

RESIDENTIAL DOORS SERIES LIVING

LOGISTIC
SOLUTIONS



ASSEMBLY, USE AND MAINTENANCE MANUAL

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NOTE

This manual plus the data sheet herein enclosed, must be carefully read by installers before assembling the doors, in order to be properly informed on the following:

- List of components of a sectional door either manually operated or with automations;
- How to assemble a sectional door correctly;
- Correct maintenance in order to keep the guarantee valid;
- Risks during assembly and use of the door.

The Installer, for a correct assembly, must keep to instructions contained in this manual and in the "Data sheet" included hereim.

Once the assembly has been carried out, installer will write in the Maintenance Register all data carried on the drawing of the spring carriage shaft, such as:

- The serial number
- Type
- Opening cycles
- Name of the installer
- Spring type: single.

Kopron will not be liable for consequences due to the installation on behalf of Customer of a motor on doors originally supplied with manual operation. Safety, assembly instructions for doors with automation are different from the instructions for doors manually operated.

In case you need to contact Kopron technical offices for information please apply to the following address and telephone number:

Kopron Spa

Via I Maggio - 20064 Gorgonzola - Milan - Italy
Telefono: +39 02 921521 - Fax: +39 02 92152923

Kopron reserve the right to update this manual whenever the product is improved.

It must be checked that each shipment includes the following material plus relevant labels as shown in the photographs:

1 TRACKS

Vertical and horizontal tracks complete with template (if requested).

2 SPRING CARRIAGE SHAFT

Springs, brackets, drums, cones, joints, spring anti-break safety device, screws and keys.

3 PANELS

The packing is made of polythene e polystyrene.

4 ACCESSORY BOX

List of components plus manuals.

5 MOTOR (optional)

Residential door.

Should shipment include more than one door of same type, some parts, of same category, may be packed together in one package.

The handling of the packages can be carried out with the aid of forklifts, which can bear the weight and dimension of the packages. Rubber or polystyrene sheets should pad the parts where the material is laid on.

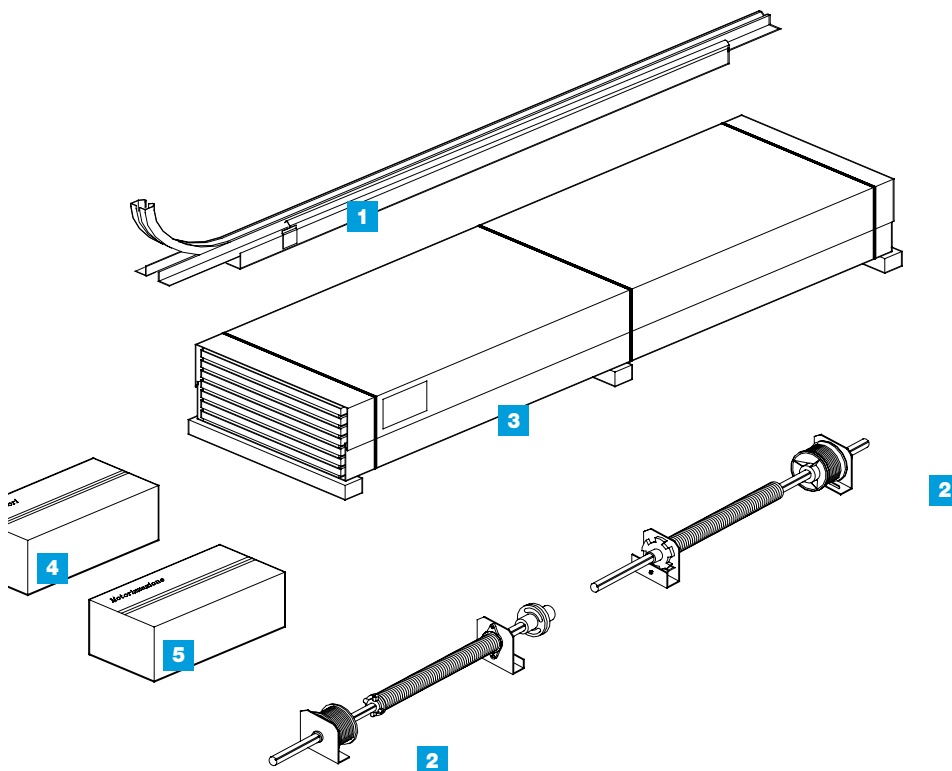
Net weights are shown on the labels.

Parts of the motor are packed in boxes which are easy to handle.

We recommend:

- to put the packages in a sheltered and dry area;
- for disposal of the material, to apply to specialized companies which will dispose material according regulations in force.

FIG 1



NOTE

PACKAGE HANDLING

LABELS



INTRODUCTION

LIST OF TOOLS AND EQUIPMENT SUGGESTED FOR ASSEMBLY AND INSTALLATION OF THE SECTIONAL DOORS

NOTICE

TOOLS AND EQUIPMENT SUGGESTED

- Plumb line, coloured wire for tracing, marking pen, pencils, level and wooden ruler for levelling cement plaster.
- Drill complete with steel inserts.
- Churn drill with inserts ø 6, 8, 10, 12, 14 mm.
- Screwer.
- Big disk grinder and small disk grinder
- Manual or electric winch.
- Tool box including: hammer, screwdrivers, set of hexagonal keys, pliers, tongs, wrench siz. 6, 8, 10, 12, 13, 14, 17, sissors to cut steel sheets, file, 5mt tape, gauge.
- Riveting machine with rivets ø 4.
- Hacksaw.
- Clamps.
- Qty 1 l=50mt + qty 2 l=10mt extension cords 230 v. EC standards.
- Qty 1 l=20mt extension cord 380 v. - EC standards.
- 230 v. adaptors for sockets for either industrial or civil use.
- movable electric panels with plugs, thermal magnetic, switches and a residual-current devices which connects electric supply with the various functions carried out by installer.
- wheeled scaffold for workmen.
- fixed ladder (min. 2 mt) and stretching ladder (9mt).
- Set of steel dowels.
- Tapping screws and taptite screws.
- Spring-load kit.
- Safety tools: goggles, earphones, helmet, gloves, safety belts, safety shoes, first aid box plus anything useful to prevent accidents.

Safety standards established for workers on-site must be applied strictly:

Check the size of the door space if it is the same written on the order confirmation as well as on the packages, and if there are any obstacles to a correct installation (tubes, ducts, etc...).

Check if the material corresponds to the accessory list which accompanies the material inside the package.

If necessary, the panels can be provided with wind resistant reinforcements.

In case the doors are modified from manual operation to motorized with pulling drive motors, the anchoring arm must be fixed to the surface with screws.

Any other modification should be carried out by qualified personnel.

Our technical and service departments can be contacted for any need.

For a correct assembly of all the types of doors the following sequence of operations must be followed:

OPERATION 1

Assembly of tracks and vertical profiles

OPERATION 2

Assembly of the horizontal tracks

OPERATION 3

Spring carriage shaft assembly

OPERATION 4

Preparation and assembly of the panels

OPERATION 5

Torsion spring loading

OPERATION 6

Motor assembly

OPERATION 7

Door balancing test

**BEFORE STARTING
ASSEMBLY**

NOTICE

TYPES OF DOORS

KPSRL - SERIES LIVING

Sectional door for civil use. Maximum height 200 mm.

WALL FACED SECTION DRAWING, OF THE SERIES "LIVING" DOOR TYPE

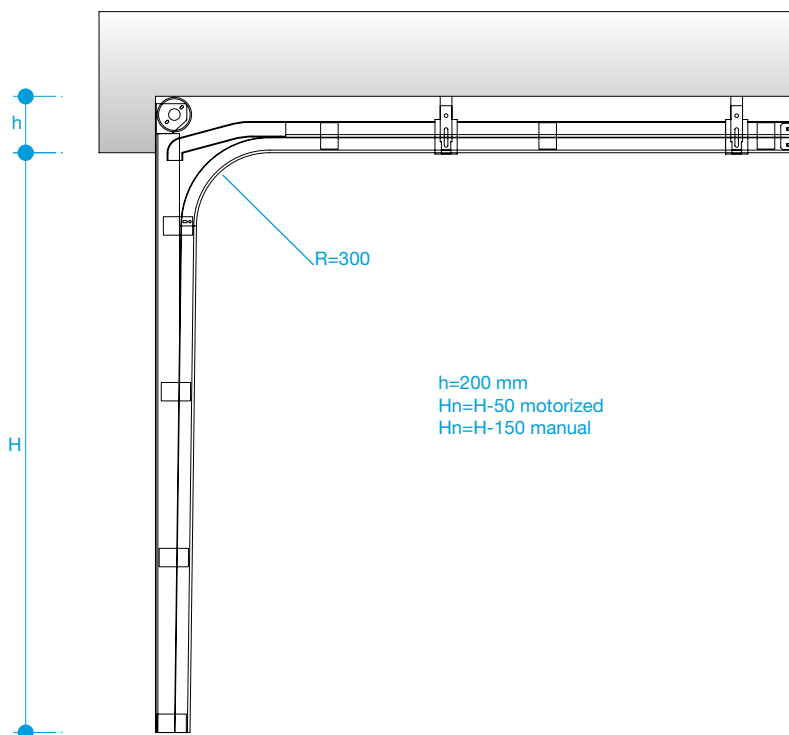


FIG 2

KPSRLV - SERIES LIVING

Sectional door for civil use, which can be used even without door frame. Maximum height 200 mm.

WALL FACED SECTION DRAWING, OF THE SERIES "LIVING" DOOR TYPE WITH COVERING PROFILES.

