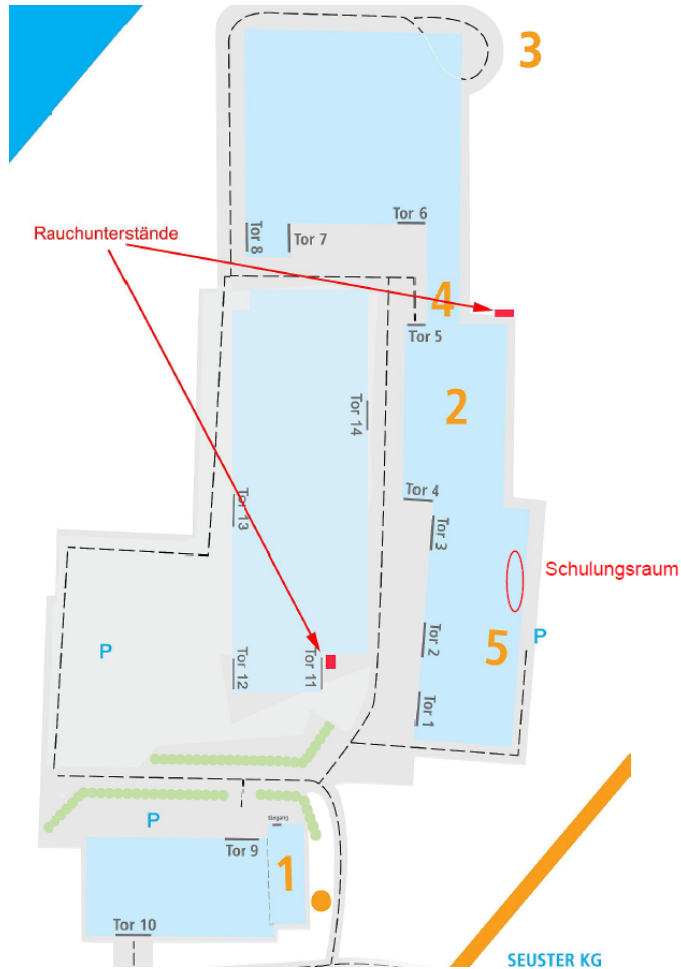


Welcome to SEUSTER

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 Tiefhülseinsatz

von 1906

SEUSTER

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

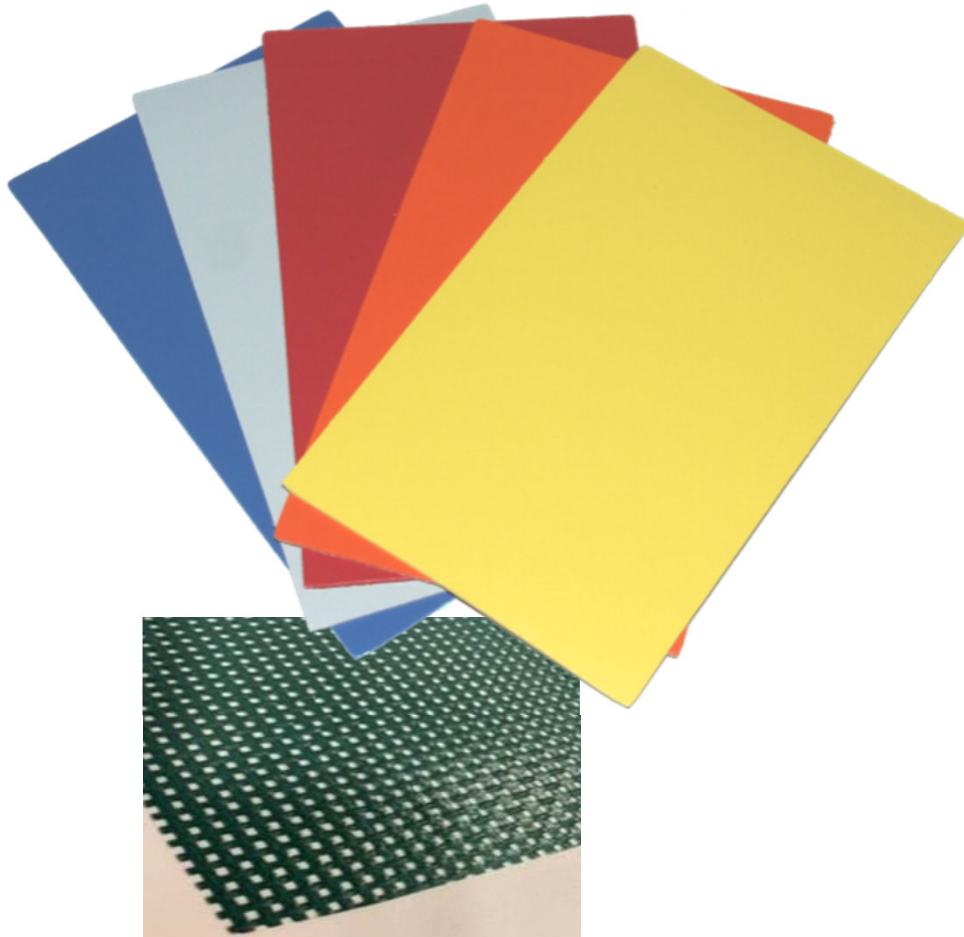
bis heute



- 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



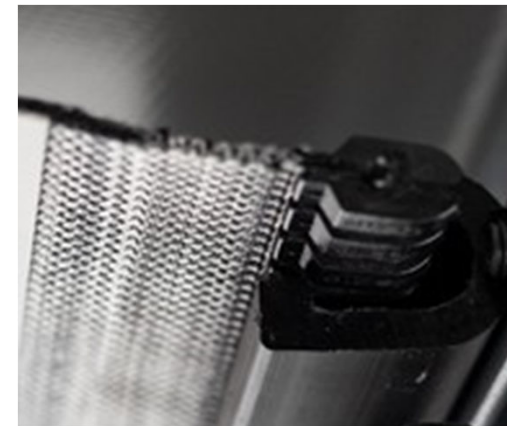
- 1.5 mm fabric on almost all doors
- Optionally with or without 900 mm transparent field
- 5 standard RAL colours, RAL 7038 agate grey, RAL 5010 blue, RAL 3002 red, RAL 2004 orange, RAL 1018 yellow
- Preferred colours from March 2025 RAL 7012 basalt grey, RAL 7016 anthracite grey, RAL 7022 umbra grey, 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
Fly screen green similar to RAL 6005



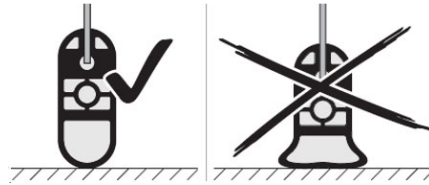
- The V 6020 TRL, V 5030 MSL , V 3015 Clean use stronger material
- 4 mm transparent material with curtain stripes in 5 standard RAL colours
- 3 mm fabric material transparent field of vision, RAL 7038 Grey, RAL 5010 Blue, RAL 2004 Orange
- Optionally with or without viewing window



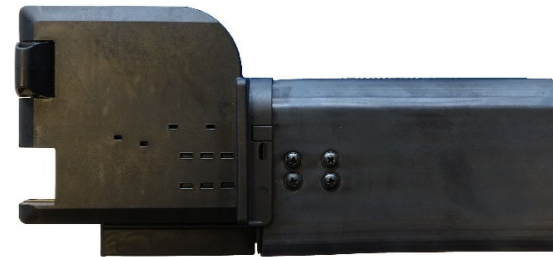
WHAT BELONGS WHERE?



SE 1



SE 2

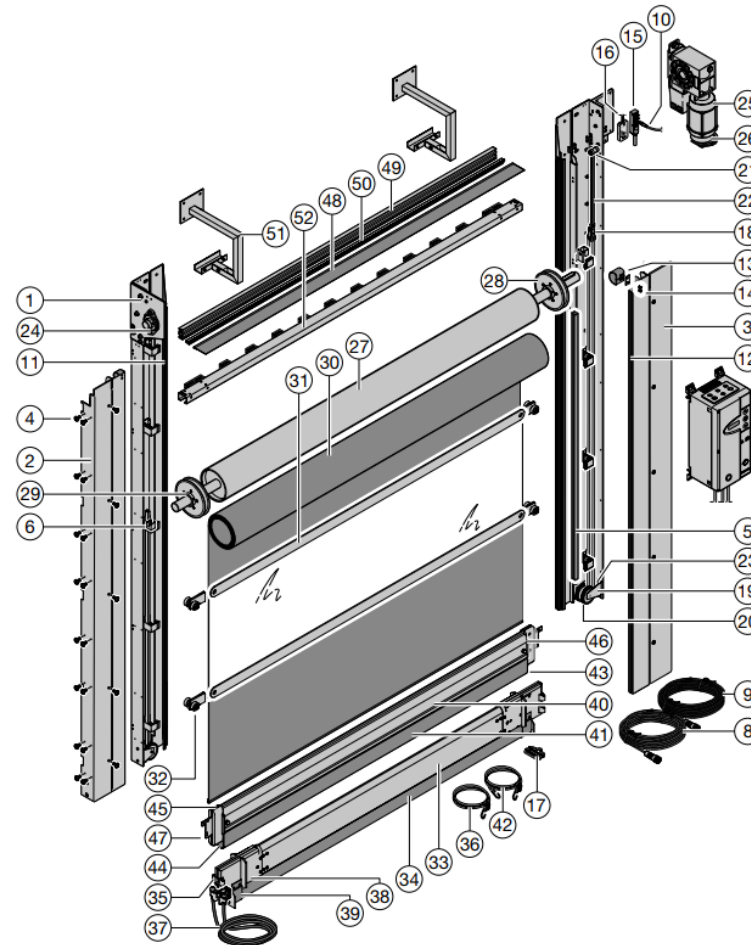
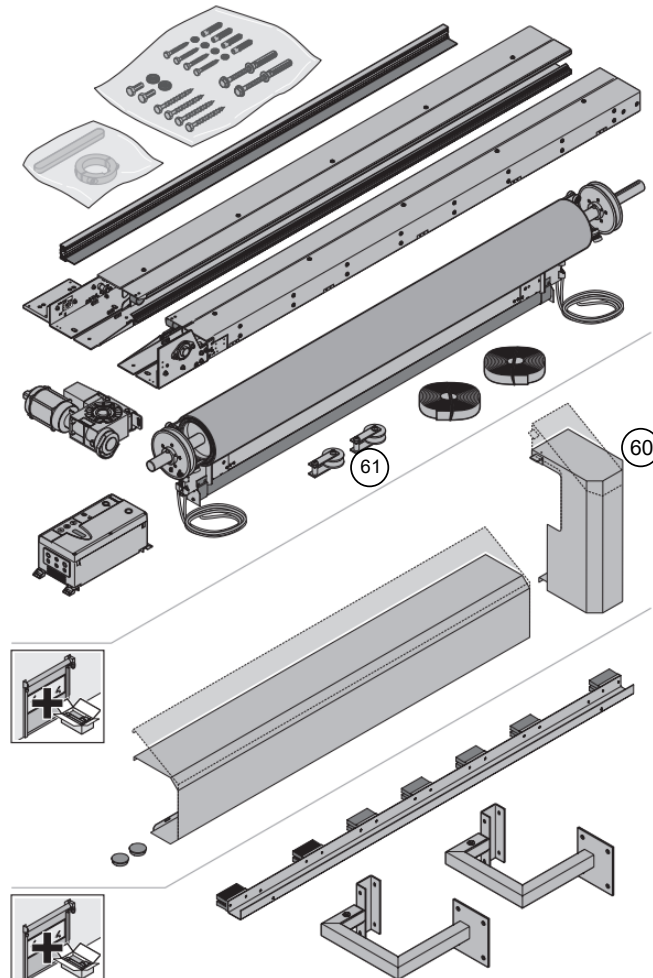


SE 3



SE 4





31	35	51	48, 49, 50	
18	27	3	15	20
33, 34		29	60	61

- Corrugation
- Set: Light grille holder
- Cover (Operator side)
- Distributor 6x M8
- Return pulley, rubber spring
- Spring steel wind lock 2 × 23 mm
- Radio crash switch
- Complete connection of belt / rubber
- Curtain fixing support
- Sealing frame channel
- Bottom part SE3 Complete
- Complete guide roller
- Operator cover right

- 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

- 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

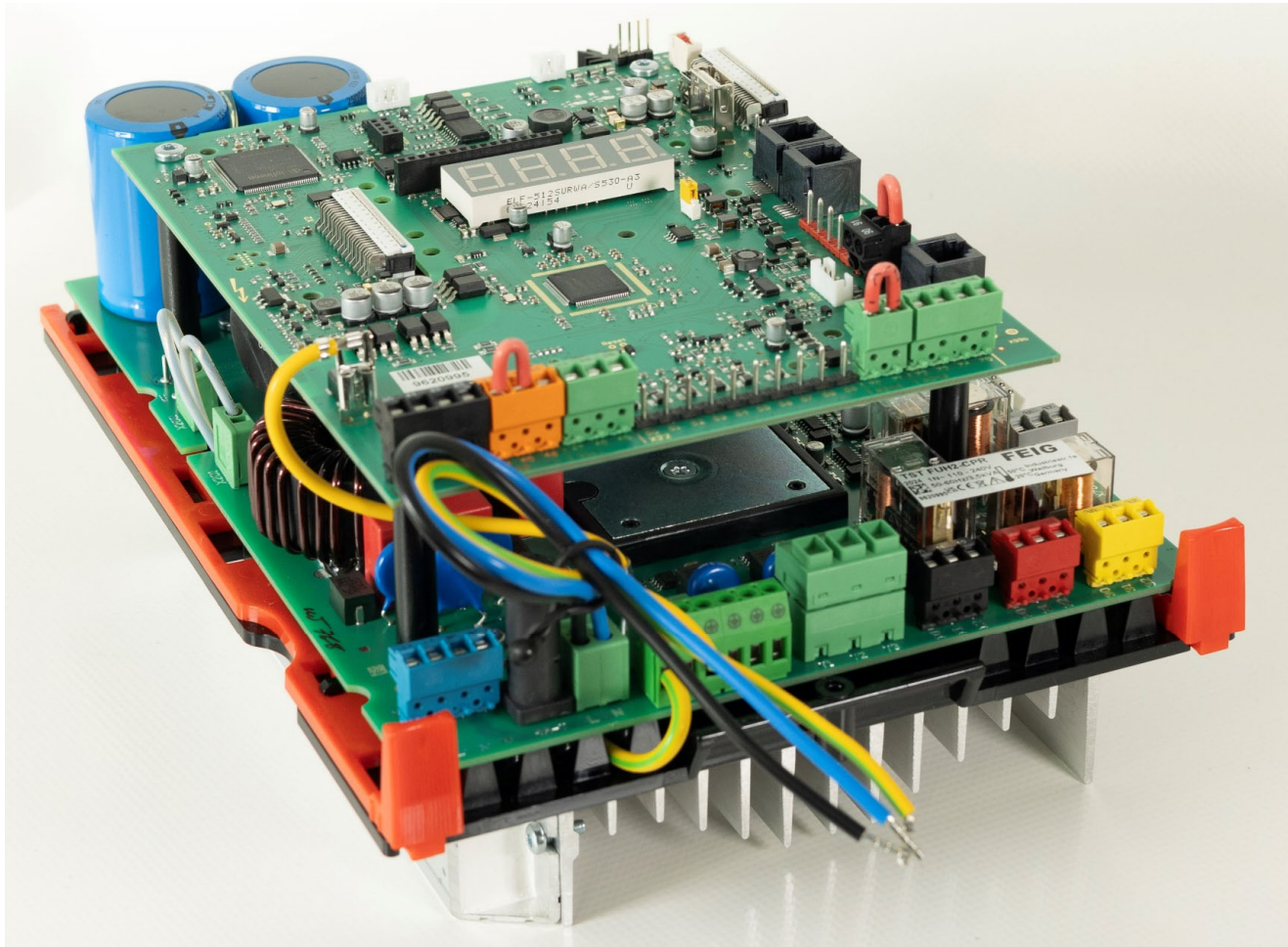
- 230 V 1-phase with plug
- As standard for doors with curtain weights under 95 kg

