



Furniture for entrance doors

7a

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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.

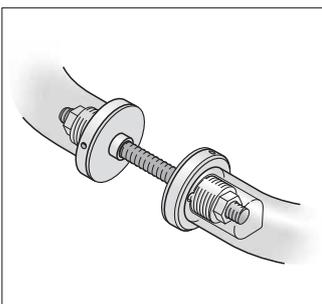
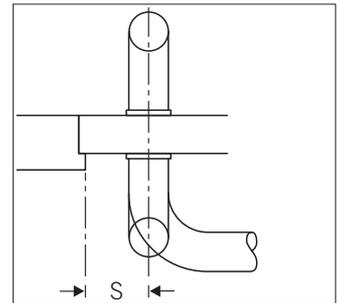
Fixing Scenarios

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).

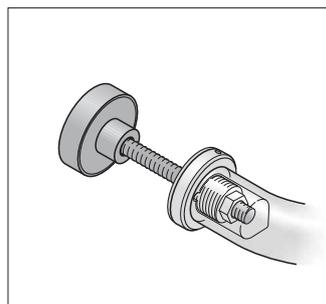
As regards the issue of face fixing versus one-side through-fixing, FSB wishes to point out that, on account of the dowel-fastening technique deployed by FSB, face fixing is both aesthetically pleasing and sufficiently durable as a rule. This needs to be qualified, however, in the case of heavy-duty 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)

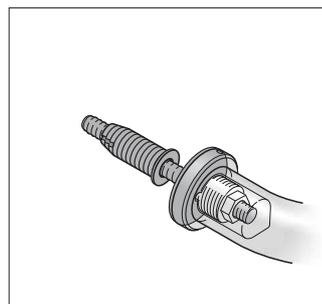
When fitting a handle to the closing face of a door, a safety clearance needs to be allowed for between the handle and the edge of the door and the jamb. The assembly scenario is made more readily comprehensible by the following sketch. Ideally, safety clearances as recommended by FSB should be adhered 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.



Back to back fixing



Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handles Oval series

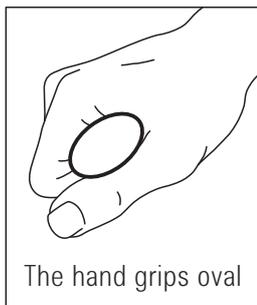
We kick this section off with a range of oval designs FSB has developed over the past decade as an alternative to traditional pulls of circular cross-section. Adopting the formula 'diagonal + oval = ideal gripping' identified by FSB reduces the amount of effort required to take hold of and operate the 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

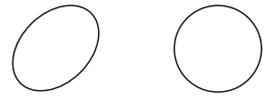
Back when the first grey Manual was published in the early 90s, we introduced a system of tubes and brackets for speedy erection on building sites that was well taken up and has thus been retained:

- 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.



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, owneroccupiers 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 or stainless steel.

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 heavyduty 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.

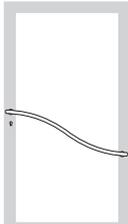
Before ordering please always check that the situation allows for sufficient mortise depth as well as the necessary backset.

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.

● New products 09110

Aluminium
 AluGrey
 Stainless steel
 Bronze
 Brass
 Alu + Color

Overview

| | | | | | | |
|---|--|--|--|---|---|---|
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Overview



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● New products 09110

- Aluminium ■ Bronze
- AluGrey ■ Brass
- Stainless steel □ Alu + Color



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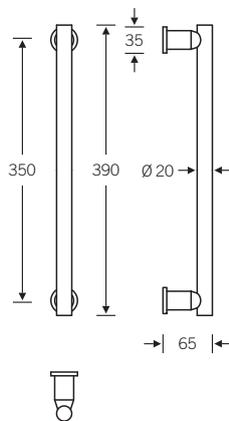


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Pages 412f.



0418 □ ■
Pages 413, 294

Pull handle
Round series



6501 38

Ø 20 mm

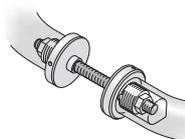
- Aluminium
- Stainless steel
- Brass

M8 fixing

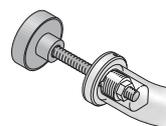
Safety clearance S=49 mm
(cf. page 348)

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).

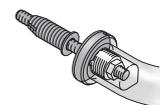
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

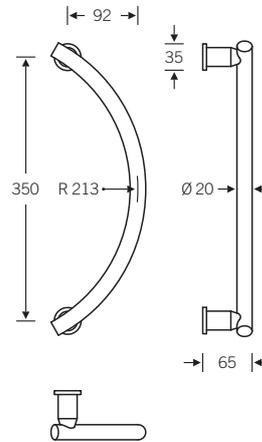


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handle
Round series



6504 38

Ø 20 mm

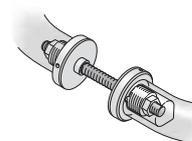
- Aluminium
- Stainless steel
- Brass

M8 fixing

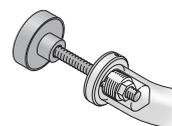
Safety clearance S=59 mm
(cf. page 348)

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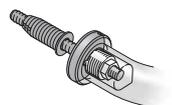
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

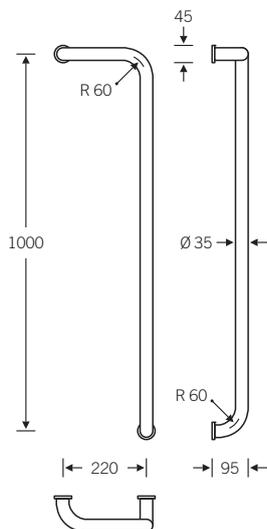


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handles
Round series



6506 ..

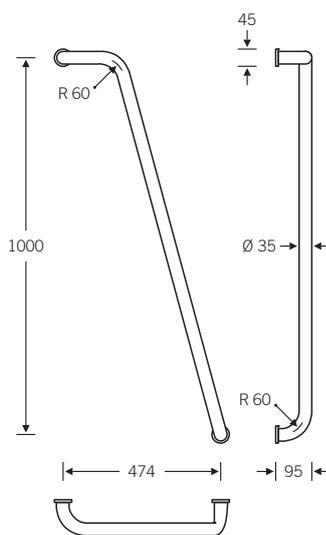
65 r.h. | 75 l.h.
Ø 35 mm

- Aluminium
- Stainless steel
- Bronze

Illustration r.h., outside view
handing details, cf. page 586f.

M8 fixing

Safety clearance S=47 mm
(cf. page 348)



6507 ..

65 r.h. | 75 l.h.
Ø 35 mm

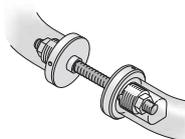
- Aluminium
- Stainless steel
- Bronze

Illustration r.h., outside view
handing details, cf. page 586f.

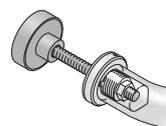
M8 fixing

Safety clearance S=47 mm
(cf. page 348)

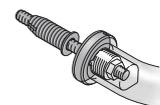
For detailed information on
fixing, please turn to page
414ff.



Back to back
fixing

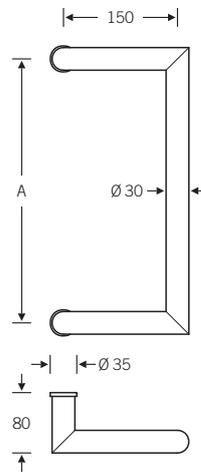


Bolt through-fixing



Secret single
side fixing with
self-tapping
insert

Pull handle
Round series



6514

■ Stainless steel

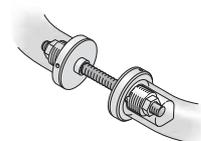
M8 fixing

Safety clearance S=55 mm
(cf. page 348)

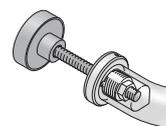
| Item nos. | Ø | A |
|-----------|----|-----|
| 6514 38 | 30 | 350 |
| 6514 45 | 30 | 450 |

7a

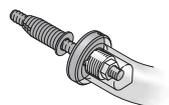
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

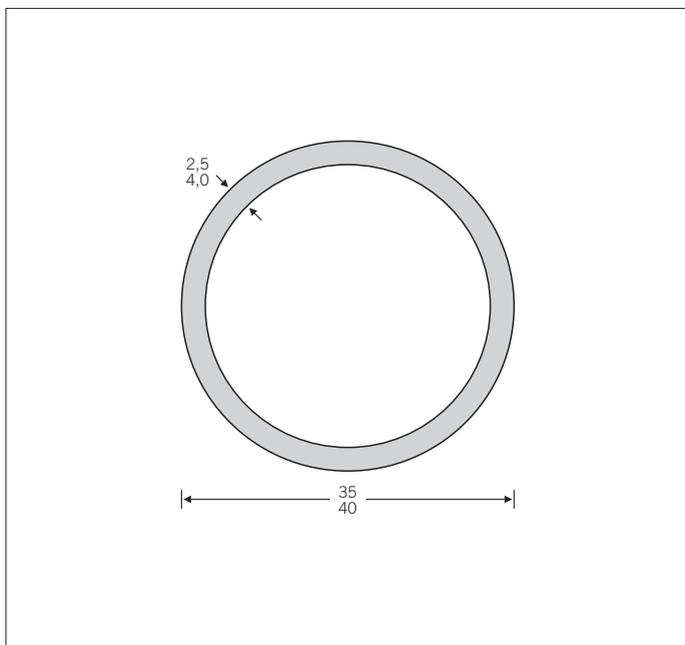


Bolt through-fixing



Secret single side fixing with self-tapping insert

ht round welded
from 1500 to 2100 mm and
for lengths more than 2100 mm



6522

- Stainless steel
- Bronze*

Tube Ø 35 × 2.5 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 1500 mm and a maximum of 2100 mm

* with brackets 45/55 and 46/56 only

6523

- Stainless steel

Tube Ø 40 × 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.

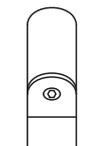
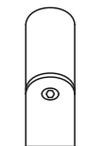
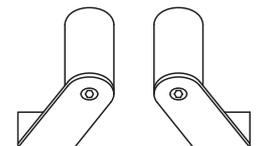
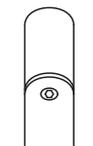
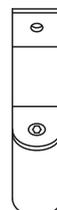
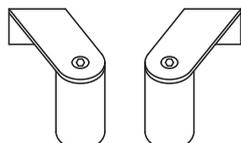
45 . .

46 . . r. h.

56 . . l. h.

47 . .

48 . .



→ | 35 / 40 | ←

→ | 40 / 46 | ←

→ | 40 / 46 | ←

→ | 35 / 40 | ←

→ | 35 / 40 | ←

. . 45

. . 46 r. h.

. . 56 l. h.

. . 47

. . 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 402, we calculate the length of the pull at the works prior to welding.

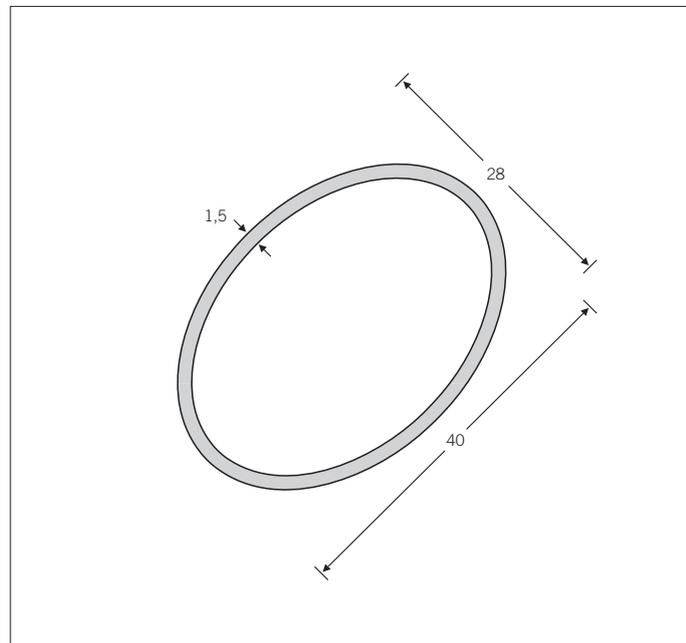
Reference:

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 414.

ht oval welded from 1500 to 2100 mm



6524

- Stainless steel
- Bronze*

Tube 28 × 40 × 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 1500 mm and a maximum of 2100 mm.

* with brackets 45/55 and 46/56 only

| | | | | | | | |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 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 406, we calculate the length of the pull at the works prior to welding.

7a

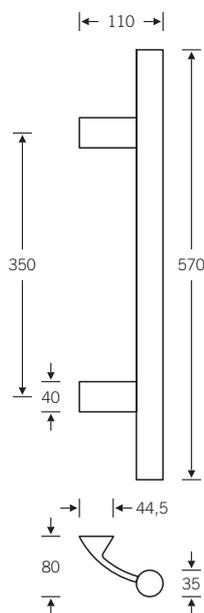
Reference:

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 414.

Pull handle
Round series

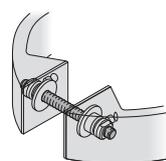


6526

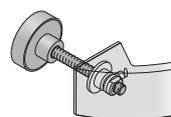
- Aluminium
- Stainless steel
(brackets aluminium)

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.

For detailed information on fixing, please turn to page 414ff.



Back to back fixing



Bolt through-fixing



Secret single side fixing with self-tapping insert

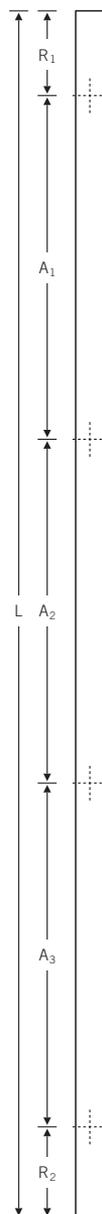
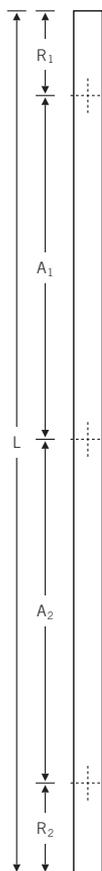
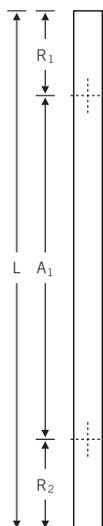
Fax copy



6526 Ø 35 mm



To order custom designs in the pull handle series 6526, please use a copy of this page: 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 1200 mm.

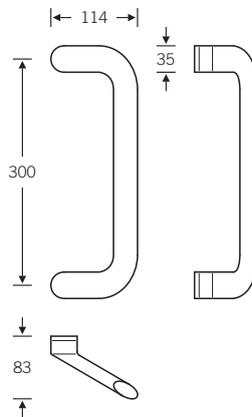


7a

| Qua. | Overall length L | Distance between brackets | | | Edge spacing* | | Fixing method |
|------|---------------------|---------------------------|----------------|----------------|----------------|----------------|---------------|
| | | A ₁ | A ₂ | A ₃ | R ₁ | R ₂ | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

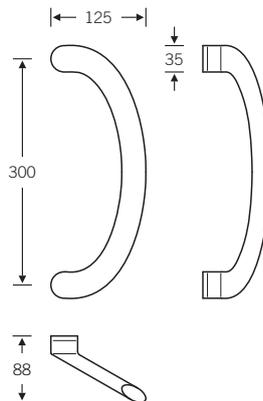
* least. 40 mm
max. 350 mm

Pull handles
Oval series



6533

- Aluminium
- Stainless steel
- Bronze



6534

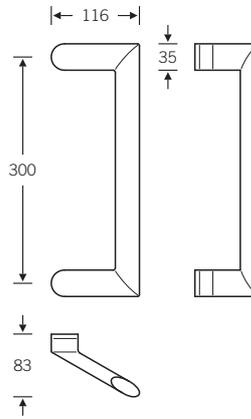
- Aluminium
- Stainless steel
- Bronze

The 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.

