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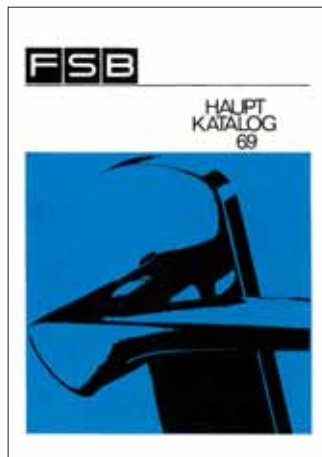
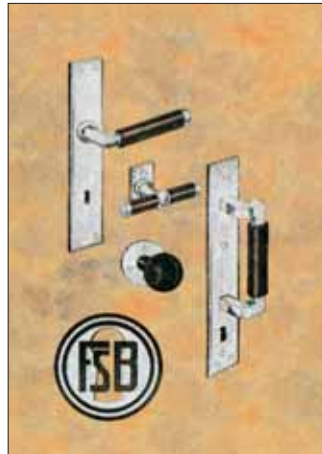
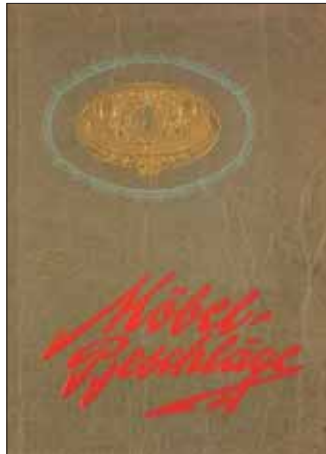




## Proud tradition

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

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



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## Dear Reader and Handle Enthusiast,

It is with pleasure – and not a little pride – that we are now presenting you with the new FSB Manual for 2009/10. We Eastern Westphalians are known for our modesty and yet we would at least like to take this opportunity (and this one only) to urge you with quite a bit of self-belief to make the FSB Manual your Number One choice for door and window hardware, project construction ventures, barrier-free grab systems or electronic access control – i.e. for anything remotely connected to fitting your own or other people's four walls out with architectural hardware. The principal function of this Manual, after all, is to serve architects, building planners, fabricators, trade stockists and house builders alike as a sound and exhaustive aid to planning that leaves no wish unfulfilled. But perhaps you also know FSB as an enterprise that addresses itself to things that do not at first sight appear to have much in common with mere products: "lived" corporate culture, resource-conscious production, well-conceived product design, socially responsible action – for us, far from being just fine words, these have always been part and parcel of our day-to-day activities and of how we see ourselves. They are also all vital for active environmental protection. FSB was one of the first companies in Germany to have its endeavours certificated. We are aware of our ecological responsibility in the natural course of things. This relates to the choice of materials worked, the design of manufacturing processes and dealings with inherited liabilities. And if there

is one thing we are clear about as an SME at a time when globalisation is on everybody's lips, it is this: successful business activity is indeed compatible with being regionally rooted and opting for "high-wage economy" Germany. FSB products have friends all over the world. The "Made in Germany" tag is a byword both at home and abroad for timeless design, function-driven engineering, durability and sustainability, attributes that cannot be reconciled with arbitrariness, any focus on short-term profit or opportunism. FSB door and window fittings are an investment in the future – if that's what you're after. FSB products live longer than we could theoretically care for. Their visuals are still spot-on after decades and decades too. We offer you quality together with well-conceived system solutions. From an aesthetic point of view, our products are the authentic upshot of work with celebrated international architects and designers. We additionally focus our attention on the materials used and the enduring quality of our finishes, which are carefully coordinated throughout the range. You can be just as sure, moreover, that we are technically on the ball. Besides an innovative electronic access control system and some very engaging flush assembly variants of our classic fittings, we also wish at this juncture to draw your attention to our barrier-free ErgoSystem. We have drawn on experience gained in the sphere of handle culture to offer the elderly – or anyone aspiring to greater comfort in the bathroom and

home – a well thought-out range of grabs and accessories for barrier-free living. It goes without saying that we likewise keep up with trends in facade construction that are leading to the use of windows and doors with a high degree of thermal insulation or of large-format glass components. The high level of investment involved is reason enough to demand hardware that does its job lastingly and reliably as well as being technically on a par with the systems it operates with. It is only if solutions are arrived at under these provisos that are also fittingly attractive, however, that our quality aspirations are met. Test us!

