



**JANSEN BRANDSCHUTZ**

## **Conveying-system closures**

### **Jansen conveying-system closures**

- are employed according to the successful construction principle of open all-steel structure.
- convince by their long life span, permanent monitoring of function of the components and by low maintenance costs.

**Unconnected conveying-system closures**

**T90/ EI90**

**Connected conveying-system closures**

**T90/ EI90**

**Pneumatic conveying-system closures**

**T90/ EI90**

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## Conveying-system closures

# Protecting production.

Due to building regulations, walls or ceilings which serve as partitions within buildings in the terms of fire protection may not contain apertures. Exceptions are permitted if so called for by the use of the building. When conveyor technology is implemented we offer connected, unconnected and pneumatic conveying-system closures.





If conveyors penetrate building closures which consist of fire-resistant and smoke proof walls and ceilings due to the concept of fire protection, the resulting apertures have to be shut in case of fire or fault with a conveying-system closure.

Because of the high requirements of this double function a conveying-system closure differs significantly from a regular fire protection door and therefore is also verified according to special guidelines.



# Conveying-system closures



## Technical product description

### Construction principle:

For the Jansen conveying-system closures the successful principle of an open all-steel structure was chosen for the frame construction. From this result the following advantages for the operator:

- inherently stable steel construction designed for a long life span
- permanent monitoring of the function of the components
- quick and low-cost replacement of wear parts
- low maintenance costs

### Frame:

The frame consists of steel profiles which are connected to the body of the building by means of approved types of fixtures.

### Lock element/ sliding blade:

The lock element is integrated in the steel frame and is free to move. The guiding takes place via low-maintenance sliding blocks or also, related to design, via roller guides or guide rails with ball bearing mounted rollers. The lock element is enclosed by a T-section frame and consists of several layers of calcium silicate fire protection panels of various density.

The front and back of the lock element is protected by an additional covering with sheet steel. Re-opening of the lock element takes place either manually (handle or line pull) or motor driven.

### Closing means and balance weights:

Closures shutting from bottom to top are equipped with a closure weight. Horizontally shutting wall and ceiling closures shut via closure weights, spring cable reels or door closers. Closures shutting from top to bottom operate using their own weight. Depending on the dimensions of the closure, a weight counterbalance can be allowed for.

### Sealing system:

In the area of overlap (wall/ceiling) the lock element is equipped with a hard-wearing and age-resistant sealing system. The sealing system develops its full protective function under the application of heat.

### Equipment:

All conveying-system closures are equipped with an approved locking device and limit switches for the safety interlock with the conveyor. The closing speed can be adjusted within certain limits.

### Approved/ verified according to: T90 according to DIN 4102



## Control technology

The control concept is consistently designed for decentralization according to the requirements of practice. This means that all control components (locking system, door clearance control with drive switchings) consist out of modules which are mounted directly on site, that is in direct vicinity to the conveying-system closure.

The separate control components are built as modules and consist out of the following structural components:

- locking system
- extension module (in case of several closures, coupled with locking system)
- drive electronics (conveying-system closure drive, only with closure basic type B – manual reopening)
- automatic door clearance control (AFM)

The concept is rounded off by various reasonably priced and high-performance emergency power supply systems.

### Locking system:

The locking system is especially designed and approved for the implementation of conveying-system closures (Z-6.5-1517).

It consists of the modules (insertions in 19"-technology):

- 24 DC power supply
- charge card (separate charge and trickle charge supply of the maintenance-free batteries)
- release and extension module
- fire recognition components, release button, closing area monitoring

### Door clearance control:

The door clearance control ensures that in case of fire recognition the closing areas are cleared under circuit and circuit-failure conditions.

Prerequisite for an orderly function is that the closing areas are monitored (e. g. via a light barrier) and that an emergency power supply system for the drive motors of the conveyor is available. The door clearance control consists out of the following modules:

- door clearance control module (FSM), integrated into the casing of the locking system
- automatic door clearance module (AFM), switching at the conveying-system motor.

### Emergency power supply:

In case of activation the drive motors of the conveying-system are used to clear blocked closing areas. The clearance of the closing areas is also ensured in case of power failures. In case of circuit failures an automatic switching to emergency power supply takes place. The emergency power supply system is designed for implementation with three-phase induction motors (400 V AC, 50 Hz). In such a case the drive motors of the conveying-system are driven under reduced voltage (230 V AC) and reduced frequency (29 Hz). At the same time the torque remains unchanged.

