

**"fire protection excellence,
flexibility custom-made"**





PROGET NINZ Doors

FIRE RATED VERSION

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THE FIRE DOOR IN A CLASS OF ITS OWN

"Indisputable quality"

- Especially sturdy door for safe functioning over time
- Ideal for application to uneven or weak walls
- Fully isolated frame for true "dry wall installation"
- Built to order for all kinds of requests
- Fully galvanized door, including the "hidden" parts
- Made of hot-galvanized sheet metal, "Sendzimir" processed
- Corrosion protection also provided along cut edges of the metal sheets
- Painted with epoxy-polyester thermoset powders in a 180 degrees (Celsius) oven
- Substantial paint layer (70 microns plus)
- Optimal corrosion resistance demonstrated by 500 hour salt-fog test
- Unaffected by severe climate changes, demonstrated by 2000 hours with +60° to -10° cycles at 75% humidity
- Finishing with high-quality aesthetics
- Orange skin anti-scratch structured paint
- Customizable with wide selection of RAL colors

"Practicality of use"

- Truly sturdy frame that facilitates anchoring to the wall
- Suitable for all wall types
- Different installation methods to choose from
- Significantly reduced installation times
- Type approvals for multiple installations to different wall types
- Ample size range
- Wide variety of accessories

"Conformity to standards"

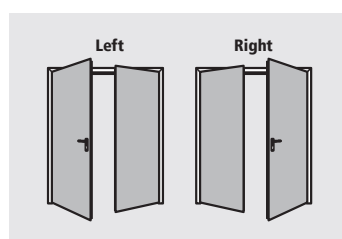
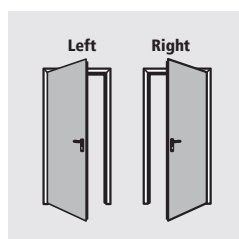
- In-house Ninz R&D with specialized testing equipment
- Fire testing in accordance with UNI 9723 and EN 1634-1
- Mechanical testing for the **CE** marking of accessories
- **CE** marked door accessories studied and sized to meet standard European requirements
- Careful selection of materials and manufacturing methods
- Strict product testing for conformity to declared technical standards
- Absolute functional certainty over time
- Doors "type approved" in compliance with M.D. 21 June 2004
- Products delivered with the documentation required by current regulations

"Manufacturing technology"

- Manufacturing in modern and functional facilities which employ the latest technologies to maintain high quality levels and product uniformity
- The entire production process - from raw materials to painted and packaged products - takes place inside Ninz's own facilities, ensuring a 360 degree door control

Opening direction

Opening direction needs to be indicated while ordering



One-leaved doors available in the following classes:

EI₂60
 EI₂120
 REI 60
 REI 120



Two-leaved doors available in the following classes:

EI₂60
 EI₂90
 REI 60
 REI 120



STANDARD ELEMENTS

Door leaf

- Made of "Sendzimir" processed hot-galvanized sheet metal, press folded and electro welded
- Perimetral rebate on 3 sides, flat at the bottom
- Internally reinforced with hot-galvanized steel profiles
- Heat-insulated treated mineral wool packing that is rigidly joined to the sheet metal
- Internal stiffeners for overhead door closer and panic bar

Standard frame

- Sturdy profile with a sizeable cross section
- Made of "Sendzimir" processed hot-galvanized sheet metal
- Equipped with special assembly brackets
- Grooves for thermo expansive sealing and rebate sealing
- Standard installation via anchors for mortar fixing
- Upon request installation via expansion screws or screws onto the subframe
- Lower spacer, mounting template
- Rests on finished flooring without rebate
- Strike plates in black plastic for lock bolt and safety bolts
- Assembly required for doorframes

Thermo expansive sealing

- Mounted on vertical doorframe profiles and central vertical profiles (for two-leaved doors)
- Mounted above and below the leaves depending on the certification



Hinges

- Nr. 2 three-wing hinges for each leaf
- of which one ball-bearing hinge with screws for vertical adjustment of the leaf, **CE** marked as per EN 1935, classified for up to 160 kg load, 200.000 cycles durability, suitable for fire door use
- and one hinge with self-closing spring

Safety bolts

- Nr. 1 or 2 safety bolts applied on hinge side leaf edge

Locking mechanism

- Reversible locking mechanism with bolt and central latch for EI₂60, EI₂90 REI 60 and REI 120 doors
- Three locking point mechanism for one-leaved EI₂120 doors
- **CE** marked in conformity with EN 12209 standard
- Insert with patent key, Euro profile cylinder ready

Handle

- Fire rated handle in black plastic with steel core
- Steel installation plate with cylinder hole
- Cover plate in black plastic
- Fastener screws and patent key insert

INCLUDED ACCESSORIES

Closing regulator

- Standard two-leaved doors include an RC/STD closing regulator to ensure the correct closing sequence of the leaves, except those with environmental characteristics for which the RC2 system is mandatory (to be ordered with the door).
- **CE** marking in conformity with EN 1158 standard

Locking mechanism for inactive leaf

- "Flush-bolt" automatic locking of the inactive leaf
- Lever control for unlocking

Upper coupling system for the inactive leaf

- Inactive leaf lock activated device which inserts rod into the upper strike box
- Upper strike box in pierced steel with steel roller

Lower coupling system for the inactive leaf

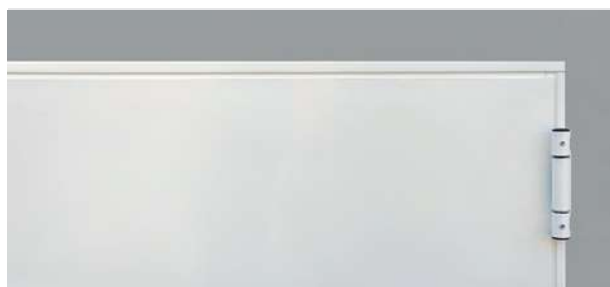
- Vertical rod with steel point which inserts into lower strike box
- Lower floor catch (floor-mounted bushing) made of self-extinguishing black plastic with rebate stopper

Identification plate

- Metal tag with door identification data, in accordance with current regulations



Standard paint - group 01: RAL 9010



Finishing

- Standard painted with epoxy-polyester thermoset powders in a 180 degrees oven, orange skin, anti-scratch finishing
- Standard paint RAL 9010

Standard packaging

- Single leaf wrapped into stretchable polyethylene (PE) film
- Single packaging for each doorframe with stretchable polyethylene (PE) film
- Palletized on wooden pallets

Door weight	class	kg/m ² of wall opening
1 leaf	EI ₁ 60, REI 60	37
2 leaves	EI ₁ 60, REI 60	35
1 leaf	EI ₁ 120, REI 120	42
2 leaves	EI ₁ 90, REI 120	40

NOTE

If the door ever needs to be repainted, follow the precise instructions on the "Painting" section.

INSTALLATION ONTO OTHER WALL TYPES

Other types of installation are possible, all of which have been rigorously certified and approved

- Frame for dry wall installation with expansion screws
- Frame for dry wall installation with screws onto the sub-frame
- Block frame for in the reveal application
- Embracing frame for lightweight constructions installation

OPTIONAL ACCESSORIES

A wide variety of accessories and surface finishes are available on request for maximum value enhancement of Proget doors to your own specific needs. The proper accessories can help resolve:

Safety-related needs

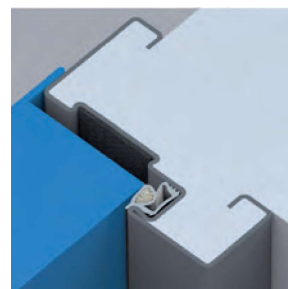
- Doors for panic exits (see panic bars)
- Doors for emergency exits (see emergency exit handles)
- Open doors which must be closed in case of fire (see leaf holding systems)

Installation and utilization needs

- Frame extensions
- Different kinds of floor mounted catches
- Roofing and drip steel-profile
- Special fastener screws
- Kick and protection plates in stainless steel
- Rectangular windows, standard dimensions or built to order
- Round windows
- One-leaved door with frame on four sides

Access-related control issues

- Electrically-activated lock mechanisms
- Electric handle mechanisms
- Magnetic blocking mechanisms



Performance enhancing

- Sealing
- Cylinders
- Door closers
- Special closing regulators
- Special handles

Customized finishing

- Select finishing from a wide variety of RAL colours
- NDD – Ninz Digital Decor, graphic images applied with special ink jets and protected by a transparent topcoat. Infinite varieties of customizable decorations in harmony with specific door settings
- Stainless steel handles
- Colored handles

Packaging for maximum protection

Sturdy wooden crates protect all doors and related accessories

- For NDD decorated doors
- On construction sites
- During shipping abroad
- For special transport

NOTE

Details on the optional accessories may be found in the following chapters of this brochure:

- Painting and NDD decorations
- Accessories for metal doors
- Emergency handles and panic bars



WINDOW WITH FIRE RATED GLASS

Upon request all one- and two-leaved fire doors may be equipped with round or rectangular windows with fire rated stratified glass and respective window frames fixed with screws. The window frame carters are included for round window and available as an optional accessory for the rectangular one.

Limits prescribed by regulations

According to standards UNI 9723 and EN 1634-1, windows may be smaller but not larger than the test sample size, and the reverse holds true for the border strip around the window which may be wider but not thinner. The following limits correspond with these restrictions.

Borders, window position

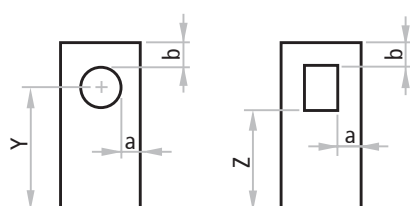
"Border measurement" refers to the distance from the edge of the window to the wall opening of the door.

