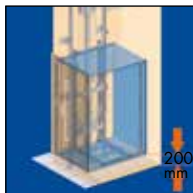


Lift Equipment



**DICTATOR DHM 500 Homelift
(in accordance
with the Machinery Directive)**

Page 01.003.00



**DICTATOR DHE Lift
(in accordance
with Lift Standard EN 81-2)**

Page 01.009.00



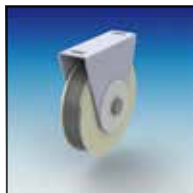
DICTATOR Lift Shaft System

Page 01.013.00



**DICTATOR Accessories for
Hinged Lift Doors**

Page 01.019.00



**DICTATOR Accessories for
Sliding Lift Doors**

Page 01.045.00



Other Lift Equipment

Page 01.051.00

Dear customer,

This catalog contains plenty of detailed data about many of our products. Although we have carefully checked all the information we cannot guarantee that this catalog contains no mistakes and take no responsibility for the correctness of the data/details provided.

Certain details of all technical products - even when they are manufactured very accurately – have tolerances.

Please note that all measurements (unless stated otherwise) are in inch, pound, pound force etc. As the measurements have been converted from metric numbers, the numbers are nearly always odd numbers.

Technical changes may happen and are not subject to notice.

We appreciate your interest and promise to furnish you immediately with detailed information to any of our other products by fax, email or letter post.

Dictator is well known worldwide for its close personal contact to his customers.

We want to become your partner, too.

Management
Dictator U.S., Inc.

State: June 2019

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	1100 lbs
Cabin size	max. 21.53 sqft
Speed	max. 5.91"/sec.
Travel	max. 45.93 ft
Depth of pit/Headroom top floor	min. 3.15"/approx. 98.43" (min. approx. 90.55")
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 choosen 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 5.91"/s. This relatively slow speed allows to do without cabin doors. This represents a big advantage if there is little space available.

Cabin

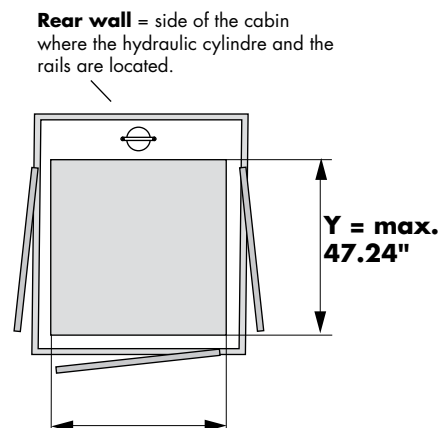
Every cabin of the homelift DHM 500 is **custom-built**. The dimensions don't have to exactly meet the regulations, not like a lift according to the lift standards, but are always manufactured to fit in the given space. The cabin of the DHM 500 can be made with access from one side, through cabin, from 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. 47.24 inch.

- Cabin height

Standard	approx. 80.11" or approx. 82.09"
Minimum	74.80" (allowed only in the private sector or when the edificial situation permits nothing else)

2. Shaft

- Pit

min. 3.15" (in case of standard dimensions and weights); recommended are 7.87" (necessary in case of large and/or heavy cabins, e.g. with glass wall)

- Headroom

98.43" may possibly be reduced to about 90.55"

3. Hinged landing doors

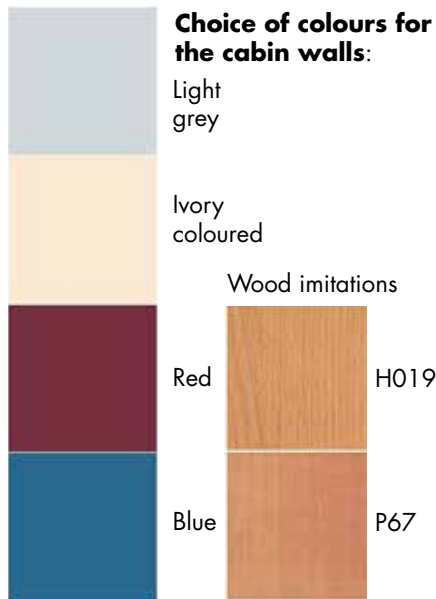
Standard widths	19.69, 21.65, 23.62, 25.59, 27.56, 29.53, 31.5, 33.46, 35.43"
Clear heights	78.74" (default); 74.80, 82.68"

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

Standard widths	27.56, 31.50, 35.43"
-----------------	----------------------

II. Furnishing / Delivery

Cabin Furnishing



Mirror:	standard (half the height of the cabin) at one cabin wall
Walls:	Melamine panels. Glass or stainless steel at an extra charge
Floor:	anti-slip linoleum floor On request also prepared for floor by customers Skirting made of stainless steel
Operating controls:	horizontal panel of stainless steel with push buttons (diameter 1.18") in the cabin wall in front of the rails (one button per landing, one alarm button, one stop button, one key switch)
Cabin lighting:	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.
Hand rail:	at an extra charge: chromeplated or in stainless steel Special executions on demand

Components Included or Available

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 8.2 ft),

Hydraulic cylinder with pipe rupture valve, hydraulic unit with valve block, shut-off valve, manometer, hand pump, emergency descent switch, 13.12 ft 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: 19.69, 21.65, 23.62, 25.59, 27.56, 29.53, 31.5, 33.46, 35.43"
 (other dimensions upon request)
 Height: 78.74" (default)
 74.8 or 82.68" on demand

Components of delivery (default):

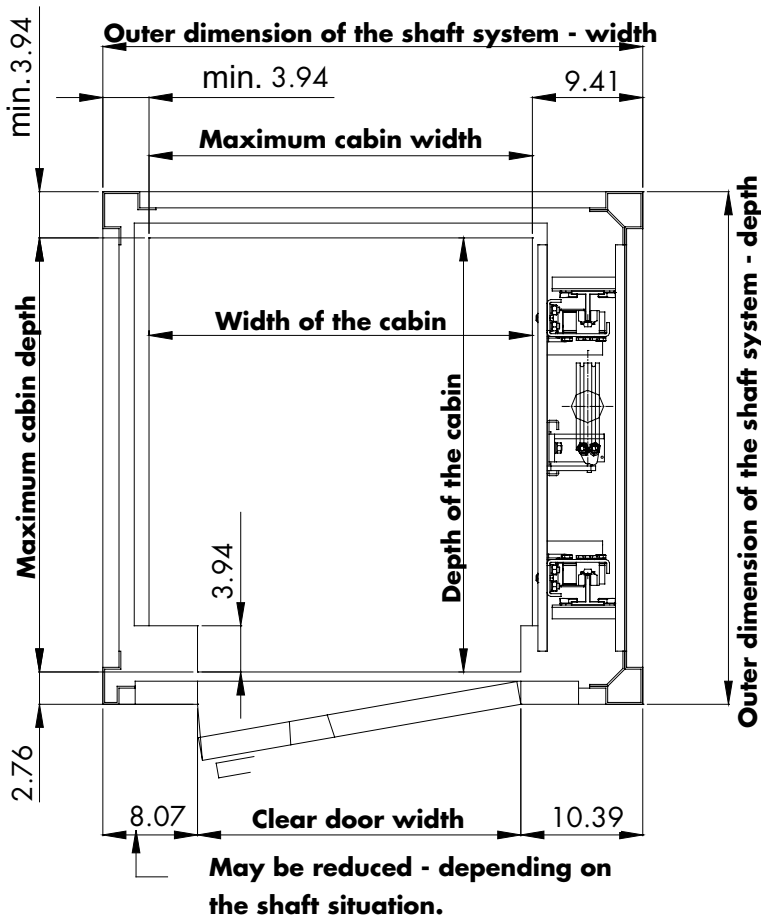
- semi-automatic hinged door with primary coat, with closing spring and Standard door damper
- electromagnetic retiring cam and emergency unlocking
- wire-reinforced glass pane and door handle
- control panel in the door frame with call button and key switch



Non-standard design landing doors can be supplied at an extra charge with large window (in case of a 35.43" wide door: 22.64" x 51.14"), 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 unauthorized persons from entering the cabin.

Dictator Lift Shaft System

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



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 43.7", being determined by the rail system. Depending on the door or shaft situation, this measure may be reduced.

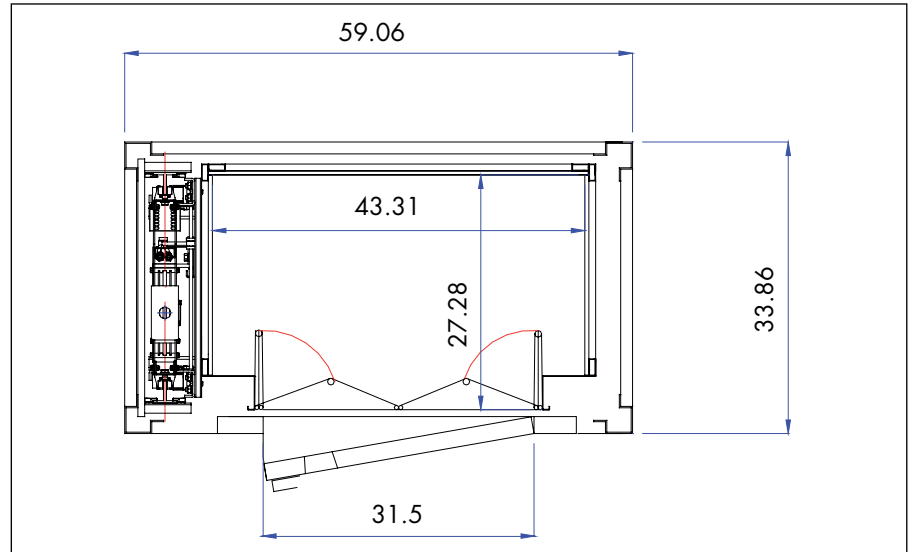
Special designs with smaller dimensions can be realized on demand. Please ask us!

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.

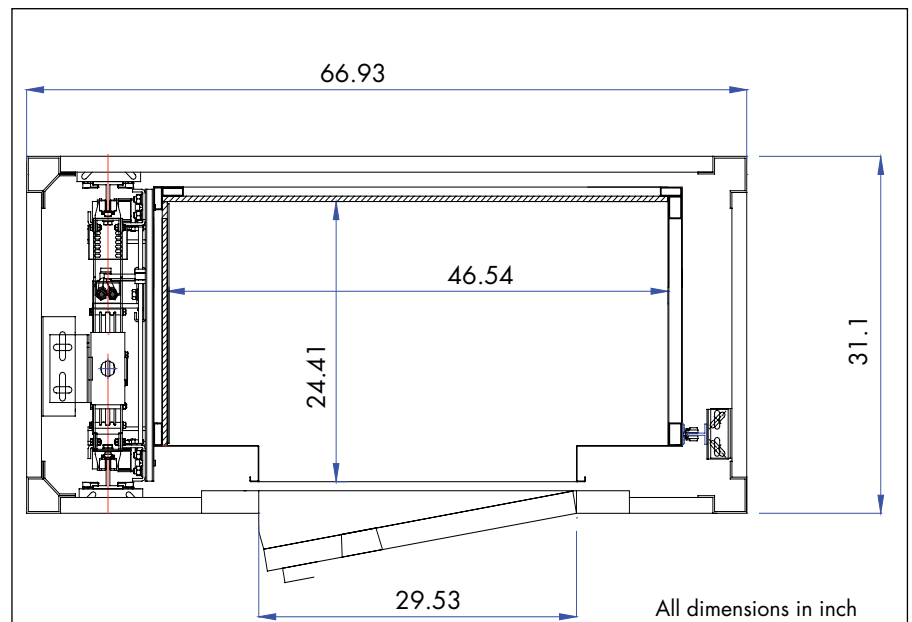
In spite of the very little given space there also could be realized the cabin door wanted by the customer. This allows to operate the cabin by impulsion instead of the standard dead man operation, i.e. the button of the desired floor has to be pressed just shortly.



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

Despite the extremely little depth of this stair well (33.86 inch!) 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.

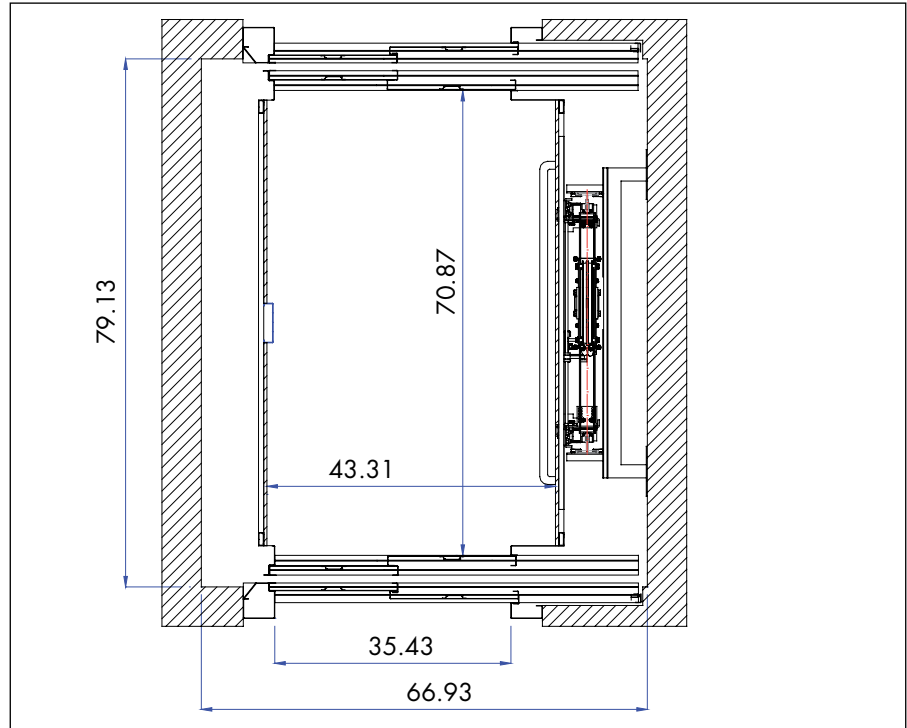
To achieve the necessary stability this lift was provided with a third guide rail.