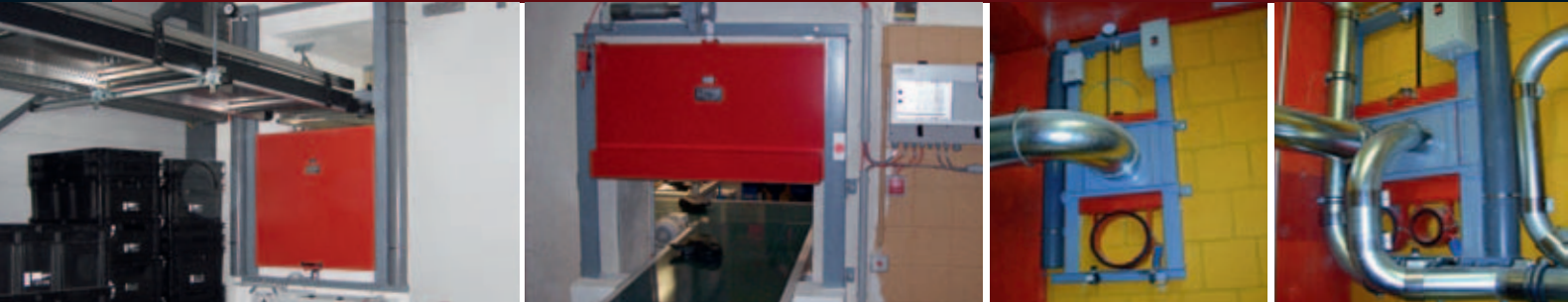
### Standard signal exchange:

For the signal exchange with the conveying-system engineering the following floating contacts are available:

- no release
- conveying-system closure open
- open/ close (only in connection with manual reopening)
- closing area blocked (only when light barriers are used)
- no malfunction



# Conveying-system closures



- We offer connected, unconnected and pneumatic conveying-system closures.
- Depending on the conveying-system a special conveying-system closure is necessary. Here, a distinguishing criterion is, among others, the kind of execution in the closing area.

## Connected conveying-system closures:

**The conveying-system is not disconnected in the closing area.**

The conveying-system has to pervade the closing area in a non-separated manner.

### Examples for implementation:

- roller, suspension chain, round belt and belt conveyors
- suspended electric conveyor
- endless chain conveyor
- power- and free-systems
- scraper chain conveyors
- rail-bound conveying-systems
- conveying-systems for containers
- floor conveyors

