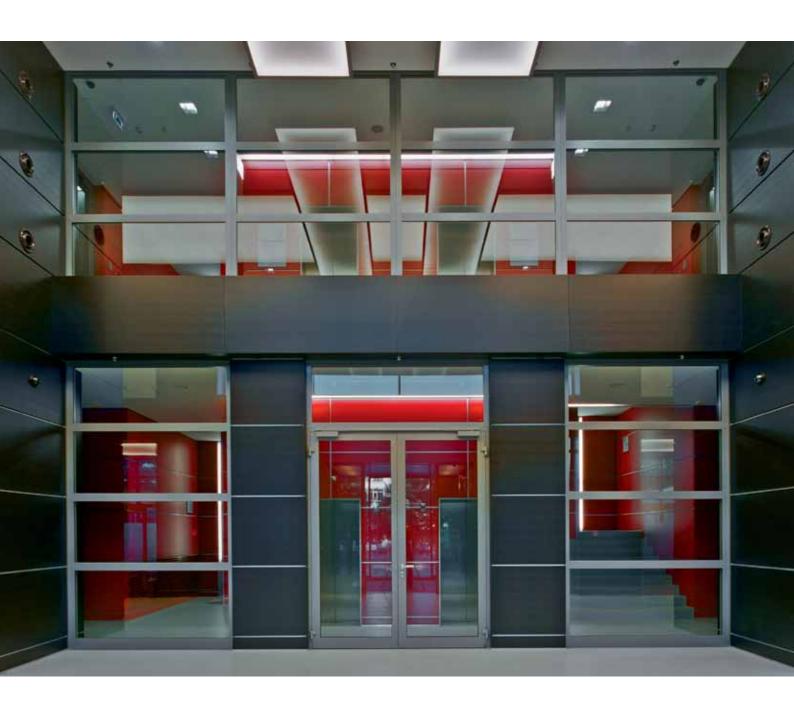


#### T90 steel fire and smoke protection elements



# Fire-Rated Doors and Smoke-Tight Door Assemblies

Fully glazed tubular frame parts for construction projects









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The colours and surface finishes shown are subject to the limitations of the printing process and cannot be regarded as binding.

Figure to the left: ThyssenKrupp Q2 canteen, Essen Figure on cover page: Citadeles Moduli, Riga; Interior design: m-plus design, Hamburg

## Hörmann brand quality

#### Top safety and reliability



"The Squaire" in Frankfurt am Main with Hörmann products



#### In-house product development

Growing and constantly changing functional and safety requirements necessitate continuous new construction and equipment developments and improvements, especially when it comes to moveable construction components such as doors. In this area, our qualified development teams time and again prove their great specialised expertise.



#### **Highly sophisticated production methods**

We at Hörmann rely on the latest production technology at our specialised factories. Computer-controlled operations ensure dimensionally accurate elements with perfectly fitted fittings and functional parts.



In the course of several decades, Hörmann has continuously developed its fire protection programme into today's complete range. In addition to this multifarious range of products for construction projects, Hörmann also offers individual solutions with case by case approval.

Highly-specialised factories develop and produce construction components that are marked by excellent quality, functional safety and a long service life.

Our presence in the global economy's key regions makes us a strong, future-oriented partner for industrial and public construction projects.



#### Fire testing at own fire test chamber

Our new and further developments are constantly tested for the required fire resistance and smoke-tightness through in-house fire tests at our fire testing centre. The knowledge gained from these tests ensures high fire protection for buildings. They also allow us to optimally prepare our innovations for the official inspections by the accredited testing centres for official approvals.



#### **Expert building support**

Experienced specialists within our customer-oriented sales organisation accompany you from the planning stage, through technical clarification up to the final building inspection.

Expert fitting is guaranteed by experienced Hörmann fitters and the specialised trained staff of Hörmann's partners.

5

# Hörmann construction project door programme

The right solution for any requirement





#### **Function doors**

From sturdy steel internal doors and secure apartment entrance doors to fully glazed office doors up to external doors with thermal break, Hörmann offers a large programme with diverse colour and equipment variants.



#### Steel and stainless steel multi-function doors

Steel multi-function doors offer crucial advantages for architects and building owners: doors with different functional requirements that are fitted in the same storey match perfectly thanks to their identical look. STS/STU steel and stainless steel doors feature a flush-fitting, elegant appearance.



#### **Automatic sliding doors**

Hörmann's AD 100 automatic sliding doors open reliably and safely in every situation. They are characterised by robustness, functional safety and sustainability. In addition, the automatic sliding doors are used in barrier-free construction and as escape route doors.



#### **Visibility windows**

Hörmann visibility glazings are used as windows or room-high elements to provide more light and better visibility. Visibility glazing is available for requirements like heat and acoustic insulation or radiation protection. All versions are offered in fire-retarding F30 and fire-resistant F90 variants. Individual solutions can be implemented using rail divisions and angles.

7

Figure to the left: Skyline Tower, Munich with Hörmann products

# Hörmann fire protection programme

Variety is our strength





#### F30 / F90 system wall

The system wall combines a maximum of light with ideal fire protection without any transom or post profiles interrupting the view. The F30 system wall can be easily combined with matching Hörmann T30 aluminium doors and S-Line and N-Line T30 steel doors.





#### T30 aluminium automatic sliding door

The T30 automatic sliding door expands your design possibilities. Combine the convenience and transparency of a fully glazed automatic sliding door with optimum fire protection.



#### **Aluminium fire protection elements**

Hörmann's aluminium fire-rated/smoke-tight doors and glazings will convince you with certified safety, perfect function and a 100 % matching appearance. These products allow Hörmann to provide a uniform fire protection concept for use in architecturally demanding construction projects.



Figure on the left: Q1 ThyssenKrupp Megacube, Essen, with Hörmann products

# Steel fire protection elements S-Line and N-Line

Hörmann provides both systems as T30 / F30 fire-rated doors and matching smoke-tight door assemblies. The S-Line system appears very delicate thanks to a fine frame structure. Narrow profiles enhance the look and passage width. The N-Line system is very robust and recommended for construction projects where the doors will be subjected to heavy strain.

9

# **Overview of door functions**

## **Everything is possible**



T30

#### Fire-retarding

DIN 4102 / DIN EN 1634

T60

**High fire resistance** DIN 4102 / DIN EN 1634

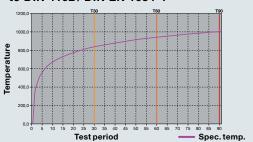
**T90** 

#### Fire-proof

DIN 4102 / DIN EN 1634

Fire-retarding fire protection elements are tested according to DIN 4102-T5 or DIN EN 1634-1 and officially approved. In fire tests, these doors must resist temperatures according to the temperature/time curve for at least 30 minutes (T30), 60 minutes (T60) or 90 minutes (T90).

# Temperature/time curve according to DIN 4102 / DIN EN 1634-1





#### Smoke-tight

DIN 18095

dB

#### Acoustic-rated

**DIN EN ISO 717-1** 

Acoustic-rated doors and glazings are approved according to DIN EN ISO 717-1. The stated acoustic values are laboratory values. The calculated acoustic value that can be achieved for the object is the laboratory value – 5 dB.

according to DIN 18095 or DIN EN 1634-3. The

surface edges of the frame must be permanently sealed to both sides of the building structure.

Smoke protection elements are approved

## Ordered in correlation with the resistance class

DIN EN V 1627 DIN EN 1627







#### Break-in-resistant according to DIN EN 1627

The DIN EN 1627ff series of standards took effect in September 2011 for break-in-resistant doors. Hörmann break-in-resistant doors have been tested and classified in accordance with the European specifications of the prestandards DIN V ENV 1627 to 1630 since 1999. They are also voluntarily subjected to quality monitoring by an accredited test and certification authority and are recommended by the police.

#### RC 2 (WK 2) optional extras

- Triple lock
- Aluminium FS lever/knob handle set DIN 18257, class ES 1, with long escutcheon and pull-off protection
- 3-way adjustable hinges
- P4A glazing



#### External door

Fire-rated and smoke-tight doors for outside use include thermally insulated outer doors as well as approved fire-rated and smoke-tight doors.

The compliance proofs of e.g. resistance to wind loads, water-tightness under heavy rain, air permeability, etc. are based on EN 14351-1.



# Anti-fall safeguard glazing

The German state building codes require protection from lateral falls for circulation areas that are used by persons such as galleries, pedestals or stairways with a minimum height difference of 1000 mm (500 mm in Bavaria).

These directives can be complied with for example by a separately installed railing or, better yet, by a fixed glazing according to TRAV from Hörmann.

# F30 / F90 aluminium system wall

#### Fire protection with maximal transparency for the most discerning demands



#### Discreet glazing joint

The individual glass panes are jointed with silicone (joint width 5 mm). Available in black as standard and on request in grey.



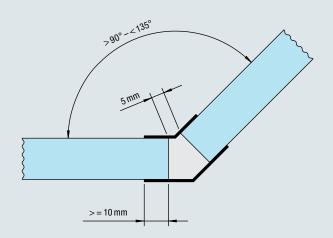




Grey silicone joint

#### **Corner connector**

In corner areas with any type of angle, this system glazing does not require corner posts for aluminium F30. The joint with fire-rated silicone is elegantly concealed on the inside and the outside by a glued-on slim metal angle profile only. A technically and visually appealing solution.



