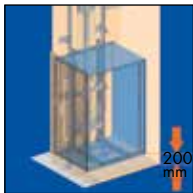


## Lift Equipment



**DICTATOR DHM 500 Homelift  
(according to the  
Machinery Directive)**

**Page 01.003.00**



**DICTATOR DHE Lift  
(according to  
Lift Standard EN 81-2)**

**Page 01.009.00**



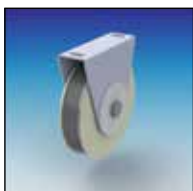
**DICTATOR Lift Shaft System**

**Page 01.013.00**



**DICTATOR Accessories for  
Hinged Lift Doors**

**Page 01.019.00**



**DICTATOR Accessories for  
Sliding Lift Doors**

**Page 01.049.00**



**Other Lift Equipment**

**Page 01.055.00**

**Notes:**

## DICTATOR Home Lift DHM 500

### The Lift According to the Machinery Directive 2006/42/EC

Being mobile is one of the essentials of today's life. The DICTATOR home lift DHM 500 is the ideal solution both for installation in a house under construction or for retrofit into existing houses in order

- to facilitate daily life
- to enable people to stay in their own home when being old and/or physically handicapped.

The DHM 500 has been tested and approved by the TÜV Rheinland/Germany in accordance with the Machinery directive 2006/42/EC on the basis of the requirements of the standard EN 81-41.

Like many other DICTATOR products every homelift DHM 500 is a **bespoke installation being planned and manufactured individually**. This procedure often allows to install a lift even if the available space is most unfavourable. An additional advantage is the small depth of the pit of only 80 mm and that the headroom of 2500 mm in the top floor may be reduced under certain circumstances to only 2300 mm.

The DICTATOR DHM 500 can be installed either in a lift shaft provided by the customer or be furnished complete with a DICTATOR steel lift shaft.



### Technical Data

Rated load	max. 500 kg
Cabin size	max. 2 m <sup>2</sup>
Speed	max. 0.15 m/sec.
Travel	max. 14 m
Depth of pit/Headroom top floor	min. 80 mm/ca. 2500 mm (min. ca. 2300 mm)
Power supply	400 VAC/2.2 kW (standard), 230 VAC (surcharge)
Type of lift	1:2 roped hydraulic drive
Operation	depending on the furnishing, see next page



## I. Technical Data / Features

### Features

Compared to a normal lift (according to the lift standard) a lift according to the Machinery Directive has a few restrictions but also some important advantages.

#### Operation

A homelift is never intended for general use. It may only be used by persons who have been instructed to use it. For this purpose it is normally equipped with key switches so that only persons with a key can operate it. In the basic furnishing without cabin door the key of the desired floor has to be pressed during the whole travel. When reaching the chosen floor the lift stops on its own. When the key is released during the travel, the lift stops. This is to ensure the safety of the persons in the cabin.

In case the lift is called from one of the landings the key has to be pressed only shortly. To operate the lift also from inside the cabin **by impulsion** is always then possible if the cabin has **cabin door(s)**.

#### Speed

The maximum speed allowed for a homelift is 0.15 m/s. This relatively slow speed allows to do without cabin doors. This represents a big advantage if there is little space available.

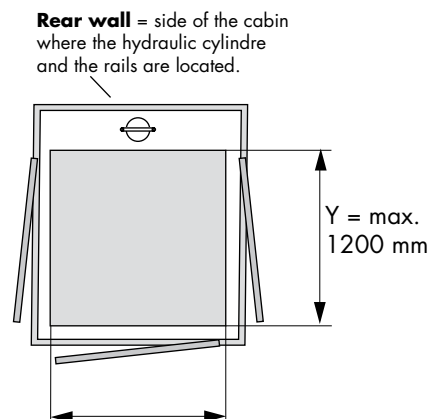
#### Cabin

Every cabin of the homelift DHM 500 is **custom-built**. The dimensions don't have to exactly meet the regulations, not like a lift according to the lift standards, but are always manufactured to fit in the given space. The cabin of the DHM 500 can be made with access from one side, through cabin, from adjoining sides or from three sides. This allows to adapt it in an optimal way to the situation on site, especially when being retrofitted. The open cabin sides are secured by a light grid of the category II (standard). This means as soon as somebody triggers them the travel of the cabin is stopped. Apart from the open accesses the cabin of the DHM 500 is closed, i.e. it disposes of high walls and a ceiling.

#### Requirements of pit and headroom (dimensions see below)

Another advantage of the DHM 500, beside the customized cabins, are its minimal requirements concerning the dimensions of the pit (space below the lowest stopping place) and the headroom (height above topmost floor level).

### Dimensions



#### 1. Cabin

##### - Floor space

In general the cabin measurements are chosen to the requirements of the client - taking into consideration the directives and the technical feasibility. Due to technical reasons measure Y (see drawing beside) may be max. 1200 mm.

##### - Cabin height

Standard	approx. 2035 mm or approx. 2085 mm
Minimum	1900 mm (allowed only in the private sector or when the edificial situation permits nothing else)

#### 2. Shaft

##### - Pit

min. 80 mm (in case of standard dimensions and weights); recommended are 200 mm (necessary in case of large and/or heavy cabins, e.g. with glass wall)

##### - Headroom

2500 mm  
may possibly be reduced to about 2300 mm

#### 3. Hinged landing doors

Standard widths	500, 550, 600, 650, 700, 750, 800, 850, 900 mm
Clear heights	2000 mm (default); 1900, 2100 mm

#### 4. Automatic sliding doors for landing and cabin doors (optional)

Standard widths	700, 800, 900 mm
-----------------	------------------

## II. Furnishing / Delivery

### Cabin Furnishing



### Components Included or Available

<i>Mirror:</i>	Standard (half the height of the cabin) on one cabin wall
<i>Walls:</i>	Melamine panels, glass or stainless steel at an extra charge
<i>Floor:</i>	Anti-slip linoleum floor On request also prepared for floor by customers Skirting made of stainless steel
<i>Operating controls:</i>	Horizontal panel of stainless steel with push buttons (Ø 30 mm) in the cabin wall in front of the rails (one button per landing, one alarm button, one stop button and one key switch)
<i>Cabin lighting:</i>	Fluorescent tubes or LED lights in the cabin ceiling (white, black or stainless steel/at extra charge) The lighting is turned on automatically as soon as the landing door is opened and will be alight as long as the lift is in function. Then it will be switched off automatically (time adjustable between 8 and 30 seconds). In case of a power failure an emergency light is automatically turned on.
<i>Hand rail:</i>	at an extra charge: chromeplated or in stainless steel Special executions on demand

#### 1) Standard equipment of the DHM 500 lift

**Cabin** with walls and ceiling, interior furnishing see above, telephone (feeding cable to be supplied by customer)

**Rails** pre-assembled to crossbar (standard length of the rail pieces 2.50 m),

**Hydraulic cylinder** with pipe rupture valve, hydraulic unit with valve block, shut-off valve, manometer, hand pump, emergency descent switch, 4 m hydraulic hose

**Control system** including distribution box on cabin roof with emergency stop button, retiring cam(s), ribbon cable, cable loom for the shaft wiring, position detector, magnets, emergency bypass switch, reset switch, floating battery for emergency descent, alarm and emergency lighting

**Landing doors** standard version: primary coat, with DICTATOR door damper, closing spring, door handle, narrow wire-reinforced glass pane, control panel in the door frame, emergency unlocking with additional safety contact, door locking and door contact

#### **Safety features:**

- safety light grid of category II according to EN in the cabin openings
- mechanical gripping device on both rails
- integrated testing device for the gripping device
- pipe rupture valve
- emergency descent device, hand pump
- automatic emergency lighting in the cabin
- alarm siren and telephone
- safety prop in the pit with device for folding out and folding to be operated from outside the shaft, integrated safety contact

#### 2) Additional equipment

Cupboard for hydraulic unit and control system  
(if there is no lockable machine room on site)

Intercom, when machine room/cupboard is not within calling distance

Non-standard design landing doors (see following page)

Electric door operator for landing doors

Cabin doors, non-standard furnishings for the cabin

### III. Landing Doors - DICTATOR Lift Shaft System

#### Landing Doors

By default the landing doors of the DHM 500 are hinged doors. The following **dimensions** are available:

Width: 500, 550, 600, 650, 700, 750, 800, 850, 900 mm  
(other dimensions upon request)

Height: 2000 mm (default)  
1900 or 2100 mm on demand

**Components of delivery (default):**

- semi-automatic hinged door with primary coat, with closing spring and Standard door damper
- electromagnetic retiring cam and emergency unlocking
- wire-reinforced glass pane and door handle
- control panel in the door frame with call button and key switch

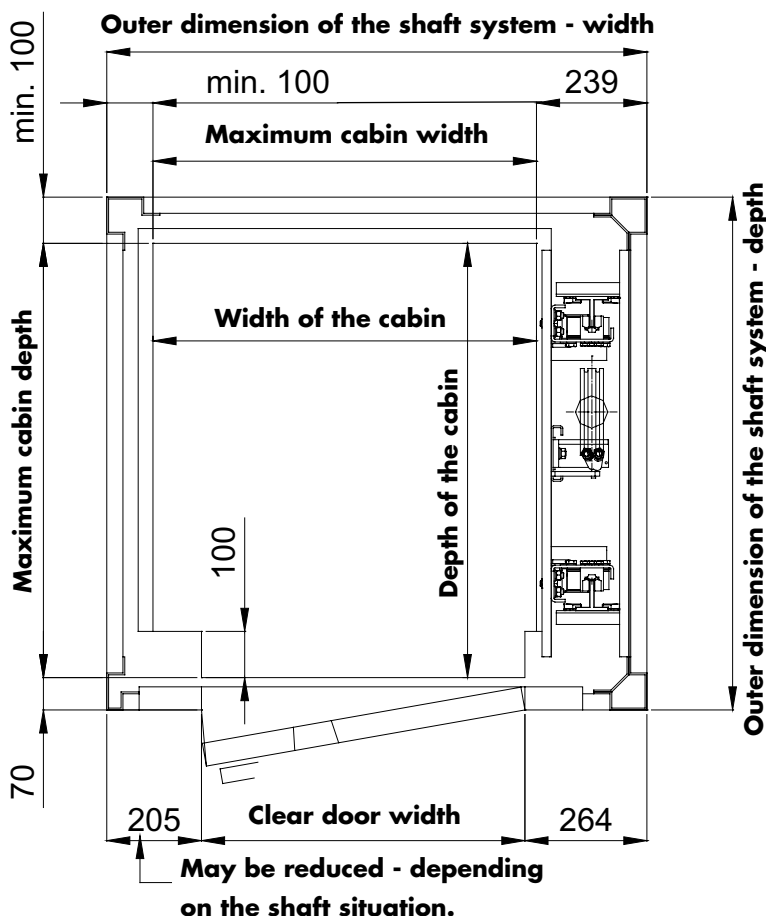


Non-standard design landing doors can be supplied at an extra charge with large window (in case of a 900 mm wide door: 575 mm x 1299 mm), powder-coated

and for exterior use corrosion protected and powder-coated. The doors can also be furnished with a door look and inside turning handle to prevent unauthorised persons from entering the cabin.

An optional possibility are **automatic sliding** (landing) **doors** or **folding doors** in the cabin.

#### DICTATOR Lift Shaft System



The DICTATOR lift shaft system **certified according to EN 1090** offers important advantages due to its modular structure, the elements all screwed together and its great flexibility. The design and production of the DICTATOR lift shaft system is bespoke. Therefore no fixed dimensions exist. The dimensions indicated in the drawing are just an indication for any calculation. It enables you to approximately determine the space required for the shaft with a determined cabin size or what cabin size might be achieved with given lift shaft dimensions. In case of complicated requests please contact our technical support.

Further detailed information is to be found starting on page 01.013.00.

Minimum dimensions of the Standard lift shaft with the hydraulic unit placed laterally:

The *minimum width* of the lift shaft is determined either by the desired cabin width or by the required width of the door (see drawing).

The *minimum depth* of the standard lift shaft is 1110 mm, being determined by the rail system. Depending on the door or shaft situation, this measure may be reduced.

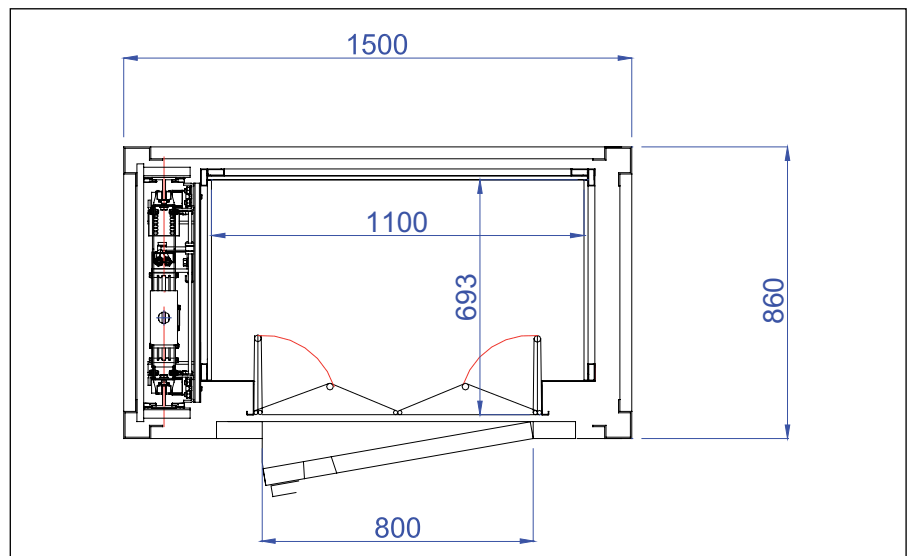
**Special designs with smaller dimensions can be realized on demand. Please ask us!**

## IV. Realized Projects DHM 500 - Examples

### Homelift DHM 500 in a Very Narrow Stair Well - with Folding Door

For retrofitting a DHM 500 in an existing stair well a home lift with shaft system has been designed exactly to the given dimensions.

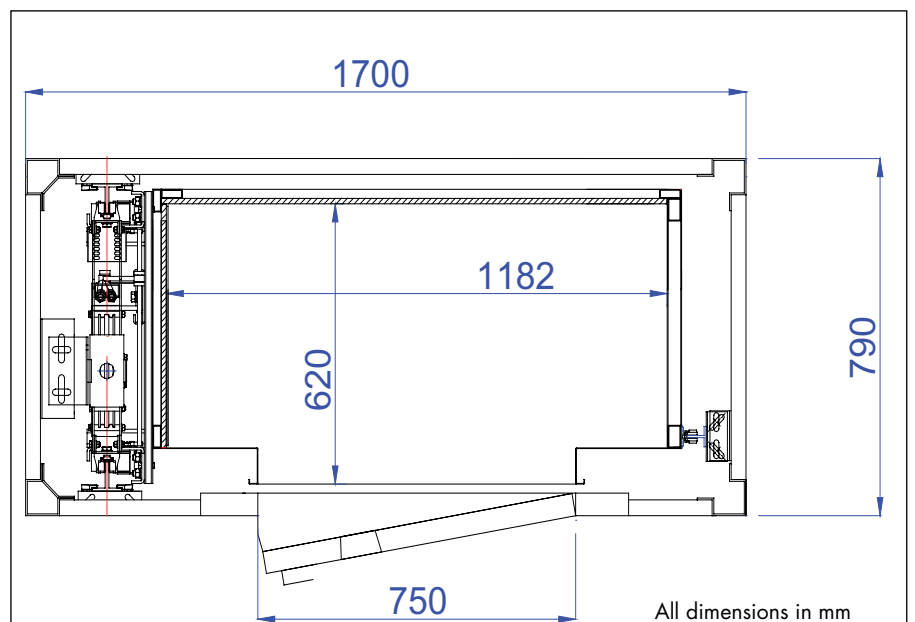
In spite of the very little given space there also could be realized the cabin door wanted by the customer. This allows to operate the cabin by impulsion instead of the standard dead man operation, i.e. the button of the desired floor has to be pressed just shortly.



### Homelift DHM 500 in an Extremely Narrow Stair Well with Glass Cabin Walls

Despite the extremely little depth of this stair well (860 mm!) the customer wanted a cabin with glass walls. As a shaft was used the DICTATOR lift shaft system with glass panels to keep the staircase as "open" and bright as possible.

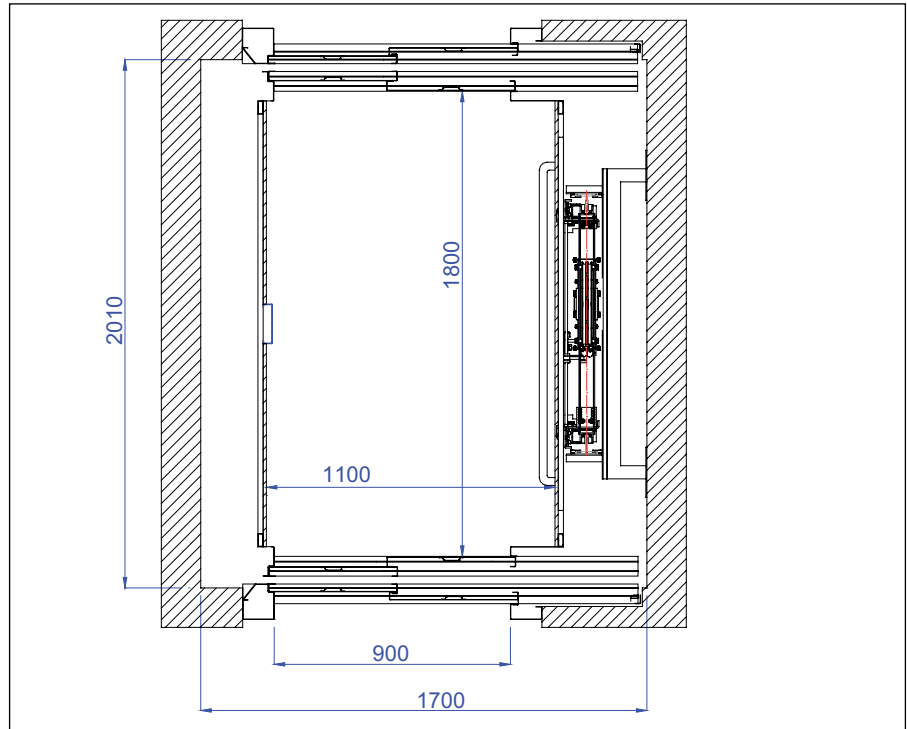
To achieve the necessary stability this lift was provided with a third guide rail.



#### IV. Realized Projects DHM 500 - Cont. Examples

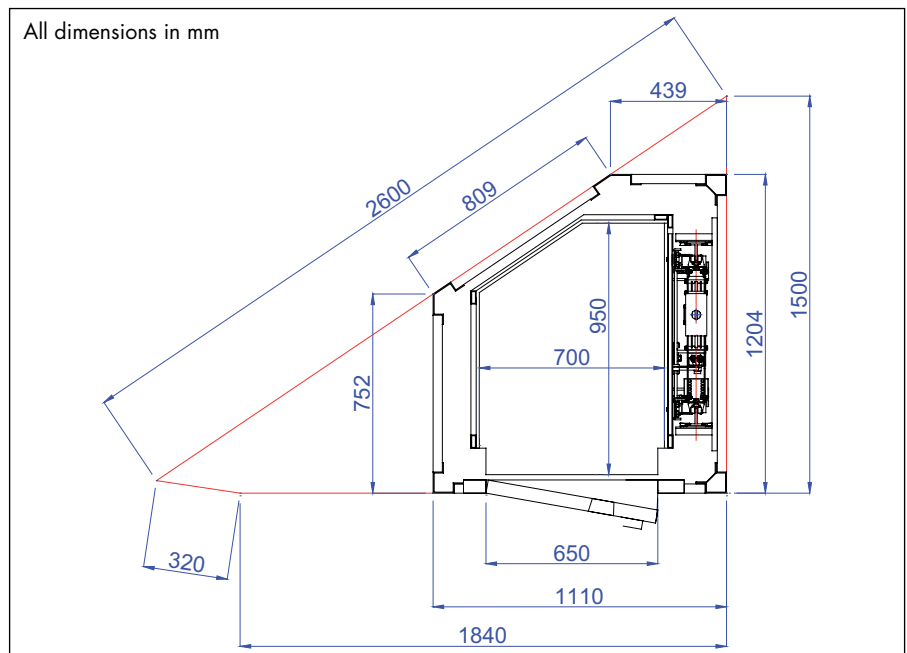
##### Homelift DHM 500 with 2 sqm Ground Area and 500 kg Load

Due to its robust concept and the high stability of its supporting frame the Homelift DHM 500 has been approved for loads up to 500 kg at a ground area of up to 2 sqm. In this case the Homelift also had been furnished with automatic doors to offer highest operating comfort.



##### Homelift DHM 500 in a Triangular Stair Well

The following example demonstrates the extremely high flexibility of the DICTATOR Homelift DHM 500 and the lift shaft system. In order to realize in the triangular stair well a cabin with sufficient space the shaft system as well as the cabin were designed and manufactured in a pentagonal layout.