IV. Realized Projects DHM 500 - Cont. Examples

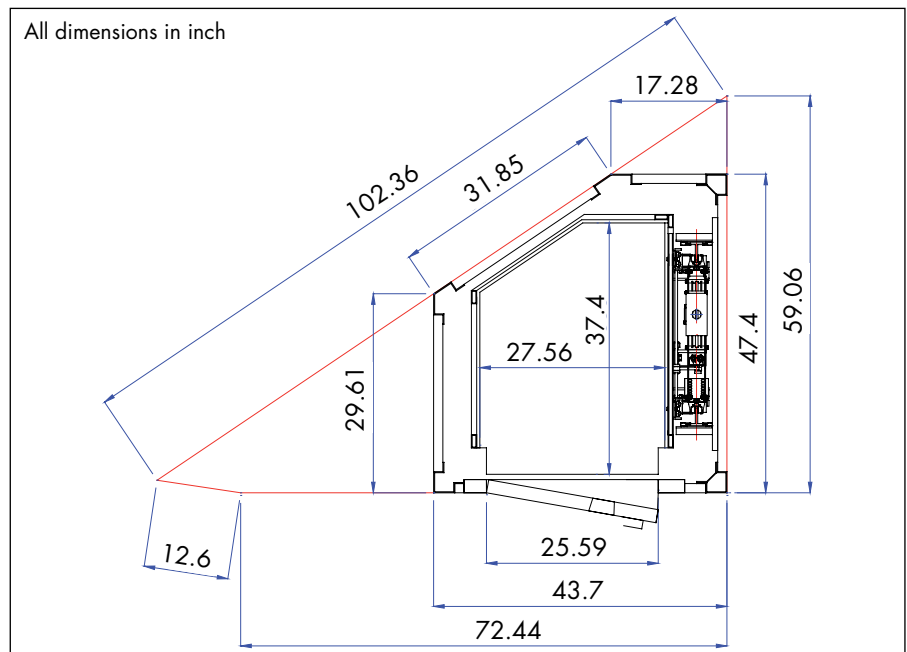
Homelift DHM 500 with 21.53 sqft Ground Area and 1100 lbs Load

Due to its robust concept and the high stability of its supporting frame the Homelift DHM 500 has been approved for loads up to 1100 lbs at a ground area of up to 21.52sqft. 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 7.87" and Headroom of 106.3"

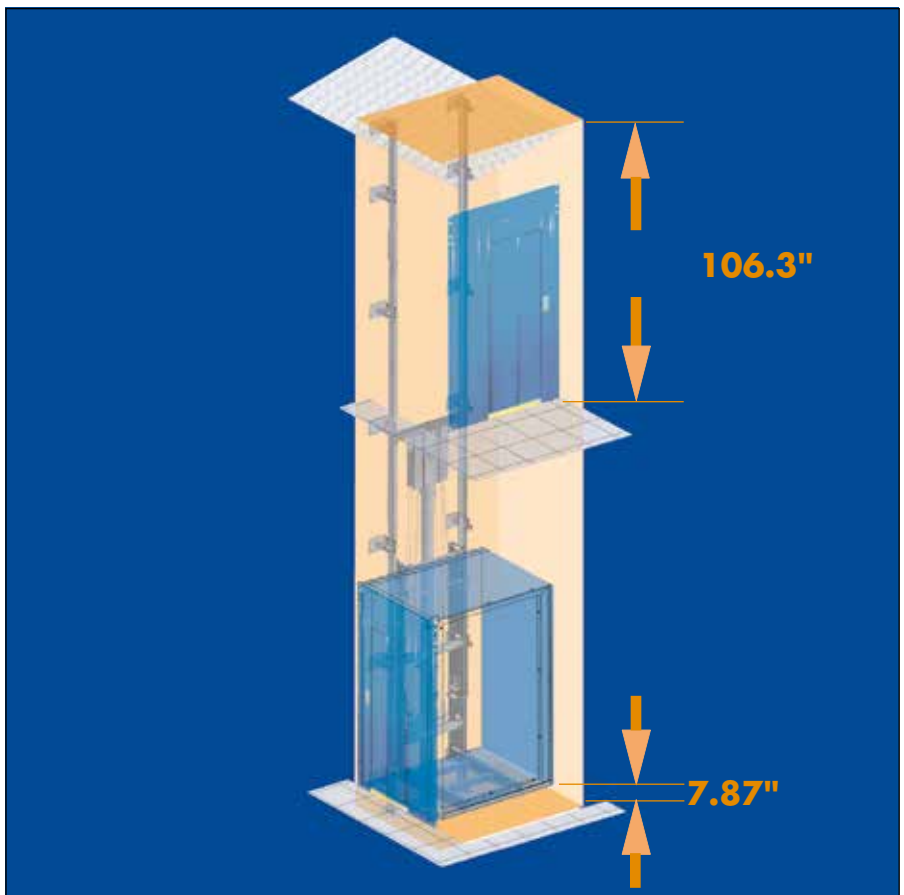
Nowadays it becomes more and more important to remove barriers from buildings that might impede the movement of handicapped persons. However, in quite a lot of existing buildings there is neither the space for the pit nor the headroom required for the installation of a lift.

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

Its **main advantages:**

- Shallow pit: 7.87"
- Small headroom: 106.3"
- 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 lift shaft system of DICTATOR offers the ideal solution.



Technical Data

Rated load /number of persons	495, 660, 990, 1320 lbs / 3, 4, 6, 8
Speed	max. 24.41"/sec.
Travel	up to 65.62 ft
Min. depth of pit /height of headroom	7.87" / 106.3"
Dimensions	customized 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!)**.

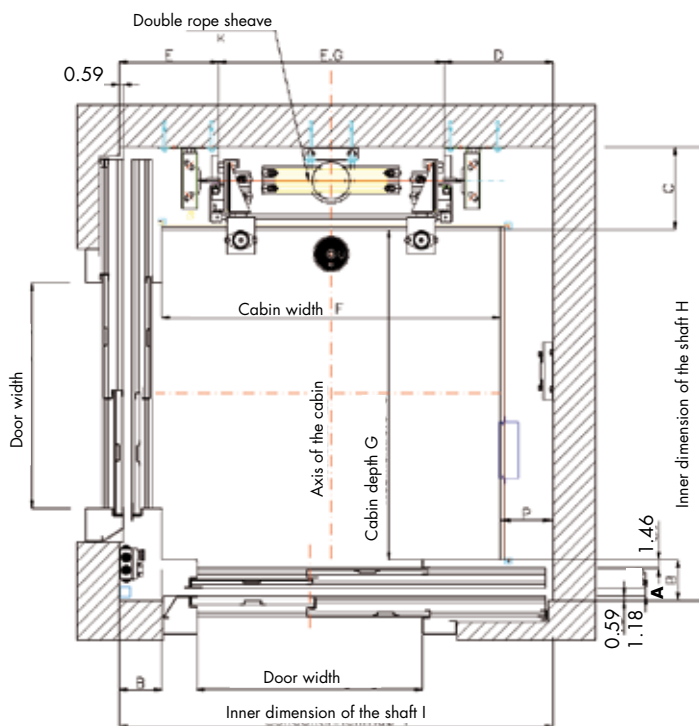
	DHE 225	DHE 300	DHE 450	DHE 600
Load	495 lbs	660 lbs	990 lbs	1320 lbs
Number of persons	3	4	6	8
Minimum area	6.46 sqft	8.5 sqft	12.59 sqft	15.61 sqft
Maximum area	7.53 sqft	9.69 sqft	13.99 sqft	17.22 sqft
Depth of pit	7.87"			
Headroom	106.3"			
Travel	max. 65.62 ft			
Number of stops	depending on travel, min. distance about 35.43"			
Dimensions of the cabin	custom-made to size required			
	height 78.74"			
	dimension Y (see drawing) max. 47.24"			
Number of accesses	one or two accesses (adjoining or through cabin)			
Cabin doors	automatic doors			
Door width (standard)(inch)	depending on cabin size: 23.62, 27.56, 31.5, 35.43, 39.37			
Landing doors	automatic doors			
Speed	24.41"/sec.			
Engine room	approved cupboard			
Mains connection	230/400 VAC / 50Hz			
Motor rating kW	9.6	11.8	11.8	14.7
Precision of positioning	+/- 0.2"			
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 calling key and display

Dimensions - Example



The DICTATOR DHE lift is always custom-made, that means it is adapted the best 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 47.24".

Type	Minimum Dimensions					
	EG	A	B	C	D	E inch
DHE 300	25.59	2.95	6.18	13.19	5.51	11.42
DHE 450	31.5	2.95	6.18	13.19	5.71	11.81
DHE 600	31.5	2.95	6.18	14.57	5.71	11.81

Type	Minimum Dimensions					Max. FxG(sqft)
	FxG(sqft)	H	I	K	P	
DHE 300	8.50	55.12	55.12	12.6v	3.94	9.69
DHE 450	12.59	61.02	61.02	15.75	3.94	13.99
DHE 600	15.61	61.02	61.02	15.75	3.94	17.22

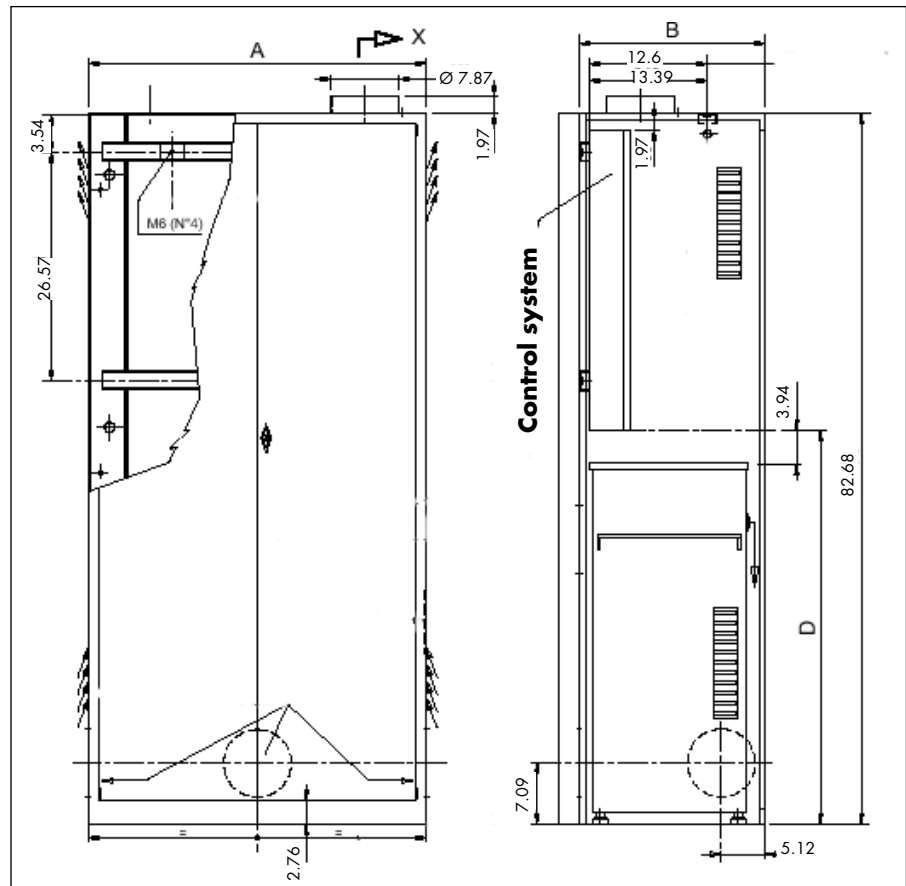
III. Hydraulic, Components of Delivery

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	37.4 x 15.75 x 82.68"
	DHE 450 and DHE 600	40.55 x 24.41 x 82.68"
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 13.12 ft 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

Rated load of the lift	max. 1320 lbs for lifts with rear rails max. 1650 lbs for lifts with lateral rails
Type of lifts	all types, hydraulic and electrical
Max. interior dimensions	76.77 x 76.77"
Max. height of the shaft	85.30 ft
Finish	polyester powder coated for outdoors: additionally hot galvanized
Certificate of conformity	0035-CPR-1090-1.00963.TÜVRh.2014.001

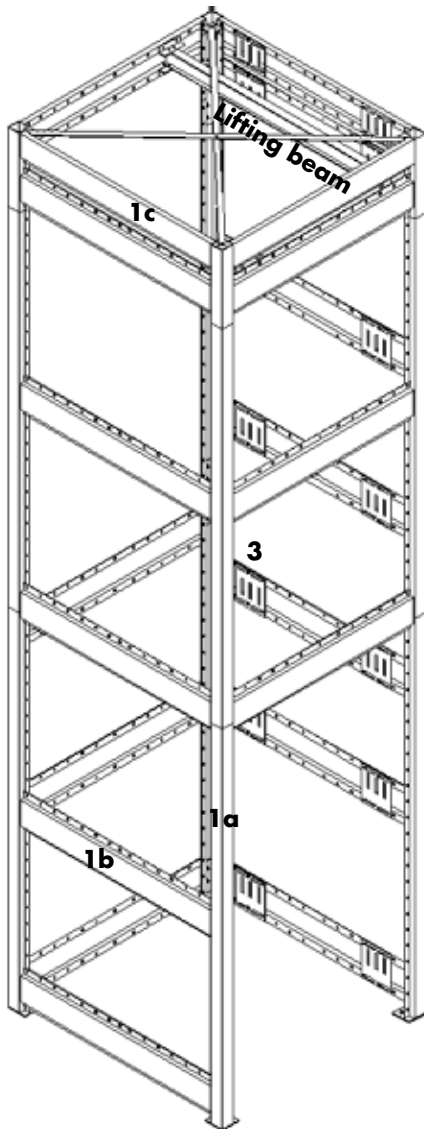


Certified according to EN 1090 in accordance with the Construction Products Directive 305/2011/EU

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).



Ill. 1: Load carrying components of the shaft system

1) Load carrying components

- a) Columns
 - Standard 3.15 x 3.15"
 - (The columns on the sides where the rails are fixed always must be of the standard profile 3.15 x 3.15".)
 - Opposite sides 3.15 x 1.38" 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. 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

4) Revetments

- 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. 4a: Lift shaft with closed sheet steel panels ...



Ill. 4b: ... or perforated panels



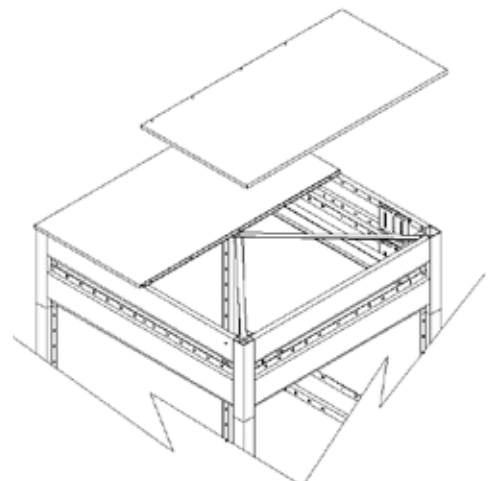
Ill. 4c: Lift shaft with window panes



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	sheet steel 0.16" thick, cold formed	
Panels, roof	sheet steel 0.06" thick	
Bolts	for the columns	M12
	for the beams, panels	M10

Finish

For interior use	powder coated, light textured paint finish for colours see separate table (sent on demand)
For outdoors	Hot galvanized and powder coated (as above)

Load / Fastening of the Shaft

Columns	each standard column (3.15 x 3.15") with reinforcement: 5500 lbs
Lifting beam	max. 2200 lbs

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 9.8 ft 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).



III. 7

Static Calculations

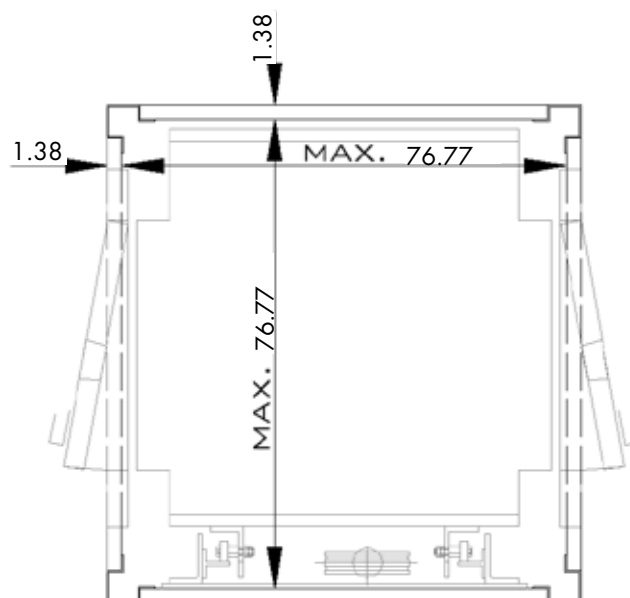
A general statics calculation for the maximum dimensions (height 85.3 ft, inner dimensions 76.77 x 76.77") is available. An abbreviated version of this calculation can be provided without charge.

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

On demand DICTATOR can also provide a detailed statics calculation. This is always necessary, when the lift shaft is installed at more than 59.06" distance from the building, when special wind conditions apply or a paneling with high own weight is used. This statics calculation is charged separately.

Dimensions

Inner dimensions max. 76.77 x 76.77"



Variations / Required Data

Variations

The DICTATOR lift shaft system offers both **technical and architectural versatility**. It is **individually designed**, thus optimizing 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

Dictator Standard lift door dampers are the good value choice for closing lift doors quietly.

They are designed for lift doors up to 220 lbs. They are fitted into the door itself, making them unobtrusive and vandal proof.

Dictator Standard door dampers are available in almost 30 different designs. The models shown on the following pages are the most common. If you are unable to find the door damper you require, please ask for further information.

Dictator door dampers work progressively. As soon as the operating arm with the elastic rubber roller enters the inlet hook in the frame the door is slowed down smoothly and quietly. The door is closed securely and held closed so that the door contacts are operated. Even with variable surrounding temperatures the damping characteristics remain constant due to a special silicone oil mostly unaffected by temperature changes.

For most door dampers we supply an adequate inlet hook. To actually close the door we recommend our various closing springs.