Elevation for round windows

window size	FM H	position
Ø 300	minimum 2050	Y=1600
Ø 300	less than 2050	Y=FM H - 450
Ø 400	minimum 2150	Y=1600
Ø 400	from 2050 to 2149	Y=1550
Ø 400	less than 2050	Y=FM H - 500

Elevation for rectangular windows

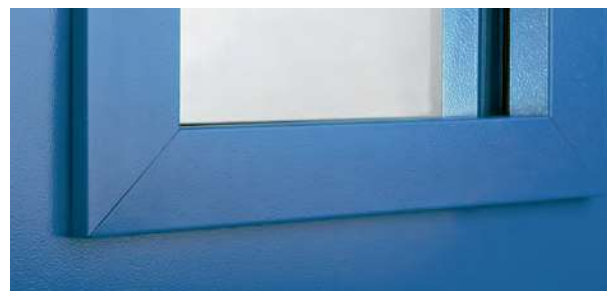
window dimensions L x H	FM H	position
300 x 400	minimum 2150	Z=1450
300 x 400	from 2050 to 2149	Z=1350
300 x 400	less than 2050	Z=FM H - 700
400 x 600	minimum 2150	Z=1250
400 x 600	from 2050 to 2149	Z=1150
400 x 600	less than 2050	Z=FM H - 900
400 x 1200	minimum 2150	Z=650
400 x 1200	from 2050 to 2149	Z=550
400 x 1200	less than 2050	Z=FM H - 1500



NOTE

Position and measurements indicated above are those standard.

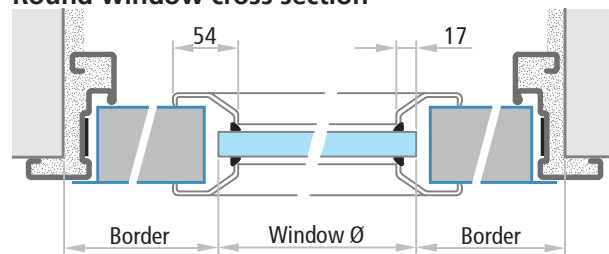
Different positions and measurements may be considered as long as they respect the minimum "a" and "b" border strips and maximal measurements mentioned in the certificate for the window. The window itself may not be supplied separately except for replacements. It is always advisable for doors with windows to be equipped with door closers for controlled closing.



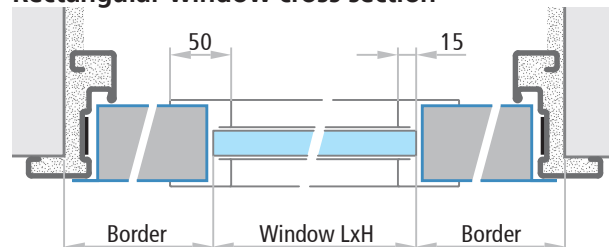
NOTE

For the rectangular windows the frame carters are an optional accessory

Round window cross section



Rectangular window cross section



ATTENTION

For special instructions and recommendations for glazed fire-rated products, see the "Notices" section on the last page of the present brochure.

EI WINDOW SPECIFICATIONS BASED ON INSTALLATION METHOD

model	min./max. window			border strip		mortar fixing	expansion screws	lightweight constructions with embracing frame	block frame	EI ₆₀	EI ₉₀	EI ₁₂₀	dimensions FM L (L1 + L2) x FM H
	L	x	H	a	b								
	Ø 300			300	300	✓	✓	✓	✓	✓			from 900 to 1340 x from 1950 to 2600
	Ø 400			300	300	✓	✓	✓	✓	✓			from 1000 to 1340 x from 1950 to 2600
	Ø 300			300	300	✓	✓		✓			✓	from 900 to 1340 x from 1900 to 2640
	Ø 400			300	300	✓	✓		✓			✓	from 1000 to 1340 x from 1900 to 2640
	from 250 to 700		from 250 to 650	300	300	✓	✓	✓		✓			from 850 to 1340 x from 1950 to 2600
	from 250 to 670		from 250 to 620	300	300				✓	✓			from 850 to 1340 x from 1950 to 2600
	from 250 to 600		from 250 to 400	370	300	✓	✓		✓			✓	from 990 to 1340 x from 1900 to 2640
	Ø 300			300	300	✓	✓	✓	✓	✓			from 1250 (900 + 350) to 2540 (1270 + 1270) x from 1775 to 2600
	Ø 400			300	300	✓	✓	✓	✓	✓			from 1350 (1000 + 350) to 2540 (1270 + 1270) x from 1775 to 2600
	Ø 300			300	300	✓	✓		✓		✓		from 1475 (900 + 575) to 2270 (1150 + 1120) x from 1775 to 2300
	Ø 400			300	300	✓	✓		✓		✓		from 1575 (1000 + 575) to 2270 (1150 + 1120) x from 1775 to 2300
	Ø 300			300	300	✓	✓	✓	✓	✓			from 1800 (900 + 900) to 2540 (1270 + 1270) x from 1775 to 2600
	Ø 400			300	300	✓	✓	✓	✓	✓			from 2000 (1000 + 1000) to 2540 (1270 + 1270) x from 1775 to 2600
	Ø 300			300	300	✓	✓		✓		✓		from 1800 (900 + 900) to 2270 (1150 + 1120) x from 1775 to 2300
	Ø 400			300	300	✓	✓		✓		✓		from 2000 (1000 + 1000) to 2270 (1150 + 1120) x from 1775 to 2300
	from 250 to 700		from 250 to 650	300	300	✓	✓	✓		✓			from 1200 (850 + 350) to 2540 (1270 + 1270) x from 1775 to 2600
	from 250 to 670		from 250 to 620	300	300				✓	✓			from 1200 (850 + 350) to 2540 (1270 + 1270) x from 1775 to 2600
	from 250 to 600		from 250 to 400	300	300	✓	✓		✓		✓		from 1425 (850 + 575) to 2270 (1150 + 1120) x from 1775 to 2300
	from 250 to 700		from 250 to 650	300	300	✓	✓	✓		✓			from 1700 (850 + 850) to 2540 (1270 + 1270) x from 1775 to 2600
	from 250 to 670		from 250 to 620	300	300				✓	✓			from 1700 (850 + 850) to 2540 (1270 + 1270) x from 1775 to 2600
	from 250 to 600		from 250 to 400	300	300	✓	✓		✓		✓		from 1700 (850 + 850) to 2270 (1150 + 1120) x from 1775 to 2300

REI WINDOW SPECIFICATIONS BASED ON INSTALLATION METHOD

model	min./max. window			border strip		mortar fixing subframe	expansion screws	plasterboard with embracing frame	REI 60	REI 120	dimensions FM L (L1 + L2) x FM H
	L	x	H	a	b						
	Ø 300			300	300	✓	✓	✓	✓	✓	from 900 to 1170 x from 1775 to 2275 from 1004 to 1340 x from 2050 to 2500
	Ø 400			300	300	✓	✓	✓	✓	✓	from 1000 to 1170 x from 1775 to 2275 from 1004 to 1340 x from 2050 to 2500
	from 250 to 400		from 250 to 600	250	300	✓			✓		from 750 to 900 x from 1775 to 2000
	from 250 to 400		from 250 to 600	300	300	✓			✓	✓	from 850 to 1000 x from 1775 to 2150
	from 250 to 620		from 250 to 400	360	300	✓			✓	✓	from 970 to 1340 x from 1775 to 2670
	from 250 to 564		from 250 to 443	300	300		✓	✓	✓	✓	from 850 to 1170 x from 1775 to 2275 from 1004 to 1340 x from 2050 to 2500
 (*)	from 250 to 400		from 630 to 1400	250	300	✓			✓	✓	from 750 to 900 x from 1775 to 2000 from 779 to 1037 x from 1803 to 2197
 (*)	from 250 to 522		from 500 to 1460	320	300	✓				✓	from 890 to 1162 x from 1775 to 2620 from 997 to 1332 x from 2361 to 2670
	Ø 300			300	300		✓	✓	✓	✓	from 1250 (900 + 350) to 2252 (1126 + 1126) x from 1775 to 2275** from 1962 (996 + 966) to 2540 (1270 + 1270) x from 2050 to 2500**
	Ø 400			300	300		✓	✓	✓	✓	from 1350 (1000 + 350) to 2252 (1126 + 1126) x from 1775 to 2275** from 1966 (1000 + 966) to 2540 (1270 + 1270) x from 2050 to 2500**
	Ø 300			300	300		✓	✓	✓	✓	from 1800 (900 + 900) to 2252 (1126 + 1126) x from 1775 to 2275** from 1962 (996 + 966) to 2540 (1270 + 1270) x from 2050 to 2500**
	Ø 400			300	300		✓	✓	✓	✓	from 2000 (1000 + 1000) to 2252 (1126 + 1126) x from 1775 to 2275** from 2000 (1000 + 1000) to 2540 (1270 + 1270) x from 2050 to 2500**
	from 250 to 400		from 250 to 600	300	300	✓			✓	✓	from 1200 (850 + 350) to 2000 (1000 + 1000) x from 1775 to 2150**
	from 250 to 400		from 250 to 600	300	300	✓			✓	✓	from 1700 (850 + 850) to 2000 (1000 + 1000) x from 1775 to 2150**
	from 250 to 620		from 250 to 400	325	300	✓			✓	✓	from 1250 (900 + 350) to 2540 (1270 + 1270) x from 1775 to 2670**
	from 250 to 620		from 250 to 400	325	300	✓			✓	✓	from 1800 (900 + 900) to 2540 (1270 + 1270) x from 1775 to 2670**
	from 250 to 564		from 250 to 443	300	300		✓	✓	✓	✓	from 1200 (850 + 350) to 2252 (1126 + 1126) x from 1775 to 2275** from 1962 (996 + 966) to 2540 (1270 + 1270) x from 2050 to 2500**
	from 250 to 564		from 250 to 443	300	300		✓	✓	✓	✓	from 1700 (850 + 850) to 2252 (1126 + 1126) x from 1775 to 2275** from 1962 (996 + 966) to 2540 (1270 + 1270) x from 2050 to 2500**
 (*)	from 250 to 400		from 630 to 1400	250	300	✓			✓	✓	from 1100 (750 + 350) to 1800 (900 + 900) x from 1775 to 2000 from 1539 (772 + 767) to 2061 (1028 + 1033) x from 1803 to 2197
 (*)	from 250 to 515		from 500 to 1460	320	300	✓				✓	from 1240 (890 + 350) to 2315 (1155 + 1160) x from 1775 to 2620 from 1975 (989 + 986) to 2540 (1268 + 1272) x from 2361 to 2670

