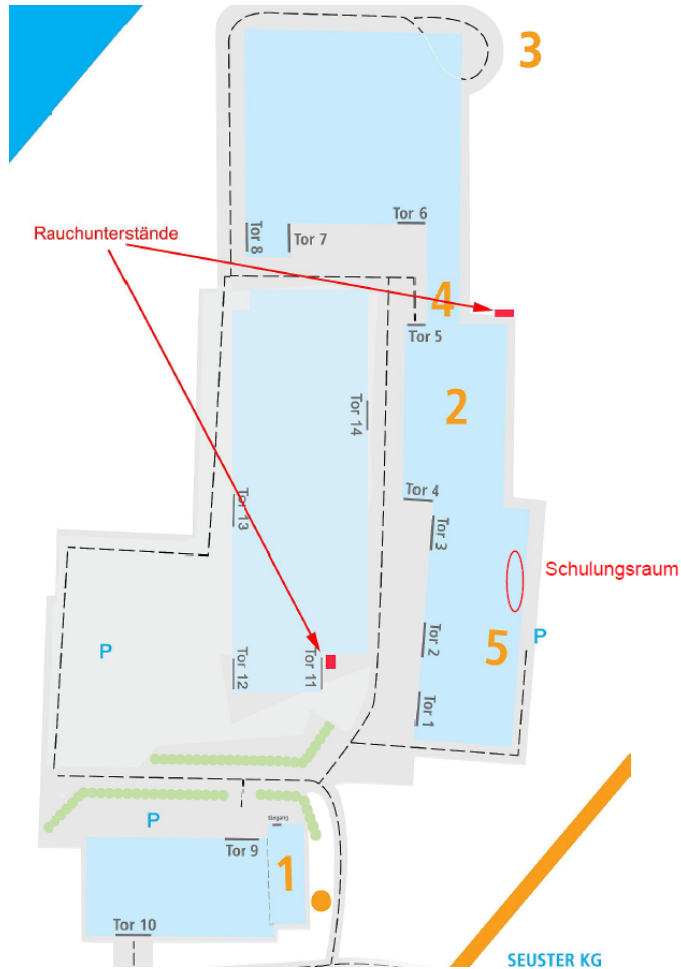


Welcome to SEUSTER

HÖRMANN

# High-Speed Doors Presentation 2025





Absolute smoking ban on the factory premises, except for smoke shelters!



Vegetarians, vegans, persons suffering from allergies?





**Headquarter :**

Seuster KG

Tietmecker Weg 1

D-58513 Lüdenscheid

Germany

## Im Laufe der Zeit

aus dem Unternehmen



1906

Adolf Seuster



1948

Adolf Seuster GmbH



1978

38 Mitarbeiter



1988

56 Mitarbeiter



1989

Verlagerung des Unternehmens aus der Innenstadt ins Industriegebiet



1997

Neubau Tietmecker Weg 2.000 qm



1998

70 Mitarbeiter



2002

erste Erweiterung Tietmecker Weg 2.000 qm

aus der Produktentwicklung



1906

Jalousie- und Holzrolladenbau



1948

Produktion, Lieferung und Montage von Stahl-/Alu-Rolltoren



1970

Herstellung und Montage von Kunststoff-Fenstern



1982

Lieferung des ersten transparenten Schnellauftores weltweit



1994

Entwicklung horizontale Schnellauf-tore



2003

Einführung SoftEdge Generation mit Wiedereinfädung nach Crash



2007

Herstellung Spiraltore und Tore für den Tiefühleinsatz

# von 1906

# SEUSTER

 <p><b>2008</b> 137 Mitarbeiter</p>	 <p><b>2008</b> zweite Erweiterung Tietmecker Weg 9.000 qm</p>	 <p><b>2010</b> Zusammenschluss Adolf Seuster GmbH und Co. KG mit der Tochterfirma LABEX. Die Firmierung wird zu SEUSTER LABEX KG.</p>	 <p><b>2013</b> 178 Mitarbeiter</p>	 <p><b>2016</b> dritte Erweiterung Tietmecker Weg 8.000 qm</p>	 <p><b>2017</b> 219 Mitarbeiter</p>	 <p><b>2020</b> vierte Erweiterung Hochregallager</p>	 <p><b>2023</b> Rebranding aus SEUSTER LABEX wird SEUSTER</p>
 <p><b>2010</b> Sicherheitslichtgitter in der Schließebene werden zum Standard</p>	 <p><b>2012</b> Vorstellung Speed Sectionaltor</p>	 <p><b>2015</b> Vereinheitlichung der Antriebe und Steuerung. Einführung des neuen Kabelkonzeptes</p>	 <p><b>2017</b> Produktlaunch Schnellaufator mit Aluminium Seitenteilen</p>	 <p><b>2019</b> Innovation SmartControl</p>	 <p><b>2022</b> Markteinführung TLS 1000 TurboLux</p>		

# bis heute



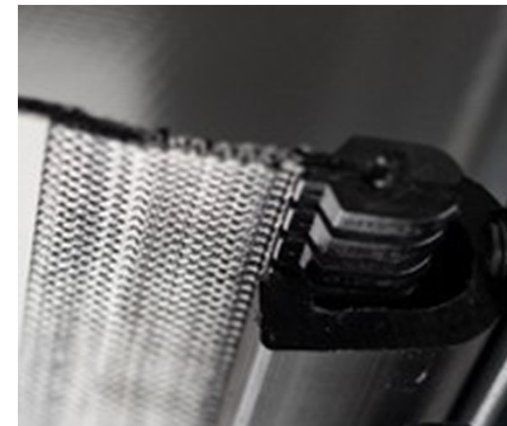
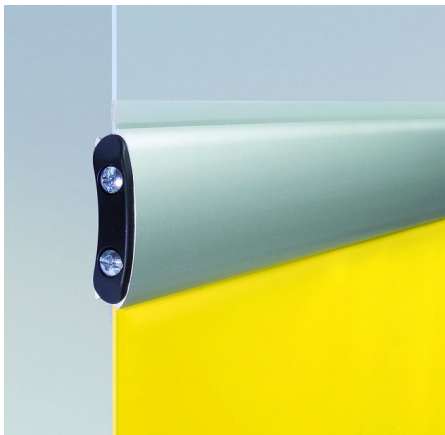
- Repetition of the basics
- Control and electrical application
- Energy efficiency of high-speed doors
- New door type V 5025 Z
- Overview of flexible high-speed doors
- Internal doors for special applications and for individual requirements
- The fastest door in the world: HS 5040 TurboLux S
- Lunch break and factory tour
- Doors with fixed door leaf
- Door for the refrigeration and frozen food industry
- Requirements for the building structure
- Impulse generators
- Wearing parts

What are the customer's requirements for a high-speed door?

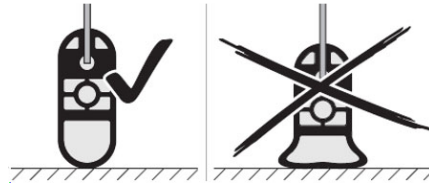
**HÖRMANN**



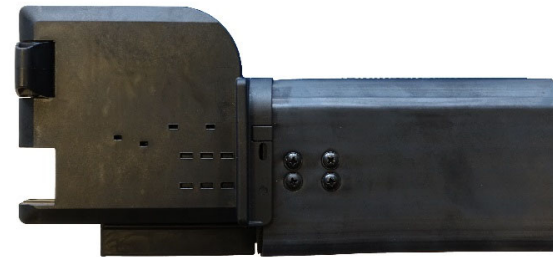
WHAT BELONGS WHERE?



SE 1



SE 2



SE 3



SE 4



- Repetition of the basics
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- Frequency converter
- Plastic housing IP 65, 230 × 460 × 200 mm
- As standard for doors with curtain weights over 95kg
- Cable set standard length 6 m
- Special cable lengths without additional price: 3 m
- Special cable lengths:  
10 m, 15 m, max. 20 m



### **BK 150 FUE-1**

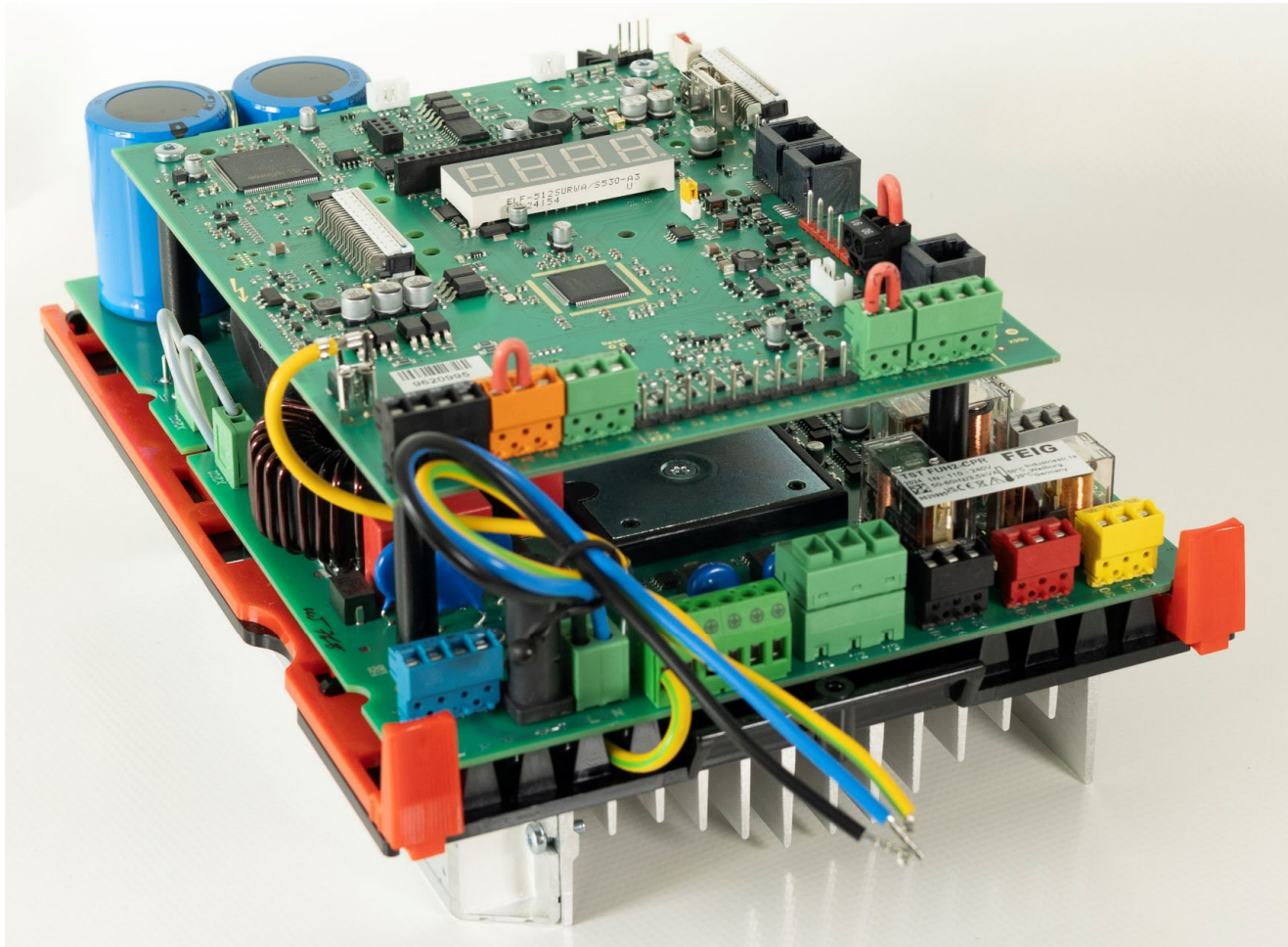
- 230 V 1-phase with plug
- As standard for doors with curtain weights under 95 kg

### **Optional**

- Main switch and emergency-off
- UPS Uninterruptible Power Supply 230 V

### **AK 500 FUE-1**

- Incl. main switch and emergency off
- As standard for doors with curtain weights over 95kg





BK 150 FUE-1



AK 500 FUE-1

- Same add-on boards
  - Same cable concept
  - BUS-controller
  - Integrated 24 V power supply unit with high performance
  - 3rd potential free contact as standard!  
(Door open, door closed, traffic lights...)
- Option: Steel or stainless steel cabinet

## Control BK 150 FUE-1 and AK 500 FUE-1 inputs, outputs, extension

**HÖRMANN**



### **BK 150 FUE-1 and AK 500 FUE-1**

3 switching outputs (up to 230 V)

10 digital inputs (plus switching)

Special traffic light

(2 outputs)

Red / green traffic light permanent light

(1 output)

Flashing warning light

(1 output)

Upper travel limit or Lower travel limit

(1 output) each

Malfunction / ready for operation

(1 output)

Lock Hörmann (AST) with Seuster

(1 output, 1 input)

Lock external with Seuster

not possible

Locking external with Seuster

(1 output, 1 input)

Locking / lock Seuster/Seuster

(4991940 Com circuit board included)

UPS

(1 output)

RWA / BMA

(1-2 input)

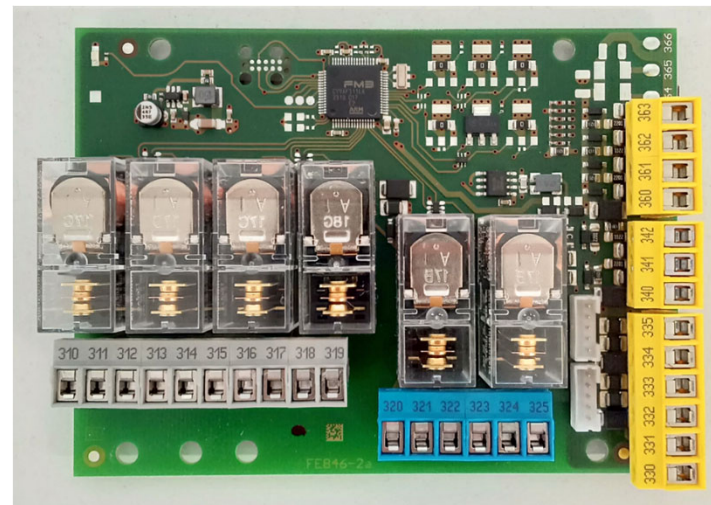
Selection switch / key switch

(1 input)



## 1 Relay PCB

1 additional switching output  
(1 x 1, 1 x 1 potential-free)  
1 additional digital input



## 6 Relais Relay PCB

6 additional switching output  
(1 x 4, 2 x 1 potential-free)  
6 additional digital input

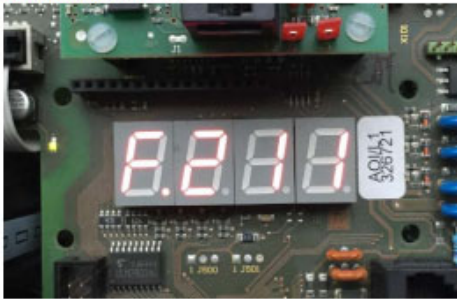


## Expansion Board Pulse Generator

Doubling of the  
pulse generator Inputs

## FUE-1 Controllers Displays

Standard: F.211



VFD: F.211 Artikel 017629/4980358



- Status display, error messages, parameter input visible from the outside
- 4-way 7 segment display, illuminated red
- Optional:
  - Plain text display in languages German, English, French, Spanish, illuminated green
- Installation and service support
- Simple explanation without instructions
- Detailed information (e.g. light grill)

NC 

NO 

Recommendation: NC Cont.

1. Is the BMA contact a normally closed (NC) or normally open (NO)?

---

Imp. 

Cont. 

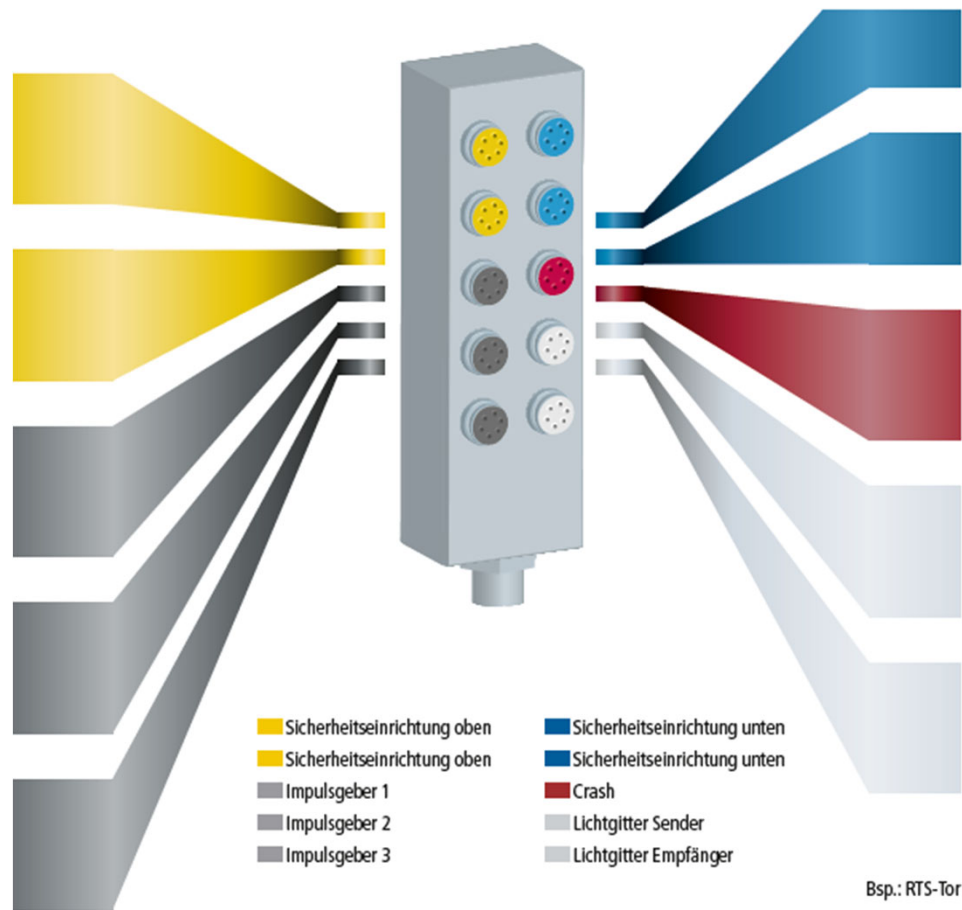
2. Does the BMA generate a short pulse (Imp.) after actuation or does the signal remain on during the entire tripping time (Cont.)?



- UPS only with thr BK 150 FUE-1
- UPS as emergency opening
- UPS = Uninterruptible Power Supply
- Works as a battery
- Separate housing
- Retrofitting to existing doors
- **Attention:** Do not use as a substitute for construction electricity!

## Advantages of Cable Concept Colour-coded plug-in control wiring

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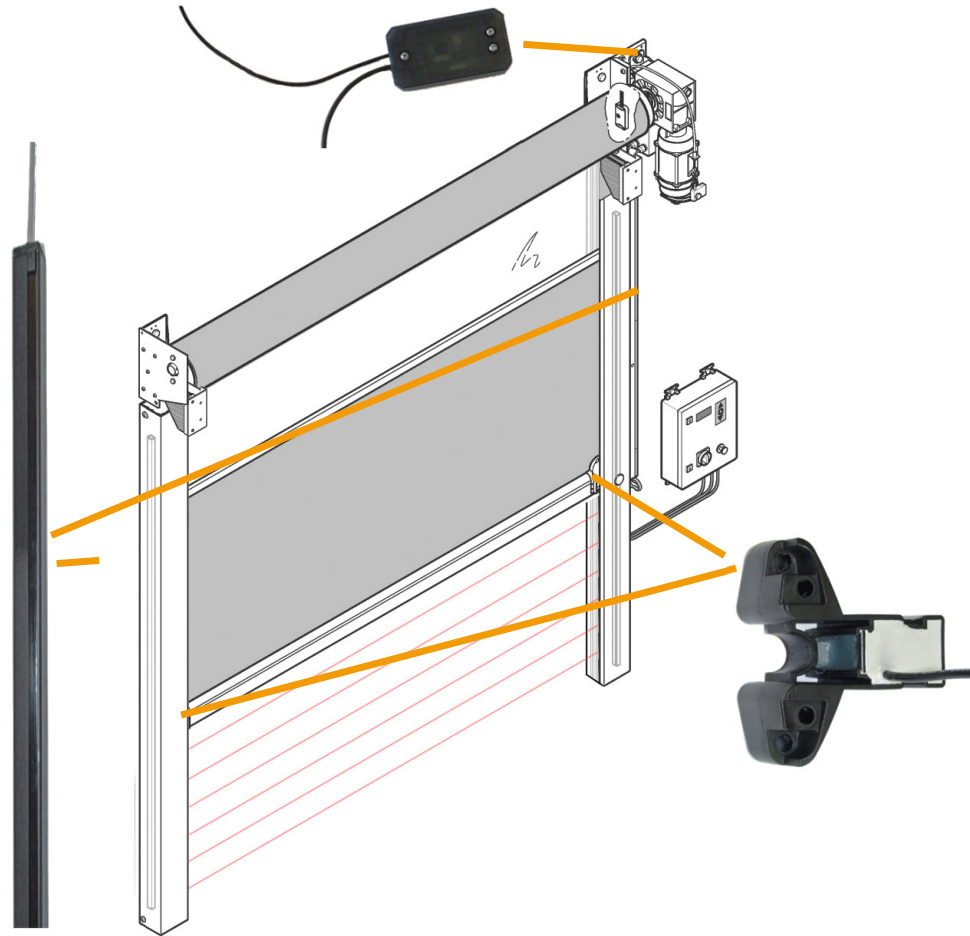
- Wiring of the operator and control through a simple plug-in connection
- Easy connection of accessory components and safety equipment through colour-coded plug-in connections and connection wires
- Fitting time reduced for electrical wiring of the door

New:

- Soft-Stop
- Eco-Open-Function
- Track monitoring
- Automatic correction of the lower travel limit

## Safety light grille + radio crash

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## Safety light grille for high-speed doors with FUE-1 Controls

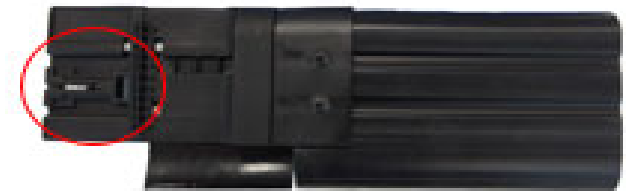
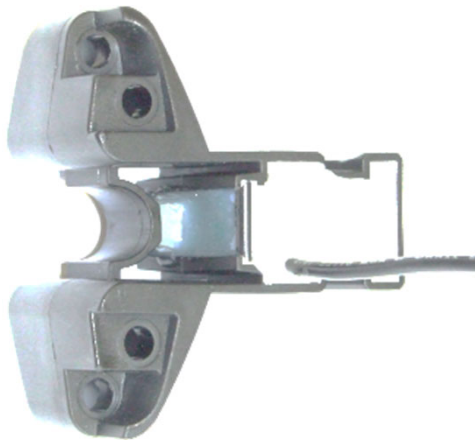
**HÖRMANN**

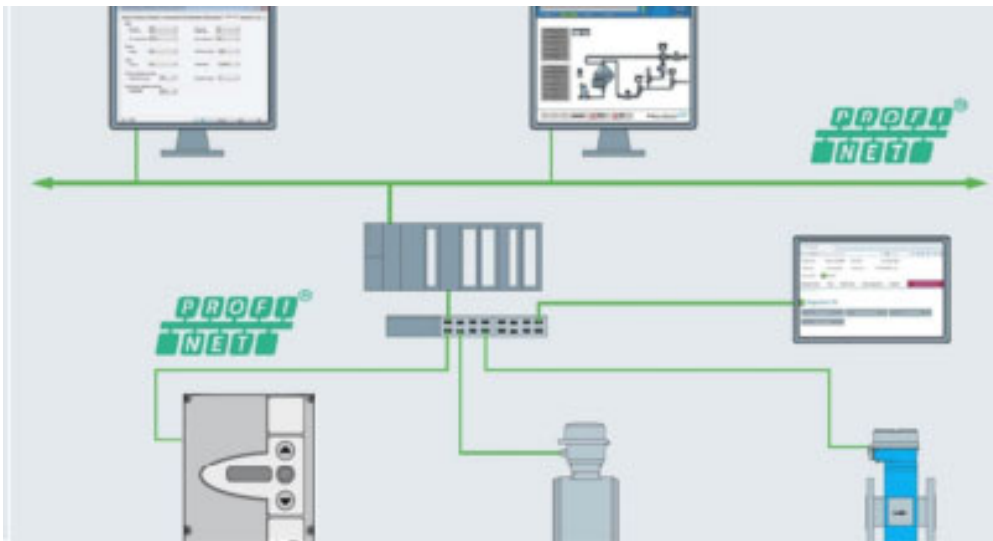


- Detects a force pushing up of the door leaf, e.g. flashing light for more protection
- Automatic correction of the end-of-travel position when the curtain is extended
- Integrated path-monitoring
- Softstopp in case of light grille interruption:
  - Preserves the door construction
  - Reduced brake wear
  - Improved engine service life
  - Extended service life of control box
  - Long service life of the gate



- Encapsulated lithium battery
- 433 MHz
- IP 65
- Transmitter pre-assembled in bottom rail





Smart with RCCA card as a FUE-1 extension

PCB Profinet RCCA-A

PCB Profisafe RCCA-B

Simplifying automation processes

The gate becomes part of a network

Standardized building, machinery, factory  
automation connection

## Interface to PROFINET und PROFIsafe

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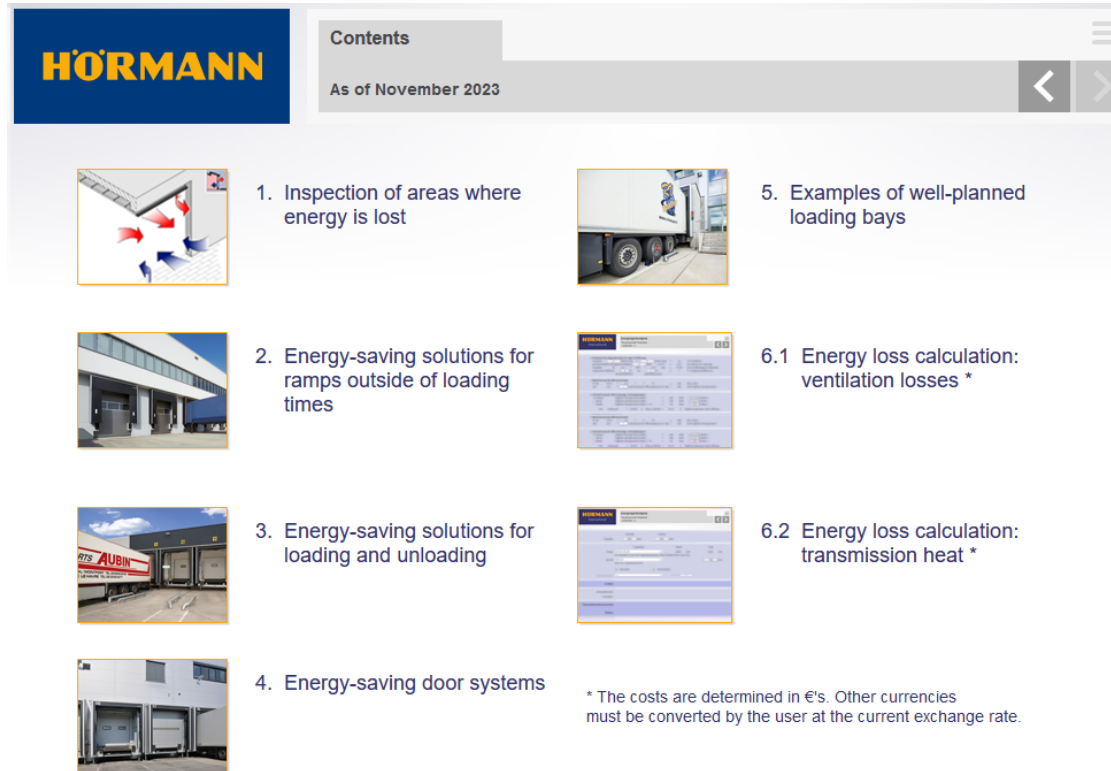
### On-site requirement

- Higher-level control unit
- Min. Siemens S7
- Siemens TIA use with paid license
- Self-reliant programming
- Wiring for high-speed door control
- RCCA – Board must be registered and configured before use
- Use of data in accordance with:

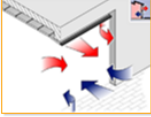






<https://www.feig.de/tst-rcca-a/>

<https://www.feig.de/tst-rcca-b-c-d/>

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The screenshot shows the 'Contents' page of the Hörmann Energie Saving Compass. The page is titled 'Contents' and 'As of November 2023'. It features a grid of six items, each with a small image and a title. The items are: 1. Inspection of areas where energy is lost (image of a roof with red arrows pointing to gaps), 2. Energy-saving solutions for ramps outside of loading times (image of a building exterior), 3. Energy-saving solutions for loading and unloading (image of a loading dock with a truck), 4. Energy-saving door systems (image of a loading dock door), 5. Examples of well-planned loading bays (image of a truck at a loading bay), and 6.1 Energy loss calculation: ventilation losses \* (image of a software interface) and 6.2 Energy loss calculation: transmission heat \* (image of a software interface). A footnote at the bottom right states: '\* The costs are determined in €'s. Other currencies must be converted by the user at the current exchange rate.'

Contents	
As of November 2023	
	1. Inspection of areas where energy is lost
	2. Energy-saving solutions for ramps outside of loading times
	3. Energy-saving solutions for loading and unloading
	4. Energy-saving door systems
	5. Examples of well-planned loading bays
	6.1 Energy loss calculation: ventilation losses *
	6.2 Energy loss calculation: transmission heat *

\* The costs are determined in €'s. Other currencies must be converted by the user at the current exchange rate.