## DICTATOR DHE Lift

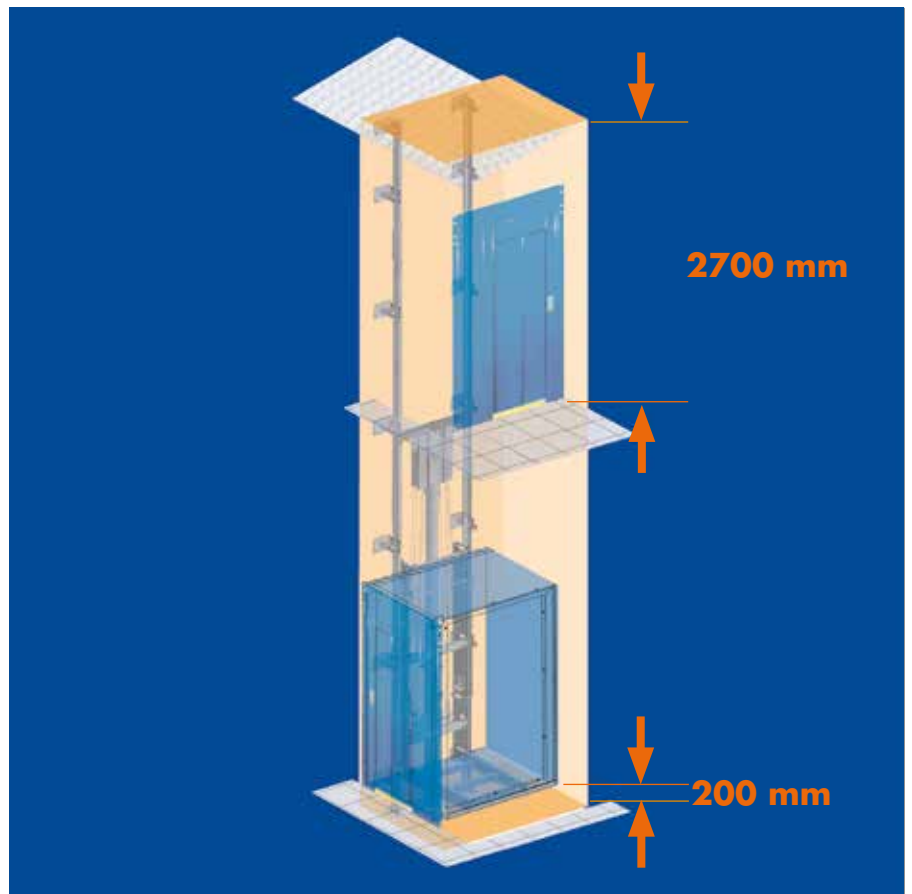
**Reduced Pit of 200 mm and Headroom of 2700 mm**

Nowadays it becomes more and more important to remove barriers from buildings that might impede the movement of handicapped persons. However, in quite a lot of existing buildings there is neither the space for the pit nor the headroom required for the installation of a lift.

DICTATOR offers for these cases in addition to the home lift DHM 500 the **DHE lift** according to the directive 2014/33/EU. Its **main advantages:**

- Shallow pit: 200 mm
- Small headroom: 2700 mm
- For all sizes double access options (adjoining or through cabin)
- Only little space required.
- Custom made to size required: individual production permits the maximum use of the available space.
- No separate engine room required (hydraulic unit and control system in approved, lockable cupboard)

If no existing lift shaft can be used, the modular structured DICTATOR lift shaft system offers the ideal solution.



### Technical Data

Rated load / number of persons	225, 300, 450, 600 kg / 3, 4, 6, 8
Speed	max. 0.62 m/sec.
Travel	up to 20 m
Min. depth of pit / height of headroom	200 mm / 2700 mm
Dimensions	customised production
Access options	2 on all models, at 90° and 180°
Power supply	230/400 VAC / 50 Hz
Type	1:2 roped hydraulic drive



## I. Technical Data

The DICTATOR DHE lift is the ideal solution for complex requirements.

Its main advantages are the shallow pit, the small headroom, variable access options for all sizes and especially the **custom made design and production (no fix standard dimensions!)**.

	DHE 225	DHE 300	DHE 450	DHE 600
Load	225 kg	300 kg	450 kg	600 kg
Number of persons	3	4	6	8
Minimum area	0.60 m <sup>2</sup>	0.79 m <sup>2</sup>	1.17 m <sup>2</sup>	1.45 m <sup>2</sup>
Maximum area	0.70 m <sup>2</sup>	0.90 m <sup>2</sup>	1.30 m <sup>2</sup>	1.60 m <sup>2</sup>
Depth of pit	200 mm			
Headroom	2700 mm			
Travel	max. 20 m			
Number of stops	depending on travel, min. distance about 90 cm			
Dimensions of the cabin	custom-made to size required			
	clear height 2000 mm			
	dimension Y (see drawing) max. 1200 mm			
Number of accesses	one or two accesses (adjoining or through cabin)			
Cabin doors	automatic doors			
Door width (standard)(mm)	depending on cabin size: 600, 700, 800, 900, 1000			
Landing doors	automatic doors			
Speed	0.62 m/sec.			
Engine room	approved cupboard			
Mains connection	230/400 VAC / 50 Hz			
Motor rating kW	9.6	11.8	11.8	14.7
Precision of positioning	+/- 5 mm			
Safety gear	instantaneous safety gear			
	pipe rupture valve			
Control system	universal or selective			
Apron	foldable apron with one access			
	one foldable and one lifting apron with 2 accesses			

## II. Cabin

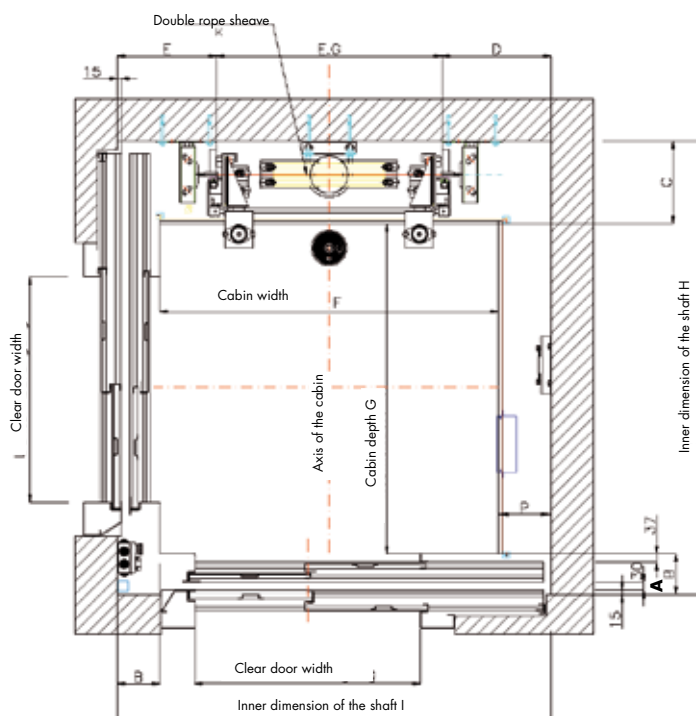
### Cabin Styling - Standard

<i>Walls</i>	laminated panels (7 standard designs) options: stainless steel or glass panels wall on the hydraulic side in two parts (removable)
<i>Mirror</i>	one wall of the cabin (to be chosen) with a mirror, half the cabin height, frame in stainless steel
<i>Ceiling</i>	white or black perforated sheet steel ceiling, optional stainless steel, with integrated cabin lighting
<i>Floor</i>	anti-slip linoleum floor option: prepared for stone floor
<i>Operating controls</i>	vertical stainless steel operating panel, stainless steel push buttons (with Braille engraving), display
<i>Handrail</i>	round handrail as option, nickel-plated or in stainless steel
<i>Battens, door frames</i>	skirtings, battens, door frames and lintels in stainless steel
<i>Cabin doors</i>	stainless steel telescopic sliding doors on demand also as central opening door
<i>Landing doors</i>	telescopic sliding door with primary coat stainless steel operating panel with call button and display

### Dimensions - Example

The DICTATOR DHE lift is always custom-made, i.e. it is adapted as best as possible to the available space. Therefore no tables with standard dimensions exist. The dimensions depend e.g. on the desired load, the number and position of the accesses, the type and width of doors. Normally the dimensions C and P, however, are standard dimensions.

The illustration shows a DHE with 2 accesses at 90°. The minimum dimensions for the DHE 300, DHE 450 and DHE 600 are shown in the tables below. The dimension G may not exceed 1200 mm.



Type	Minimum Dimensions (mm)					
	EG	A	B	C	D	E
DHE 300	650	75	157	335	140	290
DHE 450	800	75	157	335	145	300
DHE 600	800	75	157	370	145	300

Type	Minimum Dimensions (mm)					Max. FxG(m <sup>2</sup> )
	FxG(m <sup>2</sup> )	H	I	K	P	
DHE 300	0.79	1400	1400	320	100	0.9
DHE 450	1.17	1550	1550	400	100	1.3
DHE 600	1.45	1550	1550	400	100	1.6

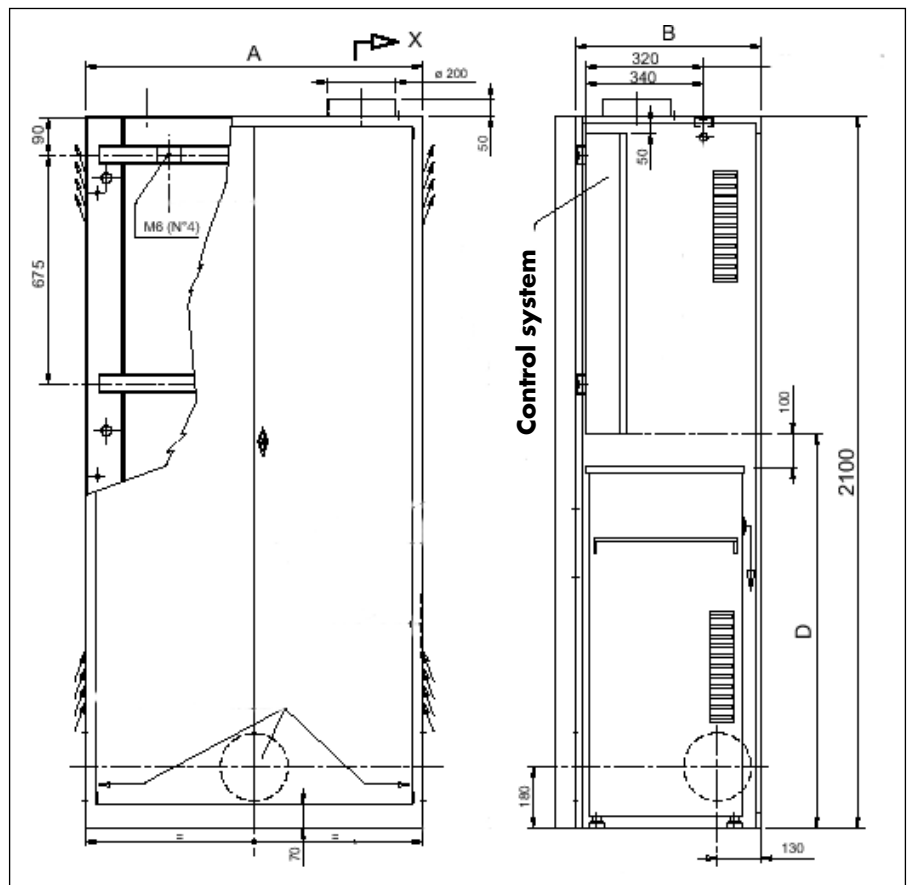
### III. Hydraulic, Components of Delivery

#### Cupboard for the Hydraulic Unit and the Control System

The DICTATOR DHE lift does not require a separate engine room. The hydraulic unit and the control system can be installed in an approved cupboard.

The cupboard is available in two sizes, depending on the model of DHE it is required for.

Dimensions (W x D x H)	DHE 225 and DHE 300	950 x 400 x 2100 mm
	DHE 450 and DHE 600	1030 x 620 x 2100 mm
Access door	two-leaf	
Finish	powder coated, RAL 7035	



#### Standard Components of Delivery

Cabin (see specifications on the preceding page) with cabin and landing doors

Complete hydraulic unit with 4 m hydraulic hose

Rails with fixing brackets

Control system

Complete electrical installation for the lift shaft and flat cable

## DICTATOR Lift Shaft System

The Modular Lift Shaft System, also for Retrofitting  
Certified According to EN 1090

A lift is becoming more and more important for daily life, not only in newly constructed buildings but also when modernizing existing houses.

The DICTATOR **modular lift shaft system** offers the ideal solution for all cases where a concrete lift shaft is not available or cannot be built for architectural reasons or lack of space.

Under the Construction Products Regulation 305/2011/EU only shaft systems may be mounted which have been **certified** according to EN 1090 and the production of which is subject to constant supervision. The DICTATOR lift shaft system meets these demands.

More **essential advantages:**

- Solid, self supporting system
- Easy installation without dirt because all components are bolted together.
- Modular and therefore very flexible
- Offers various individual designs.
- For interior and exterior installation
- Retrofitting into existing houses
- Comes prepared for the lift to be fitted into the lift shaft system (brackets to hold the rails, space to house the machinery on top etc.).
- Complete installation from inside the shaft



### Technical Data



Certified according to EN 1090 in accordance with the Construction Products Directive 305/2011/EU

Rated load of the lift	max. 600 kg for lifts with rear rails max. 750 kg for lifts with lateral rails
Type of lifts	all types, hydraulic and electrical
Max. interior dimensions	1950 x 1950 mm
Max. height of the shaft	26 m
Finish	polyester powder coated for outdoors: additionally hot galvanized
Certificate of conformity	0035-CPR-1090-1.00963.TÜVRh.2014.001

## Components

### Components

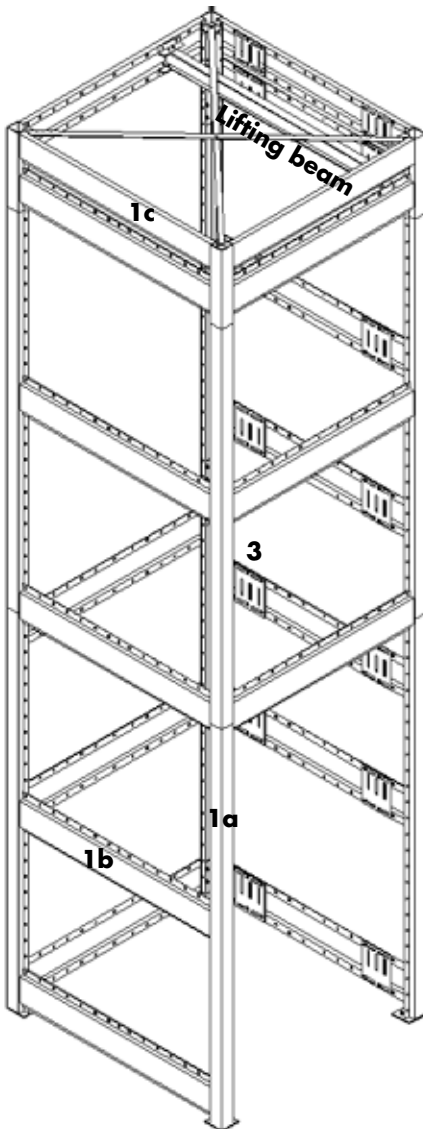
The DICTATOR lift shaft system consists of various components. Varying combinations of the standard elements permit to adapt the lift shaft system to the most different requirements. This permits an economic, efficient production without reducing the possibilities for a bespoke, flexible design. The main components are described in the following (see also illustrations no. 1, 2 and 3).

#### 1) Load carrying components

- a) Columns
  - Standard 80 x 80 mm  
(The columns on the sides where the rails are fixed must always be of the standard profile 80 x 80 mm.)
  - Opposite sides 80 x 35 mm possible;
  - Special profiles on demand
- b) Crossbeams
- c) Upper beams with the lifting beam for installation and maintenance

#### 2) Reinforcements (depend on the lift to be built into the lift shaft)

- a) Reinforcements in the columns
- b) Diagonal braces between the beams (depend on the size of the lift shaft, the type of facing, the rated load)



Ill. 1: Load carrying components of the shaft system



Ill. 2: Components of the DICTATOR lift shaft system

#### 3) Fixing brackets for the rails

Fixing brackets or plates, depending on the type of lift and rails, prepared to be bolted to the shaft system. They are normally produced to fit the rail fixtures used by the lift erecting company. Oblong holes in the brackets/plates permit an easy fitting and adjustment of the rail fixtures.

## Components - continued



**Ill. 3 a/b: Examples of fixing brackets/plates for the rail fixtures of the lift companies**



**Ill. 4a: Lift shaft with closed sheet steel panels...**



**Ill. 4b: ...or perforated panels**

### 4) Facings

- a) Closed sheet steel panels
- b) Perforated sheet steel panels
- c) Frames for window panes (supplied by the customer)
- d) Special designs or preparation for those on demand (indicate weight and dimensions - for static reasons)



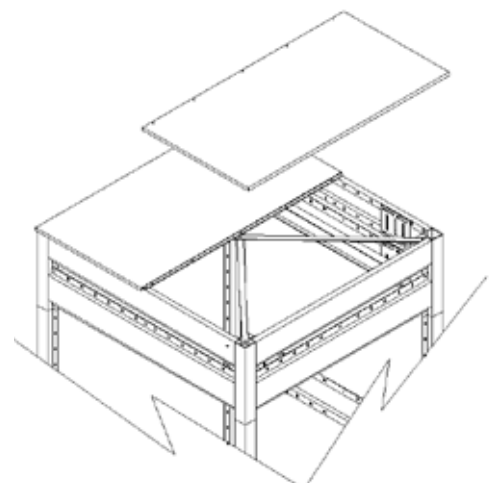
**Ill. 4c: Lift shaft with window panes**



**Ill. 4d: Special design: lift shaft closed with sandwich panels**

### 5) Roof

- Normally made in two parts,
- a) straight for interior use
  - b) slightly inclined for exterior use



**Ill. 5: Construction of the roof**

## Technical Data

### Materials

**Upper beams (depend on the type of lift)**

hot-drawn U-profiles or normal beams

**Columns, beams, reinforcements, brackets/plates for the rail supports**

4 mm thick sheet steel, cold formed

**Panels, roof**

1.5 mm thick sheet steel

**Bolts**

for the columns	M 12
for the beams, panels	M 10

### Finish

**For interior use**

powder coated, light textured paint finish  
for colours see separate table (sent on demand)

**For outdoors**

Hot galvanised and powder coated (colours as above)

### Load / Fastening of the Shaft

**Columns**

each standard column (80 x 80 )with reinforcement 2500 kg

**Lifting beam**

max. 1000 kg

Those loads are valid for lift shaft systems being installed inside a building or if outdoors are leant and fixed directly to the building.

At least 2 columns of the lift shaft have to be fixed every 3 m in the vertical. In order to assure the smooth and reliable function of the door operators, this has always to be on the side of the access (see ill. 6a/6b).



Ill. 6a



Ill. 6b



## Weather-Proofness, Static Calculation, Dimensions

### Ventilation / Insulation

The necessary ventilation of the lift shaft is achieved by using perforated sheet steel panels below the upper beams. It depends on the area and the travel.

The standard lift shaft system with sheet steel panels or window panes is not insulated and waterproof. When the lift shaft is installed outdoors, it is sealed on site with silicone.

If the lift shaft system has to be insulated and sealed, it is possible just to use the load carrying components and reinforcements without panels. The shaft can then be covered e.g. with sandwich panels (see ill. 4d) or an aluminium framework with window panes can be fixed to the shaft system. A further possibility is e.g. to close the shaft from the outside with a simple brick wall or a dry construction and apply plaster (see ill. 7).



### Static Calculations

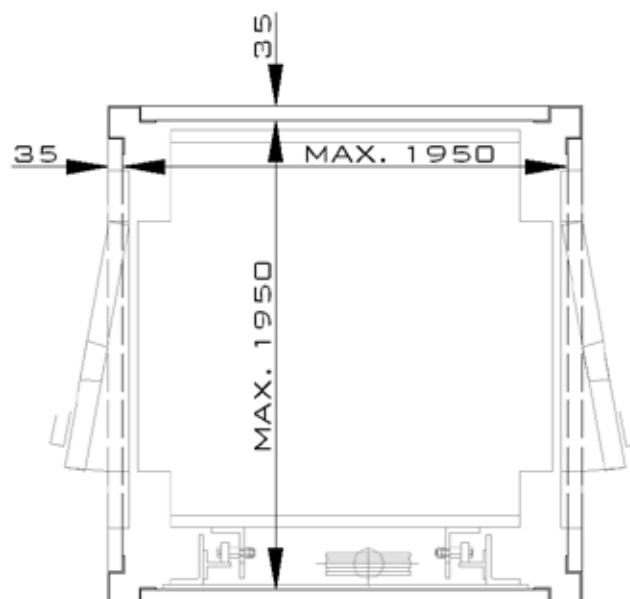
A general static calculation for the maximum dimensions (height 26 m, inner dimensions 1950 x 1950 mm) is available. An abbreviated version of this calculation can be provided without charge.

If the lift shaft is panelled by the customer, the aprox. weight and the type of paneling must be indicated in the order. DICTATOR then verifies whether the basic data of the standard static calculation are still valid.

On demand DICTATOR can also provide a detailed static calculation. This is always necessary, when the lift shaft is installed at more than 1.5 m distance from the building, when special wind conditions apply or a paneling with high own weight is used. This static calculation is charged separately.

### Dimensions

**Inner dimensions** max. 1950 x 1950



## Variations / Required Data

### Variations

The DICTATOR lift shaft system offers both **technical and architectural versatility**. It is **individually designed**, thus optimising the coordination of the requirements of the installed lift and the design of the installation site.



### Required Data

For an **offer** the following information is required:

- Dimensions of the site for the lift shaft and the travel/total height
- Lift to be installed
- Pit and headroom (height available from the floor of the upper landing to the ceiling)
- Design (sheet steel panels, window panes etc.)
- Inside or outdoor installation

In case of an **order** the following additional data:

- Binding installation plan with horizontal and vertical projections and all necessary dimensions
- Detailed drawing of the rail fixing brackets
- Detailed drawing of the landing doors
- Detailed drawing of the vertical projection of the access side to the lift shaft.

If the DICTATOR lift shaft system is used in combination with the DICTATOR home lift DHM 500 or the lift DHE, we just need the information concerning the design of the lift shaft.

## Standard Lift Door Dampers

The Original DICTATOR Standard door dampers stand out due to their excellent quality and reliable functioning. The DICTATOR product range comprises about 30 models - and is continuously completed by new custom-made types. Therefore the models shown on the following pages are just the most common types. We will gladly provide information on other types as e.g. Standard Medasa, Bassetti, Ciocca, Savof, Teka etc.

