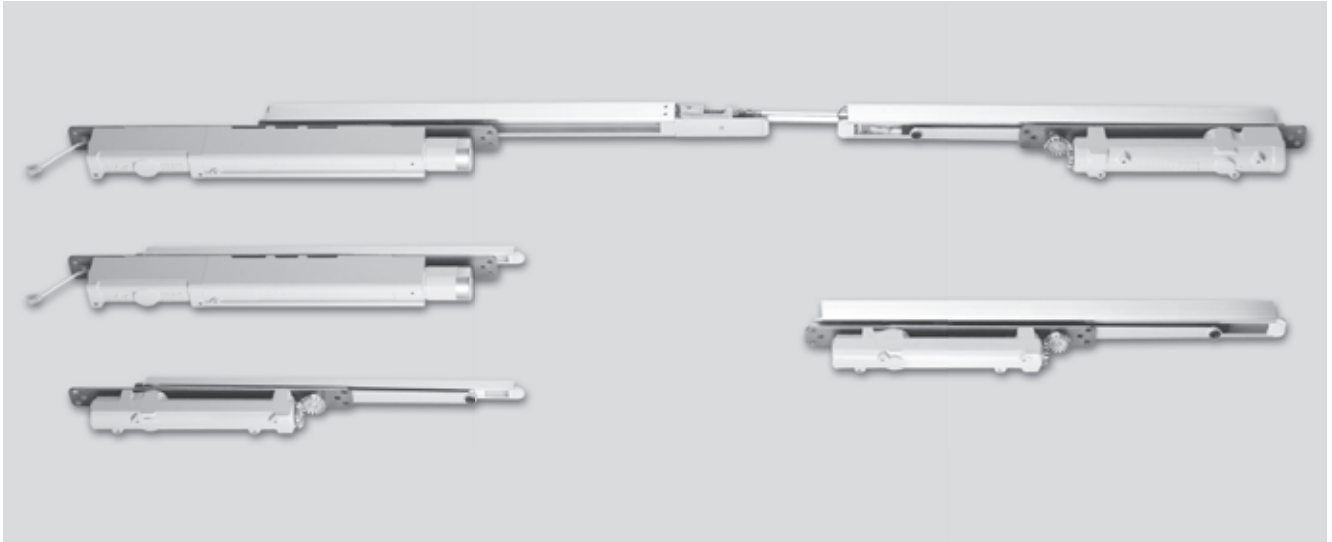
A detailed technical illustration of the ITS 96 door closer system. The image shows a side view of the main body and a gear mechanism. The main body is a long, cylindrical component with various mounting points and a textured surface. The gear mechanism is located at the end of the body, showing a gear wheel and its associated components. The illustration is rendered in a light gray color, highlighting the mechanical details of the system.

ITS 96  
ITS 96 FL

---

Concealed cam-action  
door closer system

## CONCEALED CAM-ACTION DOOR CLOSER SYSTEM



## THE INTEGRATED SOLUTION FOR PRESTIGE DOORS

Because of its compact design, the ITS 96 system can be concealed for virtual invisibility within the door and frame, integrating inconspicuously with the overall architectural ambience.

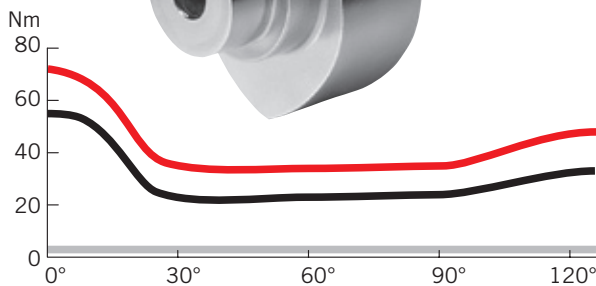
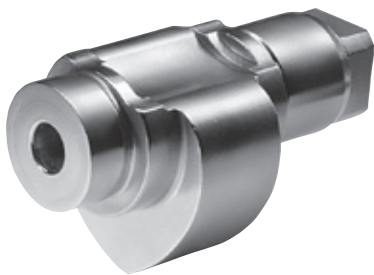
Following the further development of the ITS 96 system to create the ITS 96 FL, the same advantages have now been

complemented with a free-swing function for fire and smoke check doors up to a passage width of 1400 mm and a weight of 180 kg. This enhanced convenience also contributes to providing barrier-free access in a building.

Offering proven EASY OPEN technology, the free-swing

function ensures exceptionally light door opening. DORMA cam-action door closers with EASY OPEN technology feature a heart-shaped cam that significantly reduces the opening resistance that has to be overcome, almost as soon as the door is operated. Children, seniors and the physically disabled can thus open the door

without undue effort. However, it is not only this group of users that benefits from the advantages of the rapidly decreasing opening force required – because this technology also generally ensures a significant reduction in effort for maximum user friendliness.



Force profile of an ITS 96 cam-action door closer (Size EN 3 – 6, max. closing strength setting)

- Opening force
- Closing force
- ITS 96 FL free-swing door closer

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ITS 96 / ITS 96 FL	<b>Features and functions</b>	4
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	<b>RF</b> Hold-open unit	11
	<b>G 96 EMF</b> Slide channel with electro-mechanical hold-open	14
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Smoke detectors	<b>RMZ, RM-N</b>	30
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## ENGINEERING AT ITS BEST

The closer and slide channel of the ITS 96 are of such compact design that they can be installed for complete visual concealment in the door and frame. At the same time, they offer the same level of user convenience expected from high-quality door closers, combined with a wide range of functionality. Its compactness means that the ITS 96 system can be installed in virtually all doors with a leaf thickness of 40 mm or more.

### Plus points...

#### ...for the trade

- Low inventory costs and reduced stocking requirements thanks to streamlined modular system and separate packaging of closer body and slide channel assemblies.
- Same slide channels and accessories for the ITS 96 and ITS 96 FL.

#### ...for the installer

- Non-handed system.
- Apart from the length, the installation dimensions of the ITS 96 EN 3-6 and the ITS 96 FL EN 3-6 are identical.
- Easy adjustment of the closing strength, closing speed and latch action after hanging of the doors.

The ITS 96 FL (hold-open device with free-swing function) is ideally combinable with the existing slide channels and accessories generally available for the ITS 96, which means that the existing portfolio of add-ons can be utilised without any change. The area of application for this model extends to the protection of fire and smoke check doors and also general doors in senior homes, centres for the disabled, and hospitals.

#### ...for the specifier/architect

- Unblemished appearance of prestige doors thanks to concealed installation.
- Compliance with statutory requirements for barrier-free building.
- Universally suitable for single or double doors.

#### ...for the user

- Optimum protection against vandalism thanks to the concealed installation.
- Enhanced user convenience and fully controlled, reliable closing with adjustable latch action.
- Free-swing function from a door angle >0°, resulting in virtually resistance-free opening of the doors in applications requiring passive fire protection.

Data and features		ITS 96		ITS 96 FL
		EN 2-4	EN 3-6	EN 3-6
Variable closing force	Spring strength			
Standard doors <sup>1)</sup>	up to 1100 mm	●	●	●
	up to 1400 mm	–	●	●
External doors, outward opening		–	–	–
Fire and smoke check doors <sup>1)</sup>				
	up to 1100 mm	●	●	–
	up to 1400 mm	–	●	●
Door leaf thickness	up to 40 mm	●	–	–
	up to 50 mm	●	●	●
Max. door leaf weight in kg		130	180	180
Non-handed design (closer)		●	●	●
Arm	Slide channel	●	●	●
Closing force variable by means of adjustable screw		●	●	●
Closing speed adjustable by means of valve		●	●	●
Latching speed adjustable by means of valve		●	●	●
Cushioned limit stay, mechanical		●	●	●
Delayed action		–	–	–
Hold-open		○	○	–
Max. door opening angle (depends on door design)		approx. 120°		
Input voltage		–	–	24 V DC ± 15 %
Power consumption		–	–	3 W
Weight in kg		1.3	2.5	4.2
Dimensions in mm	Length	277	291	476
	Width	32	39.5	39.5
	Height	42	51	51
Door closer tested to EN 1154		●	●	●
Hold-open devices tested to EN 1155		●	●	●
Door co-ordinators tested to EN 1158		●	●	●
CE mark for building products		●	●	●
Suitable for barrier-free building to DIN 18040 and DIN SPEC 1104 (CEN/TR 15894)		●	●	●
ANSI 156.4		●	–	–

● Yes – No ○ Option

1) For applications involving particularly heavy or wide doors, and doors which have to close against wind resistance, the next highest door closer size should be selected, or the closing force adjusted to a higher setting.

## ITS 96

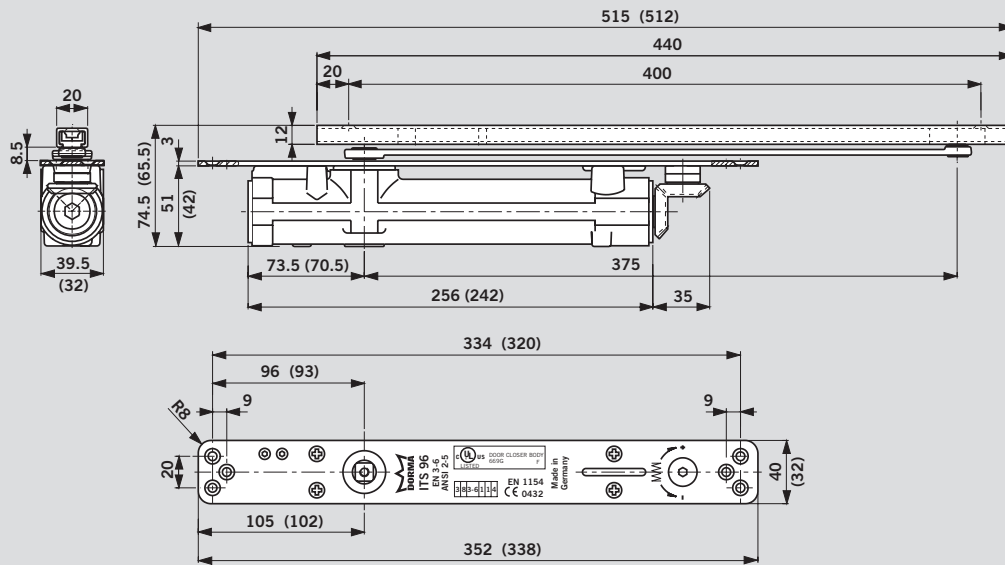
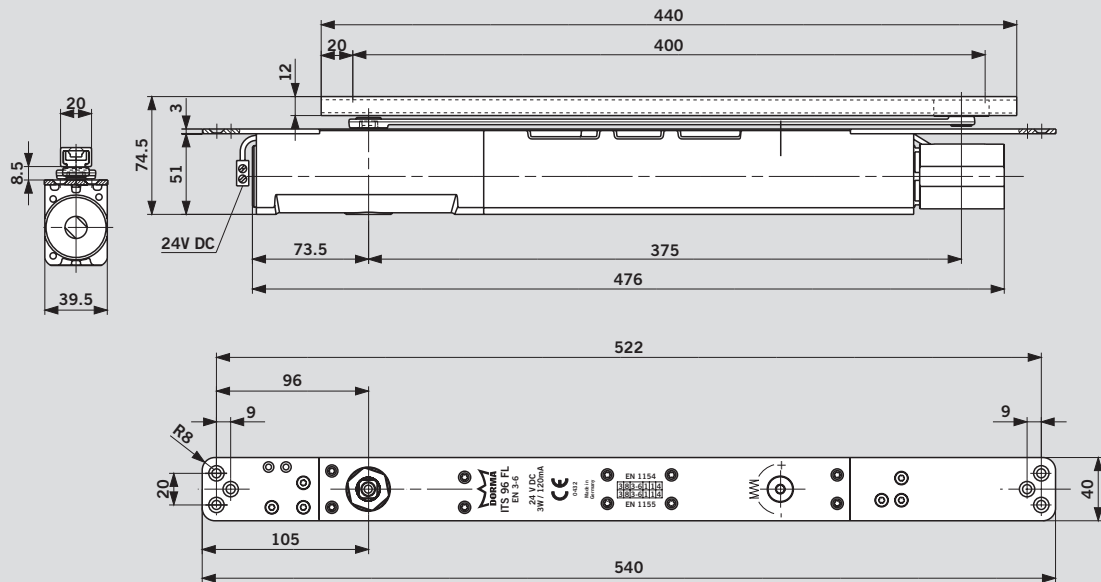


Illustration shows the ITS 96, size 3 – 6  
Dimensions shown in ( ) = ITS 96, size 2 – 4

## ITS 96 FL

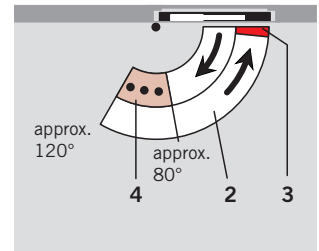
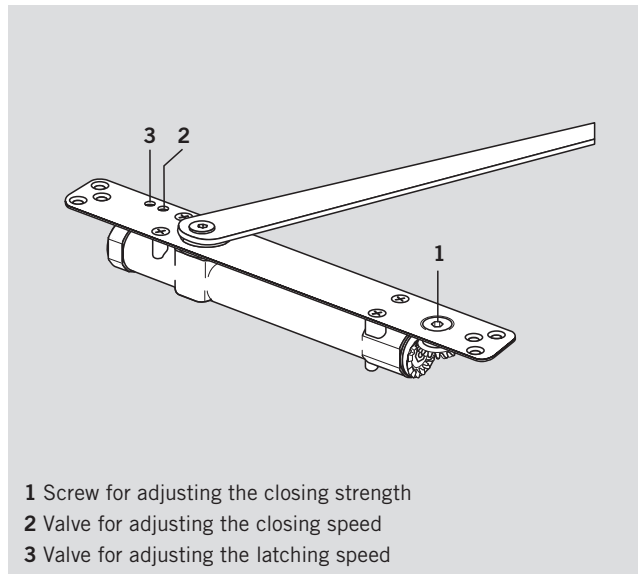


## ITS 96 CAM-ACTION DOOR CLOSER

### Adjustment of settings

The functions of the DORMA ITS 96 can be individually adapted to the local conditions of each application.

The closing strength can be easily varied in accordance with the door width via the adjustment screw accessible from the top. The closing speed and the latch action can likewise be modified at any time using adjustment screws at the top, even after the door has been hung.



- 2 Fully controlled closing with adjustable speed
- 3 Adjustable latch action
- 4 Cushioned limit stay

### F Approval certification

The DORMA ITS 96 is approved by the State Material Testing Authority, Dortmund, in accordance with EN 1154. Additionally, the model size EN 2 – 4 and EN 3 – 6 has CERTIFIRE approval for use on timber FD30 and FD60 doors (code ITT), when installed with the approved intumescent gasket set for FD30 or FD60 supplied by DORMA UK.

The length, width and height of mortice for the body and slide channel must be increased by 2 mm to accommodate the gasket.

### Specification text

Cam-action door closer to EN 1154 for integration in the door leaf or frame, with rapidly decreasing opening resistance, for easy door opening action to DIN SPEC 1104.

Closing force, closing speed and latch action infinitely variable. Non-handed, with slide channel... (see pages 10 – 29).

### Size

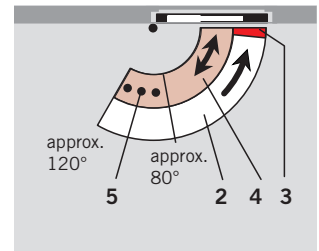
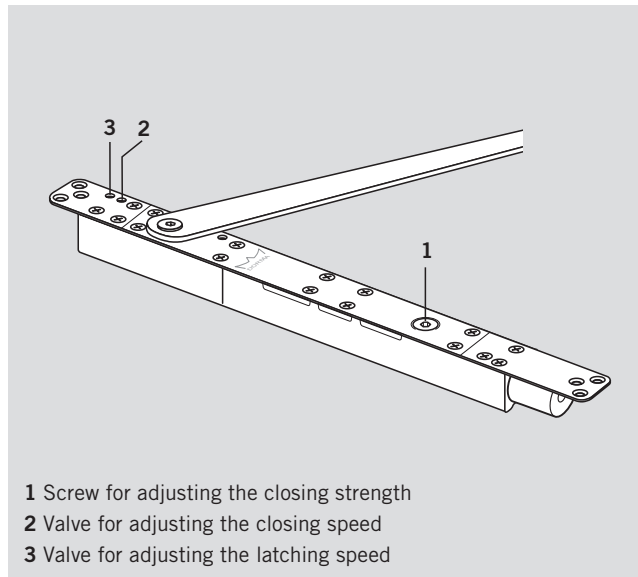
- EN 2 – 4
- EN 3 – 6

**Make** DORMA ITS 96

# ITS 96 FL CAM-ACTION DOOR CLOSER WITH FREE SWING FUNCTION

## Adjustment of settings

As the door is opened, the **free-swing function is activated from an opening angle of >0°**. This feature ensures that the door is particularly easy to use, with the only opening resistance emanating from the hinges. In the event of a fire or power failure, the door is safely closed by the door closer. The closing force can be readily adapted to the door width using an adjustment screw accessible from above. The closing speed and the latch action are likewise adjustable from above, again with the closer in situ and the door remaining hung.



- 2 Fully controlled closing with adjustable speed (non-powered)
- 3 Adjustable latch action (non-powered)
- 4 Free-swing range
- 5 Cushioned limit stay

## F Approval certification

The ITS 96 has been tested to EN 1154 and EN 1155 by the State Material Testing Authority, Dortmund. An approval certificate of the fire and smoke check door to be used is additionally necessary in combination with the ITS 96 FL.

## Specification text

Cam-action door closer, spring strength 3-6 to EN 1154, for integration in the door leaf or door frame, with CE marking, with rapidly decreasing opening resistance, with electro-hydraulic hold-open, 24 V DC, tested to EN 1154, and with free-swing function from a door opening angle >0°. Closing speed and latch action variable, non-handed, with slide channel ... (see pages 10 – 29).

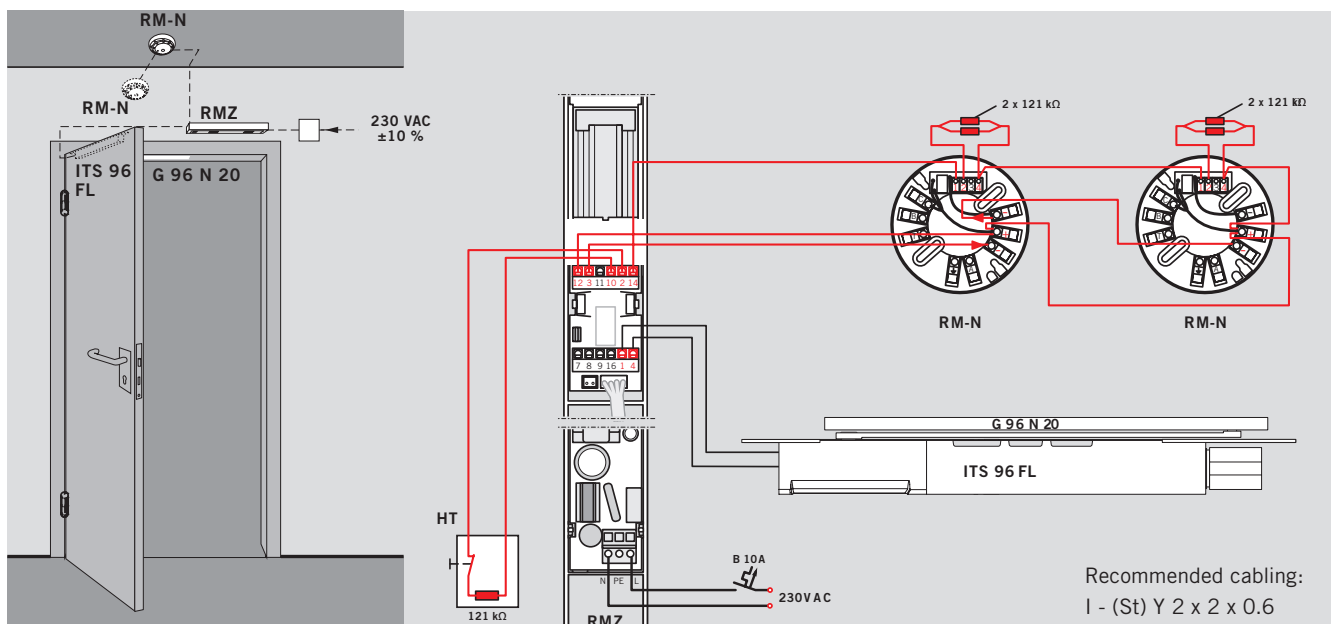
Suitable for barrier-free building to DIN 18040 and DIN SPEC 1104 (CEN/TR 15894). General building approval granted by DIBt, Berlin, for use in a hold-open system. Acceptance inspection of the system is mandatory in Germany.