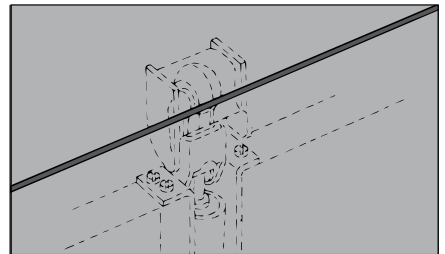
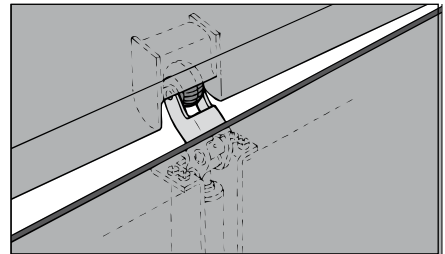
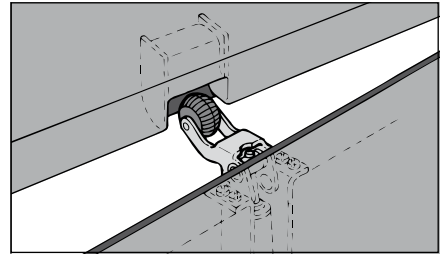


Technical Data

Operating temperature	-4 °F to +122 °F
Finish	zinc-plated / stainless steel
Spring force	4.5 lbf to 18 lbf as required
Damping fluid	silicone oil (mostly independent to temp.)
Damping characteristics	progressive - without final latch
Damping speed	adjustable
Material of roller	moulded rubber

Operation of a Standard Door Damper

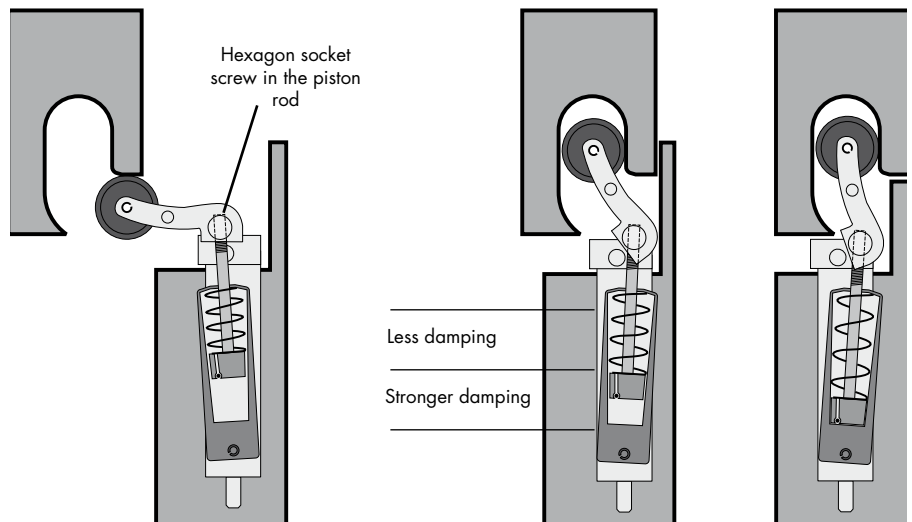
- The door can be opened easily by either pulling or pushing it. When opening the door the operating arm with the roller is pushed downwards and thus tensions the spring in the damping cylinder.
- When the door is closed the operating arm enters the inlet hook in the frame and damps the door movement 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.



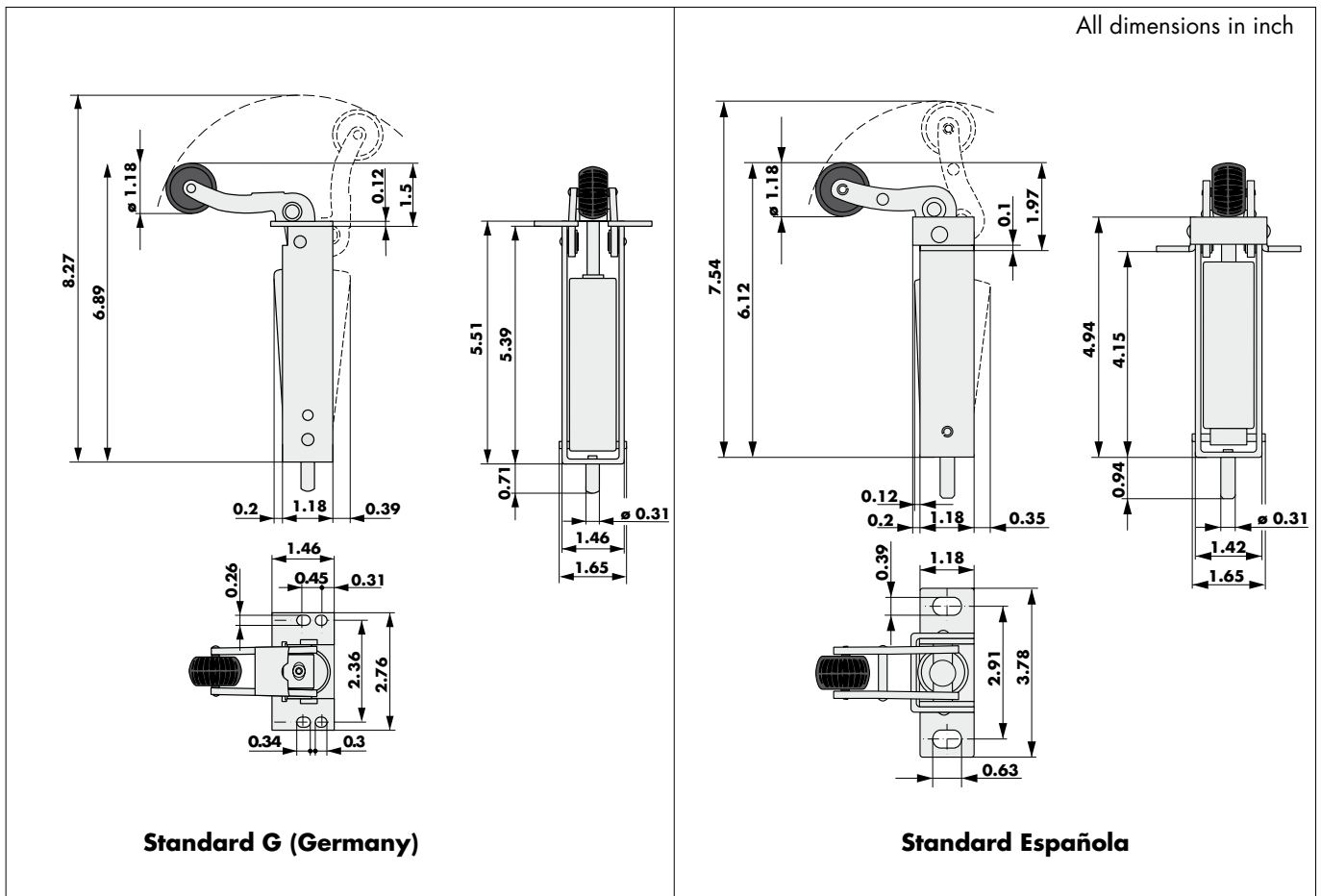


Standard Germany / Standard Española

The Standard Germany (G) door damper is used in a large number of European hinged 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, 4.5 lbf, zinc-plated	part no. 101000
Standard Germany, 11.25 lbf, zinc-plated	part no. 101001
Standard Germany, 18 lbf, zinc-plated	part no. 101002
Standard Germany, 18 lbf, casing stainless steel	
cylinder zinc-plated	part no. 101008
Standard Española, 11.25 lbf, zinc-plated	part no. 105000
Standard Española, 18 lbf, zinc-plated	part no. 105001



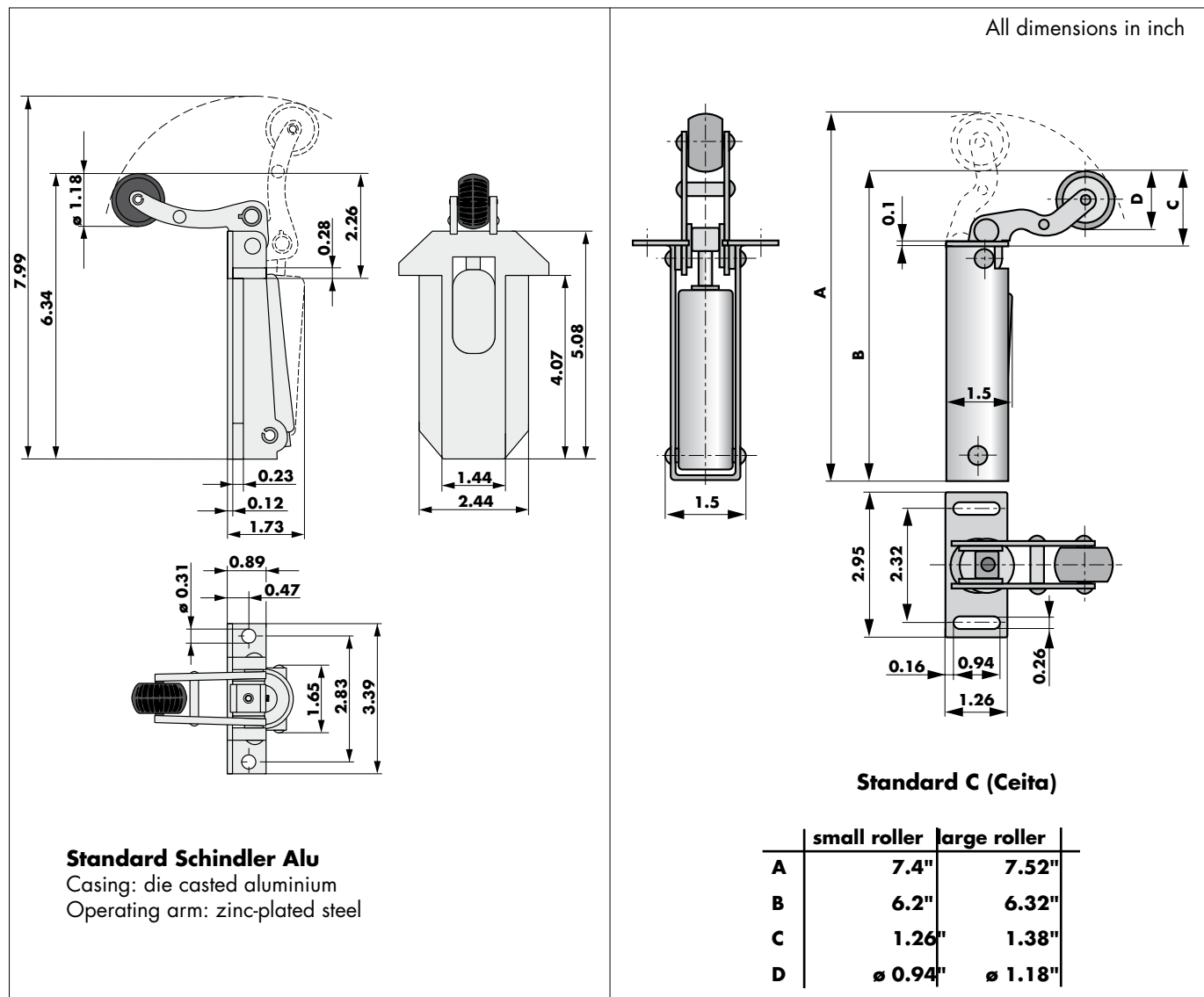
Standard Schindler Alu / Standard Ceita

The Standard Schindler Alu door damper is used in Schindler hinged lift doors, the Standard C (Ceita) mainly in Italian doors make Ceita.

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

Standard Schindler Alu, 11.25 lbf	part no. 102100
Standard Schindler Alu, 18 lbf	part no. 102102
Standard C, small roller, 9.68 lbf, zinc-plated	part no. 100006
Standard C, large roller, 9.68 lbf, zinc-plated	part no. 100007



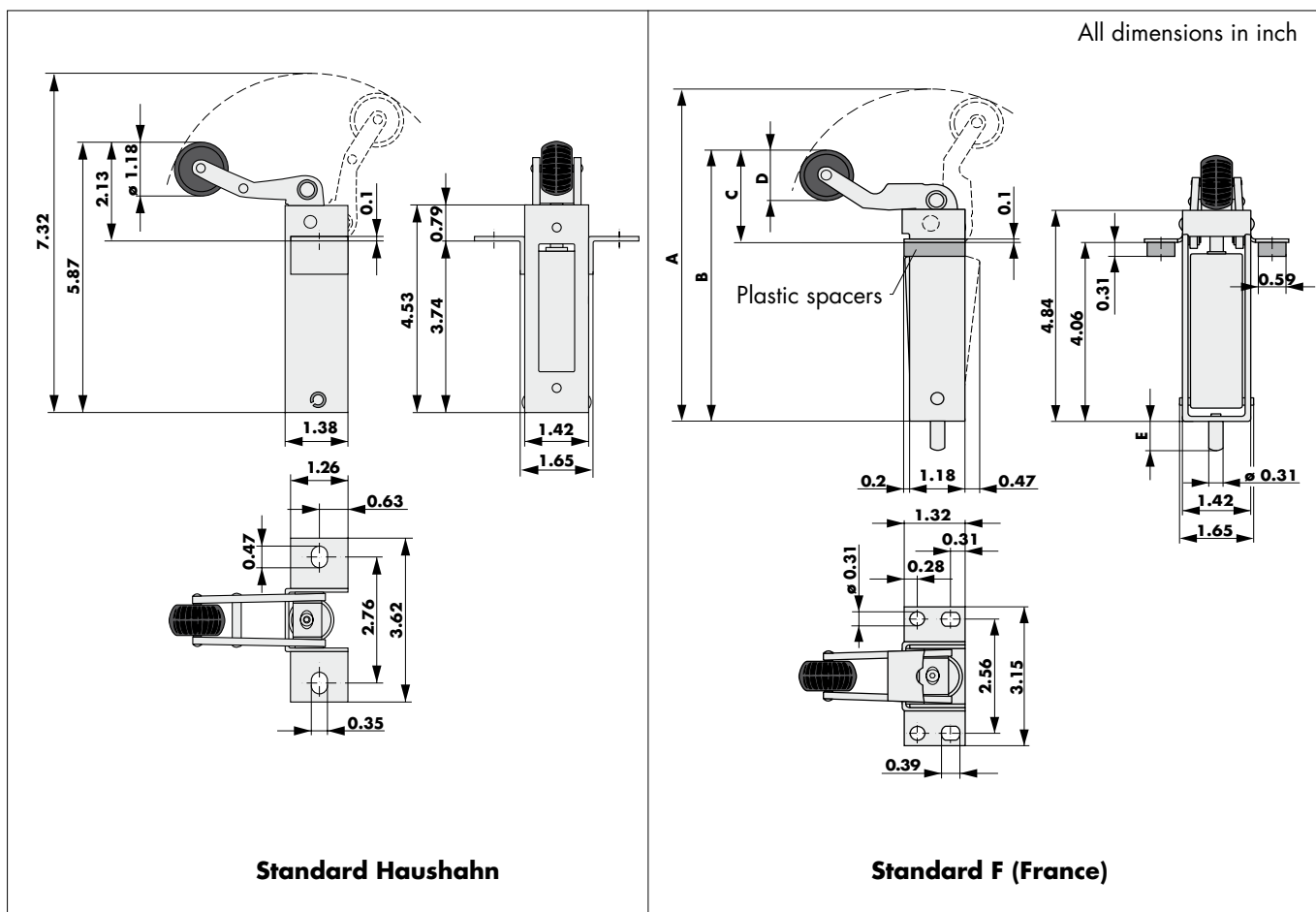
Standard Haushahn / Standard F (France)

In addition to the Standard Haushahn for hinged doors shown below there exists also a special model 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 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.

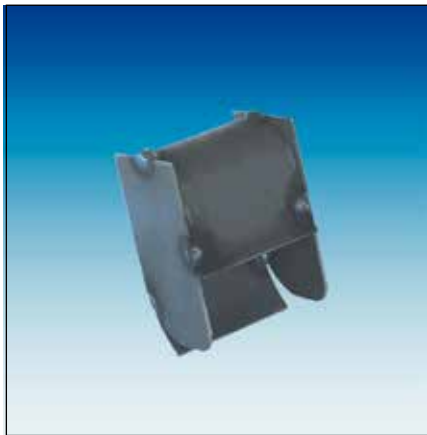
Dimensions



Order Information

Standard F	with normal roller		with large roller	
	Meas. A [inch]	7.64	7.72	7.72
Meas. B [inch]	6.02	5.91	6.1	5.98
Meas. C [inch]	1.97	1.85	2.05	1.93
Meas. D [inch]	$\varnothing 1.18$	$\varnothing 1.18$	$\varnothing 1.34$	$\varnothing 1.34$
Meas. E [inch]	0.94	0.94	0.94	0.94
Final latch	yes	no	yes	no
Part no.	102500	102501	102600	102601

Standard Haushahn with two horizontal brackets (11.25 lbf) part no. 203008



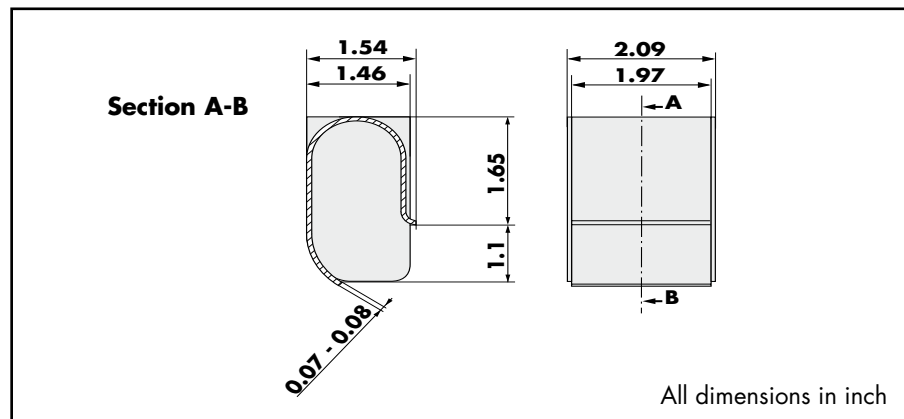
Inlet Hook for DICTATOR Door Dampers

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.

