

FlexiForce



INNOVATIONS FOR OVERHEAD DOORS

GB PRODUCTS 2002

INNOVATIONS FOR OVERHEAD

For over 20 years Flexi-Force B.V., a completely independent Dutch company, has specialised in the supply, production and development of components for industrial and residential (garage) overhead doors. Flexi-Force has as wholesaler and as manufacturer built up in this field extensive expertise. Its target group consists mainly of small to medium-sized door manufacturers in more than 30 different countries in and outside Europe. Flexi-Force's policy is designed to enable this target group to compete as effectively as possible in its own, mainly local markets. Reduction of the integral costs is in this the main objective. Constant product innovation, the presentation of practical solutions, informing the customer about new market developments and the fact that Flexi-Force will not deliver complete doors are also elements that contribute significantly to this policy. In addition to reliability and professionalism Flexi-Force is also noted for its product range and modern production organisation. These elements, in combination with specific advice and support and an enthusiastic team of approx. 80 people, ensure that Flexi-Force is ready to be of service to you.

PRODUCTS 2002

In this product catalogue we introduce our new, complete product range for industrial as well as residential overhead doors. Featuring many new products, extended product information and a clear separation of industrial components (IND) and residential components (RES), this catalogue offers you an easy and fast entry to our products.

The actual prices are to be found in our separate pricelist "Prices 2002".

DELIVERY PROGRAM

Our product range offers the options hereunder, depending on what is suitable for your own business:

Inventory supply of separate parts

For door manufacturers who want to maintain full control of the production and assembly of the door, Flexi-Force supplies all parts in full packaging units directly from inventory.

Supply of assembled track sets

Combining separate components with our assembled track sets will provide you with maximum flexibility and freedom in your door configuration, in combination with the quality and efficiency of Flexi-Force track set production.

Supply of complete hardware sets

You can avoid having to invest in expensive machinery by ordering hardware in complete custom made sets for the door sold. The sets will be delivered to you in complete pallet loads together with the box of hardware.

Electrical E-operators

With the introduction of electrical operators for both industrial and residential Flexi-Force offers the benefit of the "one-stop-shopping" principle. Flexi-Force's E-operators stand out with their advanced technology, ease of operation and reliable quality.



SUPPORT IN THE FORM OF TAILOR-MADE ADVICE

For Flexi-Force the customer comes first and there is an experienced sales team of eleven people ready to assist you.

- The sales department is divided into three teams for Northern, Central and Southern Europe respectively. These teams are for you the primary contact for inquiries on this catalogue, products, delivery times, specials, spring calculations etc.
- Support and information are also available via Internet, www.flexiforce.nl, where product information can be obtained and downloaded.
- With the e-mail news service @-INFO you will receive actual news in your e-mail box.
- A good opportunity for increasing your knowledge on our products and production methods is a visit to our factory. You are invited!

HEAD DOORS

WELCOME AT FLEXI-FORCE

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(International) Banks

The Netherlands ING Bank Barneveld (NL) nr 68,45,60,550
(IBAN) nr. NL97ING068,45,60,55 NLG/Euro

Germany BBL Cologne BLZ 37010400-3150051306
(IBAN) DE63370104003150051306
(BIC) BBRUDE3X

Belgium BBL Brussels 310-1610136-22

France ING Bank (France) S.A., Paris Compte
nr. 00 27912036000, Swift: INGB FR PP

Portugal BBL Lisbon 311-0200100-54
(IBAN) PT50050000003110020010036
(BIC) BBRUPTPL

Italy ING Milan, 306-0512619-47
(IBAN) IT93P0347501601000051261947
(BIC) INGBITMMICM

Spain BBL Madrid 305-0015407-78
(IBAN) ES6501680001870001540778
(BIC) BBRUESMX

GB BBL Londen 309-0200670-84
(IBAN) GB84BBRU23885920067084
(BIC) BBRUGB2X

Working hours

Offices	Monday – Friday	08.00 – 17.00 hours
Expedition	Monday - Thursday	08.00 – 16.30 hours
	Friday	08.00 – 14.30 hours

Delivery times

Separate components and residential track sets:
average 5 working days after receipt of your order. Actual

More information, route to Flexi-Force,
direct phone numbers,
personal e-mail addresses?

www.flexiforce.nl



Flexi-Force B.V. Barneveld, The Netherlands



Flexi-Force Hungary Kft. Hadüböszörmény, Hungary

delivery times daily on www.flexiforce.nl, news. Delivery times hardware sets and assembled torsion springs on request.

TERMS AND CONDITIONS OF DELIVERY

All our quotations, all orders placed with us and all contracts concluded with us are subject to the METAALUNIECONDITIONS, filed with the registrar of the District Court of Rotterdam, as stipulated in the latest text lodged with the said court. These conditions of delivery and payment will be sent to you upon request and can be found on the last page of this booklet. Or download from www.flexiforce.nl (downloads).

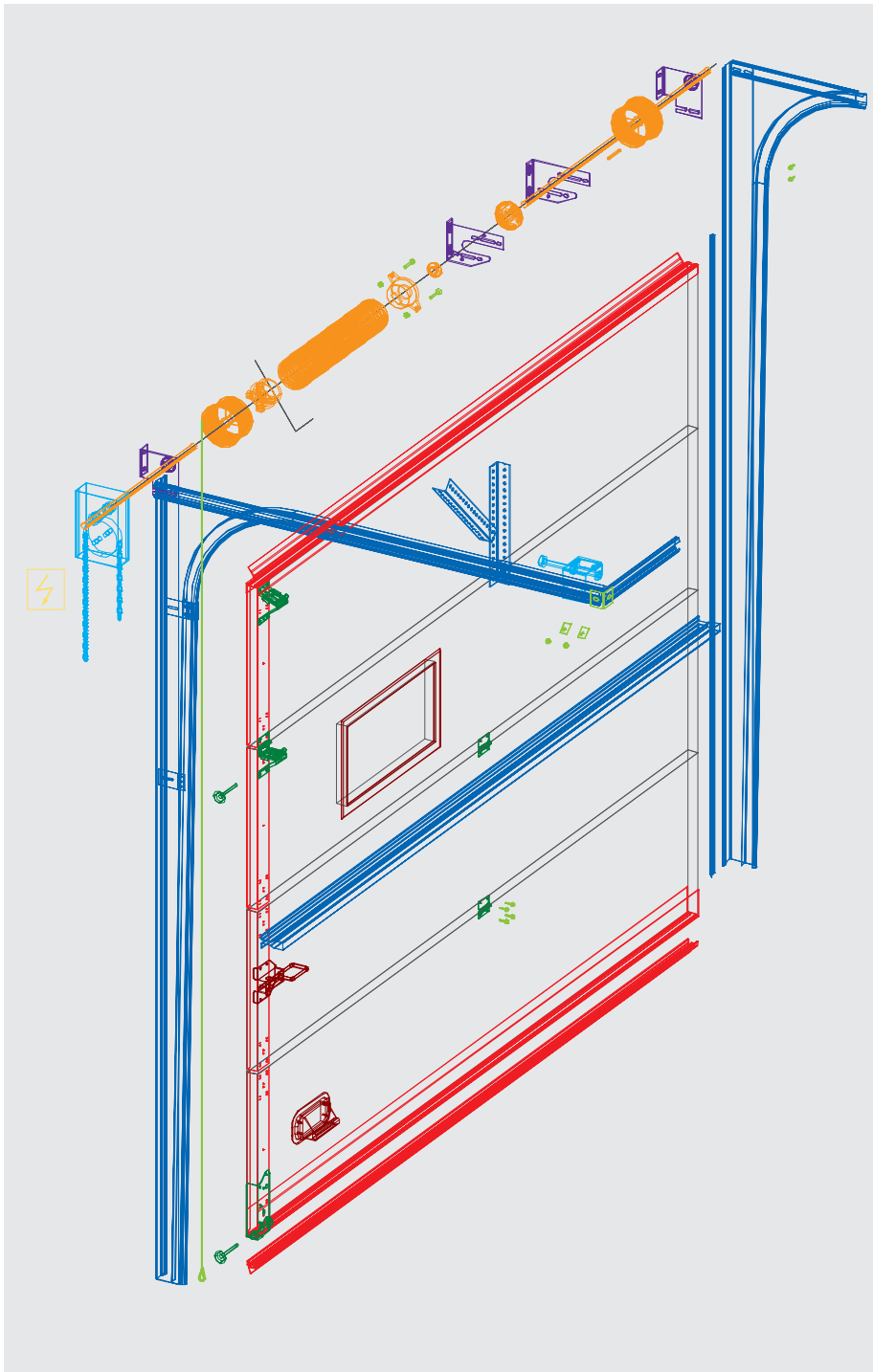
For our price conditions we refer to our actually valid price-list. The validity of all our earlier price lists or information bulletins has been expired. The product information and other data in this catalogue can be subject to changes without prior notice. All rights are reserved.

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INDUSTRIAL INNOVATIONS

The industrial door market today is characterised by product rationalisation and important legislation and norms (CE). Flexi-Force answers to these trends by introducing a large number of new products, resulting in:

- cost decreases without changing the technical functionality;
- product specifications according to CE-norms;
- complementary to the existing product range.



HARDWARE SETS OR SEPARATE COMPONENTS?

Next to the possibility to order our components separately (in bulk), we offer a total different solution: delivery of a "configured to order" hardware set for each door that you have sold. This means that meanwhile Flexi-Force puts the hardware set together for you, you can manufacture and assemble the door panel.

Advantages of opting for complete hardware sets:

- your stock of separate parts is limited, which reduces your inventory costs;
- you purchase your hardware after you have sold the door: Minimal financing!;
- you do not have to invest in machines for welding and assembling the sets;
- you have optimum flexibility, due partly to the fact of our delivery times;
- you are guaranteed optimum quality at relatively low costs, since Flexi-Force manufactures these sets in very large quantities at its factory in Barneveld.

INDUSTRIAL HARDWARE SETS

Standard execution

Our standard pricing table, shown in our separate, most actual price list, is based on a standard hardware set, Normal Lift system (NL) and a maximal door weight of approximately 16 kg/m². This execution consists of:

- cable drums;
- powder coated torsion springs with spring plugs;
- top roller brackets;
- bottom brackets;
- intermediate and side hinges;
- lifting cable with plastic core;
- 2" nylon rollers with bearing;
- black solid shaft 1" with keys (or keyed tubular shaft);
- alu coupler;
- 2" track, assembled to the vertical angle;
- standard supplied with side seal;
- horizontal tracks assembled to C-profiles;
- bearing plates;
- nylon rope (black);
- fixing materials.

Other lifting systems, chain hoist, safety devices, tension sets, locks, handles etc. can be selected on the special order form.

Components used for assembling door panels such as: end caps, top/bottom profiles and seals, windows, reinforcement struts etc. can not be delivered in your hardware set but has to be ordered separately.

If you need more information on delivery times, lifting systems, application ranges, extra prices, accessories and ordering procedure, contact your Flexi-Force account manager.



LOGICAL CONFIGURATION WITH FF-LOGIC

Configuring and ordering becomes very simple with our new software program for components and hardware sets: FF-Logic. The components version selects the proper springs, cable drums, lifting cable sizes depending on the door dimensions. The hardware program configures all parts and dimensions, necessary for production and installation of an industrial overhead door. The program operates under Windows and is extremely user-friendly.



SEPARATE COMPONENTS

On the next pages our product range for separate components is presented in chapters A-M. In the last chapter our new industrial operators are shown.

NEW INDUSTRIAL PRODUCTS

A pre-selection of newly introduced products is displayed below. Detailed information on these products can be found in the following product pages.



ELECTRICAL INNOVATIONS

INDUSTRIAL OPERATORS

Flexi-Force introduces a complete new product line, electric operators for (industrial) doors. This will provide you with the opportunity to combine your purchase volume in operators with your orders for hardware. An ideal formula for one-stop-shopping!

The delivery programme for operators comprises a choice from seven different types of motors providing an optimum solution for every type of overhead door.

These are divided into two main groups:

- **Operator with external basic control**

Mechanical limit switches utilising cam control switches, external control in push button panel, fitted as standard with emergency hand chain and decoupling option for maintenance.

Choice from 6 types, depending on voltage (400 V, 230 V), number of phases (1, 3), number of revolutions per minute (19, 24) and power (0.37 kW-0.55 kW). Types: IND-E 311 through IND-E-322.

- **Operator with integrated control with advanced frequency regulation**

The operator is fitted with a control with frequency regulation for soft-start & soft-stop and also for rapid opening. The comfort control is integrated into the motor. Fitted as standard with emergency hand chain and decoupling option for maintenance. Here too a choice has been made for mechanical limit switches by means of cam control switches. This operator is always single phase, 230 V with variable frequency. Type: IND-E-1FU.

INNOVATIVE QUALITY

A leading supplier in Germany manufactures the IND-E operators especially for Flexi-Force. Quality and innovation were the key priorities during the development of this series of operators. This can be seen for example in worm wheel transmission with hollow spindle, which employs a high-quality worm wheel manufactured from a special type of bronze. Increased lifetime is achieved by the continuous, maintenance-free lubrication. The engagement interval S3 of the three-phase motor is 60%.

It goes without saying that our operators meet the current CE guidelines and are supplied complete with certificates and instruction manuals.



CONFIGURE TO ORDER, NO INVENTORY

In contrast to what you are probably accustomed to with your present operator, you need not when you opt for Flexi-Force operators create

your own inventory. If you give us the door details needed for selection of the appropriate operator, we shall prepare for you a complete set, consisting of:

- the correct operator;
- the matching controls;
- internal cabling (ready for plug);
- accessories required with internal connections.

This complete assortment will be prepared for you and supplied as one single package within 10 working days. Having it delivered with your industrial fittings set is clearly also a sensible option.

ACCESSORIES

Our delivery programme is rounded off with a wide range of accessories. A selection from the total on offer: key switches, photocells, bottom profile with protection for safety edge, system cables, manual transmitters.

THE BENEFITS POINT BY POINT

- one-stop-shopping: hardware parts and operators;
- extensive delivery program incl. accessories;
- mechanical limit switching (reliable security);
- high torque up to 120 Nm;
- frequency control with soft-start & soft-stop;
- supplied plug-ready in one package, no inventory;
- high quality, advanced technology.

CABLE DRUM

Normal lift, H. max. 3680 mm

Art. code	kg	vol unit	description
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FF-NL-12	1.1	20 pair (2)	
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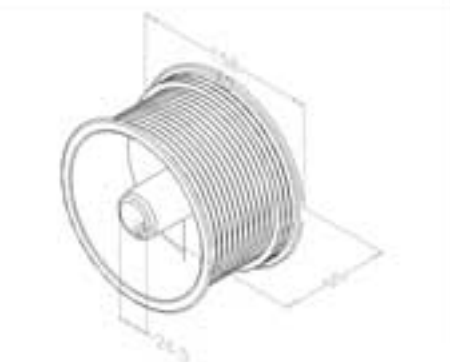
The cable drums are provided with 2 safety wraps for the cable. The lifting cable provided with a terminal (pressed aluminium sleeve) can be hooked into the camber of the cable drum. The lifting cable also can be passed through the cable drum and fixed with a hollow-head screw. In this way the length of the cable is easy to adjust. The cable drum will be fixed to the shaft through the key by one hollow-head screw M8. The drums are marked red and black (left and right). The drums are suitable for a max. cable diameter of 5.0 mm and a max. door weight of 500 kg. The outside diameter is 124 mm. The spring calculation of these drums is identical to cable drums article numbers FF-4X8 and FF-4-13.

CABLE DRUM

Normal lift, H. max. 5570 mm

Art. code	kg	vol unit	description
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FF-NL-18	1.6	20 pair (2)	
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The cable drums are provided with 2 safety wraps for the cable. The lifting cable provided with a terminal (pressed aluminium sleeve) can be hooked into the camber of the cable drum. The lifting cable also can be passed through the cable drum and fixed with a hollow-head screw. In this way the length of the cable is easy to adjust. The cable drum will be fixed to the shaft through the key by one hollow-head screw M8. The drums are marked red and black (left and right). The drums are suitable for a max. cable diameter of 5.0 mm and a max. door weight of 500 kg. The outside diameter is 158 mm.

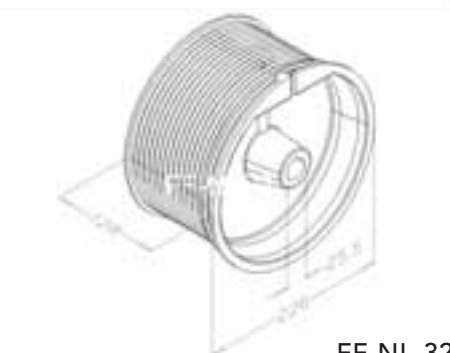
CABLE DRUM

Normal lift, H. max. 9750 mm

Art. code	kg	vol unit	description
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FF-NL-32	5.1	12 pair (2)	shaft 1"
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FF-NL-32-5/4	5.1	12 pair (2)	shaft 1 1/4"
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FF-NL-32

The cable drums are provided with 2 safety wraps for the cable. The lifting cable provided with a terminal (pressed aluminium sleeve) can be hooked into the camber of the cable drum. The lifting cable also can be passed through the cable drum and fixed with a hollow-head screw. In this way the length of the cable is easy to adjust. The cable drum will be fixed to the shaft through the key by one hollow-head screw M8 and extra through 2 bolts 3/8" with square head directly on the shaft. The drums are marked red and black (left and right). The drums are suitable for a max. cable diameter of 6.0 mm and a max. door weight of 700 kg. The outside diameter is 226 mm.

The cable drums are provided with 2 safety wraps for the cable. The lifting cable provided with a terminal (pressed aluminium sleeve) can be hooked into the camber of the cable drum. The lifting cable also can be passed through the cable drum and fixed with a hollow-head screw. In this way the length of the cable is easy to adjust. The cable drum will be fixed to the shaft through the key by one hollow-head screw M8. The drums are marked red and black (left and right). The drums are suitable for a max. cable diameter of 5.0 mm and a max. door weight of 500 kg. The outside diameter is 188 mm.

CABLE DRUM

High lift, HL max.
1370 mm, H = 4800 mm

Art. code	kg	vol unit	description
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FF-HL-54	2.1	10 pair (2)	
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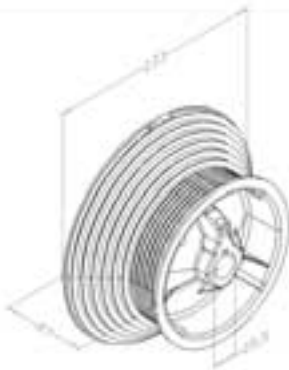
The cable drums are provided with 2 safety wraps for the cable. The lifting cable provided with a terminal (pressed aluminium sleeve) can be hooked into the camber of the cable drum. The lifting cable also can be passed through the cable drum and fixed with a hollow-head screw. In this way the length of the cable is easy to adjust. The cable drum will be fixed to the shaft through the key by one hollow-head screw M8. The drums are marked red and black (left and right). The drums are suitable for a max. cable diameter of 5.0 mm. Till high lift system of 2500 mm the drums are suitable for a max. door weight of 500 kg. With high lift above 2500 mm the drums are suitable for a max. door weight of 450 kg. The outside diameter is 238 mm.

CABLE DRUM

High lift, HL max.
3060 mm, H = 5050 mm

Art. code	kg	vol unit	description
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FF-HL-120	2.9	10 pair (2)	
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The cable drums are provided with 2 safety wraps for the cable. The lifting cable provided with a terminal (pressed aluminium sleeve) can be hooked into the camber of the cable drum. The lifting cable also can be passed through the cable drum and fixed with a hollow-head screw. In this way the length of the cable is easy to adjust. The cable drum will be fixed to the shaft through the key by one hollow-head screw M8 and extra through 2 bolts 3/8" with square head directly on the shaft. The drums are marked red and black (left and right). The drums are suitable for a max. cable diameter of 6.0 mm. Till high lift system of 2500 mm the drums are suitable for a max. door weight of 650 kg. With high lift above 2500 mm the drums are suitable for a max. door weight of 575 kg. The outside diameter is 280 mm.

CABLE DRUM

High lift, HL max. 4100 mm

Art. code	kg	vol unit	description
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FF-HL-164	6.5	12 pair (2)	shaft 1"
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FF-HL-164-5/4	6.5	12 pair (2)	shaft 1 1/4"
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FF-HL-164



CABLE DRUM

Vertical lift, H. max. 3300 mm

Art. code	kg	vol unit	description
FF-VL-11	1.9	15 pair (2)	



The cable drums are provided with 2 safety wraps for the cable. The lifting cable provided with a terminal (pressed aluminium sleeve) can be hooked into the camber of the cable drum. The lifting cable also can be passed through the cable drum and fixed with a hollow-head screw. In this way the length of the cable is easy to adjust. The cable drum will be fixed to the shaft through the key by one hollow-head screw M8. The drums are marked red and black (left and right). The drums are suitable for a max. cable diameter of 5.0 mm and a max. door weight of 500 kg. The outside diameter is 218 mm.

CABLE DRUM

Vertical lift, H. max. 6000 mm

Art. code	kg	vol unit	description
FF-VL-18	4	10 pair (2)	shaft 1"
FF-VL-18-5/4	4	10 pair (2)	shaft 1 1/4"



FF-VL-18

The cable drums are provided with 2 safety wraps for the cable. The lifting cable provided with a terminal (pressed aluminium sleeve) can be hooked into the camber of the cable drum. The lifting cable also can be passed through the cable drum and fixed with a hollow-head screw. In this way the length of the cable is easy to adjust. The cable drum will be fixed to the shaft through the key by one hollow-head screw M8. The drums are marked red and black (left and right). The drums are suitable for a max. cable diameter of 5.0 mm. Till an opening height of 4000 mm the drums are suitable for a max. door weight of 600 kg. As of opening height of 4000 mm the drums are suitable for a max. door weight of 500 kg. The outside diameter is 284 mm.

CABLE DRUM

Normal lift,
H. max. 2440 mm (0,5 sw.)

Art. code	kg	vol unit	description
FF-4X8	0.6	30 pair (2)	



The cable drums are provided with half a safety wrap for the cable. The max. opening height with 2 safety wraps for the cable is 1950 mm. The lifting cable provided with a terminal (pressed aluminium sleeve) can be hooked into the camber of the cable drum. The cable drum will be fixed directly to the shaft with 2 hollow-head screws M8. The drums are marked red and black (left and right). The drums are suitable for a max. cable diameter of 3.0 mm and a max. door weight of 240 kg. The outside diameter is 126 mm. The drums are very suitable for residential overhead doors. The spring calculation of the drums is identical to drums with article code FF-NL-12 and FF-4-13.

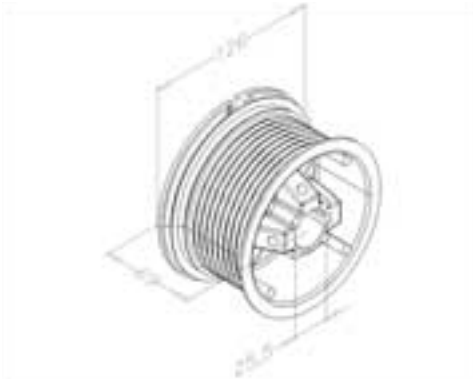
The cable drums are provided with half a safety wrap for the cable. The max. opening height with 2 safety wraps for the cable is 3360 mm. The lifting cable provided with a terminal (pressed aluminium sleeve) can be hooked into the camber of the cable drum. The cable drum will be fixed directly to the shaft with two 3/8" bolts with square head. The drums are marked red and black (left and right). The drums are suitable for a max. cable diameter of 4.0 mm and a max. door weight of 265 kg. The outside diameter is 126 mm. The drums are very suitable for residential overhead doors. The spring calculation of the drums is identical to drums with article code FF-NL-12 and FF-4X8.

CABLE DRUM

Normal lift,
H. max. 3880 mm (0,5 sw.)

Art. code	kg	vol unit	description
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FF-4-13	1	20 pair (2)	
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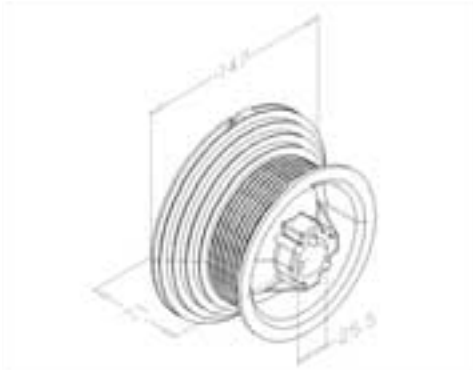
The cable drums are provided with half a safety wrap for the cable. The max. high lift system with 2 safety wraps for the cable is 750 mm. The lifting cable provided with a terminal (pressed aluminium sleeve) can be hooked into the camber of the cable drum. The cable drum will be fixed directly to the shaft with two 3/8" bolts with square head. The drums are marked red and black (left and right). The drums are suitable for a max. cable diameter of 3.0 mm and a max. door weight of 240 kg. The outside diameter is 147 mm.

CABLE DRUM

High lift,
HL max. 1370 mm (0,5 sw.)

Art. code	kg	vol unit	description
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FF-54LC	0.9	20 pair (2)	
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The cable drums are provided with half a safety wrap for the cable. The max. high lift system with 2 safety wraps for the cable is 570 mm. The lifting cable provided with a terminal (pressed aluminium sleeve) can be hooked into the camber of the cable drum. The cable drum will be fixed directly to the shaft with two 3/8" bolts with square head. The drums are marked red and black (left and right). The drums are suitable for a max. cable diameter of 5.0 mm and a max. door weight of 450 kg. The outside diameter is 188 mm. The spring calculation of the drum is identical to drum with article code FF-HL-54.

CABLE DRUM

High lift,
HL max. 1370 mm (0,5 sw.)

Art. code	kg	vol unit	description
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FF-54	2	30 pair (2)	
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CABLE DRUM

High lift,
HL max. 3050 mm (0,5 sw.)

Art. code	kg	vol unit	description
FF-120	2.6	10 pair (2)	

The cable drums are provided with half a safety wrap for the cable. The max. high lift system with 2 safety wraps for the cable is 2020 mm. The lifting cable provided with a terminal (pressed aluminium sleeve) can be hooked into the camber of the cable drum. The cable drum will be fixed directly to the shaft with two 3/8" bolts with square head. The drums are marked red and black (left and right). The drums are suitable for a max. cable diameter of 5.0 mm and a max. door weight of 450 kg. The outside diameter is 233 mm. The spring calculation of the drum is identical to drum with article code FF-HL-120.

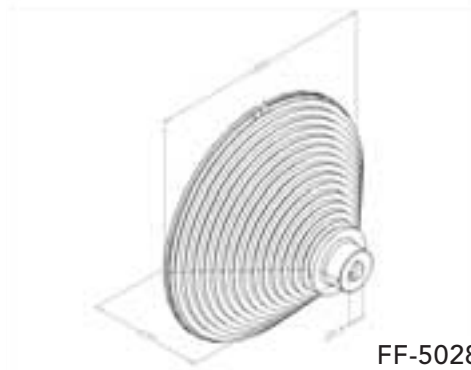


CABLE DRUM

Vertical lift,
H. max. 8540 mm (0,5 sw.)

Art. code	kg	vol unit	description
FF-5028	10	10 pair (2)	shaft 1"
FF-5028-5/4	10	10 pair (2)	shaft 1 1/4"

The cable drums are provided with a half safety wrap for the cable. The max. opening height with 2 safety wraps for the cable is 7200 mm. The lifting cable can be passed through the camber of the cable drum and with M6 bolt and plate fixed to backside of the drum. The cable drum will be fixed directly to the shaft with two M10 hollow-head screws. The drums are marked red and black (left and right). The drums are suitable for a max. cable diameter of 6.0 mm. Till an opening height of 6000 mm the drums are suitable for a max. door weight of 825 kg. At an opening height above 6000 mm the drums are suitable for a max. door weight of 650 kg. The outside diameter is 350 mm.



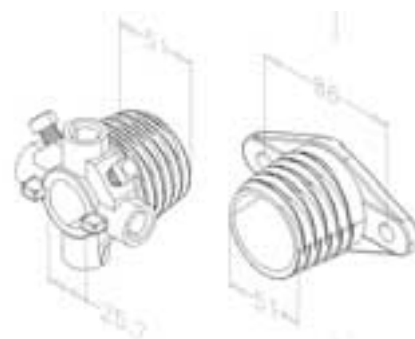
FF-5028

SPRING FITTINGS

Universal, 2", 51 mm

Art. code	kg	vol unit	description
FF-2.00TAI	0.7	50 set (4)	

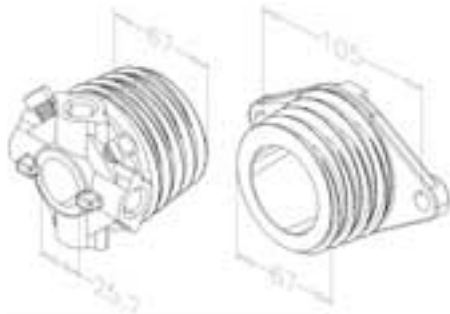
The universal aluminium spring fittings are suitable for springs with an inside diameter of 51 mm. Per set 2 winding cones and 2 stationary cones. The centre line of the fixing holes of the stationary cone is 86 mm. The winding cones are marked red and black and are provided with two installed fixing screws.



The universal aluminium spring fittings are suitable for springs with an inside diameter of 67 mm. Per set 2 winding cones and 2 stationary cones. The centre line of the fixing holes of the stationary cone is 105 mm. The winding cones are marked red and black and are provided with two installed fixing screws.

SPRING FITTINGS

Universal, 2 5/8", 67 mm

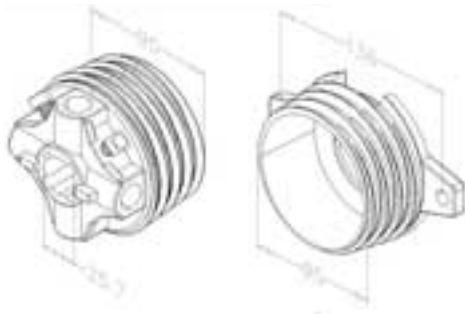


Art. code	kg	vol unit	description
FF-2.63TAI	1	50 set (4)	

The universal aluminium spring fittings are suitable for springs with an inside diameter of 95 mm. Per set 2 winding cones and 2 stationary cones. The centre line of the fixing holes of the stationary cone is 136 mm. The winding cones are marked red and black and are provided with two installed fixing screws.

SPRING FITTINGS

Universal, 3 3/4", 95 mm

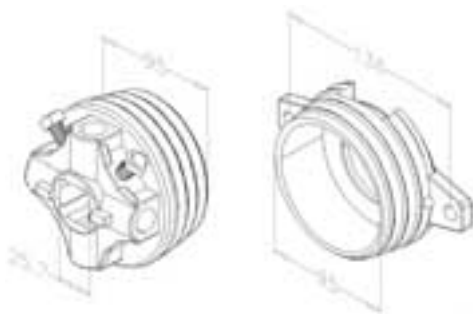


Art. code	kg	vol unit	description
FF-3.75LE	3.2	20 set (4)	

The non-universal aluminium spring fittings are suitable for springs with an inside diameter of 95 mm. Because of the fact the fittings are non-universal they are more easy to install. Per set 2 winding cones and 2 stationary cones. The centre line of the fixing holes of the stationary cone is 136 mm. The winding and stationary cones are marked red and black and are provided with two installed fixing screws.

SPRING FITTINGS

Non-universal, 3 3/4", 95 mm



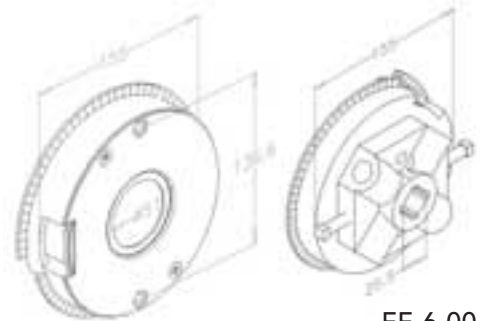
Art. code	kg	vol unit	description
FF-3.75LETAI	3.2	20 set (4)	

SPRING FITTINGS

Non-universal, 6", 152 mm

Art. code	kg	vol unit	description
FF-6.00	2.5	10 set (4)	shaft 1"
FF-6.00-5/4	2.5	10 set (4)	shaft 1 1/4"

The non-universal aluminium spring fittings are suitable for springs with an inside diameter of 152 mm. Per set 2 winding cones and 2 stationary cones. The centre line of the fixing holes of the stationary cone is 136 mm. The winding and stationary cones are marked red and black and the winding cones are provided with two installed fixing screws.



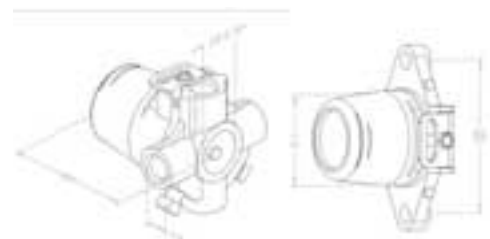
FF-6.00

SPRING FITTINGS

Universal,
for powder coated springs

Art. code	kg	vol unit	description
FSW51	1	30 set (4)	2", 51 mm
FSW67	1	30 set (4)	2 5/8", 67 mm

The universal aluminium spring fittings are suitable for springs with an inside diameter of 51 and 67 mm. The fittings are conical and only partly provided with grooves. The end of the spring wire will be bent straight. The fittings will be pressed into the spring and turned a quarter turn. The end of the spring wire will be fixed to the fitting with a clamp plate. This prevents heating the end of the powder coated springs, which improves the production environment (exhaust). The end-product will keep its high-quality appearance.



SPRING FILLER

H.D. polyethylene,
for 152 mm torsion springs

Art. code	kg	vol unit	description
1071-3000	3.45	50 piece (1)	

The spring filler is made of H.D. polyethylene and is suitable for springs with an inside diameter of 152 mm. The outside diameter is 120 mm and the inside diameter is 38 mm. The spring filler is suitable for both 1" and 1 1/4" shaft. Available in length of 3000 mm.



The improved spring filler is made of PVC and now suitable for springs with an inside diameter of 95 mm (new!) and 152 mm. By the 8 x T-legs the filler is substantially more silent than other models. The spring filler is suitable for both 1" and 1 1/4" shaft. Available in length of 3000 mm. Cutting the ends of the filler under an angle, prevents the T-legs from clamping behind the spring fitting.

SPRING FILLER

PVC, for 95 mm and 152 mm torsion springs

Art. code	kg	vol unit	description
1064PVC-3000	5.1	50 piece (1)	95 mm springs
1078PVC-3000	3.5	50 piece (1)	152 mm springs



1064PVC



The solid steel black shaft, diameter 1" (25.4 mm), is provided with a drawn 1/4" key way over full length.

SHAFT

Solid, 1", with key way

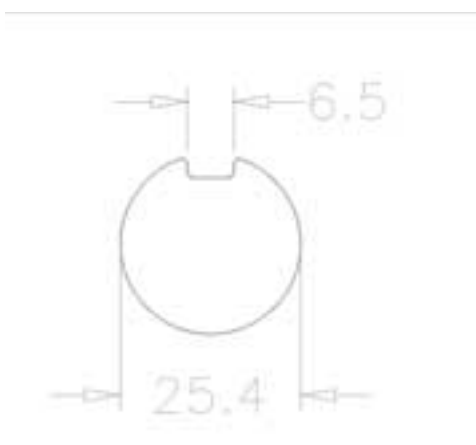


Art. code	kg	vol unit	description
702K-3500	13.3	50 piece (1) L = 3500 mm	
702K-4000	15.2	50 piece (1) L = 4000 mm	
702K-4500	17.1	50 piece (1) L = 4500 mm	
702K-5000	19	50 piece (1) L = 5000 mm	
702K-5500	20.9	50 piece (1) L = 5500 mm	
702K-6000	22.8	50 piece (1) L = 6000 mm	

The steel plated solid shaft, diameter 1" (25.4 mm), is provided with a drawn 1/4" key way over full length.

SHAFT

Solid, 1", with key way, galvanised



Art. code	kg	vol unit	description
702-3500Z	13.3	50 piece (1) L = 3500 mm	
702-4000Z	15.2	50 piece (1) L = 4000 mm	
702-4500Z	17.1	50 piece (1) L = 4500 mm	
702-5000Z	19	50 piece (1) L = 5000 mm	
702-5500Z	20.9	50 piece (1) L = 5500 mm	
702-6000Z	22.8	50 piece (1) L = 6000 mm	

SHAFT

The steel plated solid shaft, diameter 1 1/4" (31.75 mm), is provided with a drawn 1/4" key way over full length.

Solid, 1 1/4", with key way, galvanised

Art. code	kg	vol unit	description
699-4500Z	27.09	25 piece (1)	L = 4500 mm
699-6000Z	36.12	25 piece (1)	L = 6000 mm



SHAFT

The steel plated tubular shaft is provided with a profiled 1/4" key way. For this key way you will need special keys dimensions 3/8"x1/4". The tubular shaft is 3.0 mm thick. The shaft can be used for all lift systems up to a door size of 5000x4200 mm (wxh) or a max. door weight of 300 kg.

Tube, 1", with key way, galvanised

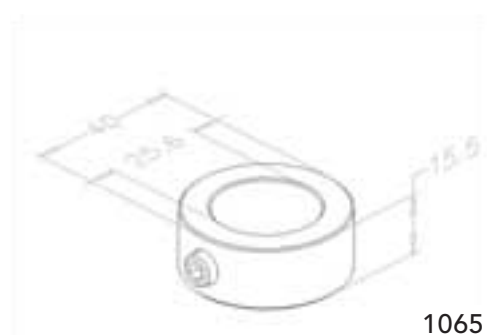
Art. code	kg	vol unit	description
705GB-3000	5.19	50 piece (1)	L = 3000 mm
705GB-3250	5.62	50 piece (1)	L = 3250 mm
705GB-3500	6.05	50 piece (1)	L = 3500 mm
705GB-4000	6.92	50 piece (1)	L = 4000 mm
705GB-4250	7.35	50 piece (1)	L = 4250 mm
705GB-4500	7.78	50 piece (1)	L = 4500 mm
705GB-5000	8.65	50 piece (1)	L = 5000 mm
705GB-5500	9.52	50 piece (1)	L = 5500 mm
705GB-6000	10.38	50 piece (1)	L = 6000 mm
705GB-7000	12.11	50 piece (1)	L = 7000 mm



SET COLLAR

The 1" nylon set collar has a 25.8 mm inside diameter, including M8 fixing screw which can be tightened max. 4 Nm. The 1" steel plated set collar has a 25.5 mm inside diameter, including 5/16" fixing screw. The 1 1/4" steel plated set collar has a 31.8 mm inside diameter, including 5/16" fixing screw. Heavier model (1065COL) of plated steel for a 1" shaft. The ring has an external diameter of 45 mm and a width of 16 mm. On one side the ring is equipped with a 2 mm brush (external diameter 32 mm) that adjusts perfectly with the inner ring of a 1" bearing. The adjustment ring is equipped with an M6 inbus bolt.