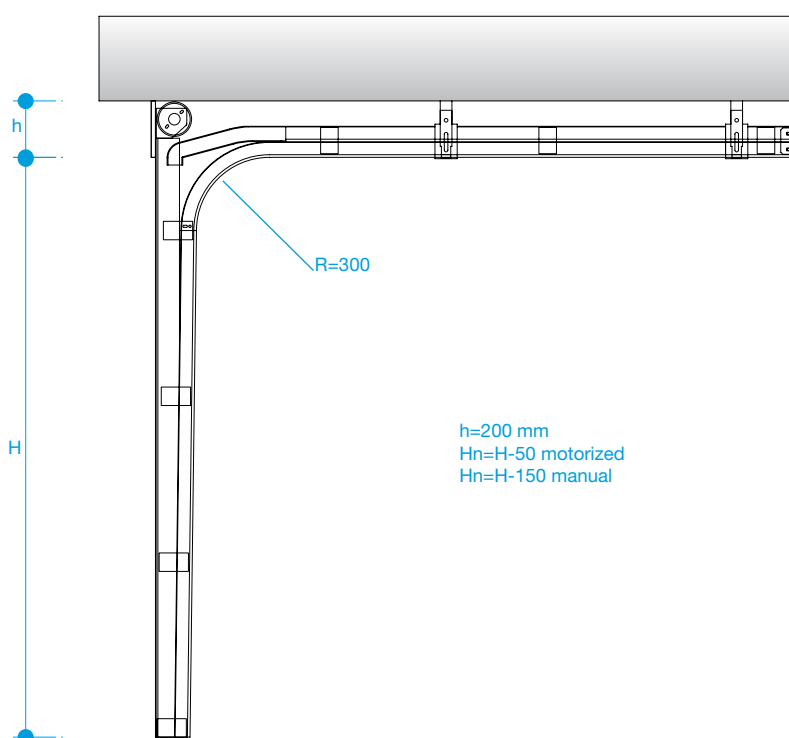


FIG 3

OPERATION 1

POSITIONING OF VERTICAL TRACKS

Use the template to check the distance between right and left track (L+145).

ALL TYPES OF DOORS

Check the perfect levelling of the floor.

Check if the embrasures and vertical profiles are duly plumbed.

Assemble the tracks and vertical profiles either with dowels for expansion fixing to masonry walls or with tapping screws and taptite screws.

ASSEMBLY VERTICAL TRACKS

1

Plumb the vertical tracks.

2

Verify the top level of the two vertical tracks.

3

Fasten the vertical tracks with clamps.

4

Perforate the structure following the existing holes along the vertical track.

5

Fix to the wall

TRACKS AND VERTICAL PROFILES ASSEMBLY

FIG 5

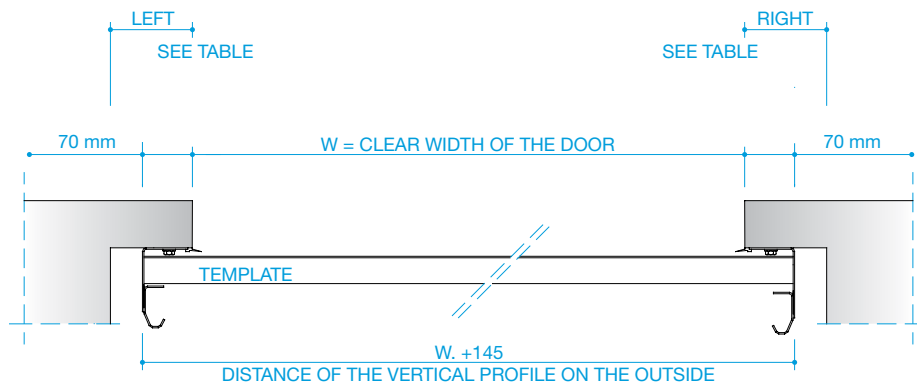


FIG 6

MANUAL SECTIONAL DOOR		
	LEFT	RIGHT
KPSRL	100	100
KPSRLV	100	100

FIG 7

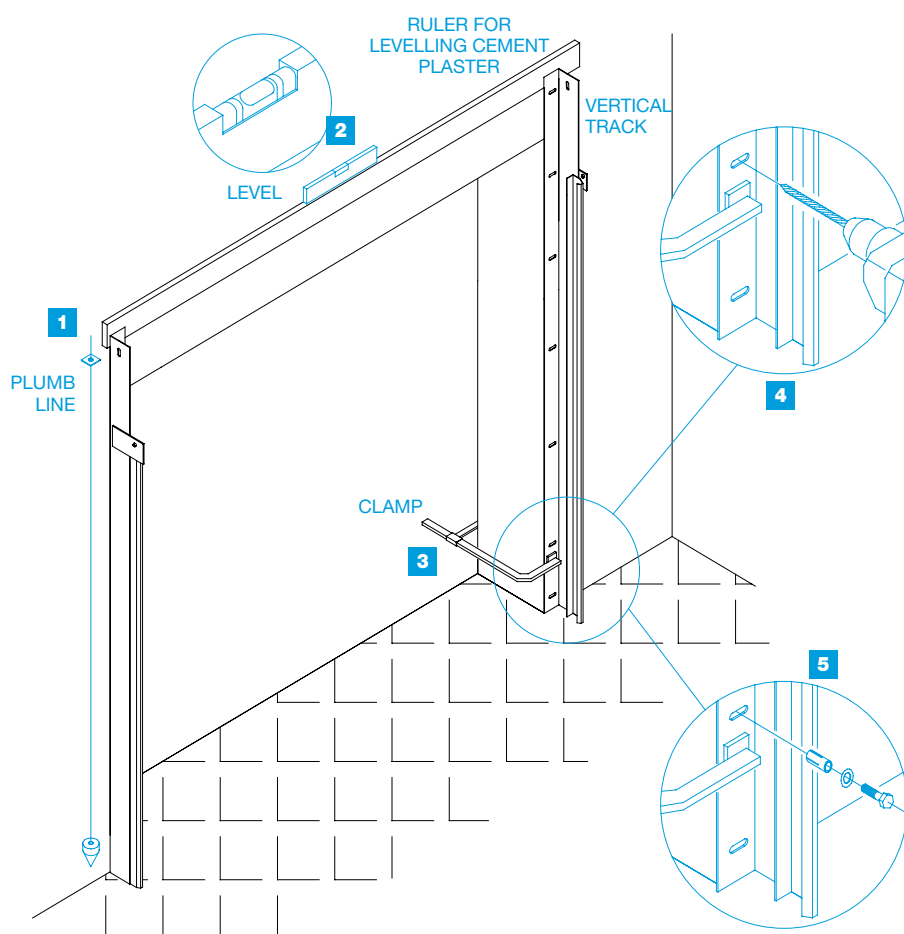
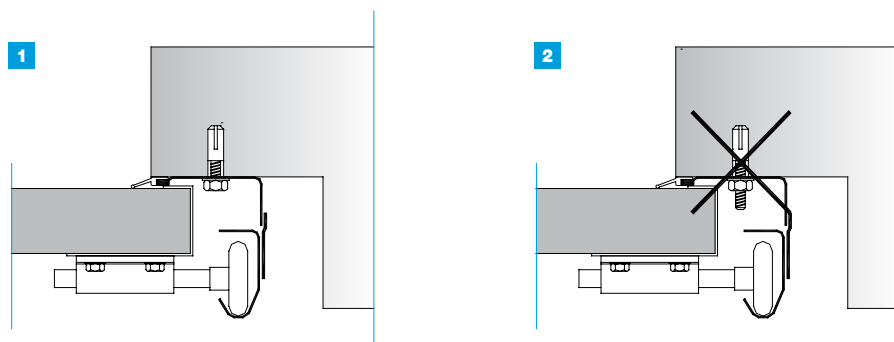


FIG 8



CORRECT ANCHORING OF THE VERTICAL TRACKS

Dowels with screw thread coming out or welding points must not be used.

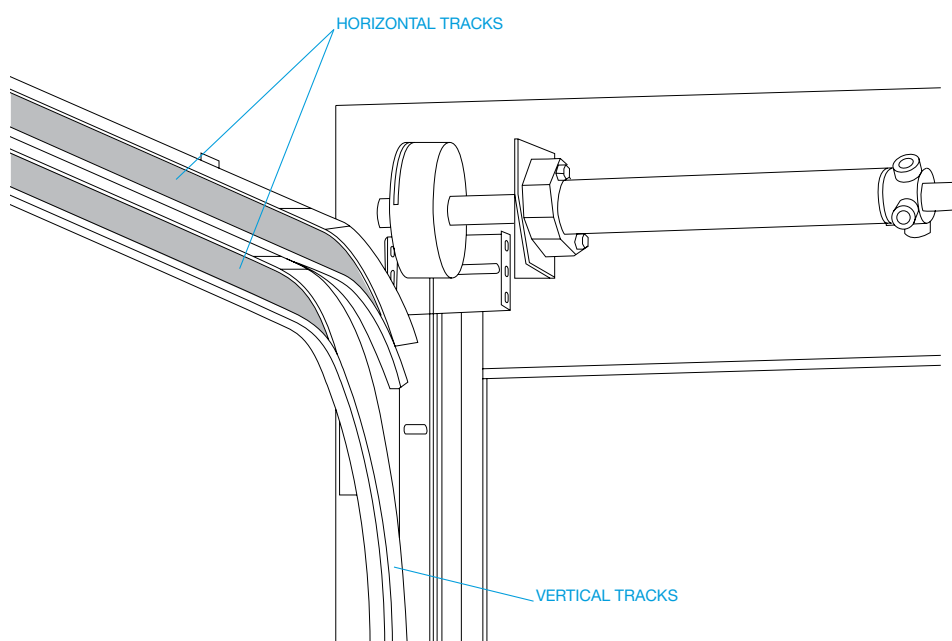
1

Expansion dowel.

2

Dowel with thread coming out (not be used).

FIG 9 KPSRL AND KPSRLV TYPE



ASSEMBLY OF TRACKS AND PROFILES

On the vertical tracks duly plumbed assemble the curves.

Join and fix the horizontal track with the nuts already inserted in the holes.

OPERATION 2

HORIZONTAL TRACK ASSEMBLY

Join the vertical and horizontal profiles with the nuts 6 x 20 mm which are already provided.

Join the vertical and horizontal tracks with nuts M6x12 which are already provided.

Position the template at the two ends of the horizontal tracks establishing the dimension $W+145$ (W =clear width of the door) both at the door frame and at the tail end obtaining two equal diagonals (D).

Make sure the horizontal tracks are parallel and check their inclination which must be ≈ 0 .

The choice of fixing dowels for ceiling anchoring depends on the weight and stress they have to bear.

When anchoring the horizontal tracks either to the carrying structure or to the ceiling, do not use flexible anchoring systems such as chains, ropes, etc..., but profiles with bending stiffness.

HORIZONTAL TRACK ASSEMBLY AND TEMPLATE

Anchor to the ceiling or to the carrying structure the horizontal tracks with suspensions according to the number and the position of the fixing points.

NOTE

Do not use flexible anchoring systems such as chains, ropes, etc..., but profiles with bending stiffness.