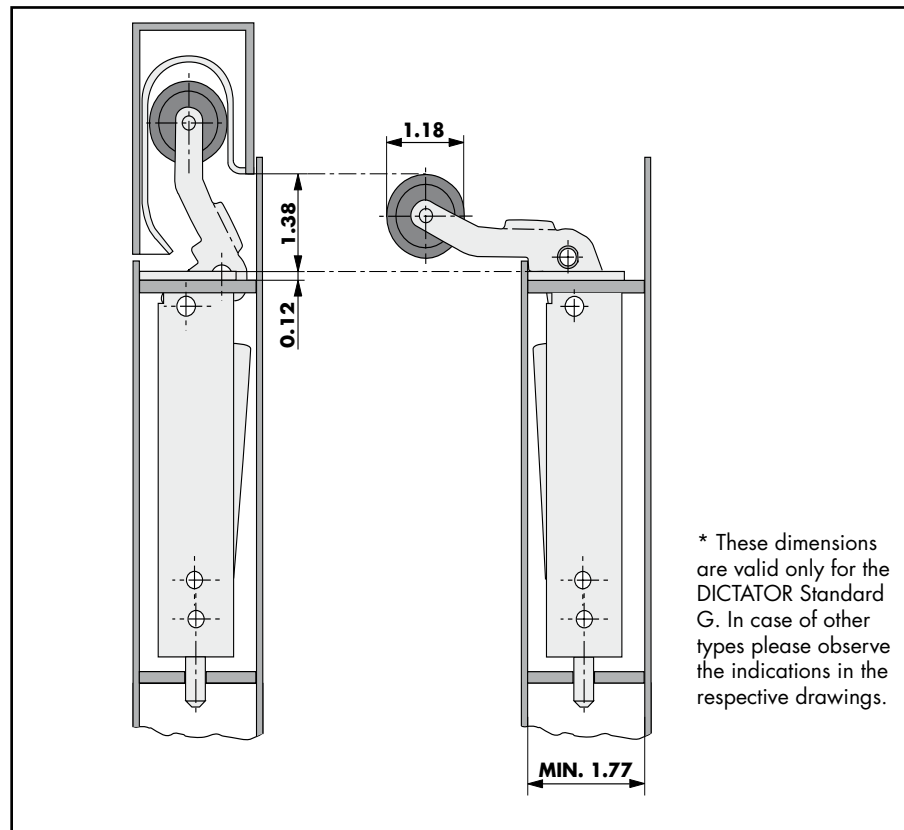
The front edge of the inlet hook should be situated about 0.04" above the rubber roller when the operating arm is in its horizontal position.

When the door is closing the approaching roller of the damper enters the inlet hook and is turned upward. This closes the door completely.

Dimensions



Installation Dimensions



Order Information

Steel inlet hook

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 or without 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

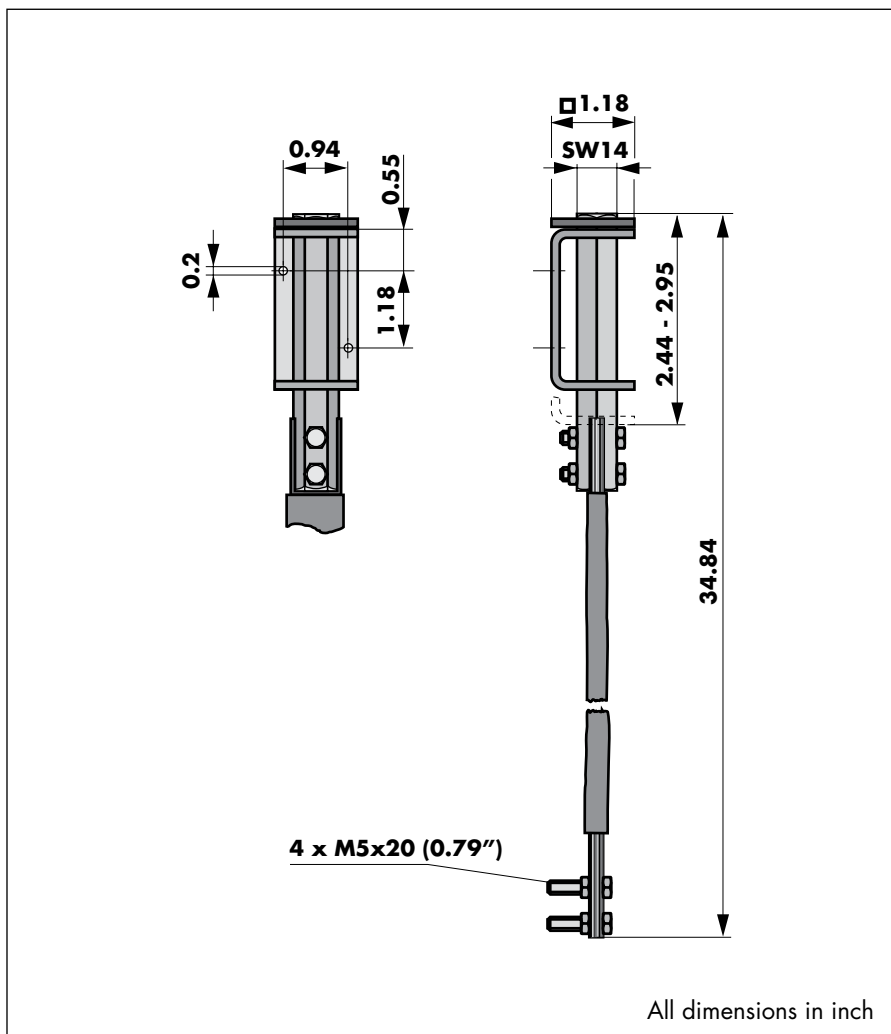


Torsion Spring for Hinged Lift Doors

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 (0.59 x 0.02")

Order Information

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



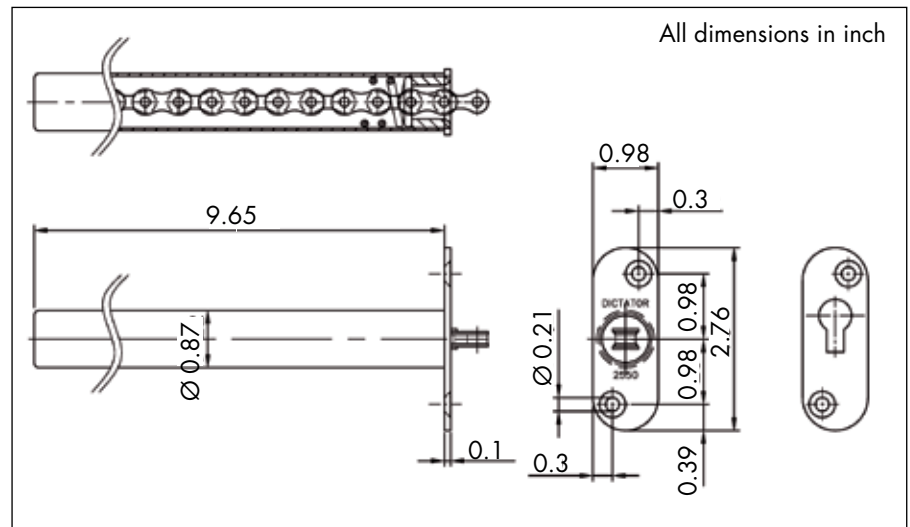
E 22/2550 Concealed Jamb Closer with Counter Plate

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 $\varnothing 0.91$ " 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° . By continuing to open the door to 180° you will damage both the concealed jamb closer and the door.

Technical Data

Diameter of the cylinder	$\varnothing 0.87$ "
Opening angle of the door	up to 180°
Closing action starting at	about 150° (depending on the hinge)
Closing force	3.38 - 6.75 lbf
Material of the cylinder	aluminium
Finish of the front and counter plate	stainless steel
E 22/2550 concealed jamb closer	part no. 300319

Order Information

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 94.49" 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.

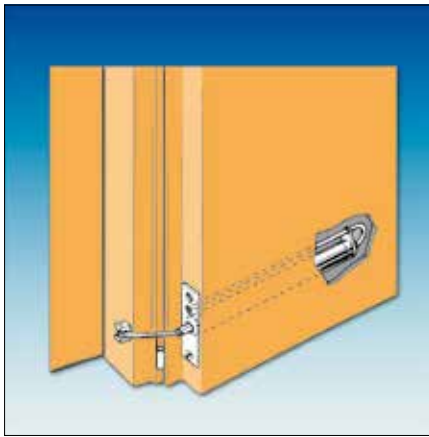
An integrated safety valve prevents any damage to the door closer should the door be forced to close.

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.



How to choose the right ATS concealed door closer:

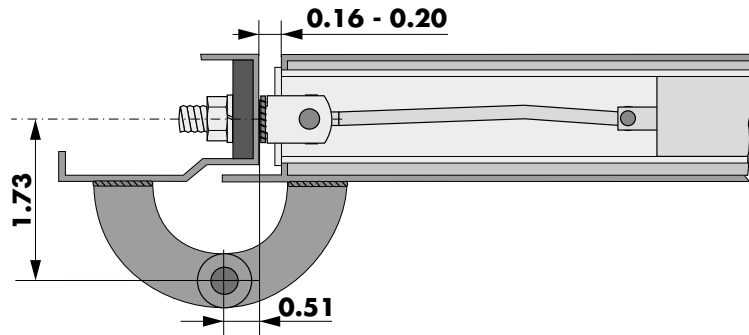
Door hinge	Door width [inch]	Door weight [lbs]	Door leaf [inch] (inside dimension)	ATS model
pivot hinge	27.56 - 35.43	132 - 154	larger than 1.18	ATS 500/30
pivot hinge	27.56 - 35.43	132 - 154	larger than 1.38	ATS 500/35
pivot hinge	35.43 - 47.24	220 - 242	larger than 1.18	ATS 600/30
pivot hinge	35.43 - 47.24	220 - 242	larger than 1.38	ATS 600/35
construction hinge	27.56 - 35.43	132 - 154	larger than 1.18	ATS 500/30 K
construction hinge	27.56 - 35.43	132 - 154	larger than 1.38	ATS 500/35 K
construction hinge	35.43 - 47.24	220 - 242	larger than 1.18	ATS 600/30 K
construction hinge	35.43 - 47.24	220 - 242	larger than 1.38	ATS 600/35 K



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.

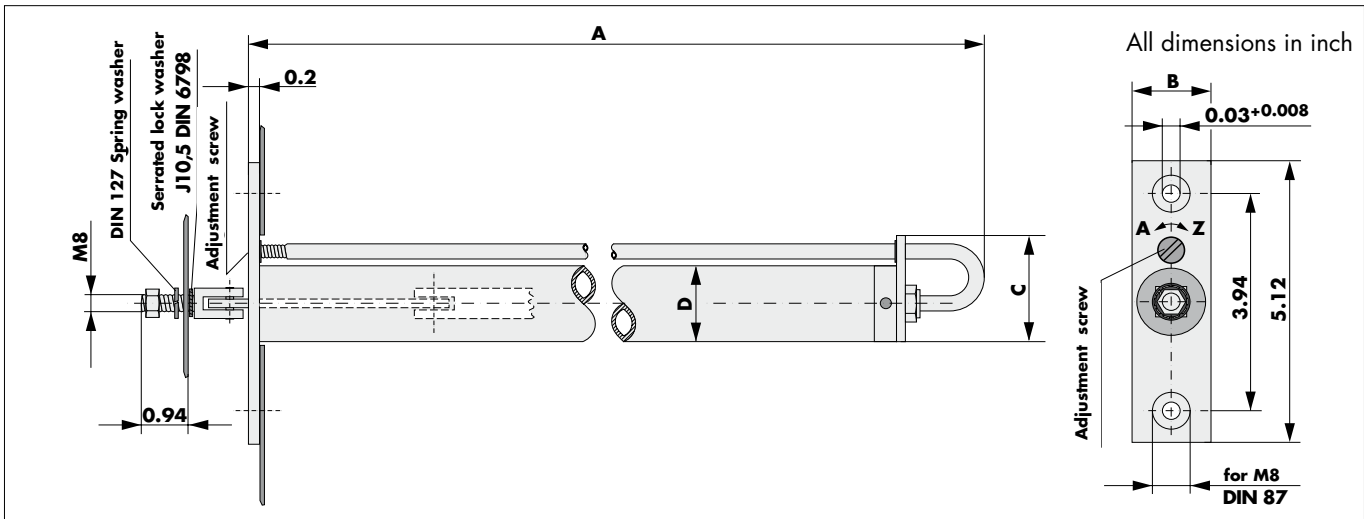
Advice: Please observe the following distances to the pivot of the door and between door and frame as well as the installation instructions.



Technical Data

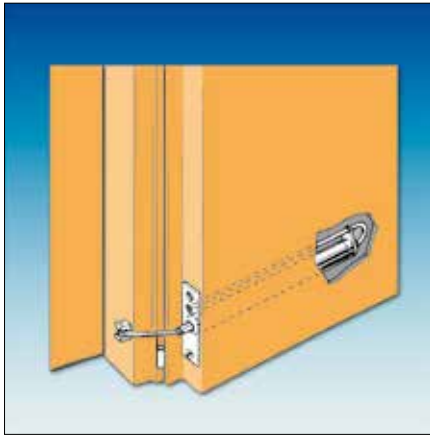
	ATS 500/30 A	ATS 500/35 A	ATS 600/30 A	ATS 600/35 A
Length A [inch]	19.69	19.69	21.65	21.65
Cylinder D [inch]	Ø 1.14	Ø 1.34	Ø 1.14	Ø 1.34
Front plate B [inch]	1.18	1.38	1.18	1.38
Rear plate C [inch]	1.85	1.93	1.85	1.93
Closing force (0°) [lbf]	2.7	2.7	4.05	4.05
Opening force (0° - 90°) [lbf]	4.5 - 6.75	4.5 - 6.75	6.75 - 9	6.75 - 9
Closing time (90° - 0°) [sec]	3 - 4	3 - 4	3 - 4	3 - 4
Max. opening angle	165°	165°	165°	165°

Dimensions



Order Information

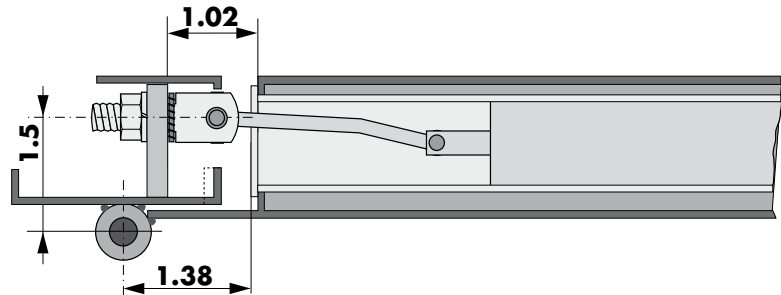
ATS 500/30 A concealed door closer	part no. 400200
ATS 500/35 A concealed door closer	part no. 400203
ATS 600/30 A concealed door closer	part no. 400220
ATS 600/35 A concealed door closer	part no. 400223



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.