Art. code	kg	vol unit	description
1065	0.1	200 piece (1)	steel, 1"
1065-5/4	0.15	200 piece (1)	steel, 1 1/4"
1065NYL	0.1	200 piece (1)	nylon, 1"
1065COL	0.1	200 piece (1)	steel, 1" reinforced with collar



1065

The steel plated square keys are made of plated steel and have the dimensions 1/4"x1/4". The keys are suitable for all solid shafts with 1/4" key way.

SQUARE KEY

1/4"x1/4"



Art. code	kg	vol unit	description
700A-38	1.5	1000 p.100	38 mm, straight
700A-75	2.6	1000 p.100	75 mm, straight
700A-1000	40	1000 p.100	1000 mm, bent
700B-75	2.6	1000 p.100	75 mm, bent
700B-110	3.8	1000 p.100	110 mm, bent

The steel plated square keys are made of plated steel and have the dimensions 3/8"x1/4". The keys are suitable for the 1" tubular shafts with 1/4" key way.

SQUARE KEY

1/4"x3/8"

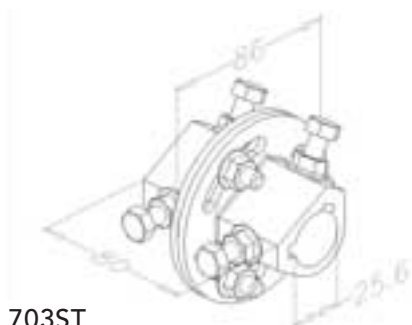


Art. code	kg	vol unit	description
711A-38	1.8	1000 p.100	38 mm, straight
711A-75	2.1	1000 p.100	75 mm, straight
711A-1000	50	1000 p.100	1000 mm, straight
712B-75	3.5	1000 p.100	75 mm, bent

These cast steel couplers are plated (galvanised) afterwards, making them attractive to see. As cast steel is approximately 20% stronger than cast iron, the walls and the flanges of the new couplers could be somewhat thinner, and still be stronger. The 1" coupler (code 703ST) is plated gold, the 1 1/4" coupler is plated silver. The coupler's flanges are attached together by means of three metric M8 set-screws/nuts and both coupler halves are equipped with two M8 bolts and a con-tran-ut (both key 13). The black couplerhalf in combination with a silver 1 1/4" couplerhalf forms code 702ST-1/2. This combination is suitable for connecting a 1" shaft with a 1 1/4" shaft, which can be used for a chain hoist or electrical operator installation.

COUPLER

Adjustable, cast-steel



703ST

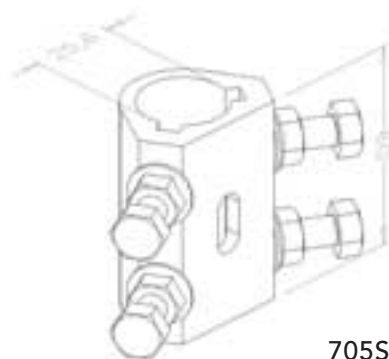


Art. code	kg	vol unit	description
703ST	0.71	20 piece (1)	1", gold
704ST	0.71	20 piece (1)	1 1/4", silver
702ST-1/2	0.71	20 piece (1)	1" > 1 1/4", black/silver

COUPLER

Non-adjustable, cast-steel

Art. code	kg	vol unit	description
705ST60	0.51	20 piece (1)	1", L = 60 mm, gold
705ST100	0.51	20 piece (1)	1", L = 100 mm, gold
706ST100	0.75	20 piece (1)	1 1/4", L = 100 mm, silver

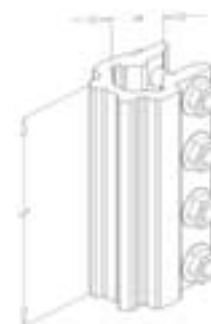


705ST60

COUPLER

Non-adjustable, alu

Art. code	kg	vol unit	description
708-120	0.4	50 piece (1)	1", L = 120 mm
708-90	0.3	50 piece (1)	1", L = 90 mm



708-120

TORSION SPRINGS

Standard lengths, galvanised

Art. code	kg	vol unit	description
VL50x1x3250GS	17.6	5 piece (1)	5.0x51x3250 mm, LHW
VR50x1x3250GS	17.6	5 piece (1)	5.0x51x3250 mm, RHW
VL55x1x3250GS	19.5	5 piece (1)	5.5x51x3250 mm, LHW
VR55x1x3250GS	19.5	5 piece (1)	5.5x51x3250 mm, RHW
VL60x1x3000GS	5.5	5 piece (1)	6.0x51x3000 mm, LHW
VR60x1x3000GS	5.5	5 piece (1)	6.0x51x3000 mm, RHW
VL65x2x3000GS	27.7	5 piece (1)	6.5x67x3000 mm, LHW
VR65x2x3000GS	27.7	5 piece (1)	6.5x67x3000 mm, RHW
VL70x2x3250GS	32.4	5 piece (1)	7.0x67x3250 mm, LHW
VR70x2x3250GS	32.4	5 piece (1)	7.0x67x3250 mm, RHW



The galvanized spring wire, of which the torsion springs are made, is according to DIN17223, category C. The spring wire has, after the coiling, received a heat treatment. In the subscription of the torsion springs we are giving: the coiling, the wire size, the inside diameter (new 67 mm!), the length and the treatment of the wire (GS).

The untreated (natural or black) spring wire, of which the torsion springs are made, is according to DIN17223, category C. The spring wire has, after the coiling, received a heat treatment. In the subscription of the torsion springs we are giving: the coiling, the wire size, the inside diameter, the length and the treatment of the wire (NS).

TORSION SPRINGS

Standard lengths, natural



Art. code	kg	vol unit	description
VL50x1x3250NS	17.6	5 piece (1)	5.0x51x3250 mm, LHW
VR50x1x3250NS	17.6	5 piece (1)	5.0x51x3250 mm, RHW
VL55x1x3250NS	19.5	5 piece (1)	5.5x51x3250 mm, LHW
VR55x1x3250NS	19.5	5 piece (1)	5.5x51x3250 mm, RHW
VL60x1x3000NS	19.8	5 piece (1)	6.0x51x3000 mm, LHW
VR60x1x3000NS	19.8	5 piece (1)	6.0x51x3000 mm, RHW
VL65x2x3000NS	23.4	5 piece (1)	6.5x67x3000 mm, LHW
VR65x2x3000NS	23.4	5 piece (1)	6.5x67x3000 mm, RHW
VL70x2x3250NS	32.4	5 piece (1)	7.0x67x3250 mm, LHW
VR70x2x3250NS	32.4	5 piece (1)	7.0x67x3250 mm, RHW
VL65x3x3250NS	41.4	5 piece (1)	6.5x95x3250 mm, LHW
VR65x3x3250NS	41.4	5 piece (1)	6.5x95x3250 mm, RHW
VL70x3x3000NS	41.4	5 piece (1)	7.0x95x3000 mm, LHW
VR70x3x3000NS	41.4	5 piece (1)	7.0x95x3000 mm, RHW
VL75x3x3250NS	48.3	5 piece (1)	7.0x95x3250 mm, LHW
VR75x3x3250NS	48.3	5 piece (1)	7.0x95x3250 mm, RHW
VL80x3x3250NS	51.7	5 piece (1)	8.0x95x3250 mm, LHW
VR80x3x3250NS	51.7	5 piece (1)	8.0x95x3250 mm, RHW
VL85x3x2500NS	42.5	5 piece (1)	8.5x95x2500 mm, LHW
VR85x3x2500NS	42.5	5 piece (1)	8.5x95x2500 mm, RHW
VL85x3x3000NS	51	5 piece (1)	8.5x95x3000 mm, LHW
VR85x3x3000NS	51	5 piece (1)	8.5x95x3000 mm, RHW
VL90x3x3000NS	54.2	5 piece (1)	9.0x95x3000 mm, LHW
VR90x3x3000NS	54.2	5 piece (1)	9.0x95x3000 mm, RHW
VL95x3x3250NS	62.5	5 piece (1)	9.5x95x3250 mm, LHW
VR95x3x3250NS	62.5	5 piece (1)	9.5x95x3250 mm, RHW
VL75x6x3000NS	69.3	5 piece (1)	7.5x152x3000 mm, LHW
VR75x6x3000NS	69.3	5 piece (1)	7.5x152x3000 mm, RHW
VL80x6x3000NS	74.2	5 piece (1)	8.0x152x3000 mm, LHW
VR80x6x3000NS	74.2	5 piece (1)	8.0x152x3000 mm, RHW
VL85x6x3000NS	79	5 piece (1)	8.5x152x3000 mm, LHW
VR85x6x3000NS	79	5 piece (1)	8.5x152x3000 mm, RHW
VL90x6x3250NS	91	5 piece (1)	9.0x152x3250 mm, LHW
VR90x6x3250NS	91	5 piece (1)	9.0x152x3250 mm, RHW
VL95x6x2750NS	81.4	5 piece (1)	9.5x152x2750 mm, LHW
VR95x6x2750NS	81.4	5 piece (1)	9.5x152x2750 mm, RHW
VL100x6x2750NS	86	5 piece (1)	10.0x152x2750 mm, LHW
VR100x6x2750NS	86	5 piece (1)	10.0x152x2750 mm, RHW
VL105x6x3250NS	107.1	5 piece (1)	10.5x152x3250 mm, LHW
VR105x6x3250NS	107.1	5 piece (1)	10.5x152x3250 mm, RHW
VL110x6x3250NS	112.5	5 piece (1)	11.0x152x3250 mm, LHW
VR110x6x3250NS	112.5	5 piece (1)	11.0x152x3250 mm, RHW
VL115x6x3250NS	118.63	5 piece (1)	11.5x152x3250 mm, LHW
VR115x6x3250NS	118.63	5 piece (1)	11.5x152x3250 mm, RHW

Next to the possibility of supplying standard lengths, we offer our springs fixed-to-size, assembled with spring fittings and if needed spring fillers. Each spring will be delivered with identification label with springdata, your reference and our orderdata. The springs are striped, greased and packed in plastic. Each week Flexi-Force produces these springs configured to order, which eliminates expensive cutting losses. If your order reaches us before monday, the springs will be ready at the end of the week. In the article code we state: LHW/RHW, wire, diameter, length and spring material (PP,NP,GP). The spring material (galvanised, powder-coated or naturel (black)), of which these springs are made is according to DIN 17223, klasse C. The powdercoated springs (PP) are provided with a bleu-grey coating (RAL 5014). This gives the spring a high-quality appearance.



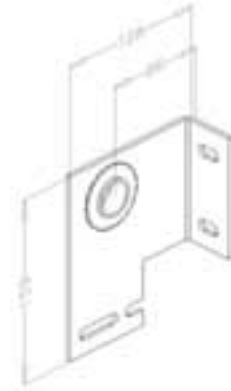
TORSION SPRINGS

Assembled

END BEARING PLATE

The plates are made of 4.0 mm galvanised steel. These end bearing plates are provided with 1" (25.4 mm) bearing installed and provided with slotted holes suited for installation to the horizontal tracks. Distance from wall flange to bearing centre differs per article number.

Art. code	kg	vol unit	description
305-8	1.5	50 pair (2)	heart distance 3 3/8" - 86 mm
307-8	1.7	50 pair (2)	heart distance 4 3/8" - 111 mm
308-8	2.5	50 pair (2)	heart distance 5" - 127 mm
309-8	2.8	50 pair (2)	heart distance 6" - 152 mm



305-8 LH

END BEARING PLATE

Improved

Art. code	kg	vol unit	description
305-4B	1.5	40 pair (2)	heart distance 3 3/8" - 86 mm
306-4B	1.7	40 pair (2)	heart distance 4 3/8" - 111 mm
307-4B	2.5	40 pair (2)	heart distance 5" - 127 mm
308-4B	2.8	40 pair (2)	heart distance 6" - 152 mm



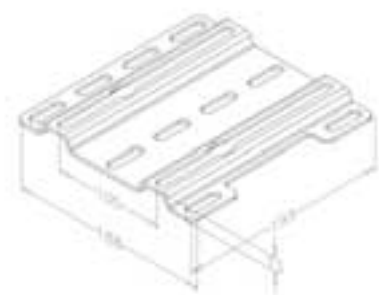
305-4B RH

WALL PLATE

Galvanised, steel 3.0 mm

Art. code	kg	vol unit	description
321WAL	0.75	50 piece (1)	

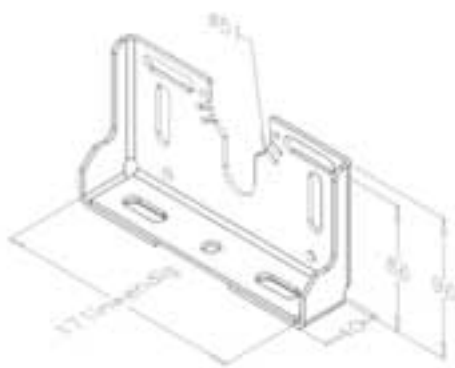
The plate is made of 3.0 mm galvanised steel. With help of several slotted holes and ribs in this wall plate the basic bearing plate, article number 322BAS, is easy to adjust on the right width and height.



The plate is made of 3.0 mm galvanised steel. This plate is applicable as end or intermediate bearing plate. By the several offsets a rigid bearing plate is given. The hole for the bearing is 50.8 mm. For sizes over 86 mm to max. 152 mm this basic bearing plate is suitable for installing the bearing plate 323LAG. The basic bearing plate is also applicable as an adjustable plate for the spring break device.

BEARING PLATE

Base, excl. bearing

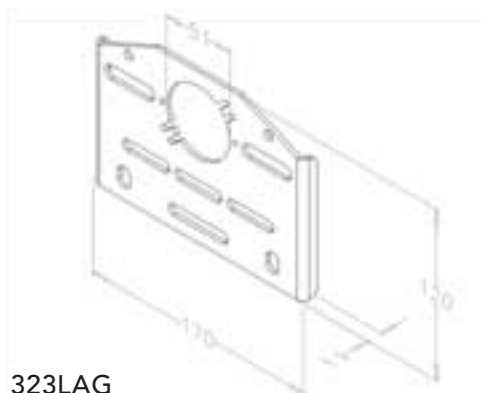


Art. code	kg	vol unit	description
322BAS	0.55	50 piece (1)	heart distance 86 mm

The plate is made of 3.0 mm galvanised steel. By the offsets a rigid bearing plate is given. The hole for the bearing is 50.8 mm. The slotted holes enable a freely adjustment for the basic bearing plate 322BAS. The plate is also applicable as bearing plate on the rear of horizontal low head-room tracks. The plate is also available with installed 1" bearing (USA-B), article code 323LAG-B.

BEARING PLATE

Adjustable heart distance



323LAG

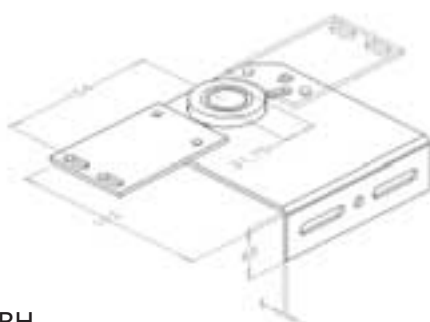


Art. code	kg	vol unit	description
323LAG	0.37	50 piece (1)	excl. bearing
323LAG-B	0.52	50 piece (1)	incl. 1" bearing

The bearing plates are made of 4.0 mm galvanised steel. The installed bearing has an outside diameter of 64 mm (article code USA-C). The plates are provided with slotted holes in the mounted strips suitable for installation to the horizontal tracks.

END BEARING PLATE

Incl. 1 1/4" bearing



RH



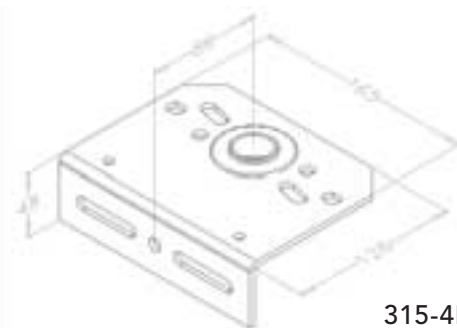
Art. code	kg	vol unit	description
318-4CP	2.5	25 pair (2)	heart distance 6" - 152 mm

BEARING PLATE

The plates are made of 4.0 mm galvanised steel. These bearing plates are provided with 1" (25.4 mm) bearing installed and provided with several holes for installation of several kind of spring fittings. The distance from wall flange to bearing centre differs per article number.

Incl. 1" bearing

Art. code	kg	vol unit	description
315-4B	0.85	40 piece (1)	heart distance 3 3/8" - 86 mm
316-4B	0.95	40 piece (1)	heart distance 4 3/8" - 111 mm
317-4B	1.05	40 piece (1)	heart distance 5" - 127 mm
318-4B	1.15	40 piece (1)	heart distance 6" - 152 mm



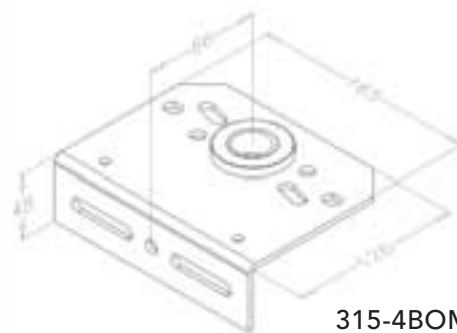
315-4B

BEARING PLATE

The plates are made of 4.0 mm galvanised steel. These bearing plates are provided with a reversed 1" (25.4 mm) bearing installed and provided with several holes for installation to several kind of spring fittings. The distance from wall flange to bearing centre differs per article number.

Incl. 1" bearing reversed

Art. code	kg	vol unit	description
315-4BOM	0.85	40 piece (1)	heart distance 3 3/8" - 86 mm
316-4BOM	0.95	40 piece (1)	heart distance 4 3/8" - 111 mm
317-4BOM	1.05	40 piece (1)	heart distance 5" - 127 mm
318-4BOM	1.15	40 piece (1)	heart distance 6" - 152 mm



315-4BOM

BEARING PLATE

The plate is made of 4.0 mm galvanised steel. The installed bearing has an outside diameter of 64 mm (article code USA-C) The bearing plate is provided with several holes for installation of several kind of spring fittings.

Incl. 1 1/4" bearing

Art. code	kg	vol unit	description
318-4C	1.15	25 piece (1)	heart distance 6" - 152 mm



The plates are made of 4.0 mm galvanised steel. The hole for bearing to install is 50.8 mm. These plates are provided with several holes for installation of several kind of spring fittings. The distance from wall flange to bearing centre differs per article number.

BEARING PLATE

Excl. bearing



315-4N

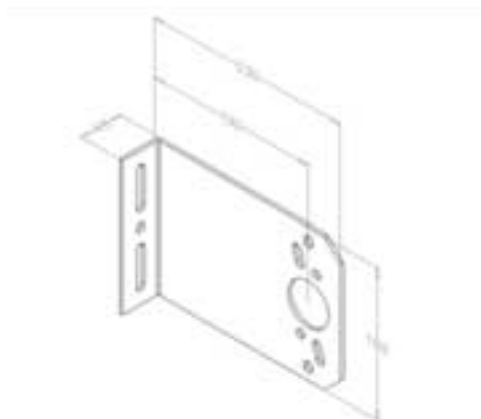


Art. code	kg	vol unit	description
315-4N	0.85	40 piece (1)	heart distance 3 3/8" - 86 mm
316-4N	0.95	40 piece (1)	heart distance 4 3/8" - 111 mm
317-4N	1.05	40 piece (1)	heart distance 5" - 127 mm
318-4N	1.15	40 piece (1)	heart distance 6" - 152 mm

The plate is made of 4.0 mm galvanised steel. The hole for the bearing to install is 50.8 mm. The bearing plate is provided with several holes for installation of several kind of spring fittings.

BEARING PLATE

Excl. bearing

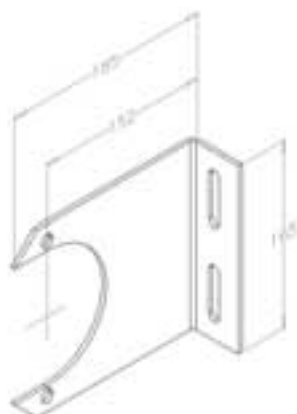


Art. code	kg	vol unit	description
320-4	1.15	20 piece (1)	heart distance 190 mm

The plate is made of 4.2 mm galvanised steel. This intermediate plate has to be used with "duplex" springs when inside spring is longer than outside spring.

MOUNTING PLATE

For "duplex" springs



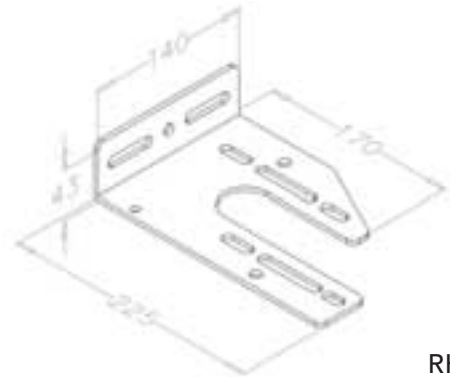
Art. code	kg	vol unit	description
UP-2-6	1	50 piece (1)	heart distance 6" - 152 mm

MOUNTING PLATE

The plate is made of 4.0 mm galvanised steel. The dimension of the plate is 140x223 mm. The plate is available in right and left hand flanged model, therefore also suitable as adjustable end bearing plate.

Universal

Art. code	kg	vol unit	description
USA-8LH	0.8	50 piece (1)	adjustable heart distance 76-152 mm
USA-8RH	0.8	50 piece (1)	adjustable heart distance 76-152 mm



RH

BEARING RETAINER

The retainer is made of 3.0 mm galvanised steel. The centre line of the slotted holes (10x17 mm) for fixing onto an end or intermediate plate amounts to 82 mm.

For bearings with outside diameter 50.8 mm

Art. code	kg	vol unit	description
325	0.12	200 piece (1)	



BEARING

This bearing is suitable for installing in bearing plates or stationary spring fittings. Suitable for residential and industrial overhead doors. The inside diameter is 25.6 mm and the flange diameter is 54.0 mm.

1"

Art. code	kg	vol unit	description
USA-B	0.12	200 piece (1)	outside diameter 50.8 mm



This bearing is suitable for installing in bearing plates or stationary spring fittings. Suitable for residential and industrial overhead doors. The inside diameter is 31.8 mm and the flange diameter is 54.0 mm. The outside diameter is the same as bearing with article code USA-B.

BEARING

1 1/4"

Art. code	kg	vol unit	description
USA-A	0.2	150 piece (1)	outside diameter 50.8 mm



This bearing is suitable for installing in bearing plates (installed in bearing plate article code 318-4C and 318-4CP) or in the 6" stationary spring fitting in 1 1/4" design. Suitable for industrial overhead doors. The inside diameter is 31.8 mm and the flange diameter is 68.0 mm.

BEARING

1 1/4"

Art. code	kg	vol unit	description
USA-C	0.26	100 piece (1)	outside diameter 64.0 mm

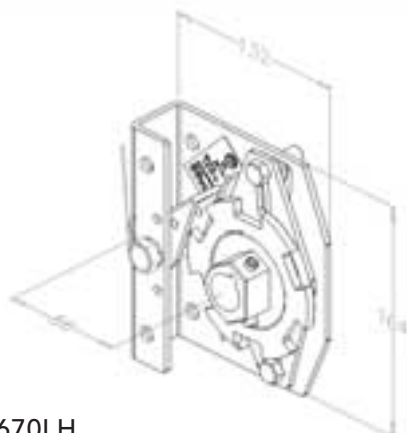


The spring break device is approved up to 210 Nm by TÜV/BG under no. 94073 and is suitable for one torsion spring. The size of the wall flange to the centre of the 1" bearing is 86 mm. For sizes bigger than 86 mm, to max. 152 mm, you have to use the spring break device in combination with the adjustable plate article code 661 or 322BAS. For more information see our manual.

SPRING BREAK DEVICE

For springs 1 3/4"-6"

Art. code	kg	vol unit	description
670LH	1.9	25 piece (1)	
670RH	1.9	25 piece (1)	



670LH

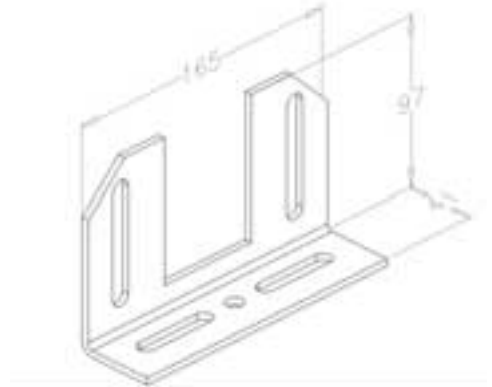


ADJUSTABLE PLATE

Necessary if size of wall flange to centre line of 1" bearing is over 86 mm to 152 mm max. Complete with 2 bolts M10x25 mm and flanged nuts M10.

For spring break device 670

Art. code	kg	vol unit	description
661	0.55	50 piece (1)	

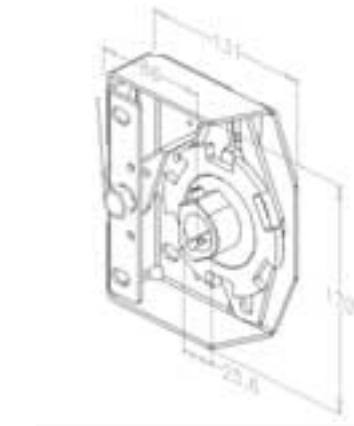


SPRING BREAK DEVICE

Reinforced

The spring break device is approved up to 210 Nm by TÜV/BG under no. 98098 and is suitable for one torsion spring. The size of the wall flange to the centre of 1" bearing is 86 mm. For sizes bigger than 86 mm, to max. 152 mm, you have to use the spring break device in combination with the adjustable plate article code 322BAS. When using 6" spring we advise you to use this, with flanges, reinforced model and at the size of 152 mm to use the reinforced angle article code 674HOEK. The spring break device is also available in 1 1/4" model. For more information see our manual.

Art. code	kg	vol unit	description
675LH	1.8	25 piece (1)	1 3/4"-6" springs, 1" bearing
675RH	1.8	25 piece (1)	1 3/4"-6" springs, 1" bearing
675LH-S/4	1.8	25 piece (1)	6" springs, LH, 1 1/4" bearing
675RH-S/4	1.8	25 piece (1)	6" springs, RH, 1 1/4" bearing



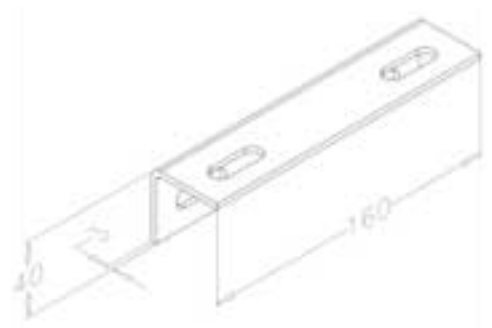
675RH

ANGLE

For 675LH/RH (1" and 1 1/4") with 322BAS

Angle made of galvanised steel. The dimensions of this angle are 40x40x3 mm and the length is 160 mm. This angle is required as reinforcement of spring brake device 675LH/RH in combination with adjustable plate 322BAS in case of the maximum centre line of 152 mm.

Art. code	kg	vol unit	description
674HOEK	0.25	100 piece (1)	



SWITCH

Switch applicable for installation on spring break device code 670LH/RH and 675LH/RH. Advised on electrically operated doors in order to prevent damage in case of spring breakage. Supply includes 3 connected wires of 0.3 metre length. Switch class is IP67 water resistant.

For mounting on spring
break device

Art. code	kg	vol unit	description
677-67	0.03	50 piece (1)	IP67



The console is made of 3.0 mm galvanised steel. The console has 2 slotted hole for fixing (approx. 1 metre above the opening) onto the vertical angle and 2 long slotted holes for fixing 2 bearing plates where in between the cable drum very good can be supported. For dockshelter doors.

DS-MOUNTING PLATE

Universal for 2 bearing plates

Art. code	kg	vol unit	description
330CON	1.35	75 piece (1)	

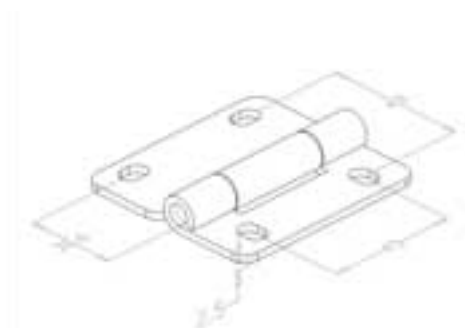


The hinge is made of 2.5 mm plated steel. The supply includes installed pin. The hinge is provided with slotted holes 7x9 mm. The horizontal centre of line of the holes is 45 mm. Suitable for sandwich panels.

INTERMEDIATE HINGE

Standard

Art. code	kg	vol unit	description
450HZ	0.12	500 piece (1)	

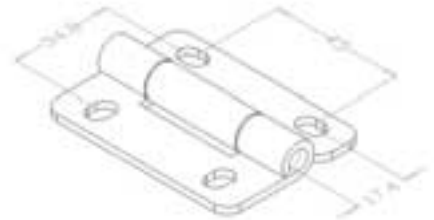


INTERMEDIATE HINGE

Short top blade, for glazed panels

The hinge is made of 2.5 mm plated steel. The supply includes installed pin. The hinge is provided with slotted holes 7x9 mm. The horizontal centre line of the holes is 45 mm. The total height of the hinge blades is 50 mm.

Art. code	kg	vol unit	description
450HZ50	0.12	500 piece (1)	



INTERMEDIATE HINGE

With 10 mm lengthened top blade

The hinge is made of 2.5 mm plated steel. The supply includes installed pin. The hinge is provided with slotted holes 7x9 mm. The horizontal centre line of the holes is 45 mm. Suitable for sandwich panels with fingersafety.

Art. code	kg	vol unit	description
450HZ+10	0.14	500 piece (1)	

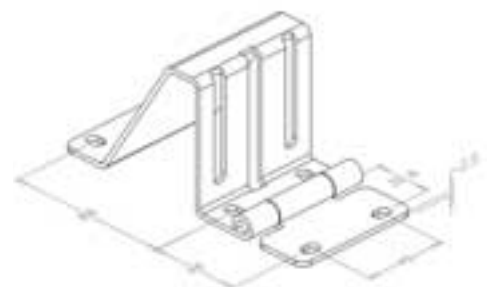


SIDE HINGE

Adjustable

The hinge is made of 2.5 mm plated steel. The supply includes installed pin. The hinge is provided with slotted holes 7x9 mm. The horizontal centre line of the holes is 45 mm. Article code 450CZ is complete and includes side hinge, roller slide of 2.0 mm for 11 mm shaft, 2 bolts and 2 nuts. Also available in parts.

Art. code	kg	vol unit	description
450CZ	0.45	200 piece (1) complete	
450RZ	0.35	200 piece (1) side hinge	
450SZ	0.12	200 piece (1) slide, for 11 mm shaft	



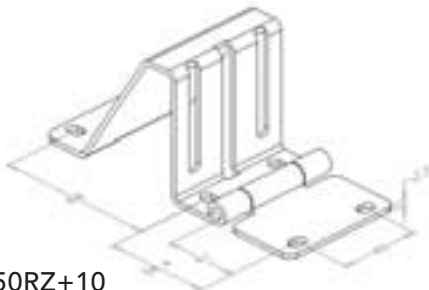
450RZ

SIDE HINGE

Adjustable, with 10 mm lengthened top blade

The hinge is made of 2.5 mm plated steel. The supply includes installed pin. The hinge is provided with slotted holes 7x9 mm. The horizontal centre line of the holes is 45 mm. Article code 450CZ+10 is complete and includes side hinge roller slide of 2.0 mm for 11 mm shaft, 2 bolts and 2 nuts. Suitable for sandwich panels with fingersafety. Also available in parts.

Art. code	kg	vol unit	description
450CZ+10	0.45	200 piece (1)	complete
450RZ+10	0.35	200 piece (1)	side hinge
450SZ	0.12	200 piece (1)	slide, for 11 mm shaft



450RZ+10

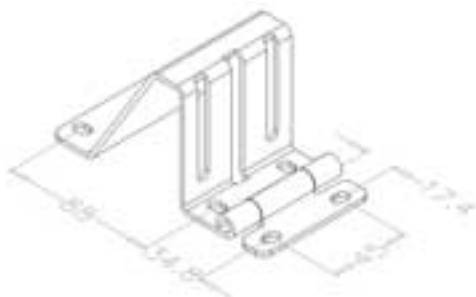


The hinge is made of 2.5 mm plated steel. The supply includes assembled pin. The hinge is provided with slotted holes 7x9 mm. The horizontal centre line of the holes is 45 mm. Article code 450CZ50 is complete and includes side hinge, roller slide of 2.0 mm for 11 mm shaft, 2 bolts and 2 nuts. Applicable for glazed sections because of shortened blade. Also available in parts.

SIDE HINGE

Adjustable, with short top blade, for glazed panels

Art. code	kg	vol unit	description
450CZ50	0.35	200 piece (1)	complete
450RZ50	0.35	200 piece (1)	side hinge
450SZ	0.12	200 piece (1)	slide, for 11 mm shaft



450RZ50

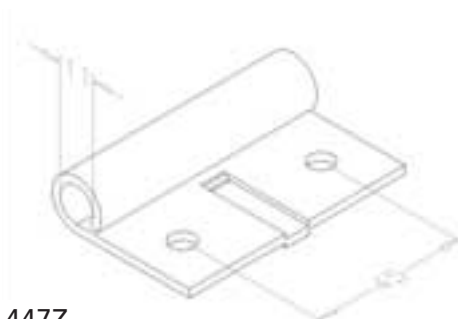


Made of 2.5 mm plated steel having a recess and suitable for several side hinges and certain type of bottom brackets.

SLIDE

For roller shaft

Art. code	kg	vol unit	description
447Z	0.12	200 piece (1)	11 mm
446Z	0.12	200 piece (1)	12 mm
447DOUB	0.2	200 piece (1)	11 mm, double



447Z

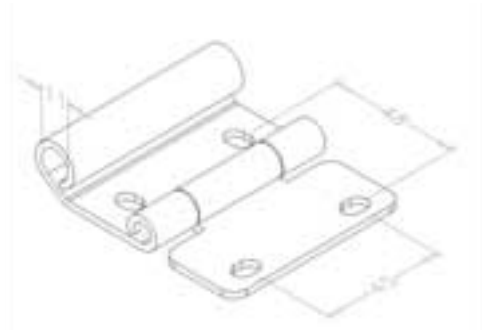


SIDE HINGE

The hinge is made of 2.5 mm plated steel. The supply includes assembled pin. The hinge is provided with slotted holes 7x9 mm. The centre line of the horizontal holes is 45 mm. The integrated roller slide is suitable for 11 mm shaft.

Non-adjustable,
for tracks without wedge

Art. code	kg	vol unit	description
450DS	0.2	200 piece (1)	



INTERMEDIATE HINGE

The hinge is made of 3.0 mm plated steel. The supply includes assembled pin. The hinge is provided with a recessed pivoting pin and therefore only suitable in combination with tandem side hinge 470RZV.

Recessed pivoting pin

Art. code	kg	vol unit	description
470HZV	0.3	100 piece (1)	



SIDE HINGE

The hinge is made of 3.0 mm plated steel. The supply includes assembled hollow pin for 12 mm roller shaft. The hinge is only suitable in combination with tandem roller article code 594 and intermediate hinge article code 470HZV.

For tandem roller type 594
with 12 mm roller shaft

Art. code	kg	vol unit	description
470RZV	0.3	100 piece (1)	

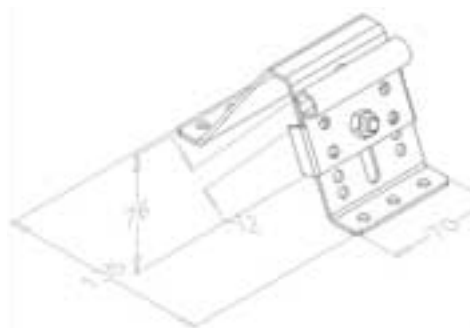


The bracket is made of 2,5 mm galvanised steel. Article code 415CZ is complete and includes bracket, roller slide of 2.0 mm for 11 mm shaft, two M6 bolts and two nuts. The vertical centre line of the holes is 120 mm.

TOP ROLLER BRACKET

Adjustable, assembled

Art. code	kg	vol unit	description
415CZ	0.45	100 piece (1)	11 mm shaft



The bracket is made of 2.5 mm plated steel. This top roller carrier is identical to side hinge 450RZ, however without top blade and roller slide. For the roller slide see code 450SZ, 447Z or 446Z.

TOP ROLLER BRACKET

Support, excl. top blade/slide

Art. code	kg	vol unit	description
450BZ	0.2	100 piece (1)	

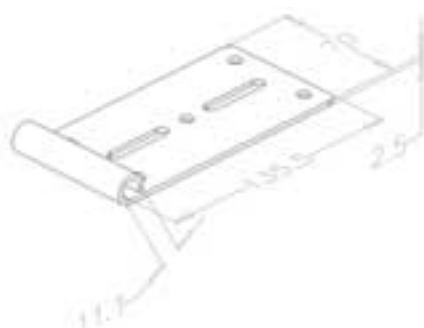


The bracket is made of 2.5 mm galvanised steel. This top roller bracket is not adjustable. Suitable for low headroom system residential and industrial overhead doors.

TOP ROLLER BRACKET

For low headroom

Art. code	kg	vol unit	description
417	0.2	200 piece (1)	11 mm shaft



BOTTOM BRACKET

Adjustable

This steel galvanised bottom bracket has a roller slide which is not fixed part of the construction. The roller slide can be installed (with roller) separately. The lifting cable is connected to the bracket with an eye bolt which enables adjusting the cable length. The cable pulley of this bracket has a large radius and has a smooth surface. One pair brackets is suitable for a door weight of 275 kg and is being delivered including 2 M10 eye bolts (code 1050B), 4 nuts, 2 roller slides and 4 self tapping screws.

Art. code	kg	vol unit	description
427SX	1.5	50 pair (2)	11 mm shaft, 275 kg



RH

BOTTOM BRACKET

Adjustable, aluminium

The bracket is made of aluminium. The bottom bracket is suitable for inside cable fixing for 2" tracks. The advised max. door weight is 500 kg. The supply includes M10 eye bolts, nuts and clevis pins. The brackets as basic plate are suitable for outside cable fixing in combination with bracket article code 437KORT and eventual with adjusting bracket article code 437VERS.

Art. code	kg	vol unit	description
428TAI	1.2	40 pair (2)	11 mm shaft, 500 kg



LH

BOTTOM BRACKET

Outside cable fixing, LHR

The shortcut bracket is made of 4.0 mm plated steel. The bracket is applicable separately or in combination with bottom bracket article code 428TAI, eventual with adjusting bracket 437VERS. The advised max. door weight is 400 kg.