HORIZONTAL TRACKS ASSEMBLY AND TEMPLATE

PARALLELISM OF THE HORIZONTAL TRACKS FIG 10

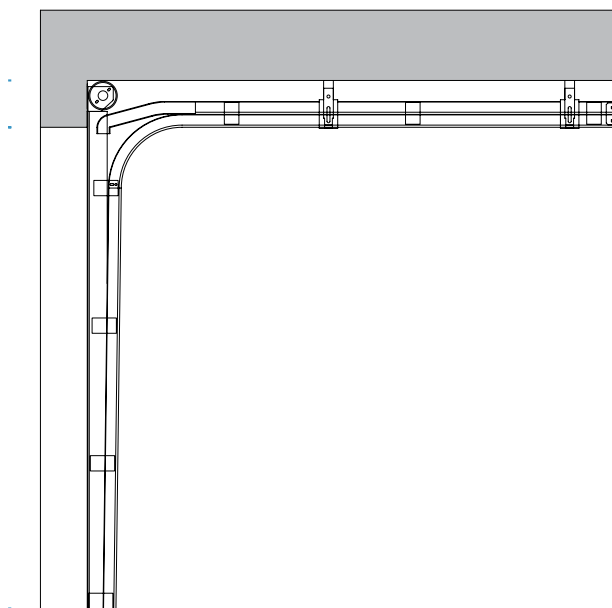
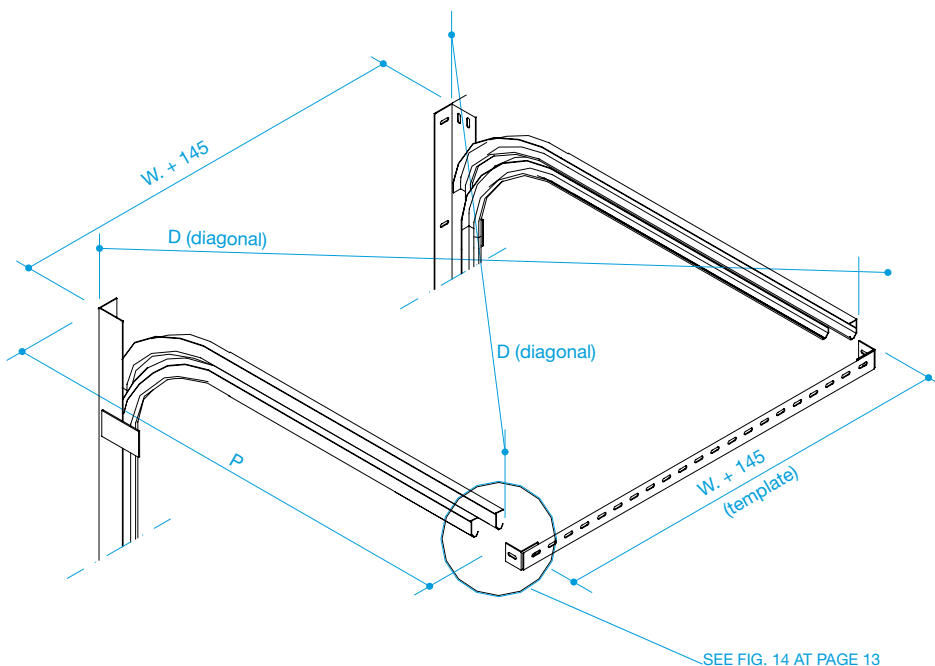


FIG 11



SEE FIG. 14 AT PAGE 13

FIG 12

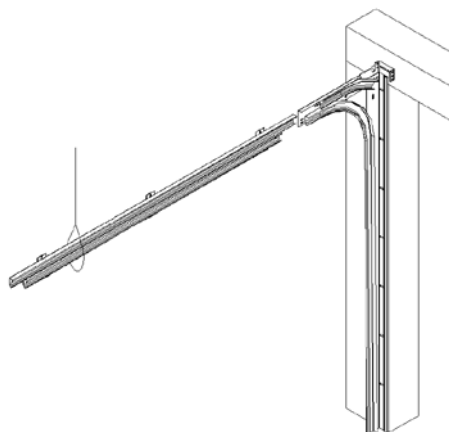


FIG 13

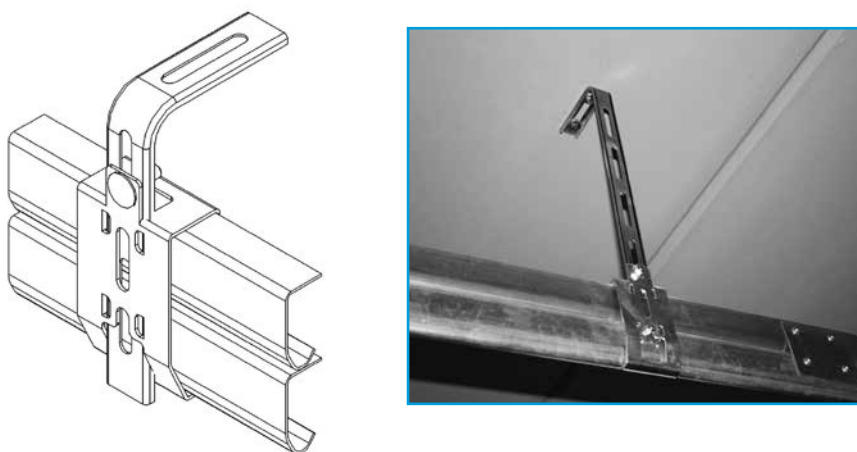
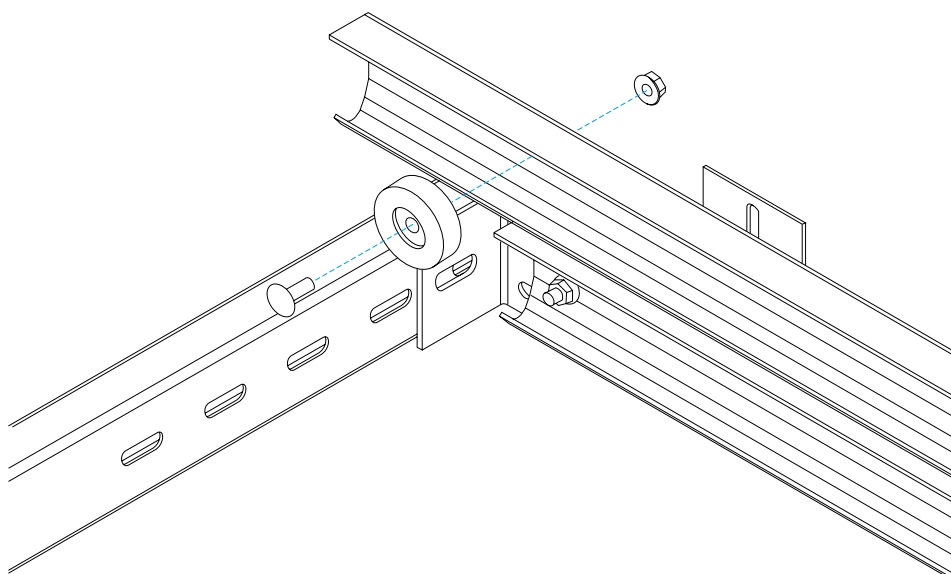


FIG 14 CEILING ANCHORING FOR DOOR TYPES KPSRL AND KPSRLV

D DEPTH	N° HOOKINGS	DIMENSION X
<1660	$2DX + 2SX$	≤ 1500
1660 ÷ 3160	$3DX + 3SX$	≤ 1500

FIG 15 RUBBER BUFFERS

**ANCHORING OF THE HORIZONTAL TRACKS TO THE CEILING**

Anchoring methods depend on the kind of structure where the sectional door is assembled.

Therefore we shall describe a standard type of anchoring.

NOTE

To calculate the weight follow this formula:

$L \times H \times 15$ Kg/square meter

RUBBER BUFFER ASSEMBLY

Assemble the rubber buffers at the tail end of the tracks as shown in Fig. 15.

OPERATION 3

NOTE

In the accessory box there is a drawing regarding the layout of springs and support brackets.

STANDARD SYSTEM

The standard system is made of:

RIGHT AXLE SHAFT

- n° 1 safety device in case of breakage of the springs.
- n° 1 right drum.
- n° 1 spring with rotation towards left complete with fixing cones and loads.
- n° 1 half coupling complete with nuts and bolts.
- n° 2/3 keys for half-coupling and drum.
- n° 1 retaining ring (if there is only one spring).

LEFT AXLE SHAFT

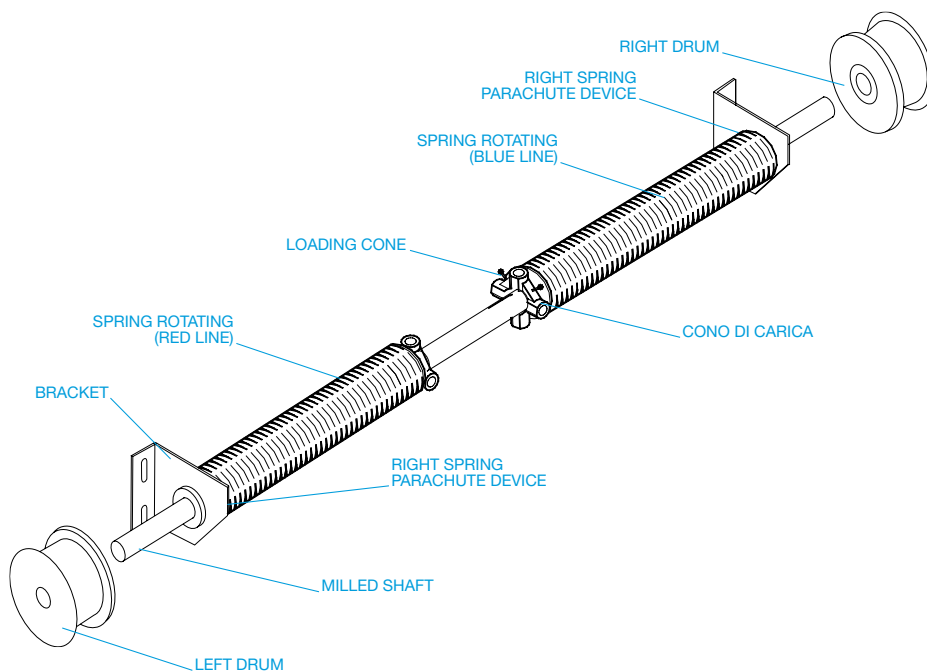
- n° 1 safety device in case of breakage of the springs.
- n° 1 left drum.
- n° 1 spring with rotation towards right complete with fixing cones and loads.
- n° 1 half coupling complete with nuts and bolts.
- n° 2/3 keys for half-coupling and drum.
- n° 1 retaining ring (if there is only one spring)

NOTE

- Dowels must not have the screw thread coming out.
- Avoid any welding points.
- Do not anchor the shaft directly on covering panels.

