// New matching profile construction

Industrial Folding Doors

Robust and Easy-to-Maintain – in Steel and Aluminium

HÖRMANN

The architects' programme and further information on Hörmann products can be found in the Internet under: **www.hoermann.com**

Reliable for the Future
Thanks to the Know-How of the Specialist

In-house product development
Product innovations, continual further development, and improvements to details are the pillars of the philosophy Hörmann's development department follows. Highly qualified employees work in teams in order to constantly optimise our products.
The result? Numerous patents and the most unique features that can be found on the market!

Qualified personnel
Computer-aided production processes are a matter of course today. At Hörmann, especially conscientious employees are in charge of the production process and follow and check process sequences with the greatest dedication, all of which results in our high level of quality.

In-house production of door and operator systems
All of the essential door components are developed and produced in-house at Hörmann. Everything comes from a single source. This ensures the greatest compatibility between the door, operator, and control elements.

This high quality is ensured through specially developed production systems. As a result, production optimally meets the high demands placed on the final product.

During the development phase for these industrial folding doors Hörmann pays close attention that the door and operator form an interlocking system. Endurance tests under realistic conditions ensure product maturity and suitability for series production that our customers can rely on.

This is Hörmann quality – made in Germany.

Decades of experience in industrial folding doors – a unique programme with future-oriented technology

CFC-free

Precise colour coating
The colour of doors is playing an ever greater role in the design of buildings. Industrial folding doors matching the corporate colour are trendy right now. Hörmann's computer-aided colour coating systems guarantee brilliant special colours with an excellent surface quality that can be delivered quickly.

CFC-free rigid foam
The entire hollow space in double-skinned FPU folding doors is uniformly filled with pressed-in foam. The CFC-free PUR rigid foam is thus connected to the steel shell without an adhesive. This light compound construction provides a high level of stability, as well as excellent thermal insulation.

Protecting the environment
Hörmann is committed to protecting the environment. From a foaming process with CFC-free polyurethane (PUR) to regenerative exhaust air decontamination systems with very low energy consumption, Hörmann sets environmental targets that go well beyond statutory limit values.

Quality management
First-rate products demand optimum conditions at every stage of the industrial process. Certified quality management guarantees highest quality from development and production to shipment.

Industrial folding doors up to 14 m
A broad range of quality

Competent advice
Experienced specialists within our customer oriented sales organization accompany you from the planning stage, through technical clarification up to the final building inspection. The necessary working documentation is available as a hard copy or as an updated version that can be downloaded from **www.hoermann.com**.

Sensible planning
Thanks to numerous track applications, Hörmann's folding doors can fit any hall. The choice of a Hörmann folding door depends on the building use and the contractor's requirements. Whether new construction or renovation. Planners are thus offered countless options for their designs.

Wide hall openings
Hörmann's industrial folding doors can also close off especially large hall openings measuring up to 14 m width and 7 m height. We can offer 3 to 12 door leaves, in accordance with the operative requirements. This version can be individually adapted to the customer's needs.

Door solutions for any requirement
FPU and FMI double-skinned folding doors filled with PUR rigid foam or mineral wool are ideal for use in workshops and halls that are heated or require acoustic insulation.The FSN door version with numerous infill variations and extensive glazing options are particularly suited for unheated buildings. They can also be combined with matching FAW aluminium doors. Featuring profiles with thermal breaks and exceptional thermal insulation values, they are a good choice for e.g. showrooms. Every door can be equipped with individual glazing and infill options. Our extensive folding door programme is rounded out with wicket doors with and without thresholds and divided traffic leaves.

Low-maintenance thanks to a sturdy and robust construction. Numerous applications: Ideal for large halls for industrial, traffic or rescue purposes. With manual operation or automatic control.

On-site advantages
Industrial folding doors from Hörmann are especially suited for halls with low headroom, as well as anywhere where hall statics do not permit additional roof loading. The sideroom needed (only 70 mm for the frame profile) is also especially small.

Variable fitting
You should take the door application and fitting type into consideration during the planning phase. Fitting on the wall for doors that open outwards permits complete use of the space in the hall, including the lateral lintel areas, which is a considerable advantage when it comes to folding doors. Doors that open inwards can function, for example, without any problem even with snow. Fitting in the opening is also possible if a sufficient passage width is available.

Low risk of collisions
Door leaves parked on the sides substantially reduce the risk of collisions. The leaves are in the field of vision of the lorry driver. Fitting the door with door leaves that open 180° and sufficient space next to the door also result in a maximum passage width.

Low-maintenance construction
Hörmann's industrial folding doors have been designed to have a long service life and operate smoothly. This reliable construction is based on just a few individual wearing components. As a result, efforts for maintenance and care are very low and the doors only entail minor consequential costs.

Standard trap protection
Safety takes top priority when it comes to Hörmann's industrial folding doors. Finger trap protection devices made of high-quality EPDM multi-chamber profiles are fitted to all vertical closing edges, making the door safe from the inside and outside.

FPU

Double-skinned steel folding doors with PUR rigid foam core

Stable and insulating
Polyurethane rigid foam (PUR) is uniformly filled into the entire hollow space of the double-skinned steel construction and firmly connected with the door leaves. This results in high rigidity and good thermal insulation values. The door leaves are flush and have a uniform thickness of approx. 60 mm. FPU folding doors are primarily used in heated industrial halls.

Numerous versions
FPU folding door leaves can be equipped with 5 different glazing and ventilation variants. Square, rectangular and diamond glazing are available. Wicket doors with a threshold and divided traffic leaves are also included in the programme.

Material with long-term protection
The hot galvanised material and high-adhesion primer-coating (similar to RAL 9002) used in Hörmann's industrial folding doors offer optimum protection against the adverse effects of weather. Stucco-textured, hot-galvanised surface on both sides as standard. Smooth surface available on request.

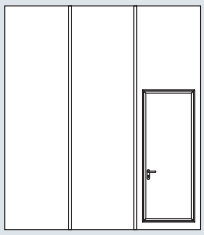
Available in 6 preferred colours and in RAL to choose
(see page 16).