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



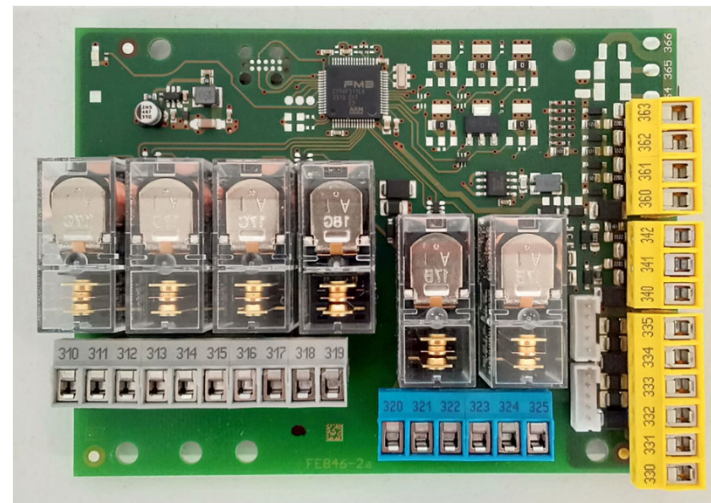
AK 500 FUE-1

- 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



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

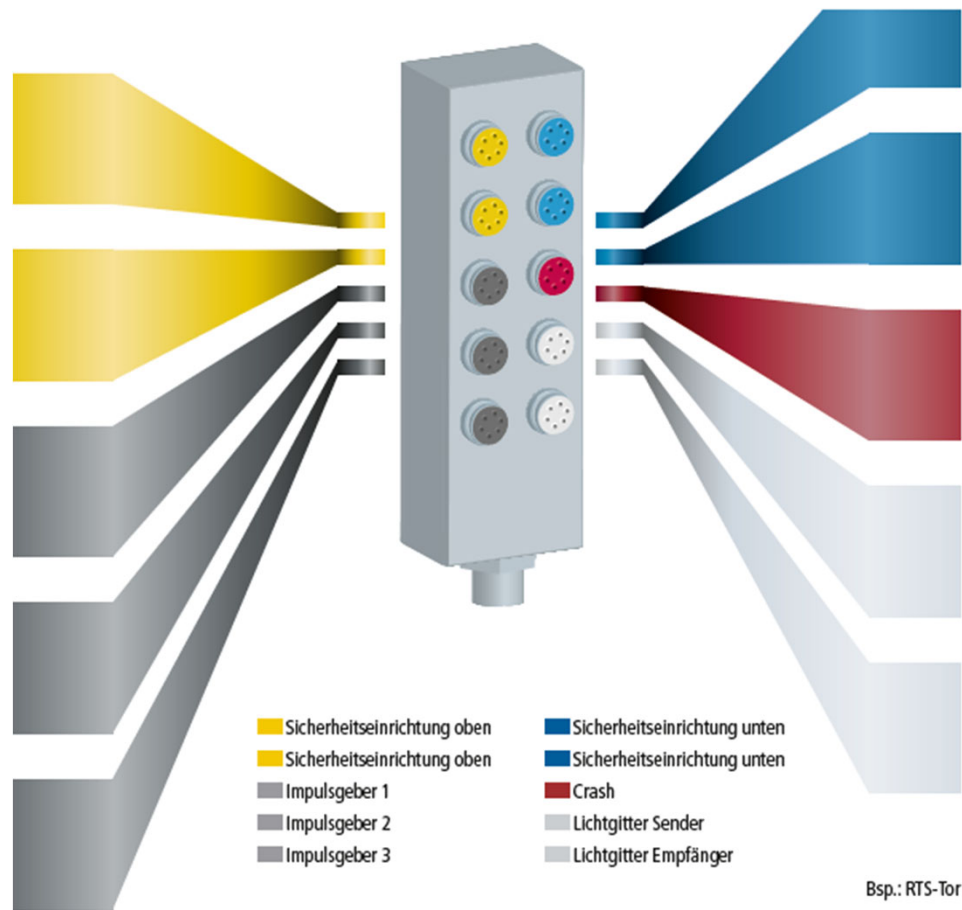
Doubling of the
pulse generator Inputs



- 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

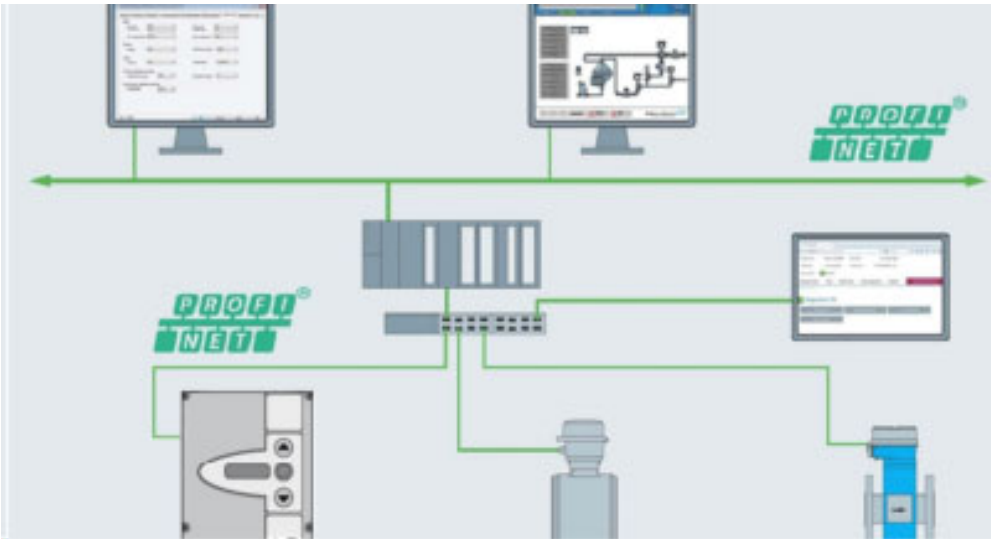
HÖRMANN



- 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

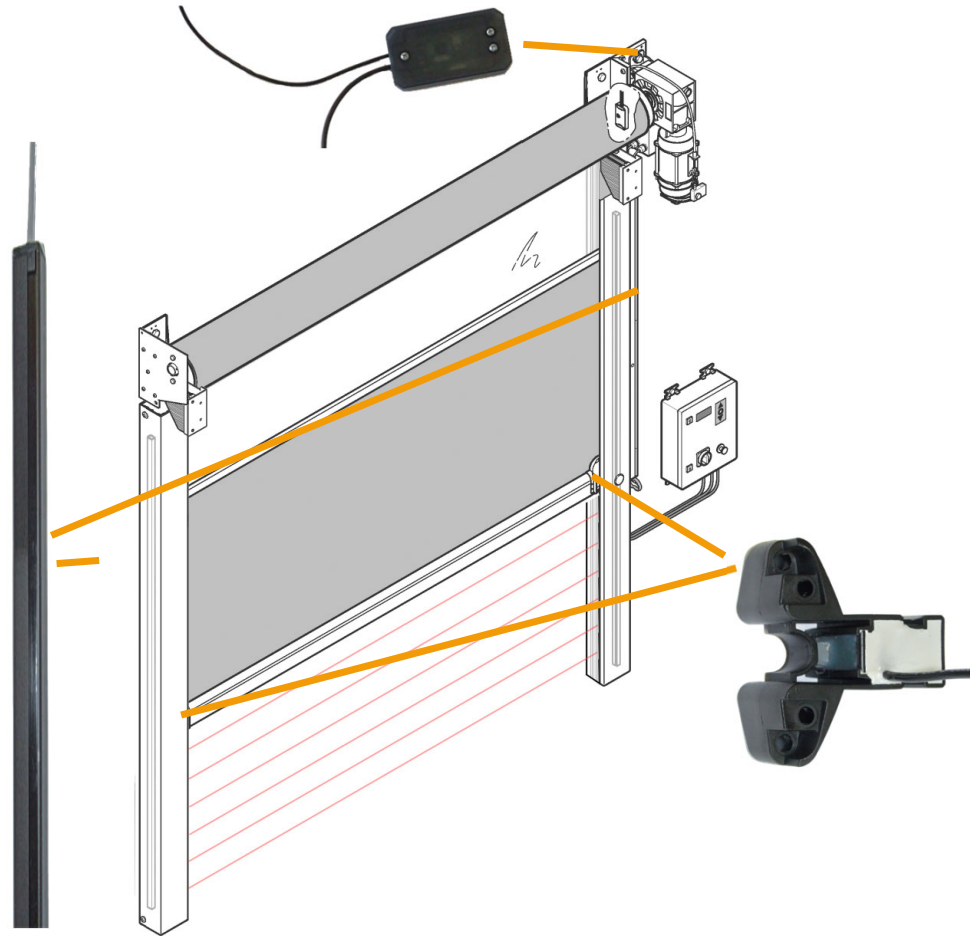


Smarte Steuerung mit RCCA-Karte als
FUE-1 Erweiterung

- Platine Profinet RCCA-A
- Platine Profisafe RCCA-B
- Einfachere Gestaltung von Automatisierungsprozessen
- Das Tor wird Teil eines Netzwerks
- Standardisierte Gebäude-, Maschinen, Fabrikautomatisierung

Safety light grille + radio crash

HÖRMANN





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

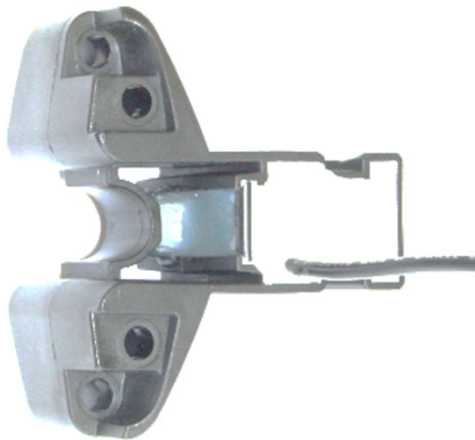
HÖRMANN



- 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



Nothandkurbel



Nothandkette



Notöffnung mittels 1/2 Zoll Antrieb mit Steckschlüsseinsatz



- 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

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

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 m² (door surface)
 Average wind speed: 4 km/h * 0.2777 = 1.11 m/s (metre per second)
 Door size: 16 m² * 0.80 * 1.11 m/s = 14.21 m³/s (air quantity per second)
 Temperature difference: 19 °C (Inside temperature) to 11 °C (Outside temperature) = 8 °C (temperature difference)

Determination of heat loss:

14.21 m³/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!

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

HÖRMANN

Energy Efficiency Measure Doors: Hörmann High-Speed Door Systems



- 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 5025 Z

Flexible internal and exterior high-speed door

HÖRMANN



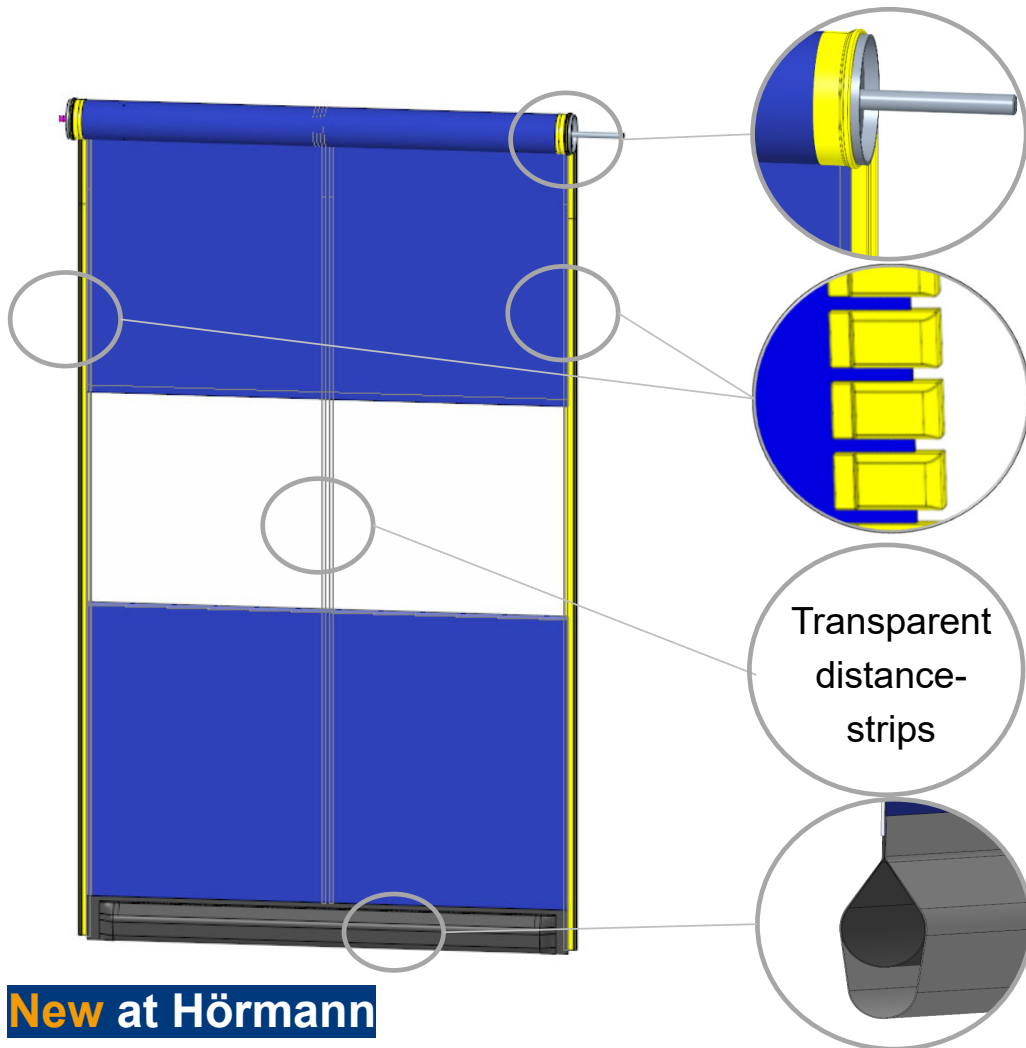
- Size range max. 5000 x 5000 mm
- Anti-crash function with fully automatic re-threading
- Anti-crash function over the entire clear door height
- Max. opening speed:
Opening / Closing: 2.0 m/s / 1.0 m/s
- Safety equipment: Eco-Light grille
- Resistance against wind in acc. EN 12424: Class 3
- New door 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



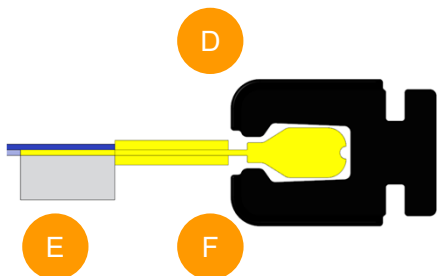
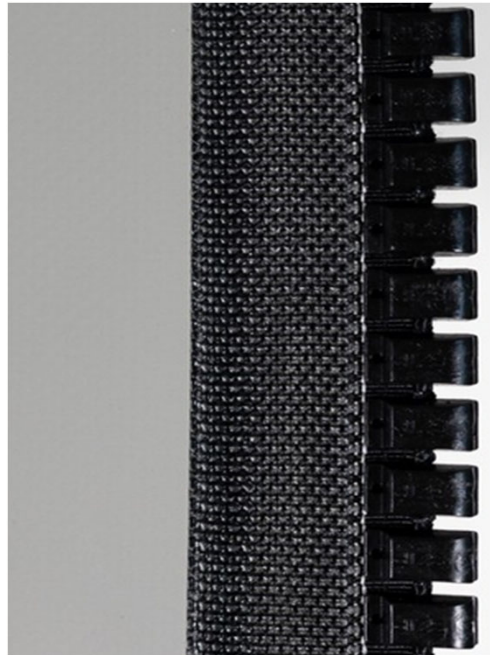
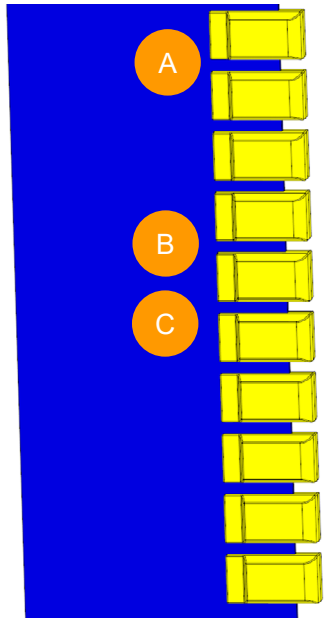
- Curtain with zipper and additional distance strips on both sides
- Optionally with or without 900 mm transparent vision field over the entire clear width
- Transparent distance strips in the middle of the curtain/ of the vision field
from 2000 mm 1 transparent distance strip
from 4000 mm 2 transparent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

New at Hörmann

Available from 01/03/025

V 5025 Z Zipper Technology

HÖRMANN



- 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

New at Hörmann

V 5025 Z
Flexible door leaf – Curtain

HÖRMANN



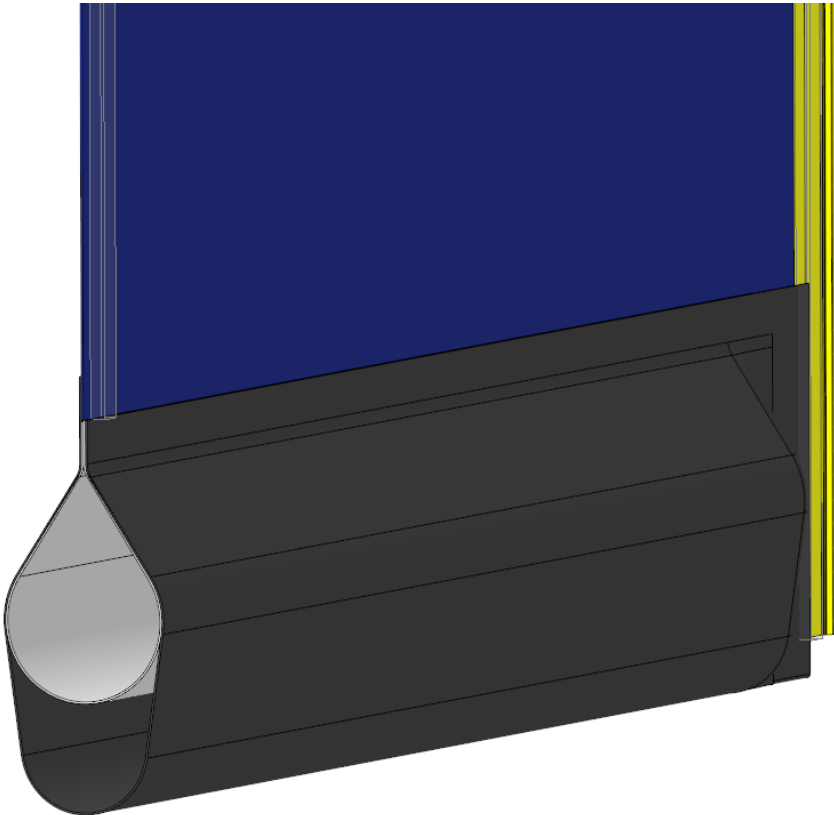
- 0.9 mm PVC fabric
- Optionally with or without 900 mm transparent vision field over the entire clear width
- 5 standard RAL colours :
 - RAL 7038 grey
 - RAL 5010 blue
 - RAL 3002 red
 - RAL 2004 orange
 - RAL 1018 yellow

New at Hörmann

Available from 01/03/2025

V 5025 Z
Flexible bottom rail

HÖRMANN



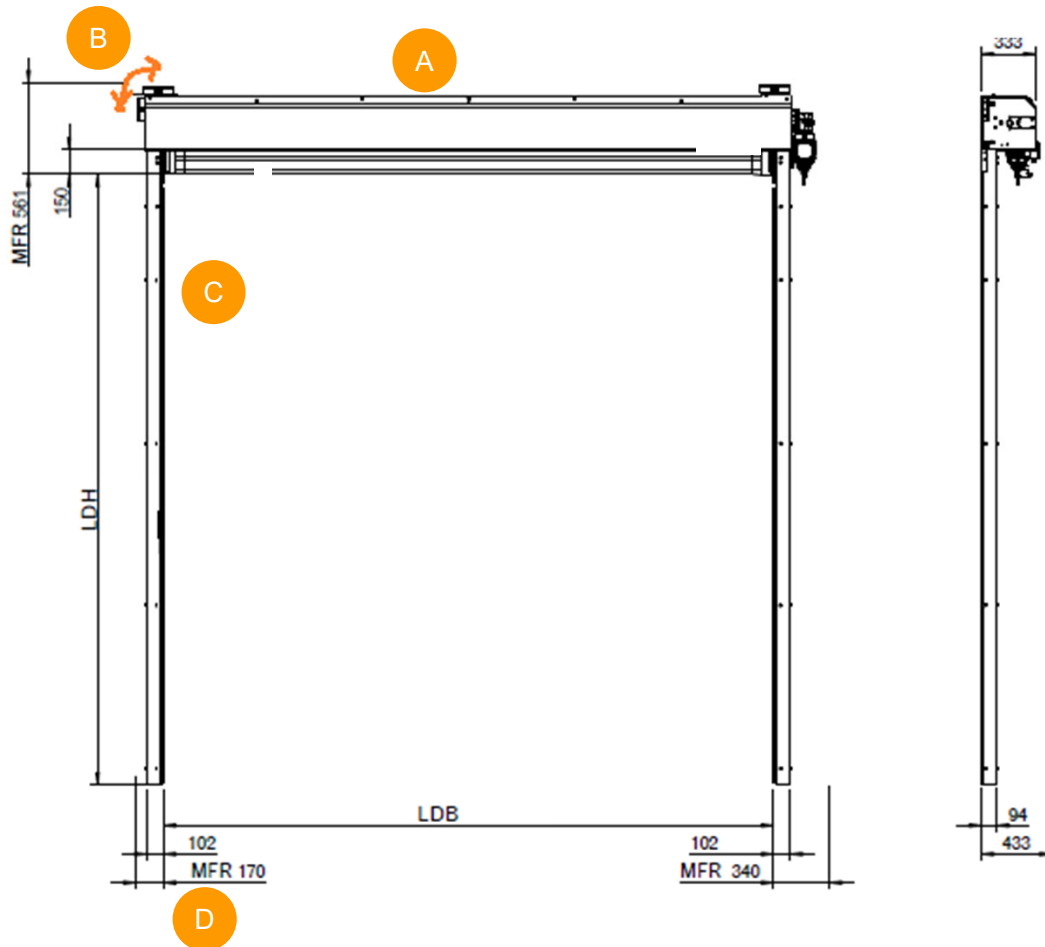
- Double PVC curtain loop in black colour
- High tightness against the floor
- Particularly tolerant to uneven floor conditions
- Door closes over own weight

New at Hörmann

Available from 01/03/2025

V 5025 Z Dimensions

HÖRMANN



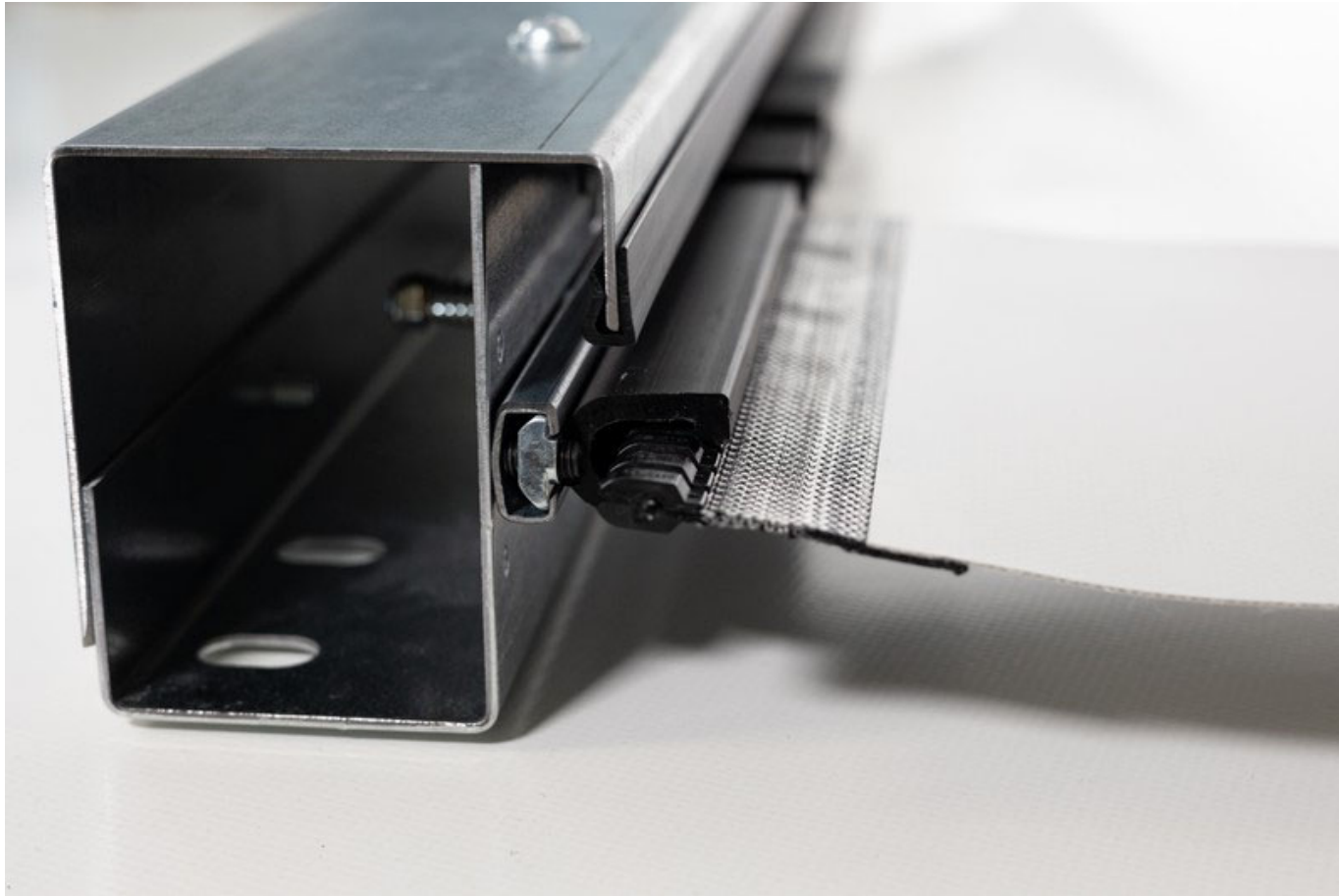
- A Compact installation dimensions
- B Top attachment freely selectable
- C All fitting points in one line
- D Particularly narrow side guides