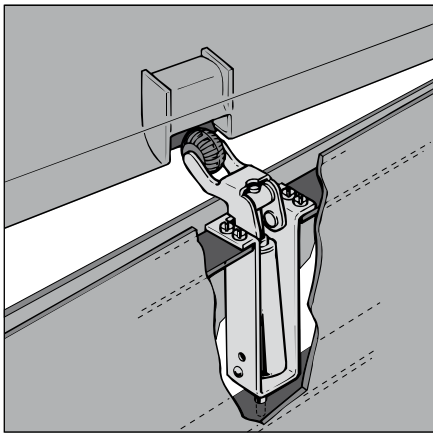
Among the **main quality features** of the DICTATOR Standard door dampers are:

- The progressive damping provides a silent and optimal closing. This is only possible because the cylinders are turned from solid material. The doors are closed without banging, there is no springing back of the door which could lead to a malfunction or damage the door contacts.
- The bearings of the operating arm are from extremely resistant sintered iron.
- The rubber roller is from abrasion-proof rubber with a moulded-in bush.
- The operational life of a DICTATOR door damper reaches more than 1 million cycles.



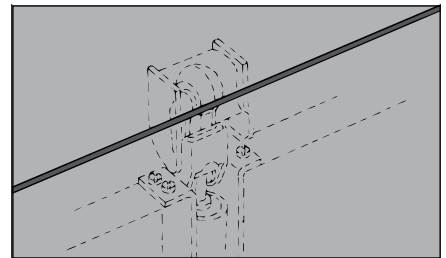
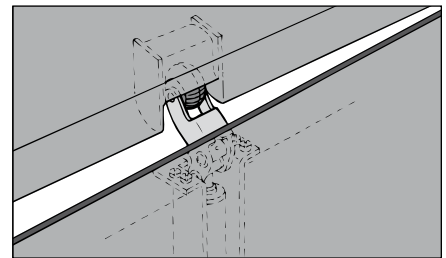
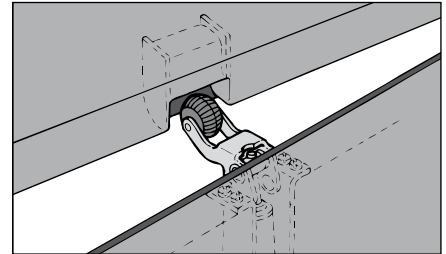
### Technical Data

Operating temperature	-20 °C to +50 °C
Material / Finish	zinc-plated / stainless steel
Spring force	20 to 115 N as required
Damping fluid	silicone oil (mostly independent to temperature)
Damping characteristics	progressive - usually without final latch
Damping speed	continuously adjustable
Material of rubber roller	moulded rubber with moulded-in bush



### Operation and Regulation

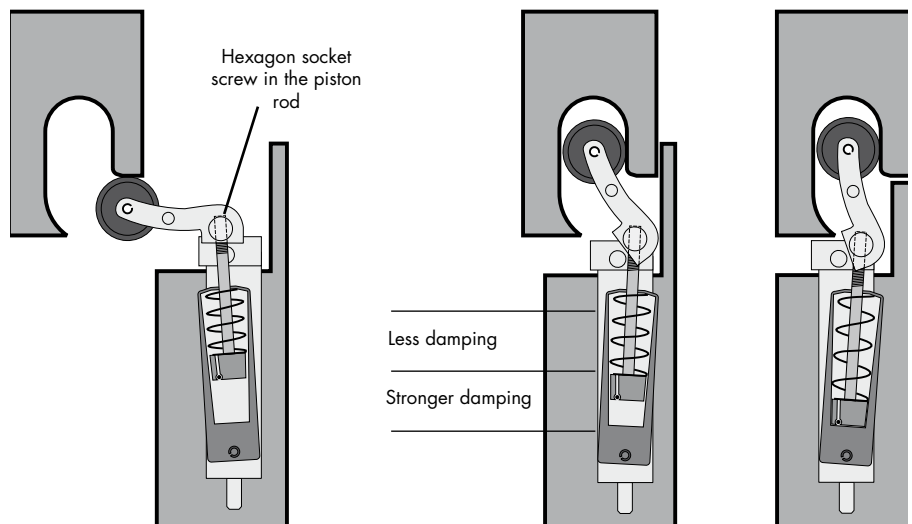
- The door can be opened easily by either pulling or pushing it. When opening the door the operating arm with the roller is pushed downwards and thus tensions the spring in the damping cylinder.
- When the door is closed the operating arm enters the inlet hook in the frame and damps the door movement smoothly and quietly.
- Finally the door check closes the door completely and keeps it firmly closed by the integrated spring, even against wind or draughts. This enables the electrical contacts in the door to work reliably with minimum wear. Furthermore the door damper prevents the lift door from banging; noise, which would reverberate in the shaft.



### Adjusting the Closing Speed

The closing speed can be adjusted to achieve optimum damping both with flush and overlapping doors. Due to the conical interior of the damping cylinder, the closing movement becomes slower the further the piston enters into the cylinder (see diagram down right). Therefore an overlapping door is not damped to the optimum in the standard setting. It closes faster as the piston does not reach the bottom of the cylinder when not adjusted (see centre diagram below).

By turning the piston rod you can change the final position of the piston in the cylinder. To move the piston further down the cylinder, turn the piston rod clockwise with a hexagon socket screw key. The door will now take longer to close. Two turns of the piston rod correspond to 1 second. If you turn the piston rod anti-clockwise twice you will speed up the closing of the door by one second.



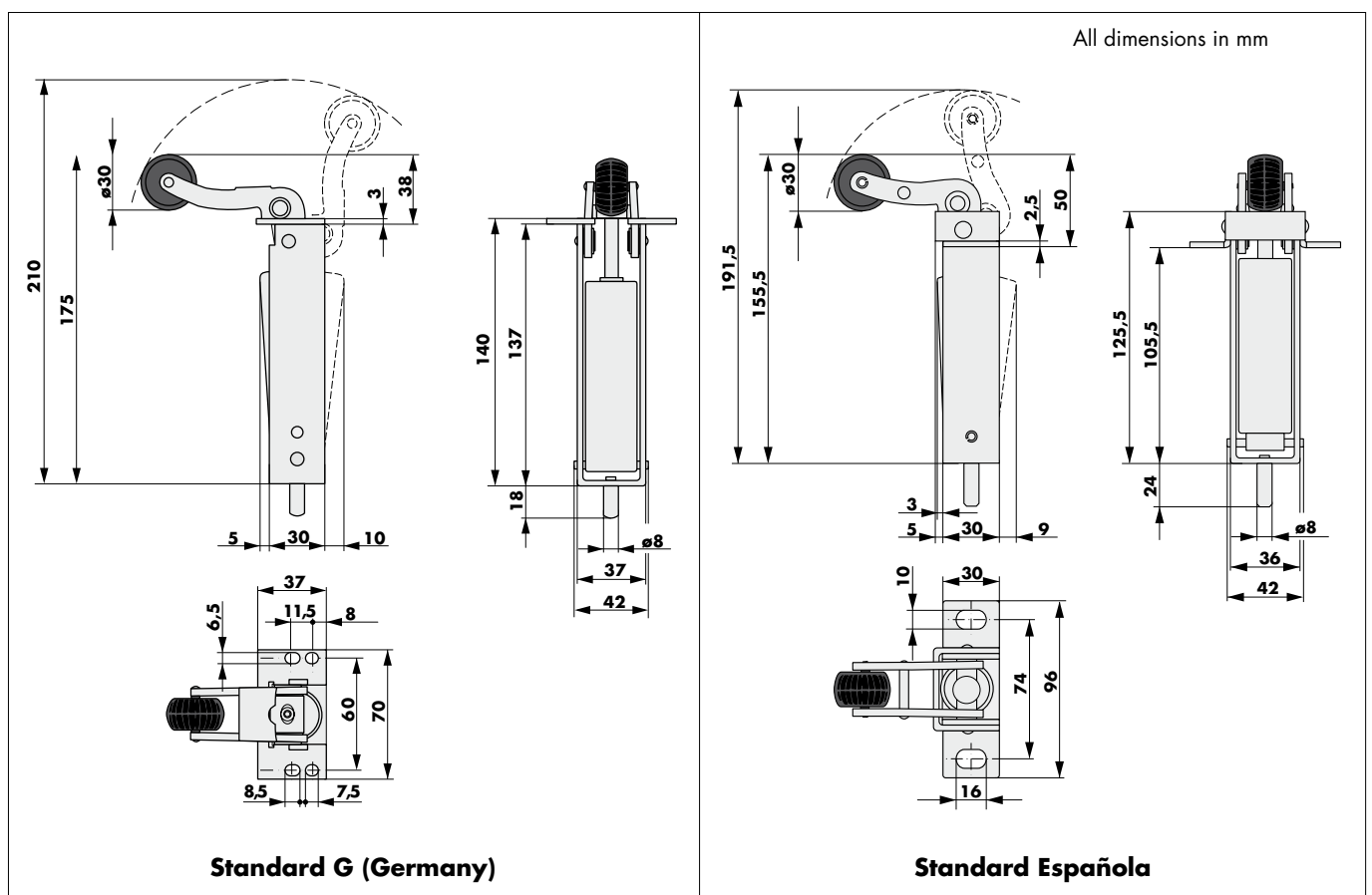


### Standard Germany / Standard Española

The Standard Germany (G) door damper is used in a large number of European swing doors. The Standard Española is mainly used in Spanish lift doors.

The Standard Germany and Standard Española door dampers are inserted into the door from above. The pin at the bottom of the casing must fit into a corresponding hole in the door. The Standard Germany is fixed to the door with four screws (M6), the Standard Española with two screws (M8).

### Dimensions



### Order Information

Standard Germany, 20 N, zinc-plated	part no. 101000
Standard Germany, 50 N, zinc-plated	part no. 101001
Standard Germany, 80 N, zinc-plated	part no. 101002
Standard Germany, 80 N, casing AISI 304, cylinder zinc-plated	part no. 101008
Standard Española, 50 N, zinc-plated	part no. 105000
Standard Española, 80 N, zinc-plated	part no. 105001

More models on demand (e.g. other springs, roller with Ø 24 mm etc.)



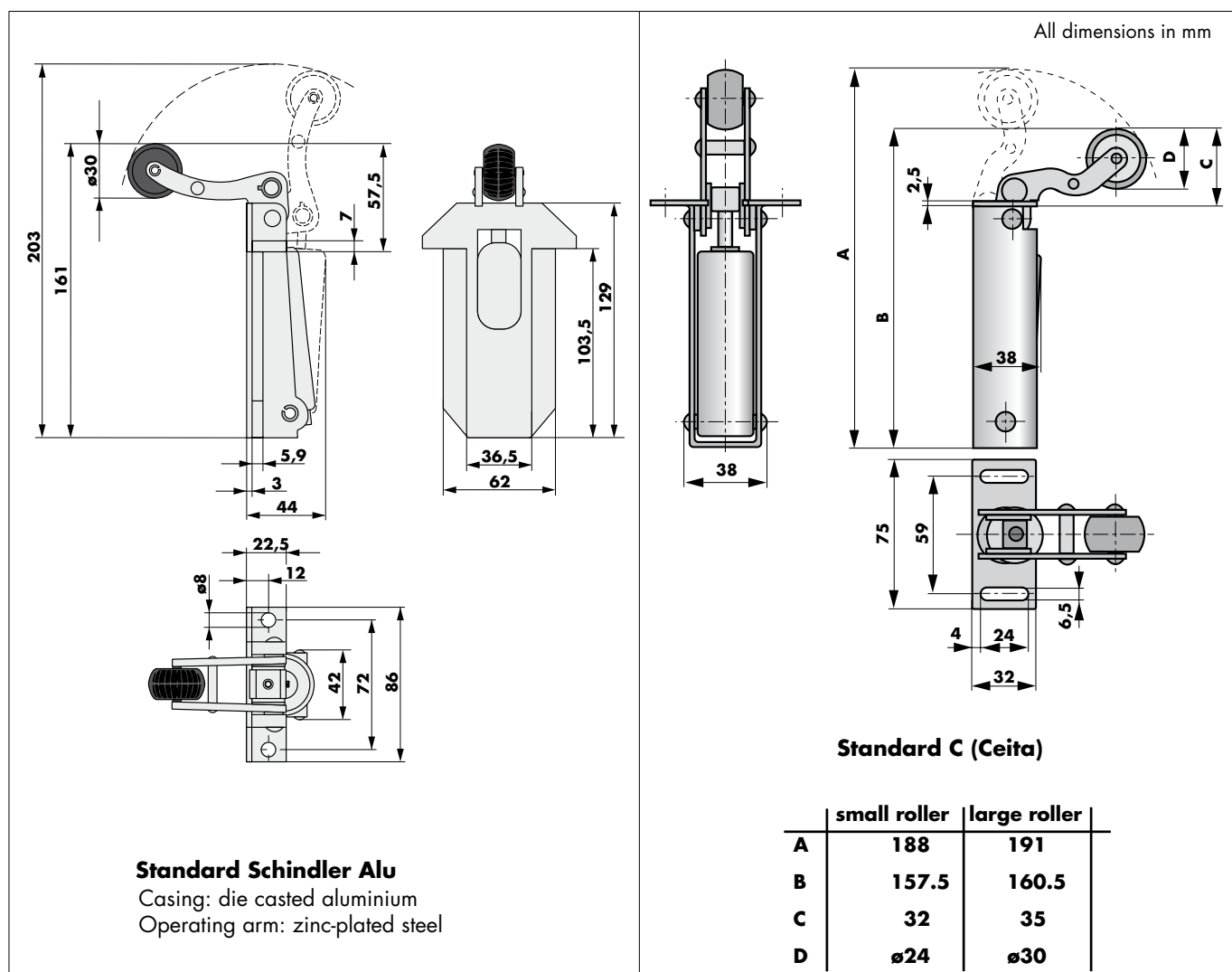
### Standard Schindler Alu / Standard Ceita

The casing of the Standard Schindler Alu door damper (see adjacent photo) is made from high-precision die casted aluminium. This provides optimum function and accuracy of fit and thus guarantees a very long operational life.

Both door checks are inserted into the door from above. The lateral guidings of the Standard Schindler Alu must fit into the corresponding holes in the door. The door damper is fixed to the door with two screws (M6).

The Standard C is firstly fixed to the door with just one screw (M6) only on each side. Use the oblong holes to adjust the damper exactly. Only when this is done, it is tightened with the remaining two screws.

### Dimensions



### Order Information

Door damper Standard Schindler Alu, 50 N	part no. 102100
Door damper Standard Schindler Alu, 80 N	part no. 102102
Door damper Standard C, 43 N, zinc-plated, roller 24R	part no. 100006
Door damper Standard C, 43 N, zinc-plated, roller 30R	part no. 100007
More models on demand (e.g. other springs etc.)	



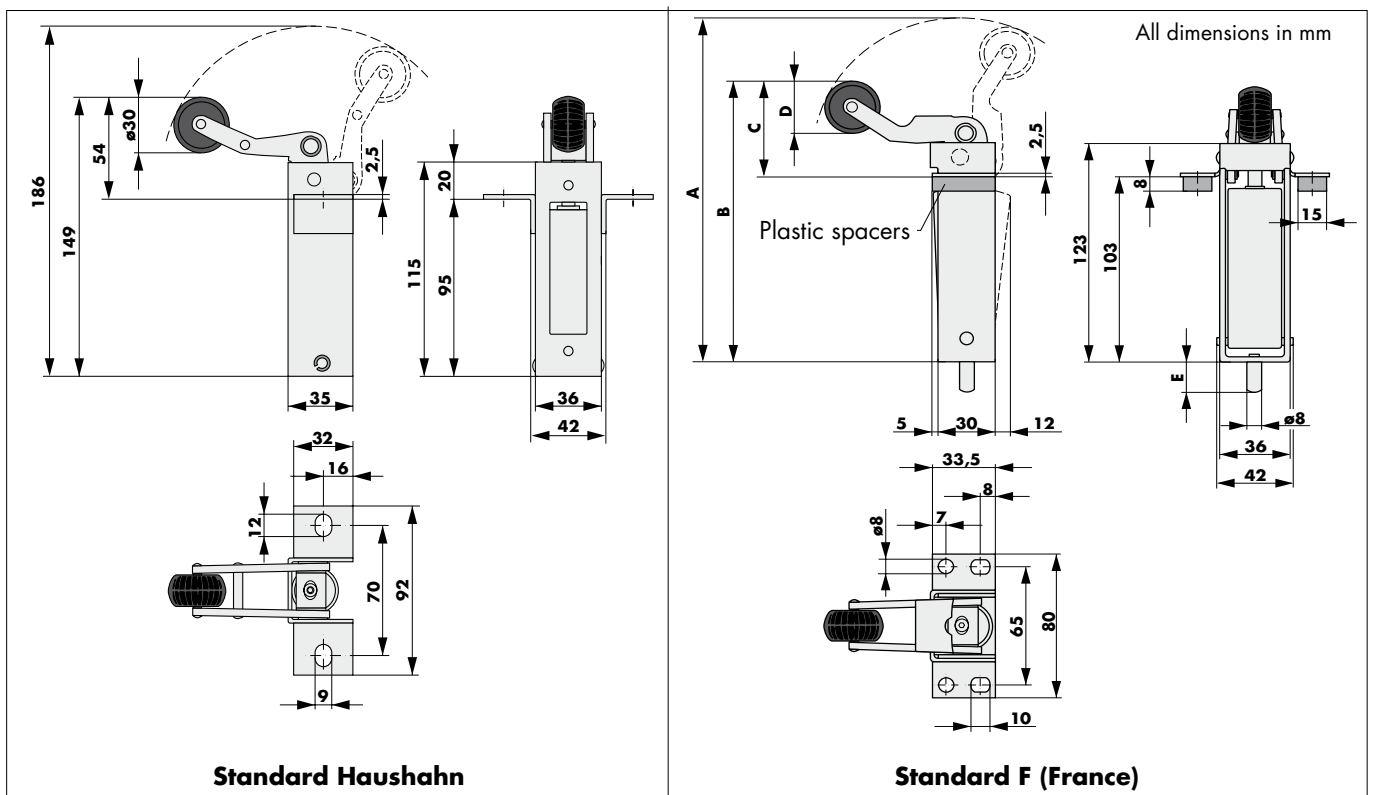
### Standard Haushahn / Standard F (France)

In addition to the Standard Haushahn for hinged doors shown below there exists also a special execution for sliding doors (see page 01.051.00).

The Standard Haushahn is inserted from above into the location hole of the door. Fix the damper with two screws (M6) to the door.

The Standard F (see adjacent photo) is inserted into the door also from above. The pin at the bottom of the casing must fit into a corresponding hole in the door construction. The Standard F is fixed with four screws (M6). Two plastic spacers supplied along with the Standard F may be used to adjust it to differing heights.

### Dimensions



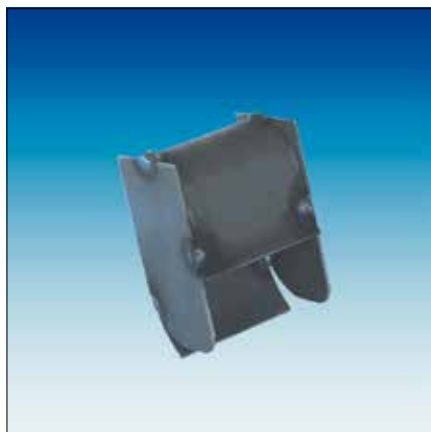
### Dimensions Standard F

Standard F	with 30R roller		with 34 R roller	
	102500	102501	102600	102601
Part no.	102500	102501	102600	102601
Meas. A [mm]	194	196	196	198
Meas. B [mm]	153	150	155	152
Meas. C [mm]	50	47	52	49
Meas. D [mm]	∅ 30	∅ 30	∅ 34	∅ 34
Meas. E [mm]	24	24	24	24
Final latch	yes	no	yes	no

### Order Information

Standard F, 50 N, zinc-plated, roller 30R, with final latch	part no. 102500
Standard F, 50 N, zinc-plated, roller 30R, without final latch	part no. 102501
Standard F, 50 N, zinc-plated, roller 34R, with final latch	part no. 102600
Standard F, 50 N, zinc-plated, roller 34R, without final latch	part no. 102601
Standard Haushahn, 50 N, zinc-plated	part no. 203008

More models on demand  
(e.g. other springs etc.)



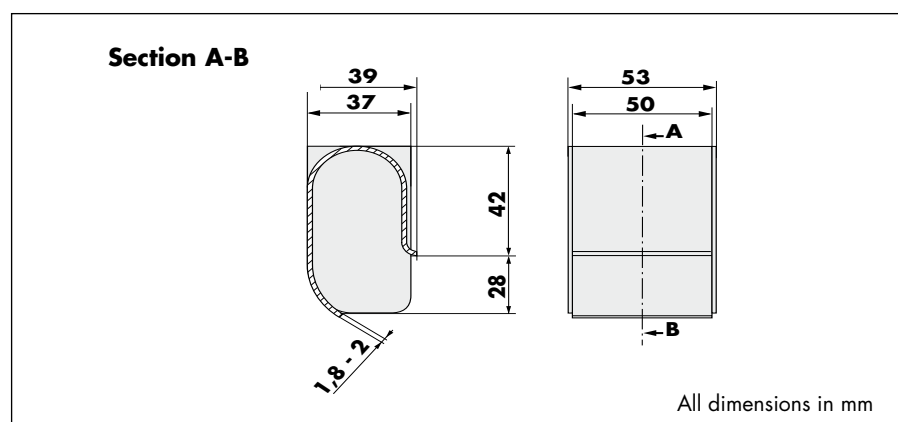
## Inlet Hook for DICTATOR Door Dampers

The DICTATOR inlet hook is supplied as a counter part for most Standard door dampers. It is welded into the door frame top member and ensures optimum performance as it matches the motion pattern of the door damper operating arm. The lateral sheeting is more easy to weld than the often used auxiliary sheets.

