

// New matching profile construction



# Industrial Folding Doors

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







	The know-how of the specialist	4
	Innovations	6
<b>FSN</b>	Steel folding doors // <b>NEW</b> with profile construction	8
<b>FAW</b>	Aluminium folding doors // <b>NEW</b> with profile construction with thermal breaks	10
<b>FPU</b>	Steel folding doors with PUR insulation	12
<b>FMI</b>	Steel folding doors with mineral wool insulation	14
	Colours	16
	Glazings and infills	17
	Detailed quality	20
	Locking and handles	22
	Operators and accessories	24
	Folding arrangements	26
	Door type overview, technical details	28

The architects' programme and further information on Hörmann products can be found in the Internet under: [www.hoermann.com](http://www.hoermann.com)

Copyright:  
No part of this brochure may be reproduced without our prior permission.  
We reserve the right to make changes without notification.  
Some of the doors shown are special versions and may require approval in individual cases.



## 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**



**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](http://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 6 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 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.



**FSN**

## Steel folding door with profile construction // NEW

### Light and transparency

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.

### Insulated infill

The excellent insulation of FSN doors is due to a uniform material thickness of 26 mm with glazing and panel infill.

### 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), or optionally in Terra brown (similar to RAL 8028). Also available in RAL to choose as a wet coating.



RAL to choose



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



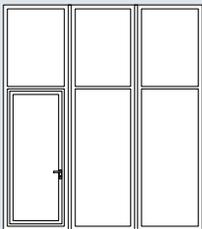
The black hinges are fitted as standard between the door leaves and aligned with the seals.



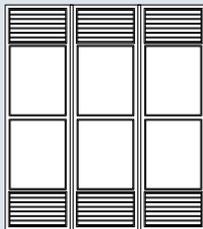


## Numerous options for more light and transparency in unheated buildings

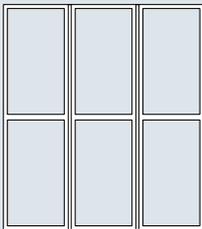
### Door versions (examples)



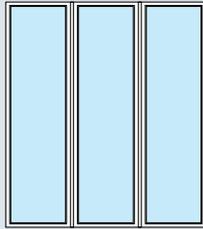
Smooth sheet steel infill  
1.5 mm thick  
Wicket door with threshold



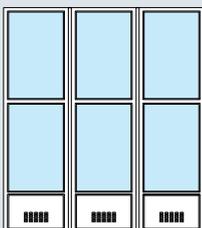
Sheet steel infill with ventilation  
slots. Ventilation cross-section  
per m<sup>2</sup>: 23%



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



Full glazing without rails  
up to 4 m max. door height  
(Real glass)



Ventilation slots  
with partial glazing

### Technical Data

#### Size range

Width up to 14.000

Height up to 6.000

#### Resistance to wind pressure

Class 4

1)

#### Water-tightness

Class 2

2)

#### Air permeability

Class 2

3)

#### Sound insulation

R = 22 dB

4)

#### Thermal insulation

U = 3,5 W/m<sup>2</sup>K

5)

#### Performance characteristics in accordance with EN 13241-1\*

1) EN 12424; 2) EN 12425; 3) EN 12426; 4) EN 717-1; 5) EN 12428

\* 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

ERHOHUNG  
im neuen C-Klasse T-Modell.



**FAW**

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

### Prestigious and insulated

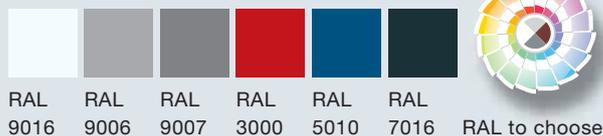
A beautiful appearance and thermal insulation are perfectly combined in FAW aluminium folding doors. The outer and inner profile shells are separated by glass-fibre reinforced polyamide spacers. This construction and an identical material thickness for glazing and panel (26 mm) ensures optimum insulation. 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. For an especially representative look, door leaves can be supplied fully glazed with real glass and without rails up to a door height of 4 m.

### Best material quality

The extruded aluminium profiles are available in 6 preferred colours and primer powder-coated in RAL to choose. This guarantees a long-lasting prestigious surface.