SPRING HOLDER SHAFT ASSEMBLY

PARALLELISM OF THE HORIZONTAL TRACKS KPSRL FIG 16



SPRING HOLDER SHAFT WITH COVERING PANEL PRE-ASSEMBLE KPSRLV FIG 17

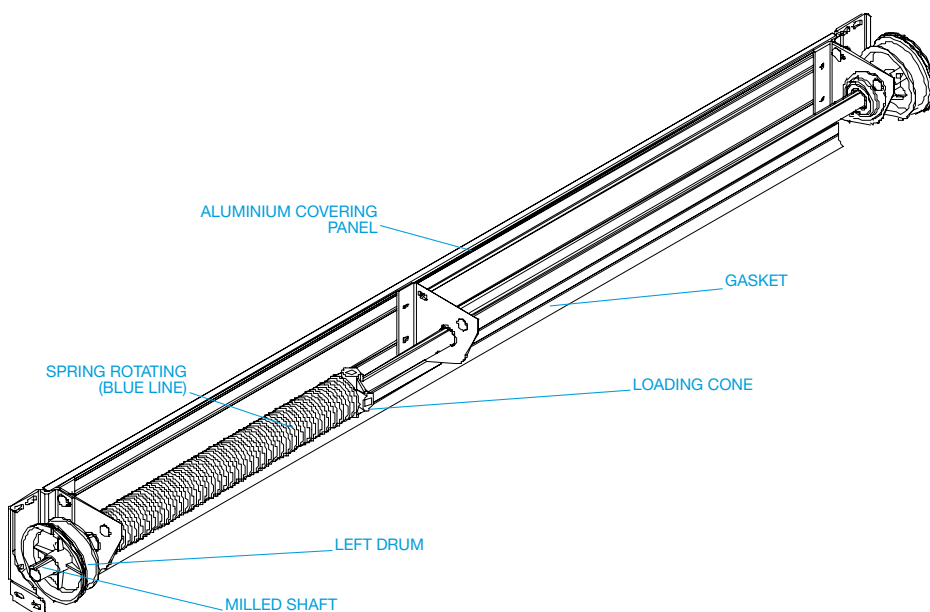
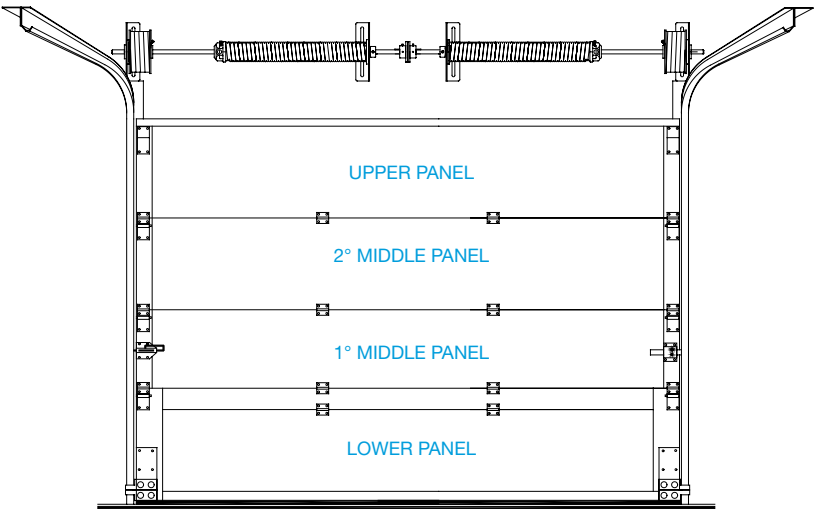


FIG 18



EXAMPLE OF A FOUR PANEL DOOR

FIG 19

UPPER
4° MIDDLE PANEL
3° MIDDLE PANEL
2° MIDDLE PANEL
1° MIDDLE PANEL
LOWER PANEL

MAXIMUM PANELS POSSIBLE

							H door (mm)
Position	Lower p.	1° middle p.	2° middle p.	Upper p.			2200
h panel	650	500	500	500			
Position	Lower p.	1° middle p.	2° middle p.	3° middle p.	Upper p.		2700
h panel	650	500	500	500	500		
Position	Lower p.	1° middle p.	2° middle p.	3° middle p.	4° middle p.	Upper p.	3000
h panel	650	500	500	500	500	300	

OPERATION 4

WHEEL CARRIAGE AND HINGE ON MIDDLE PANELS

Remove the covering film from the panels and assemble the accessories.

Fix the middle hinges and the middle wheel carriage supports.

Position the first panel between the tracks, lifting it from ground with the aid of some supports 50±80 mm thick and fix the carriage (with wheel already inside the track) to the wheel carriage support.

Prepare the two parachute supports Left and Right with relevant wheels inserted in the hole. Fix to the first panel (with lower gasket and handle) the two wheel carriage supports and hinges with tapping screws.

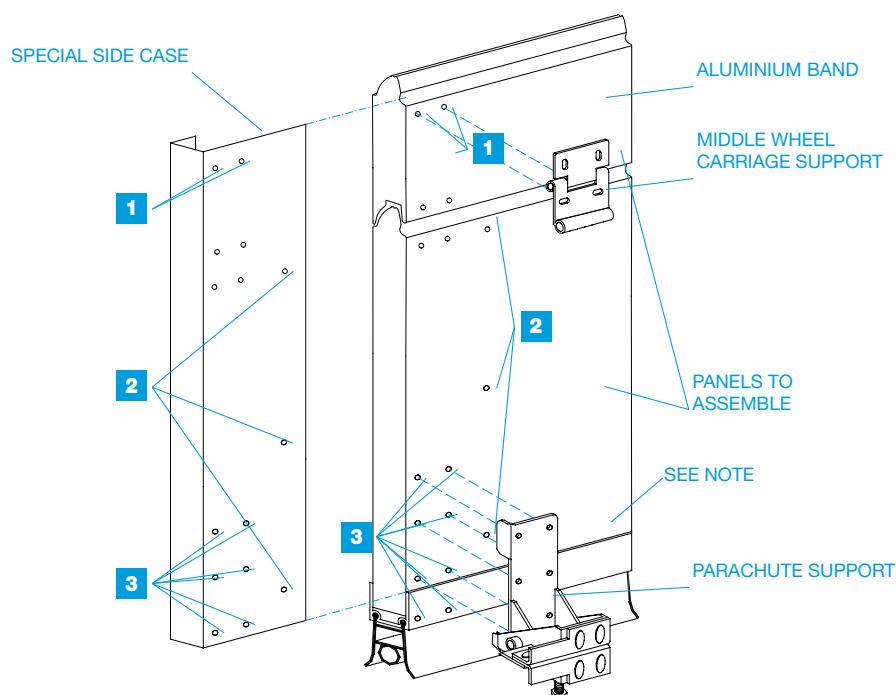
NOTE

For the lower panel carry out the following coupling operations:

join the panel with the aluminium band;
insert the perforated cases at the ends of the panels fixing them with the rivets already available.

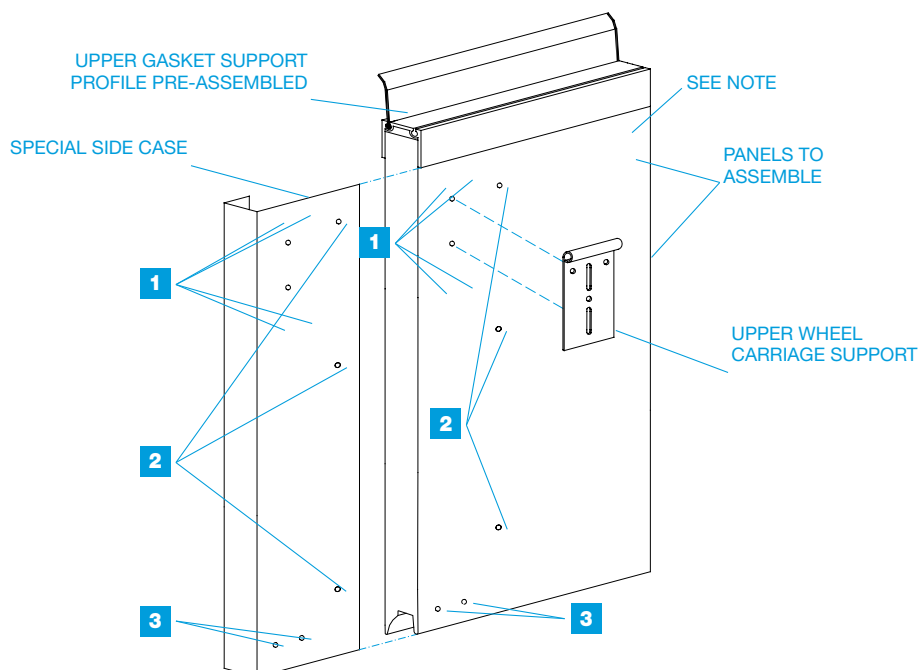
PREPARATION AND PANEL ASSEMBLY

LOWER PANEL FIG 20



- 1 2 HOLES FOR FIXING THE MIDDLE WHEEL CARRIAGE SUPPORT
- 2 3 HOLES FOR FIXING THE SPECIAL SIDE CASE
- 3 8 HOLES FOR FIXING THE PARACHUTE SUPPORT

HIGH SECTION UPPER PANEL FIG 21



- 1 4 HOLES FOR FIXING THE UPPER WHEEL CARRIAGE SUPPORT
- 2 3 HOLES FOR FIXING THE SPECIAL SIDE CASE
- 3 2 HOLES FOR FIXING THE HINGE