The lock, locking rods and lever handle set are fitted on the door leaf.

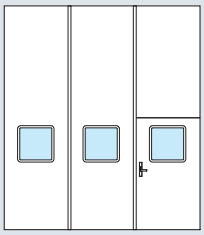
The sturdy hinges are fitted on the door leaf as standard. This makes it possible to exchange the leaf quickly and inexpensively if a repair is needed.

Good thermal insulation ensures energy savings

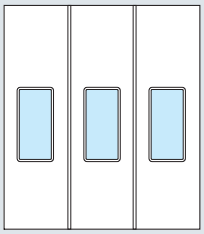
Door versions (examples)



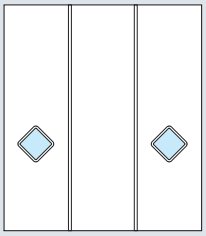
Door version with
wicket door with threshold



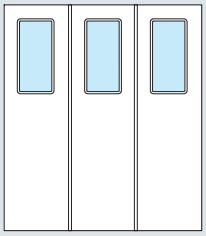
Door version with
square glazing and
2-part traffic leaf



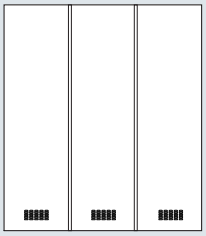
Door version with
rectangular glazing



Door version with
diamond-shaped glazing
Partial glazing possible.



Door version with
rectangular glazing



Door version with
ventilation slots.

Technical Data

Size range
Width up to 14.000
Height up to 5.000

Resistance to wind pressure **1)**
Class 4

Water-tightness **2)**
Class 2

Air permeability **3)**
Class 2

Sound insulation **4)**
R = 22 dB

Thermal insulation **5)**
U = 2,0 W/m²K

Performance characteristics in accordance with EN 13241-1*
1) EN 12428; **2)** EN 12424; **3)** EN 12425; **4)** EN 12426; **5)** EN 717-1

* Specifications for a 3,500 mm x 3,500 mm door, without glazings, without wicket door or divided traffic leaf, door with threshold

Ventilation:
all door versions on request with
ventilation slots or sliding cover.

FMI

Double-skinned steel folding doors with mineral wool insulation

Door leaf with thick insulation
The door leaves for FMI folding doors are 60 mm thick. The hollow space is completely filled with mineral wool and the insulation is firmly bonded to the steel shells. This thick insulating core provides effective protection against noise and loss of heat. FMI doors are perfect for separating halls with high noise levels.

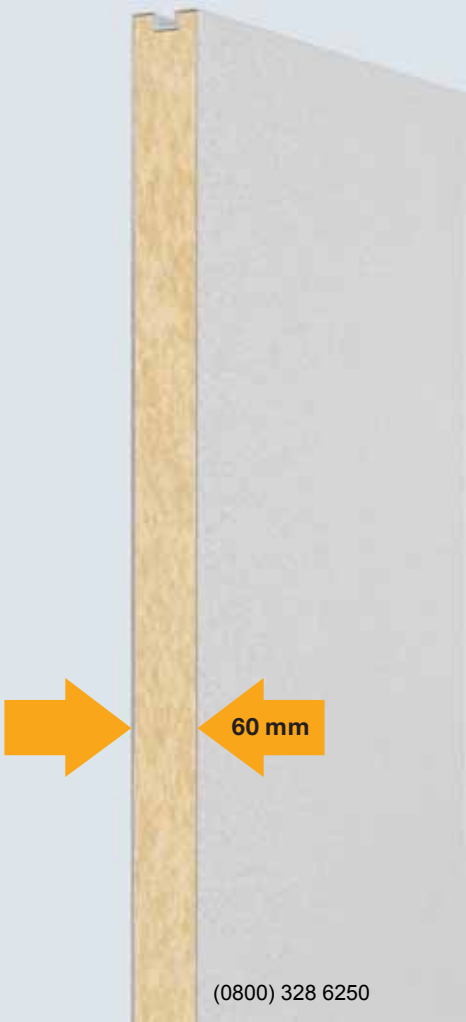
Robust and long-lasting
The robustness of the FMI folding doors is attained through a special shell construction with additional interior reinforcement. Hot galvanised material and high-adhesion primer-coating provide long-term protection against the adverse effects of weather and thus guarantee a long service life for Hörmann folding doors. The interior and exterior smooth surfaces are Grey white (similar to RAL 9002) as standard.

Bright and safe access
Numerous glazing and ventilation variants are available for FMI folding doors. Other equipment options include panels with ventilation slots or sliding covers. Unhindered staff access is easy to implement thanks to a wicket door without threshold or a divided traffic leaf.

Available in 6 preferred colours and in RAL to choose
(see page 16).

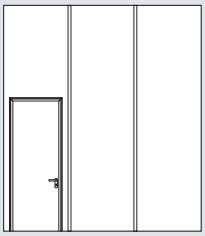
The lock, locking rods and lever handle set are fitted on the door leaf.

The sturdy hinges are fitted on the door leaf as standard. This makes it possible to exchange the leaf quickly and inexpensively if a repair is needed.

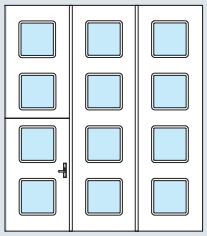


Robust construction with numerous glazing variants for individual needs

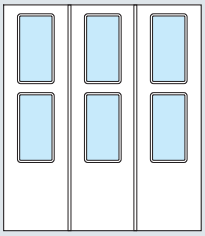
Door versions (examples)



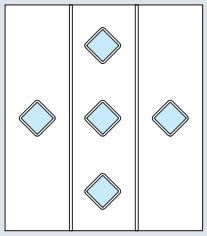
Door version with wicket door with/ without threshold



Door version with square glazing and divided traffic leaf



Door version with rectangular glazing



Door version with diamond glazing

Technical Data

Size range
Width up to 14.000
Height up to 6.000

Resistance to wind pressure 1)
Class 4

Water-tightness 2)
Class 2

Air permeability 3)
Class 2

Sound insulation 4)
R = 25 dB

Thermal insulation 5)
U = 2,1 W/m²K

Performance characteristics in accordance with EN 13241-1*
1) EN 12428; **2)** EN 12424; **3)** EN 12425; **4)** EN 12426; **5)** EN 717-1

* Specifications for a 3,500 mm x 3,500 mm door, without glazings, without wicket door or divided traffic leaf, door with threshold.