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



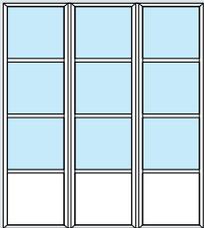
The black hinges are fitted as standard between the door leaves and aligned with the seals.



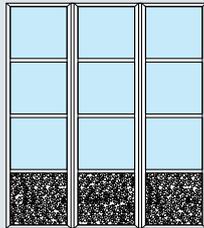


## A convincing door appearance with excellent thermal insulation

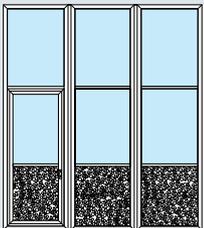
### Door versions (examples)



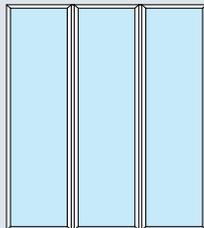
26-mm PU panel smooth, with 26-mm insulated glazing



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



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



Full glazing without rails up to 4 m max. door height (Real glass)

### Technical Data

#### Size range

Width up to 8.000

Height up to 5.000

#### Resistance to wind pressure

Class 4

1)

#### Water-tightness

Class 2

2)

#### Air permeability

Class 3

3)

#### Sound insulation

R = 28 dB

4)

#### Thermal insulation

U = 2,1 W/m<sup>2</sup>K

5)

#### Performance characteristics in accordance with EN 13241-1\*

1) EN 12424; 2) EN 12425; 3) EN 12426; 4) EN 717-1; 5) EN 12428

\* 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



## FPU

# Double-skinned steel folding doors with PUR rigid foam core

### Stable and insulating

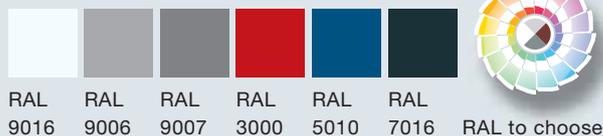
Polyurethane rigid foam (PUR) is uniformly filled into the entire hollow space of the double-skinned steel construction and firmly connected with the door leaves. This results in high rigidity and good thermal insulation values. The door leaves are flush and have a uniform thickness of approx. 60 mm.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

### Numerous versions

FPU folding door leaves can be equipped with 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 as a wet coating.



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.



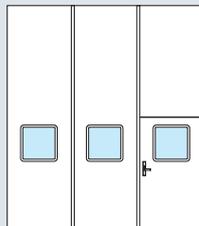


## Good thermal insulation ensures energy savings

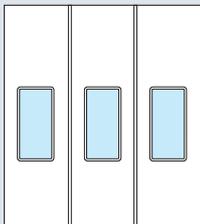
### Door versions (examples)



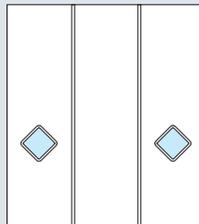
Door version with wicket door with threshold



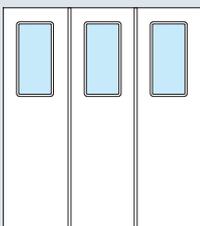
Door version with square glazing and 2-part traffic leaf



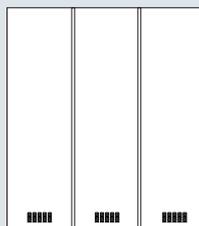
Door version with rectangular glazing



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

Class 4

1)

#### Water-tightness

Class 2

2)

#### Air permeability

Class 2

3)

#### Sound insulation

R = 22 dB

4)

#### Thermal insulation

U = 2,0 W/m<sup>2</sup>K

5)

#### Performance characteristics in accordance with EN 13241-1\*

1) EN 12424; 2) EN 12425; 3) EN 12426; 4) EN 717-1; 5) EN 12428

\* 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

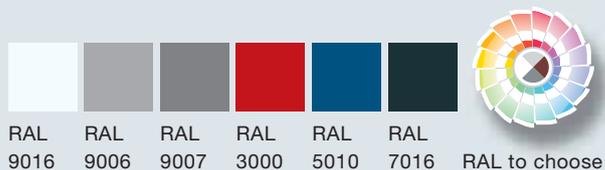
The door leaves for FMI folding doors are 60 mm thick. The hollow space is completely filled with mineral wool. This thick insulating core provides effective protection against noise and loss of heat. FMI doors are perfect for separating halls with high noise levels.

