FSB Manual Door and window fittings Access management Barrier-free living

www.fsb.de/en

It's in your hand.

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Palace of International Forums, Tashkent | Uzbekistan

Ippolito Fleitz Group GmbH, Stuttgart, Zurich, Seoul www.ifgroup.org

FSB 1003 range of handles, see page 116 ff.

Flush version, see page 270 ff.

Stainless steel, fine matt, brushed

www.fsb.de/palace_tashkent

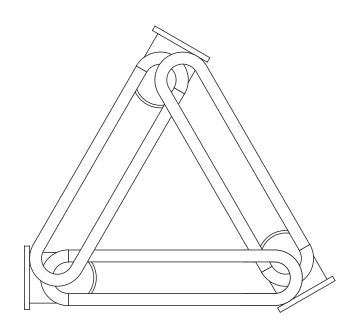
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Taking Euclid's angle

Your craftsman's tools for architecture



FSB has its roots in the interaction between design, ergonomics and architecture, and always measures the results of this against the requirements of constructing a building.

The prerequisite for this is, and always was, questioning what is current and familiar, dealing with social change and engaging with new technologies.

The isis systems: electronic access management

The various isis systems stand for - measured against FSB's history - the comparatively new area of system solutions for the electronic organisation of access. In a consistency which is typical for FSB, this area includes both simply structured solutions for domestic entrance doors as well as a demanding system for multi-layered building structures and interrelated organisational requirements. Our solution for entrance doors - isis F100/200/300 - is based on an innovative system with a biometric reader integrated into the door pull. As a multi-dimensional system, the isis system combines classic FSB fittings skills with all of the convenience, flexibility and organisational aspects of an electronic system and is predestined for heterogeneous building complexes and multi-layered user structures. More about the isis systems from page 43.

ErgoSystem[®] diagonal-oval: Live conveniently & barrier-free

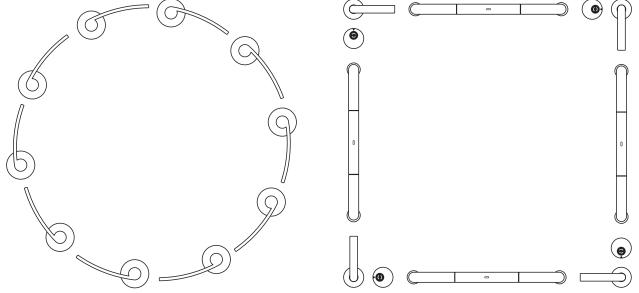
The ErgoSystem[®] is FSB's barrier-free handle and equipment concept, which combines function, design and convenience and takes account of the needs of people of all ages in the bathroom and sanitary area. We also make it in Brakel, with the handles made of stainless steel, the functional parts made of powder-coated aluminium. This area of competence is also based on the experiences which we collected in the 1980s when reflecting on how humans grip things together with Otl Aicher. The results of scientific cooperation with the Fraunhofer Institute in the 1990s added to this. At the start of this millenium FSB transferred this knowledge to the requirements resulting from changes in the age structure of our population. The declared objective here was not just to develop supports suitable for larger buildings but rather to take particular account of older people's gripping requirements: What does a reduction in muscle power or age-related muscle loss mean for the design of supports? How are supports to be assessed which are relevant for the appearance of a room but which are subject to different dynamic and static requirements than door pulls? The design principle of the ErgoSystem[®] supports is based on the laws for the ergonomics of gripping and led us to an oval cross section.

For the ErgoSystem[®], functionality, aesthetics and ergonomics also make up a convincing whole. Criteria which take account of the variety of requirements in the construction of larger building and homes. (A lot) more about our solutions for barrierfree living from page 617.

Classic fittings for doors and windows and more

The authors and architects range of handles on the one hand and the plethora of door handle designs from FSB on the other hand from the classical modern period have become legendary in the meantime. Their validity in the world of international architecture is not just based on the formal and material consistency of the range of handles but also on the variety of relevant technical and regulatory parameters: so FSB can offer almost all fittings for large buildings as well as for fire doors. Both categories are now equipped with the new, second generation of AGL[®] or AGL[®] FS technology.

It gets tangibly classic from page 99.



New: co-ordinated lock and fitting solutions for emergency exit locks from SSF + FSB

In the area of systems of fittings for emergency exits, where components which have been tested and certified together are required, FSB offers the most extensive range in the sector. More about this on pages 16f. and 449f. For frame doors the material and formal consistency applies as well as approval to the pertinent regulatory standards in the same way. This is complemented by a very sophisticated fixing technique which knows no equal in the hardware sector. The range of window handles is similarly well thought through, and it is not just oriented towards window functions as it also provides a wealth of locking and security applications.

Matched up lock and fitting technology

With a view on locks and fittings which had already formed a functional unit in preindustrial times, at the end of 2009, FSB took over the Sächsische Schlossfabrik (SSF) in Groitzsch near Leipzig. Our objective is to offer locks and fittings with matching technology, combined with functionality which convinces in detail. Based on our efforts towards sustainability, we also wanted to create a particular awareness of quality in the area of locks. We have made a start with locks matching the AGL[®] system family in class 5, with frame door locks with an innovative through fixing option for frame door fittings, as well as with locks with special functions which match isis fittings.

Find out actual details about this from page 20.

Sustainability "Made in Germany"

FSB sees the construction of large buildings as an architectural task with a higher level of relevance for society. This results in a product philosophy which aims for a first class and thus sustainable quality. Sustainability and the product features associated with that are not available for free - neither for the building, nor for the supplied components. This is not just about the economically driven reduction of rework or about reducing the level of complaints. This is about creating functional buildings which can be used long term and which meet the individual and thus the social needs of their users. FSB products with EPD certification create a maximum level of reliability for your plans, for the future too, and encourage further innovative approaches for sustainable building - made in Germany, but for a global idea.

FSB. It's in your hands.



"How green is our business?"

Everything gets a green light



Institut Bauen und Umwelt e.V.







FSB and our subsidiary SSF Sächsische Schlossfabrik provide an environmental product declaration (EPD) to ISO 14 025 resp. EN 15 804, making a valid contribution to sustainable architecture. Our EPDs cover more than 25,000 items, giving us a leading role in our sector around the world.

We actively support a globally established concept which understands sustainability as an equal balance between ecological, economic and social factors. There is now a global consensus that, in view of the worldwide social and climatic challenges, this understanding of sustainability is of fundamental importance for coming generations' quality of life.

We have always understood our products as "Architecture en miniature". This does not just mean that our products are used in architecture, rather that we assess technology and design against the the length of time that buildings or architecture are used in the widest sense. For us, constructing buildings is first and foremost an architectural task affecting the entire community and we see our products as the interface between people and architecture, to which we have made a satisfactory contribution for over 130 years. The prerequisite for this is a product philosophy aiming for first class quality and thus for sustainability. "Sustainability" something which everyone is talking about these days - was something on which FSB had already taken action, even when ecology was still viewed as something at the fringe of society, which only concerned those who wore - at least that's what was said at the time - hand knitted clothes made from natural wool. FSB had already started reflecting on the subject in the 1990s, when "ecology" was still greeted with a weary smile in most companies, with its project entertainingly

called "clean underwear" about ecological effects at our production site in Brakel and what to do with the waste products resulting from production. At the end of 1995, FSB was the first company in North Rhine Westphalia and only the second company in Germany to be audited to the strict rules of the EU's ecological audit. This was preceded in 1991 by the first company agreement in Germany on the protection of the environment. Over a period of what is now almost twenty years, we still ask ourselves again: "How green is our business?"

Here is FSB's "green" history:

- 1991 First company agreement in Germany on the protection of the environment
- 1992 Setup of a company organisation which reflects environmental concerns
- 1993 First environmental declaration
- 1994 German environmental prize for the district of East Westphalia Lippe
- 1995 ISO 9001 environmental manual
- 1996 EU eco-audit certification
- since
- 1996 every 3 years, certification to ISO 14 001 and EMAS
- 2008 Joined DGNB 2009, preparation for ISO 14 025
- 2010 FSB and SSF are the first architectural hardware companies in the world with an environmental product declaration to ISO 14 025
- 2013 Certification of the company-wide energy management system to ISO 50 001
- 2014 Environmental product declaration to EN 15 804



Environmental product declarations to ISO 14 025 resp. EN 15 804 are necessary for the certification of sustainable buildings. The consequence of this approach, which was formulated in 2007 and which amongst other things forms the basis of the EN standard 15 804, is now seen as pioneering around the world. This concept consistently pursues the evaluation of the entire value creation chain over all phases in the the life of a building. The aim is to optimise all factors affecting the life cycle, from the extraction of raw materials, through building and on to demolition. It is not just the materials used to construct a building which are considered but the components used as well. The requirements for this are product-specific ecological balance sheets, which are verifications of product and company data and are produced independently & neutrally. The essential characteristics of ecological balance sheets are not just very specific environmental aspects, but much more the assessment of the entire chain of value creation of a product. In this context, a check is made how the environment is protected while the product is being made and then used, as well as considering how

it can be recycled. FSB's and SSF's environmental product declarations as listed below are available for inspection.

After all that, the question remains: "How green is your business?" It's in your hands.

FSB declaration numbers:

- door handles, window handles, isis[®] system made of aluminium: EPD-FSB-20140131-IBC1-DE
- door handles, window handles, isis[®] system made of stainless steel: EPD-FSB-20140132-IBC1-DE
- door handles, window handles, isis[®] system in bronze or brass: EPD-FSB-20140133-IBC1-DE
- barrier-free ErgoSystem[®] (stainless steel): EPD-FSB-20140134-IBC1-DE

SSF declaration number:

 locks and strike plates: EPD-FSB-20140135-IBC1-DE Corresponding environmental product information according to LEED is also available under www.fsb.de/leed

Barrier-free living

The FSB range in the context of DIN 18 040

The so-called senior citizens would like – and it is hardly any wonder – to grow old within their own "familiar" four walls. And even though the above-mentioned standard takes account of contemporary ergonomic knowledge and sensory restrictions and comprehensively documents this in the bathroom and sanitary context, then the quality of a barrierfree design stands out in particular if it is possible to react accordingly not only in acute cases, but rather a room situation can be flexibly adapted during the course of slowly changing needs and continue to be adequately used.

In view of the extensive range of handle and fitting solutions from FSB, which have been developed for a wide variety of room and door situations particularly as part of renovations, we would therefore like to take a look at this complex issue and understand DIN 18 040 not only focused on the sanitary sector or the ErgoSystem[®] from FSB. The fact that standard regulations can only be a starting point and that in the end it essentially comes down to common sense and the planning expertise of architects and technical planners, is taken for granted.

Floor plan optimisation – effective use of space by means of sliding doors

For historical reasons, existing bathrooms are usually tight in terms of space or offer unfavourable conditions with regard to their geometrical design. The advantage of sliding doors is not only the neutral opening direction – one is saved considerations over space with regard to the use of a wheelchair or zimmer frame – but also that no space has to be sacrificed in the bathroom by the area covered by the door, and in addition the risk of a door being blocked by a person lying on the floor is considerably reduced. Added to this is the fact that space efficiency is unlimited by the overlapping of areas of movement permitted according to DIN 18 040-2 – 1.2×1.2 m or 1.5×1.5 m respectively in front of the individual sanitary facilities, which also includes a washing machine in the bathroom. We supply bathroom roses with emergency opening function and generously sized WC bolt, which is easy to handle even taking geriatric limitations into account.

Floor plan optimisation – Use of corner situations

Corner situations can be flexibly developed using the different handrail configurations and angled rails from the ErgoSystem® and be specifically coordinated to the space situation and individual movement sequences. The possibilities here are almost unlimited in principle. Not only individually matched lengths can be of relevance here, but also individual support distances, which are based on the joint arrangement or existing fastening points. Accessories and complementary components, which can be combined with handrail configurations, angled rails and drop-down support rails, further increase the flexibility and space efficiency. The same applies to drop-down support rails that can be installed laterally and fastened to concealed installations developed according to structural load principles.

Fall prevention

These individual coordinated handle and handrail configurations are also suitable for fall prevention purposes in a special way – this may concern the mounting position as well as the length structure – because all areas of the room can be optimally made accessible to the individual habits of the residents.

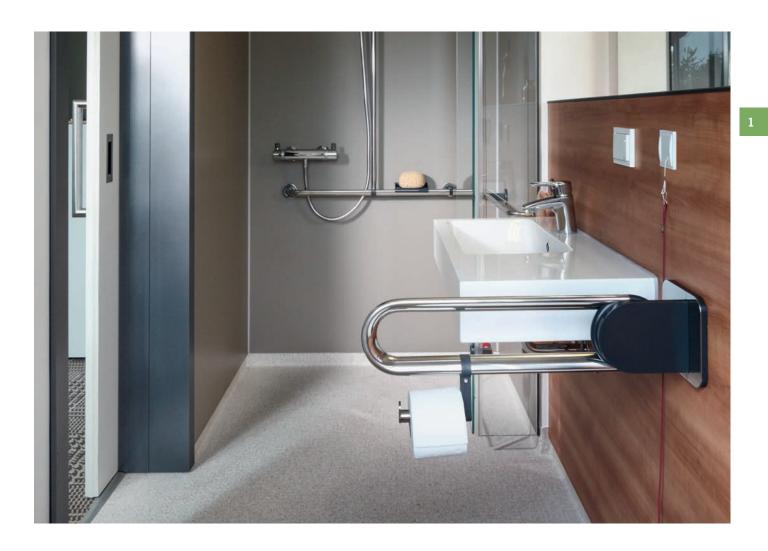
Gripping | Supporting | Holding

Barrier-free design is distinguished by its ability to adapt to changing needs. This applies in particular to support rails and handles in the WC and shower area. For this reason, DIN 18 040 calls for the following in barrier-free homes: "The walls of sanitary areas shall be developed so that they can be retrofitted if necessary with vertical and horizontal support rails and/or handles (...)".

All well and good, as far as new builds are concerned. Yet what happens in case of conversion work to existing buildings if the load bearing capacity of the brickwork is unclear? FSB provides solutions for this scenario, which take unclear structural conditions into account: the suspended seat 82 8250 00001 is available with an integrated floor support. This can of course be set exactly to the measurement between handrail and top edge of the tile or shower tray. The floor support 82 8228 can be fitted subsequently to drop-down support rails from the ErgoSystem. Discreet rubber feet protect the surfaces.

Barrier-free living in the shower

As regards seated use, the over-the-corner arrangement in the shower area has proved to be favourable. The advantage of fixed folding shower seats is that they can be installed independently from the holding system in line with individual needs, whilst suspended folding seats can be positioned more flexibly – both types ultimately produce a wider space to move around. Over and above this, the FSB range offers folding seats in the A-Flex series, which can be installed or pushed in place as required. For shower head holders, an effortless one-handed operation is essential, but it must be ensured that one hand always remains free with which to hold tight. In the case of restricted fine motor



skills, mechanisms without rotary movements increase convenience further. And last but not least: You can say what you like about shower curtains, but for effortless "operation" and simple integration in the geometry of the shower they are ideal.

Barrier-free living around the bath tub

Even if the bath tub represents a barrier for people with restricted motor skills, its value for their well-being should not be underestimated. Here too, the risk of falling is reduced when a vertical support rail helps a person getting into the bath and a horizontal rail provides safety when sitting down and standing up.

Enhancing brightness contrast

In this respect the ErgoSystem[®] reveals its full strengths; irrespective of the surrounding colour scheme, the fine matt brushed surface of the oval tube reflects all sources of light, meaning that these elements automatically stand out against the background and can easily be seen even with limited vision. In addition, the dark grey powder-coated installation elements are deliberately restrained compared to the handles. The optical demarcation is able to be further supported by a corresponding colour concept.

Dementia

Dementia is not a dedicated topic in DIN 18 040, yet isis[®] access solutions from FSB have successfully taken hold in this context in the meantime. What is advantageous with the isis® hardware is not only the former practice of learning to open the door using the handle after holding up the identification medium to it. An ergonomically excellent solution, which cannot be compared with the rotary opening process using so-called electronic thumbturn cylinders, which cannot be operated due to fading strength. Added to this is the loss of feeling for day and nighttime, which sees residents with dementia repeatedly getting up in the night and looking for people to talk to. With a classic access concept - everyone carries an identification medium that is only authorised for their own room - these kinds of trials and tribulations can be avoided.

A security benefit is gained at the same time, as each door is locked when pulled closed and does not remain unlocked unintentionally.



Barrier-free ErgoSystem[®]. We have transferred our know-how on the subject of gripping and handles to the design of barrier-free products for the sanitary area. The ErgoSystem[®] offers optimum help to help yourself, without having to do without first class design.

from page 545

If you have worked for such a long time as we have with tools to extend your hand, you must also produce products which go beyond a support: For example, our barrier-free "ErgoSystem® diagonaloval" for the sanitary area, which clearly demonstrates that functional and ergonomic products can also be aesthetic. Its multiple award winning design is as pleasant in your hand when you grip it as it is for your eye when you look at it.

The basis of the ErgoSystem is a range of supports in silk finish stainless steel in different variants and lengths. Its basic principle follows the laws of ergonomics when gripping things. Its unique diagonally aligned oval cross section enables an ideal grip quality with less force expended. Functionality, aesthetics and ergonomics in the ErgoSystem[®] result in a convincing whole. Its use becomes universal in combination with numerous accessories such as paper roll holders, pushbuttons, armrest pads and shower seats. The ErgoSystem[®] is the ideal solution for all requirements in care homes and hospitals – and also for everyone who would just like more convenience in the bathroom.

Under the name METRIC[®] we also offer a range of discretely designed bathroom accessories, distinguished by geometric shapes and high quality material. Their formal design follows the classical principle of proportions. METRIC[®] takes its place harmoniously in the most varied design concepts – whether in combination with ErgoSystem products or even as an independent line of accessories.



isis[®] **systems** for electronic access management stand for gripping ergonomics and convenience, enhanced by the dimension of a digital organisation of buildings. They combine classic FSB expertise with the benefits of electronically organised security.

from page 42

With isis®, FSB offers intuitively operated solutions both for entrance doors on homes (isis® F, see page 87 f.) as well as a scalable concept for multi-layered building structures and integrated organisational requirements. isis® F (= Fingerscan) is based on a biometric identification device integrated in the door pull. isis® M100 and isis® M300 (see page 53 f.) combine classic FSB expertise with all the convenience and corganisational aspects of a flexible access management system: with the isis[®] family of systems, FSB always provides the right solution for your individual needs - also taking budget factors into consideration.

isis[®] meets all of the functional, aesthetic and ergonomic requirements placed by industry, commerce, administration, the care sector (hospitals, old people's homes) and also the hotel sector. The system includes designs for solid, frame and glass doors as well as for external entrances (security class S2). For all types of door, installation is uncomplicated and there is no problem retrofitting to existing doors.

It is obligatory that the system is approved for fire doors and emergency exits, that the range of handles for the various designs of FSB door handles is consistent as is the range of metals used by FSB of aluminium, stainless steel, bronze and brass. Classical mechanical fittings and those with an electronic access function combine to make a formal aesthetic and material unit which is unique in the field of fittings for large buildings. The supply of power which does not depend on the building's electricity supply maximises flexibility way beyond the planning phase.

Order forms and brochures are available under www.fsb.de/isis





Flush fittings. The architectural trend of reducing visible structures is continued in doors and windows, whether in the shape of our flush fittings and roses, window handles with low-profile roses or recessed pulls for sliding doors.

from page 270 CNC milling data under fsb.de/cnc Precision installation is at the centre of the world of flush fittings, where the roses are literally sunk into the surface of the door. Flush fittings and roses are nicely complemented by flush security roses, window handles with low-profile roses and recessed door pulls.

Their very distinctive character shines a very positive light on a craftsman's design skills, especially in projects where great weight is placed on interior design. A craftsman's skills in dealing with the flush fittings can represent a unique selling point to improve their competitive situation. The contemporary appearance of our flush fittings is not just suited for brand new buildings.

They also make a great impression providing a modern accent during renovation projects. Almost all models of FSB door handles are available in flush-mounting versions and, independently from that, are available in all materials and finishes in FSB's range. FSB's portfolio of flushmounting fitting solutions includes:

- heavy-duty flush-mounted fittings for doors from a thickness of 45 mm, see page 270
- flush-mounting roses (round, Ø 55 mm) for standard doors with a thickness of between 38 and 44 mm, see page 271
- **new:** flush-mounting roses (rectangular, 55×55 mm) for standard doors with a thickness of between 38 and 44 mm, see page 272
- new: heavy-duty window handles with a completely flush recessed rose, see page 323
- flush-mounting security roses to DIN 18 257 ES 1, see page 599



Flush recess pulls. Regardless of whether new construction, renovation, conversion or the construction of residential or commercial buildings is involved: with sliding doors, the level of flexibility when planning and the space efficiency of the rooms fitted with sliding doors are increased.

from page 365 CNC milling data under fsb.de/cnc This applies in particular if areas cannot easily be made bigger for structural or budget reasons or because of the floor plan. In the context of DIN EN 18 040, it should therefore be mentioned that you can make considerations about space easier with regard to the use of a wheelchair or zimmer frame as well as reduce the risk of a door being blocked by person lying on the floor in case of emergency.

New: Recess pulls with counter-fitting for double sliding doors

With a line of stand-alone recess pulls for solid doors in various forms with open or spring-loaded closed handle through to versions with matching lock including bolt for bathroom and WC doors, FSB already took this requirement from the market into account some time ago (see page 366 f.). Our 42 4255 series of recess pulls that have been refined in detail – the two-part configurations for double sliding doors are new – can be found from page 370.

Recessed pulls for fully glazed sliding doors

Our comprehensive product line has also been extended by adding solutions for fully glazed sliding doors corresponding to the shape of solid door recess pulls. These recess pulls, which are very easily fitted into glass cut-outs of 70 mm diameter by means of a clever screw-in or clamping solution, completely make do without adhesive or similar aids and are easily for craftsmen and door specialists to handle. The pulls are available in versions for glass thicknesses of 8, 10 and 12 mm. You will find these pulls on page 478.

DIN EN 1125: Consistent FSB quality

Lock and fitting from one source



With the publication of this manual, FSB presents a new, coordinated modular system, "Lock + Fitting" for single and double-leaf escape and panic doors (solid). Some time ago, we introduced an extensive range of mortice locks. thus starting to unite what once used to belong together: in the pre-industrial age, locks and fittings formed a single unit.

During the course of industrialisation, both components became independent parts and what now divided them was regulated by industrial standards. Together with our subsidiary, Sächsische Schlossfabrik SSF, we have brought the strategy of the functional and technical unit of lock and fitting back to life and are presenting the market with a newly developed system for single and double-leaf solid panic doors with and without top locking mechanism on the active leaf.

The technically and functionally coordinated concept of lock and fitting consists of a pull bar according to the future Type C of DIN EN 1125 (model no. 7982, lifting upwards, see page 449f.) and modularly structured locking and bolting components (SSF lock series 61/62, anti-panic functions B, D and E).

Key-operated quick-release lock:

If the key is turned in the lock direction, this releases a locking lever in the lock, which promptly leads to a deadbolt being automatically thrown 20 mm. The benefits, besides the convenience aspect of not having to complete two full locking turns by hand, are clear to see: there is no risk from locking by hand of bringing the locking cam of the cylinder into a position that blocks other lock functions - the so-called free-running function.

Four-point checking query

Furthermore, the anti-panic locks in the 61/62 series enable the bolt, the top locking mechanism and the latch as well as the handle's connection to be queried using electronic switch contacts.

Anti-blockade function:

Hazardous manipulations of anti-panic doors, such as blocking the door handle on the outside - which is common practice in schools - are effectively prevented by the so-called anti-blockade function. The panic function on the inside is therefore guaranteed at all times.

Flexible screw-on faceplates

For the processor, the modular lock series offers the benefit that SSF can soon react to changing dimensions thanks to a screwon faceplate.

fine details. The above-mentioned freerunning function as a basic feature is accompanied by a split follower (anti-panic function B, D), which is mechanically coupled, a plastic-coated latch with convenient whisper-quiet feature, plus an independent spring support on both sides of the door handle by means of the lock follower, which guarantees a permanent 0° position of the door handle.

In addition, no attachment is needed for the top locking mechanism, which means it needs no extra milling groove in the mortices. What is more, the faceplate length on locks with or without top locking mechanism is identical.

A summary of the panic-lock functions B, D and E:

B – Change-over function, for locks with semi-automatic locking mechanism (outer side with handle). It is used on doors that must enable a transit from outside sometimes.

D – **Transit function**, for locks with manual locking mechanism (outer side with handle). It is used on doors that must enable a passageway from outside when unobstructed.

E - Reversible function, for locks with manual locking mechanism (outer side with knob). It is used on doors where unauthorised opening from outside must be prevented as a matter of principle.



The anti-panic pull bar from FSB not only boasts a unique design approach but also impresses due to the slightly upwards facing operating angle (future Type C pursuant to DIN EN 1125), which gives it a special security feature: this makes it impossible to open panic doors from outside using pulling elements inserted under the door. This also has the advantage that there is no need for solid sealing or protection measures on the bottom of the door, which in turn opens up spaces without thresholds and hence without barriers.

Operating angle of 30°, omission of angle of rotation setting

The system's operating angle is a uniform 30° on active and inactive leafs. It ensures an optimal force ratio and interplay between the lock and fitting components; the low angle of rotation enables a quick release. Over and above this, is it not necessary to set the angle of rotation on site, which prevents errors, as incorrect settings are ruled out. The bolt thrower on the strike box can be set on site in each case to the existing gap of 2 to 6 mm between the active and inactive leaf. On top of this, the new anti-panic pull bar



pursuant to DIN EN 1125 can be combined with short backplates and nearly all the handles from our range. All roses, short and long backplates in the DIN EN 179 design can be combined with the 1 or 2-leaf SSF panic lock. In addition, SSF offers various other types of locks which represent the ideal complement to our door fittings. SSF's range includes mortice locks for:

- interior doors,
- tubular frame doors,
- flat entrance doors,
- house doors
- doors for large buildings,
- fire safety and emergency exit doors
- as well as special locks, strike plates and accessories

On the following pages we present the mortice locks in the 55, 20/21 APK, 02 and 19/24 FH series. You will find detailed information in the current SSF catalogue, which you can get from FSB or directly in Saxony.

SSF – Sächsische Schlossfabrik GmbH Am Pappelhain 10 · D-04539 Groitzsch Phone +49 34296 733-00 Fax +49 34296 733-11 or on the Internet: www.ssf.de | info@ssf.de

DIN EN 179 for emergency exit locks DIN EN 1125 for panic door locks

The fact is that the standards mentioned have today achieved the status of recognised technological rules, and the use of relevant fittings is strongly recommended, if they are not already required in the call for proposals. Building regulations require that the doors in escape routes must be easy to open from inside to their full width, with a handle if necessary. DIN EN 179 specifies the use and requirements for locks on emergency exits with handles and push plates. Combinations of fittings as understood by EN 179 must be considered as products subject to building regulations with the necessary EU or CE conformity labels. They consist of lock, fitting and strike plate and must have been tested and certified together. So that you do not have to worry about such formal matters, in this area FSB offers the most extensive range of fittings across the sector.

The following FSB fittings systems are available in fire safety versions with the door handle models listed in the overview with corresponding tests and certificates for the approved ranges of lock and strike plate combinations, in the area covered by EN 179:

- Door handles, fittings for active and inactive doors each available in FSB versions of
 - roses
 - short backplates
 - long backplates
 - wide backplates
- Frame door handles and
- Security fitting doors
- as well as the respective isis® designs

Construction Products Regulation (EU CPR)

The declarations of performance (DOP), by which FSB documents that the relevant products conform to the applicable EU regulations, can be found under www.fsb.de/dop

Pictogram labelling of corresponding versions:



	79 1002 Page 112f.	2	2	09 1002 06 1002 Page 408f.
	79 1016 Page 130f.	2	2	09 1016 06 1016 Page 410f.
A	79 1031 Page 150f.			09 1031 06 1031 Page 410f.
	79 1043 Page 188f.		R	09 1043 06 1043 Page 412f.
2	79 1045 Page 154f.		2	09 1045 06 1045 Page 412f.
2	79 1053 Page 138f.			09 1053 06 1053 Page 414f.
2	79 1070 Page 164 f.	2		09 1070 06 1070 Page 414f.
	79 1074 Page 240f.	ē	-	09 1074 06 0644 Page 414f.
	79 1088 Page 176f.			09 1088 06 1088 Page 416f.
2	79 1094 Page 180f.	<u>a</u>	2	09 1094 06 1094 Page 418f.
2	79 1119 Page 202 f.	2	2	09 1119 06 1119 Page 420f.
<u>(</u>	79 1134 Page 118f.	2	-	09 1134 06 1134 Page 420f.
2	79 1146 Page 214 f.	ê j	2	09 1146 06 1146 Page 422f.
A	79 1159 Page 222 f.	2	2	09 1159 06 1159 Page 424 f.
2	79 1160 Page 226 f.	2	2	09 1160 06 1160 Page 424 f.
1	79 1164 Page 230f.			09 1164 06 1164 Page 426f.
2	79 1177 Page 192f.	2	2	09 1177 06 1177 Page 426f.
<u> </u>	79 1187 Page 244 f.			09 1187 06 1187 Page 244 f.
12 - 1	79 1223 Page 254 f.		2-1	06 1223 Page 254 f.
-	79 1231		2	06 1231

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DIN 18 273, fire safety fittings DGUV

New: Gymnasium fitting FSB 7948



For gymnasium fitting FSB 7948 with suitability according to DIN EN 179 and DGUV, see page 378

Door handles complying with German accident prevention regulations

German accident prevention regulations (GUV-V, May 2001) provide a specification for so-called "areas of occupancy" (those are areas in schools and kindergartens, which are "intended to be accessible to children") in §11 para. 1 for "fixtures & fittings" such that "edges, corners and hooks of fixtures & fittings in the area of occupancy (...) up to a height of 2 m from the floor level must be designed or protected so that risks of injury to children are avoided." Injuries are to be avoided using a minimum radius of 2 mm or by the use of a corresponding chamfer on all corners and edges and this also applies for door fittings. As would seem natural, only return models to EN 179 are used, even if they are not explicitly specified. Doors and windows are given special consideration in §10 of the GUV-V law, but the associated fittings are not. Insurance companies and building supervisory authorities do not issue certificates for specific models of door handle. However, our experience in 30 years of work on buildings for schools and kindergartens shows that the following FSB models are approved across Germany.



Door handle fittings for fire safety doors and smoke safety doors

The currently valid standard DIN 18 273 (December 1997) specifies the requirements and the test procedure for the socalled fire safety fittings. These belong to the regulated building products, as listed in the German list A of building regulations, under sequence number 6.17 and which have to be demonstrated to be suitable with a certificate of compliance issued by a recognised certification authority as well as a general building authorities' test certificate. The suitability marking (Ü in Germany) documents this proof and is provided with every fire safety fitting.



FSB has the largest range on the market for this, with more than 50 models of door handle, in combination with roses, short, long and wide backplates, all certified and constantly monitored by the materials testing office in Dortmund.

Mortice lock with anti-panic function + self-locking

20 APK | FH series 21 APK series



For fire safety doors FH 20 APK series – DIN 18 250 and EN 179

21 APK series - DIN 18 251

For 20/21 series locks an auxiliary latch ensures that the door locks automatically. When an entrance door fitting is used the door can only be opened from outside using the cylinder. On the inside of the door, the door handle simultaneously operates the latch and deadbolt to open the door (the so-called anti-panic function). This version of the lock provides very convenient security for home entrance doors and hotel room doors. It can also be used in connection with the isis systems (see page 37 f.).

Features

- Faceplate made of galvanised steel or painted or stainless steel
- Follower made of steel, latch
- and deadbolt nickel plated – Lock case closed all round
- LOCK Case closed all rour

Versions

- Euro cylinder in combination with "anti-panic" and self-locking, spacing 72 mm
- Backset 55, 60 and 65 mm
- Faceplate widths 20 and 24 mm
- Faceplate, rounded or rectangular
- Follower 8 or 9 mm square hole

Functions

- Delayed self-locking
- Noise reduction in case of automatic locking
- When the deadbolt closes back up, this is closed back earlier than the latch
- Standard, thumbturn and free-movement cylinders can be used

Classification key according to EN 12 209:

3 S 5 1 0 C 3 B B 2 0



53 | 54 | 55 series 50 | 51 | 52 series



50 | 53 series – Category 3 according to DIN 18 251-1

51 | 54 series – Category 4 according to DIN 18 251-1

52 | 55 series – Category 5 according to DIN 18 251-1

Features

- Faceplate made of fine matt stainless steel or painted stainless steel, polished brass
- Clamping follower made of steel, galvanised
- Follower bearing made of nylon or steel rings
- Precision cast steel latch, galvanised
- Auxiliary latch made of nylon
- Lock case closed all round
- Protective sleeves to keep swarf out
- Lubrication mechanism
- Angle adjustment (optional)
- Noise-reduction for latch (optional)
- 50 | 51 | 52 series for flush doors, centre design, can be used left/right

Versions

- Euro cylinder, spacing 72 mm
- Backset 55, 60, 65, 70 or 80 mm
- Faceplate widths 20 or 24 mm
- Faceplate, rounded or rectangular
- Follower 8 or 9 mm square hole
- optionally as slam lock with spring latch and changeover

Classification key according to EN 12 209:

3 M 5 1 0 F 3 B C 2 0 3 S 5 1 0 G 6 B C 2 0

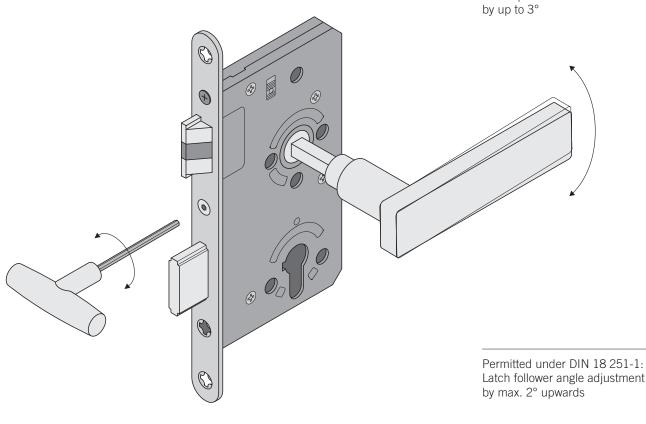


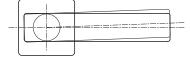
"The right angle of Ulm" or because it looks better straight: angle adjustment

As an option, SSF locks belonging to the 50-55 series can be supplied with a device for adjusting the angle of the door handle.

In accordance with DIN 18 251-1 specifications, the latch follower can be supplied and fitted with an angle adjustment of max. 2° facing upwards. The consequence of this, however, is that it creates an aesthetic shortcoming when fitted, especially on geometrically straight-lined door handle shapes. Very much to the annoyance of users who value small details and to whom an exact appearance of the door with a horizontally aligned door handle is important. In order to compensate this deficit, SSF has developed a device for the locks in the 50-55 series, with which the angle adjustment of the latch follower can be corrected accordingly. When the lock is completely installed and the door handle fitted, this device can be adjusted by up to 3° downwards by turning a screw attached on the faceplate side using an Allen key and thereby compensate the angle adjustment permitted by the standard.

SSF series 50-55 locks: Subsequent aesthetic correction by up to 3°







Mortice lock with follower adjustment

55 NV series



55 series – Category 5 according to DIN 18 251-1

For doors in large buildings with a high user frequency and enhanced break-in protection.

Series 55 locks are specially designed to meet the high requirements for use in large buildings. High quality materials and finest machining ensure quality and longterm functionality.

Features

- Faceplate made of non-rusting stainless steel or painted stainless steel, polished brass
- Clamping follower made of steel
- Latch and deadbolt are nickel-plated
- Noise-reduction for latch and follower
- Lock case closed all round
- Lubrication mechanism
- Protective sleeves to keep swarf out

Versions

- Euro cylinder, spacing 72 mm
- WC 78 mm
- Backset 55, 60, 65, 70, 80 or 100 mm
- Faceplate widths 20 and 24 mm
- Faceplate, rounded or rectangular
- Follower 8, 9 or 10 mm square hole
- Designs in Category 3 and 4 available on request

Classification key according to EN 12 209:

3 S 5 1 0 G 6 B C 2 0



Mortice lock fire-retardant

19 | 24 FH series



ES 19 series – Category 3 according to DIN 18 251-1 ES 24 series – Category 4 according to DIN 18 251-1

For fire safety doors FH 19 series – Category 3 according to DIN 18 250 FH 24 series – Category 4 according to DIN 18 250

For the 19/24 series of locks, all working parts are made of steel. The latch and deadbolt are implemented as a combination of shaped steel parts with injection moulded plastic guides and holding parts. This combination results in special kinematic characteristics and good noise reduction within the lock as well as in the interaction of the latch and the strike plate.

Features

- ES 19: steel clamping follower, galvanised with nylon bearing shells
- FH 19: steel folding follower with steel bearing shells, both galvanised
- ES/FH 24: steel clamping follower with steel bearing shells, both galvanised
- Faceplate made of fine matt stainless steel or painted or galvanised stainless steel
- Latch and deadbolt in combination of shaped steel parts and plastic guides
- Latch follower made of galvanised steel with clamping action
- Lock case closed all round
- Special noise reduction in the lock and on the latch and deadbolt

Versions

H # 11

- Euro cylinder, spacing 72 mm
- Backset 55, 60 and 65 mm
- Faceplate widths 20 and 24 mm
- Faceplate, rounded or rectangular
- Follower 9 mm square hole

Classification key according to EN 12 209:

 $\begin{array}{c} 3 \hspace{0.1cm} M \hspace{0.1cm} 5 \hspace{0.1cm} 1 \hspace{0.1cm} 0 \hspace{0.1cm} G \hspace{0.1cm} 3 \hspace{0.1cm} H \hspace{0.1cm} C \hspace{0.1cm} 2 \hspace{0.1cm} 0 \\ 3 \hspace{0.1cm} M \hspace{0.1cm} 5 \hspace{0.1cm} 1 \hspace{0.1cm} 0 \hspace{0.1cm} G \hspace{0.1cm} 4 \hspace{0.1cm} H \hspace{0.1cm} C \hspace{0.1cm} 2 \hspace{0.1cm} 0 \end{array} \end{array}$

Mortice lock for tubular frame doors

02 series



02 series – Category 3 according to DIN 18 251-2

Deadbolt throw 21 mm

The 02 series includes frame door locks for the most varied of frame door contours and profiles. This series also supports the option of through fixing the fittings.

The through screw fixing is ideal for repair purposes when rivet nuts have been torn out and generally recommended for frequently used doors.

Features

- Faceplate matt chromated steel or stainless steel
- Latch and deadbolt are nickel-plated
- Through holes to fix fittings with protective sleeves
- Clamping follower
- Lock case closed top and bottom
- Latch with noise reduction

Versions

- Euro cylinder, spacing 92 mm
- Backset 22, 25, 30, 35, 40, 45 or 50 mm (DM 20 without changeover)
- Faceplate widths 16, 20, 22 and 24 mm
- Follower 8, 9 or 10 mm square hole
- Latch reversible, can be used right / left hand
- U-faceplate 24 × 6 mm inc. end caps for backset 29, 34, 39, 44 or 49 mm

Classification key according to EN 12 209:

3 M 5 0 0 C 3 B A 2 0



Inner (added) value. Behind the beautiful facade of our fittings you will find thought-through technology, commonly categorised with the term "bearing". This does not really do justice to it. Read some more about how our precision engineered masterpieces ensure convenience, a long service life and sustainability.

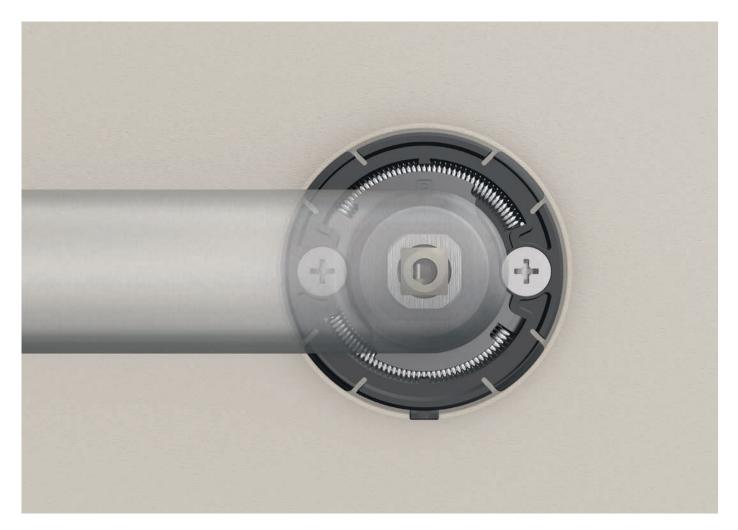


Bearings - an overview

Standard fittings 10 💬 FSB standard fittings fit exactly in a 7 mm wide guide made of black plastic in roses and backplates. Apart from the 7 mm wide bearing, FSB roses and short backplates also have supporting lugs which, when fitted properly ensure that all of the pull, push and twist forces which occur in normal use are properly supported and accepted. These design details have been proven in practical experience. The handle bearing is designed as a turnably fixed plain bearing. For this, the door handle with its guide ring are inserted into the subconstruction. The turnably fixed mechanism clips on the covering fittings (see page 269). Heavy-duty fittings AGL® 72 🗲 Door handle fittings are more highly stressed on frequently used doors than 76 🔶 in the normal domestic area. To accom-79 🔶 modate the forces arising as flexibly as possible when opening and closing these doors and above all continuously for a long period of time, an especially high-performance bearing is needed. AGL® from FSB reliably cushions the push and pull forces via a rubber-metal connection. This quality is accompanied by further benefits: A hold up mechanism with preloaded springs pursuant to EN 1906, version B puts an end to sagging door handles. AGL[®] fittings also contain a 0° stop point integrated into the hold up mechanism. This puts an end to door handles which are not positioned exactly horizontally. They are often pressed up by the lock spring by approx. 2° from their - in the ideal case, horizontal - position. The AGL® hold up mechanism compensates for any effects of the lock spring. See page 30 for information about fittings standard EN 1906.

Classification key for

 $\begin{array}{c} 10 \textcircled{\baselineskiplimits} : 3 | 7 | - | 0 | 1 | 4 | 0 | U \\ 72 \textcircled{\baselineskiplimits} : 4 | 7 | - | 0 | 1 | 5 | 0 | B \\ 76 \textcircled{\baselineskiplimits} : 4 | 7 | - | B | 1 | 5 | 0 | B \\ 79 \textcircled{\baselineskiplimits} : 4 | 7 | - | B | 1 | 5 | 0 | U (aluminium + stainless steel) \\ 79 \textcircled{\baselineskiplimits} : 4 | 7 | - | B | 1 | * | 0 | U (bronze) \end{array}$



Speed and precision. AGL[®] from FSB has stood for decades for an unbeatable category of fittings for large buildings. AGL[®] puts forward product and installation benefits that set new standards on the door.

www.fsb.de/agl

AGL[®] has not just advanced to being the ultimate among architects, but with its thought through technology and durable function, it has continued to convince craftsmen, home builders, operators and investors for more than 30 years.

FSB has rethought this classic and has revised it, without losing its technical core and without changing its proven functionality.

- turnably fixed compensating bearing AGL[®] with low friction and maintenancefree Teflon-coated bearing bushings
- compensating bearing to compensate for tolerances in the holes drilled in doors and in the lock/cutout for the lock body and the solid spindle
- interlocking connection between the spindle and the aperture for the optimal transfer of the forces arising in the door
- pre-fitted as a spindle and aperture adapter half set
- superior user category 4/EN 1906 with more than 1 million tested operations



AGL[®] – **effortless screw fixing thanks to adapter half set.** The advantage: the two AGL[®] half sets can be effortlessly screwed together, because it is no longer necessary to "screw past" the door handle or the door handle shank.

Simple and installer-friendly assembly

AGL[®] fittings are distinguished by a special design feature, which makes installing them considerably easier: the door handle aperture has been uncoupled from the part of the door handle attachment where the FSB Stabil spindle is set in place. The result is an aperture adapter half set, on which the door handle is only set in place once the adapter side has been screwed together with the spindle side.

Effortless screw fixing thanks to adapter half set

The glaring advantage: the two halves of the fitting can be effortlessly screwed together because it is no longer necessary to "screw past" the door handle or door handle shank. Cordless screwdrivers can therefore be positioned axially and thus exactly according to the screwing direction. After this the door handle is pushed onto the adapter and fixed together with the adapter half set using a grub screw. The design principle of the FSB Stabil spindle, which has proven itself over decades, remained untouched in the process. All AGL® fitting types will be made according to this design principle in future.



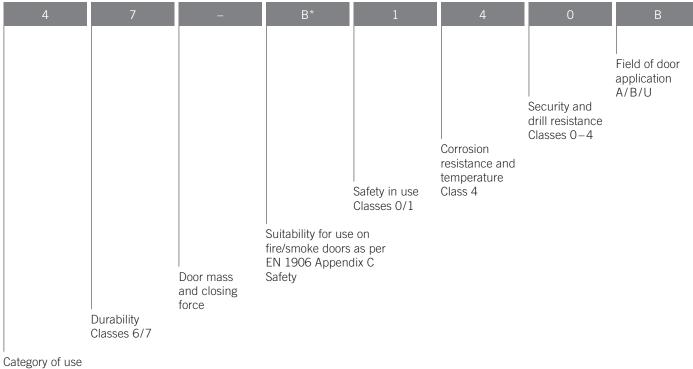
A hold up mechanism with preloaded springs pursuant to EN 1906, version B puts an end to sagging door handles.



Aesthetic added value due to precise 0° position

AGL[®] fittings also contain a 0° stop point integrated into the hold up mechanism. This puts an end to door handles which are not positioned exactly horizontally. They are often pressed up by the lock spring by approx. 2° from their – in the ideal case, horizontal – position. The AGL[®] hold up mechanism compensates for any effects of the lock spring right from the start.

The features of hold up mechanism B and 0° position also apply to all AGL® types of fitting.



Classes 1-4

Their practical value and the categorisation of fittings must be judged using the entire classification scheme. For an FSB fitting for large buildings (8 and 9 mm square) the categorisation is shown above. Only the total of all test criteria and test results lead to DIN EN 1906. All FSB products not only meet its minimum requirements, but can demonstrate clearly better results.

* for fire safety doors to DIN EN 1634-1/EN 1906

Our ambition: Better than the standard

International standards can only be agreed if the institutions are able to make compromises while taking account of national interests. This means that the agreement phase often takes several years. This in turn means that there is a constant risk that technical progress will not be sufficiently taken into account. Due to the compromises made and the time lost, this leads to the requirements on products manufactured in conformance to standards often only being "mediocre". Many suppliers also meet the requirements but do not use the better options.

We at FSB do not want to be satisfied with mediocre. Sufficient is not enough for us. We believe that quality is no accident but is always the result of some strenuous thinking, the sum total of a lot of experience and keeping your eye on every detail. And in concrete terms, as a manufacturer of branded products FSB merely sees the standards as minimum requirements. We do everything that we can, using the most modern technology, to produce better results. There are unfortunately no standards for design, craftsmanship or surface quality. FSB regrets that. Because tables showing comparisons to competitors would presumable also be in our favour here, as we ensure that many complex individual steps guarantee the consistency of the typical FSB finishes for all products. However, comparisons are possible even without tables, using hand and eye. This may be subjective, but is no less honest.

The ideal materials for door and window handles for FSB are aluminium, stainless steel, brass and bronze. They meet the highest requirements of functionality, cost-effectiveness, practical value and environmental compatibility. Stainless steel proves to be almost indestructible especially for frequently used doors and windows. The same is true for bronze as, with its natural patina, it develops an additional aesthetic appeal. Aluminium scores with its pleasant feel, its decorative surface and its low weight.

DIN EN 1906

"Made in Germany" is symbol of value which we can be proud of: FSB's door and window fittings are manufactured in Brakel and are German made products.

On request, we are happy to issue certificates of origin and long term supplier declarations for goods with preferential origin status according to EU regulation no. 1207/ 2001. In your own interest, if there is any doubt, please check whether it is just a "German" brand or whether it is a German product. We would be happy to convince you of the latter during a visit to our factory in Brakel. Certification to ISO 9001 as a desirable requirement for participation in calls for proposals is a matter of course for FSB just like the validation after an EU eco-audit and certification to ISO 14 001. Since 2010 on this subject, we also have EPD environmental product declarations to ISO 14 025 for our range of over 25,000 deliverable items.

A highly developed society's image of itself should include just as highly developed products. This also has a lot to do with sustainability. Doors, windows or even rooms designed to be free from barriers accompany us over many decades For these products, this is reason enough to not just pay attention to materials, design and technology but also to longevity. Handles or fittings which merely correspond to the standard are not necessarily of equal value to our products.

In the adjacent illustrations we show with a few selected diagrams how FSB fittings clearly exceed the requirements of DIN EN 1906.

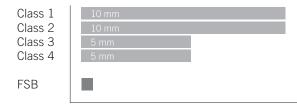
To see why you can trust products from FSB, please see our extensive brochure titled "FSB on standards: DIN EN – Quality to get to grips with" – for quality is measurable. On request, we would be happy to send you this free of charge: www.fsb.de/brochures

Tensile load for installed fittings



Owing to their compact design and the robustness of the connecting parts, FSB fittings for large buildings can withstand high tensile loads.

Free angular movement



With zero play clamping, the FSB solid spindle prevents door handles from "wobbling".

Durability

In a test jig, the forces and relative movements arising in use are modelled and simulated in an endurance test.

 Class 6
 100,000 operations for average frequency of use

 Class 7
 200,000 operations for frequent use

 FSB
 1,000,000 and more operations tested

Even after the endurance test, the FSB fittings meet the requirements of the user category classes.

1

Made in Brakel Germany

Materials and finishes

Aluminium

FSB 0105 Aluminium, natural colour

FSB 0205 Aluminium, new silver colouring





Aluminium is the most commonly occurring metal in the Earth's crust. In comparison to other metals, aluminium has not been known for long – it was first produced with a chemical reaction in 1808.

Right from the start, aluminium has been used as a high-tech material, when light weight and high durability are required. Space travel as well as aircraft and carmaking are inconceivable without it and it was responsible for making some innovations possible in the first place. Especially in the second half of the 20th century, aluminium started its triumphal advance into interior design and into design in general. Its technological mystique together with its silvery, glittering surface opened up new horizons in the use of metal in interior design. At FSB this started with the designs by Johannes Potentes in the 1950s. Still today, the expertise which we gained at the time in the machining of aluminium is the basis of all of FSB's families of handles made of this wonderful material.

Aluminium is a light metal (density 2.699 g/cm³). It melts at 660 degrees Celsius. Admittedly, its initial extraction requires a relatively large amount of energy. This energy balance is however compensated by its many positive characteristics in use and when recycled. The energy savings associated with recycling are about 95 % compared to its initial extraction. And aluminium can be recycled again and again, without any loss.

It is very pleasant to handle, above all as this lightweight amongst the metals is very good at matching the ambient temperature. FSB only uses pure alloys from the smelters to DIN 1725 with the following material numbers:

AIMg3: material no. 3.3541.02 AIMg1: material no. 3.3315 AIMgSi0,5: material no. 3.3206

After the mechanical machining, its surface is protected by anodising.

FSB 0305 Aluminium, brass colouring

FSB 0405 Aluminium, bronze colouring

FSB 0704 Aluminium, dark bronze colouring







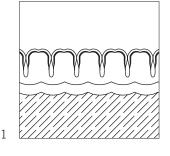
FSB uses a standard process for anodising. This process uses direct current and a sulphuric acid electrolyte. The oxide layer built up in this standard process is approx. 10 μ m thick. The hardness of this layer is up to 350 kp/mm² (Vickers), corresponding to 2,500 to 3,500 N/mm². The silver-white oxide layer can be coloured to extend your design options. FSB uses two types of colouration:

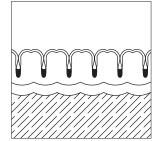
- 1. Colouring the surface and in the central region of the oxide layer by immersion colouring which is also known as the absorption process. During this, the initially silver-white anodised aluminium is chemically coloured in organic and anorganic dye solutions. The light fastness has a value of about 6 to 7.
- 2. Colouring at the base of the pores of the oxide layer. Here, metals are electrolytically deposited using alternating current into the previously created silver-white oxide layer. This is called a two-stage process. The light fastness values are from 7 to 8.

After colouring, the surface becomes more dense. This ensures that the colour's resistance to corrosion, light and weather stays within the specified values. Basically, aluminium needs no special care as a material. This artificially created anodised layer protects the aluminium. Dirt spots can be removed with water and a soft cloth.

In daily use aluminium surfaces can be worn or scratched by harder materials. Damage is typically caused by rings worn on fingers. This "damage" to the aluminium surface may impair the aesthetic impression but has no effect on its function. Many users even like this patina resulting from use.

Please note that the fitting solutions in the handle families 1001, 1003, 1004, 1035, 1102, 1163, 1183, 1191 and 1222 as well as the associated knobs (0811, 0812, 0833, 0873) are only available in FSB 0105 aluminium.





2



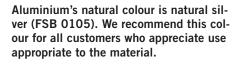
🗆 Aluminium + colour

FSB 0505 Aluminium, medium bronze anodised (C 33) FSB 0805 Aluminium, black anodised (C 35) FSB 8220 White, similar to RAL 9016, glossy

FSB 9020 Pure white, similar to RAL 9010, glossy







After a predominance of light colours in architecture, for some time a reversal of this trend has been noticeable. Colour concepts like this encompass all trades: starting from the facade, via the interior in general right through to the interior doors. This struck us at FSB not just because of the increased demand for patinated bronze finishes, but also quite pragmatically when we inspect large buildings, where we have encountered a lot more dark wood than in previous years. In the best architectural tradition, FSB is taking account of this. In this manual we are presenting two new colours which pursue this design concept and, over and above that match two common colours of facade profiles: C 33 medium bronze and C 35 black.

We would also like to point out that for the finish of the anodised colours FSB always polishes all aluminium parts to a mirror finish prior to anodising. This leads to the silk finish which is characteristic for FSB's aluminium fittings. For the manufacturers of profiles however, it is usual to at most grind the profiles prior to anodising them, only resulting in a matt finish after the anodising. It is thus unavoidable that there will be slight differences in the colours and level of gloss/mattness.

As far as the printing process allows, the standard colours mentioned for the FSB 1023 model of door handle are shown approximately correctly. We do recommend requesting colour samples from FSB for more exact colour matching. Slight colour variations due to the manufacturing process are unavoidable, especially between different delivered batches.

Coloured door and window fittings have found some recognition in the marketplace in recent decades. Often, they were the sole architectural design element in the grey concrete landscape. Today they have a firmly established place in the fittings industry's product range.

FSB sees itself primarily as a manufacturer of door and window fittings made of fine metals. FSB offers a limited range of painted fittings. When making your enquiry, please specify the RAL number of the required colour. Account must always be taken of the fact that slight variations in colour can arise in manufacture, due to the materials and the process involved.

As its basic material for painted fittings, FSB uses the cast and ground aluminium models from its standard range. Before painting, the parts are subject to a special, anodic oxidation. FSB then uses electrostatic powder coating. This is a solventfree painting process. **FSB 8802** Anthracite grey, similar to RAL 7016, glossy

FSB 8821 y Grey-brown, similar to RAL 8019, glossy FSB 8120 Black, similar to RAL 9005, matt







The paint is applied in layers of approx. 80 μ m. The quality of the finish, the light fastness of the colours, the hardness of the surface, resistance to abrasion etc. approximately correspond to that of anodised aluminium layers.

Occasionally FSB is asked whether we can supply door pulls made of round material in designs made of painted stainless steel or steel. In contrast to using aluminium as the base material, especially when using steel, there is a risk of corrosion if the surface is damaged. We ask for your understanding, that for such special versions, we cannot accept any liability and must exclude any guarantee for the product.

If properly fitted and used properly, the paint on FSB fittings will withstand daily use. Vigorous contact with hard and sharp-edged objects (e.g. rings, keys, boxes etc.) can scratch the surface. Scratches do not however impair function.

FSB sees itself primarily as a manufacturer of door and window fittings made of fine metals, which also applies for the ErgoSystem[®].

FSB offers you the option, for all parts within the ErgoSytem which are made of aluminium and as standard are painted dark grey, to paint them on request with almost all colours to RAL. ErgoSystem[®] fittings for large buildings can be colourmatched to individual designs or their colours can set an accent. Please specify the required RAL number with every inquiry.





FSB 6204 Stainless steel fine matt FSB 6205 Stainless steel, mirror finish





In 1912, Krupp in Essen, received the first patents for a new material which became familiar in pre-war Germany under the names "Nirosta" (never rust) and "V2a-steel". A variety of applications quickly opened up for this new material: from the construction of containers in the chemical industry through to designs in car and aircraft construction, from building materials to household equipment.

The general term of stainless steel includes more than 100 different steels which resist corrosion and acids. When making our fittings we use a chrome-nickel steel which, according to DIN 17 440 takes the material number 1.4301. It contains approx. 18 % chrome and 8 % nickel. This alloy has proven itself in the building trade.

Characteristics of stainless steel

Stainless steel is outstanding in its suitability for door and window fittings as its surface is extremely resistant to corrosion. Even when very roughly treated it scarcely shows traces of dents or scratches, it shows little wear even in continuous use and, above all due to the additional alloys of chrome and nickel, it requires very little care. An invisible passive layer forms on its surface which is even supposed to have bactericidal properties.

Places it is used

We recommend stainless steel door and window fittings for all heavily used doors, especially in public buildings, for public authorities, hospitals, on ships in motorway service areas, in parks and sports facilities, just about anywhere where there are lots of people and a fitting is to continue to work long term while being easy-care.

Care

In principle, architectural fittings made of stainless steel need no care. Traces of dirt can be removed with a moist cloth. If, after some time, exterior fittings or fittings in chlorinated swimming pools show traces of surface rust, this will not be from the material itself but will have been transported from outside to the fitting. This can be removed with vigorous rubbing.

Notes on selection

When selecting and ordering door and window fittings and their accessories, to avoid queries, misunderstandings and the associated waste of time, all of the general explanations and technical information in this catalogue should be considered.

Finishes

Stock versions made of matt stainless steel are particularly robust. Mirror finish stainless steel is an environmentally friendly alternative to chrome-plated surfaces and is made to order. FSB 6204 Stainless steel, fine matt

FSB 6205 Stainless steel, mirror finish



Stainless steel and ErgoSystem®

Stainless steel is a material which is outstandingly well suited for use in bathrooms and sanitary areas, as its surface is extremely resistant to corrosion. Even when very roughly treated it scarcely shows traces of dents or scratches, it shows little wear even in continuous use and, above all due to the additional alloys of chrome and nickel, it requires very little care. An invisible passive layer forms on its surface which is even supposed to have bactericidal properties.

FSB offers the ErgoSystem[®] with finishes of stainless steel fine matt (FSB 6204) and stainless steel mirror finish (FSB 6205). Stock versions made of stainless steel fine matt are particularly robust. The version with a stainless steel mirror finish is an environmentally friendly alternative to chrome-plated surfaces and is made to order.

We recommend the ErgoSystem[®] made of stainless steel for heavily used areas, especially in public buildings, hospitals, old people's and care homes, public authorities, on ships, in motorway service areas, parks and sporting facilities, just about anywhere where there are lots of people and a fitting is to continue to work long term while being easy-care.

Easy care

In principle, architectural fittings made of stainless steel need no care. Traces of dirt can be removed with a moist cloth. If, after some time, exterior fittings or fittings in chlorinated swimming pools show traces of surface rust, this will not be from the material itself but will have been transported from outside to the fitting. This can be removed with vigorous rubbing. When cleaning powder-coated aluminium parts in the ErgoSystem[®] (supports, fixings etc.) no abrasive cleaning agents may be used. They inevitably lead to fine scratches and thus to a matt, dull surface.



FSB 4205 Brass polished varnished

FSB 4305 Brass polished waxed



For four decades, FSB has offered selected door and window fittings and their accessories in brass. Apart from door and window fittings, our product range includes handles for entrance doors including accessories.

Brass fittings are offered in a variety of alloys and for a variety of prices in the market. However, not everything that shines like gold is made of real brass. But from us, it is. We exclusively use copper-zinc alloys defined in DIN 17 660 as CuZn 37, material numbers 2.0321 or 2.0335.

Protection from corrosion

It is often not mentioned that brass material tends to corrode in daily use. There is only one answer to that: and that is cleaning. If you have ever been on holiday in the Nordic countries, you will know how carefully the brass fittings are cleaned every week on house doors. Anyone who does not want to clean has the choice between the use of varnished or waxed surfaces. Waxed brass parts are polished during daily use. The parts which are not touched quickly develop a brown to grey-green patina. Many buyers see a particular aesthetic charm in this maturing of the surface. Varnished brass fittings lose their gloss finish as soon as the varnish is damaged. Then intercrystalline corrosion will start. For a fee, corroded fittings can be restored.

Recommendation

FSB basically only recommends the use of waxed brass surfaces. Polished waxed surfaces can be cleaned with standard, commercially available cleaners. We also recommend that brass surfaces are not used, in particular in outdoor areas, where the effects of sunshine and weather inevitably lead to manifestations of corrosion and above all, not to plan brass fittings in public buildings for frequently used doors. Unless of course, you accept the constant cleaning required or accept the natural patina.



FSB 7615 Bronze lightly patinated waxed





Fittings made of bronze develop a certain radiance as years go by. The patina of use results in a particular aesthetic charm. Bronze parts darken in the air and due to environmental influences.

Patina should not be understood as damaging the material. It is rather a sign of credible aging and profiting from change. Bronze is a material which is not used up, it is just used. For our fittings, we use a copper-tin alloy with 92 % copper and 8 % tin, which is called CuSn 8, or material no. 2.1030. This composition is characterised by outstanding resistance to corrosion, high strength and it is very hard. Its resistance to wear makes it suitable for heavily stressed products which are used every day.

The bronze fittings in the 7615 finish are first polished and then pretreated using a process especially developed by FSB. Immersion in a bath for metals containing copper imitates the material's natural aging process. With this pre-aging, we create a typical bronze patina, which is just as good as that produced naturally. The final waxing in the factory protects it from external influences which would lead to discolouration of untreated surfaces.

Protection from corrosion

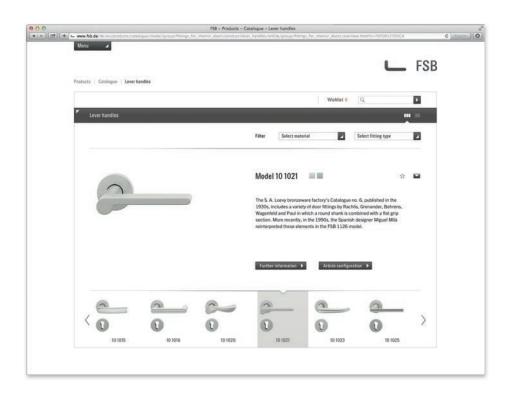
If you require the patina appearance to the bronze from the initial receipt of the product, we can varnish our bronze door handles. As this treatment falsifies the material's typical character, we would like to advise against it. Varnished bronze fittings also lose their gloss finish as soon as the varnish is damaged and the intercrystalline corrosion starts – please see the corresponding notes about brass.

Surface hygiene

Owing to the increasing occurrence of antibiotic-resistant germs, FSB's bronze takes on a new significance owing to its bactericide effect. Critical studies in the USA and in Great Britain show that bacteria on copper alloy surfaces are 99.9 % killed off after two hours at the latest. This group of bacteria includes the Methicillinresistant Staphylococcus aureus (MRSA), one of the most virulent and dangerous germs known. When the prescribed hygienic measures are carried out at the same time, it was confirmed that contamination was prevented by more than 99 %. Owing to this fact this characteristic of the copper alloy used by FSB, called CuSn 8 (UNS designation C52100) has been officially taken up by the EPA (Environmental Protection Agency) into US building regulations, US registration number 82012-2. FSB bronze fittings also carry the European copper quality seal "Cu+ Antimicrobial Copper" (for more information, see www. antimicrobialcopper.com)

The full range on the network:

www.fsb.de/catalogue



www.fsb.de keeps you up-to-date at all times. Not only does our website offer you a convenient search function for finding the FSB field sales colleague responsible for your region. Registered users of our information portal "My FSB" also enjoy a number of other benefits free of charge:

Digital catalogue plus

- Configure individual product versions that are exactly tailored to your needs or those of your customers.
- Give advice, acquire customers and plan with the digital catalogue: our product configurator offers an unrivalled depth of product range.
- Take advantage of the variety and unique selling points of the FSB range for your own marketing: no more comparability and away from the old familiar standards!
- Create watch lists and save these permanently.
- Recommend products to others, e.g. colleagues, staff, customers, planners, architects ...
- Direct requests for quotes straight to the dealer of your choice.
- Get CAD datasets and tender specifications by downloading them.

Current and preferred information

You are the first to get information e.g. about new products or events.

Customised and to the point

You only receive the information that really interests you.

Always up-to-date

Our newsletter and technical update service keeps you up to speed.

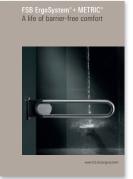
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Black on white:

www.fsb.de/brochures



FSB ErgoSystem® + METRIC® A life of barrier-free comfort



<section-header>

FSB Flush hardware solutions Less is more



FSB Recessed pulls Purist points of focus



FSB International Perfection in Detail

FSB + Sustainability Everything gets a green light



FSB + Sustainability Everything gets a green light





FSB Access management isis® M100 – compact starter package



Product family David Chipperfield



FSB Access management isis® M300 – convenience of online administration



Brakel International



FSB Access management isis® T300 – for complex public project requirements



FSB Access management isis® F10012001300 Door pulls with Fingerscan



FSB Push/pull pad handles S-Flat series



Geometry to get to grips with



isis[®] Electronic access management

Culture House ROZET, Arnhem

Neutelings Riedijk Architects, Rotterdam www.neutelings-riedijk.com

FSB 1023 range of handles, see page 138 ff.

AGL[®]-/AGL[®] FS heavy duty fittings for fire and smoke doors, see page 26 ff. Frame door fittings FSB 06/09 1023, see page 397 ff. Fittings for emergency exits FSB 77 7980, see page 453

Access management with isis[®] M300, model FSB 26 1023, see page 45 ff. isis[®] M Access Management Software isis[®] M Offline Synchronisation Software isis[®] M Access Points isis[®] M Card Reader

Stainless steel, fine matt, brushed

www.fsb.de/rozet_arnhem

46 Overview of isis®

isis systems – like cluster of cells – follow logical, efficient and simple principles. In other words: isis stands for system intelligence. isis combines digital authentication with mechatronic function. The technology in turn submits to the users' need and handling it is intuitive. Simple is better than complicated.

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isis[®] access management – Intelligent building technology starts at the (front) door

product design award 2009





According to a study by the Germany Association for Consumer Electronics (gfu), 13 % of German households control housing technology and appliances with a tablet PC or smartphone: in the smart home, as much as possible is networked and the benefits for residents and operators are manifold. These range from the efficient use of energy and meters that are able to communicate, showing the consumption and consumption times of energy or water, right through to access control – because: with the isis® systems from FSB, intelligent, digital building technology starts at the (front) door.

When it comes to access control, the focus is on several parameters: on the one hand the unrivalled quick reaction times when keys are lost, because lost identification media can be immediately digitally deleted and replaced, without having to physically intervene in the lock system. On the other hand, the almost unlimited options and likewise flexible modification possibilities in terms of building management, which affects the specific award of access authorisations and the use of rooms. And last but not least: convenience aspects. Whether you deal with isis® F (the biometric system for the front door), isis® M100 (the chip card-based starter package system) or isis® M300 (the online manageable access concept for complex requirements) as a builder, planner, facility manager or operator: isis[®] access management systems are the logical consequence of networked, digital building technology.

isis[®] access management stands for system intelligence, i.e. for scalable concepts that are only as complex as you need them to be and likewise for particular operating convenience. Moreover, we have strictly tuned isis[®] to the specific needs of builders: whether they are used for private house building, modernisation, renovation or conversion, by small businesses, the trades, medium-sized enterprises or corporate groups, for working and/or living, production or administration – whereever (many) people come together in buildings, isis[®] systems from FSB are ideal. With the isis[®] system family, we always offer the solution that it just right for you – also from a budgeting point of view. Take a look and see for yourself. 2

isis® M systems

isis[®] M combines digital authentication with mechatronic function. The technology processes submit to the users' need and operation is intuitive. From operating the door pull with all its ergonomic benefits to simply holding the identification medium in front of the lock, the unlimited ability to use it on almost any common type of door and assemble it like a fitting thanks to battery power without additional electrical design, through to the specially developed isis[®] software.

From page 53

isis® F series

The isis[®] F series impresses in an aesthetic, functional and ergonomic respect with its finger scanner integrated in the pull: with the Fingerscan pull, identification takes place directly on the pull and not on the door or even in the door peripherals. As you already know: "Simple is better than complicated."

From page 87

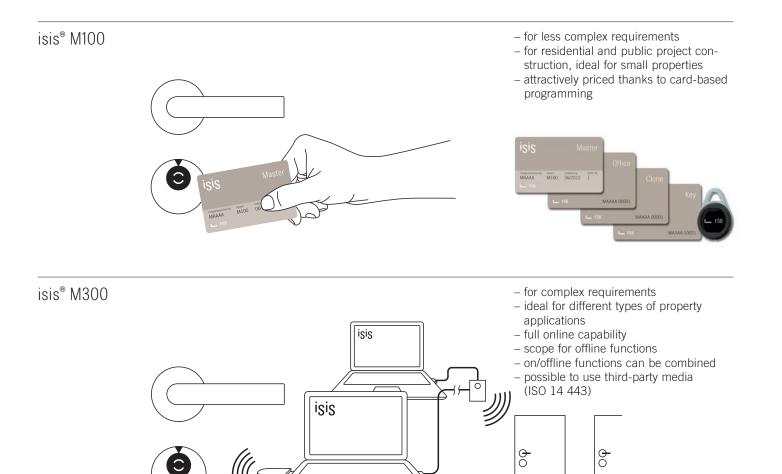
Overview of isis[®]

isis® M100 and isis® M300



isis® from FSB - for all types of building

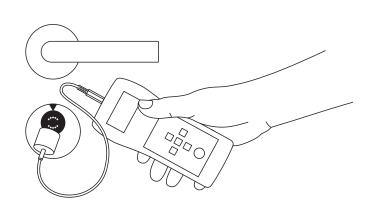
The isis® access management concept was specially aimed at the common building element types found in architecture. These include solid, frame and fully glazed doors as well as outside doors – naturally with the relevant approvals pursuant to DIN 18 273 (fire and smoke safety doors) and DIN EN 179 (emergency exit locks). In this respect, the hardware-based technology has not only proved to be an optimal constellation in terms of function, design and ergonomics, but also as an ideal way of producing an extremely consistent fitting "from one casting". Whether it is for a new or existing door plays just as little a part as the often separately required electrical design or the corresponding installation of the doors.





And as ideally as isis[®] fittings can be used on nearly all doors, the use of isis[®] systems in buildings is just as unlimited in principle: whether they are used for private house building, modernisation, renovation or conversion, by small businesses, the trades, medium-sized enterprises or corporate groups, for working and/or living, production or administration – wherever people move around in buildings, isis[®] systems from FSB are the perfect answer to all questions concerning access organisation. Beyond the core application, a number of specific functions and special features are possible, which we tailor to your individual needs. In this respect: tell us what we can do for you and which safety and organisation requirements there are in your building. It's in your hand – isis[®] from FSB.

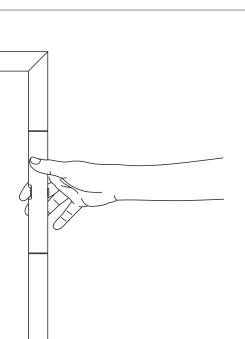
isis® T300



- for highly complex requirements and heterogeneous building structures
- ideal for different types of property applications
- possible to integrate third-party systems using various interfaces

- ideal for residential construction
- biometrics system in exclusive design
- with individual configurations; comes with a choice of three different control and functional concepts









- 54 isis[®] M100/M300 Intelligence with a system
- 56 isis[®] M Consistent right up to the outside door
- 58 Technology and functional description
- 59 Compact reader
- 60 isis[®] M100 Programming using a chip card
- 61 isis[®] M300 Online administration made child's play
- 62 System features and benefits
- 64 isis[®] M100 range of handles

isis[®] **M systems** incorporate the classic hardware expertise of FSB with all the convenience, flexibility and organisation aspects of an electronic system. isis[®] offers a new experience of keys from both a functional as well as from an aesthetic point of view.

54

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isis[®] M system from FSB: Because simple is better than complicated

isis[®] M100 incorporates the technical features and ergonomic merits of isis[®] access management systems in a compact "starter pack" that's child's play to handle. isis[®] M300, with identical design, convenience and functional features, stands for a network-capable solution for more complex requirements.

isis[®] M100 – child's play to handle thanks to card-based administration on the hardware itself

Whether for use in private houses, doctors' surgeries, lawyers' chambers or other premises of similar size: the far lower degree of complexity compared to conventional systems – there are no additional software installations, training sessions or external programming devices involved – makes isis[®] M100 the perfect solution for build-ings with few doors or tight budgets.

The difference to classic complex systems is the way in which the rights of access are managed. Whilst this is normally done using stationary software, isis[®] M100 operates with hardware-level programming, thus making it easier to get started with a networked, self-supporting system of electronic access management.

At the heart of isis® M100 are four key cards incorporating MIFARE[™] DESFire EV1 technology, which allow rights of access to be granted and deleted on the door itself: one master card, one key card (the actual "key - also available in the form of a key fob) plus clone card and the office card. It is remarkably easy to "train" or delete a key. The master is placed close to the hardware to initiate the programming process. After that the same is done with the key or the clone. Finished! The right of access is awarded and the key is ready to use. If the key is to be given the activation option of a permanent release (office function) in addition, the office card is first placed next to the fitting after the master. Key and clone card are "paired" with one another at the factory, meaning that it is possible to train or delete the key card without it being present using the clone card alone.

isis[®] M300 – Convenient thanks to LAN-based online administration

isis® M300 transfers the technical features and ergonomic benefits of the isis® concept to a network-capable solution for complex requirements. isis® M300 is the next step up from its "little brother", isis® M100, whose card-based programming makes it an ideal starter pack for smaller buildings. In medium to large buildings, isis® M300 reveals the benefits of a completely LAN-based system of administering rights of access, whereby any number of doors can be conveniently activated and administered from a PC. There is also scope for offline control on the actual hardware using a laptop combined with a USB transmitter stick. Users are authenticated at the door - as with isis® M100 – by holding a key card or key fob up close to the hardware.

isis[®] M systems = Always scalable + easy to administer

Short response times and contactless operation put isis[®] M300 streets ahead of electronic cylinder systems. With isis[®] M300 you will be opting for a compact solution notable for its ease of handling that performs admirably in buildings with large numbers of doors and users. Anyone using the isis[®] M100 starter pack can easily upgrade to isis[®] M300. Hardware such as identification media can continue to be used without restriction.

Door handle model FSB 1147 is shown on the following double-page spread as an example of the different fittings available.

For a system presentation, initial sales advice or to actually plan an isis[®] access solution, please contact us under info@ fsb.de. You will find a contact person in your vicinity at www.fsb.de/contact



Consistent and convenient right up to the outside door





isis[®] M systems: Only as complex as you need them to be

The low level of complexity without additional software installations and external programming devices makes isis[®] M100, with its card-based administration on the hardware, the perfect solution for buildings with few doors or tight budgets and is particularly recommended for smaller properties. "Run-around administration" comes to an end with isis[®] M300: isis[®] M300 relies on convenient administration software and a network of isis[®] access points, which take effect on the fittings online. In medium-sized or large buildings, controlling the hardware and allocating rights of access from a central PC/laptop is ideal.

Incidentally: isis[®] systems – like the rest of our supply range with more than 25,000 product – is certified according to ISO 14 025. isis[®] is therefore perfect for integration in efficient, user-friendly buildings that protect the environment.

Consistent

isis[®] M systems boast classical backplate/ rose visuals and are available for solid, glass and frame doors. Their ability to be combined with a host of attractive FSB door handle models in aluminium, stainless steel, brass and bronze ensures a perfect match with the surrounding architecture and your own personal taste. Readers for wall-mounting and a security fitting for outside doors are also available.





Child's play

At the heart of the isis[®] M systems is the battery-operated M10 identification unit. Housed in a rose or backplate, it ensures dependable communication with the isis[®] access points, the isis[®] RF USB stick and of course the identification media in the form of a key card or key fob. Optical and acoustic signals accompany the identification processes, which is triggered when the ID medium is held close to the hardware.

Secure inside and out

The convenient isis® operating concept is perfectly rounded off on outside doors: the security fitting used here can be combined with a self-locking lock and thus unites the benefits of contactless identification with programmed hardware functionality whilst having a security effect: as soon as the door closes, it is automatically locked. When positive identification is presented and the handle is operated, it is automatically unlocked again. The door can be opened without having to separately operate a cylinder or the like. The isis® M300 security fitting guarantees the secure protection of external points of access pursuant to DIN 18 257 security class ES-1 L-ZA (Reg. No. 3V63) and DIN EN 1906 security class 2. Moreover, isis® M fittings meet the requirements of directives 2002/95/EC (RoHS), 1999/5/EC and the R&TTE. You can find more information about this at www.fsb.de/reach_rohs

Technology and functional description



Identifiers are contactlessly authenticated by the electronic module with the aid of passive transponder technology. They are automatically recognised as being either authorised or unauthorised by the electronic module in the "key rose" upon being held up close to the hardware. The transponder in the identifier contains specified or custom-programmable information and yet requires no batteries and no maintenance whatsoever.

Passive transponder technology

"Passive transponder technology" means that the power needed to communicate and to complete internal processes is drawn solely from the field of the scanner, i.e. the identifier does not require its own supply of current.

The electronic module for the isis M system operates with MIFARETM chip technology by NXP. Data are communicated at a frequency of 13.56 MHz. Secure encryption with a suite-specific security feature is achieved in conjunction with the key cards on the basis of MIFARETM DESFire EV1. This technology meets the most exacting security specifications and is technically state-of-the-art.

FS approval for fire doors

isis[®] fittings from FSB mean a considerable simplification of the planning work as well as offering security about liability and complaints. As regards use on fire safety components, the isis[®] fittings are approved for fire safety and meet the applicable requirements according to DIN 18 273. Over and above this they can even be used for emergency exits with door handles pursuant to DIN EN 179 in conjunction with suitable locks.

Both for renovations and for new buildings, the advantages are clear: owing to its FS approval, isis[®] can be installed on corresponding fire doors, without having to add the use of the fitting to the building's monitoring documents. Already existing FS doors or even FS doors preconfigured with other fittings can continue to be used without any problems and isis[®] fittings can be used to bring them up to the latest level.

Readers with internal and external control unit







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Compact readers for activating peripheral functions

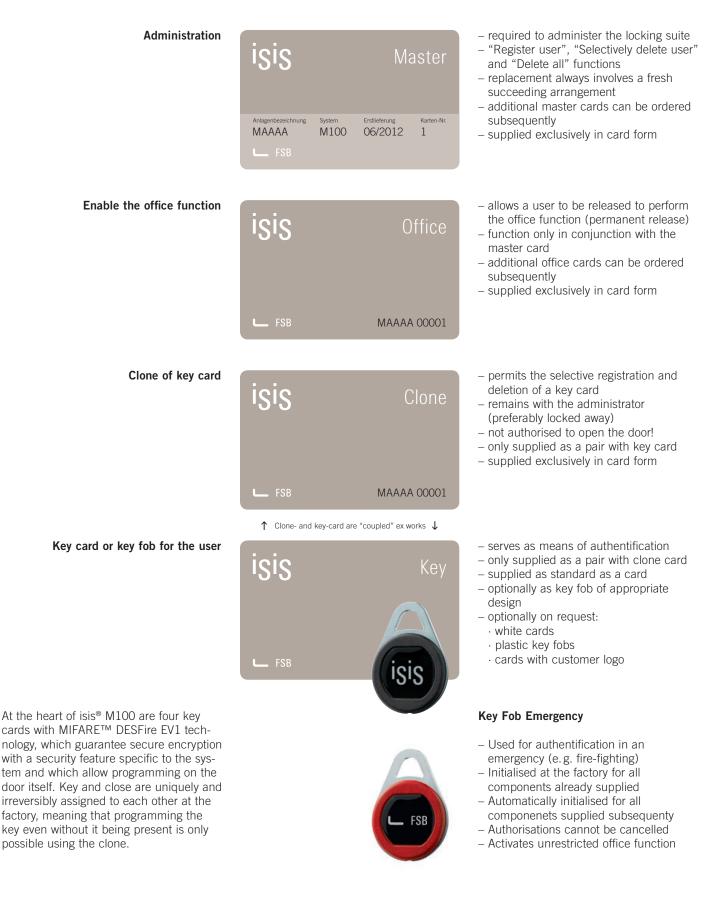
In addition to its classic door handle furniture for flush, glass and frame doors, FSB also supplies compact readers with integrated control units in housings made by noted manufacturers. There is a choice of a number of designs matching the standard product lines by these manufacturers. The administration and operating concept corresponds to that of the isis[®] M door handle furniture, thus guaranteeing the comprehensive continuity one is accustomed to from FSB. Compact readers enable motorised locks and door openers to be actuated, but can also be used for turnstiles, parking barriers and various other peripheral items used in building automation (e.g. for lift or light control systems) both indoors and out. ELCOM Modesta, Siedle Vario and Gira TX44 are for use in outdoor settings, as their housings also have an IP44 rating. The Gira Event model comes in a variety of different colour schemes for fitting indoors.

As is generally the case, when operating the device in conjunction with electronic motor locking mechanisms or electric door openers, it is necessary to ensure the relevant technical prerequisites are fulfilled. isis[®] compact readers in the housing design of (from left to right):

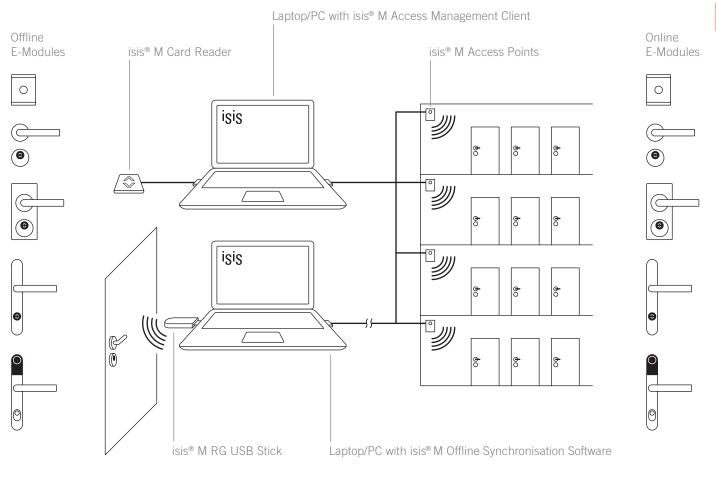
- ELCOM Modesta
- Gira Event
- Gira TX44
- Siedle Vario

You can find the different isis[®] compact readers available to order on page 84 f.

isis® M100 Programming using chip card

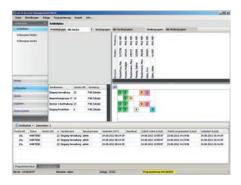


isis® M300 Online administration child's play



Underpinning isis M300 is isis access management software for administration of the lock suite from a PC/laptop. This is complemented by components for either radio networking throughout the building or hardware-level actuation.

User-friendly isis access management software is wholly responsible for the administration of the isis M300 system as well as for awarding and deleting access rights as appropriate. The rights of given identifiers may be limited for each fitting by means of time profiles applicable to the entire system. Communication with fittings can be effected either via LAN-networked isis access points (online mode) or using a laptop in conjunction with the isis USB transmitter stick in the direct vicinity of a fitting (offline mode). Actuation is performed with the aid of a transmitter stick at locations in a building at which there are no access points, e.g. in the case of



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Creating a locking plan

single doors beyond the range of an access point or in areas in which radio networks are either not permissible or not feasible. isis M300 can be installed as a purely online, purely offline or hybrid system.

Administering specific time profiles

fsb.de/catalogue

isis[®] **M** Characteristics and advantages of the system

Characteristics of the system

- Flexible administration of access authorisations for keys on fittings and readers
- Corresponds to EN 1906 class 4
- Approval to DIN 18 273 (fire and smoke doors)
- Approval to DIN EN 179 (emergency exit locks), in combination with APK locks
- Contact-free communication between keys and fittings or readers
- Passive technology with MIFARE DES-Fire EV1 transponders in conjunction with security features specific to the installation
- Keys contain an identification feature specific to the installation
- Both individual access and office function possible
- Modular and flexibly extensible locking system
- Power supplied to fittings by means of lithium battery 3.6V 1/2 AA. Service life approx. 2.5 years depending on type of function and operating frequency
- The access information is stored in the fitting or the reader

Advantages of the system

- If the key is lost:
 - high organisational security and low maintenance costs by simply deleting lost keys
- \cdot it is not necessary to replace parts of the locking system
- Quick response times and contact-free electronic identification,
- combined with particularly convenient operation of the hardware using the door handle
- Unlimited flexibility when changing room usage and access authorisations
- The only hardware solution across the sector which uses classic roses which look like they are designed for the home
- Available in aluminium, stainless steel, brass and bronze
- Available in various handle designs, custom versions possible on request
- Suitable for interior doors made of glass, wood and steel as well as frame doors; the only electronic access control fitting solution for full glass doors across the sector.
- Hardware-based solution
- Quick and easy installation
- No problem to supply emergency power via external 9V battery (in case of security fitting for external doors, possible to open in an emergency using mechanical locking cylinder)
- Easy to handle for the user with uniform operating and signalling concept

Planning benefits

- Stand alone solution which does not require on-site preparations for electrical power or connections to external interfaces
- Power supplied to the hardware independently from the electrical network using an integrated battery for maximum flexibility from the planning phase onwards
- Quick and easy installation
- Use is simple and flexible, suitable for all Euro cylinder locks to DIN standards
 from a backset of 50 mm with an operating angle of max. 30° for rose fittings,
 - from a backset of 30 mm with an operating angle of max. 30° for tubular frame fittings und
 - from a backset of 35 mm with an operating angle of max. 39° for security fittings
- It is possible to easily retrofit to existing doors and locks
- External entrances: unique combination of technology, convenience and security effect by combining isis[®] M security fittings with self-locking systems
- Harmonised part of FSB's comprehensive range of heavy-duty door and window fittings and products to equip the interiors of large buildings
- Customer-related organisational philosophy in the factory: all of the electronic components which belong to a building are given a dedicated security parameter
- Highest security for orders: you must possess the master to be able to order additional components
- System upgrades e.g. from isis[®] M100 to M300 possible without replacing the fittings or readers

isis[®] **M100 + isis[®] M300** Specific system features and benefits

System features	isis [®] M100	isis® M300			
	 For residential construction, ideal for smaller properties 	 Ideal for various project applications with complex system requirements and building structures 			
	 For buildings with less complex system requirements Attractively priced thanks to card-based programming No software, complex administration or dedicated hardware such as programming devices required Access authorisation is contactlessly registered or deleted by holding the master and key/clone cards up close 	 Fully online-capable by means of LAN- based wireless network, authorisations are awarded directly Offline-capable using netbook and RF USB stick, authorisations are awarded indirectly Both online and offline components car be used in one locking concept The use of contactless external media pursuant to ISO 14 443, e.g. MIFARE Classic on UID basis without security features is possible after testing 			
System benefits	isis® M100	isis® M300			



isis® architectural tours

changes

Projects using various isis[®] system solutions can be found under

media can continue to be used without

fsb.de/rathaus_brakel fsb.de/gymnasium_bochum fsb.de/erichkaestner_schule_oelde fsb.de/st_petri_hoexter

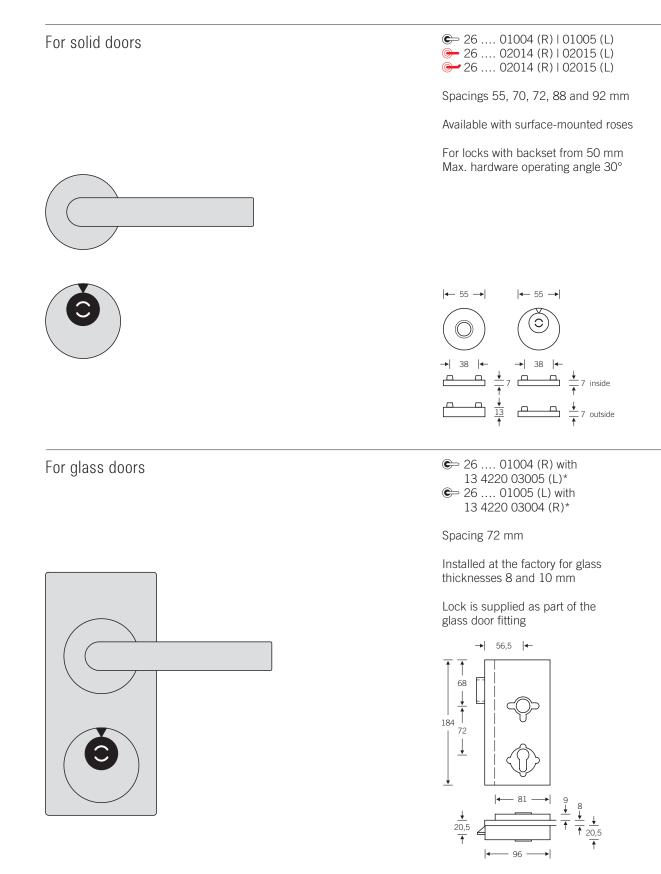
isis® M300 white paper

Our white paper provides you with detailed and extensive information about all the functions, features and benefits of isis[®] M300 listed here. You can find the white paper (PDF) under

fsb.de/isisM300

2a

isis® M100 Hardware sets



* Also possible for glass door fitting

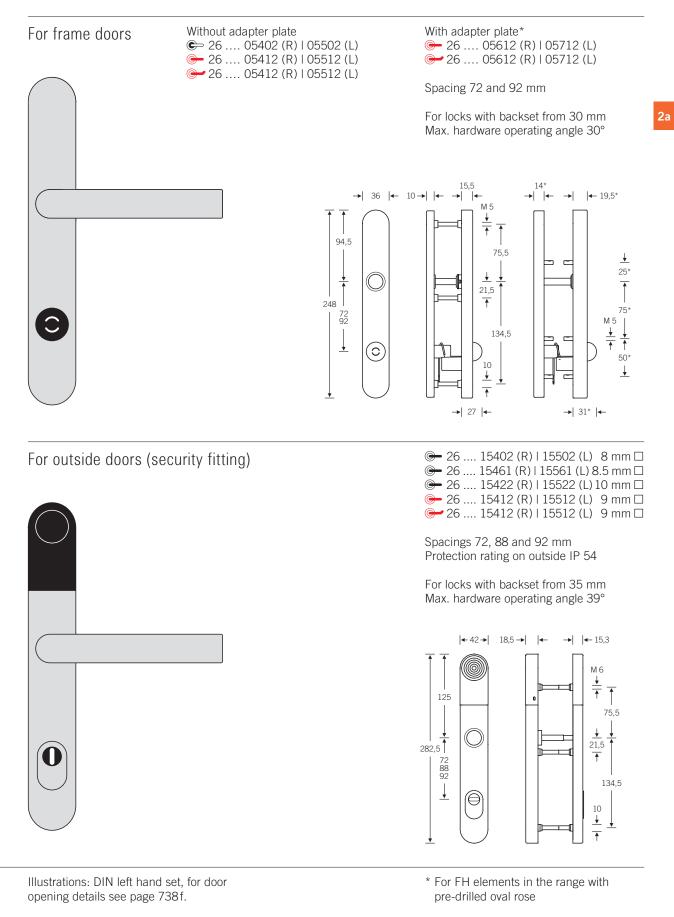
panic lock

13 4223, for dimensions see dimension

drawing (identical), glass door fitting can also be supplied with self-locking anti-

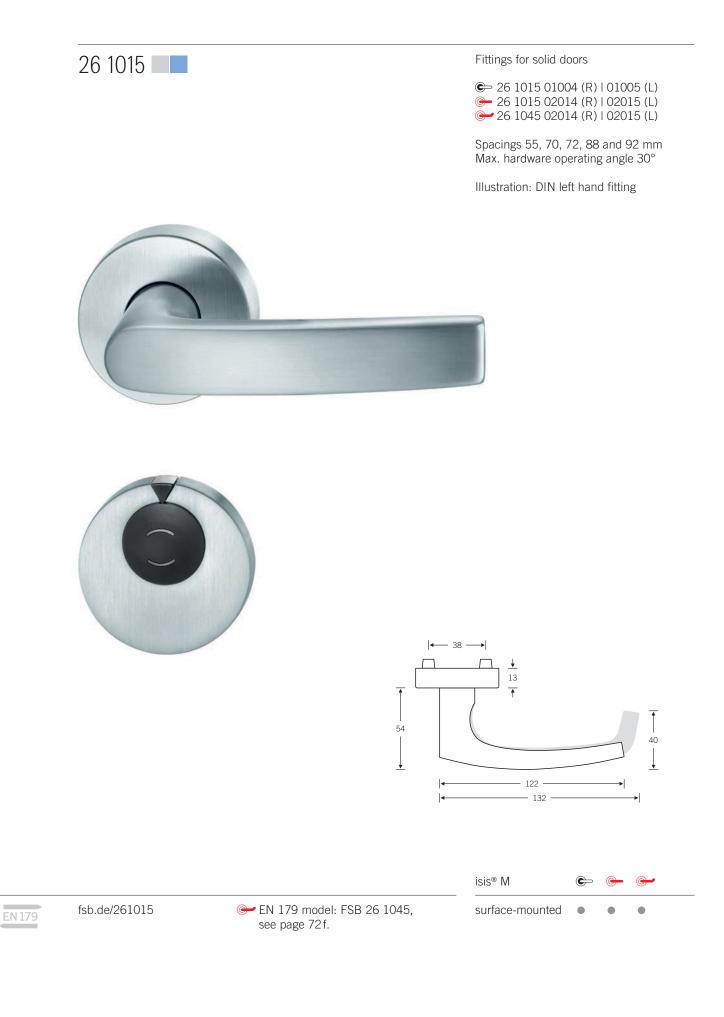
Illustrations: DIN left hand set, DIN right hand glass door fitting, for door opening details see page 738 f.

The number of the FSB door handle model must be added to the item number.



The number of the FSB door handle model must be added to the item number.

isis® M100





For door opening details see page 738 f.

To plan an isis[®] access solution, please contact us at info@fsb.de. You will find a contact person in your vicinity at www.fsb.de/contact

- * For FH elements in the range with pre-drilled oval rose
- ** Also possible for glass door fitting 13 4220

Fittings for glass doors

 C= 26 1015 01004 (R) with 13 4223 03005 (L)**
 C= 26 1015 01005 (L) with 13 4223 03004 (R)**

Spacing 72 mm

Installed at the factory for glass thicknesses 8 and 10 mm

Lock is supplied as part of the glass door fitting

Illustration: DIN left hand fitting and DIN right hand glass door fitting

Fittings for frame doors

With adapter plate* 26 1015 06612 (R) | 06712 (L) 26 1045 06612 (R) | 06712 (L)

Spacing 72 and 92 mm

For locks with backset from 30 mm Max. hardware operating angle 30°

Illustration: DIN left hand fitting

Fittings for outside doors

- G 26 1015 16402 (R) | 16502 (L) 8 mm □
- ⊕ 26 1015 16461 (R) | 16561 (L) 8.5 mm □
- ⊕ 26 1015 16422 (R) | 16522 (L) 10 mm □
- General 26 1015 16412 (R) | 16512 (L) 9 mm □
- e 26 1045 16412 (R) | 16512 (L) 9 mm □

Spacings 72, 88 and 92 mm For locks with backset from 35 mm Max. hardware operating angle 39°

Illustration: DIN left hand fitting

Additional items for large buildings:

Product family FSB 1015 | Page 126 f. SSF tubular frame locks with optional through screw connection | Page 406 Barrier-free ErgoSystem® | Page 629 f.

isis® M100



EN 179



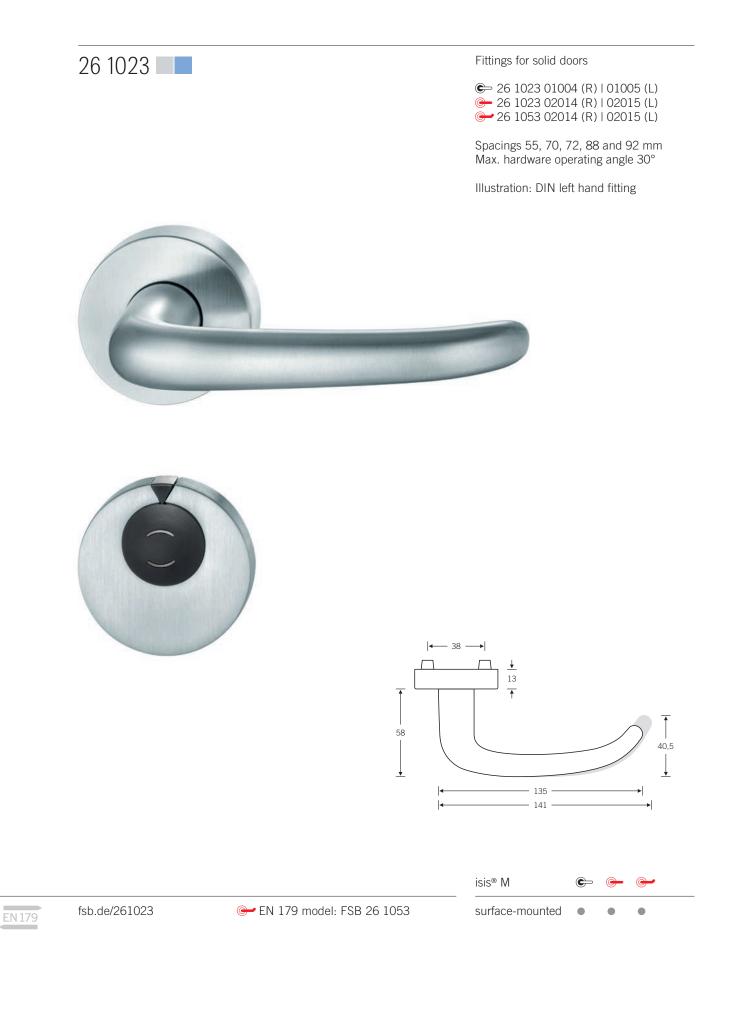
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- * For FH elements in the range with pre-drilled oval rose
- ** Also possible for glass door fitting 13 4223

2a

Additional items for large buildings:

Product family FSB 1016 | Page 130 f. SSF tubular frame locks with optional through screw connection! Page 406 Barrier-free ErgoSystem® | Page 629 f.





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- * For FH elements in the range with pre-drilled oval rose
- ** Also possible for glass door fitting 13 4220

Illustration: DIN left hand fitting and DIN right hand glass door fitting

€ 26 1023 06402 (R) | 06502 (L) General 26 1023 06412 (R) | 06512 (L) (CHR) = 26 1053 06412 (R) | 06512 (L)

₢── 26 1023 06612 (R) | 06712 (L) @ 26 1053 06612 (R) | 06712 (L)

For locks with backset from 30 mm Max. hardware operating angle 30°

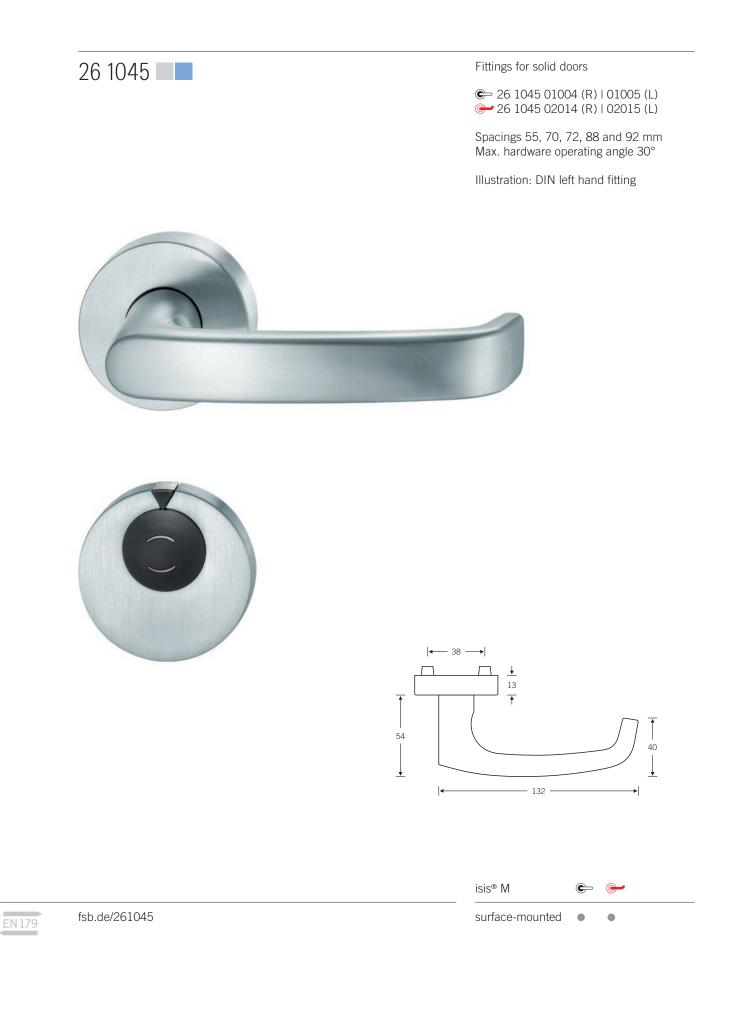
- ⊕ 26 1023 16402 (R) | 16502 (L)
- 🕒 26 1023 16461 (R) | 16561 (L)

For locks with backset from 35 mm Max. hardware operating angle 39°

Illustration: DIN left hand fitting

Additional items for large buildings:

Product family FSB 1023 | Page 138f. SSF tubular frame locks with optional through screw connectionl Page 406 Barrier-free ErgoSystem® | Page 629 f.





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- * For FH elements in the range with pre-drilled oval rose
- ** Also possible for glass door fitting 13 4220

Illustration: DIN left hand fitting and DIN right hand glass door fitting

€ 26 1045 06402 (R) | 06502 (L)

@~26 1045 06612 (R) | 06712 (L)

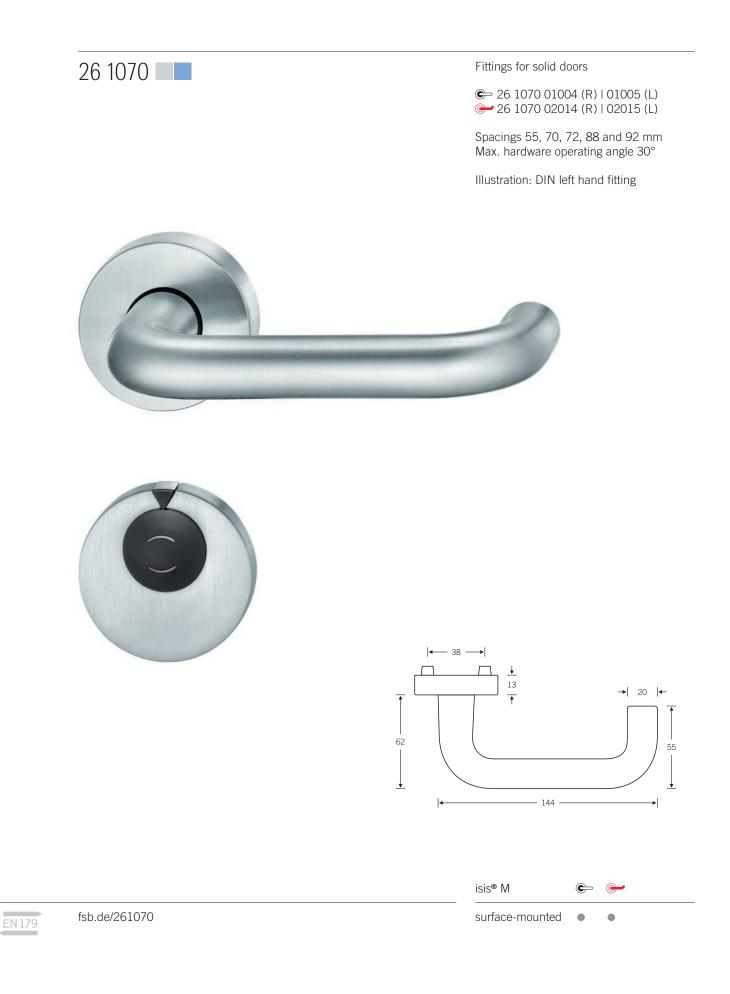
For locks with backset from 30 mm Max. hardware operating angle 30°

- ⊕ 26 1045 16402 (R) | 16502 (L)
- 🕒 26 1045 16461 (R) | 16561 (L)
- 🕒 26 1045 16422 (R) | 16522 (L)
- 26 1045 16412 (R) | 16512 (L)

For locks with backset from 35 mm Max. hardware operating angle 39°

Additional items for large buildings:

Product family FSB 1045 | Page 154 f. SSF tubular frame locks with optional through screw connectionl Page 406 Barrier-free ErgoSystem® | Page 629 f.



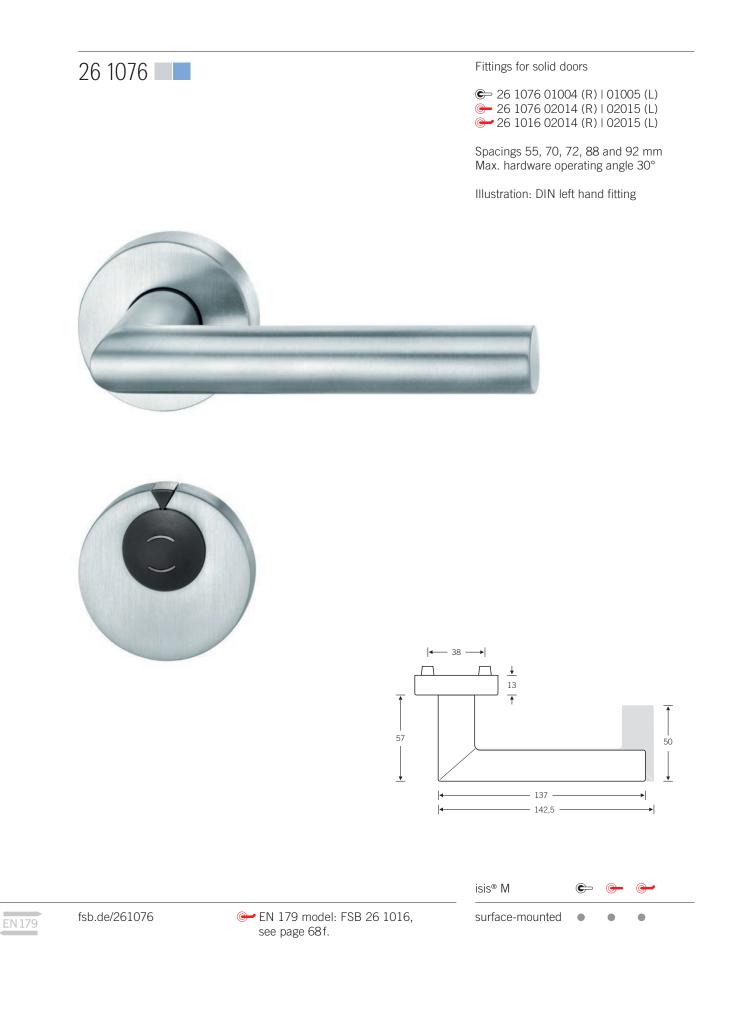


To plan an isis® access solution, please contact us at info@fsb.de. You will find a contact person in your vicinity at www.fsb.de/contact

- * For FH elements in the range with pre-drilled oval rose
- ** Also possible for glass door fitting 13 4220

Product family FSB 1070 | Page 164 f. SSF tubular frame locks with optional through screw connectionl Page 406

Barrier-free ErgoSystem® | Page 629 f.





