

WHAT MAKES THEM SPECIAL?

"Quality first"

- Fully galvanized door, including the "hidden" parts
- Made of "Sendzimir" processed hot-galvanized sheet metal
- 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"

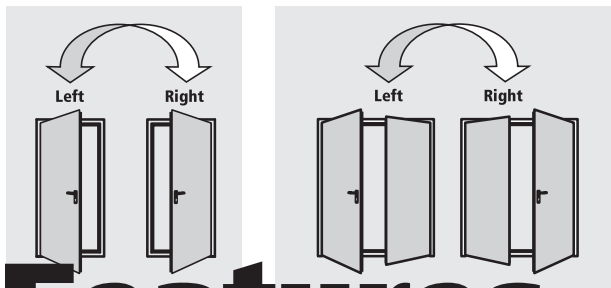
- Door reversibility
- Indication of door opening direction not necessary
- Reduction of stock for retailers
- Simplifies choices for end-customers
- Multiple installation methods for each door
- Type approvals for anchors for mortar fixing or expansion screws

"Conformity to standards"

- 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



Features

UNIVER Fire doors

One-leaved doors available in the following classes:



Two-leaved doors available in the following classes:



STANDARD ELEMENTS

Door leaf

- Made of "Sendzimir" processed hot-galvanized sheet metal, press folded and electro welded
- Perimetral rebate on 4 sides
- Internally reinforced with hot-galvanized steel profiles
- Heat-insulated with treated mineral wool
- Internal stiffeners for overhead door closer and panic bar

Doorframe

- Made of "Sendzimir" processed hot-galvanized sheet metal
- Grooves for thermo expansive sealing and rebate sealing
- Suitable for anchors for mortar fixing or expansion screws
- Detachable rebate for application on finished flooring
- Removable threshold for thresholdless installation
- Strike plates in black plastic for lock bolt and safety bolts
- Assembled doorframes for one-leaved doors
- Assembly required for two-leaved doorframes

Thermo expansive sealing

- Mounted on vertical doorframe profiles and central vertical profiles on two-leaved doors
- For on-site mounting on the doorframe's upper cross-beam
- Mounted above and below the EI₂₉₀ and REI 120 leaves



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. 2 safety bolts on hinge side leaf edge

Locking mechanism

- Reversible locking mechanism with bolt and central lock
- **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

Features

UNIVER Fire doors

INCLUDED ACCESSORIES

Closing regulator

- Two-leaved doors include an RC/STD closing regulator to ensure the correct closing sequence of the leaves
- 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 black plastic with steel roller

Lower coupling system for the inactive leaf

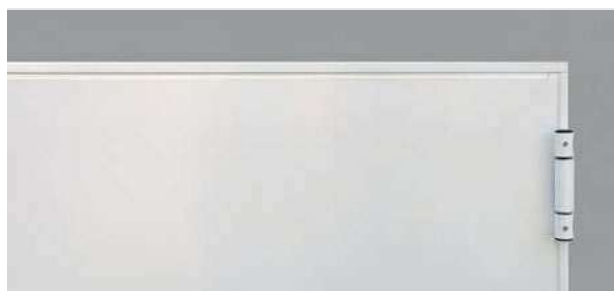
- Vertical rod with steel point which inserts into lower strike box
- Floor catch (floor-mounted floor catch) made of self-extinguishing black plastic, for doors without threshold
- Floor catch in black plastic with a steel roller, for doors with threshold

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 door wrapped into stretchable polyethylene (PE) film
- Assembled doorframes for one-leaved doors
- Assembly required for doorframes for two-leaved doors
- Palletized on wooden pallets

Door weight

class	kg/m ² of wall opening	
	1 leaf	2 leaves
E 60	23	-
EI,60	36	35
EI,90, REI 120	43	41

NOTE

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

Features

UNIVER Fire doors

OPTIONAL ACCESSORIES

A wide variety of accessories and surface finishes are available on request for maximum value enhancement of Univer 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
- Drip steel-profile
- Special fastener screws
- Kick and protection plates in stainless steel
- Windows
- Roofing

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



The following optional accessories make Univer doors irreversible, requiring the indication of the door opening direction when the order is placed:

- SLASH panic bar
- Panic bar for inactive leaves
- Windows
- MAC lock
- ELM/cisa and ELM/mt electric handle
- Special locks (Stel 15)
- NDD - Ninz Digital Decor

Features

UNIVER Fire doors

WINDOW WITH FIRE RATED GLASS

Upon request all one- and two-leaved fire doors, excluding those EW 60 and EI₃₀ rated, 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 standard

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

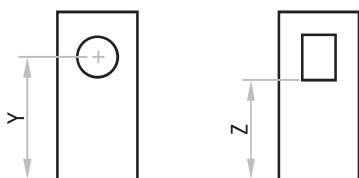
"Border measurement" refers to the distance from the edge of the window to the wall opening of the door.