FIG 22 WHEEL CARRIAGE AND HINGE ON MIDDLE PANELS

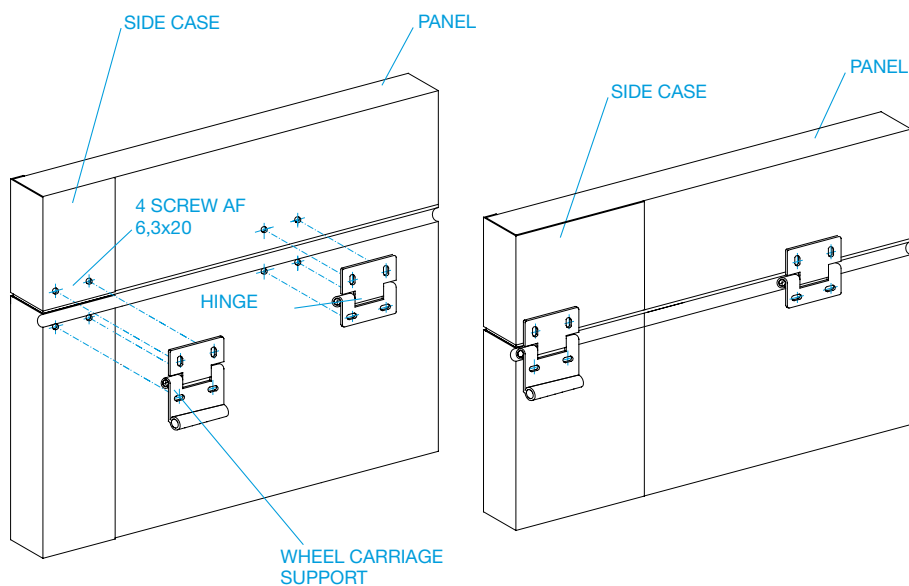


FIG 23 TANDEM WHEEL CARRIAGE ON MIDDLE PANELS

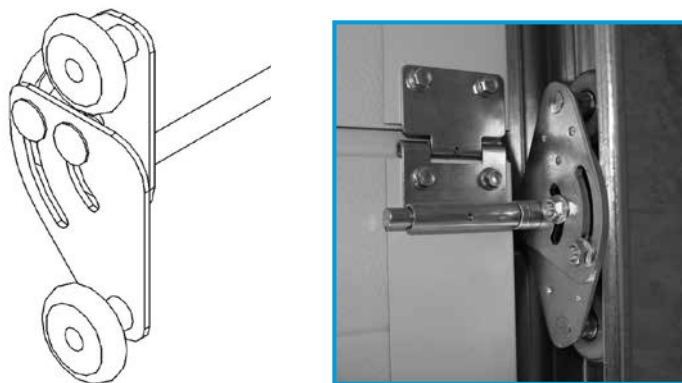
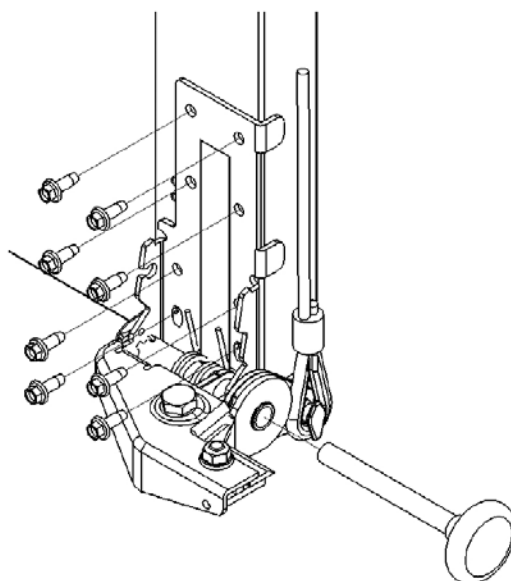


FIG 24 PARACHUTE SUPPORT ASSEMBLY



WHEEL CARRIAGE ASSEMBLY ON MIDDLE PANELS

TANDEM WHEEL CARRIAGE ASSEMBLY ON MIDDLE PANELS

PARACHUTE

Once the parachute of the lower panel is fixed with 8 tapping screws 6,3x20, after having inserted the wheel in the track, hook on the side of the thimble, the lifting ropes. Then verify the panel levelling.

ALL TYPES

Position the lower panel between the tracks lifting them 20/25 cm from ground.

Insert the stem of the wheel in nylon inside the pivot of the PARACHUTE support and in vertical track in the space underneath the lower panel. Make sure the 8 holes of the parachute support coincide with the 8 holes of the lower panel and fix with screws AF 6,3x20.

OPERATION 4

ASSEMBLY OF PARACHUTE SUPPORT

Put the lifting rope in the parachute support and hook the end to the drum.

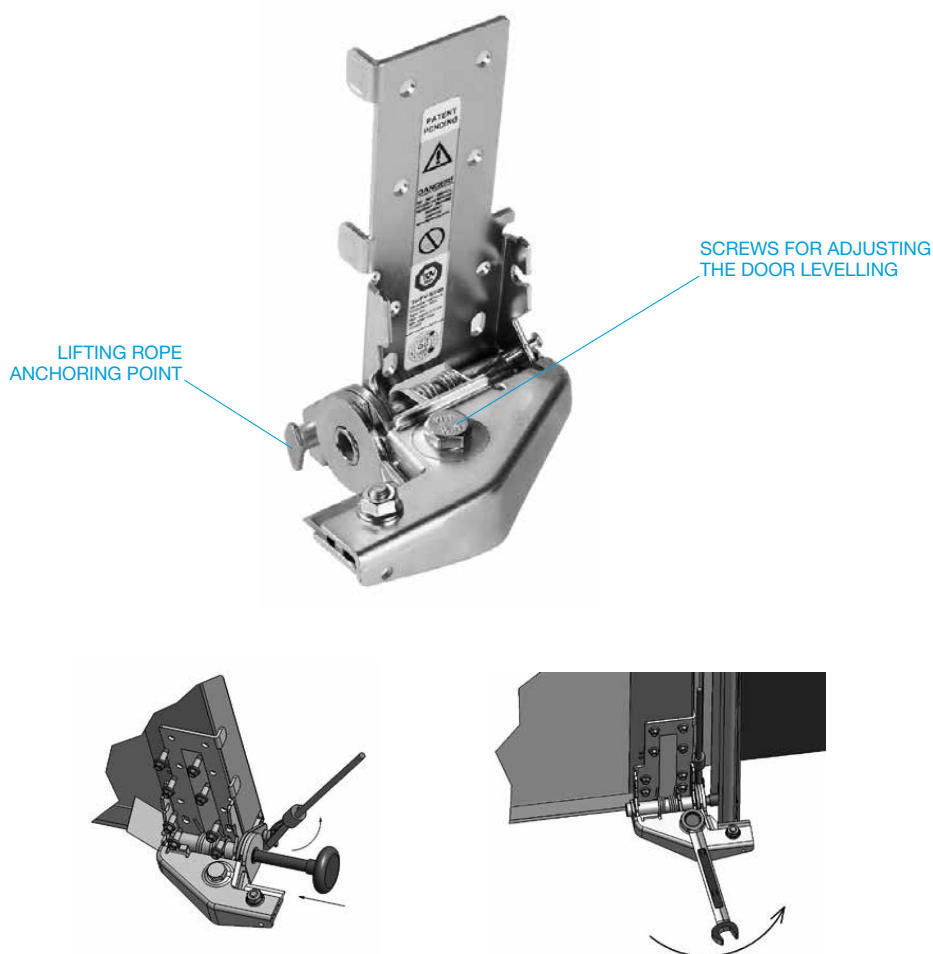
NOTE

Remove the protection covering around the knife before the activating the door.

If necessary adjust the screws shown in Fig. 25 to the level the door.

PREPARATION AND PANEL ASSEMBLY

ASSEMBLY OF PARACHUTE SUPPORT FIG 25



TAPPING SCREWS

1

4 galvanized tapping screws 6,3 x 25 for upper wheel carriage.

2

4 galvanized tapping screws 6,3 x 25 for hinge.

3

4 galvanized tapping screws 6,3 x 25 for middle wheel carriage and hinge.

4

8 galvanized tapping screws 6,3 x 25 for parachute support cables.

