

**LOGISTIC
SOLUTIONS**

**FAST-PACK
SMART**



EUROPEAN STANDARDS *EN 13241-2016* 

ASSEMBLY, USE AND MAINTENANCE MANUAL



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When the door is provided with special opening systems (i.e pull cord switch, remote controller, magnetic loop, radar) specific manuals shall be included inside the packaging.

We recommend to carefully follow both the manual plus additional instructions, in order to ensure safety by using the product correctly.

Kopron S.p.A.

All drawings and technical characteristics may be subject to changes at any time, should this occur Kopron shall provide to update the manual as soon as possible

Kopron S.p.A

INTRODUCTION

This manual is a guide for installers, users and maintenance personnel as well as containing information on EC directives and being useful for preventing accidents during life cycle of the equipment from installation to dismantling.

In case instructions are not clear or should particular problems arise and are not mentioned herein, please apply to our service department.

Do not take personal initiatives for interventions if instructions are not fully understood.

Buyer and personnel involved in installation and operation should read this manual of assembly, use and maintenance before using the equipment.

The following are an integral part of this manual:

- Instructions for control and safety components of the manufacturers
- DOP (Declaration of Performance) in compliance with the CPR 305/2011
- Declaration of Compliance in accordance with the Machine Directive 2006/42/CE
- Declaration of correct installation
- EC plate previously applied to the door

We would suggest to keep a copy of this manual handy in a place where it can be easily consulted.

The equipment has been manufactured in compliance with the European standards and specifically to the harmonised standard **EN 13241-1**. certified with system 3 by **CSI S.p.A. n° 0497**.

Assembly and installation must be carried out by qualified personnel adequately equipped to operate in absolute safety condition according to regulations in force.

A dedicated chapter on Other Risks will face the matter in detail.

Preventive maintenance for solving anomalies must be programmed according to standard EN 292.2 ART 5.5.1. which require only specialized personnel to carry out interventions.

The equipment must be operated by professional operators duly trained and also informed on risks, improper use and safety.

A detailed chapter on risks and safety is included in this manual.

This manual for use and maintenance is strictly according to European Directives which guarantee a safe use of the product.

To have another copy of the manual you may contact our service department at the following address, specifying the serial number and year of construction of the product.

An EC marking plate is positioned on the jamb opposite the motor (see Chap. 1.3 - Unit I). EC documentation is provided in a waterproof envelope upon delivery on site of the door. The fitter is obliged to give it to the end user during inspection, registering delivery and training of personnel in charge on the declaration of correct installation to be returned to the manufacturer (KOPRON).

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KOPRON S.p.A. have the right to update or improve the manual without affecting the validity of this version.

Some important points have been highlighted by using symbols explained on next page.

INTRODUCTION

SYMBOLS



DANGER - NOTICE

This sign indicates serious danger which must not be underestimated in order not to risk people's health and safety.



CAUTION

This sign indicates the requirement to be careful on how to move and act in order not to risk people's health and safety and cause economical damages



IMPORTANT

This sign indicates technical information and important regulations to pay attention to.



ECOLOGY

Remarks on ecology



PROHIBITION

If instructions contained in this manual are not strictly followed and original spare parts are not used, or in case ordinary maintenance or non authorized interventions are carried out, Buyer will take his own responsibilities and guarantee will no longer be valid

Kopron S.p.A.

CHAPTER 1

DESCRIPTIONS

1.1 DESCRIPTION OF A 'FAST-PACK' KV-FP VERTICAL PVC FOLDING DOOR

'Fast-Pack' vertical folding doors are particularly suitable to separate rooms inside the factory building and ideal for intense use.

Opening/closing speed, safety and reliability become characteristics of utmost importance.

'Fast-Pack' vertical folding doors manufactured by Kopron S.p.A. have been designed to bear continuous stress throughout the day.

They are made of a PVC fabric which allows an excellent thermal and acoustic insulation, therefore they can be used also for external closing of the building.

The opening command can be with either a push button, a chain, a remote control, or through photocells or radar.

The frame and tracks are in galvanized steel sheet and carry a robust PVC fabric, reinforced by metal bars placed in horizontal pockets.

The fabric is in a 2 layer, self-extinguishing class 2 fabric, with the possibility of having transparent vision panels.

The wrapping shaft rolls on supports with roller ball bearings.

The opening system consists of a self-braking motor reducer, provided with a limit switch, and pulling system by means of belts.

Safety during use is guaranteed by safety edges assembled on the lower border of the fabric or on the infrared photocell which may function under all weather conditions.

The electric system is made according to European machine directives EN 60204/1.

1.2 IMPROPER USE

'Fast-Pack' vertical folding doors cannot have a different application from the one they have been designed for.

In case Buyers need to use them differently they must inform Kopron S.p.A. who in case of authorization will suggest how to handle the product in the best way.

In case of removal of the product from one place to the other with different climatic and environmental conditions, the structure must be inspected.

Controls are set in order not to expose either operator or product to risks, provided that no changes have been brought to the electric system and safety devices have not been removed.

'Fast-Pack' vertical folding doors are not emergency doors and must not interfere in emergency getaways for personnel.

Improper use, and ignoring the instructions contained in this manual will imply Buyer to take his own responsibilities and guarantee will no longer be valid.



1.3 'CE' IDENTIFICATION PLATE

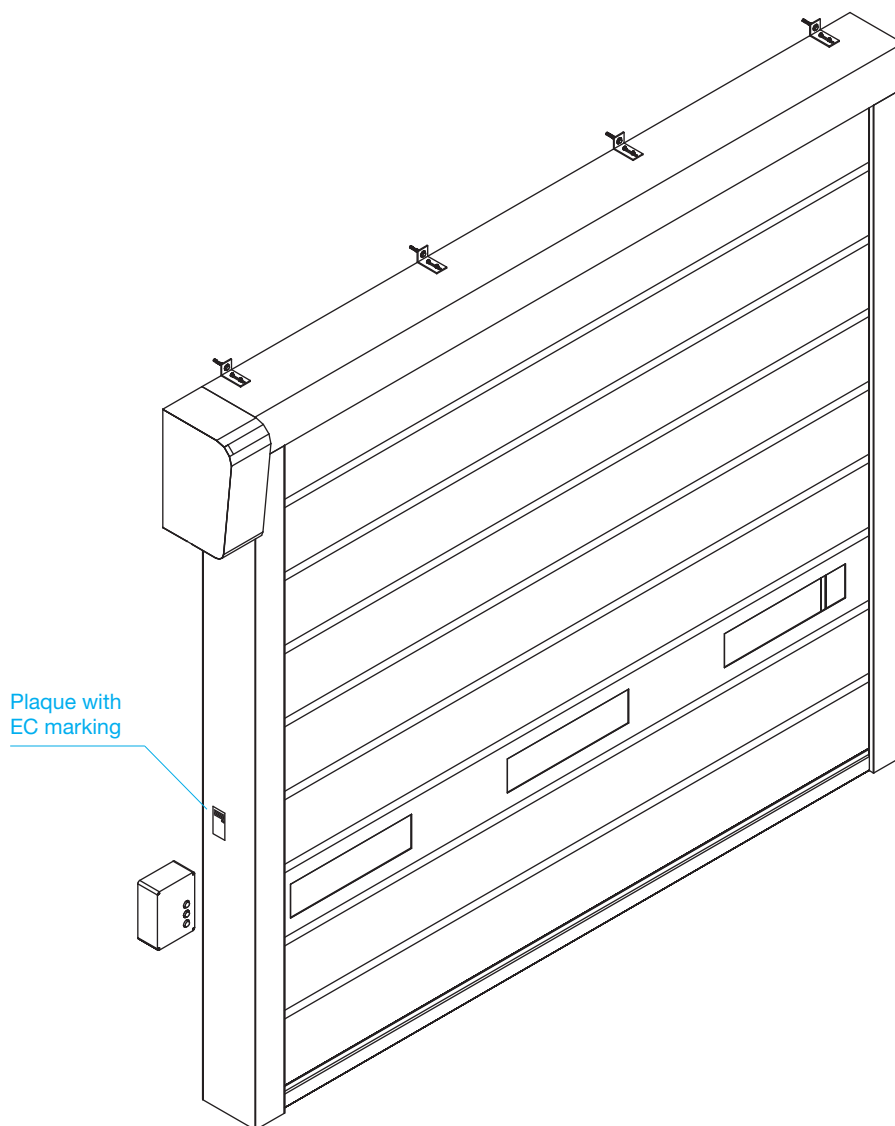


A 'CE' identification plate is positioned permanently on the side of the jamb side motor at a height of 1,5 mt from ground.

The data on identification plate must always be kept clean and legible.

Should the plate be damaged or become illegible even only in part, according to the Machine Directives it must be replaced.

In the request you must mention the model, year of manufacturing and serial number, data which can be easily found in the documents delivered along with the door.



The position of the plate is always on the jamb side motor at a height of 1,5 mt from ground.

CHAPTER 1

IDENTIFICATION AND CONTROL OF THE MATERIAL

1.1 PREAMBLE

Each shipment of a 'Fast Pack' door s made of 4 packages containing: cross member with motor, two jambs, fabric, lifting belts, motor casing, nuts and bolts and accessories.