## Regulations and information

The use of hold-open devices may be subject to certain conditions – see page 35.

**Make**  
 DORMA ITS 96 FL

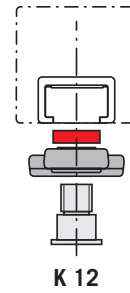
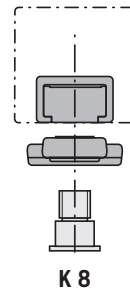
## Example application, hold-open system



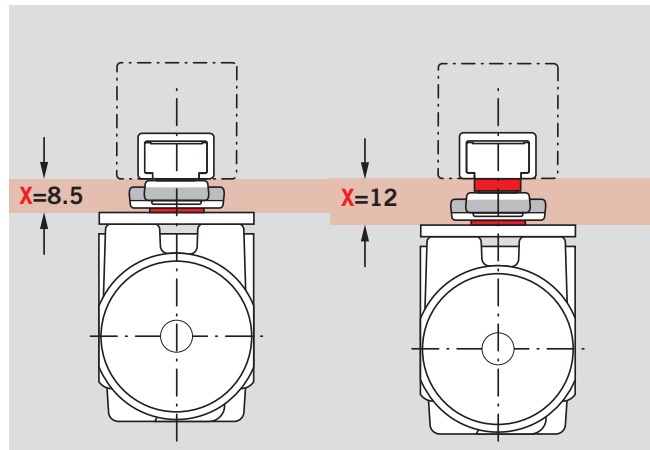
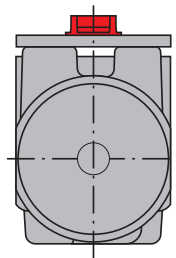
# APPLICATIONS AND INSTALLATION

The DORMA ITS 96 / ITS 96 FL concealed cam-action door closer system is suitable for various door designs and different rebate clearance dimensions. This is achieved through the combination of different spindle lengths available with the closer and the universal K8/K12 slide channel.

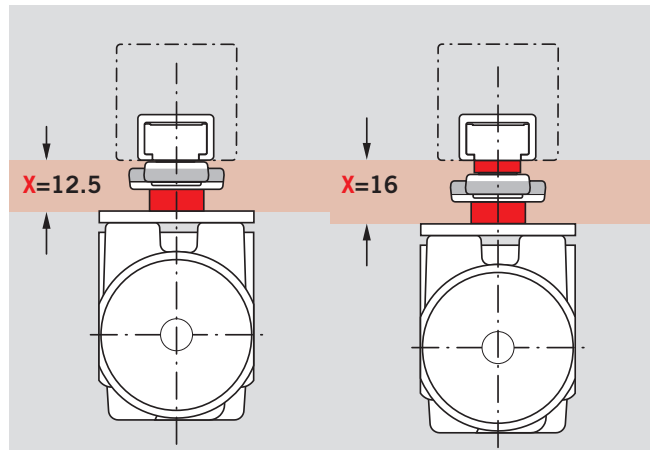
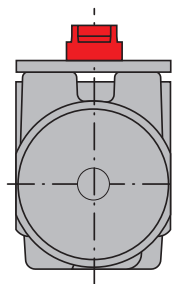
G 96 ...



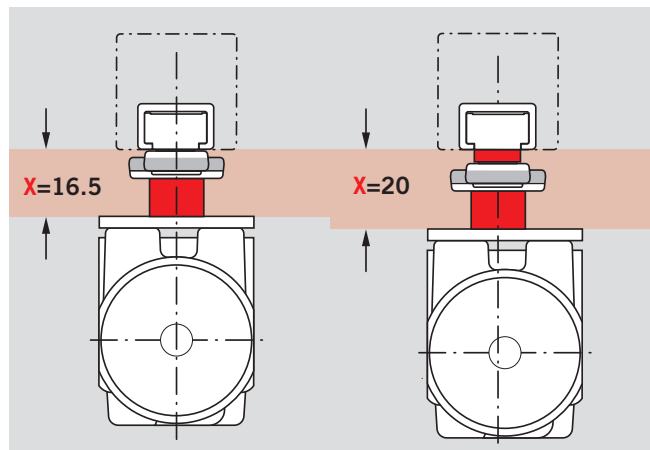
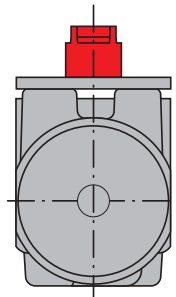
ITS 96 2-4  
ITS 96 3-6  
ITS 96 FL 3-6



ITS 96 2-4  
ITS 96 3-6  
ITS 96 FL 3-6  
with 4 mm  
extended spindle

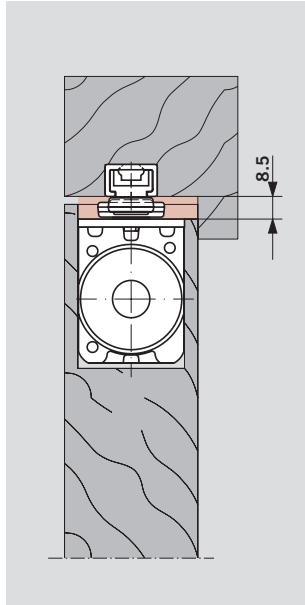


ITS 96 2-4  
ITS 96 3-6  
ITS 96 FL 3-6  
with 8 mm  
extended spindle




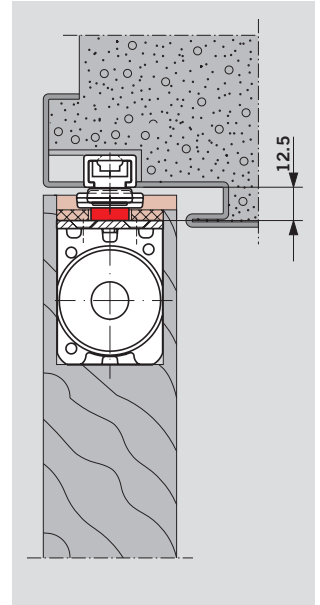


Timber door, flush-closing, clearance 8.5 mm, with ITS 96/ITS 96 FL EN 3-6 and slide channel G 96 N20 K8.

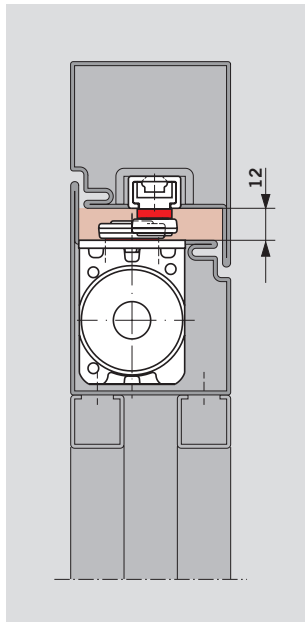


Timber door with steel frame, flush closing, clearance 12.5 mm, with ITS 96/ITS 96 FL EN 3-6, 4 mm extended spindle and slide channel G 96 N20 K8.

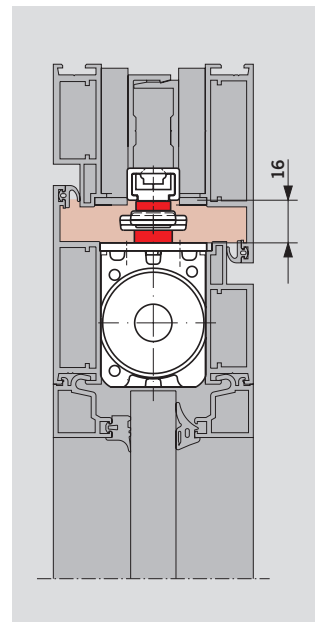
 Please check dimensions carefully



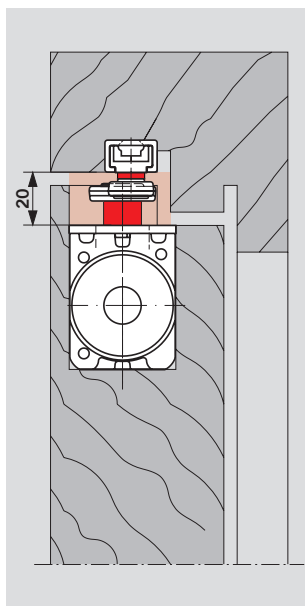
Tubular steel frame door, flush-closing, clearance 12 mm, with ITS 96/ITS 96 FL EN 3-6 and slide channel G 96 N20 K12.




Aluminium tubular frame door, flush-closing, clearance 16 mm, with ITS 96/ITS 96 FL EN 3-6, 4 mm extended spindle and slide channel G 96 N20 K12.

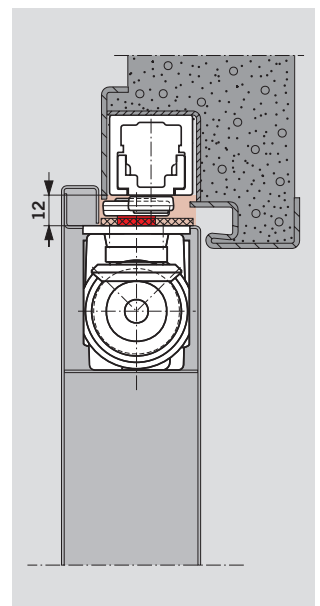


Timber door with solid frame, double-rebated, clearance 20 mm, with ITS 96/ITS 96 FL EN 3-6, 8 mm extended spindle and slide channel G 96 N20 K12.

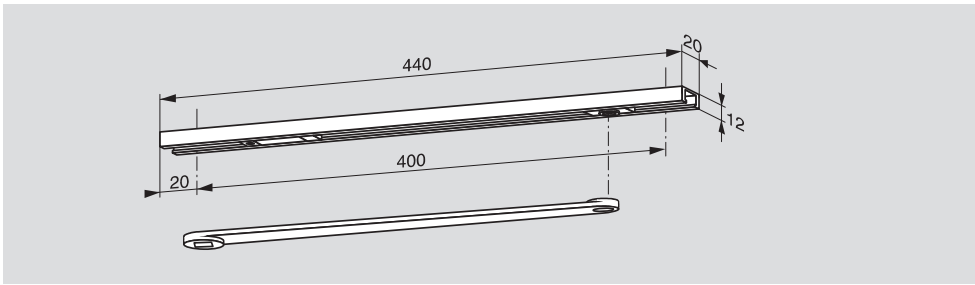


Hollow steel door with steel frame, over-rebated, clearance 12 mm, with ITS 96 EN 3-6, 4 mm extended spindle and slide channel G 96 EMF K8.

 Please check dimensions carefully



## G 96 N20 SLIDE CHANNEL

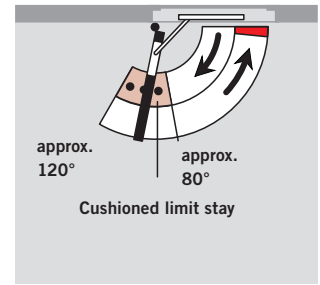


The DORMA G 96 N20 slide channel pack includes the arm, slide channel, slide block, cushioned limit stay and fixing screws, and can be combined with both door closer sizes in the DORMA ITS 96 range.

The DORMA G 96 N20 slide channel is adjustable to K8/K12.

### **F** Approval certification

The G 96 N20 slide channel is tested to EN 1154 in conjunction with the ITS 96.



### Specification text

DORMA ITS 96 ... door closer (see pages 4 and 7) with slide channel G 96 N20

### Version

- LH (ISO 6) K8/K12
- RH (ISO 5) K8/K12

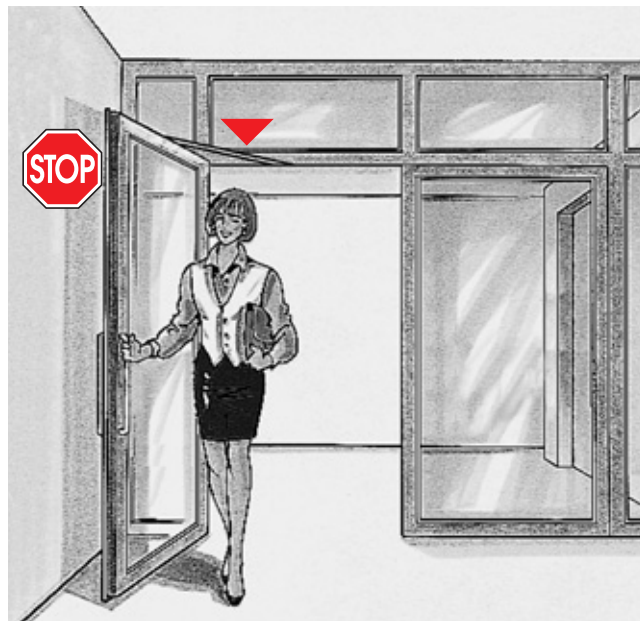
### Make

DORMA ITS 96 N20  
ITS 96 FL N20

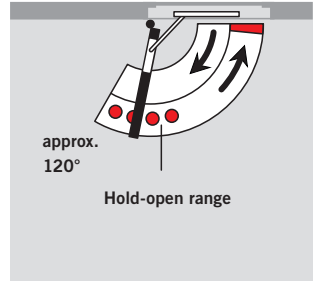
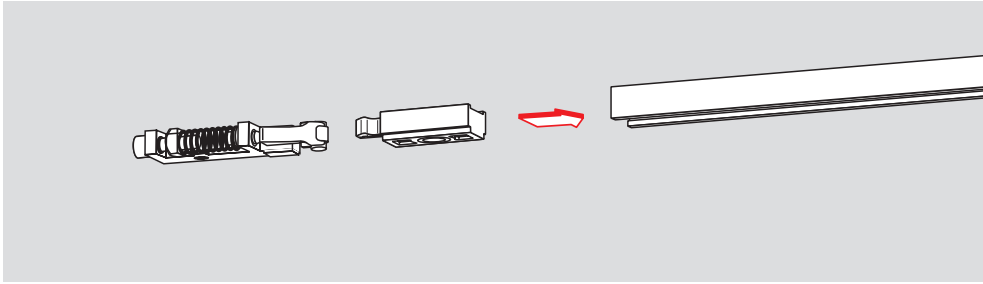
### Cushioned limit stay

The integrated mechanically cushioned limit stay of the DORMA ITS 96 is progressively damped to protect the wall and doors from the damage arising from the door being opened too wide (under conditions of normal usage). It can be adjusted to an opening angle between approx. 80° and max. 120°.

**The cushioned limit stay feature is not an overload protection device and in many cases cannot replace a doorstop.**



## HOLD-OPEN UNIT



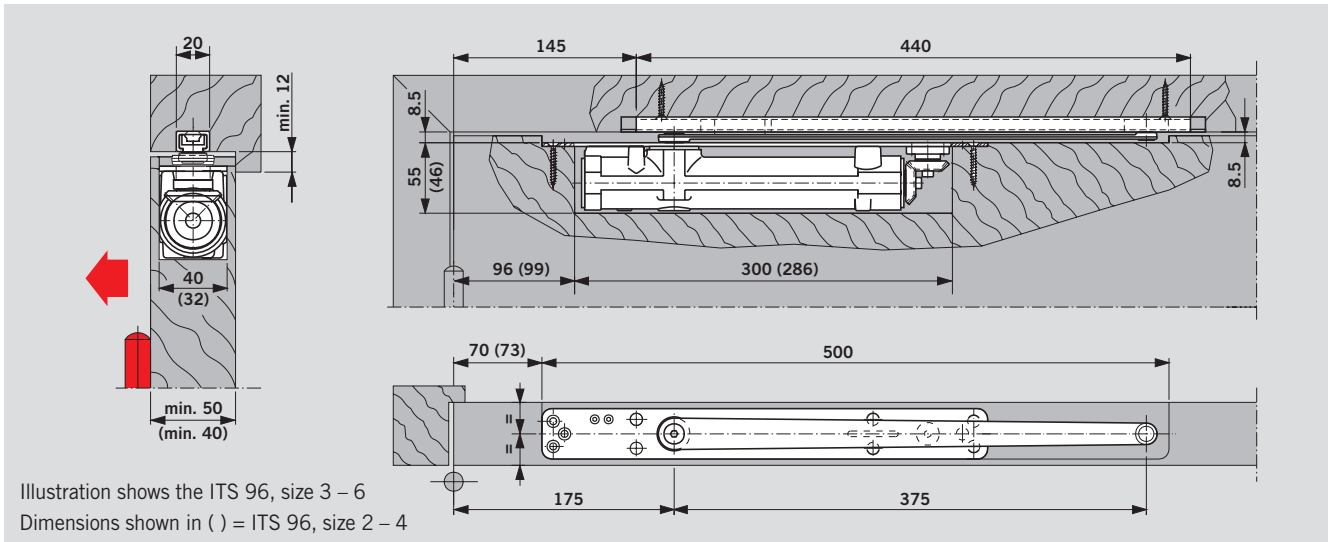
The RF hold-open unit enables doors to be securely held without any fall-back at precisely the required position up to an opening angle of approx. 120°.

The pull-off force can be adjusted to any door situation. The RF mechanism is non-handed and has been specifically designed for retrofitting to the G 96 N20 slide channel.