FSB Franz Schneider Brakel



## Project sector innovations



Classics for the modern age – the FSB Bronze Collection

With the appearance of its 2008I09 Manual, FSB is adding another classic door handle design (FSB 1102) to its Bronze Collection as well as a complete range of fittings and matching accessories for main-entrance doors. The collection embraces both classic and modern handle designs of round and oval cross-section, DIY handle solutions from our kit sets, security roses, letter-plates, intercom and bell-push plates and the now almost legendary house numbers after Otl Aicher.

The relevant product overview is to be found on pages 40 and 41.



ErgoSystem – new departures for life in old age

Our multi-award-winning ErgoSystem has established itself as the Number One choice in recent years where barrier-free products for residential and sanitary applications are concerned. The handicapped and elderly appreciate the comprehensiveness of a system that provides an optimum means of self-help without dispensing with design of the highest order. Its support rails, grabs and bathroom accessories are also distinctive from an ergonomics point of view: the diagonal-oval sectioning of the rails and handles echoes the human anatomy and reduces the force required to take hold of them. Rounding off the system are our barrier-free lever handles, XXL-format handles and elegant METRIC bathroom accessories. In the present Manual we are also launching new products that complement the range in a formally harmonious and functionally consistent manner. From walking aid holder through shower-head bracket for single-handed operation to flexible hanging seat: the new products are shown together with the whole familiar range on pages 474 onwards.



Flush pulls – and other flat product ideas

The flush furniture with heavy-duty bearings for door thicknesses of 45 mm upwards that we presented in our last German Manual was extremely well-received by the market. The FSB Development Dept responded by going into retreat and duly coming up with a raft of innovations that we would like to present for the first time in the present Manual:

- flush roses with standard bearings for door thicknesses of from 38 - 44 mm (cf. page 146)
- recessed pulls in rectangular/square and oval/round designs with open and discreetly closed handle recesses (cf. pages 234ff.)
- armoured roses for main-entrance doors to DIN 1906 S2 in a flush finish (cf. pages 448 and 449)
- window handles with shallow roses - suppliable for all models in the FSB range (cf. page 195)



Design + Security Generation 2008

The proven anti-bandit credentials of the “Design + Security” range FSB introduced in the 1990s successfully demonstrated how a modular security hardware concept can meet varying design notions and security requirements in equal measure. With our new security hardware models FSB 7360 and 7361 we are literally cloaking our proven security technology in a completely new, self-standing design concept: adopting a radically purist approach to design, FSB’s in-house designer Hartmut Weise introduces a security hardware design in the present Manual that departs radically from received formal concepts: using stainless steel 5 mm thick he has created a matter-of-fact sculpture of folded surfaces that does nothing whatsoever to accommodate its intended door. The design is only available with an S4 security rating and, besides a classic version, optionally comes with an integrated electronics package in the form of a capacitive door-bell sensor plus nameplate and radio-operated door-bell module and a harmonised radio gong on the inside. Please consult pages 430ff for more on our security hardware sculptures.



Compact glass door furniture  
by Christoph Ingenhoven

Glass doors are a contemporary means of expression in modern architecture. They create more light, link up spaces and are conducive to a great sense of roominess. The innate transparency of glass doors means that great care needs to be taken when designing hardware for them, however. It is the lock, handles and hinges, after all, that can really turn a glass door into a design factor. Together with the architect Christoph Ingenhoven, we have now developed a slender rectangular item of furniture for glass doors whose unfussy elegance sets perceptible accents in a space. The surface terminates flush with any DIN frame to visually unify the two. The glass door's transparency is underscored by the tight dimensions of the lock cover, which is some 10 % smaller than in standard glass door furniture. Transparency-driven information is to be found on pages 325ff.