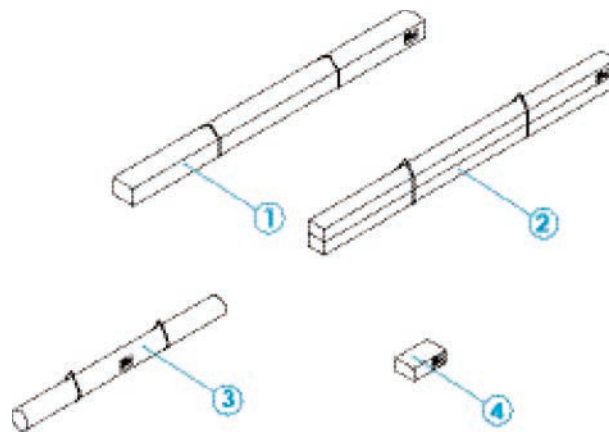
The first three packages are wrapped in plastic films, the fourth is a cardboard box. In case the door is provided with particular opening systems (i.e pull cord switch, remote controller, magnetic loop, barriers, detectors, radar) the packages will also contain the relevant manuals.

All the packages have a label carrying the order number.

In case the delivery is of several 'Fast Pack' doors it can happen that nuts and bolts and accessories are gathered all together into one box.

If packages are to be stored, the warehouse must be sheltered and dry.

Packages must not be placed one on top of the other in order to avoid damages. Take care not to damage the PVC fabric when cutting the plastic wrappings.



1. Cross member with motor and rubber profiles and aluminium of the safety edges.
2. Jambs
3. Fabric and lifting belts
4. Box with nuts and bolts with components of the safety edges.

1.2 IDENTIFICATION AND CONTROL OF THE MATERIAL

Along with the 'Fast Pack' door an envelope is delivered containing the following:

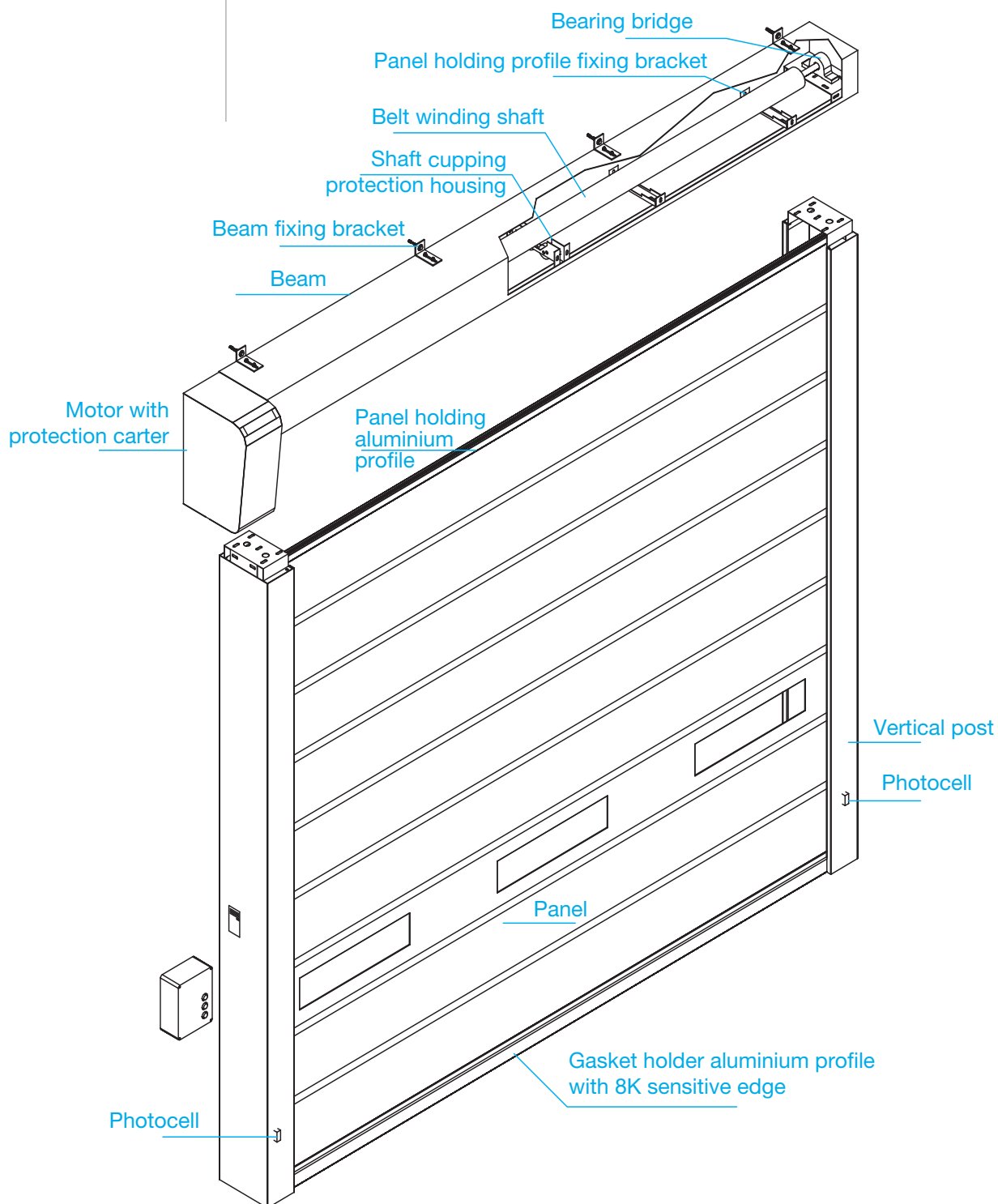
- packing list complete with number of nuts and bolts necessary for the assembly.
- data regarding the door such as the width, height etc..
- drawing of the door.
- drawing of the laying procedure for both inside and outside the building with instructions on how to position the motor.



Upon receipt the material must go through inspection with the aid of the packing list to verify completeness.

In case of damages or missing items, written claim must be made within seven days from delivery and sent through registered mail to Kopron S.p.A.

See drawing enclosed to better identify the details listed in the packing list.

1.3 DOOR PARTS

CHAPTER 1

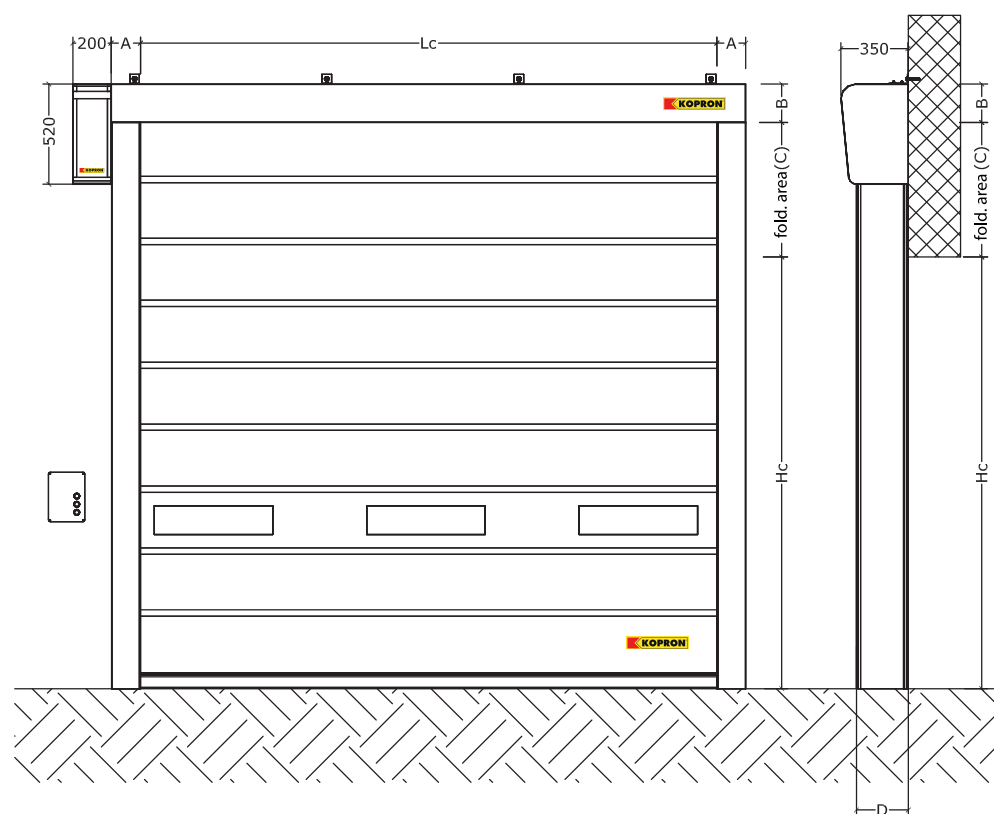
VERIFICATION OF THE MASONRY WORK

1.1 VERIFICATION OF THE WORKS

Before beginning assembly check the dimensions of the door space if they comply with the ones mentioned in the documents contained in the envelope sent along with the shipment.

Check there is nothing interfering with the installation.

External width and height are also indicated in the documents above mentioned.



	TYPE	A	B	D	Folding area C
for maximum dimensions doors check the workability chart	MECCANICA 1	150 mm	200 mm	270 mm	As per attached table
	MECCANICA 2	250 mm	200 mm	270 mm	
	MECCANICA 3	350 mm	200 mm	350 mm	



A specialized technician at the Buyer's, must verify that the carrying structure is able to bear the weight and stress of the door. In case of problems do not hesitate to contact the Service Dpt Koprion S.p.A. ☎ +39-02 – 92 152 751 📠 +39-02 – 92 152 923, indicating the model, serial number, year of production; the data can be found on the 'CE' marking plate. (see Unit I chap.1.3).

