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c

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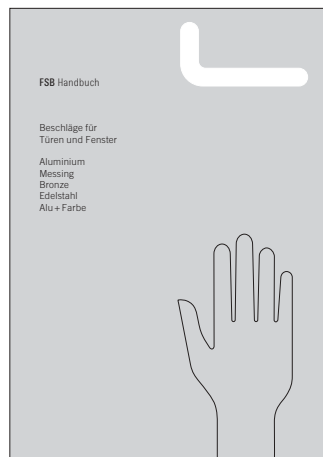
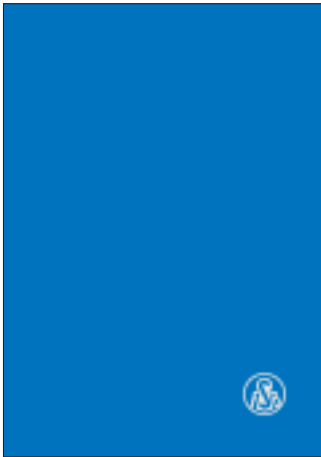
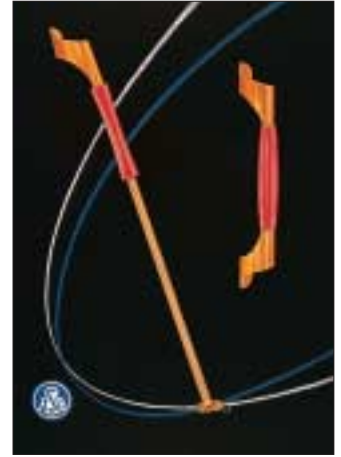
a

b

Proud tradition

This Manual is part of a proud tradition stretching back to 1881. Since then, FSB has been presenting itself to the market in new guises every 15 years or so. This approach has kept us fresh and has clearly also helped keep us going.

We hope you will make use of this new aid at every opportunity. Should you encounter difficulties in your day-to-day dealings, please do not hesitate to communicate them to us. Only thus can we continue to match market requirements.

































Our thanks once again go out to all who have had a hand in the new programme – everyone from product originators and design engineers, through draughtspersons, copywriters, layout staff and photographers to the printer at their rotary offset machine.

One name we would like to mention on behalf of all the rest is that of photojournalist Mirko Krizanovic, who captured the creative process at our Brakel production facility in black-and-white.

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Overview

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- Aluminium
- AluGrey
- Stainless steel
- Plastics, black
- New products 04105



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Page 61 and 374



Page 62 and 375



Page 63 and 364



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Technical Informations

Standard fittings

FSB standard furniture rests snugly in a 7 mm bearing made of black glass-fibre reinforced plastics contained within a rose or backplate. In addition to the 7 mm glass-fibre reinforced bearing, FSB roses and back-plates feature lugs that, if properly fitted, ensure all tensile, compressive, and torsional forces arising in normal use are comprehensively contained and absorbed. These design features have been proving their worth for decades.

Selection guidelines

When selecting and ordering door furniture, there are a number of guidelines to follow. The most important ones are illustrated on this page.

Further information has been printed into chapters Fixing Instructions and Explanations.

Specification details for FSB standard door furniture

FSB-lever handle furniture

Nr.

FSB-dead knob/lever furniture

Nr.

FSB-bathroom furniture

Nr.

features 7 mm bearing glass-fibre reinforced bearing to ensure snug lever fit.

Roses and short backplates with lugs to counteract the tensile, compressive, and torsional forces arising in normal use,

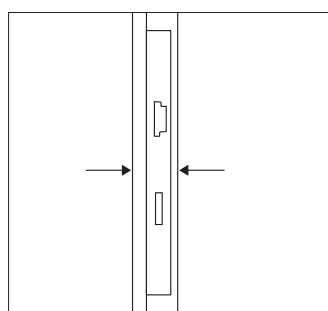
incorporating FSB Stabil-spindle,

prepared for door thickness mm,

manufactured in Aluminium/AluGrey/Stainless steel

Door thickness

Standard doors almost invariably feature standardised door thicknesses: internal doors 38–42 mm, entrance doors 66–70 mm. This is the standard FSB spindles are designed to.



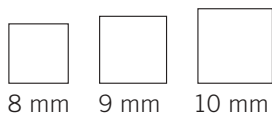
The thickness of older doors should be checked and any discrepancy pointed out when ordering.

Lock follower

According to DIN lever handles employ different locking mechanisms depending on their application.

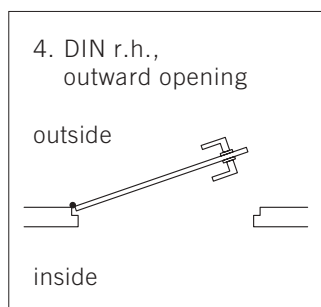
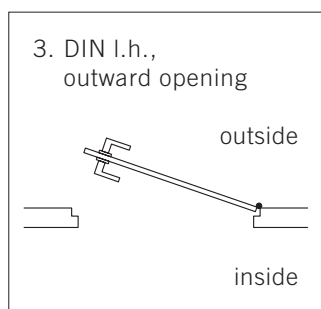
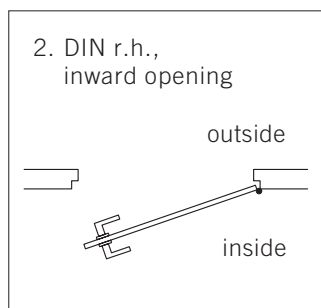
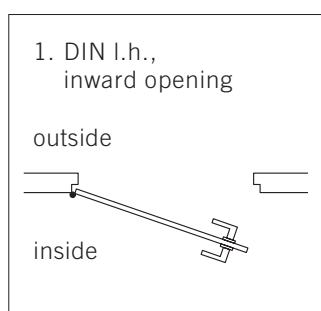
FSB supplies:

- for internal door locks lever handles with 8 mm square spindle
- for entrance door locks lever handles with 10 mm square spindle
- for locks in fire safety, smoke and panic doors lever handles with 9 mm spindle



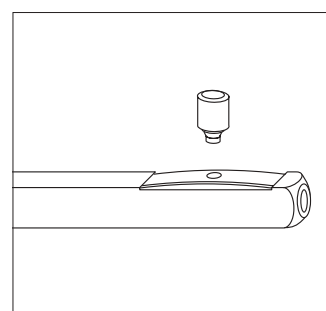
Handing

Doors are either right or left hand, relative to which way they open. When ordering lever furniture with dead knob or spindle element located on the outside, you should specify left or right. Indication with use of diagram nos. 1, 2, 3 or 4 would suffice.



FSB Stabil-spindle

All FSB lever handles are to be fitted with the FSB Stabil-spindle. The spindle is solid and meets all the specification set out in DIN 18 255 if correctly mounted.



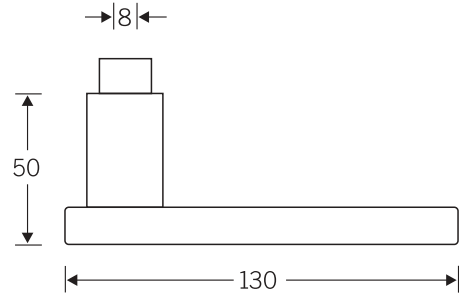
For detailed information on every aspect of our spindle technology, please consult chapter 5b.

Lever handle



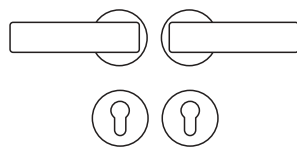
1003

Aluminium
Stainless steel

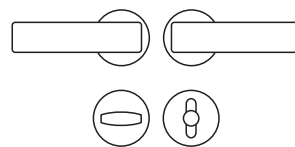


The FSB 1003 lever handle, styled like a miniature door on its side, is a bit of a collector's item. Its designer is unknown. Johannes Potente discovered this design and redesigned it in aluminium and stainless steel.

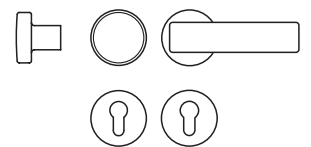
Order proposal:



Internal door furniture
Lever handle 1003
Rose 1731
Escutcheon 1735



Bathroom furniture
Lever handle 1003
Rose 1731
Roses WC 1735 0054



Entrance door furniture
Lever-female part 1003
Rose 1731
Escutcheon 1735
Door knob 2329 06

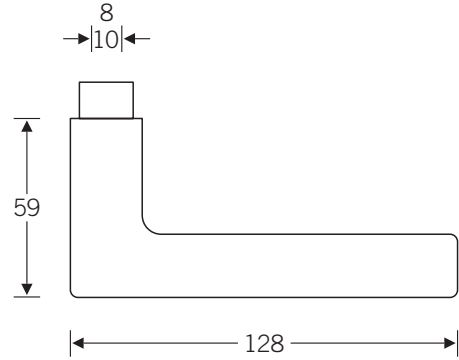
Lever handle

1
a



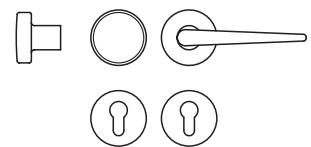
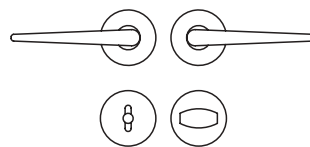
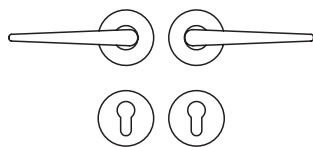
1005

Aluminium
AluGrey
Stainless steel



There's no shortage of wedge-shaped lever handles around. Virtually every maker features a variation on this theme in their repertoire. This design may originally have been Professor Burchartz's. The version by Johannes Potente is very slender.

Order proposal:



Window handle 3425
Page 118

Internal door furniture	
Lever handle	1005
Rose	1731
Escutcheon	1735

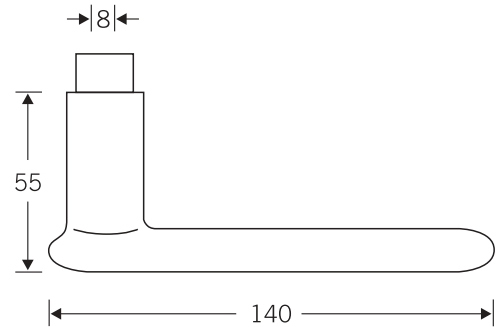
Bathroom furniture	
Lever handle	1005
Rose	1731
Roses WC	1735 0054

Entrance door furniture	
Lever-female part	1005
Rose	1731
Escutcheon	1735
Door knob	2329 06

Lever handle



1010
Aluminium
Stainless steel

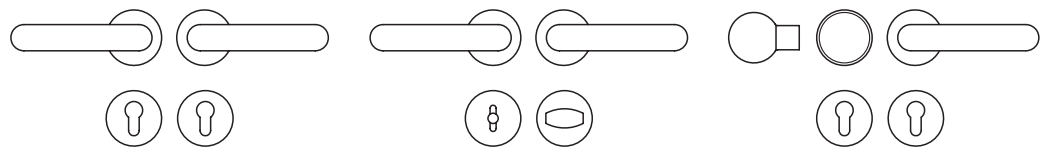


During a visit in 1996 to the Charité hospital in East Berlin, FSB staff came across a lever handle design: an upright oval grip yoked to a cylindrical shank.

It pleased us no end, so we thought it might find favour elsewhere too. And so it came to pass that we marketed our felicitous little find from Berlin.

Always on the look-out for uncluttered designs, the visiting group duly reported back to base on returning to the Weserberg hills. FSB in-house designer Hartmut Weise listened attentively and then set about constructing a model incorporating what he had heard.

Order proposal:



Window handle 3484
Page 123

Internal door furniture
Lever handle 1010
Rose 1731
Escutcheon 1735

Bathroom furniture
Lever handle 1010
Rose 1731
Roses WC 1735 0054

Entrance door furniture
Lever-female part 1010
Rose 1731
Escutcheon 1735
Door knob 2302 06

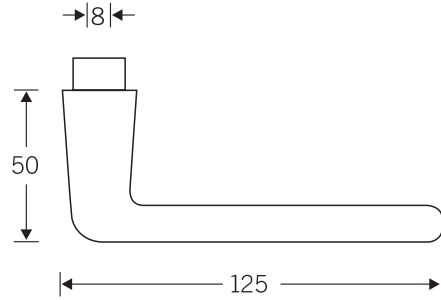
Lever handle

1
a



1012

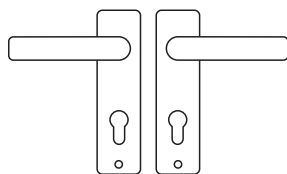
Aluminium



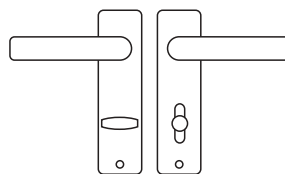
Some lever handle types defy explanation as to either their origins or their market durability. This is especially true of FSB 1012. It used to be known colloquially as a 'Reich-shape' but is now described as an 'upright oval'. It is said to have been first used in 1926 in IG Farben's admin block in Frankfurt.

It was inspired by the architect Hans Poelzig. The version shown here was adapted by Peter Assenmacher in 1988.

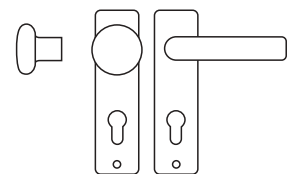
Order proposal:



Internal door furniture
Lever handle 1012
Backplate 1402



Bathroom furniture
Lever handle 1012
Backplates WC 1402 0054



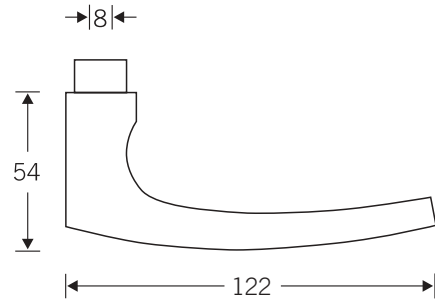
Entrance door furniture
Lever-female part 1012
Backplate 1402
Knob backplate 1904

Lever handle



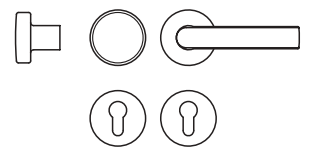
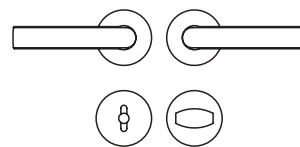
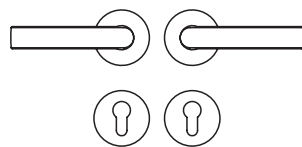
1015

Aluminium
AluGrey
Stainless steel



It is not known who designed the original of FSB 1015. We suspect it was hatched by the wehag company. Like most FSB lever handles, 1015 was conceived by Johannes Potente. The clarity of the design struck a particular chord in the Netherlands – more than 40 years ago.

Order proposal:



Window handle 3424
Page 118

Internal door furniture
Lever handle 1015
Rose 1731
Escutcheon 1735

Bathroom furniture
Lever handle 1015
Rose 1731
Roses WC 1735 0054

Entrance door furniture
Lever-female part 1015
Rose 1731
Escutcheon 1735
Door knob 2329 06

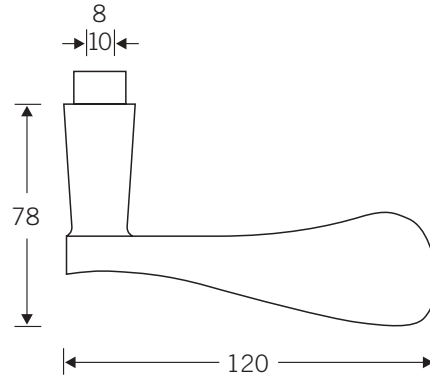
Lever handle

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a



1020

Aluminium

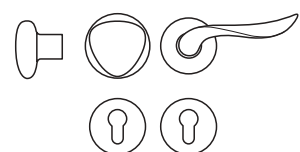
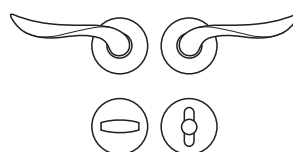
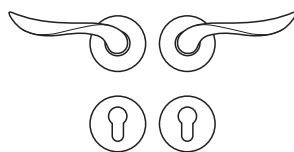


The 'functional style' of the 50s found its clearest expression in the model FSB 1020. Johannes Potente designed this model in 1953. His design's strong points are its physical dynamism, its simple hand shape and an asymmetry that gives the illusion of symmetry.

When Johannes Potente designed his 1020 model, it was his intention to provide visual relief from the strict lines of the door, 'inviting' the observer to take hold of the handle.

FSB 1020 is one of four models designed by Designer Johannes Potente which became part of the permanent collection of the MoMA in New York.

Order proposal:



Window handle 3404
Page 126

Internal door furniture
Lever handle 1020
Rose 1731
Escutcheon 1735

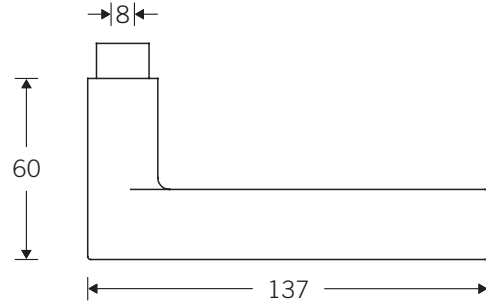
Bathroom furniture
Lever handle 1020
Rose 1731
Roses WC 1735 0054

Entrance door furniture
Lever-female part 1020
Rose 1731
Escutcheon 1735
Door knob 2327 06

Lever handle



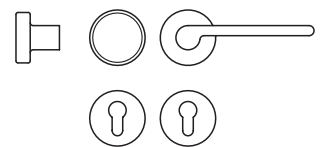
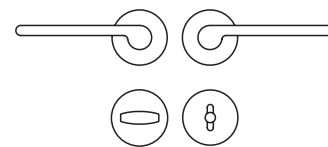
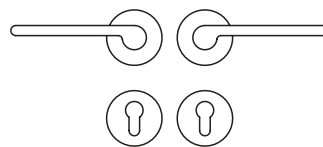
1021
Aluminium
Stainless steel



Illustrated on pages 4 and 5 of a 30s' catalogue by the bronze-ware company S. A. Loevy are half a dozen door fittings by Rachlis, Grenander, Behrens, Wagenfeld and Paul in which a round shank is combined with a flat grip section. In the 90s, the Spanish designer Miguel Milá bent things round a bit to produce the FSB 1126 model.

This time, though, we are adhering more to the original 30s' designs. The third modernist age embraces the spirit of the Bauhaus.

Order proposal:



Window handle 3420
Page 127

Internal door furniture
Lever handle 1021
Rose 1731
Escutcheon 1735

Bathroom furniture
Lever handle 1021
Rose 1731
Roses WC 1735 0054

Entrance door furniture
Lever-female part 1021
Drückerrostte 1731
Escutcheon 1735
Door knob 2329 06

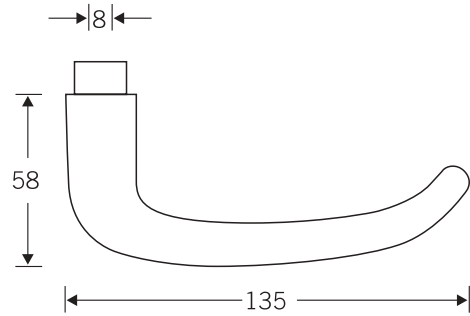
Lever handle

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a



1023

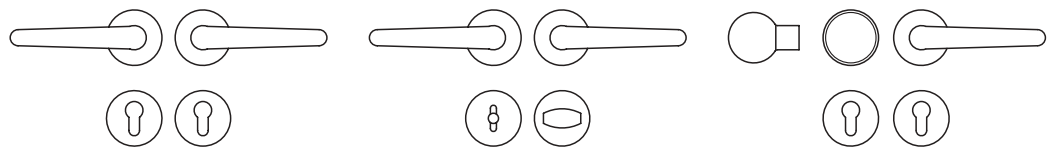
Aluminium
AluGrey
Stainless steel



When the Ulm Design College was being built in the Fifties, the Swiss architect, sculptor and designer Max Bill with Ernst Moeckel designed a lever handle based on the railway carriage handle common in Switzerland. It entered design history as the 'Ulm handle'.

Johannes Potente took this as the starting point for the 1023 model, still a compelling alternative to anonymous tubular designs.

Order proposal:



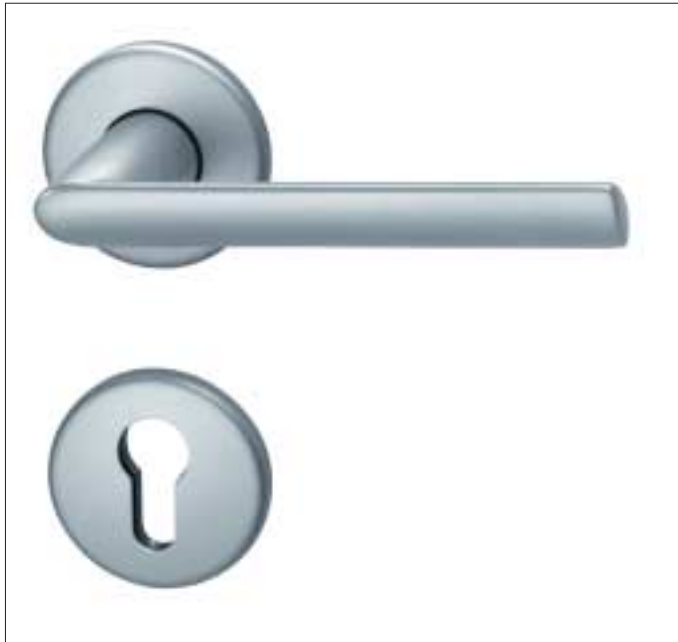
Window handle 3423
Page 116

Internal door furniture
Lever handle 1023
Rose 1731
Escutcheon 1735

Bathroom furniture
Lever handle 1023
Rose 1731
Roses WC 1735 0054

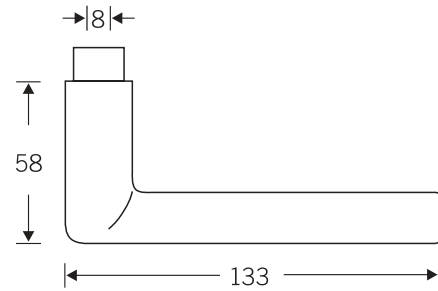
Entrance door furniture
Lever-female part 1023
Rose 1731
Escutcheon 1735
Door knob 2302 06

Lever handle



1025

Aluminium natural colour
anodised
AluGrey
Stainless steel



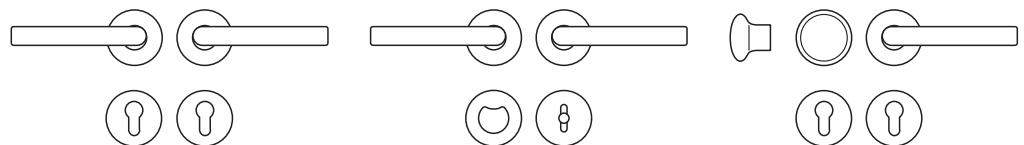
FSB 1025 is the nucleus of the 'FSB Light' range of handles.

Its stylistic identity is clearly discernible. A straight handle grip, fashioned in cross section like the outline of a teardrop, slants away from the axis of the lever shank to which it is connected.

FSB 1025 possesses an elegant modesty that will please all those keen on no-frills efficiency. With the gripping surface tilted at 45 degrees, the hand slips on easily; the handle's globular section makes for comfortable and secure gripping.

A central element in the design of FSB 1025 is its vividly condensed ridge of luminosity. The effect of slenderness in this unfussy door handle model is heightened by the way light and shade are manipulated.

Order proposal:



Window handle 3435
Page 119

Internal door furniture
Lever handle 1025
Rose 1707
Escutcheon 1708

Bathroom furniture
Lever handle 1025
Rose 1707
Roses WC 1708 7554

Entrance door furniture
Lever-female part 1025
Rose 1707
Escutcheon 1708
Door knob 2380 06

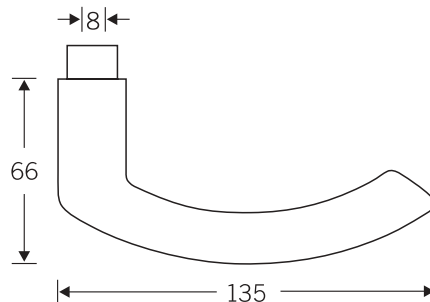
Lever handle

1
a



1026

Aluminium natural colour
anodised
AluGrey

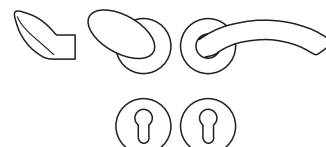
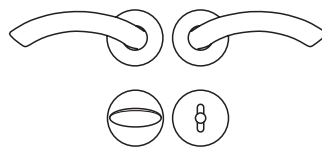
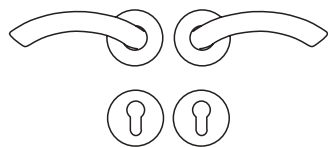


Lever handle model FSB 1026 adds a rising quarter circle to the core features of the 'FSB Light' range, thus pointedly making its mark.

The sectionally globular grip arcs up in a quarter circle as though reaching out to be held. This is a door handle that can be grasped with equal ease left- or right-handedly. There's good support for elbows and forearms.

The curvature creates the impression of increased gripping substance, although here, too, material input was kept to a minimum.

Order proposal:



Window handle 3435
Page 119

Internal door furniture	
Lever handle	1026
Rose	1707
Escutcheon	1708

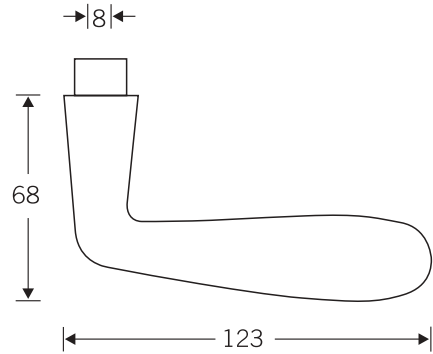
Bathroom furniture	
Lever handle	1026
Rose	1707
Roses WC	1708 0054

Entrance door furniture	
Lever-female part	1026
Rose	1707
Escutcheon	1708
Door knob, r.h.	2326 0406
l.h.	2326 0506

Lever handle

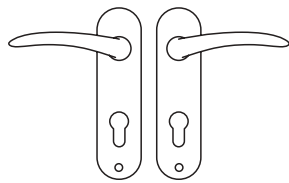
1027

Aluminium
Stainless steel

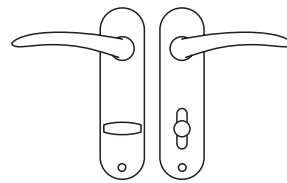


FSB 1027 is regarded as a stock item in the industry. It is also disparagingly known as the 'shoe horn' model. The basic design was made by Professor Max Burchartz. It sits extremely snugly in the hand and is notably unobtrusive. FSB's 'shoe horn'-version was designed by Johannes Potente.

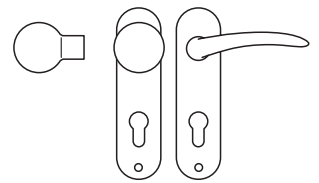
Order proposal:



Internal door furniture
Lever handle 1027
Backplate 1415



Bathroom furniture
Lever handle 1027
Backplates WC 1415 0054



Entrance door furniture
Lever-female part 1027
Backplate 1415
Knob backplate 1923

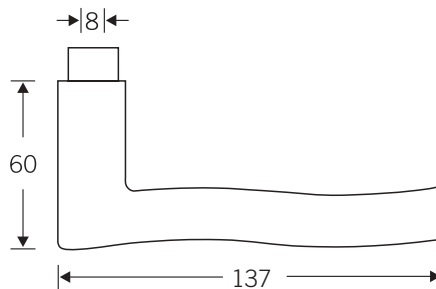
Lever handle

1
a



1028

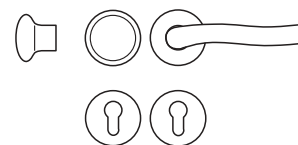
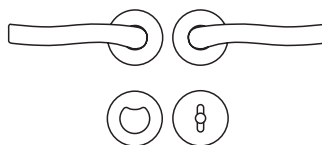
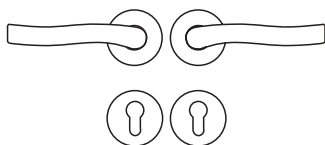
Aluminium natural colour
anodised
AluGrey
Stainless steel



FSB 1028 is the most ornate of the handles in the 'FSB Light' range. It's a bold variation on the FSB 1025 theme that nonetheless retains the vital ergonomic features.

This is a design that catches the eye and is just as good to hold. The undular styling of the actual handle is both visually striking and a stimulating experience for the hand. It's as elegant a silver embellishment as you could wish to see on any door, and it also does the job of opening and closing the door pretty well.

Order proposal:



Window handle 3435
Page 119

Internal door furniture	
Lever handle	1028
Rose	1707
Escutcheon	1708

Bathroom furniture	
Lever handle	1028
Rose	1707
Roses WC	1708 7554

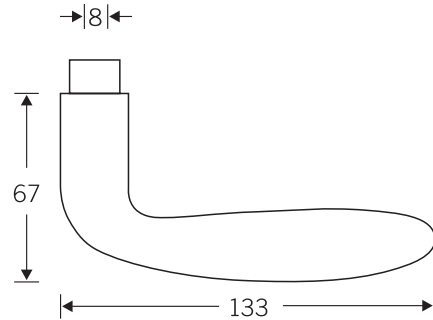
Entrance door furniture	
Lever-female part	1028
Rose	1707
Escutcheon	1708
Door knob	2380 06

Lever handle



1029

Aluminium natural colour
anodised
AluGrey

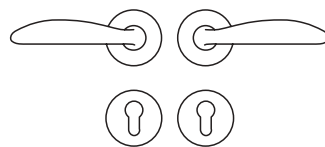


FSB 1029 is a special moulded-to-the-hand design that augments the other three handles in the 'FSB Light' range.

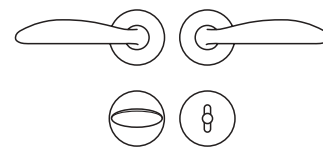
We only use the phrase 'moulded-to-the-hand' for models that meet our four Good Grip criteria to the letter.

Hartmut Weise managed to modify the teardrop motif in such a way that the thumb and the forefinger have somewhere to go and the palm of the hand has ample bulk to grip on.

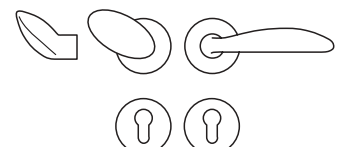
Order proposal:



Internal door furniture
Lever handle 1029
Rose 1707
Escutcheon 1708



Bathroom furniture
Lever handle 1029
Rose 1707
Roses WC 1708 0054



Entrance door furniture
Lever-female part 1029
Rose 1707
Escutcheon 1708
Door knob, r.h. 2326 0406
l.h. 2326 0506

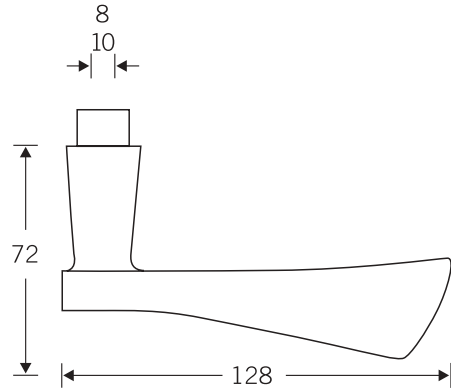
Lever handle

1
a



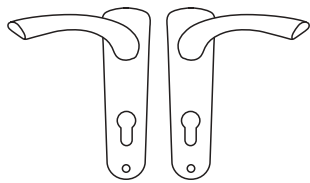
1034

Aluminium

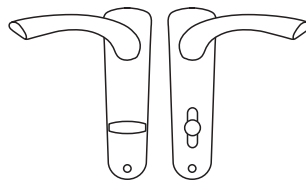


The FSB 1034 lever handle was Johannes Potente's first major hit. It dates from 1952. Once the copyright lapsed, it was imitated by the million throughout the world. It even had to suffer being remodelled in grey plastic – back in the days before plastic went technicolor. The Four Rules of the Grip viz. thumb guide, forefinger furrow, ball-of-thumb support and gripping substance are ideally catered for.

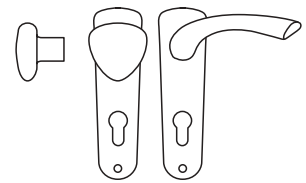
Order proposal:



Internal door furniture
Lever handle 1034
Backplate 1431



Bathroom furniture
Lever handle 1034
Backplates WC 1431 0054



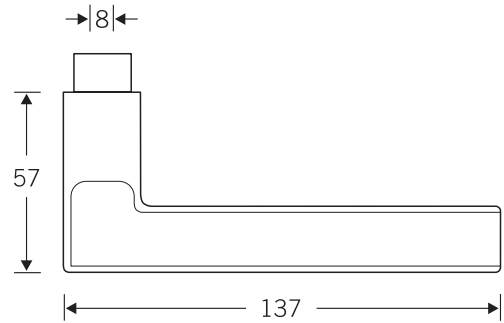
Entrance door furniture
Lever-female part 1034
Backplate 1431
Knob backplate 1936

Lever handle



1035

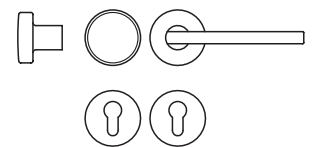
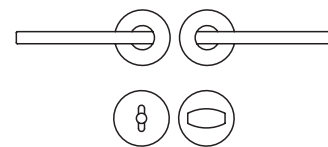
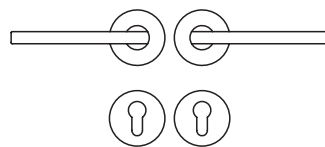
Aluminium
AluGrey
Stainless steel



In the autumn of 1996, the Düsseldorf-based interior designer Heike Falkenberg invited us to recreate a handle design from the past as part of a renovation project. On the strength of sketches submitted, the FSB development department did some milling work on FSB 1076 to arrive at a first approximation.

We were so enamoured of the prototype that we decided on the spot to present our hefty new idea to the market. The market has responded enthusiastically to the new design.

Order proposal:



Window handle 3459
Page 121

Internal door furniture
Lever handle 1035
Rose 1731
Escutcheon 1735

Bathroom furniture
Lever handle 1035
Rose 1731
Roses WC 1735 0054

Entrance door furniture
Lever-female part 1035
Rose 1731
Escutcheon 1735
Door knob 2329 06

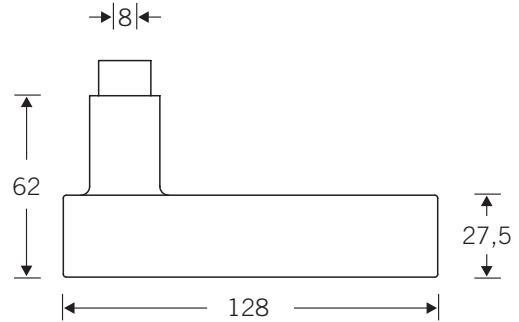
Lever handle

1
a



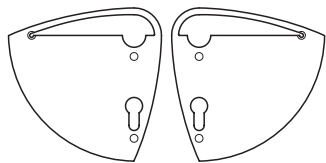
1048

Aluminium natural colour
anodised

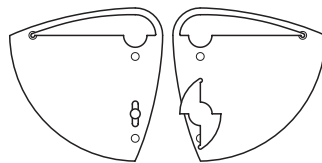


The door handle by Josef Paul Kleihues is the epitome of 'poetic rationalism'. Rational design engineering, poetic form. And that's equally true of the backplate. The handle's lyrical lines soften the consciously practical nature of the piece.

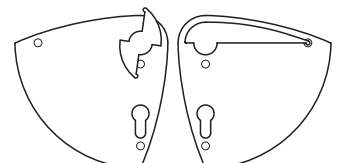
Order proposal:



Internal door furniture
Lever handle 1048
Backplate 1448



Bathroom furniture
Lever handle 1048
WC set, r.h. 1448 4254
l.h. 1448 5254

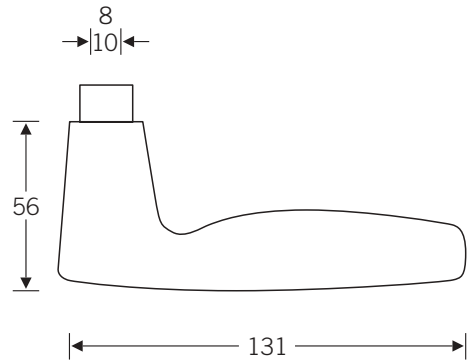


Entrance door furniture
Lever-female part 1048
Backplate 1448
Fixed knob r.h. 1948 4210
backplate l.h. 1948 5210

Lever handle



1051
Aluminium

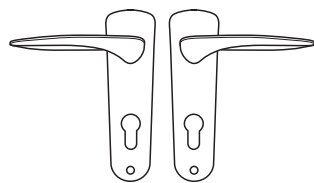


The FSB 1051 lever handle has come to epitomize FSB. It was known as the 'Schneider-handle' virtually from its conception in the mid Fifties. We can only surmise as to why this model was such a success for Johannes Potente in the Fifties (as it still is).

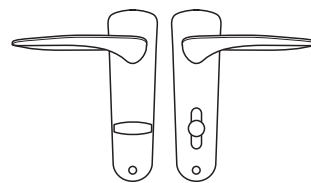
Maybe it's because of the smooth design, the harmonious interplay between an unerring rectilinearity and the calculated triangular design motif towards the neck.

FSB 1051 is one of four models designed by Designer Johannes Potente which became part of the permanent collection of the MoMA in New York.

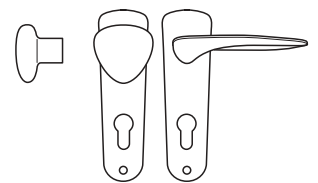
Order proposal:



Internal door furniture
Lever handle 1051
Backplate 1431



Bathroom furniture
Lever handle 1051
Backplate 1431 0054



Entrance door furniture
Lever-female part 1051
Backplate 1431
Knob backplate 1936

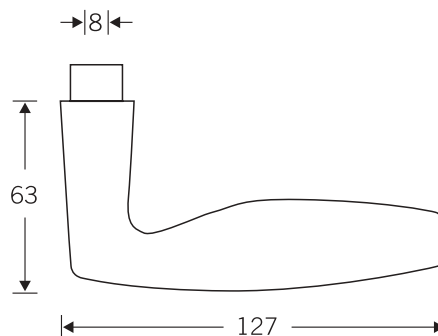
Lever handle

1
a



1057

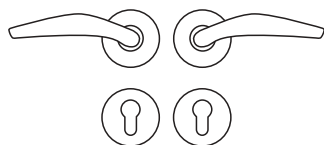
Aluminium
Stainless steel



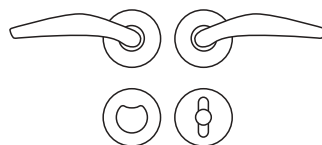
The FSB 1057 lever handle is the work of Munich designer Jan Roth. Unimpressed by the models then on sale, he decided to design handles of his own. After the first casting, he took the polished unfinished parts home and duly fitted them to his doors (which is where they still are).

The Jan Roth-designed FSB 1057 model nestles snugly in the hand, and women, especially, often fall for it on the spot.

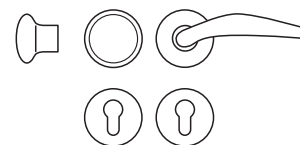
Order proposal:



Internal door furniture	
Lever handle	1057
Rose	1707
Escutcheon	1708



Bathroom furniture	
Lever handle	1057
Rose	1707
Roses WC	1708 7554



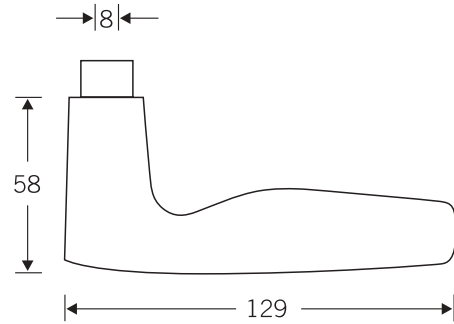
Entrance door furniture	
Lever-female part	1057
Rose	1707
Escutcheon	1708
Door knob	2380 06

Lever handle



1058

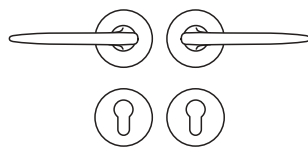
Aluminium
Stainless steel



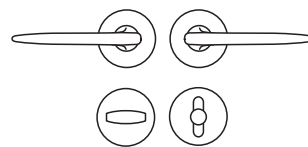
FSB 1058 was Johannes Potente's favourite. It is not known why he followed up his accomplished FSB 1051 model with a re-design two years later. The FSB 1058 re-design does away with the triangular motif near the pivotal axis. The result is a slender, elegant model that is strikingly attractive.

FSB 1058 is one of four models designed by Designer Johannes Potente which became part of the permanent collection of the MoMA in New York.

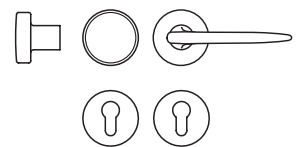
Order proposal:



Internal door furniture	
Lever handle	1058
Rose	1731
Escutcheon	1735



Bathroom furniture	
Lever handle	1058
Rose	1731
Roses WC	1735 0054



Entrance door furniture	
Lever-female part	1058
Rose	1731
Escutcheon	1735
Door knob	2329 06

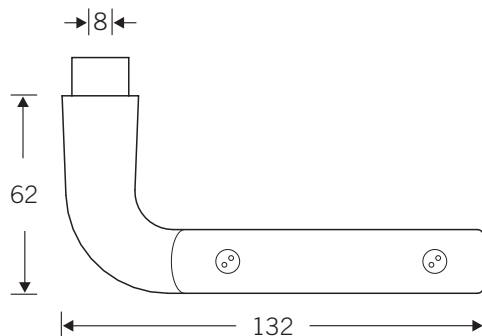
Lever handle

1
a



1064

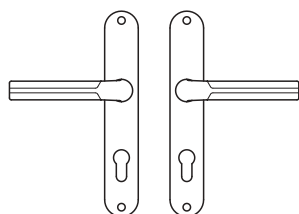
Aluminium natural colour
anodised | black thermoplast



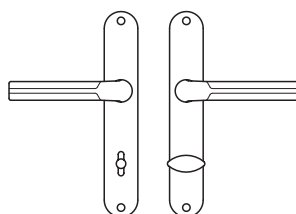
The design behind FSB 1064 is very much market-driven. An admirer of Nicholas Grimshaw's handle collection (FSB 1069) tentatively enquired whether his window handle design coupled with a narrow backplate could be re-interpreted as door furniture. It transpired that this was indeed possible without too much bother.

Nicholas Grimshaw had no option but to go along with what was being done to his design work.

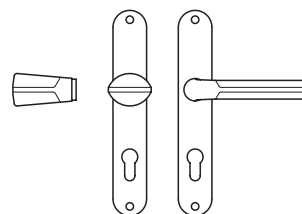
Order proposal:



Internal door furniture
Lever handle 1064
Backplate 1417



Bathroom furniture
Lever handle 1064
Backplates WC 1417 6754



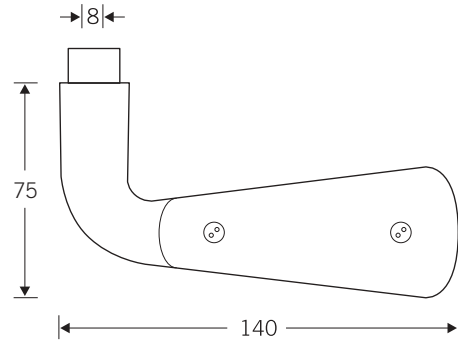
Entrance door furniture
Lever handle 1064
Backplate 1417
Knob backplate 1929

Window handle 3469
Page 315

Lever handle

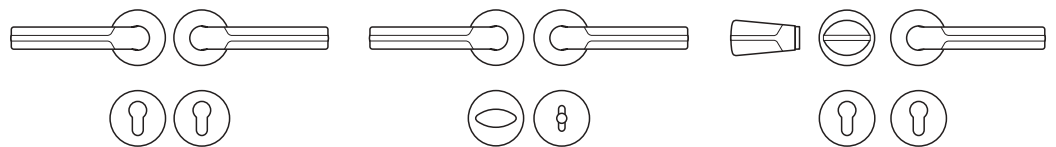
1069

Aluminium natural colour
anodised | black thermoplast



Nicholas Grimshaw's door handle design is notable for its easy readability. The grip appears to be saying 'to open please press'. The flattened bulk is clearly inviting the hand to envelop and operate it. The grip is as slender from the front as it is broad across the top. The silver aluminium layer that separates the top of the grip from the bottom lends the design a sense of great lightness.

Order proposal:



Window handle 3469
Page 315

Internal door furniture
Lever handle 1069
Rose 1731
Escutcheon 1735

Bathroom furniture
Lever handle 1069
Rose 1731
Roses WC 1735 6754

Entrance door furniture
Lever-female part 1069
Rose 1731
Escutcheon 1735
Door knob 2369 06

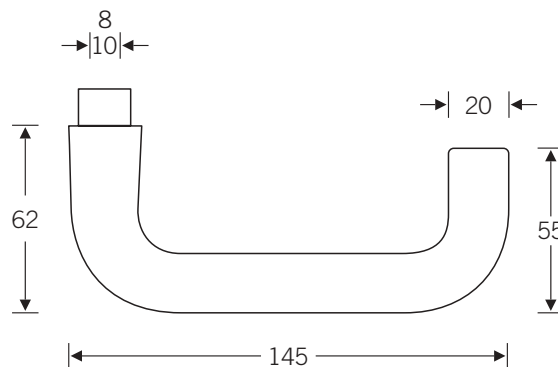
Lever handle

1
a



1070

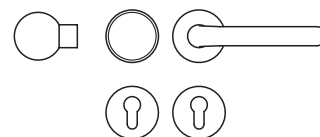
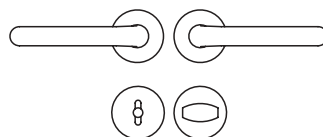
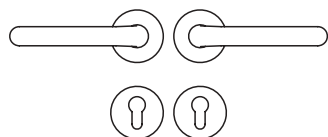
Aluminium
AluGrey
Stainless steel



What is there left to say about this particular design? Art historians report that it was a blacksmith of yore who fashioned the first tubular handle. In more recent times – in the 1920s – it was most likely the wehag company that introduced the circular cross-section to architectural hardware. At about the same time the neighbouring Woelm company was launching an identical design it dubbed the 'stable door handle'.

FSB didn't leap onto the circular bandwagon until the 1970s, when the market was very well disposed to such moves.

Order proposal:



Window handle 3421
Page 117

Internal door furniture	
Lever handle	1070
Rose	1731
Escutcheon	1735

Bathroom furniture	
Lever handle	1070
Rose	1731
Roses WC	1735 0054

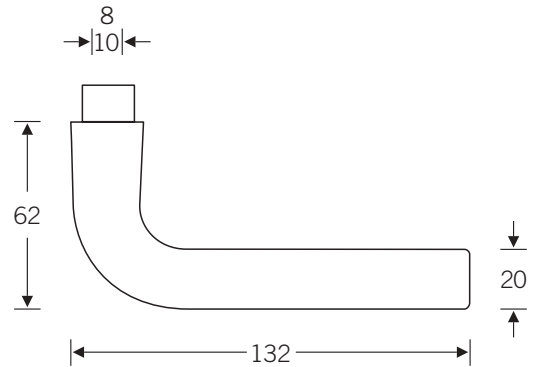
Entrance door furniture	
Lever-female part	1070
Rose	1731
Escutcheon	1735
Door knob	2302 06

Lever handle



1075

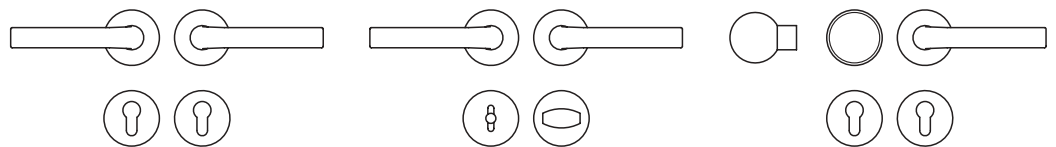
Aluminium
AluGrey
Stainless steel



The 1920s gave us three truly enduring door handle designs. In Paris, the architect Mallet-Stevens cut a tube in half and mitred it back together again (FSB 1076). The open end was rounded. In Vienna, meanwhile, the philosopher Ludwig Wittgenstein was busy bending a brass tube through 90 degrees (FSB 1147). He, too, rounded off the end. Messieurs Gropius and Meyer, finally, yoked a square section shank to a circular grip (FSB 1102).

All three designs are still with us today. In fact, two and three times over as far as FSB is concerned, viz. the Frankfurt Model, Wittgenstein's handle and the Gropius/Meyer redesign by Alessandro Mendini. There's even a variation on the theme: Model FSB 1075. Someone had the bright idea of slicing off the round tip. That was the simple way FSB 1075 turned out.

Order proposal:



Window handle 3422
Page 120

Internal door furniture
Lever handle 1075
Rose 1731
Escutcheon 1735

Bathroom furniture
Lever handle 1075
Rose 1731
Roses WC 1735 0054

Entrance door furniture
Lever-female part 1075
Rose 1731
Escutcheon 1735
Door knob 2302 06

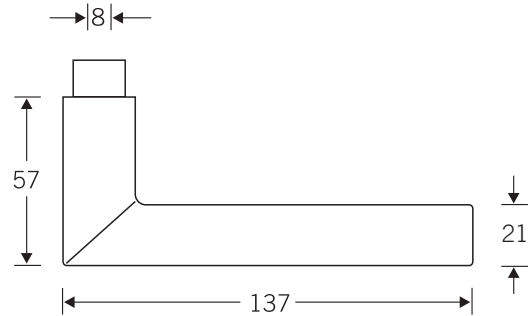
Lever handle

1
a



1076

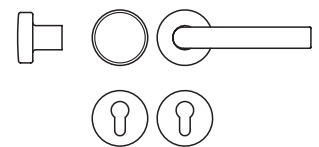
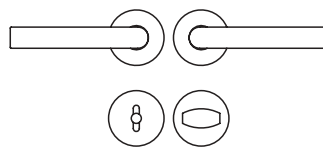
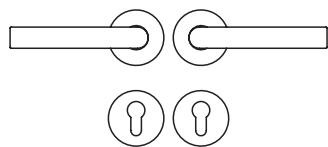
Aluminium
AluGrey
Stainless steel



The architect Robert-Mallet Stevens (1886 – 1945) designed several blocks of flats in the Paris of the 1920s. He was probably the first designer to hit upon the idea of taking the tubular handle devised by the Viennese philosopher Ludwig Wittgenstein in the same decade, splitting it where it bends, and mitring it back together again at right angles.

They are now known as the 'FRANKFURT model', and there's a simple reason for this. They were rediscovered for the new Architecture Museum building in Frankfurt and soon took the market by storm.

Order proposal:



Window handle 3476
Page 122

Internal door furniture
Lever handle 1076
Rose 1731
Escutcheon 1735

Bathroom furniture
Lever handle 1076
Rose 1731
Roses WC 1735 0054

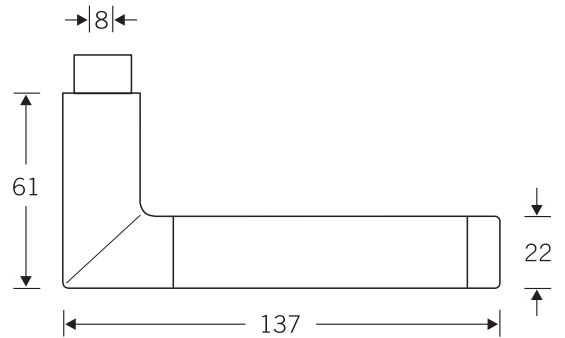
Entrance door furniture
Lever-female part 1076
Rose 1731
Escutcheon 1735
Door knob 2329 06

Lever handle



1077

Aluminium natural colour anodised

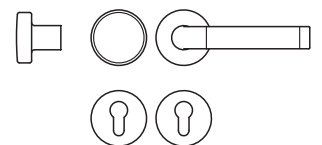
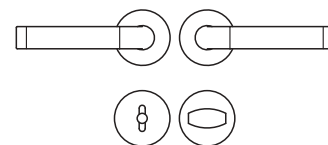
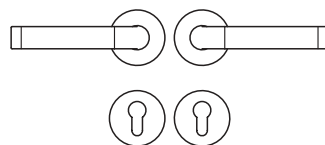


The idea behind the FSB 1077 lever handle series was to give architects and end-users the opportunity to have a say in the choice of grip.

The following proven combinations await your order in FSB's stock range:

- Aluminium natural colour anodised, Grip stainless steel
- Aluminium natural colour anodised, Grip black

Order proposal:



Window handle 3477
Page 123

Internal door furniture
Lever handle 1077
Rose 1731
Escutcheon 1735

Bathroom furniture
Lever handle 1077
Rose 1731
Roses WC 1735 0054

Entrance door furniture
Lever-female part 1077
Rose 1731
Escutcheon 1735
Door knob 2329 06

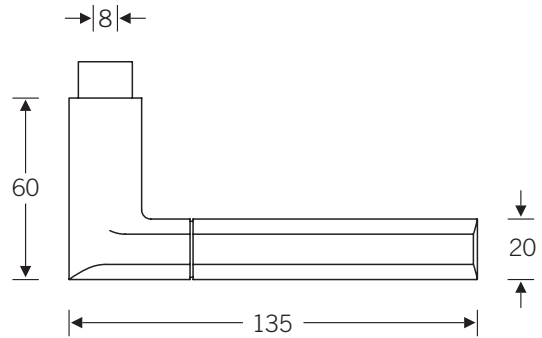
Lever handle

1
a



1078

AluGrey



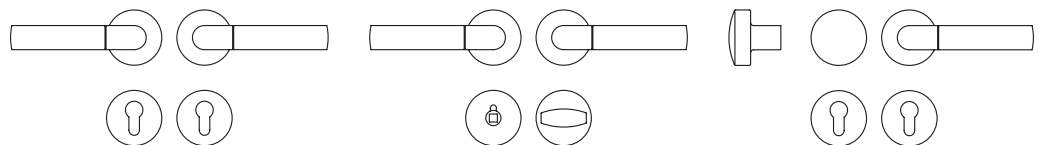
Excited by the new FSB-material AluGrey, Christoph Ingenhoven returned to the major door handle design of the 1990s that FSB had marketed as the Frankfurt Model in the late 1980s, when it had picked up on a design idea Mallet-Stevens had in 1923.

Ingenhoven retained the mitring but radically reinvented the handle's gripping credentials by combining a flat top and bottom with a well-rounded body.

A version with a high performance thermoplast is optionally available.

Coding for order processing:
in AluGrey 1005
with tactile grip 1088

Order proposal:



Window handle 3778
Page 327

Internal door furniture
Lever handle 1078
Rose 1731
Escutcheon 1735

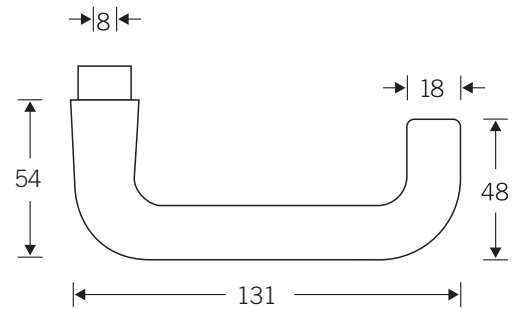
Bathroom furniture
Lever handle 1078
Rose 1731
Roses WC 1735 7954

Entrance door furniture
Lever-female part 1078
Rose 1731
Escutcheon 1735
Door knob 2377 06

Lever handle



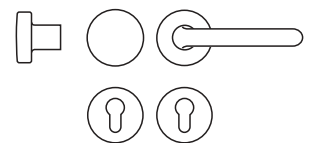
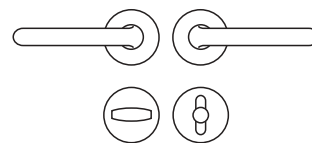
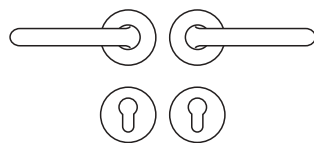
1080
Aluminium
Stainless steel



Much has been written about who invented the tubular design. Most probably it was some master craftsman way back when hammering steel tubing into a handle format on the anvil. The phrase 'horse stable handle' has long been common parlance – the end bent towards the door was presumably designed to prevent the bridle from snagging. Having served the animal world, it experienced a world-wide comeback in manifold materials and countless jazzed-up plastic colours a century later. That's the general background to this classical design.

There's no doubt who designed FSB 1080, though – none other than our during life anonymous designer Johannes Potente. His idea was to produce a shorter version suitable for domestic use. He was successful.

Order proposal:



Window handle 3421
Page 117

Internal door furniture
Lever handle 1080
Rose 1731
Escutcheon 1735

Bathroom furniture
Lever handle 1080
Rose 1731
Roses WC 1735 0054

Entrance door furniture
Lever-female part 1080
Rose 1731
Escutcheon 1735
Door knob 2329 06

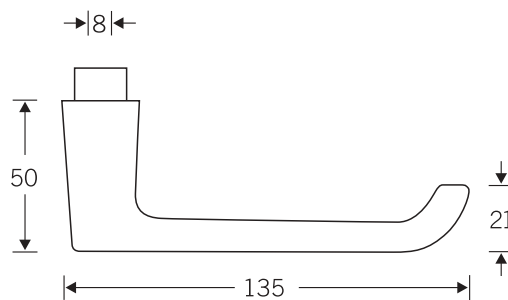
Lever handle

1
a



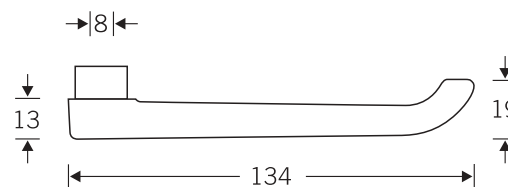
1086

Aluminium

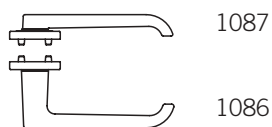


1087

Aluminium

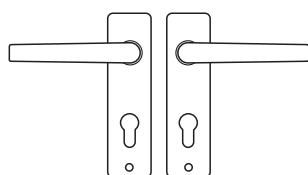


FSB 1086 is a typical purpose-driven form. This lever handle model is used in conjunction with FSB 1087 (cf. Chapter 2b, "Lever handles for framed doors") if a non-projecting handle is required so as to accommodate folding shutters or blinds.

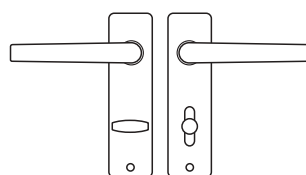


Of course it can be used as a regular pair of lever handles, too.

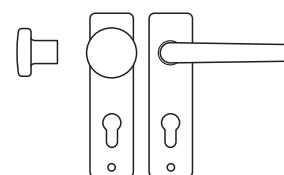
Order proposal:



Internal door furniture
Lever handle 1086
Backplate 1402



Bathroom furniture
Lever handle 1086
Backplates WC 1402 0054



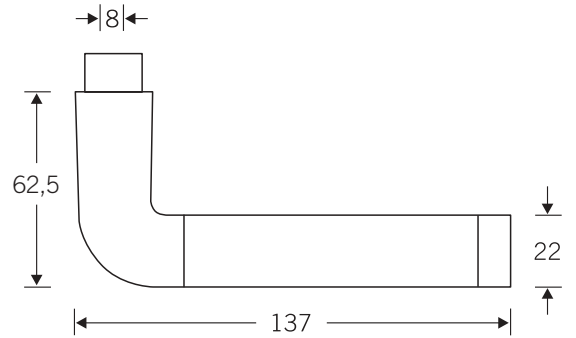
Entrance door furniture
Lever-female part 1086
Backplate 1402
Knob backplate 1966

Lever handle



1089

Aluminium natural colour anodised

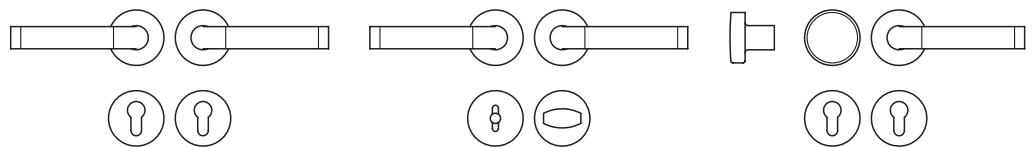


The idea behind the FSB 1089 lever handle series was to give architects and end-users the opportunity to have a say in the choice of grip.

The following proven combinations await your order in FSB's stock range:

- Aluminium natural colour anodised, Grip stainless steel
- Aluminium natural colour anodised, Grip black

Order proposal:



Window handle 3489
Page 124

Internal door furniture
Lever handle 1089
Rose 1731
Escutcheon 1735

Bathroom furniture
Lever handle 1089
Rose 1731
Roses WC 1735 0054

Entrance door furniture
Lever-female part 1089
Rose 1731
Escutcheon 1735
Door knob 2329 06

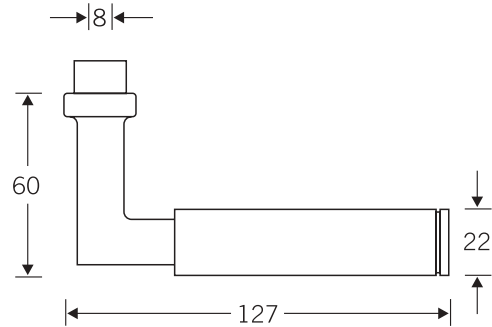
Lever handle

1
a



1102

Aluminium natural colour
anodised
Stainless steel



The redesign of the Gropius handle by the Italian design philosopher Alessandro Mendini is available from FSB in Stainless steel, natural anodised aluminium or with black grip sections. No other grips are authorised by Alessandro Mendini.

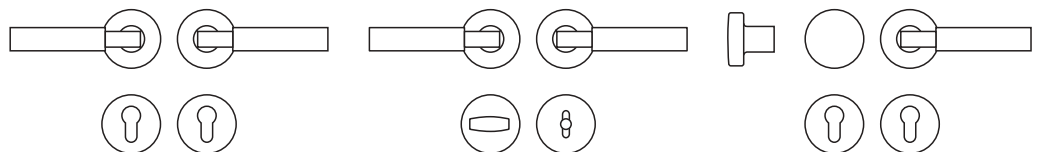
Available in:

Aluminium natural colour anodised

Aluminium natural colour anodised, Grip black

Stainless steel

Order proposal:



Window handle 3432
Page 119

Internal door furniture
Lever handle 1102
Rose 1731
Escutcheon 1735

Bathroom furniture
Lever handle 1102
Rose 1731
Roses WC 1735 0054

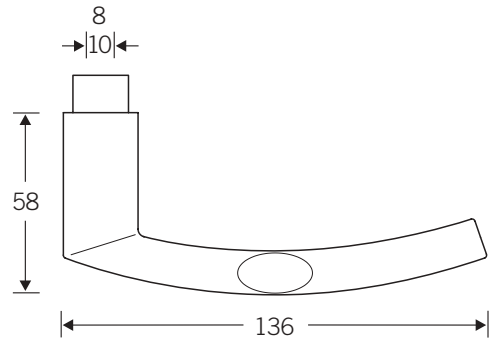
Entrance door furniture
Lever-female part 1102
Rose 1731
Escutcheon 1735
Door knob 2329 06

Lever handle



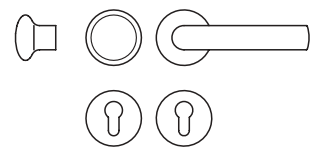
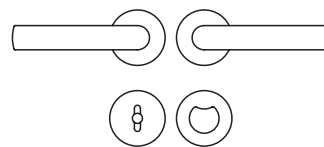
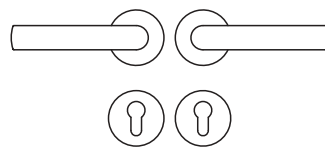
1107

Aluminium
AluGrey
Stainless steel



FSB 1107 has close affinities with FSB 1108. Hartmut Weise has imbued his 'Brakel light-weight' model with the verve of a door in motion.

Order proposal:



Window handle 3440
Page 115

Internal door furniture
Lever handle 1107
Rose 1707
Escutcheon 1708

Bathroom furniture
Lever handle 1107
Rose 1707
Roses WC 1708 7554

Entrance door furniture
Lever-female part 1107
Rose 1707
Escutcheon 1708
Door knob 2380 06

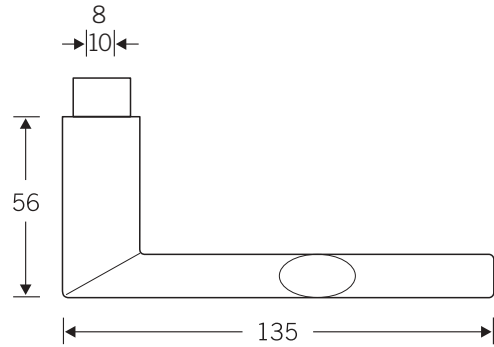
Lever handle

1
a



1108

Aluminium
AluGrey
Stainless steel

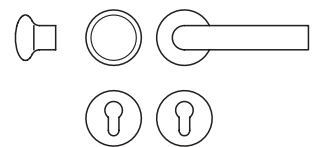
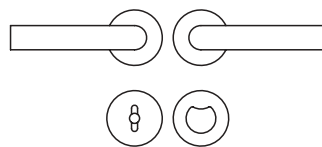
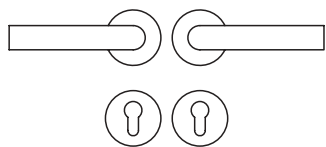


FSB designer Hartmut Weise has long been wondering where the secret of the two popular door handles 'Wittgenstein's Handle' and 'Frankfurt Model' can lie. Then one day he hit upon the term 'unpretentious presence' to sum up the outcome of his deliberations.

Spurred on by this analysis, Hartmut Weise resolved to place an even more chaste variant on the decision-making table:

Round tubing is mitred to an oval grip at right angles. The 'Frankfurt heavyweight' is instantly transformed into an elegant 'Brakel featherweight' without in any way having sacrificed the unpretentious presence of the former.

Order proposal:



Window handle 3409
Page 115

Internal door furniture	
Lever handle	1108
Rose	1707
Escutcheon	1708

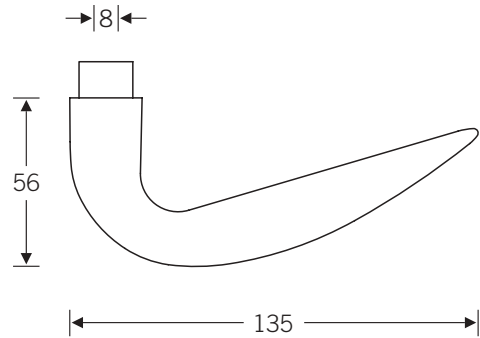
Bathroom furniture	
Lever handle	1108
Rose	1707
Roses WC	1708 7554

Entrance door furniture	
Lever-female part	1108
Rose	1707
Escutcheon	1708
Door knob	2380 06

Lever handle



1111
Aluminium natural colour
anodised



Originally, back in the early 1990s, Philippe Starck actually designed two handle collections for FSB, the PS1 and PS2 series.

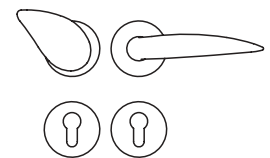
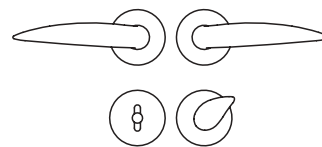
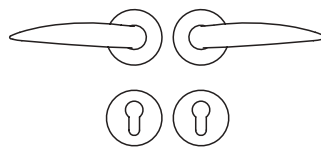
Whereas the PS1 series has since become a 'classic' under the label of FSB 1191, in the end we didn't have the courage to market the PS2 series, despite having set everything up for series production. What got into us?

The second lever-handle series comprised an aluminium core with a sprayed-on coating of transparent, coloured plastic. With the proceedings very far advanced, but thankfully not too far, we began thinking about how this composite material was to be recycled. The outcome

was an out-and-out victory for the environment.

The idea was shelved until 2002, when we decided the time had come to ask its originator to rework it – omitting the plastic this time. The upshot is a door handle of a very unusual kind. But then, that's what one expects of Philippe Starck.

Order proposal:



Window handle 3439
Page 372

Internal door furniture
Lever handle 1111
Rose 1707
Escutcheon 1708

Bathroom furniture
Lever handle 1111
Rose 1707
Roses WC r.h. 1708 4354
l.h. 1708 5354

Entrance door furniture
Lever-female part 1111
Rose 1707
Escutcheon 1708
Door knob r.h. 2339 0406
l.h. 2339 0506

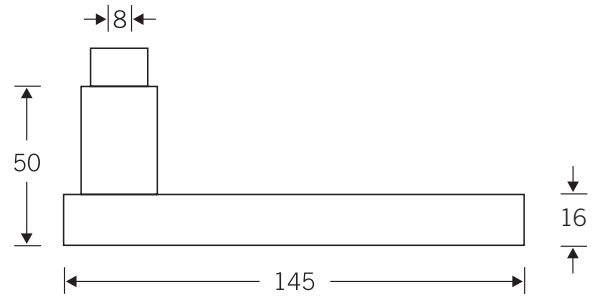
Lever handle

1
a



1114

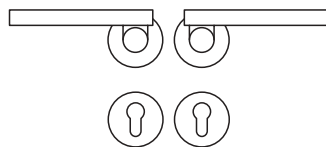
Stainless steel



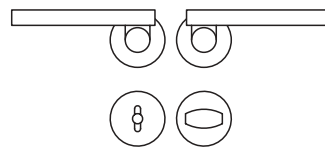
Richard Rogers commissioned his colleague Laurence Abbott and a team headed by Florian Fischötter to come up with a lever handle design with a difference. The brief foresaw an elegant stainless steel hardware collection whose individual constituents would be immediately discernible to the human eye. This far from easy task was achieved with aplomb with door handle model FSB 1114.

A stainless steel bar 16 mm in diameter floats airily above a pivot to which it is connected by means of a heavy-duty shackle. Sporting the looks of a mechanical lever, this is a no-nonsense tool for opening closed doors.

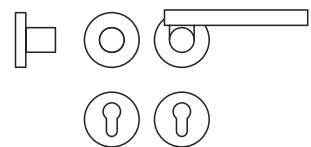
Order proposal:



Internal door furniture
Lever handle 1114
Rose 1731
Escutcheon 1735



Bathroom furniture
Lever handle 1114
Rose 1731
Roses WC 1735 0054



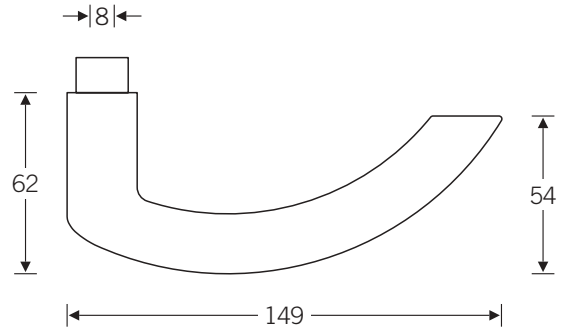
Entrance door furniture
Lever-female part 1114
Rose 1731
Escutcheon 1735
Door knob 2314 06

Lever handle



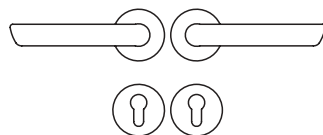
1119

Aluminium
AluGrey
Stainless steel

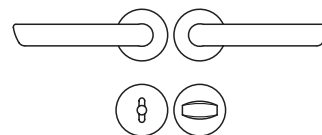


FSB 1119 is the heavy-duty member of the light series. It augments the design's graceful lightness with the ruggedness required for doors in constant use. Hands and elbows are dependably guided into the operating position. Its end curves gently back towards the leaf of the door. This handle was designed by Hartmut Weise.

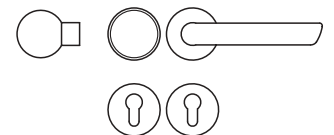
Order proposal:



Internal door furniture	
Lever handle	1119
Rose	1731
Escutcheon	1735



Bathroom furniture	
Lever handle	1119
Rose	1731
Roses WC	1735 0054



Entrance door furniture	
Lever-female part	1119
Rose	1731
Escutcheon	1735
Door knob	2302 06

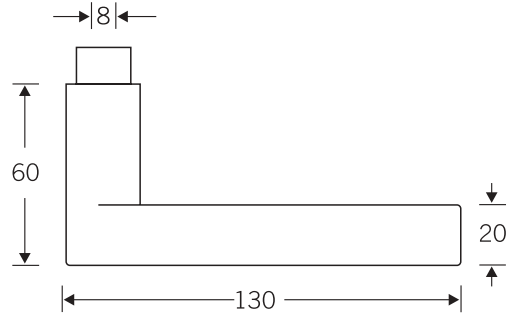
Lever handle

1
a



1126

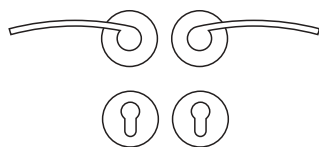
Stainless steel



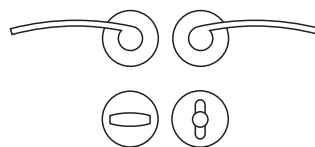
When the Spanish designer Miguel Milá suggested that we make a gently arching lever handle from a flat steel hoop, we first thought Milá was resurrecting a form familiar from the work of Wilhelm Wagenfeld and his followers.

But we were to discover that, by grace of its organic curvature, Miguel Milá's steel handle boasted hitherto unknown formal properties. His design is an inventive re-interpretation of an old motif, the fusing of a round shank and a flat steel band into a single entity.

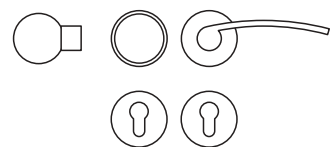
Order proposal:



Internal door furniture
Lever handle 1126
Rose 1731
Escutcheon 1735



Bathroom furniture
Lever handle 1126
Rose 1731
Roses WC 1735 0054

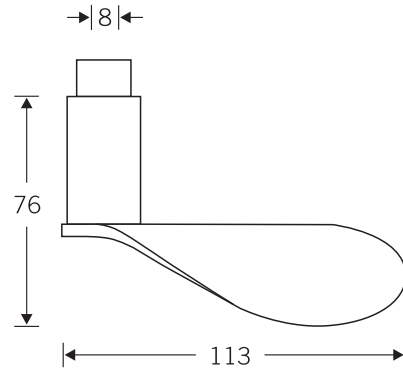


Entrance door furniture
Lever-female part 1126
Rose 1731
Escutcheon 1735
Door knob 2302 06

Lever handle

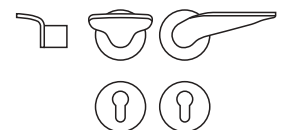
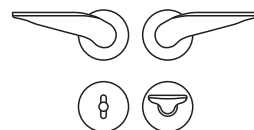
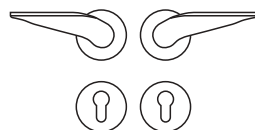


1128
Stainless steel



For his wife Jonna – and for FSB too of course – Erik Magnussen styled a lever handle as the 'small wingbeat' of a gull. Its grip is short and full and makes operating doors a decidedly sensuous experience for the hand. Handle design FSB 1128 blends particularly well with circular roses but can also be combined with the long narrow backplate FSB 1432.

Order proposal:



Window handle 3458
Page 348

Internal door furniture
Lever handle 1128
Rose 1707
Escutcheon 1708

Bathroom furniture
Lever handle 1128
Rose 1707
Roses WC 1708 7054

Entrance door furniture
Lever-female part 1128
Rose 1707
Escutcheon 1708
Door knob 2357 06

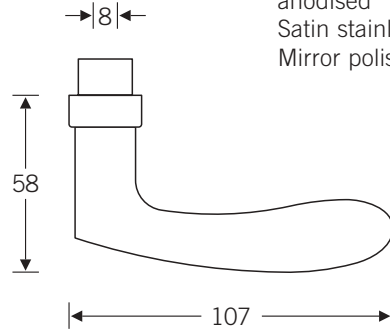
Lever handle

1
a



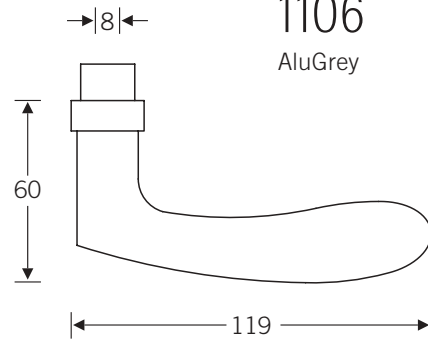
1135

Aluminium natural colour
anodised
Satin stainless steel
Mirror polished stainless steel



1106

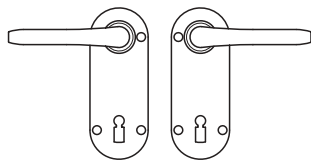
AluGrey



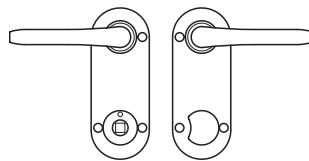
What makes this handle so appealing is its poise. Set off by the flat, clean-lined form and explicitly technical charm of its backplate, this new design looks good on any door.

Also available is FSB 1106, a slightly enlarged version with roses in AluGrey.

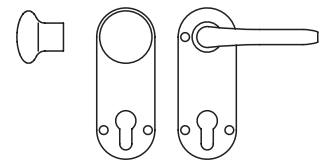
Order proposal:



Internal door furniture
1135 | 1425



Bathroom furniture
1135 | 1425 | 7554



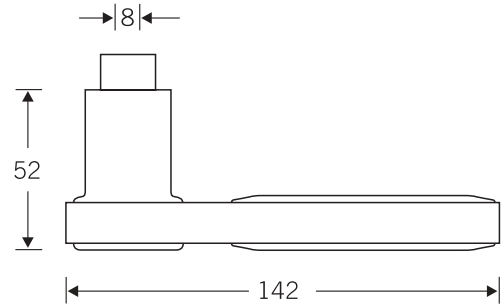
Entrance door furniture
1135 | 1425 | 1925

Window handle 3735, 3736
Page 343, 124

Lever handle



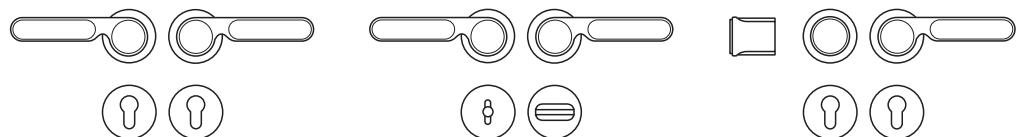
1138
AluGrey
Thermoplast black



The qualities Dieter Rams demands of design are simplicity, lightness, and the incorporation of what readily springs to mind. His own work faithfully puts these demands to effect, as is graphically demonstrated by FSB 1138.

FSB 1138 is endowed with a sturdy round aluminium neck that is effectively the lynchpin of the piece. The black grip section in thermoplast features a clearly discernible index finger recess.

Order proposal:



Window handle 3438
Page 361

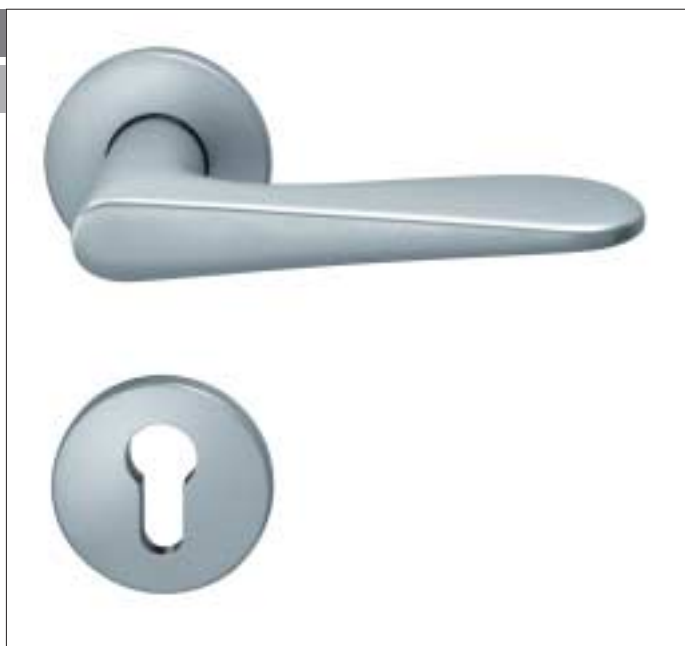
Internal door furniture
Lever handle 1138
Rose 1740
Escutcheon 1741

Bathroom furniture
Lever handle 1138
Rose 1740
Roses WC 1741 0054

Entrance door furniture
Lever-female part 1138
Rose 1740
Escutcheon 1741
Door knob 2376 06

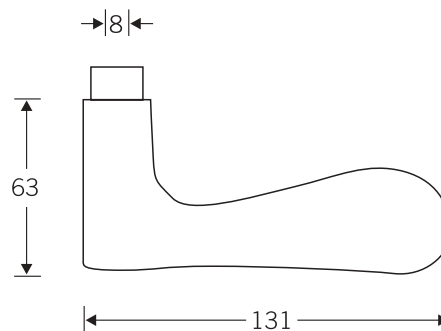
Lever handle

1
a



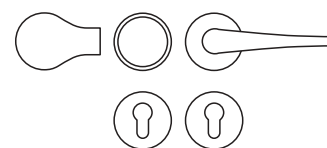
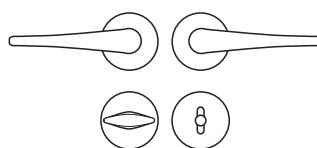
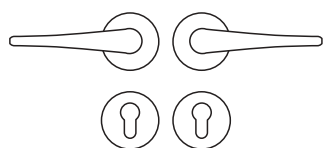
1144

Aluminium natural colour
anodised
AluGrey



FSB 1144 is a lever handle styled to appeal to eye and hand in equal measure. The message the eye receives from Jasper Morrison's design is that this handle is a hand-operated device for opening doors. Reassured, the hand reaches out. The thumb comes to rest; the index settles in its recess; the hand clenches to give a firm grip. All the good-grip criteria identified by Otl Aicher and ourselves have been met.

Order proposal:



Window handle 3444
Page 352

Internal door furniture
Lever handle 1144
Rose 1731
Schüsselrosette 1735

Bathroom furniture
Lever handle 1144
Rose 1731
Roses WC 1735 6054

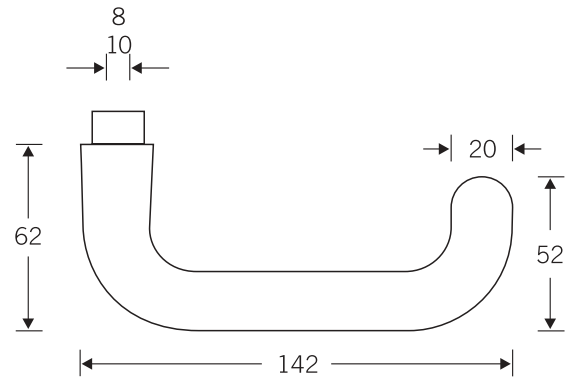
Entrance door furniture
Lever-female part 1144
Rose 1731
Escutcheon 1735
Door knob 2374 06

Lever handle



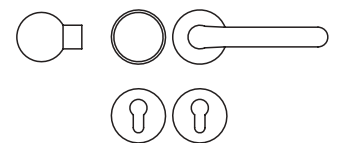
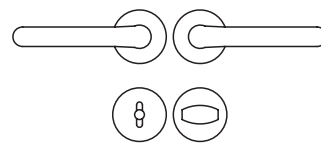
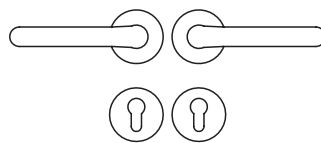
1146

Aluminium
AluGrey
Stainless steel



In the early 1990s, FSB decided the time had come to rework the stable door handle with its plain round tubing. The shank was tapered and the curving outer end rounded off at the tip. Seemingly minor though these two changes were, they lend the reworked model FSB 1146 a very distinctive appearance and, believe it or not, the competition has since taken to copying our design.

Order proposal:



Window handle 3446
Page 117

Internal door furniture
Lever handle 1146
Rose 1731
Escutcheon 1735

Bathroom furniture
Lever handle 1146
Rose 1731
Roses WC 1735 0054

Entrance door furniture
Lever-female part 1146
Rose 1731
Escutcheon 1735
Door knob 2302 06

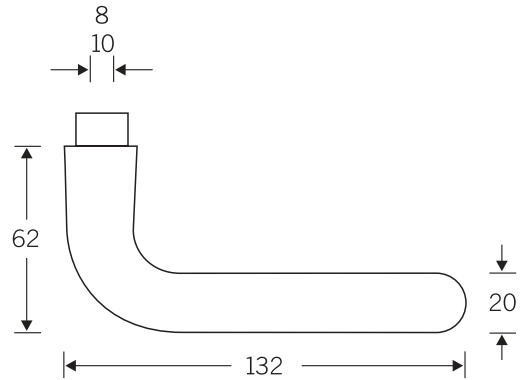
Lever handle

1
a



1147

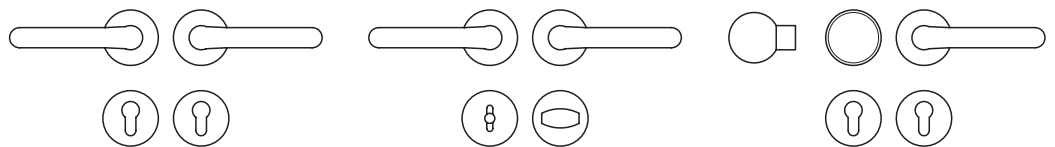
Aluminium
AluGrey
Stainless steel



The company motif draws on a door handle designed in mid-Twenties' Vienna by the Austrian philosopher Ludwig Wittgenstein that has served as a model for several designs since, including the reworked FSB 1147 handle in this catalogue. It should replace the standard 1075 model.

Its tapered neck and rounded end set it apart from both our own company motif and the many other variants of this handle on the market.

Order proposal:



Window handle 3447
Page 120

Internal door furniture	
Lever handle	1147
Rose	1731
Escutcheon	1735

Bathroom furniture	
Lever handle	1147
Rose	1731
Roses WC	1735 0054

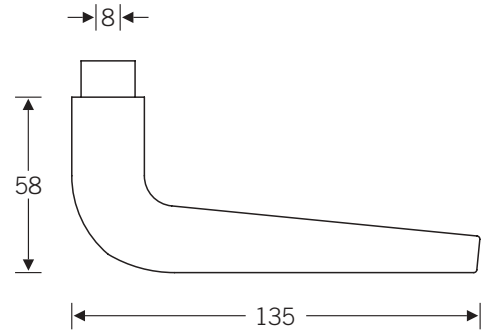
Entrance door furniture	
Lever-female part	1147
Rose	1731
Escutcheon	1735
Door knob	2302 06

Lever handle



1149

Aluminium natural colour
anodised
AluGrey

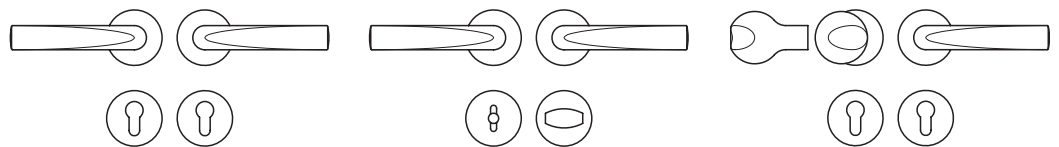


Three design constituents go to make up the grace of the rahe+rahe door handle.

First, there is the conical, flat styling visible front-on that emerges from the tubular material. This bisects the end face, giving rise there to a striking semi-circle as the second constituent.

The third constituent is heftiness deriving from the slight angle of extension of the back of the door handle. It is the harmonious interplay of these three constituents that gives the rounded tube its striking and innovative identity.

Order proposal:



Window handle 3448
Page 358

Internal door furniture	
Lever handle	1149
Rose	1731
Escutcheon	1735

Bathroom furniture	
Lever handle	1149
Rose	1731
Roses WC	1735 0054

Entrance door furniture	
Lever-female part	1149
Rose	1731
Escutcheon	1735
Door knob	2318 06

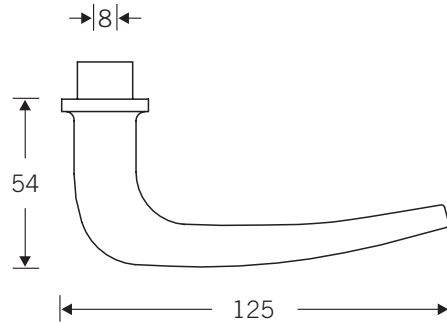
Lever handle

1
a



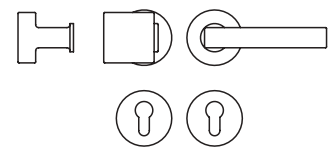
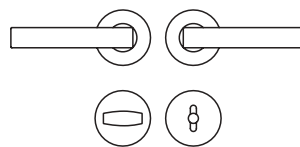
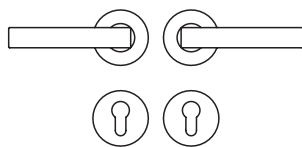
1163

Aluminium natural colour
anodised
Stainless steel



The Berlin-based architect Hans Kollhoff devised a handle design for his building projects that consciously incorporates elements of 30s' styles. His chaste door handles and window handles and fasteners have been accepted by the market as authentic interpretations.

Order proposal:



Window handle 3433, 3453
Page 339

Internal door furniture
Lever handle 1163
Rose 1731
Escutcheon 1735

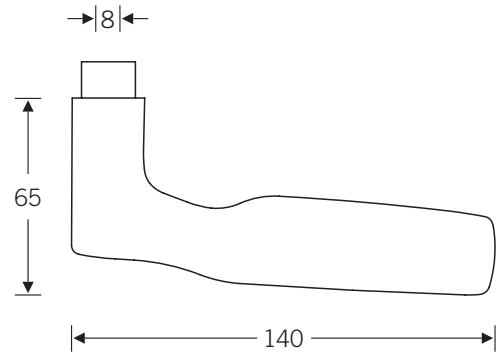
Bathroom furniture
Lever handle 1163
Rose 1731
Roses WC 1735 0054

Entrance door furniture
Lever-female part 1163
Rose 1731
Escutcheon 1735
Door knob 2333 06

Lever handle



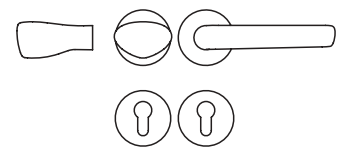
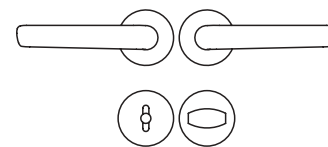
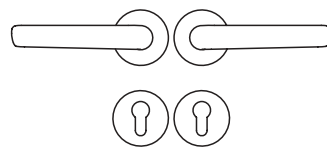
1168
AluGrey



Helmut Jahn and Yorgo Lykouria wanted the experience of the door handle to be like a good handshake. They saw the problem as being to design a common and well-used object that is laden with history and experience.

To put it in the London designers' own words: "The first sketch was a piece of modelling clay formed by one of our own gripping hands. This experience of touch evolved through countless models all formed by hand without a single drawing being produced. The sensuous gestures of the hand were read faithfully by machines to return a perfect aluminium echo of the hand-crafted pieces."

Order proposal:



Window handle 3468
Page 335

Internal door furniture
Lever handle 1168
Rose 1731
Escutcheon 1735

Bathroom furniture
Lever handle 1168
Rose 1731
Roses WC 1735 0054

Entrance door furniture
Lever-female part 1168
Rose 1731
Escutcheon 1735
Door knob 2368 06

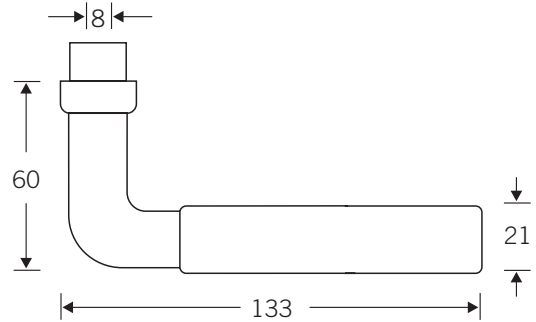
Lever handle

1
a



1171

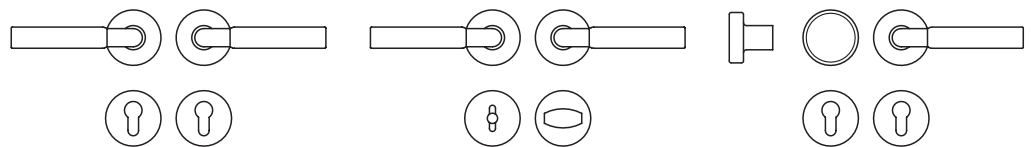
Aluminium
Stainless steel



FSB's lever handle model 1171 owes its existence to a 'crazy notion' hatched in FSB's tool-making shop. It's a notion with a history. In the inter-war and post-war periods FSB produced a lever handle that entered design history as the nickel horn handle. It combined a bent silverplated shank with a black plastic grip.

It was in 1992 that FSB's tool-makers set about recreating this design classic in tubular stainless steel using modern expansion technology. Law and behold – it worked.

Order proposal:



Window handle 3471
Page 121

Internal door furniture
Lever handle 1171
Rose 1731
Escutcheon 1735

Bathroom furniture
Lever handle 1171
Rose 1731
Roses WC 1735 0054

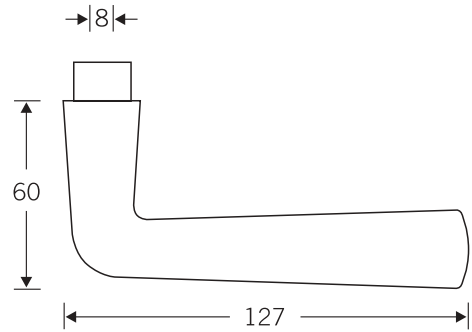
Entrance door furniture
Lever-female part 1171
Rose 1731
Escutcheon 1735
Door knob 2329 06

Lever handle



1173

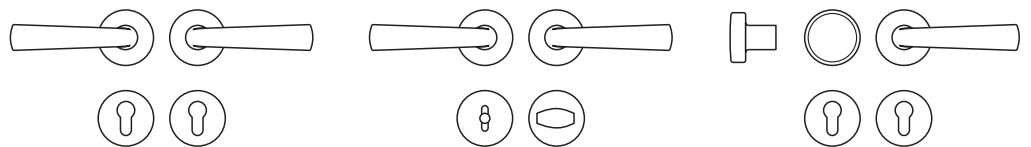
Aluminium
AluGrey
Stainless steel



FSB 1173 model sports a trumpet-shaped design very much reminiscent of a model that emerged in the late Twenties in the Frankfurt area and has also long been part of the FSB repertoire. In earlier catalogues it was listed as FSB 7411.

The chaste styling of this redesign in aluminium and stainless steel represents a compelling alternative to the famous door handle model FSB 1147, based on a design by the philosopher Ludwig Wittgenstein.

Order proposal:



Window handle 3473
Page 122

Internal door furniture	
Lever handle	1173
Rose	1731
Escutcheon	1735

Bathroom furniture	
Lever handle	1173
Rose	1731
Roses WC	1735 0054

Entrance door furniture	
Lever-female part	1173
Rose	1731
Escutcheon	1735
Door knob	2329 06

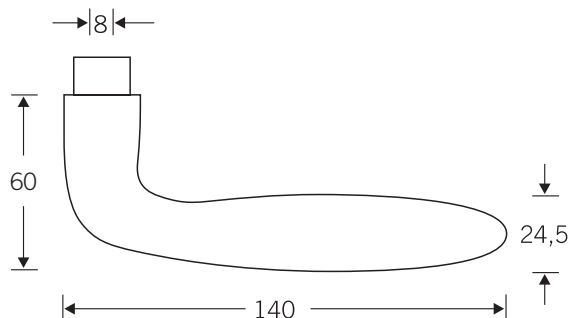
Lever handle

1
a



1176

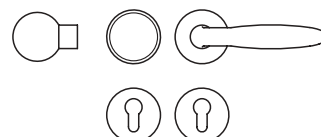
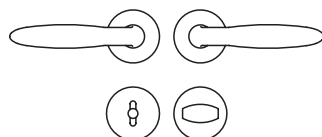
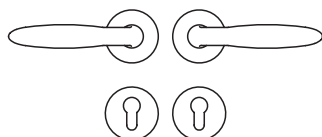
Aluminium
AluGrey
Stainless steel



The design of FSB 1176 is likewise based on an older FSB model. The shank and tip of the handle were originally made of rolled steel, this later giving way to cast aluminum, whilst the grip itself was finished in chunky black plastic.

The tool makers and R & D people at FSB joined forces to fashion this familiar form out of steel tubing, which then simply had to be rolled to a point at one end. To produce the moulds for the aluminium version was much easier.

Order proposal:



Window handle 3437
Page 120

Internal door furniture	
Lever handle	1176
Rose	1731
Escutcheon	1735

Bathroom furniture	
Lever handle	1176
Rose	1731
Roses WC	1735 0054

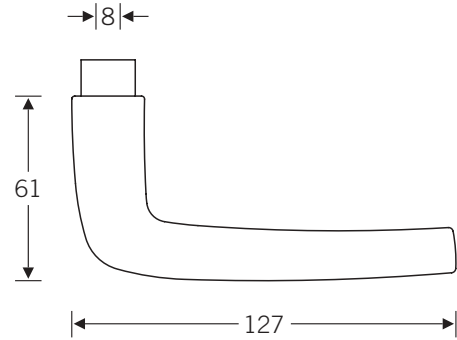
Entrance door furniture	
Lever-female part	1176
Rose	1731
Escutcheon	1735
Door knob	2302 06

Lever handle



1179

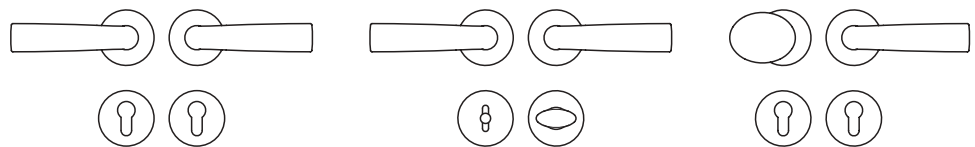
Aluminium natural colour
anodised
AluGrey



No matter how much we enjoy setting lever handles to words, some designs present us with well-nigh insurmountable obstacles. Had Ton Haas taken a standard tubular handle and simply flattened it into an upright oval shape on his anvil? Or had he got two geometric shapes to merge seamlessly together?

The simplicity of the various means used to lend new form to a tool for operating doors never ceases to amaze. FSB 1179 enters the world of hardware as inconspicuously as if it were an old hand.

Order proposal:



Window handle 3779
Page 321

Internal door furniture
Lever handle 1179
Rose 1707
Escutcheon 1708

Bathroom furniture
Lever handle 1179
Rose 1707
Roses WC 1708 7854

Entrance door furniture
Lever-female part 1179
Rose 1707
Escutcheon 1708
Door knob 2379 06

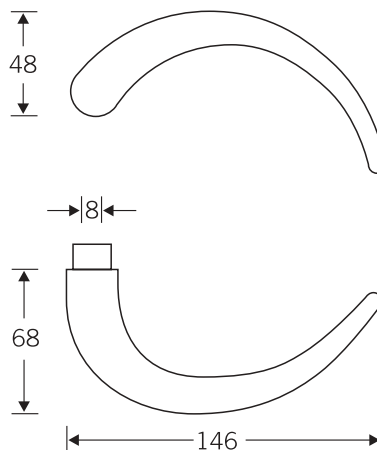
Lever handle

1
a



1191

Aluminium natural colour
anodised

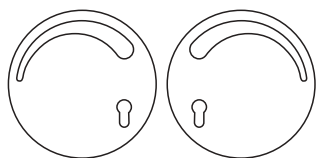


Looking at this lever design divorced from its backplate, it might be suggested that Philippe Starck was out to endow us with horns. Strangely enough, though, when these horns are fastened to the backplate they turn into door handles as functional as any you could wish for:

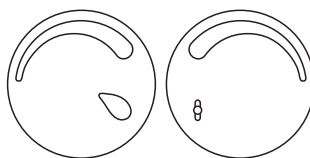
The lever can be grasped at varying heights. Thumb, forefinger and palm nestle securely. The handle fills the hand when gripped; there is sufficient volume available.

With this door furniture, FSB offers an alternative to the symmetrical design philosophy based on circles, triangles and rectangles. And the set as a whole provides a visual contrast to the rectangular door without seeking to rise above its station. Matt silver backplate, polished lever. Both in high-quality aluminium.

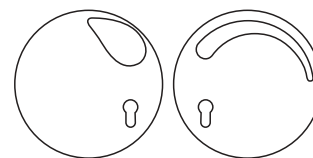
Order proposal:



Internal door furniture
Lever handle 1191
Backplate 1491



Bathroom furniture
Lever handle 1191
Backplates WC 1491
r.h. 4354
l.h. 5354



Entrance door furniture
Lever-female part 1191
Backplate 1491
Knob backplate, r.h. 1991 43
l.h. 1991 53

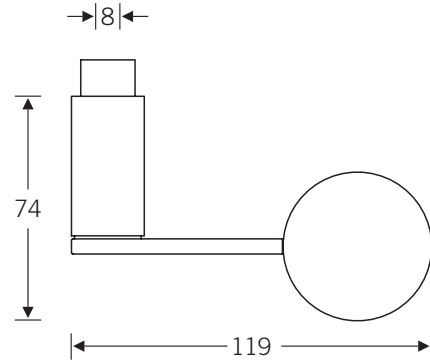
Window handle 3439
Page 372

Lever handle



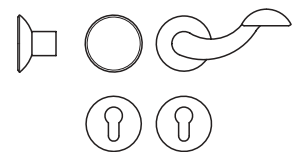
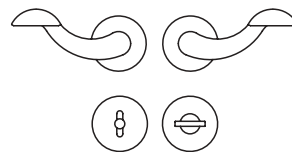
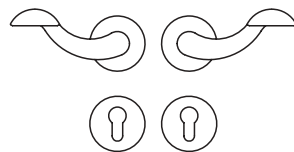
1192

Satin stainless steel
Mirror polished stainless steel



With his design effort in stainless steel, Hartmut Weise adopts and adapts a formal vocabulary for the things we use day in, day out, that has been passed down by several generations. Despite the flatness of the material used, bulkiness and gripping volume are provided for the Hand, whilst curvaceous lightness flatters the Eye – something particularly dear to the designer's heart. We dubbed this the 'Eye + Hand' series as a result.

Order proposal:



Window handle 3793
Page 377

Internal door furniture
Lever handle 1192
Rose 1707
Escutcheon 1708

Bathroom furniture
Lever handle 1192
Rose 1707
Roses WC 1708 7754

Entrance door furniture
Lever-female part 1192
Rose 1707
Escutcheon 1708
Door knob 2392 06

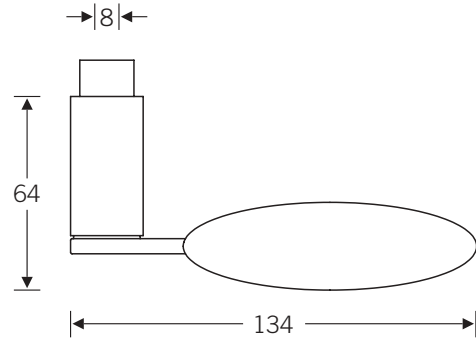
Lever handle

1
a



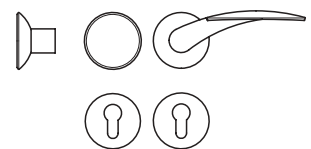
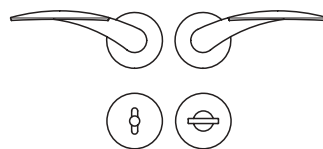
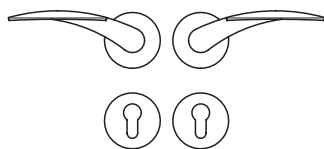
1194

Satin stainless steel
Mirror polished stainless steel



Whereas FSB 1192 constitutes a modern re-design of the famous post-horn lever handle, FSB 1194 takes up the equally famous duck's bill motif in a new guise. Together with Mario Botta, Hartmut Weise is of the view that every generation should be allowed to re-interpret tradition with its own vocabulary and materials. Only in this way can there be progress.

Order proposal:



Window handle 3793
Page 377

Internal door furniture
Lever handle 1194
Rose 1707
Escutcheon 1708

Bathroom furniture
Lever handle 1194
Rose 1707
Roses WC 1708 7754

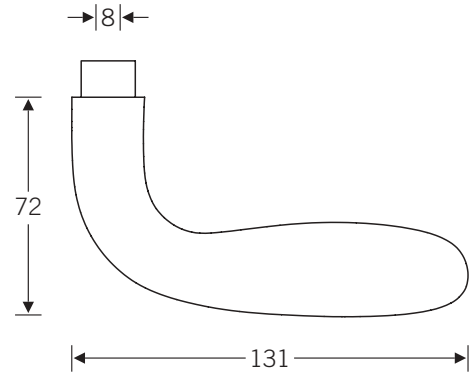
Entrance door furniture
Lever-female part 1194
Rose 1707
Escutcheon 1708
Door knob 2392 06

Lever handle



1195

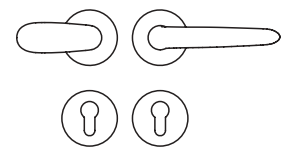
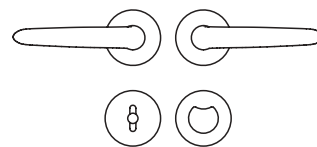
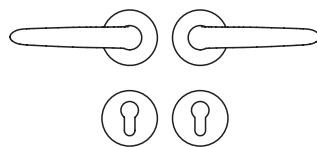
Aluminium natural colour
anodised



The 'clenched fist' designs by Thomas Sandell derive from Mother Nature and give us a very clear idea of how she operates. Their natural forms appear to have been burnished by the action of sun, wind and rain. His lever handles, window handles and doorknobs blend in with our domestic environment without further ado. They are not supposed to stand out, they simply do what's expected of them. Perhaps this is the true secret of Scandinavian design.

Mr Sandell's designs eschew intellectual trappings. The only way they are supposed to enrich our 'home and castle' is by dint of their unobtrusive usefulness. What a good thing there is such a variety of approaches to design.

Order proposal:



Window handle 3795
Page 366

Internal door furniture
Lever handle 1195
Rose 1707
Escutcheon 1708

Bathroom furniture
Lever handle 1195
Rose 1707
Roses WC 1708 7554

Entrance door furniture
Lever-female part 1195
Rose 1707
Escutcheon 1708
Door knob 2395 06

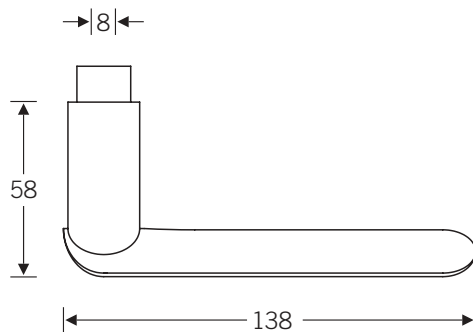
Lever handle

1
a



1196

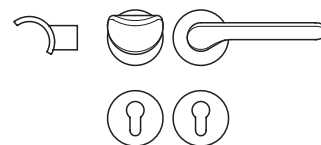
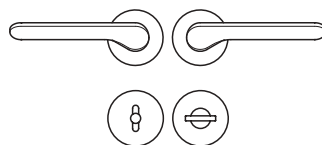
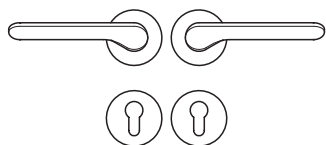
Satin stainless steel
Mirror polished stainless steel



Departing from punching, stamping and jointing, Hartmut Weise resorted, in design tests for a second range of hardware, to the latest options afforded by laser technology. As his starting point he selected proprietary tube rounds in stainless steel. Using the laser, he cut sections out of these rounds to produce hollow shapes that are a treat to Hand and Eye alike. Since the emphasis is on the Hand in this range, we are calling it 'Hand + Eye'.

FSB 1196 tidily lets the laser beam run either inline or along precisely defined curves in compliance with the rules of classical modernism, with the result that the hefty tubular section nestles snugly in the hand and even suggests a certain symmetry to the eye.

Order proposal:



Window handle 3796
Page 380

Internal door furniture
Lever handle 1196
Rose 1707
Escutcheon 1708

Bathroom furniture
Lever handle 1196
Rose 1707
Roses WC 1708 7754

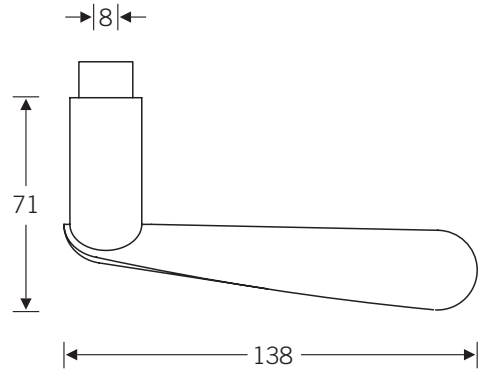
Entrance door furniture
Lever-female part 1196
Rose 1707
Escutcheon 1708
Door knob 2396 06

Lever handle



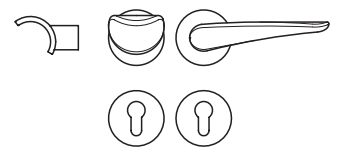
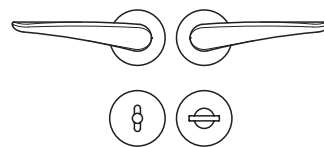
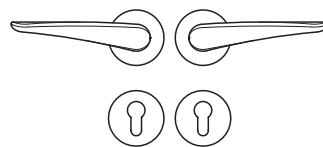
1197

Satin stainless steel
Mirror polished stainless steel



FSB 1197 makes quite different demands of the laser beam. The profile is cut out of the tube in a dynamic turning motion. The styling points the way. This handle does not in the first instance seek to be ogled but rather to be operated by the hand.

Order proposal:



Window handle 3796
Page 380

Internal door furniture
Lever handle 1197
Rose 1707
Escutcheon 1708

Bathroom furniture
Lever handle 1197
Rose 1707
Roses WC 1708 7754

Entrance door furniture
Lever-female part 1197
Rose 1707
Escutcheon 1708
Door knob 2396 06

Lever handle

1
a

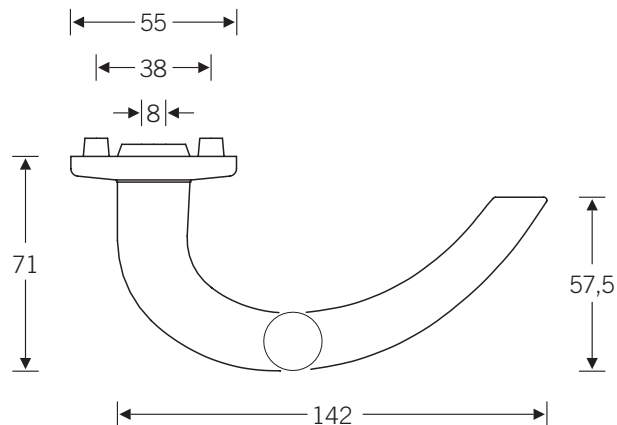


7010

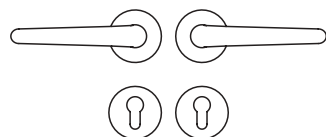
Aluminium natural colour
anodised
AluGrey
Stainless steel

In works design FSB 7010, the 'dynamic golden growth spiral' was recreated with a round cross-section, the lever tapering progressively towards the tip. This effect enhances the momentum of the natural curvature. With its restrained looks and direction-of-motion styling, FSB 7010 is a joy to hold and use.

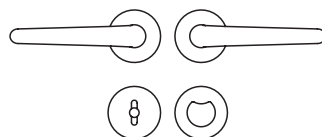
As well as the round cross-section handle, FSB also supplies models 7011 and 7012 sporting the triangular and square cross sections shown below. The models themselves are shown in Chapter 2a, "Commercial".



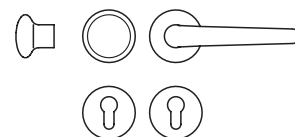
Order proposal:



Window handle 3410
Page 116



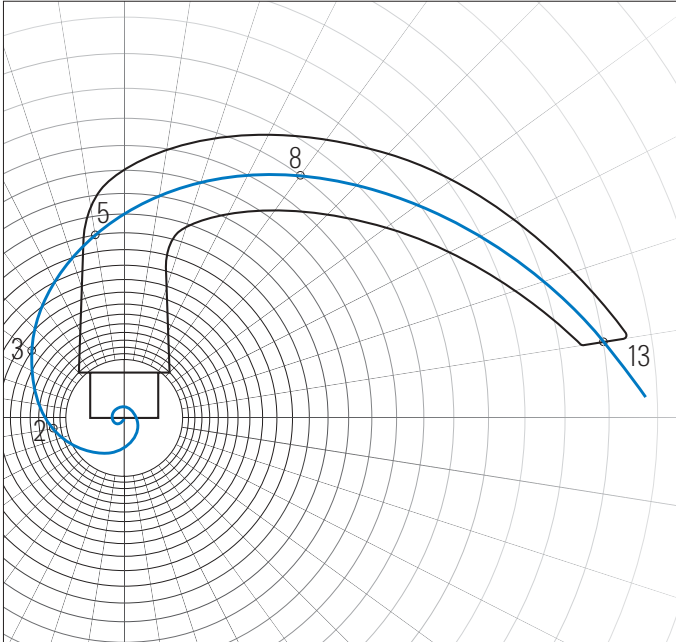
Internal door furniture
7010 63



Bathroom furniture
7010 65

Entrance door furniture
7010 66

The history of the golden section



Three door handles in search of the irrational measure of beauty or the golden spiral as the soul of handle culture:

Having read a book on the 'Nature of Beauty' by Friedrich Cramer and Wolfgang Kämpfer, we at FSB hit upon the idea of fathoming the mystery of beauty in the world of door handles with the aid of the Golden Section.

The mystery of beauty, we had read, is closely bound up with the history of an irrational number whose mysterious power man had been attempting to interpret since Vitruvius (first century B.C.). We learnt about multifarious endeavours by leading minds to visualise this mystery-enshrouded number, we read about proportioned sketches by Leonardo da Vinci and the series of numbers discovered by Leonardo

of Pisa (1170 to 1220), read about flying squares and less flightworthy rectangles. We discovered that this 'ineffable number' (Johannes Kepler, 1571 to 1630) is a symbol for the dynamics of the life process that is generally regarded as being beautiful if it adheres to the principle of self-similitude. One merely needs to observe the natural growth spiral of a sea-shell, a daisy or a sunflower's infructescence.

Fascinated by these mathematical interpretations of beauty in nature, we immediately harnessed the dynamics of the Golden Section for our own purposes and came up with a pleasing door-handle style.

In our Design Engineering dept. we generated a radial grid system in our CAD system, entered the technical specifications for a door handle and, with the aid of right angles and Fibonacci's numbers (0, 1, 1, 2, 3, 5, 8, 13, ...), constructed a line through swirling rectangles.

Before our eyes, the aesthetic soul of a handle form gently reclining towards the door materialised – an irrational measure so compelling we were a little dumbfounded.

The rest was plain sailing. Drawing on our ergonomic know-how, we arrived at three handle cross-sections, one traditionally circular, one ergonomically triangular, and one elegantly square.

We, the 650-strong FSB workforce, are proud of our new co-operatively produced

lever-handle collection. The market had been getting on at us for years to provide an alternative to the classic lever-handle style rooted in the Pythagorean laws and incapable of more than 'harmonia et symmetria'. It was not until we shot a glance at Nature and familiarised ourselves with the laws of the Golden Section and the mystery of the irrational proportional number that we hit upon the innovative alternative the market was anticipating by way of the dynamic golden growth curve.



Design
Center
Stuttgart

Excellent!

FSB 7010, 7011, 7012

1999



Industrie
Forum
Design
Hannover

**Product Design Award
+
Ecology Design Award**

FSB 7010, 7011, 7012

2000

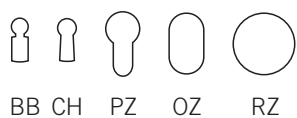
Technical information	70
Overview	71
Roses	72
Roses with spring mechanism	74
WC furnitures for special requirements	75
Backplates	76
Square backplates	84
Finger plates	86

Roses Backplates

Opening a door involves two key forces, pushing and then pulling. Both forces have a cumulative effect and need to be carefully counteracted if a door handle set is to remain in good working order over the years. Backplates and roses fulfil this function, which is why it is so important that they are properly fitted.

All plates and roses supplied by FSB feature a 7 mm plain bearing made of indestructible black GFR plastics. Backplates and roses are additionally fitted with rugged support lugs in the same material.

Lever handle sets and their accessories need to match the appropriate locks. Thus it is therefore important to heed the specifications listed below when ordering. It goes without saying that we are acquainted with the common international variations in spacings, key patterns and lock break-throughs. We nevertheless advise you to quote the lock type in use if in any doubt.

