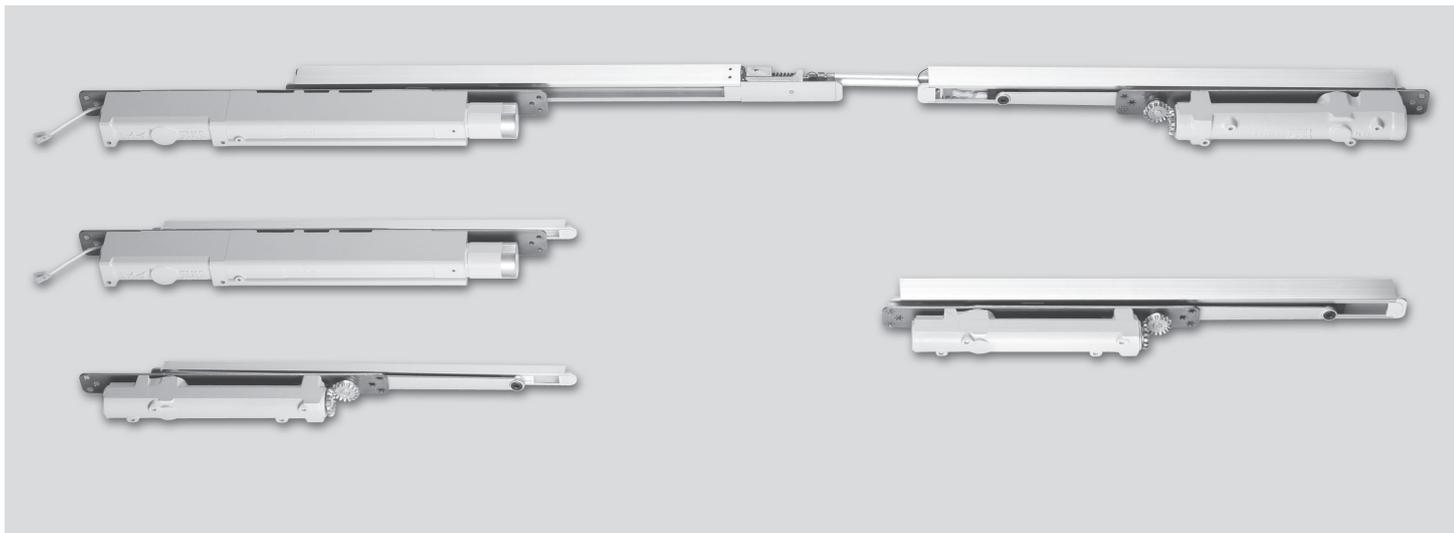


# ITS 96 ITS 96 FL

Concealed cam-action  
door closer system

# Concealed cam-action door closer system

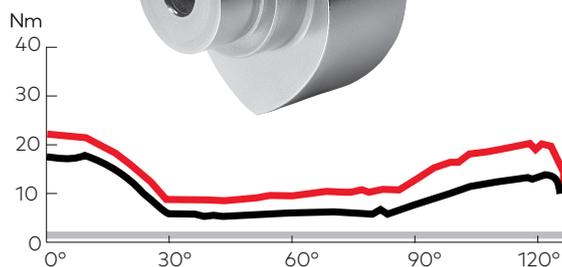
## The integrated solution for prestige doors



**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. dormakaba 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 2 – 4, EN3 strength setting)

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



## 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.

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.

### 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.

#### ...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	from 40 mm	●	–	–
Non-fire doors	from 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		●	–	–

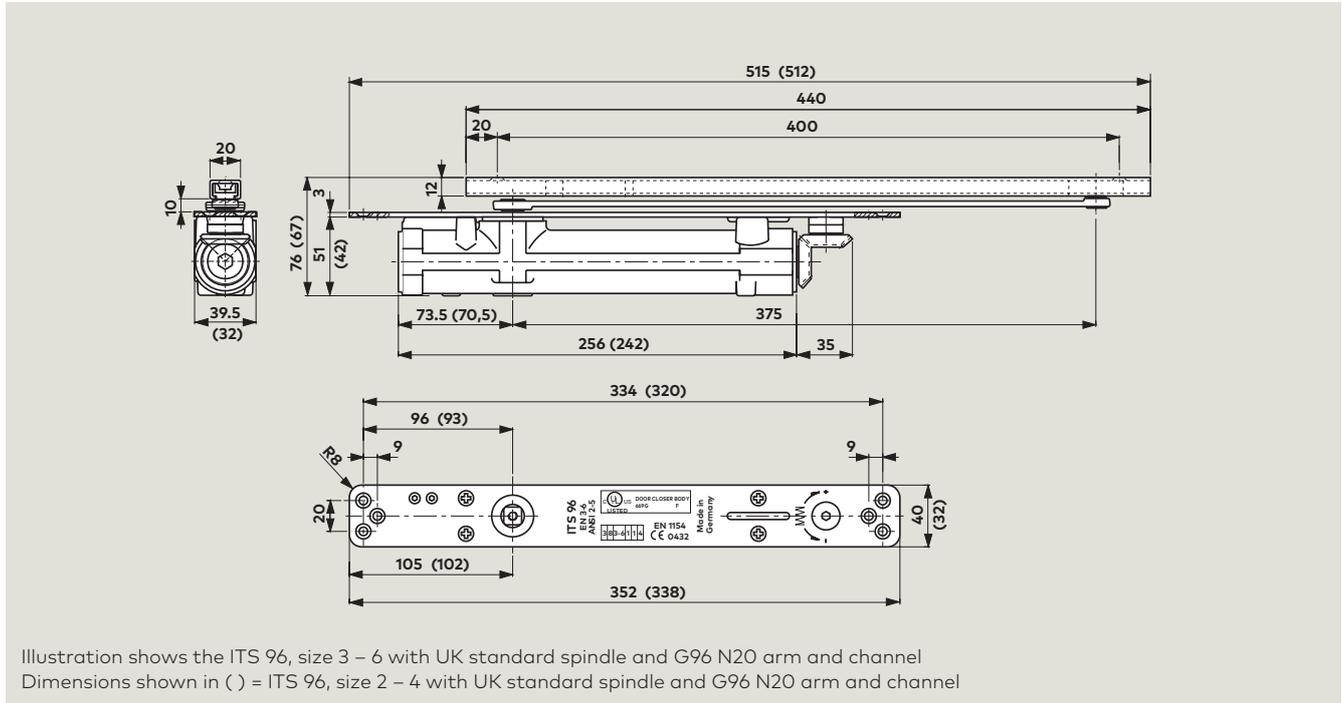
● Yes – No ○ Option

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.

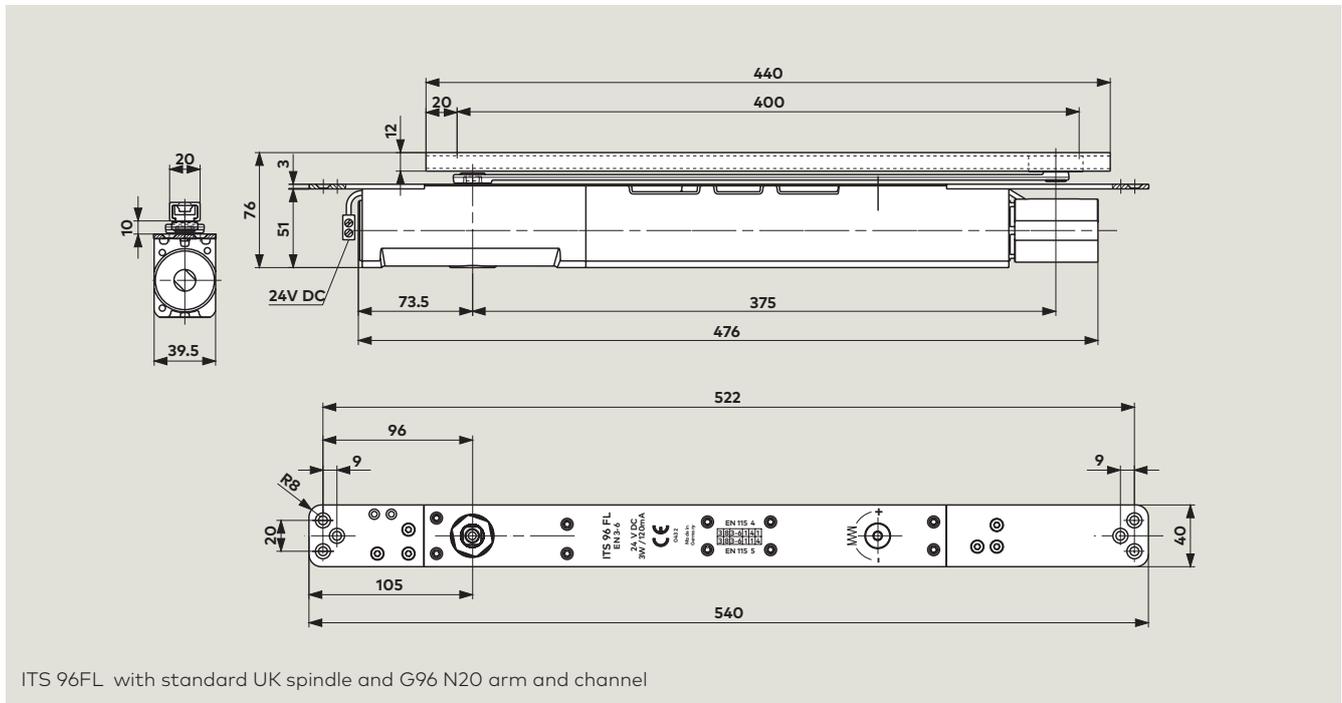


The ITS 96 is CERTIFIRE approved (Certificate No. CF140) for door types ITT 60, MM/IMM 240.