TAPPING SCREWS POSITIONING FIG 26

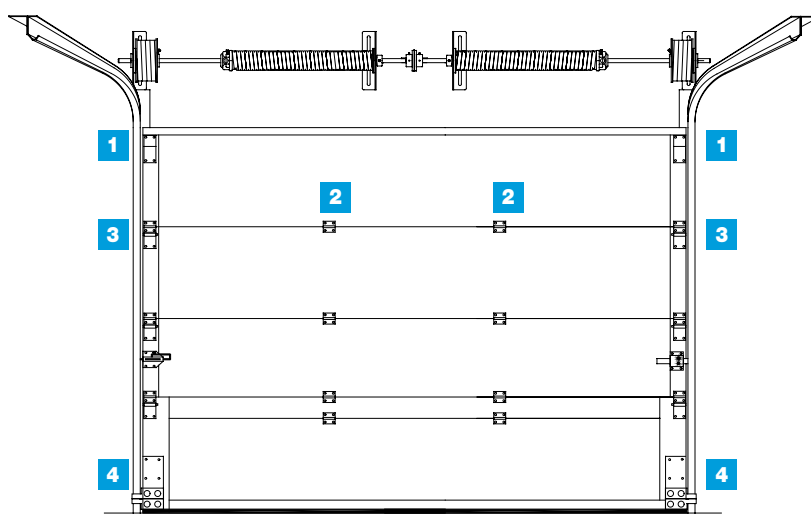


FIG 27 MIDDLE WHEEL CARRIAGE ASSEMBLY

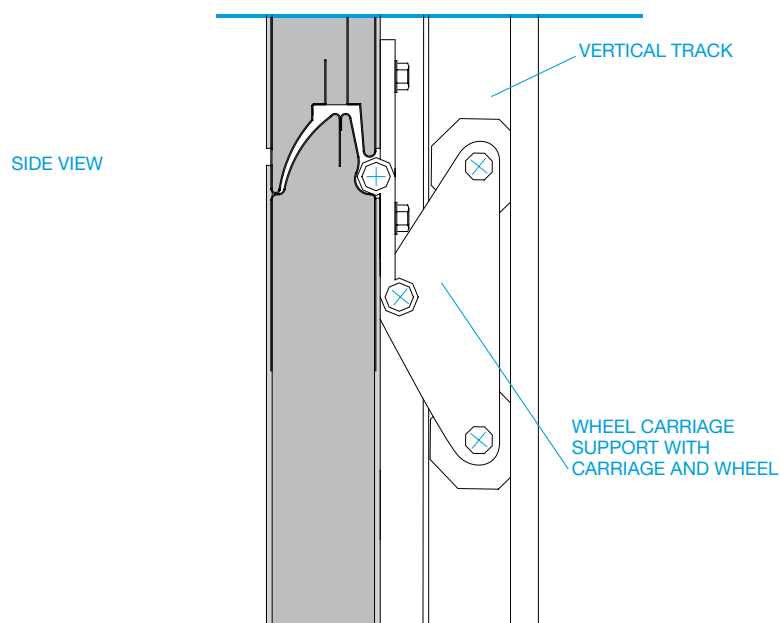
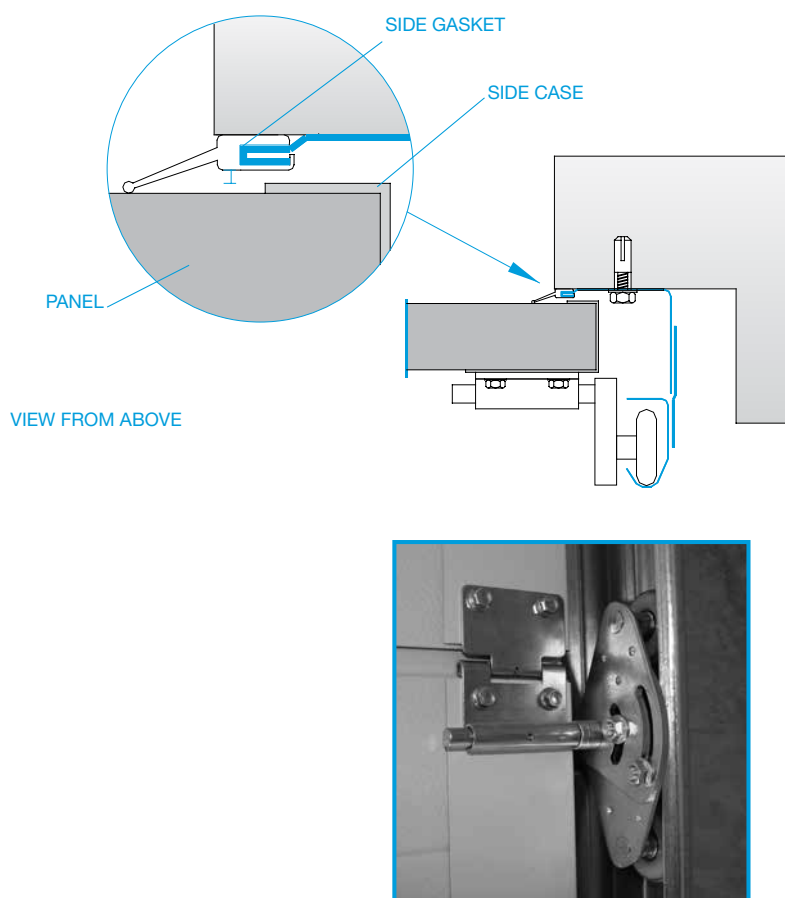


FIG 28 MIDDLE WHEEL CARRIAGE ASSEMBLY



ALL TYPES

Assemble the wheel carriage and relevant wheel with screws 6,3 x 25 mm.

NOTE

Adjust the carriages for a correct connection between panel and vertical gasket lip in order to keep a minimum space of 1 ± 2 mm between the basis of the vertical gasket and the panel case.

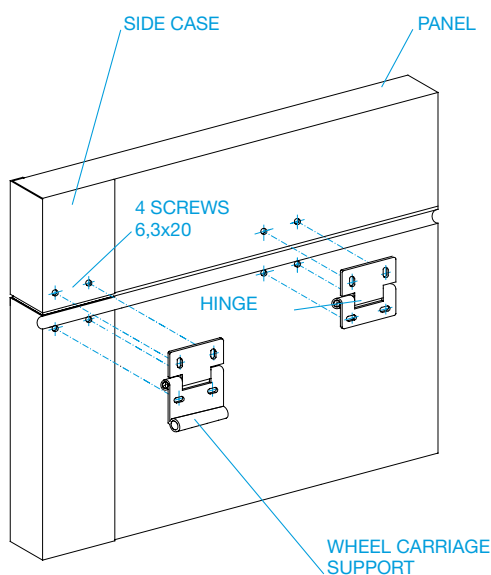
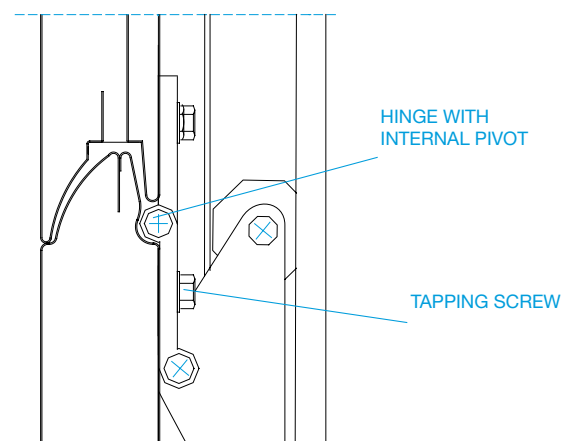
OPERATION 4

MIDDLE HINGES ASSEMBLY

The hinges must be assembled only as shown in the drawing. Should space between the panels be too much this would create risk of squeezing, if too little this would damage the door.

PREPARATION AND PANEL ASSEMBLY

HINGE FIXING FIG 29



MIDDLE HINGES ASSEMBLY

Assemble the wheel carriage support, with relevant wheels, on the last panel.

Insert the stem of the wheel in nylon inside the upper wheel carriage, and put the wheel in the upper horizontal track.

Draw the wheel carriage near the side case of the upper panel aligned with the lower ones.

Moving the wheel carriage up and down, you establish the correct compression of the panel against the side gasket.

Once the ideal position has been established make a hole in the middle of the slots with drill insert $\varnothing 4,75$ mm and fix with tapping screws 6,3 x 25.

HINGE FIXING FIG 30

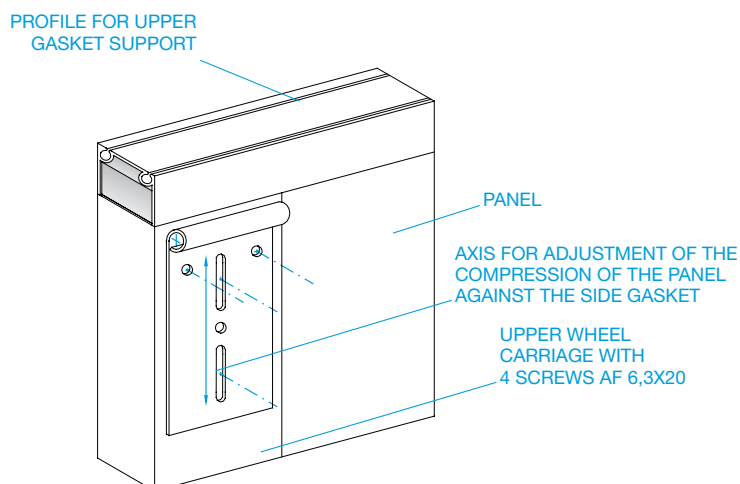


FIG 31 DRUM WITHOUT OPEN SLOT

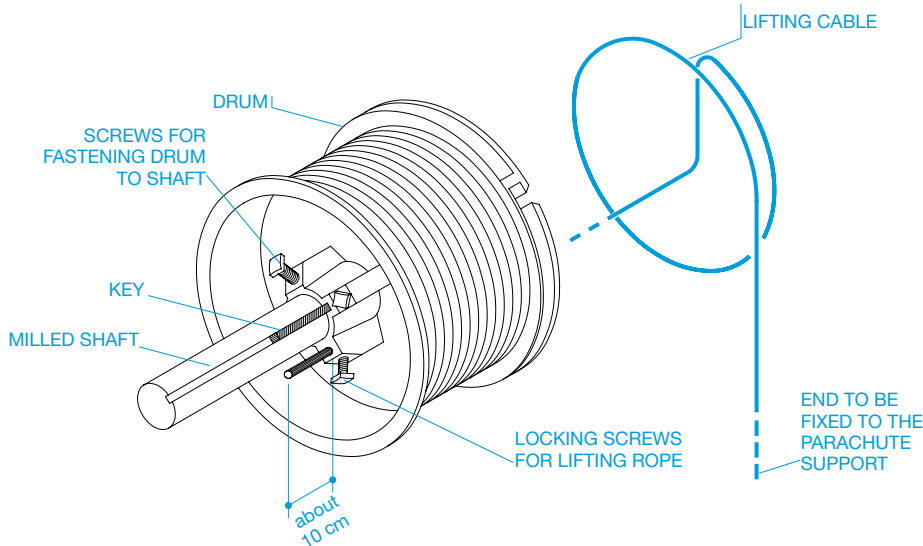


FIG 32 SHAFT AND SURFACE FASTENING

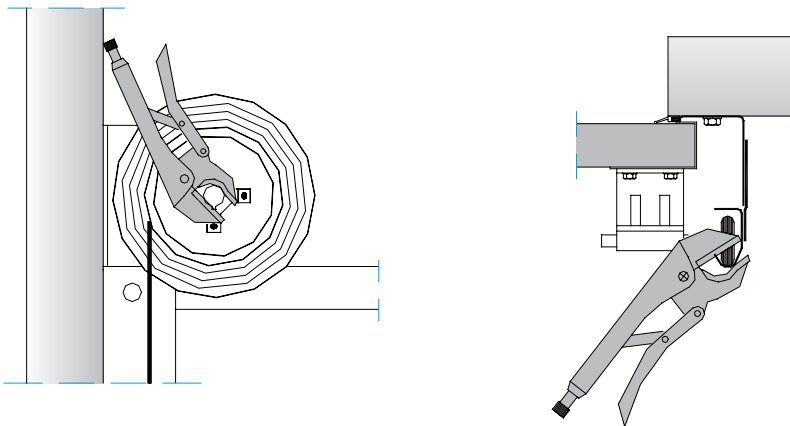
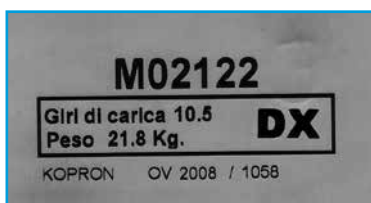
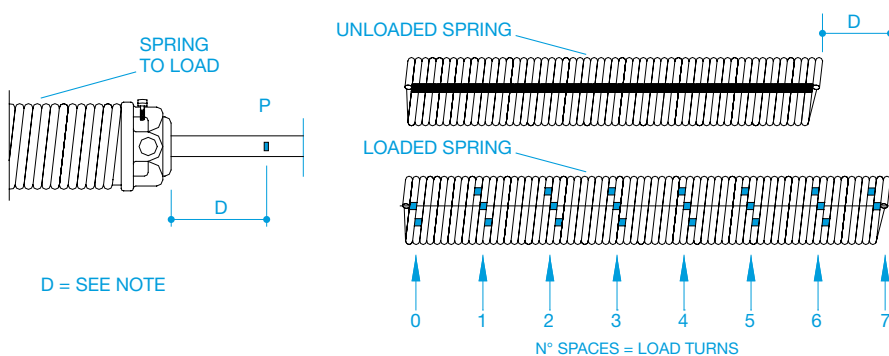


FIG 33 CALCULATION OF SPRING-LOAD TURNS



TAG ON THE SPRING CARRIAGE SHAFT BRACKET



ALL TYPES

After having anchored the lifting cables to the parachute support, pass the end of the cable behind the nylon wheels fixing them to the drums.