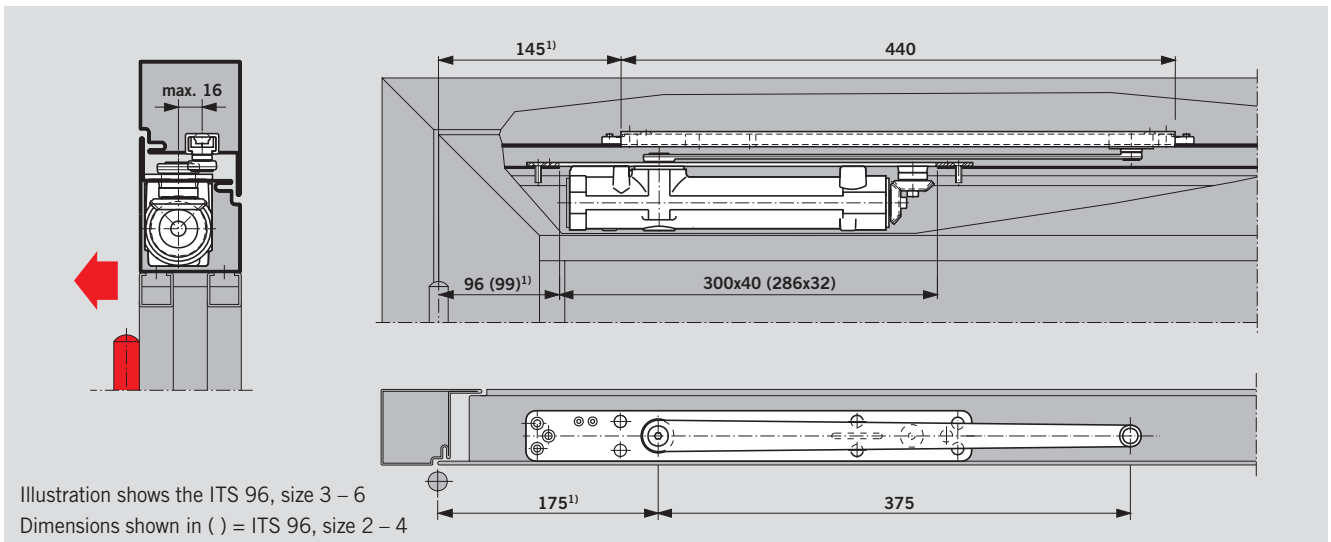
**Not for fire and smoke check doors.**

### Accessories

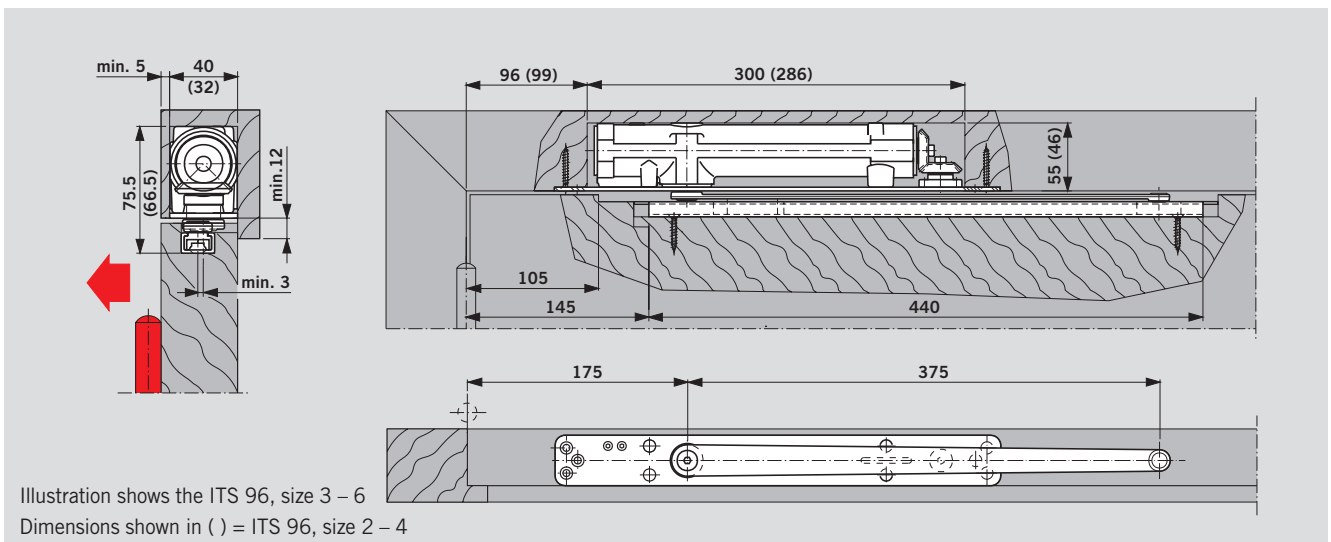
- Hold-open unit  
DORMA RF G 96 N20



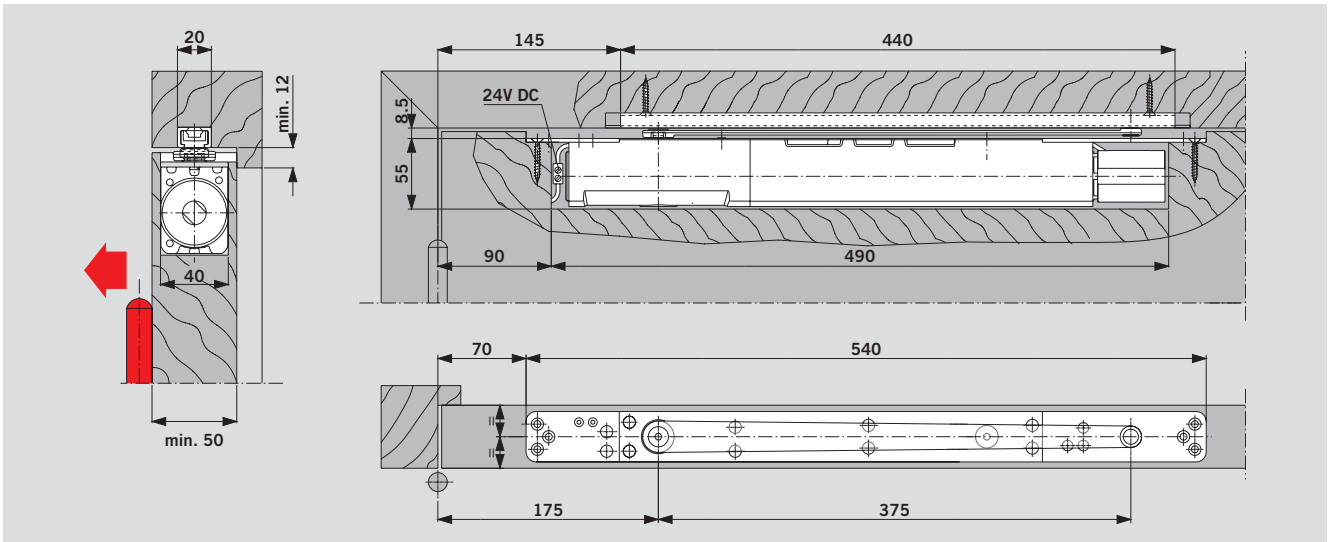
ITS 96 door closer with DORMA G 96 N20 slide channel in a **timber door**.  
 Example: Anticlockwise-closing (ISO 6) door; mirror image applies to clockwise-closing (ISO 5) doors.



ITS 96 door closer with DORMA G 96 N20 slide channel in an **aluminium framed door**. Example: Anticlockwise-closing (ISO 6) door; mirror image applies to clockwise-closing (ISO 5) doors. <sup>1)</sup> Add 25 mm for aluminium profile frames with corner-angle reinforcement.

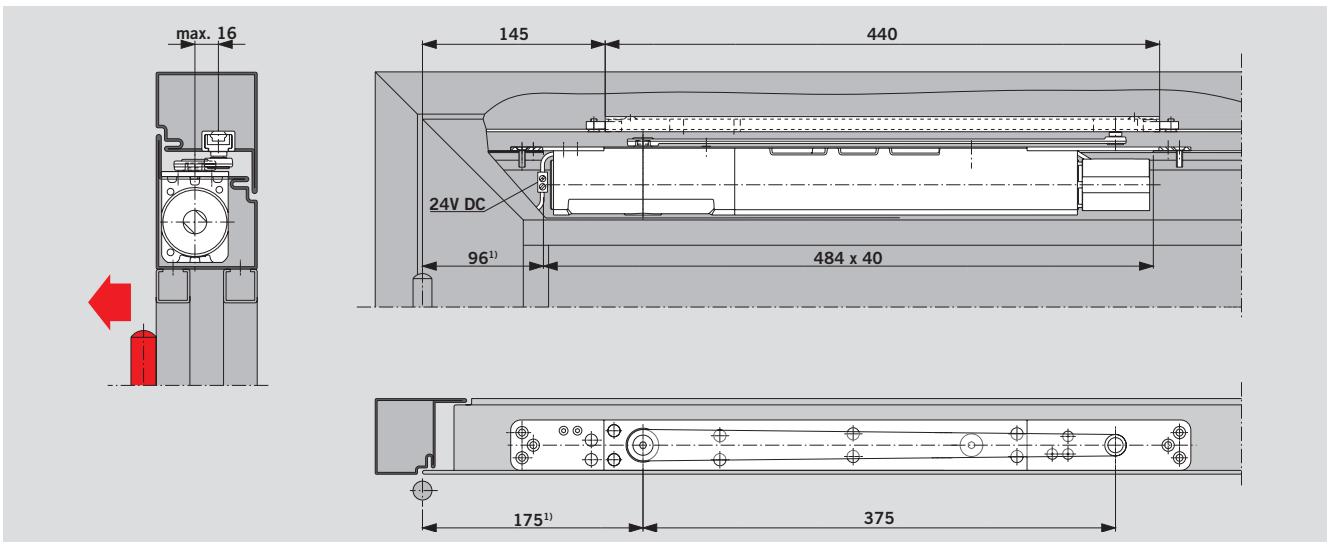


ITS 96 door closer with DORMA G 96 N20 slide channel in a timber door transom fixing.  
 Example: Anticlockwise-closing (ISO 6) door; mirror image applies to clockwise-closing (ISO 5) doors.

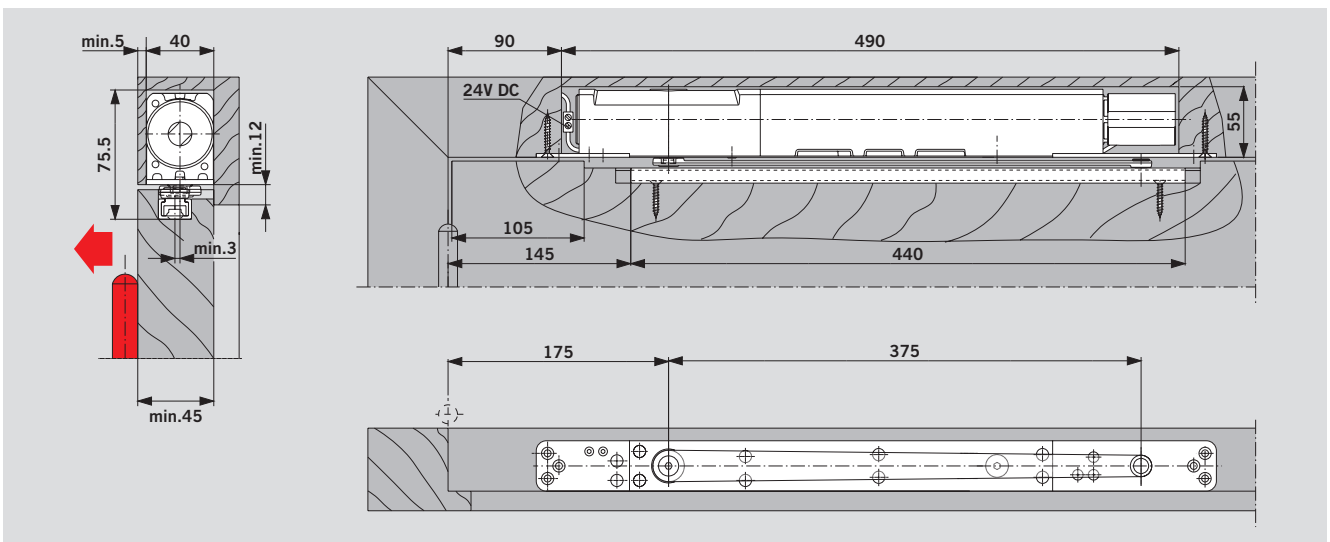


ITS 96 FL door closer with DORMA G 96 N20 slide channel in a **timber door**.

Example: Anticlockwise-closing (ISO 6) door; mirror image applies to clockwise-closing (ISO 5) doors.



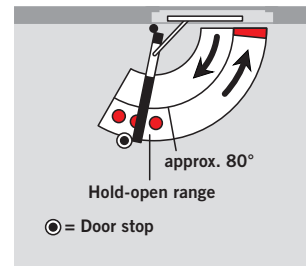
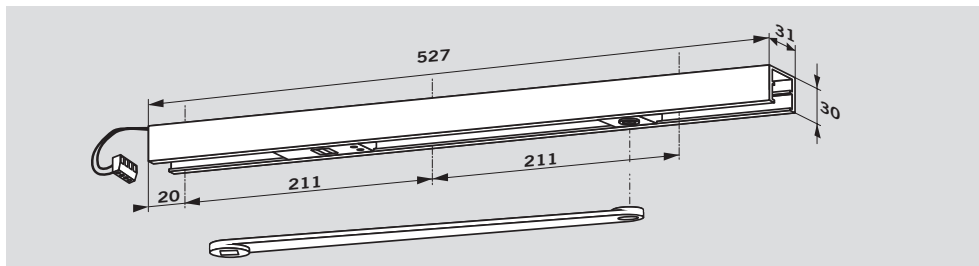
ITS 96 FL door closer with DORMA G 96 N20 slide channel in an **aluminium framed door**. Example: Anticlockwise-closing (ISO 6) door; mirror image applies to clockwise-closing (ISO 5) doors. <sup>1)</sup> Add 25 mm for aluminium profile frames with corner-angle reinforcement.



ITS 96 FL door closer with DORMA G 96 N20 slide channel in a timber door transom fixing.

Example: Anticlockwise-closing (ISO 6) door; mirror image applies to clockwise-closing (ISO 5) doors.

# G 96 EMF SLIDE CHANNEL WITH ELECTRO-MECHANICAL HOLD-OPEN



The slide channel assembly enables the door to be held open securely at a pre-selected position without fall-back. The hold-open point can be adjusted within an opening angle of approx. 80° and 120°.

**Note:**

The hold-open point also constitutes the max. door opening angle (position door stop accordingly).

In the event of an alarm or a fault in the power supply, the hold-open is released and the door is closed by the door closer. The release is triggered by a signal from external smoke detectors (e.g. RMZ). The release force for the hold-open mechanism can be adjusted without tools and is rated to ensure that the door can also be easily released manually.

The G 96 EMF slide channel assembly comprises the arm, slide channel, slide block, electro-mechanical hold-open unit and fixing screws, and can be combined with both door closer sizes in the ITS 96 range. In the case of particularly large and heavy doors (over 1250 mm), we recommend that EM hold-open magnets be employed instead of the electro-mechanical hold-open unit.

**Specification text**

ITS 96 ... door closer (see pages 4 and 5) with G 96 EMF K8/K12 slide channel assembly, with integrated 24 V DC electro-mechanical hold-open, tested to EN 1155. Hold-open point (80° – 120°) and release force adjustable. Approved by the Institute for Building Technology, Berlin, for general use in hold-open systems. Acceptance inspection of the system is mandatory in Germany.

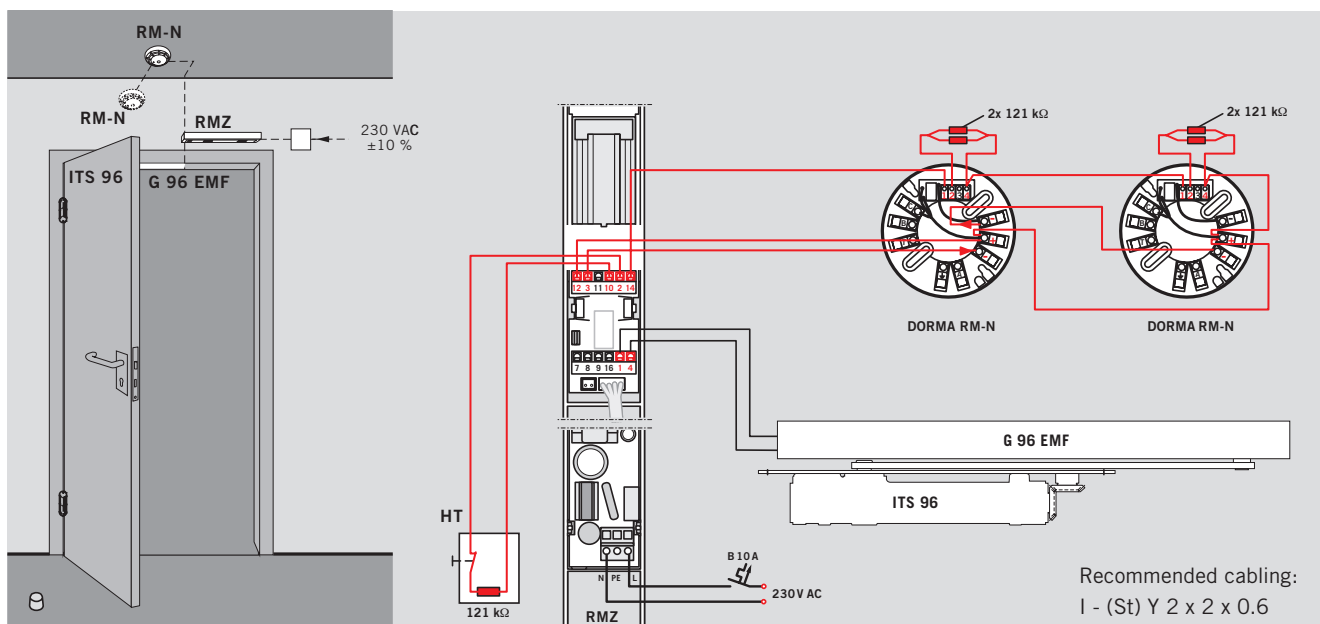
Technical data	
Operating voltage:	24 V DC, ± 15%
Power input:	1.4 W
Rated for continuous duty:	100% ED
Release force:	Adjustable

**Version**

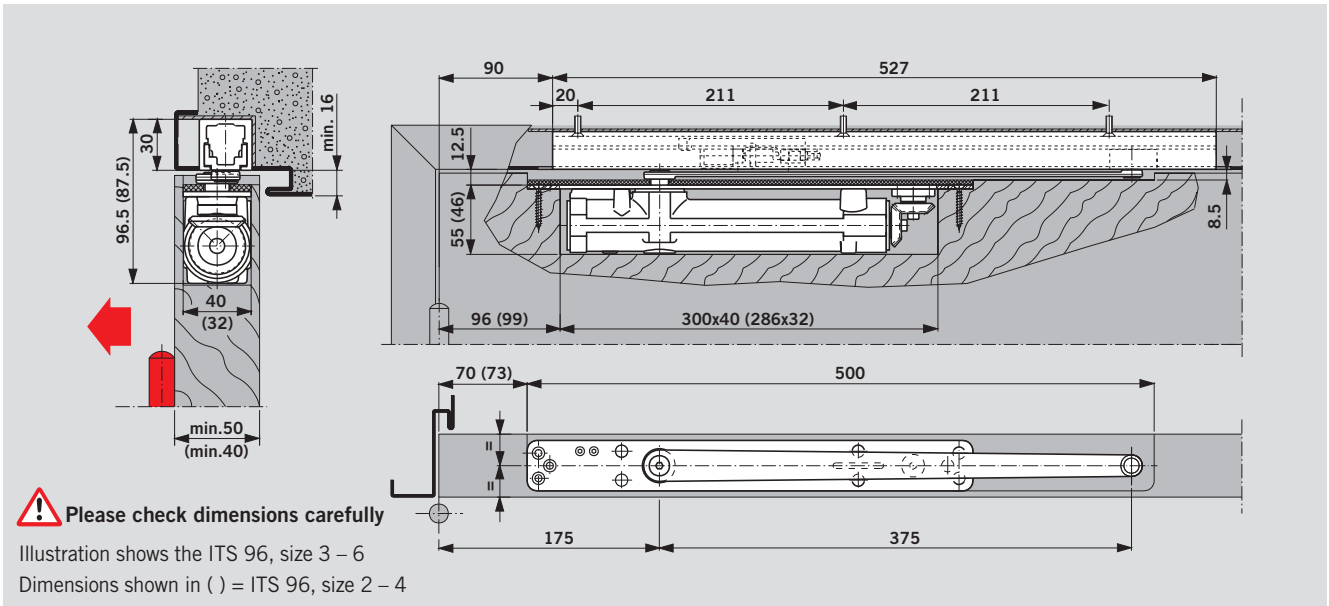
- LH (ISO 6) K8/K12
- RH (ISO 5) K8/K12

**Make DORMA ITS 96 EMF**

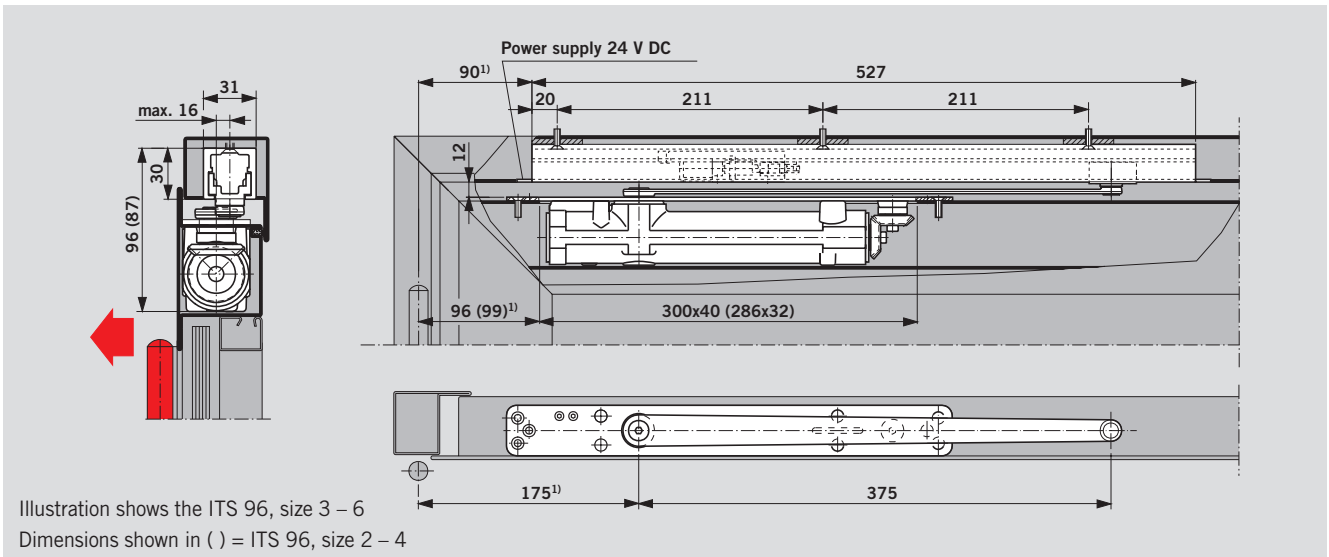
**Example application, hold-open system**



Recommended cabling:  
I - (St) Y 2 x 2 x 0.6



ITS 96 door closer with DORMA G 96 EMF slide channel assembly in a **timber door**.  
 Example: Anticlockwise-closing (ISO 6) door; mirror image applies to clockwise-closing (ISO 5) doors.