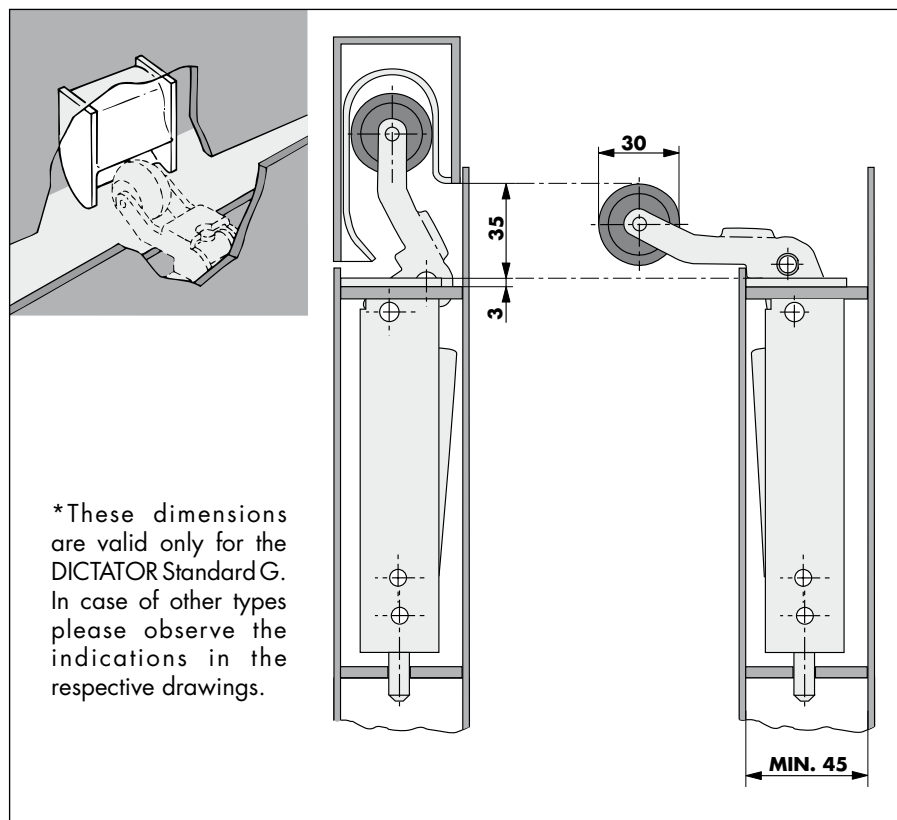
The front edge of the inlet hook should be situated about 1 mm above the rubber roller when the operating arm is in its horizontal position.

When the door is closing the operating arm of the damper enters the inlet hook with the roller, is turned upward and thus pulls the door closed.

## Dimensions



## Installation Dimensions



## Order Information

Inlet hook from steel

part no. 103100



## Closing Springs for Hinged Doors

DICTATOR supplies various closing springs to go along with the Standard door dampers. They assure that the door is closed reliably without fault.

All closing springs are designed to be built into the door. DICTATOR provides two different systems:

- **Torsion spring**

It is mainly used for doors with hinges that are situated in-between the door and the frame.

- **Concealed jamb closer**

It is available with front plate. It can be installed also on existing doors as its use is not limited to a special door make.



### List of Types

Torsion spring

E 22/2550 concealed jamb closer with front and counter plate

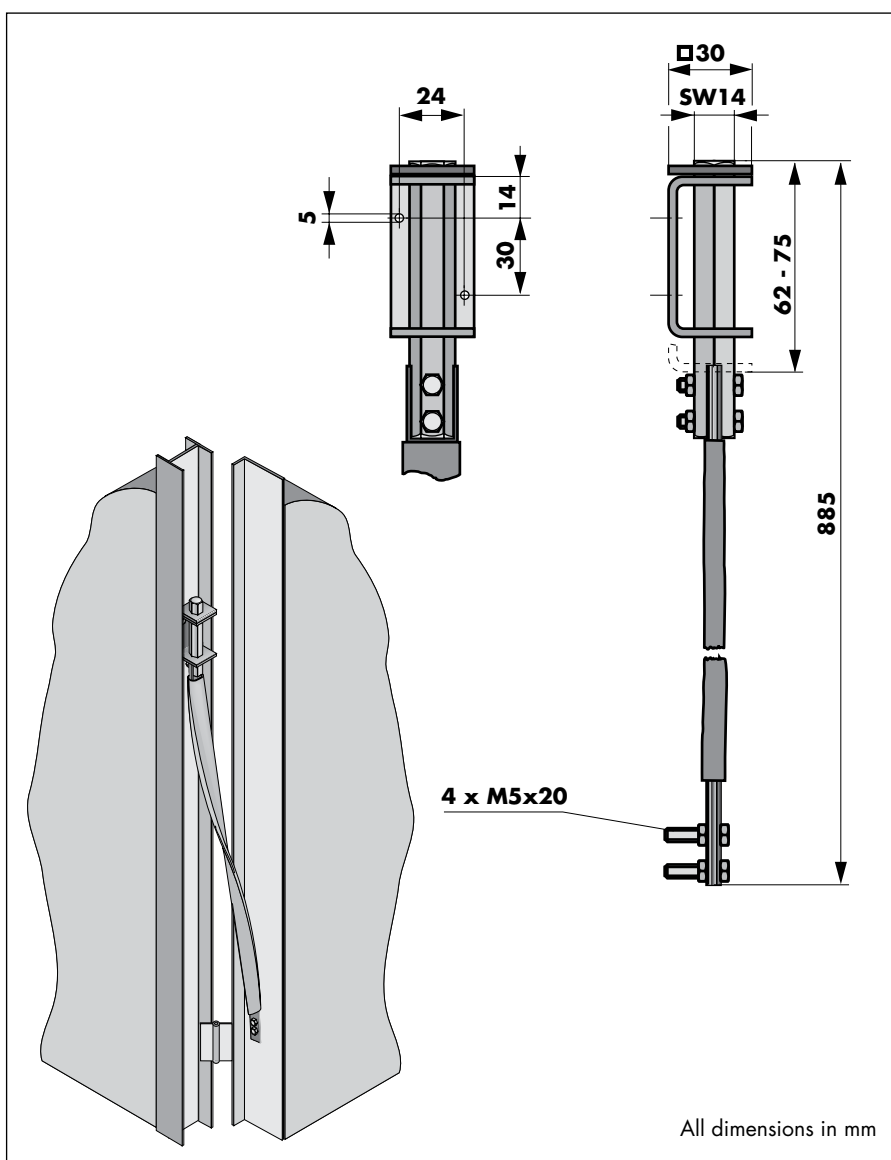


### Torsion Spring for Hinged Lift Doors

The torsion spring consists of several high-quality spring leaves, that are held together at the top and the bottom with screws. To avoid unnecessary noise the spring leaves are covered with a flexible plastic tube.

When installing the torsion spring please make sure there is sufficient space between the door frame and the door to which the torsion spring is to be fitted. We are unable to make any general recommendation on the pretensioning of the torsion spring as this will depend on the door size and weight.

### Dimensions



### Technical Data

Material	spring steel
Components	eight spring leaves (15 x 0.5 mm)

### Order Information

Torsion spring	part no. 103000
----------------	-----------------



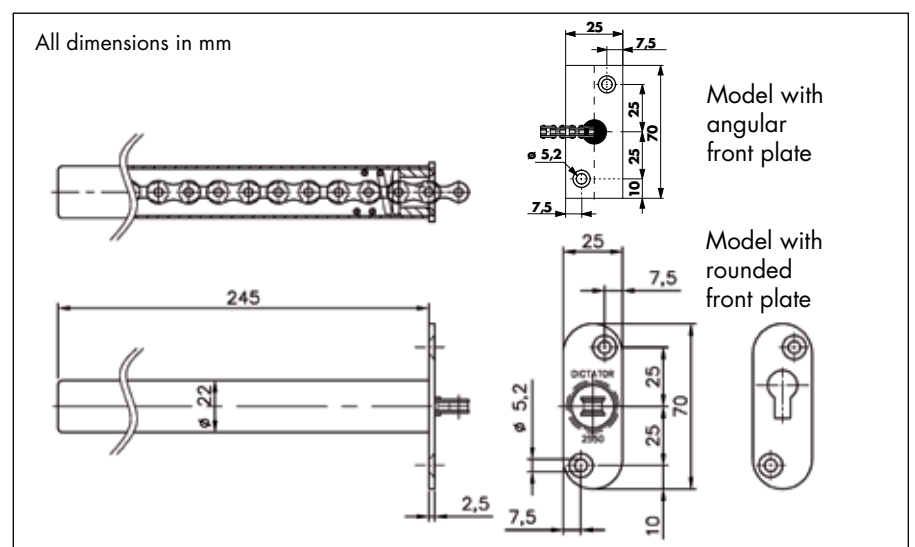
## E 22/2550 Concealed Jamb Closer with Counter Plate

In combination with the DICTATOR Standard door dampers the concealed jamb closer represents an economic and reliable solution for the closing of hinged lift doors.

The E 22/2550 concealed jamb closer can be installed anywhere on the door as the closing force can be adjusted on the connection chain. The closing force indicated below is just an approximate value as it depends a lot on the hinges of the lift door.

The DICTATOR E 22/2550 concealed jamb closer can be used on flush and overlapping doors. It does not require maintenance. However, we recommend you occasionally grease the chain to achieve optimal results and durability.

### Dimensions



### Installation



Firstly drill a  $\varnothing 23$  mm hole into the face side of the door. Then insert the concealed jamb closer into the hole and fix its front plate to the door with two countersunk head screws. Fix the counter plate to the frame opposite the front plate, exactly at the same height.

Connect the chain to the opening of the counter plate, open the door a bit more and remove the securing pin. The concealed jamb closer is now ready to work.

The tension of the spring and closing force of the concealed jamb closer can be increased by putting the securing pin back into the chain when the door is wide open. Now insert the chain further into the counter plate. After removing the securing pin the door is closed with a higher force. Please be aware that the opening angle of the door may be limited if the hinges are lying far outside and/or the spring of the concealed jamb closer is tensioned strongly. In this case the jamb closer locks before reaching  $180^\circ$ . By continuing to open the door to  $180^\circ$  you will damage both the concealed jamb closer and the door.

### Technical Data

Diameter of the cylinder	$\varnothing 22$ mm
Opening angle of the door	up to $180^\circ$
Closing action starting at	about $150^\circ$ (depending on the hinge)
Closing force	15 - 30 Nm
Material of the cylinder	Aluminium
Finish of the front and counter plate	stainless steel

### Order Information

E 22/2550 concealed jamb closer, rounded AISI 304 front plate	part no. 300319
E 22/2550 concealed jamb closer, angular zinc-plated steel front plate	no. 300341



## ATS Concealed Tube Door Closer

The DICTATOR ATS concealed tube door closer is designed especially for lift swing doors. They can be used on both left and right hand doors up to 2400 mm height.

The integrated spring closes the door, with the speed being controlled hydraulically. The closing speed is adjustable to provide a sure, softly dampened closing with activating the door contacts.

An integrated safety valve prevents any damage to the door closer should the door be forced to close.

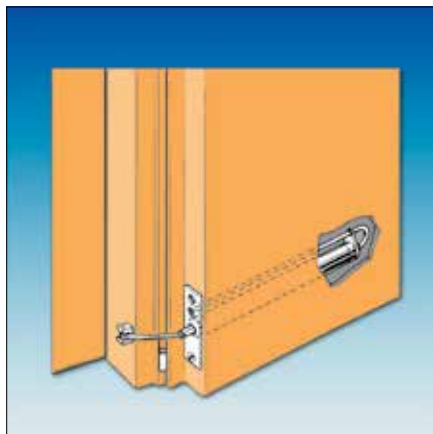
One of the main advantages of the ATS concealed tube door closers is that when being installed they are totally hidden. They can also be retrofitted.

There are provided different models of the ATS tube door closer suitable for different door hinges, door dimensions and weights. Depending on the installation position in the door the ATS have either a front plate or an fixing bracket at the rear end of the cylinder.



### How to choose the right ATS concealed door closer:

Door hinge	Door width [mm]	Door weight [kg]	Door leaf [mm] (inside dimension)	ATS model
pivot hinge	700 - 900	60 - 70	larger than 30	<b>ATS 500/30</b>
pivot hinge	700 - 900	60 - 70	larger than 35	<b>ATS 500/35</b>
pivot hinge	900 - 1200	100 - 110	larger than 30	<b>ATS 600/30</b>
pivot hinge	900 - 1200	100 - 110	larger than 35	<b>ATS 600/35</b>
construction hinge	700 - 900	60 - 70	larger than 30	<b>ATS 500/30 K</b>
construction hinge	700 - 900	60 - 70	larger than 35	<b>ATS 500/35 K</b>
construction hinge	900 - 1200	100 - 110	larger than 30	<b>ATS 600/30 K</b>
construction hinge	900 - 1200	100 - 110	larger than 35	<b>ATS 600/35 K</b>

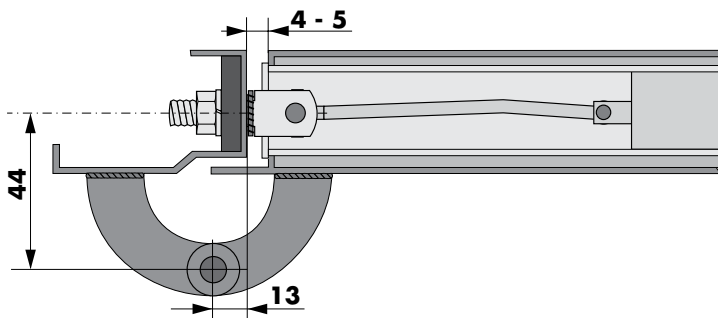


### ATS Concealed Door Closer with Front Plate

#### For Lift Doors with Pivot Hinges

The ATS concealed tube door closer can be fitted to lift swing doors with pivot hinges once a suitably sized hole has been drilled into the door - preferably near one of the hinges.

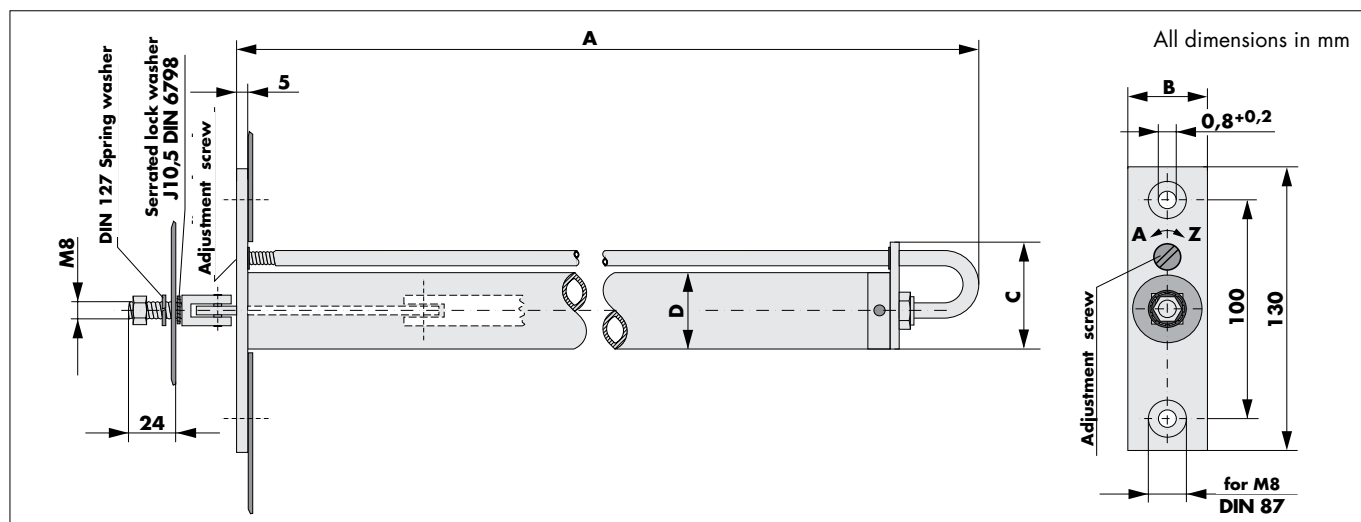
**Advice:** Please observe the following distances to the pivot of the door and between door and frame as well as the installation instructions.



### Technical Data

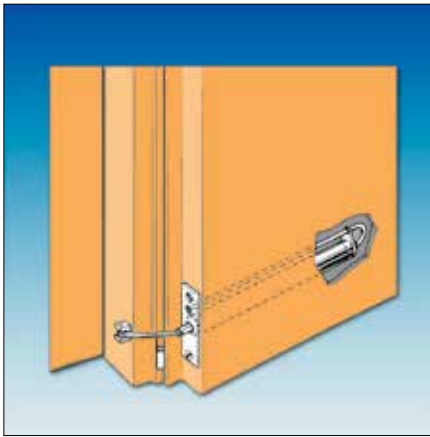
	ATS 500/30 A	ATS 500/35 A	ATS 600/30 A	ATS 600/35A
Length A [mm]	500	500	550	550
Cylinder D [mm]	Ø 29	Ø 34	Ø 29	Ø 34
Front plate B [mm]	30	35	30	35
Rear plate C [mm]	47	49	47	49
Closing force (0°) [N]	12	12	18	18
Opening force (0° - 90°) [N]	20 - 30	20 - 30	30 - 40	30 - 40
Closing time (90° - 0°) [sec]	3 - 4	3 - 4	3 - 4	3 - 4
Max. opening angle	165°	165°	165°	165°

### Dimensions



### Order Information

ATS 500/30 A concealed door closer	part no. 400200
ATS 500/35 A concealed door closer	part no. 400203
ATS 600/30 A concealed door closer	part no. 400220
ATS 600/35 A concealed door closer	part no. 400223

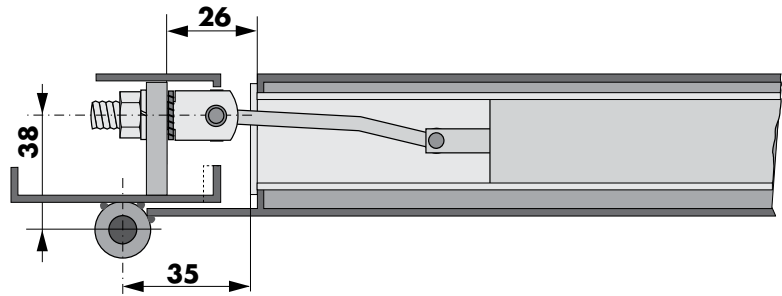


## ATS-K Concealed Door Closer with Front Plate

### For Lift Doors with Construction Hinges

The ATS-K concealed tube door closer can be fitted to lift swing doors with construction hinges once a suitably sized hole has been drilled into the door - preferably near one of the hinges.

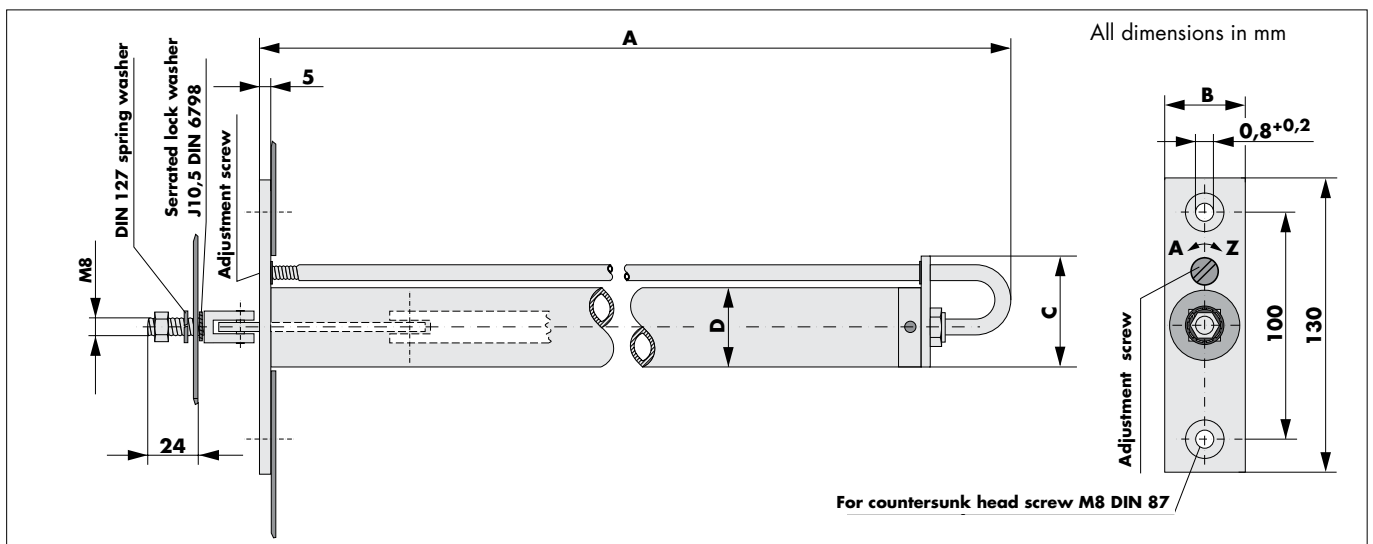
**Advice:** Please observe the following distances to the pivot of the door and between door and frame as well as the installation instructions.