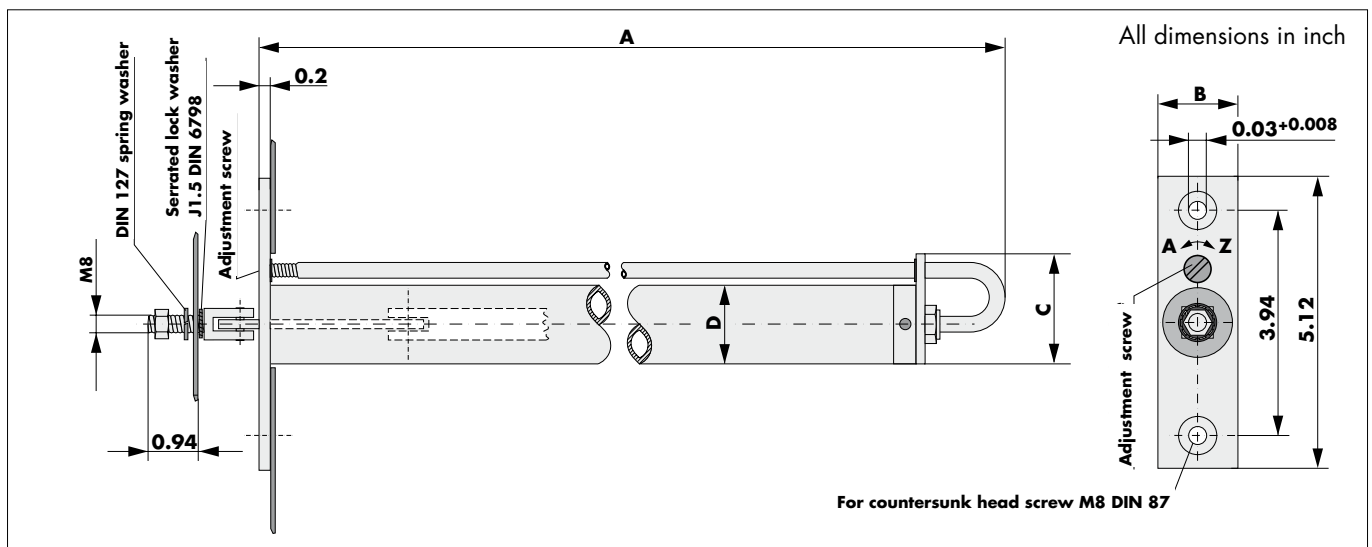
Advice: Please observe the following distances to the pivot of the door and between door and frame as well as the installation instructions.



Technical Data

	ATS 500/30-K	ATS 500 35-K	ATS 600/30-K	ATS 600/35-K
Length A [inch]	19.69	19.69	21.65	21.65
Cylinder D [inch]	Ø 1.14	Ø 1.34	Ø 1.14	Ø 1.34
Front plate B [inch]	1.18	1.38	1.18	1.38
Rear plate C [inch]	1.85	1.93	1.85	1.93
Closing force (0°) [lbf]	2.7	2.7	4.5	4.5
Opening force (0° - 90°) [lbf]	4.5 - 6.75	4.5 - 6.75	6.75 - 9	6.75 - 9
Closing time (90° - 0°) [sec]	3 - 4	3 - 4	3 - 4	3 - 4
Max. opening angle	120°	120°	120°	120°

Dimensions



Order Information

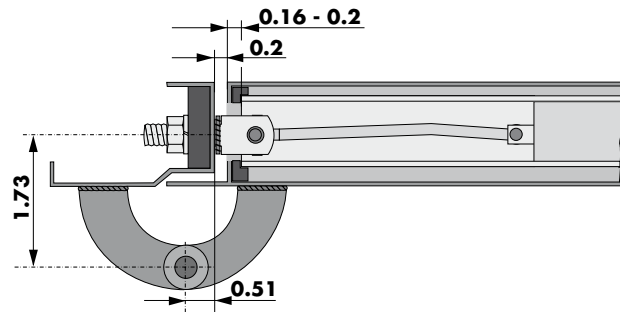
ATS 500/30 K, A concealed door closer	part no. 400201
ATS 500/35 K, A concealed door closer	part no. 400205
ATS 600/30 K, A concealed door closer	part no. 400221
ATS 600/35 K, A concealed door closer	part no. 400225



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.

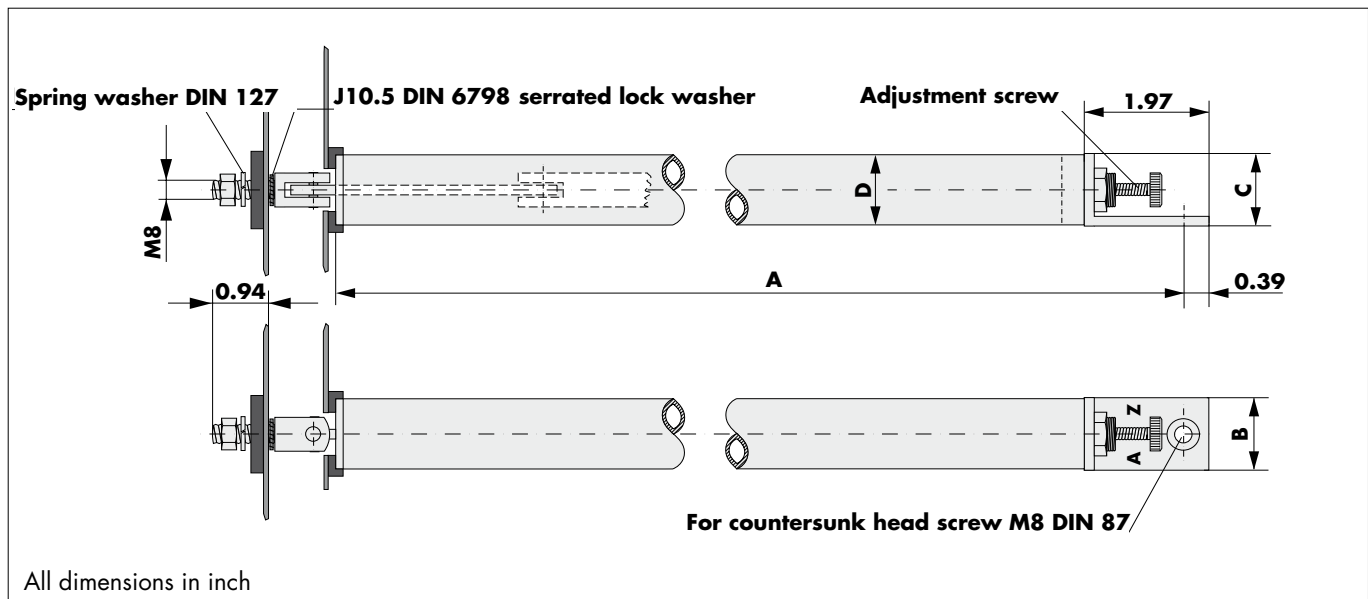
Advice: Please observe the following distances to the pivot of the door and between door and frame as well as the installation instructions.



Technical Data

	ATS 500/30-O	ATS 500/35-O	ATS 600/30-O	ATS 600/35-O
Length A [inch]	19.69	19.69	21.69	21.69
Cylinder D [inch]	Ø 1.14	Ø 1.34	Ø 1.14	Ø 1.34
Bracket B/C [inch]	1.18/1.18	1.38/1.38	1.18/1.18	1.38/1.38
Closing force (0°) [lbf]	2.7	2.7	4.5	4.5
Opening force (0° - 90°) [lbf]	4.5 - 6.75	4.5 - 6.75	6.75 - 9	6.75 - 9
Closing time (90° - 0°) [sec]	3 - 4	3 - 4	3 - 4	3 - 4
Max. opening angle	165°	165°	165°	165°

Dimensions



Order Information

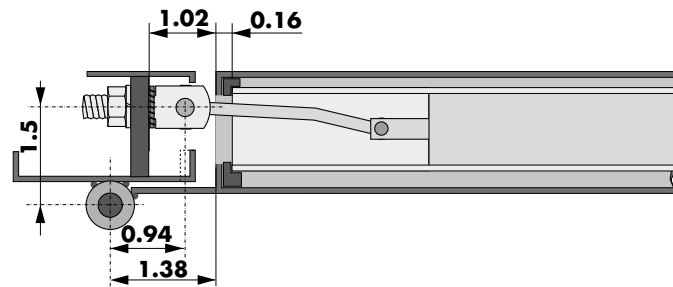
ATS 500/30 O, A concealed door closer	part no. 400199
ATS 500/35 O, A concealed door closer	part no. 400204
ATS 600/30 O, A concealed door closer	part no. 400238
ATS 600/35 O, A concealed door closer	part no. 400224



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.

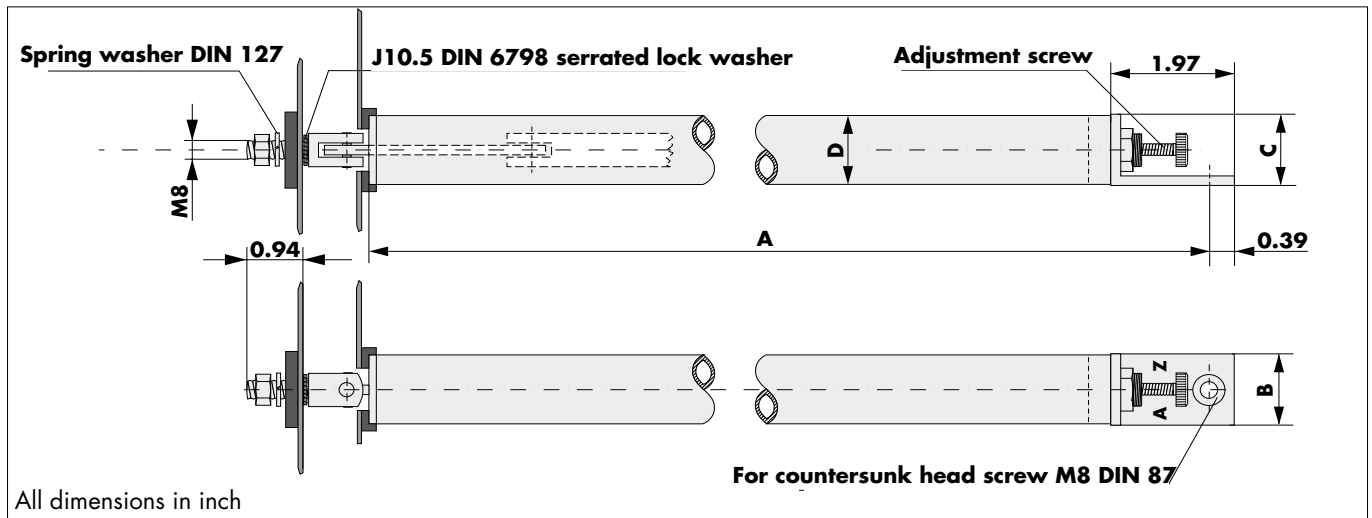
Advice: Please observe the following distances to the pivot of the door and between door and frame as well as the installation instructions.



Technical Data

	ATS 500/30-KO	ATS 500/35-KO	ATS 600/30-KO	ATS 600/35-KO
Length A [inch]	19.69	19.69	21.69	21.69
Cylinder D [inch]	Ø 1.14	Ø 1.34	Ø 1.14	Ø 1.34
Bracket B/C [inch]	1.18/1.18	1.38/1.38	1.18/1.18	1.38/1.38
Closing force (0°) [N]	2.7	2.7	4.5	4.5
Opening force (0° - 90°)[N]	4.5 - 6.75	4.5 - 6.75	6.75 - 9	6.75 - 9
Closing time (90° - 0°) [sec]	3 - 4	3 - 4	3 - 4	3 - 4
Max. opening angle	120°	120°	120°	120°

Dimensions



Order Information

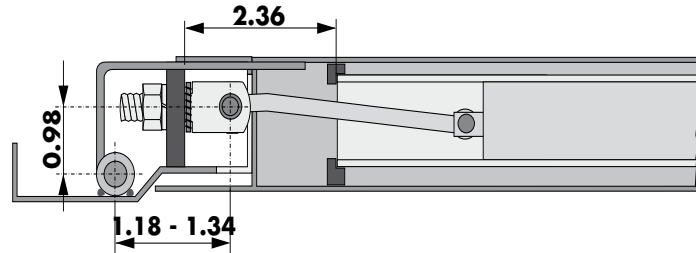
ATS 500/30 KO, A concealed door closer	part no. 400202
ATS 500/35 KO, A concealed door closer	part no. 400206
ATS 600/30 KO, A concealed door closer	part no. 400222
ATS 600/35 KO, A concealed door closer	part no. 400226



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.

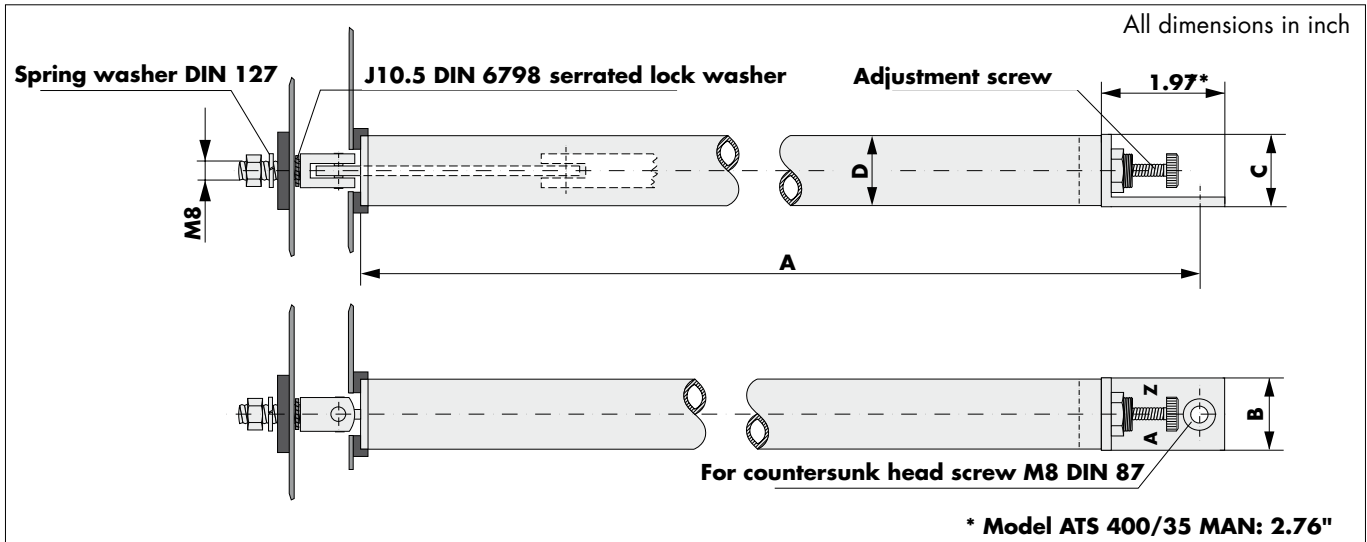
Advice: Please observe the following distances to the pivot of the door and between door and frame as well as the installation instructions.



Technical Data

	400/35-O	400 35-AK	400/35-KL	400/35-MAN*	800/35-OA
Length A [inch]	19.69	16.54	12.60	19.69	21.69
Cylinder D [inch]	Ø 1.34	Ø 1.34	Ø 1.34	Ø 1.34	Ø 1.34
Bracket B/C [inch]	1.34/1.34	1.34/1.34	1.34/1.34	1.34/1.34	1.34/1.34
Closing force (0°) [lbf]	2.7	2.7	2.7	4.05	4.05
Opening force (0°-90°)[lbf]	4.5 - 6.75	4.5 - 6.75	4.5 - 6.75	6.75 - 9	6.75 - 9
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 hydraulically damped. 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 adjustable.