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
250/300 x 400	minimum 2150	Z=1450
250/300 x 400	from 2050 to 2149	Z=1350
250/300 x 400	less than 2050	Z=FM H - 700



NOTE

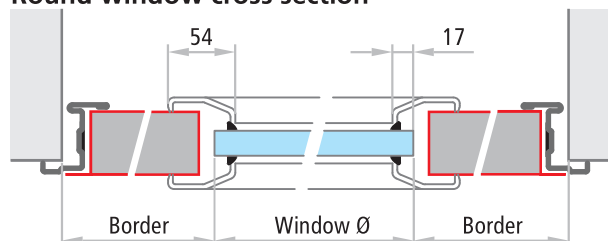
The positions indicated above are those standard. Different positions may be considered as long as they respect the minimum "a" and "b" border strips. The window itself may not be supplied separately except for replacements. It is always advisable for doors with windows to be equipped with door closers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



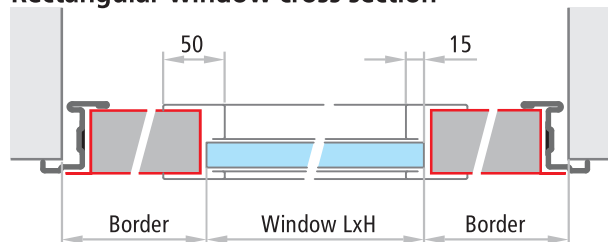
NOTE

For the rectangular windows the frame carters are an optional accessory

Round window cross section



Rectangular window cross section



ATTENTION

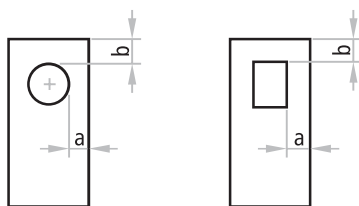
In case of external installation use windows designed for this purpose.

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

Features

UNIVER Fire doors

Window dimensions		min. border EI ₂		min. border RE, REI		dimensions FM L min.
		a	b	a	b	
	Ø 300 Ø 400	220	300	220	300	740 840
	Ø 300 Ø 400	220	300	220	300	L1 740 + L2 min. L1 840 + L2 min.
	Ø 300 Ø 400	220	300	220	300	L1 740 + L2 740 L1 840 + L2 840



Window dimensions		min. border EI ₂		min. border RE, REI		dimensions FM L min.
		a	b	a	b	
	250 x 400 300 x 400	250	300	300	300	EI ₂ =750 RE, REI=850 EI ₂ =800 RE, REI=900
	250 x 400 300 x 400	300	300	300	300	L1 850 + L2 min. L1 900 + L2 min.
	250 x 400 300 x 400	300	300	300	300	L1 850 + L2 850 L1 900 + L2 900

NOTE

Round windows not possible for one-leaved EI 60 doors with FM L (wall opening) above 1020mm.

Rectangular windows not possible for one-leaved EI 60 doors with FM L (wall opening) above 1144mm.

Round and rectangular windows not possible for one-leaved REI doors with FM L (wall opening) above 1167mm and FM H above 2150mm..

FRAME EXTENSIONS FOR UNIVER DOORS

IM 12

Frame extensions to be mounted in addition to the Univer frame acting as a wall cladding. 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 12: for installation on 80mm (min.) wall thickness

IM 14

Telescopic frame extensions to be screwed to the Univer door-frame acting as a wall cladding. 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, fixing holes need to be drilled into doorframe on site. Combine with sealing to conceal the screw heads.

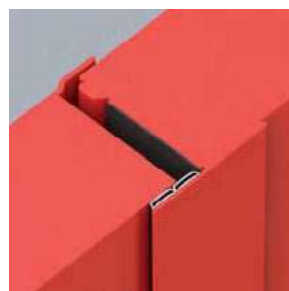
IM 14: for installation on 135mm (min.) wall thickness



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.

Sealing in black extruded profile self-adhesive to cut for application to the central joint of two-leaved doors.



Features

UNIVER Fire doors

INTERNAL PEDESTRIAN DOORS

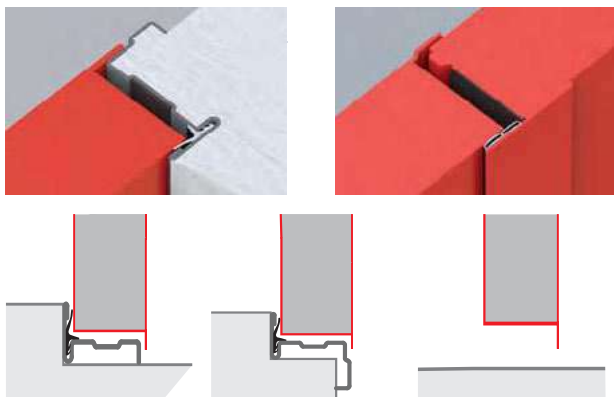
Test report No. CPR/35/05/2019 (E 60)

Test report No. CPR/35/04/2019 (EI₂60)

Test report No. CPR/35/06/2019 (REI 120/EI₂90)