ITS 96 door closer with DORMA G 96 EMF slide channel assembly in an **aluminium framed door**.  
 Example: Anticlockwise-closing (ISO 6) door; mirror image applies to clockwise-closing (ISO 5) doors.  
<sup>1)</sup> Add 25 mm for aluminium profile frames with corner-angle reinforcement.

**F Approval certification**

The ITS 96 EMF has been tested by the State Material Testing Authority, Dortmund, to EN 1155, Electrically Powered Hold-open Devices.

**Regulations/Information**

The use of hold-open devices may be subject to certain conditions – see page 35.

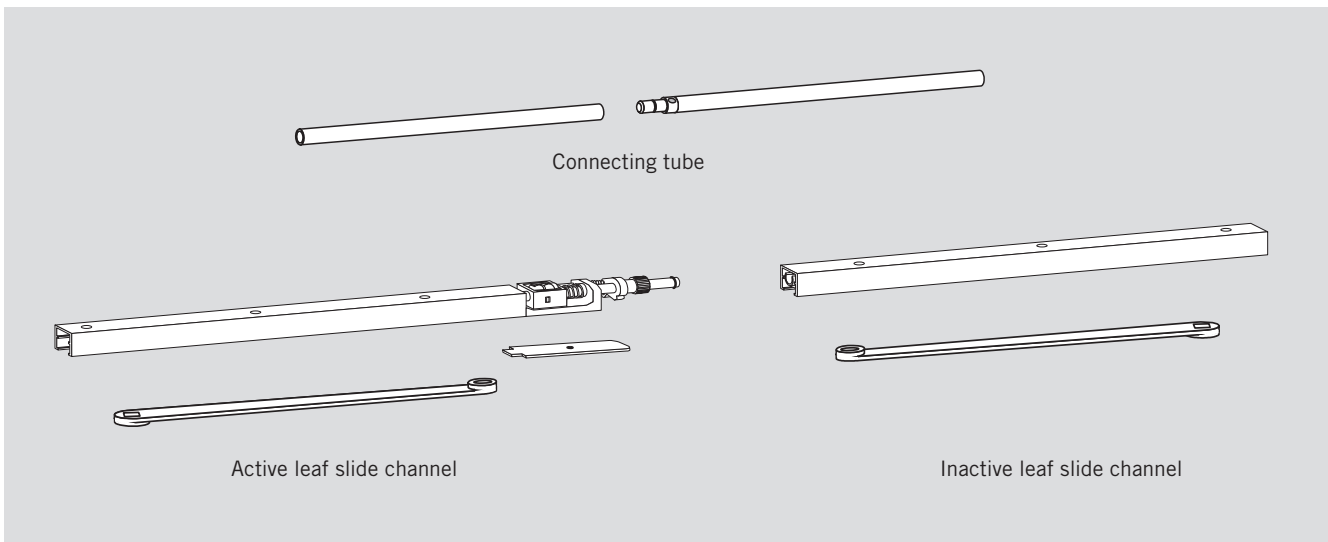
## G 96 GSR SLIDE CHANNEL DOOR CO-ORDINATOR

The slide channel with integral door co-ordinator for pairs of doors ensures that the active leaf always closes after the inactive leaf.

The G 96 GSR slide channel door co-ordinator features a push rod clamping system. As this system operates independently of door closer hydraulics, it offers maximum safety and reliability.

An overload release protects the door co-ordinator and the door set from damage. The G 96 GSR can be combined with both door closer sizes of the DORMA ITS 96 and ITS 96 FL range.

Version/Function	Door width (mm)	Door leaf thickness min. (mm)	Closer size ITS 96
<b>GSR</b>			
Door co-ordinator	1450 – 2200	40	2 – 4
	1450 – 2800	50	3 – 6

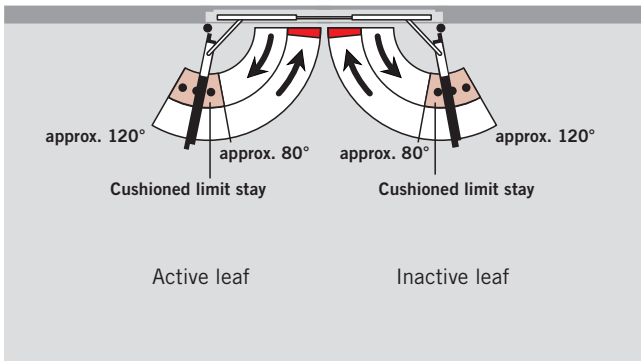


A G 96 GSR slide channel door co-ordinator encompasses an active leaf and an inactive leaf slide channel with cushioned limit stay, a connecting tube, a cover for the co-ordinator mechanism on the active leaf slide channel, and two arms.

### **F** Approval certification

The ITS 96 GSR has been tested to EN 1158, Door Co-ordinator Devices, by the State Material Testing Authority, Dortmund/Germany.





**Specification text**

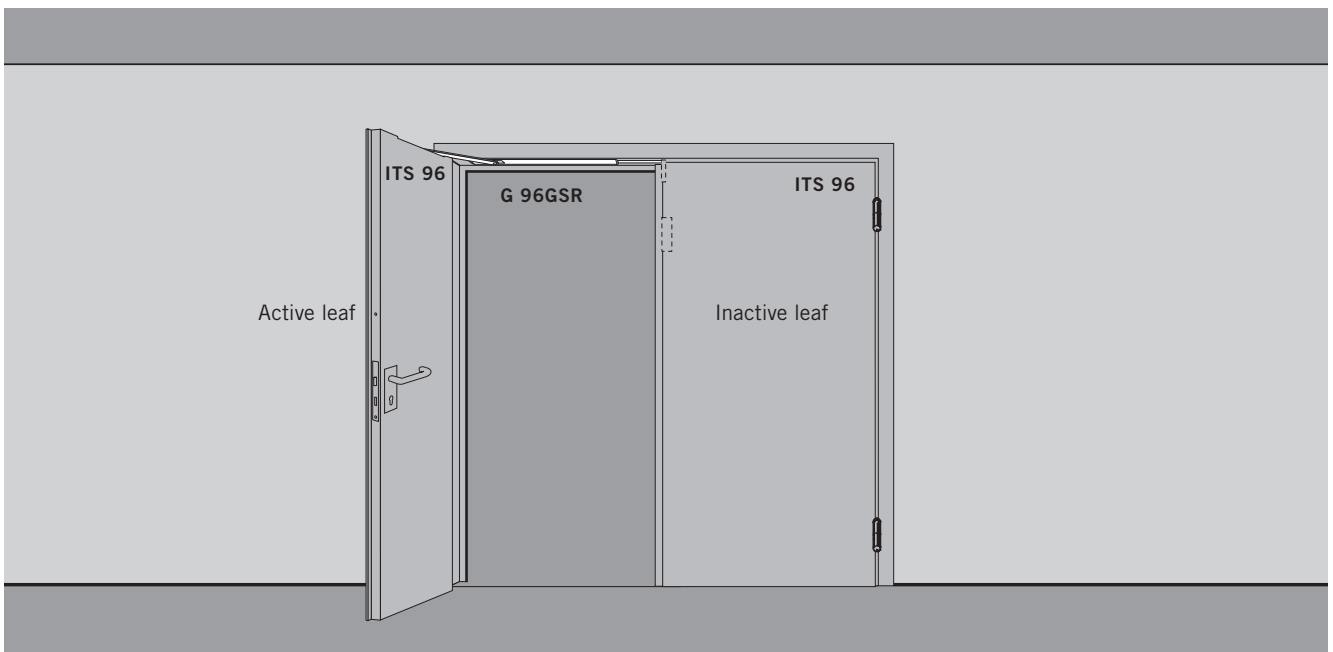
ITS 96 ... door closer (see pages 4 – 6) with G 96 GSR K8/K12 slide channel, featuring integrated mechanical door co-ordinator using a push rod clamping system with overload release which operates independently of the closer hydraulics. Standard design – door leaves with no hold-open. Tested to EN 1158.

Approved by the Institute of Building Technology, Berlin, for general use in conjunction with fire and smoke check doors.

**Make**

DORMA ITS 96 GSR

**Example application**



# G 96 GSR-EMF SLIDE CHANNEL DOOR CO-ORDINATOR WITH ELECTRO-MECHANICAL HOLD-OPEN

This door co-ordinator not only ensures the correct closing sequence of pairs of doors, but also allows the door leaves to be individually held open by an electro-mechanical device. The hold-open point for both door leaves lies between approx. 80° and 120°.

**Note:**

The hold-open point also constitutes the max. door opening angle – position door stop accordingly.

In the event of an alarm or a fault in the power supply, the hold-open is released and the door is closed by the door closer. The release is initiated by a signal from external smoke detectors (e.g. RMZ) or other fire alarm.

The release force for the hold-open mechanism can be adjusted without tools and is rated to ensure that the door can also be easily released manually.

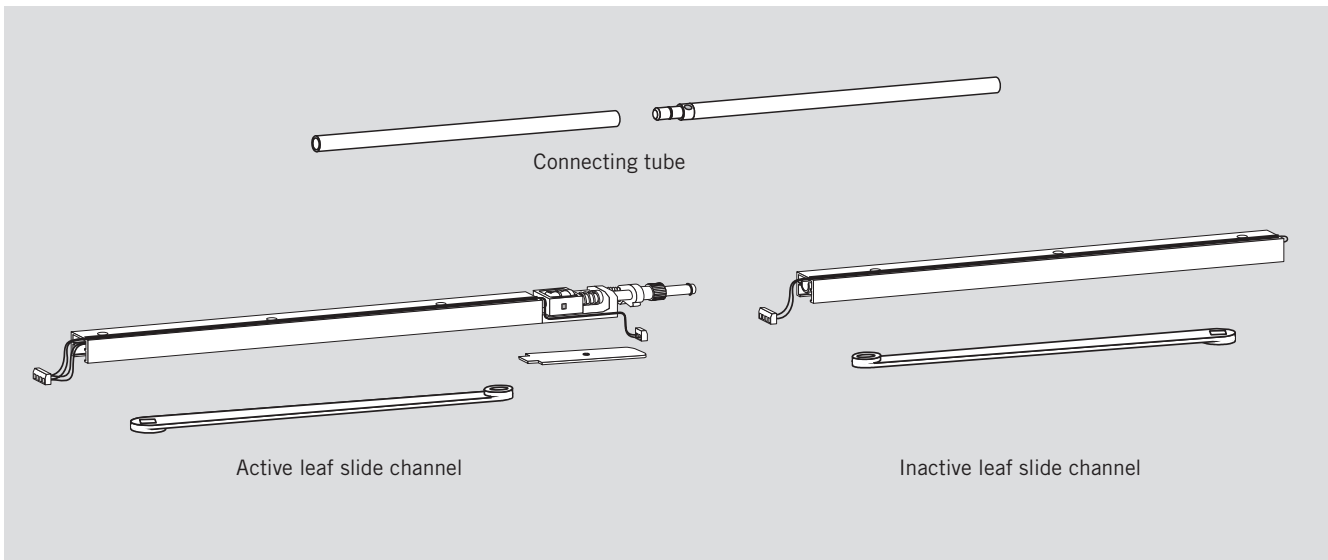
The G 96 GSR-EMF slide channel door co-ordinator can be combined with both door closer sizes of the DORMA ITS 96 range.

In the case of particularly large and heavy doors (over 2500 mm), we recommended that EM hold-open magnets be employed instead of the electro-mechanical hold-open unit.

**Regulations/Information**

The use of hold-open devices may be subject to certain conditions – see page 35.

Version/Function	Door width (mm)	Door leaf thickness min. (mm)	Closer size ITS 96
<b>GSR-EMF</b>			
Door-coordinator and hold-open in both leaves	1450 – 2200	40	2 – 4
	1450 – 2800	50	3 – 6

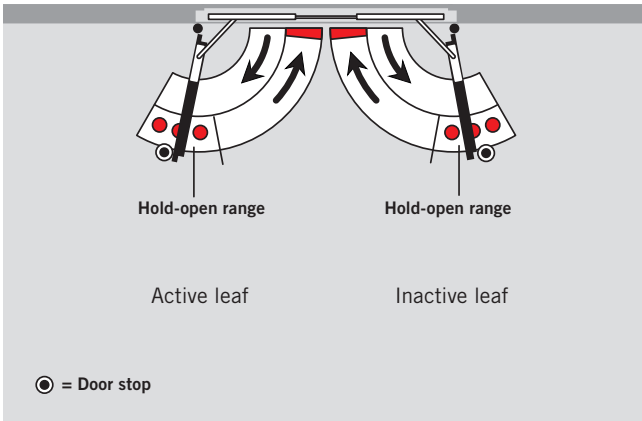


A G 96 GSR slide channel door co-ordinator encompasses an active leaf and an inactive leaf slide channel with electro-mechanical hold-open, a connecting tube, a cover for the co-ordinator mechanism on the active leaf slide channel, and two arms.

Technical data	
Operating voltage:	24 V DC, ± 15%
Power input:	2.8 W
Rated for continuous duty:	100% ED
Release force:	adjustable

**F Approval certification**

The ITS 96 GSR-EMF has been tested by the State Materials Testing Authority, Dortmund, to EN 1158, Door Co-ordinator Devices, and EN 1155, Electrically Powered Hold-Open Devices.



**Specification text**

ITS 96 ... door closer (see pages 4 – 6) with G 96 GSR-EMF K8/K12 slide channel, featuring integrated mechanical door co-ordinator using a push rod clamping system with overload release which operates independently of the closer hydraulics, with integrated electro-mechanical hold-open, 24 V DC. Hold-open point (80° – 120°) and release force adjustable.

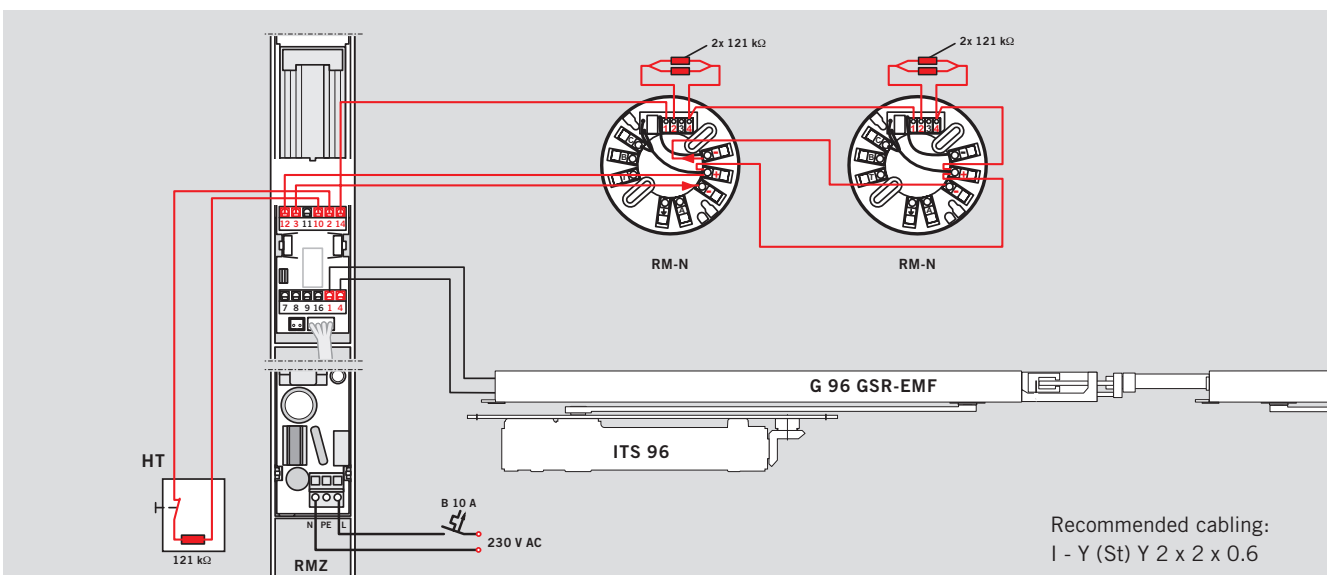
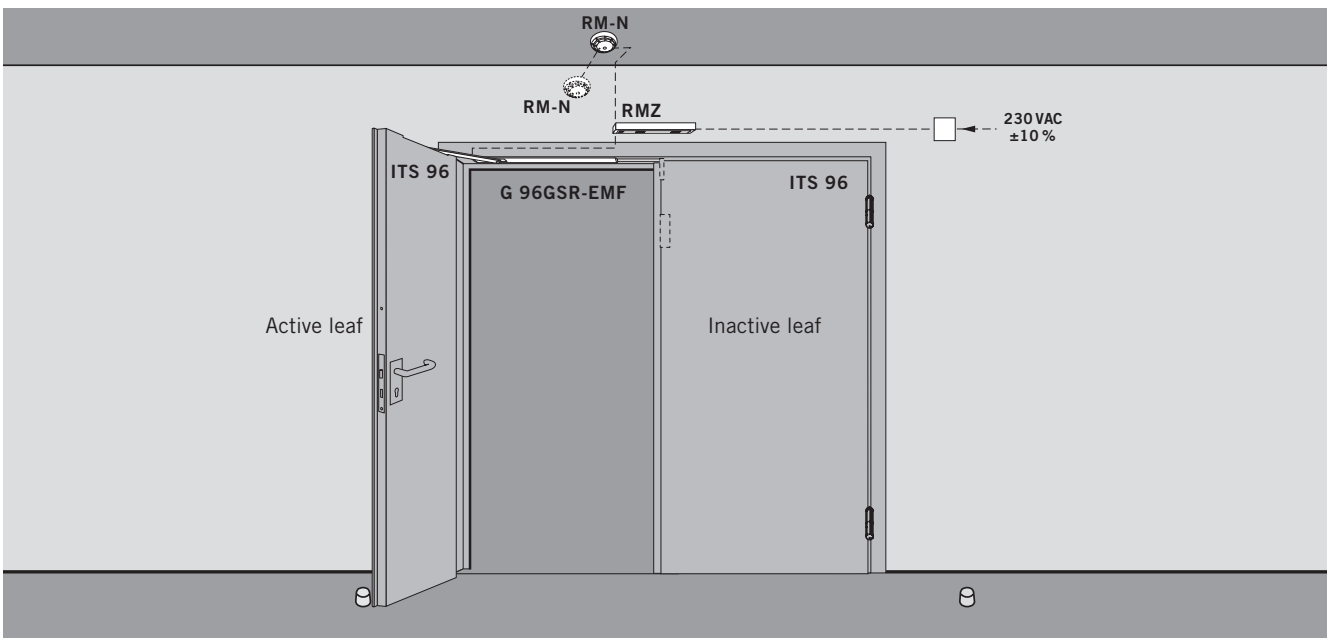
Tested to EN 1158 and EN 1155.