## Technical Data

	ATS 500/30-K	ATS 500/35-K	ATS 600/30-K	ATS 600/35-K
Length A [mm]	500	500	550	550
Cylinder D [mm]	Ø 29	Ø 34	Ø 29	Ø 34
Front plate B [mm]	30	35	30	35
Rear plate C [mm]	47	49	47	49
Closing force (0°) [N]	12	12	20	20
Opening force (0° - 90°) [N]	20 - 30	20 - 30	30 - 40	30 - 40
Closing time (90° - 0°) [sec]	3 - 4	3 - 4	3 - 4	3 - 4
Max. opening angle	120°	120°	120°	120°

## Dimensions



## Order Information

ATS 500/30 K, A concealed door closer	part no. 400201
ATS 500/35 K, A concealed door closer	part no. 400205
ATS 600/30 K, A concealed door closer	part no. 400221
ATS 600/35 K, A concealed door closer	part no. 400225

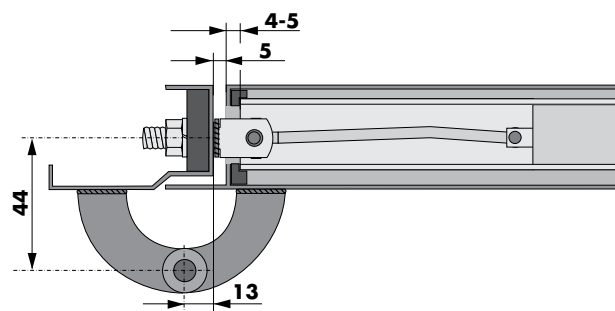


## Easily installed ATS-O Concealed Door Closer

### For Lift Doors with Pivot Hinges

The ATS-O concealed tube door closer can be fitted to lift swing doors with pivot hinges when there is a suitable groove at the top of the door in which to fit the tube door closer.

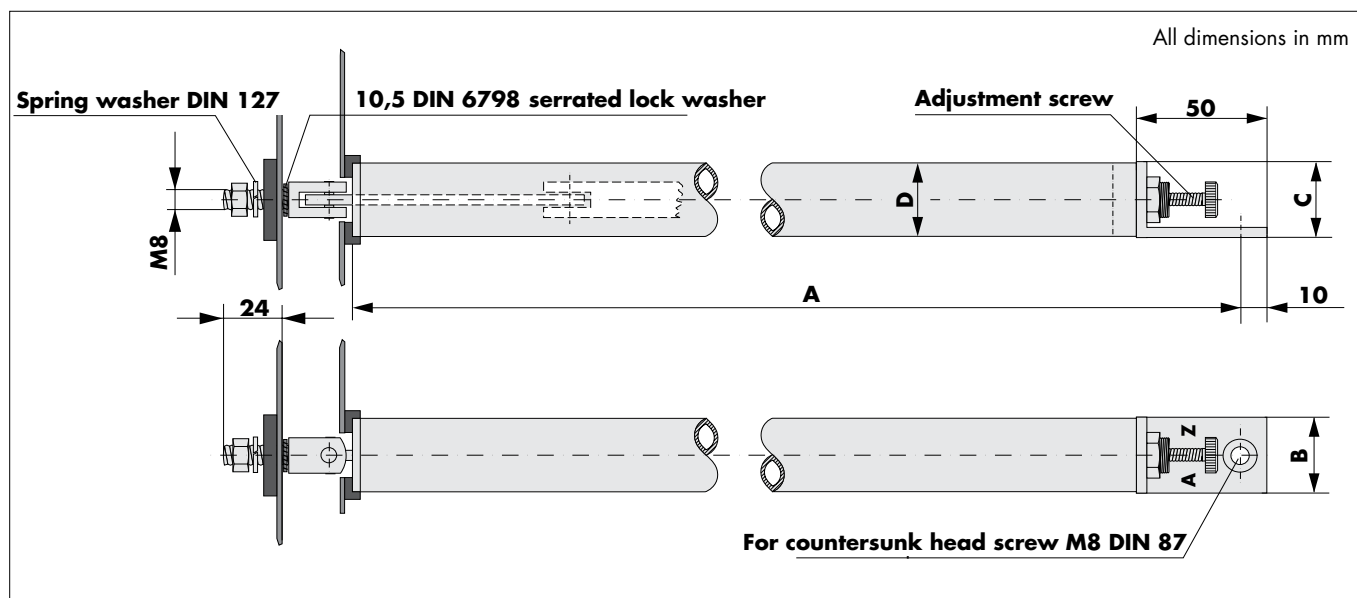
**Advice:** Please observe the following distances to the pivot of the door and between door and frame as well as the installation instructions.



## Technical Data

	ATS 500/30-O	ATS 500/35-O	ATS 600/30-O	ATS 600/35-O
Length A [mm]	500	500	551	551
Cylinder D [mm]	Ø 29	Ø 34	Ø 29	Ø 34
Bracket B/C [mm]	30/30	35/35	30/30	35/35
Closing force (0°) [N]	12	12	20	20
Opening force (0° - 90°) [N]	20 - 30	20 - 30	30 - 40	30 - 40
Closing time (90° - 0°) [sec]	3 - 4	3 - 4	3 - 4	3 - 4
Max. opening angle	165°	165°	165°	165°

## Dimensions



## Order Information

ATS 500/30 O, A concealed door closer	part no. 400199
ATS 500/35 O, A concealed door closer	part no. 400204
ATS 600/30 O, A concealed door closer	part no. 400238
ATS 600/35 O, A concealed door closer	part no. 400224

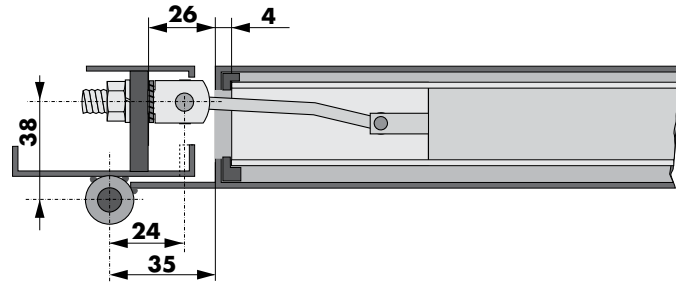




## Easily Installed ATS-KO Concealed Door Closer For Lift Doors with Construction Hinges

The ATS-KO concealed tube door closer can be fitted to lift swing doors with construction hinges when there is a suitable groove at the top of the door in which to fit the tube door closer.

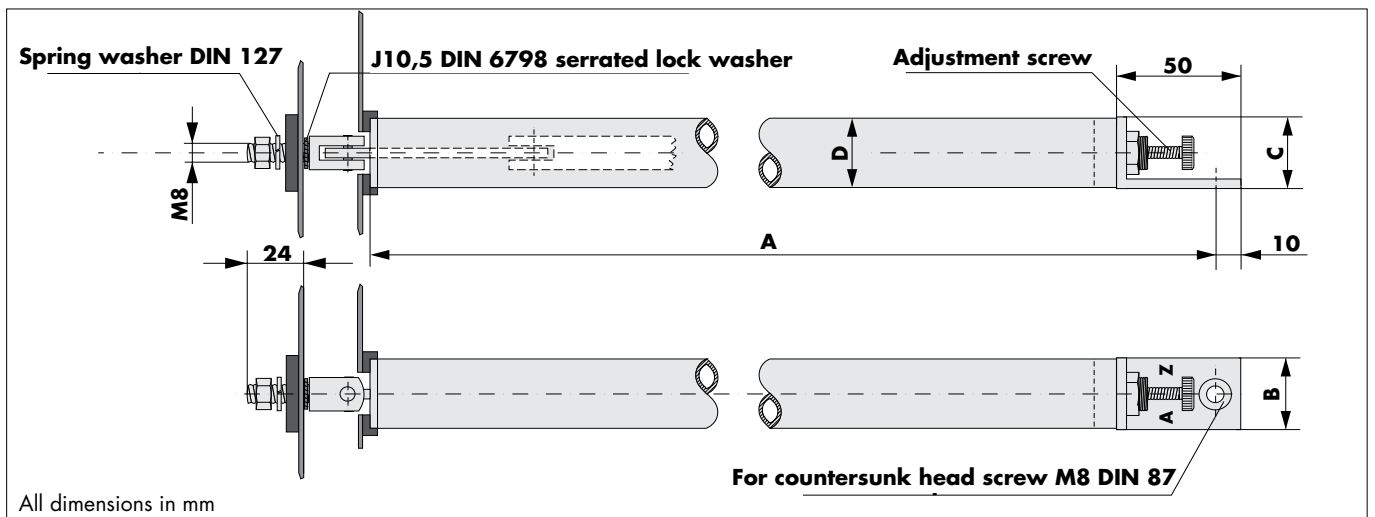
**Advice:** Please observe the following distances to the pivot of the door and between door and frame as well as the installation instructions.



## Technical Data

	ATS 500/30-KO	ATS 500/35-KO	ATS 600/30-KO	ATS 600/35-KO
Length A [mm]	500	500	551	551
Cylinder D [mm]	Ø 29	Ø 34	Ø 29	Ø 34
Bracket B/C [mm]	30/30	35/35	30/30	35/35
Closing force (0°) [N]	12	12	20	20
Opening force (0° - 90°) [N]	20 - 30	20 - 30	30 - 40	30 - 40
Closing time (90° - 0°) [sec]	3 - 4	3 - 4	3 - 4	3 - 4
Max. opening angle	120°	120°	120°	120°

## Dimensions



## Order Information

ATS 500/30 KO, A concealed door closer	part no. 400202
ATS 500/35 KO, A concealed door closer	part no. 400206
ATS 600/30 KO, A concealed door closer	part no. 400222
ATS 600/35 KO, A concealed door closer	part no. 400226

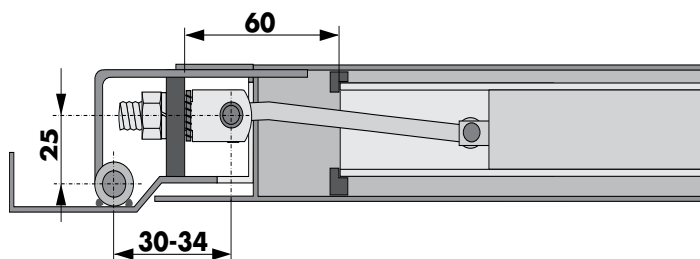


## Easily installed ATS-O Concealed Door Closer

### For Lift Doors with Pivot Hinges

ATS 400-O and ATS 800-O concealed tube door closers can be fitted to lift swing doors with hinges in between the door and frame when there is a suitable groove at the top of the door in which to fit the tube door closer.

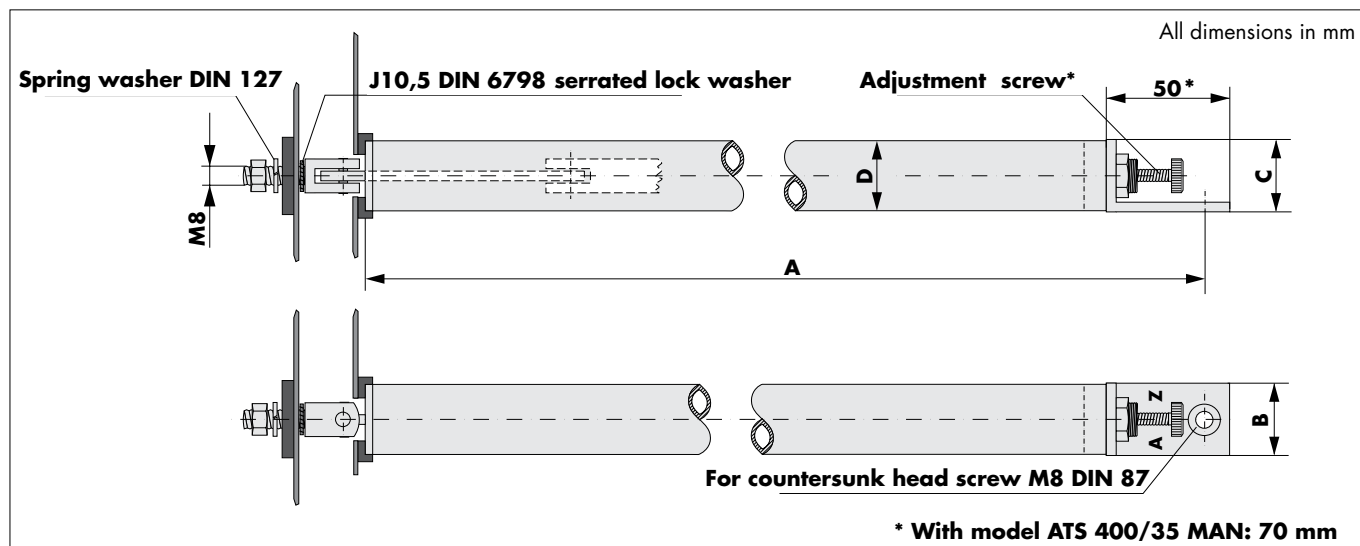
**Advice:** Please observe the following distances to the pivot of the door and between door and frame as well as the installation instructions.



## Technical Data

	400/35-O	400/35-AK	400/35-KL	400/35-MAN*	800/35-OA
Length A [mm]	500	420	320	520	551
Cylinder D [mm]	Ø 34	Ø 34	Ø 34	Ø 34	Ø 34
Bracket B/C [mm]	34/34	34/34	34/34	34/34	34/34
Closing force (0°) [N]	12	12	12	18	18
Opening force (0°-90°) [N]	20 - 30	20 - 30	20 - 30	30 - 40	30 - 40
Closing time (90°-0°) [sec]	3 - 4	3 - 4	3 - 4	3 - 4	3 - 4
Max. opening angle	110°	110°	110°	110°	110°

## Dimensions



## Order Information

ATS 400/35 O, A concealed door closer	part no. 400010
ATS 400/35 O, AK concealed door closer (short version)	part no. 400011
ATS 400/35 O, KL concealed door closer	part no. 400014
ATS 400/35 O, MAN concealed door closer	part no. 400013
ATS 800/35 O,A concealed door closer	part no. 400012

## Lift Door Closers

### Guide Rail Door Closers, Koni Door Closer

DICTATOR furnishes various lift door closers for replacement purposes. There are door closers for guide rails and the Koni door closers.

The **guide rail door closers** are either fitted into the door from above or into the frame from below. Depending on where the door closer is fitted, the door can open up to 160° (see dimensioned drawings).

The closing movement is damped hydraulically. It can be adjusted with a screw.

All lift door closers for guide rails can be used on both left and right hand doors because the operating arm can be attached to the axle of the door closer from either above or below.

The operating arm is prestressed by about 20° to ensure the complete and reliable closing of the door.

The operating arm is supplied with the door closer.

The **Koni door closer** is inserted into the door frame. Its closing speed is also adjustable.



### Types

LS-C(eita) lift door closer

Lift door closer LX

Phantom PH 90 lift door closer

Koni lift door closer



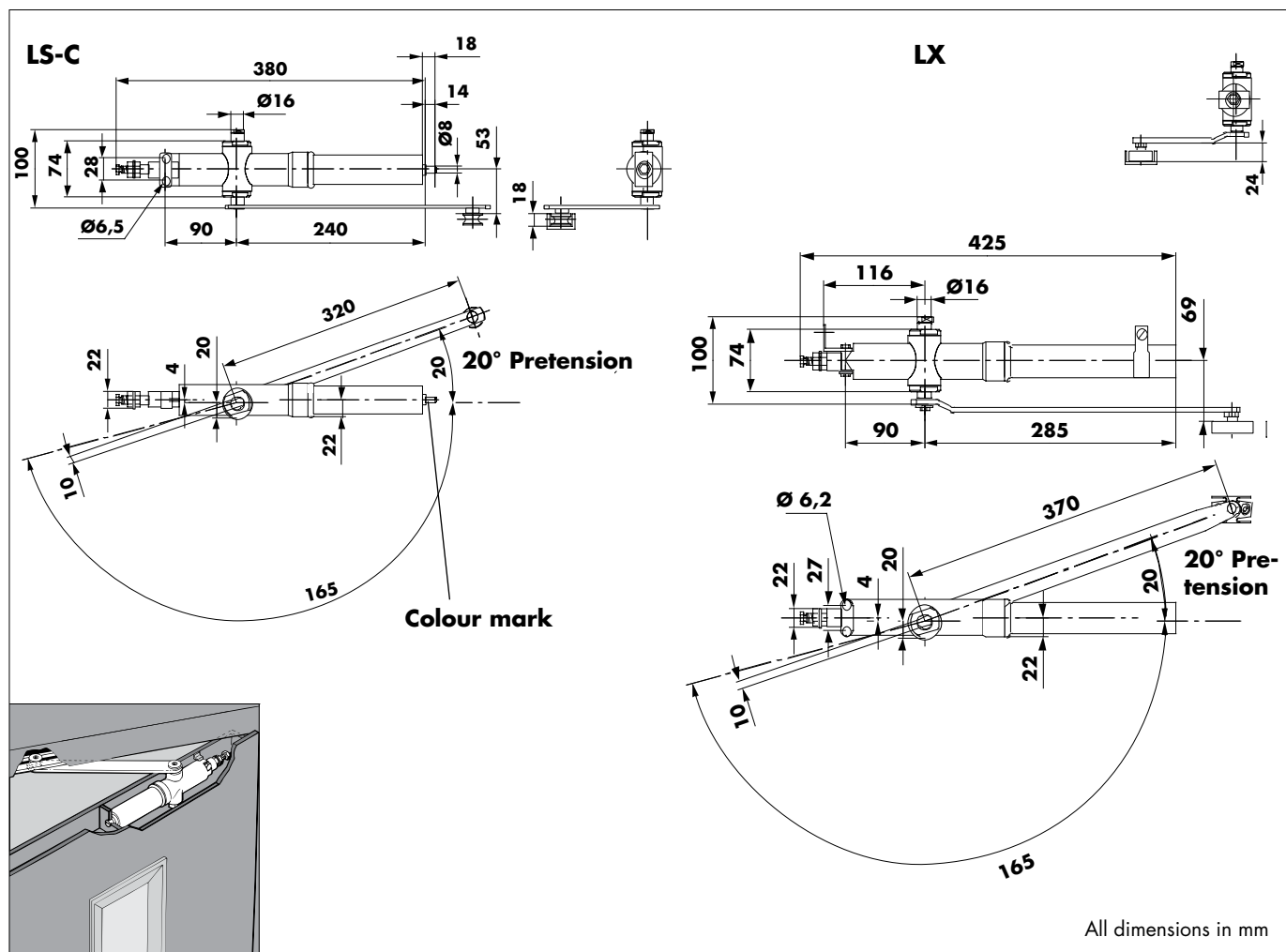
### LS-C Lift Door Closer (also Replacement for the LS), LX

The **LS-C** lift door closer is mainly used on **Italien doors**, the **LX** type is for replacement in **Otis doors**. They can be used on both left and right hinged doors.

The LS-C lift door closer is fixed to the door with 2 M6 screws which are inserted horizontally through the 2 fixing holes of the door closer. In case of the LX the fixing holes are vertical.

The LS-C is also used as a **replacement for the LS door closer**. However, please note that the **LS-C can only be fixed from the front** whereas the LS could also be fixed from above. If necessary, the fixing has to be modified slightly.

### Dimensions



### Order Information

Model	Closing force**	Part no.
LS-C Standard (red*)	20 N - 30 N	205121
LS-C with light spring (blue*)	15 N - 20 N	205122
LX with normal spring	21 N	600008

(\* see colour mark)

\*\* measured on the operating arm: first value at 0°, second value at 90°



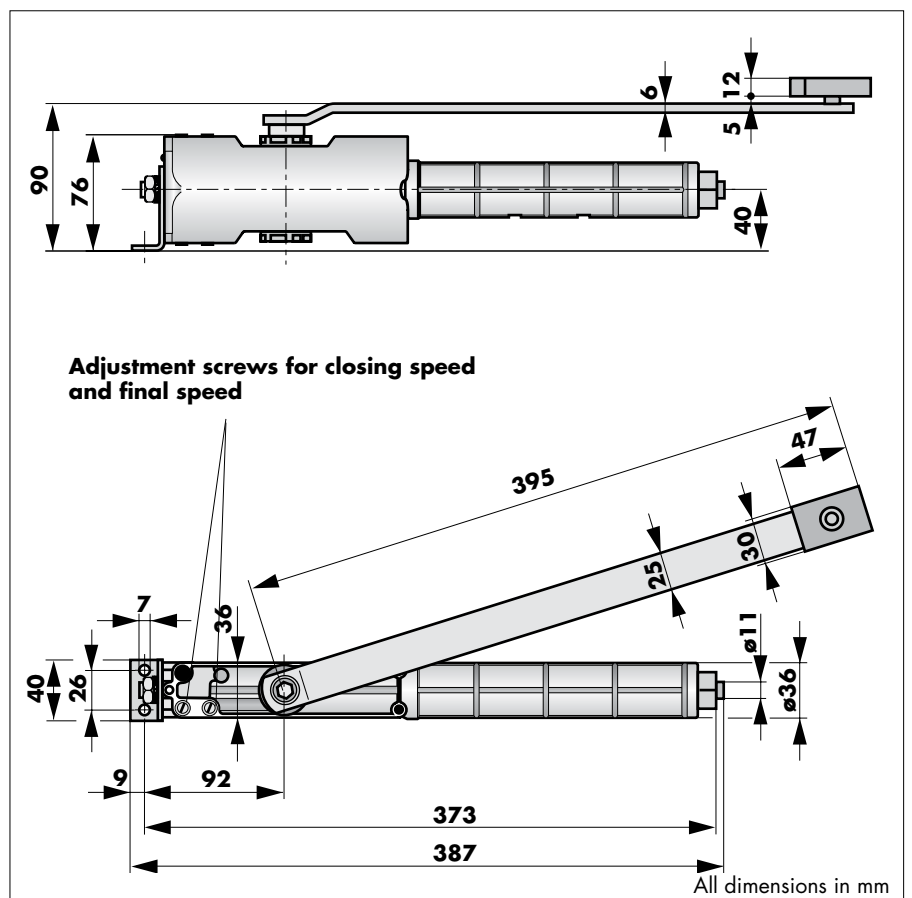
## Phantom PH 90 Lift Door Closer

The Phantom PH 90 lift door closer replaces the Phantom door closer. Due to a complete remodelling of the casing the new Phantom PH 90 can now be used on both left and right hand doors. This facilitates maintenance and servicing.