CHAPTER 1**INSTRUCTIONS REGARDING TRANSPORT****1.1 GENERAL INDICATIONS**

The handling of the material, must be assigned to trained personnel such as crane operators and sling operators.

Safety measures must be undertaken to guarantee the stability of the machine and of the material.

The slinging of the material must be properly done in order to prevent the material to slide or fall.

Should the operator be unable to control the way during handling of goods another person must be put beside and give help.

Necessary conditions for lifting material is the perfect balancing of the goods.

Lifting machines must be proportioned to the volumes and weights to lift.

Before using cranes check the efficiency of the brakes and limit switches.

Avoid swinging the material during lifting phases.

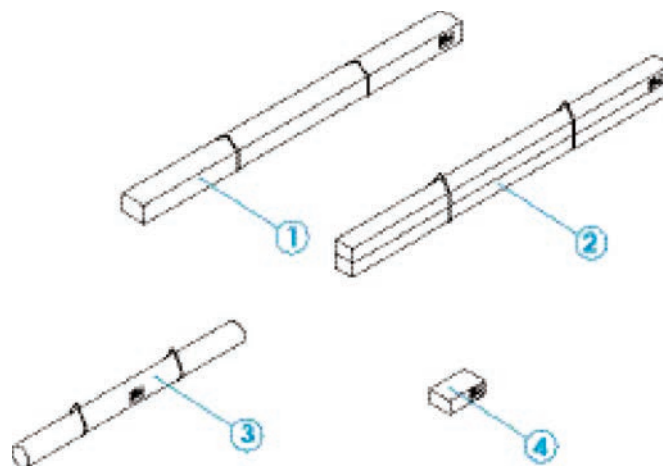
Do not lift material over working areas, otherwise personnel must be evacuated.

The crane must not be left alone with hanging material.

1.2 NOTES ON CONSTRUCTION

Each shipment of a 'Velokop' mainly consists of four packages:

1. Cross member complete with motor plus rubber and aluminium profiles for the assembly of safety edges.
2. The two jambs
3. Fabric and lifting belts.
4. Box with motor casing, nuts and bolts, accessories with parts of the safety edges.





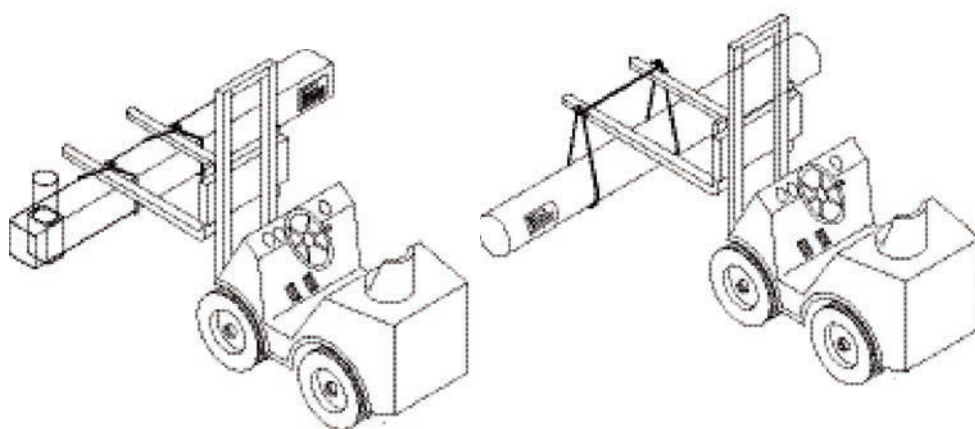
The first three packages are wrapped in a plastic film the fourth is a cardboard box. If the door is provided with special opening systems (i/e trip switch, remote controller, barrier, detector, magnetic loop, radar) the relevant packages will be included in the delivery.

The box containing the motor casing, nuts, bolts and accessories according to the weight can be handled either with forklifts or by several men.

The other three packages are equipped with ropes to ease their lifting.

Since the length of the packages exceeds the width of the transpallet, this must be equipped with a pallet to reinforce the supporting surface, preventing deformation of the material.

If a forklift is used the forks must operate as indicated in the drawing.

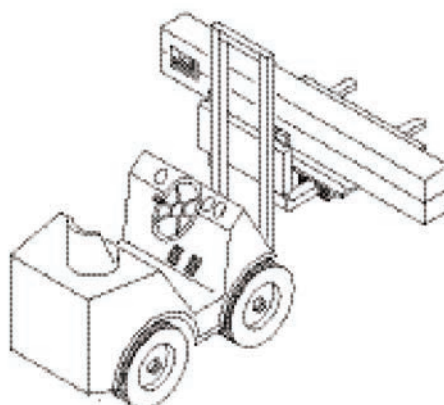


Support pallets must be in good conditions, and points of contact like edges and corners must be padded with polystyrene or similar material to prevent damages caused by rubbing.

If packages are to be stored, the warehouse must be sheltered and dry.

Packages must not be placed one on top of the other.

Take care not to damage the PVC fabric when cutting the plastic wrappings.



CHAPTER 2

INSTALLATION

2.1 BEFORE STARTING

Along with the 'Fast Pack' doors an envelope is delivered containing data and drawings as follows, necessary for the assembly of the door:

- packing list complete with number of nuts and bolts necessary for the assembly.
- data regarding the door such as the width, height etc..
- drawing of the fabric.
- drawing of laying procedure for both inside and outside the building with instructions on how to position the motor.

The envelope can also contain information regarding the positioning of the door and details regarding technical-commercial agreements between Kopron S.p.A. and Buyer.

Therefore do not start with assembly before having read the contents of the envelope. In case of doubts you may refer to the Service Dpt in Kopron S.p.A. calling the following numbers. ☎ +39-02 - 92152 751 - 📠 +39-02 - 92152 923 giving the order number as a reference (it is indicated on the packages).

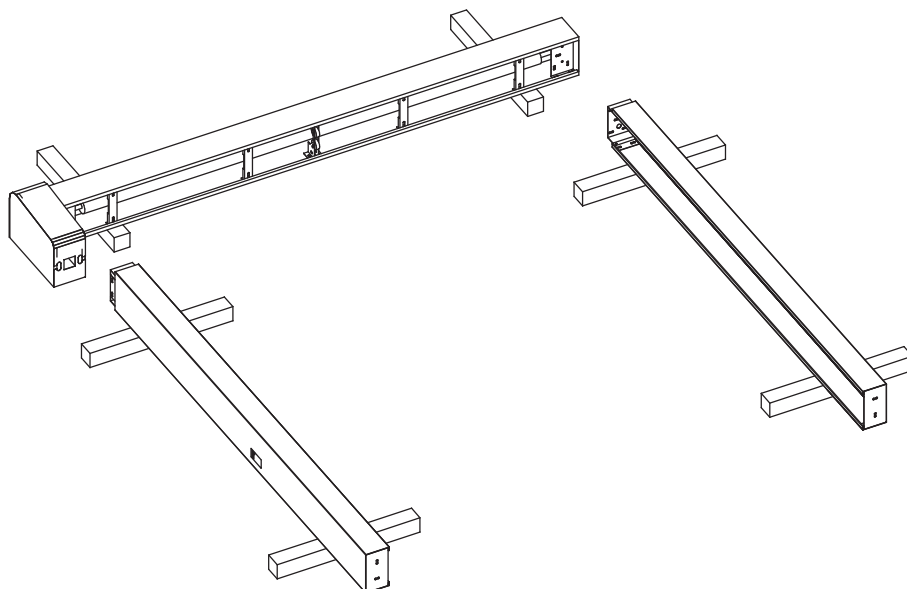
The assembly of the structure must be carried out, according to standards EN 292.2 art. 5.5.1, by specialized and skilled personnel, which must also be informed of the risks and of tools to used and safety measures to undertake.

For safety reasons it is recommended to assemble the structure in days without wind.