Approved by the Institute of Building Technology, Berlin, for general use in hold-open systems. Acceptance inspection of the system is mandatory in Germany.

**Make**

DORMA ITS 96 GSR-EMF

**Example application, hold-open system**



# INSTALLATION IN A TIMBER DOOR

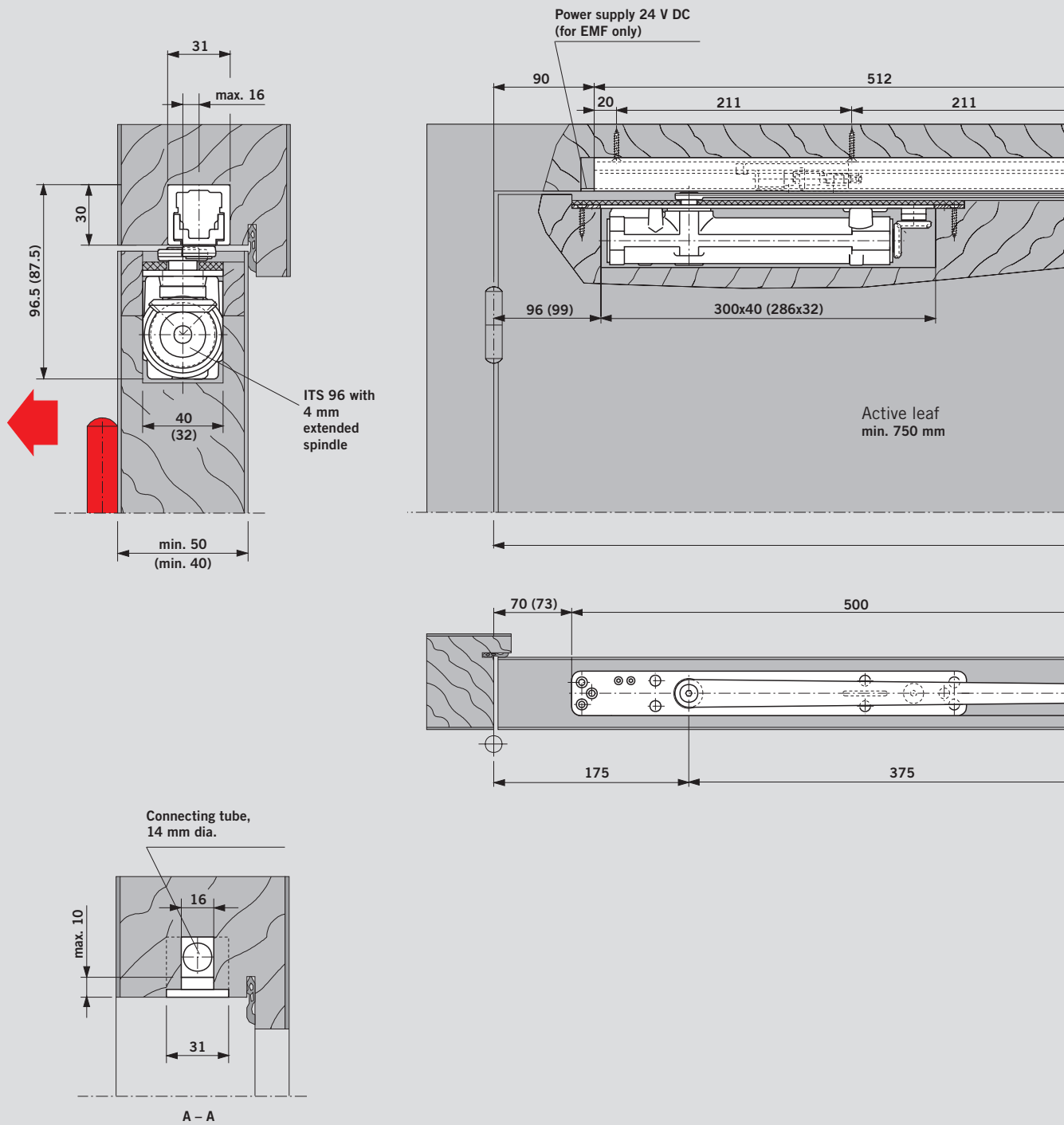
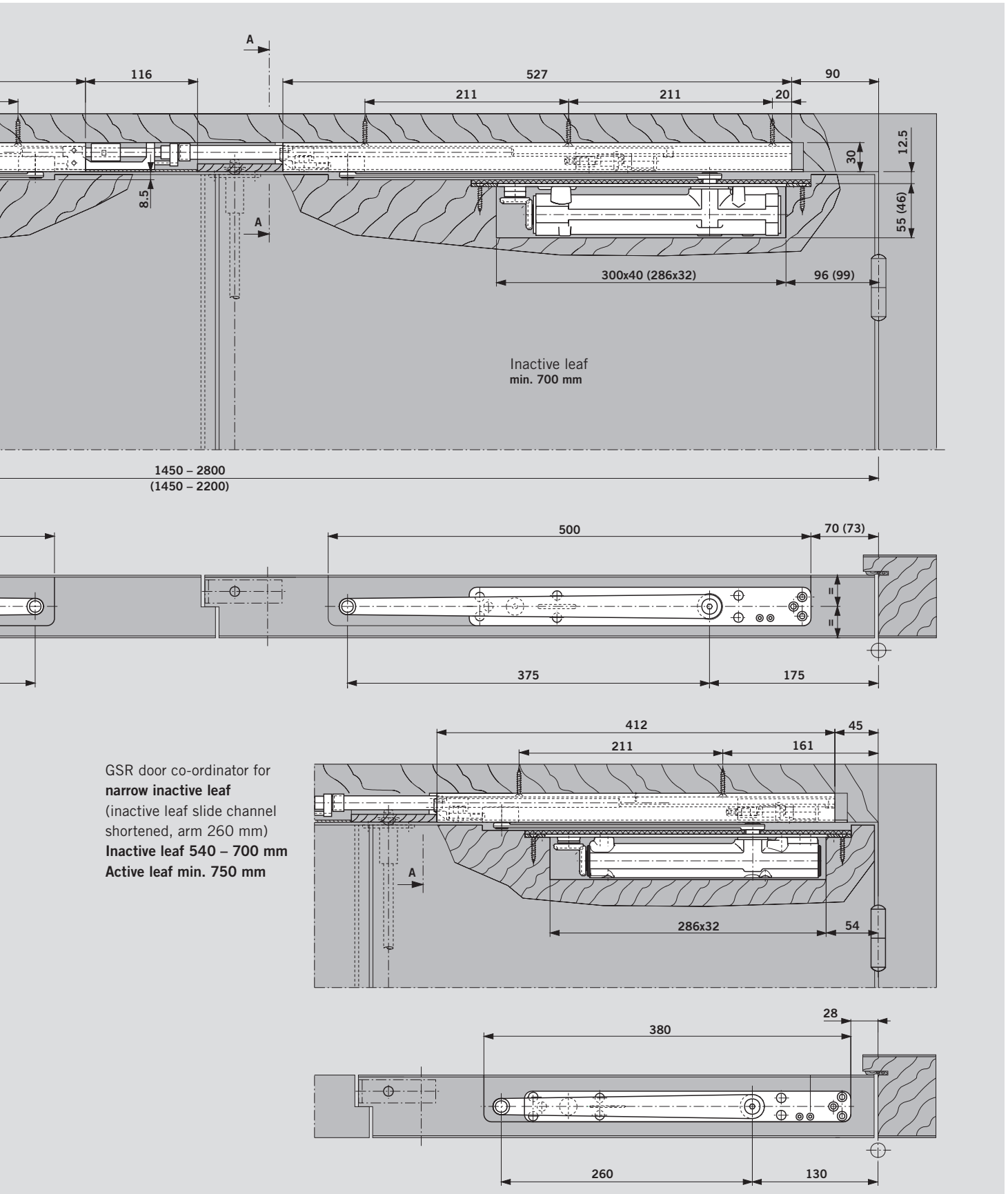


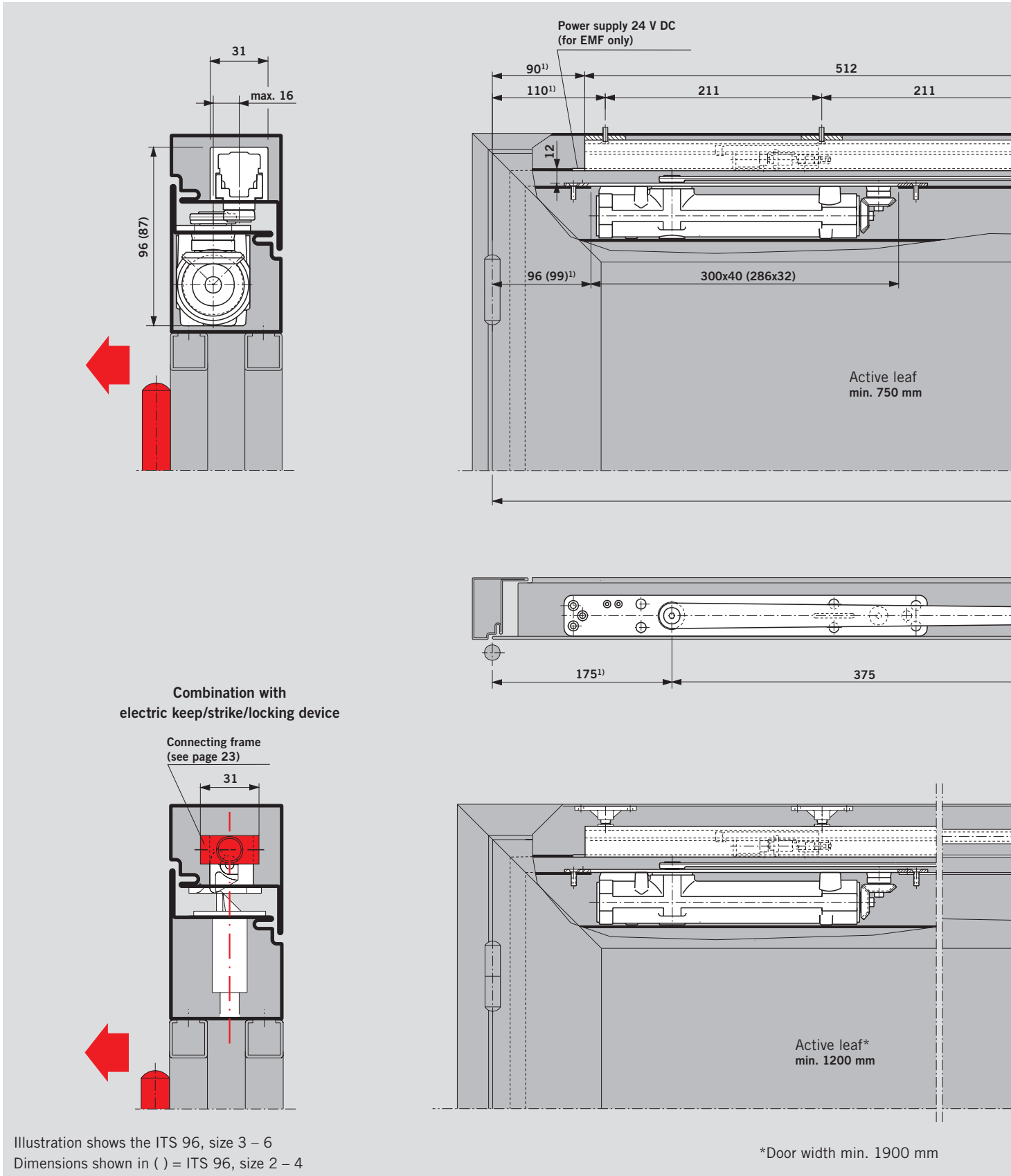
Illustration shows the ITS 96, size 3 – 6  
 Dimensions shown in ( ) = ITS 96, size 2 – 4

ITS 96 door closer with G 96 GSR/GSR-EMF slide channel.  
 Example: Anticlockwise-closing (ISO 6) active leaf; mirror image applies to clockwise-closing (ISO 5) active leaf.



**F** When installed in fire and smoke check doors, ensure that the DORMA MK 397 carry bar is also fitted.

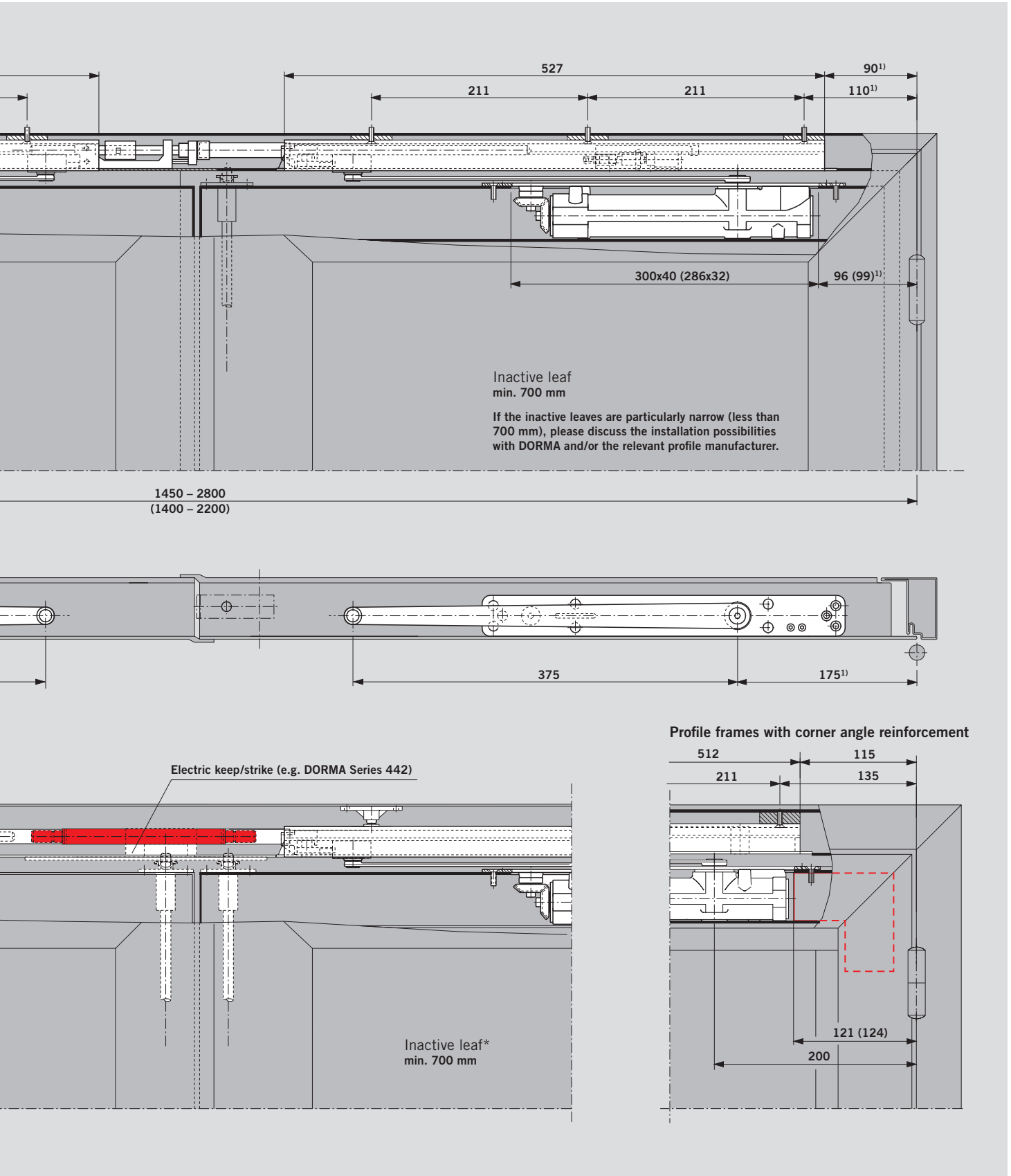
# INSTALLATION IN AN ALUMINIUM FRAMED DOOR



ITS 96 door closer with G 96 GSR/GSR-EMF slide channel.

Example: Anticlockwise-closing (ISO 6) active leaf; mirror image applies to clockwise-closing (ISO 5) active leaf.

<sup>1)</sup> Add 25 mm for aluminium profile frames with corner-angle reinforcement.



**F** When installed in fire and smoke check doors, ensure that the DORMA MK 397 carry bar is also fitted.

## G 96 GSR SLIDE CHANNEL DOOR CO-ORDINATOR WITH FREE SWING FUNCTION AT THE ACTIVE LEAF

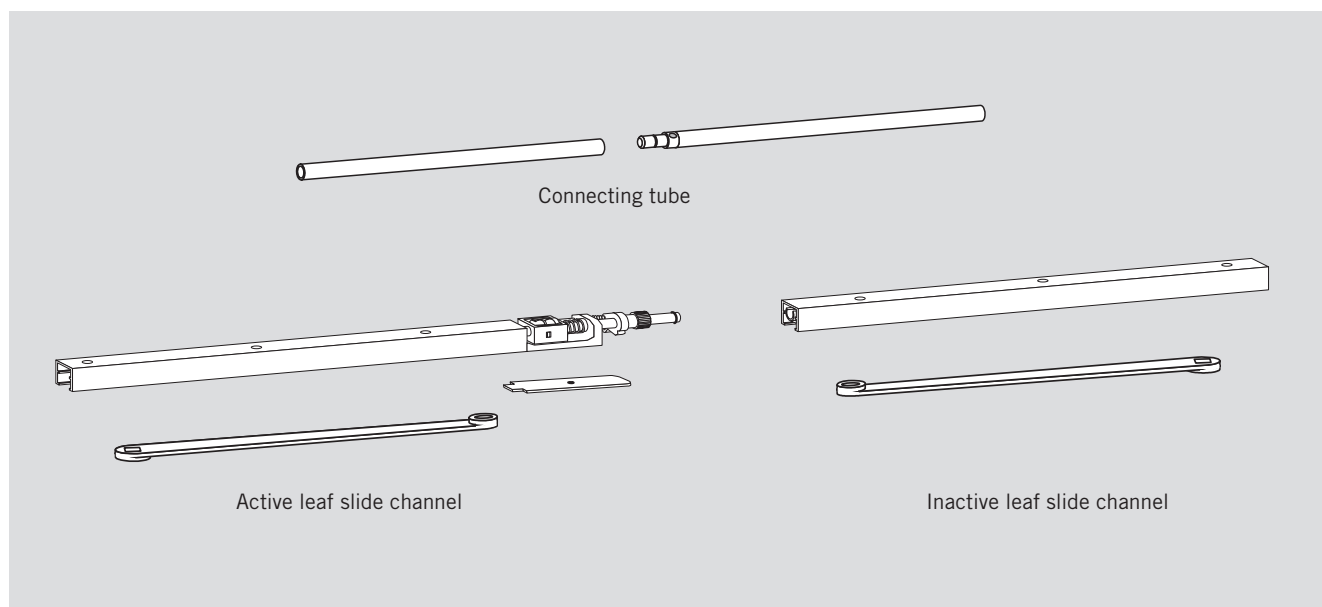
The ITS 96 system also allows the fitting of an ITS 96 FL on the active leaf of pairs of doors. As the door is opened, the free-swing function is activated for the active leaf from a door opening angle >0°.

The slide channel with integral door co-ordinator for pairs of doors ensures that the active leaf always closes after the inactive leaf.

The G 96 GSR slide channel door co-ordinator features a push rod clamping system. As this system operates independently of door closer hydraulics, it offers maximum safety and reliability.

An overload release protects the door co-ordinator and the door set from damage. The G 96 GSR can be combined with the ITS 96 FL at the active leaf.