Ventilation:
all door versions on request with ventilation slots or sliding cover.

FSN

Steel folding door with profile construction // NEW

Daylight for unheated buildings
FSN folding doors are suitable for halls in which daylight is desired, but thermal insulation is not essential. These doors are favoured in vehicle depots, machine halls, car washes or maintenance and storage facilities. The steel door leaves consist of all-round square tubular profiles, which can be individually equipped with various infills, glazing or ventilation panels without the need for a support strip. The doors can also be prepared for on-site glazing on request.

Matching appearance
The FSN steel folding door with 80 mm profile width matches the FAW aluminium folding door. This creates a uniform and harmonious profile appearance. FSN folding doors come with weather-resistant galvanising and a high-quality powder-coating in traffic white (similar to RAL 9016).

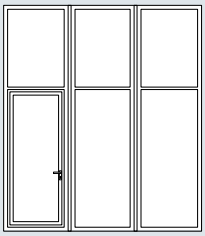
Available in the preferred colour Terra brown (similar to RAL 8028) **and in RAL to choose** (see page 16).

Lockings are countersunk in the leaf profile. This results in clear door lines in the hall interior.

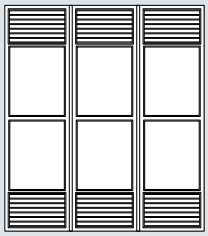
The black hinges are fitted as standard between the door leaves and aligned with the seals.

Numerous options for more light and transparency in unheated buildings

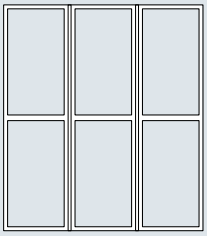
Door versions (examples)



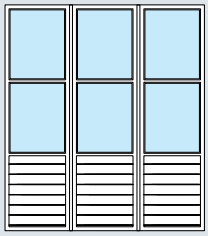
Smooth sheet steel infill
1.5 mm thick
Wicket door with threshold



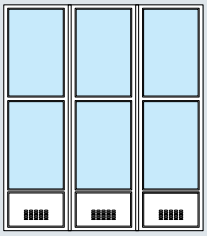
Sheet steel infill with ventilation slots. Ventilation cross-section per m^2: 23%



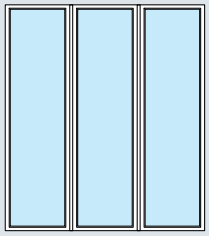
Prepared for on-site infill
(max. 16 kg/m^2)
Terra brown (RAL 8028) frame



SPU infill with partial glazing



Ventilation slots with partial glazing



Full glazing without rails
up to 4 m max. door height

Technical Data

Size range
Width up to 14.000
Height up to 6.000

Resistance to wind pressure 1)
Class 4

Water-tightness 2)
Class 2

Air permeability 3)
Class 2

Sound insulation 4)
R = 22 dB

Thermal insulation 5)
U = 2,8 W/m²K

Performance characteristics in accordance with EN 13241-1*
1) EN 12428; **2)** EN 12424; **3)** EN 12425; **4)** EN 12426; **5)** EN 717-1

* Specifications for a 3,500 x 3,500 mm door, without wicket door, without divided traffic leaf, with threshold, 26 mm DURATEC® synthetic double pane, with 1 rail

FAW

Aluminium folding door with profile construction with thermal breaks // NEW

Prestigious and insulated
A beautiful appearance and thermal insulation are perfectly combined in FAW aluminium folding doors. The outer and inner profile shells are separated by glass-fibre reinforced polyamide spacers. This construction provides optimum thermal insulation. An 80 mm profile width matches the FSN steel folding door, thus creating a uniform building appearance.

Individual appearance
Numerous infills and glazing types are available for our FAW folding doors. Door leaves with a height of up to 4 m can be fully glazed without rails to create an especially prestigious look.

Beste Materialqualität
The aluminium extrusions are powder-coated in White aluminium (similar to RAL 9006) as standard. This guarantees a long-lasting prestigious surface.

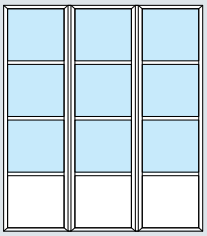
Available in 5 preferred colours and in RAL to choose (see page 16).

Lockings are countersunk in the leaf profile. This results in clear door lines in the hall interior.

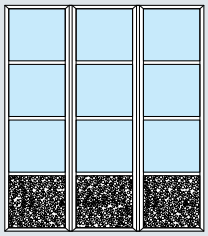
The black hinges are fitted as standard between the door leaves and aligned with the seals.

A convincing door appearance with excellent thermal insulation

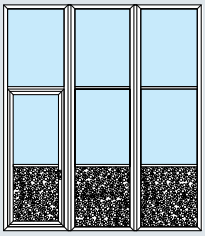
Door versions (examples)



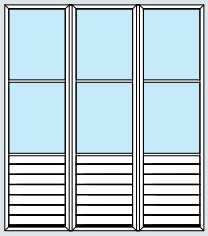
26-mm PU panel smooth, with 26-mm insulated glazing



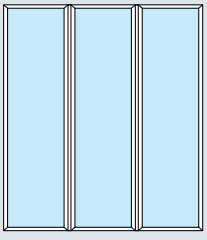
PU infill, aluminium stucco-embossed 26 mm with 26-mm synthetic glazing



PU infill, aluminium stucco-embossed 26 mm with partial glazing



SPU stucco infill with partial glazing



Full glazing without rails up to 4 m max. door height

Technical Data

Size range
Width up to 8.000
Höhe bis 5.000

Resistance to wind pressure 1)
Class 4

Water-tightness 2)
Class 2

Air permeability 3)
Class 3

Sound insulation 4)
R = 28 dB

Thermal insulation 5)
U = 2,1 W/m²K

Performance characteristics in accordance with EN 13241-1*
1) EN 12428; **2)** EN 12424; **3)** EN 12425; **4)** EN 12426; **5)** EN 717-1

* Specifications for a 3,500 x 3,500 mm door, without wicket door, without divided traffic leaf, with threshold, 26 mm fully glazed with ISO real glass, without rails

Coloured industrial folding doors adjusted to the specific architecture

Set the tone with colour
Industrial architecture is following the general trend and using more colour. As a result, coloured doors are matched to e.g. the company's corporate design.