New at Hörmann

Available from 01/03/2025

V 5025 Z
Small side panels

HÖRMANN

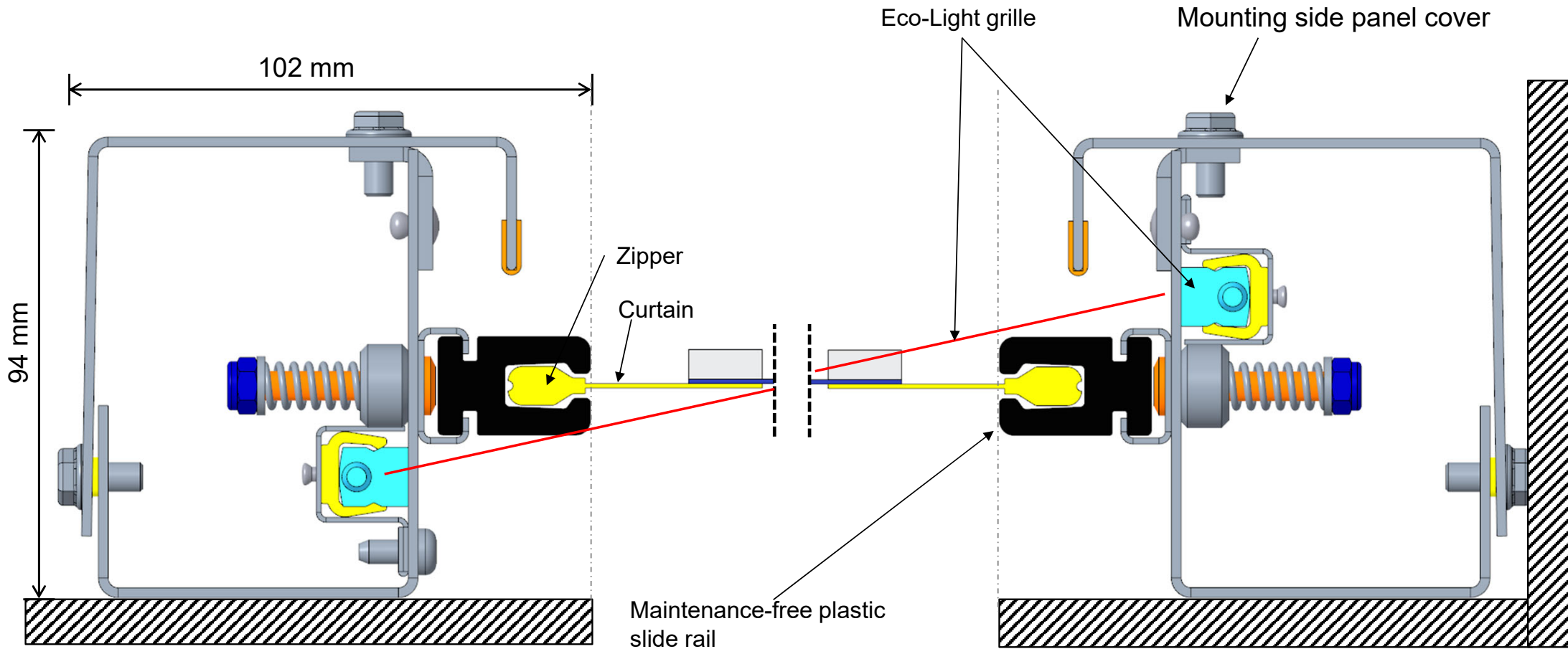


New at Hörmann

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

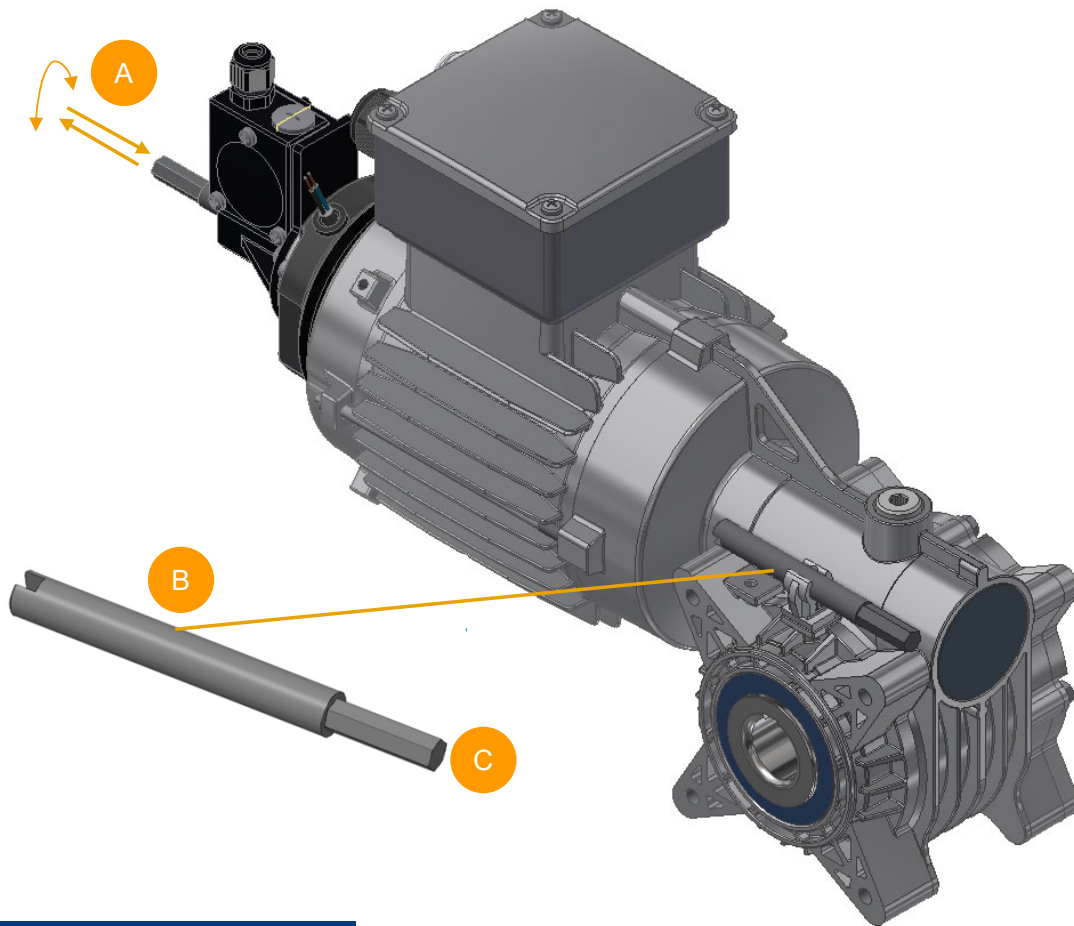
HÖRMANN



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



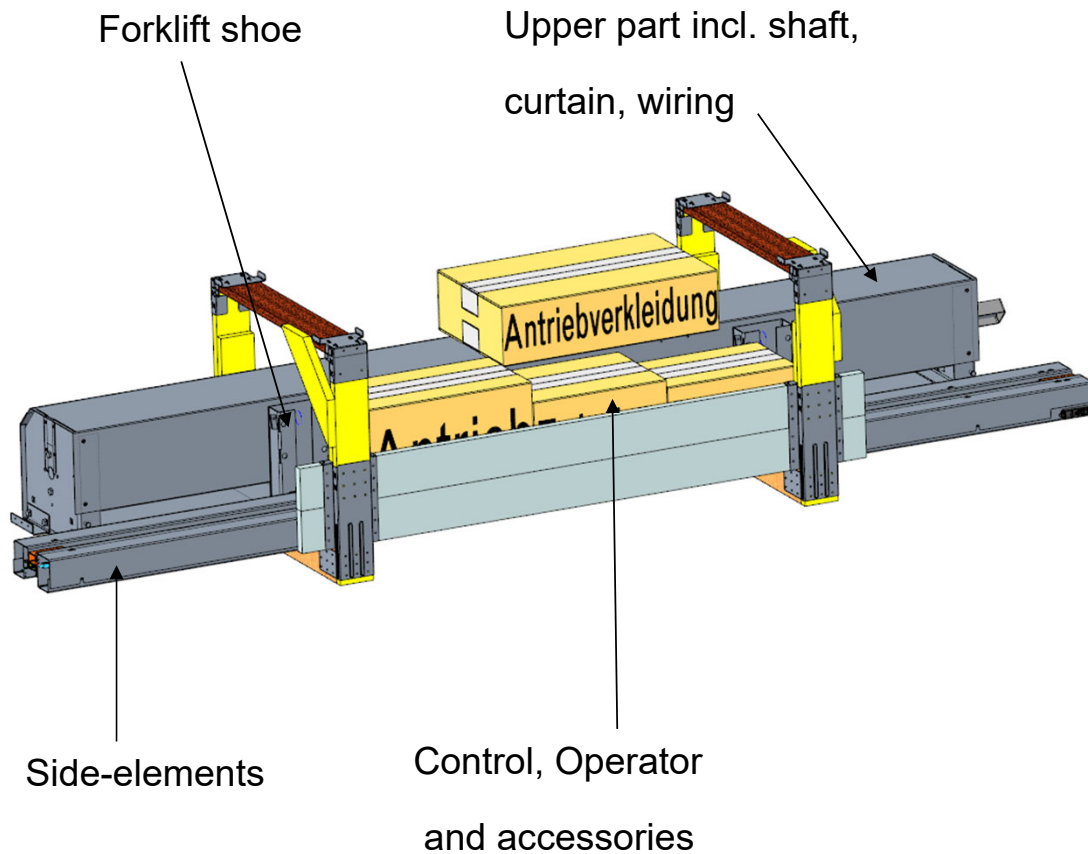
- 1-phase 230 V frequency converter control
- Plastic cabinet IP 54
- Options:
 - Main switch (on plaster), emergency stop (on plaster)
- Basic Accessories
 - 10 x Inputs
 - 1 x Output
- Upgrade to BK 150 FUE-1 with all known accessories and functions possible at an additional cost

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 gate packing
- Made in Germany

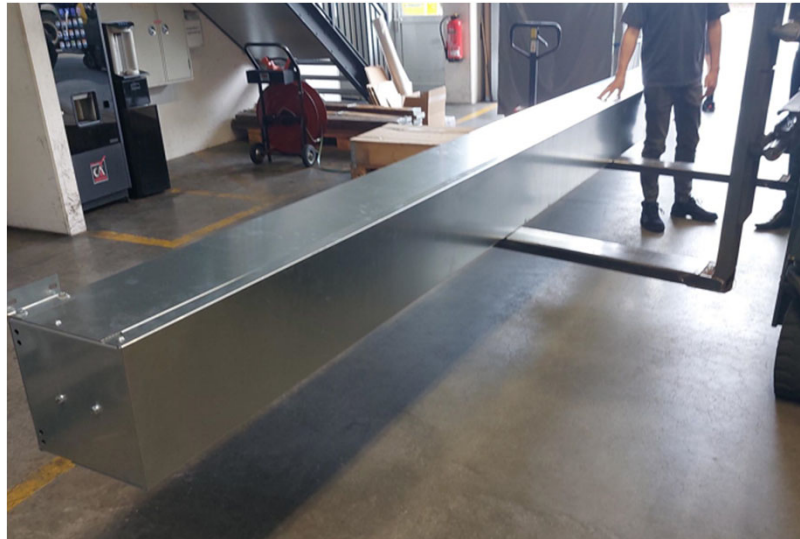
New at Hörmann

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



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

V4020 SEL Alu-R

Emergency opening by means of 1/2 inch drive with socket

HÖRMANN





Option: Clean Version

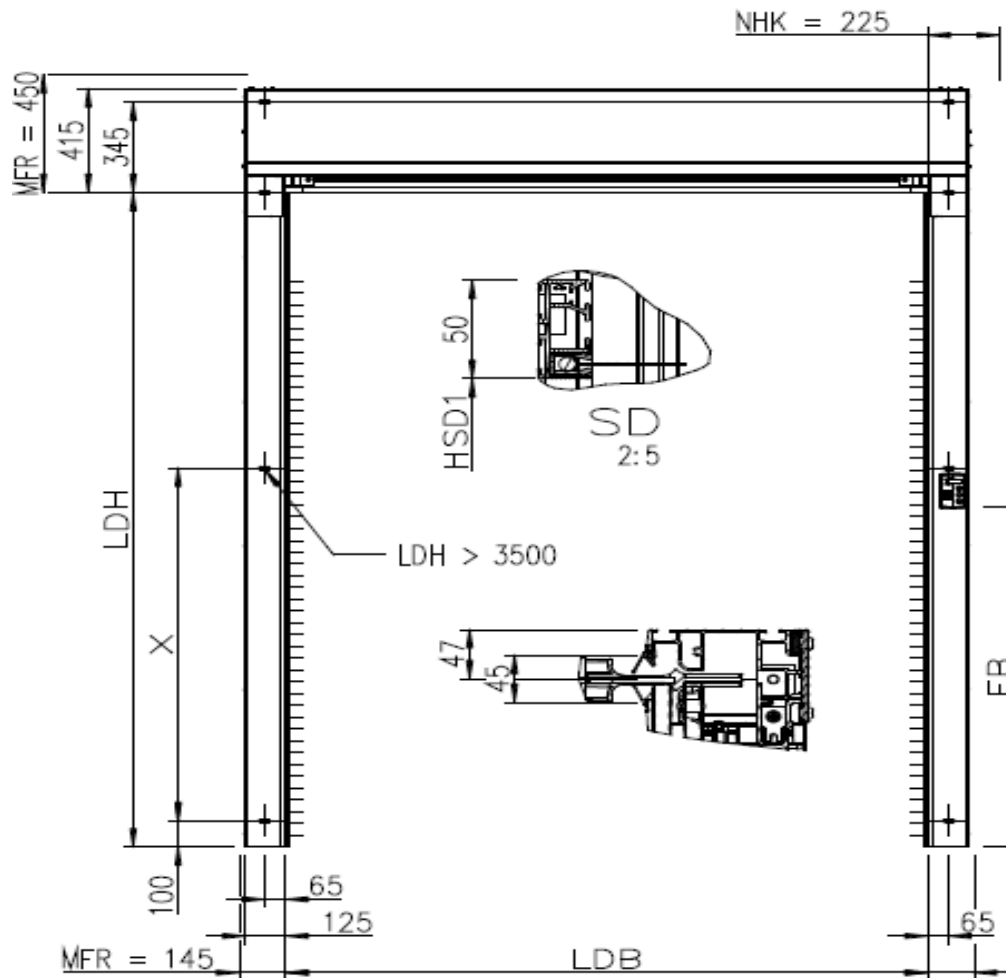
for Pressure differences up to 30 Pa

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 Internal door

HÖRMANN



- Size range 5000 x 5000 mm
- Lower part Soft Edge SE 2 with radio crash
- Aluminium wind protection
- Control BK 150 FUE-1
- Safety light curtains in the locking level
- Emergency opening via hand crank
- Self-supporting construction

Sales advantages

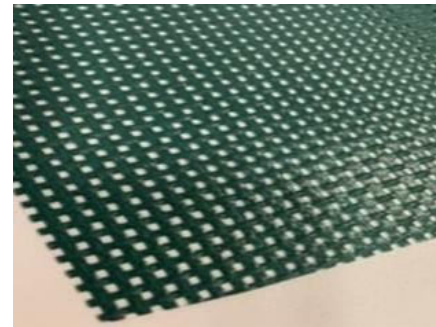
- Cost-effective interior door for areas without draughts
- Individual sections can be exchanged
- SoftEdge lower part with automatic rethreading

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 5030 SEL Internal door

HÖRMANN



- Size range 5000 x 5000 mm
- Lower part Soft Edge SE 2 with radio crash button
- Wind protection made of spring steel
- Control BK 150 FUE-1
- Safety light curtains in the locking level
- Emergency opening via hand crank
- Self-supporting construction

Sales advantages

- Inner door for low draught conditions
- SoftEdge lower part with automatic rethreading
- Optional aluminium lower part for wind class 1

- 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 6030 SEL Internal and exterior door

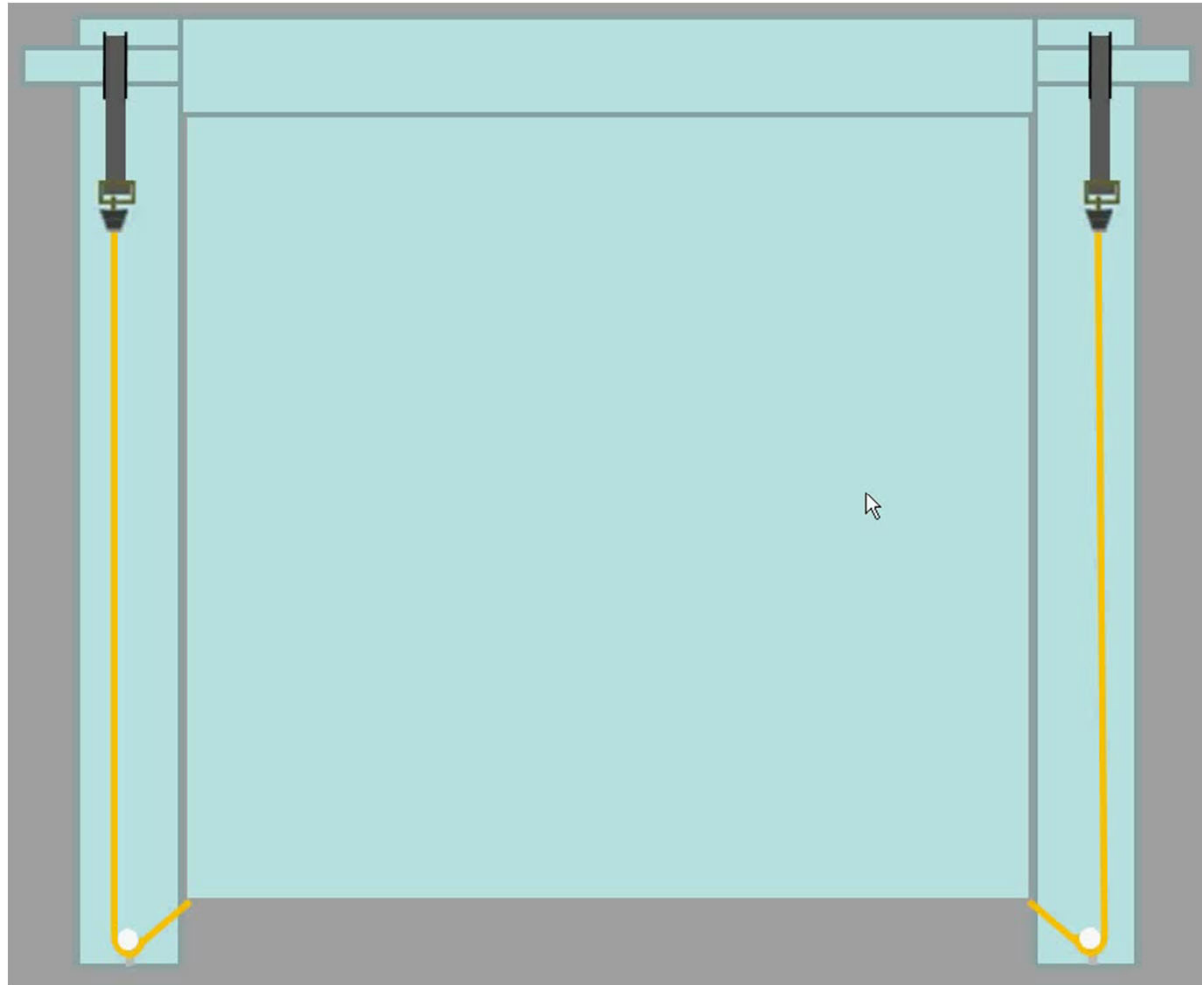
HÖRMANN



- Size range 5000 x 6000 mm
- Outer door reinforced by pull mechanism and curtain fixing
- Lower part Soft Edge SE 3 with Radio Crash
- Wind protection made of spring steel
- Control BK 150 FUE-1
- Safety light curtains in the locking level
- Emergency opening via hand crank
- Self-supporting construction