<https://www.hoermann.de/energiesparkompass/>

[https://www.hoermann.de/energy\\_savings\\_compass/](https://www.hoermann.de/energy_savings_compass/)

https://www.hoermann.de/energy\_savings\_compass/H\_ESKR\_Lv\_6\_1\_1\_DE/ml\_H5Eframe.html

### Energy loss calculation - Ventilation losses - Doors

Info Assistant **Total screen** Print Reset

▶ **Determine the following data for every door opening:**

Door size: 4000 mm wide \* 4000 mm high = 16 m<sup>2</sup> (door surface)  
 Average wind speed: 4 km/h \* 0.2777 = 1.11 m/s (metre per second)  
 Door size: 16 m<sup>2</sup> \* 0.80 \* 1.11 m/s = 14.21 m<sup>3</sup>/s (air quantity per second)  
 Temperature difference: 19 °C to 11 °C = 8 °C (temperature difference)  
Inside temperature      Outside temperature

▶ **Determination of heat loss:**

14.21 m<sup>3</sup>/s \* 1.2 \* 8 °C = 136 kJ/s (=kW)  
 136 kW \* 1,187 Shortening of the opening duration per day (hours) comparing BR60 - Standard sectional door = 161.43 kWh of daily energy losses

▶ **Conversion of heat into energy costs:**

- Natural gas: Daily energy losses (kWh) = 161.43 kWh ( 0.12 €/kWh)\*
- Electric: Daily energy losses (kWh) = 161.43 kWh ( 0.39 €/kWh)\*
- Heating oil: Daily energy losses (kWh) / 10 = 16.14 litre ( 0.91 €/litre)\*

161.43 Consumption \* 0.12 € Price per unit = 19.37 € Daily heating costs through opening  
\*Status: August 2023

▶ **Determination of savings:**

Daily heating costs through opening 19.37 € \* Days per week 5 = 96.85 € Savings/week  
 Savings per week 96.85 € \* Weeks per year 52 = 5036.2 € Savings/year

▶ **Determination of amortisation time (ROI):**

Price difference: 12000 € / 5036.2 € Savings/year = 2.38 Years (ROI)  
 Years (ROI) 2.38 \* 12 Months/year = 28.56 Months (ROI)

Energy-efficient solutions for planning and equipment of door openings in industry

Result:

A Hörmann high-speed door has paid for itself after 2-3 years!



### Independent tool from BVT Nationwide Association of Gate Manufacturers...

- Detecting energy losses
- Question answered: When does it make sense to use a high-speed door?
- Which is better: faster gate travel speed or a better insulated gate?
- Interesting, interactive energy calculator
- The connection between thermal insulation and door speed is visualized
- Choosing the right gate for the opening

Link: <https://www.edsf.com/calculator/>



Link: <https://www.edsf.com/calculator/>

## E.D.S.F. European Door and Shutter Federation e.V.

	H57030	Sectionaltor gedämmt	Turbolux
BEFUND	FALL 1	FALL 2	FALL 3
Ort	Berlin	Berlin	Berlin
Gebäude (Bd.)	74670 m²	74670 m²	74670 m²
Türapplikation	Industriell	Industriell	Industriell
Türtyp	Hohe Geschwindigkeit Flexibel	Überkopf-Schnitt	Hohe Geschwindigkeit Flexibel
Türgröße (B x H)	4,28 x 4,53 m	4,28 x 4,53 m	4,28 x 4,53 m
Glasfläche	20,94 %	20,94 %	90,51 %
Zykluszeit	56 s	300 s	18 s
Mittlere Zyklusgeschwindigkeit	0,18 m/s	0,03 m/s	0,56 m/s
Anzahl der Zyklen	57098	31260	108773
U-Wert	1 W/m²K	1 W/m²K	5,32 W/m²K
Luftdurchlässigkeit	12 m³/m²h	12 m³/m²h	12 m³/m²h
Solarfaktor g-Wert	0,03	0,03	0,36
<b>Energieverluste Heizperiode</b>	<b>156914 kWh</b>	<b>449362 kWh</b>	<b>106175 kWh</b>
<b>Energieverluste Kühlperiode</b>	<b>0 kWh</b>	<b>0 kWh</b>	<b>0 kWh</b>
<b>Energieverluste insgesamt</b>	<b>156914 kWh</b>	<b>449362 kWh</b>	<b>106175 kWh</b>
<b>EDSF-Energieklassifizierung</b>	<b>T1 B T2 D T3 E</b>	<b>T1 F-- T2 F-- T3 F--</b>	<b>T1 E T2 B T3 A</b>



**Wichtig**  
Diese Ergebnisse der Energieverluste durch die Türen dienen der Veranschaulichung und dienen nur zu Vergleichszwecken. Die Berechnung basiert auf EDSF-Forschung und -Standards und wird an Gebäuden mit einer parallelepipedischen Form ohne Inneneinteilung durchgeführt. Die Gesamtverluste in Gebäuden in realen Umgebungen werden von vielen Faktoren beeinflusst, die für eine genaue Berechnung berücksichtigt werden müssen. Weitere Informationen finden Sie unter [www.edsfdoorenergy.com](http://www.edsfdoorenergy.com).

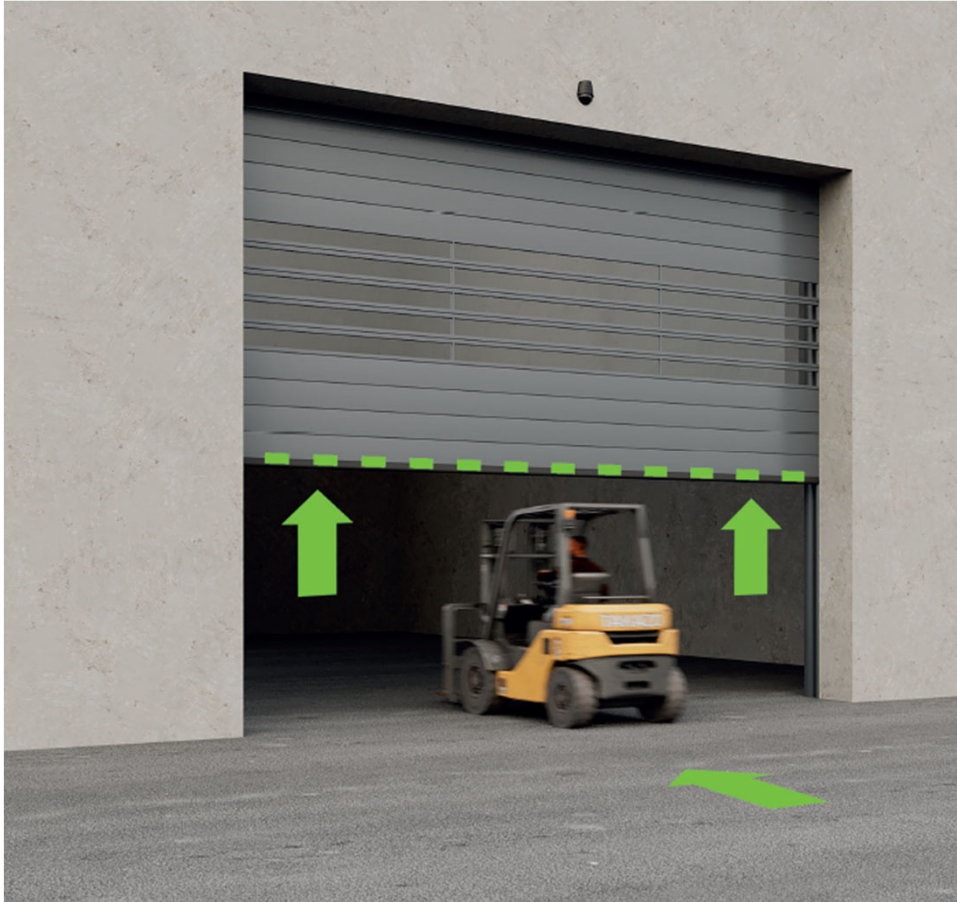
Link: <https://edsfdoorenergy.com>

High-speed energy-saving doors  
Hold-open time 5 seconds

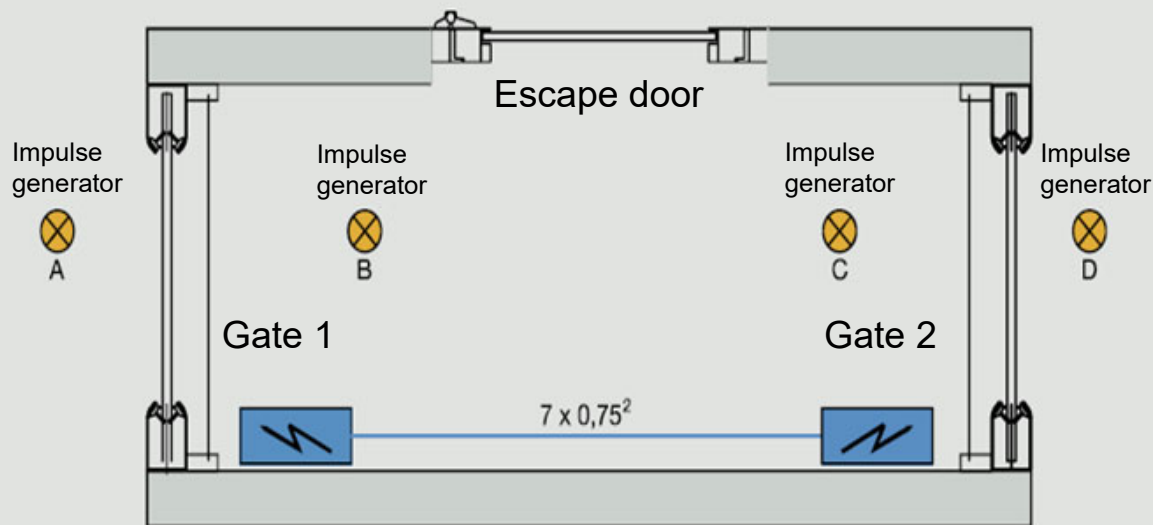
**HÖRMANN**

## Energy Efficiency Measure Doors: Hörmann High-Speed Door Systems

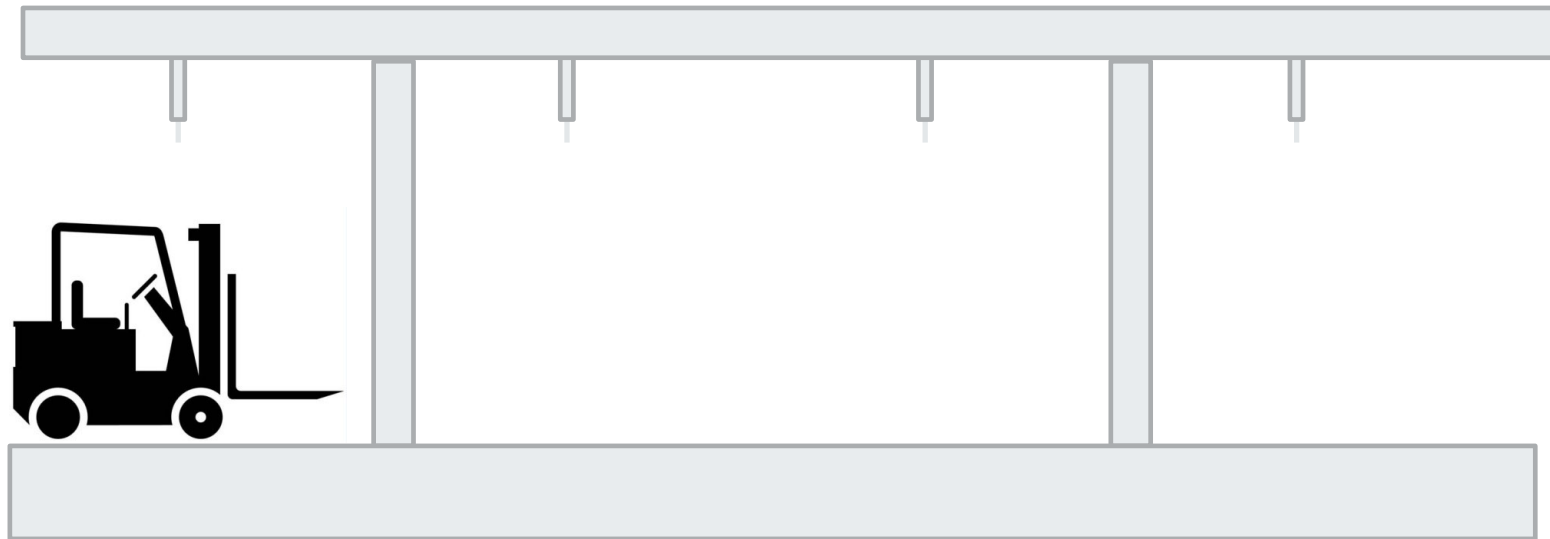


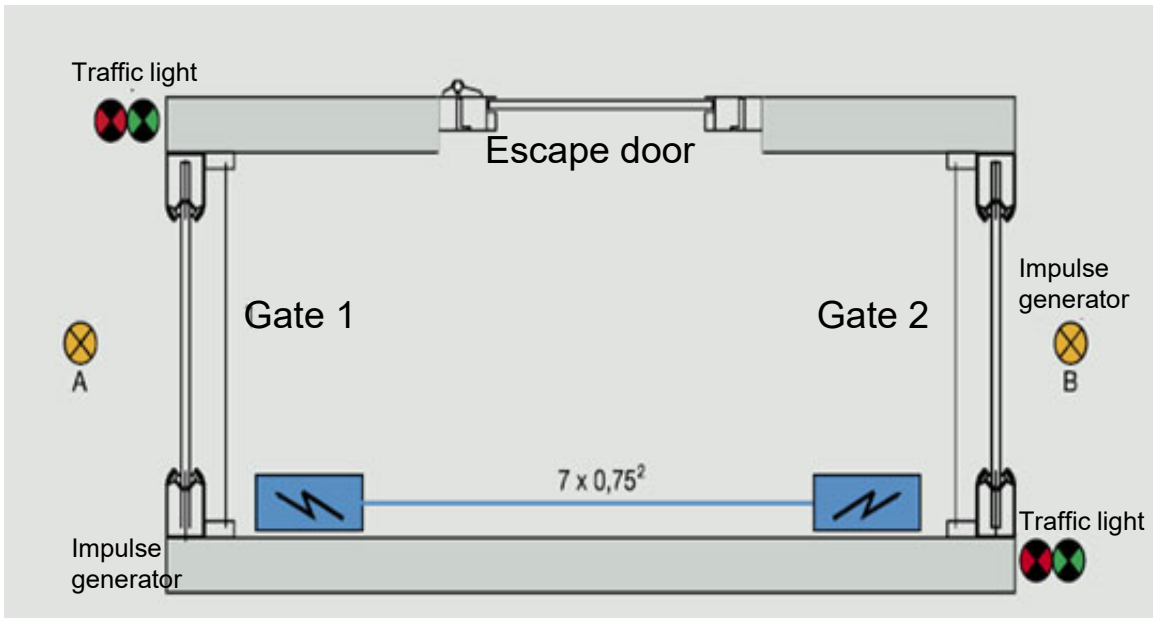


- The door does not activate the full door height
- Opening only up to the previously set partial height
- Also possible in the light grille area
- Intermediate stop via impulse generator (158180 impulse generator must be ordered separately)
- Intermediate stop via selection switch (159784)
- Intermediate stop via Scanprotect: Detects movement and presence
  
- Alternative to the Intermediate stop:
- Scanprotect with Eco-Open-Function



- Locking of both doors together, the second door does **not** open automatically
- Both doors are closed in the home position
- The open command is only given to the door control if the other door is in the lower travel limit and has not received an open command.
- 4 Impulse generators, manual operation
- Locking switch-off is optional





- Impulse on the first door, the second door opens automatically after closing run of the first door
- Both doors are closed in the home position
- The open command is only given to the door control if the other door is in the lower travel limit and has not received an open command.
- 2 impulse generators, automatic sequence
- Traffic lights optional
- Lock controller switch-off is optional
- Summer / winter switch (signal switching)
- Optional Master/Slave, Master is open



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**V 5025 Z**

**Flexible internal and exterior high-speed door**

**HÖRMANN**



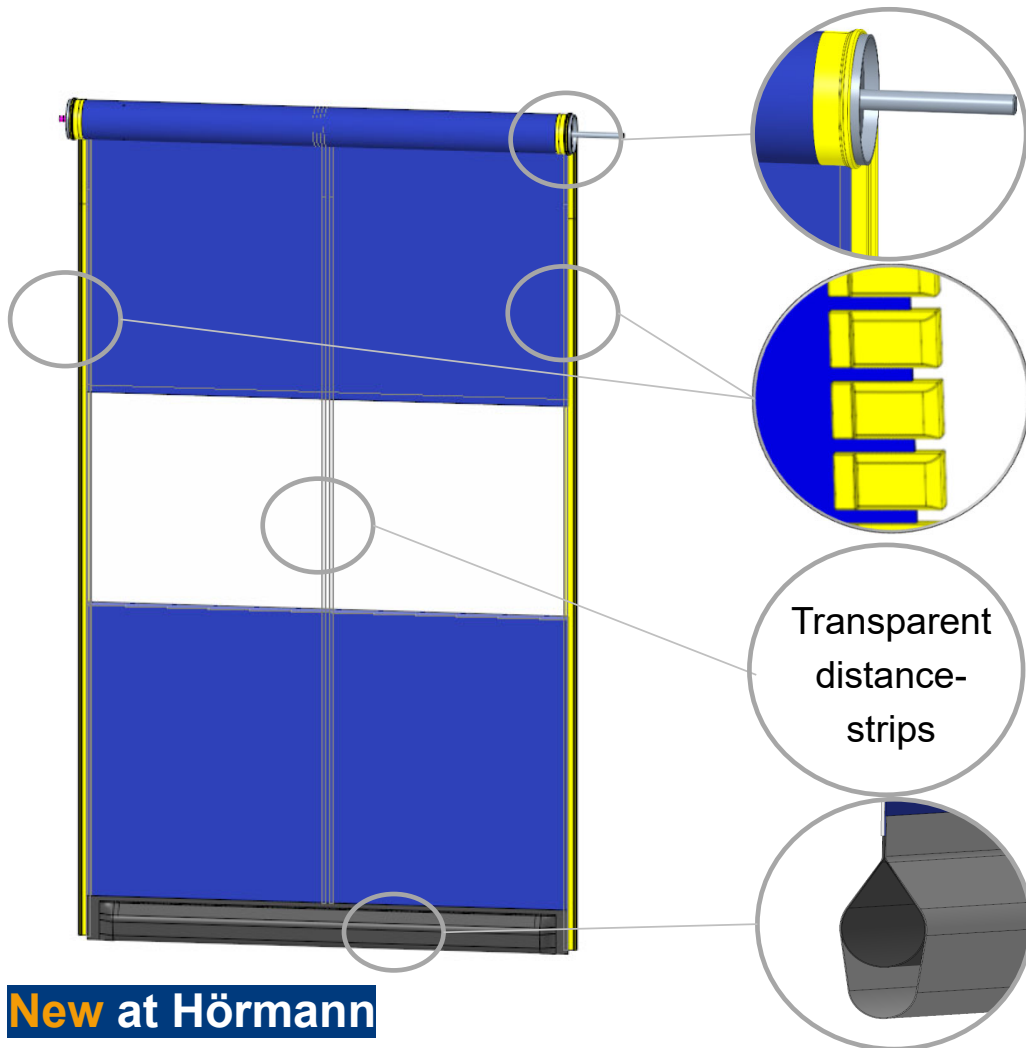
- Size range max. 5000 x 5000 mm
- Anti-crash function with fully automatic re-threading
- Anti-crash function over the entire clear door height
- Max. opening speed:  
Opening / Closing: 2.0 m/s / 1.0 m/s
- Safety equipment: Eco-Light grille
- Resistance against wind in acc. EN 12424: Class 3
- New door control BK FU Z
- Emergency opening with service-adapter
- 2-parts cladding standard, steel galvanized
- Optional: High-quality coating, operator cover
- Attractive price-performance ratio

**New at Hörmann**

**Available from 01/03/2025**

## V 5025 Z Zipper door - Curtain

**HÖRMANN**



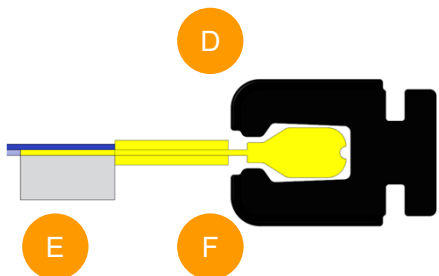
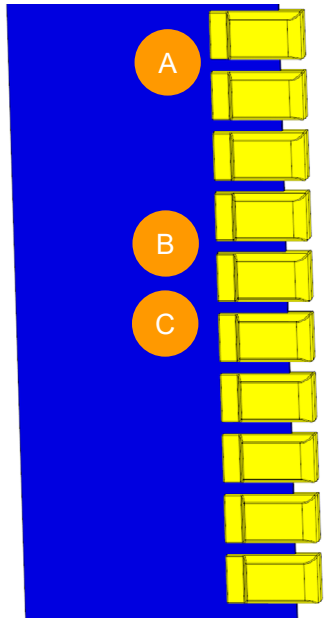
- Curtain with zipper and additional distance strips on both sides
- Optionally with or without 900 mm transparent vision field over the entire clear width
- Transparent distance strips in the middle of the curtain/ of the vision field  
from 2000 mm 1 transparent distance strip  
from 4000 mm 2 transparent distance strips
- Flexible bottom profile

**New at Hörmann**

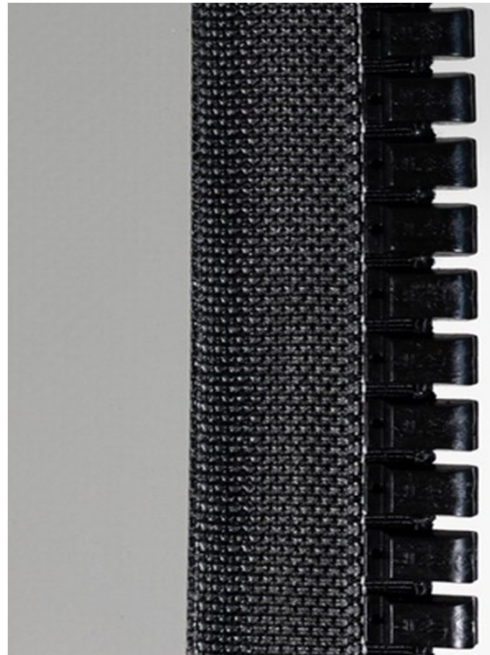
**Available from 01/03/025**

# V 5025 Z Zipper Technology

**HÖRMANN**



**New at Hörmann**



- A** Wind protection by zipper plastic gliders (zipper technology)
- B** Anti-crash function over the entire clear door height
- C** Evenly wind load absorption
- D** Maintenance-free plastic slide rail
- E** Reinforcement strips
- F** High tightness
  - Resistance to water penetration (EN 12425) class 2
  - Air permeability (EN 12426) class 1

**Available from 01/03/2025**

**V 5025 Z**  
**Flexible door leaf – Curtain**

**HÖRMANN**



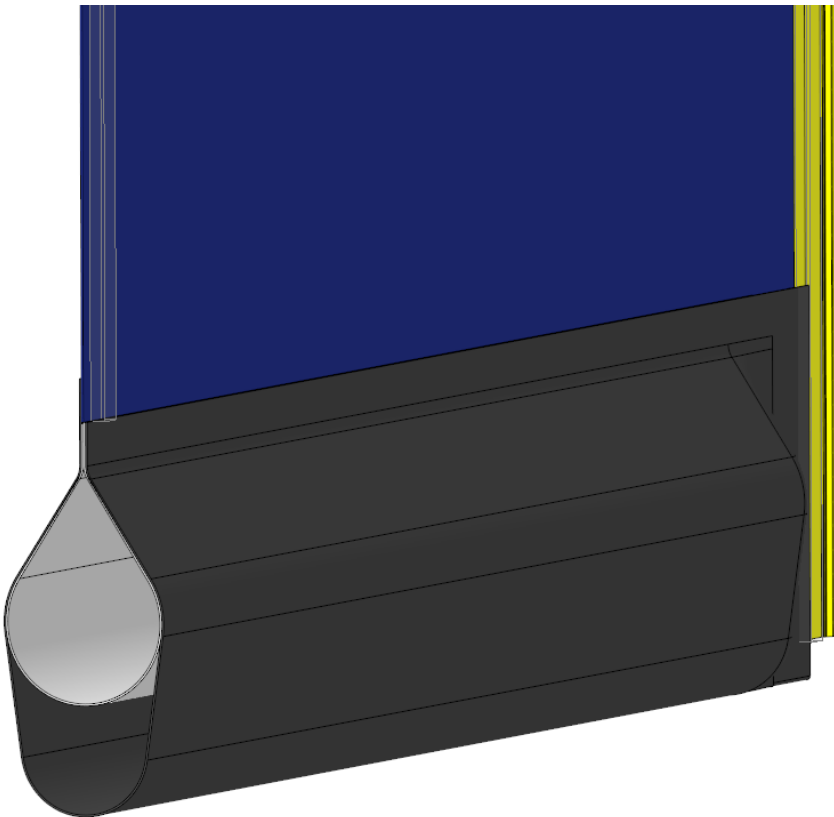
- 0.9 mm PVC fabric
- Optionally with or without 900 mm transparent vision field over the entire clear width
- 5 standard RAL colours :
  - RAL 7038 grey
  - RAL 5010 blue
  - RAL 3002 red
  - RAL 2004 orange
  - RAL 1018 yellow

**New at Hörmann**

**Available from 01/03/2025**

**V 5025 Z**  
**Flexible bottom rail**

**HÖRMANN**



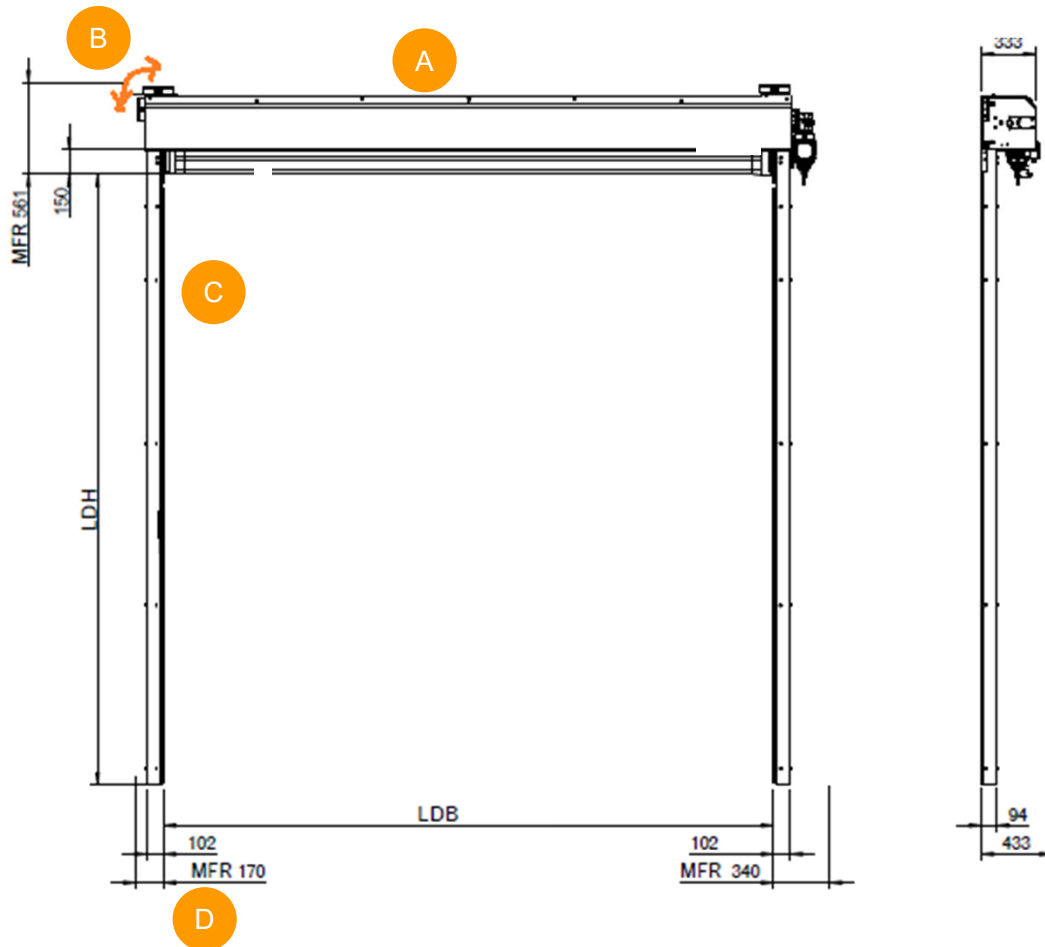
- Double PVC curtain loop in black colour
- High tightness against the floor
- Particularly tolerant to uneven floor conditions
- Door closes over own weight

**New at Hörmann**

**Available from 01/03/2025**

# V 5025 Z Dimensions

**HÖRMANN**



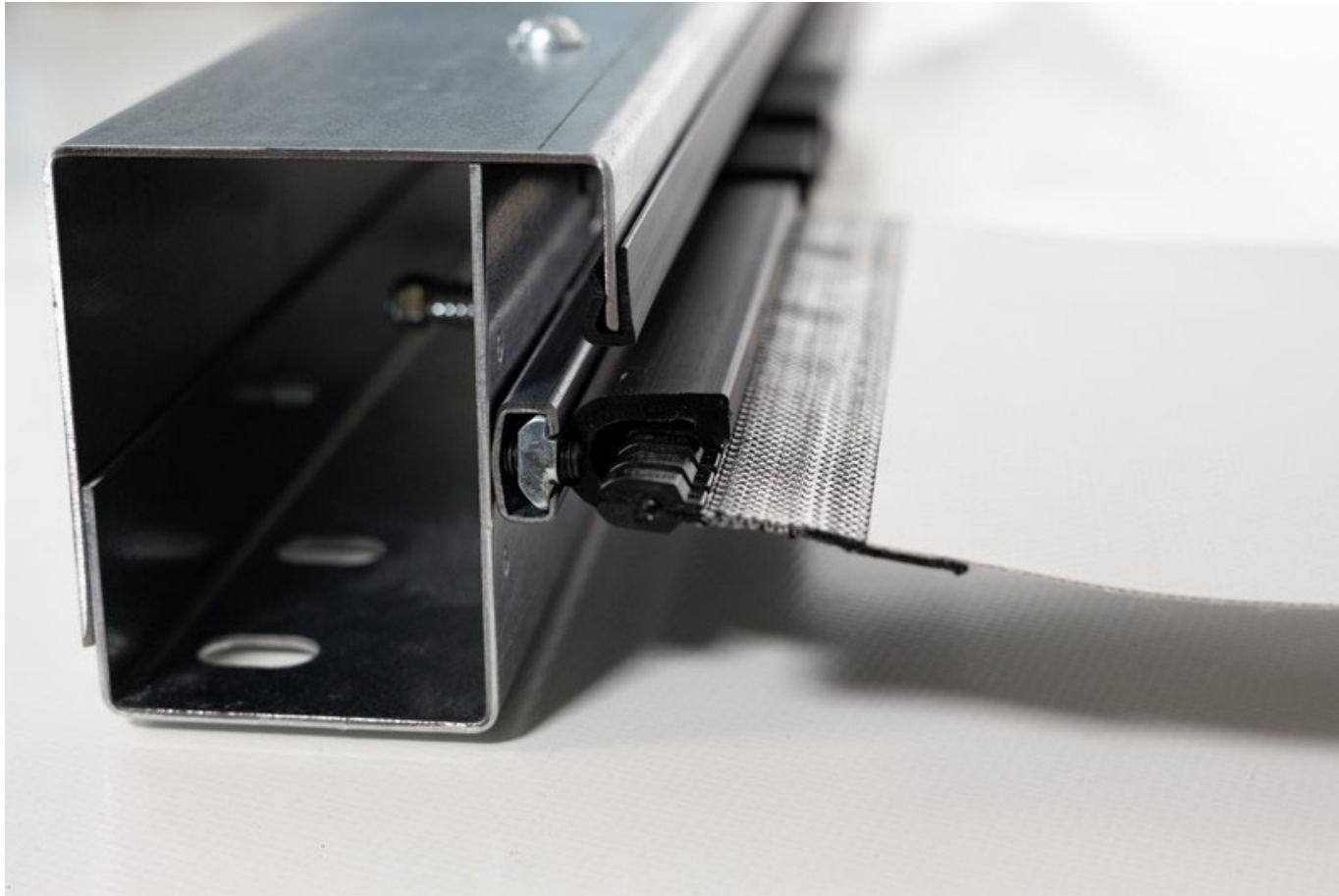
- A** Compact installation dimensions
- B** Top attachment freely selectable
- C** All fitting points in one line
- D** Particularly narrow side guides