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



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

- Combo Thermo/CB (with lower threshold):
 - frame on all 4 sides
 - if the door is installed on an escape route, it is necessary to fill the difference in height on the push side between the floor and the lower threshold with cement mortar
 - isolation of the door frame with the filling of cement mortar
 - installation of rubber seals along the entire perimeter of the door frame including the central rebate for double leaved doors
 - sealing of the perimeter of the frame (push side) with neutral silicone
- Combo Thermo/SB (without lower threshold):
 - isolation of the door frame with the filling of cement mortar
 - installation of rubber seals along the 3 sides of the frame including the central rebate for two-leaved doors
 - sealing of the perimeter of the frame (push side) with neutral silicone

 Consiglio Nazionale delle Ricerche Istituto per la BioEconomia	
CNR IBE – Via F. Biasi n. 75, San Michele all'Adige – Trento T. 0461 660111 Fax 0461 650045	
CNR - IBE U 0000804 13/02/2020 	LABORATORIO SERRAMENTI E FACCIATE CONTINUE
RAPPORTO DI PROVA N° CPR/35/06/2019 San Michele all'Adige, 07/02/2020	
COMMITTENTE: NINZ S.p.a. Corso Trento, 2/A - 38061 Ala (TN) COSTRUTTORE: NINZ S.p.a. Corso Trento, 2/A - 38061 Ala (TN) OGGETTO: PORTA MODELLO: UNIVER REI 120 / EI ₂ 90 MATERIALE: profilato metallico, coibente DIMENSIONI: Spessore anta (mm) 60	
PROVE ESEGUITE SOTTO NOTIFICA (NB 2127): ☐ CALCOLO DELLA TRASMITTANZA TERMICA SECONDO NORME UNI EN ISO 10077-2:2018 e UNI EN ISO 10077-1:2018 Note:.....	
DATA ACCETTAZIONE PREVENTIVO: 23/12/2019 (prot.n. 0003210/2019) DATA INIZIO PROVE: 04/02/2020 DATA FINE PROVE: 06/02/2020	
IL PRESENTE RAPPORTO DI PROVA È COMPOSTO DA: n° 05 pagine di rapporto di prova n° 23 pagine di allegati tecnici	
DIRETTORE TECNICO Giulio Pasotto  	
MOD 00 00 13 - FormA Rev.05 Rapporto di prova rilasciato sotto notifica ai sensi del Reg. (UE) n.305/2011 (CPR)	
FIRENZE BOLOGNA CATANIA ROMA SASSARI S.MICHELE ALL'ADIGE C.F. 80054330986 - P.IVA 02118311006 PEC: protocollo.ibe@pec.cnr.it	

Features

UNIVER Fire doors



INTERNAL PEDESTRIAN DOORS

Test report No. CPR/35/05/2019 (E 60)

Test report No. CPR/35/04/2019 (EI₂60)

Test report No. CPR/35/06/2019 (REI 120/EI₂90)

TYPE	FM L x H	Class	Combo Thermo/CB with lower threshold and gasket on all 4 sides		Combo Thermo/SB without lower threshold and gasket on 3 sides	
			air permeability according to UNI EN 1026:2001	thermal transmittance according to UNI EN 10077-1:2018 UNI EN 10077-2:2018	air permeability according to UNI EN 1026:2001	thermal transmittance according to UNI EN 10077-1:2018 UNI EN 10077-2:2018
 without window	≤ 3,6 m ²	EI ₂ 60	class 2	1,5 W/m ² K	-	1,5 W/m ² K
		E 60	class 2	1,6 W/m ² K	-	1,6 W/m ² K
		REI 120/EI ₂ 90	class 2	1,5 W/m ² K	-	1,5 W/m ² K
 with window 300X400	≤ 3,6 m ²	EI ₂ 60	class 2	2,0 W/m ² K	-	2,0 W/m ² K
		E 60	class 2	2,1 W/m ² K	-	2,1 W/m ² K
		REI 120/EI ₂ 90	class 2	2,0 W/m ² K	-	2,0 W/m ² K
 without window	≤ 3,6 m ²	EI ₂ 60	class 3	1,9 W/m ² K	-	1,9 W/m ² K
	> 3,6 m ²	EI ₂ 60	class 3	1,5 W/m ² K	-	1,5 W/m ² K
	≤ 3,6 m ²	E 60	class 3	2,0 W/m ² K	-	2,0 W/m ² K
	> 3,6 m ²	E 60	class 3	1,6 W/m ² K	-	1,6 W/m ² K
	≤ 3,6 m ²	REI 120/EI ₂ 90	class 3	1,9 W/m ² K	-	1,9 W/m ² K
	> 3,6 m ²	REI 120/EI ₂ 90	class 3	1,5 W/m ² K	-	1,5 W/m ² K
  with windows 300x400	≤ 3,6 m ²	EI ₂ 60	class 3	2,4 W/m ² K	-	2,4 W/m ² K
	> 3,6 m ²	EI ₂ 60	class 3	2,2 W/m ² K	-	2,1 W/m ² K
	≤ 3,6 m ²	E 60	class 3	2,5 W/m ² K	-	2,5 W/m ² K
	> 3,6 m ²	E 60	class 3	2,3 W/m ² K	-	2,2 W/m ² K
	≤ 3,6 m ²	REI 120/EI ₂ 90	class 3	2,4 W/m ² K	-	2,4 W/m ² K
	> 3,6 m ²	REI 120/EI ₂ 90	class 3	2,1 W/m ² K	-	2,1 W/m ² K

Features

UNIVER Fire doors

INTERNAL PEDESTRIAN DOORS



SMOKE CONTROL

Test report IFT N° 16-000122-PR03

This is the ability of a door set 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 m³/h per metre through the gap between the door leaf and the door frame excluding eventual losses 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 m³/h for a single door or 30 m³/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

UNIVER doors are certified for smoke control according to EN 1634-3 and classified Sa/S200 according to EN 13501-2. The price list lists the Combos which add these additional performances to the door.