Art. code	kg	vol unit	description
437KORT	1.9	40 pair (2)	11 mm shaft, 400 kg

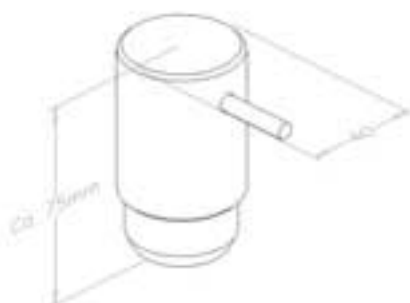


SWITCH

The switch is used on a bottom bracket with cable adjustment on a power operated door. When the cable tension drops, because of a sudden decrease of the door weight on the cable, the switch operates a signal which stops the motor. The switch is an extra safety device and can be used for instance with our bottom bracket 428TAI. The switch is delivered without eye bolt.

Slack cable safety device

Art. code	kg	vol unit	description
6901SCHA	0.28	25 piece (1)	



The cable adjusting bracket is made of plated steel. By placing the M10 eye bolt (article code 1050B) in the round part and using nuts the lifting cable can be adjusted in length. The cable adjusting bracket can pivot thanks to the pin. Advised max. door weight is 400 kg.

CABLE ADJUSTING BRACKET

For using with 437, 437KORT

Art. code	kg	vol unit	description
437VERS	0.3	100 piece (1)	



The bracket is made of 3.0 mm steel. The bottom bracket is suitable for inside cable fixing for 2" tracks. The supply includes clevis pins and cotters (article code 1042). The advised max. door weight is 500 kg.

BOTTOM BRACKET

Non-adjustable

Art. code	kg	vol unit	description
429	1.2	50 pair (2)	11 mm shaft, 500 kg



LH



BOTTOM BRACKET

The bracket is made of 3.0 mm galvanised steel. The bracket is suitable for inside cable fixing for 3" (76.2 mm) tracks. The supply includes clevis pins and cotters (article code 1042). The advised max. door weight is 500 kg.

Non-adjustable, for 3" tracks

Art. code	kg	vol unit	description
430	2.4	50 pair (2)	11 mm shaft, 500 kg



BOTTOM BRACKET

The bracket is made of 3.0 mm galvanised steel. The bottom bracket is suitable for outside cable fixing for 2" tracks (f.e. with low system). The supply includes clevis pins and cotters (article code 1041). The advised max. door weight is 250 kg.

Outside cable fixing, LHR

Art. code	kg	vol unit	description
435	2.2	50 pair (2)	11 mm shaft, 250 kg

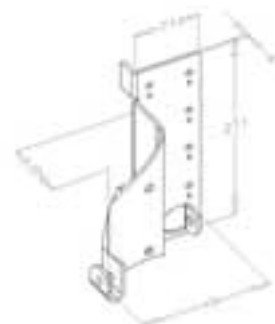


BOTTOM BRACKET

The heavy duty bracket is made of 4.0 mm galvanised steel. The bottom bracket is suitable for outside cable fixing for 2" tracks (f.e. with low system). The supply includes clevis pins and cotters (article code 1042). The advised max. door weight is 400 kg.

Outside cable fixing, LHR

Art. code	kg	vol unit	description
437	2.4	30 pair (2)	11 mm shaft, 400 kg

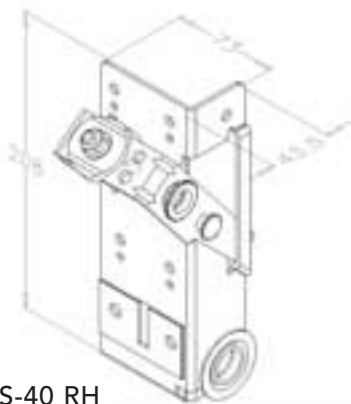


LH

This cable break device can be used in combination with the specially developed vertical angle 915DS. The range of application is for doors up to a door weight of max. 240 kg. The cable can be mounted adjustable as well as fixed. The cable break devices are tested by TÜV (BG-nr. 00024). Article 442INBEU is a simple anti-burglar bracket. For more information see our separate manual on www.flexiforce.nl (downloads).

CABLE BREAK DEVICE

Adjustable cable fixing,
dockshelter doors



442DS-40 RH



Art. code	kg	vol unit	description
442DS-40	1.5	50 pair (2)	panel 40-45 mm
442DS-45	1.5	50 pair (2)	panel from 45 mm
442INBEU	1.5	100 pair (2)	anti-burglar device



The switch, provided with 6 meter wire, is situated in the plastic housing and is already attached to the bracket. The bracket must be mounted onto the baseplate of the cable break device, model 442DS. The lip of the switch falls into the hole which is in the arm of the device. As soon as the arm is turned, caused by a change in the cable tension, the switch is actuated.

SWITCH

For DS cable break device

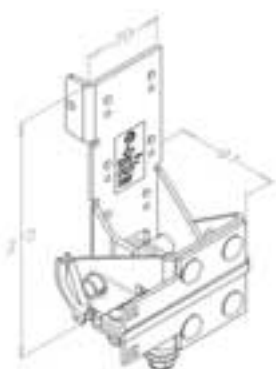
Art. code	kg	vol unit	description
2520SCHA-67K	0.35	50 piece (1)	incl. switch



The device is suitable for 2" track, approved by TÜV/BG under no. 94072, up to 750 kg door weight. The device replaces the bottom bracket and is suitable for 11 mm roller shaft. Cable fixing (non-adjustable) by included M10 bolt/nut. For more information see our separate manual.

CABLE BREAK DEVICE

Non-adjustable cable fixing,
TÜV/BG 750 kg



LH



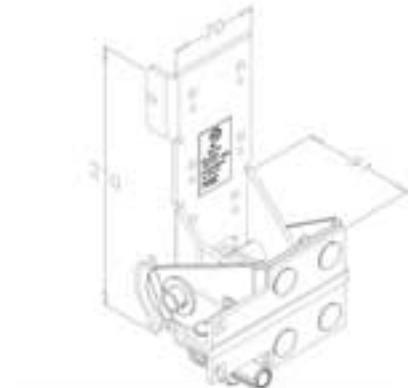
Art. code	kg	vol unit	description
440-600	3.8	50 pair (2)	



CABLE BREAK DEVICE

Adjustable cable fixing,
TÜV/BG 750 kg

Art. code	kg	vol unit	description
440REGL	3.8	50 pair (2)	excl. bolt/nut
440REGL-1040	3.8	50 pair (2)	incl. bolt/nut



LH

COVER

For cable break device
440-600, 440REGL (CE)

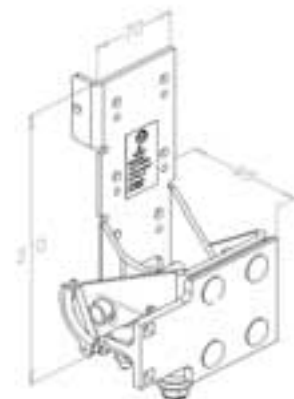
Art. code	kg	vol unit	description
440KAP	0.4	50 piece (1)	plastic, incl. switch



CABLE BREAK DEVICE

Non-adjustable cable fixing,
TÜV/BG 960 kg

Art. code	kg	vol unit	description
440HD	4.4	50 pair (2)	heavy duty



LH

Per pair adjustable cable break device, article code 440REGL, you will need 2 bolts (article code 1040REGL) and 4 nuts (1040M) to adjust the cable. We supply these with article code 1040REGL+M.

BOLT/NUT M16

Hollow, 4 half nuts

Art. code	kg	vol unit	description
1040REGL+M	0.05	50 set	



Steel plated outside hook-up brackets. The brackets are applicable for 2" cable break devices for outside cable fixing. Therefore cable fixing is non-adjustable. Per set 2 brackets, 4 bolts/nuts M8 and 2 shackles. For more information see our separate manual.

STEEL HOOK-UP BRACKET

Outside cable fixing

Art. code	kg	vol unit	description
441MBR	1.3	50 set	6 mm, door 250 kg
441HBR	1.8	50 set	8 mm, door 400 kg



441MBR

Galvanised steel cap for 2" cable break device. The cap is also available with an installed electrical switch (IP67) and 0.5 metre wire connected. The switches are advised for application on electrically operated doors in order to prevent damage in case of cable breakage.

CAP/SWITCH

For cable break device

Art. code	kg	vol unit	description
2507AFD	0.18	100 set	
2507SCHA-67K	0.25	100 set	incl. switch



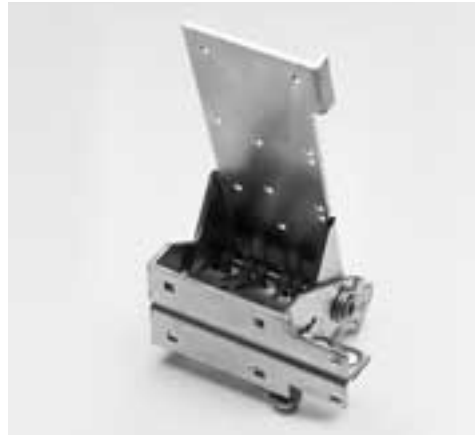
2507AFD

CABLE BREAK DEVICE

The device is suitable for 3" track, approved by TÜV/BG under number 94072, up to 750 kg door weight. The device replaces the bottom bracket and is suitable for 11 mm roller shaft. Cable fixing (non-adjustable) by included M10 bolt/nut. For more information see our separate manual.

3", non-adjustable cable fixing,
TÜV/BG 750 kg

Art. code	kg	vol unit	description
440-3"	6.5	25 pair (2)	for 3" track



LH

STEEL HOOK-UP BRACKET

Plated steel outside hook-up brackets extra heavy duty provided with extra strengthening ribs. The brackets are suitable for 3" cable break devices for outside cable fixing. Therefore the cable is non-adjustable. The max. door weight for an E-operated door with "soft stop" is 700 kg, otherwise it is 700 kg. Per set 2 brackets, 8 bolts/nuts M8 and 2 shackles. For more information see our separate manual.

Outside cable fixing

Art. code	kg	vol unit	description
441BR-3HD	4	25 set	8 mm, door 700 kg



ROLLER

Nylon 2" roller with ball bearing. The outside diameter of the roller is approx. 46.5 mm. Suitable for 2" tracks. The advised max. carrying capacity differs per code.

Nylon, 2", shaft 11 mm,
L = 118 mm

Art. code	kg	vol unit	description
574-100	0.15	200 piece (1)	50 kg carrying capacity
574-60	0.15	200 piece (1)	60 kg carrying capacity



Nylon 2" roller with ball bearing. The outside diameter of the roller is approx. 46.5 mm. Suitable for 2" tracks. The advised max. carrying capacity is 50 kg.

ROLLER

Nylon, 2", shaft 11 mm,
L = 193 mm

Art. code	kg	vol unit	description
575-100	0.2	100 piece (1)	50 kg carrying capacity



Steel plated 2" roller with ball bearing. The outside diameter is approx. 46.0 mm. Suitable for 2" tracks.

ROLLER

Steel galvanised, 2",
shaft 11 mm

Art. code	kg	vol unit	description
571	0.2	200 piece (1) L = 193 mm	
572	0.15	200 piece (1) L = 118 mm	



Nylon 2" roller with ball bearing. Without shaft. Shaft hole 11 mm diameter. The outside diameter is approx. 46.5 mm. Suitable for 2" tracks. The advised max. carrying capacity is 60 kg.

ROLLER

Nylon, 2",
excl. 11 mm roller shaft

Art. code	kg	vol unit	description
573-60	0.05	500 piece (1)	60 kg carrying capacity

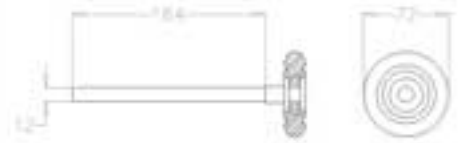


ROLLER

Nylon 3" roller with high quality ball bearing. The outside diameter is approx. 72.0 mm. Suitable for 3" tracks. The advised max. carrying capacity is 150 kg. Steel plated 3" roller with ball bearing. The outside diameter is approx. 72.0 mm. Suitable for 3" tracks.

3"

Art. code	kg	vol	unit	description
578-12-198	0.27	100	piece (1)	nylon, shaft 12 mm, L = 198 mm
579	0.4	200	piece (1)	galvanised, shaft 11 mm, L = 193 mm
579-11-198	0.27	200	piece (1)	nylon, shaft 11 mm, L = 198 mm



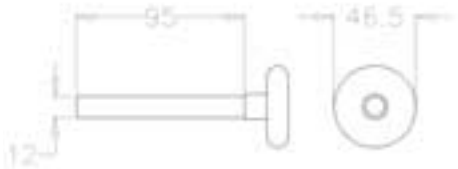
578-11-198

ROLLER

Nylon 2" roller with ball bearing. The outside diameter is approx. 46.5 mm. Suitable for 2" tracks. The advised max. carrying capacity is 60 kg.

Nylon, 2", shaft 12 mm,
L = 118 mm

Art. code	kg	vol	unit	description
584-60	0.15	200	piece (1)	60 kg carrying capacity

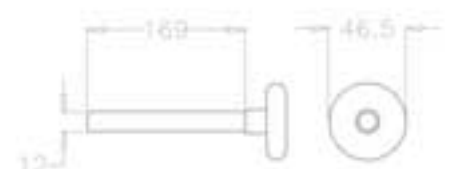


ROLLER

Nylon 2" roller with ball bearing. The outside diameter is approx. 46.5 mm. Suitable for 2" tracks. The advised max. carrying capacity is 60 kg.

Nylon, 2", shaft 12 mm,
L = 193 mm

Art. code	kg	vol	unit	description
585-60	0.22	100	piece (1)	60 kg carrying capacity

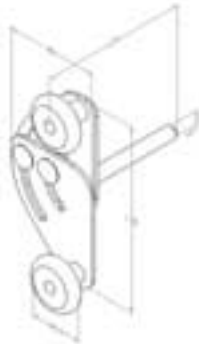


The tandem roller has 2 pieces nylon 2" rollers with ball bearing and 2 adjustable plates of 3.0 mm plated steel.

ROLLER

Tandem, nylon, 2", L = 131 mm

Art. code	kg	vol unit	description
594	0.55	50 piece (1)	shaft 12 mm
596-11	0.55	50 piece (1)	shaft 11 mm



594

The plated steel distance rings can be placed on the shaft of the rollers in order to decrease the tolerance between panels and tracks (walking of the door blade).

DISTANCE RINGS

Galvanised, steel

Art. code	kg	vol unit	description
2066-05	0.005	1000 piece (1)	for 11 mm shaft, w = 5 mm
2066-07	0.007	1000 piece (1)	for 11 mm shaft, w = 7.5 mm
2066-10	0.019	1000 piece (1)	for 11 mm shaft, w = 10 mm
2076-05	0.004	1000 piece (1)	for 12 mm shaft, w = 5 mm
2076-07	0.006	1000 piece (1)	for 12 mm shaft, w = 7.5 mm
2076-10	0.009	1000 piece (1)	for 12 mm shaft, w = 10 mm



The pulley is made of 2 times 1.2 galvanised folded together. The diameter on the pulley is 64 mm. The outside diameter is 77 mm. The inside diameter of the bearing is 10 mm. The advised max. door weight is 75 kg.

CABLE PULLEY

Galvanised steel, 3",
D = 64 mm, d = 10 mm

Art. code	kg	vol unit	description
551	0.13	200 piece (1)	door 75 kg



CABLE PULLEY

Nylon, D = 90 mm, d = 10 mm,
incl. 557BUS

The pulley is made of reinforced nylon and moulded-in ball bearing 6302Z. The max. static load is 540 kg. The bearing has an inner diameter of 17 mm, which can be reduced to 10 mm with the 2 bushes (code 557BUS) with distance breast. The diameter on the pulley is 90 mm. The outside diameter of the pulley is 100 mm. The pulley is suitable for 5 mm cable maximum. The advised max. door weight is 450 kg.

Art. code	kg	vol unit	description
557	0.12	200 piece (1)	door 450 kg



CABLE PULLEY

Galvanised steel,
D = 5" - 102 mm,
incl. M14 bolt/nut

The pulley is made of 2 times 2.0 mm galvanised steel riveted together. The diameter on the pulley is 102 mm. The outside diameter of the pulley is 139 mm. The cable pulley is provided with a ball bearing with installed M14 bolt and nut. The max. door weight is 200 kg.

Art. code	kg	vol unit	description
559	0.8	100 piece (1)	door 200 kg

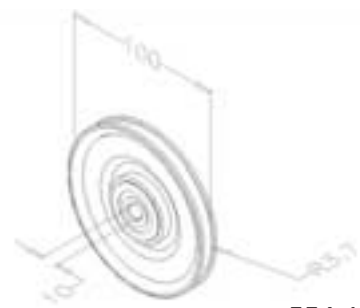


CABLE PULLEY

Galvanised steel

The pulleys are made of plated steel. The high quality production method results in a weldless cable groove. The pulley with outside diameter of 100 mm is provided with ball bearing type 6200ZZ and has an inside diameter of 10 mm. The pulley with outside diameter 140 mm is provided with ball bearing type 6300ZZ and has an inside diameter of 17 mm. By means of 2 bearing bushes, article code 557BUS, the hole for the shaft can be reduced to 10 mm.

Art. code	kg	vol unit	description
554-100	0.25	200 piece (1)	D = 100 mm, d = 10 mm, door 450 kg
554-140	0.55	200 piece (1)	D = 140 mm, d = 17 mm, door 650 kg
557BUS	0.02	200 piece (1)	bearing bush



554-100

The pulleys are made of plated steel. The high quality production method results in a weldless cable groove. The pulleys are provided with ball bearing type 6200ZZ and have an inside diameter of 10 mm. The diameter of these pulleys are applying to the new CE-regulations with regard to cablediameter and pulleydiameter.

CABLE PULLEY

Galvanised steel, CE

Art. code	kg	vol unit	description
570-60	0.14	200 piece (1)	D = 60 mm, d = 10 mm
570-80	0.14	200 piece (1)	D = 80 mm, d = 10 mm, door 345 kg



570-60



The low system end plates for fixing cable pulleys are made of 3 mm galvanised steel having several reinforcing ribs for optimum rigidity. The end plates are suitable for low system and following the roof low system. Pulleys can be mounted outside or under the tracks. The end plates can be supplied with or without installed cable pulleys (code 554-100).

PULLEY PLATE

Galvanised, LHR,
for mounting tracks/pullies

Art. code	kg	vol unit	description
566-3	4.1	50 pair (2)	
566-3ASS	4.5	50 pair (2)	incl. cable pullies 554-100



RH



The low system end plates are provided with assembled cable pulleys (article code 566-3ASS) and also with short bends (article code 2H0645-300LHR and 2H0768-380) and U-plate (article code 569U220). Both bends have at the rear the same length. With this combined system, all the necessary components are assembled in one go, guaranteeing a solid construction for limited head-room of min. 180 mm.

PREASS. TRACK SET

Galvanised, LHR, incl. assembled
cable pullies and short bends

Art. code	kg	vol unit	description
566-3RAIL	8.6	50 pair (2)	



RH



PREASS. TRACK SET

Pre-assembled, LHR,
with long bent 2G1500-380-02

The low system end plates are provided with assembled cable pulleys (article code 566-3ASS) and also with long bends (article code 2H0645-300LHR and 2G1500-380-02) and U-plate (article code 569U220). Both bends have at the rear different length. With this combined system, all the necessary components are assembled in one go, guaranteeing a solid construction for limited head-room of min. 180 mm.

Art. code	kg	vol unit	description
566-554-2G	8.6	50 pair (2)	



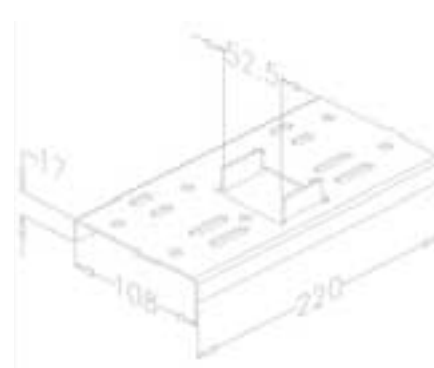
LH

U-PROFILE

Galvanised, LHR, for mounting
hor. track to 5C-profile

The U-profile is made of 2.0 mm galvanised steel, dimensions 220x112 mm. Suitable for assembling double horizontal tracks and C-profile. The lips in the U-profile position the 5C-profile. The hole pattern is corresponding to the LHR pulley plate 566-3.

Art. code	kg	vol unit	description
569U220	0.5	50 piece (1) 2 mm	



CABLE TENSION SET

Incl. spring bracket, cable and
steel pulleys 551

This set keeps tension on the lift cable on electrically and chain operated doors having normal lift or low lift. The complete set consists of assembled spring bracket with installed 3" steel cable pulley, 2 pieces 3" steel cable pulleys with brackets, a mounting bracket, 15 metre cable and 2 cable clamps (code 680). The assembled spring bracket is also individually available. The cable tension set is to special order also available with pulley article code 554-80.

Art. code	kg	vol unit	description
680	2.9	20 set	complete
680EK	2	20 set	spring bracket



This set keeps tension on the lift cable on electrically or chain operated doors having normal lift or low lift. The complete set consists of assembled spring bracket with installed nylon cable pulley, 2 pieces nylon cable pulleys with brackets, a mounting bracket, 15 metre cable and 2 cable clamps. The assembled spring bracket is also individually available.

CABLE TENSION SET

Incl. spring bracket,
cable and nylon pulleys

Art. code	kg	vol unit	description
685CH	2.9	20 set	complete
685NEP	2	20 set	spring bracket

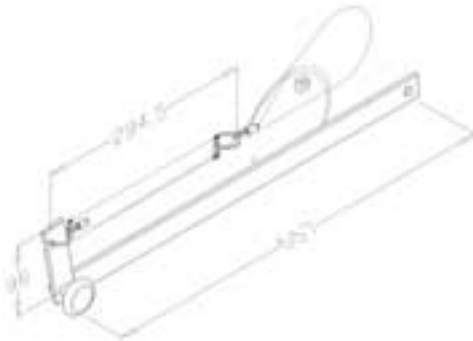


This set keeps tension on the lifting cable on electrically and chain operated doors having standard lift or low headroom lift. The set consists of a galvanised steel lever with fitted roller, extension spring, 10 metre cable and clamp. Easy to fit lever which is connected to the top roller carrier by the fitted roller. The horizontal track must be lengthened on one side with approx. 500 mm. The set is only available in one version and not suitable in combination with cable drum article code FF-NL-32.

CABLE TENSION SET

Complete, incl. steel lever

Art. code	kg	vol unit	description
687	2.9	20 set	



The double nylon cable pulleys are installed on a galvanised bracket and are for cable tension set at low lift system having the springs installed at the rear of the horizontal tracks.

CABLE PULLEY

Nylon, double, incl. bracket

Art. code	kg	vol unit	description
553DOUB+907	0.4	20 piece (1)	

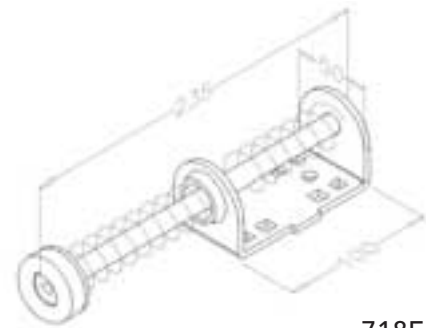


SPRING BUMPER

220 mm

The bumpers are provided with a rubber stop. The spring bumpers are available loose, without fixing material, or with 2 different types of mounting plates including fixing material. (L = code 2090.)

Art. code	kg	vol	unit	description
718	1.15	20	piece (1)	complete with plate 2101
718C	1.15	20	piece (1)	complete with plate 2090
718EPS	0.65	20	piece (1)	excl. plate/accessories

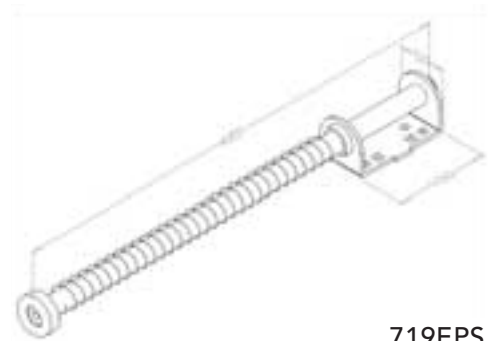


718EPS

SPRING BUMPER

The pushes down spring bumpers are provided with a rubber stop. The extra long spring bumpers are only available without fixing material. The standard long spring bumpers are available loose, without fixing material, or with 2 different types of mounting plates including fixing material. (L = code 2090.)

Art. code	kg	vol	unit	description
719	1.5	15	piece (1)	500 mm, complete with plate 2101
719C	1.5	15	piece (1)	500 mm, complete with plate 2090
719EPS	1	15	piece (1)	500 mm, excl. plate/accessories
719EPS-750	1.5	15	piece (1)	750 mm, excl. plate/accessories



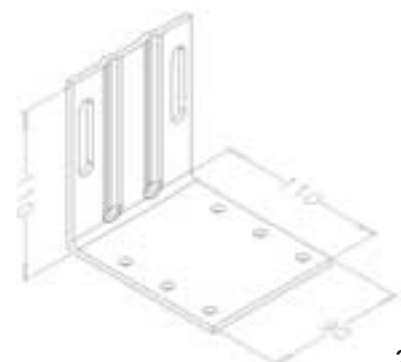
719EPS

MOUNTING PLATES

Galvanised, 4.0 mm

The plates are made of 4.0 mm galvanised steel. The mounting plates are suitable for short or long spring bumpers. The reinforcing ribs in the flange of article code 2090 give an additional strength. (L = 2090 mm.)

Art. code	kg	vol	unit	description
2090	0.5	40	piece (1)	installation to 5C-profiles
2101	0.5	40	piece (1)	installation to angle profiles



2090

The hoist is suitable for 1" (25.4 mm) shaft and comes complete with 8.0 metre hand chain, chain stop, jack shaft sprocket, drive chain and plated frame.

CHAIN HOIST

Ratio 1:3, complete

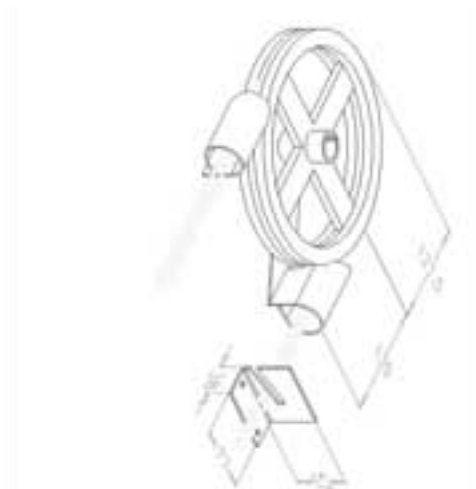


Art. code	kg	vol unit	description
721A	10.5	12 piece (1)	

The hoist is suitable for 1" (25.4 mm) shaft and comes complete with 8.0 metre hand chain, chain stop set collar, and plated frame. Only suitable for high system and vertical system by means of the direct drive onto the shaft.

CHAIN HOIST

Ratio 1:1, complete,
HL and VL doors

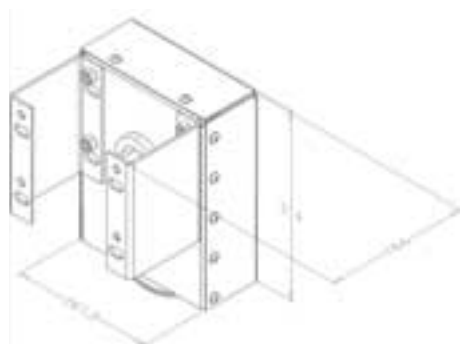


Art. code	kg	vol unit	description
722A	7	16 piece (1)	

The hoist is suitable for 1" (25.4 mm) shaft and comes complete with 8.0 metre hand chain, chain stop and coupler. The chain hoist is compact and suitable for installation directly on the shaft with help of a coupler.

CHAIN HOIST

Ratio 1:4, complete,
mounting on shaft with coupler



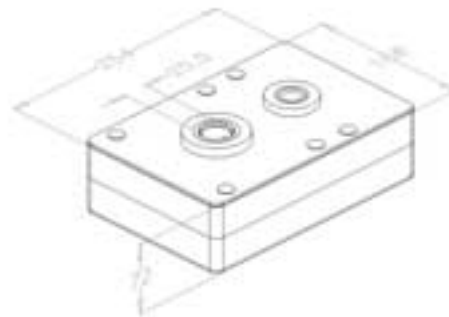
Art. code	kg	vol unit	description
724	10.8	12 piece (1)	

CHAIN HOIST

Ratio 1:4, steel, incl. 8 m hand chain, directly onto shaft

Art. code	kg	vol unit	description
725	5	12 piece (1)	

Cast steel "high-tech" construction. Cast steel toothed wheels, steel bearings, steel side plates, plastic distance holders for low noise. This chain hoist is suitable for 1" (25.4 mm) keyed shaft and is delivered with 8 meter hand chain, chain stop and fixing material. The chain hoist is compact, can be installed directly onto the shaft and is used for bearing plates with a central line of 86 mm and bigger. Fixation to the bearing plates (305-4B etc.) is easy because of the matching holes in the bearing plate.

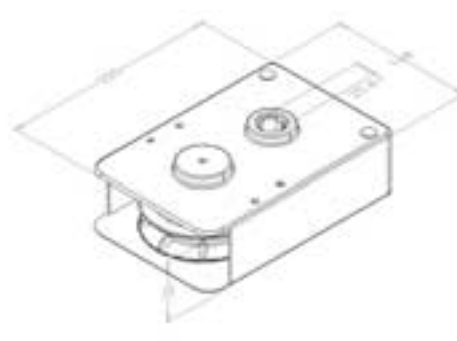


CHAIN HOIST

Ratio 1:4, plastic, excl. chain, installation directly on 1" shaft

Art. code	kg	vol unit	description
726	1.5	12 piece (1)	

The hoist is suitable for 1" (25.4 mm) shaft and comes complete with chain stop and fixing material but without the hand chain (code 723A). The chain hoist is compact and made of high quality plastic. The chain hoist is suitable for installation directly onto the 1" (25.4 mm) shaft. The hoist is suitable for a max. door weight of 275 kg and suitable for bearing plates with a centre line of 86 mm and over. Supremely quiet.

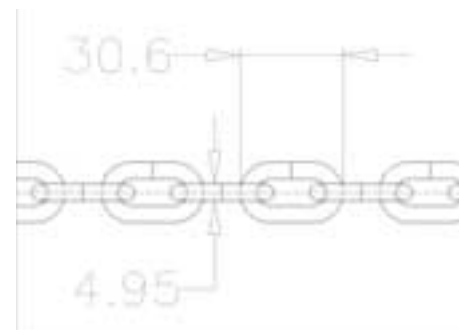


HAND CHAIN

For chain hoist

Art. code	kg	vol unit	description
723A	0.5	150 p.mtr	

The hand chain is suitable for chain hoist article code 721A, 722A, 724, 725 and 726. The dimensions are designed special for these types of chain hoists.



This orange polypropylene pull rope is only available on reels of 220 metre.

PULL ROPE

Polypropylene, 10 mm, orange



Art. code	kg	vol unit	description
1056	0.04	220 p.mtr	

This black polypropylene pull rope is available on reels of 220 metre.

PULL ROPE

Polypropylene, 10 mm, black



Art. code	kg	vol unit	description
1056B	0.04	220 p.mtr	

The clip is made of 4.0 mm galvanised steel. The clip is for fixing pull rope to vertical angle.

ROPE CLIP

Galvanised, 4.0 mm,
for pull rope



Art. code	kg	vol unit	description
1045	1	1000 p.100	

SHACKLE

The shackle code 1044 is suitable for fixing cables to outside hook-up brackets (max. 500 kg). This shackle is recognisable on its black bolt. The shackle code 1047 is suitable for fixing pull rope to bottom bracket (max. 100 kg).

Galvanised, 6.0 mm,
for cable outside

Art. code	kg	vol unit	description
1044	0.04	400 piece (1)	reinforced, <500 kg
1047	0.04	400 piece (1)	<100 kg



VERTICAL DOOR TRACK

The track is made of 2.0 mm galvanised steel. Both ends are provided with 2 round holes of 7 mm diameter. The tracks are available in several standard lengths. Other lengths available to special order.

2", straight, 2.0 mm, galvanised

Art. code	kg	vol unit	description
2V2500	3.7	50 piece (1)	L = 2500 mm
2V3000	4.5	50 piece (1)	L = 3000 mm
2V3500	5.25	50 piece (1)	L = 3500 mm
2V3750	5.6	50 piece (1)	L = 3750 mm
2V4000	6	50 piece (1)	L = 4000 mm
2V4250	6.2	50 piece (1)	L = 4250 mm
2V4500	6.7	50 piece (1)	L = 4500 mm
2V5000	7.5	50 piece (1)	L = 5000 mm
2V5500	8.2	50 piece (1)	L = 5500 mm
2V6000	9	50 piece (1)	L = 6000 mm
2V6500	9.7	50 piece (1)	L = 6500 mm
2V7000	10.5	50 piece (1)	L = 7000 mm

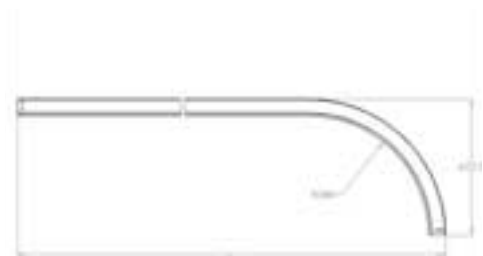
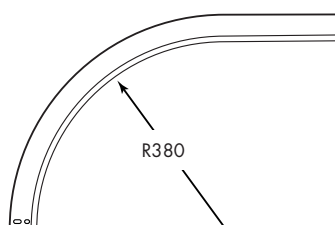


HORIZONTAL DOOR TRACK

The track is made of 2.0 mm galvanised steel. One end is provided with 2 round holes of 7 mm diameter, the other end is provided with one slotted and one round hole. The bend has an inner radius of approx. 380 mm. The bends are bend in approx. 180 degrees, cut in the middle and provided with fixing holes. The given length indicates the length in mm, before bending.

2", bended, R380 mm,
galvanised, 2.0 mm

Art. code	kg	vol unit	description
2H1500-380	2.2	50 piece (1)	L = 1500 mm
2H3000-380	4.5	50 piece (1)	L = 3000 mm
2H3500-380	5.25	50 piece (1)	L = 3500 mm
2H3750-380	5.6	50 piece (1)	L = 3750 mm
2H4000-380	6	50 piece (1)	L = 4000 mm
2H4250-380	6.2	50 piece (1)	L = 4250 mm
2H4500-380	6.7	50 piece (1)	L = 4500 mm
2H5000-380	7.5	50 piece (1)	L = 5000 mm



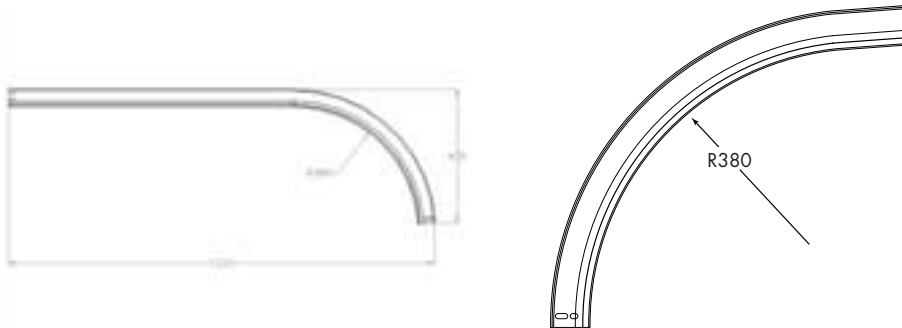
X = L-200mm

The track is made of 2.0 mm galvanised steel. One end is provided with 2 round holes of 7 mm diameter, the other end is provided with one slotted and one round hole. The bend has an inner radius of approx. 380 mm. The bends are 3 degrees inclining. The bends are bend in approx. 180 degrees, cut in the middle and provided with fixing holes. The given length indicates the length in mm, before bending.

HORIZONTAL DOOR TRACK

2", bended, R380 mm, 3° inclining, galvanised, 2.0 mm

Art. code	kg	vol unit	description
2H1500-380-03	2.2	50 piece (1)	L = 1500 mm

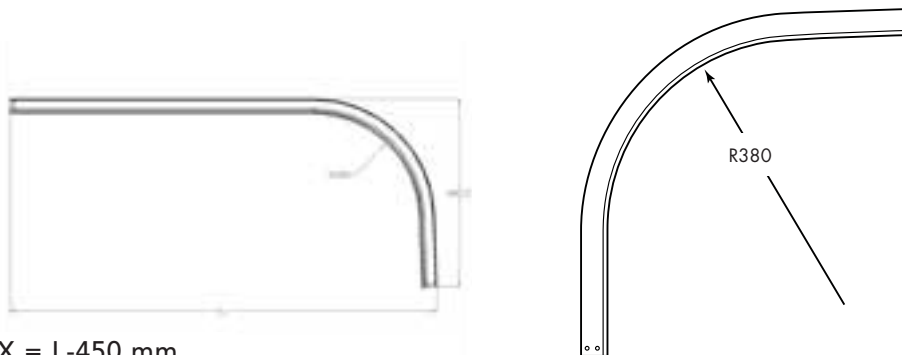


The track is made of 2.0 mm galvanised steel. Both ends are provided with 2 round holes of 7 mm diameter. The bend has an inner radius of approx. 380 mm. The bends are 2 degrees inclining. The end of the bend has a 250 mm long straight part. The bends are bend in approx. 90 degrees. The given length indicates the length in mm, before bending.

HORIZONTAL DOOR TRACK

2", bended, R380 mm + 250 mm, 2° inclining, galvanised, 2.0 mm

Art. code	kg	vol unit	description
2F1500-380-02	2.2	50 piece (1)	L = 1500 mm
2F3000-380-02	4.5	50 piece (1)	L = 3000 mm
2F3500-380-02	5.25	50 piece (1)	L = 3500 mm
2F4500-380-02	6.4	50 piece (1)	L = 4500 mm
2F5000-380-02	5.7	50 piece (1)	L = 5000 mm



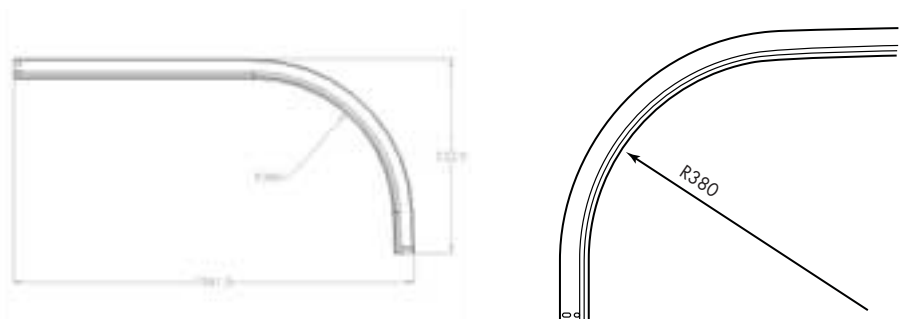
X = L-450 mm

The track is made of 2.0 mm galvanised steel. One end is provided with 2 round holes diameter 7 mm, the other end is provided with a slotted hole and a round hole. The bend has an inner radius of approx. 380 mm. The horizontal track is 2 and 5 degrees inclining. The end of the bend has a 250 mm long straight part cut down to 100 mm. The bends are bend in approx. 90 degrees. The given length indicates the length in mm, before bending.