ITS 96



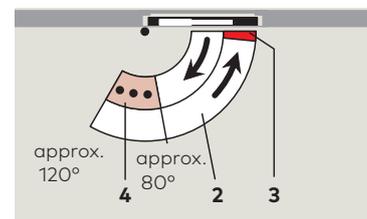
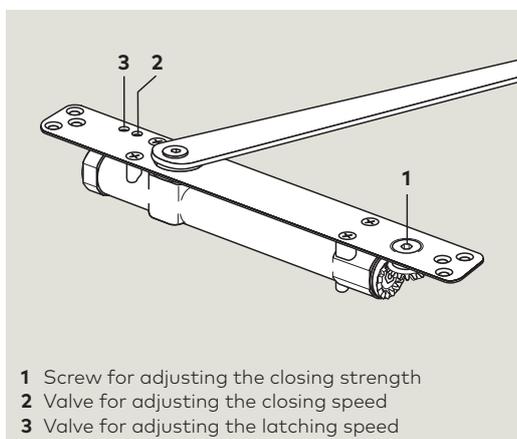
ITS 96 FL



## ITS 96 Cam-action door closer

### Adjustment of settings

The functions of the 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 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 dormakaba 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

ITS 96

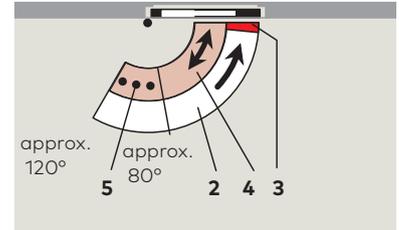
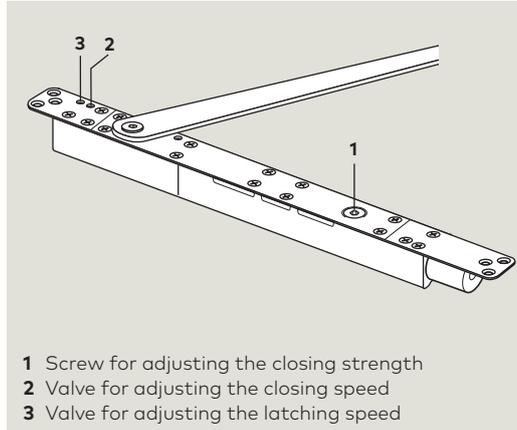


The ITS 96 is CERTIFIRE approved (Certificate No. CF140) for door types ITT 60, MM/IMM 240.

## 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 FL has been tested to EN 1154 and EN 1155 by the State Material Testing Authority, Dortmund.



The ITS 96 is CERTIFIRE approved (Certificate No. CF140) for door types ITT 60, MM/IMM 240.

### Specification text

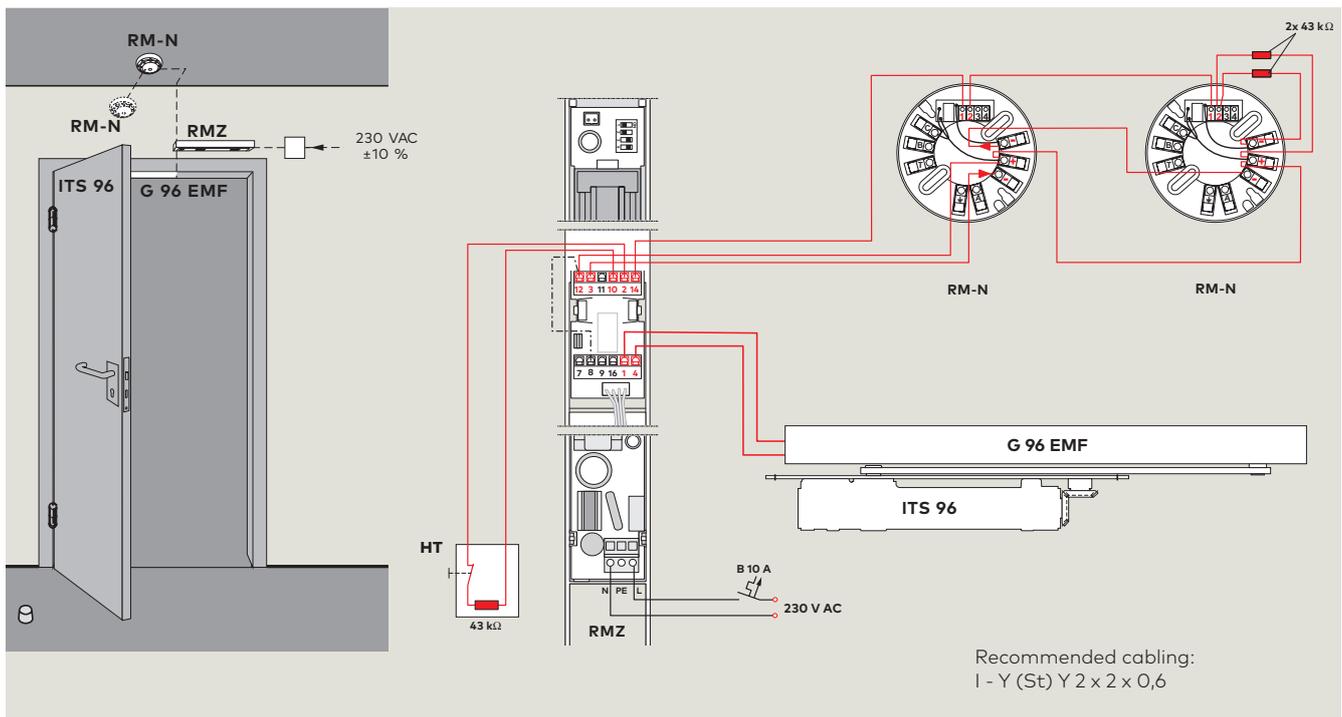
Cam-action door closer, spring strength 3-6 to EN 1154, for integration in the door leaf or door frame, with CE marking, with rapidly decreasing opening resistance, with electro-hydraulic hold-open, 24 V DC, tested to EN 1154, and with free-swing function from a door opening angle >0°. Closing speed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

Suitable for barrier-free building to DIN 18040 and DIN SPEC 1104 (CEN/TR 15894).

### Make

ITS 96 FL

### Example application, hold-open system

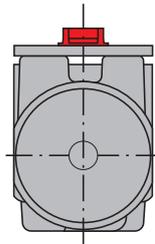


## Applications and installation

The 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.

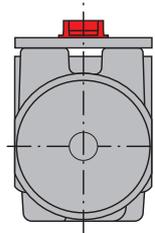
### UK Standard

ITS 96 2-4  
 ITS 96 3-6  
 ITS FL 3-6  
 with 1.5mm extended spindle.



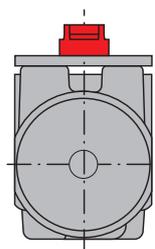
### Reduced spindle

ITS 96 2-4  
 ITS 96 3-6  
 ITS 96 FL 3-6  
 \* G 96 N arm cannot be used with ITS96 reduced spindle unit



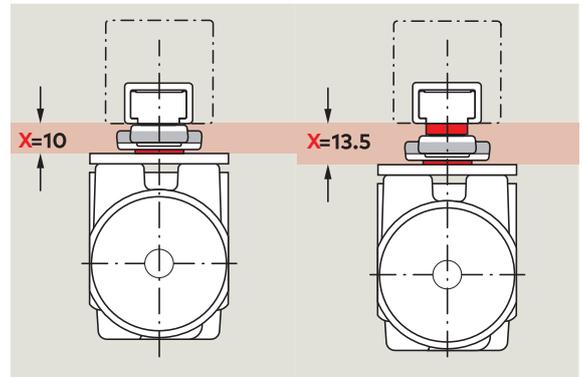
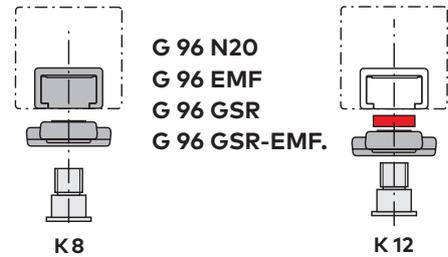
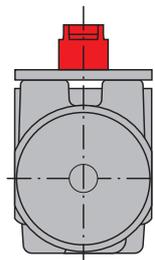
### 4 mm extended spindle

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

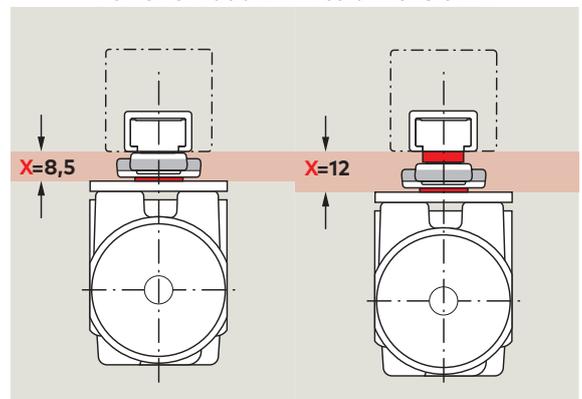


### 8 mm extended spindle

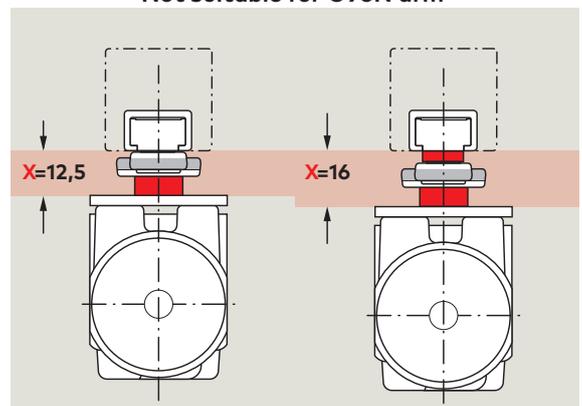
ITS 96 2-4  
 ITS 96 3-6  
 ITS 96 FL 3-6