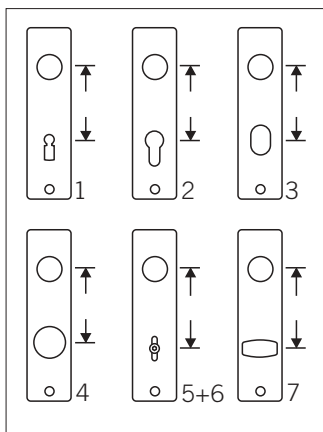


Keyholes

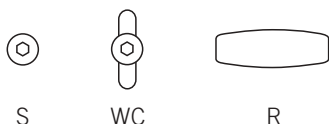
In the absence of special instructions, we supply plates and roses with lever lock keyholes, i.e. BB

Keyhole spacing

The standard keyhole spacing for internal backplates is 72 mm, for bathroom backplates 78 mm and for final exit backplates 92 mm. The spacings are measured as follows:

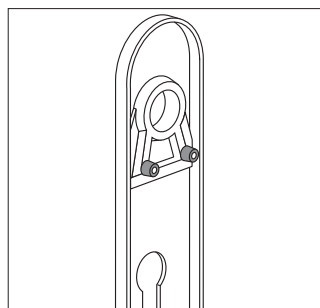


1. BB and Chubb: centre of follower to centre of key pin.
2. Profile cylinder: centre of follower to centre of profile cylinder core.
3. Oval cylinder: centre of follower to centre of oval cylinder.
4. Round cylinder: centre of follower to centre of round cylinder.
5. Emergency release: centre of follower to centre of spindle.
6. WC: centre of follower to centre of spindle.
7. Thumbturn: centre of follower to centre of spindle.



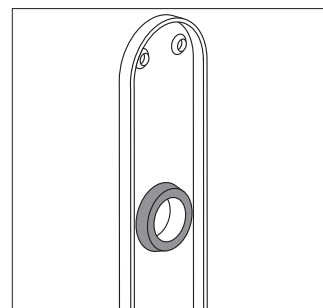
Bathroom/WC version

FSB bathroom furniture features a thumbturn (R) on the inside and an emergency release with indicator (WC) on the outside. The door can be unlocked from the outside using an Allen key or coin. The red/white indicator can be dispensed with if so desired (S). A special-purpose emergency furniture is available for old people's homes and nursery schools, shown on page 98.



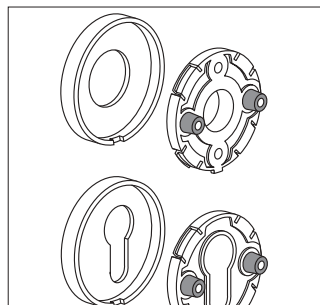
Standard short backplates with visible screws

Standard short backplates with visible screws feature two support lugs in the area beneath the handle bearing. Screw holes are designed for 3.5 mm countersunk screws.



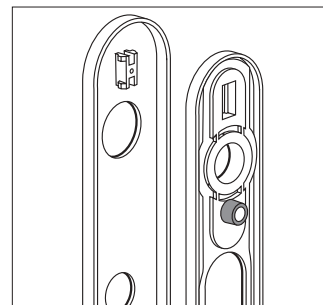
Standard backplates with visible screws

Standard backplates with visible screws incorporate a GFR plastics bearing. Screw holes are designed for 3.5 mm countersunk screws.



Roses with concealed fixing

The metal covering plates rest on a GFR-plastics backplate fitted with 2 support lugs in the fixing area. Fixing centres 38 mm.



Backplates and squareplates with concealed fixing

Backplates and squareplates with concealed fixing have a support plate similar to that for roses.

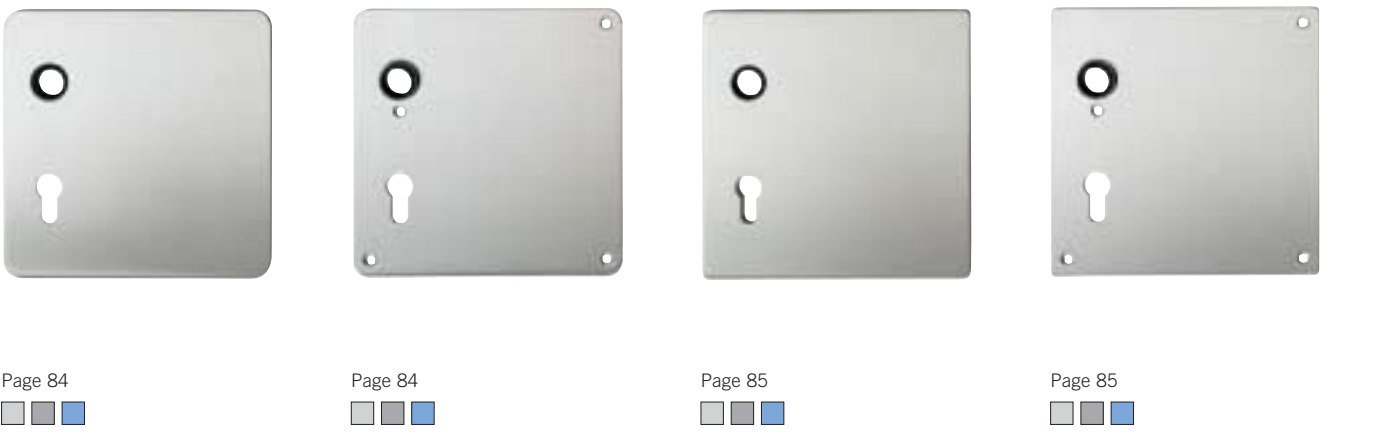
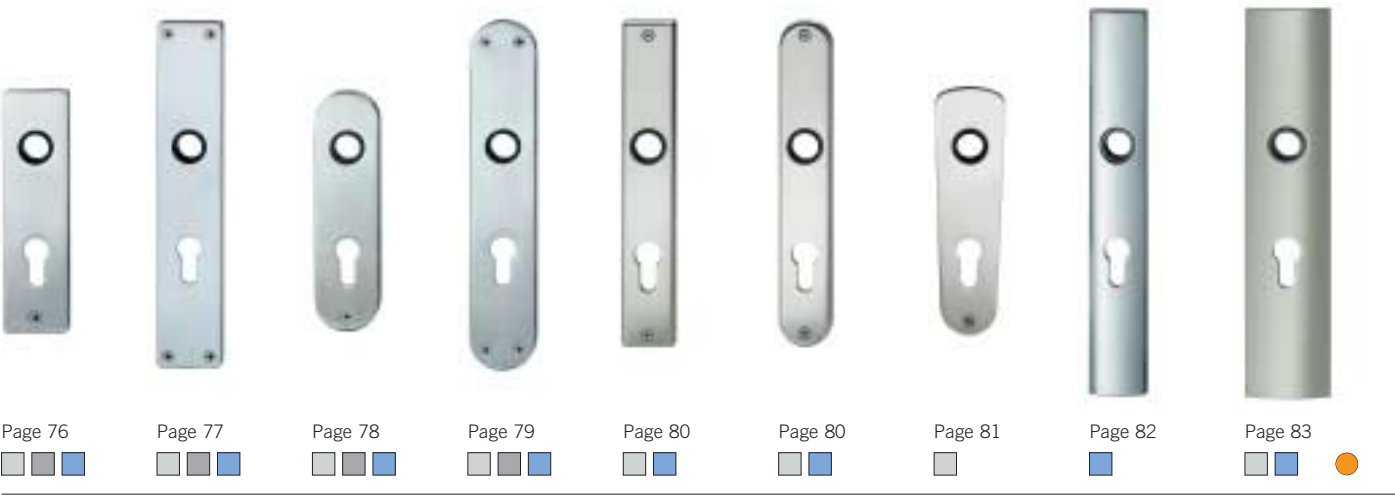
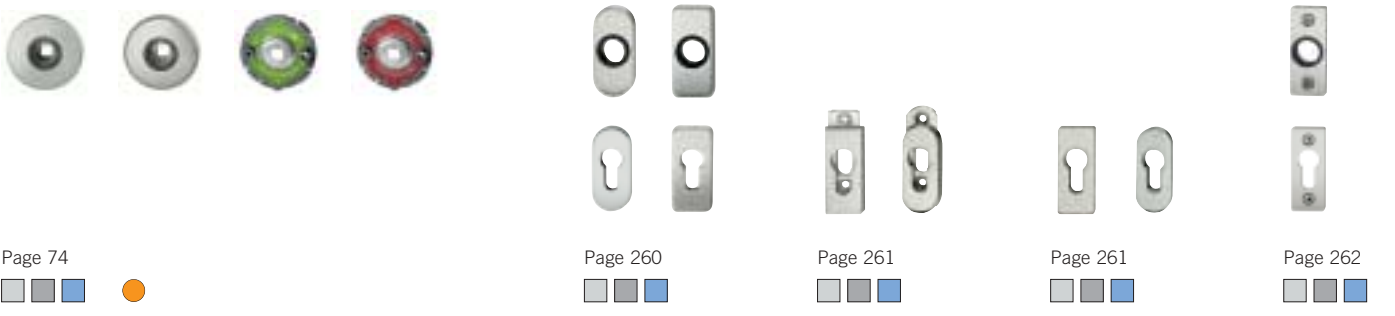
Fixing Aids

In the Fixing Aids section '13' of this Catalogue we have set out all the steps needed to ensure roses and plates are correctly fitted.

To ensure FSB door furniture is only supplemented by the appropriate FSB accessories, we manufacture all plastics components in the same black GFR plastics. The colour scheme is sustained in the black grub screw featured in FSB handle sets. This uniformity of colour means you can check the correctness of pieces before fitting the handle.

-  Aluminium
-  AluGrey
-  Stainless steel
-  New products

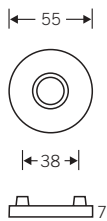
Overview



Roses

1

b



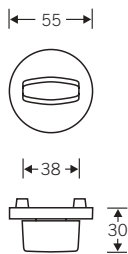
1731
without lugs 1743

Aluminium
AluGrey
Stainless steel



1735
without lugs 1744

Aluminium
AluGrey
Stainless steel



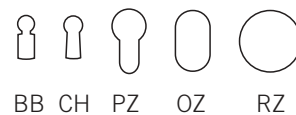
1735 0054
without lugs 1744 0054

Aluminium
AluGrey
Stainless steel



Roses with square edges

Keyholes



Roses



← 55 →



← 38 →



1707

without lugs 1705

Aluminium
AluGrey
Stainless steel

1

b



← 55 →



← 38 →



1708

without lugs 1709

Aluminium
AluGrey
Stainless steel



← 55 →



← 38 →



1708 7554

without lugs 1709 7554

Aluminium
AluGrey
Stainless steel



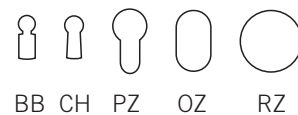
← 55 →



← 38 →



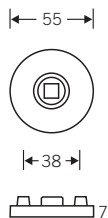
Keyholes



Roses with spring mechanism

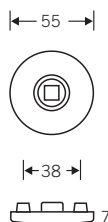
1

b



1731 2111

Aluminium
AluGrey
Stainless steel



1707 2111

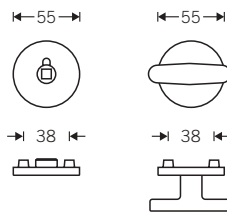
Aluminium
AluGrey
Stainless steel



The metal caps rest on a glass-fibre reinforced base equipped with two lugs in the fixing area. A spring mechanism is incorporated into the base. Rose are employed in sets of two, with a lefthand version (green cover) and a righthand version (red cover) being screwed together from opposite sides.

Return of the carrier plate is ensured by compression springs, making for an indestructible arrangement. The angle of rotation is 25°. Used in conjunction with a lever handle set, this hardware does not differ visually from the standard version.

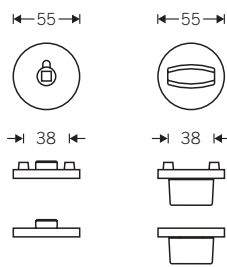
WC furniture for special requirements



1732 0054

Aluminium
AluGrey
Stainless steel

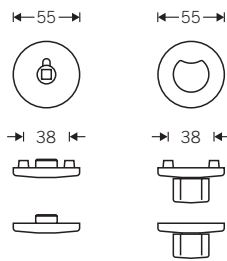
through fixing



1735 7654

without lugs 1744 7654

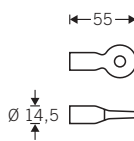
Aluminium
AluGrey
Stainless steel



1708 7654

without lugs 1709 7654

Aluminium
AluGrey
Stainless steel



3464

Aluminium

Enquiries are often received from old people's homes, nursing wards, and indeed child-care centres and schools concerning heavy-duty bathroom furniture with an emergency release on the outside. An FSB set devised for such special circumstances features a chunky, extra-large thumb-turn on the inside that can be safely operated by all hands

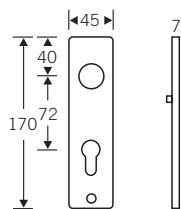
small, tremulous, or frail. This fitting is connected to a rugged emergency release on the outside that can be opened, by authorised persons only, even if resistance is put up on the inside.

WC furniture can also be combined with backplates. Please send your requests.

Backplates

1

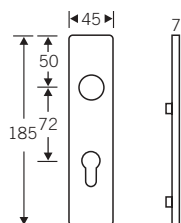
b



1402

Aluminium
Stainless steel

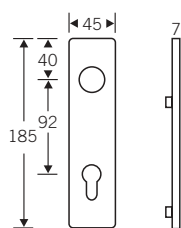
Distance 72 mm
visible fixing



1450 03

Aluminium
AluGrey
Stainless steel

Distance 72 mm
concealed fixing

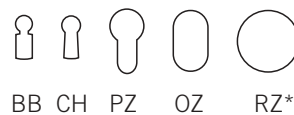


1452 03

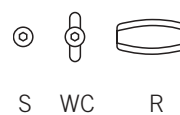
Aluminium
Stainless steel

Distance 92 mm
with unsichtbarer
Verschraubung

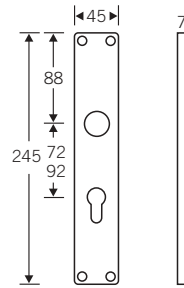
Keyholes



Bathroom/WC version



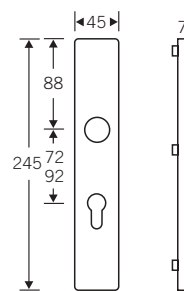
Backplates



1410

Aluminium
Stainless steel

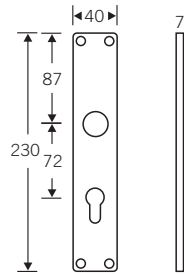
Distance 72 + 92 mm
visible fixing



1410 03

Aluminium
AluGrey
Stainless steel

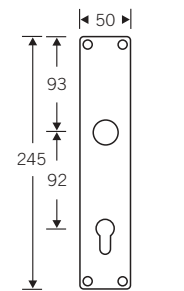
Distance 72 + 92 mm
concealed fixing



1407

Aluminium

Distance 72 mm
visible fixing



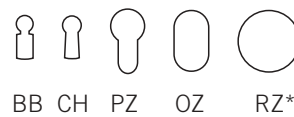
1445

Aluminium

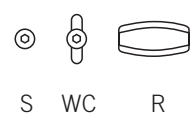
Distance 92 mm
visible fixing

* except FSB 14.. 03

Keyholes



Bathroom/WC version



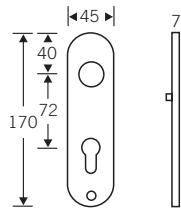
1

b

Backplates

1

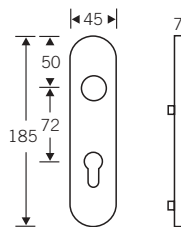
b



1415

Aluminium
Stainless steel

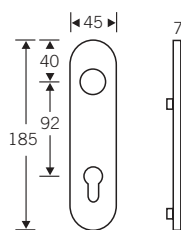
Distance 72 mm
visible fixing



1451 03

Aluminium
AluGrey
Stainless steel

Distance 72 mm
concealed fixing

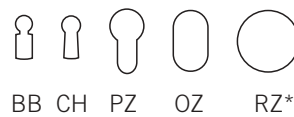


1453 03

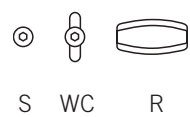
Aluminium
Stainless steel

Distance 92 mm
concealed fixing

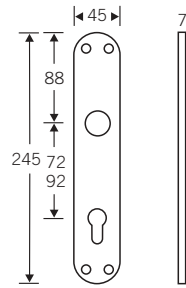
Keyholes



Bathroom/WC version



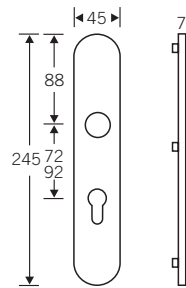
Backplates



1418

Aluminium
Stainless steel

Distance 72 + 92 mm
visible fixing



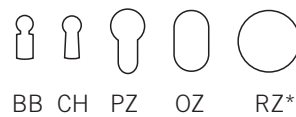
1418 03

Aluminium
AluGrey
Stainless steel

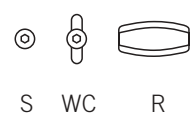
Distance 72 + 92 mm
concealed fixing

* except FSB 14.. 03

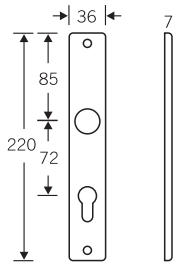
Keyholes



Bathroom/WC version



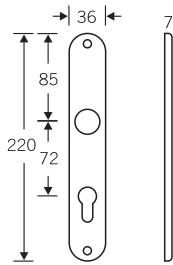
Backplates



1416

Aluminium
Stainless steel

Distance 72 mm



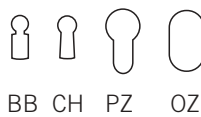
1417

Aluminium
Stainless steel

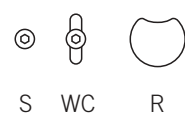
Distance 72 mm

With backplates series 1416 and 1417 FSB wants to suggest, whether lever handles shouldn't be sometimes combined with narrow backplates. Less, often is more.

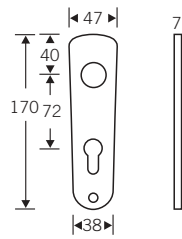
Keyholes



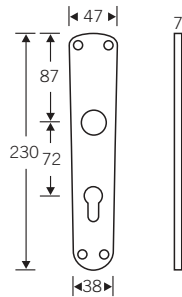
Bathroom/WC version



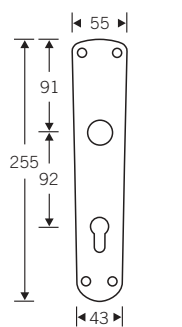
Backplates



1431
Aluminium
Distance 72 mm

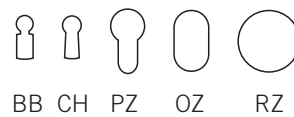


1436
Aluminium
Distance 72 mm

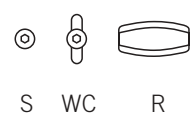


1439
Aluminium
Distance 92 mm

Keyholes



Bathroom/WC version

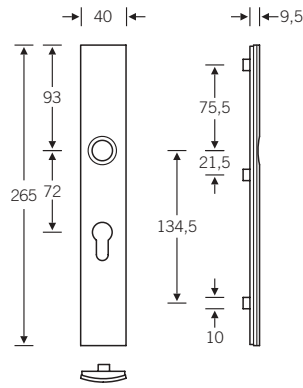


1
b

Backplates

1

b



1432

Stainless steel

Distance 72 + 92 mm

Bereits vor einigen Jahren hat Hartmut Weise dem Markt gewölbte Roses als Alternative zum kantigen Design der flachen Roses geschenkt. Jetzt reicht er ein leicht gewölbtes Schild aus edlem Stahl nach, das auf einem Unterbau aus Kunststoff bildhaft auf der Tür schwebt.

Keyholes



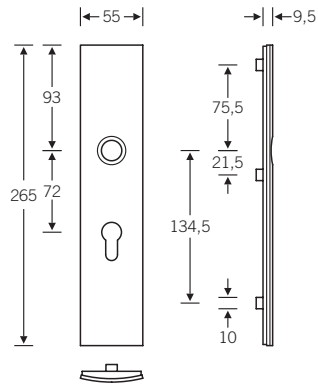
BB PZ

Bathroom/WC version



S WC R

Renovation backplate



1433

Aluminium
Stainless steel

Distance 72 + 92 mm

1433 is the larger equivalent of the familiar 1432 backplate by Hartmut Weise. Especially developed for renovation work, it measures 55 mm across and is hence ideal for covering over traces of the previous fitting. Set off by a black base, this slightly curving backplate for invisible fixing to doors somehow appears to 'hover' in space.

Keyholes



BB PZ

Bathroom/WC version



S WC R

1

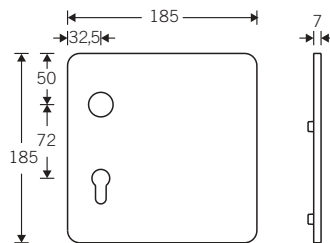
b

Square backplates
Radius corners 12 mm

1



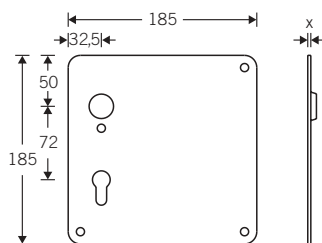
b



1483 03

Aluminium
AluGrey
Stainless steel

Radius corners 12 mm



1485 01

Aluminium (x = 3 mm)
Stainless steel (x = 2 mm)

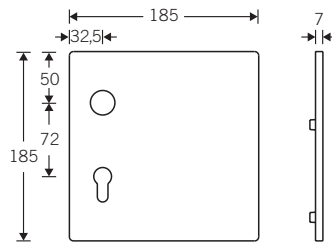
Radius corners 12 mm

Square backplates

The FSB backplate programme embraces items for both concealed and visible fixing, radiused corners or square corners. In the lever handle section of this Manual these backplates have been allotted to specific lever handle designs.

In addition FSB offers 'nibbled' or laser cut customized backplates for visible fixing. Please send dimensioned drawings. We will submit our own drawings and a quote by return.

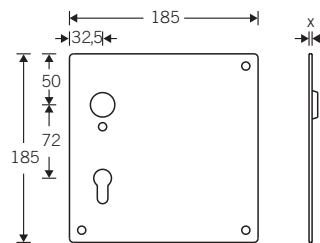
Square backplates
Radius corners 4 mm



1488 03

Aluminium
AluGrey
Stainless steel

Radius corners 4 mm



1486 01

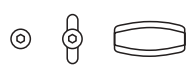
Aluminium (x = 3 mm)
Stainless steel (x = 2 mm)

Radius corners 4 mm

Keyholes

Bathroom/WC version

* except FSB 14.. 03



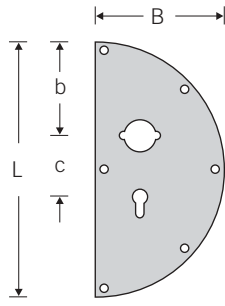
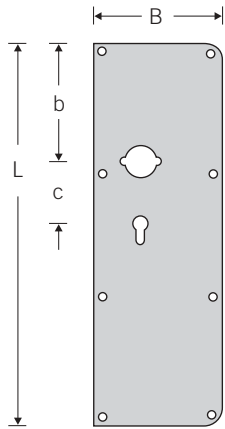
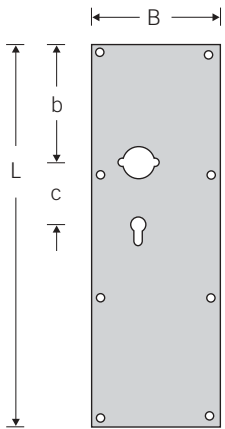
BB CH PZ OZ RZ*

S WC R

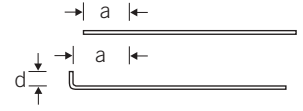
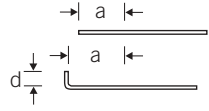
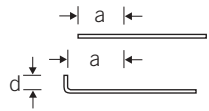
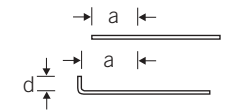
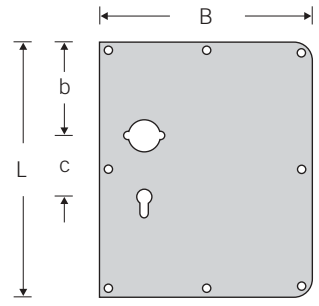
Finger plates

1

b



Aluminium
Stainless steel



Illustrated r.h.

5300 without return
5310 with return

5320 without return
5330 with return

5340 without return
5350 with return

5360 without return
5370 with return

Perforations

Finger plates can be pierced to accommodate roses or backplates. The simplest way of providing accurate specifications here is to cite the roses or backplates used together with their product codes. The following options are possible:

Option 1

Lever handle rose above (e. g. 1731), keyhole perforation below (e. g. europrofile cylinder).

Option 2

Lever handle rose above, escutcheon below (e. g. 1731, 1735).

Option 3

Backplate with visible fixing (e. g. model 1402).

Option 4

Backplate for concealed fixing (e. g. 1450).

Further options

FSB can also produce other forms of finger plates to customer specifications through 'CNC' or laser procedures. Please send dimensioned drawings. We will submit our own drawings and a quote by return.

pce	no	r. h. l. h.	L length mm	B width mm	a backset mm	b spacing mm	c keyhole spacing mm	d return mm	perforations with product codes for roses or backplates used				keyholes e. g.		
									1	2	3	4	BB	PZ	

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Overview



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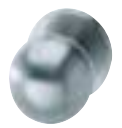
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- Aluminium
- AluGrey
- Stainless steel
- Black plastics
- New products



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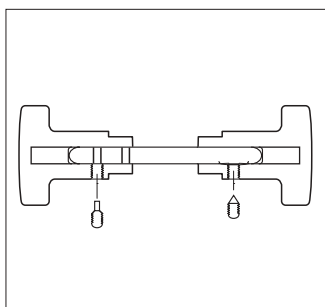
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Door knobs



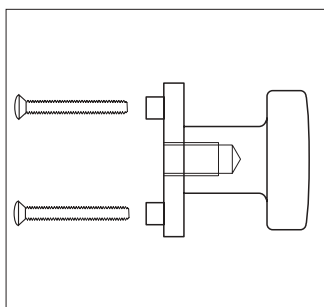
Knob handles

We supply knob handle sets as female pairs complete with a separate special-purpose FSB Stabil-spindle.

To assemble, first construct a male handle from the spindle and one of the female parts, carefully inserting the grub screw supplied through the neck of the knob and locates into the spindle. For the male knob to be correctly assembled it is generally necessary for the head of the grub screw to lie flush with the outer surface of the neck of the knob.

Thereafter, fixing is as for the FSB Stabil-spindle.

Female knob handles can of course be fitted to rotate in a plate or rose on one side only using the customised FSB half-spindle.



Fixed knobs on roses

Door knobs can be riveted to roses to form dead knobs and can be fixed in one of two ways:

Concealed through fixing and concealed face fixing

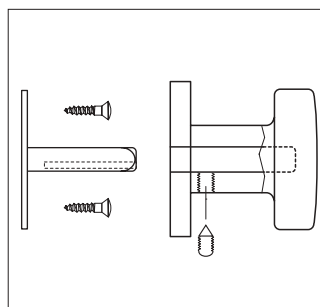
Concealed through fixing

Where concealed through fixing is required, we supply door knobs prepared for 5 mm bolts and reinforced with two lugs with standard 38 mm centres.

On the reverse, a lever handle rose of comparable technical design is used (FSB 1731 50.. and 1707 50..).

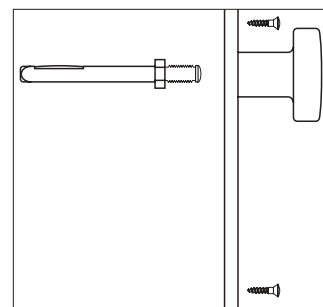
The M5 screws are 45 mm in length, making them suitable for doors 37-46 mm thick. For other door thicknesses, screws of the appropriate size should be used (FSB 0308 05..).

In this configuration, the door knob can be fastened to an FSB lever handle on the reverse by means of an FSB half-spindle screwed into the 12 mm threaded neck of the knob.



Concealed face fixing

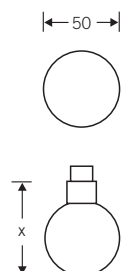
Concealed face fixing first involves screwing a steel base rose to the door. The dead knob is then positioned so as to precisely cover this and is secured with a grub screw.



Backplate with dead knob

FSB also supplies door knobs rigidly mounted on backplates. These feature a 12 mm internal thread to accommodate the FSB Stabil-half-spindle provided. Before fitting the plate, the spindle is firmly screwed into the shank of the knob. Backplate and spindle are then fitted to the door and the procedure is repeated on the reverse.

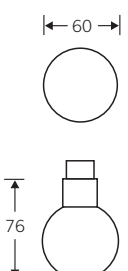
Knob handles



0802

Aluminium (x = 70 mm)
 AluGrey (x = 70 mm)
 Stainless steel (x = 66 mm)

8 + 10* mm □-hole

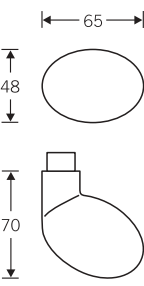


0803

Stainless steel

8 mm □-hole

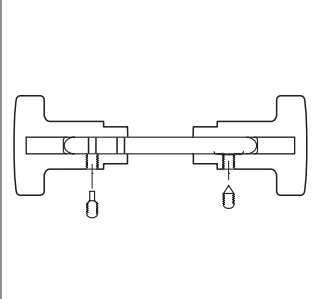
* only Aluminium



0804

Aluminium
 Stainless steel

8 mm □-hole



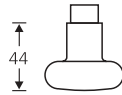
Turnable knob handles are made and supplied by FSB as female sections. Knobsets are created by joining two female parts together using the FSB Stabil spindle 0102.

Knob handles

1



← 53 →



0806

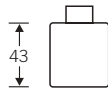
Aluminium

8 + 10 mm □-hole

C



← 40 →



0808 00..

44 r.h. | 45 l.h.

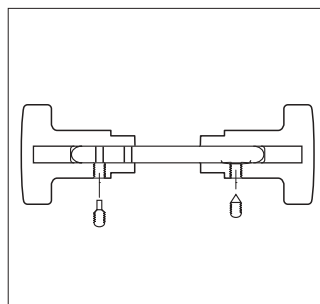
Aluminium natural colour
anodised

Stainless steel

8 mm □-hole

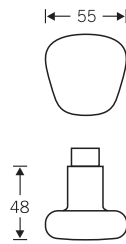
Design: Franco Clivio

Illustration r.h.



Turnable knob handles are made and supplied by FSB as female sections. Knobsets are created by joining two female parts together using the FSB Stabil spindle 0102.

Knob handles



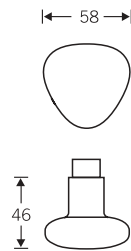
0810

Aluminium

8 + 10 mm □-hole

1

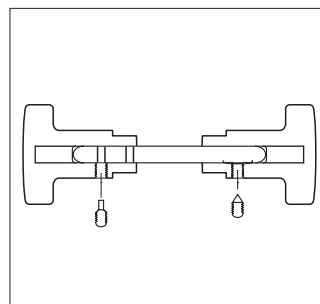
C



0817

Aluminium

8 + 10 mm □-hole

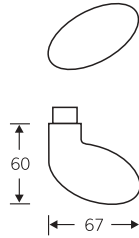


Turnable knob handles are made and supplied by FSB as female sections. Knobsets are created by joining two female parts together using the FSB Stabil spindle 0102.

Knob handles

1

C



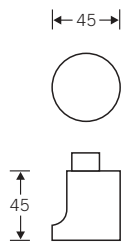
0826 00..

44 r.h. | 45 l.h.
Aluminium natural colour
anodised
AluGrey

8 mm □-hole

Design: Hartmut Weise

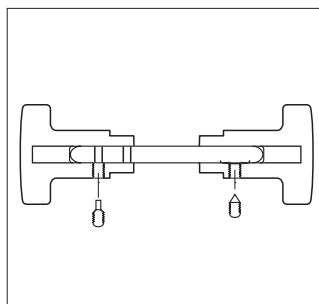
Illustration r.h.



0828

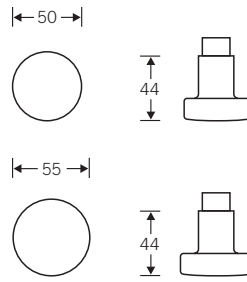
Aluminium
Stainless steel

8 mm □-hole



Turnable knob handles are made and supplied by FSB as female sections. Knobsets are created by joining two female parts together using the FSB Stabil spindle 0102.

Knob handles

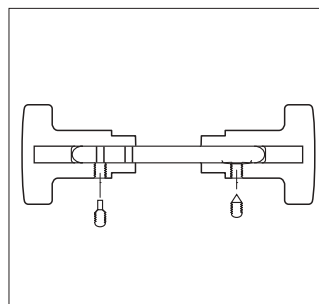


0829

Aluminium Ø 50 mm
 AluGrey Ø 50 mm
 Stainless steel Ø 55 mm

8 mm □-hole

1
 C

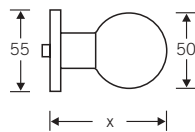


Turnable knob handles are made and supplied by FSB as female sections. Knobsets are created by joining two female parts together using the FSB Stabil spindle 0102.

Door knobs

1

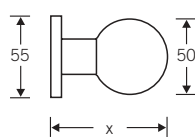
C



2302 06

Aluminium (x = 77 mm)
AluGrey (x = 77 mm)
Stainless steel (x = 73 mm)

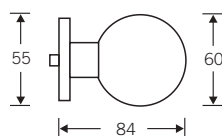
concealed through fixing
c:c screw holes 38 mm



2302 05

Aluminium (x = 77 mm)
AluGrey (x = 77 mm)
Stainless steel (x = 73 mm)

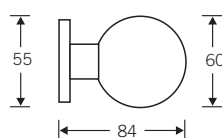
concealed face fixing



2303 06

Stainless steel

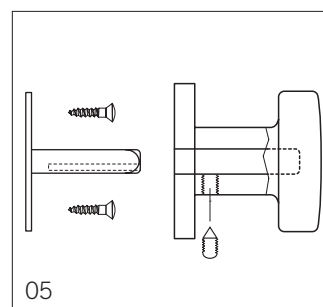
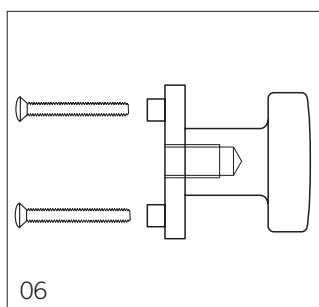
concealed through fixing
c:c screw holes 38 mm



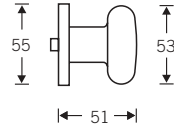
2303 05

Stainless steel

concealed face fixing



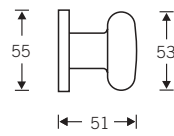
Door knobs



2306 06

Aluminium

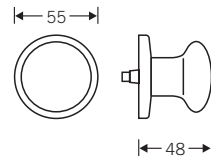
concealed face fixing



2306 05

Aluminium

concealed face fixing



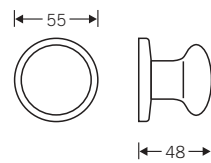
2380 06

Aluminium

AluGrey

Stainless steel

concealed through fixing
c:c screw holes 38 mm



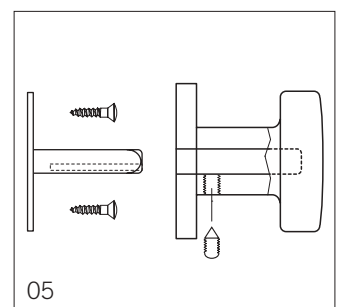
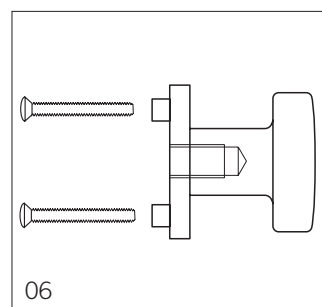
2380 05

Aluminium

AluGrey

Stainless steel

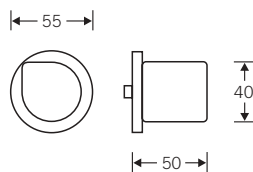
concealed face fixing



Door knobs

1

C

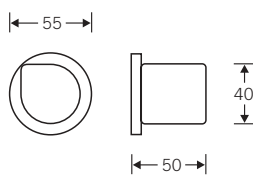


2308 ..06

04 r.h. | 05 l.h.
Aluminium natural colour
anodised
Stainless steel

concealed through fixing
c:c screw holes 38 mm

Design: Franco Clivio



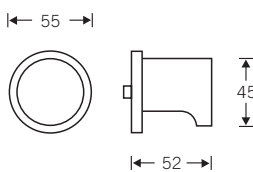
2308 ..05

04 r.h. | 05 l.h.
Aluminium natural colour
anodised
Stainless steel

concealed face fixing

Design: Franco Clivio

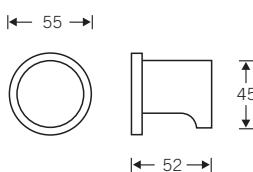
Illustration r.h.



2322 06

Aluminium
Stainless steel

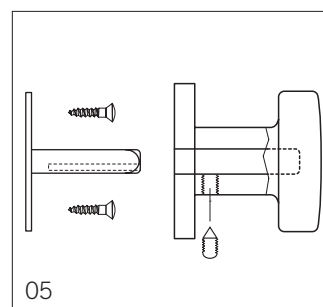
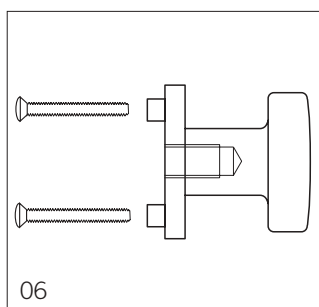
concealed through fixing
c:c screw holes 38 mm



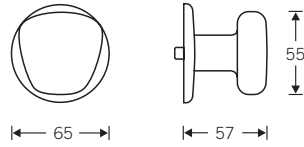
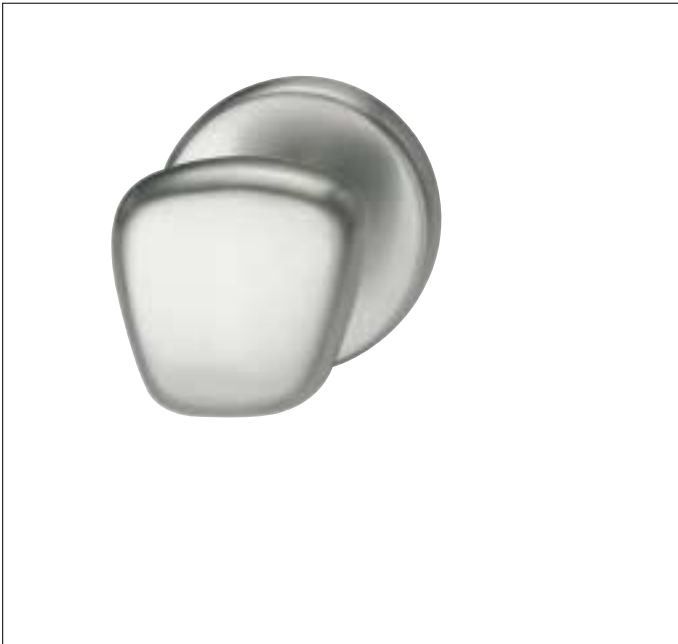
2322 05

Aluminium
Stainless steel

concealed face fixing



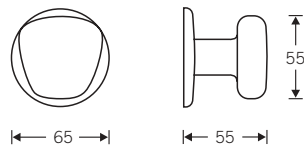
Door knobs



2320 06

Aluminium

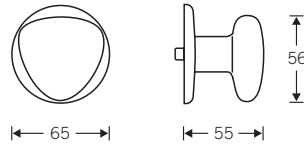
concealed through fixing
c:c screw holes 38 mm



2320 05

Aluminium

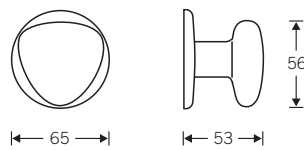
concealed face fixing



2327 06

Aluminium

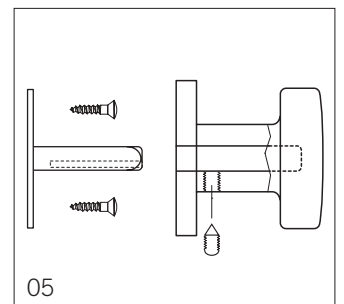
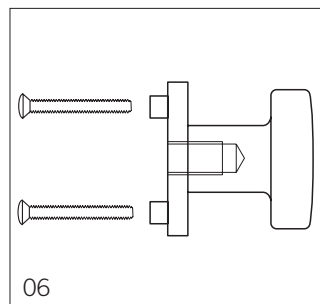
concealed through fixing
c:c screw holes 38 mm



2327 05

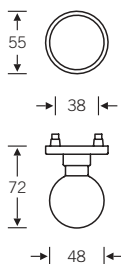
Aluminium

concealed face fixing



Door knobs

1



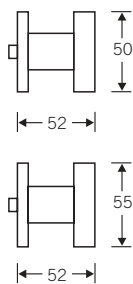
2316 06

AluGrey

concealed through fixing
c:c screw holes 38 mm

Design: Christoph Mäckler

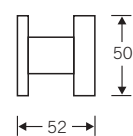
C



2329 06

Aluminium Ø 50 mm
AluGrey Ø 50 mm
Stainless steel Ø 55 mm

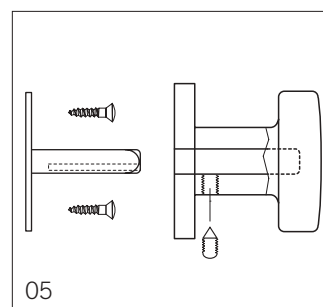
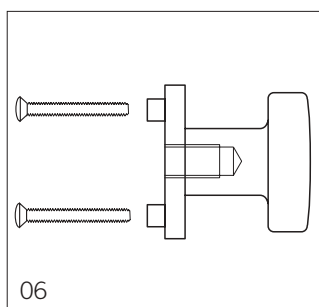
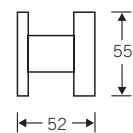
concealed through fixing
c:c screw holes 38 mm



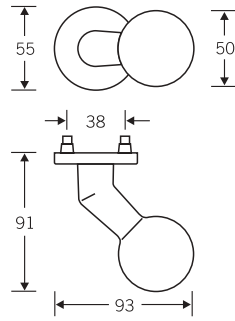
2329 05

Aluminium Ø 50 mm
AluGrey Ø 50 mm
Stainless steel Ø 55 mm

concealed face fixing



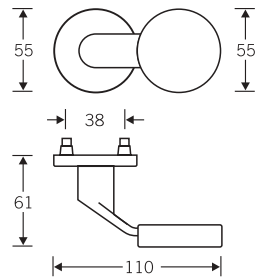
Door knobs



2346 06

Aluminium
AluGrey
Stainless steel

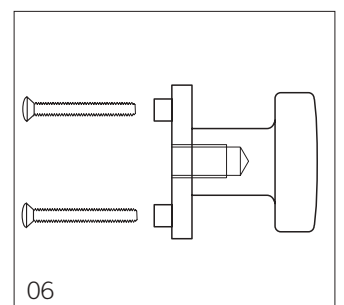
concealed through fixing
c:c screw holes 38 mm



2354 06

Stainless steel

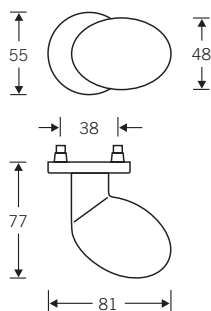
concealed through fixing
c:c screw holes 38 mm



Door knobs

1

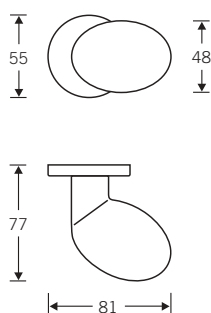
C



2304 06

Aluminium
Stainless steel

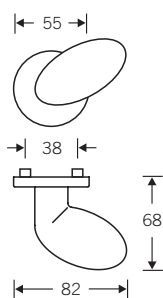
concealed through fixing
c:c screw holes 38 mm



2304 05

Aluminium
Stainless steel

concealed face fixing

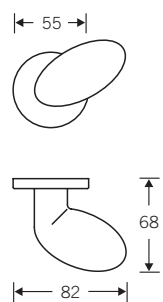


2326 ..06

04 r.h. | 05 l.h.
Aluminium natural colour
anodised
AluGrey

concealed through fixing
c:c screw holes 38 mm

Illustration r.h.



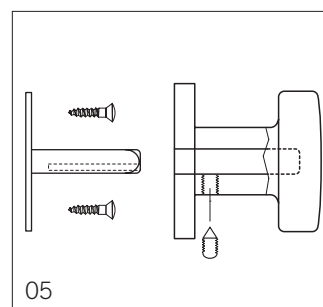
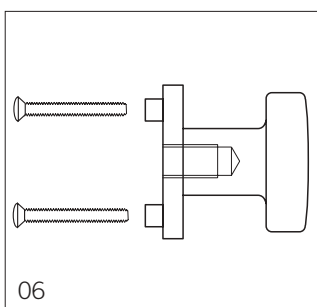
2326 ..05

04 r.h. | 05 l.h.
Aluminium
AluGrey

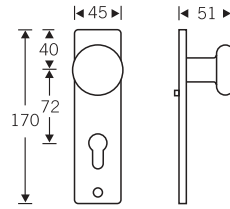
concealed face fixing

Illustration r.h.

Design: Hartmut Weise

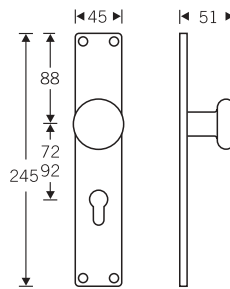


Knob backplates

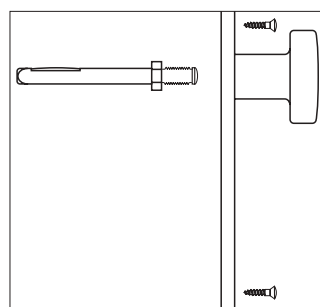


1904
Aluminium
Distance 72 mm

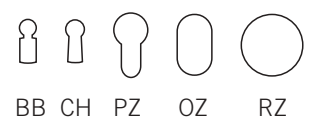
1
C



1920
Aluminium
Distance 72 + 92 mm

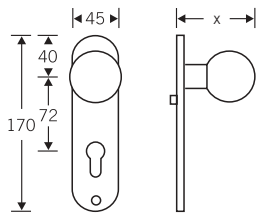


Keyholes



Knob backplates

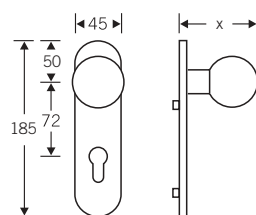
1
C



1923

Aluminium (x = 77 mm)
Stainless steel (x = 73 mm)

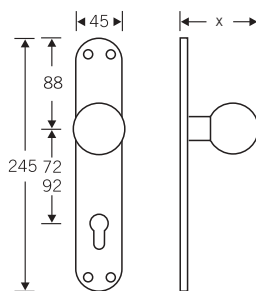
Distance 72 mm
visible fixing



1964 03

Aluminium (x = 78 mm)
AluGrey (x = 78 mm)
Stainless steel (x = 73 mm)

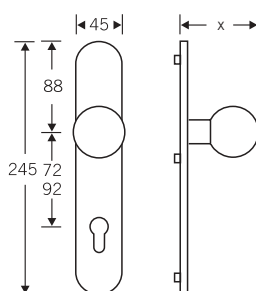
Distance 72 mm
concealed fixing



1927

Aluminium (x = 77 mm)
Stainless steel (x = 73 mm)

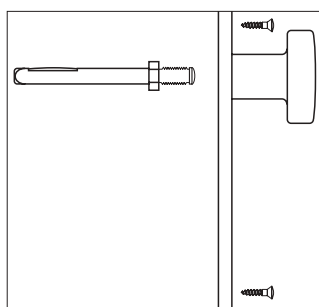
Distance 72 + 92 mm
visible fixing



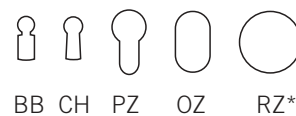
1927 03

Aluminium (x = 77 mm)
AluGrey (x = 77 mm)
Stainless steel (x = 73 mm)

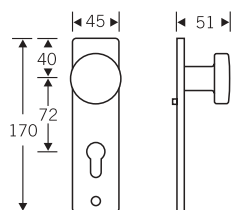
Distance 72 + 92 mm
concealed fixing



Keyholes



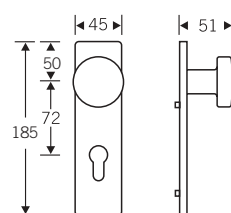
Knob backplates



1966

Aluminium
Stainless steel

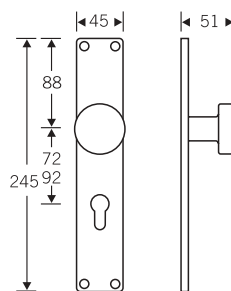
Distance 72 mm
visible fixing



1963 03

Aluminium
AluGrey
Stainless steel

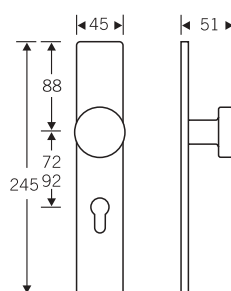
Distance 72 mm
concealed fixing



1970

Aluminium
Stainless steel

Distance 72 + 92 mm
visible fixing

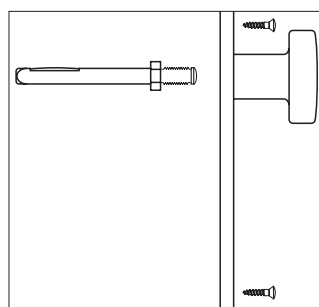


1970 03

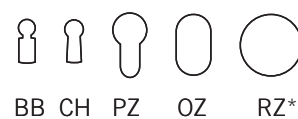
Aluminium
AluGrey
Stainless steel

Distance 72 + 92 mm
concealed fixing

* except FSB 19.. 03

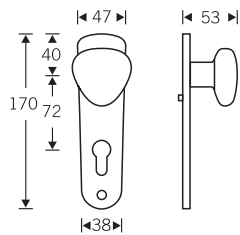


Keyholes



Knob backplates

1

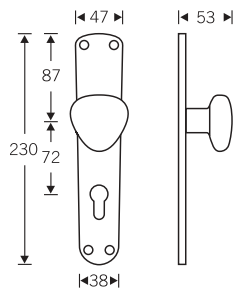


1936

Aluminium

Distance 72 mm

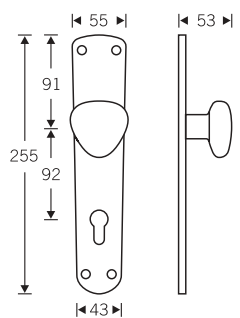
C



1942

Aluminium

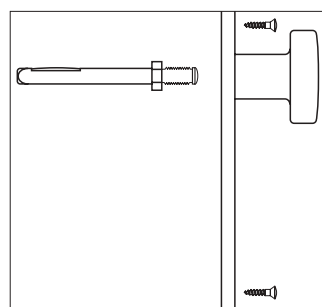
Distance 72 mm



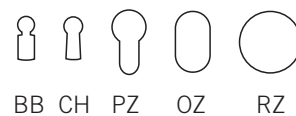
1945

Aluminium

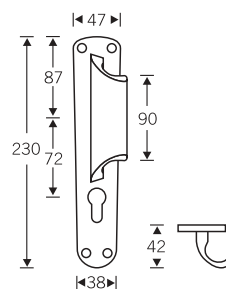
Distance 92 mm



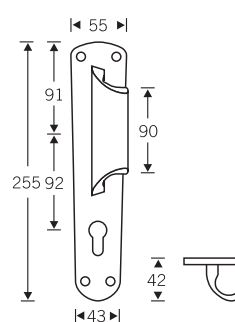
Keyholes



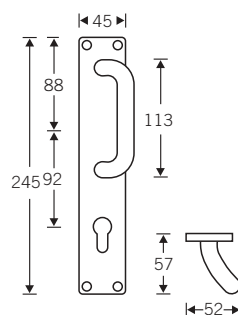
Pull handles on backplates



2121
Aluminium
Distance 72 mm



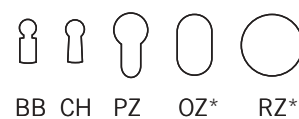
2123
Aluminium
Distance 92 mm



2144
Aluminium
Distance 92 mm

* except FSB 2121

Keyholes



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Even humdrum items such as window handles are subject to the laws of commodity aesthetics, i.e. they need to be selected to match the lever handles in use.

Overview



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- Aluminium
- AluGrey
- Stainless steel
- Black plastics
- White plastics
- New products

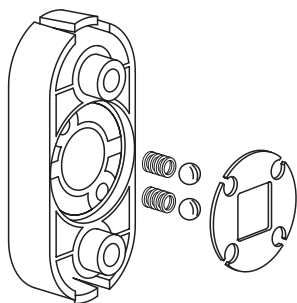
						
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Page 132	Page 125	Page 125	Page 126	Page 126	Page 127	Page 127
				 	 	

						
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Window handles



The FSB click-stop mechanism

All FSB window handles with click-stop mechanisms comply with the RAL quality standard. The RAL quality board has drawn up specifications for window handles that are designed to ensure lasting quality and performance.

The FSB click-stop device enables windows to be efficiently closed, tilted, or opened. This device is made up of steel ball bearings in a rugged GFR plastics housing. Whenever the window is operated, the handle clicks audibly into place. Handles can be supplied with a 45-degree 'night-tilt' setting on request.

FSB supplies window handles with or without a click-stop mechanism.

For models with click-stop mechanisms the following applies:

FSB supplies these handles as standard with a rose thickness of 14 mm, lugs of 10 mm dia., and a 7 mm spindle with a 30 mm projection, the distance between fixing centres being 43 mm. The same handles can also be supplied with 12 mm Ø lugs or without lugs.

In the case of models without click-stop mechanism, the rose thickness is just 7 mm. The distance between fixing centres remains 43 mm.

FSB window handles are supplied without screws. Fixing is by means of 5 mm oval head screws.

Window handles with security characteristics

For burglar-resistant windows conforming to DIN ENV 1627, there are, in addition to the various security criteria involved, corresponding requirements for the handles used. Such window handles are required to be lockable and specially resistant to twisting and pulling.

Where lockable window handles are concerned, these conditions have for years been set forth in the RAL quality standards together with more extensive design requirements.

Indeed, the values for twisting and pulling forces are twice as stringent as those specified in DIN ENV 1627. Certification and quality assurance tests carried out by the RAL Quality Association ensure the quality and fitness for function of lockable windows.

In this Manual, FSB presents two new designs of lockable window handle alongside the familiar standard styles and these are also available in the same style without cylinders.

A rose with a catch and locking mechanism allows FSB's wide variety of window handle designs to be adopted for the special requirements of burglar-resistant windows. The rose can be fitted in one of two positions, with the cylinder either at the top or bottom. The lockable adaptor rose is, of course, likewise tested and monitored to RAL quality standards. Models 3423 and 3476 shown here are stocked as standard. Any other handle design may also be selected for fitting to the adaptor rose. In such instances, FSB asks that the necessary delivery time be borne in mind.

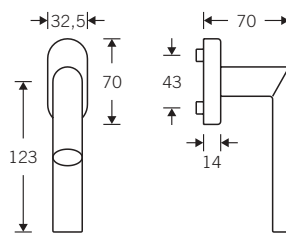
Tilt before turning

Specially engineered lockable handles are required for window mechanisms incorporating the "tilt before turning" action which are often fitted in schools, offices and hospitals and which prevent the window being unintentionally opened without impairing its ventilation properties. FSB produces such special-purpose window handles to the familiar designs on request.

Window handle locks

Rounding off the range of security fittings for windows are window handle locks on which any design of window handle can be mounted and anti-leverage devices for window sashes.

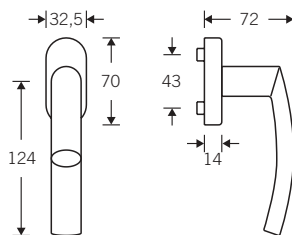
Window handles



3409

Aluminium
AluGrey
Stainless steel

Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



3440

Aluminium
AluGrey
Stainless steel

Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

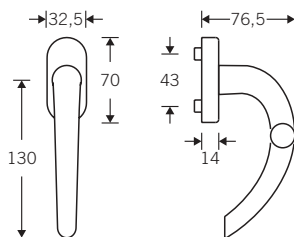


Window handles

1



d



3410

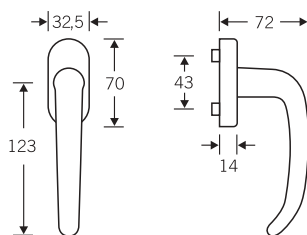
3411 

3412 

Aluminium
AluGrey
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Besides the circular-section grip, FSB also supplies alternative triangular and square cross-sections as 3411 and 3412.



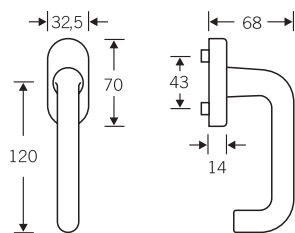
3423

Aluminium
AluGrey
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



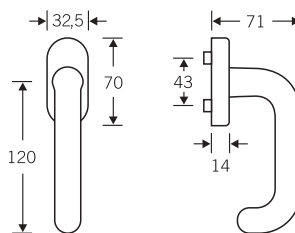
Window handles



3421

Aluminium
AluGrey
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



3446

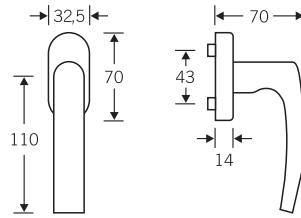
Aluminium
AluGrey
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Window handles

1

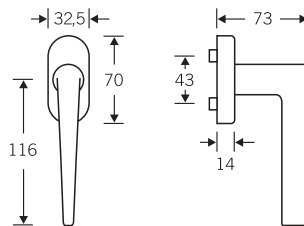


3424

Aluminium
AluGrey
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

d



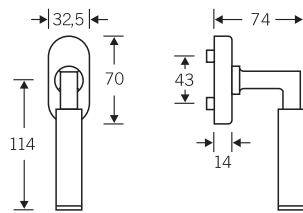
3425

Aluminium
AluGrey
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Window handles



3432

Aluminium natural colour
anodised
Stainless steel

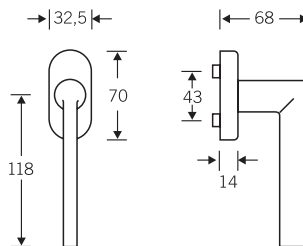
Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Available in:

Aluminium natural colour

Aluminium natural colour
black DUROHORN® handle

Stainless steel



3435

Aluminium natural colour
anodised
AluGrey
Stainless steel

Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

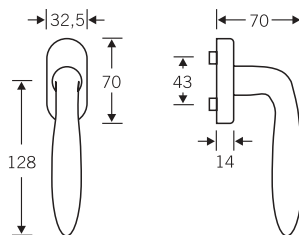
Design: Hartmut Weise



Window handles

1

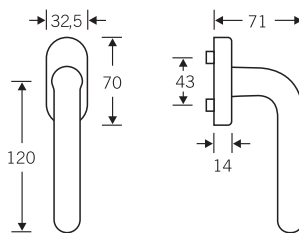
d



3437

Aluminium
AluGrey
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

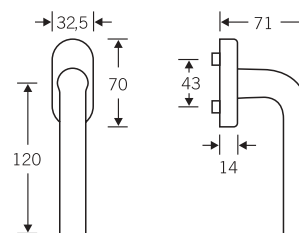


3447

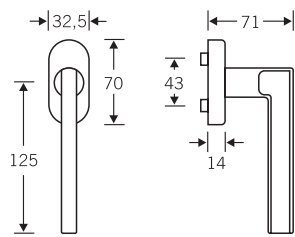
3422

Aluminium
AluGrey
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Window handles

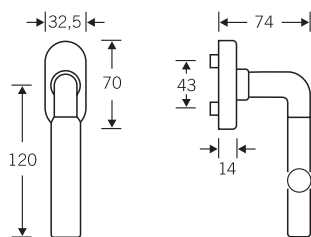


3459

Aluminium
AluGrey
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Design: Heike Falkenberg



3471

Aluminium
AluGrey
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

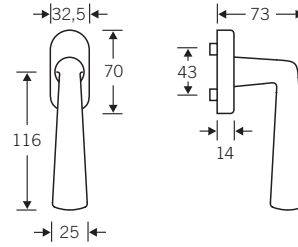


Window handles

1



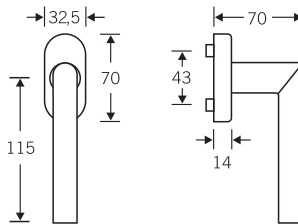
d



3473

Aluminium
AluGrey
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



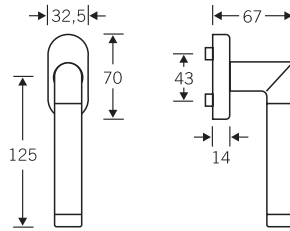
3476

Aluminium
AluGrey
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Window handles



3477

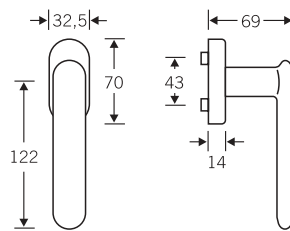
Aluminium

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Available in:

Aluminium natural colour
handle stainless steel

Aluminium natural colour
handle black



3484

Aluminium
AluGrey
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

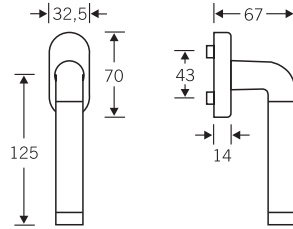


Window handles

1



d



3489

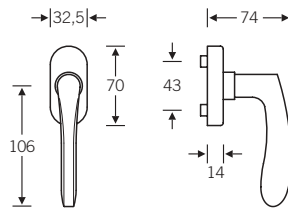
Aluminium natural colour
anodised

Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Available in:

Aluminium natural colour
handle stainless steel

Aluminium natural colour
handle black



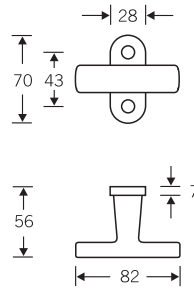
3736

AluGrey

Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



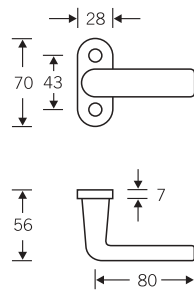
Window handles



3401

Aluminium

c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



3402

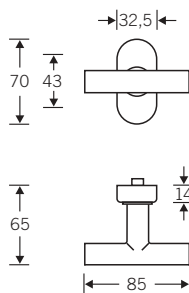
Aluminium

c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Window handles

1

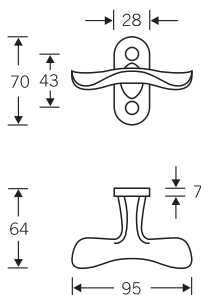
d



3403

Aluminium
AluGrey
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

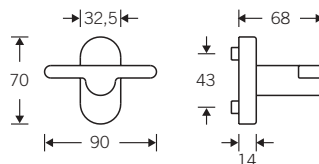


3404

Aluminium

c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

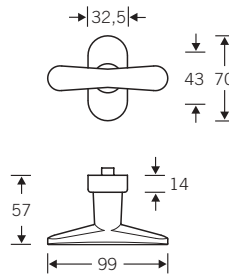
Window handles



3420

Aluminium
Stainless steel

Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



3455

Aluminium natural colour
anodised

Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Design: Hartmut Weise

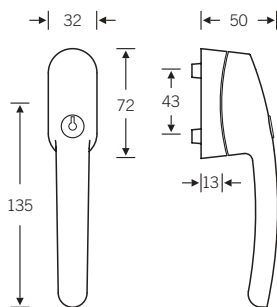


Window handles

1



d



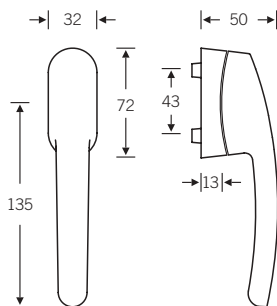
3496

Aluminium

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Keys to differ – keys to pass

for security windows
acc. DIN V ENV 1627



3496 00

Aluminium

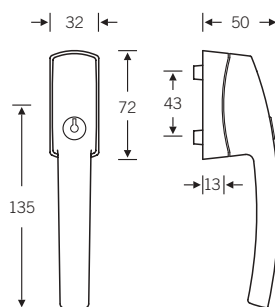
Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Click-stop + protection

Technical information page 114

Window handles



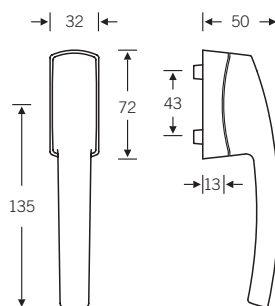
3497

Aluminium

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Keys to differ – keys to pass

for security windows
acc. DIN V ENV 1627



3497 00

Aluminium

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Click-stop + protection

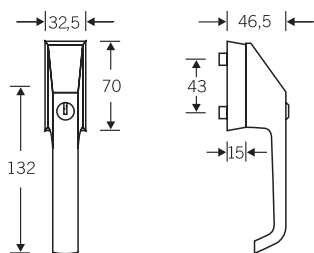
Technical information page 114

Window handles

1



d



3488

Aluminium
Aluminium + colour

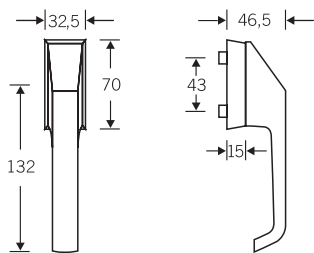
Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Keys to differ – keys to pass

for security windows
acc. DIN V ENV 1627



Click-stop + protection



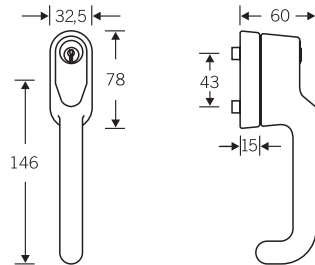
3488 00

Aluminium
Aluminium + colour

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Window handles



3481

Aluminium

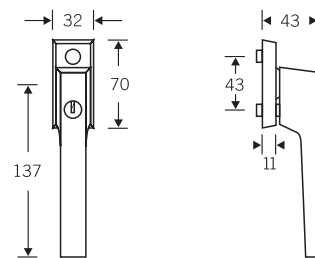
Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Keys to differ – keys to pass

for security windows
acc. DIN V ENV 1627



Click-stop + protection



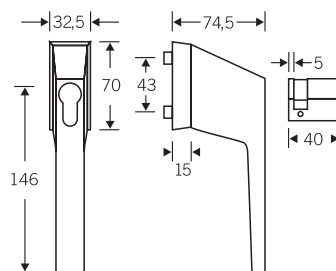
3492

Aluminium

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Keys to differ – keys to pass

Window handle prepared for profile cylinder lock



3495

Aluminium

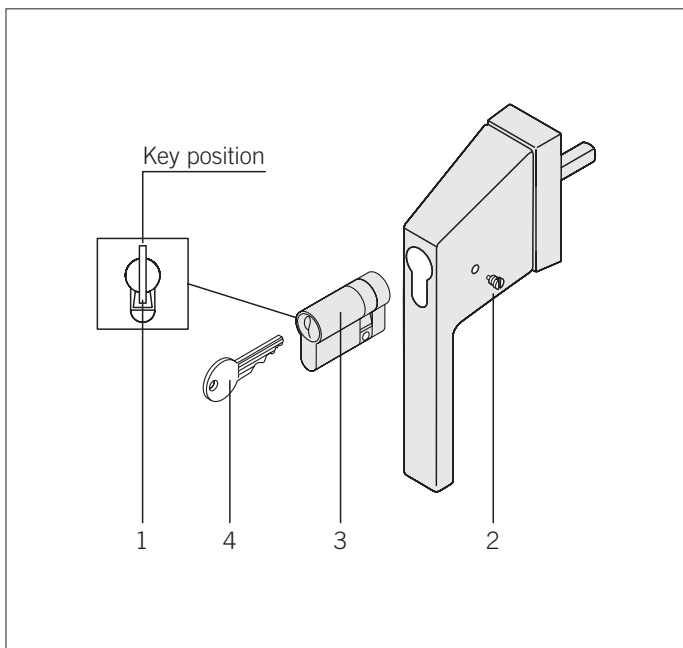
Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

prepared for single profile cylinder

for security windows
acc. DIN V ENV 1627



Click-stop + protection

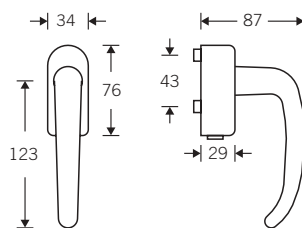


Fixing aid

Inserting the cylinder: Loosen grub screw (2), set the Cylinder thrower to the vertical Position before assembly (1),insert the cylinder (3) and pressing until there is an audible click. Tighten grub screw (2). Further pressure on the cylinder (3) causes the handle to become locked. To unlock, turn the key (4) clockwise.

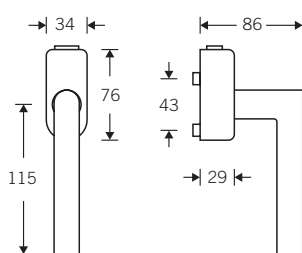
Removing the cylinder: Set the cylinder (3) in the unlocked position. Loosen grub screw (2). The cylinder (3) can now be removed by turning the key (4) anticlockwise.

Window lock acc.
DIN V ENV 1627



3423 80

Aluminium
AluGrey
Stainless steel



3476 80

Aluminium
AluGrey
Stainless steel

Window lock matching FSB-
window handles on security
windows acc. DIN V ENV 1627



Click-stop + protection

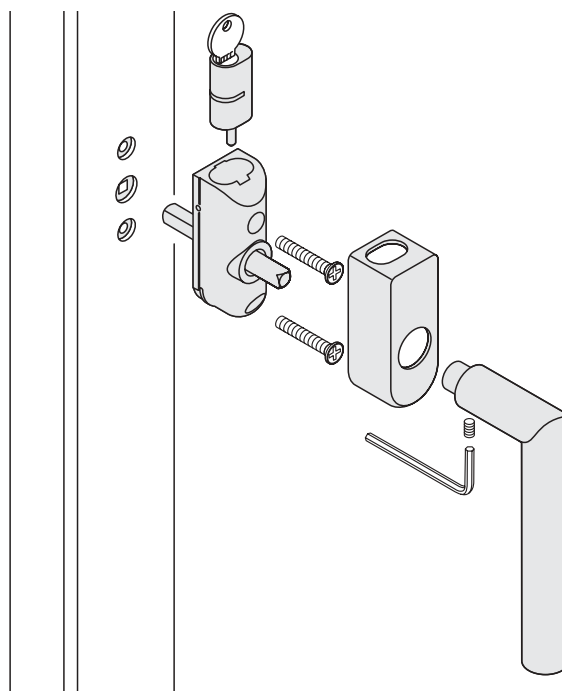
Accessories:
2 screws M5 x 35 mm
2 adapter rings 10 to 12
Disassembly pin for cylinder

FSB has for many years supplied RAL-tested lockable handles for burglar-resistant windows.

Complementing and augmenting the standard styles, a rose with a catch and locking mechanism allows FSB's wide variety of window-handle designs to be adopted for the special requirements of burglar-resistant windows.

The rose can be fitted in one of two positions, with the cylinder either at the top or bottom. (When ordering the "tilt before turning" variant it is necessary to state the position of the cylinder.) The lockable adaptor rose is, of course, likewise tested and monitored to RAL quality standards.

Models 3423 and 3476 shown here are stocked as standard. Any other handle design may also be selected for fitting to the adaptor rose. In such instances, FSB asks that the necessary delivery time be borne in mind.

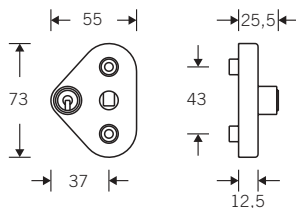


Window handle lock adaptor

1



d



3407

Aluminium
AluGrey
Stainless steel
Black plastics
similar to RAL 9004
White plastics
similar to RAL 9010

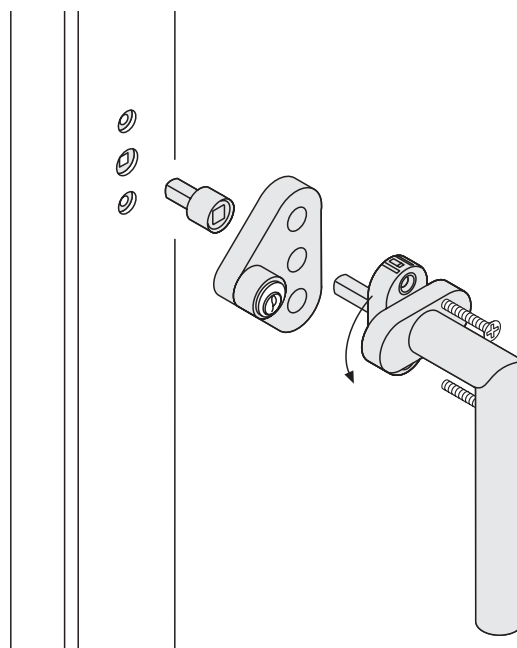
Keys to differ – keys to pass

Lugs with 10 mm Ø
matching FSB-window handles
with lugs 10 mm Ø only

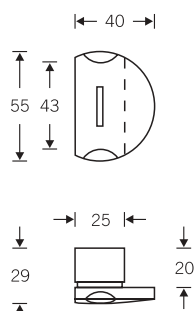
FSB 3407 matches all FSB window handles with click-stop mechanism. To compensate for the insert length of the spindle due to the additional depth of the lock adaptor, the standard spindle projection of 30 mm will be extended to 42 mm. This is accomplished with the use of a spindle extension part

which is delivered together with the window lock. Installed as illustrated on this page. We emphasize that, whilst protection from leverage devices make break-ins more difficult and time-consuming, they cannot provide complete protection.

Accessories:
2 screws M5 x 50 mm
1 spindle extension part



Protection from leverage Socket key-operated locks

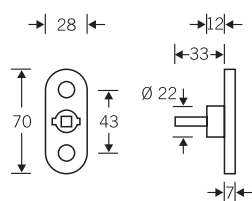
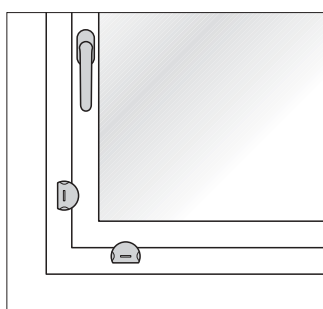


3416

Aluminium

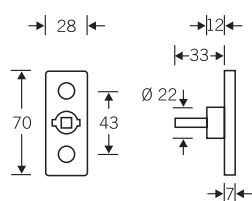
FSB anti-leverage devices are security items which, whilst not rendering burglaries impossible, make them a good deal harder to perpetrate.

How effective they are also depends on how well they are secured and to what material (timber, plastic or metal frame).



3461

Aluminium



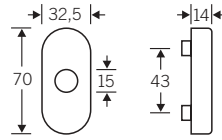
3462

Aluminium

The socket key for FSB 3461 and 3462 can be ordered citing Item No. 3463.

Budget lock roses

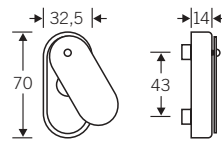
1
d



1759 25

Aluminium
Stainless steel

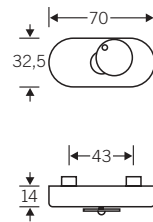
Lugs with 10 mm Ø



1759 26

Aluminium
Stainless steel

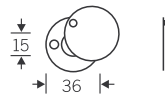
Lugs with 10 mm Ø



1759 27

Aluminium
Stainless steel

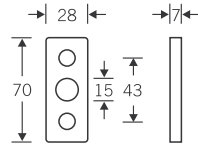
Lugs with 10 mm Ø



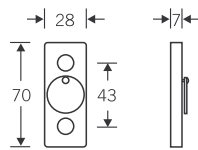
1793

Aluminium

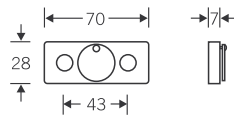
Budget lock roses



1783
Aluminium



1784
Aluminium

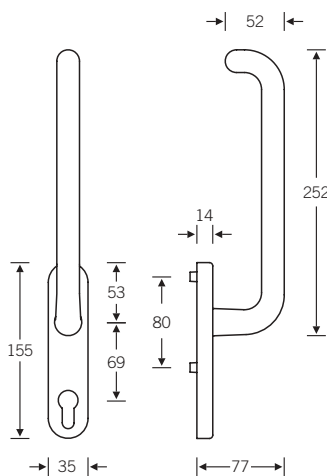


1785
Aluminium

Sliding patio door levers

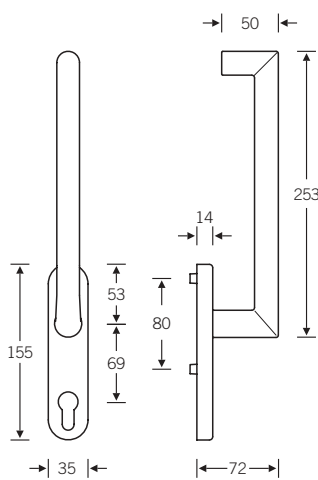
1

d



3750 11..

Stainless steel



3750 12..

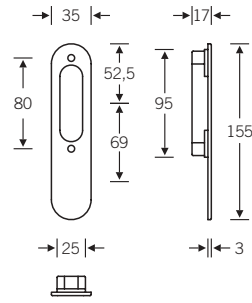
Stainless steel

Sliding patio door levers
incl. mechanism
turnably fixed
concealed fixing
10 mm □-spindle
Fixing M6

Sliding patio door levers are available:

- 00 without keyhole, concealed through fixing
- 01 with PZ-keyhole, concealed through fixing
- 02 without keyhole, concealed face fixing
- 03 with PZ-keyhole, concealed face fixing

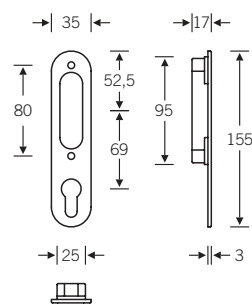
Flush pulls



4215 00

Stainless steel

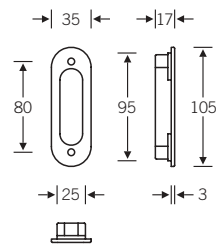
Flush pull without keyhole



4215 02

Stainless steel

Flush pull with PZ-keyhole



4215 10

Stainless steel








Flush pull without keyhole












Overview	142
Pull handles	143
Flush ring handles	147
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Cable box	152
Card frames	153
Indicators	154
Key tag	154
Engravings, Laser engravings Tampon prints	155

Overview

- Aluminium
- AluGrey
- Stainless steel
- New products

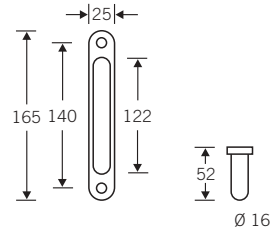
									
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Page 332	Page 332	Page 336	Page 147	Page 147	Page 148	Page 148	Page 148	Page 148
 	 	 			 	 	 	

										
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Pages 150 and 372	Page 320	Page 320	Page 348	Page 152	Page 153	Page 154	Page 154
 	 	 			 	 	

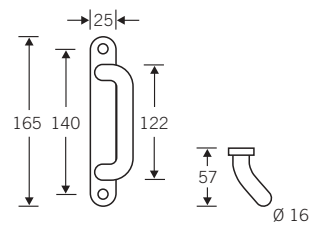
Pull handles



2160
Aluminium

1

e



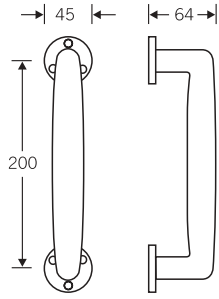
2161
Aluminium

Pull handles

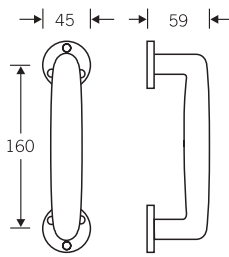
1



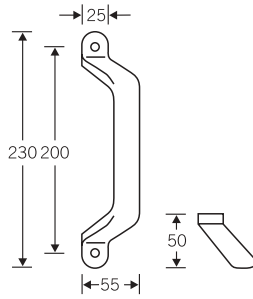
e



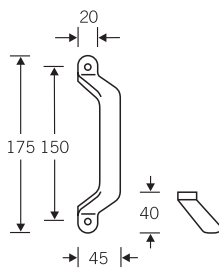
3601
Aluminium



3602
Aluminium

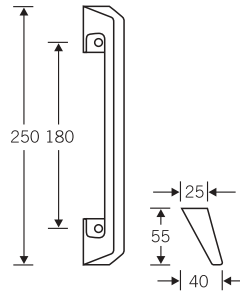


3603
Aluminium

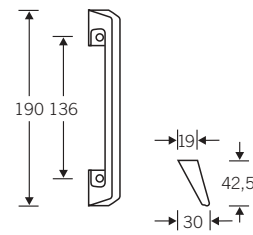


3604
Aluminium

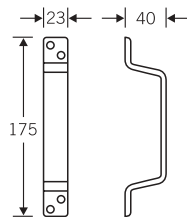
Pull handles



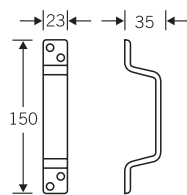
3606
Aluminium



3607
Aluminium



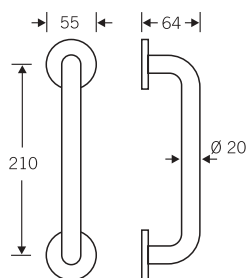
3617
Aluminium



3618
Aluminium

Pull handles

1

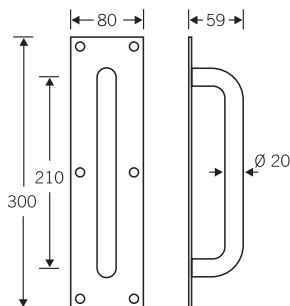


6628

Aluminium
Stainless steel

Fittings feature two fixing points concealed by a clip-on cover.

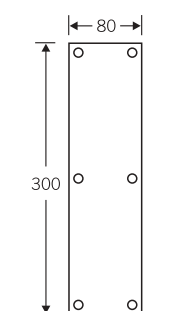
e



6629

Aluminium
Stainless steel

Boreholes for 4.0 mm counter-sunk screws



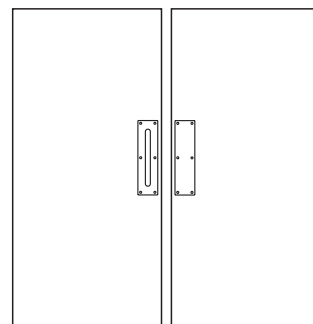
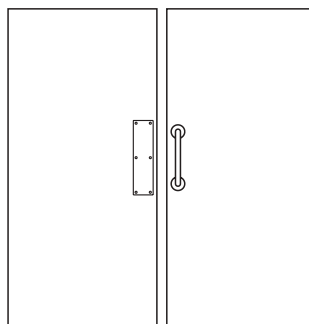
5325

Aluminium
Stainless steel

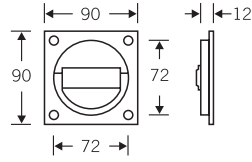
counterplate to 6629

Boreholes for 4.0 mm counter-sunk screws

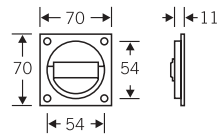
Double-action swing doors in restaurants, canteens, hospitals and the like are generally fitted with finger plates and kicking plates for added protection. There are further conceivable forms of the finger-plates, however. By coupling models as shown, the desired direction of swing can be determined



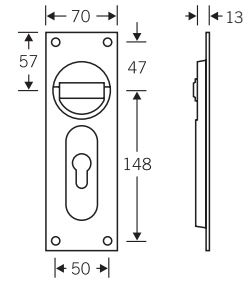
Flush ring handles



4203
Aluminium



4204
Aluminium



4205
Aluminium

Available with:

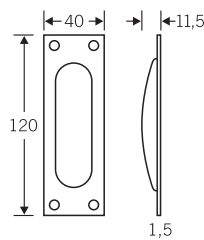
- 8 mm □-hole
- Solid spindle 8 mm □
- FSB Stabil-spindle 8 mm □

Lever lock/BB keyhole
Profile cylinder/PZ keyhole (4205)

Boreholes for 3.5 mm counter-sunk screws

Flush pulls

1



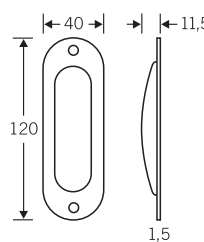
4211

Aluminium
Stainless steel

Mill out size in the door
87 x 28 x 10 mm

Boreholes for 3.0 mm
countersunk screws

e



4212

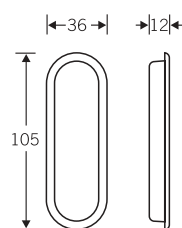
Aluminium
Stainless steel

Mill out size in the door
87 x 28 x 10 mm

Boreholes for 3.0 mm
countersunk screws

Flush pulls FSB 4211 and
4212 are available:

- without keyhole,
- with lever lock/BB keyhole,
- with profile cylinder/PZ keyhole.

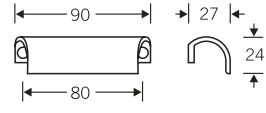


4213

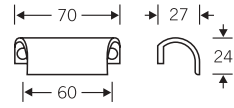
Aluminium
Stainless steel

Mill out size in the door
97 x 28 x 10 mm

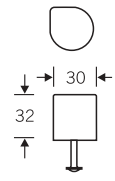
Drawer pull
Cabinet knobs



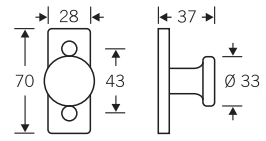
3657
Aluminium



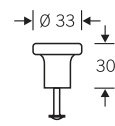
3656
Aluminium



3614
Aluminium
Stainless steel
Screw M4 x 30 mm
Design: Franco Clivio



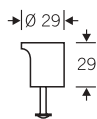
2328
Aluminium



3689
Aluminium
Screw M4 x 30 mm

Cabinet knobs

1

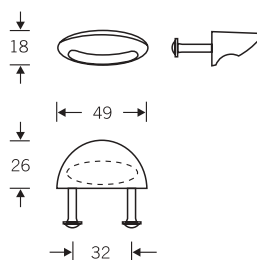


3691

Aluminium
Stainless steel

Screw M4 x 30 mm

e

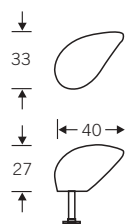


3629

Aluminium natural colour
anodised

Screw M4 x 30 mm

Design: Hartmut Weise



3632 ..

04 r.h. | 05 l.h.
Aluminium natural colour
anodised
Stainless steel

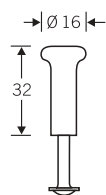
Screw M4 x 30 mm

Design: Philippe Starck

Quiz question: how can you tell whether cabinet knob design FSB 3632 is the FSB Philippe Starck original or a cheap copy?

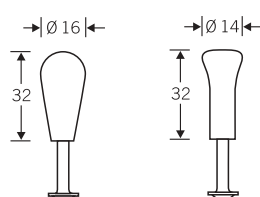
Answer: by its design and cost. Philippe Starck fashioned an elaborate right- and lefthand version. The plagiarisers reduced the effect to cheap symmetry. FSB continues to supply solely original designs.

Cabinet knobs



3641

Aluminium natural colour
anodised
Stainless steel

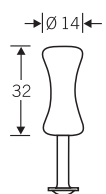


3642

Aluminium natural colour
anodised
Stainless steel

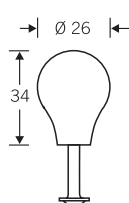
3643

Aluminium natural colour
anodised
Stainless steel



3644

Aluminium natural colour
anodised
Stainless steel



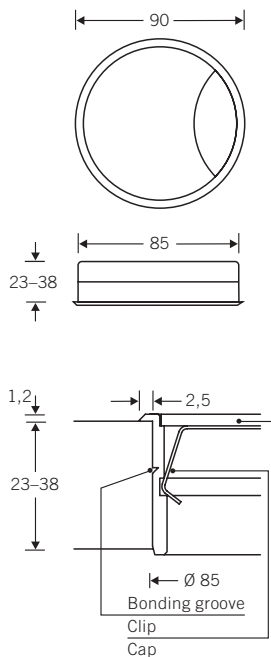
3654

Aluminium natural colour
anodised
Stainless steel

Jasper Morrison has designed a whole handful of unfussy cabinet knobs for FSB.

All cabinet knobs are supplied with screw M4 x 30 mm.

Cable box



9865

Aluminium
Stainless steel

External diameter	90,0 mm
Internal diameter	80,0 mm
Inlet diameter	85,0 mm
Height less rim	
9865 0000	38,0 mm
9865 0002	33,0 mm
9865 0004	29,0 mm
9865 0006	23,0 mm
Rim thickness	1,2 mm
Rim projection	2,5 mm
Slit length	58,0 mm

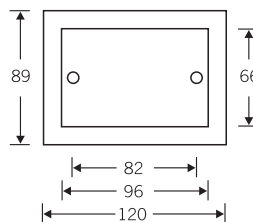
The FSB cable box ensures tidy cable management at work desks. Connections for telephones and fax machines, task lights, desktop computers and all that goes with them are ideally accommodated in this elegant cable box. Its heavy-duty design is such that the cap remains resolutely clipped in place no matter how obdurate the cabling beneath.

The slit is sealed by a brush gasket that adapts itself to the cables inserted.

The FSB cable box is available in

- Alu 01 natural colour anodised
- Alu 03 brass-colour anodised
- Alu + colour black
- Alu + colour white
- Alu + colour grey
- Satin stainless steel

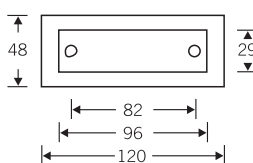
Card frames



4001

Aluminium

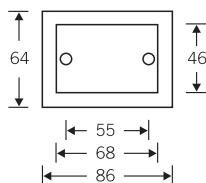
suitable for paper dimension
74 x 105 mm



4002

Aluminium

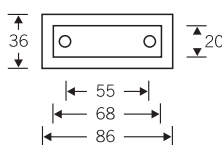
suitable for paper dimension
37 x 105 mm



4003

Aluminium

suitable for paper dimension
52 x 74 mm



4004

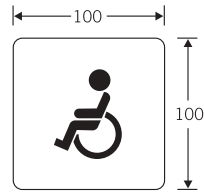
Aluminium

suitable for paper dimension
26 x 74 mm

The card frames are also available with metal plates with or without engraving.

Indicators
Key tag

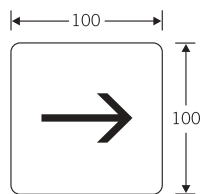
1



4058 30

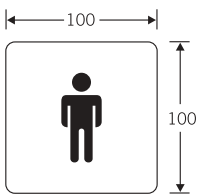
Aluminium
Stainless steel

e



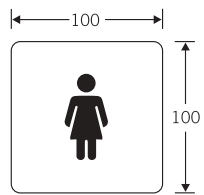
4058 33

Aluminium
Stainless steel



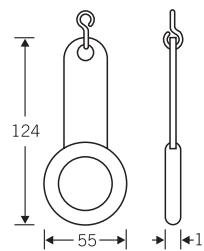
4058 36

Aluminium
Stainless steel



4058 37

Aluminium
Stainless steel



4047

Aluminium
Stainless steel

Engravings

Laser engravings

Tampon prints

FSB can engrave lettering and numerals onto information signs, key tags, letter plates, bell-push plates, handle pads and any other flat fittings in aluminium or stainless steel.

The various options together with the relevant technical specifications are set out on this page.

Before we can quote we require details of the material, exact details of the typeface and type size and specimen logos or other illustrative material. We work with all the standard graphics formats as well as with .dxf data. Besides a broad range of typefaces, we can also arrange for script or names to be input in vectored form.

Engravings

Size of plate
max. 610 x 2000 mm

Cylindrical objects
up to 120 mm in diameter

Min. height of characters 4 mm

Engraving natural or with inlay lacquering.
For the latter, please state colour required; our standard colour for such work is black.

Laser engravings

Size of flat inscription area
max. 120 x 120 mm

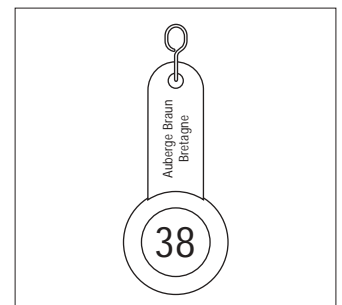
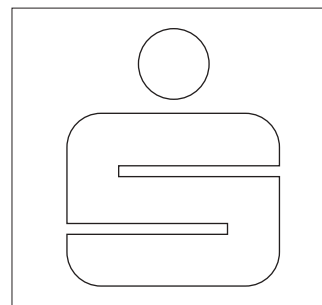
Laser engraving is performed in an enclosed device that places restrictions on the overall dimensions of the object engraved. Please consult if need be.

The finest of strokes are possible with laser engravings. In the case of aluminium their appearance is white.

Tampon prints

Size of flat inscription area
max. 70 x 70 mm

Tampon prints are used for monochrome printed matter in high print runs.



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Lever handle	160
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Door knobs	173
Knob backplates	174
Letter plates	175
Window handles	176
Window lock	179
Door stops	180
Flush pulls	181

Brass



FSB 4205
Brass polished lackiert

FSB 4305
Brass polished waxed

FSB and brass

FSB has been supplying select door and window furniture in brass, together with accessories, for forty years. From the very beginning we strove for originality, spurning hackneyed forms such as post horns or duck bills.

DIN 17660

Brass furniture is available in a wide range of alloys and at widely differing prices. But not all that glitters is pure brass. It is in our case though. We make exclusive use of the CuZn37 copper-zinc alloy specified under DIN 17660 as material no. 2.0321 and 2.0335.

Corrosion protection

Brass is prone to corrosion in everyday use - a fact that is sometimes glossed over.

Polishing is the only way round this. Anyone acquainted with more northerly countries will have observed the weekly buffing given to brass furniture on front doors there.

This chore becomes redundant if the surface is either lacquered or waxed.

Waxed brass components are self-polishing through use. Areas that are not handled will rapidly develop a brown or grey-green patina. Many buyers deem this surface discolouration positively alluring. Lacquered brass furniture loses its gloss once the lacquer is damaged. Intercrystalline corrosion then quickly sets in. Corroded handles can be reconditioned, however - for a charge covering costs.

Recommendation

For anyone interested in a lasting golden 'sheen', FSB recommends zirkon-coated stainless steel fittings in a golden brass finish. The hardness of the base material ensures that the brass stained zircon coating will withstand the ravages of the environment in normal use.

For those who prefer to stick with brass despite what we have said on the previous page, FSB has the following recommendations to make:

Only use waxed brass finishes. Waxed brass polished finish can be looked after using proprietary cleansers.

Do not use lacquered brass finishes in outdoor applications where the sun and the environment will hasten the onset of corrosion.

Brass furniture should not be considered for heavy duty applications in public buildings, since there is too much cleaning involved.

Surface hygiene

A brief word of clarification concerning the hygienic properties of door handles:

There are those amongst our competitors who, citing the findings of research institutes, make much in their brochures of the enhanced sterilizing properties of certain finishes. FSB likewise has access to reports proving that, for instance, cupriferous metals kill germs more effectively than, in particular, synthetic materials.

But FSB sets no great store by such findings. Whether a given finish destroys bacteria in 24 hours or in 72 is academic really, since in practice, doors tend to be in fairly regular use anyway. You'd have to take remedial action every time a door was opened or closed if you wished to eliminate germs altogether.

Overview

● New products



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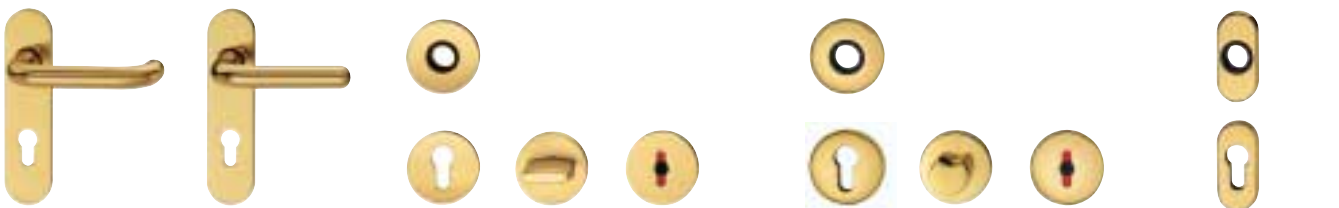
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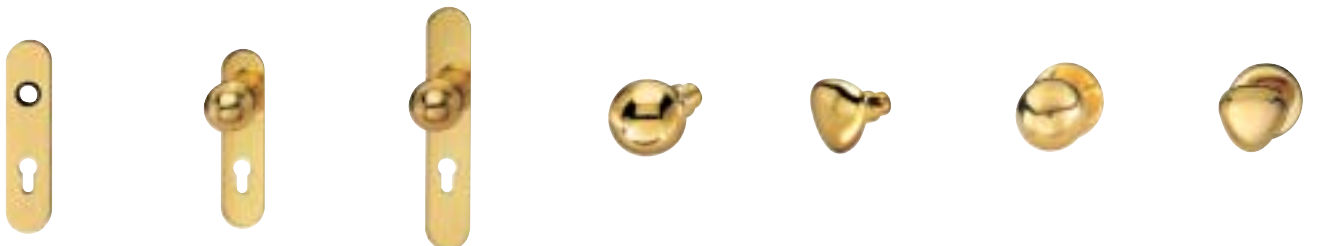
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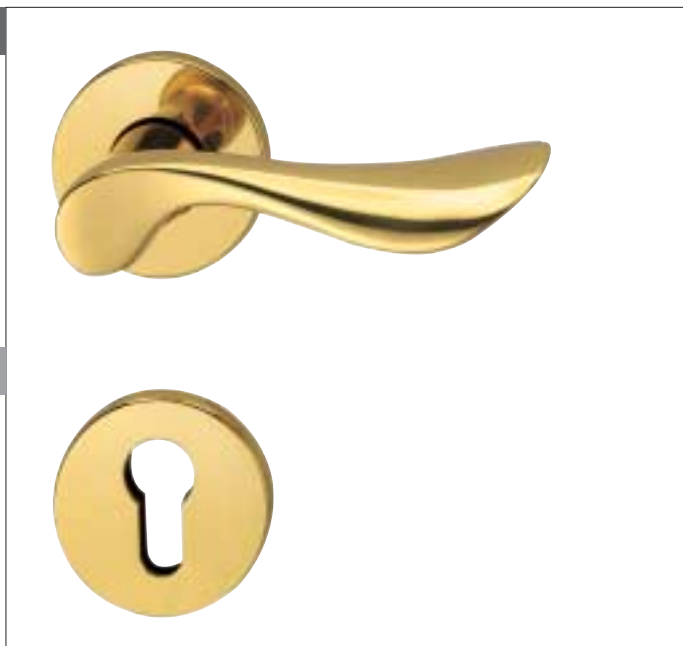
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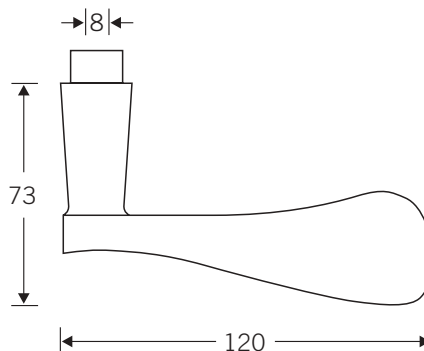
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Lever handle



1020

Brass



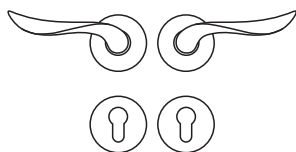
The 'functional style' of the 50s found its clearest expression in the model FSB 1020. Johannes Potente designed this model in 1953. His design's strong points are its physical dynamism, its simple hand shape and an asymmetry that gives the illusion of symmetry.

When Johannes Potente designed his 1020 model, it was his intention to provide visual relief from the strict lines of the door, 'inviting' the observer to take hold of the handle.

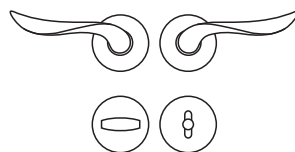
Johannes Potente always intended that this model should be produced in aluminium and brass.

FSB 1020 is one of four models designed by Designer Johannes Potente which became part of the permanent collection of the MoMA in New York.

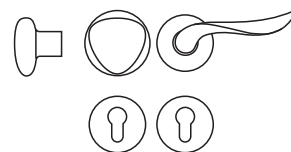
Order proposal



Internal door furniture	
Lever handle	1020
Rose	1731
Escutcheon	1735



Bathroom furniture	
Lever handle	1020
Rose	1731
Roses WC	1735 0054



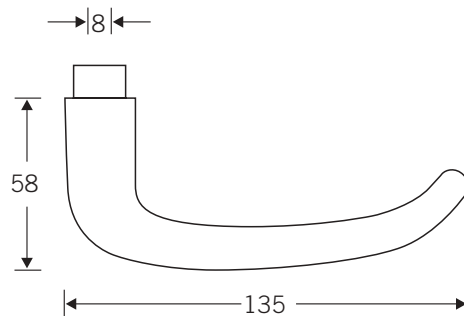
Entrance door furniture	
Lever-female part	1020
Rose	1731
Escutcheon	1735
Door knob	2327 06

Lever handle



1023

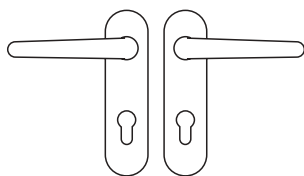
Brass



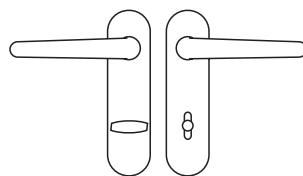
When the Ulm Design College was being built in the Fifties, the Swiss architect, sculptor and designer Max Bill with Ernst Moeckel designed a lever handle based on the railway carriage handle common in Switzerland. It entered design history as the 'Ulm handle'.

Johannes Potente took this as the starting point for the FSB 1023 model, still a compelling alternative to anonymous tubular designs.

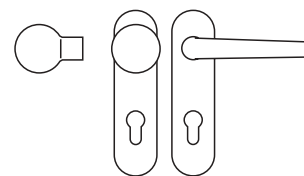
Order proposal



Internal door furniture
Lever handle 1023
Drückerschild 1451 03



Bathroom furniture
Lever handle 1023
WC Set 1451 0354



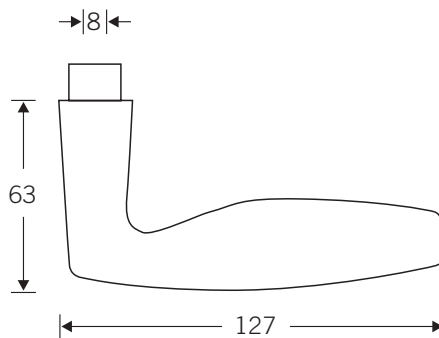
Entrance door furniture
Lever-female part 1023
Backplate 1451 03
Knob backplate 1964 03

Lever handle



1057

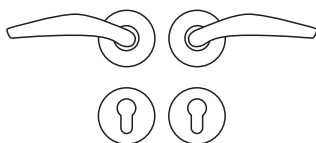
Brass



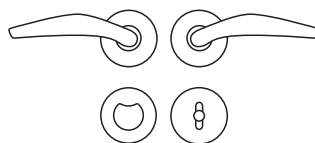
The FSB 1057 lever handle is the work of Munich designer Jan Roth. Unimpressed by the models then on sale, he decided to design handles of his own. After the first casting, he took the polished unfinished parts home and duly fitted them to his doors (which is where they still are). Will Jan Roth like our version in brass too?

The Jan Roth-designed FSB 1057 model nestles snugly in the hand, and women, especially, often fall for it on the spot.

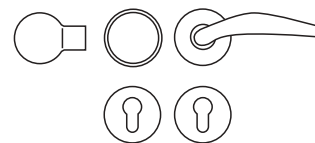
Order proposal



Internal door furniture
 Lever handle 1057
 Rose 1707
 Escutcheon 1708



Bathroom furniture
 Lever handle 1057
 Rose 1707
 Roses WC 1708 7554



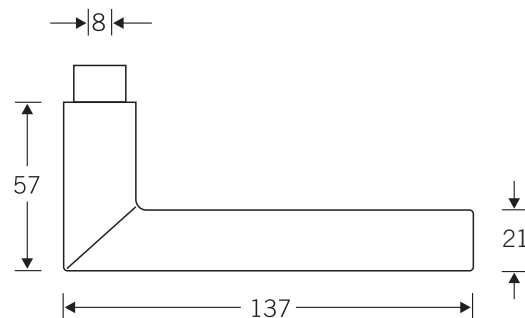
Entrance door furniture
 Lever-female part 1057
 Rose 1707
 Escutcheon 1708
 Door knob 2302 06

Lever handle



1076

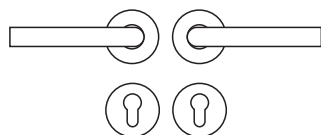
Brass



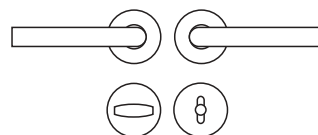
The architect Robert-Mallet Stevens (1886–1945) designed several blocks of flats in Paris during the 1920s. He was probably the first designer to hit upon the idea of taking the tubular handle devised by the Viennese philosopher Ludwig Wittgenstein in the same decade, splitting it where it bends, and mitring it back together again at right angles.

They are now known as the 'FRANKFURT model', and there's a simple reason for this. They were rediscovered for the new Architecture Museum building in Frankfurt and soon took the market by storm.

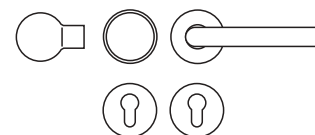
Order proposal



Internal door furniture
 Lever handle 1076
 Rose 1731
 Escutcheon 1735



Bathroom furniture
 Lever handle 1076
 Rose 1731
 Roses WC 1735 0054



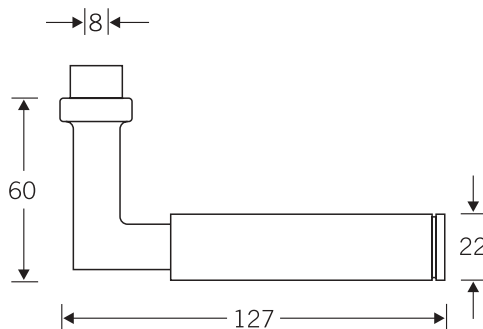
Entrance door furniture
 Lever-female part 1076
 Rose 1731
 Escutcheon 1735
 Door knob 2302 06

Lever handle



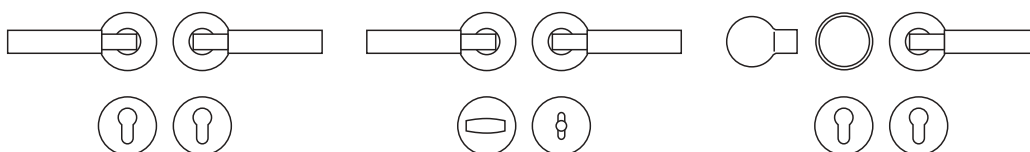
1102

Brass



Model FSB 1102 was produced by the Italian designer Alessandro Mendini, who contributed to the FSB Design Workshop by refashioning a familiar Gropius handle using new materials. So popular has Alessandro Mendini's 're-design' proved that there have been many requests for a brass version. We're only too pleased to comply.

Order proposal



Internal door furniture
 Lever handle 1102
 Rose 1731
 Escutcheon 1735

Bathroom furniture
 Lever handle 1102
 Rose 1731
 Roses WC 1735 0054

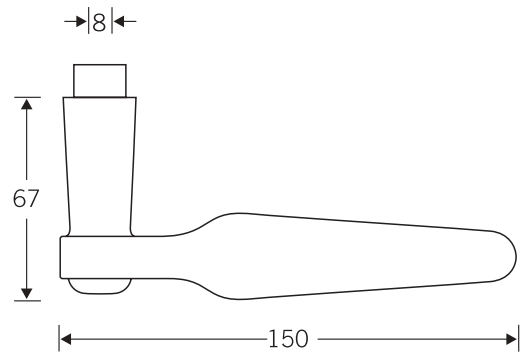
Entrance door furniture
 Lever-female part 1102
 Rose 1731
 Escutcheon 1735
 Door knob 2302 06

Lever handle



1103

Brass



The FSB 1103 lever handle by Hans Hollein is shaped to the hand in classical FSB fashion. Hans Hollein incorporated two specific principles into this model: Firstly, he wanted to keep the user's hand well clear of the edge of the door. Hence the offset between the point of pivot and the grip. Secondly, he wanted to offer a choice of either upward or downward lever position, thus lending the door a flexible identity.

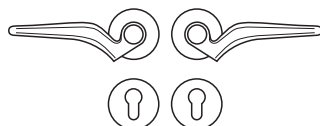


Handle upwards



Handle downwards

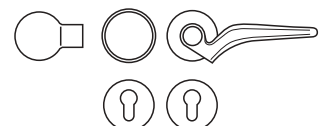
Order proposal



Internal door furniture
 Lever handle 1103
 Rose 1707
 Escutcheon 1708



Bathroom furniture
 Lever handle 1103
 Rose 1707
 Roses WC 1708 7554



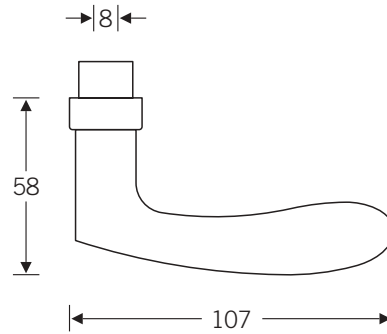
Entrance door furniture
 Lever-female part 1103
 Rose 1707
 Escutcheon 1708
 Door knob 2302 06

Lever handle



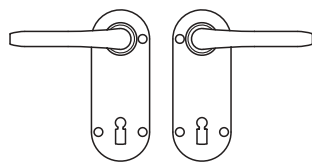
1135

Brass polished waxed

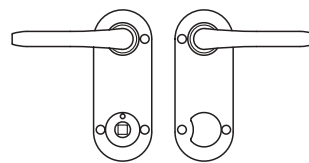


What makes this handle so appealing is its poise. Set off by the flat, clean-lined form and explicitly technical charm of its backplate, this new design looks good on any door.

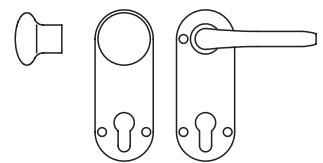
Order proposal



Internal door furniture
Lever handle 1135
Backplate 1425



Bathroom furniture
Lever handle 1135
WC Set 1425 7554



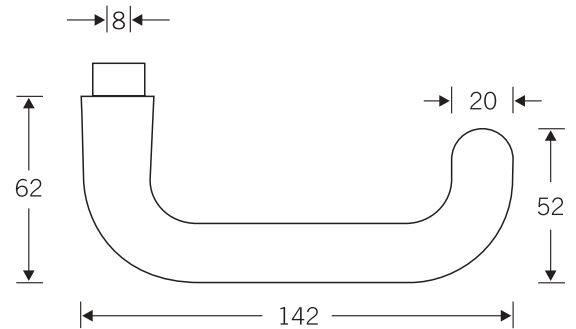
Entrance door furniture
Lever-female part 1135
Backplate 1425
Knob backplate 1925

Lever handle



1146

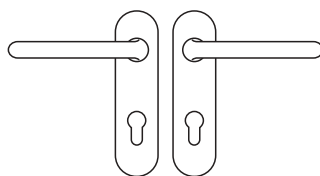
Brass



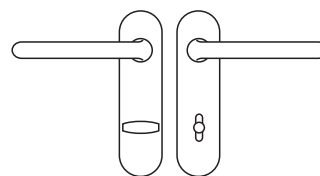
Much has been written about who actually invented the tubular design. Most probably it was some master craftsman in the mists of time hammering steel tubing into a rudimentary handle on his anvil. He had very likely been commissioned to produce a handle that would prevent animals' harnesses snagging on doors. This disparaging phrase 'stable door handle' has long been common parlance. Having served the animal world well, the handle came back in an array of material and colours a century later to adorn doors for human use the world over. That's the general background to this classic design.

But FSB felt the time had come to take tubular design a stage further. The shank was made to taper, the arching free end given a spherical tip. Only two very simple features have lent the FSB 1146 model greater individuality with this reworking. Isn't it strange? FSB 1146 gets copied more and more.

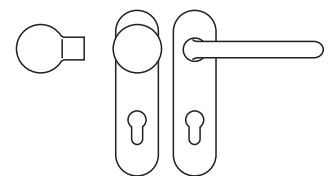
Order proposal



Internal door furniture
Lever handle 1146
Backplate 1451 03



Bathroom furniture
Lever handle 1146
WC Set 1451 0354



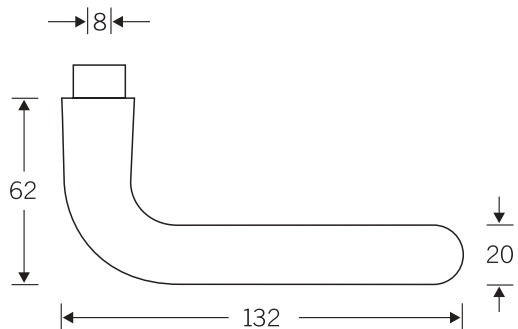
Entrance door furniture
Lever-female part 1146
Backplate 1451 03
Knob backplate 1964 03

Lever handle



1147

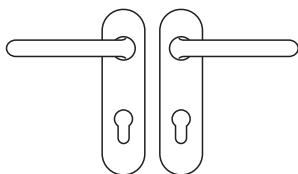
Brass



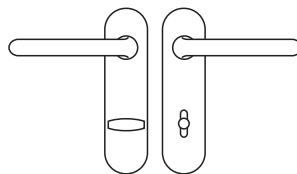
The company motif draws on a door handle designed in mid-Twenties' Vienna by the Austrian philosopher Ludwig Wittgenstein that has served as a model for several designs since, including the reworked FSB 1147 handle in this catalogue. It should replace the standard 1075 model.

Its tapered neck and rounded end set it apart from both our own company motif and the many other variants of this handle on the market.