Main functions
Fire-retarding
HE 331 SW

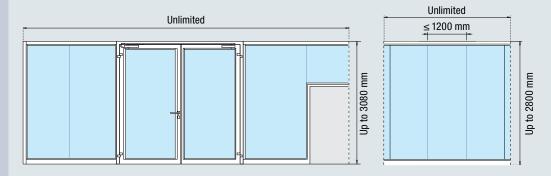
**T90** H

Fire-proof HE 931 SW

RS

Smoke-tight

HE 331 SW HE 931 SW



	HE 331 SW	HE 931 SW
Version	Fixed glazing	Fixed glazing
Profile system	Aluminium	Aluminium
Viewed width	70	70
Depth	80	80
Bottom section height	70 / 150	70 / 150
Fitting in		
Brickwork	≥115	≥240
Concrete	≥ 100	≥ 140
Gas concrete	≥ 175	≥ 240
Partition wall	≥ 100	≥ 100

 $Wall\ requirements\ based\ on\ size\ can\ be\ found\ in\ the\ fitting\ instructions\ at\ www.hoermann.com$ 

The compliance proofs of e.g. resistance to wind loads, water-tightness under heavy rain, air permeability, etc. are based on EN 14351-1.

	HE 331 SW		HE 931	
Size range	Width	Height	Width	Height
With fascia frame				
Overall frame dimension (ordering size)	Unlimited	3080	Unlimited	2800
Maximum door height		3000		Not available

Fixed glazings
Design variations Page 31

All dimensions in mm 13
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# T30 RS aluminium automatic sliding door

Perfection and transparency in the most limited space with general official approval





0800 328 6250





Recommended for barrier-free construction

#### At a glance:

- T30 aluminium fire-rated door
- Smoke-tight according to DIN 18095
- Single-leaf and double-leaf and with side elements and transom lights
- Matching the Hörmann aluminium fire protection programme
- Maximum clear passage width up to 1200 mm (single-leaf), 2600 mm for double-leaf, maximum clear passage height up to 2500 mm
- No guide rail in the passage area
- GEZE operator Slimdrive SL-T30 with only 70 mm installation height
- Fitting in brickwork / concrete and in light blockwork
- Door element TÜV approved, operator VDS approved
- General official approval by the DIBt







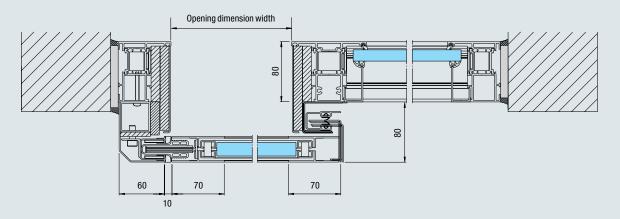
Narrow profile view of the operator with only 70 mm installation height

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# T30 aluminium automatic sliding door **ASW-1, ASW-2, ASV-1, ASV-2**

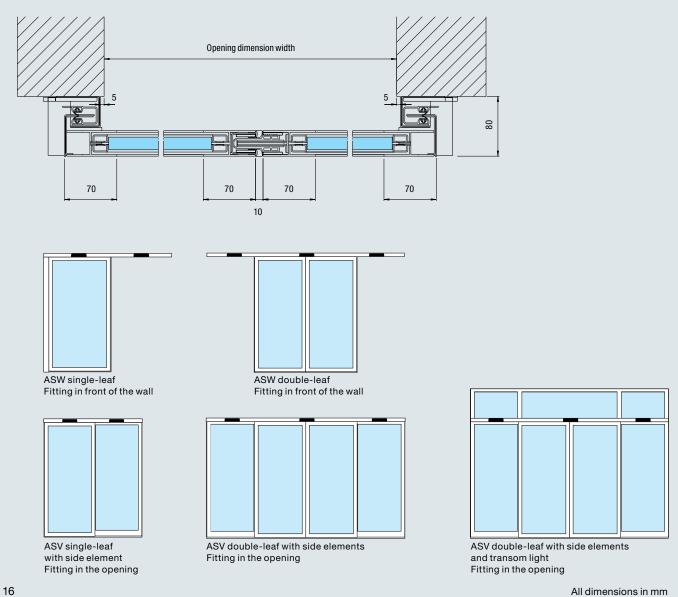
Single and double-leaf doors

ASV -1 Fitting in the opening



ASW-2 Fitting in front of the wall

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www.samsondoors.co.uk

ASW-1 / ASV-1

Main functions

Fire-retarding

Smoke-tight

T30

Opening dimension up to 1200 mm up to 2600 mm up to 2600 mm up to 2600 mm of the control of the

ASW-2/ASV-2

	ASW-1 / ASV-1	ASW-2 / ASV-2
Version	Single-leaf door	Double-leaf door
Profile system	Aluminium	Aluminium
Viewed width	70	70
Depth	80	80
Bottom section height	150/82	150/82
Fitting in		
Brickwork	≥115	≥115
Concrete	≥ 100	≥ 100
Gas concrete	≥ 150	≥ 150
Partition wall	≥ 100	≥ 100

Wall requirements based on size can be found in the fitting instructions at www.hoermann.com  $\,$ 

	ASW-1 / ASV-1		ASW-2	/ASV-2
Size range	Width Height		Width	Height
Opening dimension				
Bottom section height 82 mm	900 – 1200	1800 – 2500	1300 – 2500	1800 – 2500
			1270	
Bottom section height 150 mm	900 – 1200	1800 – 2500	1300-2600	1800 – 2500
	1190		1270	

Clear passage	Width	Height
ASW-1	= Opening dimension – 10	= Opening dimension
ASW-2	= Opening dimension – 30	= Opening dimension
ASV-1	= Opening dimension – 10	= Opening dimension – 150 – gap
ASV-2	= Opening dimension – 30	= Opening dimension – 150 – gap

Fixed glazings
Design variations Page 31

All dimensions in mm 17
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# Aluminium fire and smoke protection elements





# T30

#### Fire-retarding

HE 311 HE 321

### F30

#### Fire-retarding

HE 331 HE 331 SW



#### High fire resistance

HE 611 HE 621

# F60

#### High fire resistance

HE 631

# T90

#### Fire-proof

HE 911 HE 921



#### Fire-proof

HE 931



#### Smoke-tight

A/RS 100/150 A/RS 200/250 A/RS 300/350



#### Acoustic-rated



#### Break-in-resistant

HE 311 HE 321 A/RS 100 A/RS 200



#### External door

(In approval process) HE 311 HE 321



# Anti-fall safeguard glazing

A/RS 300 A/RS 350

# 

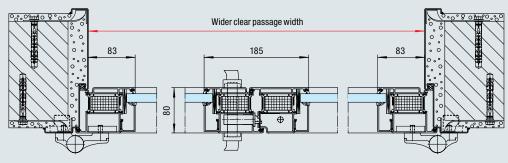
150

70

Single-leaf door with fascia frame

View T30 aluminium

#### Double-leaf door with steel frame

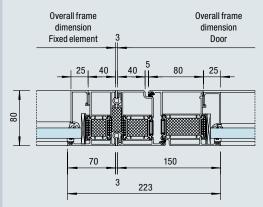


150

70

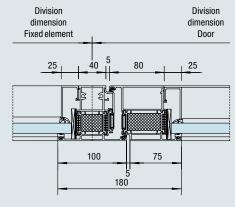
View T30 aluminium

#### **Fixed glazing**



Door / fixed element coupled

View T30 aluminium



Door / fixed element vertical profile construction

All dimensions in mm

19

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# Aluminium fire and smoke protection elements

#### **Features**

#### 1 Uniform colour scheme

Hörmann offers you doors, frames, fittings, hinges and closing devices in a uniform colour scheme. This allows the door to fit harmoniously into the room concept. As standard, we offer the steel fire and smoke protection elements with a powder-coated primer in Traffic white (RAL 9016). Optionally, the elements are available in natural finish aluminium EV 1, bronze and all RAL colours.

#### 2 Lock

As standard, all Hörmann fire-rated and smoke-tight doors are equipped with a latch catch lock. Doors with resistance class 2 are equipped with a triple lock. The fixed leaf is secured by a rebate espagnolette lock. Optionally, we offer anti-panic locks, also self-locking.

#### 3 Lever handle set

As standard, we offer all door sets with an offset aluminium lever/lever handle set with a steel core including a cylinder rose escutcheon. Break-in-resistant doors are additionally equipped with a protective fitting. Optionally, you can also choose lever handles and lever/knob handle sets as well as aluminium and stainless steel anti-panic bars.



#### 4 Closing devices

As standard, all fire-rated and smoke-tight doors are equipped according to DIN EN 1154 with a slide rail overhead door closer on the hinge side, with an integrated door leaf selector for double-leaf doors. Integrated overhead door closers are also available for a particularly harmonious look of the door.