ATTENTION

The smoke control performance is only valid in presence of the following accessories or enhancements:

- no fixed threshold
- filling of the slot between frame and wall with cement mortar
- 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
- closing regulator RC/STD for the correct closure of double leaved doors



S200, C5 ENHANCED PERFORMANCES

Mandatory accessories

Enhanced performance	features	type	mandatory optional accessories	reference in brochure
S200	Smoke control Door	1 leaf	- rubber seal CR - Nr. 1 automatic door sweep	UNIVER fire door ACCESSORIES
		2 leaves	- rubber seal CR - Nr. 2 automatic door sweep	UNIVER fire door ACCESSORIES
C5	Durability: 200,000 cycles	1 leaf	- Nr. 1 door closer	ACCESSORIES
		2 leaves	- Nr. 2 door closers	ACCESSORIES

MECHANICAL STRENGTH PERFORMANCES

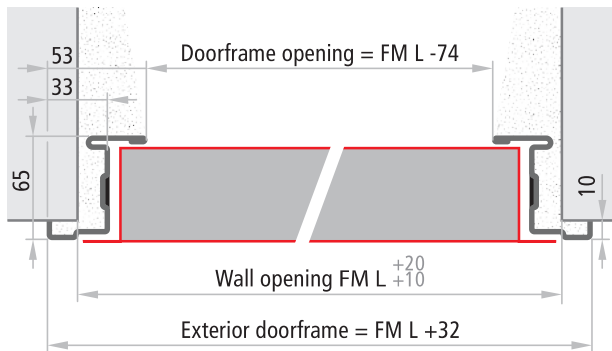
Test report according to norm EN 947, EN 948, EN 949, EN 950

Features

UNIVER Fire doors

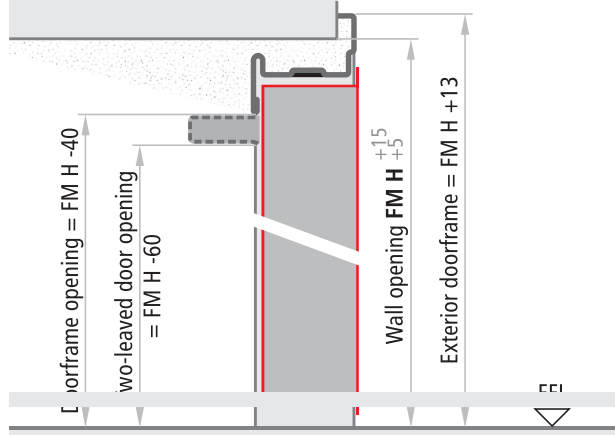
One-leaved doors

Horizontal cross section



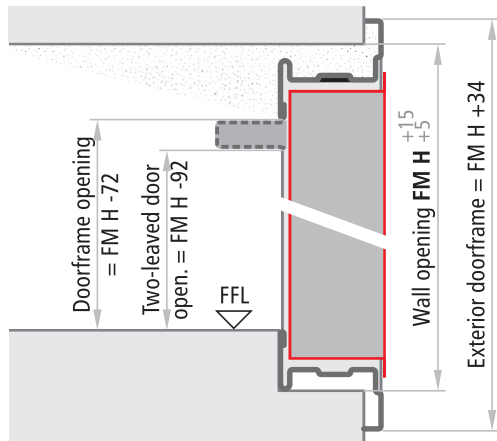
Doors without lower threshold

Vertical cross section



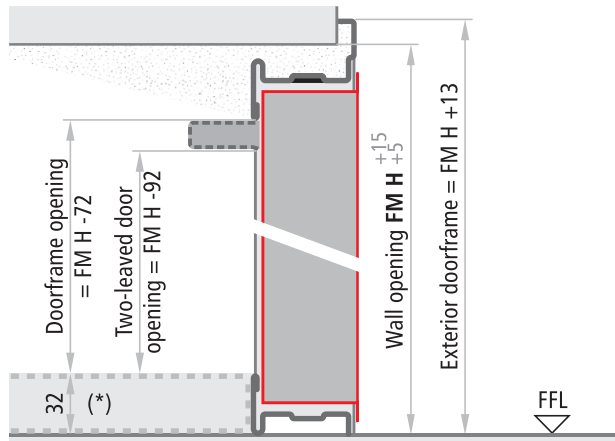
Doors with internal and external lower thresholds