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- * For FH elements in the range with pre-drilled oval rose
- ** Also possible for glass door fitting 13 4223

Illustration: DIN left hand fitting and

€ 26 1076 06402 (R) | 06502 (L) General Content (€ 26 1076 06412 (€) | 06512 (€) (CHR) = 26 1016 06412 (R) | 06512 (L)

₢── 26 1076 06612 (R) | 06712 (L) € 26 1016 06612 (R) | 06712 (L)

For locks with backset from 30 mm Max. hardware operating angle 30°

- ⊕ 26 1076 16402 (R) | 16502 (L)
- 🕒 26 1076 16461 (R) | 16561 (L)
- 🕒 26 1076 16422 (R) | 16522 (L)
- 26 1076 16412 (R) | 16512 (L)

For locks with backset from 35 mm Max. hardware operating angle 39°

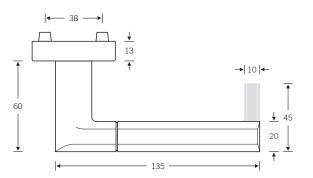
Illustration: DIN left hand fitting

Additional items for large buildings:

Product family FSB 1076 | Page 170 f. SSF tubular frame locks with optional through screw connectionl Page 406 Barrier-free ErgoSystem® | Page 629 f.











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- * For FH elements in the range with pre-drilled oval rose
- ** Also possible for glass door fitting 13 4223

Lock is supplied as part of the

Illustration: DIN left hand fitting and DIN right hand glass door fitting

€ 26 1078 06402 (R) | 06502 (L) General Content (€ 26 1078 06412 (€ 106512 (€ 106512) (e→ 26 1088 06412 (R) | 06512 (L)

₢── 26 1078 06612 (R) | 06712 (L) @ 26 1088 06612 (R) | 06712 (L)

For locks with backset from 30 mm Max. hardware operating angle 30°

Illustration: DIN left hand fitting

- ⊕ 26 1078 16402 (R) | 16502 (L)
- 🕒 26 1078 16461 (R) | 16561 (L)
- 🕒 26 1078 16422 (R) | 16522 (L)
- 26 1078 16412 (R) | 16512 (L)

For locks with backset from 35 mm Max. hardware operating angle 39°

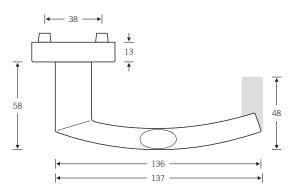
Illustration: DIN left hand fitting

Additional items for large buildings:

Product family FSB 1078 | Page 176 f. SSF tubular frame locks with optional through screw connectionl Page 406 Barrier-free ErgoSystem® | Page 629 f.









Door handle with a straight grip section: FSB 1108 see page 196f.

EN 179



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- * For FH elements in the range with pre-drilled oval rose
- ** Also possible for glass door fitting 13 4220

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Additional items for large buildings:

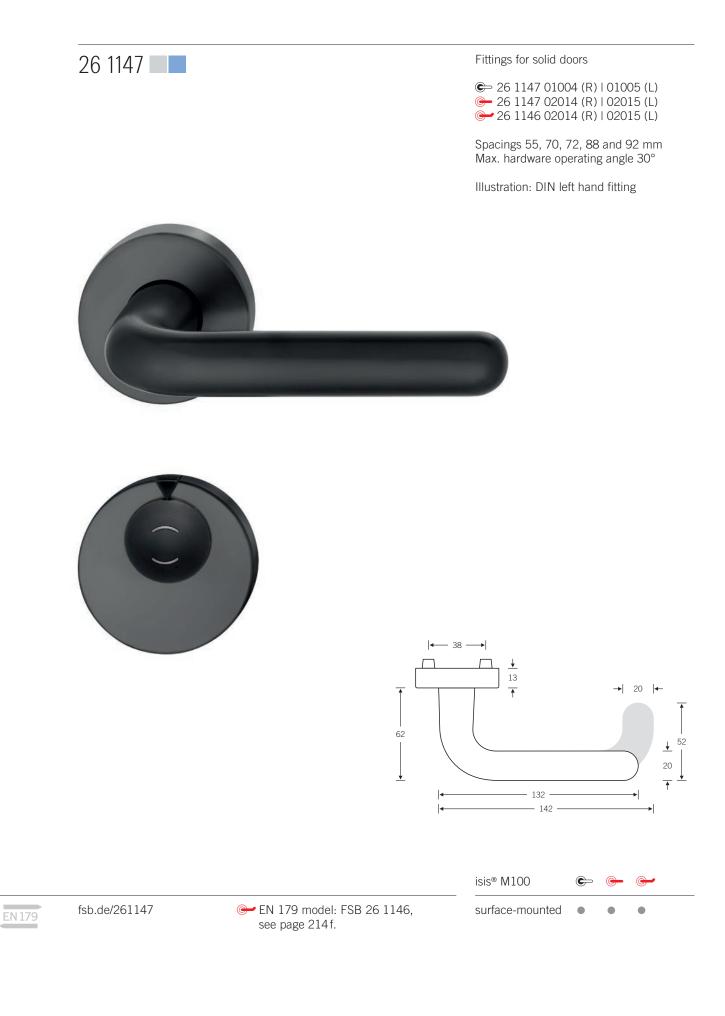
Product family FSB 1107 | Page 192 f.

SSF tubular frame locks with optional

through screw connectionl Page 406

Barrier-free ErgoSystem® | Page 629 f.

isis® M100





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- * For FH elements in the range with pre-drilled oval rose
- ** Also possible for glass door fitting 13 4220

Additional items for large buildings:

Product family FSB 1147 | Page 218f.

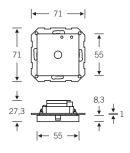
SSF tubular frame locks with optional

through screw connectionl Page 406

Barrier-free ErgoSystem® | Page 629 f.

isis[®] M100 Readers for wall-mounting

Reader modules, **ELCOM Modesta** with internal control unit 26 2504 00050 6204 for external control unit 26 2504 00051 6204 26 2504 00052 6204 (surface-mounted frame) 26 2504 00053 6204 (flush-mounted frame) Stainless steel (6204) Protection rating IP 44 - 120 -0 120 85 110 ↓ - 85 -• ↓ 32 1 110 Reader modules, Gira Event with internal control unit 26 2504 00150 for external control unit 26 2504 00151 26 2504 00154 (cover frame) Anthracite (8802), Pure white matt (9020) Protection rating IP 20 Only assembled in flush-mounted box isis



External flush-mounted control unit 26 2504 00201 8100 External control unit top-hat rail 26 2504 00200 8100 The dimension drawings always relate to the reader module

Gira TX44



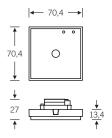
Siedle Vario



Reader modules, with internal control unit 26 2504 00152 for external control unit 26 2504 00153 26 2504 00155 (cover frame)

Anthracite (8802), Pure white (9020)

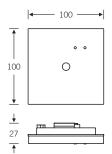
Protection rating IP 44 Only assembled in flush-mounted box



Reader modules, with internal control unit 26 2504 00100 for external control unit 26 2504 00101 Surface mounting 26 2504 00104 (mounting frame) 26 2504 00102 (housing) Flush mounting 26 2504 00104 (mounting frame) 26 2504 00105 (combination frame) 26 2504 00103 8800 (housing)

White (8220), Silver metallic (8826)

Protection rating IP 44



External flush-mounted control unit 26 2504 00201 8100 External control unit top-hat rail 26 2504 00200 8100 The dimension drawings always relate to the reader module

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76 isis® F

2b

isis[®] **F door pulls with Fingerscan technology** read from a single finger whether you get access ... or not. Biometric systems have been used in banks and high security areas for many years. Now this technology is also available for home doors, combined with FSB's familiar first class design.

Thanks to isis[®] F (Fingerscan) your key is always in your hand

With door pulls in the isis® F series (previously Fingerscan 2.0) from FSB, you always have your keys at hand - in the truest sense of the word. Lost or even stolen keys are now finally a thing of the past. Another advantage is in the flexible arrangement of access rights. If for example you have friends or relatives to stay for a few days, you can easily grant them access to your home and simply delete the authorisation when they leave. In this way, you can conveniently program up to 99 fingers via the menu-guided programming unit and enable or delete them. It is also child's play to operate the Fingerscan door pull. Just draw a finger over the scanner and open the door.

You can choose between three different designs of pull: two classic designs with a diameter of 30 or 35 mm (recently also available in an offset version) as well as a pull with an oval cross section of 38.5×20 mm. The straight model with a diameter of 35 mm is also available in bronze as an alternative. To exactly match your Fingerscan pull to the proportions of your entrance door, FSB provides you with the option, for a small additional charge, of customising both the length and the position of the reader unit.

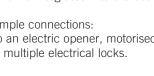
isis[®] F at a glance:

- Unique convenience: Puts an end to the search for lost keys, forgotten access codes or cards. Additional convenience through the combination with motorised locks.
- High comfort: You key is always "at hand" - one key/finger opens the door to the house, garage door, garden gate, office etc.
- Individual configurations: Choose between 3 different control units for the variant which best matches your functional requirements.
- Ergonomics: Easy to use due to the integration of the biometric reader into the door pull.
- Security from loss: It is no longer possible to lose or forget your keys and lock yourself out.
- Security from theft: It is not possible for your key to be stolen. Additional security through the combination with motorised locks.

- Proof against forgery: Every finger is unique.
- Tamper proof: The system cannot be affected from outside as data is encrypted making it secure.
- Easy to use: Users save or delete the authorisations themselves (without a PC or a technician) via a menu-guided control unit which is integrated into the door.
- Simple connections: To an electric opener, motorised lock or multiple electrical locks.
- Suitable for outdoor use: from -40 °C to +85 °C
- Maximum service life:
- Damage: Insensitive to minor damage and cuts.
- 24 month guarantee







- Up to 4 million operations

Access with a system: Can be individually adjusted and flexibly extended

isis[®] F is available in three different versions of the system:

isis® F100 – with a relay to control an electric motor lock or an electric door opener.

isis® F200 – with two relays to control peripheral equipment or other functions, such as burglar alarms or garage door openers.

isis® F300 – with three relays to control peripheral equipment or other functions such as burglar alarms or garage door openers – as a surface mounted or tophat rail solution (control unit).

You will find a detailled comparison on page 91. The three scenarios described below can each be realised using the three versions mentioned.

Retrofitting on existing doors

The FSB isis[®] F door pull can also be fitted to existing doors, which do not have a motorised lock or a motor-driven multipoint locking system.

Apart from the low investment costs, the isis[®] F door pull convinces in this case, if the door is only held for example during the day by the catch, in combination with an electric door opener. This can be controlled directly via isis[®] F and will release the catch on positive identification. It is also possible to open the door from a distance. The door is "classically" locked manually via the locking cylinder.

Unlocking the door via an intercom or an external push-button

The isis[®] F door pull is compatible with all of the significant motor operated multipoint locking systems and security locking components on the market. This applies amongst others for Winkhaus, KFV, G.U, Roto and Fuhr, so that you do not have to do without this convenience.

The advantage here is that the door is not only held by the catch and released by the external push-button, but the door is completely bolted and unbolted for each closing & opening operation.

In this respect, this constellation is the most secure, as the door is always "locked" as specified in the insurance requirements. This applies both for operation with and without the remote opening function.

"Opening times" or access rules defined by the time

isis[®] F also offers corresponding extension options for requirements like this, for example for the opening times of your business premises.

Within a combination of electric door openers with unlocking, at the same time it is possible to directly control the motor lock electronically for day-time/nighttime operation. For this either a manually operated switch or a programmable control relay is suitable, which is directly connected to the motorised lock. For daytime operation, the door remains unlocked in both cases, for night-time operation the door will be completely bolted or unbolted after every opening/closing procedure. To define this, all you have to do is program the weekdays and the corresponding times once into the control relay so that the door can be opened during business hours without fingerprint identification. When switching manually, you have to switch between day and night mode each day.

At the installation site, a qualified electrician must make the electrical connection to the isis[®] F door pull.

Plug and play

The new plug-in cable connectors make it possible to install the isis[®] F door pulls using the "plug and play" principle. Tedious stripping of the cable insulation, cutting the wires to length and the risk of incorrect polarity are now all a thing of the past.

Your systems & technology partner



Always at hand: Your fingers

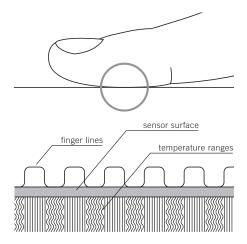
	FSB isis [®] F					
	isis [®] F100	isis® F200	isis® F300			
Field of use		private				
Number of fingers		99				
Relays	1	2	3			
Installation height	Scanner centre 1200 mm above finished floor level					
Power supply	230 V AC or 110 V AC via an external power supply unit					
Input voltage	8–24 or 8–3	9–12 V AC or DC				
Power consumption	appro	x.1W	approx. 2 W			
Time-controlled access authorisation	—	ternal switch				
Temperature range Scanner	−40 °C to +85 °C					
Humidity		max. 95 %				
Biometric parameters	FAR* 1	× 10 ⁻⁶ / FRR** 1.4	4 × 10 ⁻²			
Security from power failure		Data is saved and will not be lost				
Security of finger scanner	tamper-protected					
Guarantee	24 months					
Service life	4 million finger scans (under normal conditions)					

 * FAR = False Acceptance Rate: The system recognises a person who has not yet been registered in the system with a probability of approx. 1.0×10^{-6}

**FRR = False Rejection Rate: The system doesn't recognise a person who has been registered in the system with a probability of $1.4 \times 10^{\circ}$

Biometric systems have been used for many years in banks and high security areas. Now biometric systems are available which are also suitable for every day use, at home or at work. Today's systems scan optically, capacitively or thermally. Owing to its high security from tampering and its resistance to environmental influences, not to mention the best scanning results, we have integrated a thermal linear sensor.

Special characteristics are filtered out from the scanned image of your finger, so-called minutiae, they are stored as a biometric key and a comparison is made. The determining factor here is not the "pattern" of your fingerprint, but the temperature differences at specific points, at the "peaks" and "troughs" of your fingerprint. This means that it is not possible to manipulate the system with fingerprints taken from other surfaces. No image data is saved, just a binary code which is impossible reproduce as a fingerprint.



isis" F door pulls

24 6538	Product no.	А	Ø	В
	24 6538 04524 (R) 24 6538 04525 (L) 24 6538 09924 (R) 24 6538 09925 (L)	450 450 custom custom	38,5/20 38,5/20 38,5/20 38,5/20	225 225 see below see below
	A dimensions up to 8 B: min. 150 mm / ma	00 mm poss ax. 650 mm	sible	
3	Illustration: right-hand	d version		

fsb.de/246538

92

24 6669	Product no.	А	Ø	В	
24 6607	24 6669 04523 24 6669 09923	450 custom	30 30	225 see belov	
	24 6607 04523 24 6607 09923	450 custom	35 35	225 see belov	
9	24 6669 A dimensions up B: min. 150 mm	to 1300 mm / max. 1150	possible mm	S = 55 mm	
	24 6607 A dimensions up to 1500 mm possible S = 57 mm B: min. 150 mm / max. 1350 mm				
	S Safety spacing	ÿ			
8					
e		1			
	Ø30/35 -	• •			
	$\overline{\uparrow}$ U				

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isis" F door pulls

24 6630	Product no.	А	Ø	В	L		
24 6531	24 6630 03024 (24 6630 03025 (24 6630 099 (24 6630 099 (L) 300 R) custom	30 30 30 30	150 150 s.b. s.b.	custom		
	24 6531 099 (24 6531 099 (s. b. s. b.	at least 500 at least 500		
	24 6630 for possible dime	nsions, see pa	ge 95				
C	24 6531 for possible dime	nsions, see pa	ge 96				
		When used on double doors in combination with 66 6630 or 66 6531 standard, please note the differing support dimensions.					
		The illustrations on the following pages will help you with the configuration.					
8	Illustration: right-l	hand version					
	With FSB you do pulls in the truest you want an isis® dividually matche your door, FSB 2- just the right choi models exactly to They have a round well as round sup of over 1500 mm arrangement mak ommended for us with a narrow pro doors.	sense of the v F door pull the d to the dimer 4 6630 and 24 your size spec d pull cross-se ports and mal possible. The ses these door se on entrance	vord. at is ir sions 6531 e both cificati ection ke leng crank pulls doors	If of are ons. as gths ed rec-			
	The illustrations of will help you with			S			

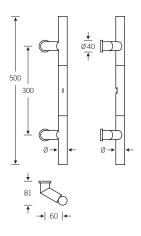
fsb.de/246630 fsb.de/246531

isis[®] F door pulls

24 6630

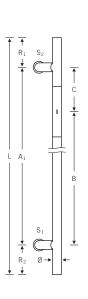
Ø = 30 mm

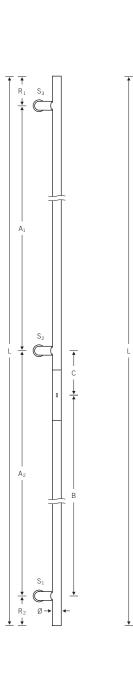
When used on double doors in combination with 66 6630 Standard please note the differing support dimensions.



24 6630 03024 (R) 24 6630 03025 (L)

Scanner central





 R_1

Α1

 S_2

 \square

A₂

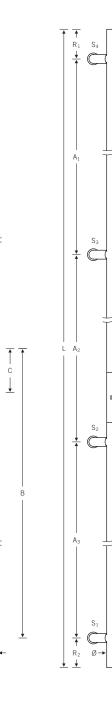
 S_1

ø-

 $\frac{1}{\uparrow}$ R₂

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S₃ +



1

С

Ļ

В

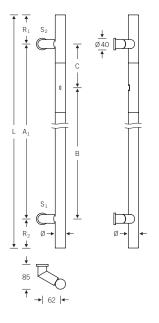
	630 09924 (R) 630 09925 (L)		630 09934 (R)* 630 09935 (L)*		6630 09936 (R)** 6630 09937 (L)**		6630 09944 (R) 6630 09945 (L)
$\begin{array}{c} R_1 \\ A_1 \end{array}$	30–350 mm 300–1200 mm	$\begin{matrix} R_1 \\ A_1 \\ A_2 \end{matrix}$	30–350 mm 100–1200 mm 300–1200 mm	$\begin{matrix} R_1 \\ A_1 \\ A_2 \end{matrix}$	30-350 mm 300-1200 mm 100-1200 mm	R ₁ A ₁ A ₂	30–350 mm 100–1200 mm 300–1200 mm 100–1200 mm
R ₂ C B L	30–350 mm 150–1050 mm 150–1050 mm R ₁ +A ₁ +R ₂	R ₂ C B L	30-350 mm 150-1050 mm 150-1050 mm R ₁ +A ₁ +A ₂ +R ₂	R ₂ C B L	30-350 mm 150-1050 mm 250-2250 mm R ₁ +A ₁ +A ₂ +R ₂	R ₂ C B L	30–350 mm 150–1050 mm 250–2250 mm R ₁ +A ₁ +A ₂ +A ₃ +R ₂

The cable outlet can be individually selected for one of the illustrated supports. * Scanner beneath the central support, ** Scanner above the central support

isis[®] F door pulls

24 6531 Ø = 35 mm

When used on double doors in combination with 66 6531 Standard please note the differing support dimensions.

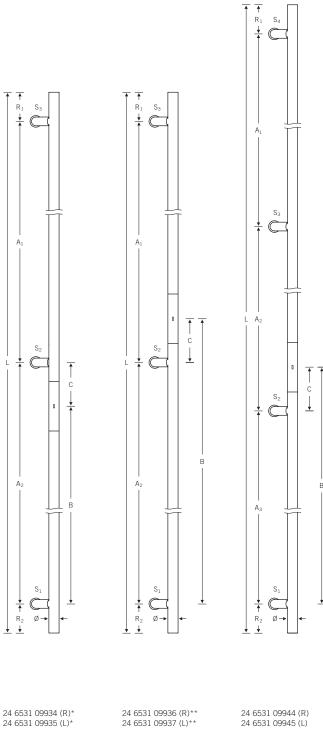


24	6531	09924	(R)
24	6531	09925	(L)

R,	30-350	mm
A ₁	300-1200	mm



The cable outlet can be individually selected for one of the illustrated support. * Scanner beneath the central support, ** Scanner above the central support



4 6531 0993 4 6531 0993			31 09936 (R)** 31 09937 (L)**		531 09944 (R) 531 09945 (L)
100-1 300-1 30-1 150-1	350 mm 200 mm 200 mm 350 mm 250 mm	$\begin{array}{c} R_1\\ A_1\\ A_2\\ R_2\\ C\\ C\\ C\\ C \end{array}$	30–350 mm 300–1200 mm 100–1200 mm 30–350 mm 150–1050 mm	$\begin{array}{c} R_1\\ A_1\\ A_2\\ A_3\\ R_2\\ C \end{array}$	30–350 mm 100–1200 mm 300–1200 mm 100–1200 mm 30–350 mm 150–1050 mm
	050 mm ₁ +A ₂ +R ₂	B L	250-2250 mm $R_1+A_1+A_2+R_2$	B L	250-2250 mm R ₁ +A ₁ +A ₂ +A ₃ +R ₂

 $\begin{array}{c} \mathsf{R}_1\\ \mathsf{A}_1\\ \mathsf{A}_2\\ \mathsf{R}_2\\ \mathsf{C}\\ \mathsf{B}\\ \mathsf{L} \end{array}$



Heavy-duty fittings and accessories

3

Music Theatre Linz www.landestheater-linz.at/musiktheater

Terry Pawson Architects, London www.terrypawson.com

Architektur Consult, Graz, Vienna www.archconsult.com

FSB 1163 range of handles, see page 230 ff. (Design: Hans Kollhoff)

FSB 1045 range of handles, see page 154 ff.

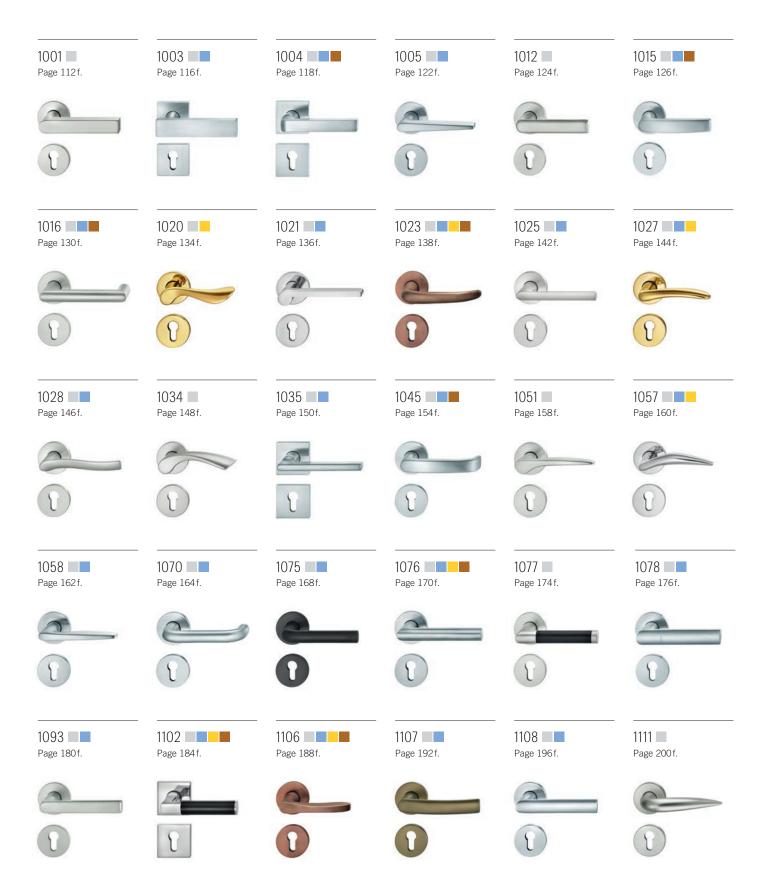
AGL®-/AGL® FS heavy duty fittings for fire and smoke doors, see page 26 ff. Frame door fittings for fire and smoke doors FSB 06/09 1045, see page 397 ff. FSB 34 1163 and FSB 34 1015 window handles, see page 315 ff. FSB 34 3407 window handle locks, see page 352 FSB 34 3470 pushpin forced locks, see page 347 FSB 42 4250 flush pulls, see page 366 Fittings for emergency exits FSB 77 7980, see page 453

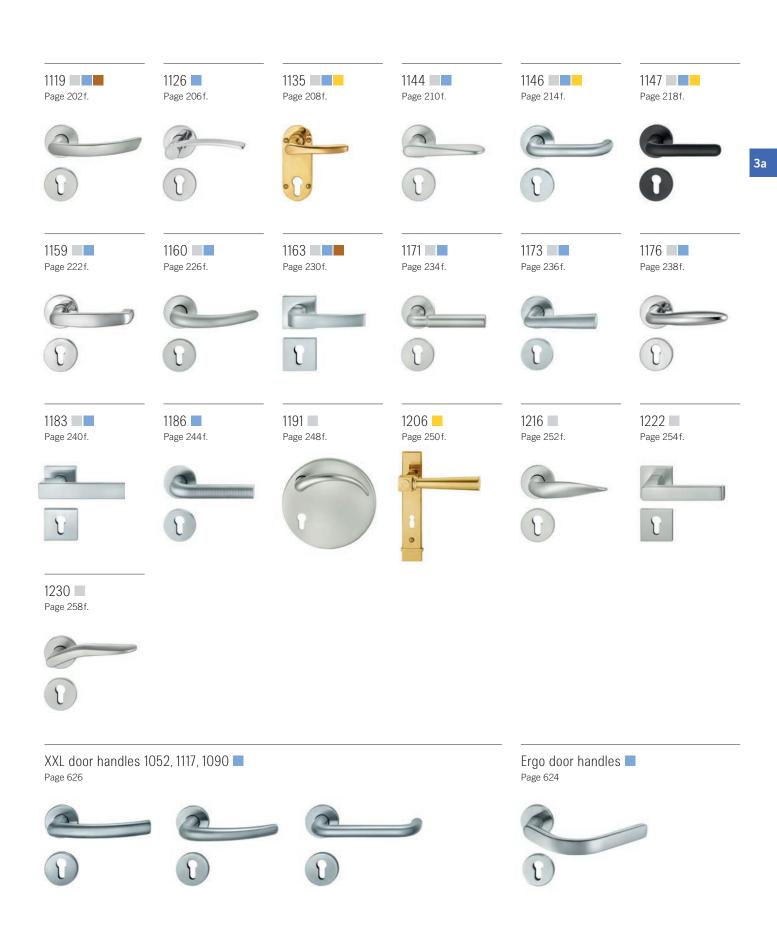
Bronze, lightly patinated, waxed Stainless steel, fine matt, brushed Fittings for emergency exits Aluminium black matt EPS-powder coated (special version)

www.fsb.de/music_theatre

- 106 Tangible architecture
- 110 Structure of the pages for heavy-duty door handles
- 112 Heavy-duty door handles and families, standard FD, AGL[®], AGL[®] FS

Overview







For us, door handles are artefacts, which we understand as manual tools and in terms of their semantics and symbolism are as comprehensible and universally accepted as handicraft tools. On the other hand they are digital as well as analogue mediators at the sensitive interface between people and architecture: architecture only fully opens up once you pass through your own doorway. The answer to the question, to what extent the handle may be attributed a special role as an (accentuating?) detail, however, can be left to architects and builders. Our range offers a unique abundance of shapes, materials and technical options – you decide.

Tangible architecture

After more than 130 years, FSB can look back on a truly vivid number of projects, which not only went down in architecture as trendsetting buildings – which admittedly is due not alone to the handles used – but which were in truth consciously accentuated or "only" equipped with handle designs from FSB. We have put together a small extract of the 20th century here by way of example. We put our handle designs with some buildings simply as a suggestion, because we believe that they would admirably match the respective architecture era – particularly if you are planning to renovate buildings from that period. If you would like to know (even) more about our vision of "Tangible architecture", we are happy to send you our publication that goes with this subject – or you can find out without further ado under fsb.de/architectours. This is where we keep our current reference projects.





FSB 1015 | Bronze

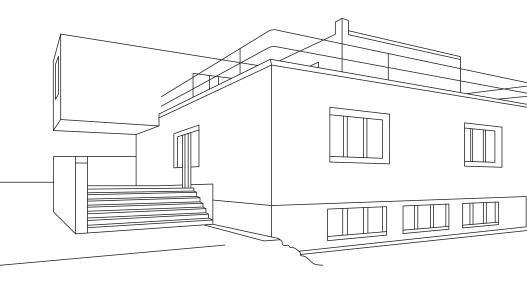
New face for the city on the Ruhr. Solid façade, magnificent tower. A part of Ruhrbania from the Neo-Renaissance period. Colossal and yet delicate. Stones, tiles, floors and ceilings come together from all over the world. Panelled, decorated, stuccoed and culminated in a clear statement.

Gropius Haus | 1920

New ideal for architectural discourse Good living for everyone. Advancing industry as a force of progress. Art and technology shake hands with each other. The whole thing has long since been world famous and protected as a UNESCO World Heritage Site.



FSB 1102 | Stainless steel







FSB 1106 | Bronze

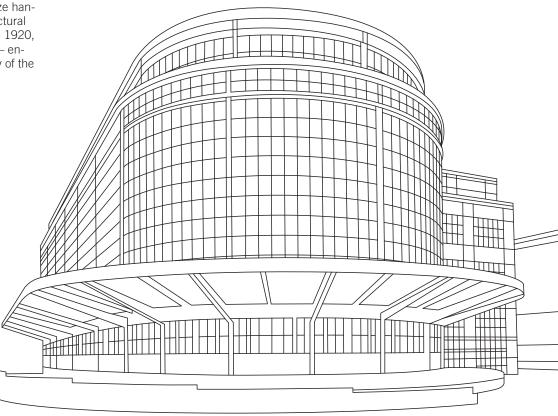
Uncle Tom's Cabin | 1930

Rationalisation, use of new materials, sober interior design combined with social responsibility– that was what New Construction was about. Aesthetically rounded off by small handy details. Because "what works well, looks good" according to Bruno Taut in his day.

Perfume Factory 4711 | 1950

Curtain wall made of steel and glass, smooth and shiny materials, bronze handles: round corners are not a structural contradiction. What was around in 1920, is also well received in the 1950s – enhanced by the light floating quality of the design.





Gauss School of Engineering | 1960

Aesthetics and functionality cannot be conceived independently of each other. A reinforced concrete skeleton, cubically styled, gives asymmetrical looks through large glass fronts. A pattern of transparency and lightness. Built structure as the the counter-shape of social structures.



FSB 1058 | Stainless steel

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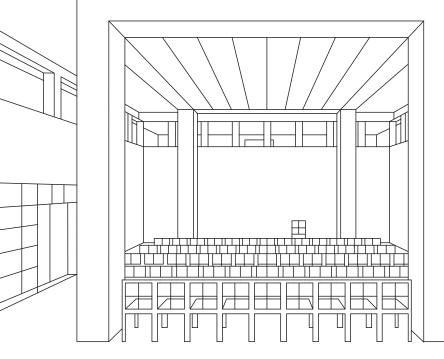
Π

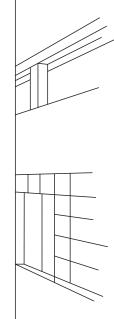
Ruhr Uni Bochum | 1970

The harbour in the sea of knowledge. Equality, the greatest possible proximity and human and professional exchange became the built agenda here. For hierarchy-free community, where philosopher and mechanical engineer open the door to one another.



FSB 1003 | Stainless steel







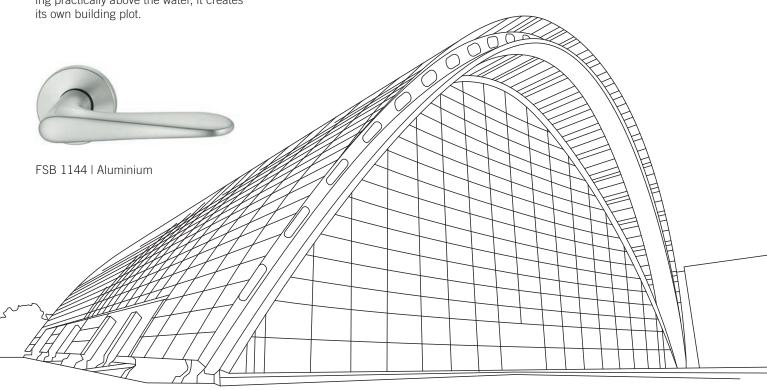
FSB 1076 | Stainless steel

DAM | 1980

White reinforced concrete design in twostorey villa, house-in-house, old and new, from the baseboard to the door handle – not only the architectural end result counts here, but also the way there. Postmodern architecture as the object of the public debate.

Berliner Bogen | 1990

Someone has it figured out here. A casually arched steel colossus and glass giant combines futuristic looks with with solutions to urgent questions of its era: hovering practically above the water, it creates its own building plot.



Structure of the pages for heavy-duty door handles

1

Our FSB product number concept extends beyond the handle types and follows the model numbers of the door handles. The specified link takes you straight to the digital catalogue with which, amongst other things, you can generate specific texts for calls for proposals.

For a simplified overview you will find all types of fitting immediately after the range of handles concerned, on the following pages. They contain all of the versions relevant for planning, including their product numbers.

2

The roses and backplates illustrated here in combination with the door handles concerned are available as part of the standard product range, different designs on request.

3

This is an overview of the individual qualities of heavy-duty bearings for the range of handles concerned:

- FSB AGL[®] (72) compensating bearing Heavy-duty fitting for medium to heavy doors and doors subject to heavy traffic
- Ger AGL® FS (76) compensating bearing Heavy-duty fitting in fire safety version to DIN 18 273 / EN 1634
- Ger AGL® FS (79) compensating bearing Heavy-duty fitting for emergency exit locks in fire safety version to EN 179
- FD (10) standard fitting with turnably fixed standard bearing for lightweight doors and doors which are not so frequently used

For more information about the FSB bearings, please see page 26 f.

Note: Please also note the specifications for the bearing versions for the fitting types on the following two pages which are specific to certain components.

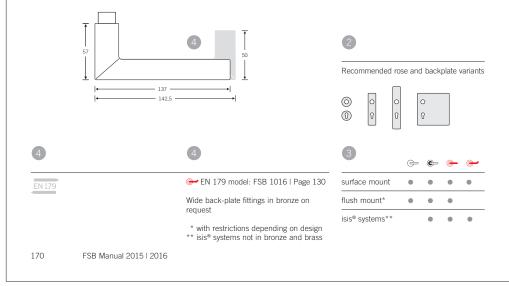
Standard product range

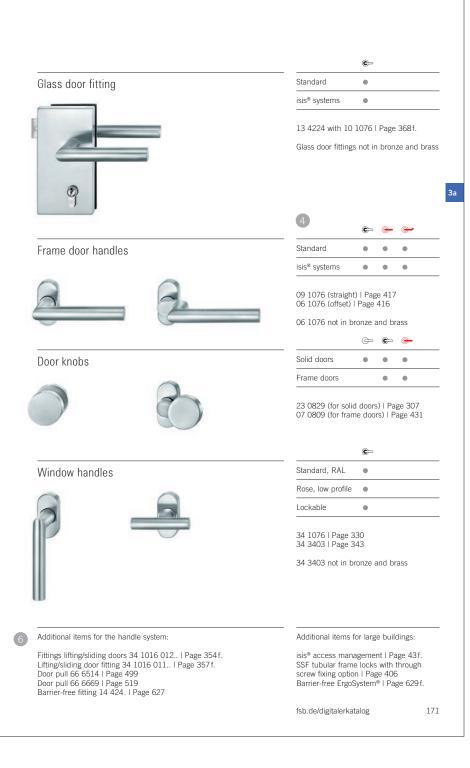
Possible on request

fsb.de/1076

The architect Robert Mallet-Stevens (1886-1945) was the one who hit upon the idea of cutting a round tube in two and mitring the ends together again at a right angle. His creation is today known as the "Frankfurt model". The handle was rediscovered when the Architecture Museum was rebuilt and proceeded to take the market by storm.







4 FSR (

FSB offers the most extensive range of fittings to DIN EN 179. These so-called "return models" are shown with a number 79 as well as with their specific model number. For the classic (straight) models, in the dimensioned drawings, the "return" models are marked in grey but are to be understood as formal variants. This formal aspect applies both for the EN 179 dimensional specifications prescribed by building regulations as well as for the characteristic style of the architect or designer concerned. FSB includes the following door handle "return" models in its product range as independent designs:

- 1016 (to 1076) | Page 130 f.

– 1045 (to 1015) | Page 154 f.

- 1070 (to 1075) | Page 1464 f.

- 1119 | Page 202 f.

- 1146 (to 1147) | Page 214 f.
- 1159 | Page 222 f.

- 1160 | Page 226 f.

The component-related versions to EN 179 are actually shown in the individual overviews of the handle ranges.

5

6

The FSB material ID – it shows the materials in which versions are available. There are restrictions e.g. with the isis[®] system and glass door fittings.

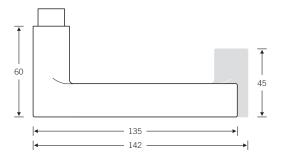


In some cases, a lot of additional items for the handle systems are shown, which clearly exceed the versions which can be shown on a double page spread of door handles. 3a

fsb.de/1001

Architect Peter Bastian wanted his handle to be a graceful presence on tall, large doors as well as representing an almost doctrinaire reduction of the geometry. The result is a very accurately made door handle with a square cross-section that fits comfortably into your hand.





Recommended rose and backplate variants



	G	¢	—		
surface mount	٠	•	•	•	
flush mount*	٠	•	•	•	
isis [®] systems		0	0	0	

EN 179

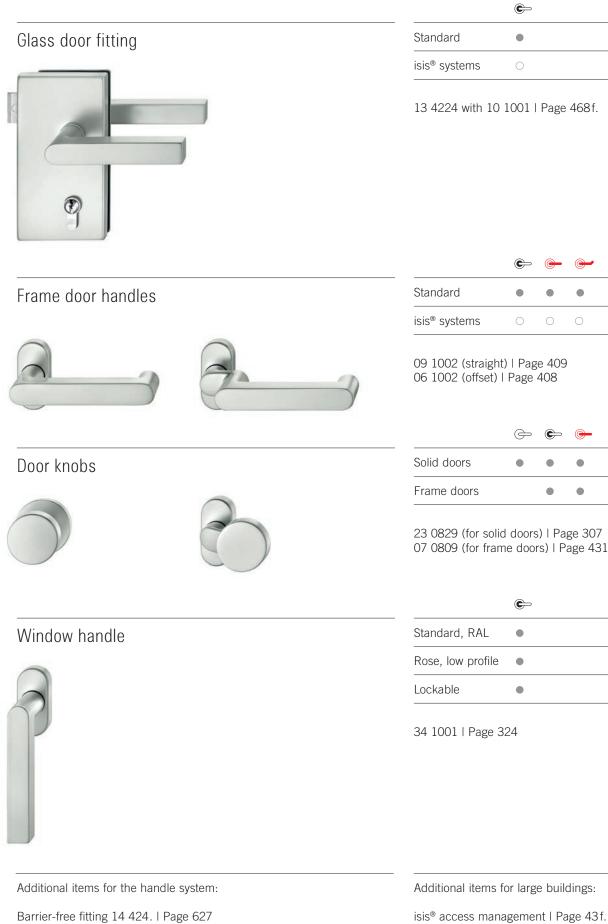
Design: Peter Bastian

Only available in natural anodised finish (FSB 0105).

G EN 179 model: FSB 1002

Wide backplate fittings on request

* with restrictions depending on design

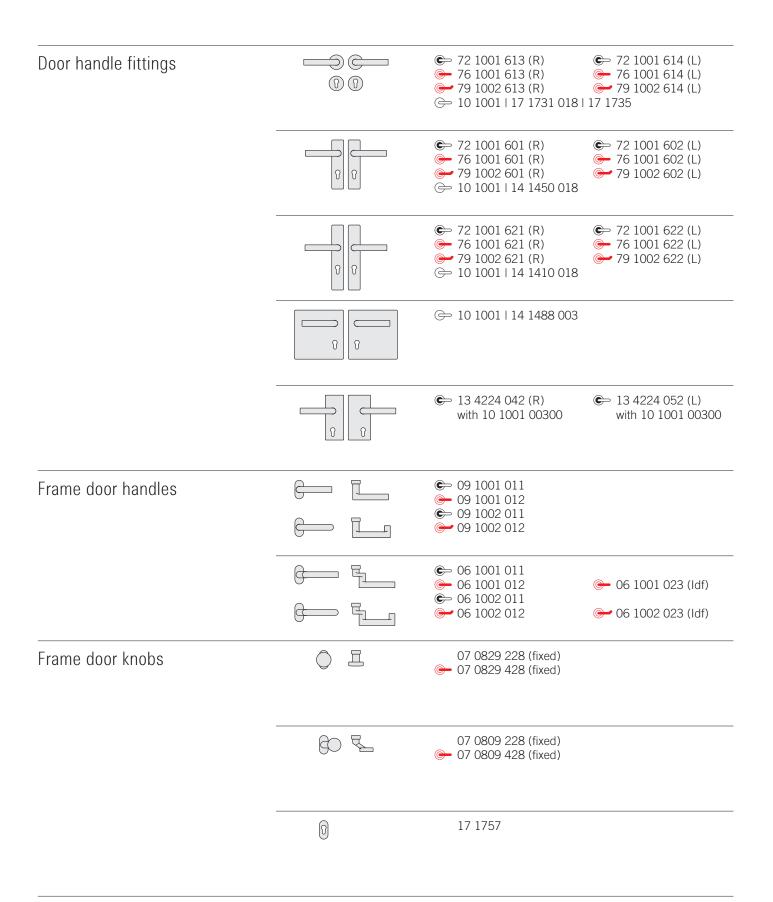


Barrier-free fitting 14 424. | Page 627

fsb.de/catalogue

SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem® | Page 629 f. 3a

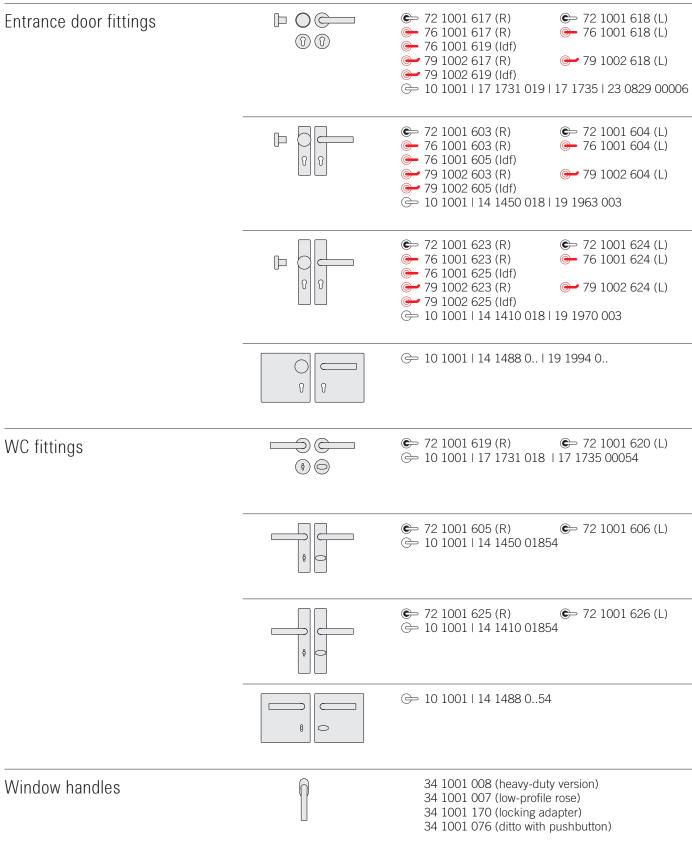
Product family 1001



R = DIN right hand

L = DIN left hand

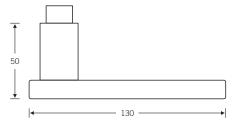
Idf = inactive door fitting



3a

The FSB 1003 door handle, which takes the shape of a slim door, is a model for real aficionados. Johannes Potente took up the design concept and implemented it in aluminium and stainless steel.





Recommended rose and backplate variants



		G	¢	—
surface	e mount	•	0	0
flush m	iount*	•	0	0

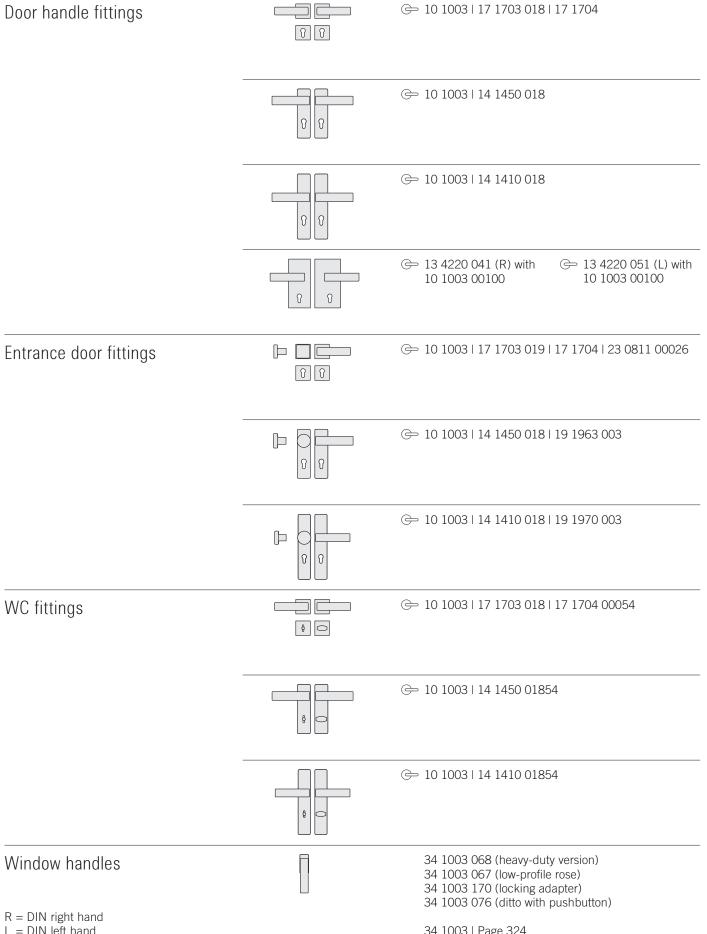
Design: Johannes Potente

In aluminium only available in natural anodised finish (FSB 0105)

* with restrictions depending on design

Door pull 66 6548 | Page 514





L = DIN left hand

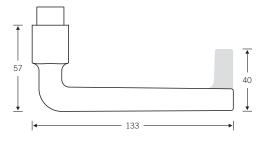
34 1003 | Page 324

fsb.de/catalogue

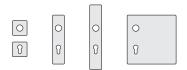
3a

David Chipperfield's design for the FSB 1004 bears the hallmark of the pioneers of modernism. It is based on a clear formal concept which meets all of the functional requirements while giving expression to his formal idea in both public and private spheres.





Recommended rose and backplate variants



	G	¢	@	_
surface mount	•	•	•	•
flush mount*	•	•	•	•
isis® systems**		0	0	0

EN 179

Design: David Chipperfield

In aluminium only available in natural anodised finish (FSB 0105) G EN 179 model: FSB 1134

Wide back-plate fittings in bronze on request

** with restrictions depending on design ** only with a round rose

Standard Glass door fitting S Frame door handles _ is S Door knobs _ F Window handle

Additional items for the handle system:

Lifting/sliding door fitting 34 1004 011.. | Page 356 f. Barrier-free fitting 14 424. | Page 627

Additional items for large buildings:

isis® access management | Page 43 f. SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem® | Page 629 f.

isis® systems

13 4224 with 10 1004 | Page 468 f.

Glass door fittings not in bronze

	œ	—	—
Standard	•	•	•
sis® systems	0	0	0

3a

09 1134 (straight) | Page 421 06 1134 (offset) | Page 420

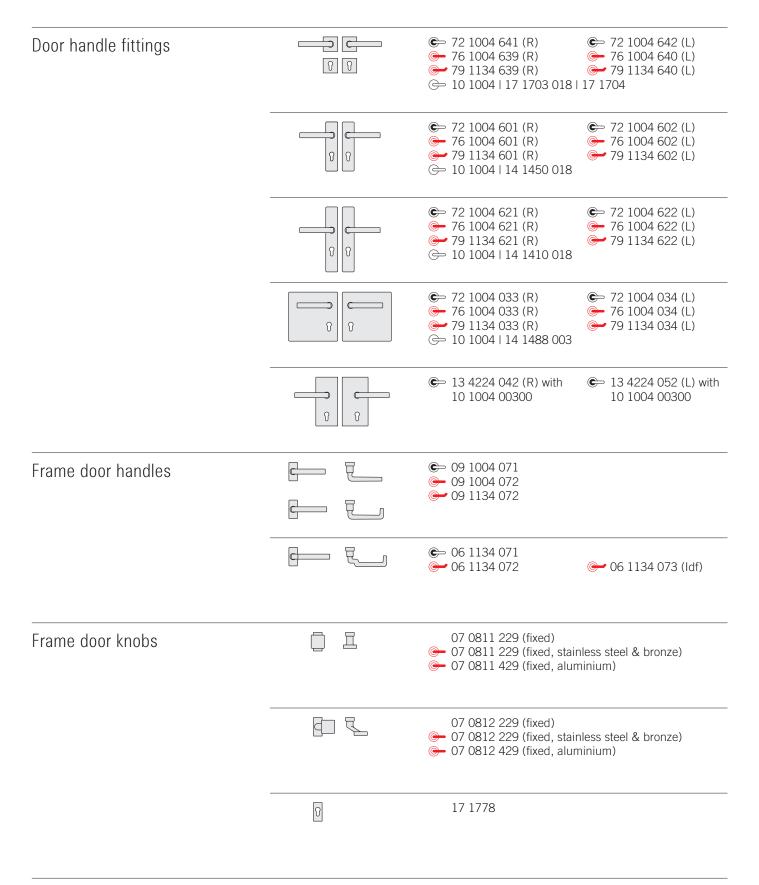
	\bigcirc	©	—
Solid doors	•	•	•
rame doors		•	•

23 0811 (for solid doors) | Page 305 07 0812 (for frame doors) | Page 430

	¢
Standard, RAL	•
Rose, low profile	•
Lockable	•

34 1004 | Page 325

Product family 1004

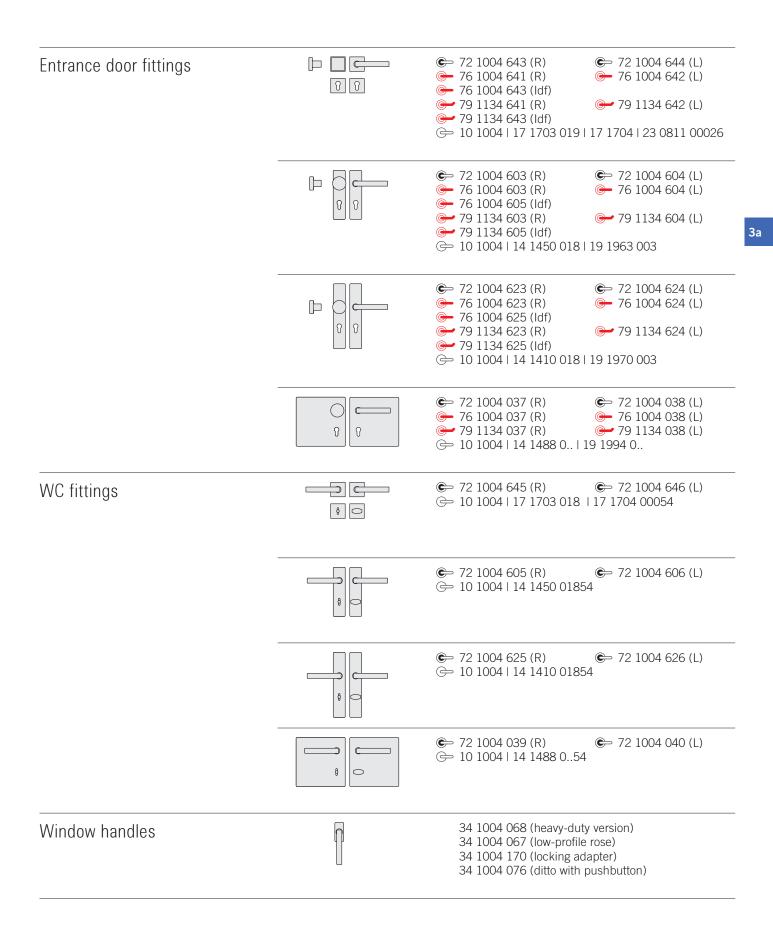


R = DIN right hand

L = DIN left hand

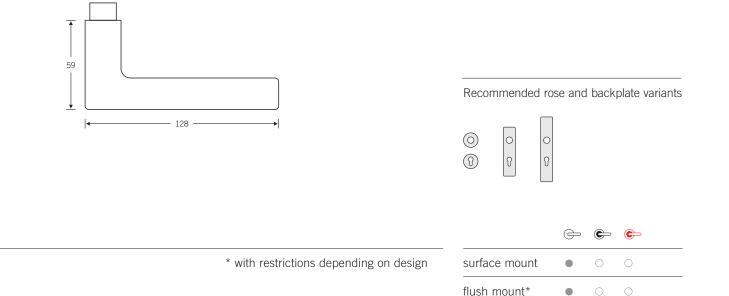
Idf = inactive door fitting

Glass door fittings not in bronze Wide back-plate fittings in bronze on request

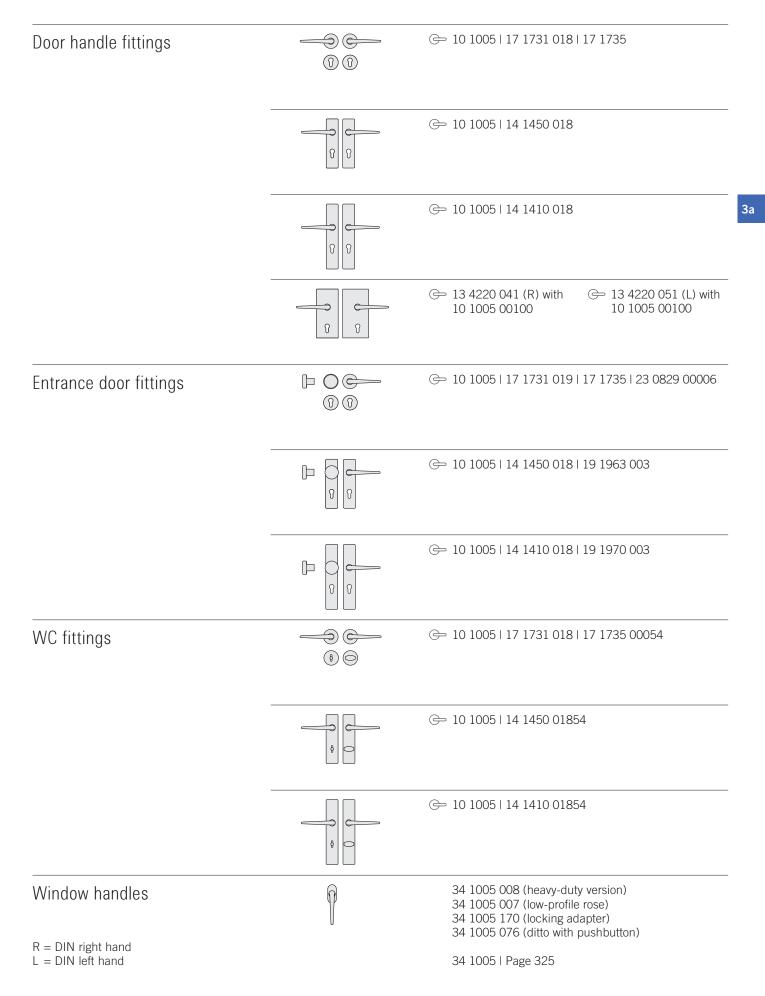


There are a lot of wedge-shaped door handles. Almost every manufacturer offers its own version of this basic shape. The original design for this door handle was most probably produced by Professor Max Burchartz. The FSB 1005 version by Johannes Potente is characterised by its slender proportions.







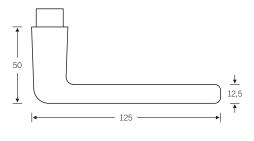


fsb.de/catalogue

fsb.de/1012

The creation of the extreme oval shape featured on the 1012 is credited to Hans Poelzig during the course of the construction of the I. G. Farben administration building in 1928, after which it was promoted to "Reich shaped handle No. 16". A wide band made of solid white bronze, cast into a rectangular shape. FSB also moved to an aluminium model back in the 1930s.



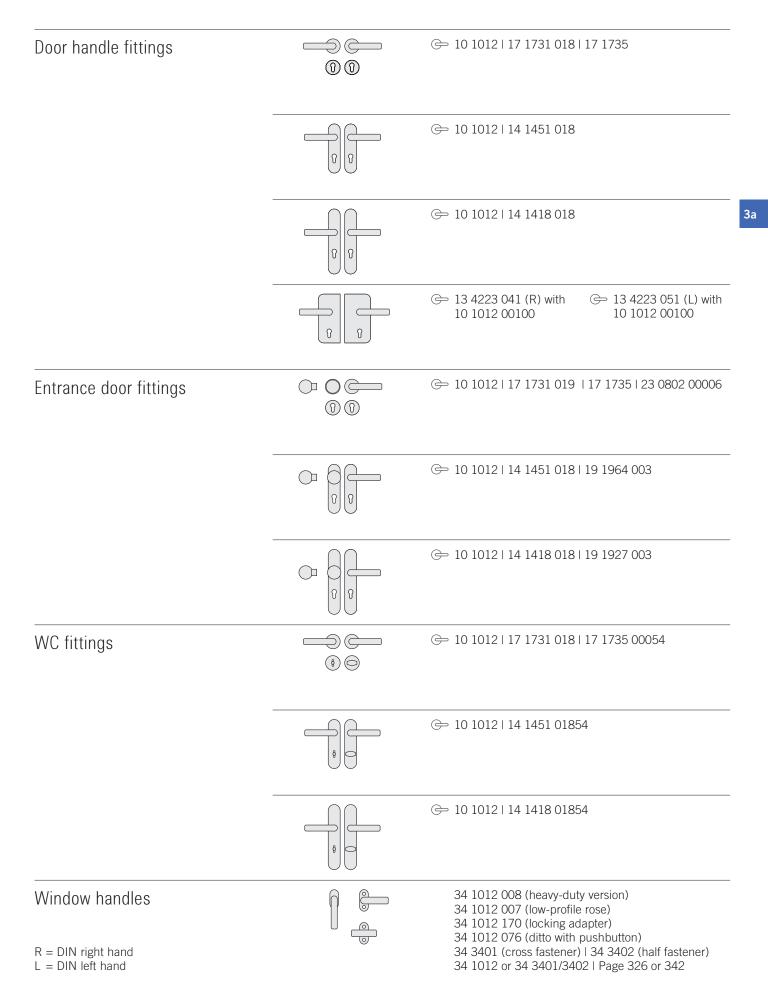


Recommended rose and backplate variants



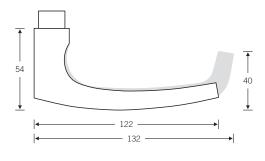
	Ģ
surface mount	•
flush mount	•

Product family 1012

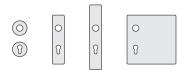


We presume that the basic shape of our FSB 1015 model was conceived in the 1930s by a company called wehag. This version by Johannes Potente has a very clear handle shape which creates a lot of interest, especially in the Netherlands.





Recommended rose and backplate variants



	Ð	¢	—	—
surface mount	•	•	•	•
flush mount*	•	•	•	•
isis® systems		•	•	0

EN 179

G EN 179 model: FSB 1045 | Page 154

Wide back-plate fittings in bronze on request

* with restrictions depending on design

Ð C Glass door fitting Standard isis® systems 13 4220 with 72 1015 | Page 470f. Glass door fittings not in bronze C Standard Frame door handles isis® systems 09 1015 (straight) | Page 409 06 1015 (offset) | Page 408 œ œ Solid doors Door knobs Frame doors 23 0829 (for solid doors) | Page 307 07 0809 (for frame doors) | Page 431 œ Window handle Standard, RAL Rose, low profile Lockable 34 1015 | Page 326

Additional items for the handle system:

Barrier-free fitting 14 424. | Page 627

Additional items for large buildings:

isis[®] access management | Page 43 f. SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem[®] | Page 629 f. 3a

Product family 1015

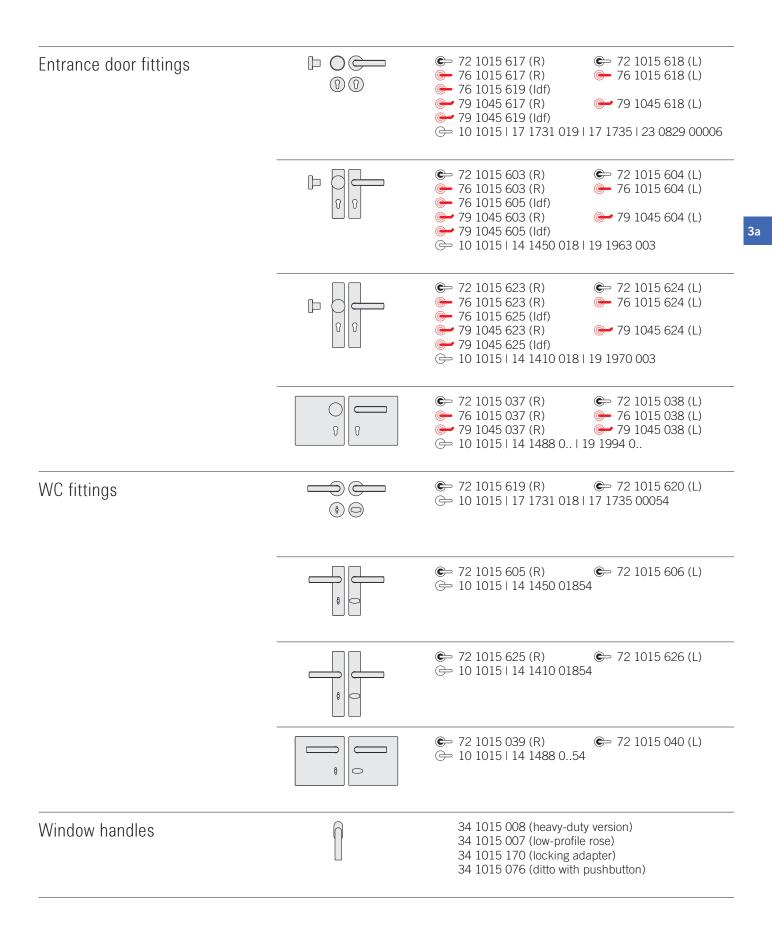
Door handle fittings		 € 72 1015 613 (R) € 72 1015 614 (L) 6 76 1015 613 (R) 6 76 1015 614 (L)
		 → 79 1045 613 (R) → 79 1045 613 (R) → 79 1045 614 (L) → 10 1015 17 1731 018 17 1735
		 C→ 72 1015 601 (R) C→ 76 1015 601 (R) C→ 76 1015 601 (R) C→ 79 1045 601 (R) C→ 79 1045 602 (L) C→ 79 1045 602 (L) C→ 10 1015 14 1450 018
		 C→ 72 1015 621 (R) C→ 76 1015 621 (R) C→ 76 1015 621 (R) C→ 79 1045 621 (R) C→ 10 1015 14 1410 018
		 ← 72 1015 033 (R) ← 72 1015 034 (L) ← 76 1015 033 (R) ← 76 1015 034 (L) ← 79 1045 033 (R) ← 79 1045 034 (L) ← 79 1045 034 (L)
		 I 3 4220 042 (R) with 72 1015 61350 (R) I 3 4220 052 (L) with 72 1015 61450 (L) I 3 4220 041 (R) with 10 1015 00100 I 3 4220 051 (L) with 10 1015 00100
Frame door handles		 € 09 1015 011 6 09 1015 012 € 09 1045 011 6 09 1045 012
		 C→ 06 1015 011 C→ 06 1015 012 C→ 06 1045 011 C→ 06 1045 012 C→ 06 1045 023 (ldf)
Frame door knobs	<u></u>	07 0829 228 (fixed)
	60 2	07 0809 228 (fixed)
	0	17 1757

R = DIN right hand

L = DIN left hand

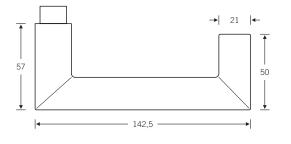
Idf = inactive door fitting

Glass door fittings not in bronze Wide back-plate fittings in bronze on request

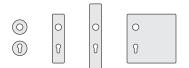


In 1990, FSB introduced a door handle to the market which originated in the 1920s. The FSB 1076 model has since become the most-copied door handle of the last century. The version shown here, FSB 1016, is a more closed-off counterpart to it.





Recommended rose and backplate variants



	G	œ	—	
surface mount	•	•	•	
flush mount*	•			
isis [®] systems**		•	•	

EN 179

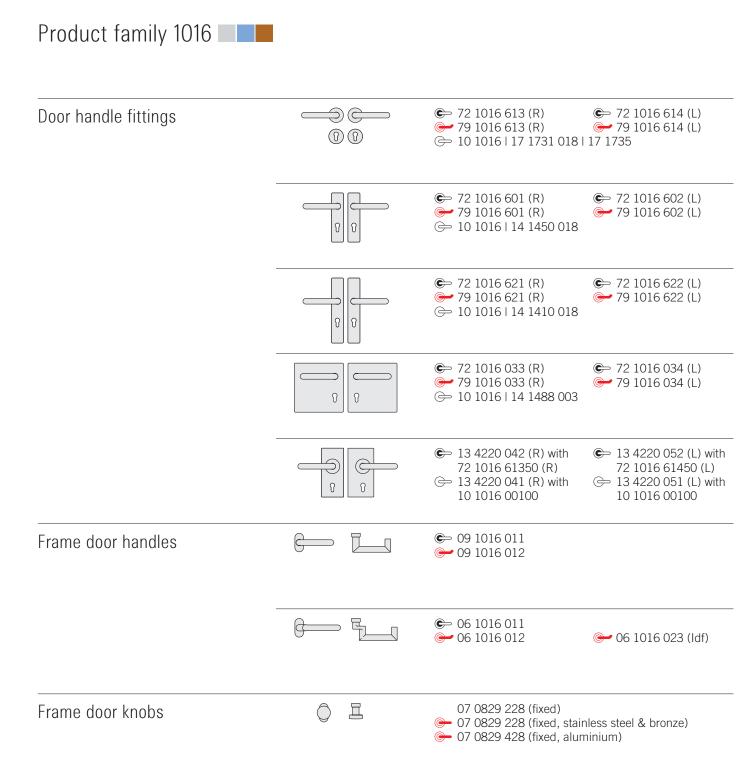
Wide back-plate fittings in bronze on request

* with restrictions depending on design ** isis® systems not in bronze

		Ģ	e	
Glass door fitting	Standard	•	•	
	isis® systems		٠	
	13 4220 with 72	1016	Page	470f.
	Glass door fittings	s not ir	ı bron:	ze
		œ	—	
Frame door handles	Standard	•	•	
	isis® systems	•	•	
	09 1016 (straight 06 1016 (offset)	:) Pag Page	;e 411 410	
		G	¢	—
Door knobs	Solid doors	٠	•	•
	Frame doors		•	•
	23 0829 (for solid 07 0809 (for fran			
		¢		
Window handles	Standard, RAL	٠		
	Rose, low profile	٠		
	Lockable	•		
	34 1076 Page 3 34 3403 Page 3			
Additional items for the handle system:	Additional items f	for larg	je build	dings:
				10.6

Parallel sliding tilt fitting 34 1016 012.. | Page 354f. Lifting/sliding door fitting 34 1016 011.. | Page 357f. Door pull 66 6514 | Page 499 Door pull 66 6669 | Page 519 Barrier-free fitting 14 424. | Page 627 isis[®] access management | Page 43 f. SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem[®] | Page 629 f.

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 $\left(\right)$

R = DIN right hand

L = DIN left hand

Idf = inactive door fitting

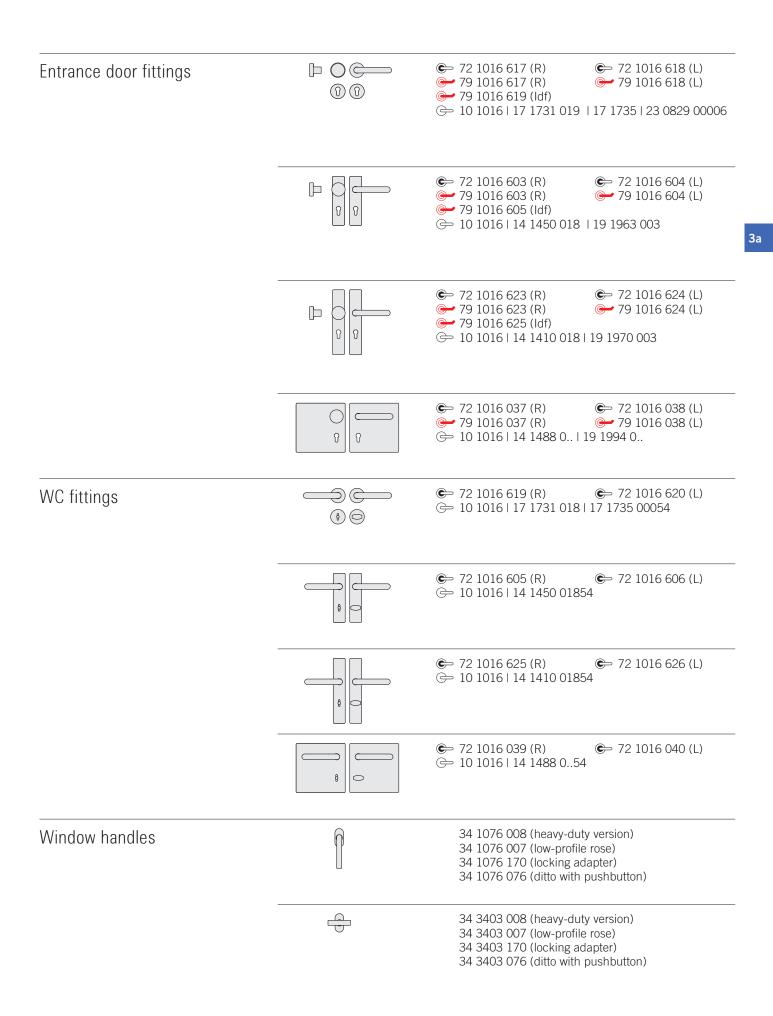
Glass door fittings not in bronze Wide back-plate fittings in bronze on request

07 0809 228 (fixed, stainless steel & bronze)

07 0809 228 (fixed)

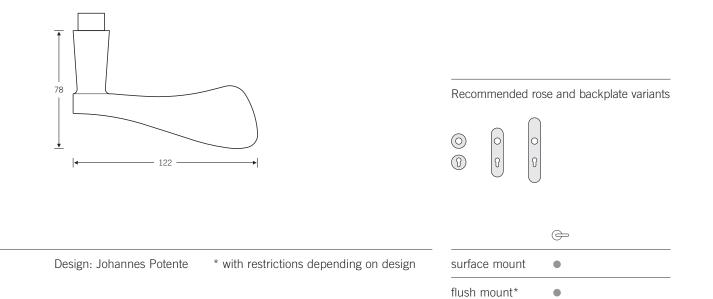
17 1757

- 07 0809 428 (fixed, aluminium)

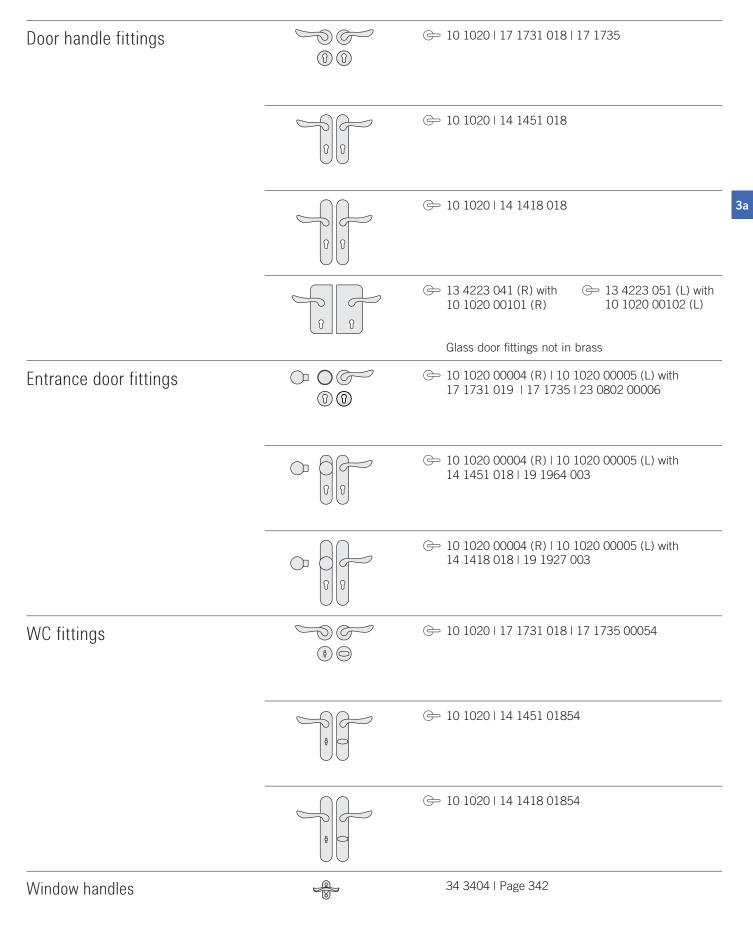


The FSB 1020 model is the clearest embodiment of the "good form" of the 1950s. This is a handle with a flourish in the organic flow of its moulded-to-the-hand design and it looks symmetrical with-out actually being so. FSB 1020 is one of four models designed by FSB designer Johannes Potente which have been added to MoMA's permanent collection.





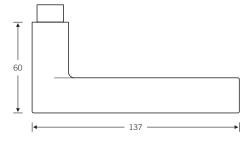




R = DIN right hand L = DIN left hand

Catalogue No. 6 published by the S.A. Loevy bronzeware factory in the 1930s includes a variety of door fittings by Rachlis, Grenander, Behrens, Wagenfeld and Paul in which a round shank is combined with a flat grip section. More recently, in the 1990s, the Spanish designer Miguel Milà re-interpreted these elements in the FSB 1126 model.





Recommended rose and backplate variants

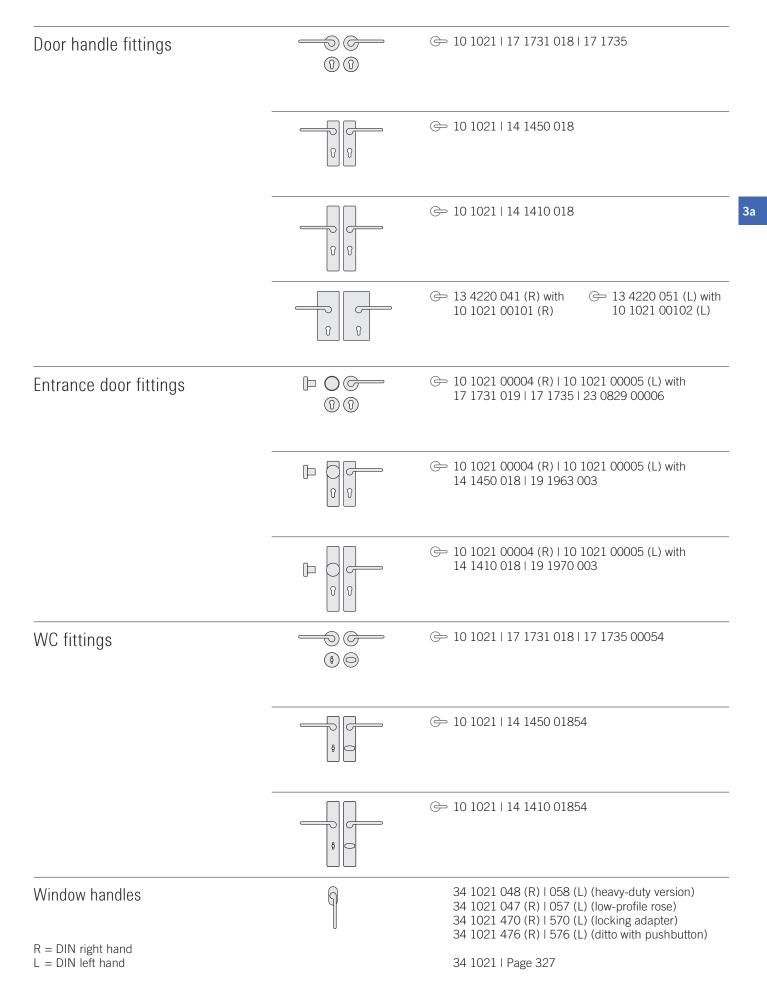


_		
0	0	
ß	Ŷ	
<u> </u>		L

	\bigcirc	¢
surface mount	٠	0
flush mount*	•	0

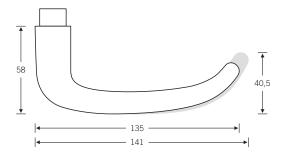
* with restrictions depending on design





In the 1950s, the Swiss architect, sculptor and designer Max Bill got together with Ernst Moeckel to fashion a door handle that made design history as the "Ulm handle". From this, Johannes Potente created the 1023 model, which has been an alternative to common U-shaped models ever since.





Recommended rose and backplate variants



		\bigcirc	¢	—	—	
	surface mount	•	•	•	•	
sign	flush mount*	•	•	•	•	
	isis® systems		•	•	•	

LIN 1/9

G EN 179 model: FSB 1053

* with restrictions depending on design

		Ģ	¢	
Glass door fitting	Standard	•	•	
	isis® systems		•	
	13 4223 with 72	1023	Page	472f.
	Glass door fitting	s not ir	ı bron	ze or brass
		¢	—	~
rame door handles	Standard	•	•	•
	isis® systems	•	•	•
	09 1053 (straigh 06 1053 (offset)	t) Pag Page	;e 411 410	
		Ģ	¢	—
)oor knobs	Solid doors	•	•	•
	Frame doors		•	•
	23 0802 (for solid doors) Page 305 07 0846 (for frame doors) Page 432			
		¢		
Nindow handle	Standard, RAL	•		
	Rose, low profile	•		
	Lockable	•		
P	34 1023 Page 4	127		
Additional items for the handle system:	Additional items	for larg	e buil	dings:
XXL door handle 79 1117 Page 626	isis® access man	ageme	nt I Pa	age 43f

XXL door handle 79 1117 | Page 626 Barrier-free fitting 14 424. | Page 627

isis[®] access management | Page 43 f. SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem[®] | Page 629 f.

Product family 1023

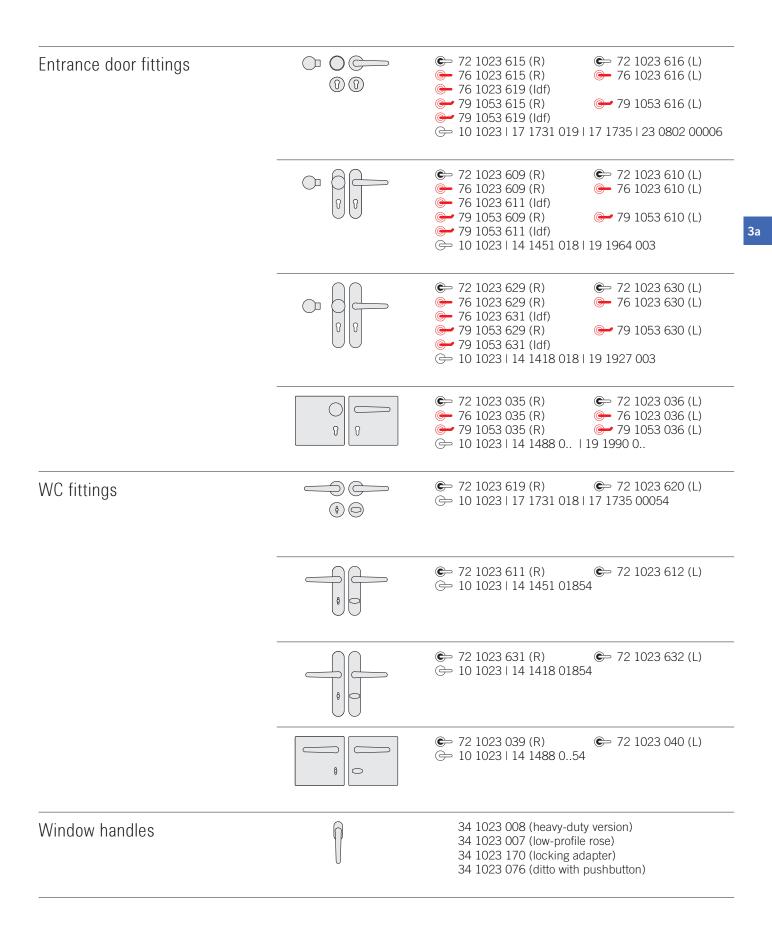
Door handle fittings		 ← 72 1023 613 (R) ← 76 1023 613 (R) ← 76 1023 613 (R) ← 76 1023 614 (L) ← 79 1053 613 (R) ← 79 1053 614 (L) ← 79 1053 614 (L) ← 10 1023 17 1731 018 17 1735 		
		 C→ 72 1023 607 (R) C→ 76 1023 607 (R) C→ 76 1023 607 (R) C→ 79 1053 607 (R) C→ 79 1053 607 (R) C→ 10 1023 14 1451 018 		
		 C→ 72 1023 627 (R) C→ 76 1023 627 (R) C→ 76 1023 627 (R) C→ 79 1053 627 (R) C→ 79 1053 627 (R) C→ 79 1053 628 (L) C→ 10 1023 14 1418 018 		
		 C→ 72 1023 033 (R) C→ 76 1023 033 (R) C→ 76 1023 034 (L) C→ 79 1053 033 (R) C→ 79 1053 034 (L) C→ 79 1053 034 (L) C→ 79 1053 034 (L) 		
		 I 3 4223 042 (R) with 72 1023 61350 (R) I 3 4223 052 (L) with 72 1023 61450 (L) I 3 4223 041 (R) with 10 1023 00100 I 3 4223 051 (L) with 10 1023 00100 		
Frame door handles	F L	 €→ 09 1023 011 6→ 09 1023 012 6→ 09 1053 012 		
		 ← 06 1023 011 ← 06 1023 012 ← 06 1023 023 (ldf) ← 06 1053 012 ← 06 1053 023 (ldf) 		
Frame door knobs	0 8	07 0802 228 (fixed)		
	60 5	07 0846 228 (fixed)		
	0	17 1757		

R = DIN right hand

L = DIN left hand

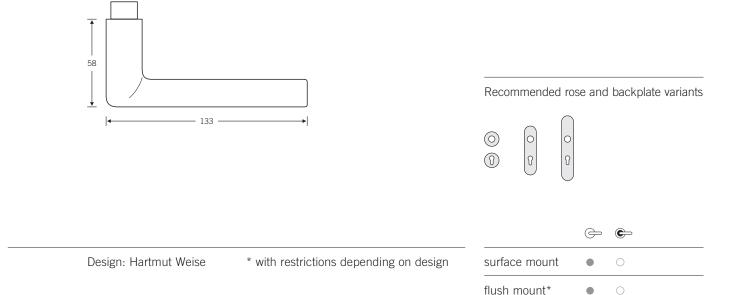
Idf = inactive door fitting

Heavy-duty and fire safety fittings not in brass Glass door fittings not in bronze and brass

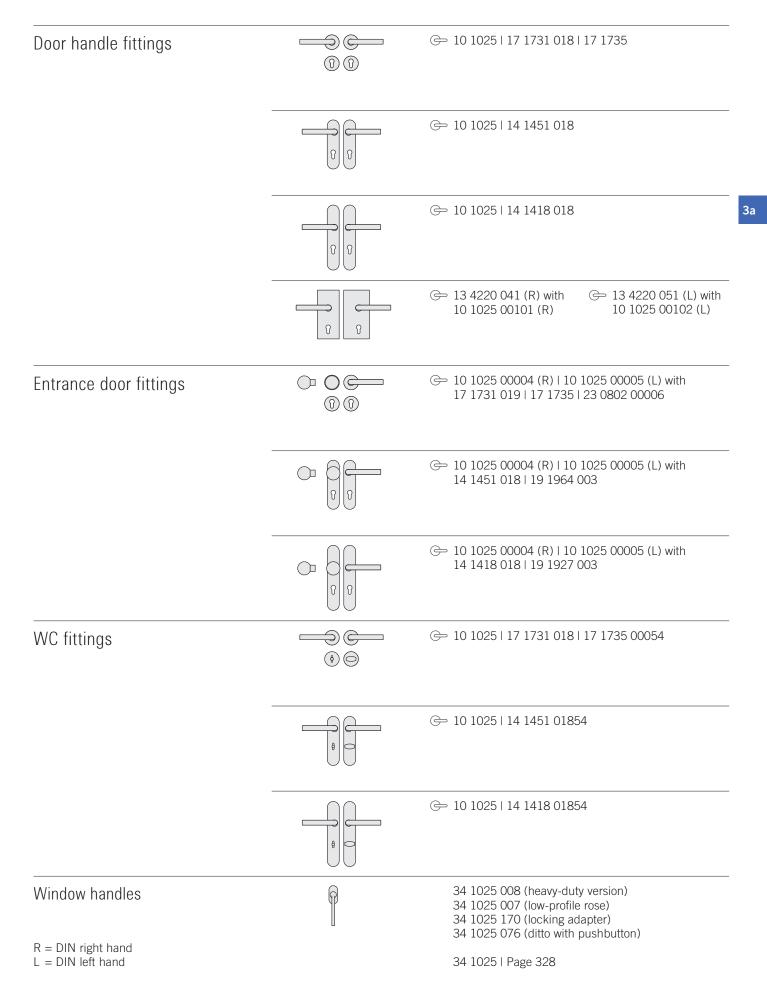


The design parameters of the FSB 1025 are plain to see. A straight grip section is joined to the pivotal point on the shank. The handle has a droplet-shaped cross-section. With its no-frills looks, this is a design that offers up its services humbly. The FSB 1025 is brought to life by the way it seems to capture the light along its edges.



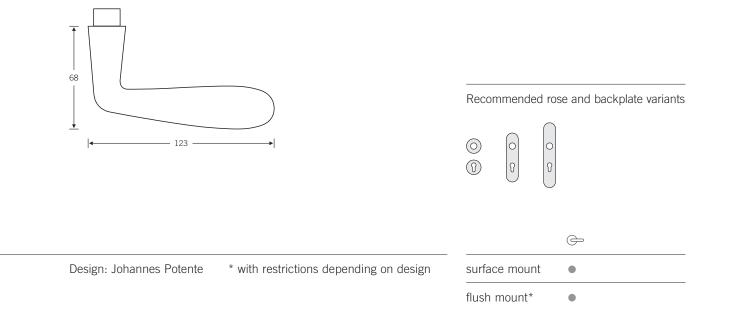




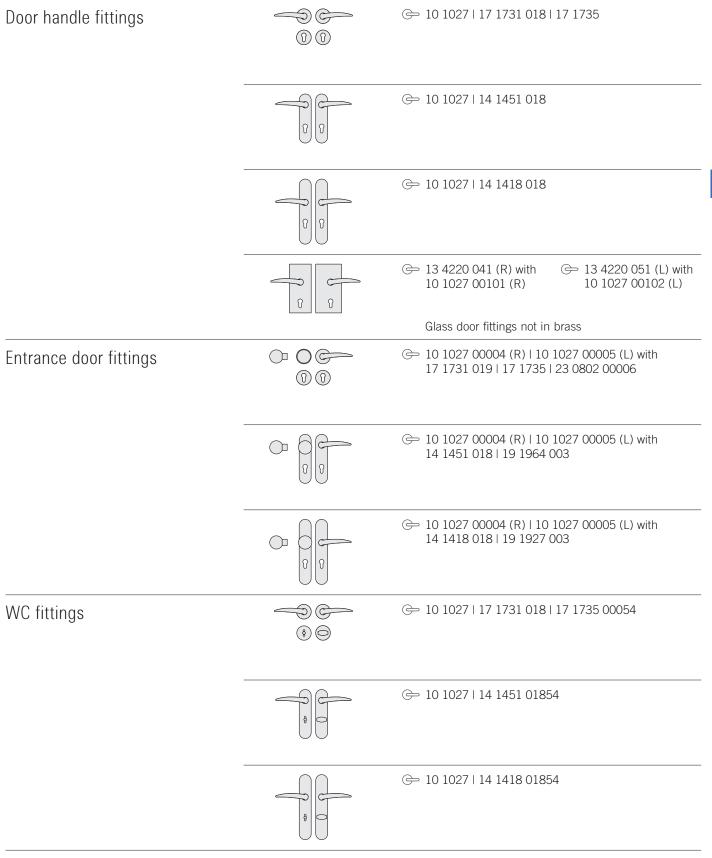


The FSB 1027 model is a stock item in the trade. It is rather disparagingly referred to as the "shoe horn". The underlying design is from Professor Max Burchartz. The handle lies extremely snugly in your hand and unobtrusiveness is its watchword. The FSB version of the "shoe horn" is by Johannes Potente.





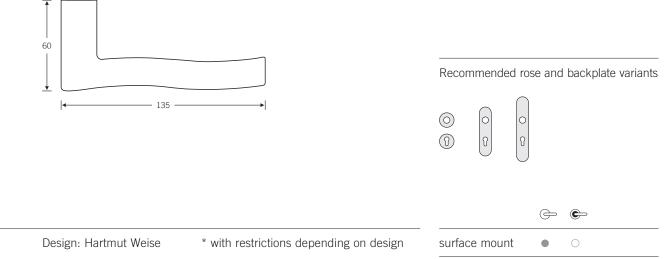




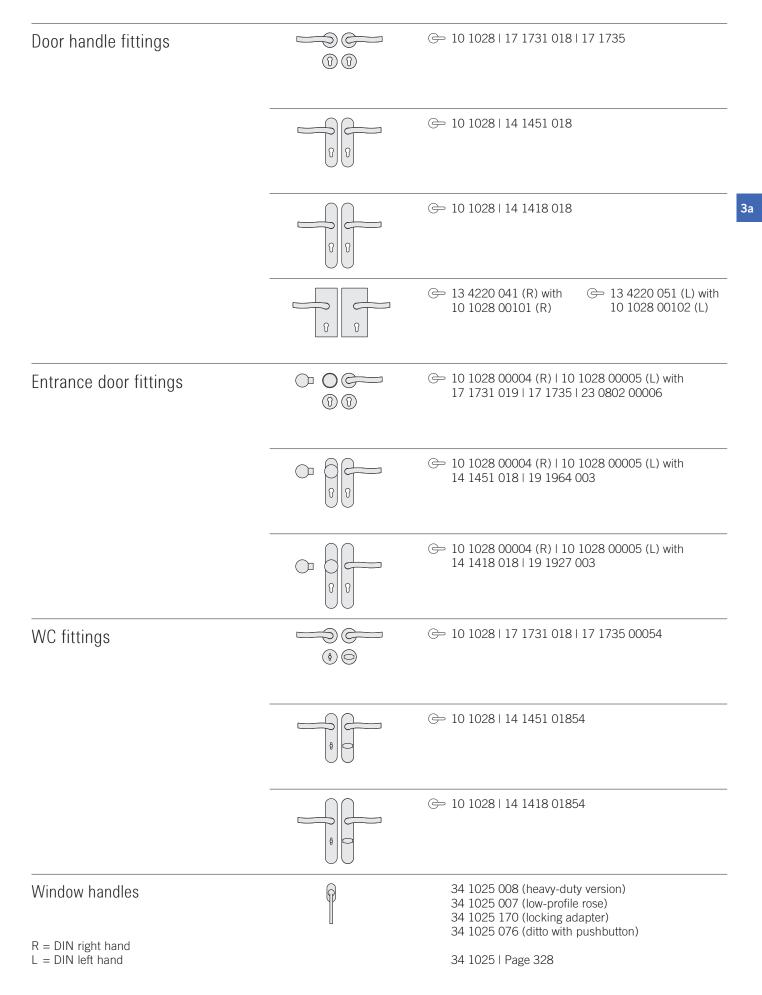
3a

The FSB 1028 is a variation on the parameters used in the FSB 1025, without neglecting the ergonomic qualities. This is a design that both pleases the eye and is pleasant to touch. The undulating grip section looks great. and it nestles into your hand.



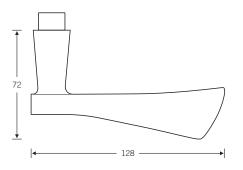






The FSB 1034 handle was Johannes Potente's first major design. He produced it in 1952. Once the copyright lapsed, it was imitated by the million throughout the world. It even had to suffer being remodelled in grey plastic in the days before plastic gained some colour.





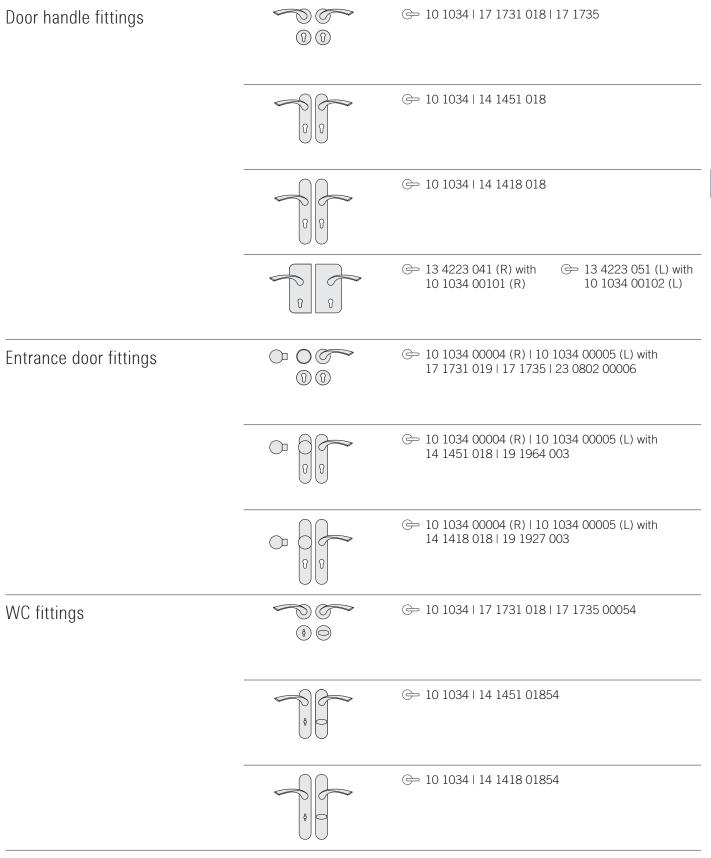
Recommended rose and backplate variants



	Ģ
surface mount	•
flush mount	•

Design: Johannes Potente

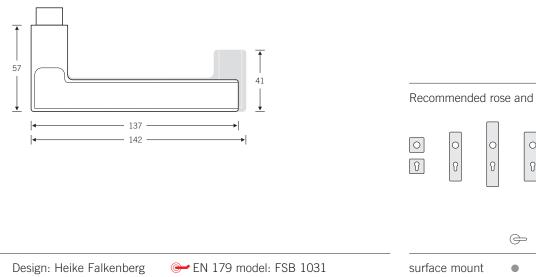
Product family 1034



За

In the autumn of 1996, Düsseldorf-based interior designer Heike Falkenberg asked FSB to recreate an old handle design for a renovation job. Using the sketch she submitted, FSB's developers milled a prototype from an FSB 1076 handle. This looked so good that we decided to market our gripping idea.





In aluminium only available in natural anodised

* only in stainless steel

** only with a round rose

*** with restrictions depending on design

Recommended rose and backplate variants



	¢	¢	@- *	—
surface mount	•	•	0	•
flush mount***	•	•	0	•
isis® systems**		•	0	•

150

finish (FSB 0105)

		¢	œ		
Glass door fitting	Standard	٠	•		
	isis® systems		•		
	13 4220 with 10	1035	Page	470f.	
Frame door handles	Standard	•	•	•	
	isis [®] systems	•	•	•	
	09 1031 (straigh 06 1031 (offset)	t) Pag Page	ge 411 410		
		Ģ	¢	—	
Door knobs	Solid doors	•	•	•	
	Frame doors		•	•	
	23 0811 (for solid doors) Page 305 07 0812 (for frame doors) Page 430				
		¢			
Window handles	Standard, RAL	•			
	Rose, low profile	٠			
	Lockable	•			
	34 1035 Page 3 34 3784 Page 3	328 343			

Additional items for the handle system:

Door pull 66 6540 | Page 512 Barrier-free fitting 14 424. | Page 627 Additional items for large buildings:

isis[®] access management | Page 43 f. SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem[®] | Page 629 f.

Product family 1035

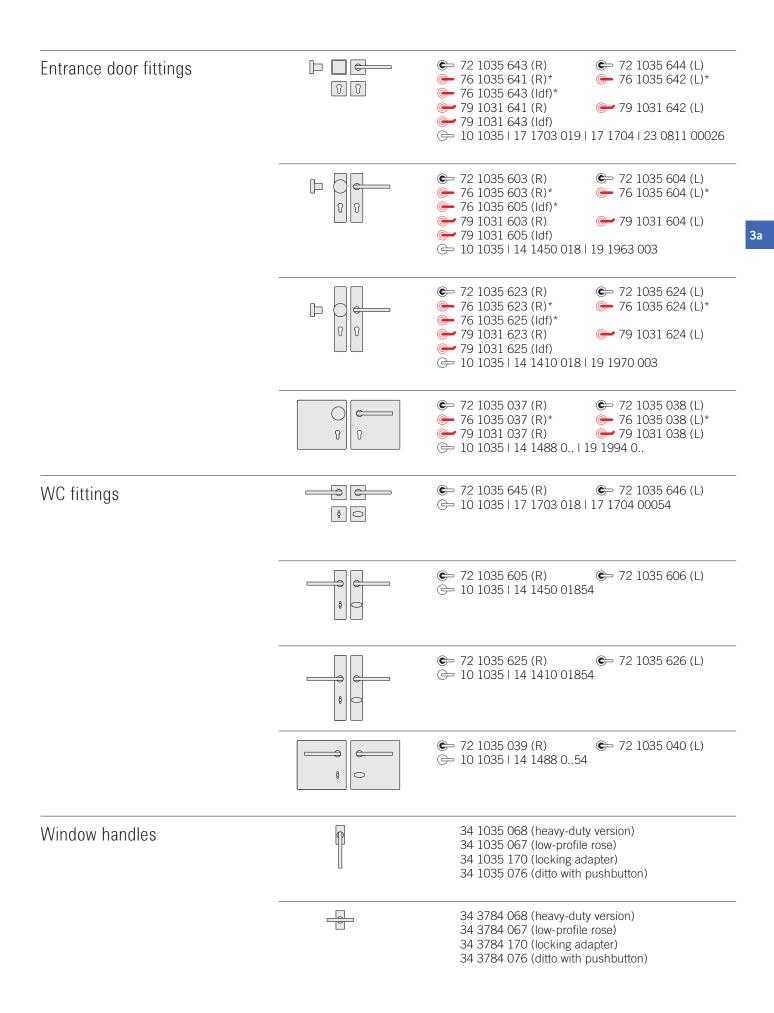
Door handle fittings		 C→ 72 1035 641 (R) C→ 76 1035 639 (R)* C→ 79 1031 639 (R) C→ 79 1031 640 (L)* C→ 10 1035 17 1703 018 17 1704
		 C→ 72 1035 601 (R) C→ 76 1035 601 (R)* C→ 79 1031 601 (R) C→ 79 1031 601 (R) C→ 79 1031 602 (L)
		 € 72 1035 621 (R) € 72 1035 622 (L) 6 76 1035 621 (R)* 6 70 1035 621 (R) 6 70 1035 622 (L)* 7 9 1031 621 (R) 6 10 1035 14 1410 018
		 ☞ 72 1035 033 (R) ☞ 76 1035 033 (R)* ☞ 76 1035 033 (R)* ☞ 79 1031 033 (R) ☞ 79 1031 033 (R) ☞ 79 1031 034 (L)
		 I3 4220 042 (R) with 72 1035 64150 (R) 72 1035 041 (R) with 10 1035 00100 I3 4220 052 (L) with 72 1035 64250 (L) 72 1035 051 (L) with 10 1035 00100
Frame door handles		 €→ 09 1035 071 (→ 09 1035 072* (→ 09 1031 072
		 C→ 06 1035 071 C→ 06 1035 072* C→ 06 1035 073 (ldf)* C→ 06 1031 072 C→ 06 1031 073 (ldf)
Frame door knobs	0 I	07 0811 229 (fixed)
		07 0812 229 (fixed)
	0	17 1778

R = DIN right hand

L = DIN left hand

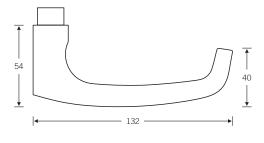
Idf = inactive door fitting

* only in stainless steel

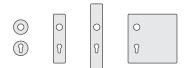


FSB 1045 is based on FSB model 1015, which was conceived in the 1930s by a company called wehag. Given the unceasing use of the FSB 1015 model in commercial buildings, we have added a return variant of this design conforming to DIN EN 179.





Recommended rose and backplate variants



	Ģ	œ	-
surface mount	•	•	•
flush mount*	•	•	•
isis® systems**		•	•

EN 179

Wide back-plate fittings in bronze on request

 * with restrictions depending on design ** isis $^{\scriptscriptstyle (\! 8\!)}$ systems not in bronze

		Ģ	¢
Glass door fitting	Standard	•	•
	isis® systems		•
	13 4223 with 72	2 1045	l Page 472f.
	Glass door fitting	;s not ir	ו bronze
		¢	—
Frame door handles	Standard	•	•
	isis® systems	•	•
	09 1045 (straig) 06 1045 (offset)	ıt) Pag Page	ge 413 412
		Ģ	© •
Door knobs	Solid doors	•	• •
	Frame doors		• •
	23 0829 (for sol 07 0809 (for fra		
		¢	
Window handle	Standard, RAL	•	
	Rose, low profile	•	
	Lockable	•	
	34 1015 Page	326	
Additional items for the handle system:	Additional items	for larg	e buildings:
Barrier-free fitting 1/ /2/ Page 627	isis [®] access mar	nagama	nt Paga 13

Barrier-free fitting 14 424. | Page 627

isis[®] access management | Page 43 f. SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem[®] | Page 629 f.



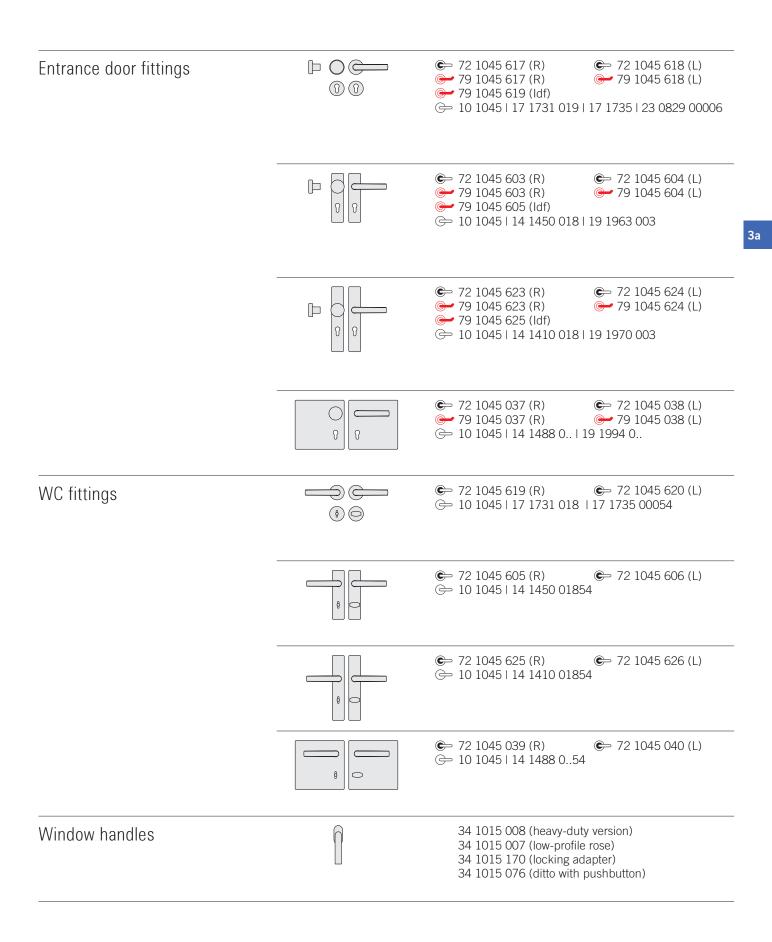
Door handle fittings		 72 1045 613 (R) 72 1045 614 (L) 79 1045 613 (R) 79 1045 614 (L) 10 1045 17 1731 018 17 1735
		 € 72 1045 601 (R) € 72 1045 602 (L) € 79 1045 601 (R) € 79 1045 602 (L) € 10 1045 14 1450 018
		 72 1045 621 (R) 79 1045 621 (R) 79 1045 621 (R) 79 1045 622 (L) 79 1045 622 (L)
		 72 1045 033 (R) 79 1045 033 (R) 79 1045 033 (R) 79 1045 034 (L) 10 1045 14 1488 003
		 I3 4223 042 (R) with 72 1045 61350 (R) I3 4223 052 (L) with 72 1045 61450 (L) I3 4223 051 (L) with 10 1045 00100 I3 4223 051 (L) with 10 1045 00100
Frame door handles	f L	€> 09 1045 011
		 €> 06 1045 011 ● 06 1045 012 ● 06 1045 023 (ldf)
Frame door knobs	<u></u>	07 0829 228 (fixed)
		07 0809 228 (fixed)
	0	17 1757

R = DIN right hand

L = DIN left hand

Idf = inactive door fitting

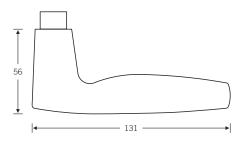
Glass door fittings not in bronze



fsb.de/1051

The FSB 1051 handle has come to epitomise FSB. The "Schneider Handle" became Johannes Potente's supreme creation and a market leader in the 1960s. It is typified by its harmonised parts carefully shaped to the hand. FSB 1051 is one of four models designed by Johannes Potente which were added to MoMA's permanent collection in the summer of 1998.