2.2 ASSEMBLY OF THE DOOR

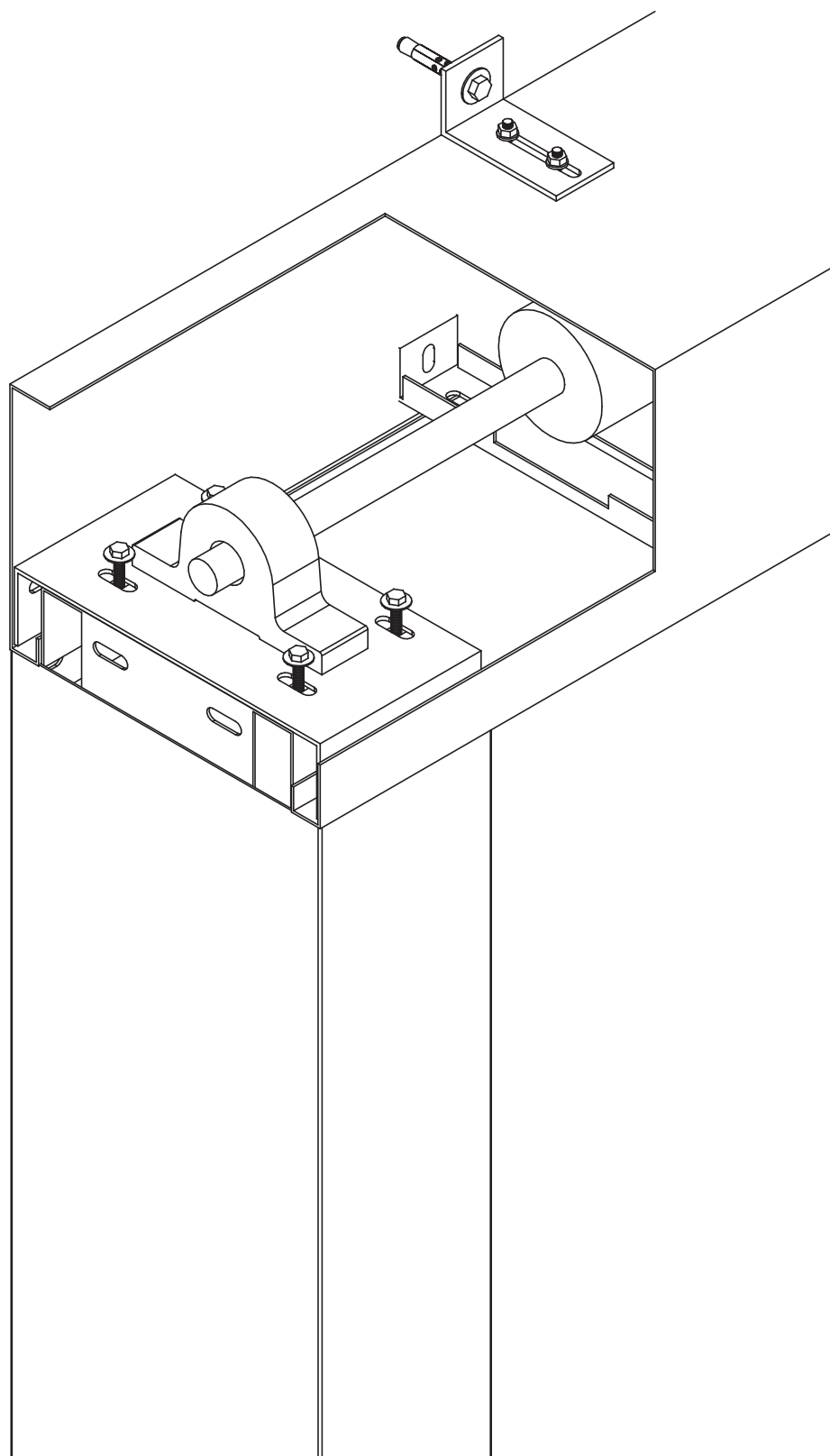
Lay on the floor the wooden bars, the cross member and two jambs as shown in the drawing.

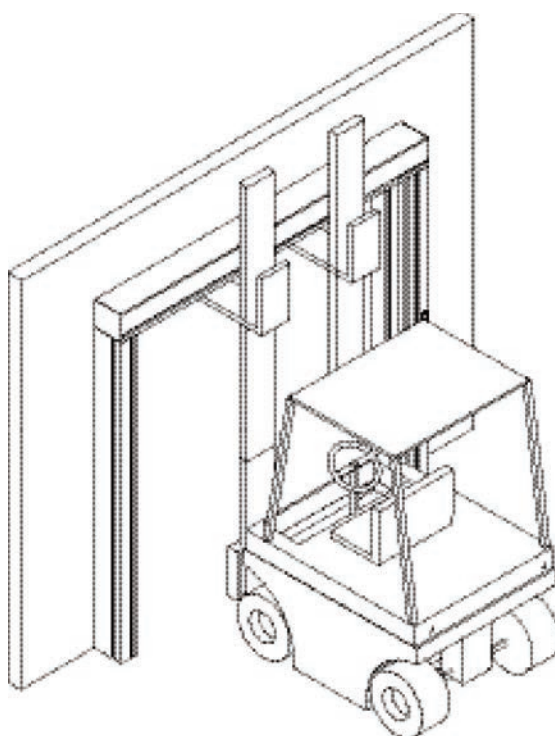
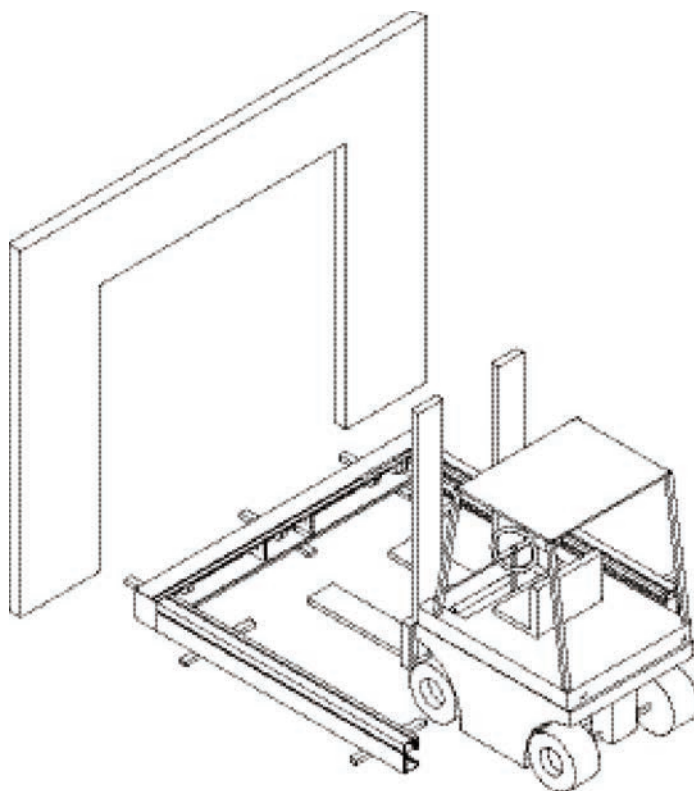




The jambs are assembled in order to make the CE plate, applied on the jamb side motor, well visible. The joining plates of both jambs and cross members must coincide and bolts must be inserted in the holes and then tightened making sure the jambs are well in parallel.

This can be checked by measuring the diagonals which must be equal.





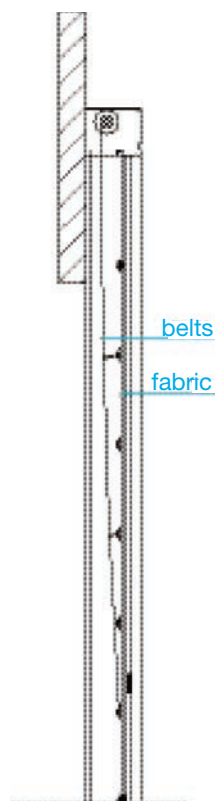
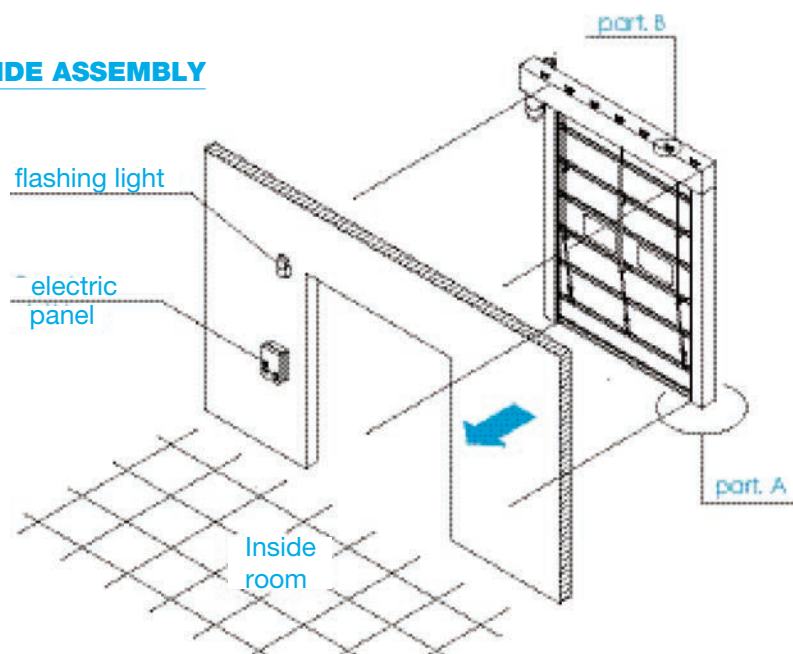
The door frame is made in galvanized steel sheet, so operations which could accidentally scratch off the coating must be avoided.
Most common operations to avoid are weldings and grindings.
Protective coating is important to prevent corrosion.