Hörmann offers industrial folding doors available in approximately 200 different RAL colours with fine nuances.

Standard door colours
The FPU and FMI folding doors are available in Grey white (similar to RAL 9002), the FSN doors in Traffic white (similar to RAL 9016) and the FAW doors in White aluminium (similar to RAL 9006) as standard.

Preferred colours
Hörmann folding doors are available in up to 6 preferred colours, depending on the version.

FPU/FMI	RAL 9006, RAL 9007, RAL 9016, RAL 3000, RAL 5010, RAL 7016
FSN	RAL 8028
FAW	RAL 9007, RAL 9016, RAL 3000, RAL 5010, RAL 7016

RAL 9016 Traffic White
RAL 9006 White Aluminium
RAL 9007 Grey Aluminium
RAL 3000 Flame Red
RAL 5010 Gentian Blue
RAL 7016 Anthracite Grey
RAL 8028 Terra Brown

The colours shown are subject to the limitations of the printing process and cannot be regarded as binding. Contact your Hörmann specialist dealer for advice regarding coloured doors.

Daylight and a clear view – more safety and transparency

Customised glazing and infill
The infill can be selected independent of the door type. Planners thus are offered a wide range of the most varied design options to fit every need.

FPU and FMI glazing
The glazing frames for the double-skinned FPU and FMI steel folding doors are made of either black graphite plastic or metal. An EPDM seal on both sides is screwed from the inside to prevent break-ins. The distance to side is at least 180 mm. The rail heights between the glazing rows are 208 mm for the FPU and 108 mm for the FMI.

FSN and FAW glazing
The FSN and FAW door variants are set apart by an 80-mm profile frame. 80-mm wide rails (optionally: 60 mm) are available for these doors. Doors up to 4 m max. height are available in full glazing without rails. The pane bezel is made of black aluminium glazing beads.

On-site glazing
Hörmann's folding doors can also be prepared for on-site glazing on request. Infill spaces between 3 to 26 mm are possible for FPU and FMI doors, and between 3 and 36 mm for FSN and FAW doors. The max. infill weight is 40 kg/m².

Superior scratch resistance
With DURATEC® synthetic glazing, Hörmann folding doors retain a clear view even after extensive cleaning and excessive use. It comes as standard without any surcharge for all industrial folding door glazing.

Sensitive, common synthetic glazing

Marks and scratches from cleaning cannot be avoided on common synthetic glazing.

DURATEC® synthetic glazing with superior scratch resistance

A clear view is maintained with the new DURATEC® glazing, even after many cleanings.

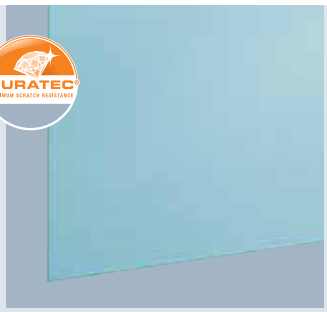
Only from Hörmann

Rectangular glazing
for FPU and FMI
Glazing size depends on the door leaf width.
Standard sizes:
473/523/573 × 773 mm (W x H)
Special sizes:
Width dependent on the leaf width
Height up to max. of 1250 mm

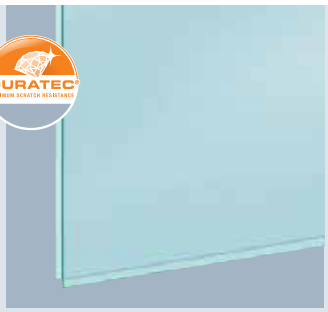
Square glazing
for FPU and FMI
Glazing size depends on the door leaf width.
of approx. 350 × 350 mm
up to 850 × 850 mm.

Circular glazing
for FPU and FMI
Glazing size depends on the door leaf width.
of 300 mm diameter
up to 650 mm diameter

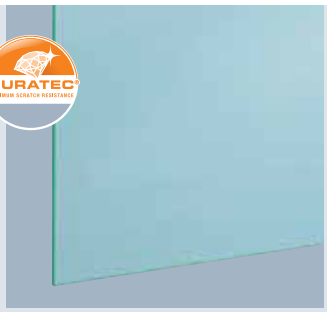
Folding doors with glazing for increased daylight



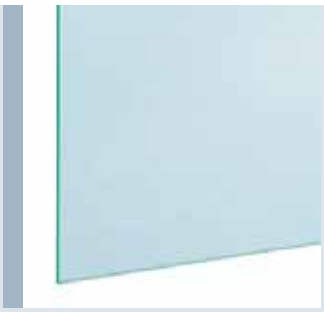
DURATEC®-synthetic panes
3 mm, clear



DURATEC® synthetic double panes
26 mm, clear

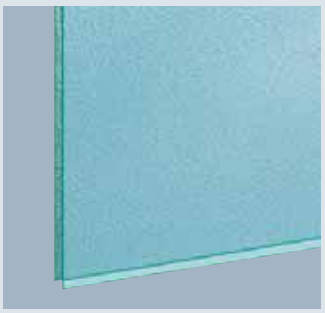


DURATEC®- polycarbonate panes
6 mm, clear



Laminated safety glass
6 mm, clear

Synthetic panes
6 mm, crystal structure



Synthetic double panes
26 mm, crystal structure

Polycarbonate/acrylic double panes
26 mm, clear
Impact resistant, break-in-resistant

Laminated safety glass
26 mm, clear

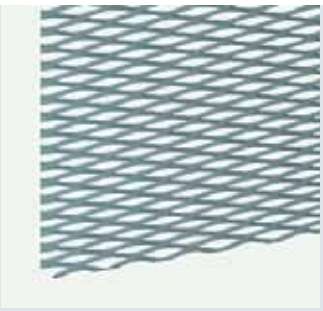
FSN
Max. height of the window section 1,250 mm. The clear view is dependent on the leaf width.