DuoHandles/HandleDuos  
Dissimilar couples by FSB

We have been busying our minds with the door handle – a seemingly mundane common-or-garden product – for well over a century now. This has given rise at pleasantly irregular intervals to books and brochures, workshops and exhibitions, all driven by the creative tension existing between hand and handle. Honouring the tradition of the now legendary “Door Handle Workshop in Brakel”, in 2006 we invited the new design elite to wrap their brains round the handle's innate bilateralism. Handles on either side of a door do not, after all, necessarily have to be of identical design. Thirty-two designers and architects then set to work – as duos of course. Married couples, unmarried couples, office partners and other twosomes proceeded to develop “duo handles” and “handle duos” of a surprising breadth: pairings marked by contrast and others on common ground, “male” and “female” handles, “soft” organic forms and “hard” hi-tech models, sculptural works of art and straightforward means of leverage. We have now chosen five handle duos for you and admitted them to series production. The inspirational outcome can be inspected and conceptually embraced on pages 13ff.



Satisfactory doesn't satisfy us

Competent product solutions ought to be a matter of course for a highly evolved society, as should equally reliable functioning over a product's full life cycle. Doors accompany our lives for a great many years after all. That's reason enough to scrutinise the material, design, engineering but also, crucially, the durability of a door in its entirety. Durability equates with cost-effectiveness, meaning that dearer can be cheaper in the long run. That's because, as well as procurement costs, it is also necessary to bear in mind all outgoings over a product's anticipated life cycle – repairs, servicing and any replacement included. That holds particularly true for doors subject to constant heavy-duty operation – open/shut, open/shut, open/shut - for many decades.



In its capacity as an international project brand and in keeping with the approach it has to quality in any case, FSB is therefore adding Class 3 and 5 mortise locks and Class 3 panel locks to its product range with publication of the present Manual, specifically with a view to providing its international market partners co-ordinated entire solution from a single source.

You will find the FSB lock range inclusive of strike plates and europrofile cylinders by Winkhaus on pages 531ff.

# DIN EN 179 for emergency exit devices

Seldom has the inclusion of standards in Germany's Building Rules List B/Part 1 triggered such controversy as in the case of these two standards. They have both indisputably come through the proof-of-conformance procedure and are thus valid. It is also official, however, that there is no reference in building legislation to EN 179 and EN 1125 being bindingly applicable despite the model and special building regulations essentially dictating that doors on escape routes be easy to open from the inside across their full width, if need be with the aid of a pull handle. DIN EN 179 governs the use of and requirements for emergency exit devices involving lever handles and push pads. Hardware combinations within the meaning of EN 179 are to be rated as products with a bearing on building supervision functions to be included in Building Rules List B and having the requisite EU or CE conformance kitemark. They comprise a lock, handle hardware and striking plate and are required to have been tested and certified as a unit. To spare your having to rack your mind over such arcane matters, however, and to make sure you're always on the right side of the fence, FSB supplies what must be the most comprehensive range of hardware in the sector in this respect.

Making up that range for the purposes of EN 179, with the appropriate testing and certification having been carried out for the lock and striking plate series permitted in combination with them, are the following FSB fire-safety hardware systems in conjunction with the lever handle models indi-

cated in the digest below:

- lever handle and entrance door furniture, respectively available as FSB
- rose
- short backplate
- backplate
- broad backplate sets
- frame-door handle, and
- safety hardware furniture

	7607 13*		7607 25*		0657 12*
	7616 13*		7616 25 Page 288		0616 12*
	7631 13*		7631 25*		0684 12*
	7645 13*		7645 25 Page 289		0645 12*
	7653 13*		7653 25*		0603 12*
	7670 13*		7670 25 Page 290		0665 12*
	7674 13*				0670 12*
	7688 13*		7688 25*		0688 12*
	7694 13*		7694 25*		0694 12*
	7619 13*		7619 25 Page 288		0619 18*
	7646 13*		7646 25 Page 289		0646 12*
	7610 63*		7610 25 Page 287		0680 12*
	7664 13*		7664 25*		0632 12*
	7650 63*		7650 25*		0627 12*
	7651 63*		7651 25*		0628 12*

\* Available on request, versions with 9 mm □ for fire doors

# DIN EN 1125 DIN EN 1906

## DIN EN 1125

Under this standard, panic door devices (= lock + striking plate + push bar) are to be fitted wherever high levels of public traffic are likely and unfamiliarity with the environs may lead to panic arising. Here, too, exact and binding implementations of the provisions set forth in EN 1125 have been the subject of heated debate. We are very much of the opinion that the ultimate decision as to where panic

push-bar furniture is to be fitted should lie with the architect/planner – in liaison with the competent building authority, of course.