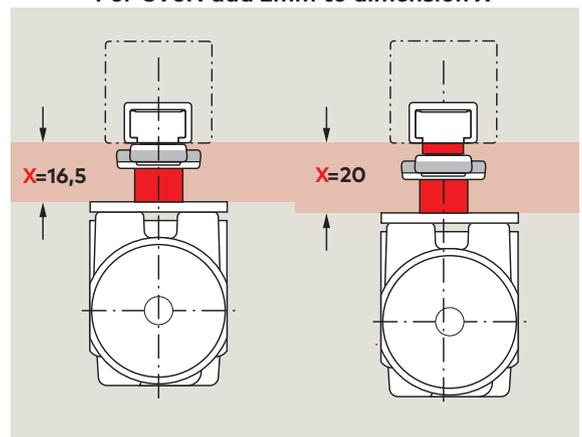
For G96N add 2mm to dimension X



Not suitable for G96N arm

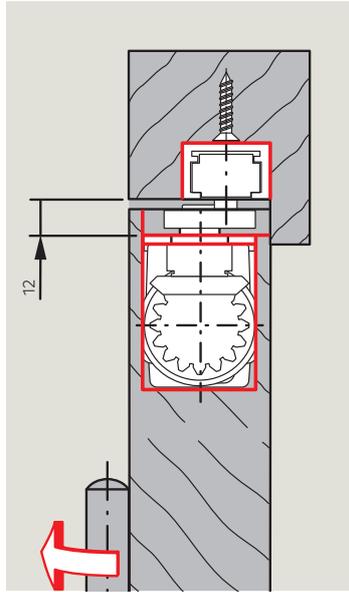


For G96N add 2mm to dimension X



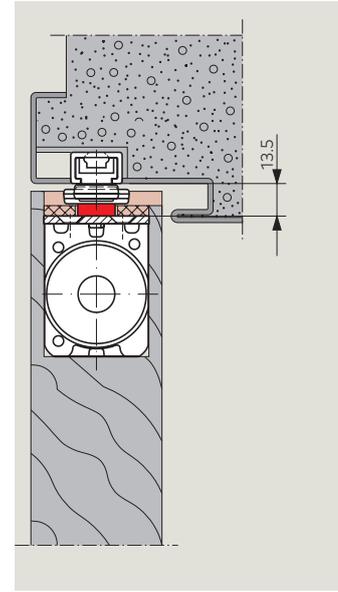
For G96N add 2mm to dimension X

Timber door, flush-closing, clearance 12mm with ITS 96/ITS 96 FL EN 3-6 and slide channel G 96 N

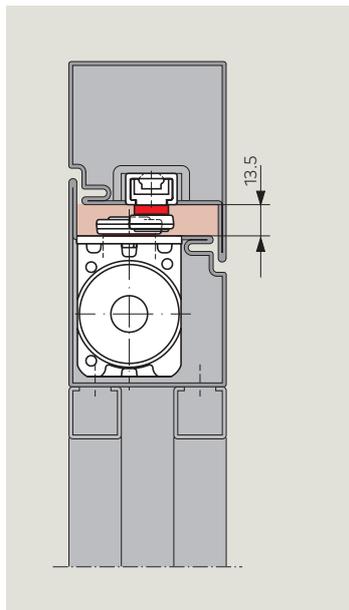


Timber door with steel frame, flush closing, clearance 12.5 mm, with ITS 96/ITS 96 FL EN 3-6, 4 mm extended spindle and slide channel G 96 N20 K8.

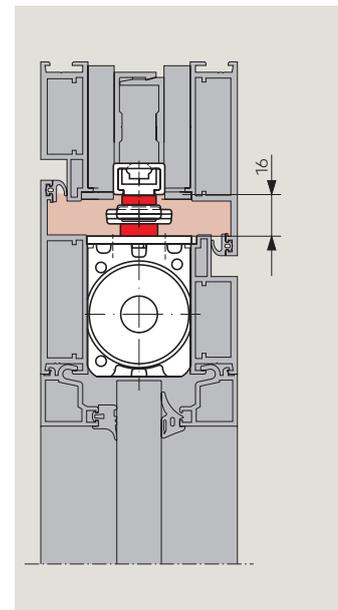
 Please check dimensions carefully



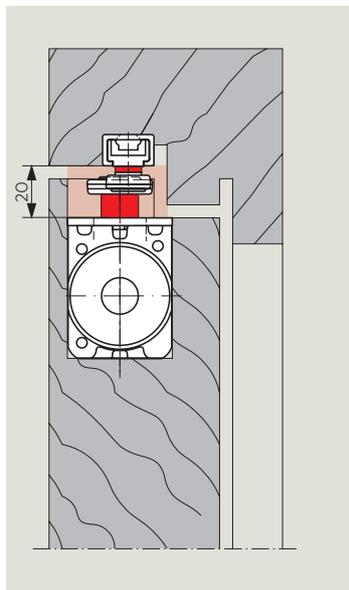
Tubular steel frame door, flush-closing, clearance 13.5 mm, with ITS 96/ITS 96 FL EN 3-6 and slide channel G 96 N20 K12.



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.

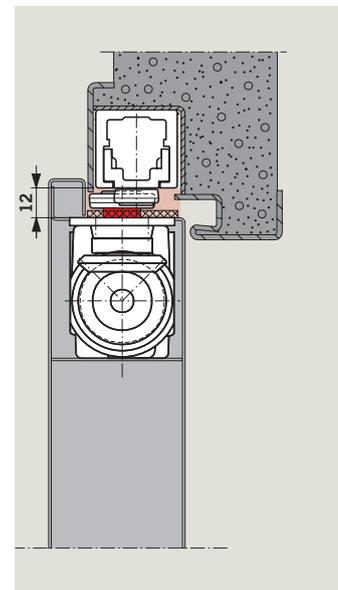


Timber door with solid frame, double-rebated, clearance 20 mm, with ITS 96/ITS 96 FL EN 3-6, 8 mm extended spindle and slide channel G 96 N20 K12.

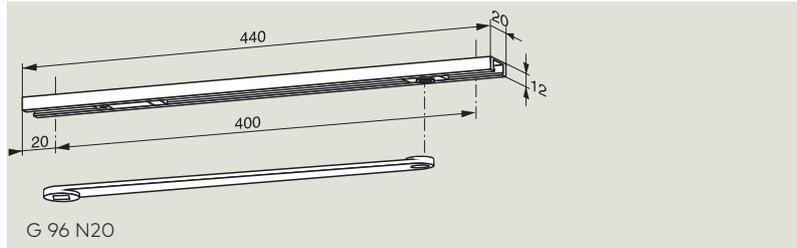
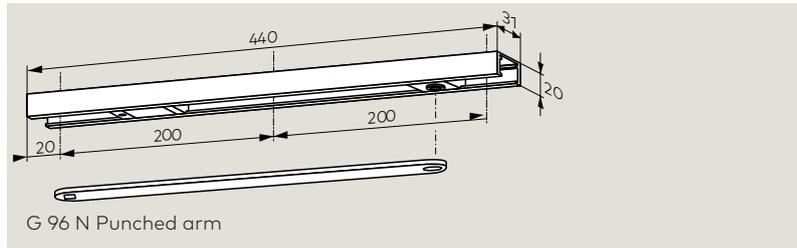


Hollow steel door with steel frame, over-rebated, clearance 12 mm, with ITS 96 EN 3-6, 4 mm extended spindle and slide channel G 96 EMF K8.

 Please check dimensions carefully

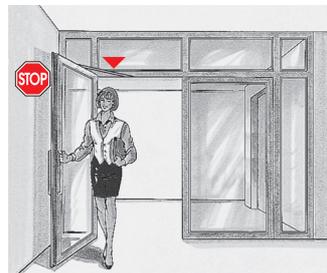
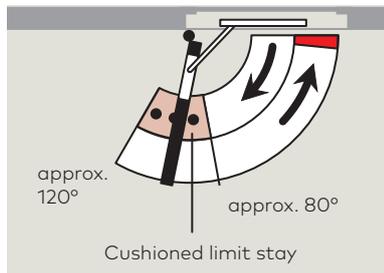


## G 96 and G 96 N20 Slide channels



### F Approval certification

The G 96 N and G 96 N20 slide channel is tested to EN 1154 in conjunction with the ITS 96 and ITS 96 FL. Additionally, the model size EN 2 – 4 and EN 3 – 6 has CERTIFIRE approval (CF.140) for use on timber FD30 and FD60 doors (code ITT), when installed with the approved intumescent gasket set for FD30 or FD60 supplied by dormakaba UK. The length, width and height of mortice for the body and slide channel must be increased by 2 mm to accommodate the gasket on 30 minute doors and 4 mm on the channel only for 60 minute doors. The ITS 96 has 4 hour CERTIFIRE approval for metal doors.