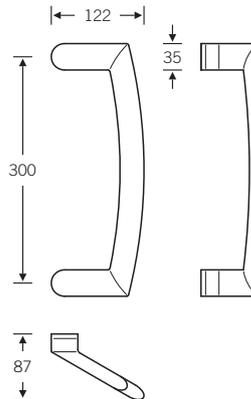
Guaranteeing FSB's usual production excellence are the traditional casting technique for aluminium and an innovative internal high-pressure metal forming process for the stainless steel variant.

Pull handles
Oval series



6535

- Aluminium
- Stainless steel
- Bronze

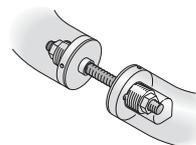


6536

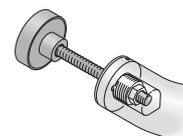
- Aluminium
- Stainless steel
- Bronze

7a

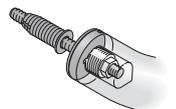
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

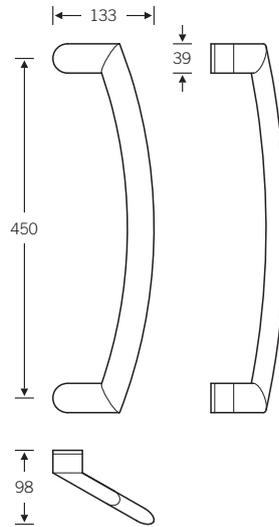


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handle
Oval series

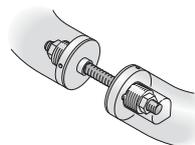


6537

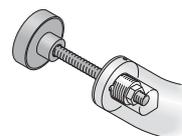
- Stainless steel
- Bronze

Door pulls 6537 and 6538 are visually related to the 300 mm range of pulls. 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.

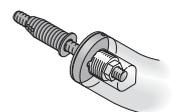
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

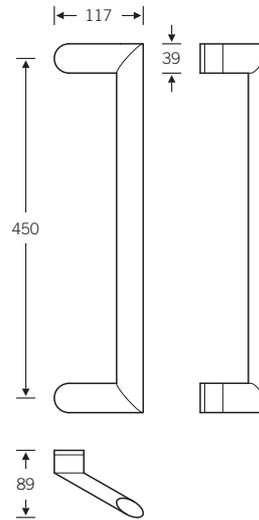


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handle
Oval series



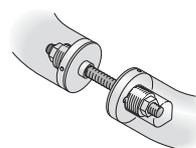
6538

- Stainless steel
- Bronze

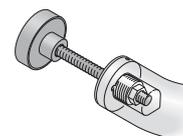
Door pulls 6537 and 6538 are visually related to the 300 mm range of pulls. Their 450 mm length allows them to be effortlessly integrated into the closing area, though for technical reasons they are only available in stainless steel.

7a

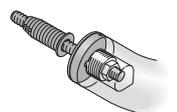
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

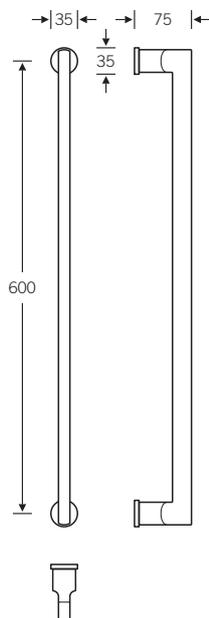


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handle
Round series



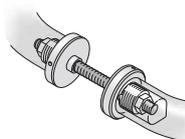
6540

■ Stainless steel

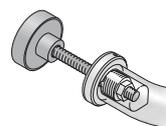
Matches FSB lever handle
model 1035

Safety clearance S=45 mm
(cf. page 348)

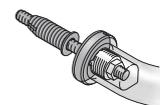
For detailed information on
fixing, please turn to page
414ff.



Back to back
fixing

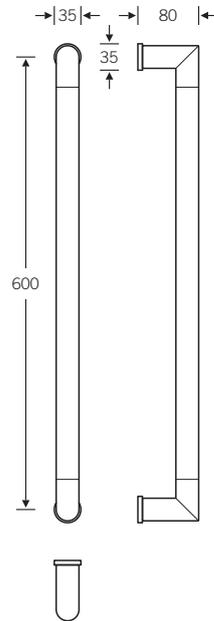


Bolt through-fixing



Secret single
side fixing with
self-tapping
insert

Pull handles
Round series

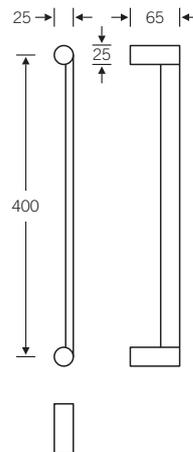


6541

- Stainless steel (Grip)
- Aluminium (Corners)

Matches FSB lever handle model 1077

Safety clearance S=51 mm (cf. page 348)



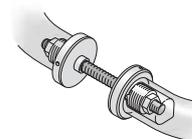
6543 40

- Aluminium
- Stainless steel

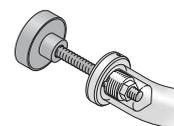
Matches FSB lever handle model 1021

Safety clearance S=48 mm (cf. page 348)

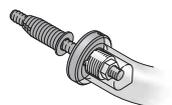
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

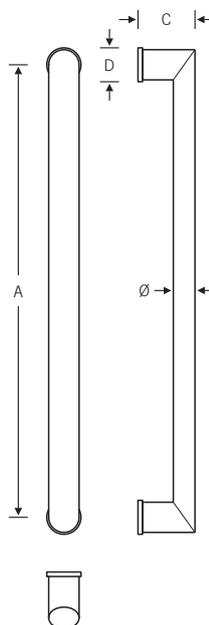


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handle
Oval series



6542

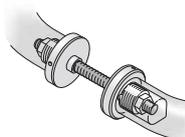
■ Stainless steel

Matches FSB lever handle models 1107/1108

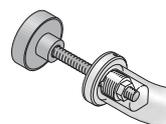
| Item nos. | Ø | A | C | D | S |
|-----------|---------|-----|----|----|----|
| 6542 3095 | 30 × 15 | 300 | 60 | 35 | 48 |
| 6542 6095 | 40 × 28 | 600 | 75 | 45 | 53 |

S Safety clearance (cf. page 348)

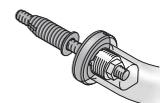
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

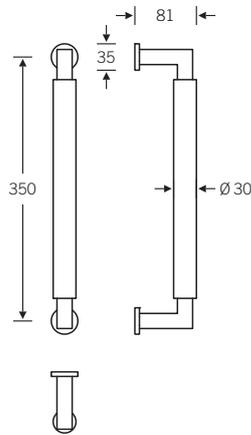


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handles
Round series



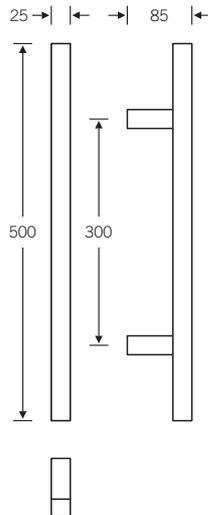
6546

■ Stainless steel

Matches FSB lever handle model 1102

Maximum A Dimension 1200 mm

Safety clearance S=51 mm (cf. page 348)



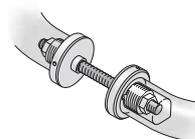
6599 0036

■ Stainless steel

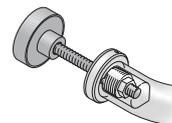
Matches FSB lever handle model 1003

Safety clearance S=55 mm (cf. page 348)

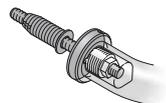
For detailed information on fixing, please turn to page 414ff.



Back to back fixing



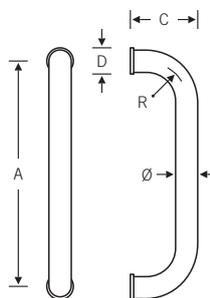
Bolt through-fixing



Secret single side fixing with self-tapping insert

7a

Pull handles
Round series



6602 38

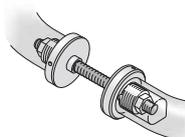
- Aluminium
- Stainless steel
- Bronze
- (only 6602 38)
- Brass
- Alu + Color

Fixing Ø = 20 mm M6
Ø ≥ 25 mm M8

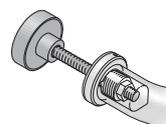
| Item nos. | Ø | R | A | C | D | S |
|-----------|----|----|----------|-----|----|----|
| 6627 34 | 20 | 25 | 200 | 75 | 30 | 45 |
| 6670 34 | 25 | 40 | 200 | 80 | 35 | 48 |
| 6670 37 | 25 | 40 | 300 | 80 | 35 | 48 |
| 6670 38 | 25 | 40 | 350 | 80 | 35 | 48 |
| 6602 38 | 30 | 55 | 350 | 90 | 35 | 51 |
| 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 (cf. page 348)

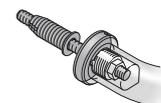
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

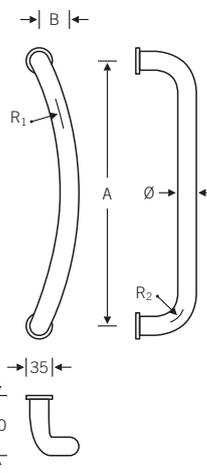


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handles
Round series



6605 38

- Aluminium
- Stainless steel
- Brass
- Alu + Color

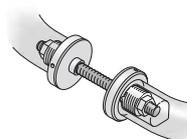
M8 fixing

Safety clearance S=45 mm
(cf. page 348)

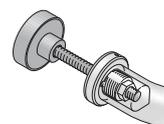
| Item nos. | Ø | R1 | R2 | A | B |
|-----------|----|-----|----|-----|----|
| 6605 25 | 25 | 260 | 40 | 250 | 32 |
| 6605 38 | 25 | 260 | 40 | 350 | 68 |
| 6605 50 | 25 | 400 | 40 | 500 | 88 |

7a

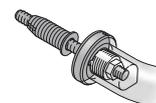
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

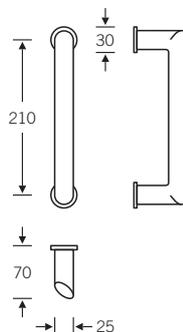


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handles
Oval series

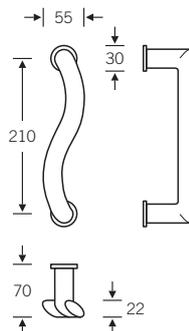


6610

- Aluminium
- Stainless steel

Fixing M6

Safety clearance S=45 mm
(cf. page 348)



6611 ..

- Aluminium
- Stainless steel

..24 r.h.
..25 l.h.

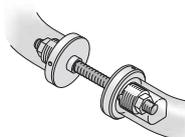
Fixing M6

Safety clearance S=60 mm
(cf. page 348)

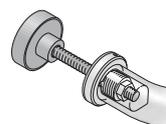
Illustration r.h.*, outside view,
handing details, cf. page 586f.

* is required for DIN l.h.
opening inwards

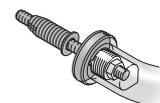
For detailed information on
fixing, please turn to page
414ff.



Back to back
fixing

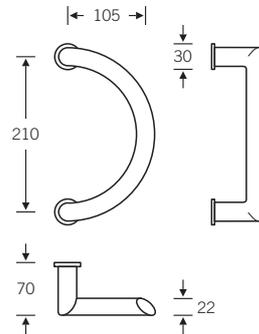


Bolt through-fixing



Secret single
side fixing with
self-tapping
insert

Pull handles
Oval series

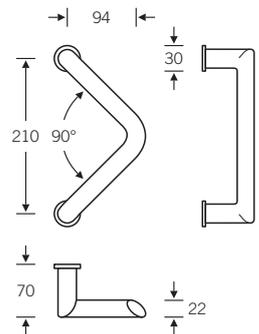


6612

- Aluminium
- Stainless steel

Fixing M6

Safety clearance S=48 mm
(cf. page 348)



6613

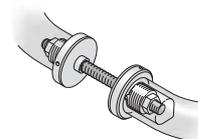
- Aluminium
- Stainless steel

Fixing M6

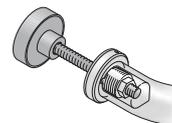
Safety clearance S=48 mm
(cf. page 348)

7a

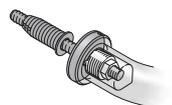
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

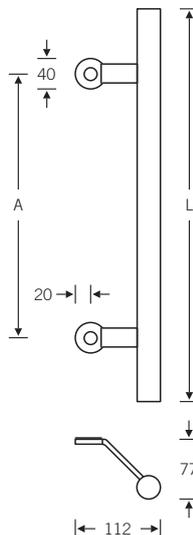


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handles
Round series

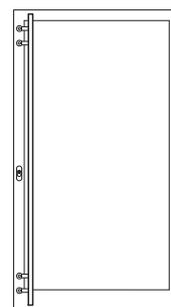
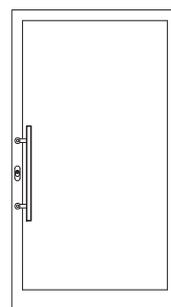
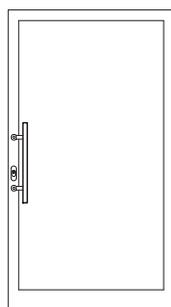


6615

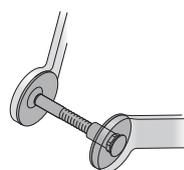
■ Stainless steel

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 | |



For detailed information on fixing, please turn to page 414ff.



Back to back fixing



Bolt through-fixing



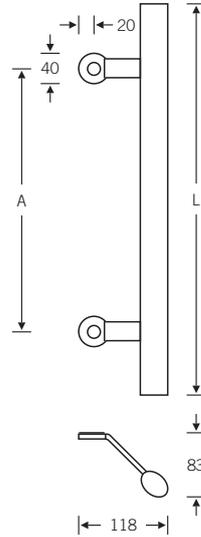
Secret single side fixing with self-tapping insert

Pull handles
Oval series

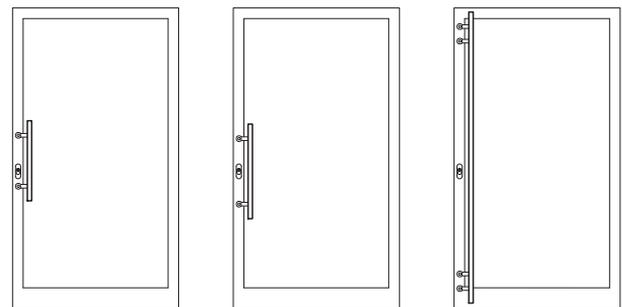


6616

■ Stainless steel

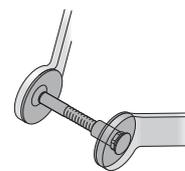


| Item nos. | Ø | A | L |
|-----------|---------|----------|-----|
| 6616 35 | 40 × 28 | 350 | 550 |
| 6616 45 | 40 × 28 | 450 | 650 |
| 6616 99 | 40 × 28 | 451–2100 | |

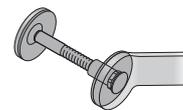


7a

For detailed information on fixing, please turn to page 414ff.