Slide rail overhead door closer

#### 5 Hinges

The standard 3D hinge for fire-rated and smoke-tight doors is three-way adjustable, either with a pivot point of 20 or 36 mm. This aluminium hinge is available anodised, powder-coated in all colours or with a stainless steel finish.

The elegant and also precisely adjustable guide roller (pivot point 16 mm) is available as an alternative to the 3-way adjustable hinge. It is available in painted steel matching the door surface finish or in polished stainless steel.

The 3-part 3-way adjustable hinges of T90 fire-rated doors (pivot point 20 or 36 mm) can be optimally aligned and are available in the door surface finish. For a matching look, we also offer you T30 and RS doors with these hinges.



2-part 3-way adjustable hinge as standard



Guide roller



3-way adjustable hinge, 3-part (T90)

#### 6 Glazing beads

Glazing beads are not only a functional but also a style element for the overall look of a door. As standard we offer the doors with rectangular glazing beads.

If required, we offer the doors with rounded Softline glazing beads in which the precise mitre of frame and leaf is continued along a single line.



Rectangular glazing beads as standard



Softline glazing beads

21

### Office towers, Hamburg Architect: BRT Architekten LLP, Hamburg







- Hörmann products
   T30 aluminium fire-rated doors
- T30 aluminium smoke-tight doors A / RS 150



# T30 / F30 aluminium fire and smoke protection elements HE 311, HE 321, HE 331

Single and double-leaf doors, fixed glazing

#### Main functions

Fire-retarding
HE 311
HE 321

Fire-retarding
HE 331

Smoke-tight

Acoustic-rated
Acoustic values
from 35 – 40 dB
– 43 dB (HE 331)

Break-in-resistant

HE 311 Up to 1500 × 2750 mm HE 321

Up to 2750 × 2750 mm

External door

(In approval process) HE 311 HE 321

HE 311 HE 321 HE 331 Unlimited Up to 1500 mm Up to 3000 mm Up to 4500 mm Up to 4000 mm Up to 4000 **HE 311 HE 321 HE 331** Version Single-leaf door Double-leaf door Fixed glazing Profile system Aluminium Aluminium Aluminium Viewed frame width 70 70 70 80 80 80 **Bottom section height** 105/150 105/150 105/150 Fitting in Brickwork ≥115 ≥115 ≥115 ≥ 100 ≥ 100 Concrete ≥ 100 Gas concrete ≥ 150 ≥ 150 ≥ 150 Partition wall ≥ 100 ≥ 100 ≥ 100

	HE 311		HE	321
Size range	Width	Height	Width	Height
With fascia frame				
Overall frame dimension (ordering size)	605 – 1500	1740 – 4000	1355 – 3000	1740 – 4000
Clear passage	391 – 1286	1670 – 3930	1067 – 2712	1670 - 3930
With steel frame				
Nominal size (ordering size)	535 – 1430	1705 – 2965	1285 – 2930	1705 – 2965
Clear passage	414 – 1309	391 – 2933	1107 – 2752	1673 – 2933
Traffic leaf division			750 – 1500	
Fixed leaf division			500 – 1500	

Wall requirements based on size can be found in the fitting instructions at www.hoermann.com

	HE 331		
Size range	Width	Height	
With fascia frame			
Overall frame dimension (ordering size)	Unlimited	4500 / 4000*	
Maximum door height*		3000	

 $<sup>^{\</sup>star}$  For combination of door (HE 311, HE 321) and fixed glazing (HE 331)

Clear passage	Page 30
Fixed glazings	

Page 31

Design variations

### "Sign" Harbour Office, Düsseldorf Architect: Murphy / Jahn, Chicago – Berlin

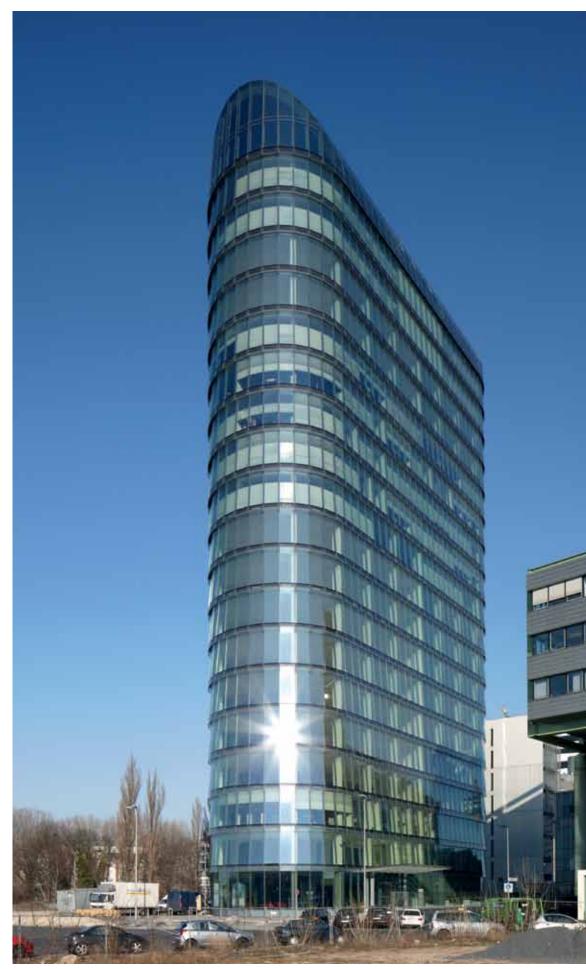






#### Hörmann products

- T30 aluminium fire-rated and smoke-tight doors HE 311/331
- T90 aluminium fire-rated and smoke-tight doors HE 921
- F90 fire-resistant glazing HE 931
- T30 steel fire-rated doors STS
- T30 steel fire-rated doors H3DT90 steel fire-rated doors H16
- Industrial rolling grille



# T60 / F60 aluminium fire and smoke protection elements HE 611, HE 621, HE 631

Single and double-leaf doors, fixed glazing

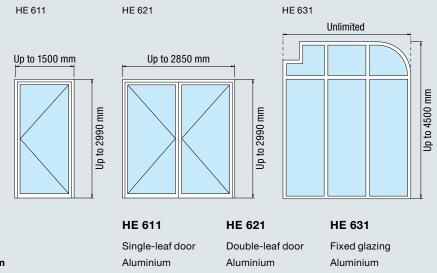
Main functions

High fire resistance
HE 611
HE 621

High fire resistance
HE 631

Smoke-tight

Acoustic-rated
Acoustic values
from 39 – 40 dB
– 44 dB (HE 631)



	HE 611	HE 621	HE 631
Version	Single-leaf door	Double-leaf door	Fixed glazing
Profile system	Aluminium	Aluminium	Aluminium
Viewed width	70	70	70
Depth	80	80	80
Bottom section height	150	150	150
Fitting in			
Brickwork	≥ 175	≥ 175	≥ 175
Concrete	≥ 140	≥ 140	≥ 140
Gas concrete	≥200	≥200	≥200
Partition wall	≥ 100	≥ 100	≥ 100

Wall requirements based on size can be found in the fitting instructions at www.hoermann.com

	HE 611		HE	621
Size range	Width Height		Width	Height
With fascia frame				
Overall frame dimension (ordering size)	605 – 1500	1740 – 2990	1355 – 2850	1740 – 2990
Clear passage	391 – 1286	1720 – 2780	1167 – 2562	1720 – 2780
Traffic leaf division			500 – 1425	
Fixed leaf division			500 – 1425	

	HE 631		
Size range	Width	Height	
Overall frame dimension (ordering size)	Unlimited	4500 / 4000*	
Maximum door height*		2800	

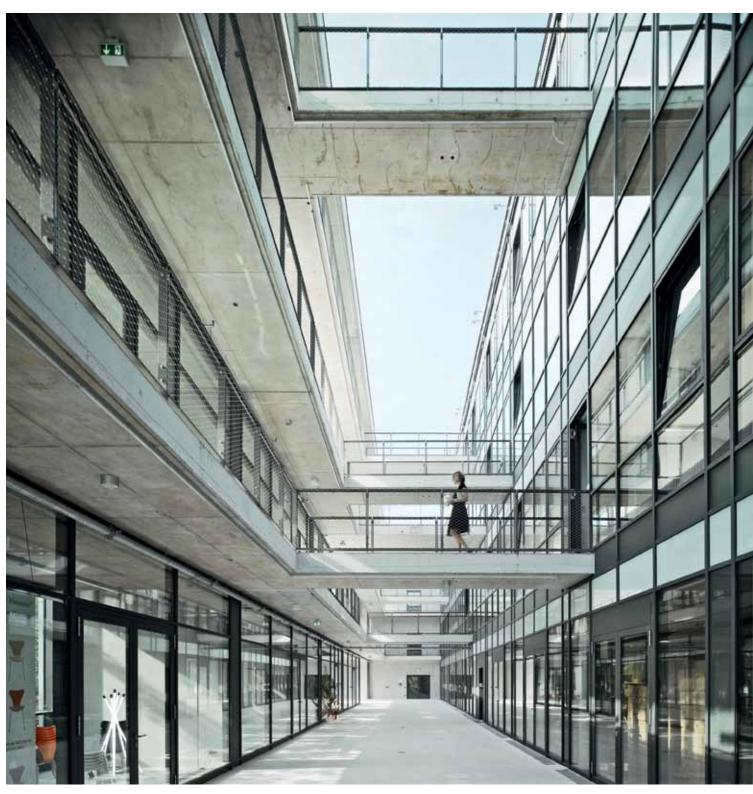
<sup>\*</sup> For combination of door (HE 611, HE 621) and fixed glazing (HE 631)