The G 96 N Punched arm is non-handed and includes the arm, slide channel, slide block, cushioned limit stay and fixing screws.

The G 96 N Punched arm cannot be used with the reduced spindle unit.

### Specification text

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

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

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

### Specification text

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

### Version

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

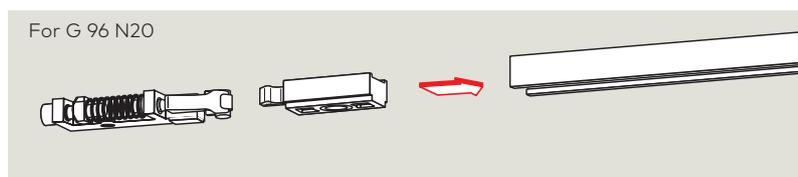
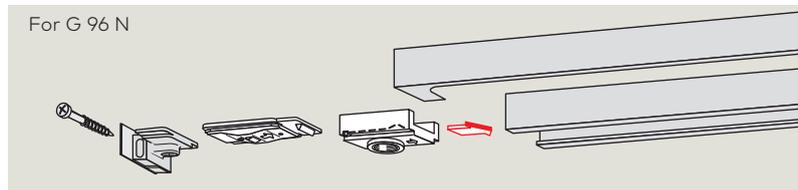
### Cushioned limit stay

The integrated mechanically cushioned limit stay of the 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°.

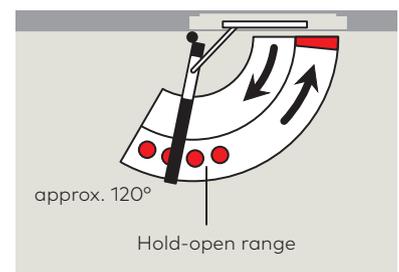
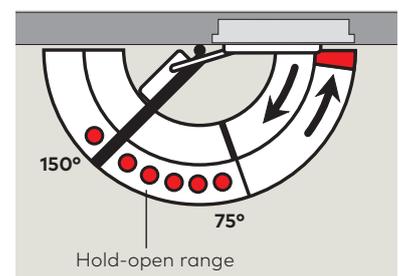
**The cushioned limit stay feature is not an overload protection device and in many cases cannot replace a doorstop.**

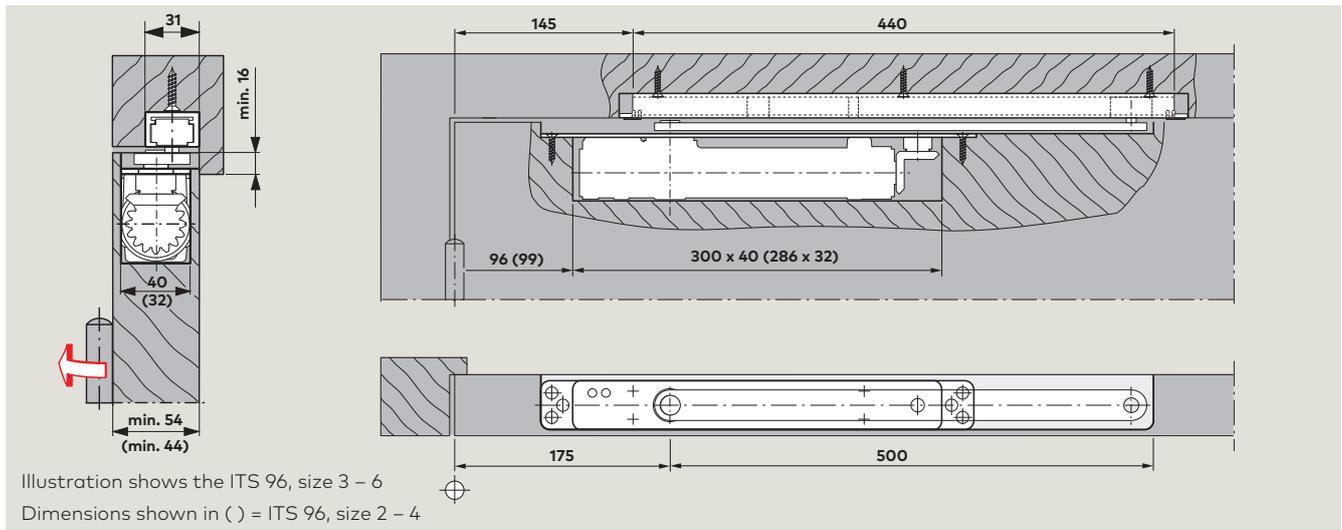
## Hold-open unit

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

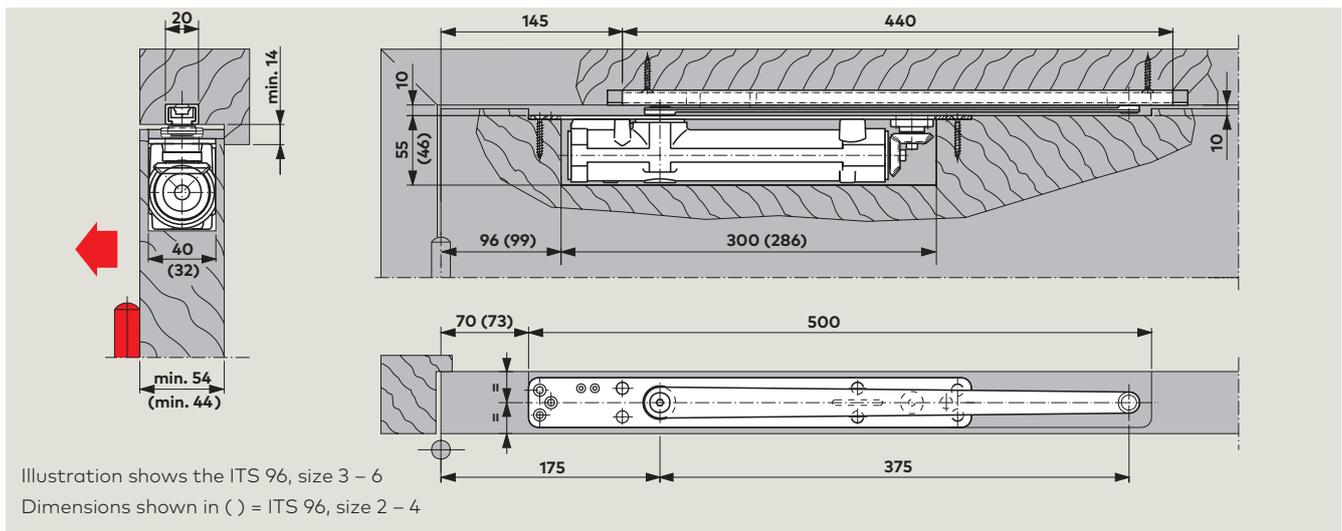


The RF hold-open unit enables doors to be securely held without any fall-back at precisely the required position up to an opening angle of approx. 120°. The pull-off force can be adjusted to any door situation. The RF mechanism is non-handed.