### Bright and safe access

Numerous glazing and ventilation variants are available for FMI folding doors. Additional equipment options include e.g. ventilation slots with and without a sliding cover. Unhindered staff access is easy to implement thanks to a wicket door without threshold or a divided traffic leaf.

### Robust and long-lasting

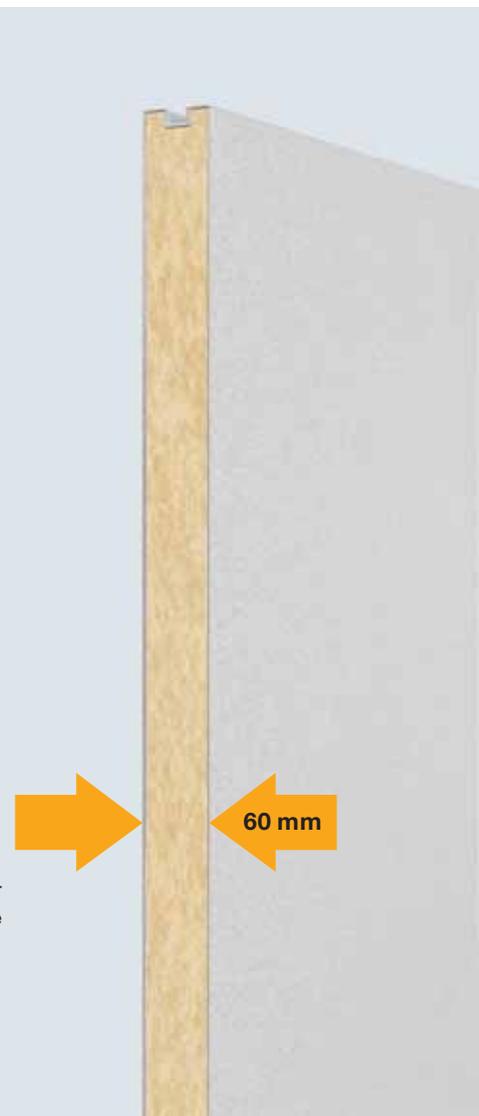
The robustness of the FMI folding doors is attained through a special shell construction with additional interior reinforcement. The hot galvanized material and high-adhesion primer-coating protect against the adverse effects of weather over the long-term. The interior and exterior smooth surfaces are Grey white (similar to RAL 9002) as standard. Available in 6 preferred colours and in RAL to choose as a wet coating.



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



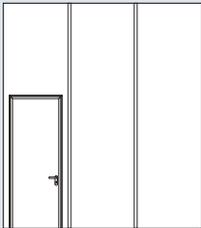
The sturdy hinges are fitted on the door leaf as standard. This makes it possible to exchange the leaf quickly and inexpensively if a repair is needed.



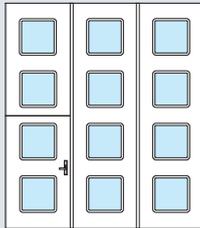


## Robust construction with numerous glazing variants for individual needs

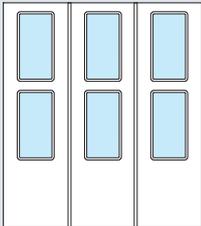
### Door versions (examples)



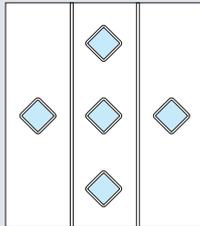
Door version with wicket door with/without threshold



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

Class 4

1)

#### Water-tightness

Class 2

2)

#### Air permeability

Class 2

3)

#### Sound insulation

R = 25 dB

4)

#### Thermal insulation

U = 2,1 W/m<sup>2</sup>K

5)

#### Performance characteristics in accordance with EN 13241-1\*

1) EN 12424; 2) EN 12425; 3) EN 12426; 4) EN 717-1; 5) EN 12428

\* 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.



## 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.



In the colours of the RAL spectrum



## 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. The glazing frame is screwed on 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 x 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 thicknesses of 3 to 26 mm are possible for the FPU and FMI, 3 to 36 mm for the FSN and 18 to 36 mm for the FAW. The max. infill weight is 40 kg/m<sup>2</sup>.