Clear passage Page 30
Fixed glazings

Page 31

Design variations

### Aufbau Haus in Berlin Architects: Clarke und Kuhn, freie Architekten BDA, Berlin Thinkbuild architecture, Jason Danzinger, Berlin









#### Hörmann products

- T30 aluminium fire-rated doors HE 311 and HE 321
- T30 steel fire-rated doors H3
- Industrial rolling grille Classic HG-A

# T90 / F90 aluminium fire and smoke protection elements HE 911, HE 921, HE 931

Single and double-leaf doors, fixed glazing

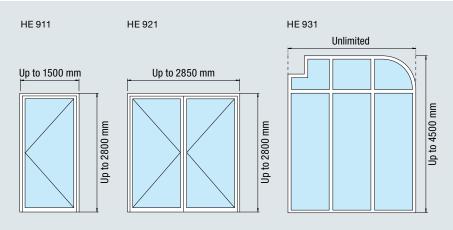
#### Main functions

**Fire-proof**HE 911
HE 921

Fire-proof HE 931

Smoke-tight

Acoustic-rated
Acoustic values
from 39 – 40 dB
– 44 dB (HE 931)



	HE 911	HE 921	HE 931
Version	Single-leaf door	Double-leaf door	Fixed glazing
Profile system	Aluminium	Aluminium	Aluminium
Viewed frame width	70	70	70
Depth	80	80	80
Bottom section height	150	150	70 / 150
Fitting in			
Brickwork	≥240	≥240	≥240
Concrete	≥ 140	≥ 140	≥ 140
Gas concrete	≥240	≥240	≥240
Partition wall	≥ 100	≥ 100	≥ 100

Wall requirements based on size can be found in the fitting instructions at www.hoermann.com

	HE 911		HE	921	
Size range	Width	Height	Width	Height	
With fascia frame					
Overall frame dimension (ordering size)	605 – 1500	1740-2800	1355 – 2850	1740 – 2800	
Clear passage	391 – 1286	1720 - 2730	1167 – 2562	1720 – 2730	

	HE 931		
Size range	Width	Height	
Overall frame dimension (ordering size)	Unlimited	4500 / 4000*	
Maximum door height*		2800	

<sup>\*</sup> For combination of door (HE 911, HE 921) and fixed glazing (HE 931)

Clear passage Page 30
Fixed glazings

Design variations Page 31

# Aluminium smoke protection elements A / RS 150, A / RS 250, A / RS 350

Single and double-leaf doors, fixed glazing



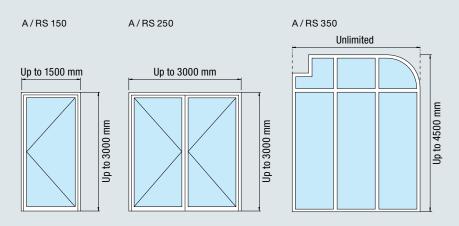
dB

RS

Acoustic-rated Acoustic values from 31 – 32 dB

TRAV

Anti-fall safeguard glazing A/RS 350



	A / RS 150	A / RS 250	A / RS 350
Version	Single-leaf door	Double-leaf door	Fixed glazing
Profile system	Aluminium	Aluminium	Aluminium
Viewed frame width	70	70	70
Depth	50	50	50
Bottom section height	105/150	105/150	105/150
Fitting in			
Brickwork	≥115	≥115	≥115
Concrete	≥ 100	≥ 100	≥100
Gas concrete	≥ 150	≥ 150	≥ 150
Partition wall	≥ 100	≥ 100	≥100

Wall requirements based on size can be found in the fitting instructions at www.hoermann.com

	A/R	A/RS 150		A/RS 250				
Size range	Width	Width Height		Height				
With fascia frame	With fascia frame							
Overall frame dimension (ordering size)	605 – 1500	1740 – 3000	1355 – 3000	1740 – 3000				
Clear passage	421 – 1316	1670 – 2730	1215 – 2860	1670 – 2730				
With steel frame								
Nominal size (ordering size)	535 – 1430	1635 – 2965	1285 – 2930	1635 – 2965				
Clear passage	424 – 1319	1603 – 2933	1127 – 2777	1603 – 2933				
Traffic leaf division			548 – 1500					
Fixed leaf division			548 – 1500					

	A/R5350		
Size range	Width	Height	
Overall frame dimension (ordering size)	Unlimited	Unlimited	
Maximum door height*		3000	
TRAV			
Max. element size	Unlimited	4500	
Min. pane size	800	1000	
Max. pane size	Depending on glass type according to table 2 TRAV		

\_\_\_

Page 30

Clear passage Fixed glazings

Design variations Page 31

 $^{\star}$  For combination of door (A / RS 150, A / RS 250) and fixed glazing (A / RS 350)

28

All dimensions in mm

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# Aluminium smoke protection elements, insulated A/RS 100, A/RS 200, A/RS 300

Single and double-leaf doors, fixed glazing





RS

Acoustic-rated Acoustic values 34 dB



Break-in-resistant A/RS 100 Up to 1500 × 2750 mm A/RS 200 Up to  $2750 \times 2750 \text{ mm}$ 

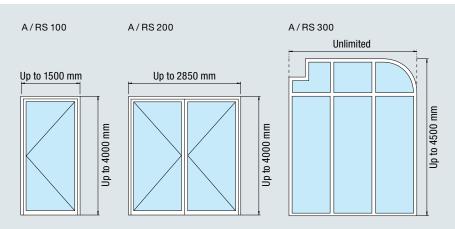


Clear passage

Fixed glazings

Page 30

Anti-fall safeguard glazing A/RS 300



	A/RS 100	A/RS 200	A/RS 300
Version	Single-leaf door	Double-leaf door	Fixed glazing
Profile system	Aluminium	Aluminium	Aluminium
Viewed width	70	70	70
Depth	80	80	80
Bottom section height	70/150	70/150	70 / 150
Fitting in			
Brickwork	≥115	≥115	≥115
Concrete	≥ 100	≥ 100	≥ 100
Gas concrete	≥ 150	≥ 150	≥ 150
Partition wall	≥ 100	≥ 100	≥ 100

Wall requirements based on size can be found in the fitting instructions at www.hoermann.com

	A/RS100		A/R	S 200
Size range	Width	Height	Width	Height
With fascia frame				
Overall frame dimension (ordering size)	605 – 1500	1740 – 4000	1355 – 3000	1740 – 4000
Clear passage	391 – 1286	1670 – 3930		
With steel frame				
Nominal size (ordering size)	535 – 1430	1705 – 2965*	1285 – 2930	1750 – 2965*
Clear passage	424 – 1319	1673 – 3933	1127 – 2777	1673 –3933
Traffic leaf division			500 – 1500	
Fixed leaf division			500 – 1500	

29

With transom light 3500

	A/RS 300		
Size range	Width	Height	
Overall frame dimension (ordering size)	Unlimited	Unlimited	
Maximum door height**		3000	
TRAV			
Max. element size	Unlimited	4500	
Min. pane size	800	1000	
Max. pane size	Depending on glass type according to table 2 TRAV		

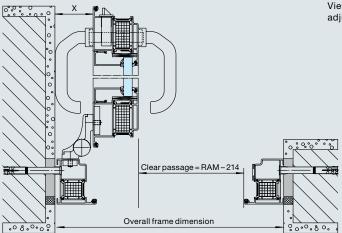
<sup>\*\*</sup> For combination of door (A/RS 100, A/RS 200) and fixed glazing (A/RS 300)

Design variations Page 31

## Clear passage

# With door leaf opened by 90° and without fittings

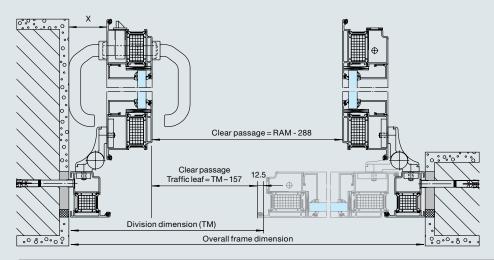
#### Single-leaf door



View of T30 aluminium fire-rated door, single-leaf with 3-way adjustable hinge with 20 mm pivot point

#### **Double-leaf door**

View of T30 aluminium fire-rated door, double-leaf with 3-way adjustable hinge with 20 mm pivot point



Hinge system	Single-leaf door		Double-leaf door, Coverall					eaf door, c leaf	Distance leaf / wall (x)
Door type	A/RS 150	HE 311 HE 611	A/RS 250	HE 321 HE 621	A/RS 250	HE 321 HE 621			
		HE 911 A/RS 100		HE 921 A/RS 200		HE 921 A/RS 200			
Depth	50	80	50	80	50	80			
3-way adjustable hinge, pivot point 20 mm	RAM – 184	RAM - 214	RAM – 228	RAM - 288	Division dimension – 127	Division dimension – 157	64		
3-way adjustable hinge, pivot point 36 mm	RAM - 200	RAM - 230	RAM - 260	RAM - 320	Division dimension – 143	Division dimension – 173	80		
Guide roller*, pivot point 16 mm	RAM – 179	RAM - 209	RAM - 218	RAM - 278	Division dimension – 117	Division dimension – 152	52		

All dimensions refer to element assemblies

30

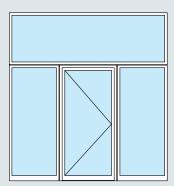
 $<sup>^{\</sup>ast}\,$  Only for HE 611, HE 621, HE 911, HE 921

# **Fixed glazings**

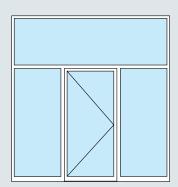
#### **Design variations**

Hörmann aluminium fire-rated doors are available either as a coupling construction for simple connection on location, or as complete elements with a vertical/horizontal profile construction. Thus they can be easily matched to the fitting situation at the construction site.

