

Stoebich Conveyor System Closures

Fire protection for conveyor techniques

RGT
ECClos-flex
Universal-B
ECClos-S
ECClos-Q
ECClos-D
ECClos-K
Ecotube
Omnitube
Omnicomact
Isogate
Turbocoil
Sleeve
Control units



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STÖBICH®
FIRE PROTECTION

Innovation for your Protection!

2 A conveyor system closure must fulfil many additional requirements compared with a fire protection gate

1. Conveyor system closure for 22 different conveyor technique designs (interrupted or continuous) e.g. roller conveyor, belt conveyor, carrying chain conveyor, circular conveyor, etc.

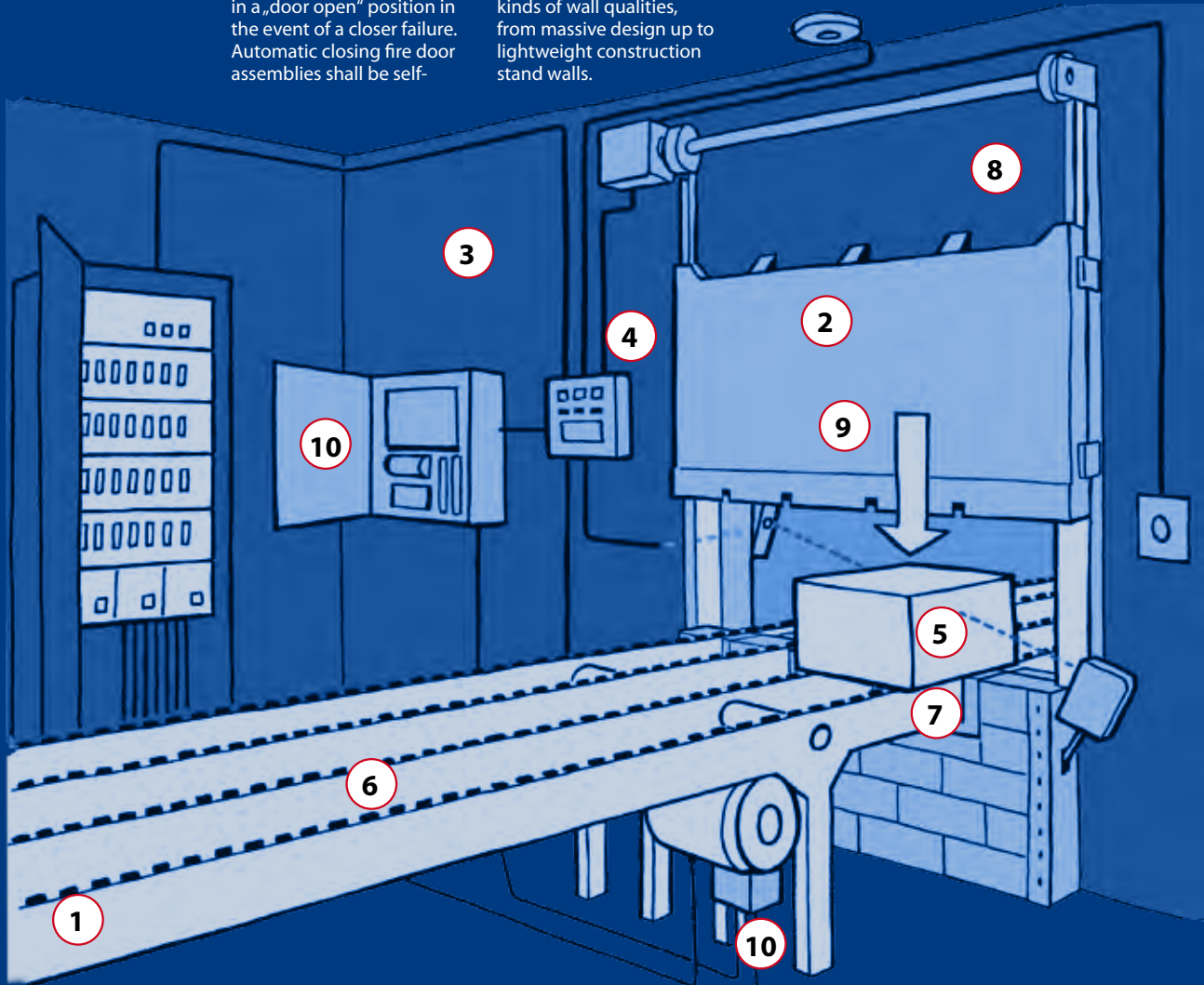
2. Fire door assemblies and shutters shall be installed in accordance with the provisions of section 716.5 (IBC 2012) and NFPA 80. Fire doors shall be self or automatic-closing in accordance with section 716.5.9 (IBC 2012). Self-closing chute intake doors shall not fail in a „door open“ position in the event of a closer failure. Automatic closing fire door assemblies shall be self-

closing in accordance with NFPA 80. Control units must meet the test standard UL 864. Backup power is required by section 2702.1 (IBC 2012) and shall be installed in accordance with NFPA 110 and NFPA 111.

3. Tested for the different kinds of wall qualities, from massive design up to lightweight construction stand walls.

4. Control systems (hold open devices) specially tested and designed for conveyor system closures (e.g. signal exchange with the conveyor technique) and approved by the building authorities.

5. In case of release, the closing area will be cleared by monitoring the closing area or clearing systems.



6. Guarantee of a trouble-free conveying process hence no effects due to the conveyor system closure.

7. Safe sealing of continuous conveyor technique even with complicated construction.

8. Various closing directions because of limitations in space.

9. Also designed for high cycles of up to 200,000 and also more if required.

10. Decentralized emergency power supply to clear the closing area also in case of power failure.

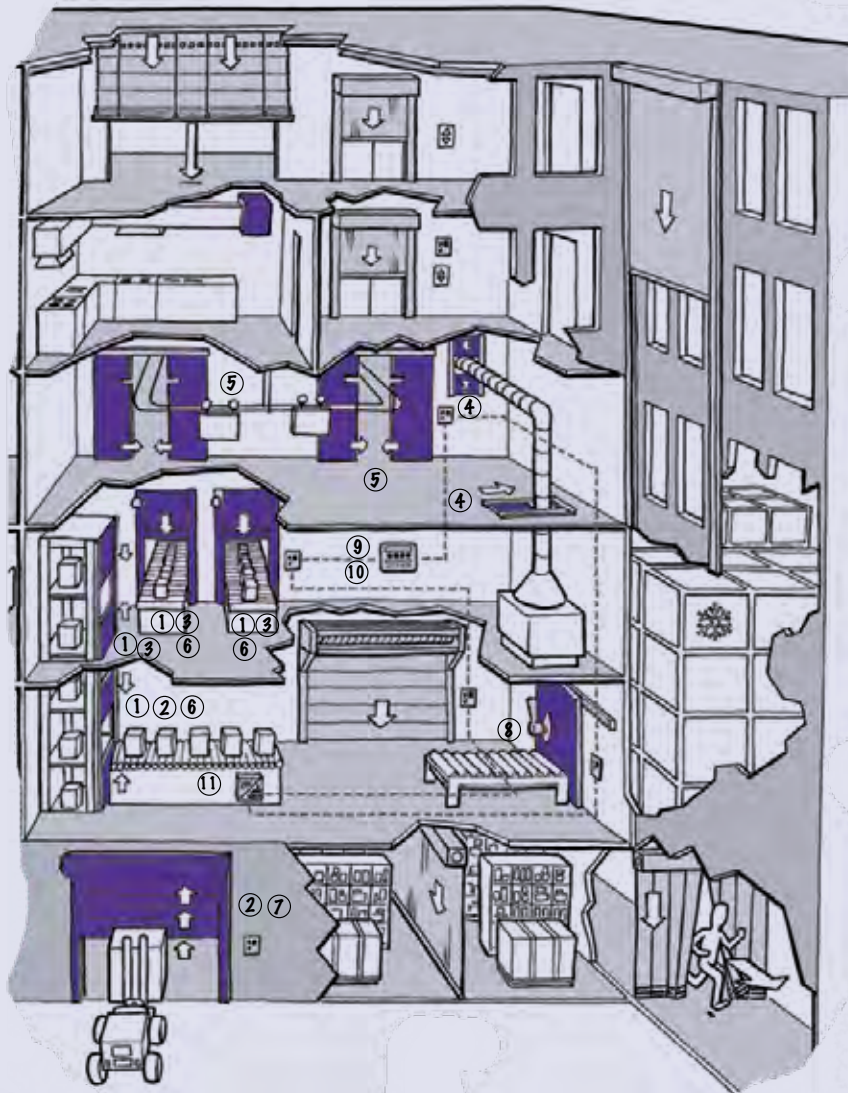
Stoebich Fire Protection - the world leader *) has already developed and established in the market 11 world novelties. Over 35 years, Stoebich successfully completed more than 60 fire tests alone for conveyor system closures in many countries.

*) by „Germans standards: Encyclopedia of German world market leaders“

References :

Procter & Gamble (Baltimore, MD), Lego (Mexico City), Public Library (DeKalb, IL), Walmart Distribution Center (Indianapolis, IN; Atlanta, GA; Chino, CA), Procter & Gamble (New York, NY), Wacker Chemie (Cleveland, TN), Marushan Texas (San Antonio, TX), Audi, BASF, BMW, Coca-Cola, Daimler, Ford, Fraport AG, Goodyear, Ikea, Jägermeister, Jungheinrich, Mars, Milford Tea, Motorola, etc. (all Germany)

3 Stoebich innovative fire & smoke protection



1. Automatic textile fire curtain for openings in walls
2. High speed doors with integrated fire protection
3. Conveyor system closures for uninterrupted and interrupted conveyor systems
4. Conveyor system closures for pneumatic conveyor systems
5. Conveyor system closures for hanger conveyors
6. Elevator shaft doors as fire protection closures
7. Fire protection stacking doors
8. Isogate – swing and sliding doors
9. Control units
10. CAN BUS – cross linked hold open units
11. Emergency power back up unit "Powerdrive" 400 VAC

Attention:

Textile fire curtains are not regulated in the Building Code and has to be approved by the local authorities as an alternate solution, means and methods.