Back to back fixing

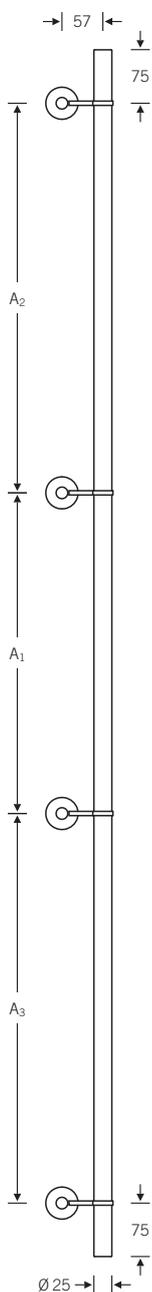


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handles Round series

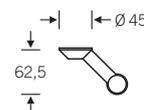
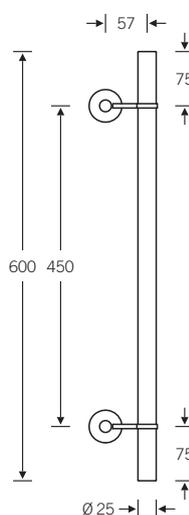


6620 45

Ø 25 mm

■ Stainless steel

Overall length 600 mm



| Item nos. | Ø | A1 | A2 | A3 | Ending |
|-----------|----|----|----|----|--------|
| 6620 99 | 25 | X | 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 1200 mm.

Pull handles
Round series



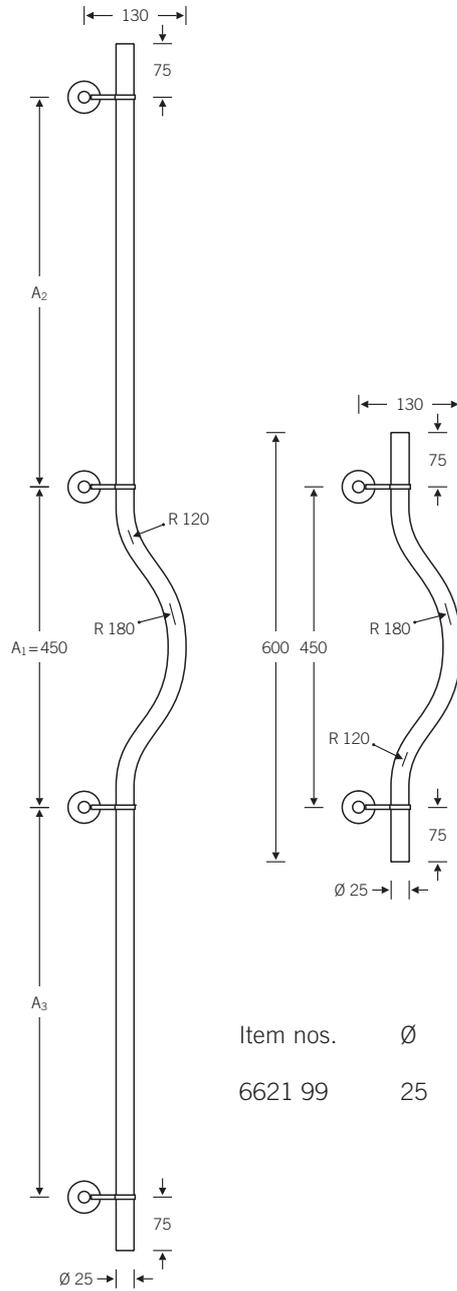
6621 45

Ø 25 mm

■ Stainless steel

A₁ = 450 mm

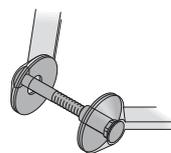
Overall length 600 mm



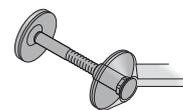
| Item nos. | Ø | A1 | A2 | A3 | Ending |
|-----------|----|-----|----|----|--------|
| 6621 99 | 25 | 450 | X | X | 75 mm |

7a

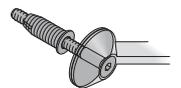
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

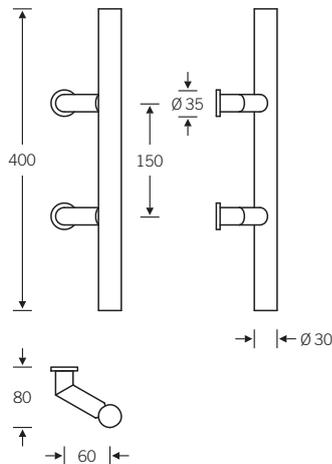


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handles Round series

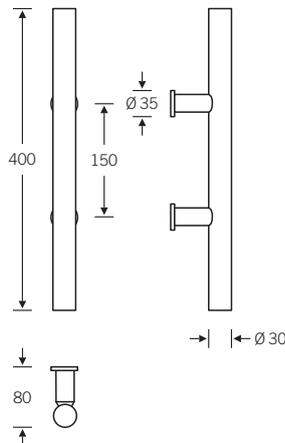


6630

Ø 30 mm

■ Stainless steel

Standard length 400 mm
M8 fixing



6681

Ø 30 mm

■ Stainless steel
■ Bronze

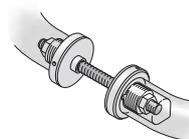
Standard length 400 mm
M8 fixing

Safety clearance S=38 mm
(cf. page 348)

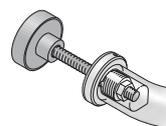
Available in custom lengths
also, please turn to the next
page.

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).

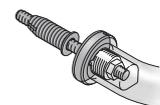
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

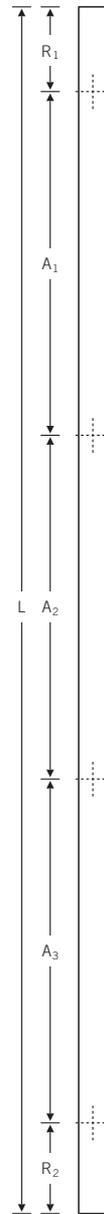
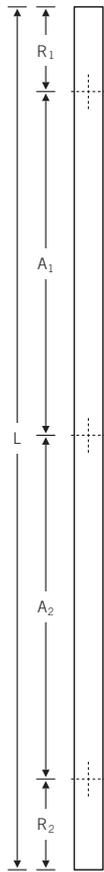
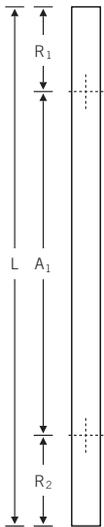


Bolt through-fixing

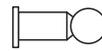


Secret single side fixing with self-tapping insert

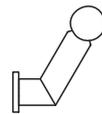
Fax copy



- 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



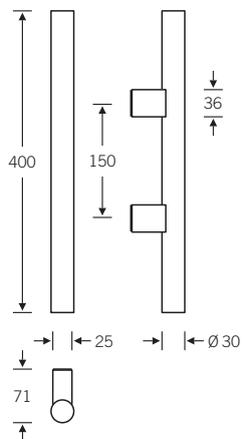
To order custom designs in the pull handle series 6681 or 6630, please use a copy of this page: First specify the model desired citing the applicable order code above. Then enter the quantity required and overall length in the table below. Then enter details of the distances between brackets and, where applicable, their distance from the end of the handle in mm. To ensure stability, the distance between brackets should not exceed 1200 mm. Finally, please tick the cap required for standard versions with a diameter of 30 Ø.

7a

| Qua. | 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
max. 350 mm

Pull handles
Round series



6642

Ø 30 mm

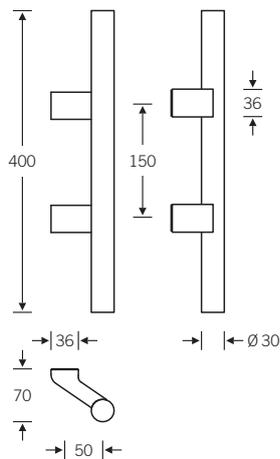
Brackets
■ Aluminium

Grip
■ Aluminium or
■ Stainless steel

Standard length 400 mm
Fixing M6

Safety clearance S=38 mm
(cf. page 348)

Available in custom lengths
also, please turn to the next
page.



6643

Ø 30 mm

Brackets
■ Aluminium

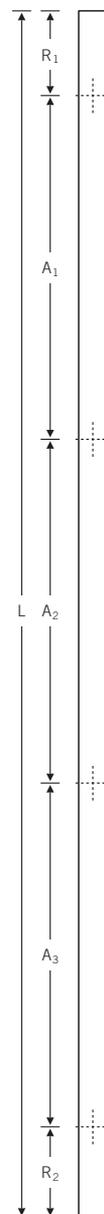
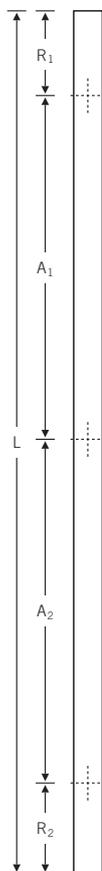
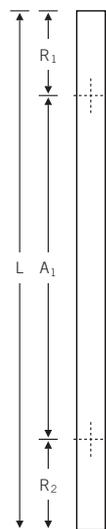
Grip
■ Aluminium or
■ Stainless steel

Standard length 400 mm
Fixing M6

Available in custom lengths
also, please turn to the next
page.

For detailed information on
fixing of the pull handles 6642
and 6643, please turn to page
422.

Fax copy



6642 Ø 30 mm



6643 Ø 30 mm



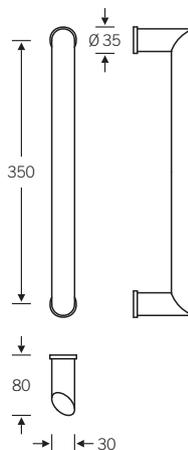
To order custom designs in the pull handle series 6642 or 6643, please use a copy of this page: First specify the model desired citing the applicable order code above. Then enter the quantity required and overall length in the table below. Then enter details of the distances between brackets and, where applicable, their distance from the end of the handle in mm. To ensure stability, the distance between brackets should not exceed 1200 mm.

7a

| Qua. | Overall length L | Distance between brackets | | | Edge spacing* | | Fixing method |
|------|---------------------|---------------------------|----------------|----------------|----------------|----------------|---------------|
| | | A ₁ | A ₂ | A ₃ | R ₁ | R ₂ | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

* least. 30 mm
max. 350 mm

Pull handle
Oval series



6650

■ Stainless steel

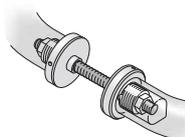
Diameter 36 × 22 mm
M8 fixing

Safety clearance S=49 mm
(cf. page 348)

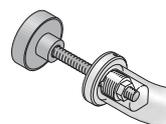
FSB could not resist squeezing all the experience gained in fashioning the 40 x 28 mm oval tube into a smaller diameter. And thus it was that the standard in-line pull FSB 6650 came into being. If so desired, FSB 6650 can also be supplied in other lengths.

| Item nos. | Ø | A |
|-----------|---------|----------|
| 6650 38 | 36 × 22 | 350 |
| 6650 99 | 36 × 22 | 351-1500 |

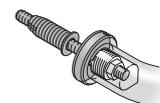
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

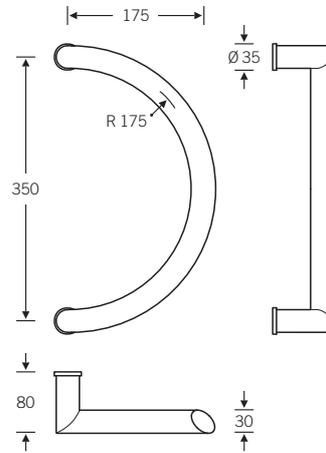


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handle
Oval series



6652 38

■ Stainless steel

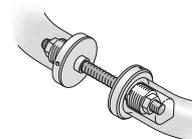
Diameter 36 × 22 mm
M8 fixing

Safety clearance S=53 mm
(cf. page 348)

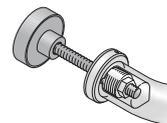
Handle models FSB 6650 (in-line), FSB 6682 (U-shape) and FSB 6652 (semicircular) are living proof that tested designs featuring new oval cross-sections have the edge over their round counterparts both optically and in terms of gripping ergonomics. The hand glides effortlessly around them.

7a

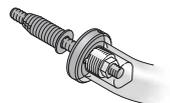
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

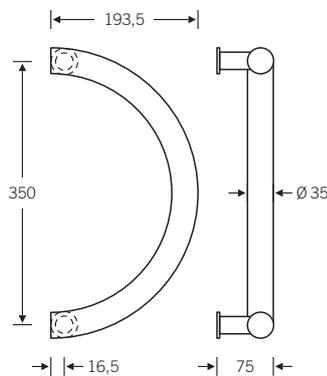


Bolt through-fixing



Secret single side fixing with self-tapping insert

Grip de porte
tubulaires



6655 38

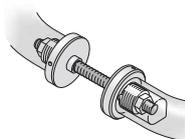
Ø 35 mm

- Aluminium
- Stainless steel

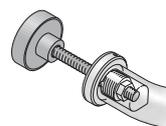
M8 fixing

Safety clearance S=55 mm
(cf. page 348)

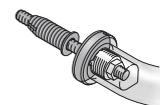
For detailed information on
fixing, please turn to page
414ff.