Recommended rose and backplate variants

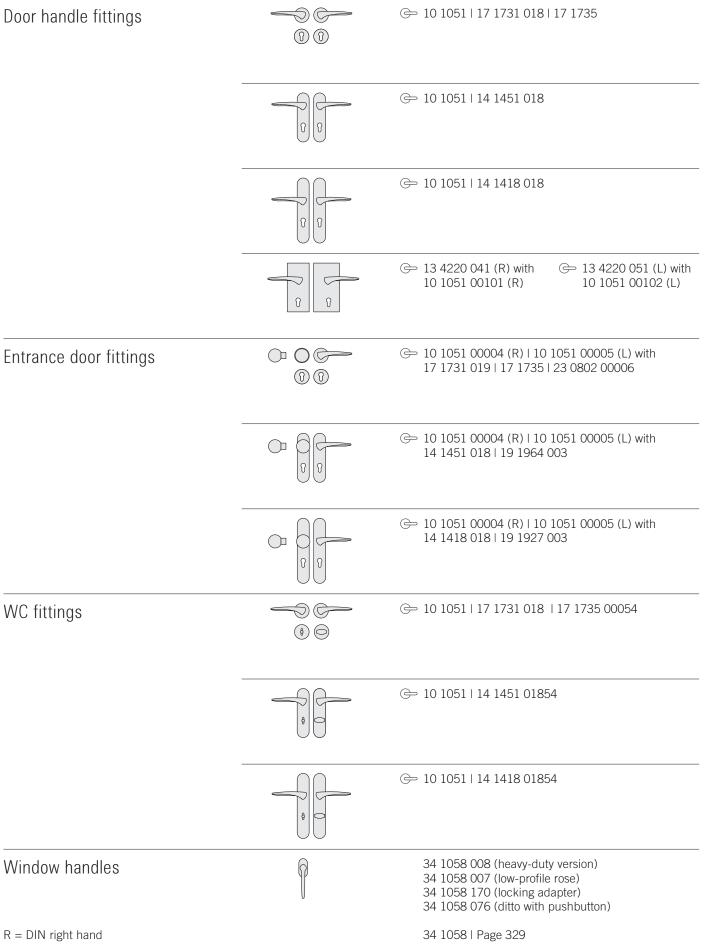


P

Design: Johannes Potente

surface mount

Product family 1051

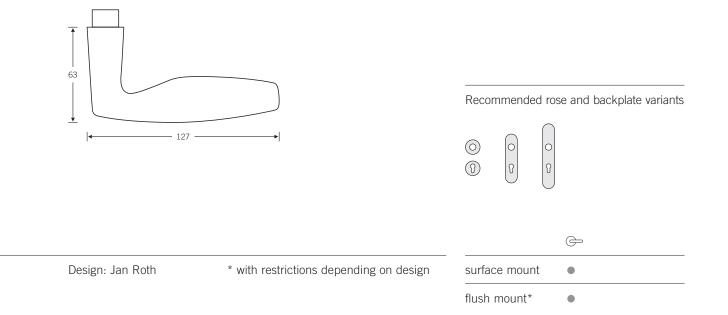


L = DIN left hand

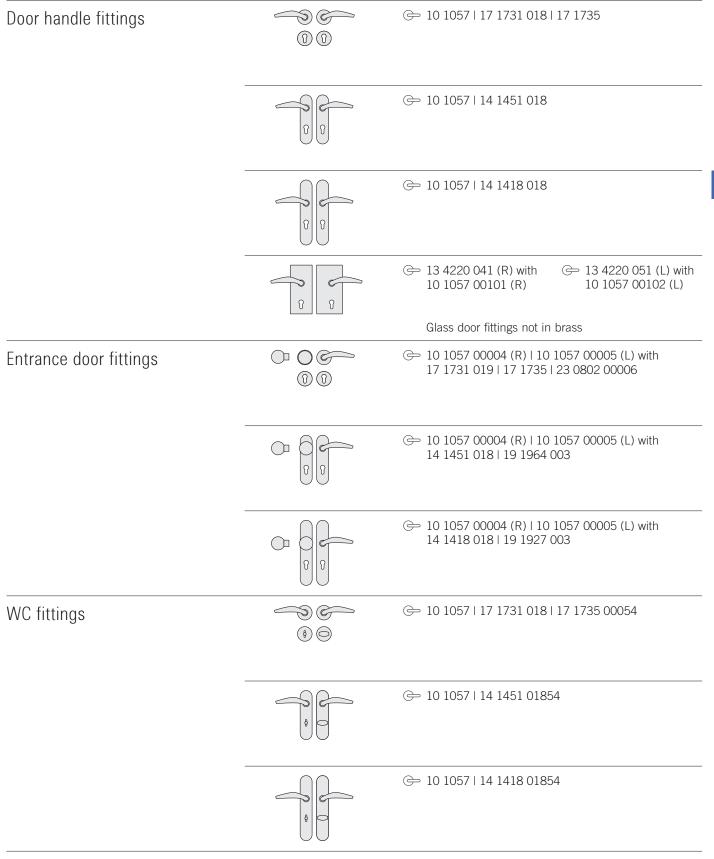
3a

Model FSB 1057 is the work of Munich-based designer Jan Roth. Unimpressed by the handles then on sale he designed a handle of his own for his doors. After the first casting in aluminium, he took the polished parts home with him and fitted them to his doors, where they can still be found.





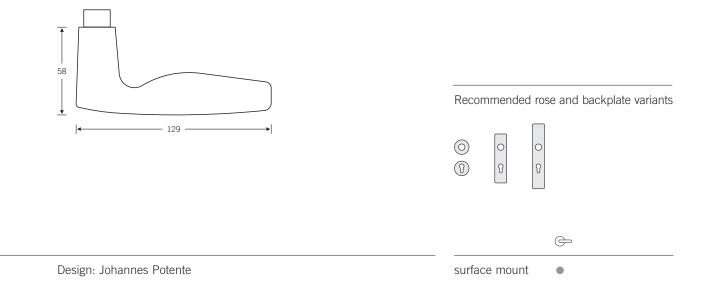




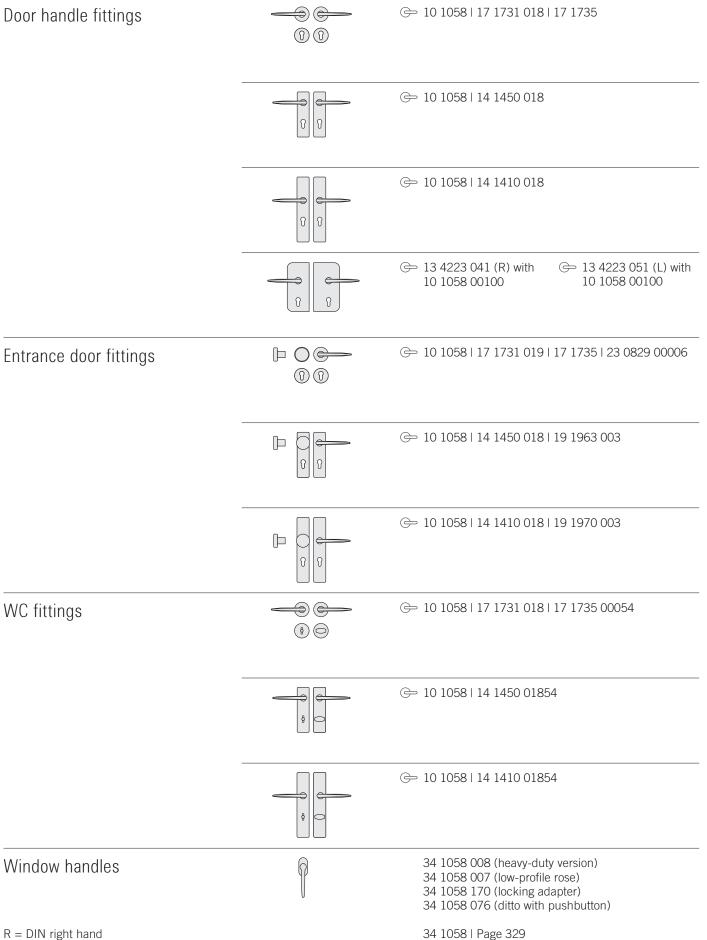
3a

FSB 1058 was Johannes Potente's favourite model. It is not known why, only two years after designing FSB 1051, his supreme creation, he followed up with this redesign. FSB 1058 is one of four models designed by Johannes Potente which have been added to MoMA's permanent collection.









L = DIN left hand

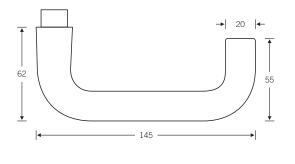
4 1058 | Page 329

3a

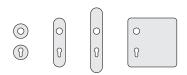
This is a handle design that became "really famous" during the period of bright colours in the 1970s. For many architects who were schoolchildren at the time this handle epitomises the architecture of the age.



* with restrictions depending on design



Recommended rose and backplate variants



	Ģ	¢	—
surface mount	•	•	•
flush mount*	٠		
isis® systems		•	•

EN 179

		G	œ	
Glass door fitting	Standard	٠	•	
	isis® systems		•	
	13 4223 with 72	2 1070	Page	472 f.
		¢	—	
Frame door handles	Standard	•	•	
	isis® systems	•	•	
	09 1070 (straigh 06 1070 (offset)	nt) Pag Page	je 415 414	
		Ģ	¢	—
Door knobs	Solid doors	•	•	•
	Frame doors		•	•
	23 0802 (for sol 07 0846 (for fra			
		¢		
Window handle	Standard, RAL	•		
\bigcirc	Rose, low profile	•		
	Lockable	•		
P	34 1070 Page	329		
Additional items for the handle system:	Additional items	for larg	e buil	dings:
Fitting lifting/sliding doors 34 1146 012 Page 3 Lifting/sliding door fitting 34 1146 011 Page 35 Door pull 66 6602 Page 518	54 f. isis® access mai 7 f. SSF tubular fran screw fixing opti	ne locks	with t	through

Fitting lifting/sliding doors 34 1146 012.. | Page 354f Lifting/sliding door fitting 34 1146 011.. | Page 357f. Door pull 66 6602 | Page 518 Door pull 66 6662 | Page 535 XXL door handle 79 1090 | Page 626 Barrier-free fitting 14 424. | Page 627

screw fixing option | Page 406

Barrier-free ErgoSystem[®] | Page 629 f.



Door handle fittings		 ☞ 72 1070 613 (R) ☞ 72 1070 614 (L) ☞ 79 1070 613 (R) ☞ 79 1070 614 (L) ☞ 10 1070 17 1731 018 17 1735
		 € 72 1070 607 (R) € 72 1070 608 (L) € 79 1070 607 (R) € 79 1070 608 (L) € 10 1070 14 1451 018
		 C→ 72 1070 627 (R) C→ 79 1070 627 (R) C→ 79 1070 627 (R) C→ 79 1070 628 (L) C→ 10 1070 14 1418 018
		 ☞ 72 1070 033 (R) ☞ 79 1070 033 (R) ☞ 79 1070 033 (R) ☞ 79 1070 034 (L) ☞ 10 1070 14 1488 003
		 I 3 4223 042 (R) with 72 1070 61350 (R) I 3 4223 052 (L) with 72 1070 61450 (L) I 3 4223 051 (L) with 10 1070 00100
Frame door handles		 € 09 1070 011 ⊕ 09 1070 012
		 C→ 06 1070 011 C→ 06 1070 012 C→ 06 1070 023 (Idf)
Frame door knobs	68	07 0802 228 (fixed) - 07 0802 228 (fixed, stainless steel) - 07 0802 428 (fixed, aluminium)
	60 5	07 0846 228 (fixed)
	0	17 1757

R = DIN right hand

L = DIN left hand

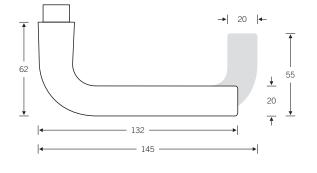
Idf = inactive door fitting

Entrance door fittings	 ← 72 1070 615 (R) ← 72 1070 616 (L) ← 79 1070 615 (R) ← 79 1070 616 (L) ← 79 1070 619 (Idf) ← 10 1070 17 1731 019 17 1735 23 0802 00006
	 € 72 1070 609 (R) € 72 1070 610 (L) 6 79 1070 609 (R) 6 79 1070 611 (Idf) 6 10 1070 14 1451 018 19 1964 003
	 € 72 1070 629 (R) € 72 1070 630 (L) € 79 1070 629 (R) € 79 1070 630 (L) € 79 1070 631 (Idf) € 10 1070 14 1418 018 19 1927 003
	 € 72 1070 035 (R) € 72 1070 036 (L) 6 79 1070 035 (R) 6 79 1070 036 (L) 6 10 1070 14 1488 0 19 1990 0
WC fittings	 € 72 1070 619 (R) € 72 1070 620 (L) ○ 10 1070 17 1731 018 17 1735 00054
	€ 72 1070 611 (R) F 72 1070 612 (L) ○ 10 1070 14 1451 01854
	 € 72 1070 631 (R) € 72 1070 632 (L) ○ 10 1070 14 1418 01854
	 € 72 1070 039 (R) € 72 1070 040 (L) € 10 1070 14 1488 054
Window handles	34 1070 008 (heavy-duty version) 34 1070 007 (low-profile rose) 34 1070 170 (locking adapter) 34 1070 076 (ditto with pushbutton)

3a

In the 1920s Mr. Mallet-Stevens mitred two sections of cylindrical tubing together: FSB 1076. Mr. Wittgenstein bent a cylindrical brass tube: FSB 1147. Messrs Gropius and Meyer married an angled piece of square section material to a handle bushing: FSB 1102. However, we still don't know today who it was that picked up a saw and "liberated" FSB 1147 from its hemispherical tip:





Recommended rose and backplate variants





	Ģ	¢	@	—
surface mount	•	0	0	0
flush mount*	•	0	0	
isis® systems		0	0	0

G EN 179 model: FSB 1070 | Page 146

* with restrictions depending on design

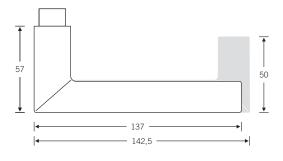




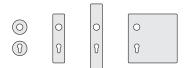
fsb.de/catalogue

The architect Robert Mallet-Stevens (1886 – 1945) was the one who hit upon the idea of cutting a round tube in two and mitring the ends together again at a right angle. His creation is today known as the "Frankfurt model". The handle was rediscovered when the Architecture Museum was rebuilt and proceeded to take the market by storm.





Recommended rose and backplate variants



	¢	¢	@	@
surface mount	•	•	•	•
flush mount*	•	•	•	
isis® systems**		•	•	•

← EN 179 model: FS	SB 1016 Page 130
--------------------	--------------------

Wide back-plate fittings in bronze on request

 * with restrictions depending on design

** isis® systems not in bronze and brass

œ Glass door fitting Standard isis® systems 13 4224 with 10 1076 | Page 368f. Glass door fittings not in bronze and brass C Standard Frame door handles isis® systems 09 1076 (straight) | Page 417 06 1076 (offset) | Page 416 06 1076 not in bronze and brass \bigcirc œ \bigcirc Door knobs Solid doors Frame doors 23 0829 (for solid doors) | Page 307 07 0809 (for frame doors) | Page 431 œ Window handles Standard, RAL Rose, low profile Lockable 34 1076 | Page 330 34 3403 | Page 343 34 3403 not in bronze and brass Additional items for the handle system:

Fittings lifting/sliding doors 34 1016 012.. | Page 354 f. Lifting/sliding door fitting 34 1016 011.. | Page 357 f. Door pull 66 6514 | Page 499 Door pull 66 6669 | Page 519 Barrier-free fitting 14 424. | Page 627

Additional items for large buildings:

isis® access management | Page 43 f. SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem® | Page 629 f.

Product family 1076

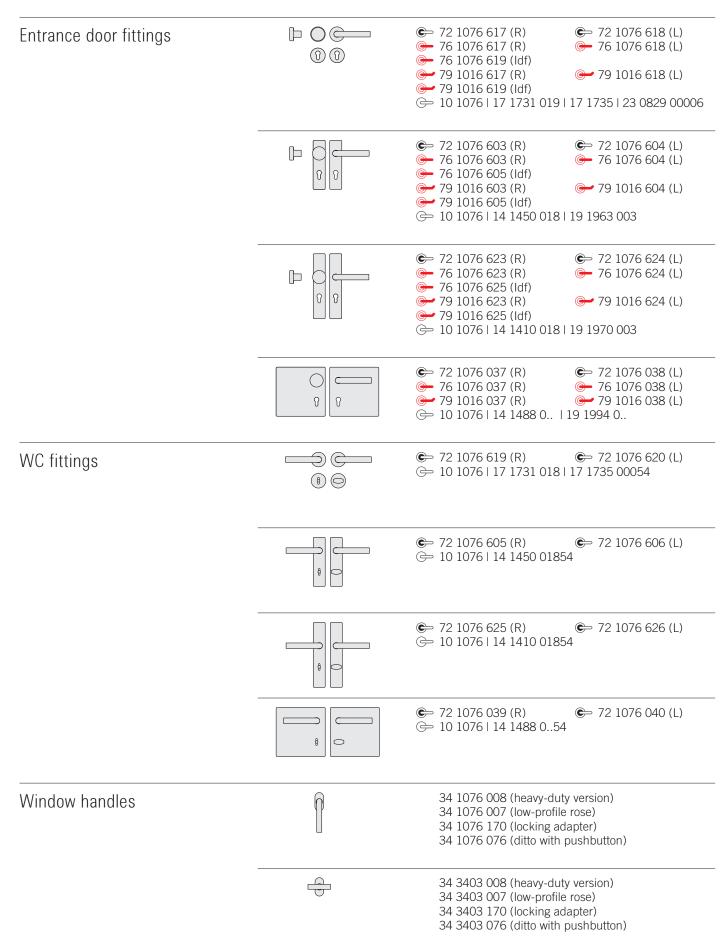
€ 72 1076 613 (R) € 72 1076 614 (L) Door handle fittings \mathfrak{I} 76 1076 613 (R) ● 76 1076 614 (L) (\mathbf{i}) € 79 1016 614 (L) € 79 1016 613 (R) ⇔ 10 1076 | 17 1731 018 | 17 1735 € 72 1076 601 (R) € 72 1076 602 (L) ● 76 1076 601 (R) ● 76 1076 602 (L) ស ß ✓ 79 1016 601 (R) - 79 1016 602 (L) ⇔ 10 1076 | 14 1450 018 🗲 72 1076 621 (R) € 72 1076 622 (L) - 76 1076 621 (R) - 76 1076 622 (L) \bigcirc *←* 79 1016 621 (R) ൙ 76 1016 622 (L) Ŷ ß ⊖ 10 1076 | 14 1410 018 € 72 1076 033 (R) 🗲 72 1076 034 (L) C ● 76 1076 033 (R) ● 76 1076 034 (L) ● 79 1016 033 (R) Ŷ 0 🗁 10 1076 | 14 1488 003 € 13 4224 042 (R) with 🕒 13 4224 052 (L) with C 10 1076 00300 10 1076 00300 Ŷ Ŷ Frame door handles € 09 1076 011 O9 1076 012 € 09 1016 011 **⊖** 09 1016 012 € 06 1076 011 - 06 1076 012 ⊖ 06 1076 023 (Idf) € 06 1016 011 ● 06 1016 012 O6 1016 023 (Idf) 07 0829 228 (fixed) Frame door knobs I \bigcirc 07 0829 228 (fixed, stainless steel) - 07 0829 428 (fixed, aluminium) 07 0809 228 (fixed) 07 0809 228 (fixed, stainless steel) - 07 0809 428 (fixed, aluminium) $\left(\right)$ 17 1757

R = DIN right hand

L = DIN left hand

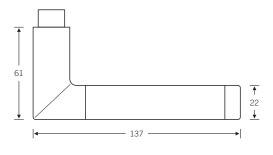
Idf = inactive door fitting

Heavy-duty and fire safety fittings not in brass Wide back-plate fittings in bronze on request



The idea behind the FSB 1077 series of door handles was to give architects, craftsmen and end-users some choice in the material used for the grip sections of their handles. If you want: a democratic handle!





Recommended rose and backplate variants



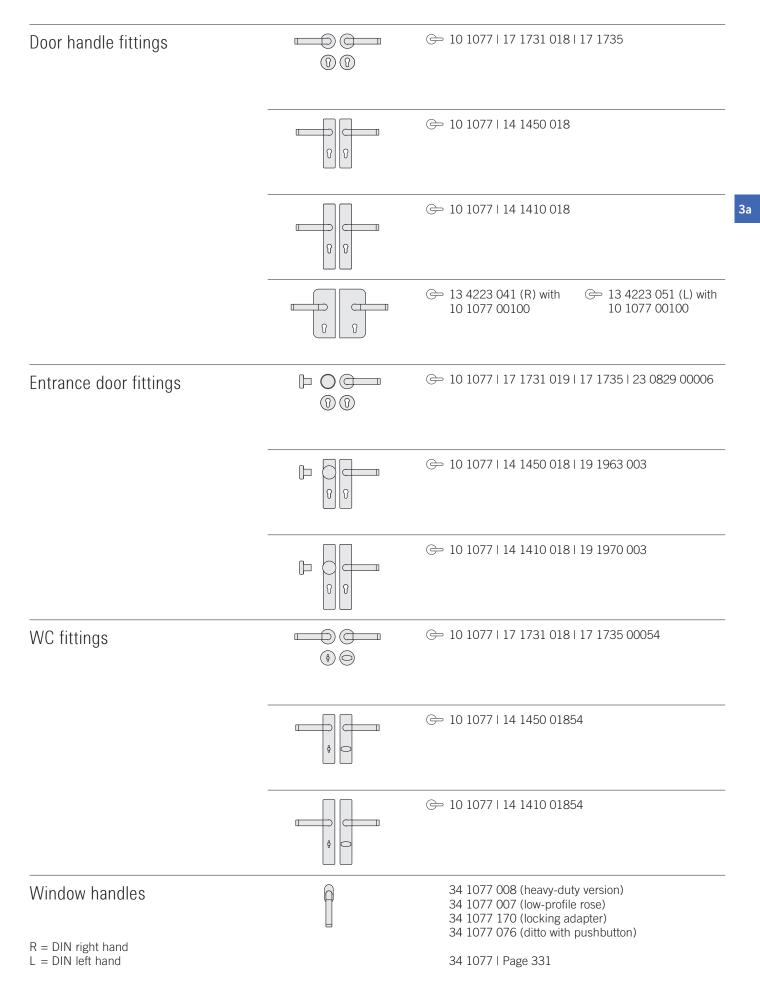
	¢	¢
surface mount	•	0
flush mount	•	0

Combinations:

Roses, backplates and elbows in natural anodised aluminium (FSB 0105), grip section in stainless steel or hard, black plastic

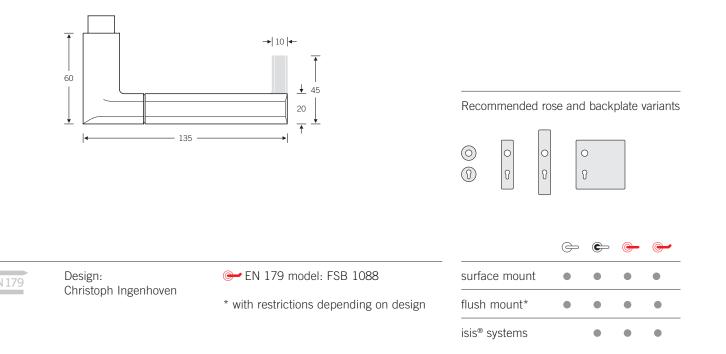
Door pull 66 6541 | page 512

Product family 1077



Christoph Ingenhoven was inspired by the quintessential "classic", FSB 1076, which he reinterpreted both in the mitring and the grip section. The particular attraction of the FSB 1078 is the transition from the round shank to the flat surfaces on the grip section. The associated return version complements the open model with a closed design to EN 179.





		¢		
Glass door fitting	Standard	•		
	isis [®] systems	٠		
	13 4224 with 10	Page	468f.	
		¢	@-	@-
Frame door handles	Standard	•	•	•
	isis® systems	•	•	•
	09 1088 (straigh 06 1088 (offset)	t) Pag Page	je 417 416	,
		Ģ	œ	©-
Door knobs	Solid doors	•	•	•
	Frame doors		•	•
	23 0829 (for soli 07 0809 (for frar	d doors ne dooi	s) Pa rs) P	ge 307 age 431
		¢		
Window handle	Standard, RAL	•		
	Rose, low profile	•		
3	Lockable	•		
P	34 1078 Page 3	331		

Additional items for the handle system:

Glass door pull 36 3688 | Page 479 Barrier-free fitting 14 424. | Page 627 Additional items for large buildings:

isis[®] access management | Page 43 f. SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem[®] | Page 629 f.

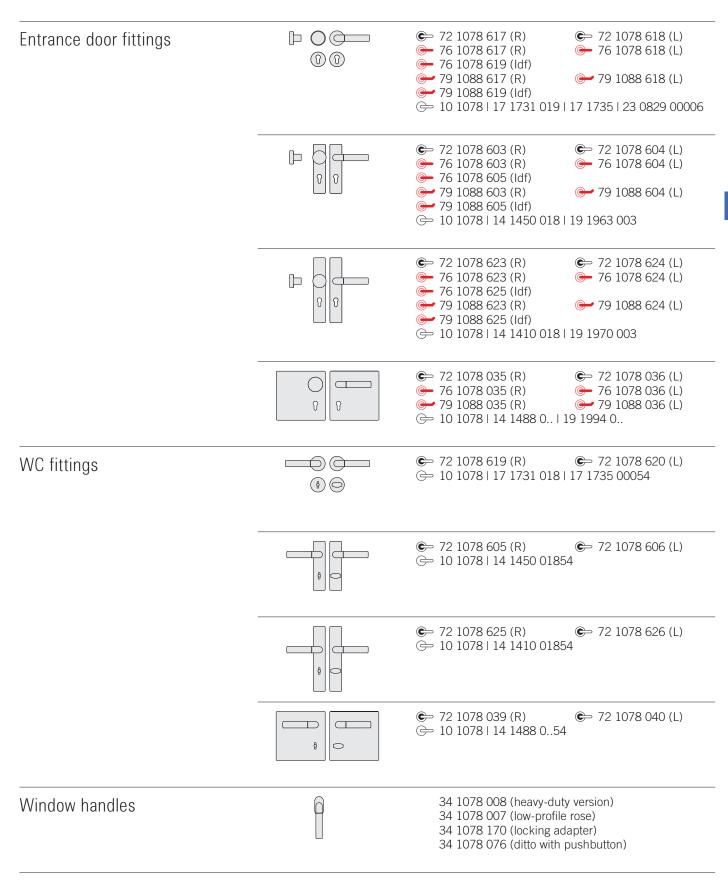


Door handle fittings		 ← 72 1078 613 (R) ← 76 1078 613 (R) ← 76 1078 613 (R) ← 76 1078 614 (L) ← 79 1088 613 (R) ← 79 1088 614 (L) ← 10 1078 17 1731 018 17 1735
		 ♥ 72 1078 601 (R) ♥ 72 1078 602 (L) ♥ 76 1078 601 (R) ♥ 76 1078 602 (L) ♥ 79 1088 601 (R) ♥ 79 1088 602 (L) ♥ 79 1088 602 (L)
		 ♥ 72 1078 621 (R) ♥ 72 1078 622 (L) ♥ 76 1078 621 (R) ♥ 76 1078 622 (L) ♥ 79 1088 621 (R) ♥ 79 1088 621 (R) ♥ 79 1088 622 (L) ♥ 79 1088 622 (L)
		 € 72 1078 033 (R) € 72 1078 034 (L) € 76 1078 033 (R) € 76 1078 034 (L) € 79 1088 033 (R) € 79 1088 033 (R) € 79 1088 034 (L)
		C 13 4224 042 (R) with 10 1078 00300 13 4224 052 (L) with 10 1078 00300
Frame door handles		 € 09 1078 011 ● 09 1078 012 ● 09 1088 012
		 € 06 1078 011 6 06 1078 012 6 06 1078 023 (ldf) 6 06 1088 012 6 06 1088 023 (ldf)
Frame door knobs	0 I	07 0829 228 (fixed)
		07 0809 228 (fixed)
	0	17 1757

R = DIN right hand

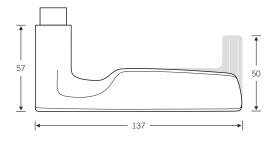
L = DIN left hand

Idf = inactive door fitting

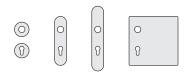


Helmut Jahn and Yorgo Lykouria approached handle design without any preconceptions whatsoever. They freed their minds from the constraints of industrial production processes and sought a shape that combines geometrical elements with ergonomic needs. The result is a genuine innovation for a hand-held shape.





Recommended rose and backplate variants



		¢	¢	—	—
	surface mount	•	•	•	•
* with restrictions depending on design	flush mount*	•			
	isis® systems		0	0	0

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Design: Helmut Jahn, Yorgo Lykouria

Glass door fitting	Standard	•	•	
	isis [®] systems		0	
	13 4223 with 72	1093	Page	472f.
		¢	—	—
Frame door handles	Standard	٠	•	•
	isis® systems	0	0	0
	09 1093 (straight 06 1093 (offset)) Pag Page	e 419 418	
		¢	¢	—
Door knobs	Solid doors	•	•	•
	Frame doors		•	•
	23 0802 (for solid 07 0846 (for fram			
		¢		
Window handle	Standard, RAL	•		
	Rose, low profile	•		
0	Lockable	•		
	34 1093 Page 3	32		
	Additional items f			

Barrier-free fitting 14 424. | Page 627

isis[®] access management | Page 43 f. SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem[®] | Page 629 f. 3a

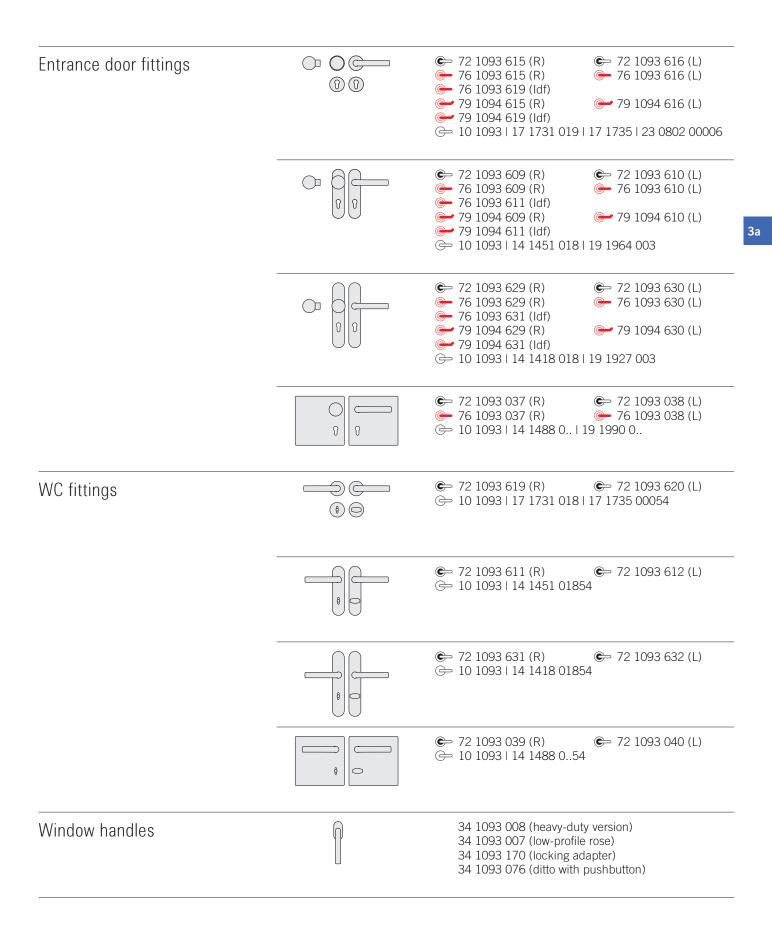
Product family 1093

Door handle fittings		 72 1093 613 (R) 76 1093 613 (R) 76 1093 613 (R) 76 1093 614 (L) 79 1094 613 (R) 79 1094 614 (L) 10 1093 17 1731 018 17 1735
		 € 72 1093 607 (R) € 72 1093 608 (L) € 76 1093 607 (R) € 76 1093 608 (L) € 79 1094 607 (R) € 79 1094 607 (R) € 10 1093 14 1451 018
		 ♥ 72 1093 627 (R) ♥ 72 1093 628 (L) ● 76 1093 627 (R) ● 76 1093 628 (L) ● 79 1094 627 (R) ● 79 1094 627 (R) ● 79 1094 628 (L)
		 € 72 1093 033 (R) € 72 1093 034 (L) € 76 1093 033 (R) € 76 1093 034 (L) € 10 1093 14 1488 003
		 I 3 4223 042 (R) with 72 1093 61350 (R) I 3 4223 052 (L) with 72 1093 61450 (L) I 3 4223 051 (L) with 10 1093 00100 I 3 4223 051 (L) with 10 1093 00100
Frame door handles		 €→ 09 1093 011 (→ 09 1093 012 (→ 09 1094 012
		 ⇐ 06 1093 011 ⇐ 06 1093 012 ⇐ 06 1093 023 (ldf) ⇐ 06 1094 012 ⇐ 06 1094 023 (ldf)
Frame door knobs	0 B	07 0802 228 (fixed) • 07 0802 228 (fixed, stainless steel) • 07 0802 428 (fixed, aluminium)
		07 0846 228 (fixed)
	0	17 1757

R = DIN right hand

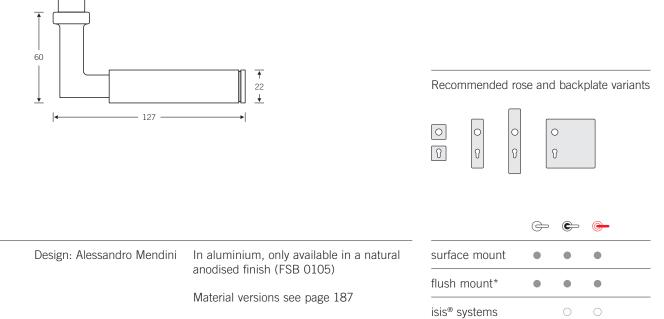
L = DIN left hand

Idf = inactive door fitting



FSB 1102 is rooted in Alessandro Mendini's redesign of the celebrated Gropius handle by choosing a different material and adding a groove during one of our design workshops. Owing to the popularity of this design, we now supply FSB 1102 in four materials. For heavily used doors we would recommend using the rugged stainless steel version.





* with restrictions depending on design

184

		¢			
Glass door fitting	Standard	•			
	isis [®] systems	•			
	13 4224 with 10 1102 Page 468f.				
	Glass door fitting	s not ir	ı bron	ze and brass	
	Standard	©	•		
Frame door handles		-	-		
	09 1102 (straigh	t)			
		Ģ	œ	-	
Door knobs	Solid doors	•	•	•	
	Frame doors		•	•	
	23 0811 (for soli 07 0812 (for frar	d doors ne doo	s) Pa rs) P	ge 305 age 430	
		¢			
Window handle	Standard, RAL	•			
	Rose, low profile	•			
3	Lockable	•			
	34 1102 Page 3	332			

Additional items for the handle system:

Lifting/sliding door fitting 34 1102 011.. | Page 358 f. Door pull 66 6546 | Page 513 Barrier-free fitting 14 424. | Page 627 Additional items for large buildings:

isis[®] access management | Page 43 f. SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem[®] | Page 629 f.



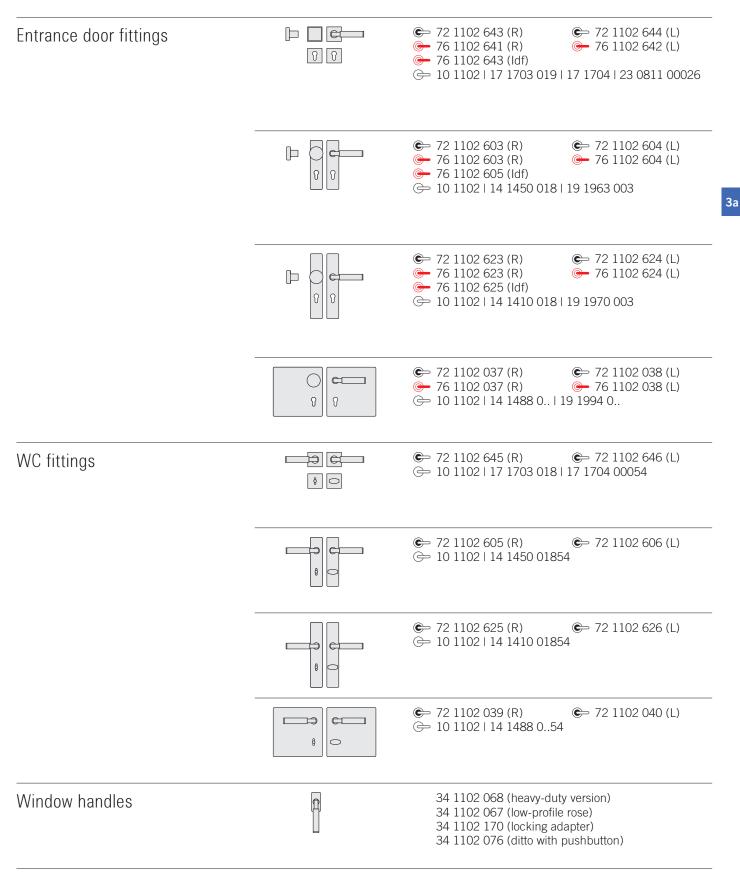
Door handle fittings		 ← 72 1102 641 (R) ← 72 1102 642 (L) ← 76 1102 639 (R) ← 76 1102 640 (L) ← 10 1102 17 1703 018 17 1704
		 ← 72 1102 601 (R) ← 72 1102 602 (L) ← 76 1102 601 (R) ← 76 1102 602 (L) ← 76 1102 602 (L)
		 ← 72 1102 621 (R) ← 76 1102 621 (R) ← 76 1102 621 (R) ← 76 1102 622 (L) ← 76 1102 622 (L)
		 € 72 1102 033 (R) € 72 1102 034 (L) € 76 1102 033 (R) € 76 1102 034 (L) € 10 1102 14 1488 003
		E 13 4224 042 (R) with 10 1102 00300 I 3 4224 052 (L) with 10 1102 00300
Frame door handles		 ← 09 1102 071 ← 09 1102 072
Frame door knobs		07 0811 229 (fixed)
		07 0812 229 (fixed)
	0	17 1778
R = DIN right hand		Heavy-duty and fire safety fittings not in brass

R = DIN right hand

L = DIN left hand

Idf = inactive door fitting

Heavy-duty and fire safety fittings not in brass Glass door fittings not in bronze and brass Wide back-plate fittings in bronze on request Fire safety fittings only in stainless steel and bronze



Material version (please state when ordering):

- completely aluminium

- elbow/rose aluminium, grip section black plastic

- completely stainless steel

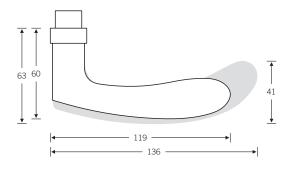
- elbow/rose stainless steel, grip section black plastic

- completely brass

- completely bronze

The FSB 1106 is characterised by its traditional style together with the variety of classic fitting hardware metals. FSB 1106 is based on its little brother 1135. Technically, it has been adapted to meet the requirements for the AGL[®] and AGL[®] FS heavy-duty fittings with the FSB compensating bearing. The version to EN 179 is new.





Recommended rose and backplate variants



	G	œ	@-	—
surface mount	٠	•	•	•
flush mount*	٠	•	•	
isis® systems		0	0	0

EN 179

Design: Christoph Mäckler

G EN 179 model: FSB 1043

Wide back-plate fittings on request

* with restrictions depending on design

		÷	©-
Glass door fitting	Standard	•	•
	isis® systems 		0
	13 4223 with 72	1106	l Page 472f.
	Glass door fitting	s not ii	n bronze and br
		¢	—
Frame door handles	Standard	•	•
	isis® systems	0	0
	09 1043 (straigh 06 1043 (offset)	t) Paş Page	ge 413 412
		Ģ	¢ •
Door knobs	Solid doors	•	• •
	Frame doors		• •
	23 0802 (for soli 07 0846 (for fran		
		¢	
Window handle	Standard, RAL	•	
	Rose, low profile	•	
0	Lockable	•	
70	34 1106 Page -	333	
Additional items for the handle system:	Additional items	for larg	ge buildings:
Barrier-free fitting 14 424. Page 627	isis [®] access mar	ageme	ent Page 43 f.

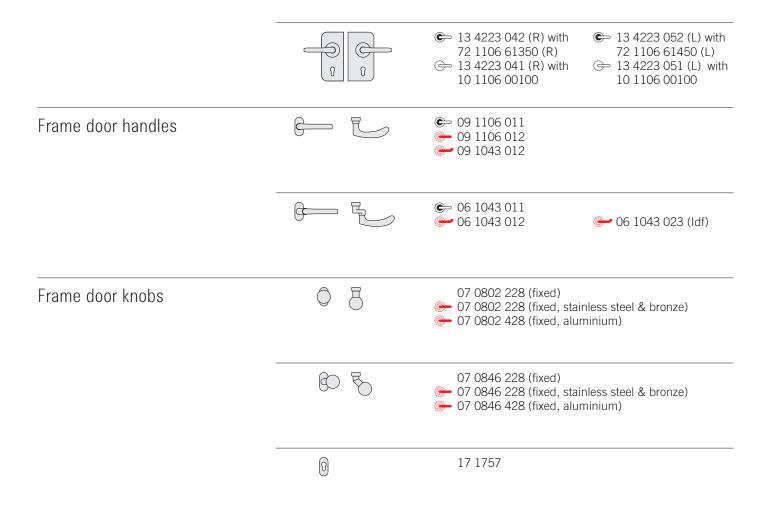
Barrier-free fitting 14 424. | Page 627

isis[®] access management | Page 43 f. SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem[®] | Page 629 f. За

Product family 1106

Door handle fittings

 ← 72 1106 613 (R) ← 76 1106 613 (R) ← 79 1043 613 (R) ← 10 1106 17 1731 018 	 ← 72 1106 614 (L) ← 76 1106 614 (L) ← 79 1043 614 (L) ↓ 17 1735
 ← 72 1106 607 (R) ← 76 1106 607 (R) ← 79 1043 607 (R) ← 10 1106 14 1451 018 	 ← 72 1106 608 (L) ← 76 1106 608 (L) ← 79 1043 608 (L)
 ← 72 1106 627 (R) ← 76 1106 627 (R) ← 79 1043 627 (R) ← 10 1106 14 1418 018 	 ← 72 1106 628 (L) ← 76 1106 628 (L) ← 79 1043 628 (L)



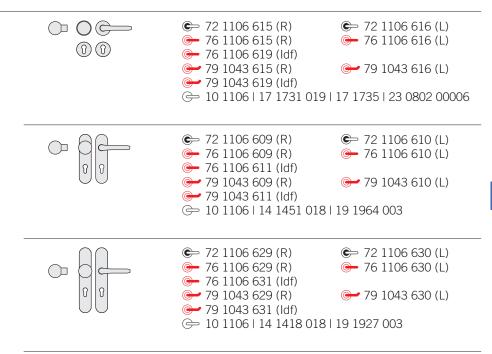
R = DIN right hand

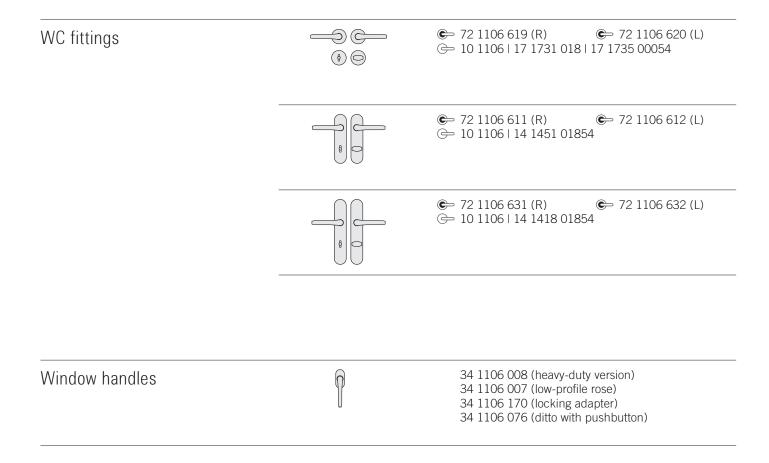
L = DIN left hand

Idf = inactive door fitting

Heavy-duty and fire safety fittings not in brass Glass door fittings not in bronze and brass

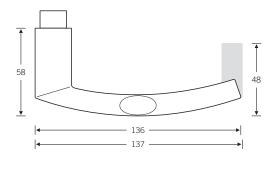
Entrance door fittings





FSB 1107 is related to FSB 1108. FSB's in-house designer Hartmut Weise has imbued his "Brakel Lightweight" with the curve of a door in motion. Matching the door handles for frame doors, it was not a long wait for the return version of the FSB 1177 model.





Recommended rose and backplate variants



	G	œ	@-	—
surface mount	٠	•	•	•
flush mount*	٠	•	•	•
isis® systems		•	•	•

EN 179

Design: Hartmut Weise

G EN 179 model: FSB 1177

Wide back-plate fittings on request

* with restrictions depending on design

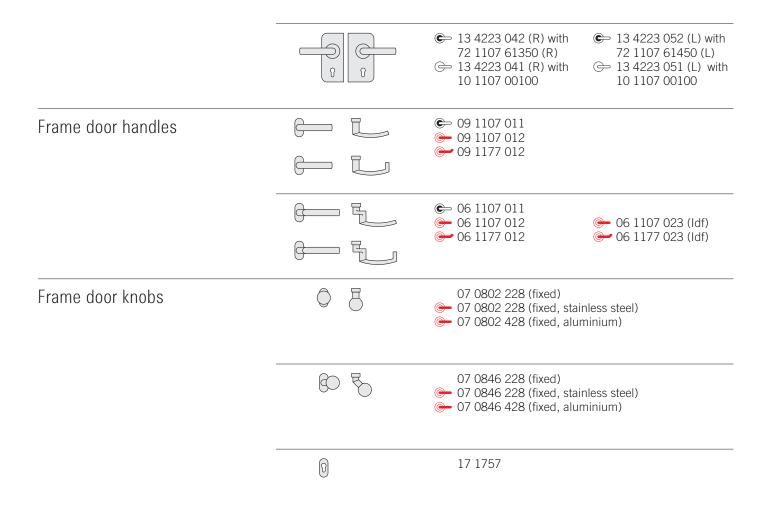
		¢	¢	
Glass door fitting	Standard	•	•	
	isis® systems		•	
	13 4223 with	72 1107	Page	472f.
	Standard	©	<u> </u>	_
Frame door handles	isis® systems			-
	09 1177 (strai 06 1177 (offse	ght) Page	ge 419 418)
		Ģ	¢	—
Door knobs	Solid doors	٠	٠	•
	Frame doors		•	•
	23 0802 (for s 07 0846 (for f			
		¢		
Window handle	Standard, RAL	•		
	Rose, low prof	ile •		
0	Lockable	•		
	34 1107 Pag	e 333		
Additional items for the handle system:	Additional item			
Door pulls 66 6535/36/37/38 Page 509 f.	isis [®] access m	anageme	ent I Pa	age 43

Door pull 66 6535/36/37/38 | Page 509 Door pull 66 6542 | Page 513 XXL door handle 76 1052 | Page 626 Barrier-free fitting 14 424. | Page 627 SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem® | Page 629 f.



Door handle fittings

€ 72 1107 613 (R) € 72 1107 614 (L) \Rightarrow ● 76 1107 613 (R) ● 76 1107 614 (L) (\mathbf{n},\mathbf{n}) 健 79 1177 614 (L) ● 79 1177 613 (R) ⇔ 10 1107 | 17 1731 018 | 17 1735 € 72 1107 607 (R) € 72 1107 608 (L) ● 76 1107 607 (R) ● 76 1107 608 (L) • 79 1177 607 (R) ß Ŷ ⇔ 10 1107 | 14 1451 018 🗲 72 1107 627 (R) 🗲 72 1107 628 (L) - 76 1107 627 (R) 🕒 76 1107 628 (L) \bigcirc ൙ 79 1177 627 (R) ൙ 79 1177 628 (L) ß Ŷ ✑ 10 1107 | 14 1418 018

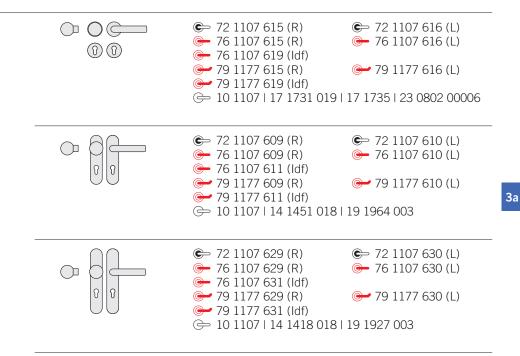


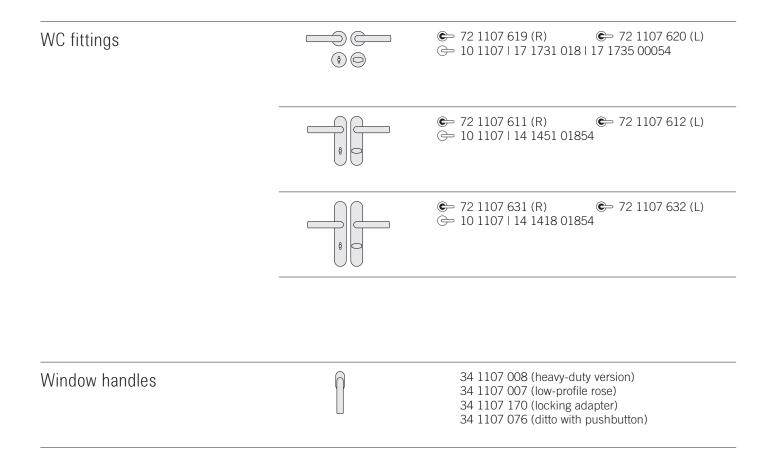
R = DIN right hand

L = DIN left hand

Idf = inactive door fitting

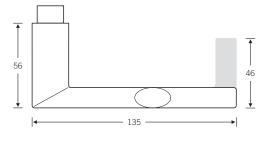
Entrance door fittings





FSB's in-house designer Hartmut Weise was wondering what it is that gives the "Frankfurt Model" and "Wittgenstein's Handle" their particular appeal. He jotted down the words "unpretentious presence". He then produced a plain design that was at the very least on a par with them. The FSB 1108, a round tube combined with a mitred, oval grip section. The "Brakel Model"?





Recommended rose and backplate variants



	Ģ	¢	—	—	
surface mount	•	•	•	•	
flush mount*	•	•	•	•	
isis [®] systems		•	•	•	

EN 179

Design: Hartmut Weise

G EN 179 model: FSB 1178

Wide back-plate fittings on request

* with restrictions depending on design

		G	œ	
Glass door fitting	Standard	٠	٠	
	isis [®] systems		•	
	13 4223 with 72	2 1108	Page	472 f.
		œ-	—	-
Frame door handles	Standard	٠	•	•
	isis® systems	٠	•	•
	09 1178 (straigh 06 1178 (offset)			
		¢	¢	—
Door knobs	Solid doors	٠	•	•
	Frame doors		•	•
	23 0802 (for so 07 0846 (for fra			
		¢		
Window handle	Standard, RAL	•		
	Rose, low profile	e •		
	Lockable	•		
	34 1108 Page	334		
Additional items for the handle system: Door pulls 66 6535/36/37/38 Page 509 f.	Additional items			
Door pull 66 6542 Page 513 Barrier-free fitting 14 424. Page 627	SSF tubular frar screw fixing opti Barrier-free Ergo	ne locks ion Pag	s with ge 406	through S

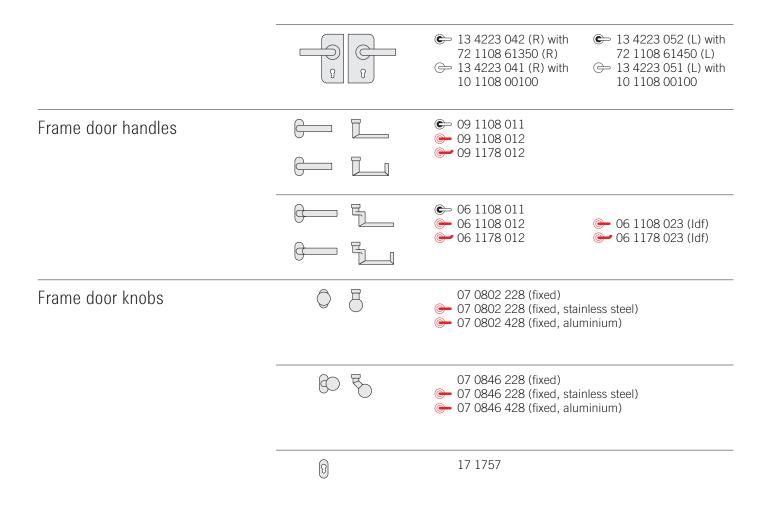
fsb.de/catalogue

3a

Product family 1108

Door handle fittings

 ☞ 72 1108 613 (R) ☞ 76 1108 613 (R) ☞ 79 1178 613 (R) ☞ 10 1108 17 1731 018 	 ☞ 72 1108 614 (L) ☞ 76 1108 614 (L) ☞ 79 1178 614 (L) Ⅰ 17 1735
 72 1108 607 (R) 76 1108 607 (R) 79 1178 607 (R) 10 1108 14 1451 018 	 ← 72 1108 608 (L) ← 76 1108 608 (L) ← 79 1178 608 (L)
 72 1108 627 (R) 76 1108 627 (R) 79 1178 627 (R) 10 1108 14 1418 018 	 € 72 1108 628 (L) ● 76 1108 628 (L) ● 79 1178 628 (L)

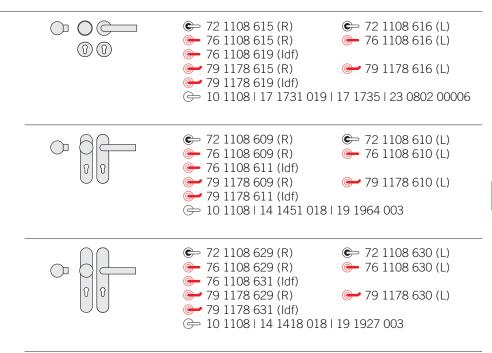


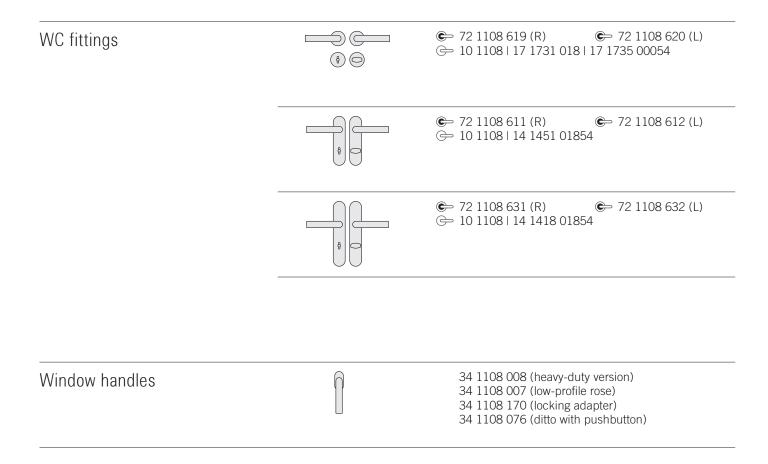
R = DIN right hand

L = DIN left hand

Idf = inactive door fitting

Entrance door fittings

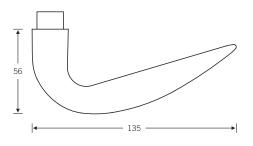




fsb.de/1111

"PS2" – as Philippe Starck called it – came from the idea of spraying an aluminium core with transparent plastic. The difficulty of recycling the combination of materials made us reject the concept at the time. Now we know: the core - FSB 1111 - has outlived trends. It is made 100% of recyclable aluminium.





Recommended rose and backplate variants

 \bigcirc (?)

P

surface mount

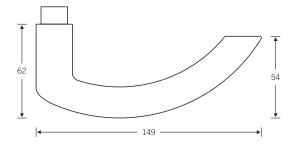
Design: Philippe Starck

Product family 1111



FSB 1119 incorporates insights gained by FSB in cooperation with the Fraunhofer Institute (FSB 1155). Whilst utmost importance was given to the rigorous implementation of ergonomic parameters when producing the FSB 1155, for the FSB 1119 formal aesthetic considerations took precedence.





Recommended rose and backplate variants



			Ģ	¢	-
Design: Hartmut Weise	Wide back-plate fittings on request	surface mount	٠	•	•
	* with restrictions depending on design	flush mount*	٠	•	•
		isis [®] systems		0	0

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EN 179

		Ģ	¢
Glass door fitting	Standard	•	•
	isis® systems		0
	13 4223 with 72	2 1119	l Page 472f.
		¢	-
Frame door handles	Standard	•	•
	isis® systems	0	0
2	09 1119 (straigh 06 1119 (offset)	nt) Pag Page	ge 421 420
		Ģ	e -
Door knobs	Solid doors	٠	• •
	Frame doors		• •
	23 0802 (for sol 07 0846 (for fra		
		¢	
Window handle	Standard, RAL	•	
	Rose, low profile	•	
	Lockable	٠	
	34 1107 Page	333	
Additional items for the handle system:	Additional items	for larg	e buildings:
Barrier-free fitting 14 424. Page 627	isis® access mar SSF tubular fran screw fixing opti Barrier-free Ergo	ne locks on Pag	s with through ge 406

fsb.de/catalogue



Door handle fittings		 ☞ 72 1119 613 (R) ☞ 72 1119 614 (L) ☞ 79 1119 613 (R) ☞ 79 1119 614 (L) ⓒ 10 1119 00004 17 1731 018 17 1735
		 ☞ 72 1119 607 (R) ☞ 72 1119 608 (L) ☞ 79 1119 607 (R) ☞ 79 1119 608 (L) ☞ 10 1119 00004 14 1451 018
		 € 72 1119 627 (R) € 72 1119 628 (L) 6 79 1119 627 (R) 6 79 1119 628 (L) ○ 10 1119 00004 14 1418 018
		 13 4223 042 (R) with 72 1119 61350 (R) 13 4223 041 (R) with 10 1119 00101 (R) 13 4223 051 (L) with 10 1119 0102 (L)
Frame door handles		 € 09 1119 01144 (R) € 09 1119 01145 (L) € 09 1119 01264 (R) € 09 1119 01265 (L)
		 € 06 1119 01144 (R) € 06 1119 01145 (L) € 06 1119 01264 (R) € 06 1119 01265 (L) € 06 1119 02364 (Sfg, R) € 06 1119 02365 (Sfg, L)
Frame door knobs	0 B	07 0802 228 (fixed)
	60 5	07 0846 228 (fixed)
	0	17 1757

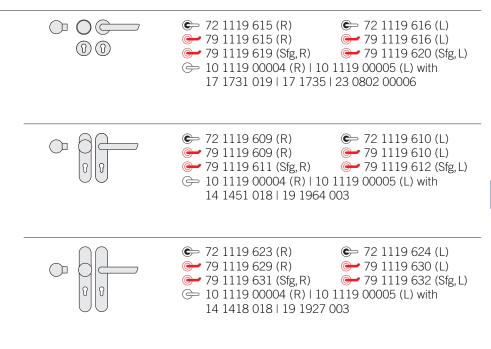
R = DIN right hand

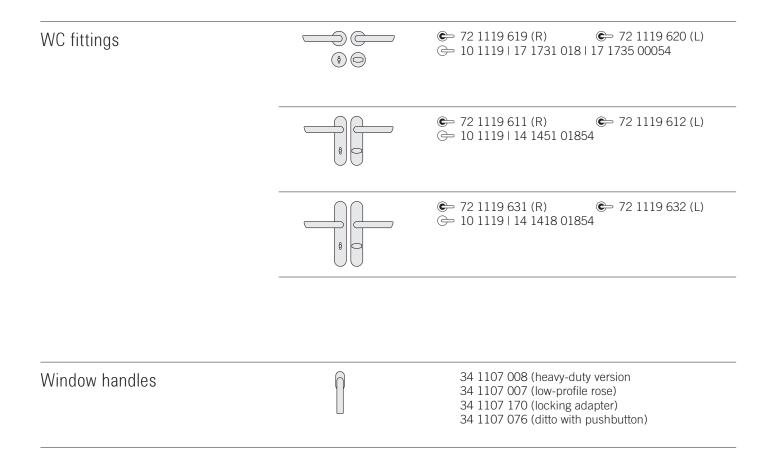
L = DIN left hand

Idf = inactive door fitting

Glass door fittings not in bronze

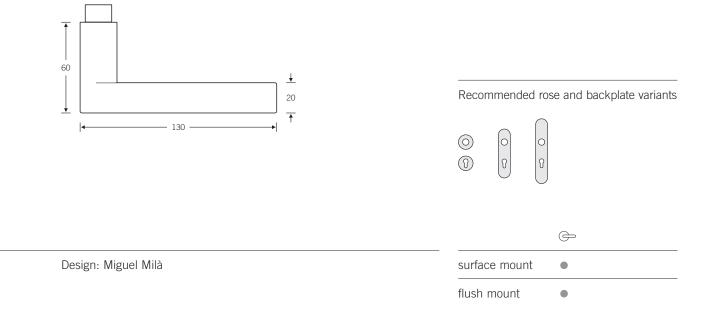
Entrance door fittings



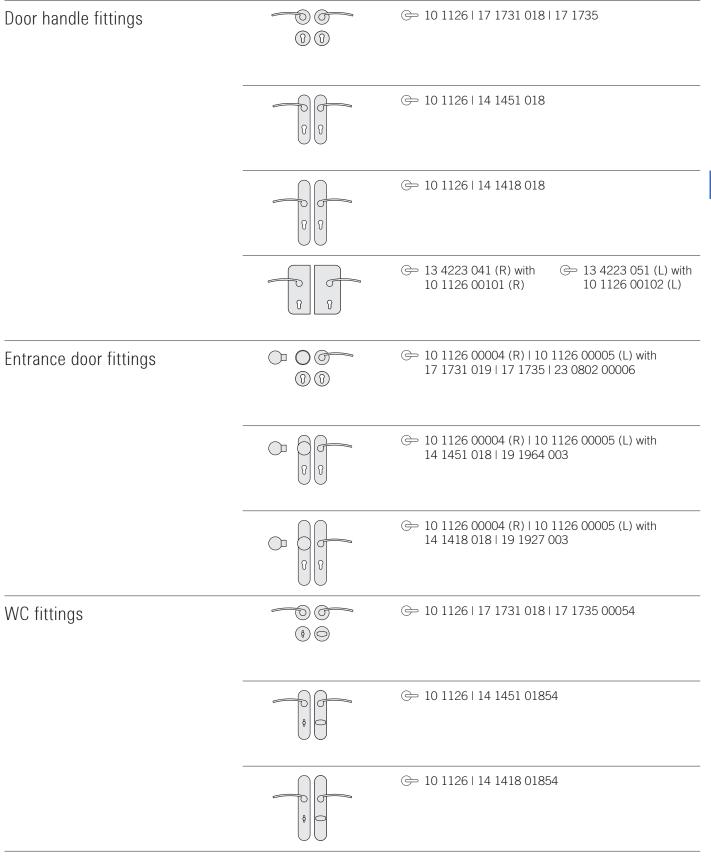


Miguel Milà's idea that we make a door handle from a flat stainless steel strip reminded us of familiar shapes from Wagenfeld and his followers. But our research revealed that, with his curved grip section, the Spaniard Milà had created a hitherto unknown impression.





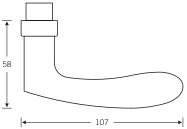
Product family 1126



3a

The special attraction of this door handle is its traditional style. Together with the emphatically technical appearance of its backplate, this fitting represents a no-frills style element for any door. Also available as a heavy-duty version, is the FSB 1106 in the classic FSB metals (see page 188).





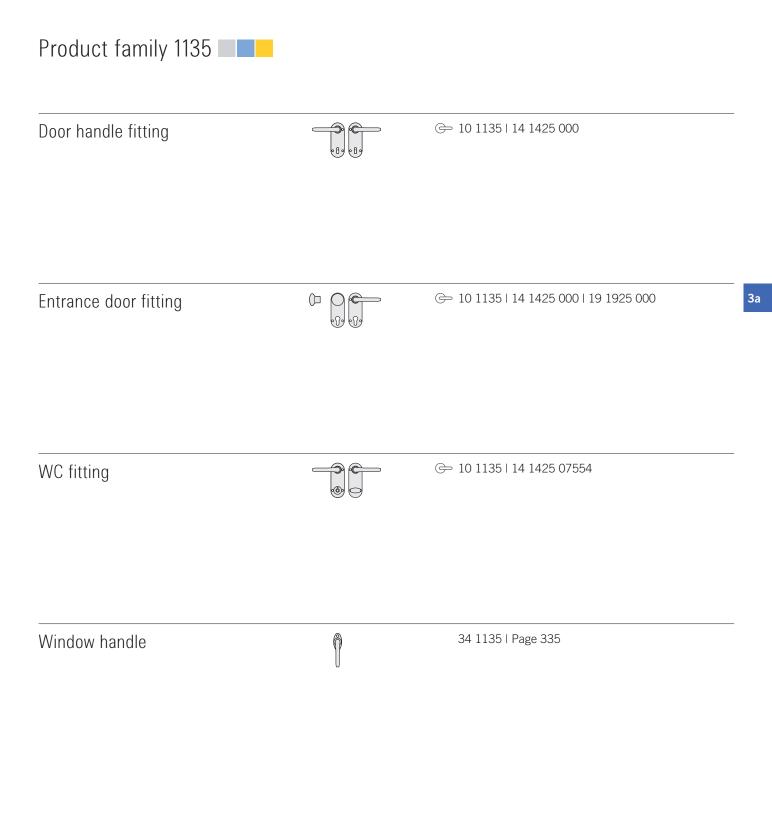
Recommended rose and backplate variants



P

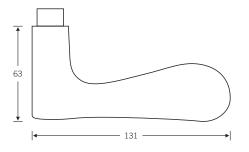
Design: Christoph Mäckler

surface mount



The FSB 1144 door handle is as pleasing to the eye as to the hand. Designer Jasper Morrison lets our eyes know that this door handle is a manual tool. Your eyes relax and your hand takes over. Your thumb finds its place, your forefinger finds its hollow and your hand finds plenty to get hold of. This is precisely what the "Four-Point Guide to Good Grip" drawn up by FSB and Otl Aicher requires.





Recommended rose and backplate variants



_	Ģ	¢	—
surface mount	•	•	•
flush mount*	•	•	•
isis® systems	•	•	•

Design: Jasper	Morrison
----------------	----------

* with restrictions depending on design

		¢
Glass door fitting	Standard	• •
	isis [®] systems	•
	13 4223 with 7;	2 1144 Page 472f.
		©-
Frame door handles	Standard	• •
	isis® systems	• •
	09 1144 (straig 06 1144 (offset	ht) Page 423) Page 422
		G G G
Door knob	Solid doors	• • •
	23 0844 (for so	lid doors) Page 308
		¢
Window handle	Standard, RAL	•
	Rose, low profile	e •
0	Lockable	•
P	34 1144 Page	335
Additional items for the handle system: Hat hooks 36 3650 Page 389 Furniture knob 36 3654 Page 389	isis® access ma SSF tubular frar	s for large buildings: nagement I Page 43 f. ne locks with through
Barrier-free fitting 14 424. Page 627	screw fixing opt	

fsb.de/catalogue

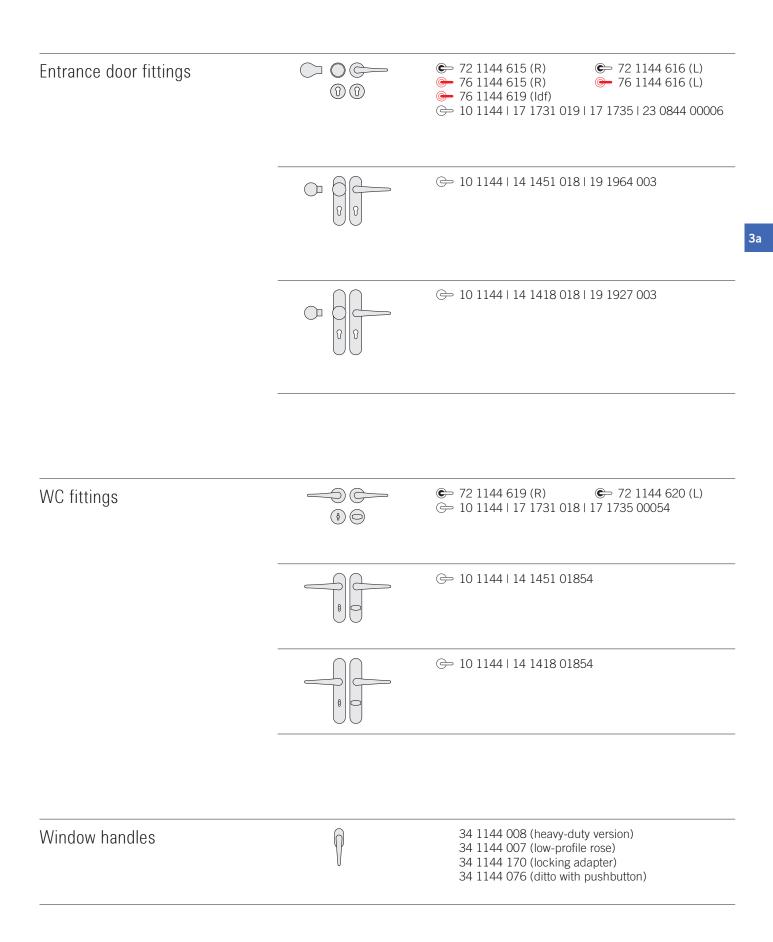


Door handle fittings		 72 1144 613 (R) 72 1144 614 (L) 76 1144 613 (R) 76 1144 614 (L) 10 1144 17 1731 018 17 1735
		⇔ 10 1144 14 1451 018
		☞ 10 1144 14 1418 018
		 I 3 4223 042 (R) with 72 1144 61350 (R) I 3 4223 041 (R) with 10 1144 00100 I 3 4223 051 (L) with 10 1144 00100
Frame door handles	F L	 € 09 1144 011 ● 09 1144 012
		 ⇐ 06 1144 011 ➡ 06 1144 012 Œ 06 1144 023 (Idf)
Frame door knobs	0	07 0802 228 (fixed) - 07 0802 228 (fixed, stainless steel) - 07 0802 428 (fixed, aluminium)
	60 5	07 0846 228 (fixed)
	0	17 1757

R = DIN right hand

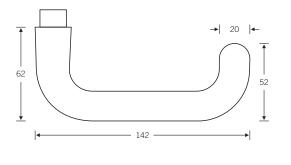
L = DIN left hand

Idf = inactive door fitting

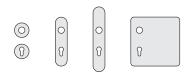


In the early 1990s we gave the plain round rod of the stable-door handle a going over. The shank was conically widened and a hemispherical tip was added to the bent end. Two small but important special features that have given the FSB 1146 model a character all of its own.





Recommended rose and backplate variants



	G	œ	—
surface mount	•	•	•
flush mount*	•	•	•
isis® systems**		•	•

EN 179

* with restrictions depending on design ** isis Systeme nicht in Messing

		¢	¢	
Glass door fitting	Standard	•	•	
	isis [®] systems		•	
	13 4223 with 72	2 1146	Page	e 472f.
	Glass door fitting			
		¢	@ ••	
Frame door handles	Standard	•	•	
	isis [®] systems	•	•	
	09 1146 (straigh 06 1146 (offset)	ıt) Pag Page	;e 423 422	3
		Ģ	¢	—
Door knobs	Solid doors	•	•	•
	Frame doors		•	•
	23 0802 (for sol 07 0846 (for fra	id doors me doo	s) Pa rs) P	ige 304 Page 432
		¢		
Window handle	Standard, RAL	•		
	Rose, low profile	•		
	Lockable	•		
P	34 1146 Page	336		
Additional items for the handle system:	Additional items	for larg	e buil	dings:
				40.5

Fitting lifting/sliding doors 34 1146 012.. | Page 354f. Lifting/sliding door fitting 34 1146 011.. | Page 357f. Door pull 66 6602 | Page 518 Door pull 66 6662 | Page 535 XXL door handle 79 1090 | Page 626 Depring free fitting 14 424 | Door 627 Barrier-free fitting 14 424. | Page 627

isis® access management I Page 43 f. SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem® | Page 629 f.

C

Product family 1146		
Door handle fittings		 € 72 1146 613 (R) € 72 1146 614 (L) € 79 1146 613 (R) € 79 1146 614 (L) € 10 1146 17 1731 018 17 1735
		 C→ 72 1146 607 (R) C→ 72 1146 608 (L) C→ 79 1146 607 (R) C→ 79 1146 608 (L) C→ 10 1146 14 1451 018
		 € 72 1146 627 (R) € 72 1146 628 (L) € 79 1146 627 (R) € 79 1146 628 (L) € 10 1146 14 1418 018
		 ⇐ 72 1146 033 (R) ⇐ 72 1146 034 (L) ⇐ 79 1146 033 (R) ⇐ 79 1146 034 (L) ⇐ 10 1146 14 1488 003
		 13 4223 042 (R) with 72 1146 61350 (R) 13 4223 041 (R) with 10 1146 00100 13 4223 051 (L) with 10 1146 00100
Frame door handles		 €→ 09 1146 011 (→) 09 1146 012
		 € 06 1146 011 € 06 1146 012 € 06 1146 023 (ldf)
Frame door knobs	68	07 0802 228 (fixed) • 07 0802 228 (fixed, stainless steel) • 07 0802 428 (fixed, aluminium)
	60 5	07 0846 228 (fixed)
	0	17 1757

 $\mathsf{R}=\mathsf{DIN}$ right hand

L = DIN left hand

Idf = inactive door fitting

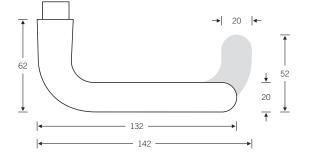
Heavy-duty, fire safety and glass door fittings not in brass

Entrance door fittings	 C→ 72 1146 615 (R) C→ 72 1146 616 (L) C→ 79 1146 615 (R) C→ 79 1146 616 (L) C→ 79 1146 619 (Idf) C→ 10 1146 17 1731 019 17 1735 23 0802 00006
	 € 72 1146 609 (R) € 72 1146 610 (L) 6 79 1146 609 (R) 6 79 1146 610 (L) 6 79 1146 611 (Idf) 6 10 1146 14 1451 018 19 1964 003
	 € 72 1146 629 (R) € 72 1146 630 (L) 6 79 1146 629 (R) 6 79 1146 630 (L) 6 79 1146 631 (Idf) 6 10 1146 14 1418 018 19 1927 003
	 ← 72 1146 035 (R) ← 72 1146 036 (L) ← 79 1146 035 (R) ← 79 1146 036 (L) ← 10 1146 14 1488 0 19 1990 0
WC fittings	 € 72 1146 619 (R) € 72 1146 620 (L) ⓒ 10 1146 17 1731 018 17 1735 00054
	C 72 1146 611 (R) C 72 1146 612 (L) C 10 1146 14 1451 01854
	 € 72 1146 631 (R) € 72 1146 632 (L) ⓒ 10 1146 14 1418 01854
	 € 72 1146 039 (R) ⓒ 72 1146 040 (L) ⓒ 10 1146 14 1488 054
Window handles	34 1146 008 (heavy-duty version) 34 1146 007 (low-profile rose) 34 1146 170 (locking adapter) 34 1146 076 (ditto with pushbutton)

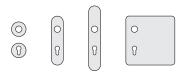
3a

The FSB logo echoes a door handle designed by the Austrian philosopher Ludwig Wittgenstein in the mid-1920s in Vienna. This is the original upon which all similar door handle shapes are based. By adding a conical shank and spherical tip we aimed to set ourselves apart from the many other variants of this handle on the market.





Recommended rose and backplate variants



	G	¢	@-	—
surface mount	•	•	•	•
flush mount*	•	•	•	•
isis [®] systems**			•	•

EN 179

G EN 179 model: FSB 1146 | Page 194

* with restrictions depending on design ** not in brass

		¢	¢	
Glass door fitting	Standard	•	•	
	isis [®] systems		•	
	13 4223 with 7	2 1147	Page	472f.
	Glass door fittin	gs not ir	ı brass	5
		¢	<u> </u>	@ -•
Frame door handles	Standard	•	•	•
	isis® systems	•	•	•
	09 1147 (straig 06 1147 (offset			
		Ģ	¢	<u> </u>
Door knobs	Solid doors	•	•	٠
	Frame doors		•	•
	23 0802 (for so 07 0846 (for fra			
		¢		
Window handle	Standard, RAL	•		
	Rose, low profile	e •		
	Lockable	•		
7	34 1147** Pa	ge 336		
Additional items for the handle system:	Additional items	s for larg	e buil	dings:
Fitting lifting/sliding doors 34 1146 012 Page 354 f. Lifting/sliding door fitting 34 1146 011 Page 357 f.	isis® access ma SSF tubular frar	nageme ne locks	nt Pa s with	ige 43 throug

Lifting/sliding door fitting 34 1146 011.. | Page 357 f. Door pull 66 6602 | Page 518 Door pull 66 6662 | Page 535 Barrier-free fitting 14 424. | Page 627

e 43 f. SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem[®] | Page 629 f.



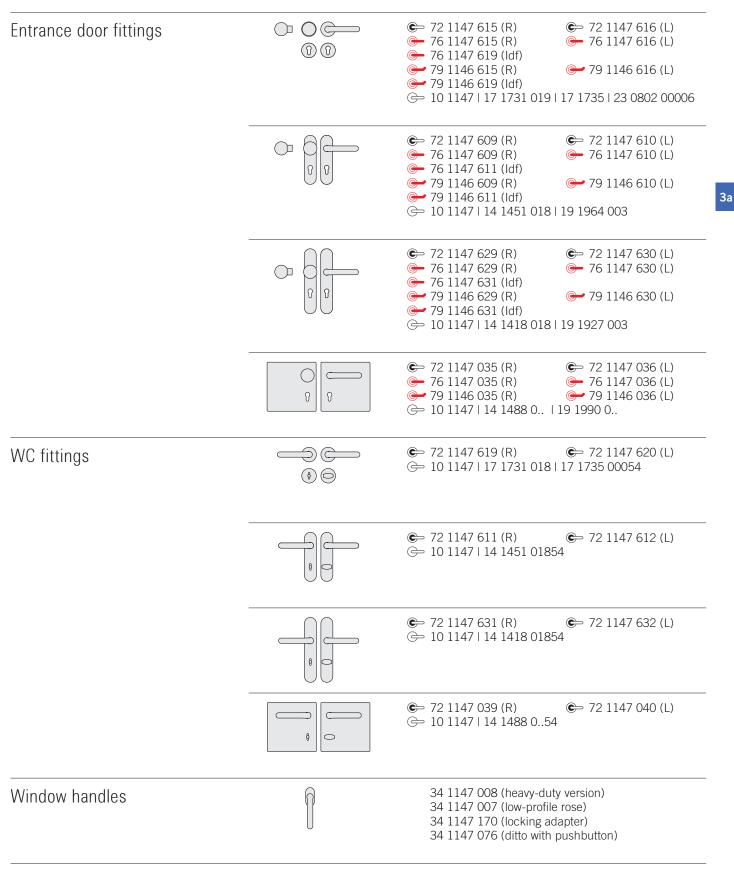
Door handle fittings		 72 1147 613 (R) 76 1147 613 (R) 76 1147 613 (R) 76 1147 614 (L) 79 1146 613 (R) 79 1146 614 (L) 10 1147 17 1731 018 17 1735
		 72 1147 607 (R) 76 1147 607 (R) 76 1147 607 (R) 76 1147 608 (L) 79 1146 607 (R) 79 1146 608 (L) 10 1147 14 1451 018
		 72 1147 627 (R) 76 1147 627 (R) 76 1147 627 (R) 76 1147 628 (L) 79 1146 627 (R) 79 1146 627 (R) 79 1146 628 (L)
		 72 1147 033 (R) 76 1147 033 (R) 76 1147 033 (R) 76 1147 034 (L) 79 1146 033 (R) 79 1146 033 (R) 79 1146 034 (L) 10 1147 14 1488 003
		 13 4223 042 (R) with 72 1147 61350 (R) 13 4223 052 (L) with 72 1147 61450 (L) 13 4223 051 (L) with 10 1147 00100 13 4223 051 (L) with 10 1147 00100
Frame door handles		 €> 09 1147 011 €> 09 1147 012 €> 09 1146 012
		 C→ 06 1147 011 C→ 06 1147 012 C→ 06 1147 023 (ldf) C→ 06 1146 012 C→ 06 1146 023 (ldf)
Frame door knobs	0 B	07 0802 228 (fixed)
	60 5	07 0846 228 (fixed)
	0	17 1757

R = DIN right hand

L = DIN left hand

Idf = inactive door fitting

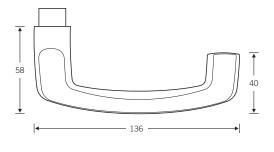
Heavy-duty, fire safety and glass door fittings not in brass



Window handle not in brass

The process of creating FSB 1159 began for Laurids and Manfred Ortner with a comparative analysis of door handle models old and new. At the end of the day a typical handle shape was produced which, with its transitions and curved surfaces, gives its users the feeling of holding something familiar in their hand.





Recommended rose and backplate variants



	Ģ	œ	@ **
surface mount	٠	•	•
flush mount*	٠	•	•
isis® systems		0	0

EN 179

Design: Laurids and Manfred Ortner * with restrictions depending on design ** only in stainless steel

Ð C Glass door fitting Standard isis® systems 13 4223 with 10 1159 | Page 472 f. œ 6 ** Standard Frame door handles isis® systems 09 1159 (straight) | Page 425 06 1159 (offset) | Page 424 ** œ e 0 Solid doors Door knobs Frame doors 23 0829 (for solid doors) | Page 307 07 0809 (for frame doors) | Page 431 œ Window handle Standard, RAL Rose, low profile Lockable 34 1159 | Page 337

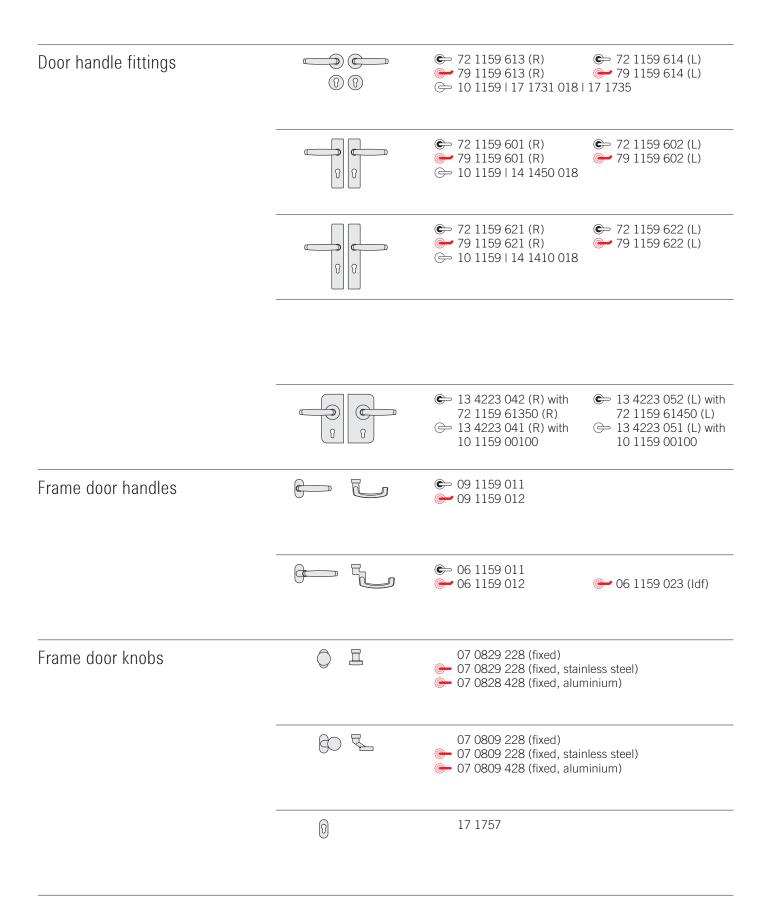
Additional items for the handle system:

Barrier-free fitting 14 424. | Page 627

Additional items for large buildings:

isis[®] access management | Page 43f. SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem[®] | Page 629f. 3a





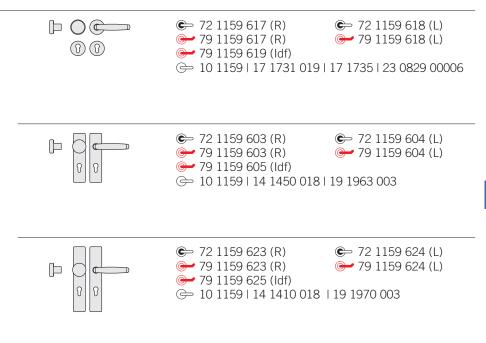
R = DIN right hand

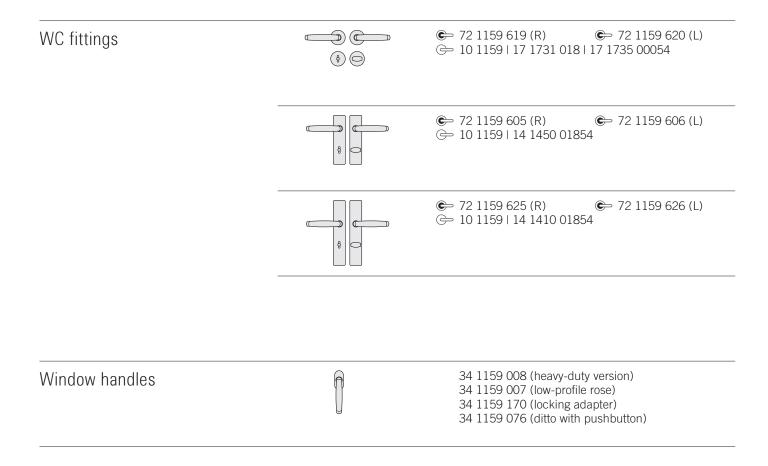
L = DIN left hand

Idf = inactive door fitting

Fire safety fittings only in stainless steel

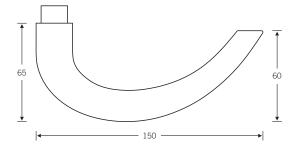
Entrance door fittings





Works design FSB 1160 is based on the "dynamic golden growth spiral". It has a round cross-section, with the door handle also tapering from the shank to the end of the handle following the rule of the golden ratio.





Recommended rose and backplate variants



	G	¢	—	
surface mount	٠	•	•	
flush mount*	•			
isis® systems		0	0	

EN 179

Wide back-plate fittings on request

* with restrictions depending on design

			Ģ	e	
Glass door fitting	Sta	andard	•	•	
	isi	s® systems		0	
	13	3 4223 with 72	1160	Page	472f.
			¢	_	
Frame door handles		andard	•	•	
-	isi: 	s® systems			
	09 06	9 1160 (straight 5 1160 (offset)	t) Pag Page	e 425 424	
			¢	¢	—
Door knobs	So	lid doors	•	•	•
	Fra	ame doors		•	•
		8 0802 (for solid 7 0846 (for fran			
			¢		
Window handle	Sta	andard, RAL	٠		
	Rc	ose, low profile	•		
0	Lo	ckable	٠		
	34	1160 Page 3	337		
Additional items for the handle system:	Ac	Iditional items	for larg	e build	dings:
Barrier-free fitting 14 424. Page 627	SS sc	s® access mana SF tubular fram rew fixing optic arrier-free Ergos	e locks on Pag	with t ge 406	through S

()

3a



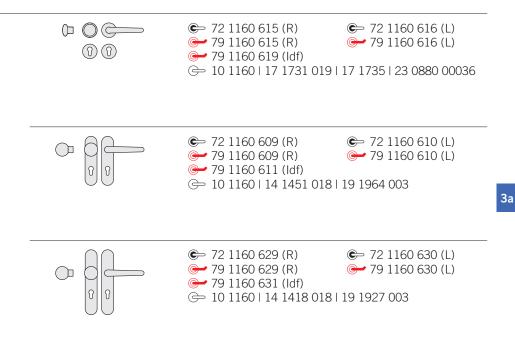
	 € 72 1160 613 (R) € 72 1160 614 (L) € 79 1160 613 (R) € 79 1160 613 (R) € 79 1160 614 (L) € 10 1160 17 1731 018 17 1735
	 ⇐ 72 1160 607 (R) ⇐ 72 1160 608 (L) ⇐ 79 1160 607 (R) ⇐ 79 1160 607 (R) ⇐ 79 1160 608 (L)
	 ⇐ 72 1160 627 (R) ⇐ 72 1160 628 (L) ⇐ 79 1160 627 (R) ⇐ 79 1160 628 (L) ⇐ 10 1160 14 1418 018
	 I 3 4223 042 (R) with 72 1160 61350 (R) I 3 4223 052 (L) with 72 1160 61450 (L) I 3 4223 041 (R) with 10 1160 00100 I 3 4223 051 (L) with 10 1160 00100
F V	 € 09 1160 011 ⑥ 09 1160 012
	 € 06 1160 011 € 06 1160 012 € 06 1160 023 (Idf)
08	07 0802 228 (fixed)
60 5	07 0846 228 (fixed)
0	17 1757

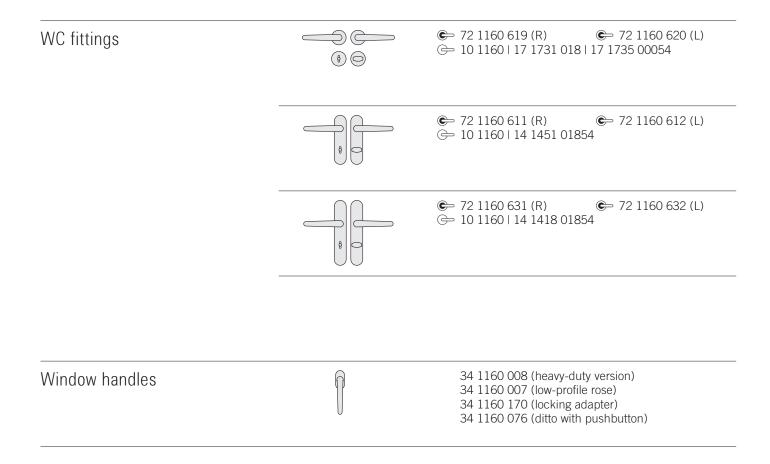
R = DIN right hand

L = DIN left hand

Idf = inactive door fitting

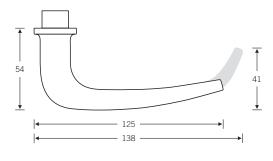
Entrance door fittings



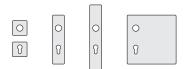


Berlin-based architect Hans Kollhoff devised a handle design for his projects that consciously accommodates design elements from the 1930s. His plain door handles, window handles and window fasteners were immediately adopted as authentic interpretations by the market.





Recommended rose and backplate variants



	G	¢	@	_
surface mount	•	•	•	•
flush mount*		•	•	•
isis [®] systems**		0	0	0

EN179 Design: Hans Kollhoff

In aluminium only available in natural anodised finish (FSB 0105) G EN 179 model: FSB 1164

Wide back-plate fittings in bronze on request

* with restrictions depending on design ** only with a round rose

an only with a round ros

Glass door fitting



Frame door handles





Door knobs





Window handle



C \bigcirc Standard isis[®] systems

13 4220 with 10 1163 | Page 470f.

Glass door fittings not in bronze

	¢	—	—
Standard	•	•	•
isis® systems	0	0	0

09 1164 (straight) | Page 427 06 1164 (offset) | Page 426

	Ģ	œ	—
Solid doors	٠	•	•
Frame doors		•	•

23 0811 (for solid doors) | Page 305 07 0812 (for frame doors) | Page 430

	¢
Standard, RAL	•
Rose, low profile	•
Lockable	•

34 1163 | Page 338 34 3453 | Page 343

Additional items for large buildings:

isis® access management | Page 43 f. SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem® | Page 629 f.

fsb.de/catalogue

Product family 1163

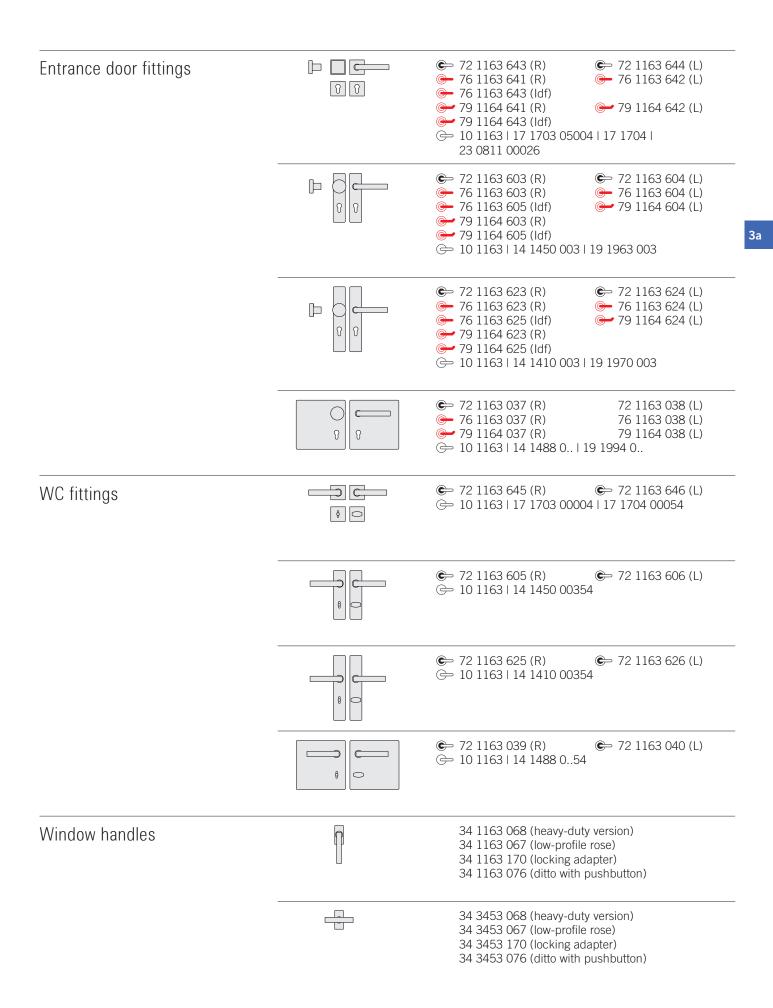
€ 72 1163 641 (R) € 72 1163 642 (L) Door handle fittings ЭC ● 76 1163 639 (R) ● 76 1163 640 (L) 00 € 79 1164 639 (R) 🕒 79 1164 640 (L) 🕞 10 1163 | 17 1703 00004 | 17 1704 € 72 1163 601 (R) € 72 1163 602 (L) ● 76 1163 601 (R) ● 76 1163 602 (L) ✓ 79 1164 601 (R) ß ß 79 1164 602 (L) ⇒ 10 1163 | 14 1450 003 🗲 72 1163 621 (R) 🗲 72 1163 622 (L) - 76 1163 621 (R) - 76 1163 622 (L) \bigcirc € 79 1164 621 (R) ൙ 79 1164 622 (L) Ŷ ß ⇒ 10 1163 | 14 1410 003 🗲 72 1163 033 (R) 🕒 72 1163 034 (L) ٦ C 🕞 76 1163 033 (R) ● 76 1163 034 (L) ● 79 1164 033 (R) ● 79 1164 034 (L) Ŷ Ŷ 🗁 10 1163 | 14 1488 003 € 13 4220 042 (R) with 🕒 13 4220 052 (L) with 72 1163 64150 (R) 72 1163 64250 (L) 🗁 13 4220 051 (L) with ⇒ 13 4220 041 (R) with Ŷ ß 10 1163 00100 10 1163 00100 Frame door handles € 09 1163 071 - 09 1163 072 • 09 1164 072 € 06 1163 071 - 06 1163 072 06 1163 073 (Idf) ● 06 1164 072 • 06 1164 073 (ldf) 07 0811 229 (fixed) Frame door knobs Д m 07 0811 229 (fixed, stainless steel & bronze) - 07 0811 429 (fixed, aluminium) 07 0812 229 (fixed) 07 0812 229 (fixed, stainless steel & bronze) - 07 0812 429 (fixed, aluminium) Ŷ 17 1778

R = DIN right hand

L = DIN left hand

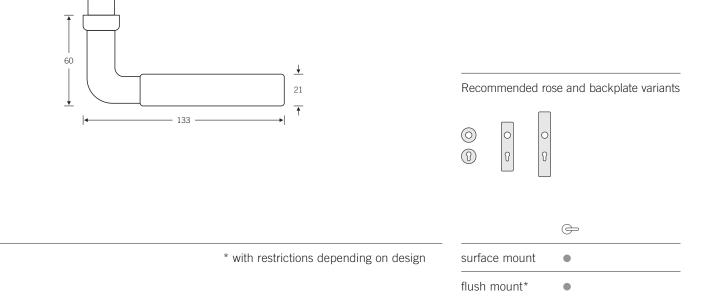
Idf = inactive door fitting

Glass door fittings not in bronze Wide back-plate fittings in bronze on request

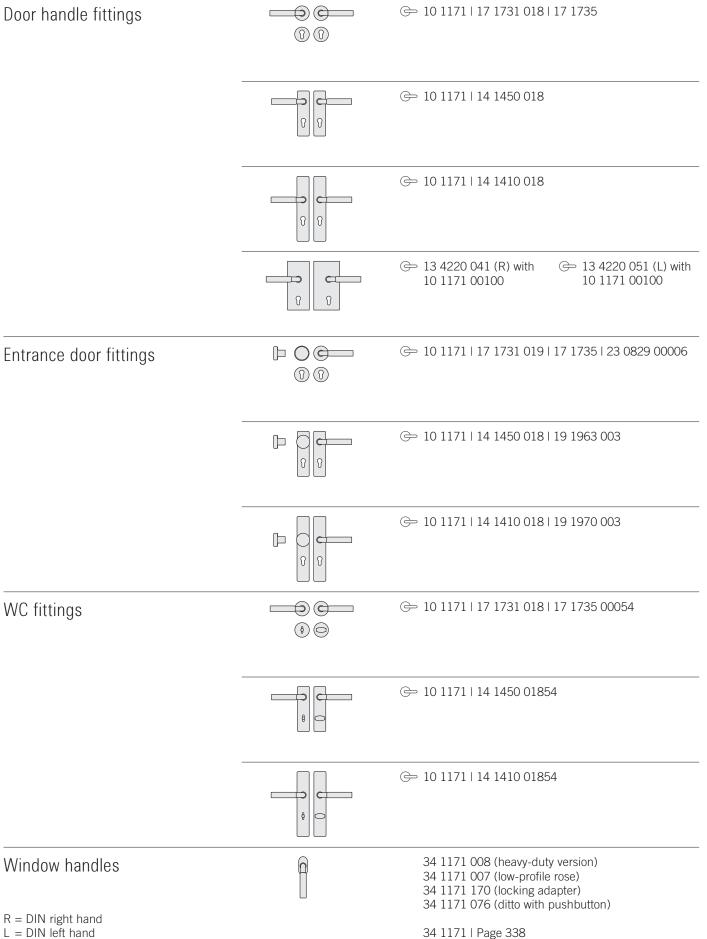


Back in the 1930s and 1940s, FSB made a door handle that entered design history as the "nickel-horn handle". In 1992 FSB's toolmakers set about recreating this shape in tubular stainless steel using innovative technology. Their efforts succeeded and the traditional design was reinterpreted in modern materials.





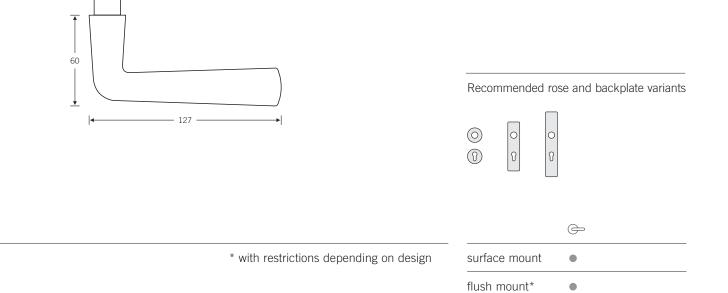




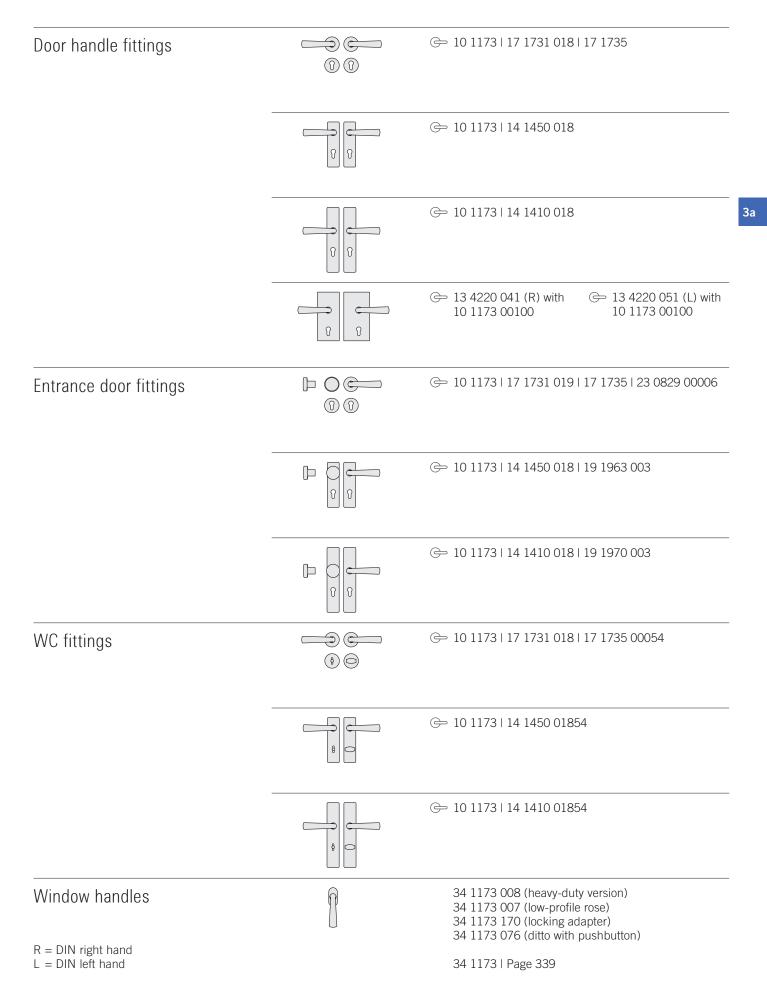
3a

The design of the 1173 with its fantail shape picks up on an idea that first emerged in the Frankfurt area at the end of the 1920s, but also has a long tradition at our company. 1173 is a clever variation of the "round tube design" and represents a welcome alternative to the familiar classics, which we do want to advertise any further at this point ;-)



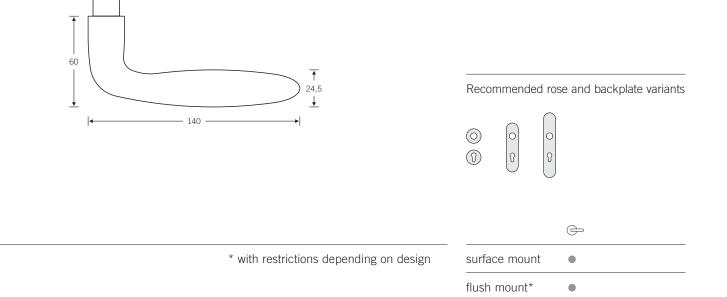






The design of FSB 1176 is based on a classic model from the FSB range. The shank and tip of this handle were originally made of rolled steel, then later of cast aluminium. The grip itself was a chunky affair made of black plastic. FSB's toolmakers succeeded in fashioning this familiar design out of stainless steel tubing.



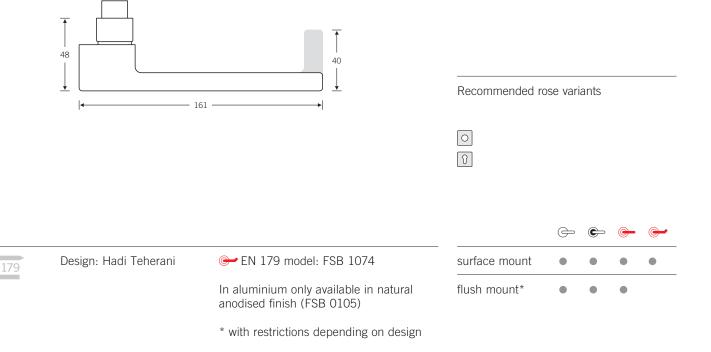






For frame doors we are familiar with offset handle shapes on the closing side of the door, and standard shapes on the other side, the so-called "Wittgenstein solution". Hadi Teherani solved the function of the offset handle to avert the risk of skinning your thumb on the door frame, by simply shifting the handle's axis of rotation to the left.

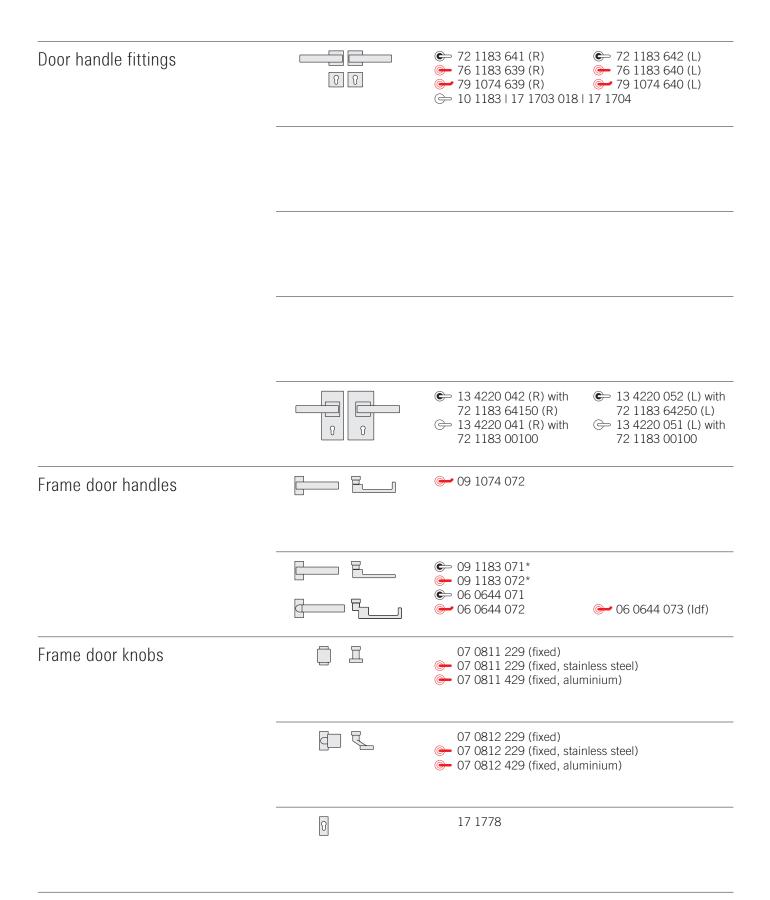




		\bigcirc	¢	
Glass door fitting	Standard	•	•	
	13 4220 with 1	0 1183	Page	470f.
		¢	—	-
Frame door handles	Standard	•	•	•
	09 1074 (straig 06 0644 (offset			15
		¢	¢	—
Door knobs	Solid doors	٠	•	•
	Frame doors		•	•
	23 0873 (for sc 07 0812 (for fra	olid doors ame door	s) Pa rs) P	ge 309 age 430
		¢		
Nindow handle	Standard, RAL	•		
	Rose, low profile			
-3	Lockable	•		
	34 1183 Page	2 340		
** suitable for a backset from 40 mm	Additional items	s for larg	e build	dings:

isis® access management | Page 43f. SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem® | Page 629f.