4 RGT Robust closure with 3 hours fire rating and FM approval

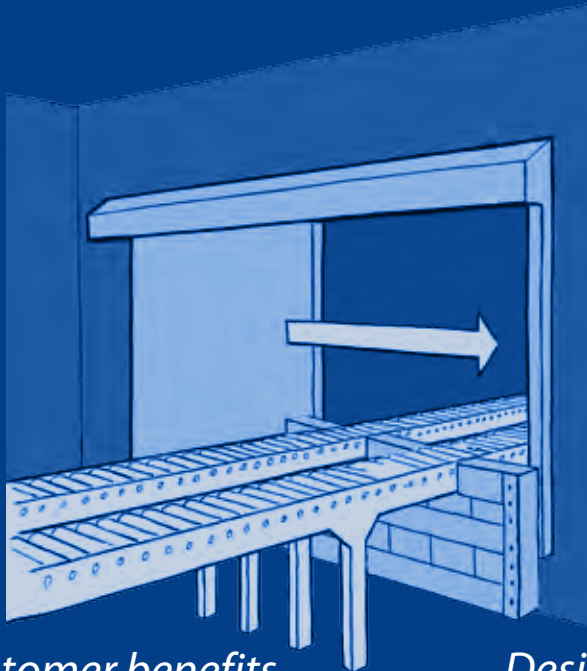
Conveyor systems

- Separable conveyor systems
- Continuous belt conveyor
- Continuous roller conveyor
- Continuous chain conveyor
- Continuous travelling carriages

fire resistance: 3 hours fire rating and 90 min. insulation in accordance with German test standard (DIN 4102) and FM approval

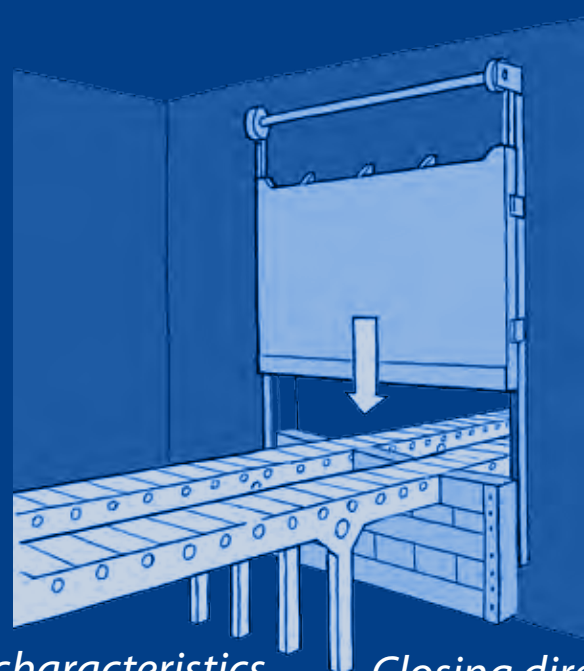
durability: 200,000 cycles

proof of usability: German approval (90 minutes insulation), FM approval (5'11" x 7'1" (w x h))



Customer benefits

- Tested and approved for constructions for continuous circular conveyor, Power & Free, cross chain conveyor and similar
- The rail is integrable with horizontal closing direction, therefore free floor area
- For passage of multiple conveyor tracks



Design characteristics

- Sandwich construction, calcium silicate boards all around
- Horizontal closing direction or vertical from bottom
- Sealing of continuous circle conveyor with intumescent sleeves

Closing direction



Continuous belt conveyor



Continuous roller conveyor

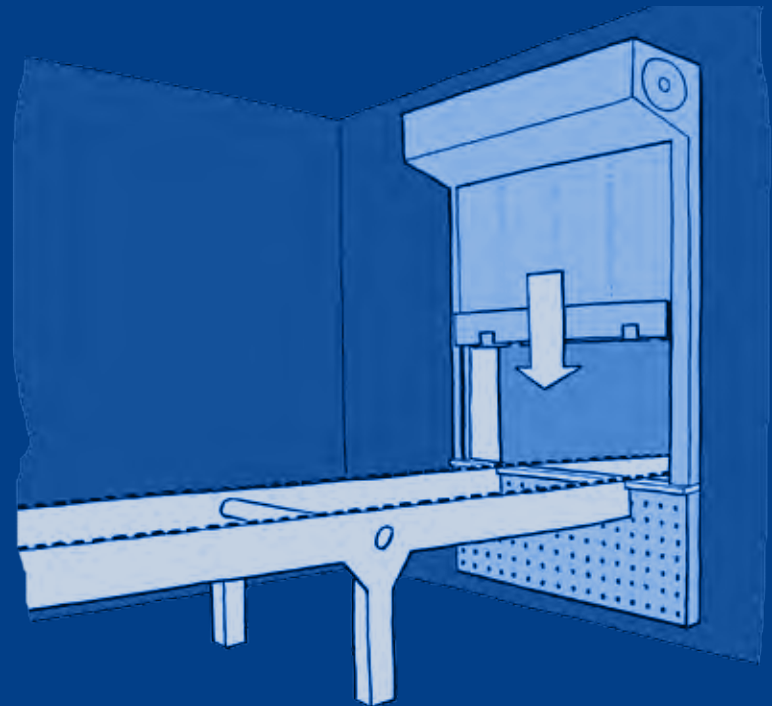


Chain conveyor system

5 **EC Clos-flex** *Space-saving winding (based on Stoebich Fire Curtain P)*

fire resistance: 120 min. fire rating with UL 10B listing
(based on Stoebich Fire Curtain P)

proof of usability: UL 10B listing
(based on Stoebich Fire Curtain P)
engineering judgement is necessary



Conveyor systems

- Interrupted conveyor systems
- Separable conveyor systems
 - Continuous belt conveyor
 - Continuous roller conveyor
 - Continuous chain conveyor
- Continuous travelling carriages

Customer benefits

- UL 10B listing with 2 hours fire rating (based on Stoebich Fire Curtain P)
- Small space requirement due to winding sealing element
- Appropriate for very large openings

Design characteristics

- Textile, winding conveyor system closure
- Vertical closing direction from top to bottom
- Appropriate for separated and continuous conveyor systems
- No insulation properties

Closing direction



Interrupted baggage conveyors



Continuous chain conveyor



Interrupted roller conveyors

6 **Universal-B** Encapsulated versatile slider closure

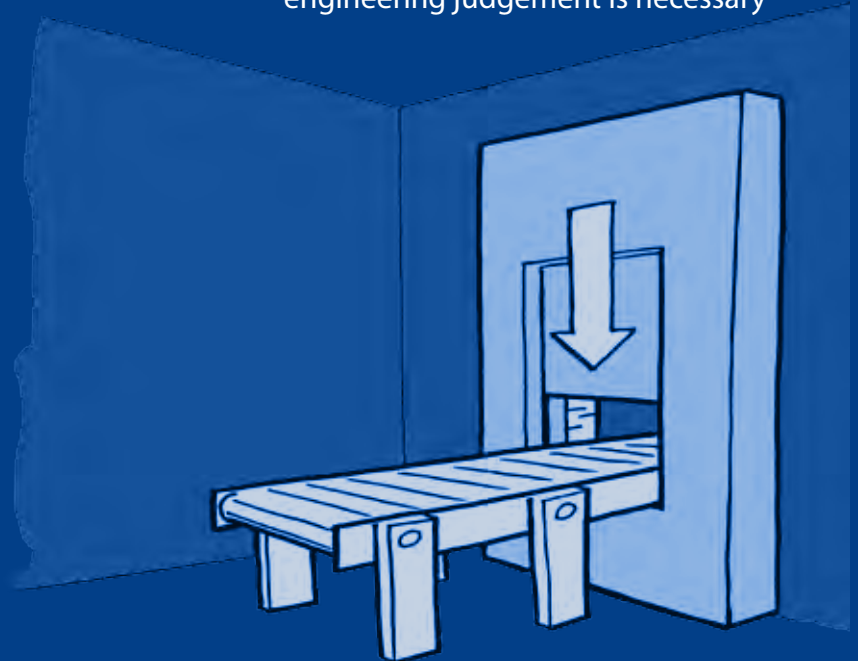
fire resistance: 3 hours fire rating in accordance with British test standard (BS 476) and 90 min. insulation in accordance with German test standard (DIN 4102)

durability: 200,000 cycles

proof of usability: German approval (90 minutes insulation), British test report
engineering judgement is necessary

Conveyor systems

- Interrupted conveyor systems
 - Separable conveyor systems
 - Continuous belt conveyor
 - Continuous roller conveyor
 - Continuous chain conveyor
- Continuous travelling carriages
 - Sorter
 - Newspaper conveyor



Customer benefits

- For high aesthetic standards due to even surfaces as completely interior
- Walls can be replaced by ceiling-high elements
- Tested according to British (BS 476) and German (DIN 4102) test standard

Design characteristics

- Slider construction
- Supporting steel construction planked with Promatect H plates
- Closed construction (slider parks in the casing)

Closing direction



Integrated in stainless steel planked hood



Newspaper conveyor



Conveyor system forms ceiling-high wall



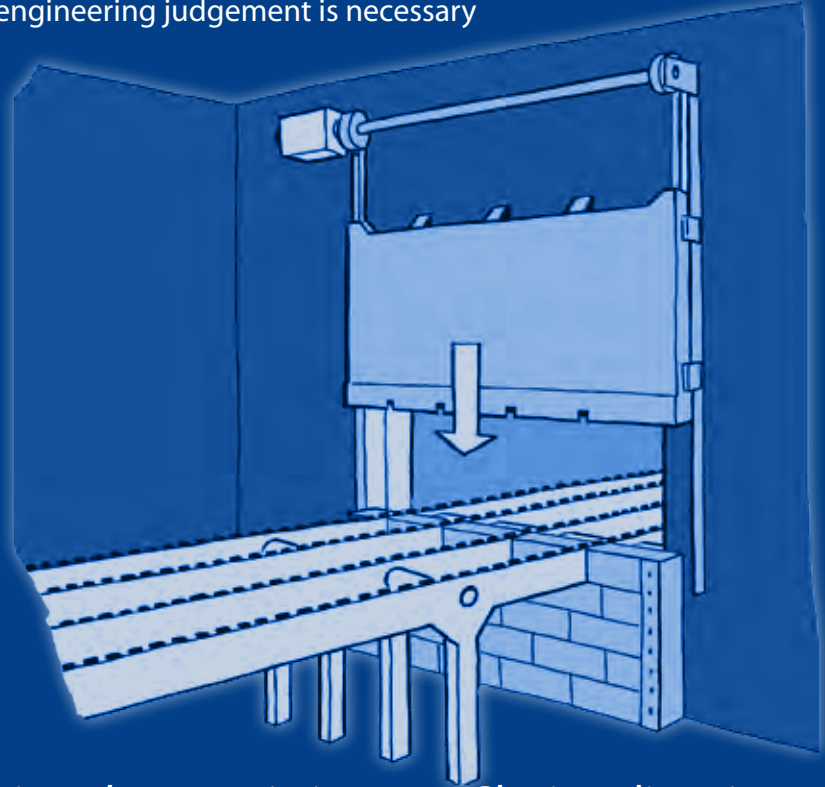
With a protective cage, as conveyed goods are shattered

7 ECClos-S Robust slider in sheet metal design

fire resistance: 2 hours fire rating and 120 minutes insulation in accordance with European test standard (EN 1366-7)

durability: 200,000 cycles

proof of usability: European approval (ETA) (120 minutes insulation), CE marked engineering judgement is necessary



Conveyor systems

- Interrupted conveyor systems
- Separable conveyor systems
 - Continuous belt conveyor
 - Continuous roller conveyor
 - Continuous chain conveyor
- Continuous travelling carriages

Customer benefits

- Robust surface of the slider by sheet metal construction
- Tested according to European test standard
- 2 hours fire rating and 120 minutes insulation
- European approval with sizes up to 14.7' x 16.6' (w x h)

Design characteristics

- Slider design
- Sandwich construction of the slider, cover sheet on all sides
- Segmented slider elements for transport
- Variable blocks for the fixed field for the continuous conveyor systems