**New at Hörmann**

**Available from 01/03/2025**

**V 5025 Z**  
**Small side panels**

**HÖRMANN**

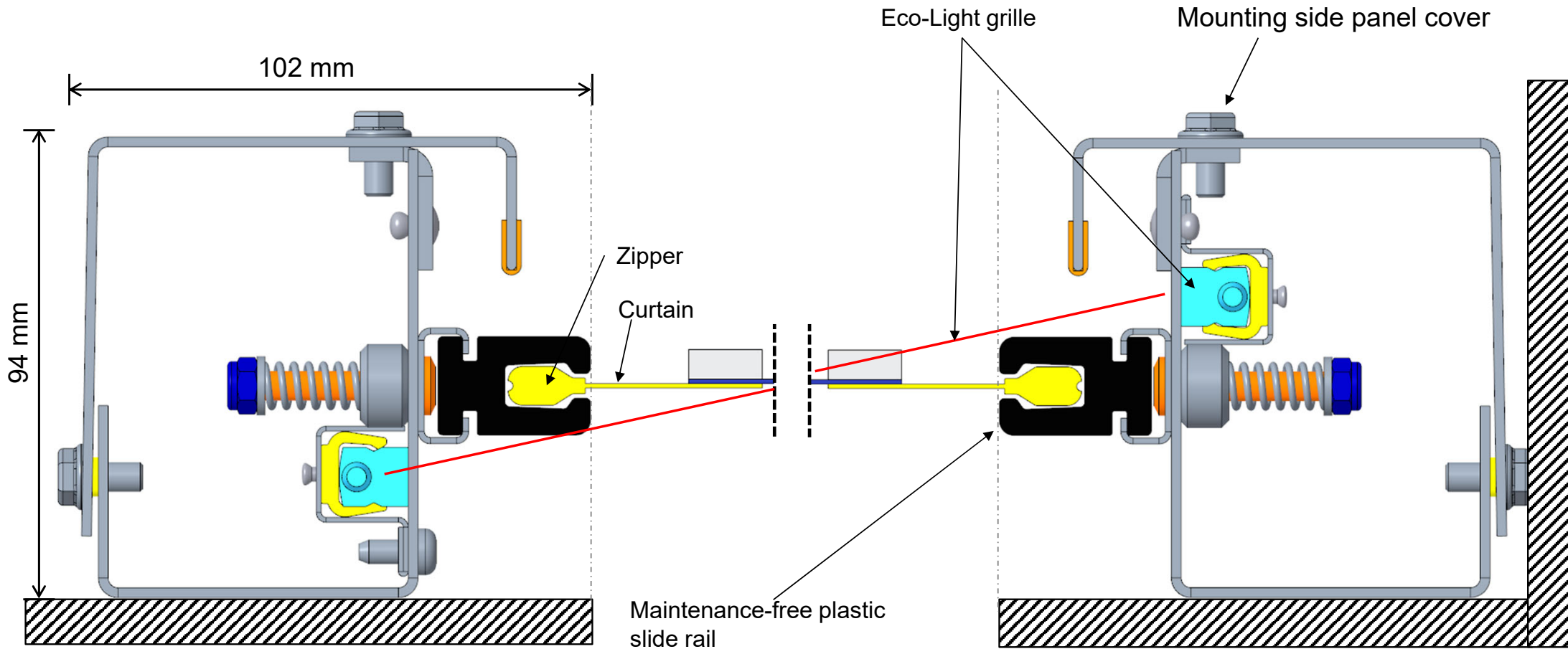


**New at Hörmann**

**Available from 01/03/2025**

**V 5025 Z**  
**New sideelement construction**

**HÖRMANN**



**New at Hörmann**

**Available from 01/03/2025**

**V 5025 Z**  
**Fully automatic re-threading**

**HÖRMANN**



V 5025 Z  
Fully automatic re-threading

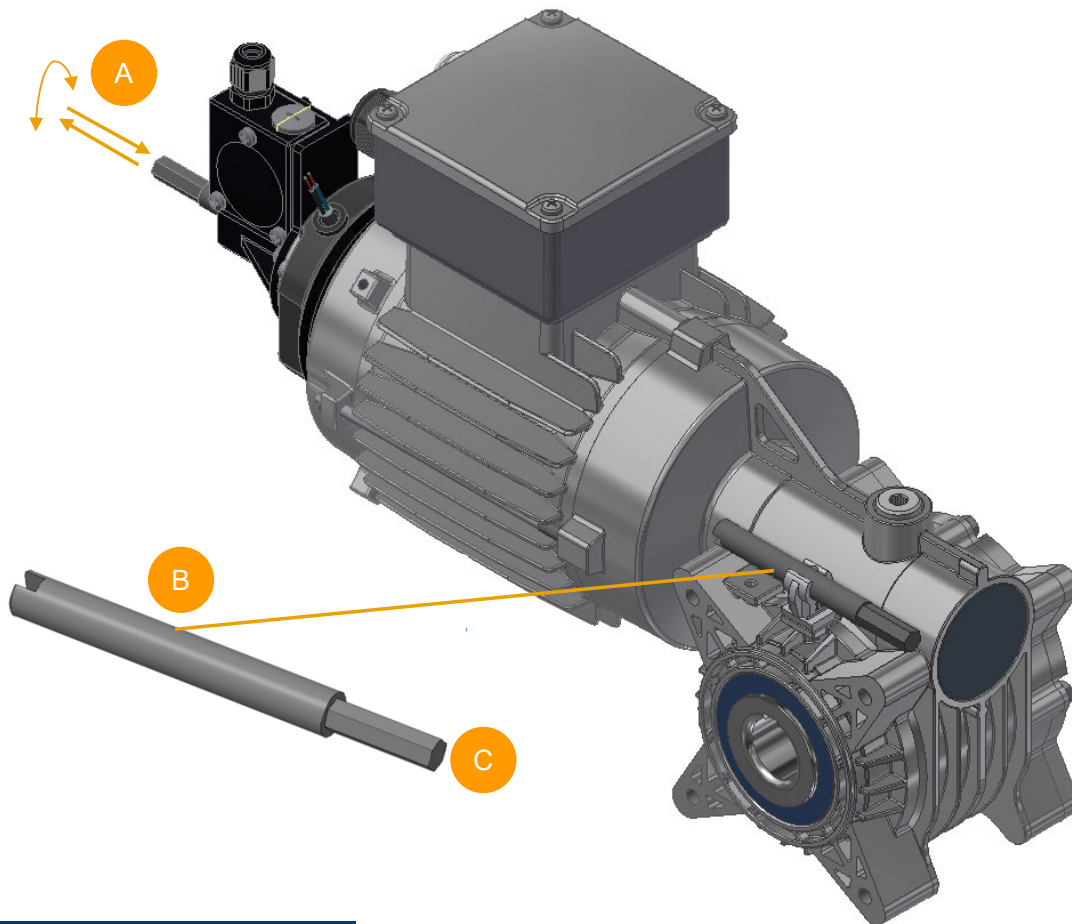
HÖRMANN



Re-threading  
in the opening

## V 5025 Z Emergency opening via service adapter

**HÖRMANN**



- A** Emergency opening / emergency closure
- B** Service-adapter
- C** Hexagon for operation via on-site ratchet

**New at Hörmann**

**Available from 01/03/2025**

## V 5025 Z Control BK FU Z

**HÖRMANN**



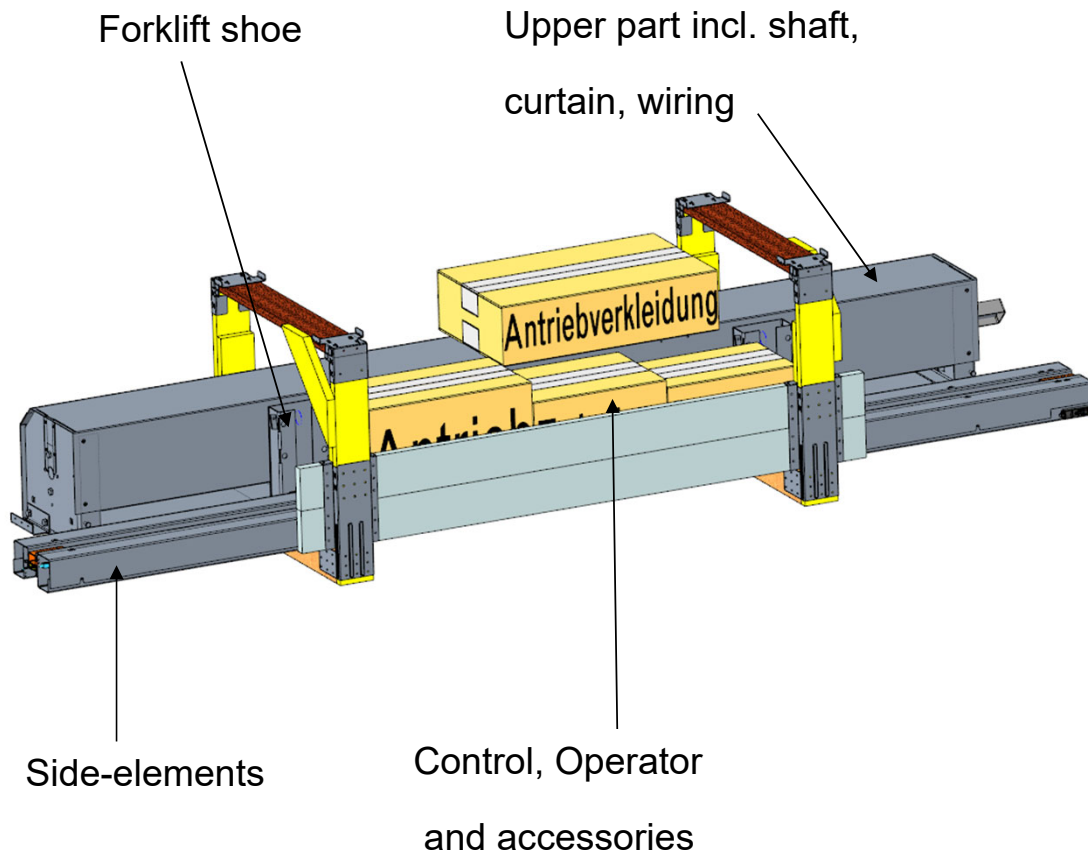
- 1-phase 230 V frequency converter control
- Plastic cabinet IP 54
- Options:
  - Main switch (on plaster), emergency stop (on plaster)
- Basic Accessories
  - 10 x Inputs
  - 1 x Output
- Upgrade to BK 150 FUE-1 with all known accessories and functions possible at an additional cost

**New at Hörmann**

**Available from 01/03/2025**

## V 5025 Z Packaging concept and assembly

**HÖRMANN**



- Entire door with drive unit, control, accessories in one package
- Well-known, stackable packaging concept
- Largely pre-assembled in the factory
- Quick, easy installation

**New at Hörmann**

**Available from 01/03/2025**

## V 5025 Z Application areas

**HÖRMANN**



Flexible single curtain PVC fabric door with flexible base

- + Anti-crash door with full automatic re-threading
- + Optional: With combination frame behind existing roller or sectional door
- + Highest tightness
- ⚙️ As an interior and exterior flexible door for industry and commerce

**New at Hörmann**

**Available from 01/03/2025**

## V 5025 Z

### Differences to competitor products

**HÖRMANN**



- Large vision field
- Attractive, upgradeable control concept
- Easy electrical installation
- Snap-plug
- Well-known Hörmann high-speed door control logic
- No reference trip after power failure necessary
- Stable full single date backing

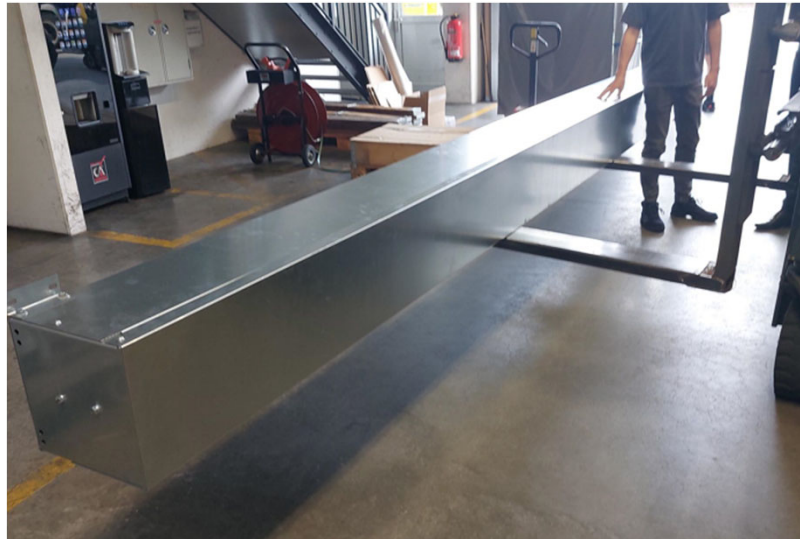
**New at Hörmann**

**Available from 01/03/2025**

**V 5025 Z**

**Benefits from the point of view of retailers and end customers**

**HÖRMANN**



### **Dealer**

- Easy transport to the construction site, easy assembly
- Fits in almost any installation location, due to small dimensions
- Well-known Hörmann high-speed door control logic
- Attractive price-performance ratio

### **Customers**

- Few assembly inserts thanks to well thought-out crash function with full automatic re-threading
- Low-maintenance door thanks to plastic slide rails with zipper system
- Better energy savings due to high tightness
- High security due to large vision field

**New at Hörmann**

**Available from 01/03/2025**

**V 5025 Z**  
**Flexible interior and exterior door**

**HÖRMANN**



**New at Hörmann**

**Available from 01/03/2025**

- Repetition of the basics
- Control and electrical application
- Energy efficiency of high-speed doors
- New door type V 5025 Z
- **Overview of flexible high-speed doors**
- Internal doors for special applications and for individual requirements
- The fastest door in the world: HS 5040 TurboLux S
- Lunch break and factory tour
- Doors with fixed door leaf
- Door for the refrigeration and frozen food industry
- Requirements for the building structure
- Impulse generators
- Wearing parts

V 4020 SEL Alu-R

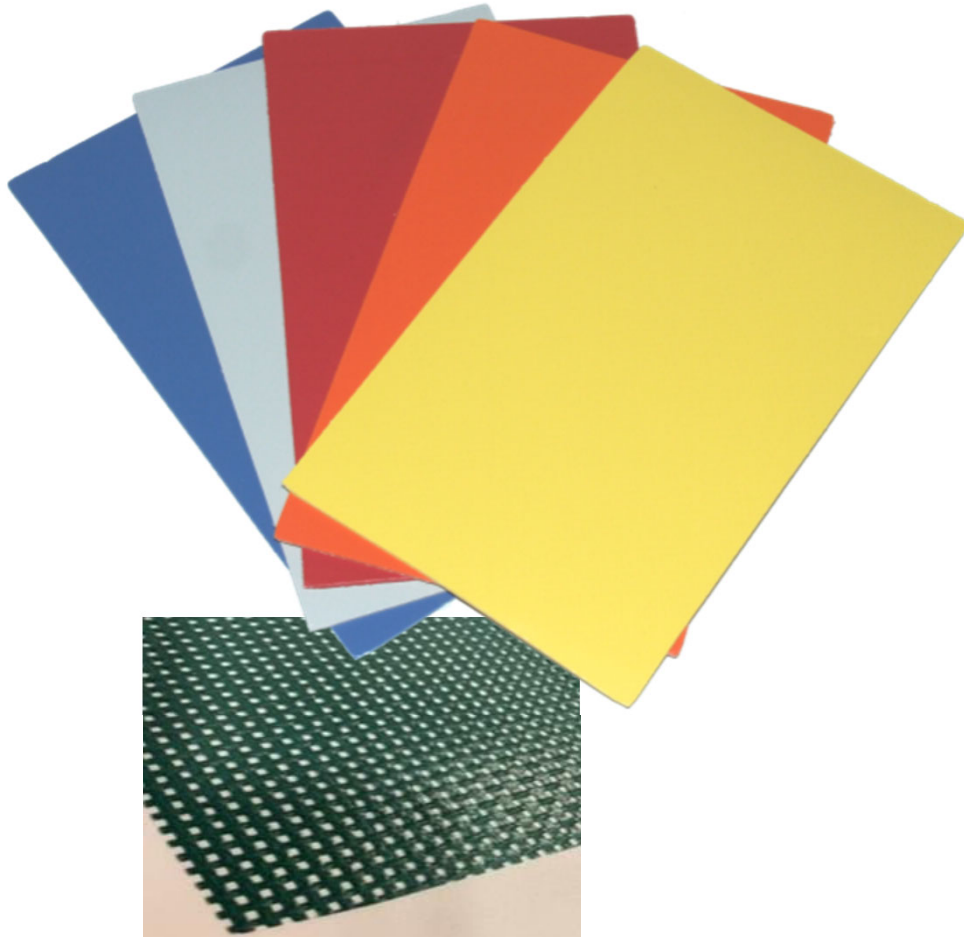


V 5015 SEL



V 5030 SEL





- 1.5 mm fabric on almost all goals
- Optionally with or without 900 mm transparent field of view
- 5 Standard RAL colours, RAL 7038 agate grey, RAL 5010 blue, RAL 3002 red, RAL 2004 orange, RAL 1018 yellow
- Preferred colours from March 2025  
RAL 7012 basalt grey, RAL 7016 anthracite grey,  
RAL 7022 umbra grey, RAL 7024 graphite grey
- Special colour 0.9 mm fabric possible on request for interior gates

Optional: Insect screen instead of the field of vision field

The fly screens similar green RAL 6005

## V 4020 SEL Alu-R Internal door

**HÖRMANN**



- Interior door with 1.5 mm PVC curtain
- Dimensions 4000 × 5000 mm
- Opening speed: max. 2.2 m/s
- Closing speed: max. 0.8 m/s
- Safety equipment: Light curtain
- SoftEdge bottom part
- Tubular drive 1,500,000 cycles
- Emergency opening - emergency closure

Optional:

Wind class 3 with aluminium bottom part



**Option:** Clean Version

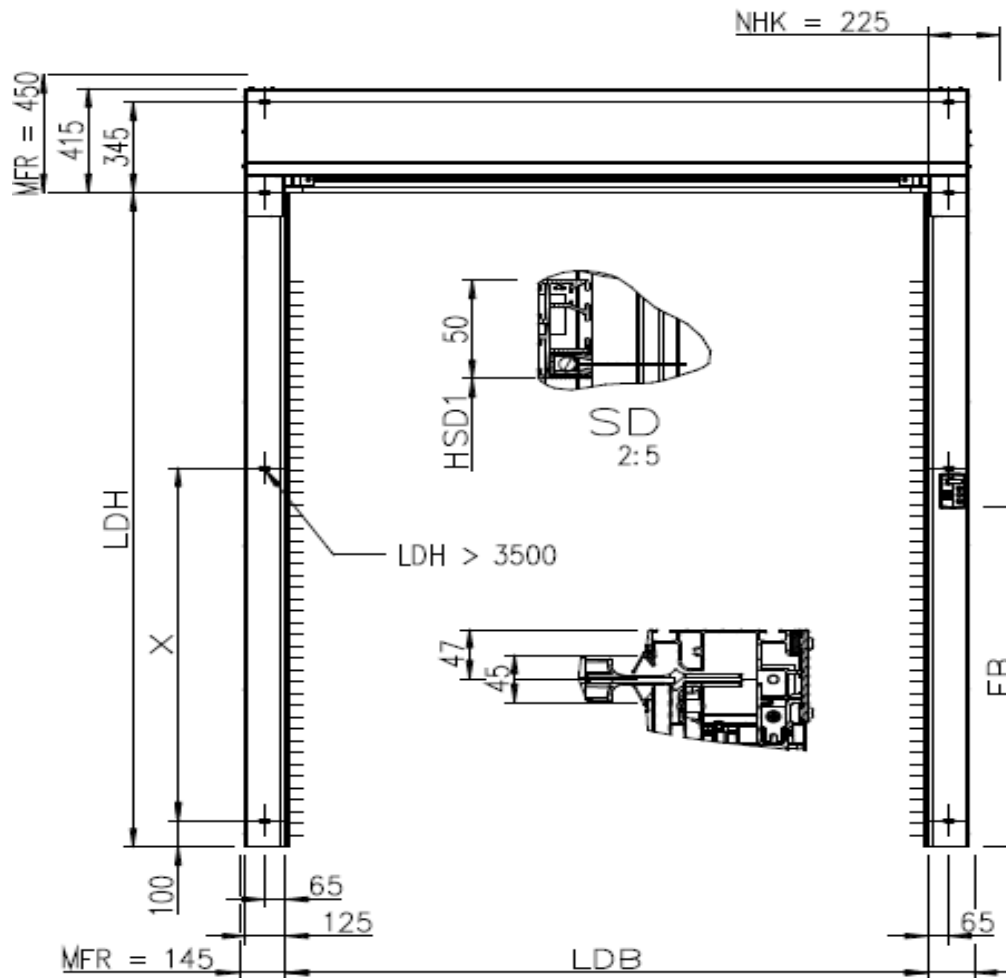
for Pressure differences up to 30 Pa

**Equipment:**

- Inspection opening on the cladding for easy maintenance and servicing
- No more splited cladding
- Additional sealing lip in the cladding increases tightness
- Aluminium bottom part

## V 4020 SEL Alu-R Sales benefits

**HÖRMANN**



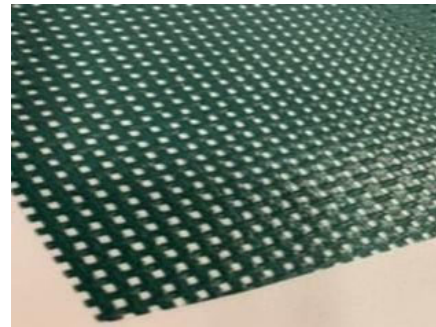
- Aluminium side elements
- Minimum fitting dimensions
- Simple initial start-up
- SoftEdge bottom part (automatic initial start-up)
- Light grille with Soft-stop
- Very good sealing
- Cladding included, RAL 9006
- Emergency opening, closing via on-site ratchet
- **Tubular drive 1,500,000 cycles**

## V 5015 SEL with Two Transparent Vision Panels Optional:

**HÖRMANN**



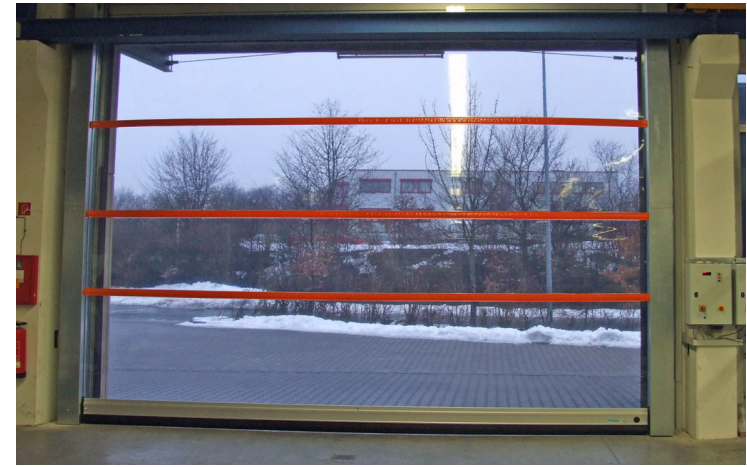
V 5015 SEL with two transparent vision panels  
Possible from a clear height of 3000 mm!



**Fly screens** similar to green RAL 6005



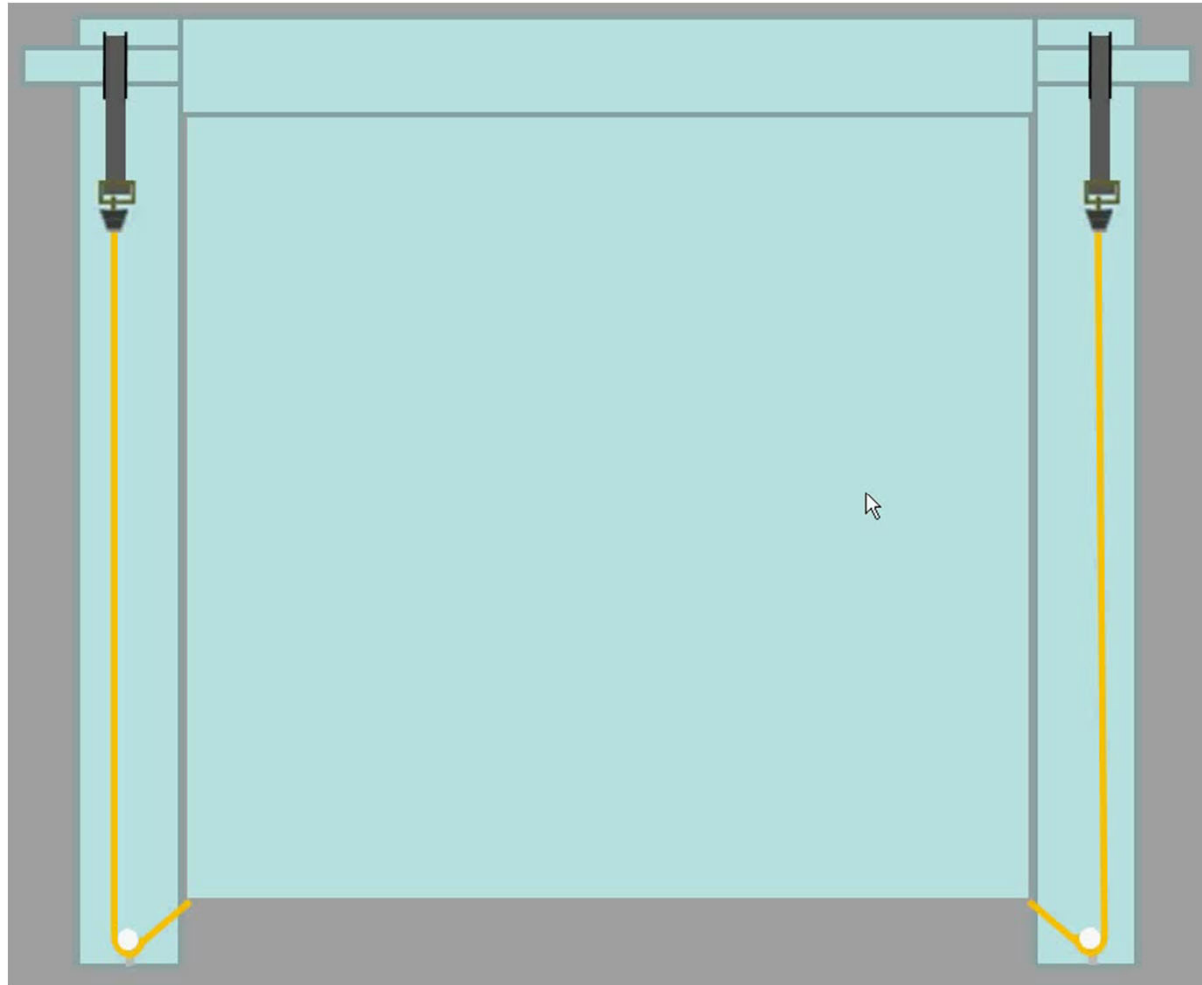
V 6030 SEL



V 6020 TRL



V 10008



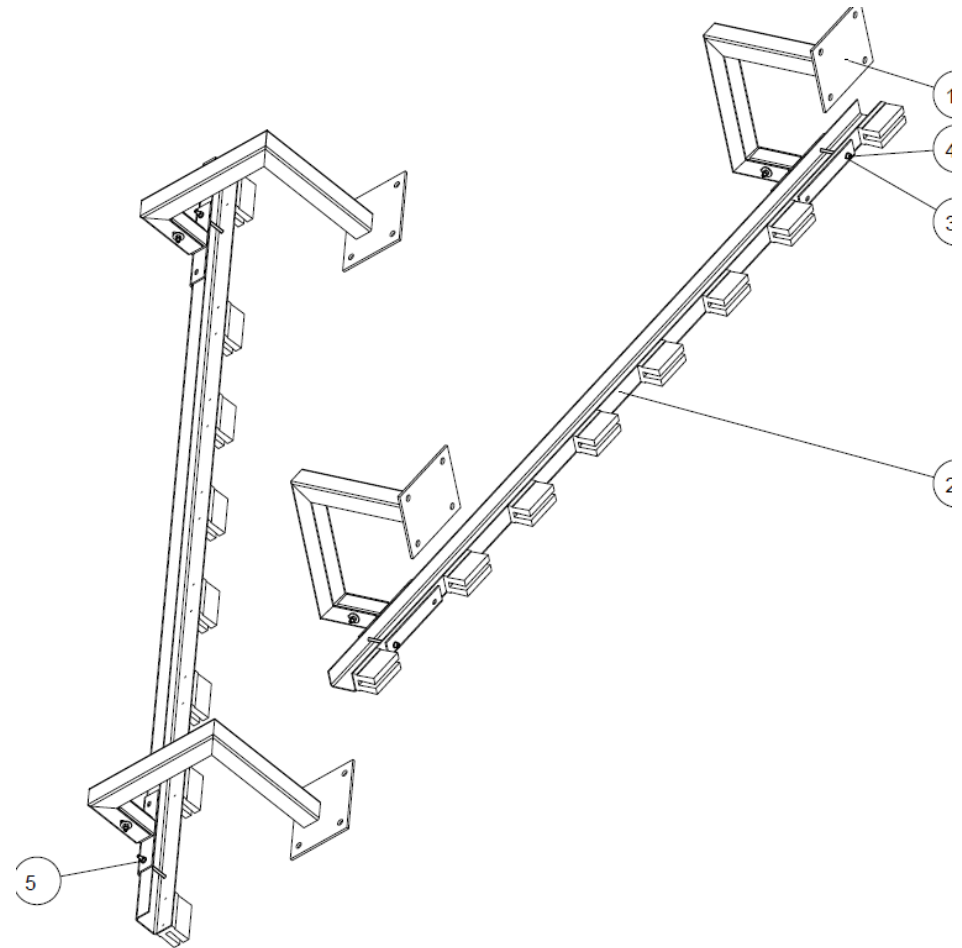
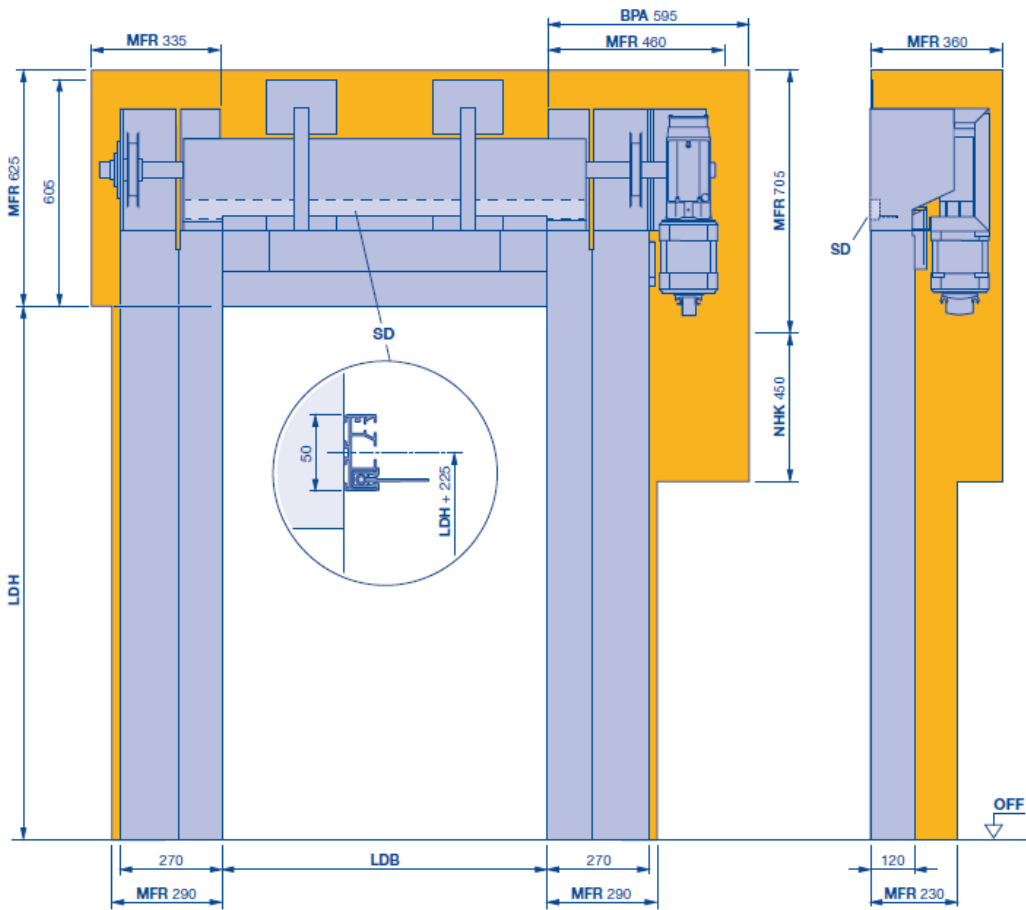
## V 6030 SEL – Curtain Fixing Recommendation:

**HÖRMANN**



- Wind exposed fitting situations
- Doors larger than 4000 × 4000 mm
- Not with a cladding
- Not with a
- Z-Frame or Door frame

# V 6030 SEL – curtain fixing



Flexible doors with alu bottom part  
Retrofitting on request

**HÖRMANN**

V6030 Alu



V5030 Alu



Wind force in Beaufort	Speed in m/s	Speed in km/h	Dynamic pressure in kg/m <sup>2</sup>	Dynamic pressure in Pascal	Classification acc. to EN 12 424
0 - Calm	0 - 0,2	unter 1	0	0	
1 - Light air	0,3 - 1,4	1 - 5	0 - 0,1	0,0 - 1,2	
2 - Light breeze	1,7 - 3,1	6 - 11	0,2 - 0,6	1,7 - 5,6	
3 - Gentle breeze	3,3 - 5,3	12 - 19	0,7 - 1,7	6,7 - 16,7	
4 - Moderate breeze	5,6 - 7,8	20 - 28	1,9 - 3,6	18,5 - 36,3	
5 - Fresh wind	8,1 - 10,6	29 - 38	3,9 - 6,7	38,9 - 66,9	
6 - Strong wind	10,8 - 13,6	39 - 49	7,0 - 11,1	70,4 - 111,2	
7 - Very strong wind	13,9 - 16,9	50 - 61	11,6 - 17,2	115,7 - 172,3	
8 - Gale	17,2 - 20,6	62 - 74	17,8 - 25,4	178,0 - 253,5	
9 - Serve Gale	20,8 - 24,4	75 - 88	26,0 - 35,9	260,4 - 358,5	class 1 – 300 N/qm
10 - Storm	24,7 - 28,3	89 - 102	36,7 - 48,2	366,7 - 481,7	class 2 – 450 N/qm
11 - Serve storm	28,6 - 32,5	103 - 117	49,1 - 63,4	491,2 - 633,8	class 3 – 700 N/qm
12 - Orkan	32,8 - 36,9	118 - 133	64,5 - 81,9	644,6 - 818,9	class 4 – 1000 N/qm

Internal doors

Outside doors

- Repetition of the basics
- Control and electrical application
- Energy efficiency of high-speed doors
- New door type V 5025 Z
- Overview of flexible high-speed doors
- Internal doors for special applications and for individual requirements
- The fastest door in the world: HS 5040 TurboLux S
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- Doors with fixed door leaf
- Door for the refrigeration and frozen food industry
- Requirements for the building structure
- Impulse generators
- Wearing parts

## V 2515 Food L Door for the food industry

**HÖRMANN**

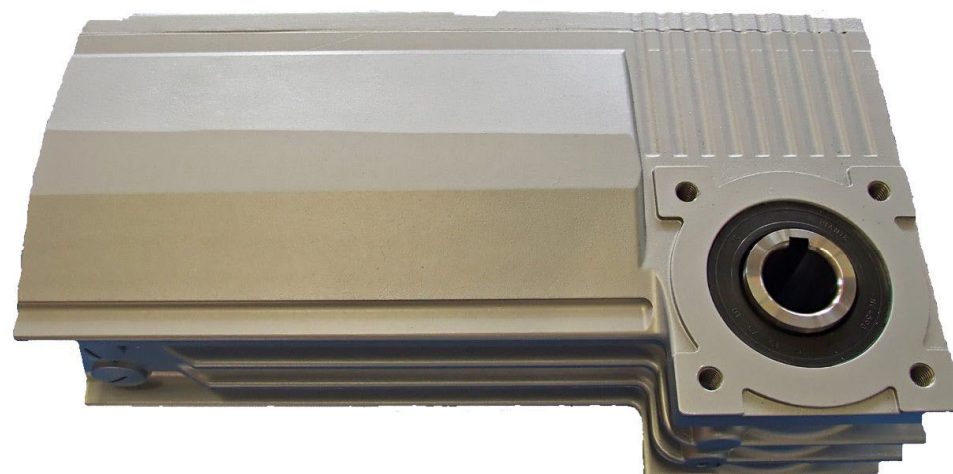


- Size range: 2500 × 4000 mm
- Door for the food industry and wet rooms
- Control BS 150 FUE-1 (stainless steel)
- Safety light grille in the closing zone with radio crash

Option: Emergency opening only via UPS

### **Sales benefits:**

- Enclosed operator
- Full stainless steel equipment
- Enclosed operator, full stainless steel equipment, chamfered cladding
- Cut-out in the side element for simple cleaning





- Size range: 2500 × 2500 mm
- Shaft and operator cover as standard
- BK 150 FUE -1 control with emergency off and main switch
- Light grille in door guide, height: 510 mm
- Automatic emergency opening via counter weights

### **Sales benefits**

- Fully equipped door for personnel traffic
- Automatic emergency opening

Option: Curtain printing

Curtain imprints optionally available

HÖRMANN



## V 3015 Clean Door for chemical and pharmaceutical industries

**HÖRMANN**



- Entirely stainless steel equipment
- Chamfered shaft and operator cover
- Special design for pressure differences
- 4-mm-thick fully transparent curtain
- Control BS 150 FUE-1
- Closing edge safety device and photocell
- Emergency opening via emergency crank handle

### **Sales benefits**

- Especially close-fitting door
- Narrow, close side elements
- Pressure resistance until 50 Pa

clean air for your workflow

**!** Partikelmessungen an einem Betriebsmittel

**Protokoll Nr.:** 203273  
**Ort der Messung:** COLANDIS GmbH  
 Im Camisch  
 34 07768 Kahla; Deutschland  
**Artikelbezeichnung:** S 1500 CLEAN  
**Artikelnummer:** ---  
**Zeichnungsnummer:** ---  
**Seriennummer:** 0410 0105 9290 0101 01  
**Baujahr:** 2016  
**Hersteller:** Seuster KG  
 Tietmecker Weg 1  
 58513 Luedenscheid  
**Messpersonal:** Frank Helbig  
 COLANDIS GmbH  
**Datum der Messung:** 14.11.2016 - 18.11.2016

**Zusammenfassung des Messergebnisses**

Test	Bemerkung	Wertung
Visuelle Inspektion	Design, Material, Sauberkeit	i.O.
Partikelmessung Reinraum Leerlauf (at rest)	ISO Klasse 3erfüllt	i.O.
Klassifizierung Schnellauftor	ISO Klasse 6	i.O.
Zusammenfassung		i.O.

19.12.16   
 Unterschrift Messdurchführung  
 COLANDIS GmbH

the clean air company  
 Im Camisch 34 · D-07768 Kahla

COLANDIS  
 ISO 15646  
 VO 2005

the clean air company

COLANDIS GmbH · Im Camisch 34 · D-07768 Kahla  
 Telefon +49 39424 7694-0 · E-Mail: info@colandis.com · www.colandis.com

- Target group: Companies, which operate cleanrooms
- Particle measurement: The particle measurement behaviour of the high-speed door is measured. (24 hour fatigue testing)
- Target: To derive suitability of the high-speed door for cleanrooms.



- Repetition of the basics
- Control and electrical application
- Energy efficiency of high-speed doors
- New door type V 5025 Z
- Overview of flexible high-speed doors
- **Internal doors for special applications and for individual requirements**
- The fastest door in the world: HS 5040 TurboLux S
- Lunch break and factory tour
- Doors with fixed door leaf
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- Requirements for the building structure
- Impulse generators
- Wearing parts

## V 5030 MSL

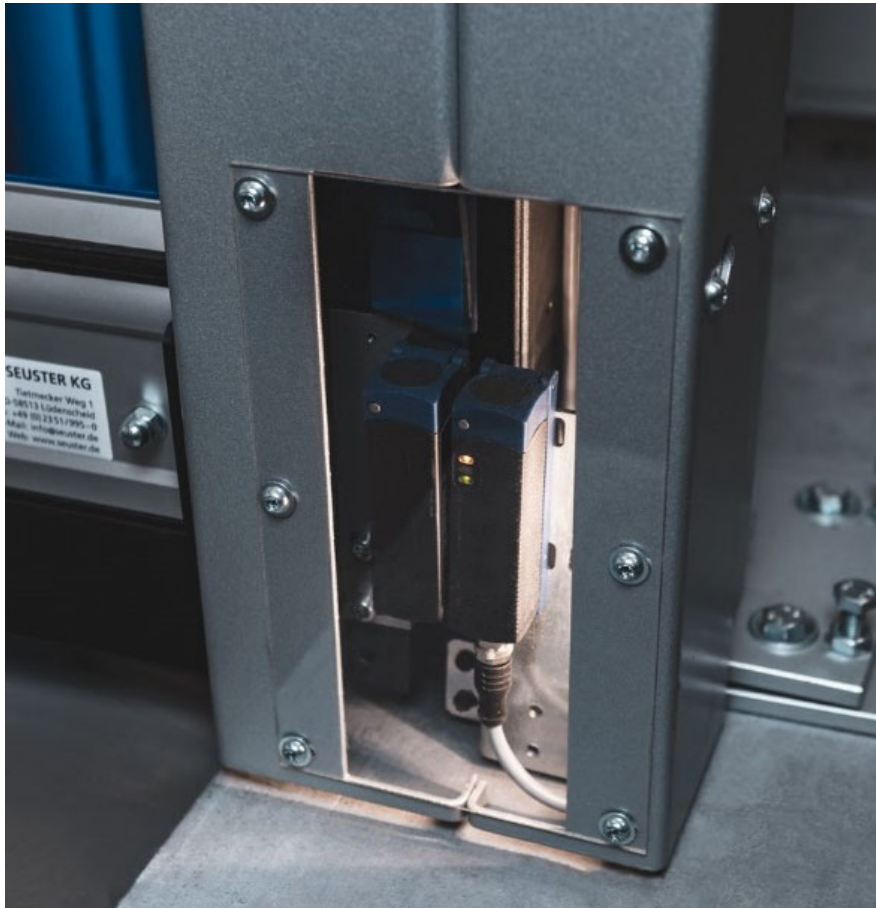
### Machine protection door with safety limit switch

**HÖRMANN**



- Size range 4000 × 4000 mm
- Basis: V 5030 SEL side elements with aluminium floor blade
- 4 mm thick transparent curtain, alternatively 3 mm fabric curtain in blue, orange, grey
- Control BK 150 FUE-1 / AK 500 FUE-1
- Safety light grille in the closing zone
- Emergency opening via emergency crank handle

Alternatively without switch as a transparent internal door



4 different safety switches can be used below:

- **Schmersal CSS 14-34-S-D-M-ST (cat. 4)**
- Euchner CES-A-C5H-01 (cat.4)
- Klaschka SIDENT 40fq50n20-11Sh1C (cat.4)
- Pilz PRESENcs 1.19n (cat.4)
- P&F NBB20-L2-A2-V1
- Safety sensor P&F NBB20-L2-A2-V1 can be optionally used in the top section

The switches are assessed on-site.



- A self-supporting installation frame can be ordered for integration in the production process
- Any unevenness on-site can be balanced out with adjustable mounting plates
- The frame consists of C-profiles, which can also be used as a cable duct
- Inside bearing for less fitting clearance in the top section



Standardised pendulum impact test for mechanical strength according to **EN ISO 14120:2015** and functional safety according to **EN ISO 13849-1**

### Details:

- Pendulum length 1.6 m
- Pendulum body, weight 125 kg
- Height from floor: 1.35 m

## V 4020 Protect

Our high-speed door for machine protection

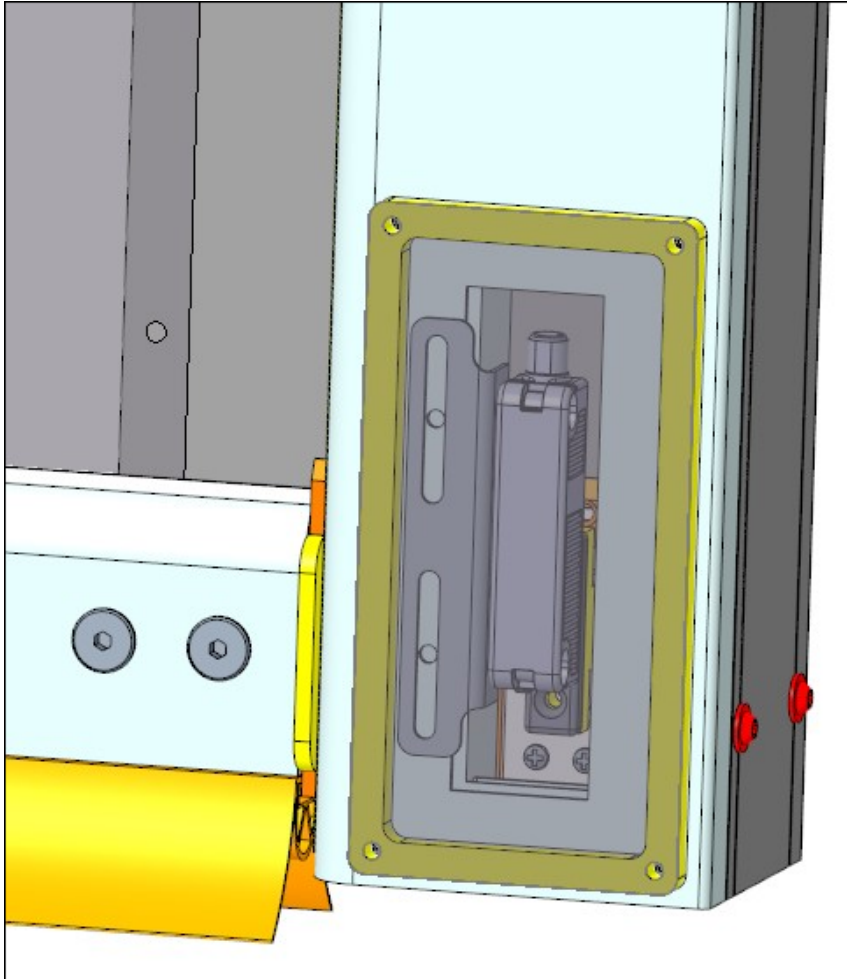
**HÖRMANN**



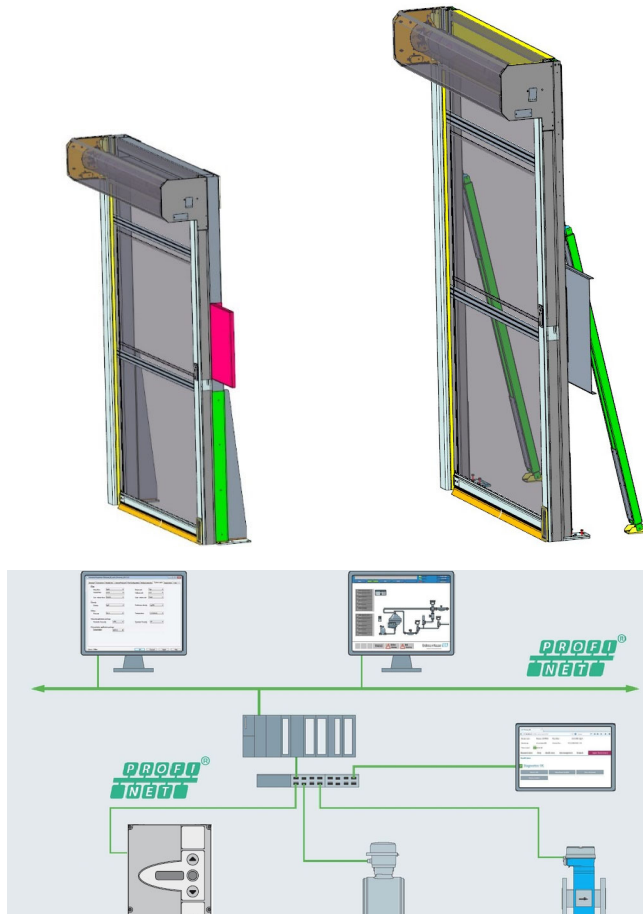
- Max. clear width 4000 mm
- Max. clear height 5000 mm
- Fully transparent
- Windclass 3 acc. to DIN EN 12424
- Max. opening speed 2.2 m/s
- Max. closing speed 1.0 m/s
- Aluminium bottom rail
- Safety light grille with soft-stop
- Emergency opening via 1/2" on-site ratchet
- Control: BK 150 FUE-1
- **Tubular drive 2,500,000 cycles**

## V 4020 Protect Product Features

**HÖRMANN**



- Safety Limit Switches Category PL d
- Message position below: Gate closed Switch manufacturer: Schmersal, Euchner, Pilz
- Height adjustment +/-50 mm
- Contact position above: Door open without category Pepperl+Fuchs
- Diodes of the switches visible from the outside
- Safety of machinery – standards
  - EN 1088, EN ISO 13849-1, EN 62061
- Optional:
  - Side guide extension as a separate component



- Self-supporting frame **w/o** columns LDH < 3000 mm
- Self-supporting frame **with** columns outrigger LDH > 3000 mm  
a outrigger to the front or rear
- UPS: Uninterrupted power supply
- Safety limit switch detecting upper end limit
- Back cover cladding
- Interface via clamps
- Interface ProfiNet via RCCA-A-board

## V 3009 Door conveyor systems

**HÖRMANN**



- Size range: 2500 x 3000 mm
- Aluminium bottom part
- Volt-free contacts signal Open / Close
- With AKE relay control unit as standard
- Closing edge safety device and photocell
- Emergency opening via emergency crank handle

### **Sales benefits**

- Designed for a high number of cycles
- Low cost door in conveyor systems

## V 6030 Atex Internal door for potentially explosive areas

**HÖRMANN**



- Size range: 4000 x 4000 mm
- Fully approved door for Atex areas
  - Gas:  $\text{Ex}$  II 2G Ex h IIB T4 Gb
  - Dust:  $\text{Ex}$  II 2D Ex h IIB T125 °C Db
- With EX operator, EX safety contact strip and EX photocell
- The control must always be fitted outside the EX area (cable: max. 20 m)
- Only certain impulse generators can be connected
- The curtain must be replaced every 36 months (fabric only) or 18 months (fabric with vision section)

- Repetition of the basics
- Control and electrical application
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- New door type V 5025 Z
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- **The fastest door in the world: HS 5040 TurboLux S**
- Lunch break and factory tour
- Doors with fixed door leaf
- Door for the refrigeration and frozen food industry
- Requirements for the building structure
- Impulse generators
- Wearing parts

**New: Spiral gate HS 5040 TurboLux  
the fastest spiral door in the world**

**HÖRMANN**





- **Very fast opening speed of more than 4.0 m/s**
- **No vertical element**
- **Transparency up to 90% due to very high impact resistant polycarbonate sections**
  - Maximum daylight
  - Risk reduction
- **Emergency closing of the gate possible**
- **Quick assembly due to pre-assembled upper unit**
- **Spiral-Cladding included**

### Standard

- Application: Internal and external gate
- Dimensions  
max. 5000 x 5000 mm
- Closing speed: 1.0 m/s
- Safety equipment: Light grille with soft stop
- Resistance against wind load:  
Class 2 / 4
- Door leaf: Polycarbonate sections, 1 x 1.5 mm
- Emergency opening: Handchain
- Lifetime > 1,000,000 cycles

### HS 5040 TurboLux

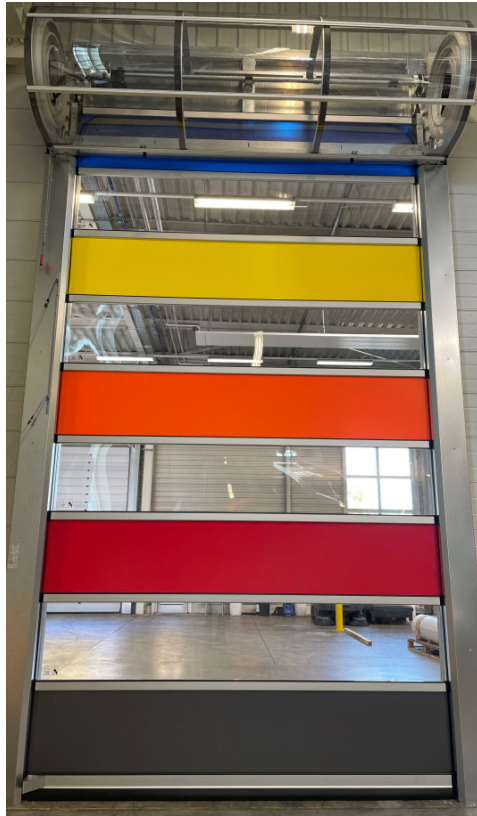
- Opening speed:  
max. 3.5 m/s
- Counter balance:  
**Counter weight**
- 400 V Control:  
3-phase control AK 500 FUE-1

### HS 5040 TurboLux S

- Opening speed:  
greater than 4 m/s
- Counter balance:  
**Springs**
- 230 V Control:  
1-phase control BK 150 FUE-1
- Emergency opening by secured  
unlocking handle



External view

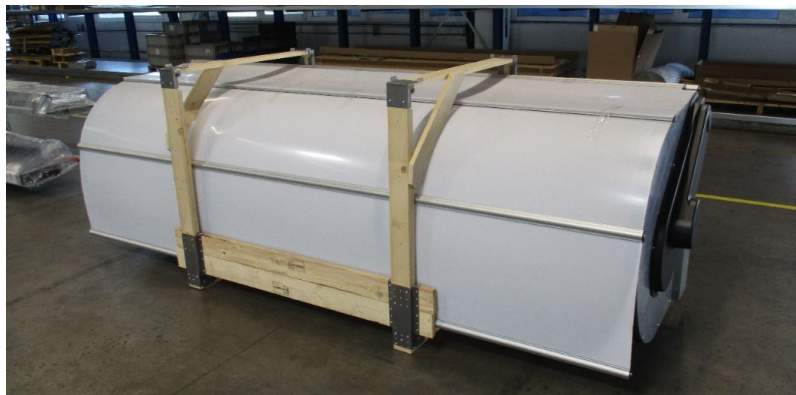
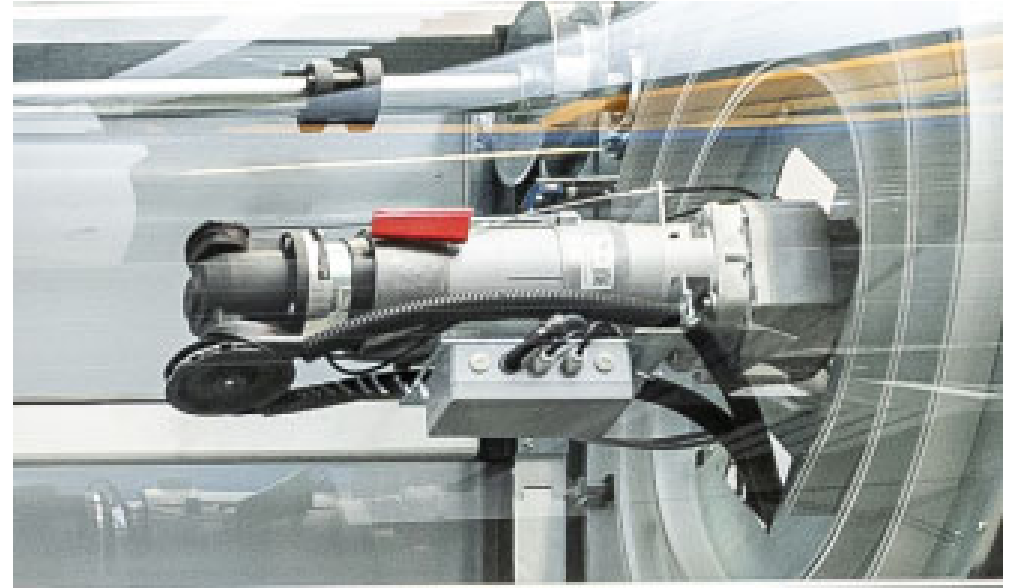


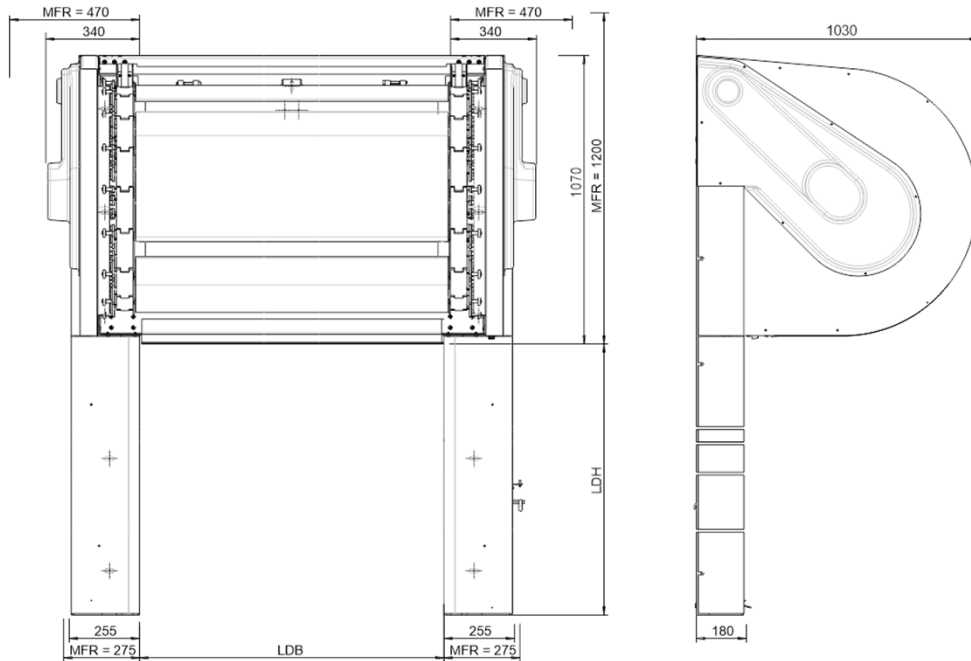
Internal view

- Optional foil coating in preferred colours:
- Dark grey
- Light grey
- Blue
- Red
- Orange
- Yellow
- Special colour on request

# HS 5040 TurboLux and HS 5040 TurboLux S

**HÖRMANN**

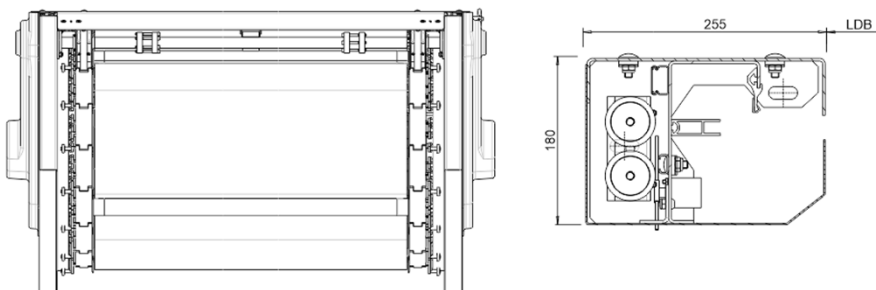




**Dimension C.H. = 5000mm x C.W. = 5000mm**

**Space requirement:**

- Required lintel 1100 x 1030 mm
- Operator site 275 / 470 mm
- Bearing site 275 / 470 mm
- Side element (depth) 180 mm
- Drive in the spiral



## HS 5040 TurboLux User Story

**HÖRMANN**



<https://www.youtube.com/watch?v=1BqNblcCinY>



- Fast
- Transparent
- Impact resistant
- Sure
- Durable
- **and...**



The  
HÖRMANN KG  
achieved with its high-speed door, model  
"HS 5040 TurboLux S" the world record for  
the "fastest vertically opening industrial  
high-speed door as tested and  
certified on August 5, 2024.