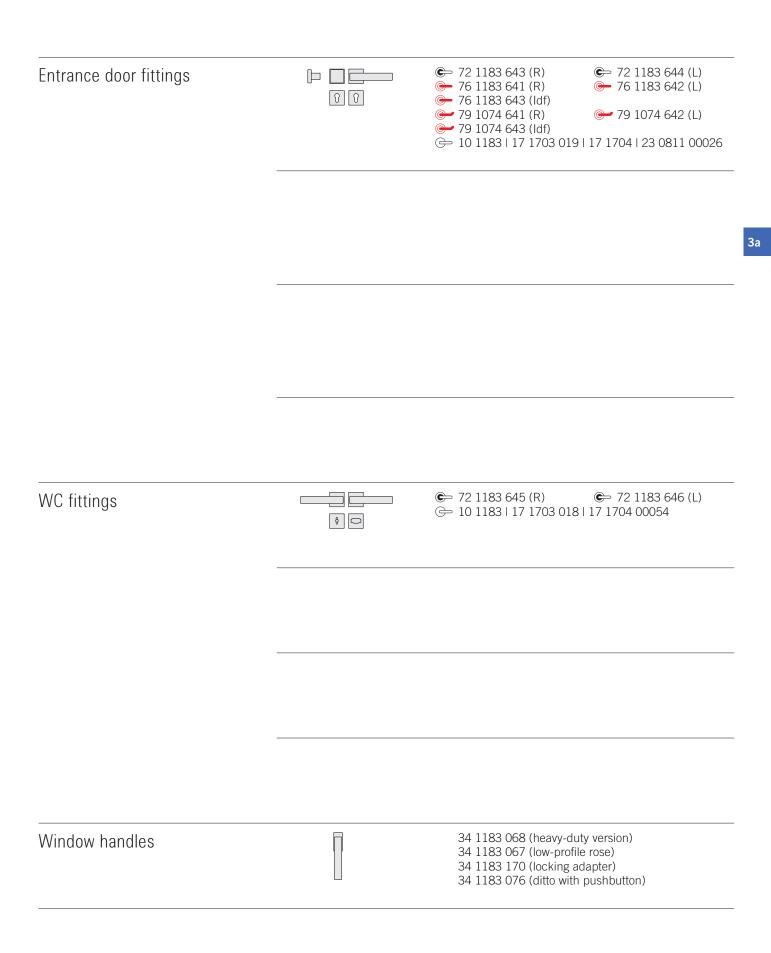


R = DIN right hand

L = DIN left hand

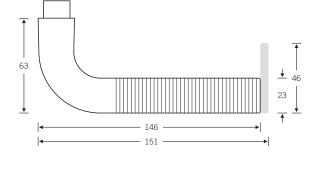
Idf = inactive door fitting

* suitable for a backset from 40 mm



Prévost drew on the iconic door handle FSB 1147 designed by the philosopher Ludwig Wittgenstein: "Form that follows a function is definitely clear, effective and economical. But that is not enough," says Monsieur Perrault about the design.





Recommended rose and backplate variants



0	0	
ß	${ m b}$	

Design: Gaëlle Lauriot-Prévost and Dominique Perrault Dominique Perrault Cere EN 179 Modell: FSB 1187 Surface mount Surface mount

		G	¢	
Glass door fitting	Standard	•	•	
	isis® systems		•	
	13 4220 with 10 1	186	Page	470f.
		¢	@-	—
Frame door handles	Standard	•	•	•
	isis® systems	0	0	0
	09 1187 (straight) 06 1187 (offset)			
		G	œ	©-
Door knobs	Solid doors	•	•	•
	Frame doors		•	•
	23 0829 (for solid doors) Page 307 07 0809 (for frame doors) Page 431			
		¢		
Window handle	Standard, RAL	•		
	Rose, low profile	0		
	Lockable	0		
P	34 1186 Page 340			
Additional items for the handle system:	Additional items for	or larg	e build	dings:
Barrier-free fitting 14 424. Page 627	isis® access mana SSF tubular frame screw fixing optior Barrier-free ErgoS	locks I Pag	with t ge 406	through S

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Product family 1186

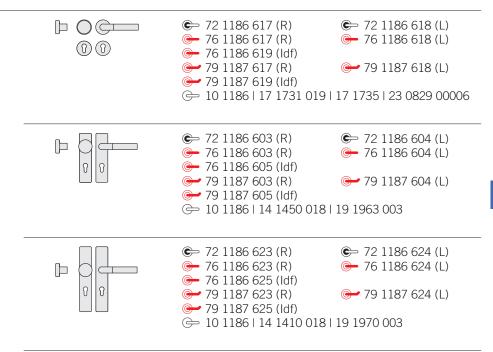
Door handle fittings € 72 1186 613 (R) € 72 1186 614 (L) t) CIII ● 76 1186 613 (R) ● 76 1186 614 (L) (\mathbf{i}) 🕒 79 1187 614 (L) ● 79 1187 613 (R) ⇔ 10 1186 | 17 1731 018 | 17 1735 € 72 1186 601 (R) € 72 1186 602 (L) ● 76 1186 601 (R) ● 76 1186 602 (L) ✓ 79 1187 601 (R) ┛ 79 1187 602 (L) ⇔ 10 1186 | 14 1450 018 🗲 72 1186 621 (R) 🗲 72 1186 622 (L) - 76 1186 621 (R) 🕒 76 1186 622 (L) \bigcirc 🗲 79 1187 621 (R) ൙ 79 1187 622 (L) ß 8 ✑ 10 1186 | 14 1410 018 🕒 13 4220 052 (L) with € 13 4220 042 (R) with (\subset) 10 1186 61350 10 1186 61450 🕞 13 4220 041 (R) with 🕞 13 4220 051 (L) with ß Ŷ 10 1186 00100 10 1186 00100 € 09 1186 011 Frame door handles - 09 1186 012 • 09 1187 012 € 06 1186 011 - 06 1186 012 ⊖ 06 1186 023 (Idf) ● 06 1187 012 • 06 1187 023 (ldf) 07 0829 228 (fixed) Frame door knobs Д 07 0829 228 (fixed, stainless steel) - 07 0829 428 (fixed, aluminium) 07 0809 228 (fixed) 07 0809 228 (fixed, stainless steel) - 07 0809 428 (fixed, aluminium) $\left(\right)$ 17 1757

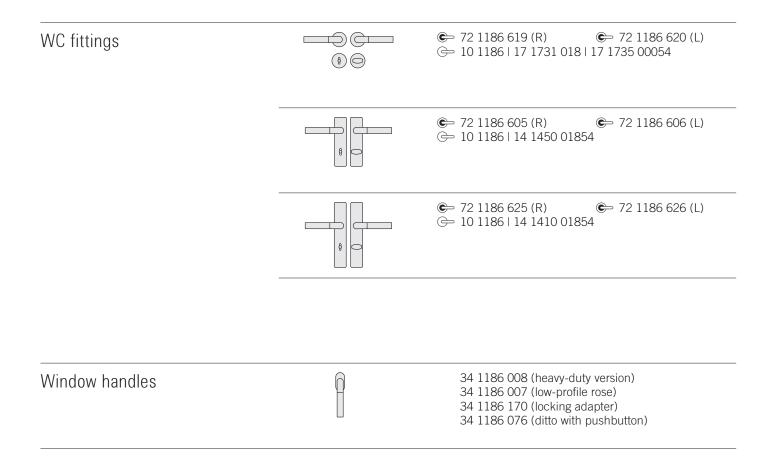
R = DIN right hand

L = DIN left hand

Idf = inactive door fitting

Entrance door fittings





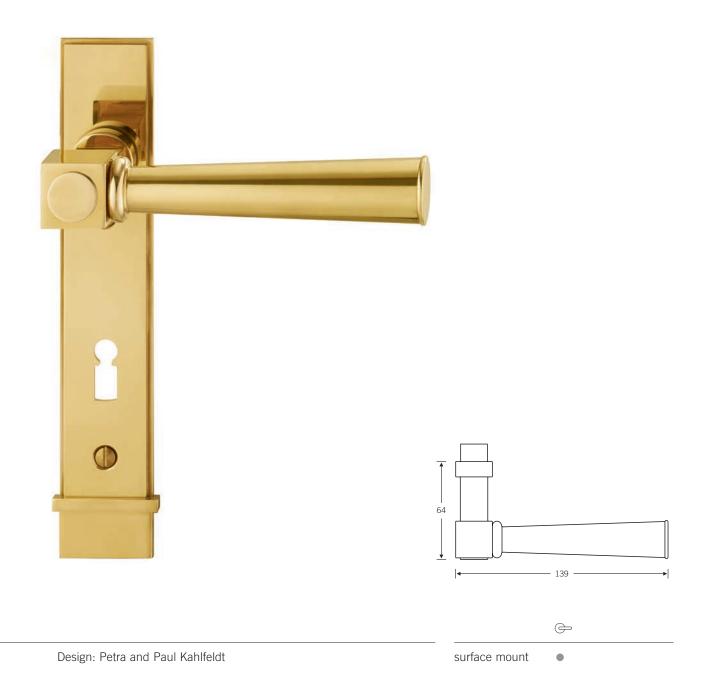
fsb.de/1191

Looking at these shapes, you could argue that Philippe Starck wanted to take our sector by the horns. However, when the horns are fastened to their backplates, they become door handles as fit for purpose as any you could wish for. The backplate is matt silver, the handle is polished. Both are made of premium-quality aluminium.

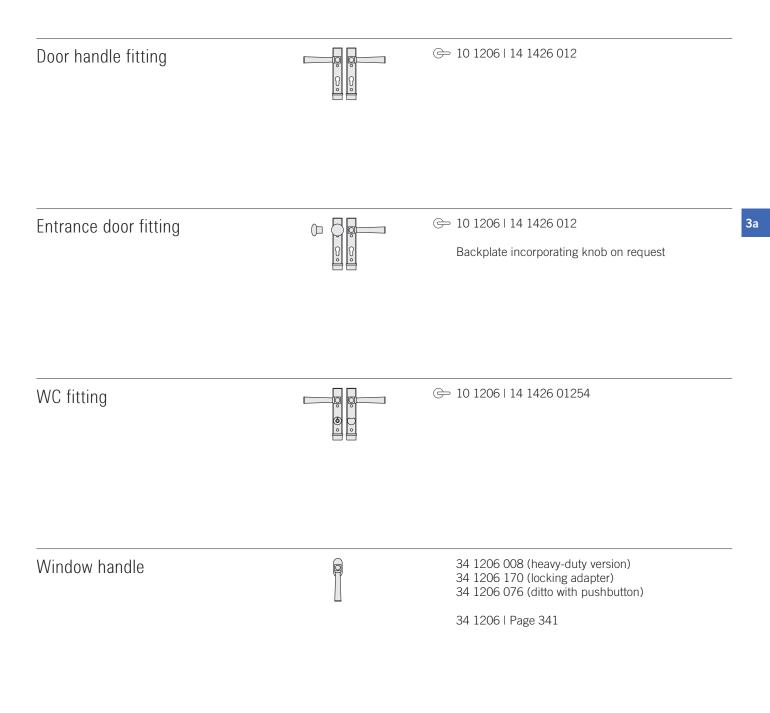




Made of solid, polished brass and featuring a finely decorated backplate, FSB 1206 stands for an attitude that is all about the return of construction to classic architecture and art history. FSB 1206 was created in the 21st century, however: Petra und Paul Kahlfeldt designed it during the course of our "HandleDuos – DuoHandles" project in 2006.

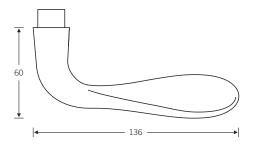


Product family 1206



The shape of the FSB 1216 is a very special type of design. It flatters hand and eye to the same extent. We made it for Calatrava's "Turning Torso" building, which provided the formal concept with its twist. Its material and finish on the other hand are quite classical: natural anodised aluminium.





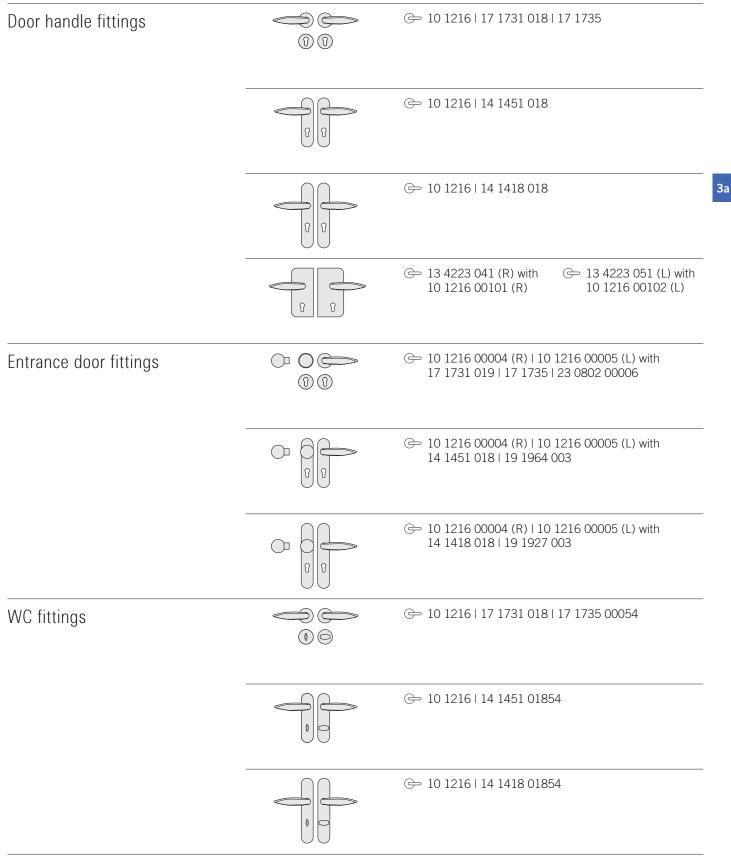
Recommended rose and backplate variants



P

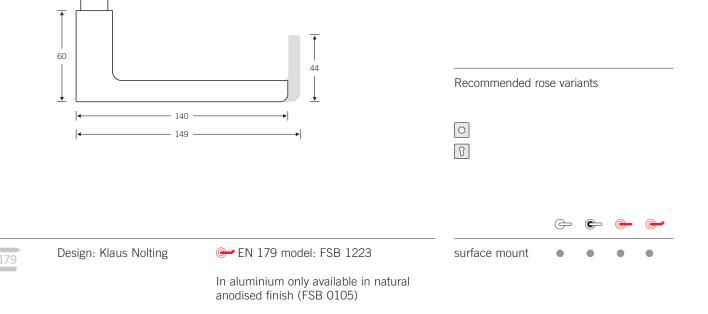
surface mount

Product family 1216



Klaus Nolting has already demonstrated with his designs for chairs how to set accents with the targeted use of metal parts. It was no great surprise that this sensitivity would eventually lead to his own design of door handle. His design mirrors a door's shape and dynamics in equal terms.

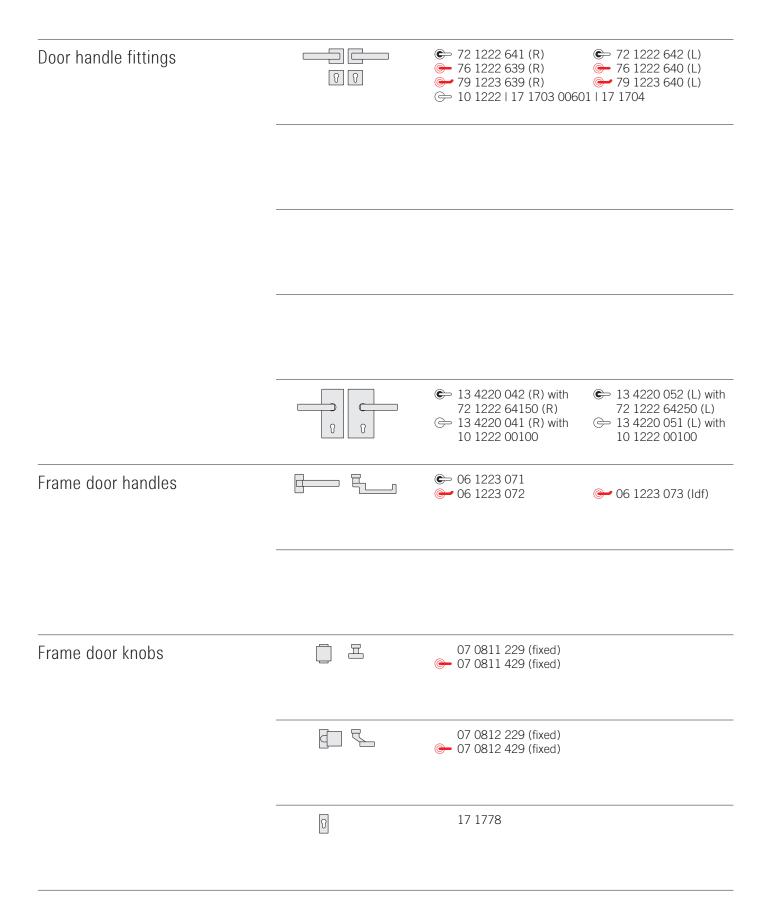




		¢		
Glass door fitting	Standard	•		
	13 4220 with 10) 1222	Page	470f.
	Standard	¢	<u> </u>	~
Frame door handles	isis [®] systems	•	•	•
	06 1223 (offset)			-
		e	¢	—
Door knobs	Solid doors	•	٠	•
	Frame doors		•	•
	23 0811 (for sol 07 0812 (for fra	id doors me doo	s) Pa rs) P	ge 305 age 430
		¢		
Window handle	Standard, RAL	•		
	Rose, low profile			
	Lockable	•		
	34 1222 Page	341		

Additional items for large buildings:

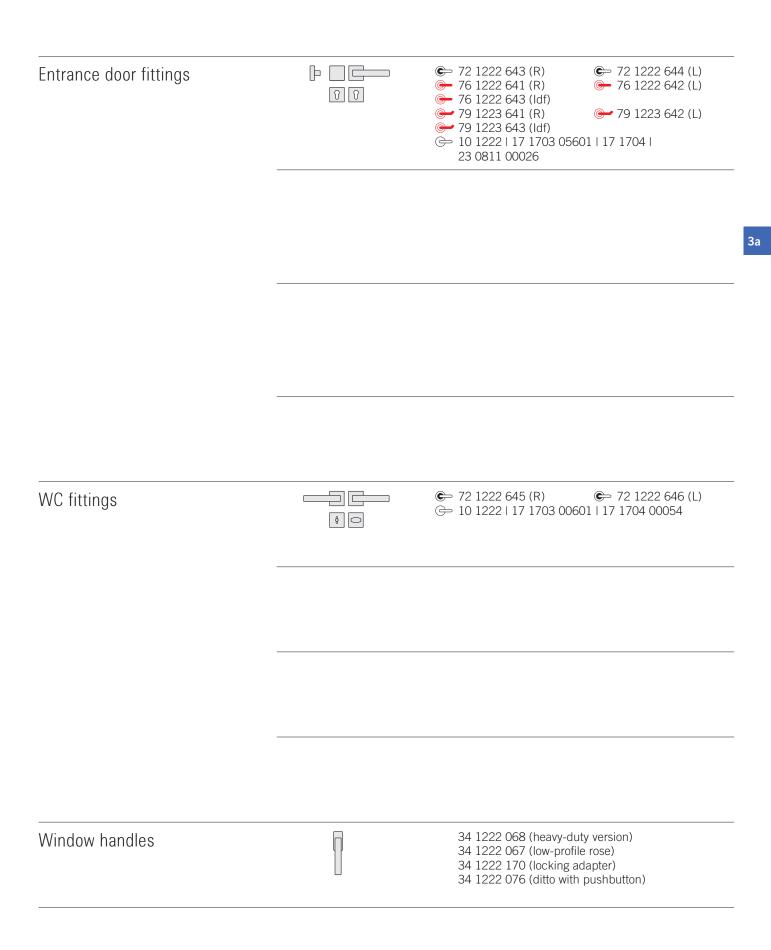
isis[®] access management | Page 43 f. SSF tubular frame locks with through screw fixing option | Page 406 Barrier-free ErgoSystem[®] | Page 629 f.



R = DIN right hand

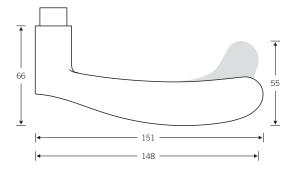
L = DIN left hand

Idf = inactive door fitting



The German-English couple, Matthias Sauerbruch and Louisa Hutton, has designed a family of door handles that represents our design philosophy of the ergonomics of gripping in exemplary fashion. The result is an elegant shape free of any ideology. The grip section stretches out to the gripping hand and pleases with its soft curves when grasped.





Recommended rose and backplate variants

0

 Design:
Matthias Sauerbruch and
Louisa Hutton
 Image: EN 179 model: FSB 1231
* with restrictions depending on design
 Image: Surface mount
 Image: Surface mount
 Image: Surface mount

 * with restrictions depending on design
 Image: Surface mount
 Image: Surface mount
 Image: Surface mount
 Image: Surface mount

 * with restrictions depending on design
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 Image

		G	œ	
Glass door fitting	Standard	•	•	
	isis [®] systems		0	
	13 4223 with 72	1230	Page	472f.
		¢	—	—
Frame door handles	Standard	•	•	•
	isis® systems	0	0	0
3	06 1231 (offset)			
		G	œ	—
Door knobs	Solid doors	•	•	•
	Frame doors		•	•
	23 0802 (for sol 07 0846 (for fra			
		¢		
Window handle	Standard, RAL	•		
	Rose, low profile	•		
D	Lockable	•		
	34 1229			
Additional items for the handle system: Barrier-free fitting 14 424. Page 627	Additional items isis® access man SSF tubular fram screw fixing optio Barrier-free Ergo	agemer 1e locks 2n Pag	nt Pa with ge 406	ige 43f. through

fsb.de/catalogue

3a

Door handle fittings		 ☞ 72 1230 613 (R) ☞ 76 1230 613 (R) ☞ 79 1231 613 (R) ☞ 10 1230 17 1731 018 	 € 72 1230 614 (L) ● 76 1230 614 (L) ● 79 1231 614 (L) ○ 17 1735
		 13 4223 042 (R) with 72 1230 61350 (R) 13 4223 041 (R) with 10 1230 00100 	 13 4223 052 (L) with 72 1230 61450 (L) 13 4223 051 (L) with 10 1230 00100
rame door handles		C→ 06 1231 011 C→ 06 1231 012	@ 06 1231 023 (Idf)
rame door knobs	08	 O7 0802 228 (fixed) O7 0802 228 (fixed, sta 07 0802 428 (fixed, alu 	
	60 5	 O7 0846 228 (fixed) O7 0846 228 (fixed, sta 07 0846 428 (fixed, alu 	
	0	17 1757	

R = DIN right hand

L = DIN left hand

Idf = inactive door fitting

Entrance door fittings	 72 1230 615 (R) 72 1230 616 (L) 76 1230 615 (R) 76 1230 616 (L) 76 1230 619 (Idf) 79 1231 615 (R) 79 1231 616 (L) 79 1231 619 (Idf) 10 1230 17 1731 019 17 1735 23 0802 00006
VC fittings	C 72 1230 619 (R) C 72 1230 620 (L) C 10 1230 17 1731 018 17 1735 00054
Window handles	34 1229 048 (R) 058 (L) (heavy-duty version) 34 1229 047 (R) 057 (L) (low-profile rose) 34 1229 470 (R) 570 (L) (locking adapter) 34 1229 476 (R) 576 (L) (ditto with pushbutton)

3a





Zorlu Center, Istanbul

www.zorlucenter.com

Emre Arolat Architects, Istanbul www.emrearolat.com

Tabanlioglu Architects, Istanbul, Ankara, Dubai www.tabanlioglu.com

Photo: Achim Krug

FSB 1076 range of handles, see page 170 ff.

FSB 1080 range of handles

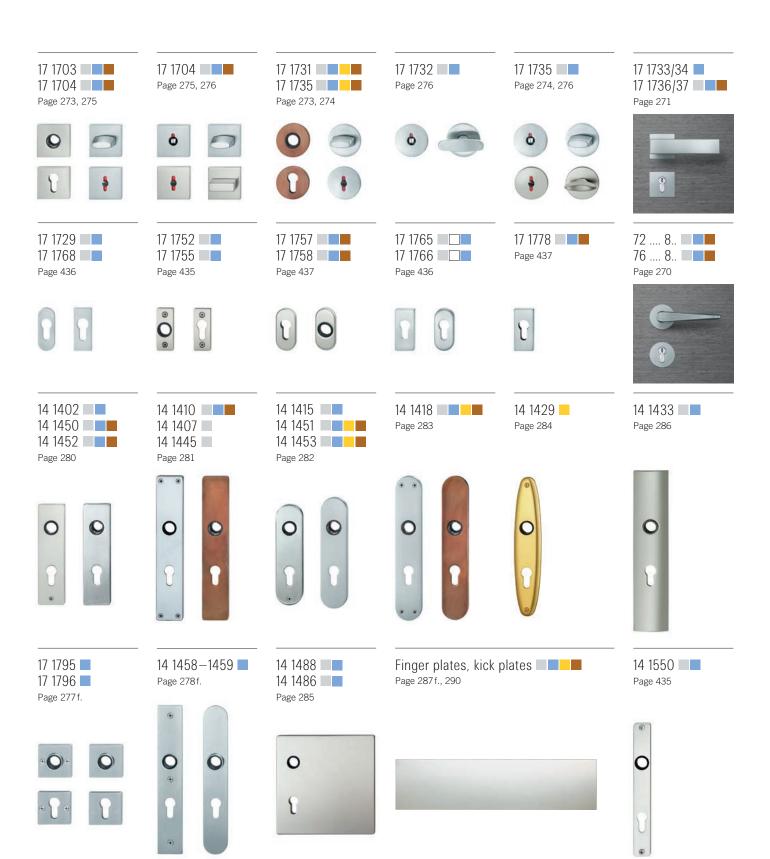
FSB 42 4251 flush pulls, see page 367 FSB 77 7980, FSB 77 7970 fittings for emergency exits, see page 446 ff. FSB 88 9104 door closers

Stainless steel, fine matt, brushed Bronze, lightly patinated, waxed Aluminium natural colour

www.fsb.de/zorlu_center

- 270 Flush fittings and roses
- 273 Rose round + rectangular
- 274 Bathroom/WC bolts
- 277 Trimmed roses and backplates
- 280 Backplates
- 287 Finger plates and kick plates

Overview





It was in the 1920s and in the Bauhaus period, as a plethora of classic door handle designs were created, that designers first consciously thought about the shape and fixing of roses and backplates, as for the Gropius handle with its visibly screwed, angular roses. With its matchless range of shapes, materials and technical variants, or even the flush versions, FSB can offer almost unrestricted options for individual and exclusive combinations of fittings.

Flush roses and fittings

FSB has added to its flush fittings with a bearing function with flush roses for standard doors (door thicknesses 38-44 mm): 17 1736/1737. These separately available roses are also a convincing solution for standard doors both aesthetically and for installation, which was previously the reserve of doors with a thickness of 45 mm and above. With this precision solution it is possible to completely avoid the use of adhesives as practised by some competitors in the market. For details of this, please see our system brochure "Flush fittings from FSB", which we are happy to send to you free of charge. As

another aesthetic option, we also offer cut backplates and roses - see page 241 f.

Fundamentals

Doors are pushed and pulled. Both forces have to be supported if a door handle set is to continue to function in the long term. Backplates and roses provide this supporting function. This is why it is so important that they are correctly fitted. All of the backplates and roses offered by FSB have a 7 mm wide bushing made of indestructible black plastic. The backplates and roses are also equipped with strong supporting lugs. As the door handle set and its accessories have to harmonise with the associated locks, it is important to note the following special aspects when ordering:

Keyholes

Unless otherwise specified, we supply backplates and roses with LL keyholes.

ß		\bigcirc	\bigcirc	\bigcirc	
LL	СН	PC	ΟZ	RZ	

Bathroom/WC versions

⊜	Ð		\bigcirc
S	WC	R	R ("Moon")
	(Î) WC	R	14 1458, 14 1459 17 1734, 17 1737 17 1796

Keyholes and Bathroom/WC versions

72 2.. | 76 2..

(heavy-duty version, flush) LL and PC Diff. keyholes/spacings on request. WC designs acc. to details in door handles section.

17 1736 | 17 1737

(standard version, flush) LL, PC, WC, R Other holes and PC spacings on request.

17 1731 | 17 1735 | 17 1735 00054 | 17 1735 06054

LL, CH, PC, OZ, RZ and without holes

17 1703 | 17 1704 | 17 1704 00054

LL, CH, PC, OZ, RZ and without holes

17 1795 | 17 1796 | 14 1454 - 1459 LL, PC, WC, R

14 1402 | 14 1410 | 14 1445 | 14 1415 | 14 1418 | 14 1445 | 14 1486 LL, CH, PC, OZ, RZ, S, WC, R

14 1410 | 14 1407 | 14 1450 | 14 1452 | 14 1451 | 14 1453 | 14 1418 | 14 1488 LL, CH, PC, OZ, S, WC, R

14 1429

LL, PC, WC, R ("Moon")

14 1433

LL, PC, S, WC, R

Hole spacings

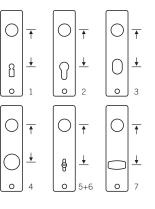
The standard hole spacing for room door backplates is 72 mm (LL, CH and PC), for bathroom door backplates 78 mm and for entrance door backplates 92 mm (LL, CH and PC). The spacings are measured as follows:

- 1. Warded and Chubb
- Nut centre to centre of key stem 2. Euro profile cylinder
- Nut centre to centre of cylinder core 3. Oval cylinder
- Nut centre to centre of oval cylinder 4. Round cylinder
- Nut centre to centre of round cylinder 5. Emergency release
- Nut centre to centre of emergency release
- 6. WC

268

- Nut centre to centre of emergency release with indicator
- 7. Locking knob Nut centre to centre of locking knob

FSB bathroom/WC versions have a knob (R) on the inside and an emergency release with an indicator (WC) on the outside. Using a coin, the lock can be opened from outside. On request, the indicator can be omitted (S). For old peoples' homes and kindergartens a stronger emergency release is offered.



Backplates with visible screws

Apart from a visible screw to fix the backplate, standard short backplates with visible screw fixings have two supporting lugs beneath the door handle bushing, which prevent sideways movement on the surface of the door. Standard length backplates are fixed to the door with four visible screws. The screw holes are suitable for 3.9 mm countersunk screws.

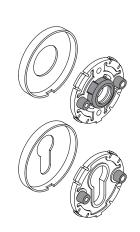
Both types of backplate have a glass fibre reinforced plastic door handle bushing designed as a plain bearing.

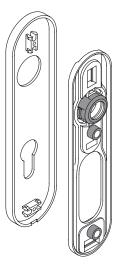
Rose with concealed fixing

The metal covering caps sit on a plastic base with two supporting lugs in the attachment area. Fixing hole spacing 38 mm.

Short, long and wide backplates with concealed fixing

Short, long and wide backplates with invisible fixing have a base comparable to the roses made of glass fibre reinforced plastic. FSB door fittings are generally to be installed with especially matched FSB accessories. The bearings on door handles are turnably fixed (plain bearing) both in the standard and heavy-duty version (wide backplates only turnably fixed in heavy-duty version). For more information on this, please see page 27.





Fixing types 17 1795 | 17 1796 14 1454 - 1459

Concealed on one side: screw fixing via stainless steel threaded sleeves welded on the other side, with a supporting function, stainless steel crosshead screws.

Visible on both sides: screw fixing with crosshead sheet metal screws made of stainless steel



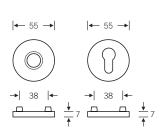
Flush fittings

Door thicknesses from 45 mm

€→ 72 8..
(→ 76 8..)



G → 79 8
+ Model number of the door handle + Type of fitting:
813 (R) 814 (L) Door handle fitting
815 (R) 816 (L) Entrance door fitting with knob 08 0802
817 (R) 818 (L) Entrance door fitting with knob 08 0829
819 (R) 820 (L) WC fitting*
Spacings: 72 mm PC, LL 70/78/85/88 mm PC, 90 mm LL



70/78/90 mm WC 74/78/94 mm CH-RZ

Technical requirements:

Minimum door thickness 45 mm; for rebated doors, the location of the cutout for the lock body should be noted. The cut-out to accommodate the roses must be routed 7 mm deep with a Ø of 55.6 mm centred on the latch follower. The material left between the base of the routed hole and the surface of the lock must be strong enough for it to be screwed in place without applying pressure on the lock. To accommodate and fix the supporting lugs, drill 9 mm Ø holes (38 mm spacing) with a minimum depth of 7 mm – for this purpose use the FSB 03 0460 universal template.

Specification:

Door handle/rose sets, turnably fixed bearing in Teflon-coated metal bushings with a function to compensate for tolerances (AGL® 72) or with turnably fixed bearing for fire safety and smoke safety doors (AGL® FS 76 + 79), prepared for flush installation, removable, only in combination with roses 17 1731/17 1735. With a spacing of 72 or 92 mm, can also be supplied as half sets for entrance doors. Please make sure in this case that, after the routing process, a sufficiently strong wall thickness is left for fastening the half sets on one side, particularly on entrance doors that open outwards.

72 8..

76.... 8..

79.... 8..

Ordering details:

- AGL[®] or AGL[®] FS fitting
- Door thickness
- Model of door handle*
- Keyhole
- Material/finish
- Quantity
- The required knob model for entrance door fittings (for bathroom/WC designs the bolt is supplied according to the respective door handle model)
- * The following models are not available in a flush design: FSB 1016, 1043, 1070, 1074, 1093, 1094, 1155, 1160, 1187, 1222 and 1223

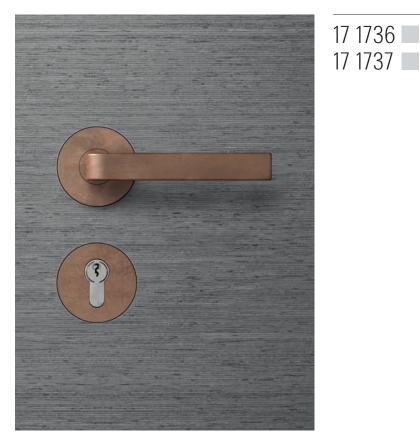
For routing template FSB 03 0462 000, see page 725 f.

** WC fitting not in AGL® FS

Please request others keyholes and spacings individually.

Round flush roses

Door thicknesses 38-44 mm



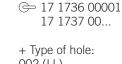
Technical requirements:

The door thickness must be 38-44 mm; please note the cut-out for the lock body. Use the FSB drilling template 03 0455 or universal template 03 0460 on both sides. Then, on the clip side (= hinge side) drill out the holes for the door handle and key roses to a Ø of 12 mm and a depth of 12 mm. When routing the door to take the roses, you should use the routing template FSB 03 0462 000. Please note that in contrast to the flush fittings (for doors from 45 mm thick) you may only rout to a depth of 3 mm. The routing for the round version 17 1736/17 1737 is done with a Ø of 55.6 mm, 3 mm deep. The thickness left between the base of the routed hole and the surface of the

Keyholes and bathroom/WC versions (please request others keyholes and spacings individually) lock must be strong enough for it to be screwed in place without applying pressure on the lock.

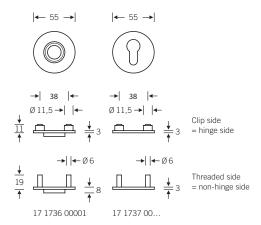
Specification:

Single pairs of door handle and key roses for flush installation, can only be combined with specially prepared pairs of FSB door handles, the door handles and roses are removable.



002 (LL) 010 (PC) 154 (R/WC 8 mm) 188 (R/WC 7 mm)

Spacings: 72 mm PC, LL 70/78/85/88 mm PC, 90 mm LL 70/78/90 mm WC 74/78/94 mm CH-RZ 3b



Ordering details:

- Model of door handle*
- Keyhole
- Material/finish
- Quantity
- Door direction of opening to DIN on rebated doors in combination with asymmetrical door handles
- * The following models are not available in a flush design: FSB 1051, 1058, 1163, 1164, 1187, 1216, 1222 and 1223



For routing template FSB 03 0462 000, see page 725 f.

Rectangular flush roses

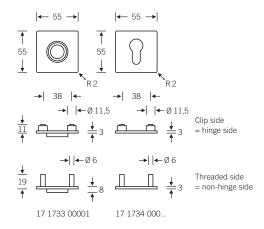
Door thicknesses 38-44 mm



G→ 17 1733 00001 17 1734 00...

+ Type of hole: 002 (LL) 010 (PC) 154 (R/WC 8 mm)

Spacing: 72 mm LL, PC, 8/78 mm WC



Ordering details:

- Model of door handle*
- Keyhole
- Material/finish
- Quantity
- Door direction of opening to DIN (for rebated doors in combination with asymmetrical door handles)
- * The following models are not available in a flush design: FSB 1051, 1058, 1163, 1164 and 1187

trast to the flush fittings (for doors from 45 mm thick) you may only rout to a depth of 3 mm. The routing for the rectangular version 17 1733/17 1734 is done with dimensions of 55.6×55.6 mm with a corner radius of 2 mm. Please use a router with a Ø of 4 mm.

The door thickness must be 38-44 mm;

please note the cut-out for the lock body.

Use the FSB drilling template 03 0455

or 03 0460 on both sides. Then, on the

clip side (= hinge side) drill out the holes for the door handle and key roses to a \emptyset

of 12 mm and a depth of 12 mm. When

routing the door to take the roses, you

should use the routing template FSB 03 0462 00030. Please note that in con-

Technical requirements:

Keyholes and bathroom/WC versions (please request others keyholes and spacings individually)

272

The specified radius of 2 mm is then made automatically using the routing template 03 0462 00030. The thickness left between the base of the routed hole and the surface of the lock must be strong enough for it to be screwed in place without applying pressure on the lock.

Specification:

Single pairs of square door handle and key roses for flush installation, can only be combined with specially prepared pairs of FSB door handles, the door handles and roses are removable.



For routing template FSB 03 0462 000, see page 726

3b

17 1731 17 1743 17 1731 01801 (with lugs) 17 1743 01801 (without lugs)	17 1703 17 1711 17 1703 01801 (with lugs) 17 1711 01801 (without lugs)
-55 -	$ - 55 \rightarrow $ $\downarrow \\ - 55 \rightarrow $ $\downarrow \\ - 55 \rightarrow $ $\downarrow \\ - 138 - 1 \\ + 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1 \\ - 1$
17 1735 17 1744	17 1704 17 1712
	[+55]
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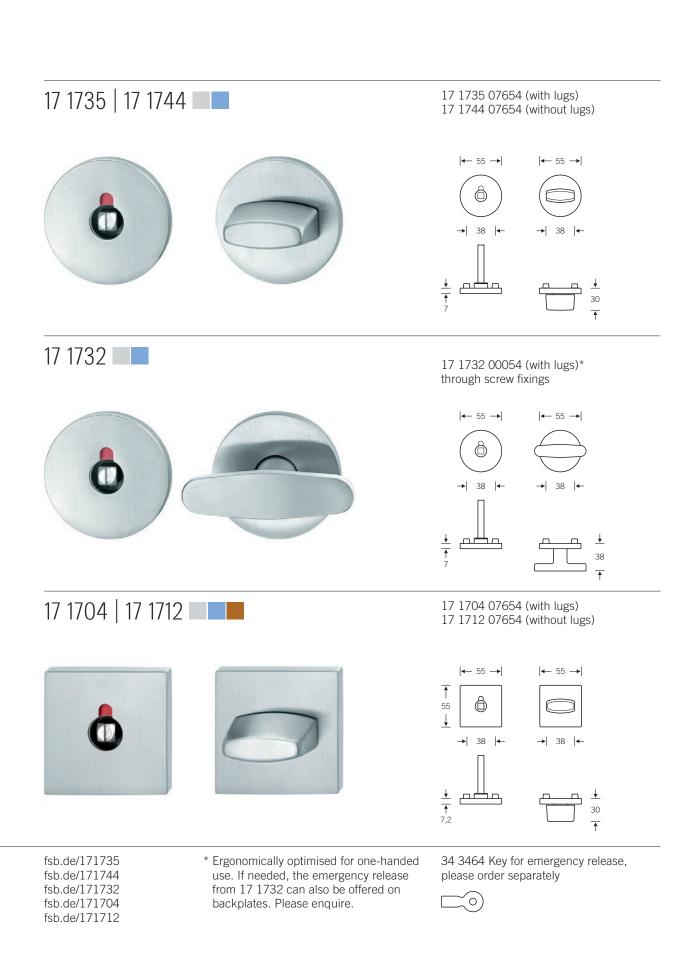


fsb.de/171735 fsb.de/171744



fsb.de/171704 fsb.de/171712

Emergency release for special circumstances



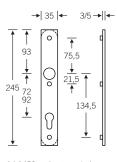
3b



fsb.de/171796

Cut backplates





14 1458 ... (rectangular) 14 1459 ... (round)

fsb.de/141458

fsb.de/141459

14 1458

D

 $\frac{1}{\frac{B}{1}}$

С

→ Y |←

0

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0

7

14 1459

A D

*

С

→ Y |←

0

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Ζ

1

14 145.

Fax form for custom manufacture of cut backplates with stainless steel supporting lugs (please configure in the table, using the adjacent illustrations)

Standard version rectangular:

□ 14 1458 (rectangular, 35 × 245 mm)

Standard version round:

 \Box 14 1459 (round, 35 × 245 mm)

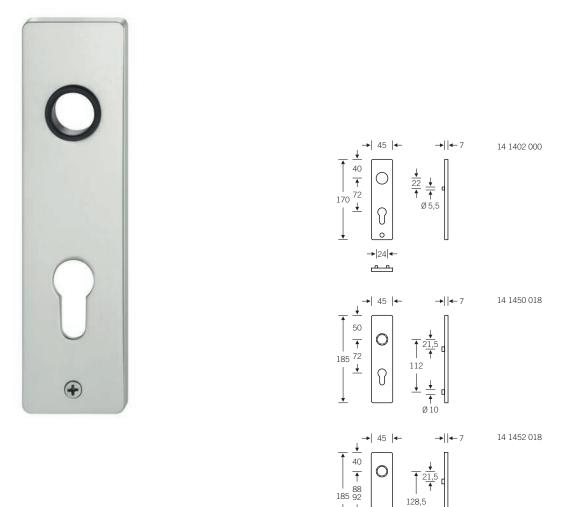
	14 1458	14 1459
Backplate thickness	□ 3 mm □ 5 mm	□ 3 mm □ 5 mm
Door thickness		
Length X		
Width Y		
Dimension A		
Dimension B		
Dimension C		
Dimension D		
Spacing Z		
Holes		
Screw fixings (visibility)	☐ one side☐ both sides	☐ one side☐ both sides
Handle bearing	 ☐ loose ☐ turnably fixed* 	 ☐ loose ☐ turnably fixed*
	* only for screw fixings visible	one side

fsb.de/catalogue

14 1402	14 1402 000 (screws visible) Spacing 72 mm
14 1450	14 1450 018 (screws concealed)
14 1452	Spacing 72 mm

14 1452 018 (screws concealed) Spacing 88 + 92 mm

For drilling templates see page 727



For holes see page 268

↓

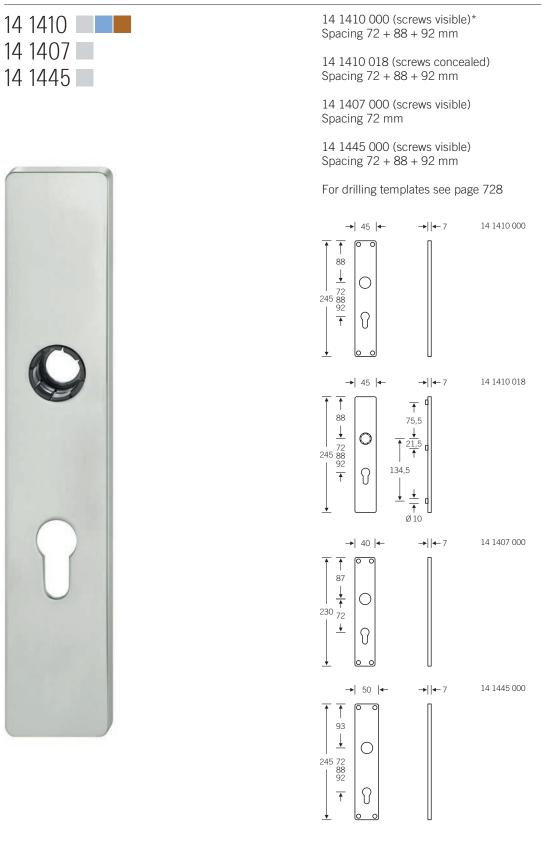
Ø 10

+ 0

+

fsb.de/141402 fsb.de/141450 fsb.de/141452

3b



For holes see page 268

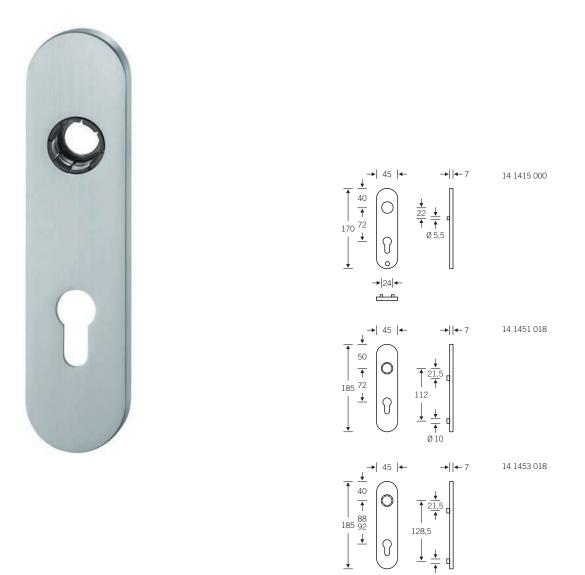
* not in bronze

fsb.de/141410 fsb.de/141407 fsb.de/141445

14 1415	14 1415 000 (screws visible) Spacing 72 mm
14 1451 1 4 1453 1 4 1453 1 4	14 1451 018 (screws concealed) Spacing 72 mm

14 1453 018 (screws concealed) Spacing 88 + 92 mm

For drilling templates see page 727



For holes see page 268

Ø 10

+

fsb.de/141415 fsb.de/141451 fsb.de/141453

Backplates



For holes see page 268

* not in brass and bronze

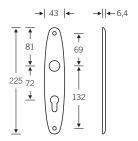
fsb.de/141418

Backplate



14 1429 000 (screws visible) Spacing 72 + 8/78 mm



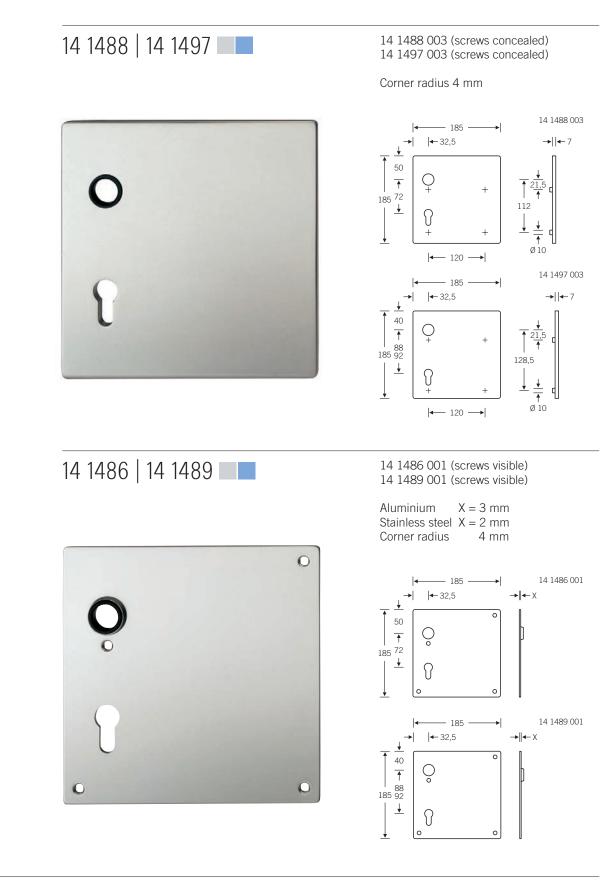


fsb.de/141429

For holes see page 268

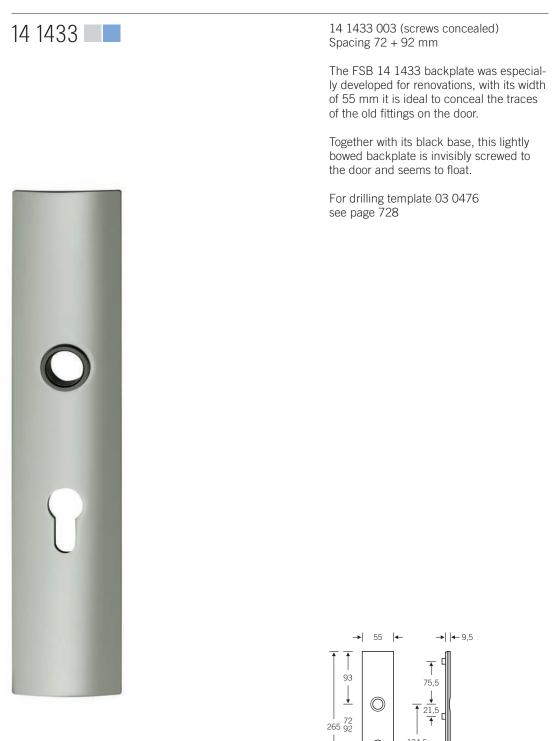
Wide backplates

Corner radius 4 mm



fsb.de/141488 fsb.de/141497 fsb.de/141486 fsb.de/141489 For holes see page 268 For drilling templates see page 728

Renovation backplate



134,5 $\left\{ \right\}$ 1 Ť 10

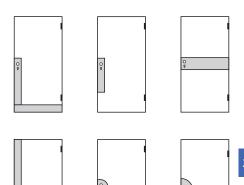
fsb.de/141433

Kick plates and finger plates

To prevent soiling and damage to doors, FSB offers finger plates for areas where hands touch the door and kick plates for areas where feet touch the door. Kick plates and finger plates are made in aluminium and stainless steel in a variety of thicknesses.

With and without screw holes

As standard for assembly, the FSB kick plates and finger plates have countersunk holes suitable for 3 mm countersunk screws. When expressly requested by the customer, kick plates and finger plates can also be made and supplied without screw holes, but with a self-adhesive film. To fit plates like this the user must be very experienced and must be very careful. Above all, the surface of the door must be perfectly smooth, free from grease and clean prior to application.





Finger plates are generally prepared to take roses and backplates. By default, FSB supplies finger plates with punched out cut-outs for the door handle roses (uniformly suitable for rose fittings and isis rose sets) and with a punched out PC hole for a Euro cylinder.

Fold overs

Fold overs are possible for kick plates and finger plates. For proper manufacture an exactly dimensioned drawing must be supplied which shows the tolerances to be expected in the construction. If no detailed, dimensioned drawing is supplied, FSB will consider the dimensions specified as internal dimensions for simple bends. This applies especially for doors with a rebate.

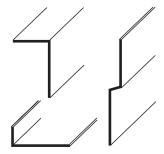
Shapes

Many variants of finger plates and kick plates are possible. FSB simply appeals to the designer's imagination and is happy to supply quotations after receiving dimensioned sketches. FSB can use drawings supplied in .dxf or .dwg format directly.

Risk of injury

Kick plates, ventilation plates, ventilation grilles, ventilation cladding and perforated sheets are made of thin, sharp-edged material.

During installation, care should be taken to ensure that the material is clean and makes good contact, with no gaps. We would ask you to be extremely careful when unpacking, installing, checking the seating and subsequent use. Improper handling – even during cleaning work – can lead to injuries.



All illustrations to the right

Drawings are for right-hand doors (to DIN) Plate with rebate to the right Plate without rebate to the left

Material thicknesses: 1, 1.5 and 2 mm

Brass: only surface FSB 4305 Brass – polished, waxed

Bronze: only surface FSB 7305 Bronze – polished, waxed and only in a thickness of 1 mm

Please generally specify required material thickness when placing orders

51 5300 | 51 5310 51 5300 (without rebate) 51 5310 (with rebate)

С

|← B →

 \bigcap

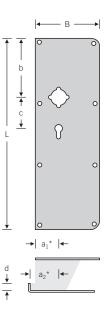
→| a1* |←

a₂* |←

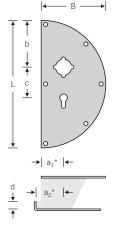
b

+

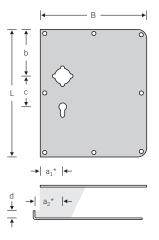
c ↓ 51 5320 | 51 5330 51 5320 (without rebate) 51 5330 (with rebate)



51 5340 | 51 5350 51 5340 (without rebate) 51 5350 (with rebate)



51 5360 | 51 5370 51 5360 (without rebate) 51 5370 (with rebate)



fsb.de/515300 fsb.de/515310 fsb.de/515340 fsb.de/515350 fsb.de/515320 fsb.de/515330 fsb.de/515360 fsb.de/515370

Cutouts

Version 1

Finger plates can be prepared with cutouts to take roses or backplates. The version required must be exactly described for this. It is simplest if the roses or backplates to be used are specified via their order numbers. The adjacent versions are conceivable: Door handle rose at top (e.g. 17 1731), punched out keyhole at bottom (e.g. PC)

Version 2

Door handle rose on top, key rose underneath (e.g. 17 1731, 17 1735), also suitable for isis rose sets

Version 3

Backplate with visible screws (e.g. 14 1402)

Version 4

Backplate with concealed screws (e.g. 14 1450)

Other versions

On request, FSB can produce other shapes of finger plate by nibbling or by laser cutting. Please send us your dimensioned sketch. We will produce our own drawing and provide you with a quotation. FSB can use drawings supplied in .dxf or .dwg format directly.

		right	L length	B width	a1* backset	a2* backset	b spacing	c keyhole spacing	d Width of fold/ inner dim. of rebate	of order	versions w numbers ckplates u	for roses		Holes	
Quantit	y No.	left	mm	mm	mm	mm	mm	mm	mm	1	2	3	4	LL	PC

* Please note: For rebated doors, when ordering finger plates depending on the side of the door and the width of the rebate, specific backsets a₁ and a₂ must be specified. Our experience is that just specifying the lock's backset is not sufficient. According to DIN 18 101 (rebated doors for domestic premises) you can presume a rebate width of 13 mm. a_2 can be calculated by adding the backset a_1 + width of the rebate.

If there is any doubt, we do however recommend checking this with a measurement. For doors without a rebate, it is not necessary to specify dimension a_2 as it is the same as a_1 .



51 5222 (sheet thickness 1 mm) 51 5223 (sheet thickness 1.5 mm) 51 5224 (sheet thickness 2 mm)

Bronze: only available in 1 mm sheet thickness and with a maximum sheet size 1,250 \times 300 mm

Brass: only surface FSB 4305 Brass – polished, waxed

Bronze: only surface FSB 7305 Bronze – polished, waxed



fsb.de/515222 fsb.de/515223 fsb.de/515224 Painted versions of kick plates are not available.

- 300 Knob handles
- 304 Door knobs
- 312 Combined knob & backplates

Overview

08 0802 08 0803 Page 300	08 0804 2 Page 300	08 0826 Page 301	08 0828	08 0829	
	6	6			
08 0844	08 0880				
23 0802	23 0803 Page 304	23 0804 Page 305	23 0811	23 0826 Page 306	23 0828
		6		6	\bigcirc
23 0829	23 0833	23 0839 Page 307	23 0844 28 Page 308	23 0873	23 0880
		0	0	2	6



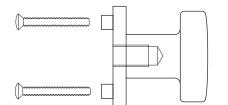


Door knobs and knob handles, very unjustly, lead a shadowy existence. Admittedly they lack the ergonomic benefits of the handle, which the door pull naturally brings along, and on entrance doors they are often an inferior option compared to security fittings or impressive door pulls. Hadi Teherani has therefore proved that things can also be different: combined with our rectangular security rose FSB 73 7397 (see page 597), his equally squareshaped door knob FSB 23 0873 (see page 309) produces a symbolically graphic image that sheds new light on entrance door pulls.

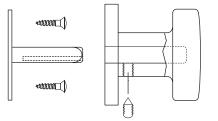
Technical information Knobs/Types of fixing

Door knobs on roses

Concealed through fixing (06)



Door knobs on roses Concealed face fixing (05)



There are two types of fixing for door knobs permanently attached to roses: through fixing and concealed face fixing.

Prepared for M5 screws with protruding threaded lugs 38 mm apart. The rose used on the other side of the door also has a knob attached but with unthreaded M5 lugs: FSB 17 1731 019 or FSB 17 1703 019.

The M5 screws are 45 mm long and are suitable for doors from 37-46 mm thick. For other door thicknesses, screws with a length varying in steps of 10 mm must be used (FSB 05 0308 005), see page 714 too.

When installing like this an FSB solid halfspindle 05 0177 / 05 0107 (see page 708) must be fitted to the knob by screwing it into the knob's M12 thread (13 mm spanner), to allow a rotating connection to the opposing door knob. The FSB solid halfspindle must be ordered separately.

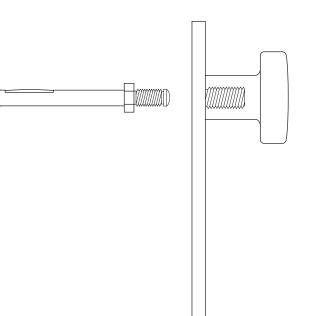
For the concealed face fixing of a door knob, a steel subassembly must first be screwed to the door.

The door knob is then put on the subassembly's 8 mm \Box pin and is fixed in place with a grub screw.

Care must be taken that the subassembly is correctly positioned when fixing it, so that the grub screw can enter the slot on the pin (see the adjacent illustration). The knob is correctly fitted when the outer end of the grub screw is flush with the surface of the neck.

Combined knob & backplates Concealed through fixing

Visible face fixing

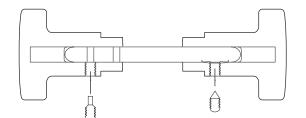


For combined knob & backplates, FSB supplies the door knobs permanently fixed to the backplates.

All FSB combined knob & backplates have an M12 thread to accommodate the supplied FSB solid half-spindle. Before installing the combined knob & backplate, screw the FSB solid half-spindle 05 0177/ 05 0107 (see page 708) firmly into the neck of the knob (13 mm spanner). Only then install the backplate and spindle onto the door and then continue with the installation on the other side of the door. The FSB solid half-spindle must be ordered separately.

Knob handles

Can be freely combined with roses and backplates with visible and concealed screw fixings

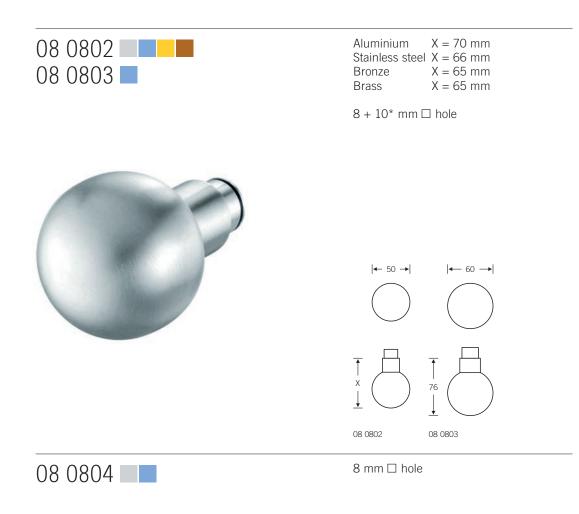


FSB makes and delivers knob handles with holes to accommodate separate spindles.

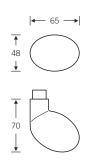
Pairs of knob handles are then installed with an FSB solid spindle 05 0102 (see page 710).

When installing, the FSB solid spindle is first fixed to one of the knob handles by screwing in the special grub screw supplied into the hole intended for that purpose. This has generally only been done correctly when the head of the grub screw is level with the surface of the knob's neck. The other fitting then corresponds to the rules for the FSB solid spindle, see page 706.

Of course you can also combine knob handles with suitable FSB half-spindles so that they only turn on the inside in backplates and roses, with a fixed knob or combined knob & backplate outside.







fsb.de/080802 fsb.de/080803 fsb.de/080804 * 10 mm not in brass and bronze

Knob handles

3c



fsb.de/080826 fsb.de/080828

Knob handles



302 FSB Manual 2015 | 2016

Knob handles



fsb.de/080880

23 0802	23 0802 00005 (face fixing) 23 0802 00006 (through fixing)
	Screw hole spacing 38 mm
	Aluminium $X = 77 \text{ mm}$ Stainless steel $X = 73 \text{ mm}$ Brass $X = 72 \text{ mm}$ Bronze $X = 72 \text{ mm}$
	$ \longleftarrow X \longrightarrow $ $\overline{\uparrow} \qquad \square \qquad \overline{\uparrow} \qquad \overline{\uparrow}$
	$ \begin{array}{c c} \hline \uparrow \\ 55 \\ \downarrow \end{array} $ $ \begin{array}{c c} \hline \uparrow \\ 50 \\ \downarrow \end{array} $
	$ \begin{array}{c c} \longleftarrow X \longrightarrow \\ \hline \uparrow \\ 55 \\ \downarrow \end{array} \qquad \qquad$
23 0803	23 0803 00005 (face fixing) 23 0803 00006 (through fixing)
	Screw hole spacing 38 mm
	$ \longleftarrow 84 \longrightarrow $ $\downarrow \qquad \qquad$
	$ \begin{array}{c c} \hline \\ 55\\ \downarrow \end{array} \hline \\ \hline \\$

fsb.de/230802 fsb.de/230803



fsb.de/230804

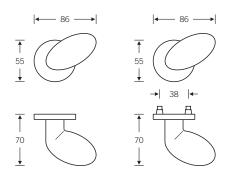
23 0826 00435 (R) | 23 0826 00535 (L) Face fixing

23 0826 00436 (R) I 23 0826 00536 (L) Through fixing

Screw hole spacing 38 mm

Illustration: right





23 0828

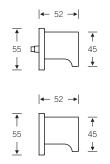
23 0826

Design: Hartmut Weise



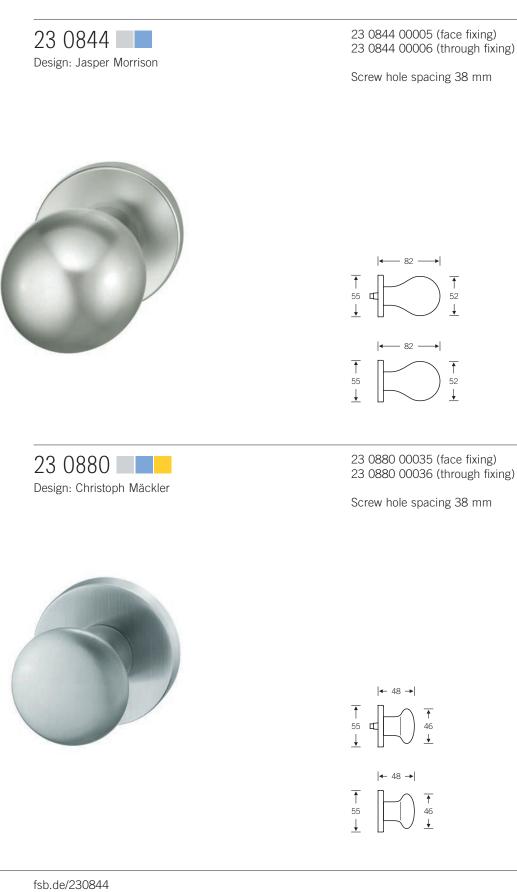
Screw hole spacing 38 mm





fsb.de/230826 fsb.de/230828

23 0829	23 0829 00005 (face fixing) 23 0829 00006 (through fixing)
	Screw hole spacing 38 mm
	Aluminium $\emptyset = 50 \text{ mm}$ Stainless steel $\emptyset = 55 \text{ mm}$ Bronze $\emptyset = 50 \text{ mm}$
	$ \leftarrow 52 \rightarrow $ $\uparrow 55 \qquad \qquad$
23 0839 Design: Philippe Starck	23 0839 00435 (R) 23 0839 00535 (L) Face fixing 23 0839 00436 (R) 23 0839 00536 (L) Through fixing Screw hole spacing 38 mm
	Illustration: right $ \leftarrow 82 \rightarrow \qquad \leftarrow 82 \rightarrow $ $\downarrow \qquad \uparrow \qquad $
fsb.de/230829 fsb.de/230839	



fsb.de/230844

23 0833	23 0833 00026 (through fixing)
Design: Hans Kollhoff	Screw hole spacing 38 mm
	$ \leftarrow 67,5 \rightarrow $ $ \uparrow \qquad \uparrow \qquad 55 \qquad \downarrow \qquad f \qquad 50 \qquad \downarrow \qquad f \qquad f$
23 0873	23 0873 00026 (through fixing)
Design: Hadi Teherani	Screw hole spacing 38 mm
	Owing to the large knob size, ca be used offset.
	$ \bullet - 87 \longrightarrow $ $\uparrow \\ 55$ $\downarrow $ $\rightarrow 38 \bullet -$ $\uparrow $ $\uparrow $ $\uparrow $ $\uparrow $ $\uparrow $
fsb.de/230833 fsb.de/230873	Both door knobs in aluminium o available in natural anodised fin (FSB 0105)

3c

For technical information see page 298 f.



fsb.de/230809 fsb.de/230812

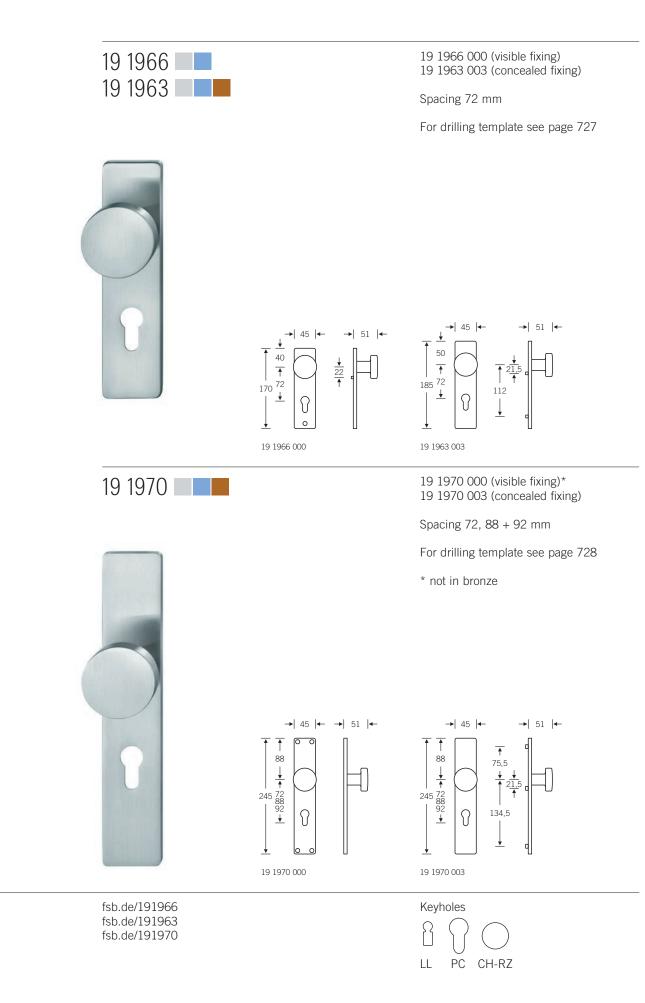
3c



fsb.de/230846 fsb.de/230854

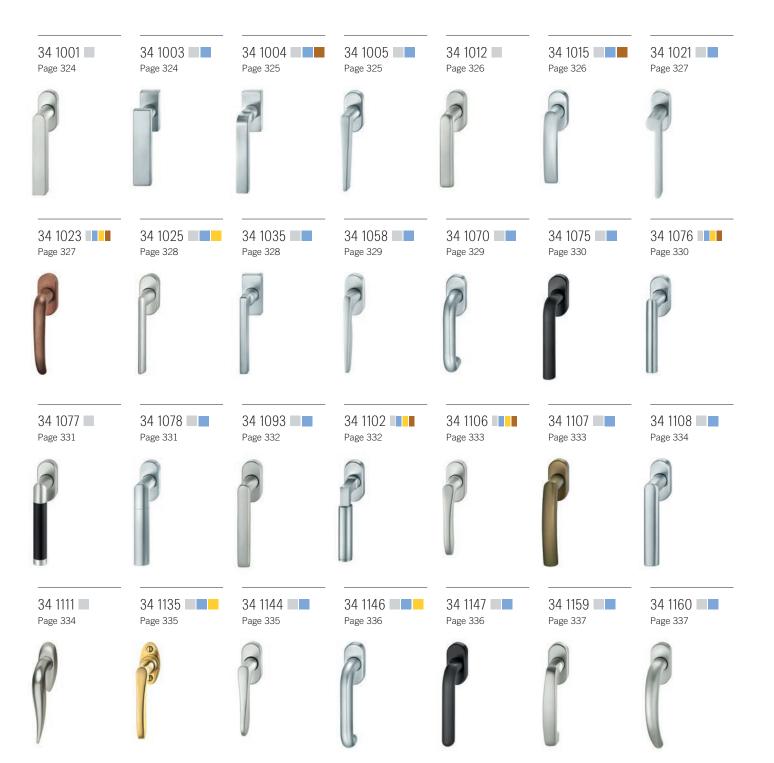
Combined knob & backplates

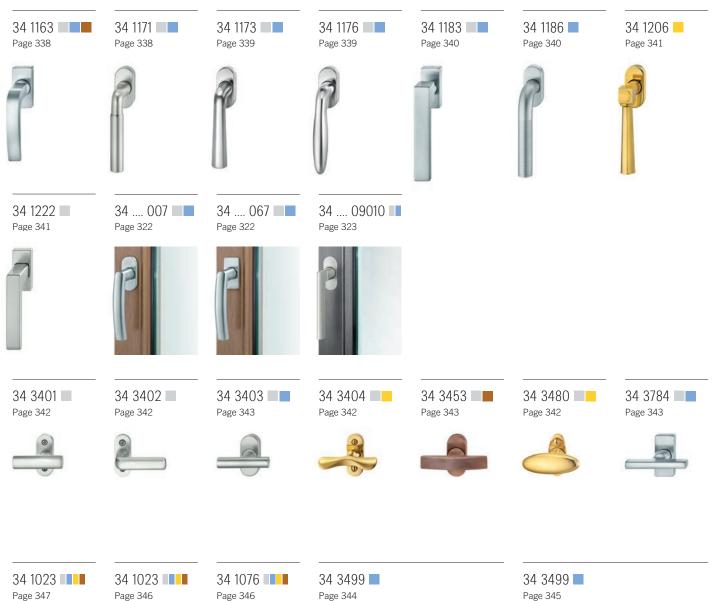
19 1923		19 1923 000 (visible fixing) 19 1964 003 (concealed fixing)
19 1964		Spacing 72 mm
		Aluminium $X = 77 \text{ mm}$ Stainless steel $X = 73 \text{ mm}$ Bronze $X = 72 \text{ mm}$ Brass $X = 72 \text{ mm}$
		For drilling template see page 727
	$ \begin{array}{c c} \bullet & 45 & \bullet & \bullet \\ \hline & 40 \\ 170 & 72 \\ 170 & \bullet \\ \end{array} \end{array} $	$ \begin{array}{c c} \bullet & 45 & \bullet & \bullet \\ \hline & 50 \\ 185 & 72 \\ 185 & 72 \\ \hline & \bullet & 0 \end{array} \qquad \begin{array}{c} \bullet & & \bullet \\ \uparrow & 21,5 \\ \uparrow & \bullet \\ 112 \end{array} $
	19 1923 000	19 1964 003
19 1927		19 1927 000 (visible fixing)* 19 1927 003 (concealed fixing)
		Spacing 72, 88 + 92 mm
		Aluminium $X = 77 \text{ mm}$ Stainless steel $X = 73 \text{ mm}$ Bronze* $X = 72 \text{ mm}$ Brass* $X = 72 \text{ mm}$
		For drilling template see page 728
		* not in bronze and brass
	$\rightarrow 45 \leftarrow \leftarrow X \rightarrow $ $\uparrow \uparrow \bigcirc \bigcirc \qquad []$	$\rightarrow 45 \leftarrow \leftarrow \times \rightarrow $ $\uparrow \uparrow \bigcirc \qquad \downarrow \qquad \downarrow \qquad \downarrow$
0	$ \begin{array}{c} 1 \\ 88 \\ \downarrow \uparrow \\ 245 \\ 92 \\ 92 \\ \downarrow \downarrow \\ 92 \\ 92 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 92 \\ 0 \\ 0 \\ 92 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0$	$ \begin{array}{c} 1 \\ 88 \\ 4 \\ 245 \\ 245 \\ 88 \\ 92 \\ 92 \\ 4 \end{array} $ $ \begin{array}{c} 1 \\ 75,5 \\ 1 \\ 21,5 \\ 134,5 \\ 134,5 \\ 134,5 \\ 134,5 \\ 134,5 \\ 134,5 \\ 134,5 \\ 134,5 \\ 19 \\ 19 \\ 1927 \\ 003 \end{array} $
fsb.de/191923		Keyholes
fsb.de/191964 fsb.de/191927		$\begin{array}{c} 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 $
		LL PC CH-RZ



- 322 Window handles
- 346 Lockable window handles
- 350 Window handles designed for single profile cylinders
- 352 Window locks
- 353 Budget lock roses
- 354 Parallel sliding tilt fittings
- 356 Fittings for lifting/sliding doors

Overview





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Page 346



Page 346

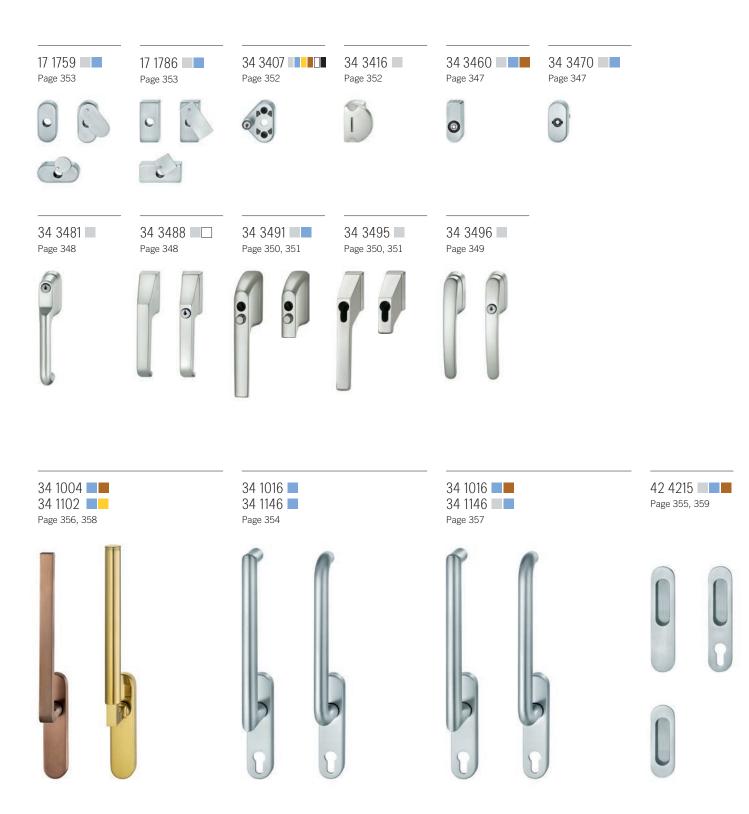


Page 345



3d

Overview



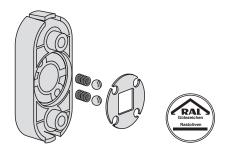


When it comes to practised handle culture, it is taken for granted that window handles match the handle design of interior doors. In this section, not only will you discover a unique variety of designs and materials, but also our functional solutions like lockable window handles, handles for large sliding elements or our charming window fasteners reminiscent of the 19th and 20th century.

Technical information Window handles

The FSB click-stop mechanism

All FSB window handles with click-stop mechanism and roses 14 mm deep conform to the RAL quality standard. The RAL Quality Association has defined specifications for window handles that are designed to ensure consistent quality and performance over many years. The FSB click-stop mechanism enables windows to be closed, tilted or opened correctly. This FSB technology consists of steel ball bearings in a rugged GFR plastic housing. They ensure that whenever the window is operated, the handle audibly and tangibly clicks into place. Handles can be optionally supplied with a 45° setting for ventilation.



Click-stop mechanism according to RAL quality standard

This special FSB technology consists of steel ball bearings in a rugged GFR plastic housing.

FSB supplies window handles with and without a click-stop mechanism:

Product numbers 34 008 or 068 Window handle heavy-duty version, with click-stop mechanism in RAL quality:

- concealed fixing method
- gap between mounting holes 43 mm
- lugs Ø 10 mm
- rose depth 14 mm
- 7 mm □ spindle, projecting 34 mm
- alternatively with lugs Ø 12 mm, or completely without lugs

Product numbers 34 09010 Window handle heavy-duty version version, rose flush with window profile, with click-stop mechanism in RAL quality:

- concealed fixing method
- gap between mounting holes 43 mm
- rose depth 13 mm
- − 7 mm □ spindle, projecting 22 mm

Product numbers 34 007 or 067 Window handle heavy-duty version version, click-stop mechanism recessed into profile, rose flat (not RAL quality): – concealed fixing method

- concealed lixing method
- gap between mounting holes 43 mm
- lugs Ø 10 mm
- rose depth 5 mm
- 7 mm □ spindle, projecting 34 mm

Product numbers 34 000

- Window handle standard version, rose flat:
- visible fixing method
- gap between mounting holes 43 mm
- lugs Ø 10 mm (FSB 34 1135 in stainless steel and brass, in aluminium without lugs)
- rose depth 3 mm
- without lugs (FSB 34 3401, 34 3402, 34 3404, 34 3480)
- rose depth 7 mm
- − 7 mm □ spindle, projecting 30 mm

The standard spindle projection on the windows handles kept in stock is 34 mm according to the 2014 manual. Over and above that, the models FSB 1015, 1023, 1070, 1076, 1107 and 1108 and the lockable window handle 3495 are also available from stock with spindle projections of 24, 30 and 38 mm. Experience shows that the above-mentioned spindle projections can be used on the gearing mechanism with a tolerance of +/- 1 mm. i.e. a spindle projection of e.g. 38 mm is practical in most cases when the theoretical spindle projection specified by the profile manufacturer lies in a range of 37 to 39 mm. However, different profile systems require specific spindle projections now and then. FSB supplies these on a job-by-job basis please specify these when ordering. Window handles are supplied without screws. M5 oval-head screws should be used for fixing purposes. Please bear in mind in this regard: shortening the square spindle yourself results in a loss of warranty!

Classification key according to DIN 13 126-3

For window handles with click-stop mechanism

 2
 5/180
 0
 1
 3*
 0/0
 3/C1

 * Finishes brass, bronze, class 0

For lockable window handles

 2
 5/180
 0
 1
 3*
 3/3
 3/C1

 Finishes brass, bronze, class 0

Lockable window handles

For lockable window handles, design requirements and tests are set out in the RAL-GZ quality standard. Window handles that meet these high requirements are awarded the RAL label. DIN EN 13 126-3 has also been in place at European level since September 2012. Different classes were defined here for various requirements regarding permanent function and resistance. FSB achieved the highest class in this standard with the quality design. Besides the quality of the clickstop mechanism, the pull-out force of the spindle and the torque resistance of the locking cylinder, the test for twisting or tearing off the window handle is of great significance. DIN EN 13 126-3 and the RAL test based on this demand 200 Nm of resistance on the locking element for these tests in the highest class. In DIN EN 1627 to 1630 (requirements for burglarresistant windows) there is a requirement of 100 Nm against twisting or tearing off the window handle on the burglar-proof window. As the tested values are twice as high, the lockable window handles from FSB are suitable without restriction for use on burglar-proof windows. This applies to all resistance classes, RC 1 to RC 6.

In addition to the standard lockable formats, a locking adapter allows nearly all of FSB's designer window handles to be used on burglar proof windows and to continue the shape and material line of your favourite handle down to functional details. Naturally these solutions are also tested and monitored according to the afore-mentioned RAL quality standards and are suitable without restriction for burglar-proof windows in the resistance classes RC 1 to RC 6 in accordance with DIN EN 1627 to 1630.

Forced closing

The same applies to an optionally available version with forced closing. Forced locking means that, in order to be able to pull the key out, the window must always be closed. In the standard version without forced closing, the key can be pulled out irrespective of the window's closing position. If no information is provided for this purpose when ordering, we supply the version without forced closing as standard. The lockable window handles 34 3481, 3488 and 3496 are not available with forced closing function.

Without key – with convenient push-button

In addition there is a push-button operated version, which requires two hands to operate it and makes manipulation from outside even harder – and can be used, for example, if windows in children's rooms are intended to be fitted with a lockable window handle so that the little dears cannot open the window themselves, but allow you yourself to ventilate the room at any time, for example, without first having to look for the key. This convenient solution is not suitable, however, for burglar-proof windows in accordance with RC 1 to RC 6.

Tilt to turn

Special-action lockable handles are required in conjunction with the "tilt to turn" window drive mechanisms, which are often fitted in schools, offices and hospitals to prevent unauthorised operation without impairing ventilation.

Please bear in mind: windows with "tilt to turn" function are fitted with window drive mechanisms that differ from the norm in order to ensure the described function. A window handle in the corresponding design alone does not perform this function. Please take this into account at the planning and tendering stage.

Moreover, window handles with the "tilt to turn" function meet neither the RAL quality standard nor DIN EN 1627 – 1630.

Special solutions

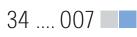
Innovations in facade techniques such as curtain walling or new window designs necessitate special types of window handle:

- with a reduced depth or flat roses for box-type windows
- featuring cranking for top-hinged windows
- with sash locks for horizontally pivoted sash windows

FSB produces a wide variety of special concept solutions for such requirements, which can be combined with virtually all our window handle models (on request).

with flat rose





Window handle with flat oval rose and click-stop mechanism recessed into profile



34 067

Window handle with flat rectangular rose and click-stop mechanism recessed into profile



Lugs Ø 10 mm Mounting holes 43 mm 7 mm □ spindle Protruding 34 mm

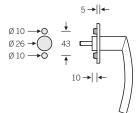
Can be used on wood profiles Possible with rectangular and oval rose Assembly is in the usual manner, except that a central drill hole 26 mm in diameter is required in addition to the two fixing holes (c:c 43 mm).

Nearly all FSB window handles with a click-stop mechanism can be supplied with shallow roses. Please enquire in each case.

Other flush products:

- AGL[®]/AGL[®] FS heavy-duty fittings for door thicknesses from 45 mm, see page 270
- round roses 17 1736/17 1737 for door thicknesses from 38–44 mm, see page 271
- rectangular roses 17 1733/17 1734 for door thicknesses from 38–44 mm, see page 272
- armoured roses FSB 73 7396, security class ES1 DIN 18 257, for wood entrance doors, see page 599



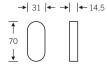


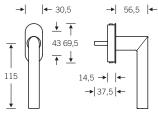
fsb.de/flush

with flush rose



Routing dimensions





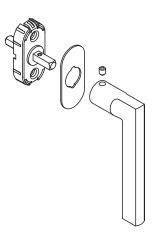
fsb.de/flush

34 09010

Window handle heavy-duty version, rose flush with window profile, with click-stop mechanism in RAL quality

3d

- concealed fixing method
- mounting holes 43 mm
- the covering rose is fastened in the recesses on the rose substructure using clips
- rose depth and routing depth 13 mm
- 7 mm 🗆 spindle
- standard spindle projection 22 mm



Nearly all FSB window handles with a click-stop mechanism can be supplied in a completely flush version. Please enquire in each case.

Other flush products:

- AGL®/AGL® FS heavy-duty fittings for door thicknesses from 45 mm, see page 270
- round roses 17 1736/17 1737 for door thicknesses from 38-44 mm, see page 271
- rectangular roses 17 1733/17 1734 for door thicknesses from 38-44 mm, see page 272
- armoured roses FSB 73 7396, security class ES1 DIN 18 257, for wood entrance doors, see page 599

CNC milling data under fsb.de/cnc

34 1001

34 1001 008 (oval rose) 34 1001 007 (oval rose, flat) 34 1001 170 (lockable)

Design: Peter Bastian



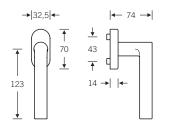


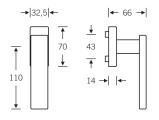
34 1003

34 1003 170 (lockable)

34 1003 068 (rectangular rose)

34 1003 067 (rectangular rose, flat)







324

fsb.de/341001

In aluminium only available in natural anodised finish (FSB 0105)



In aluminium only available in natural anodised finish (FSB 0105)



34 1004 068 (rectangular rose) 34 1004 067 (rectangular rose, flat)* 34 1004 170 (lockable)

Design: David Chipperfield

34 1005

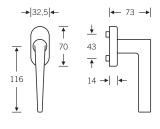
34 1005 008 (oval rose) 34 1005 007 (oval rose, flat) 34 1005 170 (lockable)





In aluminium only available in natural

anodised finish (FSB 0105)





fsb.de/341004

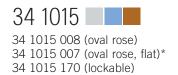
* not in bronze

fsb.de/341005

3d

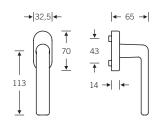
34 1012

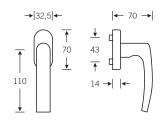
34 1012 008 (oval rose) 34 1012 007 (oval rose, flat) 34 1012 170 (lockable)













fsb.de/341012

fsb.de/341015

* not in bronze



34 1021 048 (R) | 058 (L) (oval rose) 34 1021 047 (R) | 057 (L) (oval rose, flat) 34 1021 470 (R) | 570 (L) (lockable)



34 1023 008 (oval rose) 34 1023 007 (oval rose, flat)* 34 1023 170 (lockable)





fsb.de/341021

fsb.de/341023

* not in brass and bronze



34 1025 008 (oval rose) 34 1025 007 (oval rose, flat)* 34 1025 170 (lockable)

Design: Hartmut Weise

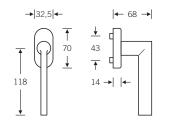




34 1035 068 (rectangular rose)34 1035 067 (rectangular rose, flat)34 1035 170 (lockable)

Design: Heike Falkenberg

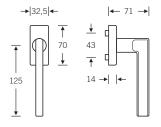






fsb.de/341025

* not in brass



fsb.de/341035

In aluminium only available in natural anodised finish (FSB 0105)



34 1058 008 (oval rose) 34 1058 007 (oval rose, flat) 34 1058 170 (lockable)

Design: Johannes Potente

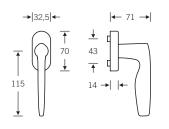


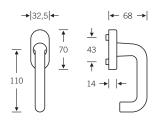


34 1070

34 1070 008 (oval rose)

34 1070 007 (oval rose, flat) 34 1070 170 (lockable)







fsb.de/341058





fsb.de/341075

* not in brass and bronze

34 1077

34 1077 008 (oval rose) 34 1077 007 (oval rose, flat) 34 1077 170 (lockable)

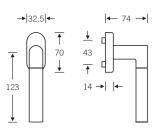
34 1078

34 1078 008 (oval rose) 34 1078 007 (oval rose, flat) 34 1078 170 (lockable)

Design: Christoph Ingenhoven









fsb.de/341077

→|32,5|←

125

Available versions:

- elbow/rose aluminium, grip section stainless steel

← 67 →

43

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14 → | | ←

70 ↓

- elbow aluminium, rose/grip section stainless steel
- elbow/rose aluminium natural,

grip section black



34 1093 008 (oval rose) 34 1093 007 (oval rose, flat) 34 1093 170 (lockable)

Design: Helmut Jahn, Yorgo Lykouria





34 1102

34 1102 008 (oval rose)

34 1102 170 (lockable)

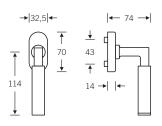
34 1102 007 (oval rose, flat)*

Design: Alessandro Mendini

Material versions (Please specify when ordering):

- completely aluminium
- elbow/rose aluminium, grip
- section black plastic completely stainless steel
- elbow/rose stainless steel, grip
- section black plastic completely brass
- completely bronze





fsb.de/341102

In aluminium only available in natural anodised finish (FSB 0105)

* not in brass and bronze



fsb.de/341093

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70

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34 1106 008 (oval rose) 34 1106 007 (oval rose, flat)* 34 1106 170 (lockable)

Design: Christoph Mäckler

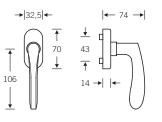


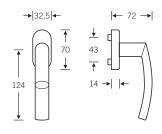


34 1107 008 (oval rose) 34 1107 007 (oval rose, flat) 34 1107 170 (lockable)

Design: Hartmut Weise









fsb.de/341106

* not in brass and bronze







34 1135 000 (oval rose, flat, visible screws)

Design: Christoph Mäckler

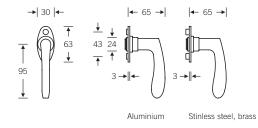
34 1144

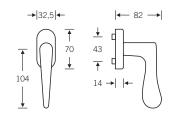
34 1144 008 (oval rose) 34 1144 007 (oval rose, flat) 34 1144 170 (lockable)

Design: Jasper Morrison









fsb.de/341135

Not suitable for heavy-duty buildings, if nec. resort to 34 1106, see page 333





34 1146 008 (oval rose) 34 1146 007 (oval rose, flat)* 34 1146 170 (lockable) 34 1147 34 1147 34 1147 008 (oval rose) 34 1147 007 (oval rose, flat) 34 1147 170 (lockable)





fsb.de/341146

* not in brass



34 1159 008 (oval rose) 34 1159 007 (oval rose, flat) 34 1159 170 (lockable)

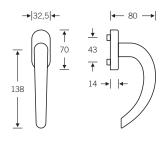
Design: Laurids and Manfred Ortner

34 1160

34 1160 008 (oval rose) 34 1160 007 (oval rose, flat) 34 1160 170 (lockable)









fsb.de/341159

70 ↓

→ 32,5 ←

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|← 72 →

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43

→ d

14 → | |←



34 1163 068 (rectangular rose) 34 1163 067 (rectangular rose, flat)* 34 1163 170 (lockable)

Design: Hans Kollhoff



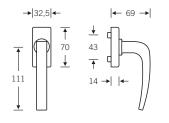


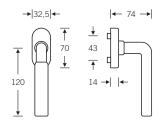
34 1171

34 1171 008 (oval rose)

34 1171 170 (lockable)

34 1171 007 (oval rose, flat)







338

fsb.de/341163

fsb.de/341171

In aluminium only available in natural anodised finish (FSB 0105)

* not in bronze



34 1173 008 (oval rose) 34 1173 007 (oval rose, flat) 34 1173 170 (lockable)

34 1176

34 1176 008 (oval rose) 34 1176 007 (oval rose, flat) 34 1176 170 (lockable)





fsb.de/341173

fsb.de/341176

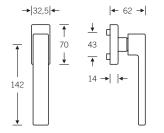
3d



34 1183 068 (rectangular rose)34 1183 067 (rectangular rose, flat)34 1183 170 (lockable)

Design: Hadi Teherani



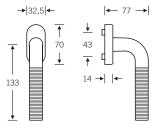




34 1186 008 (oval rose) 34 1186 007 (oval rose, flat) 34 1186 170 (lockable)

Design: Gaëlle Lauriot-Prévost, Dominique Perrault







fsb.de/341183

In aluminium only available in natural anodised finish (FSB 0105)

34 1206 34 1206 008 (oval rose) 34 1206 170 (lockable)

Design: Petra and Paul Kahlfeldt

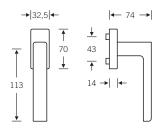
34 1222

34 1222 068 (rectangular rose) 34 1222 170 (lockable)

Design: Klaus Nolting







Gütezeichen Rastoliven fsb.de/341206

→|32,5|←

127

70 ↓ 43

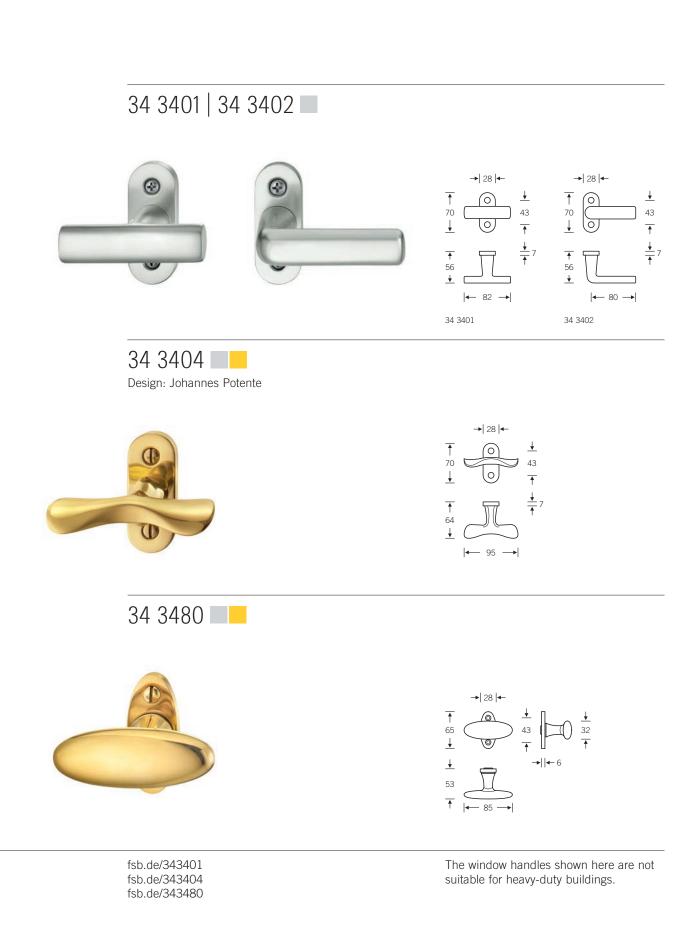
┭ [

14 → | |←

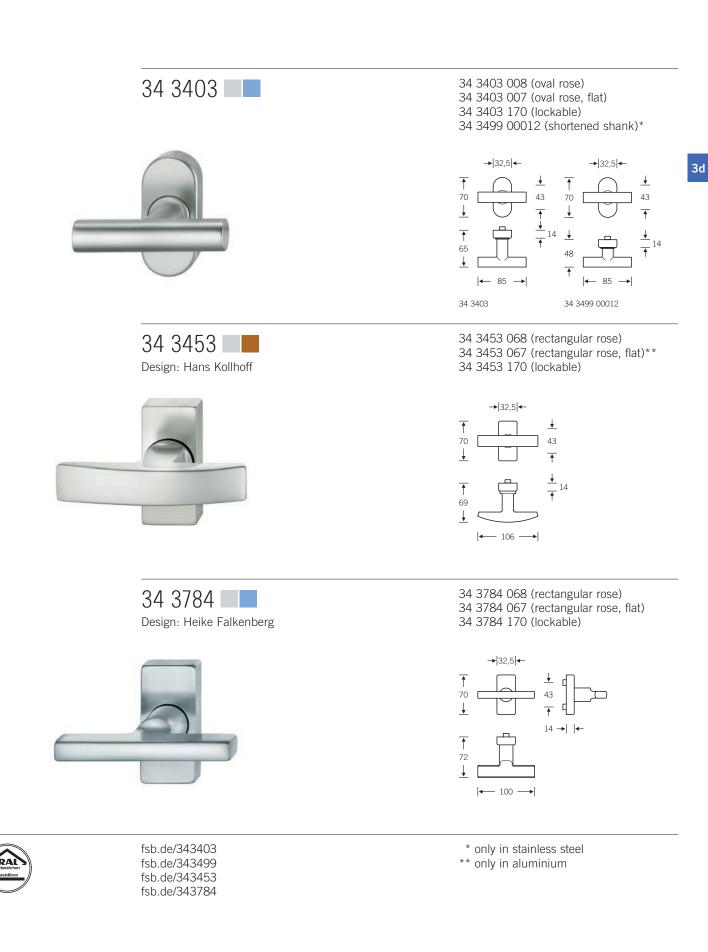
|← 78 →|

fsb.de/341222

In aluminium only available in natural anodised finish (FSB 0105)



342

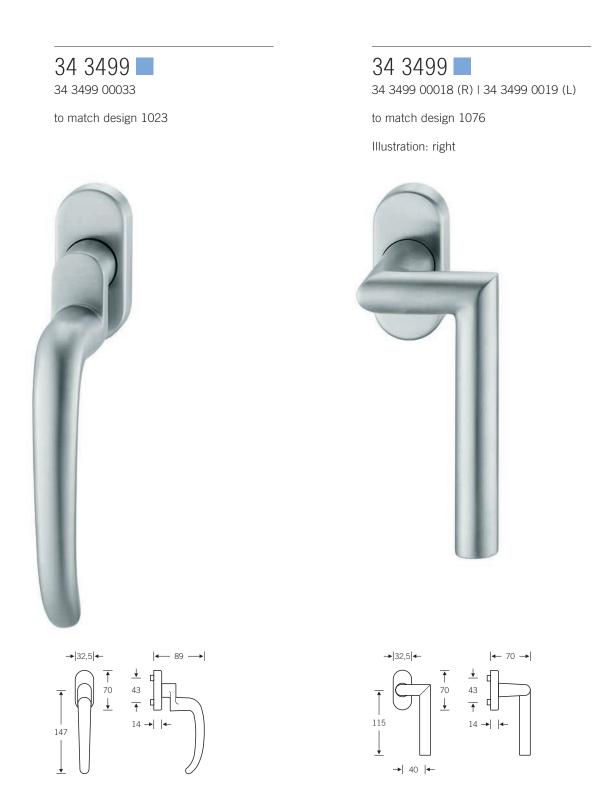


for specific requirements



for specific requirements

3d





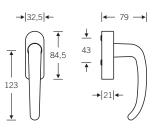


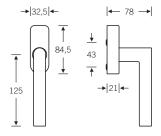
Suitable for security windows acc. to DIN EN 1627f. Keyed-to-differ, keyed-alike and tilt to turn* possible



Suitable for security windows acc. to DIN EN 1627 f. Keyed-to-differ, keyed-alike and tilt to turn* possible









Locking + security fsb.de/341023 fsb.de/341076 Adapter facing up and down can be used, possible with nearly all FSB handle designs. Optional with forced closing feature, i.e. in order to pull the key out, the window must be closed.

* Not burglar-proof acc. to DIN EN 1627 f. and not RAL quality. Specify DIN direction when ordering.

Window handle security devices Push-pin forced locks



Push-pin requires two-handed operation and makes access from outside more difficult





Locking + security 34 3460

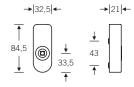
34 3460 170

Matching handle 34 1076 09001*



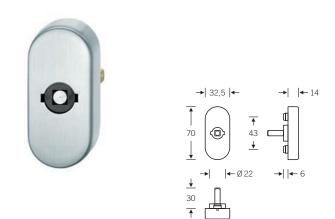
Gütezeichen Restolven 3d

Locking



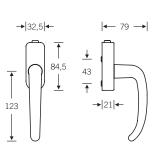
34 3470

Matching handle 34 3463 to be ordered separately

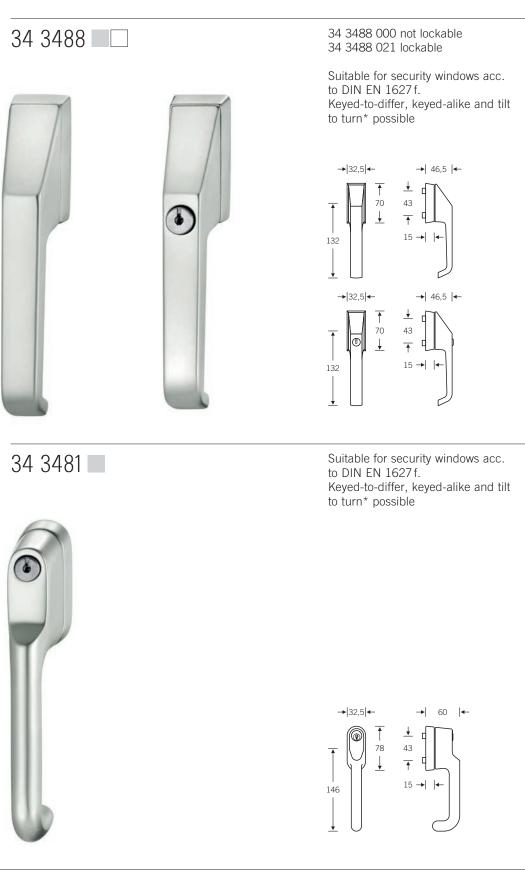


fsb.de/343460 fsb.de/343470 fsb.de/343463

* only in stainless steel



lockable



Gitzzeichen Rastoliven Locking +

security

fsb.de/343488 fsb.de/343481 * Not burglar-proof acc. to DIN EN 1627 f. and not RAL quality. Specify DIN direction when ordering

3d

34 3496 34 3496 000	34 3496 021 Suitable for security windows acc. to DIN EN 1627 f. Keyed-to-differ, keyed-alike and tilt to turn* possible
$ \Rightarrow 32 \leftarrow \Rightarrow 50 \leftarrow $ $ \hline \uparrow \qquad \downarrow \qquad \downarrow$	$\rightarrow 32 \left \leftarrow \rightarrow 50 \right \leftarrow$ $\uparrow \qquad \downarrow \qquad \uparrow \qquad \downarrow \qquad \downarrow$
fsb.de/343496	fsb.de/343496

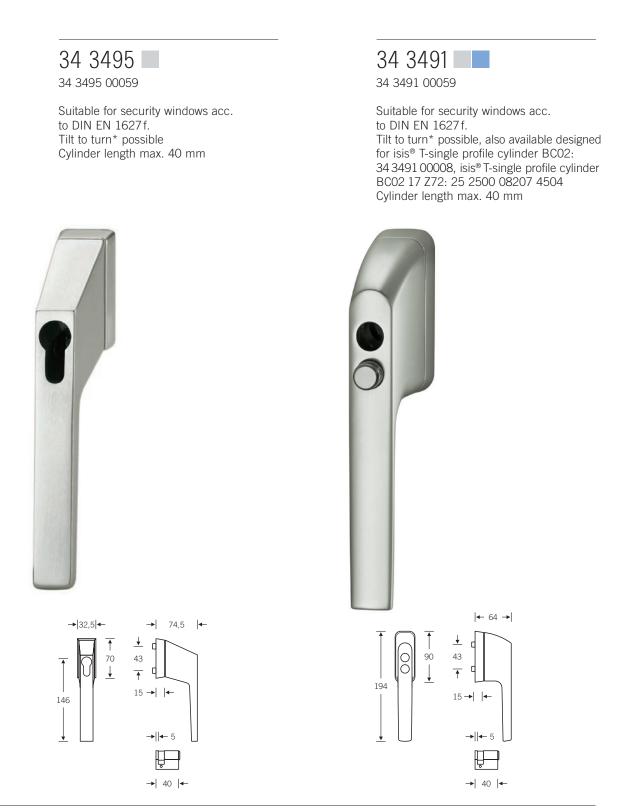


fsb.de/343496

fsb.de/343496

* Not burglar-proof acc. to DIN EN 1627 f. and not RAL quality. Specify DIN direction when ordering

designed for single profile cylinders





security

fsb.de/343495 fsb.de/343491 * Not burglar-proof acc. to DIN EN 1627 f. and not RAL quality. Specify DIN direction when ordering

350

designed for single profile cylinders, anti-suicide version

34 3495

34 3495 01059

Suitable for security windows acc. to DIN EN 1627 f. Tilt to turn* possible Cylinder length max. 40 mm

Anti-suicide version



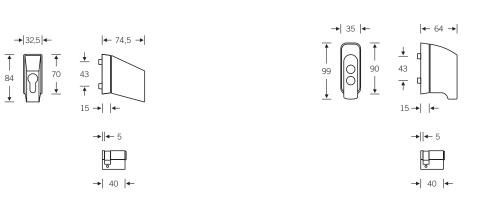


34 3491 01059

Suitable for security windows acc. to DIN EN 1627 f. Tilt to turn* possible (design slightly different) Cylinder length max. 40 mm

Anti-suicide version





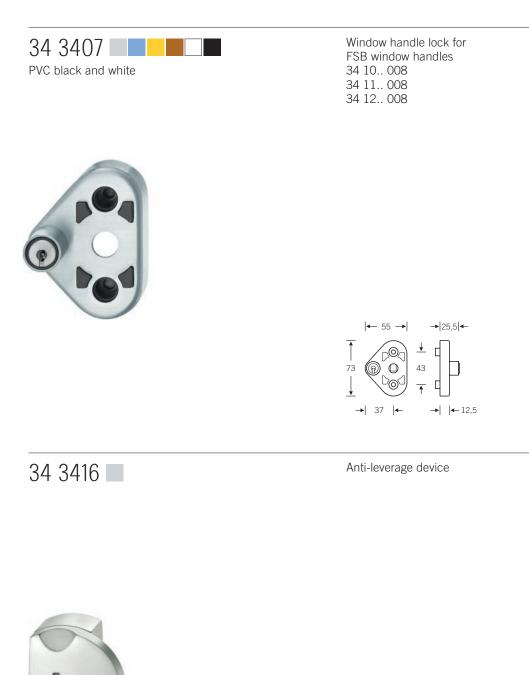


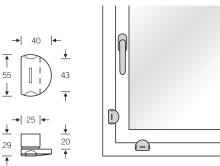
fsb.de/jva

* Not burglar-proof acc. to DIN EN 1627 f. and not RAL quality. Specify DIN direction when ordering

We are happy to send you the specialist brochure with a host of special JVA solutions free of charge on request.

Window locks





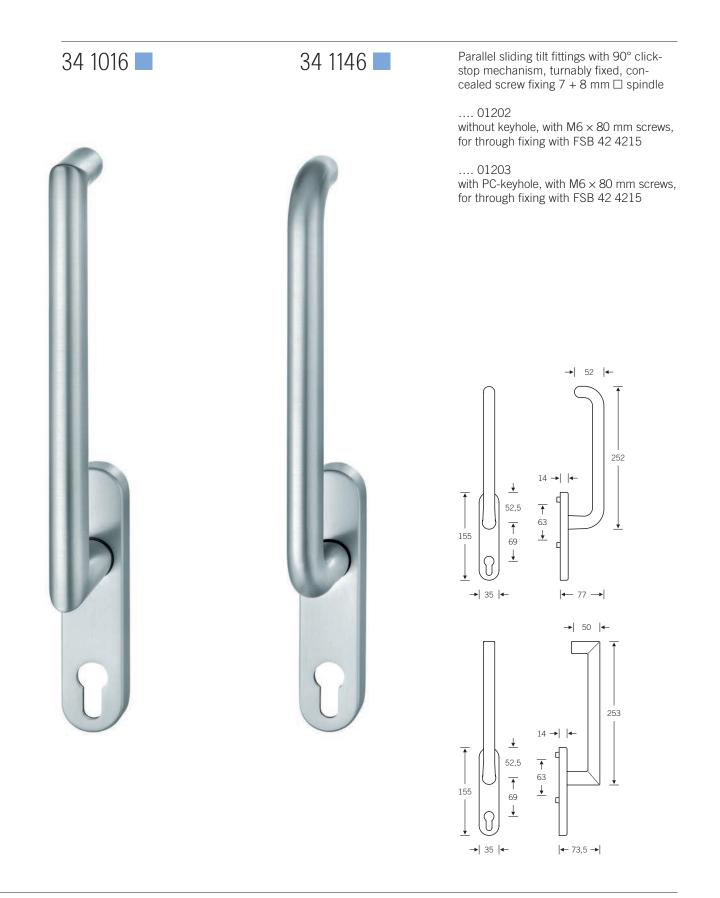
fsb.de/343407 fsb.de/343416

Budget lock roses



fsb.de/171759 fsb.de/171786

Parallel sliding tilt fittings (PST)

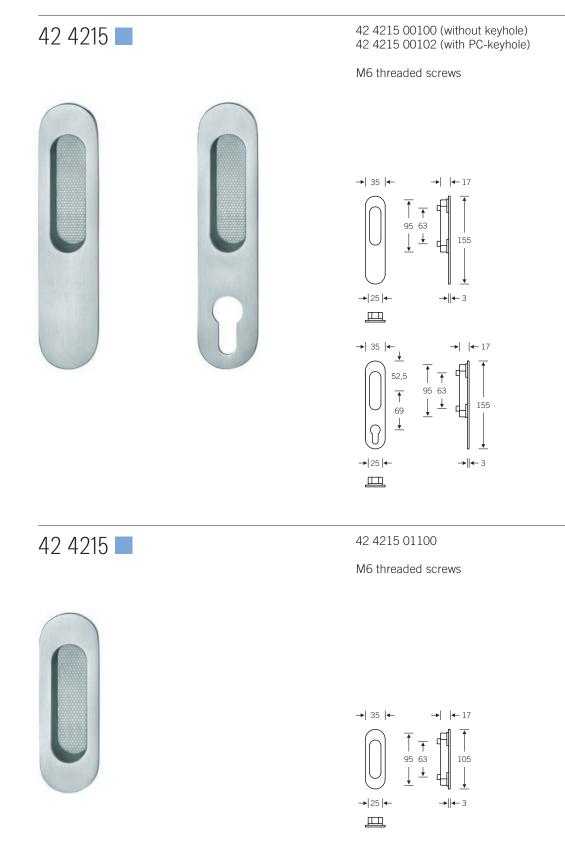


For matching handle pulls FSB 42 4215, see opposite page

fsb.de/341016 fsb.de/341146

Parallel sliding tilt fittings (PST)

Handle pulls for the opposite side



3d

Lifting/sliding door fittings



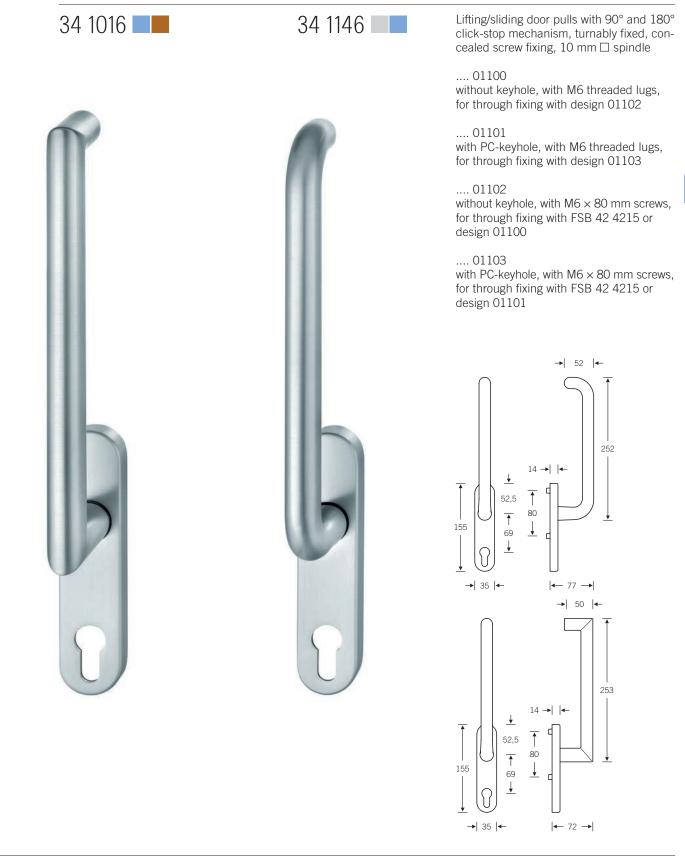
fsb.de/341004

For matching handle pulls FSB 42 4215, see page 359

|← 72 →

→ 35 ←

Lifting/sliding door fittings



fsb.de/341016 fsb.de/341146 In aluminium only available in natural anodised finish (FSB 0105).