FAW
Max. height of the window section 1,250 mm. The clear view is dependent on the leaf width.

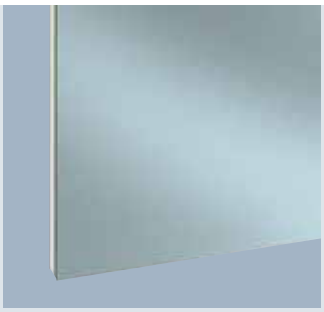
FSN/FAW without rails
Full glazing for up to 4,000 mm door height.

Glazing and infills – the right material for every demand

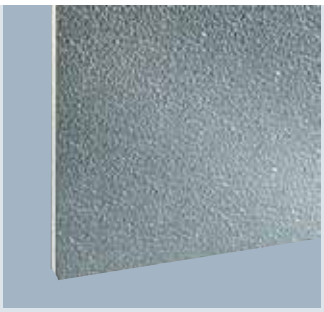
Double-moulded panes
20 mm, very stable panes



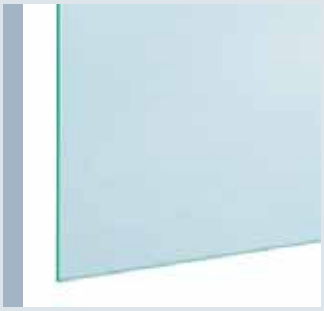
Expanded mesh
Galvanised steel, powder-coated
Ventilation cross section



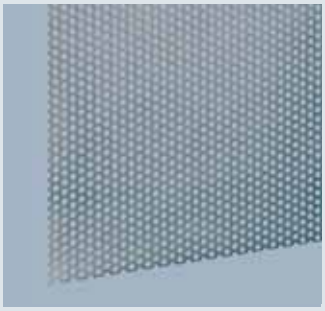
PU sandwich infill
Aluminium sheet cladding
Galvanised on both sides, 26 mm, smooth



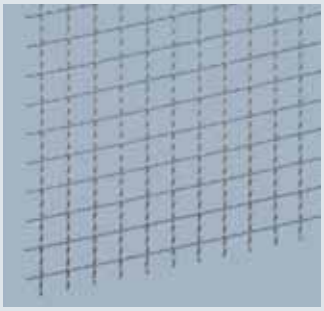
PU sandwich infill
Aluminium sheet cladding
Stucco-textured on both sides, 26 mm



Double panes
26-mm laminated safety glass, clear



Perforated steel sheet
Stainless steel, smooth
Ventilation cross section:
40% of infill surface



Corrugated mesh infill

Panel infill

Detailed quality
Well thought-out technology for mature products

Top door guidance
The door is guided precisely and safely in the guide rail made of heavy-duty steel. 4-wheel plastic rollers with ball-bearings ensure that the door is easy to move and quiet when opening and closing. The door can be fitted quickly and easily, as the guide rail and lintel frame are already welded together as standard. Tight-closing EPDM seals impede weather and dirt from penetrating from the outside.

Tight and secure all around
The lip seals made of flexible EPDM not only protect against the cold, humidity and dirt near the lintel, but also near the floor, sides and the door leaves. The seals between the traffic leaf and adjoining leaf are double-reinforced. Operational safety is increased through trap protection installed as standard on all vertical closing edges, thus preventing fingers from being crushed. A brush seal integrated in the bottom of the door leaf provides additional protection against adverse effects of the weather, as well as dirt. It can be easily exchanged if it wears out.

Safety features to the European Standard 13241-1

With Hörmann tested and certified:

Hörmann industrial folding doors are safe during all opening and closing phases, whether operated manually or power-driven. In doors with an impulse-controlled operator, a closing edge safety device and photocell in the passage ensure that the closing forces required for safety (max. 400 N) are complied with.

It goes without saying that Hörmann doors and operators are precisely matched and for your safety are tested by the TÜV (German Technical Inspectorate) and for conformity with the relevant standards.

It's worthwhile making a comparison!

In the optimum position
Precision guidance, which precisely moves the end leaf into the closing position, is recommended for doors without a bottom stop. An optional Z profile embedded in the floor provides reliable door guidance for doors with 4 or more door leaves per side. It prevents the door leaves from folding away while opening and holds them firmly in position. A brush seal in the door leaf protects against adverse effects of the weather near the floor and can be easily exchanged.

Hinge systems for FAW and FSN

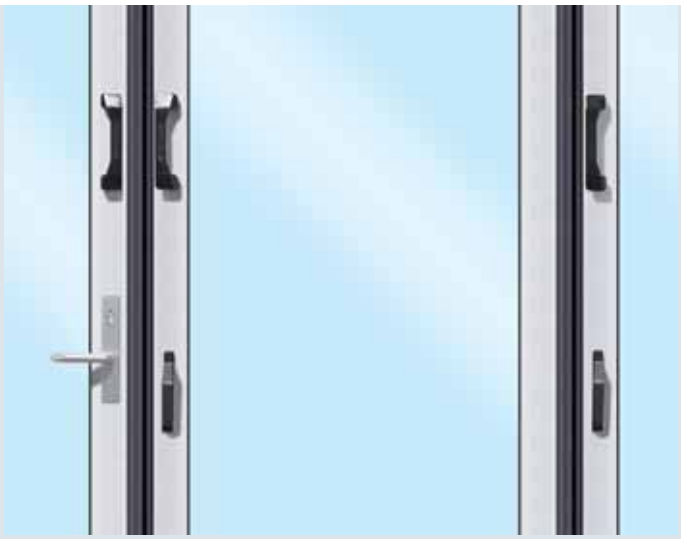
Hinge systems for FPU and FMI

FAW and FSN hinges
The hinge systems are fitted between the door leaves in FAW and FSN doors. Painted black, they blend in with the EPDM seals. The hinges are made of especially sturdy diecast aluminium and are very long-lasting. Each hinge can be adjusted horizontally by 1.5 mm, making it possible to precisely adjust the intermediate spaces between the leaves. Surface-mounted hinge systems are optionally available.