Only at Hörmann

Available from 05/08/2024

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**U<sub>D</sub>-value:**  
**1.04 W/m<sup>2</sup>K**



42 mm with  
thermal break

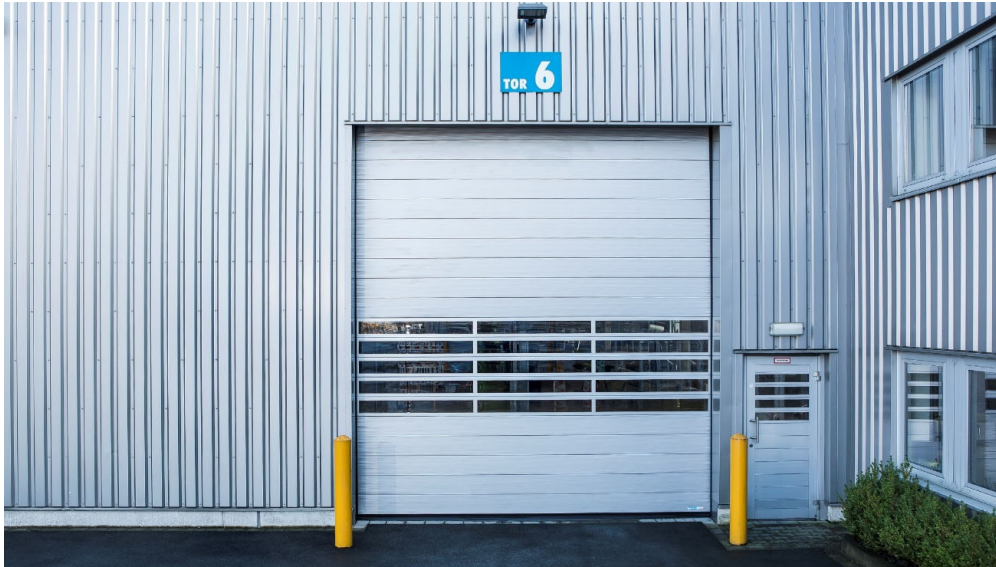
**U<sub>D</sub>-value:**  
**0.57 W/m<sup>2</sup>K**



100 mm with  
thermal break

### Door types:

- HS 7030 PU 42
- HS 5015 PU **N** 42
- HS 5015 PU **H** 42
- HS 6015 PU **V** 42
- HS 50**12** PU 42 S
- HS 50**12** PU **N** 42 S
  
- Iso Speed Cold H 100
- Iso Speed Cold V 100



- Section height 250 mm
- Dimension C.H. = 8000mm x C.W. = 5000mm
- Exterior Micrograin, interior Stucco, RAL 9006
- **U<sub>D</sub>-value: 1.04 W/m<sup>2</sup>K**, with Thermoframe
- Glazing with glazing beads (Duratec)
- Control AK 500 FUE-1, 400 V 3-Phase
- Safety equipment: Light grille with soft stop
- Up to wind class 5 (dependent on door size)
- Acoustic insulation R = 26 dB
- Air permeability class 2
- Water-tight under heavy rain class 2
- Burglar resistance RC 2 as standard

## High speed doors HS 7030 PU 42 –product improvements

**HÖRMANN**



- Door size up to 8000 mm wide and 5000 mm high
- Up to 5000 x 5000 mm: Counterbalance by counter weights instead of springs
- Low maintenance work
- Low follow-up costs
- Quietdoor travel
- RC 2 security as standard



## HS 7030 PU 42

### Counterweights reduce the cost of life LCC

**HÖRMANN**

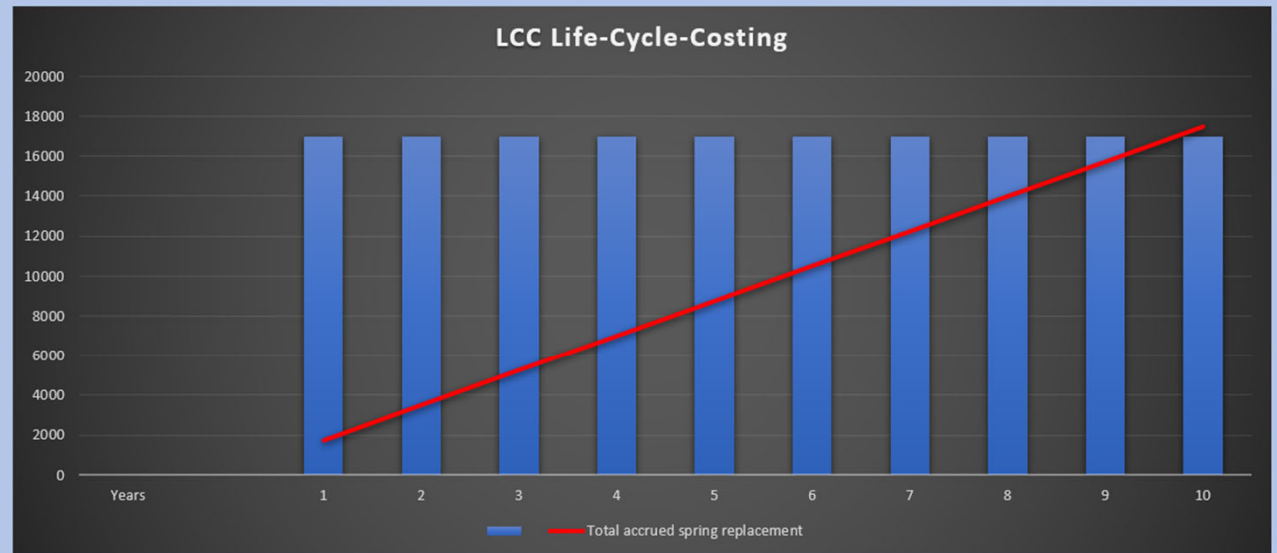


- Up to 5000 x 5000 mm weight compensation via counterweights instead of springs
- ✓ Standard
- ✓ Wear-free
- ✓ Less maintenance
- ✓ Lower follow-up costs
- ✓ Smooth slalom
- ✓ For the highest door cycles
- ✓ At no extra cost
- ✓ Low payback periods

# HS 7030 PU 42 - LCC Life-Cycle-Costing Compared to gates with springs

What is the cost of spring replacement compared to counterweights? Fill in

Price for a new door **17.000 €**  
 Springs must be all **100.000** cycles exchanged  
 Cycles per hour **35**  
 Working days per week **5**  
 Number of shifts **1,5**



	Tor Zyklen									
Cycles per year, accrued	109.200	218.400	327.600	436.800	546.000	655.200	764.400	873.600	982.800	1.092.000
Cost springs spare part	874	874	874	874	874	874	874	874	874	874
Assemble replace springs	874	874	874	874	874	874	874	874	874	874
Years	1	2	3	4	5	6	7	8	9	10
Total accrued spring replacement	1.747 €	3.494 €	5.242 €	6.989 €	8.736 €	10.483 €	12.230 €	13.978 €	15.725 €	17.472 €

## Shaft and drive cover made of polycarbonate sections for spiral doors of the HS family

**HÖRMANN**



- Doortyp with spiral:
  - HS 7030 PU 42
  - HS 5012 PU 42 S
  - HS 7030 Acoustic
- Unique transparent shaft and drive cover
- Impact-resistant polycarbonate
- Particularly easy to install, light
- Max. 8000 mm door width
- Standard colour: Smoke grey
- Optional foil coating in preferred colours: dark grey, light grey, blue, red, orange, yellow

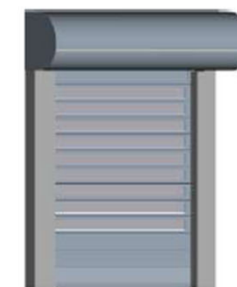
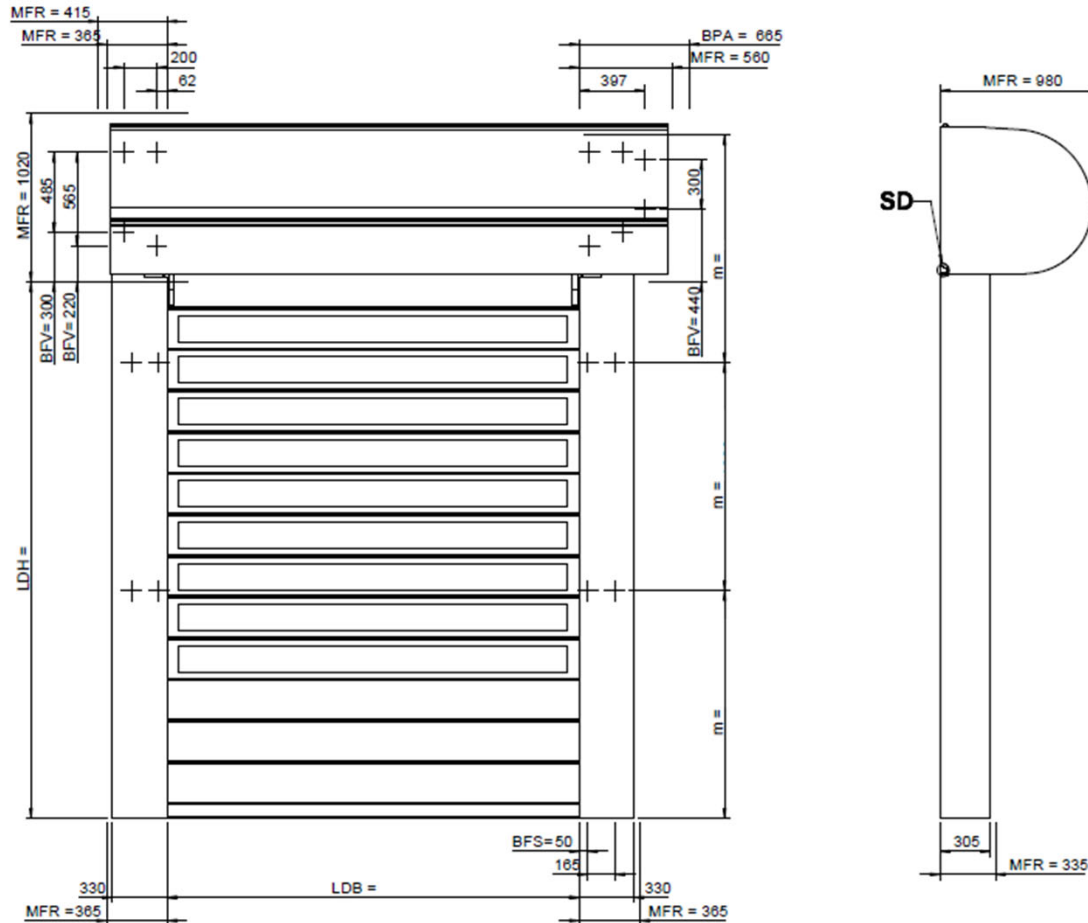
**New at Hörmann**

**Available from 01/06/2025**

# Shaft and drive cover made of polycarbonate sections

## Dimension sheet

**HÖRMANN**



1:50

**New at Hörmann**

**Available from 01/06/2025**

Area attack door leaf



Dynamic attack gate leaf



Push-up/up-thrust test



Manual attack guide rail



Certificate

<b>Zertifikat / Certificate</b>		
Zertifikatsnr. / Certificate No.: 219 IFT-6080181-1-1		
<b>Angriffshemmende Bauteile</b> <i>Security building components</i>		
<b>Produkt</b> <i>product</i>	HS 7030 PU 42	
<b>Produktfamilien</b> <i>product families</i>	Einbruchhemmendes Rollltor aus Weißblech mit PU-Füllung und Fensterprofil <i>Burglar-resisting roller door made of Inplate with PU-filling</i>	
<b>Bauart</b> <i>type of construction</i>	Rolltor <i>Roller door</i>	
<b>Klassifizierung</b> <i>classification</i>	DIN/TS 18194:2020 - RC 2	
<b>Hersteller</b> <i>manufacturer</i>	Hörmann KG Verkaufsgesellschaft Upheider Weg 94-98, DE 33803 Steinhagen	
<b>Produktionsstandort</b> <i>production site</i>	Seuster KG Tietmecker Weg 1, DE 58513 Lüdenscheld	
<p>Mit diesem Zertifikat wird bescheinigt, dass das benannte Bauprodukt den Anforderungen des zugrundeliegenden IT-Zertifizierungsprogramms in der aktuellen Fassung entspricht.</p> <p>IT1 Überprüfung des Bauproduktes durch eine akkreditierte Prüfstelle nach DIN/TS 18194</p> <p>IT2 Einhaltung und Aufrechterhaltung einer werkseigenen Produktionskontrolle durch den Hersteller</p> <p>IT3 Entsendung des Werkes und der werkseigenen Produktionskontrolle durch IT-Q-Zert</p> <p>IT4 kontinuierliche Fremdüberwachung des Werkes und der werkseigenen Produktionskontrolle durch IT-Q-Zert</p> <p>Dieses Zertifikat wurde erstmals am 21.09.2020 ausgestellt und gilt 3 Jahre, wenn sich zwischenzeitlich die Festlegungen in der oben angeführten technischen Spezifikation oder die Herstellungsbedingungen im Werk oder in der werkseigenen Produktionskontrolle selbst nicht wesentlich verändert haben.</p> <p>Das Zertifikat darf nur unverändert vervielfältigt werden. Alle Änderungen der Voraussetzungen für die Zertifizierung sind dem IT-Q-Zert mit den erforderlichen Nachweisen unverzüglich schriftlich anzuzeigen.</p> <p>Das Unternehmen ist berechtigt, das benannte Bauprodukt gemäß der IT-Zeichensetzung mit dem IT-zertifiziert-Zeichen zu kennzeichnen.</p>		
<p>This certificate attests that the building product mentioned fulfils the requirements of the underlying IT-certification scheme in its current version.</p> <p>IT1 initial type-testing of the building product by an accredited testing body as per DIN/TS 18194</p> <p>IT2 implementation and maintenance of a factory production control by the manufacturer</p> <p>IT3 initial inspection of the production site and the factory production control by IT-Q-Zert</p> <p>IT4 continuous third-party control of the production site and the factory production control by IT-Q-Zert</p> <p>This certificate was first issued on 21.09.2020 and will remain valid for 3 years, as long as neither the conditions laid down in the technical specification listed above nor the manufacturing conditions in the production site nor the factory production control itself are modified significantly.</p> <p>The reproduction of the certificate without any change from the original is permitted. Any changes to the prerequisites applicable to certification shall be immediately communicated in writing to IT-Q-Zert, accompanied by the necessary evidence.</p> <p>The company is authorized to affix the "IT-certified"-mark to the building product mentioned according to the IT-rules for use of the "IT-certified"-mark.</p>		
<p><b>Grundlage(n) / Basis:</b> IT-Zertifizierungsprogramm für "Angriffshemmende Bauteile" <i>IT-certification scheme for security building components</i> (QM 301) Ausgabe / Issue: 2020</p> <p>DIN/TS 18194  Einbruchhemmung <i>burglar resistance</i></p> <p>Überswachungsstelle: ift Rosenheim GmbH Theodor-Gieß-Str. 7-9 Deutschland 83026 Rosenheim</p> <p>Prüfautor: ift Rosenheim GmbH Theodor-Gieß-Str. 7-9 Deutschland 83026 Rosenheim</p>		
<p>ift Rosenheim 21.09.2020</p> <p>Gültig bis / Valid until: 20.09.2023</p> <p>Vertragen. / Contract No.: 219 IFT 6080181</p>		<p>ift Rosenheim Prof. Jörn P. Laas Institutsvorleiter Director of Institute</p> <p>Prüfer-ID-Nr. / Prüfprot.-Nr.: 20-003129-PR01 vom / dated 23.07.2020</p> <p></p> <p>www.ift-rosenheim.de</p>

- HS 7030 PU 42
- HS 5012 PU 42 S
- HS 5015 PU N 42

ift Rosenheim GmbH  
Theodor-Gieß-Str. 7-9  
D-83026 Rosenheim

Kontakt  
Tel. +49 8031 281-0  
Fax. +49 8031 281-260  
www.ift-rosenheim.de

Prüfung und Kalibrierung - EN ISO/IEC 17025  
Inspektion - EN ISO/IEC 17020  
Zertifizierung Produkte - EN ISO/IEC 17065  
Zertifizierung Managementsysteme - EN ISO/IEC 17021

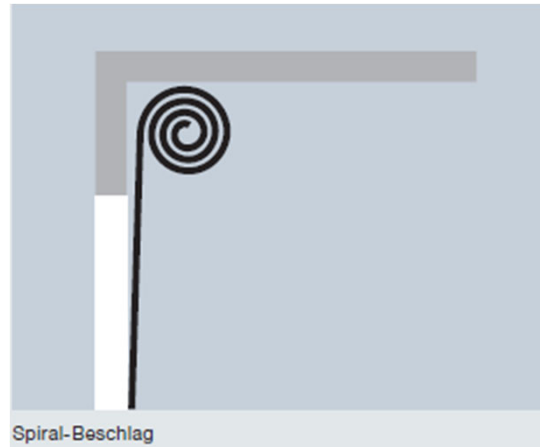
Verkehrsbauwerk  
DIN EN ISO 9001

### Required headroom:

920 – 1055 mm

Counterweights or  
spring, depending on  
size

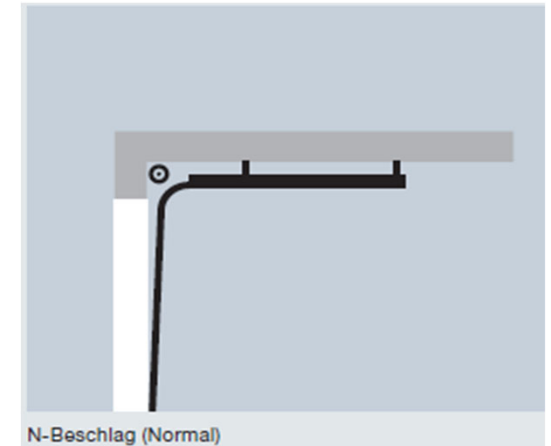
**PU 42 S** without spring



### Required headroom:

480 – 750 mm

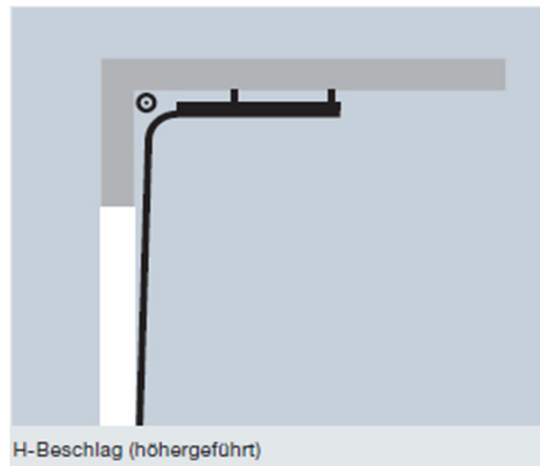
Spring



### Required headroom:

750 until LDH+585 mm

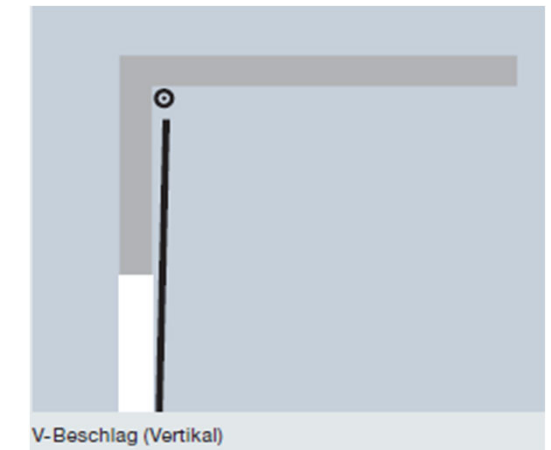
Counter weights



### Required headroom:

LDH + 585 mm

Counter weights

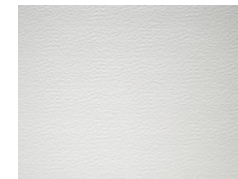




- Fitting possible on exterior side!
- Recommended: cladding on three sides

**It is not possible to turn the curtain!**

Exterior side:



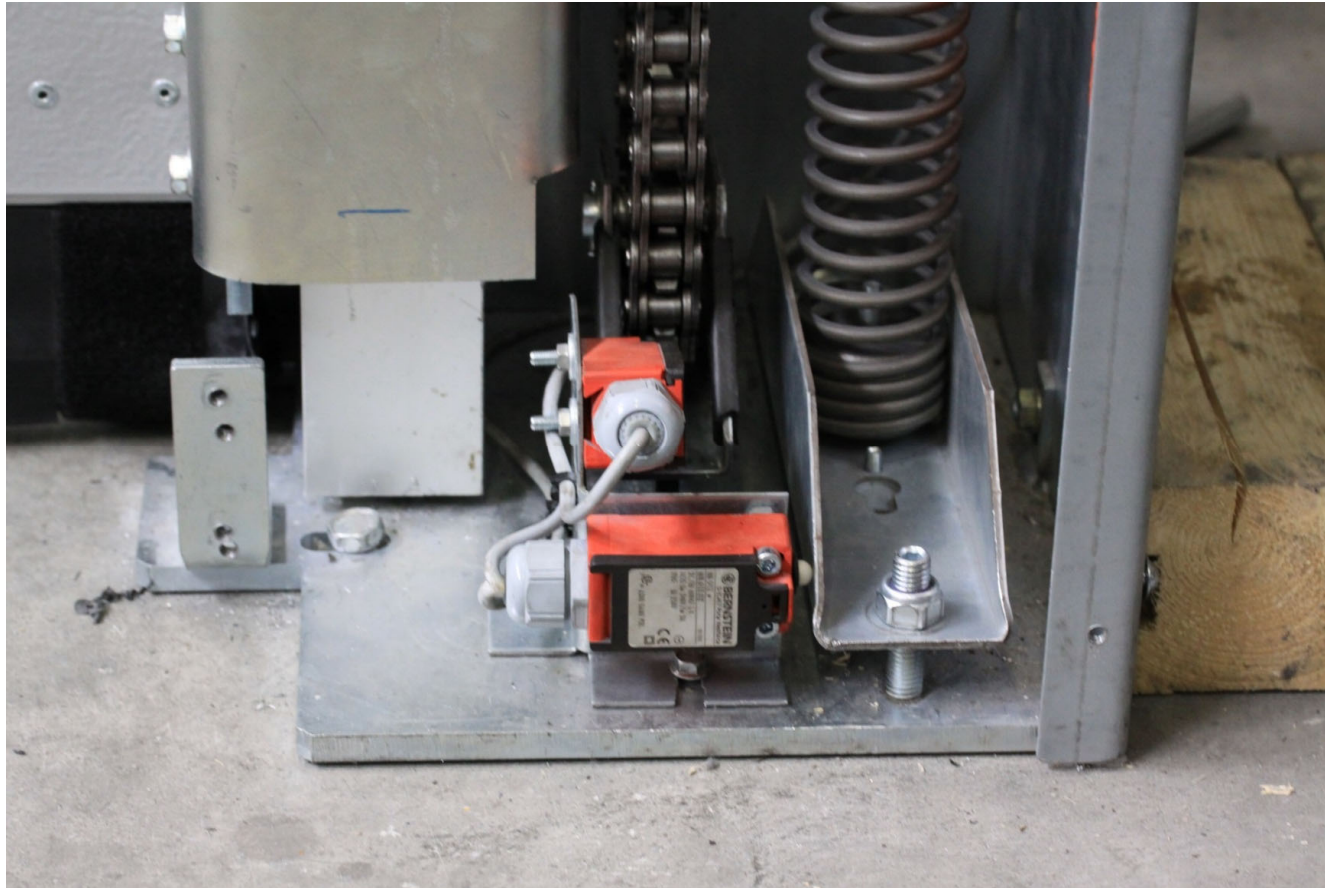
*Visible side*

Stucco **with hinges!**

Interior side:



Micrograin



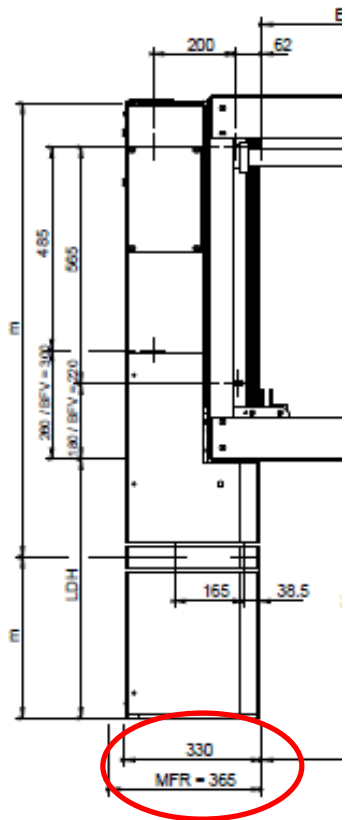


- **Counterweights are particularly low-wear**
  - - for spirals up to 5000x5000
  - - for H and V fittings
- Weight compensation via springs for very heavy spiral doors and N-fittings
- Door variants without springs or counterweights
- Very good U-values
- Scratch-proof Duratec glazing, windows can be replaced individual using glazing beads
- Track applications variants: Spiral, N, H,V
- Certified safety RC 2 for spiral doors as standard
- The spiral door can also be also be fitted externally
- Safety Light grille with soft stop
- Up to 8000 mm width

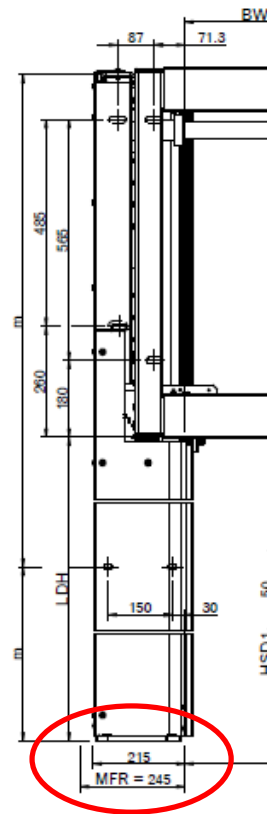




Side elements HS 7030 PU 42    Side elements HS 5012 PU 42 S



Width: 330 mm



Width: 215 mm

- Size range 5000 x 5000 mm
- Max. opening speed:
  - Opening: 1.2 m/s
  - Closing: 0.5 m/s
- More narrow side elements and lower side space requirement
- No springs, no counterweights
  - = no expensive maintenance costs

### Sales advantages

- Minimal wear and tear
- Less expensive than the HS 7030 PU 42

**HS 5012 PU N 42 S**  
**Extension of the HS 5012 PU 42 S family**

**HÖRMANN**



- Small side panels guides only 215 mm wide
- Normal track-application lintel height 550 mm
- No counterweights, no springs
- Cheaper than the HS 5015 PU N 42

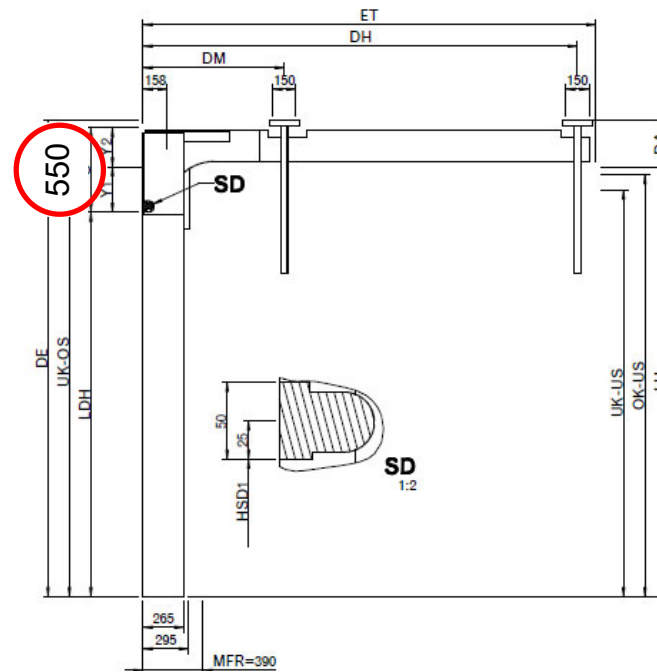
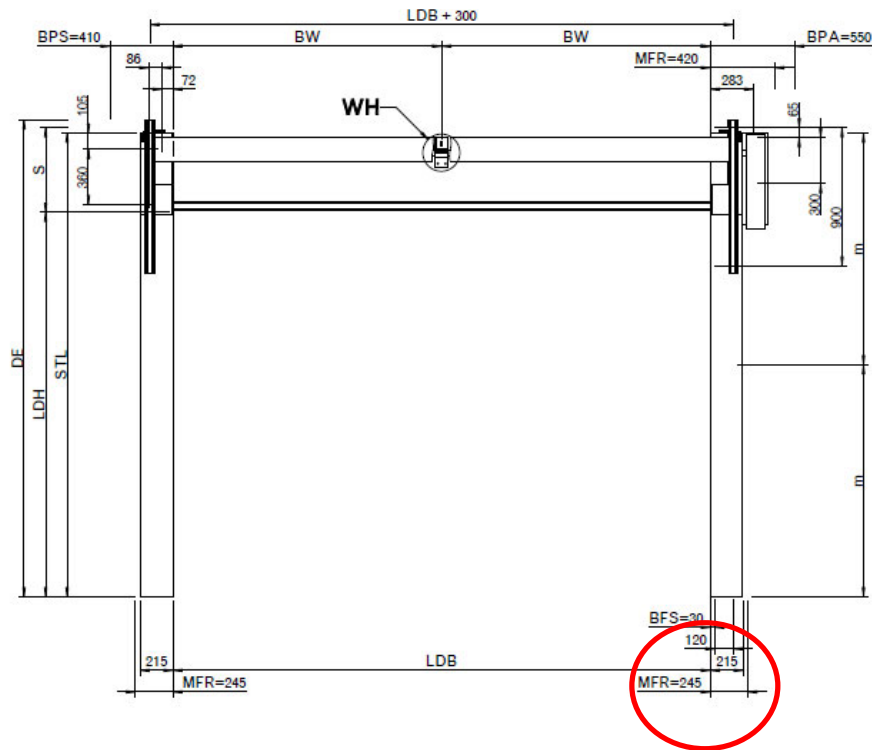
**New at Hörmann**

**Available from 01/03/2025**

# HS 5012 PU N 42 S

215 mm small side elements

**HÖRMANN**



**New at Hörmann**

**Available from 01/03/2025**



\* Optional: Special cover

- Max. opening width x height 5000 x 5000 mm
- N - Track application 550-750 mm
- Without any weight compensation
- $U_b$  value: 1.04 W/m<sup>2</sup>K, 4000 x 4000 mm, without glazing, with optional available thermoframe
- Speed max. approx.  
Open/Close: 1.2 m/s / 0.5 m/s
- Resistance against wind Wind class 5
- Control AK 500 FUE-1
- Safety light grille with soft-stop function
- Emergency opening/emergency closing via emergency hand chain
- Option: Glazing frame or steel expanded mesh



- Track application: H,
- Section 42 mm anodised in E6 / EV 1 with rigid foam insulation
- Only available without window profiles
- Control AK 500 FUE-1
- Safety light grille in the closing zone
- Counterbalanced through counter weights
- Standard: High-lift track application; other track applications on request



- Acoustic rating acc. to DIN EN ISO 10140-2
- Weighted acoustic rating index

**R = 31 dB**

- Plus improved acoustic insulation thanks to quicker opening and closing of the door
- 2 aluminium hollow profiles with infill: 5PVC / 30PU foam (black)
- Moulded section edge

## Nachweis Luftschalldämmung von Bauteilen

Prüfbericht  
Nr. 13-000583-PR02  
(PB M19-D01-04-de-01)



Auftraggeber **Seuster KG**  
Tietmecker Weg 1  
58513 Lüdenscheid  
Deutschland

Grundlagen  
EN ISO 10140-1: 2010  
+A1: 2012  
EN ISO 10140-2: 2010  
EN ISO 717-1: 1996+A1: 2006  
Darstellung

Produkt	Rolltor
Bezeichnung	Schnellaufstor RTS 4000 PU
Abmessungen	3670 mm x 3200 mm (LDM, b x h)
Behang	Lamellenbehang aus profilierten doppelwandigen Aluminium mit Hartschaumdämmung, Dicke d = 42 mm, flächenbezogene Masse: m' = 24 kg/m <sup>2</sup> kg/m <sup>2</sup>
Zarge	mehrteilige Profalzarge
Beschlag	Laufschienebeschlag mit seitlicher Rollenführung, Kettentrieb
Dichtungen	Zargendichtungen seitlich und oben, Bodendichtung in der Sockellamelle, Lamellenprofile mit Stoßdichtung und Fließ
Besonderheiten	Antrieb/Führungsschnecke nicht montiert



Verwendungshinweise  
Dieser Prüfbericht dient zum Nachweis der Luftschalldämmung eines Bauteils.  
Für Deutschland gilt  
-  $R_{w,R}$  nach DIN 4109:  
( $R_{w,R}$  entspricht  $R_{w,P}$ ,  
 $R_{w,R} = R_{w,P} - 5$  dB)  
-  $R_{w,R}$  für Bauregelliste

Gültigkeit  
Die genannten Daten und Ergebnisse beziehen sich ausschließlich auf den geprüften und beschriebenen Probekörper.  
Die Prüfung einer Leistungseigenschaft berechtigt keine Aussage über weitere leistungs- und qualitätsbestimmenden Eigenschaften der vorliegenden Konstruktion.