For matching handle pulls FSB 42 4215, see page 359

3d

Lifting/sliding door fittings

34 1102



Lifting/sliding door pulls with 90° and 180° click-stop mechanism, turnably fixed, concealed screw fixing, 10 mm □ spindle

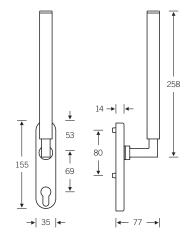
Versions: stainless steel, stainless steel mirror finish and brass-coloured PVD-coated

.... 01100 without keyhole, with M6 threaded lugs, for through fixing with design 01102

.... 01101 with PC-keyhole, with M6 threaded lugs, for through fixing with design 01103

 \dots 01102 without keyhole, with M6 \times 80 mm screws, for through fixing with FSB 42 4215 or design 01100

 \dots 01103 with PC-keyhole, with M6 \times 80 mm screws, for through fixing with FSB 42 4215 or design 01101

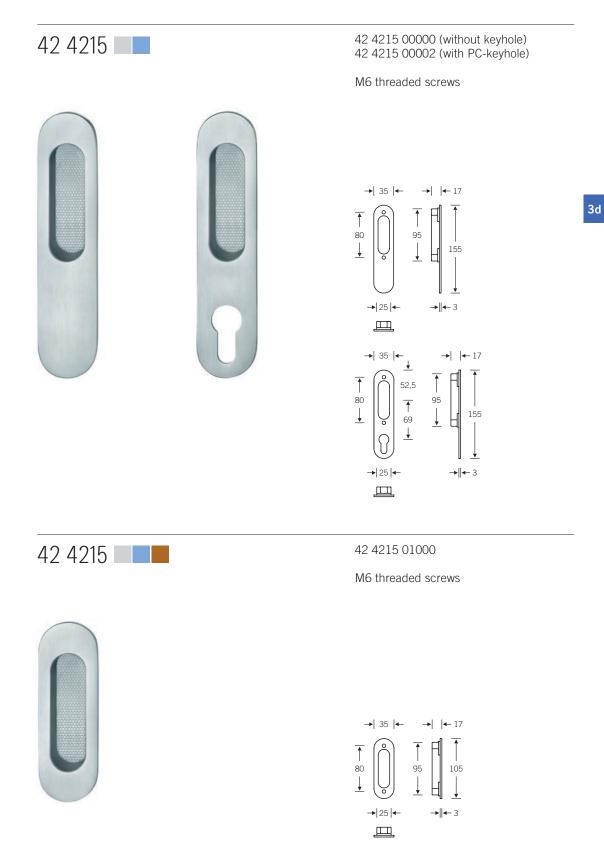


For matching handle pulls FSB 42 4215, see opposite page

fsb.de/341102

Lifting/sliding door fittings

Handle pulls for the opposite side



In aluminium only available in natural anodised finish (FSB 0105). Versions in stainless steel mirror finish, brass-coloured PVD-coated available on request.

fsb.de/424215

- 366 Flush pulls
- 378 Gymnasium fittings
- 385 Door stops
- 388 Accessories
- 391 Pictograms
- 392 Engravings

Overview



38 3816 1 Page 385	38 3817 Page 385	38 3878 1 Page 385	38 3880 ■ Page 386	38 3881 200 Page 386	38 3884 1 Page 386	38 3888 Page 385
7				•	P	
36 3646 Page 387	38 3880 4 Page 387	38 3896 Page 387				
•						
36 3650 Page 389	36 2328 Page 389	36 3632	36 3654			
		Ţ	P			
36 3689 Page 388	36 3691	36 3656 Page 388				
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36 4001 Page 390	36 9865 1 Page 390	36 4059	Engravings Page 392 f.			
		\rightarrow	FAMAL	Klie Julius Annfeld		

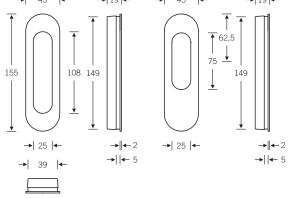
3e



Construction on existing buildings: sliding doors! Regardless of whether new construction, refurbishment, renovation, conversion, sophisticated interior design, residential building or small properties is involved: with sliding doors, the level of flexibility when planning and the space efficiency of the rooms fitted with sliding doors are increased in equal measure. What is particularly interesting is the way they open up spaces.

basket arch-shaped





* 42 4250 00000 also available in bronze

fsb.de/424250

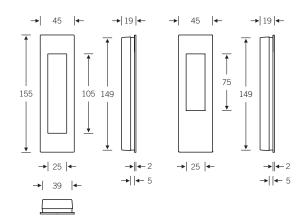
rectangular

42 4251

42 4251 00000 (open)* 42 4251 00001 (closed) 42 4251 00002 (half open)

Recess $150 \times R 20 \times 17.5 \text{ mm}$

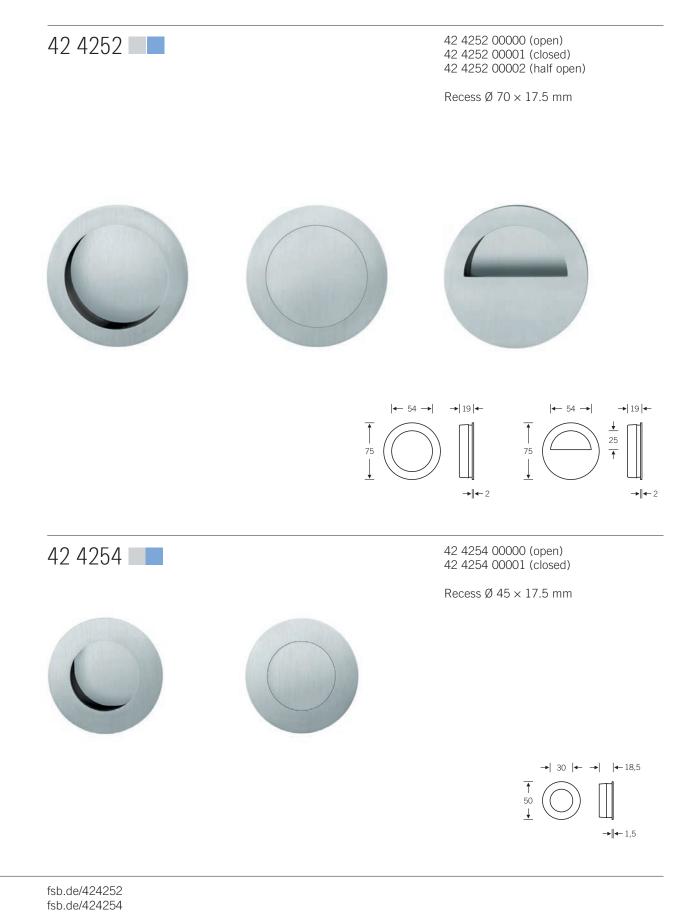




* 42 4251 00000 also available in bronze

fsb.de/424251

round



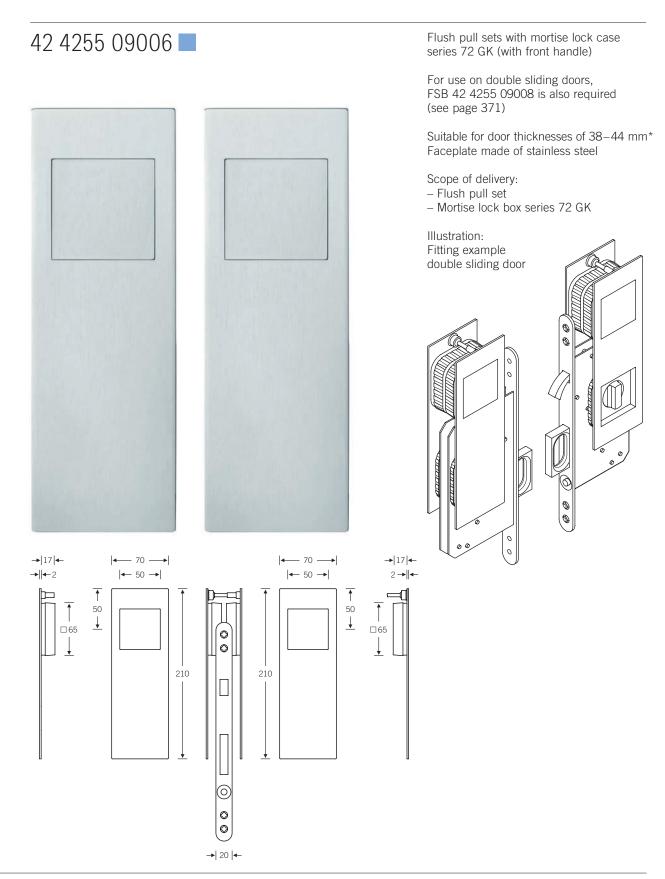
square



fsb.de/424253 fsb.de/424299 3e

Flush pull sets

for double sliding doors



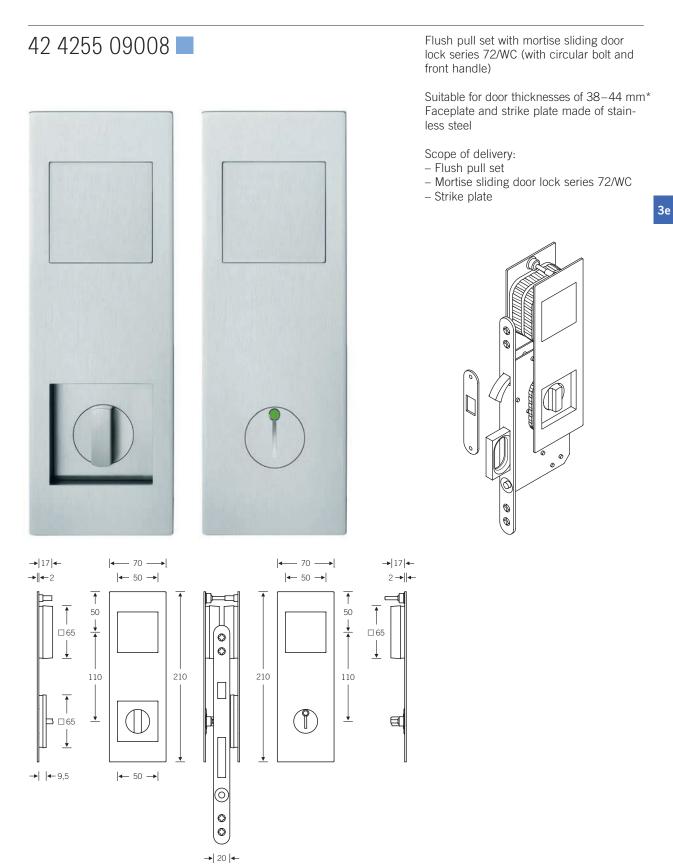
fsb.de/424255

* other door thicknesses on request

Note: The necessary recesses should be made by CNC machining, for milling data see www.fsb.de/cnc

Flush pull sets

for bathroom and WC



fsb.de/424255

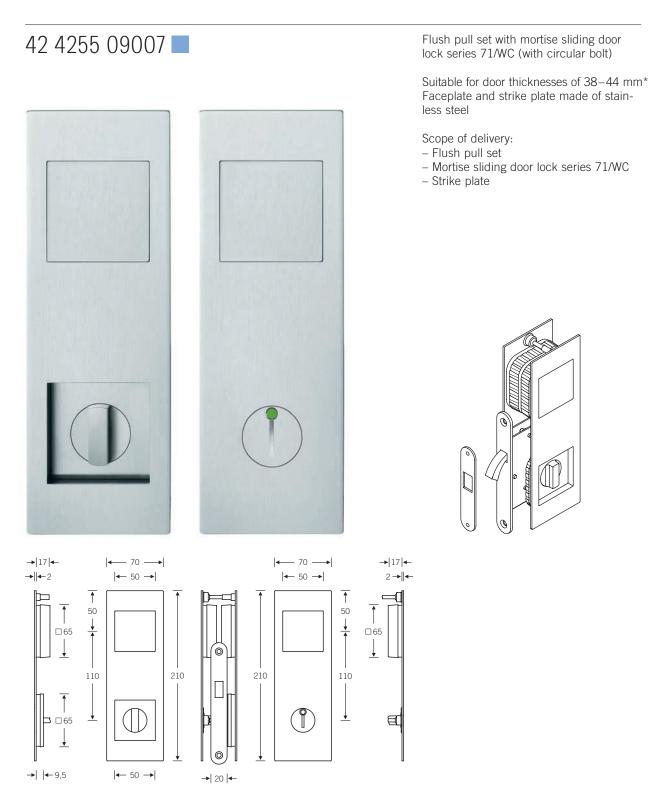
* other door thicknesses on request

Note: The necessary recesses should be made by CNC machining, for milling data see www.fsb.de/cnc

fsb.de/catalogue

Flush pull set

for bathroom and WC



fsb.de/424255

* other door thicknesses on request

Note: The necessary recesses should be made by CNC machining, for milling data see www.fsb.de/cnc

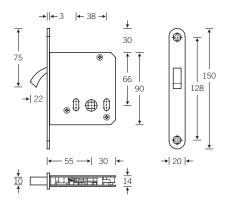
71/WC series



Mortise sliding door lock Class 3 Round flat faceplate Stainless steel faceplate, polished Nickel-plated circular bolt

Mortise sliding door lock and strike plate (see page 376) included in delivery of FSB 42 4255 09007

3e



Note: The mortise sliding door lock series 71/WC for use on sliding doors can also be ordered separately through SSF. You can find the contact details under www.ssf.de

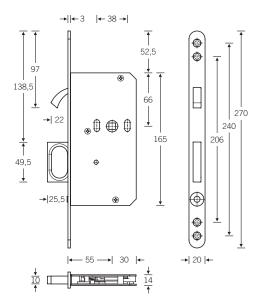
Mortise sliding door lock

72/WC series



Mortise sliding door lock Class 3 Round flat faceplate Stainless steel faceplate, polished Front handle, circular bolt and push-button nickel-plated

Mortise sliding door lock and strike plate (see page 376) included in delivery of FSB 42 4255 09008



Note: The mortise sliding door lock series 72/WC for use on sliding doors can also be ordered separately through SSF. You can find the contact details under www.ssf.de

Mortise lock case

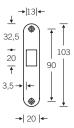


Note: The mortise lock case series 72 GK for use on double sliding doors can also be ordered separately through SSF. You can find the contact details under www.ssf.de

Strike plate

Strike plate included in delivery of FSB 42 4255 09007 and FSB 42 4255 09008



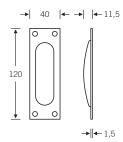




Recess 87 \times 28 \times 10 mm Drill hole for Ø 3.0 mm countersunk screws

Can be supplied with lever lock, profile cylinder or without keyhole







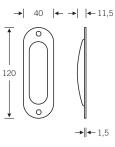


fsb.de/424211 fsb.de/424213 42 4212

Recess 87 \times 28 \times 10 mm Drill hole for countersunk screws Ø 3.0 mm

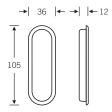
Can be supplied with lever lock, profile cylinder or without keyhole





Recess 97 \times 28 \times 10 mm

Can be supplied with lever lock, profile cylinder or without keyhole



fsb.de/424212

Gymnasium fittings

to DIN EN 179

77 7948

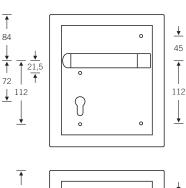


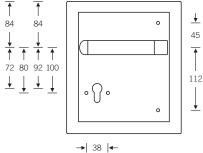
Backplate design for profile cylinder 72 mm

Inner backplate profile cylinder 72 mm: Mod. 14 14... | 14 1450 | 14 1451

Rose design for profile cylinder 72 and 92 mm

Roses: Mod. 17 17... | 17 1731 | 17 1735 Mod. 17 17... | 17 1703 | 17 1704





 $| \underbrace{-} 163 \longrightarrow |$ $\rightarrow | 35 | \underbrace{+} \\
40$ $\downarrow 40$

fsb.de/777948

G g mm square

Profile cylinder and blank keyholes (for standard doors to DIN EN 179) Spacings 72 + 92 mm Installation depth 40 mm, frame height 45 mm

In certain installation situations, door handles are not allowed to protrude beyond the surface of the door: for example on sliding-door designs or gymnasium doors.

For this purpose FSB 77 7948 was subject to both the requirements of DIN EN 179 (inc. generous gripping area behind the door handle) and those of the DGUV (inc. edge radii of 2 mm, see also page 19). The door handle designed in accordance with DIN EN 179 with return and generous rounded parts also prevents any risk of crushing or trapping.

The FSB 77 7948 pull handle is combined on the opposite side with the fittings from the FSB heavy-duty range (AGL[®]), with a choice of backplate or rose design.

To prevent any risk of injury, ensure there is sufficient backset and that the rim fits flush with the door when fitting the pull handle.

Illustration: right

Ordering details:

- Backplate/rose
- Direction
- Keyhole
- Spacing
- Door thickness

Please always order correct rose or backplate for the reverse side in turnably fixed design (AGL $^{(0)}$) separately.

Gymnasium fittings

77 7949



€ 8 mm square€ 9 mm square

In certain installation situations, door handles are not allowed to protrude beyond the surface of the door: for example on sliding-door designs or gymnasium doors.

For these installation situations, FSB has developed so-called gymnasium fittings with integrated door handle with a reduced installation height. The FSB 77 7949 model is angular with mitre corners.

The FSB 77 7949 pull handle is combined on the reverse side with hardware from the FSB heavy-duty range (AGL[®]), either in a backplate or rose design. Using the FSB flush pulls requires a minimum door thickness of 55 mm.

To prevent any risk of injury, when fitting the pull please ensure there is sufficient backset and that the rim fits flush with the door.

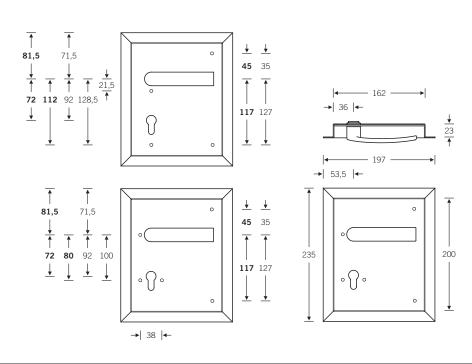
Illustration: right

Backplate design for profile cylinder 72 and 92 mm

Inner backplate profile cylinder 72 mm: Mod. 14 14... | 14 1450 | 14 1451 Inner backplate profile cylinder 92 mm: Mod. 14 14... | 14 1452 | 14 1453

Rose design for profile cylinder 72 and 92 mm

Roses: Mod. 17 17... | 17 1731 | 17 1735 Mod. 17 17... | 17 1703 | 17 1704



fsb.de/777949

Ordering details:

- Backplate/rose
- Direction
- Square 8 or 9 mm
- Keyhole
- Spacing
- Door thickness

Please always order correct rose or backplate for the reverse side in turnably fixed design (AGL®) separately.

77 7950 | 77 7952



8 mm square
9 mm square*

Corner radius 8 mm

Through fixing is only possible with the 92 mm profile cylinder backplate design below the handle bearing.

* Fire safety design only available in stainless steel

See opposite page for notes about use

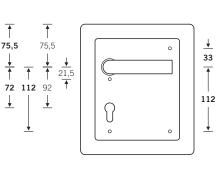
Illustration: right

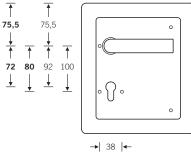
77 7950 Backplate design for profile cylinder 72 and 92 mm

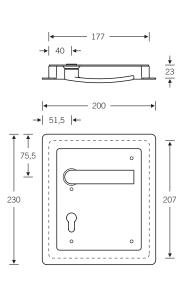
Inner backplate profile cylinder 72 mm: Mod. 14 14... | 14 1450 | 14 1451 Inner backplate profile cylinder 92 mm: Mod. 14 14... | 14 1452 | 14 1453 or 14 1410 | 14 1418

77 7952 Rose design for profile cylinder 72 and 92 mm

Roses: Mod. 17 17... | 17 1731 | 17 1735 Mod. 17 17... | 17 1703 | 17 1704







fsb.de/777950 fsb.de/777952

Ordering information:

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112

+

- Backplate/rose
- Direction
- 8 or 9 mm square
- Keyhole
- Distance
- Door thickness

Please always order correct rose or backplate for the reverse side in turnably fixed design (AGL®) separately.

Flush ring handles



Drill hole for 3.5 mm countersunk screws

Handles



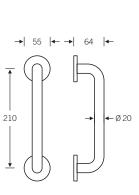
Fitted using fastening points on the sub-rose

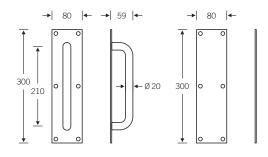
66 6629

51 5325 backplate for 66 6629 For 4.0 mm countersunk screws







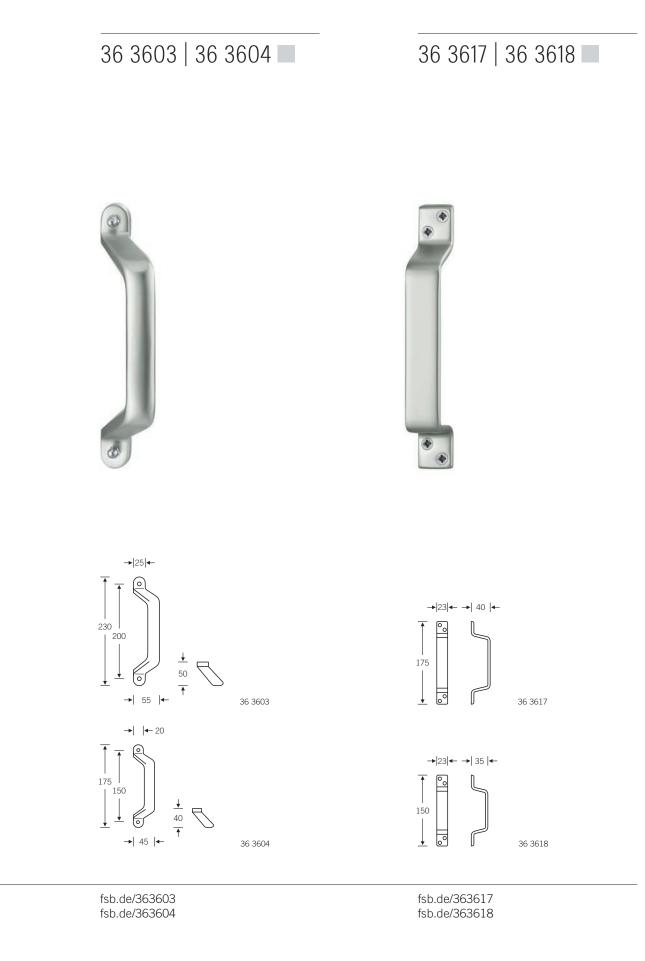


fsb.de/666628

fsb.de/666629

51 5325, 66 6628 and 66 6629 are suitable for combining to specify the opening direction on swing doors.

Handles



Handles



fsb.de/212144

fsb.de/212160

Door stops



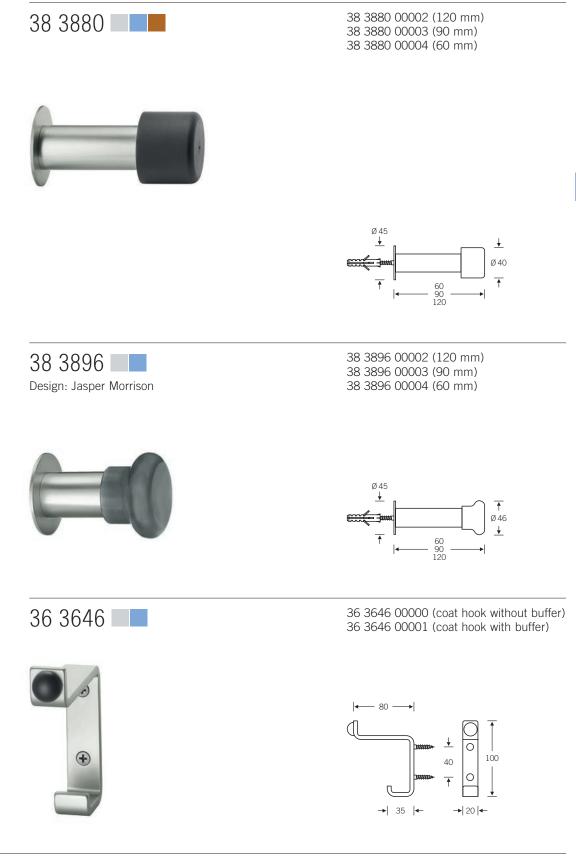
fsb.de/383816 fsb.de/383817 fsb.de/383878 fsb.de/383888 Before any order or fitting, the weight of the door, the angle of incidence, the height of the bottom edge of the door above the floor and the firmness of the floor need to be checked. According to the requirements, it is possible to choose between simple stops, stops with anti-twist protection, stops with baseplate, directed and undirected stops as well as simple floor fastening or professional fastening using plugs.

Door stops



FSB Manual 2015 | 2016

Wall stops, coat hooks



fsb.de/383880 fsb.de/383896 fsb.de/363646

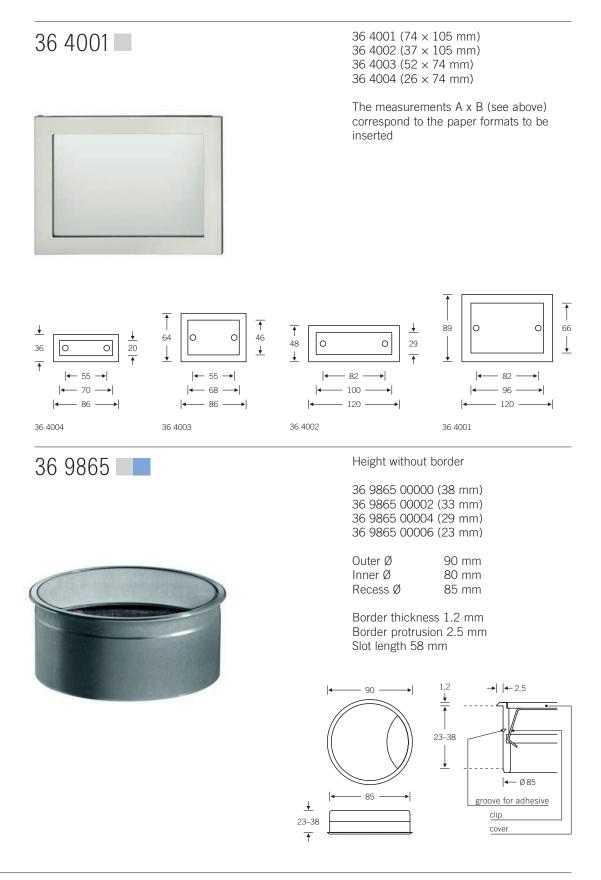


fsb.de/363656 fsb.de/363657 fsb.de/363689 fsb.de/363691

Cabinet knobs



Label frame Cable socket



fsb.de/364001 fsb.de/369865

Information signs / pictograms



fsb.de/364059

3e

Engraving Tampo printing



FAMiklie Julius

Information signs, key tags, letter plates, bell-push plates, handle pads and any other flat fittings in aluminium, stainless steel, bronze and brass or, indeed, wood and glass can be engraved with illustrations, graphics, patterns, decorative material, lettering, numerals and also colours at FSB.

The various options together with the relevant technical specifications can be found below. To prepare an individual quote, we require details of the material as well as specimens of the graphics, illustrations, logos or other pictorial material as a means of gauging the work involved more accurately. We work with all the standard picture and graphics formats, i.e. pixel data such as .tiff, .jpeg or .bmp, and vector data such as .dxf, .cdr or .eps. In the case of typographic engravings, we require precise details of fonts and sizes. Besides a broad range of fonts, we can also arrange for your script, logos or names to be input in vectored form or converted into character paths. If no details about the font type, style or size are given when ordering, we produce typographic engravings in "Arial". The font "Blair Medium" is used on the lower of the engravings shown above.

When it comes to laser engravings using pixel data, it is necessary both to check the data and carry out a simulation in combination with the desired materials before we can make a quote or commit ourselves to producing the item.

Engraving

Size of inscription area: $610 \times 2,000 \text{ mm}$ (flat)

Workpiece size: H 50 \times 650 \times 2,000 mm, cylindrical objects up to Ø 110 mm, length 200 mm maximum

Inscriptions: Caps height from 4.0 mm

Engravings are possible in "bare" metal or "colour filled". Individual designs may incorporate any conventional colour system (RAL, HKS, Pantone etc.) through to paints used in the automotive industry.

Unless specified otherwise by the customer, we deliver colour fill engravings in black as standard.

Laser engraving

Size of laserable area: 610×610 mm (flat or slightly curved)

Workpiece size: H $200 \times 610 \times 610$ mm, cylindrical objects up to Ø 110 mm, length 360 mm maximum

Inscriptions: Caps height from 2.0 mm

FSB now allows you to process motifs not only as vectorised data but also in the form of pixel data such as .tiff, .jpeg or .bmp, as well as to laser images or graphics. Delicate, linear design elements look particularly attractive in this way, as these can be made in very fine lines or dots using lasers.

Laser engravings (also on coloured anodised surfaces) generally have a metallic white appearance due to the oxide layer specific to aluminium. Lasered stainless steel surfaces turn black.

Tampo printing

Size of inscription area or maximum size of graphic elements: \emptyset 85 mm (flat)

Workpiece size: H 150 \times 300 \times 200 mm, cylindrical objects not possible

Inscriptions: Cap height from 2.5 mm, standard colour black, special colours possible on request

Tampo printing is recommended for less complex mono or two-tone print objects to be produced in large quantities. Furthermore, it is an effective means of adding differently coloured details to areas colour filled by engraving or of accentuating laser engraved surfaces or designs using colours.

There is thus some scope for combining the techniques described above. If you have any questions, please contact our inhouse service staff:

Phone +49 5272 608-128 info@fsb.de

In case of special designs concerning engraving, laser engraving and tampo printing and/or special formats, please plan in additional delivery time.



Heavy-duty fittings for special and functional doors

Foster + Partners, London www.fosterandpartners.com

Photograph: Nigel Young

FSB 1015 range of handles, see page 126 ff.

FSB 1045 range of handles, see page 154 ff.

AGL®-/AGL® FS heavy duty fittings for fire and smoke doors, see page 26 ff. Frame door fittings for fire and smoke doors FSB 06/09 1045, see page 397 ff. FSB 34 1015 window handles, see page 315 ff.

Bronze lightly patinated, waxed

www.fsb.de/lenbachhaus

408 Handles for frame doors

- 430 Door knobs for frame doors
- 435 Roses and backplates for frame doors
- 438 Door handle and entrance door fittings for frame doors

06 1001 09 1001 Pages 408, 409





06 1031 09 1031 Pages 410, 411



06 1070 09 1070 Pages 414, 415



06 1093 09 1093 Pages 418, 419





06 1002 09 1002 Pages 408, 409





06 1035 09 1035 Pages 412, 413







06 1144

06 1144 09 1144 Pages 422, 423



06 1015





06 1043 09 1043 Pages 412, 413



06 1076 09 1076 Pages 416, 417





06 1107 09 1107 Pages 418, 419







06 1016 09 1016 Pages 410, 411





06 1045



06 1078 09 1078 Pages 416, 417



06 1108 09 1108 Pages 420, 421



06 1147

00 1147 09 1147 Pages 422, 423



06 1023



06 1053 **1** 09 1053 **1**



06 1088 09 1088 Pages 416, 417



06 1119 09 1119 Pages 420, 421





06 1159 09 1159 Pages 424, 425



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06 1160 09 1160 Pages 424, 425	06 1163 09 1163 Pages 424, 425	06 1164 09 1164 Pages 426, 427	06 1177 09 1177 Pages 426, 427	06 1178 09 1178 Pages 426, 427
06 0605 09 1087 Page 428	06 0620 06 0663 Page 429	06 0662 Page 428		
• 07 0802 Page 432	07 0804 Page 433	07 0809 Page 431	07 0811	07 0812 Page 430
07 0829 Page 431	07 0829 Page 434	07 0846 Page 432	07 0846 Page 434	07 0846 Page 434
07 0854 Page 433	03 0418	_		

8

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06 7816



06 7820 Page 440

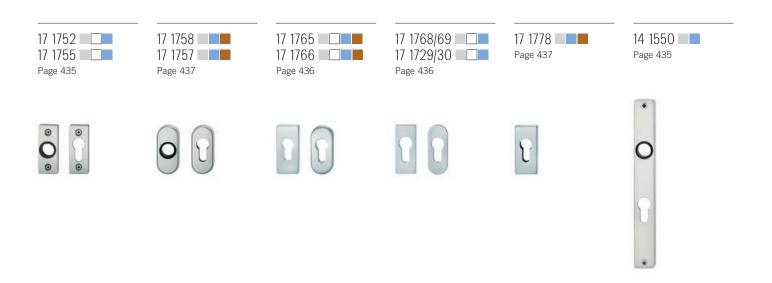






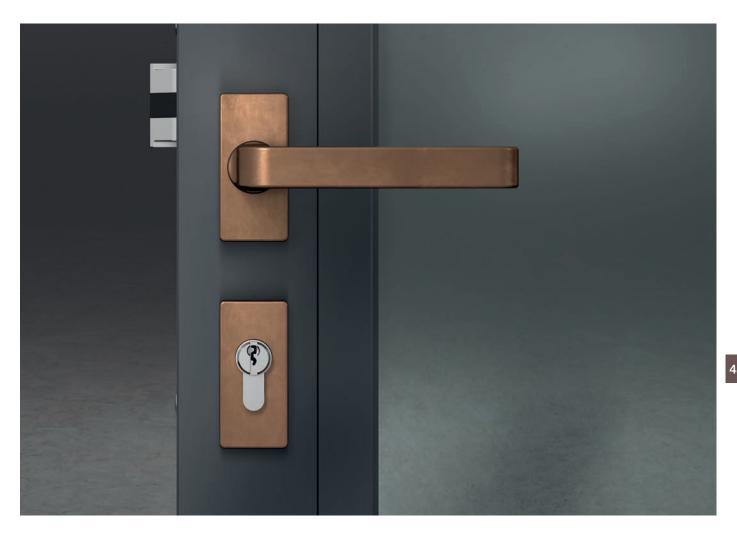
06 7820 Page 441





06 7816

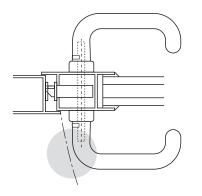




The brilliant idea of the philosopher, Ludwig Wittgenstein: in order to attach the fittings securely to the narrow profiles and avoid injury to the hand on the handle side, in the 1920s Wittgenstein produced a cranked door handle for the handle side to his own drawings that he combined on the opposite side with an uncranked door handle as a male part. The idea was and is significant for the design of handle ranges: For each new door handle design, a corresponding pair of door handles is created at FSB for frame doors. Here from the hand of David Chipperfield FSB 09 1134.

Technical information

Fittings for frame doors

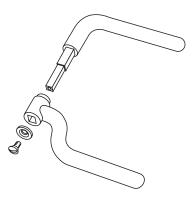


FSB not only offers a complete programme of fittings such as door handles, knobs and pulls for frame doors made of metal, plastic or wood, but the company's mounting technology has also been designed to suit the particular requirements of frame doors and fittings, and has been consistently improved over the years.

You will find detailed information on safety distances in DIN 31001.

As the result of space restrictions, with frame doors there is the risk of the hand coming into contact with the door frame on the handle side when opening or closing the door (see ill.). Another consequence of the space restrictions are certain problems when mounting the fittings. As the result of small backsets and the lack of proper screw connections within the frame door lock, single-sided attachment has become the norm (against better knowledge) with the attendant irritation of loose and slipping fittings.

FSB's heavy-duty frame door fittings generally have an oval or square rose and an integrated positive mechanism plus turnably fixed plain bearings. Attachment is concealed, and carried out using M5 countersunk screws, screw holes 50 mm apart. The attachment of standard versions is visible, and does not include the positive mechanism.



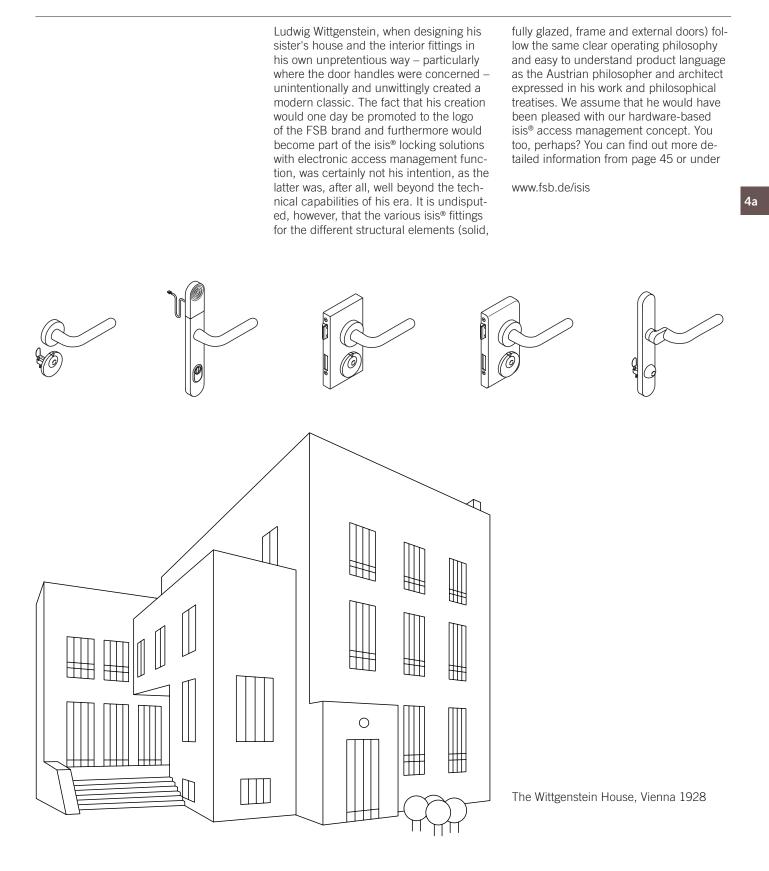
The brilliant idea of philosopher Ludwig Wittgenstein

During a period of philosophical reflection in the 1920s Ludwig Wittgenstein, the Austrian philosopher and qualified engineer, planned and designed Palais Wittgenstein for his sister in Vienna. One of his challenges included dealing with very narrow steel profiles.

In order to attach the fittings securely to the narrow profiles and avoid injury to the hand on the handle side, Ludwig Wittgenstein produced a cranked door handle for the handle side to his own drawings that he combined on the opposite side with an uncranked door handle as a male part. The linguist found the first convincing responses to the risk of trapping and the problems of attachment that continue to this day (see ill.) in this combination of a cranked female part and standard male part.

The idea was and is significant in FSB's designs of new handle programmes. To this day, a formal-aesthetically balanced cranked version for the handle side of the frame door is still created by the hand of the respective designer for each new door handle design.

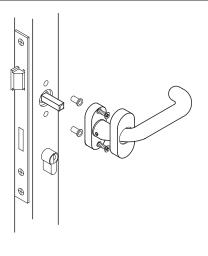
Ludwig Wittgenstein meets isis® access management



Technical information Fittings for frame doors

FSB fixing technology for frame door fittings

Spurred on variously by Wittgenstein's breakthrough, our knowledge of the notorious fixing problems involved and the innovations developed in co-operaton with the Sächsische Schlossfabrik (SSF), FSB has realigned its fixing system for frame door fittings and based it on new system-led technical foundations. We have revised the key factors as follows:



1 Mounting accessories included in delivery

In the past, we often had to deal with complaints that were the result of fittings not having been installed in accordance with their function or our recommendations. To avoid these difficulties, our products are now supplied with the corresponding fittings. The fixing materials consist of M5 non-loosenings screws and riveting nuts as appropriate to the base construction of the frame door fittings. The heads of the riveting nuts (11 mm diameter) fit perfectly on the underside of FSB fittings for frame doors. Please note that a standard commercial assembly tool is required for inserting the blind riveting nuts.

The combination of riveting nuts, base construction (with integrated slip and screw safety) and non-loosening screws ensures that the fittings can be attached without working loose or moving around (ill. top). FSB will not accept any complaints for problems that are due to the failure to use original FSB mounting accessories.

Wittgenstein's solution

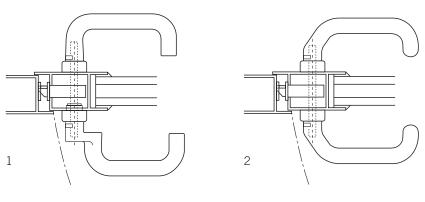
FSB also recommends honouring Wittgenstein's approach anew in practical use with a combination of cranked and uncranked door handles, both in order to avoid injury to the user and in the interests of achieving the optimum fixation with the optimum power transmission into the frame door profile. In our case, the cranked door handle is used as the male part, and a solid connection created with the uncranked door handle (female part: ill. 1 on the following page). RT special spindle 05 0525 is to be used for this; see page 713. All FSB solid spindles are notable in particular for the advantages 2.1 to 2.3 listed on the following page.

2.1 Male part: connection between handle and square spindle

The male part of the door handle is tightened securely and safely by screwing in a threaded pin. The steel pin of the threaded pin slides perfectly into a corresponding drill hole on the square spindle, where it creates a permanent non-positive connection between the door handle and the square spindle.

2.2 Fixed pinned fittings

On the opposite side, the female part of the frame door handle is reliably and safely secured by the FSB clamping anchor spring (which has proven itself a million times over) to create a fixed pinned fitting. Mounted properly (threaded pin flush with the surface of the handle), the clamping anchor spring creates a permanently reliable fixed handle/pin connection that – for good reason – is a fundamental component in all FSB Stabil spindles. You will find the various applicationbased pin designs for all other FSB frame door combinations as per the illustrations on page 407. All FSB frame door handles with roses that are invisibly mounted have a pre-head drill as standard. This means that loose or floating pins that, despite better knowledge, are commonly used in metal construction are now a thing of the past.



2.3 Effective load absorption and dissipation

Another advantage of the above aspects on pinning is that the axial forces that occur when the door and door handle are activated are absorbed far more efficiently than they are with floating pin connections and dissipated to the frame door profile: this means that the leverage effects of the occurring loads are compensated for from the beginning by the best possible reduction in the mounting tolerances of all involved component groups. This will effectively prevent the handle/pin connection from gradually working loose from the outset.

Slip and screw safety

3

Irrespective of the use of the riveting nut and non-loosening screws, all FSB roses for frame door fittings are fitted with friction caps made of a rubber-like synthetic material within the screw gland sockets. These friction caps project very slightly beyond the underside of the rose, and are compressed by the screwing torque. On the one hand they act to prevent slipping on the profile, and on the other – thanks to the simultaneous axial and radial tension – they stop the screws from working loose.

SSF locks for tubular frame doors Series 01 and 02

SSF locks: fixing technology with optional through screw connection

For a reputable company, not only should adequate product solutions be a matter of course, but reliable function should also continue throughout the product's entire life cycle. As an option, FSB has matched the fixing technology of its frame door fittings to SSF frame door locks with the through screw connection points of series 01 and 02 (ill. right). This requires a special fixing set (product no. 05 0526 01..., ill. below; see also page 712), which is used to fit the FSB frame door fittings to order and prepare them at the factory. The set includes the screws and supporting lugs in metal for the particular door thickness, which are precision fit in the base construction in place of the rubber brake caps and are additionally secured on one side with an M5 screw.

This fixing solution dispenses with the requirement for riveting nuts because the metal supporting lugs are inserted in both sides of the frame door profile, and thus perform the function of the riveting nuts. As FSB carries out the preparation of the half sets, the two measures ensure an effective and significant reduction of the assembly time since, thanks to the through screw connection, the frame door set now requires only two screws for fixing. The described spindle solutions also apply with this fixing technology.



Series 01 (bolt throw 15 mm) – Mortise locks to DIN 18 251-2, class 1

- .
- Series 02 (bolt throw 21 mm)
- Mortise locks
- to DIN 18 251-2, class 3, with bolt throw 21 mm or as a 34.5 mm swivel hook deadlock
- Anti-panic mortise locks for single leaf tubular frame doors (APE, APB, APD)
- Roller latches to DIN 18 251-2, class 3
- Roller latches
 to DIN 18 251-2, class 3,
 standard length and short version
- Deadlocks
 to DIN 18 251-2, class 3,
 standard length and short version

SSF tubular framed locks are notable for the following product features:

- dust-protected through screw holes through the item to attach the frame door handle
- clamp nut
- latch can be used right/left
- galvanised lock cylinder, closed top and bottom, through screw holes protected against dust
- comfort function in the form of a lownoise latch (except on roller locks and deadlocks)

SSF's lock programme also includes mortise locks for

- interior doors
- apartment entrance doors
- house doors
- heavy-duty doors
- fire safety and panic doors
- plus special locks, strike plates and accessories.

You will find detailed information in SSF's current lock catalogue, which you can obtain directly from Saxony:

SSF – Sächsische Schlossfabrik GmbH Am Pappelhain 10 04539 Groitzsch Phone +49 34296 733-00 Fax +49 34296 733-11

or through the Internet: www.ssf.de | info@ssf.de

SSF – a member of the FSB group of companies

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Spindles for frame doors

Application-based FSB fixing accessories and spindle designs for frame door handles

It is common practice for frame door fittings to be compiled from individual components to suit the particular application. FSB meets this requirement with a comprehensive and appropriate spindle concept. The following FSB spindles are to be used for the individual applications.

Aluminium finishes

Please note that the following frame door handles and frame door knobs 07 0811, 07 0812 and 07 0873 are only available in aluminium FSB 0105:

- 06 0644 / 09 1074
- 06/09 1001
- 06/09 1002
- 06/09 1031
- 06/09 1134 - 06/09 1035
- 06/09 1035
- 06/09 1163 - 06/09 1164
- 06 1223
- 00 1225

Ö-Norm (Austrian Standard)

Individual frame door handles (06/09 1035 and 06/09 1159), which are available in both aluminium and stainless steel, are sometimes labelled with the information that these are only approved (in accordance with DIN 18 273) in stainless steel in the fire safety version. This does not apply in the form to FS versions made of aluminium according to the Ö-Norm these are permitted and can be supplied. On the subject of this special feature caused by the standard, there is a selfcontained product overview: our Ö-Norm price list, which also contains heavy-duty fittings from other product areas. On request, we would be happy to send this to you.

Concealed screw connection

- Frame door handle in combination with SSF tubular frame locks with through screw sleeves (series 01 and 02): fixing set 05 0526 01 ... – see page 712). FSB frame door fittings can be ordered with this accessory fitted at the factory.
- 2. To combine two cranked frame door handles (fig. 2 – designs 06 + 06): accessories bag 05 0525 028.. (□ 8 mm) or 05 0525 029.. (□ 9 mm), see page 713.
- 3. To combine frame door handle with cranked FD handle (fig. 1, the "Wittgenstein solution" – designs 09 + 06): accessories bag 05 0525 018.. (□ 8 mm) or 05 0525 019.. (□ 9 mm), see page 713.
- 4. To combine two frame door handles for emergency exits to DIN EN 179 or for fire safety doors with panic locks: FSB special spindle 05 0125, see page 711
- 5. For frame door half sets for one-sided attachment: also full spindles 05 0172 008.. (□ 8 mm) or 05 0173 019.. (□ 9 mm) with door thickness increments other than under 6, see page 712.

Exposed screw connection

 To combine two cranked frame door handles (06 + 06): full spindles 05 0172 008.. (□ 8 mm), see page 712.

Our sales team or FSV application technology will be pleased to help you with the precise specification for your order with regard to your particular application and the door thickness.

Positive mechanism

Almost the entire FSB range for frame doors is fitted with a positive mechanism to support the lock springs that permits a maximum actuation angle of 45 °C.

Positive mechanism in combination with inactive leaf fittings

Cranked frame door handles that are to be used on inactive leaves should be ordered under the specific product numbers 06 23 (oval roses) or 06 73 (rectangular roses), and will be supplied from the factory without the positive mechanism.

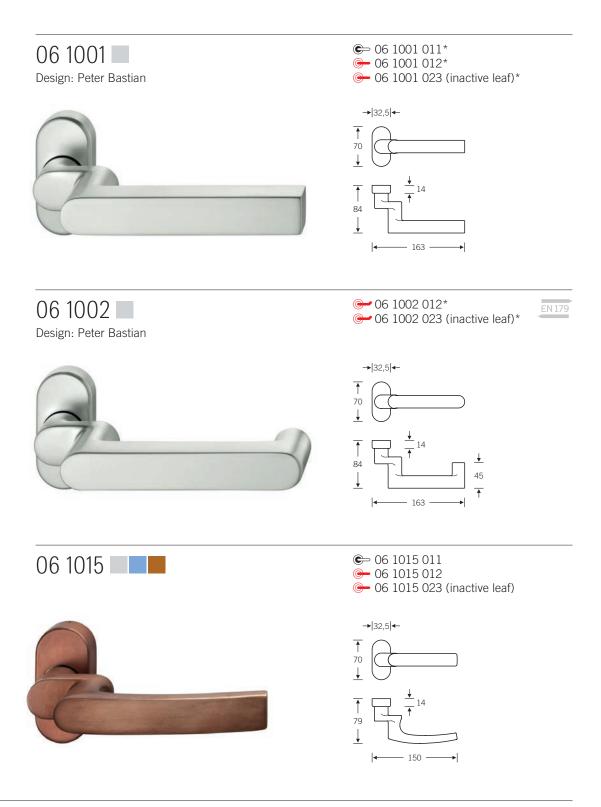
Frame door handles used in combination with drive dead bolts without spring support and actuation angles of $< 45^{\circ}$ are to used with a positive mechanism.

Should the actuation angle be $> 45^{\circ}$, and if any designs are to be used as inactive leaf fittings at the same time (i.e. without the positive mechanism), then as a general rule bronze versions and stainless steel designs

- 06/09 1163 ... - 06 1164 ...

are to be equipped with spring-assisted locks.

for frame doors



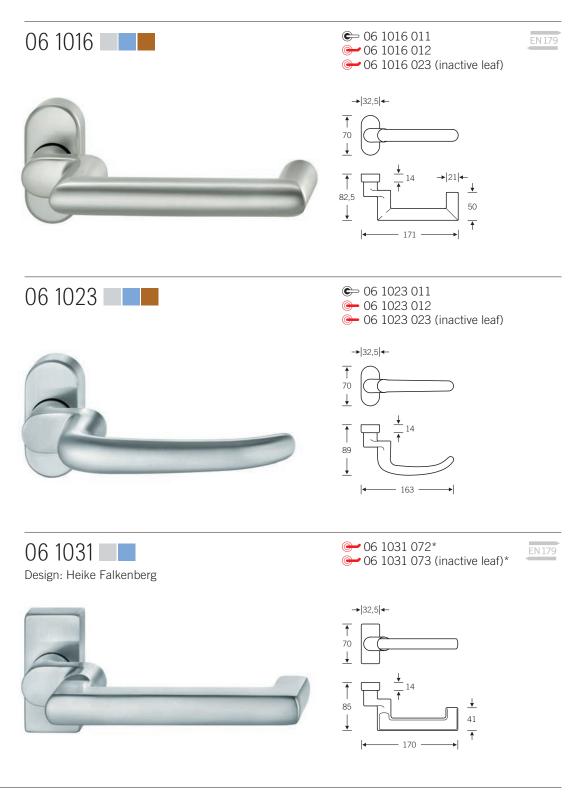
fsb.de/061001 fsb.de/061002 fsb.de/061015 * In aluminium only available in natural anodised finish (FSB 0105) SSF tubular frame locks with optional through screw connection see page 406

408

09 1001 Design: Peter Bastian		 € 09 1001 011* ⑥ 09 1001 012*
		$\rightarrow 32,5 \leftarrow$ \uparrow 70 \downarrow \uparrow $74,5$ \downarrow $139 \longrightarrow $
09 1002 Design: Peter Bastian		G 09 1002 012* EN 179
		$\rightarrow 32,5 \leftarrow$ \uparrow 70 \downarrow \uparrow $74,5$ \downarrow $ \leftarrow$ 146 \downarrow \uparrow 145 \uparrow
09 1015		 €→ 09 1015 011 (→ 09 1015 012
		$\rightarrow 32,5 \leftarrow$ \uparrow
fsb.de/091001 fsb.de/091002 fsb.de/091015	* In aluminium only avail- able in natural anodised finish (FSB 0105)	SSF tubular frame locks with optional through screw connection see page 406

4a

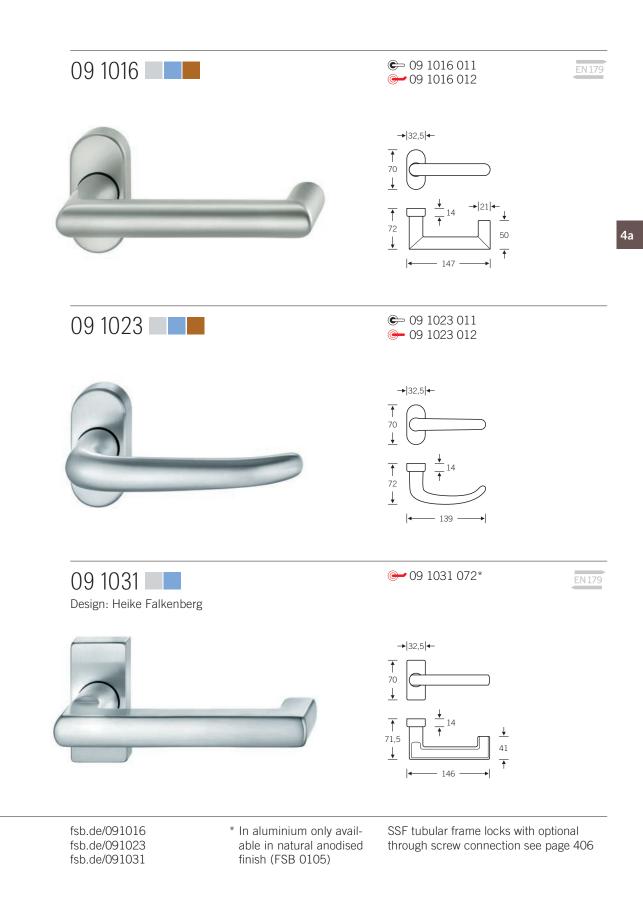
for frame doors



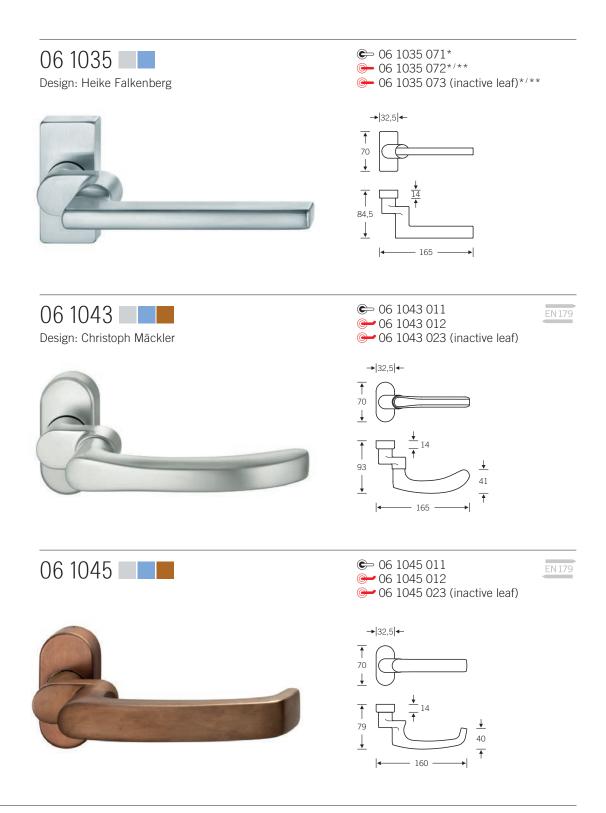
fsb.de/061016 fsb.de/061023 fsb.de/061031 * In aluminium only available in natural anodised finish (FSB 0105)

Door handles

for frame doors



for frame doors



fsb.de/061035 fsb.de/061043 fsb.de/061045 * In aluminium only available in natural anodised finish (FSB 0105)

** only in stainless steel, according to Ö-Norm permitted in aluminium

09 1035		€ 09 1035 071*
Design: Heike Falkenberg		
		$\rightarrow 32,5 \leftarrow$ \uparrow 70 \downarrow
		$\uparrow \qquad \downarrow \qquad $
09 1043 Design: Christoph Mäckler		€ 09 1043 012 EN 17
		→ 32,5 ← 1 1 1 1 1 1 1 1 1 1 1 1 1
		$ \begin{array}{c} \uparrow \\ 78 \\ \downarrow \\ \downarrow$
09 1045		€ 09 1045 011
		$\rightarrow 32,5 \leftarrow$ \uparrow 70 \downarrow \uparrow
fsb.de/091035 fsb.de/091043	* In aluminium only avail- able in natural anodised	$\stackrel{69}{\downarrow} \underbrace{40}_{\uparrow}$ SSF tubular frame locks with optional through screw connection see page 406
fsb.de/091045	finish (FSB 0105) ** only in stainless steel, according to Ö-Norm permitted in aluminium	

for frame doors

06 1053	 ●● 06 1053 012 ●● 06 1053 023 (inactive leaf) 	EN 179
	$\rightarrow 32,5 \leftarrow$ \uparrow 70 \downarrow \uparrow 14 85 \downarrow \downarrow 169 \downarrow \downarrow	
06 1070	 € 06 1070 011 € 06 1070 012 € 06 1070 023 (inactive leaf) 	EN 179
	$\rightarrow 32,5 \leftarrow$ \uparrow 70 \downarrow 14 $\rightarrow 20 \leftarrow$ 55 \uparrow 160 \rightarrow	
06 0644 Design: Hadi Teherani	 © 06 0644 071* © 06 0644 072* © 06 0644 073 (inactive leaf)* 	EN 179
	$\rightarrow 32,5 \leftarrow$ \uparrow	

fsb.de/061053 fsb.de/061070 fsb.de/060644 * In aluminium only available in natural anodised finish (FSB 0105)

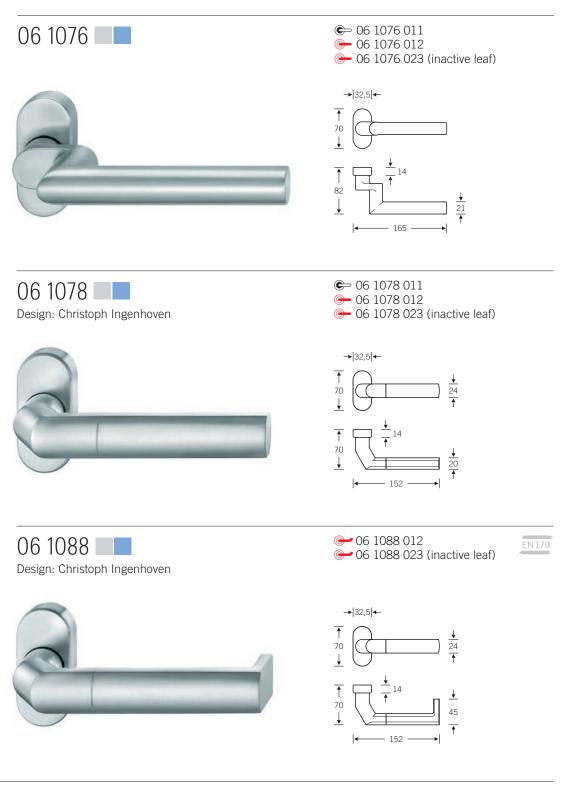
Door handles

for frame doors



4a

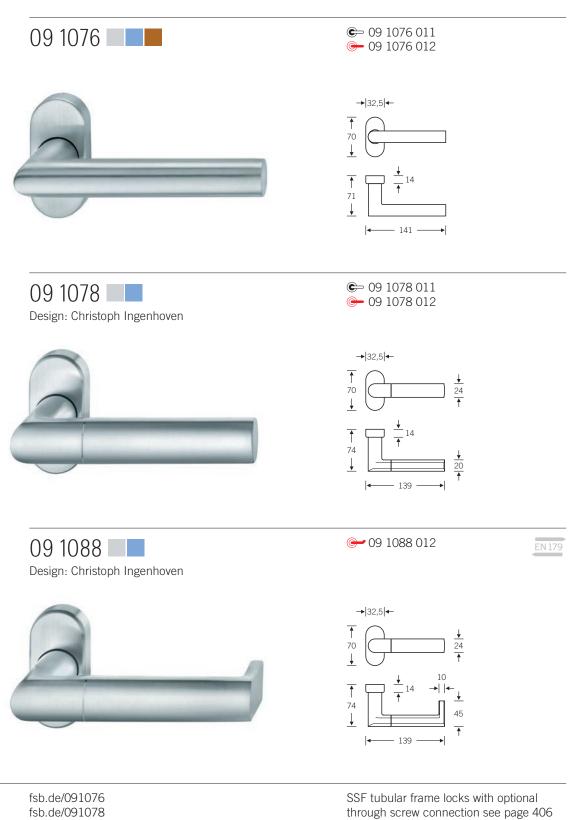
for frame doors



fsb.de/061076 fsb.de/061078 fsb.de/061088

Door handles

for frame doors



fsb.de/091078 fsb.de/091088 4a

for frame doors

06 1093 Design: Jahn/Lykouria	 © 06 1093 011 © 06 1093 012 © 06 1093 023 (inactive leaf)
	$\rightarrow 32,5 \leftarrow$ \uparrow 70 \downarrow \uparrow 14 82 \downarrow $165 \longrightarrow $
06 1094 Design: Jahn/Lykouria	 ● 06 1094 012 ● 06 1094 023 (inactive leaf)
	$\rightarrow 32,5 \leftarrow$ \uparrow 70 \downarrow \uparrow 14 4 50 \uparrow 165
06 1107 Design: Hartmut Weise	 © 06 1107 011 © 06 1107 012 © 06 1107 023 (inactive leaf)
	$\rightarrow 32,5 \leftarrow$ \uparrow 70 \downarrow \uparrow 14 88 \downarrow \downarrow 164

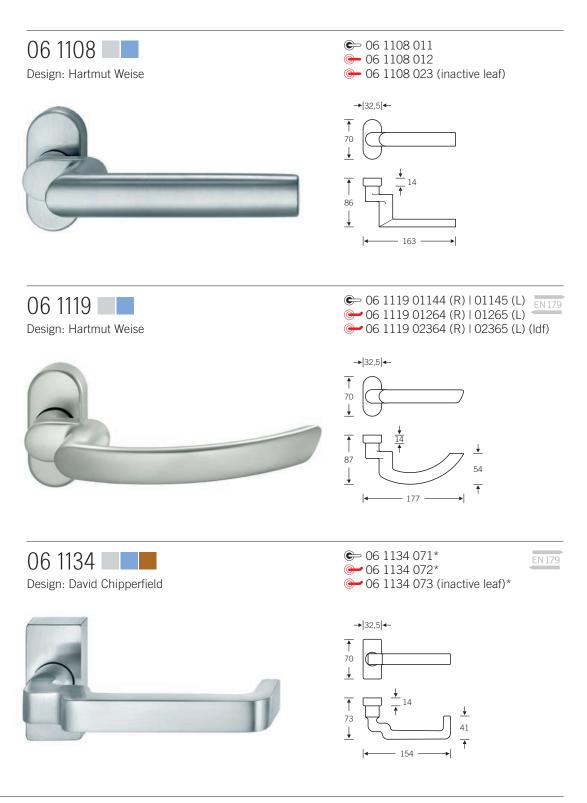
fsb.de/061093 fsb.de/061094 fsb.de/061107

09 1093 Design: Jahn/Lykouria	€ 09 1093 011
	$\rightarrow 32,5 \leftarrow$ \uparrow 70 \downarrow \uparrow 14 \uparrow \downarrow
09 1094 Design: Jahn/Lykouria	€ 09 1094 012 EN 179
	$\rightarrow 32,5 \leftarrow$ \uparrow 70 \downarrow \uparrow 72 \downarrow \uparrow 14 50 \uparrow 143
09 1107 Design: Hartmut Weise	 €> 09 1107 011 ⑥> 09 1107 012
	$\rightarrow 32,5 \leftarrow$ $\overrightarrow{10}$ $\overrightarrow{10}$ $\overrightarrow{14}$ $\overrightarrow{14}$ $\overrightarrow{14}$ $\overrightarrow{140}$
fsh de/091093	SSE tubular frame locks with optional

fsb.de/091093 fsb.de/091094 fsb.de/091107 SSF tubular frame locks with optional through screw connection see page 406

4a

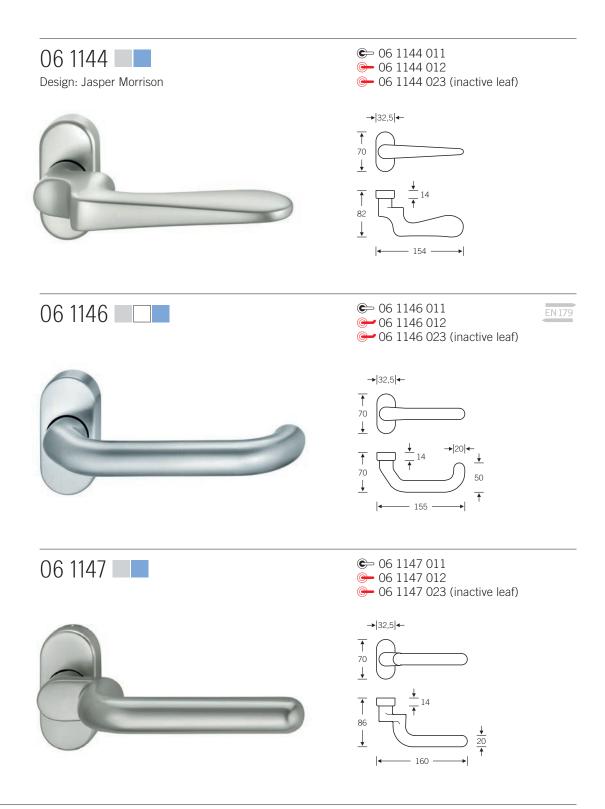
for frame doors



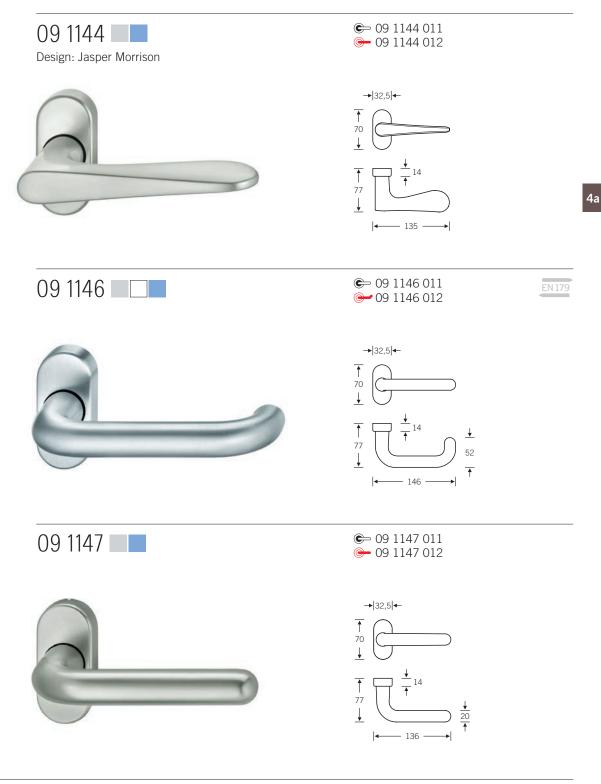
fsb.de/061108 fsb.de/061119 fsb.de/061134 * In aluminium only available in natural anodised finish (FSB 0105)

09 1108 Design: Hartmut Weise		 ← 09 1108 011 ← 09 1108 012
		$\rightarrow 32,5 \leftarrow$ \uparrow
09 1119 Design: Hartmut Weise		 € 09 1119 01144 (R) 01145 (L) 6 09 1119 01264 (R) 01265 (L) 6 09 1119 02364 (R) 02365 (L) (ldf)
6		$\rightarrow 32,5 \leftarrow$ \uparrow 70 \downarrow \uparrow 14 76 \downarrow $153 \longrightarrow $
09 1134 Design: David Chipperfield		
		$\rightarrow 32,5 \leftarrow$ \uparrow
fsb.de/091108 fsb.de/091119 fsb.de/091134	* In aluminium only avail- able in natural anodised finish (FSB 0105)	SSF tubular frame locks with optional through screw connection see page 406

for frame doors



fsb.de/061144 fsb.de/061146 fsb.de/061147



fsb.de/091144 fsb.de/091146 fsb.de/091147

for frame doors



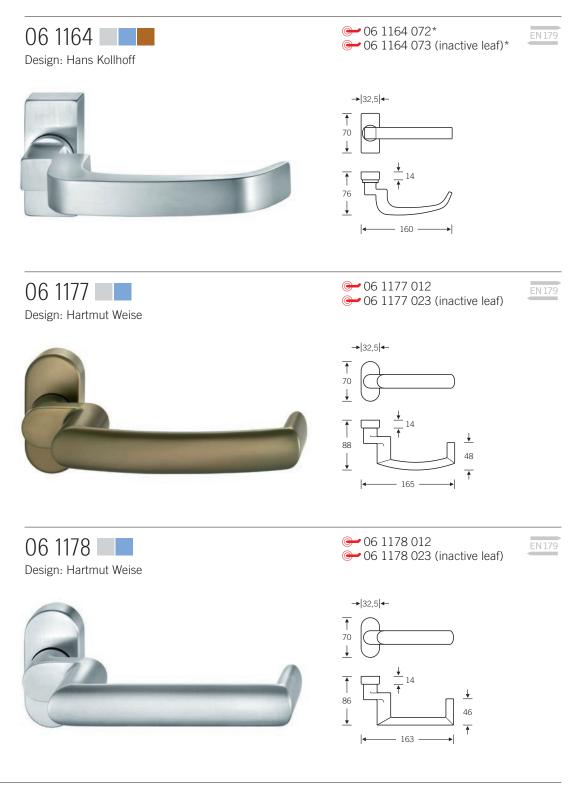
fsb.de/061159 fsb.de/061160 fsb.de/061163 * In aluminium only available in natural anodised finish (FSB 0105)

** only in stainless steel, according to Ö-Norm permitted in aluminium

09 1159 Design: Laurids und Manfre	ed Ortner	 ♥ 09 1159 011 ♥ 09 1159 012** 	EN 179
		$\rightarrow 32,5 \leftarrow$ \uparrow 70 \downarrow $72,5$ \downarrow 141 $40,5$ \uparrow	
09 1160		 €→ 09 1160 011 ⑥→ 09 1160 012 	EN 179
		$\rightarrow 32,5 \leftarrow$ \uparrow 70 \downarrow \uparrow 14 60 \downarrow 154 \downarrow	
09 1163		 €→ 09 1163 071* ⑥→ 09 1163 072* 	
		$\rightarrow 32,5 \leftarrow$ \uparrow 70 \downarrow \uparrow	
fsb.de/091159 fsb.de/091160 fsb.de/091163	 * In aluminium only avail- able in natural anodised finish (FSB 0105) ** only in stainless steel, according to Ö-Norm permitted in aluminium 	SSF tubular frame locks with or through screw connection see	

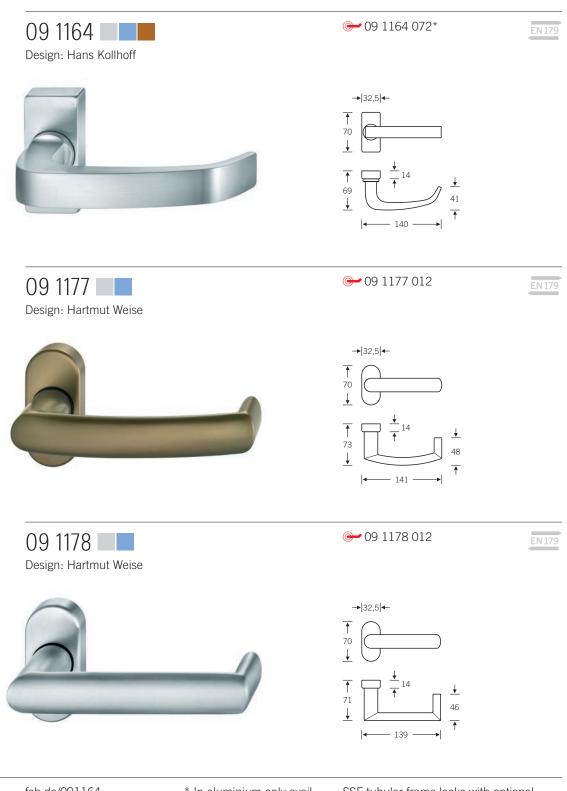
4a

for frame doors



fsb.de/061164 fsb.de/061177 fsb.de/061178 * In aluminium only available in natural anodised finish (FSB 0105) SSF tubular frame locks with optional through screw connection see page 406

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fsb.de/091164 fsb.de/091177 fsb.de/091178 * In aluminium only available in natural anodised finish (FSB 0105) SSF tubular frame locks with optional through screw connection see page 406

4a

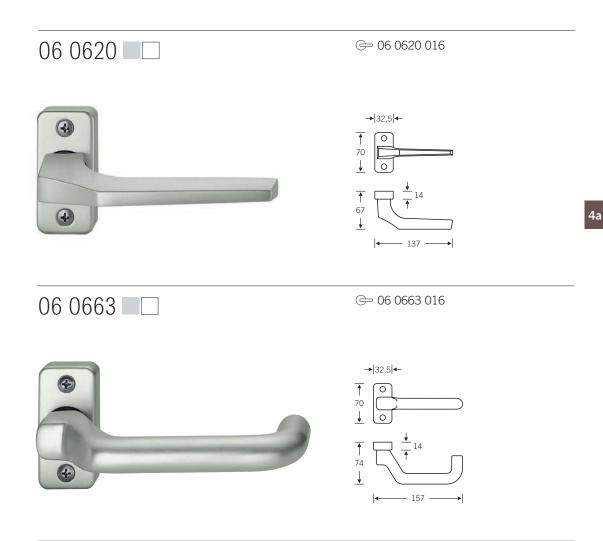
for frame doors

06 0605	☞ 06 0605 013
	$\rightarrow 32,5 \leftarrow$ $\uparrow \qquad \bigcirc \qquad $
09 1087	(⇒ 09 1087 002
	$\rightarrow 32,5 \leftarrow$ \uparrow \uparrow \uparrow \downarrow
06 0662	© 06 0662 011 @ 06 0662 012 @ 06 0662 023 (inactive leaf)
	$\rightarrow 32,5 \leftarrow$ \uparrow

fsb.de/060605 fsb.de/060634 fsb.de/060662

Cranked door handles

with positive mechanism for frame doors



fsb.de/060620 fsb.de/060663 SSF tubular frame locks with optional through screw connection see page 406

Door knobs

for frame doors

Fixed	€ 07 0811 229	Aluminium* Stainless steel Bronze
	ᢙ 07 0811 229	Stainless steel Bronze
	ᢙ 07 0811 429	Aluminium*
	$\rightarrow 32,5 \leftarrow$ \uparrow 70 \downarrow 10 \uparrow 10 10	
Fixed	€ 07 0812 229	Aluminium* Stainless steel Bronze
	G− 07 0812 229	Stainless steel Bronze
	G- 07 0812 429	Aluminium*
	$\rightarrow 32,5 \leftarrow$ \uparrow 70 \downarrow 14 \uparrow 68 \downarrow \downarrow 68 \downarrow $42 \rightarrow $	

fsb.de/070811 fsb.de/070812 * In aluminium only available in natural anodised finish (FSB 0105) SSF tubular frame locks with optional through screw connection see page 406

Door knobs

for frame doors

07 0829	Turnably fixed Fixed	 ← 07 0829 128 ← 07 0829 328 	(not in bronze) (not in bronze)
	FIXEO	ເ€⊃ 07 0829 228	Aluminium Stainless steel Bronze
		G− 07 0829 228	Stainless steel Bronze
	Aluminium	ᢙ 07 0829 428	Aluminium
	Stainless steel Bronze	Ø = 50 mm Ø = 55 mm Ø = 50 mm	
		→ 32,5 ← 70	
		$\frac{1}{1} \qquad \qquad$	
		$ \begin{array}{c c} \hline \\ \hline \\ 59 \\ \hline \\ $	
07 0809	Turnably fixed Fixed	 €→ 07 0809 128 (→ 07 0809 328 	(not in bronze) (not in bronze)
	T IACU	ເ⊊⊃ 07 0809 228	Aluminium Stainless steel Bronze
		G− 07 0809 228	Stainless steel Bronze
		G− 07 0809 428	Aluminium
		→ 32,5 ← 1 70	
		$ \begin{array}{c} \hline \\ 61 \\ \downarrow \\ \downarrow \\ \leftarrow 81 \rightarrow \end{array} $	

fsb.de/070829 fsb.de/070809 SSF tubular frame locks with optional through screw connection see page 406

4a

Door knobs

for frame doors

07 0802	Turnably fixed 🐑 07 0802 128 🎯 07 0802 328
	Fixed C> 07 0802 228 Aluminium Stainless steel Bronze
	G→ 07 0802 228 Stainless steel Bronze
	₢── 07 0802 428 Aluminium
	Aluminium $X = 85 \text{ mm}$ Stainless steel $X = 81 \text{ mm}$ Bronze $X = 80 \text{ mm}$
3.4	→ 32,5 ←
	$ \begin{array}{c} \hline \uparrow \\ \hline 70 \\ \downarrow \end{array} $
	$ \begin{array}{c} \hline \\ \times \\ \downarrow \end{array} $ $ \begin{array}{c} \downarrow \\ \downarrow \end{array} $ $ \begin{array}{c} \downarrow \\ \uparrow \\ \uparrow \\ \downarrow \end{array} $ $ \begin{array}{c} \downarrow \\ \uparrow \\ \uparrow \\ \uparrow \\ \downarrow \\ \downarrow \end{array} $ $ \begin{array}{c} \downarrow \\ \uparrow \\ \uparrow \\ \downarrow \\ \downarrow$
	→ 50 ←
07.0046	Turnably fixed © 07 0846 128
07 0846	()→ 07 0846 328 Fixed
	C 07 0846 228 Aluminium Stainless steel Bronze
	G→ 07 0846 228 Stainless steel Bronze
2	→ 32,5 ←
	$\begin{array}{c} \hline \\ \hline \\ 1 \\ 70 \\ 1 \end{array}$
	$\frac{1}{1} \bigcup \frac{1}{14}$
	 ← 81 →

fsb.de/070802 fsb.de/070846 SSF tubular frame locks with optional through screw connection see page 406

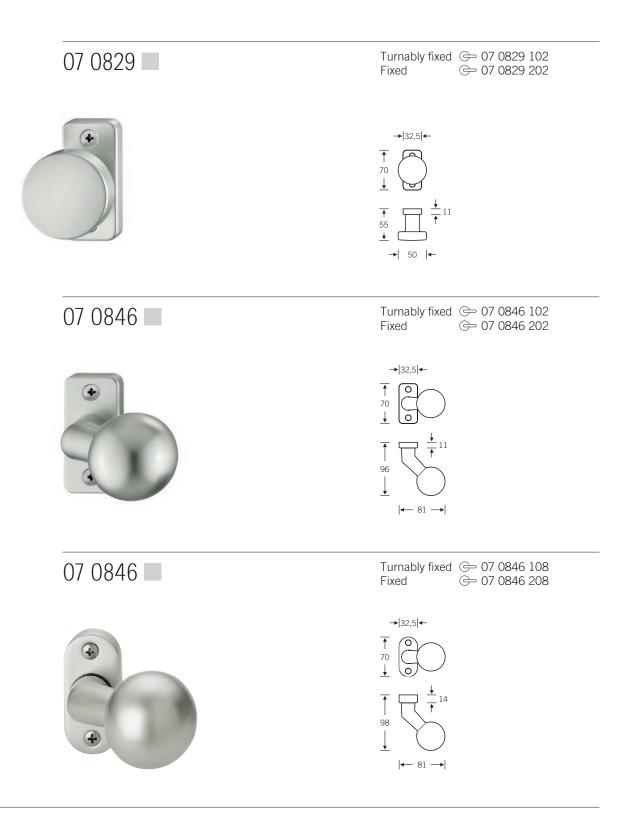
Door knobs and bolts

for frame doors



fsb.de/070854 fsb.de/070804 fsb.de/030418 SSF tubular frame locks with optional through screw connection see page 406

4a



fsb.de/070829 fsb.de/070846 SSF tubular frame locks with optional through screw connection see page 406

Roses and doorplates

for frame doors



Screw hole distance 50 mm, suitable for M5 countersunk screws

→ 28 ← → ← 7

0

Ο

70





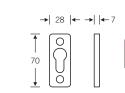


fsb.de/171752 fsb.de/171755 fsb.de/141550



Screw hole distance 50 mm, suitable for M5 countersunk screws

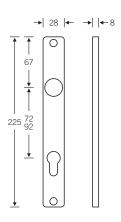




4a

Screw hole distance 210 mm, suitable for M4 countersunk screws

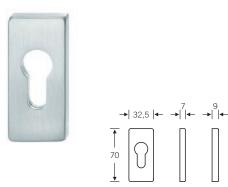
Due to its slender shape, FSB 14 1550 can be combined with locks with a small backset, and so appeals aesthetically and functionally in equal measure on narrow profiles.



SSF tubular frame locks with optional through screw connection see page 406

17 1765	
17 1765 000 (7 mm) 17 1765 001 (9 mm)	

Sliding rose



17 1768 | 17 1769

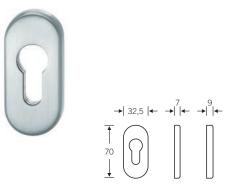
Glued-on rose



 $\rightarrow 28 \left| \leftarrow \rightarrow \right| \leftarrow \rightarrow \left| \leftarrow \rightarrow \right| \rightarrow \left| \leftarrow \rightarrow \right| \leftarrow \rightarrow \left| \leftarrow \rightarrow \left| \leftarrow \rightarrow \right| \rightarrow \left| \leftarrow \rightarrow \right| \rightarrow \left| \rightarrow \rightarrow \left| \rightarrow \rightarrow \right| \rightarrow \left| \rightarrow \rightarrow \left| \rightarrow \rightarrow \right| \rightarrow \left| \rightarrow \rightarrow \right| \rightarrow \rightarrow \left| \rightarrow \rightarrow \left| \rightarrow \rightarrow \right| \rightarrow \left| \rightarrow \rightarrow \left| \rightarrow \rightarrow \right| \rightarrow \left| \rightarrow \rightarrow \right| \rightarrow \left| \rightarrow$



Sliding rose



17 1729 17 173	30
17 1729 (3 mm)	
17 1730 (7 mm)	

Glued-on rose



 $\rightarrow 28 \models \rightarrow 14 \implies 714$ $\overrightarrow{\uparrow}$ $\overrightarrow{\rightarrow}$ $\overrightarrow\rightarrow\rightarrow$ $\overrightarrow\rightarrow\rightarrow$

fsb.de/171766 fsb.de/171729 fsb.de/171730

fsb.de/171765 fsb.de/171768 fsb.de/171769

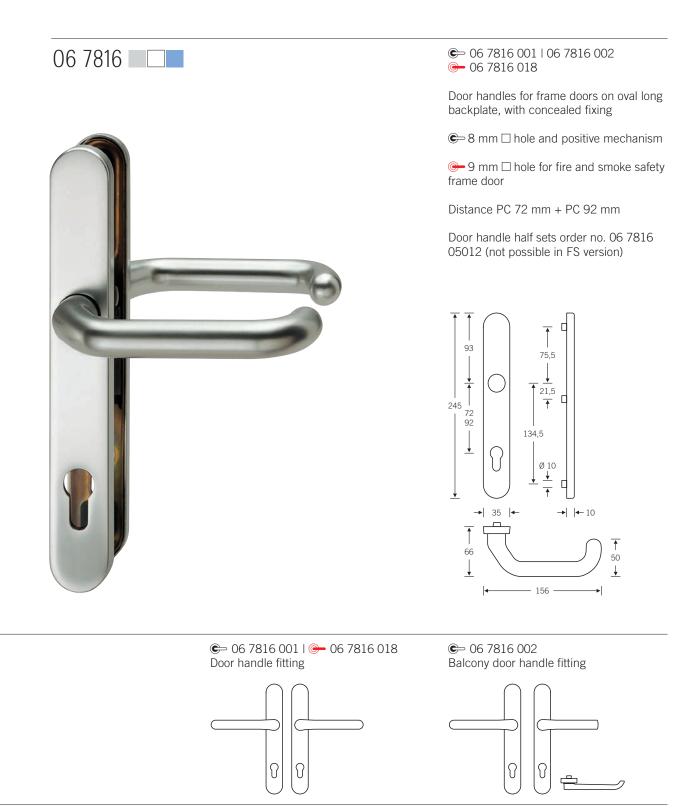
Roses for frame doors



fsb.de/171757 fsb.de/171778

Fixing accessories see chapter Spindles

4a



fsb.de/067816

Order information:

- square follower (8, 9 or 10 mm)
- door thickness in mm
- distance

for frame doors



€→ 06 7816 013
6→ 06 7816 019 (R) | 06 7816 020 (L)

Door handles for frame doors on oval long backplate, with concealed fixing

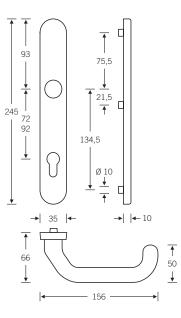
 \bigcirc 8 mm \Box hole and positive mechanism

 \bigcirc 9 mm \Box hole for fire and smoke safety frame door

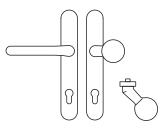
4a

Distance PC 72 mm + PC 92 mm

III.: left-hand FS entrance door fitting



Combined knob and backplate fitting



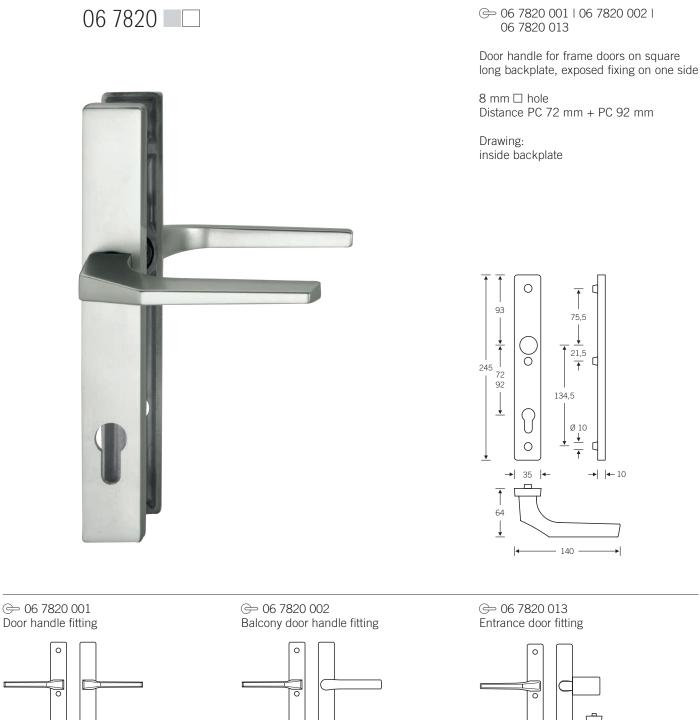
Order information:

- square follower (8, 9 or 10 mm)
- door thickness in mm
- distance
- direction (□ 9 mm: knob fixed,
 □ 8 mm: knob loose)

fsb.de/067816

fsb.de/catalogue

for frame doors

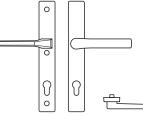


fsb.de/067820

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In aluminium only available in natural anodised finish (FSB 0105)

Order information:

Ŷ

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- spindle thickness (8 or 10 mm)

ß

- door thickness in mm
- distance

Handle shield fitting

for frame doors



fsb.de/067820

In aluminium only available in natural anodised finish (FSB 0105)

Order information:

- spindle thickness (8 or 10 mm)

- door thickness in mm

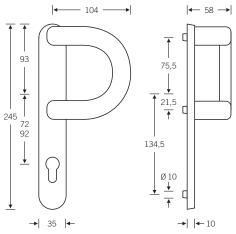
– distance



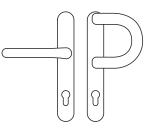
€ 06 7816 009

Handle backplate fitting for frame door on oval long backplate, with concealed fixing and positive mechanism

8 mm □ hole Distance PC 72 mm + PC 92 mm



€ 06 7816 009 Handle shield fitting



Order information:

- spindle thickness (8 or 10 mm)

- door thickness in mm
- distance

fsb.de/067816

448 Exit bars DIN EN 1125 for solid doors for frame doors 458 Standard exit bars

- for solid doors
- 461 Counter fittings



New from Brakel: FSB presents a coordinated, modular system, "Lock + fitting" for single and double-leaf solid escape and panic doors. The coherently coordinated concept consists of a pull bar according to the future type C of DIN EN 1125 (FSB 77 7982) modularly structured locking and bolting components from SSF (lock series 61/62, anti-panic functions B, D and E).

"Lock + fitting" coordinated in accordance with DIN EN 1125

With the exit bars, FSB offers an opening mechanism for doors on which a push movement is required to operate the lock or open the door, rather than the familiar rotary movement of the door handle.

By means of a horizontal bar, which stretches across at least 60 % of the door width, the actuating force is transferred by a bevel gear directly through the square spindle to the lock follower. The door can be opened by pressing on any area of the horizontal bar.

In the Federal Republic of Germany and a few other countries, these pull bars have predominantly been used on panic doors with corresponding mortice locks. On the European market, however, other hardware systems are also usual for panic doors. For example, surface-mounted versions are often used. These different views about the equipment on escape, emergency exit and panic doors have been revised by the development of European standards and been made mandatory for all EU states. For instance, the requirements of hardware systems for emergency exit locks have been defined and described in DIN EN 179, and those for panic doors in DIN EN 1125. The hardware set for panic doors consists of the blocking element (lock), blocking counterpiece (strike plate) and exit bar.

Construction Products Regulation (EU CPR)

The performance declarations, which FSB uses to document the conformity of the hardware solutions in accordance with DIN EN 179 and DIN EN 1125 with the valid EU regulations, can be found under www.fsb.de/baupvo

Pictogram labelling of corresponding versions:



New: Exit bar 77 7982

The anti-panic pull bar FSB 7982 not only boasts a unique design approach but also impresses due to the slightly upwards facing operating angle (future Type C pursuant to DIN EN 1125), which gives it a special security feature: this makes it impossible to open panic doors from outside using wires inserted under the door. This also has the advantage that there is no need for solid sealing or protection measures on the bottom of the door, which in turn opens up spaces without thresholds and hence without barriers.



Operating angle of 30°, omission of angle of rotation setting

The system's operating angle is a uniform 30° on active and inactive leafs. It ensures an optimal force ratio and interplay between the lock and fitting components; the low angle of rotation enables a quick release. Over and above this, is it not necessary to set the angle of rotation on site, which prevents errors, as incorrect settings are ruled out.

Exit bar DIN EN 1125

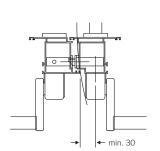
According to this standard, locks for panic doors must be used where a lot of visitors are to be expected and where not knowing about local circumstances can result in panic occurring. Besides the design requirements, extensive demands are made of the fitness for use. For instance, the panic door must be able to be opened using the hardware system, even if the door is loaded with a pressure of 1000 N on the locking system, with a force of just 220 N on the pull bar, or with a force of just 80 N without a load. This and other requirements, such as long-lasting functionality and resistance to misuse, must be proven by tests and certification of the associated system carried out by an independent test institute. The CE mark on the hardware system ensures that only tested fittings that comply with the standards are allowed to be installed.

FSB exit bars are tested up to a door weight of 200 kg.

The FSB exit bar is just a part of the panic locking system. This fitting has been adapted, tested and classified with lock systems from various reputable manufacturers.

Exit bar 77 7970

FSB continues to supply the tried and tested exit bar 77 7970 for doors that do not have to be designed in accordance with DIN EN 1125.



To prevent exit bar 77 7970 or 77 7980 from catching the frame when opening the door, a distance of at least 30 mm is necessary between the frame and middle of the fitting. Please bear this in mind when selecting the profile and door construction.

DIN EN 1125: Consistent FSB quality

Lock and fitting from one source



With the publication of this manual, FSB presents a new, coordinated modular system, "Lock + Fitting" for single and double-leaf escape and panic doors (solid). Some time ago, we introduced an extensive range of mortice locks, thus starting to unite what once used to belong together: In the pre-industrial age, locks and fittings formed a single unit.

During the course of industrialisation, both components became independent parts – and what now divided them was regulated by industrial standards. Together with our subsidiary, Sächsische Schlossfabrik SSF, we have brought the strategy of the functional and technical unit of lock and fitting back to life and are presenting the market with a newly developed system for single and double-leaf solid panic doors with and without top locking mechanism on the active leaf.

The technically and functionally coordinated concept of lock and fitting consists of a pull bar according to the future Type C of DIN EN 1125 (model no. 7982, lifting upwards, see Page 449ff.) and modularly structured locking and bolting components (SSF lock series 61/62, anti-panic functions B, D and E). Both solutions come with a host of special functions:

Key-operated quick-release lock:

If the key is turned in the lock direction, this releases a locking lever in the lock, which promptly leads to a deadbolt being automatically thrown 20 mm. The benefits, besides the convenience aspect of not having to complete two full locking turns by hand, are clear to see: there is no risk from locking by hand of bringing the locking cam of the cylinder into a position that blocks other lock functions – the so-called free-running function.

Four-point checking query

Furthermore, the anti-panic locks in the 61/62 series enable the bolt, the top locking mechanism and the latch as well as the handle's connection to be queried using electronic switch contacts.

Anti-blockade function:

Hazardous manipulations of anti-panic doors, such as blocking the door handle on the outside – which is common practice in schools – are effectively prevented by the so-called anti-blockade function. The panic function on the inside is therefore guaranteed at all times.

Flexible screw-on faceplates

For the fitter, the modular lock series offers the benefit that SSF can soon react to changing dimensions thanks to a screwon faceplate.

"Lock and fitting" – refined down to the last detail

One can see what focus was used to work on this lock series from the intelligent, fine details. The above-mentioned free-running function as a basic feature is accompanied by a split follower (anti-panic function B, D), which is mechanically coupled, a plastic-coated latch with convenient whisper-quiet feature, plus an independent spring support on both sides of the door handle by means of the lock follower, which guarantees a permanent 0° position of the door handle.

In addition, no attachment is needed for the top locking mechanism, which means it needs no extra milling groove in the mortices. What is more, the faceplate length on locks with or without top locking mechanism is identical.



4b

A summary of the panic-lock functions B, D and E:

B – Change-over function, for locks with semi-automatic locking mechanism (outer side with handle). It is used on doors that must enable a transit from outside sometimes.

D – **Transit function**, for locks with manual locking mechanism (outer side with handle). It is used on doors that must enable a passageway from outside when unobstructed.

E – **Reversible function**, for locks with manual locking mechanism (outer side with knob). It is used on doors where unauthorised opening from outside must be prevented as a matter of principle.

The anti-panic pull bar from FSB not only boasts a unique design approach but also impresses due to the slightly upwards facing operating angle (future Type C pursuant to DIN EN 1125), which gives it a special security feature: this makes it impossible to open panic doors from outside using pulling elements inserted under the door. This also has the advantage that there is no need for solid sealing or protection measures on the bottom of the door, which in turn opens up spaces without thresholds and hence without barriers.

Operating angle of 30°, omission of angle of rotation setting

The system's operating angle is a uniform 30° on active and inactive leafs. It ensures an optimal force ratio and interplay between the lock and fitting components; the low angle of rotation enables a quick release. Over and above this, is it not necessary to set the angle of rotation on site, which prevents errors, as incorrect settings are ruled out. The bolt thrower on the strike box can be set on site in each case to the existing gap of 2 to 6 mm between the active and inactive leaf. On top of this, the new anti-panic pull bar pursuant to DIN EN 1125 can be combined with short backplates and nearly all the handles from our range.

All roses, short and long backplates in the DIN EN 179 design can be combined with the 1 or 2-leaf SSF panic lock.

In addition, SSF offers various other types of locks which represent the ideal complement to our door fittings, see Page 20 ff. The SSF range includes mortice locks for:

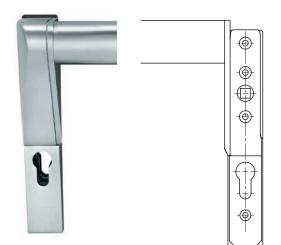
- interior doors,
- tubular frame doors,
- flat entrance doors,
- house doors
- doors for large buildings,
- fire safety and emergency exit doors
- as well as special locks, strike plates and accessories

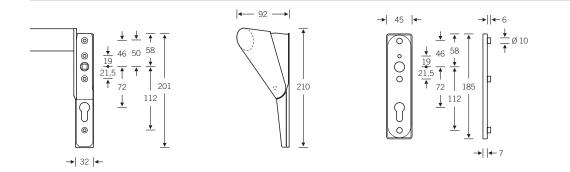
You will find detailed information in the current SSF catalogue and the brochure on the anti-panic locks in the 61/62 series, which you can get from FSB or directly in Saxony.

SSF – Sächsische Schlossfabrik GmbH Am Pappelhain 10 04539 Groitzsch, Germany Phone +49 34296 733-00 Fax +49 34296 733-11 or on the Internet: www.ssf.de | info@ssf.de

Exit bar DIN EN 1125

The anti-panic pull bar from FSB boasts a unique design approach and a slightly upwards facing operating angle (future Type C pursuant to DIN EN 1125). This provides the following security feature: opening panic doors from outside using pulling elements inserted under the door is almost impossible. This also means that there is no need for solid sealing or protection measures on the bottom of the door, which in turn opens up spaces without thresholds and hence without barriers.





