588 Fittings for emergency exit and panic doors
592 Crossbar fittings for panic doors
604 Lever handles for emergency exit doors
609 Technical information

Fittings for emergency exit and panic doors
Added value at a glance

Always there to grab in case of emergency: FSB crossbar fittings provide a means of unlocking and opening doors through a pushing motion.

Escape-route doors must be able to be opened easily and fully from the inside within one second using a single movement with a defined level of force. These requirements are defined and described for all EU countries in the EN 179 and EN 1125 standards. EN 179 specifies the use and requirements for emergency exit devices with handles and push pads. FSB offers the most extensive range of compliant fittings in the industry. EN 1125 prescribes the use of panic exit devices wherever high levels of public traffic are to be expected and where panic may arise due to unfamiliarity with the surroundings. The fitting package for panic doors comprises a fastening element (lock), a lock receiver (strike plate) and crossbar fitting. FSB crossbar fitting 77 7980 meets the highest standards of fitness for purpose and reliability. Nevertheless, FSB can only make recommendations on the use of fittings on escape and emergency exit routes. The project planner or local building inspection authorities are responsible for ensuring that the appropriate fittings are used.

Crossbar fittings for panic doors

FSB crossbar fittings 77 7980 and 77 7981 meet the requirements of EN 1125.

For single and double-leaf panic doors

Reset mechanism with positive mechanism spring brings the fitting back to its original position after use

The door can be opened by pressing on any part of the crossbar.

A stop device absorbs the forces exerted (e.g. for durability and resistance against abuse)

FSB also offers the tried-and-tested crossbar fitting 77 7970 for doors that do not have to conform to EN 1125. These fittings do not have a stop device and can be set to the operating angle of the lock.

The technically and functionally harmonised concept of combined lock and fitting has been adapted, tested and classified with lock systems from various well-known manufacturers

The force exerted is transmitted to the lock follower by a bevel gear acting directly through the square spindle

Crossbar fittings tested for door weights of up to 200 kg

Construction Products Regulation (CPR): The declarations of performance used by FSB to document compliance of the EN 179 or EN 1125 fittings with the applicable EU regulations.

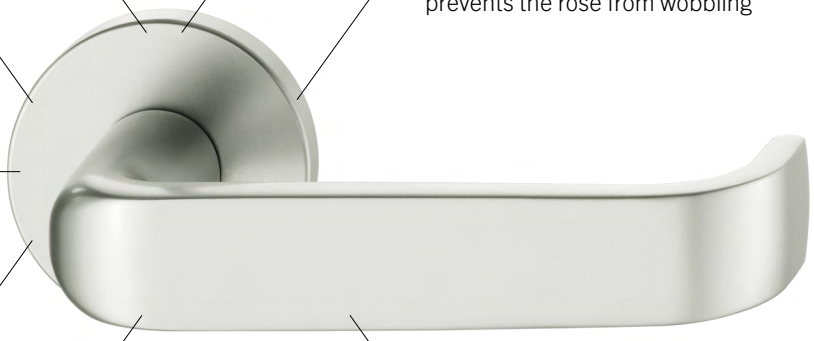
Lever handles for emergency exit doors

Lever handles for flush and narrow-stile doors meet EN 179 requirements

Rose and backplate sets available for flush doors

Type B positive mechanism for flush doors, type A positive mechanism for narrow-stile doors

Optimal connection of base and cover rose prevents the rose from wobbling



Narrow-stile door handles available in-line and cranked

Round or angular roses

Most comprehensive range in the industry: approx. 30 different door handle models for flush doors and approx. 50 models for narrow-stile doors

Continuity of design to match the product collection

Fittings for emergency exit and panic doors

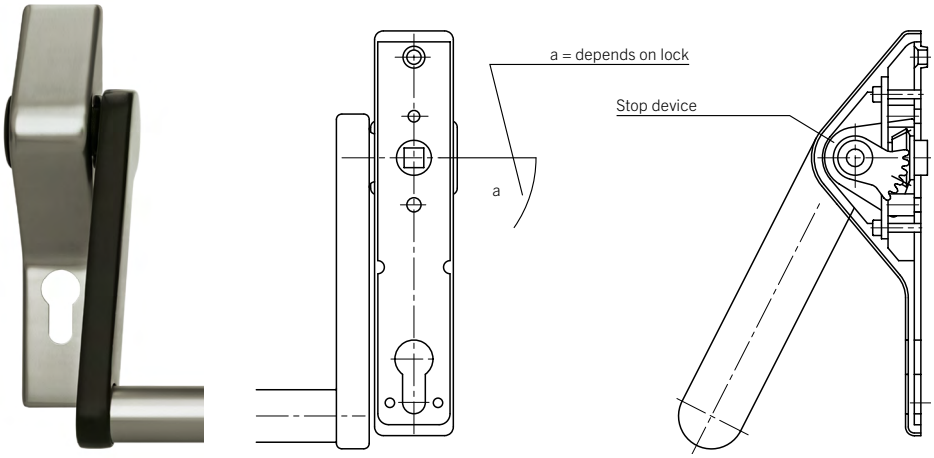
Crossbar fitting for panic doors conforming to EN 1125