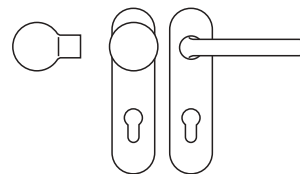
Order proposal



Internal door furniture
Lever handle 1147
Backplate 1451 03

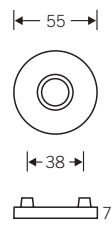
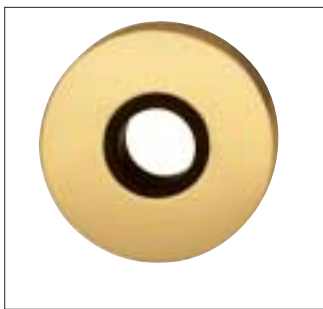


Bathroom furniture
Lever handle 1147
WC Set 1451 0354



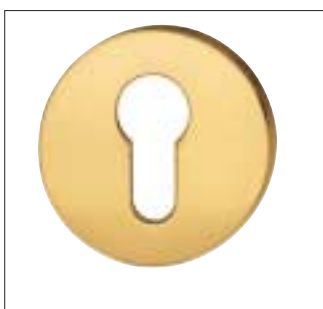
Entrance door furniture
Lever-female part 1147
Backplate 1451 03
Knob backplate 1964 03

Roses



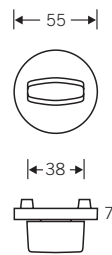
1731
without lugs 1743
Brass

1

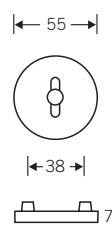


1735
without lugs 1744
Brass

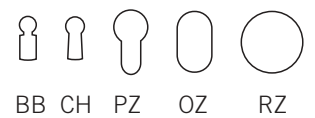
f



1735 0054
without lugs 1744 0054
Brass

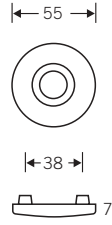
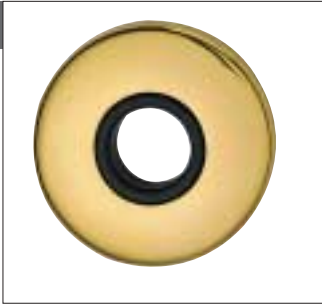


Keyholes



Roses

1

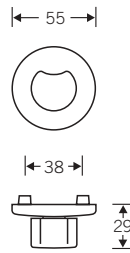


1707
without lugs 1705
Brass

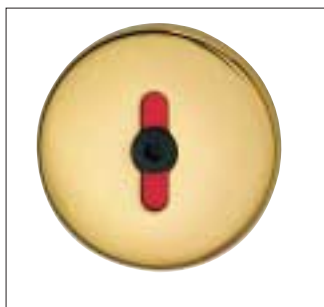
f



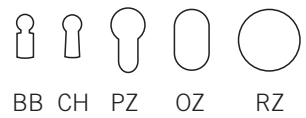
1708
without lugs 1709
Brass



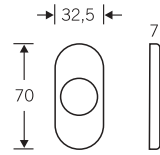
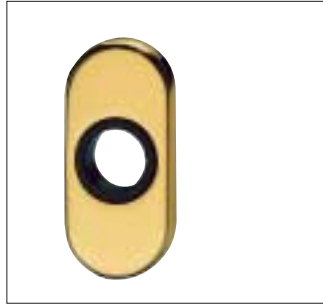
1708 7554
without lugs 1709 7554
Brass



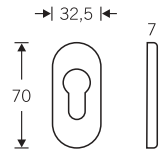
Keyholes



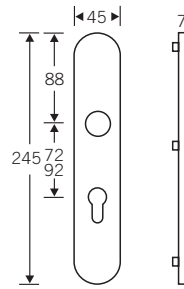
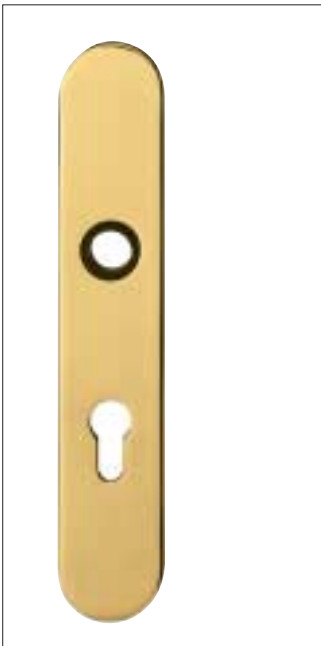
Roses
Backplates



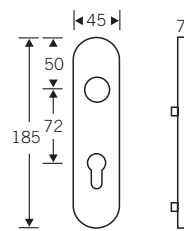
1758
Brass



1757
Brass

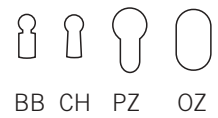


1418 03
Brass
Distance 72 + 92 mm



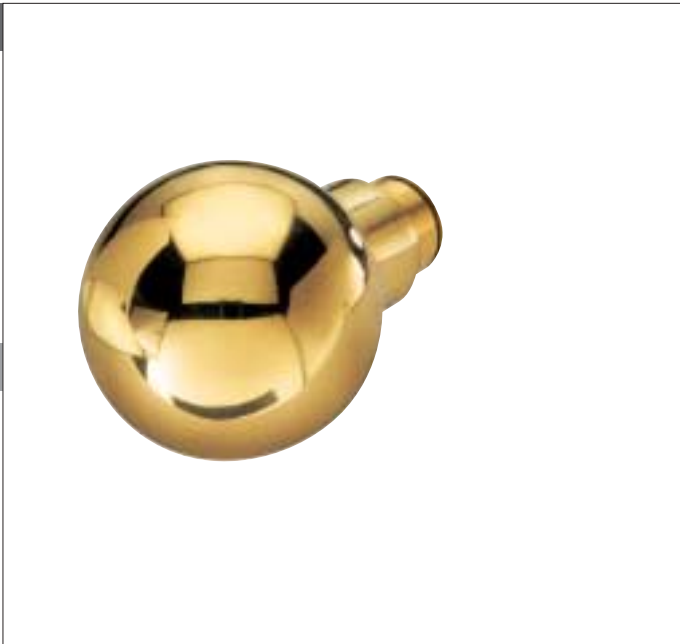
1451 03 72 mm
Brass
Distance 72 mm

Keyholes

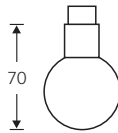


Knob handles

1



← 50 →

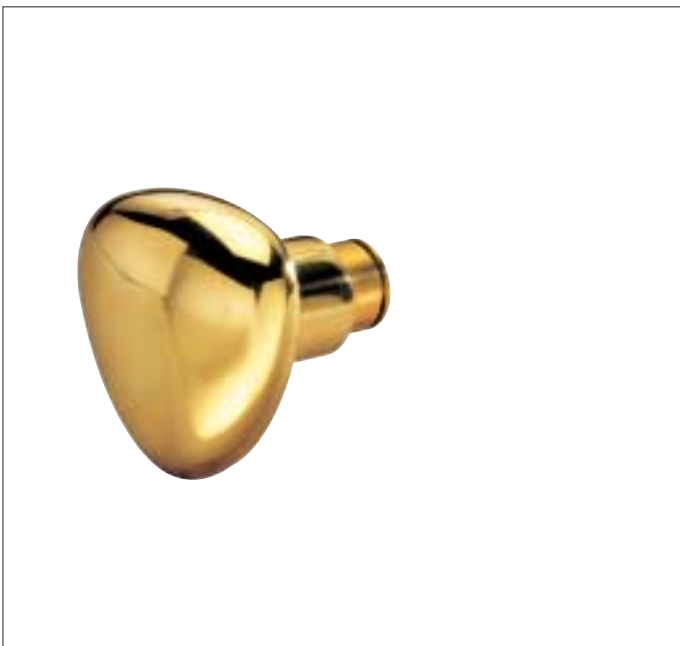


0802

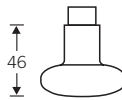
Brass

8 mm □-hole

f



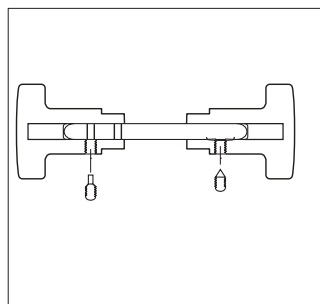
← 58 →



0817

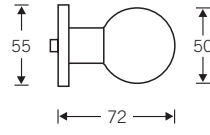
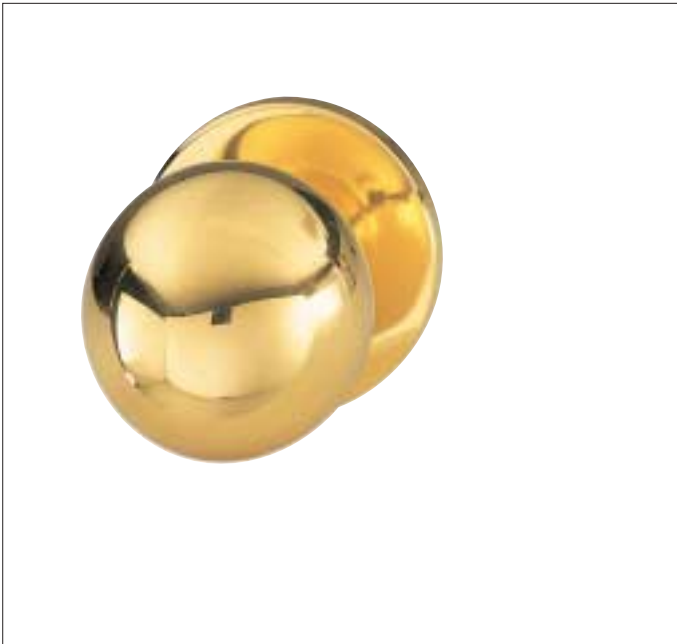
Brass

8 mm □-hole



Turnable knob handles are made and supplied by FSB as female sections. Knobsets are created by joining two female parts together using the FSB Stabil-spindle 0102.

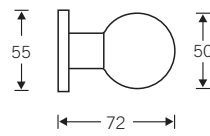
Door knobs



2302 06

Brass

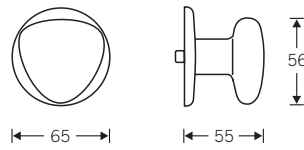
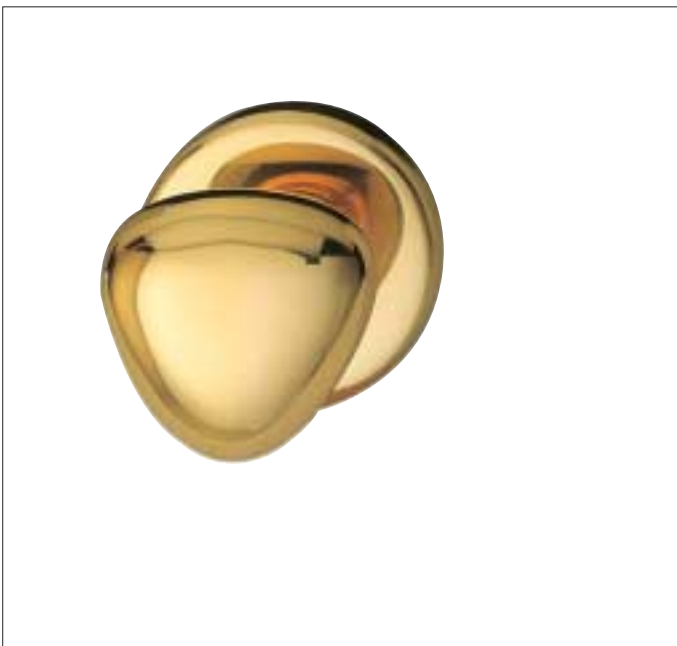
concealed through fixing
c:c screw holes 38 mm



2302 05

Brass

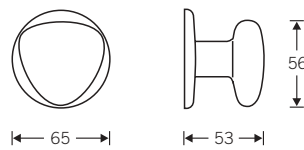
concealed face fixing



2327 06

Brass

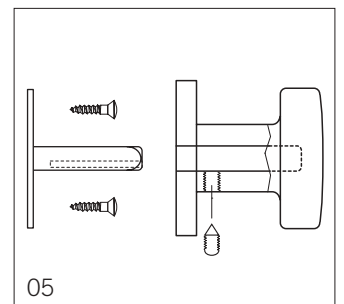
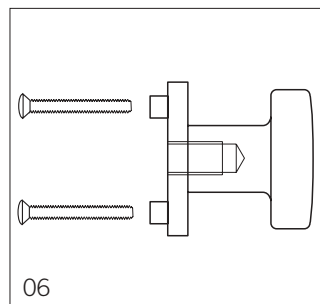
concealed through fixing
c:c screw holes 38 mm



2327 05

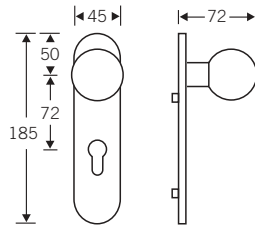
Brass

concealed face fixing



Knob backplates

1

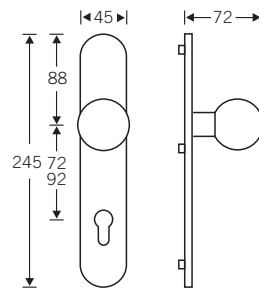


1964 03

Brass

Distance 72 mm

f

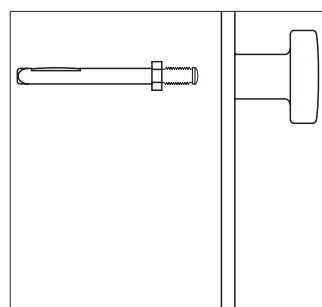


1927 03

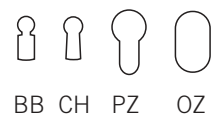
Brass

Distance 72 + 92 mm

Matching backplates reverse side shown on page 171.



Keyholes



Letter plates with spacer



3826 20

Inside:
Brass polished lacquered
Outside:
Brass polished waxed

Opening size 230 x 40 mm
Cutout size in the door
240 x 50 mm

Fixing of letter plate and inner flap must be made separately.

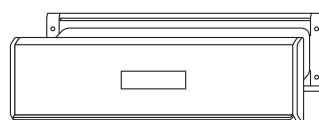
Letter plate system 3826 20 is available as:

- Letter plate set with black spacer and inner flap for door thickness 40 – 70 mm or door thickness 71 – 100 mm
- Single as letter plate.



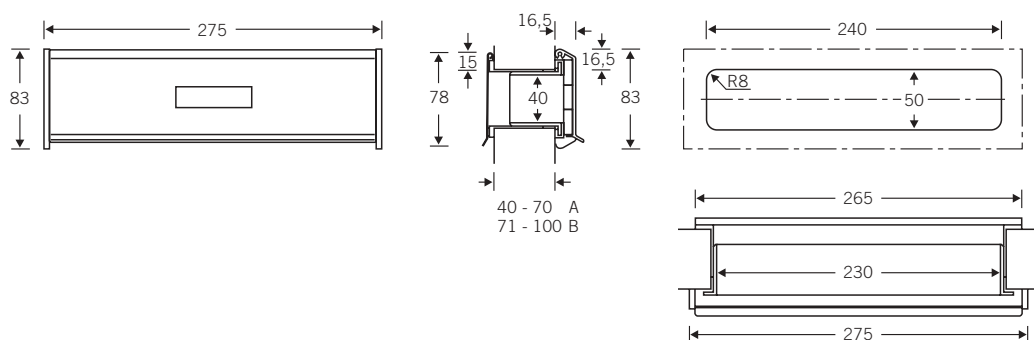
3826 2061 (40 - 70 mm)
3826 2071 (71 - 100 mm)
Letter plate set without nameplate, with spacer and inner flap

3826 2001
Letter plate set without nameplate, without spacer or inner flap



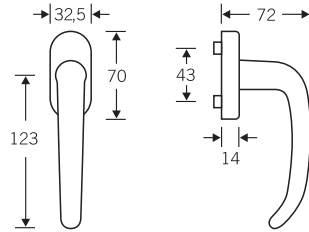
3826 2062 (40 - 70 mm)
3826 2072 (71 - 100 mm)
Letter plate set with nameplate, spacer and inner flap

3826 2002
Letter plate set with nameplate, without spacer or inner flap



Window handles

1

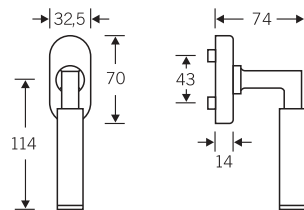


3423

Brass

Window handle with click-stop mechanism
 lugs with 10 mm Ø
 c:c mounting holes 43 mm
 7 mm □
 spindle projecting 30 mm

f



3432

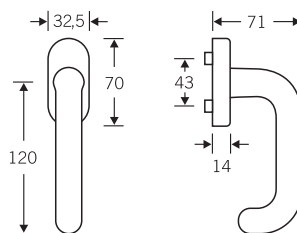
Brass

Window handle with click-stop mechanism
 lugs with 10 mm Ø
 c:c mounting holes 43 mm
 7 mm □
 spindle projecting 30 mm

Design: Alessandro Mendini



Window handles



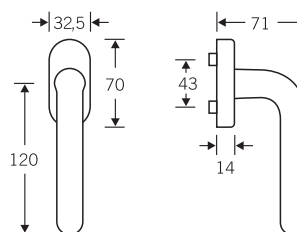
3446

Brass

Window handle with click-stop mechanism
 lugs with 10 mm Ø
 c:c mounting holes 43 mm
 7 mm □
 spindle projecting 30 mm

1

f



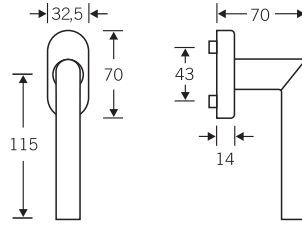
3447

Brass

Window handle with click-stop mechanism
 lugs with 10 mm Ø
 c:c mounting holes 43 mm
 7 mm □
 spindle projecting 30 mm



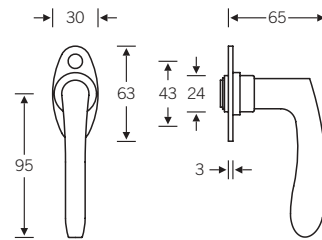
Window handles



3476

Brass

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

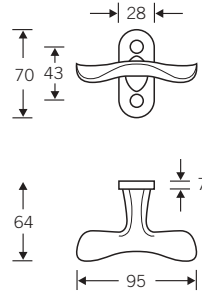


3735

Brass polished waxed

c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

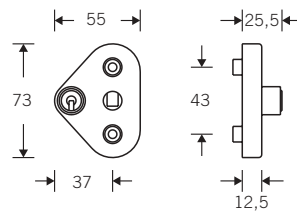
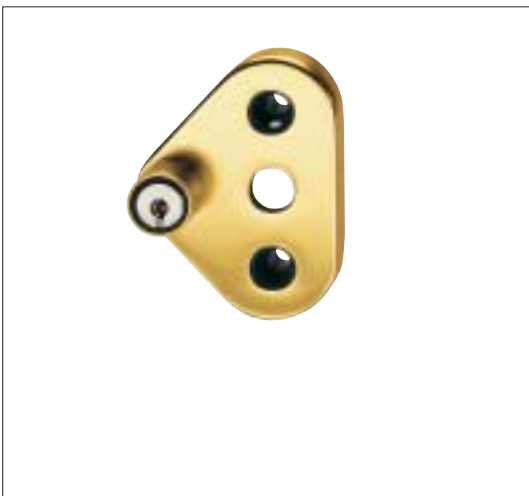
Window handle
Window lock



3404

Brass

c:c mounting holes 43 mm
7 mm \square
spindle projecting 30 mm

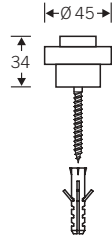


3407

Brass

Door stops

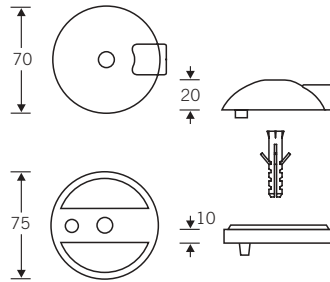
1



3881

Brass

f

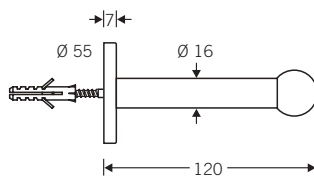


3884 00

Brass

3884 10

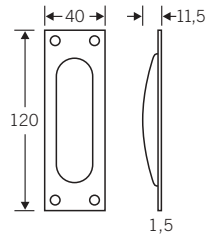
Black baseplate



3895

Brass

Flush pulls



4211

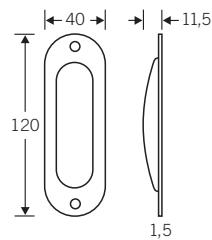
Brass

Mill out size 87 x 28 x 10 mm

Boreholes for 3,0 mm countersunk screws

1

f



4212

Brass

Mill out size 87 x 28 x 10 mm

Boreholes for 3,0 mm countersunk screws

Flush pulls FSB 4211 and 4212 are available:

- without keyhole,
- with lever lock/BB keyhole,
- with profile cylinder/PZ keyhole.

Explanations	184
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Lever handles with Project and Fire door fittings	188
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Lever handleset Ergo	230
FSB XXL lever handle	231
Gymnasium fittings	232
WC furniture for special requirements	234
Emergency exit devices as specified under DIN EN 179	235

Commercial

Product family

FSB's new Commercial section details all products associated with the planning and out-fitting of public buildings. Besides technical explanations of FSB's bearing system or the materials used, here you will also find the FSB range of heavy-duty or 'project' lever handles plus all their accessory products. As well as rose and backplate designs and fittings for glass doors, these also include window handles and hardware for frame doors.

The familiar visual presentation of FSB's lever handles for frame doors is accommodated in Section 2b, furthermore. The succeeding sections are devoted to glass-door fittings, emergency-exit hardware and FSB's diagonal-oval ErgoSystem.

FSB fixing system for heavy-duty fittings with roses

FSB heavy-duty ('project') and fire-safety hardware with roses can now be fixed more speedily and efficaciously still with FSB's new fixing system. To this end, the bearing on the female handle has been split to form a bearing support and a rose base.

FSB · SIMONSWERK

As from the beginning of 2002, FSB has been involved in an interlocking participation with Simonswerk of Rheda-Wiedenbrück, makers of door hinges of repute, and in the process has made a giant leap towards rounding off its product offering for doors. The parties to this alliance have pledged to co-ordinate their two sets of products in terms of materials, designs and finishes as well as to boldly invest in the future together.

The first example of what this can lead to is shown in the present edition of our Manual in the form of an innovative package of fittings for use on glass doors, cf. Section 2c.

AluGrey

We are always on the look out for new materials, and so it was in the mid-1980s that we came across AluGrey. We were thrilled by the hardness of its surface, its crystalline texture and its elegant restraint. Arriving at tools with which the hand can operate doors and windows involves a lot of paring down and refining, though. We spent ten long years working and experimenting on our newly discovered material.

The Brinell hardness of this alloy is in the region of 75 – 80, some 50 per cent higher than the prescribed standard. It is the silvery grey colour achieved through anodisation that lends fittings their distinctive flair whilst significantly enhancing their use-value. The texture of the material is brought out by shading and 'pigmentation' effects. The silvery grey of the hardware creates a delightful contrast with the faces of the door.

Roses and accessories are identical in colour to the castings. The anodised layer is at least 20 µm thick.

For detailed information about these new material, please consult Section 'Explanations'.

Stainless steel with a polished brass finish

The host material in this ideal solution for entrance and internal doors is a corrosion-resistant high-grade steel, a material that has been proving its worth in construction under the most exacting of conditions for decades.

An additional solid layer of metal with a polished brass finish is applied to this base using a PVD (physical vapour deposition) technique. This dyed zirconium nitride (ZrN) coating delivers excellent resistance to abrasion and corrosion. Inter-crystalline corrosion is now ruled out. Accordingly, FSB guarantees long enjoyment of its polished brass finish, always assuming correct fixing and proper use.



Details of DIN EN 179 for emergency exit devices are to be found on Page 235.

The models concerned are suitably marked on the relevant pages.

Details of DIN EN 1125 are contained in Section 2e.

DIN standards

A digest of the DIN standards for door and window hardware can be found in Section 6a, 'Explanations'.

Bearings and Specification details



Key

- Sliding bearing
- Compensating bearing
- Backplate or rose baseplate plus retaining ring and washer



Key

- Sliding bearing
- Backplate or rose baseplate plus retaining ring, washer and wavy ring

Project fittings

Lever sets on heavily-used doors are subject to greater stress than their domestic counterparts. Designers in the builders hardware industry have for this reason long been working on how best to contain the forces exerted when doors are opened and closed. FSB opted for a technique tried and tested in automobile construction and mechanical engineering. Here, stress and thrust are absorbed using combinations of rubber and metal as opposed to all-metal bearings. This proven construction method has enabled FSB to come up with project fittings, in which a 7 mm self-lubricating bearing is flexibly attached to a backplate screwed to the door. We have been successfully marketing this system for a decade now.

The FSB project fittings with compensating bearing deal very ably with the considerable axial and vertical forces that arise given doors that are in virtually constant use. This is ideal for use in:

- Schools
- Nursery schools
- Hospitals
- Nursing homes
- Office buildings
- Banks

Specification details for

Project fittings with FSB compensating bearing

- FSB lever handle furniture No.
- FSB dead knob/lever furniture No.
- FSB bathroom furniture No.

Levers operating in conjunction with the FSB compensating bearing and the FSB Stabil-spindle, inseparable from their backplate or rose but nevertheless rotate freely, concealed fixing on both sides.

Backplates with lugs 10 mm dia.,

roses with lugs 8.5 mm dia.,

prepared for door thickness mm,

manufactured in Aluminium/AluGrey/Stainless steel

More specification details can be found in Section 6a.

Fire safety furniture

The specifications for fire, smoke and panic doors are set forth in the following DIN (German Standards) provisions:

- DIN 4 102, Pts 5 + 18
- DIN 18 082, Pt 1
- DIN 18 095, Pts 1 + 2
- DIN 18 273

Standards for fire-safety furniture address design-engineering as well as function and stress-rating criteria. FSB supplies almost all heavy-duty furniture in a fire-safety variant. These fittings are certified and quality-controlled in line with Construction Rulebook (Bauregelliste) A (6.17). A general Construction Supervision Certificate (P) and Certificate of Conformity (ÜZ) have been awarded by Dortmund Material Testing Laboratory. The safety-engineering contract bears the registration number 12 9902-Do 20.3.

Specification details for

FSB fire door fittings

- FSB fire door lever handle furniture No.
- FSB fire door dead knob/lever furniture No.

turnably fixed in 7 mm bearing, non loosening in conjunction with 9 mm FSB Stabil-spindle,

prepared for door thickness mm,

manufactured in Aluminium/AluGrey/Stainless steel

More specification details can be found in Section 6a.

2
a



Clarification

To simplify specification and ordering procedures, heavy-duty and fire-door furniture has been accorded a six-figure code number covering both lever handles and accessories. And there are other potential accessory options.

In case this might sound confusing, here's an explanation of the final two digits with the diagrams of the item being concerned.

Inactive leaf furniture

FSB supplies inactive leaf furniture as standard without key roses or keyhole perforations in the rose and backplate versions respectively.

Roses 1731 | 1735

Project fittings
72 . . 12 to 72 . . 15
Fire door fittings
76 . . 12 to 76 . . 14

←55→



→ 38 ←

→ | ← ∅8,5



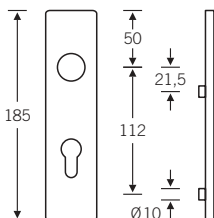
Roses 1707 | 1708

Project fittings
72 . . 62 to 72 . . 65
Fire door fittings
76 . . 62 to 76 . . 63

Backplate 1450 03

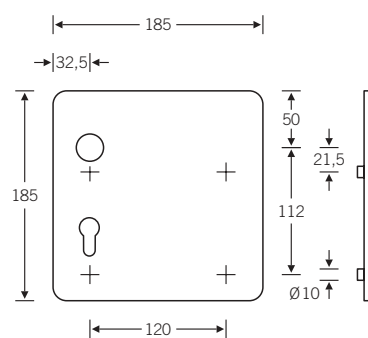
Project fittings
72 . . 01 to 72 . . 03
Fire door fittings
76 . . 01 to 76 . . 02

→ 45 ←



Square Backplate 1483 03 and 1488 03

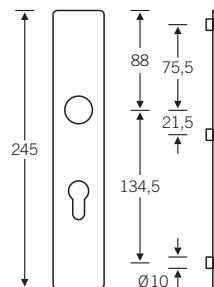
Project fittings
72 . . 16 to 72 . . 28
Fire door fittings
76 . . 16 to 76 . . 28



Backplate 1410 03

Project fittings
72 . . 09 to 72 . . 11
Fire door fittings
76 . . 09 to 76 . . 10

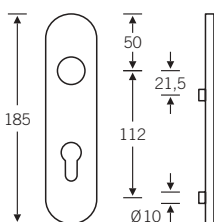
→ 45 ←



Backplate 1451 03

Project fittings
72 . . 04 to 72 . . 06
Fire door fittings
76 . . 04 to 76 . . 05

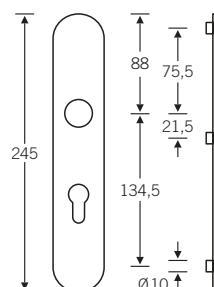
→ 45 ←








Backplate 1418 03















Project fittings
72 . . 39 to 72 . . 41
Fire door fittings
76 . . 39 to 76 . . 40

→ 45 ←



-  Aluminium
-  AluGrey
-  Stainless steel
-  Plastics black
-  New products 04105

Overview

						
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Page 202	Page 204	Page 205	Page 206 and 324	Page 207 and 325	Page 208	Page 210
						

						
Page 212	Page 214	Page 215	Page 216	Page 217	Page 218	Page 220
						

						
Page 222 and 350	Page 223 and 356	Page 224	Page 225	Page 227	Page 228	Page 229
						

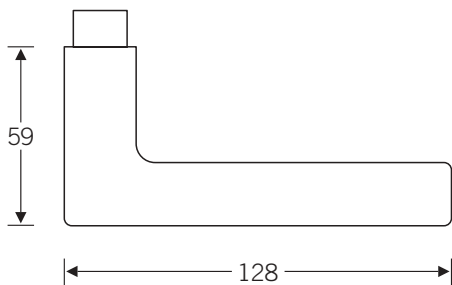
			
Page 230	Page 232	Page 233	Page 234
			

Project fittings Design 1005



Aluminium
AluGrey
Stainless steel

2
a



There's no shortage of wedge-shaped lever handles around. Virtually every maker features a variation on this theme in their repertoire. This design may originally have been Professor Burchartz's.

The version by Johannes Potente is very slender.

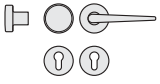
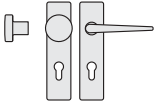
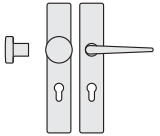
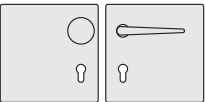
Product family Internal door furnitures

	7205 13
	7605 13 F
	7205 01
	7605 01 F
	7205 09
	7605 09 F
	7205 16 r.h. 7205 19 l.h.
	7605 16 F r.h. 7605 19 F l.h.
	4220 42 r.h. 4220 52 l.h. 7205 1350
	Details page 274

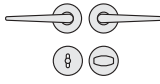
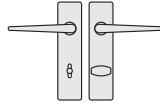
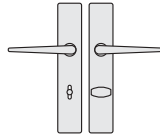
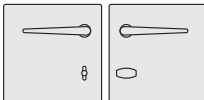
Lever handles for framed doors

	7205 25
	7605 25 F
	Details page 238
	0601 21
	0601 22 F
	Details page 238
	1757


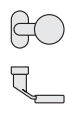

Entrance door furnitures

	7205 14 7605 14 F 7605 73 F Inactive leaf furn.
	7205 02 7605 02 F 7605 71 F Inactive leaf furn.
	7205 10 7605 10 F 7605 79 F Inactive leaf furn.
	7205 17 r.h. 7205 20 l.h. 7605 17 F r.h. 7605 20 F l.h.


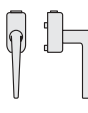

Bathroom furnitures

	7205 15
	7205 03
	7205 11
	7205 18 r.h. 7205 21 l.h.

Door knobs for framed doors

	0629 .. turnable 2329 .. fixed Details page 257
	0654 28 turnable 2354 28 fixed Details page 257
	1757

Window handles

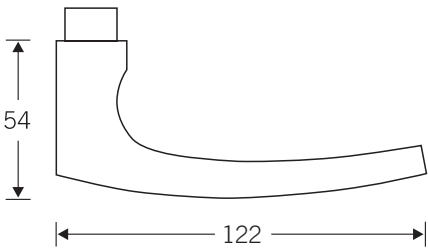
	3425 Details page 118
	3425 80 Window handle, lockable Details page 133
	3407 Window handle lock adapter Details page 134

Project fittings
Design 1015



Aluminium
AluGrey
Stainless steel

2
a



It is not known who designed the original of FSB 1015. We suspect it was hatched by the wehag company. Like most FSB lever handles, 1015 was conceived by Johannes Potente. The clarity of the design struck a particular chord in the Netherlands – more than 40 years ago.

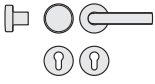

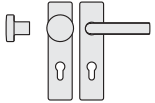

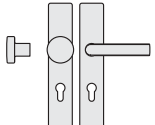

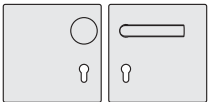


Product family
Internal door furnitures

	7215 13
	7615 13 F
	7215 01
	7615 01 F
	7215 09
	7615 09 F
	7215 16 r.h. 7215 19 l.h.
	7615 16 F r.h.
	7615 19 F l.h.
	4220 42 r.h. 4220 52 l.h.
	7215 1350
	Details page 274

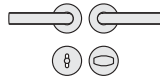
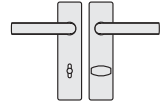
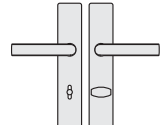

Lever handles for framed doors

	7215 25
	7615 25 F
	Details page 245
	0655 21
	0655 22 F
	Details page 244
	1757


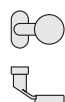

Entrance door furnitures

	7215 14
	7615 14 F
	7615 73 F Inactive leaf furn.
	7215 02
	7615 02 F
	7615 71 F Inactive leaf furn.
	7215 10
	7615 10 F
	7615 79 F Inactive leaf furn.
	7215 17 r.h. 7215 20 l.h.
	7615 17 F r.h.
	7615 20 F l.h.




Bathroom furnitures

	7215 15
	7215 03
	7215 11
	7215 18 r.h. 7215 21 l.h.

Door knobs for framed doors

	0629 .. turnable 2329 .. fixed
	Details page 257
	0654 28 turnable 2354 28 fixed
	Details page 257
	1757

Window handles

	3424
	Details page 118
	3424 80
	Window handle, lockable Details page 133
	3407
	Window handle lock adapter Details page 134

Project fittings Design 1023

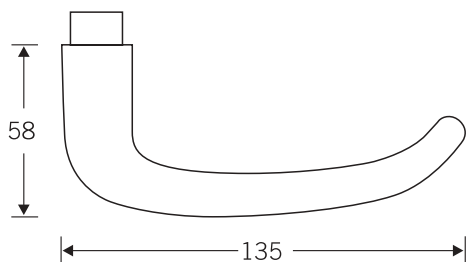


Aluminium
AluGrey
Stainless steel

2

a

EN 179



When the Ulm Design College was being built in the Fifties, the Swiss architect, sculptor and designer Max Bill with Ernst Moeckel designed a lever handle based on the railway carriage handle common in Switzerland. It entered design history as the 'Ulm handle'.

Johannes Potente took this as the starting point for the 1023 model, still a compelling alternative to anonymous tubular designs.

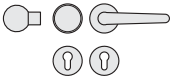

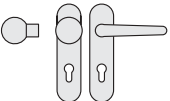

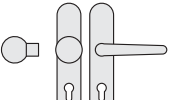

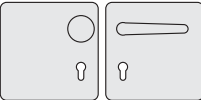
Product family Internal door furnitures

	7223 13
	7623 13 F
	7223 04
	7623 04 F
	7223 39
	7623 39 F
	7223 16 r.h. 7223 19 l.h.
	7623 16 F r.h. 7623 19 F l.h.
	4223 42 r.h. 4223 52 l.h. 7223 1350
	Details page 272

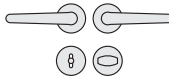
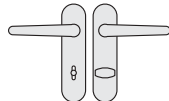
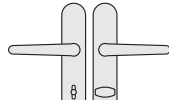

Lever handles for framed doors

	7223 25
	7623 25 F
	Details page 245
	0653 21
	0653 22 F
	Details page 244
	1757




Entrance door furnitures

	7223 12
	7623 12 F
	7623 73 F Inactive leaf furn.
	7223 05
	7623 05 F
	7623 74 F Inactive leaf furn.
	7223 40
	7623 40 F
	7623 78 F Inactive leaf furn.
	7223 27 r.h. 7223 28 l.h.
	7623 27 F r.h. 7623 28 F l.h.


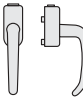

Bathroom furnitures

	7223 15
	7223 06
	7223 41
	7223 18 r.h. 7223 21 l.h.

Door knobs for framed doors

	0602 .. turnable 2302 .. fixed
	Details page 256
	0638 .. turnable 2346 .. fixed
	Details page 256
	1757

Window handles

	3423
	Details page 116
	3423 80
	Window handle, lockable Details page 133
	3407
	Window handle lock adapter Details page 134

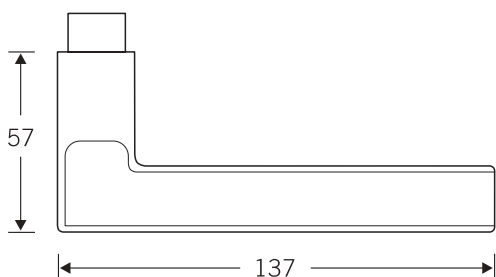
Project fittings Design 1035



Aluminium
AluGrey
Stainless steel

2











a








In the autumn of 1996, the Düsseldorf-based interior designer Heike Falkenberg invited us to recreate a handle design from the past as part of a renovation project. On the strength of sketches submitted, the FSB development department did some milling work on FSB 1076 to arrive at a first approximation.

We were so enamoured of the prototype that we decided on the spot to present our hefty new idea to the market. The market has responded enthusiastically to the new design.

Product family Internal door furnitures

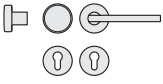
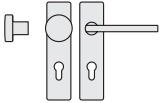
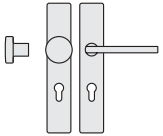
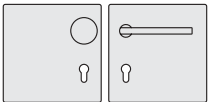
	7235 13
	7635 13 F
	7235 01
	7635 01 F
	7235 09
	7635 09 F
	7235 16 r.h. 7235 19 l.h.
	7635 16 F r.h. 7635 19 F l.h.
	4220 42 r.h. 4220 52 l.h.
	7235 1350
	Details page 274

Lever handles for framed doors

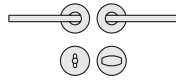
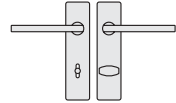
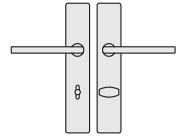

	7235 25
	7635 25 F
	Details page 238
	0635 21
	0635 22 F
	Details page 238
	1757

Fire door fittings **F** only
available in Stainless steel


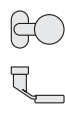

Entrance door furnitures

	7235 14 7635 14 F 7635 73 F Inactive leaf furn.
	7235 02 7635 02 F 7635 71 F Inactive leaf furn.
	7235 10 7635 10 F 7635 79 F Inactive leaf furn.
	7235 17 r.h. 7235 20 l.h. 7635 17 F r.h. 7635 20 F l.h.


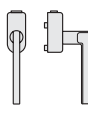

Bathroom furnitures

	7235 15
	7235 03
	7235 11
	7235 18 r.h. 7235 21 l.h.

Door knobs for framed doors

	0629 .. turnable 2329 .. fixed Details page 257
	0654 28 turnable 2354 28 fixed Details page 257
	1757

Window handles

	3459 Details page 121
	3459 80 Window handle, lockable Details page 133
	3407 Window handle lock adapter Details page 134

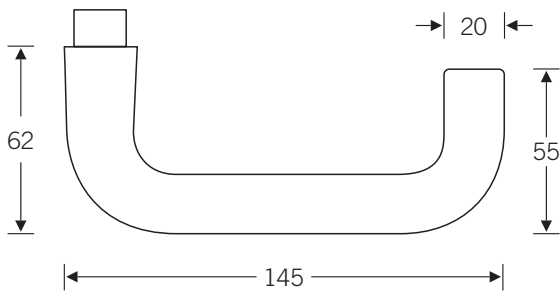
Project fittings
Design 1070



Aluminium
AluGrey
Stainless steel

2
a

EN 179



What is there left to say about this particular design? Art historians report that it was a blacksmith of yore who fashioned the first tubular handle. In more recent times – in the 1920s – it was most likely the wehag company that introduced the circular cross-section to architectural hardware. At about the same time the neighbouring Woelm company was launching an identical design it dubbed the 'stable door handle'.

FSB didn't leap onto the circular bandwagon until the 1970s, when the market was very well disposed to such moves.

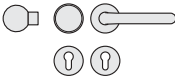
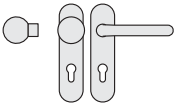
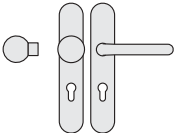
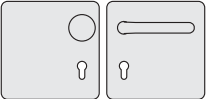
Product family
Internal door furnitures

	7270 13
	7670 13 F
	7270 04
	7670 04 F
	7270 39
	7670 39 F
	7270 16 r.h. 7270 19 l.h.
	7670 16 F r.h. 7670 19 F l.h.
	4223 42 r.h. 4223 52 l.h. 7270 1350
	Details page 272

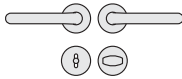
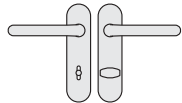
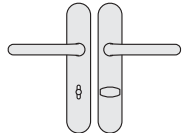

Lever handles for framed doors

	7270 25
	7670 25 F
	Details page 247
	0665 21
	0665 22 F
	Details page 246
	1757




Entrance door furnitures

	7270 12 7670 12 F 7670 73 F Inactive leaf furn.
	7270 05 7670 05 F 7670 74 F Inactive leaf furn.
	7270 40 7670 40 F 7670 78 F Inactive leaf furn.
	7270 27 r.h. 7270 28 l.h. 7670 27 F r.h. 7670 28 F l.h.




Bathroom furnitures

	7270 15
	7270 06
	7270 41
	7270 18 r.h. 7270 21 l.h.

Door knobs for framed doors

	0602 .. turnable 2302 .. fixed Details page 256
	0638 .. turnable 2346 .. fixed Details page 256
	1757

Window handles

	3421 Details page 117
	3421 80 Window handle, lockable Details page 133
	3407 Window handle lock adapter Details page 134

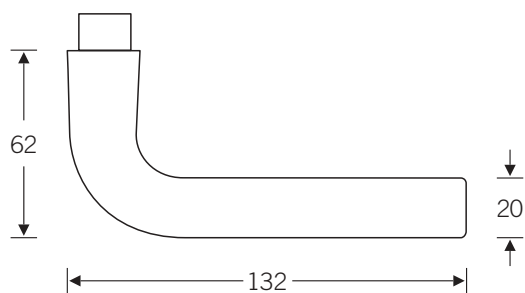
Project fittings Design 1075



Aluminium
AluGrey
Stainless steel

2

a



The 1920s gave us three truly enduring door handle designs.

In Paris, the architect Mallet-Stevens cut a tube in half and mitred it back together again (FSB 1076). The open end was rounded. In Vienna, meanwhile, the philosopher Ludwig Wittgenstein was busy bending a brass tube through 90 degrees (FSB 1147). He, too, rounded off the end. Messieurs Gropius and Meyer, finally, yoked a square section shank to a circular grip (FSB 1102).

All three designs are still with us today. In fact, two and three times over as far as FSB is concerned, viz. the Frankfurt Model, Wittgenstein's handle and the Gropius/Meyer redesign by Alessandro Mendini. There's even a variation on the theme: Model FSB 1075. Someone had the bright idea of slicing off the round tip. That was the simple way FSB 1075 turned out.

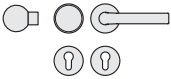

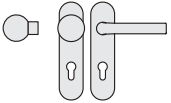

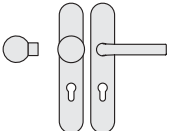

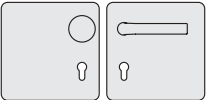


Product family Internal door furnitures

	7275 13
	7675 13 F
	7275 04
	7675 04 F
	7275 39
	7675 39 F
	7275 16 r.h. 7275 19 l.h.
	7675 16 F r.h. 7675 19 F l.h.
	4223 42 r.h. 4223 52 l.h. 7275 1350
	Details page 272

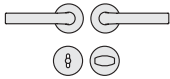
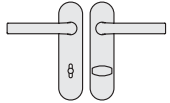
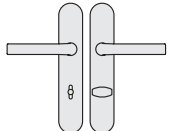

Lever handles for framed doors

	7275 25
	7675 25 F
	Details page 238
	1757




Entrance door furnitures

	7275 12
	7675 12 F
	7675 73 F Inactive leaf furn.
	7275 05
	7675 05 F
	7675 74 F Inactive leaf furn.
	7275 40
	7675 40 F
	7675 78 F Inactive leaf furn.
	7275 27 r.h. 7275 28 l.h.
	7675 27 F r.h.
	7675 28 F l.h.



Bathroom furnitures

	7275 15
	7275 06
	7275 41
	7275 18 r.h. 7275 21 l.h.

Door knobs for framed doors

	0602 .. turnable 2302 .. fixed
	Details page 256
	0638 .. turnable 2346 .. fixed
	Details page 256
	1757

Window handles

	3422
	Details page 120
	3407
	Window handle lock adapter Details page 134

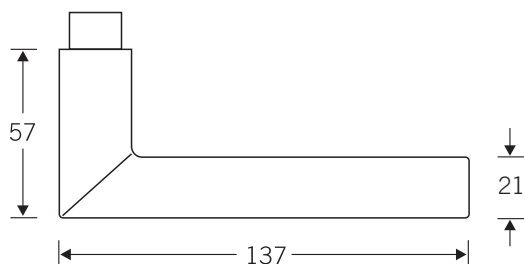
Project fittings Design 1076



Aluminium
AluGrey
Stainless steel

2











a








The architect Robert-Mallet Stevens (1886–1945) designed several blocks of flats in the Paris of the 1920s. He was probably the first designer to hit upon the idea of taking the tubular handle devised by the Viennese philosopher Ludwig Wittgenstein in the same decade, splitting it where it bends, and mitring it back together again at right angles.

They are now known as the 'FRANKFURT model', and there's a simple reason for this. They were rediscovered for the new Architecture Museum building in Frankfurt and soon took the market by storm.

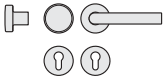
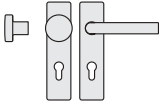
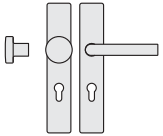
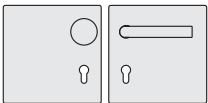
Product family Internal door furnitures

	7276 13
	7676 13 F
	7276 01
	7676 01 F
	7276 09
	7676 09 F
	7276 16 r.h. 7276 19 l.h.
	7676 16 F r.h. 7676 19 F l.h.
	4220 42 r.h. 4220 52 l.h.
	7276 1350
	Details page 274

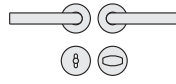
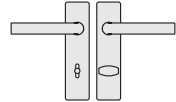
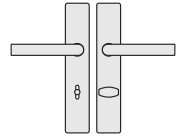

Lever handles for framed doors

	7276 25
	7676 25 F
	Details page 247
	0656 21
	0656 22 F
	Details page 246
	1757




Entrance door furnitures

	7276 14 7676 14 F 7676 73 F Inactive leaf furn.
	7276 02 7676 02 F 7676 71 F Inactive leaf furn.
	7276 10 7676 10 F 7676 79 F Inactive leaf furn.
	7276 17 r.h. 7276 20 l.h. 7676 17 F r.h. 7676 20 F l.h.

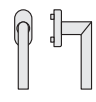
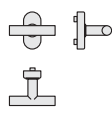
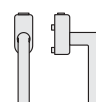

Bathroom furnitures

	7276 15
	7276 03
	7276 11
	7276 18 r.h. 7276 21 l.h.

Door knobs for framed doors

	0629 .. turnable 2329 .. fixed Details page 257
	0654 28 turnable 2354 28 fixed Details page 257
	1757

Window handles

	3476 Details page 122
	3403 Details page 126
	3476 80 Window handle, lockable Details page 133
	3407 Window handle lock adapter Details page 134

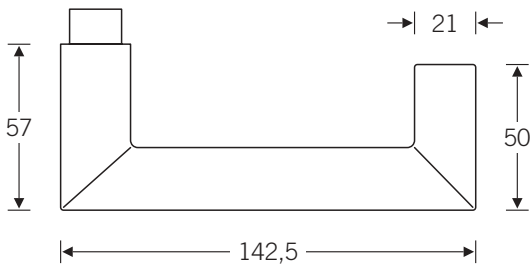
Project fittings
Design 1016



Aluminium
AluGrey
Stainless steel

2
a

EN 179



FSB's first Grey Manual published in 1990 introduced to the market a lever handle based on a design from the 1920s. FSB 1076 subsequently became the most copied handle of the 20th century. FSB 1016, the model pictured here, is a closed variant that meets the specifications for emergency exits.

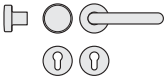
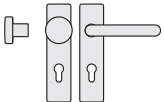
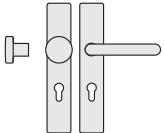
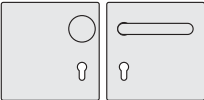
Product family
Internal door furnitures

	7216 13
	7616 13 F
	7216 01
	7616 01 F
	7216 09
	7616 09 F
	7216 16 r.h. 7216 19 l.h.
	7616 16 F r.h. 7616 19 F l.h.
	4220 42 r.h. 4220 52 l.h. 7216 1350
	Details page 274

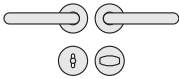
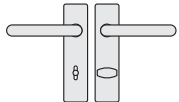
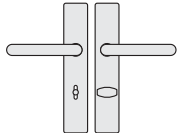

Lever handles for framed doors

	7216 25
	7616 25 F
	Details page 247
	0616 21
	0616 22 F
	Details page 246
	1757


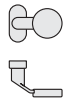

Entrance door furnitures

	7216 14 7616 14 F 7616 73 F Inactive leaf furn.
	7216 02 7616 02 F 7616 71 F Inactive leaf furn.
	7216 10 7616 10 F 7616 79 F Inactive leaf furn.
	7216 17 r.h. 7216 20 l.h. 7616 17 F r.h. 7616 20 F l.h.


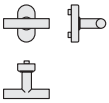
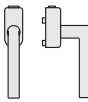

Bathroom furnitures

	7216 15
	7216 03
	7216 11
	7216 18 r.h. 7216 21 l.h.

Door knobs for framed doors

	0629 .. turnable 2329 .. fixed Details page 257
	0654 28 turnable 2354 28 fixed Details page 257
	1757

Window handles

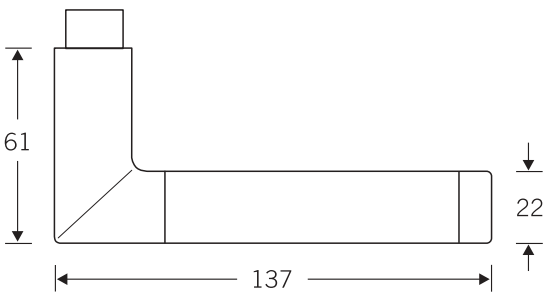
	3476 Details page 122
	3403 Details page 126
	3476 80 Window handle, lockable Details page 133
	3407 Window handle lock adapter Details page 134

Project fittings Design 1077



Aluminium

2
a



The idea behind the FSB 1077 lever handle series was to give architects and end-users the opportunity to have a say in the choice of grip.

The following proven combinations await your order in FSB's stock range:

- Aluminium natural colour anodised, Grip stainless steel
- Aluminium natural colour anodised, Grip black

Product family

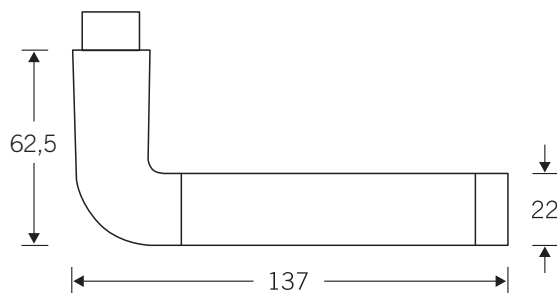
	Internal door furniture 7277 13 7677 13 F
	Entrance door furniture 7277 14 7677 14 F
	Bathroom furniture 7277 15
	Glass door set 4220 42 r.h. 4220 52 l.h. 7277 1350
	Window handle 3477 Details page 123
	Lever handles for framed doors 7277 25 7677 25 F Details page 238
	Lever handles for framed doors 0664 12 0664 22 F Details page 252
	Door knob for framed doors 0629 .. turnable 2329 .. fixed
	Door knob for framed doors 0654 28 turnable 2354 28 fixed
	Rose, oval 1757

Project fittings

Design 1089



Aluminium



The idea behind the FSB 1089 lever handle series was to give architects and end-users the opportunity to have a say in the choice of grip.

The following proven combinations await your order in FSB's stock range:

- Aluminium natural colour anodised, Grip stainless steel
- Aluminium natural colour anodised, Grip black

Product family

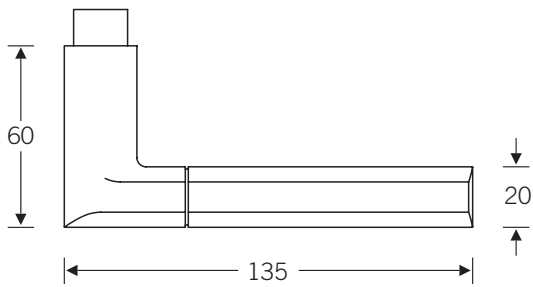
	Internal door furniture
	7289 13 7689 13 F
	Entrance door furniture
	7289 14 7689 14 F
	Bathroom furniture
	7289 15
	Glass door set
	4223 42 r.h. 4223 52 l.h. 7289 1350
	Window handle
	3489 Details page 124
	Lever handles for framed doors
	7289 25 7689 25 F Details page 253
	Lever handles for framed doors
	0664 21 0664 22 F Details page 252
	Door knob for framed doors
	0629 .. turnable 2329 .. fixed
	Door knob for framed doors
	0654 28 turnable 2354 28 fixed
	Rose, oval
	1757

Project fittings Design 1078



AluGrey
AluGrey with
tactile grip

2
a



Excited by the new FSB-material AluGrey, Christoph Ingenhoven returned to the major door handle design of the 1990s that FSB had marketed as the Frankfurt Model in the late 1980s, when it had picked up on a design idea Mallet-Stevens had in 1923.

Ingenhoven retained the mitring but radically reinvented the handle's gripping credentials by combining a flat top and bottom with a well-rounded body.

A version with a high performance thermoplast is optionally available.

Product family

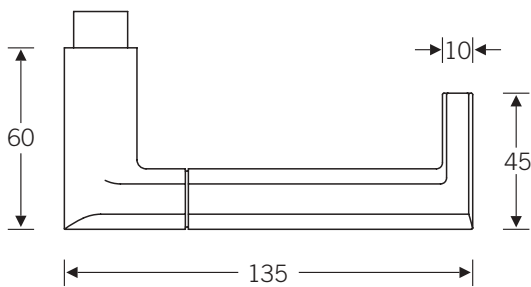
	Internal door furniture 7278 13 7678 13 F
	Entrance door furniture 7278 14 7678 14 F
	Bathroom furniture 7278 15
	Glass door set 4220 42 r.h. 4220 52 l.h. 7278 1350
	Window handle 3778 Details page 327
	Lever handles for framed doors 7278 25 7678 25 F Details page 331
	Lever handles for framed doors 0678 21 0678 22 F Details page 330
	Door knob for framed doors 2378 28 fixed 2378 18 fixed F
	Rose, oval 1757

Project fittings Design 1088



AluGrey
AluGrey with
tactile grip

EN179



The 'return handle', shown here with tactile grip, is a more enclosed version of Model 1078 that complies with emergency-exit door specifications.

Product family

	Internal door furniture 7288 13 7688 13 F
	Entrance door furniture 7288 14 7688 14 F
	Bathroom furniture 7288 15
	Glass door set 4220 42 r.h. 4220 52 l.h. 7288 1350
	Window handle 3778 Details page 327
	Lever handles for framed doors 7288 25 7688 25 F Details page 331
	Lever handles for framed doors 0688 21 0688 22 F Details page 330
	Door knob for framed doors 2378 28 fixed 2378 18 fixed F
	Rose, oval 1757

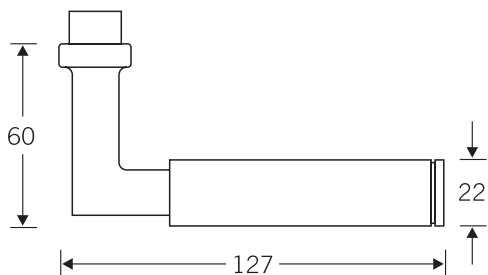
Project fittings Design 1102



Stainless steel

2

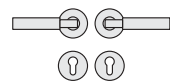
a



Model 1102 was produced by the Italian designer Alessandro Mendini, who contributed to the FSB Design Workshop by refashioning a familiar Gropius handle using new materials. So popular has Alessandro Mendini's 're-design' proved that there have been many requests for a stainless steel version. We're only too pleased to comply.

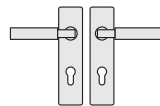
Shown on this page is the rugged version in stainless steel for heavily-used doors.

Product family Internal door furnitures



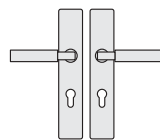
7202 13

7602 13 **F**



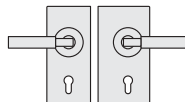
7202 01

7602 01 **F**



7202 09

7602 09 **F**



4220 42 r.h. | 4220 52 l.h.
7202 1350

Details page 274

Lever handles for framed doors



7202 25



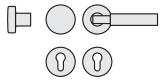
7602 25 **F**

Details page 238



1757

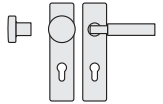
Entrance door furnitures



7202 14

7602 14 **F**

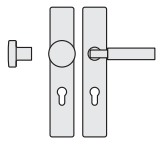
7602 73 **F** Inactive leaf furn.



7202 02

7602 02 **F**

7602 71 **F** Inactive leaf furn.

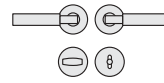


7202 10

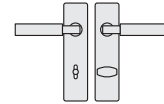
7602 10 **F**

7602 79 **F** Inactive leaf furn.

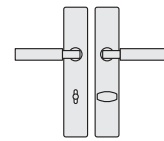
Bathroom furnitures



7202 15



7202 03



7202 11

Door knobs for framed doors



0629 .. turnable
2329 .. fixed

Details page 257



0654 28 turnable
2354 28 fixed

Details page 257



1757

Window handles



3432



3407

Details page 119

Window handle lock adapter
Details page 134

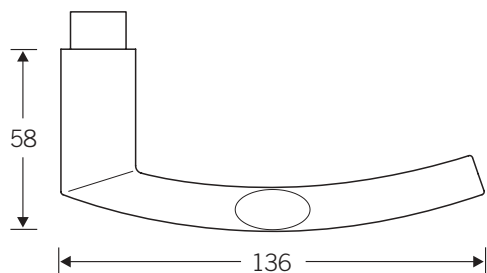
Project fittings
Design 1107



Aluminium
AluGrey
Stainless steel

2

a



FSB 1107 has close affinities with FSB 1108. Hartmut Weise has imbued his 'Brakel light-weight' model with the verve of a door in motion.

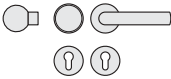
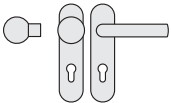
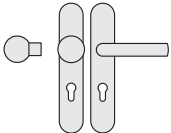
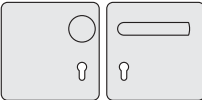
Product family
Internal door furnitures

	7240 63
	7640 63 F
	7240 04
	7640 04 F
	7240 39
	7640 39 F
	7240 16 r.h. 7240 19 l.h.
	7640 16 F r.h. 7640 19 F l.h.
	4221 42 r.h. 4221 52 l.h. 7240 1350
	Details page 270

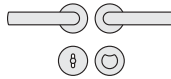
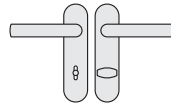
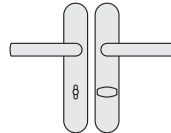

Lever handles for framed doors

	7240 25
	7640 25 F
	Details page 249
	0607 21
	0607 22 F
	Details page 248
	1757






Entrance door furnitures

	7240 62 7640 62 F 7640 72 F Inactive leaf furn.
	7240 05 7640 05 F 7640 74 F Inactive leaf furn.
	7240 40 7640 40 F 7640 78 F Inactive leaf furn.
	7240 27 r.h. 7240 28 l.h. 7640 27 F r.h. 7640 28 F l.h.




Bathroom furnitures

	7240 65
	7240 06
	7240 41
	7240 18 r.h. 7240 21 l.h.

Door knobs for framed doors

 	0602 .. turnable 2302 .. fixed Details page 256
 	0638 .. turnable 2346 .. fixed Details page 256
	1757

Window handles

	3440 Details page 115
	3440 80 Window handle, lockable Details page 133
	3407 Window handle lock adapter Details page 134

2
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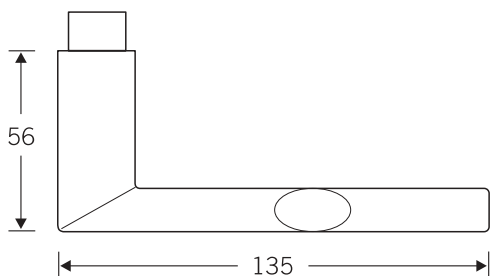
Project fittings Design 1108



Aluminium
AluGrey
Stainless steel

2

a



FSB designer Hartmut Weise has long been wondering where the secret of the two popular door handles 'Wittgenstein's Handle' and 'Frankfurt Model' can lie. Then one day he hit upon the term 'unpretentious presence' to sum up the out-come of his deliberations.

Spurred on by this analysis, Hartmut Weise resolved to place an even more chaste variant on the decision-making table:

Round tubing is mitred to an oval grip at right angles. The 'Frankfurt heavyweight' is instantly transformed into an elegant 'Brakel light-weight' without in any way having sacrificed the unpretentious presence of the former.

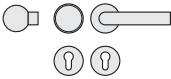

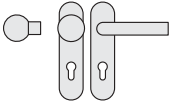

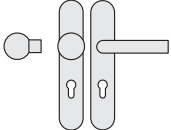




Product family Internal door furnitures

	7242 63
	7642 63 F
	7242 04
	7642 04 F
	7242 39
	7642 39 F
	7242 16 r.h. 7242 19 l.h.
	7642 16 F r.h. 7642 19 F l.h.
	4221 42 r.h. 4221 52 l.h. 7242 1350
	Details page 270

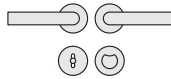
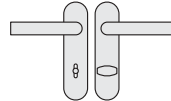
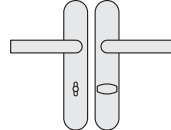

Lever handles for framed doors

	7242 25
	7642 25 F
	Details page 249
	0658 21
	0658 22 F
	Details page 248
	1757




Entrance door furnitures

	7242 62
	7642 62 F
	7642 72 F Inactive leaf furn.
	7242 05
	7642 05 F
	7642 74 F Inactive leaf furn.
	7242 40
	7642 40 F
	7642 78 F Inactive leaf furn.
	7242 27 r.h. 7242 28 l.h.
	7642 27 F r.h.
	7642 28 F l.h.




Bathroom furnitures

	7242 65
	7242 06
	7242 41
	7242 18 r.h. 7242 21 l.h.

Door knobs for framed doors

	0602 .. turnable 2302 .. fixed
	Details page 256
	0638 .. turnable 2346 .. fixed
	Details page 256
	1757

Window handles

	3409
	Details page 115
	3409 80
	Window handle, lockable Details page 133
	3407
	Window handle lock adapter Details page 134

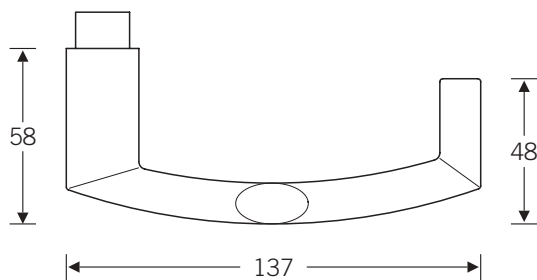
Project fittings Design 1177



Aluminium
AluGrey
Stainless steel

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a

EN 179



Matching the lever handles for frame doors, the 'return variant' of the FSB 1107 model was not long coming.

Product family

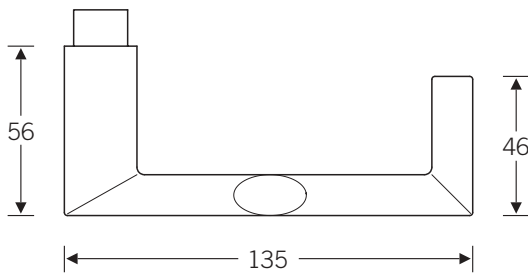
	Internal door furniture 7250 63 7650 63 F
	Entrance door furniture 7250 62 7650 62 F
	Bathroom furniture 7250 65
	Glass door set 4221 42 r.h. 4221 52 l.h. 7250 1350
	Window handle 3440 Details page 115
	Lever handles for framed doors 7250 25 7650 25 F Details page 249
	Lever handles for framed doors 0627 21 0627 22 F Details page 248
	Door knob for framed doors 0602 .. turnable 2302 .. fixed
	Door knob for framed doors 0638 .. turnable 2346 .. fixed
	Rose, oval 1757

Project fittings Design 1178



Aluminium
AluGrey
Stainless steel

EN179



The FSB 1178 model is the enclosed form of the 'Brakel lightweight', model 1108 by Hartmut Weise. Originally conceived as a lever handle for framed doors, the version incorporating a circular rose also serves to complement model 1108.

Product family

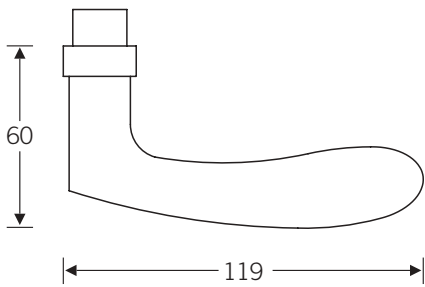
	Internal door furniture 7251 63 7651 63 F
	Entrance door furniture 7251 62 7651 62 F
	Bathroom furniture 7251 65
	Glass door set 4221 42 r.h. 4221 52 l.h. 7251 1350
	Window handle 3409 Details page 115
	Lever handles for framed doors 7251 25 7651 25 F Details page 249
	Lever handles for framed doors 0628 21 0628 22 F Details page 248
	Door knob for framed doors 0602 .. turnable 2302 .. fixed
	Door knob for framed doors 0638 .. turnable 2346 .. fixed
	Rose, oval 1757

Project fittings Design 1106



AluGrey

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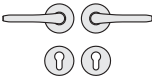
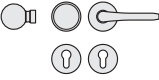
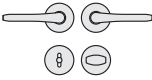
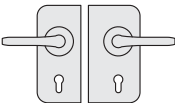

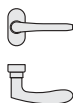
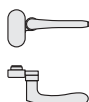



Materials always figure centrally in the thinking of Frankfurt architect Professor Christoph Mäckler. Thus it stood to reason that FSB's 'Alu-Grey' material should also figure in the Mäckler handle collection.

Revamping the handle's shape and size also allowed the technical requirements for heavy-duty hardware to be met with the FSB AGL compensating bearing and a variant for fire doors. The upshot was lever handle 1106.

Completing the series are a doorknob, a lever handle with oval roses for narrow-frame doors and a window handle with FSB's proven click-stop mechanism.

Product family

	Internal door furniture 7206 13 7606 13 F
	Entrance door furniture 7206 12 7606 12 F
	Bathroom furniture 7206 15
	Glass door set 4223 42 r.h. 4223 52 l.h. 7206 1350
	Window handle 3736 Details page 124
	Lever handles for framed doors 7206 25 7606 25 F Details page 238
	Lever handles for framed doors 0606 17.. 0606 18.. F Details page 238
	Rose, oval 1757

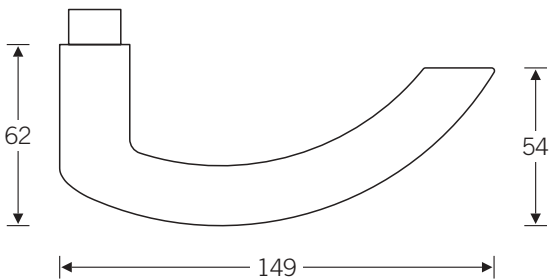
Project fittings

Design 1119



Aluminium
AluGrey
Stainless steel

EN179



FSB 1119 is the heavy-duty member of the light series. It augments the design's graceful lightness with the ruggedness required for doors in constant use. Hands and elbows are dependably guided into the operating position. Its end curves gently back towards the leaf of the door. This handle was designed by Hartmut Weise.

Product family

	Internal door furniture 7219 13 7619 13 F
	Entrance door furniture 7219 .. 7619 .. F
	Bathroom furniture 7219 15
	Glass door set 4221 42 r.h. 4221 52 l.h. 7219 1350
	Window handle 3440 Details page 115
	Lever handles for framed doors 7219 25.. 7619 25.. F Details page 243
	Lever handles for framed doors 0619 17.. 0619 18.. F Details page 243
	Door knob for framed doors 0602 .. turnable 2302 .. fixed
	Door knob for framed doors 0638 .. turnable 2346 .. fixed
	Rose, oval 1757

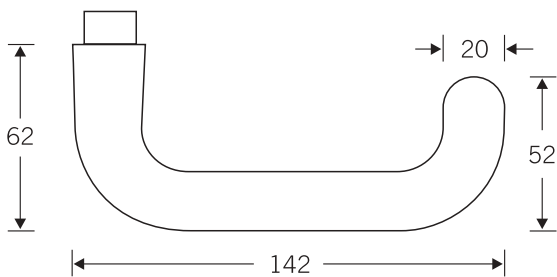
Project fittings Design 1146



Aluminium
AluGrey
Stainless steel

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EN 179



In the early 1990s, FSB decided the time had come to rework the stable door handle with its plain round tubing. The shank was tapered and the curving outer end rounded off at the tip. Seemingly minor though these two changes were, they lend the reworked model FSB 1146 a very distinctive appearance and, believe it or not, the competition has since taken to copying our design.

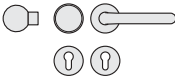
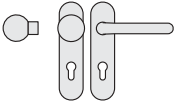
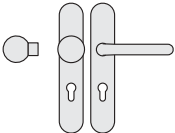
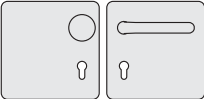
Product family Internal door furnitures

	7246 13
	7646 13 F
	7246 04
	7646 04 F
	7246 39
	7646 39 F
	7246 16 r.h. 7246 19 l.h.
	7646 16 F r.h. 7646 19 F l.h.
	4223 42 r.h. 4223 52 l.h. 7246 1350
	Details page 272

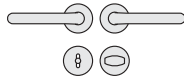
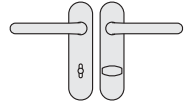
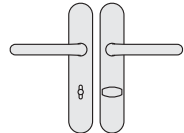

Lever handles for framed doors

	7246 25
	7646 25 F
	Details page 253
	0646 21
	0646 22 F
	Details page 252
	1757

Entrance door furnitures




	7246 12 7646 12 F 7646 73 F Inactive leaf furn.
	7246 05 7646 05 F 7646 74 F Inactive leaf furn.
	7246 40 7646 40 F 7646 78 F Inactive leaf furn.
	7246 27 r.h. 7246 28 l.h. 7646 27 F r.h. 7646 28 F l.h.

Bathroom furnitures




	7246 15
	7246 06
	7246 41
	7246 18 r.h. 7246 21 l.h.

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Door knobs for framed doors

	0602 .. turnable 2302 .. fixed Details page 256
	0638 .. turnable 2346 .. fixed Details page 256
	1757

Window handles

	3446 Details page 117
	3446 80 Window handle, lockable Details page 133
	3407 Window handle lock adapter Details page 134

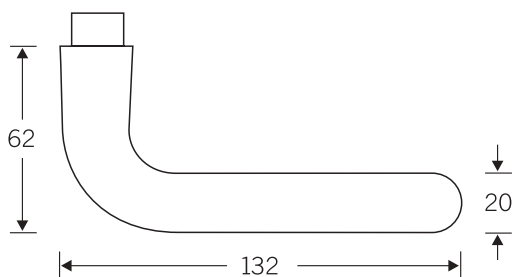
Project fittings Design 1147



Aluminium
AluGrey
Stainless steel

2

a



The company motif draws on a door handle designed in mid-Twenties' Vienna by the Austrian philosopher Ludwig Wittgenstein that has served as a model for several designs since, including the reworked FSB 1147 handle in this catalogue. It should replace the standard 1075 model.

Its tapered neck and rounded end set it apart from both our own company motif and the many other variants of this handle on the market.

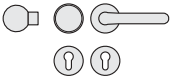
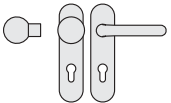
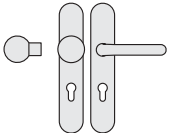
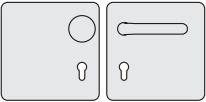
Product family Internal door furnitures

	7247 13
	7647 13 F
	7247 04
	7647 04 F
	7247 39
	7647 39 F
	7247 16 r.h. 7247 19 l.h.
	7647 16 F r.h. 7647 19 F l.h.
	4223 42 r.h. 4223 52 l.h. 7247 1350
	Details page 272

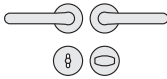
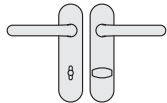
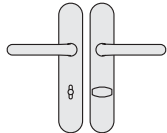
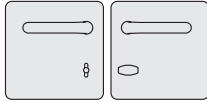
Lever handles for framed doors

	7247 25
	7647 25 F
	Details page 247
	0647 21
	0647 22 F
	Details page 246
	1757

Entrance door furnitures




	7247 12 7647 12 F 7647 73 F Inactive leaf furn.
	7247 05 7647 05 F 7647 74 F Inactive leaf furn.
	7247 40 7647 40 F 7647 78 F Inactive leaf furn.
	7247 27 r.h. 7247 28 l.h. 7647 27 F r.h. 7647 28 F l.h.

Bathroom furnitures



	7247 15
	7247 06
	7247 41
	7247 18 r.h. 7247 21 l.h.

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Door knobs for framed doors

	0602 .. turnable 2302 .. fixed Details page 256
	0638 turnable 2346 fixed Details page 256
	1757

Window handles

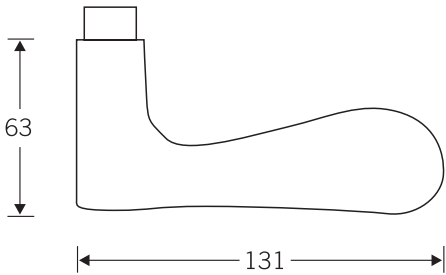
	3447 Details page 120
	3407 Window handle lock adapter Details page 134

Project fittings
Design 1144



Aluminium
AluGrey

2
a



FSB 1144 is a lever handle styled to appeal to eye and hand in equal measure. The message the eye receives from Jasper Morrison's design is that this handle is a hand-operated device for opening doors. Reassured, the hand reaches out. The thumb comes to rest; the index settles in its recess; the hand clenches to give a firm grip. All the good-grip criteria identified by Otl Aicher and ourselves have been met.

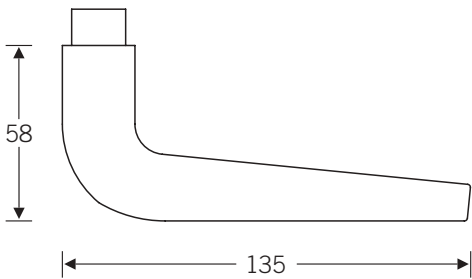
Product family

	Internal door furniture 7244 13 7644 13 F
	Entrance door furniture 7244 14 7644 14 F
	Bathroom furniture 7244 15
	Window handle 3444 Details page 352
	Lever handles for framed doors 7244 25 7644 25 F
	Lever handles for framed doors 0642 21 0642 22 F Details page 353
	Door knob for framed doors 0602 .. turnable 2302 .. fixed
	Door knob for framed doors 0638 .. turnable 2346 .. fixed
	Rose, oval 1757

Project fittings Design 1149



Aluminium
AluGrey

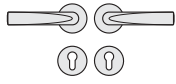
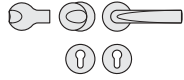
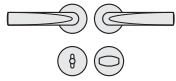

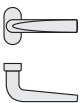
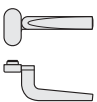



Three design constituents go to make up the grace of the rahe+rahe door handle.

First, there is the conical, flat styling visible front-on that emerges from the tubular material. This bisects the end face, giving rise there to a striking semi-circle as the second constituent.

The third constituent is heftiness deriving from the slight angle of extension of the back of the door handle. It is the harmonious interplay of these three constituents that gives the rounded tube its striking and innovative identity.

Product family

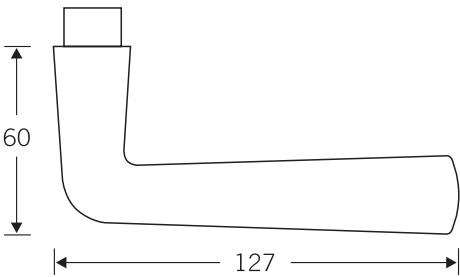
	Internal door furniture 7249 13 7649 13 F
	Entrance door furniture 7249 12 7649 12 F
	Bathroom furniture 7249 15
	Window handle 3448 Details page 358
	Lever handles for framed doors 7249 25 7649 25 F Details page 358
	Lever handles for framed doors 0649 17.. 0649 18.. F Details page 358
	Rose, oval 1757

Project fittings
Design 1173



Aluminium
AluGrey
Stainless steel

2
a



FSB 1173 model sports a trumpet-shaped design very much reminiscent of a model that emerged in the late Twenties in the Frankfurt area and has also long been part of the FSB repertoire. In earlier catalogues it was listed as FSB 7411.

The chaste styling of this redesign in aluminium and stainless steel represents a compelling alternative to the famous door handle model FSB 1147, based on a design by the philosopher Ludwig Wittgenstein.

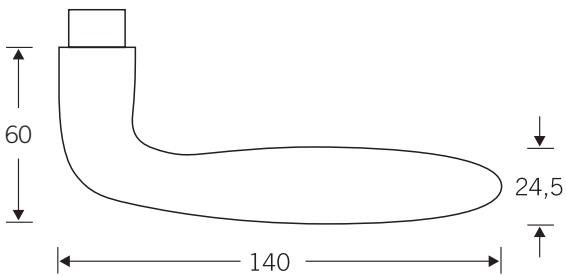
Product family

	Internal door furniture 7273 13 7673 13 F
	Entrance door furniture 7273 14 7673 14 F
	Bathroom furniture 7273 15
	Glass door set 4220 42 r.h. 4220 52 l.h. 7273 1350
	Window handle 3473 Details page 122
	Lever handles for framed doors 7273 25 7673 25 F Details page 245
	Lever handles for framed doors 0673 21 0673 22 F Details page 244
	Door knob for framed doors 0629 turnable 2329 fixed
	Door knob for framed doors 0654 28 turnable 2354 28 fixed
	Rose, oval 1757

Project fittings Design 1176



Aluminium
AluGrey
Stainless steel



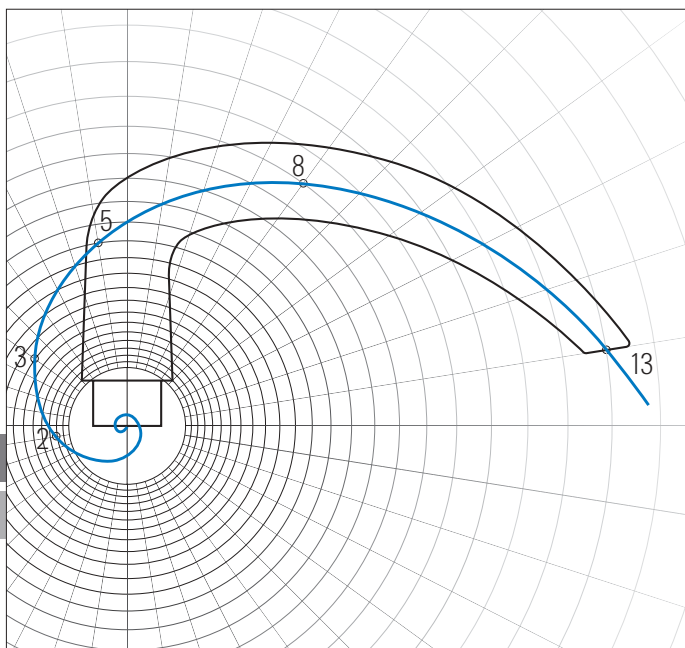
The design of FSB 1176 is likewise based on an older FSB model. The shank and tip of the handle were originally made of rolled steel, this later giving way to cast aluminum, whilst the grip itself was finished in chunky black plastic.

The tool makers and R & D people at FSB joined forces to fashion this familiar form out of steel tubing, which then simply had to be rolled to a point at one end. To produce the moulds for the aluminium version was much easier.

Product family

	Internal door furniture 7286 13 7686 13 F
	Entrance door furniture 7286 12 7686 12 F
	Bathroom furniture 7286 15
	Glass door set 4223 42 r.h. 4223 52 l.h. 7286 1350
	Window handle 3437 Details page 120
	Lever handles for framed doors 7286 25 7686 25 F Details page 238
	Door knob for framed doors 0602 .. turnable 2302 .. fixed
	Door knob for framed doors 0638 .. turnable 2346 .. fixed
	Rose, oval 1757

The history of the golden section



Three door handles in search of the irrational measure of beauty or the golden spiral as the soul of handle culture:

Having read a book on the 'Nature of Beauty' by Friedrich Cramer and Wolfgang Kämpfer, we at FSB hit upon the idea of fathoming the mystery of beauty in the world of door handles with the aid of the Golden Section.

The mystery of beauty, we had read, is closely bound up with the history of an irrational number whose mysterious power man had been attempting to interpret since Vitruvius (first century B.C.). We learnt about multifarious endeavours by leading minds to visualise this mystery-enshrouded number, we read about proportioned sketches by Leonardo da Vinci and the series of numbers discovered by Leonardo

of Pisa (1170 to 1220), read about flying squares and less flightworthy rectangles. We discovered that this 'ineffable number' (Johannes Kepler, 1571 to 1630) is a symbol for the dynamics of the life process that is generally regarded as being beautiful if it adheres to the principle of self-similitude. One merely needs to observe the natural growth spiral of a sea-shell, a daisy or a sunflower's infructescence.

Fascinated by these mathematical interpretations of beauty in nature, we immediately harnessed the dynamics of the Golden Section for our own purposes and came up with a pleasing door-handle style.

In our Design Engineering dept. we generated a radial grid system in our CAD system, entered the technical specifications for a door handle and, with the aid of right angles and Fibonacci's numbers (0, 1, 1, 2, 3, 5, 8, 13, ...), constructed a line through swirling rectangles.

Before our eyes, the aesthetic soul of a handle form gently reclining towards the door materialised – an irrational measure so compelling we were a little dumbfounded.

The rest was plain sailing. Drawing on our ergonomic know-how, we arrived at three handle cross-sections, one traditionally circular, one ergonomically triangular, and one elegantly square.

We, the 650-strong FSB workforce, are proud of our new co-operatively produced

lever-handle collection. The market had been getting on at us for years to provide an alternative to the classic lever-handle style rooted in the Pythagorean laws and incapable of more than 'harmonia et symmetria'. It was not until we shot a glance at Nature and familiarised ourselves with the laws of the Golden Section and the mystery of the irrational proportional number that we hit upon the innovative alternative the market was anticipating by way of the dynamic golden growth curve.



Design Center Stuttgart

Excellent!

FSB 7010, 7011, 7012

1999



Industrie Forum Design Hannover

Product Design Award + Ecology Design Award

FSB 7010, 7011, 7012

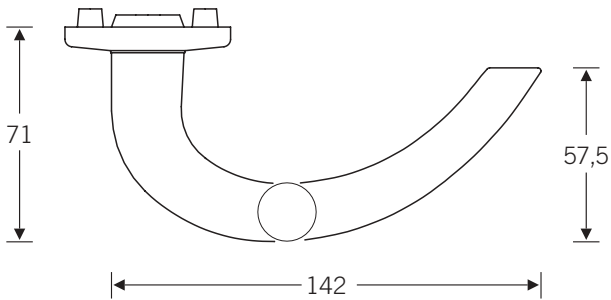
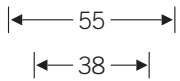
2000

Project fittings Design 7010



Aluminium
natural colour
anodised
AluGrey
Stainless steel

EN179



In works design FSB 7010, the 'dynamic golden growth spiral' was recreated with a round cross-section, the lever tapering progressively towards the tip. This effect enhances the momentum of the natural curvature. With its restrained looks and direction-of-motion styling, FSB 7010 is a joy to hold and use.

Product family

	Internal door furniture 7210 63 7610 63 F
	Entrance door furniture 7210 66 7610 66 F
	Bathroom furniture 7210 65
	Glass door set 4222 42 r.h. 4222 52 l.h. 7210 1350
	Window handle 3410 Details page 116
	Lever handles for framed doors 7210 25 7610 25 F Details page 251
	Lever handles for framed doors 0680 21 0680 22 F Details page 250
	Door knob for framed doors 0602 .. turnable 2302 .. fixed
	Door knob for framed doors 0638 .. turnable 2346 .. fixed
	Rose, oval 1757

Project fittings Design 7011



Aluminium
natural colour
anodised
AluGrey
Stainless steel

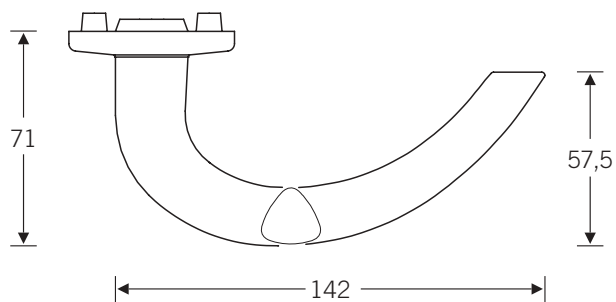
2

a

EN 179

55

38



In the case of works design FSB 7011, the round cross-section of the FSB 7010 model makes way for an ergonomic triangular form. Very striking here is the organic ease with which the shank of the handle initiates the 'dynamic golden growth spiral' and oversees a tapering of the grip's cross-section from 24 mm to 18 mm at the tip. This is an unobtrusive, non-slip design that reflects the direction of motion.

Product family

	Internal door furniture 7211 63 7611 63 F
	Entrance door furniture 7211 66 r.h. 7211 76 l.h. 7611 66 F r.h. 7611 76 F l.h.
	Bathroom furniture 7211 65
	Glass door set 4222 42 r.h. 4222 52 l.h. 7211 1350
	Window handle 3411 Details page 116
	Lever handles for framed doors 7211 25 7611 25 F Details page 251
	Lever handles for framed doors 0681 21 0681 22 F Details page 250
	Door knob for framed doors 0602 .. turnable 2302 .. fixed
	Door knob for framed doors 0638 .. turnable 2346 .. fixed
	Rose, oval 1757

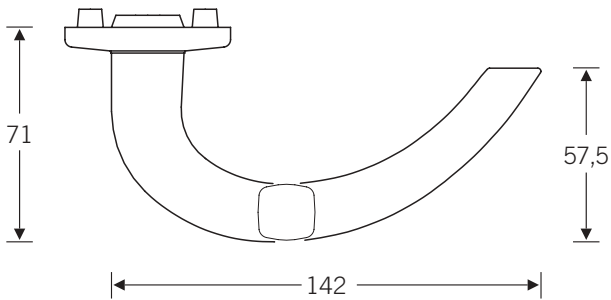
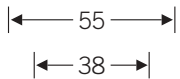
Fire door fittings **F** only
available in Stainless steel

Project fittings Design 7012



Aluminium
natural colour
anodised
AluGrey
Stainless steel

EN179



Works design FSB 7012 yokes the 'dynamic golden growth spiral' to an elegant square cross-section. In this series, we quite deliberately adopted three classical Euclidean forms – circle, triangle and square. We wanted to demonstrate that the 'dynamic golden growth spiral' applies for all forms. In this model, too, the grip tapers as the spiral expands. This tough handle is conducive to gripping and features direction-of-motion styling.

Product family

	Internal door furniture 7212 63 7612 63 F
	Entrance door furniture 7212 66 7612 66 F
	Bathroom furniture 7212 65
	Glass door set 4222 42 r.h. 4222 52 l.h. 7212 1350
	Window handle 3412 Details page 116
	Lever handles for framed doors 7212 25 7612 25 F Details page 251
	Lever handles for framed doors 0682 21 0682 22 F Details page 250
	Door knob for framed doors 0602 .. turnable 2302 .. fixed
	Door knob for framed doors 0638 .. turnable 2346 .. fixed
	Rose, oval 1757

2
a

Fire door fittings **F** only
available in Stainless steel

Lever handleset Ergo



7655

Aluminium
Stainless steel

2
a

This design is the splendid result of a time taking research and solves virtually every ergonomic problem associated with heavily-used doors. Why we've called it the 'Ergo handle' is thus plain to see.

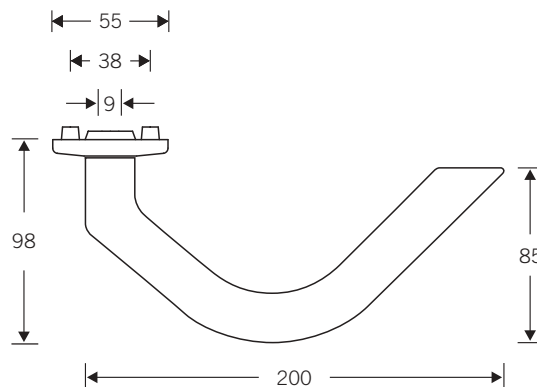
The main benefits of the Ergo handle FSB 7655 are:

- The triangular styling corresponds to the direction of motion of the user.
- This angular shape absorbs the effort of operating the door.

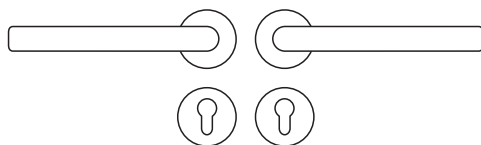
-The fullness and triangular cross-section of the design complement the shape of the hand as it closes to grip.

Where an elbow is applied, the left-right offers ample support.

The FSB Ergo lever furniture set 7655 is turnably fixed backplate and is suitable for fire doors (acc. to German DIN 18 273). Because of the width of FSB 7655 we recommend to use locks with follower 9 mm only. That's why the spindle is only available in 9 mm.



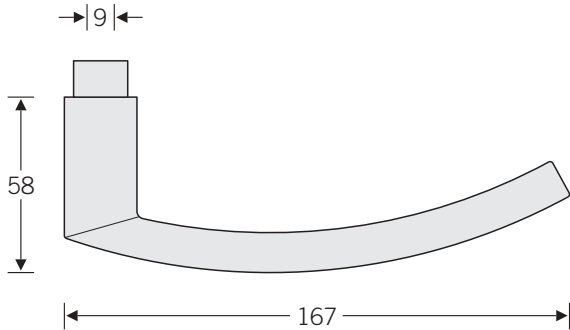
Order proposal:



Fire door fitting

Internal door furniture
7655 13

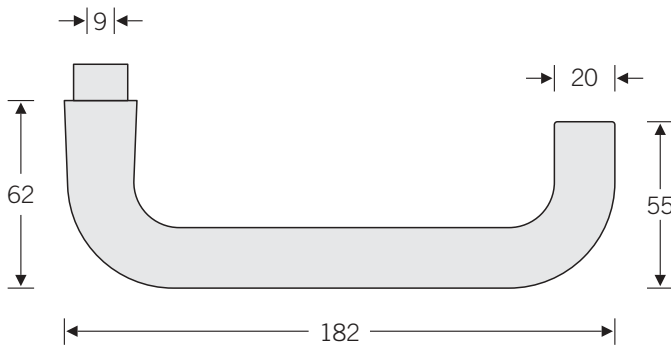
FSB XXL lever handles



7652 **F**

Stainless steel

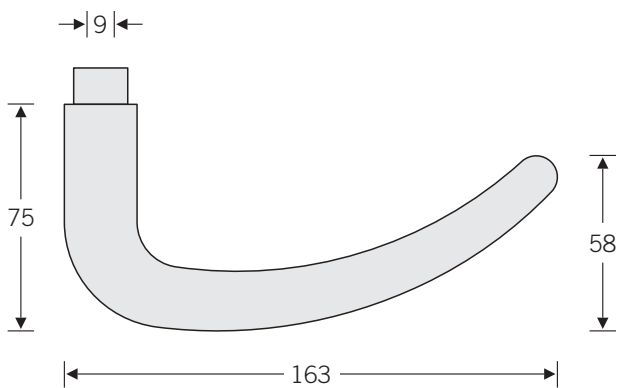
XXL version of
Design FSB 1107



7690 **F**

Stainless steel

XXL version of
Design FSB 1070



7617 **F**

Stainless steel

XXL version of
Design FSB 1023



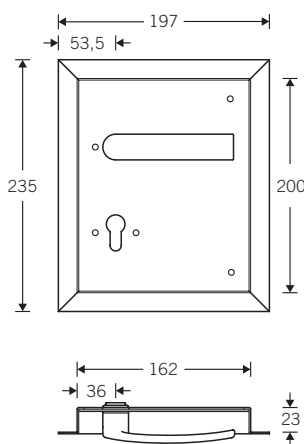
FSB's XXL lever handles for hospital doors are particularly popular. Architects often approach us with requests for extra-long door handles.

Over the years, these are the three designs that have established themselves in the marketplace.

For the sake of stability, XXL handles by FSB are only supplied with a 9 mm spindle for fire-safety doors.

We additionally recommend Institution Class 4 locks.

Gymnasium fittings



7949

Stainless steel

Applications exist in which it is not permissible for the handle to protrude above the surface of the door, in the case of sliding-door designs, for instance, or gymnasium doors.

FSB has devised two models of gymnasium fittings for such applications. The FSB 7949 model is angular with mitred corners. FSB 7950, by contrast, features rounded edges.

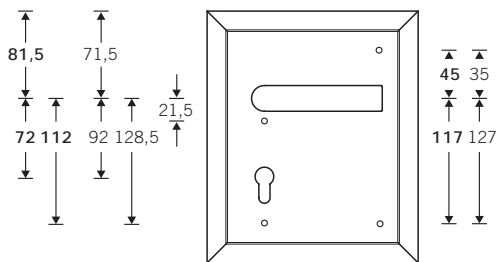
Flush handles FSB 7949 and 7950 are combined on the reverse side with hardware from the FSB heavy-duty programme, with the option of either a backplate or rose. Cf. page 91ff.

Doors to which flush handles are to be fitted must be at least 55 mm thick. To rule out any chance of injury, it should be ensured when fitting the handle that there is sufficient backset and the rim rests fully flush against the door.

Backplate version to suit
PZ 72 and 92 mm

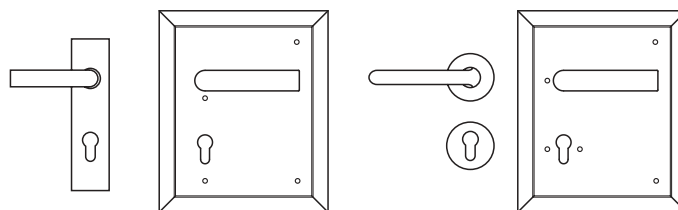
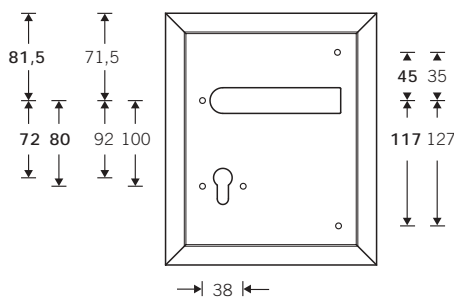
Inner backplate PZ 72 mm:
1450 03 / 1451 03

Inner backplate PZ 92 mm:
1452 03 / 1453 03



Roses version to suit
PZ 72 and 92 mm

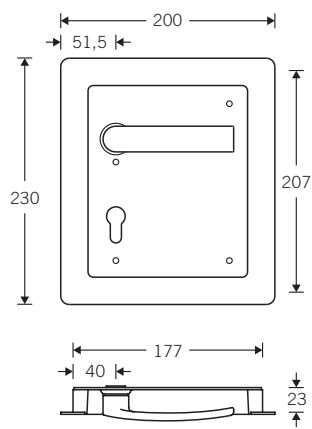
Roses:
1731 / 1735 resp.
1707 / 1708



Backplate version

Roses version

Gymnasium fittings



7950 Backplate version

7952 Roses version

Aluminium
Stainless steel

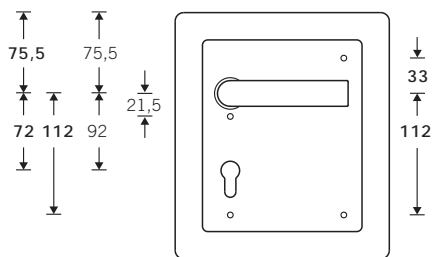
Edges: radius 8 mm

2
a

Backplate version to suit
PZ 72 and 92 mm

Inner backplate PZ 72 mm:
1450 03 / 1451 03

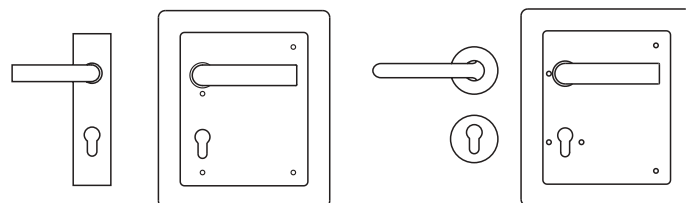
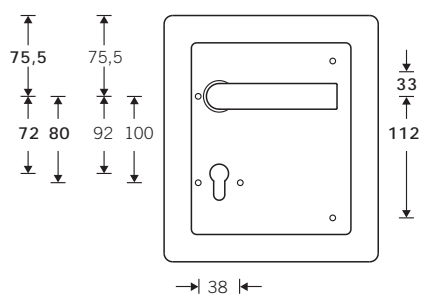
Inner backplate PZ 92 mm:
1452 03 / 1453 03 resp.
1410 03 / 1418 03



With the PZ 92 backplate,
through fixing is only possible
below the lever bearing.

Roses version to suit
PZ 72 and 92 mm

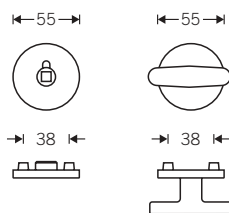
Roses:
1731 / 1735 resp.
1707 / 1708



Backplate version

Roses version

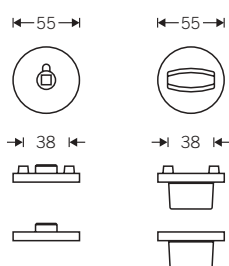
WC furniture for special requirements



1732 0054

Aluminium
AluGrey
Stainless steel

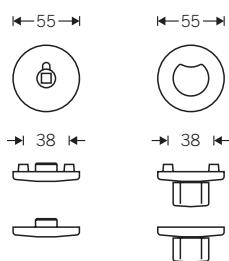
through fixing



1735 7654

without lugs 1744 7654

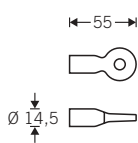
Aluminium
AluGrey
Stainless steel



1708 7654

without lugs 1709 7654

Aluminium
AluGrey
Stainless steel



3464

Aluminium

Enquiries are often received from old people's homes, nursing wards, and indeed child-care centres and schools concerning heavy-duty bathroom furniture with an emergency release on the outside. An FSB set devised for such special circumstances features a chunky, extra-large thumb-turn on the inside that can be

safely operated by all hands small, tremulous, or frail. This fitting is connected to a rugged emergency release on the outside that can be opened, by authorised persons only, even if resistance is put up on the inside.

WC furniture can also be combined with backplates. Please send your requests.

Emergency exit devices as specified under DIN EN 179

Uniform standards will in future be applied in Europe for hardware on fire-escape doors. The DIN EN 179 standard for emergency exits has been in force since April 2003. It governs the use and fitness for function of closing devices comprising a lever handle or push pad and a lock.

Under the provisions of the standard, closing devices of this kind are to be made use of on doors for emergency situations where it can be assumed that the users are familiar with the emergency exit and its fittings and that, hence, it is unlikely that a panic situation will arise.

An emergency exit device must be constructed in such a way that the door can be opened by a movement of the hand within one second, regardless of whether the door is on the latch or locked. The release force required to this end must not exceed 70 N. This function is largely performed by the lock. But there are also requirements as regards the handle hardware and, in particular, the shape of the lever handle. Thus the outer end of the handle is required to point towards the face of the door so as to avoid the risk of injury.

The standard goes on to provide specifications and rules with regard to opening force, stability and durability of service. So as to ensure that lock and handle hardware interwork smoothly, an independent institute is charged with verifying that these requirements are met by testing the closing device in its entirety.

Once testing has been concluded, the emergency-exit device is certificated and may be fitted to the relevant emergency-exit doors. To ensure the delivery and assembly of matching locks and handle hardware proceeds smoothly the lock is identified with the CE kitemark, with a test certificate being issued for the handle hardware. Hardware is to be matched on the basis of these two documents. Special attention is to be drawn to this by means of suitable notes and fitting instructions.

FSB has a number of lever handles amongst its wide range of designs that are suitable and certificated for use on emergency exits. They can be employed either with roses or with long or short backplates.

All handle hardware has been tested and certificated in conjunction with various lock types and makes. Test certificates are available for inspection upon request.

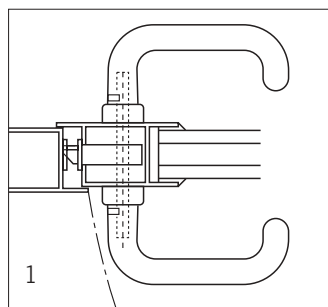
Please note the references made on the applicable pages:



Panic exit devices are dealt with in DIN EN 1125 (Section 2e).

Explanations	238
Overview	240
FSB Adaptor-solution	242
Lever handles for framed doors	243
Door knobs for framed doors	256
Roses for framed doors	260
Unlatching and pulling or pushing	263

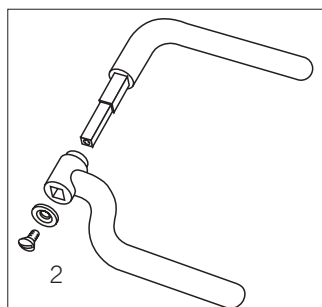
Furniture for framed doors



Hand injury hazard

The dimensional limits of narrow-frame doors can lead to fingers getting caught when the door is operated. This is particularly true of the closing face (Fig. 1).

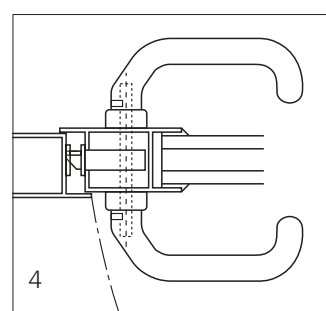
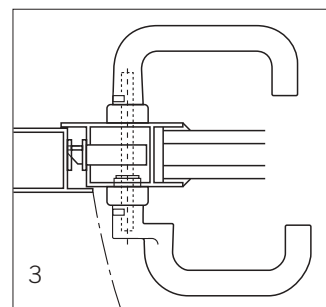
A further consequence of the spatial constraints referred to is a certain difficulty in fixing the furniture. The locks used feature a very short backset (25, 30, or 35 mm) and do not allow through fixing as an option. Thus lever handles, knobs, and pulls must generally be face fixed onto the stile.



An inspired idea by the philosopher Ludwig Wittgenstein

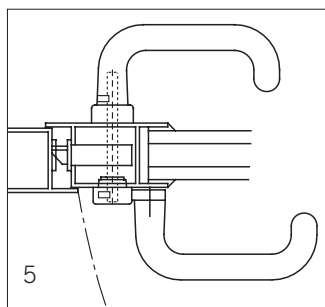
The Austrian philosopher and qualified engineer Ludwig Wittgenstein took time off from philosophising in the 1920s to design the interior of his sister's house, Palais Wittgenstein, in Vienna. In the process he had to come to grips with very narrow steel door stiles. To enable furniture to be firmly fixed onto the stiles yet prevent hands getting caught between the closing face and the door jamb, Ludwig Wittgenstein had a cranked handle made for the closing face to his own drawings, and to this he connected a normal male lever handle on the opening face. By combining a cranked female handle with a standard male lever handle in this inspired fashion, a man who otherwise applied himself to the imponderables of language produced a very clear-cut answer to the problems of injuries to the hand and firmness of fixing (Fig. 2).

FSB recommends giving the Wittgensteinian solution a new lease of life by pairing cranked and uncranked lever handles, the cranked handle being used as the male section and its uncranked counterpart providing a rugged connection (Figs. 3 and 5).



Anyone studying the remedy advocated for such problems in the past will be shaking their heads in disbelief given these insights. Two cranked female handle sections, rigidly mounted but freely rotating, were screwed onto the stile and joined together by means of a floating spindle (Fig. 4).

FSB supplies a complete range of different types of handle (levers, knobs and pulls) for narrow-frame doors in metal, plastic or wood.

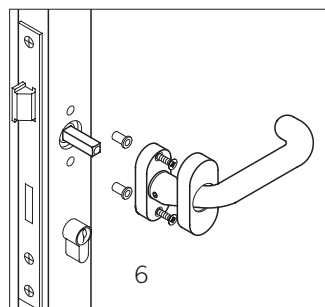


The alternative

As an alternative to the cranked lever handles supplied hitherto, FSB is introducing a new type of hardware in which the lever handle is located away from the point of pivot.

The pivot shaft in the rose is doubly supported between the baseplate and the housing. This rugged double bearing improves tolerances. The desired lever handle design is positioned on a swivel lever to the side of the rose (Fig. 5).

This adaptive alternative enables FSB to offer a solution for the wishes of architects to equip their building projects with the same design of lever handle in all its technical diversities.



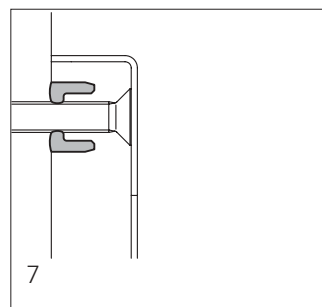
Rivet nuts

To ensure hardware for narrow-frame doors is securely affixed, FSB recommends the use of rivet nuts in which fittings are subsequently anchored by means of non-loosening screws.

The heads of these rivet nuts (\varnothing 11 mm) fit snugly into the underside of FSB fittings for narrow-frame doors. The combination of rivet nuts, baseplate and non-loosening screws enables fittings to be very securely fastened. (Fig. 6)

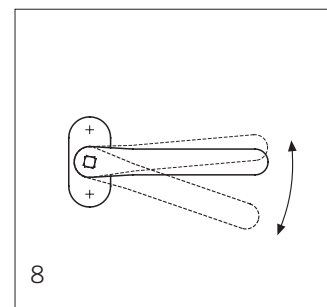
Front-end borehole

To further reduce any remaining play between spindle, follower and other parts, FSB recommends firmly tightening fittings for narrow-frame doors against the spindle via the grub screw in the front-end borehole.



Antislip and screw-retention device

Notwithstanding the use of rivet nuts and non-loosening screws, at their fixing centres all FSB roses forming part of hardware for narrow-frame doors feature retarder plugs made of a rubbery plastic. These retarder plugs project slightly beyond the reverse of the rose and are compressed when the screws are tightened. Hence, they act as an antislip device against their host surface whilst also providing the necessary axial and radial tension to keep the screws in a vice-like grip (Fig. 7).



Spring loading

Virtually the entire FSB range for narrow-frame doors is fitted with a positive mechanism to support the lock springs. This restricts the angle of operation to 45° . If required (i.e. for inactive doors), the positive mechanism can be straightforwardly removed from the base-rose. (Fig. 8)

Lever handle on oval rose

Uncranked FSB lever handles are supplied for invisible fixing to narrow-frame doors on oval roses. They are fitted with positive mechanisms (maximum angle of operation 45°) and optionally front-end boreholes.

Supplied as standard with 8 mm square hole. Lever handle variants for fire and smoke stop doors with 9 mm square hole.

Overview



Page 217 and 243



Page 192, 244 and 245



Page 190, 244 and 245



Page 224, 244 and 245



Page 220, 246 and 247



Page 196, 246 and 247



Page 200, 246 and 247



Page 202, 246 and 247



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Page 214, 248 and 249



Page 212, 248 and 249



Page 215, 248 and 249



Page 227, 250 and 251



Page 228, 250 and 251



Page 229, 250 and 251



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Page 205, 252 and 253



Page 252



Page 216



Page 336



Page 222 and 353



Page 223 and 358



Page 206, 207 and 330, 331



Page 321



Page 366



- Aluminium
- AluGrey
- Stainless steel
- Aluminium + colour
- Plastics, black
- New products 04105



Page 254



Page 254



Page 254



Page 255



Page 255



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Page 256



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Page 257



Page 258



Page 258



Page 258



Page 258



Page 259



Page 259



Page 259



Page 259



Page 260



Page 261



Page 261



Page 262



Page 263

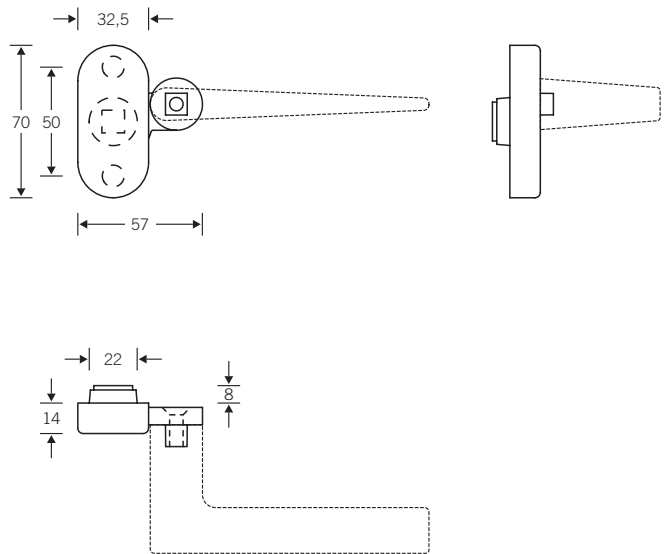
FSB Adaptor-solution



Many architects and planners set store by matching lever handle designs for internal and narrow-frame doors. On the pages that follow, FSB offers a wide range of solutions for some of its typical lever handle types.

Since it is not possible to design separate narrow-frame handles to go with all our internal-door models, however, FSB recommends using its patented and design-protected adaptor combination.

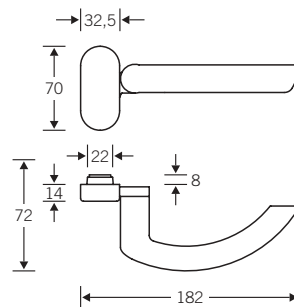
The Picture opposite visualises a few of the possible options. Whilst variants in stainless steel are generally suitable for use on smoke and fire control doors, there are restrictions in this respect as regards aluminium.