Sales advantages

- Exterior door with crashable SoftEdge
- Resistance to wind: Class 3



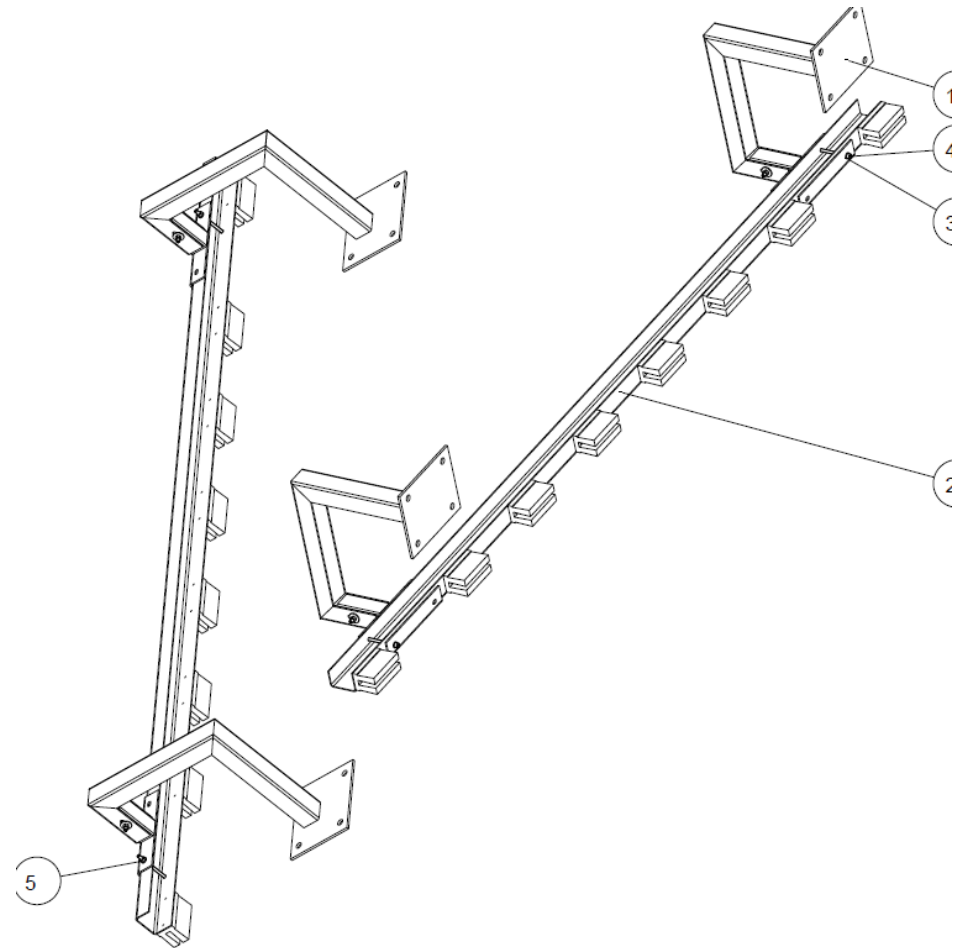
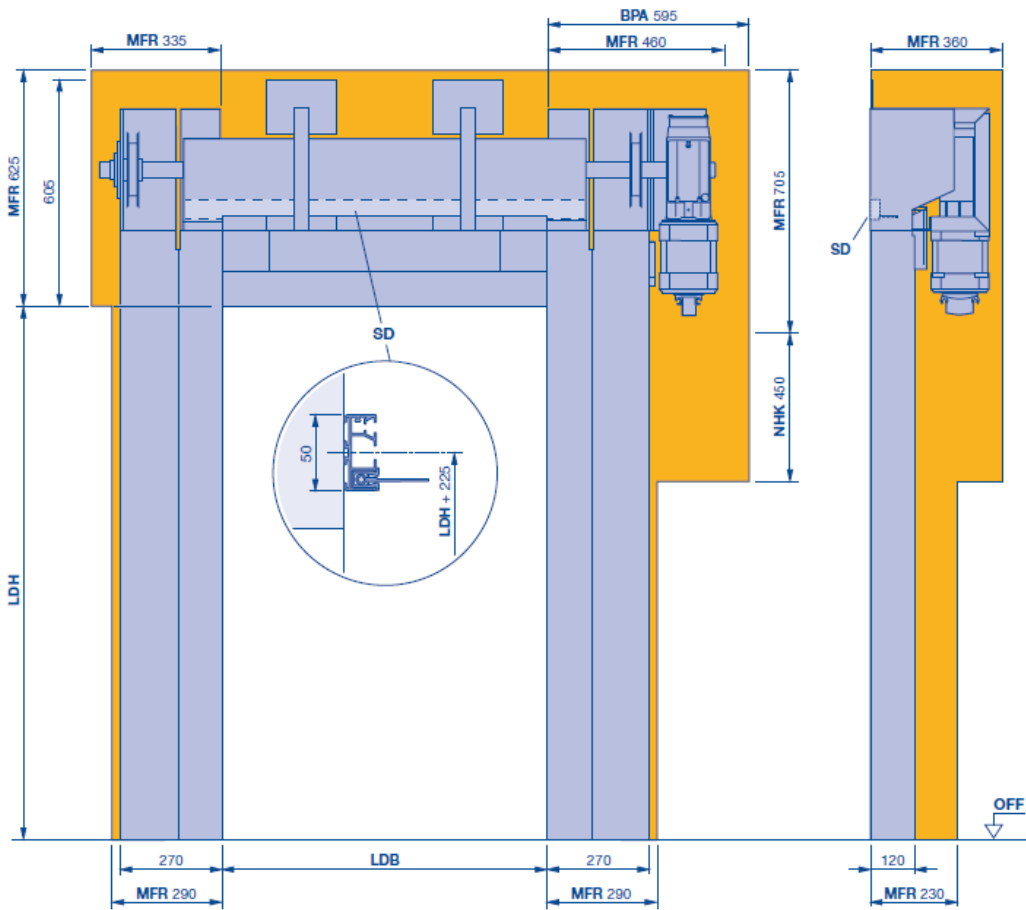
V 6030 SEL – Curtain Fixing Recommendation:

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



V 10008 Internal and exterior door

HÖRMANN



- Size range: 10000 x 6250 mm
- Aluminium base with curtain loop
- Pulling mechanism double
- Wind protection made of spring steel
- Control AK 500 FUE-1
- 2 contact rails with 2 light barriers (300 mm/600 mm)
- Emergency opening via emergency hand chain

Sales advantages

- Door width up to 10000 mm possible

Doors under 2500 mm clear height:

- Intervention protection (cladding) for doors with a clear height of less than 2500 mm is required by law

Temperatures:

- Our high-speed doors are designed for the Central European region and can also withstand prolonged minus temperatures in winter
- If we are permanently below 7°C – 0°C, a drive heater is recommended
- In the deep-freeze area, a flexible high-speed door "may" not be used permanently

Wind force in Beaufort	Speed in m/s	Speed in km/h	Dynamic pressure in kg/m ²	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
- 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 2515 Food L Door for the food industry

HÖRMANN

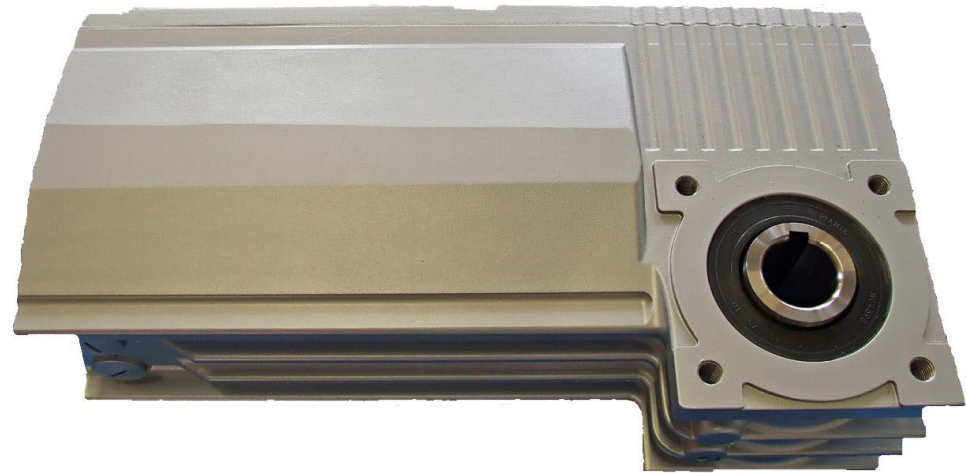


- Size range: 2500 × 4000 mm
- Door for the food industry and wet rooms
- Control BS 150 FUE-1 (stainless steel)
- Safety light grille in the closing zone with radio crash

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

- 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 5030 MSL

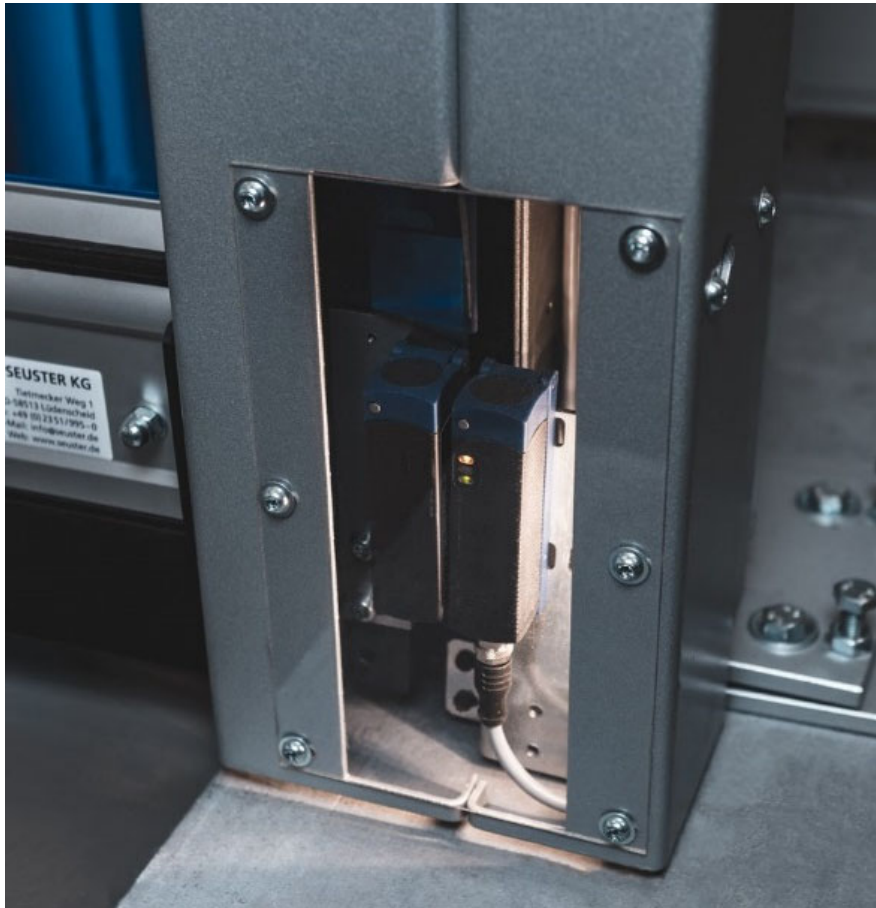
Machine protection door with safety limit switch

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

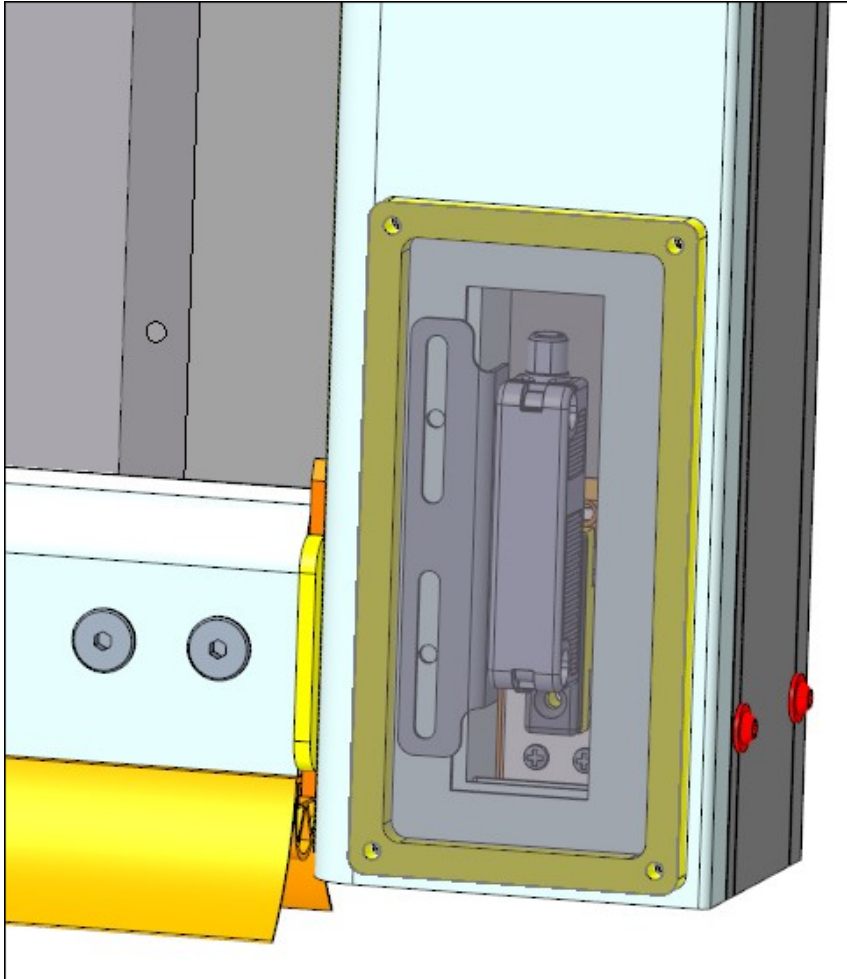
HÖRMANN



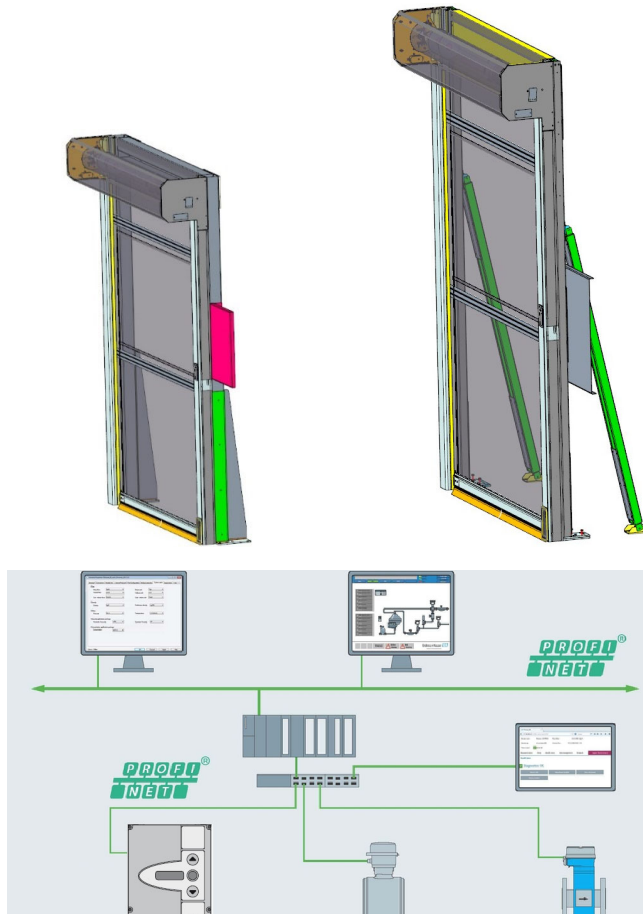
- Max. clear width 4000 mm
- Max. clear height 5000 mm
- Fully transparent
- Windclass 3 acc. to DIN EN 12424
- Max. opening speed 2.2 m/s
- Max. closing speed 1.0 m/s
- Aluminium bottom rail
- Safety light grille with soft-stop
- Emergency opening via 1/2" on-site ratchet
- Control: BK 150 FUE-1
- **Tubular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

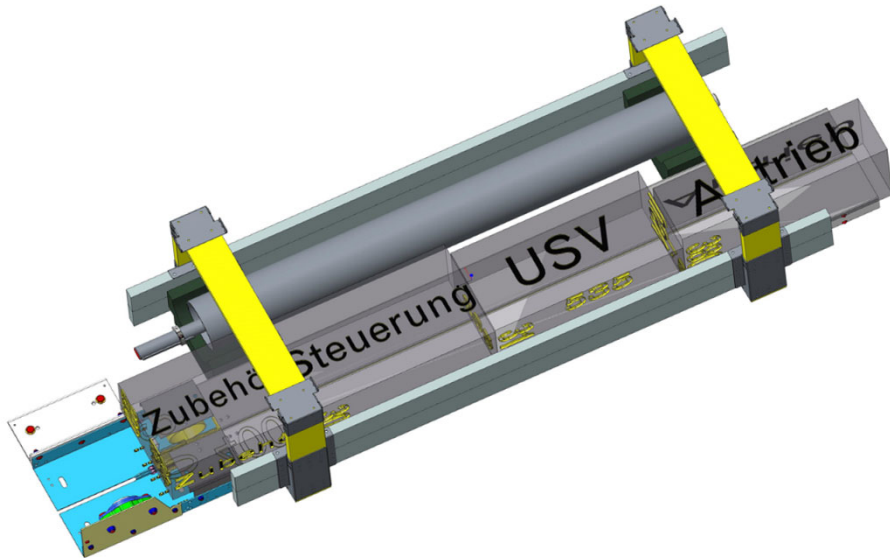
V 6030 Atex Internal door for potentially explosive areas

HÖRMANN



- Size range: 4000 x 4000 mm
- Fully approved door for Atex areas
 - Gas: Ex II 2G Ex h IIB T4 Gb
 - Dust: 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)

- Tor, Antriebs- und Steuerungskartons in einer Einheit
- Reduzierung Beschädigungen durch stabilere Ausführung
- Verringerung der Transport- oder Lagerkosten durch stapelbare Einheit
- Auch für Großbaustellen und Exporte geeignet



- 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

**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

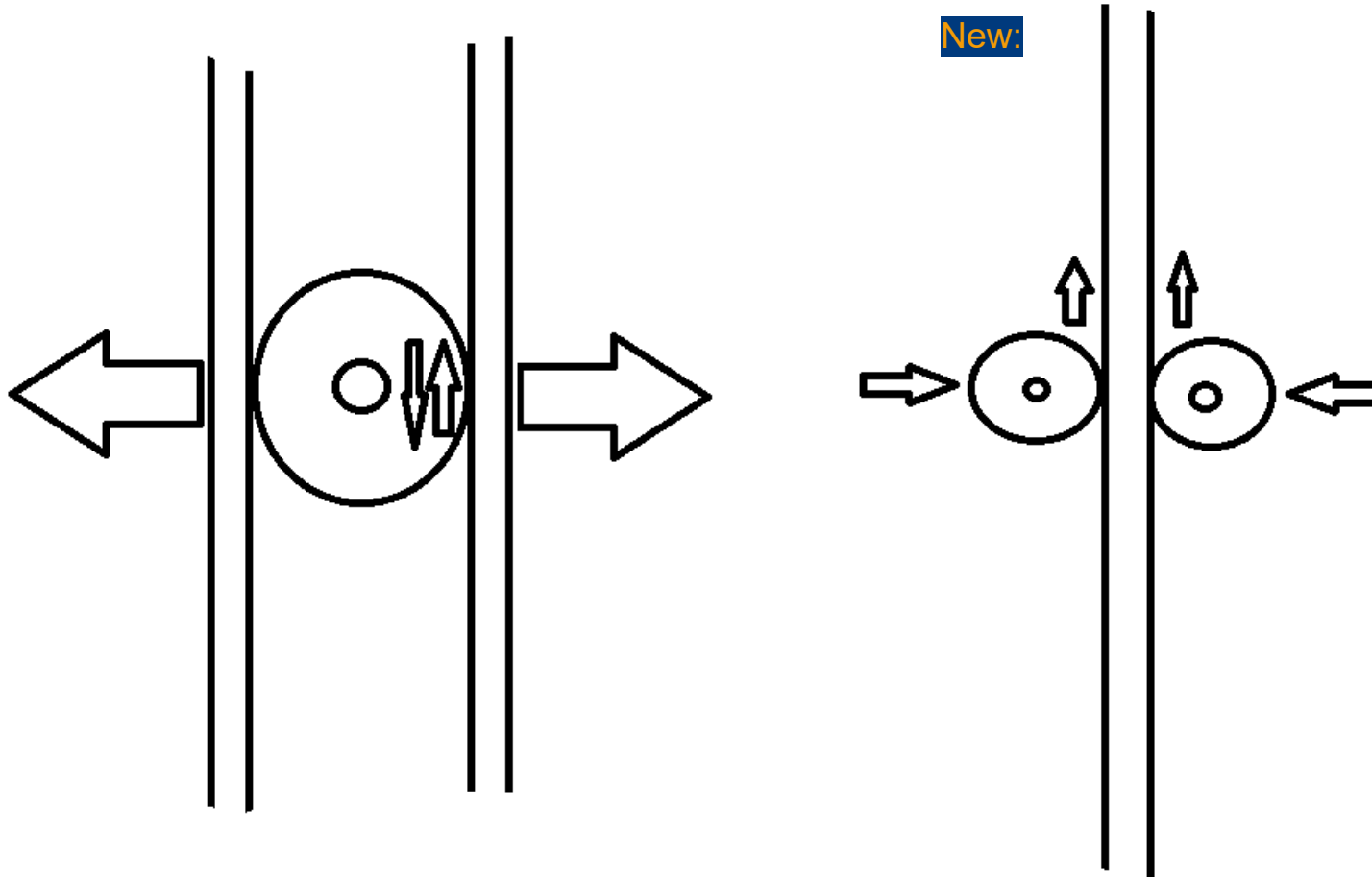
- Application: Internal and external gate
- Dimensions
max. 5000 x 5000 mm
- Closing speed: 1.0 m/s
- Safety equipment: Light grille with soft stop
- Resistance against wind load:
Class 2 / 4
- Door leaf: Polycarbonate sections, 1 x 1.5 mm
- Emergency opening: Handchain
- Lifetime > 1,000,000 cycles

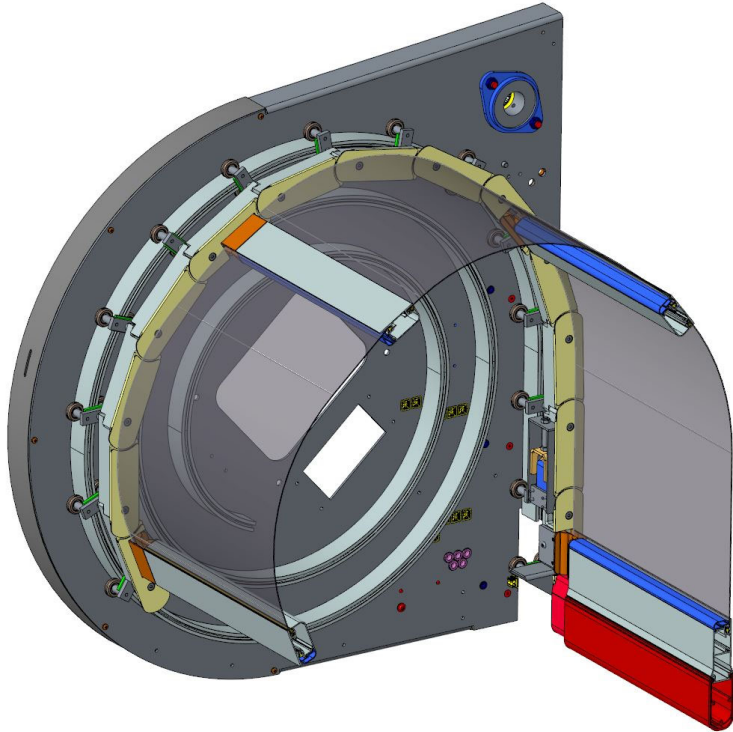
HS 5040 TurboLux

- 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





- Due to the frameless design of the sections, we can achieve a total height of 550 mm
- The competition works exclusively with a frame construction
- Thanks to the high sections, we can create transparency of up to 90%