Back to back
fixing



Bolt through-fixing



Secret single
side fixing with
self-tapping
insert

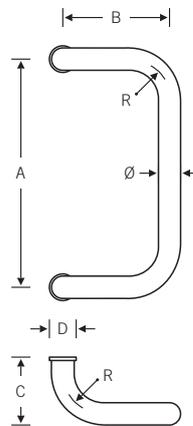
Pull handles
Round series



6662 38

- Aluminium
- Stainless steel
- Brass
- Alu + Color

Fixing $\varnothing = 20$ mm M6
 $\varnothing \geq 25$ mm M8

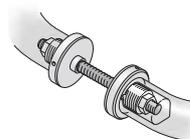


| Item nos. | \varnothing | R | A | B | C | D | S |
|-----------|---------------|----|----------|-----|-----|----|----|
| 6660 34 | 20 | 25 | 200 | 100 | 75 | 30 | 41 |
| 6661 34 | 25 | 40 | 200 | 100 | 80 | 35 | 42 |
| 6661 37 | 25 | 40 | 300 | 100 | 80 | 35 | 42 |
| 6661 38 | 25 | 40 | 350 | 100 | 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 |

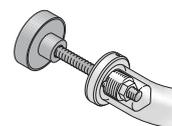
7a

S Safety clearance (cf. page 348)

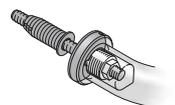
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

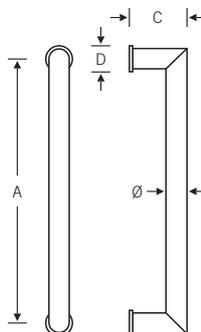


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handles
Round series



6669 38

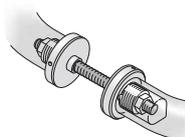
■ Stainless steel
■ Bronze
(With diameter 30 mm and maximum length 1200 mm only)

M8 fixing

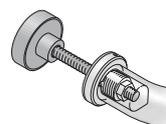
| Item nos. | Ø | A | C | D | S |
|-----------|----|---------------|----|----|----|
| 6606 38 | 25 | 350 | 75 | 35 | 50 |
| 6669 38 | 30 | 350 | 80 | 35 | 55 |
| 6669 99 | 30 | custom length | | | |
| 6607 38 | 35 | 350 | 85 | 45 | 57 |
| 6609 38 | 40 | 350 | 90 | 45 | 60 |
| 6609 99 | 40 | custom length | | | |

S Safety clearance (cf. page 348)

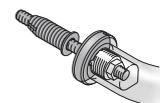
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

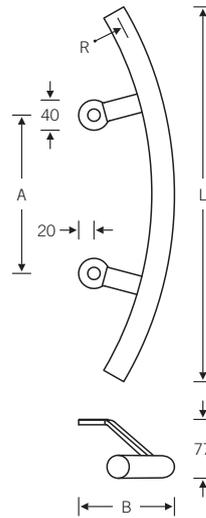


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handles
Round series

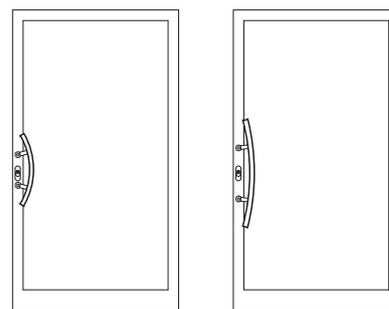


6674

■ Stainless steel

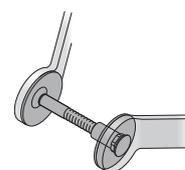
Door pull FSB 6674 takes the offset strap-type brackets from the FSB 6615 series and fuses these with the sweep of the crescent-shaped round pull (Ø 30 mm). This pull series is only supplied with A dimensions of 210 mm and 350 mm.

| Item nos. | Ø | R | A | B | L |
|-----------|----|------|-----|-----|-----|
| 6674 21 | 30 | 485 | 210 | 126 | 497 |
| 6674 35 | 30 | 1420 | 350 | 123 | 742 |



7a

For detailed information on fixing, please turn to page 414ff.



Back to back fixing

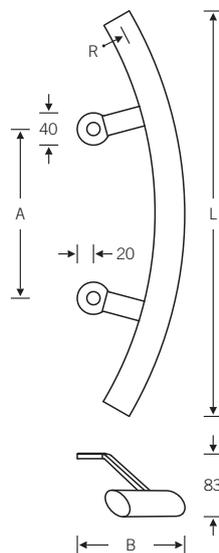


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handles
Oval series

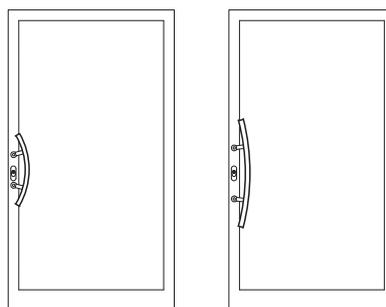


6675

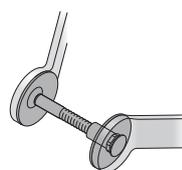
■ Stainless steel

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 | 132 | 504 |
| 6675 35 | 40 x 28 | 1420 | 350 | 129 | 745 |



For detailed information on fixing, please turn to page 414ff.



Back to back fixing

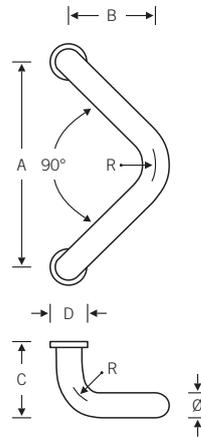


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handles
Round series



6679 38

- Aluminium
- Stainless steel
- Brass
- Alu + Color

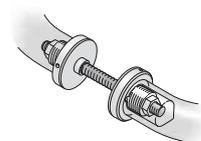
Fixing $\varnothing = 20$ mm M6
 $\varnothing \geq 25$ mm M8

| 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 |

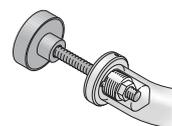
S Safety clearance (cf. page 348)

7a

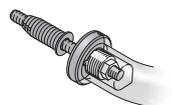
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

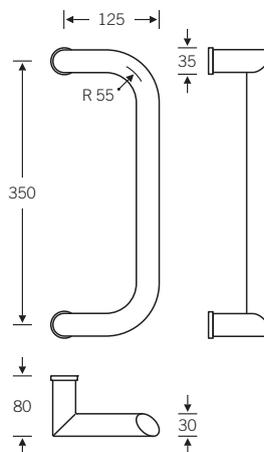


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handle
Oval series



6682 38

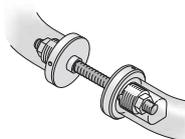
■ Stainless steel

Diameter 36 × 22 mm
M8 fixing

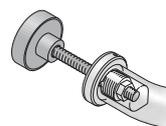
Safety clearance S=53 mm
(cf. page 348)

FSB has extended its FSB 6650 series introduced four years ago to embrace U-shaped and circular variants. In all four cases, the easy-grip oval tube with a diameter of 36 x 22 mm is supported on round fixing brackets.

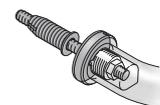
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

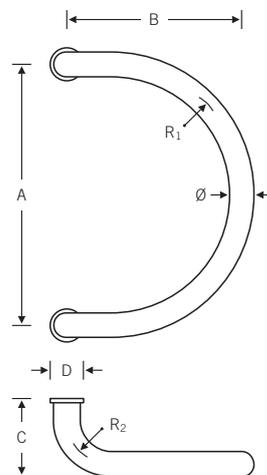


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handles
Round series



6683 38

- Aluminium
- Stainless steel
- Bronze (6683 38 only)
- Brass
- Alu + Color

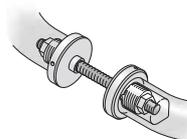
Fixing Ø = 20 mm M6
Ø ≥ 25 mm M8

| 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 | 190 | 80 | 35 | 42 |
| 6673 38 | 25 | 175 | 40 | 350 | 215 | 80 | 35 | 42 |
| 6683 38 | 30 | 175 | 55 | 350 | 230 | 90 | 35 | 43 |
| 6659 38 | 35 | 175 | 60 | 350 | 235 | 95 | 45 | 45 |
| 6678 38 | 40 | 175 | 60 | 350 | 235 | 120 | 45 | 52 |

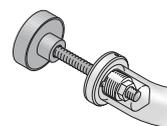
S Safety clearance (cf. page 348)

7a

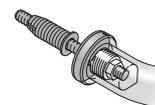
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

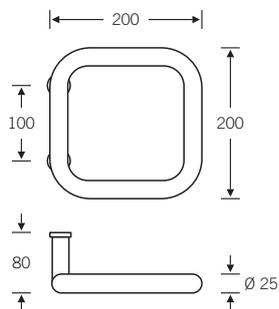


Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handle
Round series



6688 00

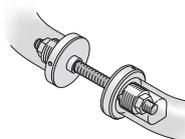
∅ 25 mm

■ Stainless steel

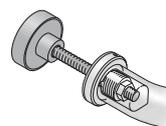
M8 fixing

Safety clearance S=48 mm
(cf. page 348)

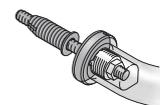
For detailed information on fixing, please turn to page 414ff.



Back to back fixing



Bolt through-fixing



Secret single side fixing with self-tapping insert

Pull handles Wave



6510

Ø 30 mm

- Aluminium
- Stainless steel
- Brass

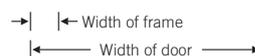
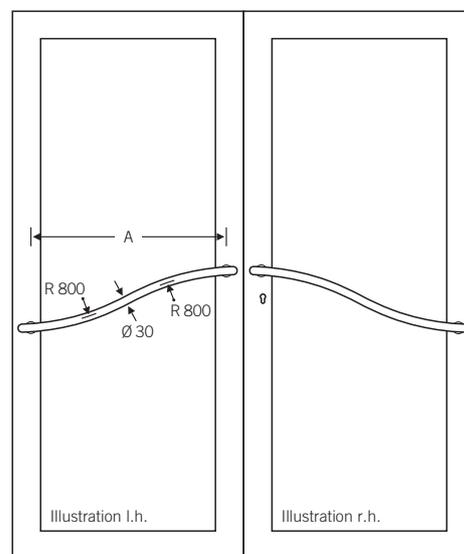
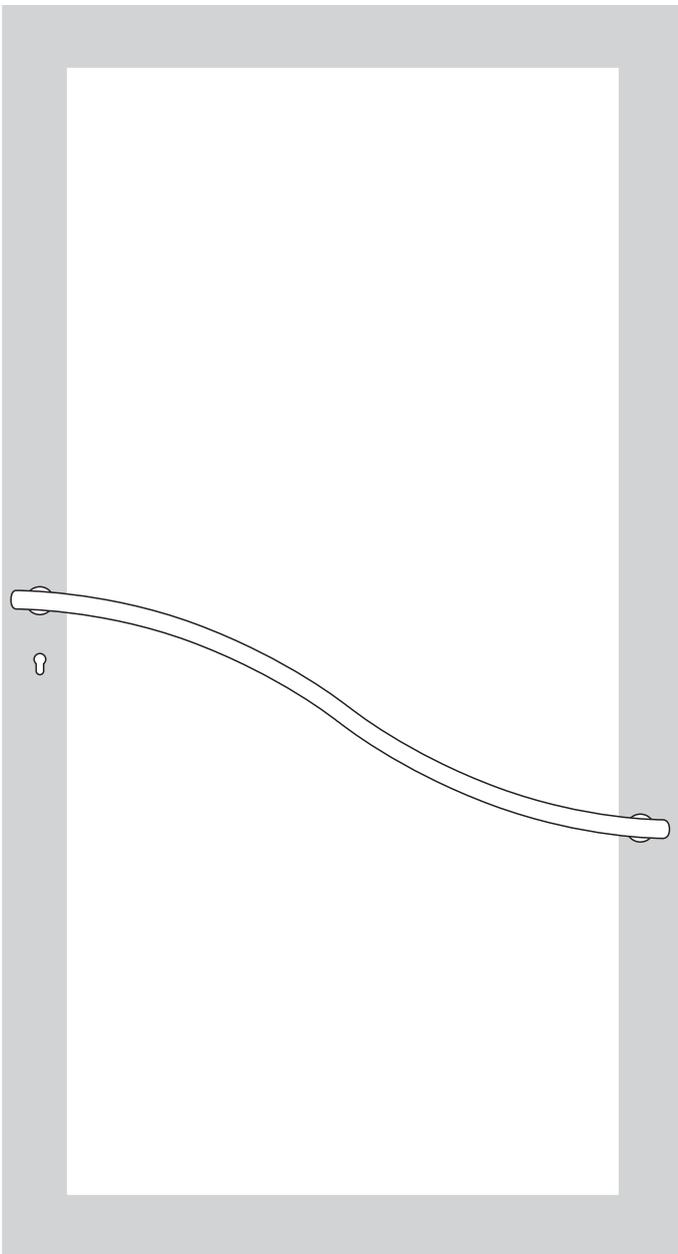
Safety clearance 65 mm for 30 mm handle projection, M8 fixing

The wave handle is offered in aluminium, stainless steel and brass with the following specifications:

Torsion radius: 800 mm
 Handle diameter: 30 mm
 Bracket diameter: 35 mm

For quoting purposes, we require the following details together with a dimensioned sketch:

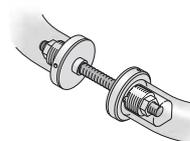
1. Door width
2. Size A required
3. Width of frame
4. Profile section
5. In case of glass doors: distance of fixing holes from edge



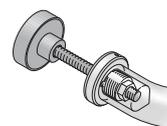
Handing details, cf. page 586f.

7a

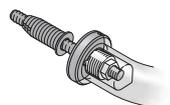
For detailed information on fixing, please turn to page 414ff.



Back to back fixing

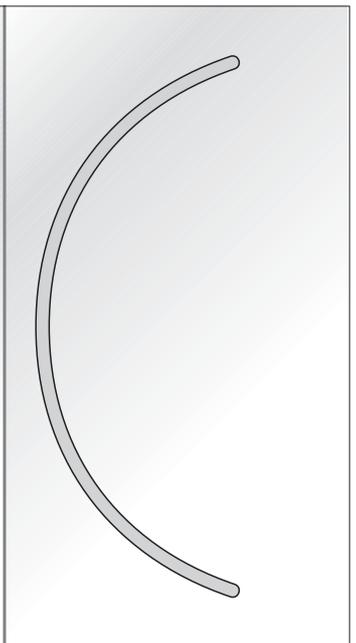
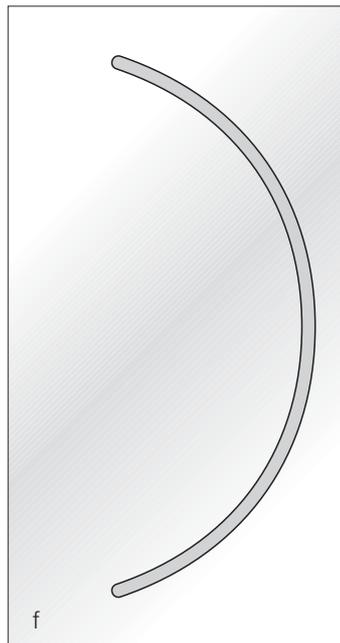
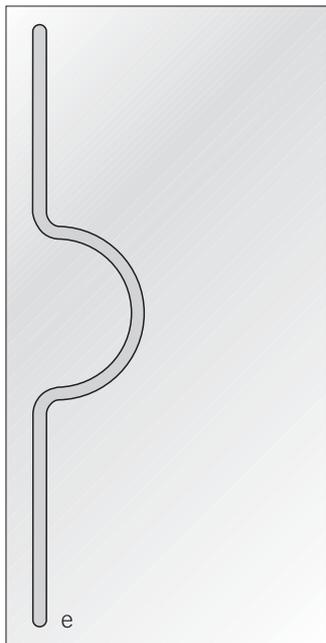
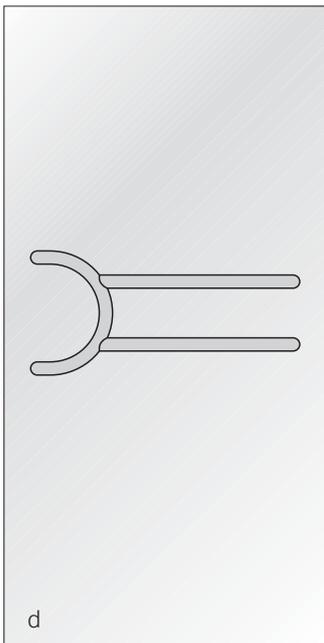
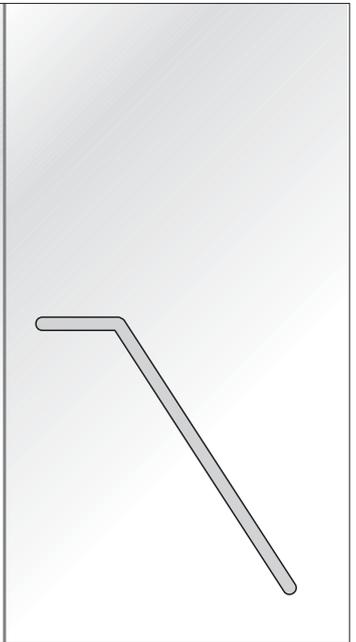
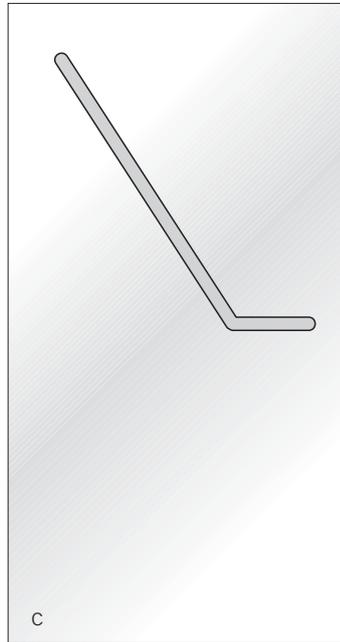
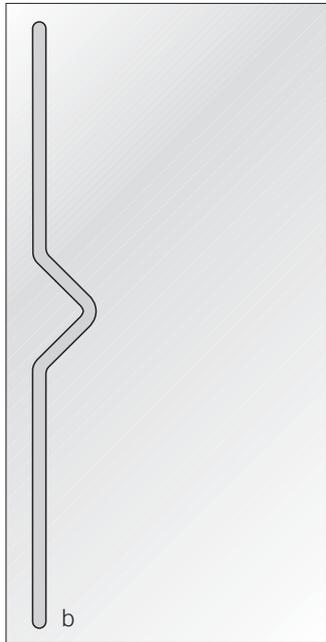
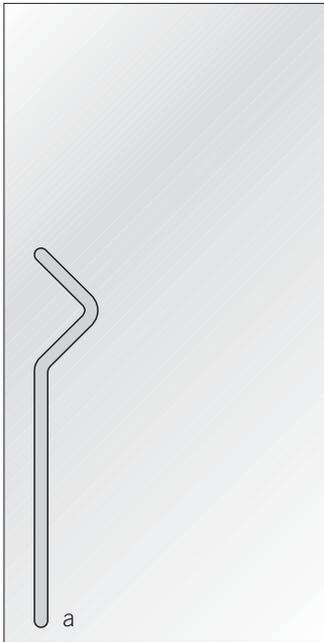