2

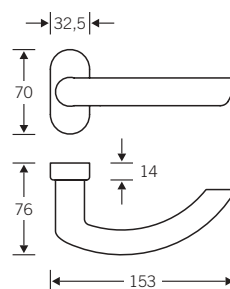
b

Lever handles for framed doors fixed on oval rose,
with concealed fixing and support mechanism
8 mm □-hole
9 mm □-hole for fire and smoke stop doors* **(F)**



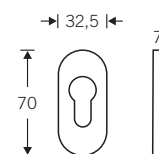
0619 17..
1744 r.h. | 1745 l.h.
Aluminium | AluGrey
Stainless steel

0619 18.. (F)
1864 r.h. | 1865 l.h.
Aluminium | AluGrey
Stainless steel



7219 25..
2554 r.h. | 2555 l.h.
Aluminium | AluGrey
Stainless steel

7619 25.. (F)
2564 r.h. | 2565 l.h.
Aluminium | AluGrey
Stainless steel

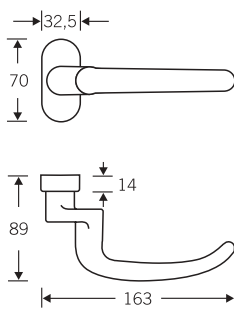


1757
Aluminium | AluGrey
Stainless steel

* acc. to German
DIN standard

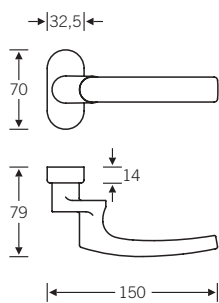
c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. Section
5b, spindles and screws

Lever handles for framed doors fixed on oval rose, with concealed fixing and support mechanism
 8 mm □-hole
 9 mm □-hole for fire and smoke stop doors* (F)



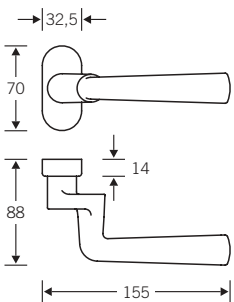
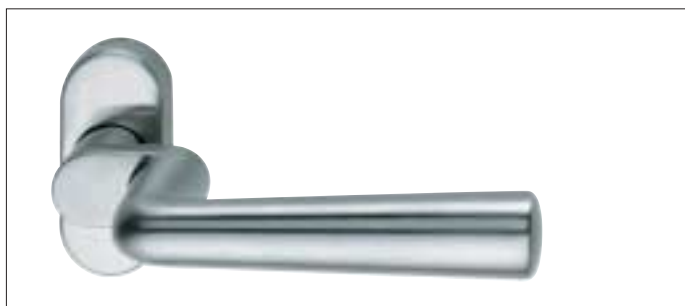
0653 21
 Aluminium | AluGrey
 Stainless steel

0653 22 (F)
 Aluminium | AluGrey
 Stainless steel



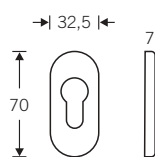
0655 21
 Aluminium | AluGrey
 Stainless steel

0655 22 (F)
 Aluminium | AluGrey
 Stainless steel

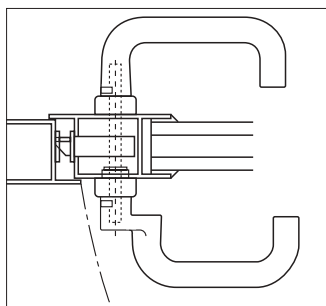


0673 21
 Aluminium | AluGrey
 Stainless steel

0673 22 (F)
 Aluminium | AluGrey
 Stainless steel



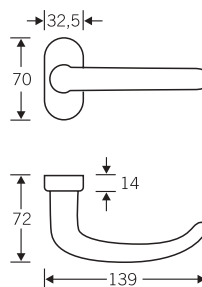
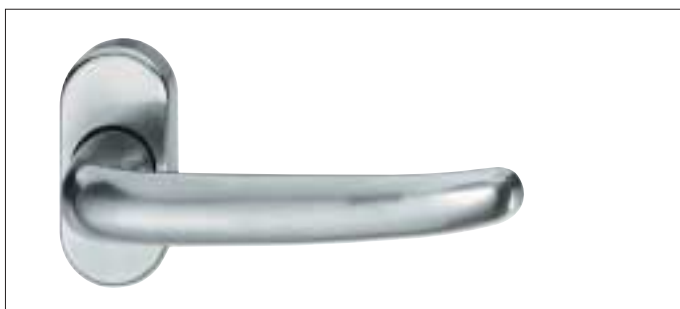
1757
 Aluminium | AluGrey
 Stainless steel



The cranked lever handles, illustrated on these pages, are the well-tried forerunners of the solution illustrated on page 242. Their operating principles are set out on pages 238 and 239.

c:c screwholes 50 mm, for countersunk screws M5
 Fixing accessories cf. Section 5b, spindles and screws

Lever handles for framed doors fixed on oval rose, with concealed fixing and support mechanism
 8 mm □-hole
 9 mm □-hole for fire and smoke stop doors* (F)

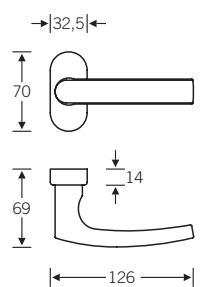


7223 25

Aluminium | AluGrey
 Stainless steel

7623 25 (F)

Aluminium | AluGrey
 Stainless steel

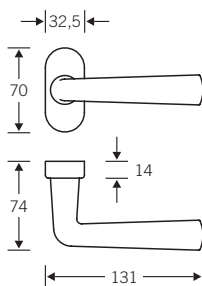


7215 25

Aluminium | AluGrey
 Stainless steel

7615 25 (F)

Aluminium | AluGrey
 Stainless steel

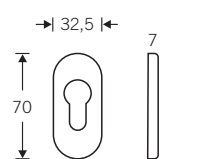


7273 25

Aluminium | AluGrey
 Stainless steel

7673 25 (F)

Aluminium | AluGrey
 Stainless steel



1757

Aluminium | AluGrey
 Stainless steel

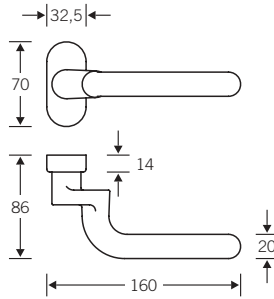
* acc. to German DIN standard

c:c screwholes 50 mm, for countersunk screws M5
 Fixing accessories cf. Section 5b, spindles and screws

2

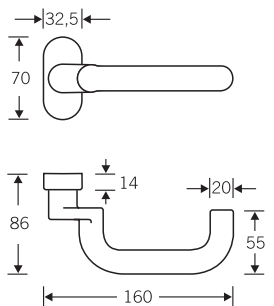
b

Lever handles for framed doors fixed on oval rose, with concealed fixing and support mechanism
 8 mm □-hole
 9 mm □-hole for fire and smoke stop doors* (F)



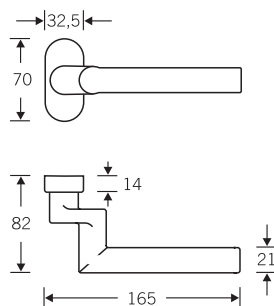
0647 21
 Aluminium | AluGrey
 Stainless steel

0647 22 (F)
 Aluminium | AluGrey
 Stainless steel



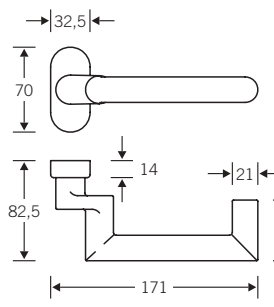
0665 21
 Aluminium | AluGrey
 Stainless steel

0665 22 (F)
 Aluminium | AluGrey
 Stainless steel



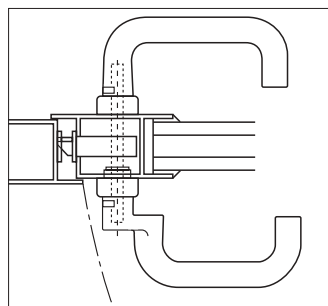
0656 21
 Aluminium | AluGrey
 Stainless steel

0656 22 (F)
 Aluminium | AluGrey
 Stainless steel



0616 21
 Aluminium | AluGrey
 Stainless steel

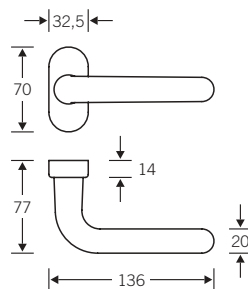
0616 22 (F)
 Aluminium | AluGrey
 Stainless steel



The cranked lever handles, illustrated on these pages, are the well-tried forerunners of the solution illustrated on page 242. Their operating principles are set out on pages 238 and 239.

c:c screwholes 50 mm, for countersunk screws M5
 Fixing accessories cf. Section 5b, spindles and screws

Lever handles for framed doors fixed on oval rose, with concealed fixing and support mechanism
 8 mm □-hole
 9 mm □-hole for fire and smoke stop doors* **(F)**

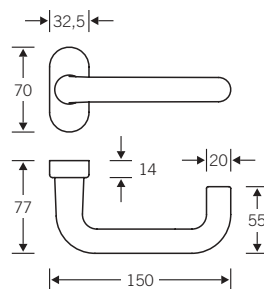


7247 25

Aluminium | AluGrey
 Stainless steel

7647 25 (F)

Aluminium | AluGrey
 Stainless steel

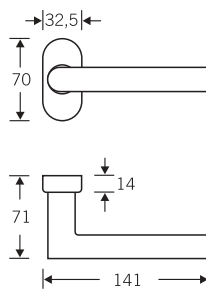
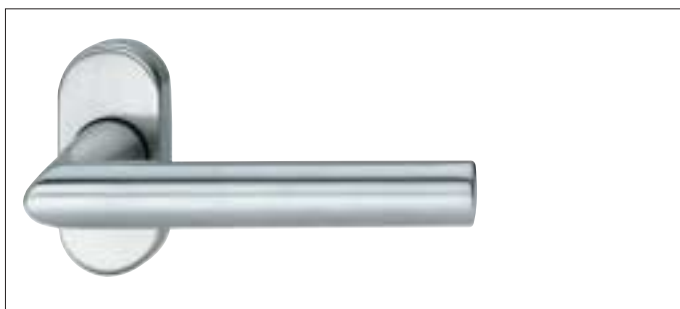


7270 25

Aluminium | AluGrey
 Stainless steel

7670 25 (F)

Aluminium | AluGrey
 Stainless steel

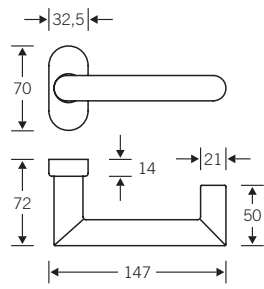


7276 25

Aluminium | AluGrey
 Stainless steel

7676 25 (F)

Aluminium | AluGrey
 Stainless steel



7216 25

Aluminium | AluGrey
 Stainless steel

7616 25 (F)

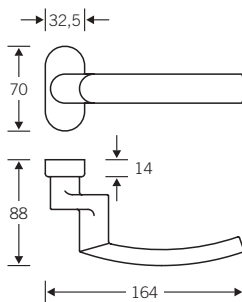
Aluminium | AluGrey
 Stainless steel

* acc. to German DIN standard

c:c screwholes 50 mm, for countersunk screws M5
 Fixing accessories cf. Section 5b, spindles and screws

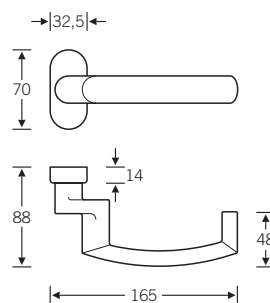
2
b

Lever handles for framed doors fixed on oval rose, with concealed fixing and support mechanism
 8 mm □-hole
 9 mm □-hole for fire and smoke stop doors* (F)



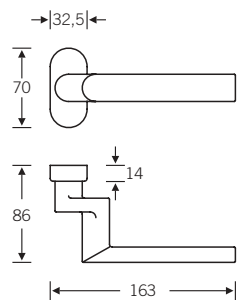
0607 21
 Aluminium | AluGrey
 Stainless steel

0607 22 (F)
 Aluminium | AluGrey
 Stainless steel



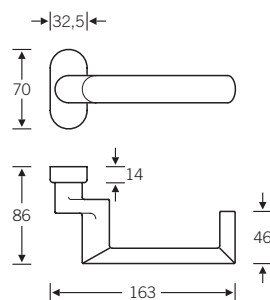
0627 21
 Aluminium | AluGrey
 Stainless steel

0627 22 (F)
 Aluminium | AluGrey
 Stainless steel



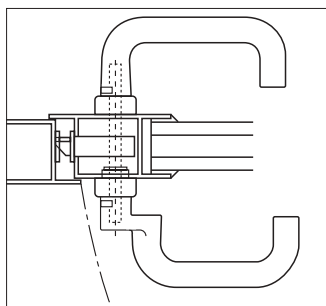
0658 21
 Aluminium | AluGrey
 Stainless steel

0658 22 (F)
 Aluminium | AluGrey
 Stainless steel



0628 21
 Aluminium | AluGrey
 Stainless steel

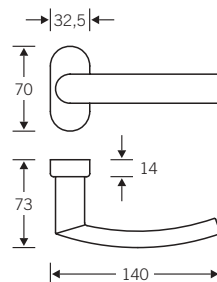
0628 22 (F)
 Aluminium | AluGrey
 Stainless steel



The cranked lever handles, illustrated on these pages, are the well-tried forerunners of the solution illustrated on page 242. Their operating principles are set out on pages 238 and 239.

c:c screwholes 50 mm, for countersunk screws M5
 Fixing accessories cf. Section 5b, spindles and screws

Lever handles for framed doors fixed on oval rose, with concealed fixing and support mechanism
 8 mm □-hole
 9 mm □-hole for fire and smoke stop doors* **F**

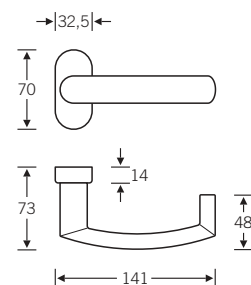


7240 25

Aluminium | AluGrey
 Stainless steel

7640 25 **F**

Aluminium | AluGrey
 Stainless steel

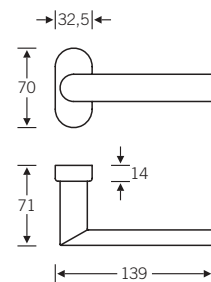


7250 25

Aluminium | AluGrey
 Stainless steel

7650 25 **F**

Aluminium | AluGrey
 Stainless steel

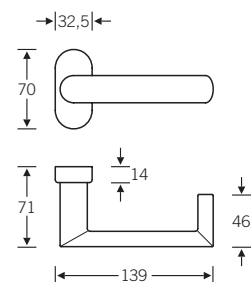


7242 25

Aluminium | AluGrey
 Stainless steel

7642 25 **F**

Aluminium | AluGrey
 Stainless steel



7251 25

Aluminium | AluGrey
 Stainless steel

7651 25 **F**

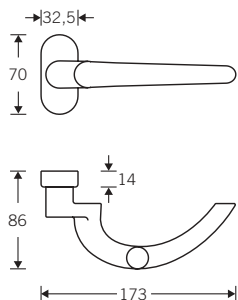
Aluminium | AluGrey
 Stainless steel

* acc. to German DIN standard

c:c screwholes 50 mm, for countersunk screws M5
 Fixing accessories cf. Section 5b, spindles and screws

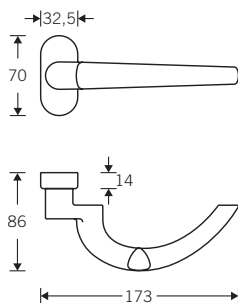
2
b

Lever handles for framed doors fixed on oval rose, with concealed fixing and support mechanism
 8 mm □-hole
 9 mm □-hole for fire and smoke stop doors* **F**



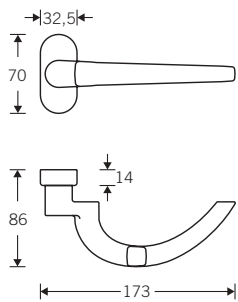
0680 21
 Aluminium natural colour
 AluGrey
 Stainless steel

0680 22 **F**
 Aluminium natural colour
 AluGrey
 Stainless steel



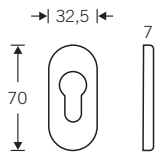
0681 21
 Aluminium natural colour
 AluGrey
 Stainless steel

0681 22 **F**
 Stainless steel

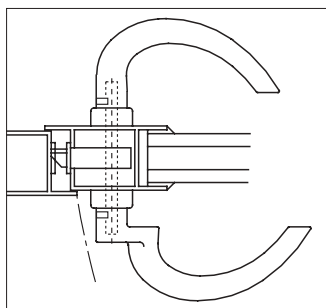


0682 21
 Aluminium natural colour
 AluGrey
 Stainless steel

0682 22 **F**
 Stainless steel



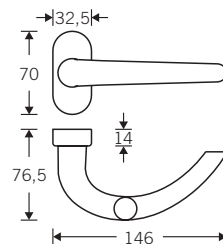
1757
 Aluminium | AluGrey
 Stainless steel



The cranked lever handles, illustrated on these pages, are the well-tried forerunners of the solution illustrated on page 242. Their operating principles are set out on pages 238 and 239.

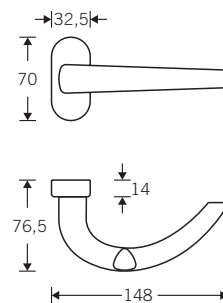
c:c screwholes 50 mm, for countersunk screws M5
 Fixing accessories cf. Section 5b, spindles and screws

Lever handles for framed doors fixed on oval rose, with concealed fixing and support mechanism
 8 mm □-hole
 9 mm □-hole for fire and smoke stop doors* (F)



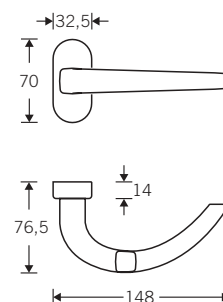
7210 25
 Aluminium natural colour
 AluGrey
 Stainless steel

7610 25 (F)
 Aluminium natural colour
 AluGrey
 Stainless steel



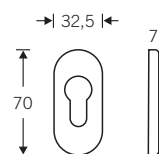
7211 25
 Aluminium natural colour
 AluGrey
 Stainless steel

7611 25 (F)
 Stainless steel



7212 25
 Aluminium natural colour
 AluGrey
 Stainless steel

7612 25 (F)
 Stainless steel



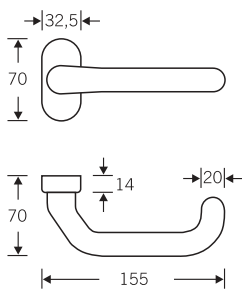
1757
 Aluminium | AluGrey
 Stainless steel

* acc. to German DIN standard

c:c screwholes 50 mm, for countersunk screws M5
 Fixing accessories cf. Section 5b, spindles and screws

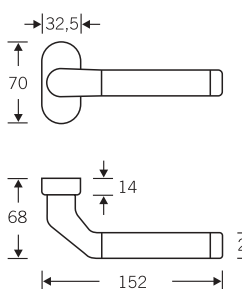
2
b

Lever handles for framed doors fixed on oval rose, with concealed fixing and support mechanism
 8 mm □-hole
 9 mm □-hole for fire and smoke stop doors* (F)



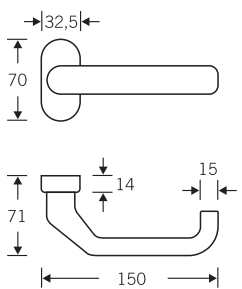
0646 21
 Aluminium | AluGrey
 Stainless steel
 Aluminium + colour

0646 22 (F)
 Aluminium | AluGrey
 Stainless steel
 Aluminium + colour



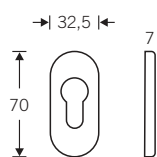
0664 21
 Aluminium
 black handle

0664 22 (F)
 Aluminium
 black handle

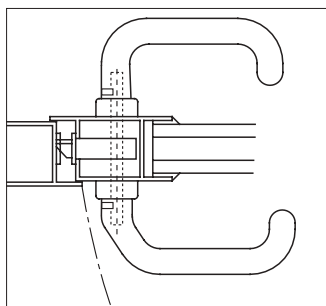


0662 21
 Aluminium
 Stainless steel
 Aluminium + colour

0662 22 (F)
 Aluminium
 Stainless steel
 Aluminium + colour



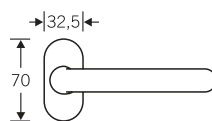
1757
 Aluminium | AluGrey
 Stainless steel
 Aluminium + colour



The cranked lever handles, illustrated on these pages, are the well-tried forerunners of the solution illustrated on page 242. Their operating principles are set out on pages 238 and 239.

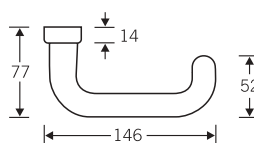
c:c screwholes 50 mm, for countersunk screws M5
 Fixing accessories cf. Section 5b, spindles and screws

Lever handles for framed doors fixed on oval rose,
with concealed fixing and support mechanism
8 mm □-hole
9 mm □-hole for fire and smoke stop doors* **(F)**



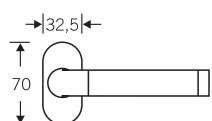
7246 25

Aluminium | AluGrey
Stainless steel



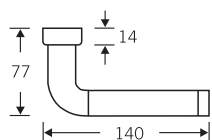
7646 25 (F)

Aluminium | AluGrey
Stainless steel



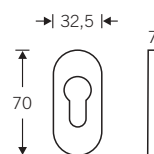
7289 25

Aluminium
black handle



7689 25 (F)

Aluminium
black handle



1757

Aluminium | AluGrey
Stainless steel
Aluminium + colour

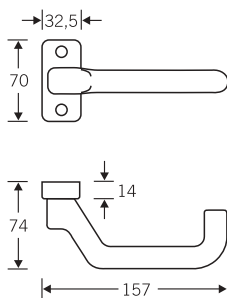
* acc. to German
DIN standard

c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. Section
5b, spindles and screws

2

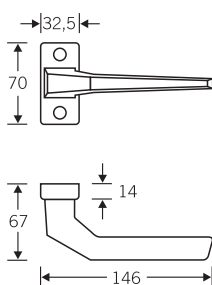
b

Lever handles for framed doors fixed on angular rose,
with visible fixing and support mechanism
8 mm □-hole



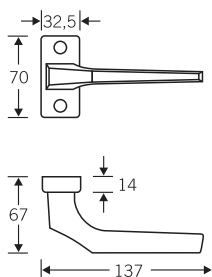
0663 16

Aluminium
Aluminium + colour



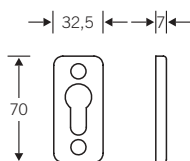
0668 16

Aluminium
Aluminium + colour



0620 16

Aluminium
Aluminium + colour

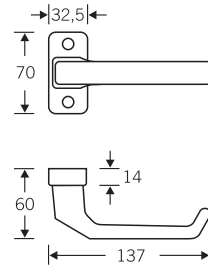


1717

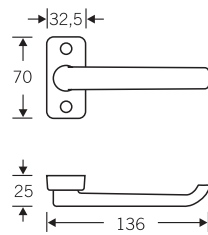
Aluminium
Aluminium + colour

c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. Section
5b, spindles and screws

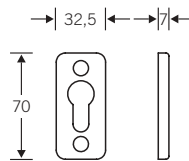
Lever handles for framed doors fixed on angular rose,
with visible fixing
8 mm □-hole



0605 13
Aluminium
Aluminium + colour



0634 02
Aluminium
Aluminium + colour



1717
Aluminium
Aluminium + colour

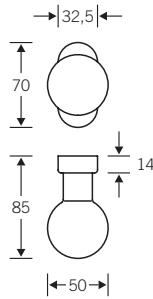
c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. Section
5b, spindles and screws

2

b

Door knobs for framed doors

with concealed fixing



0602

Aluminium | AluGrey
Stainless steel

turnable

8 mm □-hole
0602 2853

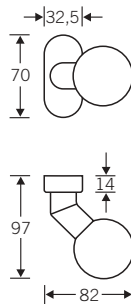
9 mm □-hole
0602 3863 Aluminium
0602 2863 Stainless steel

2302

fixed

2302 2801

2302 1801 Aluminium
2302 2801 Stainless steel



0638

Aluminium | AluGrey
Stainless steel

turnable

8 mm □-hole
0638 2853

9 mm □-hole
0638 3863 Aluminium
0638 2863 Stainless steel

2346

fixed

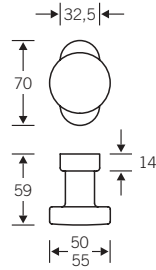
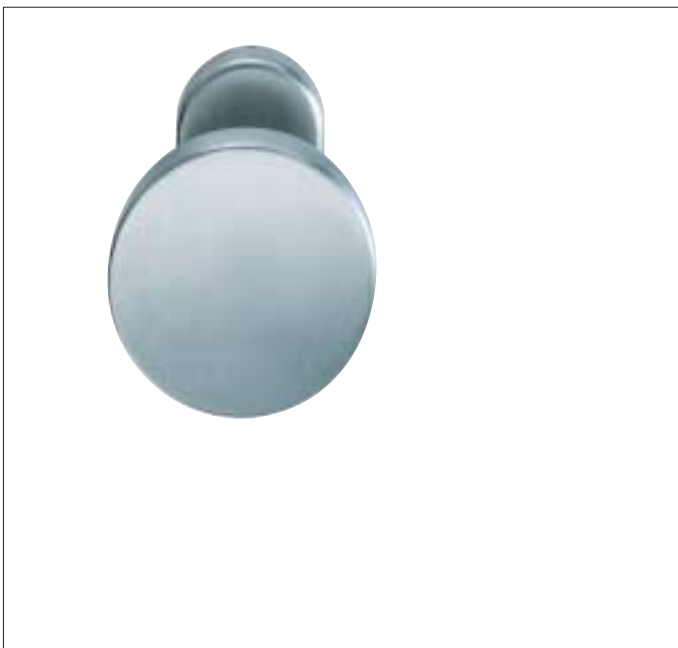
2346 2801

2346 1801 Aluminium
2346 2801 Stainless steel

c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. Section
5b, spindles and screws

Door knobs for framed doors

with concealed fixing



0629

Aluminium | AluGrey Ø 50 mm
Stainless steel Ø 55 mm

turnable

8 mm □-hole
0629 2853

9 mm □-hole
0629 3863 Aluminium **F**
0629 2863 Stainless steel **F**

2329

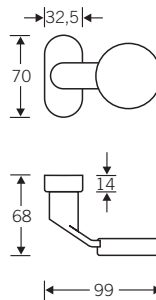
fixed

2329 2801

2329 1801 Aluminium **F**
2329 2801 Stainless steel **F**

2

b



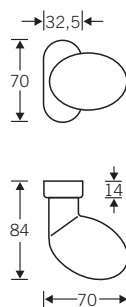
0654 28

Stainless steel

turnable 8 mm □-hole

2354 28

fixed



0604 28

Aluminium natural colour
Stainless steel

turnable 8 mm □-hole

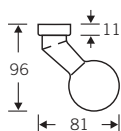
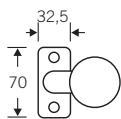
2304 28

fixed

c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. Section
5b, spindles and screws

Door knobs for framed doors

with visible fixing



0638 02

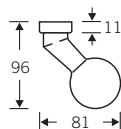
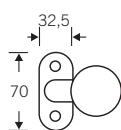
Aluminium

turnable with 8 mm □-hole

2346 02

fixed

2



0638 08

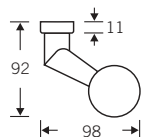
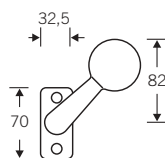
Aluminium

turnable with 8 mm □-hole

2346 08

fixed

b



0637 02

Aluminium

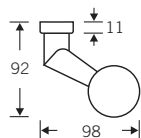
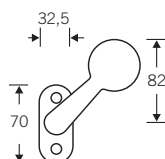
turnable with 8 mm □-hole

2348

fixed

2348 4201 r.h.

2348 5201 l.h.



0637 08

Aluminium

turnable with 8 mm □-hole

2348

fixed

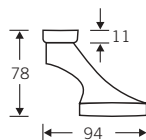
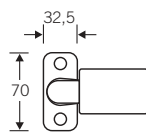
2348 4801 r.h.

2348 5801 l.h.

c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. Section
5b, spindles and screws

Door knobs for framed doors

with visible fixing



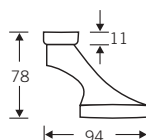
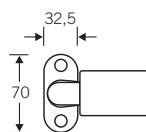
0636 02

Aluminium

turnable with 8 mm □-hole

2336 02

fixed



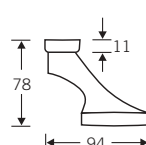
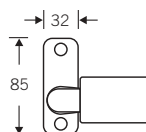
0636 08

Aluminium

turnable with 8 mm □-hole

2336 08

fixed



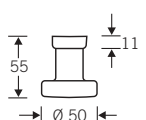
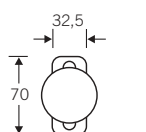
0686 06

Aluminium

turnable with 8 mm □-hole

2386 06

fixed



0643 02

Aluminium

turnable with 8 mm □-hole

2343 02

fixed

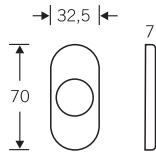
c:c screwholes 50 mm,
for countersunk screws M5

Door knobs 0686 06 and
2386 06 c:c screwholes
67,5 mm for countersunk
screws M5.

2

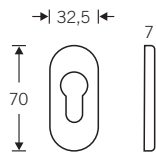
b

Roses for framed doors



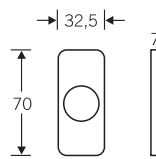
1758

Aluminium | AluGrey
Stainless steel



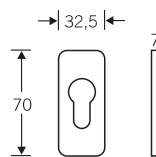
1757

Aluminium | AluGrey
Stainless steel



1718

Aluminium

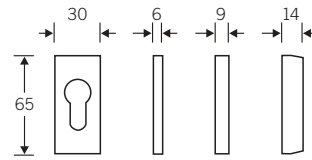


1719

Aluminium

c:c screwholes 50 mm,
for countersunk screws M5

Sliding escutcheons
Self adhesive escutcheons



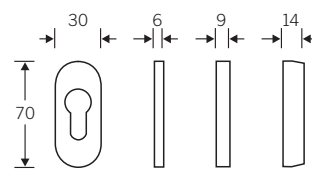
1776 6 mm

1777 9 mm

1779 14 mm

Aluminium
Stainless steel
Aluminium + colour

c:c screwholes 50 mm,
for countersunk screws M5



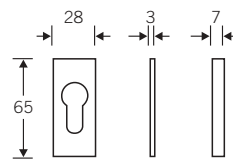
1726 6 mm

1727 9 mm

1728 14 mm

Aluminium
Stainless steel
Aluminium + colour

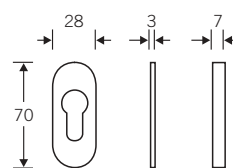
c:c screwholes 50 mm,
for countersunk screws M5



1768 3 mm

1769 7 mm

Aluminium
Stainless steel
Aluminium + colour



1729 3 mm

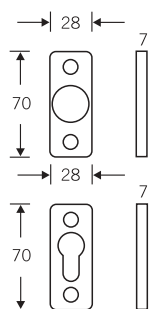
1730 7 mm

Aluminium
Stainless steel
Aluminium + colour

2
b

Roses Backplate

for framed doors



1752

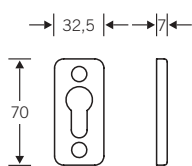
1755

Aluminium
Aluminium + colour

c:c screwholes 50 mm,
for countersunk screws M5

2

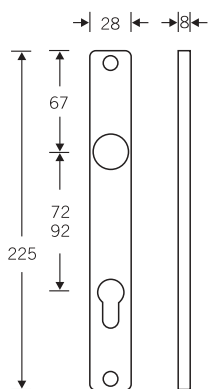
b



1717

Aluminium
Aluminium + colour

c:c screwholes 50 mm,
for countersunk screws M5



1550

Aluminium

c:c screwholes 210 mm,
for countersunk screws M4

Unlatching and pulling or pushing



Lever handle for unlatching handle for pulling and pushing

We know from sorry experience that architects, interior designers and clients often disregard the recommendations of the hardware industry in respect of emergency-exit doors, allowing them to be used for general public transit. Such furniture is only intended for emergency application, however and subjecting it to regular heavy use can cause spindles to break, backplates and roses to work loose and locks to suffer damage. The following procedure has proved effective in such scenarios:

The door lever handle furniture is fitted together with a pull. In this disparate match, the lever handle has the task of releasing the panic lock, whilst the robust pull suggests itself as a means of pulling or pushing the door. It has been our observation that people very soon grasp how difficult it is to move a heavy emergency-exit door, with door-closer attached using a lightweight lever handle. It is only a matter of time, therefore, before attention switches to the sturdier fixed pull handle.

Where there is a likelihood – against the advice of the industry – of emergency-exit doors being used as standard transit points, FSB recommends fitting a lever/pull combination from the outset, instead of waiting until damage has occurred.

Lockset plates and hinges for glass doors	268
Strike boxes for twin-leaf glass doors	276
Fixing bolt for twin-leaf glass doors	277
Technical details	278
Lever handle sets to suit locks for glass doors	282
Pull handles for glass doors	282
Knobs for glass doors	283

Furniture for glass doors

Glass doors are very much a part of modern interior design. They create more light, join spaces up and make for a congenial atmosphere.

The inherent transparency of glass doors means that great care needs to be taken when designing hardware for them, however. It is the lock space, handle and hinges after all that lend a glass door its visual identity.

FSB has augmented its product offering for heavily-used doors with a range of hardware for glass doors with outer frames only. Semicircular and trapezoidal lockset plates that both arch forward slightly provide an alternative to the typically rectangular styles familiar hitherto. The four variants can be combined with virtually any standard FSB lever handle or, for heavy-duty applications, with tried and tested rose furniture incorporating an AGL compensation bearing.

Co-ordinating the visuals for doors, glass doors and windows is easy therefore.

Fittings are supplied in either Silver Anodised Aluminium or stainless steel.

Lever handle sets to match locks for glass doors

Besides making its own special-purpose hardware for glass doors, with very few exceptions FSB also has the wherewithal to adapt its entire range of lever and knob handles to the hardware for glass doors commonly marketed by competitors. Slight technical alterations concerning how the lever handles are connected and fastening is effected do, however, need to be borne in mind in this respect.

For clarity's sake, exact details of the lock type (e.g. maker's name and product code) should be furnished when ordering lever handles and doorknobs for glass door locks.

Please submit orders well in advance owing to the adaptation input required. Deliveries from stock are not possible.

Dead knobs for glass doors

Dead knobs are generally fitted directly to glass doors. There is no lock involved. The knobs are joined together by means of a 12 mm threaded bolt and subsequently brought into alignment using a locking screw.

Pull handles for glass doors

Pull handles of round or oval cross-section can be deployed in a great variety of ways, on one or both faces of a door, as a means of either operating the door, fulfilling a safety function or to decorative effect in conjunction with special fastenings. FSB offers a wide selection of pull handles on Pages 384–.

Round lockset plate for glass doors



4222 41 r.h.

4222 51 l.h.

Aluminium
AluGrey
Stainless steel

Round lockset plate for glass doors, with mounting frame and cover plates with heavy-duty lock (DIN 18251, Class 4) for use with EPC and lifter assembly, backset 72 mm
8mm steel-bushed
split follower
latch cast steel
bolt head bright nickel-plated zinc die casting
forend stainless steel
handle bushing glass-fibre reinforced polyamide to suit all FSB lever handles

Illustration r.h.



4222 42 r.h.

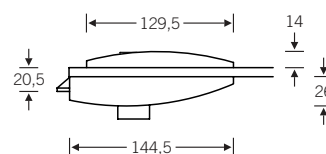
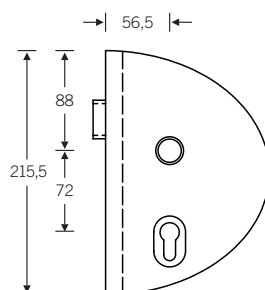
4222 52 l.h.

Aluminium
AluGrey
Stainless steel

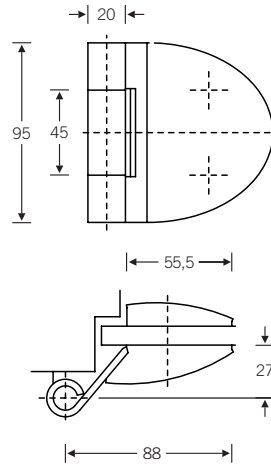
Round lockset plate for glass doors, with mounting frame and cover plates with heavy-duty lock (DIN 18251, Class 4) for use with EPC and lifter assembly, backset 72 mm
8 mm steel-bushed
split follower
latch cast steel
bolt head bright nickel-plated zinc die casting
forend stainless steel
designed to accept FSB heavy-duty hardware with roses

Illustration r.h.

The handles shown are merely illustrative. Virtually any FSB lever handle can be used.
Technical details Page 278.
Matching strike boxes for twin-leaf glass doors, cf. Page 276.



Round hinge for glass doors



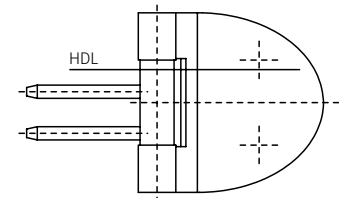
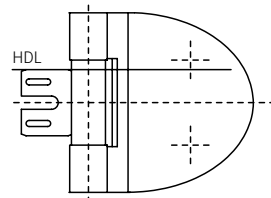
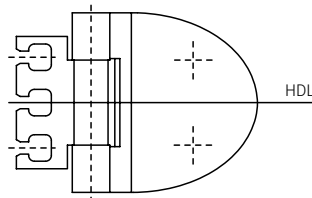
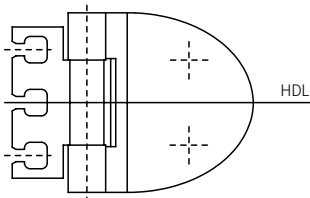
4225

Aluminium
AluGrey
Stainless steel

VARIANT glass door hinge round styling in stainless steel with decorative cover in Aluminium, AluGrey or Stainless steel with hinge connector

2

C



4225 0001

VARIANT heavy-duty hinge VXG 7992/100 for glass doors on rebated timber, steel or aluminium frames, with three-dimensionally adjustable mating elements

4225 0002

VARIANT heavy-duty hinge VNG 7992/100 for glass doors on rebated steel frames, with three-dimensionally adjustable mating elements

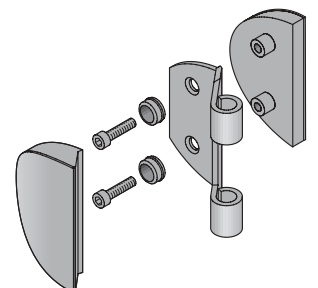
4225 0003

VARIANT heavy-duty hinge VNG 8992/100 for glass doors on rebated steel frames

4225 ..04

40 r.h. | 50 l.h.
VARIANT heavy-duty hinge VNG 3992/100 for glass doors on rebated wooden soffit and blockwork frames

Loading capacity 60 kg



Trapezoidal lockset plate for glass doors



4221 41 r.h.

4221 51 l.h.

Aluminium
AluGrey
Stainless steel

Trapezoidal lockset plate for glass doors, with mounting frame and cover plates with heavy-duty lock (DIN 18251, Class 4) for use with EPC and lifter assembly, backset 72 mm
8 mm steel-bushed
split follower
latch cast steel
bolt head bright nickel-plated
zinc die casting
forend stainless steel
handle bushing glass-fibre reinforced polyamide to suit all FSB lever handles

Illustration r.h.



4221 42 r.h.

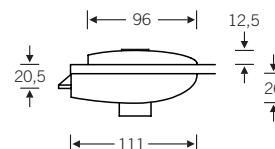
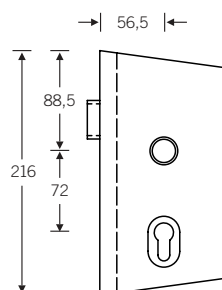
4221 52 l.h.

Aluminium
AluGrey
Stainless steel

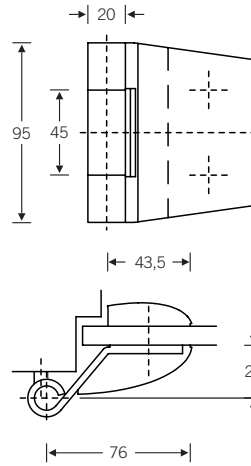
Trapezoidal lockset plate for glass doors, with mounting frame and cover plates with heavy-duty lock (DIN 18251, Class 4) for use with EPC and lifter assembly, backset 72 mm
8mm steel-bushed
split follower
latch cast steel
bolt head bright nickel-plated
zinc die casting
forend stainless steel
designed to accept FSB heavy-duty hardware with roses

Illustration r.h.

The handles shown are merely illustrative. Virtually any FSB lever handle can be used.
Technical details Page 278.
Matching strike boxes for twin-leaf glass doors, cf. Page 276.



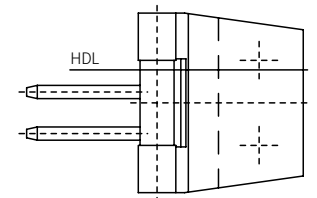
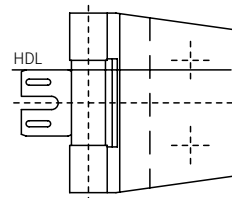
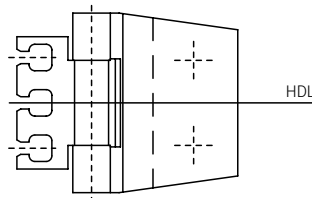
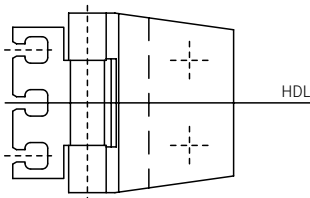
Trapezoidal hinge for glass doors



4226

Aluminium
AluGrey
Stainless steel

VARIANT glass door hinge
Trapezoidal styling in stainless
steel with decorative cover in
Aluminium, AluGrey or
Stainless steel
with hinge connector



4226 0001

VARIANT heavy-duty hinge
VXG 7991/100 for glass doors
on rebated timber, steel or
aluminium frames, with three-
dimensionally adjustable
mating elements

4226 0002

VARIANT heavy-duty hinge
VNG 7991/100 for glass doors
on rebated steel frames, with
three-dimensionally adjustable
mating elements

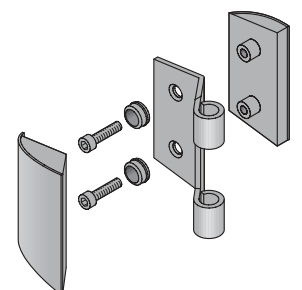
4226 0003

VARIANT heavy-duty hinge
VNG 8991/100 for glass doors
on rebated steel frames

4226 ..04

40 r.h. | 50 l.h.
VARIANT heavy-duty hinge
VNG 3991/100 for glass doors
on rebated wooden soffit and
blockwork frames

Loading capacity 60 kg



Softly rectangular lockset plate for glass doors



4223 41 r.h.

4223 51 l.h.

Aluminium
AluGrey
Stainless steel

Softly rectangular lockset plate for glass doors with cover plates with heavy-duty lock (DIN 18251, Class 4) for use with EPC and lifter assembly, backset 72 mm
8 mm steel-bushed split follower
latch cast steel
bolt head bright nickel-plated zinc die casting
handle bushing glass-fibre reinforced polyamide to suit all FSB lever handles

Illustration r.h.



4223 42 r.h.

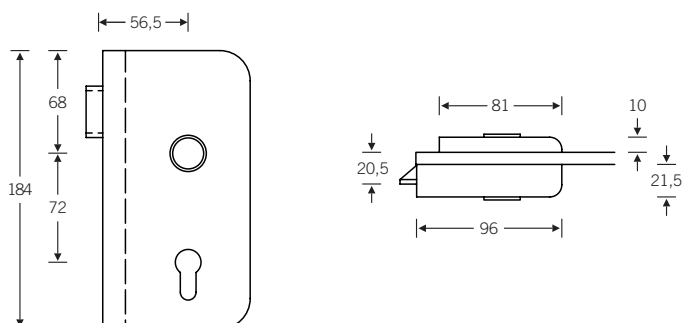
4223 52 l.h.

Aluminium
AluGrey
Stainless steel

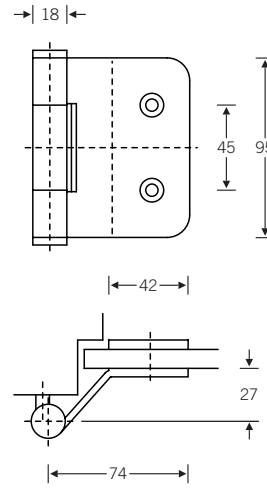
Softly rectangular lockset plate for glass doors, with cover plates with heavy-duty lock (DIN 18251, Class 4) for use with EPC and lifter assembly, backset 72 mm
8 mm steel-bushed split follower
latch cast steel
bolt head bright nickel-plated zinc die casting
designed to accept FSB heavy-duty hardware with roses

Illustration r.h.

The handles shown are merely illustrative. Virtually any FSB lever handle can be used.
Technical details Page 278.
Matching strike boxes for twin-leaf glass doors, cf. Page 277.



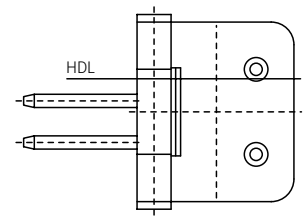
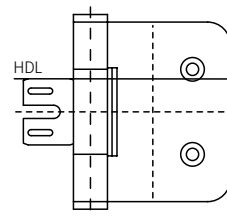
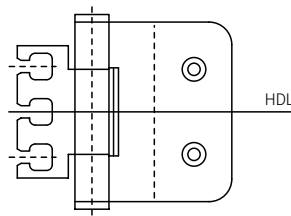
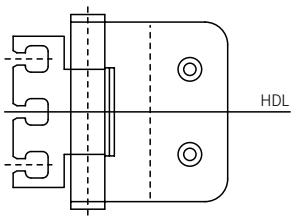
Softly rectangular hinge for glass doors



4227

Satin chromium-plated steel
Stainless steel

VARIANT glass-door hinge in satin chromium-plated steel to suit Aluminium and AluGrey finishes or in Stainless steel with hinge connector



4227 0001

VARIANT heavy-duty hinge VXG 7990/100 for glass doors on rebated timber, steel or aluminium frames, with three-dimensionally adjustable mating elements

4227 0002

VARIANT heavy-duty hinge VNG 7990/100 for glass doors on rebated steel frames, with three-dimensionally adjustable mating elements

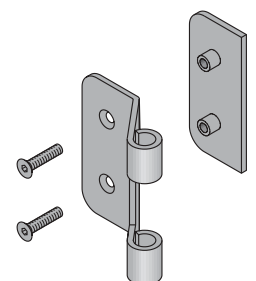
4227 0003

VARIANT heavy-duty hinge VG 8790 for glass doors on rebated steel frames

4227 ..04

40 r.h. | 50 l.h.
VARIANT heavy-duty hinge VG 3990 for glass doors on rebated wooden soffit and blockwork frames

Loading capacity 60 kg



2

C

Rectangular lockset plate for glass doors



4220 41 r.h.

4220 51 l.h.

Aluminium
AluGrey
Stainless steel

Rectangular lockset plate for glass doors with cover plates with heavy-duty lock (DIN 18251, Class 4) for use with EPC and lifter assembly, backset 72 mm
8 mm steel-bushed split follower
latch cast steel
bolt head bright nickel-plated zinc die casting
handle bushing glass-fibre reinforced polyamide to suit all FSB lever handles

Illustration r.h.



4220 42 r.h.

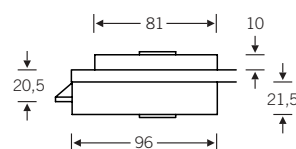
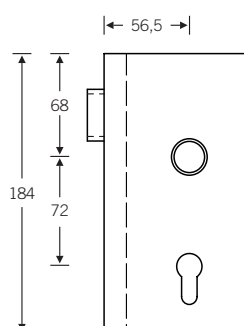
4220 52 l.h.

Aluminium
AluGrey
Stainless steel

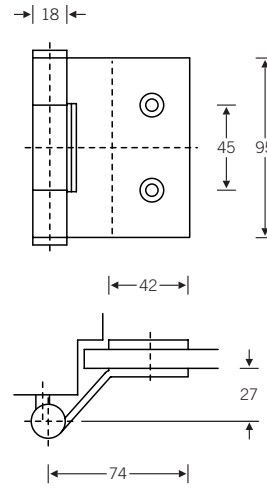
Rectangular lockset plate for glass doors with heavy-duty lock (DIN 18251, Class 4) for use with EPC and lifter assembly, backset 72 mm
8 mm steel-bushed split follower
latch cast steel
bolt head bright nickel-plated zinc die casting
designed to accept FSB heavy-duty hardware with roses

Illustration r.h.

The handles shown are merely illustrative. Virtually any FSB lever handle can be used.
Technical details Page 278.
Matching strike boxes for twin-leaf glass doors, cf. Page 277.



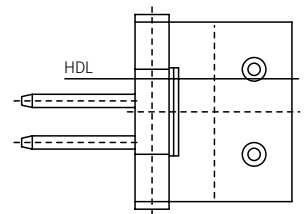
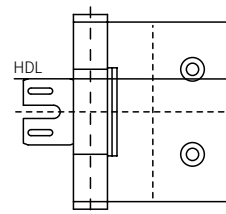
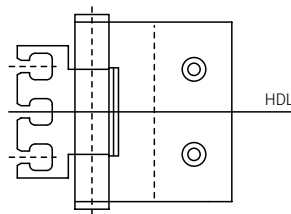
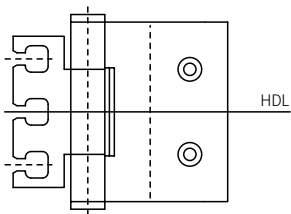
Rectangular hinge for glass doors



4228

Satin chromium-plated steel
Stainless steel

VARIANT glass-door hinge in satin chromium-plated steel to suit Aluminium and AluGrey finishes or in Stainless steel with hinge connector



4228 0001

VARIANT heavy-duty hinge VXG 7990/100K for glass doors on rebated timber, steel or aluminium frames, with three-dimensionally adjustable mating elements

4228 0002

VARIANT heavy-duty hinge VNG 7990/100K for glass doors on rebated steel frames, with three-dimensionally adjustable mating elements

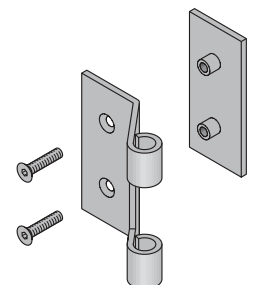
4228 0003

VARIANT heavy-duty hinge VG 8790K for glass doors on rebated steel frames

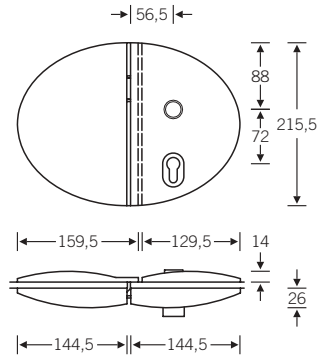
4228 ..04

40 r.h. | 50 l.h.
VARIANT heavy-duty hinge VG 3990K for glass doors on rebated wooden soffit and blockwork frames

Loading capacity 60 kg



Striking boxes for twin-leaf glass doors



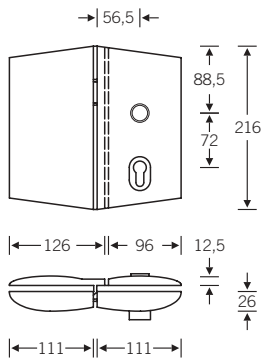
4222 45 r.h.
4222 55 l.h.

Aluminium
AluGrey
Stainless steel

to match round lockset plate
for glass doors

2

C

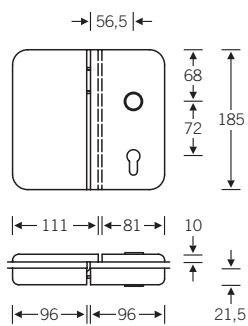


4221 45 r.h.
4221 55 l.h.

Aluminium
AluGrey
Stainless steel

to match trapezoidal lockset
plate for glass doors

The strike boxes shown here
suit DIN righthand locks.



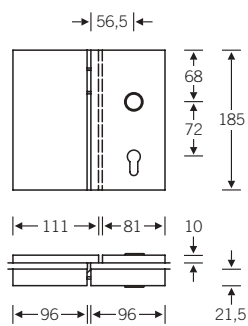
4223 45 r.h.
4223 55 l.h.

Aluminium
AluGrey
Stainless steel

to match softly rectangular lockset plate for glass doors

2

C



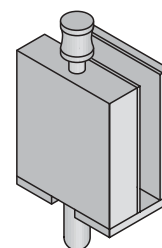
4220 45 r.h.
4220 55 l.h.

Aluminium
AluGrey
Stainless steel

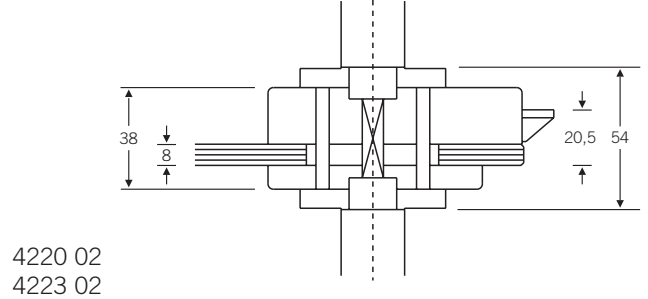
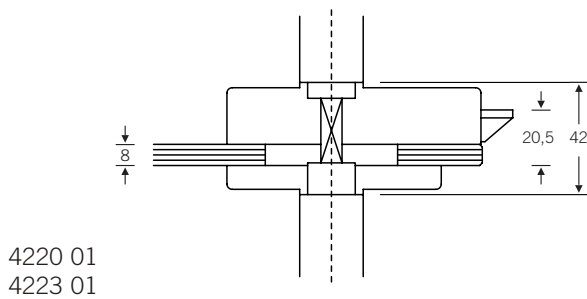
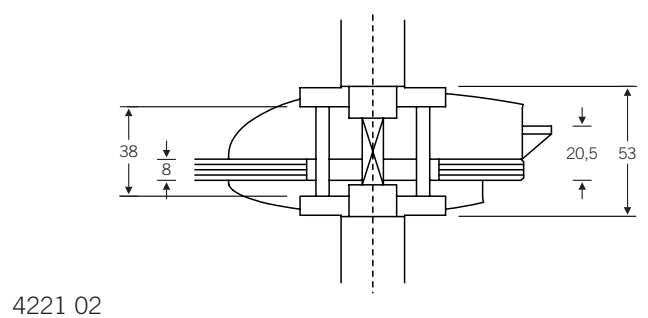
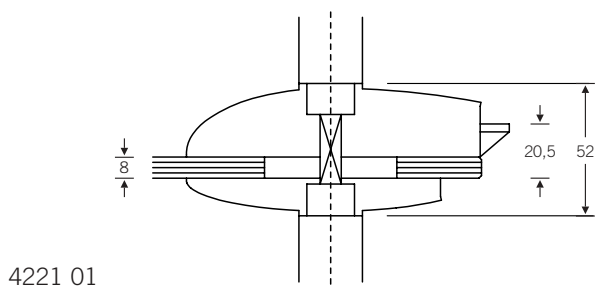
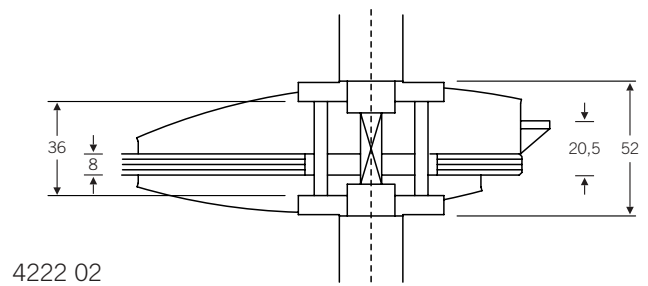
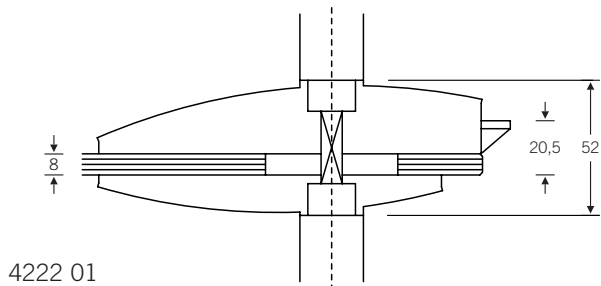
to match rectangular lockset plate for glass doors

The strike boxes shown here suit DIN righthand locks.

Under the order code 4230, FSB supplies a fixing bolt in stainless steel for twin-leaf glass doors.



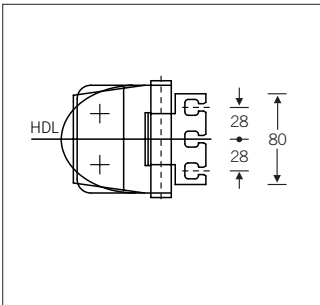
Technical details



An adapted set of lever handles is required for lockset plates 4220 01 and 4223 01 for glass doors. For all other models, any standard FSB design may be used.

Lever handles are not supplied with this hardware. Please order the model(s) desired separately, clearly stating their intended use (i.e. on glass doors), the design of lockset plate and handing details in conformity with the DIN method.

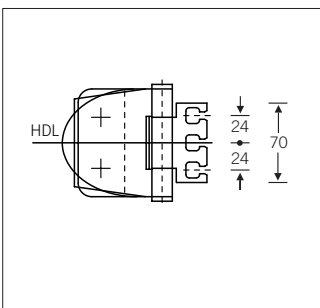
Frame connecting dimensions



VARIANT heavy-duty hinge for glass doors on rebated timber, steel or aluminium frames, with three-dimensionally adjustable mating elements VX

- suitable for wholly glazed doors with standard vertical borehole layout
- for glass 8 mm and 10 mm thick
- twistproof threaded stud
- concealed, maintenance-free axial-radial sliding bearings
- combinable with mating element:

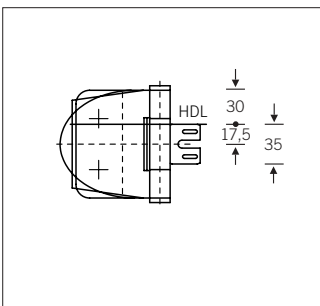
- for blockwork frames VX 7601 3D
- for soffit frames VX 7602 3D
- for blockwork frames VX 7605 3D
- for steel frames VX 7611 3D
- VX 7612 3D
- for aluminium frames VX 7621 3D
- non-handed



VARIANT heavy-duty hinge for glass doors on rebated steel frames, with three-dimensionally adjustable mating elements

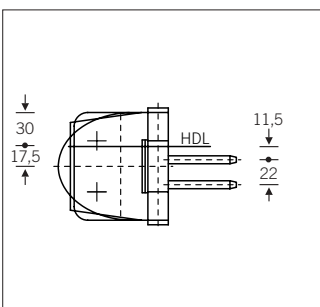
- suitable for wholly glazed doors with standard vertical borehole layout
- for glass 8 mm and 10 mm thick
- twistproof threaded stud
- concealed, maintenance-free axial-radial sliding bearings

- combinable with mating element VN 7608/120 3D
- non-handed



VARIANT heavy-duty hinge for glass doors on rebated steel frames

- suitable for wholly glazed doors with standard vertical borehole layout
- for glass 8 mm and 10 mm thick
- for mating elements V 8600 or V 8610
- non-handed



VARIANT heavy-duty hinge for glass doors on rebated wooden soffit and blockwork frames

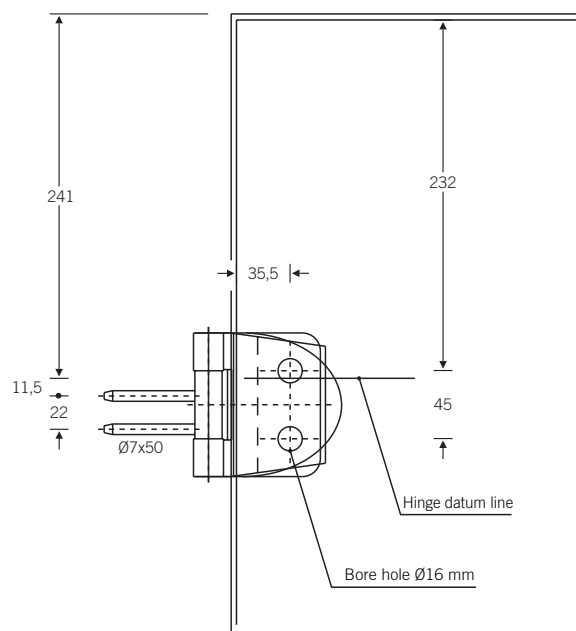
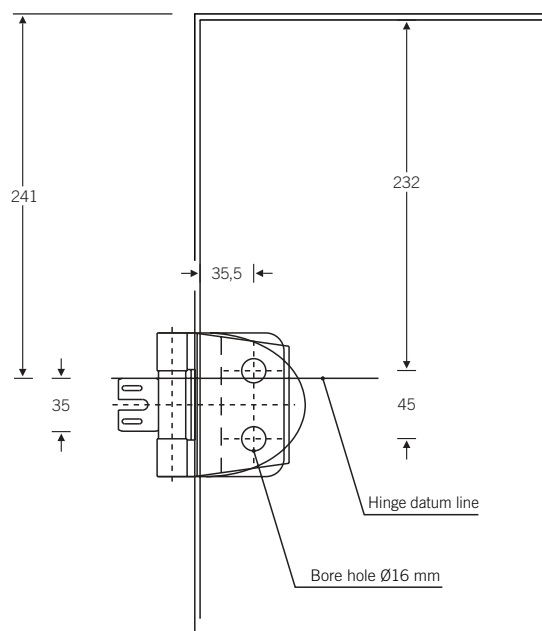
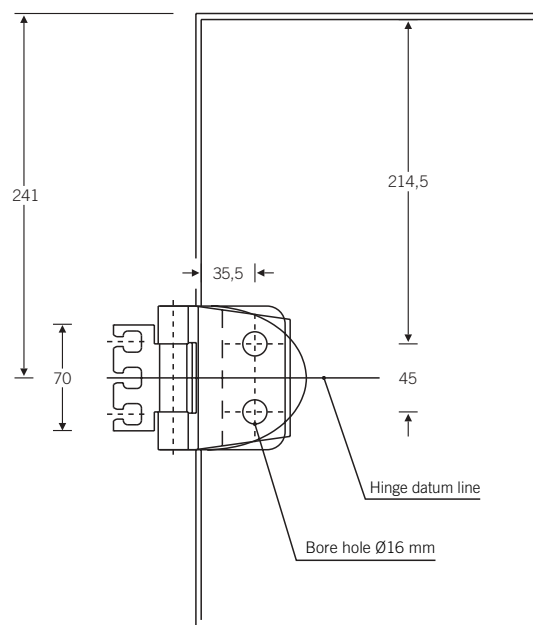
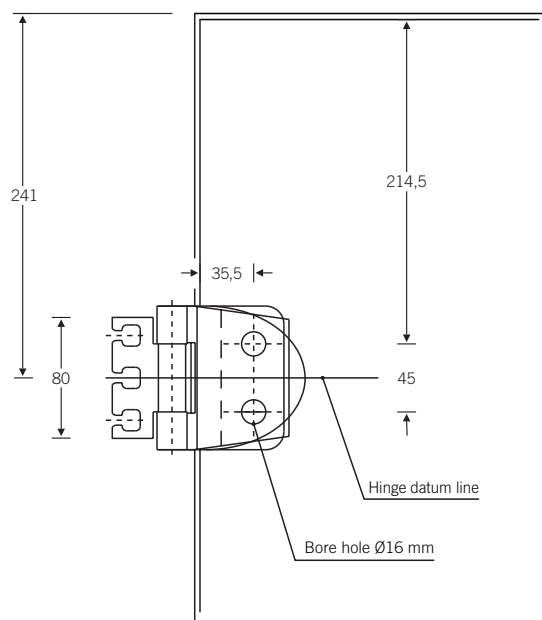
- suitable for wholly glazed doors with standard vertical borehole layout
- for glass 8mm and 10mm thick
- for mating elements V 3600, V 3610, V 3630, V 3650 and clamping block V 3604 or V 3607
- details of handing to DIN specifications necessary

SIMONSWERK engineering and quality are a byword for safety and stability to the highest professional standards. For further information on hinges, hinge connectors, frame fastening elements etc. please consult the latest SIMONSWERK manual.

SIMONSWERK GmbH
Baubeschlagtechnik
Bosfelder Weg 5
33378 Rheda-Wiedenbrück
Germany

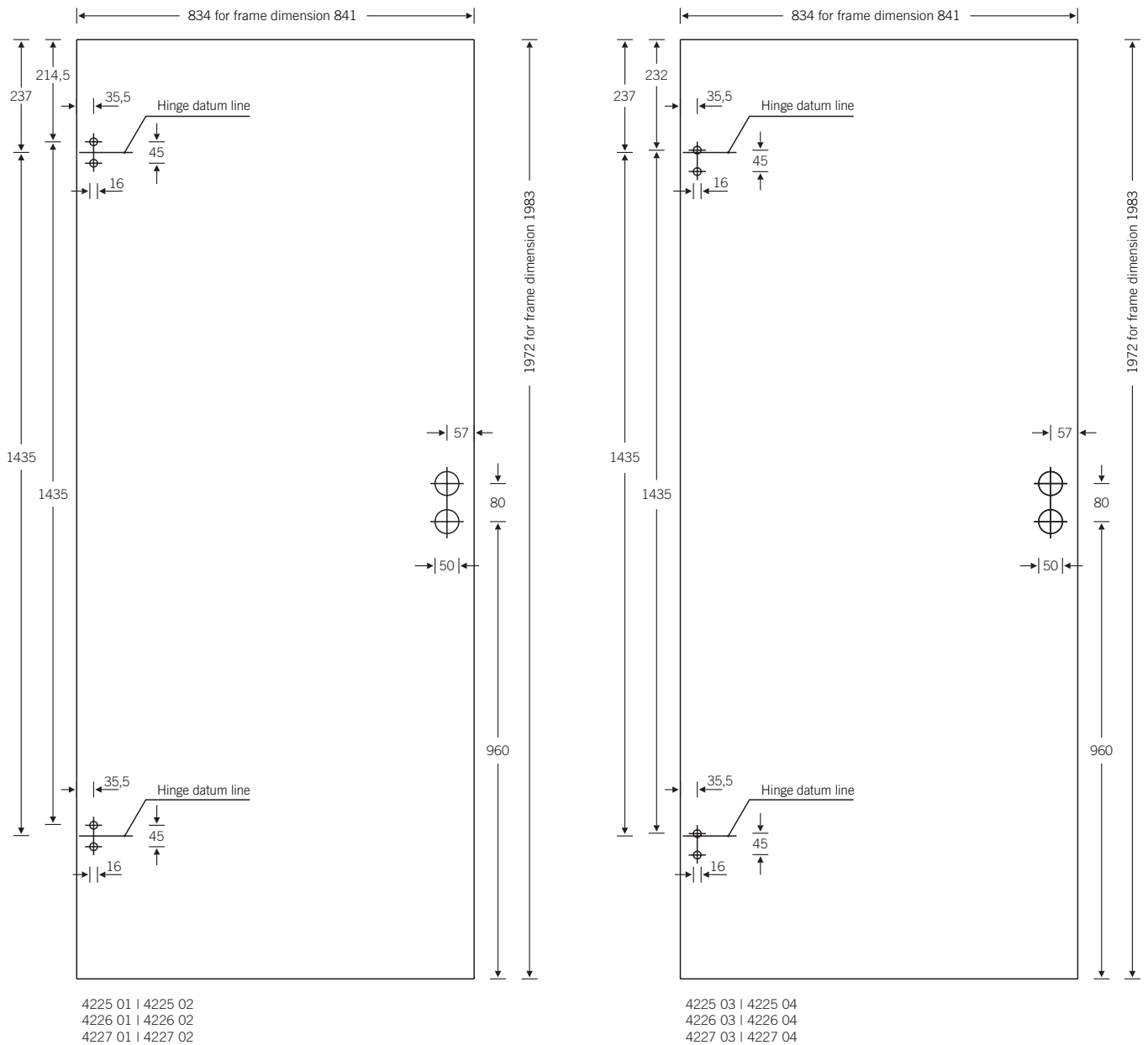
Telephone +49 5242 413-0
Telefax +49 5242 413-210
www.simonswerk.de
mail@simonswerk.de

Technical details



The positioning of hinge connectors relative to the hinge datum line also necessitates adapting boreholes in the glass door. Please pay special attention to this requirement in the case of heavy-duty hinges VX and VN.

Door dimensions as set forth in DIN 18101



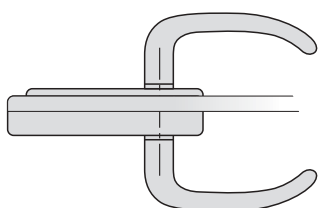
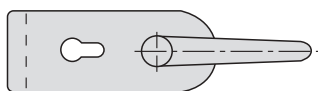
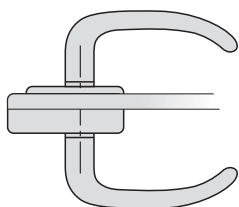
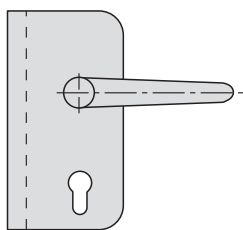
T.D.I.U.S*	750 x 2000	875 x 2000	1000 x 2000
Frame rebate dimensions	716 x 1983	841 x 1983	966 x 1983
Standard glass dimensions	709 x 1972	843 x 1972	959 x 1972

T.D.I.U.S*	750 x 2125	875 x 2125	1000 x 2125
Frame rebate dimensions	716 x 2108	841 x 2108	966 x 2108
Standard glass dimensions	709 x 2097	834 x 2097	959 x 2097

* = theoretical dimensions in unfinished state

Lever handle sets to match lockset plates for glass doors

Pull handles for glass doors



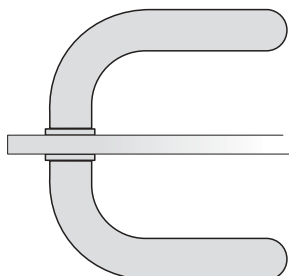
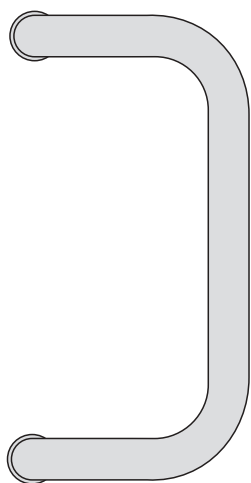
Lever handle sets to match lockset plates for glass doors

Besides making its own special-purpose hardware for glass doors, with very few exceptions FSB also has the wherewithal to adapt its entire range of lever and knob handles to the hardware for glass doors commonly marketed by competitors. Slight technical alterations concerning how the lever handles are connected and fastening is effected do, however, need to be borne in mind in this respect.

For clarity's sake, exact details of the lock type (e.g. maker's name and product code) should be furnished when ordering l

ever handles and doorknobs for glass door locks.

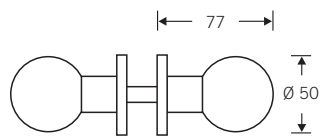
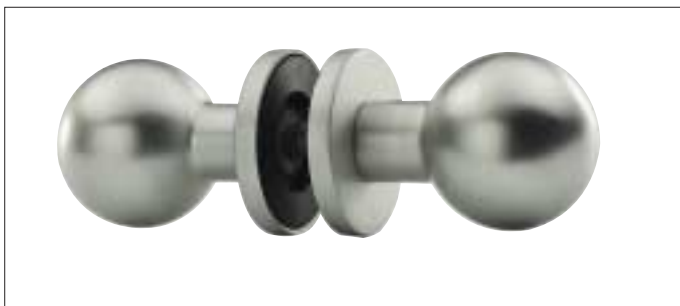
Please submit orders well in advance owing to the adaptation input required. Deliveries from stock are not possible.



Pull handles for glass doors

Pull handles of round or oval cross-section can be deployed in a great variety of ways, on one or both faces of a door, as a means of either operating the door, fulfilling a safety function or to decorative effect in conjunction with special fastenings. FSB offers a wide selection of pull handles on Pages 384–.

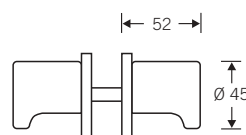
Dead knobs for glass doors



2302 07

Aluminium
AluGrey
Brass
Stainless steel

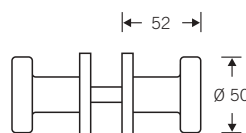
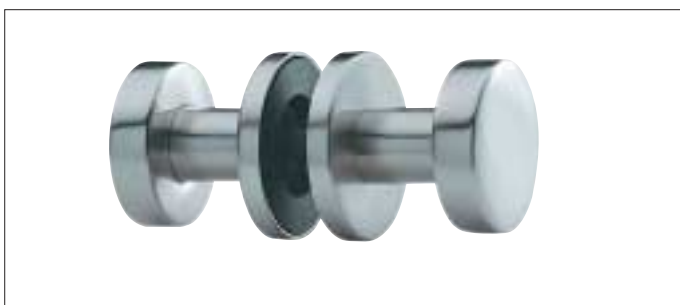
Bore hole Ø 13 mm



2322 07

Aluminium
Stainless steel

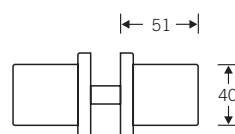
Bore hole Ø 13 mm



2329 07

Aluminium Ø 50 mm
AluGrey Ø 50 mm
Stainless steel Ø 55 mm

Bore hole Ø 13 mm



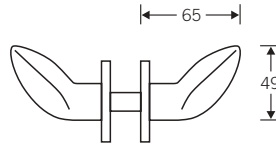
2308 07

Stainless steel

Bore hole Ø 13 mm

Dead knobs are generally fitted directly to glass doors. There is no lock involved. The knobs are joined together by means of a 12mm threaded bolt and subsequently brought into alignment using a locking screw.

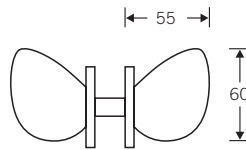
Dead knobs
for glass doors



2326 07

Aluminium natural colour
anodised
AluGrey

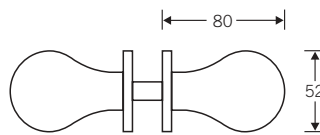
Bore hole Ø 13 mm



2339 07

Aluminium natural colour
anodised

Bore hole Ø 13 mm



2374 07

Aluminium natural colour
anodised
AluGrey

Bore hole Ø 13 mm

As with all architectural hardware, door stops will only give satisfaction if correctly fitted and properly used. Before ordering or fabricating, it is necessary to check the weight of the door leaf, the angle of contact, the height of the bottom of the door from the floor and the quality of the flooring itself.

Depending on requirements, it is then possible to choose between simple stops, stops with anti-skew capability, stops with baseplates, directional and non-directional stops and, finally, stops fitted straight into the floor or those where rawl-plugs are used.

Overview

- Aluminium
- AluGrey
- Stainless steel
- New products



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Page 289



Page 291



Pages 290 and 326



Page 291



Page 290



Page 292



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Page 294



Page 292



Page 347



Page 362



Page 340



Page 294



Page 295



Page 296



Page 296



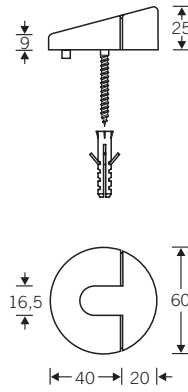
Page 353



Page 297

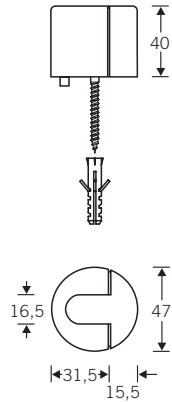


Door stops



3816
Aluminium
Stainless steel

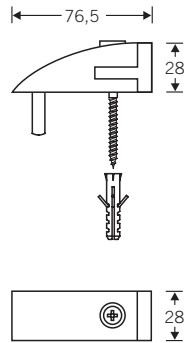
2



3817
Aluminium

d

Door stops



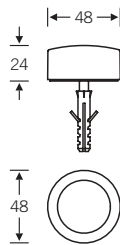
3819

Aluminium natural colour
anodised

Design: Josef Paul Kleihues

2

d



3878

Aluminium
AluGrey
Stainless steel

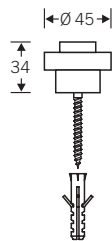
Design: Christoph Ingenhoven

Door stops



3879
Aluminium

2

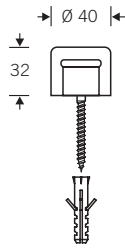


3881
Aluminium
Stainless steel

d

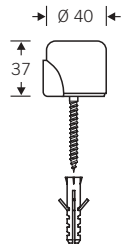
Door stops

2



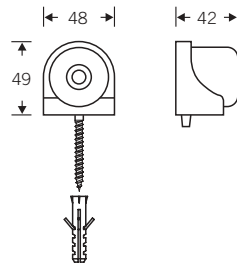
3880 01

d



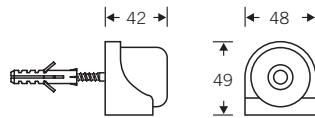
3882
Aluminium

Door stops



3888
Aluminium

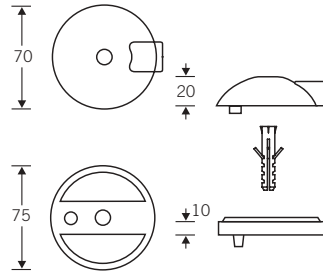
2



3889
Aluminium

d

Door stops
Door wedge



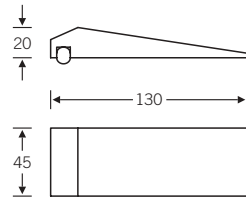
3884 00

Aluminium
Stainless steel

3884 10

Black baseplate

2

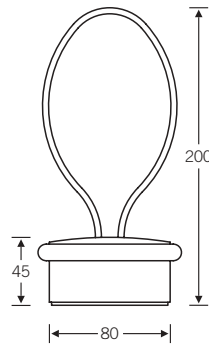


3818

Aluminium

d

Door stop



9888

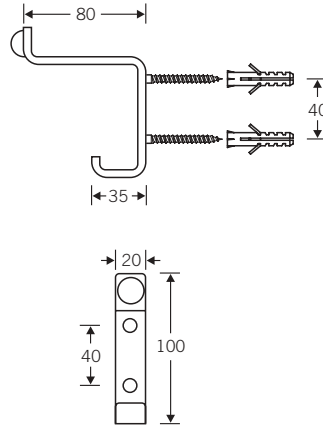
Stainless steel

Mobile door stop and door holder in one.
 Weight approx. 1.6 kg
 The rubber edging gently absorbs impact.
 Bottom surface non-slip.

2

d

Door stops for wall mounting



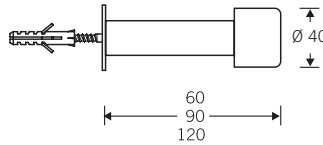
3646 ..

Aluminium
Stainless steel

Door stops combined with
hat and coat hook

00 without door stop
01 with door stop

2



3880

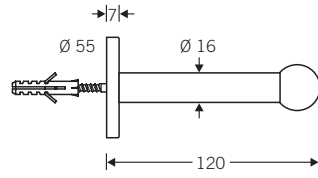
Aluminium
Stainless steel

02 length 120 mm
03 length 90 mm
04 length 60 mm

d

Door stops mounted to the wall need to be fitted in such a way that the door leaf strikes them as head-on as possible. Any undue lateral force is likely to cause the stop to be worked loose.

Door stops for wall mounting



3895
Aluminium
Stainless steel

2

d

FSB advises against fitting stops at door-handle height. The resultant shock waves are transmitted via the lock follower to the lock mechanism, eventually causing it to suffer damage.

Technical information	300
Crossbar fittings	301
Lever handle for unlatching handle for pulling and pushing	303

Crossbar fittings

Through its crossbar fittings, FSB offers a means of opening doors whereby the turning of a lever is replaced by a pushing motion acting on the lock or latch. Via a horizontal bar extending across the entire width of the door, force exerted is transmitted to the lock follower by a bevel gear pair acting directly through the spindle. The door can be opened by pressing any part of the crossbar.

In the Federal Republic of Germany and other countries, crossbar fittings of this type have hitherto predominantly been used on panic doors in combination with the appropriate mortice locks. Other hardware systems for panic doors are also available on the European market, however. Surface-mounted designs are often employed, for instance.

The differing views on the fitting-out of fire-escape, emergency-exit and panic doors have now been harmonised through the drafting of European standards that are binding upon all EU States. The requirements for emergency exit devices are set forth in DIN EN 179 (see page 235) and those for panic exit devices in DIN EN 1125. The hardware package for panic doors comprises a fastening element (lock), a lock receiver (striking plate) and a horizontal bar.

The standard specifies that use is to be made of panic or emergency doors wherever heavy public traffic is to be expected and where panic may arise due to unfamiliarity with the surroundings.

Alongside design-engineering requirements, there are also exacting demands as regards fitness for function. The hardware must, for example, be capable of opening the panic door through exertion on the bar of a force of just 220 N even with the closing device being subjected to a pressure of 1,000 N. The fulfilment of this and further demands such as durability of service and ability to withstand misuse has to be demonstrated by means of tests and certification procedures for the attendant system conducted by an independent test institute. The CE kitemark on the hardware system ensures that only tested fittings that conform to the applicable standards can be installed.

FSB's crossbar hardware only forms part of any panic-exit system. It is currently being adapted, tested and classified in conjunction with lock systems by diverse manufacturers of repute.

As this publication goes to press, a CE Certificate of Conformance has yet to be furnished. When planning, please therefore consult www.fsb.de for the latest situation on this.

Crossbar fittings



7970 **F**

Aluminium
Stainless steel

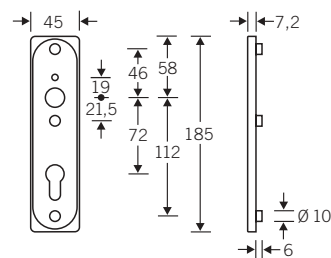
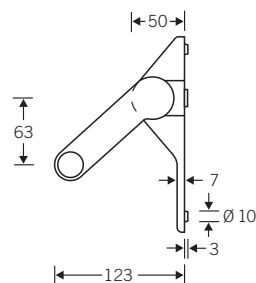
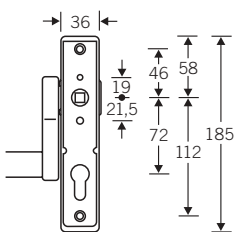
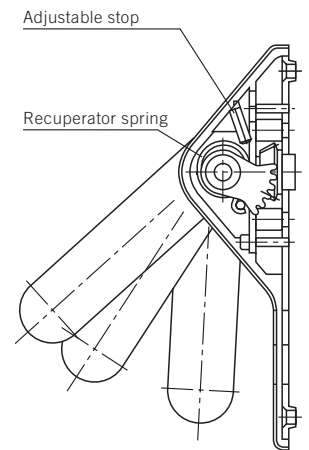
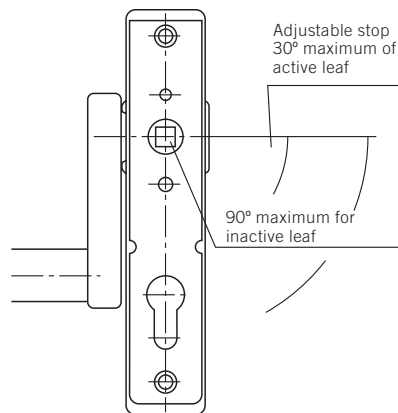
Description of function:

Bevel gearing and spindle combine to convert pressure on the cross bar into rotary motion acting on the lock follower. An adjustable stop protects the lock follower and is set at the fixing stage to suit the operating arc.

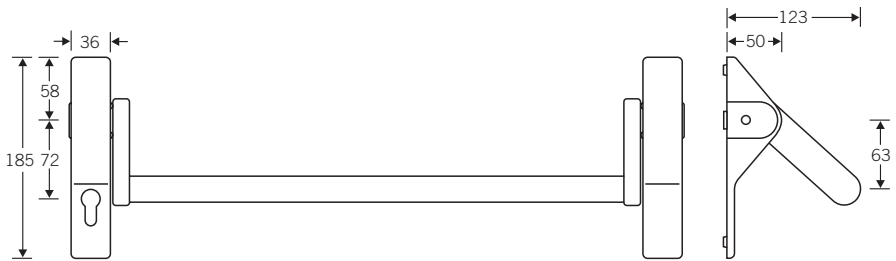


Dimensions:

Mounting boxes
185 x 36 mm,
all counter backplates
185 x 45 mm



Crossbar fittings



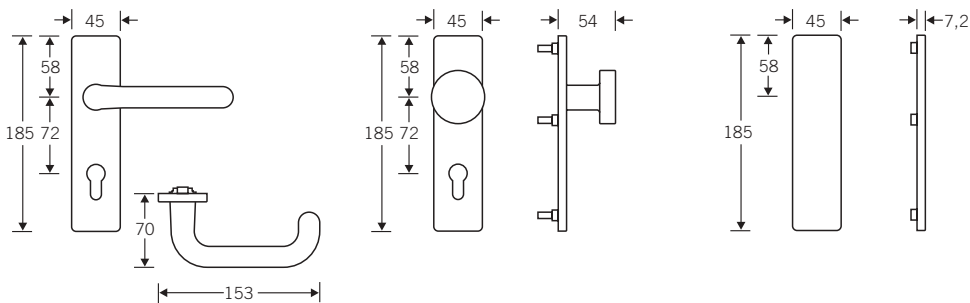
7970 0110 **F**

Aluminium
Stainless steel



7970 0200 **F**

Aluminium
Stainless steel



Outside furniture options

7971 0010 **F**

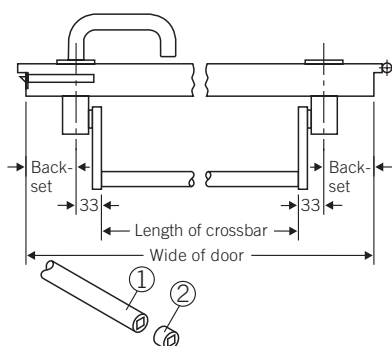
FSB lever handle turnably fixed on backplate concealed fixing for fire doors to German DIN standard, PZ 72 mm.

7972 0110 **F**

FSB backplate with dead knob concealed fixing for fire doors to German DIN standard PZ 72 mm.

7973 0000 **F**

FSB blind backplate concealed fixing for fire doors to German DIN standard.



Determining length crossbar:

Width of door
minus (2 x backset)
minus 67 mm

= Crossbar length

Note on fitting:

Cut crossbar (1) to size.

In the case of crossbar fittings in stainless steel, insert plastic end piece (2).

Unlatching and pulling or pushing



Lever handle for unlatching handle for pulling and pushing

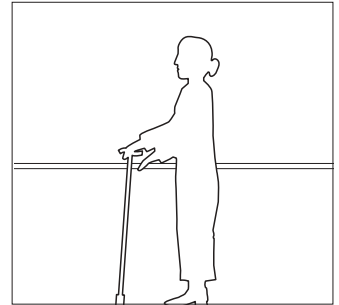
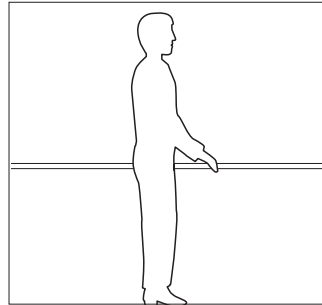
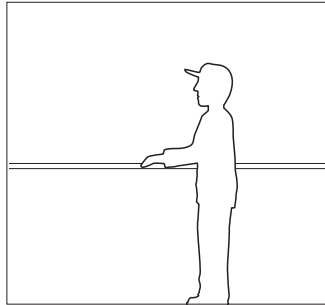
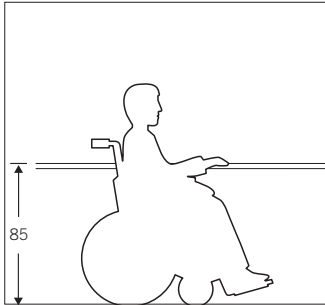
We know from sorry experience that architects, interior designers and clients often disregard the recommendations of the hardware industry in respect of emergency-exit doors, allowing them to be used for general public transit. Such furniture is only intended for emergency application, however and subjecting it to regular heavy use can cause spindles to break, backplates and roses to work loose and locks to suffer damage. The following procedure has proved effective in such scenarios:

The door lever handle furniture is fitted together with a pull. In this disparate match, the lever handle has the task of releasing the panic lock, whilst the robust pull suggests itself as a means of pulling or pushing the door. It has been our observation that people very soon grasp how difficult it is to move a heavy emergency-exit door, with door-closer attached using a lightweight lever handle. It is only a matter of time, therefore, before attention switches to the sturdier fixed pull handle.

Where there is a likelihood – against the advice of the industry – of emergency-exit doors being used as standard transit points, FSB recommends fitting a lever/pull combination from the outset, instead of waiting until damage has occurred.

Building without barriers	306
Diagonal-oval ErgoSystem for sanitary/domestic applications	307

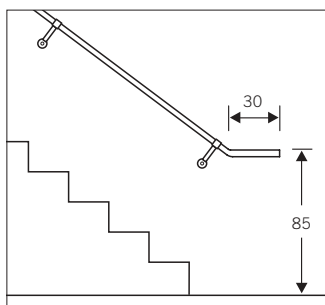
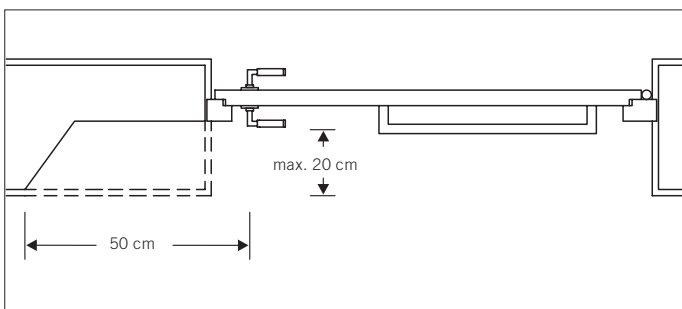
Building without barriers



FSB possesses copies of the German standards DIN 18 024 (Non-barrier access points in public buildings, spaces and workplaces) and DIN 18 025 (Non-barrier residential units) as well as guidelines and observations on this subject issued by the Bavarian Chamber of Architects. There follow extracts from these:

Operating devices on single-action hinged doors

Empirical studies have shown that, when adults - be they little or large - stand with arms dangling, their finger tips are at a height of roughly 73 - 75 cm. In the case of hinged doors in residential buildings, there must be clearance of at least 50 cm from the side wall or any furniture, measured from the centre-line of the door, to enable wheelchairs to be manoeuvred up to the handle from the side. The reveal in the wall, moreover, should be no wider than 20 cm.



Movement areas near hand-operated doors

Wheelchair users have very limited scope for movement. The movement area on the slamming side of a hinged door is calculated as being 1.50 m x 1.50 m. Once someone in a wheelchair has passed through the doorway, the easiest way for them to close the single-action door is if a bar is mounted across the inside of the door at a height of approx. 85 cm. Thus adults will always be able to reach operating devices fitted at a height of 85 cm. Those of impaired mobility do not need to raise their walking aids at this height. Wheelchair users are able to tackle a gripping height of 85 cm with their arms on their rests. Hence, operating devices (e.g. lever handle crossbars for closing hinged doors, French window openers, operating units for automatic doors) should always be fitted at a height of 85 cm in nonbarrier spaces. Operating devices need to be designed to take account of those with impairments of manual functions, e.g. by cranking lever handles at their ends to prevent hands slipping off too easily.

Railings

Stairs must be appointed in such a manner that safe use is assured. For a person to raise or support themselves, they need to be able to enclose the handrail with their hands. Handrail diameters of 30 - 45 mm are recommended. Stairs should be fitted with handrails on both sides. At the tops and bottoms of stairs, handrails should run horizontally for 30 cm. These areas should also be marked by means of tactile features.

FSB recommends careful study of the relevant regulations and will be willing to act as a development partner if required.

Diagonal-oval ErgoSystem for sanitary/domestic applications



We are forever wishing one another good health and vitality, inherently reluctant to accept that illness, disability and the ageing process are aspects of reality that we have to face up to over and over again.

Sensible means of assistance can make our day-to-day lives easier regardless of our own particular situation. Ideally, they should serve young and old alike and provide support in the event of temporary or lasting disability.

When designing such means of assistance, it goes without saying that, as well as boasting optimum functionality, they should have a modern look about them.

Which is where the diagonal-oval ErgoSystem for sanitary/domestic applications comes in. The oval, diagonally raked cross-section of these support and grab rails means less effort needs to be made when taking hold of and holding onto them and also makes it easier for a person to support themselves with a hand and an arm. Bright, easy-care stainless steel stands out against darker fastenings to, as it were, subliminally indicate which section one is supposed to take hold of. Rugged fastening roses give a visual impression of the system's robustness. At the same time, however, the support and grab rail series exudes lightness and modernity thanks to the innovative, slender looking oval cross-section of the rails.

Special attention was paid at the conceptual stage to providing straightforward but highly effective solutions.

The rotatable bath/shower stool, for instance, is a new departure. It can be combined with a bath seat to act as a means of getting into the bath, it can be hooked into a wall bracket in the shower, or it can be used as a straightforward item of bathroom furniture.

The series comprises:

- support and grab rails
- handrails for showers and baths
- bath seat
- shower and general-purpose stool

The entire range was submitted to the testing authority TÜV Rheinland as well as to the GGT (German Society for Geriatric Engineering) and accorded the kitemarks GS (Safety-Tested) and K + Q (Comfort and Quality) by these.

A detailed account of the series is given in the 'Diagonal-oval ErgoSystem for sanitary/domestic applications' prospectus, which is available on request.



design award
winner
2003

Designer programme

3

Nicholas Grimshaw	311
Ton Haas	317
Christoph Ingenhoven	323
Jahn/Lykouria	333
Hans Kollhoff	337
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Erik Magnussen	345
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Designer programme

Under the heading 'Designer programme', we have bracketed product ranges bearing the hallmark of a given designer. A product range generally consists of one or two lever handles, the attendant window handle plus doorknobs and door stops. Our European 'names' include:

- the German Dieter Rams, whose striking handles so fully bear out his dictum that 'less is more';
- the Englishman Jasper Morrison with his predilection for the unassuming, tangible and hefty;
- the Frenchman Philippe Starck, who proves that, even when designing the most commonplace of products, it is possible to infuse a strong personal touch without sacrificing functionality;
- the Dutchman Ton Haas, who feels that, above all, a Dutch handle needs to have bulk;
- the German husband-and-wife designer duo rahe+rahe, who wished to gift the Bauhaus town of Dessau a handle of their own;

- our colleague Hartmut Weise with his light and breezy stainless steel collection;
- the English architect Nicholas Grimshaw, who imparts styling common in the cutlery industry to his door handles;
- the Dane Erik Magnussen, who created a handle collection out of folded stainless steel strip that has the lightness of a Scandinavian gull's wing-beat;
- the German architect Hans Kollhoff with his clean-lined handles that exude the spirit of the legendary 1930s.

Fresh stimuli from the world of architecture have been provided by

- Düsseldorf-based Christoph Ingenhoven with his ruggedly accomplished "hand tools";
- Jahn/Lykouria of America with a beautiful moulded-to-the-hand series;
- Christoph Mäckler of Frankfurt with his successful re-vamping of an older formal vocabulary and
- the Swedish nature lover Thomas Sandell with his handy little Scandinavian fittings.

Our fertile probings beyond the horizons of our own design ideas will be continued in the years ahead.

Handle programme Nicholas Grimshaw



As had already been the case towards the end of the 19th century, Berlin is now once again one of the most engaging sites for new architecture anywhere in the world. The elite of the architectural and design scene are breaking new moulds here – and that goes for door handle design too – and we are proud to be in on the process. Take, for example, the handle by the famous British architect Nicholas Grimshaw, which he designed for his Berlin Chamber of Trade and Commerce project in 1996.

Grimshaw's handle range has been well-received by the market. Its design constituents are readily recognised and appreciated. Some (generally Europeans) instantly recall Scandinavian cutlery design, others (predominantly North Americans) are more readily reminded of the butt of a Colt. Which only goes to show that

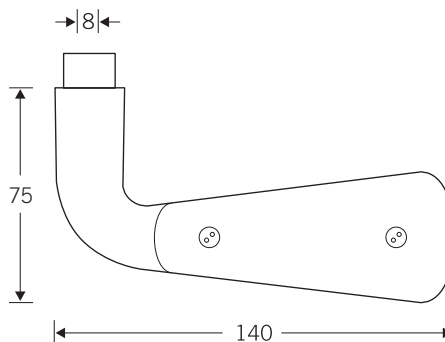
Nicholas Grimshaw and his team headed by Matt Keeler have managed to highlight the heftiness of the design. The designers made great demands of the FSB workforce's craft expertise. The production process calls for the coupling of very differing materials. Aluminium mouldings and composite injection mouldings are held together by stainless steel bolts.

Lever handle



1069

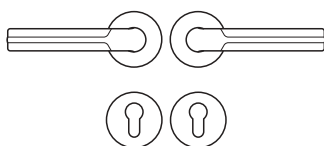
Aluminium natural colour
anodised
black plastics



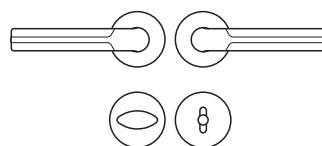
Nicholas Grimshaw's door handle design is notable for its easy readability. The grip appears to be saying 'to open please press'. The flattened bulk is clearly inviting the hand to envelop and operate it. The grip is as slender from the front as it is broad across the top.

The silver aluminium layer that separates the top of the grip from the bottom lends the design a sense of great lightness.

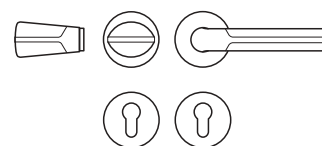
Order proposal:



Internal door set	
Lever handle	1069
Rose	1731
Escutcheon	1735



Bathroom furniture	
Lever handle	1069
Rose	1731
WC set	1735 6754



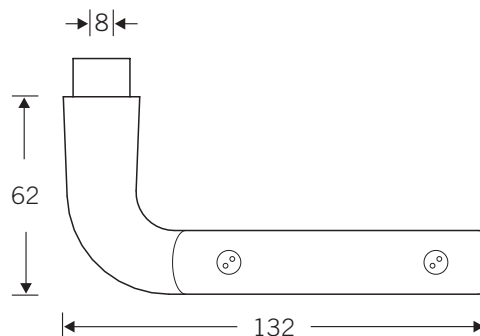
Entrance door set	
Lever-female part	1069
Rose	1731
Escutcheon	1735
Door knob	2369 06

Lever handle



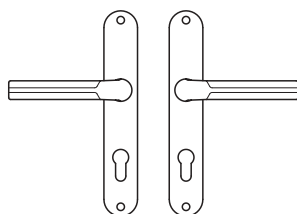
1064

Aluminium natural colour
anodised
black plastics

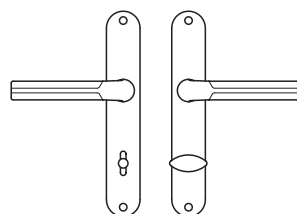


The design behind FSB 1064 is very much market-driven. An admirer of Nicholas Grimshaw's handle collection tentatively enquired whether his window handle design coupled with a narrow backplate could be re-interpreted as door furniture. It transpired that this was indeed possible without too much bother. Nicholas Grimshaw had no option but to go along with what was being done to his design work.

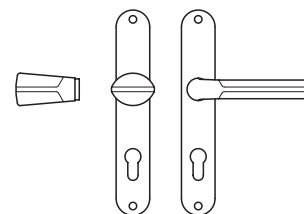
Order proposal:



Internal door set
Lever handle 1064
Backplate 1417

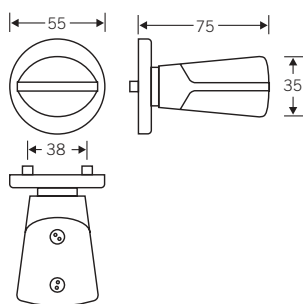


Bathroom furniture
Lever handle 1064
WC Set 1417 6754



Entrance door set
Lever handle 1064
Backplate 1417
Knob backplate 1929

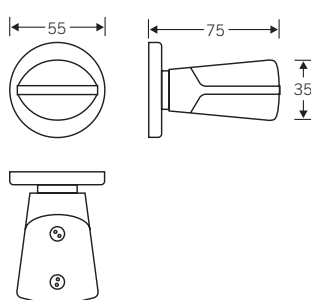
Door knob
Cabinet knob



2369 06

Aluminium natural colour
anodised
black plastics

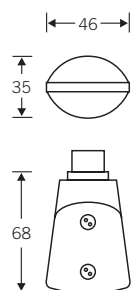
concealed through fixing
c:c screw holes 38 mm



2369 05

Aluminium natural colour
anodised
black plastics

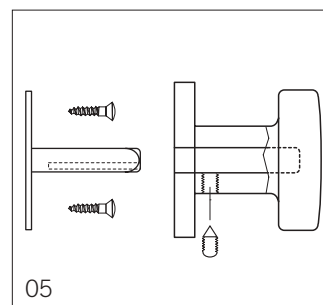
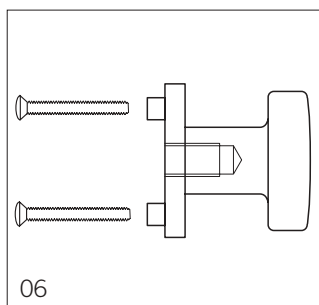
concealed face fixing



0869

Knob handle
Aluminium natural colour
anodised
black plastics

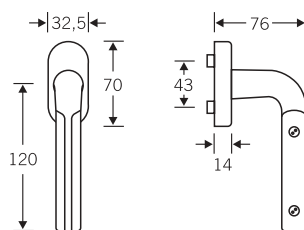
8 mm □-hole



Window handle Roses WC



Where leverage was the key-note in the case of the door handle, the window handle has been designed very much with turning and pulling in mind. Round tubing has been bent and cut away in such a fashion that the silvery central strip and the gripping cheeks to either side immediately indicate to the eye whether the window is closed, open, or tilted.



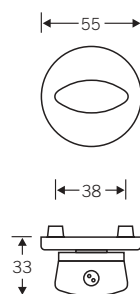
3469

Aluminium natural colour
anodised
black plastics

Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

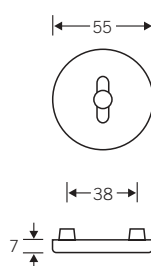


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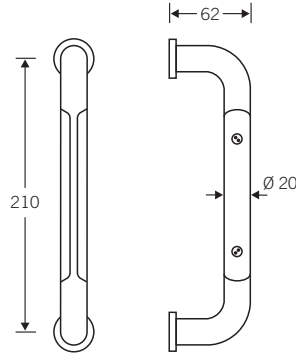


1735 6754

Aluminium natural colour
anodised
black plastics



Door pull



6619 21

Aluminium natural colour
anodised
black plastics

In the Anglo-Saxon hardware market, short pulls with an A dimension of 210 mm figure in every collection. Nicholas Grimshaw was of the opinion that we shouldn't confine this item to the British market.

Handle programme Ton Haas



For over a decade now, FSB has been looking into a succession of European neighbours' visions of the definitive door handle. At the beginning of the new millennium we knocked at Holland's door.

Ton Haas, an experienced and committed industrial designer, heeded our pleas and plunged head-first into the adventure that is the door handle. He describes his attempts to close in on the subject better than any outside party could:

'Some things look more straightforward than they actually are, a fact that led me to underestimate the door handle. What, for God's sake, is a Dutch door handle after all? We live here in a multicultural society. Wherever we look, we see water. We can build dikes and are experienced traders. Being Calvinists, we have a clear will and we proceed self-confidently. But door handles? I think a Dutch door handle ought to be substantial and to give the hand something to get hold of. Clear ideas need strong handles.'

Having put in some hard work, Ton Haas presented us with half a dozen door-handle designs. We jointly opted for one of them, around which he modelled an entire family of Dutch fittings. The watchword now is:

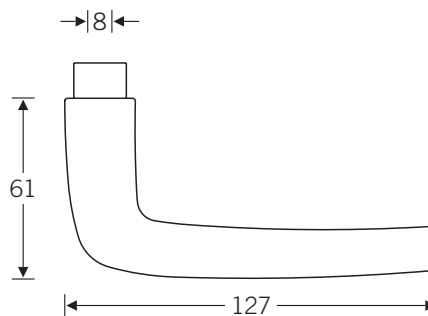
'Oranje Boven'.

Lever handle



1179

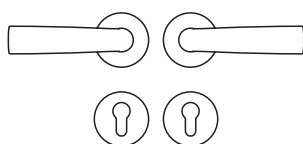
Aluminium natural colour
anodised
AluGrey



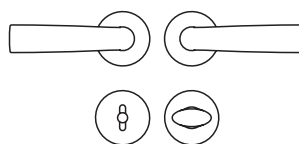
No matter how much we enjoy setting lever handles to words, some designs present us with well-nigh insurmountable obstacles. Had Ton Haas taken a standard tubular handle and simply flattened it into an upright oval shape on his anvil? Or had he got two geometric shapes to merge seamlessly together?

The simplicity of the various means used to lend new form to a tool for operating doors never ceases to amaze. FSB 1179 enters the world of hardware as inconspicuously as if it were an old hand.

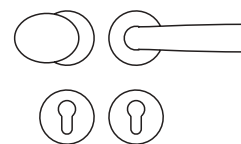
Order proposal:



Internal door set
1179 | 1707 | 1708
7279 63
7679 63



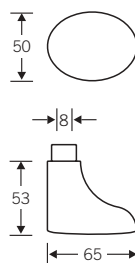
Bathroom furniture
1179 | 1707 | 1708 7854
7279 65



Entrance door set
1179 | 1707 | 1708 | 2379 06
7279 62
7679 62

Standard fittings
Project fittings
Fire door fittings
acc. to German DIN

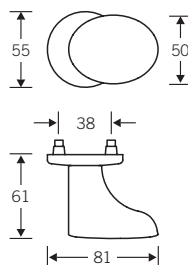
Knob handle
Door knob



0879

Aluminium natural colour
anodised
AluGrey

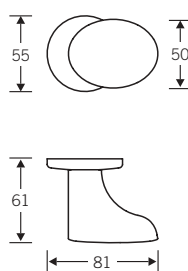
8 mm □-hole



2379 06

Aluminium natural colour
anodised
AluGrey

concealed through fixing
c:c screw holes 38 mm



2379 05

Aluminium natural colour
anodised
AluGrey

concealed face fixing

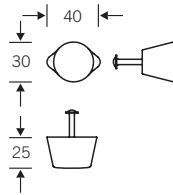
Ton Haas really hit the mark with his doorknob design. He expertly varies the transition from circular styling to oval gripping area. The substantial knob can be deployed either as a dead knob or, with spindle attachment, instead of a lever handle.

WC set
Cabinet knobs



1708 7854

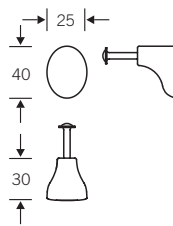
Aluminium natural colour
anodised
AluGrey



3681

Aluminium natural colour
anodised
AluGrey

Screws M4 x 30 mm

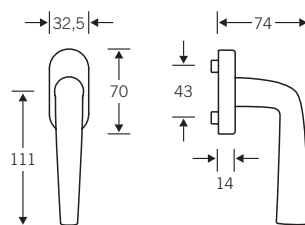


3682

Aluminium natural colour
anodised
AluGrey

Screws M4 x 30 mm

Window handle
Lever handles for framed doors



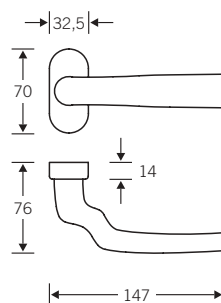
3779

Aluminium natural colour
anodised
AluGrey

Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Technical information page 114

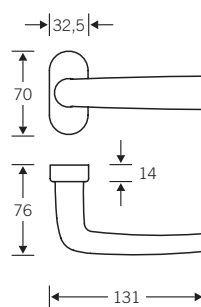


0679 21

Aluminium natural colour
anodised
AluGrey

0679 22 **F**

Aluminium natural colour
anodised
AluGrey



7279 25

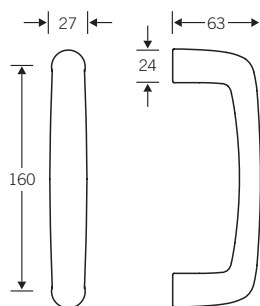
Aluminium natural colour
anodised
AluGrey

7679 25 **F**

Aluminium natural colour
anodised
AluGrey

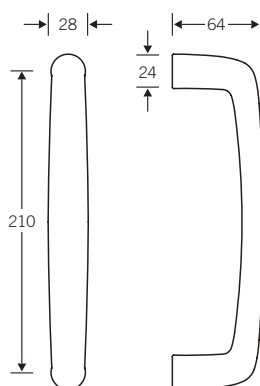
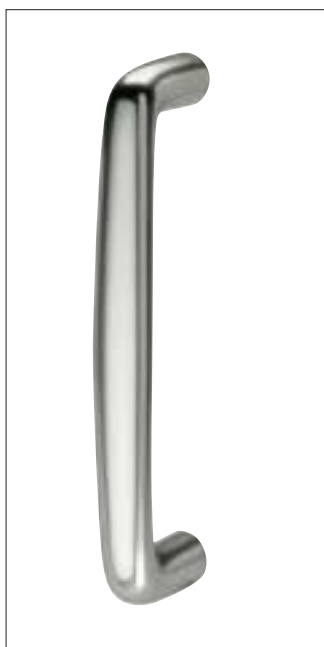
The window and narrow-frame door handles echo the styling of the lever handle, with circular giving way to oval.

Pull handles



3683

Aluminium natural colour
anodised
AluGrey



3684

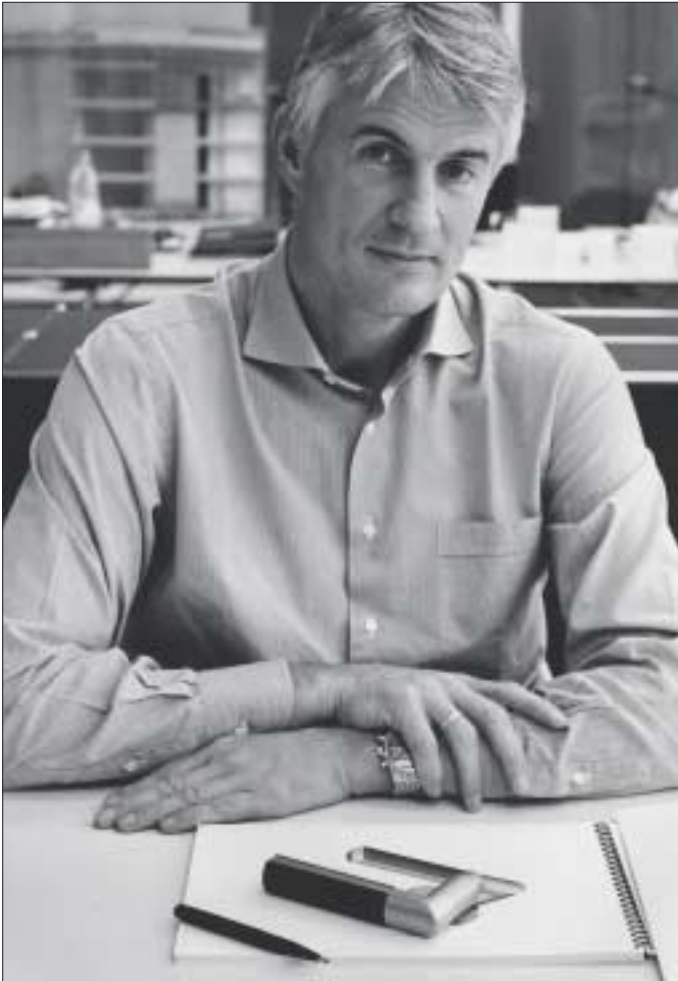
Aluminium natural colour
anodised
AluGrey

Special circumstances gave rise to two pull handles with different 'A' dimensions. On a tour of Rotterdam with Ton Haas, we discovered that large numbers of Dutch doors are fitted with pulls instead of dead knobs. Ton Haas was immediately tempted to submit a proposal of his own to his compatriots. We subsequently

patronised a recently re-opened concert hall at the same location and noticed that here, too, a not insignificant number of obsolescent pulls from the 1950s had been installed. Since Ton Haas is personally acquainted with the building's designer, this was a fitting opportunity for him to demonstrate to this friend too that, in the

new millennium, one ought to have the courage to embrace new forms. We were glad to put Ton Haas's design stimuli to effect, indeed they can be found both in the Designer programme and in the main body of the Manual.

Handle programme Christoph Ingenhoven



"Why do we all like door handles so much?" Christoph Ingenhoven and his design team mused. Why, "because they are the point of contact between our hands and our buildings." The closer any element of a building gets to us, the more carefully it must be designed.

Ingenhoven: "With the re-emergence of big, heavy doors, we wanted to deliver a powerful handle with which to open and shut them. We are not in favour of one-off solutions and laid store by developing a range of fittings for multifaceted structures. Taking a neutral, unshowy model as our point of departure, we have extended the handle family for special areas of application by means of optical and haptic add-ons to the lateral surfaces."

The work of Christoph Ingenhoven and his design team has got "21st Century" written all over it. This is partly due to their having opted for AluGrey, a material newly marketed by FSB.

In our constant search for new materials, we came across AluGrey back in the 1980s. We were thrilled by the hardness of its surface, its crystalline texture and its gracious neutrality.

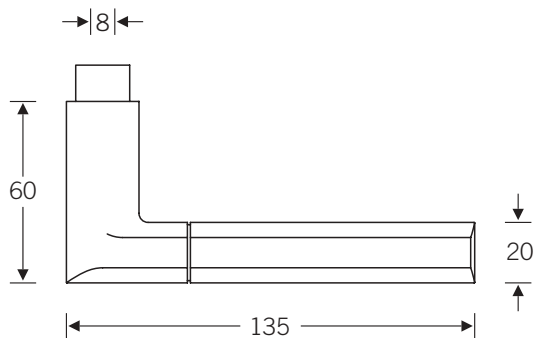
FSB is pleased to have acquired Düsseldorf architect Christoph Ingenhoven as a design coach for the propagation of AluGrey.

Lever handle



1078

AluGrey



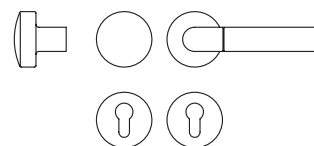
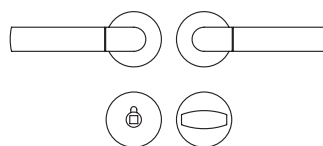
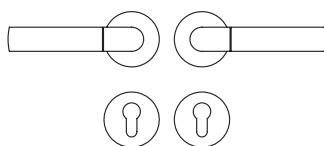
Excited by the new material, Christoph Ingenhoven returned to the major door handle design of the 1990s that FSB had marketed as the Frankfurt Model in the late 1980s, when it had picked up on a design idea Mallet-Stevens had in 1923.

Ingenhoven retained the mitring but radically reinvented the handle's gripping credentials by combining a flat top and bottom with a well-rounded body.

Coding for order processing:

in AluGrey 1005
with tactile grip 1088

Order proposal:



Standard fittings
Project fittings
Fire door fittings
acc. to German DIN

Internal door set
1078 | 1731 | 1735
7278 13
7678 13

Bathroom furniture
1078 | 1731 | 1735 7954
7278 15

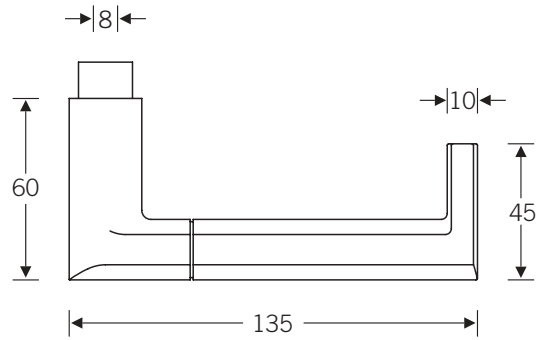
Entrance door set
1078 | 1731 | 1735 | 2377 06
7278 14
7678 14

Lever handle



1088

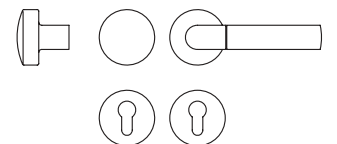
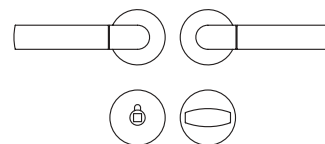
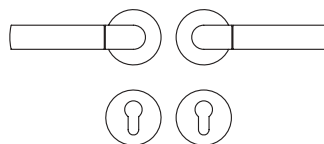
AluGrey



The 'return handle' shown here is a more enclosed version of Model 1078 that complies with emergency-exit door specifications.

Coding for order processing:
 in AluGrey 1005
 with tactile grip 1088

Order proposal:



Standard fittings
 Project fittings
 Fire door fittings
 acc. to German DIN

Internal door set
 1088 | 1731 | 1735
 7288 13
 7688 13

Bathroom furniture
 1088 | 1731 | 1735 7954
 7288 15

Entrance door set
 1088 | 1731 | 1735 | 2377 06
 7288 14
 7688 14

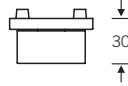
WC set
Door stop



← 55 →



← 38 →



1735 7954

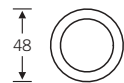
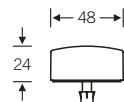
AluGrey



← 55 →



← 38 →

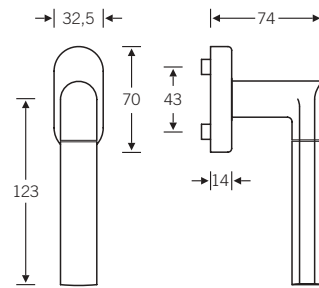


3878

AluGrey

The circular styling of this door stop means there is no lining-up to be done at the assembly stage. It should be ensured that the stop is properly fitted, as far from the door leaf as possible, and is not misused.

Window handles



3778

AluGrey

Window handle with click-stop mechanism
 lugs with 10 mm Ø
 c:c mounting holes 43 mm
 7 mm □
 spindle projecting 30 mm

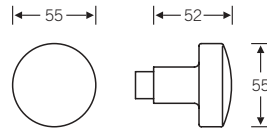
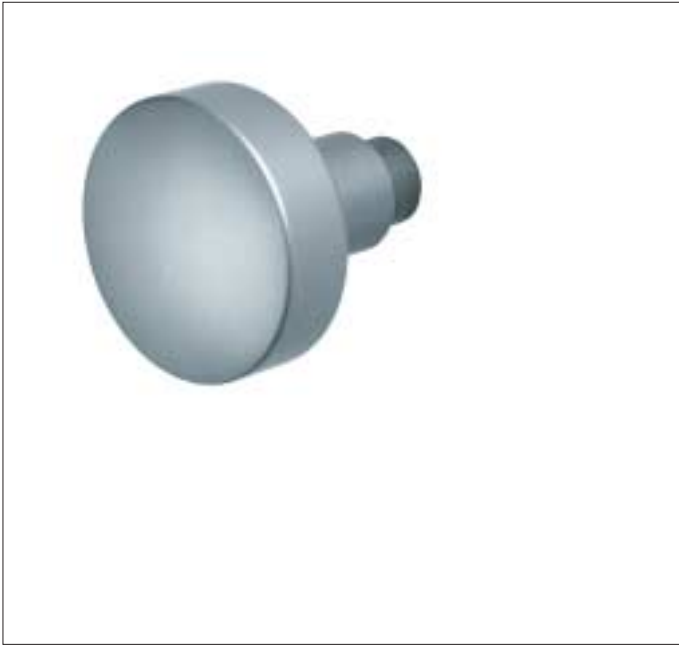


Coding for order processing:

in AluGrey 1005
 with tactile grip 1088



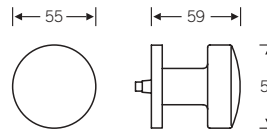
Knob handle
Door knob



0877

AluGrey

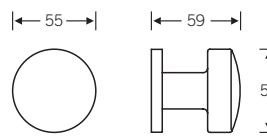
8 mm □-hole



2377 06

AluGrey

concealed through fixing
c:c screw holes 38 mm



2377 05

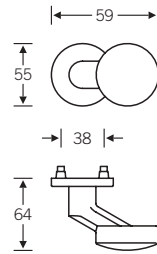
AluGrey

concealed face fixing

Coding for order processing:

in AluGrey 1005
with tactile grip 1088

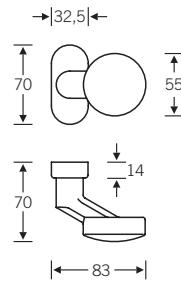
Door knob
Door knob for framed doors



2378 06

AluGrey

concealed through fixing
c:c screw holes 38 mm



2378 28

AluGrey

fixed
c:c screwholes 50 mm,
for countersunk screws M5

2378 18 **F**

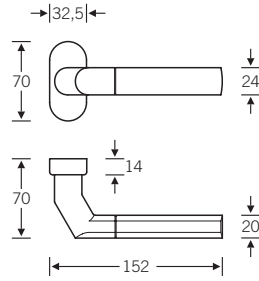
AluGrey

fixed
c:c screwholes 50 mm,
for countersunk screws M5

Coding for order processing:

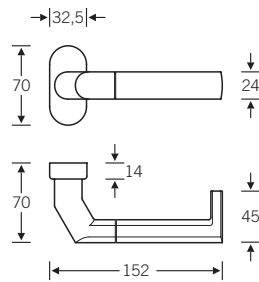
in AluGrey 1005
with tactile grip 1088

Lever handles for framed doors fixed on oval rose,
with concealed fixing and support mechanism
c:c screwholes 50 mm, for countersunk screws M5
8 mm □-hole
9 mm □-hole for fire and smoke stop doors* (F)



0678 21

AluGrey



0688 21

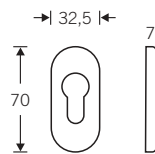
AluGrey

0678 22 (F)

AluGrey

0688 22 (F)

AluGrey



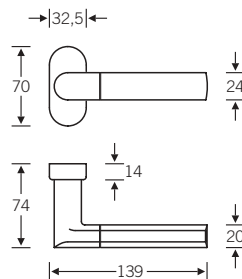
1757

AluGrey

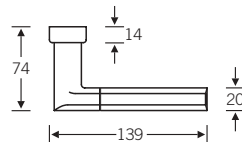
Coding for order processing:

in AluGrey 1005
with tactile grip 1088

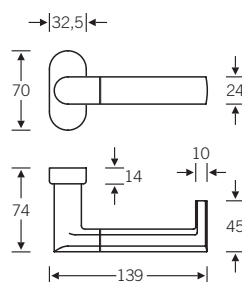
Lever handles for framed doors fixed on oval rose,
with concealed fixing and support mechanism
c:c screwholes 50 mm, for countersunk screws M5
8 mm □-hole
9 mm □-hole for fire and smoke stop doors* **F**



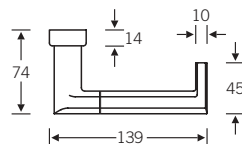
7278 25
AluGrey



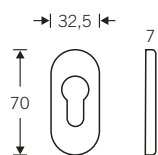
7678 25 **F**
AluGrey



7288 25
AluGrey



7688 25 **F**
AluGrey



1757
AluGrey

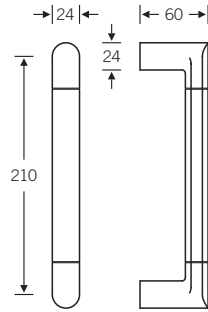
c:c screwholes 50 mm,
for countersunk screws M5

Coding for order processing:

in AluGrey 1005
with tactile grip 1088

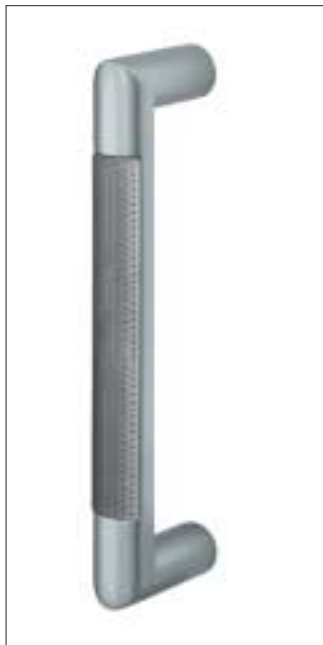
* acc. to German DIN standard

Pull handles



3688

AluGrey



Coding for order processing:

in AluGrey 1005
 with tactile grip 1088

Handle programme Jahn/Lykouria



Driven by the desire to give FSB handles an even more international feel, we recently did another spot of scouting around. In the process, we bumped into Helmut Jahn, whose architecture is a clean-lined fusion of aesthetics and technology. Via Munich, Berlin and Chicago, we finally located the offices of Jahn/Lykouria Design in London. Here, Helmut Jahn runs interdisciplinary design projects together with Yorgo Lykouria.