### 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



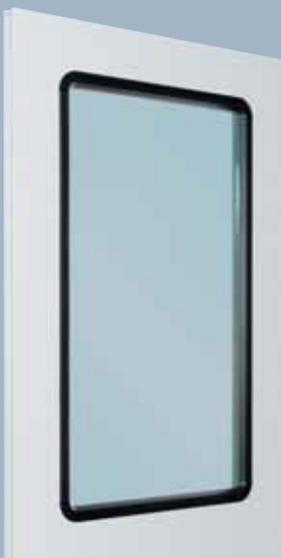
Marks and scratches from cleaning cannot be avoided on common synthetic glazing.

DURATEC synthetic glazing with superior scratch resistance



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





**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



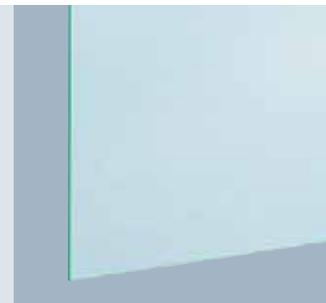
**DURATEC-synthetic panes**  
3 mm, clear  
(not for FAW)



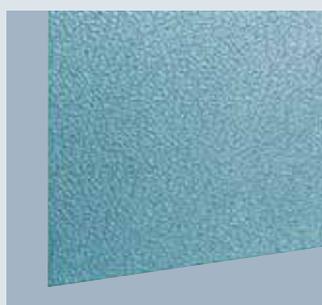
**DURATEC synthetic double panes**  
26 mm, clear



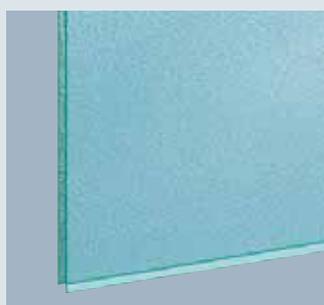
**DURATEC-polycarbonate panes**  
6 mm, clear  
(not for FAW)



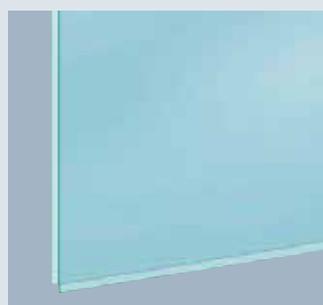
**Laminated safety glass**  
6 mm, clear  
(not for FAW)



**Synthetic panes**  
6 mm, crystal structure  
(not for FAW)



**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



**FSD**

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.



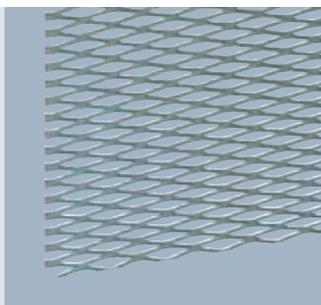
**FSD/FAW without rails**

Fully glazed up to a door height of 4,000 x 4,000 mm.

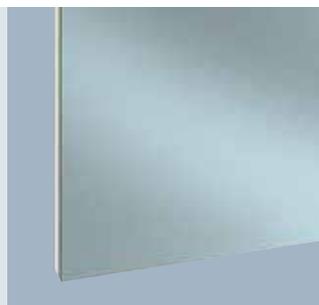
**Glazing and infills – the right material for every demand**



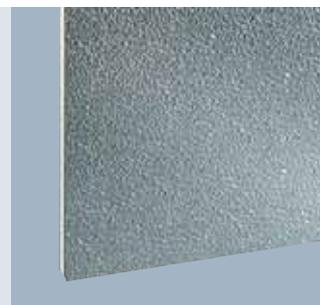
**Double-moulded panes**  
20 mm, very stable panes



**Expanded mesh**  
Galvanised steel, powder-coated  
Ventilation cross section (not for FAW)



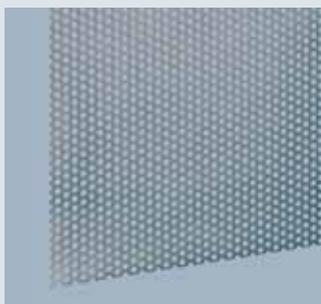
**PU sandwich infill**  
Aluminium sheet cladding  
Galvanised on both sides, 26 mm, smooth