The Phantom PH 90 is completely interchangeable with the previous Phantom door closer. However the operating arm of the old model does not fit the Phantom PH 90 so the Phantom PH 90 is always delivered with the operating arm.

The Phantom PH 90 door closer is designed for doors with a width between 700 and 900 mm and a door weight up to 60 kg. Please contact us if you have different door sizes.

## Dimensions



## Order Information

PHANTOM PH 90 door closer with long operating arm	part no. 600081
Short operating arm (separately), 272 mm	part no. 600082
Long operating arm (separately), 372 mm	part no. 600083



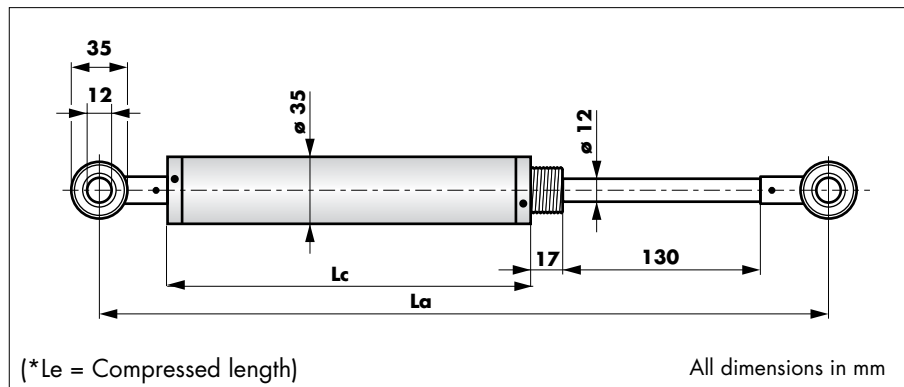
### Koni Lift Door Closer

The Koni door closer features in addition to the adjustable closing speed also an additional final damping in closing direction. It is used for Otis lifts.

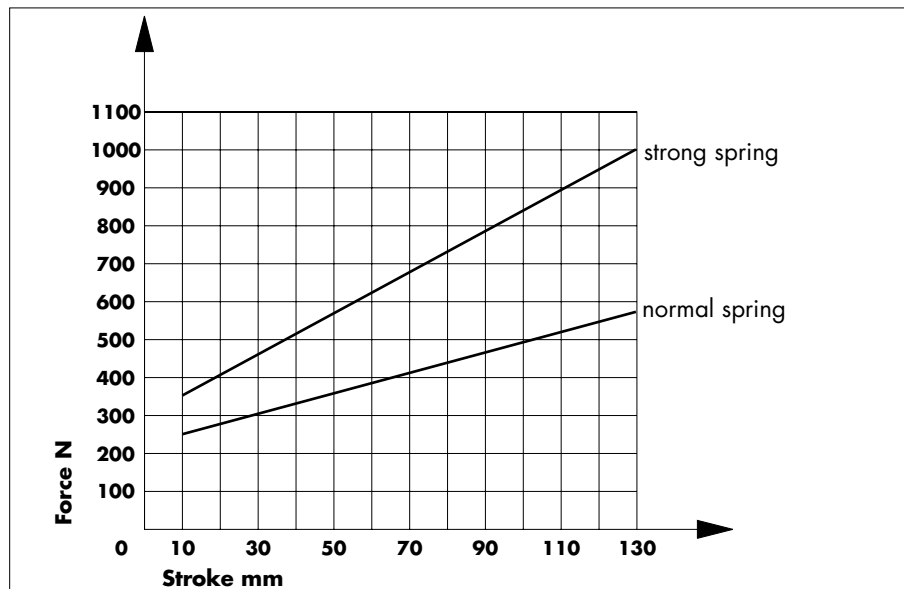
It is installed in the door frame. They are produced with different closing forces. Which one to choose depends on the width of the door (see diagram below).

### Dimensions

Part no.	La	Le*	Lc
203262	625	495	394
203263	625	495	394
203265	610	480	379
203269	570	440	339
203270	610	480	379



### Diagram of the Closing Forces



### Order Information

Type	Closing force (approx.)	Part no.
Koni door closer, normal spring	30 - 40 N	203262
Koni door closer, strong spring	50 - 60 N	203263
Koni door closer, normal spring, short	30 - 40 N	203265
Koni door closer, normal spring, very short	30 - 40 N	203269
Koni door closer, very light spring, short	15 N	203270

## ED STD 3 Hinged Door Damper

The DICTATOR ED STD 3 hinged door damper is designed for the final damping of hinged doors being closed by a spring. The damper is installed in the door frame and is accessible through the lift shaft.

The piston rod of the damper points through the door frame and makes contact with the side of the door when the door is closed. To protect the sheet steel on the door from wear, a special hardened counter plate for the piston rod needs to be fixed to the point where the piston rod meets the door.

The ED STD 3 damper works hydraulically. Its special feature is the oil tank on top which is connected to the damping cylinder. This guarantees that the ED STD 3 slows down and effectively damps the door as soon as it hits the piston. If the cylinder was made only from a simple tube, air in the cylinder could significantly reduce the damping effect.

High performance and reliability are achieved by a special guide for the piston rod in the damper and a set of high quality seals. A scraper ring of polyurethane prevents the soiling of the guiding and sealing elements.



### Technical Data

Damping fluid	special hydraulic oil
Body	aluminium
Counter plate	spring steel or hardened CrMoV-steel
Operating temperature	0° to 50 °C
Door weight	20 to 200 kg
Make of doors	Stahl; Otis: model ED STD 3L

### Installation



Insert the damper from the lift shaft into the door frame so that the piston rod points through a hole of 15 - 20 mm in the frame to the door. Finally secure the damper by screwing it to the frame - two screws on the front and one in the back.

**Attention:** make sure the two screws at the front plate are not tightened too much as this might slightly distort the front plate and hinder the free movement of the piston rod.

The counter plate ① supplied with the damper must always be fixed to the door. When closing the door the piston rod should hit the middle of the counter plate.

### Setting

To achieve optimal damping close the door several times to expell any air left in the damping cylinder prior to installation.

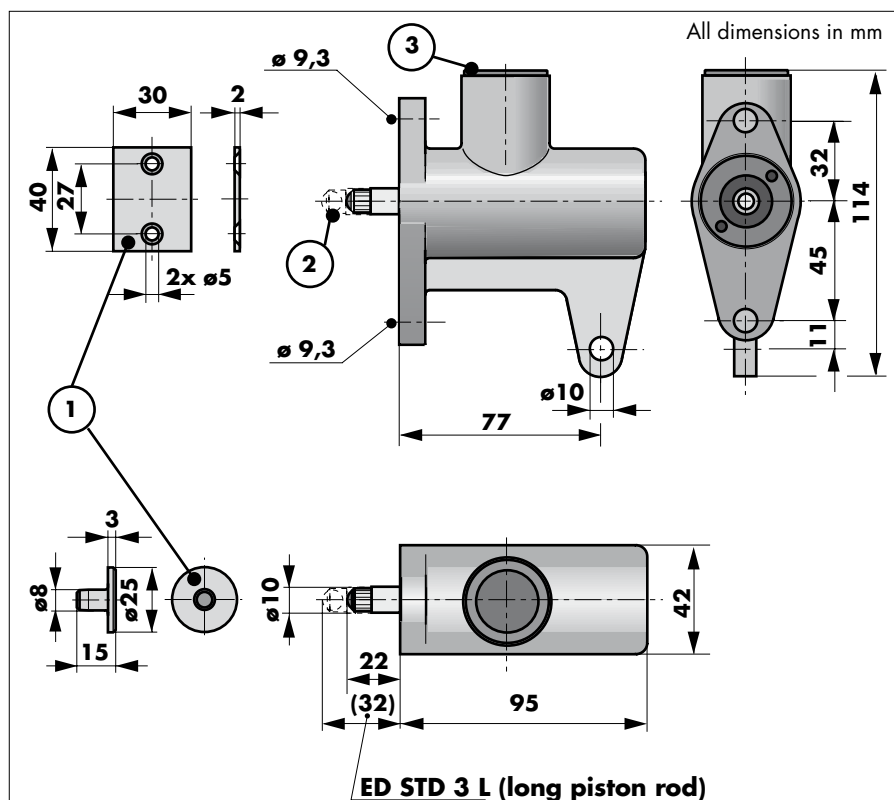
### Adjustment

With the piston rod **fully extended** grasp the knurled part ② with a pair of pliers and turn it while pulling: clockwise will reduce the damping, anti-clockwise will increase it. Please **make sure** that you do not damage the polished surface of the piston rod!

### Maintenance

The ED STD 3 damper does not require maintenance. In case of being soiled it is enough to carefully clean the piston rod. By removing the cap ③ you can check the oil filling.

### Dimensions



### Order Information

ED STD 3 with rectangular counter plate	part no. 203401
ED STD 3 without accessories	part no. 203401L
ED STD 3 L with round counter plate	part no. 203402
Rectangular counter plate for Stahl doors	part no. 205141
Round counter plate for Otis doors	part no. 205188
Hydraulic oil for ED STD 3 (1 litre), for refilling	part no. 205099



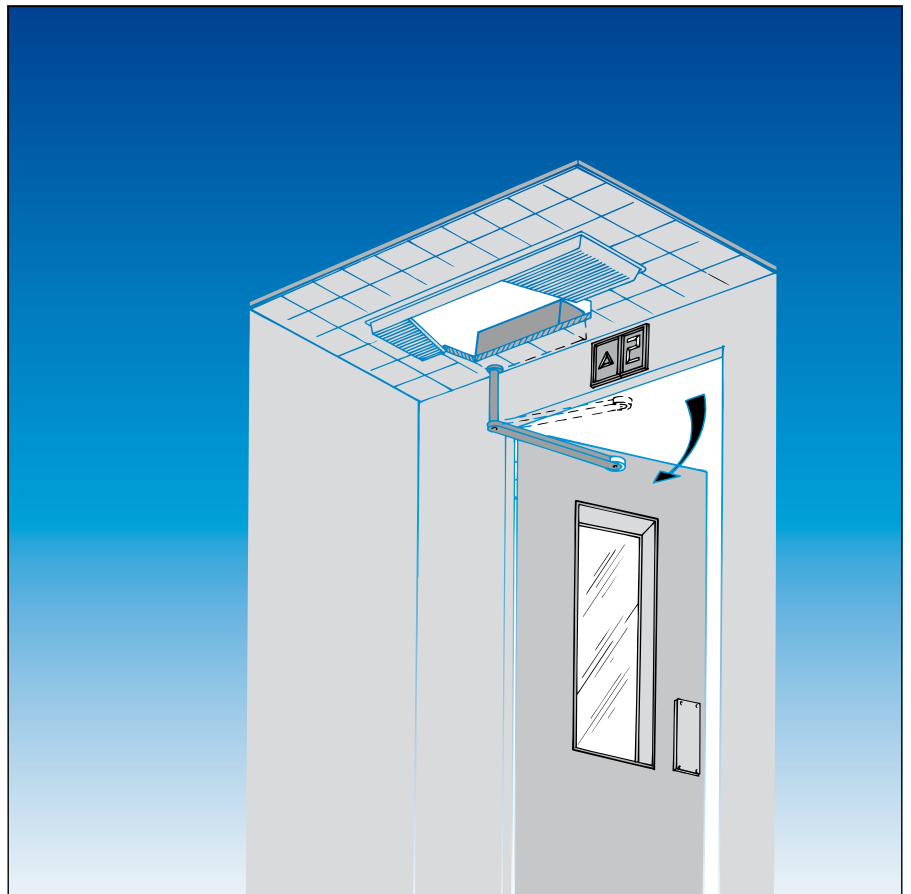
## DICTAMAT 304 AZ for Hinged Lift Landing Doors

The DICTAMAT 304 AZ is an electrical door operator which automatically opens hinged lift doors up to 200 kg.

As the operating arm is not directly fixed to the door, **all landing doors** in the lift can be opened by **a single unit** mounted above the door in the ceiling or on top of the car. The arm of the DICTAMAT 304 AZ is not connected to the landing door. It just pushes the door open with a roller on the end of the lever. The door is closed by the already installed door closer or closing spring.

The DICTAMAT 304 AZ is equipped with an electronic position control system. The final positions are memorised in the control system - even in the event of a power failure. The door operator slows down before reaching the final positions. This feature increases the safety and avoids noise and unnecessary strain on the doors.

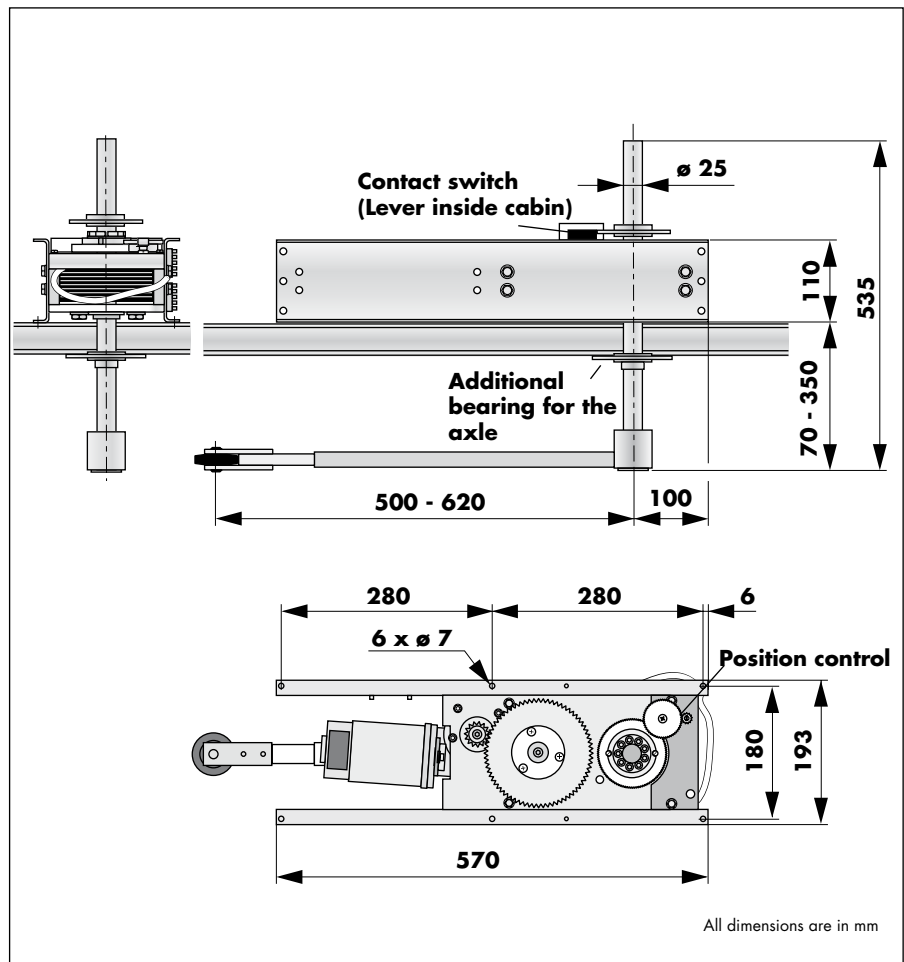
Along with the speed and the final positions, a response level for a reversing function can also be precisely adjusted in the control system. If the door hits an obstacle whilst opening, it reverses immediately.



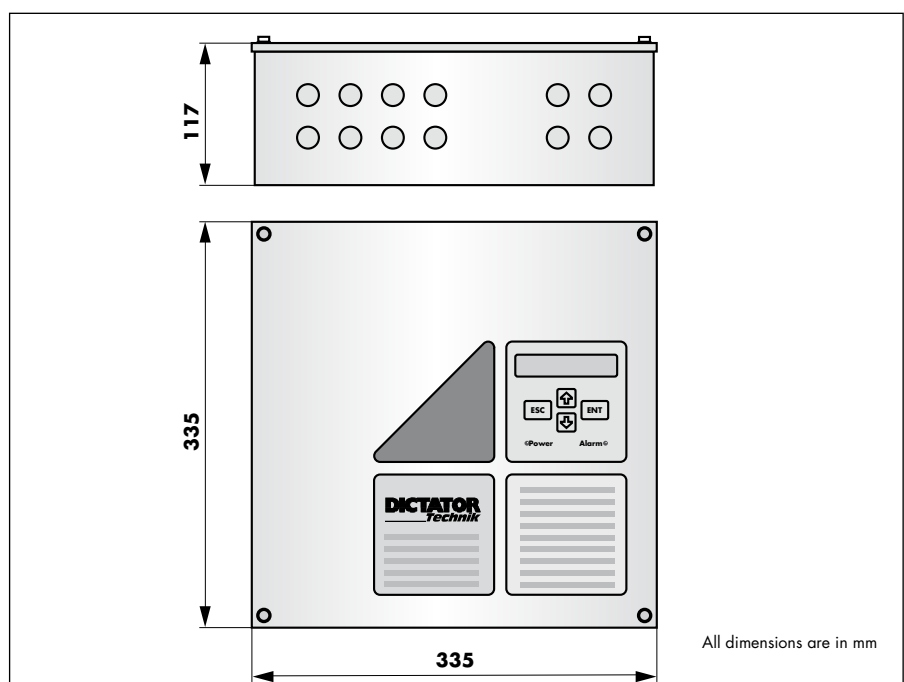
### Technical Data

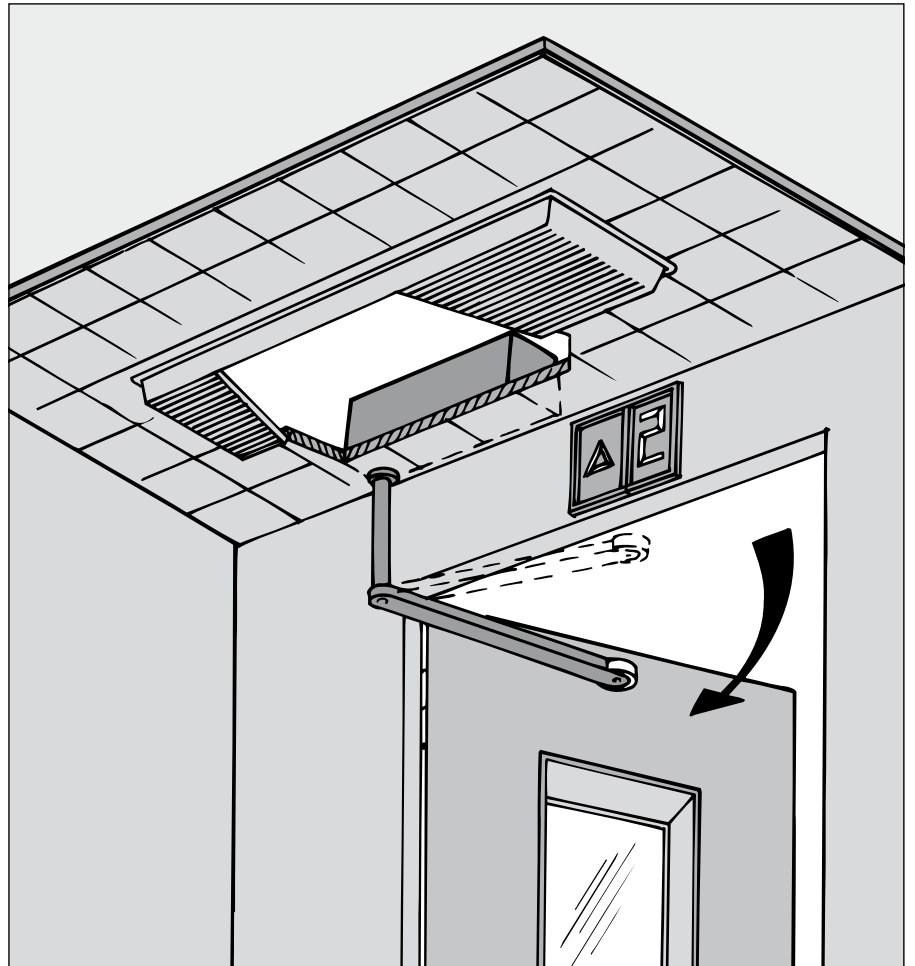
Force of door operator	max. 100 Nm
Door weight	max. 200 kg
Door width	max. 1.2 m
Door speed	opening and closing speed separately adjustable; 2 to 8 s / 90°
Power supply	230 VAC / 2 A / 50 - 60 Hz
Motor	24 VDC / 90 W / IP 40
Operating options	Impulse OPEN, CLOSE, OPEN/CLOSE

**Dimensions**



**SQUARE 820 AZ  
Control System**





## Description

The door operator is either mounted on the cabin roof or in the car on the lintel directly above the cabin door. In both cases please observe any relevant safety regulations, especially the distance of the lever to the lintel to prevent injuries,

The door operator is ready to mount once delivered, with connector for the plug-in cable connecting the SQUARE 820 AZ control system to the motor.

The length of the axle is adjustable, so that it can exactly be adapted to the requirements of each cabin. The maximum distance between the bottom edge of the door operator on the cabin ceiling and the operating arm opening the door is 350 mm. The door operator can be used both for right and left-hand doors.

The DICTAMAT 304 AZ operating arm is not connected to the landing door of the lift but is provided with a plastic roller which runs on the door. In the event of a power failure the door can therefore always be moved freely by hand. The operating arm pushes the door open. When it has reached the opened position it returns to the closed position as soon as the set time for the automatic closing has expired. The closing speed of the operating arm should be higher than the opening speed.

When the operating arm has reached its closed position, a contact switch connects with the central lift control system, making sure that the lift only starts moving again when the operating arm is securely back inside the cabin.

The door itself is closed by a door closer or closing spring combined with a door check.

## Operating Options

The control system designed for the use with the DICTAMAT 304 AZ is the SQUARE 820 AZ of the system of control units SQUARE. The control system permits both dead man as well as impulse operation. When using it on lift doors we recommend strongly the impulse operation. All final positions are adjusted in the control system. Apart from the positions OPEN and CLOSED the positions for changing to the crawling speed before the positions OPEN and CLOSED have to be adjusted. Starting at these positions the speed of the door operator is reduced and the door enters slowly the final position.