Bolt through-fixing



Secret single side fixing with self-tapping insert

Design proposals
Pull handles Round series



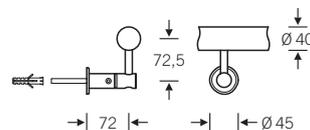
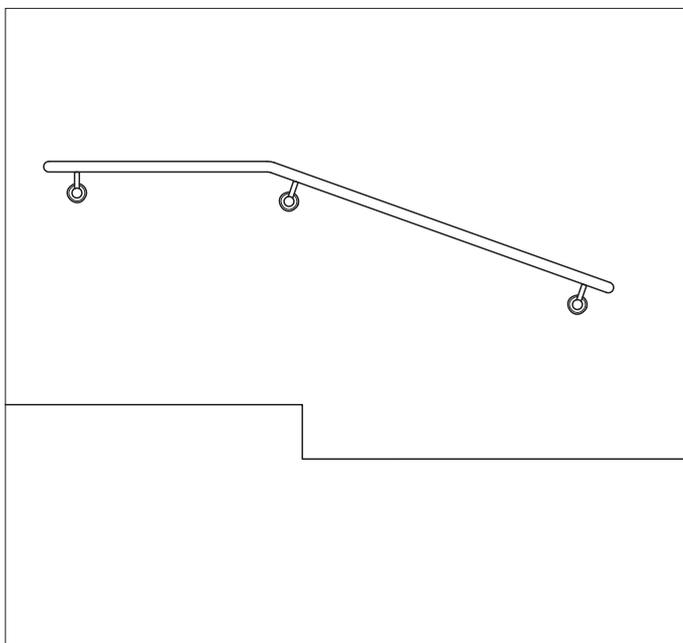
For detailed information on fixing, please turn to page 414ff.

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. pp. 586ff.

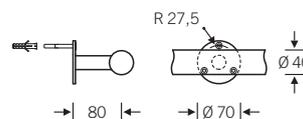


Handrail systems



Fixing method 1

6599 9991



Fixing method 2

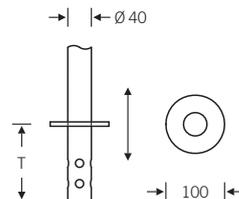
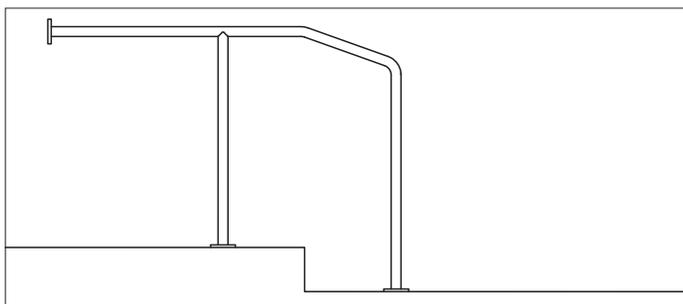
6599 9994

Typ A Stainless steel

Fixing method 1:
Hole for countersunk screw M8

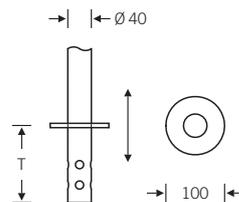
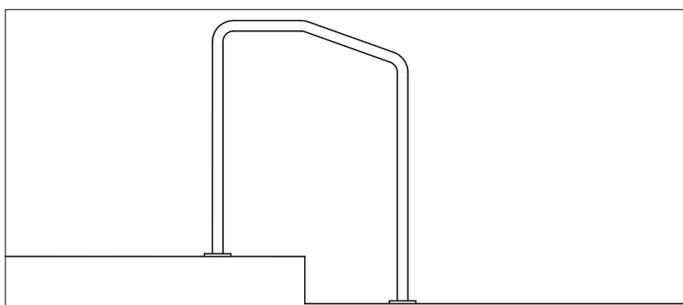
Fixing method 2:
Hole for countersunk screw M6

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.

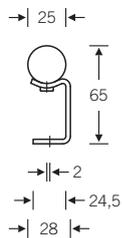
7a

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.

Pull handles TGS round

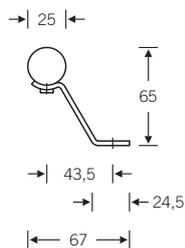
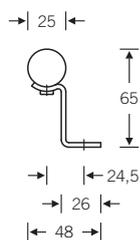


6508

Ø 25 mm

■ Stainless steel

Breadth of brackets 40 mm
Screw hole-Ø 8.5 mm

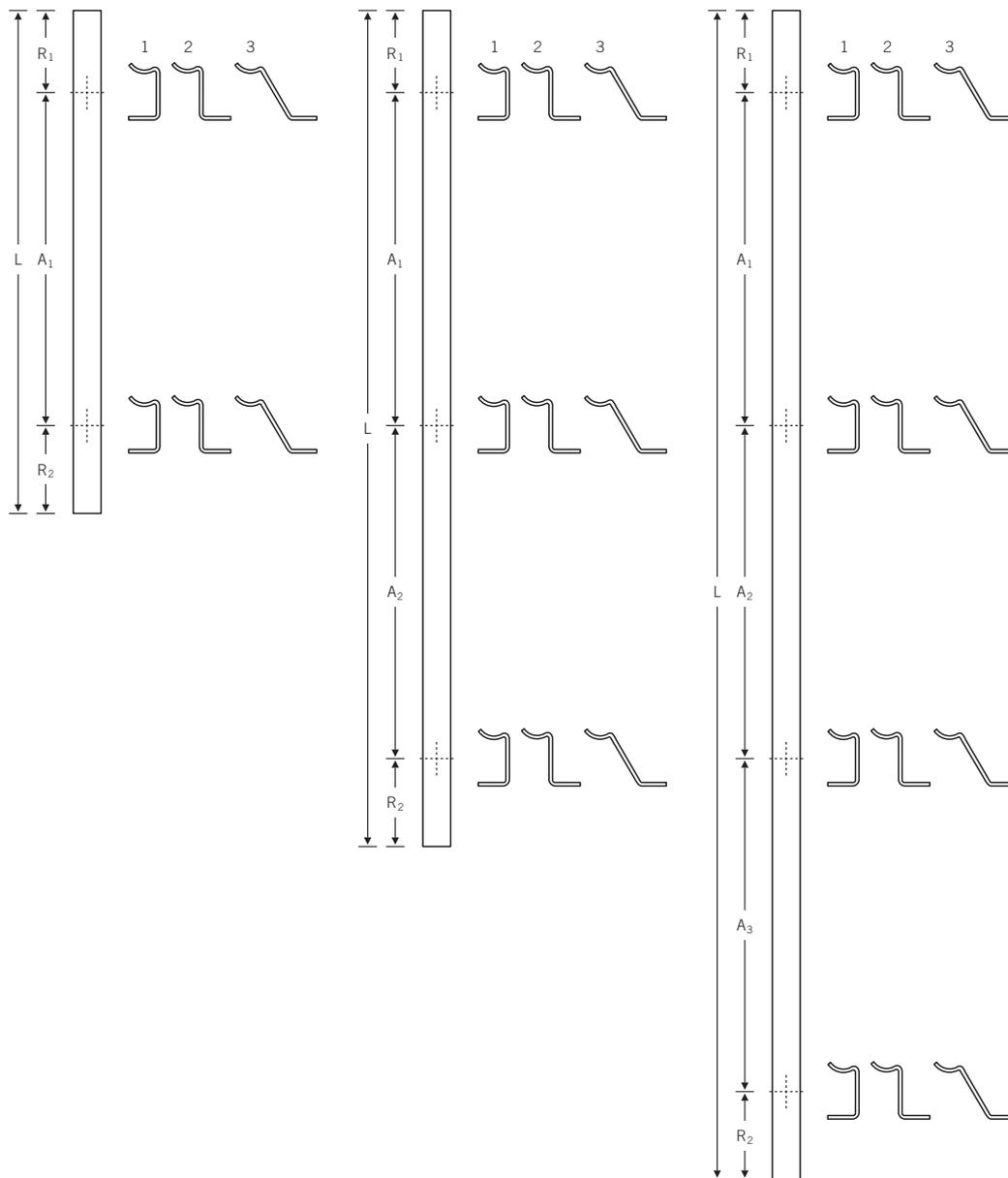


For detailed information on fixing, please turn to page 414ff.

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 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



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.

7a

| Qua. | 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

hs round modular system

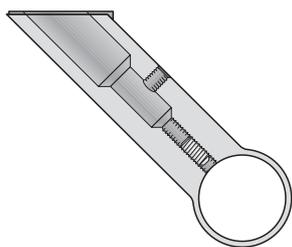


The hs modular system comprising grips and brackets caters in a novel way to individual design aspirations and functional requirements.

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.

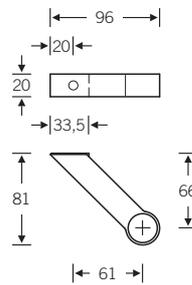


Once their arrangement and spacing have been established, brackets are firmly secured to the grip by means of recessed fastenings (cf. Fig.).

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

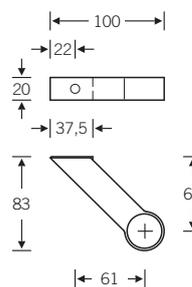
Brackets + Grips



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

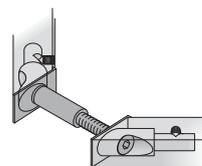
6811

■ Stainless steel

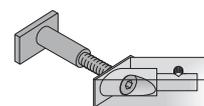
Grip Ø 30 mm

| 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 |

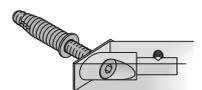
For detailed information on fixing, please turn to page 414ff.



Back to back fixing



Bolt through-fixing



Secret single side fixing with self-tapping insert

7a

hs oval modular system

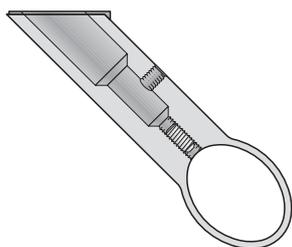


The hs modular system comprising grips and brackets caters in a novel way to individual design aspirations and functional requirements.

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.

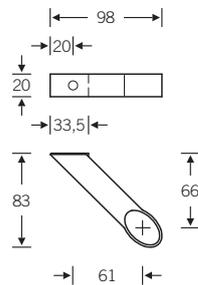
There is scope for variation owing to the differing lengths of grips and the fact that the positioning and number of brackets are freely selectable. The option of providing handle ends with either one or two brackets and positioning central brackets as desired turns every handle into a distinctive feature and an embellishment for main entrance doors.



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

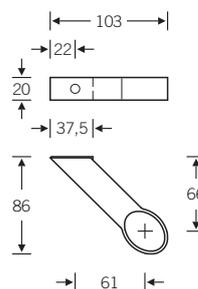
Brackets + Grips



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

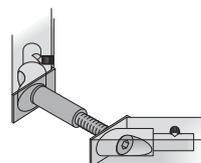
6813

Stainless steel

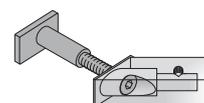
Grip
Ø 40 x 28.5 mm

| Item 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 |

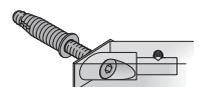
For detailed information on fixing, please turn to page 414ff.



Back to back fixing



Bolt through-fixing



Secret single side fixing with self-tapping insert

7a

ht round modular systems up to 1500 mm

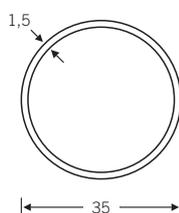


6801

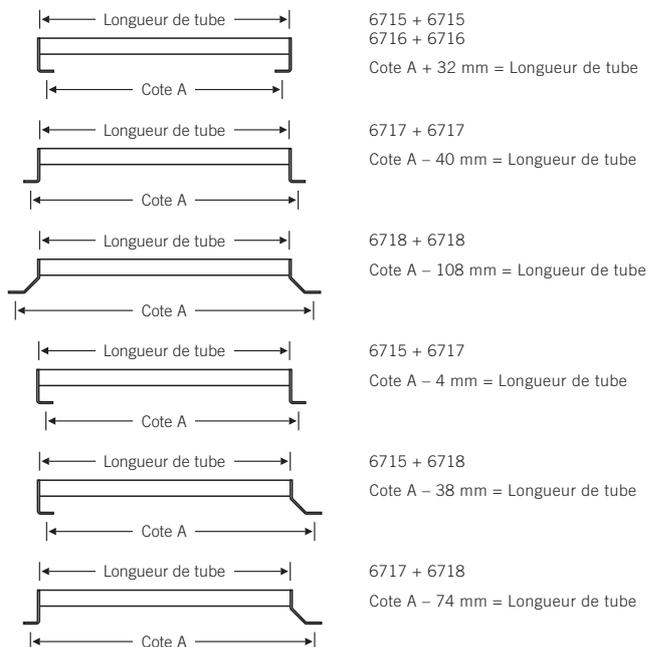
■ Stainless steel

Tube Ø 35 × 1.5 mm
Stock length 3000 mm

The ht round kit enables safety rails, handle systems, handrails etc. up to 1500 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 1500 - 2100 mm are concerned, we would recommend factory welded hardware, versions FSB 6522 and 6523 cf. page 358.