FPU and FMI hinges
The hinge systems for FPU and FMI must be surface-mounted due to the construction principle. These hinges are also made of sturdy diecast aluminium that is painted black. Special plastic bushes ensure smooth and quiet door travel.
Each hinge can be adjusted horizontally by 1.5 mm.

Standard comfort and security

Surface-mounted locking
FPU and FMI doors are equipped with surface-mounted locking systems. In these doors, the lock, locking and lever handle set are fitted on the door leaf. If a repair needs to be made, the components can be exchanged quickly and easily.



Integrated locking
An espagnolette lock is embedded in the leaf profile for FSN and FAW folding doors. This construction ensures secure locking and also creates clear door lines in the hall interior. Surface-mounted lockings are available on request.

Espagnolette lock
Hörmann folding door leaves are each equipped with an espagnolette lock as standard. These locks provide for secure mechanical anchoring of the leaves in the floor using rod lockings.

Additional security
Door leaves without rollers are additionally equipped with a rod lock that directly extends into the upper section of the frame. Secure locking on the inside and outside is ensured by this simple principle.

Traffic leaf equipment
All of the traffic leaves in Hörmann folding doors are equipped with top and bottom locking as standard.
In addition, each door has an aluminium lever handle set on each side. The long escutcheon is screwed on from the interior. This results in a nicer appearance and protects against break-ins.

Stable grip handle
A surface-mounted plastic handle for manual operation comes as standard with each door leaf. This makes it easy to open and close any folding arrangement.

Folding door operator

The folding door operator
The folding door can be opened and closed comfortably and reliably with an operator. In addition to the Hörmann hand transmitters, all control elements such as push buttons, code switches, transponder keys, etc can be used.

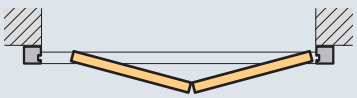
The folding doors run smoothly and quietly due to the special operator and operator arm construction. The 15 kg motor is especially light-weight. The soft stop function closes the folding door tightly and gently.

Security is provided by the closing edge safety device, which is directly integrated into the trap protection profile. The motor power can be adjusted to the folding door individually via the control.

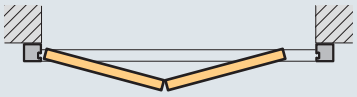
Compact and nearly invisible
The operator is narrow enough to fit directly on top of the frame profile of the FSN and FAW doors and is thus invisible from the outside. To optimize the transmission of force on the door leaves, the operator can be mounted on the door at any height.

Folding arrangement
Doors with the folding arrangement 0:2, 2:0 and 2:2 can be furnished with the operator.

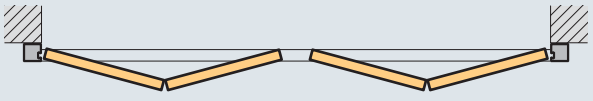
0:2



2:0



2:2



Compatible control elements

The control
This special folding door control is precisely coordinated with the operator. It is also completely compatible with all other Hörmann control elements.

The control elements
A small selection of the extensive range of comfortable Hörmann control elements is shown here.

Hand transmitter HS 4 with 4 buttons

1-button hand transmitter HS 1

Mini hand transmitter HSM 4 with 4 buttons

Code modulator FCT 10 b
With an FCT 10 b code modulator you can transmit up to 10 radio codes (868.3 MHz). No laying of cables required. With illuminated key field (lights up when first key pressed).

Push-button DT 02
Opening or closing via the same button, separate STOP button.

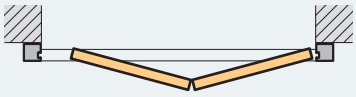
Push-button DT 03
For separate control of both operational directions, with separate STOP button.

Key switch ESU 30 with 2 keys Recessed version
Function: impulse or OPEN/CLOSE selectable

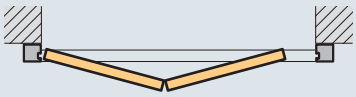
Choice of Folding Arrangements

The different folding arrangements should be considered at the planning stage. Depending on the door width or number of leaves, the door is fitted in a different way according to the site requirements and available sideroom.

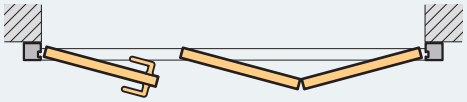
0:2
Folding door without traffic leaf*
Optionally with operator



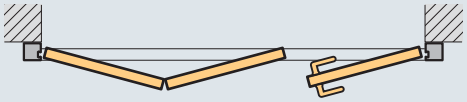
2:0
Folding door without traffic leaf*
Optionally with operator



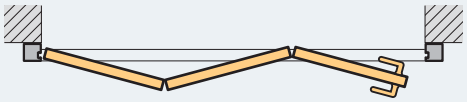
1:2



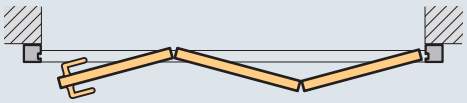
2:1



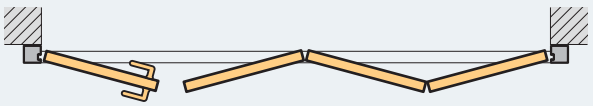
3:0



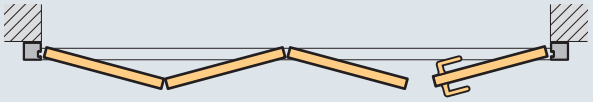
0:3



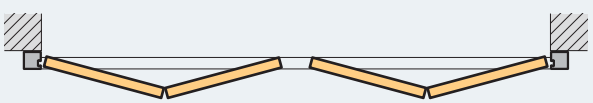
1:3



3:1



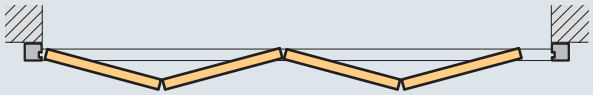
2:2
Folding door without traffic leaf*
Optionally with operator