Closing direction



Two continuous chain conveyors



Continuous roller conveyor running in a lift shaft



Continuous belt conveyor with 480 VAC emergency power system

8 ECClos-Q *Space saving robust flap in sheet metal design*

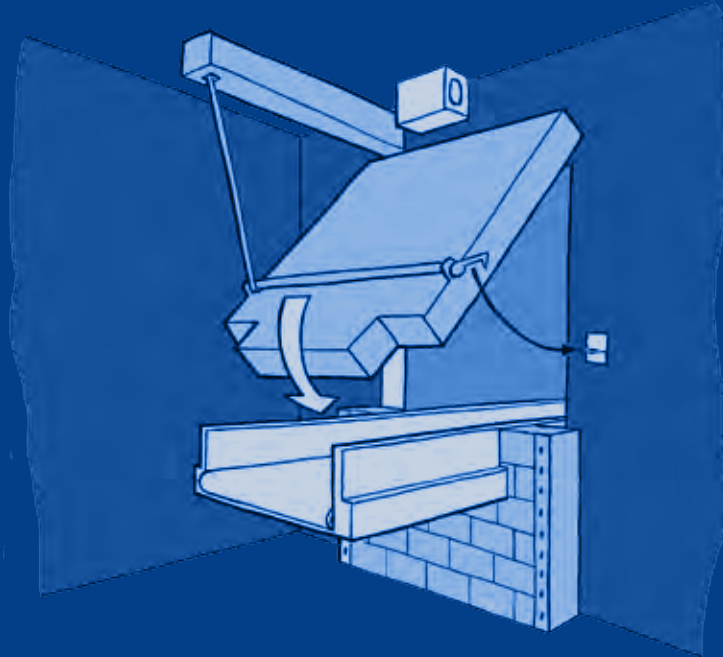
fire resistance: 4 hours fire rating and 120 minutes insulation in accordance with European test standard (EN 1366-7)

durability: 200,000 cycles

proof of usability: European approval (ETA) (120 minutes insulation), CE marked engineering judgement is necessary

Conveyor systems

- Separable conveyor systems
 - Continuous belt conveyor
 - Continuous roller conveyor
 - Continuous chain conveyor



Customer benefits

- Robust surface of the flap due to sheet metal construction
- Tested according to European test standard
- 4 hours fire rating and 120 min. insulation
- Very small place requirement in the lintel area
- European approval with sizes up to 6.3' x 5.6' (w x h)

Design characteristics

- Flap design turnable around horizontal axis
- Flap blade in sandwich construction, all around cover sheet
- Variable blocks for the fixed field for the continuous conveyor system

Closing direction



Continuous belt conveyor



Continuous baggage conveyor



Continuous roller conveyors



Continuous roller conveyors in stainless steel

9 ECclos-D Versatile applicable revolving closure

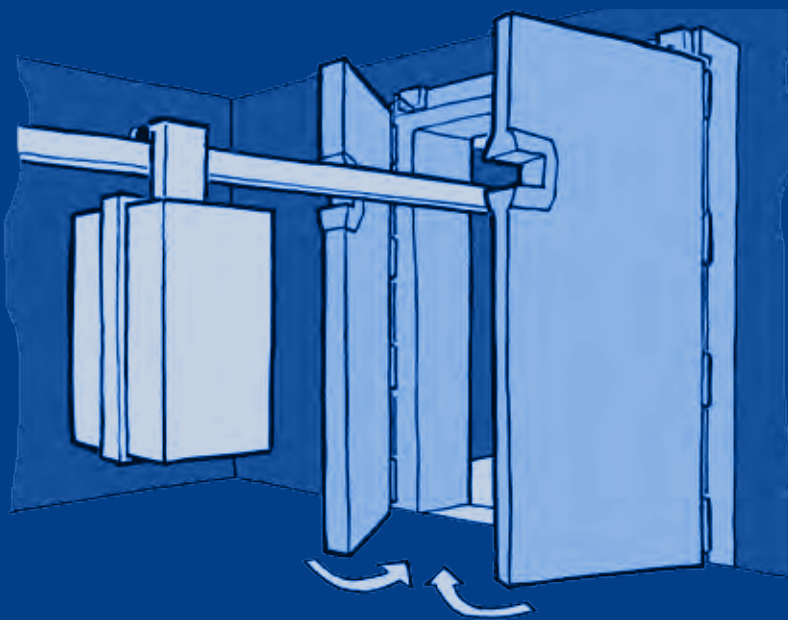
Conveyor systems

- Monorail conveyor
- Power & Free system
- Circular conveyor
- Continuous belt conveyor
- Continuous roller conveyor
- Continuous chain conveyor

fire resistance: 2 hours fire rating and 120 minutes insulation in accordance with European test standard (EN 1366-7)

durability: 100,000 cycles

proof of usability: European test report
engineering judgement is necessary



Customer benefits

- Sealing of continuous aluminum or steel rails incl. power rail
- No moving rail parts
- No restriction around the conveying rail

Design characteristics

- Double-leaf revolving door
- Alternatively two-part sliding door
- Two semi-circular sleeves encapsulate the conveyor system
- Manual or motorized re-opening

Closing direction



Power & Free conveyor with two-part revolving door



Al-rail with two-part revolving door



Steel-rail with two-part revolving door

10 **ECClos-K** *Combination of sleeve and door for complex conveyor technique*

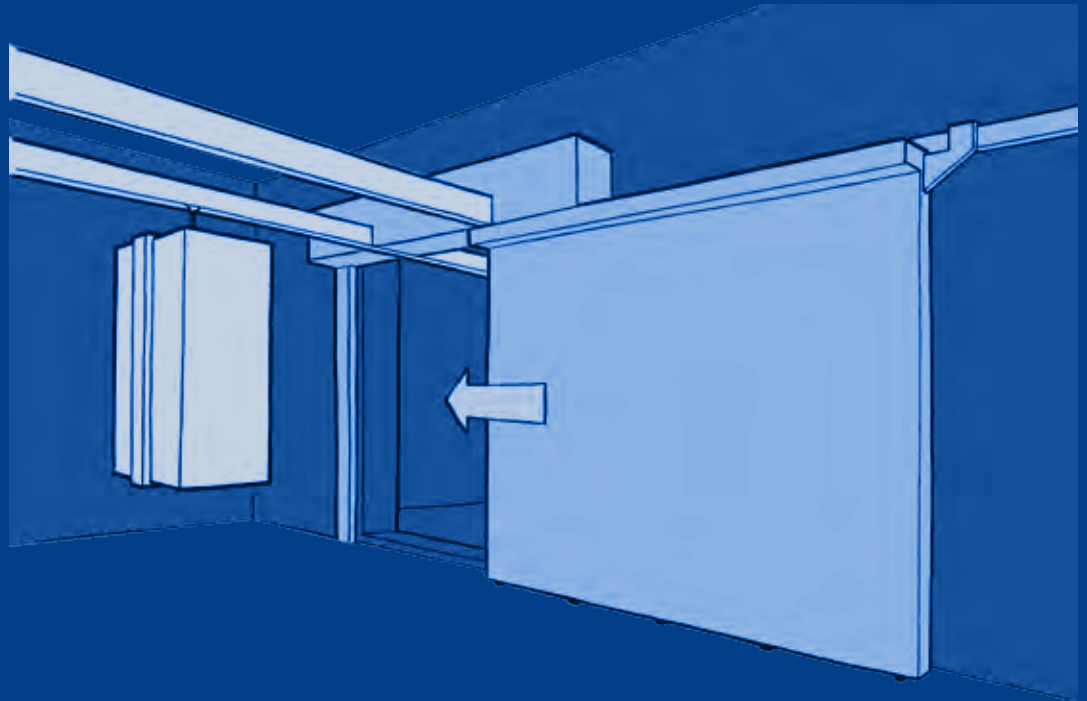
fire resistance: 2 hours fire rating and 120 minutes insulation in accordance with European test standard (EN 1366-7)

durability: 10,000 cycles

proof of usability: European test report, engineering judgement is necessary

Conveyor systems

- Power & Free system
- Circular conveyor



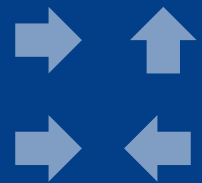
Customer benefits

- Tested and approved for constructions for continuous circular conveyor, Power & Free, cross chain conveyor and similar
- For passage of multiple conveyor tracks

Design characteristics

- Slider construction
- Sandwich construction, metal sheet all around
- Transport and fitting optimized construction
- Closure for continuous circular conveyor
- Optional without slide on the ground

Closing direction



Power & Free - conveyor with lift gate



Power & Free - conveyor with one-piece sliding door

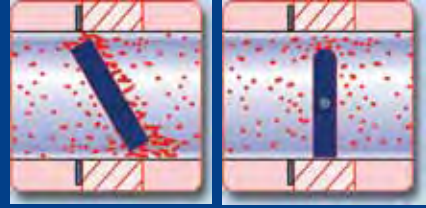
11 Ecotube

Tube sealings for pneumatic conveyor lines

90 minutes fire rating and 90 minutes insulation
engineering judgement is necessary

Issue

The closing element, which is permanently in the conveyor stream, can be damaged or contaminated by abrasive goods being transported through the conveyor system. Therefore a reliable closure of the system in case of fire cannot be assured. When transporting sustained fibres through the conveyor some of these fibres get stuck and deposited at the dampers blade, so that the closing process is inhibited.



Customer benefits

- Release by fire detection elements
- During use, connection pipes and pipe liner are congruent – therefore no sedimentation and no abrasion occurs
- 90 minutes fire rating and 90 minutes insulation. As an option we offer a closing process within split seconds by using special pneumatic devices
- Applicable for over- and negative pressure, always clean by using compatible sealings



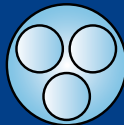
negative pressure for dust type N1



cutting edge for negative pressure type N3



overpressure up to 7,000 Pa type N7

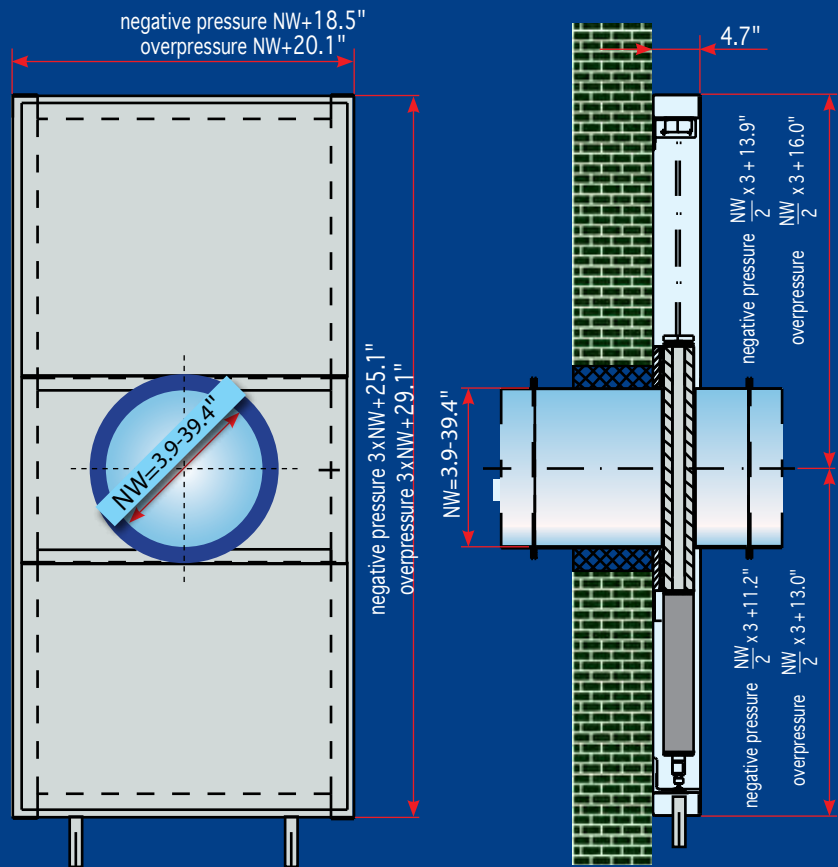


Cross section of the channel

Usable for various conveyor goods, e.g. cardboard and paper stripes

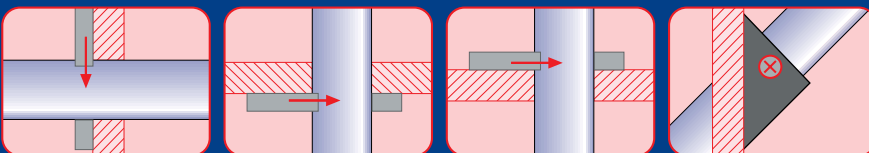
Function

The tube connector is pulled back and the closure seals the opening.