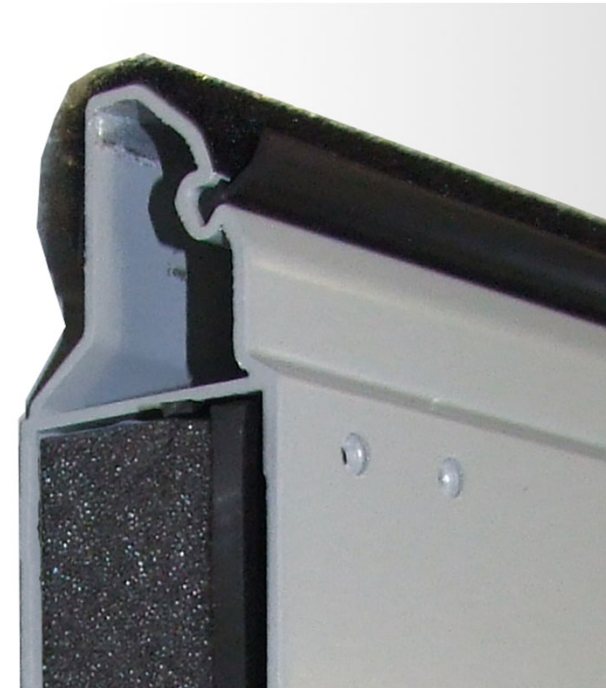
Veröffentlichungshinweise  
Es gilt das ift-Merkblatt „Bedingungen und Hinweise zur Verwendung von ift-“

Bewertetes Schalldämm-Maß  $R_w$   
Spektrum-Anpassungswerte C und  $C_T$



$$R_w (C; C_T) = 31 (-1; -3) \text{ dB}$$

ift Rosenheim  
28. Mai 2013



- Repetition of the basics
- Control and electrical application
- Energy efficiency of high-speed doors
- New door type V 5025 Z
- Overview of flexible high-speed doors
- Internal doors for special applications and for individual requirements
- The fastest door in the world: HS 5040 TurboLux S
- Lunch break and factory tour
- Doors with fixed door leaf
- Door for the refrigeration and frozen food industry
- Requirements for the building structure
- Impulse generators
- Wearing parts

## V 4015 Iso L Door for fresh logistics to 4 °C

**HÖRMANN**



- Size range: 4,000 × 4,500 mm
- Under 7 °C heated operator and control
- Curtain 20 mmPE foam in curtain pockets
- Thermal insulation value  $U = 1.6 \text{ W/m}^2\text{K}$
- Control BK 150 FUE-1
- Safety light grille in the closing zone
- Emergency opening via emergency crank handle
- Thermoframe and glazing optionally available

### **Sales benefits**

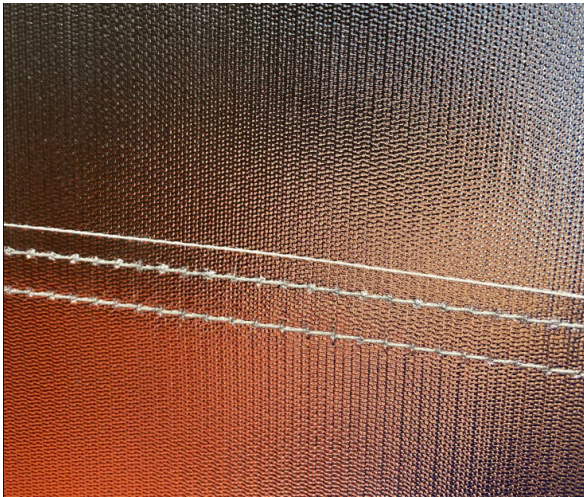
- Insulated curtain for better insulation
- Zack system for good sealing to the building structure



- Internal door with wind class 0
- Construction identical to A 4012 Logistic 2.0
- Max. LDB x LDH = 4000 x 5000 mm
- Opening speed : max. 2.2 m/s  
Closing speed : max. 0.8 m/s
- Light grid as safety equipment
- Tubular motor heated with  
Long Life brake > 2,5 Mio. cycles
- Side panel screw fittings with double drive
- Special hangings the Reflect Curtain
- Optional side panel extension (unheated) as a separate component

## V 4020 Cold hanging Reflect Curtain

**HÖRMANN**

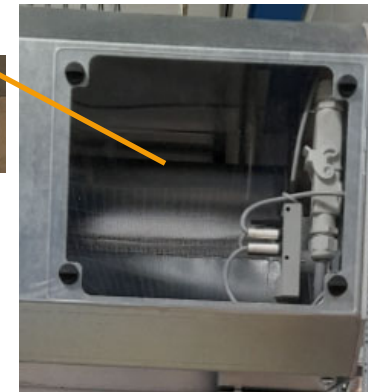


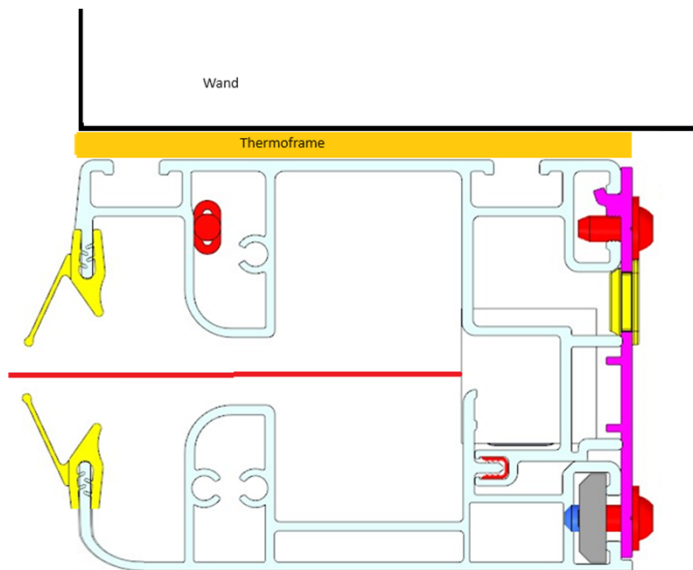
- Fabric hanging Reflect Curtain Silver coated on both sides
- Hanging thickness ca. 0,6 mm
- Based on EN ISO 12567-1  $U_p = 2,4 \text{ W}/(\text{m}^2\text{K})$
- Sewn sections
- Plastic gliders as wind protection
- SoftEdge®
- Crash without automatic rethreading



- Bottom part SoftEdge®
- Additional cover on the "cold side"

- One-piece shaft panelling
- With transparent inspection flaps, can be opened without tools
- Ventilation slots on the underside





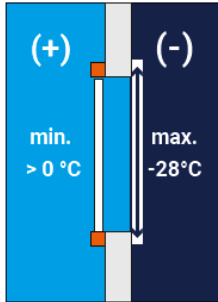
- Heated side panels
- ThermoFrame
- Drive heated and with Long Life brake
- Switch cabinet in steel heated version
- Connection of the heaters in a separate heating box
- Heating cable in separate channel above the shaft paneling  
(Lintel requirement 520 mm to V 4020 Alu-R 450 mm)
- Separate supply line analogue to Iso Speed :  
Supply line : 400V: Supply line 5 x 2,5mm<sup>2</sup>,  
Protection single 3 x 1-poliger 16A C-Automat **and**  
Residual current circuit breaker 3x25A / 0,03
- Heating can be optionally deselected at a reduced price



- Refrigerated and deep-freeze area
- Until max.  $-28\text{ °C}$
- In combination with an insulating deep-freeze cover
- Other installation situations on request and technical inspection

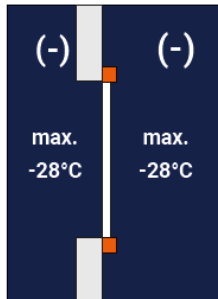
**IMPORTANT for use in cold store areas:**

On-site underfloor heating in the floor seal area



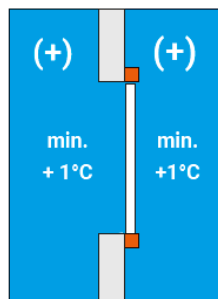
Installation outside the freezer area:

- Heated version of side panels, drive and control cabinet in steel or stainless steel
- Only in combination with insulating freezer cover



Installation within freezer area (on both sides):

- Heated version of side panels, drive and control cabinet in steel or stainless steel
- Ideally in combination with an insulating deep-freeze cover



Assembly within deep-freeze area, opposite side > 0 °C

- Enquiry at the factory!

## V 4020 Cold On-site services for use in the deep-freeze sector

### 1 Connecting lead

- A second electrical cable to the door is required for heating supply in the frame side bars
- When pressing the main switch on the door, the heating remains activated and prevents freezing

### 2 Floor heating system

- Required in the area of the door closing zone
- Covering of the entire opening area of the door and the frame depth, as well as approx. another 200 mm, to effectively prevent the door leaf from freezing

### 3 Air curtains

- For minimisation of the temperature increase in the cold store area
- Installation on the warmer side to effectively reduce the flow of air from the warm side to the cold side of the opening

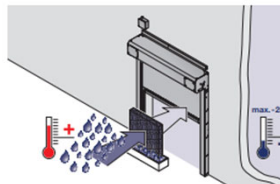
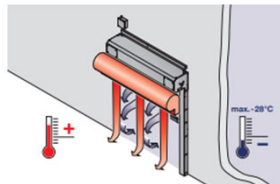
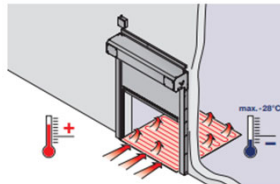
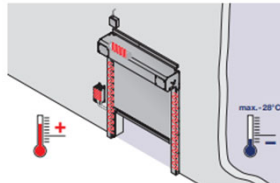
#### TIP:

Install a cold air curtain, as it is more efficient than a hot air curtain.

### 4 Air dehumidifier

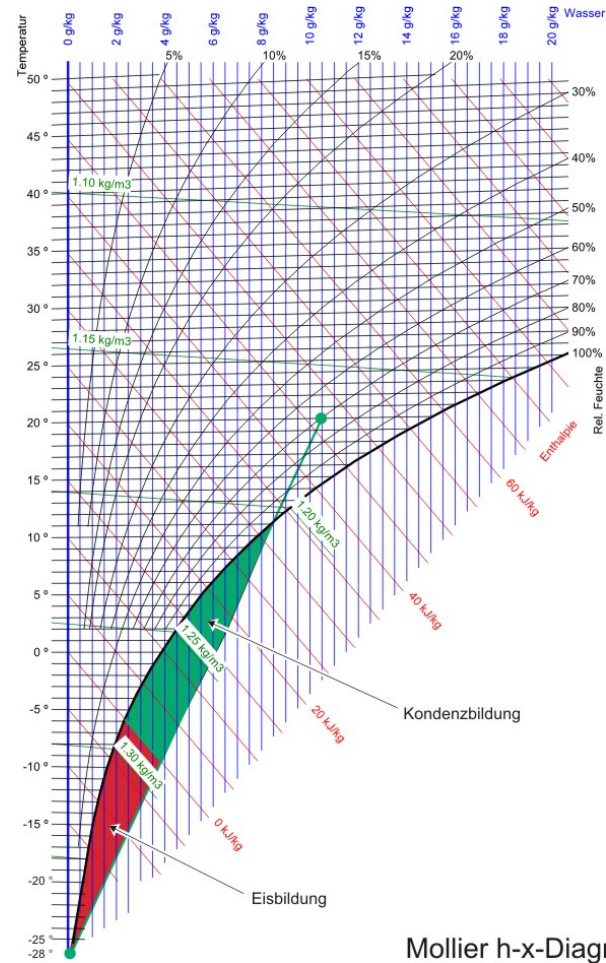
- For effective reduction of humidity in case of high temperature differences and high humidity to minimise ice formation in the cold store area
- Fitting on the warmer side

Please contact the responsible Hörmann regional sales office, providing information on temperatures and humidity, for a precise assessment of the fitting situation.



- sep. power supply for heating 400 V
- Underfloor heating
- Air curtains
- Dehumidifier
- Note the Mollier diagram h-x

Available from 1.6.2024

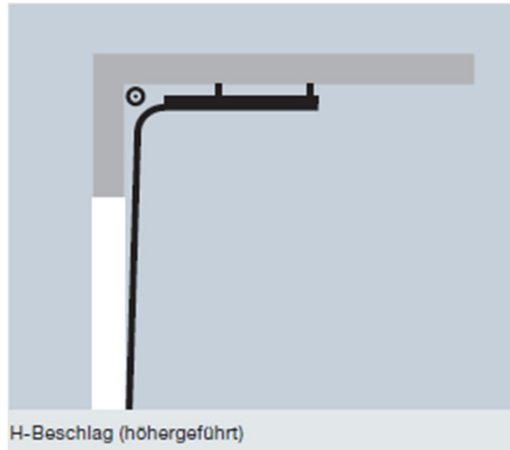


Eisbildung ist **immer** zu verhindern!

Mollier h-x-Diagramm



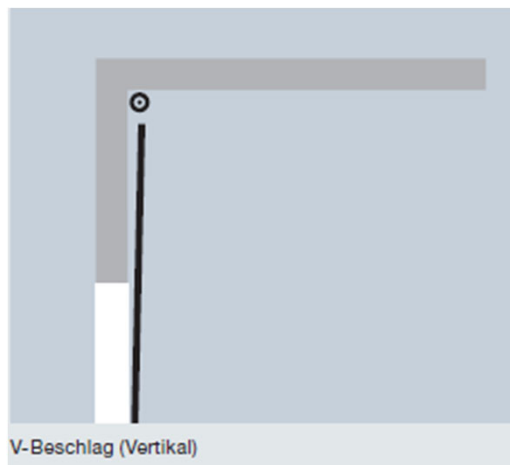
- Maximum thermal insulation / cold protection
- Dimension C.H. = 5000mm x C.W. = 5000mm
- Section height: 500 mm
- Exterior Stucco RAL 9002, interior Stucco RAL 9002
- Iso Speed Cold door with 100 mm thick sections
- Sections with thermal break
- Best thermal insulation, **U<sub>D</sub>-value: 0.57 W/m<sup>2</sup>K** 4000 × 4000 mm, without glazing, with Thermoframe
- With Thermoframe as standard
- Safety light grille with soft-stop
- Operating range: +40 to -28 °C



**Required headroom:**

750 – LDH + 585 mm

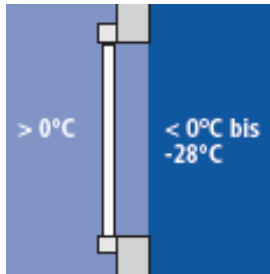
Counter weights



**Required headroom:**

750 – LDH + 585 mm

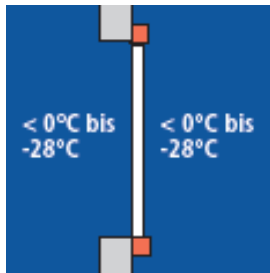
Counter weights



## Fitting outside of cold stores

Heated version of side elements, steel control cabinet, operator, sealing frame and base plates required.

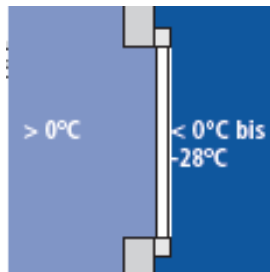
Track application H and V possible!



## Fitting inside cold stores

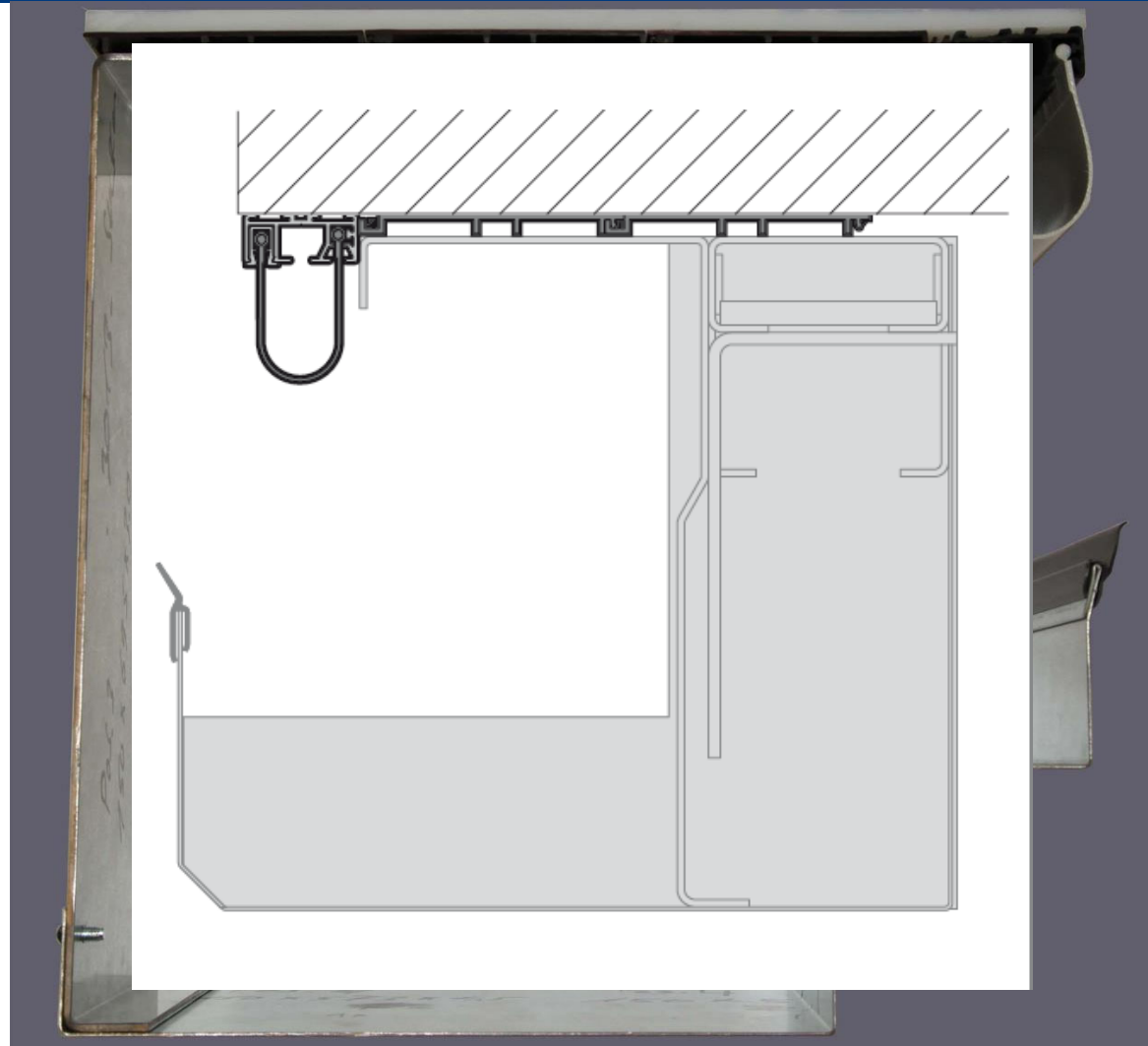
Heated version of side elements, steel control cabinet, operator, sealing frame and base plates required.

**Only track application V possible!**



## Fitting inside cold stores, opposite side > 0 °C

**Now only on request in the factory!**



\* Only fill in if different from the permanent customer address in our data

**Checklist for ISO Speed Cold 100**  
Page 1 of 1

Customer no.: \_\_\_\_\_ Customer: \_\_\_\_\_

Invoice via: \_\_\_\_\_

Delivery address:\*\*\* \_\_\_\_\_

Contact person: \_\_\_\_\_ Fax: \_\_\_\_\_

Order no. / com.: \_\_\_\_\_ Construction project: \_\_\_\_\_




Project no.: \_\_\_\_\_ Quotation no. / dd: \_\_\_\_\_ Requested date: \_\_\_\_\_ week

Fitting by: \_\_\_\_\_ Sales office: \_\_\_\_\_ Page: \_\_\_\_\_ /

Project postal code: \_\_\_\_\_ Project location: \_\_\_\_\_ Renovation New building

This clarification also serves as an order. There will be no further written confirmation for placing this order. Invoicing will be done by Hörmann KG / VKO.

The fields with a grey border will be filled in at the factory.

1 Temperature ranges (please mark where applicable)		
1.1	1.2	1.3
		
2 Precooler area:	Yes	No
3 Is climatic condition known on the deep-freeze side?	Yes	No
	Settings: _____ °C / _____ % No – Assumption: summer: 20°C / 80%	
4 On-site floor heating system (not required for > 0°C / 0 °C):	Yes	No
5 Are fastening holes allowed in the floor?	Yes	No
6 Building structure material (the subsurface must be ready for fitting):	Concrete	Partition wall (thickness in mm) _____
7 Hold-open phase:	Special: _____	
8 Door cycle / timing:	_____	
9 Comments / extras:	_____	

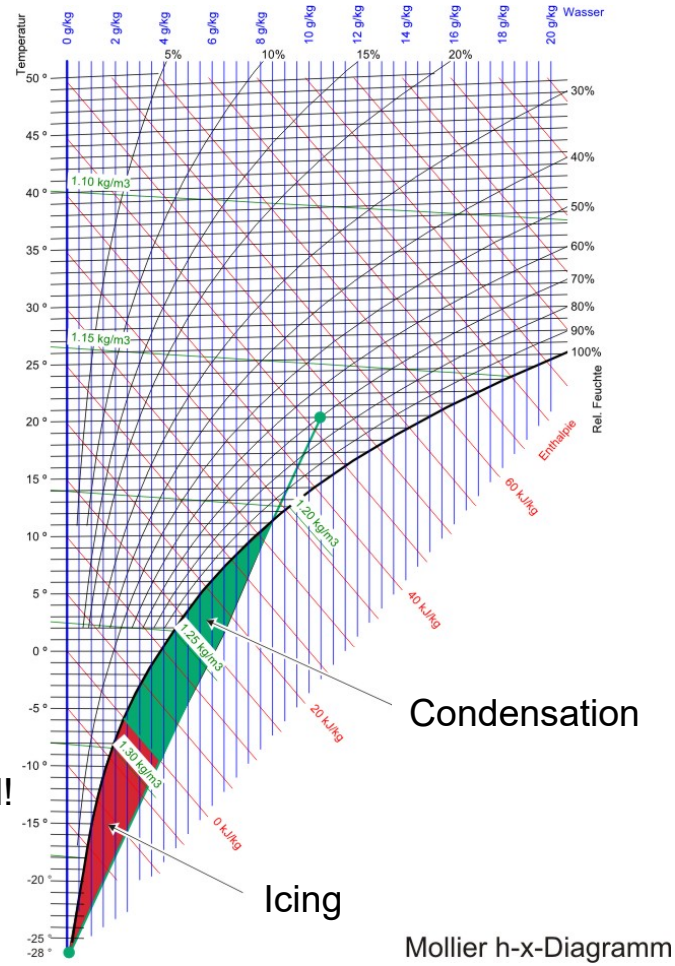
Order no. \_\_\_\_\_

Delivery date \_\_\_\_\_ week

Administrator \_\_\_\_\_ Date \_\_\_\_\_

This order is subject to the terms and conditions of sale and delivery of HÖRMANN KG Vertriebsgesellschaft, which also issues the invoice.

Place, date \_\_\_\_\_ Stamp and signature \_\_\_\_\_



Ice formation must **always** be prevented!

## Iso Speed Cold 100 On-site services for use in the deep-freeze sector

### 1 Connecting lead

- A second electrical cable to the door is required for heating supply in the frame side bars
- When pressing the main switch on the door, the heating remains activated and prevents freezing

### 2 Floor heating system

- Required in the area of the door closing zone
- Covering of the entire opening area of the door and the frame depth, as well as approx. another 200 mm, to effectively prevent the door leaf from freezing

### 3 Air curtains

- For minimisation of the temperature increase in the cold store area
- Installation on the warmer side to effectively reduce the flow of air from the warm side to the cold side of the opening

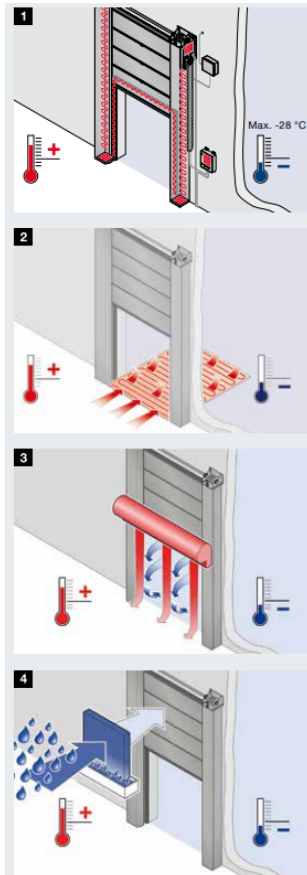
#### TIP:

Install a cold air curtain, as it is more efficient than a hot air curtain.

### 4 Air dehumidifier

- For effective reduction of humidity in case of high temperature differences and high humidity to minimise ice formation in the cold store area
- Fitting on the warmer side

Please contact the responsible Hörmann regional sales office, providing information on temperatures and humidity, for a precise assessment of the fitting situation.