NOTE

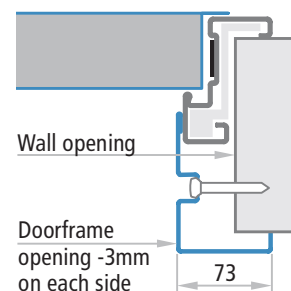
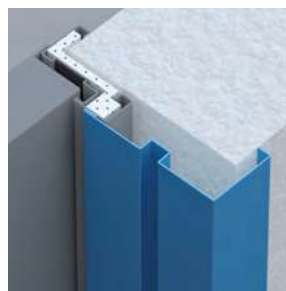
(*) Windows only possible for the minimum size of 0,25m², and only on one-leaved doors or the active leaf of two-leaved doors.

(**) FM inactive leaf minimum without window with RC/STD =350mm. FM inactive leaf minimum without window but with RC2=370mm.

FRAME EXTENSIONS FOR PROGET DOORS

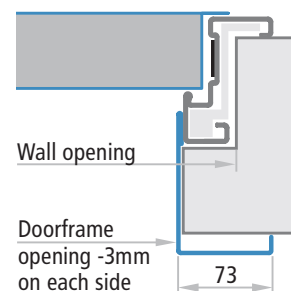
IM 1

Frame extension to be mounted in addition to the Proget frame to serve as embracing frame made of "Sendzimir" processed hot-galvanized sheet metal and painted the same color as the doorframe with epoxy-polyester powders. Profile on three sides, upper corners with 45 degree joint, fixing with screws and plugs in groove (screws and plugs not included).



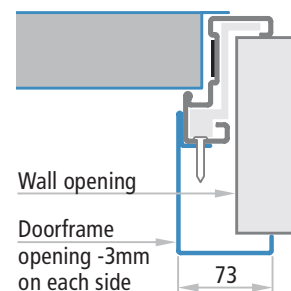
IM 3

Frame extension to be mounted in addition to the Proget frame to serve as embracing frame, especially for EI₂90, EI₂120 with installation for expansion screws fixing. Made of "Sendzimir" processed hot-galvanized sheet metal and painted the same color as the doorframe with epoxy-polyester powders. Profile on three sides, upper corners with 45 degree joint, fixing with screws and plugs (screws and plugs not included).



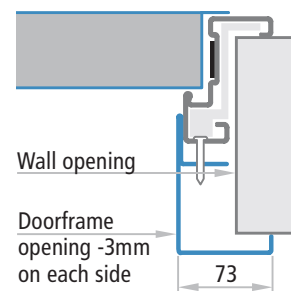
IM 4

Frame extension to be screwed to the Proget doorframe acting as a wall cladding. Made of "Sendzimir" processed hot-galvanized sheet metal painted the same color as the doorframe with epoxy-polyester powders. Profile on three sides, upper corners with 90 degree joint. Complete with fastener screws. To mount the frame extension, pre-drilled holes are available on the frame. Combine with sealing to conceal the screw heads.



IM 5

Telescopic frame extension to be screwed to the Proget doorframe acting as a wall cladding for expansion screw fixing. Consists of two overlapping profiles with a 25mm adjustable range. Made of "Sendzimir" processed hot-galvanized sheet metal painted the same color as the doorframe with epoxy-polyester powders. Profile on three sides, upper corners with 90 degree joint. Complete with fastener screws. To mount the frame extension, pre-drilled holes are available on the frame. Combine with sealing to conceal the screw heads.



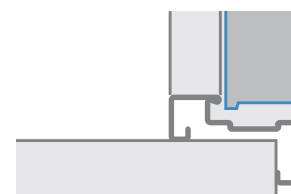
FRAME ON FOUR SIDES

Upon request one-leaved Proget doors may be supplied with frames on four sides and leaves with or without lower rebate. These type of doors are used mainly for technical rooms or shafts.

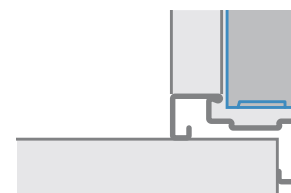
The frame on four sides is not available for the following applications: doors installed onto escape routes, two-leaved doors, doors with environmental characteristics, application on lightweight constructions, in combination with frame extensions.

ATTENTION

With the frame on four sides, the center of the handle will be 15 mm higher than the standard position. For more details, see the page "Door cross section - Measurements".



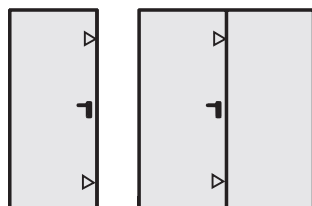
Leaf with lower rebate



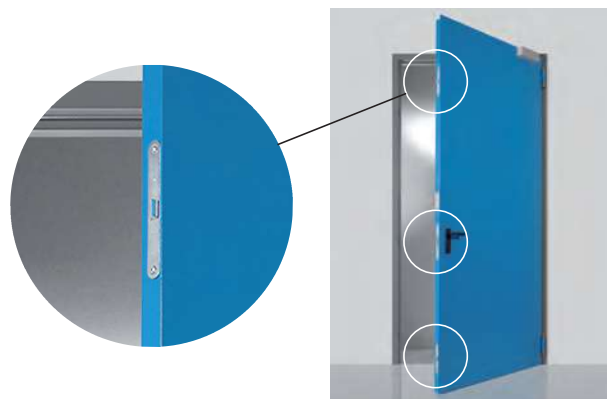
Leaf without lower rebate

THREE-POINT LOCKING MECHANISM

Mandatory for one-leaved EI₂120 doors and upon request for a more reliable closure of one- and two-leaved EI₂60 and two-leaved EI₂90 doors. In combination with double M1 handle and cylinder. The lock is also available for anti-panic and emergency push versions. Thus the three-point locking mechanism can be combined with emergency handles or with EXUS, TWIST, SLASH type BM panic bars in conformity with **CE** marking.



▷ Additional closure points



NOTE

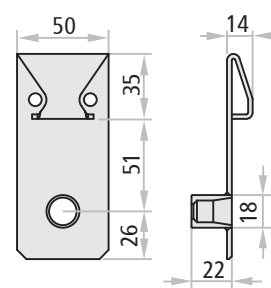
Three point locking mechanism can be combined with M1, M1C, M1X, M1Xs, M11, M11X, M11Xs handles only.

STEEL FLOOR CATCH

Floor-mounted steel floor catch for two-leaved Proget doors. Made of pierced and successively galvanized steel. Includes rebate stop for the inactive leaf, the strike box for insertion of the rod, Nr. 3 screws and Nr. 3 plugs. To be used in place of the plastic floor catch for doors that usually remain open and where carts and heavy equipment pass on a regular basis.



Lower PROGET steel floor catch



RETREATING FLOOR CATCH „N626“

To be applied in combination with two-leaved PROGET doors, which are usually to be kept open, in substitution of the standard floor catch. The N626's advantage is the embedding of the floor catch into the floor which is activated only by the closing of the inactive leaf. Thus when the doors are open protrusions are avoided guaranteeing nevertheless a correct closing.

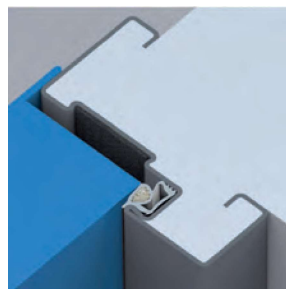


NOTE

For the passing of the cable of the command function the installation into the floor of a wrinkled cable sleeve is necessary. The installation of the N626 requires trained personnel.

REBATE SEALING

CR sealing (for EI₂ doors) and sealing (for REI doors) in black extruded profile to cut and to be pressed into the dedicated groove in the perimetral frame and on the central joint of two-leaved doors.

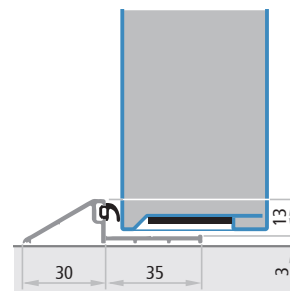


THRESHOLD

Fixed threshold in anodized aluminium supplied with relative rebate sealing. To be installed for single and double leaved doors onto the floor with screws and plugs (not supplied).

NOTE

For the installation it is necessary to adapt the threshold to the frame of the door and to drill a hole for its fixing. Further it is necessary to finish up the threshold with silicone.