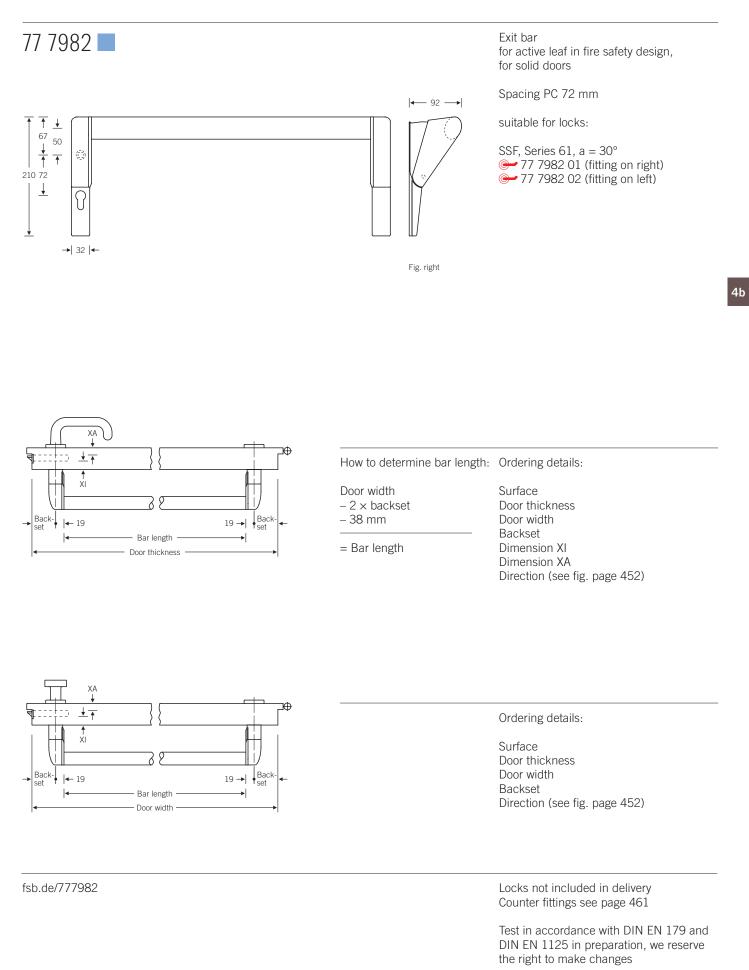


fsb.de/777982

We reserve the right to make changes

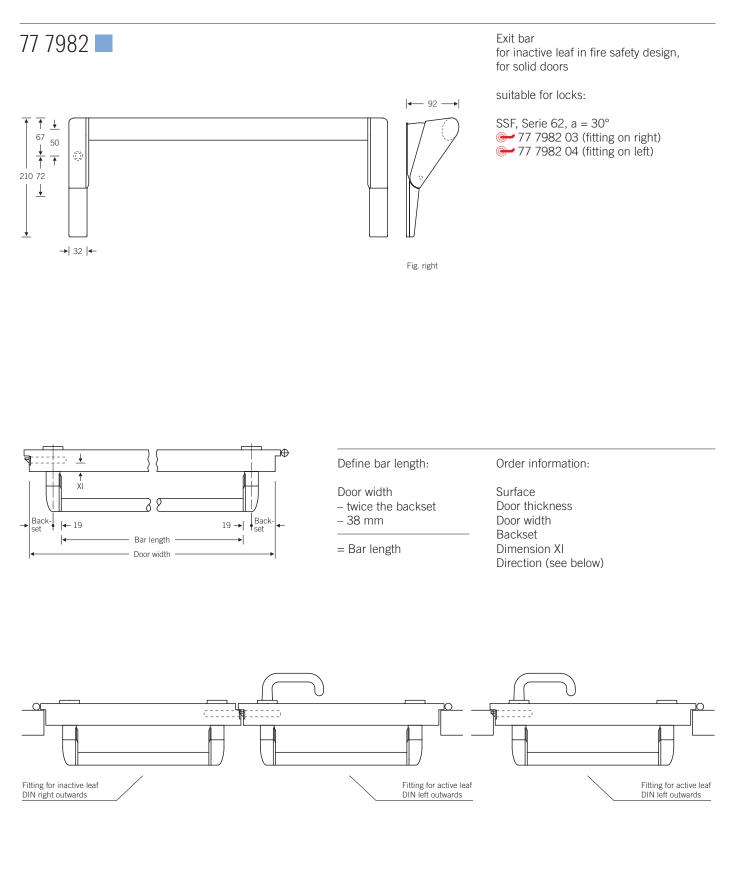
Solid door exit bar

for active leafs, PC 72 mm



Solid door exit bar

for inactive leaf

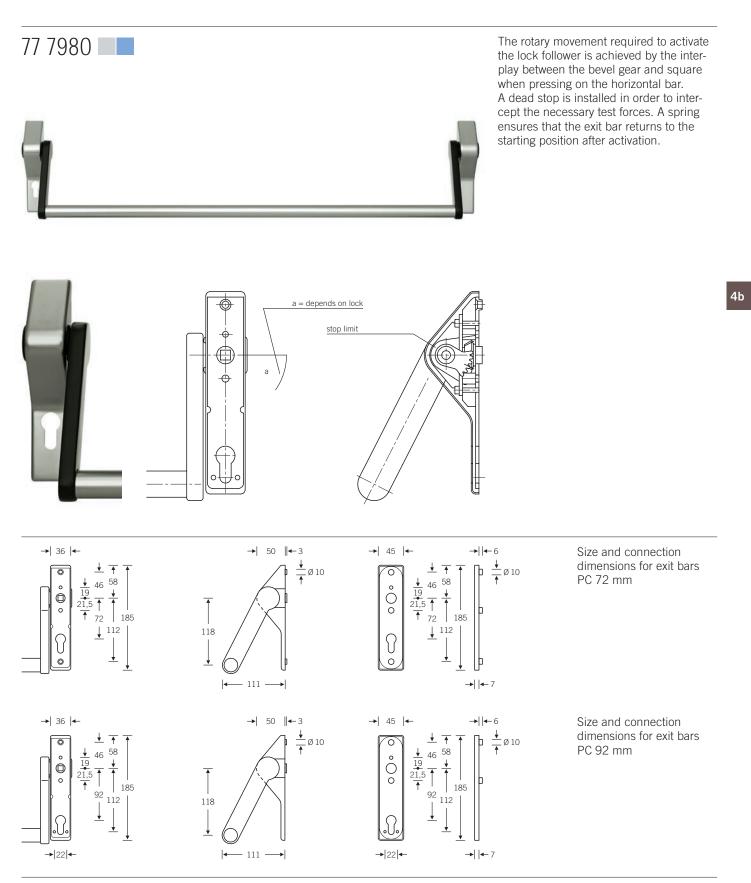


fsb.de/777982

Locks not included in delivery Counter fittings see page 461

Test in accordance with DIN EN 179 and DIN EN 1125 in preparation, we reserve the right to make changes

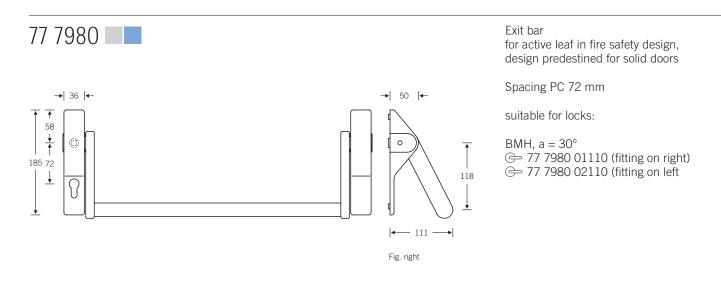
Exit bar DIN EN 1125

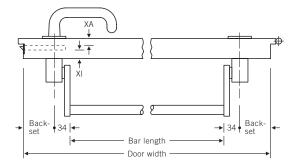


fsb.de/777980

Solid door exit bar

for active leaf, PC 72 mm



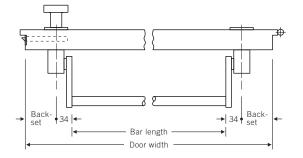


Define I	bar	length:
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- Door width – twice the backset – 68 mm
- = Bar length (tested to max. 1,150 mm)

Order information:

Material/finish Door thickness Door width Backset Dimension XI Dimension XA Direction (see fig. page 455)



fsb.de/777980

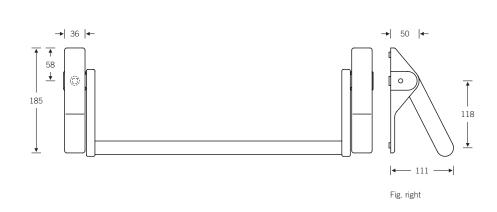
Order information:

Material/finish Door thickness Door width Backset Direction (see fig. page 455)

Solid door exit bar

for inactive leaf

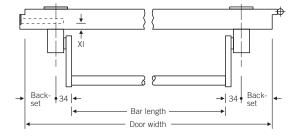
77 7980



Exit bar

for inactive leaf in fire safety design, design predestined for solid doors

suitable for locks:

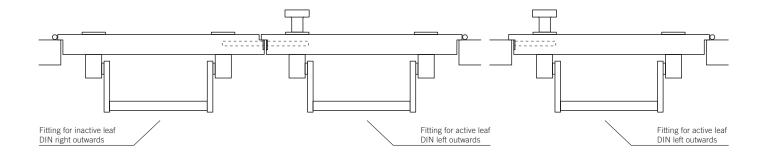


Define bar length:

Door width – twice the backset – 68 mm

= Bar length (tested to max. 1,150 mm) Order information:

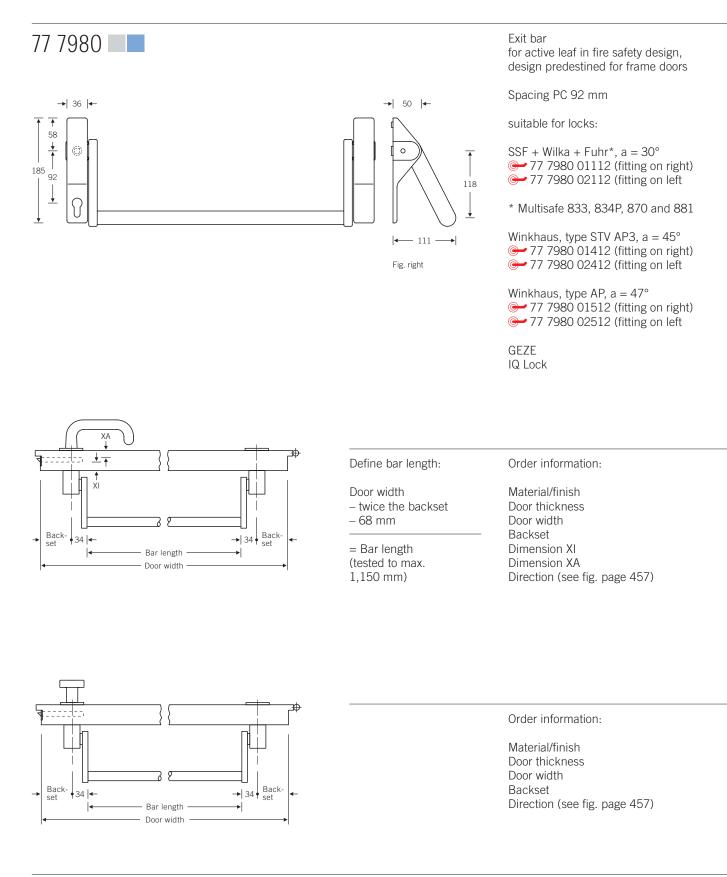
Material/finish Door thickness Door width Backset Dimension XI Direction (see below)



fsb.de/777980

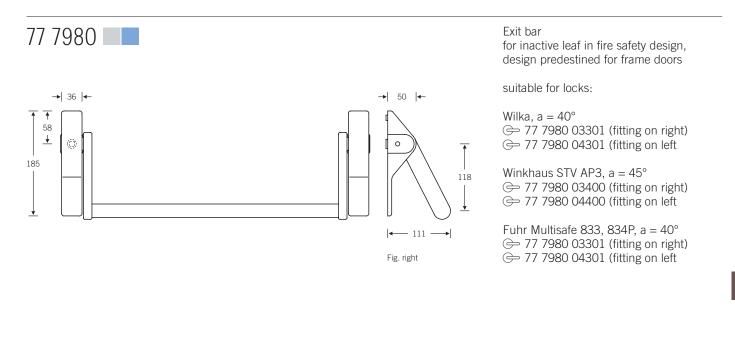
Frame door exit bar

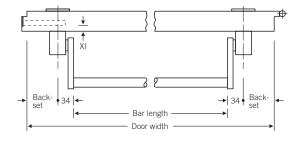
for active leaf, PC 92 mm



fsb.de/777980

Frame door exit bar



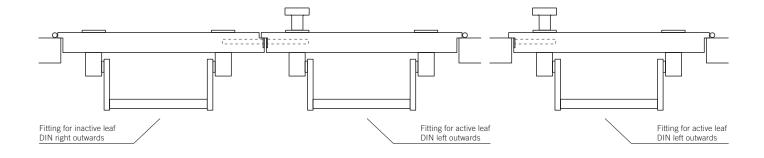


Define bar length:

Door width – twice the backset – 68 mm

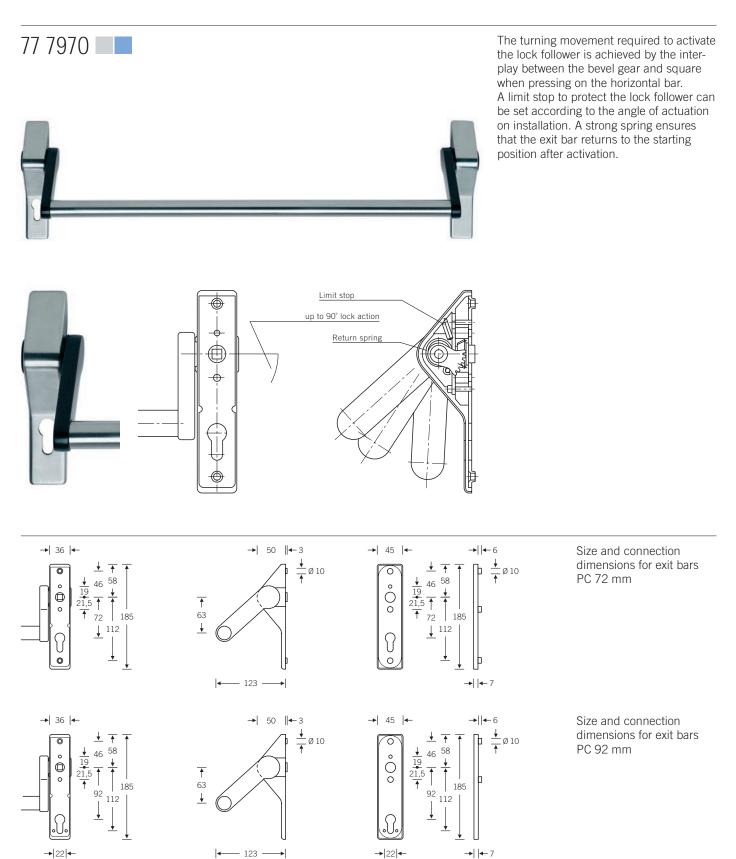
= Bar length (tested to max. 1.150 mm) Order information:

Material/finish Door thickness Door width Backset Dimension XI Direction (see below)



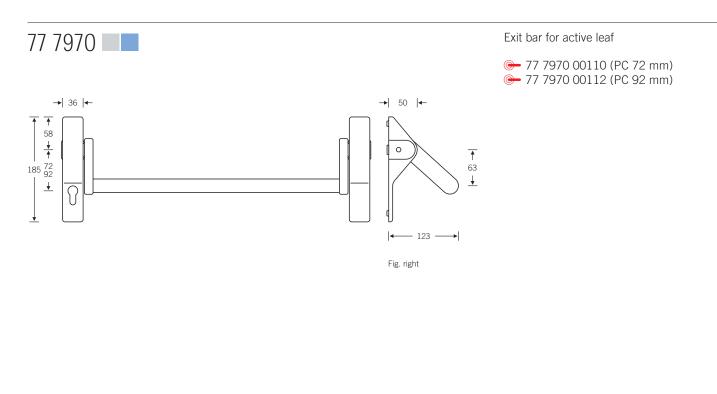
fsb.de/777980

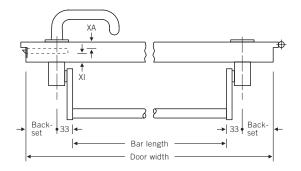
Exit bar Standard



fsb.de/777970

Solid door exit bar



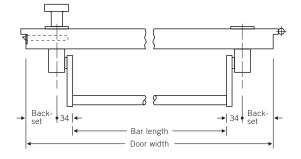


```
Door width
– twice the backset
– 66 mm
```

= Bar length

Order information:

Material/finish Door thickness Door width Backset Dimension XI Dimension XA



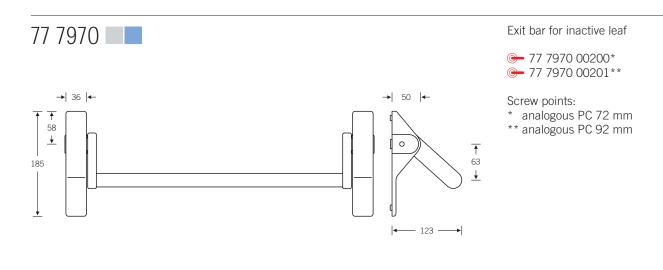
fsb.de/777970

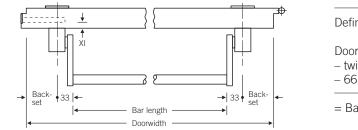
Order information:

Material/finish Door thickness Door width Backset Dimension XI

Solid door exit bar

for inactive leaf



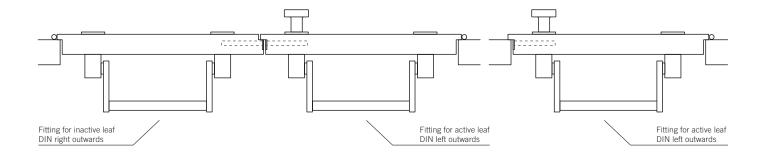


Define bar length:	
--------------------	--

- Door width – twice the backset – 66 mm
 - 00 11111
- = Bar length

Order information:

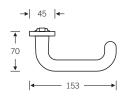
Material/finish Door thickness Door width Backset Dimension XI



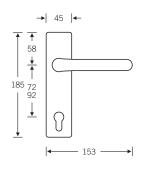
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Pull side fittings

Possible combinations for the outside of the door. FSB supplies as standard door handle design 1146 or knob 08 0829.







77 7972

→ 45 ←

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→ 54 ←

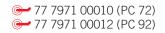
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с РС 72 → 54 ←

d

PC 92



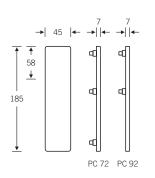
Door handle counterplate with concealed attachment in fire safety design

G→ 77 7972 00110 (PC 72)
 G→ 77 7972 00112 (PC 92)

Knob counterplate with fixed knob with concealed attachment in fire safety design

77 7973

 $\left\{ \right\}$



77 7973 00000*
77 7973 00001**

Blank plate with concealed attachment in fire safety design

Screw points:

* analogous PC 72 mm

** analogous PC 92 mm

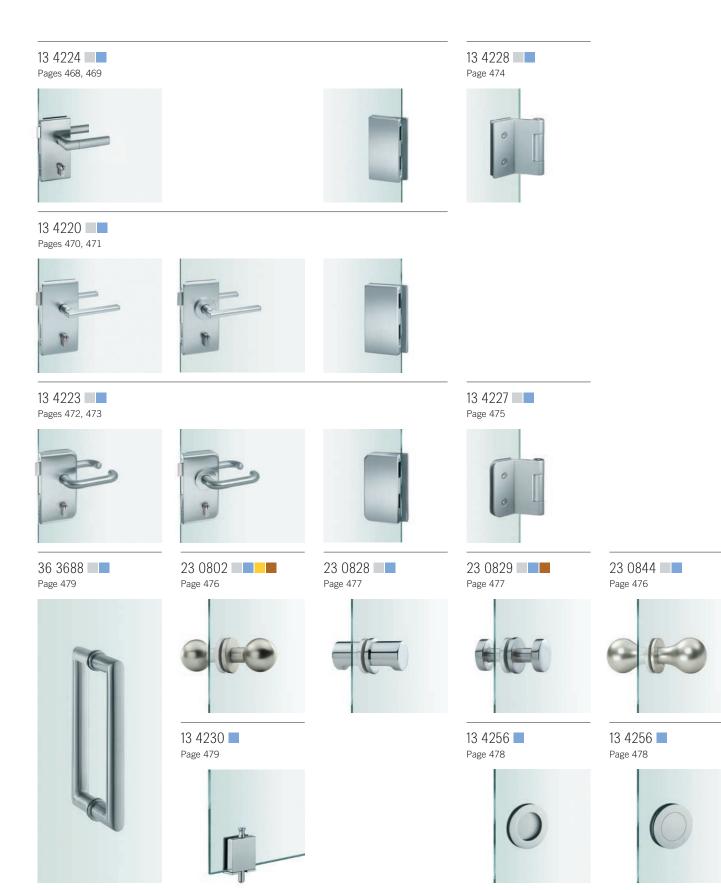
PC 72 suitable for locks from SSF and BMH

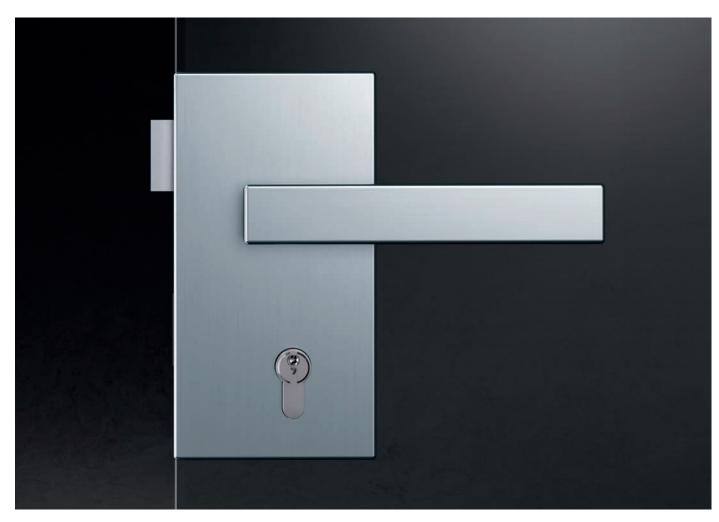
PC 92 suitable for locks from GEZE, Fuhr, SSF, Wilka and Winkhaus

fsb.de/777971 fsb.de/777972 fsb.de/777973

- 468 Glass door fittings
- 474 Glass door hinges
- 476 Glass door knobs
- 478 Inset handles for glass doors
- 479 Glass door pull
- 479 Glass door stop

Overview





Glass has always had a multi-layered role in architecture as a design tool and shape-giving material. Glass doors take the interior architecture into account, whether dealing with commercial buildings, sophisticated interior design or residential construction. As part of renovation and modernisation work, glass doors allow statements to be made; sliding glass doors also ensure space is used efficiently.







Glass has always had a multi-layered role in architecture as a design tool and shape-giving material. Glass doors take the interior architectural shape into account.

They create more light, link rooms, and radiate a wonderful atmosphere. The transparency of glass doors requires a particularly high level of care when choosing the fittings. The lock area, handle and hinges are what give a glass door its look.

isis® access management

Glass door fittings with the electronic access management function (isis® systems M100, M300 and T300) also match the consistent design of the FSB handle ranges in terms of shape and materials. What makes these fittings so innovative and unique on the market is that they can also be fitted to all-glass doors with digital access management function that operates on a number of buildings, so these concepts are no longer limited to active or inactive leaf doors. You will find detailed information about this on page 45f.

There is also the option to fit the locks of the glass door fittings of series 13 4220 and 13 4223 with an anti-panic function (APD) in combination with isis[®] sets – please specify when ordering.

Glass door fittings matched to system profiles

With this in mind, we would like to point out one particular solution for a glass door fitting that FSB developed in collaboration with Ingenhoven Architekten. This fitting concept is notable for the absence of any handle roses (including on the heavy-duty version) and for the extremely discreet dimensions, but no less importantly for the fact that when DIN frames are used, flush installation makes it absolutely appealing on every level. A number of additional components by Gira (installation system for ITS 30 partition systems), Mabeg (Comform orientation system) and Inotec (escape route lighting system ITS 30) are available that match the proportions of the glass door fittings. Please contact the manufacturers for full product information. Nor should we forget the particularly charming detail of the glass door fittings of series 13 4224: the dividing line on door handle 1078 is congruent with the edge of the glass door fitting.

If required, colour also comes into play: matching profiles in a RAL colour, the glass door fitting and matching door handle fitting can also be powder-coated in line with the RAL colour chart. Over and above this, fittings from series 13 4220/13 4223 can be equipped with and without rose/door handle fittings, thus enabling door handle fittings to be used with AGL[®] heavy-duty bearings for heavy or large glass doors.

Hinges to match the glass door fittings are the perfect complement to the FSB programme. All of the fittings in this chapter can be combined with almost any of the door handles in the FSB programme.





Space efficiency through sliding doors

Construction on existing buildings: sliding doors!

In existing buildings, particularly those built in the post-war period, rooms were often dimensioned taking functional and budget aspects into account. Such configurations are rarely contemporary by today's standards, meaning that efforts to modernise such buildings sometimes place particular challenges on planners and builders.

This applies in particular if areas cannot easily be made bigger for structural or budget reasons or because of the floor plan. In this respect, sliding doors are not only ideal for opening up small spaces but also for generally increasing space efficiency: the area that is normally "covered" by conventional doors can be used efficiently and for other purposes. In the context of DIN EN 18 040, it should therefore be mentioned that you can make considerations about space easier with regard to the use of a wheelchair or Zimmer Frame as well as reduce the risk of a door being blocked by person lying on the floor in case of emergency.

With a line of stand-alone recess pulls for solid doors in various forms with open or spring-loaded closed handle through to versions with matching lock including bolt for bathroom and WC doors, FSB already took this requirement from the residential building and sophisticated interior design sector into account some time ago (see page 366 f.). In the meantime, this comprehensive product line has been extended by adding solutions corresponding to the shape and materials of solid door recess pulls for glass doors too. These recess pulls, which are very easily fitted into glass cut-outs of 70 mm diameter by means of a clever screw-in or clamping solution, completely make do without adhesive or similar aids and are easy for craftsmen and door specialists to handle. The pulls are available in versions for glass thicknesses of 8, 10 and 12 mm. You will find these pulls on page 478.



⊕ 13 4224 042 (R) | 13 4224 052 (L)

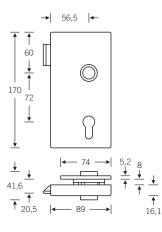
Glass door fitting rectangular, compact, with cover plates, with heavy-duty glass lock (DIN 18251-1, class 4)

PC 72 mm, 8 mm steel clamp nut with a polyamide bearing ring

Latch made from a plastic/die casting combination, low-noise

Bolt head made of bright nickel-plated casting. Door handle heavy-duty bearing in aluminium/stainless steel, Teflon-coated, to match FSB door handles

Illustration: DIN right



fsb.de/134224

The door handle shown here is a design suggestion. Can be combined with almost any FSB door handle.

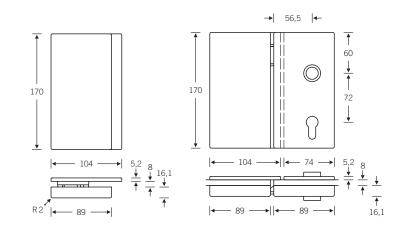
13 4224

Please state direction with order

Lock case compact

for double-leaf doors





Please state direction with order



G→ 13 4220 041 (R) | 13 4220 051 (L)
G→ 13 4220 042 (R) | 13 4220 052 (L)

Glass door fitting rectangular, with cover plates, with heavy-duty glass door lock (DIN 18 251-1, based on class 4)

PC 72 mm, 8 mm steel clamp nut with a polyamide bearing ring

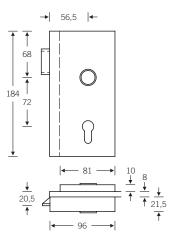
Latch made from a plastic/die casting combination, low-noise

13 4220 041 (R) | 13 4220 051 (L) PC-ready, bolt head made of bright nickelplated casting, door handle bushing made of glass fibre reinforced polyamide, suitable for FSB door handle

13 4220 042 (R) I 13 4220 052 (L) PC-ready with switch, bolt head made of bright nickel-plated casting, prepared for the installation of standard rose sets and FSB heavy-duty fittings with AGL[®] bearing in rose version

Also available as an isis[®] version (see page 45 f.) and with self-locking anti-panic lock

Illustration: DIN right



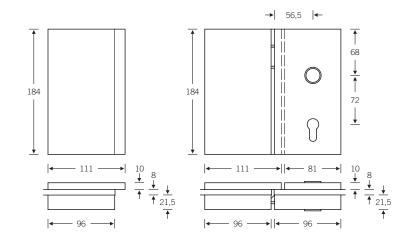
fsb.de/134220

The door handle shown here is a design suggestion. Can be combined with almost any FSB door handle.

Please state direction with order

Lock case for double-leaf doors





Please state direction with order

fsb.de/134220



fsb.de/134223

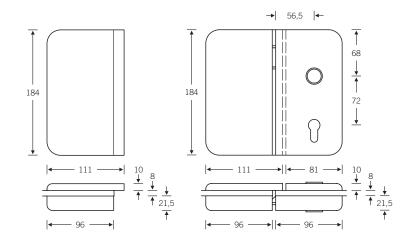
The door handle shown here is a design suggestion. Can be combined with almost any FSB door handle.

Please state direction with order

- 96

Lock case for double-leaf doors

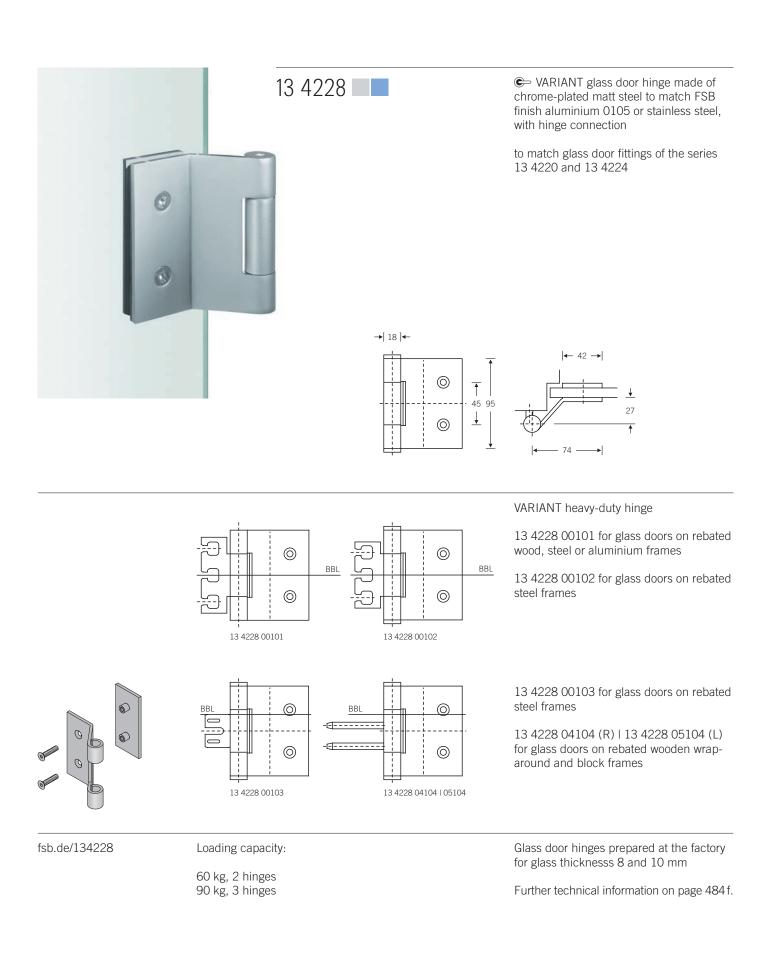




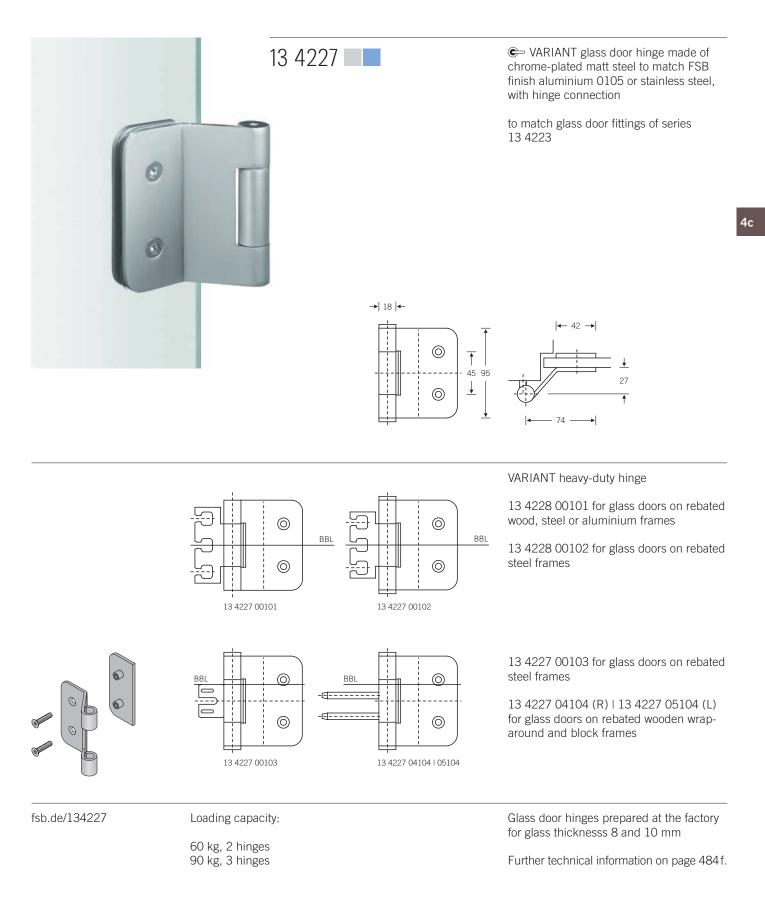
Please state direction with order

fsb.de/134223

Glass door hinge rectangular



Glass door hinge round



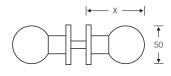
Door knobs for glass doors





X = 77 mm
X = 73 mm
X = 72 mm
X = 72 mm

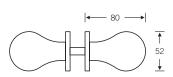
Drill Ø 13 mm



23 0844 **23** 0844 **23** 0844 00007

Design: Jasper Morrison

Drill Ø 13 mm

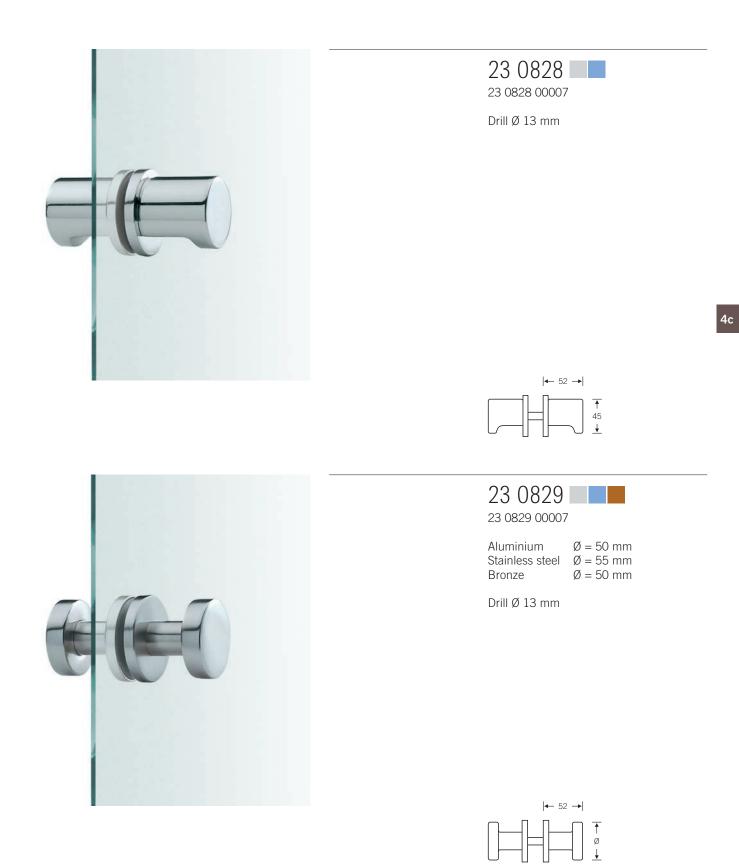


fsb.de/230802 fsb.de/230844 Fixed knobs

Fixed door knobs are usually mounted directly on glass doors. A lock is not used. The door knobs are connected by an 8 mm square spindle (for two drill holes) when they are mounted.



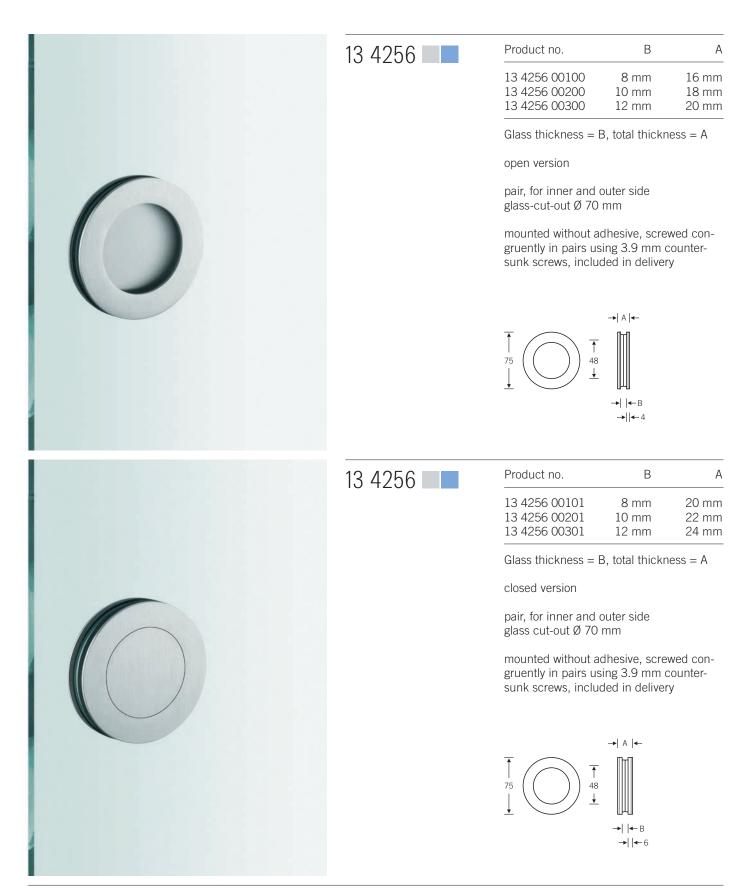
Door knobs for glass doors



fsb.de/230828 fsb.de/230829 Fixed knobs

Fixed door knobs are usually mounted directly on glass doors. A lock is not used. The door knobs are connected by an 8 mm square spindle (for two drill holes) when they are mounted.

Inset handles for glass doors



fsb.de/134256

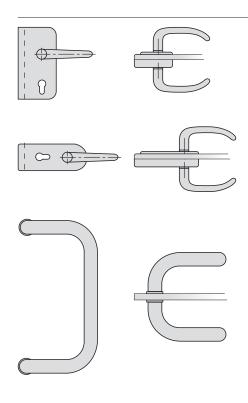
Glass door pull and door stop



fsb.de/363688 fsb.de/134230

Technical information

Fittings for glass doors



Door handle fittings for glass door locks

In addition to its own range of glass doors, FSB can also adapt its entire door handle/knob handle programme to the standard heavy-duty glass door fittings manufactured by its competitors (with just a few exceptions). Just a few minor technical changes to the door handle connection and fixing order need to be taken into account. To prevent misunderstandings, the lock type should be given as precisely as possible when ordering door handles and door knobs for glass door locks (e.g. the manufacturer's name and order number).

Please order in plenty of time to allow for the adaptation to be carried out. Delivery ex warehouse is not possible.

Door pulls for glass doors

Door pulls with round or oval cross sections can be used in lots of different ways for opening glass doors or as safety handle constructions and as design elements with special fixing tools for mounting in pairs or individually.

FSB can utilise existing special solutions for glass doors and also develop individual handle designs. You will find the standard fixing solutions for glass doors and the individually available door pull models starting on page 489 f..

Glass door fitting compact 13 4224

FSB glass door fitting 13 4224 closes flush with DIN frames, and combines the door frame and fitting in a single visual unit. Of course, non-DIN frames can also be used, but in this case we cannot guarantee that they will fit flush against the frame. Can also be used in combination with partition wall systems.

The transparency of the glass door is enhanced by the discreet dimensions of the lock cover, which at 170×89 mm is some 10 % less than on other glass door fittings. This reduction is achieved thanks to the development of a special lock that is easily on a par with the solidity and function of other large locks, and furthermore is suitable for all glass door sizes. We have also developed a special heavy-duty bearing in

the form of a Teflon-coated bearing sleeve that encompasses the door handle along its entire guide length, and can also cope with the mechanical loads associated with large-sized glass doors.

Designs:

- deadlock (LL)
- without key hole
- bathroom/WC: please state when ordering, since the fittings are prepared at the works for the WC locking set 17 1735 09005 as standard. The WC lock is mounted on site, and is to be ordered separately.

Order information for 13 4220 | 13 4223 | 13 4224

Door handles are not included in the delivery of glass door fittings. When ordering, please provide the following information and refer to the glass doors and fitting:

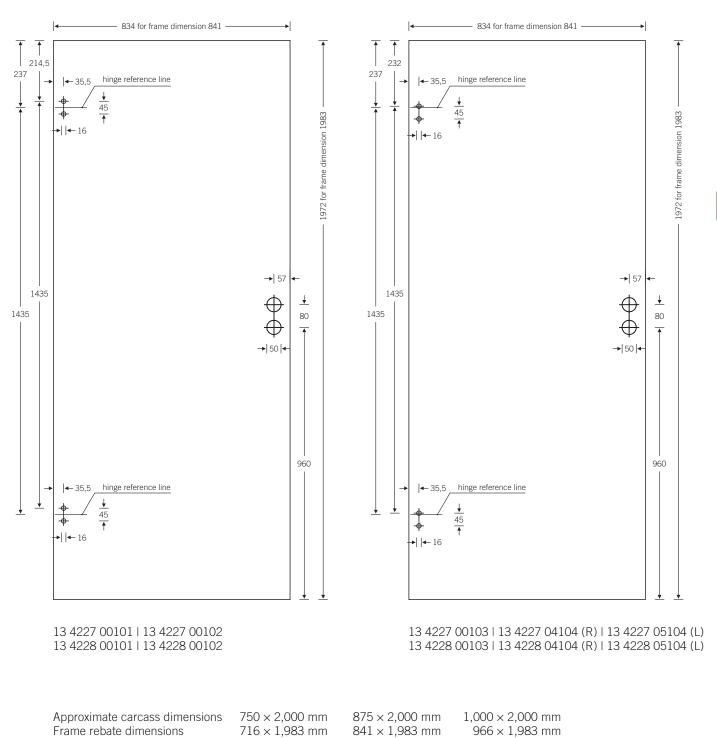
- the desired door handle design
- the fitting design for standard or heavyduty bearing
- the DIN direction

Designs for 13 4220 | 13 4223

- deadlock (LL)
- without key hole
- bathroom/WC
- fittings prepared for WC lock sets from FSB's delivery programme (see page 274). Please order WC lock sets separately; assembly on site.

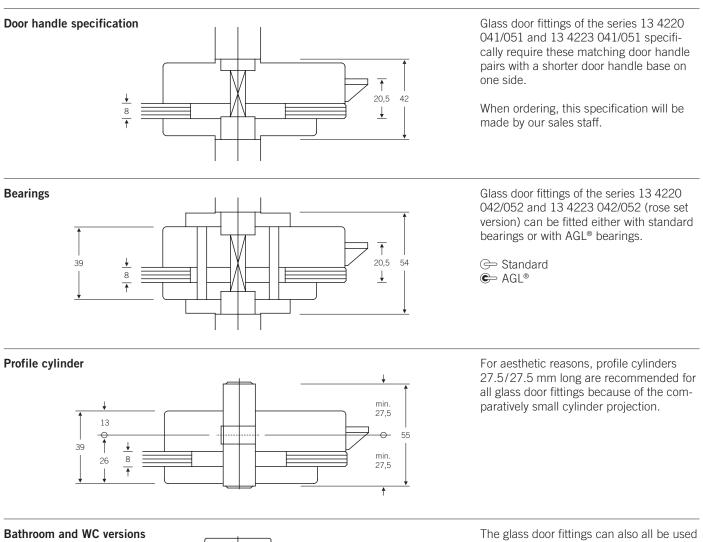
Dimensions for 13 4220 | 13 4223 | 13 4224

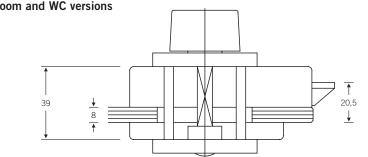
Dimensions based on glass thickness 8 mm. The glass door fittings and lock cases are prepared at the works for glass thicknesses 8 and 10 mm (13 4224 on enquiry).



Standard glass dimensions	709 imes 1,972 mm	834 × 1,972 mm	959 × 1,972 mm
Approximate carcass dimensions	750 × 2,125 mm	875 × 2,125 mm	1,000 × 2,125 mm
Frame rebate dimensions	716 × 2,108 mm	841 × 2,108 mm	966 × 2,108 mm
Standard glass dimensions	709 × 2,097 mm	834 × 2,097 mm	959 × 2,097 mm

Series 13 4220 and 13 4223

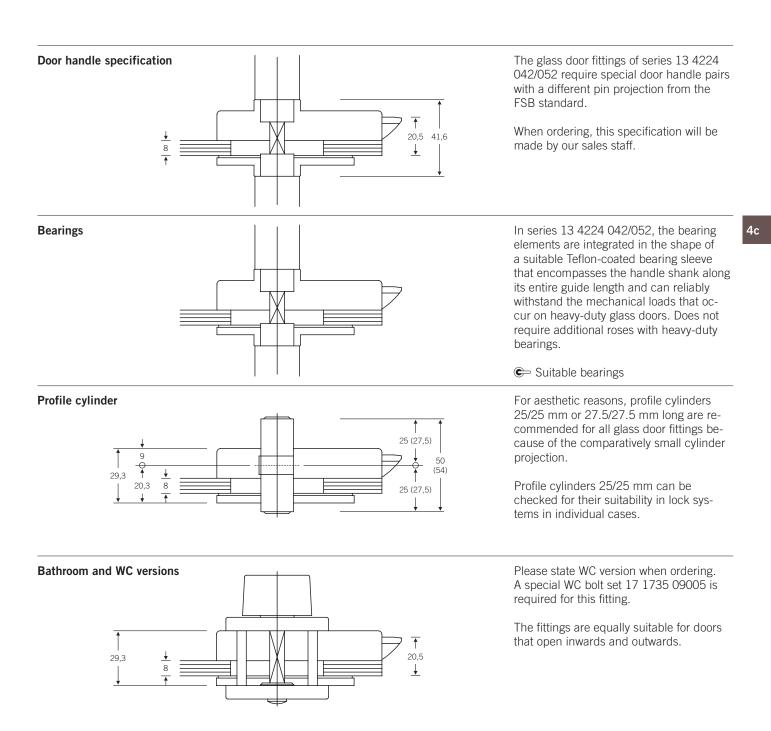




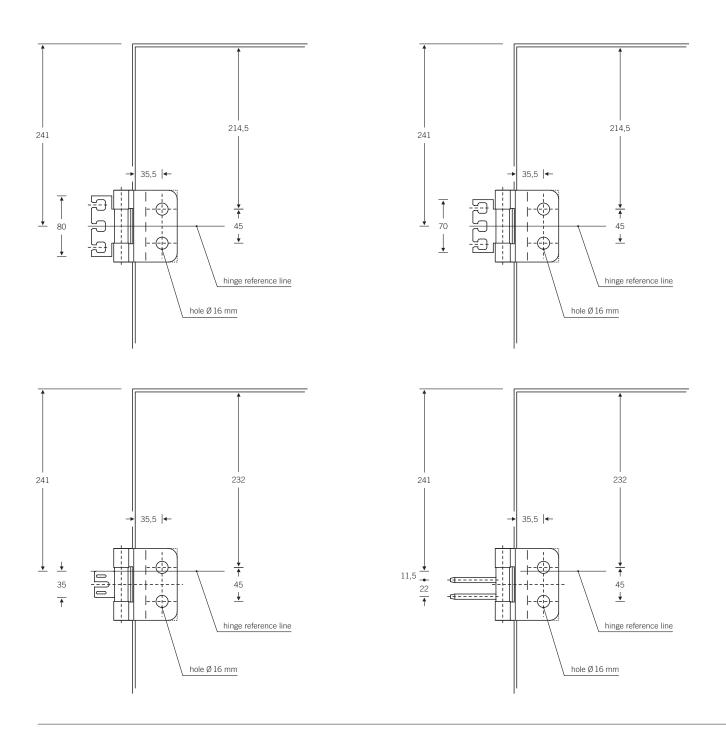
The glass door fittings can also all be used as a bathroom/WC version. The series 13 4220 and 13 4223 can be fitted with any WC bolt in FSB's delivery programme (see page 273 f.). Please order separately for fitting on site.

The fittings are equally suitable for doors that open inwards and outwards.

fsb.de/134220 fsb.de/134223

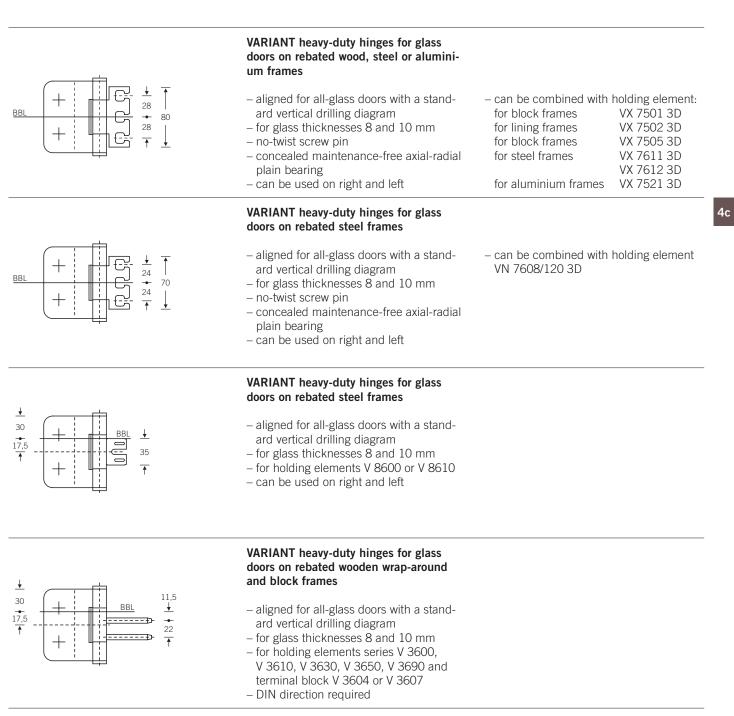


Hinge connections 13 4227 and 13 4228



The hinge connections and their position to the hinge reference line need to be aligned to the drill holes in the glass door. Please note this requirement in connection with FSB heavy-duty hinges 13 4227 00101 or 3 4227 00102, and 13 4228 00101 or 13 4228 00102 in particular.

Frame connection dimension 13 4227 and 13 4228



Please refer to the current SIMONSWERK manual for further information on hinges, hinge connections, frame fixing elements etc.

fsb.de/catalogue



Main door fittings

-

Doha High Rise

Ateliers Jean Nouvel, Paris www.jeannouvel.com

Photo: CSCEC

FSB 1003 range of handles, see page 116 f.

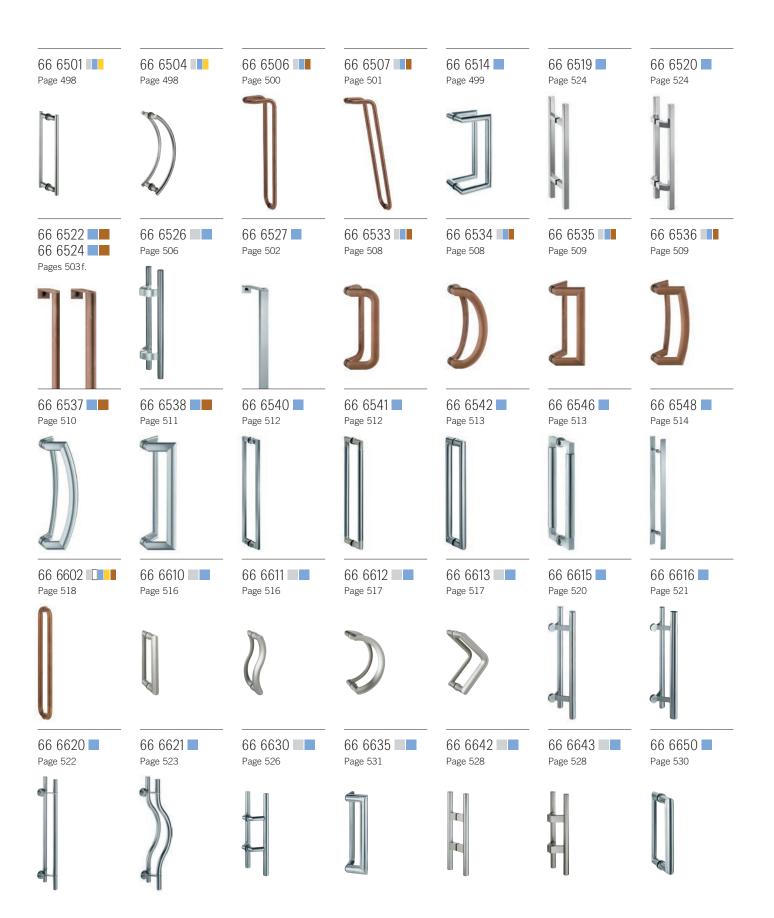
FSB 14 1488 wide backplates, see page 285 FSB 36 4059 informations signs/pictograms, see page 391 SSF heavy duty mortice locks, see page 20 ff.

Stainless steel, fine matt, brushed

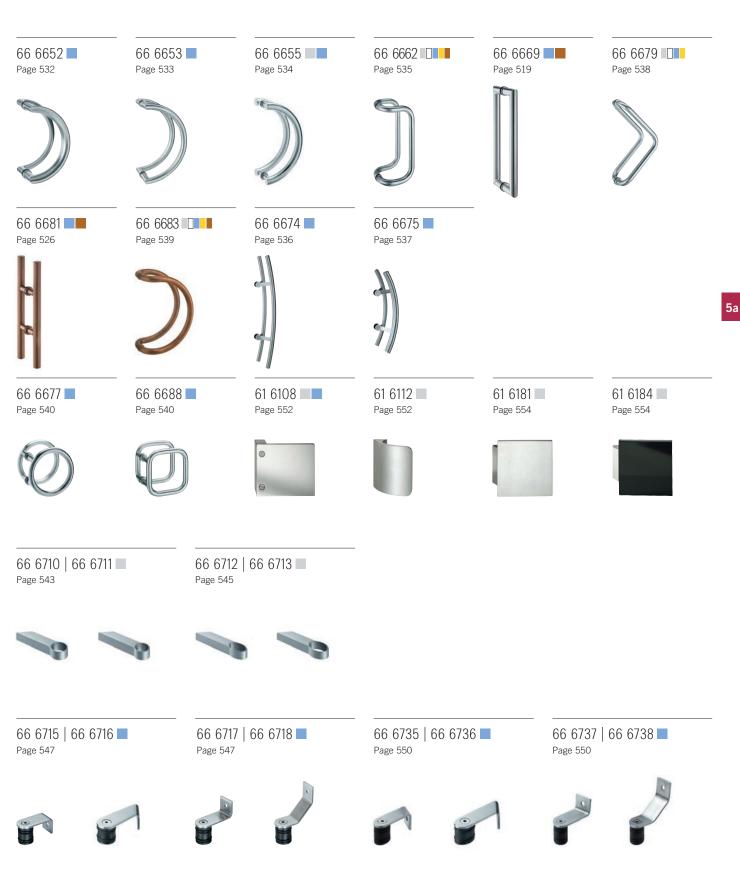
www.fsb.de/high_rise

- 494 Explanatory information
- 496 Door pulls
- 556 Pull bars
- 558 Door handles turnably fixed (AGL[®])
- 560 Fixed with self-tapping insert
- 561 Fixed with clamping roses
- 562 Drill dimensions
- 563 System presentation of the Fixing technology

Overview



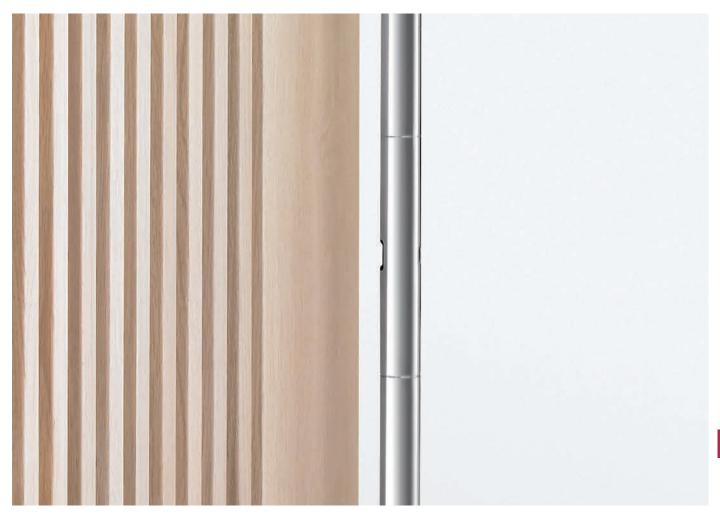
490



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Overview





Whether classic tubular pulls with a round or oval cross-section or the sleek, unobtrusive pull/push handles of the S series with an angular or square cross-section, FSB has the perfect design for any door and taste to hand. This chapter contains the full range. Besides the analogue pull, with isis[®] F we offer an impressive solution for digital closing. Because: scanning a finger biometrically for access identification should ideally take place on the pull itself – in other words where the fingers grip. You can find our more about FSB door pulls in the isis F series with pull-integrated biometry technology from page 87.

isis® F (= Fingerscan) Pull programme angular S-Flat

Square. Practical. New. FSB's square main door programme.

FSB is adding a small but perfectly formed selection of pulls of angular/ square cross-sections to its established range of round and oval tubular pulls in this new manual.

Having got the ball rolling early in 2010 with a complete range of internal hardware flush doors, frame doors and windows, FSB can now also offer architects, fabricators and end users the formal vocabulary of angular (pull) designs for main doors. The "angular" house door programme includes the following products:

- the new "S-Flat" push/pull pad handle series designed by the established designer Hartmut Weise. In the best Bauhaus tradition, he opted for a geometrical approach in his concept that sees every angular pull matched by a rounded counterpart. The S-Flat pulls are available in various dimensions and open or closed forms. Find out more on pages 496 f. and 553.
- as a technical constructive pull solution, FSB's well-known and popular ht series in a welded version with a pull section of 35×35 mm and in lengths of 350 to 2100 mm, see page 502 f.
- angular and cranked push/pull bars with a Pull cross-section of 25 × 25 mm, which we are also happy to provide in individual designs and impressive special lengths, designs 66 6519 and 66 6520, see page 524.
- as an alternative with an angular section of 40×10 mm FSB 66 6548, also in special lengths, see page 514f.
- and finally the essential security accessory: the new security rose FSB
 73 7397, the angular shape also tested and certified to DIN EN 18257 ES1, see page 597.

The accessories range extends from angular door knobs and security hardware, turnably fixed half fittings, plus letterboxes, intercoms and bell-push plates of the series 38 3808, 38 3810 and 38 3811. Not to forget the popular house numerals FSB 38 4005.

Door pull series oval

One key feature of the FSB door pull programme, and an alternative to the traditional round cross-sections, are the oval pulls developed by FSB in the last decade. FSB discovered the formula "diagonal + oval = ideal gripping" reduces the amount of effort required when taking hold of and operating the pulls on doors. The oval styling offers the market a new gripping quality for eye and hand that FSB has copyrighted. As well as the tubular programme, FSB now offers almost all the traditional styles in the user-friendly oval shape.

A flat oval pull series by our in-house designer Hartmut Weise is a modern interpretation of architecture. The ht modular system has been transferred to the oval tube for speedy results. It can be used to create clean solutions on-site up to a length of 1500 mm with no great difficulties. For lengths of 1500 mm or more, FSB recommends a factory welded construction. Welded ht pull versions shorter than 1500 mm are also possible.

The hs modular system also offers other design variants with oval or round stainless steel grip sections and aluminium supports powder-coated in silver grey and with two pull cross-sections.



The back lining on the S-Flat pulls with a curve made of Technogel[®] ensures a pleasantly soft feel and ergonomic grip.

isis[®] F: Fingerscan door pull with biometric technology

With electronic functions that provide comfort and security in equal measure, FSB has proven that thinking about a product and considering human habits and preferences can result in significant innovations. After all, the biometric reading of a finger for access identification should ideally take place directly on the pull – in other words, at the point where the fingers make contact, our technicians thought to themselves. No sooner said than done: the result was the isis[®] F door pull with the biometric identification unit integrated in the pull. Go to page 87 to find out just what the pull can do.

Bronze main door programme

FSB's main door programme has become firmly established as a point of reference in the high quality and exclusive furnishing of entrance areas. It includes pulls from the ht modular system (welded version, round and oval) in lengths of up to 2100 mm, modern designs in the "light + elegant" pull series with a flat-oval cross section, the work of our very own in-house designer Hartmut Wiese, and classic pull designs of 30 mm diameter and in lengths of up to 1200 mm. The programme is rounded off by design FSB 66 6681, which is available in any length and with variably positioned supports.

The accessories programme ranges from door knobs, secrity roses and fittings, turnably fixed door handle half sets (AGL[®]), intercom and bell-push plates and letterboxes from the series 38 3808, which are optionally available with the name engraved, and with a patinated bronze finish for a particularly elegant effect.

Please request the appropriate brochure (no charge) or go to www.fsb.de/bronze

Materials

As a general rule, FSB tries to offer the entire pull programme in the materials aluminium, stainless steel and a number of standard shapes in bronze or brass, although stainless steel is recommended for doors that experience a high level of traffic. Aluminium finishes can easily be "injured" in such situations without the ageing process having any effect on the pull's suitability for purpose. Because the surface is prone to corrosion, brass pulls are only available with a wax finish. It takes many years for the natural brown protective patina to develop on brass pulls.

Fixed with clamping roses

Fixing with FSB's clamping rose is a type of door pull fixing method in which the FSB door pulls with a round base are positioned safely on the surface of the door by means of an easy-to-fix clamping rose. This eliminates the requirement for the visible fixing screws. The radial play included by FSB provides the necessary tolerance offset. Find out more about this fixing method on page 561.

Fixing scenarios

Door pulls can be either face or throughfixed to doors made of the most diverse materials.

In the case of through-fixing, either a pair of pulls or a single pull can be fitted. There are three fixing options, "back-toback" fixing, "bolt through" fixing and "face fixing with a self-tapping insert", which are illustrated (see below).

With regard to the issue of face fixing versus bolt-through fixing, FSB wishes to point out that on account of the insert fastening technique FSB uses, face fixing is both aesthetically pleasing and sufficiently durable as a rule. However, there is one restriction with regard to doors with high frequency (for instance in schools, office buildings and other public facilities): in these cases, we strongly recommend bolt-through fixing, which ensures that the furniture remains fit for use even after years of pushing and pulling, since the forces involved are absorbed on both sides of the door.

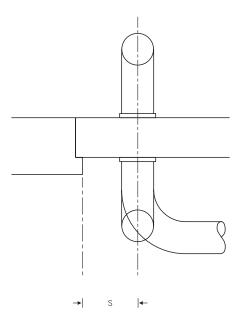
Door pulls: in pairs or singles?

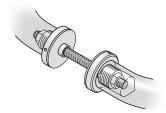
To make it easier to understand the technology and design, we show door pulls in pairs. In this way the reverse side and geometric configuration can be seen. Naturally we also supply door pulls as single items.

Safety clearance (S)

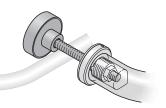
When fitting a pull to the closing face of a door, a safety clearance needs to be included between the pull, stile and jamb. The assembly scenario is made clearer in the following sketch.

It is best to observe the safety clearances recommended by FSB. However, the final decision is determined by the conditions on site.





Fixing A back-to-back fixing



Fixing B bolt-through fixing



Fixing C face fixing with self-tapping insert

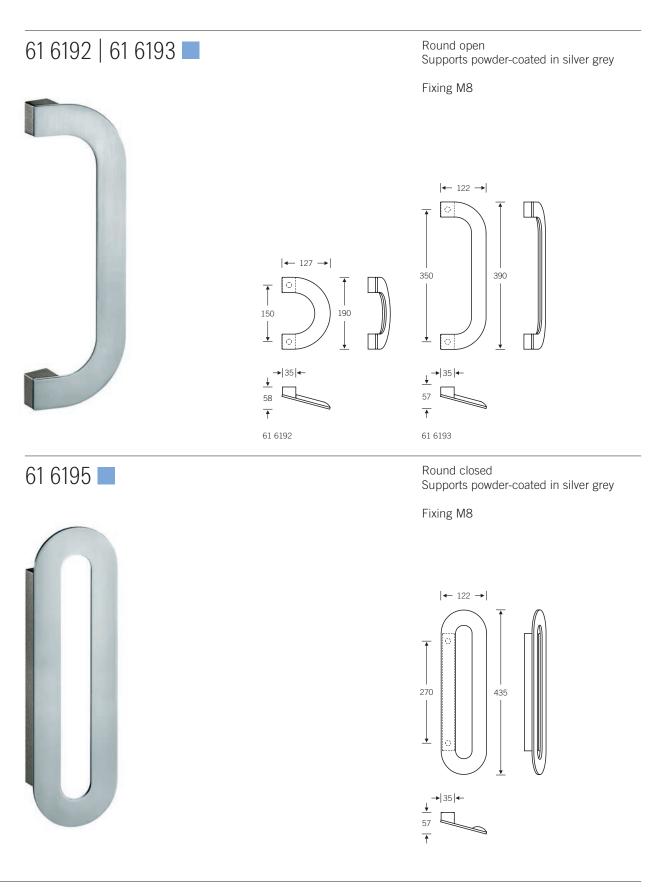
S-Flat push/pull pad handle

angular

61 6187 61 6188 Angular open Supports powder-coated in silver grey Find MB Image: specific powder-coated in silver grey Image: specific powder-coated in silver grey Find MB Image: specific powder-coated in silver grey Fin			
Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since/Since	61 6187 61 6188 🗖		Angular open Supports powder-coated in silver grey
Image: State of Line of the second state of Line of Line of the second state of Line of			Fixing M8
bild bild bild bild bild bild bild bild		$ \begin{array}{c} \hline \\ 150 \\ \downarrow \\ \hline \\ 64 $	$ \begin{array}{c} \hline \\ 350 \\ \hline \\ 390 \\ \hline \\ \hline \\ \end{array} \end{array} $
Fixing M8 Fixing M8 Fixing M8 Fixing M8 $\begin{pmatrix} + 122 \rightarrow$			
$ \begin{array}{ c c } \hline \begin{tabular}{ c } \hline \begin{tabular}{ c } \hline \\ \hline $	61 6189 61 6190 🗖		Supports powder-coated in silver grey
$ \begin{array}{c} \hline \\ \hline $			$ \leftarrow 122 \rightarrow $
Image: state of the state o			
fsb.de/616188 fsb.de/616189 Other S-Flat push/pull pad handles		$\frac{1}{64}$	$\frac{1}{57}$
	fsb.de/616188		

S-Flat push/pull pad handle

round



fsb.de/616192 fsb.de/616193 fsb.de/616195

Other S-Flat push/pull pad handles see page 553

5a

Door pulls round



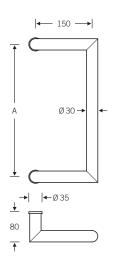
fsb.de/666501 fsb.de/666504 **Door pull** round

66	6514	
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Product no.	А	Ø
66 6514 038	350	30
66 6514 045	450	30

Fixing M8 Safety clearance S = 55 mm (see page 495)





fsb.de/catalogue

fsb.de/666514

Door pull round



fsb.de/666506



fsb.de/666507

5a

ht angular welded 350 mm to 2100 mm

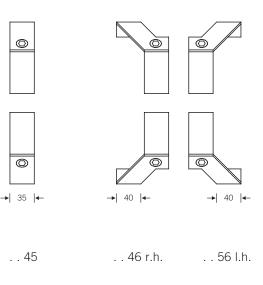
66 6527

Square tube \Box 35 x 35 x 2.5 mm

66 6527 is a factory-welded version with an angular Pull cross-section based on the concept "md modular system" (page 546 f.) or "ht welded" (page 504). FSB manufactures the 66 6527 pull style to order in A sizes from 350 mm to maximum 2100 mm.

The dimensions of the two support variants for a straight or cranked pull design are defined. When ordering, please also provide the A dimension definining the fixing clearance from the middle of the screw hole of one support to the middle of the screw hole of the other support. The overall length of the pull is achieved by adding the dimensions 2×20 mm (drill hole clearance including material) thickness.





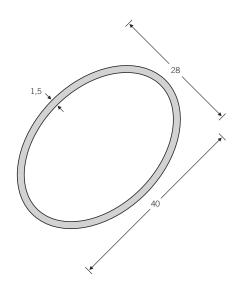
fsb.de/666527

502

The static requirements and local conditions are to be taken into account when using ht angular welded. These pulls are not a substitute for gymnastic bars, and must not be used as falling protection on hazardous building openings. In the event of doubt please consult the architect or structural engineer. Details on the fixing technology on page 560 f.

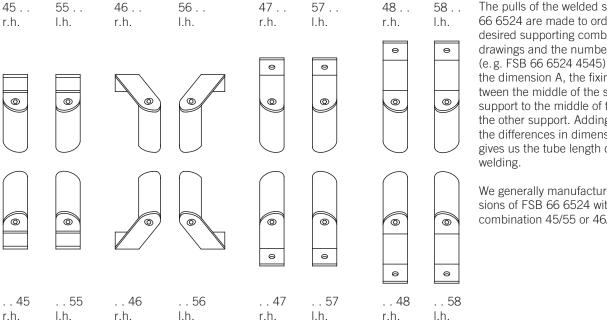
ht oval welded 1000 mm to 2100 mm

66 6524



Tube $28 \times 40 \times 1.5$ mm

66 6524 is the factory-welded version based on the components of the ht oval modular system (see page 549). From dimension A 1000 mm it can be used as an independent pull design, and is also recommended for dimensions A from 1500 to 2100 mm as a stability solution in the ht oval modular system.



The pulls of the welded series FSB 66 6524 are made to order. Specify the desired supporting combination with the drawings and the numbers given there (e.g. FSB 66 6524 4545). Also provide the dimension A, the fixing clearance between the middle of the screw hole of one support to the middle of the screw hole of the other support. Adding or subtracting the differences in dimension on page 549 gives us the tube length of the pull before

We generally manufacture the bronze versions of FSB 66 6524 with the support combination 45/55 or 46/56.

fsb.de/666524

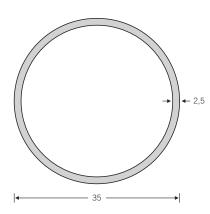
The static requirements and local conditions are to be taken into acount when using ht oval (for self assembly or in the factory-welded version). These pulls are not a substitute for gymnastic bars, and must

not be used as falling protection on hazardous building openings. In the event of doubt please consult the architect or structural engineer. Details on the fixing technology on page 560 f.

5a

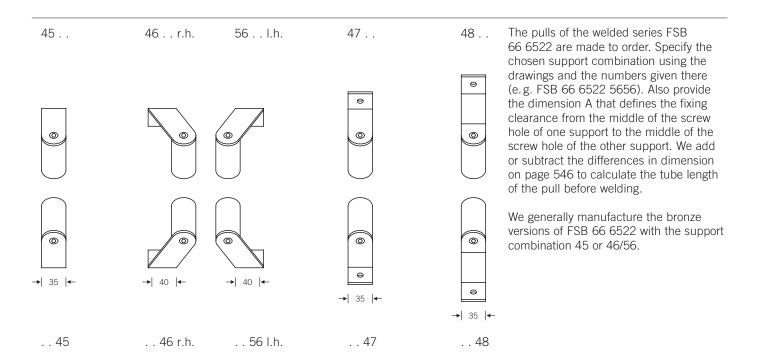
ht round welded 1000 mm to 2100 mm

66 6522



Tube Ø 35×2.5 mm

66 6522 is the factory-welded version based on the components of the ht round modular system (see page 547). From dimension A 1000 it can be used as an independent pull design, and is also recommended for dimensions A from 1500 to 2100 mm as a stability solution in the ht round modular system.

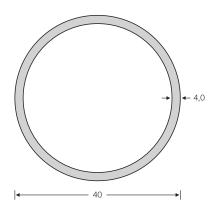


fsb.de/666522

The static requirements and local conditions are to be taken into acount when using ht round (for self assembly or in the factory-welded version). These pulls are not a substitute for gymnastic bars, and must not be used as falling protection on hazardous building openings. In the event of doubt please consult the architect or structural engineer. Details on the fixing technology on page 560 f.

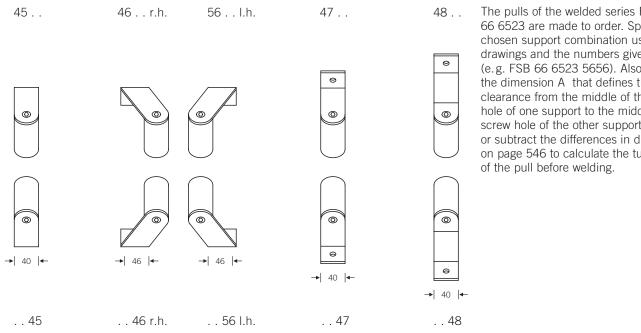
ht round welded Overlengths from 2100 mm

66 6523



Tube \emptyset 40 x 4 mm

For overlengths starting from a dimension A of 2100 mm, we offer another factory-welded version based on a more stable tube cross-section of 40×4 mm. In all other respects FSB 66 6523 is based on the other design elements of the ht round series.



The pulls of the welded series FSB 66 6523 are made to order. Specify the chosen support combination using the drawings and the numbers given there (e.g. FSB 66 6523 5656). Also provide the dimension A that defines the fixing clearance from the middle of the screw hole of one support to the middle of the screw hole of the other support. We add or subtract the differences in dimension on page 546 to calculate the tube length

fsb.de/666523

The static requirements and local conditions are to be taken into acount when using ht round (for self assembly or in the factory-welded version). These pulls are not a substitute for gymnastic bars, and

must not be used as falling protection on hazardous building openings. In the event of doubt please consult the architect or structural engineer. Details on the fixing technology on page 560 f.

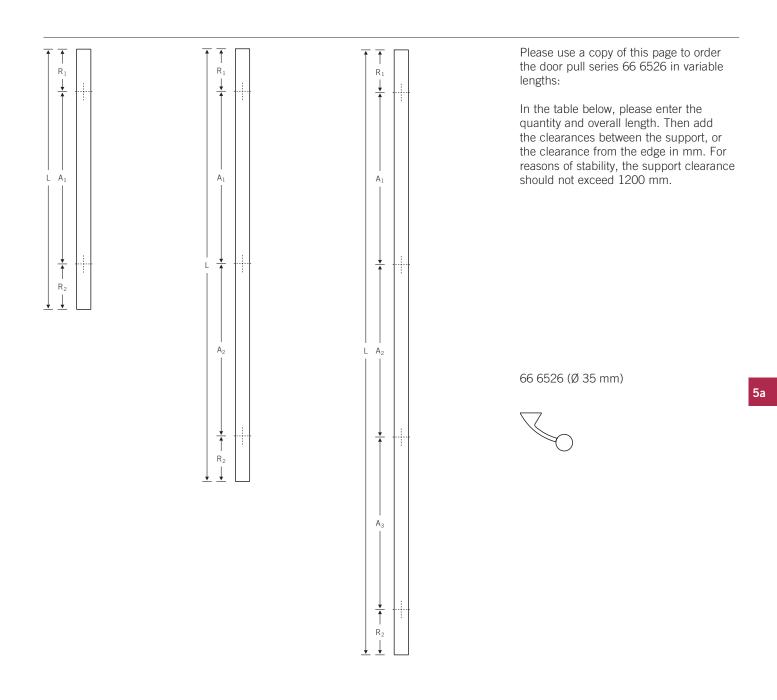


Supports aluminium natural-coloured



fsb.de/666526

Fax form +49 5272 608-312

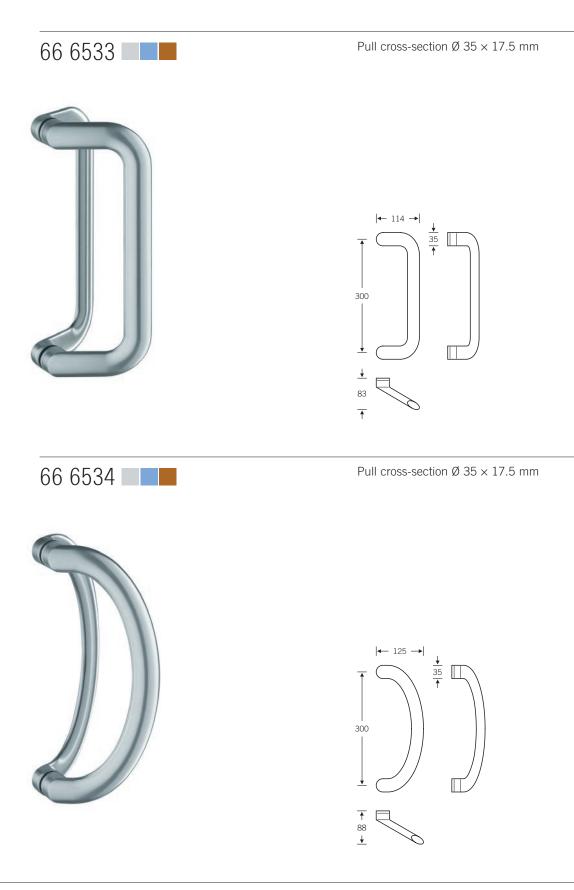


Quantity	Overall length L	Support clear	ance A ₂	A ₃	Edge clearance R ₁	e* R ₂	Fixing type

* min. 40 mm, max. 350 mm

Door pulls

oval



fsb.de/666533 fsb.de/666534 Design: Hartmut Weise

The two pulls in aluminium only available in natural anodised finish (FSB 0105)

Door pulls oval



fsb.de/666535 fsb.de/666536

The two pulls in aluminium only available in natural anodised finish (FSB 0105)

5a

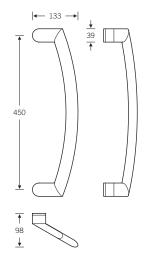
Door pull oval

For technical information see page 560 f.

66 6537		
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Pull cross-section Ø 39 \times 20 mm





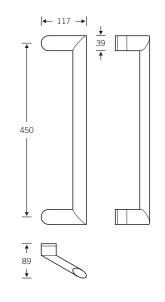
fsb.de/666537

Design: Hartmut Weise

Door pull oval







fsb.de/666538

Design: Hartmut Weise

Door pulls



fsb.de/666540 fsb.de/666541

Door pulls oval / round

66 6542		Product no.	А	Ø	С	D	S
		66 6542 030 66 6542 060	300 600	30 × 15 40 × 28	60 75	35 45	48 55
		to match FSB 1 S = Safety clear	.107 ar	d FSB 1108	3		5a
66 6546		match to FSB 1	102				
		Special lengths					200 mm
	$\begin{array}{c} & & & \\ & & \\ \hline \\ & & \\ & \\ & \\ & \\ & \\$	Safety clearance	e S = 5	1 mm (see	page 4	95)	

fsb.de/666542 fsb.de/666546

Door pull straight

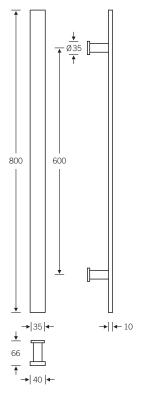
66 6548

match to FSB 1003

Safety clearance S = 55 mm (see page 495)

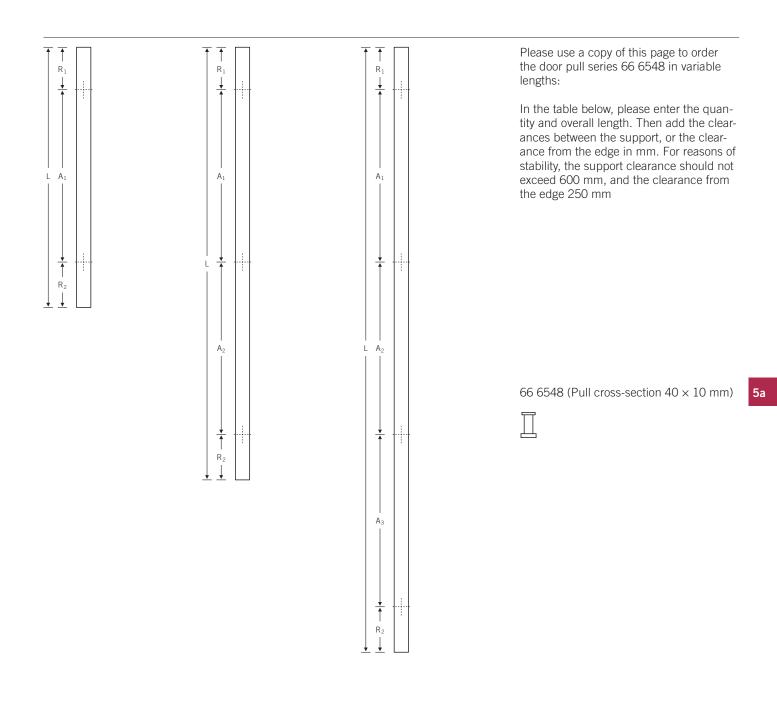
Pull cross-section $40 \times 10 \text{ mm}$





fsb.de/666548

Fax form +49 5272 608-312



Quantity	Overall length L	Support cleara	ance A ₂	A ₃	Edge clearance R ₁	e* R ₂	Fixing type

* min. 30 mm, max. 250 mm

Door pulls

oval



Design: Hartmut Weise

The two pulls in aluminium only available in natural anodised finish (FSB 0105)

Door pulls oval



fsb.de/666612 fsb.de/666613



The two pulls in aluminium only available in natural anodised finish (FSB 0105)

5a

66 6602	Product no.	А	Ø	R	С	D	S
	66 6627 034 66 6670 034	200 200	20 25	25 40	75 80	30 35	45 48
	66 6670 037	300	25	40	80	35	48
6	66 6670 038 66 6602 038 66 6603 038 66 6604 038	350 350 350 350	25 30 35 40	40 55 60 60	80 90 95 105	35 35 45 45	48 51 56 65
	66 6670 099 66 6602 099 66 6603 099 66 6604 099	200–1200 300–1200 300–1200 350–1200	25 30 35 40	40 55 60 60	80 90 95 105	35 35 45 45	48 51 56 65
	Fixing: Ø = 20	mm M6 I Ø ≥	≥ 25 mr	m M8			
		C →					

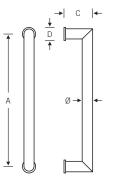
fsb.de/666602 fsb.de/666603 fsb.de/666604 fsb.de/666627 fsb.de/666670

S | Safety clearance (see page 495)

66 6669	Product no.	А	Ø	С	D	S
	66 6606 038	350	25	75	35	50
	66 6669 038	350	30	80	35	55
	66 6607 038	350	35	85	45	57
	66 6609 038	350	40	90	45	60
	66 6669 099	custom	30			
	66 6609 099	custom	40			

Special lengths with dimensions A to 1200 mm in Ø 30, 35 and 40 mm Bronze only in Ø 30 mm (66 6669 038) Fixing M8



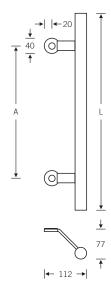


fsb.de/666606 fsb.de/666607 fsb.de/666609 fsb.de/666669 S | Safety clearance (see page 495)

66 6615	Product no.	А	Ø	L
	66 6615 035	350	30	550
	66 6615 045	450	30	650
	66 6615 099	451-2100	30	var.

Pull cross-section Ø 30 mm





FSB recommends a support clearance of max. 1200 mm.

fsb.de/666615

Door pull

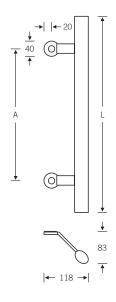
oval

66 6616

Product no.	А	Ø	L
66 6616 035 66 6616 045 66 6616 099	450	40×28	550 650 var.

Pull cross-section Ø 40×28 mm





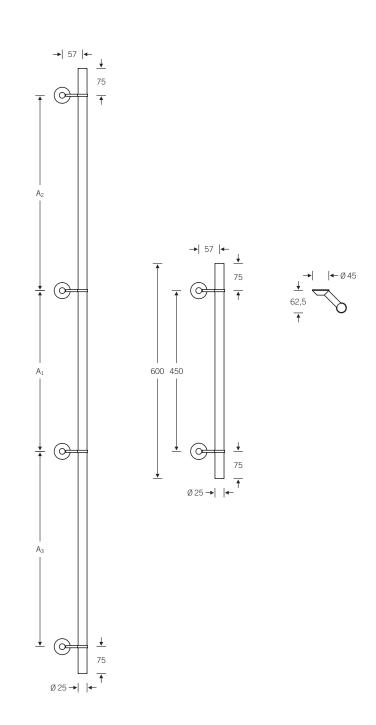
fsb.de/666616

FSB recommends a support clearance of max. 1200 mm.

6 6620	Product no.	A_1	A ₂	A_3	Ø	End piec
	66 6620 099	Х	Х	Х	25	75 mm

66 6620 045 (overall length 600 mm)





fsb.de/666620

The filigree pull 66 6620 (\emptyset 25 mm) is ideal for very narrow frame door profiles. The safety clearance from the middle of the fixing to the middle of the pull handle is 57 mm. As a standard pull it is offered with a dimension A of 450 mm and an

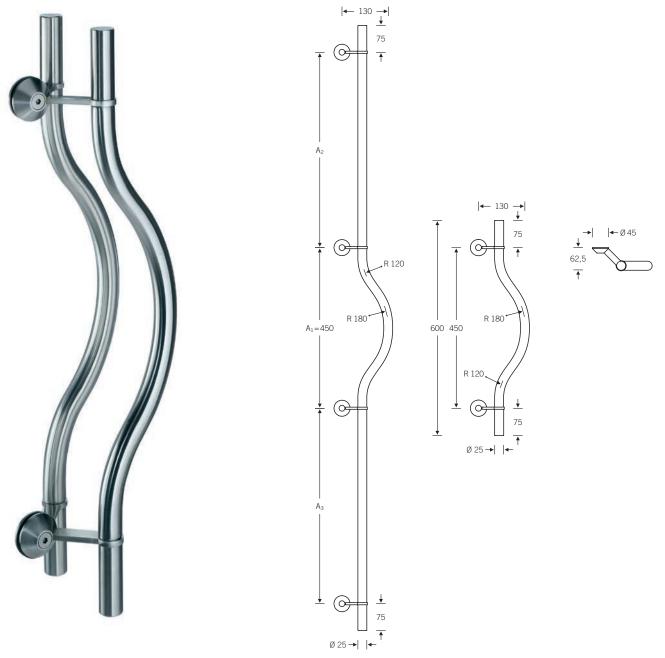
overall length of 600 mm, but it can also be taken over the entire door. The standard dimension of the end pieces is 75 mm. FSB recommends a maximum support clearance of 1200 mm.

For technical information see page 560 f.

Door pull round

66 6621	Product no.	A_1	A_2	A_3	Ø	End piec
	66 6621 099	450	Х	Х	25	75 mm

66 6621 045 (overall length 600 mm)



fsb.de/666621

The filigree pull 66 6621 (Ø 25 mm) is ideal for very narrow frame door profiles. The safety clearance at the rounded area of the pull is 130 mm. As a standard pull it is offered with a dimension A of 450 mm

and an overall length of 600 mm, but it can also be taken over the entire door. The standard dimension of the end pieces is 75 mm. FSB recommends a maximum support clearance of 1200 mm.

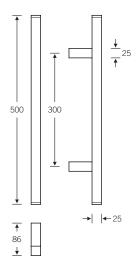
fsb.de/catalogue

523

Door pulls

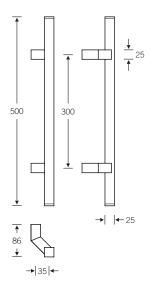
Pull cross-section \Box 25 × 25 mm Fixing M8 Standard length 500 mm (also in special lengths; see fax form at side) Safety clearance S = 53 mm (see page 495)

Illustration on left shows a special length



Pull cross-section \Box 25 × 25 mm Fixing M8 Standard length 500 mm (also in special lengths; see fax form at side) Safety clearance S = 46 mm (see page 495)

Illustration on left shows a special length



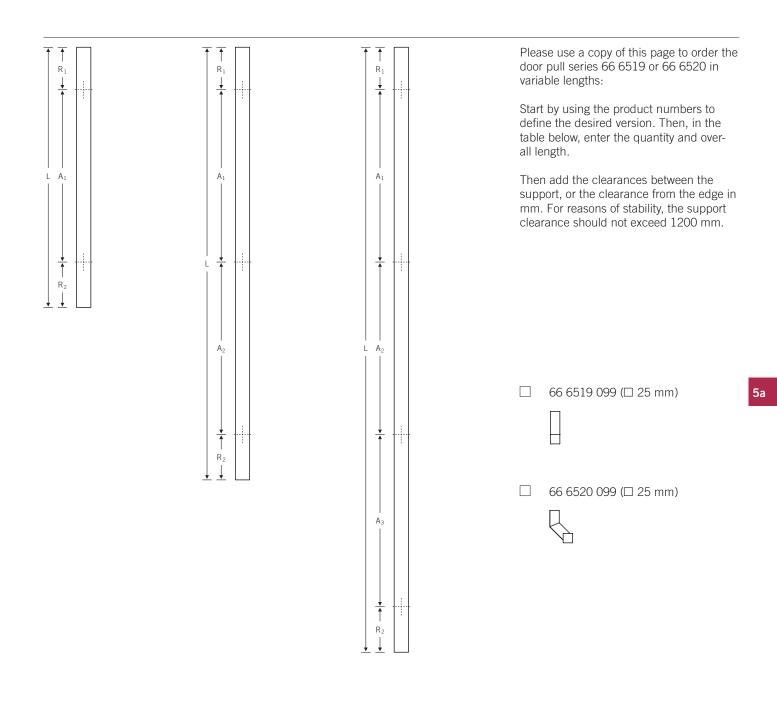


66 6520

66 6519

fsb.de/666519 fsb.de/666520

Fax form +49 5272 608-312



Quantity	Overall length L	Support cleara	ance A ₂	A ₃	Edge clearance R_1	e* R ₂	Fixing type

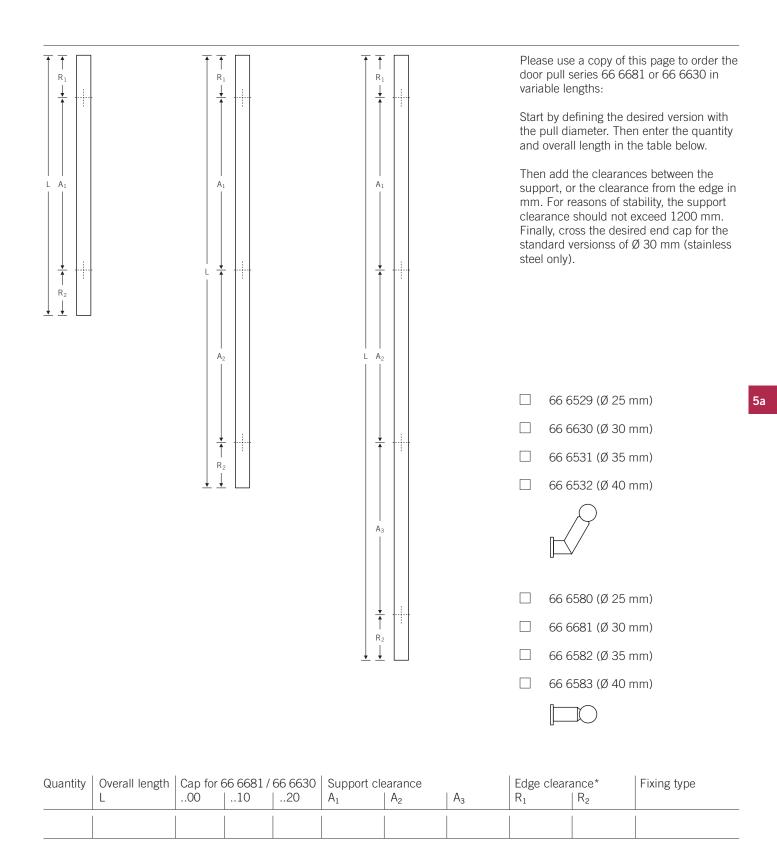
* min. 30 mm, max. 350 mm



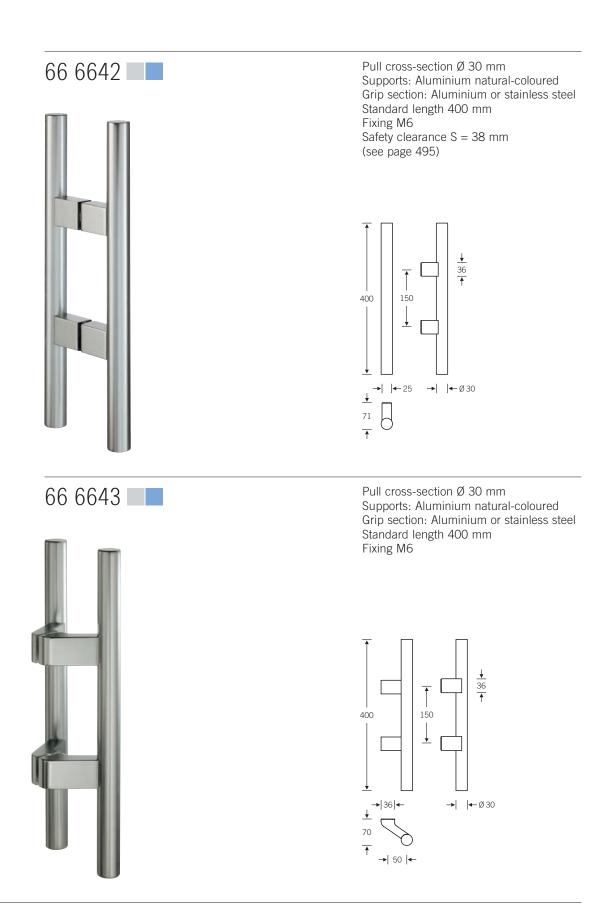


526

Fax form +49 5272 608-312

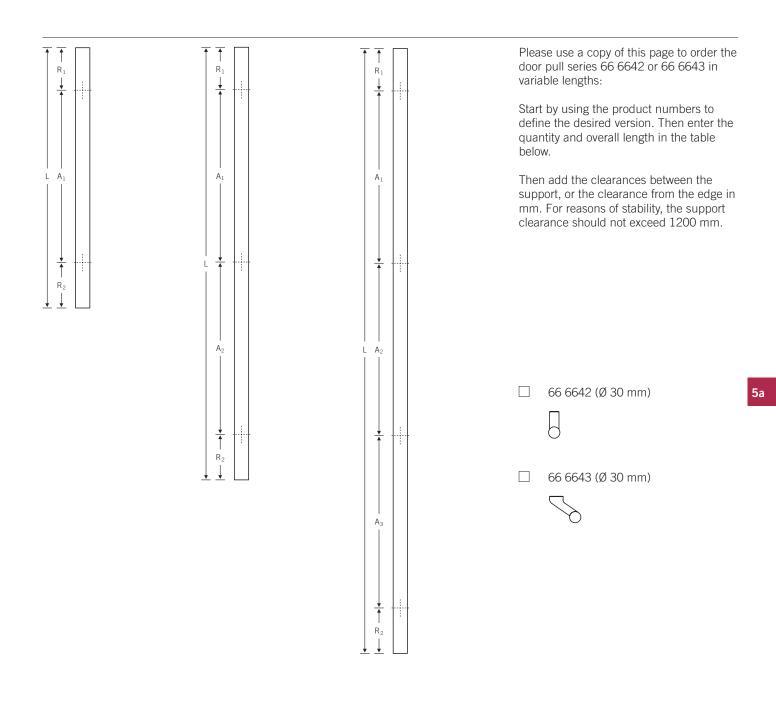


*	min	20	mm	may	250	mm
	min.	30	mm,	max.	330	[[]]]]]



fsb.de/666642 fsb.de/666643

Fax form +49 5272 608-312



Quantity	Overall length				Edge clearance* R_1 R_2		Fixing type	
	L	A ₁	A ₂	A ₃	К1	к ₂		

* min. 30 mm, max. 350 mm

Door pull

oval

351-1500

22

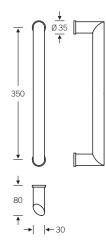
36 × 22

66 6650	Product no.	А	Ø	
	66 6650 038	350	36 × 1	

Fixing M8 Safety clearance S = 49 mm (see page 495)

66 6650 099





fsb.de/666650

Door pull

oval

66 6635			Product no. 66 6635 038 66 6635 045 66 6635 099	A 350 450 451-2100	Ø 40 × 28 40 × 28 40 × 28
			The door pull d the first produc A comfortable o is to be aligned hand can grip s aim was achiev pull and suppo vided a counter the pull design	t in FSB's oval oval tube (Ø 40 ergonomically safely and effic red by mitre we rt at a 90° angl rpoint to the so	series. x 28 mm) so that the iently. This lding the e. This pro- ft bends of
			← 105 →		
٥	و	8		$ \begin{array}{c} \downarrow \\ \emptyset 40 \\ \uparrow \end{array} $	1

fsb.de/666635

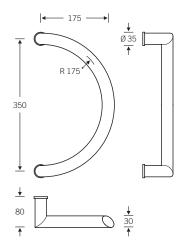
5a

Door pull oval

66 6652

Pull cross-section Ø 36×22 mm Fixing M8 Safety clearance S = 53 mm (see page 495)





fsb.de/666652

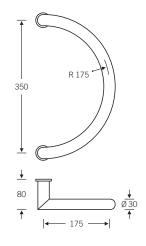
For technical information see page 560 f.

Door pull round

66	6653	
~ ~		

Pull cross-section Ø 30 mm Fixing M8 Safety clearance S = 55 mm (see page 495)



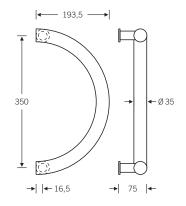


fsb.de/666653

5a

Pull cross-section \emptyset 35 mm Fixing M8 Safety clearance S = 55 mm (see page 495)



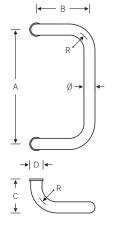


fsb.de/666655

66 6662	Product no.	А	Ø	R	В	С	D	S
	66 6660 034	200	20	25	100	75	30	41
	66 6661 034	200	25	40	100	80	35	42
	66 6661 037	300	25	40	100	80	35	42
	66 6661 038	350	25	40	100	80	35	42
	66 6662 038	350	30	55	140	90	35	43
	66 6663 038	350	35	60	140	95	45	45
	66 6664 038	350	40	60	150	120	45	52
	66 6661 099	200–1200	25	40	100	80	35	42
	66 6662 099	300-1200	30	55	140	90	35	43
	66 6663 099	300-1200	35	60	140	95	45	45
	66 6664 099	350-1200	40	60	150	120	45	52

Bronze only in Ø 30 mm (66 6662 038) Fixing: Ø = 20 mm M6 | Ø \geq 25 mm M8



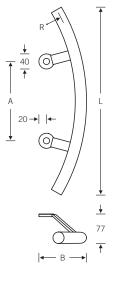


S | Safety clearance (see page 495)

fsb.de/666660 fsb.de/666661 fsb.de/666662 fsb.de/666663 fsb.de/666664 5a

66 6674	Product no.	А	Ø	R	В	L
	66 6674 021 66 6674 035		30 30	485 1420	126 123	497 742



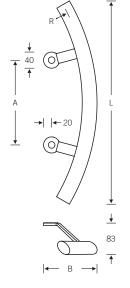


fsb.de/666674

Door pull oval

66 6675	Product no.	А	Ø	R	В	L
	66 6675 021 66 6675 035				132 129	504 745





fsb.de/666675

Door pull round

66	6679	
00	0070	

Product no.	А	Ø	R	В	С	D	S
66 6649 034	200	20	25	90	75	30	41
66 6679 034	200	25	40	83	80	35	42
66 6679 037	300	25	40	133	80	35	42
66 6679 038	350	25	40	158	80	35	42
66 6623 038	350	30	55	152	90	35	43
66 6624 038	350	35	60	150	95	45	45

Fixing: $\emptyset = 20 \text{ mm M6} \mid \emptyset \ge 25 \text{ mm M8}$



S | Safety clearance (see page 495)

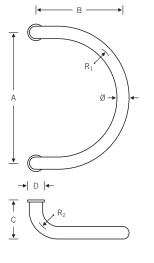
fsb.de/666623 fsb.de/666624 fsb.de/666649 fsb.de/666679

Door pull round

66 6683	Product no.	А	Ø	R1	R2	В	С	D	S
	66 6626 034 66 6673 034	200 200	20 25	100 100	25 40	130 140	75 80	30 35	41 42
	66 6673 037	300	25	150	40	190	80	35	42
	66 6673 038 66 6683 038 66 6659 038 66 6678 038	350 350 350 350	25 30 35 40	175 175 175 175	40 55 60 60	215 230 235 235	80 90 95 120	35 35 45 45	42 43 45 52

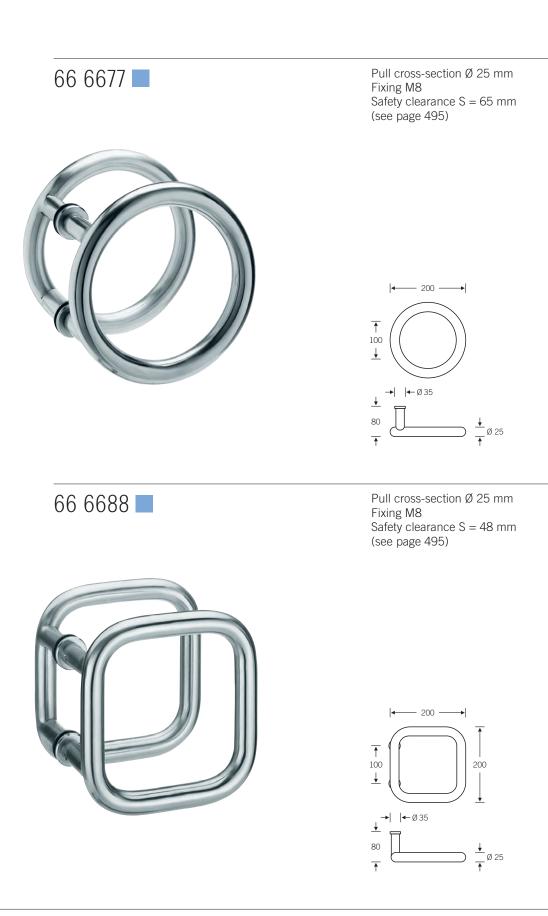
Bronze only in Ø 30 mm (66 6683 038) Fixing: Ø = 20 mm M6 I Ø \ge 25 mm M8





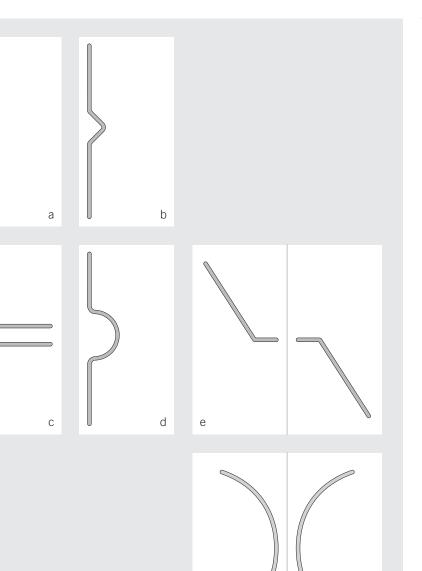
fsb.de/666626 fsb.de/666659 fsb.de/666673 fsb.de/666678 fsb.de/666683

Door pulls round



fsb.de/666677 fsb.de/666688

Design suggestions



f 🧹

For technical information see page 560 f.

The sketched pull constructions in the material stainless steel are intended as an inspiration to planners, designers, retailers and builders.

When sending an enquiry, please state the door type, material and weight. Accurate drawings are essential for an offer and for manufacture.

Directions see page 738 f.





After determining the position and spacing, the supports are attached securely to the grip section by means of an internal screw connection (see ill.). The alignment of the supports is achieved by placing the pull on a level surface once the first support has been secured, and then attaching the remaining supports with the pull in this position.

Modular system hs round Supports + grip sections

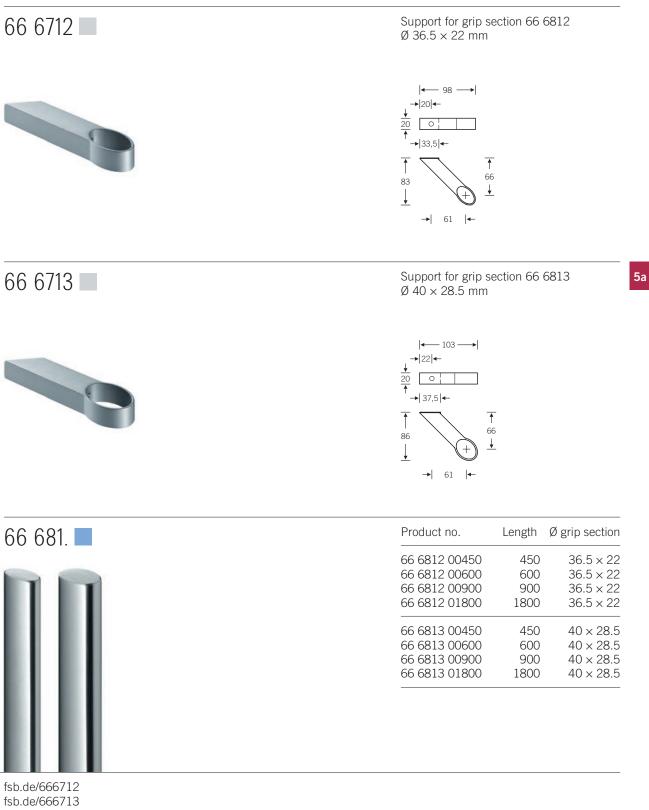
66 6710	Support for grip section 66 6810
00 0/10	Ø 25 mm
	$ \leftarrow 96 \longrightarrow $ $\downarrow 20 \leftarrow$ $\frac{1}{20} \bigcirc 1 \longrightarrow $ $\downarrow 33,5 \leftarrow$ \uparrow $ \leftarrow 61 \rightarrow $ $ \leftarrow 61 \rightarrow $
66 6711	Support for grip section 66 6811 Ø 30 mm
	$ \leftarrow 100 \longrightarrow $ $\rightarrow 22 \leftarrow$ $\frac{20}{1} \bigcirc 1 \longrightarrow $ $\Rightarrow 37,5 \leftarrow$ \uparrow 33 \downarrow $ \leftarrow 61 \rightarrow $ \downarrow
66 681.	Product no. Length Ø grip section
	66681000450450256668100060060025666810009009002566681001800180025
	66 6811 00450 450 30 66 6811 00600 600 30 66 6811 00900 900 30 66 6811 01800 1800 30
fsb.de/666710 fsb.de/666711 fsb.de/666810 fsb.de/666811	





After determining the position and spacing, the supports are attached securely to the grip section by means of an internal screw connection (see ill.). Supports + grip sections

For technical information see page 560 f.



fsb.de/666713 fsb.de/666812 fsb.de/666813

fsb.de/catalogue

Modular system ht round

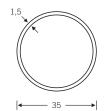
0

up to 1500 mm



Tube Ø $35 \times 1,5$ mm Ex works length 3000 mm

The ht round modular system enables the user to measure up pull systems, wall attachments, protective bars etc. on site from our tubes and the corresponding supports with the appropriate tools, and to manufacture them up to a dimension A of 1500 mm and attach them. From a dimension A of 1500 mm, we recommend the factory-welded version FSB 66 6522, see page 504. For dimensions A that are greater than 2100 mm, FSB provides 66 6523 (see page 505) – also factorywelded.



Cut lengths and 66 6715 + 66 6715 tube length 66 6716 + 66 6716 support combinations: A + 32 mm = tube length A + 40 mm = overall lengthdimension A tube length 66 6717 + 66 6717 A - 40 mm = tube length A + 30 mm = overall length dimension A tube length 66 6718 + 66 6718 A - 108 mm = tube lengthA + 30 mm = overall length dimension A tube length 66 6715 + 66 6717 A - 4 mm = tube lengthA + 35 mm = overall length dimension A tube length 66 6715 + 66 6718 A – 38 mm = tube length A + 35 mm = overall length dimension A 66 6717 + 66 6718 tube length A - 74 mm = tube length A + 30 mm = overall length dimension A (overall length incl. supports)

The terms tube length and dimension A are important for manufacture, fixing and ordering. Dimension A defines the fixing distance from the middle of the screw hole of one support to the middle of the screw hole of the other one. The tube length is the result of dimension A plus or minus the dimensional differences to the side.

FSB recommends armouring door pulls from the ht round modular system that are to be used in areas with heavy traffic with the offered accessories.

fsb.de/666801

The structural requirements and local conditions are to be taken into acount when using ht round (for self assembly or in the factory-welded version). These pulls are not a substitute for gymnastic bars, and must not be used as falling protection on hazardous building openings. In the event of doubt please consult the architect or structural engineer. Details of fixing technology see page 560 f.

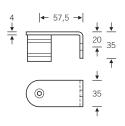
Modular system ht round

up to 1500 mm



Support straight, flap angled 90° to the inside, to fit tube Ø 35 \times 1.5 mm

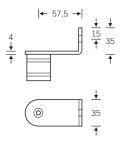




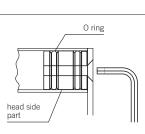
66 6717

Support straight, flap angled 90° to the outside, to fit tube Ø 35 \times 1.5 mm





fsb.de/666715 fsb.de/666716 fsb.de/666717 fsb.de/666718 Screw hole Ø 8.5 mm Safety clearance S = 52 mm (see page 495)



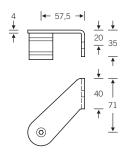
After cutting the tube length (dimension A +/- difference) the rawbolts for the chosen supports are inserted in the tube ends and screwed securely to the head end.

5a

66 6716 66 6716 014 (R) 66 6716 015 (L)

Support cranked 45°, flap angled 90° to the inside, to fit tube Ø 35 \times 1.5 mm, illustration: right

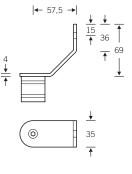




66 6718

Support for swing doors, to fit tube Ø 35×1.5 mm

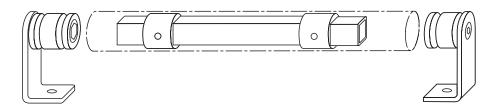


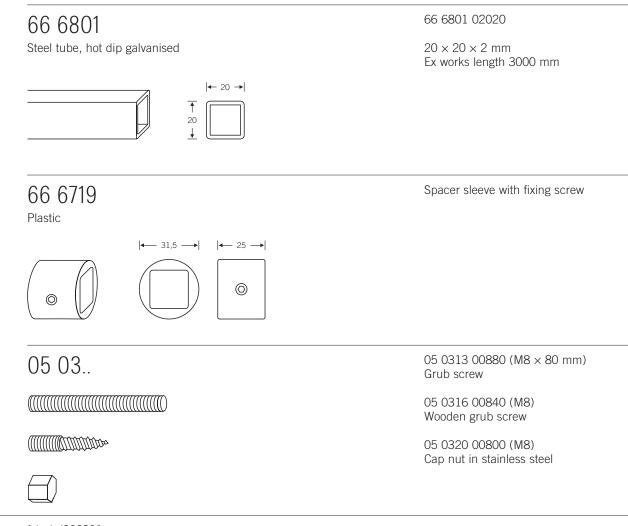


Modular system ht round

Accessories

FSB recommends armouring door pulls from the ht round modular system for use on doors with heavy traffic or with a dimension A of 1500–2100 mm with the accessories on this page – or better still, opting for the factory-welded versions FSB 66 6522 or 66 6523 (see page 504f.). Fixing information: cut steel tube to length: external tube length minus 100 mm. Position spacer sleeves along the steel tube at intervals of 350 mm and secure. Then fit.





fsb.de/666801 fsb.de/666719 fsb.de/050313 fsb.de/050316 fsb.de/050320

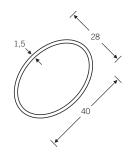
Modular system ht oval



66 6802

Tube $28 \times 40 \times 1.5$ mm Ex works length 3000 mm

The ht oval modular system enables the user to measure up pull systems, wall attachments, protective bars etc. on site from our tubes and the corresponding supports with the appropriate tools, and to manufacture them up to a dimension A of 1500 mm and attach them. From a dimension A of 1500 mm, we recommend the factory-welded version FSB 66 6524, see page 503.



66 6735 + 66 6735 66 6736 + 66 6736 Cut lengths and tube length support combinations: A + 32 mm = tube length A + 40 mm = overall length dimension A tube length · dimension A tube length dimension A tube length dimension A tube length dimension A

tube length

dimension A

	A + 40 mm = overall length
	66 6737 + 66 6737
<u>-</u>	A - 40 mm = tube length A + 30 mm = overall length
	66 6738 + 66 6738
_ →	A - 108 mm = tube length A + 30 mm = overall length
	66 6735 + 66 6737
-	A – 4 mm = tube length A + 35 mm = overall length
	66 6735 + 66 6738
\ →	A – 38 mm = tube length A + 35 mm = overall length
	66 6737 + 66 6738
_	A – 74 mm = tube length A + 30 mm = overall length

(overall length incl. supports)

The terms tube length and dimension A are important for manufacture, fixing and ordering. Dimension A defines the fixing distance from the middle of the screw hole of one support to the middle of the screw hole of the other one. The tube length is the result of dimension A plus or minus the dimensional differences to the side.

FSB recommends armouring door pulls from the ht oval modular system that are to be used in areas with heavy traffic with the offered accessories.

fsb.de/666802

The structural requirements and local conditions are to be taken into acount when using ht oval (for self assembly or in the factory-welded version). These pulls are not a substitute for gymnastic bars,

and must not be used as falling protection on hazardous building openings. In the event of doubt please bring in the architect or structural engineer. Details of fixing technology see page 560 f.