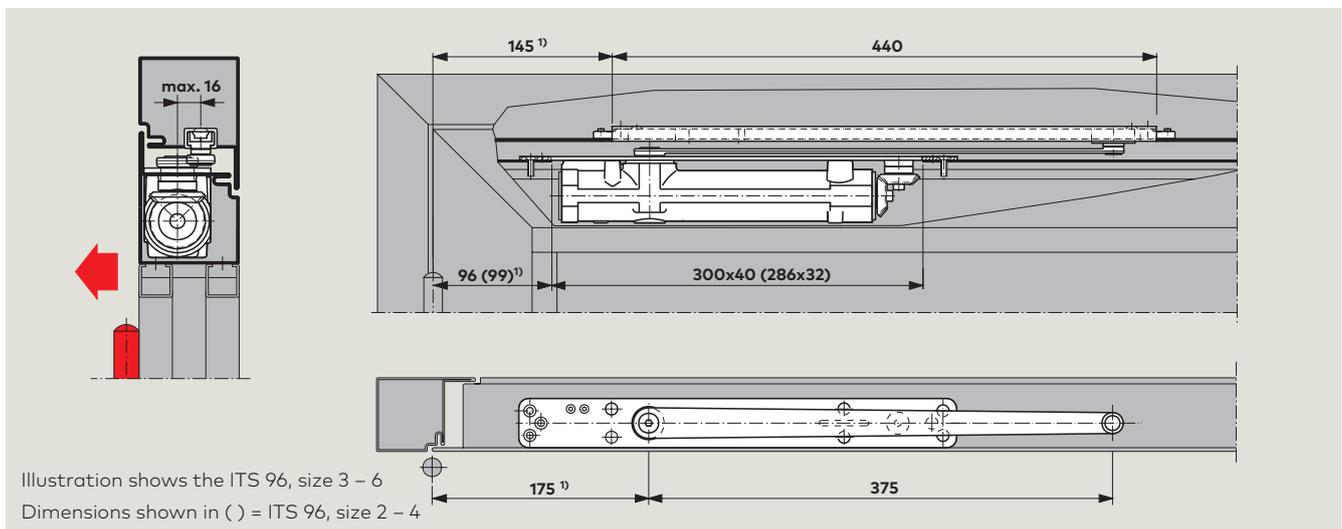




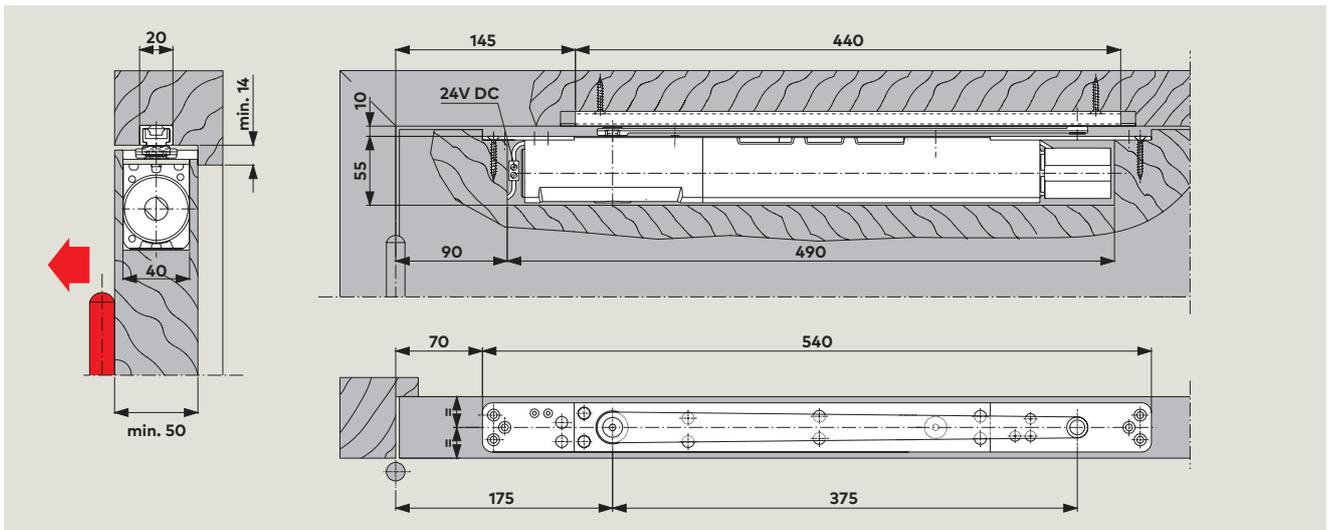
ITS 96 UK standard spindle closer with G 96 N slide channel in a **timber door**. Example: Anticlockwise-closing (ISO 6) door; mirror image applies to clockwise-closing (ISO 5) doors. For fire doors min is 54mm (44mm)



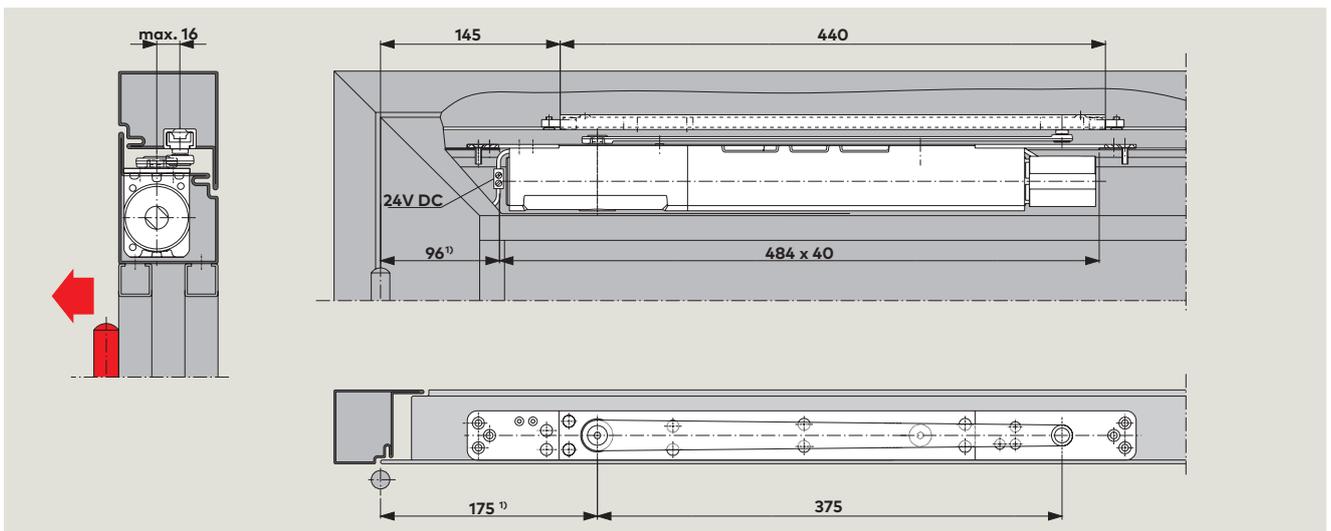
ITS 96 UK Standard spindle door closer with G 96 N20 slide channel in a **timber door**.  
 Example: Anticlockwise-closing (ISO 6) door; mirror image applies to clockwise-closing (ISO 5) doors. For fire doors min is 54mm (44mm)



ITS 96 door closer with 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.

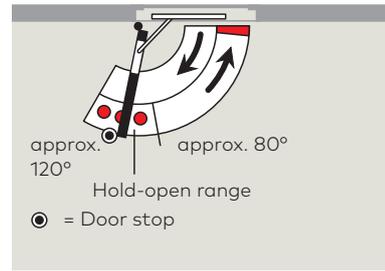
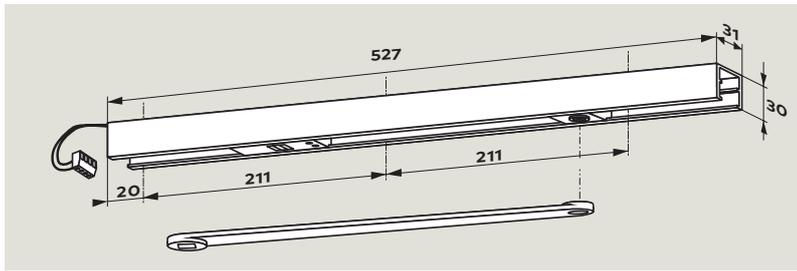


ITS 96 UK standard spindle FL door closer with G 96 N20 slide channel in a **timber door**.  
 Example: Anticlockwise-closing (ISO 6) door; mirror image applies to clockwise-closing (ISO 5) doors.



ITS 96 FL door closer with 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.

## 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).

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

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 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 recommended 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.