2.3 POSITIONING AND FIXING

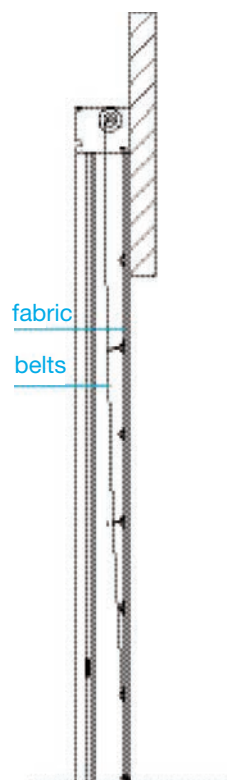
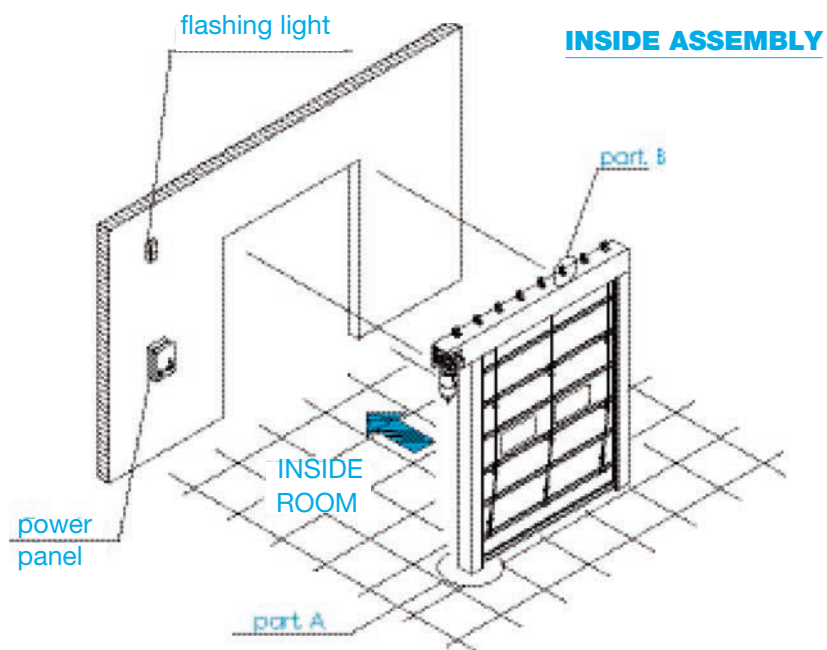
The positioning of the door is carried out mainly in two ways, inside and outside the building as shown in the following drawing.

'Fast Pack' doors must always have packing bars and lifting belts installed in the inside part of the door.

The positioning is shown in drawings which are sent along with the material.

OUTSIDE ASSEMBLY

*In case the wall is wider than standard, the door must be assembled by being positioning according to the drawing on the right.



*In case the wall is wider than standard, the door must be assembled by being positioned according to the drawing on the right.

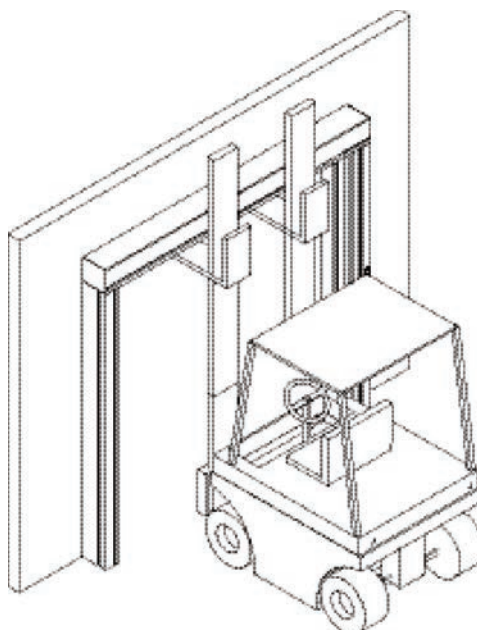


Once the positioning of the door has been defined, lift it and lean it against the door space, with the aid of a forklift as shown in the drawing.

Place under the cross member a pallet as indicated in the drawing, by slightly lifting the cross member to enable the pallet to run through.

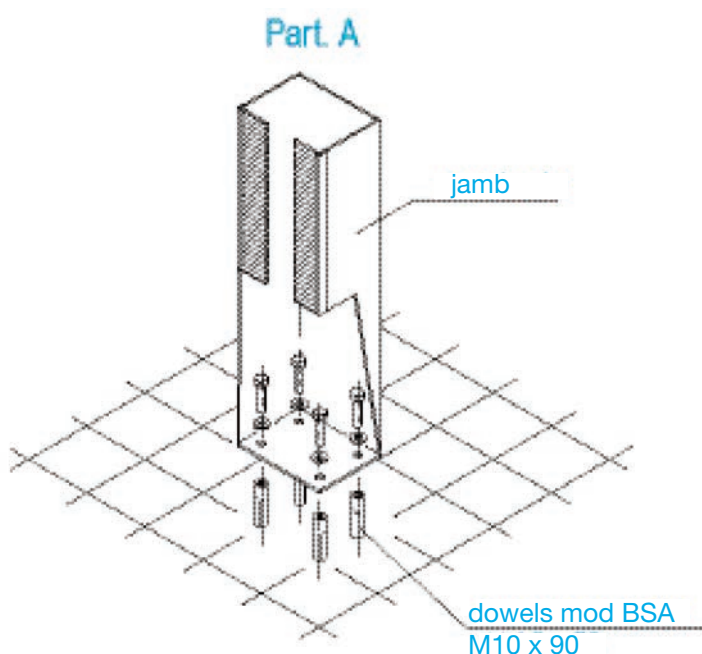
The pallet is necessary to reinforce the surface carrying the cross member and to avoid deformations of the door frame during lifting and positioning operations.

The pallet must be in good conditions, eventually provide padding edges or other points of contact, with polystyrene or similar material, which could be damaged in case of impact.



After having positioned the door frame proceed with the fixing checking the vertical position of the jambs and the perfect spirit levelling of the cross members. Check the jambs are parallel by measuring the diagonals which must be equal.

Then fix with clamps first the brackets part B then the jambs part A

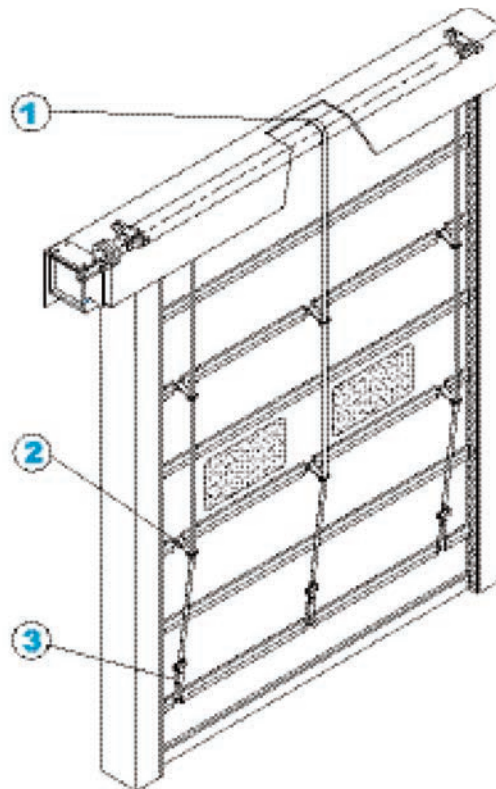


2.5 LIFTING BELTS ASSEMBLY

The number of belts varies according to the commercial width of the door.
The correct number is indicated on the drawing in the enveloped provided with the material.

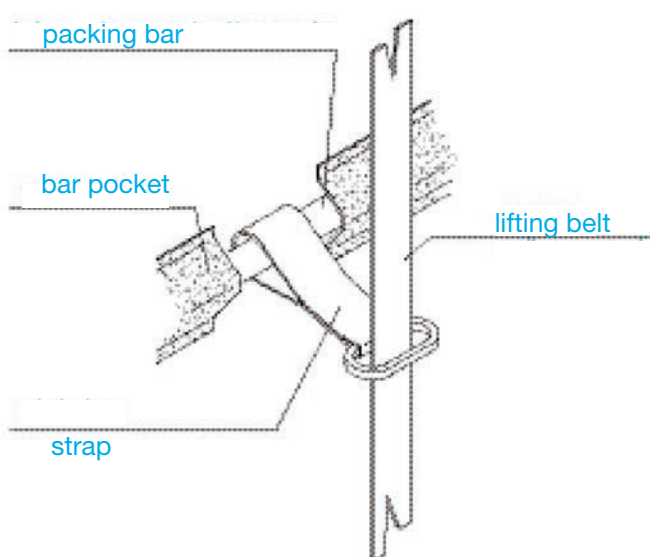
The points on which to operate to implement the assembly of the belts are:

1. at the motor shaft
2. at the passage of the belts in the straps
3. at fixing points of the belts to the lifting bar



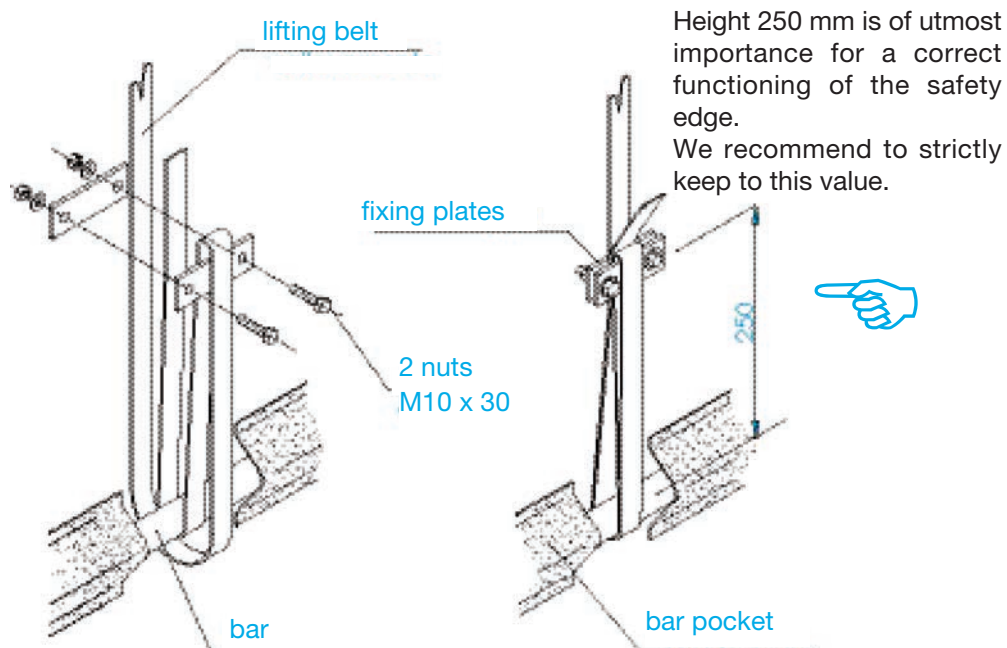
Point 2

Make the belts slide within the rings of the straps.