INTERNAL PEDESTRIAN DOORS

Classification report NO. IFT 16-000122-PR03

Test report NO. IFT 12-001195-PR01



Pedestrian interior doors are not yet subject to marking as the relevant standard EN 14351-2 has not yet entered into force. The performances contained in the standard can however be a reference for classifying the door for indoor, such as:

- air permeability according to EN 1026:2001
- thermal transmittance according to EN ISO 10077-1:2018 e EN ISO 10077-2:2018

PROGET fire doors are also classified as Sa or S200 for smoke control according to EN 1634-3 (test method) and 13501-2 (classification).

The price list lists the Combos which add these additional performances to the door.

ATTENTION

For the dimensional limits according to the certificates and homologations of the fire rated doors and regarding the minimum borders please refer to the specific pages of this brochure.

The values for the thermal transmittance W/m^2K shown in the table on the next page are given by the calculation according to the norm EN ISO 10077-1 done on samples of the dimensions 1,23x2,18 for areas $\leq 3,6m^2$ and on samples of the dimensions 2,00x2,18 for areas $> 3,6m^2$.

All performance values indicated in the table are valid only in presence of the following accessories or enhancements:

- standard frame to be installed with wall anchors and mortar or with screws and plugs
- embracing frame prepared for the installation onto lightweight constructions
- isolation of the frame with the filling of cement or plasterboard
- installation of rubber seals along the entire perimeter of the door frame including the central rebate for double leaved doors
- presence of the automatic door sweep depending upon selected solution.

In case of windows with dimensions larger than those tested (300x400mm), up to a maximum size of 400x600mm the differing performance value for the thermal transmittance needs to be asked, the performance value for acoustic isolation remains unchanged.

For the acoustic isolation performance values, in case of asymmetric double leaved doors ($L1 \neq L2$), select the minor R_w value of the two (example 1: leaf without windows and $H=2150$, $L1=1000$, $L2=500$ select 32 dB; example 2: leaf without windows and $H=2150$, $L1=1200$, $L2=1000$ select 35 dB).



SMOKE CONTROL ACCORDING TO EN 1634-3

This is the ability of one element to reduce or eliminate the passage of smoke from one side of the door to the other. Two levels of smoke performance are defined.

Smoke control Sa: when the maximum dispersion value measured at room temperature and at a pressure of 25 Pascal is not greater than $3 m^3/h$ per metre of the gap between the door frame and the door frame excluding loss through the floor threshold.

Smoke control S200: when the maximum dispersion value, measured at room temperature and 200 C and up to a pressure of 50 Pascal, is not greater than $20 m^3/h$ for a single door or $30 m^3/h$ for a two-door door.

The smoke tightness is verified with a specific technical test in accordance with UNI EN 1634-3, while the classification is provided by UNI EN 13501-2 according to the following criteria:

Sa considers only the seal at room temperature

S200 considers the seal at room temperature and at 200 C



INTERNAL PEDESTRIAN DOORS

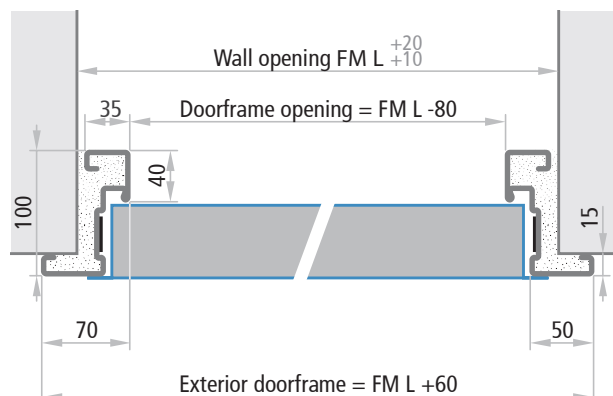
Classification report NO. IFT 16-000122-PR03

Test report NO. IFT 12-001195-PR01

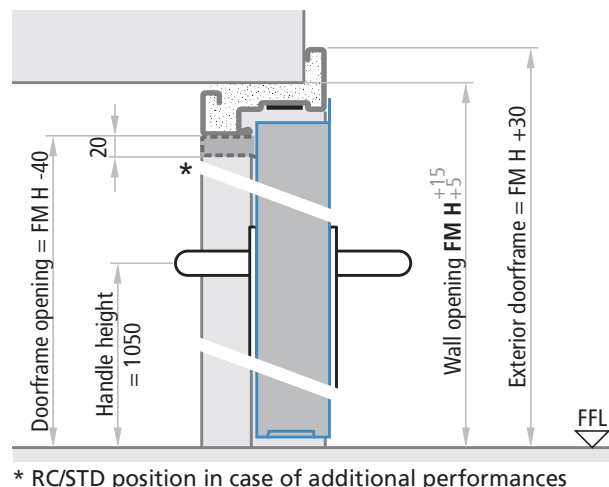


INTERNAL PEDESTRIAN DOORS						Combo Thermo/GS - Combo Thermo/GSV Combo dB Sa/GS - Combo dB Sa/GSV version with rebate sealing CR and automa- tic door sweep Combo S200/GS - Combo S200/GSV version with rebate sealing CR and automa- tic door sweep and three-point locking mechanism					Combo Thermo - Combo Sa version with rebate sealing CR		
Type	FM L x H	Class	std angular frame	installation with screw or expansions screws	embracing frame	smoke control according to UNI EN 1634-3	air permeability according to UNI EN 1026:2001	thermal transmit- tance according to UNI EN 10077-1:2018 UNI EN 10077-2:2018	acoustic performance according to UNI EN ISO 140-3	smoke control according to UNI EN 1634-3	air permeability according to UNI EN 1026:2001	thermal transmit- tance according to UNI EN 10077-1:2018	
without window	≤ 3,6 m²	REI 60-EI ₁ 60	✓			Sa S200	classe 2	1,4 W/m²K		Sa	-	-	
	≤ 3,6 m²	REI 60-EI ₁ 60		✓		Sa S200	classe 2	1,3 W/m²K		Sa	-	-	
	≤ 3,6 m²	REI 60-EI ₂ 60			✓	Sa S200	classe 2	1,5 W/m²K		Sa	-	-	
	≤ 3,6 m²	REI 120-EI ₂ 90/120	✓			Sa S200	classe 2	1,4 W/m²K		Sa	-	-	
	≤ 3,6 m²	REI 120-EI ₂ 90/120		✓		Sa S200	classe 2	1,4 W/m²K		Sa	-	-	
	≤ 3,6 m²	REI 120-EI ₂ 90/120			✓	Sa S200	classe 2	1,5 W/m²K		Sa	-	-	
	800 - 1100 x 2000 - 2250	REI 120-EI ₂ 90/120	✓	✓	✓				Rw = 36 dB				
	1101 - 1340 x 2000 - 2250	REI 120-EI ₂ 90/120	✓	✓	✓				Rw = 35 dB				
	800 - 1340 x 2251 - 2670	REI 120-EI ₂ 90/120	✓	✓	✓				Rw = 34 dB				
	with window 300x400	≤ 3,6 m²	REI 60-EI ₁ 60	✓			Sa S200	classe 2	1,9 W/m²K		Sa	-	1,9 W/m²K
≤ 3,6 m²		REI 60-EI ₁ 60		✓		Sa S200	classe 2	1,9 W/m²K		Sa	-	1,9 W/m²K	
≤ 3,6 m²		REI 60-EI ₁ 60			✓	Sa S200	classe 2	2,1 W/m²K		Sa	-	2,1 W/m²K	
≤ 3,6 m²		REI 120-EI ₂ 90/120	✓			Sa S200	classe 2	1,9 W/m²K		Sa	-	1,9 W/m²K	
≤ 3,6 m²		REI 120-EI ₂ 90/120		✓		Sa S200	classe 2	1,8 W/m²K		Sa	-	1,8 W/m²K	
≤ 3,6 m²		REI 120-EI ₂ 90/120			✓	Sa S200	classe 2	2,0 W/m²K		Sa	-	2,0 W/m²K	
800 - 1100 x 2000 - 2250		REI 120-EI ₂ 90/120	✓	✓	✓				Rw = 36 dB				
1101 - 1340 x 2000 - 2250		REI 120-EI ₂ 90/120	✓	✓	✓				Rw = 35 dB				
800 - 1340 x 2251 - 2670		REI 120-EI ₂ 90/120	✓	✓	✓				Rw = 34 dB				
without window		≤ 3,6 m²	REI 60-EI ₁ 60	✓			Sa S200	classe 3	1,8 W/m²K		Sa	-	1,8 W/m²K
	> 3,6 m²	REI 60-EI ₁ 60	✓			Sa S200	classe 3	1,5 W/m²K		Sa	-	1,4 W/m²K	
	≤ 3,6 m²	REI 60-EI ₁ 60		✓		Sa S200	classe 3	1,8 W/m²K		Sa	-	1,7 W/m²K	
	> 3,6 m²	REI 60-EI ₁ 60		✓		Sa S200	classe 3	1,4 W/m²K		Sa	-	1,4 W/m²K	
	≤ 3,6 m²	REI 60-EI ₂ 60			✓	Sa S200	classe 3	1,9 W/m²K		Sa	-	1,9 W/m²K	
	> 3,6 m²	REI 60-EI ₂ 60			✓	Sa S200	classe 3	1,6 W/m²K		Sa	-	1,5 W/m²K	
	≤ 3,6 m²	REI 120-EI ₂ 90/120	✓			Sa S200	classe 3	1,8 W/m²K		Sa	-	1,8 W/m²K	
	> 3,6 m²	REI 120-EI ₂ 90/120	✓			Sa S200	classe 3	1,5 W/m²K		Sa	-	1,5 W/m²K	
	≤ 3,6 m²	REI 120-EI ₂ 90/120		✓		Sa S200	classe 3	1,8 W/m²K		Sa	-	1,8 W/m²K	
	> 3,6 m²	REI 120-EI ₂ 90/120		✓		Sa S200	classe 3	1,5 W/m²K		Sa	-	1,4 W/m²K	
	≤ 3,6 m²	REI 120-EI ₂ 90/120			✓	Sa S200	classe 3	2,0 W/m²K		Sa	-	1,9 W/m²K	
	> 3,6 m²	REI 120-EI ₂ 90/120			✓	Sa S200	classe 3	1,6 W/m²K		Sa	-	1,6 W/m²K	
	(L1 o L2) 500 - 799 x 2000 - 2670	REI 120-EI ₂ 90/120	✓	✓	✓				Rw = 32 dB				
	(L1 o L2) 800 - 1100 x 2000 - 2250	REI 120-EI ₂ 90/120	✓	✓	✓				Rw = 36 dB				
(L1 o L2) 1101 - 1330 x 2000 - 2250	REI 120-EI ₂ 90/120	✓	✓	✓				Rw = 35 dB					
(L1 o L2) 800 - 1330 x 2251 - 2670	REI 120-EI ₂ 90/120	✓	✓	✓				Rw = 34 dB					
with window 300x400	≤ 3,6 m²	REI 60-EI ₂ 60	✓			Sa S200	classe 3	2,3 W/m²K		Sa	-	2,3 W/m²K	
	> 3,6 m²	REI 60-EI ₂ 60	✓			Sa S200	classe 3	2,1 W/m²K		Sa	-	2,1 W/m²K	
	≤ 3,6 m²	REI 60-EI ₂ 60		✓		Sa S200	classe 3	2,3 W/m²K		Sa	-	2,3 W/m²K	
	> 3,6 m²	REI 60-EI ₂ 60		✓		Sa S200	classe 3	2,1 W/m²K		Sa	-	2,0 W/m²K	
	≤ 3,6 m²	REI 60-EI ₁ 60			✓	Sa S200	classe 3	2,5 W/m²K		Sa	-	2,4 W/m²K	
	> 3,6 m²	REI 60-EI ₁ 60			✓	Sa S200	classe 3	2,2 W/m²K		Sa	-	2,2 W/m²K	
	≤ 3,6 m²	REI 120-EI ₂ 90/120	✓			Sa S200	classe 3	2,3 W/m²K		Sa	-	2,3 W/m²K	
	> 3,6 m²	REI 120-EI ₂ 90/120	✓			Sa S200	classe 3	2,1 W/m²K		Sa	-	2,0 W/m²K	
	≤ 3,6 m²	REI 120-EI ₂ 90/120		✓		Sa S200	classe 3	2,3 W/m²K		Sa	-	2,2 W/m²K	
	> 3,6 m²	REI 120-EI ₂ 90/120		✓		Sa S200	classe 3	2,0 W/m²K		Sa	-	2,0 W/m²K	
	≤ 3,6 m²	REI 120-EI ₂ 90/120			✓	Sa S200	classe 3	2,4 W/m²K		Sa	-	2,4 W/m²K	
	> 3,6 m²	REI 120-EI ₂ 90/120			✓	Sa S200	classe 3	2,2 W/m²K		Sa	-	2,1 W/m²K	
	(L1 o L2) 500 - 799 x 2000 - 2670	REI 120-EI ₂ 90/120	✓	✓	✓				Rw = 32 dB				
	(L1 o L2) 800 - 1100 x 2000 - 2250	REI 120-EI ₂ 90/120	✓	✓	✓				Rw = 36 dB				
(L1 o L2) 1101 - 1330 x 2000 - 2250	REI 120-EI ₂ 90/120	✓	✓	✓				Rw = 35 dB					
(L1 o L2) 1101 - 1330 x 2000 - 2250	REI 120-EI ₂ 90/120	✓	✓	✓				Rw = 34 dB					