The SQUARE 820 AZ offers the following functions:

- Impulse OPEN: Door opens completely after pressing the switch shortly or pulling a ceiling switch.
- Impulse partial opening: Door opens partially (to an additional position adjusted in the control system) after pressing an extra switch shortly.
- Impulse CLOSE: After pressing the switch shortly the lever of the door drive returns automatically to the position CLOSED. The door itself is closed by its closing spring or a door closer.
- Alternating impulse OPEN / CLOSE: after each impulse the door/lever moves in the opposite final position.
- STOP As long as the door opens, it stops as soon as the STOP switch is pressed. When using the STOP switch during closing the arm of the drive unit is stopped. The door goes on closing until it hits the lever.
- Automatic closing: Door closes automatically after a time pre-set between 1 and 999 sec.

Further adjustment possibilities:

- Safety equipment
- Function relay contact (e.g. for the connection of a siren, warning flashlight etc.)
- Operation characteristics of the motor:

*Smooth starting/stopping* (adjustment of the acceleration and deceleration when the motor starts or is disconnected)

*Fast Stop* (when safety equipment is triggered)

Distance for the *crawling speed* before the final position OPEN and CLOSED, crawling speed OPEN, crawling speed CLOSE

*Response level for the reverse function*

**Please make sure that the  
motor reverses when the  
load exceeds 150 N.**

## Components Included

Door operator (24 VDC motor, casing zinc-plated)  
with adjustable axle, contact switch on the axle

## Components Included Control System

SQUARE 820 AZ control system with 2.5 m connection cable to the door drive,  
2.0 m cable with plug for the mains supply and integrated OPEN and CLOSE keys

## Order Information

DICTAMAT 304 AZ

part no. 710344

SQUARE 820 AZ control system

part no. 706082AZ

## DICTATOR Door Contacts

### For Hinged Lift Doors

DICTATOR door contacts have especially been designed for hinged lift doors. They guarantee the lift door is fully closed before the lift starts moving.

The contact points are silvered to help them last and prevent sparking when the door closes.

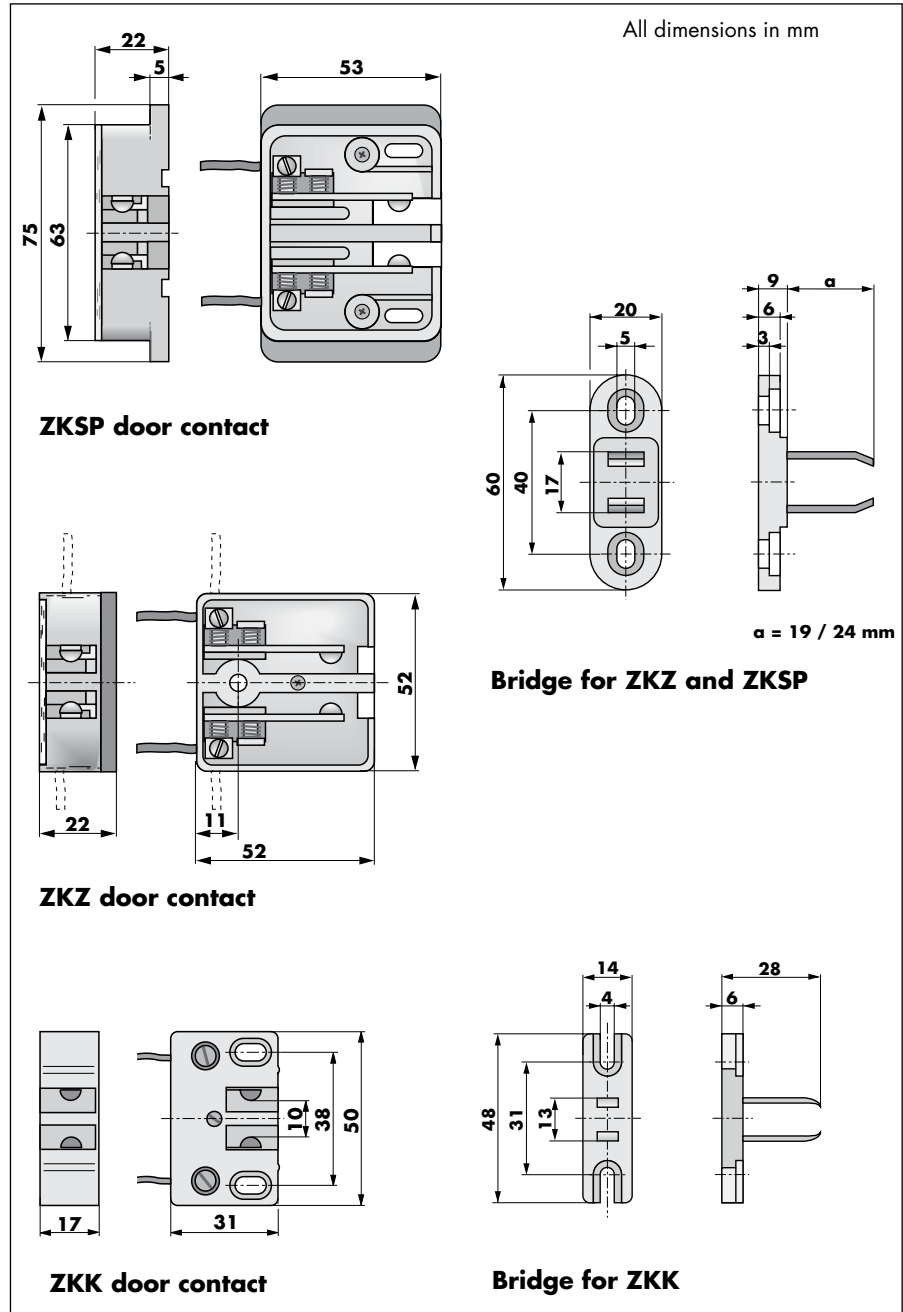


### Types

Contact points	silvered
Body	plastic
Types	ZKK, ZKZ, ZKSP

**DICTATOR Door Contacts**

**Dimensions**



**Order Information**

ZKSP door contact	part no. 050000
ZKZ door contact	part no. 050002
ZKK door contact	part no. 050104
Contact bridge for ZKK	part no. 050005
Contact bridge for ZKZ and ZKSP (19 mm)	part no. 050001
Contact bridge for ZKZ and ZKSP (24 mm)	part no. 050003

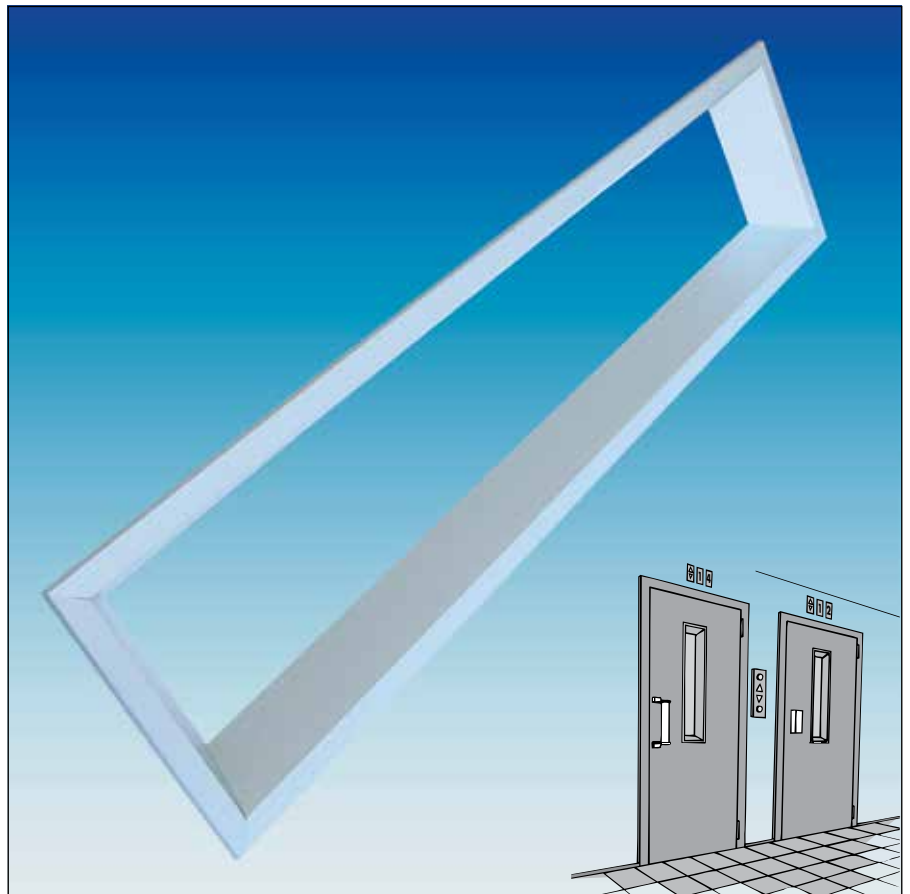
## Door Handles and Window Frames for Hinged Lift Doors

DICTATOR provides a range of door handles for lift doors. They are especially robust and indifferent to damages and high strain. They are also suitable for outdoor use.

They are constructed in a special aluminium alloy. The standard finish is anodised silver. With higher quantities there are also other colours possible.

Our standard products are listed on the following page. But we can supply to your own requirements. Please ask for a quotation.

Matching the door handles DICTATOR also furnishes window frames for lift doors. Apart from the standard type "H" we also provide window frames according to your requirements.



### Technical Data

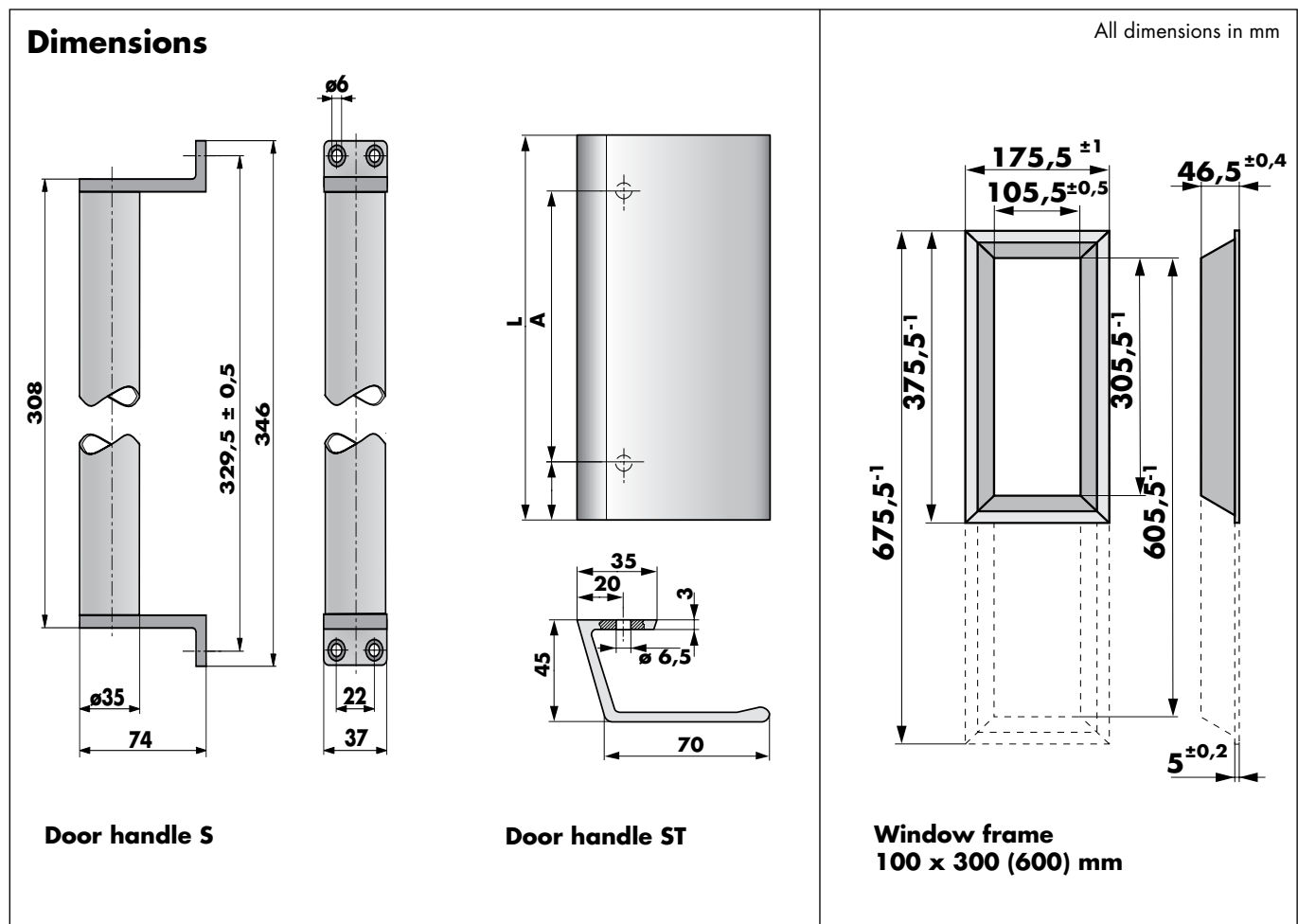
Finish	anodised silver
Material	aluminium (AlMgSi 0.5)
Special designs	varnished steel



## Door Handles and Window Frames for Hinged Doors

DICTATOR door handles model "S" consist of a tube and two holding brackets. All parts are made of aluminium and are silver anodized. The "S" model door handle is fixed to the door with 4 M5 screws. The "ST" door handles are made of an U-shaped aluminium profile. Please make sure that the area where the handles are fixed is stable enough, if necessary weld a counter plate with M5 threads into the door.

The window frames are fitted into the cut-out provided in the door and are clicked into place.



## Order Information

ST Door handle (silver)	A = 100	L = 120	part no. 090027
ST Door handle (silver)	A = 120	L = 170	part no. 090012
ST Door handle (silver)	A = 120	L = 200	part no. 090030
ST Door handle (silver)	A = 160	L = 200	part no. 090028
ST Door handle (silver)	without holes	L = 280	part no. 090016
S Door handle (silver)			part no. 090014
Window frame 100 x 600 mm "H", silver anodised aluminium			part no. 090001
Window frame 100 x 300 mm "H", silver anodised aluminium			part no. 090017



## Accessories for Sliding Doors

DICTATOR provides various accessories for sliding lift doors. There are

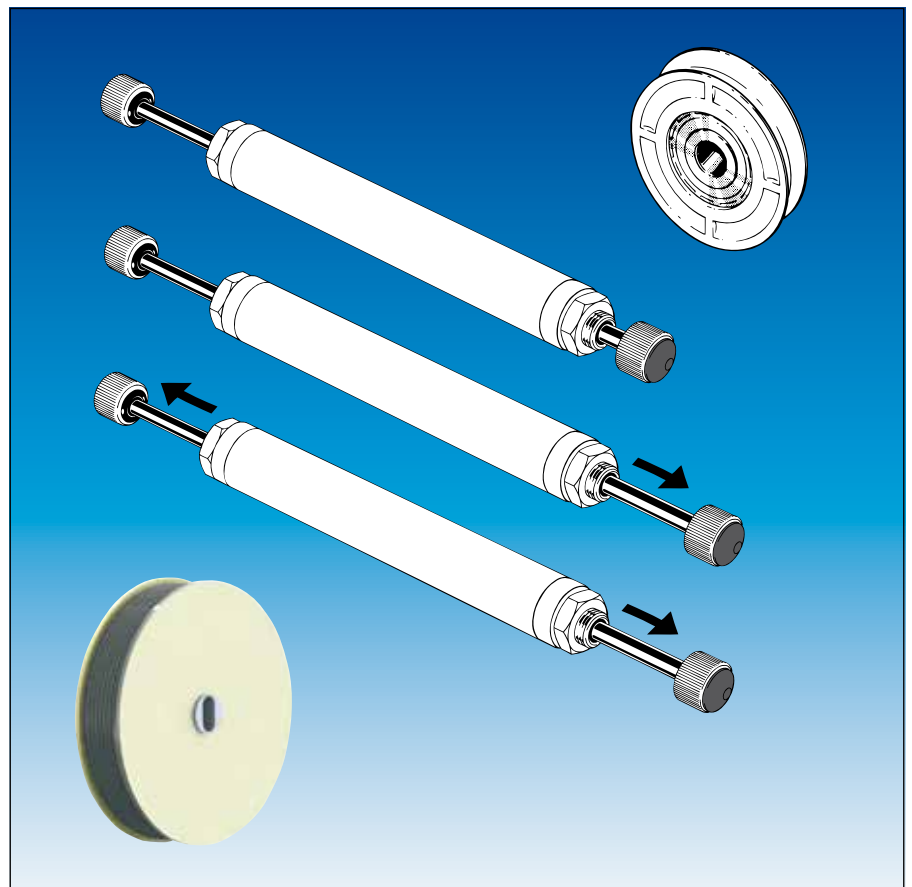
- bi-directional hydraulic ZDH dampers
- Standard Haushahn door damper
- spring rope pulleys
- plastic rollers

The **DICTATOR ZDH sliding door dampers** are bi-directional hydraulic dampers for an impact speed up to 2,0 m/sec. A single damper fixed to the door will slow down and damp the door in the final stages of travel. This requires a mechanical buffer in both final positions.

All dampers of the ZDH range can be adjusted. This allows the door to be adjusted to an optimum function. On the following page you will find a selection of the most common types of double dampers used for lift sliding doors.

DICTATOR **spring rope pulleys** are used for the mechanical closing of sliding lift doors.

DICTATOR **plastic rollers** are to be found in the running gear of the sliding doors.



### Summary

DICTATOR ZDH bi-directional hydraulic dampers	page 01.050.00
DICTATOR Standard Haushahn door damper for sliding doors	page 01.051.00
DICTATOR spring rope pulleys	page 01.052.00
DICTATOR plastic rollers	page 01.054.00

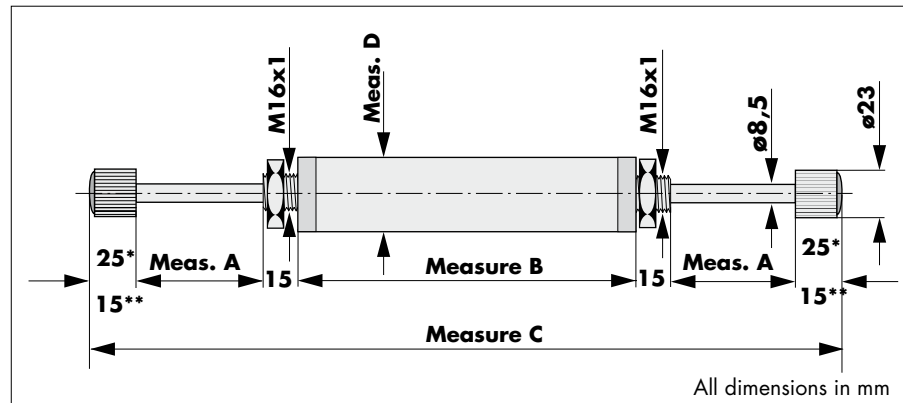


### ZDH Bi-Directional Dampers for Sliding Doors

Depending on the requirements we offer different types: with automatically extending piston rods, with the piston rods pushing/extending one another or with one piston rod extending automatically and one being pushed by the other.

To adjust dampers with stepped adjustment (ZR) you simply pull on the completely extended piston rod and turn it at the same time. Both sides can be adjusted separately. The adjustment screw for the dampers with adjustment screw (NR) is located right in the front of the piston rod. By turning the screw you can increase or reduce the damping force continuously.

### Dimensions



\* height of the buffer with stepped adjustment (ZR) 25 mm  
 \*\* height of the buffer with adjustment screw 15 mm

### Technical Data and Order Information

Model	Meas. A	Meas. B	Meas. C	Meas. D	Adjustment	Make of lift	Part no.
ZDH 50/50 BG	50	137	297	28	Adjustment screw	-	210110
ZDH 50/50 a	50	137	297	28	Adjustment screw	-	210000
ZDH 50/50 a/EG/P	50	220	400	28	Turn piston rod (ZR)	Rathgeber	203190
ZDH 60/80 a	60/80	260	484	28	Turn piston rod (ZR)		210420*
ZDH 70/70 a/EG/P	70	260	480	28	Turn piston rod (ZR)	Rathgeber	203191
ZDH 55/55 BG	55	132	255	35	Turn piston rod (ZR) one-piece piston rod	Rathgeber	203195**
ZDH 120 BG	120	208	408	28	Turn piston rod one-piece piston rod	Stahl width up to 1300 mm	203162

\* On the side with the 60 mm piston rod the length of the thread is 44 mm.