Point 3

Once you get to the last bar verify the tensioning of the belts if it is equal, enabling a correct lifting of the fabric, then fix the belts with the proper plates as shown in the following drawing



Once the correct assembly of the belts has been tested, by opening and closing the door, we suggest to trim the ends.

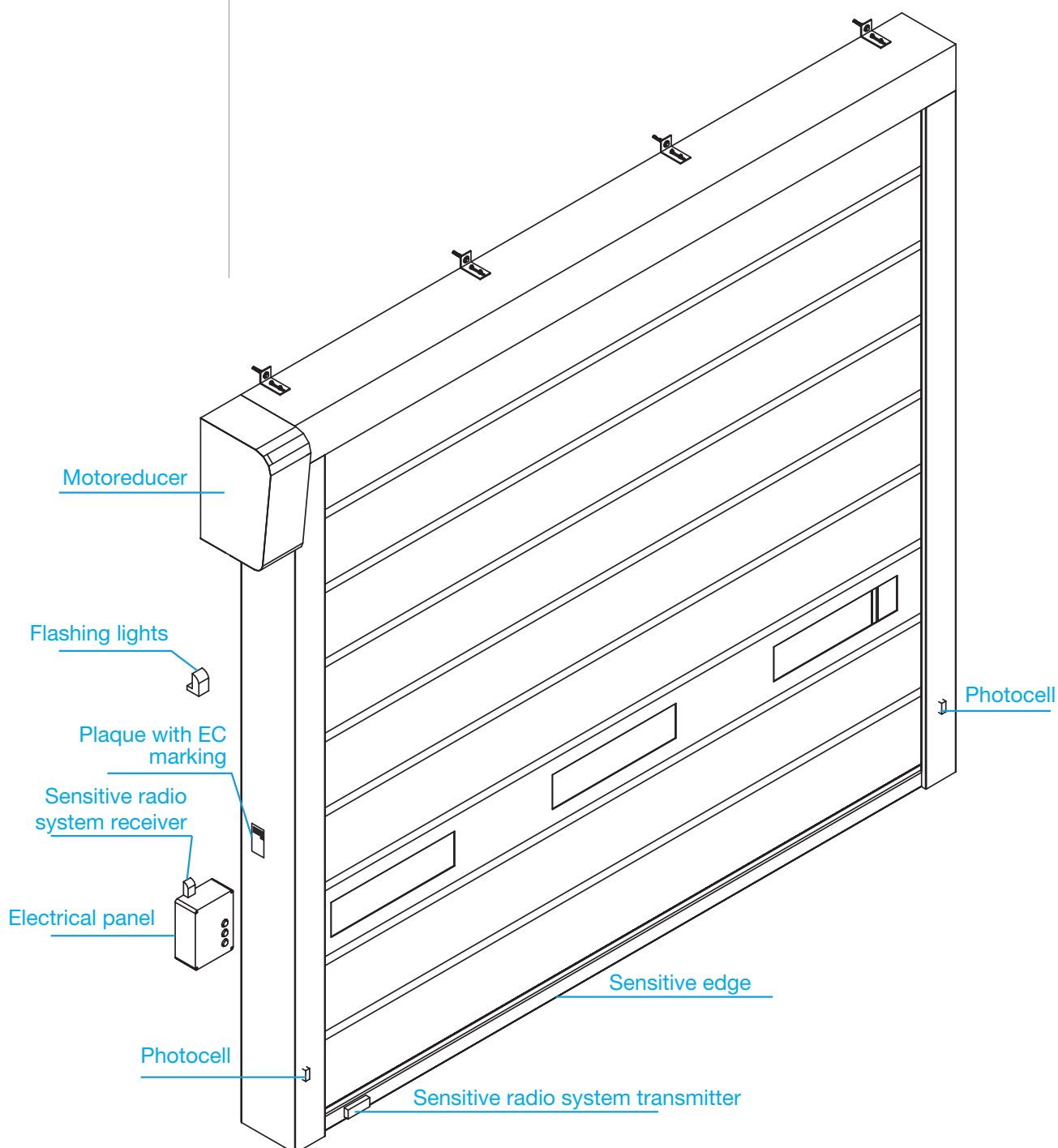
2.4 ELECTRIC SYSTEM

2.4.1 DOOR SIDE CABLES

The components of the electric system of the Fast Pack door are supplied disassembled and consist of the following parts:

- Push button electric panel
- A couple of photocells (transmitter/receiver)
- Flashing lights
- Safety cost radio system (transmitter/receiver)

For electric connections strictly keep to instructions given by the manufacturer. In case doors are already provided with wiring, you will also find a terminal box.



2.7 LIST OF TOOLS AND EQUIPMENT

In order to carry out installation with ease and in safety the following tools and equipment may be used:

- Plumb line, wire for tracing, pencils, laser level, level and ruler of about 2 m
- Drill complete with inserts for drilling iron.
- Churn drill complete with inserts for reinforced concrete.
- Grinder
- Saw for metal with set of blades.
- Brackets
- Control panel and sockets suitable for construction sites, complete with general switch, thermal magnetic switch and differential set at 30 mA.
- Extension wires with sockets and plugs, for single phase supply 230 V and three phase 400 V.
- Fixed ladder 2.5 m long, with extension to 9 mts.
- Wheeled scaffold with a height which reaches the dock.
- Tool box with keys, screwdrivers, pliers, hammers, etc...
- Electrician bag complete with tester and ampere meter
- Portable welding machines for electrodes diameter 3 mm
- Safety tools, safety belts, goggles, helmets, protection gloves against cuts and scratches, safety shoes, opto-isolators.
- First aid box.



All tools and equipment must be according to EC safety standards.

2.8 REMOVAL OF EXCEEDING MATERIAL

Exceeding and waste material from assembly can be dumped along with Customer's waste material.

2.9 ENVIRONMENT CONDITIONS

Fast Pack doors cannot work in environments exposed to fire danger or explosion. For a correct functioning of the Fast Pack door minimum and maximum temperatures depend on the technical characteristics of the safety devices, therefore it cannot operate at temperatures lower than -10° C and higher than +50°C.

Should it be necessary to operate with different temperatures please apply for info and support to our Service Dpt.

The Fast Pack door should never be assembled where they could interfere with emergency getaways.

CHAPTER 3

SET UP

3.1 SET UP

Get rid of all elements interfering with the dock leveller: strings, wires, pieces of wood or plastic from packages.

Proceed adjusting the turning micro-switch which establishes either complete opening or closing of the door fabric.

Before starting adjustment verify that the transmission chain between the switch pin and the motor reducer shaft has no damages.

Once the yellow protection lid has been opened, by unscrewing the screw positioned on the main drum, you can adjust the position of the single riders, either in open or closed position, through the screws placed around the central one.

Bring the Fast Pack door to closed position and regulate the relevant rider, then open it and adjust the second rider.

At the beginning, for both positions, adjustment must be carried out by keeping a certain tolerance limit, in order to avoid damages caused by strong excursions.

After having carried out a few tests, pass on to definite adjustment of the limit positions. In both cases, before operating the door, screw the main screw blocking the drum.

Test the functioning to see if any anomalies occur.

In case the motor has been connected with wrong rotation, intervene by disconnecting the supply line and then adjust the connection.

For this operation the Buyer technicians must be there to identify the feeding line and control feeding line disconnection.

Verify the motor absorption indicated on the tag.

Before starting electric inspections check the correct connection to the general switch, verifying in the meantime that the panel is correctly connected to ground.

The inspection must be carried out with utmost care.

In the end test the correct functioning of the safety devices by simulating the intervention.

Once it is operating provided assembling the motor protection casing.

The protection casing is fixed to the cross member through tapping screws which are supplied.



CHAPTER 4

Use

4.1 FUNCTIONING OF THE CONTROLS

The Velokop door may operate in three different modes as follows:

Impulse operating mode

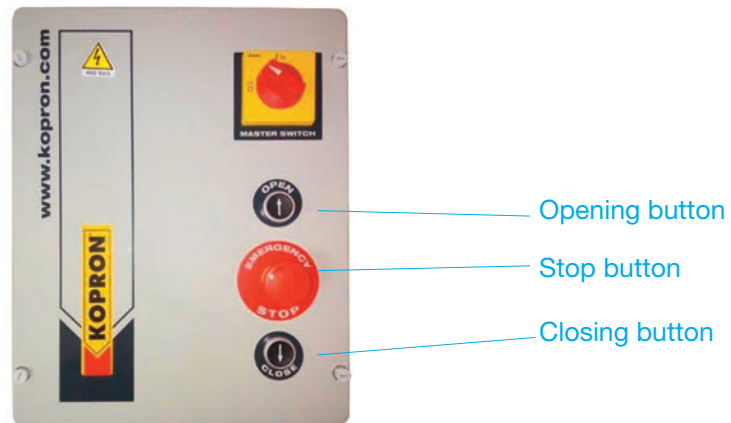
The opening and closing are controlled by relevant buttons, black of closing, white for opening. Safety edges intervene by stopping the door during closing phase and open it immediately preventing risk of crushing.