Panic fitting combinations are likewise required to be tested and certified as functional units under the terms of the standard. Accordingly, the regulatory framework for building ventures as set out above likewise applies to hardware systems governed by EN 1125. A panic device is required to be designed in such a manner

that it immediately releases the door if pressure is applied to any point on the push bar on the inside of the door in a line leading to an emergency exit. The force applied must be such that children and mobility impaired persons can disengage the locking mechanisms in place too. FSB has joined forces with lock makers Winkhaus, Wilka and BMH to test and certify a variety of panic push-bar fittings – which can be found on pages 313-322.

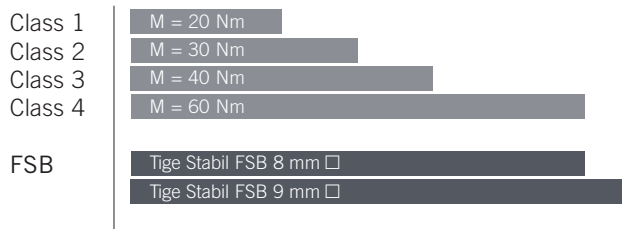
We will gladly send you the relevant test certificates for the hardware combinations governed by EN 179 and EN 1125 if so requested.

## DIN EN 1906

DIN EN 1906 lays down requirements and test procedures for lever handles and door-knobs. The utility value or rating of hardware is always to be arrived at using the classification key specified.

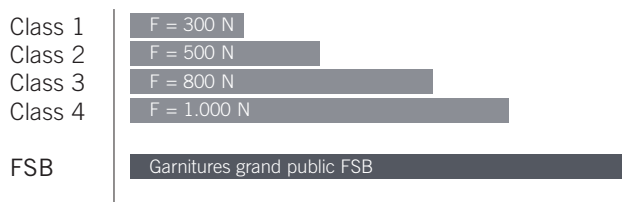
Compliance with DIN EN 1906 is only achieved on the basis of the totality of testing criteria and the findings they give rise to. All FSB products considerably exceed the values prescribed in this standard.

### Torsional rigidity of the spindle



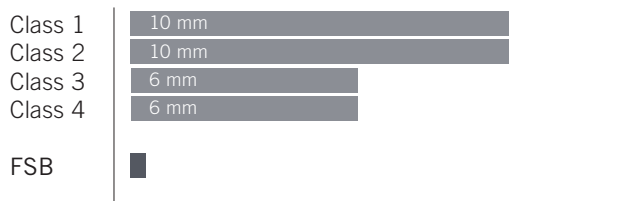
FSB-Stabil spindles offer greater torsional rigidity with lower levels of deformation.

### Tensile stress exerted on assembled fittings



FSB heavy-duty fittings withstand greater levels of tensile stress due to their compact design and the ruggedness of their connecting elements.

### Degree of slack when assembled hardware is at rest



The FSB bearing system guarantees a low amount of slack, thus preventing the furniture from “moving about”.

## Lever handle sets for fire and smoke control doors

The standard currently in force (December 1997) lays down the requirements and testing procedures for “fire safety” fittings. These are regulated building products which are included in Germany’s Building Rules List A under serial No. 6.17 and whose fitness for function is to be proved by means of a certificate of accordance (ÜZ) issued by a recognised certification body and of a general building supervision test certificate (P). The Ü kite-mark indicates that fitness for function has been proved and is enclosed with every set of fire safety hardware.

