

DICTATOR Spring Rope Pulleys for the Closing of Sliding Doors

Spring rope pulleys are a simple, efficient and **cost-effective closing device** for sliding doors. During the opening of the door the internal spring is tensioned and then auto-matically pulls the sliding door back into the closed position.

The spring rope pulleys are available in **two series with different diameters** and with a working travel of up to 4 m (depends on the type): 118 mm and 177 mm.

The casing of the 118 mm diameter spring rope pulley series is made of plastics with molded in guide grooves for the rope.

The 177 mm diameter spring rope pulley series is supplied with a casing of sheet steel.

The closing force can be adjusted by pre-tensioning the spring accordingly.

The closing speed, however, is not controlled when using just a spring rope pulley. If for safety or functional reasons a controlled closing speed is required, we recommend to use the DICTAMAT 50 (see page 02.081.00 and following). It incorporates the spring rope pulley as closing device and controls the closing speed by the adjustable radial damper LD.



Overview

Diameter series	spring reels 118 mm as single or double spring rope pulley spring rope pulley 177 mm
Closing force	25 N, 50 N, 80 N, 100 N, depending on the type
Working travel	between 1 m and 4 m (depending on the closing force and the pretension)
Material	casing in flame retardant DOMAMID plastics or zinc-plated sheet steel



Spring Rope Pulleys Ø Series 118 mm - Overview

The spring rope pulleys of the 118 mm diameter series have a casing made of plastics. They are available with different forces: 25 N, 50 N, 80 N and as double spring rope pulley with 50 N and 100 N. The **closing force can be adjusted** by pretensioning the spring accordingly.

The casing is made of heat resistant plastics. Due to the guide grooves molded into the plastic casing the Kevlar rope is always coiled properly. This guarantees a very long operational life of the spring rope pulley.

Thanks to the used material and the absolute accurately fitting hub the spring rope pulley also works very silently, without any annoying noise.

Versions

There are available two different models of the spring rope pulley from plastics, depending on the type of mounting and the handling comfort desired:

- Spring rope pulley with inner square

for mounting on an 8 mm square bolt or with a M8 square necked mushroom head bolt

(The double spring rope pulley, see page 02.105.00, is only available with sliding hub!)

- Spring rope pulley with sliding hub and bracket

Generally we recommend to use this model. The tensioning screw of this version allows to easily adjust the closing force and adapt it to the requirements.

Technical Data

Material casing	flame retardant DOMAMID plastics
Rope	flame retardant Kevlar rope with polyester coat
	approx. Ø 2 mm, with cable eye stiffener (inner diameter approx. 5.5 mm)
Closing force max.	25 N, 50 N, 80 N, 100 N, depending on the type
Working travel	see diagram on page 02.106.00
Bracket	The delivery of the version with sliding hub includes: bracket in zinc-plated sheet steel, alternatively AISI 304 For the version with inner square a mounting bracket is available (has to be ordered separately!)
Models	- with inner square for mounting on square bolt or for fixing by bolt with square neck - with integrated sliding hub, bracket and rope coming-off prevention device

Accessories

For the plastic spring rope pulleys additional mounting accessories are available.

Spring rope pulley with inner square: in case there is no square bolt provided on site, the spring rope pulley can easily be mounted with the additionally available L-bracket (part no. 070113, see drawing on the following page). The spring rope pulley is fixed to it with the included square necked bolt and washers.

Spring rope pulley with sliding hub: The spring rope pulley with sliding hub comes by default with a bracket (see the drawing on page 02.088.00). For an even simpler mounting of the bracket, we offer a mounting plate (part no. 070114, see drawing on page 02.104.00).



Spring Rope Pulleys Ø Series 118 mm - Model with Inner Square

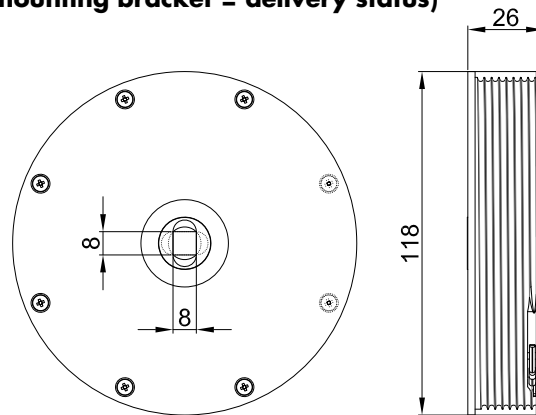
By default the spring rope pulley with inner square is furnished without mounting bracket. We recommend, however, to order the mounting bracket shown below, too, as it makes mounting much easier if no square bolt is provided on site.