HORIZONTAL DOOR TRACK

2", bended, R380 mm, galvanised, 2.0 mm

Art. code	kg	vol unit	description
2G1500-380-02	2.2	50 piece (1)	2° inclining, L = 1500 mm
2G1500-380-05	2.2	50 piece (1)	5° inclining, L = 1500 mm

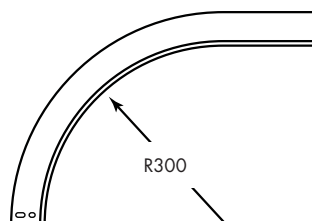


HORIZONTAL DOOR TRACK

2", bended, R300 mm, galvanised, 2.0 mm

Art. code	kg	vol unit	description
2H1500-300	2.2	50 piece (1)	L = 1500 mm
2H3000-300	4.5	50 piece (1)	L = 3000 mm

The track is made of 2.0 mm galvanised steel. One end is provided with 2 round holes of 7 mm diameter, the other end is provided with one slotted and one round hole. The bend has an inner radius of approx. 300 mm. The bends are bend in approx. 180 degrees, cut in the middle and provided with fixing holes. The given length indicates the length in mm, before bending.



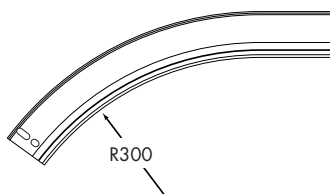
2H1500-300

HORIZONTAL DOOR TRACK

2", bended, shortened (LHR), R300 mm, galvanised, 2.0 mm

Art. code	kg	vol unit	description
2H1500-300LHR	2.2	50 piece (1)	L = 1500 mm

The track is made of 2.0 mm galvanised steel. One end is provided with 2 round holes of 7 mm diameter, the other end is provided with one slotted and one round hole. The bend has an inner radius of approx. 300 mm and is special cut for low system doors. The bends are bend in a special number of degrees, cut in the middle and provided with fixing holes. The given length indicates the length in mm, before bending. The bend is also available is a short version, bend out of 645 mm (article code 2H0645-300LHR).

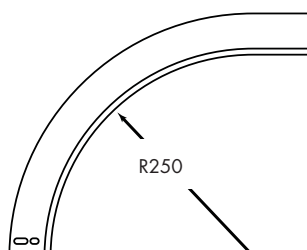


HORIZONTAL DOOR TRACK

2", bended, R250 mm, galvanised, 2.0 mm

Art. code	kg	vol unit	description
2H1500-250	2.2	50 piece (1)	L = 1500 mm
2H3000-250	4.5	50 piece (1)	L = 3000 mm

The track is made of 2.0 mm galvanised steel. One end is provided with 2 round holes of 7 mm diameter, the other end is provided with one slotted and one round hole. The bend has an inner radius of approx. 250 mm. The bends are bend in approx. 180 degrees, cut in the middle and provided with fixing holes. The given length indicates the length in mm, before bending.

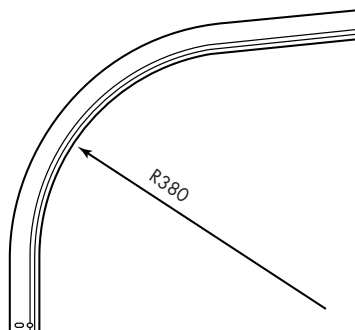


The track is made of 1.5 mm galvanised steel. One end is provided with 2 round holes diameter 7 mm, the other end is provided with a slotted hole and a round hole. The bend has an inner radius of approx. 380 mm. The horizontal track is 1 degree inclining. The end of the bend has a 250 mm long straight part cut down to 100 mm. The bends are bend in approx. 90 degrees. The given length indicates the length in mm, before bending. The bends are suitable for dockshelter doors.

HORIZONTAL DOOR TRACK

2", bended, R380 mm, galvanised, 1.5 mm, DS door

Art. code	kg	vol unit	description
215G1500-380-01	1.65	50 piece (1)	1° inclining, L = 1500 mm



The track is made of 2.8 mm galvanised steel. Both ends are provided with 3 holes.

VERTICAL DOOR TRACK

3", straight, galvanised, 2.8 mm

Art. code	kg	vol unit	description
13155	15.9	12 piece (1)	L = 5180 mm

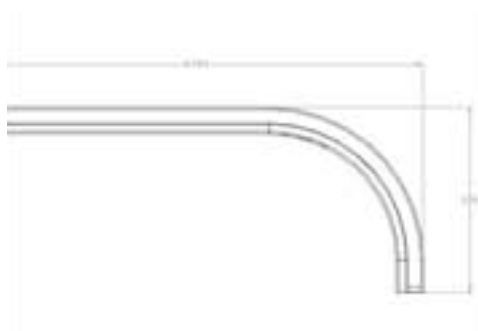


The track is made of 2.8 mm galvanised steel. The bend has an inner radius of approx. 380 mm. The end of the bend has a 100 mm long straight part. The bends are bent in approx. 90 degrees. The given length indicates the length in mm, before bending. The track is suitable for an opening height of 3650 mm (normal lift). Both ends are provided with 2 holes.

HORIZONTAL DOOR TRACK

3", bended, R380 mm + 100 mm, galvanised, 2.8 mm, 2° inclining

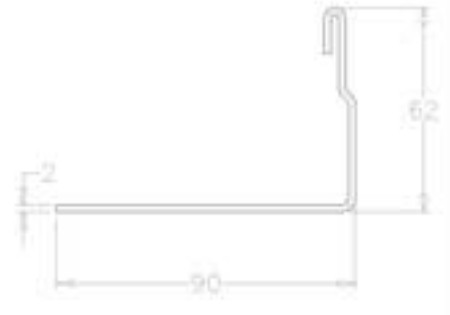
Art. code	kg	vol unit	description
13236	14.1	12 piece (1)	L = 4550 mm



ANGLE

Vertical, galvanised, 2.0 mm,
90x62 mm

Art. code	kg	vol unit	description
9VB3500	9.1	50 piece (1)	L = 3500 mm
9VB3750	9.8	50 piece (1)	L = 3750 mm
9VB4000	10.4	50 piece (1)	L = 4000 mm
9VB4250	11	50 piece (1)	L = 4250 mm
9VB4500	11.7	50 piece (1)	L = 4500 mm
9VB5000	13	50 piece (1)	L = 5000 mm
9VB5500	14.3	50 piece (1)	L = 5500 mm
9VB6000	15.6	50 piece (1)	L = 6000 mm
9VB6500	16.9	50 piece (1)	L = 6500 mm

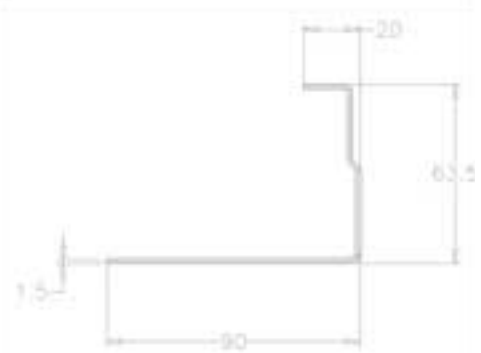


The angle is made of 2.0 mm galvanised steel. The flange of 62 mm has slotted holes 9x25 mm every 300 mm. The flange of 90 mm has on both ends 4 slotted holes 9x25 mm. The vertical angle is suitable for side seal article code 1085 and 1094-40. The angle is available in several standard lengths. Other lengths available to special order.

ANGLE

Vertical, galvanised, 1.5 mm,
88x62 mm, DS-door

Art. code	kg	vol unit	description
915DS2750	5.36	50 piece (1)	L = 2750 mm
915DS3000	5.85	50 piece (1)	L = 3000 mm
915DS3500	5.85	50 piece (1)	L = 3500 mm
915DS4550	5.85	50 piece (1)	L = 4500 mm
915DS5450	5.85	50 piece (1)	L = 5500 mm
915DS6050	5.85	50 piece (1)	L = 6000 mm
915DS6850	5.85	50 piece (1)	L = 6850 mm



The angle is made of 1.5 mm galvanised steel. The flange of 62 mm has slotted holes 9x25 mm every 300 mm and is provided over the total length with square recesses suitable for the arm of the new to introduce cable break device. The flange of 88 mm has 4 slotted holes 9x25 mm on both ends. The vertical angle is suitable for side seal article code 1097W.

ANGLE

Vertical, galvanised, 2.0 mm,
90x85 mm

Art. code	kg	vol unit	description
9K4500	13.5	50 piece (1)	L = 4500 mm
9K6500	19.5	50 piece (1)	L = 6500 mm

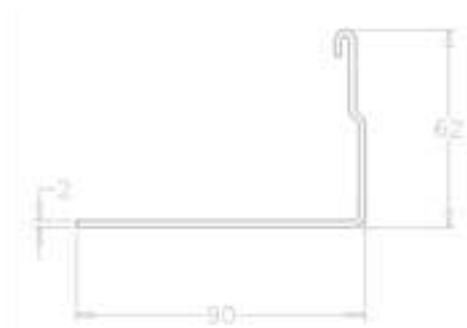


ANGLE

The angle is made of 2.0 mm galvanised steel. The flange of 62 mm has slotted holes 9x25 mm every 300 mm and has a short lip. The flange of 90 mm has 4 slotted holes 9x25 mm on both ends. The vertical angle is suitable for side seal article code 1090.

Vertical, galvanised, 2.0 mm,
90x62 mm, short lip

Art. code	kg	vol unit	description
9ZR3500	8.75	50 piece (1)	L = 3500 mm
9ZR4000	10	50 piece (1)	L = 4000 mm
9ZR4500	11.25	50 piece (1)	L = 4500 mm
9ZR5000	12.5	50 piece (1)	L = 5000 mm
9ZR6000	15	50 piece (1)	L = 6000 mm
9ZR6500	16.25	50 piece (1)	L = 6500 mm

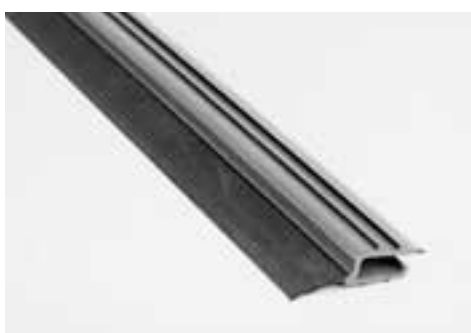
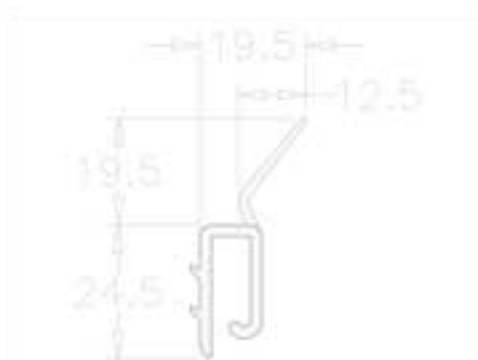


The profile is made of hard grey PVC (outward quality) and co-extruded flexible elastomer (TPR). Suitable for fixing to vertical angle code 915VB, 9VB, 9VR and 9K.

SIDE SEAL

Hard grey PVC, with flexible
TPR, for 9VB and 915VB

Art. code	kg	vol unit	description
1085-2010	0.38	50 piece (1)	L = 2010 mm
1085-2135	0.42	50 piece (1)	L = 2135 mm
1085-2260	0.46	50 piece (1)	L = 2260 mm
1085-2360	0.47	50 piece (1)	L = 2360 mm
1085-2510	0.47	50 piece (1)	L = 2510 mm
1085-3060	0.6	50 piece (1)	L = 3060 mm
1085-3660	0.7	50 piece (1)	L = 3660 mm
1085-4060	0.8	50 piece (1)	L = 4060 mm
1085-4260	0.8	50 piece (1)	L = 4260 mm
1085-4560	0.9	50 piece (1)	L = 4560 mm
1085-5060	1	50 piece (1)	L = 5060 mm
1085-5560	1.1	50 piece (1)	L = 5560 mm
1085-6000	1.2	50 piece (1)	L = 6000 mm

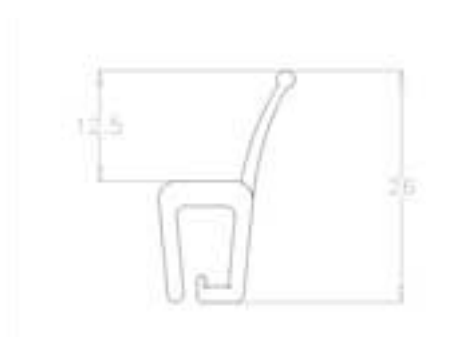


The profile is made of soft PVC and co-extruded flexible elastomer (TPR). The side seal is suitable for fixing to vertical angle article code 9ZR. Supplied on rolls, preventing waste.

SIDE SEAL

Soft grey PVC,
with flexible TPR

Art. code	kg	vol unit	description
1090	0.14	150 p.mtr	on rolls, for 9ZR

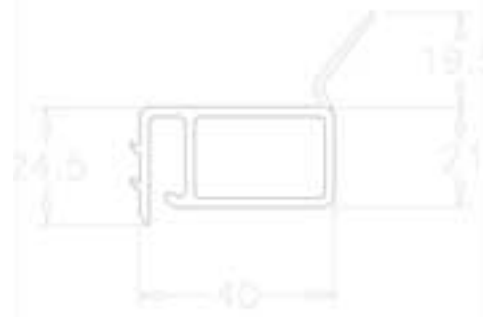


SIDE SEAL

40 mm, hard grey PVC, with flexible TPR, for 9VB and 915VB

Art. code	kg	vol unit	description
1094-40-3060	0.6	50 piece (1)	L = 3060 mm
1094-40-3660	0.73	50 piece (1)	L = 3660 mm
1094-40-4060	0.82	50 piece (1)	L = 4060 mm
1094-40-4560	0.91	50 piece (1)	L = 4560 mm
1094-40-6000	1.2	50 piece (1)	L = 6000 mm

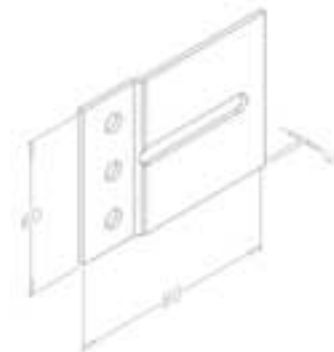
The profile is made of hard grey PVC (outward quality) and co-extruded flexible elastomer (TPR). Due to the raised version of the hard PVC part, a framework arises on the clear width. By this the clearance between the door panel and the wall increases. You have to use top seal with long lip article code 1036-52. Suitable for fixing to vertical angle code 915VB, 9VB, 9VR and 9K.



TRACK CONNECTING PLATE

Galvanised, 2.0 mm

Art. code	kg	vol unit	description
808S	0.14	500 piece (1)	60x80 mm, with holes
810S	0.14	500 piece (1)	60x100 mm, with holes
812S	0.14	500 piece (1)	60x120 mm, with holes
813S	0.14	500 piece (1)	60x130 mm, with holes
815S	0.14	500 piece (1)	60x150 mm, with holes
818S	0.14	500 piece (1)	60x180 mm, with holes
808W	0.14	500 piece (1)	60x80 mm, without holes
810W	0.14	500 piece (1)	60x100 mm, without holes
812W	0.14	500 piece (1)	60x120 mm, without holes
813W	0.14	500 piece (1)	60x130 mm, without holes
815W	0.14	500 piece (1)	60x150 mm, without holes
818W	0.14	500 piece (1)	60x180 mm, without holes



808S

The plates are made of 2.0 mm galvanised steel. The track plates are 60 mm wide and have a 2.0 mm offset on 24 mm from the bottom side. The plates type S are provided with 3 holes of 7 mm in diameter and 1 slotted hole 48x7 mm.

SIDE SEAL

Hard grey PVC, with flexible TPR, for 915DS

Art. code	kg	vol unit	description
1097W2550	0.5	50 piece (1)	L = 2550 mm
1097W2950	0.58	50 piece (1)	L = 2950 mm
1097W3150	0.62	50 piece (1)	L = 3150 mm
1097W3350	0.66	50 piece (1)	L = 3350 mm
1097W6000	1.2	50 piece (1)	L = 6000 mm



The profile is made of hard grey PVC (outward quality) and co-extruded flexible elastomer (TPR). Suitable for fixing to vertical angle article code 915DS.

The plates are made of 2.0 mm galvanised steel. The track plates are 60 mm wide and have a 2.0 mm offset on indicated measure from the bottom side. The longer version for high system has rills for a better construction. The flat version is suitable for double horizontal tracks (low system) without reinforcement as for residential overhead doors. The cut version is also suitable in combination with cable break devices.

TRACK CONNECTING PLATE

Galvanised, 2.0 mm,
for 2" tracks

Art. code	kg	vol unit	description
870	0.15	250 piece (1)	offset on 80 mm
870-120	0.2	250 piece (1)	offset on 120 mm
870-150	0.2	250 piece (1)	offset on 150 mm
870-180	0.22	250 piece (1)	offset on 180 mm
870HANG	0.16	250 piece (1)	flat
870KORT	0.13	250 piece (1)	cut rounding



870

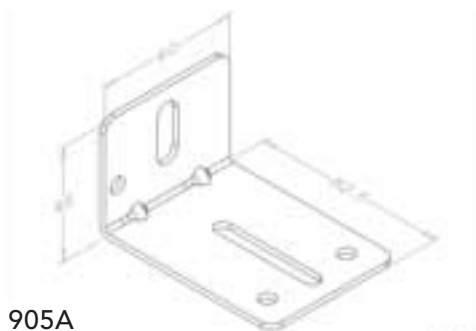


The bracket is made of 2.5 mm galvanised steel and is 60 mm wide. The length of the basic flange is 50 mm with a slotted hole 10x25 mm. Long flange having 2 holes of 7 mm in diameter and 1 slotted hole 7x48 mm, centre line 31 mm from the top.

TRACK BRACKET

Galvanised, 2.5x60 mm

Art. code	kg	vol unit	description
905A	0.2	200 piece (1)	long flange 83 mm
907A	0.15	200 piece (1)	long flange 95 mm
911A	0.21	200 piece (1)	long flange 121 mm
913A	0.24	200 piece (1)	long flange 133 mm



905A

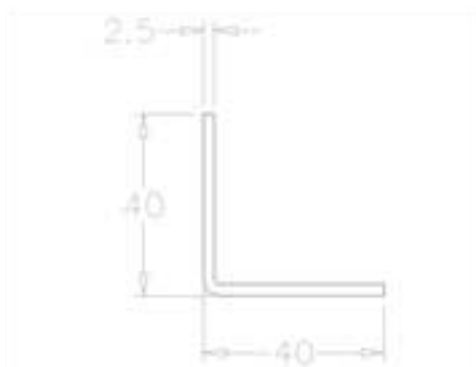


The angle is made of 2.5 mm galvanised steel. Both ends are provided with 6 slotted holes 9x25 mm.

ANGLE

Galvanised, 2.5 mm, 40x40 mm

Art. code	kg	vol unit	description
4H3500	5.6	50 piece (1)	L = 3500 mm
4H6000	9.6	50 piece (1)	L = 6000 mm

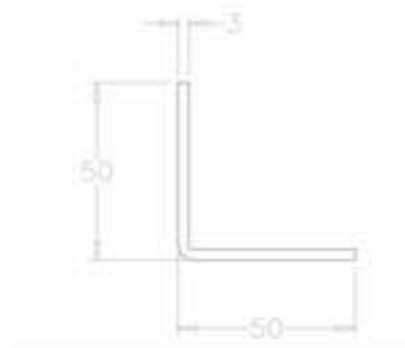


ANGLE

The angle is made of 3.0 mm galvanised steel. Both ends are provided with 6 slotted holes 9x25 mm.

Galvanised, 3.0 mm, 50x50 mm

Art. code	kg	vol unit	description
5H3500	7.7	50 piece (1)	L = 3500 mm
5H4000	8.8	50 piece (1)	L = 4000 mm
5H4250	9.3	50 piece (1)	L = 4250 mm
5H4500	9.9	50 piece (1)	L = 4500 mm
5H4750	10.4	50 piece (1)	L = 4750 mm
5H5000	11	50 piece (1)	L = 5000 mm
5H6000	13.2	50 piece (1)	L = 6000 mm

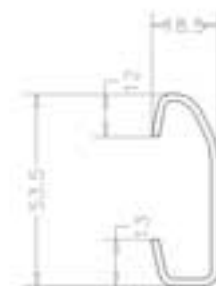


C-PROFILE

The C-profile is made of 2.0 mm galvanised steel. The outside dimensions of the profile are 53x18x12 mm. Size of the opening is 33 mm wide. Both ends are provided with 3 slotted holes 9x25 mm. Suitable for strengthening of the horizontal tracks, enabling simple fixing and adjusting possibilities for suspension, bumpers etc.

Galvanised, 2.0 mm

Art. code	kg	vol unit	description
5C3500	5.25	50 piece (1)	L = 3500 mm
5C3750	5.6	50 piece (1)	L = 3750 mm
5C4000	6	50 piece (1)	L = 4000 mm
5C4250	6.3	50 piece (1)	L = 4250 mm
5C4500	6.7	50 piece (1)	L = 4500 mm
5C4750	7.1	50 piece (1)	L = 4750 mm
5C5000	7.4	50 piece (1)	L = 5000 mm
5C5500	8.2	50 piece (1)	L = 5500 mm
5C6000	9	50 piece (1)	L = 6000 mm
5C6500	9.7	50 piece (1)	L = 6500 mm

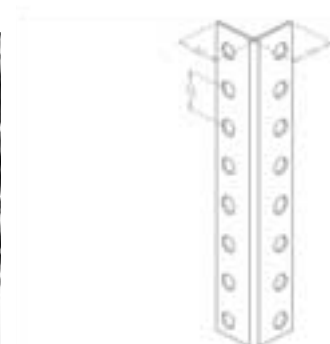


ANGLE

The angles are made of 2.0, 2.5 and 3.0 mm galvanised steel. Length of the profiles is 3000 mm.

Perforated, with holes 10 mm,
L = 3000 mm

Art. code	kg	vol unit	description
30B20-3000	4.6	50 piece (1)	30x30x2.0 mm
40B25-3000	4.56	50 piece (1)	40x40x2.5 mm
50B30-3000	6.9	50 piece (1)	50x50x3.0 mm

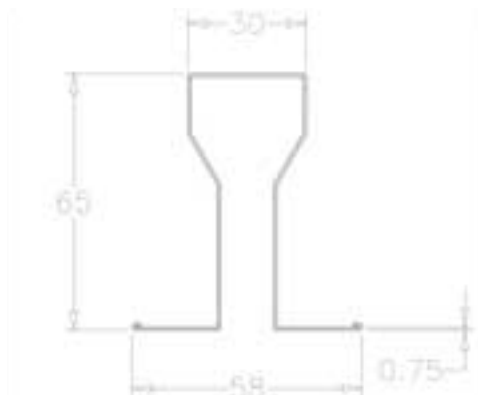


30B20

The profile is made of 0.75 mm galvanised steel. The profile has a height of 65 mm. The width of the base is 58 mm. The special designed shape gives optimum stiffness at the lowest linear metre weight.

STRUT

Omega, galvanised, 0.75 mm, 65 mm height

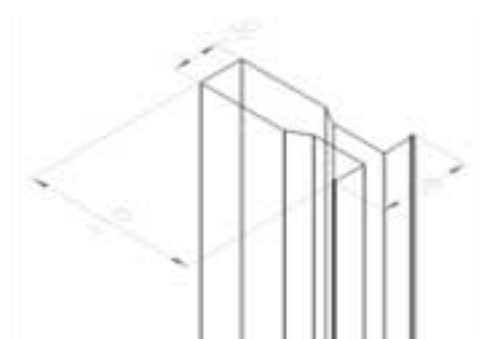


Art. code	kg	vol unit	description
65S4020	5	50 piece (1)	L = 4020 mm
65S4520	5.7	50 piece (1)	L = 4520 mm
65S5020	6.25	50 piece (1)	L = 5020 mm
65S5520	6.9	50 piece (1)	L = 5520 mm
65S6020	7.5	50 piece (1)	L = 6020 mm
65S6520	8.2	50 piece (1)	L = 6520 mm
65S7020	8.8	50 piece (1)	L = 7020 mm
65S7520	9.4	50 piece (1)	L = 7520 mm

The profile is made of 1.0 mm galvanised steel. The profile has a height of 110 mm. The width of the base is 58 mm. The special designed shape gives optimum stiffness at the lowest linear metre weight.

STRUT

Omega, galvanised, 1.0 mm, 110 mm height



Art. code	kg	vol unit	description
110S6520	15.2	25 piece (1)	L = 6520 mm
110S7020	16.35	25 piece (1)	L = 7020 mm
110S7520	17.52	25 piece (1)	L = 7520 mm
110S8020	18.7	25 piece (1)	L = 8020 mm
110S8520	19.85	25 piece (1)	L = 8520 mm
110S9020	21	25 piece (1)	L = 9020 mm
110S10020	22	25 piece (1)	L = 10020 mm

The clip is made of 3.0 mm galvanised steel. The clip is suitable for fixing strengthening struts onto the door panels.

CLIP

Galvanised, 3.0 mm, for struts



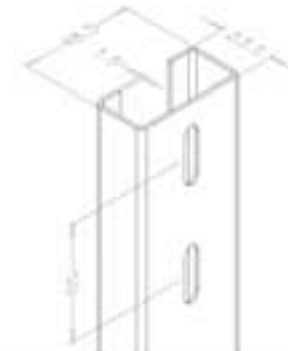
Art. code	kg	vol unit	description
1046	1	1000 p.100	

SUSPENSION PROFILE

Galvanised, 1.5 mm, open tubular, outside dimensions 48.5x23 mm

Art. code	kg	vol unit	description
48SU2000	2.54	50 piece (1) L = 2000 mm	
48SU3000	3.81	50 piece (1) L = 3000 mm	
48SU4500	5.71	50 piece (1) L = 4500 mm	
48SU6000	7.62	50 piece (1) L = 6000 mm	

The suspension profile is made of 1.5 mm galvanised steel. The outside dimensions of the profile are 48.5x23.5 mm. The open tubular profile is provided each 50 mm with slotted holes 8.5x25 mm at the wide flange. On one small flange slotted holes 8.5x25 mm are located each 300 mm. The 48SU-profile can slide into the 50SU-profile to enable freely adjustment of length. The coupling strip 1025-200 enables a quick and easy suspension construction.

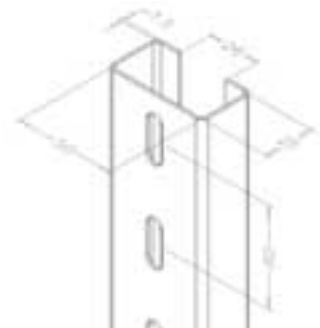


SUSPENSION PROFILE

Galvanised, 1.5 mm, open tubular, inside dimensions 50x25 mm

Art. code	kg	vol unit	description
50SU1500	2.22	50 piece (1) L = 1500 mm	
50SU3000	4.44	50 piece (1) L = 3000 mm	
50SU4500	6.66	50 piece (1) L = 4500 mm	
50SU6000	8.88	50 piece (1) L = 6000 mm	

The suspension profile is made of 1.5 mm galvanised steel. The inside dimensions of the profile are 50x25 mm. The open tubular profile is provided each 50 mm with slotted holes 8.5x25 mm at the wide flange. On one small flange slotted holes 8.5x25 mm are located each 300 mm. The 50SU-profile can slide over the 48SU-profile to enable freely adjustment of length. The coupling strip 1025-200 enables a quick and easy suspension construction. The profile is also suitable for use of paro clamp plates, article code 1026-68B.

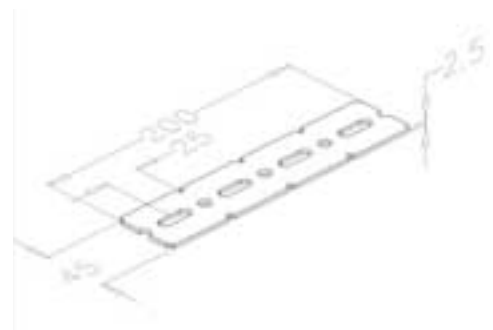


COUPLING STRIP

Galvanised, 45x200 mm, for SU-profile

Art. code	kg	vol unit	description
1025-200	0.17	100 piece (1)	

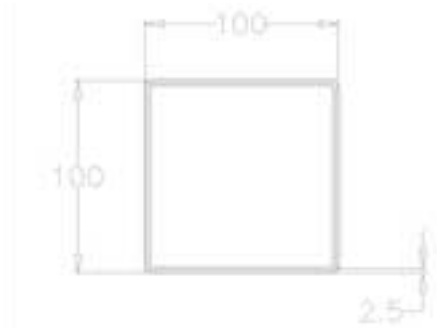
The strip is made of 2.5 mm galvanised steel. The sizes of the strip are 45x200 mm. The strip is suitable for suspension profiles 48SU and 50SU and is provided with round holes 8.5 mm and slotted holes 8.5x25 mm. The cut-outs at the sides serve to bend into the required shape for making a quick construction.



BOX BEAM

The welded box profile is made of plated steel. The outside dimensions of square 100 mm enable it to be a stabile box profile suitable for installing the spring shaft. Also a variable installation of the bearing plates will be possible because the centre line from the slotted holes of the bearing plates are bigger than 100 mm.

Galvanised, 100x100 mm

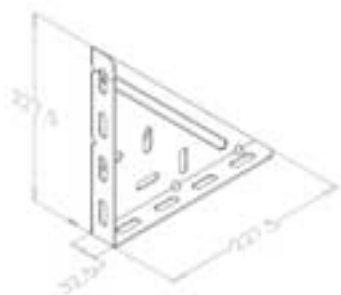


Art. code	kg	vol unit	description
100K-4000	30.56	10 piece (1)	2.5 mm L = 4000 mm
100K-6000	45.84	10 piece (1)	2.5 mm L = 6000 mm
100K-6500	49.66	10 piece (1)	2.5 mm L = 6500 mm
100K-7000	53.48	10 piece (1)	2.5 mm L = 7000 mm

The plate is made of 2.5 mm plated steel. The flat triangle plate is provided with 6 slotted holes 10x30 mm and a projection rill for strengthening. The flanges have a width of 30 mm and are welded in the corner. The flanges are provided with 4 slotted holes 10x30 mm and a projection for a stabile construction. The triangle plate is suitable for a flexible fixing of the hanging from the horizontal tracks.

TRIANGULAR PLATE

Galvanised, 230x230 mm,
provided with slotted holes



Art. code	kg	vol unit	description
3010	0.7	100 piece (1)	

These articles can be used in combination with the box beam 100K, for mounting the springshaft one meter above the opening. The big triangular plate must be mounted to the verticle angle as well as to the wall. For fixing the beam to the plate and for fixing the bearing plates to beam, strips, bolts and nuts can be used. This makes a solid construction possible.

TRIANGULAR PLATE

For installation box beam 100K

Art. code	kg	vol unit	description
355CONS	4.9	20 piece (1)	heavy triangular plate
355STRI	0.36	20 piece (1)	mounting strip
1060	0.04	1000 piece (1)	bolt M10x130 mm
1058F	0.012	1000 p.100	flangenut M10



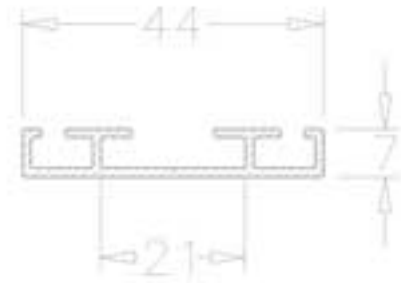
355CONS

TOP/BOTTOM PROFILE

Aluminium, flat 44x7 mm

This profile is suitable for panels thicker than 40 mm, f.e. for wooden panels when you don't want to have the aluminum profile visible. The profile is suitable for rubber profiles article code 1035, 1036 (1036-36 and 1036-52), 1037, 1039 and 1039-55. The width of the profile is 44 mm and the height is 7 mm.

Art. code	kg	vol unit	description
1031-6000	1.7	50 piece (1)	L = 6000 mm



PASS DOOR PROFILE

Aluminium, U-profile with lip, 40 mm section

The anodised aluminium U-profile is suitable for framing of panels approx. 40 mm thick, for pass doors. The lip is the stop of the door and is provided with a recess for a seal article code 1032RUB. The profile is designed in such a way the centre of rotation of our side and intermediate hinges is in one line with the lip of the aluminium profile. The anodised aluminium profile article code 1033L is suitable for framing of panels approx. 40 mm thick, for pass doors. The lip is the stop of the door and is provided with a recess for a seal article code 1033R.

Art. code	kg	vol unit	description
1032END-3000	1.95	25 piece (1)	L = 3000 mm
1032END-6000	3.91	25 piece (1)	L = 6000 mm
1033L-3000	2	25 piece (1)	L = 3000 mm
1033L-6000	3.9	25 piece (1)	L = 6000 mm



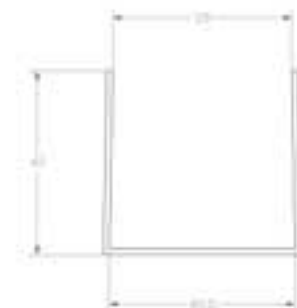
1032END

PASS DOOR PROFILE

Aluminium, U-profile for 40 mm section, h = 40 mm

The aluminium anodised aluminium U-profile is suitable for framing of panels of approx. 40 mm thick, for pass door.

Art. code	kg	vol unit	description
1033U-3000	1.3	25 piece (1)	L = 3000 mm
1033U-6000	2.6	25 piece (1)	L = 6000 mm



1033U3000

The aluminium profile is suitable as top and bottom profile for panels of approx. 40 or 42 mm thick. The profile is suitable for mounting rubber profile article code 1035, 1036 (1036-25 and 1036-40), 1037, 1039-55 and 1039. Available with anodised treatment to special order.

TOP/BOTTOM PROFILE

Aluminium, for 40 and 42 mm section, h = 35 mm

Art. code	kg	vol unit	description
1038-4040	2	50 piece (1)	L = 4040 mm
1038-5050	2.5	50 piece (1)	L = 5050 mm
1038-6090	3	50 piece (1)	L = 6090 mm
1038-42-4040	2	50 piece (1)	L = 4040 mm
1038-42-5050	2.5	50 piece (1)	L = 5050 mm
1038-42-6090	2.5	50 piece (1)	L = 6090 mm



1038



The raised aluminium profile is suitable as top and bottom profile for panels of approx. 40 mm thick. This 100 mm high profile is suitable for filling out the door panels and can avoid, in some cases, an additional panel. The profile is suitable for mounting rubber profile article code 1035, 1036 (1036-25 and 1036-40), 1037 and 1039. Available with anodised treatment to special order.

TOP/BOTTOM PROFILE

Aluminium, for 40 mm section, raised, h = 100 mm

Art. code	kg	vol unit	description
1040-6090	7.6	25 piece (1)	L = 6090 mm



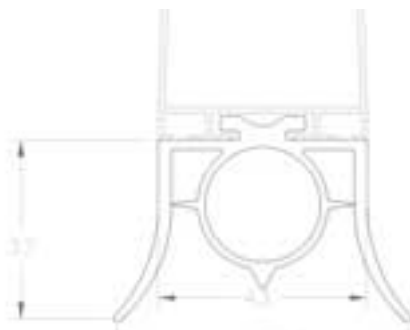
The rubber bottom profile is made of EPDM quality. The rubber profiles are having 2 lips and a round chamber of 24 mm for a pneumatic switch and an extra press point. The rubber profile is suitable for aluminium profiles article code 1031, 1038, 1038-42 and 1040. N.B. The bridge has to be removed when installing in the profile!

BOTTOM ASTRAGAL

EPDM, with chamber and 2 lips

New! Bottom astragal 1039-55 available, see page 91.

Art. code	kg	vol unit	description
1035	0.63	35 p.mtr	



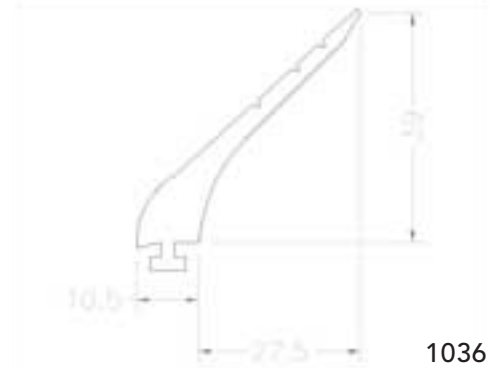
TOP ASTRAGAL

The rubber top profiles are made of EPDM quality. The profiles are suitable for aluminium profiles article code 1031, 1038, 1038-42 and 1040. The rubber top profile article code 1036 will be replaced by article code 1036-36.

EPDM

New! Bottom astragal 1039-55 available, see page 91.

Art. code	kg	vol unit	description
1036	0.25	35 p.mtr	
1036-36	0.25	35 p.mtr	length flap is 36 mm
1036-52	0.25	35 p.mtr	length flap is 52 mm



1036

BOTTOM ASTRAGAL

The rubber bottom profile (model I) is made of EPDM quality. The profile is suitable for the aluminium profile article code 1031, 1038, 1038-42 and 1040.

EPDM, model I

New! Bottom astragal 1039-55 available, see page 91.

Art. code	kg	vol unit	description
1037	0.25	35 p.mtr	



BOTTOM ASTRAGAL

The rubber bottom profile is made of EPDM quality. The profile has an inside chamber for pneumatic switch and one lip. The profile is suitable for aluminium profile article code 1031, 1038, 1038-42 and 1040. N.B. The rubber strip has to be removed when installing in the profile!

EPDM, with chamber and 1 lip

New! Bottom astragal 1039-55 available, see page 91.

Art. code	kg	vol unit	description
1039	0.46	35 p.mtr	



The anodised aluminium pinless hinge is suitable for a pass door. Total width 50 mm.

HINGE

Aluminium, pinless,
for pass door

Art. code	kg	vol unit	description
1034N	2.5	25 piece (1) L = 2500 mm	

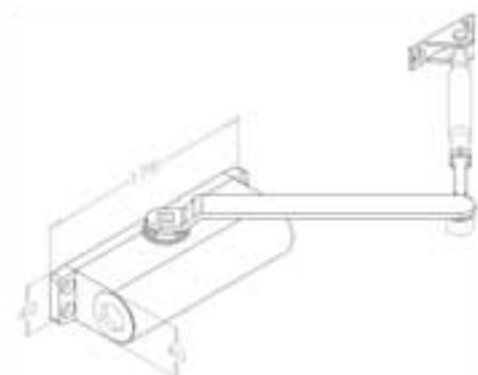


The housing is made of aluminium. The speed is adjustable by 2 set screws. Supply includes an approx. 220 mm long double lever and fixing material.

DOOR PUSHER

For pass door, complete

Art. code	kg	vol unit	description
1034D-072	1.75	20 piece (1) medium duty, door <25 kg	
1034D-082	1.75	20 piece (1) heavy duty, door <45 kg	



1034D-072



The rubber profile article code 1032RUB fits in the camber of pass door profile article code 1032END and seals of the pass door. The rubber profile article code 1033R fits in the camber of pass door profile article code 1033L.