Jahn and Lykouria are inspired by the reality of a quickly changing world. They approach each project without preconceptions – with the sense of seeing something for the first time. In this way they manage over and over again to discover new forms – and perhaps even something akin to a new poetry for the common artefacts in our lives.

In their thinking, the classic bent tube door handle was designed to take advantage of manufacturing capabilities in accordance with modernist design principles.

For Jahn/Lykouria this is not an appropriate principle for our times, since we have now become accustomed to the idea that machines are here to serve us.

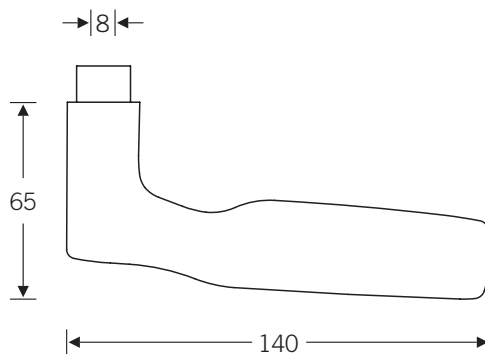
With this outlook it was not long before a new formal language evolved, executed in the new FSB material AluGrey. The upshot is a smart and very original product family that is now set to prove its worth in practice.

Lever handle



1168

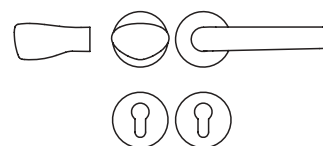
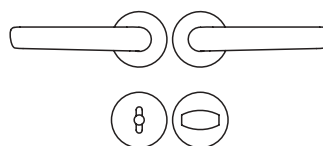
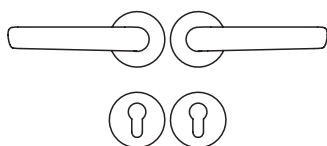
AluGrey



Jahn/Lykouria wanted the experience of the door handle to be like a good handshake. They saw the problem as being to design a common and well-used object that is laden with history and experience.

To put it in the London designers' own words: "The first sketch was a piece of modelling clay formed by one of our own gripping hands. This experience of touch evolved through countless models all formed by hand without a single drawing being produced. The sensuous gestures of the hand were read faithfully by machines to return a perfect aluminium echo of the hand-crafted pieces."

Order proposal:



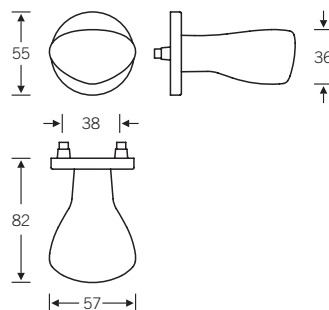
Standard fittings
Project fittings
Fire door fittings
acc. to German DIN

Internal door set
1168 | 1731 | 1735
7268 13
7668 13

Bathroom furniture
1168 | 1731 | 1735 0054
7268 15

Entrance door set
1168 | 1731 | 1735 | 2368 06
7268 14
7668 14

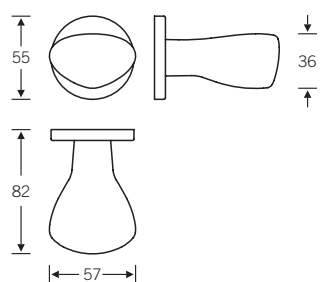
Door knobs
Window handle



2368 06

AluGrey

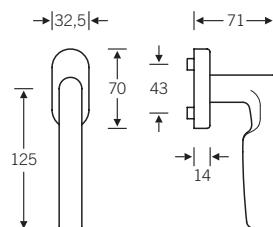
concealed through fixing
c:c screw holes 38 mm



2368 05

AluGrey

concealed face fixing



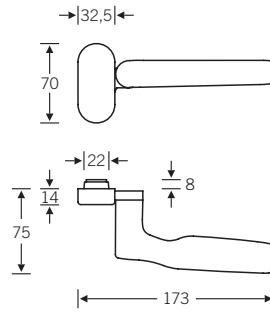
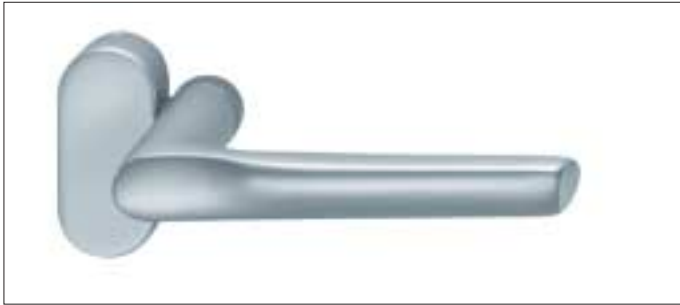
3468

AluGrey

Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Lever handles for framed doors
Pull handle

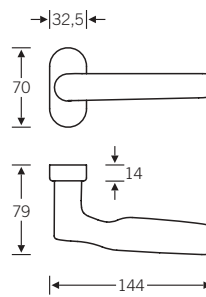
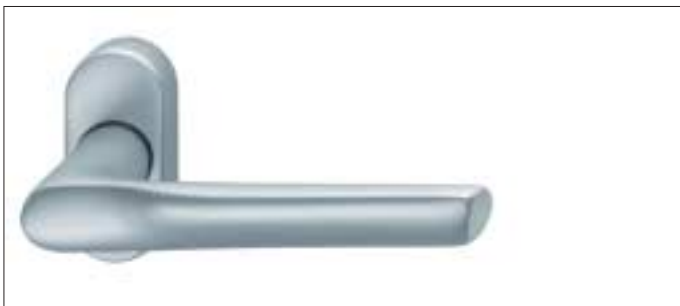


0618 17..

44 r.h. | 45 l.h.
AluGrey

0618 18.. **F**

64 r.h. | 65 l.h.
AluGrey

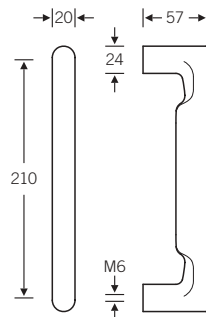
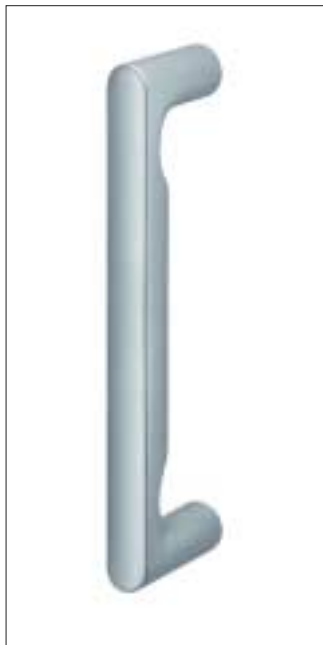


7268 25..

54 r.h. | 55 l.h.
AluGrey

7668 25.. **F**

64 r.h. | 65 l.h.
AluGrey



3687

AluGrey

Handle programme Hans Kollhoff



The architect Hans Kollhoff has added contributions to our company's 'Design for Berlin' project. In the process, he has joined Josef Paul Kleihues, Richard Rogers and Nicholas Grimshaw with some panache.

Born at Lobenstein in 1946, Hans Kollhoff studied architecture in Karlsruhe and New York. Having learnt the ropes with Oswald Matthias Unger, he set up his own architect's business in Berlin in 1978. The architectural scene in what was then West Berlin soon pricked up its ears. The housing he built on Luisenplatz received international acclaim. And the way Hans Kollhoff took off in the 'new' Berlin could have come as a surprise to no one:

Malchower Weg estate, Potsdamer Platz, government buildings, Alexanderplatz project etc.

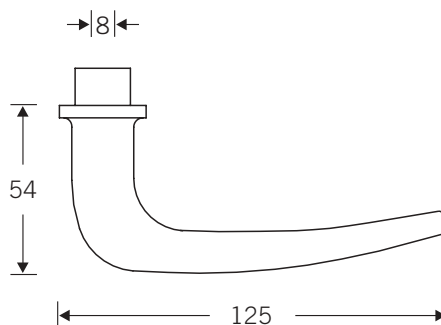
Hans Kollhoff advocates building that is thought through: re-addressing the essence of architecture, putting ideas found to effect in urban spaces, execution to the highest of standards – these are what inform his thoughts and deeds.

Lever handle



1163

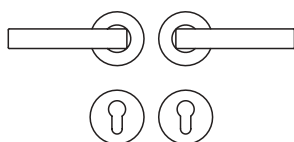
Aluminium natural colour
anodised
Stainless steel



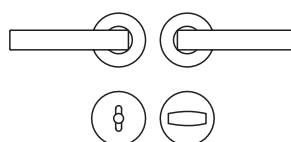
Hans Kollhoff's lever handle echoes the design vocabulary from the 30s of the last century, when Mies van der Rohe produced handle 3690 for Loevy. A circular shank mutates into a square-section lever.

Hans Kollhoff re-interprets both elements with reference to the laws of the obvious and the unassuming. The emphasis is no longer on 'Softline' but on 'New Edge', or unfussy gripability. You can see and feel what you're taking hold of.

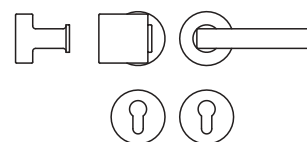
Order proposal:



Internal door set
1163 | 1731 | 1735
7663 13



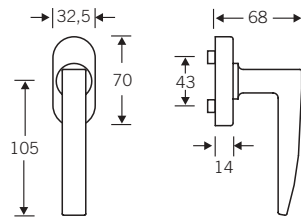
Bathroom furniture
1163 | 1731 | 1735 0054



Entrance door set
1163 | 1731 | 1735 | 2333 06
7663 14

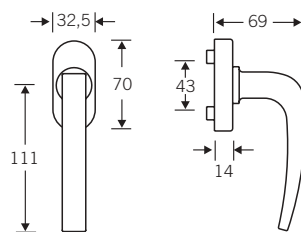
Standard fittings
Fire door fittings
acc. to German DIN

Window handles

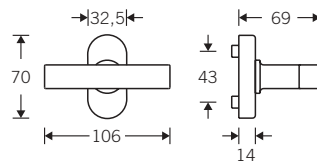


3433

Aluminium natural colour anodised



Stainless steel



3453

Aluminium natural colour anodised

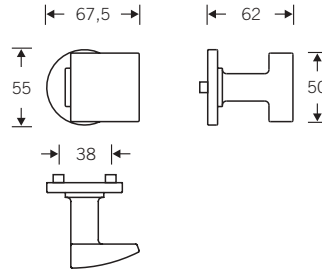
Window handles mit Rastung
Nocken-Ø 10 mm
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Together, the two window handles by Hans Kollhoff just about sum up what 'functional realism' is all about. The L-shaped model mimics the angular styling of the window and hence clearly sets itself apart from the lever handle, their underlying affinities notwithstanding.

The alternative twist handle features a rounded front to soften the hardness of the T design.



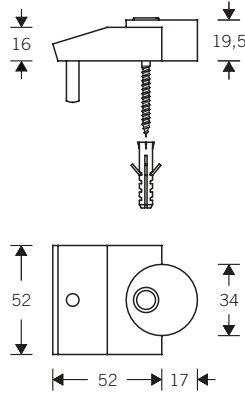
Door knob
Door stop



2333 06

Aluminium natural colour
anodised
Stainless steel

concealed through fixing
c:c screw holes 38 mm



3820

Aluminium natural colour
anodised
black plastics

The door knob and door stop
adapt the lever handle styling
to their own functional require-
ments.

Handle programme Christoph Mäckler



When we set our minds to creating a new handle collection together with Prof. Christoph Mäckler, an architect who works in Frankfurt, it wasn't the design that dominated our initial deliberations but the choice of material. We even jointly ran a much acclaimed workshop on the subject at the Dortmund "U".

Christoph Mäckler loves natural materials. Brass was his first choice, though in a raw polished finish as opposed to the lacquered variant generally on offer.

We then found it quite hard convincing our interlocutor that his new design ought additionally to be made available in aluminium and stainless steel.

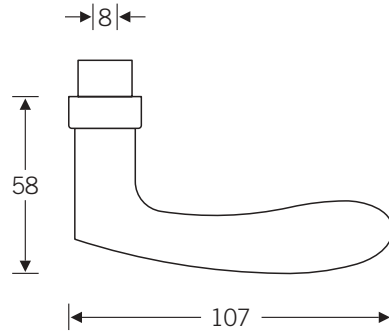
Once the question of materials had been resolved and after much leafing through old catalogues, Christoph Mäckler eventually settled for a basic style that had already been enthralling door users in the 19th century. It's such a well-known style and one which Christoph Mäckler reworked over and over again. His design proposal is a compact handle family which he wanted to see complemented by backplates and roses with visible fixing.

Lever handle



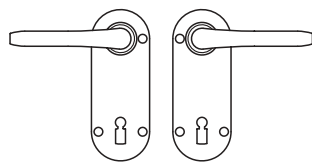
1135

- Aluminium natural colour anodised
- Satin stainless steel
- Mirror polished stainless steel
- Polished brass waxed

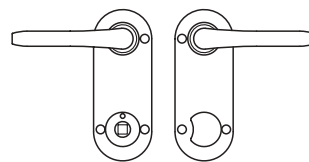


What makes this handle so appealing is its poise. Set off by the flat, clean-lined form and explicitly technical charm of its backplate, this new design looks good on any door.

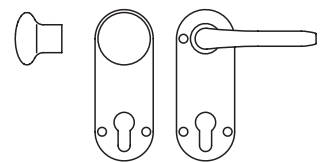
Order proposal:



Internal door set
Lever handle 1135
Backplate 1425

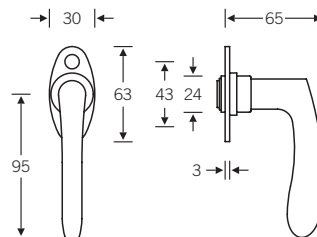


Bathroom furniture
Lever handle 1135
WC Set 1425 7554



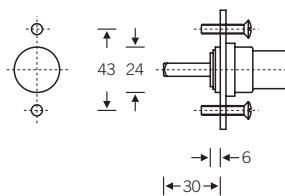
Entrance door set
Lever-female part 1135
Backplate 1425
Knob backplate 1925

Window handle
Knob backplate

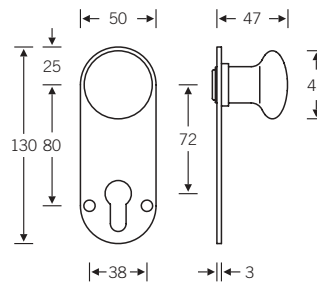


3735

Aluminium natural colour
anodised
Satin stainless steel
Mirror polished stainless steel
Polished brass waxed



The window handles operate with flat roses 3 mm thick. These are fastened to the window mechanisms at 43mm centres using M5 screws.

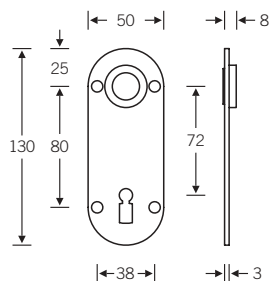


1925

Aluminium natural colour
anodised
Satin stainless steel
Mirror polished stainless steel
Stainless steel spiegelpoliert
Polished brass waxed

The knob backplate comes with a fixed knob and an FSB half-spindle. It is designed for door thicknesses from 38 - 42 mm. The furniture is visibly fixed to the door using M4 sleeve nuts and threaded bolts.

Backplates



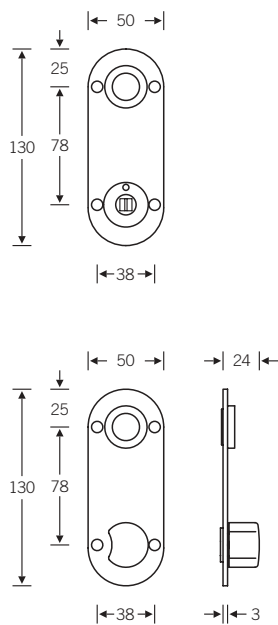
1425

Aluminium natural colour
anodised
Satin stainless steel
Mirror polished stainless steel
Polished brass waxed

Keyholes

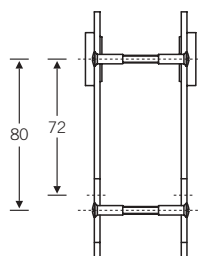


BB PZ



1425 7554

Aluminium natural colour
anodised
Satin stainless steel
Mirror polished stainless steel
Polished brass waxed



The backplates boast a protruding, injection-moulded polyamide bushing and are visibly fixed. M4 sleeve nuts and threaded bolts are supplied for door thicknesses from 38 - 42 mm. Fixing is by means of predrilled boreholes in the lock at 38 mm centres.

Handle programme Erik Magnussen



In early 1994, the Name Design series went Scandinavian and Erik Magnussen entered the Brakel scene. Born in Copenhagen in 1940, the Dane achieved fame when he followed in the footsteps of Arne Jacobsen at Stelton. Magnussen's jugs, butter dishes, side-forks, lanterns and cutlery ranges in stainless steel became a Danish trademark, his crisp formal vocabulary the symbol of what is often referred to as frosty Nordic design. His policy is to work on designs until their functioning can be taken as read.

Our collaboration with Erik Magnussen began late in the summer of 1994 when Erik and his four-legged friend Kaktus stopped over at Brakel for the first time. Kaktus, a splendid wiry-haired terrier, was part of the design team from the start. Erik inspected our production, discussed the concept of the product family with us, and promised to mull over our scheme in sunny France and to turn up again at some point once the long Danish winter was over. We got together half a dozen times, either at ours or in greater Copenhagen, over the next twelve months.

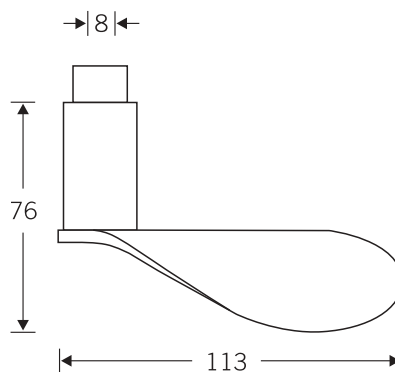
Naturally enough, our remit was largely about taking Kaktus for long walks through the Weser valley woodlands and around the Royal Hunting Lodge, though we did also touch on the subject of design. After such a long and intensive period of incubation, it is hardly surprising that Erik Magnussen won the hearts of Brakel's door handle makers with his very first sketches. He set his initial ideas to paper with broad pencil strokes. We thought we could discern the wing-beat of Scandinavian gulls in these first drafts. Which is how the entire product family acquired its semiotic identity. The materials we were required to use by Erik Magnussen were stainless steel and black plastic, his favourites. He also had clear ideas concerning the production process. We were not to engage in any bending, welding or widening, we were simply to fold. Once again, we were being led into virgin engineering territory by a designer.

Lever handle



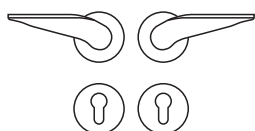
1128

Stainless steel

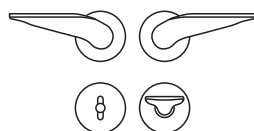


It was by means of pleasant-to-hold, folded stainless steel plate that FSB's modellers lent substance to a charcoal drawing by designer Erik Magnussen which has been interpreted as the wing-beat of a dove. The grip is short and hefty. Operating doors with this model is something of a sensuous delight. All the attendant accessories have been styled in the same vein.

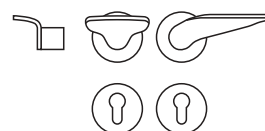
Order proposal:



Internal door set
Lever handle 1128
Rose 1707
Escutcheon 1708

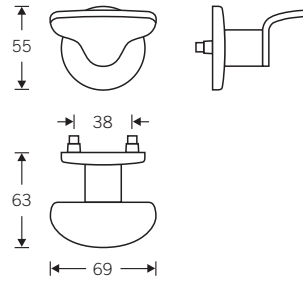


Bathroom furniture
Lever handle 1128
Rose 1707
WC set 1708 7054



Entrance door set
Lever-female part 1128
Rose 1707
Escutcheon 1708
Door knob 2357 06

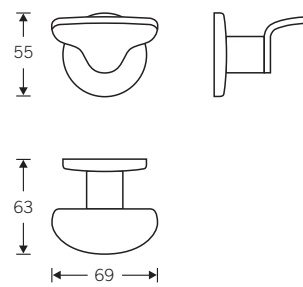
Door knob
Roses WC
Door stop



2357 06

Stainless steel

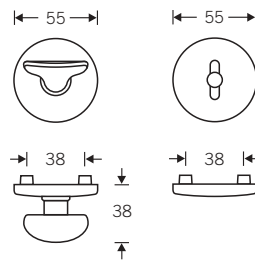
concealed through fixing
c:c screw holes 38 mm



2357 05

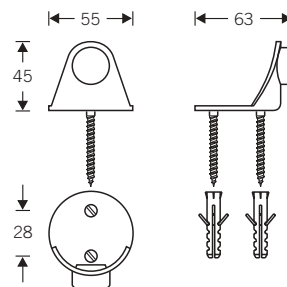
Stainless steel

concealed face fixing



1708 7054

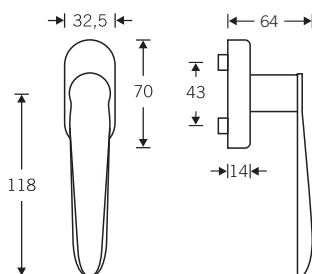
Stainless steel



3887

Stainless steel

Window handle
Coat hook
Cabinet knob



3458

Stainless steel

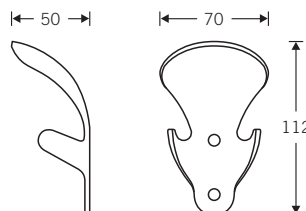
Window handles mit Rastung
Nocken-Ø 10 mm
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Technical information page 114

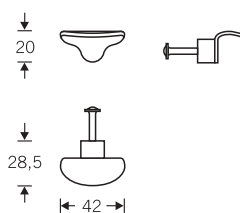


Erik Magnussen has taken the exterior styling of an eggshell and reproduced it in cutaway form as a coat hook. This marvellously uncluttered design is just crying out to have your hat, coat, jacket and scarf slung over it.



3647

Stainless steel



3627

Stainless steel

The cabinet knob is a smaller version of the doorknob design.

Screws M4 x 30 mm

Handle programme Jasper Morrison



In May 1988, the Italian design journal "domus" published an article on the young English designer Jasper Morrison. A dozen of his works from 1985-88 were presented including a door handle. A rhetorical question posed in the piece was whether the creativity of this London-based designer would survive long enough for his designs to be mass-produced. We have invited Jasper Morrison over to the Weser Hills not once but twice. On the occasion of his first visit, we jointly put his design idea FSB 1166 to effect as a solo fitting. A little later, we asked Jasper Morrison to design a second door handle for FSB. The issue of materials was soon resolved, since Jasper loves aluminium. He likes it most of all in its natural silvery-coloured form. Jasper Morrison emphasizes the aura of the utensil in his work, opting for chaste looks. No wonder, then, that he furnished us with a very unassuming product range.

Should you find yourself exclaiming 'I've seen that before' when you view products by Jasper Morrison, you will have grasped the English designer's philosophy. Morrison's wish is that anyone looking at or using his products should feel at once that the object is trustworthy. That, after all, is what design is about: fashioning usable objects.



Industrie
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**Auszeichnung für
excellente Designlösungen**

Die 10 Besten des Jahres

1990



Design Zentrum Essen

**Designpreis des Landes
Nordrhein-Westfalen**

Hohe Designqualität

1991



Rat für Formgebung
Frankfurt

bundespreis
produkt-design

bundespreis produkt-design

für hervorragende Produkt-
gestaltung

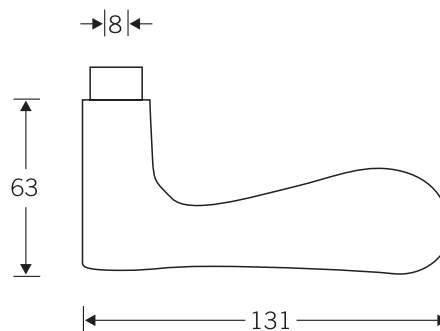
1992

Lever handle



1144

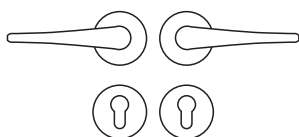
Aluminium natural colour
anodised
AluGrey



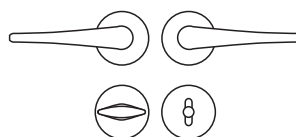
FSB 1144 is a lever handle styled to appeal to eye and hand in equal measure. The message the eye receives from Jasper Morrison's design is that this handle is a hand-operated device for opening doors.

Reassured, the hand reaches out. The thumb comes to rest; the index settles in its recess; the hand clenches to give a firm grip. All the good-grip criteria identified by Otl Aicher and ourselves have been met.

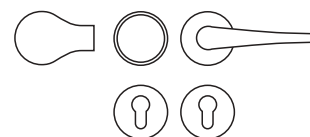
Order proposal:



Internal door set
1144 | 1731 | 1735
7244 13
7644 13



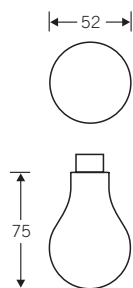
Bathroom furniture
1144 | 1731 | 1735 6054
7244 1554



Entrance door set
1144 | 1731 | 1735 | 2374 06
7244 14
7644 14

Standard fittings
Project fittings
Fire door fittings
acc. to German DIN

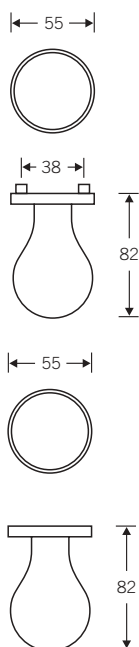
Knob handle
Door knob



0844

Aluminium natural colour
anodised
AluGrey

8 mm □-hole



2374 06

Aluminium natural colour
anodised
AluGrey

concealed through fixing
c:c screw holes 38 mm

2374 05

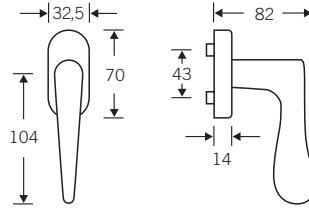
Aluminium natural colour
anodised
AluGrey

concealed face fixing

The FSB 0844 and FSB 2374 door knobs add a fresh dimension to design in this field. As Jasper Morrison was hatching them, he must have looked up at the ceiling in his design studio. Hanging there was a conventional light bulb. Jasper took this form so familiar to us all and transferred it to the door knob. The outcome is a

worthy alternative to the more usual round or flattened disc styles. The fixed version gives the hand plenty of scope to grip and pull, while the rotating knob can be turned the requisite amount without unduly extending the hand. Their style, moreover, harmonises well with the FSB 1144 handle design.

Window handle
Roses WC



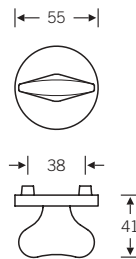
3444

Aluminium natural colour
anodised
AluGrey

Window handles mit Rastung
Nocken-Ø 10 mm
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Technical information page 114

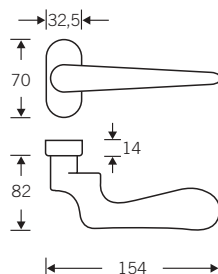


1735 6054

Aluminium natural colour
anodised
AluGrey



Lever handles for framed doors
 Door stops
 Coat hook

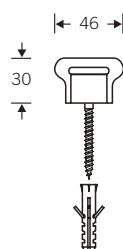


0642 21

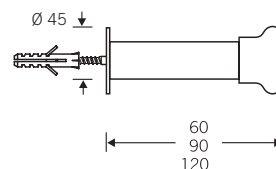
0642 22 **F**

Aluminium natural colour
 anodised
 AluGrey

c:c screw holes 50 mm,
 for countersunk screws M5



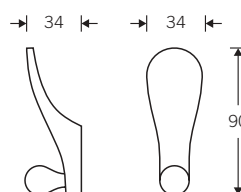
3896 00



3896

Aluminium natural colour
 anodised

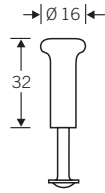
02 length 120 mm
 03 length 90 mm
 04 length 60 mm



3650

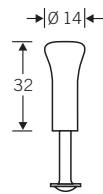
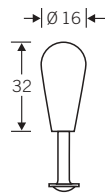
Aluminium natural colour
 anodised

Cabinet knobs



3641

Aluminium natural colour
anodised
Stainless steel

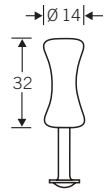


3642

Aluminium natural colour
anodised
Stainless steel

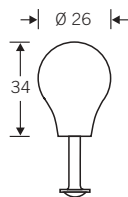
3643

Aluminium natural colour
anodised
Stainless steel



3644

Aluminium natural colour
anodised
Stainless steel



3654

Aluminium natural colour
anodised
Stainless steel

Jasper Morrison has designed a handful of unfussy cabinet knobs for FSB.
All cabinet knobs are supplied with M4 x 30 mm screws.

Handle programme rahe+rahe



When the young architect Walter Gropius was given the opportunity in the convulsive 1920s to build a shoe-last factory at Aalfeld, he commissioned Loevy of Berlin to produce the door handles. This angular machine handle with round grip (FSB 1102) came, along with Wittgenstein's handle (FSB 1147) and the model by the Frenchman Mallet-Stevens (FSB 1076), to epitomise early modernism. The Gropius handle followed in the traces of its creator. It was fitted at the Bauhaus premises at Weimar and later at Dessau. It has wrongly been referred to since as the Bauhaus handle or the handle from Dessau.

A genuine door handle for and from Dessau was produced in the design workshop of the Rahe husband-and-wife business. rahe+rahe designed a handle collection for the new Dessau college campus sited right next to the Bauhaus building and containing seminar rooms, student ateliers, professors' and staff offices, lecture halls, an admin wing, dining hall and cafe, and chose FSB to be their development associates.

Their design follows seamlessly on from the great masterpieces of modernism. A circular handle element that gently arcs back towards the door has had its front surface flattened off in such a way that, front on, the door and handle run parallel, though the back of the handle does retreat a little from the leaf of the door. This elemental, innovative design feature defines the entire collection, an unobtrusive, functional range of handles that offer themselves up for use by the hand.



iF design award
Product Design

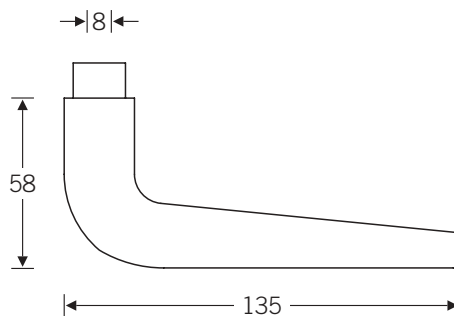
2002

Lever handle



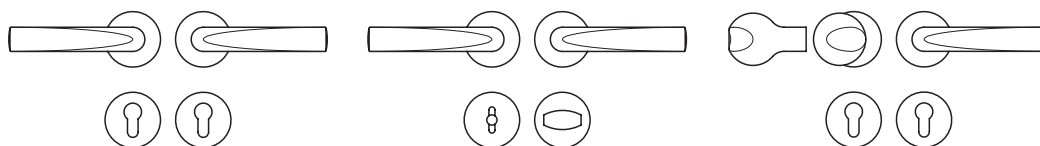
1149

Aluminium natural colour
anodised
AluGrey



Three design constituents go to make up the grace of the rahe+rahe door handle. First, there is the conical, flat styling visible front-on that emerges from the tubular material. This bisects the end face, giving rise there to a striking semi-circle as the second constituent. The third constituent is heftiness deriving from the slight angle of extension of the back of the door handle. It is the harmonious interplay of these three constituents that gives the rounded tube its striking and innovative identity.

Order proposal:



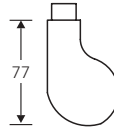
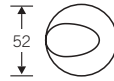
Standard fittings
Project fittings
Fire door fittings
acc. to German DIN

Internal door set
1149 | 1731 | 1735
7249 13
7649 13

Bathroom furniture
1149 | 1731 | 1735 0054
7249 15

Entrance door set
1149 | 1731 | 1735 | 2318 06
7249 12
7649 12

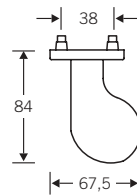
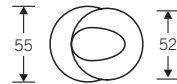
Knob handle
Door knob



0818 □

Aluminium natural colour
anodised
AluGrey

8 mm □-hole

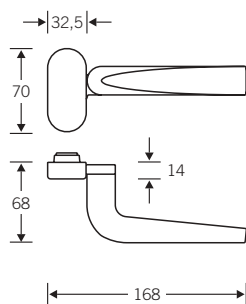


2318 06

Aluminium natural colour
anodised
AluGrey

concealed through fixing
c:c screw holes 38 mm

Lever handles
for framed doors
Window handles

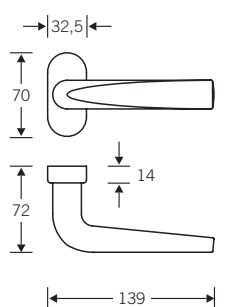


0649 17..

44 r.h. | 45 l.h.
Aluminium natural colour
anodised, AluGrey

0649 18.. **F**

64 r.h. | 65 l.h.
Aluminium natural colour
anodised, AluGrey

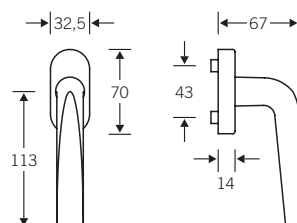


7249 25

Aluminium natural colour
anodised
AluGrey

7649 25 **F**

Aluminium natural colour
anodised
AluGrey



3448

Aluminium natural colour
anodised
AluGrey

Window handles mit Rastung
Nocken-Ø 10 mm
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Technical information page 114

Although the styling for door and window handle is essentially the same, the window model makes a completely different visual impact. Its flattened front surface clearly mirrors the glass plane of the window.

Handle programme Dieter Rams



At the now legendary FSB Door Handle Workshop in the mid-1980s, Germany's best-known designer Dieter Rams presented the media and FSB with a whole raft of design ideas incorporating the experience he had gained over many years as an industrial designer.

Each of his proposals was formally compelling, technically innovative, amenable to combinations of materials and gracious in an utterly new way.

The FSB 1138 handle collection became a design classic in the decade that followed and now adorns not only office and industrial buildings but also any number of private houses and design collections.



Design Zentrum Essen

**Staatspreis des Landes
Nordrhein-Westfalen**

Design Innovationen

1989



Industrie
Forum
Design
Hannover

**Auszeichnung für
excellente Designlösungen**

Die 10 Besten des Jahres

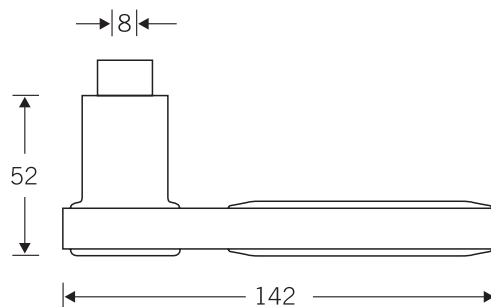
1990

Lever handle



1138

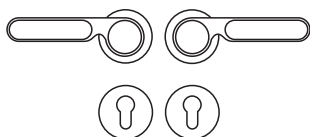
AluGrey
Thermoplastics black



In his design work, Dieter Rams tends to prioritise simplicity, lightness, and the close-at-hand. FSB 1138 is a classic embodiment of his belief that form follows function.

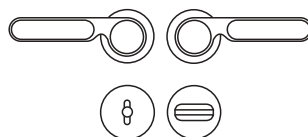
FSB 1138 is endowed with a sturdy round aluminium neck that is effectively the lynchpin of the piece. The black grip section in thermoplastics features a clearly discernible index finger recess. The lateral heftiness of the grip components provides plenty to grasp hold of. All in all, this design meets the Good Grip criteria in exemplary fashion.

Order proposal:

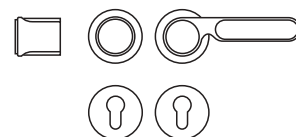


Internal door set
1138 | 1740 | 1741
7638 13

Standard fittings
Fire door fittings
acc. to German DIN standard

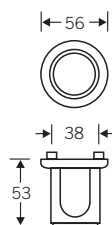


Bathroom furniture
1138 | 1740 | 1741 0054



Entrance door set
1138 | 1740 | 1741 | 2376 06
7638 44 r.h.
7638 54 l.h.

Door knob
Window handle



2376 06

AluGrey
Thermoplastics black

concealed through fixing
c:c screw holes 38 mm

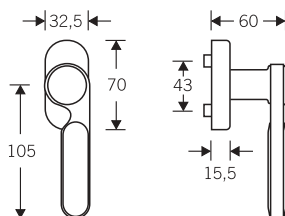


0838

Knob handle
AluGrey
Thermoplastics black



8 mm □-hole



3438

48 r.h. | 58 l.h.
AluGrey
Thermoplastics black

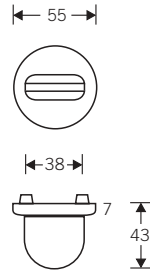
Window handles mit Rastung
Nocken-Ø 10 mm
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



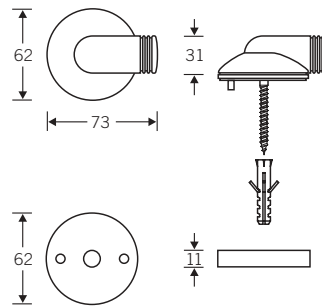
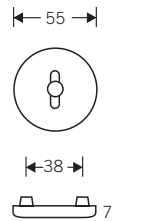
Illustration r.h.

Technical information page 114

Roses WC
Door stop



1741 0054
AluGrey
Thermoplastics black



3891 00
AluGrey
Thermoplastics black

3891 10
Unterplatte schwarz

Handle programme Thomas Sandell



No one is likely to be surprised when we reveal that FSB's trip to Sweden in search of a top-notch designer, part of its European design strategy, coincided with the midsummer night festival. The architect Thomas Sandell had been recommended to us. He let us know that before the midsummer night festival he would be out walking in the mountains with his family and after the midsummer night festival he would be out sailing with his family in the skerries, but that he saw a window of opportunity for FSB in the 24 hours in between. He suggested we meet in Stockholm.

Thomas Sandell is a very well-known architect and designer in his home country. For us southern Europeans (from a Swedish perspective), he is one of the great unsung designers of unsung mass-produced goods, from candle holders to chairs, stocked by a not so unsung furniture retailer. Just the person, then, for a maker of common-or-garden products from the Weser Hills to be getting in touch with.

We were admittedly a bit perplexed when, at our meeting on a fine midsummer's day in Stockholm, he whipped out a shoe box whose contents – stones, bones and bits of all sorts of roots that he had picked up during his mountain walk – he proceeded to tip out onto the table in front of us. "That's how plain and simple my door handle ought to look," was his plain and simple explanation.

We must have looked somewhat aghast. But Thomas Sandell quickly managed to put us at our ease again. In addition to the bits and bobs he had brought, he also handed us some sketches and sent us to Stockholm's Arts & Crafts Museum, where some of his masterpieces were currently on display. Oh yes, and he also asked us to turn one or two of his sketches into handles.

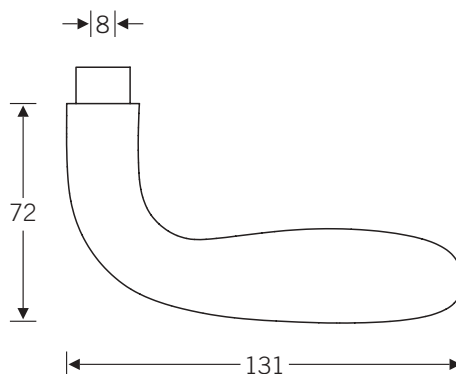
The upshot was a design devoid of theoretical trappings whose plainness simply asks to be taken hold of. Typically Nordic? Without a doubt. It's the plain simplicity of Nordic design, after all, that has been thrilling us over and over again for decades.

Lever handle



1195

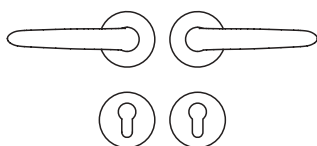
Aluminium natural colour
anodised



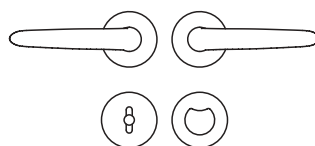
The 'clenched fist' designs by Thomas Sandell derive from Mother Nature and give us a very clear idea of how she operates. Their natural forms appear to have been burnished by the action of sun, wind and rain. His lever handles, window handles and doorknobs blend in with our domestic environment without further ado. They are not supposed to stand out, they simply do what's expected of them. Perhaps this is the true secret of Scandinavian design.

Mr Sandell's designs eschew intellectual trappings. The only way they are supposed to enrich our 'home and castle' is by dint of their unobtrusive usefulness. What a good thing there is such a variety of approaches to design.

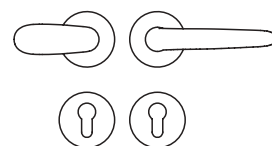
Order proposal:



Internal door set
1195 | 1707 | 1708
7295 63
7695 63



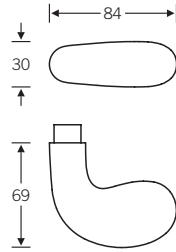
Bathroom furniture
1195 | 1707 | 1708 7554
7295 6554



Entrance door set
1195 | 1707 | 1708 | 2395 06
7295 66
7695 66

Standard fittings
Project fittings
Fire door fittings
acc. to German DIN

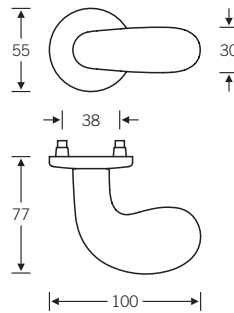
Knob handle
Door knob



0895

Aluminium natural colour
anodised

8 mm □-hole

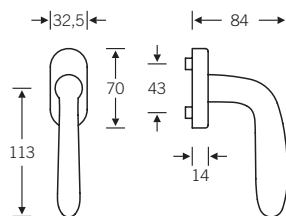


2395 06

Aluminium natural colour
anodised

concealed through fixing
c:c screw holes 38 mm

Window handle
Lever handles for framed doors



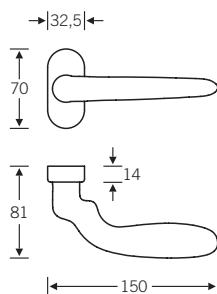
3795

Aluminium natural colour
anodised

Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



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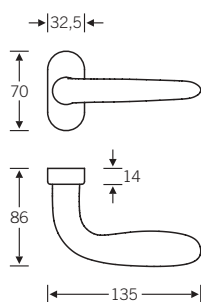


0695 21..

44 r.h. | 45 l.h.
Aluminium natural colour
anodised

0695 22.. **F**

64 r.h. | 65 l.h.
Aluminium natural colour
anodised



7295 25..

54 r.h. | 55 l.h.
Aluminium natural colour
anodised

7695 25.. **F**

64 r.h. | 65 l.h.
Aluminium natural colour
anodised

Handle programme Philippe Starck



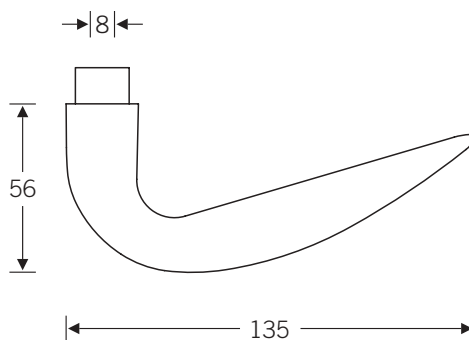
Philippe Starck, the mega-star of the 1990s, has never contented himself with simply submitting plans for interior designs. From the outset he has also created furniture for them. A typical example is the famous chair for Café Costes, which has since outlived the site of its deployment. Fascinating industrial products followed: office articles, bottles, cutlery, luggage, knives, household gadgets, vases, carpets, toothbrushes. FSB was very keen indeed on asking this uncommonly productive and also extraordinarily multifaceted designer to try his hand at something as commonplace as a door handle. Philippe Starck did just that and gifted us some of his gritty French charm.

Lever handle



1111

Aluminium natural colour
anodised



Originally, back in the early 1990s, Philippe Starck actually designed two handle collections for FSB, the PS1 and PS2 series.

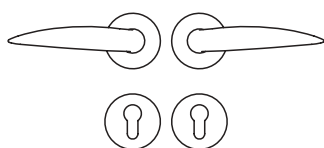
Whereas the PS1 series has since become a 'classic' under the label of FSB 1191, in the end we didn't have the courage to market the PS2 series, despite having set everything up for series production. What got into us?

The second lever-handle series comprised an aluminium core with a sprayed-on coating of transparent, coloured plastic. With the proceedings very far advanced, but thankfully not too far, we began thinking about how this composite material was to be recycled. The outcome

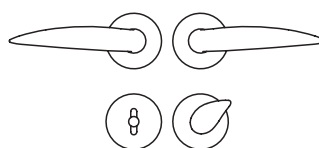
was an out-and-out victory for the environment.

The idea was shelved until 2002, when we decided the time had come to ask its originator to rework it – omitting the plastic this time. The upshot is a door handle of a very unusual kind. But then, that's what one expects of Philippe Starck.

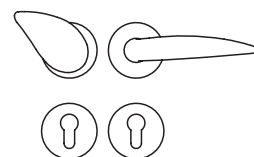
Order proposal:



Internal door set	
Lever handle	1111
Rose	1707
Escutcheon	1708

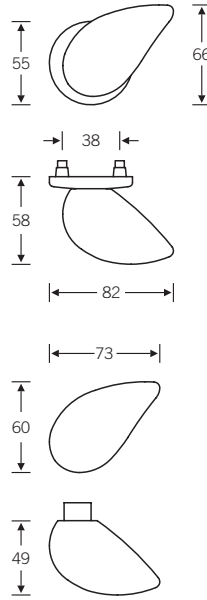


Bathroom furniture	
Lever handle	1111
Rose	1707
WC set r.h.	1708 4354
l.h.	1708 5354



Entrance door set	
Lever-female part	1111
Rose	1707
Escutcheon	1708
Door knob r.h.	2339 0406
l.h.	2339 0506

Door knob
Roses WC



2339 ..06

04 r.h. | 05 l.h.
Aluminium natural colour
anodised

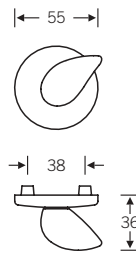
Illustration r.h.

0839 ..

04 r.h. | 05 l.h.
Aluminium natural colour
anodised

8 mm □-hole

Illustration r.h.



1708 ..54

43 r.h. | 53 l.h.
Aluminium natural colour
anodised

Illustration r.h.

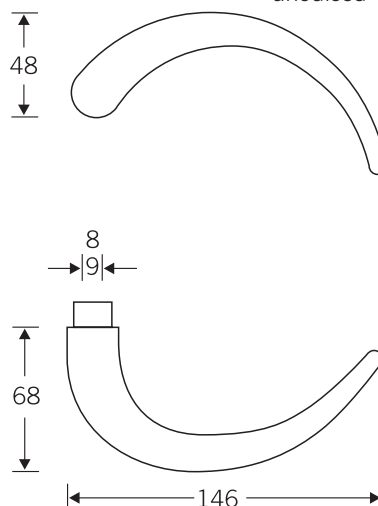


Lever handle



1191

Aluminium natural colour
anodised

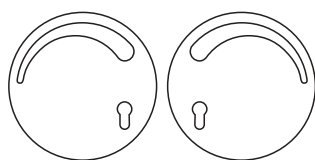


Looking at this lever design divorced from its backplate, it might be suggested that Philippe Starck was out to endow us with horns. Strangely enough, though, when these horns are fastened to the backplate they turn into door handles as functional as any you could wish for:

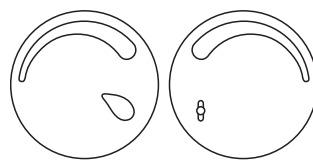
The lever can be grasped at varying heights. Thumb, forefinger and palm nestle securely. The handle fills the hand when gripped; there is sufficient volume available.

With this door furniture, FSB offers an alternative to the symmetrical design philosophy based on circles, triangles and rectangles. And the set as a whole provides a visual contrast to the rectangular door without seeking to rise above its station. Matt silver backplate, polished lever. Both in high-quality aluminium.

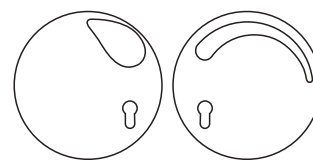
Order proposal:



Internal door set
1191 | 1491



Bathroom furniture
1191 | 1491 4354 r.h.
1191 | 1491 5354 l.h.

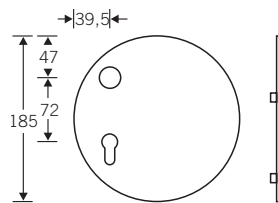


Entrance door set
1191 | 1491 | 1991 43 r.h.
1191 | 1491 | 1991 53 l.h.
7691 17 r.h.
7691 20 l.h.

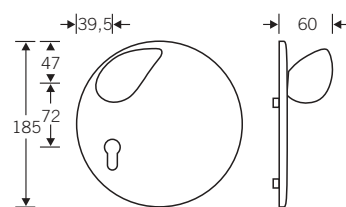
Standard fittings

Fire door fittings
acc. to German DIN standard

Backplate
Knob backplate



1491
Aluminium natural colour
anodised
Distance 72 mm



1991 ..
43 r.h. | 53 l.h.
Aluminium natural colour
anodised
Distance 72 mm
Illustration r.h.

In the case of the door knob, Philippe Starck reverted to the drop motif, a design concept of which he has made frequent and varied use. But his drop-shaped door knob does not descend earthwards but instead, in line with its function, gently curves upwards

in unison with the backplate. It rests snugly in the hand and matches the handle design.

Keyholes

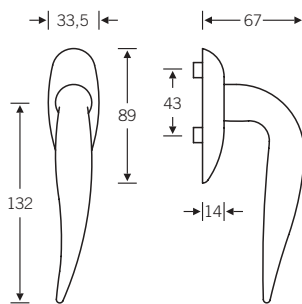


BB CH PZ OZ

Window handle Cabinet knob



Philippe Starck was taken aback at first when we pointed out to him during our working discussions that individual doors are almost invariably accompanied by a plethora of windows and that, hence, designing a window handle to match that on the door was imperative if only to avoid clashes of style. He applied himself to this as to any other task. With rapid, masterful strokes, he drafted a window handle and, while he was at it, a matching rose on a sweeping Gothic S-shape.



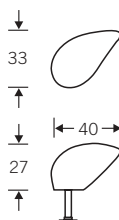
3439

Aluminium natural colour anodised

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



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3632 ..

04 r.h. | 05 l.h.
Aluminium natural colour anodised
Stainless steel

Illustration r.h.

Screws M4 x 30 mm

The cabinet knob draws on the design of the doorknob. It could well become a 'cult object', being the smallest Philippe Starck ever. The marketplace is now veritably awash with plagiarised versions. Don't be taken in!

Handle programme Hartmut Weise



In the spring of 2000, we gave our in-house designer Hartmut Weise a clear brief: 'Please design us some treats for Hand and Eye or else tools for the Hand and treats for the Eye. Both in stainless steel.'. Hartmut Weise promptly set about punching, stamping, lasing, cutting and jointing. Very much in the spirit of the 'new flatness', he fashioned a series of designs with one thing in common - the inherent formal momentum of parts punched out of flat metal and then jointed together.

The lever handles were soon joined by designs for door knobs plus handles and fasteners for windows. A novel backplate was also conceived. All items were supplied in a satin finish as standard, and optionally in a mirror polish variant.

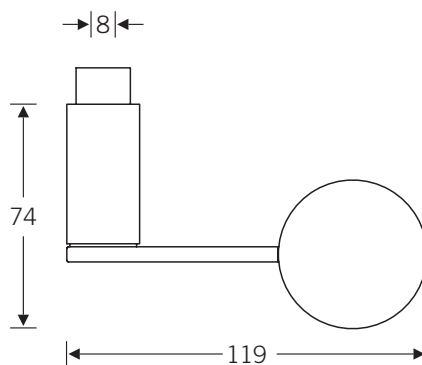
Following his globally successful debut with the ecologically focused 'FSB light' handle series in aluminium, Hartmut Weise has thus again made his mark in the design world. Incidentally, the initial 'FSB light' series has been so successful that we have propelled it from the Name Design section to the main body of the Manual, where attention is directed less towards the name of the author than towards the degree of long-term market take-up.

Eye + hand
Lever handle



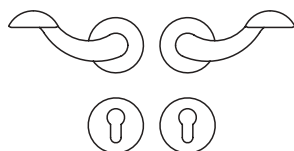
1192

Satin stainless steel
Mirror polished stainless steel

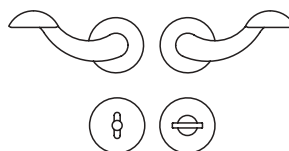


With his first two design efforts in stainless steel, Hartmut Weise adopts and adapts a formal vocabulary for the things we use day in, day out, that has been passed down by several generations. Despite the flatness of the material used, bulkiness and gripping volume are provided for the Hand, whilst curvaceous lightness flatters the Eye – something particularly dear to the designer's heart. We dubbed this the 'Eye + Hand' series as a result.

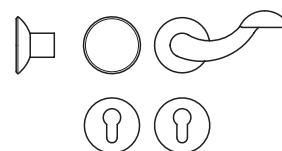
Order proposal:



Internal door set	
Lever handle	1192
Rose	1707
Escutcheon	1708



Bathroom furniture	
Lever handle	1192
Rose	1707
WC set	1708 7754

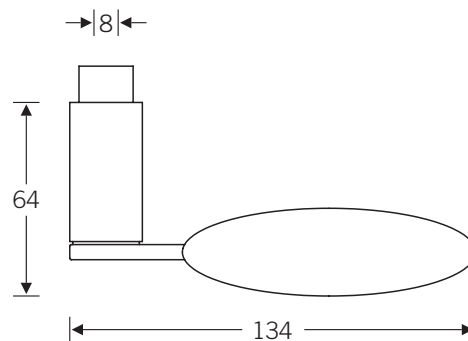


Entrance door set	
Lever-female part	1192
Rose	1707
Escutcheon	1708
Door knob	2392 06

Eye + hand
Lever handle

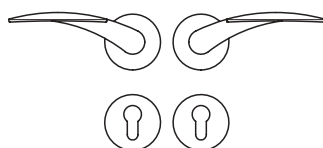
1194

Satin stainless steel
Mirror polished stainless steel

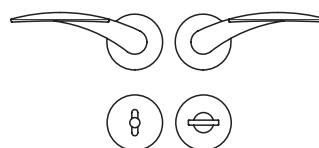


Whereas FSB 1192 constitutes a modern re-design of the famous post-horn lever handle, FSB 1194 takes up the equally famous duck's bill motif in a new guise. Together with Mario Botta, Hartmut Weise is of the view that every generation should be allowed to re-interpret tradition with its own vocabulary and materials. Only in this way can there be progress.

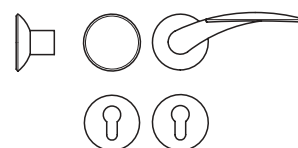
Order proposal:



Internal door set
Lever handle 1194
Rose 1707
Escutcheon 1708

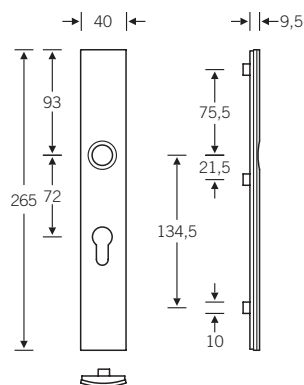


Bathroom furniture
Lever handle 1194
Rose 1707
WC set 1708 7754



Entrance door set
Lever-female part 1194
Rose 1707
Escutcheon 1708
Door knob 2392 06

Eye + hand
Backplate



1432

Satin stainless steel
Mirror polished stainless steel

Distance 72 + 92 mm

All design efforts at FSB are rooted in the Renaissance concept of 'disegno'. It follows, therefore, that every FSB product is called upon to mirror the company's 120-year-old design tradition. Hartmut Weise is likewise bound by this duty, which as well as covering principal products also extends to accessories. It is now several years since he came up with curved roses that found great favour in the marketplace as an alternative to the angular styling of the flat roses. Now, he has added a curved backplate in stainless steel that appears to hover on its plastic base. This innovative design departure again embodies the 'new flatness'. Airy visuals virtually cancel out the materiality of the stainless steel.

Keyholes



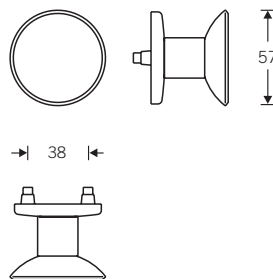
BB PZ

Bathroom/WC version



S WC R

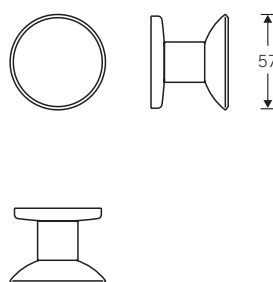
Eye + hand
 Door knob
 Window handle



2392 06

Satin stainless steel
 Mirror polished stainless steel

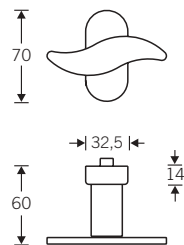
concealed through fixing
 c:c screw holes 38 mm



2392 05

Satin stainless steel
 Mirror polished stainless steel

concealed face fixing



3793

Satin stainless steel
 Mirror polished stainless steel

Window handle with
 click-stop mechanism
 lugs with 10 mm Ø
 c:c mounting holes 43 mm
 7 mm □
 spindle projecting 30 mm

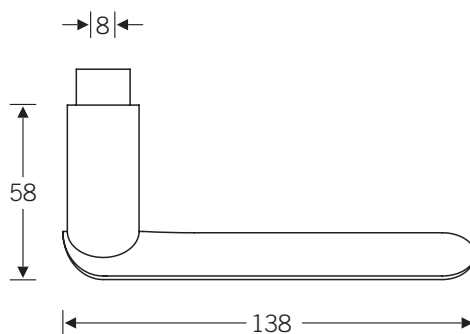


Hand + Eye
Lever handle



1196

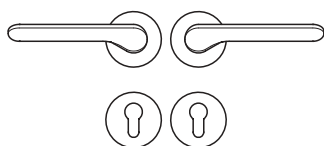
Satin stainless steel
Mirror polished stainless steel



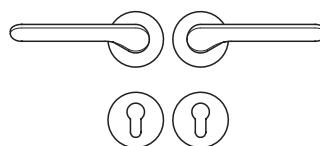
Departing from punching, stamping and jointing, Hartmut Weise resorted, in design tests for a second range of hardware, to the latest options afforded by laser technology. As his starting point he selected proprietary tube rounds in stainless steel. Using the laser, he cut sections out of these rounds to produce hollow shapes that are a treat to Hand and Eye alike. Since the emphasis is on the Hand in this range, we are calling it 'Hand + Eye'.

FSB 1196 tidily lets the laser beam run either inline or along precisely defined curves in compliance with the rules of classical modernism, with the result that the hefty tubular section nestles snugly in the hand and even suggests a certain symmetry to the eye.

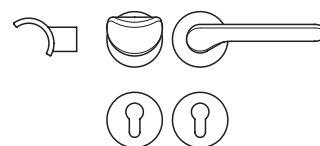
Order proposal:



Internal door set	
Lever handle	1196
Rose	1707
Escutcheon	1708



Bathroom furniture	
Lever handle	1196
Rose	1707
WC set	1708 7754

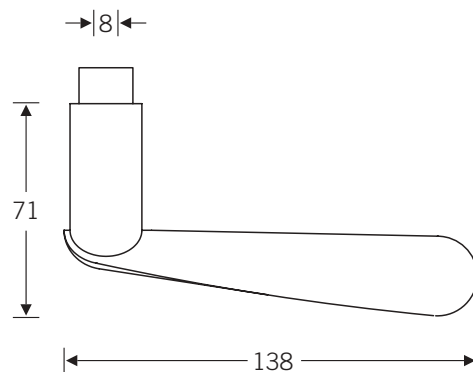


Entrance door set	
Lever-female part	1196
Rose	1707
Escutcheon	1708
Door knob	2396 06

Hand + Eye
Lever handle

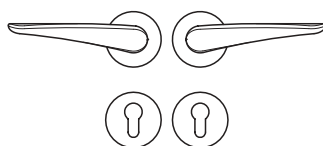
1197

Satin stainless steel
Mirror polished stainless steel

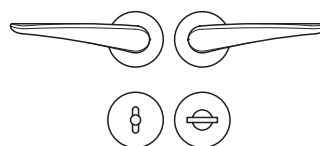


FSB 1197 makes quite different demands of the laser beam. The profile is cut out of the tube in a dynamic turning motion. The styling points the way. This handle does not in the first instance seek to be ogled but rather to be operated by the hand.

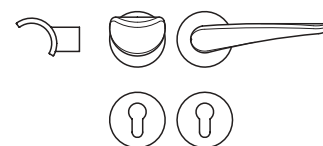
Order proposal:



Internal door set
Lever handle 1197
Rose 1707
Escutcheon 1708



Bathroom furniture
Lever handle 1197
Rose 1707
WC set 1708 7754



Entrance door set
Lever-female part 1197
Rose 1707
Escutcheon 1708
Door knob 2396 06

Hand + Eye
 Door knob
 Window handle



2396 06

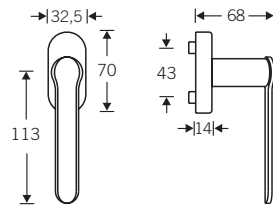
Satin stainless steel
 Mirror polished stainless steel

concealed through fixing
 c:c screw holes 38 mm

2396 05

Satin stainless steel
 Mirror polished stainless steel

concealed facefixing



3796

Satin stainless steel
 Mirror polished stainless steel

Window handle with
 click-stop mechanism
 lugs with 10 mm Ø
 c:c mounting holes 43 mm
 7 mm □
 spindle projecting 30 mm



Technical information page 114

Hartmut Weise was likewise intent on adding a distinctive touch to accessories for the 'Hand + Eye' range. His door knob and window handle represent the world of hardware in a youthfully effervescent manner.

Entrance doors



Pull handles

4a

Explanations	384
Overview	386
Pull handles Oval series	388
Pull handles Round series	412
Fixing methods	451

Materials, Fixing Options, Safety Clearance

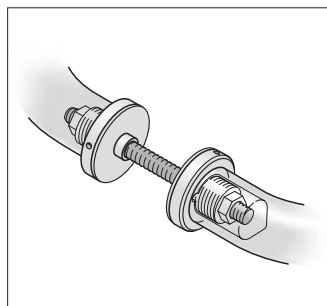
Over the past decade, FSB has added a fully-fledged alternative to its traditional tubular pull-handle range with a comprehensive collection of oval designs. Both sets of designs can be fixed in a wide variety of ways. The traditional range of push/pull pad handles and profiles with brackets has also been further developed.

Materials

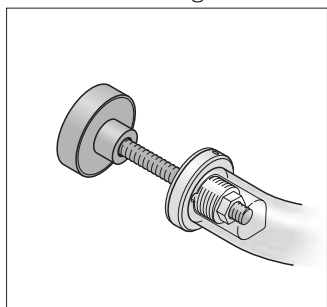
In principle, FSB supplies its entire pull-handle range in either aluminium, stainless steel or brass, with stainless steel being particularly recommended for heavy-duty applications. Aluminium surfaces can easily get blemished in such circumstances, though this 'ageing process' in no way impairs the functioning of the handle. Owing to their tendency to corrode, brass pulls are only offered with a waxed finish. It takes several years before a natural brown protective patina forms on brass handles.

Fixing Scenarios

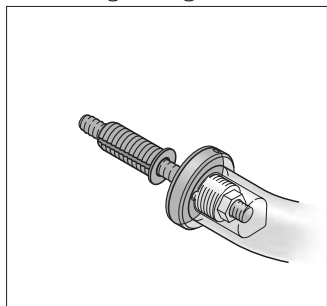
Pulls can be either face or through fixed to doors made of the most diverse of materials. In the case of through-fixing, either a pair of pulls or a single handle can be fitted. FSB has accorded these three fixing options - both-sides through fixing, one-side through fixing - clear identifying symbols that can be found on all relevant product pages. (Examples show fixing for tubular pulls).



back to back fixing



bolt through fixing

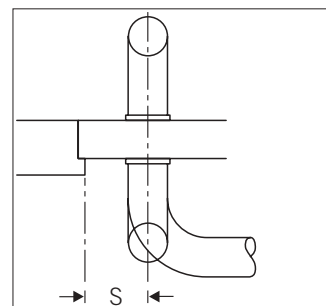


secret single side fixing with expansion plug

As regards the issue of face fixing versus one-side through-fixing, FSB wishes to point out that, on account of the dowel-fastening technique deployed by FSB, face fixing is both aesthetically pleasing and sufficiently durable as a rule. This needs to be qualified, however, in the case of heavy-duty applications, (i.e. in schools, office blocks and other public institutions): here, we emphatically recommend one-side through-fixing, which ensures that the furniture remains fit for use even after years of heavy treatment, since the forces involved are absorbed on both sides of the door.

Safety Clearance (S)

When fitting a handle to the closing face of a door, a safety clearance needs to be allowed for between the handle and the edge of the door and the jamb. The assembly scenario is made more readily comprehensible by the following sketch. Ideally, safety clearances as recommended by FSB should be adhered to. Nevertheless, conditions at the point of assembly are crucial. It is particularly advisable to make use of the shackle-type bracket purpose-designed by FSB for especially narrow stiles, which sets the handle sufficiently far away from the edge.



Pull handles Oval series

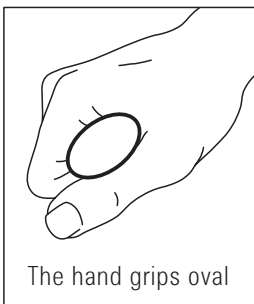
We kick this section off with a range of oval designs FSB has developed over the past decade as an alternative to traditional pulls of circular cross-section. Adopting the formula 'diagonal + oval = ideal gripping' identified by FSB reduces the amount of effort required to take hold of and operate the handles on entrance doors.

The oval styling offers the market a new gripping quality for eye and hand which FSB has had copyright protected. The experience FSB has amassed now allows it to supply almost all its traditional styles both as circular pulls and as optimised-grip oval variants.

A new flattened oval pull series airily and elegantly underpins architectural solutions.

The proven HT modular system for express assembly is likewise now available in oval. Up to a length of 1,500 mm, this kit of brackets and tubes can be put together on site to produce a technically sound and very good looking piece of hardware with little fuss. Where lengths in excess of 1,500 mm are envisaged, FSB recommends factory-welded fittings for reasons of structural strength.

A rich source of new design variants is the HS modular system with oval or circular stainless steel grips and grey anodised brackets in aluminium, each with a choice of two handle cross-sections.



Pull handles Round series

The proven FSB range of tubular pulls has profited from the burst of innovation in the sphere of oval designs. New shapes and brackets have been added.

This is particularly true of the lightweight pull series in 20 mm tubular material, for which a new design-conscious bracket fixture has been developed that FSB has likewise had utility and design patented. Hence, this lightweight pull-handle series in its familiar 'straight, rectangular, triangular and crescent' styles can continue its victorious campaign against the traditional 'heavyweights'.

Other handle systems



The HT Round and HT Oval kits launched by FSB and enthusiastically received by the market have precursors that are still going strong:

R+S

Back when the first grey Manual was published in the early 90s, we introduced a system of tubes and brackets for speedy erection on building sites that was well taken up and has thus been retained:






































- aluminium brackets
- tubes in either aluminium or stainless steel

TGS

Towards the end of the 90s, the 4th edition of our grey Manual featured a rapid-assembly range in stainless steel that was likewise well received:

- either circular with a 25 mm diameter or of 25 mm square cross-section
- accessory brackets for visible fixing
- offer of dispatch within 24 hours of order. We've always been up to the challenge so far.

Overview

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- Aluminium
- Stainless steel
- Brass
- Alu + colour
- New products 04105



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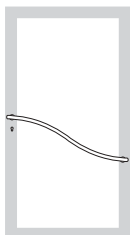
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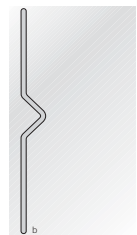
Page 446



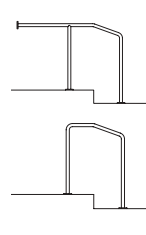
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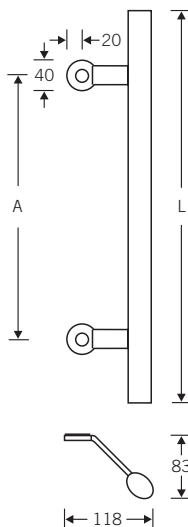


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Pull handles
Oval series

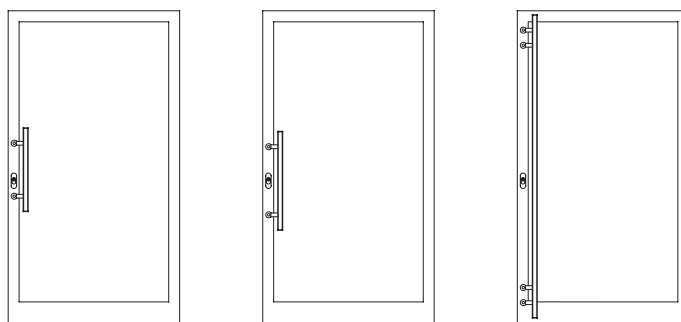


6616

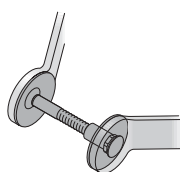
Stainless steel

In door pull series FSB 6616 (Ø 40 x 28 mm), fixing is by means of laterally offset strap-type brackets. The fastening and gripping sides are separated from one another and hence protect hands. The innovative combination of fixing strap and pull lends the design an airy, vivacious appearance.

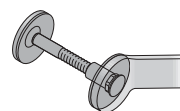
Item nos.	Ø	A	L
6616 35	40 x 28	350	550
6616 45	40 x 28	450	650
6616 99	40 x 28	451-2100	



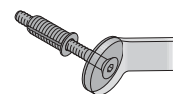
For detailed information on fixing, please turn to page 458.



back to back fixing

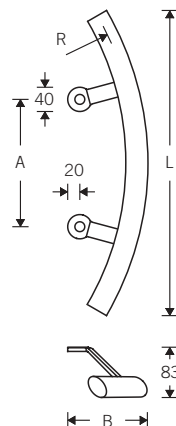


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Oval series

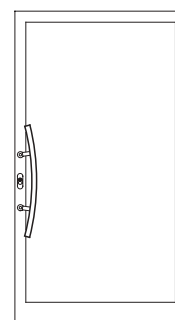
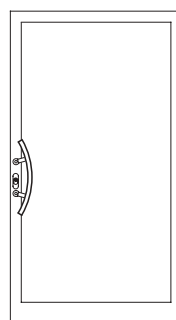


6675

Stainless steel

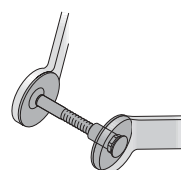
Door pull FSB 6675 takes the offset strap-type brackets from the FSB 6616 series and fuses these with the sweep of the crescent-shaped oval pull (Ø 40 x 28 mm). This pull series is only supplied with A Dimensions of 210 mm and 350 mm.

Item nos.	Ø	R	A	B	L
6675 21	40 x 28	485	210	130	504
6675 35	40 x 28	1420	350	130	745

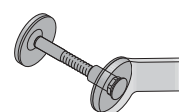


4
a

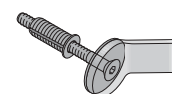
For detailed information on fixing, please turn to page 458.



back to back fixing

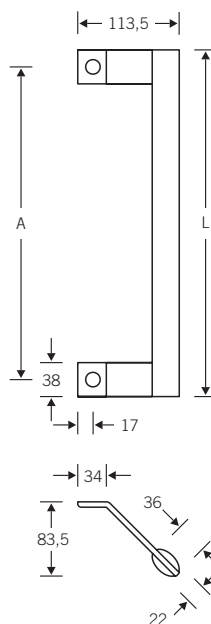


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Oval series



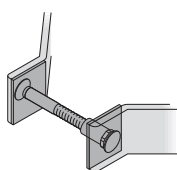
6525

Aluminium

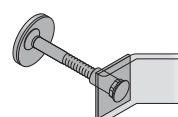
Oval pulls with safe-to-grip strap-type brackets have only hitherto been available in stainless steel. This gap in the range is being closed with publication of the 02103 Manual by means of a design-conscious model in which aluminium oval pulls with A Dimensions of 350 and 450 mm are joined to their fixing straps to great visual effect.

Item nos.	Ø	A	L
6525 35	36 x 22	350	388
6525 45	36 x 22	450	488

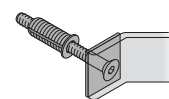
For detailed information on fixing, please turn to page 458.



back to back fixing

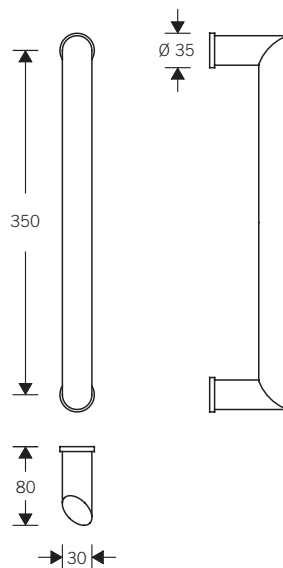


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Oval series



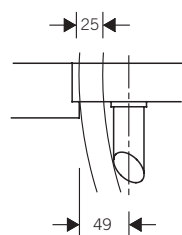
6650

Stainless steel

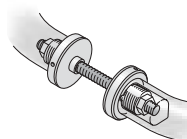
Fixing M8

FSB could not resist squeezing all the experience gained in fashioning the 40 x 28 mm oval tube into a smaller diameter. And thus it was that the standard in-line pull FSB 6650 came into being. It features a skewed oval grip 36.5 by 22 mm in diameter affixed to circular brackets. If so desired, FSB 6650 can also be supplied in other lengths.

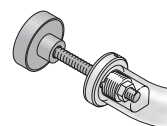
Item nos.	Ø	A	S
6650 38	36 x 22	350	49
6650 99	36 x 22	351-2100	49



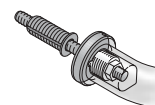
For detailed information on fixing, please turn to page 456.



back to back fixing

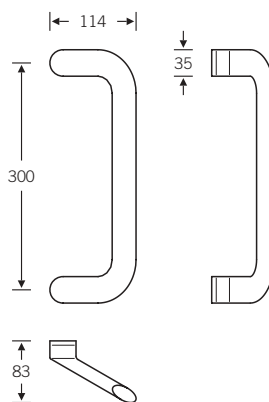


bolt through-fixing

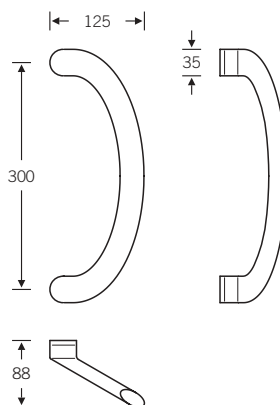


secret single side fixing with expansion plug

Pull handles
Oval series



6533
Aluminium
Stainless steel



6534
Aluminium
Stainless steel

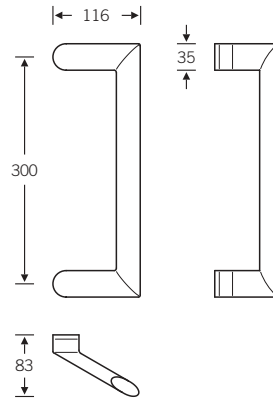
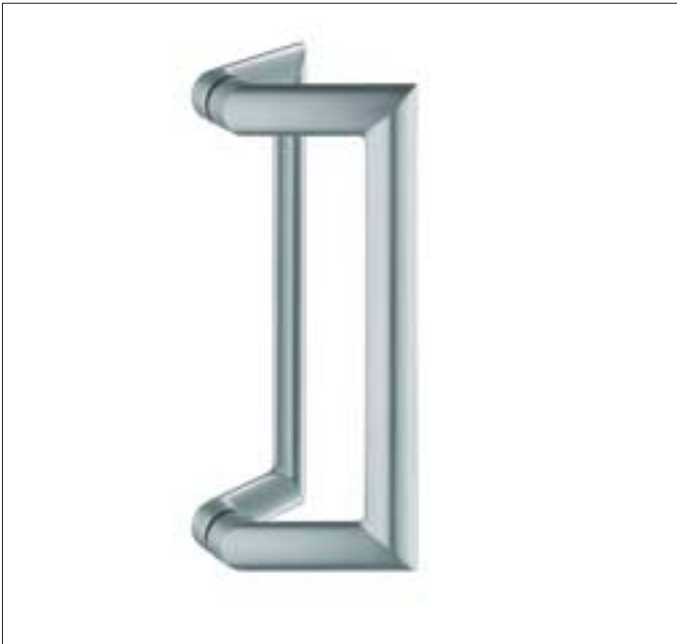
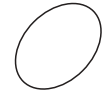
4
a

The new flattened oval pull handle series 6533, 6534, 6535 and 6536 see FSB's philosophy of the ovally gripping hand and the diagonal moving arm put to effect in telling manner.

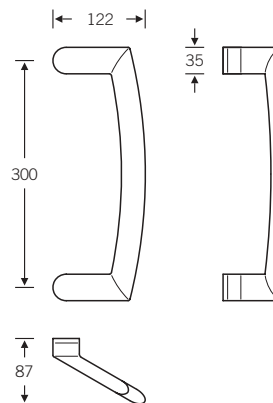
The circular fastening section has been shortened and the grip tilted towards the user by dint of a flattened oval cross-section. The hand therefore enjoys optimum clearance whilst, stylistically, these airy, elegant handles display a decidedly architectural dimension.

Guaranteeing FSB's usual production excellence are the traditional casting technique for aluminium and an innovative internal high-pressure metal forming process for the stainless steel variant.

Pull handles
Oval series

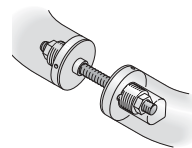


6535
Aluminium
Stainless steel

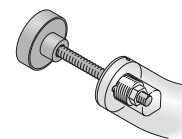


6536
Aluminium
Stainless steel

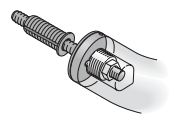
For detailed information on fixing, please turn to page 456.



back to back fixing

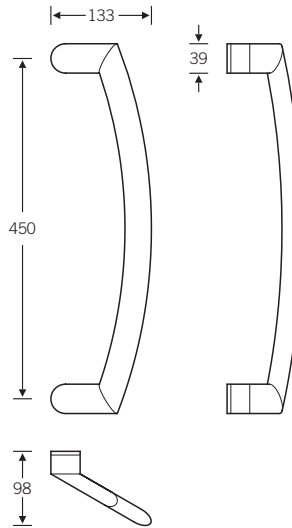


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Oval series



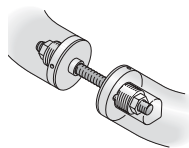
6537

Stainless steel

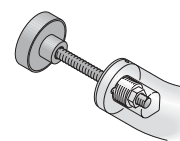
Door pulls 6537 and 6538 are visually related to the 300 mm range of pulls (Page 392 – 393). Their 450 mm length allows them to be effortlessly integrated into the closing area, though for technical reasons they are only available in stainless steel.

4
a

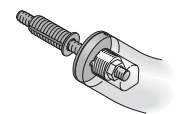
For detailed information on fixing, please turn to page 456.



back to back fixing

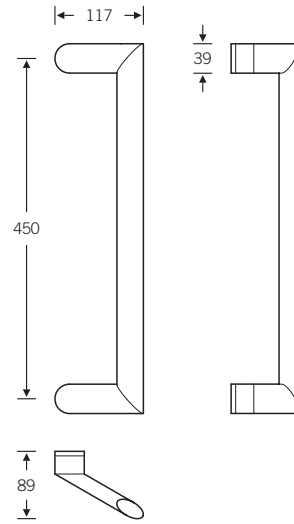


bolt through-fixing



secret single side fixing with expansion plug

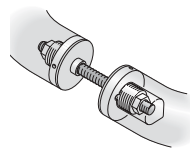
Pull handles
Oval series



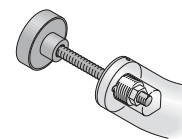
6538
Stainless steel

4
a

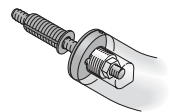
For detailed information on fixing, please turn to page 456.



back to back fixing

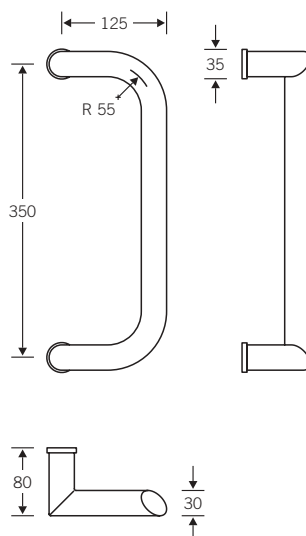


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Oval series



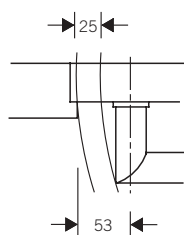
6682

Stainless steel

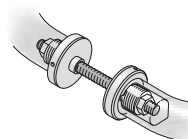
M8 fixing

For the 02/03 edition of its Manual, FSB has extended its FSB 6650 series introduced two years ago to embrace U-shaped, circular and triangular variants. In all four cases, the easy-grip oval tube with a diameter of 36 x 22 mm is supported on round fixing brackets.

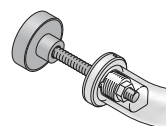
Item nos.	Ø	A	S
6682 38	36 x 22	350	53



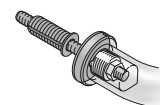
For detailed information on fixing, please turn to page 456.



back to back fixing

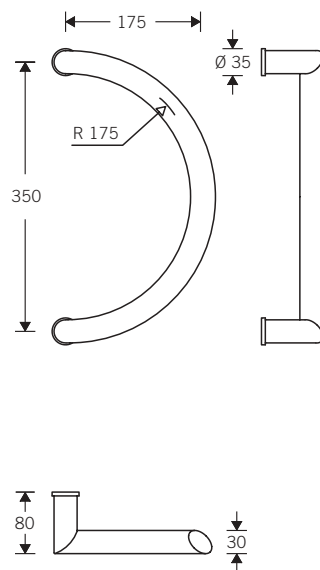


bolt through-fixing



secret single side fixing with expansion plug

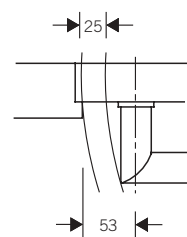
Pull handles
Oval series



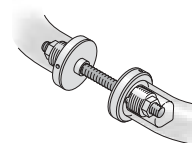
6652
Stainless steel
M8 fixing

Handle models FSB 6650 (in-line), FSB 6682 (U-shape), FSB 6652 (semicircular) and FSB 6685 (triangular) are living proof that tested designs featuring new oval cross-sections have the edge over their round counterparts both optically and in terms of gripping ergonomics. The hand glides effortlessly around them.

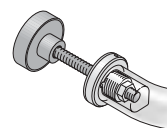
Item nos.	Ø	A	S
6652 38	36 x 22	350	53



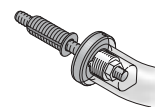
For detailed information on fixing, please turn to page 456.



back to back fixing

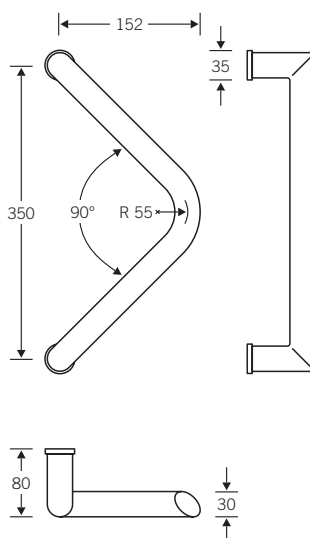


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Oval series



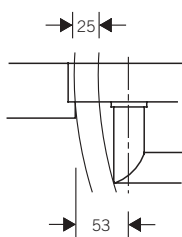
6685

Stainless steel

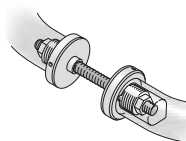
M8 fixing

The triangular tubular pull launched by FSB 15 years ago became a top-seller, echoing as it does the diagonal trussing so commonly to be found on front doors. The new oval-section pull handle 6685 adds ergonomically enhanced gripping qualities to what are already very fine visuals.

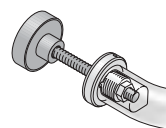
Item nos.	Ø	A	S
6685 38	36 x 22	350	53



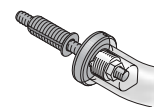
For detailed information on fixing, please turn to page 456.



back to back fixing

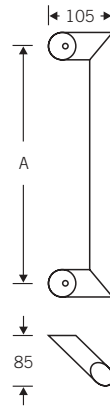


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Oval series

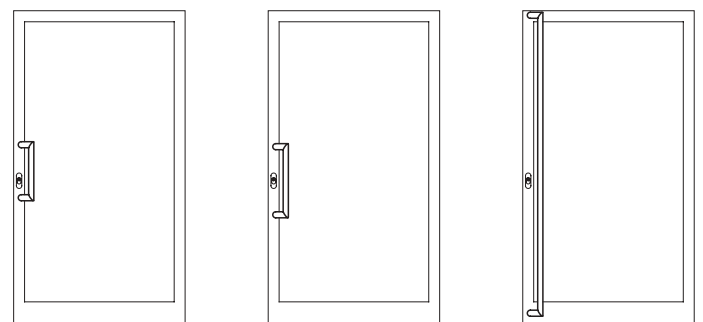
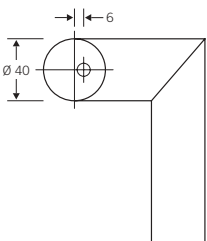


6635

Stainless steel

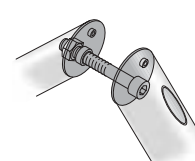
Door pull design FSB 6635 was the first member of the oval family. A hefty oval tube ($\varnothing 40 \times 28$ mm) was required to be ergonomically designed to ensure hands could grip safely and purposefully. This objective was achieved by welding handle and brackets together in a mitre-joint. The upshot was a design in stark contrast to the gentle curves of its tubular counterparts. The market was immediately receptive.

Item nos.	\varnothing	A
6635 38	40 x 28	350
6635 45	40 x 28	450
6635 99	40 x 28	451–2100

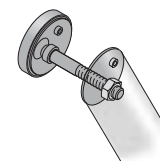


When locating the fixing points, especially on narrow stiles of frame doors, please regard the off-centre location of the threaded holes from the centre of the contact plane of the handle. The measurement's difference is in case of FSB 6635 exactly 6 mm.

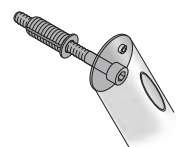
For detailed information on fixing, please turn to page 455.



back to back fixing

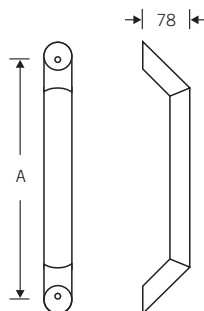


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Oval series



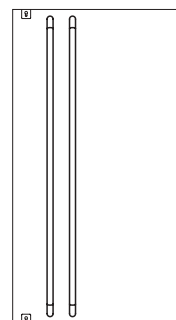
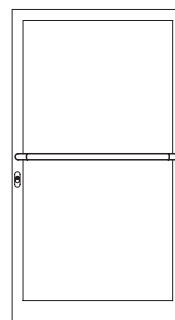
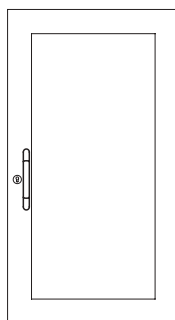
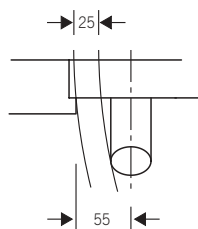
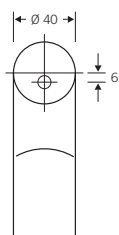
6637

Stainless steel

Door pull series FSB 6637 dispenses with the raking of the oval tube (Ø 40 x 28 mm). The pull is aligned with the door front-on whatever its A dimension. Being an in-line pull, attention must always be paid to ensuring sufficient safety clearance from the edge. Extended over the entire door, these pulls add structure to the door panel whilst also protecting it.

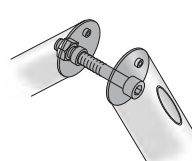
Item nos.	Ø	A	S
6637 38	40 x 28	350	55
6637 45	40 x 28	450	55
6637 99	40 x 28	451–2100	55

4
a

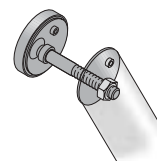


When locating the fixing points, especially on narrow stiles of frame doors, please regard the off-centre location of the threaded holes from the centre of the contact plane of the handle. The measurement's difference is in case of FSB 6637 exactly 6 mm.

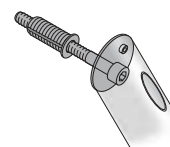
For detailed information on fixing, please turn to page 455.



back to back fixing

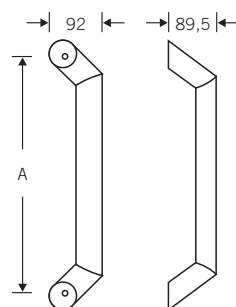


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Oval series

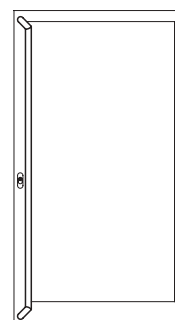
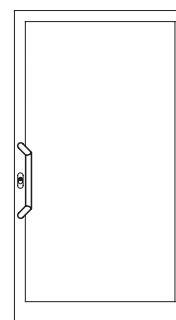
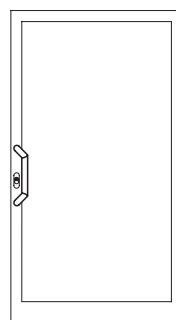
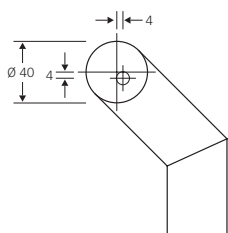


6636

Stainless steel

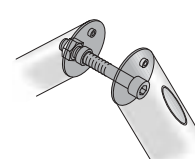
Door pull design FSB 6636 is a variation on the now classic first design FSB 6635. The visual severity of the first model is softened by having the brackets slope towards the grip. The angle between the two is 135°. The new design qualities really come into their own given smaller A dimensions.

Item nos.	Ø	A
6636 38	40 x 28	350
6636 45	40 x 28	450
6636 99	40 x 28	451-2100

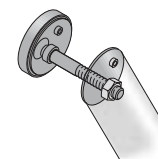


When locating the fixing points, especially on narrow stiles of frame doors, please regard the off-centre location of the threaded holes from the centre of the contact plane of the handle. The measurement's difference is in case of FSB 6636 exactly 4 mm.

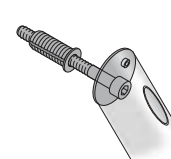
For detailed information on fixing, please turn to page 455.



back to back fixing

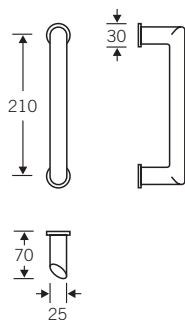


bolt through-fixing



secret single side fixing with expansion plug

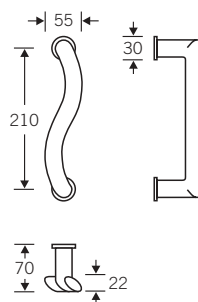
Pull handles
Ellipse series



6610

Aluminium natural color
anodised
Stainless steel
Aluminium + colour

Safety clearance 45 mm
Fixing M6



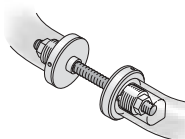
6611

Aluminium natural color
anodised
Stainless steel
Aluminium + colour

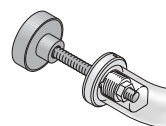
Safety clearance 60 mm
Fixing M6

Illustration r.h., outside view,
handing details cf. page 578.

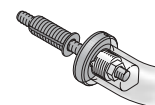
For detailed information on
fixing, please turn to page 457.



back to back
fixing

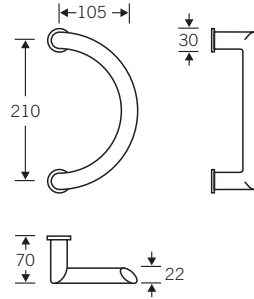


bolt through-fixing



secret single side
fixing with
expansion plug

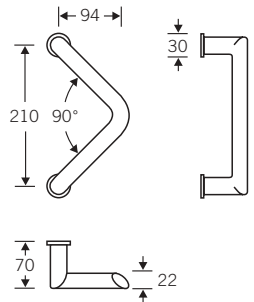
Pull handles
Ellipse series



6612

Aluminium natural color
anodised
Stainless steel
Aluminium + colour

Safety clearance 48 mm
Fixing M6

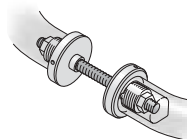


6613

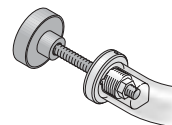
Aluminium natural color
anodised
Stainless steel
Aluminium + colour

Safety clearance 48 mm
Fixing M6

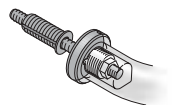
For detailed information on fixing, please turn to page 457.



back to back
fixing

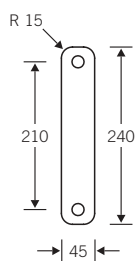
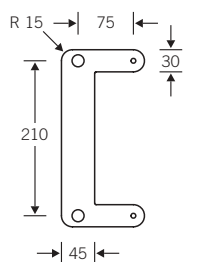


bolt through-fixing



secret single side
fixing with
expansion plug

Handle adaptor for special applications



6114

Stainless steel

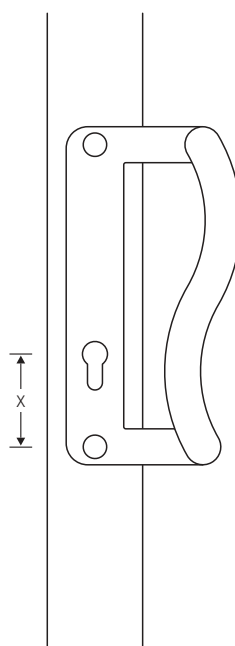
6114 14 r.h.
6114 15 l.h.

Illustration r.h.

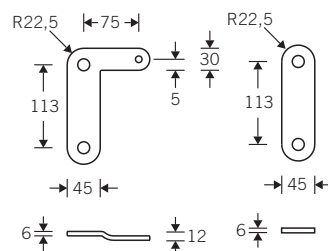
Fixing holes pull handle
6,5 mm Ø
Fixing element reverse
side 6114 20

4
a

Where special handle designs are to be fitted to extremely narrow stiles, conjuring up the prospect of injuries to hands, one way out is to attach the handle on the slamming face to a stainless steel adaptor. FSB 6114 is a handle adaptor developed for pull handle designs FSB 6610 and 6611.



Handle adaptor for special applications



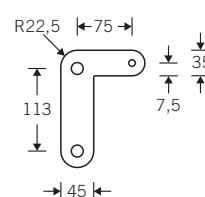
6115

6115 20

6115 Grip Ø 25 mm
Stainless steel

6115 14 r.h.
6115 15 l.h.

Fixing holes pull handle
8.5 mm Ø
Fixing element reverse side
6115 20



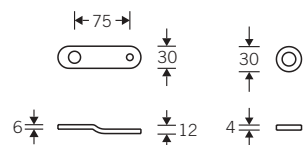
6116

Illustration r.h.

6116 Grip Ø 30 mm
Stainless steel

6116 14 r.h.
6116 15 l.h.

Fixing holes pull handle
Ø 8.5 mm
Fixing element reverse side
6115 20

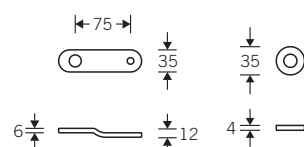


6115 30

6115 40

6115 30 Grip Ø 25 mm
Stainless steel

Fixing holes pull handle
Ø 8.5 mm
Fixing element reverse side
6115 40

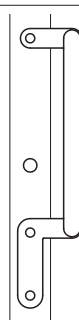


6116 30

6116 40

6116 30 Grip Ø 30 mm
Stainless steel

Fixing holes pull handle
Ø 8.5 mm
Fixing element reverse side
6116 40



Handle adaptors FSB 6115/6116 and 6115 30/6116 30 extend the range of troubleshooting options available for miscellaneous fixing scenarios and specifically for handles from the broad FSB programme with a diameter of 25 mm or 30 mm.

hs oval modular system



The hs modular system comprising grips and brackets caters in a novel way to individual design aspirations and functional requirements.

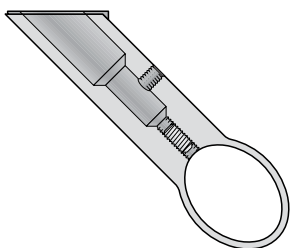
The oval grips in stainless steel are supplied in standard lengths of 36.5 x 22 mm and 40 x 28.5 mm as well as in custom lengths as requested.

The matching 45°-crank brackets in aluminium are grey anodised and are securely attached by means of a special-purpose fastening system.

There is scope for variation owing to the differing lengths of grips and the fact that the positioning and number of brackets are freely selectable. The option of providing handle ends with either one or two brackets and positioning central brackets as desired turns every handle into a distinctive feature and an embellishment for main entrance doors.

4

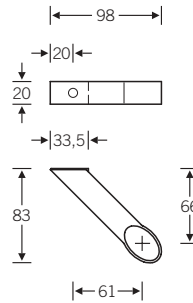
a



Once their arrangement and spacing have been established, brackets are firmly secured to the grip by means of recessed fastenings (cf. Fig.).

hs oval modular system

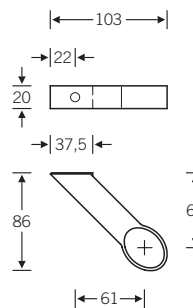
Brackets + Grips



6712

Aluminium
grey anodised

Bracket for grip 6812
Ø 36.5 x 22 mm



6713

Aluminium
grey anodised

Bracket for grip 6813
Ø 40 x 28.5 mm



6812

Stainless steel

Grip
Ø 36.5 x 22 mm

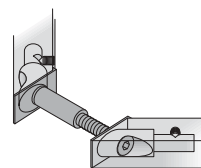
6813

Stainless steel

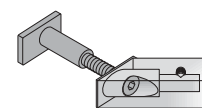
Grip
Ø 40 x 28.5 mm

Items nos.	Grips Ø	length
6812 0450	36.5 x 22 mm	450 mm
0600	36.5 x 22 mm	600 mm
0900	36.5 x 22 mm	900 mm
1800	36.5 x 22 mm	1800 mm
6813 0450	40 x 28.5 mm	450 mm
0600	40 x 28.5 mm	600 mm
0900	40 x 28.5 mm	900 mm
1800	40 x 28.5 mm	1800 mm

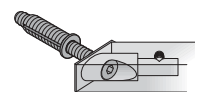
For detailed information on fixing, please turn to page 463.



back to back fixing



bolt through-fixing



secret single side fixing with expansion plug

ht oval modular systems up to 1,500 mm



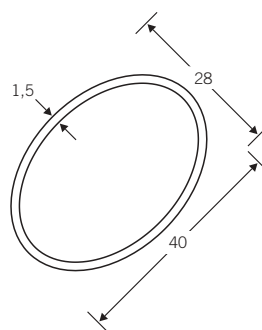
6802

Stainless steel

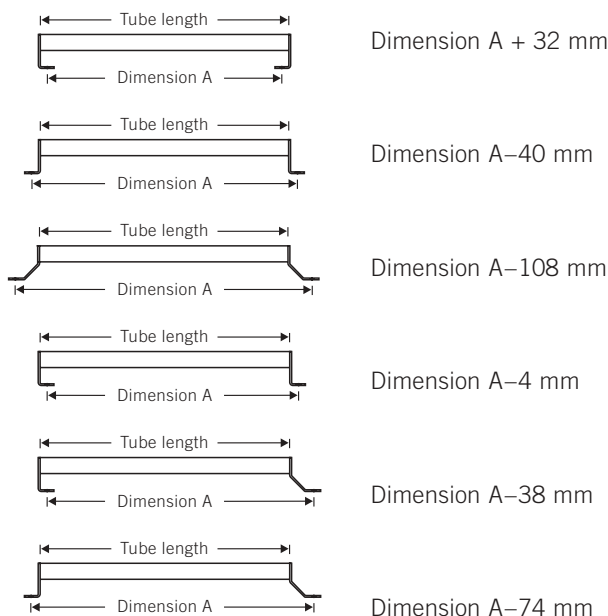
Tube 28 x 40 x 1.5 mm
Stock length 3,000 mm

The ht oval kit enables safety rails, handle systems, hand-rails etc. up to 1,500 mm in length to be cut to size, fabricated and fitted on site with the aid of the appropriate tools.

Where lengths in excess of 1,500 mm are concerned, we would recommend factory welded hardware.



Dimensions:



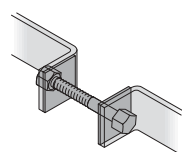
Tube length and A dimension are important for fabrication, fitting and ordering purposes. The A dimension defines the fixing distance from the centre of the borehole for one bracket to the centre of the borehole for the other. Tube length is arrived at by adding or subtracting the differential dimensions given alongside from the A dimension.

FSB recommends reinforcing door pulls from the HT Oval kit that are to be fitted to heavily used doors by means of the accessories available.

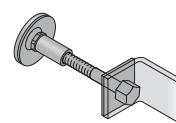
Reference:

When using elements of the HT Oval kit - whether for self-fabrication or as factory-welded parts - attention needs to be paid to structural specifications and conditions locally. This hefty product series is not a substitute for gym bars, neither should it be used as a safety

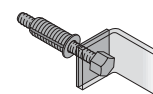
rail at particularly hazardous openings in buildings. If in any doubt, please contact the architect or engineer in charge. For detailed information on fixing, please turn to page 462.



back to back fixing

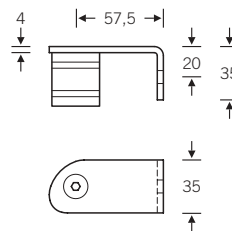


bolt through-fixing



secret single side fixing with expansion plug

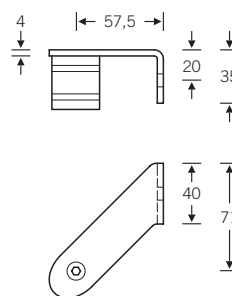
Brackets ht oval modular systems



6735 ..
Stainless steel

6735 04 r.h.
6735 05 l.h.

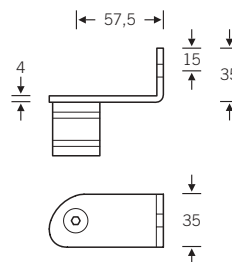
Straight bracket,
angled 90° inwards,
to match oval tube
40 x 28 x 1.5 mm Ø



6736 ..
Stainless steel

6736 14 r.h.
6736 15 l.h.

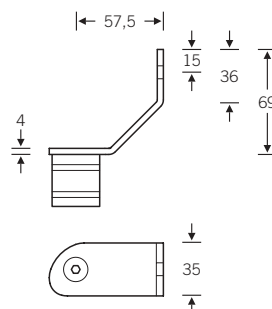
Bracket with 45° cranking,
angled 90° inwards,
to match oval tube
40 x 28 x 1.5 mm Ø



6737 ..
Stainless steel

6737 04 r.h.
6737 05 l.h.

Straight bracket,
angled 90° outwards,
to match oval tube
40 x 28 x 1.5 mm Ø



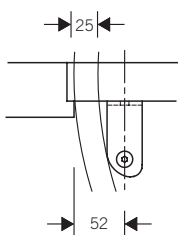
6738 ..
Stainless steel

6738 04 r.h.
6738 05 l.h.

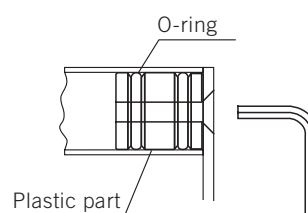
Bracket for swing doors,
to match oval tube
40 x 28 x 1.5 mm Ø

All illustrations r.h.

Screw hole Ø 8,5 mm



Safety clearance 52 mm

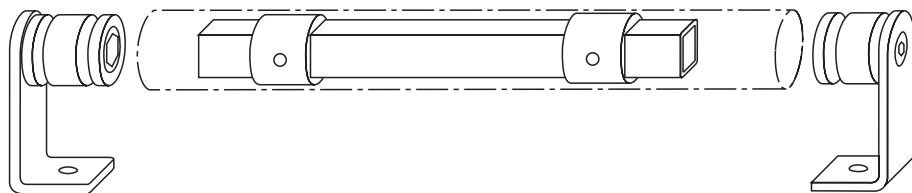


Once the tube has been cut to size (dimensions A + differential measurement), matching brackets are slotted into the tube ends and fastened with screws from the top.

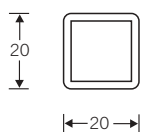
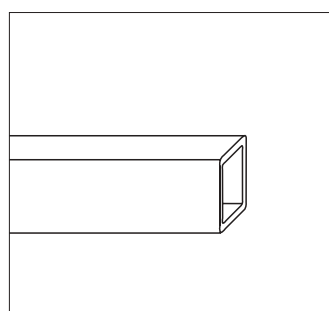
4
a

Accessories

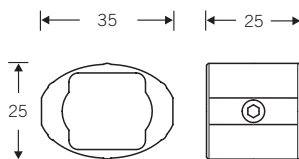
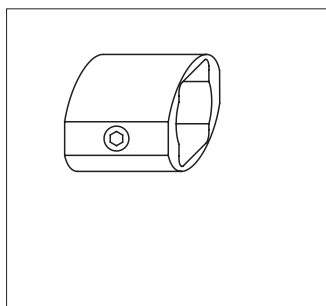
ht oval modular systems



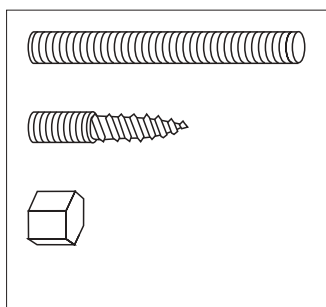
For pull handles from the modular systems ht oval where robust handling is to be assumed, we would recommend reinforcing them with the accessories as shown on this page.



6801 20
Steel tube hot galvanised
20 x 20 x 2 mm
Stock length 3,000 mm



6739
Synth. mat.
Spacing sleeve with fixing screw



0313 0880 M8 x 80 mm
Steel stud

0316 0840 M8
Steel stud - for timber fixing

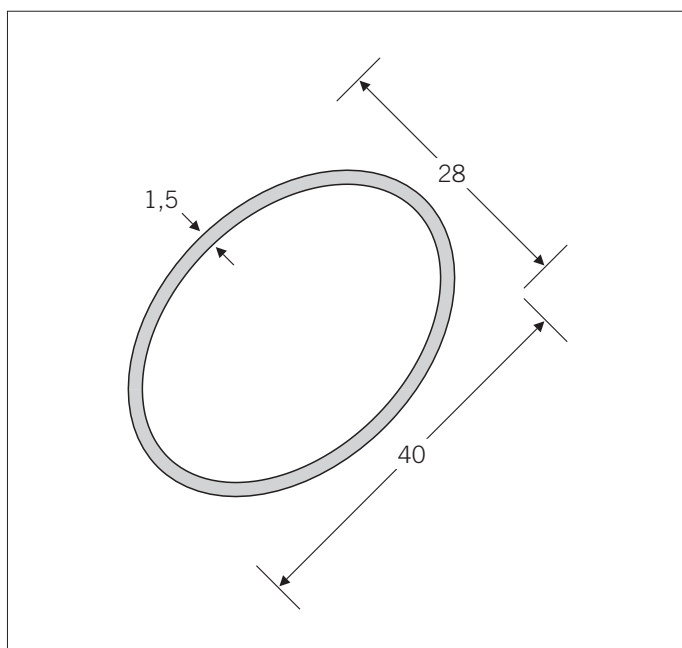
0320 0800 M8
Dome nut of stainless steel

For detailed information on fixing, please turn to page 462.

Fixing reference:

Sizing square-section tube: outside length of oval tube minus 100 mm. Then fixing of spacing sleeves with distance 350 mm, afterwards assembling.

ht oval welded
from 1500 to 2100 mm



6524

Stainless steel

Rohr 28 x 40 x 1,5 mm

For reasons of structural strength, we recommend ordering a factory-welded version drawing on the elements of the ht oval kit in cases where the A dimension lies between 1.500 mm and a maximum of 2.100 mm.

45 .. r.h.	55 .. l.h.	46 .. r.h.	56 .. l.h.	47 .. r.h.	57 .. l.h.	48 .. r.h.	58 .. l.h.
.. 45 r.h.	.. 55 l.h.	.. 46 r.h.	.. 56 l.h.	.. 47 r.h.	.. 57 l.h.	.. 48 r.h.	.. 58 l.h.

The pulls in the welded series FSB 6524 are produced to order. This involves selecting the combination of brackets desired from the illustration alongside and citing the appropriate code numbers. It is also necessary to state the A dimensions, which defines the fixing distance from the centre of the borehole for one bracket to the centre of the borehole for the other. By adding or subtracting the differential dimensions given on page 408, we calculate the length of the pull at the works prior to welding.

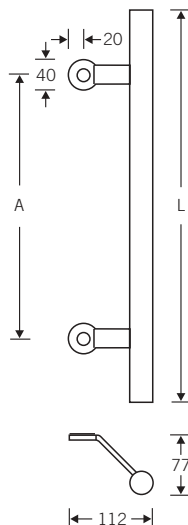
Reference:

When using elements of the HT Oval kit - whether for self-fabrication or as factory-welded parts - attention needs to be paid to structural specifications and conditions locally. This hefty product series is not a substitute for gym bars, neither should it be used as a safety rail at particularly hazardous

openings in buildings. If in any doubt, please contact the architect or engineer in charge.

For detailed information on fixing, please turn to page 462.

Pull handles
Round series



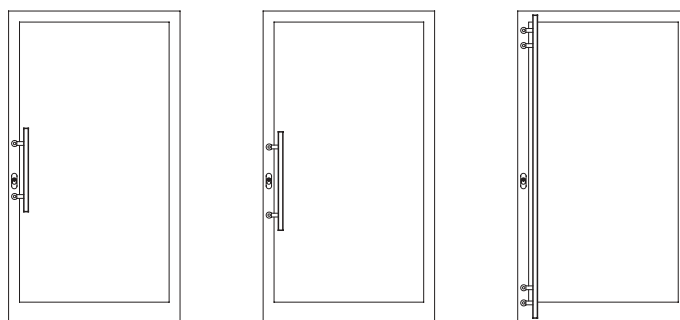
6615

Stainless steel

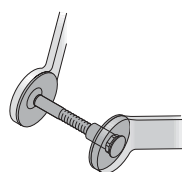
In door pull series FSB 6615 (Ø 30 mm), fixing is by means of laterally offset strap-type brackets. The fastening and gripping sides are separated from one another and hence protect hands. The innovative combination of fixing strap and pull lends the design an airy, vivacious appearance.

Item nos.	Ø	A	L
6615 35	30	350	550
6615 45	30	450	650
6615 99	30	451-2100	

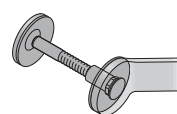
4
a



For detailed information on fixing, please turn to page 458.



back to back fixing

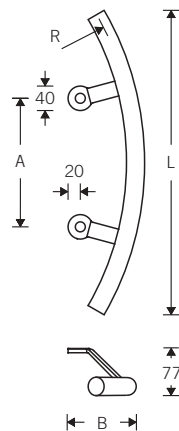


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series

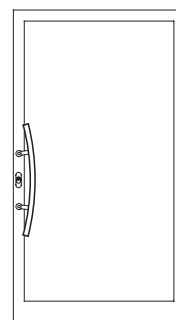
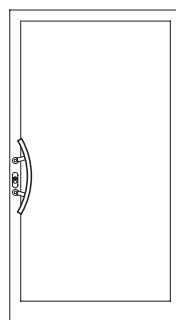


6674

Stainless steel

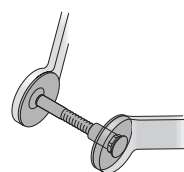
Door pull FSB 6674 takes the offset strap-type brackets from the FSB 6615 series and fuses these with the sweep of the crescent-shaped round pull (Ø 30 mm). This pull series is only supplied with A dimensions of 210 mm and 350 mm.

Item nos.	Ø	R	A	B	L
6674 21	30	485	210	126	497
6674 35	30	1420	350	123	742

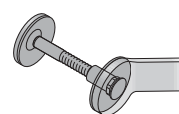


4
a

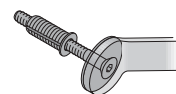
For detailed information on fixing, please turn to page 458.



back to back fixing

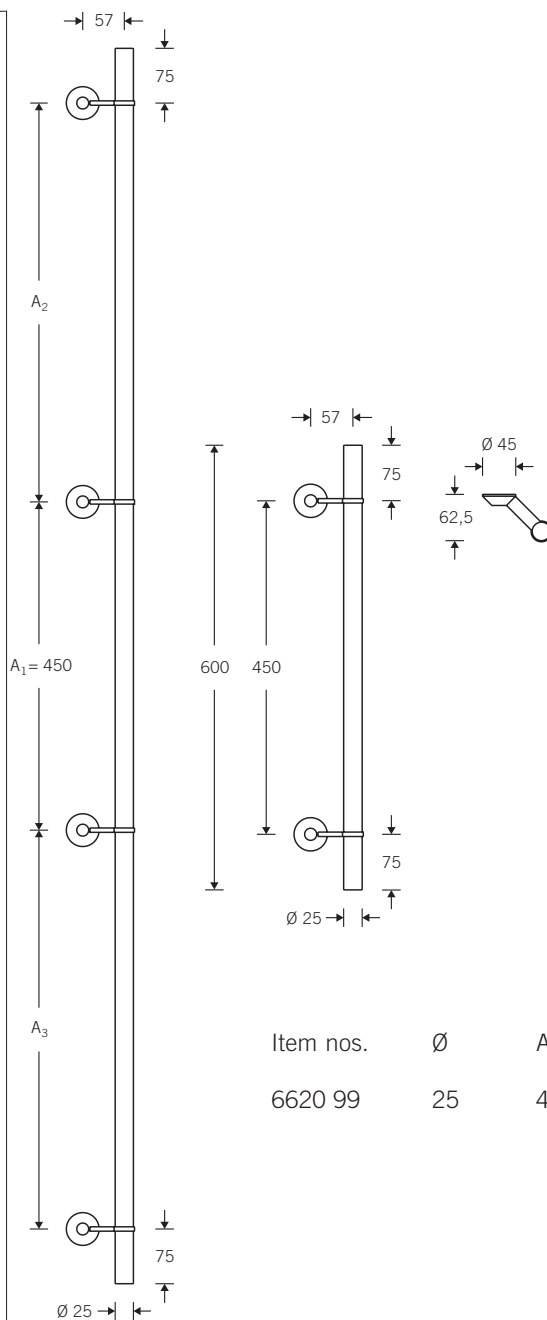


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series



6620 45

Ø 25 mm

Stainless steel

A₁ = 450 mm

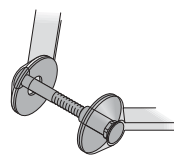
Overall length 600 mm

4
a

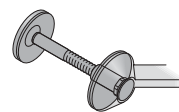
Item nos.	Ø	A1	A2	A3	Ending
6620 99	25	450	X	X	75 mm

The stiles on frame doors have become narrower in recent years. FSB has responded by producing a filigree handle series in stainless steel (Ø 25 mm). The straight bar handle features a clearance between the fixing centre and the centre of the bar of no less than 57 mm. With the curved version, the clearance is a mighty 130 mm. Both are

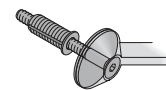
supplied as standard with an A dimension of 450 mm and an overall length of 600 mm. Optionally, they can both extend over the entire door. The standard measurement for the end sections is 75 mm. FSB recommends a distance between brackets of at most 1,200 mm.



back to back fixing



bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series



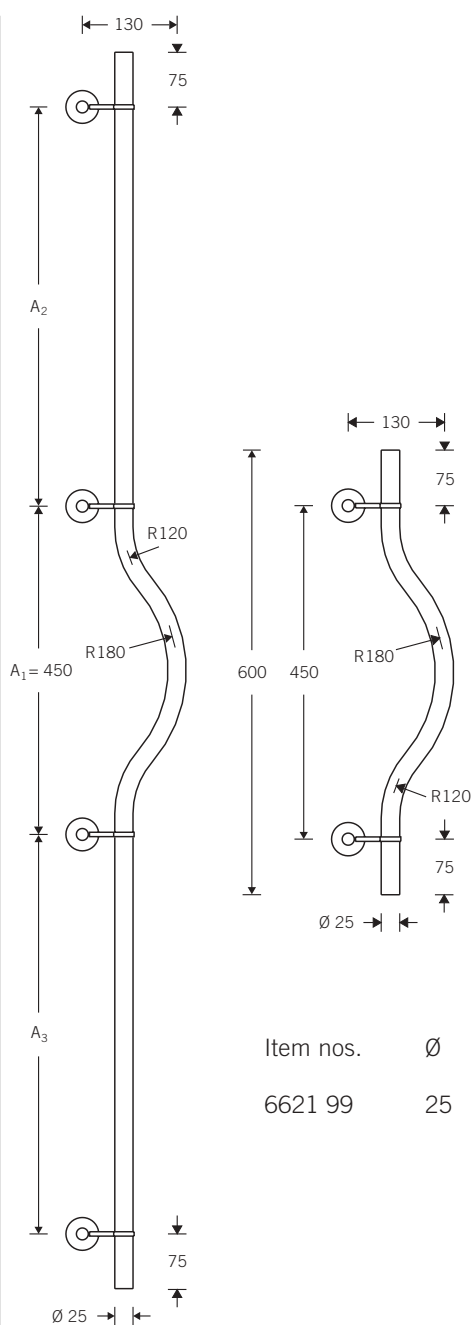
6621 45

Ø 25 mm

Stainless steel

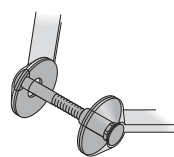
A₁ = 450 mm

Overall length 600 mm

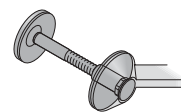


Item nos.	Ø	A1	A2	A3	Ending
6621 99	25	450	X	X	75 mm

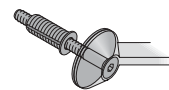
For detailed information on fixing, please turn to page 459.



back to back fixing

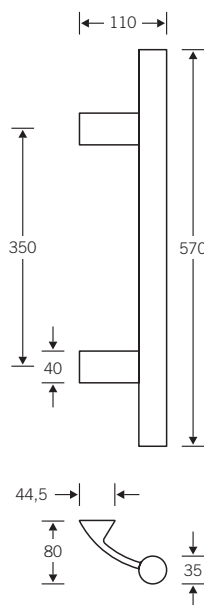


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series



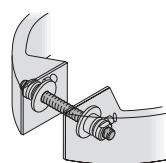
6526

Aluminium
Stainless steel (brackets natural coloured aluminium)

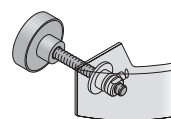
With the publication of its 02/03 Manual, FSB is supplementing its proven and long-successful in-line pull series in aluminium and stainless steel with a particularly safe-to-grip design featuring heavily cranked fixing points on which the ends of brackets are incorporated into the pull section. The in-line pull sections are supplied with a diameter of 35 mm in either aluminium or stainless steel. The brackets are made of aluminium and are anodised in the metal's natural colour. The standard version has an A dimension of 350 mm and a length of 570 mm. Other A dimensions and lengths are possible.