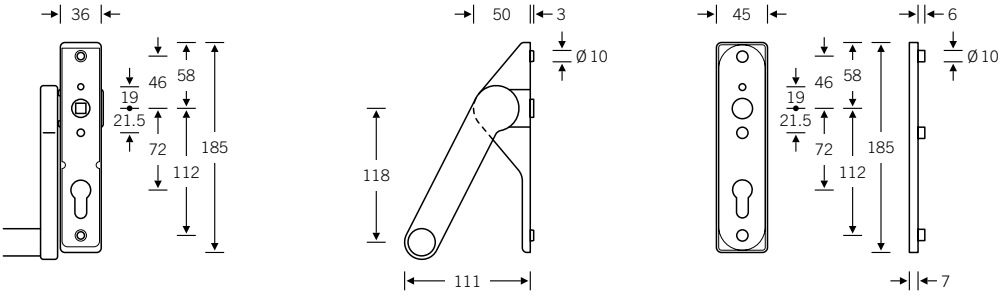
Aluminium
Stainless steel
Bronze

77 7980

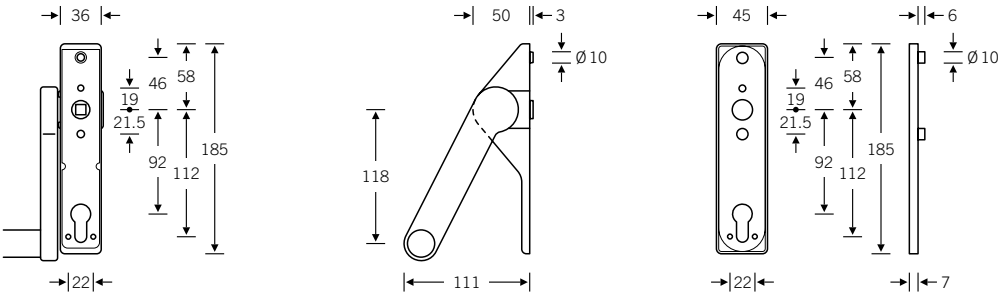
The bevel gear and square spindle work together to convert pressure exerted on the crossbar into rotary motion acting on the lock follower. A fixed stop device is fitted as a means of absorbing the requisite test forces. A spring ensures that the crossbar fitting returns to its original position once it has been operated.

The FSB 77 7980 crossbar fitting is suitable for locks by BMH, Fuhr, GEZE, SSF, Wilka and Winkhaus, and for different operating angles.





Size and mating dimensions for crossbar fittings PC 72 mm



Size and mating dimensions for crossbar fittings PC 92 mm

Fittings for emergency exit and panic doors

Crossbar fitting for panic doors conforming to EN 1125

Aluminium
Stainless steel
Bronze

77 7980

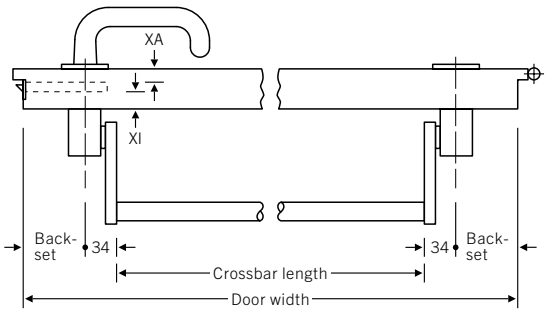
Pictured: right

Crossbar fitting
for active leaf in fire safety variant,
designed for flush doors

Centres for PC 72 mm

Suitable for locks:

BMH, a = 30°
77 7980 01110 (RH fitting)
77 7980 02110 (LH fitting)



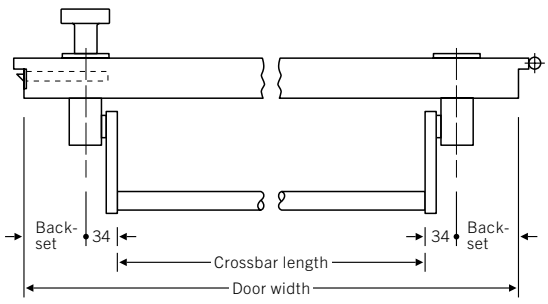
Determining bar length:

Door width
– 2 × backset
– 68 mm

= Crossbar length
(tested to max. 1,150 mm)

Order details required:

Material/finish
Door thickness
Door width
Backset
Dimension XI
Dimension XA
Handing
(see figure on page 594)



Order details required:

Material/finish
Door thickness
Door width
Backset
Handing
(see figure on page 594)

Locks not included in scope of delivery
For reverse-face fittings, see page 603

Fittings for emergency exit and panic doors

Crossbar fitting for panic doors conforming to EN 1125

Aluminium
Stainless steel
Bronze

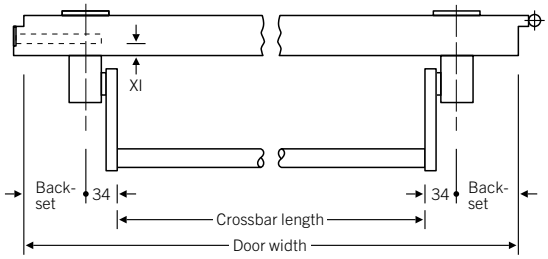
77 7980

Pictured: right

Crossbar fitting
for inactive leaf in fire safety variant,
designed for flush doors

Suitable for locks:

BMH, a = 45°
77 7980 03400 (RH fitting)
77 7980 04400 (LH fitting)



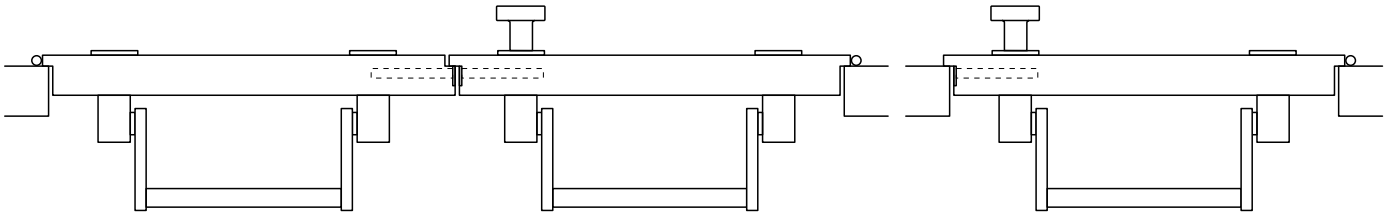
Determining bar length:

Door width
– 2 × backset
– 68 mm

= Crossbar length
(tested to max. 1,150 mm)

Order details required:

Material/finish
Door thickness
Door width
Backset
Dimension XI
Handing
(see below)



Locks not included in scope of delivery
For reverse-face fittings, see page 603

Fittings for emergency exit and panic doors

Crossbar fitting for panic doors conforming to EN 1125

Aluminium
Stainless steel
Bronze

77 7980

Pictured: right

Crossbar fitting
for active leaf in fire safety variant,
designed for narrow-stile doors

Centres for PC 92 mm

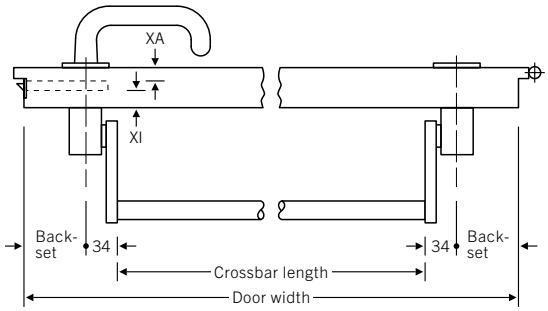
Suitable for locks:

SSF (Series 02 APE/APB/APD) + Wilka +
Fuhr Multisafe 833 and 834P, a = 30°
77 7980 01112 (RH fitting)
77 7980 02112 (LH fitting)

Winkhaus, type STV AP3, a = 45°
77 7980 01412 (RH fitting)
77 7980 02412 (LH fitting)

Winkhaus, type AP, a = 47°
77 7980 01512 (RH fitting)
77 7980 02512 (LH fitting)

GEZE IQ Lock + Fuhr Multisafe 870 and 881,
a = 40°
77 7980 01312 RH
77 7980 02312 LH



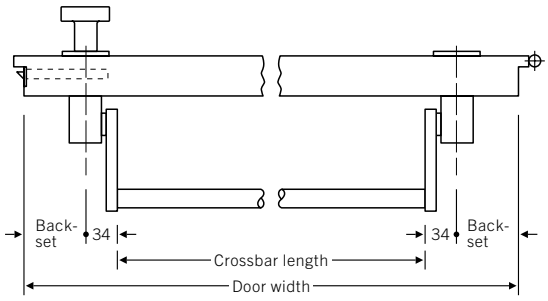
Determining bar length:

Door width
– 2 × backset
– 68 mm

= Crossbar length
(tested to max. 1,150 mm)

Order details required:

Material/finish
Door thickness
Door width
Backset
Dimension XI
Dimension XA
Handing
(see figure on page 596)



Order details required:

Material/finish
Door thickness
Door width
Backset
Handing
(see figure on page 596)

Locks not included in scope of delivery
For reverse-face fittings, see page 603

Fittings for emergency exit and panic doors

Crossbar fitting for panic doors conforming to EN 1125

Aluminium
Stainless steel
Bronze

77 7980

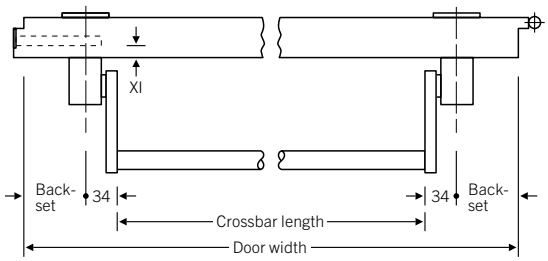
Pictured: right

Crossbar fitting
for inactive leaf in fire safety variant,
designed for narrow-stile doors

Suitable for locks:

GEZE + Wilka, Fuhr Multisafe 833, 834P,
a = 40°
77 7980 03301 (RH fitting)
77 7980 04301 (LH fitting)

Winkhaus STV AP3, a = 45°
77 7980 03401 (RH fitting)
77 7980 04401 (LH fitting)



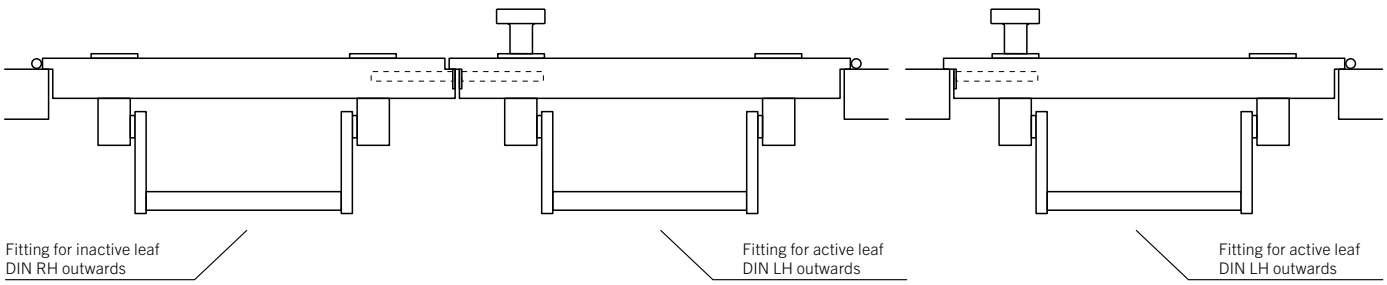
Determining bar length:

Door width
– 2 × backset
– 68 mm

= Crossbar length
(tested to max. 1,150 mm)

Order details required:

Material/finish
Door thickness
Door width
Backset
Dimension XI
Handing
(see below)