Dimensions:



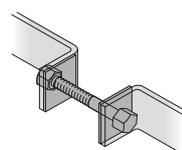
Tube length and A size are important for fabrication, fitting and ordering purposes. The A size defines the fixing distance from the centre of the borehole for one bracket to the centre of the borehole for the other. Tube length is arrived at by adding or subtracting the differential sizes given alongside 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.

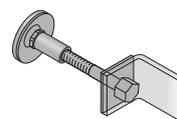
Reference:

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

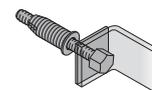
rail at particularly hazardous openings in buildings. If in any doubt, please contact the architect or engineer in charge. For detailed information on fixing, please turn to page 423.



Back to back fixing

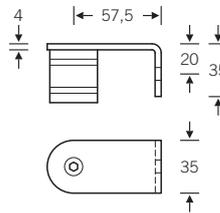


Bolt through-fixing



Secret single side fixing with self-tapping insert

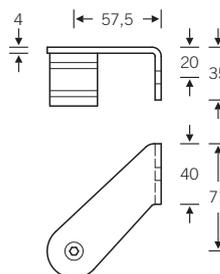
Brackets ht round modular systems



6715

■ Stainless steel

Straight bracket, angled 90° inwards, to match tube 35 x 1.5 mm Ø



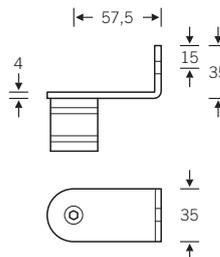
6716 ..

■ 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

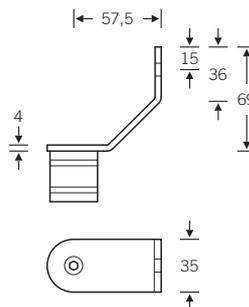
Illustration r.h.



6717

■ Stainless steel

Straight bracket, angled 90° inwards, to match tube 35 x 1.5 mm Ø



6718

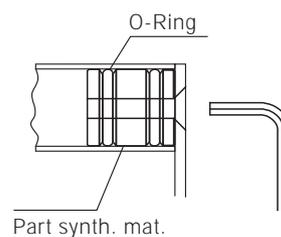
■ Stainless steel

Bracket for swing doors, to match tube 35 x 1.5 mm Ø

7a

Screw hole Ø 8.5 mm

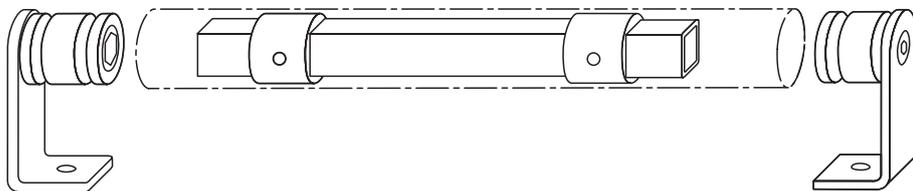
Safety clearance S=52 mm (cf. page 348)



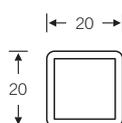
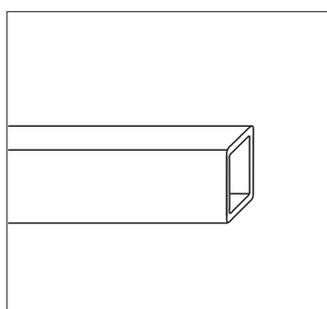
Once the tube has been cut to size (dimensions A + differential measurement), matching brackets are slotted into the tube ends and fastened with screws from the top.

Modular systems ht oval

Accessories



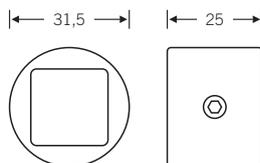
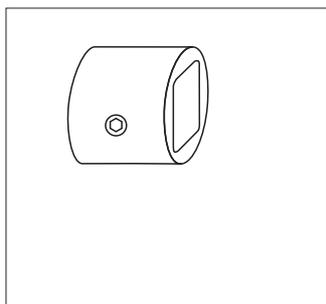
For pull handles from the modular systems ht round over 1.5 metres long or where robust handling is to be assumed, we would recommend reinforcing the tube with square-section tubing as shown on this page.



6801 20

Steel tube hot galvanised

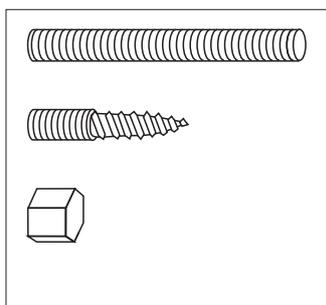
20 x 20 x 2 mm
Stock length 3000 mm



6719

Thermoplast

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 414ff.

Fixing reference:

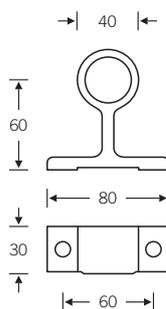
Sizing square-section tube: outside length of oval tube minus 100 mm. Then fixing of spacing sleeves with distance 350 mm, afterwards assembling.

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 Ø 30 mm
Side 1.5 mm
Stock length 3000 mm

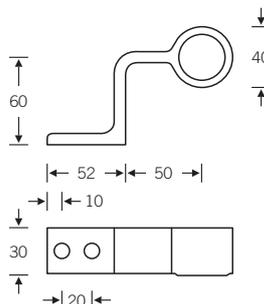
6800 09

■ Aluminium Ø 30 mm
Side 2.0 mm
Stock length 3000 mm

6707

■ Aluminium natural colour anodised

6707 06 End support
6707 05 Intermediate support

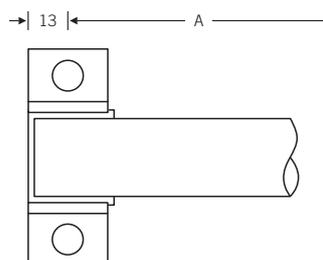


6708

■ Aluminium natural 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.



7a

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

ht oval modular systems up to 1500 mm

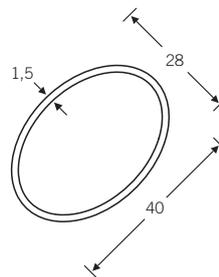


6802

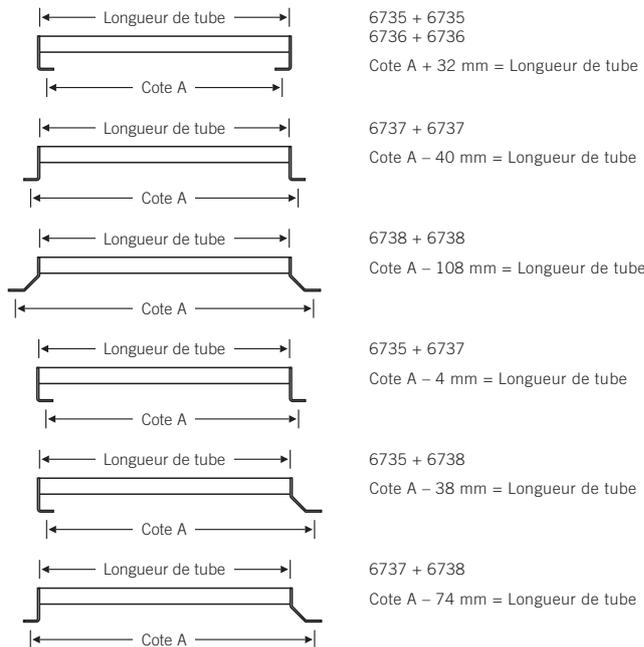
■ Stainless steel

Tube 28 × 40 × 1.5 mm
Stock length 3000 mm

The ht oval kit enables safety rails, handle systems, hand-rails etc. up to 1500 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 1500 - 2100 mm are concerned, we would recommend factory welded hardware, version FSB 6524 cf. page 358.



Dimensions:

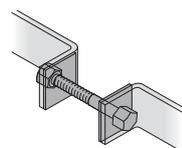


Tube length and A dimension are important for fabrication, fitting and ordering purposes. The A dimension defines the fixing distance from the centre of the borehole for one bracket to the centre of the borehole for the other. Tube length is arrived at by adding or subtracting the differential dimensions 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.

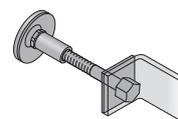
Reference:

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

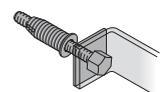
rail at particularly hazardous openings in buildings. If in any doubt, please contact the architect or engineer in charge. For detailed information on fixing, please turn to page 423.



Back to back fixing

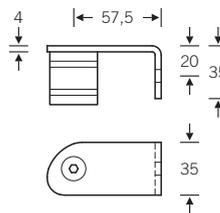


Bolt through-fixing



Secret single side fixing with self-tapping insert

Brackets ht oval modular systems

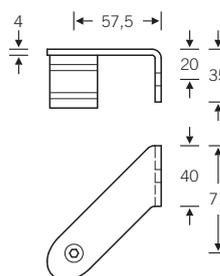


6735 ..

■ 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

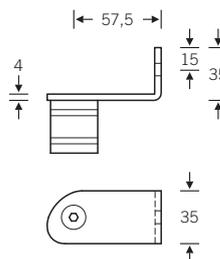


6736 ..

■ 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

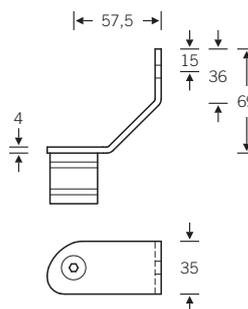


6737 ..

■ 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

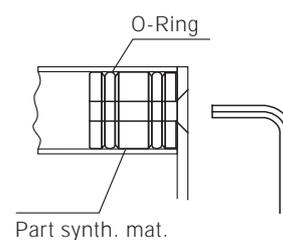
6738 04 r.h.
6738 05 l.h.

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 S=52 mm (cf. page 348)

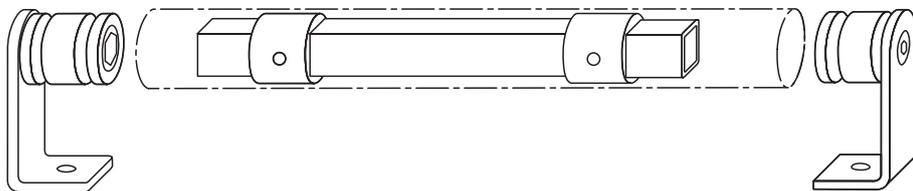


Once the tube has been cut to size (dimensions A + differential measurement), matching brackets are slotted into the tube ends and fastened with screws from the top.

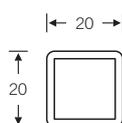
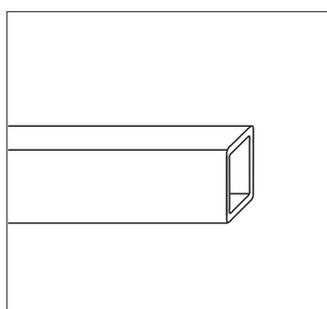
7a

Modular systems ht oval

Accessories



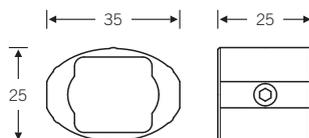
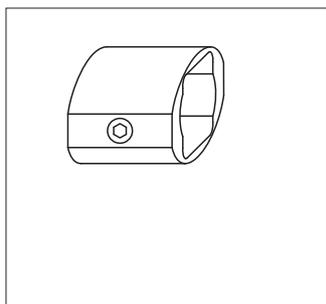
FSB recommends reinforcing door pulls from the HT Oval kit that are subject to heavy-duty use or have an "A" dimension of between 1,500-2,100 mm using the accessories shown on this page.



6801 20

Steel tube hot galvanised

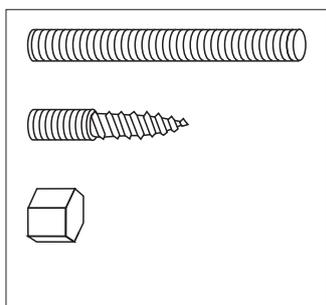
20 x 20 x 2 mm
Stock length 3000 mm



6739

Thermoplast

Spacing sleeve with fixing screw



0313 0880 M8 x 80 mm
Steel stud

0316 0840 M8
Steel stud - for timber fixing

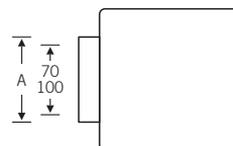
0320 0800 M8
Dome nut of stainless steel

For detailed information on fixing, please turn to page 414ff.

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.

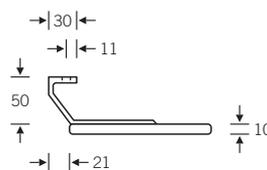
Push and pull pad handles



6181 62

■ Aluminium

Pad 150 x 150 mm
Dimension A 90 mm
C:C screw holes 70 mm



6181 70

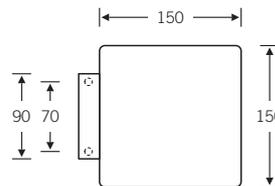
■ Aluminium

Pad 180 x 180 mm
Dimension A 120 mm
C:C screw holes 100 mm

6181 74

■ Aluminium

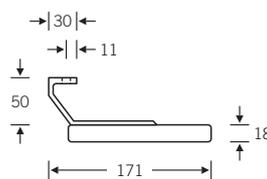
Pad 200 x 200 mm
Dimension A 120 mm
C:C screw holes 100 mm



6184 62

■ Aluminium

Plastic-Pad, black

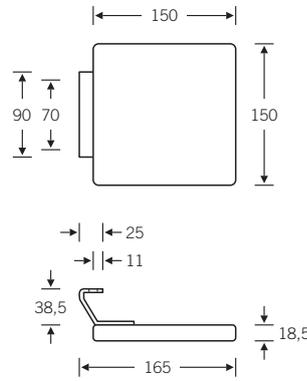


Fixing accessories,
cf. page 552.

Screw hole Ø 8.5 mm
Engravings, cf. page 253.

7a

Push and pull pad handle



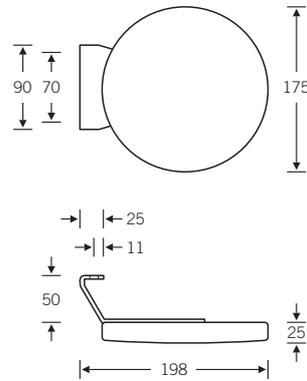
6254 62

■ Stainless steel

Fixing accessories,
cf. page 552.

Screw hole \varnothing 8.5 mm
Engravings, cf. page 253.

Push and pull
pad handle



6268

■ Stainless steel

Fixing accessories,
cf. page 552.

Screw hole \varnothing 8.5 mm
Engravings, cf. page 253.