The door can be stopped by pressing the emergency button.

Manually with controls kept pressed (man on spot)

The opening and closing are controlled by relevant buttons, black for opening, white for closing but must be kept pressed till the opening or closing desired is completed. Safety edges intervene by stopping the door during closing phase and open it immediately preventing risk of crushing.

The door can be stopped by pressing the emergency button.



Operating from a distance

Opening is controlled by buttons on electric panel in automatic mode (self-restraint). When opening is completed, a timer sets a time after which the door shuts automatically. Timer resets when opening command is given again.

The control card is provided with a another timer, which can be set in order to slow down the fabric change of direction.

Safety edges and/or infrared photocells intervene by stopping the door during closing phase and open it immediately preventing risk of crushing.

The door can be stopped by pressing the emergency button.

The door is fitted with a default with the following safety devices:

- Lower sensitive edge consisting of a rubber profile with an 8k resistant sensitive element
- Yellow flashing light
- 1 pair of photocells fitted to the pillars

Alternatively, according to the final use of the product and risk analysis, the door may also be fitted with:

- Multi-ray optical barrier
- Internal/external radar
- Internal/external magnetic coils
- Rope-pull button
- Radio control
- Hands Free access control system
- Photocell barriers

All information related to connections, operation, control and maintenance is provided in the relative documentation provided by the manufacturer.

4.2 STOPPING DEVICE USE

The door movements are stopped through a red emergency button, positioned on the electric panel and marked by a yellow label, placed under with STOP written on it.

The emergency button, stops the door movements immediately.

4.3 PARTICULAR RISKS AND PROTECTIONS

The opening and closing movements of the door can be dangerous for personnel operating it.

To reduce risks the following measures have been taken:

Safety edges intervene by stopping the door during closing phase and open it immediately preventing risk of crushing.

The safety edges and/or security photocells in case of breakdown do not allow the door to shut.

The door is provided with clamps which prevent the sudden fall of the motor shaft. The door opening and closing are signalled with warning lights.

Motoreducer, transmissions and lifting shaft are protected by a casing in order to avoid risk of crushing or cutting.

The fabric is provided with self-braking motor to avoid sudden falls. It has also an automatic brake in case of electric supply failure to the motor.

The electric panel has an emergency button which stops the movements of the door immediately.

Personnel must be informed of other risks which they could incur when getting close to the fabric while it is moving or stopping in the doorway.

The door must carry warning signs according to standards *D. Lgs 493/96 del 16/08/1996 92/58/CEE*.



When doors have particular automatic opening systems (i.e pull switches, remote controls, barriers, detectors, magnetic loop, radars) specific manuals will be supplied in the packages.

We recommend to read the information of all the manuals which are supplied which enable a correct and safe use of the products.

**4.4 FIRE PROTECTION.**

The door can be installed in areas without particular fire-prevention methods.

Door fabric is made in self-extinguishing, class 2 PVC.

In case you must put out fire use proper substances which can be sprayed on electric systems.

CHAPTER 5

ANOMALIES, MAINTENANCE AND REPAIRS

5.1 ANOMALIES, CAUSES AND REMEDIES

The following anomalies could occur:

ANOMALIES	CAUSES	REMEDIES
The door does not open with flashing lights	No power supply	verify if there are any interruptions in power supply on the electric panel
	Emergency button switched on	
	Damaged rotation micro-switch	Disconnect Check the position riders have not been moved.
	See notes end of chapter *	See unit IV cap.3.1 Operating instructions.
The door does not shut and flashing lights off	No power supply	verify if there are any interruptions in power supply on the electric panel
	Emergency button switched on	Disconnect
	Safety edge either switched on or damaged	Verify the working of the safety edge see app. of the chapter
	Rotation microswitch damaged	Check that the position riders have not been moved. See unit IV cap.3.1 Operating instructions.
	See notes end of chapter *	
The door does not open with flashing lights on	Thermal protection activated	Leave protection cool down for 3 ÷ 5 minutes then try again.*
	Mechanical part of the controls are damaged	Check the functioning of the motor shaft and joint
	Rotation microswitch is damaged	Check that the position riders have not been moved. See unit IV cap.3.1 Operating instructions.
	Control contactor damaged See notes end of chapter **	Replace
The door does not shut when flashing lights on.	Thermal protection activated	Leave protection cool down for 3 ÷ 5 minutes then try again.*
	Safety edge either switched on or damaged	Check the functioning of the safety edge.
	Mechanical part of the controls are damaged	Check the functioning of the motor shaft and joint
	Rotation microswitch damaged	Check that the position riders have not been moved. See unit IV cap.3.1 Operating instructions..p.3.1 Operating instructions..

ANOMALIES	CAUSES	REMEDIES
	Control contactor damaged See notes end of chapter * (**)	Replace
The door does not stop in the correct position when it opens or shuts.	The transmission chain from the microswitch to the motoreducer shaft is not properly functioning.	Check if the chain is well pulled otherwise provide pulling it with proper slots..
	Rotation microswitch damaged	Check that the position riders have not been moved. See unit IV cap.3.1 Operating instructions.
	Brakes slipping off.	See unit IV chap. 5.3 Brakes adjustment

In addition to this table, refer to the information provided in the documentation of the manufacturers of control and safety components provided as an option.

* The malfunction might be due to the remote control. The manuals can help to detect the damage.

** In case of continue interventions of thermal protection, verify if the value of absorption of the motor if it is the same of the plate.

Verification, controls or interventions must be carried out by specialized personnel as required by standard EN 292.2 art. 5.5.1.

To obtain further information or request an intervention you may contact our Service offices:

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via Primo Maggio s.n. - 20064 Gorgonzola – Milan- Italy

☎ 0039-02 – 92152 751 📠 0039-02 - 92152 923

5.2 PREVENTIVE MAINTENANCE AND PLANNED VERIFICATIONS

Weekly inspections

- Verify the functioning of the emergency button.
- Verify the status of the lifting belts of the fabric.
- Verify the functioning of the safety edge.
- Check the efficiency and effectiveness of the optional control and safety equipment.

Monthly inspections

- Verify the fastening of the bolts of the motoreducer
- Verify the fastening of the screws of the belts of the motor shaft.
- Verify the fastening of the belts to the lifting tube.
- Verify the status of the elastic band of the motor joint.
- Test the correct functioning of the safety devices by simulating an intervention.
- Greasing of the motor shaft supports with molykote grease.
- Check the transmission chain if it is well pulled, otherwise pull it by means of proper slots.

Quarterly inspection.

- Cleaning and brushing of the fabric and of the windows.
- Verify noise level
- Check status of the side brushes and efficiency..

Yearly inspection

- Check the bolts and nuts of the door.
- Check and fasten the anchor bolts of the door.

Quarterly inspection on electric plant.

- Inspection and test of the ground circuit.

Annual inspection on electric plant.

- Use a vacuum cleaner and a brush to clean the components on the electric panel.
- Check and fasten the clamps of the power control contactor.
- Check the correct fastening of all the lugs and clamps of the power circuit.
- Check cables and tighten connections to the devices (motor, safety edge and photocells)
- Check the electric absorption of the motor.
- Check and test the ground circuit.
- Check status and efficiency of the emergency button.
- Functional control of the safety of the electric plant.

Annual inspection of the safety edge

1. Verify that the lids of the control assembly and of the head plus the aluminium support are complete and not damaged. Check if the part in rubber is complete and not teared.
2. Disassemble the lids.
3. Check the metal cable which must be complete and not frayed, otherwise replace it.
4. Check that in idle position the roller is on the central limit switch, otherwise adjust the position with the adjusting screw.
5. Check the fastening of the electric connections to the clamps.
6. Check the conditions of the control assembly and in case it is damaged provide replacing it.
7. Check there is no sign of dampness or interfering objects which must be removed.
8. Connect a tester to the clamps in replacement of the connections to the control panel.
9. Unscrew the screw which tightens the roller on the lever and take the wheel off. Check if the electric circuit is interrupted in case there is no pressure on the central limit switch piston.
10. Keep the central limit switch piston pressed, push the rubber and check that the electric circuit is interrupted.
11. Release the rubber border and check that the electric contact is restored.
12. Keeping the piston of the central limit switch pressed, loosen the lock nut and tighten to the end the adjusting screw making sure the electric contact has been interrupted.
13. Position the wheel on the lever then screw it down. Regulate the adjustment screw in order to be able to bring the roller on the lever at the exact point on the piston and check that the electric circuit is shut. Tighten the lock nut and restore the connections to the junction box.
14. Put the lid back.
15. Check the plate which must be well legible.

Inspection, controls and interventions, must be carried out by specialized personnel according to standards EN 292.2 art. 5.5.1.