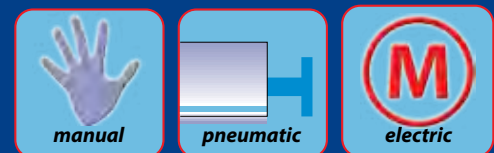


NW = Nominal Width

Variety of installations



Re-opening



12 Omnitube *Tube sealings for goods up to 1,300 °F* *2 hours fire rating and 120 minutes insulation* *engineering judgement is necessary*

Issue

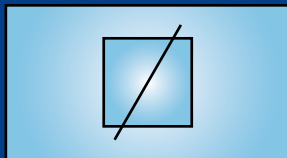
The closure of conveyed goods at a continuous high temperature becomes defective within a very short time.

Customer benefits

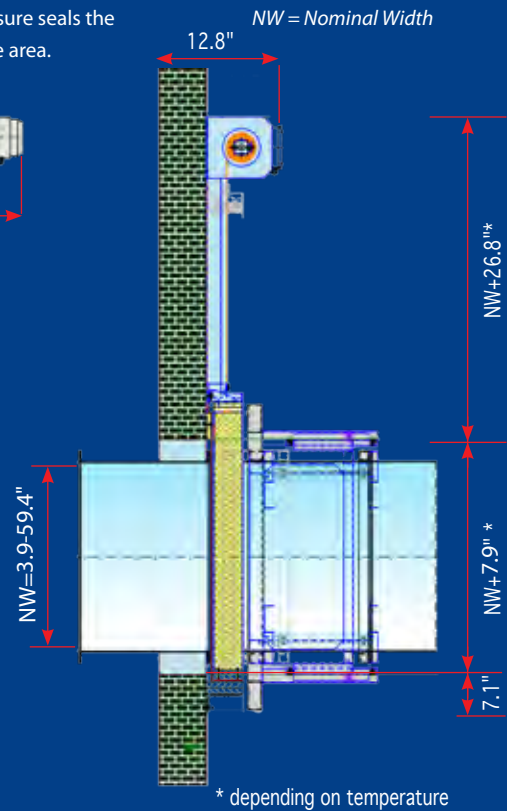
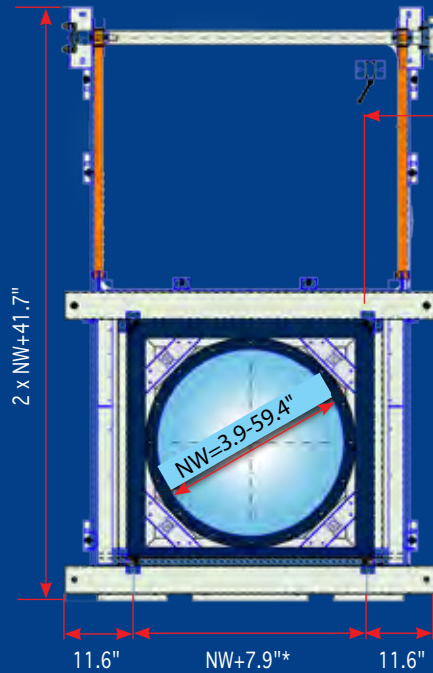
- Round or square cross section, no interference of the standard conveyor function

- Different temperature classifications up to 1,300 °F, applicable for exhaust systems

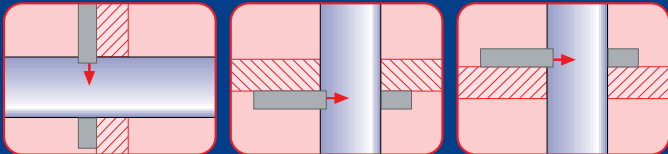
The tube connector is pulled back and the closure seals the opening - usually it is without the temperature area.



Cross section of the channel



Variety of installations



Re-opening



Pneumatic re-opening (compensators).

Conveyor system closure: pneumatic, electric, manual.

13 Omnicompact *Space saving stackable closure* 2 hours fire rating and 120 minutes insulation

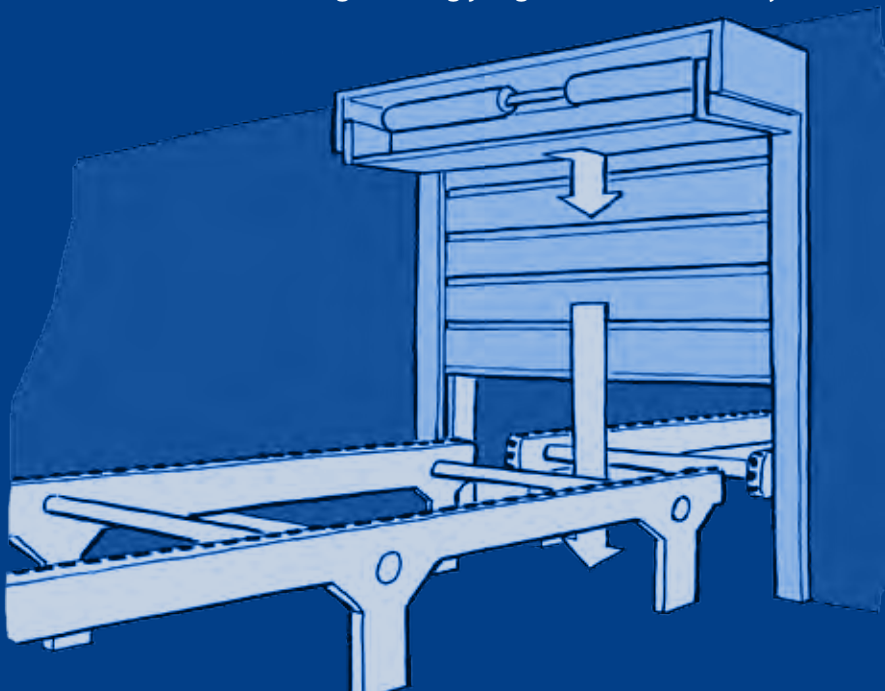
fire resistance: 2 hours fire rating and 120 minutes insulation in accordance with European test standard (EN 1634-1)

durability: 10,000 cycles

proof of usability: German approval (90 minutes insulation), European test report
engineering judgement is necessary

Conveyor systems

- Interrupted conveyor systems
- Separable conveyor systems
 - Continuous belt conveyor
 - Continuous roller conveyor
 - Continuous chain conveyor
- Continuous travelling carriages



Customer benefits

- Tested according to European test standard
- Small space requirement in the lintel area
- Robust surface due to sheet metal construction
- Appropriate for very large openings
- Also low lintel version (place requirement approx. 20")

Design characteristics

- Segmented slider that is stacked in the lintel area
- Sandwich construction, sheet metal on both sides
- Bottom bar designed for interrupted or continuous conveyor systems

Closing direction



Separated roller conveyors



Continuous chain conveyor closed position



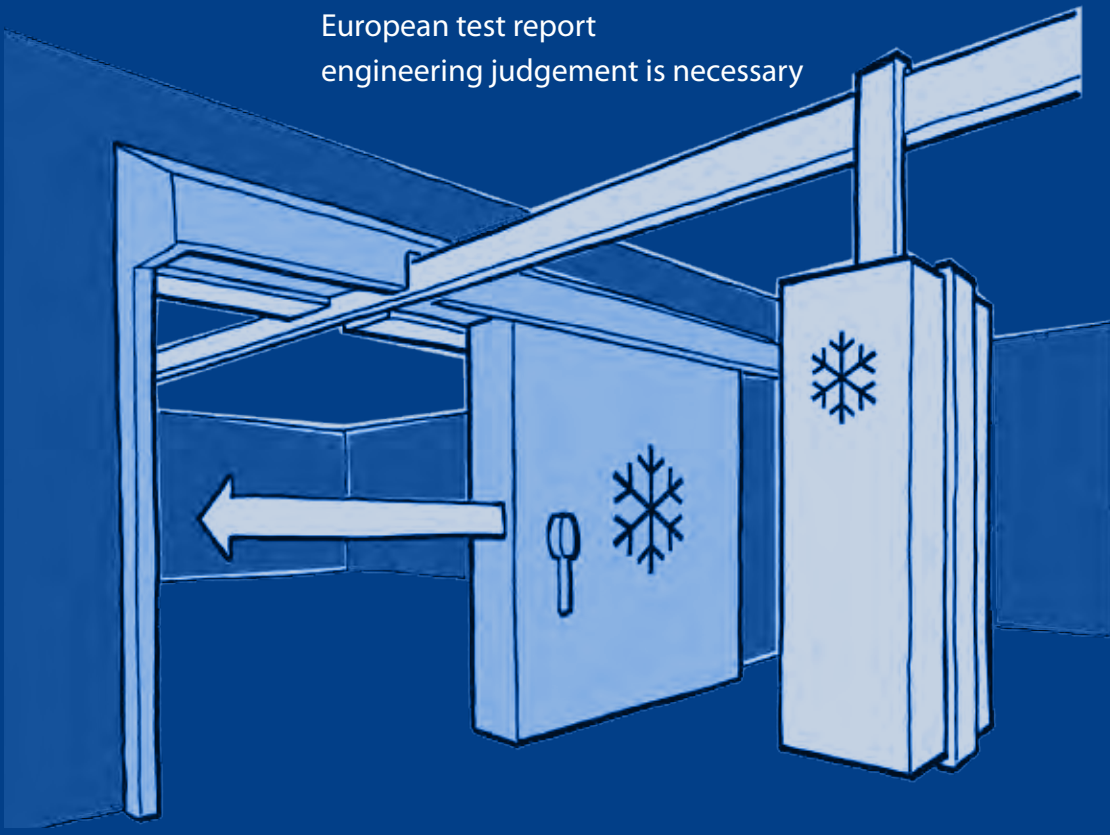
Continuous chain conveyor open position

14 Isogate *Hygienic sliding closure for cooling and freezing rooms*

- fire resistance:** 90 minutes fire rating and 90 minutes insulation in accordance with European test standard (EN 1634-1)
- durability:** 10,000 cycles
- proof of usability:** German approval (90 minutes insulation), European test report
engineering judgement is necessary

Conveyor systems

- Continuous overhead conveyor
- Interrupted conveyor systems
 - Separable conveyor systems
 - Continuous roller conveyor
 - Continuous chain conveyor



Customer benefits

- Tested according to European test standard
- Average opening velocity of up to 20 in/s
- High numbers of cycles up to 1,000/day
- Veterinary compliant version

Design characteristics

- Excellent insulation properties (K= 0.0184)
- Surface stainless steel / coating
- Wear-free self-regulating heating system with continuous conveyor systems
- Manual or motorized re-opening

Closing direction



Chain conveyors



Three continuous conveyor



Chain conveyors

15 Isogate Hygienic swing closure for cooling and freezing rooms

- fire resistance:** 90 minutes fire rating and 90 minutes insulation in accordance with European test standard (EN 1634-1)
- durability:** 10,000 cycles
- proof of usability:** German approval (90 minutes insulation), European test report
engineering judgement is necessary