The inner square of the spring rope pulley is not end-to-end. In fact the entry on both sides is staggered by exactly 90° and thus procures a safe seat for the square bolt provided on site.

The closing force at the end of the travel is determined by the varying pretension of the spring. The model with inner square doesn't have a tensioning screw and therefore the manual pretensioning requires special attention!

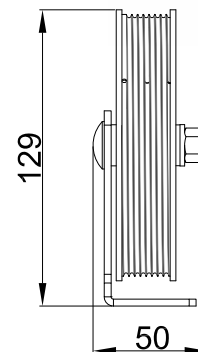
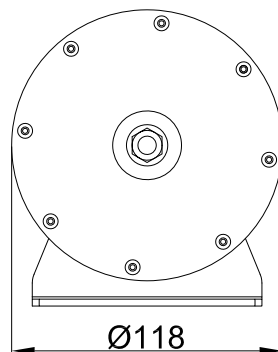
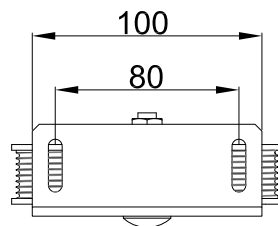
Dimensions

Spring rope pulley (without mounting bracket = delivery status)



All dimensions in mm

Spring rope pulley with mounting bracket (to be ordered separately, part no. 070113)





Spring Rope Pulleys Ø Series 118 mm - Model with Sliding Hub

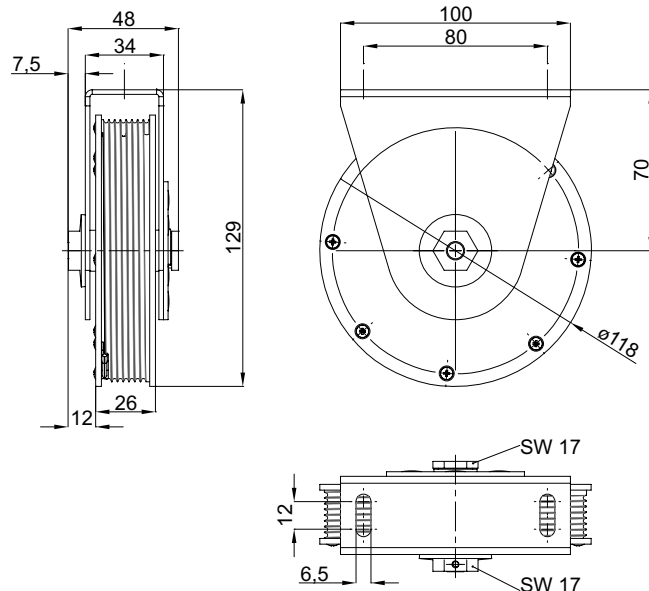
The bracket provides two oblong holes for mounting. Additionally a mounting plate (part no. 070114) is available. It is recommended in particular when the spring rope pulley should be fixed to the wall or ceiling. The spring rope pulley is simply fixed to the headless pins of the mounting plate. Then the mounting plate is screwed to the intended place.

The closing force at the end of the travel is determined by the varying pretension of the spring. In case of the model with sliding hub it is easily adjusted by the tensioning screw. There is no risk of damaging the spring when releasing it by accident.

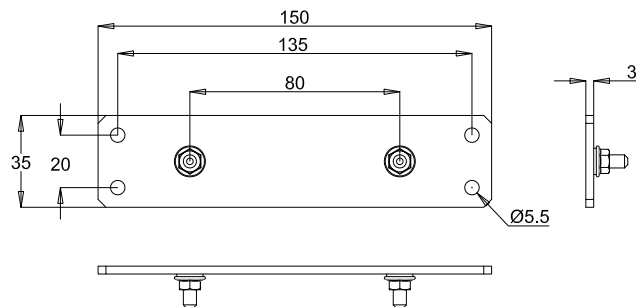
Dimensions



Spring rope pulley with sliding hub and bracket



Mounting plate for spring rope pulley with sliding hub, part no. 070114



All dimensions in mm



Spring Rope Pulleys Ø Series 118 mm - Double Spring Rope Pulleys

For special applications the spring rope pulleys with sliding hub are available as double spring rope pulleys.