External view

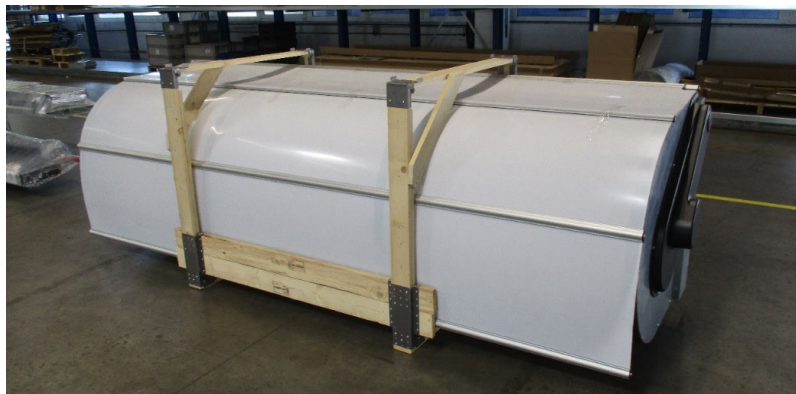
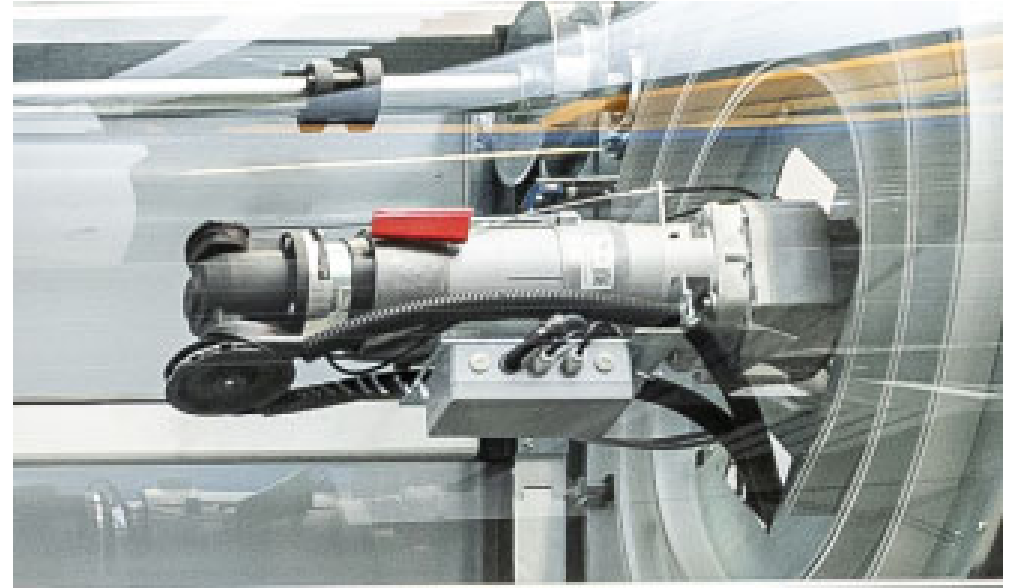


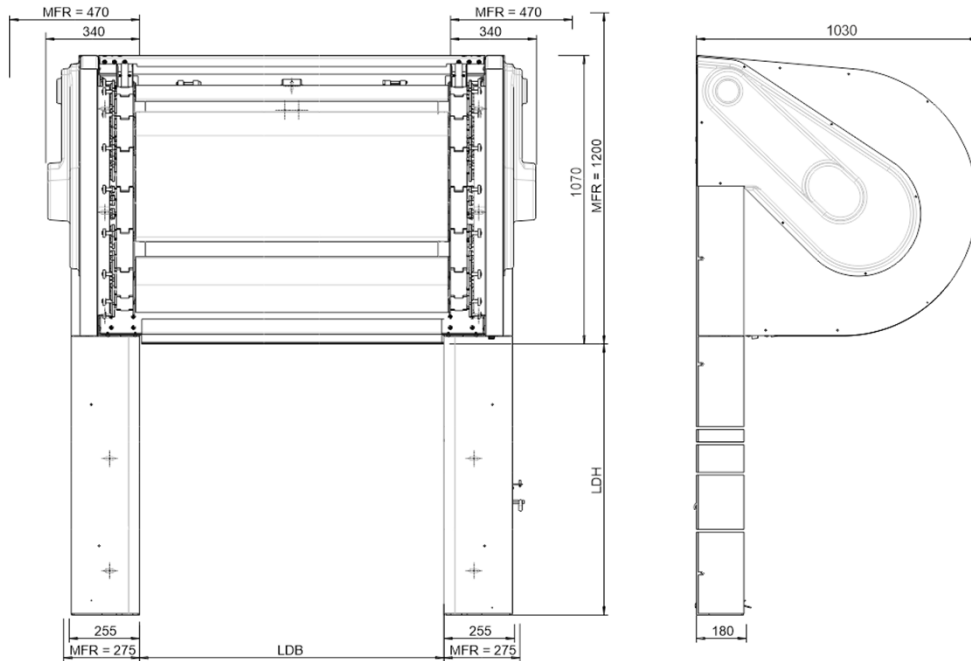
Internal view

- 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

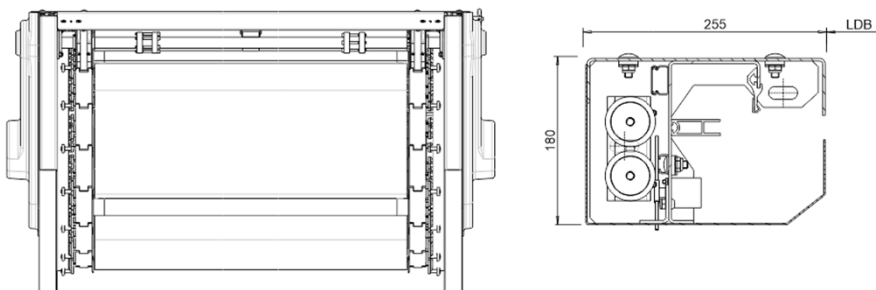




Dimension C.H. = 5000mm x C.W. = 5000mm

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





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

HS 5040 TurboLux User Story

HÖRMANN



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

- 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



U_D-value:
1.04 W/m²K



42 mm with
thermal break

U_D-value:
0.57 W/m²K

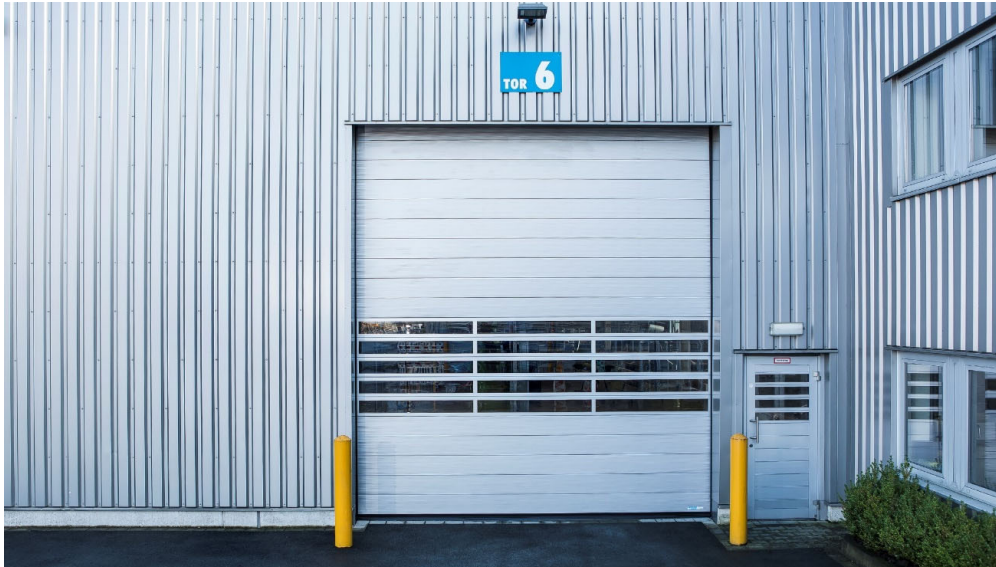


100 mm with
thermal break

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_D-value: 1.04 W/m²K**, 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

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

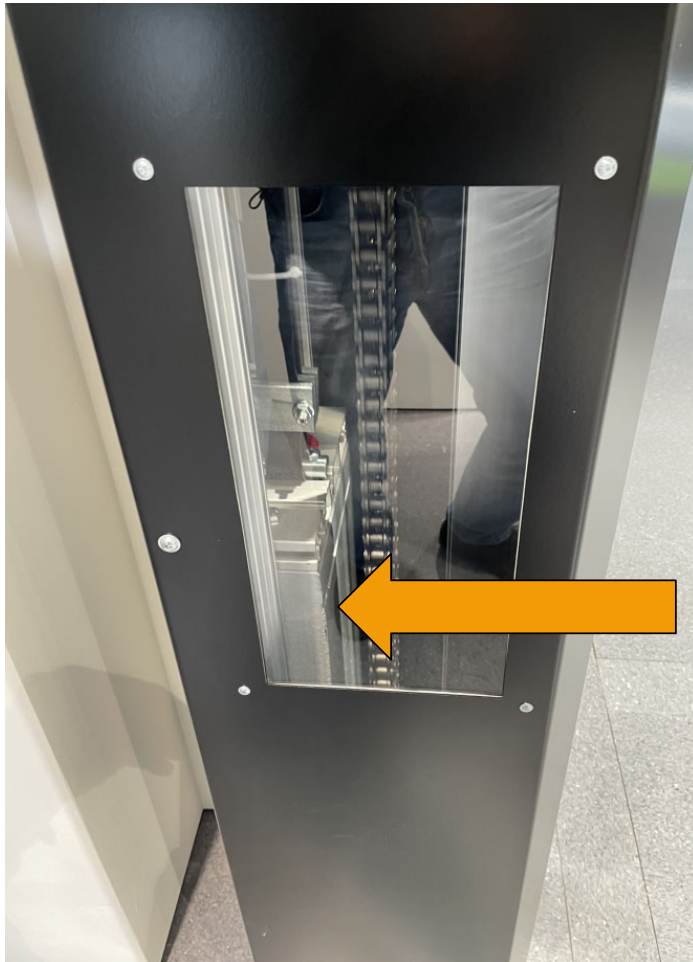
High speed doors HS 7030 PU 42 –product improvements

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



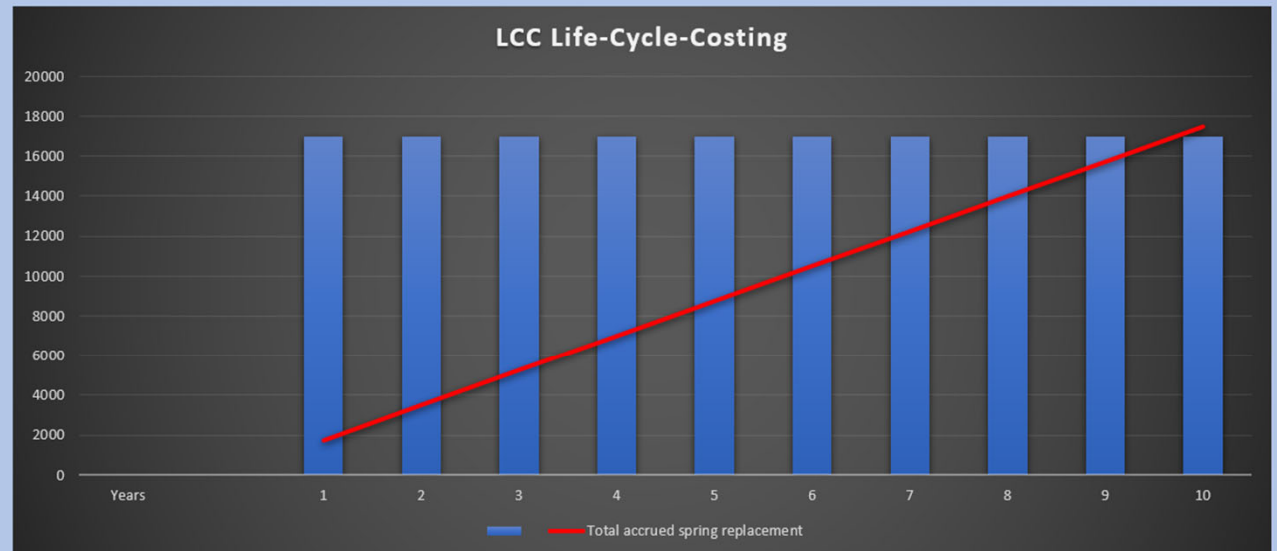


- Up to 5000 x 5000 mm weight compensation via counterweights instead of springs
- ✓ Standard
- ✓ Wear-free
- ✓ Less maintenance
- ✓ Lower follow-up costs
- ✓ Smooth slalom
- ✓ For the highest door cycles
- ✓ At no extra cost
- ✓ Low payback periods

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
	874	874	874	874	874	874	874	874	874	874
	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 €

56	35	38	10	15
19	23	33, 34	27	
54	42, 43, 44	30	13	

Complete spiral support

U-profile

Holder for light grille

Sealing frame channel, Curtain loop complete

Distributor 10 × M8 snap

Complete chain tensioner wheel

Inclination panel

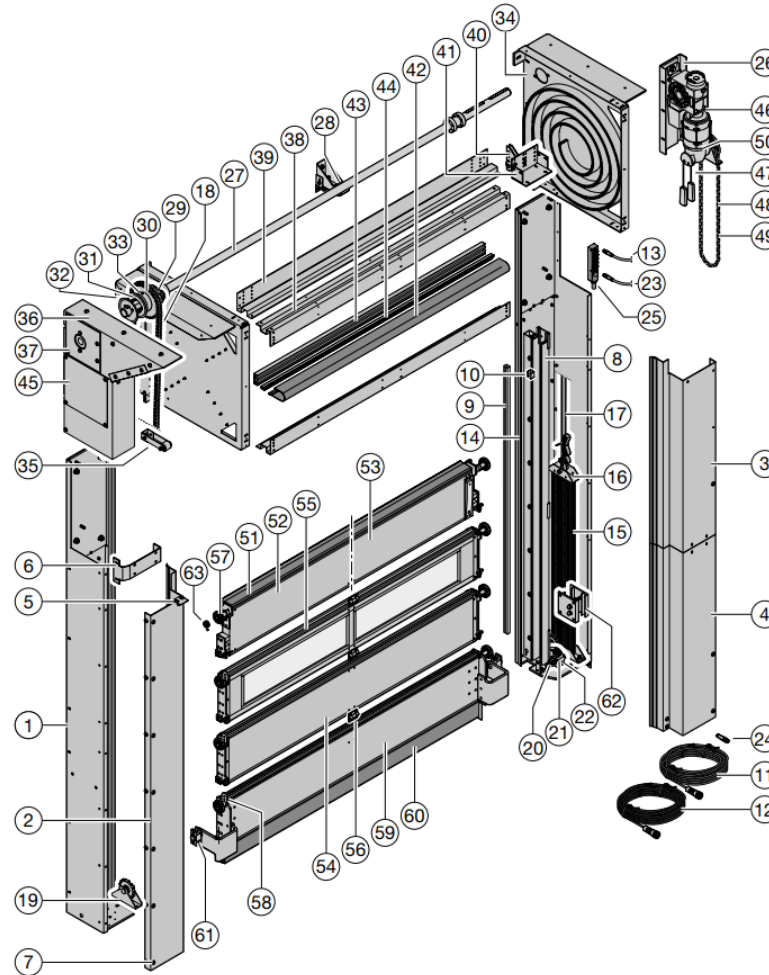
Central hinge, completet

Complete spring assembly

Complete return pulley

Guide roller

Snap cable



Area attack door leaf



Dynamic attack gate leaf



Push-up/up-thrust test



Manual attack guide rail



Certificate

Zertifikat / Certificate

Zertifikatsnr. / Certificate No.: 219 IFT-6080181-1-1



Angriffshemmende Bauteile
Security building components

Produkt <i>product</i>	HS 7030 PU 42
Produktfamilien <i>product families</i>	Einbruchhemmendes Rolllor aus Weißblech mit PU-Füllung und Fensterprofil <i>Burglar-resisting roller door made of Inplate with PU-filling</i>
Bauart <i>type of construction</i>	Rolllor <i>Roller door</i>
Klassifizierung <i>classification</i>	DIN/TS 18194:2020 - RC 2
Hersteller <i>manufacturer</i>	Hörmann KG Verkaufsgesellschaft Upheider Weg 94-98, DE 33803 Steinhagen
Produktionsstandort <i>production site</i>	Seuster KG Tietmecker Weg 1, DE 58513 Lüdenscheld



Mit diesem Zertifikat wird bescheinigt, dass das benannte Bauprodukt den Anforderungen des zugrundeliegenden IT-Zertifizierungsprogramms in der aktuellen Fassung entspricht.

IT1 Überprüfung des Bauproduktes durch eine akkreditierte Prüfstelle nach DIN/TS 18194

IT2 Einhaltung und Aufrechterhaltung einer werkseigenen Produktionskontrolle durch den Hersteller

IT3 Endinspektion des Werkes und der werkseigenen Produktionskontrolle durch IT-Q-Zert

IT4 kontinuierliche Fremdüberwachung des Werkes und der werkseigenen Produktionskontrolle durch IT-Q-Zert

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.

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.

Das Unternehmen ist berechtigt, das benannte Bauprodukt gemäß der IT-Zeichensetzung mit dem IT-zertifiziert-Zeichen zu kennzeichnen.

This certificate attests that the building product mentioned fulfils the requirements of the underlying IT-certification scheme in its current version.

IT1 initial type-testing of the building product by an accredited testing body as per DIN/TS 18194

IT2 implementation and maintenance of a factory production control by the manufacturer

IT3 initial inspection of the production site and the factory production control by IT-Q-Zert

IT4 continuous third-party control of the production site and the factory production control by IT-Q-Zert

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.

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.

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.

Grundlage(n) / Basis:
IT-Zertifizierungsprogramm für "Angriffshemmende Bauteile"
IT-certification scheme for security building components
(QM 301)
Ausgabe / Issue: 2020

DIN/TS 18194

Einbruchhemmung
burglar resistance

Überschungsstelle:
ift Rosenheim GmbH
Theodor-Gieß-Str. 7-9
Deutschland 83026 Rosenheim

Prüfautor:
ift Rosenheim GmbH
Theodor-Gieß-Str. 7-9
Deutschland 83026 Rosenheim

ift
ZERTIFIZIERT
CERTIFIED



www.ift-rosenheim.de

ift Rosenheim
21.09.2020

Gültig bis / Valid until: 20.09.2023

Vertragen. / Contract No.: 219 IFT 6080181

ift Rosenheim
Christian Kahrer
Leder der IT-Zertifizierungs- und Überwachungsstelle
Head of IT Certification and Surveillance Body

ift Rosenheim
Prof. Jörn P. Laas
Institutslieferant
Director of Institute

Prüfer-ID-Nr. / Prüfnummer: 20-003129-PR01
vom / dated 23.07.2020

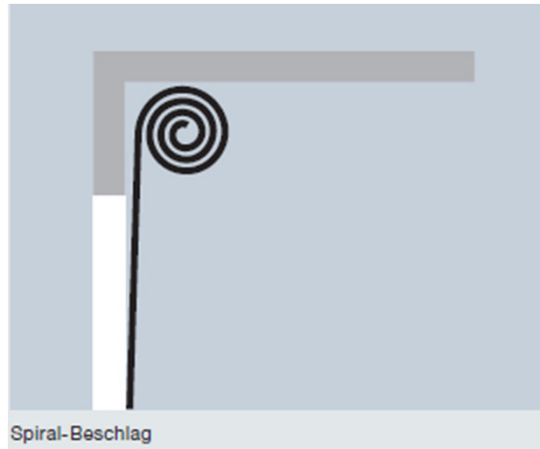
- HS 7030 PU 42
- HS 5012 PU 42 S
- HS 5015 PU N 42

Required headroom:

920 – 1055 mm

Counterweights or spring, depending on size

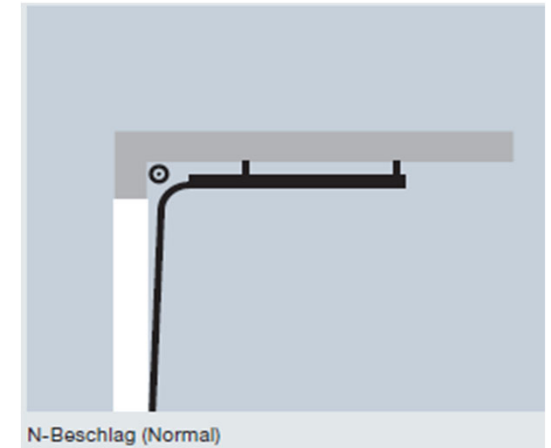
PU 42 S without spring



Required headroom:

480 – 750 mm

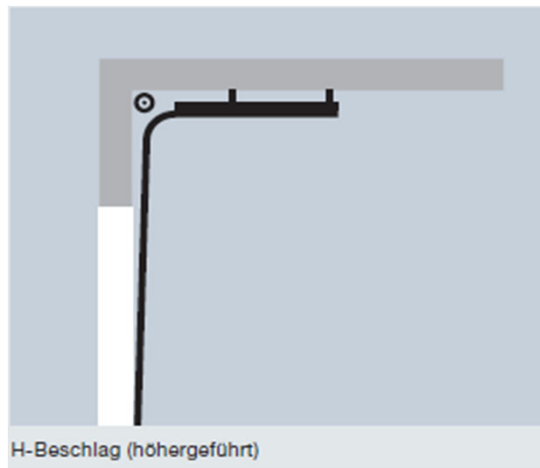
Spring



Required headroom:

750 until LDH+585 mm

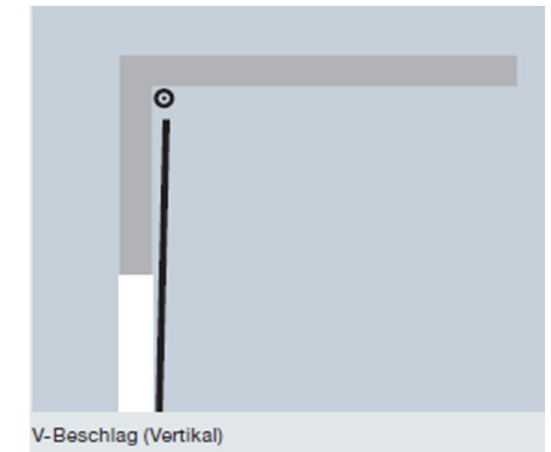
Counter weights

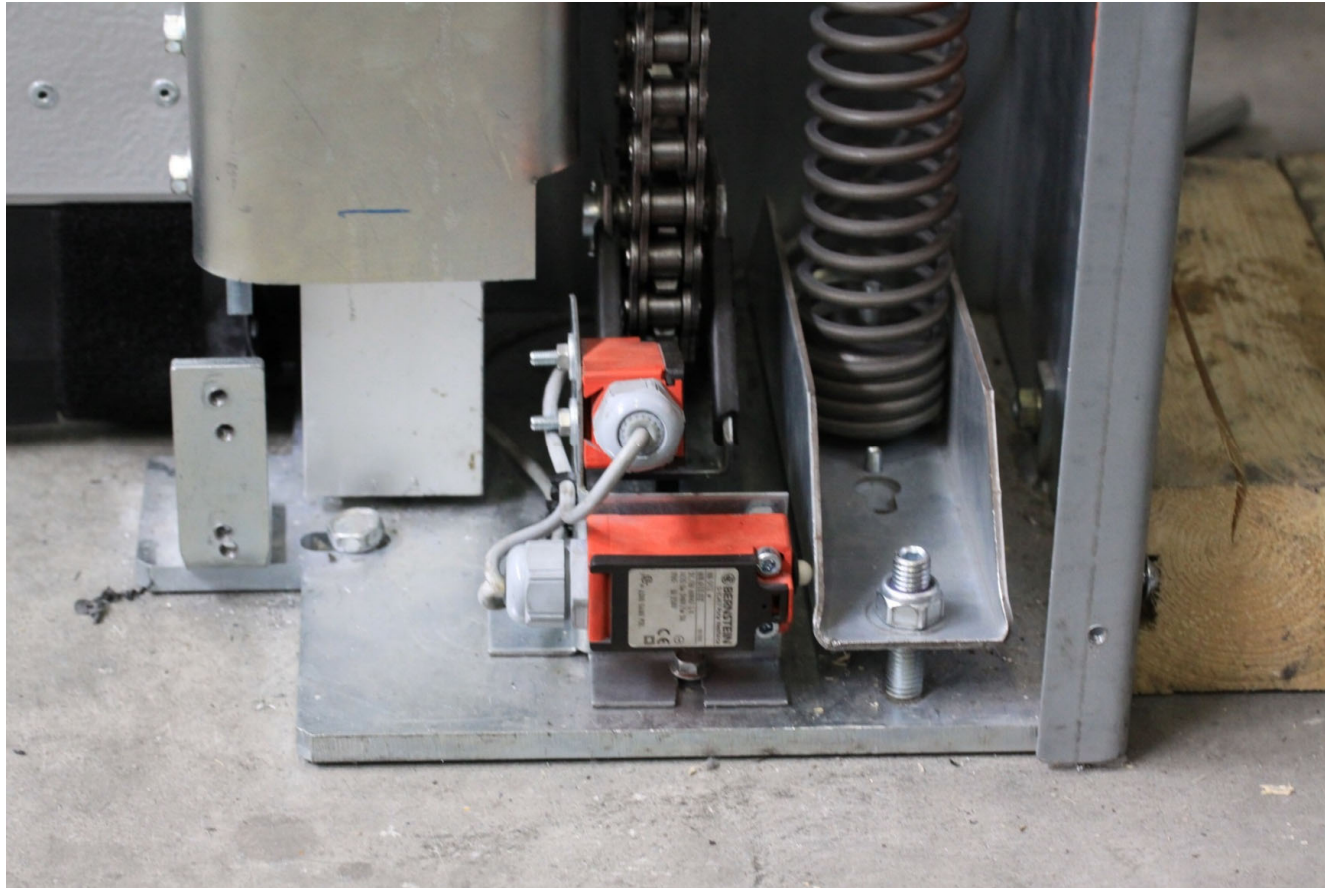


Required headroom:

LDH + 585 mm

Counter weights





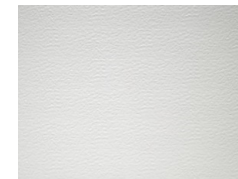


- Fitting possible on exterior side!
- Recommended: cladding on three sides

It is not possible to turn the curtain!

Exterior side:

Visible side



Stucco **with hinges!**

Interior side:



Micrograin

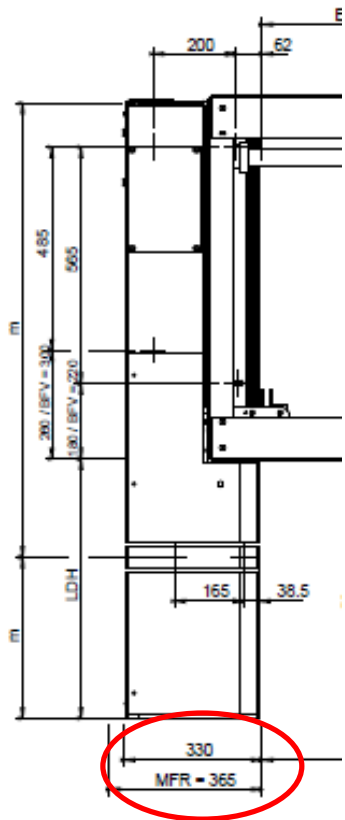


- **Counterweights are particularly low-wear**
 - - for spirals up to 5000x5000
 - - for H and V fittings
- Weight compensation via springs for very heavy spiral doors and N-fittings
- Door variants without springs or counterweights
- Very good U-values
- Scratch-proof Duratec glazing, windows can be 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

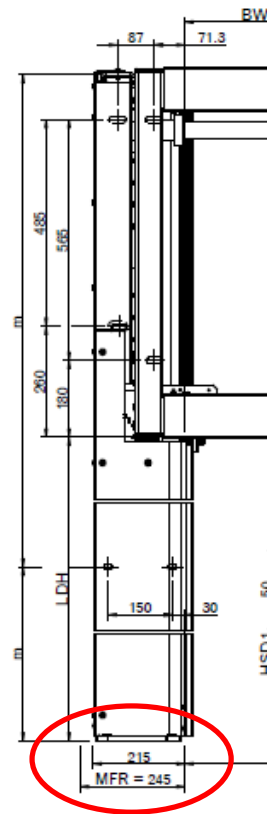




Side elements HS 7030 PU 42 Side elements HS 5012 PU 42 S



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

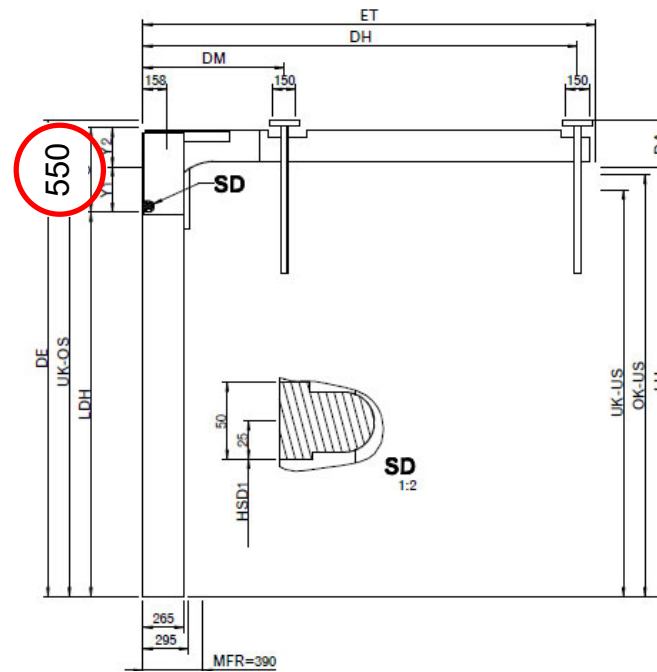
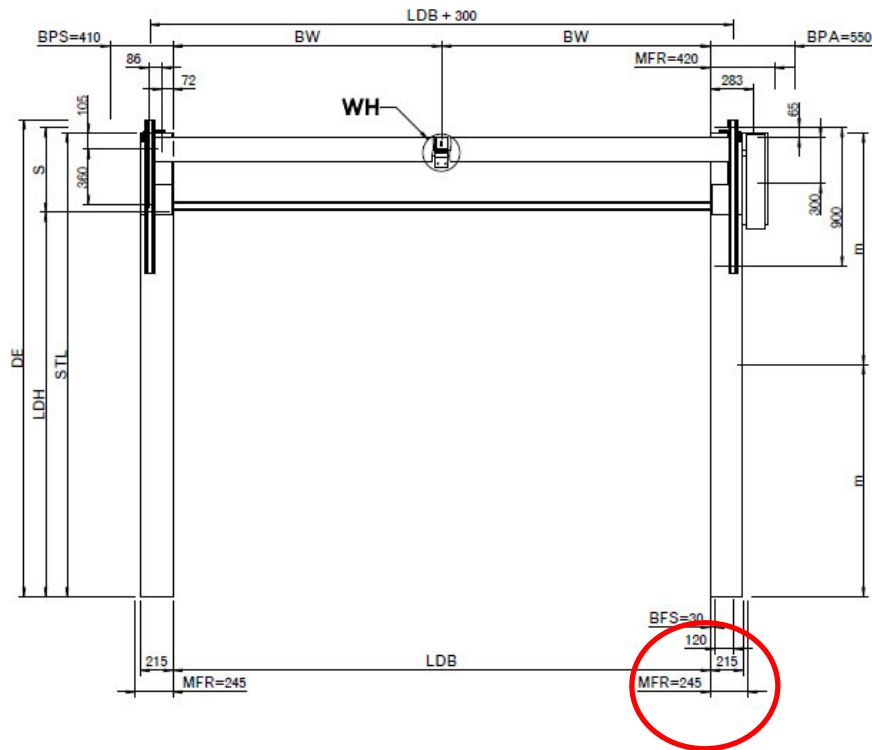
New at Hörmann

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/m²K, 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

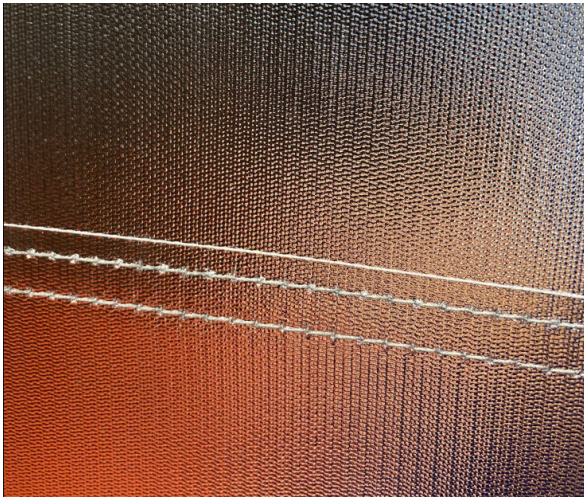
- Repetition of the basics
- Control and electrical application
- Energy efficiency of high-speed doors
- New door type V 5025 Z
- Overview of flexible high-speed doors
- Internal doors for special applications and for individual requirements
- The fastest door in the world: HS 5040 TurboLux S
- Lunch 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



- 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

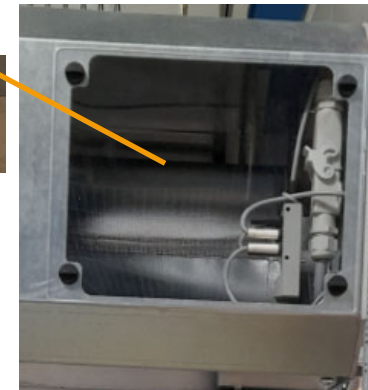


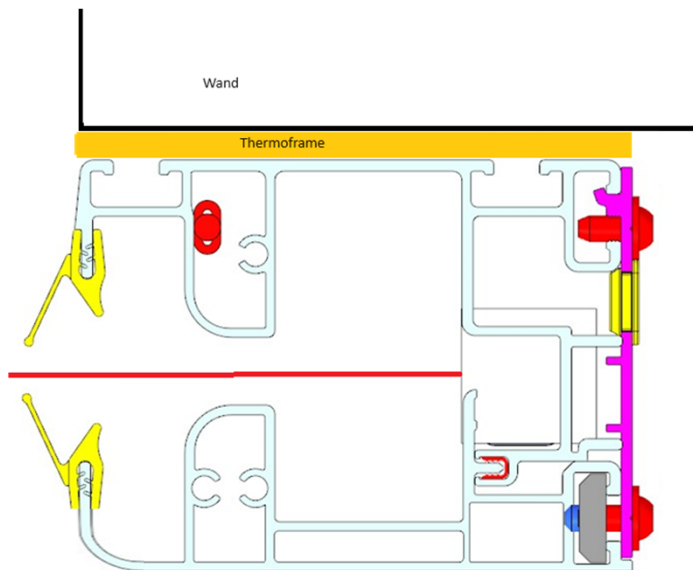
- Fabric hanging Reflect Curtain Silver coated on both sides
- Hanging thickness ca. 0,6 mm
- Based on EN ISO 12567-1 $U_p = 2,4 \text{ W}/(\text{m}^2\text{K})$
- Sewn sections
- Plastic gliders as wind protection
- SoftEdge®
- Crash without automatic rethreading



- 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





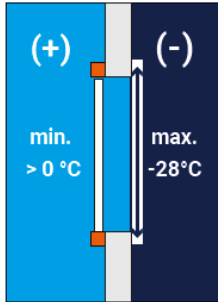
- Heated side panels
- ThermoFrame
- Drive heated and with Long Life brake
- Switch cabinet in steel heated version
- Connection of the heaters in a separate heating box
- Heating cable in separate channel above the shaft paneling
(Lintel requirement 520 mm to V 4020 Alu-R 450 mm)
- Separate supply line analogue to Iso Speed :
Supply line : 400V: Supply line 5 x 2,5mm²,
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. $-28 \text{ }^\circ\text{C}$
- In combination with an insulating deep-freeze cover
- Other installation situations on request and technical inspection

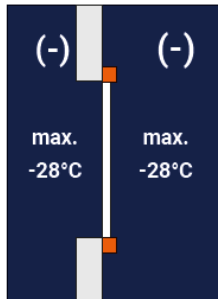
IMPORTANT for use in cold store areas:

On-site underfloor heating in the floor seal area



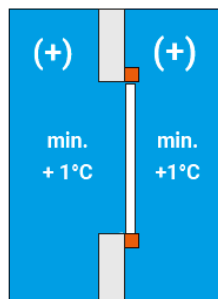
Installation outside the freezer area:

- 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

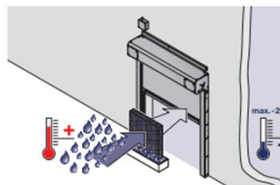
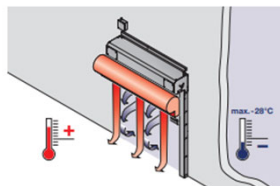
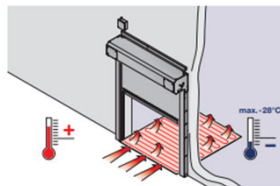
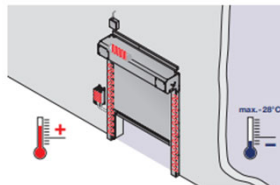
TIP:

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

4 Air dehumidifier

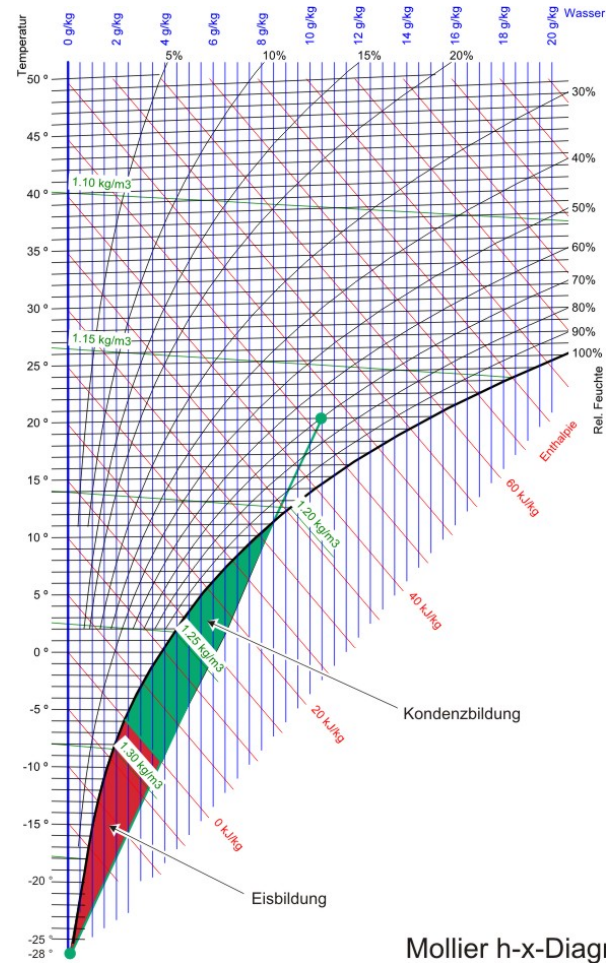
- For effective reduction of humidity in case of high temperature differences and high humidity to minimise ice formation in the cold store area
- Fitting on the warmer side

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

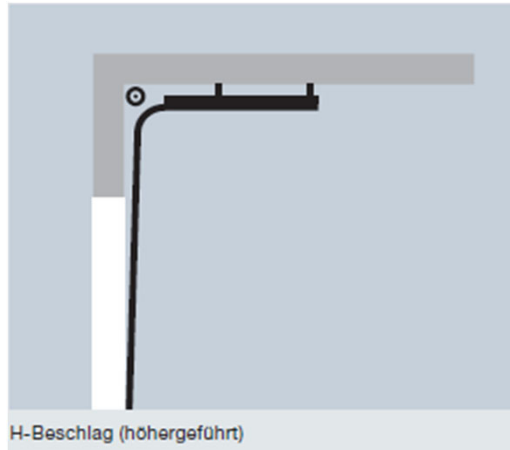


Eisbildung ist **immer** zu verhindern!

Mollier h-x-Diagramm



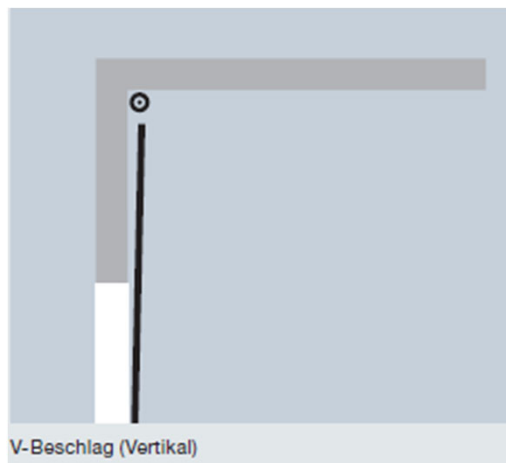
- Maximum thermal insulation / cold protection
- Dimension C.H. = 5000mm x C.W. = 5000mm
- Section height: 500 mm
- Exterior Stucco RAL 9002, interior Stucco RAL 9002
- Iso Speed Cold door with 100 mm thick sections
- Sections with thermal break
- Best thermal insulation, **U_D-value: 0.57 W/m²K** 4000 × 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

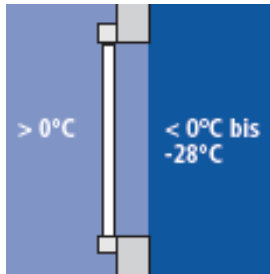
Counter weights



Required headroom:

750 – LDH + 585 mm

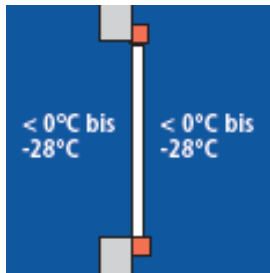
Counter weights



Fitting outside of cold stores

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

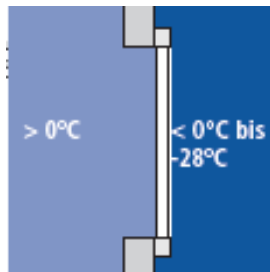
Track application H and V possible!