Conveyor systems

- Continuous overhead conveyor
- Interrupted conveyor systems
 - Separable conveyor systems
 - Continuous roller conveyor
 - Continuous chain conveyor



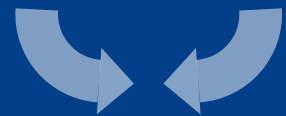
Customer benefits

- Tested according to European test standard
- Average opening velocity of up to 20 in/s
- High numbers of cycles up to 1,000/day
- Veterinary compliant version

Design characteristics

- Excellent insulation properties ($K=0.0184$)
- Surface stainless steel / coating
- Wear-free self-regulating heating system with continuous conveyor systems
- Manual or motorized re-opening

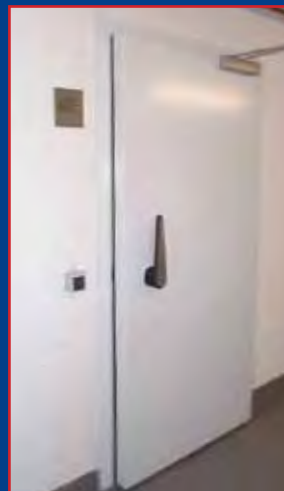
Closing direction



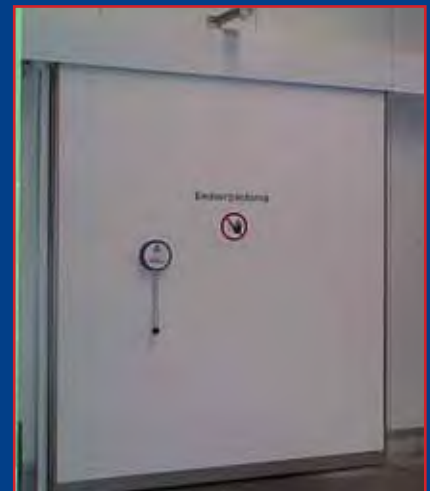
Continuous overhead conveyor



Interrupted roller conveyor



Isogate swing door



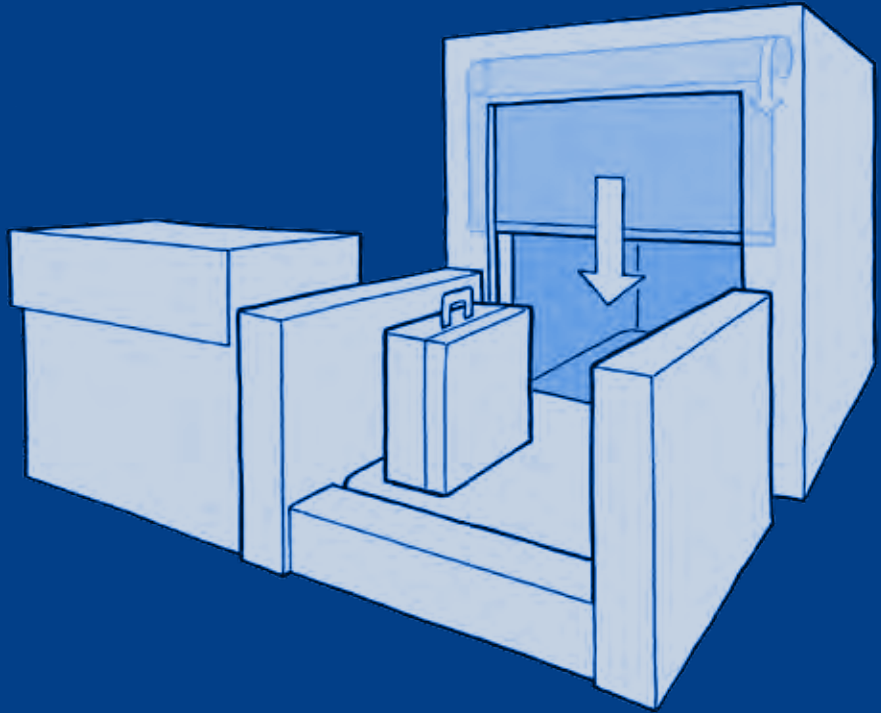
Isogate sliding door

16 *Turbocoil* High-speed protection closure

high-speed function: 39 in/s
smoke and fire resistance: smoke rated fabric up to 2,000 °F
durability: 2,000,000 cycles (in-house testing)
engineering judgement is necessary

Conveyor systems

- Interrupted conveyor systems
- Separable conveyor systems



Customer benefits

- High velocity up to 39 in/s
- Smoke rated fabric up to 2,000 °F
- 2,000,000 cycles (in-house testing)
- Preassembled and tested, ready for screwing to the cover on site

Design characteristics

- Self-supporting construction
- Winding glass filament fabric coated on both side
- Industrial drive with absolute value encoder
- Coating of the fabric with scratch-resistant and dirt repellent top coat (optional)

Closing direction



Operational open closure



Self-closing closure



Closed closure

17 Sleeve *Foamed fire retarding sealing system* 90 minutes fire rating and 90 minutes insulation

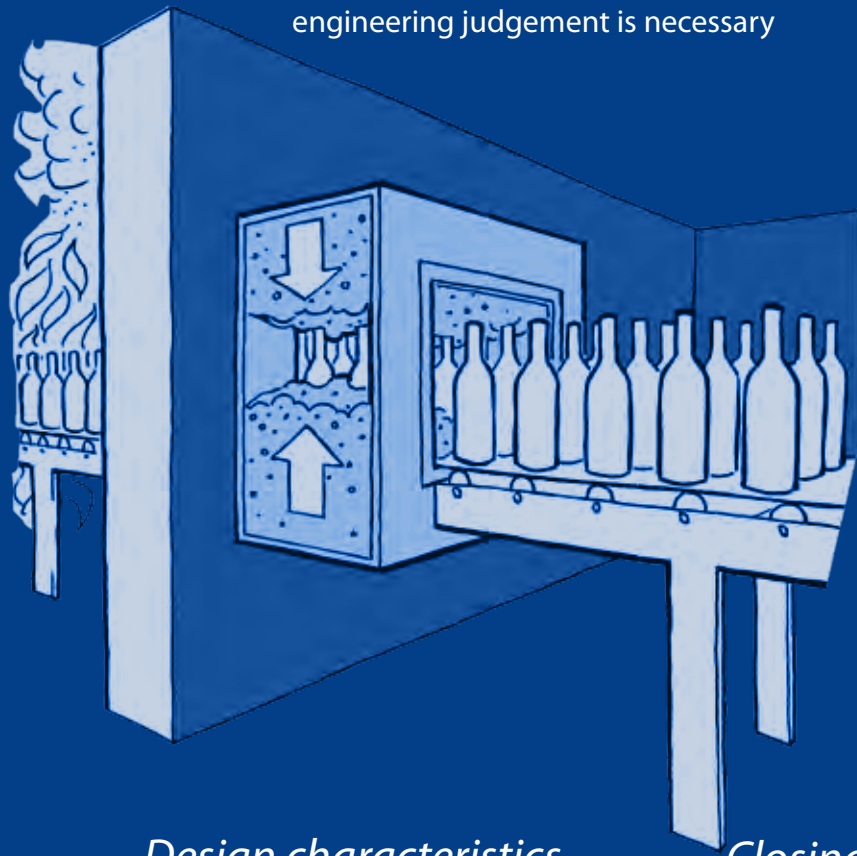
fire resistance : 90 minutes fire rating and 90 minutes insulation in accordance with European test standard (EN 1634-1)

durability: not necessary, no movable parts

proof of usability: European test report
engineering judgement is necessary

Conveyor systems

- Continuous belt conveyor
- Continuous roller conveyor
- Continuous chain conveyor
- Circular conveyor



Customer benefits

- No clearing of the closing area for non-combustible conveyed goods necessary
- No moving sealing elements
- Small space requirement on the wall plates
- Tested according to European test standards with nonflammable goods

Design characteristics

- Fire resistant steel construction encapsulates the conveyor
- Intumescent (e.g. foams in case of fire) sealing blocks in several different sealing depths
- Integrated initiators to accelerate foaming
- Sealing depth depends on the clear conveyor cross-section
- Sealing cross section adapted to the conveyed goods

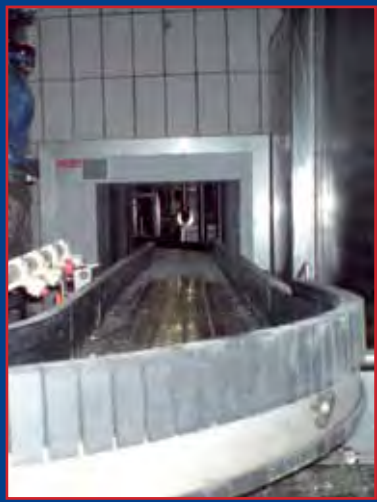
Closing direction



Round belt conveyor for bottles / cans



Hinge chain conveyor through ceiling openings



Hinge chain conveyor for bottles



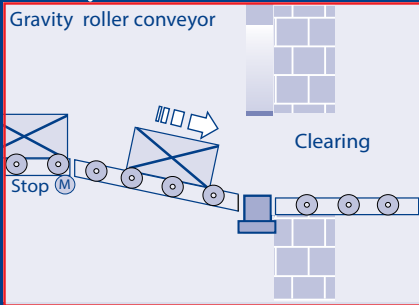
Overhead conveyor for e.g. chicken

18 Clearing

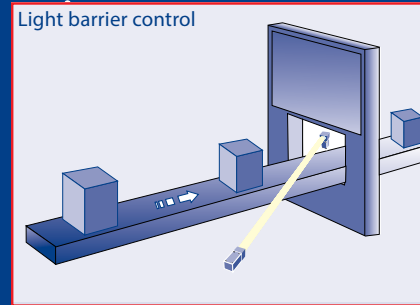
Problem-oriented clearing of the closing area.....

For stopped conveyor systems

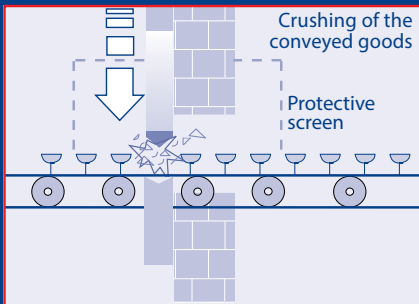
For conveyor systems which continue conveying an emergency power system is necessary



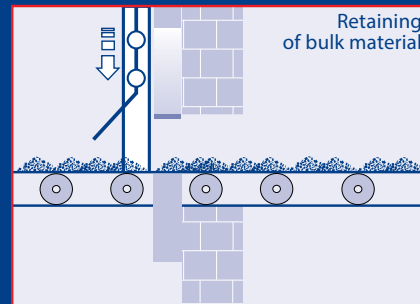
When roller conveyor systems run through the closure with an inclination, the delay of the closing process is adequate. Precondition is that it may not lead to a back draught of the goods to the closure level.



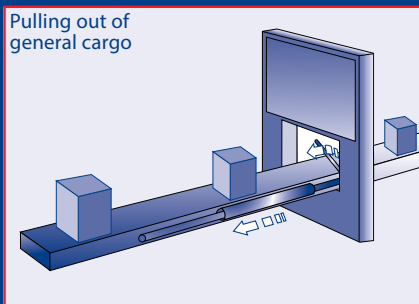
One or more transversally arranged light barriers control the closing level. In case of a detected gap the conveyor system stops.