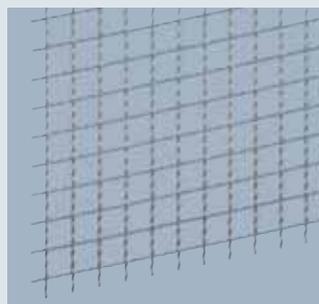
**PU sandwich infill**  
Aluminium sheet cladding  
Stucco-textured on both sides, 26 mm



**Double panes**  
26-mm laminated safety glass, clear (not for FAW)



**Perforated steel sheet**  
Stainless steel, smooth  
Ventilation cross section: 40% of infill surface (not for FAW)



**Corrugated mesh infill**  
(not for FAW)



## 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. The guide rails are supplied as standard in the door colour.



### Tight and secure all around

Rubber seals made of flexible EPDM not only protect against cold, moisture, and dirt in the lintel area, but are also effective on the 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.

# W-Service



## 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.

### Intermediate hinge system for FAW and FSN



### Surface-mounted hinge system for FPU and FMI



### The hinge systems

The hinges are made of especially sturdy diecast aluminium and are very long-lasting. Special plastic bushes ensure smooth and quiet door travel. Each hinge can be adjusted by 1.5 mm to the left and right (1.0 mm for the FPU and FMI), making it possible to precisely adjust the intermediate spaces between the leaves.

### Adjustable intermediate hinges, FAW and FSN

The hinge systems are fitted between the door leaves in FAW and FSN doors. Painted black, they blend in with the EPDM seals. Surface-mounted hinge systems are optionally available.

### Surface-mounted hinges, FPU and FMI

The hinge systems for the FPU und FMI are surface-mounted as standard. These hinges are also made of sturdy diecast aluminium that is painted black. Adjustable intermediate hinges are optionally available.



## 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 with asymmetrically arranged locking rods 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 to the top and bottom 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.

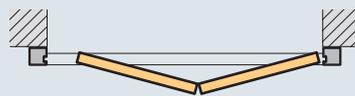
### Compact and nearly invisible

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.

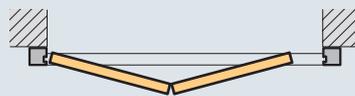
### Folding arrangement

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

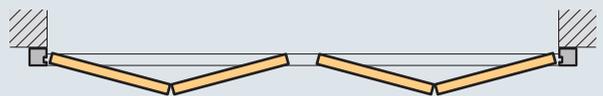
0:2



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.

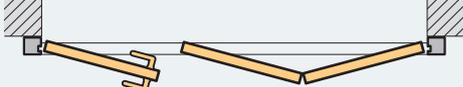
0:2  
Folding door without traffic leaf\*  
Optionally with operator



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



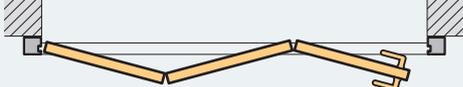
1:2



2:1



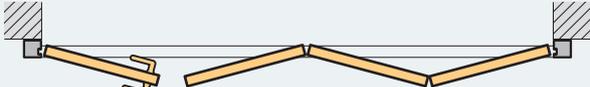
3:0



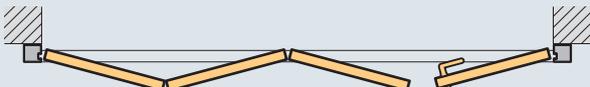
0:3



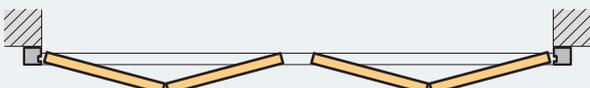
1:3



3:1

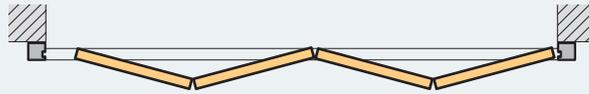


2:2  
Folding door without traffic leaf\*  
Optionally with operator



Folding arrangements are read from left to right on the opening side. Further folding arrangements on request. (see also the technical manual).