Types

LS-C(eita) lift door closer

Lift door closer LX

Phantom PH 90 lift door closer

Koni lift door closer



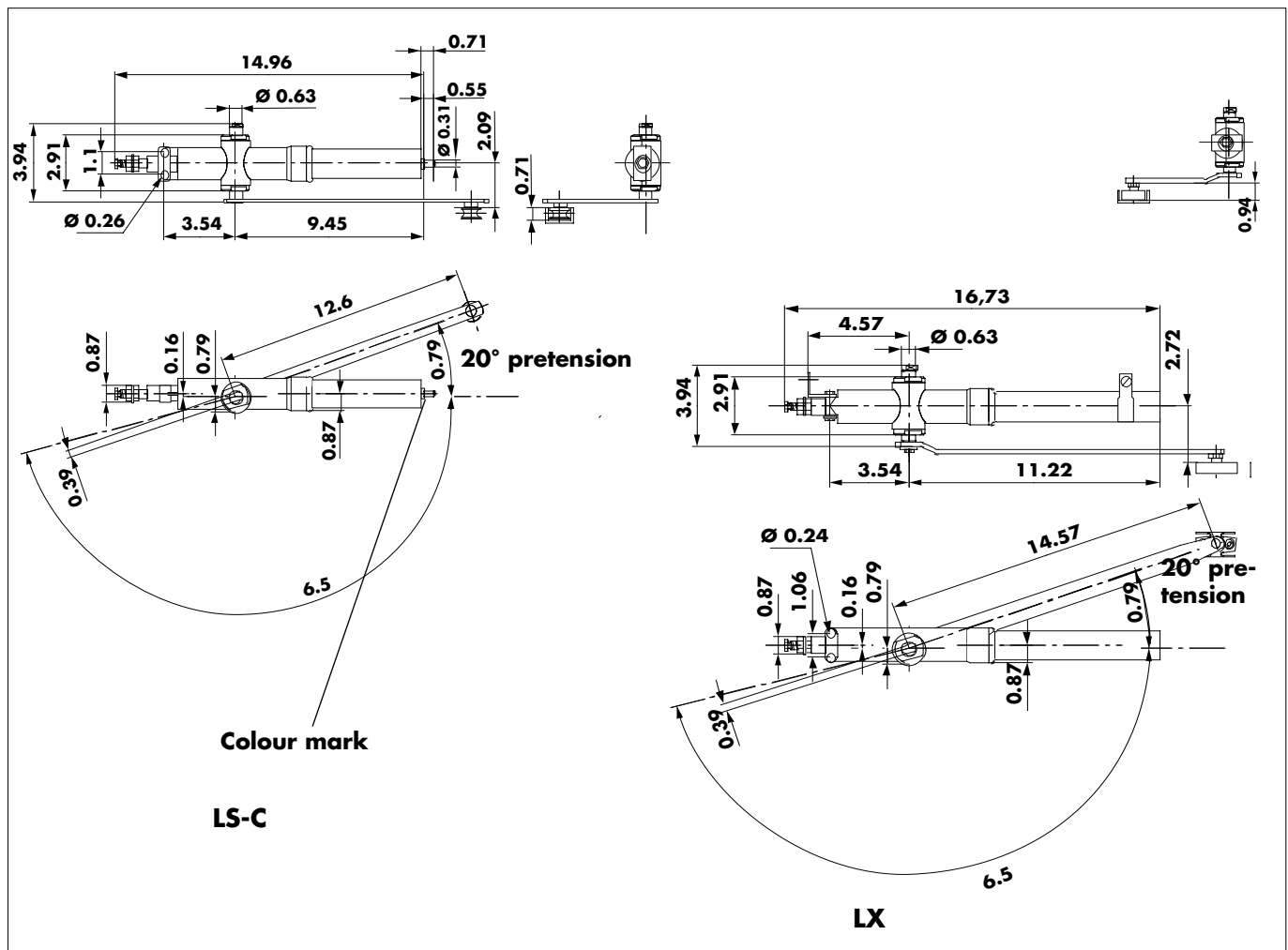
LS-C Lift Door Closer (also Replacement for the LS), LX

The **LS-C** lift door closer is mainly used on **Italian 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 vertically.

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*)	4.5 - 6.75 lbf	205121
LS-C with light spring (blue*)	3.38 - 4.5 lbf	205122
LX with normal spring	4.73 lbf	600008

(* see colour mark)

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



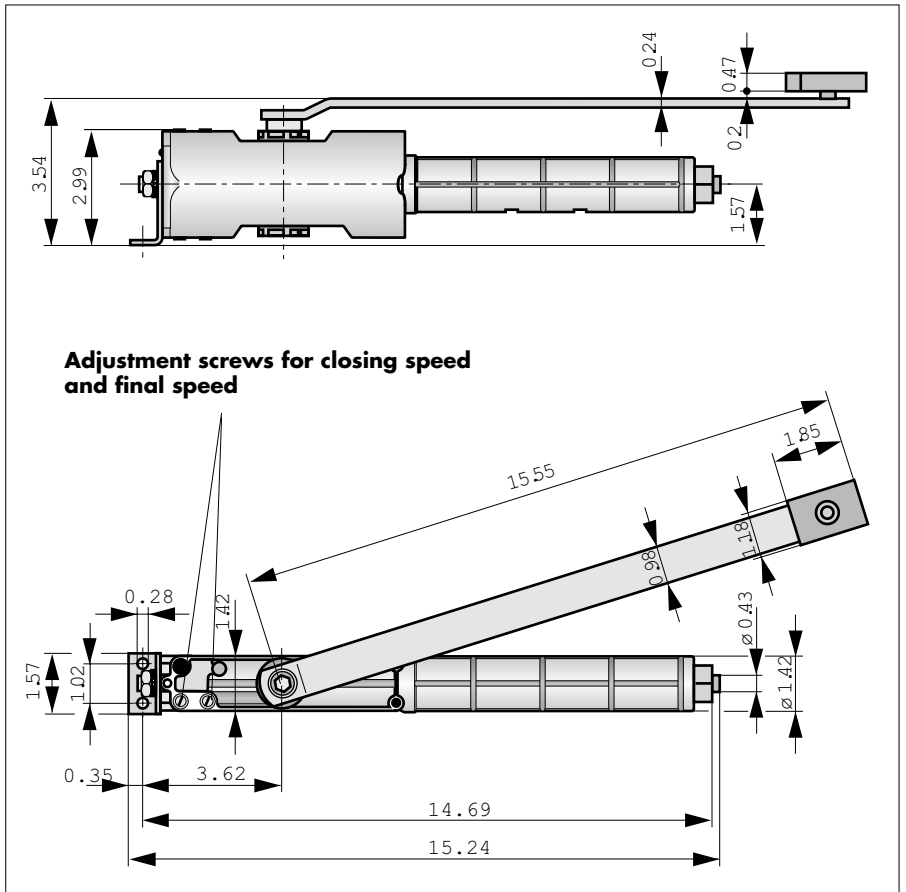
Phantom PH 90 Lift Door Closer

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 27.56 and 35.43" and a door weight up to 132 lbs. 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), 10.71"	part no. 600082
Long operating arm (separately), 14.65"	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	24.61	19.49	15.51
203263	24.61	19.49	15.51
203265	24.02	18.9	14.92
203269	22.44	17.32	13.35
203270	24.02	18.9	14.92

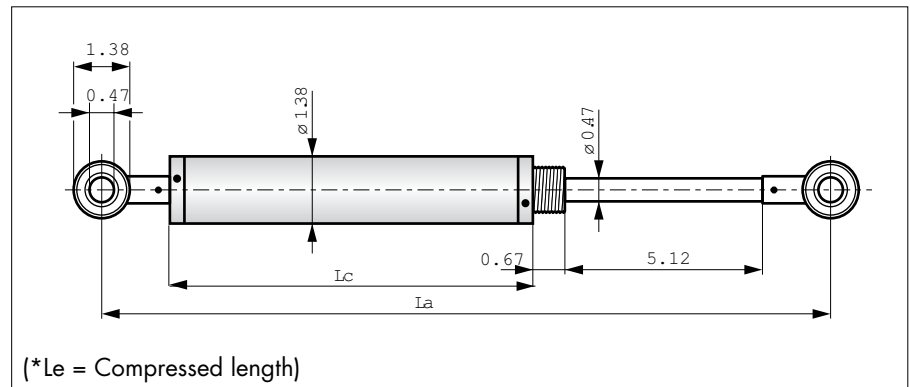
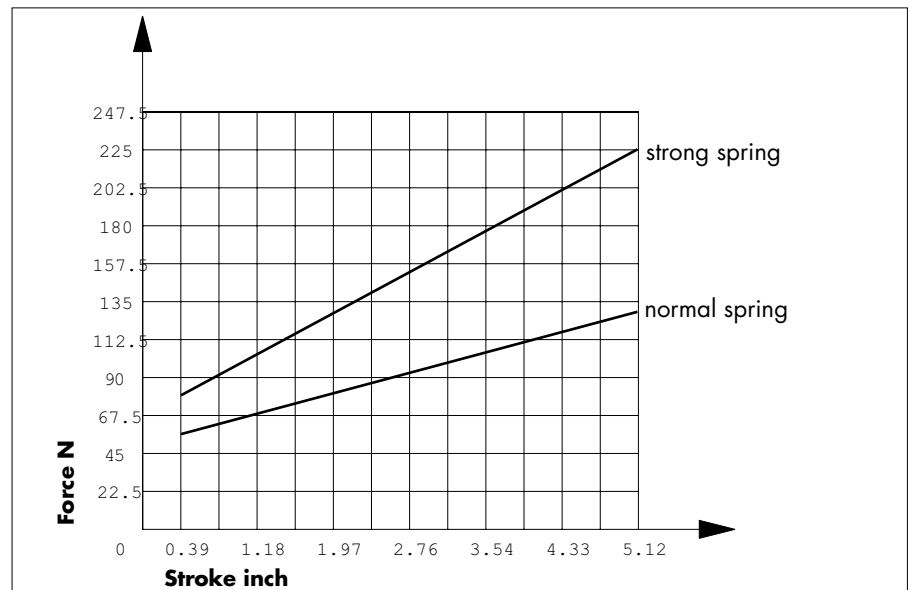


Diagram of the Closing Forces



Order Information

Type	Closing force (approx.)	Part no.
Koni door closer, normal spring	6.75 - 9 lbf	203262
Koni door closer, strong spring	11.25 - 13.05 lbf	203263
Koni door closer, normal spring, short	6.75 - 9 lbf	203265
Koni door closer, normal spring, very short	6.75 - 9 lbf	203269
Koni door closer, very light spring, short	3.38 lbf	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.

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.

For the longevity of the door construction it is important to use extra stable door hinges.



Technical Data

Damping fluid	hydraulic oil (part no. 205099 / 1.06 quart)
Body	aluminium
Counter plate	spring steel or hardened CrMoV-steel
Operating temperature	32° to 122 °F
Door weight	44 to 440 lbs
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 0.59 - 0.79" 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.

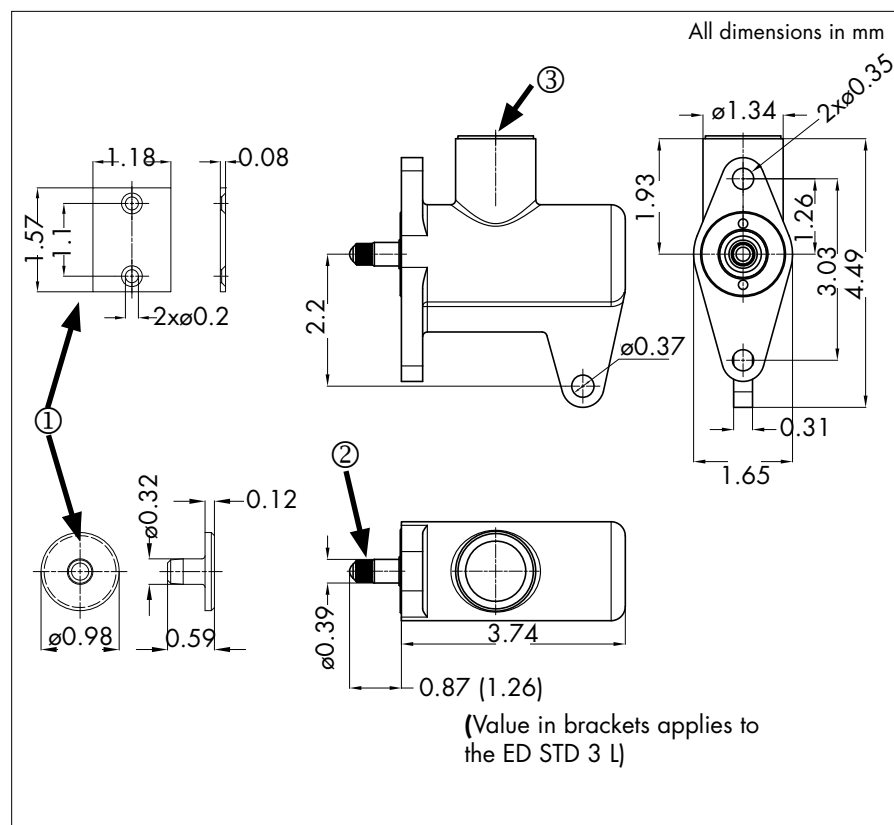
Adjustment

With the piston rod **fully extended** grasp the knurled part ② with a pair of pliers and turn it: 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 L with round counter plate (long piston rod)	part no. 203402
Rectangular counter plate for Stahl doors	part no. 205141
Round counter plate for Otis doors	part no. 205188

DICTATOR Door Contacts

For Hinged Lift Doors

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

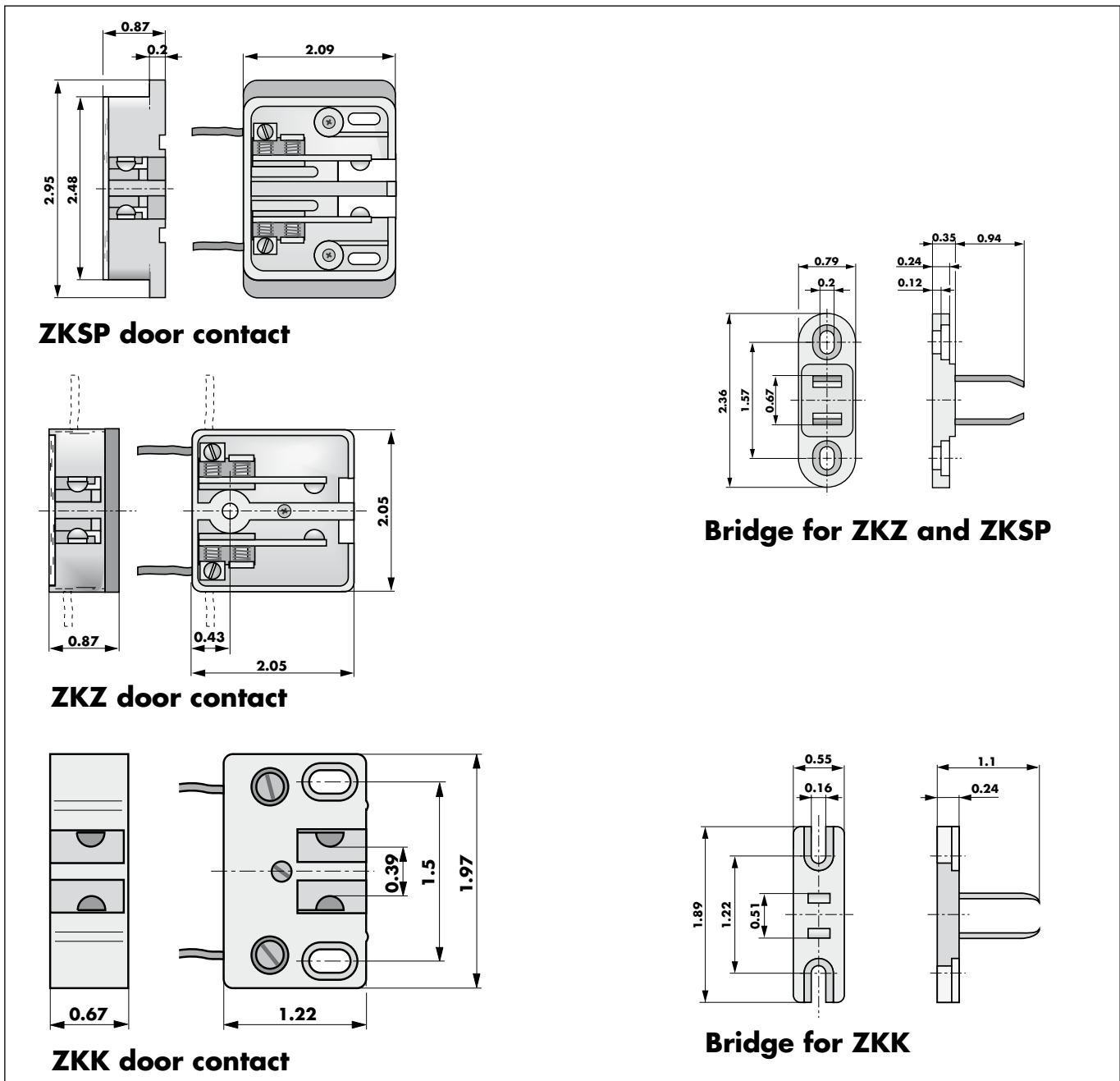
The contact points are silvered to help them last and prevent sparking when the door closes.