Lever handles turnably fixed with spring mechanism



7000 0001

- Aluminium
- Stainless steel

10 mm □-hole

Model FSB 1070

7000 0002

- Aluminium
- Stainless steel

10 mm □-hole

Model FSB 1146



7000 0003

- Aluminium
- Stainless steel

10 mm □-hole

Model FSB 1076



7000 0004

- Aluminium
- Stainless steel
- Bronze

10 mm □-hole

Model FSB 1023

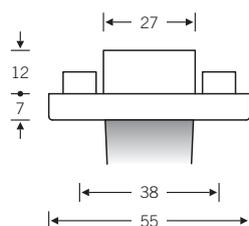


7000 0232

- Aluminium
- Stainless steel

10 mm □-hole

Model FSB 1107



Single fixed lever handles for entrance doors incl. solid subroses.
FSB spindle 0115 or 0116 necessary, see page 546.

Lever handles turnably fixed with spring mechanism
Turnable knob



7000 0233

- Aluminium
- Stainless steel

10 mm □-hole

Model FSB 1108



7000 0347

- Aluminium
- AluGrey
- Stainless steel
- Bronze

10 mm □-hole

Model FSB 1015

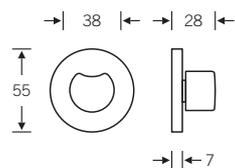


7000 0348

- Aluminium
- AluGrey
- Stainless steel
- Bronze

8 mm □-hole

Model FSB 1163



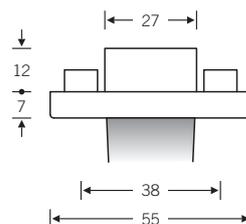
0418 02

- Aluminium
- Stainless steel

8 mm □-hole

For the deployment on multi-point lock, FSB supplies an easy-action turnable knob on a circular or oval rose for concealed face fixing.

Spindle projection: Standard 40 mm, custom projections on request.



Single fixed lever handles for entrance doors incl. solid subroses.
FSB spindle 0115 or 0116 necessary, see page 546.

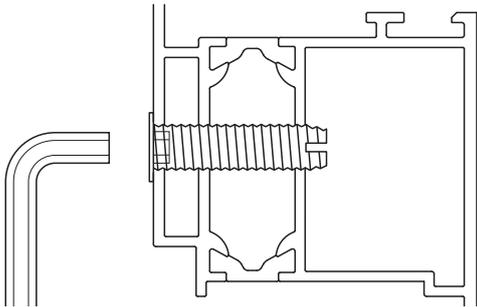
7a

FSB Self-tapping insert



FSB's threaded bushing technique delivers a practically-oriented, enhanced solution for the concealed face fixing of pulls to timber, aluminium and plastic doors that guarantees far better absorption of distension forces by the door stile. Regardless of door thickness or stile type, a single type of threaded insert 34 mm long is used.

The self-tapping thread creates an excellent bond with comparatively little play between door stile and threaded insert, thus ensuring an even and effective frictional connection – assuming the accurate drilling of 12.5 mm-diameter boreholes for timber doors and 13 mm-diameter boreholes for metal and plastic doors.



Step 1

Whether a manual or a power drill is used, threaded inserts require holes 12.5 mm in diameter to be drilled for timber doors and 13 mm in diameter where metal and plastic doors are involved.

Step 2

Then the self-tapping insert is screwed in using a Size 8 Allen key. FSB recommends an Allen key with handle, as this is the best way of guaranteeing the requisite force is applied. Once the threaded bush lies flush against the stile, the enclosed set screw is tightened.



Step 3

The handle is then fitted at these fastening points.

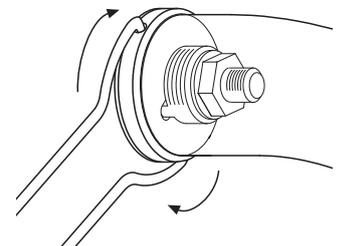
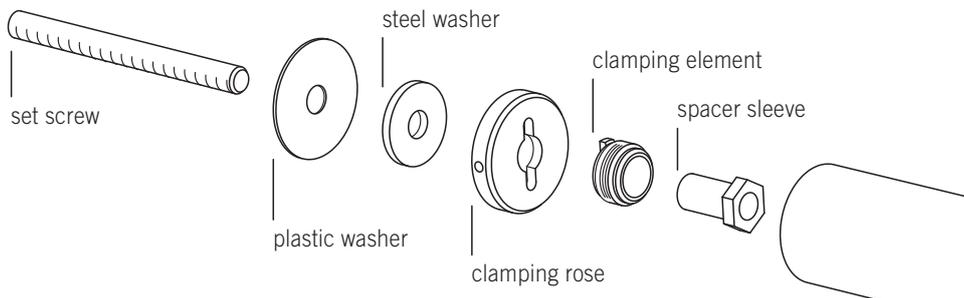
2 galvanised self-tapping inserts in hardened steel

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

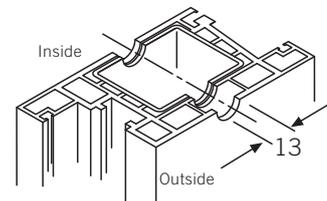
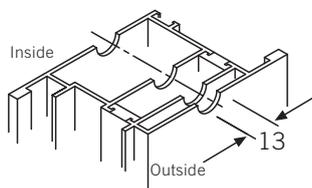
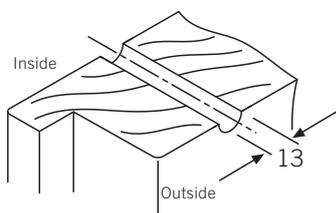
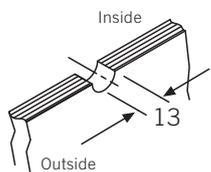
Glas door

Timber door

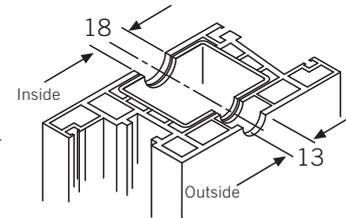
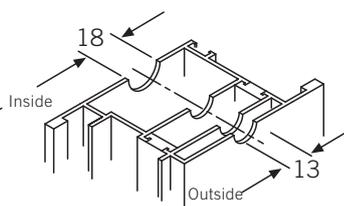
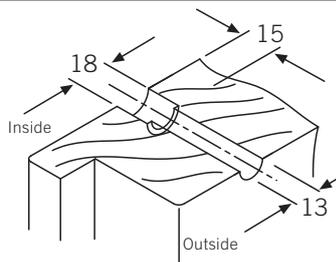
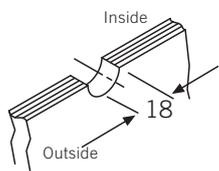
Metal door

Synth. mat. door

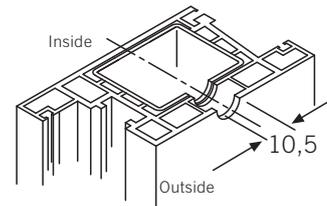
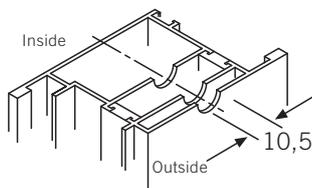
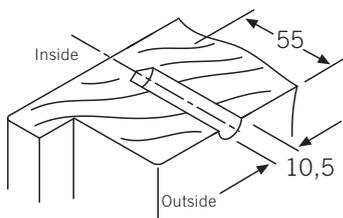
Back to back fixing



Bolt through-fixing



Secret single side fixing with self-tapping insert



Fixing methods

Pull handle series

Round M8

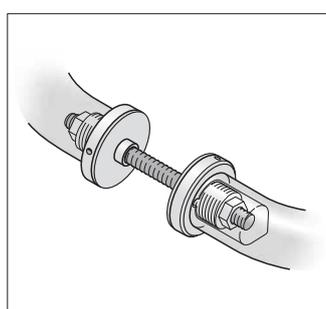
6501, 6504, 6506, 6507,
6510, 6514, 6529, 6531,
6532, 6533, 6534, 6535,
6536, 6537, 6538, 6540,
6541, 6542, 6546, 6580,
6582, 6583, 6602, 6603,

6604, 6605, 6606, 6607,
6609, 6623, 6624, 6625,
6630, 6647, 6650, 6652,
6655, 6659, 6661, 6662,
6663, 6664, 6669, 6670,
6673, 6678, 6679, 6681,
6682, 6683, 6688

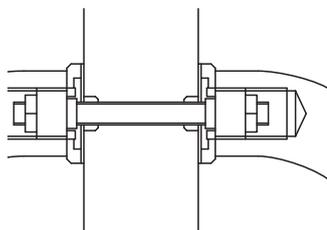
Fixing method

Fixing accessories

Item nos.



Back to back fixing

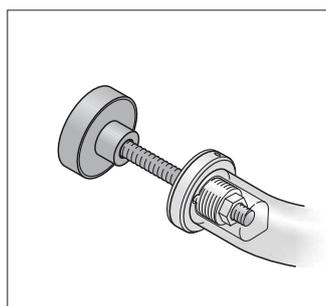


2 each set bolts M8

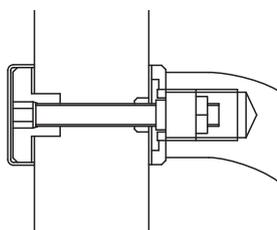
0580 1008 Glass door
8 - 10 mm

0580 3035 35 - 54 mm
0580 3055 55 - 74 mm
0580 3075 75 - 94 mm

Borehole \varnothing 13 mm



Bolt through-fixing



2 each set bolts M8
2 each fixing nuts with caps

Grip diameter 25/30 mm:

0580 2308 Glass door
8 - 10 mm

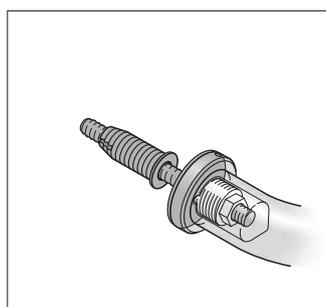
0580 4335 35 - 44 mm
0580 4345 45 - 54 mm
0580 4355 55 - 64 mm
0580 4365 65 - 74 mm
0580 4375 75 - 84 mm

Grip diameter 35/40 mm:

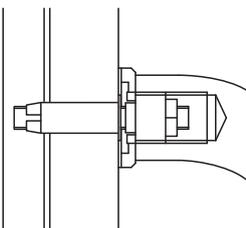
0580 2408 Glass door
8 - 10 mm

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

Borehole \varnothing 13/18 mm,
cf. page 416



Secret single side fixing
with self-tapping insert



2 each set bolts M8
2 each self-tapping inserts,
hardened steel, galvanized

0580 0335 Dim. X 10 - 30 mm
Length of insert 34 mm

\varnothing 12.5 mm (Timber door),
 \varnothing 13 mm (Metal door or
Synth. mat. door)

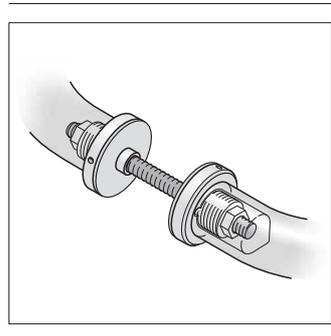
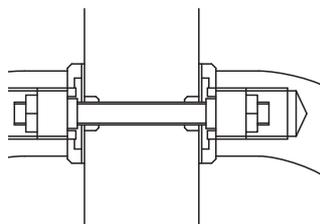
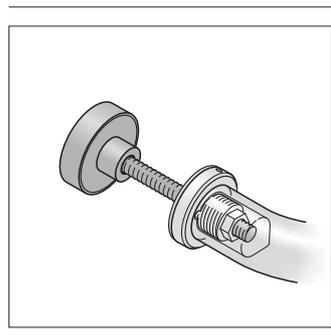
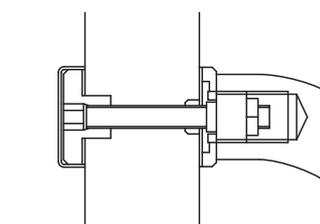
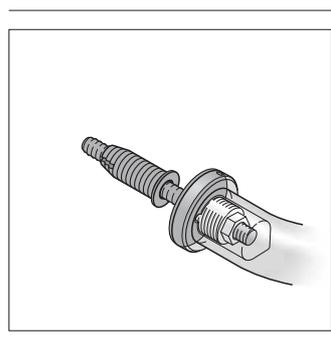
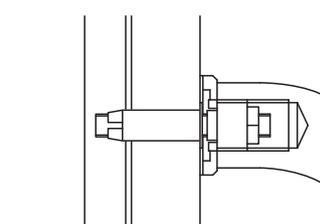
7a

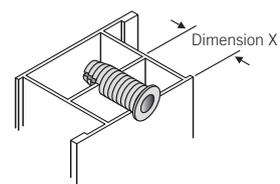
Fixing methods

Pull handle series

Round M6

3684, 3688, 6543 40, 6610,
6611, 6612, 6613, 6619,
6626, 6627, 6642, 6643,
6649, 6660

| | Fixing method | Fixing accessories | Item nos. |
|--|--|--|--|
|  | Back to back fixing  | 2 each set bolts M6 Borehole \varnothing 13 mm | 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 bolts M8 2 each fixing nuts with caps Borehole \varnothing 13/18 mm, cf. page 416 | 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 self-tapping insert  | 2 each set bolts M6 2 each self-tapping inserts, hardened steel, galvanized \varnothing 12.5 mm (Timber door), \varnothing 13 mm (Metal door or Synth. mat. door) | 0580 0435 Dim. X 10 - 30 mm Length of insert 34 mm |

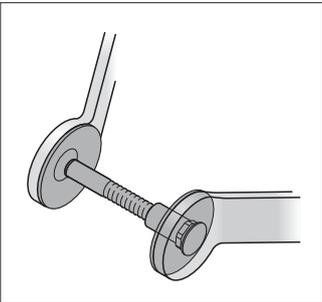
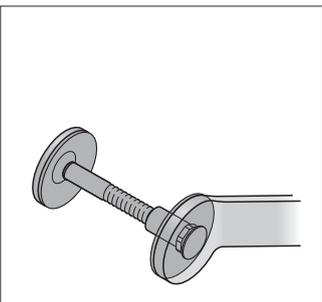
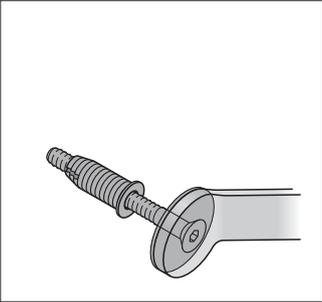


Dim. X = Dim. of chamber

Fixing methods

Pull handle series

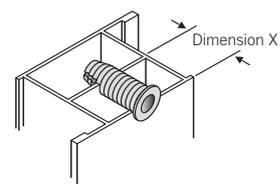
6615
6616
6674
6675

| | Fixing method | Fixing accessories | Item nos. |
|---|--|---|--|
|  | Back to back fixing | 2 each countersunk bolts M8 with sleeve nuts M8 Stainless steel 4 each plastic washers | 0583 1008 Glass door 8 - 10 mm 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 |
|  | Bolt through-fixing | 2 each countersunk bolts M8 with sleeve nuts M8 Stainless steel 2 each washers Stainless steel 4 each plastic washers | 0583 2008 Glass door 8 - 10 mm 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 |
|  | Secret single side fixing with self-tapping insert | 2 each countersunk bolts M8 Stainless steel 2 each self-tapping inserts, hardened steel, galvanized 2 each plastic washers | 0583 0335 Dim. X 10 - 30 mm Length of insert 34 mm |