Version/Function	Door width (mm)	Door leaf thickness min. (mm)	Closer size ITS 96
<b>GSR</b>			
Door co-ordinator	1450 – 2800	50	3 – 6

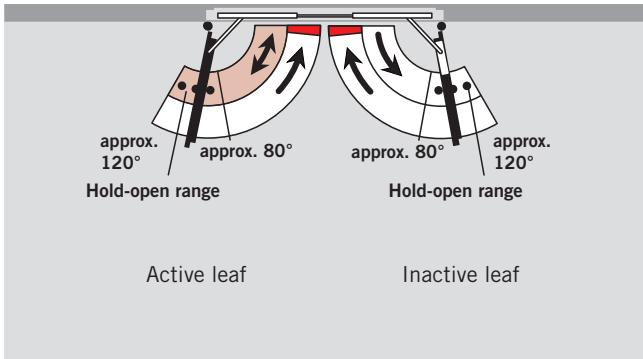


A slide channel door co-ordinator encompasses an active leaf and an inactive leaf slide channel with cushioned limit stay, a connecting tube, a cover for the co-ordinator mechanism on the active leaf slide channel, and two arms.

### **F** Approval certification

The ITS 96 GSR has been tested to EN 1158, Door Co-ordinator Devices, by the State Material Testing Authority, Dortmund/Germany.





**Specification text**

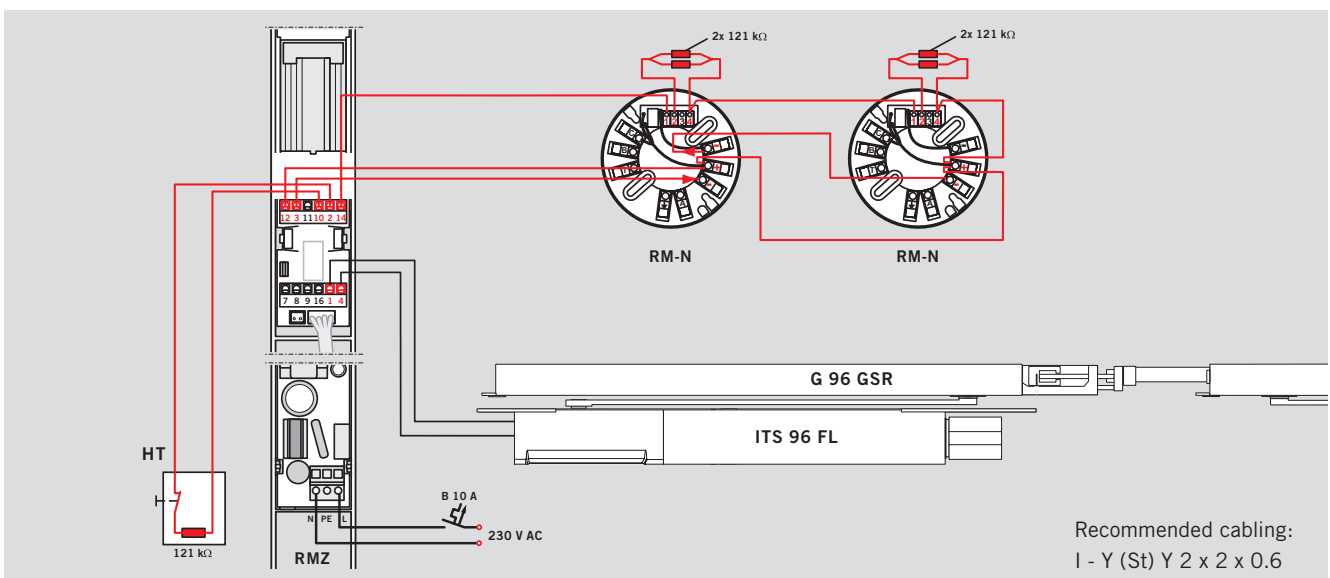
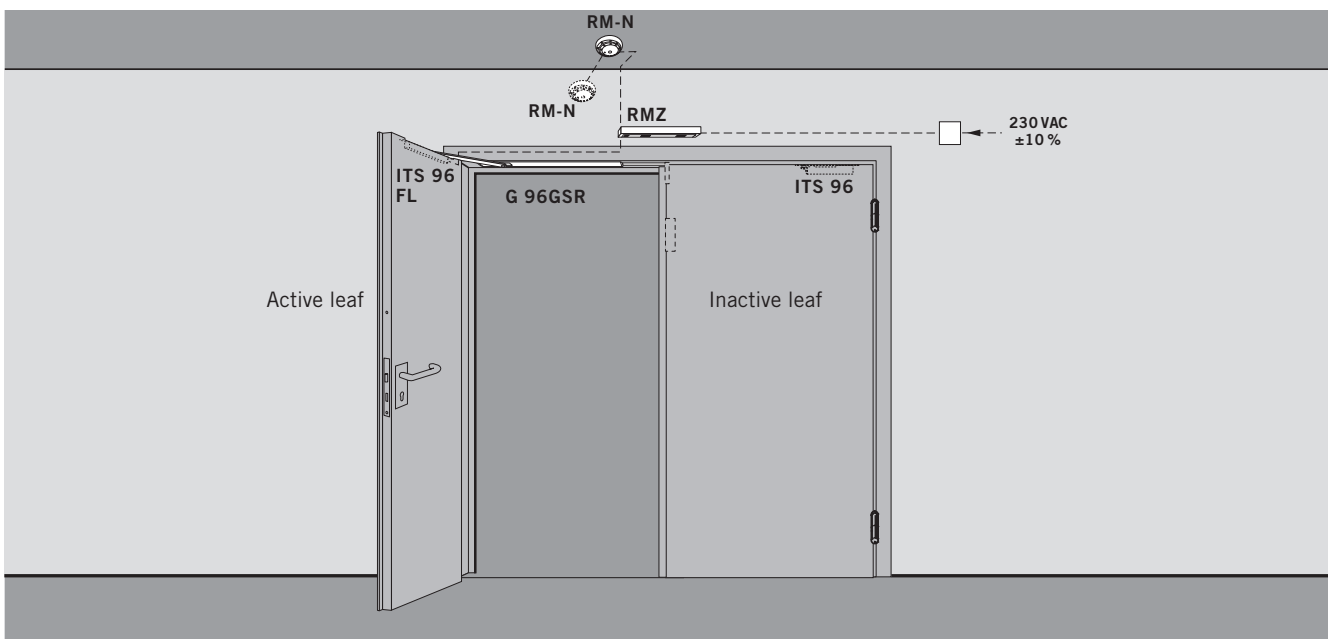
ITS 96 FL / ITS 96 door closer (see pages 4 – 7) with G 96 GSR K8/K12 slide channel, featuring integrated mechanical door co-ordinator using a push rod clamping system with overload release which operates independently of the closer hydraulics. Tested to EN 1158.

Approved by the Institute of Building Technology, Berlin, for general use in conjunction with fire and smoke check doors.

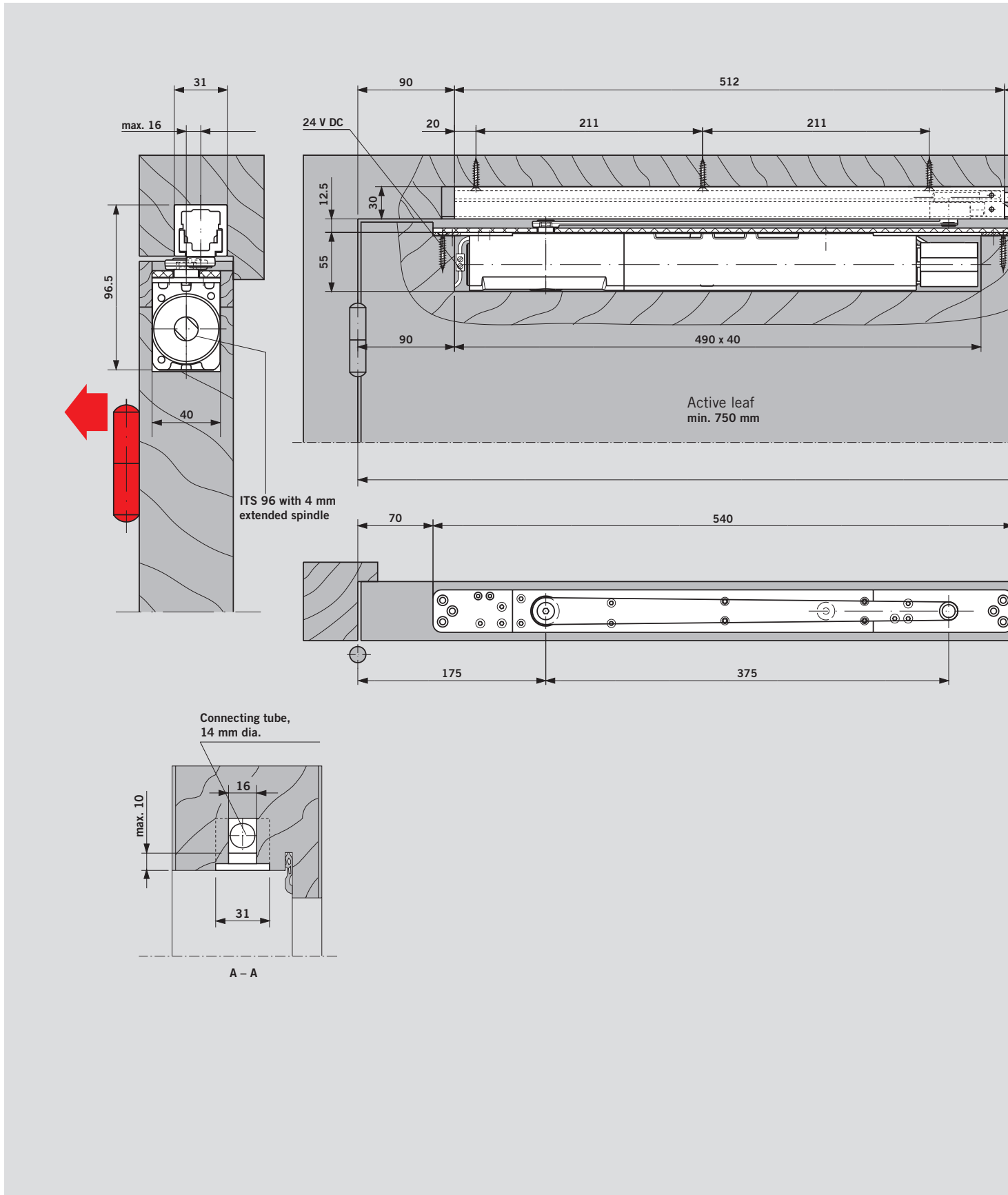
**Make**

DORMA ITS 96 FL GSR

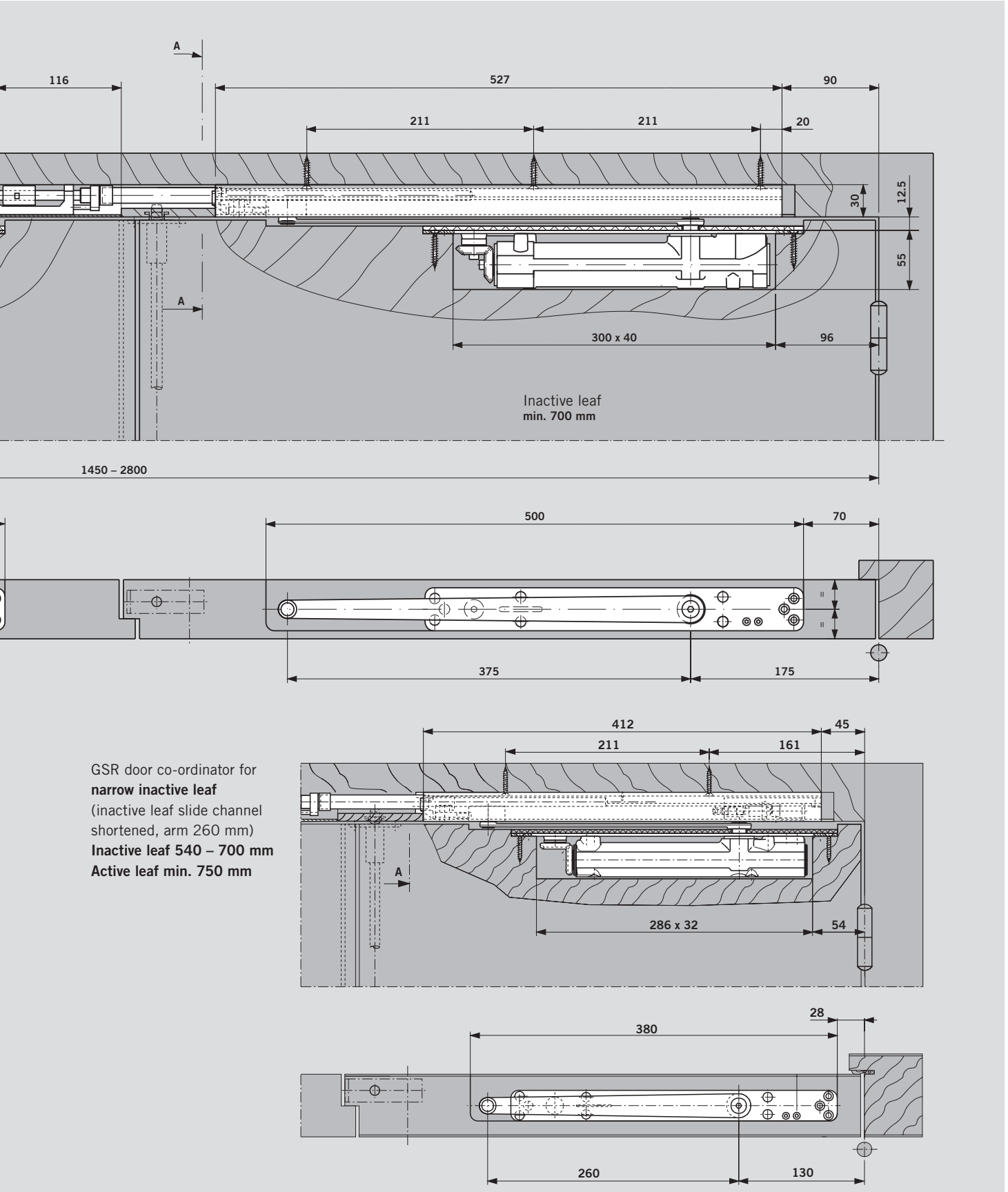
**Example application, hold-open system**



# INSTALLATION IN A TIMBER DOOR

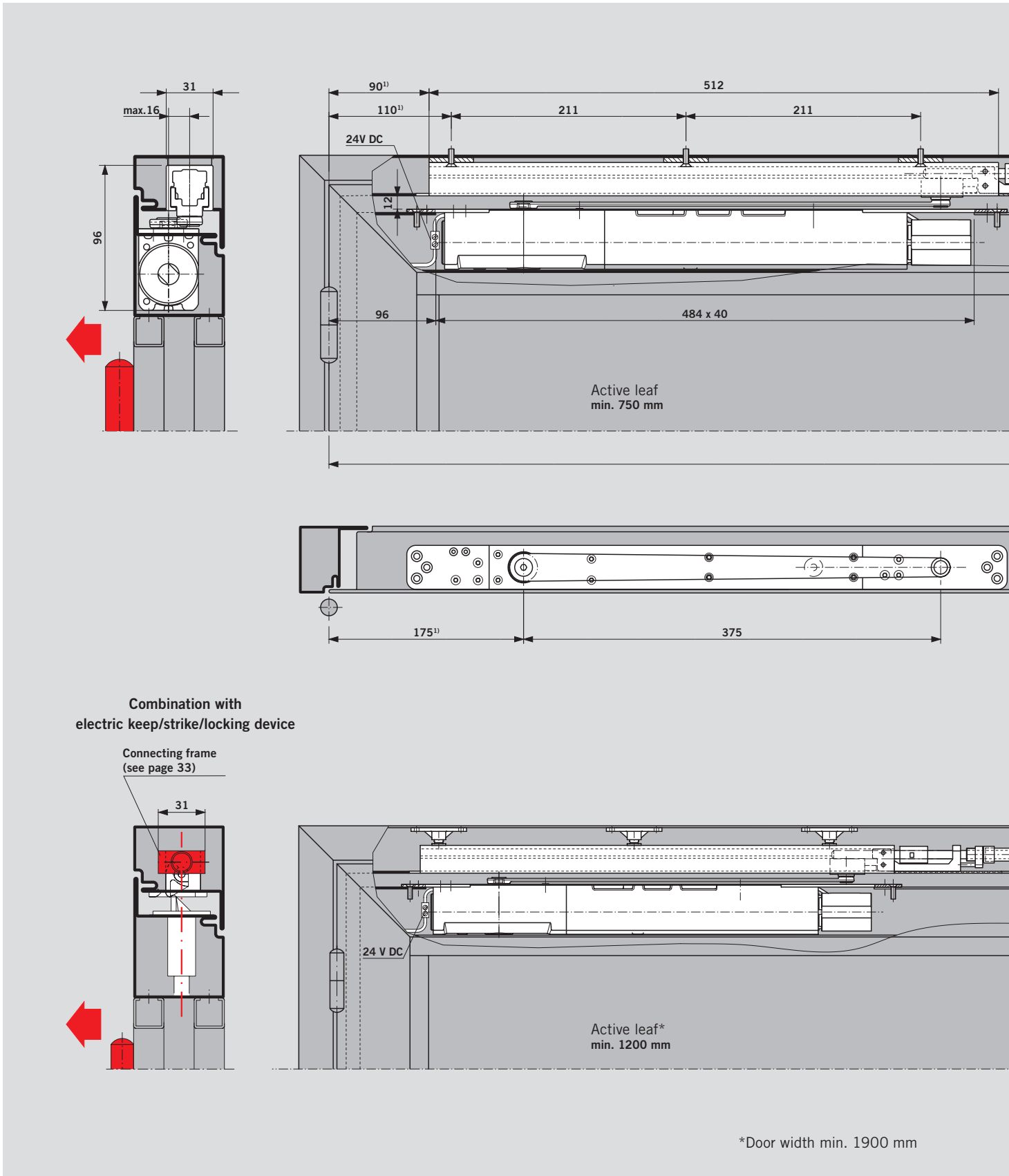


ITS 96 FL door closer at the active leaf and ITS 96 door closer at the inactive leaf with DORMA G 96 GSR slide channel.  
 Example: Anticlockwise-closing (ISO 6) active leaf; mirror image applies to clockwise-closing (ISO 5) active leaf.