Modular system ht oval Supports

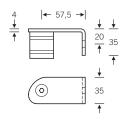
For technical information see page 560 f.

66	6735	
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66 6735 004 (R) 66 6735 005 (L)

Support straight, flap angled 90° to the outside, to fit oval tube \emptyset 40 × 28 × 1.5 mm



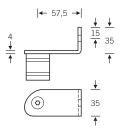


66 6737

66 6737 004 (R) 66 6737 005 (L)

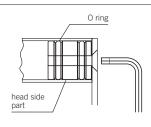
Support straight, flap angled 90° to the outside, to fit oval tube \emptyset 40 × 28 × 1.5 mm





fsb.de/666735 fsb.de/666736 fsb.de/666737 fsb.de/666738 Screw hole Ø 8.5 mm Safety clearance S = 52 mm (see page 495)

all illustrations right



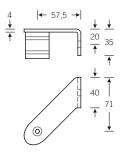
After cutting the tube length (dimension A +/– difference) the rawbolts for the chosen supports are inserted in the tube ends and screwed securely to the head end.

66 6736

66 6736 014 (R) 66 6736 015 (L)

Support cranked 45°, flap angled 90° to the inside, to fit oval tube \emptyset 40 × 28 × 1.5 mm





66 6738 66 6738 66 6738 004 (R) 66 6738 005 (L)

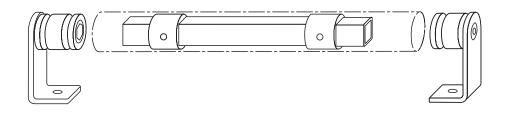
Support for swing doors, to fit oval tube, Ø 40 \times 28 \times 1.5 mm



Modular system ht oval

Accessories

FSB recommends armouring door pulls from the ht oval modular system that are to be used in areas with heavy traffic or with a dimension A of 1500–2100 mm with the accessories offered on this page – or better still, to opt for the factory-welded version FSB 66 6524 (see page 433). Fixing information: cut steel tube to length: external tube length minus 100 mm. Position spacer sleeves along the steel tube at intervals of 350 mm and secure. Then fit.



← 20 →

20

66 6801 02020

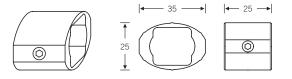
 $20 \times 20 \times 2$ mm Ex works length 3000 mm 5a

66 6739

66 6801

Steel tube, hot dip galvanised

Plastic



05 03..





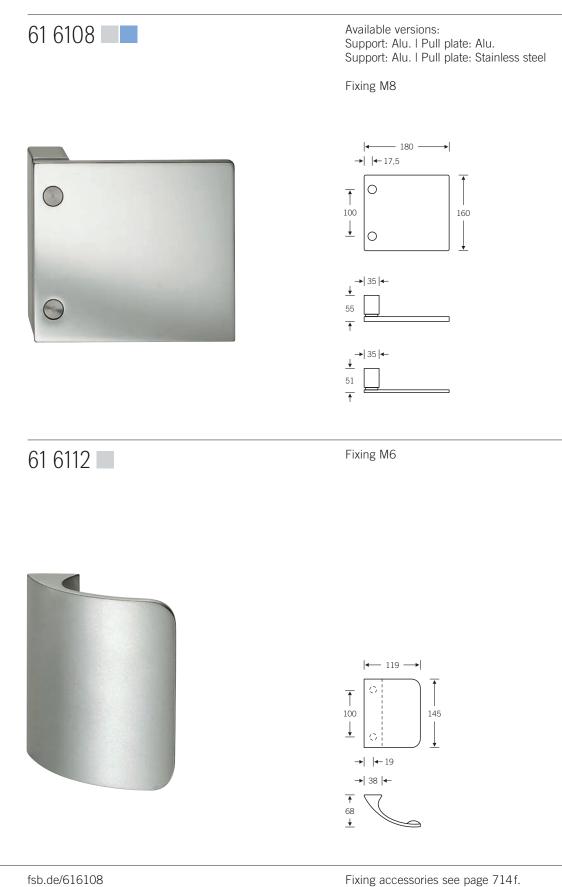
fsb.de/666801 fsb.de/666739 fsb.de/050313 fsb.de/050316 fsb.de/050320 Spacer sleeve with fixing screw

05 0313 00880 (M8 \times 80 mm) Grub screw

05 0316 00840 (M8) Wooden grub screw

05 0320 00800 (M8) Cap nut in stainless steel

Push/pull pad handles



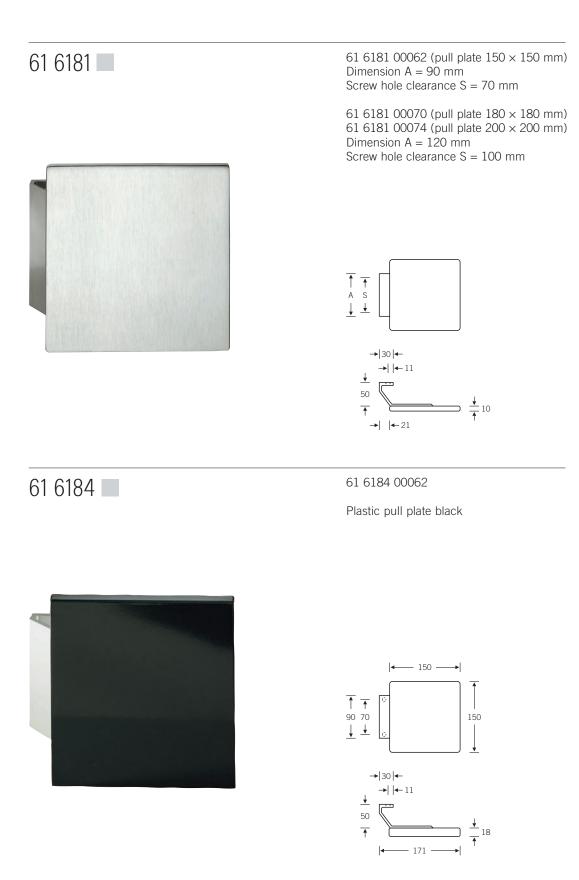
fsb.de/616112

S-Flat push/pull pad handle

Square + circle

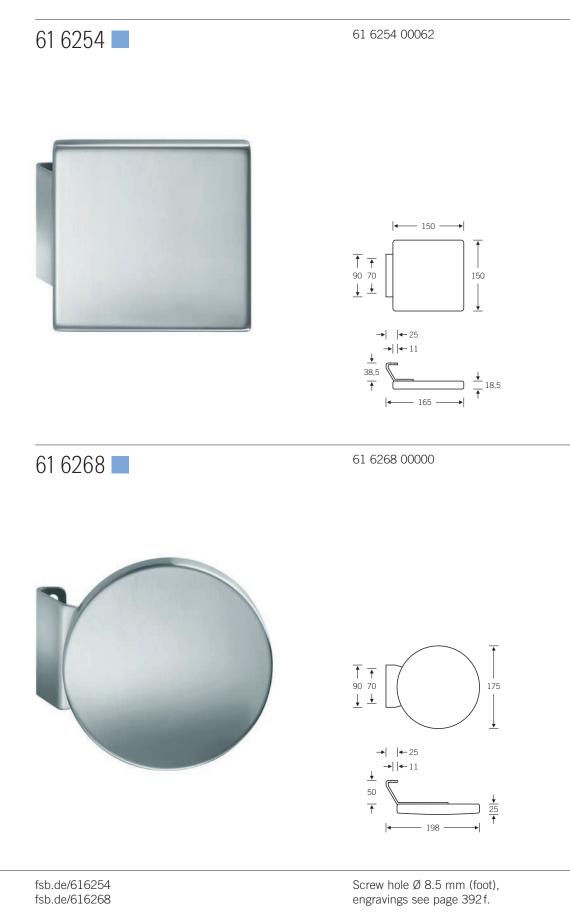


Push/pull pad handles



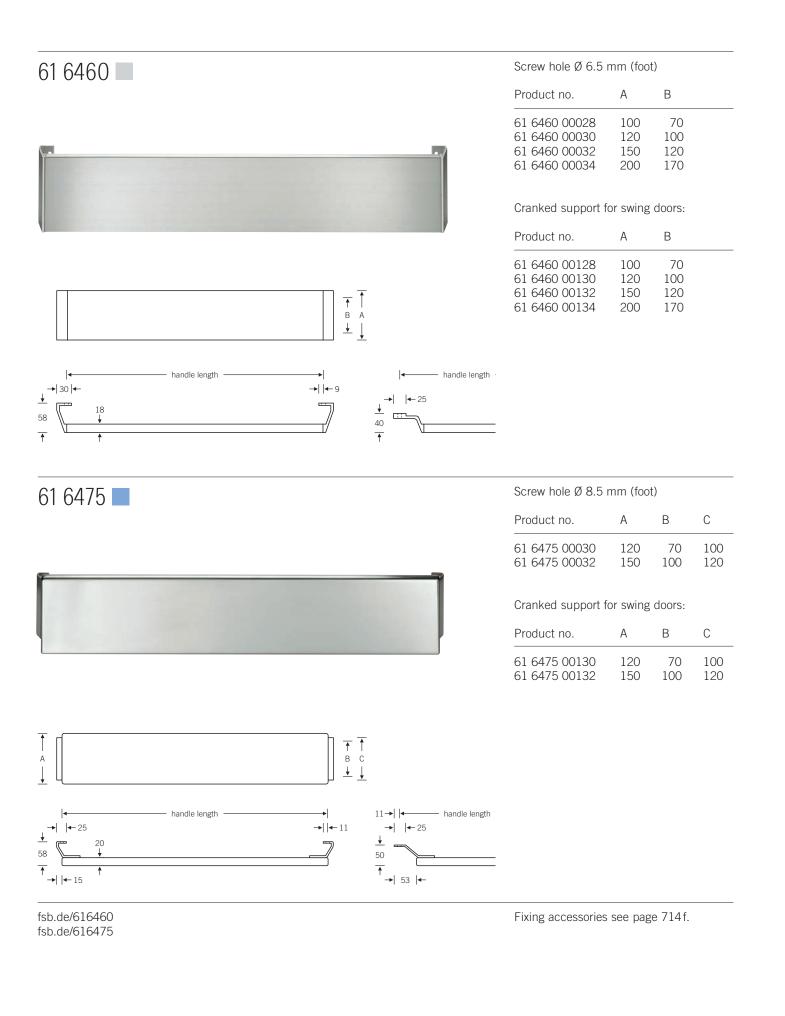
fsb.de/616181 fsb.de/616184 Screw hole Ø 8.5 mm (foot), engravings for 61 6181 see page 392 f.

Fixing accessories see page 714 f.

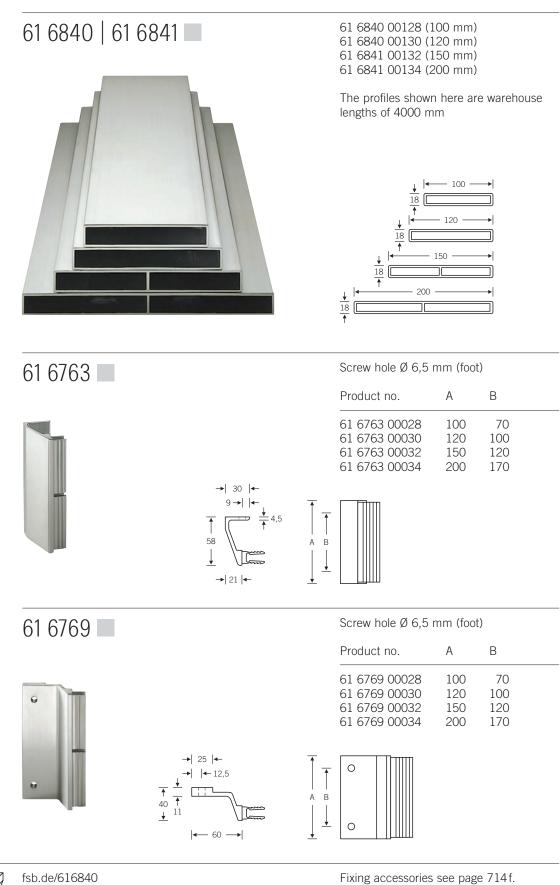


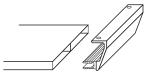
Fixing accessories see page 714 f.

Pull bars



Profiles and supports





fsb.de/616840 fsb.de/616841 fsb.de/616763 fsb.de/616769

fsb.de/catalogue

Door handles – AGL° half sets

with positive mechanism



fsb.de/701015 fsb.de/701023 fsb.de/701070 fsb.de/701076 Door handle with AGL[®] technology for face fixing to main doors, with a solid base construction including positive mechanism. You will find the required half spindles 05 0115 and 05 0116 on page 707.

Door handles – AGL[®] half sets Door knob

70 1108	70 1108 00504 right hand 70 1108 00505 left hand (round rose)
	8 mm □ hole Design FSB 1108
	Similar shaped design with arched grip section: FSB 1107, see page 192f.
70 1163	70 1163 00504 right hand 70 1163 00505 left hand (round rose)
	8 mm □ hole Design FSB 1163 ditto, but with rectangular roses (see page 230 f): 70 1163 00604 right hand 70 1163 00605 left hand
70 1183	70 1183 00604 right hand 70 1183 00605 left hand (rectangular rose)
	8 mm □ hole Design FSB 1183
	Other designs with rectangular rose: 70 1003 0060., see page116f. and 70 1004 0060., see page118f., all with 8 mm \Box hole
03 0418	03 0418 00603 8 mm □ hole Standard spindle projection 40 mm, individual spindle projections possible
3	Easy-running turning knob on a round rose for concealed face fixed attachment to multiple point locks
fsb.de/701108 fsb.de/701163 fsb.de/701183 fsb.de/030418	Door handle with AGL [®] technology for face fixing to main doors, with a solid base con- struction including positive mechanism. You will find the required half spindles 05.0115 and 05.0116 on page 707

05 0115 and 05 0116 on page 707.

FSB door pull attachment

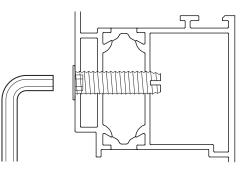
with self-tapping insert



FSB's self-tapping insert technology offers a practice-orientated and yet improved solution for concealed face fixed door pull attachments to wooden, aluminium and plastic doors that nonetheless guarantees a far more effective absorption of withdrawal forces by the door profile.

Irrespective of the door thickness or profile type, only a self-tapping insert of 34 mm length will be used.

As it is inserted, the self-tapping thread creates the optimum connection between door profile and self-tapping insert with comparatively minor tolerances that ensures an even and effective traction – as long as a precise drill hole of Ø 12.5 mm has been provided for wooden doors and Ø 13 mm for metal and plastic doors.



First step

Carry out the mechanical and the manual drills for the FSB self-tapping insert with a diameter of 12.5 mm (wooden doors) or 13 mm (metal and plastic doors).

Second step

The self-tapping insert is then screwed into place using an SW 8 Allen key. FSB recommends using an Allen key with a knob, as this offers the best possible transmission of the necessary forces. The enclosed grub screw is screwed in once the insert is flush on the profile.



Third step

The pull is then mounted on these fixing points.

FSB door pull attachment

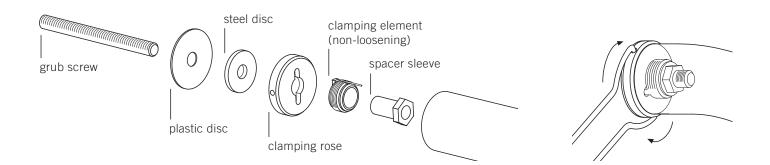
with clamping roses



The FSB fixing rose attachment is a kind of door pull attachment in which the pulls are drawn firmly onto the door surface. There is no requirement for the usually visible fixing screws.

All door pulls with a round base are supplied in the female version with an internal LH thread of 18×1.5 mm (fixing M8) or 14×1.5 mm (fixing M6). The fixing rose attachment elements consisting of one plastic disc, steel disc, clamping element (non-loosening), turning rose and spacer sleeve are firmly connected in a single unit with a plastic holder and pre-assembled on the pull end. The FSB fixing rose attachment means that any FSB door pull with a round base can be secured tightly to the surface of the door by means of an easy-to-install fixing rose. The radial play included by FSB provides the necessary tolerance offset. Installation is in the following stages:

5a



First step

First, the grub screw is inserted in the door to take up the clamping elements at a later stage. This process is based on the fixing types "back-to-back" or "bolt through" and "face fixing with a self-tapping insert".

Second step

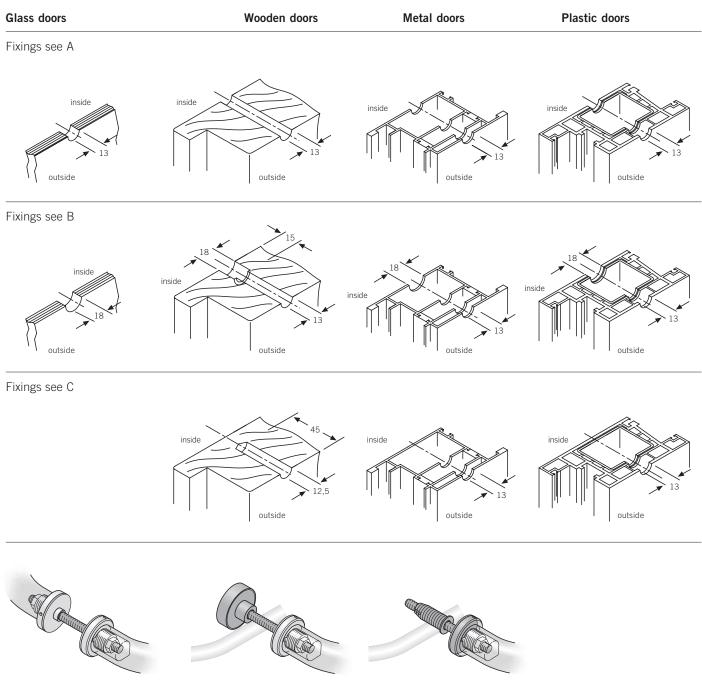
The clamping elements are then removed from the pull ends by turning them anticlockwise. The elements are now pulled off the plastic clip, and fed onto the grub screw in the sequence plastic disc, steel disc, clamping rose and clamping element. The spacer sleeve is used to screw the individual components to each other; the clamping rose and clamping element will still rotate.

Third step

Finally, the pull is placed on the fixing points and attached firmly to the surface of the door by alternately rotating the clamping roses in a clockwise direction.

The power wrench for the FSB clamping rose is included in the delivery.

Drilling dimensions



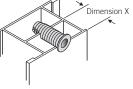
Fixing A back-to-back fixing: 05 0580, 05 0582, 05 0583, 05 0584, 05 0585, 05 0587, 05 0588 bolt through fixing: 05 0582, 05 0583, 05 0584, 05 0585, 05 0588 Fixing B bolt through fixing: 05 0580, 05 0587 Fixing C face fixing with a self-tapping insert: all fixings

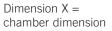
Door pull

66 6635

When choosing and ordering the pulls and fixing type, ensure that the pulls in this series are made as the threaded side and as the through side.

Fixing type	Fixing accessories	Order no.
back-to-back fixing	2 cylinder screw M8 4 plastic washers 2 pull caps in stainless steel Drill Ø 13 mm	05 0582 01008 Glass door 8 – 10 mm 05 0582 03038 38 – 44 mm 05 0582 03045 45 – 49 mm 05 0582 03050 50 – 54 mm 05 0582 03050 55 – 59 mm 05 0582 03060 60 – 64 mm 05 0582 03065 65 – 69 mm 05 0582 03070 70 – 74 mm 05 0582 03075 75 – 79 mm 05 0582 03080 80 – 84 mm
bolt-through fixing	2 countersunk screws M8 4 plastic washers 2 fixing discs with cover caps in stainless steel Drill Ø 13 mm	05 0582 02008 Glass door 8 – 10 mm 05 0582 04038 38 – 44 mm 05 0582 04045 45 – 49 mm 05 0582 04045 50 – 54 mm 05 0582 04055 55 – 59 mm 05 0582 04060 60 – 64 mm 05 0582 04065 65 – 69 mm 05 0582 04070 70 – 74 mm 05 0582 04075 75 – 79 mm 05 0582 04080 80 – 84 mm
face fixing with a self-tapping insert	 2 cylinder screw M8 2 plastic washers 2 self-cutting inserts made of hardened steel, galvanised 2 pull caps stainless steel Drill Ø 12.5 mm (wooden), Ø 13 mm (metal/plastic doors) 	05 0582 00335 Dimension X 10 – 30 mm Dowel length 34 mm





(

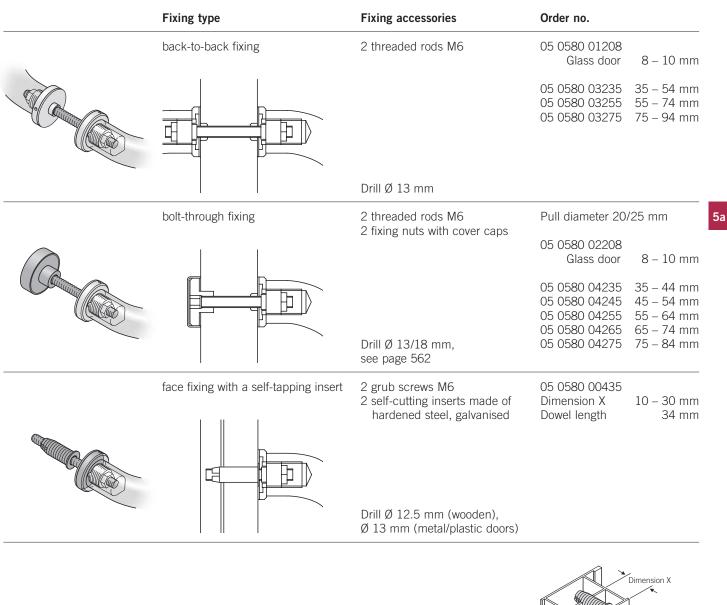
Door pulls round M8

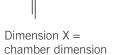
66 6501, 66 6504, 66 6506, 66 6507, 66 6514, 66 6533, 66 6534, 66 6535, 66 6536, 66 6537, 66 6538, 66 6540, 66 6541, 66 6542, 66 6546, 66 6580, 66 6582, 66 6583, 66 6602, 66 6603, 66 6604, 66 6606, 66 6607, 66 6609, 66 6623, 66 6624, 66 6625, 66 6630, 66 6650, 66 6652, 66 6653, 66 6655, 66 6659, 66 6661, 66 6662, 66 6663, 66 6664, 66 6669, 66 6670, 66 6673, 66 6677, 66 6678, 66 6679, 66 6681, 66 6683, 66 6688 * Fixing technology isis[®] F varies, see www.fsb.de/isis

	Fixing type	Fixing accessories	Order no.	
\ \	back-to-back fixing	2 threaded rods M8	05 0580 01008 Glass door	8 – 10 mm
Con Coo			05 0580 03035 05 0580 03055 05 0580 03075	35 – 54 mm 55 – 74 mm 75 – 94 mm
		Drill Ø 13 mm		
	bolt-through fixing	2 threaded rods M8 2 fixing nuts with cover caps	Pull diameter 25/	30 mm
\bigcirc			05 0580 02308 Glass door	8 – 10 mm
			05 0580 04335 05 0580 04345 05 0580 04355 05 0580 04355 05 0580 04375	35 – 44 mm 45 – 54 mm 55 – 64 mm 65 – 74 mm 75 – 84 mm
			Pull diameter 35/	40 mm
			05 0580 02408 Glass door	8 – 10 mm
		Drill Ø 13/18 mm, see page 562	05 0580 04435 05 0580 04445 05 0580 04455 05 0580 04465 05 0580 04465	35 – 44 mm 45 – 54 mm 55 – 64 mm 65 – 74 mm 75 – 84 mm
	face fixing with a self-tapping insert	2 grub screws M8 2 self-cutting inserts made of hardened steel, galvanised	05 0580 00335 Dimension X Dowel length	10 – 30 mm 34 mm
			05 0580 00336 Dimension X Dowel length 05 0580 00337 Dimension X	10 – 41 mm 45 mm 10 – 54 mm
A Line		Drill Ø 12.5 mm (wooden), Ø 13 mm (metal/plastic doors)	Dowel length	58 mm

Door pulls round M6

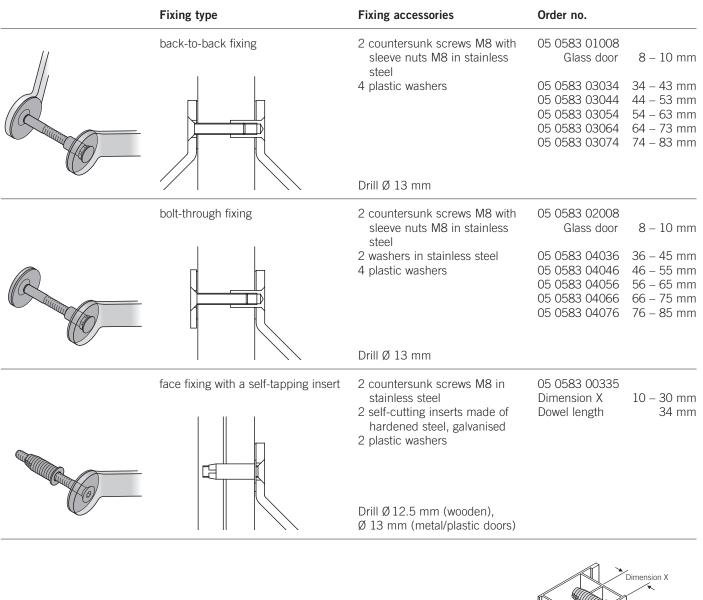
36 3688, 66 6610, 66 6611, 66 6612, 66 6613

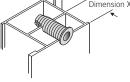




Door pulls

66 6615, 66 6616, 66 6625, 66 6674, 66 6675

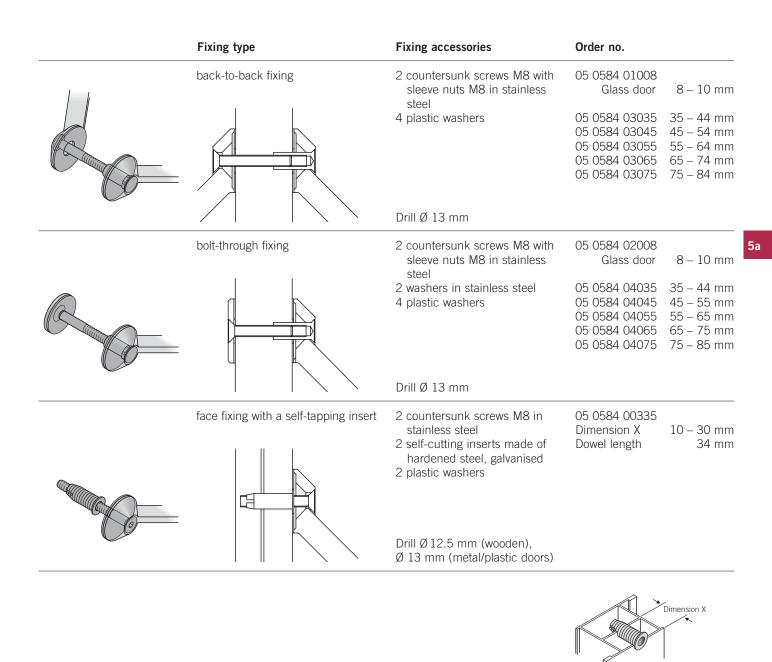




Dimension X = chamber dimension

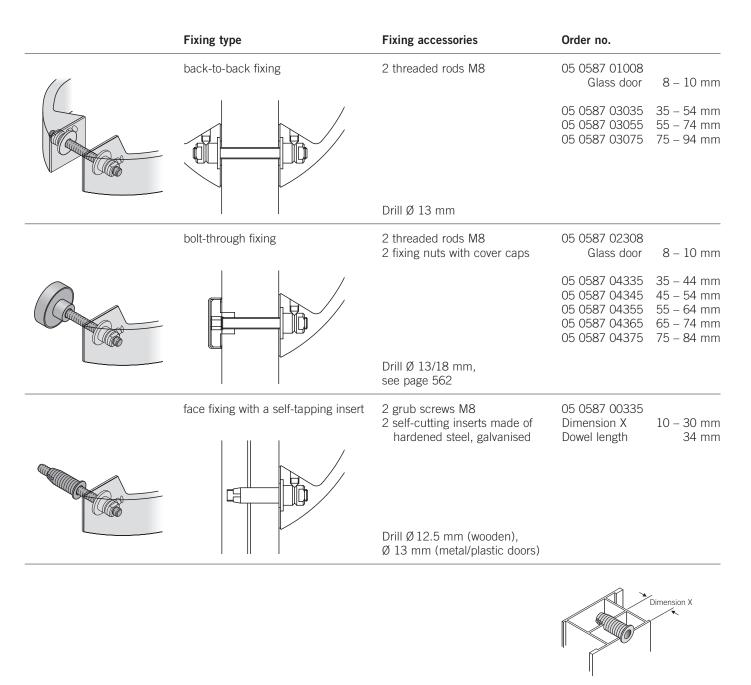
Door pulls

66 6620, 66 6621



Door and push/pull pad handles

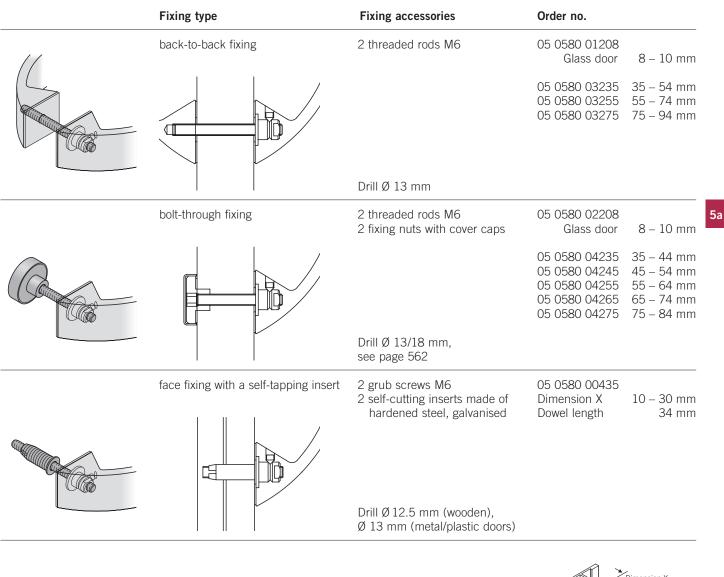
61 6108, 61 6186, 61 6187, 61 6188, 61 6189, 61 6190, 61 6191, 61 6192, 61 6193, 61 6194, 61 6195, 66 6519, 66 6520, 66 6526, 66 6548

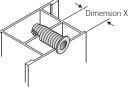


Dimension X = chamber dimension

Door and push/pull pad handles

61 6112, 66 6642, 66 6643



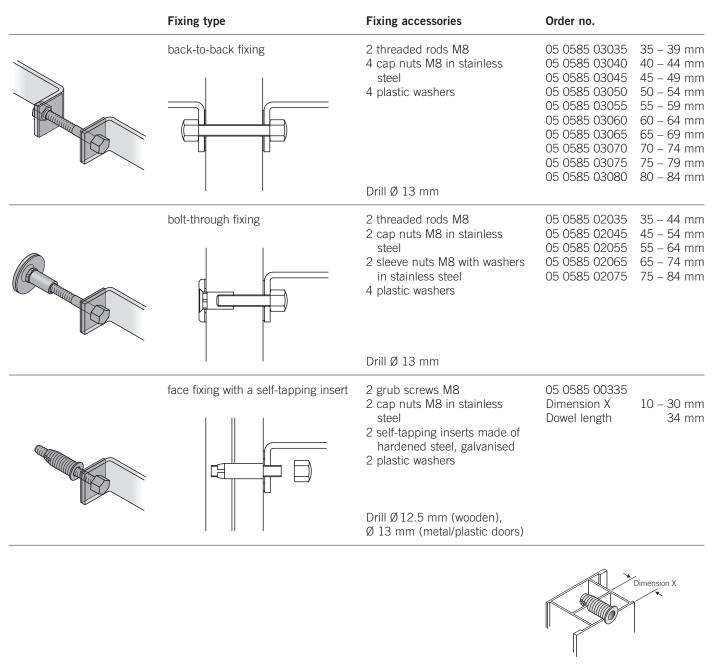


Dimension X = chamber dimension

Door pull series

Modular system ht oval Modular system ht round

66 6522, 66 6523, 66 6524, 66 6527

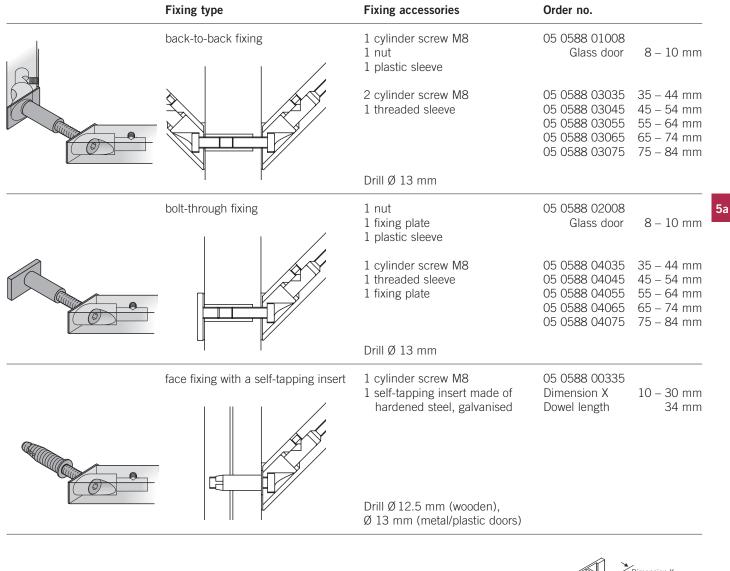


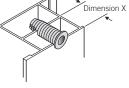
Dimension X = chamber dimension

Door pull series

Modular system ht round 66 6710, 66 6711

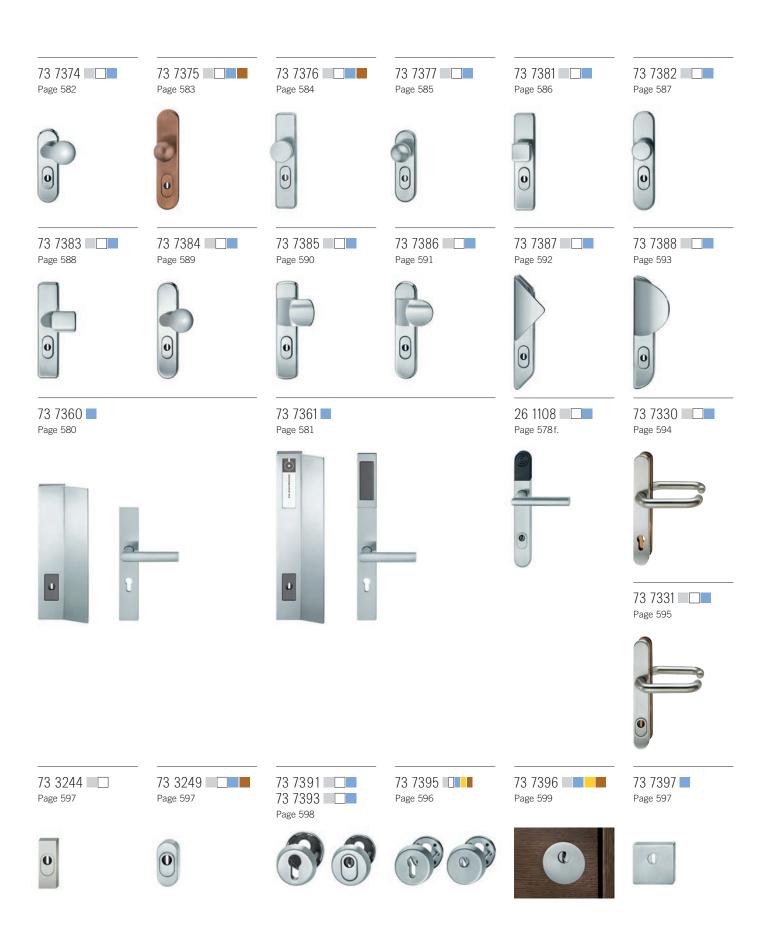
Modular system ht oval 66 6712, 66 6713

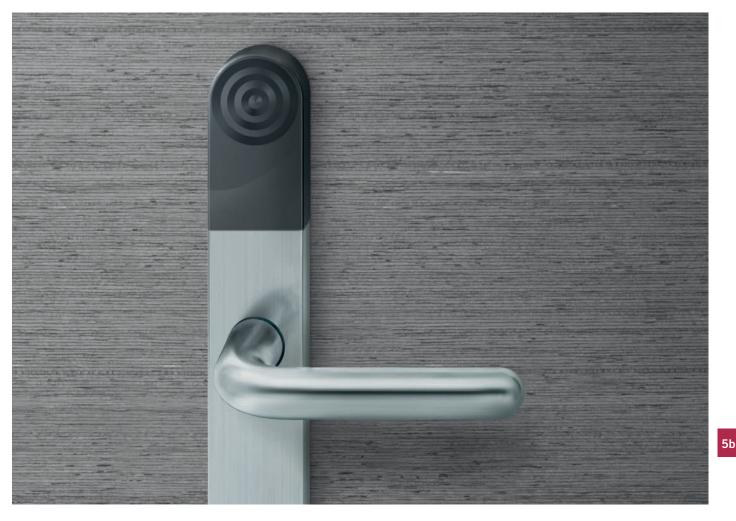




Dimension X = chamber dimension

- 575 Design + Security
- 578 isis® M100 security fittings
- 580 Security fittings
- 594 Security fittings for frame doors
- 596 Security roses
- 599 Security roses, flush fit





Is your front door open to new experiences? Because: our security fittings in the isis[®] M100 series transfer the digital building organisation straight to your entrance door (and if you want, from page 45 also inside the building). There is no need to awkwardly handle the key with our isis[®] systems in any case: simply hold the identification medium in front of the fitting and open the door using the door handle or door knob. Or you can use door pulls together with biometric function. Here the keys are always to hand – namely your fingers. More about isis[®] F (= Fingerscan) from page 87.

Technical information

Design + Security

Criminal statistics have shown that doors and windows are popular access openings. This is why police crime prevention centres and insurance companies recommend securing doors and windows.

The industry has aligned itself to market requirements. Standards have been developed to help market participants orientate themselves:

the German Industry Standard for burglarproof windows, doors and additional locks (DIN 18 103) and the German Industry Standard for building hardware and security hardware, terms, dimensions, requirements, tests and labels (DIN 18 257).

EN 1906 and DIN EN 1627 – 1630 were developed at the same time.

FSB's security hardware range in the "Design + Security" series saves architects, interior designers, carpenters and consumers from having to deal with complicated security technology. The matter of taste (design) comes first, and then the matter of understanding (the need for security). And that is why the slogan is "Design + Security". If market participants opt for this solution, then all they have to do after choosing their design is decide whether they want technical security class 2 or 4. FSB will put the chosen security technology in the chosen design package. Gone are the days when the lowest security class meant having to make do with the most basic design, while the best design was reserved for the highest class. FSB has turned this around. Once the design has been chosen, it is time to bring in the technical expert and then choose the desired security rating.

FSB's design offer is laid out clearly and comprehensively on the following pages. Browse through at your leisure, and then choose whichever design appeals. Next to your design you will find a set of technical questions; all you have to do is tick the ones that apply to you. It could not be simpler. For the technically curious, we provide the low-down on the two security classes overleaf.

Stiftung Warentest, the consumer testing company, thoroughly checked the door locks for issue 0712009 of "test" magazine. The test items included FSB 73 7376. It shone with a total rating of 1.8 (the lower the rating, the better), becoming the overall winner of the doorplates group (security class 2/ES 1-ZA). The testers felt it was important that lock. locking cylinder and doorplate should form a single unit. The latter makes it more difficult to unscrew, break, pull off or smash through the locking cylinder. It also has to be firmly screwed from the inside and made of a solid material. None of which is a problem for FSB 73 7376: the level of burglary protection resulting from these factors won it a rating of 1.4. What makes this result even more remarkable is that our security class 2 fitting achieved even better results than another company's design of rating 3.

Thanks to the modular concept and standardised layered construction of the Design + Security fittings, the security features of FSB 73 7376 also apply to all other designs in the "Design + Security" programme. Find out more at www.fsb.de/schutzbeschlag-737376 FSB security hardware is supplied for the following door thicknesses as standard:

Room doors	40-42 mm
House doors	67–69 mm
FS doors	53–57 mm

In addition to the standardised protection, FSB offers further burglar-proof components of a preventative nature. These components include:

- round roses in an open version of 12.5 to 16.5 mm height
- round roses with core extraction protection (ZA) of 12.5 to 16.5 mm height
- rectangular roses with core extraction protection (ZA) in 14.5 mm height
- round roses with core extraction protection (ZA) of 12.5 mm height, ready for flush-fit installation
- rectangular and oval roses with core extraction protection (ZA) of 16 mm height
- rectangular and oval adhesive and pushon roses of 3, 7 and 9 mm height

These burglar-proof components have been designed to deter potential burglars and/or provide as much resistance as possible to an attempt to break in.



The new security hardware designs FSB 73 7360 and 73 7361 are an entirely new design concept that is based on our proven security technology: following a quite radical, puristic design concept, our inhouse designer Hartmut Weise put forward a design for security hardware that no longer has anything in common with traditional concepts. He has made a folded surface sculpture out of 5 mm stainless steel that avoids all compromise in association with the door.

This design curity class and optior tronics pad tronic door remote doo remote go

Security class 2 (EN 1906, test mark

Security class 2 (EN 1906, test mark

Security class 4 (EN 1906, test mark

29-3/13) with core extraction protector (ZA)

29-2/13) with and without core extraction

29-2/13) open version

Tensile force fixation

max. deformation

Bore resistance Cutting bit test

protector (ZA)

(ES-1 K-ZA

(ES-1 L-ZA

max. bend

Firmness of the backplates

Firmness of the backplates

Firmness of the backplates

Tensile force fixation

max. deformation

Bore resistance

Cutting bit test

Rigidity ZA

Tensile force fixation

max. deformation

Bore resistance

Cutting bit test Rigidity ZA

(ES-3 L-ZA

max, bend

(ES-1 K

(ES-1 L

max. bend

n, which is only available in se-
s S4, comes in a classic version
nally with an integrated elec-
ckage in the form of an elec-
rbell sensor with nameplate and orbell module plus a matching ng on the inside.

reg. no. 4X078)

reg. no. 4X076)

reg. no. 4X077)

reg. no. 4X079)

reg. no. 4X081)

10 kN

15 kN

30 s

3 hits

10 kN

15 kN

30 s

3 hits

10 kN

20 kN

30 kN

5 min

12 hits

20 kN

 $\leq 5 \text{ mm}$

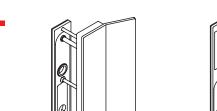
 $\leq 5 \text{ mm}$

≤ 5 mm

≤ 5 mm

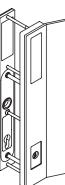
 $\leq 5 \text{ mm}$

< 5 mm



Version 73 7360

Version 73 7361 (with electronic features)



fsb.de/737361

fsb.de/737360

Security class 2 in the open (ill. 2) or core extraction protector version (ZA) (ill. 3) offers a choice in all design suggestions between the long plate version or two short plate versions.

FSB also offers a rose version for the inside in this security class in addition to the backplate variants. The open versions cover cylinder projections of 11 (ill. 1) and 15 mm (ill. 2). The core extraction protector version (ZA) covers cylinder projections of 8 to 15 mm.

The equipment rules given earlier for security class 2 in the core extraction protector version (ZA) also apply for security class 4.

Security concept Modular layer construction

In the construction of the FSB "Design + Security" fittings package, FSB made use of the layered construction technology the company had developed in-house. It has proven itself time and again in practical use, and has in fact become the industry standard.

The security required by the standard is increased from one security class to the next by replacing and adding materials.



Technical information Security fitting isis® M100

The isis® M100 security fittings combine the modular layer construction, proven over the years, of the fittings in the "Design + Security" series (see also the information about the results of the Stiftung Warentest on page 576) with a particularly clever electronic security concept.

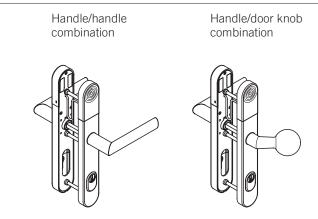
In addition, the reader (outside) and control unit (inside in the secure area) are separated from each other on the hardware: the data provided by the identification medium is read and evaluated on the outside of the fitting. The trick is: access authorisation is only then given for authorised identification media via an encrypted data connection to the control on the inside of the fitting. Unauthorised media are already rejected at the reader. In the control unit, the transferred data is encrypted and the corresponding access authorisation is triggered mechatronically. And all in just a few milliseconds. As you can see: electronic and mechanical security arrangements are consistently coordinated on isis® security fittings. The test institutes acknowledged this by awarding security class 2 (EN 1906) and ES1-L-ZA (DIN 18 257).

General features include the core extraction and cylinder snap protection (ZA) for the profile cylinder on the outside and long backplate on the inside.



Security class 2 (EN 1906) with core extraction protection (CS) (ES1-L-ZA Reg. no. 3V63) acc. to DIN 18 257: 2003-03

Rigidity	10 kN
max. bend	≤5 mm
Tensile force fixation	15 kN
max. deformation	≤5 mm
Bore resistance	30 s
Cutting bit test	3 hits
Rigidity ZA	10 kN



The security fitting originating from our access management concept isis® M100 is also supplied as a self-contained solution for house and apartment entrance doors in our "Design + Security" range.

We offer the configurations of handle/handle and handle/door knob. As regards the handle equipment, you have a choice of many design handles from the FSB range and two door knobs. You will find the list of individual designs on our order form opposite.

The isis® M100 outside fitting is an autonomous solution, which requires no on-site arrangements as regards power supply and connections to external interfaces. It can be used on all PC locks according to DIN, spacings 72/88/92 mm and backset \geq 35 mm – regardless of whether it is a new or existing door. The actuation angle is 39° maximum. Power supplied independently from the electrical network using an integrated battery ensures maximum flexibility from the planning phase onwards. In case of a declining battery voltage, an acoustic and optical signal is emitted. Replacing the two batteries (1/2 AA) requires no specialist knowledge and can easily be accomplished by laypersons with some DIY skills. An (emergency) opening option is also available at any time by means of a mechanical cylinder, which is protected against manipulation on the hardware side with a cylinder snap protection (CS).

FSB supplies the identification media equipment that you want according to your individual needs. The following administration and identification media are available:

- Key fob, in the form of a keyring, in pairs with matching clone card
- Key card, in pairs with matching clone card
- Master card (administration)
- Office card ("permanently open", not usually necessary for household customers)
- Key fob emergency

The fittings are individually programmed using the master card and key card or key fob. These are described and illustrated in Section 2a on page 60 or under fsb.de/isism100



Security fitting isis[®] **M100** Design + Security

26 1108	Order information		□	
	Type of set		Door handle (i Door handle (i door knob (out	nside),
	Door handle designs	□ 1015 (p. 126) □ 1016 (p. 130) □ 1023 (p. 138) □ 1031 (p. 150) □ 1035 (p. 150) □ 1045 (p. 154)	□ 1070 (p. 164) □ 1076 (p. 170) □ 1078 (p. 176) □ 1088 (p. 176)	□ 1144 (p. 210) □ 1146 (p. 214) □ 1147 (p. 218) □ 1177 (p. 192)
	Door knobs		□ 08 0804 (solid □ 08 0846 (fram	doors, page 300) e doors, page 311)
	Interior		Long backplate	
	Backplate set sec	curity class	S2-ZA	9–16 mm
	Direction of set		 Right, door has ZA-side facing Left, door hand ZA-side facing 	left dle
	Set to match doo	r thickness	mm	
	PC distance	□ 72 mm □ 72 mm	□ 88 mm	□ 92 mm □ 92 mm
	Square spindle	□ 8 mm □ 9 mm	□ 8.5 mm	□ 10 mm
Illustration:	Material/colour	aluminium (AL) alu. + colour (AF) stainl. steel (ER)		□ □ □ 6205
left hand fitting	Administration and identification media		Ex. office	
$ 42 \rightarrow 18,5 \rightarrow 4 \rightarrow 4 \rightarrow 15,3$ $\uparrow \uparrow \uparrow \qquad \qquad$		אור	includec new inst Ex. key (with mat Ex. key f plied wit	er (a master in l in delivery for allations) in pairs supplied cching clone) iob (in pairs sup- h matching clone) iob emergency
$\begin{array}{c c} & \downarrow \\ 282,5 \uparrow \\ & 72 \\ 88 \\ 92 \\ 92 \\ & 1 \end{array}$			Order quantity	Sets



fsb.de/261108

Reg. no. 3V63 DIN 18 257 ES1-L-ZA

5b

Design + Security



design award 2009

Design + Security



73 7361

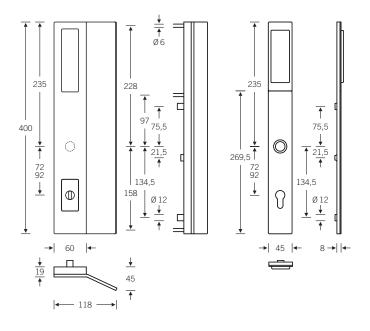
Entrance door fitting with rectangular backplate inside, with door handle FSB 1108, security class S4-ZA (cylinder projection 8–15 mm) PC distance 92 mm, 10 mm □ hole PC distance 72 mm, 8 mm □ hole

Included in the delivery:

integrated splash-proof capacitative bell sensor with LED transmitter control (outside) and tremote doorbell module integrated in door plate (inside), batteryoperated as a functional unit and with battery-operated remote gong for the inside (batteries not included)

Order information:

- door thickness
- distance and square
- door handle direction inside
- stainless steel surface
- quantity
- dimension X for pin 05 0115, see page 707





fF

design award 2009 fsb.de/737361

5b

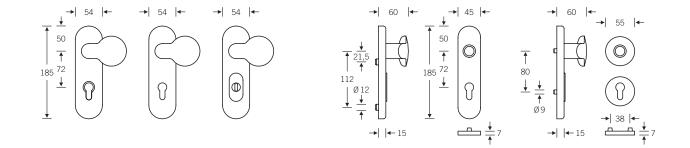
73 7374

For technical	informations	see	page !	576 f.
i or teerinicar	mormations	300	pusc .	5701.

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– S – P S
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N F

Order information	Standard Fire safety	□ 73 7374 □ 73 7574		
Type of set		 entrance door fitting door handle set 		
Interior		□ backplate	□ rose	
Security class backplate set		□ S2 □ S2 □ S2-ZA	11 mm 15 mm 8-15 mm	
Security class rose set		□ S2 □ S2 □ S2-ZA	11 mm 15 mm 8–15 mm	
Direction of set		 Door handle inside facing right Door handle inside facing left 		
Set to match door thickness		mm		
PC distance		□ 72 mm		
Square spindle		□ 8 mm □ 9 mm		
Material/colour	aluminium (AL) alu. + colour (AF) stainl. steel (ER)		□ □ □ 6205	
		Order quantity	set	

Material-specific handle versions: FSB 1107 (aluminium, aluminium + colour, stainless steel)



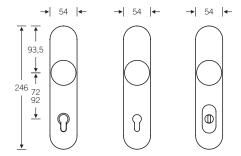
Design + Security

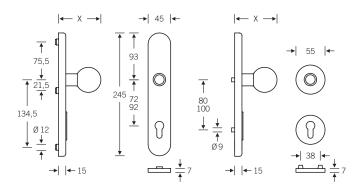
73 7375

Order information	n 🕞 Standard 🅞 Fire safety	□ 73 7375 □ 73 7575	
Type of set		□ entrance doo	or fitting
Interior		□ backplate	□ rose
Security class ba	ckplate set	□ S2 □ S2 □ S2-ZA □ S4-ZA	11 mm 15 mm 8–15 mm 8–15 mm
Security class ros	se set	□ S2 □ S2 □ S2-ZA	11 mm 15 mm 8–15 mm
Direction of set			inside facing right inside facing left
Set to match doo	r thickness	mm	
PC distance	□ 72 mm □ 78 mm, RZ 22. □ 72 mm	□ 88* mm 4 mm*	□ 92 mm
Square spindle	□ 8 mm □ 9 mm	□ 8.5* mm	□ 10 mm
Material/colour	aluminium (AL) alu. + colour (AF) stainl. steel (ER) bronze	□ 01 □ white □ 6204 □ 7615	□ □ □ 6205 □ 7625
		Order quantity .	set

Material-specific handle versions: FSB 1107 (aluminium, aluminium + colour, stal

FSB 1107 (aluminium, aluminium + colour, stainless steel) FSB 1023 (bronze, brass)







fsb.de/737375

* only S2-ZA Dim. X: 85 mm (alumi

Dim. X: 85 mm (aluminium, alu. + colour) 80 mm (stainless steel, bronze)

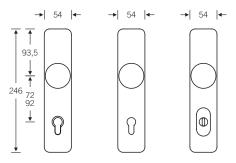
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10	1010	

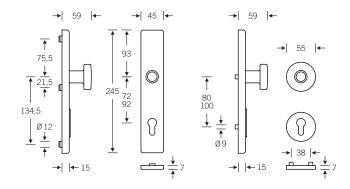


Order information 🕞 Standard G- Fire safety		□ 73 7376 □ 73 7576		
Type of set		□ entrance door	fitting	
Interior		□ backplate	□ rose	
Security class ba	ckplate set	□ S2 □ S2 □ S2-ZA □ S4-ZA	11 mm 15 mm 8–15 mm 8–15 mm	
Security class ros	e set	□ S2 □ S2 □ S2-ZA	11 mm 15 mm 8–15 mm	
Direction of set		 Door handle inside facing right Door handle inside facing left 		
Set to match doo	r thickness	mm		
PC distance	□ 72 mm □ 78 mm, RZ 22. □ 72 mm	□ 88* mm 4 mm*	□ 92 mm	
Square spindle	□ 8 mm □ 9 mm	□ 8.5* mm	□ 10 mm	
Material/colour	aluminium (AL) alu. + colour (AF) stainl. steel (ER) bronze	□ 01 □ white □ 6204 □ 7615	□ □ □ 6205 □ 7625	
		Order quantity	set	

Material-specific handle versions:

FSB 1107 (aluminium, aluminium + colour, stainless steel) FSB 1023 (bronze)



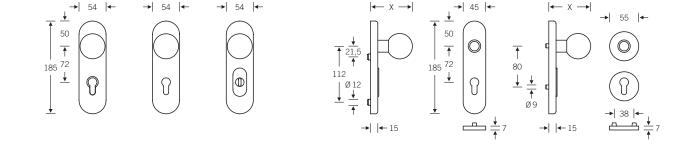




Stiftung Warentes Testsieger GUT (1,8) FSB 7376 5510 0 SK 2/ES 1 L-ZA

73 7377		Order information 🕞 Standard G- Fire safety		□ 73 7377 □ 73 7577	
	Type of set		□ entrance door	^r fitting	
	Interior		□ backplate	□ rose	
	Security class back	plate set	□ S2 □ S2 □ S2-ZA	11 mm 15 mm 8–15 mm	
	Security class rose	set	□ S2 □ S2 □ S2-ZA	11 mm 15 mm 8-15 mm	
	Direction of set		□ Door handle in □ Door handle in		
	Set to match door t	hickness	mm		
	PC distance		□ 72 mm		
	Square spindle		□ 8 mm □ 9 mm		
	ć	aluminium (AL) alu. + colour (AF) stainl. steel (ER)	□ 01 □ white □ 6204	□ □ □ 6205	
			Order quantity _	set	

Material-specific handle versions: FSB 1107 (aluminium, aluminium + colour, stainless steel)





fsb.de/737377

Dim. X: 85 mm (aluminium, alu. + colour) 80 mm (stainless steel)

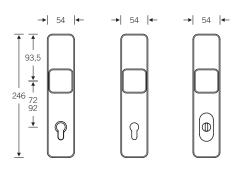
73 7381	
101001	

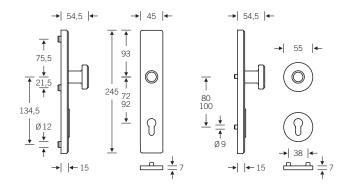


Order information (>>> Standard (>>>> Fire safety		□ 73 7381 □ 73 7581 (stainless steel only)		
Type of set		 ☐ entrance door fitting ☐ door handle set 		
Interior		□ backplate	□ rose	
Security class backplate set		□ S2 □ S2 □ S2-ZA □ S4-ZA	11 mm 15 mm 8–15 mm 8–15 mm	
Security class rose set		□ S2 □ S2 □ S2-ZA	11 mm 15 mm 8–15 mm	
Direction of set		 Door handle inside facing right Door handle inside facing left 		
Set to match door thickness		mm		
PC distance	□ 72 mm □ 78 mm, RZ 22. □ 72 mm	□ 88* mm □ 92 mm 2.4 mm*		
Square spindle	□ 8 mm □ 9 mm	□ 8.5* mm	□ 10 mm	
Material/colour	aluminium (AL) alu. + colour (AF) stainl. steel (ER)	□ 01 □ white □ 6204	□ □ □ 6205	
		Order quantity _	set	

Material-specific handle versions:

FSB 1107 (aluminium, aluminium + colour, stainless steel)





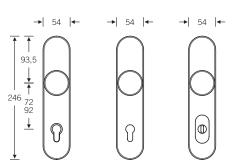


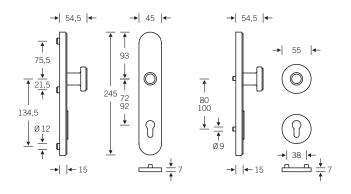
73 7382



Order information 🕞 Standard G- Fire safety		 73 7382 73 7582 (stainless steel only) 		
Type of set		☐ entrance door fitting☐ door handle set		
Interior		□ backplate	□ rose	
Security class backplate set		□ S2 □ S2 □ S2-ZA □ S4-ZA	11 mm 15 mm 8–15 mm 8–15 mm	
Security class rose set		□ S2 □ S2 □ S2-ZA	11 mm 15 mm 8–15 mm	
Direction of set		 Door handle inside facing right Door handle inside facing left 		
Set to match door thickness		mm		
PC distance	□ 72 mm □ 78 mm, RZ 22. □ 72 mm	□ 88* mm □ 92 mm 22.4 mm*		
Square spindle	□ 8 mm □ 9 mm	□ 8.5* mm	□ 10 mm	
Material/colour	aluminium (AL) alu. + colour (AF) stainl. steel (ER)	□ 01 □ white □ 6204	□ □ □ 6205	
		Order quantity	set	

Material-specific handle versions: FSB 1107 (aluminium, aluminium + colour, stainless steel)







fsb.de/737382

* only S2-ZA

5b

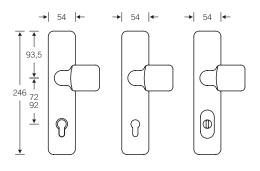
Design + Security

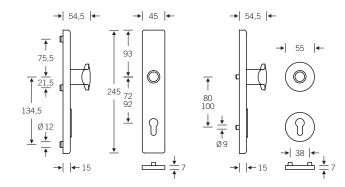


Order information 🕞 Standard G- Fire safety		 73 7383 73 7583 (stainless steel only) 	
Type of set		 ☐ entrance door fitting ☐ door handle set 	
Interior		□ backplate	□ rose
Security class backplate set		□ S2 □ S2 □ S2-ZA □ S4-ZA	11 mm 15 mm 8–15 mm 8–15 mm
Security class rose set		□ S2 □ S2 □ S2-ZA	11 mm 15 mm 8-15 mm
Direction of set		 Door handle inside facing right Door handle inside facing left 	
Set to match door thickness		mm	
PC distance	□ 72 mm □ 78 mm, RZ 22. □ 72 mm	□ 88* mm 4 mm*	□ 92 mm
Square spindle	□ 8 mm □ 9 mm	□ 8.5* mm	🗆 10 mm
Material/colour	aluminium (AL) alu. + colour (AF) stainl. steel (ER)	□ 01 □ white □ 6204	□ □ □ 6205
		Order quantity _	set

Material-specific handle versions:

FSB 1107 (aluminium, aluminium + colour, stainless steel)

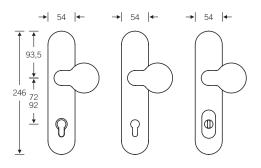


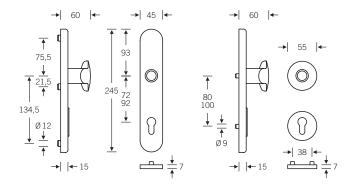




Design + Security









fsb.de/737384

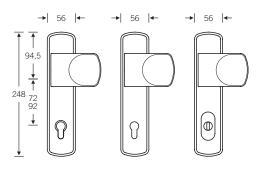
* only S2-ZA

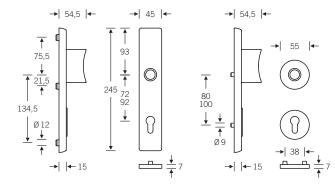


Order information 🕞 Standard		 73 7385 73 7585 (stainless steel only) 		
Type of set		 ☐ entrance door fitting ☐ door handle set 		
Interior		□ backplate	□ rose	
Security class backplate set		□ S2 □ S2 □ S2-ZA □ S4-ZA	11 mm 15 mm 8–15 mm 8–15 mm	
Security class rose set		□ S2 □ S2 □ S2-ZA	11 mm 15 mm 8-15 mm	
Direction of set		 Door handle inside facing right Door handle inside facing left 		
Set to match door thickness		mm		
PC distance	□ 72 mm □ 78 mm, RZ 22. □ 72 mm	□ 88* mm 4 mm*	□ 92 mm	
Square spindle	□ 8 mm □ 9 mm	□ 8.5* mm	□ 10 mm	
Material/colour	aluminium (AL) alu. + colour (AF) stainl. steel (ER)	□ 01 □ white □ 6204	□ □ □ 6205	
		Order quantity	set	

Material-specific handle versions:

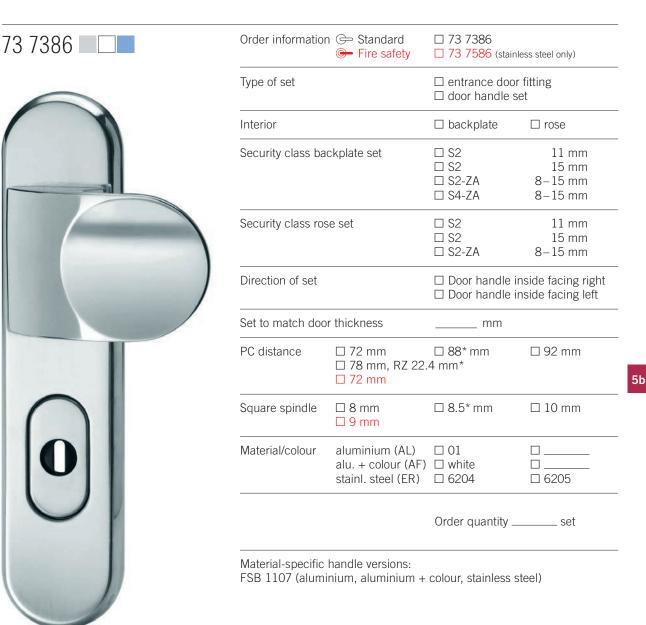
FSB 1107 (aluminium, aluminium + colour, stainless steel)

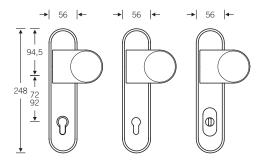


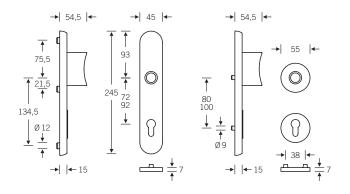




Design + Security





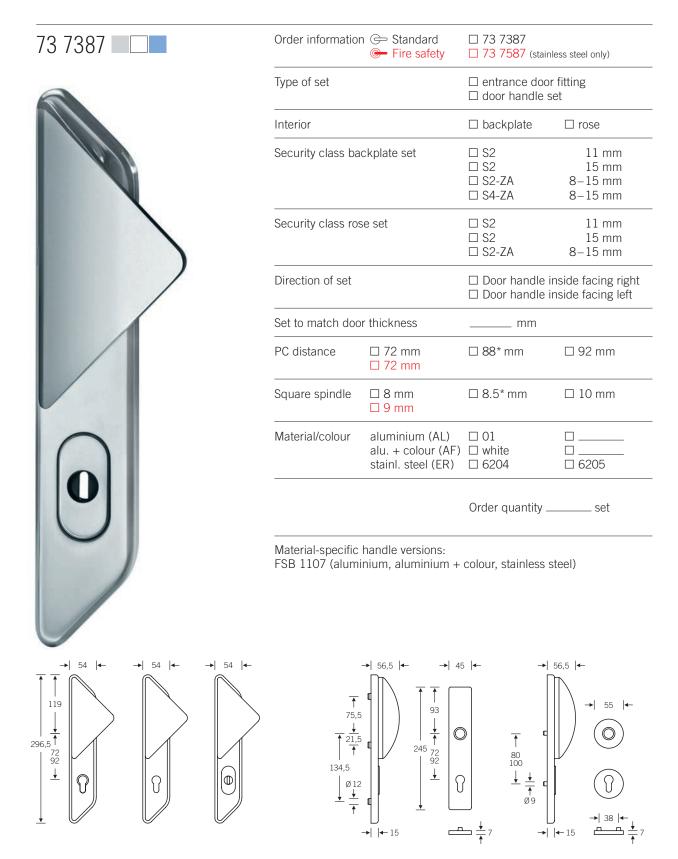




fsb.de/737386

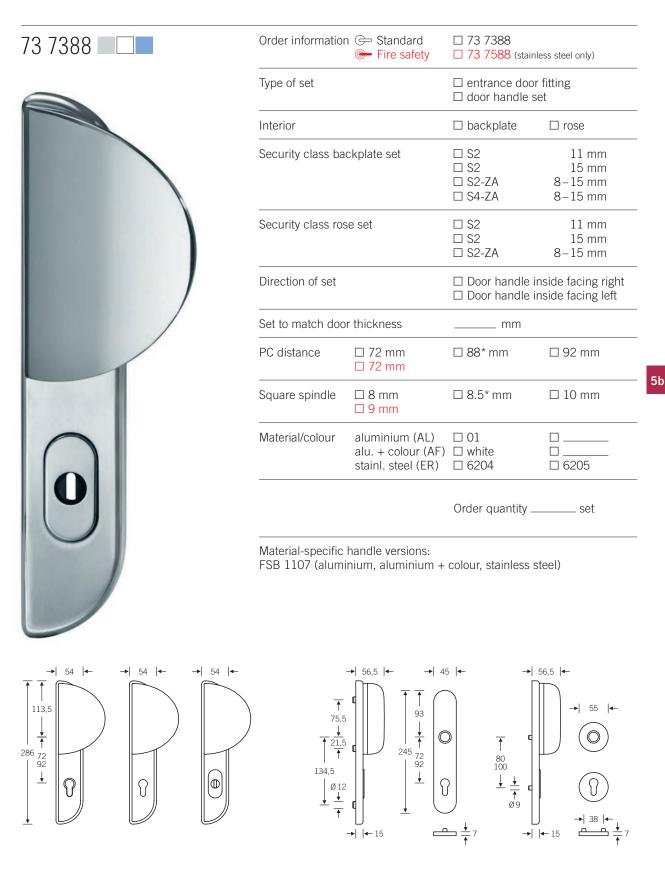
* only S2-ZA

Design + Security





Design + Security





^{*} only S2-ZA

for frame doors



EN 179

fsb.de/737330

Certified acc. to DIN 18 257 ES 1 Reg. no. 3V05

for frame doors



Reg. no. 3V05

73 7395 01	to match cylinder p	to match cylinder projection (ZÜ) as per table		
	Product no.	Ø	ZÜ	Height
	73 7395 01010 73 7395 01110 73 7395 01210	61.5 mm 62.3 mm 63.0 mm	6.5 mm 8.5 mm 10.5 mm	12.5 mm 14.5 mm 16.5 mm
	Because of the usu these roses can on 50 mm or more			
	$ \leftarrow 61,5 \rightarrow \leftarrow 62,3 \rightarrow \leftarrow 63 \rightarrow $			
70,7005,00	\rightarrow 38 $ \leftarrow \rightarrow $ 12.5 \uparrow to match cylinder p		$ 38 \leftarrow$ 16,5 \uparrow	
73 7395 00	to match cynnder f	Drojection (20) as per table	
	Product no.	Ø	ZÜ	Height
	73 7395 01010 73 7395 01110 73 7395 01210	61.5 mm 62.3 mm 63.0 mm	6.5 mm 8.5 mm 10.5 mm	12.5 mm 14.5 mm 16.5 mm
	* recommended cy	rlinder projecti	on ± 1.5 mm	
		$\overline{\mathbb{C}}$	- 63 → I	
			<u> </u>	

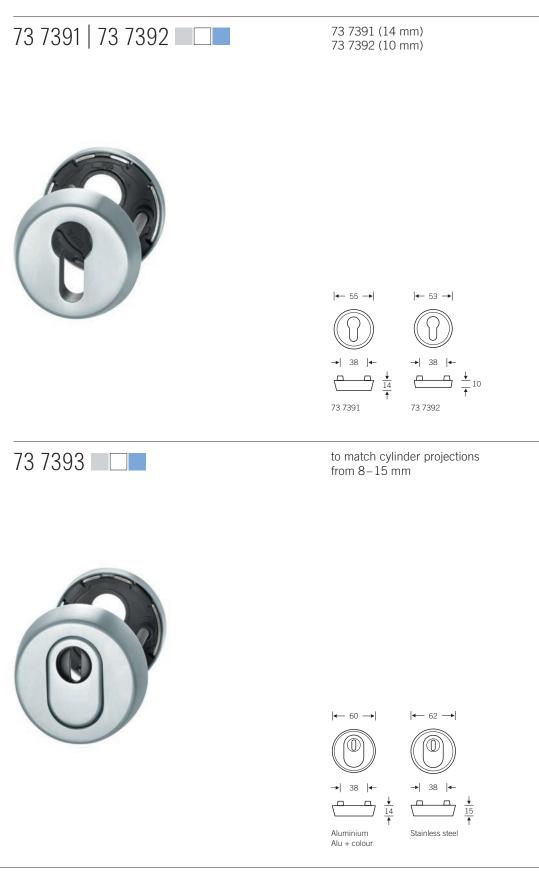
Both roses are tested and certified accord. to DIN 18 257 ES 1 $\,$

PIVGERT

73 7397 🗖	Tested and certified to DIN 18 257 ES 1 with inner rose FSB 17 1704			
	Product no.	Ø	ZÜ	Height
	73 7397 01110	61.5 mm	8.5 mm	14.5 mm
0				
	$[\leftarrow 61,5 \rightarrow]$ $\overbrace{61,5}{0}$			
	\rightarrow 38 \downarrow 14,5			
73 3244	73 3249			
to match cylinder projections from $8-15$ mm, screw hole Ø 3.2 mm	to match cylinder projections from $10-17$ mm, screw hole Ø 3.2 mm			
$ \begin{array}{c} \bullet \\ 92 \end{array} \end{array} \left[\begin{array}{c} \bullet \\ 16 \end{array} \right] \left[\begin{array}{c} \bullet \\ \bullet \end{array} \right] \left[\begin{array}{c} \bullet \\ 16 \end{array} \right] \left[\begin{array}{c} \bullet \\ \bullet \end{array} \right] \left[\begin{array}{c} \bullet \\ 16 \end{array} \right] \left[\begin{array}{c} \bullet \\ \bullet \end{array} \right] \left[\begin{array}{c} \bullet \\ 16 \end{array} \right] \left[\begin{array}{c} \bullet \\ \bullet \end{array} \right] \left[\begin{array}{c} \bullet \\ \end{array} \right] \left[\begin{array}{c} \bullet \\ \bullet \end{array} \right] \left[\begin{array}{c} \bullet \end{array} \right] \left[\begin{array}{c} \bullet \\ \end{array} \right] \left[\begin{array}{c} \bullet \\ \bullet \end{array} \right] \left[\begin{array}{c} \bullet \end{array} \\ \\ \\ \\[\end{array}] \left[\end{array} \\ \\[\end{array}] \left[\begin{array}{c} \bullet \end{array} \\ \\[\end{array}] \left[\end{array} \\ \\[\end{array}] \left[\end{array} \\ \\[\end{array}] \left[\end{array} \\ \\ \\[\end{array}] \left[\end{array} \\ \\ \\[\end{array}] \left[\end{array} \\ \\ \\ \\ \\ \\[\end{array}] \left[\end{array} \\ \\ \\$		→ 77,5	36,5 ← → 16 ◀	_



fsb.de/737397 fsb.de/733244 fsb.de/733249 The integrated security technology requires the external dimensions of the security rose to project 11 mm (FSB 73 3244) beyond the screw hole distance. Please take this into consideration in combination with other fittings.



fsb.de/737391 fsb.de/737392 fsb.de/737393

598

Security roses

flush fit



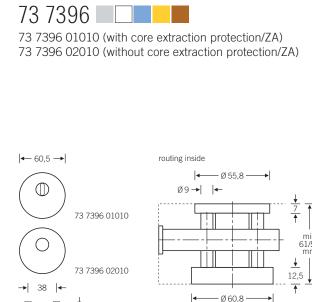
Tested and certified to DIN 18 257 ES 1

The factor that ultimately determines whether series 73 7396 armoured roses can be flush-fitted is not so much the door thickness as the distance from the lock centre to the outside of the door of 56 mm:

FSB 73 7396 01010 requires at least 33.5 mm, and FSB 73 7396 02010 a modest 29 mm.

The smaller dimension for 73 7396 02010 is due to the omission of the securing disc, making 73 7396 02010 the first choice in cases with difficult dimensional configurations of door thickness/lock position: for thinner doors or if the position of the lock is less than ideal, 73 7396 02010 will provide up to 4.5 mm more cylinder projection than 73 7396 01010, or will compensate for a door that is 4.5 mm thinner. The advantage: omitting the securing disc does not affect the security class, so DIN 18 257 ES 1 applies for both versions. In order to be able to flush-fit the inside rose, another 27.5 mm are required from the lock centre to the inside of the door. This results in a minimum door thickness of 56 mm.

Flush-fitting hardware on the outside of a door requires it to be routed to \emptyset 60.8 mm with a depth of 12.5 mm, and \emptyset 55.8 mm on the inside with a depth of 7 mm.

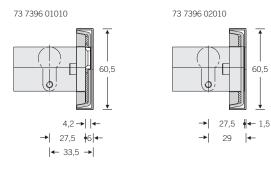


routing outside

The lug boreholes (Ø 9 mm) need to be 38 mm apart and at least 7 mm deep on both sides. The machined areas need to be sealed, especially on the outside of the door.

Since flush fitting has no bearing on the security class, armoured roses can, of course, be allowed to project by a few millimetres or, indeed, can be surface-mounted in the "classical" way, a solution that is every bit as visually impressive, given the elemental geometry that imbues the 73 7396.

You will find a routing template under product no. 03 0462 00010 on page 725.





fsb.de/737396

Order information:

Door thickness

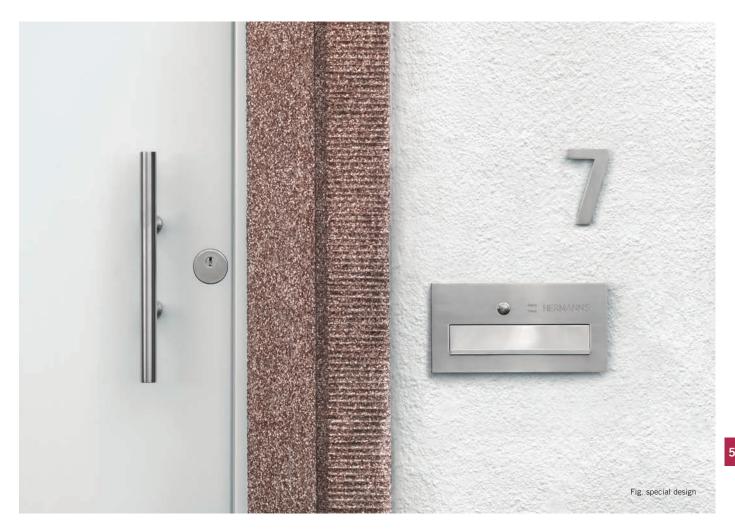
- Version 73 7396 01010 oder 02010
- Material/finish
- Quantity

606 Letter plates

- 612 Intercom and bell panels
- 614 Numerals

Overview

38 3801 Page 606	38 3808	38 3826	38 3826
38 3835	38 3845 Page 611		
38 3810	38 3811	38 3812	38 3863
38 3864	38 3865	38 3866	
38 4005 1 Page 614	Engravings _{Page} 604		
2 a	Familite julius Namifeto		



The front door or entrance area area of a house gives an initial impression of the occupants' values. FSB's range offers almost unlimited possibilities for individual or exclusive designs. It is irrelevant whether the items in question are traditional door pulls, security hardware or other accessories that do not necessarily have to be attached to the door. A consistent, simple design philosophy, using the same materials (aluminium, stainless steel, brass and bronze) and a consistently fine surface finish to all the individual items guarantees a harmonious, matching overall appearance.

Letter plates Intercom and bell-push plates



Letter plates

All FSB letter plates have a spring mechanism, so they can also be fitted vertically. Furthermore, FSB manufactures letter plates and the matching accessories for a wide range of installation situations and with the most diverse external and opening dimensions, with custom inscriptions or engravings:

- Letter plates with or without a spacer
- Letter plates with or without a nameplate, optionally with a plastic frame or the name engraved directly onto the letter plate

Engraving

Engravings can be carried out on letter plates, intercom and bell-push plates. In our opinion, engraving on metal is not only the most aesthetic solution, but also stands for respectability and a particular understanding of values that we associate with the first impression of the entrance area of the residence. Engravings can be carried out in "natural" or in colour. With regard to individual designs, the possibilities range from all the standard colour systems (RAL, HKS, Pantone etc.) to colours used in the automobile industry. If no specific colour request is made, we will supply the engraving in black as standard.

If you choose a special design for your engraving and/or a special format, please allow for a longer delivery time.

Fonts: Upper case height from 4 mm

Laser engraving

FSB offers the possibility to process motifs in the form of pixel data such as .tiff, .jpeg and .bmp in addition to vectorised files, and of lasering picture motifs or graphics. Linear filigree design elements are particular delightful, as lasering enables the use of very fine line thicknesses or dots.

Due to the oxide layer in the aluminium, laser engravings generally have a metallicwhite appearance (even on coloured anodised backgrounds). Lasered stainless steel surfaces are black.

If you choose a special design for your engraving and/or a special format, please allow for a longer delivery time.

Fonts: Upper case height from 2.0 mm



Fonts

In case of typographic engravings we need exact details about the font type and size. Besides a broad range of fonts, we can also arrange for your script, logos or names to be input in vectored form or converted into character paths. If no details about the font type, style or size are given when ordering, we produce typographic engravings in "Arial". The font "Blair Medium" is used for the lower of the engravings shown above, "Charlemagne" for the one on the right.

Bell push and light socket

Bell pushes may only be connected to a protective extra low voltage (max. 42V). Given the high no-load voltage involved, we recommend connecting the light socket (lamp operation max. 24V/40 mA) to the safety transformer (8V).

EN 13 724

The European Standards Committee drew up the above EN standard in co-operation with the Deutsche Bundespost, letterplate manufacturers and representatives of consumer associations. With regard to the opening for domestic letter boxes, the standard requires a test envelope in the format C4 (= 229×324 mm) and 24 mm thick to pass through the opening without it being folded or otherwise being damaged. The FSB letter plate designs 38 3829 and 38 3801 meet this requirement.

Fitting information

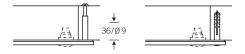
When fitting letter plates and bell-push plates, please ensure that they are not exposed to driving rain.

Fixing

Concealed fixing:

 \emptyset 9 mm, 36 mm deep, \emptyset 4.5 mm or \emptyset 5.5 mm through fixing. To be fixed with M4 or M5 screws (included).

Visible fixing (wall mounting): On request, the intercom and bell-push plates and the letter plate 38 3808 can also be supplied for visible fixing using Ø 5 mm countersunk screws.



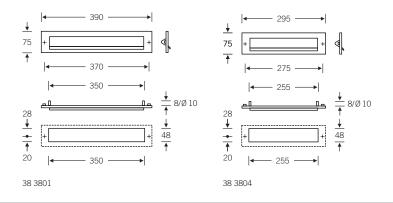
38 3801 | 38 3804 🔳

38 3801 02001 (without nameplate) 38 3801 02002 (with nameplate) Opening dimensions 325 × 32 mm Door cutout 350 × 48 mm

38 3804 02001 (without nameplate) 38 3804 02002 (with nameplate) Opening dimensions 230 × 32 mm Door cutout 255 × 48 mm

Engravings see page 604





fsb.de/383801 fsb.de/383804 Fastening drill holes:

Ø 10 mm, 48 mm deep Ø 5.5 mm through fixing To be fixed using M5 screws (included)

Letter plates

38 3808

38 3808 00061 (40 – 70 mm) 38 3808 00071 (71 – 100 mm) Letter plate set without nameplate, with spacer and inner flap

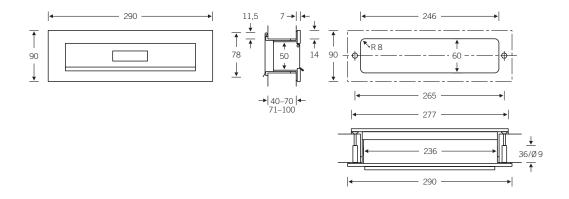
38 3808 00001 38 3808 00101 for wall mounting Letter plate without nameplate, without spacer and inner flap 38 3808 00062 (40 – 70 mm) 38 3808 00072 (71 – 100 mm) Letter plate set with nameplate, spacer and inner flap

38 3808 00002 38 3808 00102 for wall mounting Letter plate with nameplate, without spacer and inner flap

Opening dimensions 230 \times 35 mm Door cutout 246 \times 60 mm

Engravings see page 604





fsb.de/383808

Fixed invisibly from the inside or through the inner flap

Fastening drill holes:

Ø 9 mm, 36 mm deep Ø 4,5 mm through fixing To be fixed using M4 screws (included) 5c

Letter plates



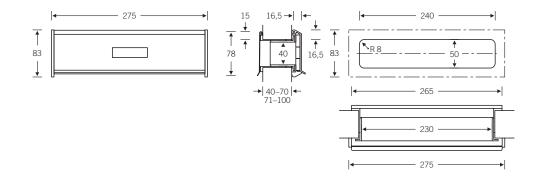
38 3826 02061 (40 – 70 mm) 38 3826 02071 (71 – 100 mm) Letter plate set without nameplate, with spacer and inner flap

38 3826 02001 Letter plate without nameplate, without spacer and inner flap 38 3826 02062 (40 – 70 mm) 38 3826 02072 (71 – 100 mm) Letter plate set with nameplate, with spacer and inner flap

38 3826 02002 Letter plate with nameplate, without spacer and inner flap

Opening dimensions 230 \times 40 mm Door cutout 240 \times 50 mm





fsb.de/383826

Separate fastening of letter plate and inner flap

38 3826 | 38 3829

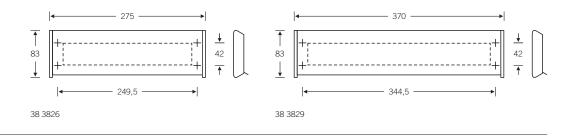
38 3826 02001 without nameplate 38 3826 02002 with nameplate

Opening dimensions or door cutout 230 \times 40 mm

38 3829 02001 without nameplate 38 3829 02002 with nameplate

Opening dimensions or door cutout $325 \times 40 \text{ mm}$







Letter plates



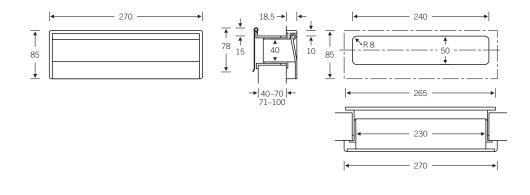
38 3835 00061 (40 – 70 mm) 38 3835 00071 (71 – 100 mm) Letter plate set without nameplate, with spacer and inner flap

38 3835 00001 Letter plate without nameplate, without spacer and inner flap 38 3835 00062 (40 – 70 mm) 38 3835 00072 (71 – 100 mm) Letter plate set with nameplate, with spacer and inner flap

38 3835 00002 Letter plate with nameplate, without spacer and inner flap

Opening dimensions 230 \times 40 mm Door cutout 240 \times 50 mm





fsb.de/383835

Separate fastening of letter plate and inner flap

Flap Bell push

38 3845

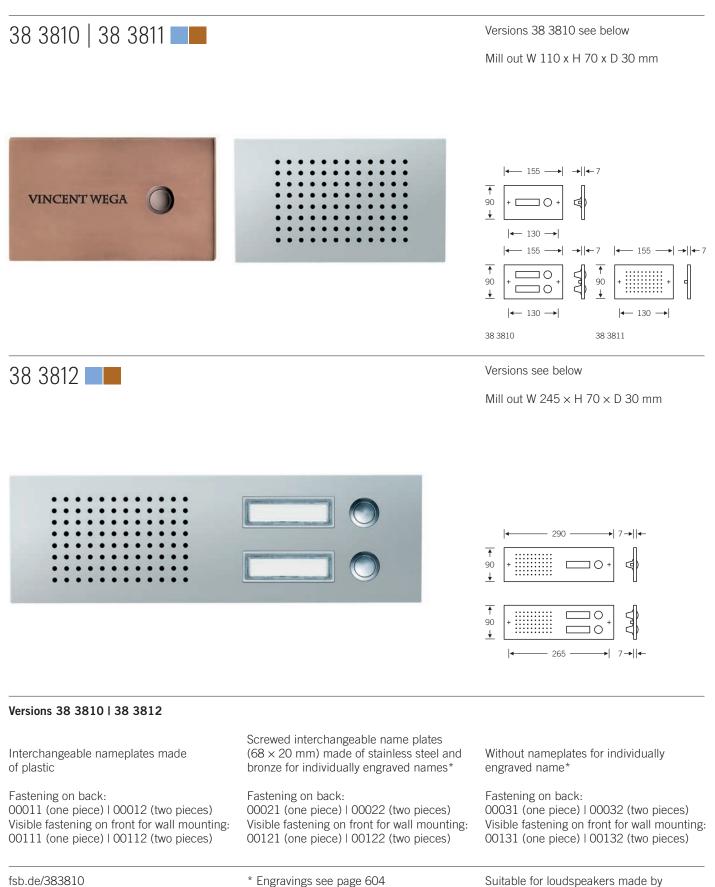
Suitable for door cutout $255 \times 40 \text{ mm}$



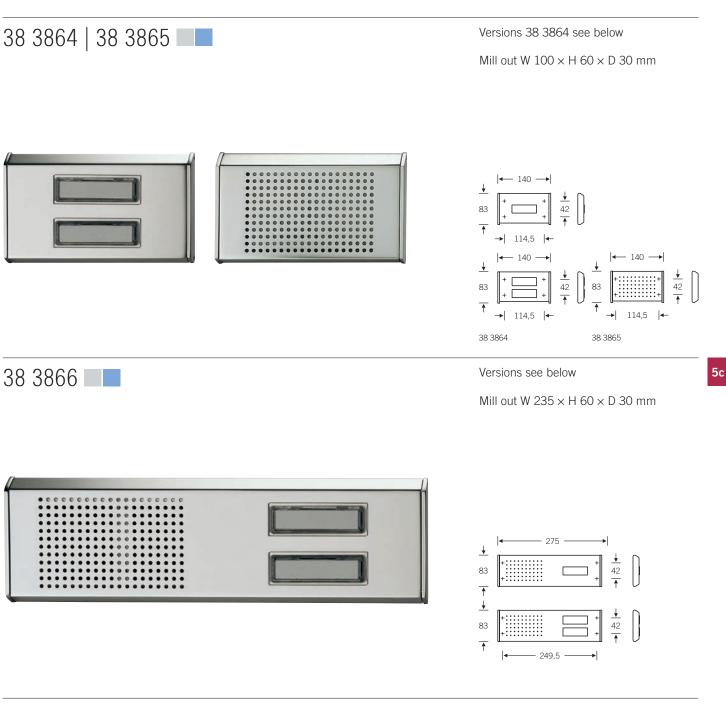
Siedle (TLE 051-01, 061-0, 640-0) and

Ritto (5921/01), and for all standard loudspeakers fitted to doors measuring

 $\leq 100 \times 60$ mm.



fsb.de/383810 fsb.de/383811 fsb.de/383812



Versions 38 3864 | 38 3866

Interchangeable nameplates made of plastic as the bell-push

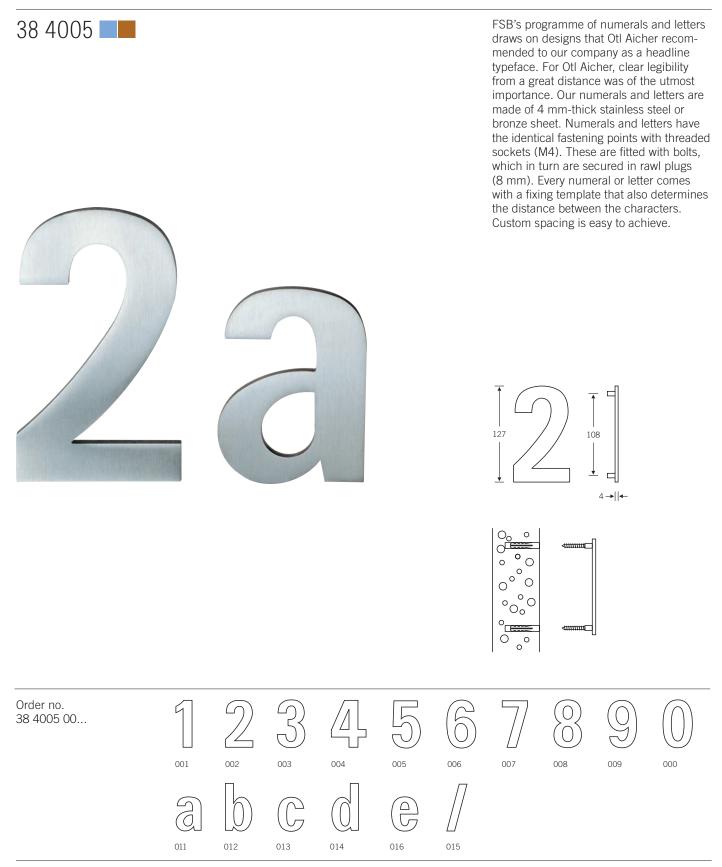
00011 (one piece) 00012 (two pieces)

fsb.de/383864 fsb.de/383865 fsb.de/383866 All FBS bell pushes may only be connected to a protective low voltage (max. 42V). For bell pushes 38 3864 and 38 3866, we recommend connecting the light socket (bulb operation max. 24V/40mA) to the safety transformer (8V) because of the

Suitable for loudspeakers made by Siedle (TLE 051-01, 061-0, 640-0) and Ritto (5921/01), and for all standard loudspeakers fitted to doors measuring $\leq 100 \times 60$ mm.

high no-load voltage involved.

Numerals





Barrier-free living



Heathrow Terminal 2 + 5, London

www.heathrowairport.com

Rogers Stirk Harbour + Partners www.rsh-p.com

Pascall + Watson Architects Ltd. www.pascalls.co.uk

ErgoSystem[®] grab rails FSB 82 8201 ErgoSystem[®] drop-down support rails FSB 82 8244 ErgoSystem[®] tip-up shower seats FSB 82 8244 including ErgoSystem[®] sanitary and bathroom accessories, see page 619 ff.

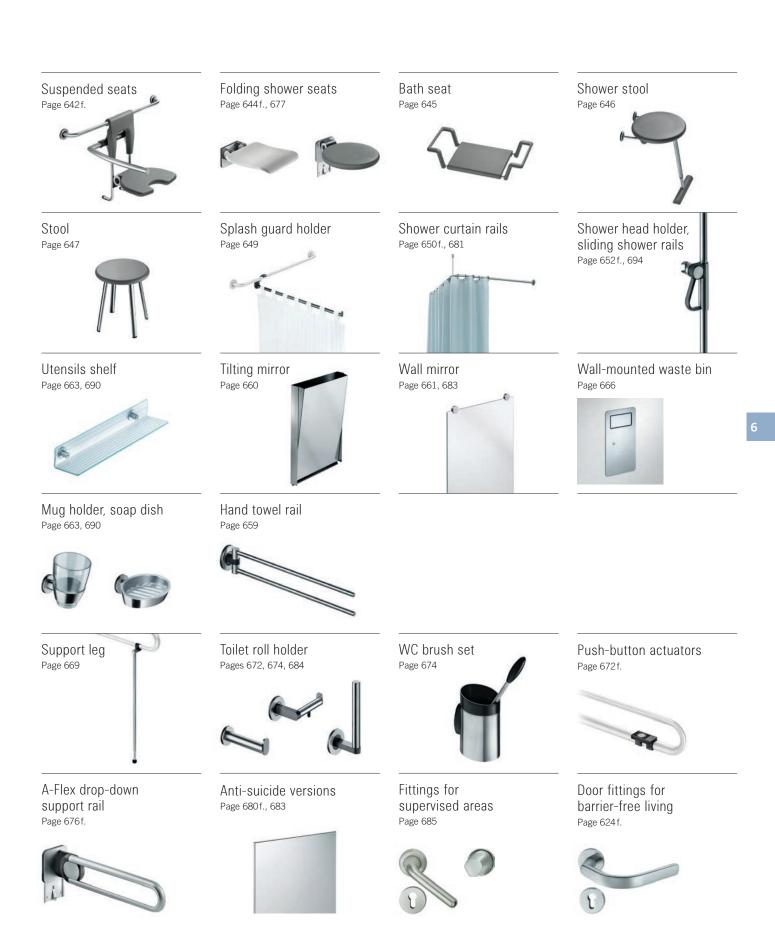
Stainless steel, fine matt, brushed

www.fsb.de/heathrow

623	Barrier-free heavy-duty fittings	6a
629	Function, design, convenience: Barrier-free ErgoSystem®	6b
635	Shower and bath area	
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667	WC	
675	Additional equipment	
684	Fittings for supervised areas	
687	METRIC [®] Bathroom accessories	6c
696	Technology and planning	
	information according	
	to DIN 18 040	

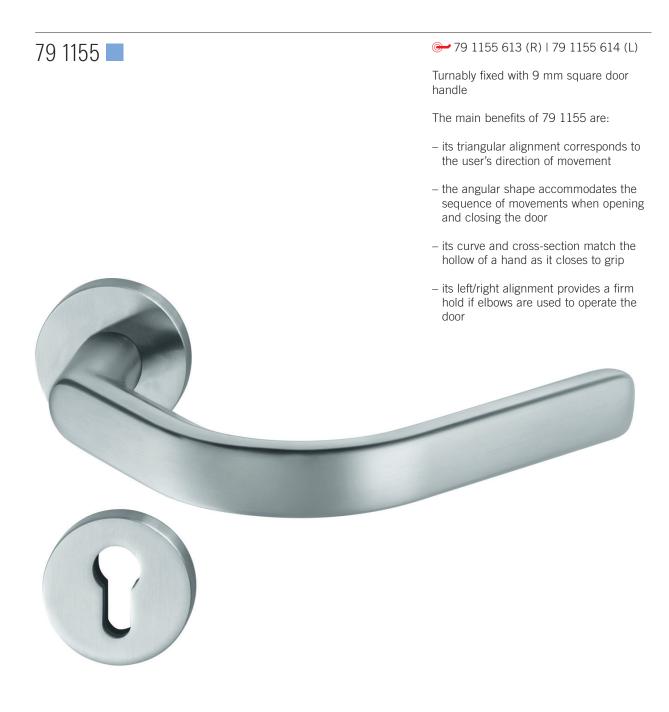
Overview

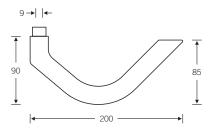




624 Barrier-free heavy-duty fittings

Ergo door handle





Explanations about the bearings see page 26f.

EN 179

Door handle model 1119



← 10 1119 ← 72 1119 613 (R) | 72 1119 614 (L) ← 79 1119 613 (R) | 79 1119 614 (L)

FSB 1119 draws on the insights that FSB gained in cooperation with the Fraunhofer Society in the course of scientific analyses on the design of a door handle for large doors in hospitals. Whilst the greatest attention was paid to strictly implementing the ergonomic parameters when designing the Ergo door handle, in the case of FSB 1119 the focus was on aesthetic considerations. Its creator is FSB's in-house designer, Hartmut Weise, who was also responsible for the ErgoSystem[®].





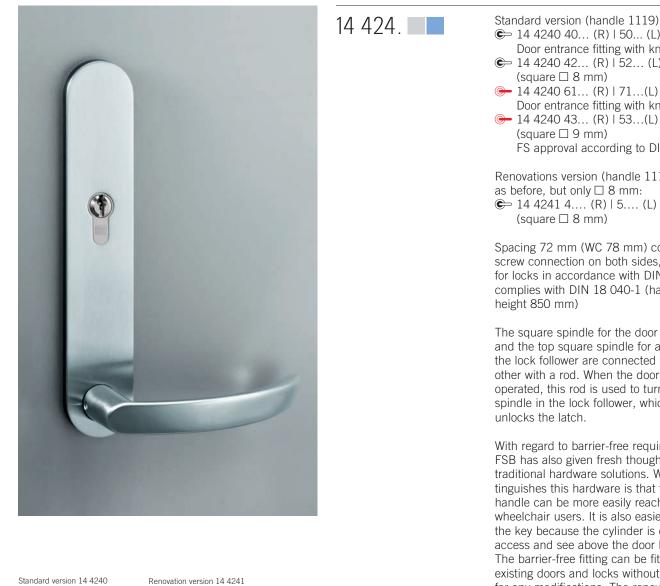
Explanations about the bearings see page 26f.

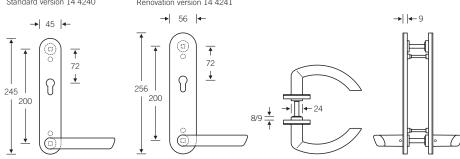


fsb.de/761052 fsb.de/791117 fsb.de/791090 Explanations about the bearings see page 26f.

626

Barrier-free hardware





Standard version (handle 1119): € 14 4240 40... (R) | 50... (L) Door entrance fitting with knob 0802

- € 14 4240 42... (R) | 52... (L) (square □ 8 mm)
- Door entrance fitting with knob 0802
- G→ 14 4240 43... (R) | 53...(L) (square □ 9 mm) FS approval according to DIN 18 273

Renovations version (handle 1119), as before, but only \Box 8 mm: € 14 4241 4.... (R) | 5.... (L) (square □ 8 mm)

Spacing 72 mm (WC 78 mm) concealed screw connection on both sides, suitable for locks in accordance with DIN 18 251, complies with DIN 18 040-1 (handle

The square spindle for the door handle and the top square spindle for actuating the lock follower are connected to each other with a rod. When the door handle is operated, this rod is used to turn the top spindle in the lock follower, which thus

With regard to barrier-free requirements, FSB has also given fresh thought to traditional hardware solutions. What distinguishes this hardware is that the door handle can be more easily reached by wheelchair users. It is also easier to insert the key because the cylinder is easier to access and see above the door handle. The barrier-free fitting can be fitted to existing doors and locks without the need for any modifications. The renovation backplate (55 mm wide) conceals drill holes left by the old fittings, moreover. Integrated in the fitting beneath the coverplate is a rugged mechanism that allows the door handle to be moved below the profile cylinder.

Ordering information:

- Door thickness
- DIN direction
- 8/9 mm square
- Distance to locking cylinder
- Door handle model

M5 stainless steel screws are included in delivery depending on the thickness of the door.

Other keyholes (see page 268) and spacings are possible on request, except for FS fittings.

fsb.de/144240 fsb.de/144241

fsb.de/catalogue

630 Function, design, convenience: Barrier-free ErgoSystem[®]

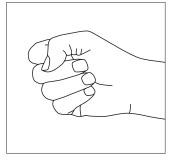
- 635 Shower and bath area
- 655 Washstands and bathroom accessories
- 667 WC
- 675 Additional equipment
- 684 Fittings for supervised areas

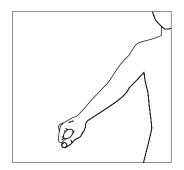
Barrier-free ErgoSystem[®]. We have harnessed our architectural expertise to yield a system that allows people of any age to make their lives more comfortable without having to forego aesthetic product design.



Diagonal + oval = optimum grip Design for all







Functionality, ergonomics, aesthetics: the above qualities are what FSB's Ergo-System[®] is all about. We have applied over 130 years of expertise acquired in all aspects of "handle culture" to designing barrier-free products for sanitary applications.

We see the ErgoSystem® as a "Design-forall" concept, which focuses on the needs of people in all age groups – regardless of whether this involves children, adolescents, (young) adults, "best agers", "50+" or "60+" people, or so-called "senior citizens" – or whatever formulations the marketing strategies may have developed for these groups. Proof that functional and ergonomic products can also look good (in our view they must) is provided by the many awards won for design, a boon not only for gripping hands but also to the trained eye.

With its diagonal-oval design, the Ergo-System[®] adheres rigorously to the ergonomics of grip. The diagonally tilted oval cross-section is a unique feature that optimises the action of gripping by the hand.

In terms of gripping, there is a basic difference between taking hold of an object and enclosing it with the hands. With the former, the fingers only touch the object intermittently, which also means that the hand only intermittently exerts any force on the object. Enclosure, by contrast, involves the whole surface of the hand and hence a far more extensive transmission of force. The act of enclosing is the most archetypal form of grip: we all resort to it instinctively whenever we have to hold or support our own body weight. An oval cross-section conforms particularly well to the laws governing the anatomy of the hand. The hand encloses the elliptical cross-section snugly.

The effort is distributed evenly between all finger joints and optimum use is made of all parts of the hand including the wrist. The upshot is that far less force needs be exerted by the hand than with a circular cross-section to prevent it slipping on the handle.

The oval shape offers the greatest possible support whilst requiring little muscular exertion. The oval section is thus an ideal shape for handles because it is so natural - especially if it is rotated through 45 degrees so that it tilts diagonally. This echoes the spatial sequence when taking hold of something. This results from the search for direction and support with the arm, which performs a diagonal motion starting from the shoulder joint and finishing with the act of enclosure. A sturdy triangle is thus formed between the hand, the shoulder used and the area the person is standing on. This causes an optimum transmission of force emanating from the body through the arm to the hand.



The full range and comprehensive information on the ErgoSystem[®] can be found in our brochure "A life of barrier-free comfort", which you can request free of charge under www.fsb.de/brochures Whether it is on the WC, around the washstand or even in the shower area: added convenience is called for when a person's movements no longer come naturally. The FSB ErgoSystem[®] makes it easy to be not reliant on help from other people.



Function, design, convenience

FSB's ErgoSystem[®] facilitates extremely flexible planning of bathroom and living areas by means of a wide-ranging collection of grab handles, drop-down support rails and seats that can be combined with a host of different accessories, thus adding specific functions to them.

The range of functional and coordinated add-on products features slide rails with shower head holders, care-oriented products such as splash guards and safety belts, through to classic bathroom accessories such as towel rails, shelves and mirrors. By way of example, at this point we would like to present you with a selection of products from the different sanitary application areas.

One-handed operation and child's play to use: the shower head holder

Proof that the ErgoSystem[®], as well as being a complete barrier-free system from a single source, can equally be operated with one hand, is provided by the new shower head holder, which consistently espouses the FSB philosophy of safe gripping. Its height, tilt and direction can be conveniently adjusted using one hand, leaving one hand free so that the user can hold on to a grab handle. The retention mechanism is released without having to either rotate the hand or exert any notable force. Once the retainer has been released, our multi-award winning shower head holder rests safely in the user's hand, as if of its own volition. Find out more on page 652 f.

The design permeating our ErgoSystem® continues in the washstand area: the ergonomic principle of a tilted oval handle cross-section is reiterated here in the form of a toothbrush mug angled slightly towards the user. The mug's conical styling allows it to be safely removed and accurately replaced. The tilting mirror in turn is strikingly less conspicuous compared to other products on the market. Its understated, pared-down design is devoid of visible adjusting devices and assiduously exemplifies FSB's approach to styling and finish. Once again, user-friendliness enjoys top priority: the ease of action of the mirror's tilt adjustment mechanism can be pre-set as required. The maximum angle of tilt has been optimised with a view to





minimising image distortion. The astutely conceived mirror height ensures that there is eye contact between the (wheelchair-) seated patient and the carer behind, which is good for interpersonal care aspects.

Elementary part of the system: the "diagonal-oval" handle range

The basis of the ErgoSystem[®] is the diagonal-oval handle range in a variety of versions and lengths for all conceivable areas of application. Particularly characteristic of ErgoSystem[®] components for WC areas is a design geared down to the last detail towards simplifying complex sequences of movements.

A key element are the fixed and drop-down support rails adapted to the most varied of usage concepts; they are made of unsurpassedly rugged, corrosion-resistant stainless steel that is virtually immune to denting and scratches even under the most exacting forms of continuous use. The elegant shaping of the elliptical handles combines with the neutral design of the connecting elements to lend the products a light and sophisticated appearance. The discreet light and ambience reflections on the fine matt brushed stainless steel surfaces integrate the ErgoSystem[®] components aesthetically and coherently in any bathroom and home interior. Combined with the anthracite-coloured (RAL 7021), powder-coated supports, the support rails are also optimised in terms of luminance and contrast.

Flexible assembly and demand-oriented use thanks to A-Flex

A-Flex is the name of the new assembly system for drop-down support rails and foldaway shower seats in the ErgoSystem®, with which you can flexibly and quickly adapt to individual or acutely changing needs of guests and patients. A-Flex facilitates flexible application and fixing in equal measure. The relevant spaces are fitted out with just the wall-mounted A-Flex support element complete with covering plate. The drop-down support rail or foldaway shower seat set up in this way is slotted into the support plate as required and is ready for use in a jiffy. Find out more about A-Flex on page 676 f.





System features and system benefits

System features

- FSB's ErgoSystem[®] conforms to all sections of DIN 18 040.
- The ErgoSystem[®] is certified according to TÜV/GS (product safety) and TÜV/ GGT (comfort & quality).
- High corrosion resistance thanks to stainless steel handle components. This alloy is virtually immune to denting and scratches even under the most exacting forms of continuous use and guarantees top hygiene properties.
- Hands fit snugly due to the unique elliptical styling of the grip section, which observes the laws of anatomy.
- Due the oval cross-section, demonstrably less force needs to be exerted both when taking hold of a handle and gripping it firmly.
- Ensuring optimum transmission of forces is the 45° tilt in the handle cross section, which in line with the rules of ergonomics allows the hardware to be taken hold of to form a triangle between hand, shoulder and the body's vertical axis.
- The consistent and uniform design concept underpinning the ErgoSystem[®] impresses with striking design elements right through to the line of accessories.

System benefits

The ErgoSystem's modular concept, variety of products and plethora of retrofittable accessories and complementary components enable flexible responses to changing conditions during planning and use:

- ErgoSystem[®] grab handles can be supplied in non-standard dimensions on request, so consideration can be given to specific requirements.
- Handrail combinations in standard lengths or as system building blocks ensure optimum solutions in any area of application.
- Continuous radii with no sharp edges combine with concealed fixings to meet hygiene requirements.
- Barrier-free handle system aimed strictly at the target group, which exceeds normal market requirements in terms of planning, equipment and use owing to its proven ergonomic and design merits.
- Custom dimensions and colours are possible, see page 678 f.
- Anti-suicide versions of relevant accessory elements can be supplied, see page 680 f.
- Flexible attachment of components with A-Flex solution if required, see page 676 f.