4
a

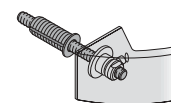
For detailed information on fixing, please turn to page 460.



back to back fixing



bolt through-fixing



secret single side fixing with expansion plug

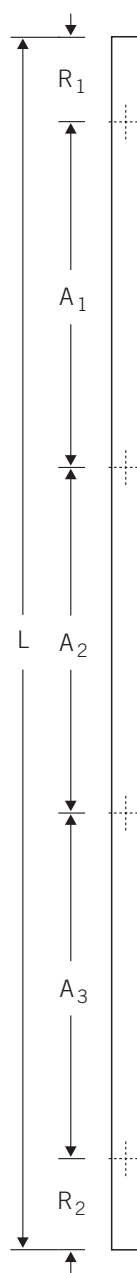
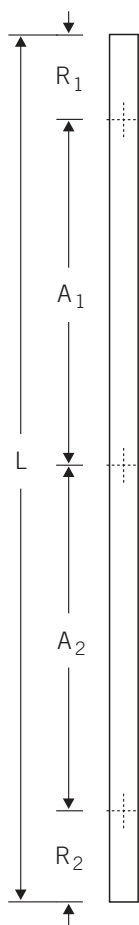
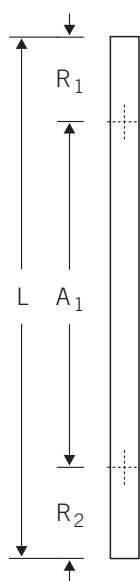


Fax copy

□ 6526 Ø 35 mm



To order custom designs in the pull handle series 6526, please use a copy of this page: First specify the model desired citing the applicable order code above. Then enter the quantity required and overall length in the table below. Then enter details of the distances between brackets and, where applicable, their distance from the end of the handle in mm. To ensure stability, the distance between brackets should not exceed 1,200 mm.

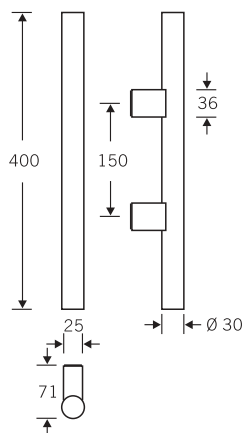


4
a

Qte.	Overall length L	Distance between brackets			Edge spacing*		Fixing methode
		A ₁	A ₂	A ₃	R ₁	R ₂	

* least 30 mm

Pull handles
Round series

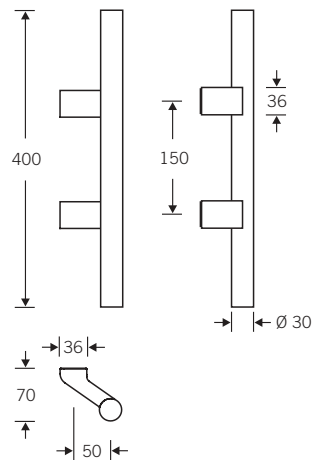


6642

Ø 30 mm

Brackets
Aluminium natural colour anod.
Grip
Aluminium natural colour anod.
or Stainless steel

Standard length 400 mm
Safety clearance 38 mm
Fixing M6



6643

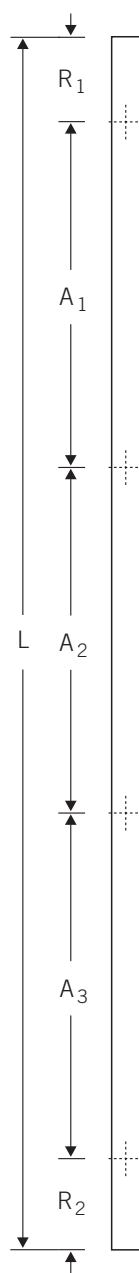
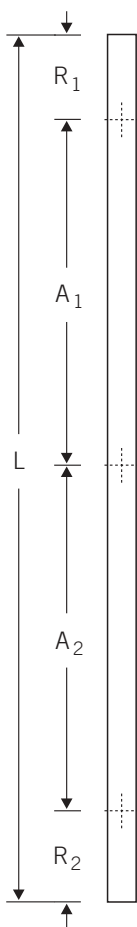
Ø 30 mm

Brackets
Aluminium natural colour anod.
Grip
Aluminium natural colour anod.
or Stainless steel

Standard length 400 mm
Fixing M6

For detailed information on
fixing of the pull handles 6642
and 6643, please turn to page
457.

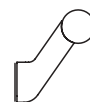
Fax copy



6642 Ø 30 mm



6643 Ø 30 mm

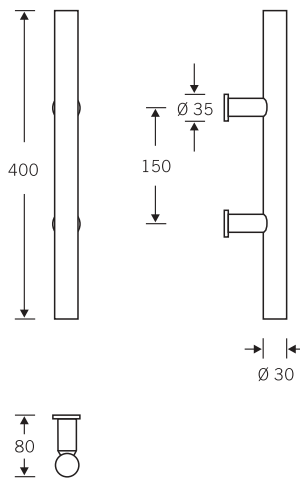


To order custom designs in the pull handle series 6642 or 6643, please use a copy of this page:
 First specify the model desired citing the applicable order code above.
 Then enter the quantity required and overall length in the table below.
 Then enter details of the distances between brackets and, where applicable, their distance from the end of the handle in mm. To ensure stability, the distance between brackets should not exceed 1,200 mm.

Qte.	Overall length L	Distance between brackets			Edge spacing*		Fixing methode
		A ₁	A ₂	A ₃	R ₁	R ₂	

* least 30 mm

Pull handles
Round series

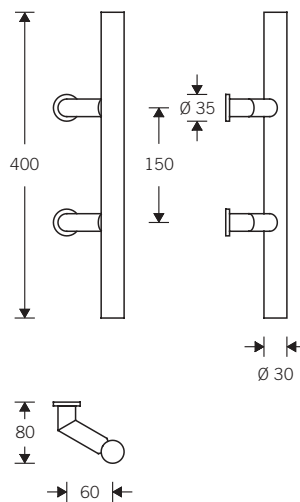


6681

Ø 30 mm

Brackets Stainless steel
Grip Stainless steel

Standard length 400 mm
Safety clearance 38 mm
Fixing M8



6630

30 mm Ø

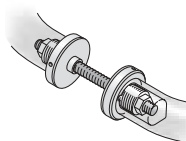
Brackets Stainless steel
Grip Stainless steel

Standard length 400 mm
Fixing M8

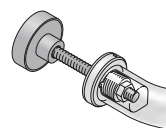
4
a

For all tubular pulls in stainless steel FSB can supply two customised variants with non-standard ends, one a shallow curvature (10), the other a stepped flat cap (20).

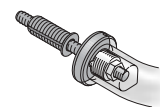
For detailed information on fixing, please turn to page 456.



back to back fixing



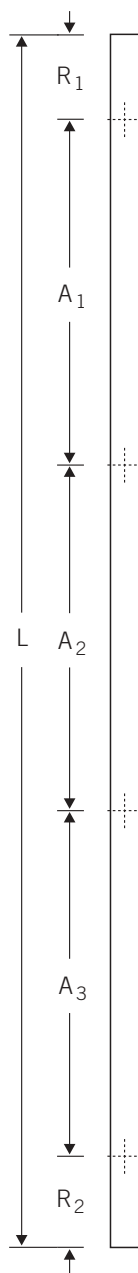
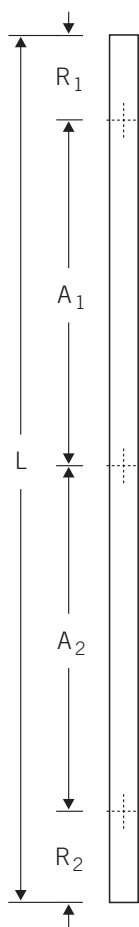
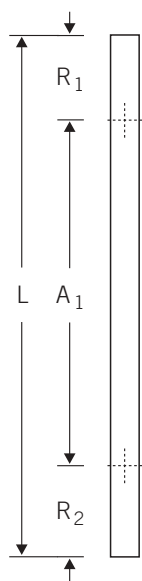
bolt through-fixing



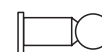
secret single side fixing with expansion plug



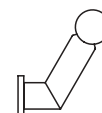
Fax copy



- 6580 Ø 25 mm
- 6681 Ø 30 mm
- 6582 Ø 35 mm
- 6583 Ø 40 mm



- 6529 Ø 25 mm
- 6630 Ø 30 mm
- 6531 Ø 35 mm
- 6532 Ø 40 mm



To order custom designs in the pull handle series 6681 or 6630, please use a copy of this page:

First specify the model desired citing the applicable order code above.

Then enter the quantity required and overall length in the table below.

Then enter details of the distances between brackets and, where applicable, their distance from the end of the handle in mm.

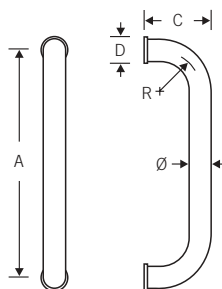
To ensure stability, the distance between brackets should not exceed 1,200 mm.

Finally, please tick the cap required for standard versions with a diameter of 30 Ø.

Qty.	Overall length L	Caps for 6681 and 6630			Distance between brackets			Edge spacing*		Fixing method
		..00	..10	..20	A ₁	A ₂	A ₃	R ₁	R ₂	

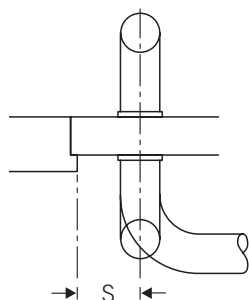
* least 30 mm

Pull handles
Round series



Aluminium
Stainless steel
Brass
Aluminium + colour

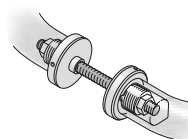
Fixing $\varnothing = 20$ mm M6
 $\varnothing \geq 25$ mm M8



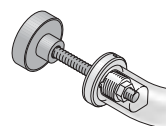
Item nos.	\varnothing	R	A	C	D	S
6627 34	20	25	200	75	30	45
6670 34	25	40	200	80	35	48
6670 37	25	40	300	80	35	48
6670 38	25	40	350	80	35	48
6602 38	30	55	350	90	35	51
6603 38	35	60	350	95	45	56
6604 38	40	60	350	105	45	65
6670 99	25	40	200-1200	80	35	48
6602 99	30	55	300-1200	90	35	51
6603 99	35	60	300-1200	95	45	56
6604 99	40	60	350-1200	105	45	65

S Safety clearance

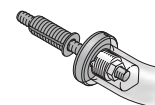
For detailed information on fixing, please turn to pages 456 and 457.



back to back fixing

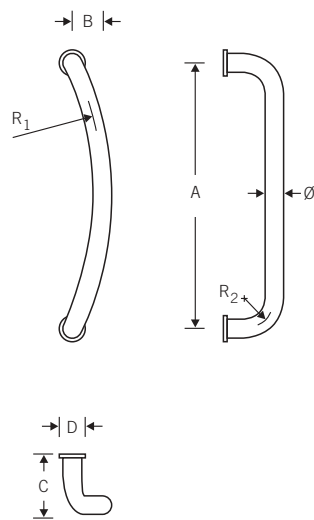


bolt through-fixing

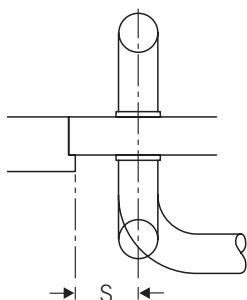


secret single side fixing with expansion plug

Pull handles
Round series



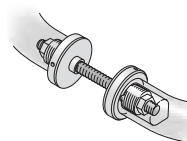
Aluminium
Stainless steel
Brass
Aluminium + colour
Fixing M8



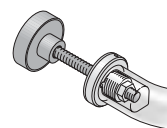
Item nos.	∅	R1	R2	A	B	C	S
6605 25	25	260	40	250	32	80	45
6605 38	25	260	40	350	68	80	45
6605 50	25	400	40	500	88	80	45

S Safety clearance

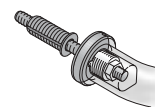
For detailed information on fixing, please turn to page 456.



back to back fixing

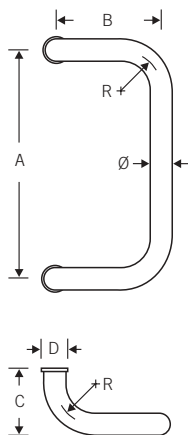
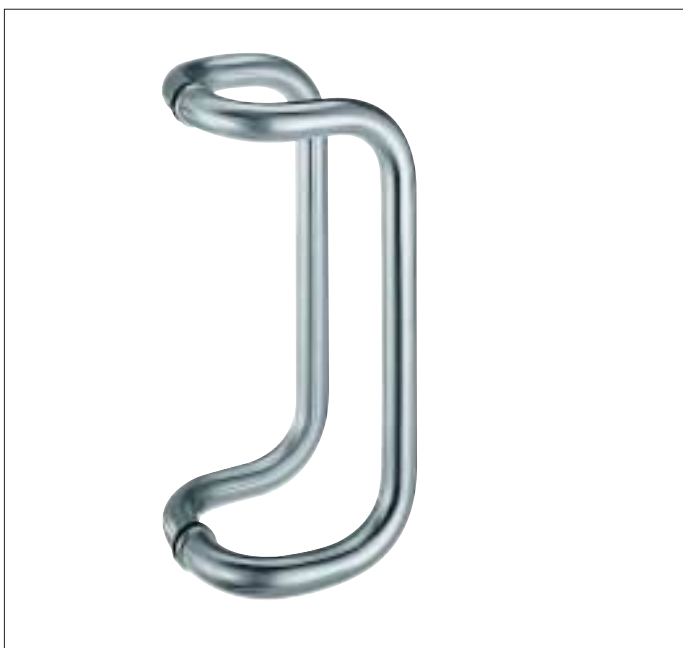


bolt through-fixing



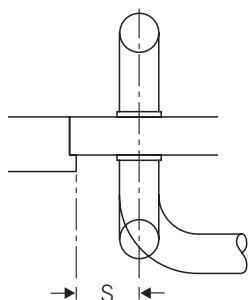
secret single side fixing with expansion plug

Pull handles
Round series



Aluminium
Stainless steel
Brass
Aluminium + colour

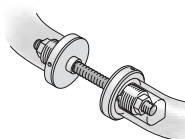
Fixing Ø = 20 mm M6
Ø ≥ 25 mm M8



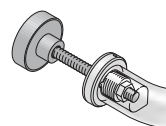
Item nos.	Ø	R	A	B	C	D	S
6660 34	20	25	200	100	75	30	41
6661 34	25	40	200	100	80	35	42
6661 37	25	40	300	100	80	35	42
6661 38	25	40	350	100	80	35	42
6662 38	30	55	350	140	90	35	43
6663 38	35	60	350	140	95	45	45
6664 38	40	60	350	150	120	45	52
6661 99	25	40	200-1200	100	80	35	42
6662 99	30	55	300-1200	140	90	35	43
6663 99	35	60	300-1200	140	95	45	45
6664 99	40	60	350-1200	150	120	45	52

S Safety clearance

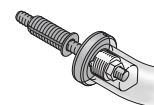
For detailed information on fixing, please turn to pages 456 and 457.



back to back fixing

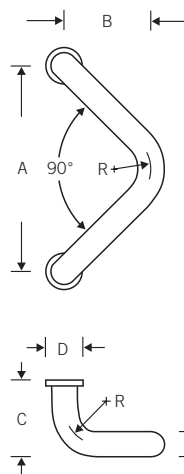


bolt through-fixing



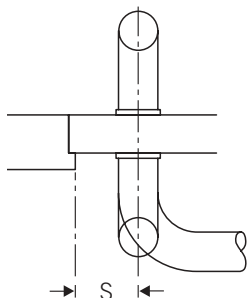
secret single side fixing with expansion plug

Pull handles
Round series



Aluminium
Stainless steel
Brass
Aluminium + colour

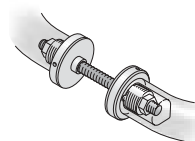
Fixing $\varnothing = 20$ mm M6
 $\varnothing \geq 25$ mm M8



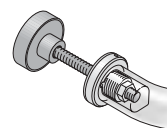
Item nos.	\varnothing	R	A	B	C	D	S
6649 34	20	25	200	90	75	30	41
6679 34	25	40	200	83	80	35	42
6679 37	25	40	300	133	80	35	42
6679 38	25	40	350	158	80	35	42
6623 38	30	55	350	152	90	35	43
6624 38	35	60	350	150	95	45	45
6625 38	40	60	350	150	105	45	49

S Safety clearance

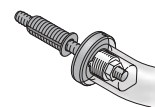
For detailed information on fixing, please turn to pages 456 and 457.



back to back fixing

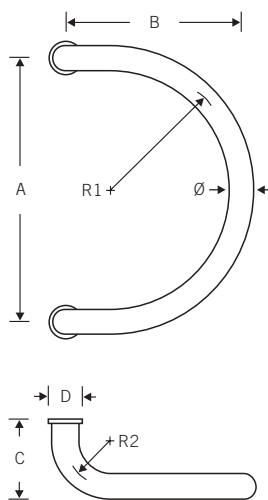


bolt through-fixing



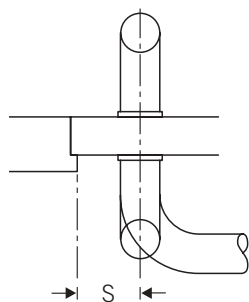
secret single side fixing with expansion plug

Pull handles
Round series



Aluminium
Stainless steel
Brass
Aluminium + colour

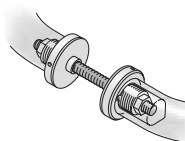
Fixing Ø = 20 mm M6
Ø ≥ 25 mm M8



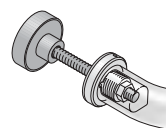
Item nos.	Ø	R1	R2	A	B	C	D	S
6626 34	20	100	25	200	130	75	30	41
6673 34	25	100	40	200	140	80	35	42
6673 37	25	150	40	300	195	80	35	42
6673 38	25	175	40	350	220	80	35	42
6683 38	30	175	55	350	235	90	35	43
6659 38	35	175	60	350	235	95	45	45
6678 38	40	175	60	350	235	120	45	52

S Safety clearance

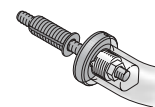
For detailed information on fixing, please turn to pages 456 and 457.



back to back fixing

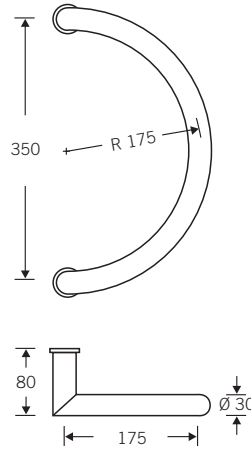


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series



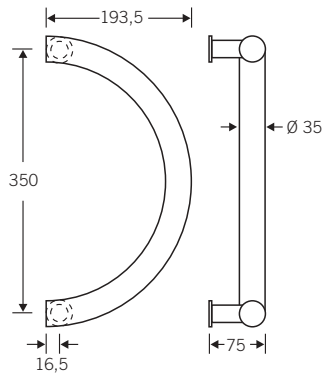
6653 38

Ø 30 mm

Stainless steel

Safety clearance 55 mm

Fixing M8



6655 38

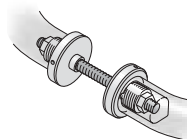
Ø 35 mm

Aluminium
Stainless steel

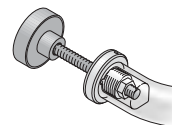
Safety clearance 55 mm

Fixing M8

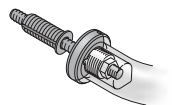
For detailed information on fixing, please turn to page 456.



back to back fixing

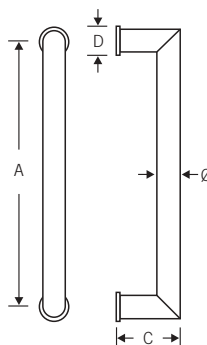


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series

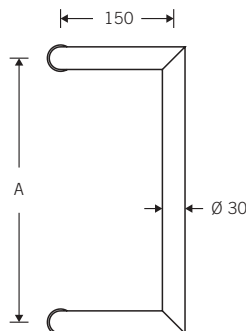


Stainless steel

Fixing M8

Item nos.	Ø	A	C	D	S
6606 38	25	350	75	35	50
6669 38	30	350	80	35	55
6607 38	35	350	85	45	57
6609 38	40	350	90	45	60

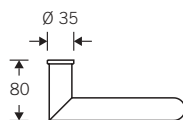
S Safety clearance



6514

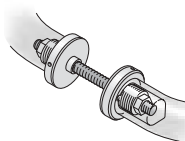
Stainless steel

Fixing M8

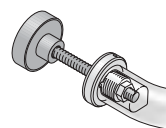


Item nos.	Ø	A	S
6514 38	30	350	55
6514 45	30	450	55

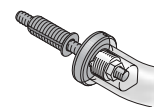
For detailed information on fixing, please turn to page 456.



back to back fixing

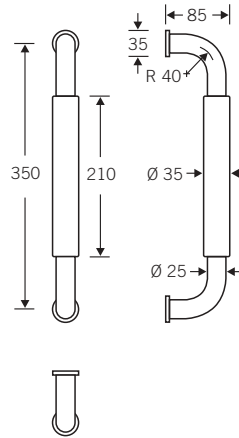


bolt through-fixing



secret single side fixing with expansion plug

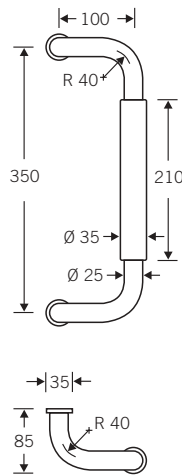
Pull handles
Round series



6608 38

Stainless steel 35/25 mm

Safety clearance 50 mm
Fixing M8

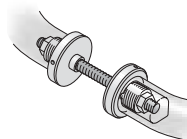


6658 38

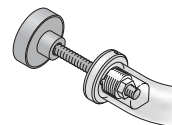
Stainless steel 35/25 mm

Safety clearance 42 mm
Fixing M8

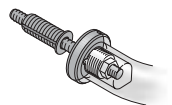
For detailed information on fixing, please turn to page 456.



back to back fixing

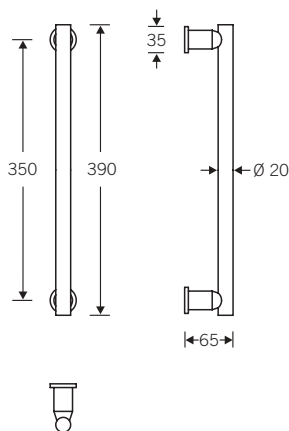


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series

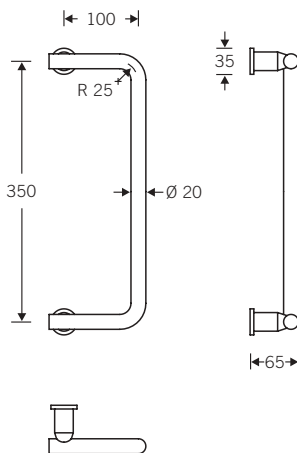


6501 38

Ø 20 mm

Aluminium
Stainless steel
Brass

Safety clearance 49 mm
Fixing M8



6502 38

Ø 20 mm

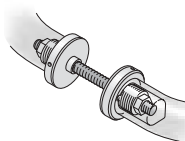
Aluminium
Stainless steel
Brass

Safety clearance 59 mm
Fixing M8

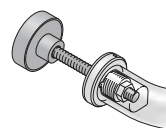
4
a

The 'heavyweights' of the long-running standard programme are juxtaposed with a 'lighter than air' series of pull handles (20 mm) in several shapes on plain brackets (25 mm).

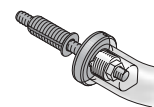
For detailed information on fixing, please turn to page 456.



back to back fixing

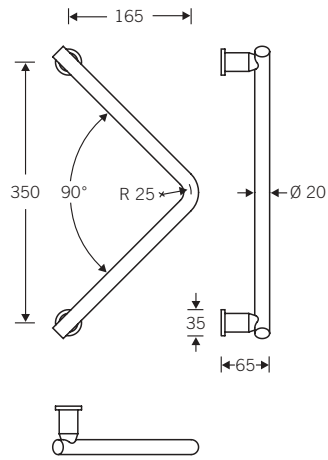


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series

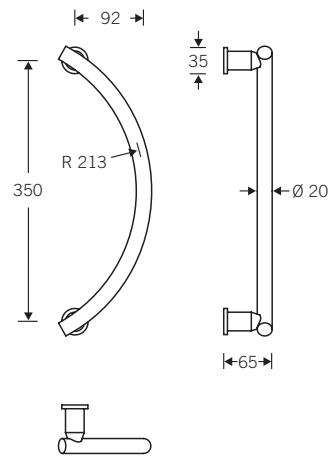


6503 38

Ø 20 mm

Aluminium
Stainless steel
Brass

Safety clearance 59 mm
Fixing M8



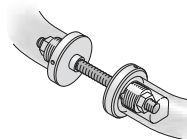
6504 38

Ø 20 mm

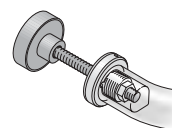
Aluminium
Stainless steel
Brass

Safety clearance 59 mm
Fixing M8

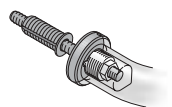
For detailed information on fixing, please turn to page 456.



back to back fixing

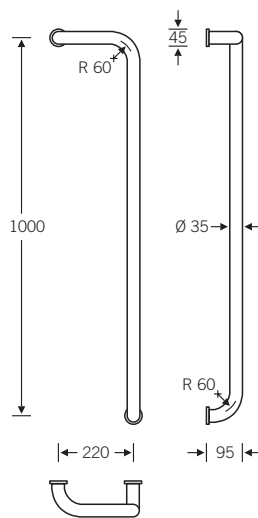
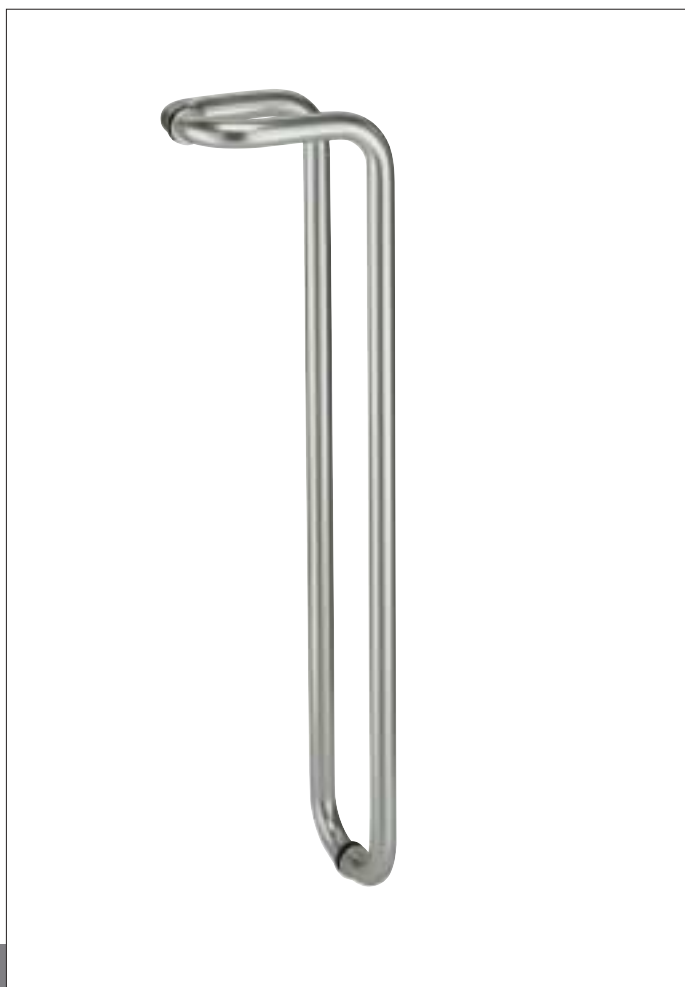


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series



6506 ..

65 right | 75 left
Ø 35 mm

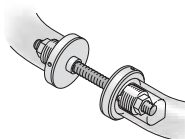
Aluminium
Stainless steel

Illustration r.h., outside view,
handing details cf. page 578

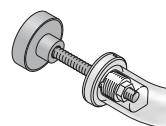
Safety clearance 47 mm
Fixing M8

4
a

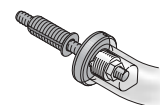
For detailed information on
fixing, please turn to page 456.



back to back
fixing

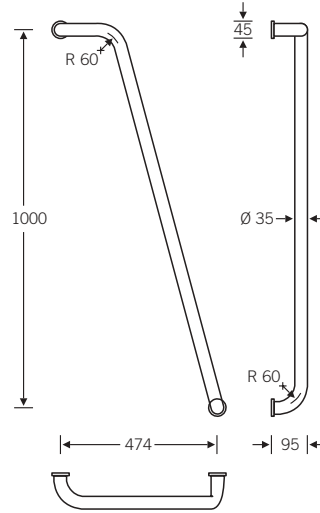
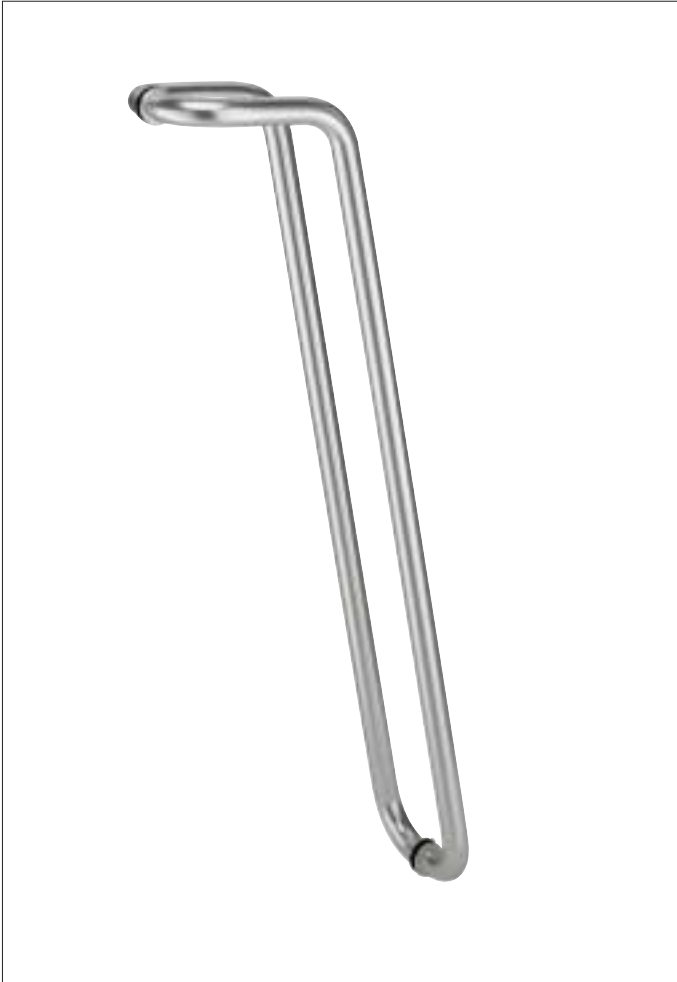


bolt through-fixing



secret single side
fixing with
expansion plug

Pull handles
Round series



6507 ..

65 right | 75 left
Ø 35 mm

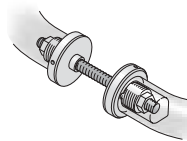
Aluminium
Stainless steel

Illustration r.h., outside view,
handing details cf. page 578

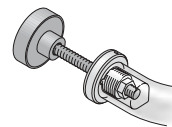
Safety clearance 47 mm
Fixing M8

4
a

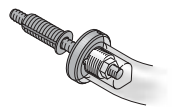
For detailed information on
fixing, please turn to page 456.



back to back
fixing

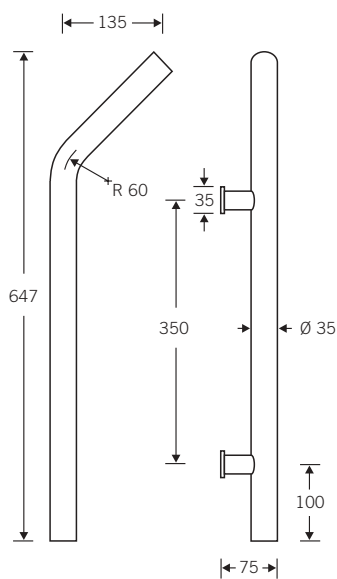


bolt through-fixing



secret single side
fixing with
expansion plug

Pull handles
Round series



6505 ..

48 r.h. | 58 l.h.
Ø 35 mm

Stainless steel

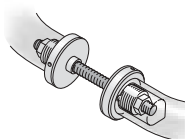
Safety clearance 56 mm
Fixing M8

Illustration r.h., outside view
handing details cf. page 578

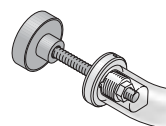
4
a

The graphic qualities of the Y handle are best brought out by fitting it in pairs to double doors.

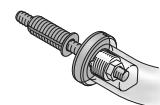
For detailed information on fixing, please turn to page 456.



back to back fixing

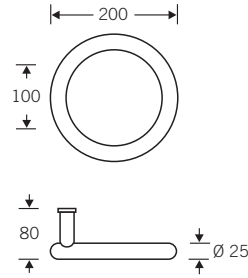


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series

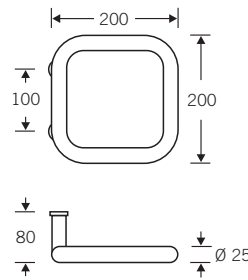


6677 00

Ø 25 mm

Stainless steel

Safety clearance 65 mm
Fixing M8



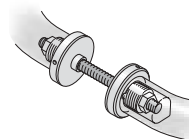
6688 00

Ø 25 mm

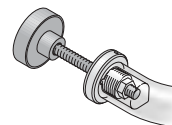
Stainless steel

Safety clearance 48 mm
Fixing M8

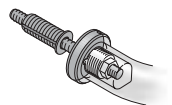
For detailed information on fixing, please turn to page 456.



back to back fixing



bolt through-fixing



secret single side fixing with expansion plug

hs round modular system



The hs modular system comprising grips and brackets caters in a novel way to individual design aspirations and functional requirements.

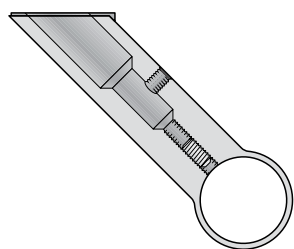
The round grips in stainless steel are supplied in standard lengths of 30 mm and 25 mm as well as in custom lengths as requested.

The matching 45°-crank brackets in aluminium are grey anodised and are securely attached by means of a special-purpose fastening system.

There is scope for variation owing to the differing lengths of grips and the fact that the positioning and number of brackets are freely selectable. The option of providing handle ends with either one or two brackets and positioning central brackets as desired turns every handle into a distinctive feature and an embellishment for main entrance doors.

4

a

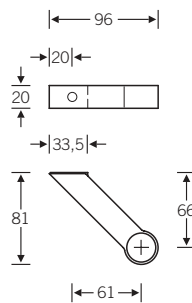


Once their arrangement and spacing have been established, brackets are firmly secured to the grip by means of recessed fastenings (cf. Fig.)

Alignment of brackets is achieved by laying the handle on a flat surface once the first bracket has been fitted and only then fixing the remaining brackets at the desired intervals.

hs round modular system

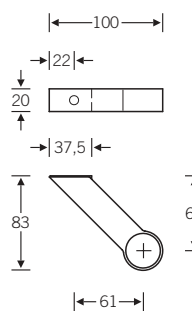
Brackets + Grips



6710

Aluminium
grey anodised

Bracket for grip 6810
Ø 25 mm



6711

Aluminium
grey anodised

Bracket for grip 6811
Ø 30 mm



6810

Stainless steel

Grip Ø 25 mm

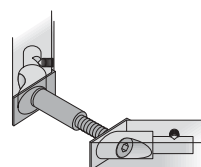
6811

Stainless steel

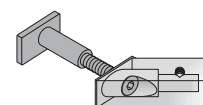
Grip Ø 30 mm

Item nos.	Grips Ø	length
6810 0450	25 mm	450 mm
0600	25 mm	600 mm
0900	25 mm	900 mm
1800	25 mm	1800 mm
6811 0450	30 mm	450 mm
0600	30 mm	600 mm
0900	30 mm	900 mm
1800	30 mm	1800 mm

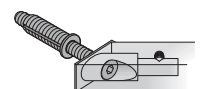
For detailed information on fixing, please turn to page 463.



back to back fixing



bolt through-fixing



secret single side fixing with expansion plug

ht round modular systems up to 1,500 mm



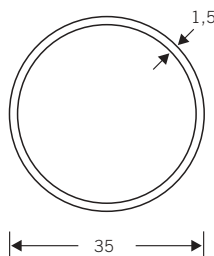
6801

Stainless steel

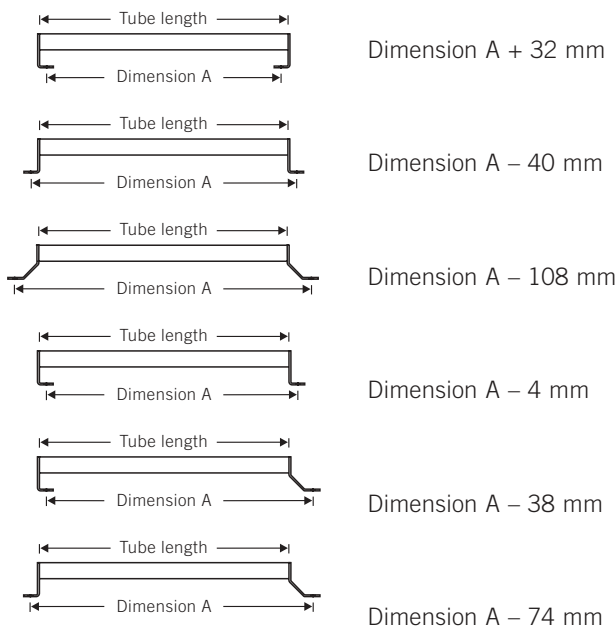
Tube Ø 35 x 1.5 mm
Stock length 3,000 mm

The ht round kit enables safety rails, handle systems, handrails etc. up to 1,500 mm in length to be cut to size, fabricated and fitted on site with the aid of the appropriate tools.

Where lengths in excess of 1,500 mm are concerned, we would recommend factory welded hardware.



Dimensions:



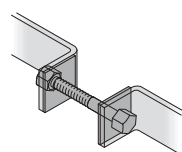
Tube length and A size are important for fabrication, fitting and ordering purposes. The A size defines the fixing distance from the centre of the borehole for one bracket to the centre of the borehole for the other. Tube length is arrived at by adding or subtracting the differential sizes given alongside from the A size.

FSB recommends reinforcing door pulls from the ht round kit that are to be fitted to heavily used doors by means of the accessories available.

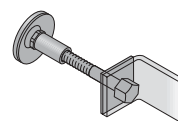
Reference:

When using elements of the ht round kit - whether for self-fabrication or as factory-welded parts - attention needs to be paid to structural specifications and conditions locally. This hefty product series is not a substitute for gym bars, neither should it be used as a

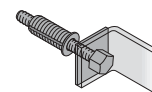
safety rail at particularly hazardous openings in buildings. If in any doubt, please contact the architect or engineer in charge. For detailed information on fixing, please turn to page 462.



back to back fixing

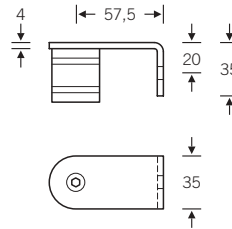


bolt through-fixing



secret single side fixing with expansion plug

ht round modular systems
up to 1,500 mm



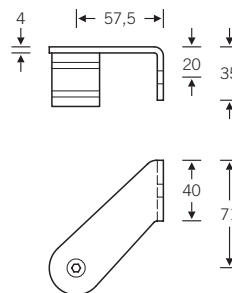
6715

Stainless steel

Straight bracket,
angled 90° inwards,
to match tube 35 x 1.5 mm Ø



Illustration r.h.

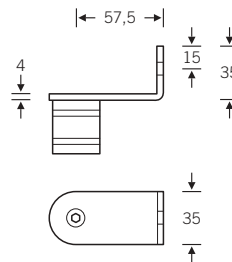


6716 ..

Stainless steel

6716 14 r.h.
6716 15 l.h.

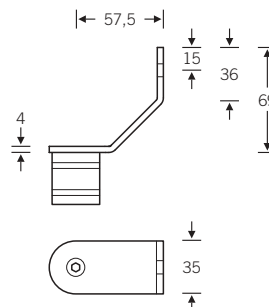
Bracket with 45° cranking,
angled 90° inwards,
to match tube 35 x 1.5 mm Ø



6717

Stainless steel

Straight bracket,
angled 90° inwards,
to match tube 35 x 1.5 mm Ø

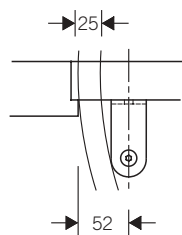


6718

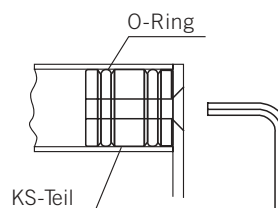
Stainless steel

Bracket for swing doors,
to match tube 35 x 1.5 mm Ø

Screw hole Ø 8,5 mm

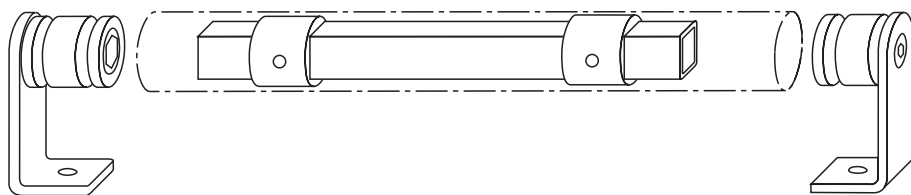


Safety clearance 52 mm

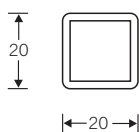
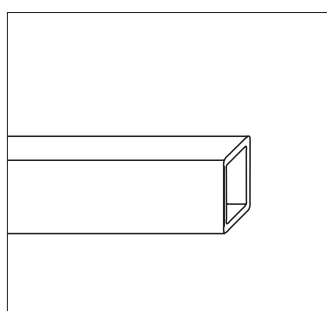


Once the tube has been cut to size (dimensions A + differential measurement), matching brackets are slotted into the tube ends and fastened with screws from the top.

Accessoires ht round modular systems



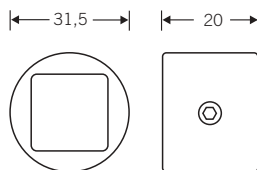
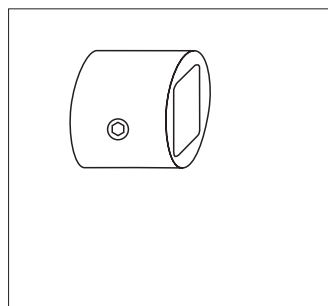
For pull handles from the modular systems HT Round over 1.5 metres long or where robust handling is to be assumed, we would recommend reinforcing the tube with square-section tubing as shown on this page.



6801 20

Steel tube hot galvanised

20 x 20 x 2 mm
Stock length 3,000 mm



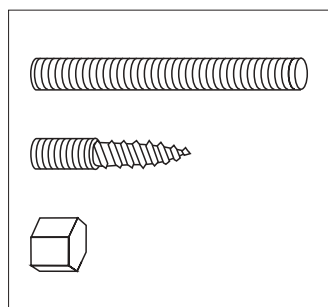
6719

Synth. mat.

Spacing sleeve with fixing screw

4

a



0313 0880 M8 x 80 mm
Steel stud

0316 0840 M8
Steel stud - for timber fixing

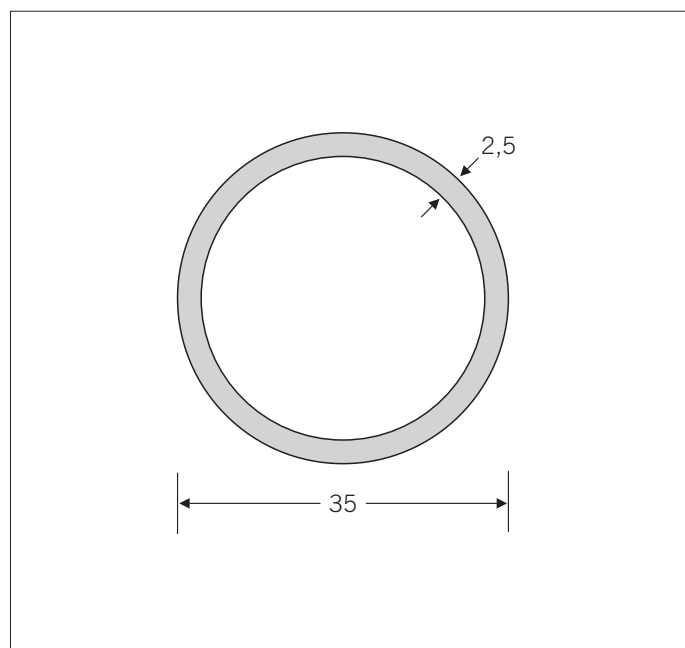
0320 0800 M8
Dome nut of stainless steel

For detailed information on fixing, please turn to page 462.

Fixing reference:

Sizing square-section tube: outside length of oval tube minus 100 mm. Then fixing of spacing sleeves with distance 350 mm.

ht round welded
from 1,500 mm up to 2,100 mm



6522

Stainless steel

Tube Ø 35 x 1.5 mm

For reasons of structural-strength, we recommend ordering a factory-welded version drawing on the elements of the HT Round kit in cases where the A dimension lies between 1,500 mm and a maximum of 2,100 mm.

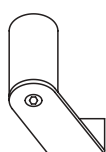
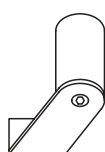
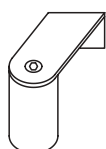
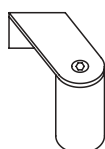
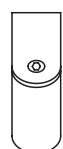
45 . .

46 . . r.h.

56 . . l.h.

47 . .

48 . .



. . 45

. . 46 r.h.

. . 56 l.h.

. . 47

. . 48

The pulls in the welded series FSB 6522 are produced to order. This involves selecting the combination of brackets desired from the illustration alongside and citing the appropriate code numbers.

It is also necessary to state the A dimension, which defines the fixing distance from the centre of the borehole for one bracket to the centre of the borehole for the other. By adding or subtracting the differential dimensions given on page 438, we calculate the length of the pull at the works prior to welding.

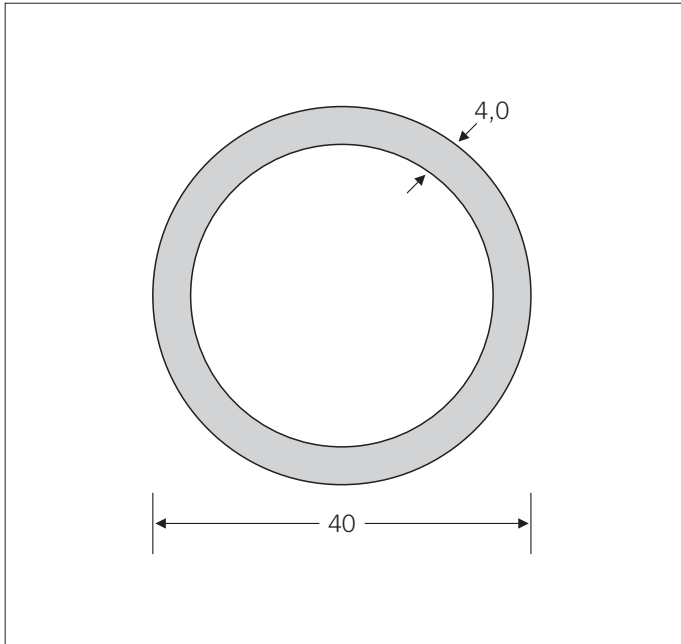
Reference:

When using elements of the HT Round kit - whether for self-fabrication or as factory-welded parts - attention needs to be paid to structural specifications and conditions locally. This hefty product series is not a substitute for gym bars, neither should it be used as a safety rail at particularly hazardous openings in buildings.

If in any doubt, please contact the architect or engineer in charge.

For detailed information on fixing, please turn to page 462.

ht round welded
for lengths more than 2,100 mm



6523

Stainless steel

Tube Ø 40 x 4 mm

For requirements where dimension A exceeds 2,100 mm, we can supply a factory-welded version incorporating a sturdy tube cross-section of 40 x 4 mm and in all other respects the design features of the HT Round series.

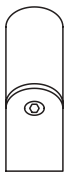
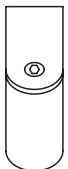
45 ..

46 .. rechts

56 .. links

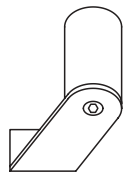
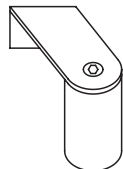
47 ..

48 ..



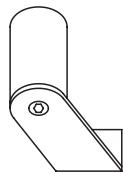
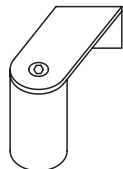
←40→

.. 45



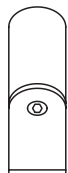
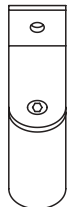
←46→

.. 46 rechts



←46→

.. 56 links



←40→

.. 47



←40→

.. 48

The pulls in the welded larger length series FSB 6522 are produced to order. This involves selecting the combination of brackets desired from the illustration alongside and citing the appropriate code numbers. It is also necessary to state the A dimension, which defines the fixing distance from the centre of the borehole for one bracket to the centre of the borehole for the other. By adding or subtracting the differential dimensions given on page 438, we calculate the length of the pull at the works prior to welding.

Reference:

When using elements of the HT Round kit - whether for self-fabrication or as factory-welded parts - attention needs to be paid to structural specifications and conditions locally. This hefty product series is not a substitute for gym bars, neither should it be used as a safety rail at particularly hazardous openings in buildings.

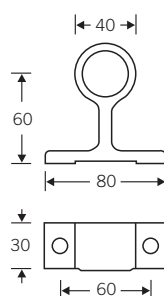
If in any doubt, please contact the architect or engineer in charge.

For detailed information on fixing, please turn to page 462.

Pull handles Modular systems R+S



The 'tube and support bracket' package is a kit system that allows the buyer effortlessly to make to measure, put together and fit in place pull handles, hand and towel rails of all types.



6800 04

Stainless steel 30 mm Ø
Side 1.5 mm
Stock length 3,000 mm

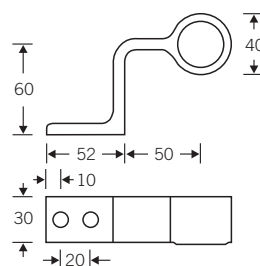
6800 09

Aluminium Ø 30 mm
Side 2.0 mm
Stock length 3,000 mm

6707

Aluminium natural colour anodised
Aluminium dark bronze colour anodised

6707 06 End support
6707 05 Intermediate support

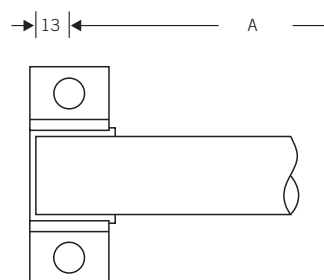


6708

Aluminium natural colour anodised
Aluminium dark bronze colour anodised

6708 06 End support
6708 05 Intermediate support

The length is established by measuring between bore holes and adding 26 mm (2 x 13 mm). The tube will now fit snugly into its end brackets. Any end play there is can easily be remedied by wedging, recentring, bonding etc., as applicable.



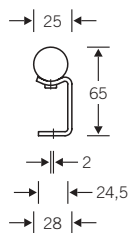
When using elements of the tubes and brackets kit attention needs to be paid to structural specifications and conditions locally. This hefty product series is not a substitute for gym bars, neither should it be used as a safety rail at particularly hazardous openings in buildings.

If in any doubt, please contact the architect or engineer in charge.

Fixing methods brackets:

Screw holes - Ø 5.3 mm for countersunk screws

Pull handles
TGS round series

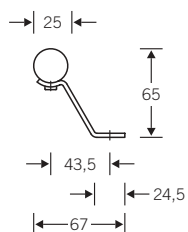
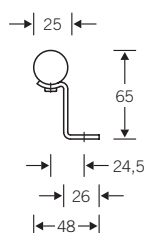


6508

Ø 25 mm

Stainless steel

Breadth of brackets 40 mm
Screw hole - Ø 8.5 mm



4
a

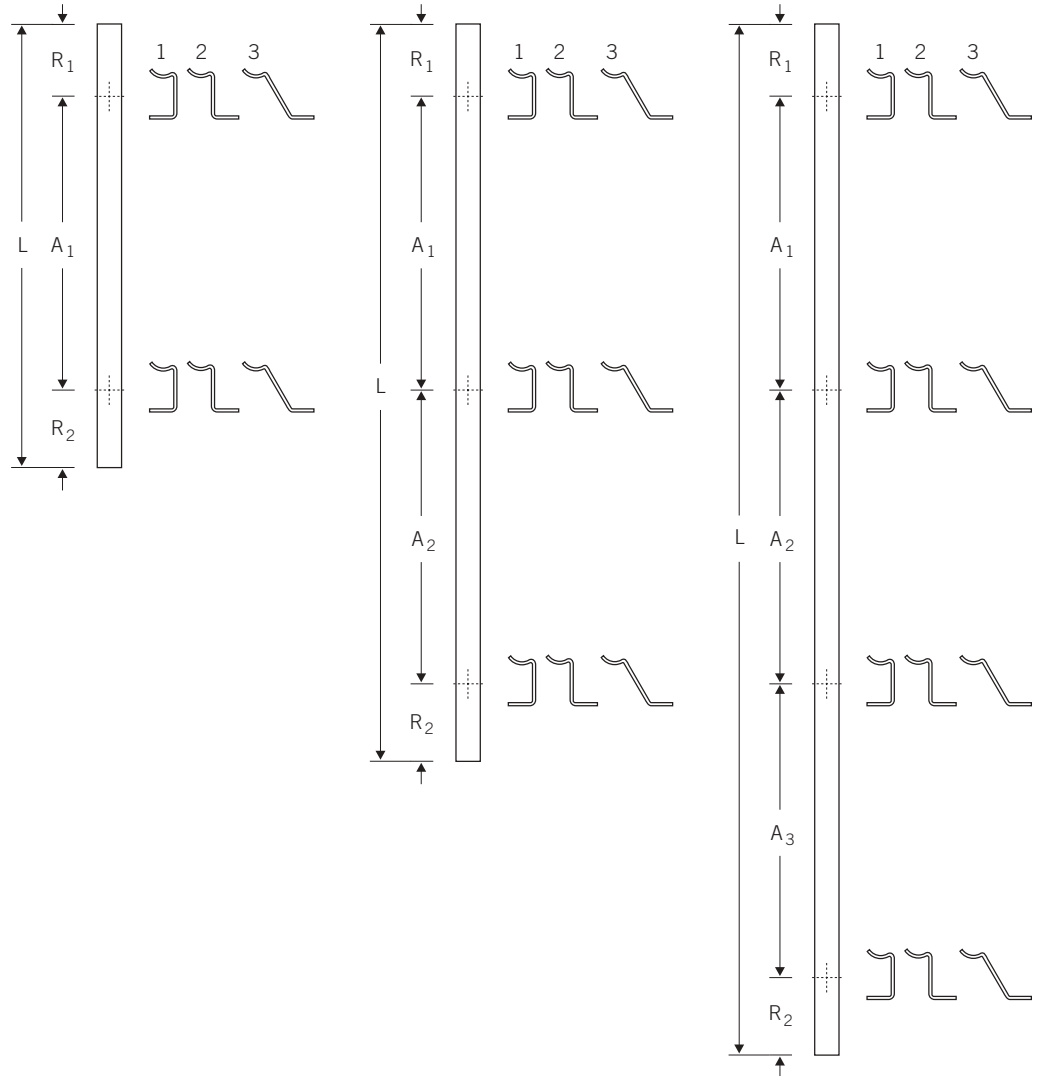
For detailed information on fixing, please turn to page 462, fixing accessories cf. page 511.

Speed and ease of installation were the design brief for the Immediate programme by FSB: The TGS series comprises stainless steel tubes with a diameter of 25 mm and three choices of brackets. We recommend allowing one bracket for each 600 mm of handle.

Please feel free to make enquiries and put FSB's new TGS series to the test. It can be called up any time and is ready and waiting to be assembled in a jiffy.



Fax copy TGS



Where express delivery is required, the TGS series can be precision assembled at the works and prepared for dispatch within 24 hours. Please submit exact measurements, ideally on a copy of the order chart shown here:

First enter number of handles required and overall length.

Then ring the brackets intended for your fixing points (in-line, offset, or diagonally offset) as well as ticking the numbered box.

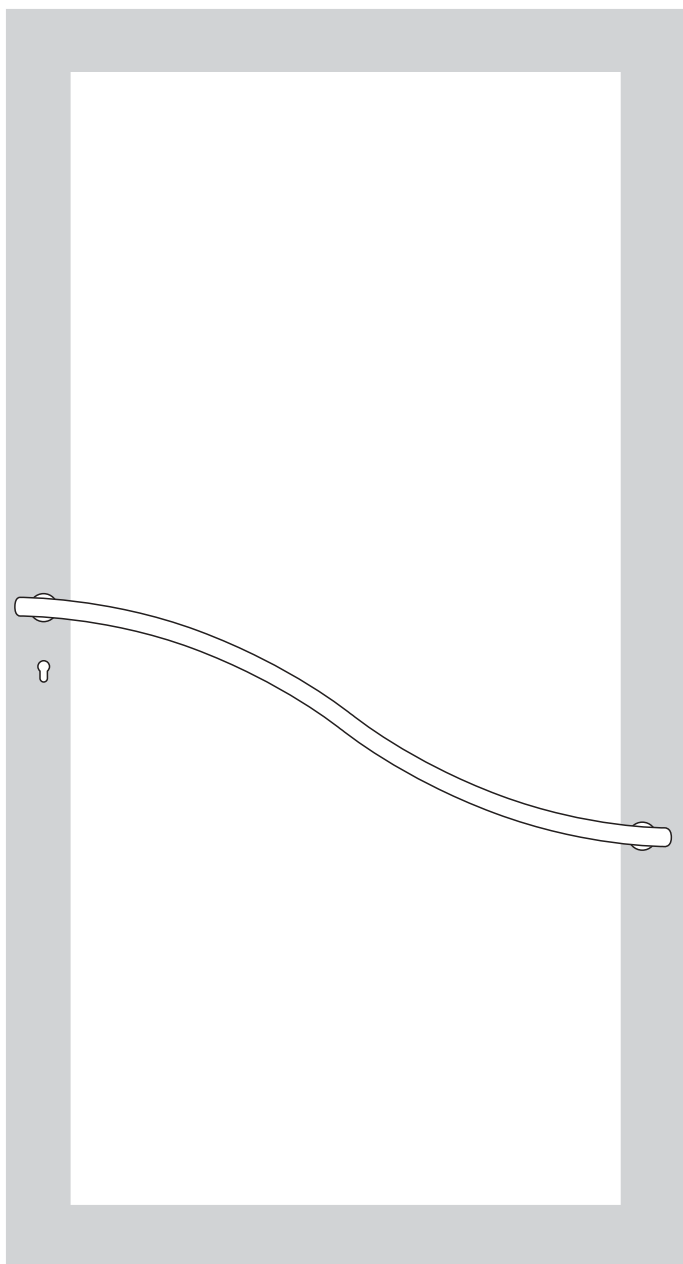
Finally, specify distances between brackets and edge spacing. For reasons of stability, the distance between brackets should not exceed 600 mm.

4
a

Quantity	Overall length L	Type of bracket						Distance between brackets			Edge spacing*	
		1		2		3		A ₁	A ₂	A ₃	R ₁	R ₂
		l.h.	r.h.	l.h.	r.h.	l.h.	r.h.					

* least 30 mm

Pull handle
Wave



6510

30 mm Ø

Aluminium
Stainless steel
Brass

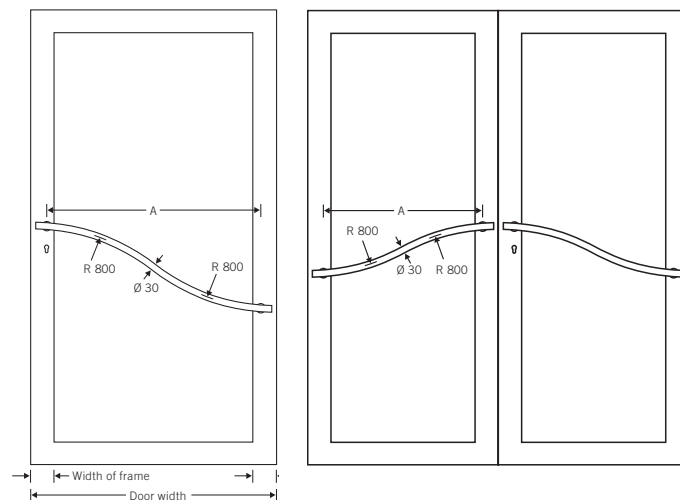
Safety clearance 65 mm for
30 mm handle projection,
fixing M8.

The wave handle is offered in
aluminium, stainless steel and
brass with the following speci-
fications:

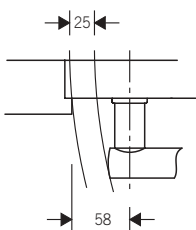
Torsion radius: 800 mm
Handle diameter: 30 mm
Bracket diameter: 35 mm

For quoting purposes, we requi-
re the following details together
with a dimensioned sketch:

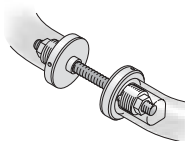
1. Width of door
2. Size A required
3. Frame widths
4. Profile section
5. In case of glass doors:
distance of fixing holes from
edge



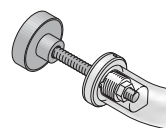
Handing details cf. page 578.



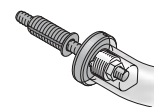
For detailed information on
fixing, please turn to page 456.



back to back
fixing

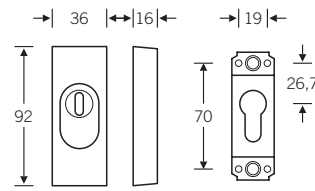


bolt through-fixing



secret single side
fixing with
expansion plug

Accessories

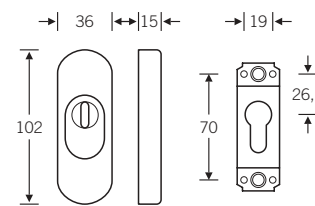


3244

Aluminium
Aluminium + colour

Suitable for cylinder projec-
tions from 8 – 15 mm

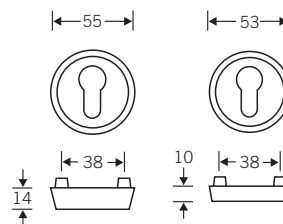
Screw hole Ø 3,2 mm



3246

Aluminium
Stainless steel
Brass
Aluminium + colour

Screw hole Ø 3,2 mm



7391

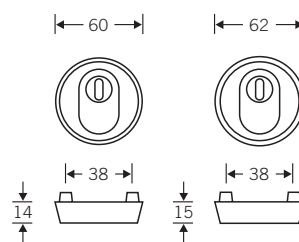
7392

7391

7392

Aluminium
Stainless steel
Brass
Aluminium + colour

Counter rose 1735 50



Aluminium
Alu. + colour

Stainless steel
Brass

7393

Aluminium
Stainless steel
Brass
Aluminium + colour

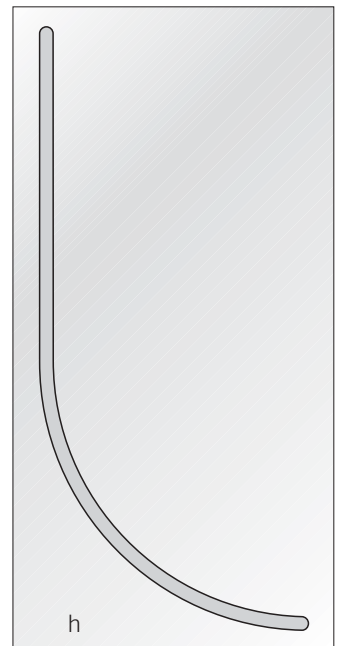
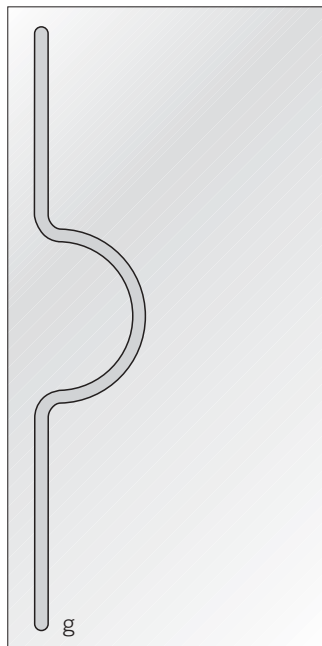
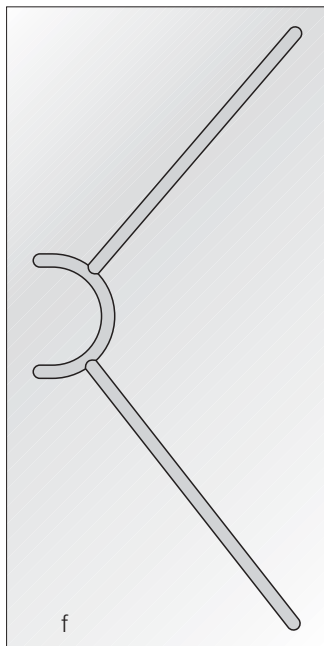
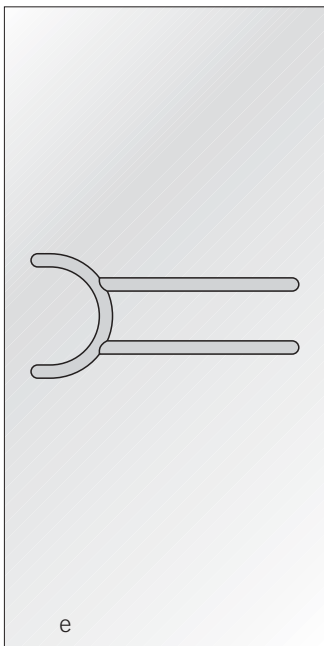
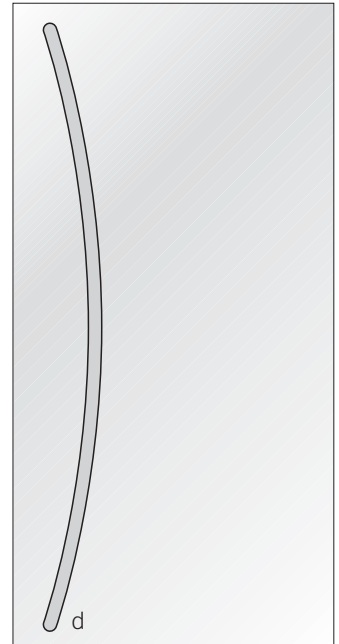
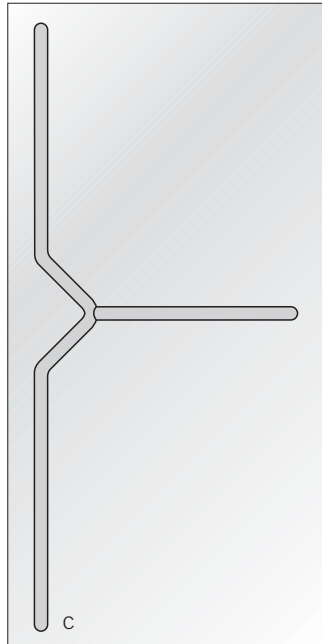
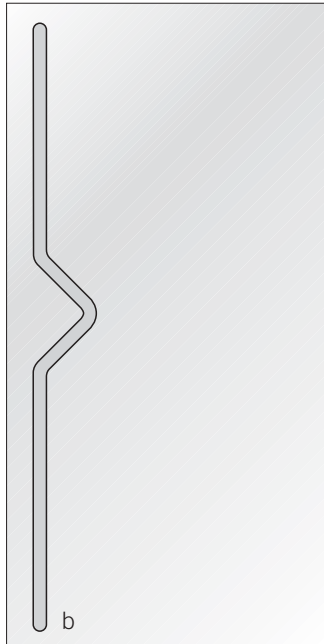
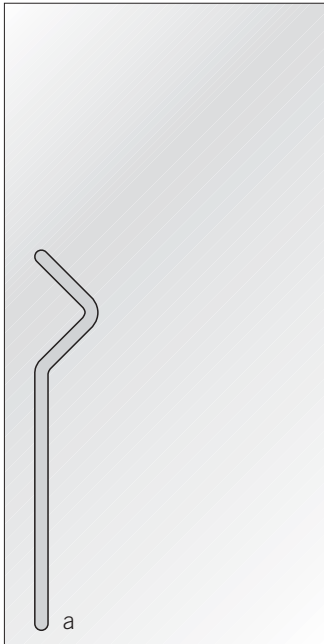
Suitable for cylinder projec-
tions from 8 – 15 mm

Counter rose 1735 50

Integrated security engineering demands that the external dimensions of an armoured rose be 11 or 16 mm greater than its fixing centres. In particular, this needs to be borne in mind when ordering a mix of hardware.

Technical information page 467

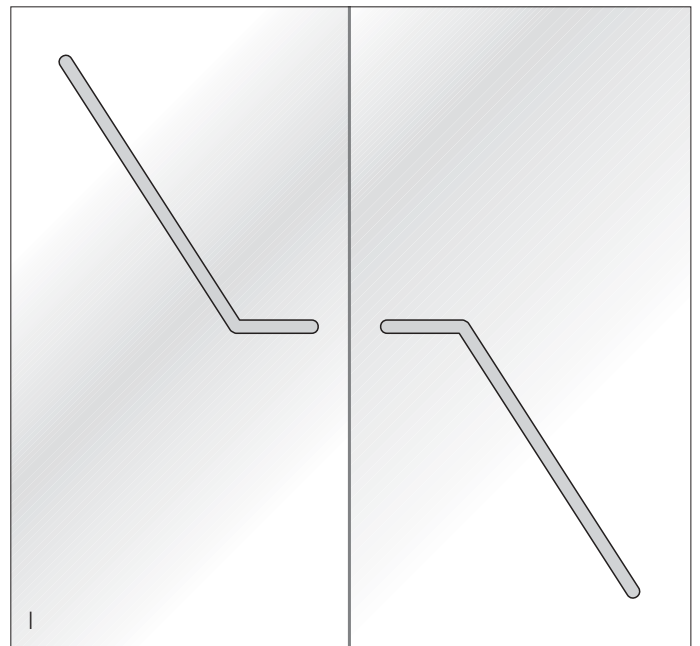
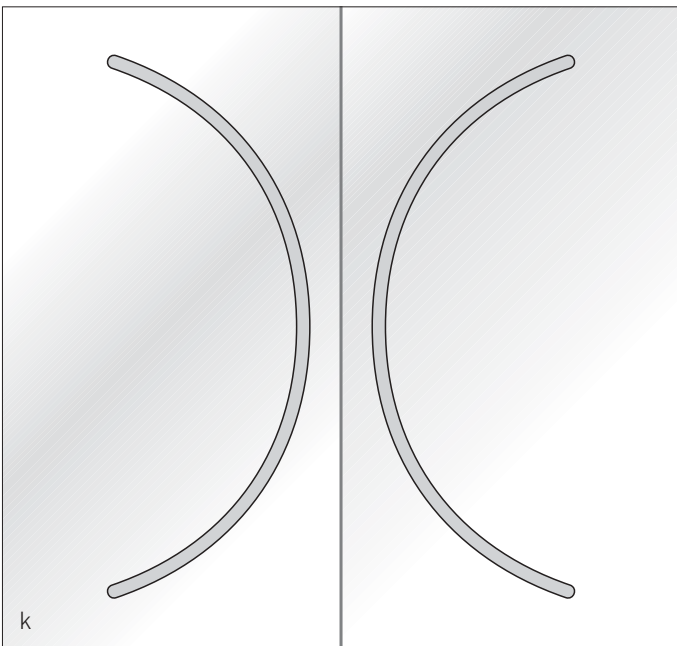
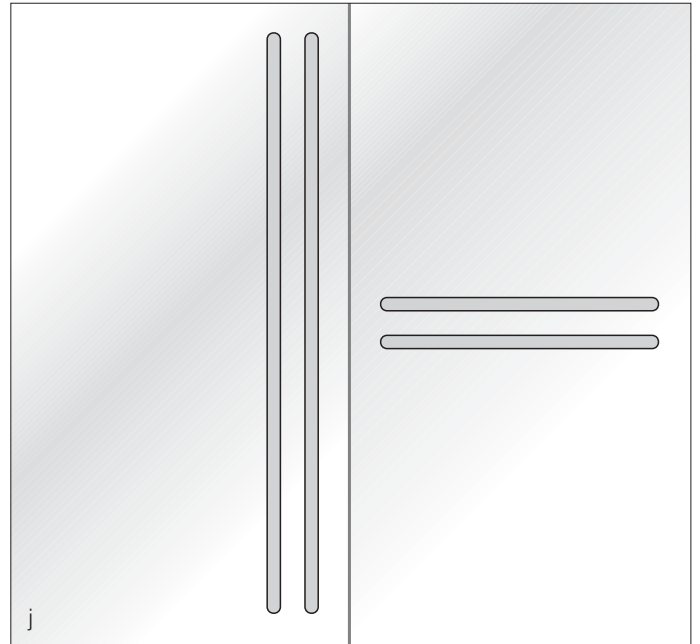
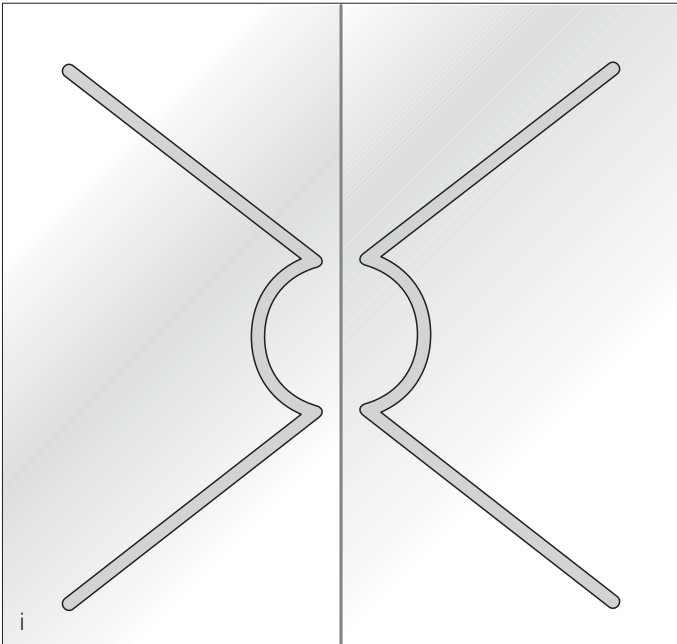
Design proposals
Pull handles Round series



The stainless steel pull handle designs shown here are intended as creative aids for architects, planners, designers, retailers and builder clients alike. Please always give details of the door's type, material and weight. We must have accurate drawings before we can supply quotes or implement orders.

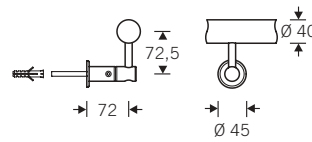
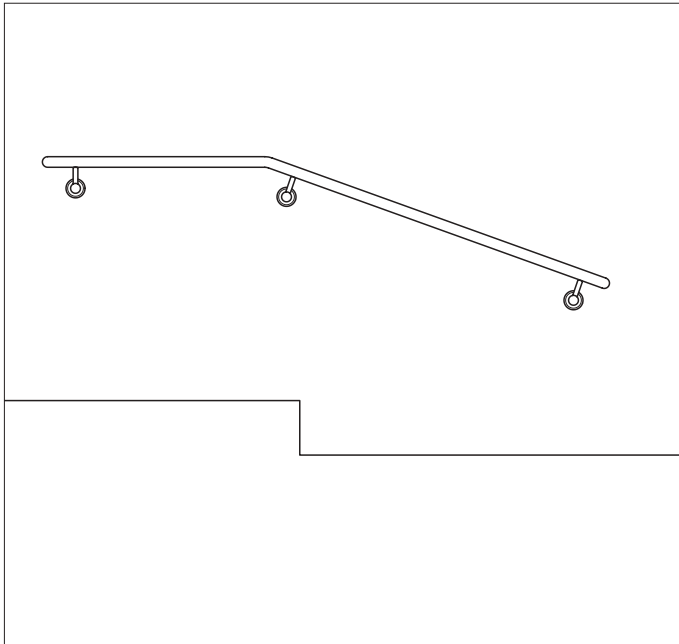
Handing details cf. page 578.

Design proposals
Pull handles Round series



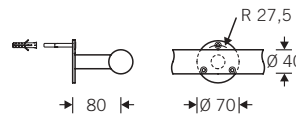
For detailed information on fixing, please turn to page 454.

Hand rail systems



Fixing method 1

6599 9991



Fixing method 2

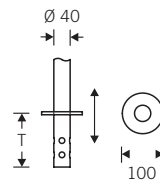
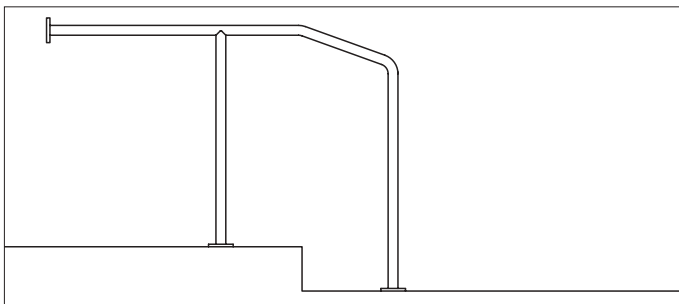
6599 9994

Typ A Stainless steel

Fixing method 1:
Hole for countersunk screw M8

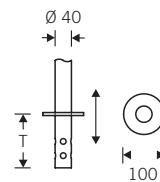
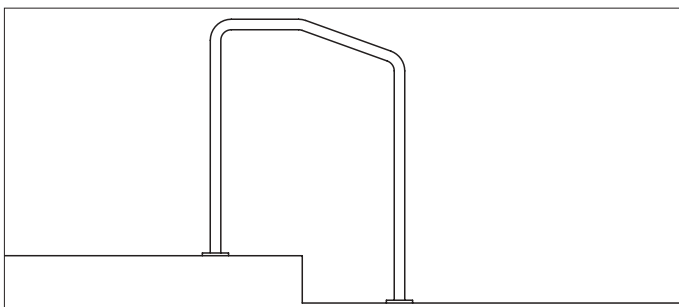
Fixing method 2:
Hole for countersunk screw M6

Screws and dowels are delivered for number of fixing points.



6599 9993

Typ B₁ Stainless steel



6599 9992

Typ B₂ Stainless steel

Fixing reference: First of all the supplied rose has to be shoved on the tubes of the handrail system. Fill up then boreholes in basis with usual constructional resins. Before hardening set up the handrail system. The rose will then be glued to the basis.

Handrail systems

In recent years FSB has occasionally made handrail systems to measures for installation near main-entrance doors. Three typical examples are shown on this page. Unlike serially produced hardware, these custom products are made to order. Responsibility for deployment and fabrication lies with the

ordering party. The variants shown here are merely meant to provide a general impression, which is why no dimensions have been given. Why not send us your specifications - plus dimensions - by fax? We will then scrutinise the details, produce drawings of our own, and submit a quote.

Fixing methods

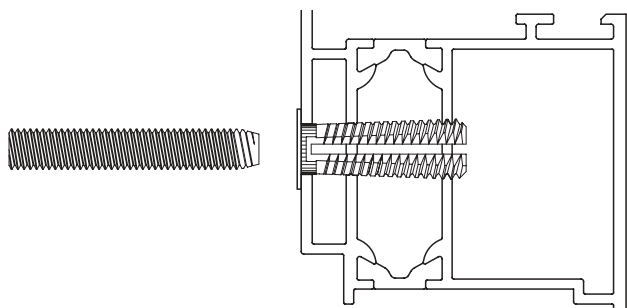
FSB expansion plug	452
FSB clamping rose fastening for pull handles with round necks	453
	454
Schematic representation of the fixing methods and accessories for the various pull handles	455

FSB Expansion Plug



FSB's straddling dowel system facilitates practical solutions for single-side concealed fixing of door pulls to timber, aluminium and composite doors whereby it is merely necessary to select the length of dowel to suit a given door thickness or stile design. Plug 20, 34 and 46mm long are available.

What makes FSB's technique so novel is the way it combines an external thread, conical styling and lateral slots to ensure that, once it has been driven in, it straddles to secure the set screw, as the latter is turned, whatever the material or type of stile. Skewing of the plug is prevented by knurling at the top of its shank.



Step 1

Drill holes 10.5 mm in diameter to accommodate the FSB plug (if using a manual drill select a 10mm bit).

Step 2

Once the plug has been driven into the borehole, tighten the set screw, thus causing the dowel's conical surfaces to spread and produce the fixing point for the handle in the stile.



Step 3

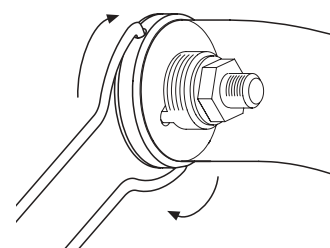
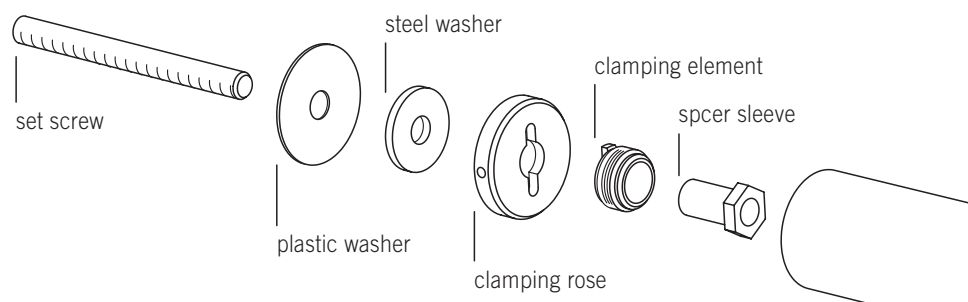
The handle is then fastened to these fixing points.

FSB Clamping Rose Fastening



The FSB clamping rose fastening is a new method of assembling door-pulls whereby the pull is tightened fast against the surface of the door. Visible fixing screws are done away with.

All door pulls with round necks are supplied as female parts with an internal left-handed thread 18 by 1.5 mm (M8 fixing) or 14 by 1.5 mm (M6 fixing). A clamping rose fastening comprises a plastic washer, a steel washer, a clamping element, a rotating rose and a spacer sleeve that are securely held in place by a plastic clip and pre-attached to the end of the handle.



FSB Clamping Rose Fastening

The new FSB clamping rose fastening allows all FSB door pulls with round necks to be screwed tight against the surface of the door by means of an easy-to-operate clamping rose. Radial play allowed for by FSB ensures the necessary tolerances during fitting. Assembly is as follows:

Step 1

First fit into the door the set screw over which the clamping elements are to pass. How this is done depends on whether back to back fixing, bolt through-fixing or secret single side fixing with expansion plug.

Step 2

Then detach the clamping elements from the handle ends by turning them anticlockwise. Remove the plastic clip and slip the plastic washer, the steel washer and the clamping element over the set screw in that order. Using the spacer sleeve, screw the elements together, ensuring that the clamping rose and clamping element remain free to rotate.

Step 3

Place the handle on the fixing points and tighten against the door by alternately turning the clamping roses in a clockwise direction.

A turning device for the FSB clamping rose is supplied with the product.

Borehole dimensions

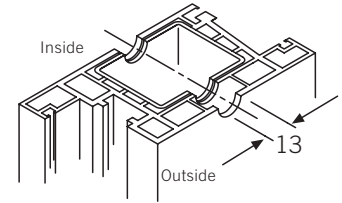
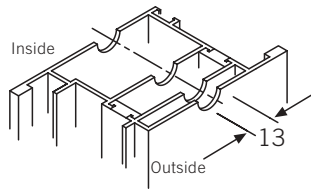
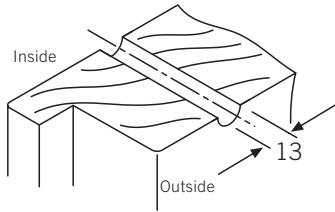
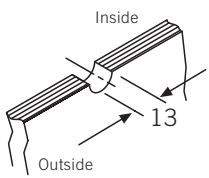
Glass door

Timber door

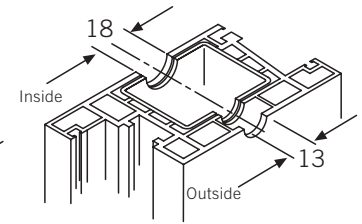
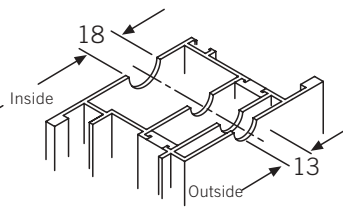
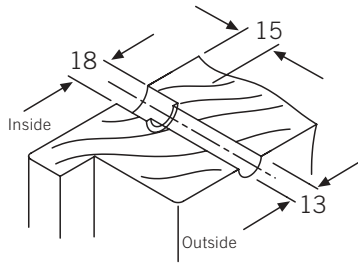
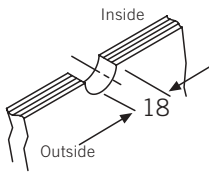
Metal door

Synth. mat. door

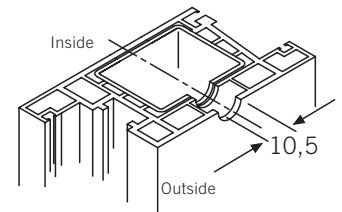
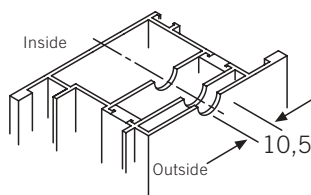
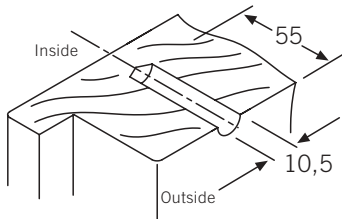
back to back fixing



bolt through-fixing



secret single side fixing
with expansion plug



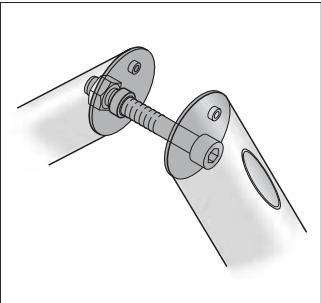
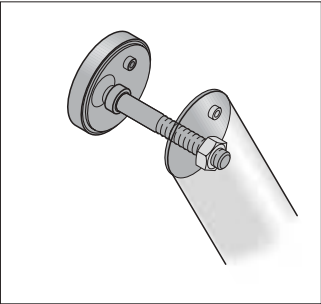
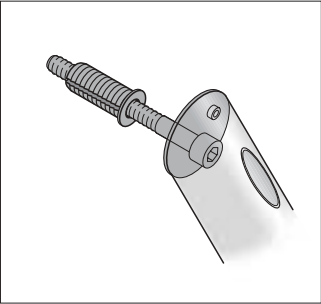
Fixing methods

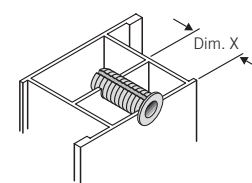
Pull handles

Pull handle series

6635
6636
6637

When selecting and ordering pull handles, please note that the pulls in this series are produced as threaded-part and through-fixing sections.

	Fixing method	Fixing accessories	Item nos.
	back to back fixing	2 each socket head cup screws M8 4 each plastic washers 2 each lids Stainless steel	0582 1008 glass door 8 – 10 mm 0582 3038 38 – 44 mm 0582 3045 45 – 49 mm 0582 3050 50 – 54 mm 0582 3055 55 – 59 mm 0582 3060 60 – 64 mm 0582 3065 65 – 69 mm 0582 3070 70 – 74 mm 0582 3075 75 – 79 mm 0582 3080 80 – 84 mm
	bolt through-fixing	2 each countersunk screw M8 4 each plastic washers 2 each fixing washers with caps Stainless steel	0582 2008 glass door 8 – 10mm 0582 4038 38 – 44 mm 0582 4045 45 – 49 mm 0582 4050 50 – 54 mm 0582 4055 55 – 59 mm 0582 4060 60 – 64 mm 0582 4065 65 – 69 mm 0582 4070 70 – 74 mm 0582 4075 75 – 79 mm 0582 4080 80 – 84 mm
	secret single side fixing with expansion plug	2 each socket head cup screws M8 2 each plastic washers 2 each expansion plugs brass dull nickel finish 2 each lids Stainless steel	0582 0010 Dim. X 10 – 16 mm length of dowel 20 mm 0582 0016 Dim. X 16 – 30 mm length of dowel 34 mm 0582 0024 Dim. X 24 – 44 mm length of dowel 48 mm



Dim. X = Dim. of chamber

For timber doors the possible max. length of dowel is to be chosen.

Fixing methods

Pull handles

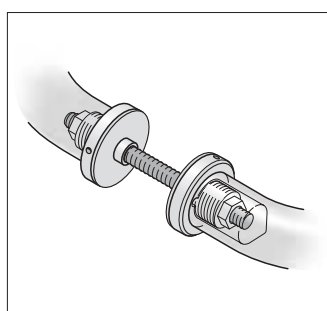
Pull handle series round M8

6501, 6502, 6503, 6504,
6505, 6506, 6507, 6510,
6514, 6529, 6531, 6532,
6533, 6534, 6535, 6536,
6537, 6538, 6580, 6582,
6583, 6602, 6603, 6604,
6605, 6606, 6607, 6608,
6609, 6623, 6624, 6625,
6630, 6647, 6650, 6652,
6653, 6655, 6658, 6659,
6661, 6662, 6663, 6664,
6669, 6670, 6673, 6677,
6678, 6679, 6681, 6683,
6688

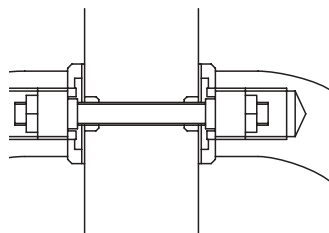
Fixing method

Fixing accessories

Item nos.



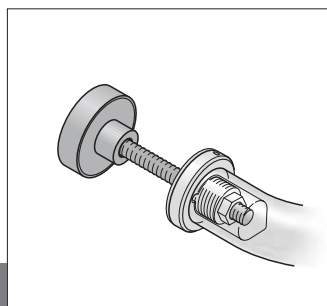
back to back fixing



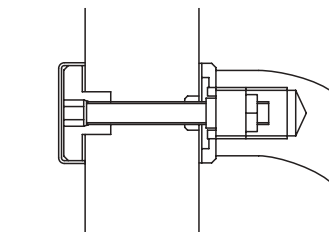
2 each set screws M8

0580 1008 glass door
8 – 10 mm

0580 3035 35 – 54 mm
0580 3055 55 – 74 mm
0580 3075 75 – 94 mm



bolt through-fixing



2 each set screws M8

Grip diameter 25/30 mm

2 each fixing nuts with caps

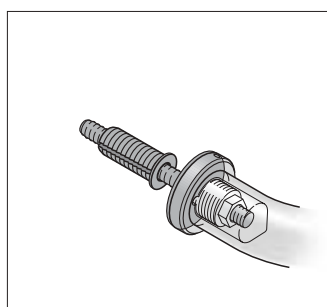
0580 2308 glass door
8 – 10 mm

0580 4335 35 – 44 mm
0580 4345 45 – 54 mm
0580 4355 55 – 64 mm
0580 4365 65 – 74 mm
0580 4375 75 – 84 mm

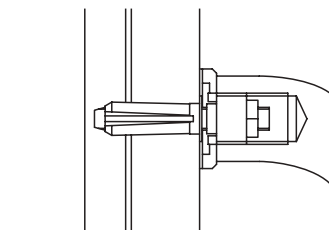
Grip diameter 35/40 mm

0580 2408 glass door
8 – 10 mm

0580 4435 35 – 44 mm
0580 4445 45 – 54 mm
0580 4455 55 – 64 mm
0580 4465 65 – 74 mm
0580 4475 75 – 84 mm



secret single side fixing
with expansion plug



2 each set screws M8

0580 0010 Dim. X 10 – 16 mm
length of dowel 20 mm

2 each expansion plugs
brass dull nickel finish

0580 0016 Dim. X 16 – 30 mm
length of dowel 34 mm

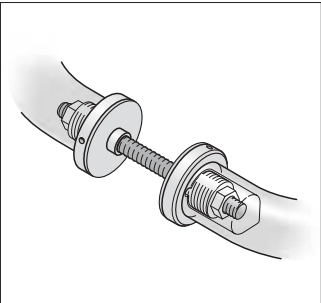
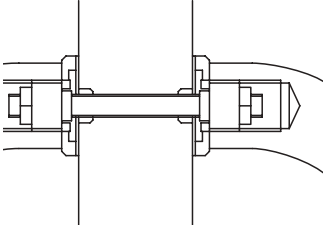
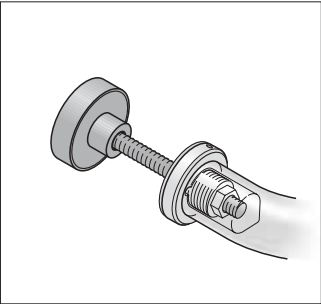
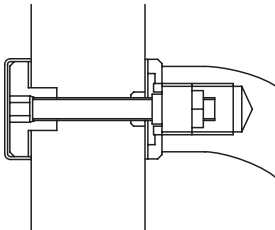
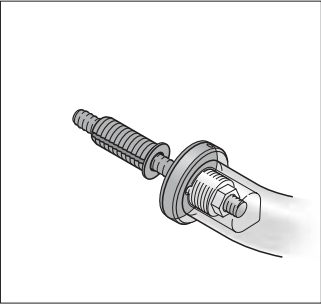
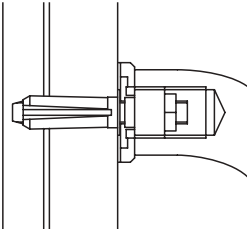
0580 0024 Dim. X 24 – 44 mm
length of dowel 48 mm

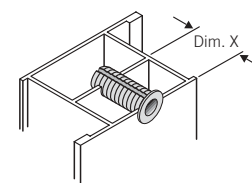
Fixing methods

Pull handles

Pull handle series round M6

6108, 6109, 6110, 6111,
6112, 6113, 6610, 6611,
6612, 6613, 6619, 6626,
6627, 6642, 6643, 6649,
6660

	Fixing method	Fixing accessories	Item nos.
	back to back fixing	2 each set screws M6	0580 1208 glass door 8 – 10 mm 0580 3235 35 – 54 mm 0580 3255 55 – 74 mm 0580 3275 75 – 94 mm
			
	bolt through-fixing	2 each set screws M6 2 each fixing nuts with caps	Grip diameter 20/25 mm 0580 2208 glass door 8 – 10 mm 0580 4235 35 – 44 mm 0580 4245 45 – 54 mm 0580 4255 55 – 64 mm 0580 4265 65 – 74 mm 0580 4275 75 – 84 mm
			
	secret single side fixing with expansion plug	2 each set screws M6 2 each expansion plugs brass dull nickel finish	0580 0210 Dim. X 10 – 16 mm length of dowel 20 mm 0580 0216 Dim. X 16 – 30 mm length of dowel 34 mm 0580 0224 Dim. X 24 – 44 mm length of dowel 48 mm
			



Dim. X = Dim. of chamber

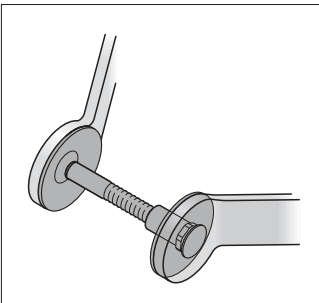
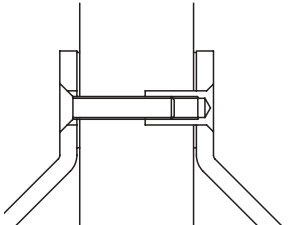
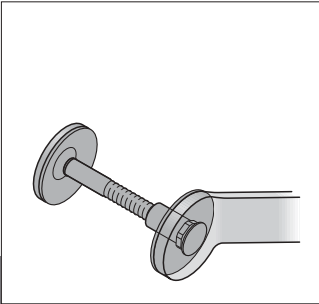
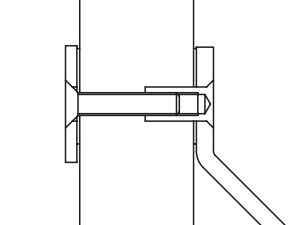
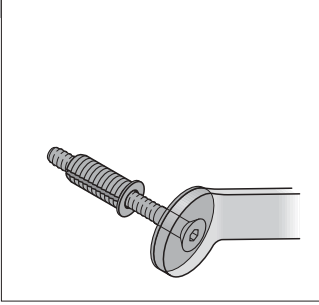
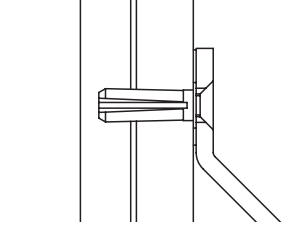
For timber doors the possible max. length of dowel is to be chosen.

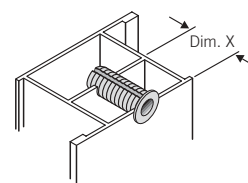
Fixing methods Pull handles

Pull handles series

6525

6615
6616
6674
6675

	Fixing method	Fixing accessories	Item nos.
		2 each countersunk screws M8 with sleeve nuts M8 stainless steel	0583 1008 glass door 8 – 10 mm
		4 each plastic washers	0583 3034 34 – 43 mm 0583 3044 44 – 53 mm 0583 3054 54 – 63 mm 0583 3064 64 – 73 mm 0583 3074 74 – 83 mm
		2 each countersunk screws M8 with sleeve nuts M8 stainless steel	0583 2008 glass door 8 – 10 mm
		2 each washers stainless steel 4 each plastic washers	0583 4036 36 – 45 mm 0583 4046 46 – 55 mm 0583 4056 56 – 65 mm 0583 4066 66 – 75 mm 0583 4076 76 – 85 mm
		2 each countersunk screws M8 Stainless steel	0583 0010 Dim. X 10 – 16 mm length of dowel 20 mm
		2 each expansion plugs brass dull nickel finish 2 each plastic washers	0583 0016 Dim. X 16 – 30 mm length of dowel 34 mm 0583 0024 Dim. X 24 – 44 mm length of dowel 48 mm



Dim X = Dim. of chamber

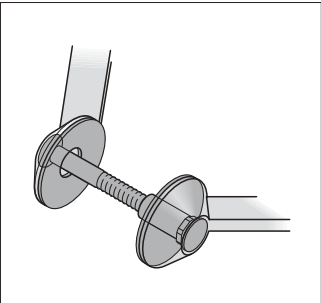
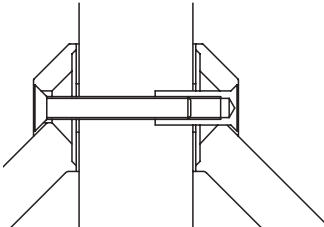
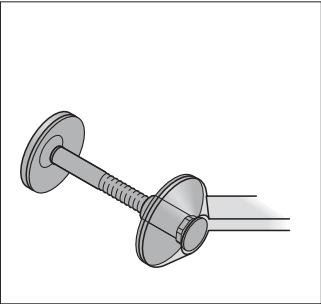
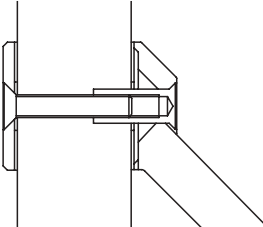
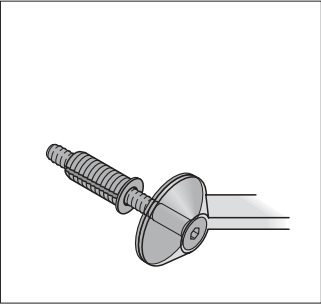
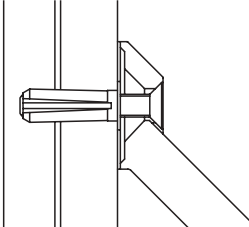
For timber doors the possible maximum length of dowel is to be chosen.

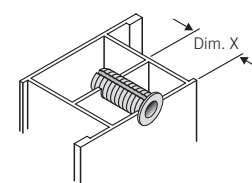
Fixing methods

Pull handles

Pull handle series

6620
6621

	Fixing method	Fixing accessories	Item nos.
		2 each countersunk screw M 8 with sleeve nuts M8 Stainless steel	0584 1008 glass door 8 – 10 mm
		4 each plastic washers	0584 3035 35 – 44 mm 0584 3045 45 – 54 mm 0584 3055 55 – 64 mm 0584 3065 65 – 74 mm 0584 3075 75 – 84 mm
		2 each countersunk screw M8 with sleeve nuts M8 Stainless steel	0584 2008 glass door 8 – 10 mm
		2 each washers Stainless steel	0584 4035 35 – 44 mm 0584 4045 45 – 55 mm 0584 4055 55 – 65 mm 0584 4065 65 – 75 mm
		2 each countersunk screw M8 Stainless steel	0584 0010 Dim. X 10 – 16 mm length of dowel 20 mm
		2 each expansion plugs brass dull nickel finish	0584 0016 Dim. X 16 – 30 mm length of dowel 34 mm
		2 each plastic washers	0584 0024 Dim. X 24 – 44 mm length of dowel 48 mm



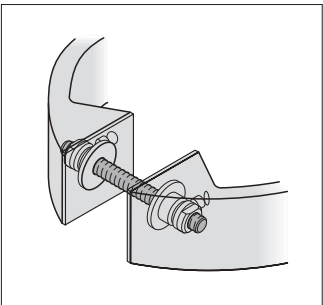
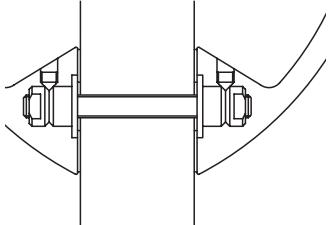
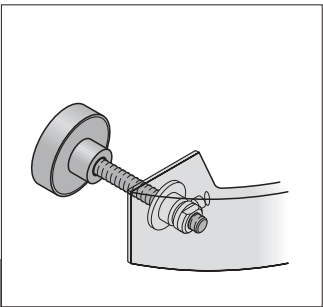
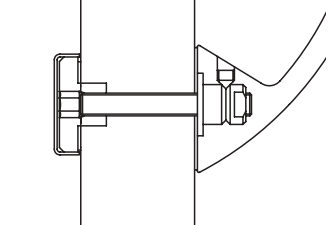
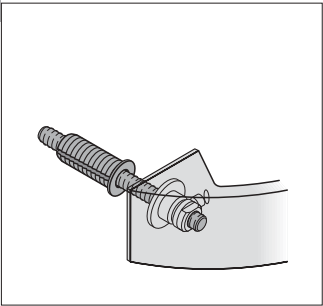
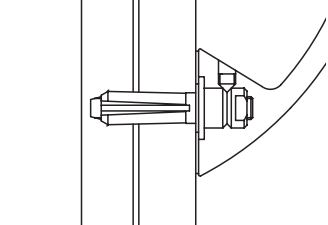
Dim. X = Dim. of chamber

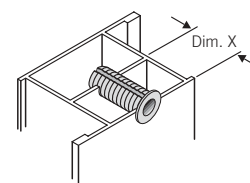
For timber doors the possible max. length of dowel is to be chosen.

Fixing methods Pull handles

Pull handle series

6526

	Fixing method	Fixing accessories	Item nos.
		2 each set screws M8	0587 1008 glass door 8 – 10 mm
			0587 3035 35 – 54 mm
			0587 3055 55 – 74 mm
			0587 3075 75 – 94 mm
		2 each set screws M8 2 each fixing nuts with caps	0587 2308 glass door 8 – 10 mm
			0587 4335 35 – 44 mm
			0587 4345 45 – 54 mm
			0587 4355 55 – 64 mm
			0587 4365 65 – 74 mm
			0587 4375 75 – 84 mm
		2 each set screws M8 2 each expansion plugs brass dull nickel finish	0587 0010 Dim. X 10 – 16 mm length of dowel 20 mm
			0587 0016 Dim. X 16 – 30 mm length of dowel 34 mm
			0587 0024 Dim. X 24 – 44 mm length of dowel 48 mm

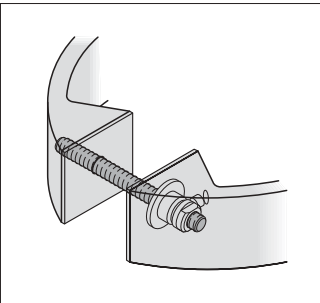
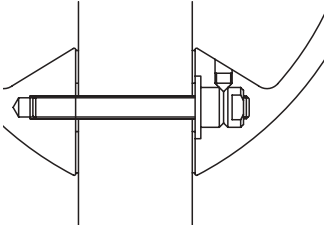
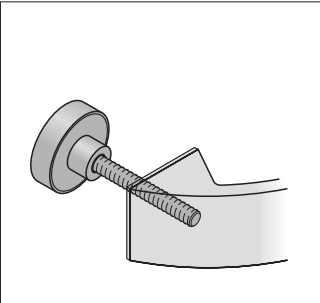
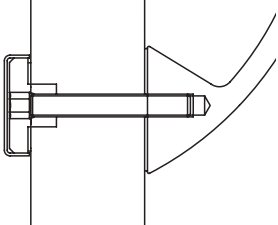
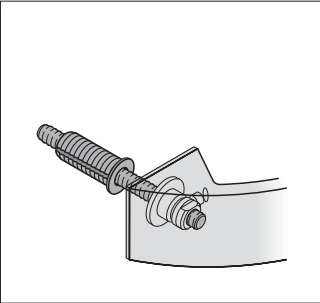
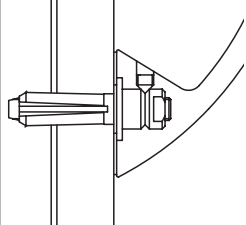


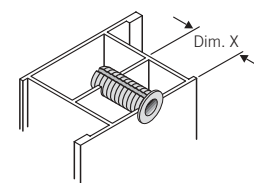
Dim. X = Dim. of chamber

For timber doors the possible max. length of dowel is to be chosen.

Fixing methods

Pull handles

Pull handle series			
6110 6111 6112 6113 6642 6643			
Fixing method	Fixing accessories	Item nos.	
	back to back fixing 	2 each set screws M6	0580 1208 glass door 8 – 10 mm 0580 3235 35 – 54 mm 0580 3255 55 – 74 mm 0580 3275 75 – 94 mm
	bolt through-fixing 	2 each set screws M6 2 each fixing nuts with caps	0580 2208 glass door 8 – 10 mm 0580 4235 35 – 44 mm 0580 4245 45 – 54 mm 0580 4255 55 – 64 mm 0580 4265 65 – 74 mm 0580 4275 75 – 84 mm
	secret single side fixing with expansion plug 	2 each set screws M6 2 each expansion plugs brass dull nickel finish	0580 0210 Dim. X 10 – 16 mm length of dowel 20 mm 0580 0216 Dim. X 16 – 30 mm length of dowel 34 mm 0580 0224 Dim. X 24 – 44 mm length of dowel 48 mm



Dim. X = Dim. of chamber

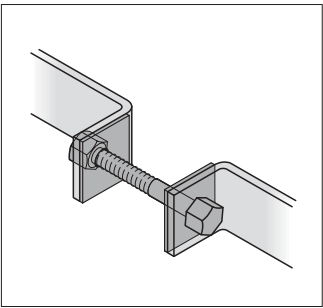
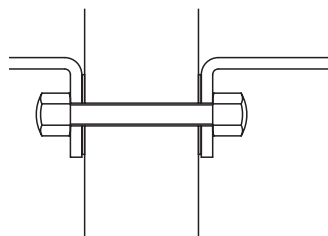
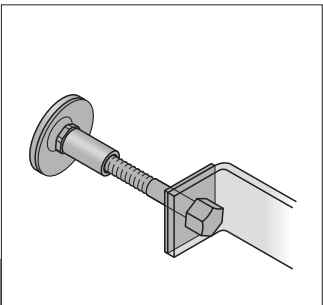
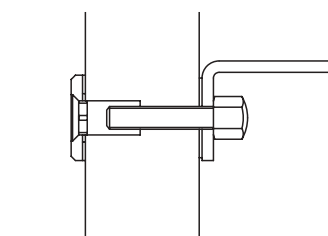
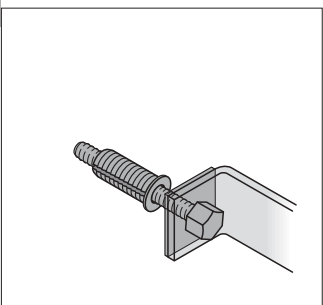
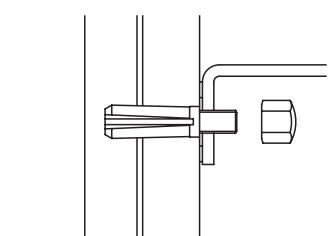
For timber doors the possible max. length of dowel is to be chosen.

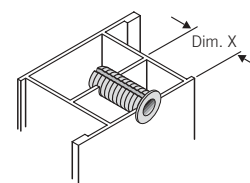
Fixing methods

Pull handles

Pull handle series

ht oval modular systems
 ht round modular systems
 6524
 6522
 6523
 6508

	Fixing method	Fixing accessories	Item nos.
	back to back fixing	2 each set screws M8 4 each sleeve nuts M8 Stainless steel 4 each plastic washers	0585 3035 35 – 39 mm 0585 3040 40 – 44 mm 0585 3045 45 – 49 mm 0585 3050 50 – 54 mm 0585 3055 55 – 59 mm 0585 3060 60 – 64 mm 0585 3065 65 – 69 mm 0585 3070 70 – 74 mm 0585 3075 75 – 79 mm 0585 3080 80 – 84 mm
			
	bolt through-fixing	2 each set screws M8 2 each sleeve nuts M8 Stainless steel 2 each sleeve nuts M8 with washers Stainless steel 4 each plastic washers	0585 2035 35 – 44 mm 0585 2045 45 – 54 mm 0585 2055 55 – 64 mm 0585 2065 65 – 74 mm 0585 2075 75 – 84 mm
			
	secret single side fixing with expansion plug	2 each set screws M8 2 each sleeve nuts M8 Stainless steel 2 each expansion plugs brass dull nickel finish 2 each plastic washers	0585 0010 Dim. X 10 – 16 mm length of dowel 20 mm 0585 0016 Dim. X 16 – 30 mm length of dowel 34 mm 0585 0024 Dim. X 24 – 44 mm length of dowel 48 mm
			



Dim. X = Dim. of chamber

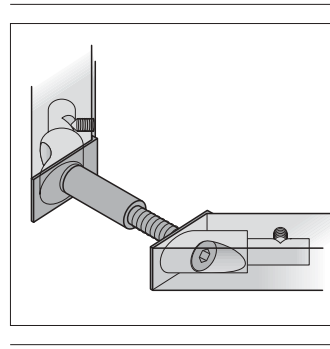
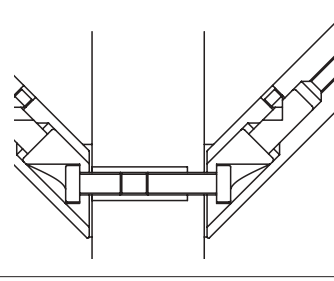
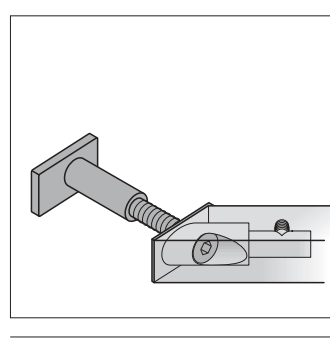
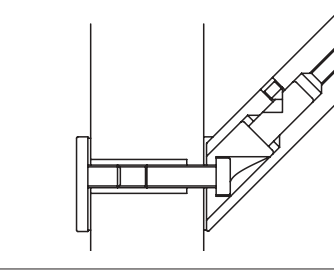
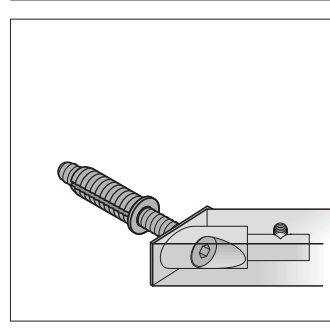
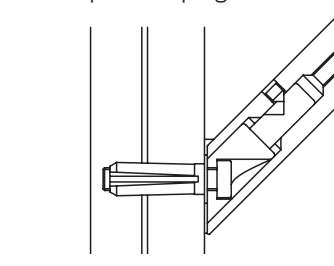
For timber doors the possible max. length of dowel is to be chosen.

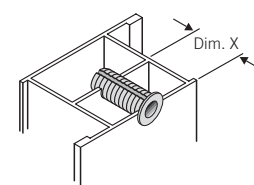
Fixing methods

Pull handles

Pull handle series

6710
6711
6712
6713

	Fixing method	Fixing accessories	Item nos.
	<p>back to back fixing</p> 	<p>1 M8 cheese-head screw 1 nut 1 plastic bushing</p> <p>2 M8 cheese-head screws 1 threaded bushing</p> <p>Borehole \varnothing 13 mm</p>	<p>0588 1008 glass door 8 – 10 mm</p> <p>0588 3035 35 – 44 mm 0588 3045 45 – 54 mm 0588 3055 55 – 64 mm 0588 3065 65 – 74 mm 0588 3075 75 – 84 mm</p>
	<p>bolt through-fixing</p> 	<p>1 nut 1 fixing plate 1 plastic bushing</p> <p>1 M8 cheese-head screw 1 threaded bushing 1 fixing plate</p> <p>Borehole \varnothing 13 mm</p>	<p>0588 2008 glass door 8 – 10 mm</p> <p>0588 4035 35 – 44 mm 0588 4045 45 – 54 mm 0588 4055 55 – 64 mm 0588 4065 65 – 74 mm 0588 4075 75 – 84 mm</p>
	<p>secret single side fixing with expansion plug</p> 	<p>1 M8 cheese-head screw 1 expansion plugs brass dull nickel finish</p> <p>Borehole \varnothing 10,5 mm</p>	<p>0588 0010 Dim. X 10 – 16 mm length of dowel 20 mm</p> <p>0588 0016 Dim. X 16 – 30 mm length of dowel 34 mm</p> <p>0588 0024 Dim. X 24 – 44 mm length of dowel 48 mm</p>



Dim. X = Dim. of chamber

For timber doors the possible max. length of dowel is to be chosen.