FSB has the largest range of its kind on the market, one embracing more than 50 lever handle models in combination with roses as well as short, standard and broad backplates, all certified and constantly monitored by the Materials Testing Laboratory (MPA) in Dortmund.



Incidentally: FSB has subjected the issue of standardisation to some thorough-going scrutiny of its own: please request our brochure entitled “FSB on the subject of standards: DIN EN – Quality to get to grips with”. The adjacent diagrams, which graphically illustrate the standing of FSB’s own quality standards, are also taken from this booklet.

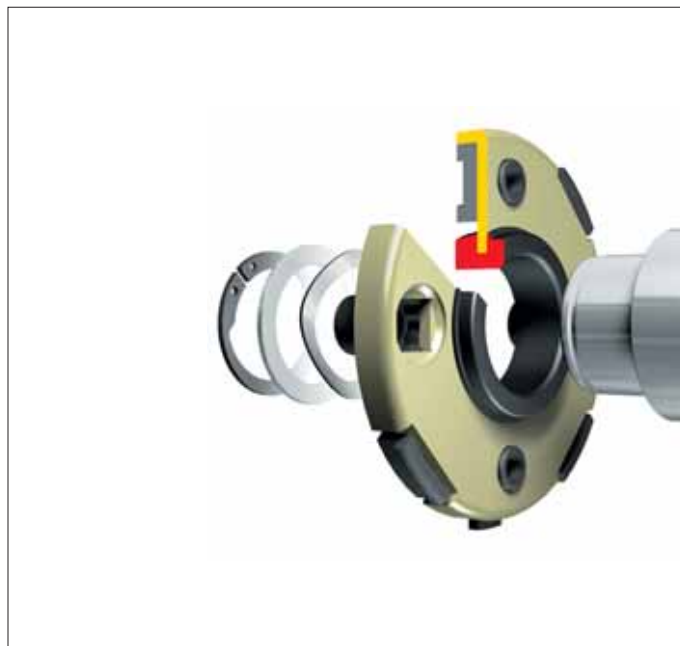
## Technical notes



### FSB Stabil-spindle

The FSB Stabil-spindle carries on from where its predecessors – the FSB Screw- and the FSB Anker-spindle – left off. New is a spring loaded tolerance compensator pierced by the grub screw when fastened.

All FSB lever handles are to be fitted with the FSB Stabil-spindle. The spindle is solid and meets all the specification set out in DIN 18 255 if correctly mounted. For detailed information on every aspect of our spindle technology, please consult sections 9b and 9d.

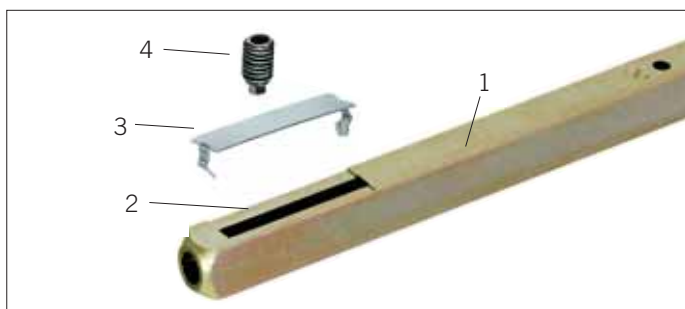


### Fire safety fittings

- Sliding bearing
- Carrier unit with circlip, spacer and wave washer

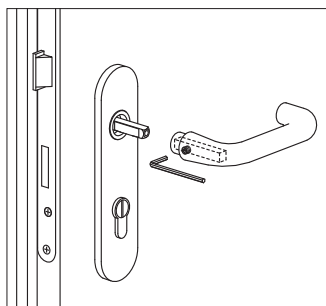
The special requirements for doors designed to afford protection against fire and smoke are set forth in the following DIN standards:

DIN 4 102, Parts 5 + 18  
 DIN 18 082, Part 1  
 DIN 18 095, Parts 1 + 2  
 DIN 18 273



### Features

1. Solid square-section construction
2. Fastening for anchor clamp
3. Anchor clamp with pre-stress springing
4. Grub screw with piercing punch