## Unconnected conveying-system closures:

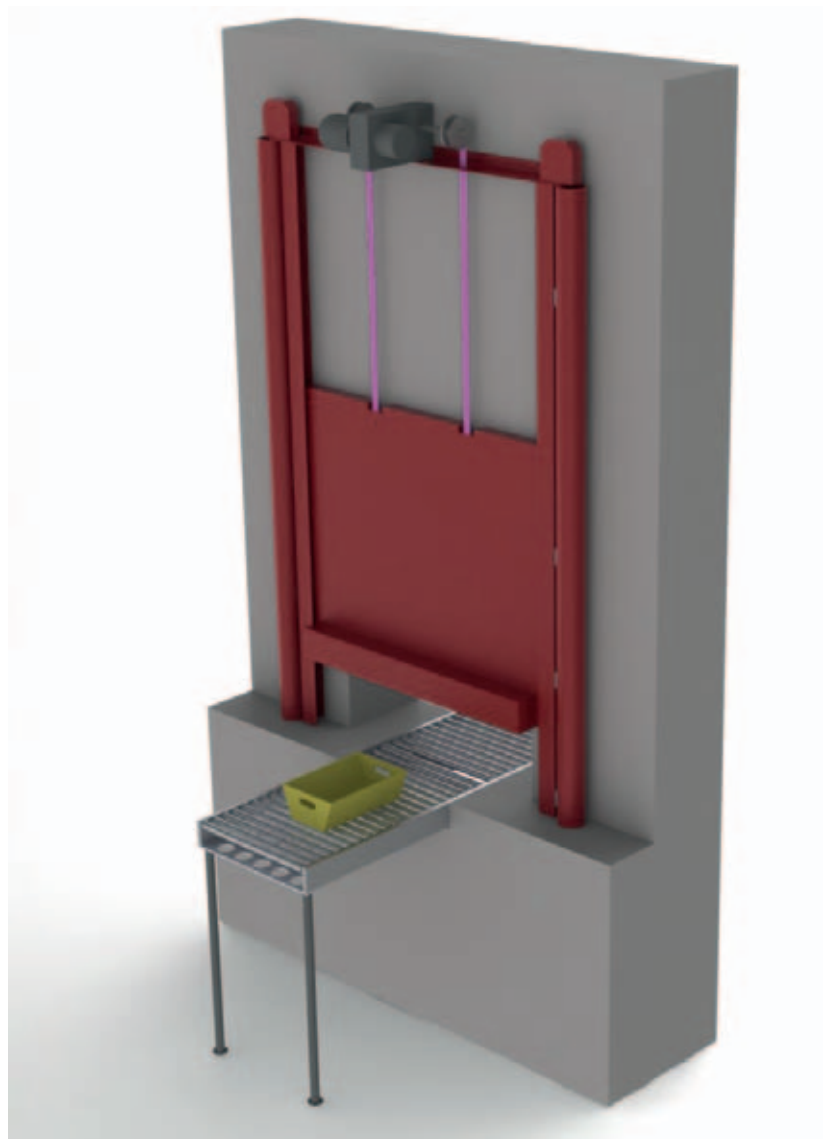
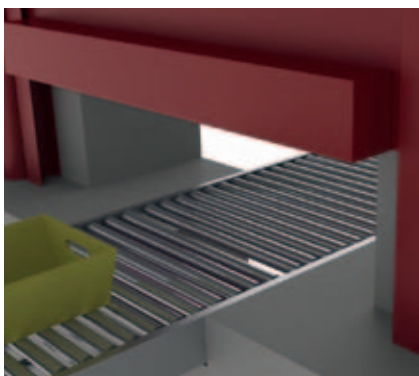
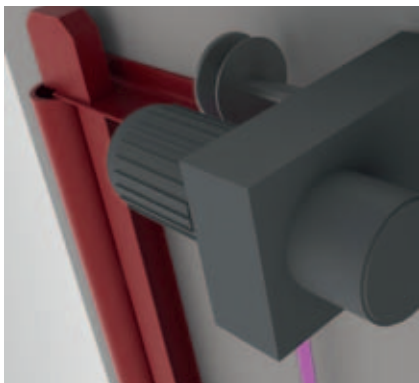
**The conveying-system is disconnected in the closing area.**

The conveying-system has to be disconnected in the closing area (gap at least 85 mm), or respectively it has to be possible to divide the conveyor path during the closing by a separator or a gate.

## Pneumatic conveying-system closures:

**The conveying-system is not disconnected in the closing area.**

Special conveying-system closures are necessary for pneumatic conveyors or airflow-technological suction systems, which are impinged with chippings, fibres, remnants, etc. and thus require a free cross-section of the pipe or the duct.



# Maintenance and Service

The name Jansen does not only stand for innovative products and varied special solutions in the area of fire protection, but also offers their customers comprehensive and individual service – not only for their own door systems but also for those of other manufacturers. Our intensive on-site customer support is carried out by skilled professional personnel. Hereby we can guarantee the highest level of safety for your door systems.

## Assembly

Apart from the delivery of door systems Jansen naturally also carries out the assembly and installation of the products. Due to our own skilled assembly operators Jansen guarantees a smooth implementation from the actual installation via the electronical installation up to the acceptance inspection.

## Inspection & Maintenance

All-around one-stop service means that Jansen not only takes care of the compulsory inspection for door systems (according to inspection regulations of the respective federal state and the rule of the professional association) but also offers additionally the maintenance of the door systems on request. Customers thus not only save money but also a considerable amount of time.

The difference between maintenance and inspection is that for maintenance additional work routines according to the manufacturer's guidelines are carried through for the preservation of performance properties.

After completion of the respective maintenance or inspection the customer receives an inspection record in which all implemented

work routines as well as possible faults are stated.

For fire-protection closures with lock systems, the operator is obliged to periodical monitoring through qualified persons according to the guidelines for lock systems, published by the German Institute for Constructional Engineering in Berlin. Furthermore the performance of fire-protection door systems with lock systems has to be checked by the operator.

## Repair

In order to rectify any problems as quickly as possible the competent staff will be pleased to be of service to you any time. Just contact Jansen. They will help you quickly and without long waiting periods.



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