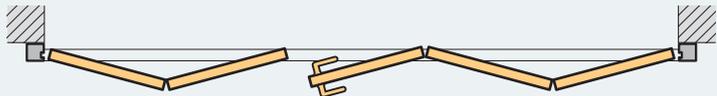
0:4  
Folding door without traffic leaf\*



4:0  
Folding door without traffic leaf\*



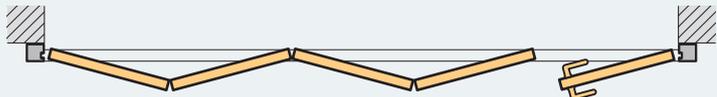
2:3



3:2



4:1



0:5



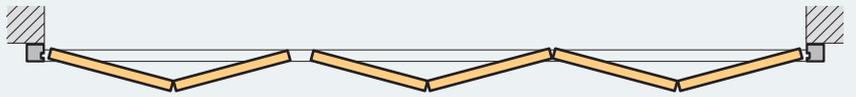
3:3



3:3



2:4  
Folding door without traffic leaf\*



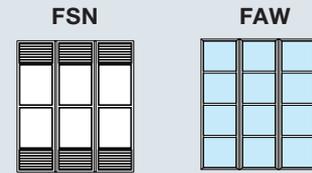
\* Folding doors without traffic leaf: If no other access is possible, a wicket door is required.

# Overview of Door Types

## Technical Data

### Design and quality features

● = standard, ○ = on request

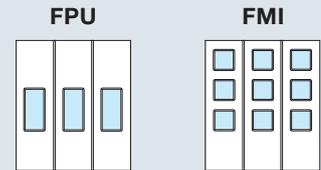


		FSN	FAW
Use	External door	●	●
	Internal door	○	●
Door sizes	Width RAM max., mm	14.000	8.000
	Height RAM max., mm	6.000	5.000
Headroom	See Technical Manual; min., mm	95	95
Clearance	Fitting on the wall, min., mm	95	95
Leaf width	max., mm	1.400	1.300
Number of leaves		3-12	3-8
Folding arrangement	See pages 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
Air permeability	EN 717-1 R = ... dB ca.	22	28
Thermal insulation *	EN 12428 3.500 × 3.500 door without glazing (U=W/m²K)	3,5	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	Single-skinned	●	-
	Double-skinned	○	●
Glazing	Synthetic/single panes	●	-
	Synthetic/double panes	○	●
	Real glass/single panes	●	-
	Real glass/double panes	○	●
Ventilation	Ventilation slots in the sheet steel infill	○	-
	Sliding cover on the inside	-	-
Glazing frame	Aluminium glazing beads, anodised black	●	●
Leaf latching	Lock and espagnolette	●	●
View	Door profile width (viewed width), mm	80	80
	Rail profile height, 60 mm	○	○
	Rail profile height, 80 mm	●	●
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)

## 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., mm	1.400	1.400
Number of leaves		3-12	3-12
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 717-1 R = ... dB ca.	24	25
Thermal insulation *	EN 12428 Door approx. 3,500 × 3,500 mm 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/m²	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	●	●
	Top rubber seal	●	●
Infills	Single-skinned	-	-
	Double-skinned	●	●
Glazing	Acrylic panes/single/insulating	○	○
	Real glass/single pane/insulated	○	○
Ventilation	Ventilation slots in the sheet steel infill	○	○
	Sliding cover on the inside	○	○
Glazing frames	Plastic frame, black	●	●
	Metal frame, black	○	○
Glazing shapes	Rectangular	○	○
	Square	○	○
	Diamond	○	○
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)



**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-appearance 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.

Garage doors for use in collective garages (not shown) are another product in Hörmann's range.