Locks not included in scope of delivery
For reverse-face fittings, see page 603

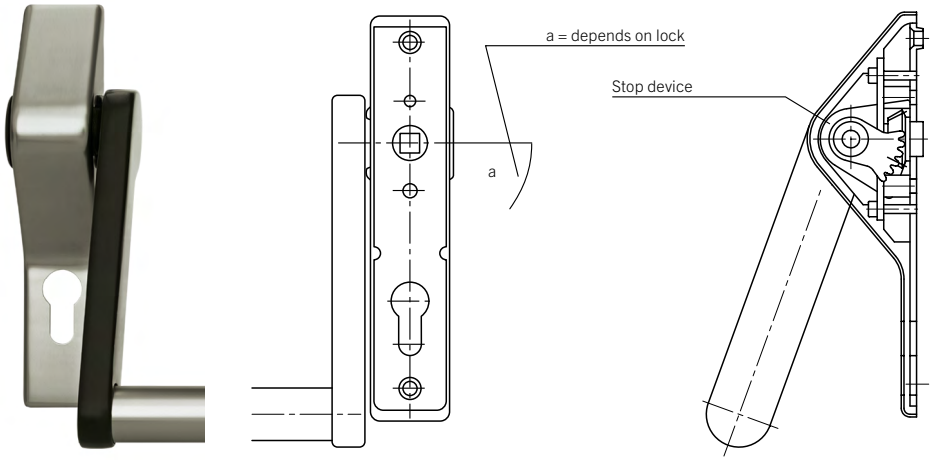
Fittings for emergency exit and panic doors

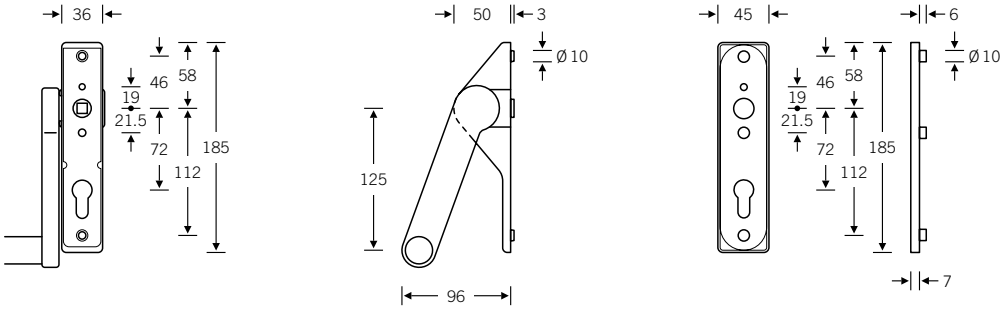
Crossbar fitting for panic doors conforming to EN 1125

77 7981

The bevel gear and square spindle work together to convert pressure exerted on the crossbar into rotary motion acting on the lock follower. A fixed stop device is fitted as a means of absorbing the requisite test forces. A spring ensures that the crossbar fitting returns to its original position once it has been operated.

The FSB 77 7981 crossbar fitting is suitable for SSF locks and an operating angle of 30°.





Size and mating dimensions for crossbar fittings PC 72 mm

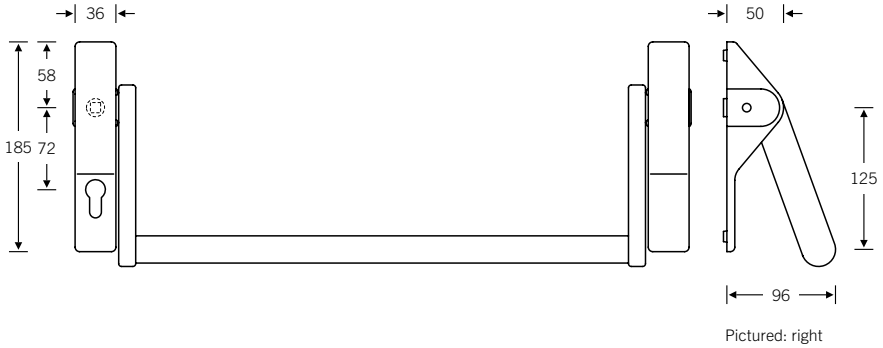
7c

Fittings for emergency exit and panic doors

Crossbar fitting for panic doors conforming to EN 1125

Aluminium
Stainless steel
Bronze

77 7981



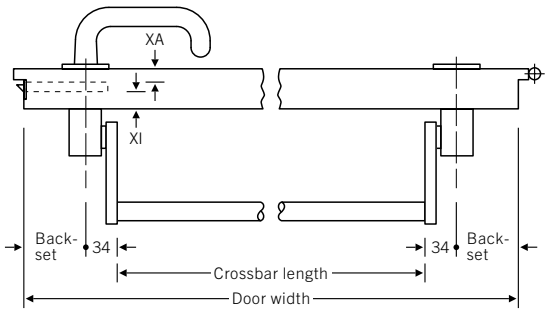
Pictured: right

Crossbar fitting
for active leaf in fire safety variant,
designed for flush doors

Centres for PC 72 mm

Suitable for locks:

SSF, a = 30°
77 7981 01110 RH
77 7981 02110 LH



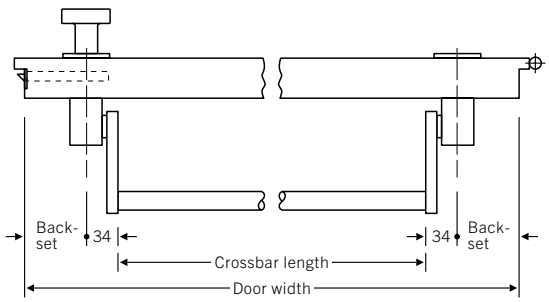
Determining bar length:

Door width
– 2 × backset
– 68 mm

= Crossbar length
(tested to max. 1,150 mm)

Order details required:

Material/finish
Door thickness
Door width
Backset
Dimension XI
Dimension XA
Handing
(see figure on page 599)



Order details required:

Material/finish
Door thickness
Door width
Backset
Handing
(see figure on page 599)