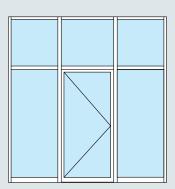
With the Hörmann plug-in system, the slim vertical/horizontal profile construction can also be assembled into walls of any size.



Coupling construction

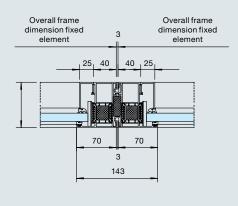


Vertical / horizontal profile construction as a complete element

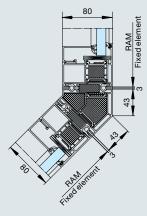


Vertical / horizontal profile construction as a plug-in system

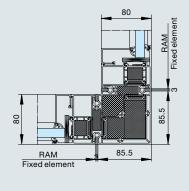
#### **Coupling construction variants**



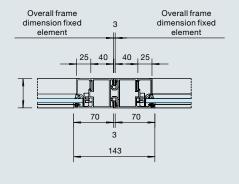
Aluminium F30 coupling 180°



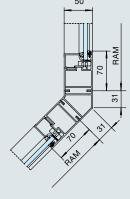
Aluminium F30 coupling 135°



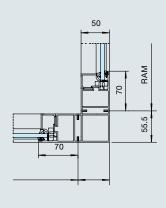
Aluminium F30 coupling 90°



Aluminium RS-3 coupling 180°



Aluminium RS-3 coupling 135°



Aluminium RS-3 coupling 90°

# Hafencity, Hamburg

#### Hörmann projects in one of Europe's largest urban development areas



Projects with Hörmann products incl. Dalmann-Carrée, Kühne + Nagel, Coffee Plaza, Marco-Polo-Tower, 25h Hotel, Unilever building, Oval am Kaiserkai





#### Hörmann products

- T30 aluminium fire-rated doors HE 311
- T90 aluminium fire-rated doors HE 911
- Aluminium smoke-tight doors A/RS 150
- T30 steel fire-rated doors H3
- T90 steel fire-rated doors H16
- T30 steel fire-rated doors STS



Certified by

DG NB\*

Deutsche Gesellschaft für Nachhaltiges Bauen e.V.

German Sustainable Building Council

**Spiegel building** Architect: Henning Larsen Architects, Copenhagen, DK







- Hörmann products
   T30 aluminium fire protection elements HE 311, HE 321, HE 331
- Aluminium smoke-tight doors A/RS 150, A/RS 250
- T30 steel fire-rated doors HL 310 S, HL 320 S
- T90 aluminium fire-rated doors HE 911, HE 921
- F90 aluminium fire protection elements HE 931

**CC01 Commercial Center** 

Architect: Baumschlager Eberle Ziviltechniker GmbH, Lochau, AT



Elbphilharmonie under construction Architect: © Herzog & de Meuron, Basel (Switzerland)





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# F30 steel system wall

#### Matching the S-Line and N-Line steel fire-rated and smoke-tight doors



#### Discreet glazing joint

The individual glass panes are jointed by silicone (joint width 5 mm). Available in black as standard and on request in transparent.



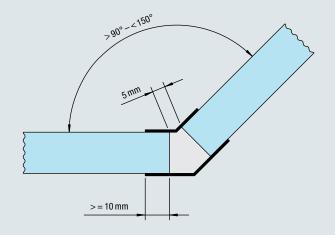




Transparent silicone joint

#### **Corner connector**

In corner areas with any angle, this system glazing does not require corner posts. The joint with fire-rated silicone is elegantly concealed on the inside and the outside by a glued-on slim metal angle profile only. A technically and visually appealing solution.



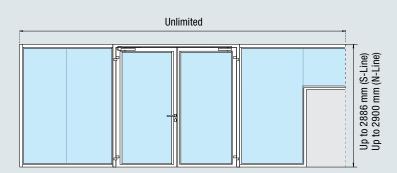
HL 330 S / SW, HL 330 SW

**Main functions** Fire-retarding

F30

RS

Smoke-tight



	HL 330 S/SW	HL 330 SW
Version	Double-leaf door	Double-leaf door
Profile system	Steel S-Line	Steel N-Line
Viewed width	134	168
Depth	60	60
Bottom section height	70/81	84 / 150
Fitting in		
Brickwork	≥115	≥ 115
Concrete	≥ 100	≥ 100
Gas concrete	≥ 150	≥ 150
Partition wall	≥ 100	≥100

Wall requirements based on size can be found in the fitting instructions at www.hoermann.com  $\,$ 

	HL 330 S/SW S-Line		HL 330 S	W N-Line	
Size range	Width Height		Width	Height	
With fascia frame					
Overall frame dimension (ordering size)	Unlimited	2886	Unlimited	2900	
Maximum door height		2886		2900	

Fixed glazings Design variations Page 49

All dimensions in mm 35 0800 328 6250 www.samsondoors.co.uk www.samsondoors.co.uk

# **Steel fire and smoke protection elements**





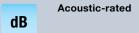
#### **Steel S-Line**

# T30 Fire-retarding HL 310 S HL 320 S

# Fire-retarding HL 330 S

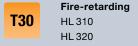


# Smoke-tight S/RS 100 S S/RS 200 S S/RS 300 S



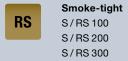


#### **Steel N-Line**

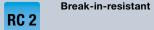


# Fire-retarding HL 330

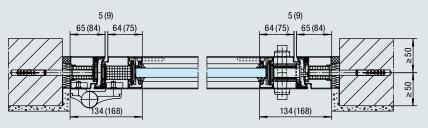






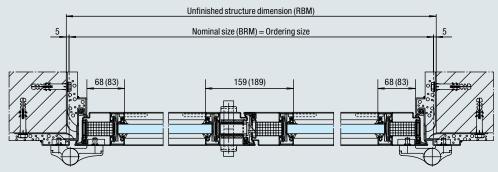


#### Single-leaf S-Line steel door with fascia frame



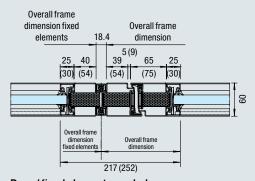
View T30 steel S-Line, in brackets N-Line dimensions

#### Double-leaf S-Line steel door with steel frame



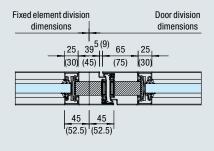
View T30 steel S-Line, in brackets N-Line dimensions

#### Fixed glazing steel S-Line



Door / fixed element coupled

View T30 steel S-Line, in brackets N-Line dimensions



Door / fixed element vertical profile construction

www.samsondoors.co.uk

All dimensions in mm 37

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# Steel fire and smoke protection elements

#### **Features**

#### 1 Uniform colour scheme

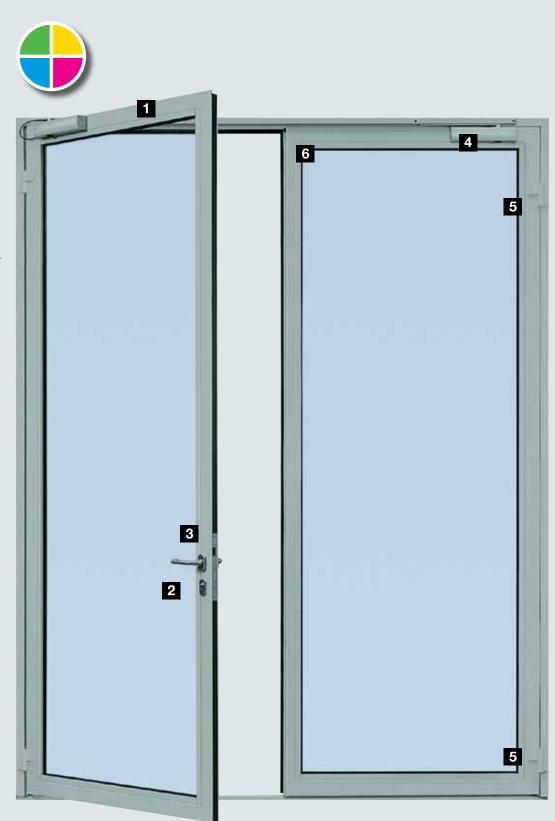
Hörmann offers you doors, frames, fittings, hinges and closing devices in a uniform colour scheme. This allows the door to fit harmoniously into the room concept. As standard, we offer the steel fire and smoke protection elements galvanized, with a powder-coated primer in Traffic white (similar to RAL 9016). Optionally, the elements are available galvanized primed, in bronze and all RAL colours.