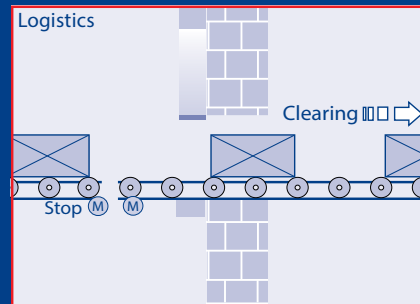
For conveyed goods, which can be crushed or displaced by kinetic energy because of their properties, the clearing system "A-Y1 type" offers an economic possibility.



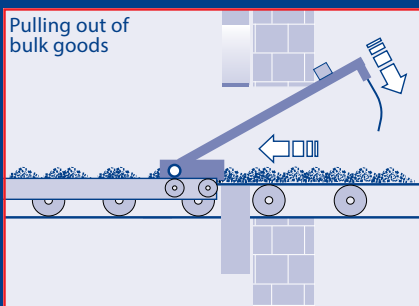
Bulk goods can be retained by means of a slider. The arrangement of the slider can be rectangular, diagonal or according to the snowplough principle. Only after the clearing the conveyor system is stopped.



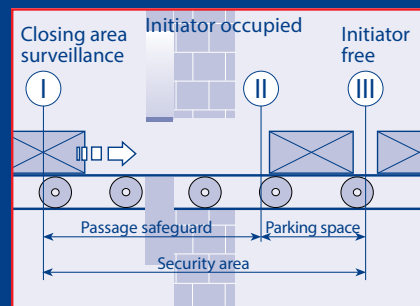
General cargo, which move on the conveyor system with gaps between one to the other, can be pulled out of the closing area via swivelling return motion lever with stored pneumatic energy.



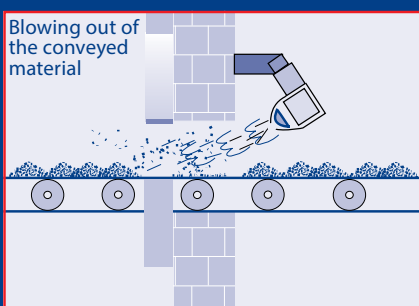
When several separated conveyor systems are used for the conveyor process, the closing range can be cleared by switching-off of the incoming conveyor route and continued running of the outgoing conveyor route.



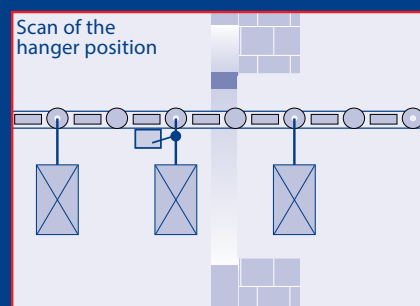
A rake, driven by stored energy, swivels into the conveyor process and pulls out the conveyed material.



The closing area surveillance is defined for the distance that is necessary to guarantee the closing range to be free of conveyed goods. Usually in front of and behind this closing area surveillance, proximity switches (initiators) are placed.

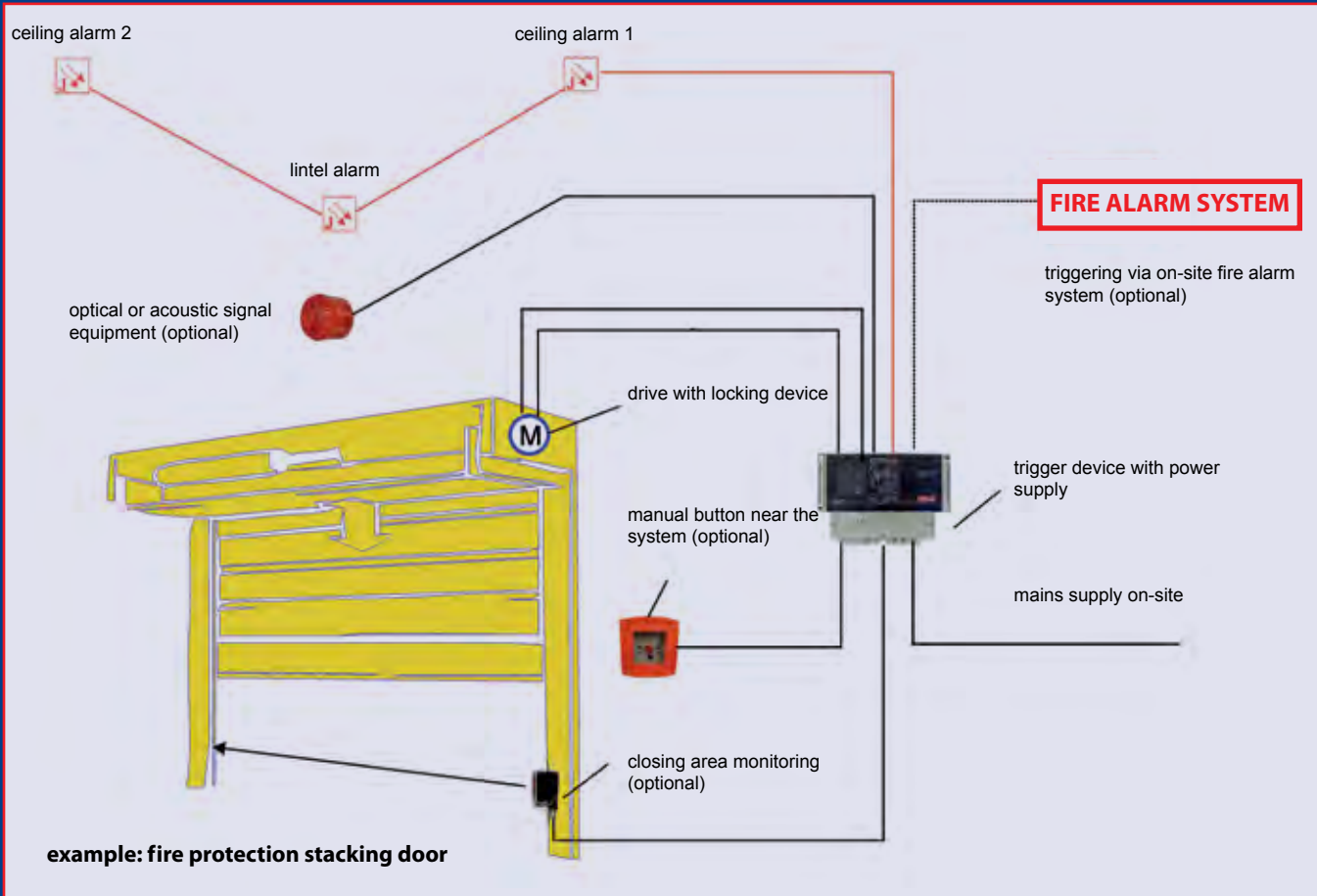


Light conveyed goods can be blown out of the closing range by means of stored compressed air.



With this system it has to be guaranteed that all openings are free simultaneously during the closing period. In dependence on the uniformity of the hanger distances as well as of the hangers itself, control elements have to be installed.

19 Control Units *Arrest system for fire protection closures with embedded alarms inside the system*



Building inspectorate's requirements

The International Building Code (IBC) stipulates verification of applicability for fire protection closures. These approvals stipulate a locking device of the systems are to be kept open when in operation. The locking device must be suitable. Its applicability must be verified by means of an approval from the building inspectorate. Approval is based on the guidelines for locking devices by IBC.

Locking device comprises:

- At least one fire alarm
- A trigger device
- A locking device
- A power supply

Quality assurance:

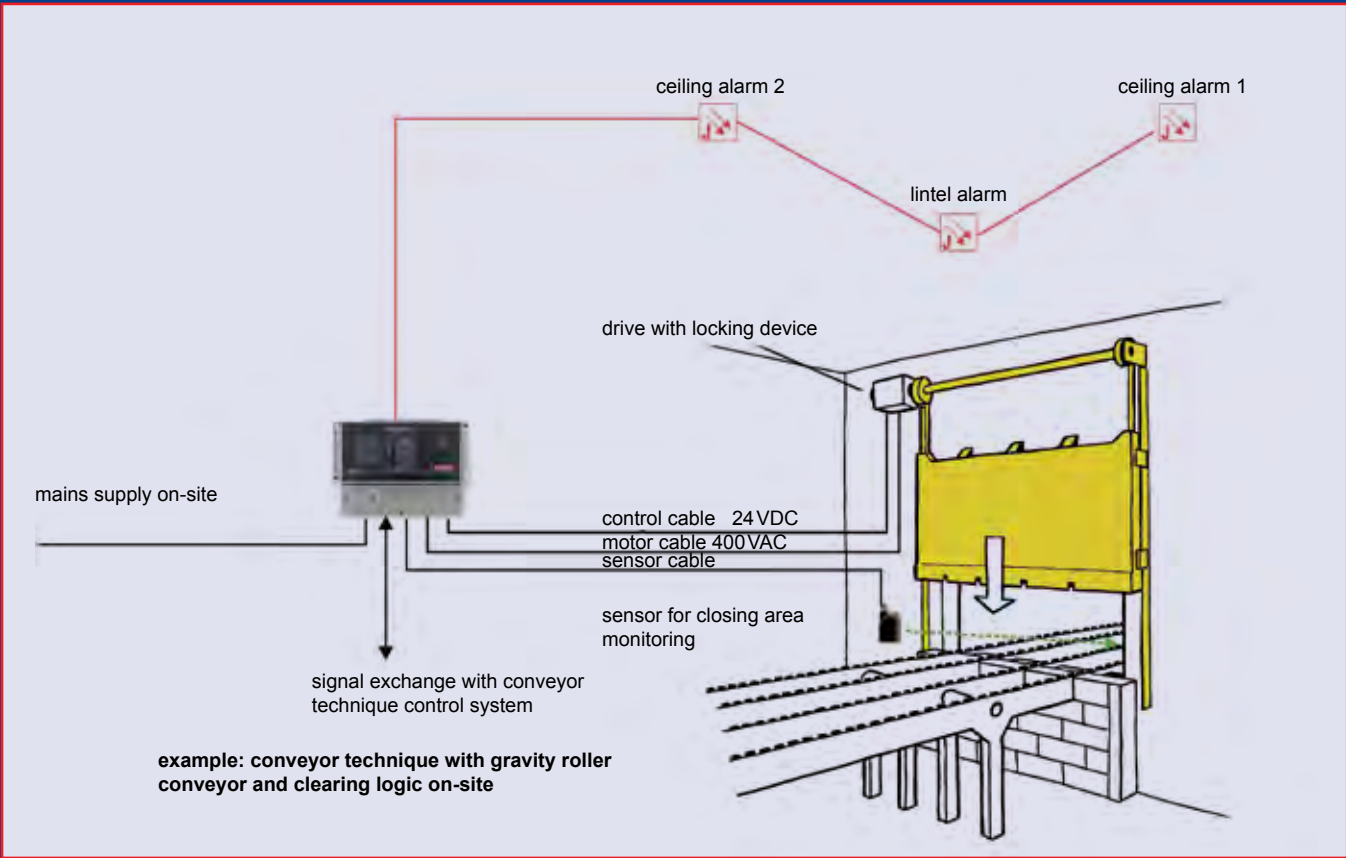
All components of the locking device must be tested and their production monitored every six months by the certified monitoring office.