Locks not included in scope of delivery
For reverse-face fittings, see page 603

Fittings for emergency exit and panic doors

Crossbar fitting for panic doors conforming to EN 1125

Aluminium
Stainless steel
Bronze

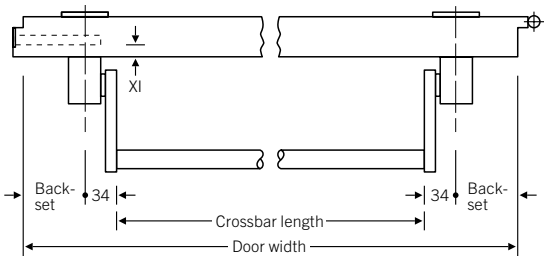
77 7981

Pictured: right

Crossbar fitting
for inactive leaf in fire safety variant,
designed for flush doors

Suitable for locks:

SSF, a = 30°
77 7981 03100 RH
77 7981 04100 LH



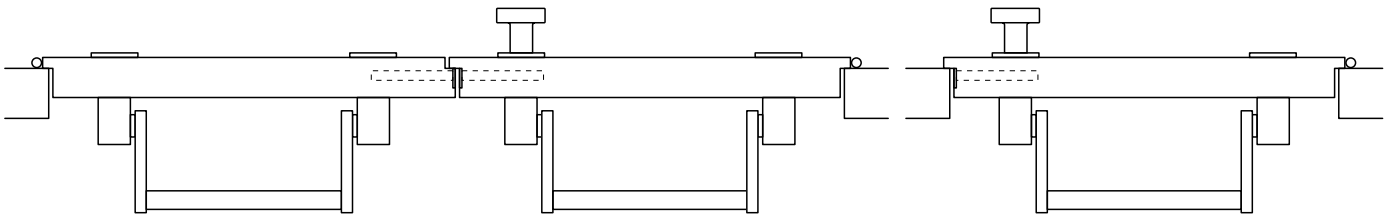
Determining bar length:

Door width
– 2 × backset
– 68 mm

= Crossbar length
(tested to max. 1,150 mm)

Order details required:

Material/finish
Door thickness
Door width
Backset
Dimension XI
Handing
(see below)



Fitting for inactive leaf
DIN RH outwards

Fitting for active leaf
DIN LH outwards

Fitting for active leaf
DIN LH outwards

Locks not included in scope of delivery
For reverse-face fittings, see page 603

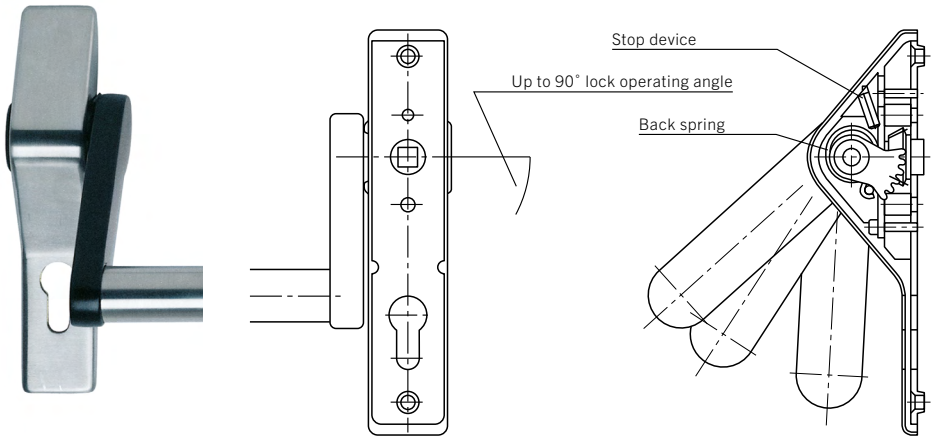
Fittings for emergency exit and panic doors

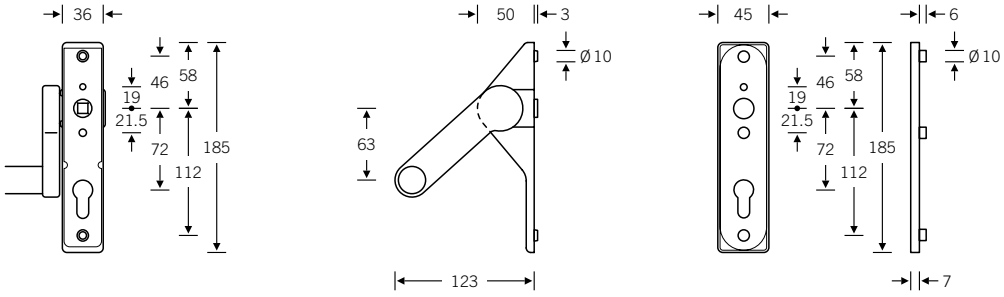
Crossbar fitting for panic doors

Aluminium
Stainless steel
Bronze

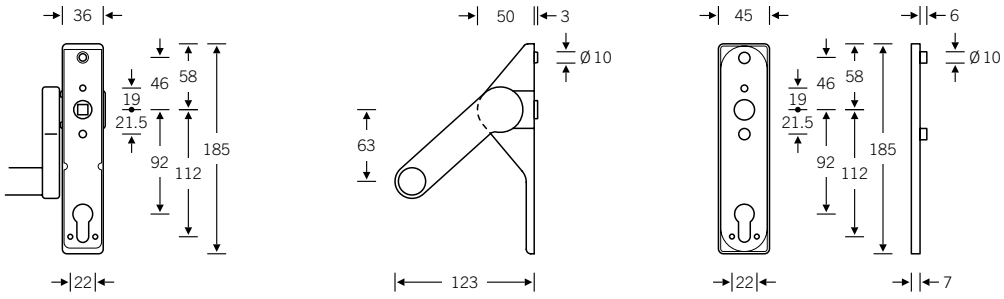
77 7970

The bevel gear and square spindle work together to convert pressure exerted on the crossbar into rotary motion acting on the lock follower. A stop device that can be adjusted during installation based on the operating angle is fitted to protect the lock follower. A strong spring ensures that the crossbar fitting returns to its original position once it has been operated.