For a double model two spring rope pulleys with the same force (2 x 25 N or 2 x 50 N) are coupled, thus providing the double force. These models also offer a longer travel than the single spring rope pulley with the same force (see indications below and the force-travel-diagramm on the next page).

Double Spring Rope Pulley with Sliding Hub

The closing force of the double spring rope pulley with sliding hub is adjusted by the tensioning screw accessible on both sides.

For mounting the double spring rope pulley is furnished with a bracket and a separate mounting plate. Depending on the local mounting possibilities this can be fixed either lengthwise or crosswise on the bracket (see the dimensioned drawings below).

Both spring rope pulleys feature a rope, however, only one of them will be used. Which rope shall be used is determined on site and depends on the mounting position. It always has to be chosen the rope which aligns better with the door movement.

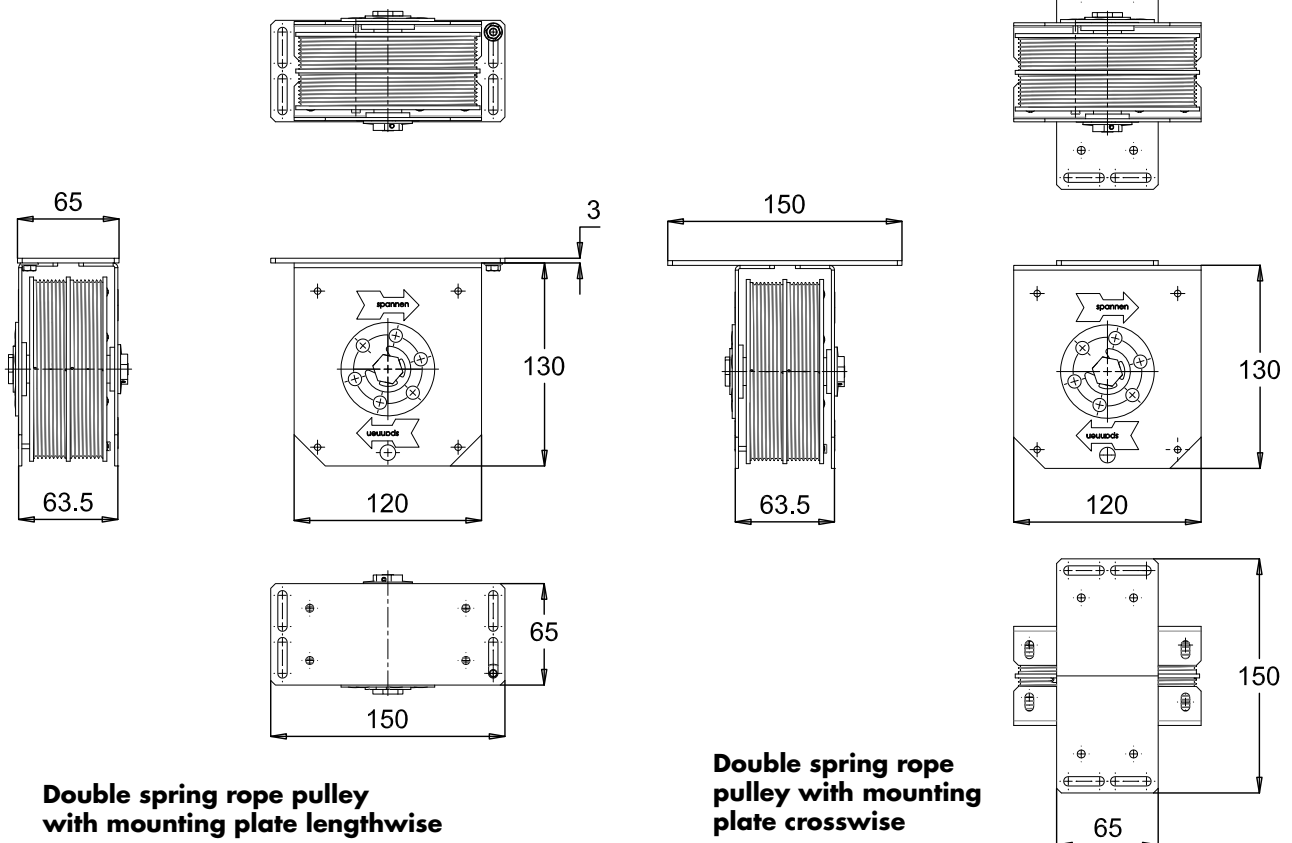
Maximum remaining travel (becomes less when the pretension of the spring rope pulley is increased - see also following page):