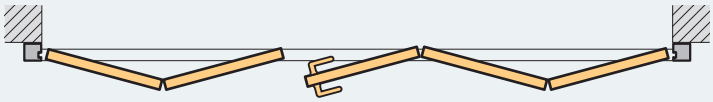
Folding arrangements are read from left to right on the opening side. Further folding arrangements on request.

0:4
Folding door without traffic leaf*

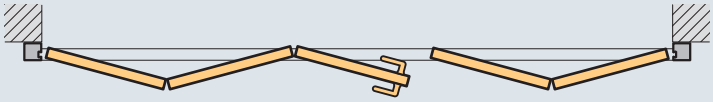
4:0
Folding door without traffic leaf*



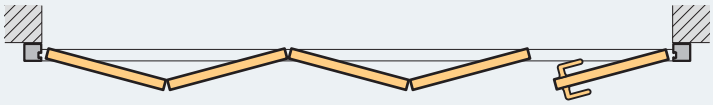
2:3



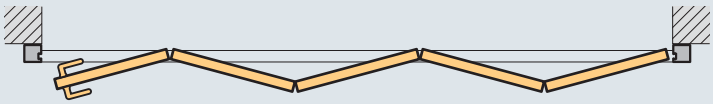
3:2



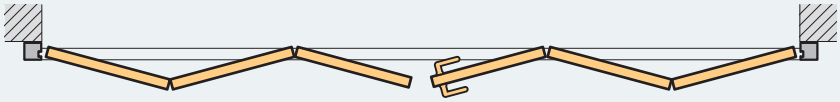
4:1



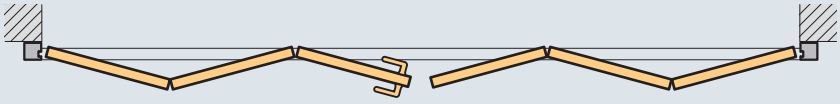
0:5



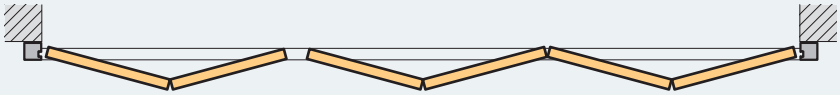
3:3



3:3



2:4
Folding door without traffic leaf*

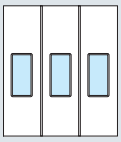
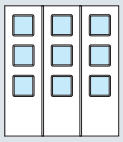


*** Folding doors without traffic leaf: If no other access is possible, a wicket door is required.**

Overview of Door Types
Technical Data

Design and quality features

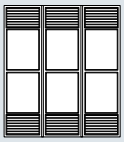
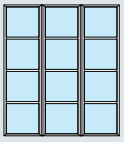
● = standard, ○ = on request

			FPU	FMI
				
Use		External door	●	●
		Internal door	○	○
Door sizes		Width RAM max., mm	14.000	14.000
		Height RAM max., mm	5.000	6.000
Headroom		See Technical Manual; min., mm	95	95
Clearance		Fitting on the wall, min., mm	95	95
Leaf width		Max. 1.300 mm	●	●
Number of leaves		3 to 12 leaves	●	●
Folding arrangement		See pages 26-27	–	–
Frame profile		85 × 60 mm	●	●
Overall thickness		60 mm	●	●
Opening angle		90° or 180°	●	●
Type of fitting		Fitted to the wall, opening inwards or outwards	●	●
		Fitted in the opening, opening inwards or outwards	○	○
Safety equipment EN 12604		Mechanical requirements. Type-tested	●	●
Wind pressure	EN 12424	Class ...	4	4
Water-tightness	EN 12425	Class ...	2	2
Air permeability	EN 12426	Class ...	2	2
Sound insulation	EN 20140	R = ... dB ca.	24	25
Thermal insulation *	EN 12428	3.500 × 3.500 mm door without glazing (U=W/m²K)	2,0	2,1
Behaviour in fire	DIN 4102	Building materials class A2 (non-combustible)	–	●
Door leaf		Building materials class B2 (normal flammability)	●	–
Material/surface		Hot galvanised material	●	●
Leaf and frame		Powder-coated with primer	–	–
		Wet-coated with 2-component PUR primer	●	●
Weight of door leaves		kg/m^2	25	35
Wicket pass door		Max. door height 2.500 mm	○	○
		Threshold height, mm	175	95
2-part locking leaf		Max. door height 2.000 mm	○	○
Matching side door		Max. door height 2.500 mm	○	○
Fascia panel		Side panel or fascia panel	○	○
Hinges		aluminium die-cast hinges	3-piece	3-piece
Finger-trap protection (EPDM)		On the vertical closing edges	●	●
Sealing		Brush seal at bottom	●	●
		Lip seal at top	●	●
Infills		Double-skinned	●	●
		Single-skinned	–	–
		Acrylic panes/single/insulating	○	○
		Flat glass/single/insulating	○	○
Ventilation		Ventilation slots in the sheet steel infill	○	○
		Sliding cover on the inside	○	○
Glazing frame		Plastic frame	●	●
		Metal frame	○	○
Glazing shapes		Rectangular	○	○
		Square	○	○
		Circular	○	○
Leaf latching		Lock and espagnolette	●	●
View			–	–
Fixing options		Concrete, steel, masonry	●	●
Fast-opening fire station folding door		2:2, in accordance with DIN 14092 part 2	○	○