Borehole Ø 13 mm

Borehole Ø 13 mm

Ø 12.5 mm (Timber door),
Ø 13 mm (Metal door or Synth. mat. door)



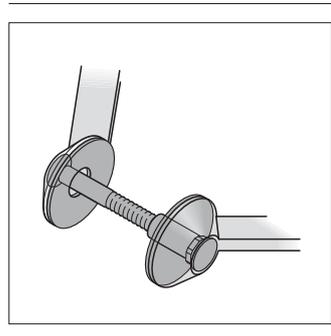
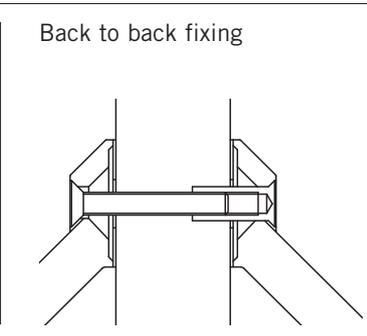
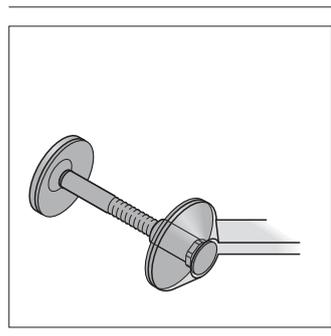
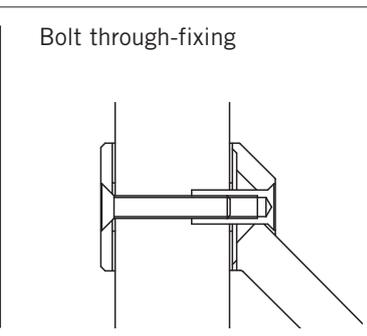
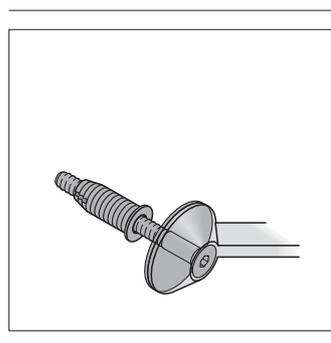
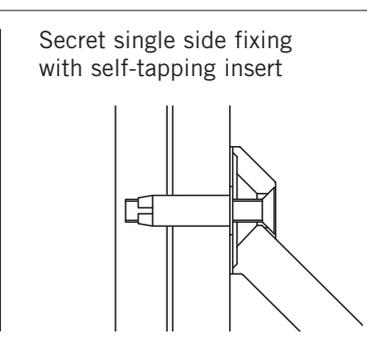
Dim. X = Dim. of chamber

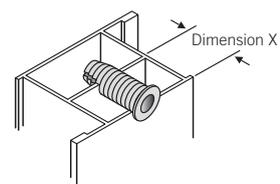
7a

Fixing methods

Pull handle series

6620
6621

| | Fixing method | Fixing accessories | Item nos. |
|--|---|--|---|
|  |  <p>Back to back fixing</p> | <p>2 each countersunk bolts M8 with sleeve nuts M8 Stainless steel 4 each plastic washers</p> <p>Borehole \varnothing 13 mm</p> | <p>0584 1008 Glass door 8 - 10 mm</p> <p>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</p> |
|  |  <p>Bolt through-fixing</p> | <p>2 each countersunk screw M8 with sleeve nuts M8 Stainless steel 2 each washers Stainless steel 4 each plastic washers</p> <p>Borehole \varnothing 13 mm</p> | <p>0584 2008 Glass door 8 - 10 mm</p> <p>0584 4035 35 - 44 mm 0584 4045 45 - 55 mm 0584 4055 55 - 65 mm 0584 4065 65 - 75 mm 0584 4075 75 - 85 mm</p> |
|  |  <p>Secret single side fixing with self-tapping insert</p> | <p>2 each countersunk screw M8 Stainless steel 2 each self-tapping inserts, hardened steel, galvanized 2 each plastic washers</p> <p>\varnothing 12.5 mm (Timber door), \varnothing 13 mm (Metal door or Synth. mat. door)</p> | <p>0584 0335 Dim. X 10 - 30 mm Length of insert 34 mm</p> |

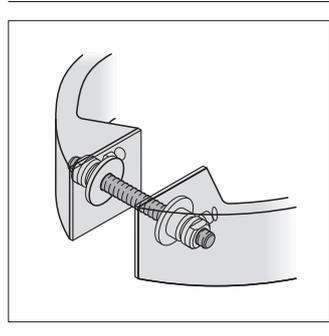
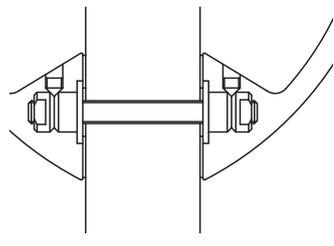
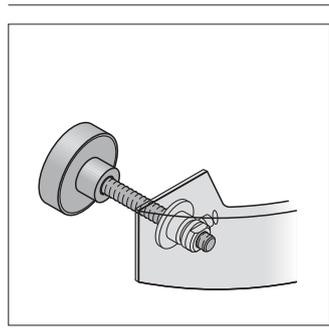
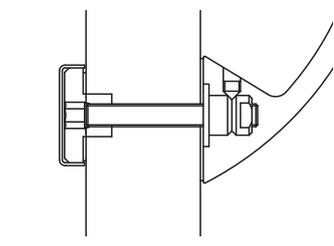
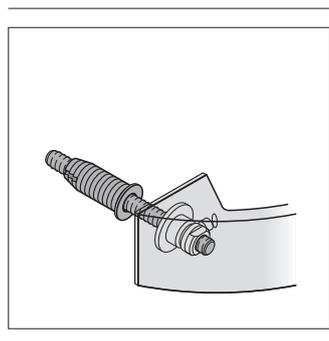
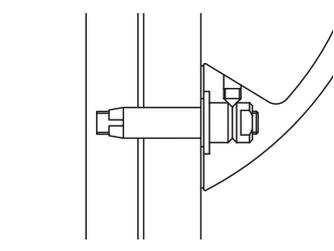


Dim. X = Dim. of chamber

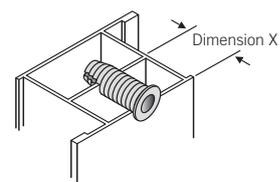
Fixing methods

Pull handle series

6526
6599 0036

| | Fixing method | Fixing accessories | Item nos. |
|---|---|---|---|
|  | <p>Back to back fixing</p>  | <p>2 each set bolts M8</p> <p>Borehole \varnothing 13 mm</p> | <p>0587 1008 Glass door 8 - 10 mm</p> <p>0587 3035 35 - 54 mm 0587 3055 55 - 74 mm 0587 3075 75 - 94 mm</p> |
|  | <p>Bolt through-fixing</p>  | <p>2 each set screws M8 2 each fixing nuts with caps</p> <p>Borehole \varnothing 13/18 mm, cf. page 416</p> | <p>0587 2308 Glass door 8 - 10 mm</p> <p>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</p> |
|  | <p>Secret single side fixing with self-tapping insert</p>  | <p>2 each set bolts M8 2 each self-tapping inserts, hardened steel, galvanized</p> <p>\varnothing 12.5 mm (Timber door), \varnothing 13 mm (Metal door or Synth. mat. door)</p> | <p>0587 0335 Dim. X 10 - 30 mm Length of insert 34 mm</p> |

7a

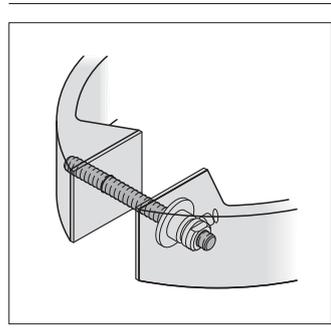
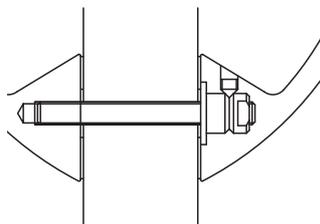
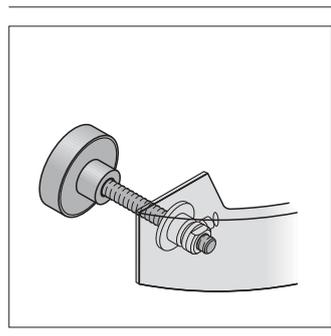
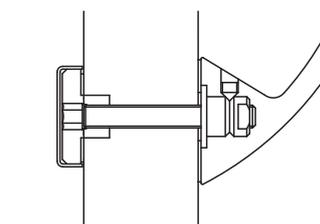
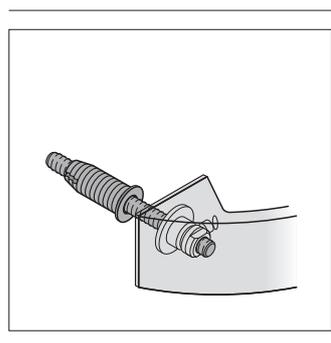
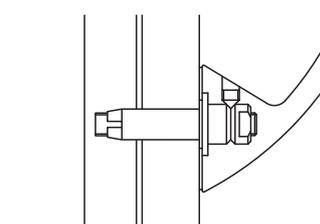


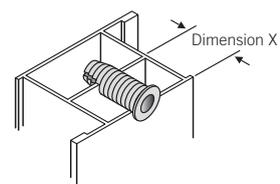
Dim. X = Dim. of chamber

Fixing methods

Pull handle series

6642
6643

| | Fixing method | Fixing accessories | Item nos. |
|--|---|---|---|
|  | <p>Back to back fixing</p>  | <p>2 each set bolts M6</p> <p>Borehole \varnothing 13 mm</p> | <p>0580 1208 Glass door 8 - 10 mm</p> <p>0580 3235 35 - 54 mm 0580 3255 55 - 74 mm 0580 3275 75 - 94 mm</p> |
|  | <p>Bolt through-fixing</p>  | <p>2 each set bolts M6 2 each fixing nuts with caps</p> <p>Borehole \varnothing 13/18 mm, cf. page 416</p> | <p>0580 2208 Glass door 8 - 10 mm</p> <p>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</p> |
|  | <p>Secret single side fixing with self-tapping insert</p>  | <p>2 each set bolts M6 2 each self-tapping inserts, hardened steel, galvanized</p> <p>\varnothing 12.5 mm (Timber door), \varnothing 13 mm (Metal door or Synth. mat. door)</p> | <p>0580 0435 Dim. X 10 - 30 mm Length of insert 34 mm</p> |

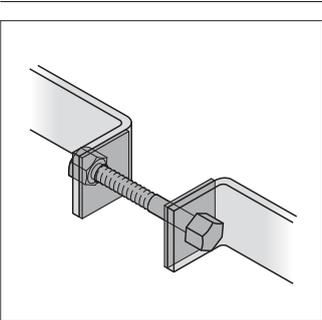
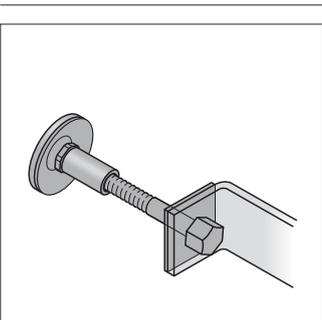
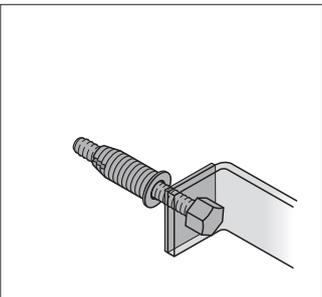


Dim. X = Dim. of chamber

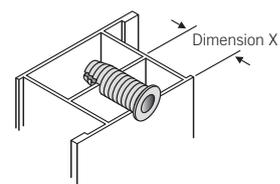
Fixing methods

Pull handle series

ht oval
ht round
6508
6522
6523
6524

| | Fixing method | Fixing accessories | Item nos. |
|---|---|--|--|
|  | Back to back fixing | 2 each set bolts 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 bolts 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 self-tapping insert | 2 each set bolts M8 2 each sleeve nuts M8 Stainless steel 2 each self-tapping inserts, hardened steel, galvanized 2 each plastic washers Ø 12.5 mm (Timber door), Ø 13 mm (Metal door or Synth. mat. door) | 0585 0335 Dim. X 10 – 30 mm Length of insert 34 mm |

7a



Dim. X = Dim. of chamber

Fixing methods

Pull handle series

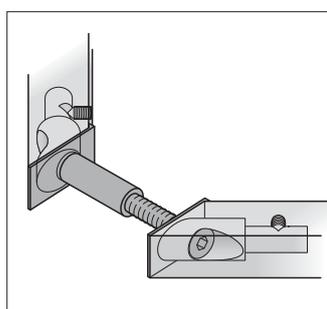
hs round
modular system
6710, 6711

hs round
modular system
6712, 6713

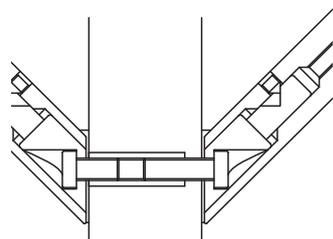
Fixing method

Fixing accessories

Item nos.



Back to back fixing



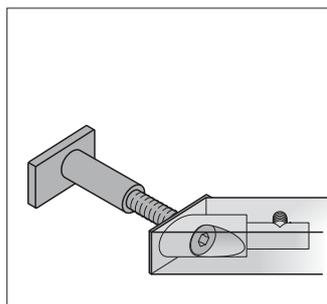
1 M8 cheese-head screw
1 nut
1 plastic bushing

0588 1008 Glass door
8 - 10 mm

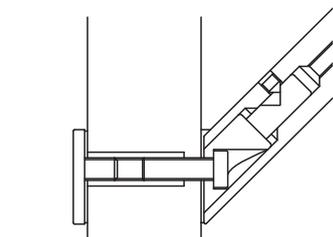
2 M8 cheese-head screws
1 threaded bushing

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

Borehole \varnothing 13 mm



Bolt through-fixing



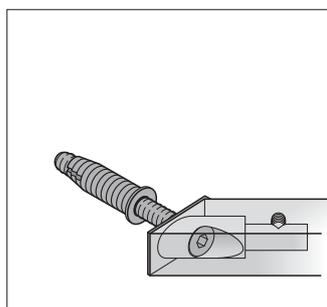
1 nut
1 fixing plate
1 plastic bushing

0588 2008 Glass door
8 - 10 mm

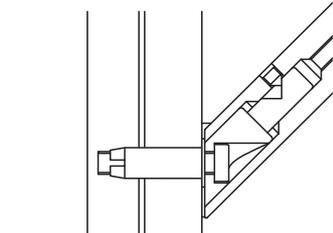
1 M8 cheese-head screw
1 threaded bushing
1 fixing plate

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

Borehole \varnothing 13 mm



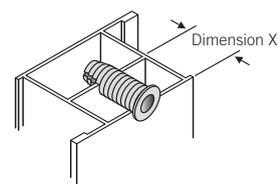
Secret single side fixing
with self-tapping insert



1 M8 cheese-head screw
1 self-tapping inserts,
hardened steel, galvanized

0588 0335 Dim. X 10 - 30 mm
Length of insert 34 mm

\varnothing 12.5 mm (Timber door),
 \varnothing 13 mm (Metal door or
Synth. mat. door)



Dim. X = Dim. of chamber