Vertical cross section



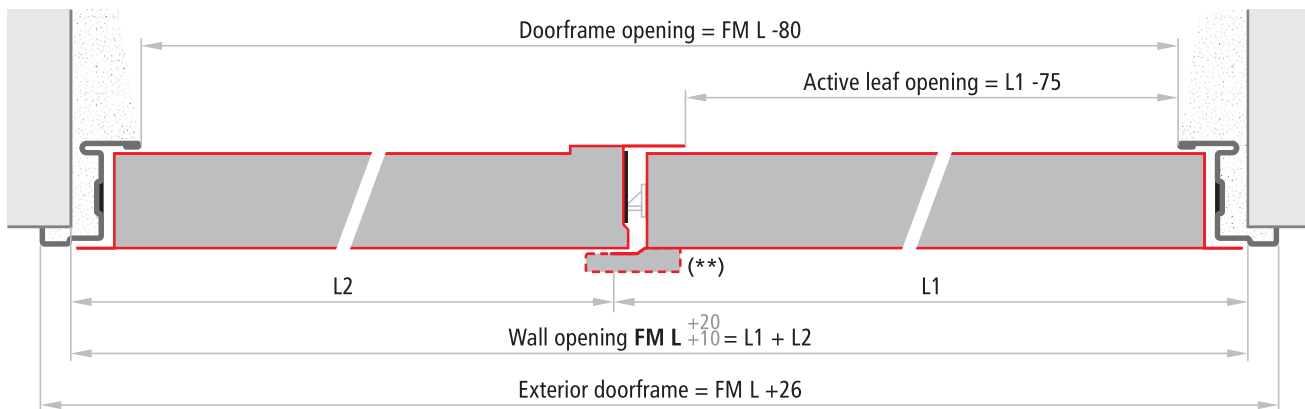
Doors with internal lower threshold

Vertical cross section



Two-leaved doors

Horizontal section



NOTE

The tolerances $\text{FM L} + 20$, $\text{FM H} + 15$ of the indicated measurements make it easier to fill the gap between the wall and the doorframe with cement mortar.

(*) Shimming to be done, mandatory in case of installation onto emergency exit routes.

(**) Only for EI₂90 fire rated doors

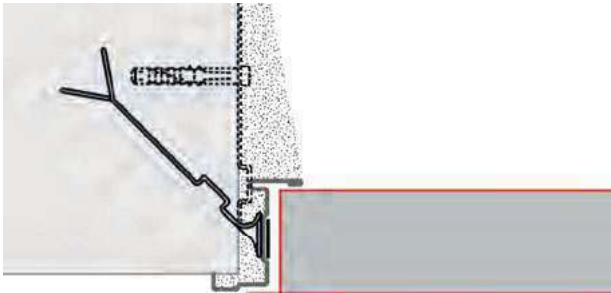
Features

UNIVER Fire doors

INSTALLATION WITH ANCHORS FOR MORTAR FIXING

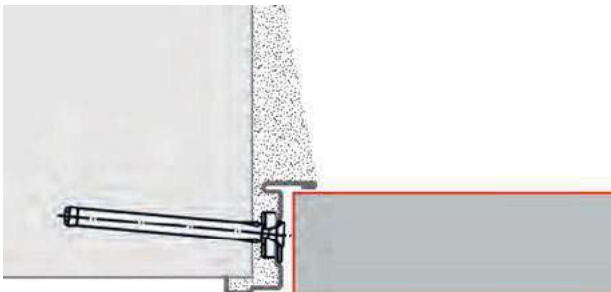


For mortar fixing, appropriate cuts will need to be created in the walls (section 80 x 200 mm). The anchors should be bent and blocked inside the wall. For fire sealing purposes and a perfect mechanical fit, the space between the door-frame and the masonry shall always be filled with concrete mortar.



INSTALLATION FOR EXPANSION SCREWS FIXING

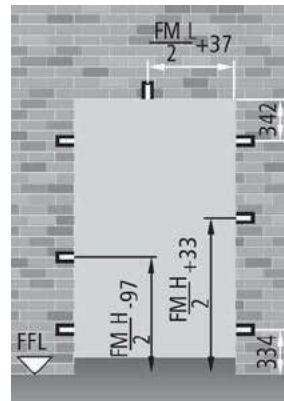
For the installation with expansion screws, the anchors serve as spacers and should not be bent. Using Würth type art. 0910436112 plugs or similar (supplied at the customer's expense), installation requires holes to be drilled through the thermo expansive sealing. The doorframe has pre-drilled holes. For fire sealing purposes and a perfect mechanical fit, the space between the doorframe and the masonry shall always be filled with concrete mortar.



