As well as supplying a complete range of narrow style door fittings such as lever handles, knobs and pulls in metal, plastic or wood, over the years FSB has constantly honed its fixing systems in line with the specific requirements of narrow stile doors and their fittings.

You will find detailed information on safety clearances in DIN 31001.

The spatial restrictions associated with narrow stile doors mean there is a risk of hands getting caught against the door jamb on the slamming side when opening or closing the door (see fig.). DIN 31001 stipulates a clearance of 25 mm between the lever handle and the closing edge.

Classification code as defined in EN 1906 standards:

4 7 - 0/D* 1 4 0 A*/U*

D* 9 mm square hole for fire rating doors
A* standard and fire rating
U* inactive leaf for panic doors

These spatial restrictions are also something of a problem when it comes to fixing hardware. Short backsets and the inability to secure bolts through narrow stile door locks has regrettably led to face fixing becoming the norm, with the attendant irritation of loose and wobbly fittings.

All FSB heavy-duty narrow stile door fittings feature an oval or square rose, an integrated positive mechanism and turnably fixed sliding bearings. Fixing is concealed and is carried out using M5 countersunk screws at 50 mm centres. Standard versions are visibly fixed and do not include the positive mechanism.
Ludwig Wittgenstein’s ingenious idea

The Austrian philosopher and qualified engineer Ludwig Wittgenstein took time off from philosophising in the 1920s to plan and design the interior of his sister’s house, Palais Wittgenstein, in Vienna. In the process, he had to come to terms with some very narrow steel door stiles.

To enable furniture to be securely fixed onto the narrow stiles yet prevent hands getting caught between the closing face and the door jamb, Ludwig Wittgenstein had a cranked handle made for the closing face to his own drawings, and to this he connected a normal male lever handle on the opening face. This inspired combination saw a man who otherwise applied himself to the imponderables of language produce very clear-cut answers both to the hand injury hazard and to fixing problems that are still with us today (see fig.).

This idea had a crucial impact upon the design of FSB handle ranges and continues to do so today – the designer in question always produces a visually matching lever-handle variant for the slamming face of narrow stile doors.

With his typically unpretentious approach to his sister’s house and its interior fitments – notably as regards the door handles – Ludwig Wittgenstein unknowingly and inadvertently created a modernist classic. He is unlikely to have been intending his creation to become the logo of the FSB brand one day.

The Wittgenstein House, Vienna 1928
Technical information
Fittings for narrow stile doors

FSB fixing system for narrow stile door fittings

Spurred on variously by Wittgenstein’s brainwave, our knowledge of the notorious fixing problems involved and innovations arrived at in cooperation with Sächsische Schlossfabrik (SSF), FSB has realigned its fixing system for narrow stile door fittings and placed it on a new system-driven technical footing. We have revised the key factors as follows:

1 Fastenings included with product

In the past, we have 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 complete with the corresponding fastenings. They consist of M5 non-loosening screws and rivet nuts to suit the bases of narrow stile door fittings. By turn, the heads of the rivet nuts (11 mm diameter) fit perfectly on the underside of FSB fittings for narrow stile doors. Please note that a standard assembly tool is required for inserting blind rivet nuts.

The combination of rivet nuts, bases (with integrated anti-slip/screw-retention devices) and non-loosening screws ensures that hardware can be fitted so as not to work loose (fig. above). Accordingly, FSB will not in future entertain any faulty-product complaints where use has not been made of original FSB fastenings.

2 Wittgenstein’s solution

Both so as to avoid injury to the user and achieve optimum fixing and conduction of forces to the narrow stile door stile, FSB recommends giving the Wittgenstein Solution a new lease of life by pairing cranked and uncranked lever handles. In our case, the cranked handle is used as the male section whilst its uncranked counterpart (female handle) provides a rugged connection (fig. 1 over). This involves using the RT Spezial spindle 05 0525, which is featured on Page 769 of this Manual. The principal merits of these spindles are set out in paragraphs 2.1 to 2.3 over.
2.1 Male handle: handle and spindle lock together

The spindle sits fast at the back of the handle recess, being secured by a grub screw. The grub screw’s steel point fits exactly into a corresponding hole in the spindle to durably lock spindle and handle together.

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2.2 Handles joined fast

On the opposite side the female narrow stile door handle is firmly and lastingly secured using the million-times proven FSB clamping spring to join the handles fast. Properly fitted (grub screw flush with the handle surface), the clamping spring makes for a lastingly reliable connection between handle and spindle, and it is not without reason that it forms an essential part of all FSB Stabil spindles.

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2.3 Efficient absorption and conduction of forces

A further merit of the join created in Steps 2.1 and 2.2 is that the axial forces arising when doors and handles are operated are absorbed far more efficiently than with floating spindle connections and are conducted into the narrow stile door stile: any leverage potential in the forces arising is thus always compensated through the best possible reduction of assembly tolerances for all subassemblies involved. This ably serves to prevent any gradual loosening of the handle/spindle connection from the outset.

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3 Antislip/screw-retention device

Regardless of whether they incorporate rivet nuts and/or non-loosening screws, all FSB roses forming part of hardware for narrow stile doors have screw bushings fitted with rubbery plastic retarder plugs. These protrude slightly beyond the reverse of the rose and are compressed when the screws are tightened. Hence, they act as an antislip device against their host surface whilst also providing the necessary axial and radial tension to hold the screws tight.
SSF locks for narrow stile doors
Series 01 and 02

The SSF lock programme further embraces mortice locks for:
– internal doors
– apartment doors
– main-entrance doors
– heavy-duty doors
– fire-safety and panic doors
– plus special-purpose locks, striking plates and accessories.