Double spring rope pulley 50 N 1.8 m

Double spring rope pulley 100 N 1.5 m

Dimensions

All dimensions in mm





Spring Rope Pulleys Ø Series 118 mm - Force-Travel-Diagram, Order Information

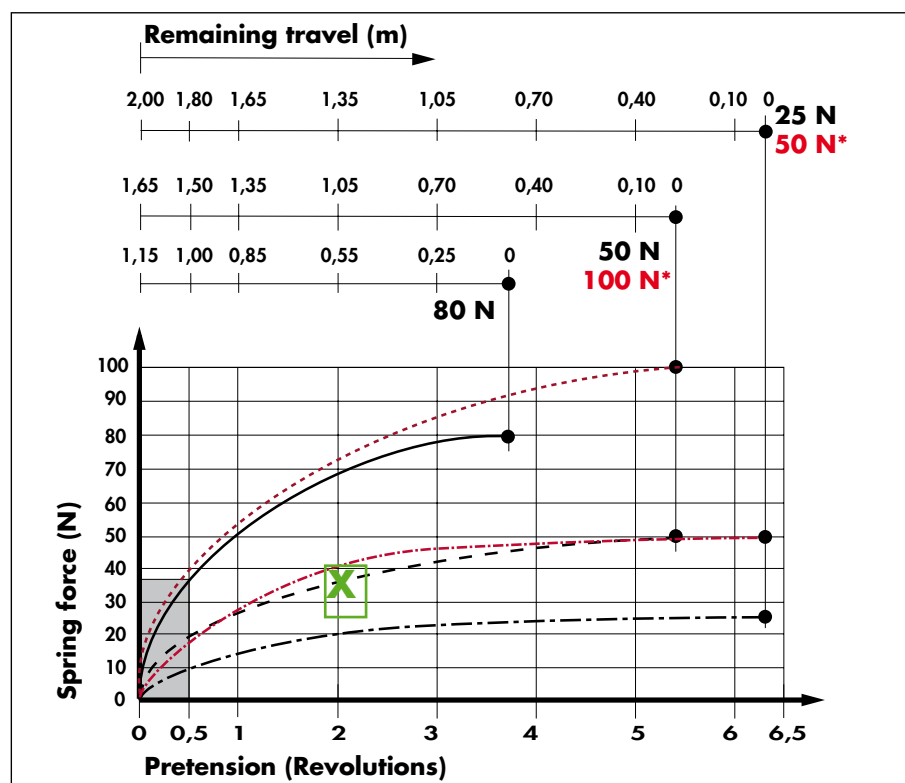
Pretensioning the spring rope pulley increases the force of the spring rope pulley at the end of the travel. Simultaneously it reduces the travel. The maximum possible travel of the respective pretension can be found in the diagram below. The force path of the double spring rope pulleys is marked in red.

Example (marked in the diagram by the cross):

Spring rope pulley with 50 N spring, pretension 2 revolutions.

The final closing force of the spring rope pulley will be (when the door is closed) about 38 N, the maximum possible travel is 1.05 meters. If the spring rope pulley is pretensioned less you get a longer travel but the final closing force will be minor.

Force-Travel-Diagram



* Curves and force indications in red apply to the double spring rope pulley.