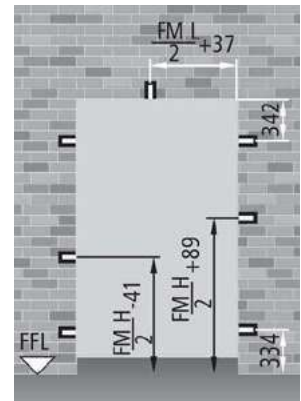
ANCHOR POSITIONING

One-leaved doors

Right opening

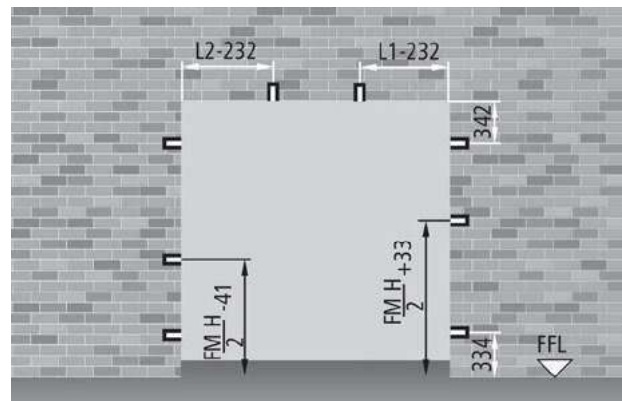


Left opening

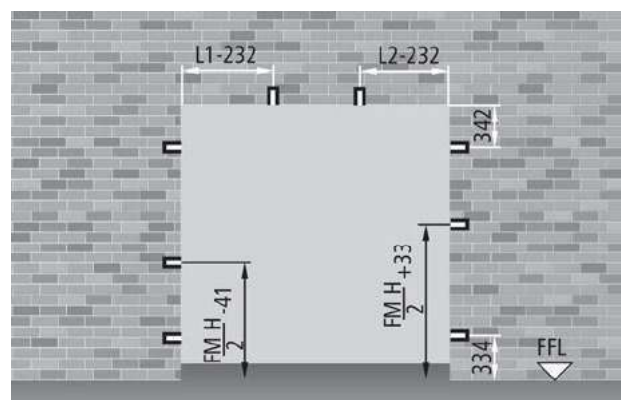


Two-leaved doors

Right opening



Left opening



NOTE

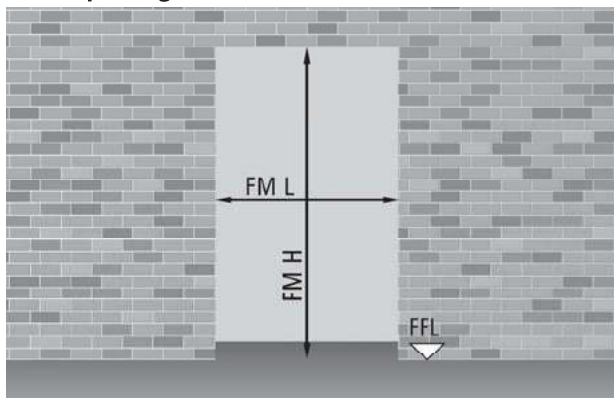
Proper installation requires 80 x 200 mm holes to be dug into the masonry.

Features

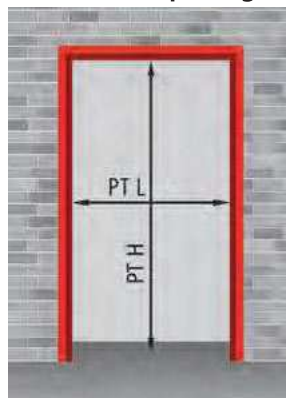
UNIVER Fire doors

ORDER MEASUREMENTS

Wall opening



Doorframe opening



One-leaved doors

PT L = FM L - 74

PT H = FM H - 40

Two-leaved doors

PT L = FM L - 80

PT H = FM H - 40

E 60 one-leaved doors FM L x FM H

PT L x PT H

fire-rating

standard dimensions			doorframe opening		class
800	x	2050 / 2100 / 2150	726	x 2010 / 2060 / 2110	E 60
900	x	2050 / 2100 / 2150	826	x 2010 / 2060 / 2110	E 60
1000	x	2050 / 2100 / 2150	926	x 2010 / 2060 / 2110	E 60
1100	x	2050 / 2100 / 2150	926	x 2010 / 2060 / 2110	E 60

non-standard dimensions

from 540 to 1150	x	from 1780 to 2150	from 466 to 1076	x from 1740 to 2110	E 60
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EI one-leaved doors FM L x FM H

PT L x PT H

fire-rating

standard dimensions			doorframe opening		class
800	x	2050 / 2100 / 2150	726	x 2010 / 2060 / 2110	EI₂60, EI₂90
900	x	2050 / 2100 / 2150	826	x 2010 / 2060 / 2110	EI₂60, EI₂90
1000	x	2050 / 2100 / 2150	926	x 2010 / 2060 / 2110	EI₂60, EI₂90
1100	x	2050 / 2100 / 2150	1026	x 2010 / 2060 / 2110	EI₂60

non-standard dimensions

from 540 to 1150	x	from 1780 to 2150	from 466 to 1076	x from 1740 to 2110	EI₂60
from 540 to 1000	x	from 1780 to 2150	from 466 to 926	x from 1740 to 2110	EI₂90