#### 2 Lock

As standard, all Hörmann fire-rated and smoke-tight doors are equipped with a latch catch lock. The fixed leaf is secured by a rebate espagnolette lock. Optionally, we offer anti-panic locks, also self-locking.

#### 3 Lever handle set

As standard, we offer all door sets with an offset aluminium lever/lever handle set with a steel core including a cylinder rose escutcheon. Optionally, you can also choose lever handles and lever / knob handle sets as well as aluminium and stainless steel anti-panic bars.



#### 4 Closing devices

As standard, all fire-rated and smoke-tight doors are equipped according to DIN EN 1154 with a slide rail overhead door closer on the hinge side, with an integrated door leaf selector for double-leaf doors. Integrated overhead door closers are also available for a particularly harmonious look of the door.



Slide rail overhead door closer

#### 5 Hinges



The standard 3D hinge for T30 and RS doors is three-way adjustable, either with a pivot point of 20 or 36 mm. This aluminium hinge is available anodised, powder-coated in all colours or with a stainless steel finish.



For the slim S-Line profiles alternatively the slim steel guide roller is also available as a version for welding or screwing on (pivot point 12 mm). It highlights the vertical line and is available with the same surface as the door or in stainless steel.



The concealed hinges are integrated in the fascia frame and door leaf. This is coupled with an integrated closing system and thus the all-round profile is not interrupted by a surface-mounted element.

#### 6 Glazing beads



As standard, the doors are equipped all-round and on both sides of the door with rectangular steel glazing beads. This detail gives the door an elegant overall appearance.



For an exclusive industrial look you can also choose screwed angle glazing beads for both sides of the door.



We also offer a screwed angle glazing bead with edge recess, which is fitted on both sides of the door, giving the door a delicate filigree touch.

# T30 steel fire and smoke protection elements S-Line HL 310 S, HL 320 S

Single and double-leaf doors

Main functions
Fire-retarding

RS

T30

Smoke-tight

dB

Acoustic-rated Acoustic values from 34 – 42 dB

RC 2

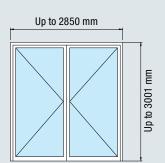
Break-in-resistant HL 310 S Up to 1500 × 2800 mm

HL 320 S Up to 1500 × 2800 mm

Size range

Fixed leaf division

HL 310 S



HL 320 S

	HL 310 S	HL 320 S
Version	Single-leaf door	Double-leaf door
Profile system	Steel S-Line	Steel S-Line
Viewed width	134	134
Depth	60	60
Bottom section height	76	76
Fitting in		
Brickwork	≥115	≥115
Concrete	≥ 100	≥ 100
Gas concrete	≥ 150	≥ 150
Partition wall	≥ 100	≥ 100

 $\label{thm:composition} Wall\ requirements\ based\ on\ size\ can\ be\ found\ in\ the\ fitting\ instructions\ at\ www.hoermann.com$ 

With fascia frame				
Overall frame dimension (ordering size)	567 – 1550	1721 – 3001	1317 – 2852	1721 – 3001
Clear passage	387 – 1370	1656 – 2936	1087 – 2622	1656 – 2936
With steel frame				
Nominal size (ordering size)	499 – 1485	1687 – 2278	1244 – 2844	1687 – 2278
Clear passage	385 – 1371	1655 – 2246	1085 - 2680	1655 – 2246
Traffic leaf division			500 – 1425	
	i e			i e

HL 310 S

Height

Width

Clear passage Page 48
Fixed glazings
Design variations Page 49

40

www.samsondoors.co.uk

HL 320 S

Height

Width

500 - 1425

# F30 steel fire and smoke protection elements S-Line HL 330 S, G 300 S $\,$

**Fixed glazings** 

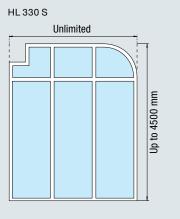
#### **Main functions**

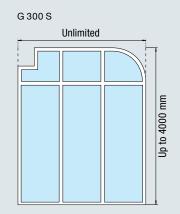
Fire-retarding
HL330 S

**G30** Fire-retarding

RS Smoke-tight

Acoustic-rated
Acoustic values
43 dB (HL 330 S)
31 dB (G 300 S)





	HL 330 S	G 300 S	
Version	Fixed glazing	Fixed glazing	
Profile system	Steel S-Line	Steel S-Line	
Viewed width	65	65	
Depth	60	60	
Bottom section height	76	76	
Fitting in			
Brickwork	≥ 115	≥115	
Concrete	≥100	≥ 100	
Gas concrete	≥ 150	≥ 150	
Partition wall	≥ 100	≥100	

Wall requirements based on size can be found in the fitting instructions at www.hoermann.com

	HL3	30 S	G 3	00 S
Size range	Width	Height	Width	Height
With fascia frame				
Overall frame dimension (ordering size)	Unlimited	4500	Unlimited	4000
Maximum door height*		3001		Not available

Fixed glazings
Design variations Page 49

All dimensions in mm 41

<sup>\*</sup> For combination of door (HL 310 S, HL 320 S) and fixed glazing (HL 330 S, G 300 S)

#### Drägerwerk AG, Lübeck Architect: Goetz Hootz Castorph Architekten und Stadtplaner, Munich









#### Hörmann products

- T30 fire-rated and smoke-tight doors HL 310, HL 320, HL 330
- Steel smoke-tight doors S/
- RS 100, S/RS 200, S/RS 300
- T30 Fire-rated doors H3, H3D
- T90 Fire-rated doors H 16
- Classic rolling grille HG-S
- Steel folding doors KSM

# Steel smoke protection elements S-Line S / RS 100 S, S / RS 200 S, S / RS 300 S

Concrete
Gas concrete

Partition wall

Single and double-leaf doors, fixed glazing





RS

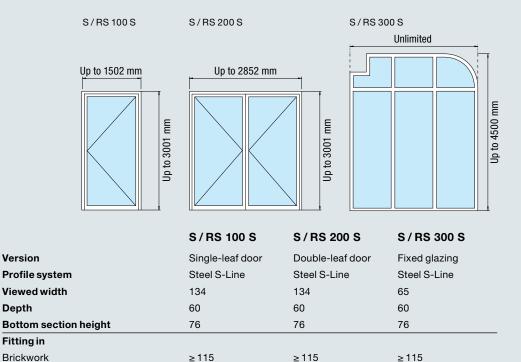
Acoustic-rated Acoustic values from 32 – 42 dB

Additional function Anti-fall safeguard glazing



TRAI/

Break-in-resistant S/RS 100 S Up to 1500 × 2800 mm S/RS 200 S Up to 2850 × 2800 mm



≥ 100

≥ 100

≥ 100

≥ 100

≥ 100

≥ 100

Wall requirements based on size can be found in the fitting instructions at www.hoermann.com

≥100

≥ 100

≥ 100

	S/RS	100 S	S/RS	200 S	
Size range	Width	Height	Width	Height	
With fascia frame					
Overall frame dimension (ordering size)	567 – 1502	1721 – 3001	1317 – 2852	1721 – 3001	
Clear passage	387 – 1322	1656 – 2936	1087 – 2622	1656 – 2936	
With steel frame					
Nominal size (ordering size)	499 – 1432	1706 – 2967	1249 – 2784	1706 – 2967	
Clear passage	385 – 1318	1674 – 2935	1085 – 2620	1674 –2935	
Traffic leaf division			500 – 1425		
Fixed leaf division			500 – 1425		

	S/RS300S		
Size range	Width	Height	
Overall frame dimension (ordering size)	Unlimited	4500	
Maximum door height*		3001	
TRAV			
Max. element size	Unlimited	4500	
Min. pane size	800	1000	
Max. pane size	Depending on glass type according to table 2 TRAV		

<sup>\*</sup> For combination of door (S / RS 100 S, S / RS 200 S) and fixed glazing (S / RS 300 S)

Fixed glazings
Design variations Page 49

Page 48

Clear passage

All dimensions in mm 43

# T30 steel fire and smoke protection elements N-Line HL 310, HL 320 $\,$

Single and double-leaf doors

Main functions
Fire-retarding

RS

T30

Smoke-tight

dB

Acoustic-rated Acoustic values from 34-42 dB

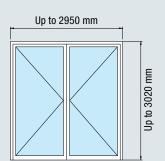
RC 2

Break-in-resistant HL 310

Up to  $1540 \times 2820$  mm HL 320 Up to  $2940 \times 2820$  mm

HL 310 HL 320

Up to 1590 mm



	HL 310	HL 320
Version	Single-leaf door	Double-leaf door
Profile system	Steel N-Line	Steel N-Line
Viewed width	168	168
Depth	60	60
Bottom section height	84/150	84 / 150
Fitting in		
Brickwork	≥115	≥ 115
Concrete	≥ 100	≥ 100
Gas concrete	≥ 150	≥ 150
Partition wall	≥ 100	≥ 100