* depending on size and version according to EN 13241 (Attachment B)

Design and quality features

● = standard, ○ = on request

			FSN	FAW
				
Use		External door	●	●
		Internal door	○	●
Door sizes		Width RAM max., mm	14.000	8.000
		Height RAM max., mm	6.000	5.000
Headroom		See Technical Manual; min., mm	95	95
Clearance		Fitting on the wall, min., mm	95	95
Leaf width		Max. 1.300 mmm	●	●
Number of leaves		3 to 12 leaves	●	●
Folding arrangement		See pages 26-27	–	–
Frame profile		85 × 60 mm	●	●
Overall thickness		60 mm	●	●
Opening angle		90° or 180°	●	●
Type of fitting		Fitted to the wall, opening inwards or outwards	●	●
		Fitted in the opening, opening inwards or outwards	○	○
Safety equipment EN 12604		Mechanical requirements. Type-tested	●	●
Wind pressure	EN 12424	Class ...	4	4
Water-tightness	EN 12425	Class ...	2	2
Air permeability	EN 12426	Class ...	2	3
Sound insulation	EN 20140	R = ... dB ca.	22	28
Thermal insulation *	EN 12428	3.500 × 3.500 door without glazing (U=W/m²K)	2,8	2,1
Behaviour in fire	DIN 4102	Building materials class A2 (non-combustible)	●	●
Door leaf		Building materials class B2 (normal flammability)	–	–
Material/surface		Hot galvanised material	●	–
Leaf and frame		Powder-coated with primer	●	●
		Wet-coated with 2-component PUR primer	–	–
Wicket pass door		Max. door height 2.500 m	○	○
		Threshold height, mm	60	60
2-part locking leaf		Max. door height 2.000 mm	○	○
Matching side door		Max. door height 2.500 mm	○	○
Fascia panel		Side panel or fascia panel	○	–
Hinges		aluminium die-cast hinges	2-piece, adjustable	2-piece, adjustable
Finger-trap protection (EPDM)		On the vertical closing edges	●	●
Sealing		Brush seal at bottom	●	●
		Lip seal at top	●	●
Infills		Double-skinned	–	○
		Single-skinned	●	–
		Acrylic panes/single/insulating	○	○
		Flat glass/single/insulating	○	○
Ventilation		Ventilation slots in the sheet steel infill	○	–
		Sliding cover on the inside	–	–
Glazing frame		Aluminium glazing bars	●	●
Leaf latching		Lock and espagnolette	●	●
View		Door profile width, mm	80	80
		Rail profile height, mm	80	80
Fixing options		Concrete, steel, masonry	●	●
Bottom profile			80	80
Fast-opening fire station folding door		2:2, in accordance with DIN 14092 part 2	○	–

* depending on size and version according to EN 13241 (Attachment B)

1 Sectional door

2 Rolling shutters and rolling grilles

3 Folding doors made of steel and aluminium

4 High-speed doors

5 Loading technology

All from one source: for your facility construction.

1 Sectional door

These room-saving door-systems can be adapted to various hardware types for each industrial facility. This gives you planning safety when building a new development or making renovations. Hörmann offers you tailored solutions for every application: for instance Fully glazed ALS sectional doors for a clear view of inner rooms or high, thermally-insulated, double-skinned 80 mm thick DPU doors that guarantee even temperatures.

2 Rolling shutters and rolling grilles

With their simple design and reduced components, rolling shutters are extremely economical and robust. Hörmann supplies rolling shutters in widths and heights of up to 11.75 m and 9 m respectively, or special doors which are even higher. Numerous window and colour designs give you room for variety when designing your facility.

3 Folding doors made of steel and aluminium

Hörmann folding doors in steel and aluminium are recommended for halls with low traffic frequency and little headroom where no roof load is permitted. Fewer wearing parts make folding doors easy to repair and service.

4 High-speed doors

Hörmann high-speed doors are used both indoors and outdoors to optimise traffic flow, improve room climate and save on energy. The Hörmann range comprises clear-view doors with a flexible curtain that open vertically and horizontally. They can also be combined with sectional doors and rolling shutters. The benefit to you: the SoftEdge technology with built-in crash-protection makes high-speed doors extremely safe and economical.

5 Loading technology

Hörmann delivers complete loading systems for all your logistics needs. The benefit to you: sure planning, reliable construction management and high functionality due to perfectly designed components is guaranteed, irrespective of whether you need individual dock levellers or loading houses. All of these can be retrofitted to existing buildings as a complete unit with a loading bridge and dock seal.

6 Fire sliding doors

Hörmann delivers one and two-leaf sliding door solutions for all areas in a facility depending on the fire-protection level required, and with wicket-door and smoke-protection functionality for escape routes by choice.

7 Multifunctional doors

Hörmann multifunction doors and inner facility doors are suitable for indoor and outdoor use. Our one and two-leaf doors can be used anywhere where heavy-duty door elements are required. With numerous additional functions, Hörmann offers you solutions that cover almost all types of application in industry.

8 Fire and smoke-protection box-frame parts

Hörmann can supply you with doors and fixed glazing made of steel and aluminium for heavy-duty areas such as industrial building administration sections. The 100 % matching system-appearence guarantees the same looks irrespective of the fire class.

9 Visibility window

Hörmann visibility glazings are used as windows or room-high elements to provide more light and better visibility. Individual solutions can also be implemented with rail partitions, recesses and slopes.

10 Service

Only intact, professionally maintained systems ensure smooth production processes and safe routes. The statutory inspections and necessary repairs are professionally carried out and documented with an inspection and maintenance contract. This saves costs and ensures reliability.

6 Fire sliding doors

7 Multifunctional doors
Facility inner doors

8 Fire and smoke-protection box-frame parts

9 Visibility window

10 Service

As a construction element specialist Hörmann gives you the power to plan perfectly whatever your needs. Carefully matched, facility-construction solutions offer you the very best in perfectly designed products in every area.