**6** Fire sliding doors



**7** Multifunctional doors  
Facility inner doors



**8** Fire and smoke-  
protection box-frame  
parts

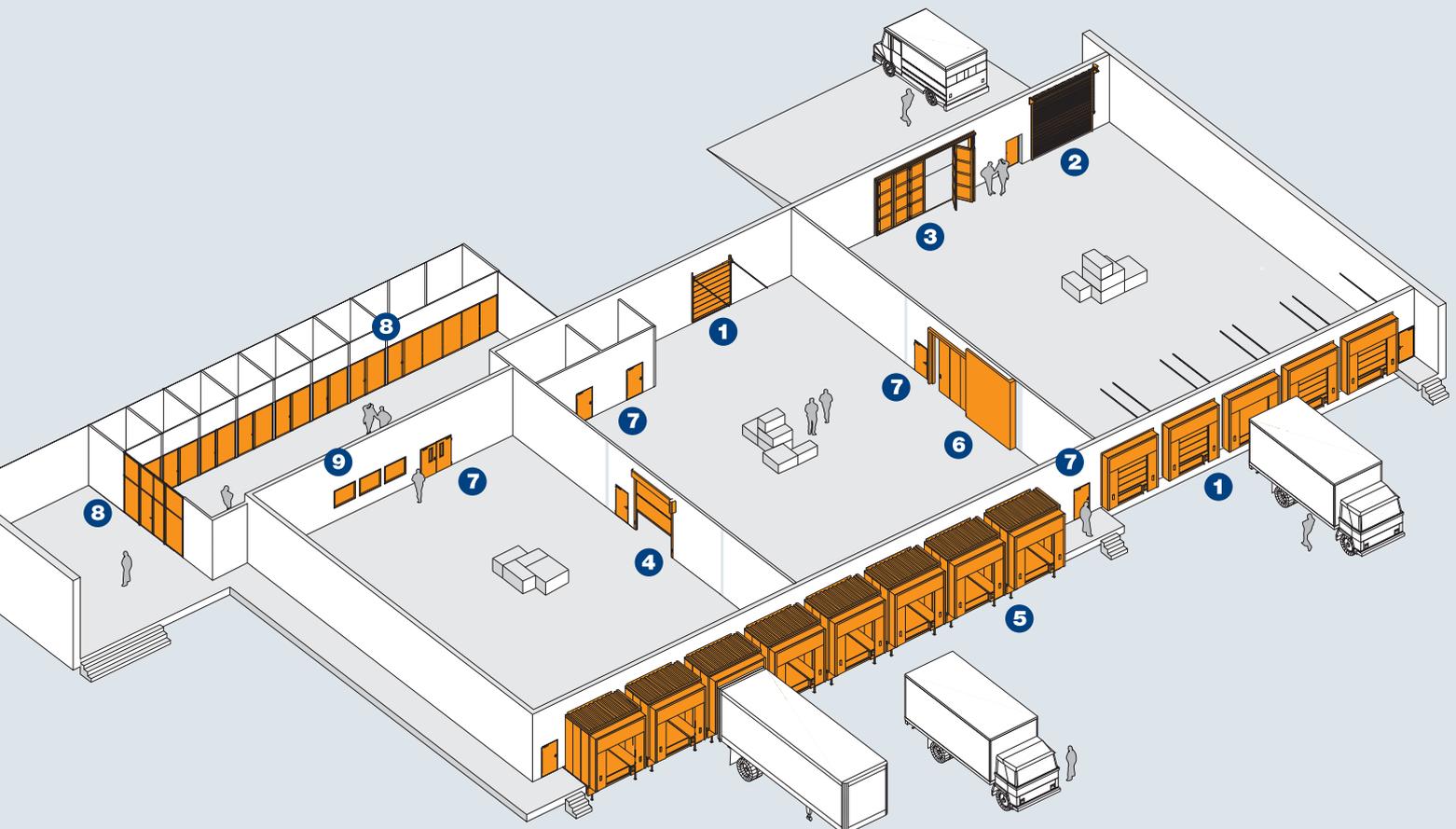


**9** Visibility window



**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.



## Hörmann: Quality without Compromise



Hörmann KG Amshausen



Hörmann KG Antriebstechnik



Hörmann KG Brandis



Hörmann KG Brockhagen



Hörmann KG Dissen



Hörmann KG Eckelhausen



Hörmann KG Freisen



Hörmann KG Ichtershhausen



Hörmann KG Werne



Hörmann Genk NV, Belgien



Hörmann Beijing, China



Hörmann LLC, Montgomery IL, USA

Hörmann is the only manufacturer worldwide that offers you a complete range of all major building products from one source.

We manufacture in highly-specialized factories using the latest production technologies.

The close-meshed network of sales and service companies throughout Europe, and activities in the USA and China, make Hörmann your strong partner for first-class building products, offering "Quality without Compromise".

**GARAGE DOORS**

**OPERATORS**

**INDUSTRIAL DOORS**

**LOADING EQUIPMENT**

**HINGED DOORS**

**DOOR FRAMES**