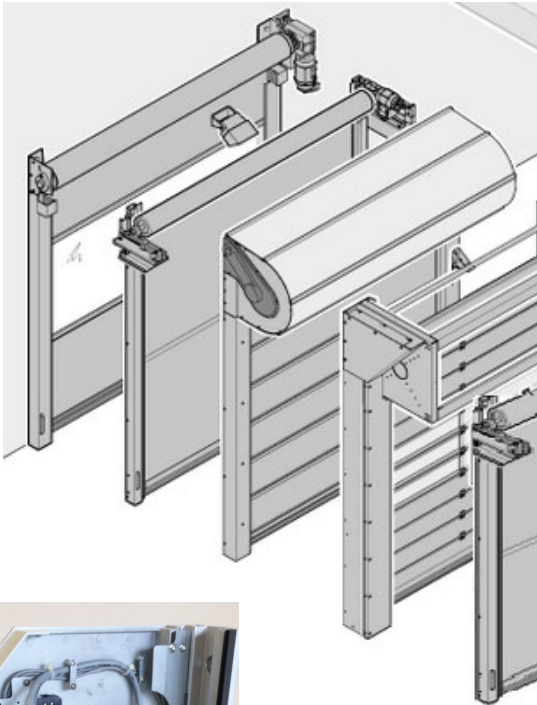


- Sep. power supply for heating  
400 V (5 x 2,5 mm<sup>2</sup>, 16 A, C oder K Charakteristik)
- Underfloor heating
- Air curtains
- Dehumidifier
- Max. temperature difference 40 °C

- Repetition of the basics
- Control and electrical application
- Energy efficiency of high-speed doors
- New door type V 5025 Z
- Overview of flexible high-speed doors
- Internal doors for special applications and for individual requirements
- The fastest door in the world: HS 5040 TurboLux S
- Lunch break and factory tour
- Doors with fixed door leaf
- Door for the refrigeration and frozen food industry
- **Requirements for the building structure**
- Impulse generators
- Wearing parts

## Ease of assembly Pre-assembly assemblies

**HÖRMANN**



- Component Principle
- 2 side panels, head, motor, control
- 1-2 packages complete
- Packages foiled
- Head component already pre-assembled and wired:
  - HS 5040 TurboLux
  - V 4020 SEL Alu-R, V 4020 Protect, V 4020 Cold
  - V 5025 Z
- Up to 5x5 m door opening quickly completely closed and ready to run
- Usually only one assembly day



Self-supporting high-speed doors	Non-self-supporting high-speed doors
V 4020 SEL Alu- R, V 4020 Protect, V 4020 Cold	HS 7030 PU 42
V 5015 SEL	HS 5015 PU N 42
V 5030 SEL	HS 5015 PU H 42
V 6030 SEL	HS 6015 PU V 42
V 5030 MSL	HS 5015 PU 42 S
V 2515 Food L	Iso Speed Cold 100
V 2012	V 5025 Z
V 3015 Clean	V 4015 Iso L
V 3009	V 10008
	V 6020 TRL
	HS 5040 Turbolux

## Requirements for the building structure Self-supporting

Without additional supports, girders, etc. With stability

- Self-supporting doors must be secured against falling over at the building structure
- The doors are fitted in the area of the side elements and in the top section
- Wind or gusts must not disconnect the doors from the building structure

Possible fitting material: (e.g. V 5015 SEL)

For high-speed doors

forbidden:



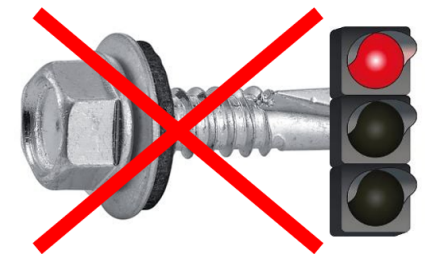
Concrete / brickwork

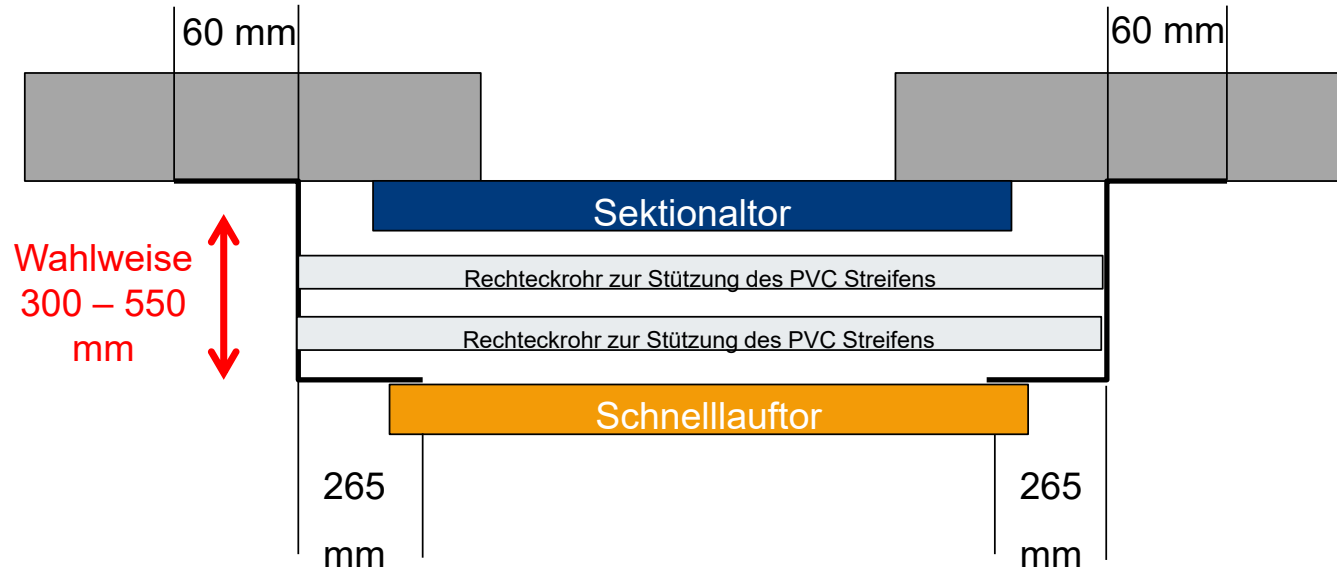


Steel

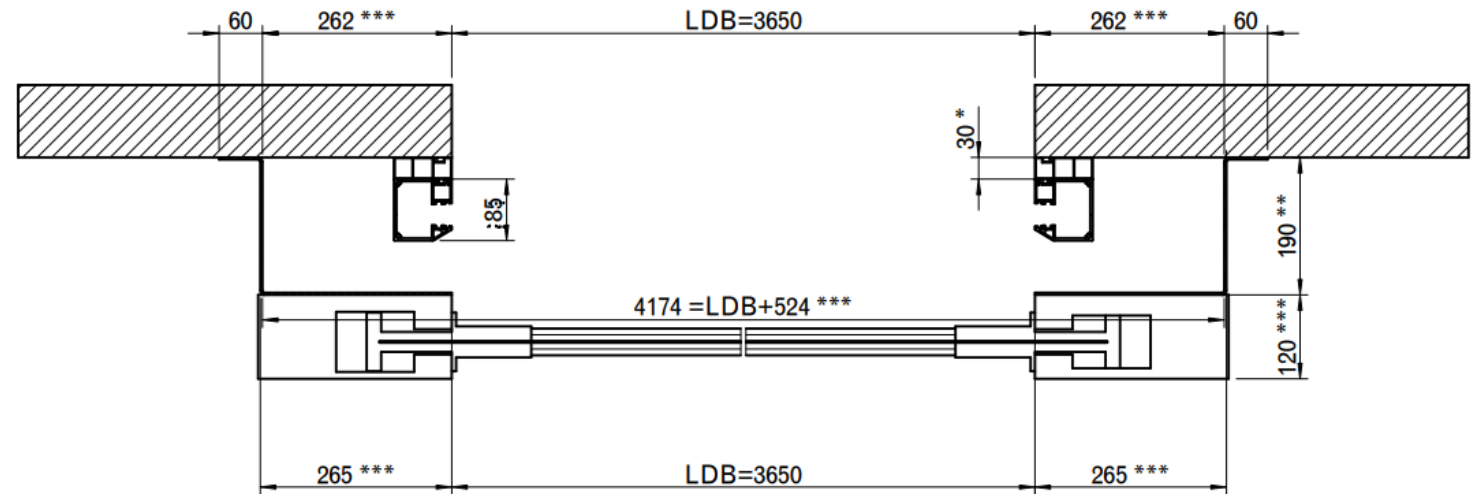


Partition wall (+threaded rods, discs)



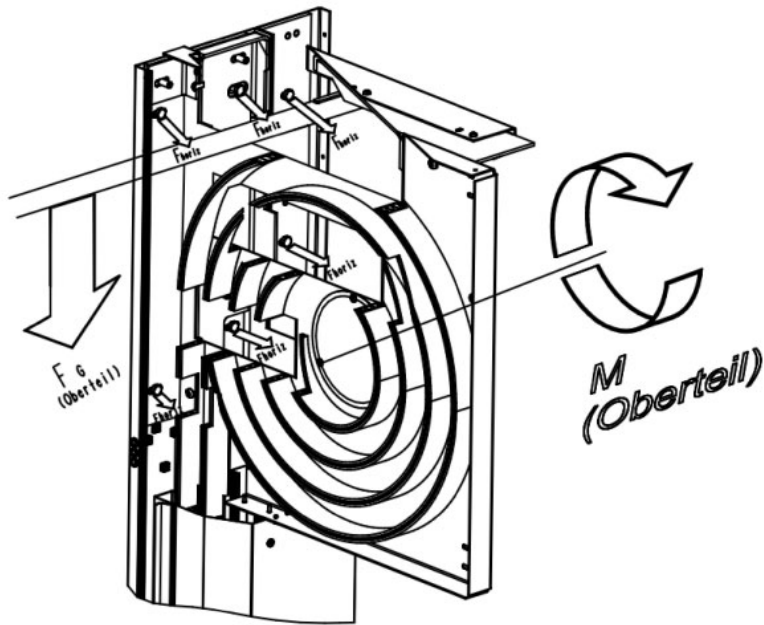


- Sektionaltor aus Brockhagen, Spezial-Kombizarge und V 6030 SEL / V 5025 Z aus Lüdenscheid
- Kombination zwischen Sektionaltor und Schnellauftor
- Tiefe wählbar zwischen 300 x 550 mm
- Ab Tiefe 400 mm werden zusätzliche Knotenbleche benötigt
- Bei Kombi mit V 6030 SEL ohne Verkleidung und ohne Behangfixierung!



- Roller shutter made of Dissen, special combination frame and V 6030 SEL / V 5025 Z from Lüdenschaid
- Combination between roller shutter and high-speed shutter, roller shutter at least 540 mm higher
- Depth selectable between 300 - 550 mm
- From a depth of 400 mm, additional gusset plates are required
- When combined with V 6030 SEL without cladding and without curtain fixation!

## Requirements for the building structure Non-self-supporting



FG = 406 kg  
M (Oberteil) = 1823 Nm

- Due to the enormous weight and high speeds the door must be securely fitted to the building structure
- Example:  
HS 7030 PU 42 – the complete weight is in the area of the spiral  
Ground fitting is mandatory!
- Walls must be arranged plane-parallel! (smooth wall)
- Individual weight calculation possible for the HS 42 / Iso Speed Cold 100 via HIS / Seuster!

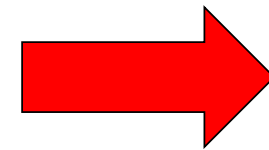
## Non-self-supporting doors



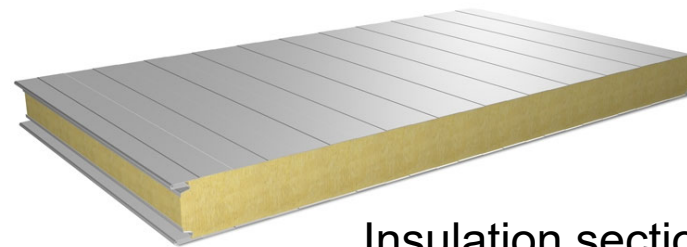
Obvious offset



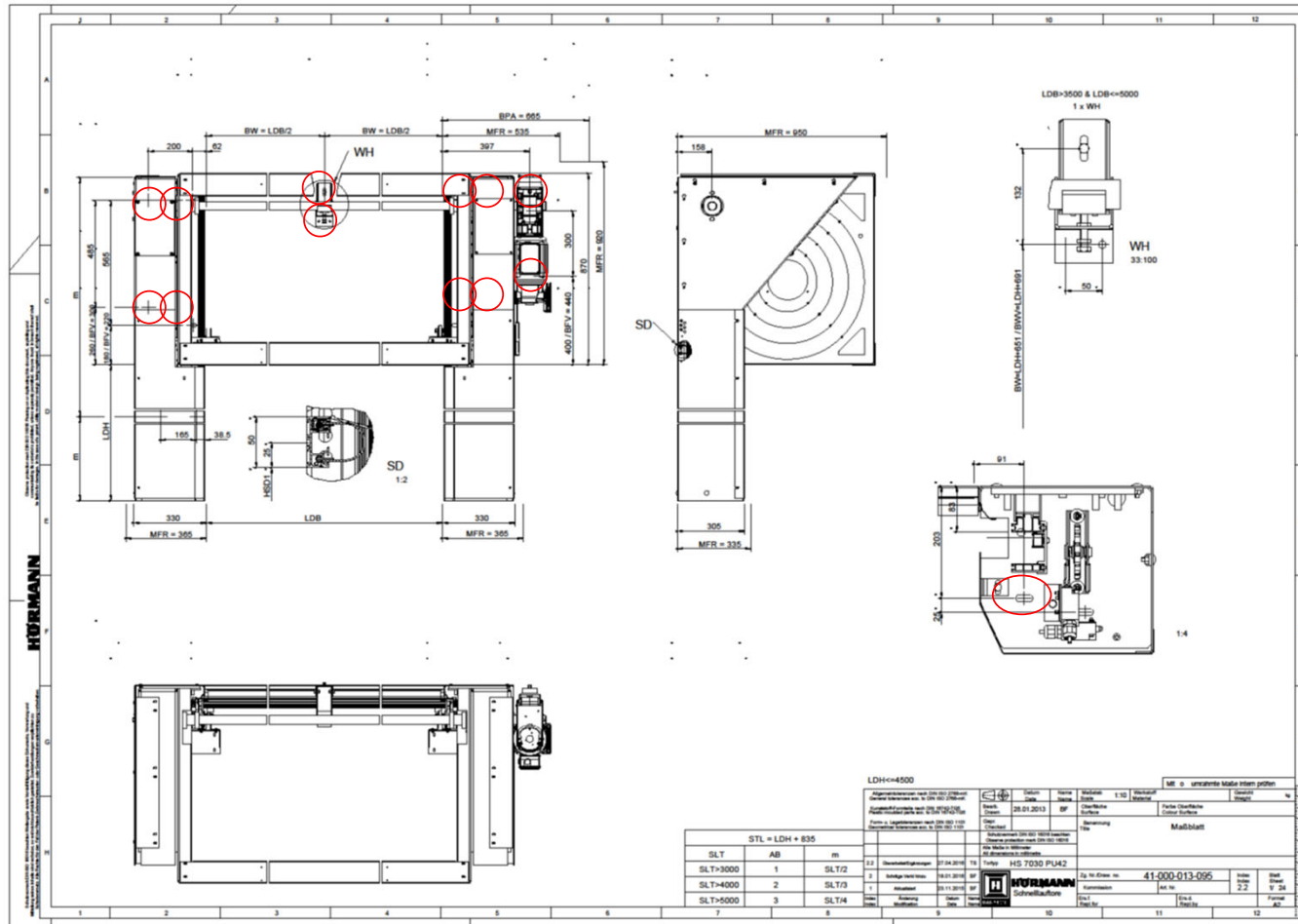
Gas concrete



Subframe required!



Insulation sections



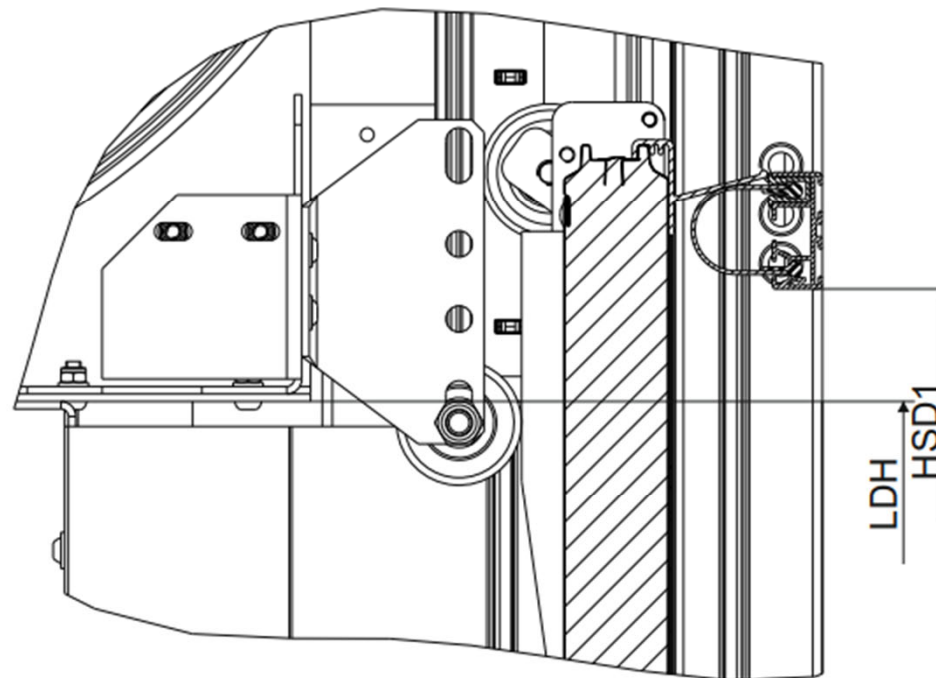
## HS 7030 PU 42

### Position of the lintel seal HSD1

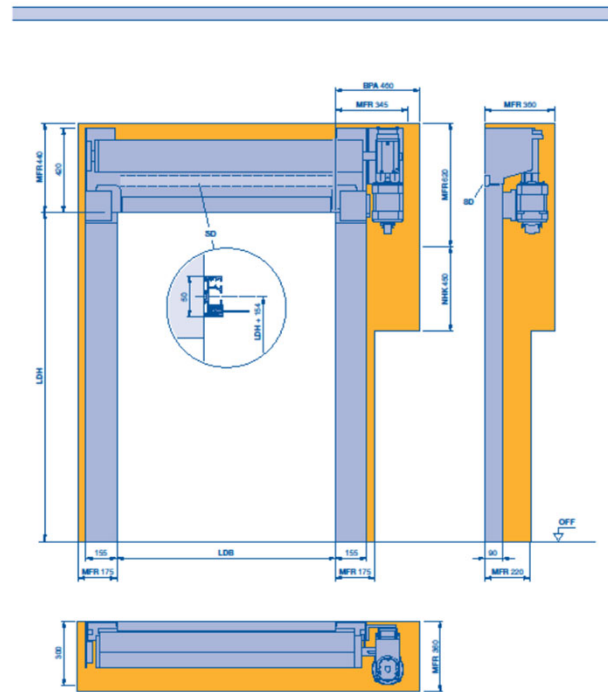
**HÖRMANN**

LDH	HSD1
> 1790 & ≤ 2030	2045
> 2030 & ≤ 2040	LDH + 15
> 2040 & ≤ 2280	2295
> 2280 & ≤ 2290	LDH + 15
> 2290 & ≤ 2530	2545
> 2530 & ≤ 2540	LDH + 15
> 2540 & ≤ 2780	2795
> 2780 & ≤ 2790	LDH + 15
> 2790 & ≤ 3030	3045
> 3030 & ≤ 3040	LDH + 15
> 3040 & ≤ 3280	3295
> 3280 & ≤ 3290	LDH + 15
> 3290 & ≤ 3530	3545
> 3530 & ≤ 3540	LDH + 15
> 3540 & ≤ 3780	3795
> 3780 & ≤ 3790	LDH + 15
> 3790 & ≤ 4030	4045
> 4030 & ≤ 4040	LDH + 15
> 4040 & ≤ 4280	4295

LDH	HSD1
> 4280 & ≤ 4290	LDH + 15
> 4290 & ≤ 4530	4545
> 4530 & ≤ 4540	LDH + 15
> 4540 & ≤ 4780	4795
> 4780 & ≤ 4790	LDH + 15
> 4790 & ≤ 5030	5045
> 5030 & ≤ 5040	LDH + 15
> 5040 & ≤ 5280	5295
> 5280 & ≤ 5290	LDH + 15
> 5290 & ≤ 5530	5545
> 5530 & ≤ 5540	LDH + 15
> 5540 & ≤ 5780	5795
> 5780 & ≤ 5790	LDH + 15
> 5790 & ≤ 6030	6045
> 6030 & ≤ 6040	LDH + 15
> 6040 & ≤ 6280	6295
> 6280 & ≤ 6290	LDH + 15
> 6290 & ≤ 6500	6545

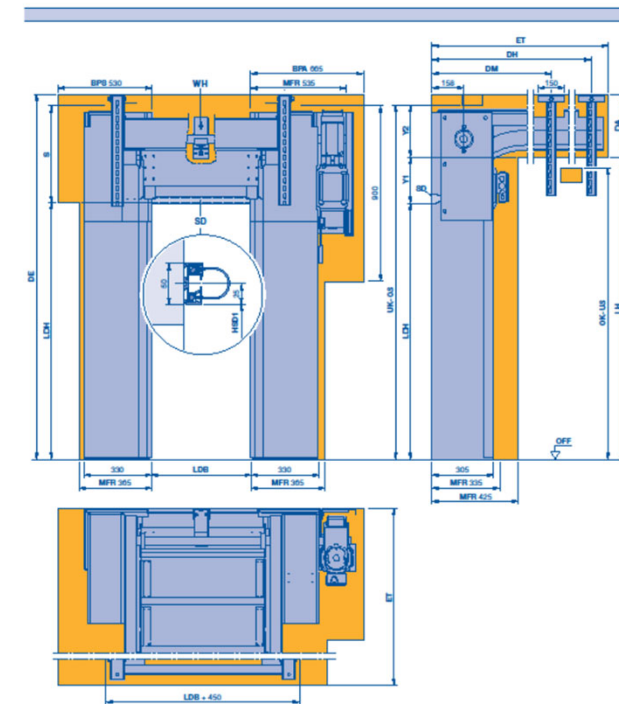


## Schnelllauf Innentor V 5015 SEL mit SoftEdge und Anti-Crash



BPA Baulöcher Platzbedarf für Montage und Demontage Antrieb  
 LDB Lichts Durchgangsbreite  
 LDH Lichts Durchgangshöhe  
 MFR Montageflurraum  
 NHK Baulöcher Platzbedarf für Nothandkurbel  
 SD Sturzschichtung

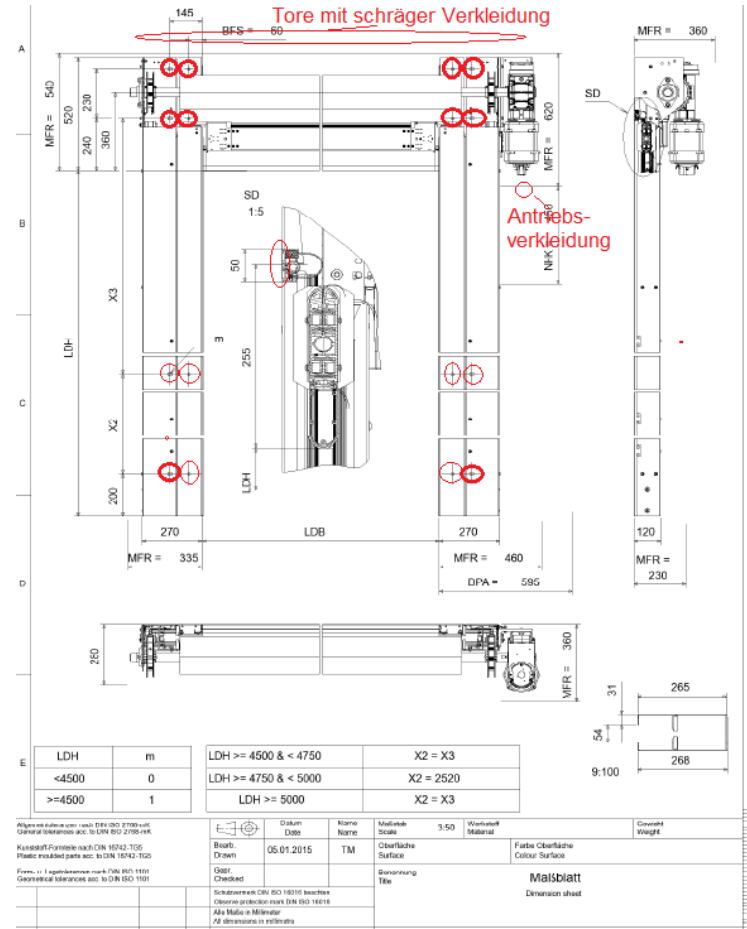
## Spiral- und Speed Sectionaltore HS 5015 PU N 42 mit PU-Isolierpaneelen



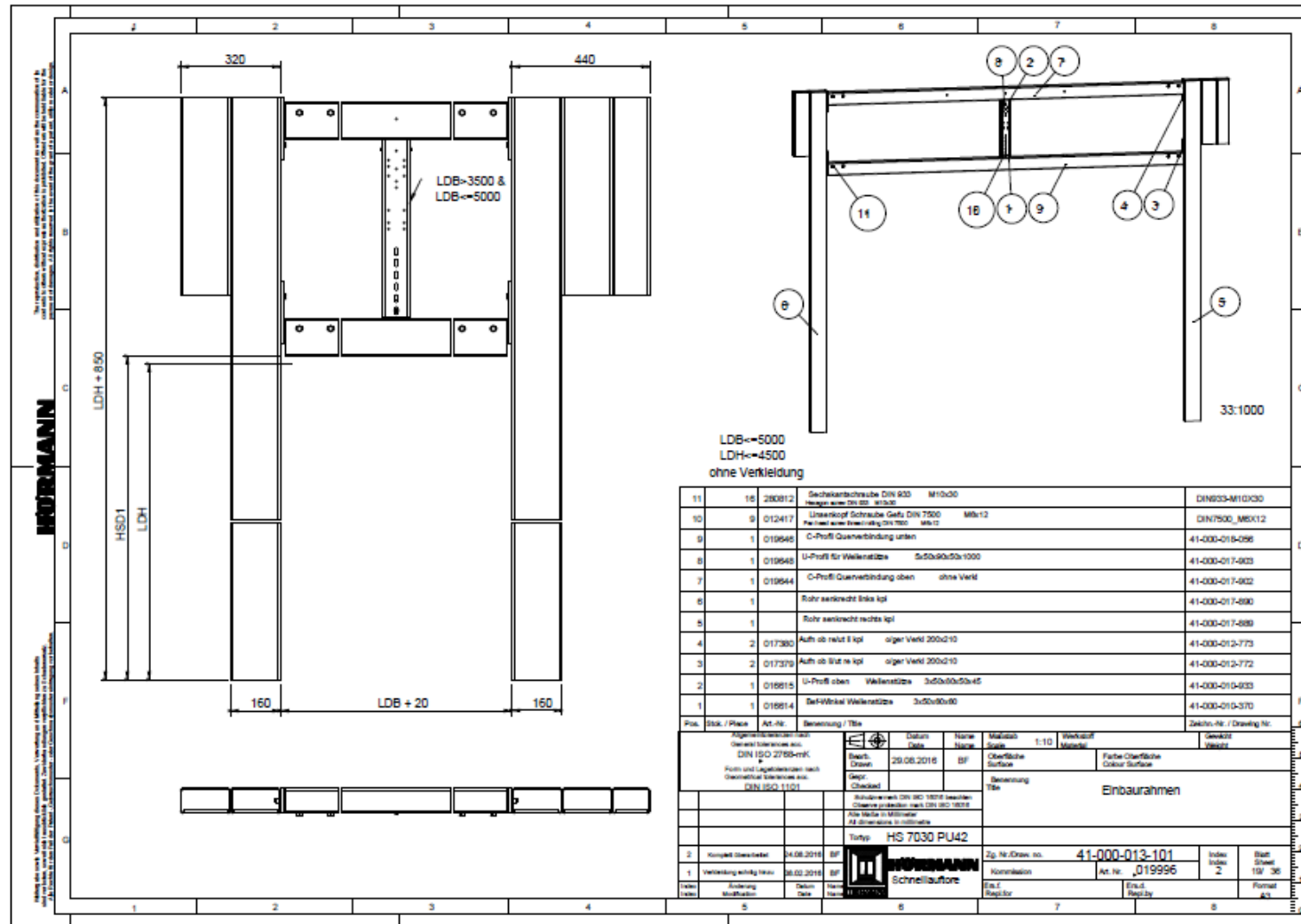
BPA Baulöcher Platzbedarf für Montage und Demontage Antrieb  
 BPS Baulöcher Platzbedarf für Montage und Demontage seitliche Abdeckung  
 DE Deckenhöhe DE = LDH + S + Y2  
 DM Deckenankerhöhe 900 (ET > 1250)  
 ET minimale Einbauhöhe 2x LDH + (LDH + S) + 1000 (min 1250)  
 HSD1 Höhe der Sturzschichtung (Maß auf Anfrage)  
 LDB Lichts Durchfahrtsbreite  
 LDH Lichts Durchgangshöhe  
 LH Leuchteisenhöhe LDH + S - Y2 (min LDH + Y1)  
 MFR Montageflurraum  
 OK Oorkante  
 OS obere Störkontur  
 S Sturzhöhe min 480, max 750  
 SD Sturzschichtung  
 UK Unterkante  
 US untere Störkontur  
 WH Wälzkorb  
 Y1 LDH + 2500; 170; LDH + 2500; 225  
 Y2 LDH + 2500; 310; LDH + 2500; 255

# Requirements for the building structure

## Dimension sheets Gates with flexible door leaf

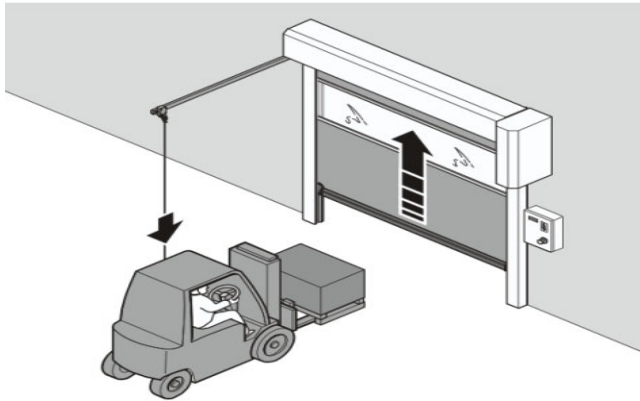


# Installation frame HS 7030 PU 42 dimension sheet



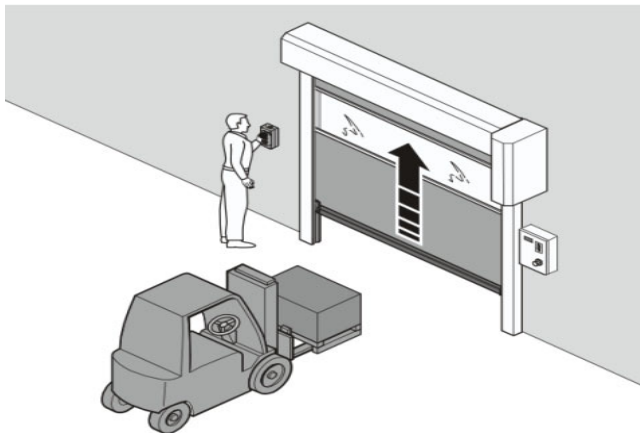
- Repetition of the basics
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- **Impulse generators**
- Wearing parts