**Version**

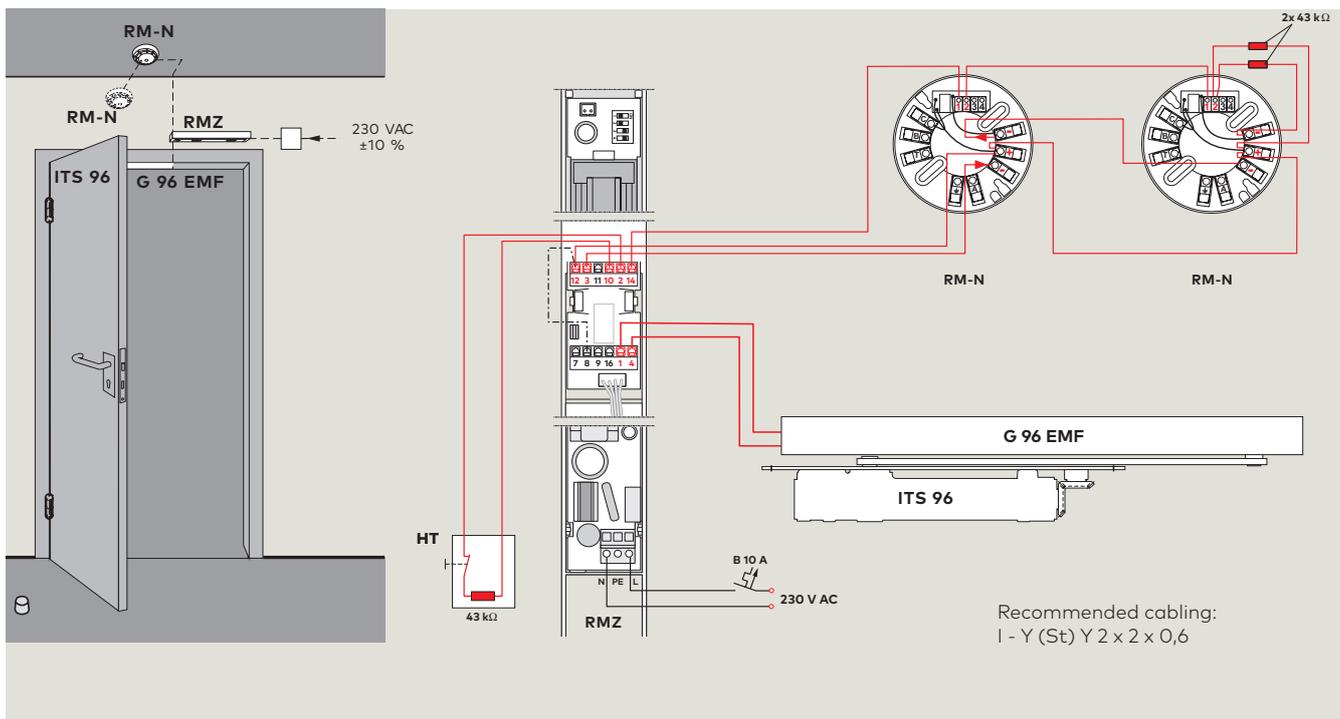
- LH (ISO 6) K8/K12
- RH (ISO 5) K8/K12

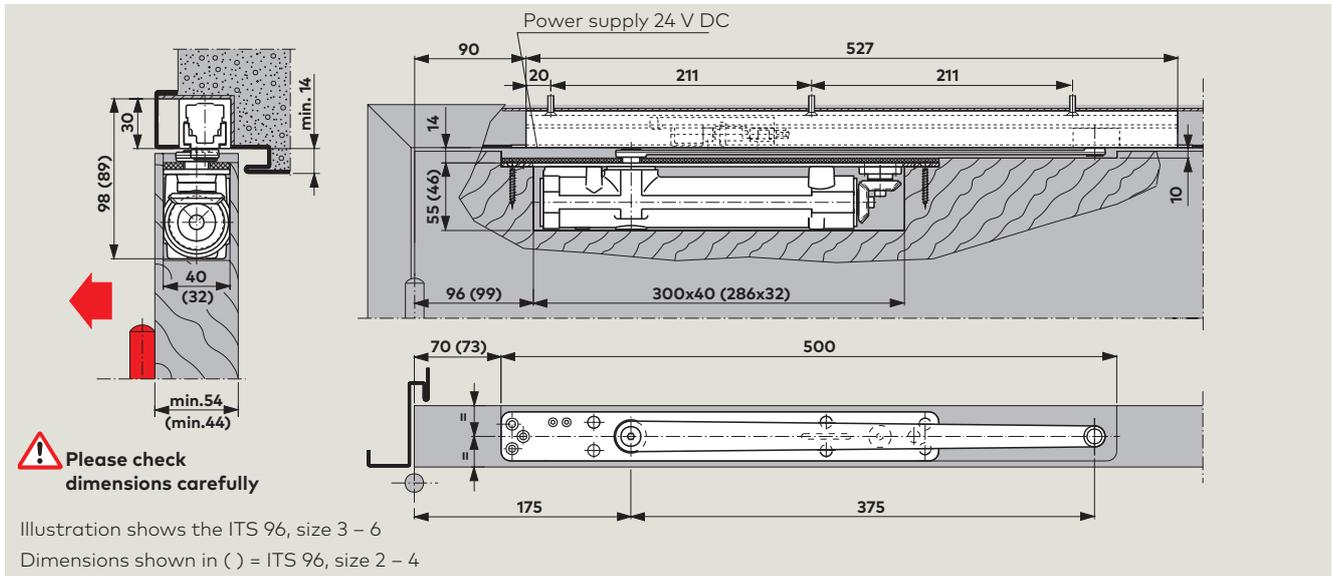
**Make**

ITS 96 EMF

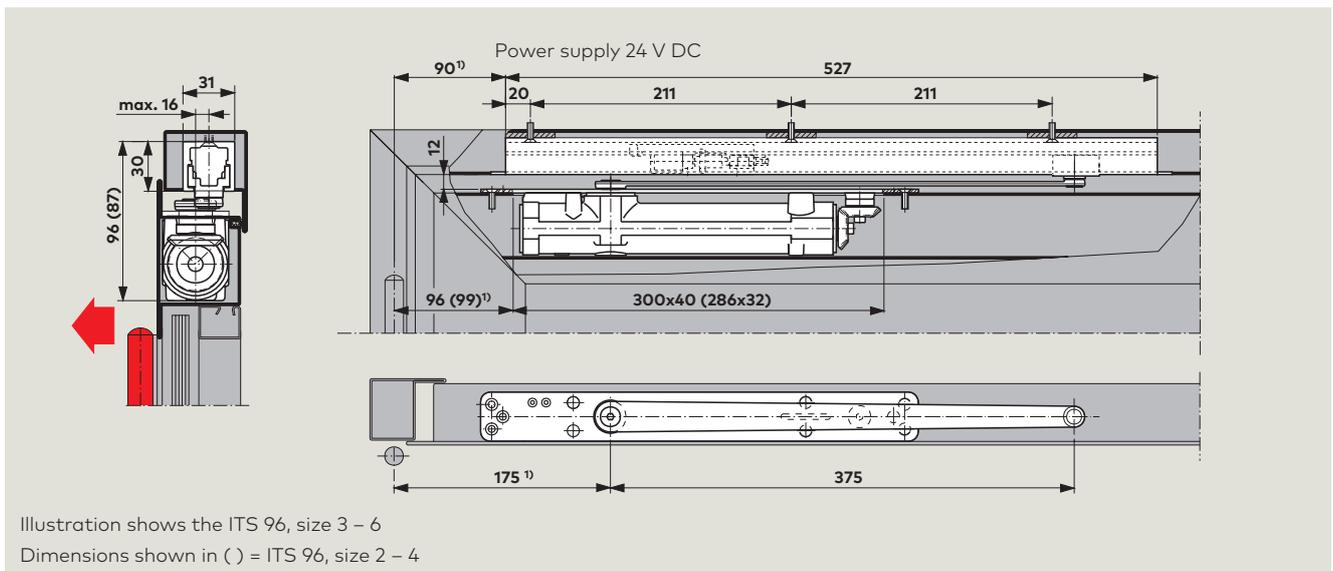


**Example application, hold-open system**





ITS 96 UK standard spindle door closer with 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 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.

ITS 96 EN 2-4 and EN 3-6 have CERTIFIRE approved CF140 for use on timber FD30 and FD60 doors (ITT) when installed with the approved instrument gasket for FD30 or FD60 supplied by dormakaba. The length width and height for the G96EMF channel must be increased by 4mm to accommodate gasket on both 30minute and 60 minute doors.

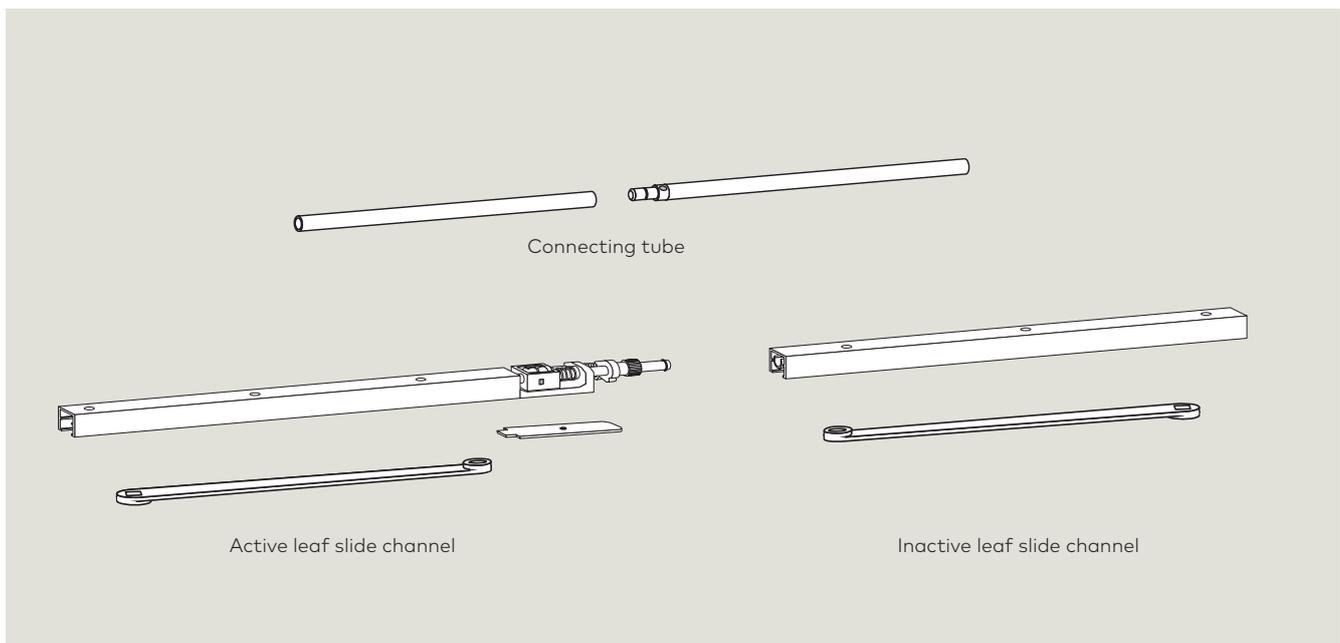
## G 96 GSR Slide channel door co-ordinator

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 ITS 96 and ITS 96 FL range.

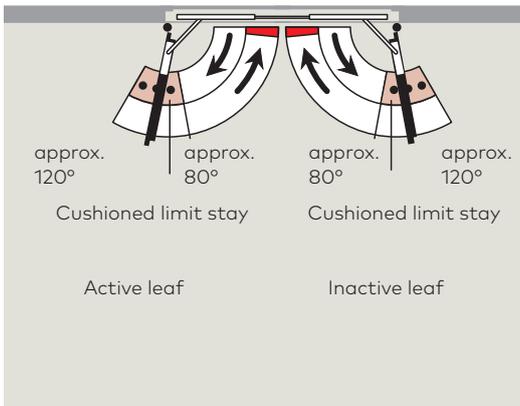
Version/Function	Door width (mm)	Door leaf thickness min. (mm)	Closer size ITS 96
<b>GSR</b>			
Door co-ordinator	1450 – 2200	40	2 – 4
	1450 – 2800	50	3 – 6



A G 96 GSR slide channel door coordinator 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.