REI one-leaved doors FM L x FM H

PT L x PT H

fire-rating

standard dimensions			doorframe opening		class
800	x	2050 / 2100 / 2150	726	x 2010 / 2060 / 2110	REI 120
900	x	2050 / 2100 / 2150	826	x 2010 / 2060 / 2110	REI 120
1000	x	2050 / 2100 / 2150	926	x 2010 / 2060 / 2110	REI 120
1100	x	2050 / 2100 / 2150	1026	x 2010 / 2060 / 2110	REI 120
1200	x	2050 / 2100 / 2150	1126	x 2010 / 2060 / 2110	REI 120
1300	x	2050 / 2100 / 2150	1226	x 2010 / 2060 / 2110	REI 120
1350	x	2050 / 2100 / 2150	1276	x 2010 / 2060 / 2110	REI 120

Features

UNIVER Fire doors

EI two-leaved doors FM L x FM H				PT L x PT H	H net passage	fire-rating
standard dimensions				doorframe opening	for RC/STD encumbrance	class
1200	(600 + 600)	x	2050 / 2100 / 2150	1120 x 2010 / 2060 / 2110	1990 / 2040 / 2090	EI ₂ 60
1200	(700 + 500)	x	2050 / 2100 / 2150	1120 x 2010 / 2060 / 2110	1990 / 2040 / 2090	EI ₂ 60
1300	(650 + 650)	x	2050 / 2100 / 2150	1220 x 2010 / 2060 / 2110	1990 / 2040 / 2090	EI ₂ 60
1300	(800 + 500)	x	2050 / 2100 / 2150	1220 x 2010 / 2060 / 2110	1990 / 2040 / 2090	EI ₂ 60, EI ₂ 90
1400	(700 + 700)	x	2050 / 2100 / 2150	1320 x 2010 / 2060 / 2110	1990 / 2040 / 2090	EI ₂ 60
1400	(900 + 500)	x	2050 / 2100 / 2150	1320 x 2010 / 2060 / 2110	1990 / 2040 / 2090	EI ₂ 60, EI ₂ 90
1500	(750 + 750)	x	2050 / 2100 / 2150	1420 x 2010 / 2060 / 2110	1990 / 2040 / 2090	EI ₂ 60
1500	(1000 + 500)	x	2050 / 2100 / 2150	1420 x 2010 / 2060 / 2110	1990 / 2040 / 2090	EI ₂ 60, EI ₂ 90
1600	(800 + 800)	x	2050 / 2100 / 2150	1520 x 2010 / 2060 / 2110	1990 / 2040 / 2090	EI ₂ 60, EI ₂ 90
1700	(900 + 800)	x	2050 / 2100 / 2150	1620 x 2010 / 2060 / 2110	1990 / 2040 / 2090	EI ₂ 60, EI ₂ 90
1800	(900 + 900)	x	2050 / 2100 / 2150	1720 x 2010 / 2060 / 2110	1990 / 2040 / 2090	EI ₂ 60, EI ₂ 90
1900	(1000 + 900)	x	2050 / 2100 / 2150	1820 x 2010 / 2060 / 2110	1990 / 2040 / 2090	EI ₂ 60, EI ₂ 90
2000	(1000 + 1000)	x	2050 / 2100 / 2150	1920 x 2010 / 2060 / 2110	1990 / 2040 / 2090	EI ₂ 60, EI ₂ 90
non-standard dimensions						
from 1000 (500+ 500) to 2000 (1000+1000)	x	from 1780 to 2150	from 920 to 1920	from 1740 x to 2110	from 1720 to 2090	EI ₂ 60, EI ₂ 90

REI two-leaved doors FM L x FM H				PT L x PT H	H net passage	fire-rating
standard dimensions				doorframe opening	for RC/STD encumbrance	class
1150	(750 + 400)	x	2050 / 2100 / 2150	1070 x 2010 / 2060 / 2110	1990 / 2040 / 2090	REI 120
1200	(800 + 400)	x	2050 / 2100 / 2150	1120 x 2010 / 2060 / 2110	1990 / 2040 / 2090	REI 120
1250	(800 + 450)	x	2050 / 2100 / 2150	1170 x 2010 / 2060 / 2110	1990 / 2040 / 2090	REI 120
1300	(900 + 400)	x	2050 / 2100 / 2150	1220 x 2010 / 2060 / 2110	1990 / 2040 / 2090	REI 120
1350	(900 + 450)	x	2050 / 2100 / 2150	1270 x 2010 / 2060 / 2110	1990 / 2040 / 2090	REI 120
1400	(1000 + 400)	x	2050 / 2100 / 2150	1320 x 2010 / 2060 / 2110	1990 / 2040 / 2090	REI 120
1450	(1000 + 450)	x	2050 / 2100 / 2150	1370 x 2010 / 2060 / 2110	1990 / 2040 / 2090	REI 120
1600	(800 + 800)	x	2050 / 2100 / 2150	1520 x 2010 / 2060 / 2110	1990 / 2040 / 2090	REI 120
1700	(900 + 800)	x	2050 / 2100 / 2150	1620 x 2010 / 2060 / 2110	1990 / 2040 / 2090	REI 120
1800	(900 + 900)	x	2050 / 2100 / 2150	1720 x 2010 / 2060 / 2110	1990 / 2040 / 2090	REI 120
1900	(1000 + 900)	x	2050 / 2100 / 2150	1820 x 2010 / 2060 / 2110	1990 / 2040 / 2090	REI 120
2000	(1000 + 1000)	x	2050 / 2100 / 2150	1920 x 2010 / 2060 / 2110	1990 / 2040 / 2090	REI 120
non-standard dimensions						
from 940 (540+ 400) to 2000 (1000+1000)	x	from 1780 to 2150	from 920 to 1920	from 2011 x to 2110	from 1720 to 2090	REI 120