Wall requirements based on size can be found in the fitting instructions at www.hoermann.com

Size range	Width	Height	Width	Height
With fascia frame				
Overall frame dimension (ordering size)	605 – 1590	1740 – 3020	1355 – 2950	1740 – 3020
Clear passage	387 – 1372	1656 – 2936	1087 – 2682	1656 – 2936
With steel frame				
Nominal size (ordering size)	499 – 1485	1687 – 2278	1249 – 2844	1687 – 2278
Clear passage	385 – 1371	1655 – 2246	1085 – 2680	1655 – 2246
Traffic leaf division			500 – 1445	
Fixed leaf division			500 – 1445	

HL 310

Clear passage Page 48

Fixed glazings

Design variations Page 49

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All dimensions in mm

HL 320

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## F30 steel fire and smoke protection elements N-Line HL 330, G 300

**Fixed glazings** 



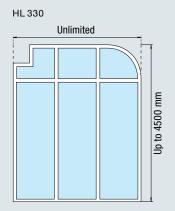
Fire-retarding F30 HL 330

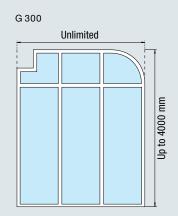
Fire-retarding **G30** G 300

Smoke-tight

Acoustic-rated dB Acoustic values 43 dB (HL 330) 31 dB (G 300)

RS





	HL 330	G 300
Version	Fixed glazing	Fixed glazing
Profile system	Steel N-Line	Steel N-Line
Viewed width	84	84
Depth	60	60
Bottom section height	84/150	84/150
Fitting in		
Brickwork	≥115	≥115
Concrete	≥ 100	≥ 100
Gas concrete	≥ 150	≥ 150
Partition wall	≥ 100	≥ 100

Wall requirements based on size can be found in the fitting instructions at www.hoermann.com

	HL 330		G 300	
Size range	Width	Height	Width	Height
With fascia frame				
Overall frame dimension (ordering size)	Unlimited	4500	Unlimited	4000
Maximum door height*		3020		Not available

Fixed glazings Design variations Page 49

For combination of door (HL 310, HL 320) and fixed glazing (HL 330)

www.samsondoors.co.uk

#### University Medical Centre Hamburg-Eppendorf Architect: Nickl & Partner Architekten AG, Munich, Berlin









#### Hörmann products

- T30 steel fire-rated and smoketight doors HL 310 / HL 320, partial automatic operation
- T30 steel fire and smoke-tight glazing HL 330 S
- Steel smoke-tight doors S/RS 100
- Steel fire and smoke-tight glazing S / RS 300

# Steel smoke protection elements N-Line S/RS 100, S/RS 200, S/RS 300

Gas concrete

Partition wall

Single and double-leaf doors, fixed glazing





RS

Acoustic-rated Acoustic values from 32 - 42 dB

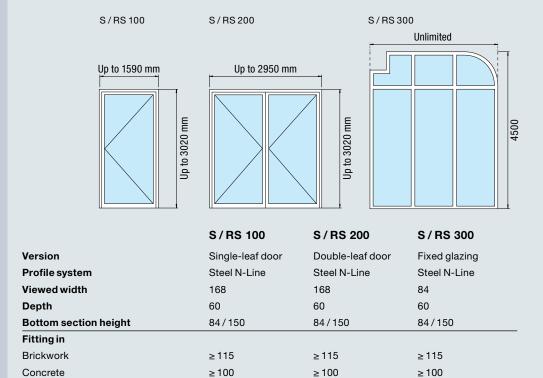
**Additional** function Anti-fall safeguard glazing



Clear passage

TRAI/

Break-in-resistant S/RS 100 Up to 1540 × 2820 mm S/RS 200 Up to 2940 × 2820 mm



≥ 150

≥ 100

Wall requirements based on size can be found in the fitting instructions at www.hoermann.com

≥ 150

≥ 100

≥ 150

≥ 100

47

	S/RS100		S/R	S 200
Size range	Width	Height	Width	Height
With fascia frame				
Overall frame dimension (ordering size)	605 – 1590	1740 – 3020	1355 – 2950	1740 – 3020
Clear passage	387 – 1372	1656 – 2936	1087 – 2682	1656 – 2936
With steel frame				
Nominal size (ordering size)	499 – 1432	1706 – 2967	1249 – 2784	1706 – 2967
Clear passage	385 – 1318	1674 – 2935	1085 – 2620	1674 –2935
Traffic leaf division			500 – 1445	
Fixed leaf division			500 – 1445	

	S/RS300		
Size range	Width	Height	
Overall frame dimension (ordering size)	Unlimited	4500	
Maximum door height*		3020	
TRAV			
Max. element size	Unlimited	4500	
Min. pane size	800	1000	
Max. pane size	Depending on glass type according to table 2		

For combination of door (S/RS 100, S/RS 200) and fixed glazing (S/RS 300)

Fixed glazings Design variations Page 49

Page 48

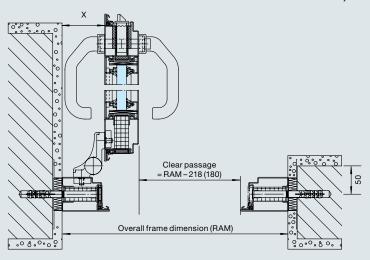
All dimensions in mm 0800 328 6250 www.samsondoors.co.uk www.samsondoors.co.uk

## Clear passage

## With door leaf opened by 90° and without fittings

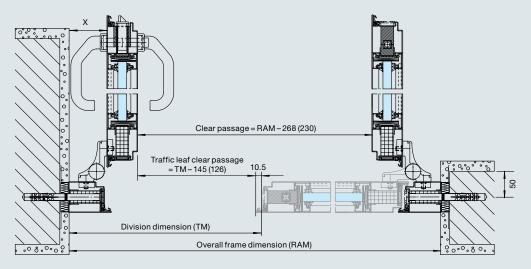
#### Single-leaf door

View of T30 steel fire and smoke-tight door N-Line, single-leaf with 3-way adjustable hinges with pivot point 20 mm. (S-Line)



#### **Double-leaf door**

View of T30 steel fire and smoke-tight door N-Line, double-leaf with 3-way adjustable hinges with pivot point 20 mm. (S-Line)



#### S-Line

Hinge system	Single-leaf door	Double-leaf door, overall	Double-leaf door, traffic leaf	Distance leaf / wall (x)
3-way adjustable hinge, pivot point 20 mm	RAM – 180	RAM – 230	Division dimension – 126	56
3-way adjustable hinge, pivot point 36 mm	RAM – 196	RAM – 262	Division dimension – 142	72
Guide roller, pivot point 12 mm	RAM – 179	RAM – 227	Division dimension – 125	54
Concealed hinge, pivot point 9.5 mm	RAM – 140	RAM – 150	Division dimension – 85	15

#### N-Line

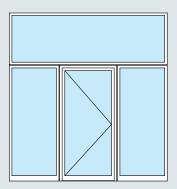
Hinge system	Single-leaf door	Double-leaf door, overall	Double-leaf door, traffic leaf	Distance leaf / wall (x)
3-way adjustable hinge, pivot point 20 mm	RAM - 218	RAM – 268	Division dimension – 145	75
3-way adjustable hinge, pivot point 36 mm	RAM - 234	RAM – 300	Division dimension – 161	91
Guide roller, pivot point 12 mm	RAM – 215	RAM – 262	Division dimension – 142	71
Concealed hinge, pivot point 9.5 mm	RAM – 178	RAM – 188	Division dimension – 104	34

# **Fixed glazings**

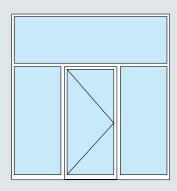
#### **Design variations**

Hörmann aluminium fire-rated doors are available either as a coupling construction for simple connection on location, or as complete elements with a vertical/horizontal profile construction. Thus they can be easily matched to the fitting situation at the construction site.

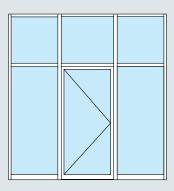
With the Hörmann plug-in system, the slim vertical/horizontal profile construction can also be assembled into walls of any size.