PASS DOOR ASTRAGAL

Art. code	kg	vol unit	description
1032RUB	0.05	100 p.mtr	for 1032END
1033R	0.05	100 p.mtr	for 1033L



1032RUB



END CAP

Galvanised, with hole pattern,
for panel 40 mm

Art. code	kg	vol unit	description
40E488	0.5	500 piece (1)	488 mm
40E500	0.5	500 piece (1)	500 mm
40E530	0.5	500 piece (1)	530 mm
40E610	0.63	500 piece (1)	610 mm



The end caps are made of 1.0 mm galvanised steel. The end caps are provided with hole pattern for side hinge code 450CZ and are applicable universal left and right. The end caps are provided with rounded corners. Effective size is panel size less 10 mm. On special demand also available in other sizes and/or without holes.

END CAP

Galvanised, double, with hole
pattern, for panel 40 mm

Art. code	kg	vol unit	description
40ED500	0.1	250 piece (1)	500 mm
40ED610	0.1	250 piece (1)	610 mm



WINDOW

Round, plastic, 300 mm,
panel 40 mm

Art. code	kg	vol unit	description
2430RON	1.75	60 piece (1)	window
2340G-95	1.75	60 piece (1)	rubber ring

This is a double layer acrylic window with a diameter of 300 mm, suitable for sandwich panels. The rubber profile needed for this, of EPDM quality, is suitable for 40 mm panels and is supplied as a glued ring (made from a 950 mm length). The use of these windows gives your door a nice, different aspect. The window is very suitable for use in a pass door, for example.



The window is suitable for sandwich panels of 26 till 45 mm thick. The dimensions of the window are 630x195 mm. R = 50 mm. The cut-out size of the window is 607x176 mm (plus radius). The window is provided with 3 and 2 mm acrylic sheets. Simple assembly by means of 12 screws which are included in the supply.

WINDOW

Oval, plastic, 630x195 mm,
panel 26-45 mm

Art. code	kg	vol unit	description
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2380	1	60 piece (1)	
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The window is suitable for sandwich panels of 38 till 45 mm thick. The dimensions of the window are 726x326 mm. R = 70 mm. The cut-out size of the window is 695x295 mm (plus radius). The window is provided with 3 and 2 mm acrylic sheets. The outer frame is provided with a butyl seal, which seals unequalties of max. 0.5 mm in the mounting surface. Bigger seams or ribs make the use of extra sealing kit necessary. Quite simple assembly by means of a click system.

WINDOW

Oval, plastic, 726x326 mm,
panel 38-45 mm

Art. code	kg	vol unit	description
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2390	1.7	50 piece (1)	
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The window is suitable for sandwich panels of approx. 40 mm thick (+ and - 3 mm). The dimensions of the window are 680x373 mm. The cut-out size of the window is 650x345 mm. The window is provided with 3 and 2 mm acrylic sheets. The outer frame is provided with a butyl seal, which seals unequalties of max. 0.5 mm in the mounting surface. Bigger seams or ribs make the use of extra sealing kit necessary. Quite simple assembly by means of a click system.

WINDOW

Rectangular, plastic,
680x373 mm, panel ca. 40 mm

Art. code	kg	vol unit	description
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2400-90	1.7	65 piece (1)	
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WINDOW

Rectangular, plastic,
680x373 mm

Art. code	kg	vol unit	description
2445	1.7	65 piece (1)	panel ca. 45 mm
2450	1.7	65 piece (1)	panel ca. 50 mm
2460	1.7	65 piece (1)	panel ca. 60 mm

The window is suitable for sandwich panels. The tolerances on the panel thickness is + and - 3 mm. The dimensions of the windows are 680x373 mm. The cut-out size of the window is 650x345 mm. The window is provided with 3 and 2 mm acrylic sheet. The outer frame is provided with a butyl seal, which seals unequalties of max. 0.5 mm in the mounting surface. Bigger seams or ribs make the use of extra sealing kit necessary. Quite simple assembly by means of a click system.



WINDOW

Oval, plastic, 663x343 mm,
panel 36-50 mm

Art. code	kg	vol unit	description
2397	1.6	65 piece (1)	

The window is suitable for sandwich panels of 36 to 50 mm thick. The dimensions of the window are 663x343 mm. R = 131. The cut-out size of the window is 640x320 mm. The window is provided with 3 and 2 mm acrylic sheets. The outer frame is provided with a butyl seal, which seals unequalties of max. 0.5 mm in the mounting surface. Bigger seams or ribs make the use of extra sealing kit necessary. Quite simple assembly by means of a click system.



WINDOW

Acrylate, double glazed

Art. code	kg	vol unit	description
2300	0.9	50 piece (1)	623x303 mm

The window is suitable for sandwich panels. The radius of the rounded corners is 110 mm.



The rubber profile is made of EPDM quality. The rubber profile is suitable for windows article code 2300.

RUBBER FRAME

EPDM, for windows

Art. code	kg	vol unit	description
2340	0.75	35 p.mtr	panel 40 mm
2350	0.75	35 p.mtr	panel 50 mm
2360	0.75	35 p.mtr	panel 60 mm



2340

The rubber profile is made of EPDM quality and available as glued rings made out of a length of approx. 1680 mm. The rubber profile is suitable for windows article code 2300.

RUBBER FRAME

EPDM, for windows 2300,
glued ring

Art. code	kg	vol unit	description
2340G	1.3	50 piece (1)	panel 40 mm
2350G	1.3	50 piece (1)	panel 50 mm
2360G	1.3	50 piece (1)	panel 60 mm



2340G

The handle is made of black plastic and suitable for panels of 37 to 42 mm thick. The construction is improved and the design is modern and ergonomic. Delivery includes inside grip, outside grip and 4 screws. On special request your company logo can be printed on the outside grip.

HANDLE

Plastic, black, panel 37-42mm

Art. code	kg	vol unit	description
639BL	0.1	25 piece (1)	

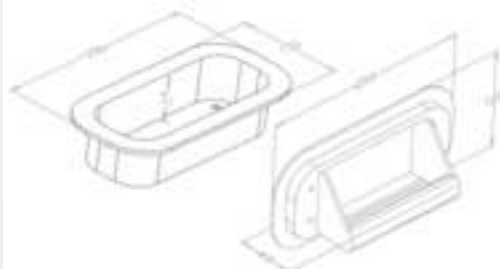


HANDLE/FOOTPLATE

Nylon, black PA 6GV,
panel 37-42 mm

The handle/footplate is made of black PA 6GV and suitable for panels of 37 to 42 mm thick. The outside dimensions are 260x120 mm. The supply includes 4 plated bolts M6x16 and nuts M6. For thicker panels please use longer bolts.

Art. code	kg	vol unit	description
640T	0.38	50 piece (1)	



HANDLE/FOOTPLATE

Plastic, black, panel 37-50 mm

A beautifully designed handle, making it possible for door manufacturers to "brand" their doors professionally with logo and identity. Inner and outer part are identical and can be connected with 4 supplied screws. The cut-out size of the handle is 170x170 mm. On request there will be the possibility to order in different colours or with your company logo on it. Available in the second half of 2002.

Art. code	kg	vol unit	description
642BL	0.54	50 piece (1)	

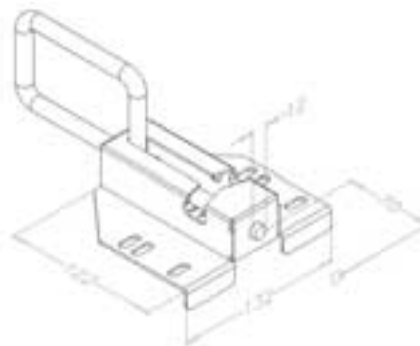


SLIDE BOLT

Galvanised, wide base

The slide bolt is made of 2.0 mm plated steel. The bolt is pre-assembled with round 12 mm bar with pointed end. The wide base and the 2 flanges take care of a solid way of mounting. For fixing the wide base 6 slotted holes are provided so it is still adjustable after installation. The housing is provided with additional hole for discus padlock.

Art. code	kg	vol unit	description
629VER	0.58	60 piece (1)	



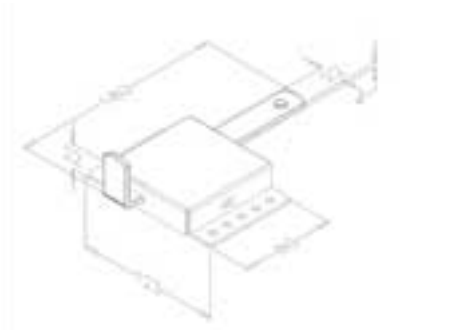
SLIDE BOLT

The slide bolt is made of 2.0 mm plated steel. The bar is made of 4.4 mm plated steel and has a bar length of 183 mm (deflection 70 mm). The bolt is suitable for inside operation only. The outside dimensions of the box are 85x115 mm (wxh).

Galvanised, bar length 183 mm
(70 mm deflection)

Art. code	kg	vol unit	description
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630D	0.38	50 piece (1)	
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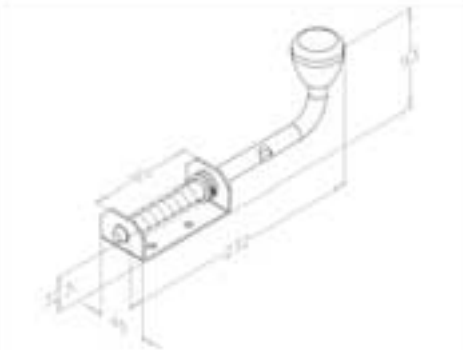
The slide is made of plated steel. The bolt is provided with a black PVC knob. The bolt is suitable for inside operation only.

SLIDE BOLT

Galvanised, with black knob

Art. code	kg	vol unit	description
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632	0.5	50 piece (1)	
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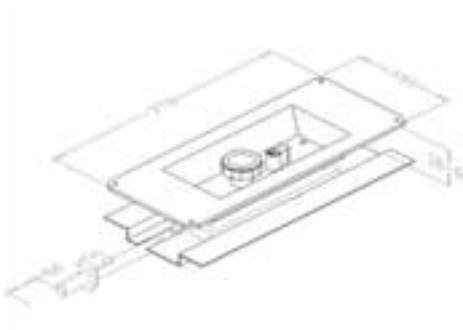
The complete cylinder lock has a recessed aluminium bowl for recessing the outside knob. Complete with external Euro-cylinder, round turn knobs and fixing material. Suitable for panels of 40 up to 52 mm thick.

CYLINDER LOCK

Aluminium bowl, complete

Art. code	kg	vol unit	description
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635	3	50 piece (1)	panel 40-52 mm
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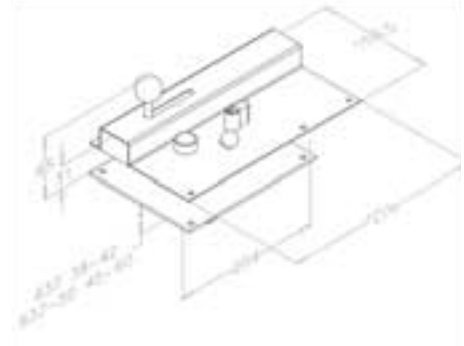


CYLINDER LOCK

The cylinder lock is made of plated steel. The integrated black handle is provided with a black knob. The lock comes with Euro-cylinder, black PVC T-handle and black plastic external plate.

Galvanised, heavy duty

Art. code	kg	vol unit	description
637	3	20 piece (1)	panel 38-42 mm
637-50	3	20 piece (1)	panel 45-60 mm

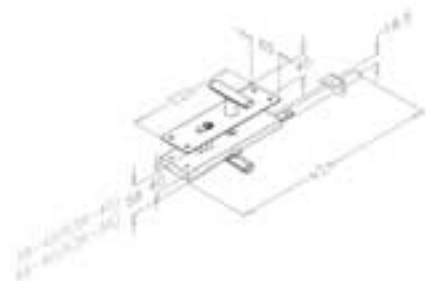


CYLINDER LOCK

The cylinder lock is made of plated steel, black coated. The deflection of the 15 mm round bar is 48 mm. The outside T-handle sticks out 45 mm. The supply includes Euro-cylinder. The lock is suitable for smaller industrial doors as well as residential doors.

Build-up, outside plate black

Art. code	kg	vol unit	description
638-40	1.4	50 piece (1)	panel 30-42 mm
638-56	1.4	50 piece (1)	panel 38-55 mm

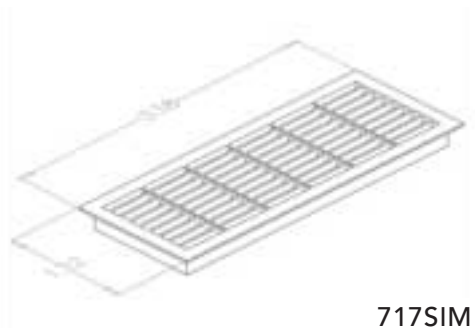


VENTILATION GRILL

The ventilation grills are made of white plastic. The outside dimensions are 338x132 mm (wxh). The grills are not provided with fixing holes. The open ventilation is approx. 200 cm². Provided with wire mesh on the backside.

White plastic

Art. code	kg	vol unit	description
717FERM	0.28	50 piece (1)	can be closed
717SIM	0.28	50 piece (1)	cannot be closed



717SIM

The cable is "Aircraft" type and is made of 7x19 = 133 wires, galvanised. The cable is greased during the production. Load limits for doors with 2 lifting cables (6-times safety) are:

- 3 mm max. 165 kg
- 4 mm max. 295 kg
- 5 mm max. 500 kg
- 6 mm max. 750 kg

LIFTING CABLE

7x19 = 133, galvanised,
greased, reel 1000 m



Art. code	kg	vol unit	description
503F	0.03	1000 p.mtr	3.0 mm
504F	0.06	1000 p.mtr	4.0 mm
505F	0.09	1000 p.mtr	5.0 mm
506F	0.14	1000 p.mtr	6.0 mm

The cable is "Aircraft" type and is made of 7x19 = 133 wires, galvanised. The cable is greased during the production. Load limits for doors with 2 lifting cables (6-times safety) are:

- 3 mm max. 165 kg
- 4 mm max. 295 kg
- 5 mm max. 500 kg
- 6 mm max. 750 kg

LIFTING CABLE

7x19 = 133, galvanised,
greased, reel 250 m



Art. code	kg	vol unit	description
503F250	0.1	250 p.mtr	3.0 mm
504F250	0.06	250 p.mtr	4.0 mm
505F250	0.09	250 p.mtr	5.0 mm
506F250	0.14	250 p.mtr	6.0 mm

The cable is "Aircraft" type and is made of 6x19 = 114 wires, galvanised and provided with a polypropylene core. Providing the plastic core the cable is very flexible and suitable for use with cable pulleys and so for low system residential and industrial overhead doors. Load limits for doors with 2 lifting cables (6-times safety) are:

- 3 mm max. 165 kg
- 4 mm max. 295 kg
- 5 mm max. 500 kg
- 6 mm max. 750 kg

LIFTING CABLE

6x19 = 114, galvanised,
with plastic core, reel 1000 m



Art. code	kg	vol unit	description
503-PP	0.1	1000 p.mtr	3.0 mm
504-PP	0.05	1000 p.mtr	4.0 mm
505-PP	0.08	1000 p.mtr	5.0 mm
506-PP	0.12	1000 p.mtr	6.0 mm

LIFTING CABLE

6x19 = 114, galvanised,
with plastic core, reel 250 m

Art. code	kg	vol unit	description
503-PP-250	0.1	250 p.mtr	3.0 mm
504-PP-250	0.05	250 p.mtr	4.0 mm
505-PP-250	0.08	250 p.mtr	5.0 mm
506-PP-250	0.12	250 p.mtr	6.0 mm

The cable is "Aircraft" type and is made of 6x19 = 114 wires, galvanised and provided with a polypropylene core. Providing the plastic core the cable is very flexible and suitable for use with cable pulleys and so for low system residential and industrial overhead doors. Load limits for doors with 2 lifting cables (6-times safety) are:

- 3 mm max. 165 kg
- 4 mm max. 295 kg
- 5 mm max. 500 kg
- 6 mm max. 750 kg



LIFTING CABLE

6x19 = 114, galvanised, PP,
complete set

Art. code	kg	vol unit	description
K4*..	-	50 p.mtr	4.0 mm first meter
K5*..	-	50 p.mtr	5.0 mm first meter
K6*..	-	50 p.mtr	6.0 mm first meter

The cable is "Aircraft" type and is made of 6x19 = 114 wires, galvanised and provided with a polypropylene core. The cable is cut to length and assembled with cable thimble and oval sleeve. The supply is not from stock approx. 2 weeks. You have to order the wire size, length and version. The price is calculated as follows: a fixed price for the first metre including fixings and a variable price per following metres.



CABLE SLEEVE

Oval, aluminium

Art. code	kg	vol unit	description
508	1.1	1000 p.100	6.0 mm
509	0.7	1000 p.100	5.0 mm
510	0.4	1000 p.100	4.0 mm
511	0.3	1000 p.100	3.0 mm

The sleeves are made of aluminium and can be pressed to the cable with help of swager or cable press. Pay attention to the CE-norms on strenght of cable connections with regards to the breaking force of the cable.



The sleeves are made of aluminium and can be pressed to the cable with help of swager or cable press. Pay attention to the CE-norms on strenght of cable connections with regards to the breaking force of the cable.

CABLE SLEEVE

Round, aluminium

Art. code	kg	vol unit	description
513	0.4	1000 p.100	6.0 mm
514	0.2	1000 p.100	5.0 mm
515	0.2	1000 p.100	4.0 mm
516	0.1	1000 p.100	3.0 mm

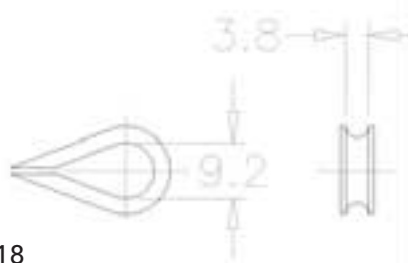


The thimbles are made of plated steel and suitable for fixing in the loop of the cable.

CABLE THIMBLE

For cable fixing

Art. code	kg	vol unit	description
518	0.8	1000 p.100	6.0 mm
519	0.5	1000 p.100	4.0 and 5.0 mm
521	0.2	1000 p.100	3.0 mm



518



The swager is suitable for fixing aluminium oval and round cable sleeves from 1/8" (3.0 mm) up to 3/16" (5.0 mm). The total length of the swager is 660 mm. The swager is suitable for regular (non-intensive) usage and is adjustable. Working instruction on demand. Pay attention to the CE-norms on strenght of cable connections with regards to the breaking force of the cable.

SWAGER

For oval and round cable sleeves

Art. code	kg	vol unit	description
511SC	2.7	10 piece (1)	3.0-5.0 mm



SWAGER

Table installation, for oval and round sleeves

Art. code	kg	vol unit	description
513BF	3.1	10 piece (1)	3.0-5.0 mm

The swager is suitable for fixing aluminium oval and round cable sleeves from 1/8" (3.0 mm) up to 3/16" (5.0 mm). The swager is suitable for regular, semi-intensive usage and is adjustable. Working instruction on demand. Pay attention to the CE-norms on strenght of cable connections with regards to the breaking force of the cable.



CABLE CUTTER

For cutting cable up to 5.0 mm

Art. code	kg	vol unit	description
530H	1	10 piece (1)	

The cable cutter is for cutting cable up to 5.0 mm cable thickness. The cutter is suitable for non-intensive usage.



CABLE CUTTER

For cutting cable up to 7.0 mm

Art. code	kg	vol unit	description
531	3	10 piece (1)	

The Felco C-9 cable cutter is suitable for cutting cable up to 7.0 mm cable thickness. The cutter is suitable for intensive use.



The steel plated track splice bolts 1/4"x14 UNC have a flat head and serrated self locking neck. The steel plated 1/4" UNC nuts have a kep lock.

SPLICE BOLT/NUT

Galvanised, 1/4"x14 UNC,
self locking

Art. code	kg	vol unit	description
1003B	0.7	2500 p.100	bolt, 1/4"
1005F	0.3	2500 p.100	nut, 1/4", serrated



The steel plated bolts M6x16 have a very flat head and serrated self locking neck. Because of this the bolt is suitable for fixing track to another profile. The standard M6 flanged nut is suitable to use with this splice bolt.

PRESS BOLT/NUT

Galvanised, M6x15 mm,
flat head, self locking

Art. code	kg	vol unit	description
1006B	0.7	5000 p.100	bolt, M6
1062M	0.3	5000 p.100	nut, M6



The 3/8" bolts with hexagon head are suitable for fixing the stationary spring fitting to the bearing plate. The 3/8" bolts with square head are suitable for fixing the wind plug or cable drum to the shaft.

BOLT

3/8 UNC

Art. code	kg	vol unit	description
1012B	1.5	1000 p.100	1/2" (12 mm), hex.headed
1014B	0.01	1000 p.100	1" (25 mm), hex.headed
1015M	0.007	1000 p.100	nut
1017B	0.02	1000 p.100	1 1/4" (32 mm), hex.headed
1021	0.01	1000 p.100	1" (25 mm), square headed, hardened cup point
1022	0.02	1000 p.100	1 1/2" (37 mm), square headed, hardened cup point



SCREW

The steel plated self tapping screw has a diameter of 6.3 mm. The head of the screw has a pressed self locking flange and is suitable for fixing with metric 10 mm wrench. Maximum fixing torque is 10 Nm. Predrilling according to norm.

Galvanised, self tapping

Art. code	kg	vol unit	description
1052BV	0.6	2500 p.100	6.3x16 mm
1053BV	0.9	2500 p.100	6.3x35 mm
1055BV	0.8	2500 p.100	6.3x25 mm



SCREW

The steel plated self tapping screw has a diameter of 6.3 mm. The head of the screw has a steel washer with a neoprene layer to prevent loosening of the hinges etc. and is suitable for fixing with 3/8" wrench. Maximum fixing torque is 10 Nm. Predrilling according to norm.

Galvanised, self tapping, neoprene layer

Art. code	kg	vol unit	description
1055	0.8	1000 p.100	6.5x25 mm



CARRIAGE BOLT/NUT

The special steel plated carriage bolts M6x16 are provided with a 2 mm high square under the head. These special carriage bolts can among other things be used for adjustable side hinges article code 450CZ. The M6 flange nuts have a pressed self-locking flange and are suitable for fixing with metric 10 mm spanner. The steel plated carriage bolts M8x25 have a 3.5 mm high square under the head. These bolts are suitable for self-locking in holes of perforated angle code 30B20-3000, 40B25-3000 and 50B30-3000. The M8 steel plated nuts are suitable for a 13 mm wrench.

Galvanised

Art. code	kg	vol unit	description
1062B	0.7	5000 p.100	bolt M6, 2 mm high square
1062M	0.3	5000 p.100	nut M6
1068M	0.7	5000 p.100	flanged nut, M8
1070B-3.5	1	5000 p.100	M8x25 mm, 3.5 mm high square

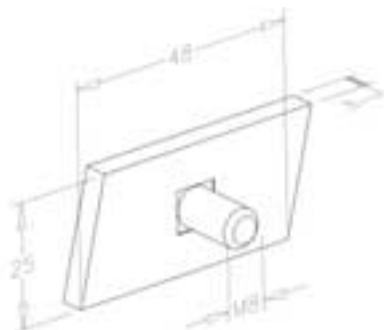


The paro clamp plates are made of plated steel. The dimensions of the clamp plates are 25x48x5 mm. The clamp plates are provided with a 8.6 square hole for M8 carriage bolts. The clamp plate is ideal fixing material for simple self locking fixing into 5C- and 50SU-profiles.

PARO CLAMP PLATE

Galvanised, 25x48x5 mm

Art. code	kg	vol unit	description
1026	0.04	400 piece (1)	square hole 8.6 mm
1026-68B	0.06	400 piece (1)	pre-assembled bolt M8x25 mm

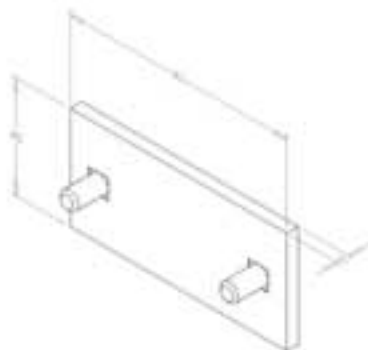


The double paro clamp plates are made of plated steel. The dimensions of this clamp plates are 45x95x5 mm. The clamp plates are provided with two M8 bolts with a heart-to-heart dimension equal to the holes in our springbumper support (code 2090) and the end bearing plates (code 305-4B to 308-4B). This enables faster and easier installation.

PARO CLAMP PLATE

Double, galvanised,
45x95x5 mm

Art. code	kg	vol unit	description
1027-68B	0.15	400 piece (1)	with 2 M8x25 mm lockbolts



The plated bolt M10x25 with square head has quality 8.8 (for 17 mm wrench). The steel plated flanged nut M10 is provided with a pressed serrated ring and is suitable for 15 mm wrench.

TAPPING BOLT/ FLANGED NUT

Galvanised, M10

Art. code	kg	vol unit	description
1058B	2.5	1000 p.100	25 mm, hex.headed
1058F	1.2	1000 p.100	flangenut M10

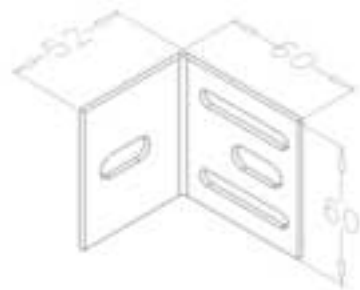
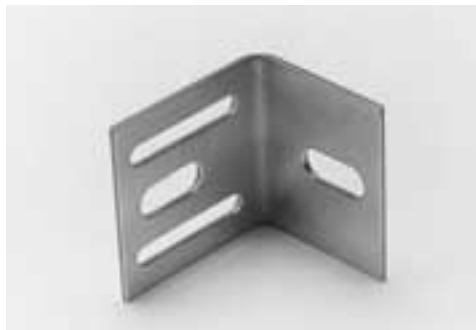


ANGLE BRACKET

Galvanised

Art. code	kg	vol unit	description
2602	0.15	200 piece (1)	b = 60 mm, flanges 50 and 60 mm

The bracket is made of galvanised steel. Both flanges have a slotted hole of 25x10 mm. One flange is provided with 2 slotted holes 7x44 mm. The angle brackets are suitable for installing a junction at the end of 5C-profiles with help of paro clamp plates, and for installation of the vertical angle 915VB of residential overhead doors to brickwork.



LUBRICATING OIL

Spray can lubricate oil for use on hinges, rollers, torsion springs etc. The can contents 370 gramme.

Art. code	kg	vol unit	description
1063	0.41	12 piece (1)	380 ml

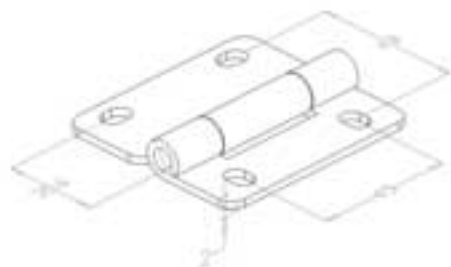


INTERMEDIATE HINGE

2 mm, chromium steel

Art. code	kg	vol unit	description
450H-RVS	0.1	200 piece (1)	centre line holes 45 mm
450H-SSA	0.1	200 piece (1)	centre line holes 40 mm

The hinge is made of 2.0 mm stainless chromium steel, materials no. 14016, AISI 430. The supply includes assembled stainless steel pin. The hinge is provided with slotted holes 7x19 mm. Article code 450H-RVS will be replaced by article code 450H304 made of AISI304.

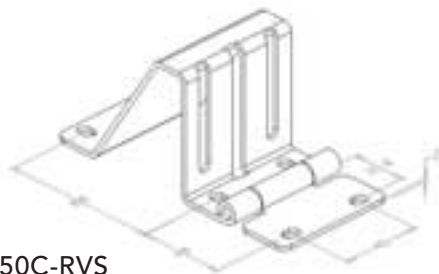


SIDE HINGE

The side hinge is made of 2.0 mm stainless chromium steel, materials no. 14016, AISI 430. The supply includes installed stainless steel pin, stainless steel roller slide for 11 mm shaft diameter and 2 special stainless steel carriage bolts M6x16 and 2 flanged nuts M6. Article code 450C-RVS will be replaced by article code 450C304 made of AISI304.

Adjustable, complete,
chromium steel

Art. code	kg	vol unit	description
450C-RVS	0.37	100 piece (1)	centre line holes 45 mm
450C-SSA	0.45	100 piece (1)	centre line holes 40 mm



450C-RVS

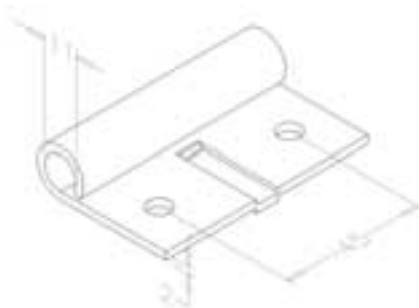


The roller slide is made of 2.0 mm stainless chromium steel, materials no. 14016, AISI 430. The slide is suitable for 11 mm shaft diameter and is including recess for fixation/locking. Article code 447-RVS will be replaced by article code 447-304 made of AISI304.

SLIDE

For roller shaft 11 mm,
chromium steel

Art. code	kg	vol unit	description
447-RVS	0.1	100 piece (1)	

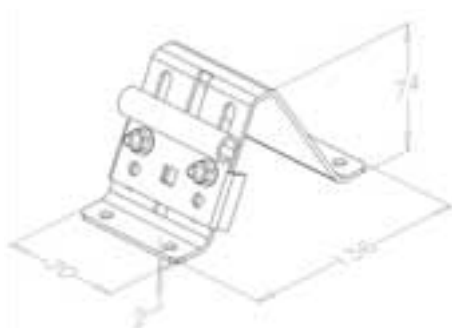


The bracket is made of 2.0 mm stainless chromium steel, materials no. 14016, AISI 430. The hinge is provided with slotted holes 7x9 mm. The supply includes stainless steel roller slide for 11 mm shaft diameter and 2 special stainless steel carriage bolts M6x16 and 2 stainless steel flanged nuts M6.

TOP ROLLER BRACKET

2 mm, chromium steel

Art. code	kg	vol unit	description
415-RVS	0.38	100 piece (1)	centre line holes 45 mm
415-SSA	0.38	100 piece (1)	centre line holes 40 mm



TOP ROLLER BRACKET

The bracket is made of 2.0 mm stainless chromium steel, materials no. 14016, AISI 430. This top roller carrier is non-adjustable. Suitable for low system residential and industrial overhead doors.

For roller shaft 11 mm, 2 mm,
chromium steel

Art. code	kg	vol unit	description
417-RVS	0.17	200 piece (1)	



BOTTOM BRACKET

The bracket is made of 2.0 mm stainless chromium steel, materials no. 14016, AISI 430. The bottom bracket is suitable for inside fixing of the cable. The advised max. door weight is 250 kg. The supply includes stainless steel cable bolts with nuts M8, screws and roller slides.

Adjustable cable fixing,
chromium steel, complete

Art. code	kg	vol unit	description
4275-RVS	1.1	50 pair (2)	



BOTTOM BRACKET

The bracket is made of 3.0 mm stainless chromium steel, materials no. 14016, AISI 430. The bottom bracket is suitable for outside fixing of the cable f.e. with low system. The supply includes roller slides, screws and bolt/nut M8x35 to fit the cable. Advised max. door weight 300 kg.

Outside cable fixing, for roller
shaft 11 mm, chromium steel,
complete

Art. code	kg	vol unit	description
437-RVS	1.7	30 pair (2)	



LH

Nylon rollers with ball bearing. The outside diameter of the roller is approx. 46.5 mm. Suitable for 2" track. The shaft and other stainless steel parts are made of AISI 304.

ROLLER

Nylon, 2", shaft 11 mm, stainless steel



Art. code	kg	vol unit	description
574RVS	0.15	200 piece (1)	L = 118 mm, galvanised bearing
574SSH	0.15	200 piece (1)	L = 118 mm, stainless steel bearing
575SSH	0.22	200 piece (1)	L = 193 mm, stainless steel bearing



The cable is "Aircraft" type, is made of 7x19 = 133 wires, stainless steel. The cable is also assembled available. In that case the cable thimble will be made of galvanised steel. Please pay attention on the article codes of the 5 and 6 mm cable. Load limits for doors with 2 lifting cables (6-times safety) are:

- 3 mm max. 165 kg
- 4 mm max. 295 kg
- 5 mm max. 500 kg
- 6 mm max. 750 kg

LIFTING CABLE

Stainless steel



Art. code	kg	vol unit	description
503RVS-250	0.03	250 p.mtr	3.0 mm
504RVS-250	0.06	250 p.mtr	4.0 mm
506RVS-250	0.09	250 p.mtr	5.0 mm
507RVS-250	0.14	250 p.mtr	6.0 mm

The stainless steel self tapping screw has a diameter of 6.3 mm. The head of the screw has a pressed serrated ring and is suitable for 10 mm wrench. Pre-drilling according to norms.

SCREW

Stainless steel, self tapping



Art. code	kg	vol unit	description
1053BV-RVS	0.9	2000 p.100	6.3x35 mm
1055BV-RVS	0.8	2000 p.100	6.3x25 mm

CARRIAGE BOLT/NUT

The special stainless steel carriage bolt M6 has a length of 16 mm. The bolt is under the head provided with a square. The stainless steel flanged nut M6 has a pressed serrated ring and is suitable for 10 mm wrench.

Stainless steel

Art. code	kg	vol	unit	description
1062B-RVS	0.7	2000	p.100	M6x16, special
1062M-RVS	0.7	2000	p.100	M6

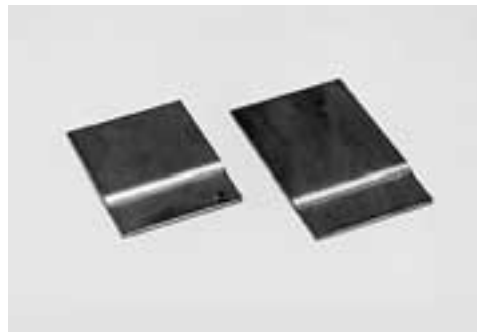


TRACK CONNECTING PLATE

The plates are made of 2.0 mm stainless chromium steel and are 60 mm wide. The track plates have a 2.0 mm offset on 24 mm from the bottom and are available in 3 lengths.

Stainless steel, without holes

Art. code	kg	vol	unit	description
808W-RVS	0.14	250	piece (1)	80x62x2 mm
813W-RVS	0.14	250	piece (1)	130x60x2 mm
810W-RVS	0.14	250	piece (1)	100x60x2 mm

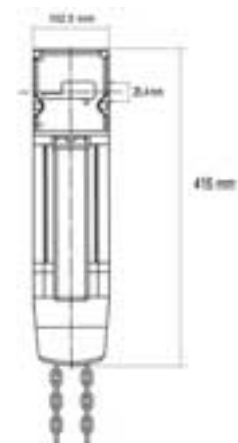


E-OPERATOR

For industrial doors, external standard control

Drive with advanced external standard control for all types of doors. Mechanical limit switches employing cam control switches, external control box with soft-contact switches, fitted as standard with emergency hand chain and disconnecting option for maintenance works. Choice of 6 types, depending on supply voltage (400 V-230 V), number of phases (1-3), number of revs per minute (19-24) and power (0.37-0.55 kW)

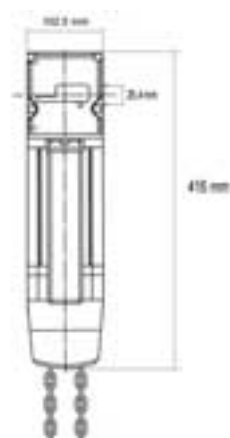
Art. code	kg	vol	unit	description
IND-E-311	5	1	piece (1)	400V 3F, 19 revs/min, 0.37 kW
IND-E-312	5	1	piece (1)	400V 3F, 19 revs/min, 0.55 kW
IND-E-321	5	1	piece (1)	400V 3F, 24 revs/min, 0.37 kW
IND-E-322	5	1	piece (1)	400V 3F, 24 revs/min, 0.55 kW
IND-E-111	5	1	piece (1)	230V 1F, 19 revs/min, 0.37 kW
IND-E-121	5	1	piece (1)	230V 1F, 24 revs/min, 0.37 kW



Operator with advanced control suitable for all types of doors and fitted with frequency converter for which soft-start & soft-stop as well as rapid upward movement is possible. Mechanical limit switches employing cam control switches. Fitted as standard with emergency hand chain and disconnecting option for maintenance works

E-OPERATOR

For industrial doors, integrated variable frequency control



Art. code	kg	vol unit	description
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IND-E-1FU	5	1 piece (1)	230 V 1F
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This antenna is required for application of a manual transmitter RES-T.. May be employed for both garage and industrial operators.

ANTENNA

1-channel, 433 MHz

Art. code	kg	vol unit	description
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97001	0.1	25 piece (1)	
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Separate plastic push button panel with the functions up/stop/down.

PUSH BUTTON CASE

For operating all types of industrial E-operators

Art. code	kg	vol unit	description
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97008	0.4	25 piece (1)	
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97009	0.42	25 piece (1)	lockable
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97010	0.42	25 piece (1)	
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97008

PHOTOCELL

For application for both garage doors and industrial operators, suitable external application, IP 65, with system plug connection.

Art. code	kg	vol	unit	description
97016	0.8	25	piece (1)	with reflector
97017	1.6	25	piece (1)	transmitter + receiver



97016

SWITCH

Slack cable safety

The switch is supplied with ca. 1.5 metre of system cable fitted with a system plug assuring rapid and faultless assembly. Should the power fail because of the door panel weight on the lifting cables the switch operates a stopping signal to the operator. The switch provides extra safety and can be used on f.e. our bottom bracket 428TAI. The switch is being supplied without eye bolt.

Art. code	kg	vol	unit	description
97018	0.04	25	piece (1)	



PASS DOOR CONTACT

This contact is a safety device for use with pass doors.

Art. code	kg	vol	unit	description
97019	0.22	25	piece (1)	



Art. code	kg	vol unit	description
97020	2.6	25 piece (1)	2 yellow lights
97021	4.5	25 piece (1)	2 lights red/green



For safety edge code 97033 or photocell 97016 and 97017.

RELAY

Art. code	kg	vol unit	description
97023	0.35	25 piece (1)	without casing
97024	0.35	25 piece (1)	in casing



97023

The 2-way plug code 97025 is for parallel switching of for example push buttons etc. The 2-way plug code 97026 is for serial looping in the security circuit. To extend system cables use the coupling plug code 97027.

COUPLING PLUG SOCKET

Art. code	kg	vol unit	description
97025	0.006	25 piece (1)	2-way (parallel)
97026	0.006	25 piece (1)	2-way (serial)
97027	0.006	25 piece (1)	coupling plug



97025

SYSTEM PLUG

The system plug is suitable when combined with cable 97031 and chuck type 97031 for construction of self-securing system cables.

Art. code	kg	vol unit	description
97028	0.3	25 p.50	6-pole
97029	0.3	25 p.50	4-pole



97028

PLIER

For fitting system plugs

Art. code	kg	vol unit	description
97030	0.4	25 piece (1)	



SYSTEM CABLE

The cable is 6-pole and suitable when combined with the system plugs and chuck type 97031 for construction of self-securing system cables.