\*\* Ø 12 mm piston rod, M24x1 mm thread on one side, 17 mm long

- Key:**
- a automatically extending piston rod
  - a/EG one piston rod extending automatically, one piston rod pushed outwards by the other
  - BG piston rods move each other to the outside
  - P progressive damping

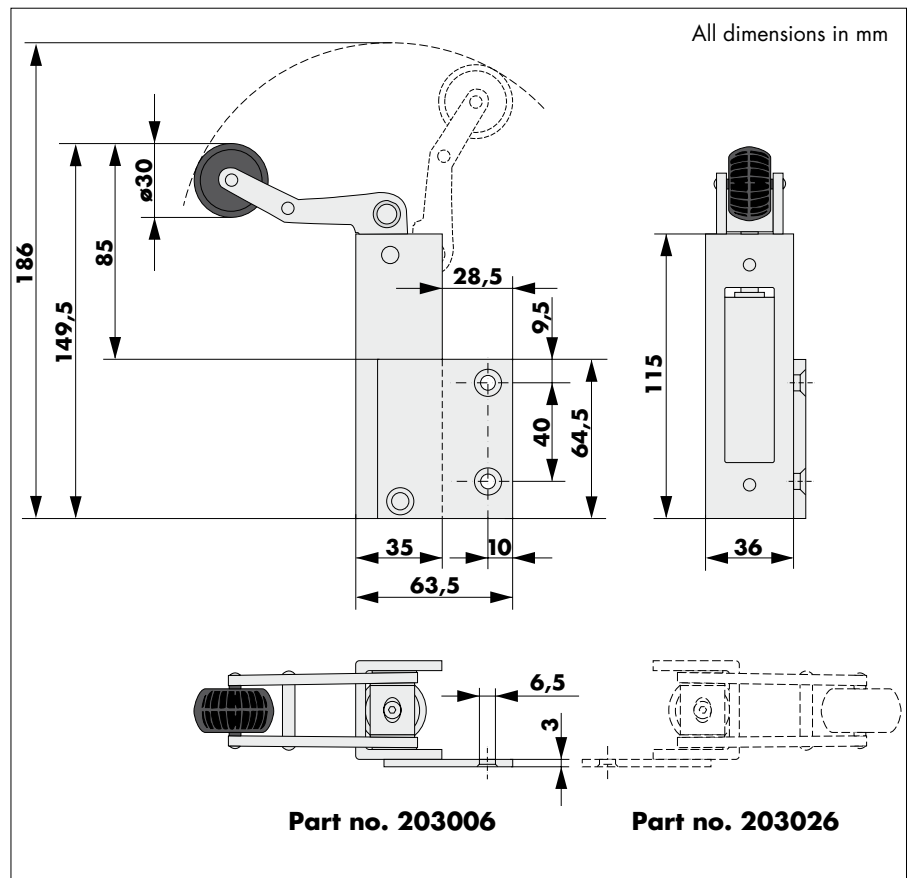


## Standard Haushahn for Sliding Lift Doors

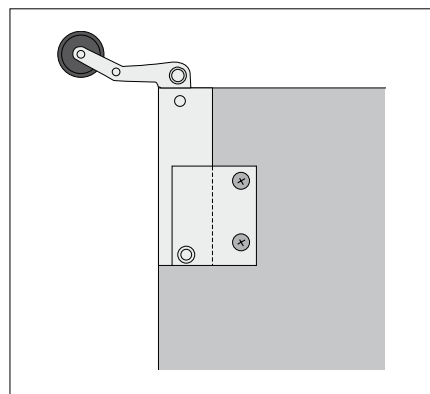
The Standard Haushahn door damper is used in Haushahn lift doors. Depending on the position of the vertical lateral fixing bracket this model is designed for **sliding lift doors** closing to the right or left.

Due to its conical damping cylinder the door damper has a progressive damping characteristic, thus damping and closing the door smoothly and quietly. It guarantees that the door is closed and kept closed even in strong draughts, thus making the door contacts work reliably with minimum wear. The special silicone oil is nearly unaffected by temperature changes and ensures the damping remains constant.

### Dimensions



### Installation



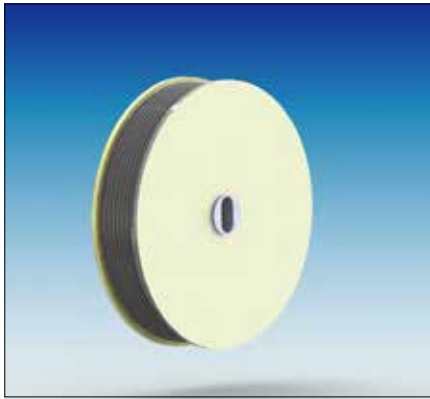
The Standard Haushahn door damper is fixed to the front of the sliding door. Its bracket is screwed laterally to the door with two M6 screws.

The damping can precisely be adjusted as required, following the instructions on page 01.020.00.

### Order Information

Standard Haushahn, 20 N, bracket on left (door closing to the left) part no. 203006

Standard Haushahn, 20 N, bracket on right (closing to the right) part no. 203026



## DICTATOR Spring Rope Pulleys for Sliding Doors

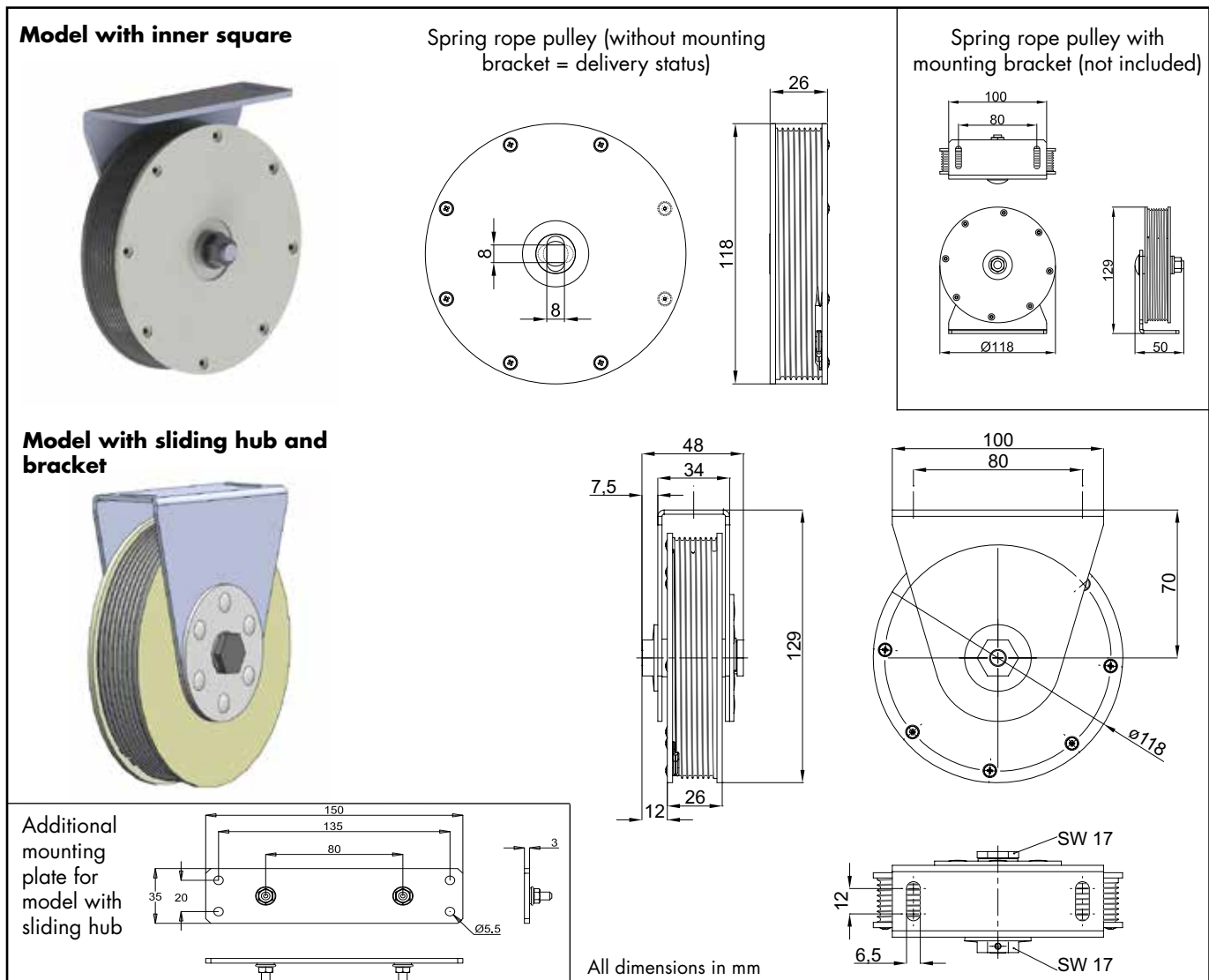
According to the EN 81-1/2, point 7.7.3.2. all landing doors driven by the car door have to be equipped with an additional mechanical closing device. An ideal solution represent the new models of the DICTATOR spring rope pulley with plastic casing. Due to the guide grooves for the plastic cable injected in the casing and an optimized bearing of the spring in the casing, they offer a very long operational life and an optimum functioning. Using a plastic casing and a plastic cable also considerably reduces the noise.

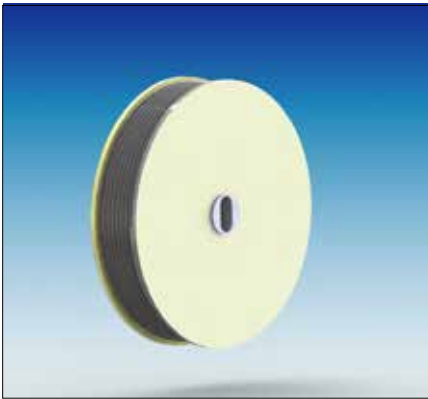
### Models

The plastic spring rope pulleys are available with different hubs, depending on the intended type of mounting and the requested handling comfort.

- Hub for mounting on an 8 mm square bolt or with a M8 bolt with square neck DIN 603 (both to be provided on site). For this model a mounting bracket is available, part no. 0700113, see drawing below.
- Sliding hub: this prevents the possible damaging of the spring during tensioning or releasing. The spring rope pulley with sliding hub is always provided with a bracket (zinc-plated or AISI 304). Mounting on the wall or ceiling is much more easier when fixing the bracket to the separately available mounting plate with headless pins.

### Dimensions



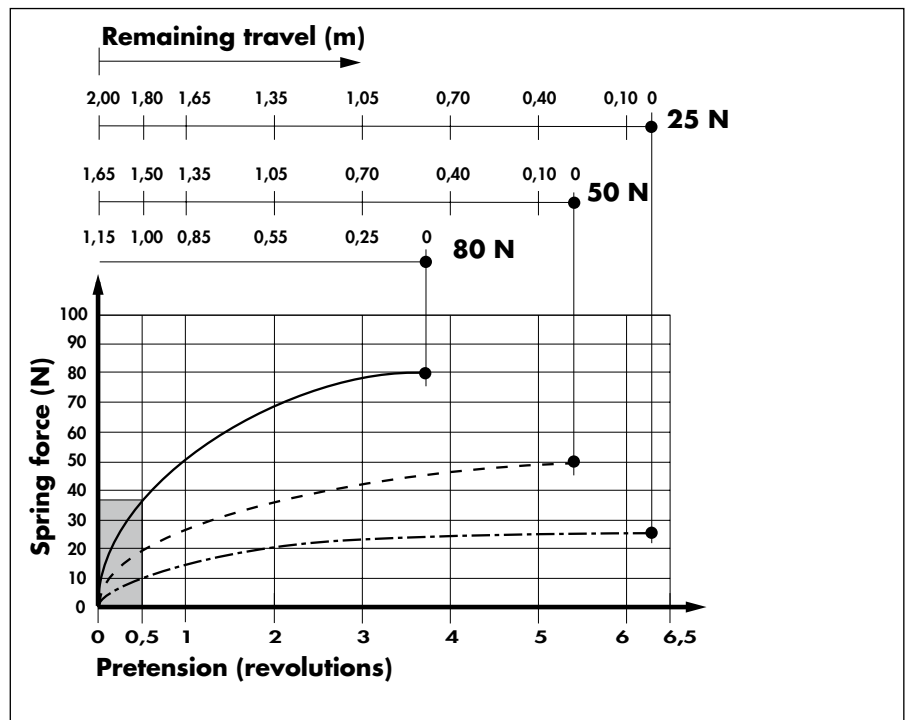


## DICTATOR Spring Rope Pulleys for Sliding Doors - cont.

For an optimum functioning of the spring rope pulley the door has to be as smooth-running that the force of the mounted spring rope pulley is sufficient to move the door from every position. If you are unsure, we recommend you measure the force required to move the door with a spring balance.

As a general rule applies, the higher the force of the spring rope pulley, i.e. the more it is pretensioned, the shorter is the working distance.

### Force-Travel Diagram



### Technical Data

Material casing	flame retardant DOMAMID plastics
Rope	flame retardant Kevlar rope with polyester coat about Ø 2 mm, with cable eye stiffener (inner Ø about 5.5 mm)
Closing force	25 N - 80 N, depending on type

### Order Information

25 N spring rope pulley with inner square	part no. 070110
50 N spring rope pulley with inner square	part no. 070111
80 N spring rope pulley with inner square	part no. 070112
Mounting bracket for spring rope pulley with inner square, zinc-plated	part no. 070113
25 N spring rope pulley with sliding hub, bracket zinc-plated	part no. 070102
50 N spring rope pulley with sliding hub, bracket zinc-plated	part no. 070093
80 N spring rope pulley with sliding hub, bracket zinc-plated	part no. 070094
25 N spring rope pulley with sliding hub, bracket from AISI 304	part no. 070103
50 N spring rope pulley with sliding hub, bracket from AISI 304	part no. 070098
80 N spring rope pulley with sliding hub, bracket from AISI 304	part no. 070099
Mounting plate for spring rope pulley with sliding hub, zinc-plated	part no. 070114

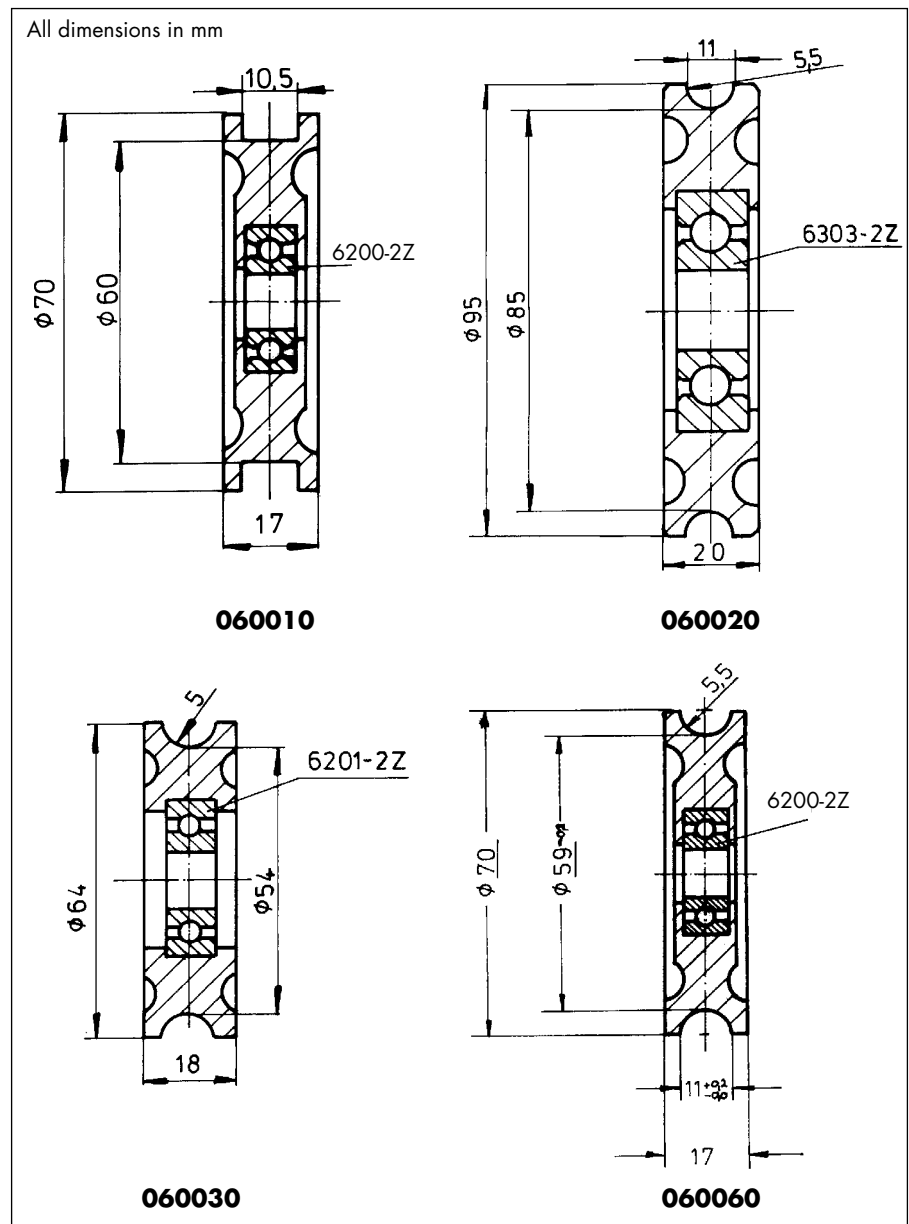


## DICTATOR Plastic Rollers for Sliding Doors

DICTATOR plastic rollers for sliding doors are produced with an integrated ball bearing. They are available in different diameters and grooves.

The drawings below show part of the DICTATOR plastic roller standard programme.

### Dimensions



### Order Information

$\phi 70$ plastic roller	part no. 060010
$\phi 95$ plastic roller	part no. 060020
$\phi 64$ plastic roller	part no. 060030
$\phi 70$ plastic roller	part no. 060060

## Further Lift Accessories

In addition to the accessories for lift doors shown on the preceding pages Dictator furnishes also the **Novoperm magnet switches** for position control.

The **BA series magnet switches** are magnet switches with a slot that work independent of their position. They have been specially designed to fit the requirements of the elevator and conveyor system industry. The magnet system and the contact values ensure a particularly favourable switching-on and -off area.

The **R series magnet switches** are cylindrical proximity switches. The switching contact and the actuating magnet are mounted separately. The switching operation is triggered when the magnet approaches the magnet switch. Even when there is only little space, the R magnet switches are easy to fit.

**On demand** the following **products** are available:

- Louvered ceilings for lift cabins
- Spare parts for older lifts such as e.g. Schindler



### Summary

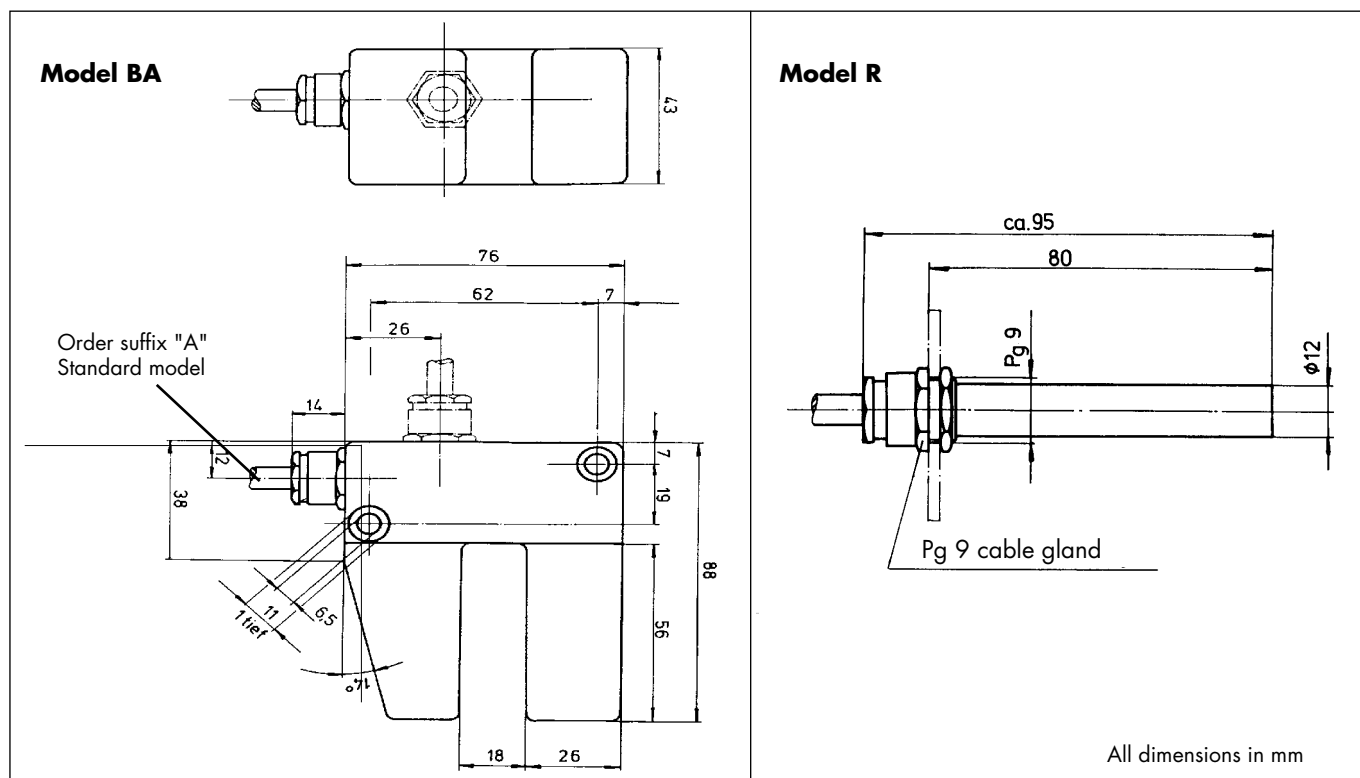
Novoperm magnet switches	page 01.056.00
Dictator louvered ceilings for lift cabins	on demand
Spare parts	on demand

## Magnet Switches

### Technical Data

	BA 30	BA 23S	R 33	R 34
Contact type	change-over	normally closed	change-over	change-over
Type of protection	IP 60			
Switching power max.	30 W/60 VA	100 W	120 W/120 VA	80 W/80 VA
Switching voltage max.	230 VAC	400 VAC	250 VAC	250 VAC
Switching current max.	1 A	3 A	3 A	1,3 A
Switching time	< 4 ms	< 4.5 ms	< 3.5 ms	< 3.5 ms
Contact bouncing time	< 0,5 ms			
Switching frequency	100 Hz			
Mechanical contact lifetime	10 <sup>9</sup> switchings			
Connection cable (sealed in)	2,5 m	2,5 m	1,0 m	1,0 m
Operating temperature	-40 °C to +60 °C			

### Dimensions



### Order Information

NOVOPERM BA 30 magnet switch	part no. 050029
NOVOPERM BA 23-S magnet switch	part no. 700123
NOVOPERM R 33 magnet switch	part no. 050036
NOVOPERM R 34 magnet switch	part no. 050037
Further models on request	