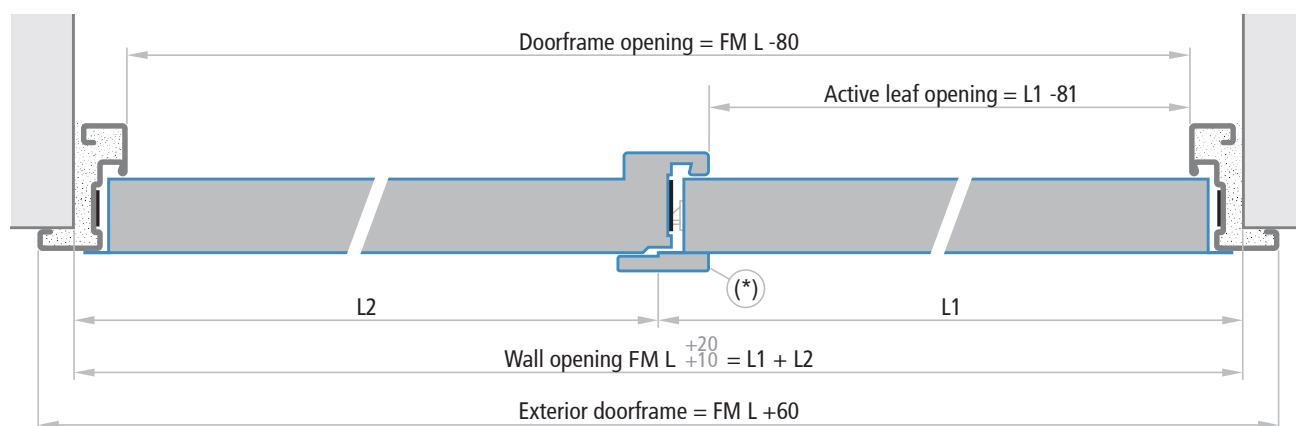
One-leaved doors - Horizontal cross section



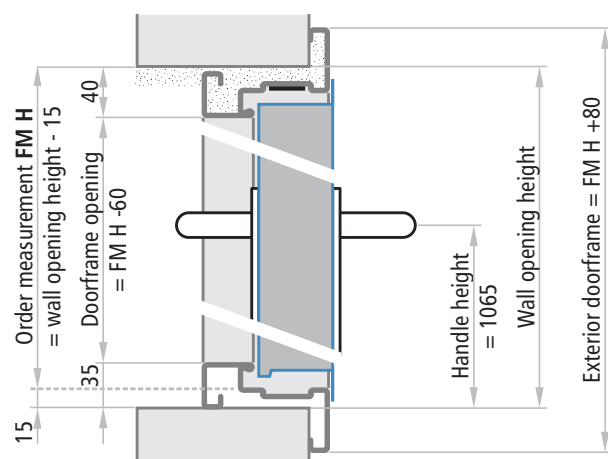
Doors without lower threshold - Vertical cross section



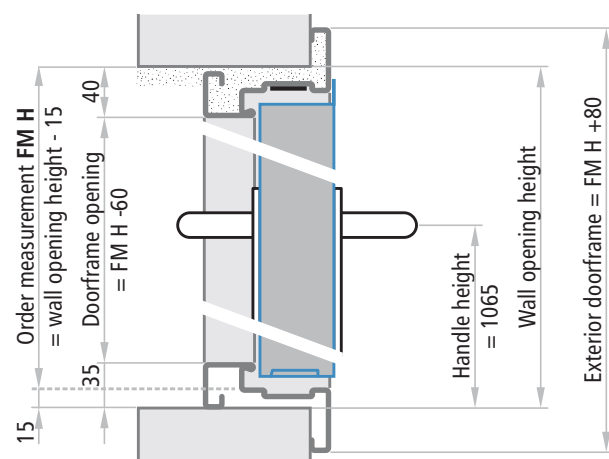
Two-leaved doors - Horizontal cross section



One-leaved doors with frame on 4 sides and leaf with lower rebate - Vertical cross section



One-leaved doors with frame on 4 sides and leaf without lower rebate - Vertical cross section



Leaves thickness

Fire doors 60 mm

NOTE

The tolerances FM L +20, FM H +15 of the indicated measurements make it easier to fill the gap between the wall and the doorframe with cement mortar. For dry wall installation, the holes must be precise and greater tolerance ranges should not be employed. (*) Proget EI₂90 two leaved doors feature an additional isolated central rebate profile, which is applied onto the active leaf.

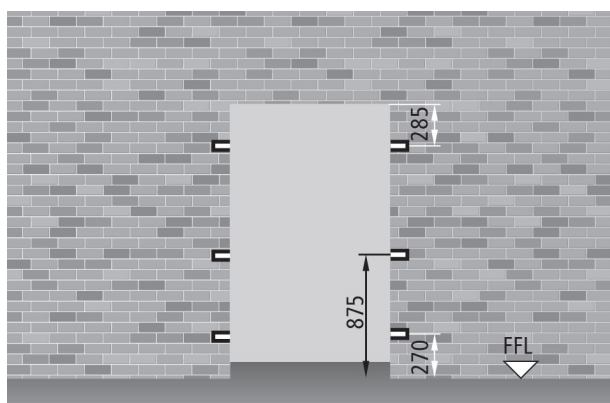
INSTALLATION WITH ANCHORS FOR MORTAR FIXING

The standard installation method for Proget doors is to use the anchors for mortar fixing. Appropriate cuts will need to be created in the walls (section 80 x 200 mm). The anchors should be bent and blocked inside the wall. For fire sealing purposes and a perfect mechanical fit, the space between the doorframe and the masonry shall always be filled with concrete mortar.