Coil 50 meter, 6-pole

Art. code	kg	vol unit	description
97031	1.2	25 piece (1)	



Raised rubber bottom profile, suitable for use with infrared safety edge system 97033. Raised profile is applying to the new CE-demands. Can be used in combination with different Flexi-Force alu-bottom profiles.

BOTTOM ASTRAGAL

For use with safety edge (CE)

Art. code	kg	vol unit	description
1039-55	0.9	35 p.mtr	



Infrared transmitter and receiver operate in combination with bottom profile code 1039-55. The optical cable type no. 97079 through 97087 is included with orders for industrial motors.

SAFETY EDGE

Art. code	kg	vol unit	description
97033	-	- piece (1)	



Type 97034 is suitable for 2" cable break device. Type 97034 is suitable for 3" cable break device protection. The switch is fitted with 0.4 metre system cable enabling it to be readily fitted to the industrial motor. When the power under influence of the door weight on the lifting cables is dropping, the switch is operated and the motor is stopped.

SWITCH

For cable break device

Art. code	kg	vol unit	description
97034	-	- set (2)	for cable break device 2"
97035	-	- set (2)	for cable break device 3"



For industrial E-operators

Art. code	kg	vol unit	description
97036	-	- piece (1)	wall installation
97037	-	- piece (1)	vertical angle installation



HAND CHAIN

This separate hand chain is suitable for industrial operators. The links are not welded and the size is adapted specially to these types of operators.

For industrial E-operators

Art. code	kg	vol unit	description
97038	-	- piece (1)	L = 2 m
97039	-	- piece (1)	L = 3 m
97040	-	- piece (1)	L = 4 m
97041	-	- piece (1)	L = 5 m
97042	-	- piece (1)	L = 6 m
97043	-	- piece (1)	L = 7 m
97044	-	- piece (1)	L = 8 m
97045	-	- piece (1)	L = 9 m
97046	-	- piece (1)	L = 10 m
97047	-	- piece (1)	L = 11 m
97048	-	- piece (1)	L = 12 m
97049	-	- piece (1)	L = 13 m
97050	-	- piece (1)	L = 14 m
97051	-	- piece (1)	L = 15 m
97052	-	- piece (1)	L = 16 m



SYSTEM CABLE, FU

The cable is fitted on both ends with a system plug establishing readily the connection between drive and operation. Cable is of the type ölflex. The length selected is dependent on the height and type of door.

For all types industrial E-operator

Art. code	kg	vol unit	description
97053	-	- piece (1)	L = 2 m
97054	-	- piece (1)	L = 3 m
97055	-	- piece (1)	L = 4 m
97056	-	- piece (1)	L = 5 m
97057	-	- piece (1)	L = 6 m
97058	-	- piece (1)	L = 7 m
97059	-	- piece (1)	L = 8 m
97060	-	- piece (1)	L = 9 m
97061	-	- piece (1)	L = 10 m
97062	-	- piece (1)	L = 12 m
97063	-	- piece (1)	L = 14 m
97064	-	- piece (1)	L = 16 m
97065	-	- piece (1)	L = 18 m



The cable is fitted on both ends with a system plug establishing readily the connection between drive and operation. Cable is of the type ölflex. The length selected is dependent on the height and type of door.

SYSTEM CABLE

For E-operator with external control



Art. code	kg	vol unit	description
97066	-	- piece (1)	L = 2 m
97067	-	- piece (1)	L = 3 m
97068	-	- piece (1)	L = 4 m
97069	-	- piece (1)	L = 5 m
97070	-	- piece (1)	L = 6 m
97071	-	- piece (1)	L = 7 m
97072	-	- piece (1)	L = 8 m
97073	-	- piece (1)	L = 9 m
97074	-	- piece (1)	L = 10 m
97075	-	- piece (1)	L = 12 m
97076	-	- piece (1)	L = 14 m
97077	-	- piece (1)	L = 16 m
97078	-	- piece (1)	L = 18 m

Cabling for safety edge code 97033. The cable is fitted at both ends with a system plug allowing the connection to be established readily. The length selected is dependent on the height and type of door.

OPTICAL CABLE

For industrial E-operators



Art. code	kg	vol unit	description
97079	-	- piece (1)	L = 2.5 m
97080	-	- piece (1)	L = 3.5 m
97081	-	- piece (1)	L = 4.5 m
97082	-	- piece (1)	L = 5.5 m
97083	-	- piece (1)	L = 6.5 m
97084	-	- piece (1)	L = 7.5 m
97085	-	- piece (1)	L = 8.5 m
97086	-	- piece (1)	L = 9.5 m
97087	-	- piece (1)	L = 10.5 m

For operation of both garage doors and industrial drives. Operates at 433 MHz (European guideline). The multibit system ensures absolute safety. The RES-T-MIDI can be fitted to your key chain or be secured with the clip supplied behind the windscreen.

HAND TRANSMITTER

433 MHz



Art. code	kg	vol unit	description
RES-T-MIDI	0.05	1 piece (1)	2-channel
RES-T-MIDI-4	0.05	1 piece (1)	4-channel
RES-T-MICRO	0.02	1 piece (1)	1-channel

RESIDENTIAL INNOVATIONS

The market for residential (garage) overhead doors is currently undergoing a number of important developments.

- The market is experiencing explosive growth.
- The safety of garage doors is determined by new CE standards.
- The appearance and design of the door, with the parts fitted to it, is increasingly important for the end user.
- More and more garage doors are electrically operated.

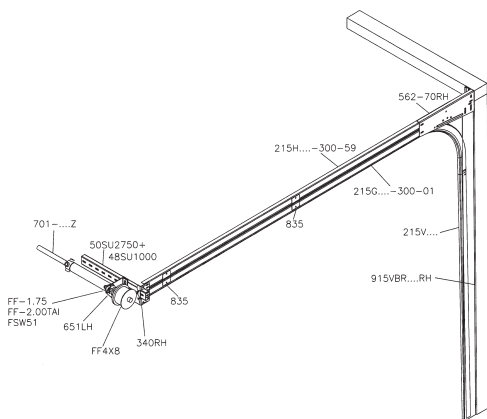
Flexi-Force anticipates these trends with the introduction of an entirely revised delivery program for garage doors in which two different concepts, "RES70" and "RES200", both provide solutions to specific application requirements.

RES70 – NEW RESIDENTIAL CONCEPT

The RES70 concept is entirely new. It features compact built-in dimensions (70 mm) which means an overhead door can be installed where a swing door was installed formerly, making it ideal for use in renovation projects where the available space is limited.

Technical specifications

The cable is attached to the shaft of the lower bearing roller (code 577). The special bearing rollers have a groove in the extended breast to ensure correct cable guidance.



The new bottom bracket 431S can be used on the left or the right. If Flexi-Force cable sets (90% attachment in accordance with CE) are used, the capacity of the cable drum can be used in such a way that the type FF-4X8 can be used for doors with a height of 2500 mm in 4 or 5 sections. The cable runs inside the track system over the bearing rollers to the cable pulley (code 570-60) mounted on the side plate (code 570-60LH/RH). The upper bearing roller has a short shaft (code 576) which is mounted on the side in the new top roller bracket (code 418LH/418RH). The cable pulley is secured against cable running off by the pulley bracket (code 554BEU). The cable runs from the pulley to the cable drum (code FF-4X8) which is mounted on the shaft at the back of the horizontal tracks. The galvanised tubular shaft, including the spring packet, is mounted using bearing plates or obligatory spring breaking device (code 651LH/RH or 667LH/RH) on the bear-



ing plate support (code 340LH/RH). With a manually operated door the headroom at the lintel is the clear width height minus ca. 70 mm. With an electrically operated door the full clear width height can be used, even behind the horizontal tracks.

The track system

The pre-assembled track set (code R70V2000/R70H2000, etc.) has been designed specifically for this system and includes a vertical set consisting of vertical angle with special hole pattern (code 915VBR), vertical tracks (code 215V) and side seal (code 1085) and a horizontal double track set in which the bends (code 215H...-300-59 and code 215G...300-01) are also integrated.

Support

The horizontal tracks can be hung from the bearing plate support using a perforated angle to the ceiling, or with adjustable SU profiles to the sidewall.

FEATURES OF RES70:

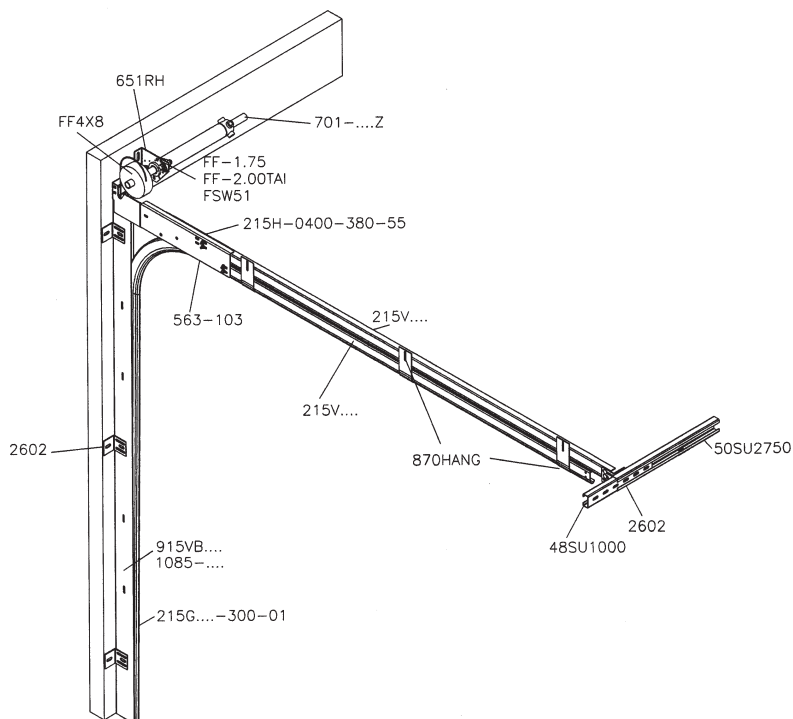
- Renovation projects (replacing swing doors).
- Required head and side space (manual) 70 mm.
- Required headroom (electr.) 100 mm.
- Shaft system with 2" springs behind.
- Lifting cable inside the tracks (internal).

RES200 – PROVEN RESIDENTIAL CONCEPT

The RES200 concept is already established in our program under the code RESV/H, but is now fully optimised. Ideal for use in situations where the available installation space is adequate and does not impose restrictions. This concept also meets the requirements of various customers who wish to fit the spring package (shaft system) at the front near to the lintel.

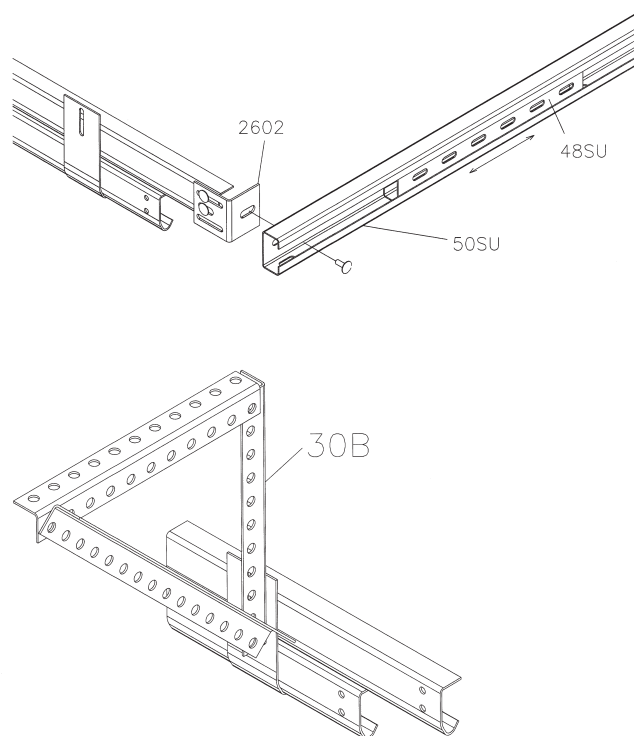
Technical specifications

The main feature of this system is the shaft with bearing plates (or spring breaking device), drums and torsion springs mounted on the lintel. The cable drums (code FF-4X8) are inside the track system. The headroom with a manually operated door is the clear width height minus ca.100-150 mm. The cable runs from the bottom console (code 422) inside the tracks straight to the cable drum. If Flexi-Force (90% attachment in conformance with CE) cable sets are used, the capacity of the cable drum can be used in such a way that the type FF-4X8 can be used for doors with a height of 2500 mm in 4 or 5 sections. The shaft is mounted to the lintel using bearing plates or the residential spring breaking device (code 651RH/LH).



FEATURES OF RES200:

- New housing development projects.
- Required top clearance 200 mm.
- Required side clearance 70 mm.
- Shaft system with 2" springs at front near to the lintel.
- Lifting cable inside the tracks (internal).



The track system

The pre-assembled track set (code RESV2000/RESH2000 etc.) has been designed specifically for this system and contains:

- A vertical set consisting of vertical angle (code 915VB), vertical tracks (code 215V), side seal (code 1085), side plate (code 563-103) with top bend and bend (radius 300 mm). The bend has a ca. 100 mm straight end, which ensures optimum connection with the horizontal tracks.
- A horizontal double track set, riveted together using track plates (code 870HANG) which also serves as an attachment point for roof suspension.

Optional: the corner brackets (code 2602) can be used for attaching the vertical tracks to the brickwork. This makes for a more robust construction, although it does increase the required side clearance to 117 mm.

The horizontal tracks can be hung from the bearing plate support using a perforated angle to the ceiling, or with adjustable SU profiles to the sidewall.

CE: SAFE GARAGE DOORS

The CE standard EN-12406 stipulates that doors must be protected against uncontrolled descent. The maximum drop must not exceed 300 mm. A manually operated garage door or an electrically operated garage door whose operator can be disengaged (i.e. almost every electric door), must be equipped for this purpose with a safety device which is activated when one of the torsion springs breaks. Flexi-Force has the solution to this standard: the 651 and 667 spring breaking devices for residential doors. These safety devices satisfy even the more rigorous BG requirements (TÜV) which stipulate a maximum drop of 200 mm. The BG approval number is 01020. The CE standards also stipulate that the safety of a garage

door is also determined by, among other things, by the use of panels with finger safety design, which protects fingers from becoming trapped. The selection of the correct cable diameter and attachment avoids the need for a cable-breaking safety device for smaller garage doors. Our interpretation of the EN-standard concerning trapping underneath or catching behind projecting parts is that a system with the lifting cable outside the tracks may no longer be used. In our opinion these are the most important factors for making a residential door safer. Since Flexi-Force considers it essential that a garage door can be installed, used and maintained safely, our complete hardware sets are manufactured in accordance with the requirements mentioned above.

HARDWARE SETS OR SEPERATE COMPONENTS?

Within both concepts there is another possible option: i.e. the option to wholly or partially contract out the assembly of the door hardware to Flexi-Force. Hardware sets or manufacture the RES70 and the RES200 using the following three options:

- complete hardware sets;
- assembled track sets;
- separate components.

This means that as the manufacturer of garage doors you can choose whatever best suits your requirements and production method.



COMPLETE HARDWARE SETS:

Flexi-Force offers the two concepts RES70 and RES200 as a complete hardware set. This means that meanwhile Flexi-Force puts the hardware set together for you, you can manufacture and assemble the door panel.

Advantages of opting for complete hardware sets:

- your stock of separate parts is limited, which reduces your inventory costs;
- you do not have to invest in machines for riveting and assembling the sets;
- you have optimum flexibility, due partly to the fact that delivery time is ca. 5 days after ordering;

The range of application of our complete sets is:

Maximum door height:	2500 mm
Maximum door width:	2600 mm
Maximum door weight:	100 kg
Panel thickness	40 mm

Delivered with 651LH/RH spring breaking device as standard. Only suitable for panels with finger safety design. Lifting cables inside the tracks (internal). Cable attachment complies to the 90% requirement of the CE standard.

- you are guaranteed optimum quality at relatively low costs, since Flexi-Force manufactures these sets in very large quantities at its new factory in Hungary;
- the sets can be packaged and delivered per set, so sending the set on to the end user is easy;
- efficient logistical operation.

Our complete hardware sets are set up as follows:

1. Assembled horizontal and vertical track set.
2. Box with required hardware parts.
3. Box with the required fixing materials.
4. Box with selected hinges.
5. Assembled cable set.
6. A galvanised tubular shaft, length 2750 mm.
7. Galvanised or powder-coated torsion springs.
8. Interconnection of the horizontal tracks.
9. Suspension profiles for hanging of the horizontal tracks.
10. Top seal with corresponding clips.
11. E-operator with drawbar.
12. One-box-packaging. The complete hardware for each door can be packed into one compact box.

Enclosed you will find an example of the "parts list" of the set with content and article codes for the various modules.

The delivery time for standard complete hardware sets is normally 5 working days from receiving your order. For prices we refer you to our current price list.

ASSEMBLED TRACK SETS

The track sets consist of a horizontal and vertical part, in which vertical angle, side seal, vertical tracks, bend, upper bend, track plates, side plates, and horizontal double running

tracks are assembled. Riveted joints are used for the assembly. This not only provides an extremely reliable connection, but also gives the track sets a high-quality appearance.



RES200

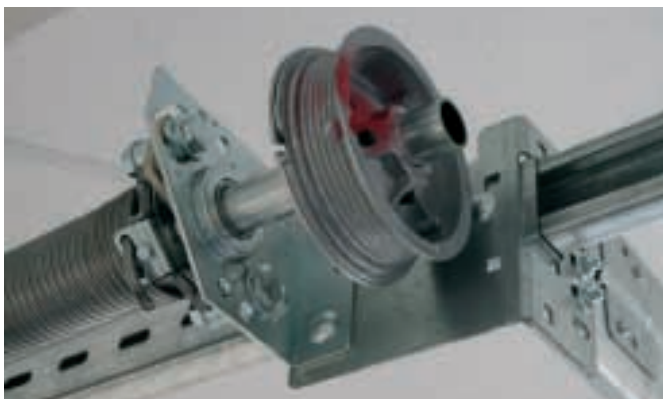


RES70

Height	RES70	Horizontal	Height	RES200	Horizontal
	Vertical			Vertical	
2000 mm	R70V2000	R70H2000	2000 mm	RESV2000	RESH2000
2125 mm	R70V2125	R70H2125	2125 mm	RESV2125	RESH2000
2250 mm	R70V2250	R70H2250	2250 mm	RESV2250	RESH2250
2350 mm	R70V2350	R70H2350	2350 mm	RESV2350	RESH2250
2500 mm	R70V2500	R70H2500	2500 mm	RESV2500	RESH2375

SEPARATE COMPONENTS

Of course you can also decide to take complete control of the production of hardware for your garage doors yourself. All parts suitable for residential application are shown in the



following pages, chapters A-M. Pictures on this page are a selection of new residential products. Detailed information in the next pages.

ELECTRICAL INNOVATIONS



RES-E-500

Electrical operators for garage doors

Flexi-Force introduces a complete new product line, electrical operators for residential (garage) doors.

This innovative product includes the following features:

- Push and pull force: 500 N.
- "Soft" start and "soft" stop.
- "Made in Germany", high tech, top quality.
- Integrated safety edge with microprocessor control.
- CE approval.
- Adaptive electronic power limit.
- Easy installation, easy operation.
- A variety of draw-bars and accessories.
- Just like your hardware: on stock at Flexi-Force.

One-stop-shopping

Flexi-Force has introduced this product, following up demands from our customers. We now offer a clear advantage on combining purchasing volume of hardware and operators at one supplier. The logistic advantages of this one-stop-shop principle are clear. A pallet with operators integrated in your hardware shipment from Flexi-Force is saving you effort and money. The combination of ordering complete residential hardware sets in which the E-operator is attached, makes it easy to pass this one-package set to your customers or installers. Can it be more efficient?

Innovative technology

The RES-E-500 offers an extremely quiet operation, easy programming and ultimate safety. Applying to the latest CE-norms on overhead door operators, the patented self-adapting power limit control, is the solution for garage door safety. The door is stopped instantly when it meets the smallest



obstacle. It then moves 20 cm upwards to release the obstacle. The soft-start and soft-stop enables a quiet running of your door. Programming the microprocessor is, thanks to the 3-but-

ton menu-operation operation, very easy. With the impulse of the remote transmitter, the integrated lighting is activated. Three minutes later is automatically switches off. When a burglar attempts to enter your garage, the electronic control of the RES-E-500 activates the full closing power to shut your door.

Energy saving is obtained by a special energy saving mode, which allows the operator to use only 3,9 W power when stand-by.

Door height	Hardware system	
	RES70	RES200
(mm)	Drawbar chain	Drawbar chain
2000	RES-D-C-2400	RES-D-C-2400
2125	RES-D-C-2400	RES-D-C-2400
2250	RES-D-C-2620	RES-D-C-2400
2350	RES-D-C-2620	RES-D-C-2400
2500	RES-D-C-3530	RES-D-C-2620

TECHNICAL DATA:

Garage door operator, type RES-E-500

Connected loads:

230 V

200 W (in operation, with lighting)

3.9 W (in stand-by without lighting)

Door travel speed:

0.14 m/s with "soft" start + "soft" stop

Pull and push force

500 N

Excess travel stop:

88 sec.

Lighting:

1 x 40 W E14

Automatically disengaged after 180 sec.

Control voltage:

Low voltage ca. 24 V DC

Protection category:

Only for dry buildings

Almost entirely maintenance-free.



The cable drums are provided with half a safety wrap for the cable. The max. opening height with 2 safety wraps for the cable is 1950 mm. The lifting cable provided with a terminal (pressed aluminium sleeve) can be hooked into the camber of the cable drum. The cable drum will be fixed directly to the shaft with 2 hollow-head screws M8. The drums are marked red and black (left and right). The drums are suitable for a max. cable diameter of 3.0 mm and a max. door weight of 240 kg. The outside diameter is 126 mm. The drums are very suitable for residential overhead doors. The spring calculation of the drums is identical to drums with article code FF-NL-12 and FF-4-13.

CABLE DRUM

Normal lift,
H. max. 2440 mm (0,5 sw.)



Art. code	kg	vol unit	description
-----------	----	----------	-------------

FF-4X8	0.6	30 pair (2)	
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The cable drums are provided with half a safety wrap for the cable. The max. opening height with 2 safety wraps for the cable is 3360 mm. The lifting cable provided with a terminal (pressed aluminium sleeve) can be hooked into the camber of the cable drum. The cable drum will be fixed directly to the shaft with two 3/8" bolts with square head. The drums are marked red and black (left and right). The drums are suitable for a max. cable diameter of 4.0 mm and a max. door weight of 265 kg. The outside diameter is 126 mm. The drums are very suitable for residential overhead doors. The spring calculation of the drums is identical to drums with article code FF-NL-12 and FF-4x8.

CABLE DRUM

Normal lift,
H. max. 3880 mm (0,5 sw.)



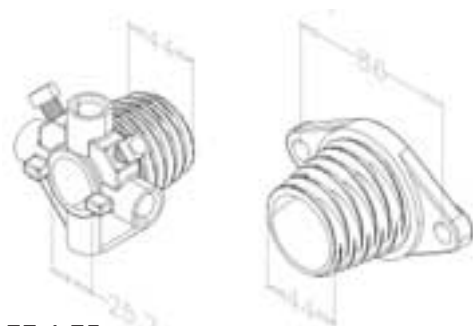
Art. code	kg	vol unit	description
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FF-4-13	1	20 pair (2)	
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The universal aluminium spring fittings are suitable for springs with an inside diameter of 44.5 and 51 mm. Per set 2 winding cones and 2 stationary cones. The centre line of the fixing holes of the stationary cone is 86 mm. The winding cones are marked red and black and are provided with two installed fixing screws.

SPRING FITTINGS

Universal, 2", 51 mm



FF-1.75



Art. code	kg	vol unit	description
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FF-1.75	0.6	50 set (4)	1 3/4", 44 mm
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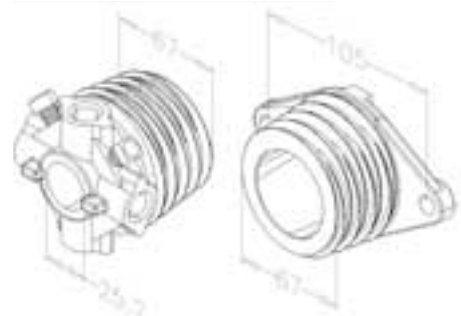
FF-2.00TAI	0.7	50 set (4)	2", 51 mm
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SPRING FITTINGS

Universal, 2 5/8", 67 mm

The universal aluminium spring fittings are suitable for springs with an inside diameter of 67 mm. Per set 2 winding cones and 2 stationary cones. The centre line of the fixing holes of the stationary cone is 105 mm. The winding cones are marked red and black and are provided with two installed fixing screws.

Art. code	kg	vol unit	description
FF-2.63TAI	1	50 set (4)	

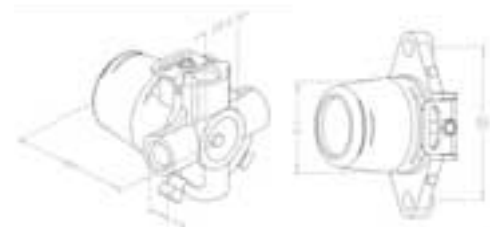
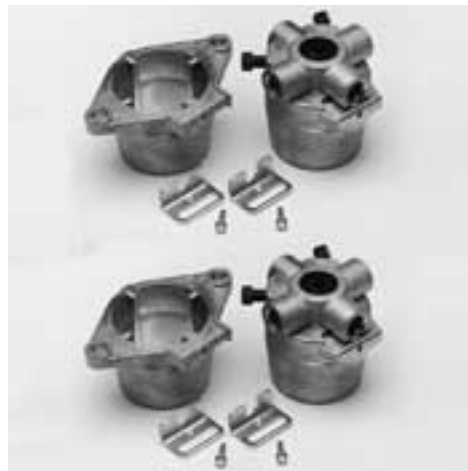


SPRING FITTINGS

Universal,
for powder coated springs

The universal aluminium spring fittings are suitable for springs with an inside diameter of 51 and 67 mm. The fittings are conical and only partly provided with grooves. The end of the spring wire will be bent straight. The fittings will be pressed into the spring and turned a quarter turn. The end of the spring wire will be fixed to the fitting with a clamp plate. This prevents heating the end of the powder coated springs, which improves the production environment (exhaust). The end-product will keep its high-quality appearance.

Art. code	kg	vol unit	description
FSW51	1	30 set (4)	2", 51 mm
FSW67	1	30 set (4)	2 5/8", 67 mm



FSW51

SHAFT

Tube, 1", galvanised

The steel plated tubular shaft, diameter 1" (25.4 mm), is 2.0 mm thick. The tubular shaft is suitable for residential overhead doors.

Art. code	kg	vol unit	description
701-2750Z	3.3	50 piece (1)	L = 2750 mm
701-3500Z	4.25	50 piece (1)	L = 3500 mm
701-4700Z	5.7	50 piece (1)	L = 4700 mm
701-5250Z	6.3	50 piece (1)	L = 5250 mm
701-6800Z	8.2	50 piece (1)	L = 6800 mm



The 1" nylon set collar has a 25.8 mm inside diameter, including M8 fixing screw which can be tightened max. 4 Nm. The 1" steel plated set collar has a 25.5 mm inside diameter, including 5/16" fixing screw. The 1 1/4" steel plated set collar has a 31.8 mm inside diameter, including 5/16" fixing screw. Heavier model (1065COL) of plated steel for a 1" shaft. The ring has an external diameter of 45 mm and a width of 16 mm. On one side the ring is equipped with a 2 mm brush (external diameter 32 mm) that adjusts perfectly with the inner ring of a 1" bearing. The adjustment ring is equipped with an M6 inbus bolt.

SET COLLAR



1065

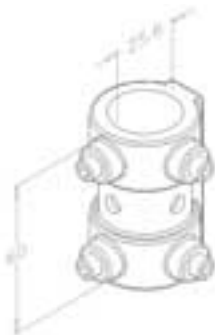


Art. code	kg	vol unit	description
1065	0.1	200 piece (1)	steel, 1"
1065-5/4	0.15	200 piece (1)	steel, 1 1/4"
1065NYL	0.1	200 piece (1)	nylon, 1"
1065COL	0.1	200 piece (1)	steel, 1" reinforced with collar

The coupler is made of an eminent aluminium alloy. This coupler can only be used on a (hollow) tubular shaft without key way with the screws tightened to a maximum of 15 Nm.

COUPLER

Non-adjustable, alu



Art. code	kg	vol unit	description
706ALU	0.11	100 piece (1)	1" (tubular shaft), L = 60 mm

The galvanized spring wire, of which the torsion springs are made, is according to DIN17223, category C. The spring wire has, after the coiling, received a heat treatment. In the subscription of the torsion springs we are giving: the coiling, the wire size, the inside diameter of 2" (51 mm), the length and the treatment of the wire (GS).

TORSION SPRINGS

Standard lengths, galvanised

ATTENTION!

These springs are also available configured to order, fixed-to-size. More information on page IND-A-21.



Art. code	kg	vol unit	description
VL50x1x3250GS	17.6	5 piece (1)	5.0x51x3250 mm, LHW
VR50x1x3250GS	17.6	5 piece (1)	5.0x51x3250 mm, RHW
VL55x1x3250GS	19.5	5 piece (1)	5.5x51x3250 mm, LHW
VR55x1x3250GS	19.5	5 piece (1)	5.5x51x3250 mm, RHW
VL60x1x3000GS	5.5	5 piece (1)	6.0x51x3000 mm, LHW
VR60x1x3000GS	5.5	5 piece (1)	6.0x51x3000 mm, RHW
VL65x2x3000GS	27.7	5 piece (1)	6.5x67x3000 mm, LHW
VR65x2x3000GS	27.7	5 piece (1)	7.0x67x3000 mm, LHW
VL70x2x3250GS	32.4	5 piece (1)	6.5x67x3250 mm, RHW
VR70x2x3250GS	32.4	5 piece (1)	7.0x67x3250 mm, RHW

BEARING PLATE

The flat plate is made of 4.0 mm galvanised steel. This bearing plate is applicable as left or right hand end bearing plate on doors up to 150 kg. Dimensions: height 143 mm, width 76 mm.

Flat

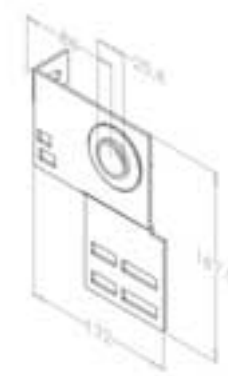
Art. code	kg	vol unit	description
302	0.45	50 piece (1)	incl. 1" bearing



END BEARING PLATE

The plates are made of 2.8 mm galvanised steel. These end bearing plates are provided with 1" (25.4 mm) bearings installed and suitable for residential or smaller industrial overhead doors. They are also provided with slotted holes for installation to horizontal reinforcement profile and have a flange for wall fixing.

Art. code	kg	vol unit	description
304-12	0.8	50 pair (2)	heart distance 3 3/8" - 86 mm



LH

BEARING PLATE

The plate is made of 3.0 mm galvanised steel. The bearing plates are applicable for residential overhead doors. Available in right and left hand model.

Incl. 1" bearing

Art. code	kg	vol unit	description
310LH	0.25	50 piece (1)	heart distance 2 5/8" - 67 mm
310RH	0.25	50 piece (1)	



RH

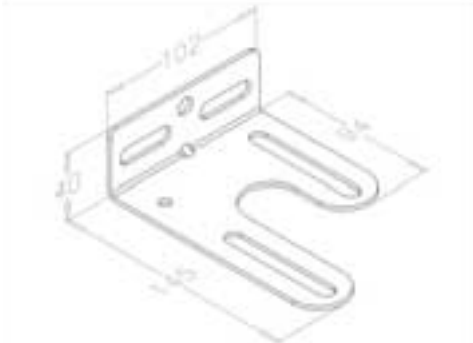
The plate is made of 2.5 mm galvanised steel. This plate is suitable for residential overhead doors. The dimensions are 102x146 mm. This plate is only available in one design.

MOUNTING PLATE

Universal

B

Art. code	kg	vol unit	description
USA-MINI	0.23	100 piece (1)	adjustable heart distance 61-107 mm

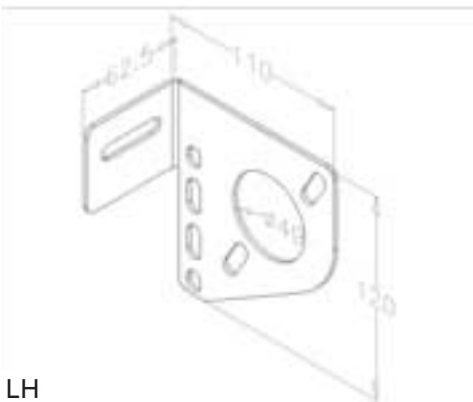


The plates are made of 2.5 mm galvanised steel. The plates are provided with slotted holes for the adjustable installation of 2" (51 mm) spring fittings. Also provided with a slotted hole for extra fixing to the wall and 4 slotted holes for adjustable fixing to the end plates (563-103).

BEARING PLATE

For FF-residential doors

Art. code	kg	vol unit	description
561	0.22	100 pair (2)	



LH

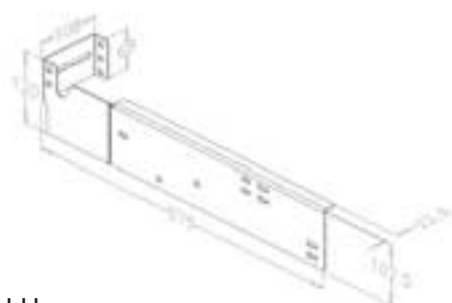


The plates are made of 2.5 mm galvanised steel, with 2.0 mm offset for fixing to the vertical angle, for residential overhead doors. The space between the flanges for drums and distance rings is 103 mm. Also provided with a slotted hole for extra fixing to the wall and provided with a flange with rectangular holes for fixing with the help of carriage bolts to the (spring) bearing plate (561). The plates are also provided with slotted holes for fixing the horizontal tracks and holes for fixing a cable pulley.

END PLATE

For FF-residential doors

Art. code	kg	vol unit	description
563-103	2.5	100 pair (2)	



LH

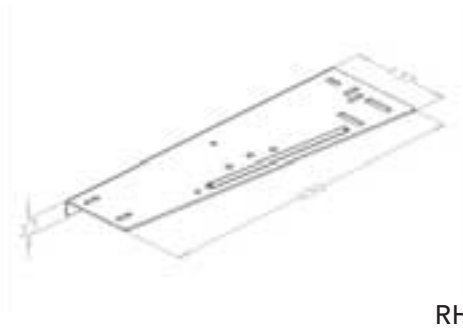


END PLATE

Endplate for RES70 doors. The plates are made of 2.5 mm galvanised steel and are supplied with extra reinforcement ribs. The plates are provided with necessary holes for fixing the horizontal double track, fixing of the cable pulley and fixation to the vertical angle code 915VBR...

For FF-residential doors,
RES70

Art. code	kg	vol unit	description
562-70LH	1.1	50 piece (1)	
562-70RH	1.1	50 piece (1)	



RH

BEARING RETAINER

The retainer is made of 2.5 mm galvanised steel. The centre line of the slotted holes (10x17 mm) for fixing onto an end or intermediate plate amounts to 82 mm.

For bearings with outside
diameter 50.8 mm

Art. code	kg	vol unit	description
325	0.12	200 piece (1)	



BEARING

This bearing is suitable for installing in bearing plates or stationary spring fittings. Suitable for residential and industrial overhead doors. The inside diameter is 25.6 mm and the flange diameter is 54.0 mm.

1"

Art. code	kg	vol unit	description
USA-B	0.12	200 piece (1)	outside diameter 50.8 mm

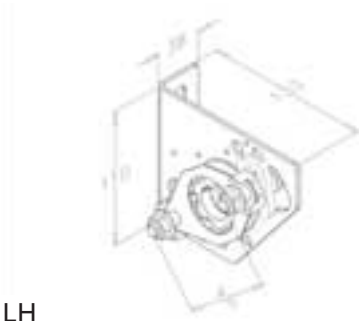


Spring breaking devices, developed for use with residential (garage) overhead doors. This making it possible to make a garage door safer to use, according to the new CE-directives. Article code 651 is suitable for spring plugs with torsion spring diameter 44.5 and 50.8 mm (FF-1.75, 2.00TAI and FSW51). Article code 667 is suitable for spring plugs with torsion spring diameter 67.0 mm (FF-2.63TAI and FSW67). The device is approved by TÜV/BG, approval number 01020, and must be used with one torsion spring. The distance from mounting flange to heart of the bearing is 70 mm. For more detailed information, we refer to the manual (download from www.flexiforce.nl).

SPING BREAK DEVICE

For garage doors (residential)

Art. code	kg	vol unit	description
651LH	1.9	25 piece (1)	for 2" spring, with bearing
651RH	1.9	25 piece (1)	for 2" spring, with bearing
667LH	1.9	25 piece (1)	for 2 5/8" spring, with bearing
667RH	1.9	25 piece (1)	for 2 5/8" spring, with bearing



LH

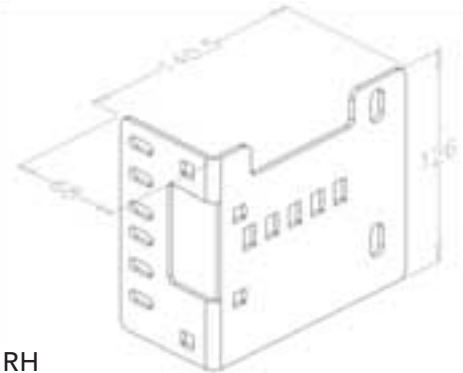


The bearing plate support is made of 3.0 mm galvanised steel. The support can be installed adjustable in height at the end of the horizontal track. For this the standard holes in the 2" tracks can be used. Then bearing plates or spring breaking device can be mounted onto the support and a connection profile (SU) can be fixed between the horizontal tracks. Available in RH and LH version.

BEARING PLATE SUPPORT

RES70

Art. code	kg	vol unit	description
340LH	0.85	50 piece (1)	
340RH	0.85	50 piece (1)	



RH



420HZ+10RES

The hinge is made of 2.0 mm plated steel. The supply includes installed pin. The hinge is provided with slotted holes 7x9 mm. The horizontal centre line of the holes is 45 mm. On order also available with centre line of the holes 40 mm (article code 420HZ+10RES40). Suitable for sandwich panels with fingersafety. Also available in white coated version.

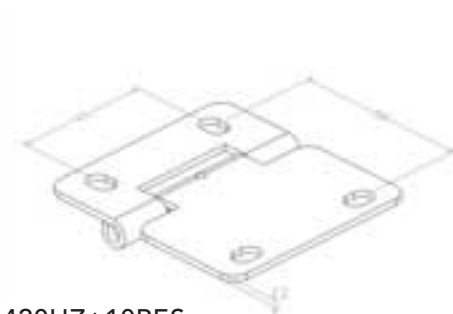
450HZ+10

The hinge is made of 2.5 mm plated steel. The supply includes installed pin. The hinge is provided with slotted holes 7x9 mm. The horizontal centre line of the holes is 45 mm. Suitable for sandwich panels with fingersafety. Also available in white coated version.