Coupling construction

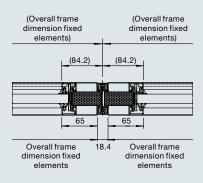


Vertical/horizontal profile construction as a complete element

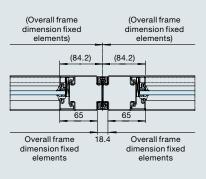


Vertical/horizontal profile construction as a plug-in system

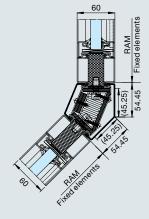
#### **Coupling construction variants**



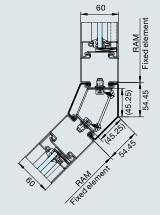
Steel S-Line F30 180° coupling (N-Line)



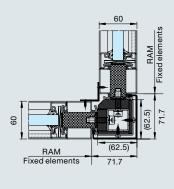
Steel S-Line RS/G30 180° coupling (N-Line)



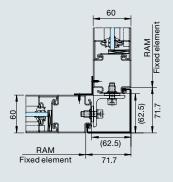
Steel S-Line F30 135° coupling (N-Line)



Steel S-Line RS/G30 135° coupling (N-Line)



Steel S-Line F30 90° coupling (N-Line)



Steel S-Line RS/G30 90° coupling (N-Line)

# T90 / F90 steel fire and smoke protection elements HL 910 F, HL 920 F, HL 930 F $\,$

NEW

Single and double-leaf doors, fixed glazing



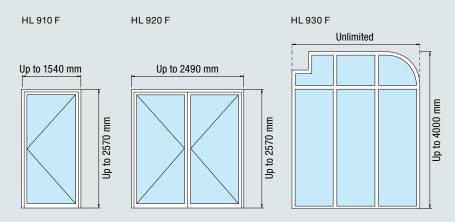
#### **Main functions**

Fire-proof **T90** HL 910 F HL 920 F

Fire-proof **F90** HL 930 F

Smoke-tight

RS



	HL 910 F	HL 920 F	HL 930 F
Version	Single-leaf door	Double-leaf door	Fixed glazing
Profile system	Steel	Steel	Steel
Viewed frame width	70	70	70
Depth	70	70	70
Bottom section height	90	90	90
Fitting in			
Brickwork	≥ 175	≥ 175	≥ 175*
Concrete	≥ 140	≥ 140	≥ 140
Gas concrete	≥240	≥240	≥240
Partition wall	≥ 100	≥100	≥ 100

Wall requirements based on size can be found in the fitting instructions at www.hoermann.com

	HL 910 F		HL 920 F		
Size range	Width	Height	Width	Height	
With fascia frame					
Overall frame dimension (ordering size)	700 – 1540	1725 – 2570	1400-2490	1725 – 2570	
Clear passage	560 – 1400	1655 – 2500	1260 – 2350	1655 – 2500	

	HL 930 F		
Size range	Width	Height	
Overall frame dimension (ordering size)	Unlimited	4000**	
Maximum door height**		2570	

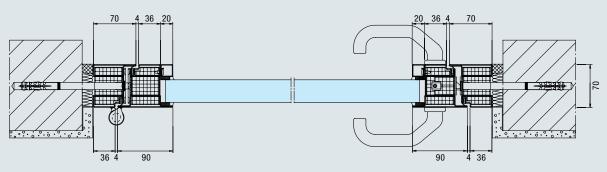
 $<sup>^{\</sup>star\star}$  For combination of door (HL 910 F, HL 920 F) and fixed glazing (HL 930 F)

 $<sup>^*</sup>$  Overall frame dimension height > 2600 mm: minimum wall thickness  $\geq$  240 mm

## T90 / F90 steel fire and smoke protection elements

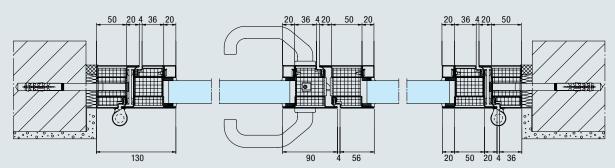
#### System overview

#### Single-leaf door with fascia frame



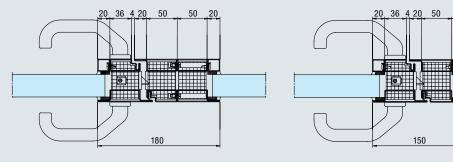
View of T90 steel

#### Double-leaf door with fascia frame



View of T90 steel

#### **Fixed glazing**



Door / fixed element coupled

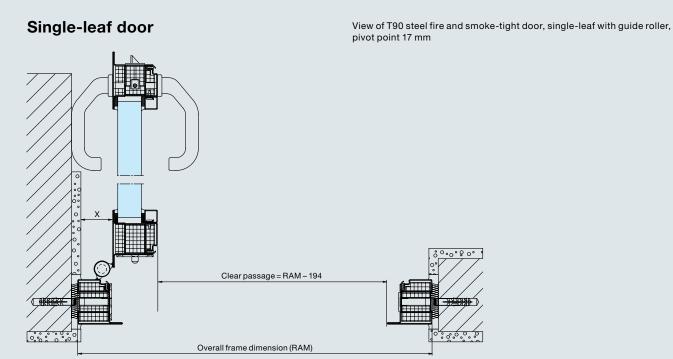
View of T90 steel

52

Door / fixed element vertical profile construction

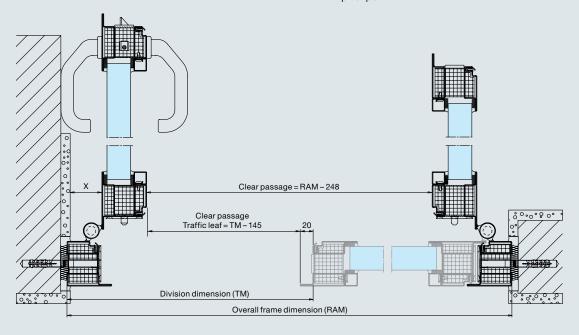
## Clear passage

### With door leaf opened by 90° and without fittings



#### **Double-leaf door**

View of T90 steel fire and smoke-tight door, double-leaf with guide roller, pivot point 17  $\,\mathrm{mm}$ 



Hinge system	Single-leaf door	Double-leaf door, overall	Double-leaf door, traffic leaf	Distance leaf / wall (x)
3-way adjustable hinge, pivot point 20 mm	RAM – 196	RAM – 252	Division dimension – 146	66
3-way adjustable hinge, pivot point 36 mm	RAM – 212	RAM – 284	Division dimension – 162	82
Guide roller, pivot point 17 mm, fitting by welding	RAM – 194	RAM – 248	Division dimension – 145	65

## Hörmann product range

#### Everything from a single source for your construction project

#### Sectional doors

These space-saving door systems can be adapted to different industrial facilities using various track applications. Hörmann offers you tailored solutions for every application.

#### 2 Rolling shutters and rolling grilles

Thanks to a simple construction with just a few components, rolling shutters are both economical and sturdy. Hörmann supplies rolling shutters in widths and heights of up to 11.75 m and 9 m respectively, or as special doors which are even larger.

#### 3 High-speed doors

Hörmann high-speed doors are used both inside and as exterior doors to optimise the flow of traffic, improve room conditions and save energy. The Hörmann programme includes vertically and horizontally opening transparent doors with flexible curtains.

#### 4 Loading technology

Hörmann offers you complete loading systems for the logistics sector. The advantages: reliable planning, dependable execution of construction work and high functionality thanks to precisely matched components.

# Fire and multi-purpose sliding doors

Hörmann can provide you with single or double-leaf sliding door solutions suitable for all areas and required fire protection classes, or without fire protection.

# 6 Multi-function doors and reinforced internal doors

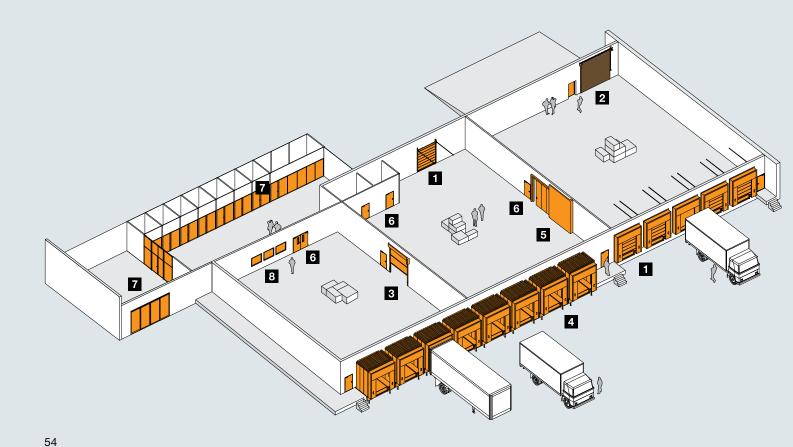
Hörmann multi-function doors and reinforced internal doors are suitable for indoor and outdoor use. Our single and double-leaf doors can be used wherever robust door elements are required. With numerous additional functions, such as fire and smoke protection, acoustic insulation or burglar protection.

#### Box frame parts

For areas in which appearance is important, such as administrative buildings, Hörmann offers you fire and smoke protection doors as well as steel and aluminium fixed glazing and automatic sliding doors, also suited for special fire protection requirements.

#### 8 Visibility windows

Hörmann visibility glazings are used as windows or room-high elements to provide more light and better visibility.





# Quick service with testing, maintenance and repairs

Our extensive service network means that we are always nearby and at your service around the clock.

















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#### Hörmann: Quality without Compromise



Hörmann is the only manufacturer worldwide that offers you a complete range of all major building products from one source. We manufacture in highly-specialised 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