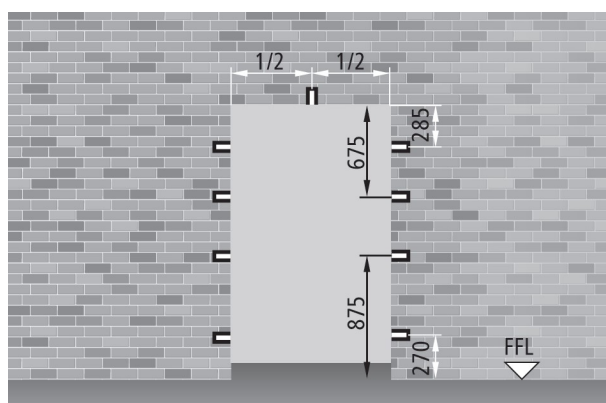


One-leaved doors

FM L = from 500 to 1035 x FM H = from 1775 to 2200

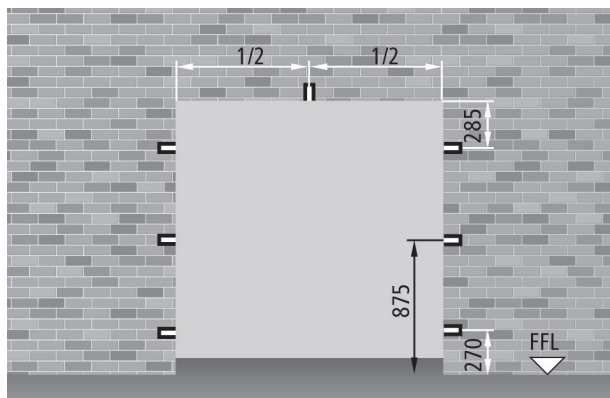


FM L greater than 1035 and/or FM H greater than 2200

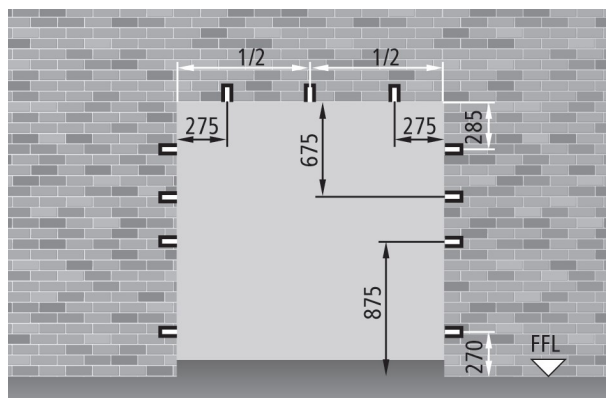


Two-leaved doors

FM L = from 850 to 2070 x FM H = from 1775 to 2200



FM L greater than 2070 and/or FM H greater than 2200



NOTE

For proper installation, the cuts for the anchors should be 80 x 200 mm in size.

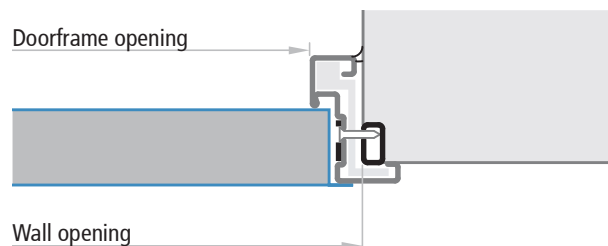
DRY WALL INSTALLATION ONTO THE SUBFRAME WITH SCREWS

Installation method certified for one- or two-leaved REI 60 and REI 120 doors, in conformity with UNI 9723 standard, for screw fixing onto metal subframes in the walls.

Subframes need to be ordered separately from the door. Make sure measurements correspond to the door's FM L x FM H measurements. For the technical characteristics of the subframe, see the specific page of the section "accessories doors".

The supplied doorframe comes factory heat-insulated with special materials and includes corner joints and a lower spacer (except for one-leaved doors with frame on four sides) to be added on site.

The subframe method allows a "dry wall" installation of the doors, making an installation onto finished masonry possible.



INSTALLATION FOR EXPANSION SCREWS FIXING

Installation method certified for: one- or two-leaved EI₂60, REI 60, REI 120, EI₂90 two-leaved and EI₂120 one-leaved doors, for expansion screws. Designed for installations onto blockwork, masonry or homogenous concrete wall, with density of (1200±400)kg/m³ and a thickness of (200±50)mm.

The supplied doorframe comes factory heat-insulated with special materials and includes corner joints and a lower spacer (except for one-leaved doors with frame on four sides) to be added on site.

This method allows for "dry wall" installation of the doors without requiring any additional masonry work. Installation of the door, therefore, becomes a simple mechanical operation plus the final adjustments.

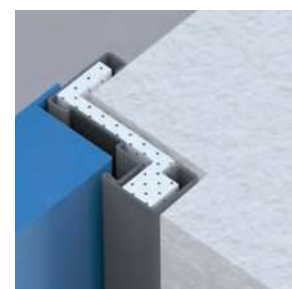
NOTE

Please specify clearly whether the door is for subframe installation or for direct wall installation with expansion screws.

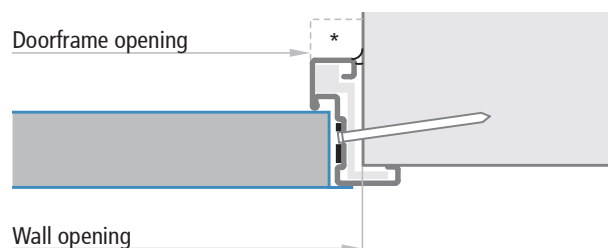
* concealing with concrete mandatory for EI₂90 and EI₂120 fire-rated doors.



EI₂60, REI 60 and REI 120 doors



EI₂90, EI₂120 doors



WALL SCREWS

For direct wall installations or installation onto subframes, special expansion screws should be used without plugs. Please see the "door accessories" pages for more details.



BLOCK FRAME FOR IN THE REVEAL APPLICATION

Installation method certified for one- and two-leaved EL_{260} , one-leaved EL_{120} or two-leaved EL_{90} doors.

The supplied frame comes factory heat-insulated with special materials and includes corner joints and pre-drilled screw holes on the rebate. Installation for expansion screws (not supplied).

This method allows for "dry wall" installation of the doors without requiring any additional masonry work. Installation of the door, therefore, becomes a simple mechanical operation plus the final adjustments.



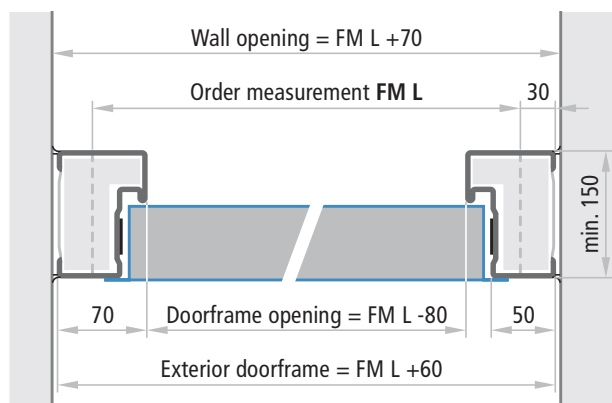
ATTENTION

Acoustic performance values are not valid in case of block frame for in the reveal application.

DOOR CROSS SECTIONS - MEASUREMENTS

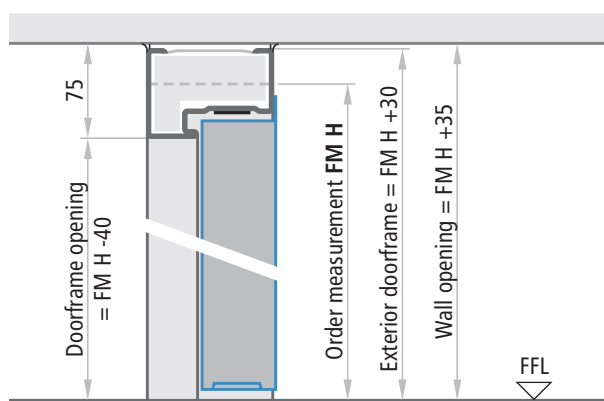
One-leaved doors

Horizontal cross section



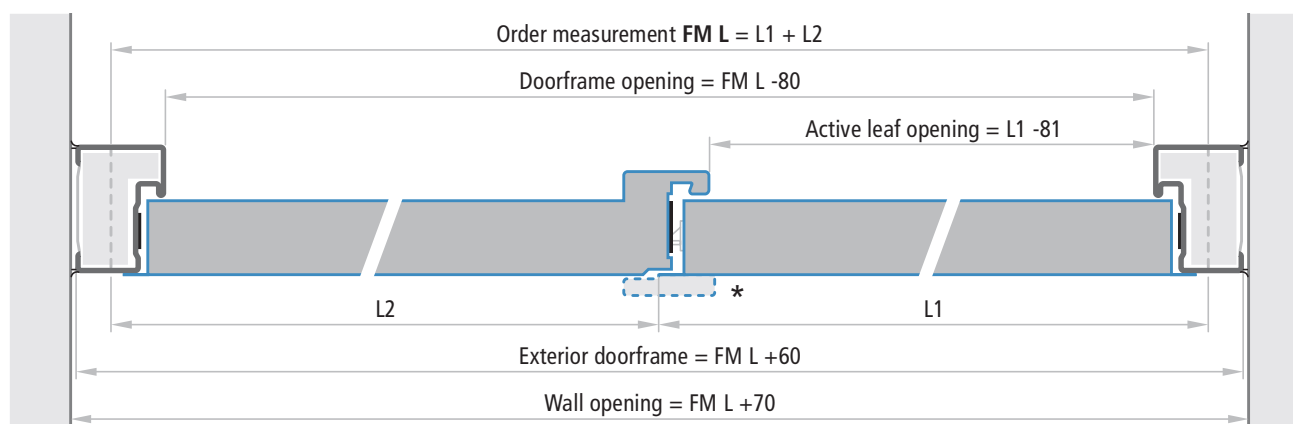
Doors without lower threshold

Vertical cross section



Two-leaved doors

Horizontal cross section



NOTE

Expansion screws recommended:

- for light wall Würth type DBL-(WUS-SK)-Z3-180-10x202
- for heavy wall Spit type L 10 - 102/152

(*) Proget EL_{90} two leaved doors feature an additional isolated central rebate profile, which is applied onto the active leaf.