Entrance doors

Security fittings

4b

Technical information	466
Design + Security	468
Security fittings for framed doors	478
Protection roses	480

Design + Security



Criminal statistics show that doors and windows are the most popular points of entry for intruders. Police and insurance sources therefore advise paying special attention to ensuring doors and windows are secure.

The industry has taken appropriate measures in this respect. German industrial standards drawn up to aid orientation include 'Burglar-resistant windows, doors and additional barriers' (DIN 18 103) and 'Builders hardware and security furniture (concepts and definitions, dimensions, requirements, testing and labelling)' (DIN 18 257).

Alongside this, the newest standards pr. EN 1906 and DIN V ENV 1627 - 1630 have been developed.

With the publication of Manual 2000, FSB posed the rhetorical question as to whether this purely technical approach is the only way to proceed and promptly answers it with its 'Design + Security' deal.

On the pages that follow, FSB sets forth no fewer than nine different hardware design options for main and internal entrance doors that vary in terms of their backplate, knobs or lever handle designs. The nine designs are available in either stainless steel or aluminium, moreover.

With this design-driven deal, FSB takes the worry out of security for architects, interior designers, joiners and end-users. In the first instance they buy what appeals to them; only then do they specify the level of protection they want. We've dubbed it 'Design + Security'. Having opted for a particular design, all you have to do is tick Security Class box 1, 2, 3 or 4. FSB will then slot the security technology selected into the design package chosen.

Gone are the days when you had to make do with the cheapest design if you wanted the lowest security rating and the best designs were only to be had for the top rating. FSB is turning the tables. Only once a given design has been chosen the purchaser's must decide the appropriate security rating to be chosen.

The FSB design range is spaciouly and clearly set out on following pages. Browse through at your leisure until you're sure which one pleases you most. Next to the design selection you will find a technical question sheet on which you are asked to tick the technical specifications you desire. Simple as that.

For the technically curious, we explain the essence of the four security ratings alongside. At European level, the German three-rating industrial norms currently in force are to be revised in such a way that, under EN 1906, there will in future be four security ratings. We have matched these with the current DIN classifications:

Security class 1 (EN 1906) open version (ES 0)

Strength of backplates 7 kN
Maximum flexion ≤ 5 mm
Tensile force of fastening 10 kN
Maximum deformation ≤ 5 mm

Security class 2 (EN 1906) open version

(ES-1 K Reg.-No. 4X078)
(ES-1 L Reg.-No. 4X076)

Strength of backplates 10 kN
Maximum flexion ≤ 5 mm
Tensile force of fastening 15 kN
Maximum deformation ≤ 5 mm
Drill resistance 30 s
Chisel test resistance 3 blows

Security class 2 (EN1906) with anti-tamper device (ZA)

(ES-1 K-ZA Reg.-No. 4X077)
(ES-1 L-ZA Reg.-No. 4X079)

Strength 10 kN
Maximum flexion ≤ 5 mm
Tensile force of fastening 15 kN
Maximum deformation ≤ 5 mm
Drill resistance 30 s
Chisel test resistance 3 blows
Strength of ZA 10 kN

Security class 3 (EN 1906) with anti-tamper device (ZA)

(ES-2 L-ZA Reg.-No. 4X080)

Strength 15 kN
Maximum flexion ≤ 5 mm
Tensile force of fastening 20 kN
Maximum deformation ≤ 5 mm
Drill resistance 3 min
Chisel test resistance 6 blows
Strength of ZA 15 kN

Security class 4 (EN 1906) with anti-tamper device (ZA)

(ES-3 L-ZA Reg.-No. 4X081)

Strength 20 kN
Maximum flexion ≤ 5 mm
Tensile force of fastening 30 kN
Maximum deformation ≤ 5 mm
Drill resistance 5 min
Chisel test resistance 12 blows
Strength of ZA 20 kN

Design + Security

In Security Class 1, open version (fig. 2), FSB supplies all eight design options with long backplates that accommodate cylinder projections of approx. 11 mm in the cylinder area (fig. 1)

In Security Class 2, open and anti-tamper versions (fig. 3), there is a choice between long and short backplate variants for all eight design options. In Security class 2 FSB supplies a counter-rose version in addition to the counter-backplate variante.

The same dimensional stipulations as set out for Security Class 1 apply for the open version. In the anti-tamper version (ZA), cylinder projections of 8 - 16 mm are catered for.

The design stipulations as set out for Security Class 2, anti-tamper version (ZA), also apply for Security Classes 3 and 4.

To aid comprehension of the engineering involved, the relevant designs are shown alongside.



fig. 1



fig. 2

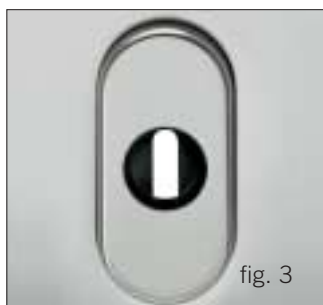


fig. 3

FSB security hardware is supplied as standard for the following door thicknesses:

Internal doors	40 - 42 mm
Main entrance doors	67 - 69 mm
Fire doors	53 - 57 mm

Besides standard-compliant security fittings, FSB also supplies other items of architectural hardware with preventive capabilities. These include:

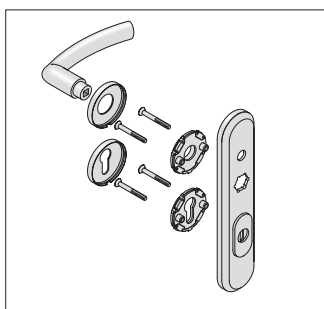
- circular armoured roses, open version, 10 and 14 mm thick
- circular armoured roses with anti-tamper devices (ZA), 15 mm thick
- rectangular and oval armoured roses with anti-tamper devices, 16 mm thick
- rectangular and oval slide-on roses 6, 9 and 14 mm thick

These anti-bandit features are designed to frighten off would-be burglars or at the very least to make breaking in an extremely arduous undertaking.

The industry has likewise addressed itself to window security. A wealth of security fittings for windows have been developed that comply with the German industrial norm already referred to - 'Burglar-resistant windows, doors and additional barriers' (DIN 18 103). Included in the FSB range of security hardware for windows (cf. pp 128-) are:

- lockable window handles
- lockable adaptors to accommodate window handles
- adaptors with combination locks to accommodate window handles
- frame locks

The FSB range of security features for windows may not be able to rule burglaries out but will certainly serve to delay them. The degree of physical resistance afforded by security features of this sort can generally only be overcome by making a lot of noise, and this will tend to deter most people from trying to enter in the first place. Assuming the right window design and security accessories have been selected, would-be burglars will be forced to turn their attention to the glass itself. If they want to get at the handle on the inside, their only option is to smash, cut a whole in or remove the pane. The presence of lockable window handles and concealed frame locks will contrive to make their task even more difficult.

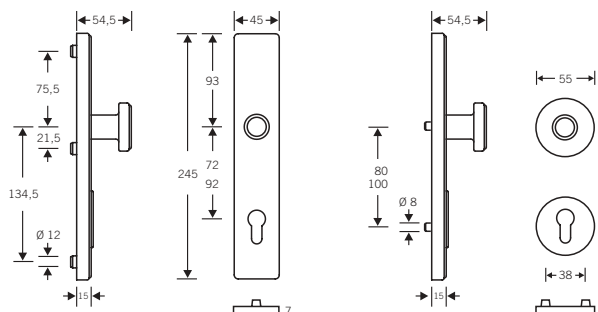
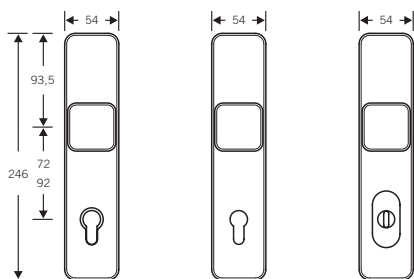


FSB's 'Design + Security' hardware package draws on a proven laminar construction technique developed within the company that is now a benchmark for the industry. The security specified in standards is enhanced from rating to rating by exchanging and adding materials. Technical refinement of the new security concept was achieved with the able help of the Engineering chair at Paderborn, where the Finite Element Method (FEM) was utilised.

Security fitting Design 7381



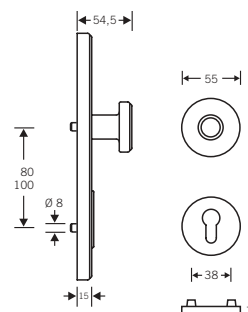
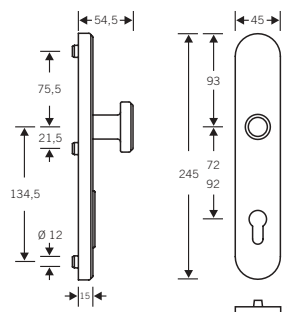
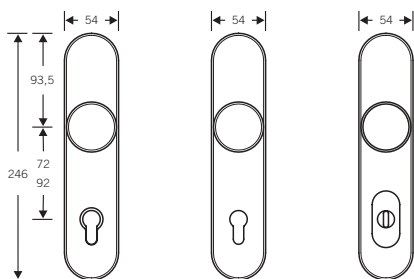
- | | |
|-------------------------------|--|
| Standard door | <input type="checkbox"/> Design 7381 |
| Fire and smoke-stop door* (F) | <input type="checkbox"/> Design 7581 (only Stainless steel) |
| Type of furniture | <input type="checkbox"/> Knob <input type="checkbox"/> Lever handle |
| Inside execution | <input type="checkbox"/> Backplate <input type="checkbox"/> Roses |
| Security class | <input type="checkbox"/> S1 11 mm |
| backplate furniture | <input type="checkbox"/> S1 15 mm |
| | <input type="checkbox"/> S2 11 mm |
| | <input type="checkbox"/> S2 15 mm |
| | <input type="checkbox"/> S2 - ZA 8 - 16 mm |
| | <input type="checkbox"/> S3 - ZA 8 - 16 mm |
| | <input type="checkbox"/> S4 - ZA 8 - 16 mm |
| Security class | <input type="checkbox"/> S2 11 mm |
| backplate furniture | <input type="checkbox"/> S2 15 mm |
| | <input type="checkbox"/> S2 - ZA 8 - 16 mm |
| Handing of door | <input type="checkbox"/> DIN r.h., inward opening |
| | <input type="checkbox"/> DIN l.h., inward opening |
| to suit door thickness | _____ mm |
| Spacing | <input type="checkbox"/> 72 mm <input type="checkbox"/> 92 mm |
| | <input checked="" type="checkbox"/> 72 mm |
| Spindle | <input type="checkbox"/> 8 mm <input type="checkbox"/> 10 mm |
| | <input checked="" type="checkbox"/> 9 mm |
| Material/colour | Aluminium <input type="checkbox"/> 01 <input type="checkbox"/> _____ |
| | Alu + colour <input type="checkbox"/> white <input type="checkbox"/> _____ |
| | Stainless steel <input type="checkbox"/> 6204 <input type="checkbox"/> _____ |
| | Order quantity _____ sets |



Security fitting Design 7382



- | | |
|---------------------------------------|--|
| Standard door | <input type="checkbox"/> Design 7382 |
| Fire and smoke-stop door* F | <input type="checkbox"/> Design 7582 (only Stainless steel) |
| Type of furniture | <input type="checkbox"/> Knob <input type="checkbox"/> Lever handle |
| Inside execution | <input type="checkbox"/> Backplate <input type="checkbox"/> Roses |
| Security class
backplate furniture | <input type="checkbox"/> S1 11 mm |
| | <input type="checkbox"/> S1 15 mm |
| | <input type="checkbox"/> S2 11 mm |
| | <input type="checkbox"/> S2 15 mm |
| | <input type="checkbox"/> S2 - ZA 8 - 16 mm |
| | <input type="checkbox"/> S3 - ZA 8 - 16 mm |
| Security class
backplate furniture | <input type="checkbox"/> S4 - ZA 8 - 16 mm |
| | <input type="checkbox"/> S2 11 mm |
| | <input type="checkbox"/> S2 15 mm |
| Security class
backplate furniture | <input type="checkbox"/> S2 - ZA 8 - 16 mm |
| | |
| Handing of door | <input type="checkbox"/> DIN r.h., inward opening
<input type="checkbox"/> DIN l.h., inward opening |
| to suit door thickness | _____ mm |
| Spacing | <input type="checkbox"/> 72 mm <input type="checkbox"/> 92 mm
<input checked="" type="checkbox"/> 72 mm |
| Spindle | <input type="checkbox"/> 8 mm <input type="checkbox"/> 10 mm
<input checked="" type="checkbox"/> 9 mm |
| Material/colour | Aluminium <input type="checkbox"/> 01 <input type="checkbox"/> _____ |
| | Alu + colour <input type="checkbox"/> white <input type="checkbox"/> _____ |
| | Stainless steel <input type="checkbox"/> 6204 <input type="checkbox"/> _____ |
| Order quantity | _____ sets |

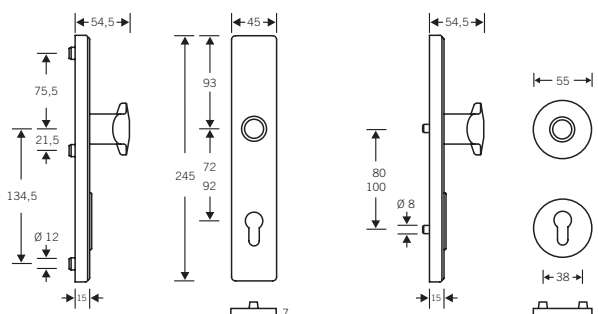
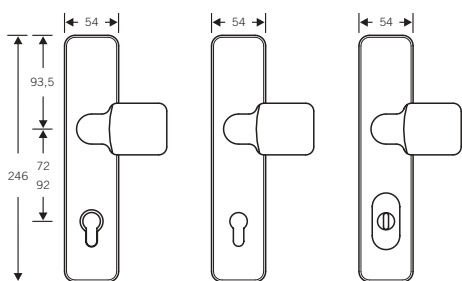


4
b

Security fitting Design 7383



- | | |
|-------------------------------|--|
| Standard door | <input type="checkbox"/> Design 7383 |
| Fire and smoke-stop door* (F) | <input checked="" type="checkbox"/> Design 7583 (only Stainless steel) |
| Type of furniture | <input type="checkbox"/> Knob <input type="checkbox"/> Lever handle |
| Inside execution | <input type="checkbox"/> Backplate <input type="checkbox"/> Roses |
| Security class | <input type="checkbox"/> S1 11 mm |
| backplate furniture | <input type="checkbox"/> S1 15 mm |
| | <input type="checkbox"/> S2 11 mm |
| | <input type="checkbox"/> S2 15 mm |
| | <input type="checkbox"/> S2 - ZA 8 - 16 mm |
| | <input type="checkbox"/> S3 - ZA 8 - 16 mm |
| | <input type="checkbox"/> S4 - ZA 8 - 16 mm |
| Security class | <input type="checkbox"/> S2 11 mm |
| backplate furniture | <input type="checkbox"/> S2 15 mm |
| | <input type="checkbox"/> S2 - ZA 8 - 16 mm |
| Handing of door | <input type="checkbox"/> DIN r.h., inward opening |
| | <input type="checkbox"/> DIN l.h., inward opening |
| to suit door thickness | _____ mm |
| Spacing | <input type="checkbox"/> 72 mm <input type="checkbox"/> 92 mm |
| | <input checked="" type="checkbox"/> 72 mm |
| Spindle | <input type="checkbox"/> 8 mm <input type="checkbox"/> 10 mm |
| | <input checked="" type="checkbox"/> 9 mm |
| Material/colour | Aluminium <input type="checkbox"/> 01 <input type="checkbox"/> _____ |
| | Alu + colour <input type="checkbox"/> white <input type="checkbox"/> _____ |
| | Stainless steel <input type="checkbox"/> 6204 <input type="checkbox"/> _____ |
| Order quantity _____ sets | |

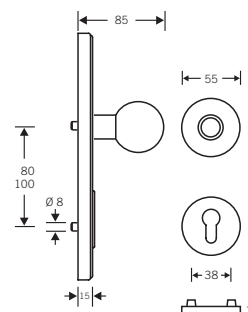
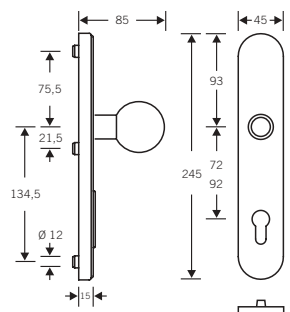
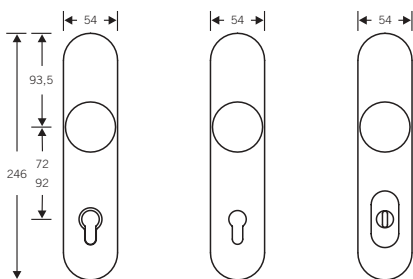


Security fitting Design 7375



- Standard door Design 7375
Fire and smoke-stop door* (F) **Design 7575 (only Stainless steel)**
 - Type of furniture Knob
 - Inside execution Backplate Roses
 - Security class backplate furniture
 - S1 11 mm
 - S1 15 mm
 - S2 11 mm
 - S2 15 mm
 - S2 - ZA 8 - 16 mm
 - S3 - ZA 8 - 16 mm
 - S4 - ZA 8 - 16 mm
 - Security class backplate furniture
 - S2 11 mm
 - S2 15 mm
 - S2 - ZA 8 - 16 mm
 - Handing of door
 - DIN r.h., inward opening
 - DIN l.h., inward opening
 - to suit door thickness _____ mm
 - Spacing
 - 72 mm 92 mm
 - 72 mm**
 - Spindle
 - 8 mm 10 mm
 - 9 mm**
 - Material/colour

Aluminium	<input type="checkbox"/> 01	<input type="checkbox"/> _____
Alu + colour	<input type="checkbox"/> white	<input type="checkbox"/> _____
Stainless steel	<input type="checkbox"/> 6204	<input type="checkbox"/> _____
- Order quantity _____ sets

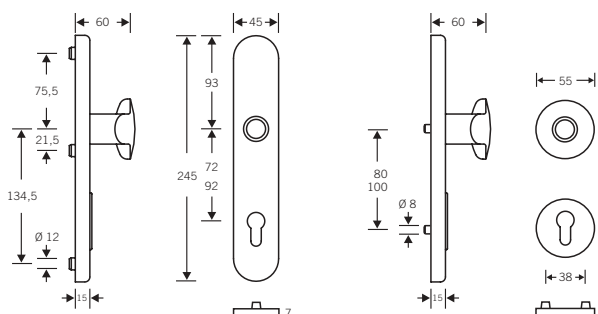
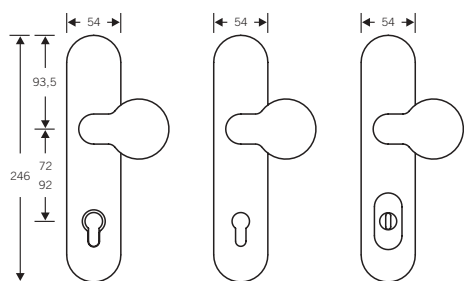


4
b

Security fitting Design 7384



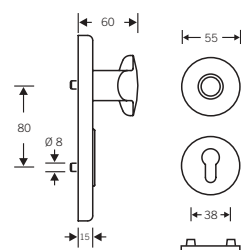
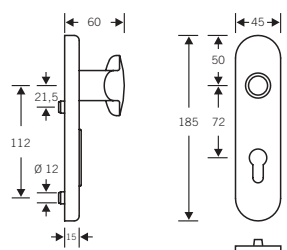
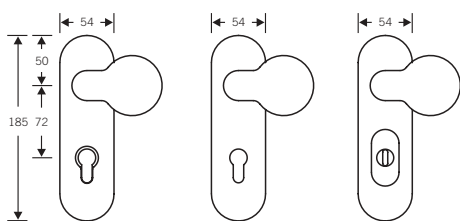
- | | |
|------------------------------------|--|
| Standard door | <input type="checkbox"/> Design 7384 |
| Fire and smoke-stop door* (F) | <input checked="" type="checkbox"/> Design 7584 |
| Type of furniture | <input type="checkbox"/> Knob <input type="checkbox"/> Lever handle |
| Inside execution | <input type="checkbox"/> Backplate <input type="checkbox"/> Roses |
| Security class backplate furniture | <input type="checkbox"/> S1 11 mm |
| | <input type="checkbox"/> S1 15 mm |
| | <input type="checkbox"/> S2 11 mm |
| | <input type="checkbox"/> S2 15 mm |
| | <input type="checkbox"/> S2 - ZA 8 - 16 mm |
| | <input type="checkbox"/> S4 - ZA 8 - 16 mm |
| Security class backplate furniture | <input type="checkbox"/> S2 11 mm |
| | <input type="checkbox"/> S2 15 mm |
| | <input type="checkbox"/> S2 - ZA 8 - 16 mm |
| Handing of door | <input type="checkbox"/> DIN r.h., inward opening |
| | <input type="checkbox"/> DIN l.h., inward opening |
| to suit door thickness | _____ mm |
| Spacing | <input type="checkbox"/> 72 mm <input type="checkbox"/> 92 mm |
| | <input checked="" type="checkbox"/> 72 mm |
| Spindle | <input type="checkbox"/> 8 mm <input type="checkbox"/> 10 mm |
| | <input checked="" type="checkbox"/> 9 mm |
| Material/colour | Aluminium <input type="checkbox"/> 01 <input type="checkbox"/> _____ |
| | Alu + colour <input type="checkbox"/> white <input type="checkbox"/> _____ |
| | Stainless steel <input type="checkbox"/> 6204 <input type="checkbox"/> _____ |
| Order quantity _____ sets | |



Security fitting Design 7374



- | | |
|------------------------------------|--|
| Standard door | <input type="checkbox"/> Design 7374 |
| Fire and smoke-stop door* F | <input type="checkbox"/> Design 7574 |
| Type of furniture | <input type="checkbox"/> Knob <input type="checkbox"/> Lever handle |
| Inside execution | <input type="checkbox"/> Backplate <input type="checkbox"/> Roses |
| Security class | <input type="checkbox"/> S2 11 mm |
| | <input type="checkbox"/> S2 15 mm |
| | <input type="checkbox"/> S2 - ZA 8 - 16 mm |
| Handing of door | <input type="checkbox"/> DIN r.h., inward opening |
| | <input type="checkbox"/> DIN l.h., inward opening |
| to suit door thickness | _____ mm |
| Spacing | <input type="checkbox"/> 72 mm <input type="checkbox"/> 92 mm |
| | <input checked="" type="checkbox"/> 72 mm |
| Spindle | <input type="checkbox"/> 8 mm <input type="checkbox"/> 10 mm |
| | <input checked="" type="checkbox"/> 9 mm |
| Material/colour | Aluminium <input type="checkbox"/> 01 <input type="checkbox"/> _____ |
| | Alu + colour <input type="checkbox"/> white <input type="checkbox"/> _____ |
| | Stainless steel <input type="checkbox"/> 6204 <input type="checkbox"/> _____ |
| | Order quantity _____ sets |

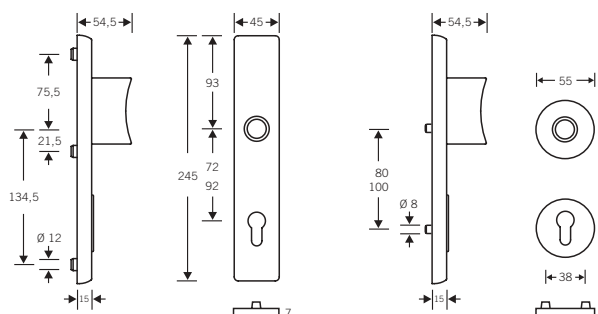
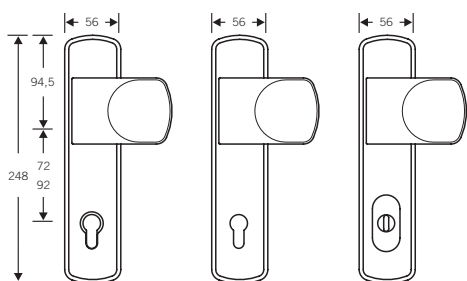


4
b

Security fitting Design 7385



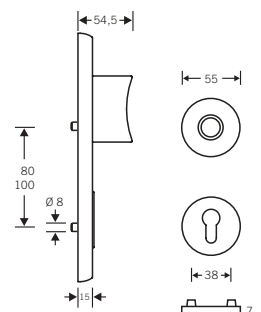
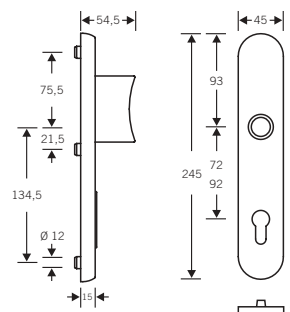
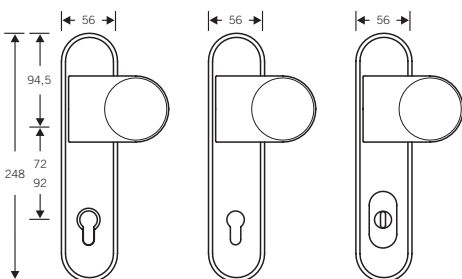
- | | |
|-------------------------------|--|
| Standard door | <input type="checkbox"/> Design 7385 |
| Fire and smoke-stop door* (F) | <input type="checkbox"/> Design 7585 (only Stainless steel) |
| Type of furniture | <input type="checkbox"/> Knob <input type="checkbox"/> Lever handle |
| Inside execution | <input type="checkbox"/> Backplate <input type="checkbox"/> Roses |
| Security class | <input type="checkbox"/> S1 11 mm |
| backplate furniture | <input type="checkbox"/> S1 15 mm |
| | <input type="checkbox"/> S2 11 mm |
| | <input type="checkbox"/> S2 15 mm |
| | <input type="checkbox"/> S2 - ZA 8 - 16 mm |
| | <input type="checkbox"/> S3 - ZA 8 - 16 mm |
| | <input type="checkbox"/> S4 - ZA 8 - 16 mm |
| Security class | <input type="checkbox"/> S2 11 mm |
| backplate furniture | <input type="checkbox"/> S2 15 mm |
| | <input type="checkbox"/> S2 - ZA 8 - 16 mm |
| Handing of door | <input type="checkbox"/> DIN r.h., inward opening |
| | <input type="checkbox"/> DIN l.h., inward opening |
| to suit door thickness | _____ mm |
| Spacing | <input type="checkbox"/> 72 mm <input type="checkbox"/> 92 mm |
| | <input checked="" type="checkbox"/> 72 mm |
| Spindle | <input type="checkbox"/> 8 mm <input type="checkbox"/> 10 mm |
| | <input checked="" type="checkbox"/> 9 mm |
| Material/colour | Aluminium <input type="checkbox"/> 01 <input type="checkbox"/> _____ |
| | Alu + colour <input type="checkbox"/> white <input type="checkbox"/> _____ |
| | Stainless steel <input type="checkbox"/> 6204 <input type="checkbox"/> _____ |
| Order quantity _____ sets | |



Security fitting Design 7386



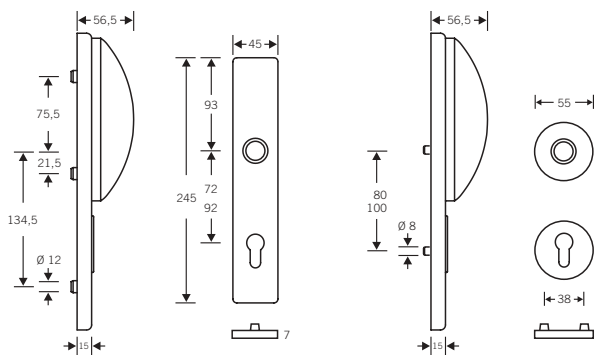
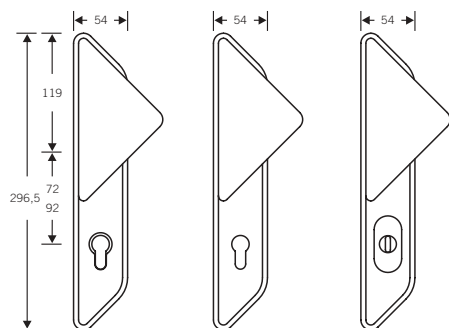
- | | |
|------------------------------------|--|
| Standard door | <input type="checkbox"/> Design 7386 |
| Fire and smoke-stop door* F | <input type="checkbox"/> Design 7586 (only Stainless steel) |
| Type of furniture | <input type="checkbox"/> Knob <input type="checkbox"/> Lever handle |
| Inside execution | <input type="checkbox"/> Backplate <input type="checkbox"/> Roses |
| Security class backplate furniture | <input type="checkbox"/> S1 11 mm |
| | <input type="checkbox"/> S1 15 mm |
| | <input type="checkbox"/> S2 11 mm |
| | <input type="checkbox"/> S2 15 mm |
| | <input type="checkbox"/> S2 - ZA 8 - 16 mm |
| Security class backplate furniture | <input type="checkbox"/> S3 - ZA 8 - 16 mm |
| | <input type="checkbox"/> S4 - ZA 8 - 16 mm |
| | <input type="checkbox"/> S2 11 mm |
| Security class backplate furniture | <input type="checkbox"/> S2 15 mm |
| | <input type="checkbox"/> S2 - ZA 8 - 16 mm |
| | Handing of door |
| to suit door thickness | _____ mm |
| Spacing | <input type="checkbox"/> 72 mm <input type="checkbox"/> 92 mm |
| | <input checked="" type="checkbox"/> 72 mm |
| Spindle | <input type="checkbox"/> 8 mm <input type="checkbox"/> 10 mm |
| | <input checked="" type="checkbox"/> 9 mm |
| Material/colour | Aluminium <input type="checkbox"/> 01 <input type="checkbox"/> _____ |
| | Alu + colour <input type="checkbox"/> white <input type="checkbox"/> _____ |
| | Stainless steel <input type="checkbox"/> 6204 <input type="checkbox"/> _____ |
| Order quantity | _____ sets |



Security fitting Design 7387



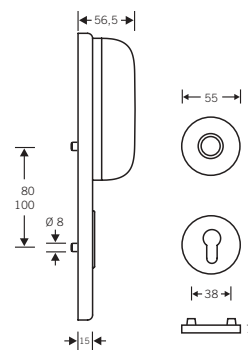
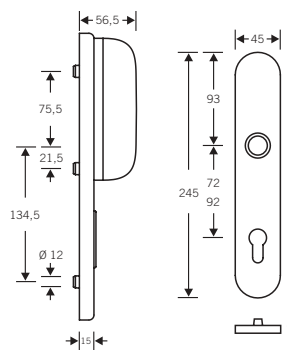
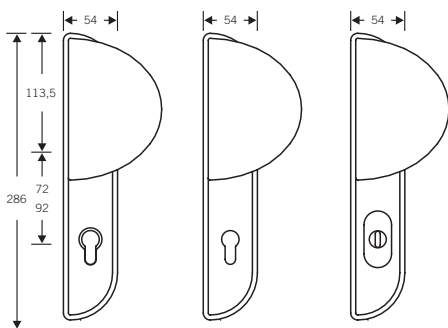
- | | |
|-------------------------------|--|
| Standard door | <input type="checkbox"/> Design 7387 |
| Fire and smoke-stop door* (F) | <input checked="" type="checkbox"/> Design 7587 (only Stainless steel) |
| Type of furniture | <input type="checkbox"/> Knob <input type="checkbox"/> Lever handle |
| Inside execution | <input type="checkbox"/> Backplate <input type="checkbox"/> Roses |
| Security class | <input type="checkbox"/> S1 11 mm |
| backplate furniture | <input type="checkbox"/> S1 15 mm |
| | <input type="checkbox"/> S2 11 mm |
| | <input type="checkbox"/> S2 15 mm |
| | <input type="checkbox"/> S2 - ZA 8 - 16 mm |
| | <input type="checkbox"/> S3 - ZA 8 - 16 mm |
| | <input type="checkbox"/> S4 - ZA 8 - 16 mm |
| Security class | <input type="checkbox"/> S2 11 mm |
| backplate furniture | <input type="checkbox"/> S2 15 mm |
| | <input type="checkbox"/> S2 - ZA 8 - 16 mm |
| Handing of door | <input type="checkbox"/> DIN r.h., inward opening |
| | <input type="checkbox"/> DIN l.h., inward opening |
| to suit door thickness | _____ mm |
| Spacing | <input type="checkbox"/> 72 mm <input type="checkbox"/> 92 mm |
| | <input checked="" type="checkbox"/> 72 mm |
| Spindle | <input type="checkbox"/> 8 mm <input type="checkbox"/> 10 mm |
| | <input checked="" type="checkbox"/> 9 mm |
| Material/colour | Aluminium <input type="checkbox"/> 01 <input type="checkbox"/> _____ |
| | Alu + colour <input type="checkbox"/> white <input type="checkbox"/> _____ |
| | Stainless steel <input type="checkbox"/> 6204 <input type="checkbox"/> _____ |
| Order quantity _____ sets | |



Security fitting Design 7388



- | | |
|---------------------------------------|--|
| Standard door | <input type="checkbox"/> Design 7388 |
| Fire and smoke-stop door* F | <input type="checkbox"/> Design 7588 (only Stainless steel) |
| Type of furniture | <input type="checkbox"/> Knob <input type="checkbox"/> Lever handle |
| Inside execution | <input type="checkbox"/> Backplate <input type="checkbox"/> Roses |
| Security class
backplate furniture | <input type="checkbox"/> S1 11 mm |
| | <input type="checkbox"/> S1 15 mm |
| | <input type="checkbox"/> S2 11 mm |
| | <input type="checkbox"/> S2 15 mm |
| | <input type="checkbox"/> S2 - ZA 8 - 16 mm |
| | <input type="checkbox"/> S3 - ZA 8 - 16 mm |
| Security class
rose furniture | <input type="checkbox"/> S2 11 mm |
| | <input type="checkbox"/> S2 15 mm |
| | <input type="checkbox"/> S2 - ZA 8 - 16 mm |
| Handing of door | <input type="checkbox"/> DIN r.h., inward opening
<input type="checkbox"/> DIN l.h., inward opening |
| to suit door thickness | _____ mm |
| Spacing | <input type="checkbox"/> 72 mm <input type="checkbox"/> 92 mm
<input checked="" type="checkbox"/> 72 mm |
| Spindle | <input type="checkbox"/> 8 mm <input type="checkbox"/> 10 mm
<input checked="" type="checkbox"/> 9 mm |
| Material/colour | Aluminium <input type="checkbox"/> 01 <input type="checkbox"/> _____ |
| | Alu + colour <input type="checkbox"/> white <input type="checkbox"/> _____ |
| | Stainless steel <input type="checkbox"/> 6204 <input type="checkbox"/> _____ |
| Order quantity | _____ sets |



Security fitting

to suit locks for framed doors
centres 92 mm



Lever handle furniture
for framed doors

Aluminium
Stainless steel
Aluminium + colour

7330 30 Outer backplate
14 mm
PZ 92
8 mm □-spindle

Lever handle furniture
for framed fire doors*



7530 30 Outer backplate
14 mm
PZ 92
9 mm □-spindle



Knob furniture
for framed doors

Aluminium
Stainless steel
Aluminium + colour

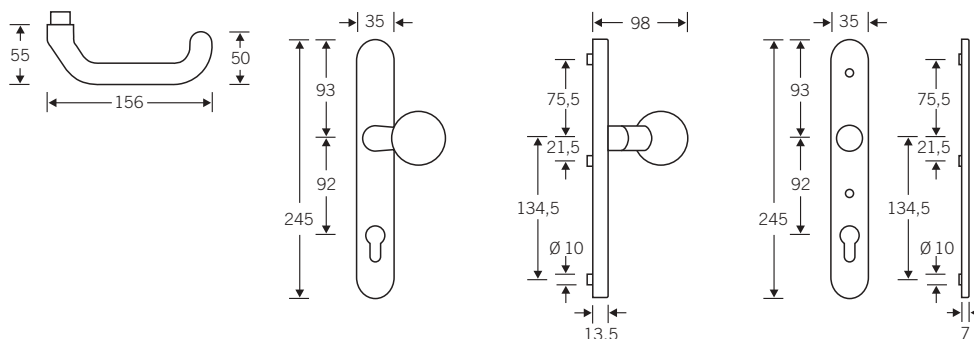
7330 31 Knob backplate
14 mm
PZ 92
8 mm □-spindle

Knob furniture
for framed fire doors*



7530 31 Knob backplate
14 mm
PZ 92
9 mm □-spindle

* acc. to German DIN standard



Security fitting

to suit locks for framed doors
centres 92 mm



Lever handle furniture
for framed doors
suitable for cylinder projec-
tions from 8 to 13 mm

Aluminium
Stainless steel
Aluminium + colour

7331 30 Outer backplate
14 mm
PZ 92
8 mm □-spindle

Lever handle furniture
for framed fire doors*
suitable for cylinder projec-
tions from 8 to 13 mm



7531 30 Outer backplate
14 mm
PZ 92
9 mm □-spindle



Knob furniture
for framed doors
suitable for cylinder projec-
tions from 8 to 13 mm

Aluminium
Stainless steel
Aluminium + colour

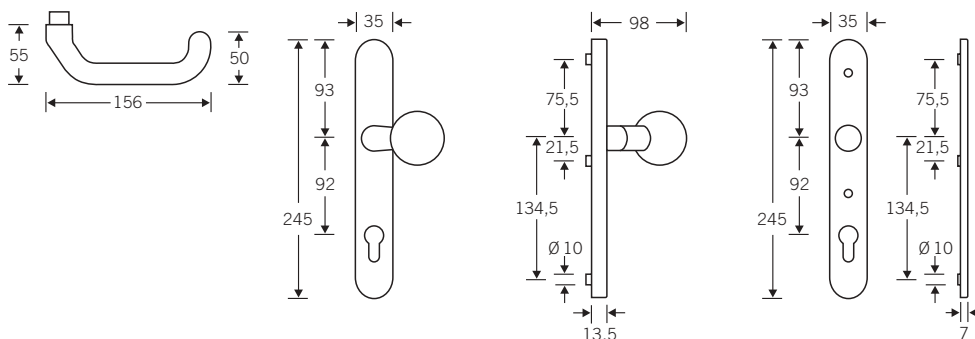
7331 31 Knob backplate
14 mm
PZ 92
8 mm □-spindle

Knob furniture
for framed fire doors*
suitable for cylinder projec-
tions from 8 to 13 mm

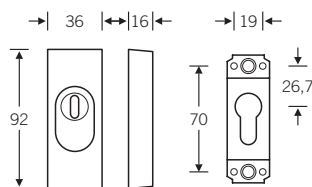


7531 31 Knob backplate
14 mm
PZ 92
9 mm □-spindle

* acc. to German DIN standard



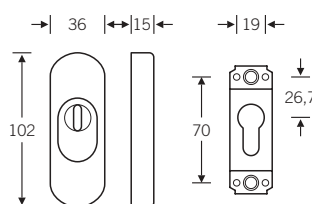
Protection roses



3244

Aluminium
Aluminium + colour

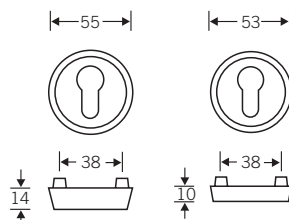
Screw hole - Ø 3.2 mm



3246

Aluminium
Stainless steel
Brass
Aluminium + colour

Screw hole - Ø 3.2 mm



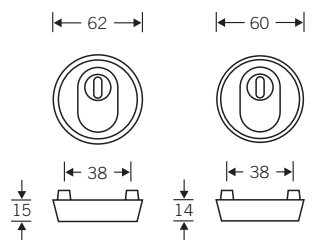
7391

7392

Aluminium
Stainless steel
Brass
Aluminium + colour

7391

7392



7393

Aluminium
Stainless steel
Brass
Aluminium + colour

Stainless steel
Brass

Aluminium
Aluminium + colour

Integrated safety engineering demands that the external dimensions of an armoured rose be 11 or 16 mm greater than its fixing centres. In particular, this needs to be borne in mind when ordering a mix of hardware.

Protection roses FSB 3244 and 3246 suit cylinder projections from 8 to 15 mm.

Explanations	484
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Lever handles, turnably fixed	486
Push and pull pad handles	494
Horizontal bar handles	501
Grip handles furniture for framed doors	504
Fixing accessories	511

Furniture for main entrance doors

The architectural hardware sector - including FSB - has for decades been marketing a veritable plethora of custom fittings for main entrance doors, to wit door knobs, door pulls, armoured roses and security furniture in all materials and all manner of designs. You'd think the market had been sated.

Not a bit of it though. An article in the supplement to the weekly newspaper DIE ZEIT of 31 March 1995 observes: 'Same doors, handles, conservatories, carports everywhere. Be it in Munich or Münster, Darmstadt or Stuttgart, owner-occupiers are a force for uniformity in their unitary housing.'

But help is at hand for our beleaguered author. FSB commissioned its in-house designer Hartmut Weise to come up with some new ideas for main entrance doors. Hartmut Weise already presented four design conceptions for the penultimate Manual. Two more followed for the last Manual.

The first four handles for main entrance doors by Hartmut Weise retain the distinctive axially slanted grip from his 1995 pull-handle collection, but forego the droplet-shaped cross section in favour of an elliptical form.

Mr. Weise was intent on ensuring that the hand would be able to exert the necessary force despite the vertical styling.

These handles are available in silver anodised or colour-coated aluminium and in stainless steel. They are through-fixed by means of 6 mm bolts that fasten onto a rugged backplate on the inside.

The internal backplate also acts as a bearing for the lever handle. The fancy coverplate on the inside can be supplied in either aluminium, colour-coated aluminium, stainless steel or brass.

Two further main-door pull handles by Hartmut Weise incorporate a design idea from the 50's. At that time, any number of doors were adorned with sinuous extruded handles. Refining this seasoned style gave rise to an integrated pull handle/backplate design.

In this case, too, handles are through fixed using 6mm bolts that engage in a heavy-duty backplate on the inside. The latter additionally supports the lever handle and its bushing.

These two designs are exclusively available in aluminium. A matching aluminium lever handle and coverplate have been selected for the inside. If so desired, however, the internal furniture may be made of stainless steel, brass or colour-coated aluminium.

This comprehensive new package is augmented by pull, knob and lever handle furniture on oval and angular narrow-frame backplates, pull-handle furniture with a selection of fittings, and push/pull handles with armoured cylinders.

Before ordering please always check that the situation allows for sufficient mortise depth as well as the necessary backset.

When fitting the new pulls for main entrance and entrance doors, FSB recommends reinforcing the cylinder by means of round, oval or angular armoured roses.

- Aluminium
- Stainless steel
- Alu + colour
- Plastic black
- New products 04105

Overview



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Page 509



Page 510



Lever handles

turnably fixed



7000 0001

Aluminium
Stainless steel

10 mm □-hole

Design FSB 1070



7000 0002

Aluminium
Stainless steel

10 mm □-hole

Design FSB 1146



7000 0003

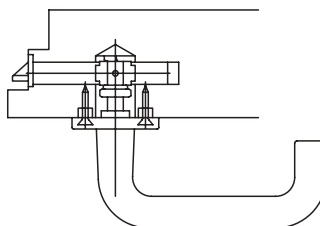
Aluminium
Stainless steel

10 mm □-hole

Design FSB 1076

4

C



Single fixed lever handles for entrance doors incl. solid sub-roses.

Fixings with metal screws acc. to DIN 7982 (4.8 x 25 mm), FSB spindle 0104 necessary, see page 548.

Lever handles

turnably fixed



7000 0004

Aluminium
Stainless steel

10 mm □-hole

Design FSB 1023



7000 0232

Aluminium
Stainless steel

10 mm □-hole

Design FSB 1107



7000 0233

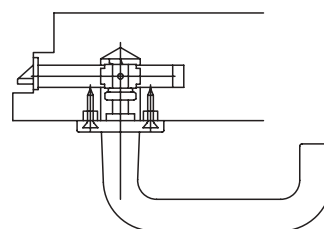
Aluminium
Stainless steel

10 mm □-hole

Design FSB 1108

4

C



Single fixed lever handles for entrance doors incl. solid sub-roses.

Fixings with metal screws acc. to DIN 7982 (4.8 x 25 mm), FSB spindle 0104 necessary, see page 548.

Furniture for
main entrance doors



7871

Aluminium natural colour
anodised
Stainless steel

The order code covers external
pull and internal backplate
plus lever handle FSB 1025.
You will additionally need to
order an FSB Stabil-half-spindle
for doors drilled from one side
only (p. 548) and an FSB
armoured rose (p. 480).

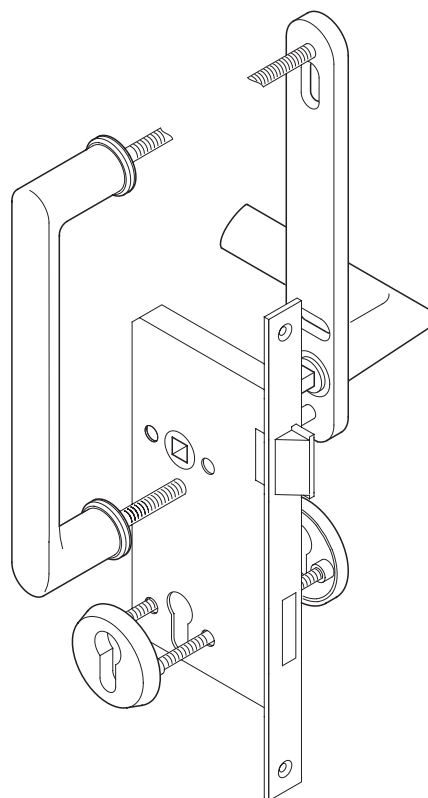
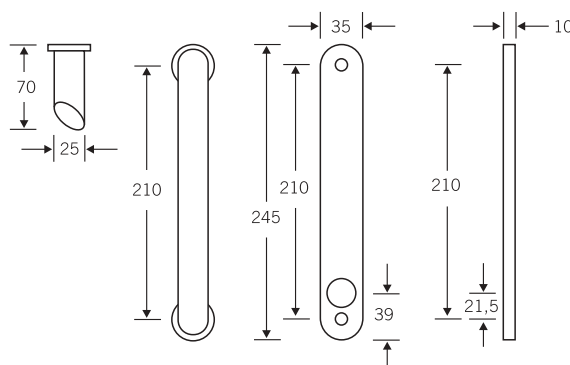


Illustration r.h.,
handing details cf. page 578.
Safety clearance 45 mm.



Order details:

spindle thickness: 8 or 10 mm
door thickness mm

7871 24 r.h.
7871 25 l.h.

Furniture for
main entrance doors



7872

Aluminium natural colour
anodised
Stainless steel

The order code covers external
pull and internal backplate
plus lever handle FSB 1028.
You will additionally need to
order an FSB Stabil-half-spindle
for doors drilled from one side
only (p. 548) and an FSB
armoured rose (p. 480).

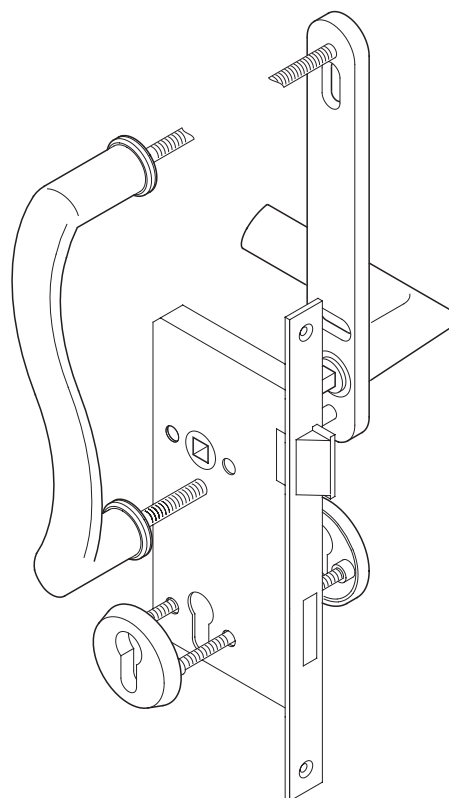
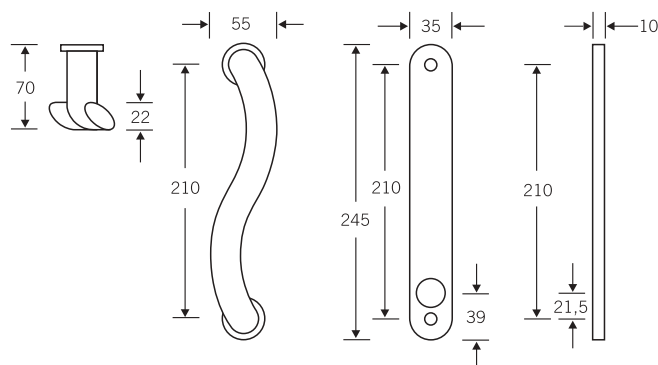


Illustration r.h.,
handing details cf. page 578.
Safety clearance 60 mm.



Order details:

spindle thickness: 8 or 10 mm
door thickness . . . mm

7872 24 r.h.
7872 25 l.h.

Furniture for
main entrance doors



7873

Aluminium natural colour
anodised
Stainless steel

The order code covers external
pull and internal backplate
plus lever handle FSB 1025.
You will additionally need to
order an FSB Stabil-half-spindle
for doors drilled from one side
only (p. 548) and an FSB
armoured rose (p. 480).

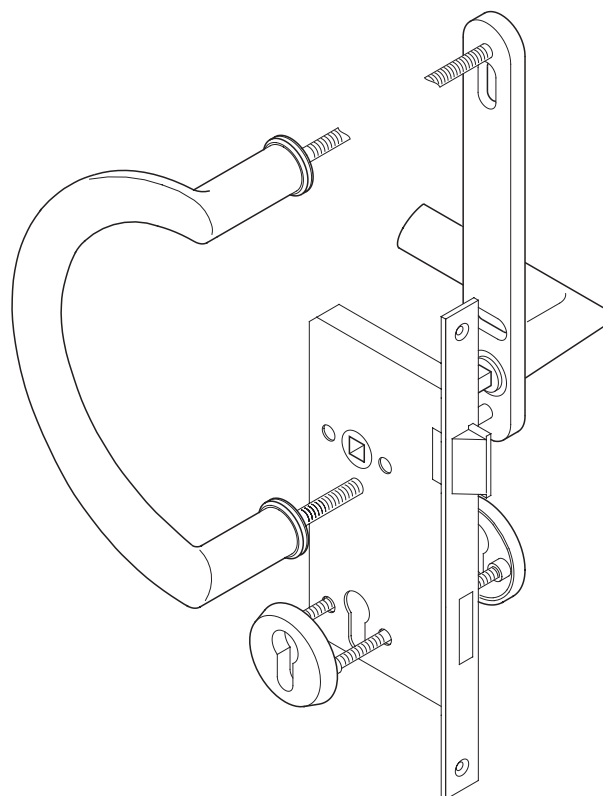
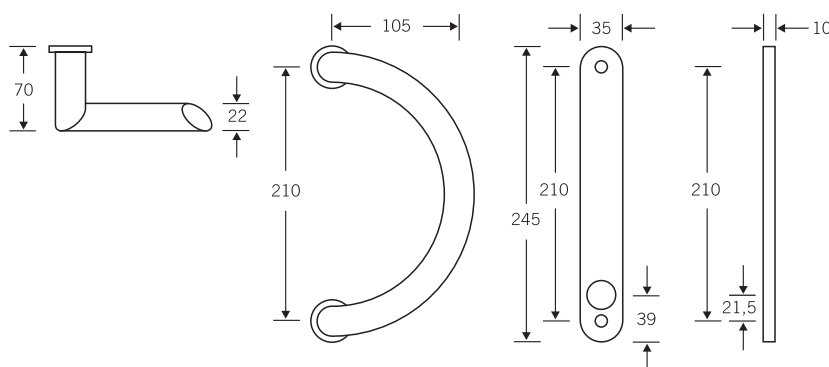


Illustration r.h.,
handing details cf. page 578.
Safety clearance 48 mm.



Order details:

spindle thickness: 8 or 10 mm
door thickness mm

7873 24 r.h.
7873 25 l.h.

Furniture for
main entrance doors



7874

Aluminium natural colour
anodised
Stainless steel

The order code covers external
pull and internal backplate
plus lever handle FSB 1025.
You will additionally need to
order an FSB Stabil-half-spindle
for doors drilled from one side
only (p. 548) and an FSB
armoured rose (p. 480).

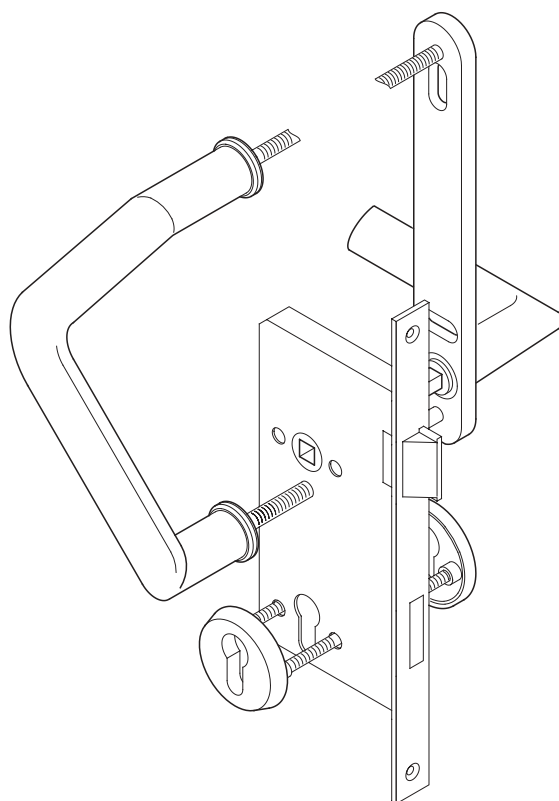
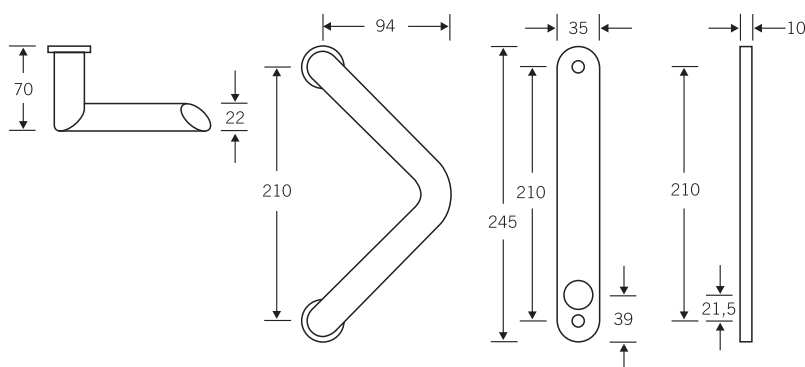


Illustration r.h.,
handing details cf. page 578.
Safety clearance 48 mm.



Order details:

spindle thickness: 8 or 10 mm
door thickness . . . mm

7874 24 r.h.
7874 25 l.h.

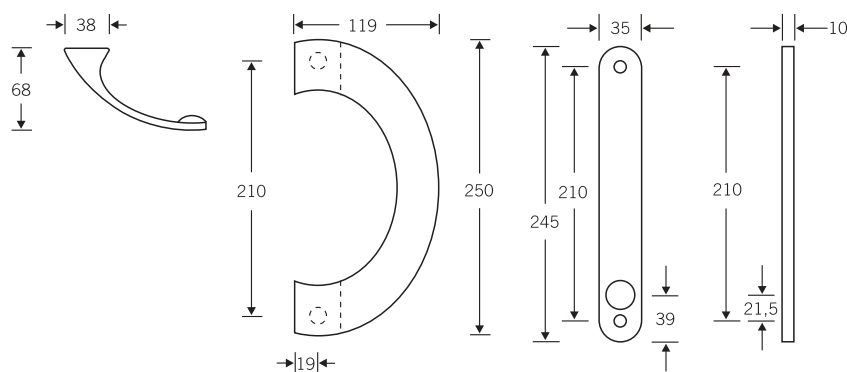
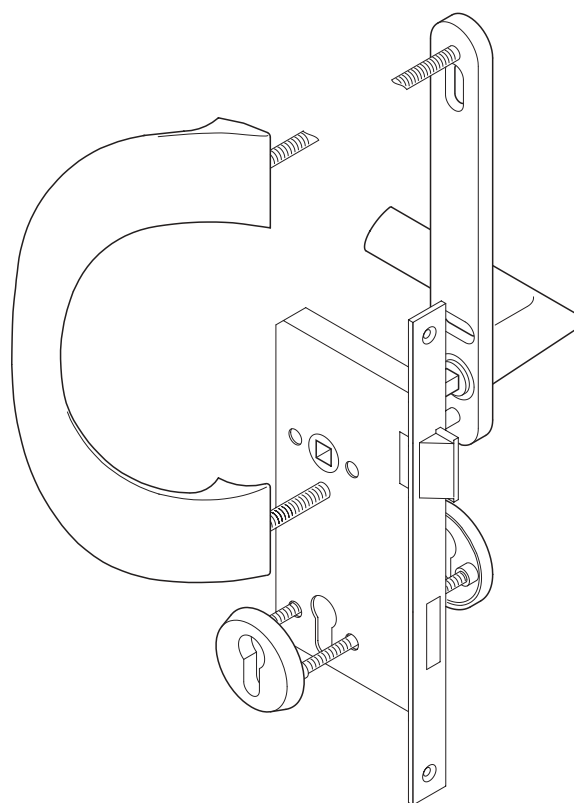
Furniture for
main entrance doors



7802

Aluminium natural colour
anodised

The order code covers external
pull and internal backplate
plus lever handle FSB 1010.
You will additionally need to
order an FSB Stabil-half-spindle
for doors drilled from one side
only (p. 548) and an FSB
armoured rose (p. 480).



Order details:

spindle thickness: 8 or 10 mm
door thickness mm

4

C

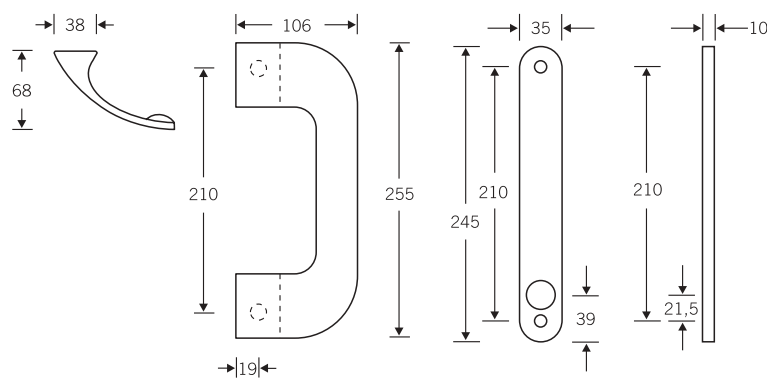
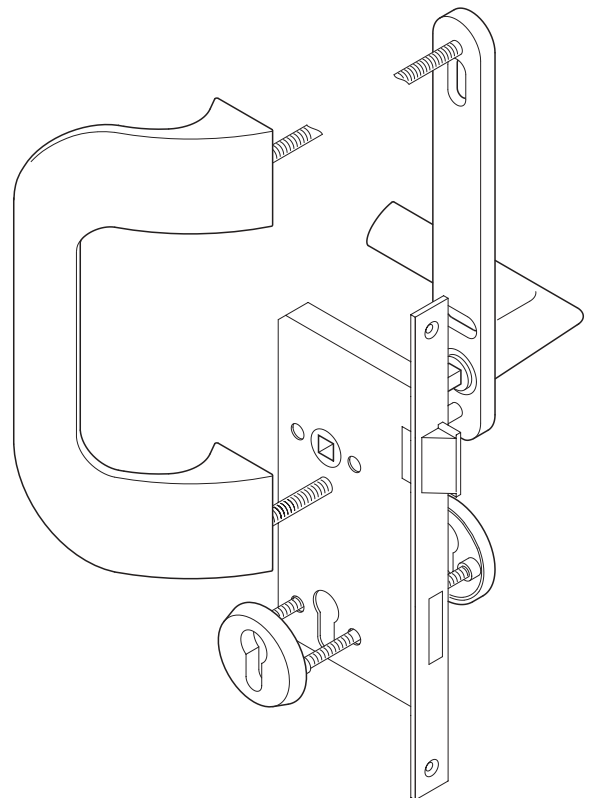
Furniture for
main entrance doors



7803

Aluminium natural colour
anodised

The order code covers external
pull and internal backplate
plus lever handle FSB 1108.
You will additionally need to
order an FSB Stabil-half-spindle
for doors drilled from one side
only (p. 548) and an FSB
armoured rose (p. 480).

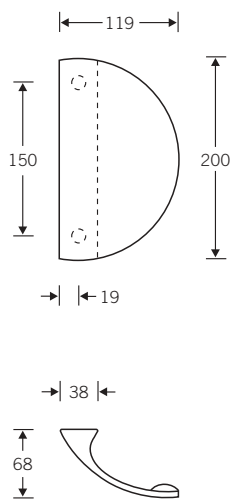


Order details:

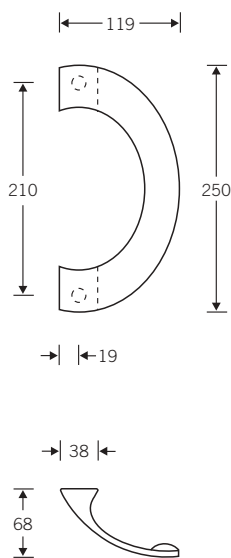
spindle thickness: 8 or 10 mm
door thickness mm

4
C

Push and pull pad handles

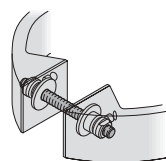


6110
Aluminium
Fixing M6

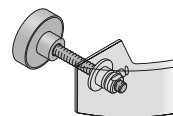


6111
Aluminium
Fixing M6

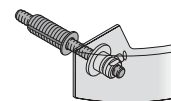
For detailed information on fixing, please turn to page 461, fixing accessories cf. page 511.



back to back fixing

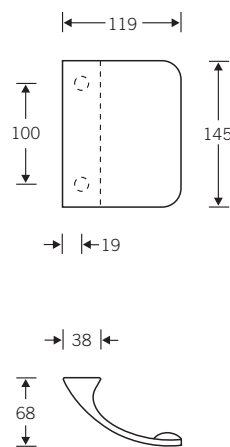


bolt through-fixing

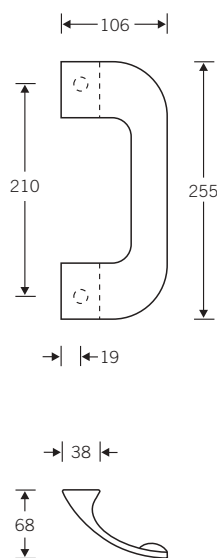


secret single side fixing with expansion plug

Push and pull pad handles

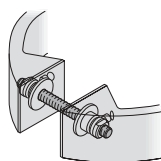


6112
Aluminium
Fixing M6

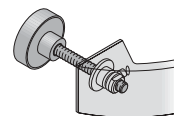


6113
Aluminium
Fixing M6

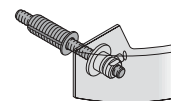
For detailed information on fixing, please turn to page 461, fixing accessories cf. page 511.



back to back fixing

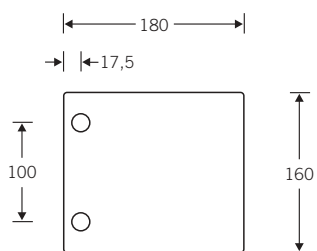


bolt through-fixing



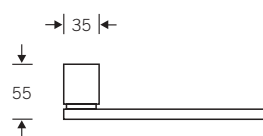
secret single side fixing with expansion plug

Push and pull pad handles



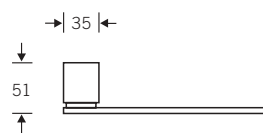
6108

Fixing M8

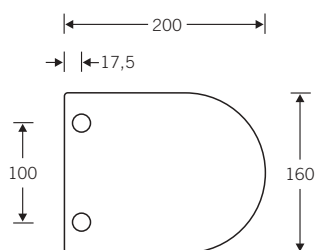


Available in:

Bracket Aluminium 01,
Pad Aluminium 01

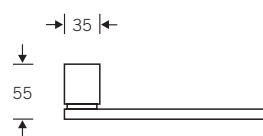


Bracket Aluminium 01,
Pad Stainless steel 62



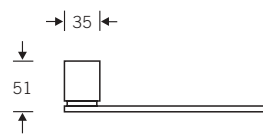
6109

Fixing M8



Available in:

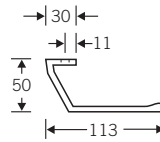
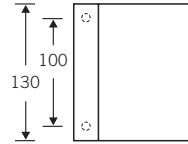
Bracket Aluminium 01,
Pad Aluminium 01



Bracket Aluminium 01,
Pad Stainless steel 62

For detailed information on fixing, please turn to page 456, fixing accessories cf. page 511.

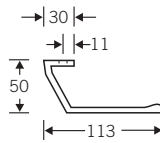
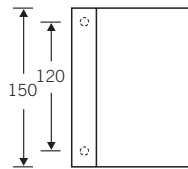
Push and pull
pad handles



6137 31

Aluminium

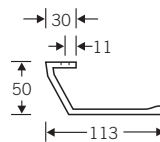
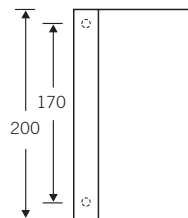
c:c screw holes 100 mm



6137 32

Aluminium

c:c screw holes 120 mm



6137 34

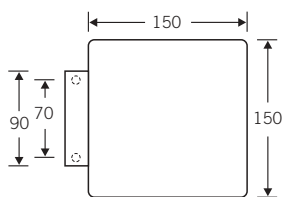
Aluminium

c:c screw holes 170 mm

Screw hole - Ø 8.5 mm
Engravings cf. page 155

Fixing accessories cf. page 511.

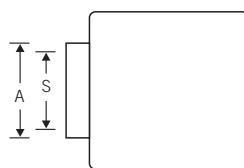
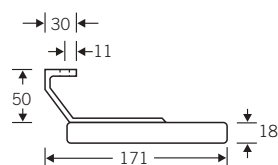
Push and pull pad handles



6184 62

Aluminium

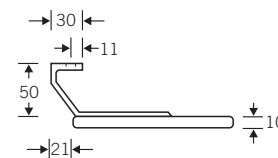
Black plastic pad



6181 62

Aluminium

Pad 150 x 150 mm
Dimension A 90 mm
c:c screw holes 70 mm



6181 70

Aluminium

Pad 180 x 180 mm
Dimension A 120 mm
c:c screw holes 100 mm

6181 74

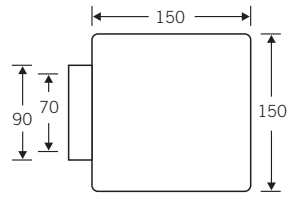
Aluminium

Pad 200 x 200 mm
Dimension A 120 mm
c:c screw holes 100 mm

Fixing accessories cf. page 511.

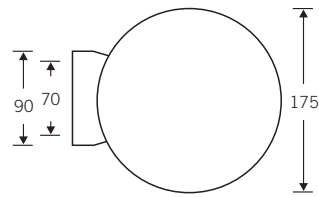
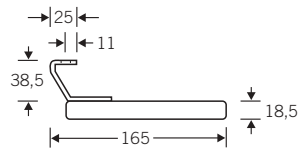
Screw hole - Ø 8.5 mm
Engravings cf. page 155

Push and pull
pad handles



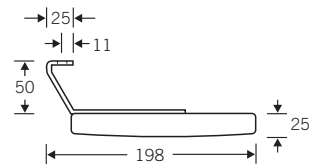
6254 62

Stainless steel



6268

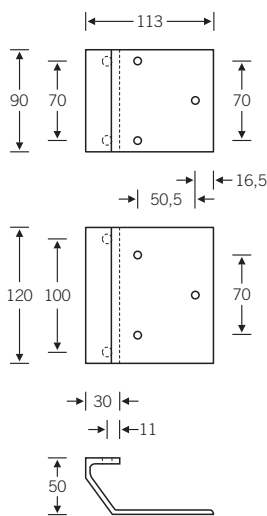
Stainless steel



Fixing accessories cf. page 511.

Screw hole - Ø 8.5 mm

Brackets for pad handles and horizontal bar handles



6755 27

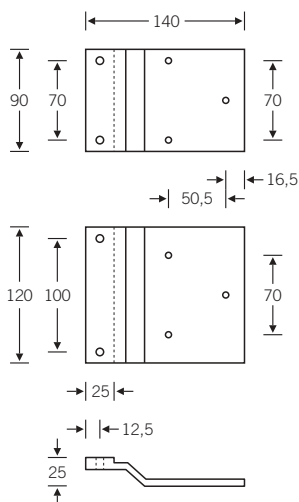
Aluminium

Screw hole - Ø 8.5 mm
Screw hole Ø 5.3 mm (pad)

6755 29

Aluminium

Screw hole - Ø 8.5 mm
Screw hole Ø 5.3 mm (pad)



6756 27

Aluminium

Screw hole Ø 6.5 mm
Screw hole Ø 5.3 mm (pad)

6756 29

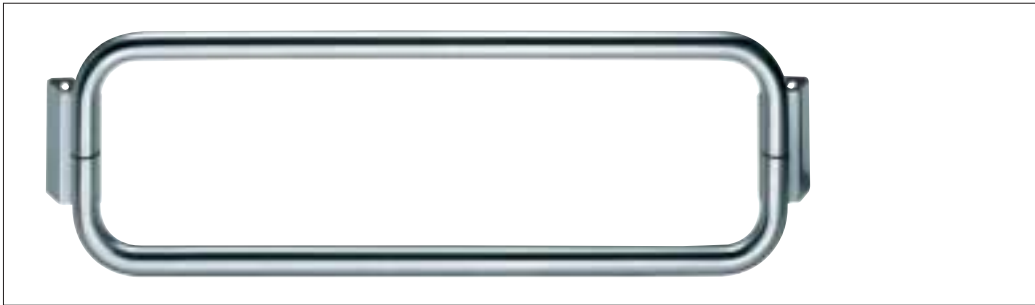
Aluminium

Screw hole Ø 6.5 mm
Screw hole Ø 5.3 mm (pad)

Bracket models FSB 6755 and 6756 are the support modules for custom-design pad and horizontal bar handles. Handle designs in timber, plastic and metal can be securely fastened to these support brackets by means of three bolts fitted from the back.

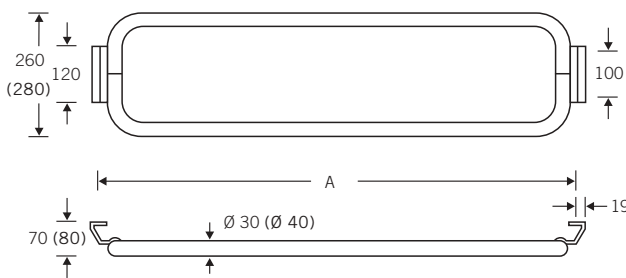
Fixing accessories cf. page 511.

Pull handles with cranked brackets

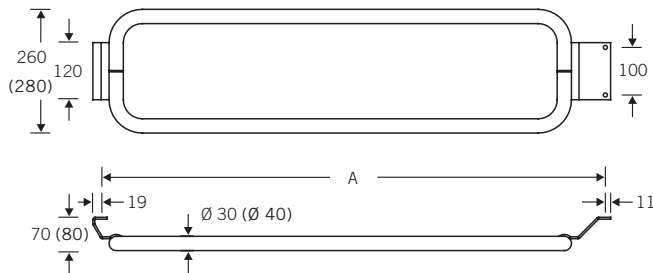


Aluminium
Stainless steel

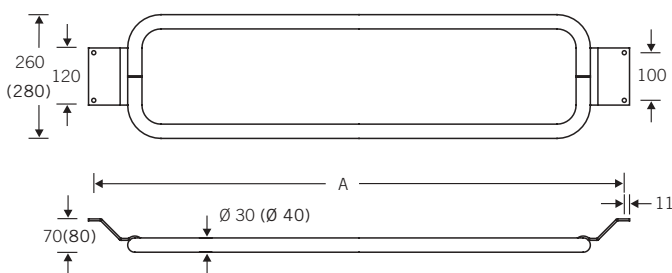
Screw hole - Ø 8.5 mm



6676 02 Ø 30 mm
6686 02 Ø 40 mm



6676 03 Ø 30 mm
6686 03 Ø 40 mm



6676 04 Ø 30 mm
6686 04 Ø 40 mm

4
C

Sections and support brackets for horizontal bar handles

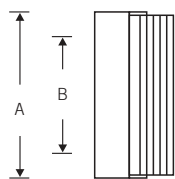
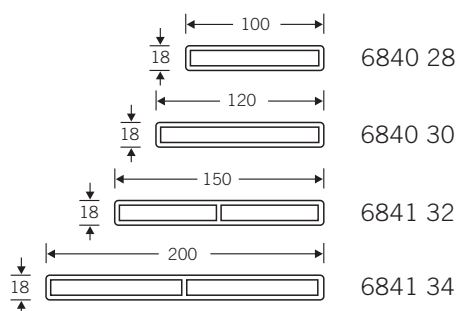


6840

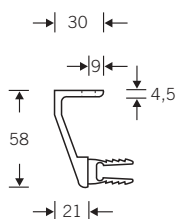
6841

Aluminium

The illustrated sections are available in stock lengths of 4,000 mm.



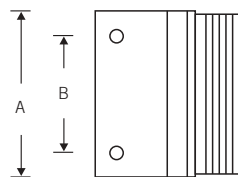
Screw hole \varnothing 6,5 mm



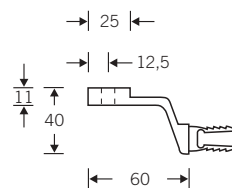
6763

Aluminium

Sizes in mm	A	B
28	100	70
30	120	100
32	150	120
34	200	170



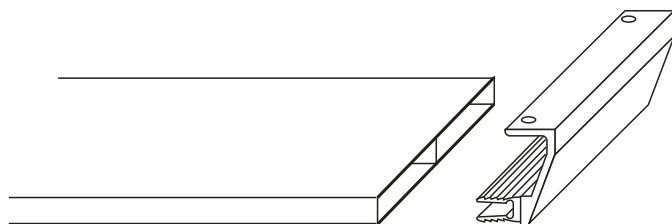
Screw hole \varnothing 6,5 mm



6769

Aluminium

Sizes in mm	A	B
28	100	70
30	120	100
32	150	120
34	200	170



Horizontal bar handles

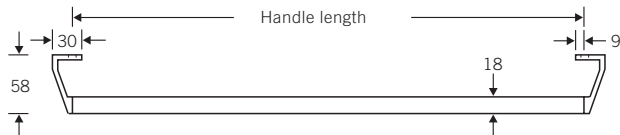
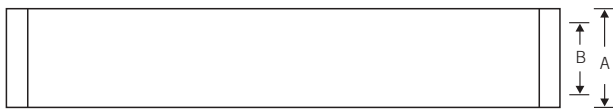


6460

Aluminium

Screw hole \varnothing 6,5 mm (base)

Sizes in mm	A	B
0028	100	70
0030	120	100
0032	150	120
0034	200	170



Cranked bracket for swing doors

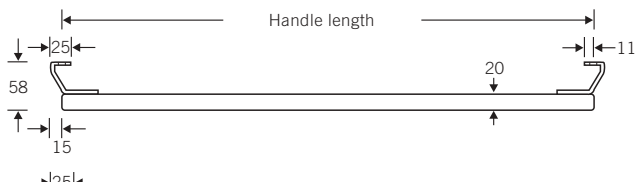
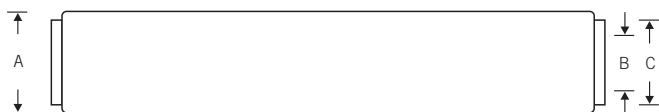


6475

Stainless steel

Screw hole - \varnothing 8.5 mm (base)

Sizes in mm	A	B	C
0030	120	70	100
0032	150	100	120



Cranked bracket for swing doors

Sizes in mm	A	B	C
0130	120	70	100
0132	150	100	120

Fixing accessories cf. page 511.

Grip handle furniture for framed doors
with concealed fixing



7816

Aluminium natural colour
anodised

7816 07 r.h.
7816 08 l.h.

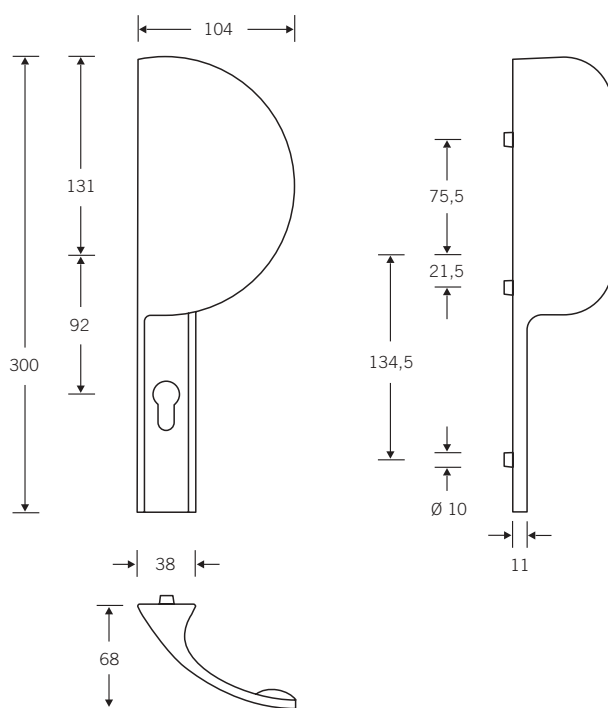
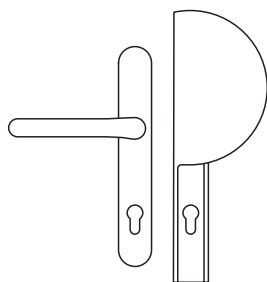


Illustration l.h.,
handing details cf. page 578.

Item nos.:



7816 07 r.h.
7816 08 l.h.

Order details:

spindle thickness: 8 or 10 mm
door thickness mm

Grip handle furniture for framed doors
with concealed fixing

7816

Aluminium natural colour
anodised

7816 11 r.h.
7816 12 l.h.

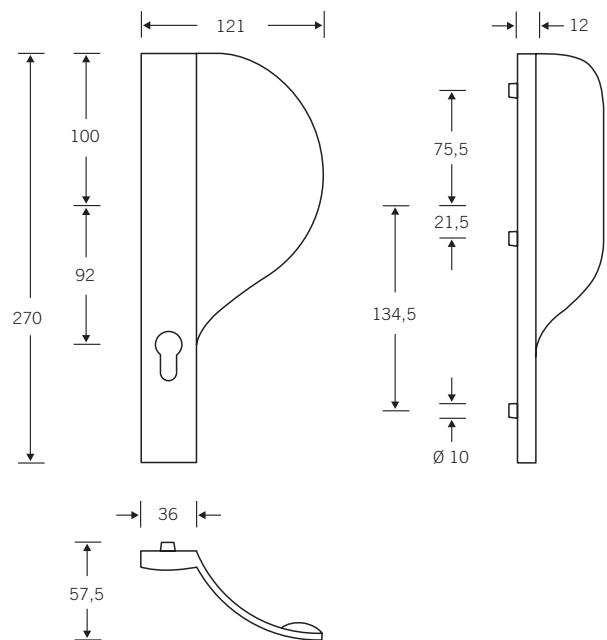
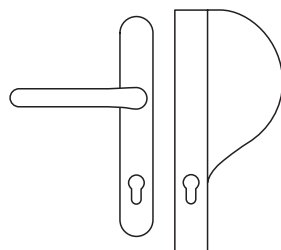


Illustration l.h.,
handing details cf. page 578.

4

C

Item nos.:



7816 11 r.h.
7816 12 l.h.

Order details:

spindle thickness: 8 or 10 mm
door thickness mm

Lever handle for framed doors fixed on an oval backplate,
with concealed fixing
8 mm □-hole und support mechanism
9 mm □-hole for fire and smoke stop doors (F)

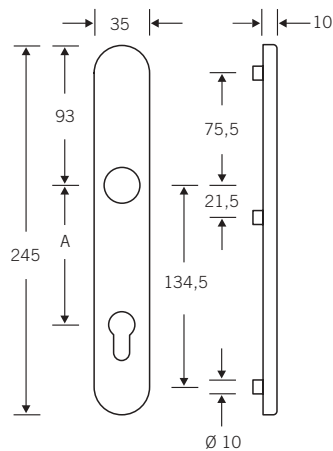
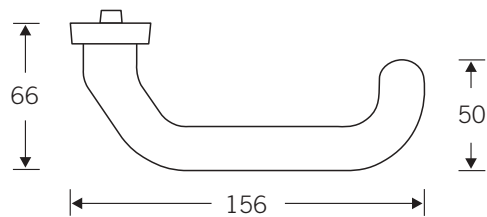


7816

Aluminium
Stainless steel
Alu + colour

7816 18 (F)

Aluminium
Stainless steel
Alu + colour

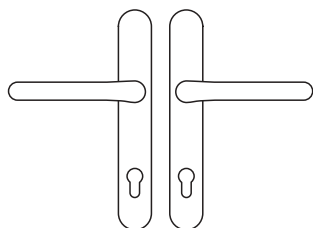


Order details:

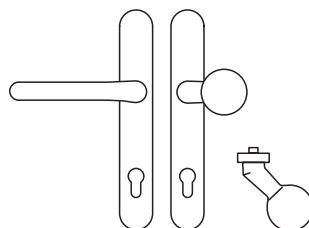
spindle thickness: 8 or 10 mm
9 mm (F) Standard
door thickness mm

Size A spacing 72 mm PZ
Size A spacing 92 mm PZ

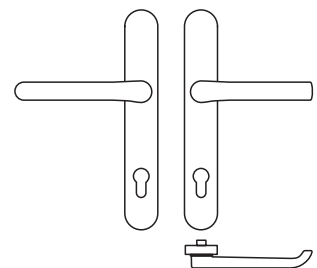
Item nos.:



Standard fittings
Fire door fittings



Entrance door furniture
7816 13

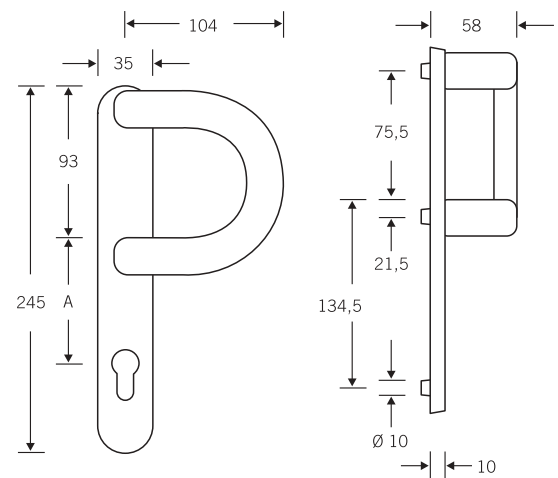


Balcony door furniture
7816 02

Grip handle furniture for framed doors
on an oval backplate, with concealed fixing
and support mechanism

7816 09

Aluminium natural colour
anodised
Alu + colour

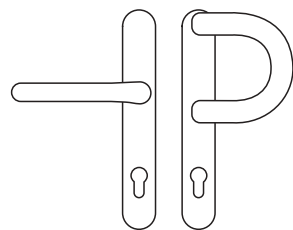


Order details:

spindle thickness: 8 or 10 mm
door thickness mm

Size A spacing 72 mm PZ
Size A spacing 92 mm PZ

Item no.:



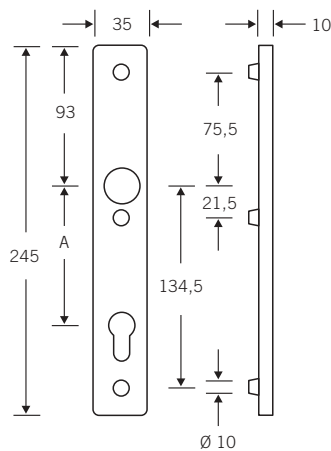
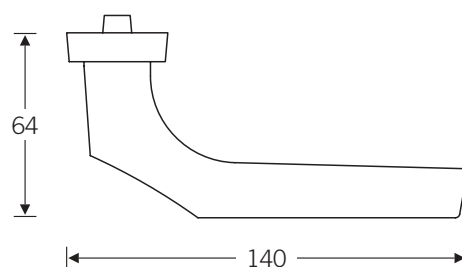
Grip handle furniture
7816 09

Lever handle for framed doors fixed on an angular backplate, concealed fixing on one side



7820

Aluminium
Alu + colour



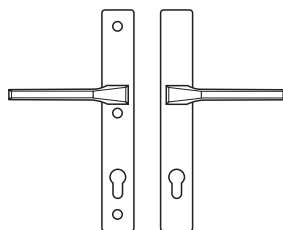
Order details:

spindle thickness: 8 or 10 mm
door thickness mm

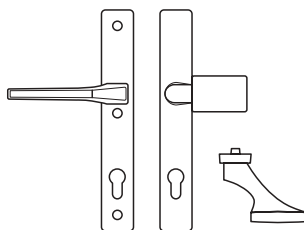
Size A spacing 72 mm PZ
Size A spacing 92 mm PZ

Illustration inner backplate

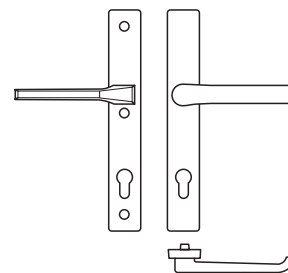
Item nos.:



Lever handle furniture
7820 01



Entrance door furniture
7820 13

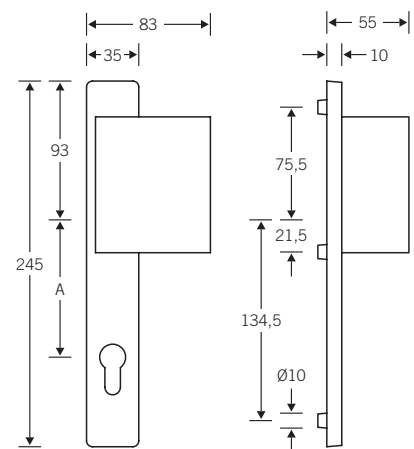
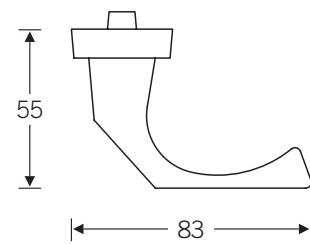


Balcony door furniture
7820 02

Lever handle furniture for framed doors
 fixed on an angular backplate
 concealed fixing on one side

7820 03

Aluminium

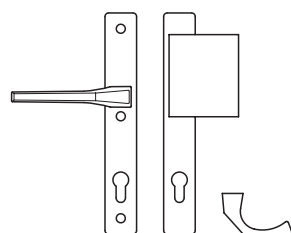


Order details:

spindle thickness: 8 or 10 mm
 door thickness mm

Size A spacing 72 mm PZ
 Size A spacing 92 mm PZ

Item no.:



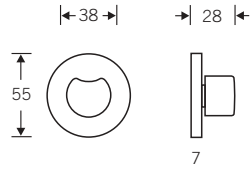
7820 03

4

C

Turnable knobs

for multi-point locks

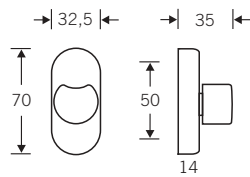


0418 02

Aluminium
Stainless steel

8 mm □

Spindle projecting
standard 40 mm



0418 03

Aluminium
Stainless steel

8 mm □

Spindle projecting
standard 40 mm

4

C

For deployment on multi-point locks, FSB supplies an easy-action turnable knob on a circular or oval rose for concealed face fixing.

Fixing accessories



0313

Steel studs

- 0313 0670 M6 x 70 mm
- 0313 0680 M6 x 80 mm

- 0313 0880 M8 x 80 mm



0316

Steel studs - for timber fixing

- 0316 0640 M6

- 0316 0840 M8



0319

Aluminium dome nuts

- 0319 0600 M6
- 0319 0800 M8

Stainless steel dome nuts

- 0319 0800 M8



0320

Aluminium and Stainless steel dome nuts

- 0320 0800 M8



0325

Aluminium

Blind nuts with 12 mm neck

- 0325 0600 M6

- 0325 0800 M8

Entrance doors

Letter plates Bell-push plates Numerals

4d

Technical Information	514
Overview	515
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Intercom and bell-push plates	522
Accessories	524
Numerals	525

Letter plates

Letter plates

Letter plates and matching accessories are available for any number of applications and with a great variety of outer and aperture dimensions:

Letter plates with and without spacer.

Letter plates with spring mechanism – they can also be fitted vertically.

Letter plates with nameplates.

DIN 32 617

The Federal German Post Office has, in consultation with letter-plate manufacturers and consumer organisations, drawn up 'industrial guidelines for domestic letter boxes (specifications, testing and installation)'. These guidelines recommend that:

The aperture should be wide enough to allow a C4 letter (229 x 324 mm) to pass through lengthwise.

FSB letter-plate models 3829 and 3801 meet this criteria.

Bell push and light socket

Bell pushes may only be connected to a protective low voltage (max 42 V). Given the high no-load voltage involved, we recommend connecting the light socket (lamp operation max. 24 V/40 mA) to the safety transformer (8 V).

Overview

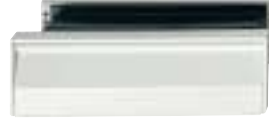
Aluminium
 Stainless steel



Pages 516 and 517



Page 518



Page 519



Page 520



Page 521



Page 524



Page 524



Page 522



Page 522



Page 522



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Page 523



Page 523



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Page 524



2a

Page 525



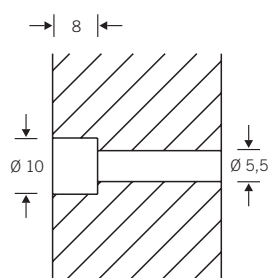
Letter plates



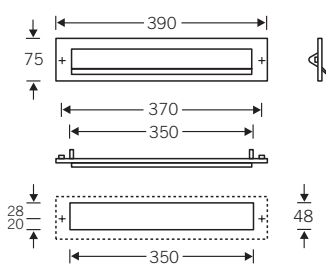
Fixing holes :
10 mm Ø, 8 mm deep
5,5 mm Ø through

Installation with delivered
screws M5.

4



d

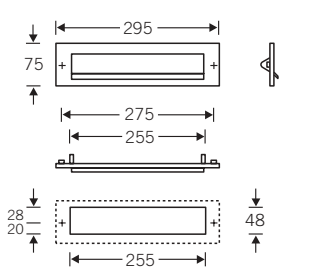


3801

Aluminium

2001 without nameplate
2002 with nameplate

Opening size 325 x 32 mm
Cutout size in the door
350 x 48 mm

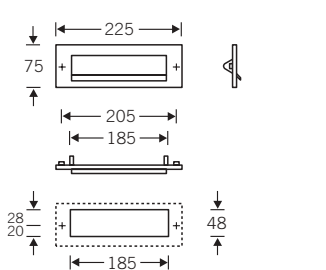


3804

Aluminium

2001 without nameplate
2002 with nameplate

Opening size 230 x 32 mm
Cutout size in the door
255 x 48 mm



3805

Aluminium

2001 without nameplate
2002 with nameplate

Opening size 160 x 32 mm
Cutout size in the door
185 x 48 mm

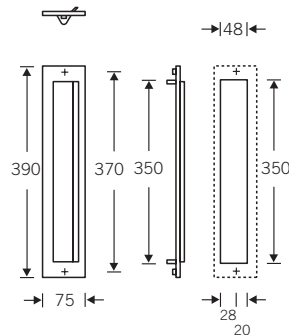
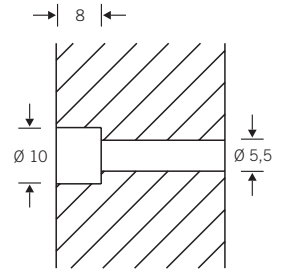
Letter plates



Letter plates 3801, 3804 and 3805 are fitted with springs and can hence be installed vertically.

Fixing holes :
10 mm Ø, 8 mm deep
5,5 mm Ø through

Installation with delivered screws M5.

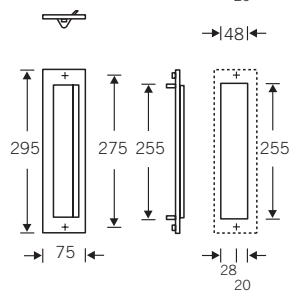


3801

Aluminium

2001 without nameplate
2002 with nameplate

Opening size 325 x 32 mm
Cutout size in the door
350 x 48 mm

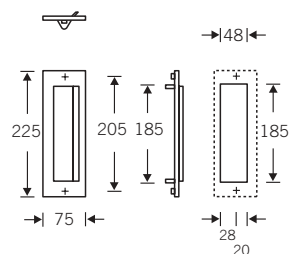


3804

Aluminium

2001 without nameplate
2002 with nameplate

Opening size 230 x 32 mm
Cutout size in the door
255 x 48 mm



3805

Aluminium

2001 without nameplate
2002 with nameplate

Opening size 160 x 32 mm
Cutout size in the door
185 x 48 mm

Letter plates



3808

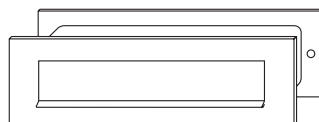
Stainless steel

Opening size 230 x 35 mm
Cutout size in the door
246 x 60 mm

Concealed fixing from the inside or through the inner flap.

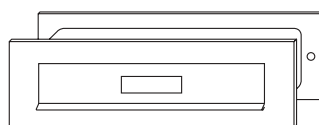
Letter plate system 3808 is available as:

- Letter plate set with black spacer and inner flap for door thickness 40 -70mm or door thickness 71-100mm
- Single as letter plate or for wallmounting.



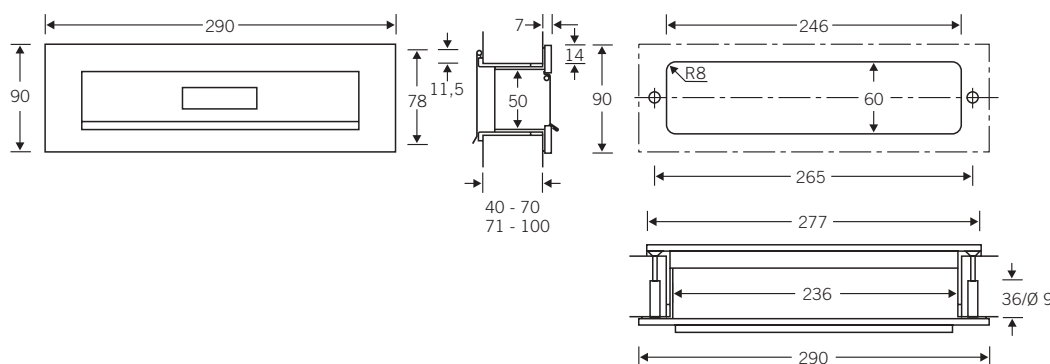
3808 0061 (40 - 70 mm)
3808 0071 (71 - 100 mm)
Letter plate set without nameplate, with spacer and inner flap

3808 0001
3808 0101, wallmounting
Letter plate without nameplate, without spacer or inner flap



3808 0062 (40 - 70 mm)
3808 0072 (71 - 100 mm)
Letter plate set with nameplate, spacer and inner flap

3808 0002
3808 0102, wallmounting
Letter plate with nameplate, without spacer or inner flap



Fixing holes:
9 mm Ø, 36 mm deep
4,5 mm Ø through

Installation with delivered screws M4.

Letter plates



3835 00

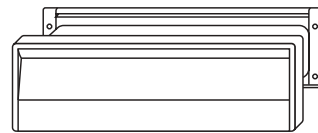
Aluminium

Opening size 230 x 40 mm
Cutout in the door
240 x 50 mm

Fixing of letter plate and inner plate must be made separately.

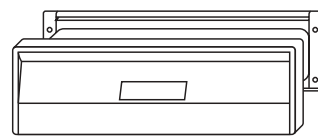
Letter plate system 3835 00 is available as:

- Letter plate set with black spacer and inner flap for door thickness 40 -70mm or door thickness 71–100mm
- Single as letter plate.



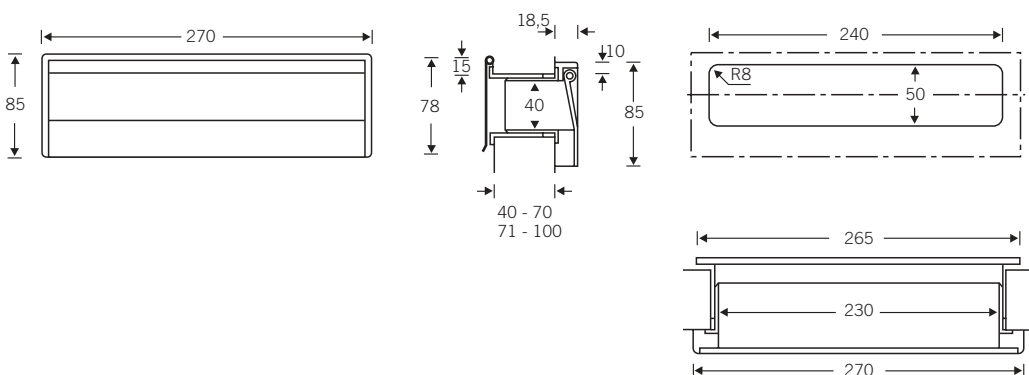
3835 0061 (40 - 70 mm)
3835 0071 (71 - 100 mm)
Letter plate set without nameplate, with spacer and inner flap

3835 0001
Letter plate without nameplate, without spacer or inner flap

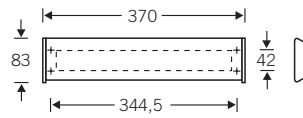


3835 0062 (40 - 70 mm)
3835 0072 (71 - 100 mm)
Letter plate set with nameplate, spacer and inner flap

3835 0002
Letter plate with nameplate, without spacer and inner flap



Letter plates

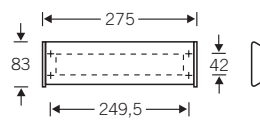


3829

Aluminium

0001 without nameplate
0002 with nameplate

Opening size/cutout size in the door 325 x 40 mm

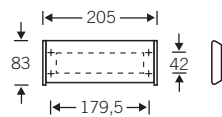


3826

Aluminium

2001 without nameplate
2002 with nameplate

Opening size/cutout size in the door 230 x 40 mm



3827

Aluminium

2001 without nameplate
2002 with nameplate

Opening size/cutout size in the door 160 x 40 mm

4

d

Letter plates

3826 20

Aluminium
Stainless steel

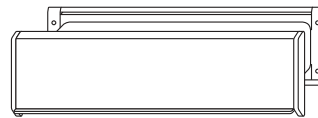
Opening size 230 x 40 mm
Cutout size in the door
240 x 50 mm

Fixing of letter plate and inner
flap must be made separately.



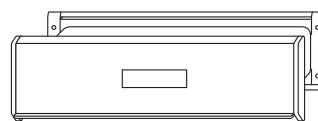
Letter plate system 3826 20 is available as:

- Letter plate set with black spacer and inner flap for door thickness 40 – 70mm or door thickness 71 – 100mm
- Single as letter plate.



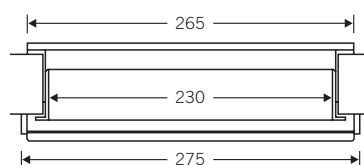
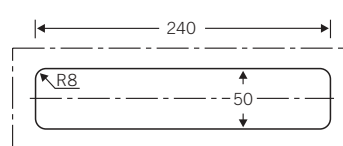
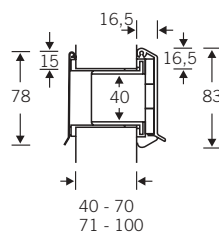
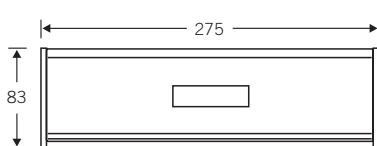
3826 2061 (40 - 70 mm)
3826 2071 (71 - 100 mm)
Letter plate set
without nameplate,
with spacer and inner flap

3826 2001
Letter plate
without nameplate,
without spacer or inner flap

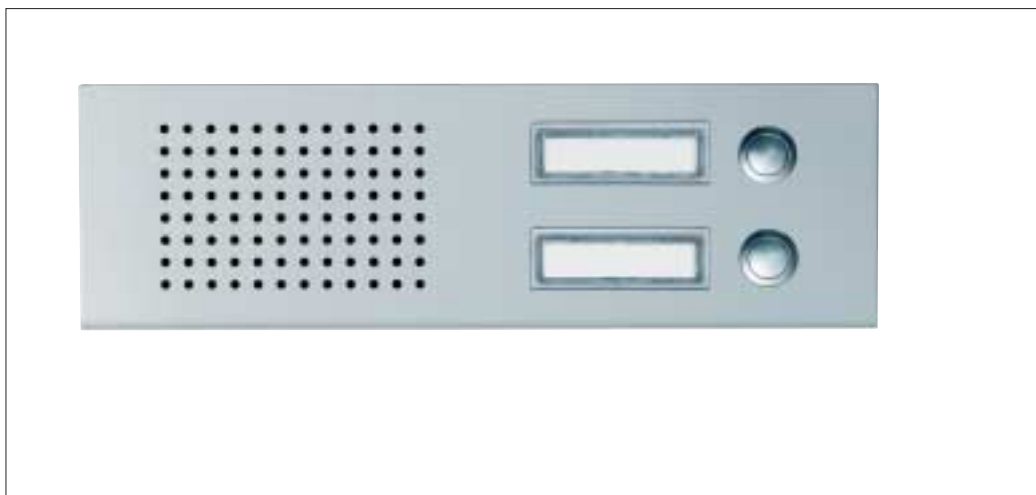


3826 2062 (40 - 70 mm)
3826 2072 (71 - 100 mm)
Letter plate set
with nameplate, spacer and
inner flap

3826 2002
Letter plate
with nameplate,
without spacer or inner flap



Intercom and bell-push plates

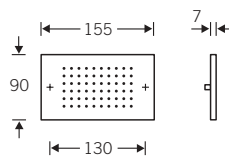
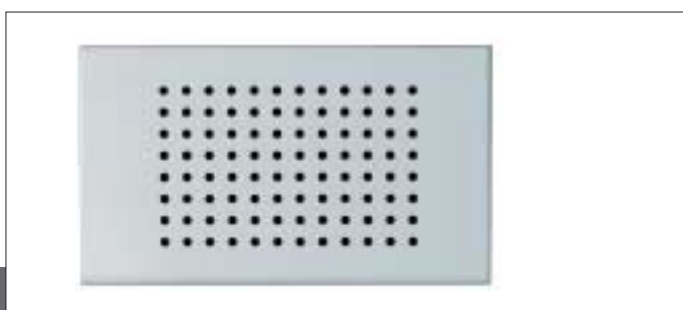
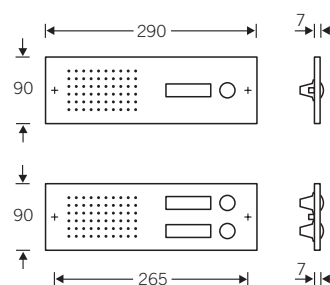


3812

Stainless steel

- 0011 single
- 0012 double
- 0111 single, wallmounting
- 0112 double, wallmounting

Mill out size
W 245 x H 70 x D 30 mm

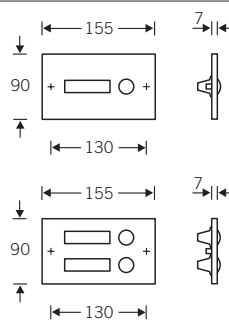


3811

Stainless steel

- 0010 single
- 0110 single, wallmounting

Mill out size



3810

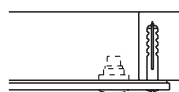
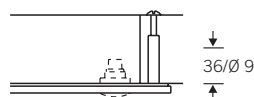
Stainless steel

- 0011 single
- 0012 double
- 0111 single, wallmounting
- 0112 double, wallmounting

Mill out size
W 110 x H 70 x D 30 mm

Instruction:

Bell pushes may only be connected to a protective low voltage (max 42 V). Given the high no-load voltage involved, we recommend connecting the light socket (lamp operation max. 24 V/40 mA) to the safety transformer (8 V).



Fixing holes:
9 mm Ø , 36 mm deep
4,5 mm Ø through
Installation with delivered screws M4.

Intercom and bell-push plates and letter plate 3808 are available on request with visible fixing for 5 mm Ø countersunk head screws.

Intercom and bell-push plates

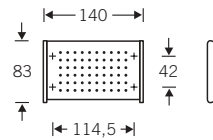
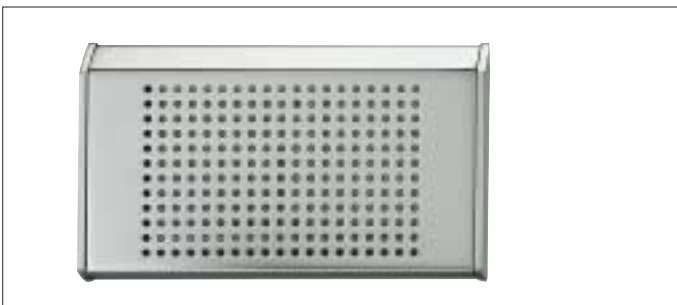
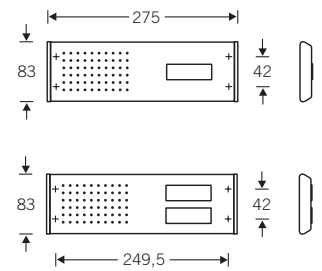


3866

Aluminium
Stainless steel

0011 single
0012 double

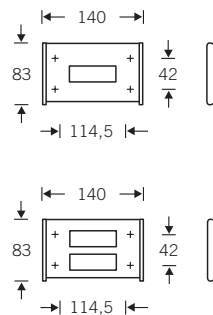
Mill out size
W 235 x H 60 x D 30 mm



3865

Aluminium
Stainless steel

Mill out size
W 100 x H 60 x D 30 mm



3864

Aluminium
Stainless steel

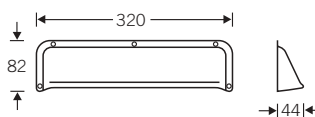
0011 single
0012 double

Mill out size
W 100 x H 60 x D 30 mm

Instruction:

Bell pushes may only be connected to a protective low voltage (max 42 V). Given the high no-load voltage involved, we recommend connecting the light socket (lamp operation max. 24 V/40 mA) to the safety transformer (8 V).

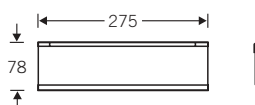
Letter hood
Flap
Bell pushes



5812

Aluminium

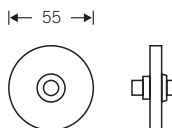
for aperture size
280 x 65 mm



3845

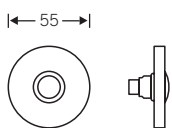
Aluminium

for aperture size
255 x 40 mm



3863

Aluminium



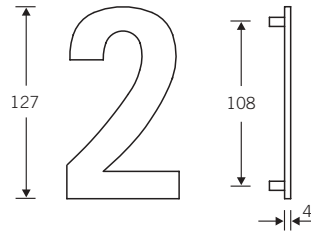
3863

Stainless steel

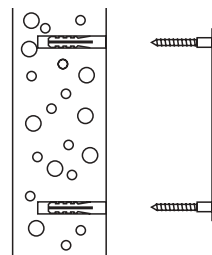
Instruction:

Bell pushes may only be connected to a protective low voltage (max 42 V). Given the high no-load voltage involved, we recommend connecting the light socket (lamp operation max. 24 V/40 mA) to the safety transformer (8 V).

Numerals



4005 ..
Stainless steel



FSB's programme of numerals and letters draws on a design that Otl Aicher recommended to our company as a headline typeface. For Otl Aicher, good legibility from a distance was all important.

Our numerals and letters are made of 4 mm-thick stainless steel, material code 1.4301. All characters feature two standardised fixing points comprising 4 mm threaded sockets. These are fitted with bolts which in turn are secured in 8 mm rawlplugs.

Each character is supplied with a fixing template that also determines the distance between characters. Custom spacing can be achieved by reducing the width of templates.

4

d

Item-nos.:
4005 ..

1	2	3	4	5	6	7	8	9	0
01	02	03	04	05	06	07	08	09	00
a	b	c	d	e	/				
11	12	13	14	16	15				

Accessories

Kicking plates
Ventilation plates
Ventilation grills
Perforated plates

5a

Technical Information	528
Kicking plates	529
Finger plates	530
Measurement details of perforation	531
Perforated Plates	532
Ventilation plates	535
Ventilation covers	536
Ventilation plates with fixing webs	537
Air inlet and outlet grills	538
Weatherseals	541

Technical Information

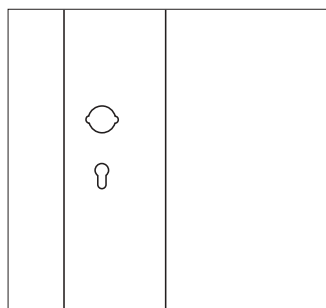
Kicking plates and finger plates

Doors are not always opened gently or with clean fingers. To prevent doors being soiled or mutilated, FSB supplies finger plates for the area adjacent to the lever handle and kicking plates for where feet tend to make contact.

Kicking and finger plates are available in a wide variety of materials (aluminium, stainless steel, brass) and thicknesses.

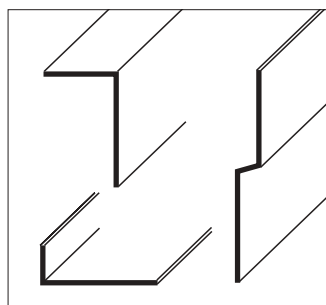
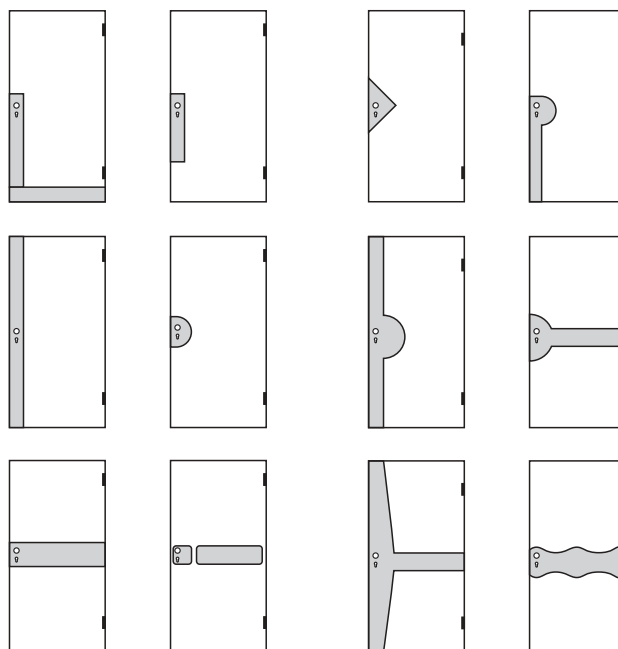
With or without screwholes

For assembly purposes, FSB kicking and finger plates are supplied as standard with holes for 3 mm countersunk screws. On express request, they may be supplied without screwholes, however. Plates 1 mm thick (FSB 5222 for example) can be made and delivered with self-adhesive foil instead of screwholes. Fitting such items requires experience and care on the part of the user. Most importantly, the surface of the door needs to be absolutely even and clean.



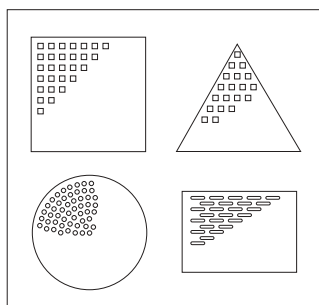
Perforations

Finger plates are generally machined to accept roses and backplates. FSB supplies finger plates as standard with piercings for the lever handle rose and for a standard euro-profile cylinder.



Return edges

Kicking plates and finger plates can feature a return edge. To ensure a good fit, detailed drawings need to be enclosed with orders that take account of all the structural tolerances involved. Should no such drawings or models be forthcoming, FSB will always treat dimensions cited for straightforward return edges as internal dimensions, notably in the case of rebated doors.



Shapes

Finger plates and kicking plates can come in many conceivable shapes, a few examples are shown here.

Basically, it's a question of availing oneself of the classic forms, i.e. square, circle, rectangle and triangle. To this extent FSB appeals to the imagination of designers and will gladly provide quotes on receipt of dimensioned drawings.

Data transferred in .dxf- or .dwg format can directly be processed by FSB.

Risk of injury

Items such as kicking plates, ventilation plates, ventilation covers and perforated plates are made of thin, sharp-edged material. When fitting them, it is important to make sure they lie flush against the surface to which they are to be attached. Such items should be handled with extreme care when being unpacked, fitted, checked for positioning and, indeed, throughout their service life. Carelessness in this respect can easily lead to fingers getting injured, especially in the course of cleaning routines.

Stock merchandise

FSB can effect immediate delivery of kicking plates in standard sizes from stock. Dimensions and materials are cited in the applicable price list.

Kicking plates



5222 1 mm

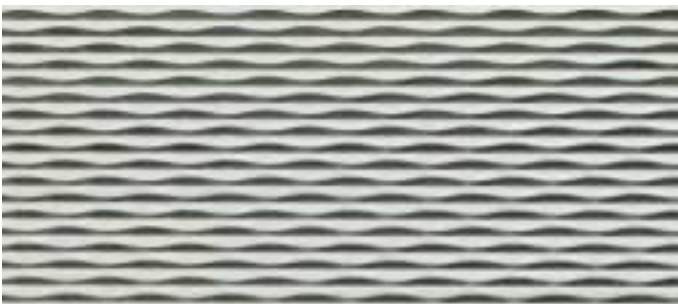
Aluminium
Stainless steel

5223 1,5 mm

Aluminium
Stainless steel

5224 2 mm

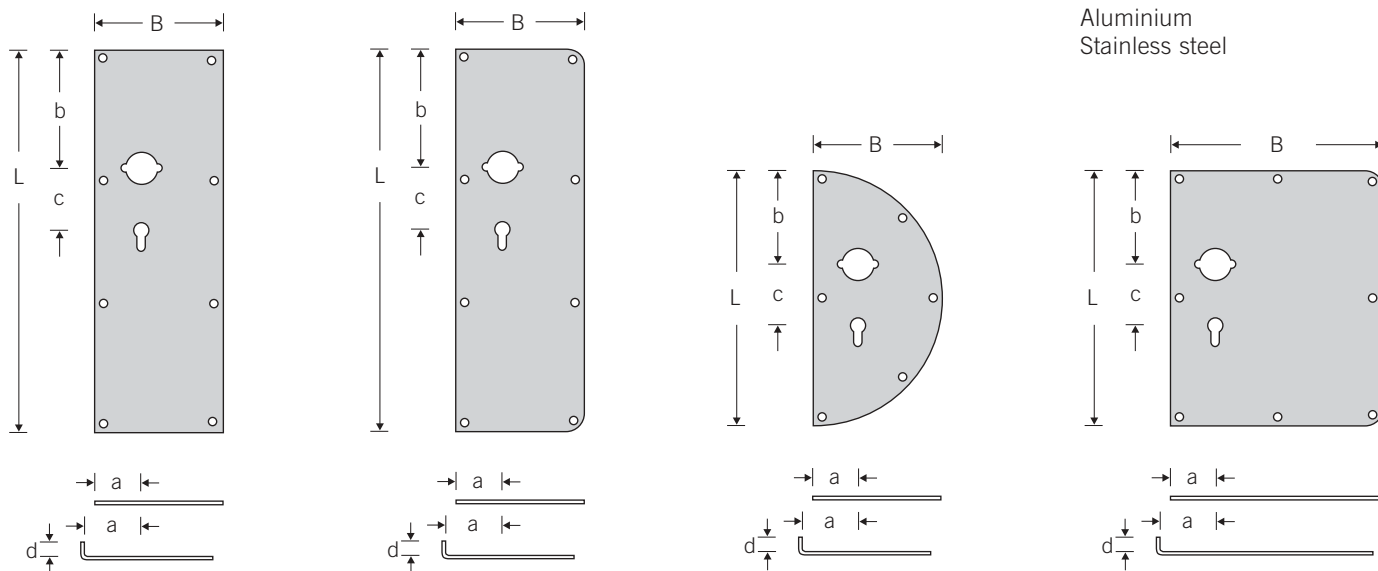
Aluminium
Stainless steel



5215 1 mm

Aluminium

Finger plates



Illustrated r.h.

5300 without return
5310 with return

5320 without return
5330 with return

5340 without return
5350 with return

5360 without return
5370 with return

Perforations

Finger plates can be pierced to accommodate roses or backplates. The simplest way of providing accurate specifications here is to cite the roses or backplates used together with their product codes. The following options are possible:

Option 1

Lever handle rose above (e. g. 1731), keyhole perforation below (e. g. europrofile cylinder).

Option 2

Lever handle rose above, escutcheon below (e. g. 1731, 1735).

Option 3

Backplate with visible fixing (e. g. model 1402).