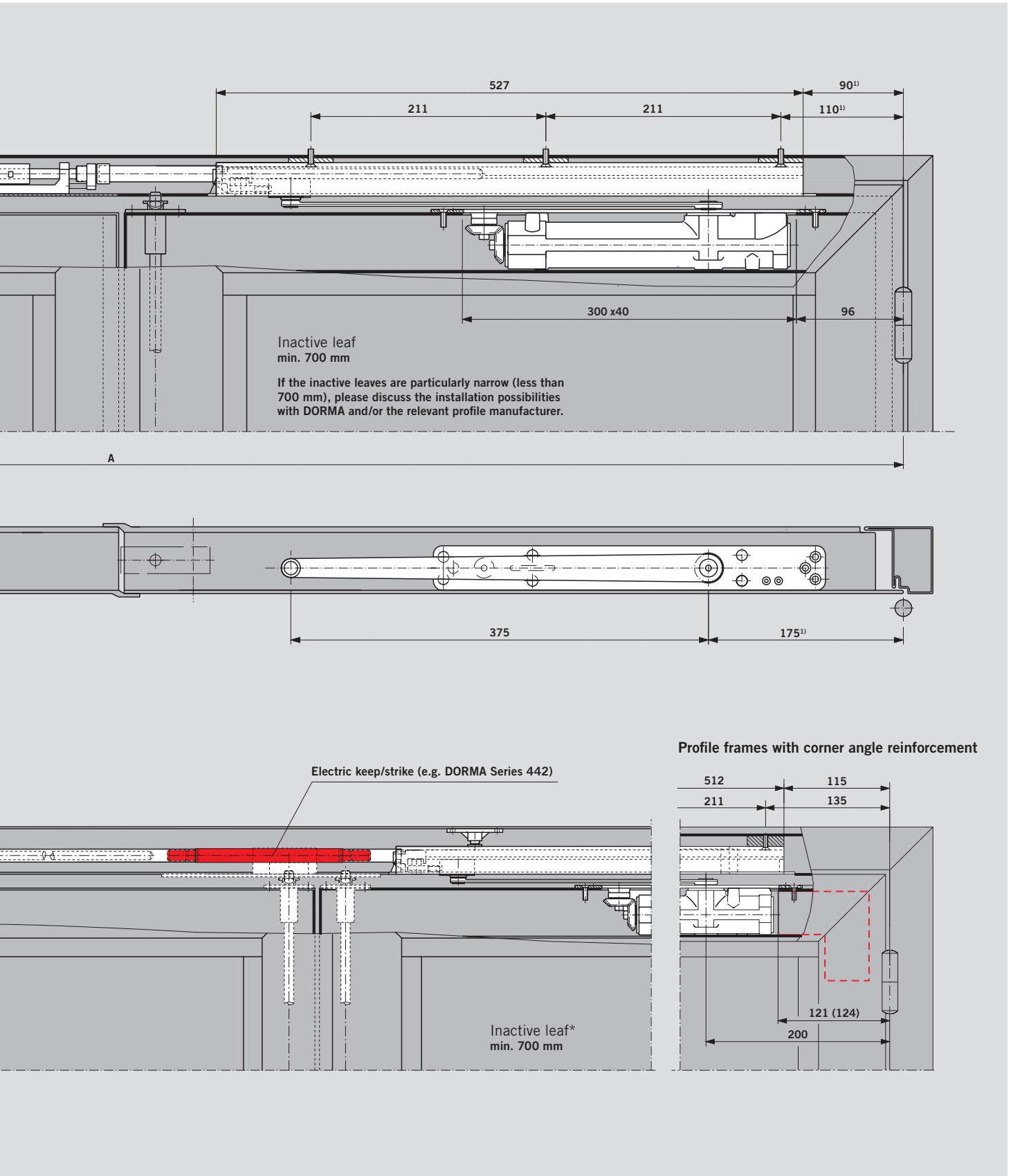
**F** When installed in fire and smoke check doors, ensure that the DORMA MK 397 carry bar is also fitted.

# INSTALLATION IN AN ALUMINIUM FRAMED DOOR



ITS 96 FL door closer at the active leaf and ITS 96 door closer at the inactive leaf with DORMA G 96 GSR slide channel.  
Example: Anticlockwise-closing (ISO 6) active leaf; mirror image applies to clockwise-closing (ISO 5) active leaf.

<sup>1)</sup> Add 25 mm for aluminium profile frames with corner-angle reinforcement.



**F** When installed in fire and smoke check doors, ensure that the DORMA MK 397 carry bar is also fitted.

# SMOKE DETECTORS

The RMZ in the Contur design and RM-N smoke detectors provide the ideal complement to the ITS 96 system for passive fire protection.

They are designed in accordance with the latest codes issued by the German Institute for

Building Technology and ensure perfect interaction between all the devices employed for holding open fire and smoke check doors – whatever the situation.

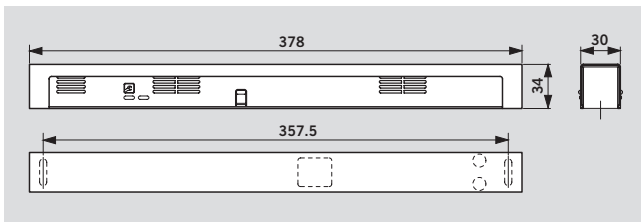
## RMZ

The RMZ smoke detector in the Contur design provides a 24 V DC supply for all the hold-open devices connected to it.

In the event of an alarm or power failure, it de-energises the devices (release function). It has an automatic reset which can be switched to manual mode if required.

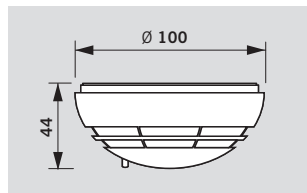
A floating (no-volt) change-over contact and connections for both further detectors and for

an external manual release device are also provided. The unit is available in the RMZ version with a stabilised power pack, or in the RMZ DCW version without a power pack for integration in building management and control systems via a DCW bus and the DORMA TMS door management system.



## RM-N

The DORMA RM-N smoke detector ensures the early detection both of smouldering fires and open fires with smoke evolution. It can be connected to all DORMA hold-open systems.



## Specification text

### RMZ

Smoke detector in the Contur design, with standby and maintenance due indicators, integral power pack and optical smoke sensor for transom/lintel fixing. For release activation of DORMA hold-open devices. A floating (no-volt) alarm contact and connections for further detectors and external manual release devices are provided. Can be switched to manual reset. One-piece cover. Overall height 30 mm. General building approval granted by DIBt, Berlin, for use in a hold-

open system. Acceptance inspection of the system is mandatory in Germany.

### Model

- RMZ with integrated power pack. Power supply 230 V AC, operating voltage 24 V DC
- RMZ DCW. Smoke detector without power pack for connection to DCW bus.
- Optional integral alarm module adding an audible signal to the visual indicator.

Data and features		RMZ	RM-N
Functions	Smoke detector	●	●
	Release device	●	–
	Power supply unit	●	–
Smoke detection	Scattered light principle (optical sensor)	●	●
Fixing	Lintel or transom-mounted	●	–
	Ceiling-mounted	–	●
Connection of other detectors		●	–
Total installed load (max.) for hold-open device and other detectors in W		9.8	–
Power consumption of internal detectors in W		1.2	0.65
LED indicators	Alarm	●	●
	Standby	●	–
	Maintenance due	●	–
	Contaminated	●	–
Input voltage		230 V AC ± 10 %	24 V DC +15%, -10%
Output voltage		24 V DC	–
Detector operating voltage		24 V DC +15%, -10%	24 V DC
Input current (max.) in mA		75	20
Floating (no-volt) change-over contact		24 V	30 V
Safety extra low voltage (SELV)		AC/DC	AC/DC
		2 A	1 A
Reset	Automatic	●	●
	Can be changed to manual reset <sup>1)</sup>	●	–
Functional check	Smoke detection	●	●
Connection terminals for external manual release		●	–
Degree of protection		IP 30	IP 43
Ambient temperature in °C		–20, +40	–10, +60
Weight in kg		0.25	0.15
Dimensions in mm	Length	379	∅ 100
	Overall depth	34	
	Height	30	44
Compliant with EN 54 Part 7		●	●
CE mark for building products		●	●

● Yes – No

<sup>1)</sup> Necessary in conjunction with the ITS 96 FL free-swing door closer

### Colour

- Silver
- White (sim. to RAL 9106)
- Stainless steel “Design”
- Special colour (sim. to RAL \_\_\_\_)

### Make

DORMA RMZ  
DORMA RMZ DCW

### RM-N

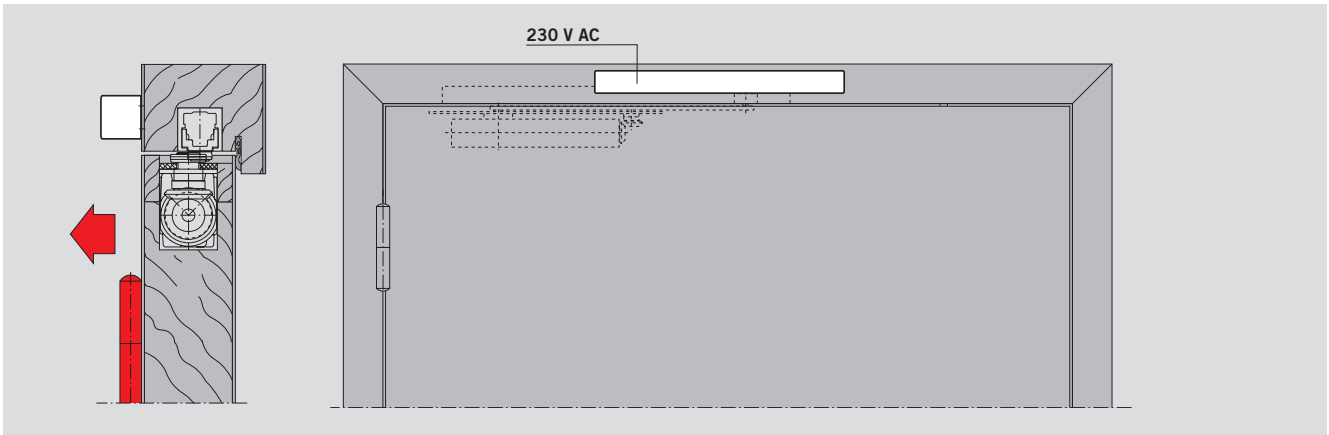
Optical smoke detector, 24 V DC, for ceiling fixing. For use as second and third triggering detector on all DORMA hold-open systems. With floating (no-volt) change-over contact. General building approval granted by DIBt, Berlin and the VdS, Cologne; compliant to EN 54, Part 7. Acceptance inspection mandatory in Germany.

### Colour

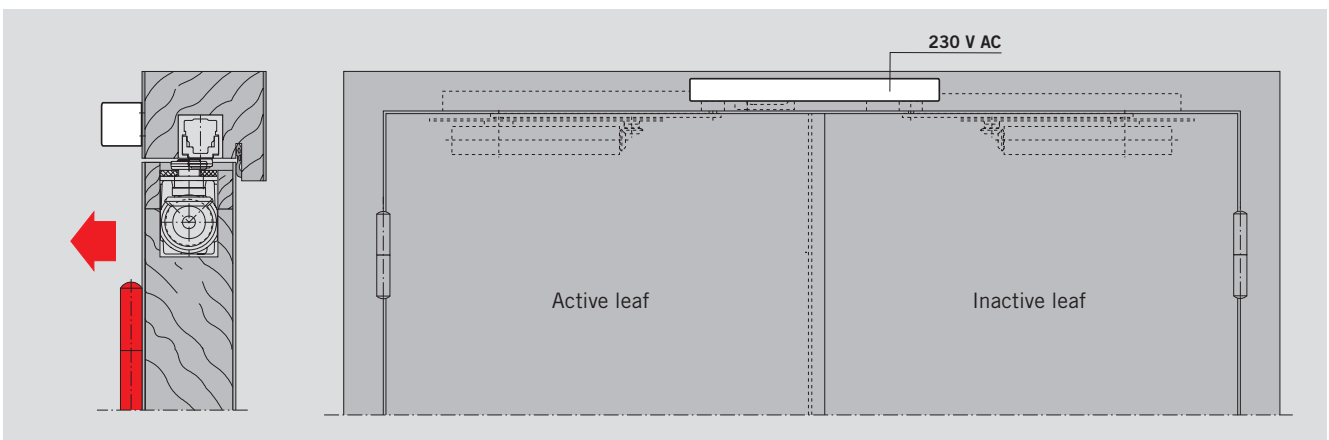
- White (sim. to RAL 9106)

### Make

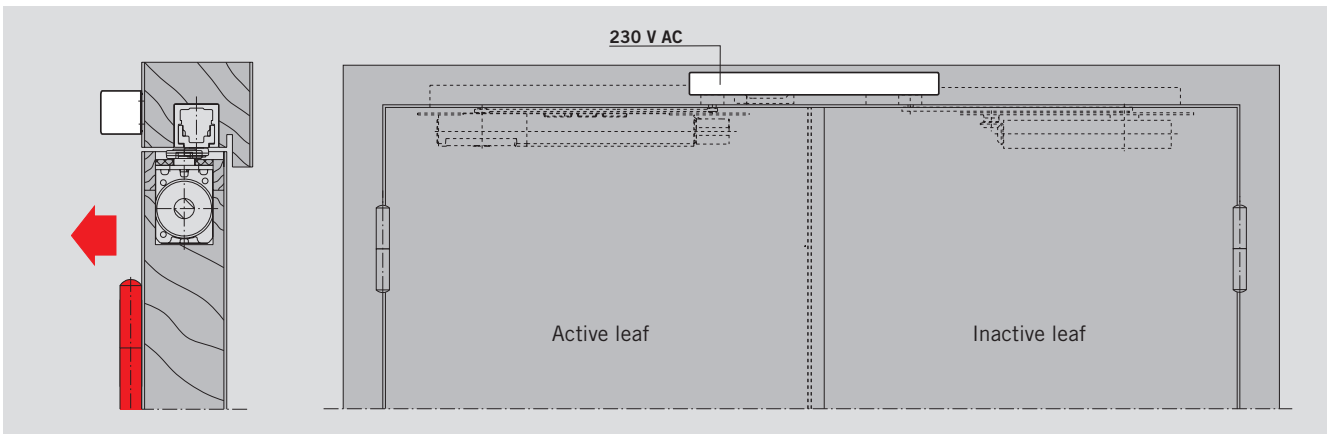
DORMA RM-N



RMZ frame-mounted smoke detector on the pull side connected to an ITS 96 EMF.  
 Example: Anticlockwise-closing (ISO 6) door; mirror image applies to clockwise-closing (ISO 5) doors.



RMZ frame-mounted smoke detector on the pull side connected to an ITS 96 GSR-EMF.  
 Example: Anticlockwise-closing (ISO 6) active leaf; mirror image applies to clockwise-closing (ISO 5) active leaf.

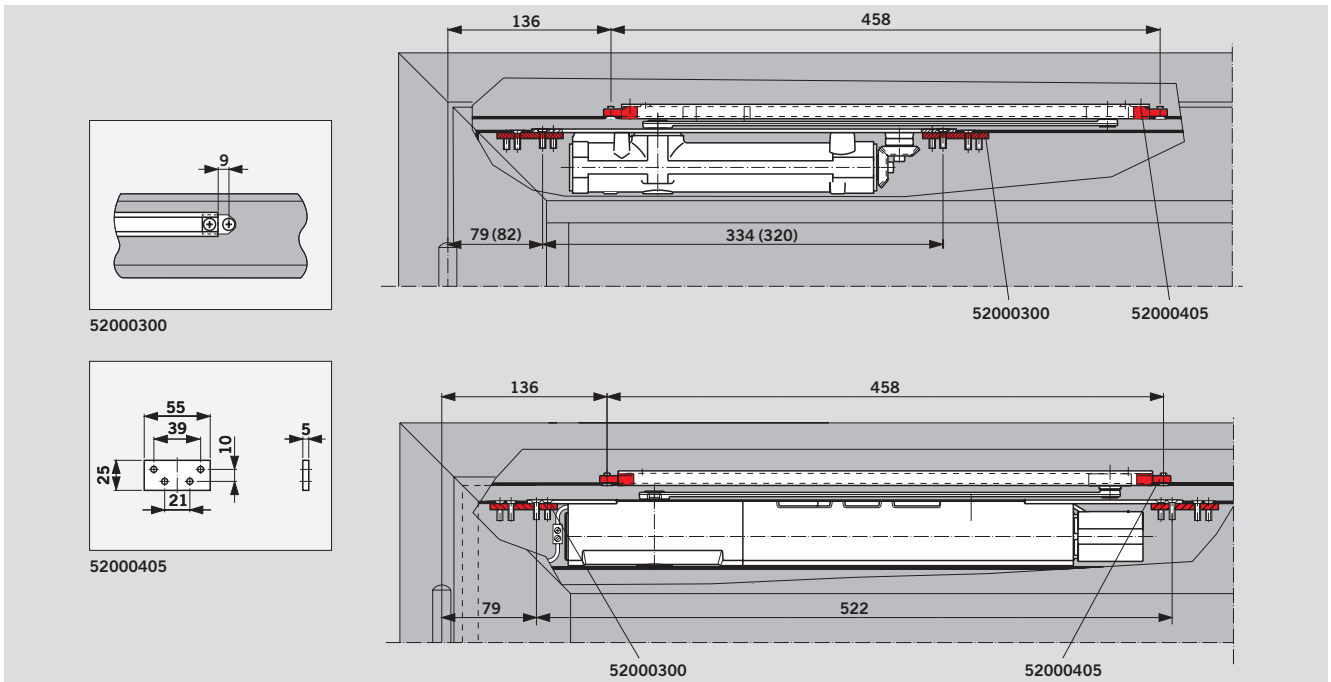


RMZ frame-mounted smoke detector on the pull side connected to an ITS 96 FL GSR.  
 Example: Anticlockwise-closing (ISO 6) active leaf; mirror image applies to clockwise-closing (ISO 5) active leaf.

**F Approval certification**

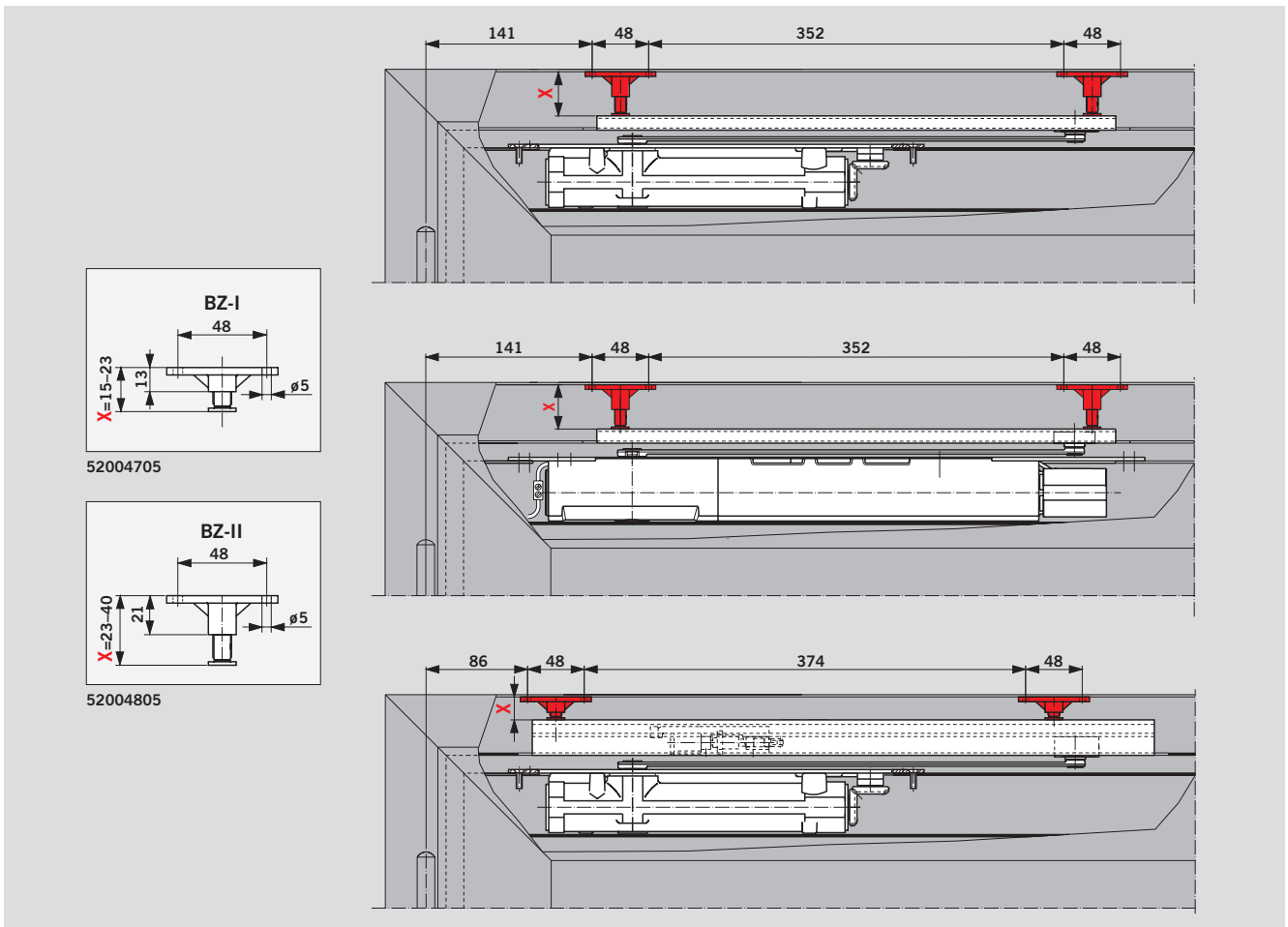
DORMA RMZ in the Contur design and DORMA RM-N smoke detectors have been granted general building approval by the German Institute for Building Technology, Berlin; acceptance inspection mandatory in Germany.