Pull switch

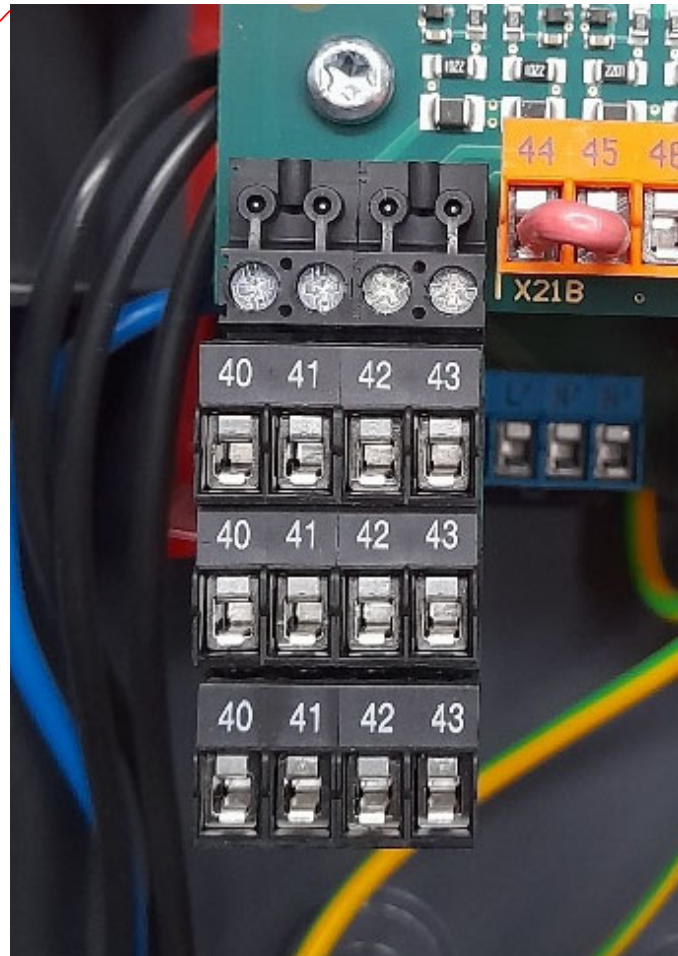
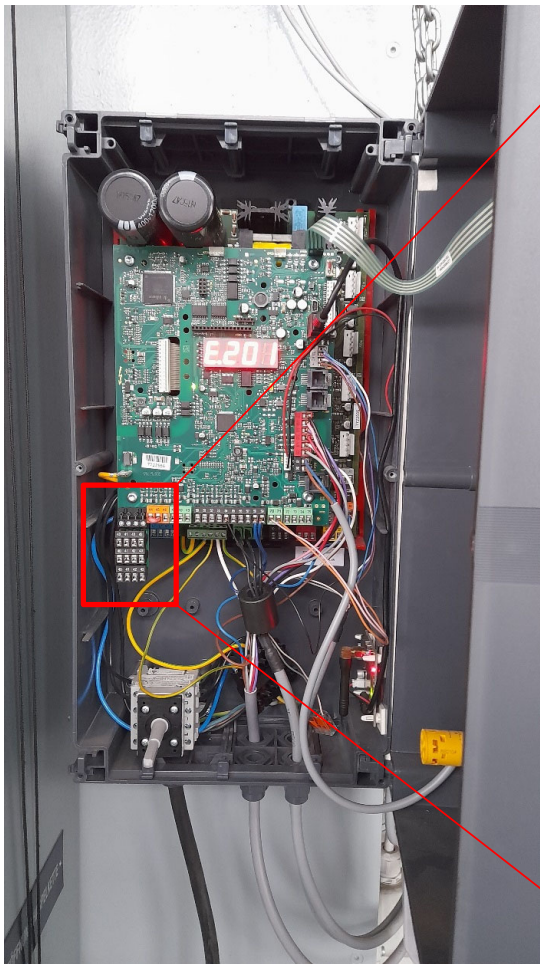


Magic Switch Chroma

Button



Art. Nr.  
7988065



- Art. Nr. Hö.: 7992121
- Simple multiple connection
- Facilitation of the wiring of several pulse generators into the FUE-1

## New impulse generators Radio switches

**HÖRMANN**



Radio receiver for 30 radio  
impulse generators

1x per door control necessary

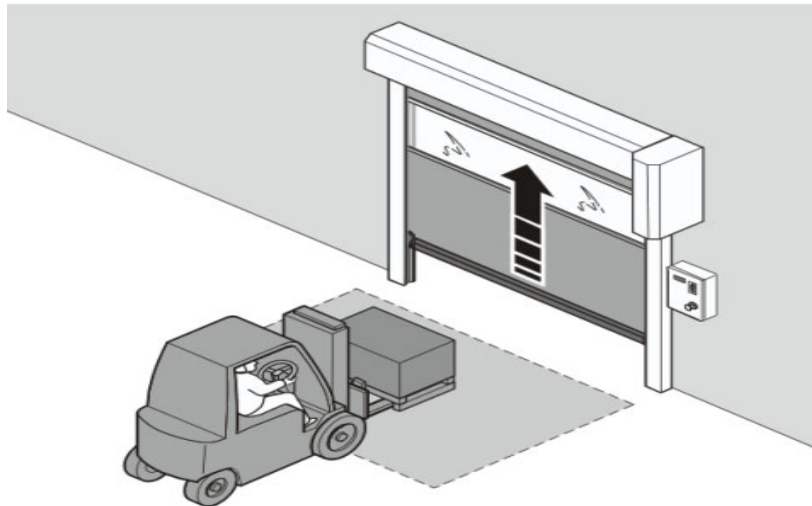


Pull cord switch With radio  
batteryless transmitter, IP 66



Radio push button  
batteryless transmitter IP 66

Induction loop (in the bottom)



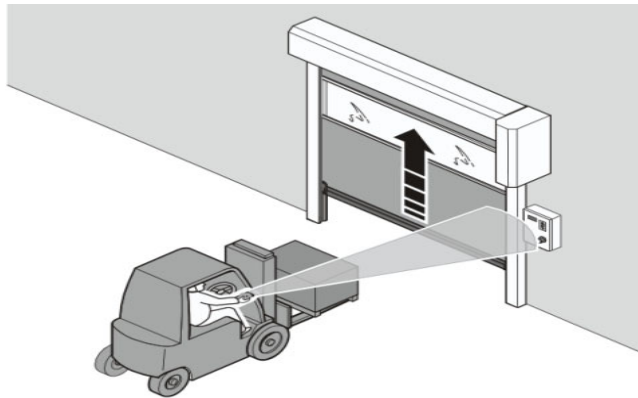
Can often be used by the Scanprotect  
to be replaced

Impulse generator in the outdoor area



Recommendation:  
Pulse generator: Switching off via selector switch  
or key switch

## Radio



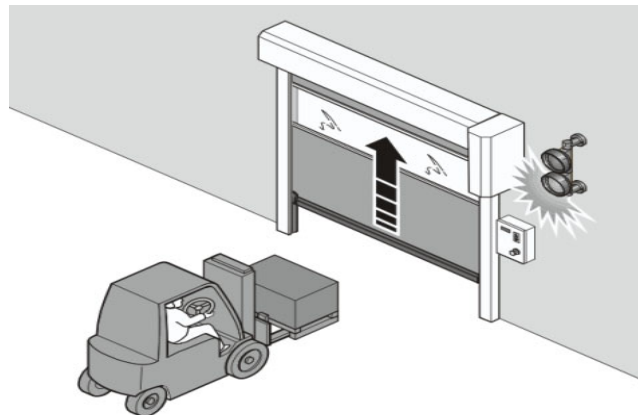
New:



BiSecur for high speed doors

- BiSecur radio board
- Circuit board for receiver HET-E2 868-BS (plug-in module)
- 128-bit encryption with the same high security level as in online banking
- Interference-resistant radio signal with a stable range

## Safety equipment



Rotating light



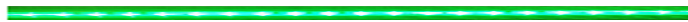
Flash light

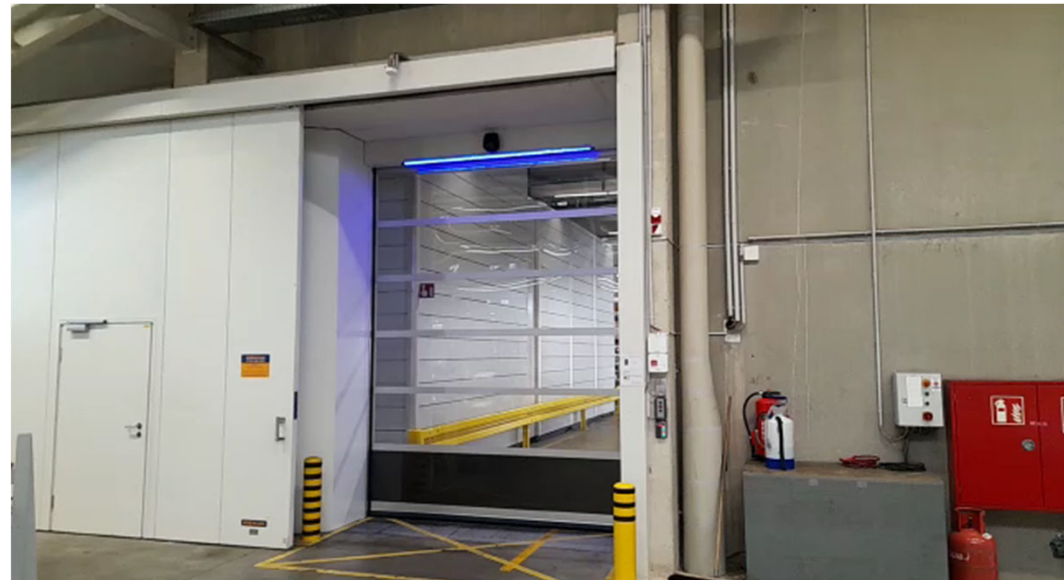
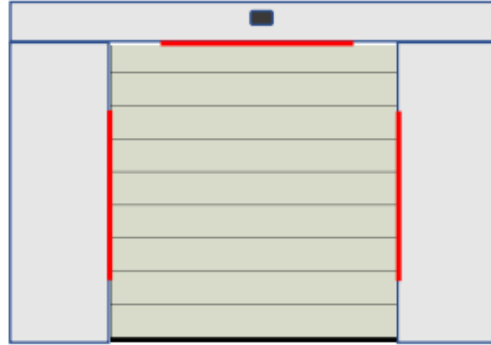
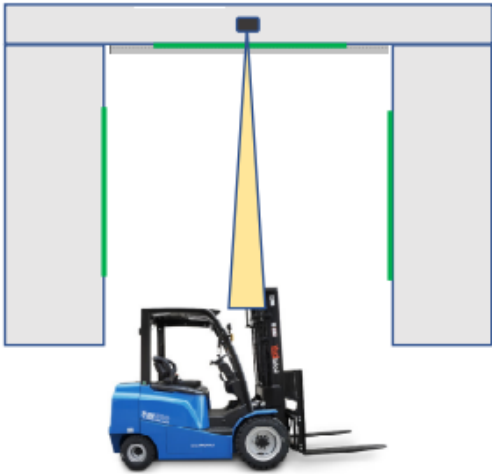


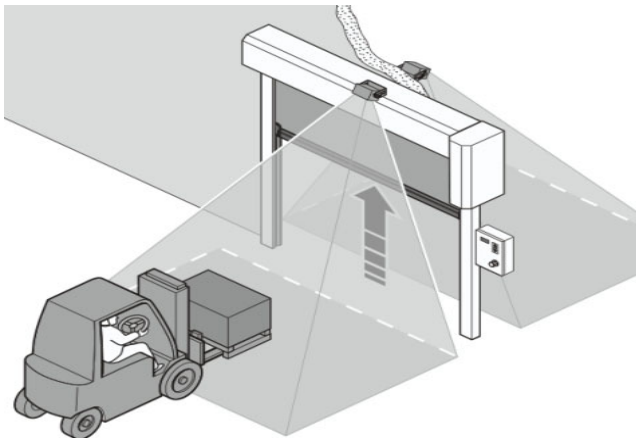
**LED Strip light 24 V DC, RGB**  
**Length 2000 mm**



- Traffic light with optical signal in the right place below the lintel
- Colours RGB: red, green, blue
- Beam angle 180°
- Activation via FUE-1 control:  
Permanent light, flashing, fading
- Advantageous positioning: for forklifts
- Preventive collision protection
- IP 67







Impulse generator holder

Optimum advance protection

Scanprotect

Impulse generator holder  
and cantilever arms

0.5 0.9 1.5 3 m



Comfort radar detector



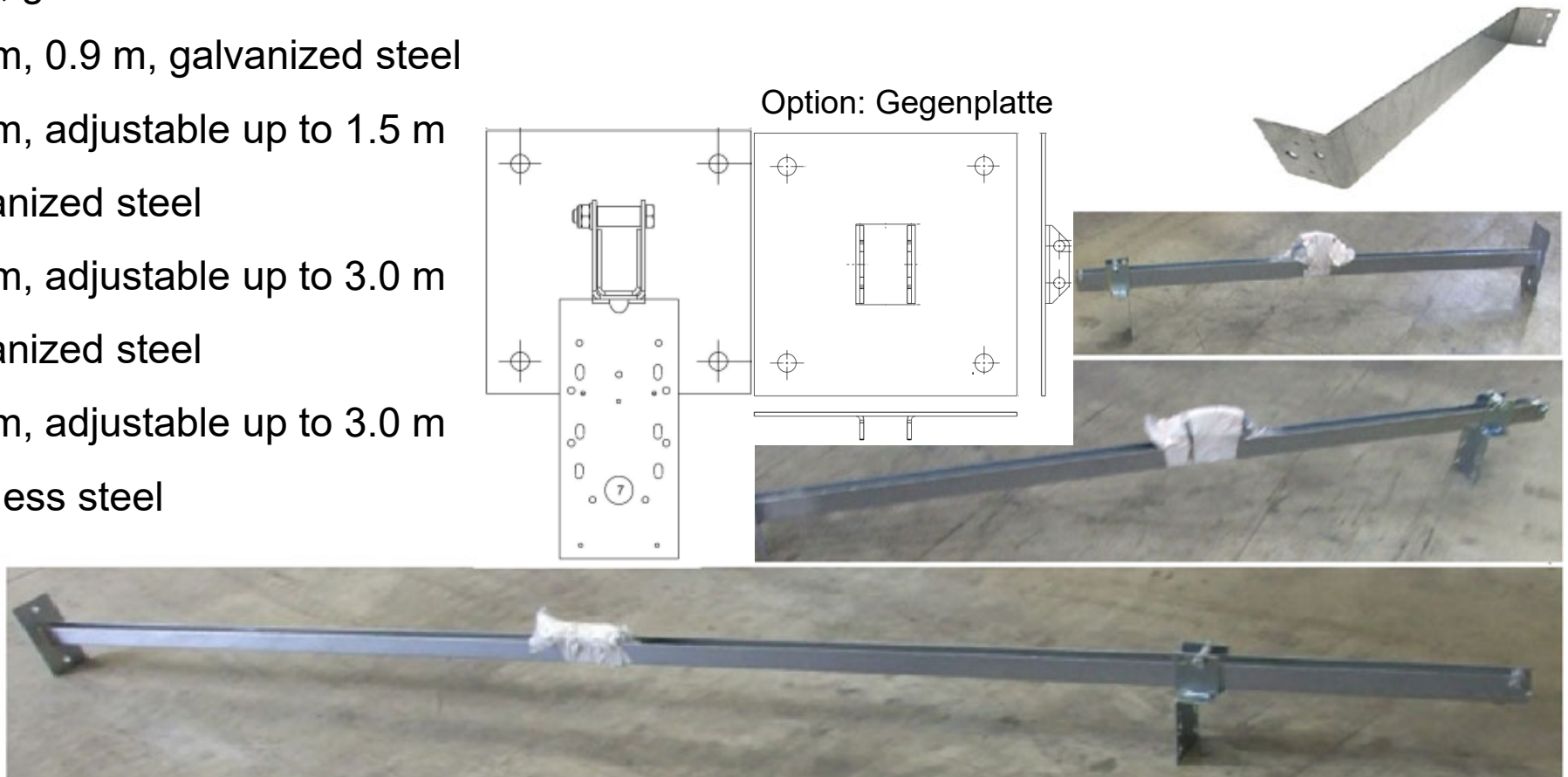
Radar detector MWD-C



## Holder and boom for pulse generators for Scanprotect und Radarmelder

**HÖRMANN**

- Holder 0.5 m, galvanized steel
- Cantilever arm, 0.9 m, galvanized steel
- Cantilever arm, adjustable up to 1.5 m length, Galvanized steel
- Cantilever arm, adjustable up to 3.0 m length, Galvanized steel
- Cantilever arm, adjustable up to 3.0 m length, Stainless steel

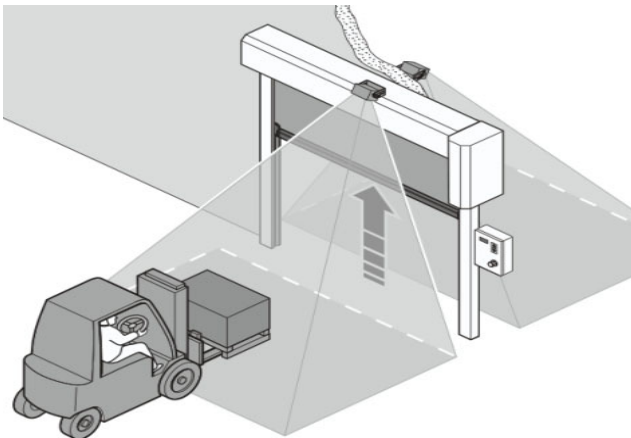




- Opens reliably upon motion
- Controlled via CAN bus system
- Only the first radar detector has to be connected to the control
- The second radar detector is connected via the first radar detector
- Compatible with the Scanprotect radar detector
- Settings are possible directly or via the control
- Position **centrally** over the door
- On the door hinge side with holder
- Application range: interior, exterior, deep freeze (with heating), fitting height up to 7 m

### Restriction:

- No presence detection, heavy rainfall gives the impulse
- Limited recognition of cross traffic and persons / vehicles

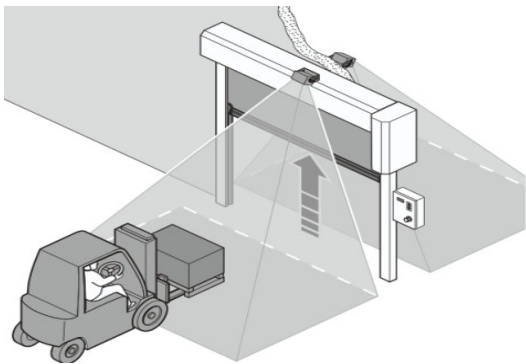


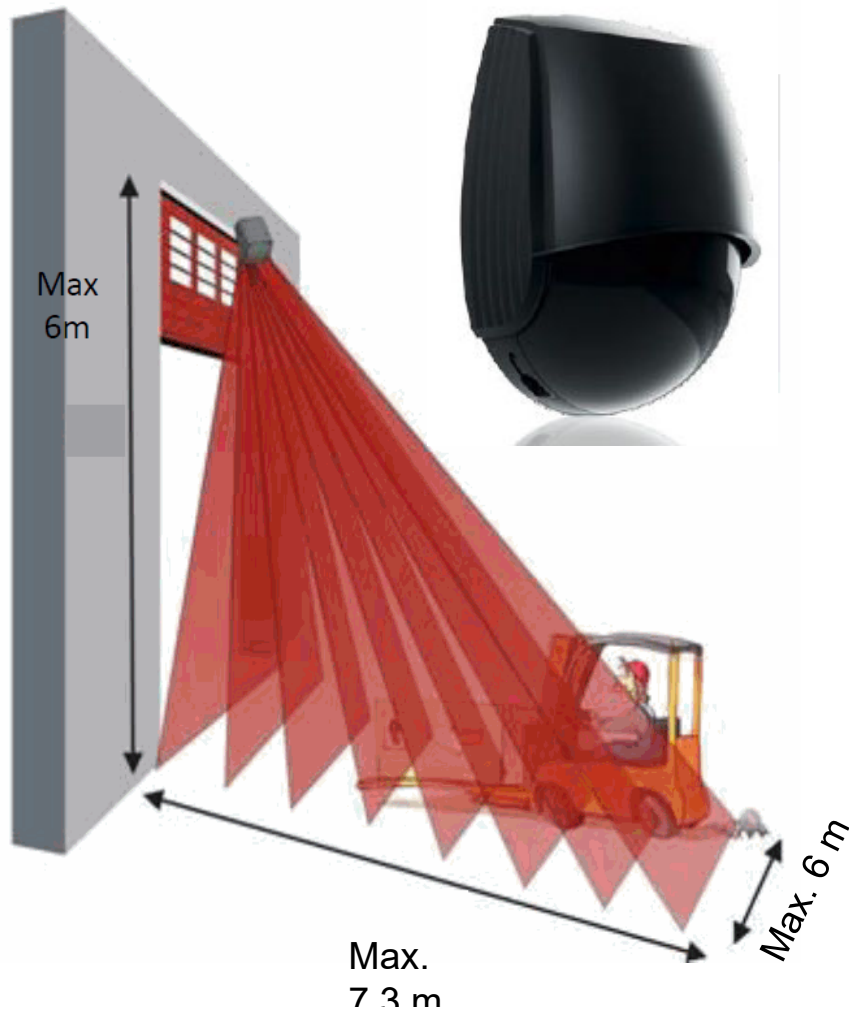


- Opens reliably upon motion
- Presence setting = safety for persons
- Adjustment via remote control
- Position **centrally** over the door
- On the door hinge side with holder
- Remote control recommended
- Application range: interior, exterior,  
fitting height 3.5 – 6 m (2 – 3.5 m mini)

### Restriction:

- No presence detection outside, heavy rainfall gives the impulse
- No deep freeze
- Limited recognition of cross traffic and persons / vehicles

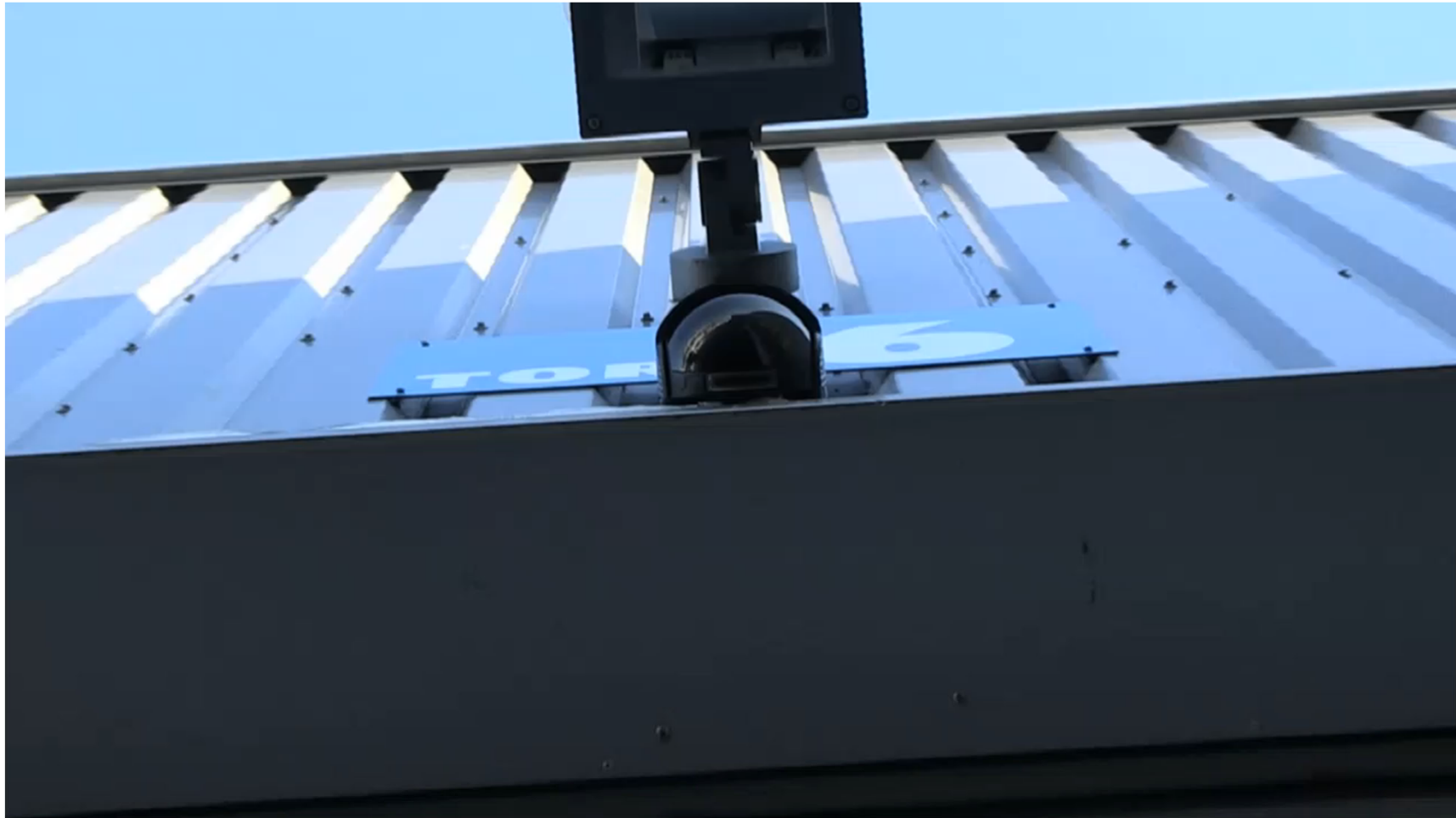




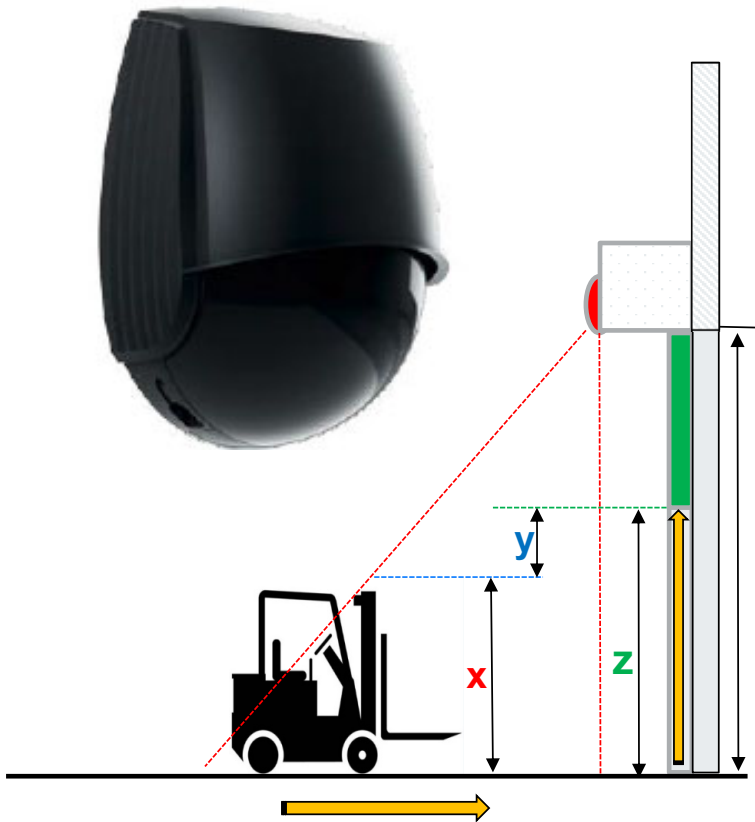
- Optimal advance recognition / monitoring
- Controlled via CAN bus system
- Only the first Scanprotect has to be connected to the control
- The second Scanprotect is connected to the first Scanprotect!
- Compatible with the radar detector MWD-C
- Settings are possible directly or via the control
- Position centrally over the door or left over the opening
- On the door hinge side with holder
- 2–8 m fitting height, optimal height 4–6 m

#### Application range:

- interior, exterior, recognition of cross traffic and persons / vehicles, until 2 Pc. in deep freeze area

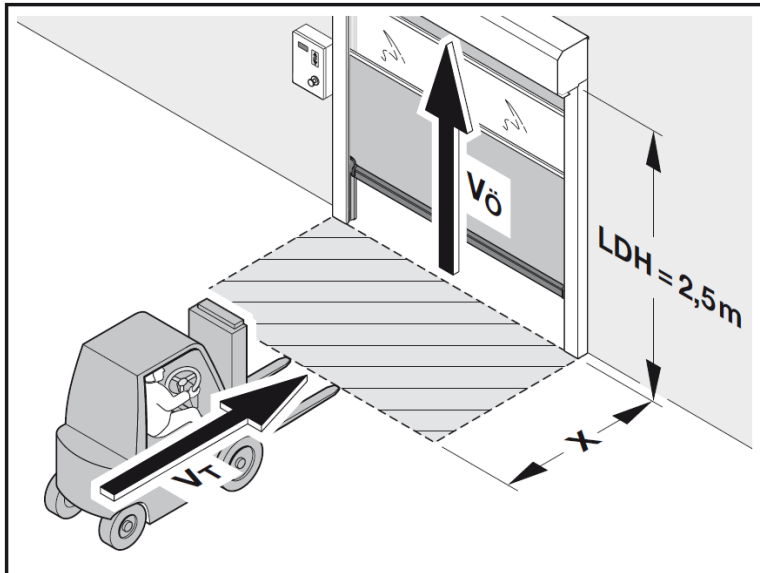






- Automatic adjustment of opening heights of the door, according to objects
- Significant energy cost savings
- Calculation of needed opening height: object  $x + y = z$   
available for FUE-1 and CAN-BUS only
- Safety height  $y$  approx. 50 cm (adjustable)
- BEA Widescan and other detector are not equipped with this function

Impulse generator installation



$V\ddot{O} = 1.5 \text{ m/s}$

$V_T = 2.7 \text{ m/s}$

$LDH = 2.5 \text{ m}$

Transport height: 1 m

$$\text{Distance to the door in m (x)} = \frac{\text{Clear height / transport height}}{\text{Opening speed}} = \frac{3,0 \text{ m} \times 2,8 \text{ m/s}}{2,0 \text{ m/s}} = \mathbf{4,2 \text{ m}}$$

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- **Impulse generators**
- **Wearing parts**

Wearing parts and electronic / electro-technical components are subject to a two-year warranty period or the maximum assumed cycles:

Operator	<b>2,500,000 cycles</b>	V 4020 Protect, V 4020 Cold
Operator:	<b>1,500,000 cycles</b>	V 4020 SEL Alu-R
Operator:	1,000,000 cycles	
Brake:	250,000 cycles	
Flat belts (counter weight, sections):	500,000 cycles	
Fabric belt:	100,000 cycles	V 6030, V 6020
Springs:	100,000 cycles	
Rollers:	100,000 cycles	
Curtain:	150,000 cycles	V 4015 Iso L

**Thank you very much**