RZ7-NT24

20 Control Units

Locking device for conveyor system closures with embedded alarms inside the system and signal exchange with conveyor technology control unit



Building inspectorate's requirements

In addition to the requirements for fire protection closures, the following requirements are also made of locking devices for conveyor system closures:

- 1.) A second independent power supply to the locking device, which ensures the function of a structured clearing process even in the event of a power failure.
- 2.) Suitable sensors need to be used for the closing area monitoring (e.g. light barriers), whose suitability for this purpose has been verified in a test certificate from FM approval or engineering judgement.
- 3.) In the case of closures in explosive areas (Zone 1 or 2) the locking device trigger also needs to be effected via a gas warning system and potential-free contacts.
- 4.) To ensure the closing function of the conveyor belt closure, the conveyor belt must be controlled within a safety range so that the conveyed goods do not hinder the closing process. This stipulation can, for instance, be achieved with these basic principles when the conveyor equipment is at a standstill, e.g. no backup power is necessary.



RZ3/4-FA

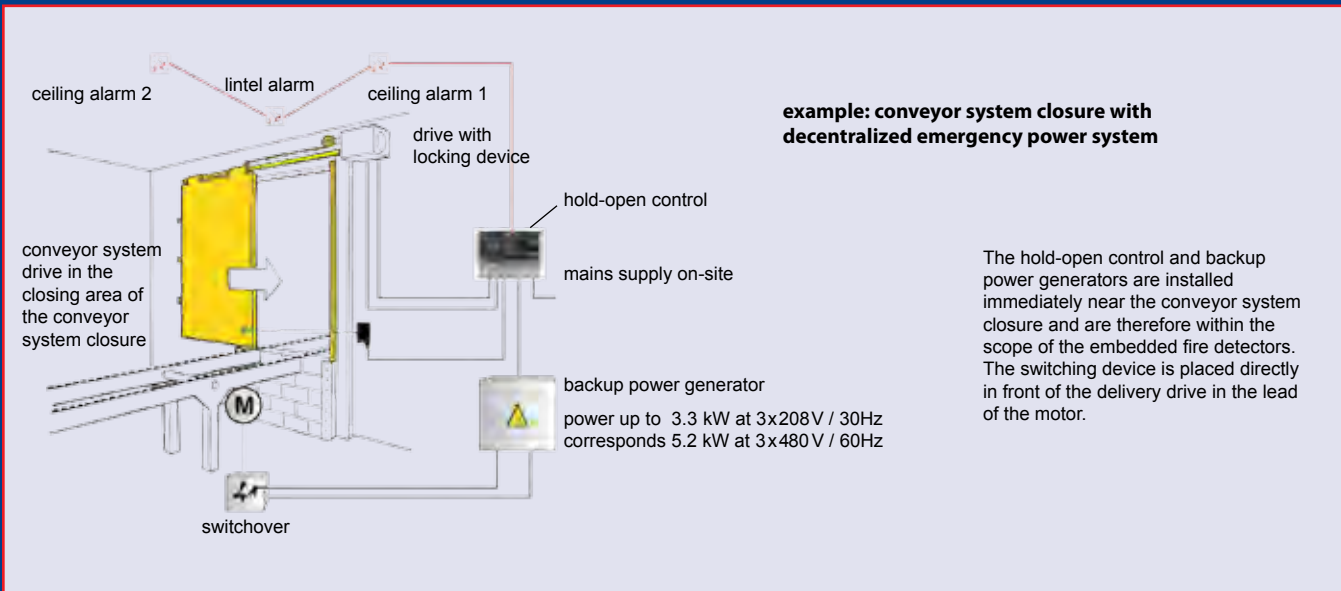


RZ7-NT24

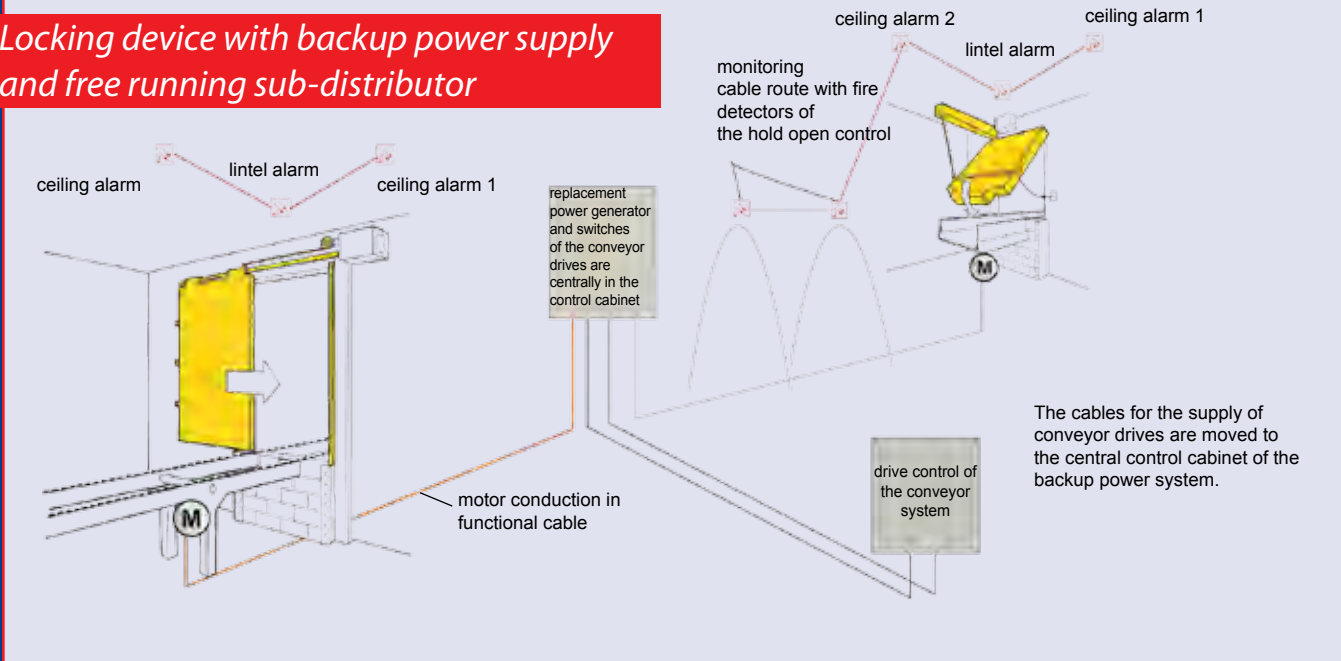


RZ7-FAA

21 Control Units *Locking device with backup power supply and free running sub-distributor*



Locking device with backup power supply and free running sub-distributor

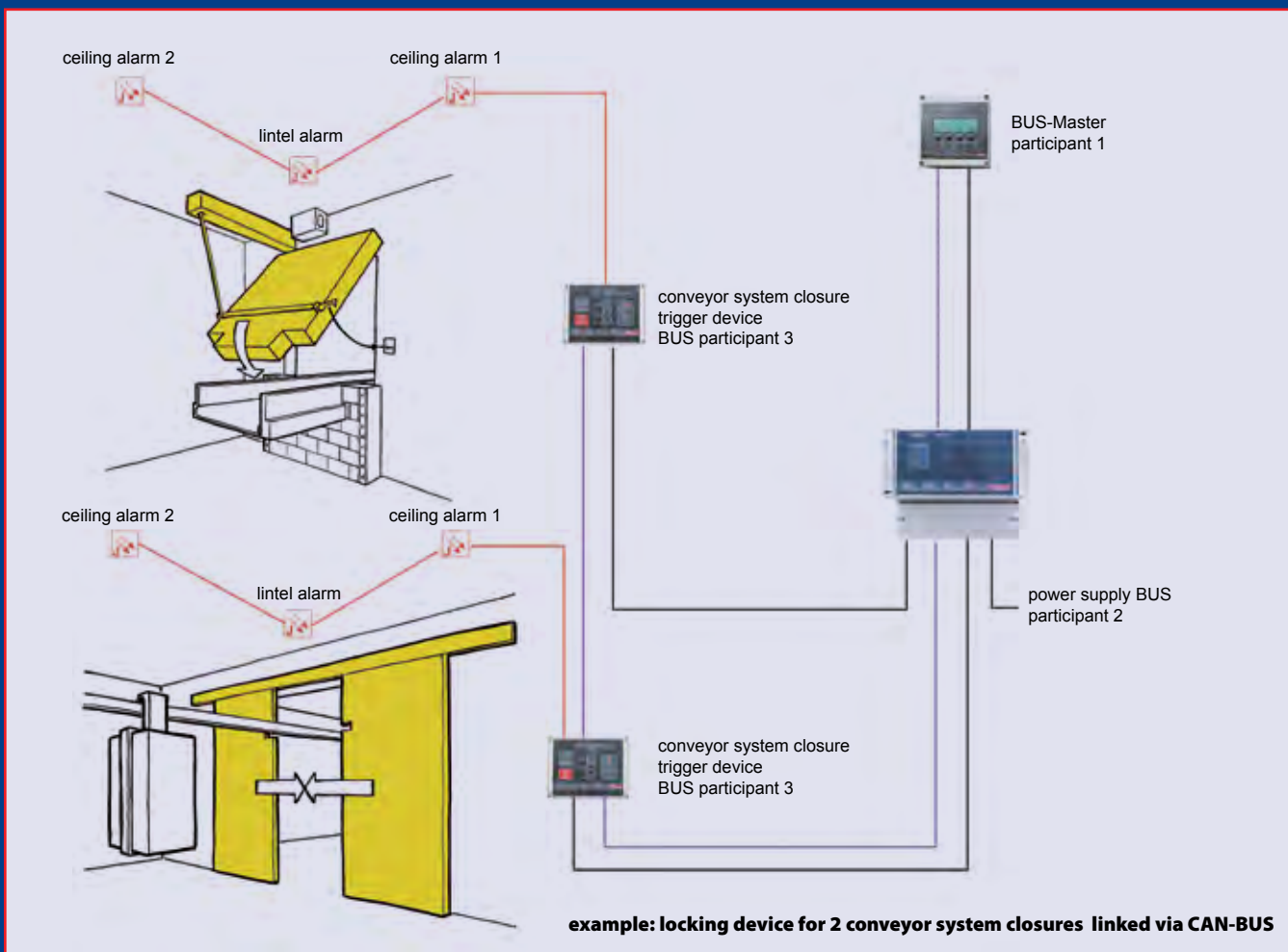


If the conveyor equipment needs to continue running for the free running process, a backup power supply suitable for the conveyor equipment drives is required for short-term operation.

The emergency power supply of the conveyor system must be realised separately. The emergency power must be available for at least the free running period in the closing area and for closing the conveyor system closure.

A backup power supply must be provided for these exemplary basic principles for free running of the closing area through other operative conveyor systems.

22 Control Units *BUS control unit*



BUS control unit applications

Locking devices and their separate components are connected to each other via the CAN-BUS. Every BUS-participant works independently and can process additional commands from the master via the BUS connection. This means it is possible to group conveyor system closures and assign them to certain zones that will then close jointly in the event of fire. The RZ7-FAA independently fulfils its fire prevention task even if the BUS connection fails. Likewise, the free running of the closing areas in the event of a trigger can be controlled in serial or parallel by the master. Up to 48 participants can be connected via the BUS without using a repeater. A maximum of 1,600' of BUS system cable without restrictions are possible.