Types

Contact points	silvered
Body	plastic
Types	ZKK, ZKZ, ZKSP

DICTATOR Door Contacts



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 (0.94")	part no. 050003

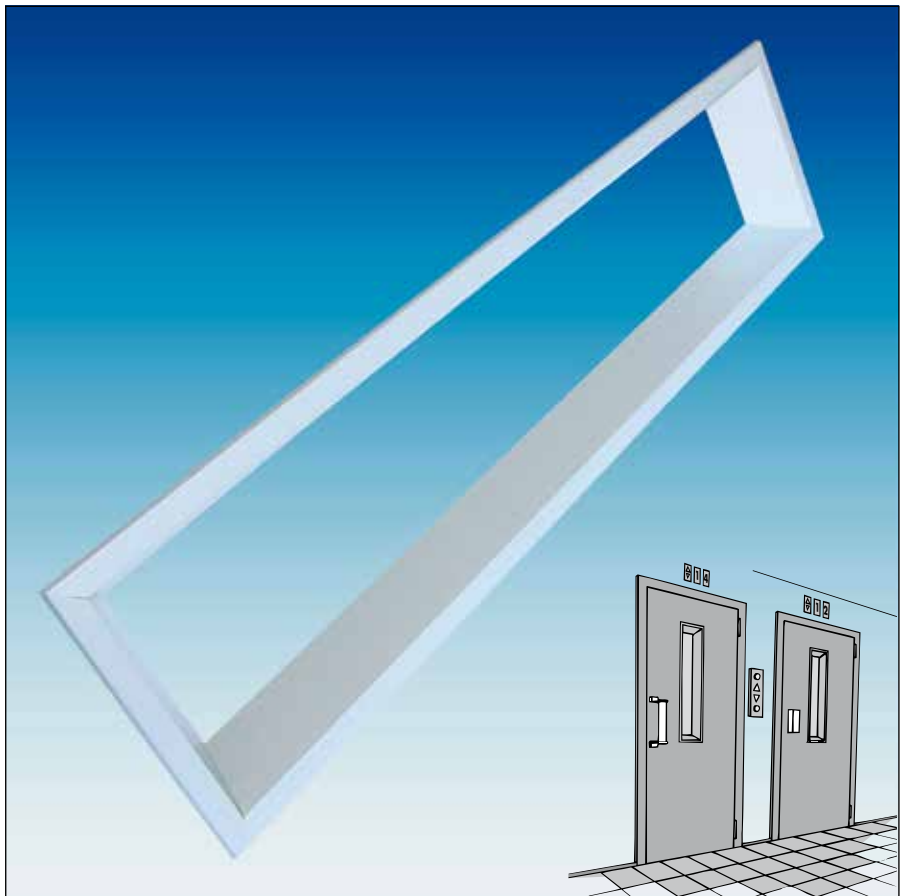
Door Handles and Window Frames for Hinged Lift Doors

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 anodized 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 a window frame for lift doors.



Technical Data

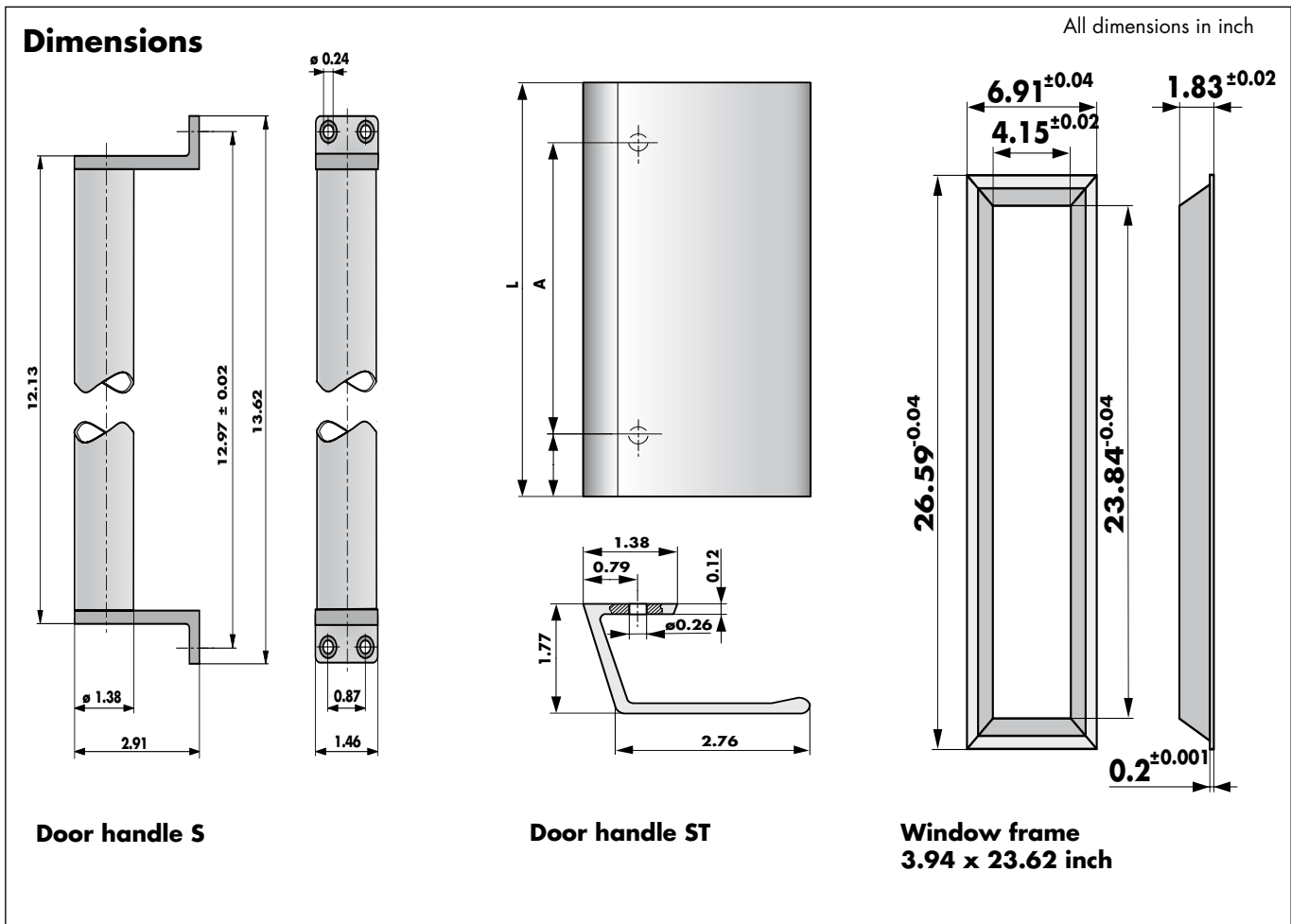
Finish	anodized silver
Material	aluminium (AlMgSi 0,5)
	Window frames in special designs also made of steel, powder coated.



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 frame is fitted into the cut-out provided in the door and is clicked into pla



Order Information

ST Door handle (silver)	A = 3.94"	L = 4.72"	part no. 090027
ST Door handle (silver)	A = 4.72"	L = 6.69"	part no. 090012
ST Door handle (silver)	A = 4.72"	L = 7.87"	part no. 090030
ST Door handle (silver)	A = 6.3"	L = 7.87"	part no. 090028
ST Door handle (silver)	without holes	L = 11.02"	part no. 090016
S Door handle (silver)			part no. 090014
Window frame 3.94 x 23.62" "H", silver anodized aluminium			part no. 090001

Accessories for Sliding Doors

DICTATOR provides various accessories for sliding lift doors. There are

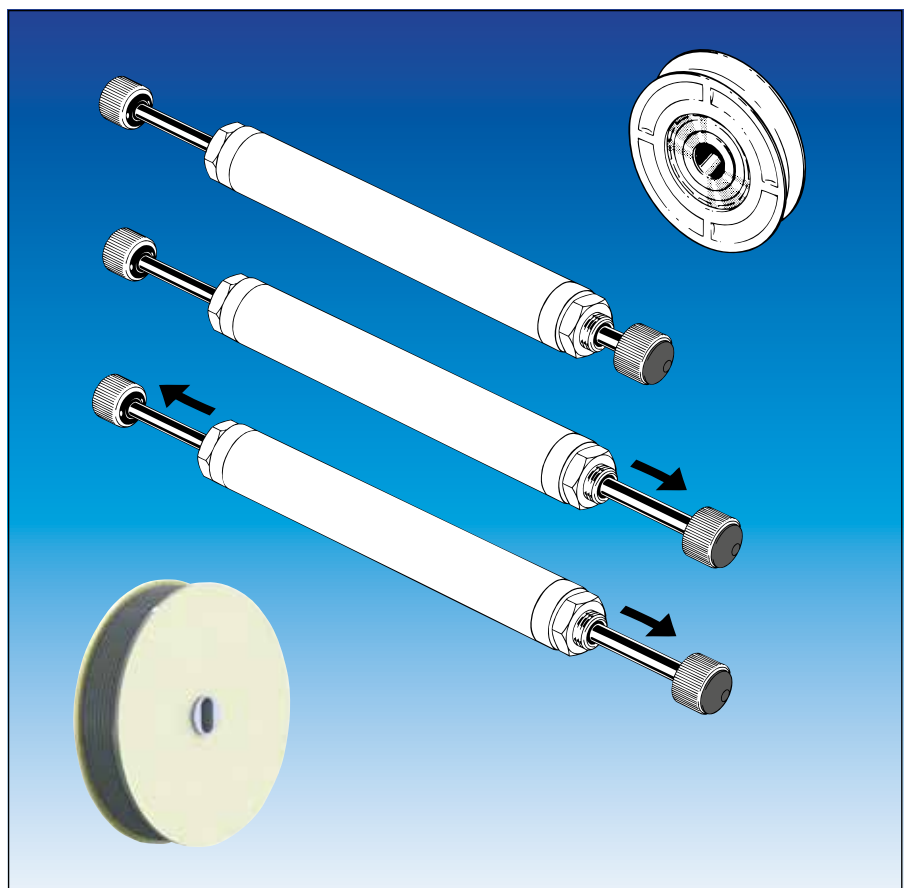
- bi-directional hydraulic ZDH dampers,
- Standard Haushahn door dampers,
- spring rope pulleys,
- plastic rollers.

The **DICTATOR ZDH sliding door dampers** are bi-directional hydraulic dampers for an impact speed up to 78.74"/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 hydraulic dampers	page 01.046.00
DICTATOR Standard Haushahn door damper for sliding doors	page 01.047.00
DICTATOR spring rope pulleys	page 01.048.00
DICTATOR plastic rollers	page 01.050.00

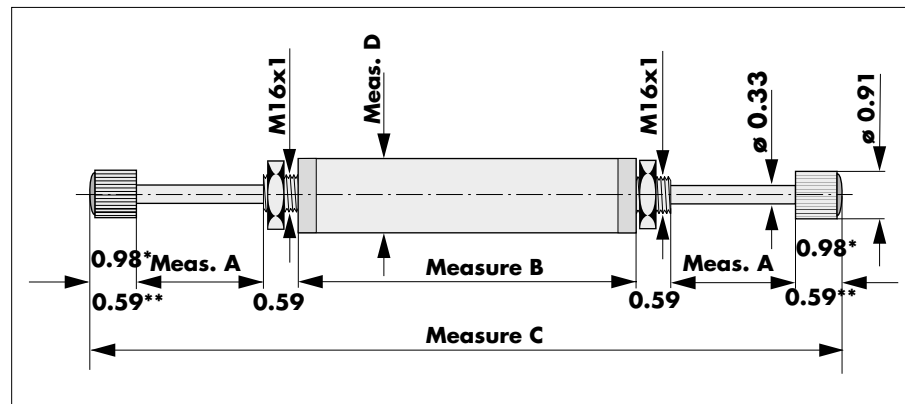


ZDH Bi-Directional Dampers for Sliding Doors

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) 0.98"

** height of the buffer with adjustment screw 0.59"

Technical Data and Order Information

Model inch	Meas. A inch	Meas. B inch	Meas. C inch	Meas. D	Adjustment	Make of lift	Part no.
ZDH 50/50 BG	1.97	5.39	11.69	1.1	Adjustment screw	-	210110
ZDH 50/50 a	1.97	5.39	11.69	1.1	Adjustment screw	-	210000
ZDH 50/50 a/EG/P	1.97	8.66	15.75	1.1	Turn piston rod (ZR)	Rathgeber	203190
ZDH 60/80 a	2.36/3.15	10.24	19.06	1.1	Turn piston rod (ZR)		210420*
ZDH 70/70 a/EG/P	2.76	10.24	18.9	1.1	Turn piston rod (ZR)	Rathgeber	203191
ZDH 55/55 BG	2.17	5.2	10.04	1.38	Turn piston rod (ZR) one-piece piston rod	Rathgeber	203195**
ZDH 120 BG	4.72	8.19	16.06	1.1	Turn piston rod (ZR) one-piece piston rod	Stahl width up to 51.18"	203162***

* On the side with the 60 mm/2.36" piston rod the length of the thread is 1.73".

** Ø 0.47" piston rod, M24x1 thread on one side, 0.67" long

*** with relief groove

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

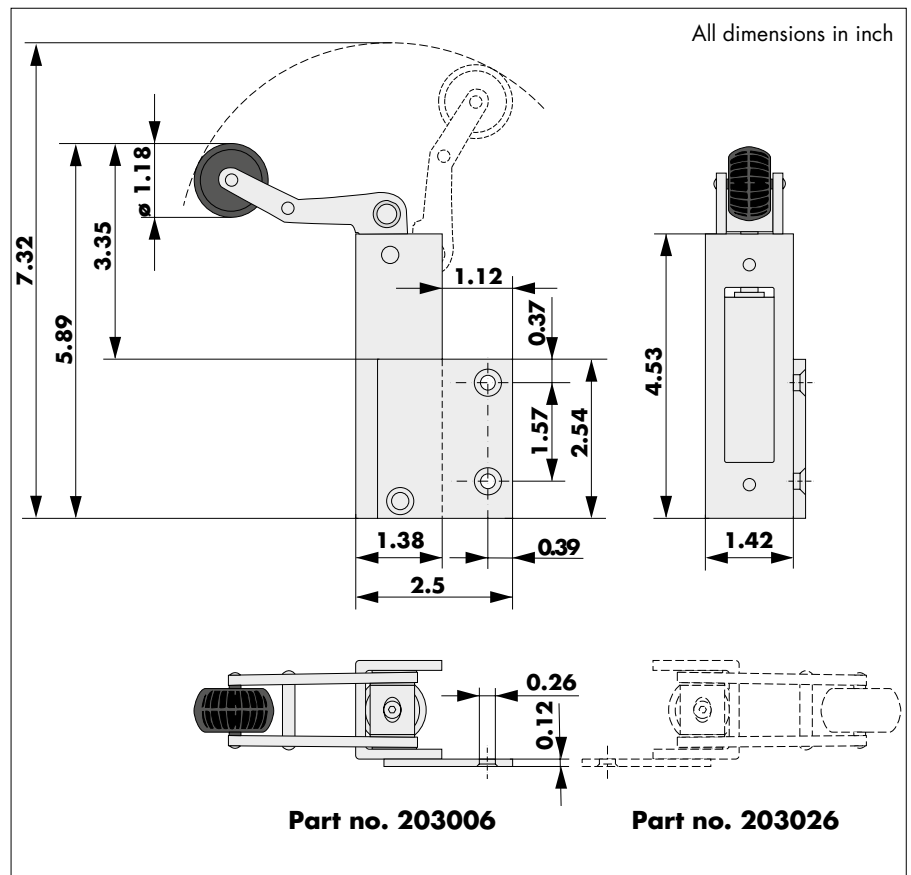


Standard Haushahn for Sliding Lift Doors

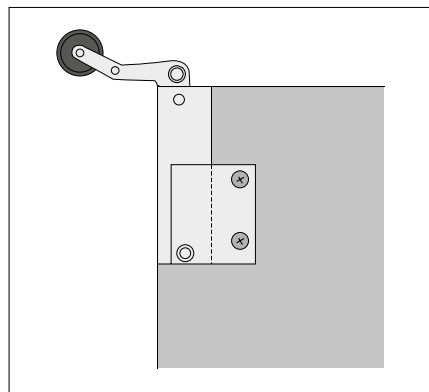
The Standard Haushahn door damper is used in Haushahn lift doors. Depending on the position of the vertical lateral fixing bracket this model is designed for **sliding lift doors** closing to the right or left.