INTERMEDIATE HINGE

With 10 mm lengthened top blade

Art. code	kg	vol unit	description
420HZ+10RES	0.14	500 piece (1)	2.0 mm
450HZ+10	0.14	500 piece (1)	2.5 mm



420HZ+10RES

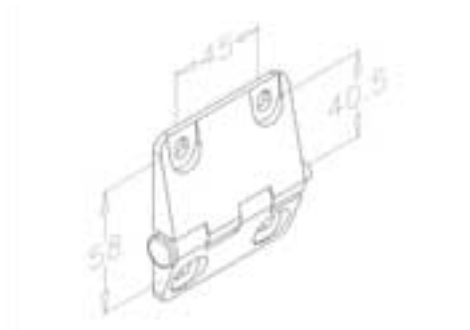


INTERMEDIATE HINGE

Plastic,
for garage doors (residential)

Art. code	kg	vol	unit	description
465BL	0.03	200	piece (1)	black
465W	0.03	200	piece (1)	white

These hinges are made of solid plastic, in white or black. We believe that the final user will definitely appreciate the elegant, smoothly finished design of this hinge. The more so since until now only industrial hinges could be fitted to garage doors. The hinges are suitable for application on insulated sandwich panels with fingersafety. The horizontal centre line of the holes is 45 mm.

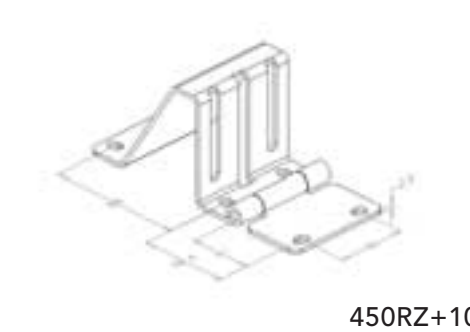


SIDE HINGE

Adjustable, with 10 mm
lengthened top blade

Art. code	kg	vol	unit	description
450CZ+10	0.45	200	piece (1)	complete
450RZ+10	0.35	200	piece (1)	side hinge
450SZ	0.12	200	piece (1)	slide, for 11 mm shaft

The hinge is made of 2.5 mm plated steel. The supply includes installed pin. The hinge is provided with slotted holes 7x9 mm. The horizontal centre line of the holes is 45 mm. Article code 450CZ+10 is complete and includes side hinge roller slide of 2.0 mm for 11 mm shaft, 2 bolts and 2 nuts. Suitable for sandwich panels with fingersafety. Also available in parts. Also available in white coated version.



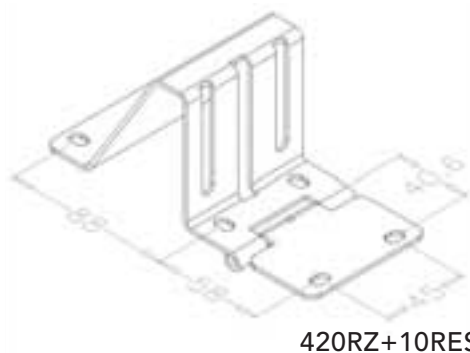
450RZ+10

SIDE HINGE

Adjustable, with 10 mm
lengthened top blade,
for residential doors

Art. code	kg	vol	unit	description
420CZ+10RES	0.35	200	piece (1)	complete
420RZ+10RES	0.28	200	piece (1)	side hinge
450SZ	0.12	200	piece (1)	slide, for 11 mm shaft

The hinge is made of 2.0 mm plated steel. The supply includes assembled pin, which is placed reversed. The hinge is provided with slotted holes 7x9 mm. The horizontal centre line of the holes is 45 mm. Article code 420CZ+10RES is the complete version and includes side hinge, roller slide for 11 mm shaft, 2 bolts and 2 nuts. Suitable for sandwich panels with fingersafety. On order also available with centre line of the holes 40 mm (article code 420CZ+10RES40). Also available in parts. New is a 3 mm hole in the round of the upperblade, which makes it possible to grease the pin after installation. Also available in white coated version.



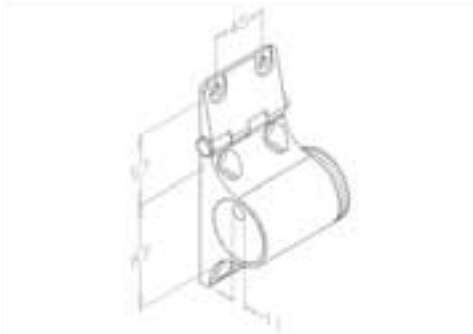
420RZ+10RES

SIDE HINGE

Plastic,
for garage doors (residential)

These hinges are made of solid plastic, in white or black. We believe that the final user will definitely appreciate the elegant, smoothly finished design of this hinge. The more so since until now only industrial hinges could be fitted to garage doors. The smooth finish also eliminates the risk of "catching" as required by the new CE norms. The side hinge is fitted with a hole for the bearing roller shaft (11 mm) and may be set eccentrically. The hinges are, just as the well-known 450HZ(CZ)+10 hinges with 10 mm elevated top leaf, suitable for application on insulated sandwich panels with fingersafety. The horizontal centre line of the holes is 45 mm.

Art. code	kg	vol unit	description
460BL	0.15	200 piece (1)	black
460W	0.15	200 piece (1)	white



The bracket is made of 1.8 mm galvanised steel and is provided with an assembled roller slide. This top roller bracket is suitable for residential overhead doors.

TOP ROLLER BRACKET

Adjustable, assembled,
residential doors

Art. code	kg	vol unit	description
415RES	0.2	200 piece (1)	11 mm shaft

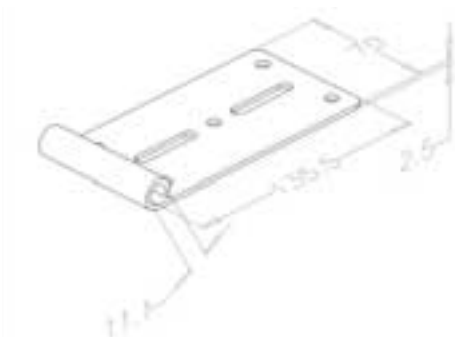


The bracket is made of 2.5 mm galvanised steel. This top roller bracket is not adjustable. Suitable for low headroom system residential and industrial overhead doors.

TOP ROLLER BRACKET

For low headroom

Art. code	kg	vol unit	description
417	0.2	200 piece (1)	11 mm shaft

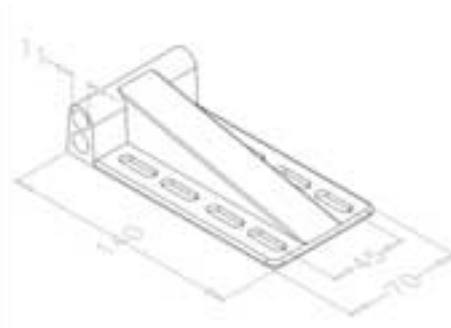


TOP ROLLER BRACKET

Made of solid plastic, in black or white (RAL 9010). These top roller brackets are non-adjustable and suitable for low headroom garagedoors.

Plastic,
for garage doors (residential)

Art. code	kg	vol unit	description
417BL	0.2	200 piece (1)	black
417W	0.2	200 piece (1)	white

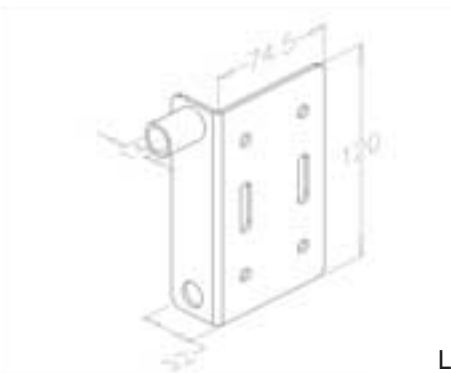


TOP ROLLER BRACKET

For garage doors (residential)

This top roller bracket is designed for our RES70 system. The bracket is made of 2.5 mm steel with welded collar. The bracket is plated (galvanised). In the collar fits the new roller (code 576) with short shaft. This construction enables the compact installation (low headroom) and prevents "overbending" of panels with fingersafety. Available in LH and RH. Excluded from the delivery is a nylon collar (code 418BUS) which can protect the steel collar from damaging by the lifting cable.

Art. code	kg	vol unit	description
418LH	0.2	100 piece (1)	LH
418RH	0.2	100 piece (1)	RH



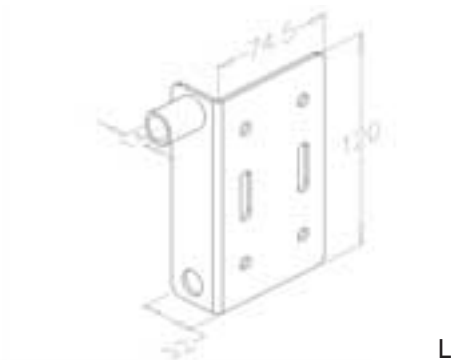
LH

TOP ROLLER BRACKET

For garage doors (residential),
white coated

This top roller bracket is designed for our RES70 system. The bracket is made of 2.5 mm steel with welded collar. The bracket is plated (galvanised) and white (RAL 9010) coated. In the collar fits the new roller (code 576) with short shaft. This construction enables the compact installation (low headroom) and prevents "overbending" of panels with fingersafety. Available in LH and RH. Excluded from the delivery is a nylon collar (code 418BUS) which can protect the steel collar from damaging by the lifting cable.

Art. code	kg	vol unit	description
418WLH	0.2	100 piece (1)	LH
418WRH	0.2	100 piece (1)	RH

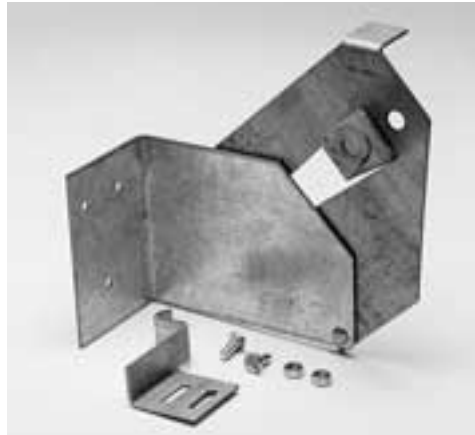


LH

The kit is made of 2.5 mm galvanised steel. This kit replaces the standard top roller carrier at residential overhead doors having limited headroom (approx. 200 mm) and single horizontal tracks (as low system). The low system kit is suitable for a shaft of 11 mm.

LOW HEADROOM KIT

For residential doors with limited headroom

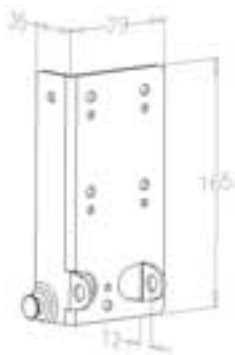


Art. code	kg	vol unit	description
412	3	10 pair (2)	

The bracket is made of 2.5 mm galvanised steel. The bottom bracket is suitable for inside cable fixing for 2" tracks. The advised max. door weight is 100 kg.

BOTTOM BRACKET

Non-adjustable, residential doors



LH



Art. code	kg	vol unit	description
422	1	75 pair (2)	11 mm shaft, 100 kg

The bracket is made of 2.5 mm galvanised steel which is coated white (RAL 9010). The bottom bracket is suitable for inside cable fixing for 2" tracks. The advised max. door weight is 100 kg.

BOTTOM BRACKET

Non-adjustable, white coated



LH



Art. code	kg	vol unit	description
422W	1	75 pair (2)	11 mm shaft, 100 kg

BOTTOM BRACKET

Adjustable

This steel galvanised bottom bracket has a roller slide which is not fixed part of the construction. The roller slide can be installed (with roller) separately. The lifting cable is connected to the bracket with an eye bolt which enables adjusting the cable length. The cable pulley of this bracket has a large radius and has a smooth surface. One pair brackets is suitable for a door weight of 275 kg and is being delivered including 2 M10 eye bolts (code 1050B), 4 nuts, 2 roller slides and 4 self tapping screws.

Art. code	kg	vol unit	description
427SX	1.5	50 pair (2)	11 mm shaft, 275 kg



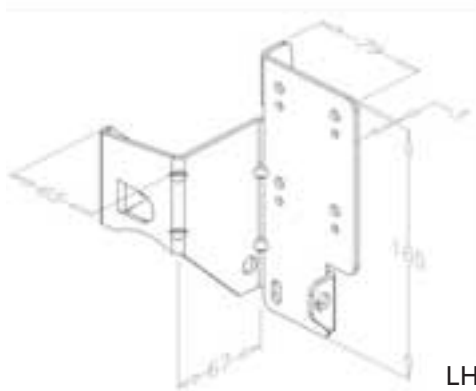
RH

BOTTOM BRACKET

Outside cable fixing, LHR

The bracket is made of 3.0 mm galvanised steel. The bottom bracket is suitable for outside cable fixing for 2" tracks (f.e. with low system). The supply includes clevis pins and cotters (article code 1042). The advised max. door weight is 100 kg.

Art. code	kg	vol unit	description
432	1.1	50 pair (2)	11 mm shaft, 75 kg



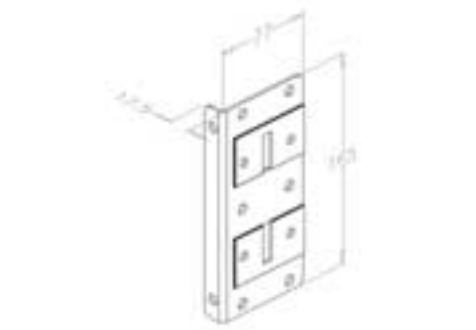
LH

BOTTOM BRACKET

For garage doors (residential)

Bottom bracket, non-adjustable, for the RES70 system. The bracket is made of 2.5 mm galvanised steel. Suitable for left and right side. Supply includes selftapping screws and roller slide for 11 mm shaft. The fixation of the cable is not directly to the bracket, but to the roller shaft (code 577).

Art. code	kg	vol unit	description
431S	1.76	100 pair (2)	



Bottom bracket, non-adjustable, for the RES70 system. The bracket is made of 2.5 mm galvanised steel, coated white (RAL 9010). Suitable for left and right side. Supply includes selftapping screws and roller slide for 11 mm shaft. The fixation of the cable is not directly to the bracket, but to the roller shaft (code 577).

BOTTOM BRACKET

For garage doors (residential),
white coated

Art. code	kg	vol unit	description
431SW	1.76	100 pair (2)	



Nylon 2" roller with ball bearing. The outside diameter of the roller is approx. 46.5 mm. Suitable for 2" tracks. The advised max. carrying capacity differs per code.

ROLLER

Nylon, 2", shaft 11 mm,
L = 118 mm

Art. code	kg	vol unit	description
574-100	0.15	200 piece (1)	50 kg carrying capacity

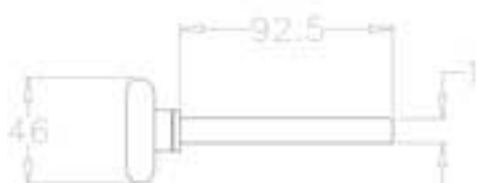


Plastic 2" roller without bearing. The outside diameter is approx. 46.5 mm. Suitable for 2" tracks. This roller is only suitable for residential overhead doors.

ROLLER

Plastic, 2", shaft 11 mm,
L = 116 mm

Art. code	kg	vol unit	description
590T	0.1	200 piece (1)	without bearing

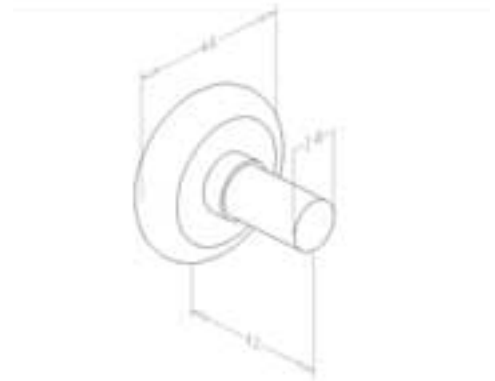


ROLLER

Nylon 2" roller with ball bearing. The outside diameter of the roller is approx. 46.5 mm. Suitable for 2" tracks. The advised max. carrying capacity is 50 kg. Code 576 has a shaft diameter of 13.8 mm over a length of 24 mm. Can be used in combination with top roller bracket code 418.

RES70

Art. code	kg	vol unit	description
576	0.15	200 piece (1)	

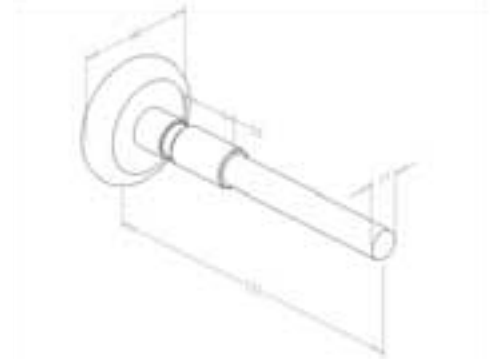


ROLLER

Nylon 2" roller with ball bearing. The outside diameter of the roller is approx. 46.5 mm. Suitable for 2" tracks. The advised max. carrying capacity is 50 kg. Code 577 has a shaft diameter of 11 mm and is equipped with a breast with groove for guiding the lifting cable. Specially designed for RES70.

RES70

Art. code	kg	vol unit	description
577	0.15	200 piece (1)	



DISTANCE RINGS

The plated steel distance rings can be placed on the shaft of the rollers in order to decrease the tolerance between panels and tracks (walking of the door blade).

Galvanised, steel

Art. code	kg	vol unit	description
2066-05	0.005	1000 piece (1)	for 11 mm shaft, w = 5 mm
2066-07	0.007	1000 piece (1)	for 11 mm shaft, w = 7.5 mm
2066-10	0.019	1000 piece (1)	for 11 mm shaft, w = 10 mm



The pulleys are made of plated steel. The high quality production method results in a weldless cable groove. The pulleys are provided with ball bearing type 6200ZZ and have an inside diameter of 10 mm. The diameter of these pulleys is applying to the new CE-regulations with regard to cable diameter and pulley diameter.

CABLE PULLEY

Galvanised steel

Art. code	kg	vol unit	description
570-60	0.14	200 piece (1)	D = 60 mm, d = 10 mm
570-80	0.14	200 piece (1)	D = 80 mm, d = 10 mm, door 345 kg



570-60

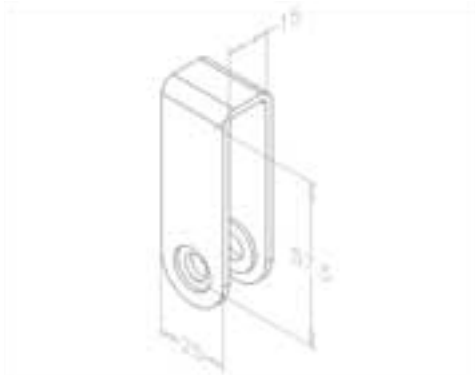


The bracket can be used in combination with cable pulley 554-100, 570-60, 570-80. It serves as safety device, preventing the cable slipping from the pulley. The bracket is provided with integrated distance bushes. The pulley fits exactly into the bracket and can be mounted with one bolt and nut.

BRACKET CABLE PULLEY

Cable run-off safety

Art. code	kg	vol unit	description
554BEU	0.07	200 piece (1)	for cable pulley, galvanised

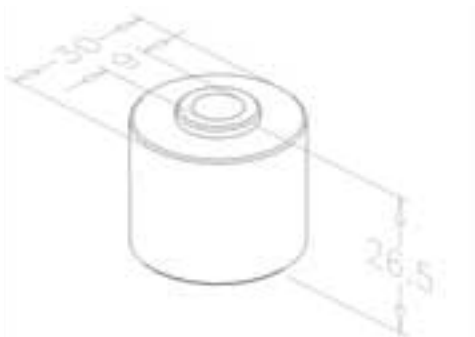


This ring is needed on our RES70 system in combination with the cable pulley, bracket (554BEU) and end plate. It allows the pulley to be positioned correctly to the tracks.

DISTANCE RINGS

For RES70 construction

Art. code	kg	vol unit	description
2060	0.008	1000 p.1000	



VERTICAL DOOR TRACK

The track is made of 1.5 mm galvanised steel. Both ends are provided with 2 round holes of 7 mm diameter. The track is available in several standard lengths and very suitable for residential overhead doors. Other lengths available on demand.

2", straight, galvanised, 1.5 mm

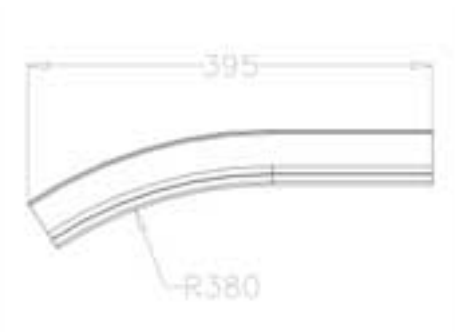
Art. code	kg	vol unit	description
215V1800	1.98	50 piece (1)	L = 1800 mm
215V2000	2.18	50 piece (1)	L = 2000 mm
215V2050	2.12	50 piece (1)	L = 2050 mm
215V2250	2.45	50 piece (1)	L = 2250 mm
215V2375	2.58	50 piece (1)	L = 2375 mm
215V3000	3.27	50 piece (1)	L = 3000 mm



TOP CURVE

2", bended, R380 mm,
under 55°, galvanised, 1.5 mm

Art. code	kg	vol unit	description
215H0400-380-55	0.45	50 piece (1)	L = 400 mm

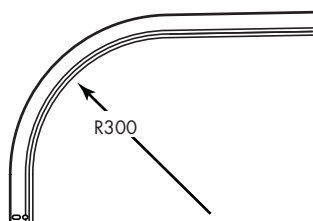


HORIZONTAL DOOR TRACK

2", bended, R300 mm,
1° inclining, galvanised, 1.5 mm

Art. code	kg	vol unit	description
215G2448-300-01	2.7	50 piece (1)	L = 2448 mm
215G2573-300-01	2.85	50 piece (1)	L = 2573 mm
215G2698-300-01	2.97	50 piece (1)	L = 2698 mm
215G2798-300-01	3.08	50 piece (1)	L = 2798 mm
215G2948-300-01	3.2	50 piece (1)	L = 2948 mm

The track is made of 1.5 mm galvanised steel. One end is provided with 2 round holes diameter 7 mm, the other end is provided with a slotted hole and a round hole. The bend has an inner radius of approx. 300 mm. The horizontal track is 1 degree inclining. The end of the bend has a 250 mm long straight part cut down to 100 mm. The bends are bent in approx. 90 degrees. The given length indicates the length in mm, before bending. The bends are suitable for residential overhead doors.

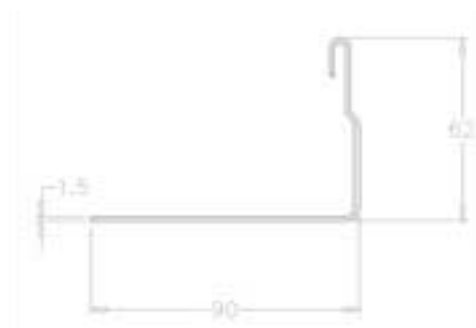


ANGLE

The angle is made of 1,5 mm galvanised steel. The flange of 62 mm has slotted holes 9x25 mm every 300 mm. The flange of 90 mm has 3 slotted holes 9x25 mm on both ends. The vertical angle is suitable for side seal article code 1085 and 1094-40. The angle is available in several standard lengths. Other lengths available to special order. NB! Code 915VB-R-length is available for RES70 systems.

Vertical, galvanised, 1.5 mm,
90x62 mm

Art. code	kg	vol unit	description
915VB2047	3.99	50 piece (1)	L = 2047 mm
915VB2172	4.25	50 piece (1)	L = 2172 mm
915VB2297	4.48	50 piece (1)	L = 2297 mm
915VB2397	4.68	50 piece (1)	L = 2397 mm
915VB2547	4.97	50 piece (1)	L = 2547 mm
915VB5100	9.94	50 piece (1)	L = 5100 mm

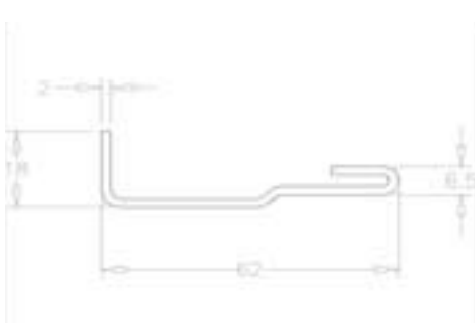


The angle is made of 2.0 mm galvanised steel. The flange of 62 mm has a slotted hole 9x25 mm every 300 mm. The vertical angle is suitable for side seal article code 1085. The angle together with the seal is also suitable as seal of the lintel. In that case the top panel does not need the aluminium profile and top seal. Therefore suitable for residential overhead doors.

ANGLE

Vertical, galvanised, 2.0 mm,
62x18 mm

Art. code	kg	vol unit	description
9VR5000	7.5	50 piece (1)	L = 5000 mm

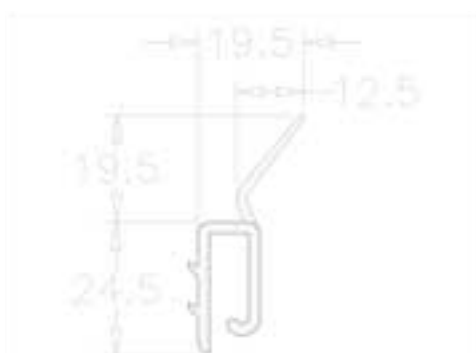


The profile is made of hard grey PVC (outward quality) and co-extruded flexible elastomer (TPR). Suitable for fixing to vertical angle code 915VB, 9VB, 9VR and 9K.

SIDE SEAL

Hard grey PVC, with flexible
TPR, for 9VB and 915VB

Art. code	kg	vol unit	description
1085-2010	0.38	50 piece (1)	L = 2010 mm
1085-2135	0.42	50 piece (1)	L = 2135 mm
1085-2260	0.46	50 piece (1)	L = 2260 mm
1085-2360	0.47	50 piece (1)	L = 2360 mm
1085-2510	0.47	50 piece (1)	L = 2510 mm
1085-3060	0.6	50 piece (1)	L = 3060 mm
1085-3660	0.7	50 piece (1)	L = 3660 mm
1085-4060	0.8	50 piece (1)	L = 4060 mm
1085-4260	0.8	50 piece (1)	L = 4260 mm
1085-4560	0.9	50 piece (1)	L = 4560 mm
1085-5060	1	50 piece (1)	L = 5060 mm
1085-5560	1.1	50 piece (1)	L = 5560 mm
1085-6000	1.2	50 piece (1)	L = 6000 mm

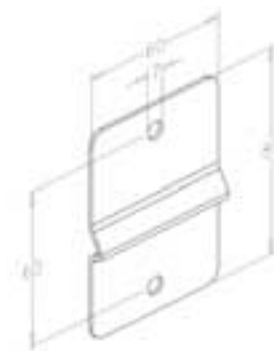


TRACK CONNECTING PLATE

Galvanised

Art. code	kg	vol unit	description
835	0.15	500 piece (1)	with border
870HANG	0.16	250 piece (1)	flat
870KORT	0.13	250 piece (1)	cut rounding

The track connecting plates (code 835) are made of 1.5 mm galvanised steel. The plates are provided with two round holes diameter 7 mm. The plates are 60x80x5 mm. There is a 5 mm border at 33 mm from the bottom side. This makes this product easy to use for assembling double horizontal tracks without reinforcement, as commonly used in residential doors. The plates (code 870HANG and 870KORT) are made of 2.0 mm galvanised steel. The track plates are 60 mm wide and have a 2.0 mm offset on indicated measure from the bottom side. The longer version for high system has rills for a better construction. The flat version is suitable for double horizontal tracks (low system) without reinforcement as for residential overhead doors. The cut version is also suitable in combination with cable break devices.



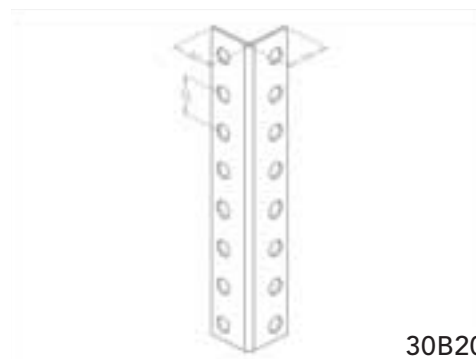
835

ANGLE

The angles are made of 2.0 mm galvanised steel. Length is 3000 mm.

Perforated, with holes 10 mm,
L = 3000 mm

Art. code	kg	vol unit	description
30B20-3000	4.6	50 piece (1)	30x30x2.0 mm



30B20

SUSPENSION PROFILE

Galvanised, 1.5 mm, open
tubular, outside dimensions
48.5x23 mm

Art. code	kg	vol unit	description
48SU2000	2.54	50 piece (1)	L = 2000 mm
48SU3000	3.81	50 piece (1)	L = 3000 mm
48SU4500	5.71	50 piece (1)	L = 4500 mm
48SU6000	7.62	50 piece (1)	L = 6000 mm

The suspension profile is made of 1.5 mm galvanised steel. The outside dimensions of the profile are 48.5x23.5 mm. The open tubular profile is provided each 50 mm with slotted holes 8.5x25 mm at the wide flange. On one small flange slotted holes 8.5x25 mm are located each 300 mm. The 48SU-profile can slide into the 50SU-profile to enable freely adjustment of length. The coupling strip 1025-200 enables a quick and easy suspension construction.

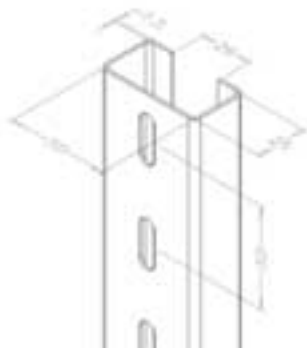


The suspension profile is made of 1.5 mm galvanised steel. The inside dimensions of the profile are 50x25 mm. The open tubular profile is provided each 50 mm with slotted holes 8.5x25 mm at the wide flange. On one small flange slotted holes 8.5x25 mm are located each 300 mm. The 50SU-profile can slide over the 48SU-profile to enable freely adjustment of length. The coupling strip 1025-200 enables a quick and easy suspension construction. The profile is also suitable for use of paro clamp plates, article code 1026-68B.

SUSPENSION PROFILE

Galvanised, 1.5 mm, open tubular, inside dimensions 50x25 mm

Art. code	kg	vol unit	description
50SU1500	2.22	50 piece (1)	L = 1500 mm
50SU3000	4.44	50 piece (1)	L = 3000 mm
50SU4500	6.66	50 piece (1)	L = 4500 mm
50SU6000	8.88	50 piece (1)	L = 6000 mm

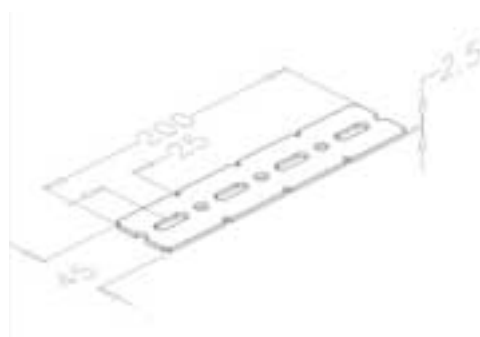


The strip is made of 2.5 mm galvanised steel. The sizes of the strip are 45x200 mm. The strip is suitable for suspension profiles 48SU and 50SU and is provided with round holes 8.5 mm and slotted holes 8.5x25 mm. The cut-outs at the sides serve to bend into the required shape for making a quick construction.

COUPLING STRIP

Galvanised, 45x200 mm, for SU-profile

Art. code	kg	vol unit	description
1025-200	0.17	100 piece (1)	



The pre-assembled, horizontal, tracksets consists of 4 pieces straight track (215V), track connecting plates (835), 2 pieces end plates (570-60LH/RH), integrated curves (215H...-380-59 and 215G...300-01). Suitable for installation in situation with limited build-in dimensions (renewal projects).

HORIZONTAL TRACK SET

Galvanised, RES70

Art. code	kg	vol unit	description
R70H-2000	12.25	25 pair (2)	door height 2000 mm
R70H-2125	12.25	25 pair (2)	door height 2125 mm
R70H-2250	13.46	25 pair (2)	door height 2250 mm
R70H-2350	13.9	25 pair (2)	door height 2350 mm
R70H-2500	14.57	25 pair (2)	door height 2500 mm



VERTICAL TRACK SET

Galvanised, RES70

Art. code	kg	vol unit	description
R70V-2000	12.3	25 pair (2)	door height 2000 mm
R70V-2125	13.11	25 pair (2)	door height 2125 mm
R70V-2250	13.92	25 pair (2)	door height 2250 mm
R70V-2350	14.57	25 pair (2)	door height 2350 mm
R70V-2500	15.55	25 pair (2)	door height 2500 mm

The pre-assembled, vertical, track set consists of vertical angle with special hole pattern (915VB-R), straight running track (215V) and side seal (1085). Suitable for installation in situation with limited build-in dimensions (renewal projects).

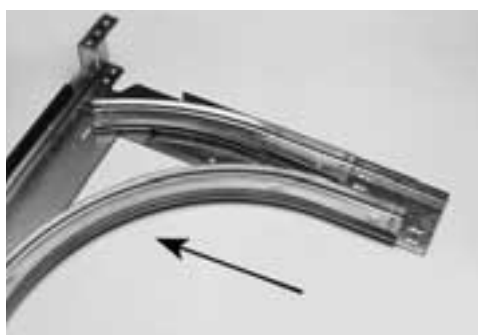


VERTICAL TRACK SET

Galvanised, RES200

Art. code	kg	vol unit	description
RESV-2000	15.8	25 pair (2)	door height 2000 mm
RESV-2125	16.8	25 pair (2)	door height 2125 mm
RESV-2250	17.8	25 pair (2)	door height 2250 mm
RESV-2350	18.8	25 pair (2)	door height 2350 mm
RESV-2500	19.8	25 pair (2)	door height 2500 mm

The assembled sets consist of 2 pieces vertical angles (code 915VB) provided with side seal (article code 1085), 2 pieces long track with bend with radius 300 mm (article code 215G...-300-01), 2 pieces short track with bend with radius 380 mm (article code 2H0400-380-55) and 2 pieces side plates (article code 563-103). The tracks and angles are made of 1.5 mm plated steel. The tracks, side plates and angles are assembled by pivots. The ends of the bends lay 100 mm spread to realise a firm construction of the horizontal track. The side plates are provided with slotted holes for fixing of the horizontal tracks.

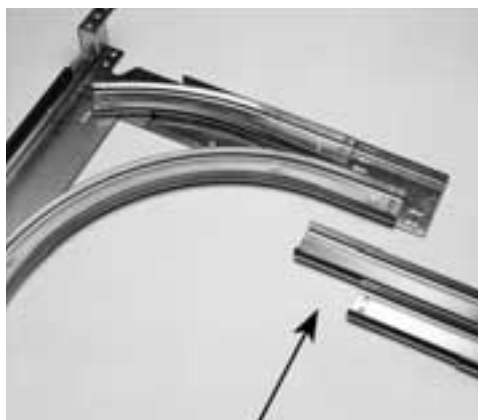


HORIZONTAL TRACK SET

Galvanised, RES200

Art. code	kg	vol unit	description
RESH-2000	9	25 pair (2)	door height 2000/2125 mm
RESH-2250	10.2	25 pair (2)	door height 2250/2375 mm
RESH-2375	10.7	25 pair (2)	door height 2375/2500 mm

The assembled set consist of 4 pieces straight track (article code 215V) and 6 pieces flat track plates (article code 870MANG). The tracks are made of 1.5 mm plated steel. The tracks and plates are assembled by pivots. The horizontal tracks are universal to be used for left and right side.



CLIP

The clip is made of 0.8 mm spring steel. The width of the strip is 16 mm and is provided with a round hole of 7 mm. The clip is suitable to install the seal article code 1085 on to the lintel. The clip has to be placed in both ends of the seal and hooked up in the lip of the vertical angle. The construction with this clip is suitable for residential overhead doors.

For fixation of seal to the lintel

Art. code	kg	vol unit	description
1083	1	200 p.100	



This plastic profile is suitable for panels of approx. 40 mm. The colour is light-grey. The un-equal heights make it possible to have on the outside of the garage door only a small strip (h = 17 mm) in sight. Available in one length: L = 5050 mm. The profile is suitable for rubber profiles article code 1035, 1036 (1036-36 and 1036-52), 1037 and 1039.

TOP/BOTTOM PROFILE

Plastic,
for garage doors (residential)

Art. code	kg	vol unit	description
1030R5050	0.65	50 piece (1) panel approx. 40 mm	

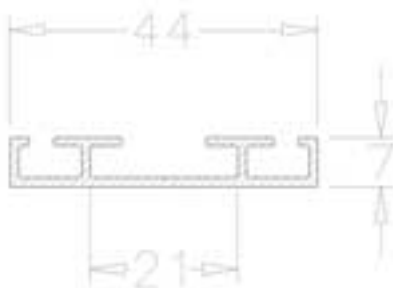


This profile is suitable for panels thicker than 40 mm, f.e. for wooden panels when you don't want to have the aluminum profile visible. The profile is suitable for rubber profiles article code 1035, 1036 (1036-36 and 1036-52), 1037 and 1039. The width of the profile is 44 mm and the height is 7 mm.

TOP/BOTTOM PROFILE

Aluminium, flat, 44x7 mm

Art. code	kg	vol unit	description
1031-6000	1.7	50 piece (1) L = 6000 mm	



TOP/BOTTOM PROFILE

The aluminium profile is suitable as top and bottom profile for panels of approx. 40 or 42 mm thick. The profile is suitable for mounting rubber profile article code 1035, 1036 (1036-25 and 1036-40), 1037, 1039-55 and 1039. Available with anodised treatment to special order.

Aluminium, for 40 and 42 mm section, h = 35 mm

Art. code	kg	vol unit	description
1038-4040	2	50 piece (1) L = 4040 mm	
1038-5050	2.5	50 piece (1) L = 5050 mm	
1038-6090	3	50 piece (1) L = 6090 mm	
1038-42-4040	2	50 piece (1) L = 4040 mm	
1038-42-5050	2.5	50 piece (1) L = 5050 mm	
1038-42-6090	2.5	50 piece (1) L = 6090 mm	

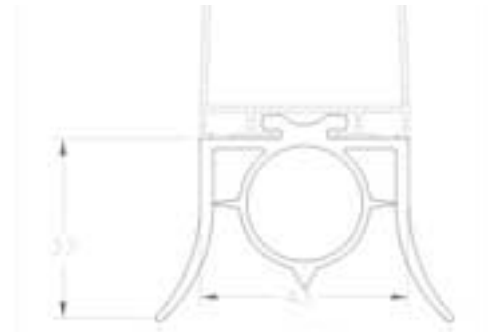


BOTTOM ASTRAGAL

The rubber bottom profile is made of EPDM quality. The rubber profiles are having 2 lips and a round chamber of 24 mm for a pneumatic switch and an extra press point. The rubber profile is suitable for aluminium profiles article code 1031, 1038, 1038-42, 1030R5050 and 1040. N.B. The bridge has to be removed when installing in the profile!