Planning benefits

- The matching range of accessories guarantees an aesthetically harmonious integration of the system into architectural surroundings.
- With its sleek looks and a brushed matt stainless steel finish that discreetly reflects the surrounding colours, the Ergo-System[®] unobtrusively blends in with bespoke bathroom environments.
- Its premium design quality takes account of the aesthetic requirements of a new generation of "youthful seniors".
- A high level of user acceptancy is brought about by a wide variety of ergonomically-driven fine detail in all product groups right through to the accessories, which afford users a maximum level of convenience as well as assisting them in everyday sequences of movements.
- The ErgoSystem's modular concept enables flexible responses to changing conditions during planning and use.
- Its standard fitments and complementary products guarantee a differentiation in terms of interior fittings, e.g. for "optional services areas".
- FSB's proximity to the market and production location in Germany allow it to deliver bespoke solutions and innovations promptly and flexibly.







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For planning information see page 697 f. Tender specifications: fsb.de/ergosystem

		L_1	L_2
82 8213 00101	r.h.	675	675
82 8213 00102	l.h.	675	675
82 8213 00201	r.h.	825	675
82 8213 00202	l.h.	675	825

Handrail configuration

Suitable for suspended seat 82 8250, see page 642 f.

Illustration: left



The handing of angled rails and handrail configurations relates to the view into the corner of the space: angled rails indicated as being "lefthand" are designed for use on lefthand walls from this perspective and vice versa. Individually produced handrails on request, see page 678 f.

For planning information see page 697 f. Tender specifications: fsb.de/ergosystem

82 8211

82 8212

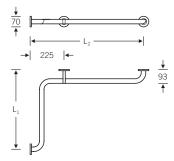


		L_1	L ₂
82 8211 00101	r.h.	528	750
82 8211 00102	l.h.	528	750
82 8211 00201	r.h.	528	975
82 8211 00202	l.h.	528	975
82 8211 00301	r.h.	750	750
82 8211 00302	l.h.	750	750

Handrail configuration

Suspended seat in the left segment only permitted for version with floor support (82 8250 00001, see page 642)

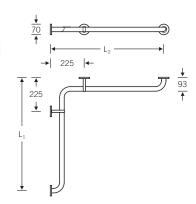
Illustration: left



		L_1	L ₂
82 8212 00100 82 8212 00200 82 8212 00301 82 8212 00302	r.h. l.h.	750 975 750 750	750 975 1125 1125

Handrail configuration

Suitable for suspended seat 82 8250, see page 642 f.



Individually produced handrails on request, see page 678 f.



fsb.de/828211 fsb.de/828212 The handing of angled rails and handrail configurations relates to the view into the corner of the space: angled rails indicated as being "lefthand" are designed for use on lefthand walls from this perspective and vice versa.

For planning information see page 697 f. Tender specifications: fsb.de/ergosystem

82 8210		H L
		82821000201r.h.10484582821000202l.h.10484582821000301r.h.11986082821000302l.h.119860
9		Angled rail Illustration: left
		$\begin{array}{c c} & & & & \\ \hline \\ \hline$
82 8260	82 8260 00039	82 8260 00059
	Plastic tray	Plastic clip-on tray with anti-theft device
	$ \begin{array}{c} & & 155 \\ \hline \\ 96 \\ \downarrow \end{array} \end{array} $	↓ ↓ ↓ ↓ 82 8260 00059
fsb.de/828210 fsb.de/828260	The handing of angled rails and handrail configurations relates to the view into the corner of the space: angled rails indicated	Individually produced handrails on request, see page 678f. d

The handing of angled rails and handrail configurations relates to the view into the corner of the space: angled rails indicated as being "lefthand" are designed for use on lefthand walls from this perspective and vice versa.

82 8201 03000 (L = 300 mm) 82 8201 82 8201 04500 (L = 450 mm) 82 8201 06000 (L = 600 mm) 82 8201 09000 (L = 900 mm) Grab handle Suitable for suspended seat 82 8250, see page 642 f. ₹ 70 ↑ . <u>↓</u> 93 ★ L_1 L_2 L_3

Angled rail

82 8202 05120

82 8202 07720

with identical side lengths, the angled rail can be used equally pointing right or left

300

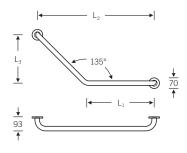
450

512

772

210

320



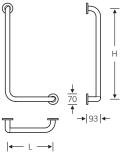
fsb.de/828201 fsb.de/828202

The handing of angled rails and handrail configurations relates to the view into the corner of the space: angled rails indicated as being "lefthand" are designed for use on lefthand walls from this perspective and vice versa.

Individually produced handrails on request, see page 678f.

82 8202

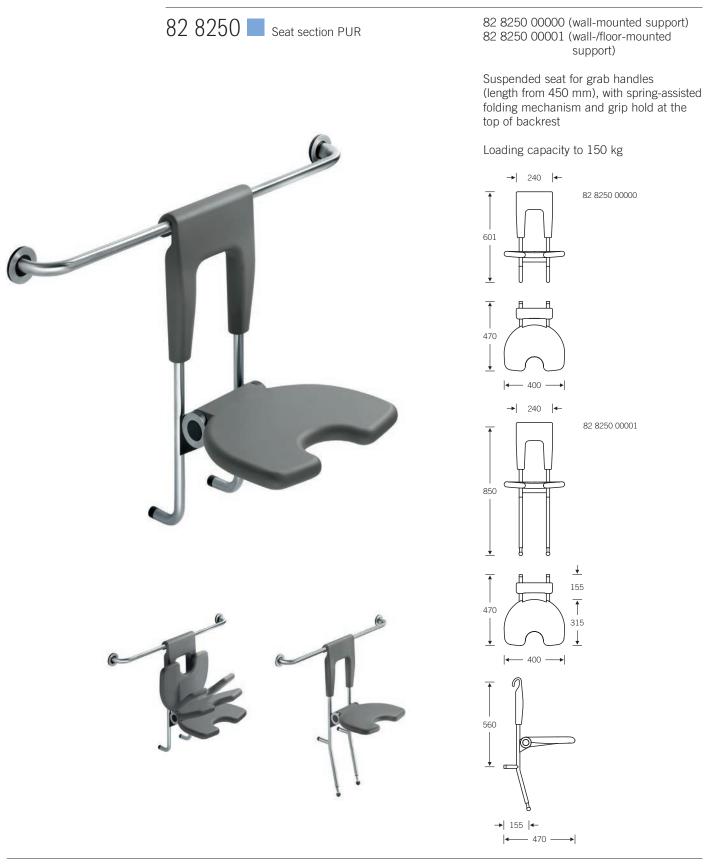
82 8203 🗖	L	Н
	82 8203 03000 30 82 8203 06001 r.h. 30 82 8203 06002 l.h. 30	006 0
	Angled rail	
	Illustration: left	



fsb.de/828203

The handing of angled rails and handrail configurations relates to the view into the corner of the space: angled rails indicated as being "lefthand" are designed for use on lefthand walls from this perspective and vice versa. Individually produced handrails on request, see page 678f.

For planning information see page 697 f. Tender specifications: fsb.de/ergosystem

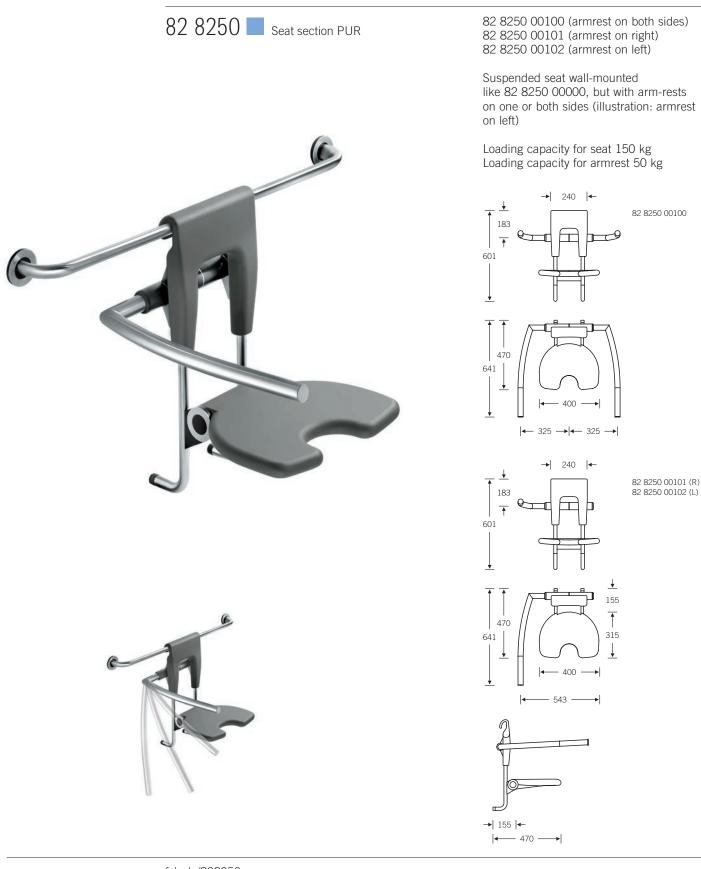




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winner 2008

For planning information see page 697 f. Tender specifications: fsb.de/ergosystem



For planning information see page 697 f. Tender specifications: fsb.de/ergosystem





fsb.de/828244 fsb.de/828240





For planning information see page 697 f. Tender specifications: fsb.de/ergosystem



Walking aid holder for universal positioning and use in the home



82 8290 82 8290 00011

Safety belt for securing persons

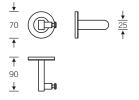
Can be combined with WC drop-down support rail 82 8224 085 or belt holder 82 8290 00016



82 8290 82 8290 00016

Belt holder





fsb.de/828260



82 8238 | 82 8235 🗖

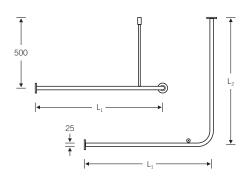


	L_1	L ₂
82 8238 01000 (16 rings) 82 8238 01200 (24 rings) 82 8238 01500 (24 rings)	1200	1000 1200 1500

Shower curtain rail round a corner with curtain rings (ceiling connector and shower curtain rail can be shortened on site)

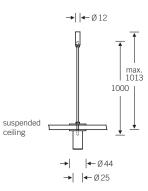
Same, but as an anti-suicide version due to reusable click-in mechanism on the ceiling connector:

	L_1	L ₂
82 8235 01000 (16 rings) 82 8235 01200 (24 rings) 82 8235 01500 (24 rings)	1200	1000 1200 1500



82 8299 82 8299 00012

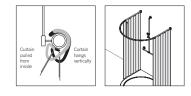
Ceiling connector for suspended ceilings (can be shortened on site)



Curtain designs see page 649

The curtain rings do not get caught on the ceiling suspension even when operated with one hand. Curtain rails available in U-shape or circular on request.

fsb.de/828238 fsb.de/828235 fsb.de/828299





82 8237 Textile		
	L	Н
82 8237 01200 82 8237 01800 82 8237 02400	1200 1800 2400	2000 2000 2000

2050

30 - ¥

Shower curtain with attachment eyelets

Note:

Shower curtain rails running round a corner require two curtains

fsb.de/828234 fsb.de/828233 fsb.de/828237

Shower curtain rails available with individual dimensions and curtains made of flame-resistant material on request.

Curtain designs see page 649

Shortening curtain rails, for example, on site leads to the lapse of any warranty rights.



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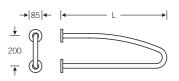


fsb.de/828260

You can find the FSB METRIC® range of accessories on pages 688 f.

656 Washstands and bathroom accessories

82 8220			L
	© 82 8220 06001	r.h.	600
	Ø 82 8220 06002	l.h.	600
	© 82 8220 07001	r.h.	700
	Ø 82 8220 07002	l.h.	700
	Wall-mounted suppo	rt rail	
	Illustration: left		
R			



All hardware bearing either the \bigcirc "righthand" or \oslash "lefthand" symbol needs to be ordered and fitted to suit the relevant handing. The relevant view is that towards the washstand/WC: the "righthand" model is for fitting to the right of the washstand/ WC and vice versa.

For planning information see page 697 f. Tender specifications: fsb.de/ergosystem

82 8221	82 8221 06000 (L = 600 mm) 82 8221 07000 (L = 700 mm) Wall-mounted support rail non-handed
	$ \begin{array}{c} \bullet 85 \bullet \\ 195 \\ \hline \uparrow \end{array} \begin{array}{c} \bullet \\ \hline \end{array} \end{array} \begin{array}{c} \bullet \\ \bullet \\ \hline \bullet \\ \hline \end{array} \end{array} \begin{array}{c} \bullet \\ \bullet \\ \hline \bullet \\ \bullet$
82 8224	L © 82 8224 06011 r.h. 600 © 82 8224 06012 l.h. 600 © 82 8224 07011 r.h. 700 © 82 8224 07012 l.h. 700
	Drop-down support rail with spring loading, ease of action adjust- able as required Compatible with TECEprofile 9.042.011 Loading capacity to 100 kg at leading edge
	Optional accessory: wall bracket as an adapter solution for subsequently fitting support rails and drop-down support rails 82 8227 00001 (85 × 195 mm) Illustration: left
	$ \begin{array}{c} \bullet 85 \bullet \\ 195 \\ \hline \uparrow \end{array} \left[\begin{array}{c} \bullet \\ \hline \\ \bullet \\ \hline \end{array} \right] \left[\begin{array}{c} \bullet \\ \bullet \\ \hline \\ \bullet \\ \hline \end{array} \right] \left[\begin{array}{c} \bullet \\ \bullet $
fsb.de/828221 fsb.de/828224	Fastening material included in delivery

For planning information see page 697 f. Tender specifications: fsb.de/ergosystem

82 8225		L
	Ø 82 8225 06002 Ø 82 8225 07001	r.h. 600 l.h. 600 r.h. 700 l.h. 700
	Floor/wall-mounted sup	oport rail
	Illustration: left	

fsb.de/828225

All hardware bearing either the \bigcirc "righthand" or \oslash "lefthand" symbol needs to be ordered and fitted to suit the relevant handing. The relevant view is that towards the washstand/WC: the "righthand" model is for fitting to the right of the washstand/ WC and vice versa.

For planning information see page 697 f. Tender specifications: fsb.de/ergosystem

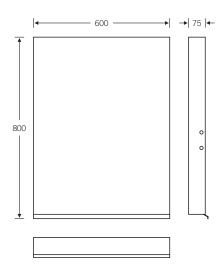


For planning information see page 697 f. Tender specifications: fsb.de/ergosystem



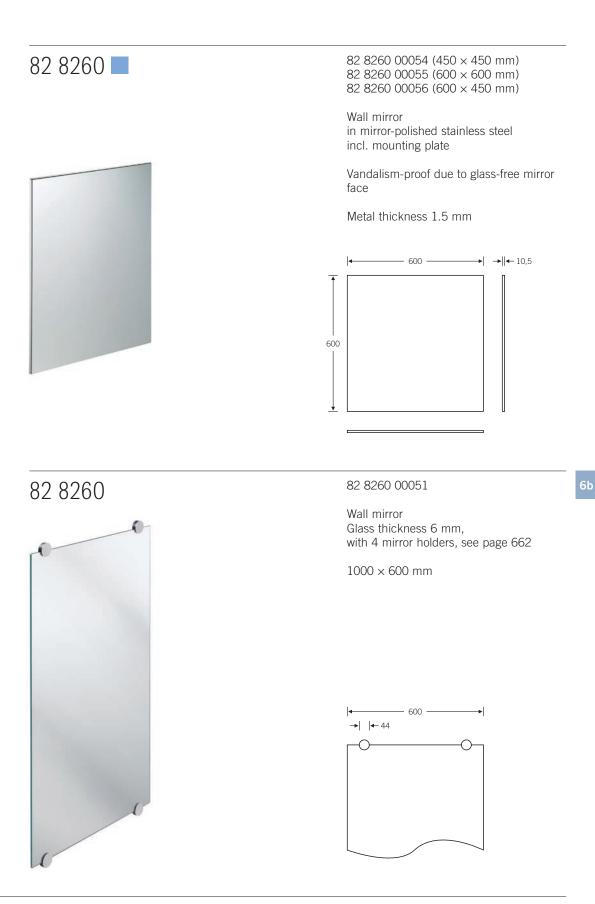
82 8260 00053

Tilting mirror with angle of tilt adjustable from 0° to 12°, easy-action and customisable operation using luminance contrast-optimised handle bar









Washstands Bathroom accessories

82 8260 82 8260 82 8260 00003 82 8260 00006 Wall buffer Coat hook (Matching wall hook see page 664) Shorter sizes possible on request -— 132 — →| — 86 —→| --**↑** 44 . 44 \bigcirc ¥ 82 8260 82 8260 82 8260 00004 82 8260 00052 Hand towel hook, duo Mirror holders (\times 4) for 6 mm glass thickness → 32 ← . 44 ¥ 35

For planning information see page 697 f. Tender specifications: fsb.de/ergosystem

Bathroom accessories



Bathroom accessories

82 8260 00001 (wall hook) 82 8260 00002 (coat hook)





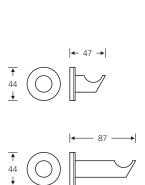


82 8260





fsb.de/828260

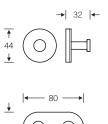


82 8260 00005 (wall hook) 82 8260 00007 (double wall hook)

(Matching coat hook see page 662)

Same, but as an anti-suicide version due to reusable clip fastening:

82 8260 01005 (wall hook) 82 8260 01007 (double wall hook)





You can find the FSB METRIC® range of accessories on pages 688 f.

Bathroom accessories



fsb.de/828260

* Standard colours, further RAL colours for an added charge. Please quote the RAL colour desired with orders and invitations to tender.

You can find the FSB METRIC® range of accessories on pages 688 f.

Wall-mounted waste bin

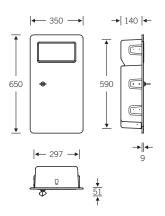


82 8290

82 8290 00048 (right, lock on left) 82 8290 00049 (left, lock on right)

Lockable wall-mounted waste bin, right or left-hand version, 12 litre capacity

Illustration: right





82 8224	L
	© 82 8224 06001 r.h. 600 Ø 82 8224 06002 l.h. 600
	© 82 8224 00002 I.II. 600 © 82 8224 07001 r.h. 700
	Ø 82 8224 07002 l.h. 700
	© 82 8224 08501 r.h. 850
	Ø 82 8224 08502 l.h. 850
	© 82 8224 09001 r.h. 900
	Ø 82 8224 09002 l.h. 900
	Drop-down support rail with spring loading, ease of action adjust- able as required
	Compatible with TECE Geronto module or TECEprofile 9.042.016
	Custom lengths up to 900 mm can be supplied
	Loading capacity to 100 kg at leading edg
	Illustration: left



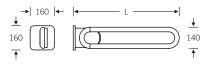
A-Flex solution for flexible fitting e.g. in hotels or optional service areas see page 676 f.



fsb.de/828224 Faster

Fastening material included in delivery

Optional accessory: wall bracket as an adapter solution for subsequently fitting support rails and drop-down support rails 82 8227 00000 ($160 \times 160 \text{ mm}$)



All hardware bearing either the \bigcirc "righthand" or \oslash "lefthand" symbol needs to be ordered and fitted to suit the relevant handing. The relevant view is that towards the washstand/WC: the "righthand" model is for fitting to the right of the washstand/ WC and vice versa.

FSB Manual 2015 | 2016



fsb.de/828224 fsb.de/828290

Θ



fsb.de/828247 fsb.de/828246



fsb.de/828224 fsb.de/828222 Fastening material included in delivery



fsb.de/828245 fsb.de/828248



fsb.de/828224 fsb.de/828248

For planning information see page 697 f. Tender specifications: fsb.de/ergosystem



fsb.de/828260

|← 100 → **| |**← 144 → **|**

363

676 Additional equipment

Compatible with TECE Geronto module or TECEprofile 9.042.016



Flexible and modular

With A-Flex, FSB offers a well-conceived means of fitting spaces out with barrier-free components from the ErgoSystem[®] flexibly and according to demand.

A-Flex can be particularly recommended for hoteliers or operators of hospitals with optional service areas, offering them scope for catering to the individual or acutely changing needs of guests and patients. Cases in point are guests in a hotel who do not require barrier-free aids in the bathroom or for whom such aids suddenly become necessary due to an acute injury e.g. at a winter sports resort. An additional benefit derives from significantly lower costs for the initial fit-out, as the spaces concerned merely need to be fitted with an A-Flex support plate and use can be made of drop-down support rails and foldaway shower seats just as in the standard scenario. The concept also convinced the jury of the Central Sanitary, Heating and Air Conditioning Association (ZVSHK) to give the A-Flex components the ZVSHK Award.



82 8227

82 8227 00002

A-Flex support plate incl. cover plate, for combination with drop-down support rail 82 8224 0604. I 0704. I 0854. and folding shower seat 82 8244 00001



$\begin{array}{c|c} \bullet & 160 & \bullet & \bullet & \bullet & 17 \\ \hline \bullet & & & & & \\ \end{array}$

fsb.de/828227

All A-flex components are fitted with an anti-theft device.

A-Flex

82 8224 🗖				L
		© 82 822		600
		Ø 82 822		600
		© 82 822		700
		Ø 82 822		700
		© 82 822		850
		Ø 82 822		850
		© 82 822		900
		Ø 82 822	24 09042 l.h.	900
Q			pp-down support rai g loading, ease of a quired	
			e with TECE Geront le 9.042.016	o module or
v		Custom le	ngths available up t	o 900 mm
		Loading c edge	apacity to 100 kg at	leading
		→ 160 ←	- ← L	> ↓
		160	\bigcirc	140
32 8244 🗖	82 8244 00001	82 8251	82 8251 0000)1
Seat section PUR	A-Flex Folding shower seat* with pivotable seat section	Seat section PUR	A-Flex Folding with rectangul tion	
	With ball bearings and roll brake		Loading capac	city to 150 k
	Loading capacity to 150 kg			
$ \begin{array}{c} \downarrow \\ \uparrow \\ \uparrow \\ \uparrow \end{array} $ $ \begin{array}{c} \downarrow \\ \downarrow \\ \downarrow \\ \uparrow \\ \downarrow \\ \downarrow$	514 — • D	$\begin{array}{c c} \downarrow & \downarrow & \downarrow \\ \hline 175 & & \downarrow \\ \hline \uparrow & \downarrow & 200 \ \leftarrow \end{array} \qquad \begin{array}{c c} \downarrow & \downarrow \\ \hline 160 \\ \hline \uparrow & \hline \end{array}$		
sb.de/828224			port plate 82 8227 (
fsb.de/828244 fsb.de/828251			cluded in delivery ar separately.	nd must be

tsb.de/828224 fsb.de/828244 fsb.de/828251

ordered separately.

Custom handrails

Made-to-measure design with standard coating





ErgoSystem[®] handrails made to measure

In years gone by, FSB has occasionally manufactured made-to-measure hand support systems for main entrance door areas in response to market demand. Comparable solutions are feasible for handrail designs, including those of a more complex variety, in hospitals and nursing homes.

Thus the unique diagonal-oval cross-section can also be harnessed for handrails. Special orders of this kind are not standard industrial products, however; rather, they are customised productions whose assembly and use lies in the client's sphere of responsibility. Assuming a suitable order volume, FSB is willing to provide you with specialists to draw up the measurements.

Please fax us your enquiries with dimensions. FSB will scrutinise these, produce a duplicate drawing and submit a quote. Please bear in mind that the maximum gap between two supports is 1.2 m.

Custom colours

Made-to-measure design with bespoke coating







Standard and bespoke coating

FSB sees itself first and foremost as a manufacturer of door and window hardware made of choice metals – which applies equally to its ErgoSystem[®].

FSB can optionally coat all ErgoSystem[®] components made of aluminium, which are dark grey as standard, with almost any other colour in the RAL scale if so desired. ErgoSystem[®] heavy-duty fittings can then be made to match or, indeed, accentuate existing colour schemes. Please indicate the required RAL number with each enquiry.

Coating process

FSB adopts a solvent-free electrostatic powder-coating technique.

The resultant surface quality – colour fastness, surface hardness, resistance to wear etc. – is roughly that of anodised aluminium coatings. On grounds of product liability, however, we will not coat ErgoSystem[®] handle components made of stainless steel. Colour coating would take both Ergo-System's aesthetic appearance and the indestructibility of the stainless steel surface to absurd levels.

Colour coatings will withstand regular use assuming items are properly fitted and used as intended. The surface may scratch if struck by hard, sharp-edged objects such as rings, tools, nursing or walking lifts etc.). Scratch marks have no affect, however, on the function of the fittings.



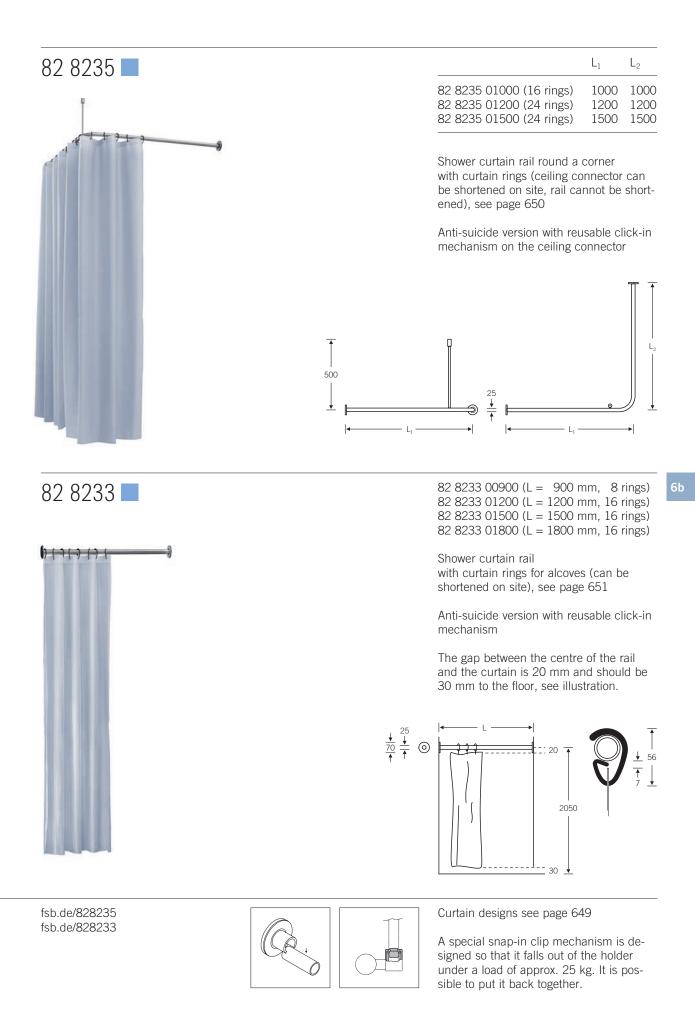
Fittings and equipment solutions for supervised areas. With a specific working paper, FSB documents its competence and many years of experience with products for prisons as well as forensic and psychiatric units.

fsb.de/jva

It goes without saying that these special fittings and equipment components fulfil the particular requirements of usability, robustness, protection against escape and vandalism plus anti-suicide design and have proven themselves many times over in practice.

Experience shows that establishments follow different safety concepts with specific key points and that, as a rule, a close and trusting coordination process with the safety experts responsible is necessary to develop specific fitting or equipment solutions In this respect, we will omit at this point to comprehensively set out all the solutions developed for various institutions so far. In order to develop and produce solutions that meet your specific requirements and requests without compromise, the tremendous manufacturing depth of FSB is at your disposal, as are the specialists from our development and design department.

Ask for the comprehensive brochure on the subject under info@fsb.de or fsb.de/ brochures



82 8259 C





82 8259 01198

Sliding shower rail with shower head holder for fitting to grab handles and handrail configurations

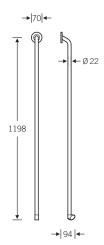
Anti-suicide version

The new shower head holder enables convenient showering: It combines an ergonomically shaped handle that is safe and easy to operate without any turning action involved and features a maintenance-free, continuously adjustable height and tilt mechanism. The shower head holder can be conveniently adjusted with one hand – leaving the other free at all times and giving the user the opportunity, for instance, to hold on to a grab handle.



The position is fixed using a double-sided adhesive strip supplied, which is glued during assembly between the plastic connection and oval tube.

Matching grabs and handrail combinations (not included in delivery) see page 636 f.







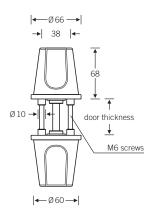
Fittings for supervised areas

96 2399



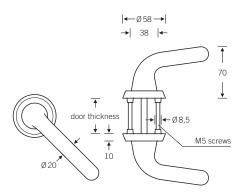
Door knob in the form of a stub-ended cone with finger recesses in a particularly rugged design with a special rose enclosing the knob's shank. It is impossible to attach cords or ropes to the knob. Its ergonomic form guarantees good handling and lessens the likelihood of acts of suicide.

You can find the different versions of this door knob in the brochure mentioned below.



96 7099 00099 (r.h.) 96 7099 00100 (l.h.)

Door handle set with conical neck and grip section angled 45° downwards on both sides. The bearing mechanism set in a conical shaped rose makes it impossible to attach cords or ropes and lessens the likelihood of acts of suicide. This particularly rugged design ensures safe use. Face fixing concealed by solid conical rose, lug Ø 8.5 mm.



Further special hardware and equipment solutions for prisons, forensic units and psychiatric establishments along with details of the products shown here can be found in a special brochure available for download from www.fsb.de/brochures

96 7099



fsb.de/catalogue

688 METRIC[®] Bathroom accessories **6c**

Overview

Utensile shelf Page 690



Bath towel rail Page 691



Toilet roll holder Page 693



WC brush set oval Page 692



Mug holder Page 690



Bath towel rail Page 691



Spare toilet roll holder Page 693



WC brush set round Page 692



Soap dish _{Page 690}



Hand towel rail Page 691



Spare toilet roll holder Page 693



Wall buffer Page 695



Wall hook, coat hook Page 695



Sliding shower rail Page 694



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METRIC[®] Bathroom accessories

The bathroom is increasingly becoming a place for tranquillity and relaxation. As a result, notions of how such spaces are designed are having to be reconsidered too. The atmosphere of a space plays an increasingly important part alongside purely functional requirements.

Factors such as "natural quality", "simplicity" and "wellbeing" are setting new standards both in the domestic sphere as well as in hotels and public areas. Growing significance is attached to the process of selecting and combining natural materials, finishes and colours. FSB is addressing this trend in the design of its METRIC[®] range of bathroom accessories.



The METRIC[®] design is deliberately understated, being defined by geometric shapes and high quality materials. The contrast between round roses and rectangular support profiles is a striking design feature that runs through the entire range. The combination of round functional parts and the supports made of rectangular profiles underscores the clear division of the system's constituent parts.

Its astutely balanced proportions have a soothing effect and blend harmoniously with a variety of design concepts. Ergonomic criteria have been taken into account wherever they are an aid to fluent sequences of movements. The holder for the toothbrush mug, for instance, tilts towards the user, thus making it easier to remove the mug. METRIC[®] is supplied in stainless steel satin matt finish. Besides looking good, stainless steel boasts an authenticity that harmonises particularly well with natural materials such as wood or granite and is excellently suited to well-appointed bathroom schemes. Steel rightly lays claim to being exceedingly hard wearing, corrosion resistant, easy to look after and durable.

The quality with which FSB works stainless steel draws on decades of experience gained as a manufacturer of well-designed, finely machined hardware for doors and windows. This expertise has found its way into the design and production of the METRIC[®] range of bathroom accessories.

Fastenings

The base rose features two parallel longitudinal slots for optimum dimensional coordination and is screwed to the wall with the fastenings supplied. The cover rose is then placed on top and aligned with the patterning as required. The final optical adjustment of the working parts is performed by firmly tightening the socket screw against the tensioning bolt.

As an alternative to classic screw fastening, FSB offers a fitting method using high strength adhesive bonding removable without residue.

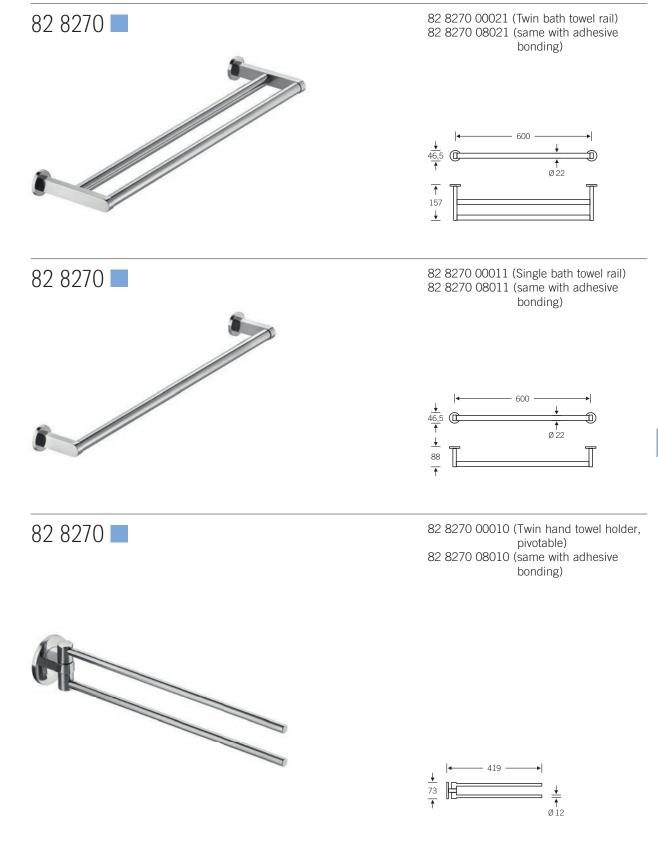


reddot design award winner 2008



METRIC[®] Bathroom accessories





METRIC[®] Bathroom accessories

82 8270

82 8270 00043 (WC brush set round) 82 8270 08043 (same with adhesive bonding)

WC brush set round with removable plastic insert*

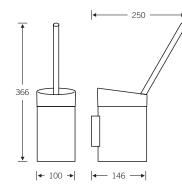
82 8270

82 8270 00042 (WC brush set oval) 82 8270 08042 (same with adhesive bonding)

WC brush set oval with removable plastic insert*







* The removable plastic insert for the WC brush sets is washable up to 130 °C. The brush heads can be replaced and ordered separately.

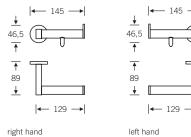
430 ↓ Ø 103 ↓ ← 122 →]

82 8270

82 8270 00030 (right) | 00130 (left) Toilet roll holder with roll brake

82 8270 08030 (right) | 08130 (left) same with adhesive bonding





145 ----1) **|**← 129 →|

left hand

82 8270

82 8270 00031 (Spare toilet roll holder for one roll) 82 8270 08031 (same with adhesive bonding)

82 8270

82 8270 00032 (Spare toilet roll holder for two rolls) 82 8270 08032 (same with adhesive bonding)



METRIC[®]

Bathroom accessories

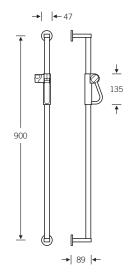


82 8270 00050 (Sliding shower rail with shower head holder for wall mounting)
82 8270 08050 (same with adhesive bonding)

The METRIC[®] shower head holder enables the shower head to be used conveniently: it combines an ergonomically shaped handle that is safe and easy to operate without rotational movement, with maintenance-free and infinite height and angle adjustment. The shower head holder can easily be adjusted with one hand – one hand always remains free, giving the user the ability to hold on to a support rail, for example.

Different lengths possible e.g. to match tile spacing or to use/cover existing drill holes are possible at customer request. Please send us a dimensioned sketch.

The shower head holder can be converted on site from "right" to "left".



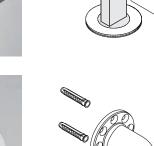
reddot design award winner 2008





ErgoSystem® Assembly and fastening technology





Push-in assembly

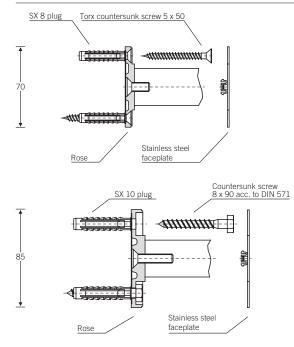
The handrails, bends and end pieces feature connecting pins, which contain a threaded hole with M6 grub screw one on side and a counterbore on the other side. To join the pieces together, these connecting pins are pushed into the precision-fit openings on the wall brackets and screwed stably together using a hole on the underneath with an SW3 socket spanner to stop them from twisting.

Fastening

The fastening roses on the handrail and grab system feature six screw holes, enabling ideal fastening with screws. Once assembled, the stainless steel faceplates are snapped onto the fastening roses with plastic clips to cover the screws.

Note

If the nature of the walls or wall structure (lightweight construction, hollow bricks, prewall assembly system etc.) makes a different fastening method necessary, please note the specifications of the plug manufacturers or the pre-wall installation manufacturers.

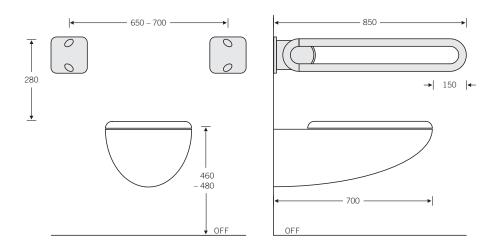


For assembly of the handrail and grab system to solid walls, the fastening accessory kit, consisting of 5×50 mm stainless steel Torx countersunk screws and SX 8 plastic plugs, is included in delivery. Clipping on the stainless steel faceplate covers the screws.

For assembly of the handrail and grab system to solid walls, the fastening accessory kit, consisting of 8×90 mm DIN 571 stainless steel countersunk screws and SX 10 plastic plugs, is included in delivery. Clipping on the stainless steel faceplate covers the screws. This type of fastening applies to the \emptyset 70 mm rose.

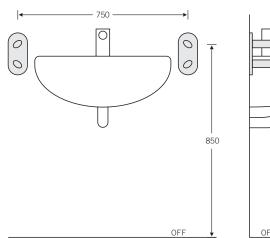
This type of fastening applies to roses with a \emptyset 85 mm and baseplates.

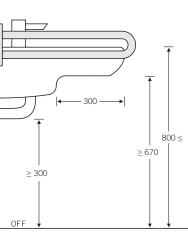
Planning information ErgoSystem® WC



	DIN 18 040/1	DIN 18 040/2 🔥	DIN 18 040/2
Installation height including seat	460-480 mm	460-480 mm	as required
WC depth (distance from front edge to wall)	≥ 700 mm	700 mm	600 mm
Mobility area at sides	\geq 900 mm on both sides	on access side min. 900 mm	as required
Mobility area in front of WC	1500 mm deep 1500 mm wide	1500 mm deep 1500 mm wide	1200 mm deep 1200 mm wide
Distance from WC to side wall	≥ 900 mm	≥ 300 mm	≥ 200 mm
Drop-down rails Distance between rails Integrated flushing Integrated toilet roll holder Backrest 	280 mm above WC seat height on both sides 650–700 mm on the left and right on the left and right 550 mm behind the front edge of the WC	280 mm above WC seat height on both sides 650–700 mm on the left and right on the left and right 550 mm behind the front edge of the WC	as required as required as required as required as required
For planning bathroom and WC areas in barrier-free buildings, the following standards must be observed:	DIN 18 040 Part 1 relates to the planning, execution and fit- ting-out of public-access build- ings or parts thereof as well of outdoor facilities, i. e. of all structural facilities except those of a purely residential nature. This standard does not apply to schools, nursery schools or hos- pitals – these are governed by the regional building regulations. In turn, the workplace directive applies to places of work.	DIN 18 040 Part 2 applies to the planning, execution and fitting-out of new rented and cooperative accommodation and corresponding residential facilities suitable for wheel- chair users.	DIN 18 040 Part 2 applies to the planning, execution and fitting-out of new, barrier-free rented and cooperative ac- commodation and correspond- ing residential facilities.

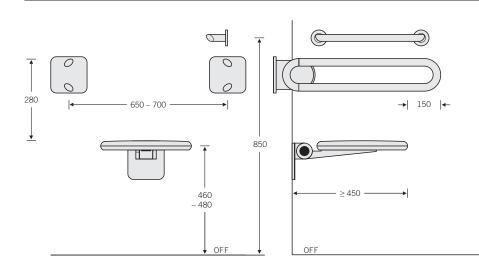
Planning information ErgoSystem® Washstands





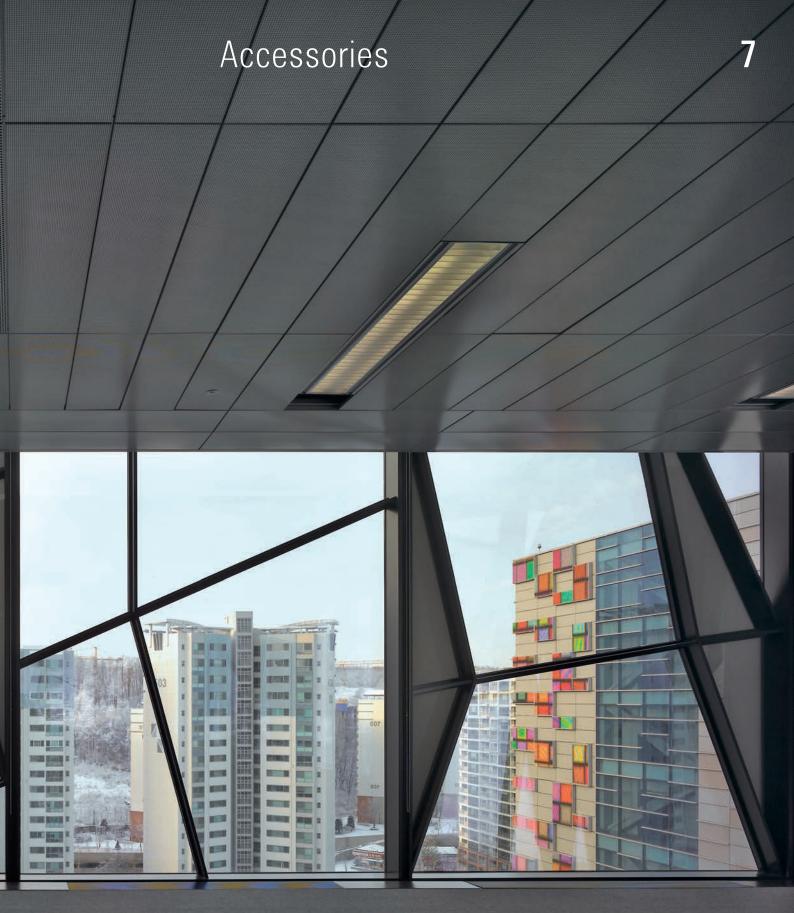
	DIN 18 040/1	DIN 18 040/2 🔥	DIN 18 040/2
Installation height top edge of washstand	≤ 800 mm	≤ 800 mm	≤ 850 mm
Mobility area in front of the washstand	1500 mm deep 1500 mm wide	1500 mm deep 1500 mm wide	1200 mm deep 1200 mm wide
Room to move underneath	≥ 550 mm	550 mm	550 mm
Legroom in depth	≥ 300 mm	300 mm	300 mm
Room to sit underneath	\geq 670 mm high	\geq 670 mm high	\geq 670 mm high
Contactless single-lever fittings with anti-scald feature	mandatory	recommended	recommended
One-handed soap dispenser, paper towel dispenser, waste bin and hand dryer	Layout in the area of the washstand	as required	as required
Flush or recess-mounted stench trap	mandatory	mandatory	mandatory
Mirror usable in seated or standing position	A mirror at least 1000 mm high is to be fitted above the wash- stand	A mirror at least 1000 mm high is to be fitted above the wash- stand	as required

Planning information ErgoSystem[®] Shower area



	DIN 18 040/1	DIN 18 040/2 🔥	DIN 18 040/2	
Flush with floor (no steps to be negotiated)	1500 mm deep 1500 mm wide	1500 mm deep 1500 mm wide	1200 mm deep 1200 mm wide	
Subsequent installation of a bath tub	not prescribed in the public domain	must be capable of having a lifter moved	underneath	
Tip-up seat	Installation height 460–480 mm, optionally shower seat 82 8243	Installation height 460–480 mm, must be retrofittable	, as required	
Fold-down rails	on both sides 280 mm above fold-away seat	must be retrofittable		
Grab handle	Installation height 850 mm	as required	as required	
Fittings	Installation height 850–1050 mm at side, within reach when sitting	Installation height 850–1050 mm at side, within reach when sitting	as required	
Contactless single-lever fittings with anti-scald feature	mandatory	recommended	recommended	
For planning bathroom and WC areas in barrier-free buildings, the following standards must be ob- served:	DIN 18 040 Part 1 relates to the planning, execution and fitting-out of public-access buildings or parts thereof as well of outdoor facilities, i. e. of all structural facilities except those of a purely residential nature. This standard does not apply to schools, nursery schools or hospi- tals – these are governed by the re- gional building regulations. In turn, the workplace directive applies to places of work.	DIN 18 040 Part 2 applies to the planning, execution and fitting-out of new rented and cooperative ac- commodation and corresponding residential facilities suitable for wheel-chair users.	DIN 18 040 Part 2 applies to the planning, execution and fitting-out of new, bar- rier-free rented and coop- erative accommodation and corresponding residential facilities.	





TRUTEC Building, Seoul | Korea

Barkow Leibinger, Berlin, New York www.barkowleibinger.com

FSB 1005 range of handles, see page 122 f.

Stainless steel, fine matt, brushed

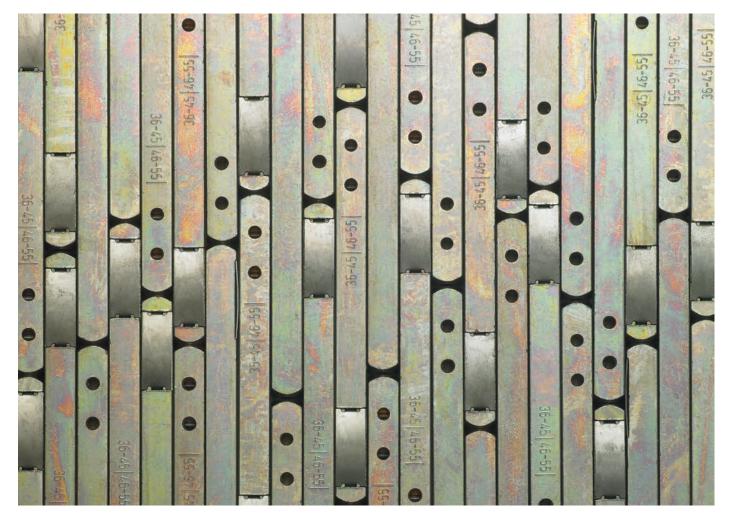
www.fsb.de/trutec

706 Stabil-spindles and half-spindles

- 712 Solid spindles
- 712 Fixing accessories
- 713 RT square spindles

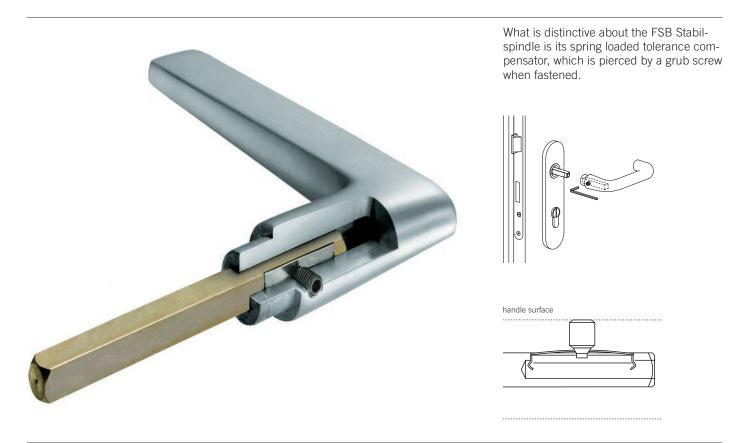
Overview





The FSB Stabil-spindle. It may live life in the shadows, but for us it is the dot on the i as far as consistent heavy-duty fitting technology is concerned. FSB is one of the few manufacturers where both halves of the fitting still positively interlock on the square spindle. On the spindle side already at the factory, on the aperture side during assembly. This ensures that the forces occurring are effectively dissipated into the door and are not imposed on the door handle set alone. We are so convinced by this principle that we have been practising it for over 30 years and have adapted it to all other spindle versions.

FSB Stabil-spindle



The FSB stock range serves the following door thicknesses:

- 36 to 45 mm with 8 mm FSB Stabilspindle
- 66 to 75 mm with 10 mm FSB Stabilspindle

The screw lengths of the accessories are adapted to this stock range. Hardware can be precision customised for other door or spindle thicknesses and fitted with accessories to match.

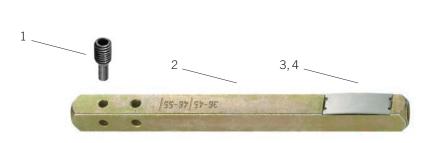
- 1. Stainless steel grub screw with punch for piercing the anchor clamp spring
- 2. Solid square-section material
- 3. Recess for anchor clamp spring
- 4. Anchor clamp spring under pretension

Assembly instructions:

Pass the spindle part of the door handle or knob handle through the lock follower. The aperture part of the door handle or knob handle is fitted onto the spindle and the two parts pushed together securely. The screw in the neck of the door handle or knob handle aperture (grub screw with punch) is then tightened against the resistance that builds up. The punch must penetrate the anchor clamp spring.

Visible sign for correctly mounted fittings: the top of the grub screw fits flush with the handle's neck.

Check that the spindle fits correctly and without play by turning, pushing and pulling the handle a number of times.



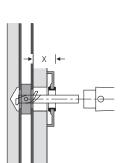
05 0103	FSB Stabil-half-spindles for through fixing
	Dimension X
	05 0103 00808 8 × 55 mm 15 – 24 mm 05 0103 00812 8 × 65 mm 25 – 34 mm 05 0103 00816 8 × 75 mm 35 – 44 mm
	05 0103 00908 9 × 55 mm 15 – 24 mm 05 0103 00912 9 × 65 mm 25 – 34 mm 05 0103 00916 9 × 75 mm 35 – 44 mm
	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$

FSB Stabil-half-spindles for doors drilled on one side, not suitable for locks with clamping follower

_		Dimension X
05 0115 00810 05 0115 00812 05 0115 00814 05 0115 00816 05 0115 00818	8 × 60 mm 8 × 65 mm 8 × 70 mm 8 × 75 mm 8 × 80 mm	20 – 24 mm 25 – 29 mm 30 – 34 mm 35 – 39 mm 40 – 44 mm
05 0115 00910 05 0115 00912 05 0115 00914 05 0115 00916 05 0115 00918	9× 60 mm 9× 65 mm 9× 70 mm 9× 75 mm 9× 80 mm	20 – 24 mm 25 – 29 mm 30 – 34 mm 35 – 39 mm 40 – 44 mm
05 0115 01010 05 0115 01012 05 0115 01014 05 0115 01016 05 0115 01018 05 0115 01022 05 0115 01026	10 × 65 mm 10 × 70 mm 10 × 75 mm 10 × 80 mm 10 × 90 mm	20 – 24 mm 25 – 29 mm 30 – 34 mm 35 – 39 mm 40 – 44 mm 50 – 54 mm 60 – 64 mm
05 0116 01014 05 0116 01016	8/10 × 65 mm 8/10 × 70 mm 8/10 × 75 mm 8/10 × 80 mm	25 – 29 mm* 30 – 34 mm* 35 – 39 mm* 40 – 44 mm*

* stepped, 8 mm handle hole/10 mm follower

When choosing the right FSB Stabil-half-spindle, please use dimension X for guidance. Dimension X is the distance from the top edge of the backplate or rose guide to the top edge of the follower.



05 0115

05 0116

fsb.de/spindles

05	0177
05	0107

FSB Stabil-half-spindles with plug (M12 thread), for screw mounting in knob neck, width across flats 13 mm



		Door thickness
05 0177 00820	8 × 85 mm	36 – 45 mm
05 0177 00824	8 × 95 mm	46 – 55 mm
05 0177 00828	8 × 105 mm	56 – 65 mm
05 0177 00832	8 × 115 mm	66 – 75 mm
05 0177 00836	8 × 125 mm	76 – 85 mm
05 0177 00840	8 × 135 mm	86 – 95 mm
05 0177 00844	8 × 145 mm	96 – 105 mm
05 0177 00920	$9 \times 85 \text{ mm}$	36 – 45 mm
05 0177 00924	$9 \times 95 \text{ mm}$	46 – 55 mm
05 0177 00928	$9 \times 105 \text{ mm}$	56 – 65 mm
05 0177 00932	$9 \times 115 \text{ mm}$	66 – 75 mm
05 0177 00936	$9 \times 125 \text{ mm}$	76 – 85 mm
05 0177 00940	$9 \times 135 \text{ mm}$	86 – 95 mm
05 0177 00944	$9 \times 145 \text{ mm}$	96 – 105 mm
05 0177 01020 05 0177 01024 05 0177 01028 05 0177 01032 05 0177 01036 05 0177 01040 05 0177 01044	10 × 105 mm 10 × 115 mm 10 × 125 mm 10 × 135 mm	36 – 45 mm 46 – 55 mm 56 – 65 mm 66 – 75 mm 76 – 85 mm 86 – 95 mm 96 – 105 mm
05 0107 01020	8/10 × 85 mm	36 – 45 mm*
05 0107 01024	8/10 × 95 mm	46 – 55 mm*
05 0107 01028	8/10 × 105 mm	56 – 65 mm*
05 0107 01032	8/10 × 115 mm	66 – 75 mm*
05 0107 01036	8/10 × 125 mm	76 – 85 mm*
05 0107 01040	8/10 × 135 mm	86 – 95 mm*
05 0107 01044	8/10 × 145 mm	96 – 105 mm*

* stepped, 8 mm door handle hole / 10 mm follower

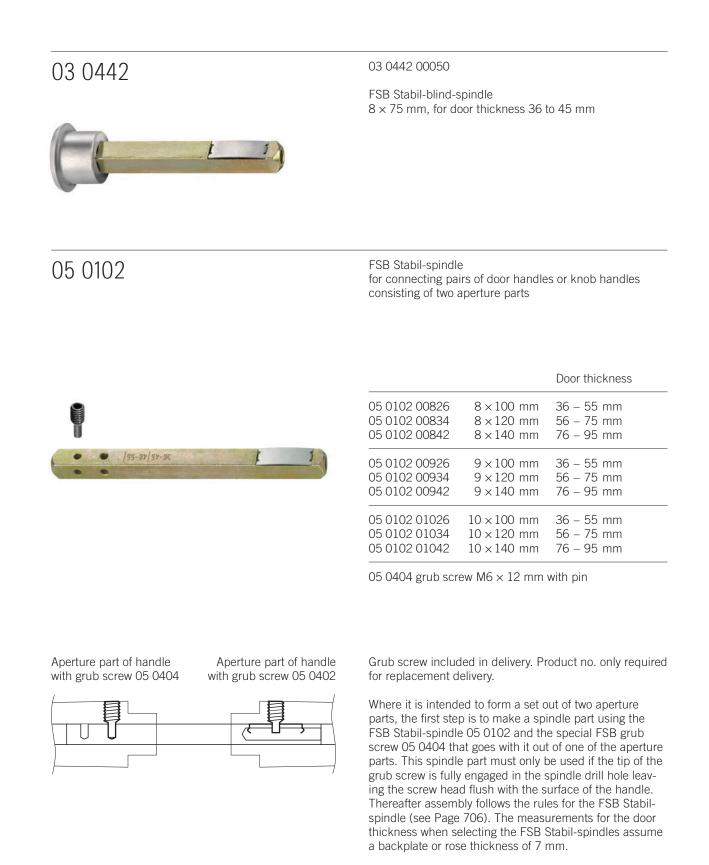
fsb.de/spindles

The measurements for the door thickness when selecting the spindles with plug shown here assume a backplate or rose thickness of 7 mm. In the case of security fittings, FSB supplies both the spindles shown here and the corresponding screws prepared at the factory for the required door thickness.

05 0108	FSB half-spindles for frame handles with plug (M12 thread), for screw mounting in knob neck, width across flats 13 mm		
FSB Dirl 18273 FS	Door Door thickness, thickness, symmetrical angled knob knob		
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		
	For more information about using FSB fittings on emer- gency exit locks according to DIN EN 179, please ask for the the corresponding specialist FSB brochure.		
05 0402	Grub screw with punch		
	$\begin{array}{llllllllllllllllllllllllllllllllllll$		
05 0406	Anchor clamp spring		
	05 0406 02008 20 mm		
←20 ───→			

fsb.de/spindles

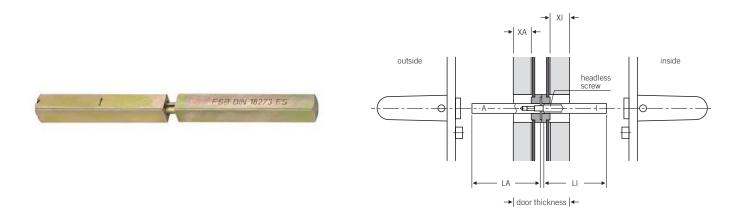
Stabil-spindles



fsb.de/spindles

05 0125

FSB special spindle in accordance with DIN 18 273 for locks with a split follower



For locks with a split follower, there is an FSB special spindle (square 9 mm), tested and approved according to DIN 18 273, with the order number 05 0125, which can be used to bridge door thicknesses from 34 to 101 mm where the lock is in the middle.

When ordering, the following details are necessary:

- Door thickness
- Dimensions XA and XI
- Order number of the FSB fitting used to determine the correct spindle length

For more information about using FSB fittings on emergency exit locks according to DIN EN 179, please ask for the the corresponding specialist FSB brochure.

When deploying the FSB special spindle for locks with a split follower, it is important not only to heed building regulations but also to bear in mind that panic fittings (lock, cylinder, spindle, handles etc.) are intended solely for use in an emergency and should never be fitted to doors in constant operation. Moreover, according to DIN 18 273 it is not permitted to freely put together fire safety fittings from one manufacturer's components or to mix fire and smoke safety fittings from different manufacturers.

FSB draws your attention to the recommendations and observations of the lock industry in this respect. Building regulations approval of the FSB special spindle 05 0125 for locks with a split follower is valid in connection with certified FSB fittings.

Assembly instructions:

- 1. From the outside of the door, insert spindle section A into the lock follower as far as the coupling washer.
- 2. From the inside, then insert the other spindle section marked I into the lock follower also as far as the coupling washer and screw the two spindle sections together through the lock follower coupling washer by means of the shank screw.
- 3. Now place the turnably fixed door handles together with backplates or roses onto the spindles.
- 4. It should be ensured that there is no play between the plates or roses and the doors, as a slight shift when operating the door can lead to the connection between the two spindle halves being ruptured.
- 5. Finally, firmly tighten the cup point screws on the two door handles against the spindle. The screws heads must be flush with the surface of the handle.

fsb.de/spindles

7a

Solid spindles Fixing accessories

	8 mm solid spindles	9 mm solid spindles
	05 0172 00810 8 × 60 mm 05 0172 00814 8 × 70 mm 05 0172 00818 8 × 80 mm 05 0172 00822 8 × 90 mm 05 0172 00826 8 × 100 mm 05 0172 00830 8 × 110 mm 05 0172 00834 8 × 120 mm 05 0172 00838 8 × 130 mm 05 0172 00842 8 × 140 mm 05 0172 00846 8 × 150 mm 05 0172 00850 8 × 160 mm	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
	Solid spindles stepped on one side	
	05 0188 00910 9/8 × 60 mm 05 0188 00916 9/8 × 75 mm 05 0188 00934 9/8 × 120 mm	_
← X → ← 35 →	05 0189 01010 10/8 × 60 mm 05 0189 01016 10/8 × 75 mm 05 0189 01018 10/8 × 80 mm 05 0189 01026 10/8 × 100 mm 05 0189 01030 10/8 × 110 mm	Solid spindles stepped on both sides
		05 0183 00926 8/9/8 × 100 mm 05 0183 00934 8/9/8 × 120 mm
← 35 → ← 35 →		05 0184 01026 8/10/8 × 100 mm 05 0184 01030 8/10/8 × 110 mm 05 0184 01034 8/10/8 × 120 mm 05 0184 01038 8/10/8 × 130 mm 05 0184 01042 8/10/8 × 140 mm
05 0425	Adaptor sleeve for compensating door handle spindle/lock follower	05 0425 008098 on9.0 mm05 0425 008108 on10.0 mm05 0425 009109 on10.0 mm05 0425 008858 on8.5 mm
05 0526	Fastening set	Bag of accessories Screw length Door thickness
	for frame door fittings for through fixing on SSF mortise locks (series 01 and 02) Matching spindle: 05 0525 018 (□ 8 mm) or 05 0525 019 (□ 9 mm) see page 713	05 0526 01045 50 mm 45 - 49 mm 05 0526 01050 55 mm 50 - 54 mm 05 0526 01055 60 mm 55 - 59 mm 05 0526 01060 65 mm 60 - 64 mm 05 0526 01065 70 mm 65 - 69 mm 05 0526 01070 75 mm 70 - 74 mm 05 0526 01075 80 mm 75 - 79 mm 05 0526 01080 85 mm 80 - 84 mm 05 0526 01085 90 mm 85 - 89 mm 05 0526 01090 95 mm 90 - 94 mm 05 0526 01095 100 mm 95 - 99 mm 05 0526 01000 105 mm 100 - 104 mm

fsb.de/spindles fsb.de/fixing-accessories

RT square spindles

05 0525

Square spindles for connecting of frame door fittings

8(9) mm RT special spindles suitable for connecting two angled frame door handles by means of

407 f.)

screw pins with punch (see page



Bag of accessories Spindle lengt		Spindle length	Door thickness
	05 0525 02804	96 mm	35 – 44 mm
	05 0525 02805	106 mm	45 – 54 mm
	05 0525 02806	116 mm	55 – 64 mm
	05 0525 02807	126 mm	65 – 74 mm
	05 0525 02808	136 mm	75 – 84 mm
	05 0525 02809	146 mm	85 – 94 mm
	05 0525 02810	156 mm	95 – 104 mm
	05 0525 02904	93 mm	35 – 44 mm
	05 0525 02905	103 mm	45 – 54 mm
	05 0525 02906	113 mm	55 – 64 mm
	05 0525 02907	123 mm	65 – 74 mm
	05 0525 02908	133 mm	75 – 84 mm
	05 0525 02909	143 mm	85 – 94 mm
	05 0525 02910	153 mm	95 – 104 mm

8(9) mm RT Stabil-spindle suitable for connecting frame door handles according to the Wittgenstein solution (see page 402 f. and 407)

Bag of accessories	Spindle length	Door thickness
05 0525 018(9)04 05 0525 018(9)05 05 0525 018(9)06 05 0525 018(9)07 05 0525 018(9)08 05 0525 018(9)09	98 mm 108 mm 118 mm 128 mm 138 mm 148 mm	35 – 44 mm 45 – 54 mm 55 – 64 mm 65 – 74 mm 75 – 84 mm 85 – 94 mm
05 0525 018(9)09	148 mm 158 mm	95 – 104 mm

05 0526

Fixing accessories for frame door fittings

and rivet nuts



Screws $M5 \times 25$ mm

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Fixing accessories

05 0303	Oval head countersunk screw with cross-head	05 0303 00515 05 0303 00535	M5 × 15 mr M5 × 35 mr		
••••••					
05 0308	Countersunk screws with cross-head, for fastening door knobs 23 08 00006 to one another on a round (17 1731 019) and rectangular (17 1703 019) rose	05 0308 00545 05 0308 00555 05 0308 00565 05 0308 00575 05 0308 00585 05 0308 00595 05 0308 00501	M5 × 45 r M5 × 55 r M5 × 65 r M5 × 75 r M5 × 85 r M5 × 95 r M5 × 105 r	mm 37 – mm 47 – mm 57 – mm 67 – mm 77 – mm 87 –	hickness 46 mm 56 mm 66 mm 76 mm 86 mm 96 mm 06 mm
05 0309	Screws with M4 threaded sleeve nut			Useful length	Door thickness
← useful length → ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓		05 0309 00435 05 0309 00440 05 0309 00445 05 0309 00450 05 0309 00455 05 0309 00460 05 0309 00465 05 0309 00475 05 0309 00475 05 0309 00480	35 mm 40 mm 45 mm 50 mm 55 mm 60 mm 65 mm 70 mm 75 mm	39 – 44 mm 44 – 49 mm 49 – 54 mm 54 – 59 mm	
05 0313	Threaded pins 05 0313 00670 M6 × 70 mm 05 0313 00680 M6 × 80 mm 05 0313 00690 M6 × 90 mm 05 0313 00600 M6 × 100 mm	05 0315		Countersunk with cross-he $2.9 \times 16 \text{ mm}$ $3.9 \times 16 \text{ mm}$ $4.2 \times 19 \text{ mm}$	1
	05 0313 00840 M8 × 40 mm 05 0313 00850 M8 × 55 mm 05 0313 00860 M8 × 60 mm 05 0313 00870 M8 × 70 mm 05 0313 00880 M8 × 80 mm 05 0313 00800 M8 × 100 mm				
	Threaded screws for wood	05 0316 00640 M6 version: Total length 40 m Length of M6 thr 10 mm		05 0316 008 M8 version: Total length 4 Length of M8 15 mm	40 mm

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Fixing accessories

05 0319	Dome nuts Aluminium 05 0319 00600 M6 05 0319 00800 M8 Stainless steel 05 0319 00800 M8	05 0320	Dome nuts Aluminium Stainless steel 05 0320 00800 M8
05 0325	Cap nut with 12 mm extension Aluminium 05 0325 00600 M6 05 0325 00800 M8	03 0410	FSB socket spanner for half-spindles with plug
03 0440	-		Door handle spacer rose for increasing the gap between the door and door handle Aluminium 03 0440 020 20 mm 03 0440 025 25 mm 03 0440 030 30 mm Stainless steel 03 0440 020 20 mm
03 0441			Handle hole cover for covering the handle hole on short and long backplates Aluminium

fsb.de/fixing-accessories

7a

718 Installation technology



For flush fittings (AGL[®], page 270) and roses (17 1736/1737, round, page 271 and 17 1733/1734, rectangular, page 272) we offer routing templates developed by ourselves and precisely matched to these hardware solutions. Turned or milled edge radii on the roses guarantee an accurate fit combined with our routing templates. In this way, exclusive door design is easily feasible even without CNC equipment.

Installation technology

Simply precise

Correct installation is essential for FSB door handle fittings to function flaw-lessly.

It is FSB policy to supply paper positioning templates with all orders. If these templates have inadvertently not been enclosed, we ask that you order them to be sent on immediately. The order numbers are listed in the footers of the pages that follow.

FSB supplies trade installers with metal templates, the product codes for which are specified on the pages that follow.

A considerable amount of force is exerted when operating door handle fittings. This holds particularly true for fittings on frequently used doors. Long-term trouble-free use can only be guaranteed if sufficient care is taken when marking out, drilling and fixing the hardware. FSB has looked very carefully into all the complaints received over recent years. In the process, it was discovered that the reason for the complaint is very frequently faulty installation.

The main sources of problems were:

- Support lugs on roses and backplates had become detached. making it impossible to screw the fittings without risk of slipping. The fittings slipped about on the door surfaces when operated.
- Fittings were ordered for the wrong door thickness and installed anyway regardless of the consequences. The connecting spindles were either too long: door handles were able to slip about, or too short: spindle fastened too close to its edge, leading to breakage.
- When putting door handle fittings together, the grub screw with punch was not tightened with sufficient care in the door handle. The retaining plate in the form of the anchor clamp spring was not pierced. The door handle was able to slip about on the spindle.
- Drill holes were made without using a template. Drill centres were marked out in haphazard manner, producing oversize holes. Backplates and roses moved about in the oversize mounting holes.
- FSB hardware was combined with spindles, screws, backplates and roses from competitors.
- Spindles on window handles were shortened by the customer. This could cause filings to get into the click-stop mechanism, leading to a fault.

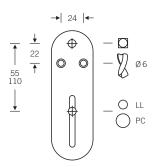
FSB is at pains to stress that it can only accept liability for its products – as is certainly the case for all competitors – if they have been correctly and professionally installed.

We would additionally like to draw attention to growing public sensitivity regarding the issue of liability. Improperly installed door and window fittings and their accessories harbour serious risks for potential product liability. FSB puts its faith in the practical experience and skill of its own clientele and of their customers. Our mutual end customers have a right to properly fitted hardware that works.

Fixing aids

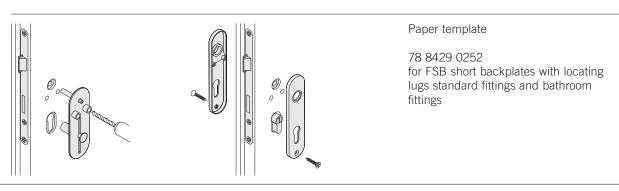
for short backplates with visible screw fixing

03 0453



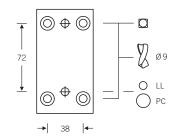
Fixing template for FSB standard short backplates, with locating lugs and a visible screw fixing

For variable use with LL/PC/WC 55–78 mm

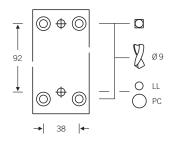


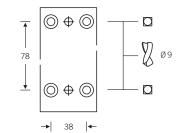
fsb.de/030453

03 0455



03 0455 00000 LL and PC 72 mm

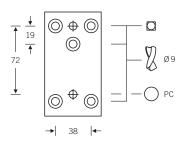




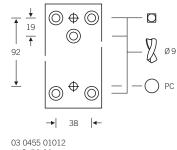
Fixing templates for all FSB roses designed for concealed screw fixing:

- FSB handle and cylinder key roses for standard bearings, AGL® heavy-duty bearings and AGL® fire safety fittings
- FSB security roses
- FSB isis® fittings

03 0455 00012 LL and PC 92 mm



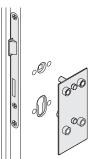
03 0455 01000 isis®, PC 72 mm

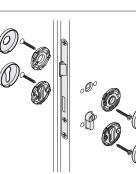


03 0455 01012 isis®, PC 92 mm

03 0455 05608

WC 78 mm





Paper templates

78 8429 0250 for FSB roses standard fittings and AGL® + AGL® FS heavy-duty fittings

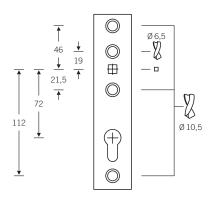
78 8429 0251 for FSB bathroom roses standard fittings

fsb.de/030455

Fixing aids

for panic fittings with concealed screw fixing

03 0457



Fixing templates for FSB panic fittings

77 7970 00110 77 7970 00200

77 7980 0..10 77 7980 0..00

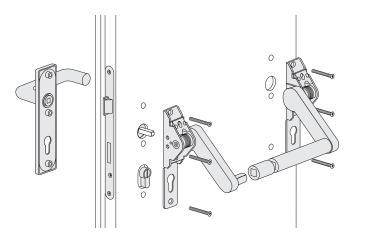


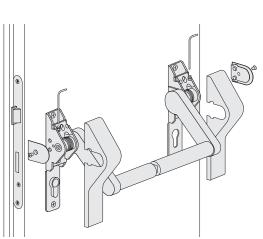
Insert the FSB special spindle 03 0125 in the lock and fit the cylinder. Position drill hole template over spindle and cylinder and drill through the drill bushes. Repeat the process on the door hinge side. Then work out the length of the crossbar and the length of the reinforcement profile: these are calculated by taking the width of the door less twice the size of the backset, less another 68 mm. Once the bars have been cut to size, fit plastic end pieces into the tube for the stainless steel version.

Assembling the panic hardware and connecting it to the fittings on the other side is very straightforward. Full instructions are enclosed with each set. Once the limit stop has been adjusted (only 77 7970) and the cover caps have been fitted, check that the fitting works.

78 8430 0085

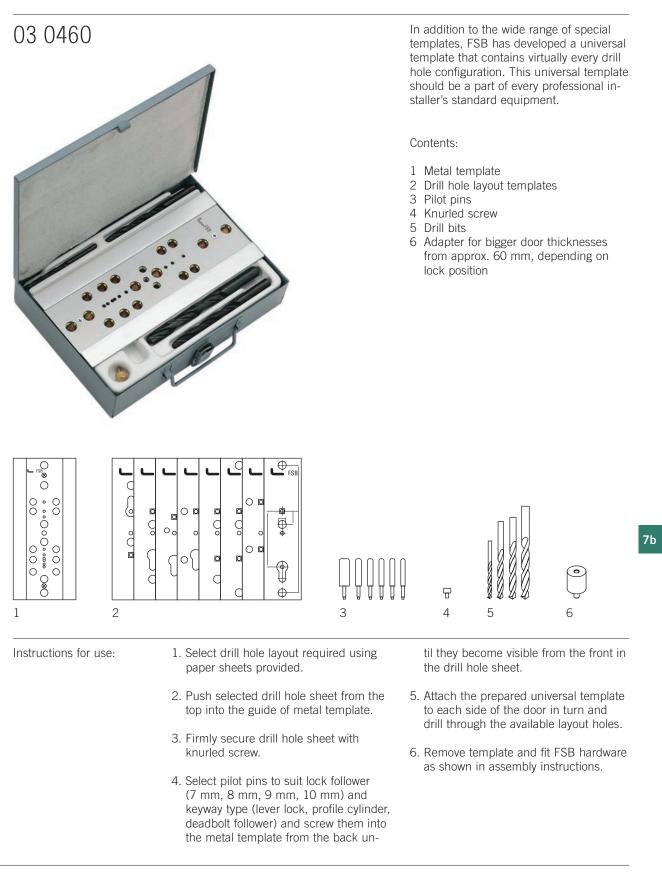
Assembly instructions for panic fittings 77 7970





fsb.de/030457

Universal template



fsb.de/030460

fsb.de/catalogue

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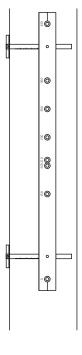
Door pull template

03 0461



The door pull template 03 0461 was designed to enable holes for door pulls to be drilled accurately. The FSB door pull template therefore takes different axial dimensions into account as well as individual backsets. It features hardened drilling bushes and graduated side stops and is made of high quality aluminium. The integrated felt pads prevent the door surfaces from being damaged.

Fixing centre spacing 150 mm, 200 mm, 210 mm, 250 mm, 300 mm, 350 mm and 450 mm



fsb.de/030461

Routing jig for round flush roses

03 0462



AT, CH, BeNeLux spacings

Description of application: push the centring device into the drill holes on the timber routing jig and place the assembly against the door leaf. Slot the two guide pins on the centring device into the handle follower and the profile cylinder or other key hole and align the routing jig parallel with the door leaf. Then secure the routing jig to the door with C-clamps based on the resulting position. Using the drilling bushes on the centring devices, make the corresponding holes to fasten the roses or fittings. Now remove the centring device and proceed to rout out:

03 0462 00001 (PC 88 mm, PC/LL 90 mm, WC/R/7/90 mm – Ö-Norm)

03 0462 00002 (PC 70 + 85 mm, WC/R/7/70 mm)

03 0462 00003

(PC + WC 78 mm + CH-RZ 74/78/94) for flush heavy-duty fittings (FSB 72 and 76/79) with a minimum door thickness of 45 mm, depth 7 mm, Ø 55.6 mm and for flush roses (FSB 17 1736/17 1737), door thicknesses from 38–44 mm, depth 3 mm, Ø 55.6 mm Routing cutter Ø 20 mm, collar ring Ø 30 mm. Repeat process on the other side.

03 0462 00010

for flush security roses FSB 73 7396: outer Ø 60.8 mm, depth 12.5 mm (routing cutter Ø 20 mm, collar ring Ø 30 mm), inside: Ø 55.8 mm, depth 7 mm (routing cutter Ø 20 mm, collar ring Ø 35 mm).

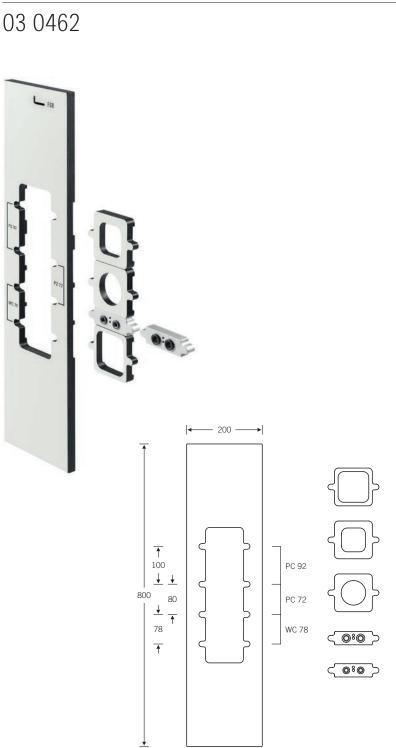
03 0462 00020 for flush pulls 42 4250-42 4254

fsb.de/030462

Additional information: fsb.de/flush

Routing template

for round and rectangular flush roses



DE spacings

Description of application for 17 1733 / 17 1734: push the two centring devices into the timber routing jig and place the assembly against the door leaf. Slot the two guide pins on the centring devices into the handle follower and the profile cylinder or keyhole and align the routing jig parallel with the door leaf. Then secure the routing jig to the door with C-clamps based on the resulting position. Using the drilling bushes on the centring devices, make the corresponding holes to fasten the roses or fittings. Now remove the centring devices and use the small attachment to rout 3 mm deep with a Ø of 55.6 mm, Ø 20 mm routing cutter and Ø 30 mm collar ring. Then switch to the big attachment and rout out the corner areas, also 3 mm deep with Ø 30 mm collar ring but Ø 4 mm routing cutter. Repeat the process on the opposite side.

Description of application for heavy-duty fittings and 17 1736 /17 1737: Rout out with round attachment, 3 or 7 mm deep, Ø 20 mm routing cutter, Ø 30 mm collar ring

03 0462 00030 (PC 72 + 92 mm, WC/R/8/78 mm)

for round flush roses FSB 17 1736/17 1737, door thick-nesses from 38–44 mm, depth 3 mm, Ø 55.6 mm

for rectangular flush roses FSB 17 1733/17 1734, door thick-nesses from 38–44 mm, depth 3 mm, 55.6 \times 55.6 mm

for flush heavy-duty fittings (round roses) FSB 72 and 76/79, doo thickness from 45 mm, depth 7 mm, Ø 55.6 mm

fsb.de/030462

Additional information: fsb.de/flush

Fixing aids

for short backplates with concealed screw fixing

03 0469

03 0477

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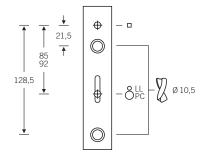
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- 8 LL - 2 Ø 10,5



Fixing template for FSB short backplates 14 1452 and 14 1453

- with concealed screw fixing
- FSB fittings in fire safety design
- FSB fittings with AGL® compensating bearing

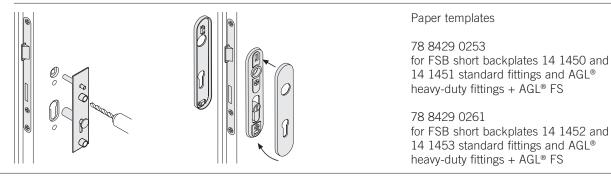
For variable use with LL/PC/WC 85-92 mm

Fixing template for FSB short backplates 14 1450 and 14 1451

- with concealed screw fixing

- FSB fittings in fire safety design
- FSB fittings with AGL® compensating bearing

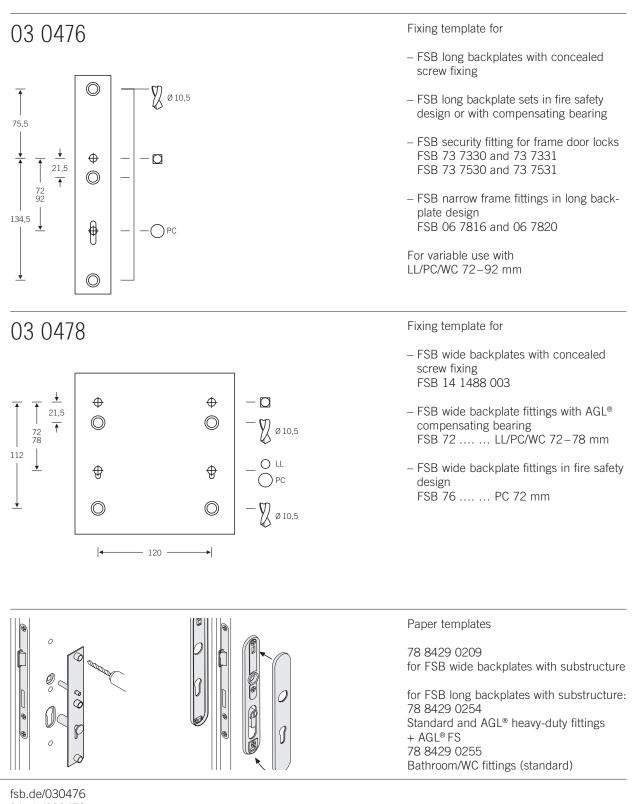
For variable use with LL/PC/WC 55-78 mm



fsb.de/030469 fsb.de/030477

Fixing aids

for long and wide backplates with concealed fastening

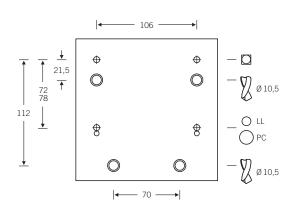


fsb.de/030478

Fixing aid

for round backplate PS1 with concealed fastening

03 0473



Fixing template for

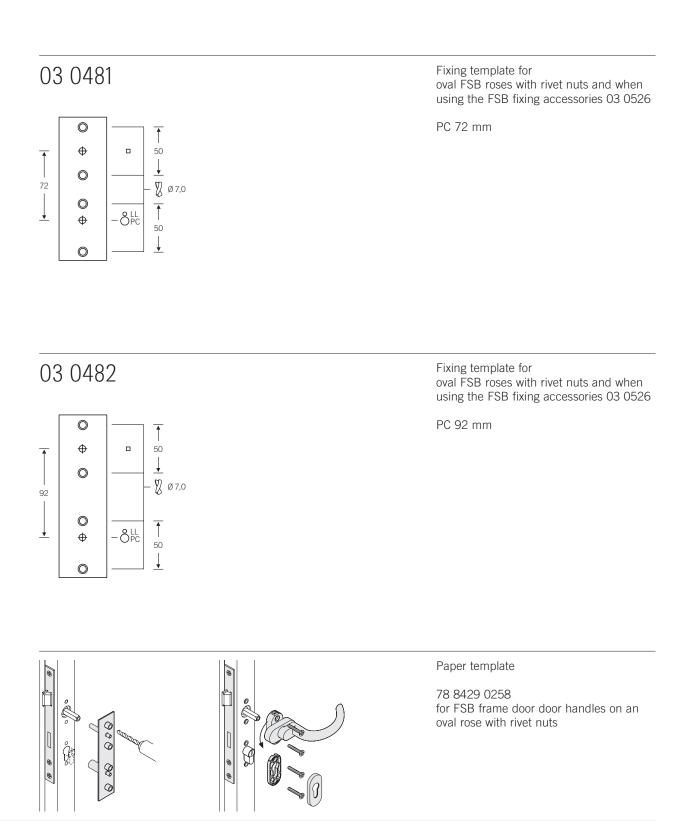
 FSB round backplate with concealed screw fixing, design Philippe Starck FSB 14 1491 003 (round backplate) FSB 19 1991 0.. (round backplate with knob)

For variable use with LL/PC/WC 72–78 mm

fsb.de/030473

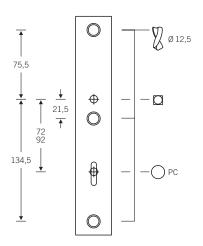
Fixing aids

for frame door roses with rivet nuts

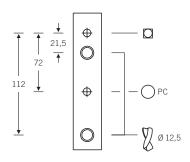


fsb.de/030481 fsb.de/030482 for Design + Security

03 0487



03 0488

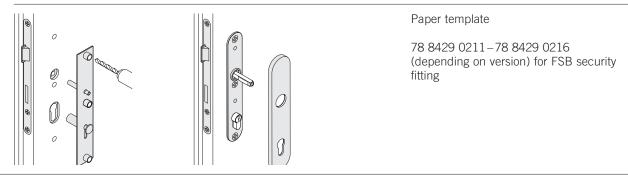


Fixing template for FSB security fitting long backplate version

For variable use with PC 72–92 mm

Fixing template for FSB security fitting short backplate version

PC 72 mm



fsb.de/030487 fsb.de/030488





Museum of the history of polish jews

www.jewishmuseum.org.pl/en

Lahdelma & Mahlamäki Architects, Helsinki www.ark-l-m.fi

FSB 1144 range of handles, see page 210 f. (Design: Jasper Morrison)

AGL®-/AGL® FS heavy duty fittings for fire and smoke doors, see page 26 ff.

Stainless steel, fine matt, brushed

www.fsb.de/jewish_museum

- 737 Sales organisation
- 738 Handing details
- 740 Terms and conditions
- 742 Sales aids
- 744 German standards (DIN)
- 745 Directions to FSB



You may have noticed it already: not only do we take a certain amount of care when preparing our catalogues and brochures. Our trade fair activities are also an important part of our sales work and corporate communications. Regardless of whether this relates to the architecture trade fair, BAU, in Munich, or exhibitions where we present our barrier-free ErgoSystem[®] or isis[®] access management system: you are always invited to visit us and get to know us in person. Where and when we from FSB can be encountered outside of Brakel around the world, you can find out here: www.fsb.de/dates

Sales/distribution partners

FSB project service worldwide



At www.fsb.de you are always up-to-date. Our website not only offers you a convenient search function to find the FSB field sales staff responsible in your region. Registered users of our information portal "My FSB" also enjoy a number of free benefits:

Digital catalogue plus

- Configure your very own product designs that are exactly tailored to your needs or those of your customers.
- Advise, acquire and plan with the digital catalogue: our product configurator offers an unrivalled product and range depth.
- Use the variety and unique selling points of the FSB range for your own marketing; get away from comparability and the old familiar standards!
- Create watch lists and save them permanently.
- Recommend products e.g. to colleagues, employees, customers, planners, architects, ...
- Send enquiries straight to the dealer of your choice.
- Download CAD datasets and texts for calls for proposals.

The FSB Brand is available worldwide

Our Points of Contact are divided in regions looked after from FSB Regional Sales Managers and local distribution partners in their countries. Please refer to www.fsb.de/contact for your region or local distribution.

Furthermore our qualified sales and specification team is available at all times for your questions and demands:

Spec Write

Nieheimer Straße 38 33034 Brakel Germany Phone +49 5272 608-213 Fax +49 5272 608-313 info@spec-write.com www.spec-write.com

Handing details

Door handle fitting for DIN doors I.h. opening inwards

spindle part points rights aperture part points left

Entrance door fitting for DIN doors l.h. opening inwards

aperture part points left

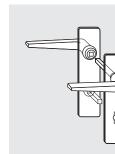
Bathroom and WC fitting for DIN doors l.h. opening inwards

spindle part points right/ WC perforation aperture part points left/ thumb turn

DIN I.h.,

DIN r.h.,

opening inwards*



ſ

Door handle fitting for DIN doors r.h. opening inwards

spindle part points left aperture part points right

Entrance door fitting for DIN doors r.h. opening inwards

aperture part points right

Bathroom and WC fitting for DIN doors r.h. opening inwards

spindle part points left/ WC perforation aperture part points right/ thumb turn

DIN r.h., opening outwards*

outside

inside

inside $\overline{}$

outside

DIN I.h., opening outwards*

outside

* with isis[®] M/T = electron-

ics side is always on the

Doors can be fitted right hand or left hand. The handing is determined by the hinge side or opening area. When ordering entrance door fittings, or if you require the spindle

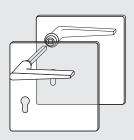
part of door handle fittings to be located on the outside, the descriptions "DIN I.h./r.h." and "opening inwards/outwards" must be specified.

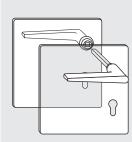
opening inwards* inside outside



738 FSB Manual 2015 | 2016 **Door handle fitting** for DIN doors l.h. opening inwards

spindle part points rights aperture part points left



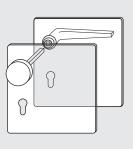


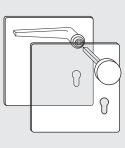
Door handle fitting for DIN doors r.h. opening inwards

spindle part points left aperture part points right

Entrance door fitting for DIN doors l.h. opening inwards

aperture part points left





Entrance door fitting for DIN doors r.h. opening inwards

aperture part points right

Bathroom and WC fitting for DIN doors l.h. opening inwards

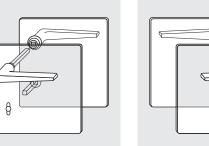
spindle part points right/ WC perforation aperture part points left/ thumb turn

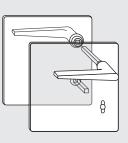
DIN I.h.,

DIN r.h.,

opening inwards*

opening inwards*





Bathroom and WC fitting for DIN doors r.h.

opening inwards spindle part points left/

WC perforation aperture part points right/ thumb turn

DIN r.h., opening outwards* 8a

DIN I.h., opening outwards*

Doors can be fitted right hand or left hand. The handing is determined by the hinge side or opening area. When ordering entrance door fittings, or if you require the spindle

inside

outside

inside

part of door handle fittings to be located on the outside, the descriptions "DIN I.h./r.h." and "opening inwards/outwards" must be specified. * with isis[®] M/T = electronics side is always on the outside

outside

inside

inside

outside

Product liability

Under the Product Liability Act, FSB is liable for damage caused by faulty products,

the precondition being that, in terms of selection, installation and use of the products, all the applicable regulations set down in the FSB manual shall have been complied with.

We would also like to point out that what the law defines as product liability and what the end user actually expects of a product can be two very different things. Door and window handles, after all, are nothing more than tools for opening and closing doors and windows. Inevitably, these tools are also subject to the laws of wear and tear.

Despite the use of prime materials, production organised in accordance with ISO 9001, validation according to the EU "eco audit" and ISO 14 025 and ISO 14 001 certification, production faults can still occur, for whose rectification we are responsible.

The main definitions and regulations are summarised below.

1.0 Product definitions

1.1 Door handles + accessories

Door handles and their accessories are used to open and close doors. They do this in concert with the door frame, door hinges, door leaf, lock and cylinder. All these elements need to coordinated with one another. Using a door handle to open and close a door, for example, requires the door not be locked. Only in certain exceptional cases, such as on panic doors, do special fittings release the locking function when the door handle or crossbar is operated.

1.2 Tubular handles

The same applies to tubular handles. The door frame, door hinges, door leaf and other closing devices such as door closers need to be compatible with one another. It is particularly important to maintain the safety gap proposed at the factory between the edge of the door and the handle fastening.

1.3 Window handles + accessories

Again, window handles are just one part of a window. The method of closure will generally determine which type of handle is appropriate.

2.0 Improper use

Door handles, door pulls and window handles are subject comparatively often to improper use, which can lead to damage sooner or later and mean that they no longer retain the product features defined by the manufacturer.

Typical examples are:

- Door handles are used as supports, especially when on doors at the top of steep steps.
- Doors are used by children as a sort of roundabout, the door handles serving as the main source of support.
- In the absence of door stops, door handles and door pulls bang against the wall.
 Door handles and pull handles are used
- to hang heavy objects on.
- Door handles are used together with panic locks continually against the recommendation of lock and fittings industry instead of only in an emergency.

3.0 Product performance

Product performance is only defined by standards to a very limited degree. For the most part, product performance qualities are the up-shot of many years of experience and have become common property in the building hardware trade. FSB keeps to these generally accepted rules. The standards listed below apply to particular performance requirements.

DIN 18 255

This standard contains general benchmarks for door fittings and their accessories.

DIN 18 273

This standard contains special rules for fire and smoke safety doors.

DIN 18 257

This standard contains minimum safety requirements for security hardware.

FSB products are being constantly developed and production is continuously monitored by the FSB quality assurance department. We reserve the right to make technical modifications.

4.0 Product maintenance

Most FSB products are "implements" for opening and closing of doors and windows. Sooner or later, depending on what they are made of and where they are fitted, they will inevitably begin to show signs of wear. The properties of the various materials can be summarised as follows:

4.1 Aluminium

Aluminium has performed admirably in everyday use for many decades. The metal is protected by a tough anodised coating. Surface scratch marks in no way impair the functionality of the hardware but are simply a typical sign of ageing.

4.2 Stainless steel

Stainless steel is commonly regarded as being indestructible. In fact, even stainless steel can develop scratches and occasional rust patches. The latter is the phenomenon known as "flash rust", which can be removed with the aid of standard cleaning agents.

4.3 Brass

Much has already been said in the FSB manual regarding the properties of brass. Whereas aluminium is more or less a pure metal, brass is a typical alloy, whose elements tend to corrode. We would therefore like to emphasise once again here that unlacquered brass components only retain their initial allure by being regularly cleaned. Once the coating of the lacquered brass fittings has been breached, unsightly corrosion sets in, which can only be rectified in our factory after a laborious stripping operation.

4.4 Aluminium + paint

In the case of painted door handles, FSB normally applies a flexible coat of paint approx. 80 microns thick, which lasts a long time given correct use. However, contact with sharp objects may cause slight dents.

4.5 Bronze

As far as brass and its properties as an alloy are concerned, this also applies in similar fashion to the alloy bronze. Culturally and historically speaking, the property of bronze especially for developing a typical patina over the course of its use is seen as a particularly aesthetic feature. In this respect, FSB only produces lacquered bronze fittings on specific request and furthermore draws attention to the fact that the same instructions apply to this surface as to lacquered brass fittings. In turn, the factory patinated bronze surfaces supplied by FSB may display production-related differences regarding the level of patina. These differences in no way impair the functionality of the hardware. These differences are in fact typical signs of bronze's natural surface ageing process.

4.6 Care

All FSB products are largely maintenancefree. Once fitted, however, FSB recommends checking at regular intervals that they are properly positioned and that screw fastenings are secure.

Only water and a soft cloth should be used to keep FSB hardware clean.

5.0 Product information and instructions

For information and instruction purposes, the following material is available:

For stockists, architects and consultants: catalogues with all the necessary detailed descriptions.

For installers:

besides the catalogues, fitting instructions and templates and, for special designs, technical drawings.

For end users:

fitting instructions, templates, instructions for use and – in specific instances – care instructions, which are supplied with the product packs.

To ensure the correct functioning of door and window hardware:

- Architects and designers are urged to bear in mind where and under what conditions the hardware is going to be used and to select the right fittings accordingly. In case of doubt, any queries should be addressed to the building hardware wholesalers, the FSB field sales representatives, or FSB itself.
- The retail trade is urged to rigorously double check the specifications provided by architects, designers and clients and to compare them with the specifications of the fittings selected.
- Installers are urged to make sure they receive all the product information, fitting and maintenance instructions from the retail trade, which allow them to fit the hardware correctly and to pass on any relevant information to the customer.

Our terms and conditions

We supply and provide our contractual services on the basis of our terms and conditions (T&Cs) valid at the time of our offer. The current version of our T&Cs can be downloaded at any time under **www.fsb.de/termsandconditions** on the

Internet from our website. We are also happy to send you the current version of our T&Cs on request.

Sales aids

You may be wondering why it is we have so much to say on the subject of sales aids. The fact is that in no way do we regard this as a peripheral issue.

After all, fittings are not replaced within short spaces of time. They are expected to perform day in day out over many years. Opting for the wrong product – wrong in terms of quality, design or, indeed, profit margin – can take a long time to put right. That is why it is important to support the decision-making process from an early stage so as to guide the customer towards choosing the right product at the decisive moment.

The enlightened purchaser and customer expects to find reasonable displays, easy to read catalogue material and pertinent sales arguments at the point of sale. FSB has always endeavoured to oblige.



1. Displays and sample boards

We at FSB do not go along with turning display areas into supermarkets and confronting the end-user with a hotchpotch of hardware. For this reason, we have developed an all-in-one display module, which is so variable that it can easily be adapted to fit the space available.

As a means of keeping key elements of the FSB range well apart from competitors' offerings even in the most cramped of spaces, we have also come up with a three-sided rotating merchandise stand. This allows upwards of 40 FSB products to be excellently exhibited on half a square metre of floor space at most. There is also a special rotating merchandise stand for FSB's wide range of main entrance door fittings. Our sample fittings are combined with special lock mechanisms so that the customer can get a feel for how they work in practice. Sample boards come in both standard and custom sizes. Architects are often not satisfied with mere sample boards, however. Instead, they want to see how the fitting works in conjunction with lock and cylinder on a small door element. We supply special sample blocks just for this purpose.

The same is true for providing samples of our flush hardware solutions. For all those who want (or have) to travel with the FSB range, we have designed special sample cases. They can be purchased or, in individual instances, hired. FSB's Field Service can tell you about the arrangements.

FSB ErgoSystem® + METRIC® A life of barrier-free comfort



FSB ErgoSystem[®] + METRIC[®] A life of barrier-free comfort



FSB Access management isis® M300 – convenience of online administration

FSB Recessed pulls Purist points of focus

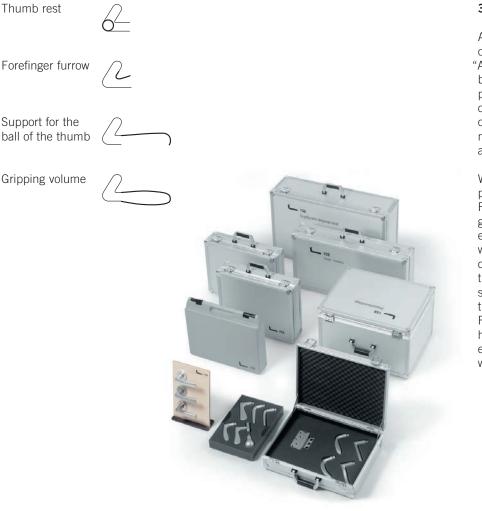


FSB Recessed pulls Purist points of focus

2. Catalogues and brochures

As you may have noticed, for many years now FSB has been putting a lot of effort into its catalogues and brochures. (You are holding the latest evidence of this in your hands). And, to our great joy, the trade and public both definitely appear to have appreciated our efforts. This has inspired us to further expand our range of written sales and information aids.

The quickest and most direct access to all our available FSB material can be found on the Internet under fsb.de/brochures



3. Sales arguments

All retailers know (and dread) the classic question from the customer that goes: "And what would you recommend?" Thus begins, more often than not, a host of platitudes, such as everyone has their own taste, or this is currently in fashion, or that is selling particularly well at the moment. But are these good or at least adequate sales arguments?

We don't think so. In light of this, we have published a whole series of books – the FSB Edition – about the problems of gripping, the design of pulls and virtually every aspect of "handle culture". Anyone wishing to extend his or her repertoire of sales arguments is urged to consult them – and in doing so will inevitably stumble on the best sales argument of all: the "Four rules of gripping" devised by FSB, the handiest aid to deciding which handle to buy. Because any enlightened end user can effortlessly reproduce them with his own hands. 8a

German standards (DIN)

Without laying any claim to being exhaustive, below is a selection of German Industrial Standards (DIN) relevant to doors and windows:

DIN 107

Identification of left and right side in the building trade

DIN 4102, Supplement 1 Fire behaviour of building materials and components; tables of contents

DIN 4102, Part 5 Fire behaviour of building materials and building components; fire barriers, barriers in lift wells and glazings resistant against fire; definitions, requirements and tests

DIN 4102, Part 13 Fire behaviour of building materials and components; fire resistant glazing, definitions, requirements and tests

DIN 4102, Part 18

Fire behaviour of building materials and components; fire barriers, verification of "automatic closure" (continuous performance test)

DIN 1080, Part 1 Terms, symbols and units used in civil engineering, principles

DIN 18 055 Windows; air permeability of joints, water tightness and mechanical strain; requirements and tests

DIN 18 082, Part 1 Fire barriers; steel doors T 30-1, construction type

DIN 18 095, Part 1 Doors; smoke control doors; terms and requirements

DIN 18 095, Part 2 Smoke control doors, type testing for durability and leakage

DIN 18 100 Doors; wall openings for doors; dimensions in accordance with DIN 4172

DIN 18 101

Doors; doors for residential buildings; sizes of door leaves, position of hinges and lock; interdependence of dimensions DIN 18 111, Part 1 Door frames; steel door frames; standard door frames for rebated doors

DIN 18 250 Mortise locks for fire barriers

DIN 18 251 Locks; mortise locks for doors

DIN 18 252 Locking cylinders for door locks; terminology

DIN 18 254 Lock cylinders for door locks; dimensions, requirements, testing for profile cylinders with pin tumbler locks

DIN 18 255 Building hardware; door handles, door plates and door roses; terms, dimensions, requirements

DIN 18 257 Building hardware; security fittings – definitions, dimensions, requirements, testing and labelling

DIN 18 267 Clickable and lockable window handles

DIN 18 268 Building hardware; hinges for doors; reference-lines for hinges

DIN 18 273

Building hardware; door handle fittings for fire safety doors and smoke safety doors; definitions, dimensions, requirements and testing

DIN 18 357 Contract procedure for building works Part C: General technical terms of con

Part C: General technical terms of contract for construction work; installing window and door fittings

DIN 18 361 Construction contract procedures; Part C: General technical requirements for construction work; glazing

DIN 58 125 School buildings, structural requirements for the prevention of accidents

DIN 68 706, Part 1 Interior doors made from wood and woodbased panels; door leaves, definitions, sizes, construction features DIN EN 179 Emergency exit devices operated by a handle or push pad – Requirements and test methods

DIN EN 1125 Panic exit devices operated by a horizontal bar – Requirements and test methods

DIN EN 1303 Cylinders for locks – Requirements and test methods

DIN EN 1627 Windows, doors, barriers – Anti-burglar devices – Requirements and classification

DIN EN 1628 Windows, doors, barriers – Anti-burglar devices – Test methods for establishing resistance under static loads

DIN EN 1629 Windows, doors, barriers – Anti-burglar devices – Test methods for establishing resistance under dynamic loads

DIN EN 1630 Windows, doors, barriers – Anti-burglar devices – Test methods for establishing resistance to manual attempts to break in

DIN EN 1670 Corrosion behaviour – Requirements and test methods DIN EN 1906 building hardware, door handles and door knobs – Requirements and test methods

DIN EN 12 209 Mechanically operated locks and striking plates – Requirements and test methods

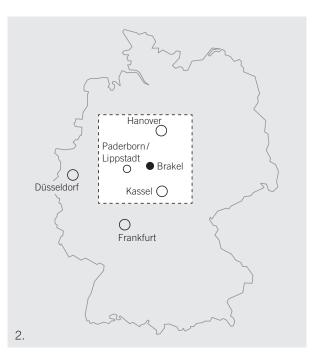
DIN EN 12 217 Operating forces on doors

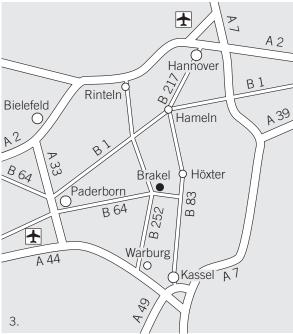
DIN EN 13 126-3 Window handle requirements

DIN EN 13 724 Residential letter boxes; requirements, testing and installation

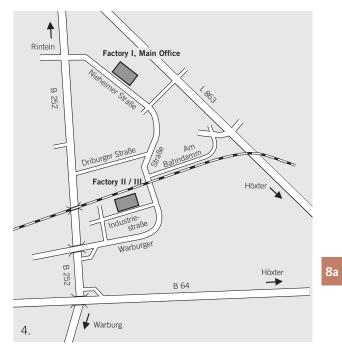
Directions to FSB







- 1. Brakel is situated in the most south-easterly corner of the state of North Rhine Westphalia in Germany. Geographically speaking, it is where the Egge Mountains merge with the Weser Uplands.
- Paderborn is linked to the airports in Berlin, London, Munich, Paris, Stuttgart, etc. The Kassel-Wilhelmshöhe intercity railway station is 55 minutes from Brakel by car. Distances to the most important airports in Germany: Düsseldorf approx. 200 km l Frankfurt approx. 220 km l Hanover approx. 120 km.



- 3. Brakel is reached by car from the north via the Hanover-Dortmund motorway, exit Rinteln, then taking the main road Rinteln-Barntrup-Blomberg to Brakel. The distance from Rinteln to Brakel is about 90 km. When coming from the south, leave the Kassel-Dortmund motorway at the Warburg/Brakel exit and drive from Warburg via Peckelsheim, Siddessen and Rheder about 35 km to Brakel.
- 4. FSB has two production sites in Brakel. The main offices are located together with the aluminium foundry, the tool making and development units at Nieheimer Straße 38. Factories II and III are located together along with the logistics centre on the Brakel industrial estate at Industriestraße 12.

748 Keywords

Keywords

0° position door handlos	20
0° position door handles	
A-Flex assembly concept	
A.S. Loevy	
Access management isis [®] M100/M300	
Access management, isis [®]	15, 451., 405
Additional equipment for ErgoSystem®	
AGL®-, AGL® FS heavy-duty bearings	6. 26 f 28
Aicher, Otl	
Aluminium	
Anodising aluminium	
Anti-blockade functions, anti-panic locks	
Anti-panic functions B, D and G	
Anti-suicide equipment solutions	
Antibacterial properties of copper	
Backplates, concealed and exposed screw connection	
Bactericidal properties of copper	
Barrier-free concepts	
Barrier-free ErgoSystem [®]	6, 10f., 12, 629f.
Barrier-free fittings	623f
Bastian, Peter	
Bathroom accessories (METRIC®)	
Bathroom/WC bolt fittings	
Bauhaus	
Deerings for deer bondles	
Bearings for door handles	
Bill, Max	
Biometric pulls (isis [®] F)	
Brass	
Bronze	
Budget lock roses	
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73 7376	584	76 1186	244		671, 673, 677	Serie 55 NV 2	2
73 7377	585	76 1222	254	82 8225	658	Serie 19124 FH 2	4
73 7381	586	76 1230	258	82 8227	676		
73 7382		77 7948					
73 7383		77 7949	,		651, 681		
73 7384		77 7950					
73 7385		77 7952			650, 681		
73 7386		77 7970			649		
73 7387		77 7971			651		
73 7388	593	77 7972	461	82 8238	650		
73 7391	598	77 7973	461	82 8239	653		
73 7392		77 7980			645		
73 7393		77 7982					
73 7395		79 1002					
73 7396		79 1016					
73 7397		79 1031			645, 677		
73 7530		79 1043		82 8245			
73 7531	595	79 1045	154	82 8246	672, 673		
73 7560	580	79 1053	19, 138	82 8247	670		
73 7574	582	79 1070	164	82 8248	672, 673		
73 7575	583	79 1074					
73 7576	584	79 1088	176		642		
73 7577		79 1090			644, 677		
73 7581	586	79 1094	180	82 8259	682		
73 7582	587	79 1117	19, 626	82 8260	639, 648, 653,		
73 7583	588	79 1119	202, 625		654, 659–665		
73 7584	589	79 1134	118	82 8270	690–695		
73 7585		79 1146	214		. 648, 666, 669		
73 7586	591	79 1155					
73 7587		79 1159					
73 7588		79 1160		96 7099	685		
76 1001		79 1164					
76 1004		79 1177					
76 1015	126	79 1178	196				



NEU: isis M100 Zutrittsmanagement kompakt + effektiv

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The FSB exhibition stand at fensterbau frontale 2012. The completely "green" accreditation of the FSB range according to ISO 14 025 resp. EN 15 804 provided the guiding theme: sustainability. The associated motif from the current FSB advertising campaign – "the tree" – was installed on site on the inside wall of the exhibition stand made completely of FSB products (including more than 600 door knobs in the design by Philippe Starck and nearly 250 door handles created by old master, Hartmut Weise).



After the trade fair, all the fittings were carefully dismantled and taken back to Brakel, since when they have been adorning our training centre, also as a "tree". Sustainability in practice ...

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FSB

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