Fitting inside cold stores

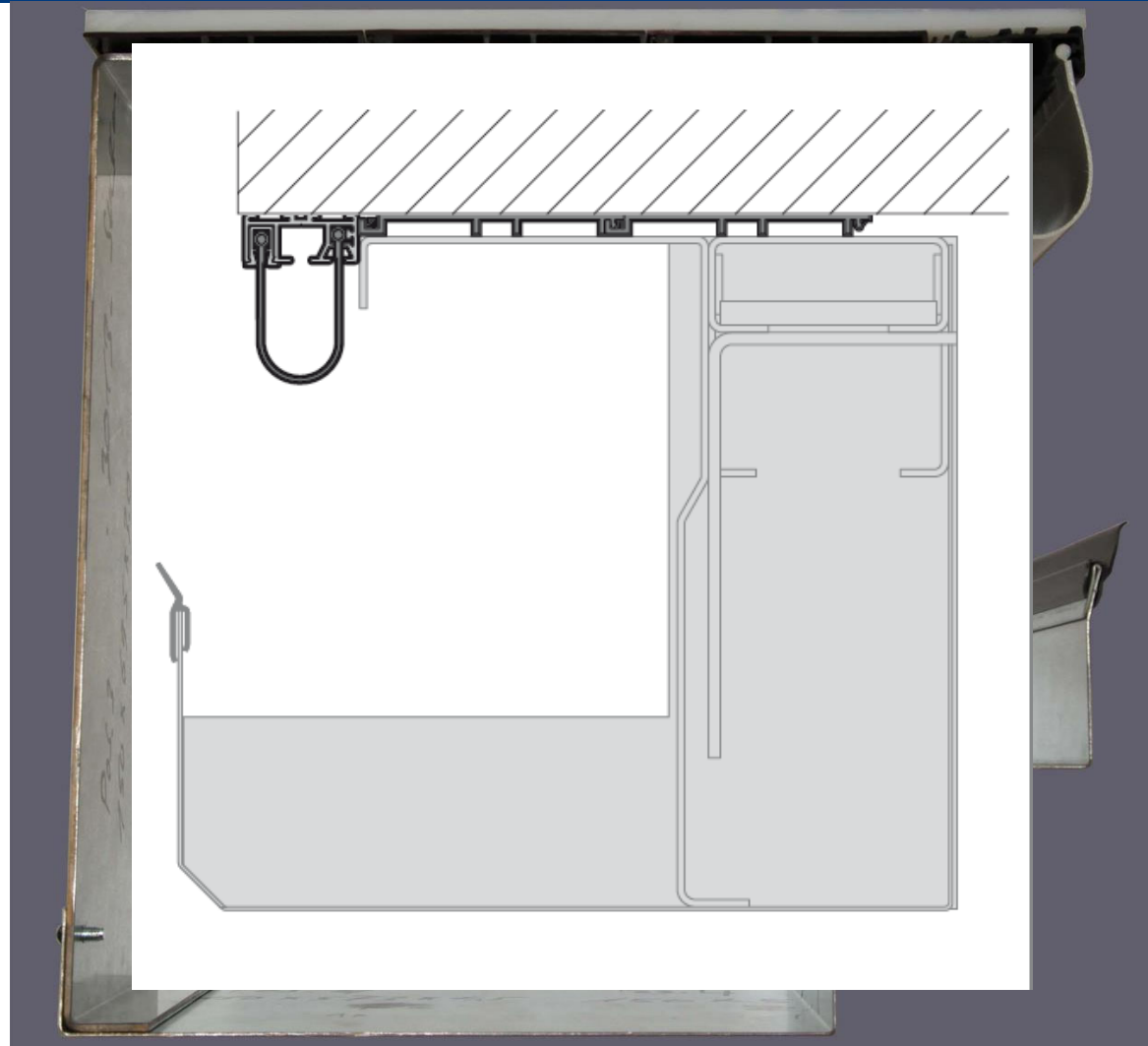
Heated version of side elements, steel control cabinet, operator, sealing frame and base plates required.

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) _____
	Special:	
7 Hold-open phase:		
8 Door cycle / timing:		
9 Comments / extras:		

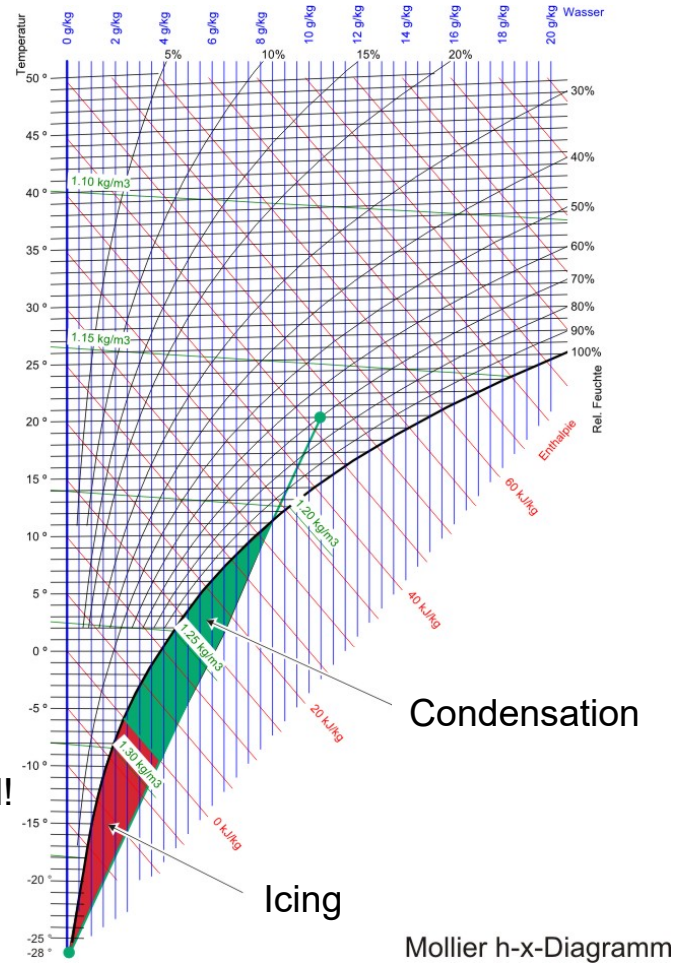
Order no. _____

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!

Condensation

Icing

Mollier h-x-Diagramm

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

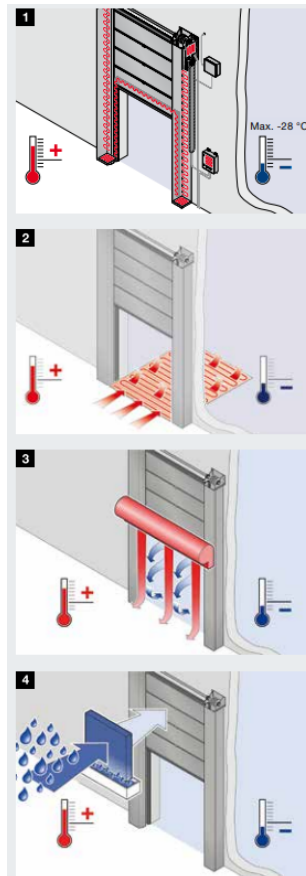
TIP:

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.

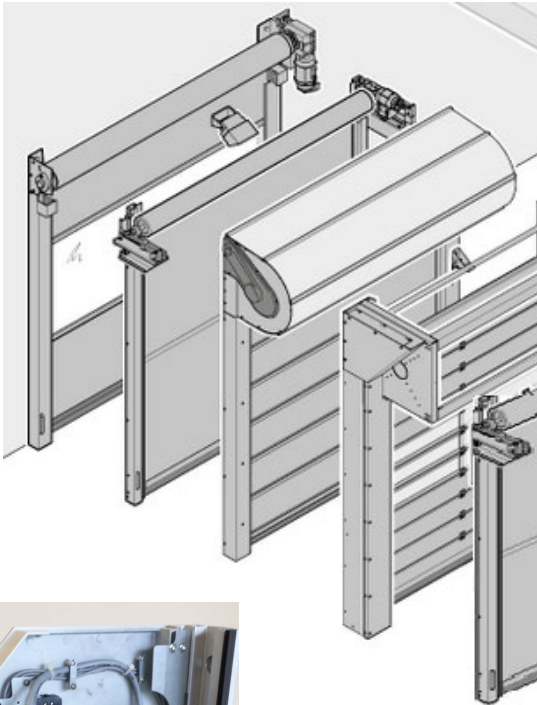


- Sep. power supply for heating
400 V (5 x 2,5 mm², 16 A, C oder K Charakteristik)
- Underfloor heating
- Air curtains
- Dehumidifier
- Max. temperature difference 40 °C

- 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)



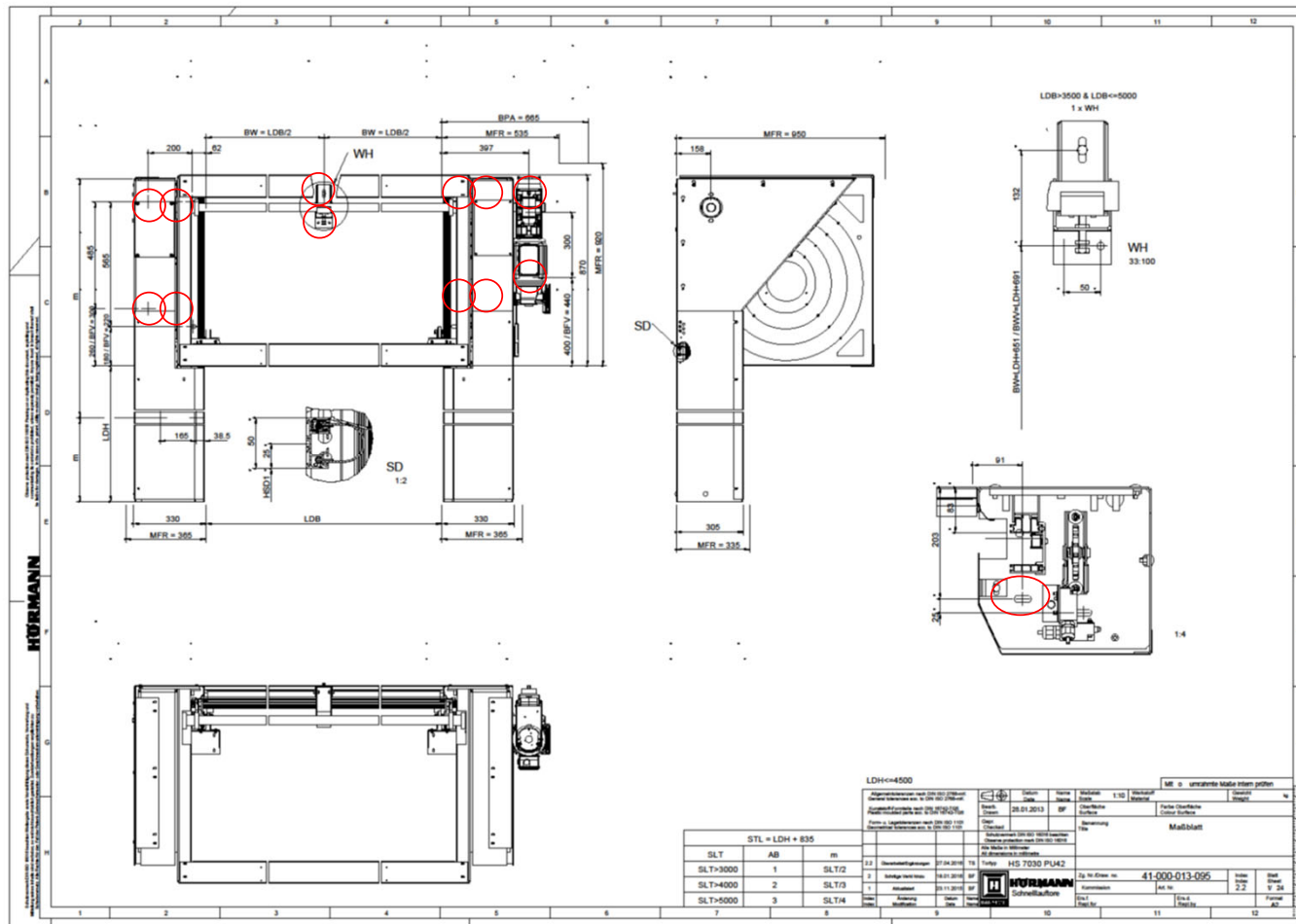
Concrete / brickwork



Steel

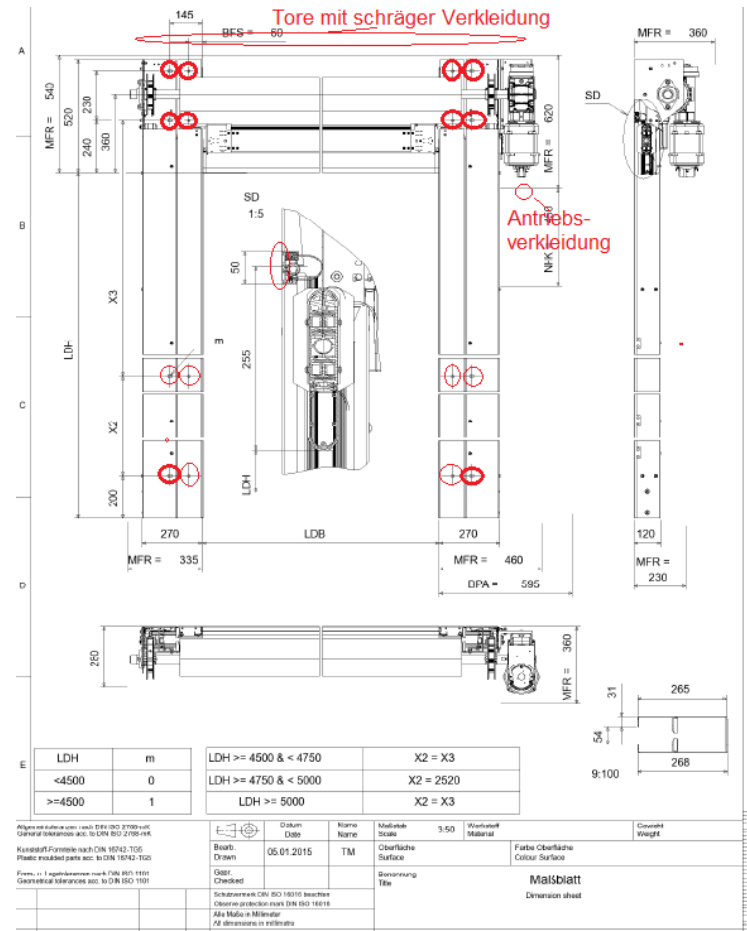


Partition wall (+threaded rods, discs)



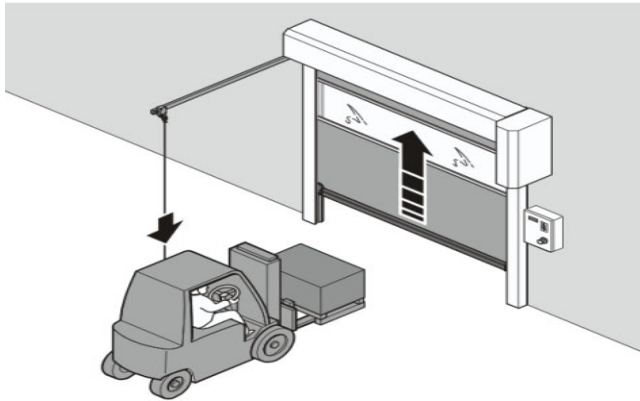
Requirements for the building structure

Dimension sheets Gates with flexible door leaf



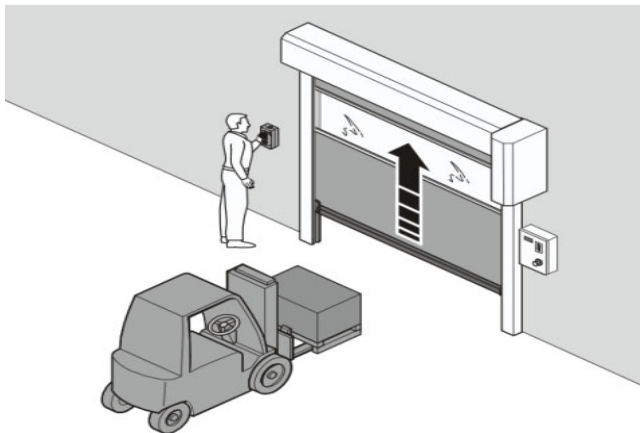
- Repetition of the basics
- Control and electrical application
- Energy efficiency of high-speed doors
- New door type V 5025 Z
- Overview of flexible high-speed doors
- Internal doors for special applications and for individual requirements
- The fastest door in the world: HS 5040 TurboLux S
- Lunch 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

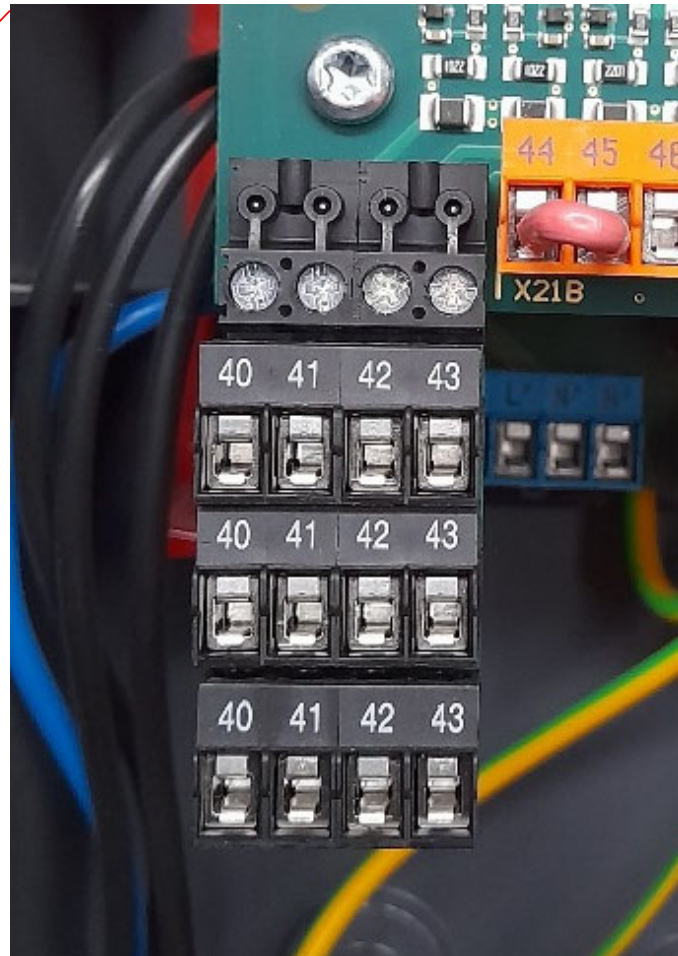
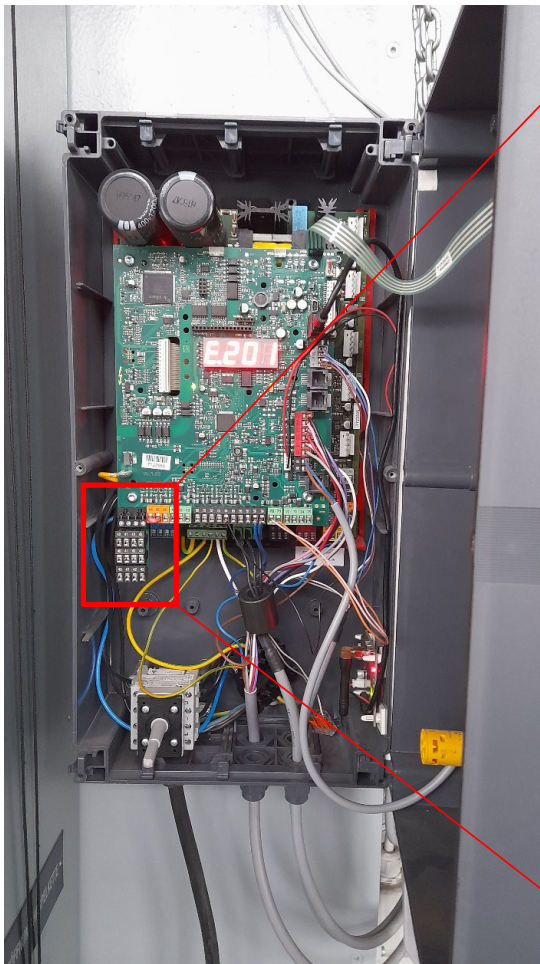
Pull switch



Magic Switch Chroma

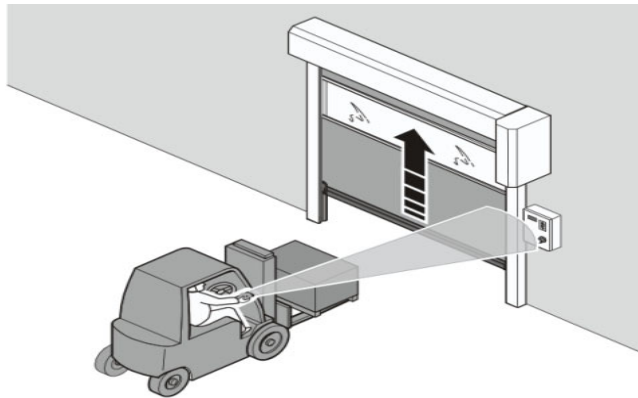
Button





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

Radio



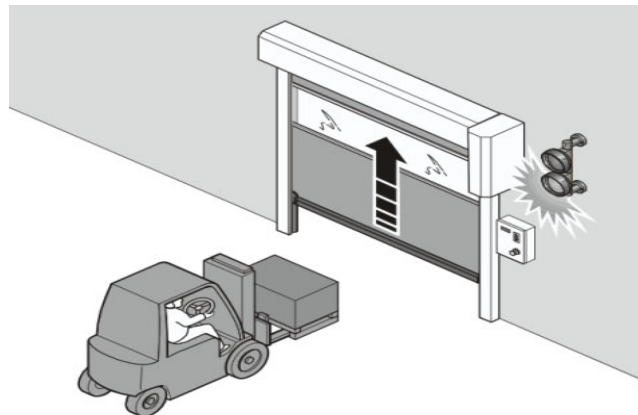
New:



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



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

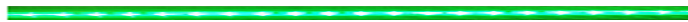


Radio push button
batteryless transmitter IP 66

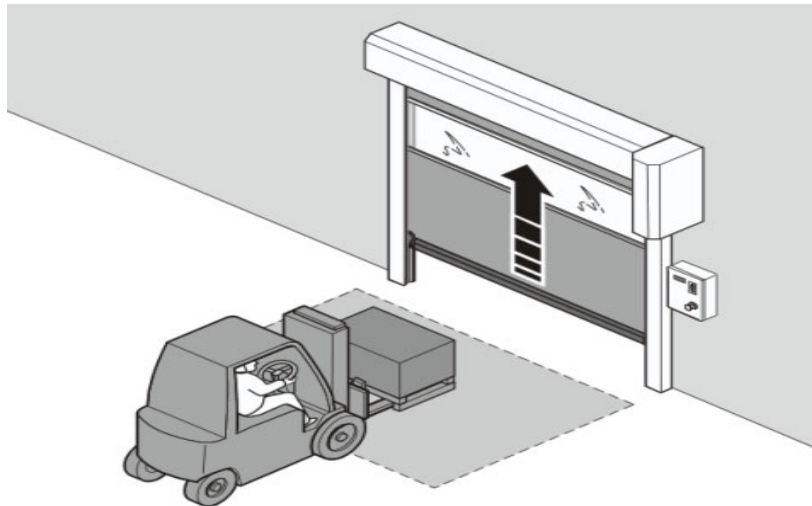
LED Strip light 24 V DC, RGB
Length 2000 mm



- 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



Induction loop (in the bottom)

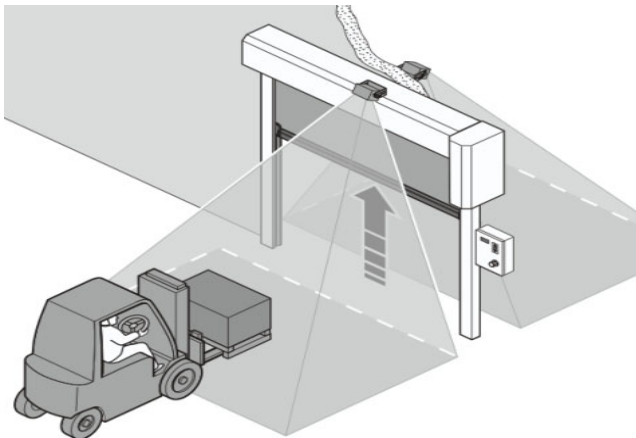


Can often be used by the Scanprotect
to be replaced

Impulse generator in the outdoor area



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



Impulse generator holder

Optimum advance protection

Scanprotect

Impulse generator holder
and cantilever arms

Comfort radar detector



Radar detector MWD-C

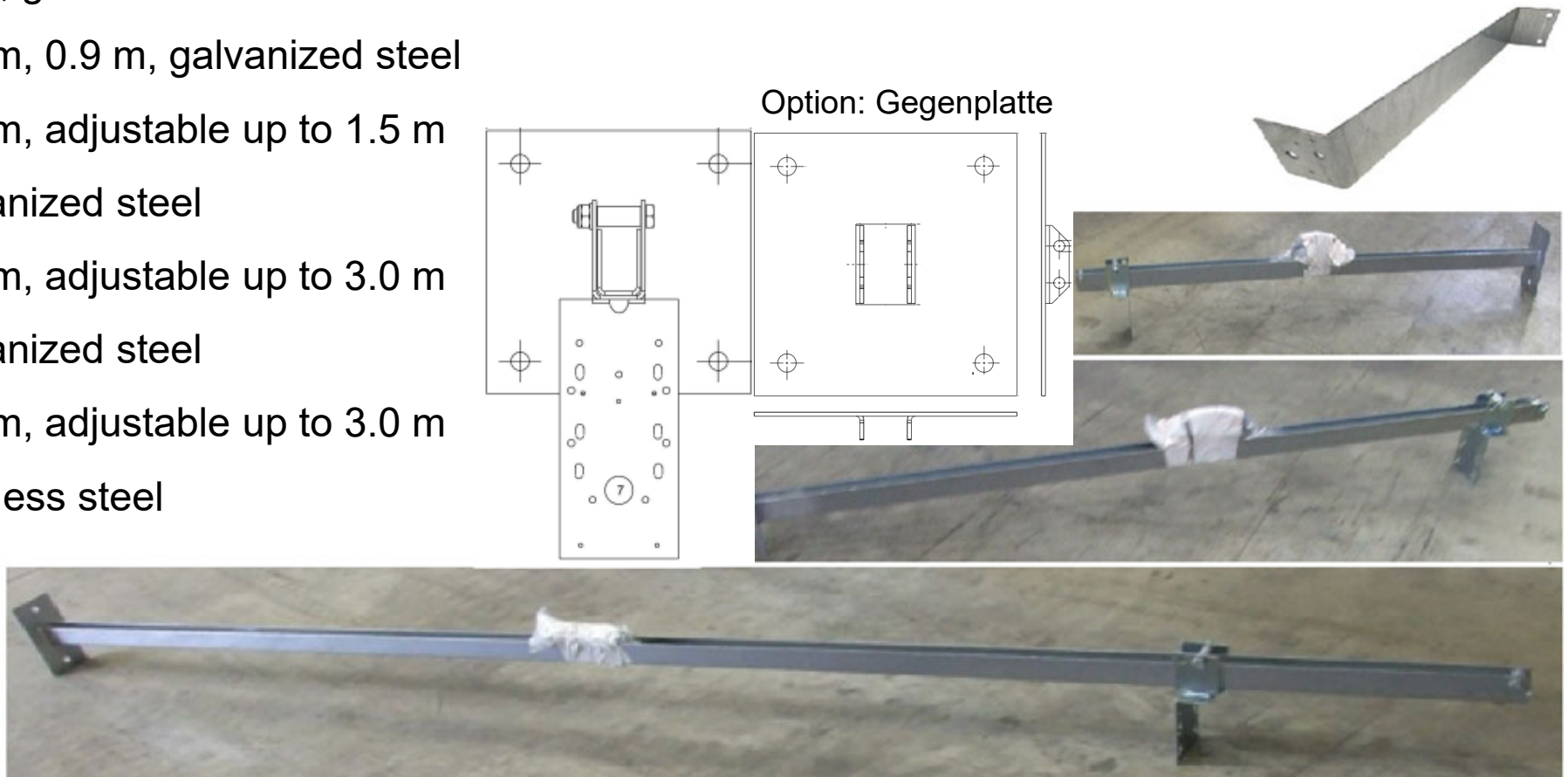
0.5 0.9 1.5 3 m



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

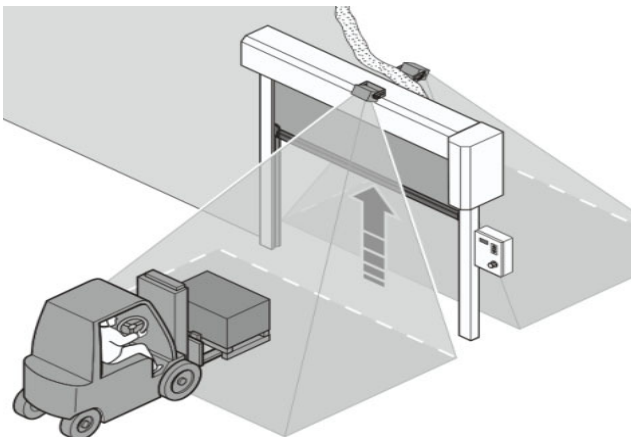




- Opens reliably upon motion
- Controlled via CAN bus system
- Only the first radar detector has to be connected to the control
- The second radar detector is connected via the first radar detector
- Compatible with the Scanprotect radar detector
- Settings are possible directly or via the control
- 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

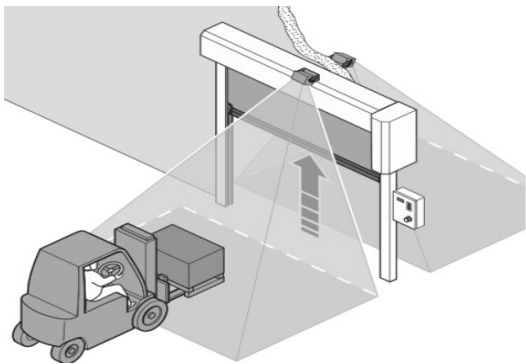


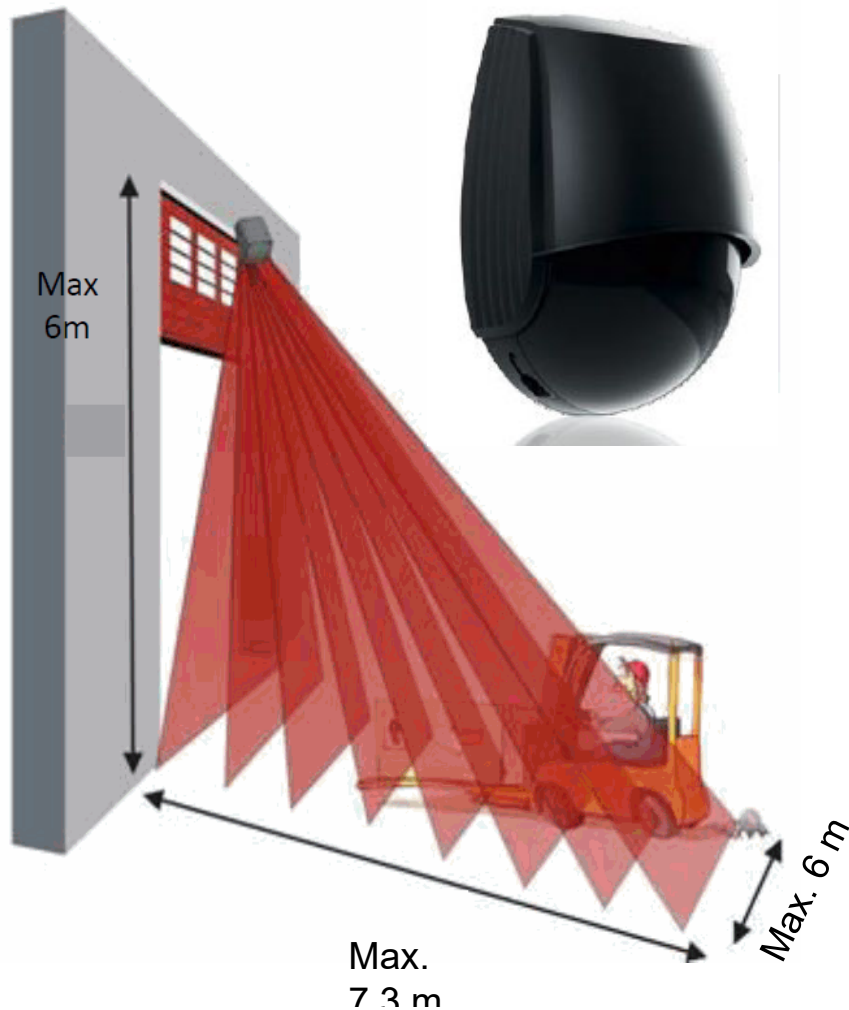


- Opens reliably upon motion
- Presence setting = safety for persons
- Adjustment via remote control
- Position **centrally** over the door
- On the door hinge side with holder
- Remote control recommended
- Application range: interior, exterior,
fitting height 3.5 – 6 m (2 – 3.5 m mini)

Restriction:

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

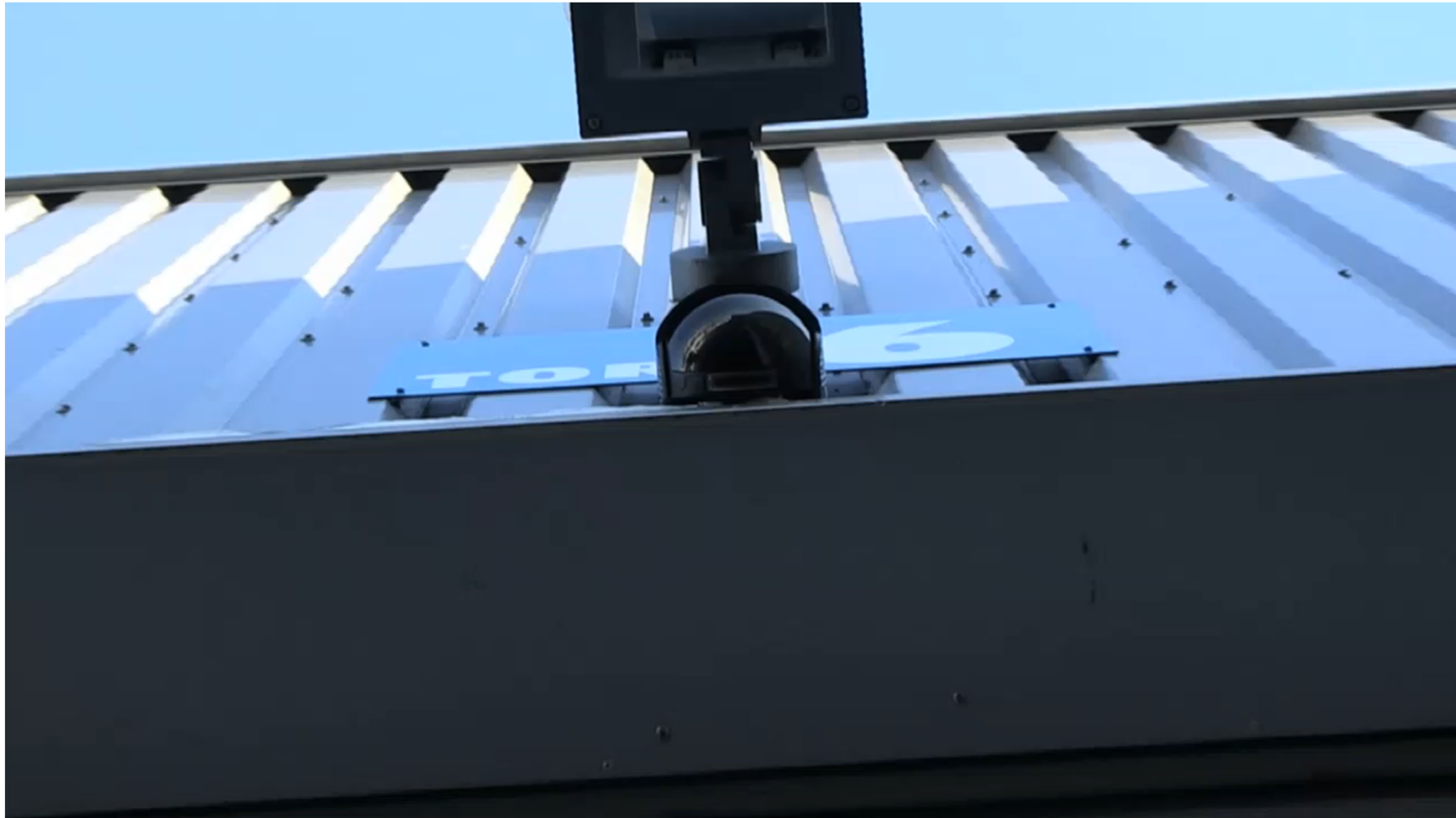




- Optimal advance recognition / monitoring
- Controlled via CAN bus system
- Only the first Scanprotect has to be connected to the control
- The second Scanprotect is connected to the first Scanprotect!
- Compatible with the radar detector MWD-C
- Settings are possible directly or via the control
- Position 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:

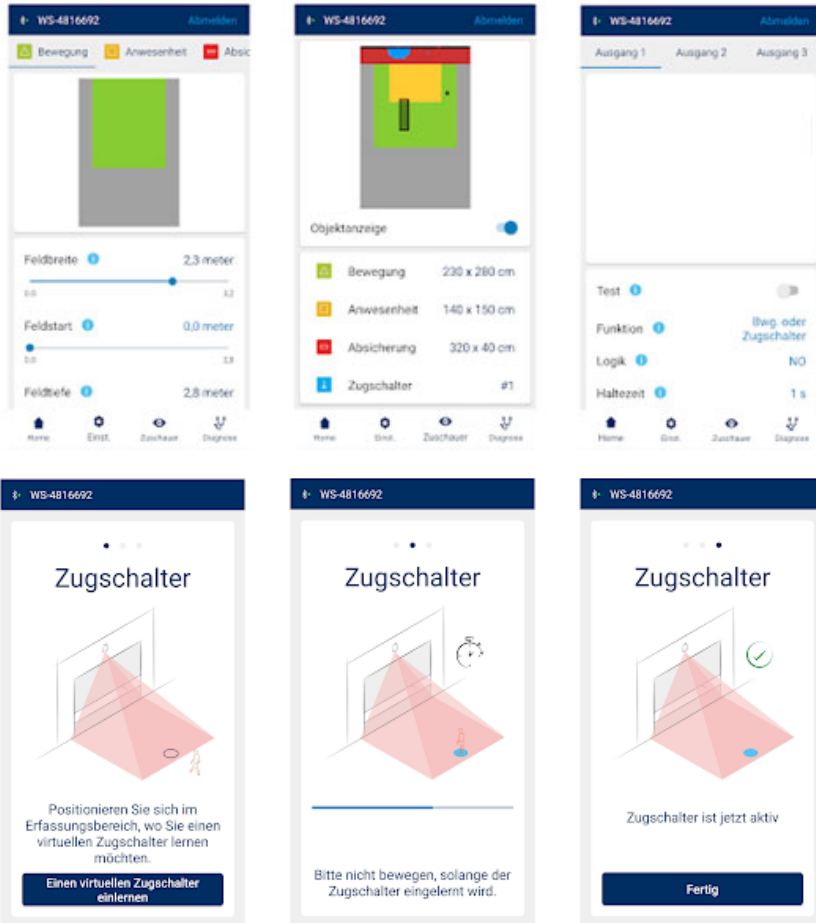
- interior, exterior, recognition of cross traffic and persons / vehicles, until 2 Pc. in deep freeze area



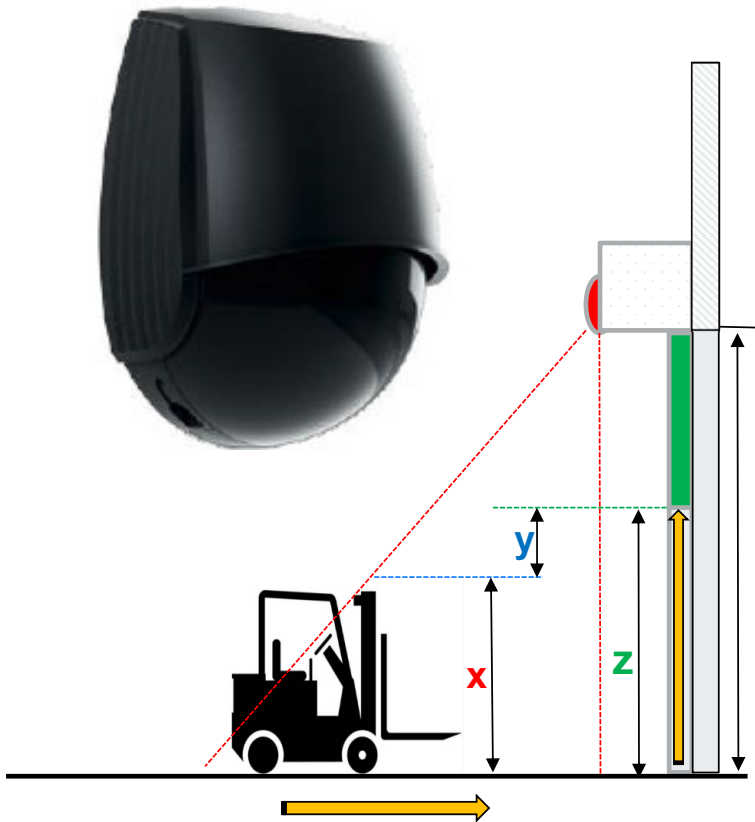


Features Scanprotect Setting via app

HÖRMANN

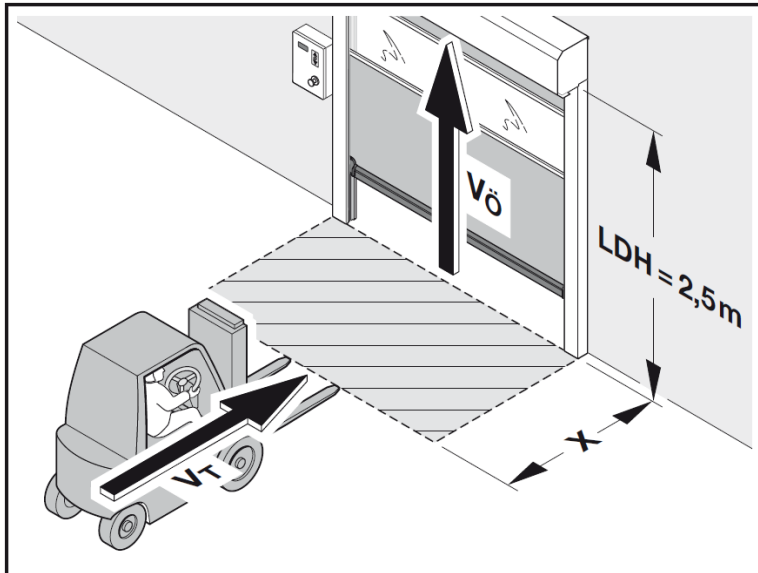


- Scanprotect can be set via the controller, and now via the app
- Visualization of the detection and presence areas
- Easy assembly support
<https://play.google.com/store/apps/details?id=com.bea.widescan>



- 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

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

- 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

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

Operator	2,500,000 cycles	V 4020 Protect, V 4020 Cold
Operator:	1,500,000 cycles	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