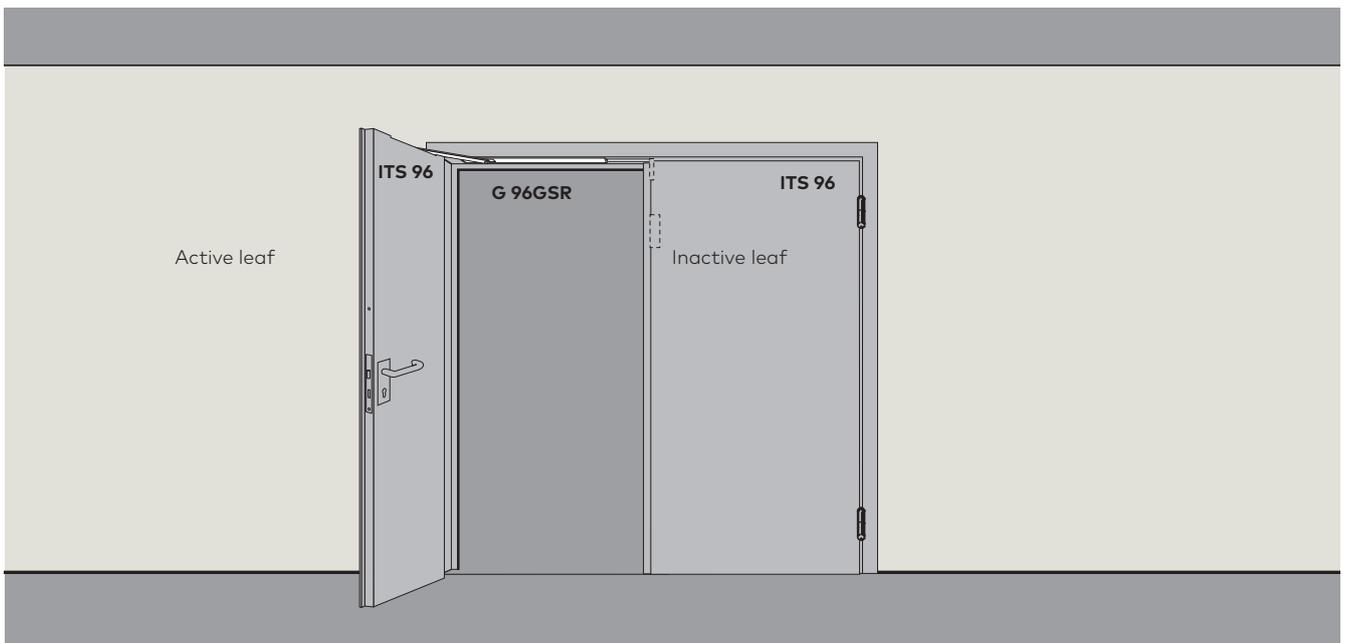
**Specification text**

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.

**Make**

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°.

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.

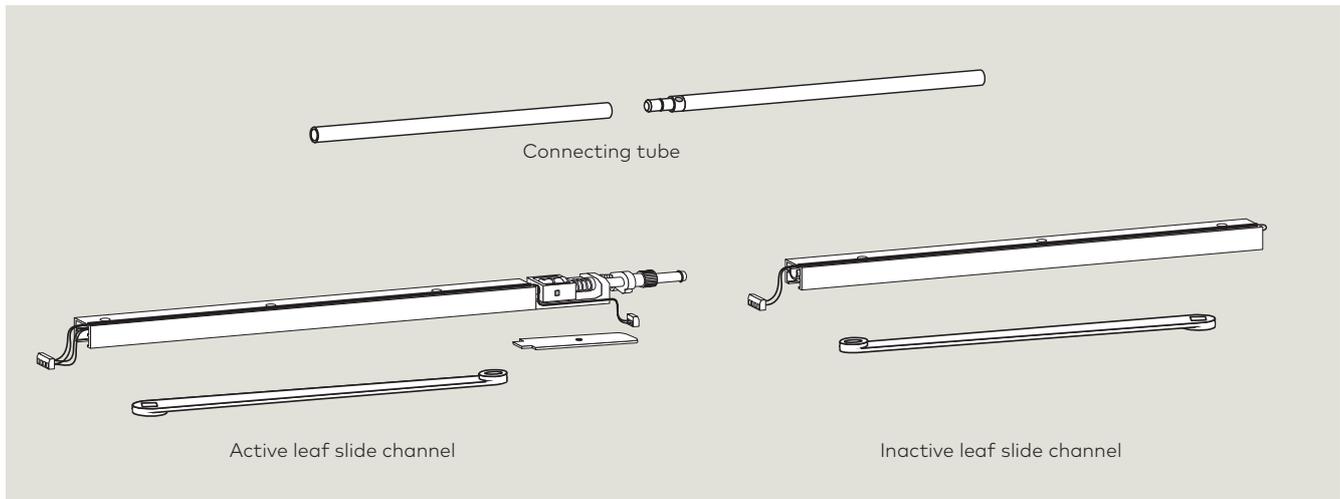
The G 96 GSR-EMF slide channel door co-ordinator can be combined with both door closer sizes of the ITS 96 range.

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

### Note:

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

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 1450 – 2800	40 50	2 – 4 3 – 6



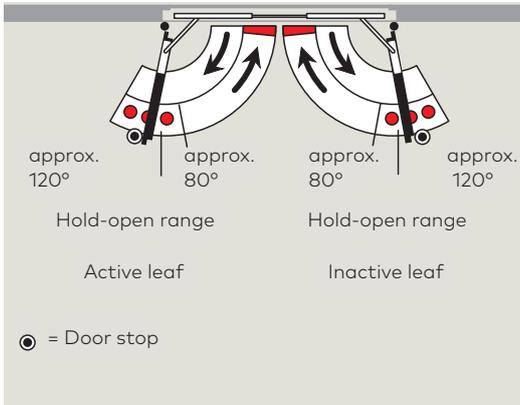
A G 96 GSR slide channel door co-ordinator encompasses an active leaf and an inactive leaf slide channel with electromechanical hold-open, a connecting tube, a cover for the co-ordinator mechanism on the active leaf slide channel, and two arms.

### 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.



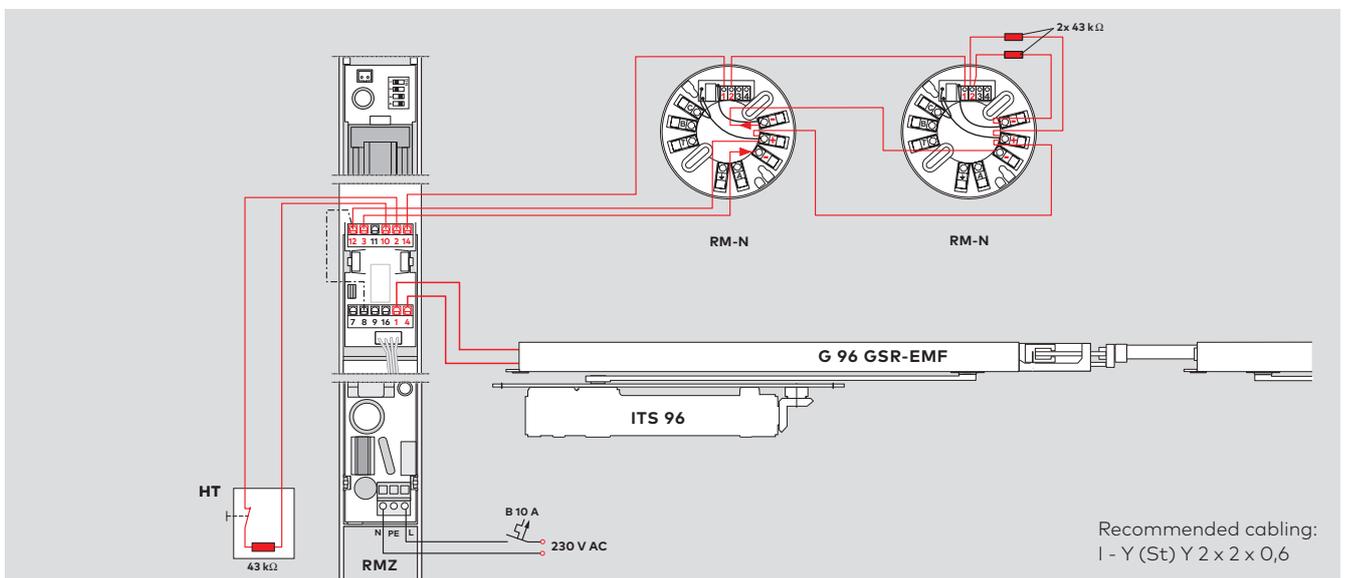
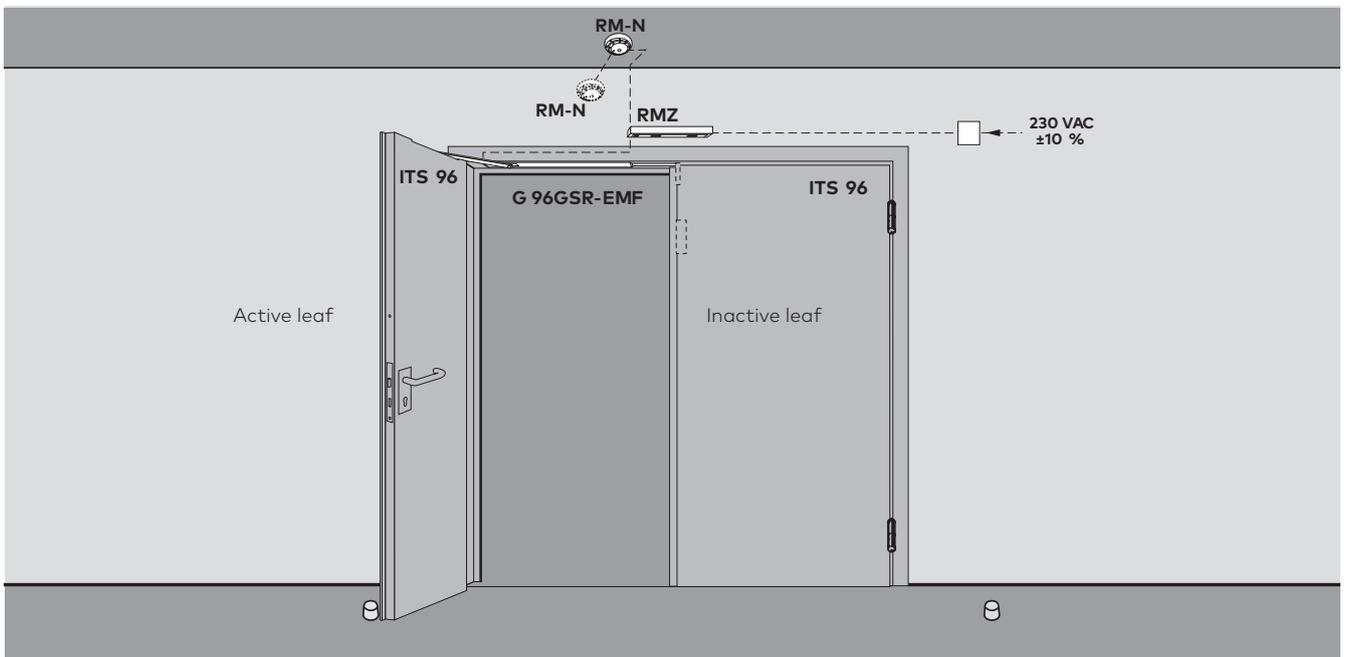
**Specification text**