DRUM WITHOUT OPEN SLOT

The end of the cable must pass through the drum hole and fastened with screws.

Rotate the drum in order to roll the cable up and pull it.

Insert the key and fasten it with screws.

ALL TYPES

Insert the key in the proper hole. Fasten the drum to the shaft with screws.

Fasten with pliers the spring carriage shaft keeping the cable well pulled. Same thing for the left cable.

Make sure the cables are perfectly inserted in the grooves.

Fasten the shaft joining points with the 3 screws already available.

IMPORTANT

Spring pre-load operation must be carried out by specialized personnel who knows how to operate according to safety standards.

ALL TYPES

Take note of the load turns of the spring, as indicated on the tag placed on the spring carriage shaft bracket (Fig. 33).

Calculate the distance D to establish the space occupied by the spring after load.

Use a mole grip to fasten the milled shaft to the wall. (Fig. 32).

Also provide fastening the door surface with clamp or use a bolt in order to prevent accidental opening during spring-load. (these operations are compulsory).

IMPORTANT

Spring-load must follow the directions of the arrow (fig. 34) and according to the number of turns indicated in fig. 33.

The number of turns must correspond to the spaces of the spirals, in case the spirals do not cover the distance D, adjust manually.

NOTE

To determine value D multiply the diameter of the spring thread by the number of load turns.

OPERATION 5

The fastening of load cone on the shaft must be strictly carried out as shown in fig. 32.

Repeat the operations with the other springs and do not damage them with welding splinters.

Remove all the tools used for fastening the door, and watch out for sudden movements of the door due to an exceeding number of loading turns.

NOTE

The use of a bolt to fasten the door surface is for safety reasons. You may use pliers.

For fastening use only these two screws, one on the key, the other at 90°.

Fastening must be done till the screws touch either the shaft or the key, make another 1/4 turn, then unscrew 1/4. Finally make 1/2 a turn for fastening.

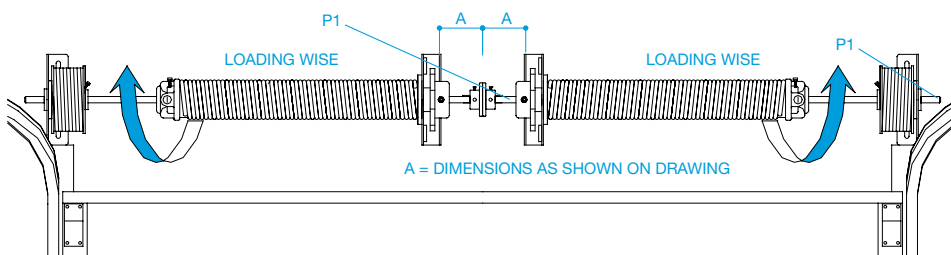
Loading cone for springs with $\varnothing i = 50,8$ mm must be fastened with only two screws, fastening one of them inside the groove of the middle shaft.

NOTE

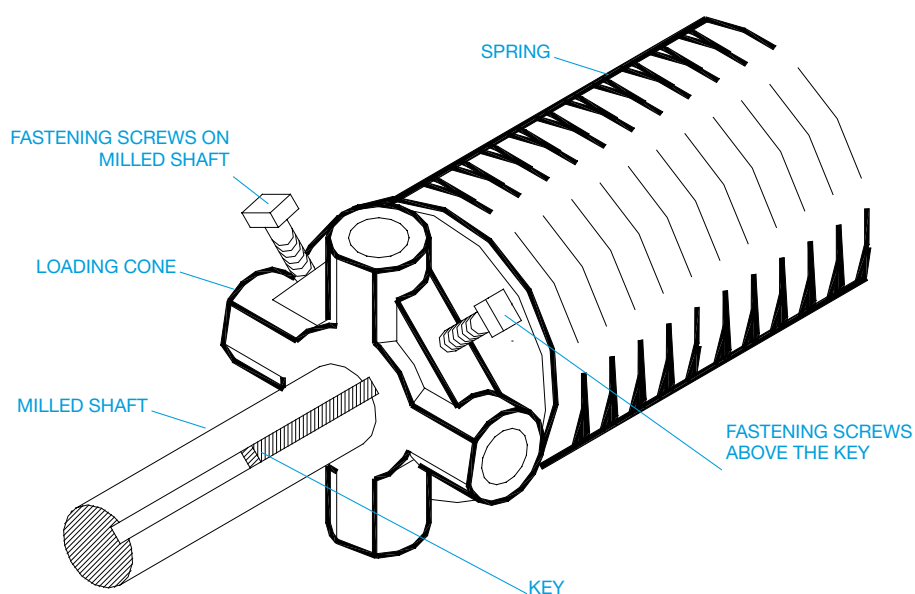
Spring-load must be carried out only by specialized personnel.

TORSION SPRING LOAD

ROTATION WISE FOR SPRING-LOAD FIG 34

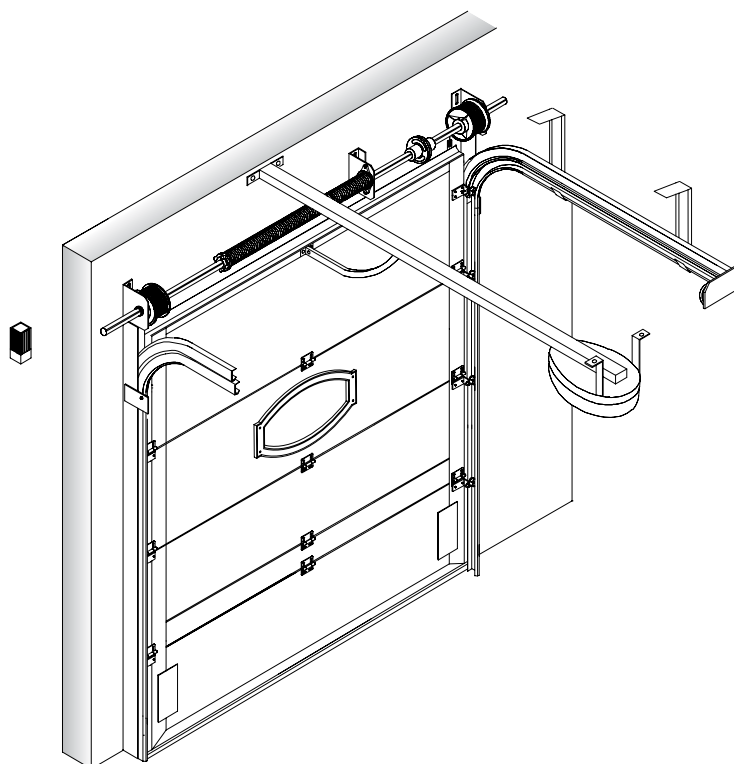


SPRING CARRIAGE SHAFT FASTENING FIG 35



**IMPORTANT: LUBRICATE
THE SPRINGS ONLY AFTER ASSEMBLY HAS
BEEN CARRIED OUT**

FIG 36

**DRIVE MOTOR**

All doors can be equipped with an automation system. The pulling drive motor is assembled on the center part of the door. The D600 model can be installed on the doors with a surface not exceeding 7 square meters. The D1000 can be used on surfaces up to 15 square meters.

The motor consists of:

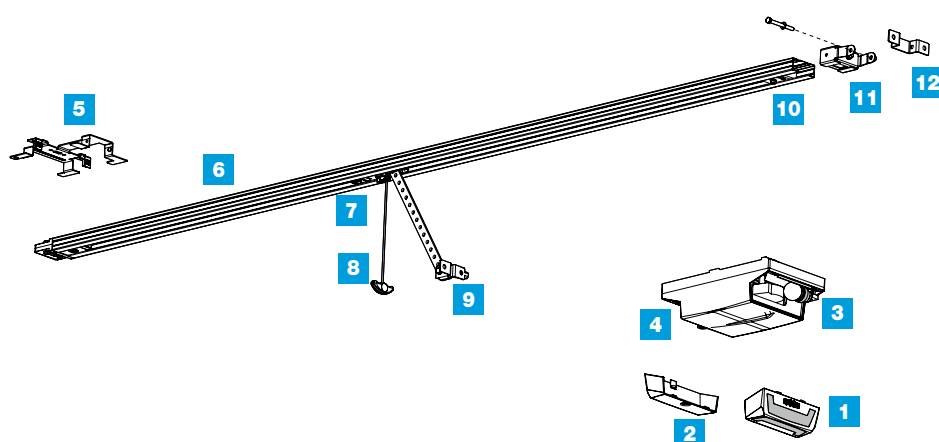
- an incorporated electric panel 220 Volts
- motor rod L = 2600 mm e L=3200 mm
- couple of photocells
- radio controller
- dual channel transmitter
- flasher

Upon specific request you can have:

- external unlocking lever
- four channel transmitter
- key selector
- photocell towers
- switchboard with personal code

For motor assembly strictly follow the instructions of the manufacturer.

FIG 37

**AUTOMATISM**

- 1** Ceiling light
- 2** Back door
- 3** Courtesy lamp
- 4** Plastic case
- 5** Rear connection
- 6** Sliding tracks
- 7** Pulling trolley
- 8** Release knob
- 9** Door bracket
- 10** Transfer case
- 11** Front anchoring point+chain stretcher
- 12** Front bracket

OPERATION 7

VERIFICATION OF THE LIFTING CABLE POSITION

ALL TYPES

It is necessary to verify that

- the cables are properly inserted in the grooves and slide smoothly.
- the cable is well stretched and door is perfectly levelled when it is closed.
- the door is correctly balanced during handling (which must be carried out carefully since a spring overload could cause a sudden lifting of the door). To correct balancing it is necessary to adjust, after having fastened the surface, the number of turns and springs (the intervention must be carried out $\frac{1}{4}$ turn at the time).

NOTE

In case of breakage of the springs you must release the ratchet on the fall arrest device otherwise it would prevent the functioning.