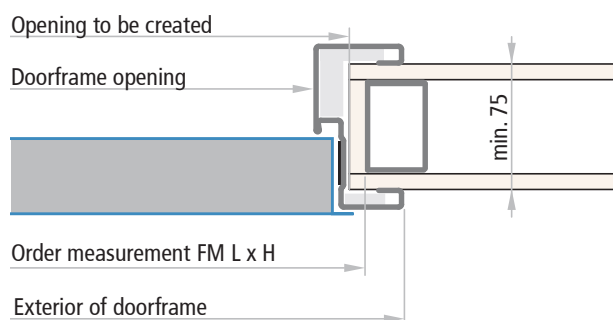
LIGHTWEIGHT CONSTRUCTION INSTALLATION WITH EMBRACING FRAME

Installation method onto lightweight constructions certified for one- or two-leaved doors.

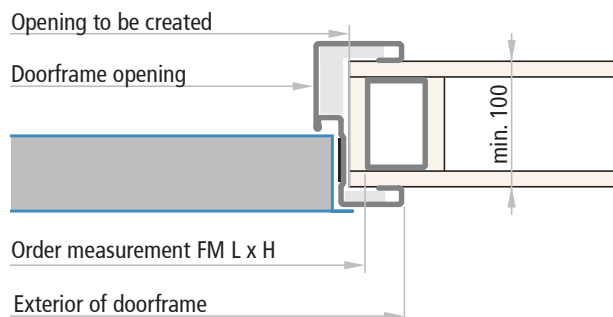
The supplied frame comes factory heat-insulated with special materials and includes corner joints and pre-drilled screw holes with cover caps.



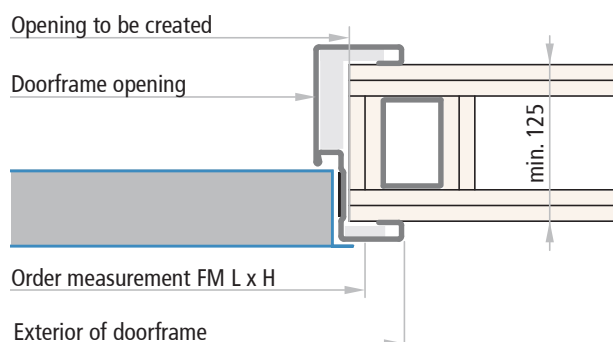
Door cross section and lightweight construction version: EI₂60



Door cross section and plasterboard version: REI 60



Door cross section and plasterboard version: REI 120 EI₂60 - EI₂120



Lightweight constructions EI₂60

EI₂60 fire-rated doorsets can be installed onto every wall or partition which is of the board covered type with studs made from metal or timber with a fire resistance equal to or greater than the EI60 supporting construction.

Order measurement	required wall opening	doorframe opening	exterior of doorframe
FM L (width)	FM L - 25 mm	FM L - 80 mm	FM L + 60 mm
FM H (height)	FM H - 12 mm	FM H - 40 mm	FM H + 30 mm

NOTE

Lightweight constructions should be done following the specific door installation instructions.

Plasterboard walls REI 60

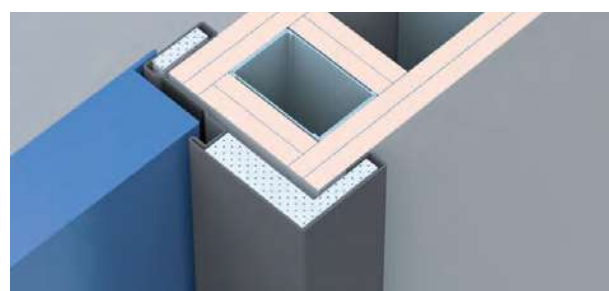
Made using galvanized steel frames with "U"-shaped 75x40mm min. guide profiles, "C"-shaped 75x47mm min. vertical profiles (doubled next to the doorframe), with a single layer of 12,5mm min. thick fire rated plasterboard used as finishing on both sides and on the profiles around the doorframe.

Order measurement	Required wall opening	Doorframe opening	Exterior of doorframe
FM L (width)	FM L - 25 mm	FM L - 80 mm	FM L + 60 mm
FM H (height)	FM H - 12 mm	FM H - 40 mm	FM H + 30 mm

Plasterboard walls EI₂90, EI₂120 and REI 120

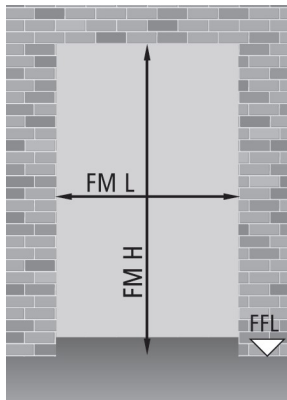
Made using galvanized steel framing with "U"-shaped 75x40mm min. guide profiles, "C"-shaped 75x47mm min. vertical profiles (doubled next to the doorframe), with a double layer of 12,5mm min. thick fire rated plasterboard used as finishing on both sides and on the profiles around the doorframe.

Order measurement	required wall opening	doorframe opening	exterior of doorframe
FM L (width)	FM L - 25 mm	FM L - 80 mm	FM L + 60 mm
FM H (height)	FM H - 12 mm	FM H - 40 mm	FM H + 30 mm

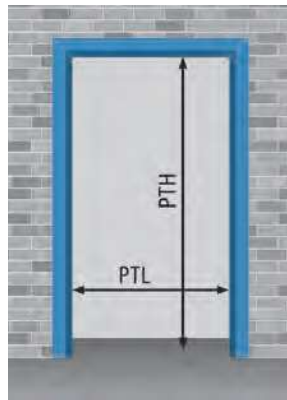


ORDER MEASUREMENTS

Wall opening

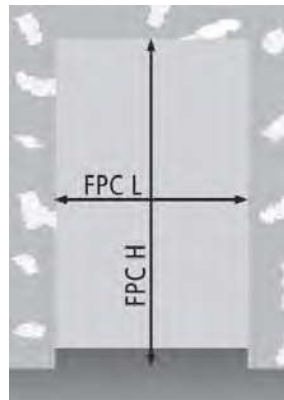


Doorframe opening



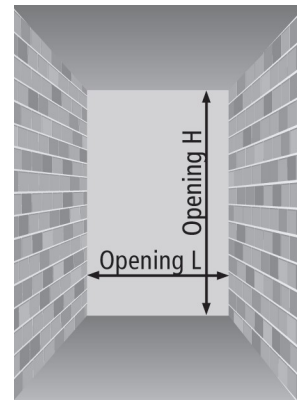
$$\begin{aligned} PTL &= FM L - 80 \\ PTH &= FM H - 40 \end{aligned}$$

Lightweight constructions wall opening



$$\begin{aligned} FPC L &= FM L - 25 \\ FPC H &= FM H - 12 \end{aligned}$$

Block frame opening



$$\begin{aligned} \text{Opening L} &= FM L + 70 \\ \text{Opening H} &= FM H + 35 \end{aligned}$$

NOTE

The wall openings to be created for the embracing frame or the block frame for in the reveal application, do not correspond to the order measurement and therefore should follow the above specifications.

One-leaved doors

FM L x FM H	PT L x PT H (doorframe opening)		fire-rating
standard dimensions	frame on 3 sides	frame on 4 sides	class
800 x 2000 / 2050 / 2100 / 2150 / 2200	720 x 1960 / 2010 / 2060 / 2110 / 2160	720 x 1940 / 1990 / 2040 / 2090 / 2140	EI,60, EI,120, REI 60, REI 120
900 x 2000 / 2050 / 2100 / 2150 / 2200	820 x 1960 / 2010 / 2060 / 2110 / 2160	820 x 1940 / 1990 / 2040 / 2090 / 2140	EI,60, EI,120, REI 60, REI 120
1000 x 2000 / 2050 / 2100 / 2150 / 2200	920 x 1960 / 2010 / 2060 / 2110 / 2160	920 x 1940 / 1990 / 2040 / 2090 / 2140	EI,60, EI,120, REI 60, REI 120
1100 x 2050 / 2100 / 2150 / 2200	1020 x 2010 / 2060 / 2110 / 2160	1020 x 1990 / 2040 / 2090 / 2140	EI,60, EI,120, REI 60, REI 120
1200 x 2050 / 2100 / 2150 / 2200	1120 x 2010 / 2060 / 2110 / 2160	1120 x 1990 / 2040 / 2090 / 2140	EI,60, EI,120, REI 60, REI 120
1300 x 2000 / 2050 / 2100 / 2150 / 2200	1220 x 1960 / 2010 / 2060 / 2110 / 2160	1220 x 1940 / 1990 / 2040 / 2090 / 2140	EI,60, EI,120, REI 60, REI 120
1340 x 2050 / 2100 / 2150 / 2200	1260 x 2010 / 2060 / 2110 / 2160	1260 x 1990 / 2040 / 2090 / 2140	EI,60, EI,120, REI 60, REI 120
non-standard dimensions			
from 670 to 1340 x from 1950 to 2600	from 590 to 1260 x from 1910 to 2560	from 590 to 1260 x from 1890 to 2540	EI,60
from 710 to 1340 x from 1900 to 2640	from 630 to 1260 x from 1860 to 2600	from 630 to 1260 x from 1840 to 2580	EI,120
from 546 to 1340 x from 1775 to 2670	from 466 to 1260 x from 1735 to 2630	from 466 to 1260 x from 1715 to 2610	REI 60, REI 120 anchor fixing
from 546 to 1170 x from 1775 to 2275	from 520 to 1090 x from 1735 to 2235	from 520 to 1090 x from 1715 to 2215	REI 60, REI 120 embracing frame
from 1004 to 1340 x from 2050 to 2500	from 924 to 1260 x from 2010 to 2460	from 924 to 1260 x from 1990 to 2440	REI 60, REI 120 embracing frame
from 546 to 1170 x from 1775 to 2275	from 520 to 1090 x from 1735 to 2235	from 520 to 1090 x from 1715 to 2215	REI 60, REI 120 subframe or expansion screw
from 1004 to 1340 x from 2050 to 2500	from 924 to 1260 x from 2010 to 2460	from 924 to 1260 x from 1990 to 2440	REI 60, REI 120 subframe or expansion screw