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.

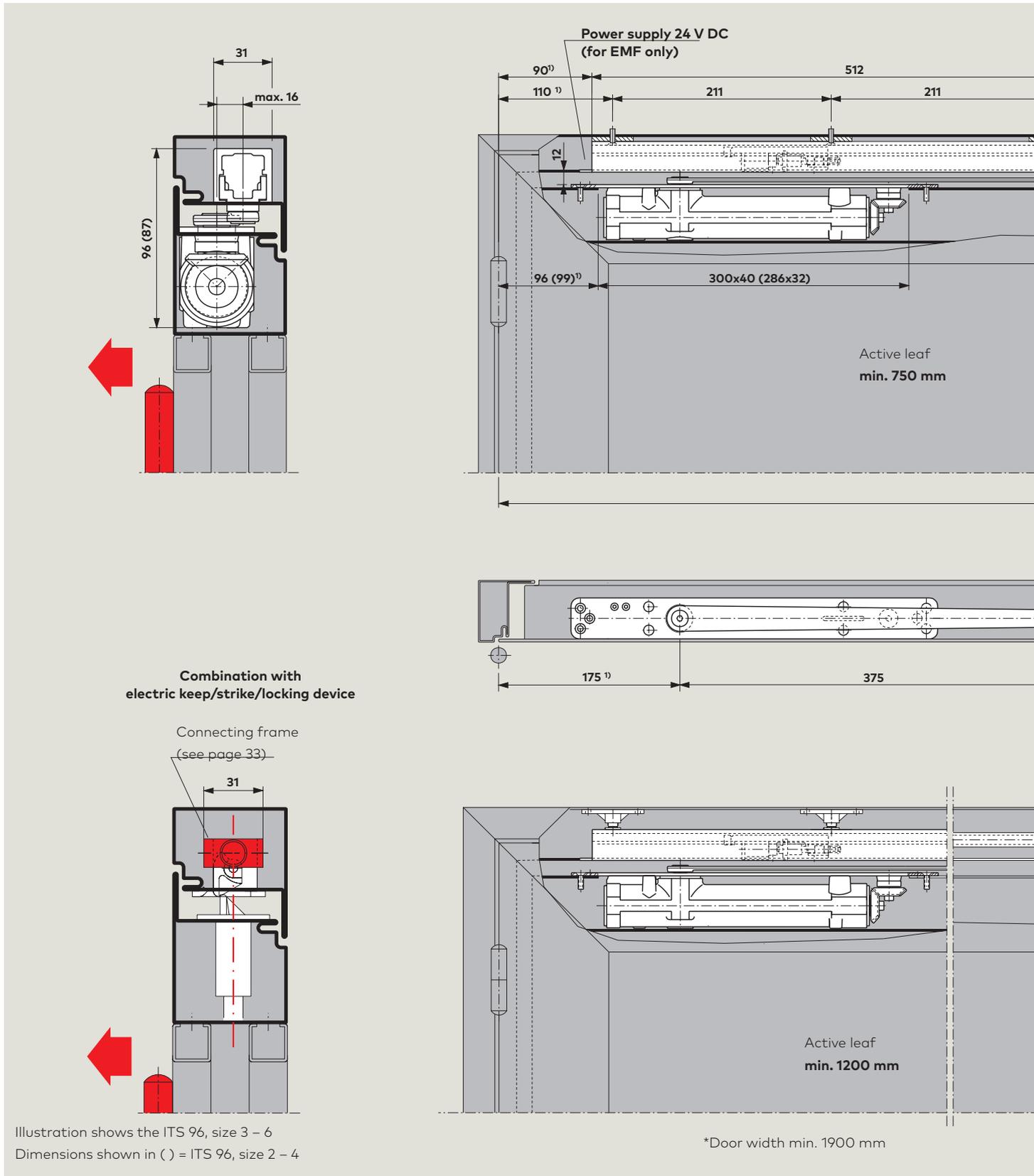
**Make**

ITS 96 GSR-EMF

**Example application, hold-open system**



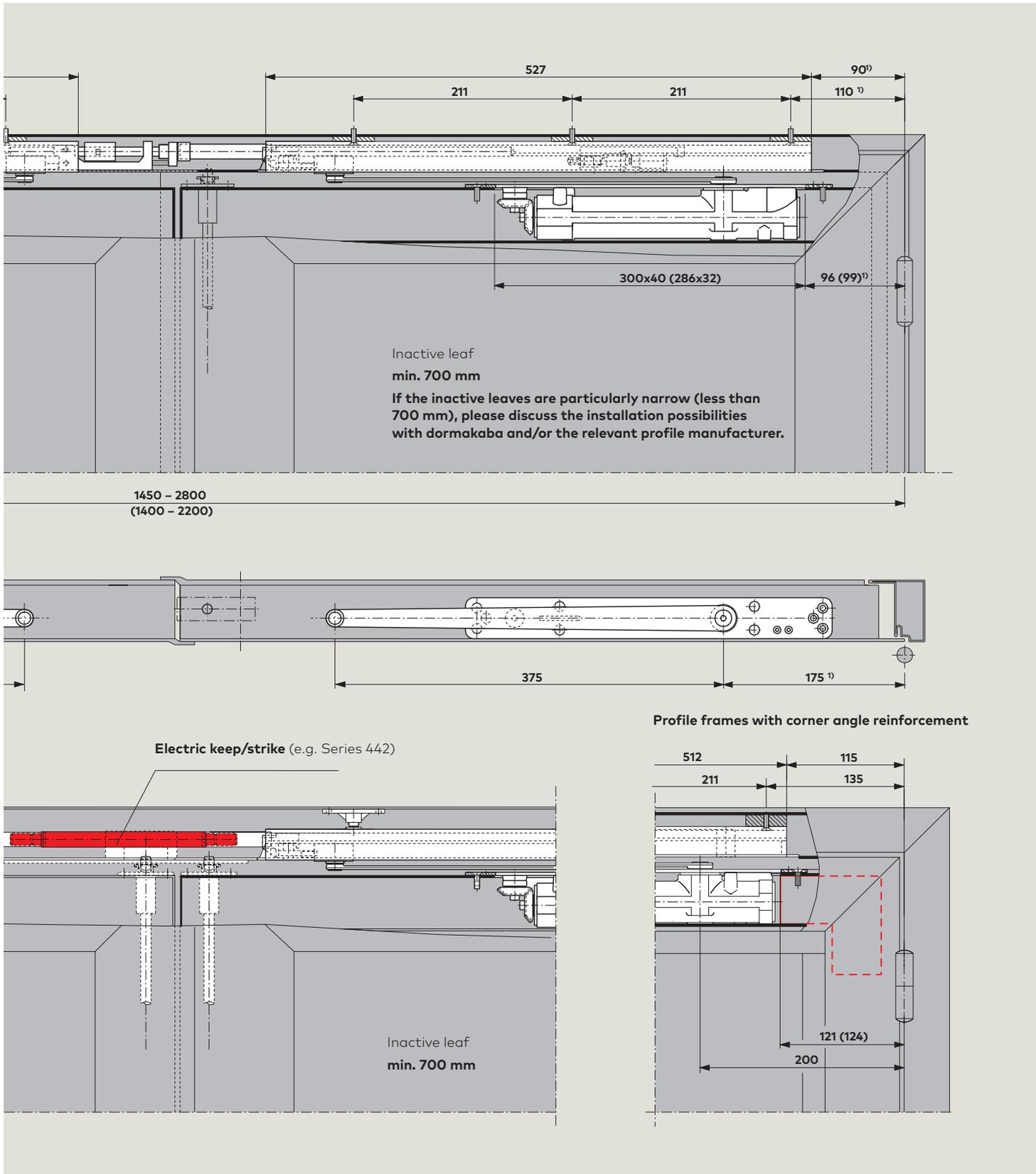
## Installation in an aluminium framed door



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 MK 397 carry bar is also fitted.