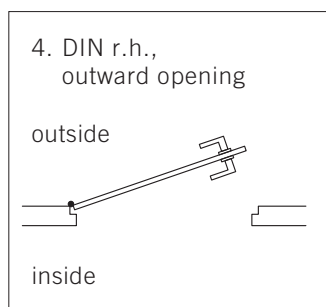
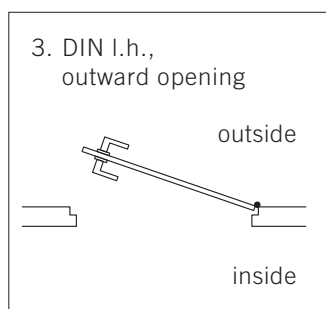
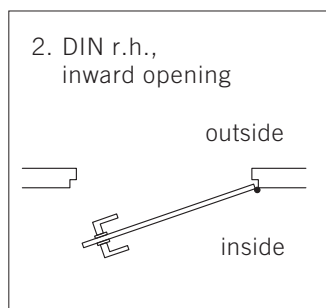
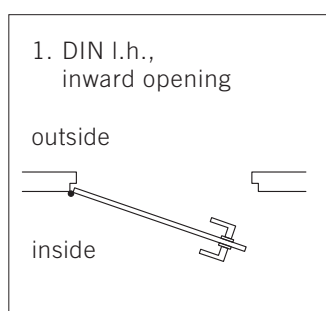
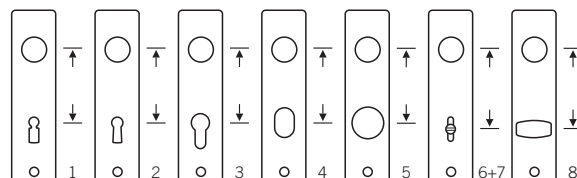
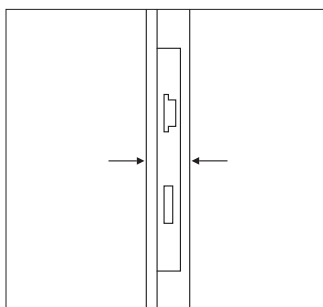


Design-engineering details as well as functional and loading criteria are specified in these standards. Please note in particular Section 5.1 of DIN 18 273. FSB supplies almost all models suitable for commercial uses in fire-safety variants. These fittings are certified and quality-monitored in accordance with Building Rules List A (6.17). The general building supervision test certificate (P) and the certificate of accordance (ÜZ) have been issued by the Materials Testing Laboratory (MPA) in Dortmund. The monitoring contract bears the registration number 12 9902-Do 20.3.

# Technical notes

## Handing

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



## Door thickness

Standard doors almost invariably feature standardised door thicknesses: internal doors 36 - 43 mm (7 mm □), internal doors 36 - 45 mm (8 mm □), entrance doors 66 - 75 mm (10 mm □).

These are the standards FSB spindles are designed to. The thickness of older doors should be checked and any discrepancy pointed out when ordering.

## Lock follower

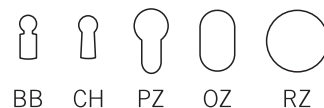
According to DIN lever handles employ different locking mechanisms depending on their application. FSB supplies:

- for internal door locks lever handles with 7 mm square spindle
- for internal door locks lever handles with 8 mm square spindle
- for locks in fire safety, smoke and panic doors lever handles with 9 mm square spindle
- for entrance door locks lever handles with 10 mm square spindle

## Keyhole spacing

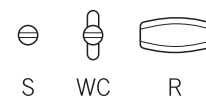
The standard keyhole spacing for internal backplates is 72 mm, for bathroom backplates 78 mm and for final exit backplates 92 mm. The spacings are measured as follows:

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



## Bathroom/WC version

FSB bathroom furniture features a thumbturn (R) on the inside and an emergency release with indicator (WC) on the outside. The door can be unlocked from the outside using an Allen key or coin. The red/white indicator (S) can be dispensed with if so desired. A special-purpose emergency furniture is available for old people's homes and nursery schools by item no. 1732 0054, cf. page 151.



## Keyholes

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