# ACCESSORIES



Fixings for G 96 N20 and mounting plate for ITS 96.

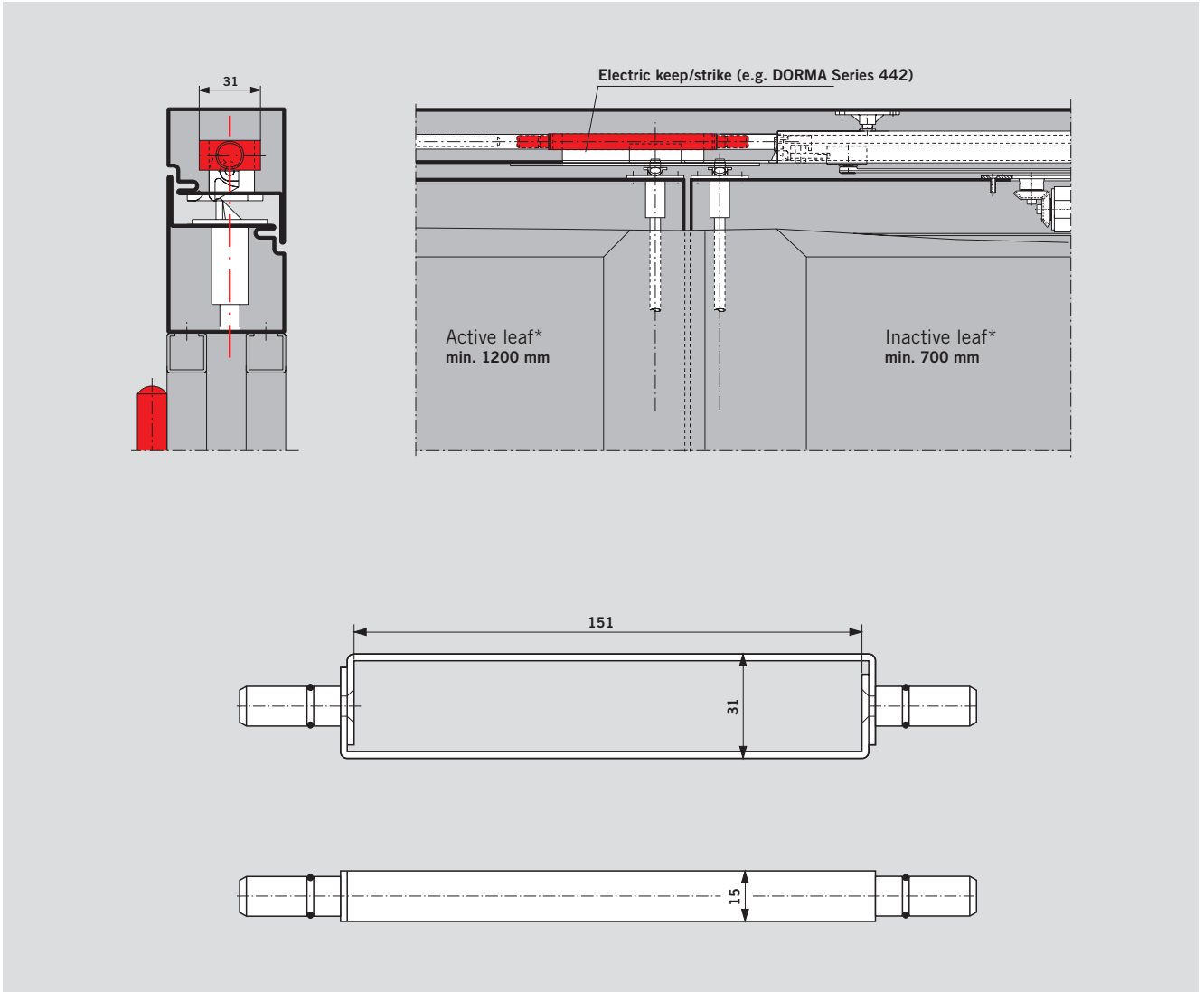
Example: Anticlockwise-closing (ISO 6) door; mirror image applies to clockwise-closing (ISO 5) doors.



Fixings for height adjustment in relation to G 96 N20, EMF, GSR.

Example: Anticlockwise-closing (ISO 6) door; mirror image applies to clockwise-closing (ISO 5) doors.





Connecting frame for G 96 GSR door co-ordinator for use on doors with electric keep/strike or overhead electro-mechanical locking device  
\*Door width min. 1900 mm

## ACCESSORIES

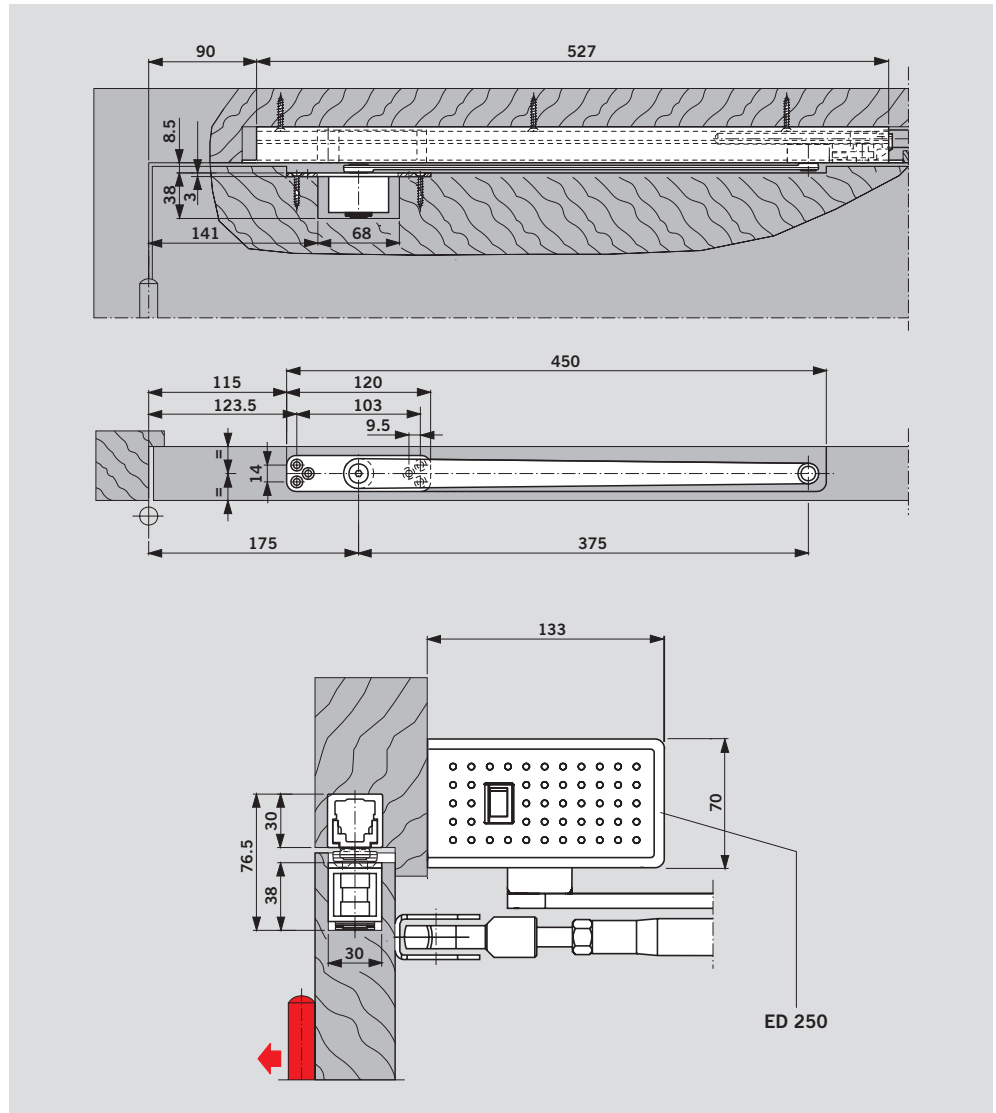
If the G 96 GSR door co-ordinators are required to operate independently of the ITS 96 door closers, e.g. in combination with the ED 200 automatic swing door operator, the connection between the door co-ordinator and the door leaf is provided by means of GSR pivot blocks.

### Specification text

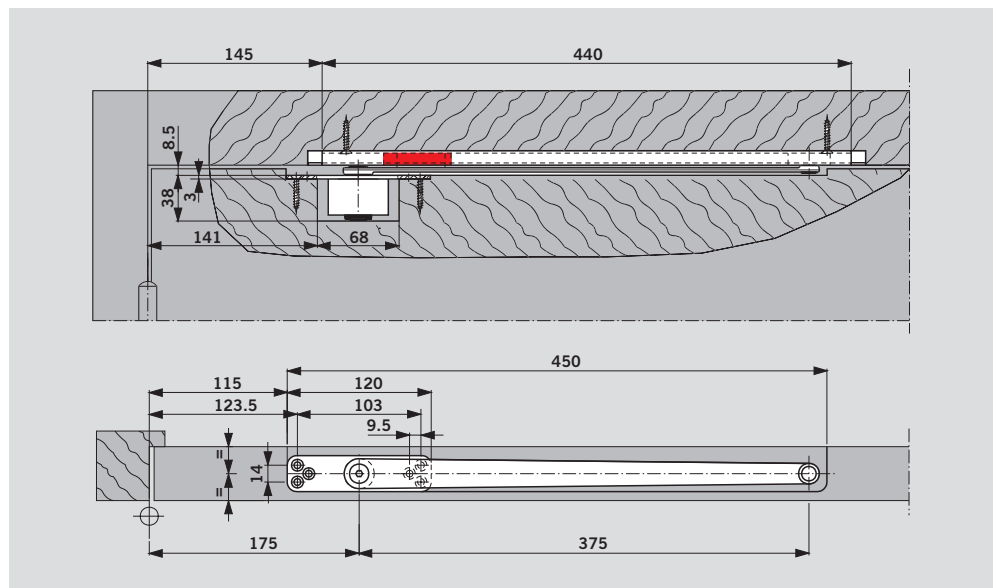
Pivot bearing for closer-independent door co-ordination with G 96 GSR door co-ordinators.

### MAKE

DORMA ITS GSR pivot block



The pivot bearing used in conjunction with the G 96 N20 slide channel also acts as a **cushioned limit stay**.



# HOLD-OPEN SYSTEMS REGULATIONS / INFORMATION

The use of hold-open systems is subject to special regulations based on official approval requirements. These relate in particular to the final inspection (acceptance), continuous monitoring and maintenance.

The regulations and instructions provided below are intended as an aid, pursuant to statutory regulations that apply e.g. in Germany, to ensure that all participants are properly informed of the most important requirements that relate to the installation and operation of hold-open systems.

Further information can be found in the following documents:

- Richtlinien für Feststellungen des Deutschen Instituts für Bautechnik, Berlin [Code of practice relating to hold-open systems issued by the German Institute for Building Technology, Berlin]
- General building regulations pertaining to the approval of the hold-open system concerned
- EN 1155
- EN 14637

## 1. General

**1.1** In the case of fire doors (and similar shutters/closures/barriers) that are held open by hold-open systems, the sweep area necessary for the closing operation must be kept constantly clear. This area must be clearly identified by lettering, floor markings or similar. Where necessary, structural measures must also be implemented to ensure that cables, leads, lines,

pipes, stored/deposited goods or components (e.g. false ceilings or other overhead items/elements) are reliably prevented from falling into the sweep area.

**1.2** Wherever possible, smoke detectors should be used for hold-open systems. For hold-open systems for fire doors in emergency escape routes, smoke detectors must be used.

**1.3** Each hold-open device must also be capable of being released by hand, without adversely affecting the functional capabilities of the automatic release device. In the case of door closers with electro-magnetic hold-open, the manual release may be performed by a small tug applied to the door leaf. If holding electro-magnets or free-swing door

closers are used, a pushbutton must be provided to facilitate manual release. The manual release push-buttons employed for this purpose must be red and carry the wording "Close Door" or equivalent. The pushbutton must be located in the immediate vicinity of the door and must not be concealed by the door when this is held open.

## 2. Commissioning

**2.1** In Germany and countries governed by DIN regulations: Following on-site installation of the operable hold-open system, its functional integrity and quality of installation must be confirmed by an acceptance inspection procedure. The acceptance inspection may only be performed by skilled personnel of manufacturers of monitoring

and/or hold-open devices, skilled personnel authorized by same, or skilled personnel from an accredited inspection agency.

**2.2** In Germany and countries governed by DIN regulations: Once the acceptance inspection has been successfully completed, the operator shall permanently fix on the wall, in the

immediate vicinity of the door, a plate supplied by the manufacturer of the hold-open system measuring 105 mm x 52 mm and carrying the inscription Hold-open system Inspected by... (company logo with month and year of acceptance inspection) or equivalent

**2.3** The operator is to be provided with a certificate detailing the successful acceptance inspection; this certificate must be retained by the operator.

## 3. Routine Inspection



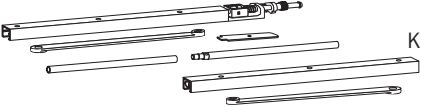
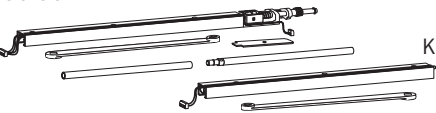

**3.1** The hold-open system must be kept by the operator in a constantly good operating condition, and inspected at least once a month to ensure that it is functioning properly.

**3.2** In addition, the operator is obliged at least once a year, or at shorter intervals if specified in the approval certificate, to inspect all the devices to ensure that they are operating and interacting properly and without

fault, and to carry out or instigate adequate maintenance. The associated test, inspection and the maintenance work may only be performed by an expert or an appropriately trained person.





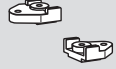



**3.3** The scope, result and time of the periodic inspection are to be recorded. These records must be retained by the operator.

## ITS 96 RANGE OF EQUIPMENT AND OPTIONAL ACCESSORIES

				ITS 96	ITS 96 with 4 mm extended spindle	ITS 96 with 8 mm extended spindle					
				EN 2 – 4 ■ 52400150 EN 3 – 6 ■ 52250150	EN 2 – 4 ■ 52410150 EN 3 – 6 ■ 52260150	EN 2 – 4 ■ 52420150 EN 3 – 6 ■ 52270150					
For specification text/product description, see page					6	6	6				
<b>G 96 N20</b> 	K8/K12	L □ 52003701	10	□	■	□	■	□	■		
		R □ 52003801		□	■	□	■	□	■		
<b>G 96 EMF</b> 	K8/K12	L □ 52001501	14	□	■	□	■	□	■		
		R □ 52001601		□	■	□	■	□	■		
<b>G 96 GSR</b> 	K8/K12 260 <sup>1)</sup>	□ 52001801	16	□	2x ■	□	2x ■	□	2x ■		
		□ 52004001		□	2x ■	□	2x ■	□	2x ■		
<b>G 96 GSR-EMF</b> 	K8/K12 260 <sup>1)</sup>	□ 52001701	18	□	2x ■	□	2x ■	□	2x ■		
		□ 52004201		□	2x ■	□	2x ■	□	2x ■		
<b>Fixing plates for ITS 96</b> 		52000300	32	△	△	△	△	△	△		

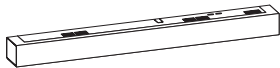
<sup>1)</sup> GSR door co-ordinator for inactive leaf of 540–700 mm (inactive leaf slide channel shortened, arm 260 mm)

<sup>2)</sup> Pivot bearing with 4 mm and 8 mm extended spindle available on request

RF hold-open unit for G 96 N20	RF hold-open unit for G 96 GSR, inactive leaf	Fixing BZ I for narrow-stile/alu-framed doors	Fixing BZ II for narrow-stile/alu-framed doors	Fixings for mounting the G 96 N20 aluminium doors	Connecting frame for G 96 GSR	Pivot bearing	Carry bar MK 397
 K8/K12 52005600	 K8/K12 52003500	 52004705	 52004805	 52000405	 52004400	 52003400 <sup>2)</sup>	 470029xx
11	-	32	32	32	33	34	-
△		△	△	△		△	
△		△	△	△		△	
		△	△				
		△	△				
	△	△	△		△	△	△
	△	△	△		△	△	△
		△	△		△		△
		△	△		△		△

**Smoke detector system**

**RMZ**  
64800xx



**RM-N**  
64830900  
packaging unit 2 pcs.



For specification text/product description, see page 30

**xx Colour**

- 01 Silver
- 11 White (RAL 9016)
- 09 Special colour


Also available in matching "Design" finishes

- 04 Stainless steel
- 05 Polished brass

**MK 397**

- 00 Galvanised
- 30 Special colour

\* "Design" refers to the surface finish of the products

**L**  LH/anticlockwise closing (ISO 6)

**R**  RH-clockwise closing (ISO 5)


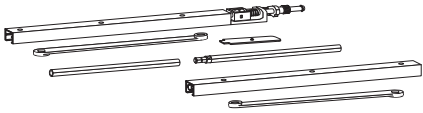


xx Colour

■ Closer body separate







□ Slide channel separate

△ Accessory

# ITS 96 FL RANGE OF EQUIPMENT AND OPTIONAL ACCESSORIES

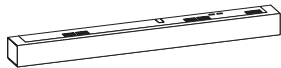
				ITS 96 FL	ITS 96 FL with 4 mm extended spindle	ITS 96 FL with 8 mm extended spindle				
				EN 3 – 6 ■ 52630150	EN 3 – 6 ■ 52640150	EN 3 – 6 ■ 52650150				
For specification text/product description, see page				7	7	7				
<b>G 96 N20</b> 	K8/12	L □ 52003701	10	□	■	□	■	□	■	
		R □ 52003801		□	■	□	■	□	■	
<b>G 96 GSR</b> 	K8/K12 260 <sup>1)</sup>	□ 52001801	24	□	1x ■	□	1x ■	□	1x ■	
		□ 52004001		□	1x ■	□	1x ■	□	1x ■	
Fixing plates for ITS 96/ITS 96 FL 		52000300	32	△	△	△	△	△	△	
Manual release pushbutton 		HT-UP 35901531 HT-AP 35901532	-	△	△	△	△	△	△	

<sup>1)</sup> GSR door co-ordinator for inactive leaf of 540–700 mm  
(inactive leaf slide channel shortened, arm 260 mm)

ITS 96	ITS 96 with 4 mm extended spindle	ITS 96 with 8 mm extended spindle	Fixing BZ I for narrow-stile/ alu-framed doors	Fixing BZ II for narrow-stile/ alu-framed doors	Fixings for mounting the G 96 N20 aluminium doors	Connection frame für G 96 GSR	Carry bar MK 397
 EN 2 – 4 ■ 52400150 EN 3 – 6 ■ 52250150	 EN 2 – 4 ■ 52410150 EN 3 – 6 ■ 52260150	 EN 2 – 4 ■ 52420150 EN 3 – 6 ■ 52270150	 52004705	 52004805	 52000405	 52004400	 470029xx
4	4	4	32	32	32	33	-
			△	△	△		
			△	△	△		
□	1x ■	□	1x ■	□	1x ■	△	△
□	1x ■	□	1x ■	□	1x ■	△	△
△	△	△	△	△	△		

**Smoke detector system**

**RMZ**  
64800xx



**RM-N**  
64830900  
packaging unit 2 pcs.



For specification text/product description, see page 30

**xx Colour**

- 01 Silver
- 11 White (RAL 9016)
- 09 Special colour


Also available in matching "Design" finishes


- 04 Stainless steel
- 05 Polished brass

**MK 397**

- 00 Galvanised
- 30 Special colour

\* "Design" refers to the surface finish of the products

**L**  LH/anticlockwise closing (ISO 6)

**R**  RH-clockwise closing (ISO 5)

xx Colour

■ Closer body separate

□ Slide channel separate

△ Accessory



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