Size and mating dimensions for crossbar fittings PC 72 mm



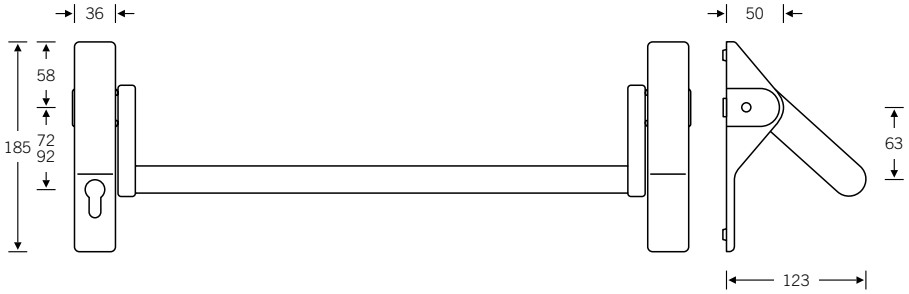
Size and mating dimensions for crossbar fittings PC 92 mm

Locks not included in scope of delivery
For reverse-face fittings, see page 603

Fittings for emergency exit and panic doors
Crossbar fitting for panic doors

Aluminium
Stainless steel
Bronze

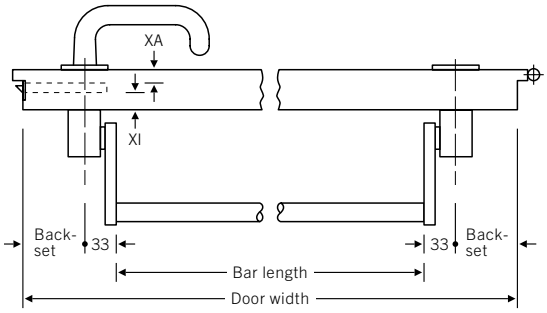
77 7970



Crossbar fitting
for active leaf

Designed for flush doors

77 7970 00110 (PC 72 mm)
77 7970 00112 (PC 92 mm)



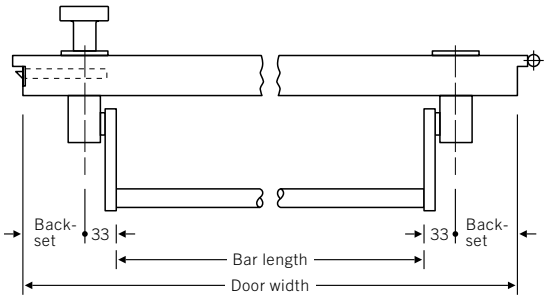
Determining bar length:

Door width
– 2 × backset
– 66 mm

= Crossbar length

Order details required:

Material/finish
Door thickness
Door width
Backset
Dimension XI
Dimension XA



Order details required:

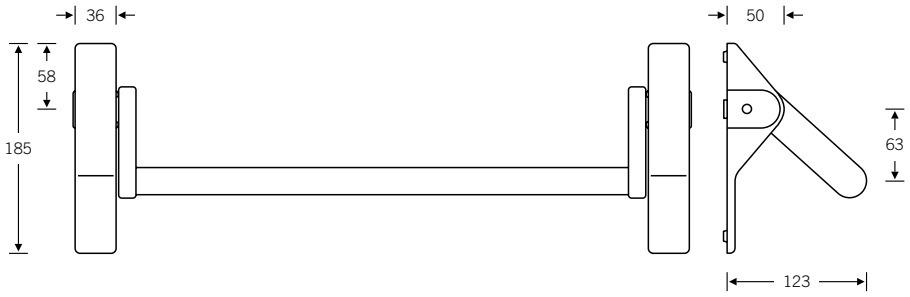
Material/finish
Door thickness
Door width
Backset

Locks not included in scope of delivery
For reverse-face fittings, see page 603

Fittings for emergency exit and panic doors
Crossbar fitting for panic doors

Aluminium
Stainless steel
Bronze

77 7970



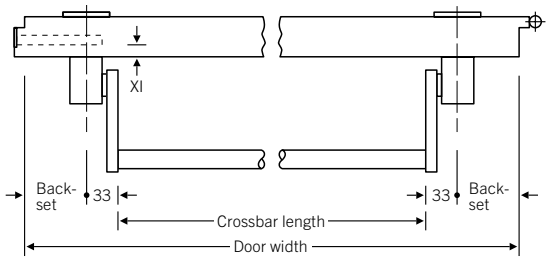
Crossbar fitting
for inactive leaf

Designed for flush doors

77 7970 00200*
77 7970 00201**

Fixing points:

* as for PC 72 mm
** as for PC 92 mm



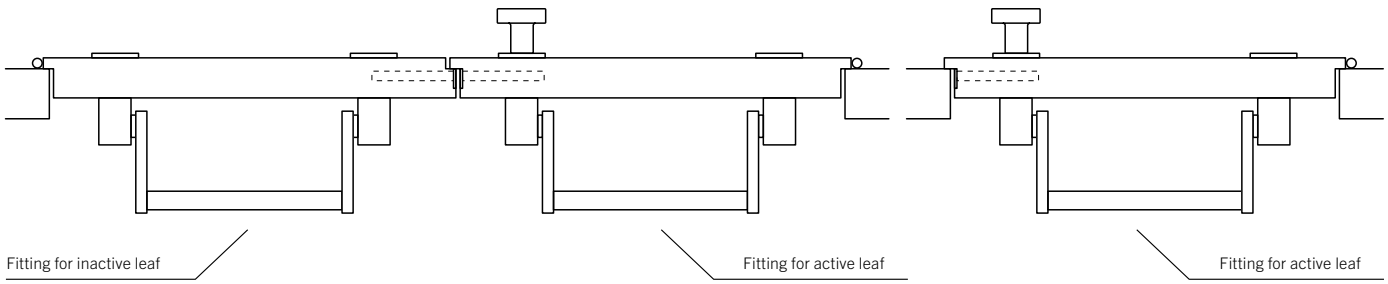
Determining bar length:

Door width
– 2 × backset
– 66 mm

= Crossbar length

Order details required:

Material/finish
Door thickness
Door width
Backset
Dimension XI



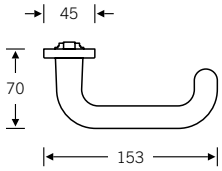
Locks not included in scope of delivery
For reverse-face fittings, see page 603

Fittings for emergency exit and panic doors

Reverse-face fittings for panic doors

Aluminium
Stainless steel
Bronze

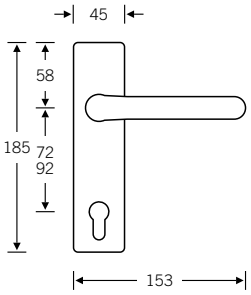
For reverse-face fittings, FSB supplies the FSB 1146 lever handle or 08 0829 knob as standard. Other lever handle and knob models are not possible.



77 7971

77 7971 00010 (PC 72)
77 7971 00012 (PC 92)

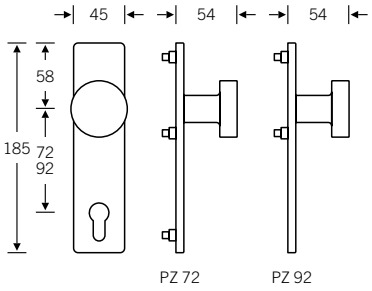
Reverse lever handle backplate with concealed fixing in fire safety variant



77 7972

77 7972 00110 (PC 72)
77 7972 00112 (PC 92)

Reverse knob backplate with fixed knob and concealed fixing in fire safety variant

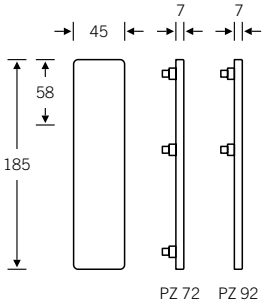


77 7973

77 7973 00000*
77 7973 00001**

Blank reverse backplate with concealed fixing in fire safety variant

Fixing points:
* as for PC 72 mm
** as for PC 92 mm



PC 72 suitable for locks from SSF and BMH

PC 92 suitable for locks from GEZE, Fuhr, SSF (series APE, APB, APD), Wilka and Winkhaus

Fittings for emergency exit and panic doors

Lever handles for emergency exit doors conforming to EN 179

The following FSB fire-safety fitting systems plus the lever handle models listed in the overview fall within the scope of EN 179 and have been jointly tested and certified with the lock and strike plate series approved for use in combination with them:

– Lever/lever, lever/knob and inactive-leaf sets, each in variant as FSB
  · rose set
  · short backplate set
  · long backplate set
  · broad backplate set
– Lever/lever sets for narrow-stile doors and security fitting sets

Lever handles

for flush doors

For further information, see page 64 ff.

79 1002
Page 80 ff.

79 1016
Page 108 ff.

79 1031
Page 124 ff.

79 1043
Page 178 ff.

79 1045 *
Page 130 ff.

79 1053 *
Page 118 ff.

79 1070 *
Page 144 ff.

79 1074
Page 246 ff.

79 1088
Page 160 ff.

79 1094
Page 166 ff.

79 1098
Page 160 ff.

79 1119 *
Page 196 ff.

Aluminium
Stainless steel
Bronze

79 1134
Page 90 ff.

79 1146 *
Page 212 ff.

79 1159
Page 224 ff.

79 1160 *
Page 230 ff.

79 1164
Page 236 ff.

79 1177
Page 184 ff.

79 1178
Page 190 ff.

79 1232 *
Page 256 ff.

79 1243
Page 266 ff.

79 1245 *
Page 272 ff.

79 1247
Page 278 ff.

79 1255
Page 288 ff.

79 1268 *
Page 294 ff.

79 1272
Page 300 ff.

79 1278
Page 252 ff.

79 1286 *
Page 306 ff.

* 2 mm edge radii to prevent injury in accordance with DGUV requirements

Fittings for emergency exit and panic doors

Lever handles for emergency exit doors conforming to EN 179

Lever handles

for narrow-stile doors

06 1002
09 1002
Pages 82, 84

06 1016
09 1016
Pages 110, 112

06 1031
09 1031
Pages 126, 128

06 1043
09 1043
Pages 180, 182

06 1045
09 1045
Pages 132, 134

06 1053
09 1053
Pages 120, 122

06 1070
09 1070
Pages 146, 148

06 0644
09 1074
Pages 248, 250

06 1088
09 1088
Pages 162, 164

06 1094
09 1094
Pages 168, 170

06 1098
09 1098
Pages 162, 164

06 1119
09 1119
Pages 198, 200

Aluminium
Stainless steel
Bronze

06 1134
09 1134
Pages 92, 94

06 1146
09 1146
Pages 214, 216

06 1159
09 1159
Pages 226, 228

06 1160
09 1160
Pages 238, 240

06 1164
09 1164
Pages 238, 240

06 1177
09 1177
Pages 186, 188

06 1178
09 1178
Pages 192, 194

06 1232
09 1232
Pages 258, 260

06 1243
09 1243
Pages 268, 270

06 1245
09 1245
Pages 274, 276

06 1247
09 1247
Pages 280, 282

06 1255
09 1255
Pages 290, 292

06 1268
09 1268
Pages 296, 298

06 1272
Pages 302, 304

06 1286
09 1286
Pages 308, 310

7c

609 **Technical information**
Fittings for emergency exit
and panic doors

Technical information
EN 1125 for panic exit devices

EN 1125 – Panic exit devices operated by a horizontal bar, for use on escape routes. Requirements and test methods

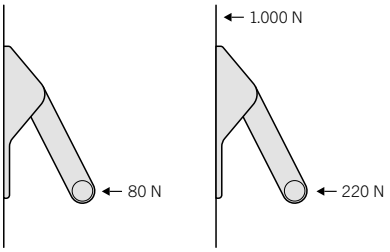
This European standard defines the requirements for the manufacture, fitness for purpose and testing of panic exit devices.