Order Information

Spring rope pulley Ø118, 25 N with inner square	part no. 070110
Spring rope pulley Ø118, 50 N with inner square	part no. 070111
Spring rope pulley Ø118, 80 N with inner square	part no. 070112
Mounting bracket for pulley with inner square, zinc-plated	part no. 070113
Spring rope pulley Ø118, 25 N, sliding hub, bracket zinc-plated	part no. 070102
Spring rope pulley Ø118, 50 N, sliding hub, bracket zinc-plated	part no. 070093
Spring rope pulley Ø118, 80 N, sliding hub, bracket zinc-plated	part no. 070094
Spring rope pulley Ø118, 25 N, sliding hub, bracket AISI 304	part no. 070103
Spring rope pulley Ø118, 50 N, sliding hub, bracket AISI 304	part no. 070098
Spring rope pulley Ø118, 80 N, sliding hub, bracket AISI 304	part no. 070099
Mounting plate for spring rope pulley with sliding hub, zinc-plated	part no. 070114
Double spring rope pulley 50 N, sliding hub, bracket zinc-plated	part no. 070104
Double spring rope pulley 100 N, sliding hub, bracket zinc-plated	part no. 070105



Spring Rope Pulley Ø Series 177 mm - Model with Sliding Hub, 100 N, 4 m Travel

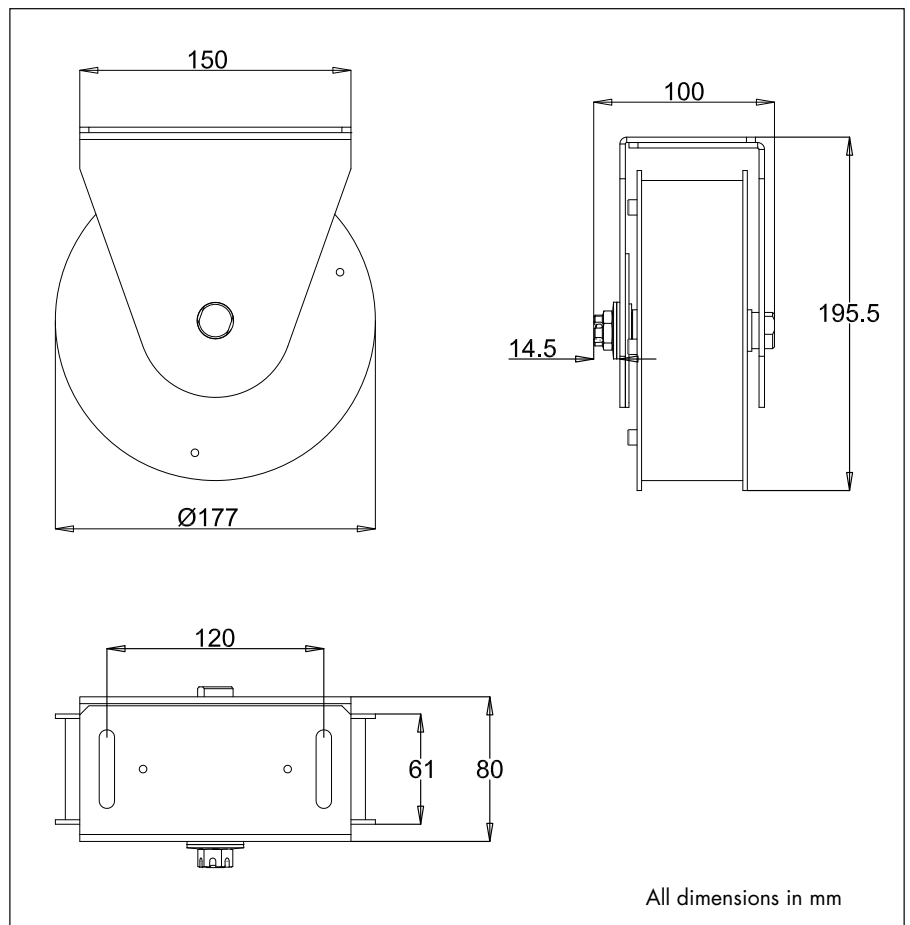
The spring rope pulley of the 177 mm Ø series is used for longer travels.

The maximum travel is 4 m, the maximum closing force 100 N.

As this model is always supplied with sliding hub and bracket, mounting and adjusting are easy.