Detailed information is contained in the latest SSF Lock Catalogue, which will be sent to you straight from Saxony:

SSF – Sächsische Schlossfabrik GmbH
Am Pappelhain 10
04539 Groitzsch
GERMANY
Telephone +49 34296 733-00
Fax +49 34296 73311
or on the web: wwwssf.de info@ssf.de

SSF – an FSB company

Locks by SSF: fastening system with optional through-fixing

Competent product solutions ought to be a matter of course for a highly evolved society, as should equally dependable functioning over a product’s full life cycle. FSB has thus optionally adapted the fixing system for its narrow stile door hardware to SSF 01 and 02 Series narrow stile door locks with through fixing points (fig. on right). This essentially involves a special fastening set (Order Code 05 0526 01, fig. below, also cf. page 768) with which FSB narrow stile door hardware can be fitted to order at the works. The set contains screws for the applicable door thickness plus metal lugs that are precision-fitted into the bases at the works instead of the usual rubber retarder plugs and are additionally secured with an M5 screw on one side.

This form of fastening does away with rivet nuts, moreover, since the metal lugs are inserted into the narrow stile door stile from both sides, thus assuming the function of said rivet nuts. Preparation of the half-sets at the FSB works beforehand in both cases leads to a real and tangible reduction in assembly times, as just two screws are needed to through-fix narrow stile door furniture (as opposed to four for two face-fixed half sets). The spindle solutions set out above are also applicable, by the way, to this form of fixing.

Series 01 (bolt throw 15 mm)
– mortice locks
to DIN 18 251-2, Class 1

Series 02 (bolt throw 21 mm)
– mortice locks
to DIN 18 251-2, Class 3, with 21 mm bolt throw or as 34.5 mm hook bolt lock
– Panic mortice locks for single-leaf narrow stile doors (APE, APB, APD)
– Roller latch locks
to DIN 18 251-2, Class 3
– Latch locks
to DIN 18 251-2, Class 3, in standard-length and short versions
– Deadbolt locks
to DIN 18 251-2, Class 3, in standard-length and short versions

SSF mortice locks for narrow stile doors boast the following distinctive features:
– chip-guarded through-fixing holes for side-to-side and hence optimum narrow style door handle fixing
– self-tightening follower
– non-handed latch bolt
– lock case zinc-coated, enclosed at top and bottom, through fixing holes chip-guarded
– high-comfort action by dint of acoustically attenuated latch bolt (except in case of roller-latch and dead-bolt locks)
Spindles for narrow stile doors

Application-specific FSB fastenings and spindles for narrow-door handles

It is usual for narrow stile door hardware to be put together from individual components to suit differing applications. FSB caters to this with a versatile, need-responsive spindle concept. The FSB spindles set out alongside find use in specific scenarios.

ÖNORM (Austrian Standard)

A number of narrow-door handles (06/09 1035 and 06/09 1159) that are available in both Aluminium and Stainless Steel bear labels stating that they are only approved as fire-safety variants (pursuant to DIN 18 273) in Stainless Steel. This does not apply in the same way under the Austrian ÖNORM standard to FS models in Aluminium – these are permitted and can be supplied. Account is had to this normative anomaly in the form of a separate rundown of products: our ÖNORM price-list, which also contains heavy-duty fittings from other product areas. We will gladly send this to you if so requested.

Concealed fixing

1. Narrow-door handles in combination with SSF mortice locks for narrow stile doors with through fixing bushings (Series 01 and 02): fixing set 05 0526 01 – cf. page 768. FSB narrow stile door hardware can be fitted with these accessories at the works to order.

2. To combine two cranked narrow-door handles (Fig. 2, page 411 – models 06.... + 06 ....): accessory bag 05 0525 028 (8 mm spindle) or 05 0525 029 (9 mm spindle), cf. page 769.

3. To combine narrow-door handles with cranked RT handles (Fig. 1, page 411, “Wittgenstein’s Solution” – models 09 .... + 06 ....): accessory bag 05 0525 018 (8 mm spindle) or 05 0525 019 (9 mm spindle), cf. page 769.

4. To combine two narrow stile door handles for emergency exit devices to DIN EN 179 or for fire-safety doors with panic locks: FSB Spezial spindle 05 0125, cf. page 765.

5. For face-fixed narrow stile door half-sets: likewise full spindles 05 0172 008 (8 mm) or 05 0173 019 (9 mm) with door thickness increments differing from those for Scenario 6. below, cf. page 767.

Visible fixing

6. To combine two cranked narrow-door handles (models 06 .... + 06 ....): full spindles 05 0172 008 (8 mm), cf. page 767.

Our in-house Sales or FSB Applications Engineering Depts will be pleased to give you further help on specifying the hardware application scenario and door thickness for your order.

Positive mechanism

Virtually the entire FSB range of hardware for narrow stile doors features a positive mechanism to support the lock springs that permits a max. angle of operation of 45°.

Positive mechanism in combination with inactive-leaf furniture

Cranked lever handles intended for use on inactive doors are supplied without a positive mechanism ex works and are ordered under separate product codes, viz. 06 .... 23 (oval roses) and 06 .... 73 (angular roses).

Non-spring-assisted espagnolette locks with an operating angle < 45° are to be used in combination with narrow-door handles fitted with a positive mechanism. Should the operating angle be > 45° and use simultaneously be made of models as inactive-leaf sets (i.e. without positive mechanisms), spring-assisted locks are always to be envisaged in the case of Bronze variants as well as of Stainless Steel models – 06 1163 ... – 06 1164 ... – 06 1243 ....