Typical designs consist of a crossbar, lock and strike plate. The FSB range includes a combination of crossbar fittings and mortice locks. This combination must be tested and certified as one exit device unit according to the standard. Accepted panic exit devices are given the CE conformity marking. They meet the state of the art and are considered regulated construction products falling within the scope of harmonised standards or as regulated building products included in Germany's Building Rules List B, Part 1.

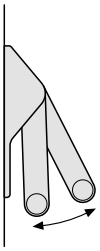
The fitting system's CE marking ensures that only tested and compliant fittings may be installed. The FSB crossbar fitting is only one part of the panic exit device system. This fitting has been adapted, tested and classified with lock systems from various well-known manufacturers.

Technical requirements

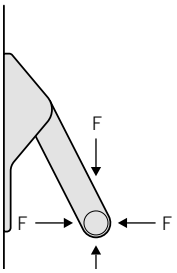
According to the design requirements, a panic exit device must be constructed so that it opens the door immediately in the direction of escape if any part of the crossbar on the inside is pressed. The forces required to operate the panic exit device must be rated in such a way that children or people with disabilities are able to push the crossbar. The following criteria must be verified by an independent test body:



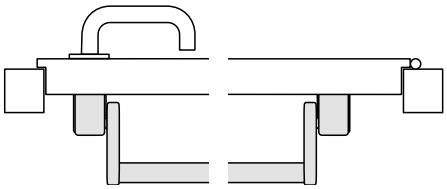
The test forces to open the door are measured on an unloaded (80 N) and pressure-loaded (220 N) door.



The durability is tested across 10,000 or 20,000 cycles for the inactive leaf and 100,000 or 200,000 cycles for the active leaf.



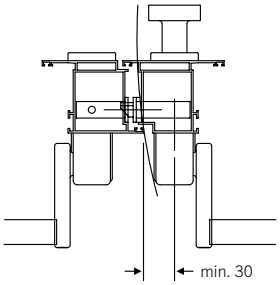
As resistance against abuse, the panic exit device must be able to withstand a load of 1,000 N in four directions.



Panic exit devices must be designed so that the length of the crossbar matches the effective width of the door opening as far as possible but no less than 60 per cent.

FSB crossbar fittings are tested for door weights of up to 200 kg.

Technical information



To prevent the 77 7970 or 77 7980 crossbar fitting from striking the door's own frame when the door is opened, it is necessary to maintain a distance between the frame and the centre of the fitting of at least 30 mm. Please bear this in mind when deciding on the door's stile and general configuration.

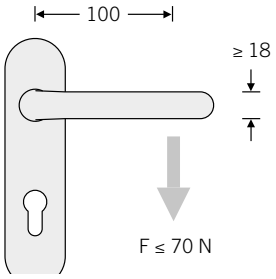
Technical information
EN 179 for emergency exit devices

EN 179 – Emergency exit devices

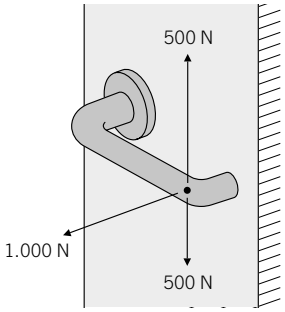
Emergency exit devices consist of a lock and fitting. They ensure in dangerous situations that the emergency exit door can be released and opened in a single movement, regardless of whether the door is locked or is only closed by the latch bolt. The standard governs the requirements and the test criteria to which the fittings and locks are subject.

These combinations of fittings as defined in EN 179 must be inspected jointly as regulated construction products, certified by a recognised certification body and given an EU or CE conformity marking. They meet the state of the art and are considered regulated construction products falling within the scope of harmonised standards or as regulated building products included in Germany's Building Rules List B, Part 1. FSB has joined forces with lock manufacturers to have combinations of fittings and locks tested and certified.

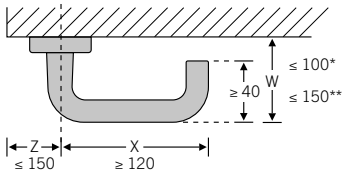
Technical requirements



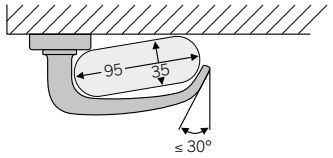
An emergency exit device must allow the door to be opened from the inside within one second with just one hand movement. The force required to operate the device must not exceed 70 N.



In order to test resistance against abuse, the fitting must be able to withstand a force of 1,000 N exerted vertically to the door leaf and a force of 500 N each exerted parallel to the door leaf.



* Grade 2, normal projection
** Grade 1, extra projection



The lever handle must not have any corners or edges that could cause injury. Edge radius at least 0.5 mm. The free end of the handle must be designed so that it points toward the face of the door.

Durability is tested across 200,000 cycles. Suitability for a door weight of max. 200 kg (grade 6) is certified. FSB fittings conforming to EN 179 are also fire-safety compatible in accordance with DIN 18273.