The standard version of this diameter series is fabricated with a plastic rope. On demand, however, it is also possible to furnish it with a steel rope.

Dimensions



Technical Data

Type	with integrated sliding hub and bracket
Material casing	zinc-plated sheet steel
Material bracket	zinc-plated sheet steel
Rope	plastic rope (without fire protection properties)
	approx. Ø 3 mm, with cable stiffener Ø = 9 mm
Closing force	max. 100 N
Travel	max. 4 m



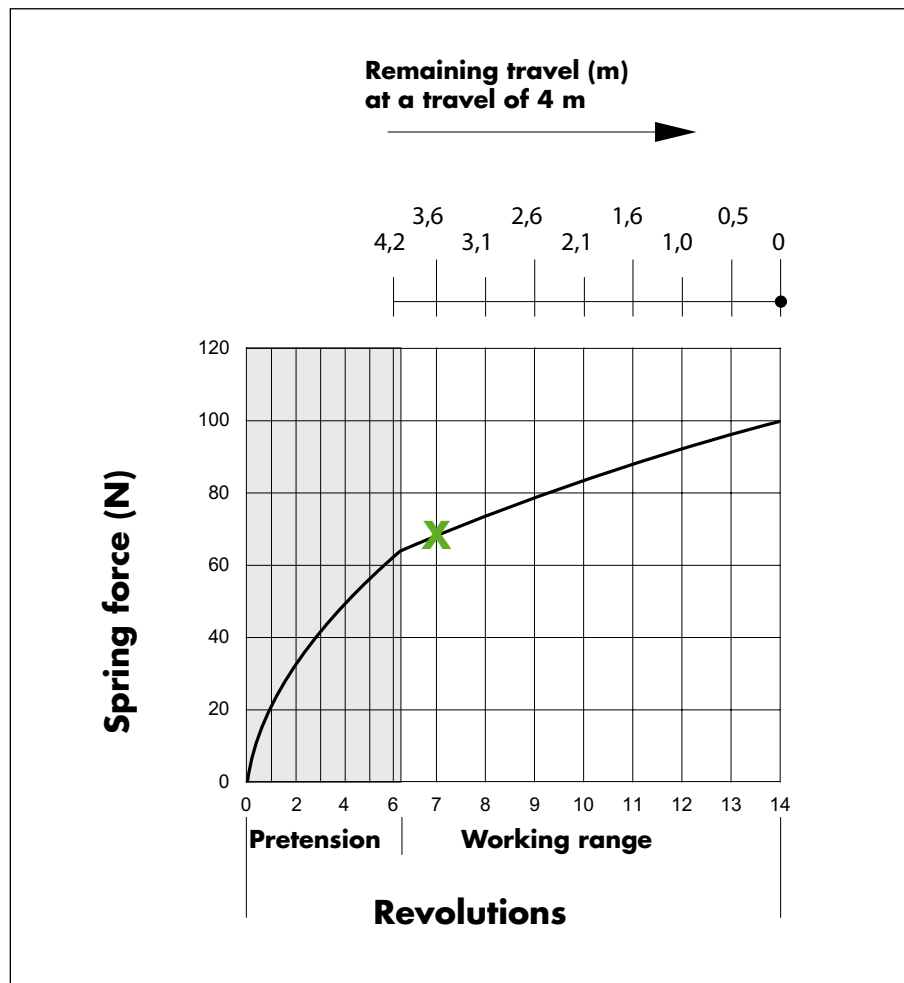
Spring Rope Pulley Ø Series 177 mm - Force-Travel-Diagram, Order Information

Pretensioning the spring rope pulley increases the force of the spring rope pulley at the end of the travel. Simultaneously it reduces the travel. The maximum possible travel of the respective spring force (pretension) can be found in the diagram below.

Example:

If the spring is pretensioned only the required 6 revolutions, a travel of 4 m is possible. At the end, when the door will be closed, there will be left a force of approx. 62 N. If the spring is pretensioned one revolution more, the travel will be reduced to 3.6 m. In this case the remaining force in the final position will be approx. 66 N (marked in the diagram by "X").

Force-Travel-Diagram



Order Information

Spring rope pulley Ø177, 100 N, with sliding hub, zinc-plated bracket

part no. 070066