Order measurements - Handle height

PROGET Fire doors

NINZ[®]
FIRE DOORS

Two-leaved doors FM L x FM H

standard dimensions

standard dimensions	PT L x PT H	fire-rating
1150 (800 + 350) x 2000 / 2050 / 2100 / 2150 / 2200	1070 x 1960 / 2010 / 2060 / 2110 / 2160	EI ₂ 60, REI 60, REI 120
1200 (800 + 400) x 2000 / 2050 / 2100 / 2150 / 2200	1120 x 1960 / 2010 / 2060 / 2110 / 2160	EI ₂ 60, REI 60, REI 120
1250 (800 + 450) x 2000 / 2050 / 2100 / 2150 / 2200	1170 x 1960 / 2010 / 2060 / 2110 / 2160	EI ₂ 60, REI 60, REI 120
1250 (900 + 350) x 2000 / 2050 / 2100 / 2150 / 2200	1170 x 1960 / 2010 / 2060 / 2110 / 2160	EI ₂ 60, REI 60, REI 120
1300 (900 + 400) x 2000 / 2050 / 2100 / 2150 / 2200	1220 x 1960 / 2010 / 2060 / 2110 / 2160	EI ₂ 60, REI 60, REI 120
1350 (900 + 450) x 2000 / 2050 / 2100 / 2150 / 2200	1270 x 1960 / 2010 / 2060 / 2110 / 2160	EI ₂ 60, REI 60, REI 120
1350 (1000 + 350) x 2000 / 2050 / 2100 / 2150 / 2200	1270 x 1960 / 2010 / 2060 / 2110 / 2160	EI ₂ 60, REI 60, REI 120
1400 (1000 + 400) x 2000 / 2050 / 2100 / 2150 / 2200	1320 x 1960 / 2010 / 2060 / 2110 / 2160	EI ₂ 60, REI 60, REI 120
1450 (1000 + 450) x 2000 / 2050 / 2100 / 2150 / 2200	1370 x 1960 / 2010 / 2060 / 2110 / 2160	EI ₂ 60, REI 60, REI 120
1600 (800 + 800) x 2000 / 2050 / 2100 / 2150 / 2200	1520 x 1960 / 2010 / 2060 / 2110 / 2160	EI ₂ 60, EI ₂ 90, REI 60, REI 120
1700 (900 + 800) x 2000 / 2050 / 2100 / 2150 / 2200	1620 x 1960 / 2010 / 2060 / 2110 / 2160	EI ₂ 60, EI ₂ 90, REI 60, REI 120
1800 (900 + 900) x 2000 / 2050 / 2100 / 2150 / 2200	1720 x 1960 / 2010 / 2060 / 2110 / 2160	EI ₂ 60, EI ₂ 90, REI 60, REI 120
1800 (1000 + 800) x 2000 / 2050 / 2100 / 2150 / 2200	1720 x 1960 / 2010 / 2060 / 2110 / 2160	EI ₂ 60, EI ₂ 90, REI 60, REI 120
1900 (1000 + 900) x 2000 / 2050 / 2100 / 2150 / 2200	1820 x 1960 / 2010 / 2060 / 2110 / 2160	EI ₂ 60, EI ₂ 90, REI 60, REI 120
2000 (1000 + 1000) x 2000 / 2050 / 2100 / 2150 / 2200	1920 x 1960 / 2010 / 2060 / 2110 / 2160	EI ₂ 60, EI ₂ 90, REI 60, REI 120

non-standard dimensions

from 890 (540 + 350) to 2540 (1270 + 1270) x from 1775 to 2600	from 810 to 2460 x from 1735 to 2560	EI ₂ 60
from 1175 (600 + 575) to 2540 (1270 + 1270) x from 1775 to 2300	from 1095 to 2460 x from 1735 to 2260	EI ₂ 90
from 1175 (600 + 575) to 2500 (1250 + 1250) x from 2301 to 2500	from 1095 to 2420 x from 2261 to 2460	EI ₂ 90
from 1175 (600 + 575) to 2380 (1200 + 1180) x from 2501 to 2630	from 1095 to 2300 x from 2461 to 2590	EI ₂ 90
from 890 (540 + 350) to 2540 (1270 + 1270) x from 1775 to 2670	from 810 to 2460 x from 1735 to 2630	REI 60, REI 120 anchor fixing
from 890 (540 + 350) to 2298 (1164 + 1134) x from 1775 to 2275	from 810 to 2218 x from 1735 to 2235	REI 60, REI 120 embracing frame
from 1962 (996 + 966) to 2540 (1270 + 1270) x from 2050 to 2500	from 1882 to 2460 x from 2010 to 2460	REI 60, REI 120 embracing frame
from 890 (540 + 350) to 2298 (1164 + 1134) x from 1775 to 2275	from 810 to 2218 x from 1735 to 2235	REI 60, REI 120 subframe or expansion screw
from 1962 (996 + 966) to 2540 (1270 + 1270) x from 2050 to 2500	from 1882 to 2460 x from 2010 to 2460	REI 60, REI 120 subframe or expansion screw

NOTE

The following doors are equipped with a CP1 door closer:

- EI₂90 2 leaves: from 2271 to 2540 x from 2151 to 2300
from 1801 to 2500 x from 2301 to 2500
from 1801 to 2380 x from 2501 to 2630
- EI₂120 1 leaf: from 1126 to 1340 x from 2301 to 2500
from 901 to 1340 x from 2501 to 2640
- REI 120 1 leaf: from 1126 to 1340 x from 2301 to 2500
from 901 to 1340 x from 2501 to 2670
2 leaves: from 1126 to 1270 x from 2151 to 2300
from 901 to 1270 x from 2301 to 2670

HANDLE HEIGHT

One-leaved door

h = 1050 (FM H ≥ 1750)

Different heights available upon request only



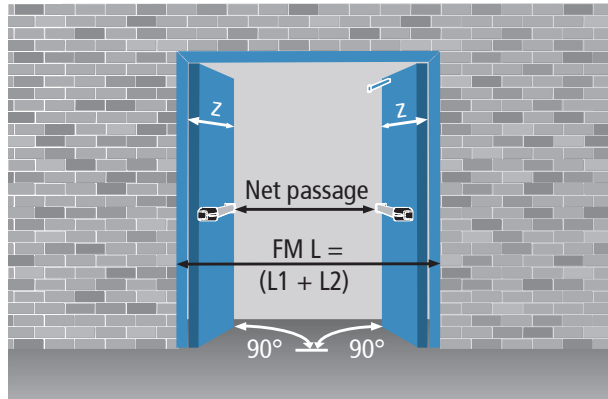
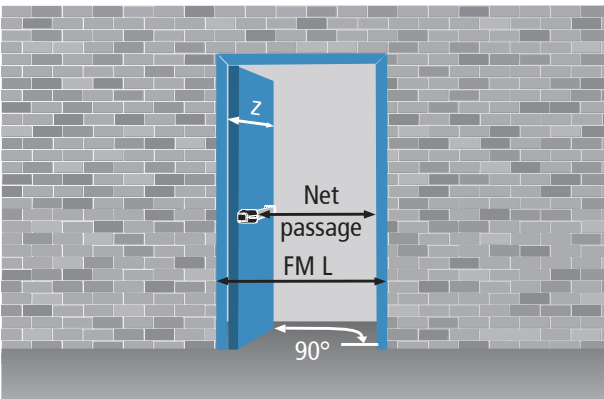
Two-leaved door

h = 1050 (FM H ≥ 1750)

Different heights available upon request only



OPENING MEASUREMENTS AND OVERALL DIMENSIONS WITH 90 DEGREE OPENING



Net passage calculation

panic bar type	protrusion	one-leaved door	two-leaved door	one-leaved door with block frame	two-leaved door with block frame
EXUS	125	FML - 245	FML - 410	Opening - 315	Opening - 480
TWIST	100	FML - 220	FML - 360	Opening - 290	Opening - 430
SLASH	75	FML - 195	FML - 310	Opening - 265	Opening - 380
FAST TOUCH	75	FML - 195	FML - 310	Opening - 265	Opening - 380
without panic bar	-	FML - 120	FML - 160	Opening - 190	Opening - 230
z = leaf protrusion relative to the wall		FML + 27	El ₂ 60, REI 60, REI 120 = L1 + 35, L2 + 75; El ₂ 90 = L1 + 67, L2 + 75		

OVERALL DIMENSIONS WITH 180 DEGREE OPENING

One-leaved door

x = FML - 7



Two-leaved door

El₂60, REI 60, REI 120: x = L1 + 1; El₂90: x = L1 + 33; y = L2 + 42
b = max. 130 (only in the presence of a panic bar or M14 handle)