Option 4

Backplate for concealed fixing (e. g. 1450).

Further options

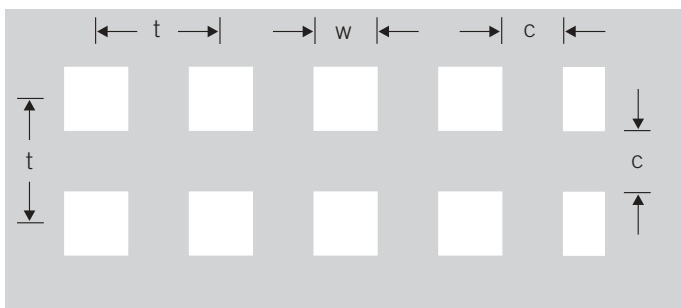
FSB can also produce other forms of finger plates to customer specifications through 'CNC' or laser procedures. Please send dimensioned drawings. We will submit our own drawings and a quote by return.

5

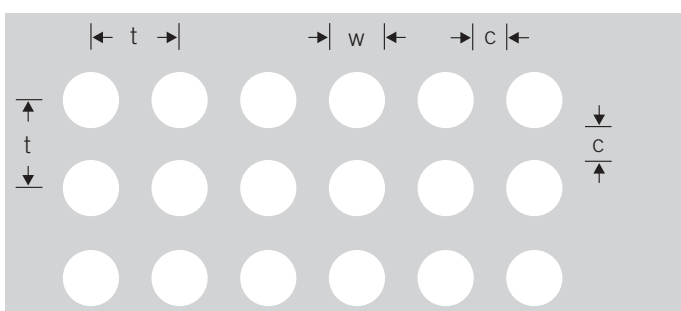
a

pce	no	r.h. l.h.	L length mm	B width mm	a backset mm	b spacing mm	c keyhole spacing mm	d return mm	perforations with product codes for roses or backplates used				keyholes e. g.		
									1	2	3	4	BB	PZ	

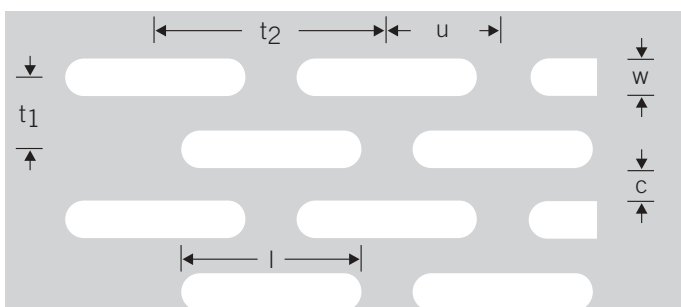
Measurement details of perforation



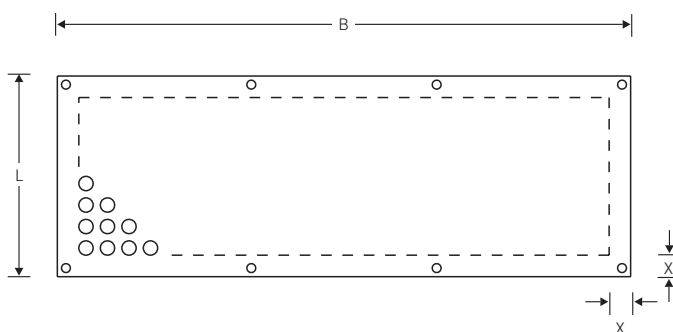
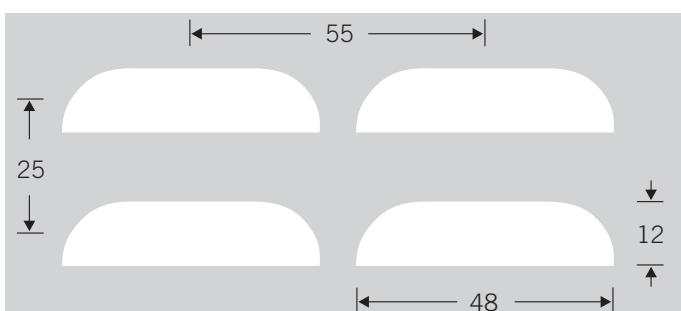
Perforation	w	t	c
	7	14	7
	10	20	10



Perforation	w	t	c
Ø	6	10	4
Ø	10	15	5

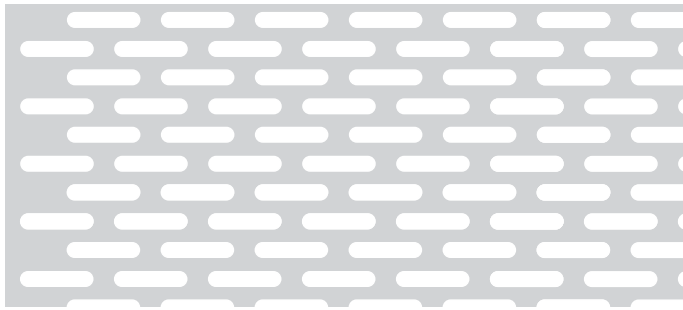


Perforation	w	l	t ₁	t ₂	u	c
20 x 4	4	20	8	26	13,0	4
30 x 5	5	30	10	37	18,5	5
40 x 7	7	40	13	48	24,0	6



Perforated plates are supplied with edges at least 15 mm wide. If broader edging is desired, the dimensions you specify should be regarded as minimum values, since they may in fact be greater due to the dictates of the perforation grid.

Perforated plates



20 x 4 mm slotted perforation

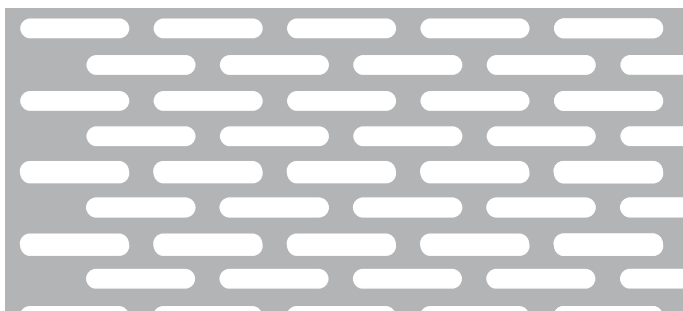
Relative free airflow area
34.2 %

5551 1 mm

Aluminium
Stainless steel

5552 1,5 mm

Aluminium
Stainless steel



30 x 5 mm slotted perforation

Relative free airflow area
36.4 %

5554 1 mm

Aluminium

5555 1,5 mm

Aluminium



40 x 7 mm slotted perforation

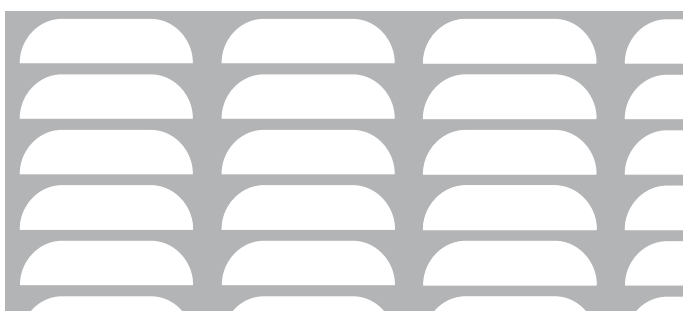
Relative free airflow area
40.4 %

5558 1 mm

Aluminium

5559 1,5 mm

Aluminium



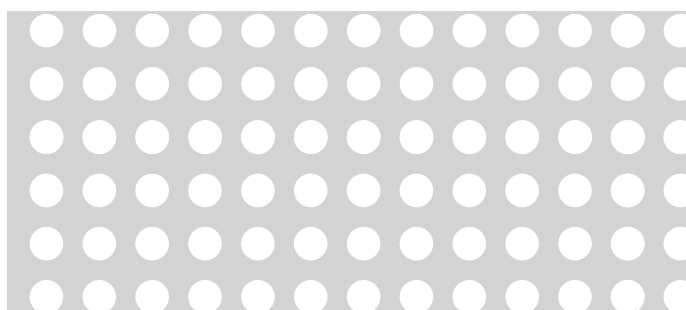
With conchately louvred
ventilation slots
Slot length 48 mm

Ventilation section
1.2 cm²/slot

5581 1,5 mm

Aluminium

Perforated plates



6 mm round perforation

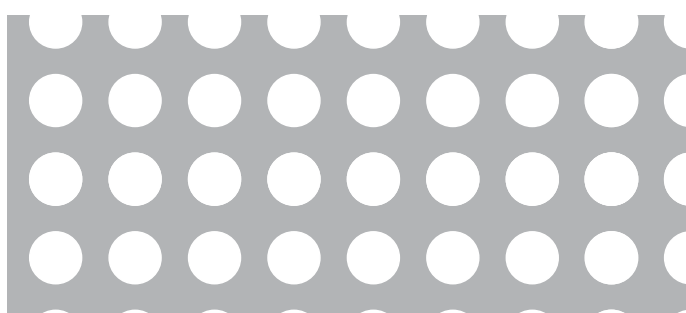
Relative free airflow area
26.6 %

5501 1 mm

Aluminium
Stainless steel

5502 1,5 mm

Aluminium
Stainless steel



10 mm round perforation

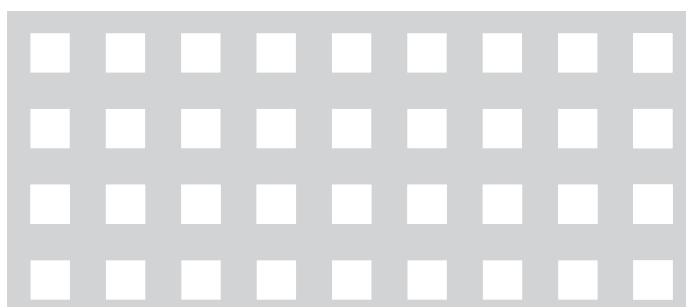
Relative free airflow area
33.2 %

5505 1 mm

Aluminium
Stainless steel

5506 1,5 mm

Aluminium
Stainless steel



7 mm square perforation

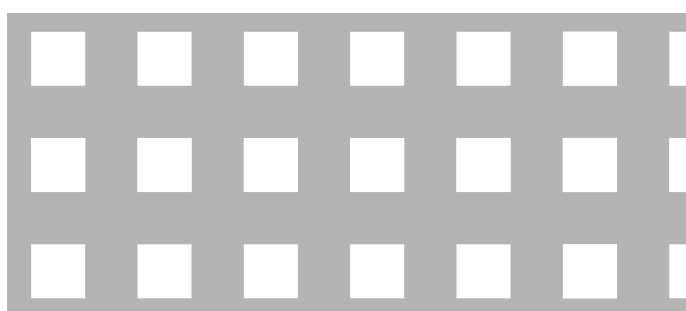
Relative free airflow area
23.3 %

5524 1 mm

Aluminium
Stainless steel

5525 1,5 mm

Aluminium
Stainless steel



10 mm square perforation

Relative free airflow area
24 %

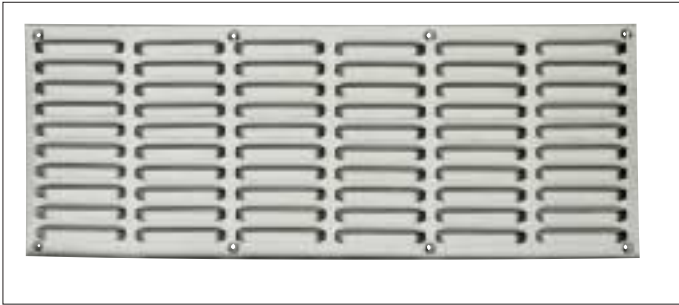
5528 1 mm

Aluminium
Stainless steel

5529 1,5 mm

Aluminium
Stainless steel

Perforated plates



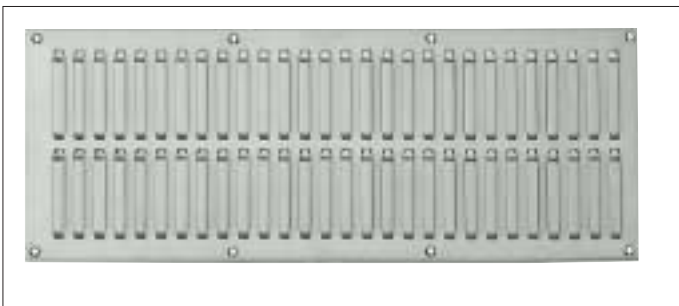
Size 360 x 135 mm
Slot length 50 mm

Ventilation area 144 cm²

Cutout size in the door
330 x 115 mm

5801

Aluminium 1,5 mm
Stainless steel 1 mm



Size 360 x 135 mm
Slot length 50 mm

Ventilation area 134.4 cm²

Cutout size in the door
330 x 115 mm

5802

Aluminium 1,5 mm
Stainless steel 1 mm



Size 55 mm Ø

Ventilation area
2.88 cm²

Cutout size in the door
Ø 37 mm

5853

Aluminium
Stainless steel

Ventilation slide



Ventilation plates
with 7 mm □-Perforation

5833 1 mm

Aluminium
Stainless steel

No.	Size	Ventilation area	Cutout size in the door
5833 24	200 x 60 mm	17,64 cm ²	165 x 35 mm
5833 31	250 x 75 mm	31,30 cm ²	220 x 50 mm
5833 37	250 x 80 mm	31,30 cm ²	220 x 50 mm
5833 38	300 x 80 mm	39,20 cm ²	275 x 50 mm
5833 39	400 x 80 mm	52,90 cm ²	375 x 50 mm
5833 40	500 x 80 mm	66,90 cm ²	470 x 50 mm
5833 41	400 x 90 mm	63,70 cm ²	375 x 65 mm
5833 46	300 x 100 mm	55,86 cm ²	275 x 80 mm
5833 47	400 x 100 mm	79,38 cm ²	375 x 80 mm
5833 48	500 x 100 mm	94,08 cm ²	470 x 80 mm
5833 51	500 x 90 mm	83,30 cm ²	470 x 65 mm
5833 61	600 x 90 mm	100,45 cm ²	570 x 65 mm

Suitable as counterplates to 5821



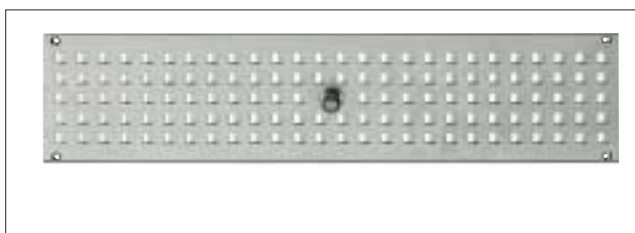
Ventilation plates with concha-ly louvred ventilation slots
Slot length 48 mm

5835 1 mm

Aluminium
Stainless steel

No.	Size	Ventilation area	Cutout size in the door
5835 24	200 x 60 mm	10,80 cm ²	165 x 45 mm
5835 31	250 x 75 mm	14,40 cm ²	220 x 60 mm
5835 41	400 x 90 mm	28,80 cm ²	385 x 60 mm

Suitable as counterplates to 5821



Ventilation plates
with 7 mm □-Perforation
Available length up to 600 mm

5821 4 mm

Aluminiumprofile

No.	Size	Ventilation area	Cutout size in the door
5821 24	200 x 60 mm	16,60 cm ²	175 x 35 mm
5821 31	250 x 75 mm	29,40 cm ²	235 x 50 mm
5821 41	400 x 90 mm	62,70 cm ²	385 x 65 mm
5821 51	500 x 90 mm	77,42 cm ²	475 x 65 mm
5821 61	600 x 90 mm	89,67 cm ²	565 x 65 mm

Ventilation covers



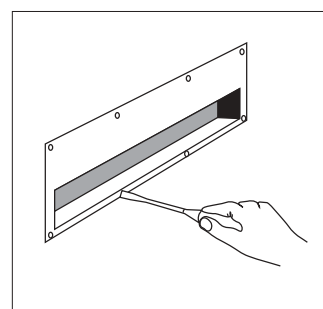
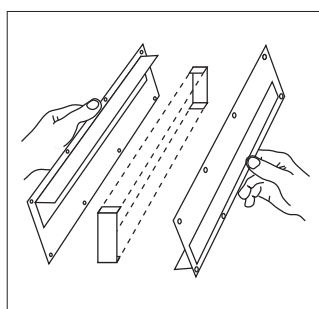
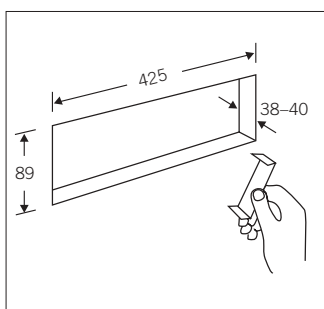
5807

Aluminium 1,5 mm
Stainless steel 1,0 mm

HORA-ventilation cover for bathroom with gas heating

Ventilation section 150 cm², corresponding to the German building regulations.

Size 450 x 115 mm
Door cutout 425 x 89 mm



5812

Aluminium

Ventilation hood

Size 320 x 80 mm
Door cutout 280 x 65 mm

Ventilation section 46.55 cm²

5833 0038

Aluminium

Ventilation grid

Size 300 x 80 mm
Door cutout 280 x 55 mm

Ventilation section 39.2 cm²

Items such as kicking plates, ventilation plates, ventilation grills, ventilation covers and perforated plates are made of thin, sharp-edged material. When fitting them, it is important to make sure they lie flush against the surface to which they are to be attached. Such items should be handled with

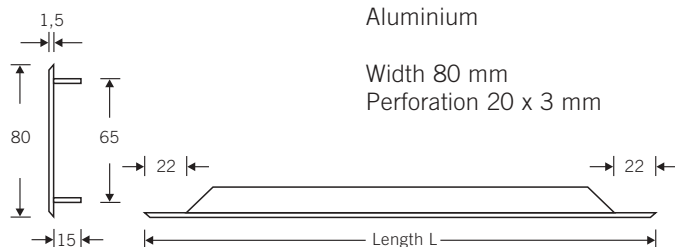
extreme care when being unpacked, fitted, checked for positioning and, indeed, throughout their service life. Carelessness in this respect can easily lead to fingers getting injured, especially in the course of cleaning routines.

Ventilation web plates

The ventilation web plates 5840 and 5841 are available in stock lengths 200, 300, 400, 480, 500, 600, 800, 1,000 and 2,500 mm.

A tailor-made construction according to your requirements is possible. Special construction and special finish on request.

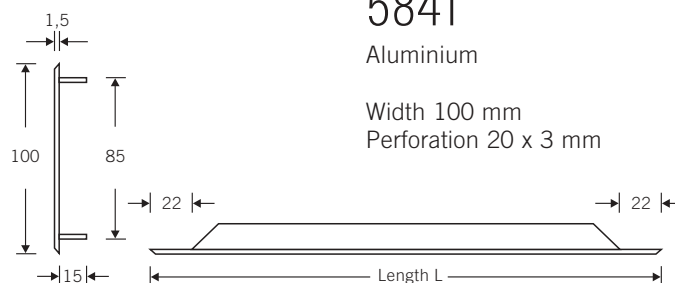
The ventilation web plates FSB 5844 are available in standard lengths of 400 and 500 mm.



5840

Aluminium

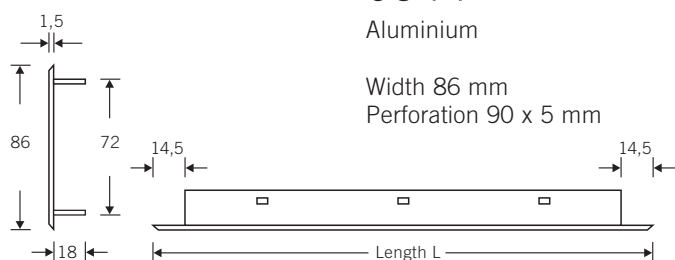
Width 80 mm
Perforation 20 x 3 mm



5841

Aluminium

Width 100 mm
Perforation 20 x 3 mm



5844

Aluminium

Width 86 mm
Perforation 90 x 5 mm

Ventilation areas:

5840 208.8 cm²/lfd m.
5841 278.4 cm²/lfd m.
5844 400.0 cm²/lfd m.

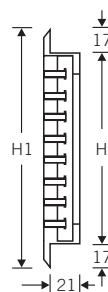
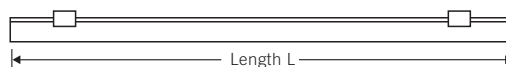
Air inlet and outlet grills



5588

Aluminium

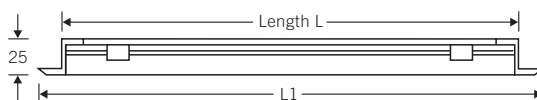
Fixing procedure A I + A II



5589

Aluminium

Fixing procedure A III + A VI



H clear installation height
H₁ total length

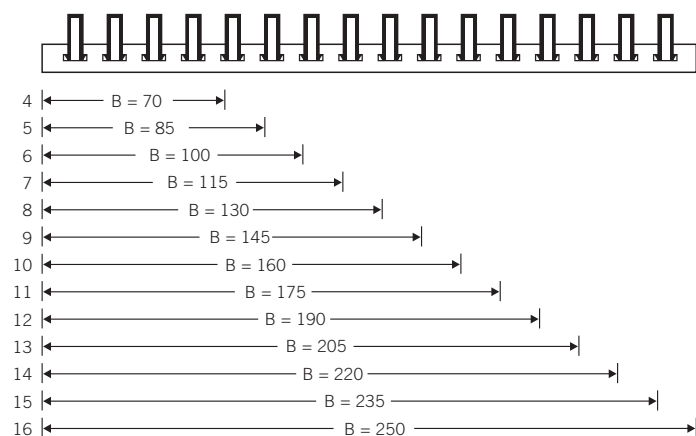
L clear installation height
L₁ total length

5
a

FSB air inlet and outlet grills in aluminium are deployed as decorative fittings in ceilings, walls, heating covers, furniture and so on. They cannot be walked or driven on.

Ordering procedure as well as sizes and models described on the following pages.

Air inlet and outlet grills



FSB can produce any dimensions within the range 4,000 x 250 mm. To avoid any unnecessary delay, please submit exact measurements, ideally on a copy of the order chart shown here. The number of lattice bars and support webs required can be roughly assessed using the appropriate tables.

In exceptional circumstances where the max. width of 250 mm needs to be exceeded, please supply us with an out-line of the situation stating all dimensions. One solution is to combine several lattice bars with one support web. FSB will willingly offer a quote for such work.

Number of holding webs:

300 - 400 mm	2 pieces
500 - 800 mm	3 pieces
900 - 1200 mm	4 pieces
1300 - 1600 mm	5 pieces
1700 - 2000 mm	6 pieces
2100 - 2500 mm	7 pieces

5888

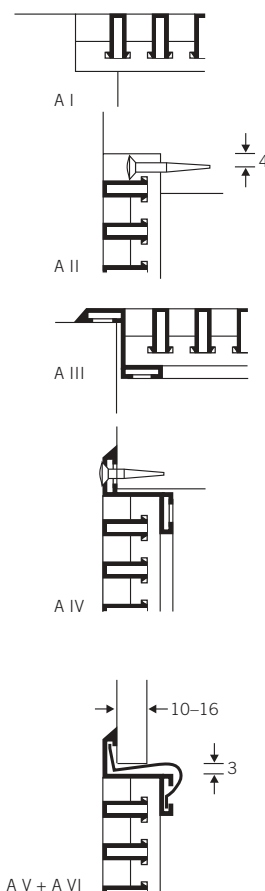
5889

Aluminium

For intermediate sizes or larger widths than 250 mm, please ask us.

Fixing modes:

- A I
without fixing holes to be placed into the groove
- A II
support webs provided with countersunk screw holes 4,25 mm Ø
- A III
Z-frame without fixing holes (grill is placed without being fixed)
- A IV
Z-frame with countersunk screw holes 4.25 mm Ø, grill is fixed in the Z-frame
- A V
Z-frame with spring elements, grill is placed without being fixed (for horizontal installation)
- A VI
Z-frame with spring elements, grill is fixed in the Z-frame.



Necessary order details:

Quantity	Item no.	Colour	Dim. L	Dim. H	Dim. L1	Dim. H1	A I	A II	A III	A IV	A V	A VI

5
a

Air inlet and outlet grills

Stock sizes:

The FSB-aluminium air inlet and outlet grills are constructed in a way that all parts can be kept in stock by retailers or fabricators and put together as required with a minimum of fuss.

Aluminium profile for lattice bars:
 Stock length: 4,000 mm
 Item no.: 5888 50
 Packing unit 29 pieces



5888

5889

Aluminium

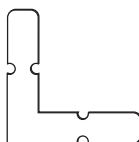
Aluminium support web
 15 x 250 mm
 Item no.: 5888 60



Aluminium profile for Z-frame
 Stock length: 4000 mm
 Item no.: 5889 60
 Packing unit 25 pieces



Corner connection for Z-frames
 Item no.: 5889 65
 Packing unit 250 pieces



Clamp element, spring steel
 Item no.: 5889 66
 Packing unit 250 pieces



5

a

Order quantity per packing unit:

Number of inlets FSB 5888 50	Number of aluminium support webs	Number of Z-Frames	Number of corner connections	Number of spring elements

Weatherseals

8580
Aluminium

Available sizes
for horizontal installation:

lengths up to max. 4000 mm
height up to max. 600 mm

for vertical installation:

lengths up to max. 1000 mm
height up to max. 1500 mm

Other dimensions on request.

The weatherseals can be installed flush. The overlap is 12 mm and is provided with countersunk screw holes.

For the installation height a modular dimension of 26 mm; + 21 mm for bottom section.

Height =
no. of blades x 26 + 21
(e. g. 5 x 26 + 21 = 151 mm).

Length can be produced to size up to max. 4000 mm.

Installation depth for vertical installation without holding webs 21 mm, for horizontal installation with holding webs 28 mm.

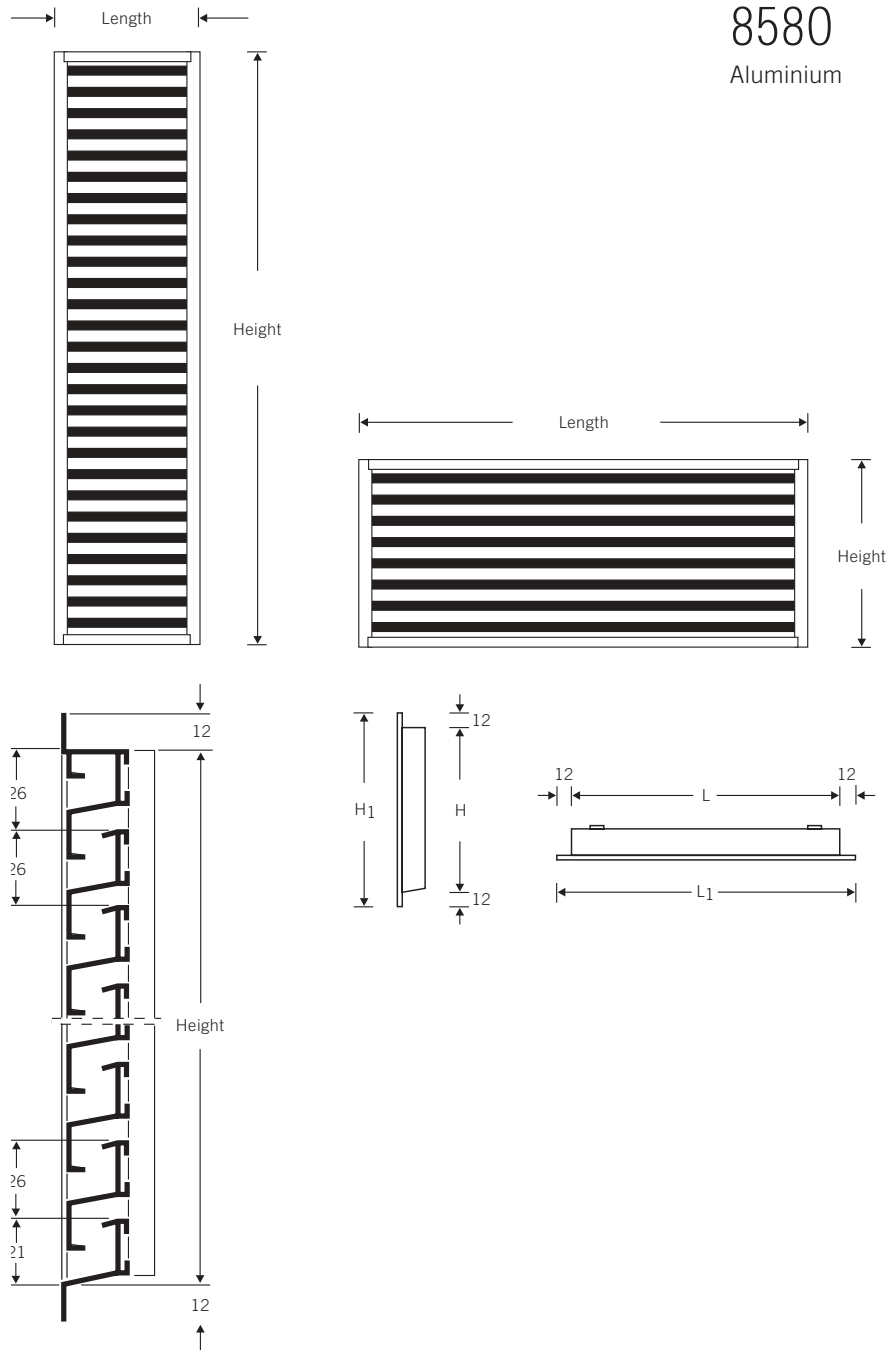
Ordering sizes:

H clear installation height

H₁ total height

L clear installation length

L₁ total length



Necessary order details:

Quantity	Item no.	Colour	Dim. L	Dim. H	Dim. L ₁	Dim. H ₁

Weatherseals



Stock version:

The FSB-weatherseals are also available in single components for self-assembly and installation.

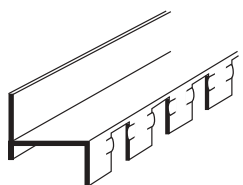
By simply cutting the sections to size and joining them up with holders, webs and cheeks, weatherseals of any dimensions can be produced.

8581

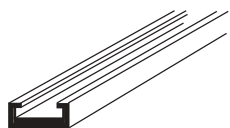
Working instructions:

1. Saw top, middle and bottom weatherseal blades to desired length (opening size -5 mm).
2. Saw lateral end sections to desired lengths notching them for the top and bottom sections.
3. Push weatherseal sections on lateral end sections. Use auxiliary web sections with plastic holder for lengths and widths over 400 mm.
4. The weatherseal can be secured on the top and bottom, in the area of the lateral end sections and web sections, using pop-rivets.

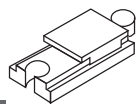
Single sections:



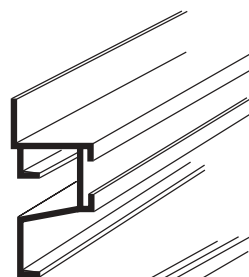
Top section
Length: 4,000 mm
Item no.: 8581 01



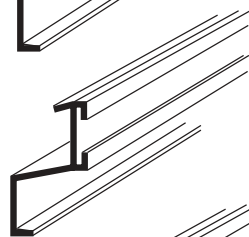
Blade section
Length: 4,000 mm
Item no.: 8581 02



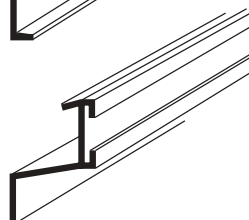
Bottom section
Length: 4,000 mm
Item no.: 8581 03



Lateral section with punches
Length: 4,000 mm
Item no.: 8581 04



Web section
Length: 4,000 mm
Item no.: 8581 05



Plastic holder
Item no.: 8581 06

Overview	546
FSB Stabil-spindle	547
FSB Stabil-half-spindle	548
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Accessories	552
Screws	554

Overview



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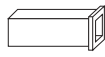
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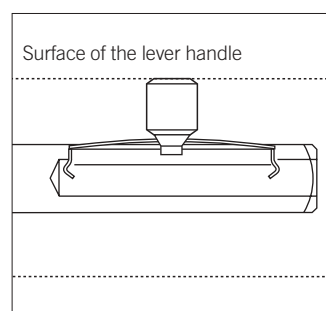
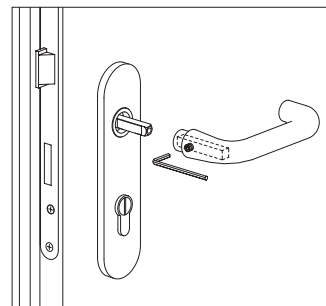


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FSB Stabil-spindle

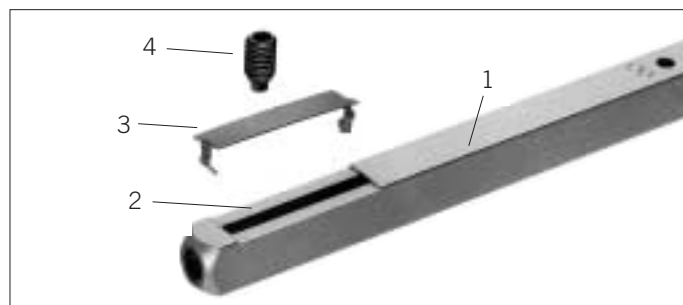


The FSB Stabil-spindle carries on from where its predecessors - the FSB Screw- and the FSB Anker-spindle - left off. New is a spring loaded tolerance compensator pierced by the grub screw when fastened.



Features

1. Solid square-section construction
2. Fastening for anchor clamp
3. Anchor clamp with pre-stress springing
4. Grub screw with piercing punch



The FSB stock range serves the following door thicknesses:

- 36 to 45 mm with the 8 mm FSB Stabil-spindle
- 66 to 75 mm with the 10 mm FSB Stabil-spindle

To this stock range all lengths of accessory parts are adapted. Hardware can be precision customised for other door or spindle thicknesses, with accessories to match.

Assembly instructions:

Pass the spindle with the male lever or male knob handle through the lock follower. The female lever or female knob handle is fitted to the spindle and the two parts pushed together securely.

The grub screw in the neck of the female lever or female knob handle is tightened and the handles are checked several times to ensure perfect operation. The grub screw should now be further firmly tightened until it pierces the spindle clamping clip. Visible sign for correctly mounted furniture: The head of the screw is flush with the handle's neck.

Check the fit by turning, pushing and pulling the handle a number of times.

FSB Stabil-half-spindle

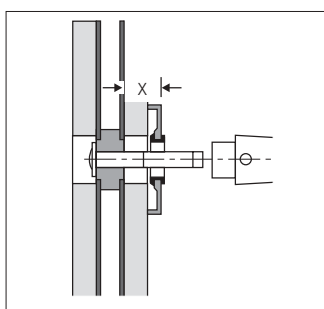


FSB Stabil-half-spindle
for through fixing

Dimension X

0103 0808 8 x 55 mm, 15 to 24 mm
0103 0812 8 x 65 mm, 25 to 34 mm
0103 0816 8 x 75 mm, 35 to 44 mm

0103 0908 9 x 55 mm, 15 to 24 mm
0103 0912 9 x 65 mm, 25 to 34 mm
0103 0916 9 x 75 mm, 35 to 44 mm



0103 1008 10 x 55 mm, 15 to 24 mm
0103 1012 10 x 65 mm, 25 to 34 mm
0103 1016 10 x 75 mm, 35 to 44 mm

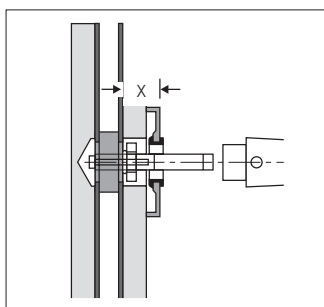


FSB Stabil-half-spindle
for doors drilled on one side

Dimension X

0104 0810 8 x 60 mm, 22,5 to 31,5 mm
0104 0814 8 x 70 mm, 32,5 to 41,5 mm
0104 0818 8 x 80 mm, 42,5 to 51,5 mm

0104 0910 9 x 60 mm, 22,5 to 31,5 mm
0104 0914 9 x 70 mm, 32,5 to 41,5 mm
0104 0918 9 x 80 mm, 42,5 to 51,5 mm



0104 1010 10 x 60 mm, 22,5 to 31,5 mm
0104 1014 10 x 70 mm, 32,5 to 41,5 mm
0104 1018 10 x 80 mm, 42,5 to 51,5 mm

0106 1012 8/10 x 65 mm, 27,0 to 36,0 mm*
0106 1014 8/10 x 70 mm, 32,5 to 41,5 mm*
0106 1018 8/10 x 80 mm, 42,5 to 51,5 mm*

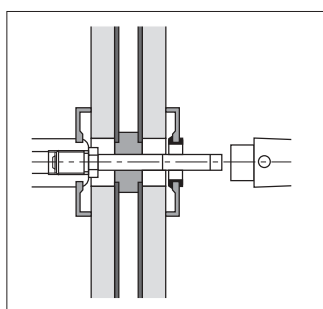
*stepped, 8 mm lever handle hole / 10 mm follower

5

b

In choosing the correct FSB Stabil-half-spindle, one can use the measurement of X as an aid. The measurement of X is the distance between the outer rim of the bushing of the backplates or roses and the lock follower.

FSB Stabil-half-spindle



FSB Stabil-half-spindle
with plug for screw mounting in knob neck, lever operable

for door thickness

0177 0820	8 x 85 mm, 36 to 45 mm
0177 0824	8 x 95 mm, 46 to 55 mm
0177 0828	8 x 105 mm, 56 to 65 mm
0177 0832	8 x 115 mm, 66 to 75 mm
0177 0836	8 x 125 mm, 76 to 85 mm
0177 0840	8 x 135 mm, 86 to 95 mm
0177 0844	8 x 145 mm, 96 to 105 mm

0177 0920	9 x 85 mm, 36 to 45 mm
0177 0924	9 x 95 mm, 46 to 55 mm
0177 0928	9 x 105 mm, 56 to 65 mm
0177 0932	9 x 115 mm, 66 to 75 mm
0177 0936	9 x 125 mm, 76 to 85 mm
0177 0940	9 x 135 mm, 86 to 95 mm
0177 0944	9 x 145 mm, 96 to 105 mm

0177 1020	10 x 85 mm, 36 to 45 mm
0177 1024	10 x 95 mm, 46 to 55 mm
0177 1028	10 x 105 mm, 56 to 65 mm
0177 1032	10 x 115 mm, 66 to 75 mm
0177 1036	10 x 125 mm, 76 to 85 mm
0177 1040	10 x 135 mm, 86 to 95 mm
0177 1044	10 x 145 mm, 96 to 105 mm

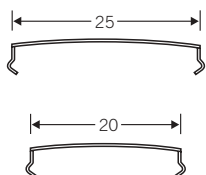
0107 1020	8/10 x 85 mm, 36 to 45 mm*
0107 1024	8/10 x 95 mm, 46 to 55 mm*
0107 1028	8/10 x 105 mm, 56 to 65 mm*
0107 1032	8/10 x 115 mm, 66 to 75 mm*
0107 1036	8/10 x 125 mm, 76 to 85 mm*
0107 1040	8/10 x 135 mm, 86 to 95 mm*
0107 1044	8/10 x 145 mm, 96 to 105 mm*

*stepped, 8 mm lever handle hole / 10 mm follower

The door thickness given for the FSB Stabil-half-spindle with plug assumes a backplate or rose thickness of 7 mm.

FSB supplies its office, fire-check and security furniture with FSB Stabil-half-spindle included, spindle and screw length being adjusted to the thickness of a given door.

Accessories Stabil-spindle



Anchor clamp spring

0406 2508 25 mm
0406 2008 20 mm

Grub screw with piercing punch

0402 0601 M6 x 8 mm
0402 0602 M6 x 9 mm
0402 0603 M6 x 10.5 mm
0402 0604 M6 x 11.5 mm



FSB Stabil-blind-spindle

0442 50 8 x 80 mm, suitable for door thickness 36 to 45 mm



FSB Special-stabil-spindle as a provisional device for lever handle sets comprising two female handles

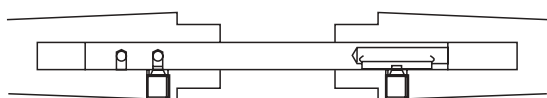
0102 0826 8 x 100 mm, suitable f. door thickness 36 to 55 mm
0102 0834 8 x 120 mm, suitable f. door thickness 56 to 75 mm
0102 0842 8 x 140 mm, suitable f. door thickness 76 to 95 mm

0102 0926 9 x 100 mm, suitable f. door thickness 36 to 55 mm
0102 0934 9 x 120 mm, suitable f. door thickness 56 to 75 mm
0102 0942 9 x 140 mm, suitable f. door thickness 76 to 95 mm

0102 1026 10 x 100 mm, suitable f. door thickness 36 to 55 mm
0102 1034 10 x 120 mm, suitable f. door thickness 56 to 75 mm
0102 1042 10 x 140 mm, suitable f. door thickness 76 to 95 mm

Female part of lever with threaded bolt 404

Female part of lever with grub screw 0402



0404 threaded bolt M6 x 12 mm with pin

5

b

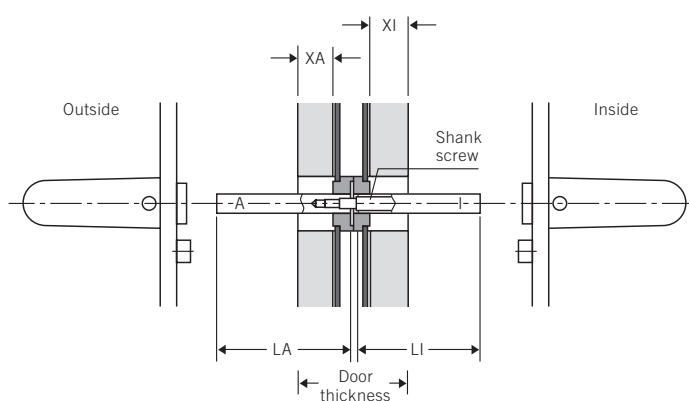
Where it is intended to form a set out of two female handle parts, the first step involves constructing a male handle using the FSB Stabil-spindle and the special threaded bolt with pin that goes with it. To produce this spindle-and-handle unit,

the grub screw must engage fully in the spindle-boreholes leaving the screw head flush with the surface of the handle. Thereafter assembly is as for the FSB Stabil-spindle in standard use.

The door thickness given for the FSB special Stabil-spindle assumes a backplate or rose thickness of 7 mm.

FSB Special spindle

0125



FSB lever handle spindle
for split follower,
item no. 0125

An equally proven FSB special spindle of 9 mm square section, item no. 0125, is available for locks with split follower. It suits door thicknesses from 34 mm to 101 mm.

When ordering, please specify:
Door thickness
Dimensions XA and XI
Item no. of FSB furniture

When deploying the FSB spindle for locks with a split follower, it is important not only to heed building regulations but also to bear in mind that panic fittings (lock, cylinder, spindle, handles etc.) are intended solely for use in an emergency and should never be fitted to doors in constant operation. FSB would draw your attention to the recommendations and observations of the lock industry in this respect.

Fixing instructions

1. From the outside insert spindle section A into the lock follower.
2. From the inside insert spindle section I into the lock follower and screw the two spindle sections together by means of the shank screw on the coupling washer.
3. Place the turnably fixed lever handles together with the backplates or roses on the spindles.
4. It should be ensured that there is no play between the plates or roses and the doors. The slightest slackness can lead to the connection in the lock follower being ruptured due to the forces exerted in operating the door.
5. Finally, firmly tighten the cup points on the two lever handles against the spindle. Heads of screws must be flush with the surface of the handle.

Accessories Stabil-spindle



Solid □-spindles 8 mm

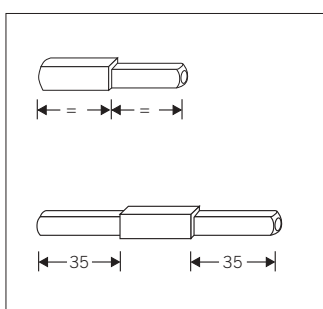
0172 0810 8 x 60 mm
0172 0814 8 x 70 mm
0172 0818 8 x 80 mm
0172 0822 8 x 90 mm

Solid □-spindles 8 mm

0172 0826 8 x 100 mm
0172 0830 8 x 110 mm
0172 0834 8 x 120 mm
0172 0838 8 x 130 mm
0172 0842 8 x 140 mm
0172 0846 8 x 150 mm
0172 0850 8 x 160 mm

Solid □-spindles 9 mm

0173 0910 9 x 60 mm
0173 0918 9 x 80 mm
0173 0926 9 x 100 mm
0173 0934 9 x 120 mm
0173 0938 9 x 130 mm
0173 0942 9 x 140 mm
0173 0946 9 x 150 mm
0173 0950 9 x 160 mm



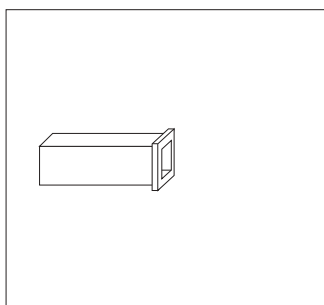
Stepped spindles one side

0188 0910 9/8 x 60 mm
0188 0916 9/8 x 75 mm
0188 0934 9/8 x 120 mm

0189 1010 10/8 x 60 mm
0189 1016 10/8 x 75 mm
0189 1018 10/8 x 80 mm
0189 1026 10/8 x 100 mm
0189 1030 10/8 x 110 mm

Stepped spindles both sides

0183 0926 8/9/8 x 100 mm
0183 0934 8/9/8 x 120 mm
0184 1026 8/10/8 x 100 mm
0184 1030 8/10/8 x 110 mm
0184 1034 8/10/8 x 120 mm
0184 1038 8/10/8 x 130 mm
0184 1042 8/10/8 x 140 mm



Adaptor sleeve
for lever handles/spindles/
lock follower

0425 0809 8 on 9 mm
0425 0810 8 on 10 mm
0425 0910 9 on 10 mm
0425 0885 8 on 8,5 mm



Fixing accessories for
frame door furniture

Screws M5 x 25 mm and
rivet nuts
Item no. 0526

5



8(9) mm spindles
(suitable to FSB adaptor-solution)

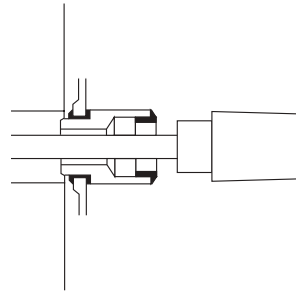
Door thickness	Spindle-length	Accessorie-bag
38 - 47 mm	88 mm	0525 08(9)03
48 - 57 mm	98 mm	0525 08(9)04
58 - 67 mm	108 mm	0525 08(9)05
68 - 77 mm	118 mm	0525 08(9)06
78 - 87 mm	128 mm	0525 08(9)07
88 - 97 mm	138 mm	0525 08(9)08
98 - 107 mm	148 mm	0525 08(9)09

8(9) mm spindles (suitable to all other lever handles for framed doors)

Door thickness	Spindle-length	Accessorie-bag
35 - 44 mm	98 mm	0525 18(9)04
45 - 54 mm	108 mm	0525 18(9)05
55 - 64 mm	118 mm	0525 18(9)06
65 - 74 mm	128 mm	0525 18(9)07
75 - 84 mm	138 mm	0525 18(9)08
85 - 94 mm	148 mm	0525 18(9)09
95 - 104 mm	158 mm	0525 18(9)10

b

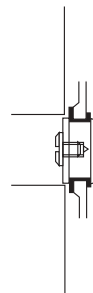
Accessories



Lever handle distance rose
to increase the distance
between door and lever
handle

Aluminium

0440 20	20 mm
0440 25	25 mm
0440 30	30 mm



Blind rose
to blank out the lever handle
hole on backplates

Aluminium

0441



FSB socket spanner
for half spindles for doors
drilled from one side

0410 00

Screws



Cross recessed tapping screw with countersunk head

0315

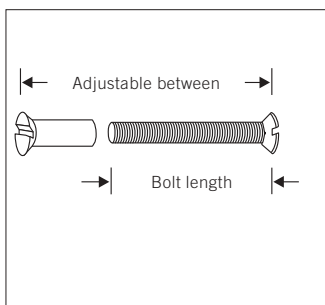
2,9 x 16 mm
3,9 x 16 mm
4,2 x 19 mm



Cross recessed raised countersunk oval head bolt

0303 0515
M5 x 15 mm

0303 0535
M5 x 35 mm



Bolts with 4 mm threaded sleeve nut 0309

Size	Bolt length	Adjustable between	for door thickness
M4 x 35	35 mm	37 - 45 mm	25 - 33 mm
M4 x 40	40 mm	42 - 50 mm	30 - 38 mm
M4 x 45	45 mm	47 - 55 mm	35 - 43 mm
M4 x 50	50 mm	52 - 60 mm	40 - 48 mm
M4 x 55	55 mm	57 - 65 mm	45 - 53 mm
M4 x 60	60 mm	62 - 70 mm	50 - 58 mm

5

b

Finishes of products

Aluminium 01, 02
Aluminium 03, 04, 07
Stainless steel
Brass
Aluminium + colour

Finishes of screws

N.P. on brass
Brass, lacquered to match
Satin stainless steel
Brass, coloured to match
Brass, lacquered to match

Correct fixing is essential if FSB lever handle furniture is to function flawlessly.

It is FSB policy to enclose paper positioning templates with all orders. Should these have been omitted, we would ask you to inform us immediately and we will rectify the matter. Product codes are given in the footers of the pages that follow.

FSB supplies trade installers with metal templates, the product codes for which are quoted towards the top of the right-hand column in the pages that follow.

A fair amount of force is involved in the operation of lever handle furniture. This holds particularly true for fittings on heavily used doors. Long-term trouble-free use can only be guaranteed if sufficient care is taken when marking out and boring holes and fixing the furniture.

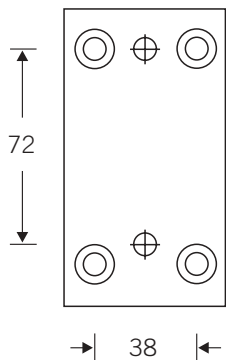
FSB has looked very carefully into the complaints received over recent years. In the process, it has discovered that the source of the problem is very frequently faulty fixing. Here are a few typical examples:

- Lugs on backplates and roses simply pinched off. Non-slip attachment impossible as a result.
- Fittings ordered for wrong door thickness. Connecting spindle was either too long - lever handle began to move - or too short - spindle mounted too close to its end, leading to breakage.
- The grub screw punch was not tightened with sufficient care and hence the clamping plate was not pierced. The lever handle was slack on its spindle, which meant it could be wrenched loose if tugged with any force.
- Holes bored without using template. Centres marked out in haphazard manner, producing oversize holes and hence poorly anchored backplates and roses moved on the door.
- FSB furniture has been combined with spindles, screws, backplates and roses of competitors.

FSB is at pains to stress that it can only accept liability for its products - just as all competitors - if they have been correctly fixed.

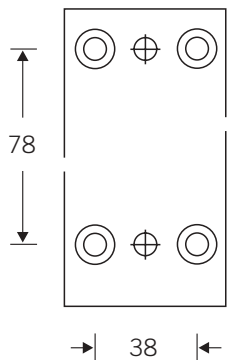
We would additionally wish to draw attention to growing public sensitivity regarding the issue of liability. Improperly fitted door and window furniture can have dire consequences in this respect. FSB puts its faith in the practical experience and skill of its own clientele and of their customers. Our mutual end customers have a right to expect properly fitted hardware that works.

Fixing template for FSB roses



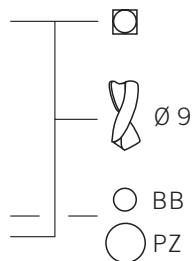
Item no. 0455 0000

BB and PZ 72 mm



Item no. 0455 5608

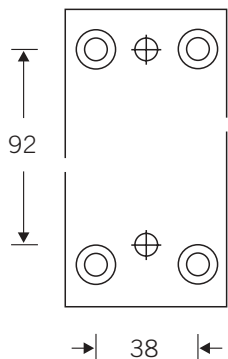
WC 78 mm



0455

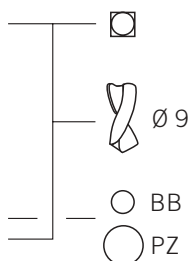
Fixing template for FSB roses designed for concealed fixing:

- FSB roses and escutcheons
- FSB roses to take compensating bearing
- FSB roses and escutcheons for fire and smoke stop doors
- FSB security roses

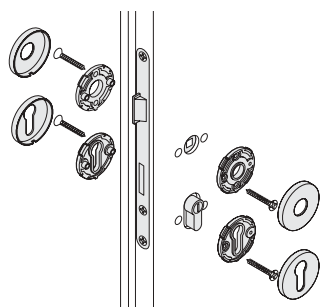
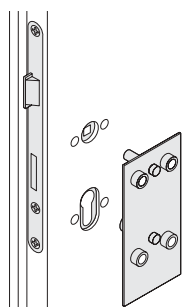


Item no. 0455 0012

BB and PZ 92 mm



5



Paper template for FSB roses standard and FSB fire door furniture resp. with compensating bearing

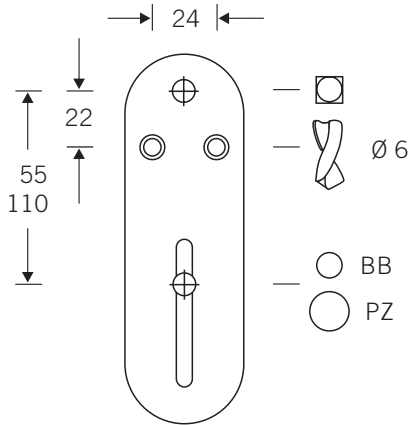
Item no. 8429 0250

Paper template for FSB roses WC standard

Item no. 8429 0251

Fixing template for FSB short backplates

with visible fixing



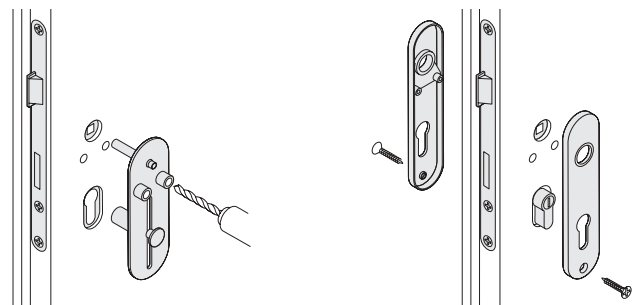
0453

Fixing template for FSB standard short backplate, locating lugs and visible fixing

BB/PZ/WC 55 – 110 mm

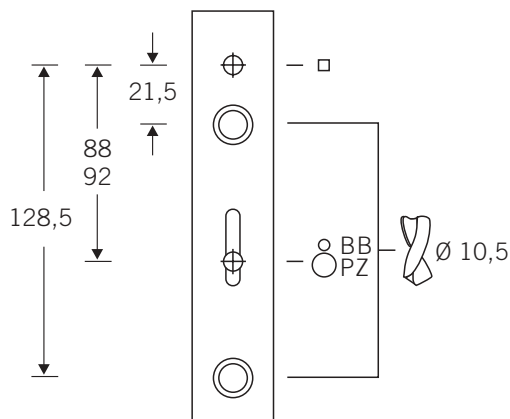
Paper template for FSB standard short backplate with locating lugs

Item no. 8429 0252



Fixing template for FSB short backplates

with concealed fixing

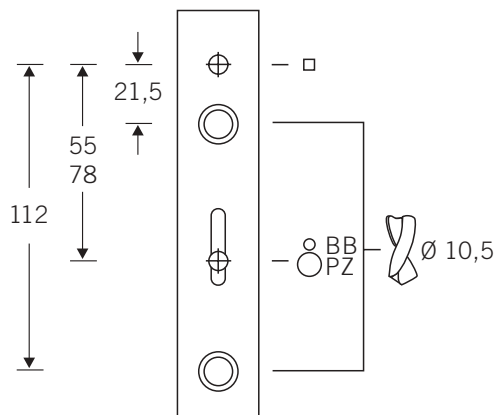


0469

Fixing template for FSB backplates 1452 03 and 1453 03

- with concealed fixing
- FSB sets for fire doors
- FSB sets with compensating bearing.

BB/PZ/WC 70 – 92 mm



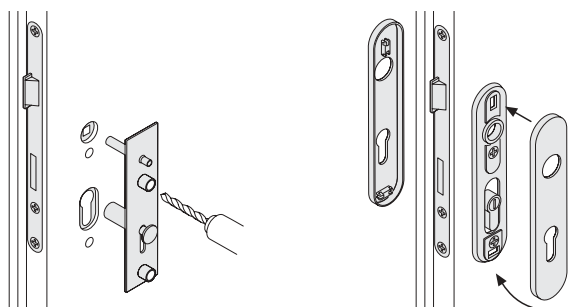
0477

Fixing template for FSB backplates 1450 03 and 1451 03

- with concealed fixing
- FSB sets for fire doors
- FSB sets with compensating bearing.

BB/PZ/WC 55 – 78 mm

5



Paper template for FSB short backplate 1450 03 and 1451 03 FSB fire door furniture resp. with compensating bearing

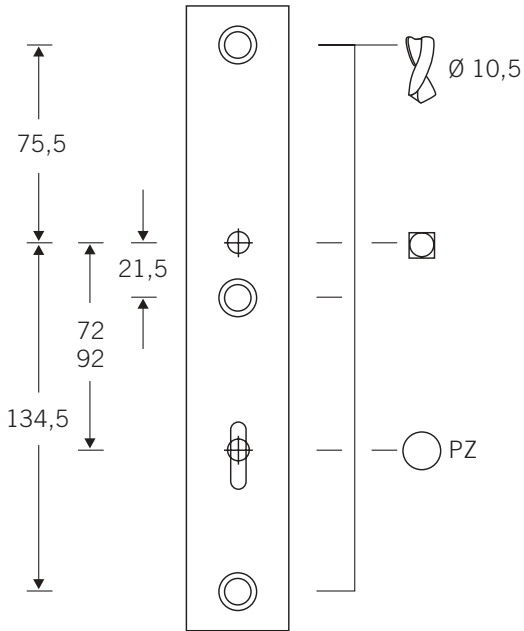
Item no. 8429 0253

Paper template for FSB short backplate 1452 03 and 1453 03 FSB fire door furniture resp. with compensating bearing

Item no. 8429 0261

Fixing template for FSB long backplates

with concealed fixing



0476

Fixing template for

- FSB long backplates with concealed fixing
- FSB long backplate sets for fire doors
- FSB long backplate sets with compensating bearing
- FSB security furniture for framed-door-locks 'Securitas' FSB 7330 and 7531 FSB 7530 and 7531
- FSB long backplate sets for framed doors FSB 7816 and 7820

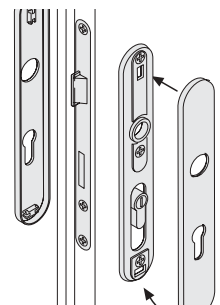
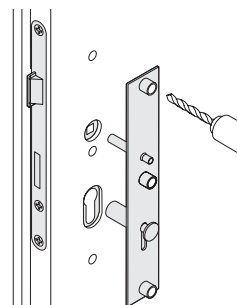
BB/PZ/WC 72 – 92 mm

Paper template for FSB long backplates with base and FSB fire door furniture resp. with compensating bearing

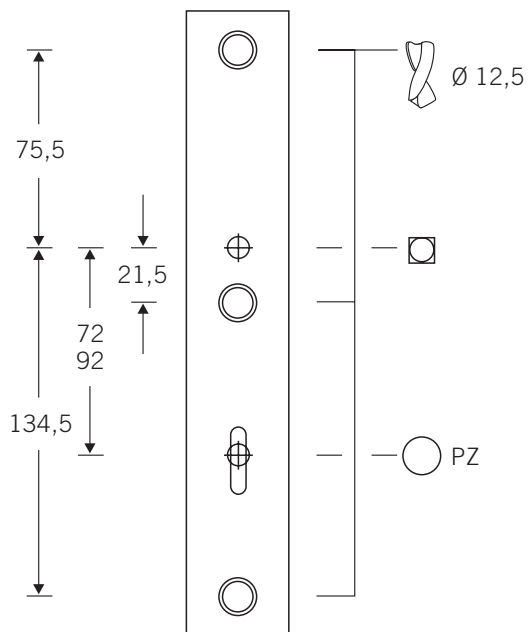
Item no. 8429 0254

Paper template for FSB long WC backplates with base

Item no. 8429 0255



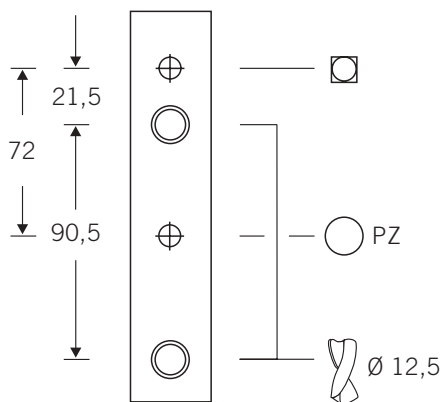
Fixing template for Design + security



0487

Fixing template for
FSB security furniture
long backplate version

BB and PZ 72 – 92 mm

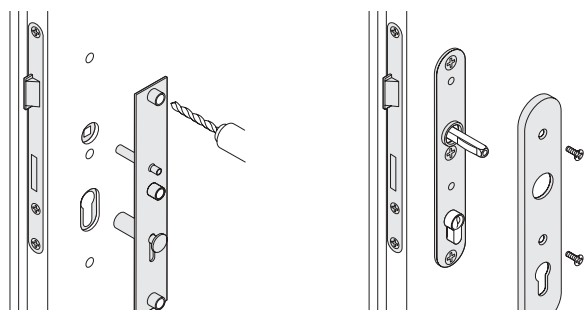


0488

Fixing template for
FSB security furniture
short backplate version

BB and PZ 72 mm

5

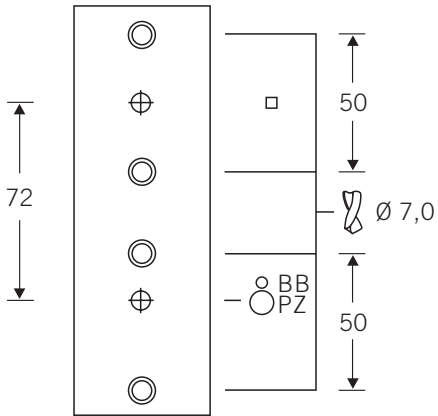


Paper template for
FSB security furniture

Item no. 8429 0211 – 0216

Fixing template for FSB oval roses

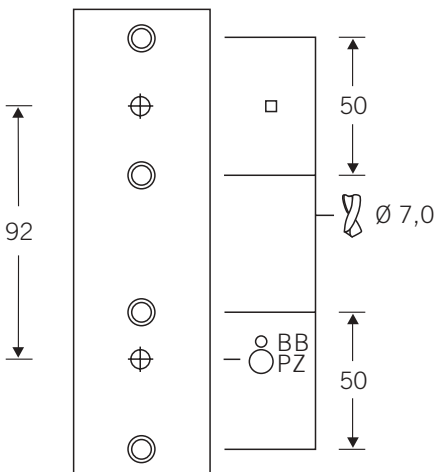
with rivet nuts



0481

Fixing template for FSB oval roses with rivet nuts for using FSB fixing accessories 0526

PZ 72 mm



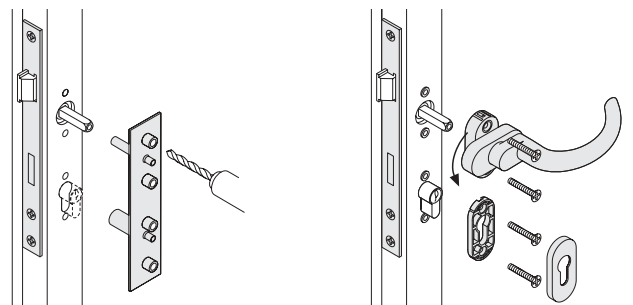
0482

Fixing template for FSB oval roses with rivet nuts for using FSB fixing accessories 0526

PZ 92 mm

Paper template for oval roses with rivet nuts

Item no. 8429 0258

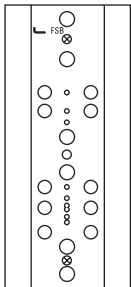


Universal Template

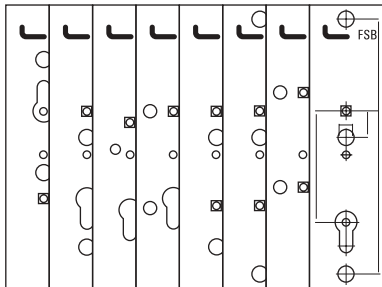


0460

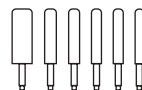
All FSB fittings have their own fixing templates for use as needed, but FSB has additionally developed a universal template that encompasses virtually every borehole configuration available. This all-purpose kit is a must for all professional fabricators.



1



2



3



4



5

Constituent parts:

- 1 Metal template
- 2 Borehole layout sheets
- 3 Pilot pins
- 4 Knurled screw
- 5 Drill bits

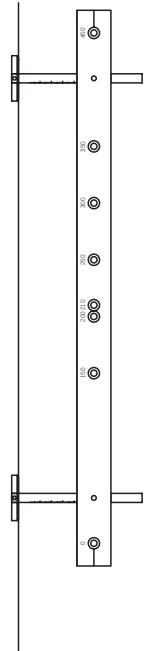
5

Instructions for use:

C

1. Select borehole layout required using paper sheets provided.
2. Push borehole layout sheet from above into the guide of metal template.
3. Firmly secure layout sheet with knurled screw.
4. Select pilot pins to suit lock-follower (7 mm, 8 mm, 9 mm, 10 mm) and keyway type (lever lock, PZ, dead-bolt follower) and screw them into the metal template from the back until they become visible in the borehole layout.
5. Attach the prepared universal template to each side of the door in turn and drill through the available layout holes.
6. Remove template and fit FSB furniture as shown in fixing instructions.

Metal fixing template



0461

The latest addition to the FSB range of drilling aids is a door-pull borehole template that allows boreholes for pull handles to be produced with great precision.

The FSB door-pull borehole template accommodates a variety of axial dimensions as well as custom backsets. It features hardened drilling bushings and graduated side stops and is made of high-quality aluminium. The felt padding prevents door surfaces being damaged.

Fixing centres
 150 mm, 200 mm, 210 mm,
 250 mm, 300 mm, 350 mm
 and 450 mm.

General Information

Explanations

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Aluminium

Aluminium is the most common metal in the Earth's crust (8 %). It occurs widely in feldspar, mica, and clay materials and is mainly extracted from bauxite.

Aluminium is a light metal (relative density 2.699 g/cu.m) with a melting point of 660 degrees Celsius. Its natural colour is silvery white. It can be cast or rolled into virtually any shape, including foil.

Aluminium is extracted from bauxite in two separate stages. Pure aluminium oxide (alumina) is generated, and this is then broken down into aluminium and oxygen by a process of electrolysis in fused cryolite solution.

Despite the high energy cost of the initial extraction process, aluminium is environmentally sound. Being a lightweight amongst metals, it saves energy when used. It can also be fully recycled at a fraction of the cost involved in its manufacture.

FSB processes only pure smelting alloys, as follows:

- AlMg3:
Mat.-No. 3.3541.02
DIN 1725
- AlMg1:
Mat.-No. 3.3315
DIN 1725
- AlMgSi0,5:
Mat.-No. 3.3206
DIN 1725

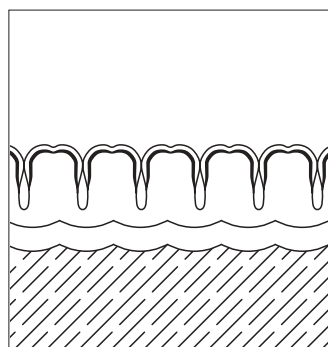
After machining, the surface is anodised. This is an electrochemical process which transforms the surface of the metal into a given thickness of aluminium oxide.

FSB uses the standard GS process to form its anodised coatings. GS are the German initials for direct-current sulphuric acid electrolysis, which produces an oxidised layer approx. 10 µm thick. Coating hardness is between 250 and 350 kp/sq.mm (Vickers), equivalent to 2,500 - 3,500 N/sq.mm.

The silvery oxidised layer can be stained to extend the range of possible finishes. FSB makes use of two methods:

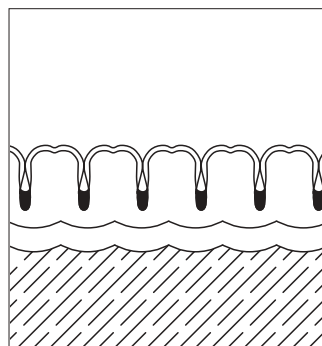
1. Surface and penetrating staining by immersion and absorption

The silvery white anodised aluminium is chemically stained in organic and inorganic dye solutions. The non-fade factor is between 6 and 7.



2. Deep staining of the oxidised coating

Metals and metal compounds are electrolytically implanted into the silvery oxidised layer using an alternating current. This is also known as the two-step method. Non-fade factors range between 7 and 8.



Once colouration is complete, the surface is sealed. This ensures abrasion strength as well as colour and weather fastness.

Aluminium essentially needs no looking after. The surface is protected by natural or artificial anodisation. Marks can be removed with water and a soft cloth.

Harder materials can gouge or abrade an aluminium surface. The scratches left by rings are a typical example. Though such blemishes may be a visual nuisance, they in no way impair the functional properties of the product. There are many users who view the impact of time on the objects of everyday use as an ennobling process.

We would also like to say a clear word on the subject of surface hygiene as it affects levers, handles and knobs.

FSB is not in the game of playing one material off against another. Whether a given surface destroys bacteria in 24 hours or 72 is a bit academic really, since people are using doors all the time in practice. You'd have to get out a disinfectant every time a handle were touched if you wished to eliminate germs altogether.

The finishes



The natural colour of aluminium is natural silver. This is the obvious choice for anyone seeking an authentic metal finish.

FSB aluminium products are colour classified as follows:

FSB 01
Aluminium natural colour
anodised



FSB 02
Aluminium German silver-
colour anodised

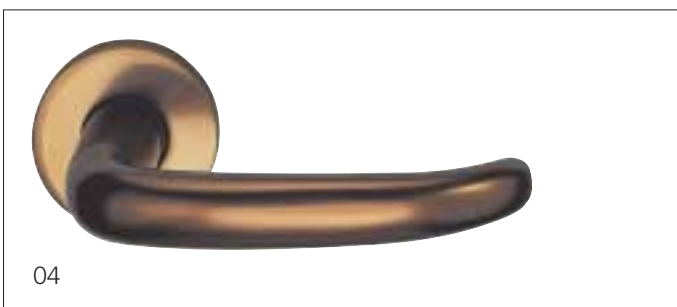
FSB 03
Aluminium brass-coloured
anodised

FSB 04
Aluminium bronze-coloured
anodised



FSB 07
Aluminium dark bronze colour
anodised

The listed standard colours are reproduced opposite as accurately as printing technology will allow, as featured on the FSB 1023 lever handle. To ensure accurate matching, you are advised to request a sample product. Slight colour deviations arising from the manufacturing process are inevitable.



AluGrey

The finishes



A bar of aluminium caused a real stir at the 1855 World Exhibition in Paris. This 'malleable silver' was admired like a priceless rarity. We now know that, after oxygen and silicon, aluminium is the third most common element in the Earth's crust. It comes from a red sedimentary rock first discovered at Les Baux in France and thenceforth known as bauxite ore.

When aluminium is first extracted, it has to be said that rather a lot of energy is consumed. But this is more than made up for by the way the material performs when it is worked, used and, above all, recycled. Almost 95 per cent less energy is used at the reprocessing stage than during the initial extraction process. And the wonder of aluminium is that it can be reprocessed over and over again without any of it being lost.

This lightweight amongst metals is pleasant to the touch, primarily because it is particularly good at adapting to environmental temperatures.

In the mid-1990s, we at FSB launched the 'Hard Aluminium' project. We were intent on giving the material we had been using at our company for over 50 years a boost. Whilst aluminium had become steadily more popular in some manufacturing sectors – e.g. the motor-car, furniture and luminaire industries – in the

architectural hardware trade it had been increasingly losing out to stainless steel.

We started by asking ourselves what might lie at the root of this trend. We concluded that users were unhappy with the way the material tends to reveal traces of use. Evidently, there was no wish to allow door handles to age gracefully, getting 'wrinkles' and all. We decided to remedy this alleged drawback in such a wonderful material by dabbling in a spot of rejuvenation.

Our research work extended over several years and took a very exciting course. Ultimately, we found ourselves on the trail of nothing less than the secret of the elements that go to make up aluminium, this means magnesium, iron, copper, zinc, titanium, manganese, nickel and silicon.

In keeping with standard practice in the industry, in the past we had used primary aluminium with a relatively high share of magnesium. And, by substituting magnesium with another material, this is precisely where we determined to take action. But which material was it to be?

After much testing we opted for the significantly harder silicon. The outcome vindicated our decision, since the surface of the new alloy had the radiant grey colouring of quartz. We were so taken with it that we changed the project's title from 'Hard Aluminium' to 'AluGrey'.

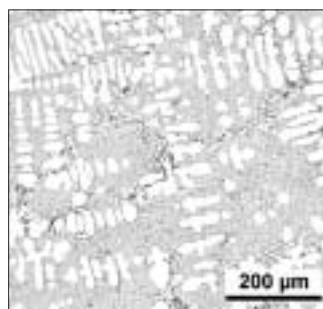
Those amongst our friends in business who are of a scientific inclination may be curious to know how swapping an alloy's constituents can lead to it becoming 50 % harder (giving it a Brinell hardness of approx. 75-80). If so, please note the comparative analysis of silicon and magnesium set out below.

- Silicon (from the Latin *silex* = pebble) is a chemical element belonging to the fourth principal group in the periodic table under which metal elements are grouped, whereas magnesium belongs to the second principal group, referred to as the alkaline earth group.
- Silicon is extracted from quartz and accounts for more than 20 per cent of the constitution of our planet. Magnesium, by contrast, is extracted from anhydrous magnesium chloride using a complex technique known as igneous electrolysis and makes up less than two per cent of the Earth's crust.

- Silicon crystallises into a dark grey diamond structure that is hard and brittle. Magnesium, by contrast, is a lightweight silvery metal that is very reactive and ductile.
- Silicon only melts at above 1,400° Centigrade, unlike magnesium, which only requires upwards of 500° Centigrade.
- The half-life of silicon – i.e. the time it takes for half its atoms to mutate – is no less than 160 years, in the case of magnesium just 21 hours by contrast.

Pictures often speak louder than words, as they say. Which is why you will find below a microscopic sectional image of the sturdy structural make-up of AluGrey.

It can be clearly seen that the bright aluminium base and the grey silicon matter both occupy about 50 per cent of the overall area.



As the two constituents solidify, the silicon claws its way into the aluminium in an all-pervasive branching action. Those in the know speak of eutectic mixtures and dendritic formations here.

We at FSB are convinced that our probings have revived the traditional material of aluminium and given it the necessary hardness for its new lease of life.

The lively grey, crystalline texture of the surface is full of subtle fluctuations, making every piece virtually a one-off design. The silvery grey colour achieved through the anodisation process imbues fittings with a very distinctive character whilst the material's enhanced hardness significantly improves their use value. The metal's deeper texturing is externalised in the form of mottling and 'pigmentation' effects. The silvery grey of the hardware creates a charming contrast to the face of the door.

Roses and accessories are identical in colour to the main castings. The anodised coating is at least 20 μm thick.

And so the final verdict is that a new, harder alloy has rendered our handsome hand tools for operating doors and windows even better suited to their purpose.

Stainless steel

Stainless steel

In 1912, the Krupp company in Essen patented a new material that was known in the inter-war period as 'Nirosta' or 'V2a steel'. It was soon adopted for applications ranging from the construction of containers for the chemical industry and components for motorcar and aviation design to building materials and domestic appliances.

Chromium-nickel steel, material No. 1.4301 under DIN 17440

The generic term stainless steel embraces over 100 separate rust and acidresistant steels. We manufacture our builders hardware utilizing a chromium-nickel steel classified as material 1.4301 under DIN 17440. It contains approx. 18 % chromium and 8 % nickel. This alloy has proved particularly successful in the building industry.

Properties of stainless steel

Stainless steel is an excellent material for door and window furniture, since its surface is extremely resistant to corrosion, knocks, scratches and abrasion and, owing to the chromium and nickel additives, needs little looking after. An invisible passive layer forms on the surface that is even said to kill bacteria.

Applications

We recommend stainless steel for all door and window furniture subject to heavy use, viz. in public buildings, office blocks, hospitals, motorway service areas, and public parks, at sporting venues, or on ships - wherever large numbers of people regularly congregate and reliable, low-maintenance fittings are a must.

Care

Stainless steel furniture basically requires no looking after. Smudges can be removed with a damp cloth. Outdoor fittings and those at chlorinated pools can develop what is known as 'flash rust' after a while. This is not generated from within the metal itself and can be removed by vigorous rubbing.

Notes on selection

When selecting and ordering door and window furniture, please read carefully the general material and technical data in this Catalogue. This avoids misunderstandings, queries, and delays.

A comprehensive 24 page guide containing information on Stainless steel and it's main-tenance is available from the Stainless steel information centre:

Informationsstelle
Edelstahl Rostfrei
P. O. Box 10 22 05
40013 Düsseldorf
Germany

The finishes



6204

FSB supplies stainless steel door and window furniture as standard in the following finishes:

FSB 6204
Satin Stainless steel
(stock version)

FSB 6205
Mirror polished Stainless steel

FSB 6206
Matt Stainless steel

FSB 6210
Stainless steel in brass finish

The stock satin finish is exceedingly hard-wearing. The optional mirror polished model is an ecologically sound alternative to chrome plating. The matt model has a very granular looking grip, though it has to be said that constant use gradually buffs the matt surface up. The mirror polished, the matt and the brass/gold hue variants are made to order. Production time, processing, and outlay are dependent on your overall order.

Surface Hygiene

There are those amongst our competitors who, citing the findings of research institutes, make much in their brochures of the enhanced sterilizing properties of certain finishes. FSB likewise has access to reports proving that, for instance, cupriferous metals kill germs more effectively than, in particular, synthetic materials. But FSB sets no great store by such findings. Whether a given finish destroys bacteria in 24 hours or in 72 is academic really, since in practice, doors tend to be in fairly regular use anyway. You'd have to take remedial action every time a door was opened or closed if you wished to eliminate germs altogether.



6205



6206



6210

Brass

The finishes



FSB 4205
Brass polished lacquered

FSB 4305
Brass polished waxed

FSB and brass

FSB has been supplying select door and window furniture in brass, together with accessories, for forty years. From the very beginning we strove for originality, spurning hackneyed forms such as post horns or duck bills.

DIN 17 660

Brass furniture is available in a wide range of alloys and at widely differing prices. But not all that glitters is pure brass. It is in our case though. We make exclusive use of the CuZn37 copper-zinc alloy specified under DIN 17 660 as material no. 2.0321 and 2.0335.

Corrosion protection

Brass is prone to corrosion in everyday use - a fact that is sometimes glossed over.

Polishing is the only way round this. Anyone acquainted with more northerly countries will have observed the weekly buffing given to brass furniture on front doors there.

This chore becomes redundant if the surface is either lacquered or waxed.

Waxed brass components are self-polishing through use. Areas that are not handled will rapidly develop a brown or grey-green patina. Many buyers deem this surface discolouration positively alluring. Lacquered brass furniture loses its gloss once the lacquer is damaged. Intercrystalline corrosion then quickly sets in. Corroded handles can be reconditioned, however - for a charge covering costs.

Recommendation

For anyone interested in a lasting golden 'sheen', FSB recommends titanium-coated stainless steel fittings in a golden brass finish. The hardness of the base material ensures that the brass stained titanium coating will withstand the ravages of the environment in normal use (shown on page 573).

For those who prefer to stick with brass despite what we have said on the previous page, FSB has the following recommendations to make:

Only use waxed brass finishes. Waxed brass polished finish can be looked after using proprietary cleansers.

Do not use lacquered brass finishes in outdoor applications where the sun and the environment will hasten the onset of corrosion.

Brass furniture should not be considered for heavy duty applications in public buildings, since there is too much cleaning involved.

Surface Hygiene

A brief word of clarification concerning the hygienic properties of door handles:

There are those amongst our competitors who, citing the findings of research institutes, make much in their brochures of the enhanced sterilizing properties of certain finishes. FSB likewise has access to reports proving that, for instance, cupriferous metals kill germs more effectively than, in particular, synthetic materials.

But FSB sets no great store by such findings. Whether a given finish destroys bacteria in 24 hours or in 72 is academic really, since in practice, doors tend to be in fairly regular use anyway. You'd have to take remedial action every time a door was opened or closed if you wished to eliminate germs altogether.

Aluminium + colour The finish



Aluminium + colour

Coloured door and window furniture has been making waves for twenty years now. Against a background of featureless concrete, it has often provided the sole relief. The builders hardware industry is no longer conceivable without it.

Standard range

FSB regards itself primarily as a producer of door and window furniture in metal. Colour-coated fittings constitute but a very small proportion of our business. Nevertheless given a sufficiently sizeable order, we will be pleased to extend our range to individual requirements.

Coating processes

Forming the basis of FSB's coated hardware are cast and polished aluminium models from the standard range. The surface is electrolytically oxidised and subsequently electro-statically powder coated. FSB uses a solvent-free lacquering process to produce a colour coating some 80 µm thick. Non-fade factor, surface hardness, and resistance to abrasion are roughly as for anodised aluminium coatings.

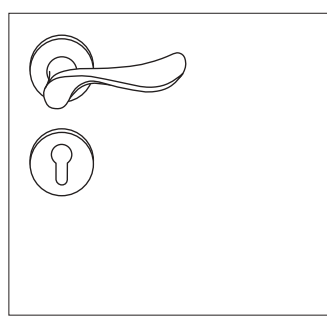
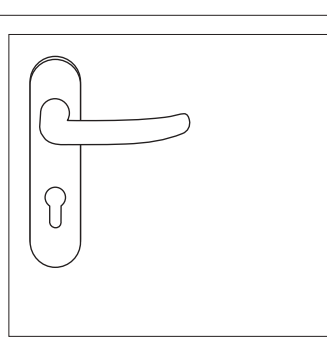
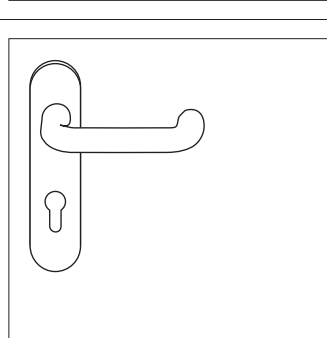
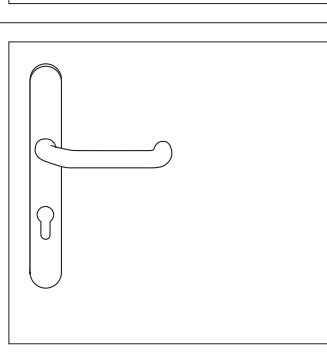
FSB is occasionally asked to supply colour coated versions of tubular handles in various types of steel. The danger here, especially with ordinary steel, is that, once the coating has been breached, the metal inside will corrode. FSB specifically draws your attention to this and is compelled to reject all claims to liability from the outset.

Assuming FSB colour coated handles are correctly fixed and properly treated, they will withstand day-to-day use. Surfaces can be damaged if knocked by hard angular items such as rings, keys, or boxes. Such scratch marks do not impair the handle's functioning, however.

Colours

White	approx. RAL 9016
Crimson	approx. RAL 3002
Black	approx. RAL 9005

Examples of German specifications

<p>Standard-Türdrückergarnitur</p>		<p>FSB-Türdrückergarnitur Aluminium eloxiert mit 8 mm FSB-Stabilstift für Türdicke 40 mm</p> <p>gelagert in Türdrückerrosetten mit Stütznocken und Gleitlager aus glasfaserverstärktem schwarzem Kunststoff</p>	<p>Schlüsselrosetten gelocht</p> <p>FSB-Handformdesign 1020 Design Johannes Potente Türdrückerrosette FSB 1731 Schlüsselrosette FSB 1735</p>
<p>Securitas -AGL- Behördengarnitur</p>		<p>FSB-Türdrückergarnitur Securitas AGL Edelstahl mit 8 mm FSB-Stabilstift für Türdicke 40 mm</p> <p>festdrehbar passgenau gelagert in wartungsfreiem FSB-Ausgleichslager auf FSB-Schildern 185 x 45 mm</p>	<p>mit stabilisierenden Stütznocken, Befestigung beidseitig unsichtbar Entfernung 72 mm</p> <p>FSB-Design 7223 04 Grundentwurf Max Bill überarbeitet von Johannes Potente</p>
<p>FS-Türdrückergarnitur</p>		<p>FSB-Türdrückergarnitur für Rauch- und Feuerschutz-türen nach DIN 18 273</p> <p>Aluminium eloxiert mit 9 mm FSB-Stabilstift für Türdicke 40 mm</p> <p>festdrehbar gelagert auf FSB-Schildern 185 x 45 mm</p>	<p>versehen mit stabilisierenden Stütznocken, Befestigung beidseitig unsichtbar Entfernung 72 mm</p> <p>FSB-Design 7646 04 authentischer FSB-Werksentwurf</p>
<p>Türdrückergarnitur für Rahmentüren</p>		<p>FSB-Türdrückergarnitur für Rahmentüren aus Aluminium eloxiert mit 8 mm Vollstift für Türdicke 40 mm</p> <p>festdrehbar gelagert auf ovalen Langschildern 245 x 35 mm</p>	<p>mit stabilisierenden Stütznocken, Gleitlager aus schwarzem Kunststoff beidseitig unsichtbare Befestigung Entfernung 72 mm</p> <p>FSB-Design 7816 authentischer FSB-Werksentwurf</p>

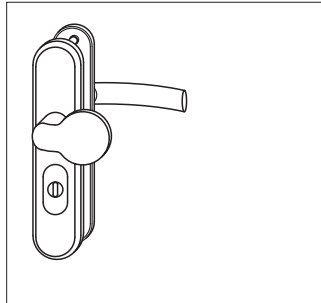
Recommendation

In describing our products at such length, we have sought to stress their distinctive 'personalities', i.e. the factors that set them apart from their market rivals.

Whether you are a briefing architect, a consultant joiner, a builders hardware wholesaler or an 'enlightened' end-

user, to ensure an FSB product is absolutely right for a given door or window you should heed all the specific 'traits' accorded that product. Indicated on these two pages are examples of how to ensure that the FSB products chosen are the most suitable for German customers.

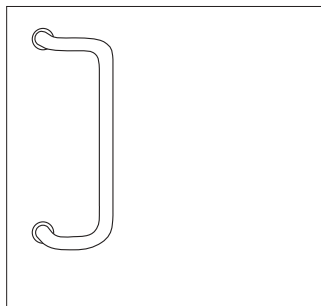
Schutzbeschlag



FSB-Schutzbeschlag
Schutzklasse 2-ZA
Aluminium . . . eloxiert
in FSB-Schichtbauweise
mit Zylinderabdeckung für
Überstände von 8 - 16 mm
mit drehbar am Kopfhals
verankertem 8 mm FSB-
Stabilstift
Entfernung 72 mm PZ

FSB-Design 7384 5510
Knopf und Türdrücker
Design Hartmut Weise

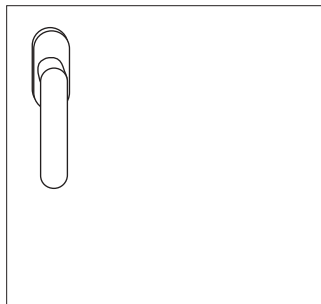
Türgriff



FSB-Türgriff aus Rundmaterial
z. B. Messing poliert gewachst
Grifflänge 350 mm
Griffdurchmesser 30 mm
mit Stützrosetten zur Stabilisie-
rung auf der Türoberfläche
Befestigung paarweise 1

FSB-Design 6662 38

Fenstergriff

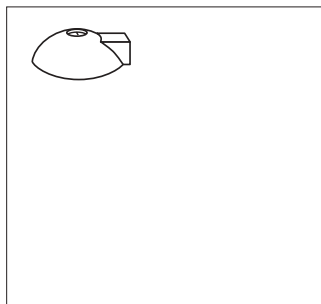


FSB-Fenstergriff
Aluguss und Thermoplast
grau-schwarz
RAL-geprüfte Kugelrastung
dauerhafter Gleichlauf
spürbare Positionierung
ganzflächig abdeckende
Korbbogenrosette

Befestigung unsichtbar mit
stabilisierenden Stütznocken,
Durchmesser 10 mm

FSB-Design 3436
Entwurf Dieter Rams

Türstopper



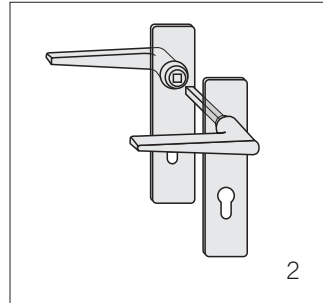
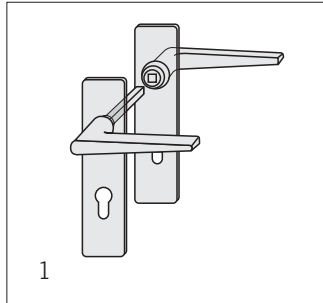
FSB-Bodentürstopper
Edelstahl
Durchmesser 70 mm
komplett mit Befestigungs-
material

FSB-Design 3884 00
authentischer
FSB-Werksentwurf

Handing details

Lever handle furniture for doors DIN l.h., inward opening

male handle points right, female handle points left.

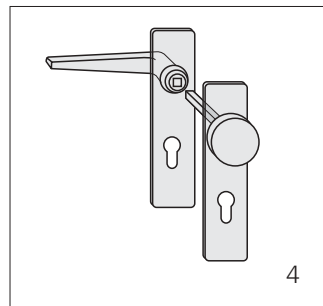
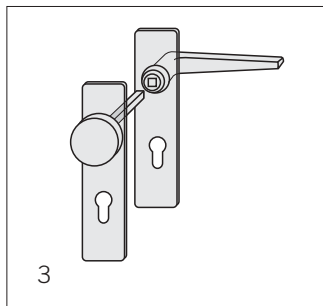


Lever handle furniture for doors DIN r.h., inward opening

male handle points left, female handle points right.

Lever furniture with dead knob for doors DIN l.h., inward opening

female handle points left.

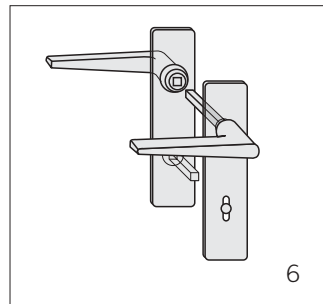
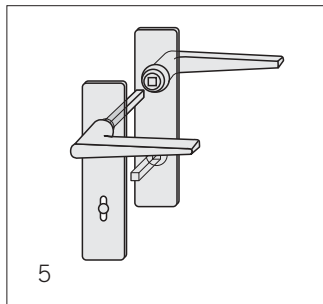


Lever furniture with dead knob for doors DIN r.h., inward opening

female handle points right.

Bathroom/WC furniture for doors DIN l.h., inward opening

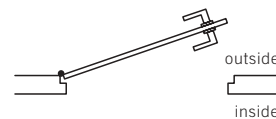
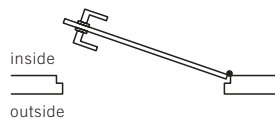
male handle points right, with WC perforation; female handle points left, with thumbturn.



Bathroom/WC furniture for doors DIN r.h., inward opening

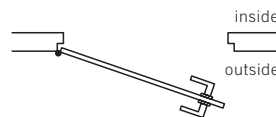
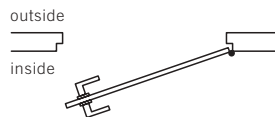
male handle points left, with WC perforation; female handle points right, with thumbturn.

DIN left hand inward opening



DIN right hand outward opening

DIN right hand inward opening



DIN left hand outward opening

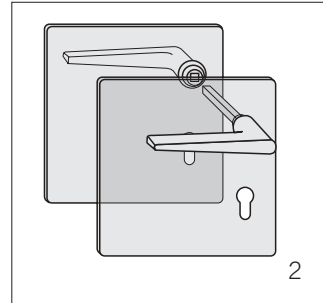
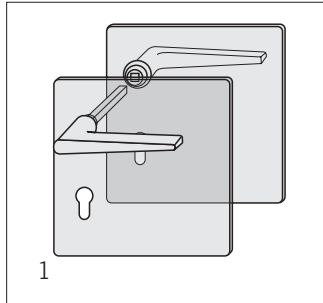
Explanation:

The German specifications DIN right hand respective DIN left hand refer to the positioning of the things on the opening face of the door.

Doors are either right or left hand, relative to which way they open. When ordering lever furniture with dead knob or if you require the spindle element to be located on the outside, you should specify left or right hand. Indication with use of diagram nos. would suffice.

Lever handle furniture for doors DIN l.h., inward opening

male handle points right, female handle points left.

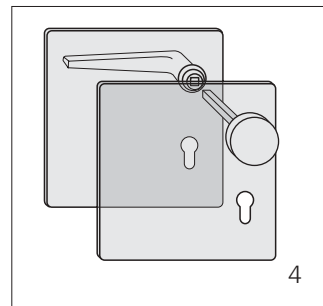
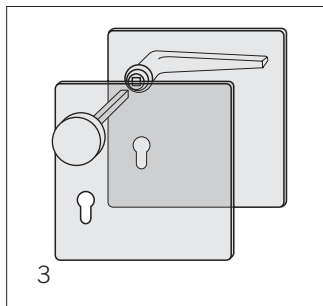


Lever handle furniture for doors DIN r.h., inward opening

male handle points left, female handle points right.

Lever furniture with dead knob for doors DIN l.h., inward opening

female handle points left.

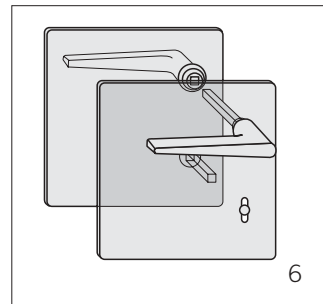
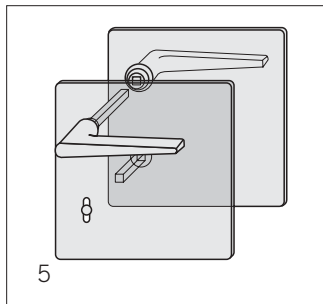


Lever furniture with dead knob for doors DIN r.h., inward opening

female handle points right.

Bathroom/WC furniture for doors DIN l.h., inward opening

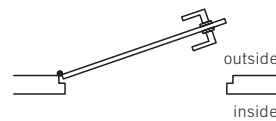
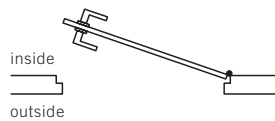
male handle points right, with WC perforation; female handle points left, with thumbturn.



Bathroom/WC furniture for doors DIN r.h., inward opening

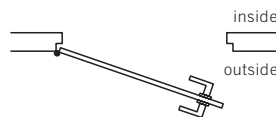
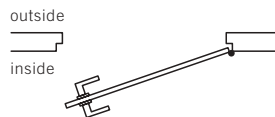
male handle points left, with WC perforation; female handle points right, with thumbturn.

DIN left hand inward opening



DIN right hand outward opening

DIN right hand inward opening



DIN left hand outward opening

About product liability

Under the Product Liability Act, FSB is liable for damage caused by faulty products, the precondition being that, in the selection, installation and use of the goods, all the applicable regulations set down in the FSB manual shall have been complied with.

We would additionally like to point out that what the law defines as product liability and what the end user actually expects of a product can be two radically different things. Door and window handles, after all, are in the first instance 'tools' for opening and closing doors and windows. However beautiful they might be, such tools still remain subject to the laws of wear and tear. Though prime materials are used, production is organised to ISO 9001, and the company has successfully undergone an EU 'eco-audit' (1996) and been certificated to ISO 14001 (1997), the laws of physics will inevitably manifest themselves to the end user in the form of wear and tear.

The main definitions and regulations are recapitulated in the following.

1.0 Product definitions

1.1 Lever handles and accessories

Lever handles and their accessories are implements with which to open and close doors. They do this in concert with the door frame, the door's hinges, the door leaf, the lock, and the cylinder, and all these components need to be properly synchronized. It's no use trying to use a lever handle to open a door if the door is locked, for instance, the only exception to this being the special mechanisms featured on panic doors.

1.2 Tubular handles

The same applies to tubular handles. The door frame, door hinges, door leaf and other closing devices such as door closers need to be compatible with one another.

1.3 Window handles and accessories

Again, window handles are but one element of the window. The method of closure will generally determine which type of handle is appropriate.

2.0 Improper use

Lever handles, pull handles and window handles and sliding ventilators are subject comparatively frequently to improper use, and this can lead sooner or later to damage for which the manufacturer can no longer be held responsible. Typical examples:

- Lever handles are used as supports, especially when on doors at the base of steep stairs.
- Doors are used as a sort of roundabout by children, the handles serving as the main source of support.
- In the absence of door stops, lever handles and pull handles bang against the wall.
- Lever handles and pull handles are used to hang heavy objects on.

3.0 Product Performance

Notions of product performance are only codified in norms to a very limited degree. For the most part, they are the up-shot of many years of experience and are by now common property in the builders hardware trade. FSB keeps faith with these general informal standards. The norms listed below apply for special performance requirements.

- **DIN 18 255**
This norm sets general standards for door furniture and accessories.
- **DIN 18 273**
This norm sets out limits specifically for firecheck and smoke stop doors.
- **DIN 18 257**
This norm lays down minimum requirements for security furniture.

FSB products are constantly evolving, and production is subject to continuous quality control. We reserve the right to make technical modifications.

4.0 Product maintenance

Most FSB products are 'implementations' for the opening and closing of doors and windows. Sooner or later, depending on what they are made of and where they are fitted, they will inevitably begin to show signs of wear. The properties of the various materials can be summarized as follows:

4.1 Aluminium

Aluminium has performed admirably in everyday use for many decades. The metal is protected by a tough anodised coating. Surface scratch marks in no way impair the operating efficiency of the furniture but simply denote the passing of time.

4.2 AluGrey

AluGrey is new to the FSB programme and boasts a greater surface hardness and resistance to wear than standard aluminium. On account of the above-mentioned properties, noticeable signs of use are slow to materialise under normal circumstances but, even so, cannot be ruled out completely in the long term, though the functioning of the hardware remains unaffected whatever the case.

4.3 Stainless steel

Stainless steel is commonly regarded as being indestructible. In fact, even stainless steel can develop scratches and traces of rust. This latter is the phenomenon known as 'flash rust', which can be removed with the aid of standard cleansing agents.

4.4 Brass

Much has already been said in the FSB manual regarding the properties of brass. Whereas aluminium is more or less a pure metal, brass is an alloy with tendencies towards corrosion. We would therefore like to emphasize once again here that only regularly cleaned brass components without lacquer retain their initial allure. Once the coating of the lacquered version has been breached, unsightly corrosion sets in, and this can only be reversed in our factory after a laborious stripping operation.

4.5 Aluminium + colour

Coloured FSB lever handles are generally given a flexible colour membrane approx. 250 microns thick that is long-lived given correct use. Contact with sharp objects may lead to some denting.

5.0 Requisite information and instructions

Relevant information and instructions can be gleaned from the following material:

For stockists, architects and consultants: catalogues with all the necessary detailed descriptions.

For installers: besides catalogues - fitting instructions and templates and, where necessary, technical drawings.

For end users: fitting instructions, templates, and instructions for use and - in specific instances - care, all included with products.

To ensure the correct functioning of door and window furniture,

architects and designers are urged to bear in mind where and under what conditions the furniture is going to be in use and to select accordingly. Any queries should be addressed to the trade wholesalers, the FSB External Service, or FSB itself.

the sales trade is urged to rigorously double check the specifications provided by architects, designers and clients so as to ensure the compatibility of these specifications with those of the furniture selected.

installers are urged to make sure they receive from the sales trade all the products information and fitting and maintenance instructions needed for them to be able to fit the furniture correctly and pass on any relevant information to the customer.

Sales aids

You may be wondering why it is we have so much to say on the subject of sales aids. Well, the fact is that we in no way regard this as a peripheral issue. Builder's hardware, after all, is not replaced that frequently and is expected to perform day in, day out for a great many years. Opting for the wrong product – wrong in terms of quality, design or, indeed, profit margin – can take a long time to put right. Which is why it is important to support the decision-making process from an early stage so as to be able, at the decisive moment, to guide the customer's aspirations towards the right product. The enlightened purchaser and customer expects to find sensible displays, readily assimilable catalogue material and cogent sales arguments at the 'point of sale'. FSB has always endeavoured to oblige.

1. Displays and specimen boards

We at FSB do not go along with turning display areas into supermarket-type affairs and confronting the end-user with a hotchpotch of hardware. For this reason, we have developed an all-in display set-up which is so variable that adapting it to a given spatial configuration is no trouble.

As a means of keeping key elements of the FSB programme well apart from competitors' offerings even in the most cramped of spaces, we have additionally come up with a three-sided rotating merchandiser. This allows upwards of 35 FSB products to be excellently exhibited on half a square metre of floor space at most. There is also a special rotating merchandiser for FSB's wide range of main entrance door fittings.

Our specimen boards sport our corporate shade of grey. Metal of all colours stand out well against this background. Fittings are combined with special lock mechanisms so the customer can get a feel of how they work in practice. Specimen boards come in both standard and custom sizes.

For architects, however, specimen boards are often not enough. Instead, they want to see how the fitting acts in conjunction with lock and cylinder on a small door element. We supply specimen blocks for just this purpose.

We have also developed a bespoke specimen case for all those who like (or have) to travel with the FSB programme. It can be bought or, in individual instances, hired. FSB's Field Service will explain the modalities.



2. Manuals and Prospectuses

As you may have noticed, for many years now FSB has been putting a lot of effort into its manuals and prospectuses (a case in point being what you are reading now). And, to our great joy, the trade and public both definitely appear to have appreciated our efforts. This has inspired us to further expand our range of written sales aids and informational material to include, for instance, a special brochure for end-users entitled 'Lever Handle Culture' and a separate booklet for fabricators the title of which translates roughly as '10 FSB reasons for a successful partnership'. Should you be interested in any of these publications, please consult our distributor.

3. Sales arguments

All retailers know (and dread) the ritual customer question that goes "And what would you recommend?" The temptation is to respond with platitudes such as 'Beauty is in the eye of the beholder' or by attempting to explain what is currently in fashion or selling particularly well. But are these good or at least adequate sales arguments?

We don't think so. And, in the light of this, we have published a whole series of books - the FSB Edition - that delve into virtually every aspect of 'handle culture'. Anyone wishing to extend his or her repertoire of sales arguments is urged to consult them. Apart from anything else, they set forth the best sales argument of all, the 'Four Rules of Grip' identified by FSB, which allow the end-user to adopt a hands-on approach to deciding which handle to buy:



Thumb rest



Forefinger furrow



Support for the ball of the thumb



Gripping volume



German Standards (DIN)

Ohne Anspruch auf Vollständigkeit werden nachstehend einige im Zusammenhang mit Türen und Fenstern relevante DIN-Normen aufgeführt (Stand 10/99).	DIN 18 082, Teil 1 Feuerschutzabschlüsse Stahltüren T 30-1, Bauart	DIN 18 257 Baubeschläge; Schutzbeschläge – Begriffe, Maße, Anforderungen, Prüfungen und Kennzeichnungen	DIN V ENV 1627 Fenster, Türen, Abschlüsse – Einbruchhemmung – Anforderungen und Klassifizierung
DIN 107 Bezeichnung mit links oder rechts im Bauwesen	DIN 18 095, Teil 1 Türen; Rauchschutztüren; Begriffe und Anforderungen	DIN 18 268 Baubeschläge; Türbänder; Bandbezugslinie	DIN V ENV 1628 Fenster, Türen, Abschlüsse – Einbruchhemmung – Prüfverfahren für die Ermittlung der Widerstandsfähigkeit unter statischer Belastung
DIN 4102, Beiblatt 1 Brandverhalten von Baustoffen und Bauteilen; Inhaltsverzeichnisse	DIN 18 095, Teil 2 Türen; Rauchschutztüren Bauartprüfung der Dauerfunktionsfähigkeit und Dichtheit	DIN 18 273 Baubeschläge; Türdrückergarnituren für Feuerschutztüren und Rauchschutztüren – Begriffe, Maße, Anforderungen und Prüfungen	DIN V ENV 1629 Fenster, Türen, Abschlüsse – Einbruchhemmung – Prüfverfahren für die Ermittlung der Widerstandsfähigkeit unter dynamischer Belastung
DIN 4102, Teil 5 Brandverhalten von Baustoffen und Bauteilen; Feuerschutzabschlüsse, Abschlüsse in Fahr-schachtwänden und gegen feuerwiderstandsfähige Verglasungen, Begriffe, Anforderungen und Prüfungen	DIN 18 100 Türen; Wandöffnungen für Türen; Maße entsprechend DIN 4172	DIN 18 357 VOB Verdingungsordnung für Bauleistungen Teil C: Allgemeine Technische Vertragsbedingungen für Bauleistungen (ATV) Beschlagarbeiten	DIN V ENV 1630 Fenster, Türen, Abschlüsse – Einbruchhemmung – Prüfverfahren für die Ermittlung der Widerstandsfähigkeit gegen manuelle Einbruchversuche
DIN 4102, Teil 13 Brandverhalten von Baustoffen und Bauteilen; Brandschutzverglasungen, Begriffe, Anforderungen und Prüfungen	DIN 18 101 Türen; Türen für den Wohnungsbau; Türblattgrößen, Bandsitz und Schlosssitz; gegenseitige Abhängigkeit der Maße	DIN 18 361 VOB Verdingungsordnung für Bauleistungen; Teil C – Allgemeine Technische Vorschriften für Bauleistungen, Verglasungsarbeiten	DIN EN 1670 Korrosionsverhalten – Anforderungen und Prüfverfahren
DIN 4102, Teil 18 Brandverhalten von Baustoffen und Bauteilen; Feuerschutzabschlüsse, Nachweis der Eigenschaft 'selbstschließend' (Dauereffunktionsprüfung)	DIN 18 111, Teil 1 Türzargen; Stahlzargen, Standardzargen für gefälzte Türen	DIN 32 617 Hausbriefkästen; Anforderungen, Prüfung und Aufstellung	DIN EN 1906 Baubeschläge, Türdrücker, und Türknäufe – Anforderungen und Prüfverfahren
DIN 1080, Teil 1 Begriffe, Formelzeichen und Einheiten im Bauingenieurwesen, Grundlagen	DIN 18 250 Einsteckschlösser für Feuerschutzabschlüsse	DIN 58 125 Schulbau, Bautechnische Anforderungen zur Verhütung von Unfällen	
DIN 18 055 Fenster; Fugendurchlässigkeit, Schlagregendichtheit und mechanische Beanspruchung; Anforderungen und Prüfungen	DIN 18 251 Schlösser; Einsteckschlösser für Türen	DIN 68 706, Teil 1 Innentüren aus Holz und Holzwerkstoffen; Sperrtürlätter, Begriffe, Vorzugsmaße, Konstruktionsmerkmale	
	DIN 18 252 Schließzylinder für Türschlösser; Begriffe, Benennungen	DIN EN 1303 Schließzylinder für Schlösser Anforderungen und Prüfverfahren	
	DIN 18 254 Schließzylinder für Türschlösser; Maße, Anforderungen, Prüfungen für Profilzylinder mit einreihigen Stiftzuhaltungen		
	DIN 18 255 Baubeschläge; Türdrücker, Türschilder und Türrosetten – Begriffe, Maße, Anforderungen		

General terms of sale

1. General

The following Terms of Sale represent the exclusive basis for all quotations and contracts; any deviating terms of the Customer, unless explicitly acknowledged in writing, shall be deemed invalid.

2. Quotations

All quotations remain subject to confirmation unless explicitly stipulated as binding or fixed. A contract of sale shall be constituted only upon our written confirmation of order.

3. Delivery and Passage of Risk

Shipment shall be made at the risk and expense of the Customer. The risk passes to the Customer when goods are delivered to the shipping or forwarding agent.

4. Delivery Dates

The delivery dates quoted indicate the foreseeable delivery dates with which we shall endeavour to comply.

5. Prices

Unless other agreements regarding pricing have been made, the prices applicable on the date of delivery shall apply. All prices shall be subject to value-added tax, VAT, and are quoted ex warehouse Brakel, excluding packaging. Packing shall be charged at cost. Tools for which prorated payments have been received shall remain our property.

6. Payment, Offset and Withholding, Return Shipment

Our invoices shall be payable 14 days after date of invoice at 2% discount or 30 days after date of invoice net. Invoice sums less than EUR 50.00 shall be payable net immediately. In the event of overdue payment, we shall be entitled to charge interest at the over-draught rate applicable at that time, and at least 3% above the basic interest rate in accordance with the BGB

(Civil Code) § 247. If, after an order has been placed, we become aware of circumstances which give us good cause to doubt the creditworthiness of the Customer, we shall be entitled to deliver this order subject to cash in advance only and to make the delivery of other orders subject to their prior payment. The Customer shall be entitled to only offset counterclaims which have been legally established or are otherwise undisputed and may exercise a withholding right only in respect to such claims that are based on the same contract. The Customer shall be entitled to return goods only subject to express prior agreement. Such return shipments are subject to a deduction of at least 30% of the value of the goods to compensate for expenses.

7. Retention of Title

The products delivered (reserved goods) shall remain our property until payment in full of the purchase price and all existing and future claims arising from the business relations with the Customer. This shall also apply in cases in which individual or all claims have been consolidated into one single invoice and balanced and approved. The Customer shall be entitled to sell the reserved goods in the due course of business provided he meets his contractual obligations. Otherwise we shall be entitled to require the surrender of the reserved goods; in this case, the Customer has no right of possession. We shall then be entitled, without prejudice towards the Customer's obligation of payment, to sell the re-possessed goods and to credit the Customer with any surplus. At the time of purchase of the reserved goods, the Customer shall at that point in time assign to us all claims arising from the resale which accrue to him against his customers. Subject to revocation, the Customer

shall be authorised to collect the assigned claims; upon our demand, however, he shall notify us without delay and in full of the amount of these claims and the names of his customers. If, in the event of a delivery by the manufacturer, a bill debt is constituted, the retention of title shall expire only after the bill has been redeemed. Should the redeemable value of existing securities surpass the secured claims by more than 10%, we shall be obliged, if so demanded by the Customer, to release securities of our own choice. We shall be entitled to repudiate a contract if an application to open bankruptcy proceedings has been made with respect to the Customer's assets.

8. Published Details

Unless explicitly described as binding, all details and illustrations contained in our brochures and catalogues shall merely represent approximate values common in the industry. The onus shall rest on the Customer to undertake his own examination as to whether the goods are suitable for the intended purpose.

9. Warranty

In the event of complaints regarding recognisable defects, wrong deliveries or substantial differences in quantity, notification must be made to us without delay and in writing at the latest within ten days of delivery of the goods. If the Customer does not make notification of any defects within this period, the goods shall be deemed to have been approved free of defects. Relevant for the purposes of determining whether the condition of the merchandise is in compliance with the contract is the point in time at which risk passes to the Customer as per Article 3. Concealed defects must be notified in writing without delay upon their discovery. We must be given the

opportunity to verify any defect notified. We shall grant a warranty for freedom from defects as defined by the state of the art for a period of two years from the date of delivery. Excluded from warranty are damages resulting from wear and tear, improper handling, faulty assembly or any servicing. The same applies for defects that only negligibly reduce the value or functionality of the merchandise. In the event of a justified and timely complaint, we shall, at our discretion, undertake either improvement or replacement of the goods; all further claims, in particular claims for consequential damage, shall be excluded. In the event that such improvement or replacement fails, the Customer shall retain the right to demand a reduction of the purchase price or rescission of the contract.

10. Place of Performance and Court of Jurisdiction

Place of performance, place of payment and court of jurisdiction, including that for legal actions on bills of exchange or checks, shall be, as far as admissible, Brakel. This contract shall be governed exclusively by German law. The United Nations Convention of 11.04.1980 on Contracts for the International Sale of Goods (CISG - 'Vienna Sales Convention') shall not apply.

11. Closing Provision

The legal invalidity of individual provisions shall not otherwise affect the enforceability of these General Terms and Conditions of Sale.

How to reach FSB



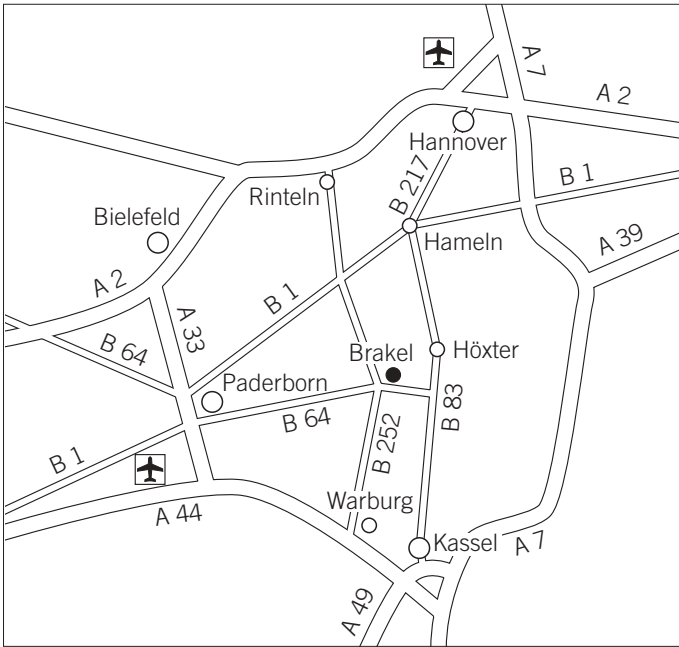
Brakel is situated in the south-easternmost corner of the German federal state of North-Rhine Westphalia. Geographically speaking, it is where the Egge mountains merge with the Weserberg hills.



Paderborn is connected with Berlin, London, Munich, Paris and Stuttgart, etc. The distance of the ICE-railway station Kassel-Wilhelmshöhe is about 55 minutes by car to Brakel.

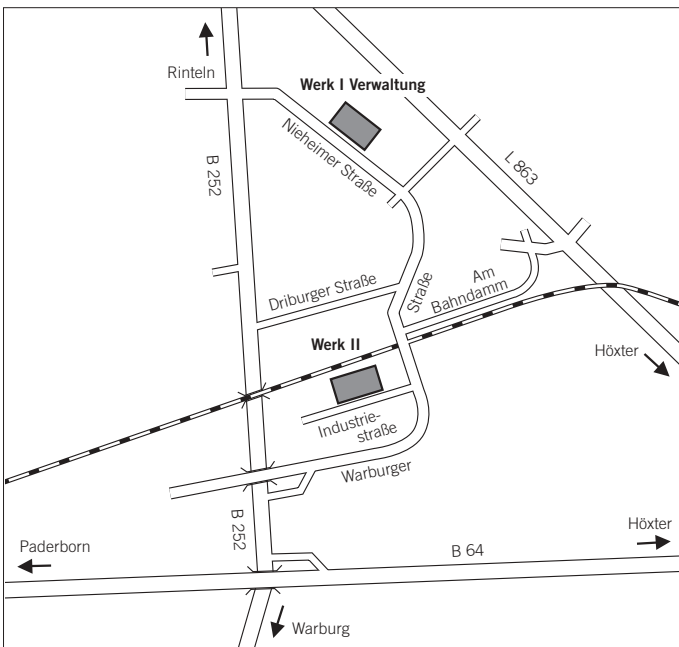
The distances to the most important German airports in km are:

Düsseldorf	about 200 km,
Frankfurt	about 220 km,
Hannover	about 120 km.



When going by car from the north, you'll come to Brakel via motorway, Hannover-Dortmund, exit point Rinteln, picking up then the route from Rinteln-Bartrup-Blomberg to Brakel. The distance from Rinteln to Brakel is about 90 km.

When coming from the south, leave the motorway Kassel-Dortmund at the exit point Warburg/Brakel driving then from Warburg over Peckelsheim, Siddessen and Rheder about 35 km to Brakel.



FSB has two production sites in Brakel.

Central administration is located together with the aluminium foundry and development units at Nieheimer Strasse 38.

Facilities II and III are housed along with the logistics centre at Industriestrasse 12 on the Brakel industrial estate.

Domestic Agencies



6
a

Domestic Agencies

- 1
Klaus-Dieter Heib
Sandberg 131a
D-25524 Itzehoe
Phone 04821 93795
94239
Fax 04821 94248
www.kd-heib.de
kd.heib@fsb.de
- 2
Hans-Gert Feldtange
Kornblumenweg 2
D-26125 Oldenburg
Phone 0441 93611-0
Fax 0441 93611-11
www.feldtange.de
hg.feldtange@fsb.de
- 3
Frank Maibohm
Pasewalker Allee 23
D-17389 Anklam
Phone 03971 210636
Fax 03971 210642
www.kd-heib.de
kd.heib.maibohm@fsb.de
- 4
Franz-Josef Hund
Rudolf-Harbig-Strasse 7
D-48301 Nottuln
Phone 02502 6422
Fax 02502 3205
www.fjhund.de
fj.hund@fsb.de
- Ludger Hammelbeck
Eichenweg 34
D-59556 Lippstadt
Phone 02941 81411
Fax 02941 81446
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- Wolfgang Doetkotte
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- Sven Rohde
Büdericher Hellweg 7
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- 5
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