DOOR BALANCING TEST

VERIFY THE POSITION OF THE LOWER PANEL - TYPE KPR FIG 38

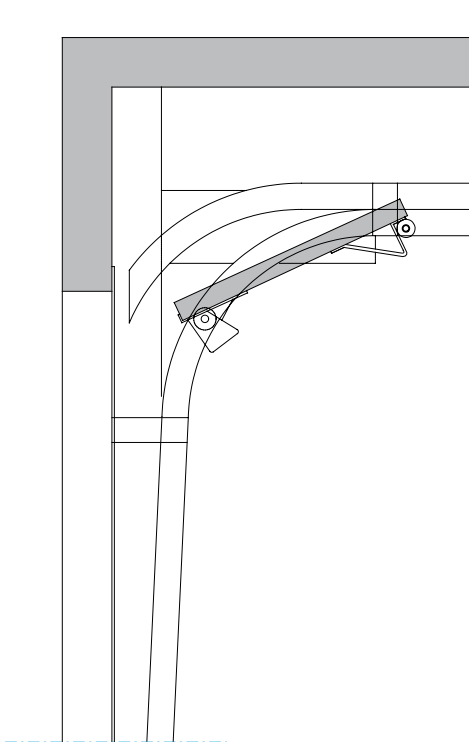
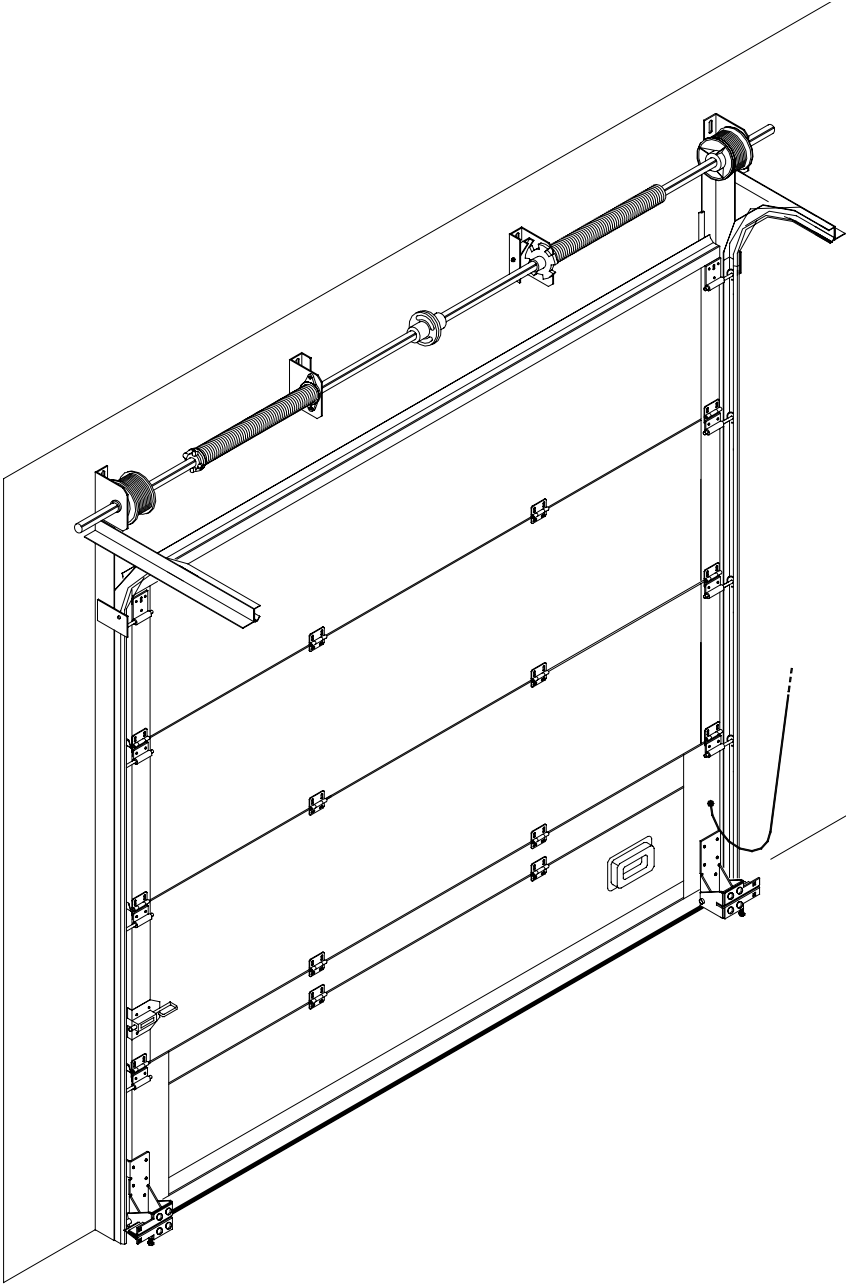


FIG 39 FINAL DRAWING OF AN ASSEMBLED DOOR

Release all locks before operating the door.

Make sure that no man or animal are near the opening area.

The pedestrian door, if any, must be kept shut.

From inside the opening operation can be stopped with the handle.

Avoid keeping the door half open since it could cause damage to vehicles travelling in the area.

Verify the correct balancing of the door during opening phase.

Closing operation from inside is gradual and fluid, and can be stopped anytime with the inside handle.

From outside you can use an external handle for shutting the door.

Use a lock if any.

Never remain in the operating area.

NOTE

For motorized versions strictly follow the instructions contained in the package.

MAINTENANCE

Every 3 months check the following:

- The correct fastening of the screws of the drums, cones, joints, and retaining rings on the spring carriage shaft.
- The keys must be in their housing.
- The completeness of the hinges and other anchoring elements.
- The stretching of the chain.
- The efficiency of the motor and of the control devices (electric panel, key selector, radio control, sensing edge, photocells, lifting micro-switch of the pedestrian door and spring anti-breaking device).
- Balancing of the door.

NOTE

The checking of the ropes according to regulations must be carried out every three months.

In case of intervention to adjust balancing of the door, please proceed as follows:

- Shut the door and lock it.
- Install the spring-load kit on the spring, slightly overload the shaft in order to keep the spring stretched.
- Tighten the screws the screws (make sure that one enters the shaft groove) and disassemble the spring-load kit.
- Repeat the operation for each spring.
- Carefully unlock the door to verify if the door is properly functioning.

All control and maintenance operations must be carried out by specialized personnel and only by using original spare parts.

In case of cable breakage, a parachute device is automatically activated avoiding a sudden fall of the door.

For correct repair of damaged parts, please apply to our service dept for any information you may need.

Spare parts must be the original ones, and safety device must necessarily be replaced.

In case of either damage or wear and tear of the springs (see cycles indicated in the maintenance table) before replacing them check the milled shaft, which could be damaged or worn out, and then contact our service department.

CABLE BREAKAGE

SPRING BREAKAGE

This manual is addressed to:

designers;

buyers;

employers for a proper use of the product;

installers;

retailers.

In the following page you may find a summary LIST OF RISKS.

Our Company now and then organizes updating and formation courses on the assembly and use of the doors.

In case motorized doors remain open or half open, the following actions are forbidden:

on doors with pulling drive motors you must not manually detach the motor;

on industrial doors you must not pull off the chain.

This to avoid the door to fall to the ground.

Should the spring-load be insufficient you must carry out necessary interventions.

Guarantee is valid for 24 months from delivery of the doors. It includes the replacement of faulty parts, which must be first sent back to producer's premises at Gorgonzola (MI), in Via I Maggio at the buyer's expense. A correct and constant maintenance must be carried out as a condition to keep the guarantee valid.

Guarantee does not cover components subject to wear and tear (wheels, cables, gaskets, ...) and maintenance interventions to adjust sliding rollers, torsion, springs, travel stops and lifting cables.

Interventions shall be totally charged to costumer.

Any arising dispute shall be held from Milano law-court.

NOTE

IMPORTANT

GUARANTEE

APPENDIX

RISK OF CLIPPING, COLLISION OR CRASH

RISK OF BEING CARRIED AWAY

RISKS ANALYSIS

CAUSE	EFFECT	REMEDY
Loose ropes.	Damages or breakage of the ropes.	Replace the ropes before winding them around the drum.i
Spring breakage (one or two in case of DUPLEX springs)	Fall of the door.	Install an anti-breakage device for duplex springs. Replace the springs before ending the number of cycles as indicated on the maintenance register.
Spring breakage (only one in case of DUPLEX spring). *	Fall of the door.	Change the spring before ending the number of cycles as indicated on the maintenance register .
Wear and tear of the side gaskets.	<u>finger clipping</u>	Change the gasket
Wear and tear of the side gaskets.	No surface flexibility preventing crash or cutting risk	Change the gasket.
Wrong assembly of the hinge.	Finger squeezing	Assemble the hinges as per drawing 29 at page 20.
Rope loosening caused by a forced door stop due to obstacles. This may happen when motor is assembled on the shaft	Fall of the door once the obstacle has been removed	Block the door with supports before intervention. Rewind the ropes correctly before removing the obstacle.
Spring overload	Too rapid lifting of the door	Strictly keep to the number of turns as per procedure at page 21.
Door partially open	People, cars and animals crashing against the door	Apply bands signalling the encumbrance
Door with pedestrian passage not perfectly closed	Damage or detachment of the pedestrian passage of the door	Personnel must be warned to shut the door properly and periodically verify the closing efficiency.
Rope loosening caused by a forced door stop due to obstacles encountered during closing phase	Door fall due to rope breakage.	Before removing the obstacle verify that the ropes are wound correctly on the drums and check that door smoothly moves upwards manually. To work in safety it is suggested to use either a forklift or a support under the door in order to avoid it to suddenly fall.
Handles or other elements sticking out	Risk of catching in clothes or limbs	Paying attention the oneself, and not approaching, with moving devices, springs, pulling chains and main shaft. No protection regulations are provided for moving devices from heights over 2,5 m.
Unloaded springs due to lack of load.	The door is not stable and balanced and could suddenly fall.	Periodically check the balancing and load of the springs, to carried out by specialized personnel.

(*) = Disassembled springs one inside the other

[illegible]

[illegible]

[illegible]



LOOKING AHEAD



Quality Management System
UNI EN ISO 9001:2008 Certified
Factory Production Control
UNI EN ISO 1090
Applicable standard
UNI EN 13241-1
UNI EN 16005
UNI EN 1398
UNI EN 3834-2

CERTIFICAZIONI CERTIFICATIONS

Kopron attraverso le certificazioni di qualità offre un'ulteriore garanzia sull'efficacia e l'efficienza dei propri prodotti.

Through certifications Kopron offer a further guarantee on efficiency and quality of their products.



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