Customer benefits

Availability of the conveyor equipment and the fire prevention system	High safety area	Optimal for complex large-scale systems	Low installation and maintenance effort
Simple troubleshooting and rectification	BUS participant work independently when the BUS system fails	Up to 48 participant	Little cabling required
Operator-friendliness	Low fire load due to less cables	Every participant can be assigned to up to 16 fire alarm zones	Section-by-section commissioning
Plain text display for operating parameter, malfunctions, status reports	Easy error identification thanks to decentral structure	Additional connection of on-site doors and gates possible	Section-by-section maintenance, therefore fewer operational interruptions
Error memory for the last 100 events	Error display with error memory	Linking with other BUS systems via gateway	Decentral structure facilitates attachment
BUS – error does not lead to a complete shutdown of the system		Simple expansion or retrofitting of the system	On-site program changes possible

23 Control Units *Smoke protection centres for fire protection and conveyor system closures*



RZ7-NT24 with RZ7-BMZ2

RZ7-BT (engineering judgement necessary)

Technical data RZ7-NT24 with RZ7-BMZ2 (power supply and trigger device):

Mains voltage: AC 208/415V, 60Hz
Control voltage: DC 24V
Casing: 9 x 9.3 x 6.85 inch

Description:

- Locking device to hold open fire protection closures
- Protection type IP 65 in surface-mounted casing, therefore it can be used almost anywhere
- Clear operation and display film
- Connection of 2 detector lines with up to 20 fire detection elements
- Approved for ex-areas Zone 1 and 2 in conjunction with on-site gas warning system
- Independent second 24VDC power supply via rechargeable batteries (2 x 12V 7.2 Ah)
- Power supply RZ7-NT24 in conjunction with RZ7-FAA or RZ3/4-FA



RZ3/4-FA

RZ3/4-FA (engineering judgement necessary)

Technical data RZ3 (power supply and trigger device):

Mains voltage: AC 208/415V, 60Hz
Control voltage: DC 24V
Casing: 12.72 x 9.3 x 6.85 inch

Description:

- Locking device to hold open conveyor belt closures
- Protection type IP 65 in surface-mounted casing, therefore it can be used almost anywhere
- Clear operation and display film
- Connection of a detector line with up to 20 fire detection elements
- Closing are monitoring of 2 conveyor sections
- Approved for ex-areas Zone 1 and 2 in conjunction with on-site gas warning system
- Independent second 24VDC power supply via rechargeable batteries (2 x 12V 2.2 or 7.2 Ah)



RZ7-NT24

RZ7-FA (engineering judgement necessary)

Technical data RZ7-NT24 (power supply):

Mains voltage: AC 208/415V, 60Hz
Control voltage: DC 24V
Casing: 9 x 9.3 x 6.85 inch

Description:

- Power supply for trigger device
- Protection type IP 65 in surface-mounted casing, therefore it can be used almost anywhere
- Clear operation and display film
- Independent second 24VDC power supply via rechargeable batteries (2 x 12V 7.2 Ah)
- Power supply RZ7-NT24 in conjunction with RZ7-FAA or RZ3/4-FA



RZ7-FAA

Technical data RZ7-FAA (trigger device):

Control voltage: DC 24V
Casing: 7.87 x 6 x 3 inch

Description:

- Locking device to hold open conveyor belt closures in conjunction with BMZ2 or NT24
- Protection type IP 65 in surface-mounted casing, therefore it can be used almost anywhere
- Clear operation and display film
- Connection of a detector line with up to 20 fire detection elements
- Approved for ex-areas Zone 1 and 2 in conjunction with on-site gas warning system
- Closing are monitoring of 4 conveyor sections
- Functions can be programmed for each specific system via CAN-BUS-Master RZ7-OP



RZ7-OP

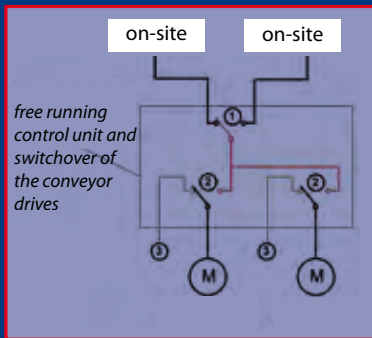
Technical data RZ7-OP:

Control voltage: DC 24V
Casing: ABS 47.24 x 4.72 x 1.46 inch

Description:

- Master module for networking locking devices of the series RZ7 via CAN-BUS
- Central operating, display and control device with plain text display
- 5 language options available
- Error and malfunction memory
- Linking with other BUS systems via gateway possible
- Overriding triggering of the conveyor system closure according to programmed fire alarm zones

24 Control Units *Backup power supply variants*

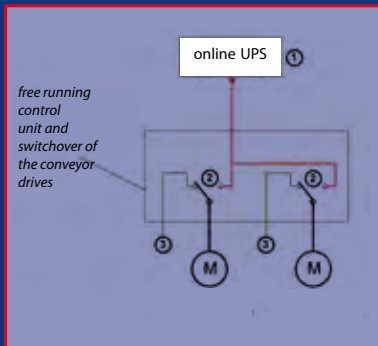


Backup power supply with 2 independent grids

Characteristics: - The mains power supply for the free running control unit is realised on-site
- In accordance with the available output, the closing areas of the conveyor system closures can be run freely in series or parallel
- The free running control unit monitors the existence of at least one grid and clears the closing areas

- 1 Grid monitoring with switching device
- 2 Switching device for conveyor drives
- 3 Power supply to conveyor drives in mains mode

Output depends on the output available on-site

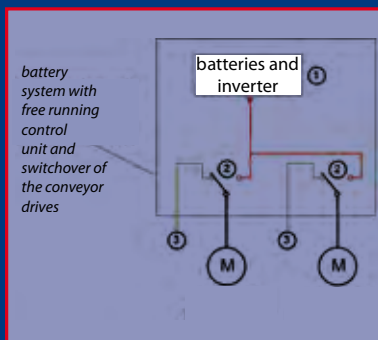


Backup power system with external UPS system

Characteristics: - The free running control unit is supplied with power via an upstream UPS system
- According to the output of the UPS, the closing areas can be freed in parallel or in series
- The external UPS must be installed according to the protection class (IP 20)
- The protection class can also be raised so that it is suitable for industrial applications if installed in a switch cabinet

- 1 Uninterrupted power supply
- 2 Switching device for conveyor drives
- 3 Power supply to conveyor drives in mains mode

Output ranging from 15 to 100 kVA



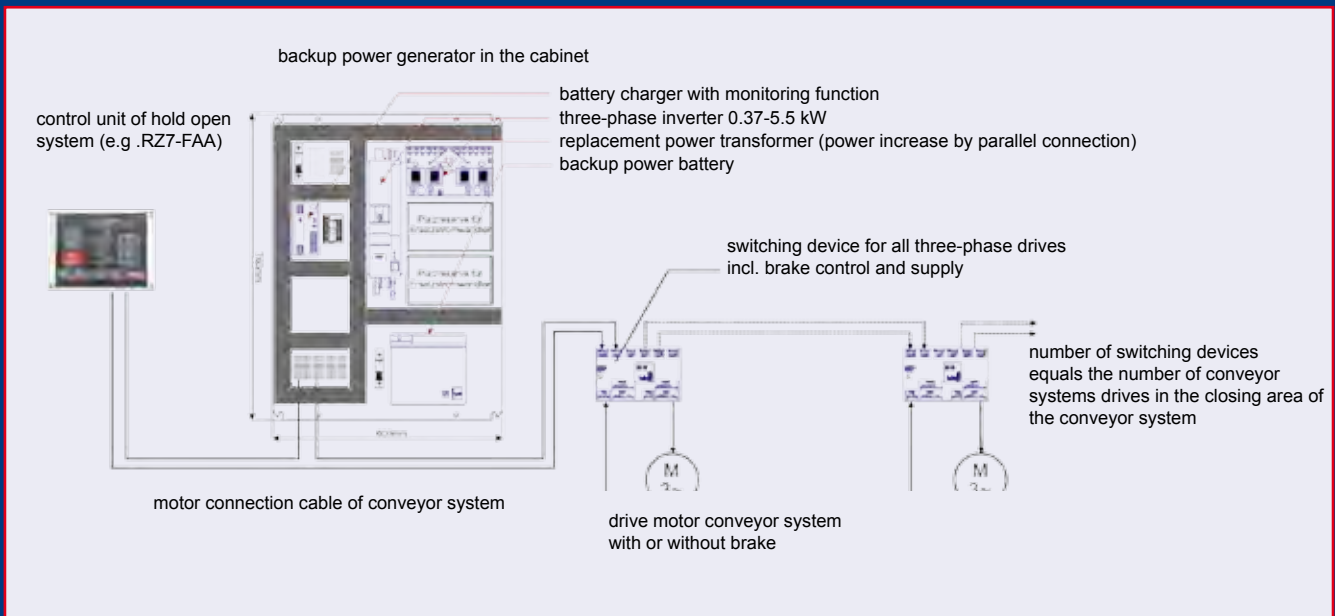
Backup power supply with internal battery

Characteristics: - The interconnection of several batteries by means of an inverter allows the required output for the conveyor drives to be reached in the event of a trigger
- The closing areas are usually run free in a serial process
- Installing the battery system in an upright cabinet achieves a high protection class

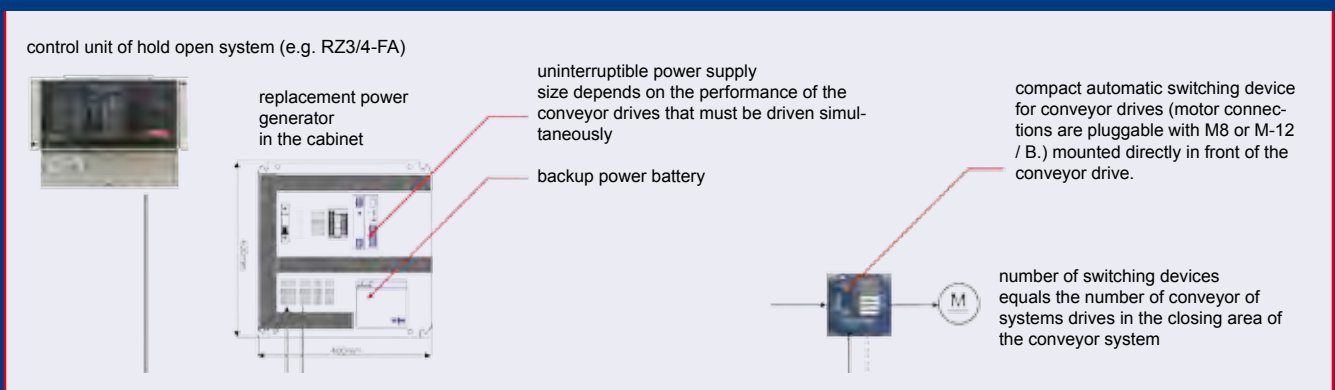
- 1 Battery system with inverter
- 2 Switching device for conveyor drives
- 3 Power supply to conveyor drives in mains mode

Output ranging from 5 to 15 kVA

25 Control Units *Decentral backup power generator „Powerdrive“*



Control Units *Decentral backup power generator “MOVIPOWER DC”*



- ✓ Optionally, linked via the CAN-BUS – therefore allowing freely programmable processes
- ✓ High availability thanks by arrangement
- ✓ Fast free running of the closing area, because the decentral backup power system starts in parallel
- ✓ Industrial protection class IP 65
- ✓ No intervention in the control unit of the conveyor system

- ✓ Easy retrofitting
- ✓ Little installation effort
- ✓ Reduction of the power load due to fewer cables
- ✓ Section-by-section commissioning is easily possible
- ✓ Small dimensions and lightweight
- ✓ Low maintenance costs, much fewer batteries

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CONVEYOR SYSTEM**



1993 **FIRST SMOKE CURTAIN
0%-LEAKAGE-INSTALLATION**



1996 **FIRST FIRE CURTAIN
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