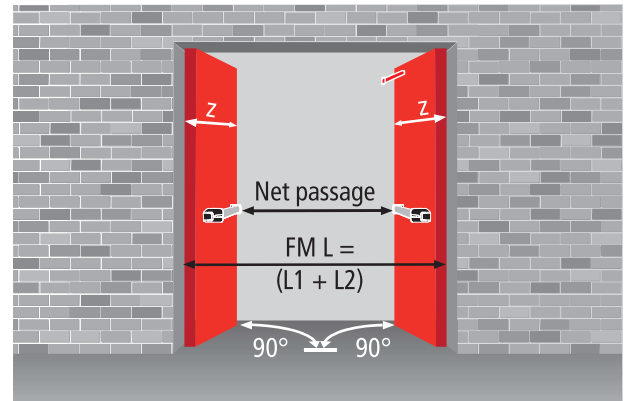
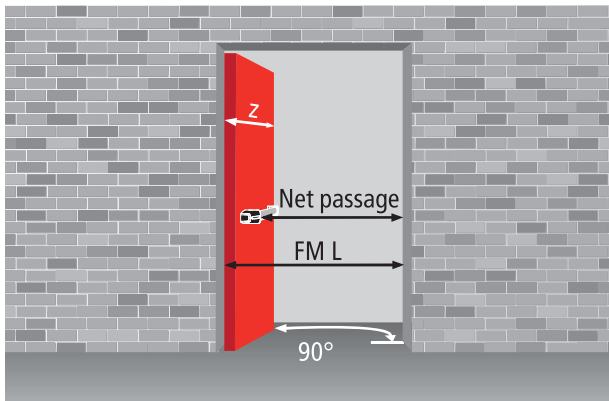
NOTE

Unless specified otherwise by the customer, two-leaved doors are supplied with a right-pull opening direction.

Features

UNIVER Fire doors

OPENING MEASUREMENTS AND OVERALL DIMENSIONS WITH 90 DEGREE OPENING



Net passage calculation

		E 60	EI ₂ 60 - EI ₂ 90 - REI 120	EI ₂ 60 - EI ₂ 90 - REI 120
panic bar type	protrusion	one-leaved doors	one-leaved doors	two-leaved doors
EXUS	125	FML - 226	FML - 236	FML - 404
TWIST	100	FML - 201	FML - 211	FML - 354
SLASH	75	FML - 176	FML - 186	FML - 304
FAST TOUCH	75	FML - 176	FML - 186	FML - 304
without panic bar	-	FML - 101	FML - 111	FML - 154
z = leaf protrusion relative to the wall		FML + 29	FML + 29	L1 + 35 L2 + 64

OVERALL DIMENSIONS WITH 180 DEGREE OPENING - HANDLE HEIGHT

One-leaved doors

$$x = FML + 5$$

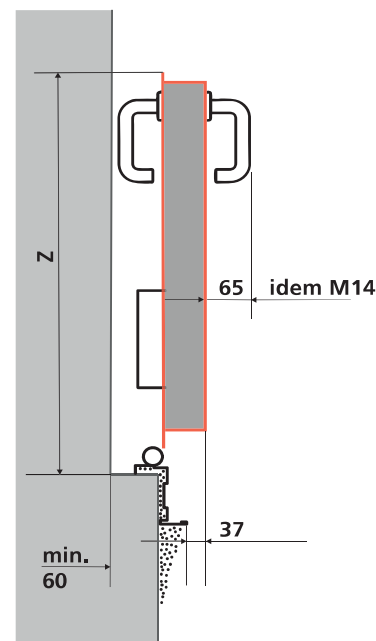
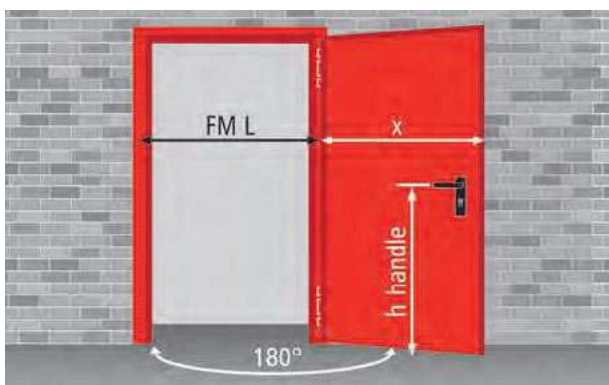
$$h_{\text{handle}} = FMH/2 + 50$$

Two-leaved doors

$$x = L1 + 5 \quad y = L2 + 35$$

$$h_{\text{handle}} = FMH/2 + 50$$

b = 130 (only in the presence of panic bars or M14 handles)



Features

UNIVER Fire doors