EPDM, with chamber and 2 lips

Art. code	kg	vol unit	description
1035	0.63	35 p.mtr	

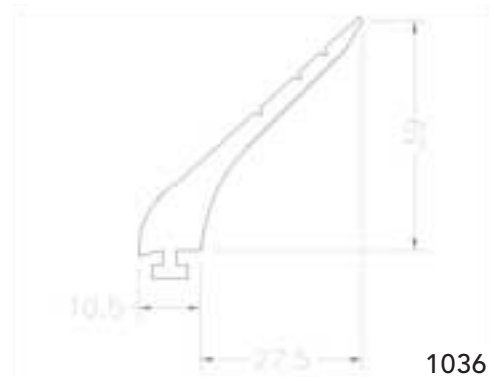


TOP ASTRAGAL

The rubber top profiles are made of EPDM quality. The profiles are suitable for aluminium profiles article code 1031.1038. 1038-42. 1030R5050 and 1040. The rubber top profile article code 1036 will be replaced by article code 1036-36.

EPDM

Art. code	kg	vol unit	description
1036	0.25	35 p.mtr	
1036-36	0.25	35 p.mtr	length flap is 36 mm

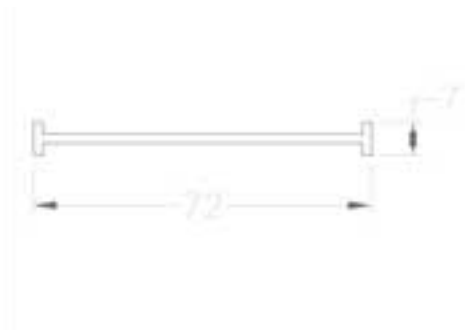


The rubber bottom profile (model I) is made of EPDM quality. The profile is suitable for the aluminium profile article code 1031, 1038, 1038-42, 1030R5050 and 1040.

BOTTOM ASTRAGAL

EPDM, model I

Art. code	kg	vol unit	description
1037	0.25	35 p.mtr	

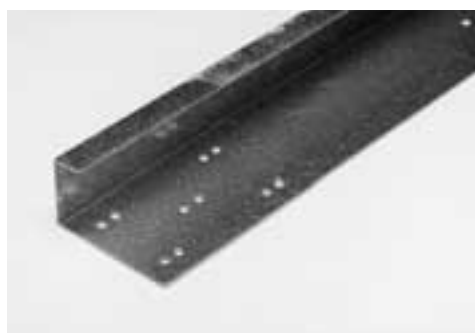


The end caps are made of 1.0 mm galvanised steel. The end caps are provided with hole pattern for side hinge code 450CZ and are applicable universal left and right. The end caps are provided with rounded corners. Effective size is panel size less 10 mm. On special demand also available in other sizes and/or without holes.

END CAP

Galvanised, with hole pattern,
for panel 40 mm

Art. code	kg	vol unit	description
40E488	0.5	500 piece (1) 488 mm	
40E500	0.5	500 piece (1) 500 mm	
40E530	0.5	500 piece (1) 530 mm	
40E610	0.63	500 piece (1) 610 mm	



The end caps are made of 1.0 mm galvanised steel, white coated (RAL 9010). The end caps are provided with hole pattern for side hinge code 450CZ and are applicable universal left and right. The end caps are provided with rounded corners. Effective size is panel size less 10 mm. On special demand also available in other sizes and/or without holes.

END CAP

Coated, with hole pattern,
for panel 40 mm

Art. code	kg	vol unit	description
40E488W	0.5	500 piece (1)	
40E500W	0.5	500 piece (1)	
40E530W	0.5	500 piece (1)	
40E610W	0.5	500 piece (1)	

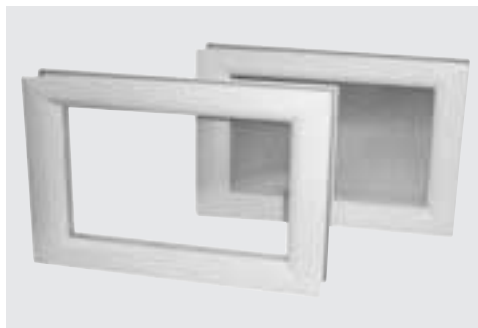


WINDOW

Rectangular, plastic,
for residential doors

This window is suitable for fitting into garage door panels 35-45 mm thick. The outside dimensions are 496 x 300mm (wxh) which makes it suitable for fitting into Bremet cassette panels and other panels with the same cassette dimensions. The cut-out size of the window is 432 x 262 mm. The window is provided with 2 x 2 mm acrylic sheet. The outside frame is provided with a seal, suitable for a flat mounting surface. Quite simple assembly by means of a one-shot click system. There are two versions, one with clear glass (code 2200CL) and one with "granite worked" glass (code 2200GR). The colour is clear white.

Art. code	kg	vol unit	description
2200CL	1	10 piece (1)	clear glass
2200GR	1	10 piece (1)	"granite worked" glass

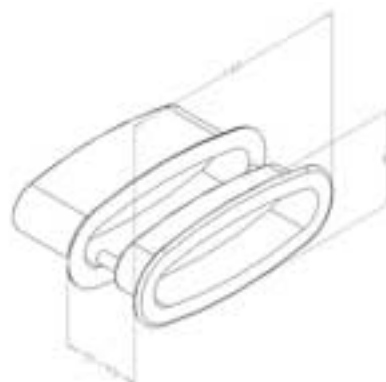


HANDLE/FOOTPLATE

Oval, garage doors,
panel 37-42 mm

Specially designed for residential (garage) overhead doors. A handle/footplate, made of plastic and suitable for installation in sections with a thickness of 37 mm up to 42 mm. The outside dimensions are approx. 60 x 145 mm. Rubber seal ring and two screws are included in the delivery. This "easy grip" improves the appearance of the residential door.

Art. code	kg	vol unit	description
641-B	0.08	100 piece (1)	black plastic
641-W	0.08	100 piece (1)	white plastic

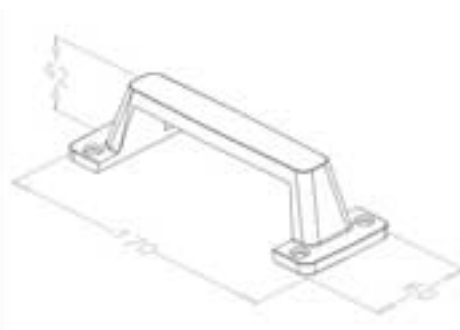


HANDLE

Nylon, black PA 6GV

The handle is made of black PA 6GV. The total height of the handle is 49 mm. The total width of the handle is 180 mm. The handle is provided with 4 holes for fixing to the panel.

Art. code	kg	vol unit	description
634	0.1	150 piece (1)	



The handle is made of black plastic and suitable for panels of 37 to 42 mm thick. The construction is improved and the design is modern and ergonomical. Delivery includes inside grip, outside grip and 4 screws. On special request your company logo can be printed on the outside grip.

HANDLE

Plastic, black, panel 37-42 mm

Art. code	kg	vol unit	description
639BL	0.1	25 piece (1)	

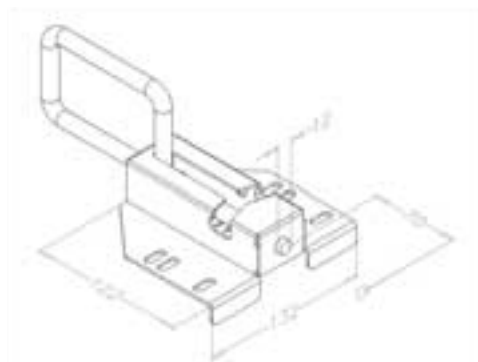


The slide bolt is made of 2.0 mm plated steel. The bolt is pre-assembled with round 12 mm bar with pointed end. The wide base and the 2 flanges take care of a solid way of mounting. For fixing the wide base 6 slotted holes are provided so it is still adjustable after installation. The housing is provided with additional hole for discus padlock.

SLIDE BOLT

Galvanised, wide base

Art. code	kg	vol unit	description
629VER	0.58	60 piece (1)	

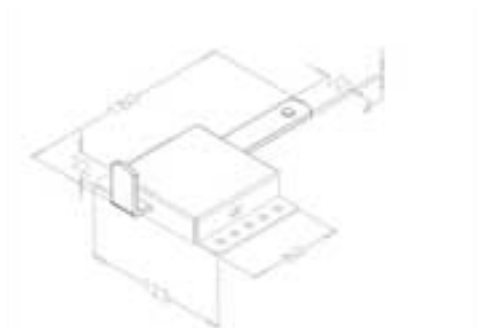


The slide bolt is made of 2.0 mm plated steel. The bar is also made of plated steel and has a deflection of 70 mm. The bolt is suitable for inside operation only.

SLIDE BOLT

Galvanised, bar length 180 mm
(70 mm deflection)

Art. code	kg	vol unit	description
630D	0.38	50 piece (1)	



SLIDE BOLT

The slide is made of plated steel. The bolt is provided with a black PVC knob. The bolt is suitable for inside operation only.

Galvanised, with black knob

Art. code	kg	vol unit	description
632	0.5	50 piece (1)	

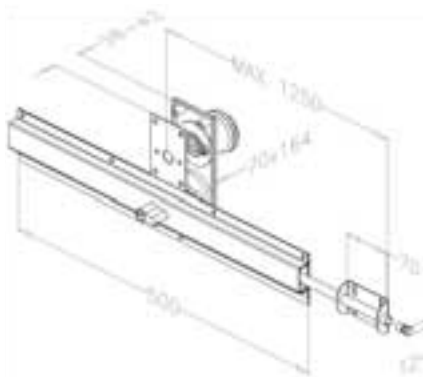


CYLINDER LOCK

For garage doors, complete

The outside plate and knob are made of black or chromium coated aluminium. The casing of the lock is made of galvanised steel. The deflection of the 12 mm hollow rod is 62 mm. The height of the knob on the outside of the door is 55 mm. The locking rods are operated by means of a toothed wheel in the cylinder, when the key is turned. This special cylinder is included. The lock has a two-point closure and is suitable for smaller industrial doors and garage doors. Panel thickness is from 38-42 mm. The standard lock has locking rods with a length of approx. 1200 mm and can be used for a door width of 2500 mm. With an extra long rod (code 645-2450T) the lock can be used on wider doors or can be placed excentrically.

Art. code	kg	vol unit	description
645-40BL	2.6	50 piece (1) black	
645-40CR	2.6	50 piece (1) chromium	
645-2450T	0.5	50 piece (1) extra rod, L = 2450 mm	

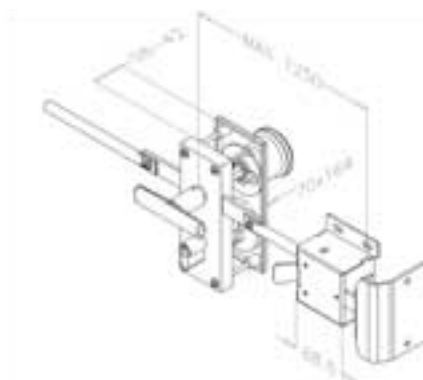


CYLINDER LOCK

Universal, with snapper, residential doors

This lock with snap closure is suitable for use on doors with a width of 2000 to 2500 mm and a panel thickness of 40 mm. It is fitted with a "Euronorm" cylinder and can be applied in combination with RES70 system. Available in chromium (650-40CR) and black (650-40BL). Fitted with T-grip and design rotating handle (can both be fitted inside or outside). The lock can be operated from inside as well as from the outside of the door. Delivery consists of, packaged in box with clear instructions and drilling template, exterior panel with handle or T-grip, interior mechanism with handle or T-grip and locking device, two locking rods (tube), eurocylinder, 2 snap closures for fitting on rails and on door panel.

Art. code	kg	vol unit	description
650-40BL	1	50 piece (1) black	
650-40CR	1	50 piece (1) chromium	

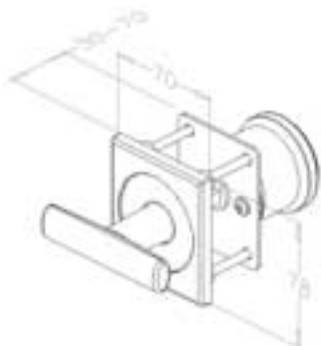


The appearance of a garage door can be improved while at the same time the lifting height is reduced with a handle/T-grip that can be applied in combination with the new 650-40 lock or the 645-40 lock from Flexi-Force. Available in chromium (665-40CR) and black (665-40BL). Fitted with T-grip and design rotating handle (can both be fitted inside or outside). Supplied with manual and drilling template.

HANDLE/T-GRIP

In combination with 645-40 and 650-40 locks

Art. code	kg	vol unit	description
665-40BL	0.5	50 piece (1)	black
665-40CR	0.5	50 piece (1)	chromium

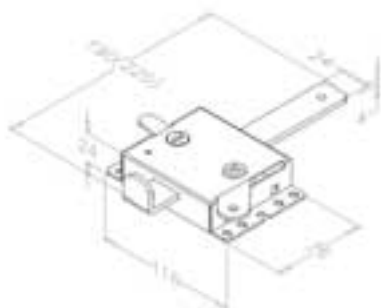


The lock is made of 1.7 mm plated steel. The bar is made of 4.0 mm plated steel. Bar length 7 1/2" (190 mm). Deflection 57 mm. Suitable for inside and outside operation with the help of cylinder and handle (article code 601), not included. The outside dimensions of the box are 77x115 mm.

CYLINDER LOCK

Galvanised

Art. code	kg	vol unit	description
631-7	0.43	50 piece (1)	bar length 190 mm
631-8	0.4	50 piece (1)	bar length 210 mm

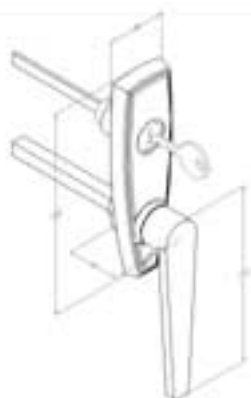


The lock handle set with cylinder is suitable for the outside operation end stile lock code 631-7 and 631-8. Supply includes 2 keys.

LOCK HANDLE

Chrome plated, incl. lock and 2 keys

Art. code	kg	vol unit	description
601	0.35	50 piece (1)	



CYLINDER LOCK

Build-up, outside plate black

The cylinder lock is made of plated steel, black coated. The deflection of the 15 mm round bar is 48 mm. The outside T-handle sticks out 45 mm. The supply includes Euro-cylinder. The lock is suitable for smaller industrial doors as well as residential doors.

Art. code	kg	vol unit	description
638-40	1.4	50 piece (1)	panel 30-42 mm

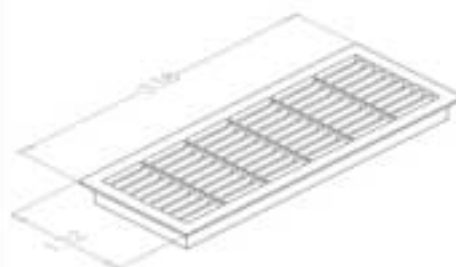


VENTILATION GRILL

White plastic

The ventilation grills are made of white plastic. The outside dimensions are 338x132 mm (wxh). The grills are not provided with fixing holes. The open ventilation is approx. 200 cm². Provided with wire mesh on the backside.

Art. code	kg	vol unit	description
717FERM	0.28	50 piece (1)	can be closed
717SIM	0.28	50 piece (1)	cannot be closed



717FERM

RUBBER STOP

EPDM, simple bumper

The rubber stop is made of EPDM rubber. The stop is identical to the one used at bumpers article code 718 and 719. The rubber stop is fixed at the end of the horizontal tracks as a bumper. The roller in the top roller carrier bumps against the stop, which is fixed, into the tracks. Suitable for residential overhead doors.

Art. code	kg	vol unit	description
2100-15	3	200 p.100	



The cable is "Aircraft" type and is made of 6x19 = 114 wires, galvanised and provided with a polypropylene core. Providing the plastic core the cable is very flexible and suitable for use with cable pulleys and so for low system residential and industrial overhead doors. Load limits for doors with 2 lifting cables (6-times safety) are:

- 3 mm max. 165 kg
- 4 mm max. 295 kg

LIFTING CABLE

6x19 = 114, galvanised, with plastic core, reel 1000 m



Art. code	kg	vol unit	description
503-PP	0.1	1000 p.mtr	3.0 mm
504-PP	0.05	1000 p.mtr	4.0 mm

The cable is "Aircraft" type and is made of 6x19 = 114 wires, galvanised and provided with a polypropylene core. Providing the plastic core the cable is very flexible and suitable for use with cable pulleys and so for low system residential and industrial overhead doors. Load limits for doors with 2 lifting cables (6-times safety) are:

- 3 mm max. 165 kg
- 4 mm max. 295 kg

LIFTING CABLE

6x19 = 114, galvanised, with plastic core, reel 250 m



Art. code	kg	vol unit	description
503-PP-250	0.1	250 p.mtr	3.0 mm
504-PP-250	0.05	250 p.mtr	4.0 mm

The cable is "Aircraft" type and is made of 6x19 = 114 wires, galvanised and provided with a polypropylene core. The cable is cut to length and assembled with cable thimble and oval sleeve. The supply is not from stock approx. 2 weeks. You have to order the wire size, length and version. The price is calculated as follows: a fixed price for the first metre including fixings and a variable price per following metres.

LIFTING CABLE

6x19 = 114, galvanised, PP, complete set



Art. code	kg	vol unit	description
K3*..	-	50 p.mtr	3.0 mm first meter
K4*..	-	50 p.mtr	4.0 mm first meter

CABLE SLEEVE

Oval, aluminium

The sleeves are made of aluminium and can be pressed to the cable with help of swager or cable press. Pay attention to the CE-norms on strenght of cable connections with regards to the breaking force of the cable.

Art. code	kg	vol unit	description
508	1.1	1000 p.100	6.0 mm
509	0.7	1000 p.100	5.0 mm
510	0.4	1000 p.100	4.0 mm
511	0.3	1000 p.100	3.0 mm



CABLE SLEEVE

Round, aluminium

The sleeves are made of aluminium and can be pressed to the cable with help of swager or cable press. Pay attention to the CE-norms on strenght of cable connections with regards to the breaking force of the cable.

Art. code	kg	vol unit	description
513	0.4	1000 p.100	6.0 mm
514	0.2	1000 p.100	5.0 mm
515	0.2	1000 p.100	4.0 mm
516	0.1	1000 p.100	3.0 mm

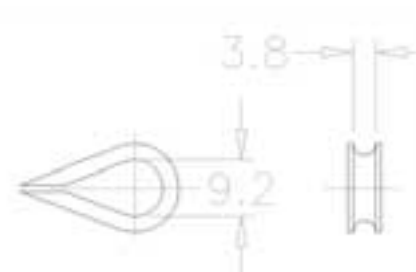


CABLE THIMBLE

For cable fixing

The thimbles are made of plated steel and suitable for fixing in the loop of the cable.

Art. code	kg	vol unit	description
518	0.8	1000 p.100	6.0 mm
519	0.5	1000 p.100	4.0 and 5.0 mm
521	0.2	1000 p.100	3.0 mm



518

The bracket is made of galvanised steel. Both flanges have a slotted hole of 25x10 mm. One flange is provided with 2 slotted holes 7x44 mm. The angle brackets are suitable for installing a junction at the end of 5C-profiles with help of paro clamp plates (code 1026 and 1026-68B), and for installation of the vertical angle 915VB of residential overhead doors to brickwork.

ANGLE BRACKET

Galvanised

Art. code	kg	vol unit	description
2602	0.15	200 piece (1)	b = 60 mm, flanges 50 and 60 mm

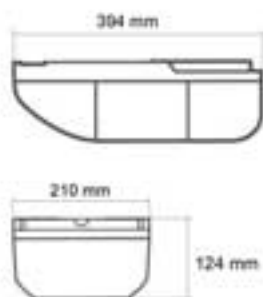


Operator with advanced control for residential doors, provided with soft-start and soft-stop. The patented self-adapting power limit control stops the door instantly when it meets the smallest obstacle. It then moves 20 cm upwards to release the obstacle. The soft-start & soft-stop enables a quiet running of your door. Programming the microprocessor is very easy. Suitable for drawbar system with chain (RES-D-C...) or toothed belt (RES-D-B-...). Supply includes transmitter RES-T-MIDI and antenna 97001.

E-OPERATOR

For residential doors, 500 N

Art. code	kg	vol unit	description
RES-E-500	5.4	1 piece (1)	

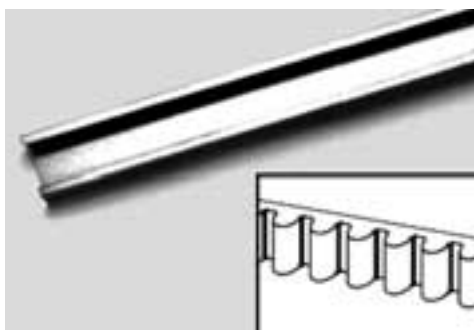


The drawbar with toothed belt operation is low noise and is high tech. The needed length of the track is depending on the height of the door and the type of door. Thanks to the quick disconnector the operator can be disconnected and be operated manually.

DRAWBAR

For RES-E-500, toothed belt

Art. code	kg	vol unit	description
RES-D-B2400	4.5	1 piece (1)	E.L. = 2400 mm
RES-D-B2620	5	1 piece (1)	E.L. = 2620 mm
RES-D-B3530	6.5	1 piece (1)	E.L. = 3530 mm

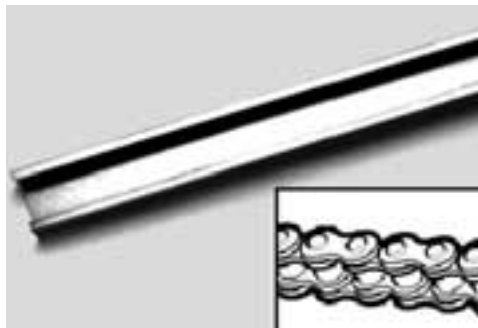


DRAWBAR

For RES-E-500, chain

The drawbar with chain operation is known and respected in the market, not only because of its economical pricing. The needed length of the track is depending on the height of the door and the type of door. Thanks to the quick discoupler the operator can be disconnected and be operated manually.

Art. code	kg	vol unit	description
RES-D-C2400	5.5	1 piece (1)	E.L. = 2400 mm
RES-D-C2620	6.5	1 piece (1)	E.L. = 2620 mm
RES-D-C3530	8.5	1 piece (1)	E.L. = 3530 mm



HAND TRANSMITTER

433 MHz

For operation of both garage doors and industrial drives. Operates at 433 MHz (European guideline). The multibit system ensures absolute safety. The RES-T-MIDI can be fitted to your key chain or be secured with the clip supplied behind the windscreen.

Art. code	kg	vol unit	description
RES-T-MIDI	0.05	1 piece (1)	2-channel
RES-T-MIDI-4	0.05	1 piece (1)	4-channel
RES-T-MICRO	0.02	1 piece (1)	1-channel



Article 1: Applicability

- 1.1. These conditions apply to all offers made by members of the Metaalunie and to all agreements they conclude and to all agreements that may be the result thereof. The offeror/supplier is the Metaalunie member who uses these conditions. Such member is designated in these conditions as the contractor or seller.
- 1.2. The other party is designated as the customer or buyer.
- 1.3. These conditions may be used only by members of the Metaalunie.
- 1.4. The standard conditions of the customer shall not apply and are expressly rejected.

Article 2: Offers

- 2.1. All offers are made without engagement.
- 2.2. If the customer supplies data, drawings etc. to the contractor, the contractor may assume them to be correct and may base his offer upon them.
- 2.3. The prices referred to in the offer are based on delivery ex works in accordance with Incoterms 2000. The prices are exclusive of turnover tax and packaging.
- 2.4. If his offer is not accepted, the contractor has the right to charge the customer for all the costs which he has had to incur in order to make his offer.

Article 3: Intellectual property rights

- 3.1. Unless agreed otherwise, the contractor retains the copyright and all industrial property rights in the offers made by him and in designs, illustrations, drawings, models, test models, software etc. supplied by him.
- 3.2. The rights to the data referred to in paragraph 1 shall remain the property of the contractor irrespective of whether costs are charged to the customer for their production. Such data may not be copied, used or shown to third parties without the express consent of the contractor. If this provision is infringed, the customer shall owe the contractor a penalty of EUR 25,000. This penalty may be claimed in addition to any compensation owed by law.
- 3.3. The customer must return the data supplied to him as referred to in paragraph 1 at the first request of the contractor within the period specified by the contractor. In the event of an infringement of this provision the customer shall owe the contractor a penalty of EUR 1,000 per day. This penalty may be claimed in addition to any compensation owed by law.

Article 4: Advice, designs and materials

- 4.1. The customer cannot derive any rights from advice and information obtained from the contractor if they do not relate directly to the order.
- 4.2. The customer is responsible for the drawings and calculations made by him or on his behalf and for the functional suitability of the materials prescribed by him or on his behalf.
- 4.3. The customer shall indemnify the contractor against any claim by its third parties relating to the use of drawings, calculations, samples, models and so forth supplied by or on behalf of the customer.
- 4.4. The customer may, at his own expense, examine (or arrange for the examination of) the materials which the contractor wishes to use before they are processed. If the contractor suffers damage as a result, this shall be borne by the customer.

Article 5: Delivery period

- 5.1. The delivery period quoted by the contractor is approximate.
- 5.2. In fixing the delivery period the contractor assumes that he can execute the order in the circumstances known to him at that time.
- 5.3. The delivery period starts when agreement has been reached on all technical details, all necessary data, final drawings etc. are in the possession of the contractor, the agreed payment or instalment has been received and the necessary conditions for execution of the order have been fulfilled.
- 5.4. a. If circumstances occur other than those known to the contractor when he fixed the delivery period, the contractor may extend the delivery period by the time necessary to execute the order in the circumstances. If the work cannot be fitted into the planning schedule of the contractor, it shall be completed as soon as his planning schedule permits this.
 b. If there is extra work, the delivery period shall be extended by the time that is necessary to supply (or arrange for the supply of) the materials and parts for this purpose and to carry out the additional work. If the extra work cannot be fitted into the planning schedule of the contractor it shall be completed as soon as his planning schedule permits this.
 c. If there is a suspension of obligations by the contractor, the delivery period shall be extended for the duration of the suspension. If continuation of the work cannot be fitted into the planning schedule of the contractor, the work shall be completed as soon as his planning schedule permits this.
- 5.5. If work is impossible owing to weather conditions, the delivery period shall be extended for the term of the delay that has occurred as a result.
- 5.6. If the agreed delivery period is exceeded, this shall not under any circumstances confer entitlement to compensation unless this has been agreed in writing.

Article 6: Transmission of risk

- 6.1. In the case of delivery ex works, in accordance with Incoterms 2000, the risk in relation to the goods shall pass at the moment when the seller makes them available to the buyer.
- 6.2. Irrespective of the provisions of the previous paragraph, the customer and the contractor agree that the contractor shall arrange for the carriage. The risk of storage, loading, carriage and unloading shall be borne by the customer in this case too. The customer may insure himself against these risks.
- 6.3. Even if the seller installs and/or assembles the goods

sold, the risk in relation to the goods shall pass at the moment when the seller makes them available to the buyer at the business premises of the seller or at another agreed place.

- 6.4. If a purchase involves a trade-in and the buyer continues to use the goods to be traded in pending delivery of the new goods, the risk in relation to the goods to be traded in shall continue to be borne by the buyer until the moment at which he transfers them to the possession of the seller.

Article 7: Pricanges

- 7.1. If four months have passed since the date on which the agreement was concluded and its performance has not yet been completed by the contractor, an increase in the price-determinants may be passed on to the customer.
- 7.2. Payment of the price increase as referred to in paragraph 1 shall take place together with payment of the principal or the last instalment.
- 7.3. If goods are supplied by the customer and the contractor is prepared to use them, the contractor may then charge a maximum of 20 percent of the market price of the delivered goods.

Article 8: Impossibility of performance

- 8.1. The customer shall be entitled to suspend performance of his obligations if he is temporarily prevented from performing them by circumstances that could not be foreseen at the time of the conclusion of the agreement and which are beyond his control.
- 8.2. Circumstances which could not be foreseen by the contractor and which are beyond his control are deemed to include failure of his suppliers and/or subcontractors to fulfil their obligations or to do so in good time, weather conditions, earthquakes, fire, loss or theft of tools, loss of processed materials, road blockades, strikes or work stoppages and import or trade restrictions.
- 8.3. The contractor shall not be entitled to suspend performance if performance is permanently impossible or if a temporary impossibility has lasted for longer than six months. The agreement may then be terminated in respect of such part of the obligations as have not yet been performed. In that case the parties shall not be entitled to compensation for damage suffered or yet to be suffered as a result of the termination.

Article 9: Scope of the work

- 9.1. The contractor shall ensure that all licences, exemptions and other decisions that are necessary in order to carry out the work are obtained in good time.
- 9.2. The price of the work does not include
 - a. the costs of groundwork, pile-driving, cutting, breaking, foundation work, bricklaying, woodwork, plastering, painting, wallpapering, repairs or other construction work;
 - b. the costs of gas, water or electricity connections and other infrastructure facilities;
 - c. the costs of preventing or mitigating damage to goods present at or near the work;
 - d. the costs of removing materials, building materials or refuse;
 - e. travelling and accommodation expenses.

Article 10: Alterations to the work

- 10.1. Alterations to the work shall result in any event in extra work or reduced work if:
 - a. there is an alteration to the design or the specifications;
 - b. the information provided by the customer does not correspond with the reality;
 - c. the quantities diverge by more than 10% from the estimates.
- 10.2. Extra work shall be calculated on the basis of the value of the price determinants applicable at the time when the extra work is carried out. Reduced work shall be calculated on the basis of the value of the price determinants applicable at the time when the agreement was concluded.
- 10.3. If the increase and decrease in the work results on balance in a decrease the contractor may charge the customer in the final invoice 10% of the difference in the balances. This provision does not apply in the case of a reduction in the work that is a result of a request of the contractor.

Article 11: Execution of the work

- 11.1. The customer shall ensure that the contractor can carry out his activities without interruption and at the agreed time and that in the execution of the work he has access to the requisite facilities such as:
 - gas, water and electricity;
 - heating;
 - a lockable and dry storage room;
 - facilities prescribed under the Working Conditions Act and other health and safety regulations under that Act.
- 11.2. The customer shall be liable for all damage as a result of the loss, theft or burning of or damage to tools, materials and other property of the contractor located at the place where the work is performed.
- 11.3. If the customer fails to discharge his obligations as referred to in the previous paragraphs and the work is delayed as a result, the work shall be executed as soon as the contractor's planning schedule permits this. In addition, the customer shall be liable for all loss or damage suffered by the contractor as a result.

Article 12: Completion of the work

- 12.1. The work shall be deemed to have been completed when:
 - a. the customer has approved the work;
 - b. the work has been used by the customer; if the customer uses only part of the work, such part shall be deemed to have been completed;
 - c. the contractor gives written notice to the customer that the work has been completed and the customer does not indicate in writing within 14 days of the

notice whether or not the work has been approved; the customer does not approve the work on account of minor defects or missing parts which can be repaired or supplied within 30 days and which do not prevent the use of the work.

- 12.2. If the customer does not approve the work, he shall be obliged to give written notice of this to the contractor specifying the reasons.
- 12.3. If the customer does not approve the work he shall give the contractor the opportunity to complete the work anew. The provisions of this article shall then apply once again.

Article 13: Liability

- 13.1. The contractor is liable for damage which the customer suffers and which is the direct and sole result of a failure attributable to the contractor. However, only loss or damage for which the contractor is insured or for which he should reasonably have been insured will be eligible for compensation.
- 13.2. The following are not eligible for compensation:
 - a. consequential loss or damage, including for example loss or damage due to business standstills and loss of profit;
 - b. damage to goods which are being worked on or to goods which are in the vicinity of the place where the work is being carried out;
 - c. damage caused by the intent or deliberate recklessness of auxiliaries.
- 13.3. The customer indemnifies the contractor against all claims of third parties on account of product liability due to a defect in a product which has been supplied by the customer to a third party and consisted wholly or partly in products and/or materials supplied by the contractor.

Article 14: Warranty

- 14.1. The contractor warrants the proper execution of the agreed performance for a period of six months after delivery or completion.
- 14.2. If the agreed performance consists in the carrying out of contracted work, the contractor warrants the soundness of the delivered construction and the materials used in the construction for the period referred to in paragraph 1, provided that he was free to choose such materials.
 If it transpires that the delivered construction or the materials used are unsound, the contractor shall repair or replace them. The parts which the contractor is to repair or replace must be sent to him free of charge. The dismantling and assembly of these parts and any travelling and accommodation expenses incurred shall be borne by the customer.
- 14.3. If the agreed performance consists in the processing by the contractor of materials supplied by the customer, the contractor warrants the soundness of the processing for the period referred to in paragraph 1. If it transpires that processing has not been carried out in a sound manner, the contractor shall choose whether:
 - to carry out the processing anew, in which case the customer must supply new material at his own expense;
 - to repair the defect, in which case the customer must return the material free of charge to the contractor;
 - to provide the customer with a credit note for a proportionate part of the invoiced amount.
- 14.4. If the agreed performance consists in the delivery of an item of goods, the contractor shall warrant the soundness of the delivered item during the period referred to in paragraph 1.
 If it transpires that the delivery has not been sound, the item of goods must be returned free of charge to the contractor. Thereafter the contractor shall choose whether:
 - to repair the item of goods;
 - to replace the item of goods;
 - to provide the customer with a credit note for a proportionate part of the invoiced amount.
- 14.5. If the agreed performance consists in part or in whole of the installation and/or assembly of a delivered item of goods, the contractor warrants the soundness of the installation and/or assembly for the period referred to in paragraph 1.
 If it transpires that the installation and/or assembly has not been carried out in a sound manner, the contractor shall repair it. Any travelling and accommodation expenses shall be borne by the customer.
- 14.6. The factory warranty shall apply to parts in respect of which this has been expressly agreed in writing by the customer and the contractor. If the customer has had the opportunity to take cognizance of the content of the factory warranty, this shall take the place of the warranty under this article.
- 14.7. The customer must in all cases offer the contractor the opportunity to repair the defect or to carry out the processing anew.
- 14.8. The customer may invoke the warranty only after he has complied with all his obligations to the contractor.
- 14.9.
 - a. No warranty is given for defects that are a result of
 - normal wear and tear;
 - injudicious use;
 - non-maintenance or defective maintenance;
 - installation, assembly, modification or repair by the customer or by third parties.
 - b. No warranty is given for delivered items of goods that were not new at the moment of delivery.

Article 15: Claims

The customer may no longer invoke an instance of non-performance if he does not lodge a written claim with the contractor within 14 days of the date on which he discovers the defect or could reasonably be expected to discover it.

Article 16: Uncollected goods

If goods have not been collected by the time the delivery period expires, they shall continue to be held available for the customer. Uncollected goods shall be stored at the expense and risk of the customer. The contractor may always make exercise the power referred to in article 6:90 Civil Code.

Article 17: Payment

- 17.1. Payment shall be made at the place of business of the contractor or by remittance to an account designated by the contractor.
- 17.2. Unless agreed otherwise, payment shall be made as follows:
 - a. cash in the case of an over-the-counter sale;
 - b. if payment in instalments has been agreed:
 - 40% of the total price at the time the order is placed;
 - 50% of the total price after the material is supplied;
 - 10% of the total price upon completion;
 - c. in all other cases: within 30 days of the date of the invoice.
- 17.3. Regardless of the agreed terms of payment, the customer shall be obliged, at the request of the contractor, to provide such security for the payment as the contractor deems sufficient for the payment. If the customer fails to do so within the specified period, he shall be deemed to be immediately in default. The contractor shall in that case have the right to terminate the agreement and recover his loss or damage from the customer.
- 17.4. The customer does not have the right to set off claims against the contractor, unless the contractor has been declared bankrupt.
- 17.5. The full claim for payment shall be immediately due and exigible if:
 - a. a payment period has been exceeded;
 - b. the customer has been declared bankrupt or has applied for a suspension of payments;
 - c. the property or accounts receivable of the customer are seized;
 - d. the customer (being a legal entity) is wound up or liquidated;
 - e. the customer (being a natural person) is made the subject of a guardianship order or dies.
- 17.6. If payment has not been made within the agreed period for payment, the customer shall immediately owe interest to the contractor. The interest shall be 10% per year or the statutory rate of interest, whichever is the higher. For the purpose of calculating the interest, part of a month shall be treated as a full month.
- 17.7. If payment has not been made within the agreed period for payment, the customer shall owe the contractor all extrajudicial costs of recovery, subject to a minimum of EUR 50. The costs shall be calculated on the basis of the following table:

on the first EUR 3,000	15%
on any additional amount up to EUR 6,000	10%
on any additional amount up to EUR 15,000	8%
on any additional amount up to EUR 60,000	5%
on any additional amount over EUR 60,000	3%

 If the extrajudicial costs actually incurred are higher than those in the above-mentioned table, the costs actually incurred shall be owed.
- 17.8. If the contractor is held to be in the right in legal proceedings, all costs which he has incurred in connection with the proceedings shall be borne by the customer.

Article 18: Reservation of title and right of lien

- 18.1. After delivery of the goods the contractor shall retain title to them as long as the customer:
 - a. fails or will fail to perform his obligations under this agreement or other similar agreements;
 - b. fails or will fail to pay for activities performed or yet to be performed under such agreements;
 - c. has not paid claims that result from the non-observance of the above-mentioned agreements such as damage, penalties, interest and costs.
- 18.2. As long as title to delivered goods is retained by the contractor, the customer may not encumber them other than in the normal course of his business.
- 18.3. After the contractor has invoked his reservation of title, he may retake possession of the delivered goods. The customer shall allow the contractor to enter the place where the goods are situated.
- 18.4. If the contractor is unable to invoke the reversion of title because the delivered goods have been mingled, distorted or changed by way of accession (accession), the customer shall be obliged to grant the contractor a lien on the newly created goods.

Article 19: Termination

If the customer wishes to terminate the agreement in circumstances where the contractor is not in default and the contractor agrees to this, the agreement shall be terminated by mutual consent. The contractor shall in that case be entitled to compensation of all pecuniary damage, such as any loss suffered, loss of profit and costs incurred.

Article 20: Applicable law and choice of forum

- 20.1. The law of the Netherlands is applicable.
- 20.2. The Vienna Convention on Contracts for the International Sale of Goods (CISG) is not applicable, nor is any other international regulation the exclusion of which is permissible.
- 20.3. Only the civil court that has jurisdiction in the place of establishment of the contractor may take cognizance of disputes, unless this would be contrary to peremptory law. The contractor may deviate from this rule of jurisdiction and apply the statutory rules governing jurisdiction.
- 20.4. The parties may agree a different form of dispute resolution such as arbitration or mediation.



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