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



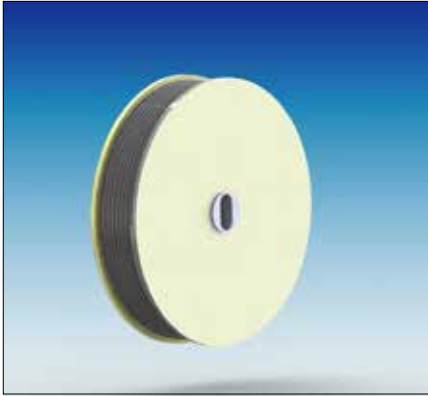
The Standard Haushahn door damper is fixed to the front of the sliding door. Its bracket is screwed laterally to the door with two M6 screws.

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



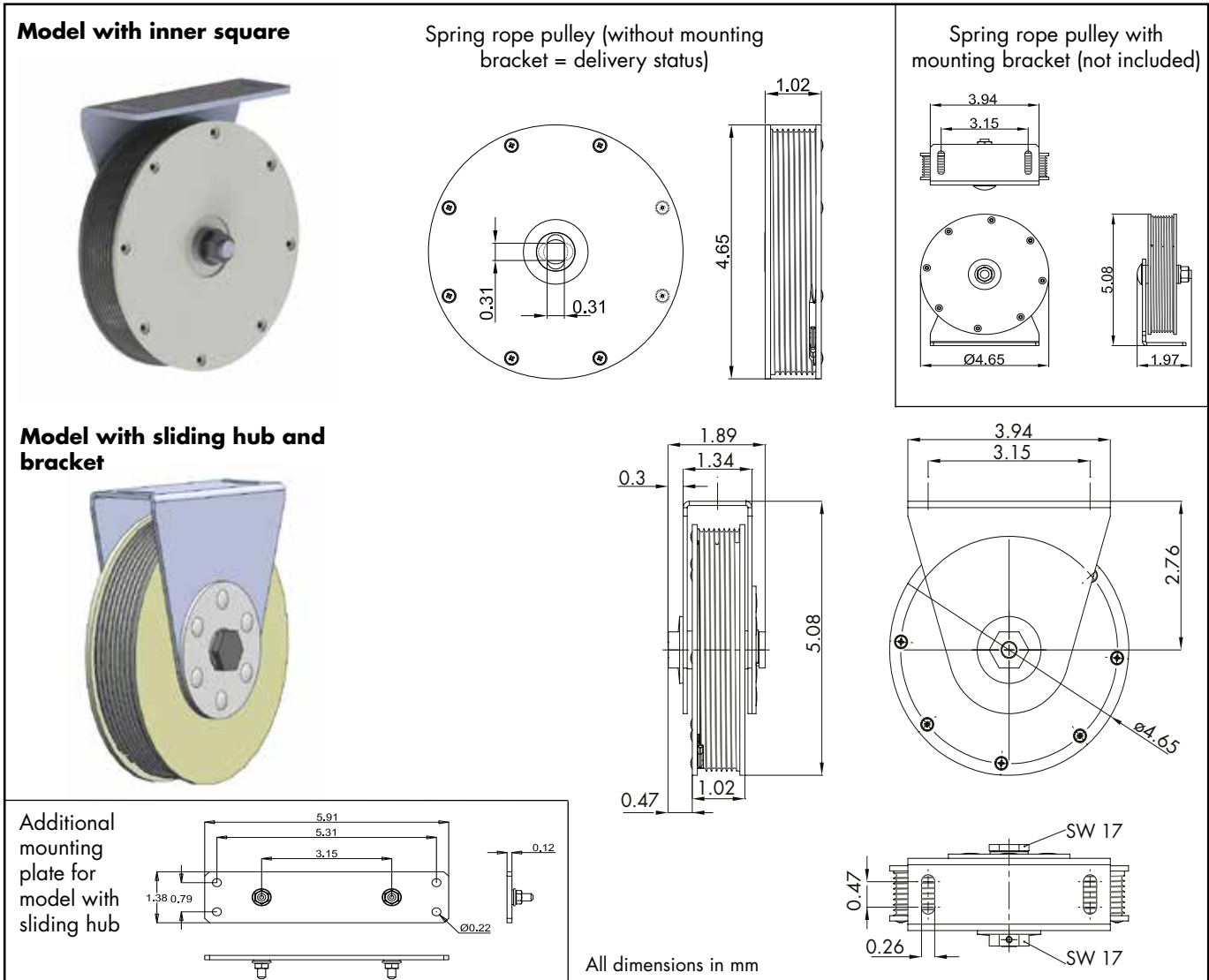
DICTATOR Spring Rope Pulleys for Sliding Doors

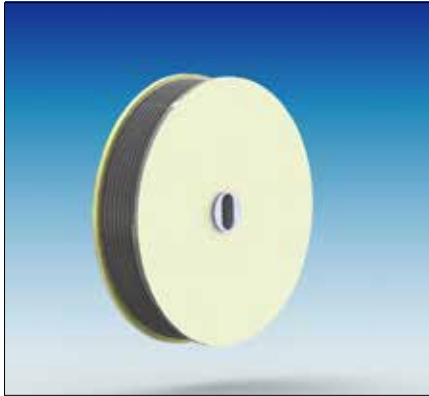
According to the EN 81-1/2, point 7.7.3.2. all landing doors driven by the car door have to be equipped with an additional mechanical closing device. An ideal solution represent the new models of the DICTATOR spring rope pulley with plastic casing. Due to the guide grooves for the plastic cable injected 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 0.31" 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.



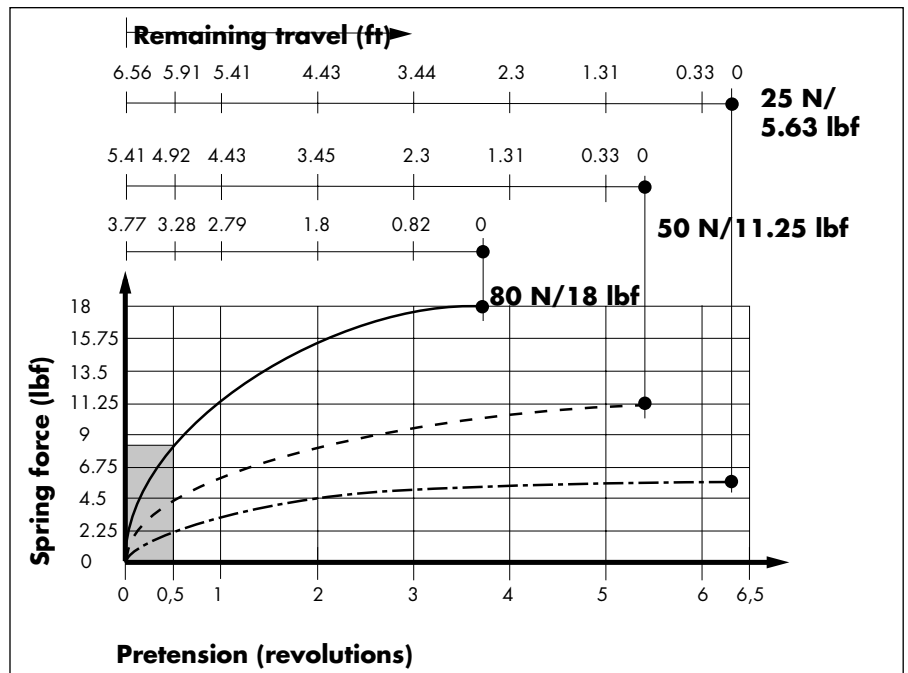


DICTATOR Spring Rope Pulleys for Sliding Doors - cont.

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 0.08 in, with cable eye stiffener (inner Ø ca. 0.22 in)
Closing force	25 N - 80 N/5.63 - 18 lbf depending on type

Order Information

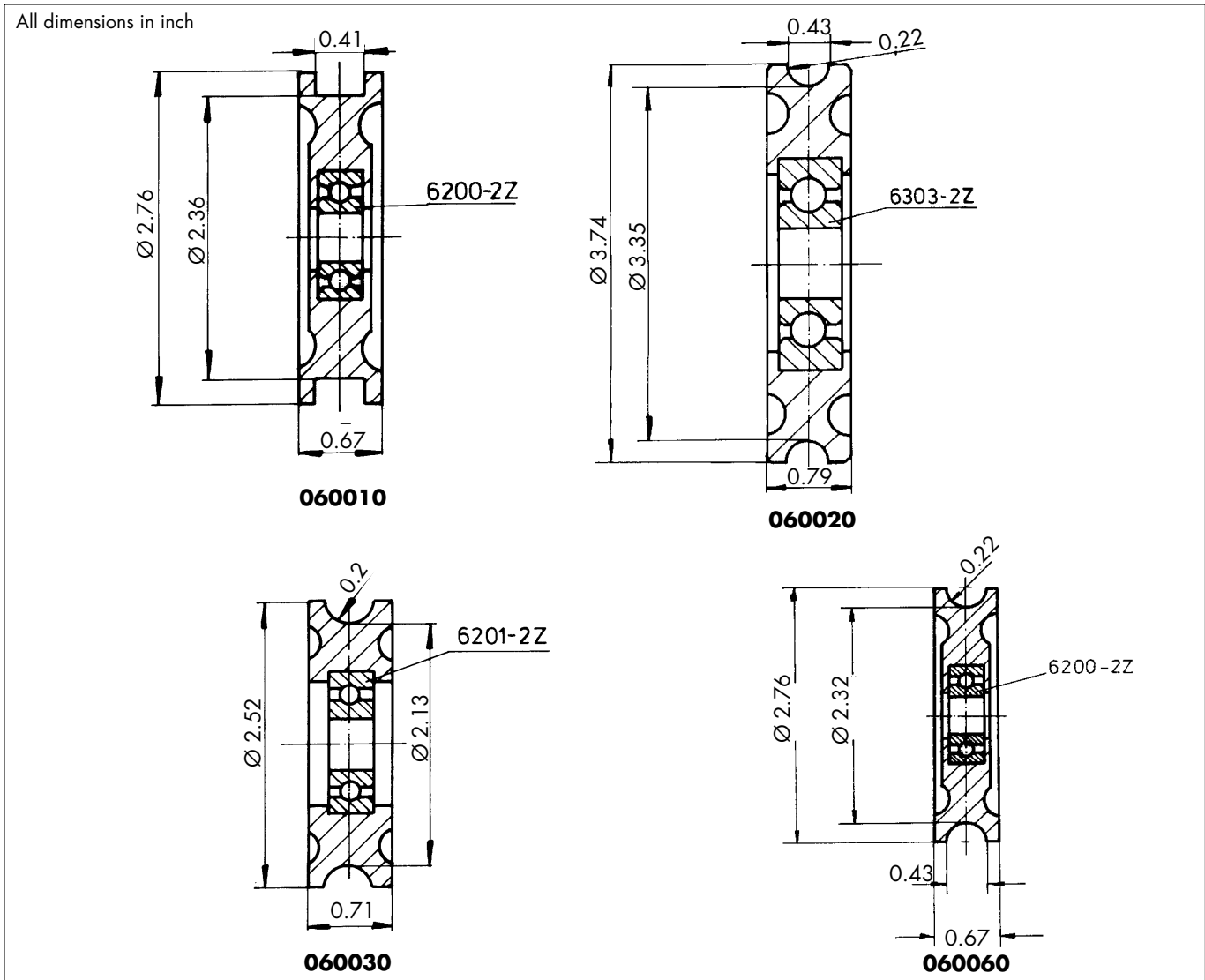
25 N spring rope pulley with inner square	part no. 070110
50 N spring rope pulley with inner square	part no. 070111
80 N spring rope pulley with inner square	part no. 070112
Mounting bracket for spring rope pulley with inner square, zinc-plated	part no. 070113
25 N spring rope pulley with sliding hub, 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.



Order Information

$\varnothing 2.76$ " plastic roller	part no. 060010
$\varnothing 3.74$ " plastic roller	part no. 060020
$\varnothing 2.52$ " plastic roller	part no. 060030
$\varnothing 2.76$ " plastic roller	part no. 060060

Further Lift Accessories

In addition to the products for lifts shown on the preceding pages DICTATOR furnishes further lift spare parts, as there are:

- Novoperm magnetic switches (see following page)
- Louvered ceilings for lift cabins
- Spare parts for older lifts such as e.g. Schindler

Please contact us whenever you require a special spare part not to be found in our catalogue.

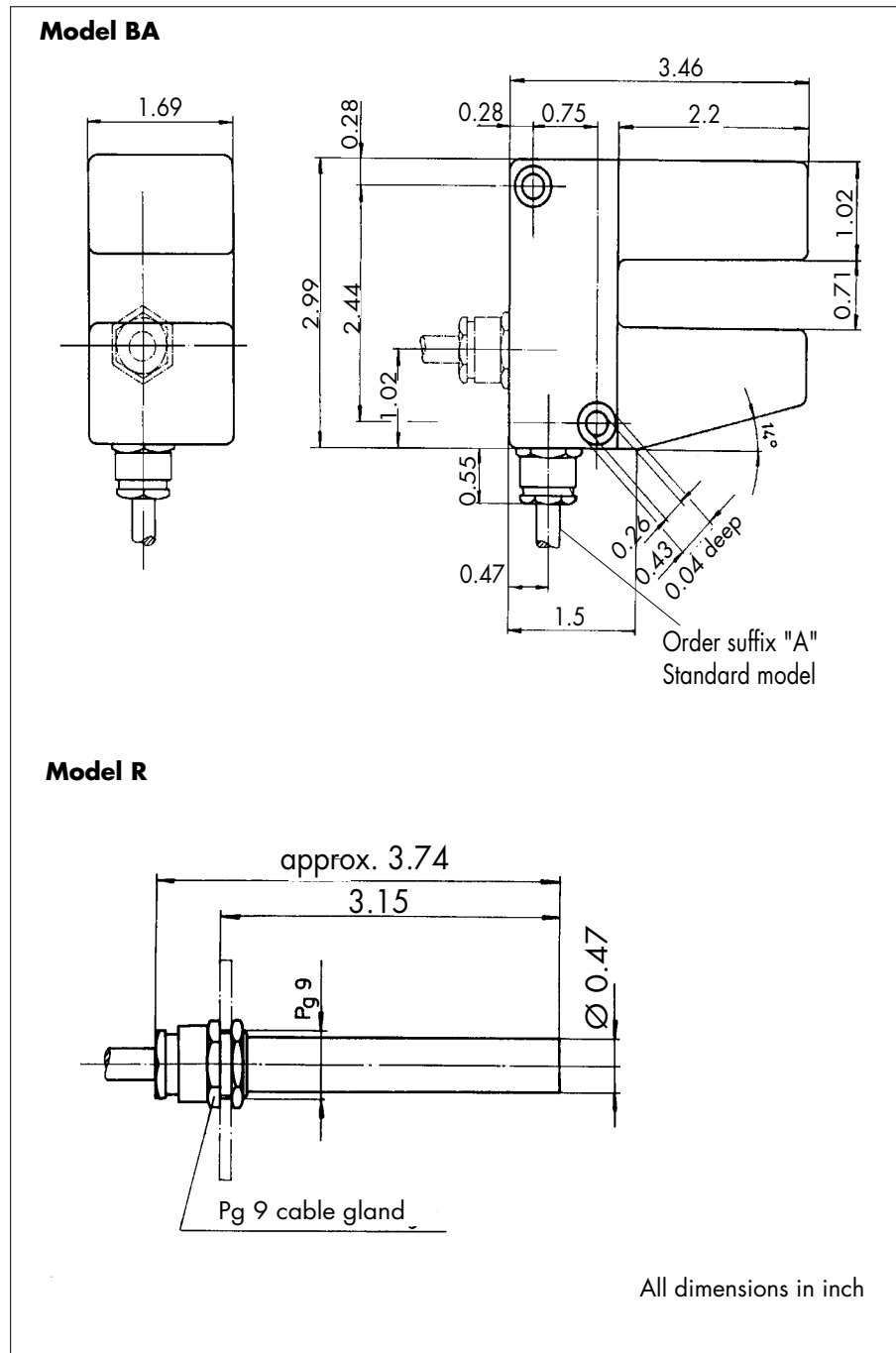


Summary

Novoperm magnetic switches	page 01.052.00
DICTATOR louvered ceilings for lift cabins	on demand
Spare parts	on demand

Magnetic Switches Novoperm

Magnetic Switches



Order Information

NOVOPERM BA 30 magnetic switch	part no. 050029
NOVOPERM BA 23-S magnetic switch	part no. 700123
NOVOPERM R 33 magnetic switch	part no. 050036
NOVOPERM R 34 magnetic switch	part no. 050037

Further models on request