For instructions keep to what is being said in Unit IV chap. 6.3

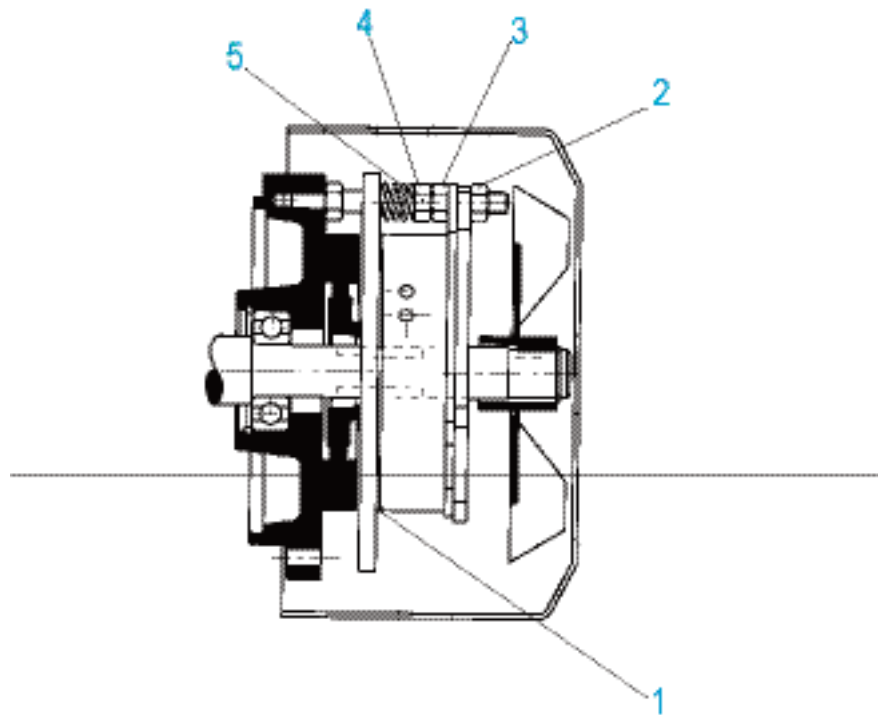
5.3 MOTOR BRAKE ADJUSTMENT

The loosening of the motor brake, with a consequent reduction of the braking torque, makes the door fall and get damaged.

This happens when the air gap increases due to the wear of the brake disc lining. This latter is caused by the continuous opening and closing of the door.

Therefore it is suggested to plan first inspection after a month and verify consumption. Inspections must be recurrent.

MOTOR BRAKE

**Air gap**

Air gap is the distance between the magnetic core and the brake moving element which must be three tenths of a millimeter. In order to set the air gap back to the required value, operate on the nuts 2 and 3 to obtain the brake coil forward displacement towards the brake moving element. Once the operation is over verify the tightening of the nuts.

Brake torque adjustment

The brake torque is proportional to the spring compression 5, which can be modified by adjusting nuts 4 (unscrew to reduce, tighten screw to increase). The compression of the springs must be as uniform as possible.

5.4 MANUAL OPENING

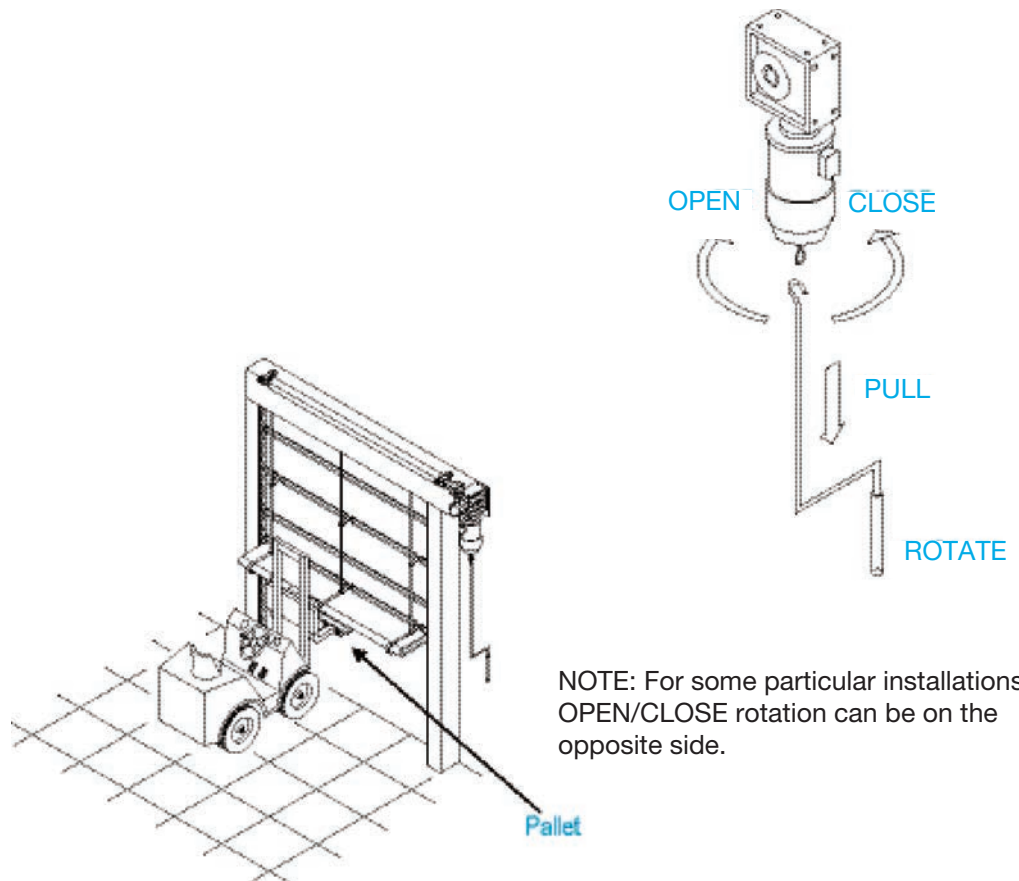
The Velokop door is provided with an emergency handle to open and shut the door in case of lack of electricity or damage.

When the door is of big size it can be hard to operate the handle alone, we suggest to use a forklift along with a pallet to lift it.

Before using the handle be sure there's no electricity on the electric panel.

Near the door there must be a sign with instructions for use of the handle.

Note the Velokop doors are not emergency doors and must not be placed near emergency getaway routes for personnel.

**5.5 INSTRUCTIONS FOR LUBRICATION**

Monthly application

Grease the motor shaft supports with molykote grease.

Yearly application

Check grease level in the reducer and add if necessary.

5.6 NOTES ON TOOLS TO BE USED

Normal workshop tools are sufficient to carry out all maintenance and repair operations of the door. No need of special tools.

For the electrical parts a tester and an amperemeter are sufficient.

CHAPTER 6

INSTRUCTIONS ON SAFETY

6.1 GENERAL NOTES



The opening and closing of the door can cause risk to personnel operating the door. In order to reduce risks and injuries the following measures have been taken: Safety edges intervene by stopping the door during closing phase and open it immediately preventing risk of crushing.

The safety edges in case of breakdown do not allow the door to shut.

The door is provided with clamps which prevent the sudden fall of the motor shaft.

The door opening and closing are signalled with warning lights.

Motoreducer, transmissions and lifting shaft are protected by a casing in order to avoid risk of crushing or cutting.

The sudden absence of electricity stops the door immediately.

The fabric is provided with self-braking motor to avoid sudden falls. It has also an automatic brake in case of electric supply failure to the motor.

The electric panel has an emergency button which stops the movements of the door immediately.

All the controls on the electric panel are duly supplied with label indicating the function.

Against electric shocks the electric panel must be connected to an adequate power supply line with a thermal magnetic switch and residual-current device set at 30 mA. (See Unit IV chapt. 2.6 Electric System)

Always for danger prevention the equipment must be connected to collectors positioned to ground with proper cables. The collector connected to the supply cable must three-phase + ground (see Unit IV chapt. 2.6. Electric System).

The door must be operated by **specialized personnel**.

Personnel must be informed of other risks which they could incur when getting close to the fabric or stopping in the doorway.

Standard EN 13241-1 warns on the danger when operating the door during windy days.

Velokop are not emergency doors and must not be placed along personnel emergency getaways.



6.2 SAFETY AREAS NEAR THE DOOR

There are no dangerous areas near the door, the operator can move free around it. Personnel must be informed about other risks relevant to the opening of the door and it must be forbidden to stop in the doorway during door movements.



The door must have this warning signal according to standards

6.3 ADVICE ON MAINTENANCE

Preventive maintenance and interventions for repair must be planned according to standard EN 292.2 art. 5.5.1, and must be carried out by **specialized personnel**. The following advice must be considered: maintenance must be carried out with electricity off.



General switch can be locked in off position.

A written sign must be placed on the general switch indicating that the system is temporarily off for maintenance.

In case any inspections are required with electricity on and/or electric panel open these must be carried by two people, one operating the inspection and one checking the electric panel.



For this type of operation, prevention is guaranteed through equipment with protection level IP 2X inside the electric panel. This standard provides protection against accidental contact of objects which exceed a diameter of 12 millimeters.

Safety standards against electric standards are the following: EN 292.1 (4.3), EN 292.2 and EN 60204.1.

It is of utmost importance to forbid user to accede to the inside of the electric panel. For this reason special keys are used for opening.

Before opening the electric panel, the general switch must be off.

For mechanical maintenance there is no particular danger to point out, however general switch must always be off.

For interventions to be carried out on the top of the door, a proper trestle must be used.

6.4 OTHER RISKS

Main operation	Transport
Secondary operation	Lifting and handling
Danger connected	Mechanical danger due to either the shape of the structure or to operations carried out.
Other risks	The operators can injure themselves by either breaking or squeezing feet and hands.
Prevention	Manual handling of bulky and or heavy loads. Personal protection wear, gloves, safety shoes, helmets. Qualified personnel Specific instructions on operations in Unit IV Chap. 1 Use of lifting means according to EC standards.
Main operation	Assembly
danger connected	Danger due to mechanical handling of the components.
Other risks	Bruises, excoriation, pricks, cuts at hands.
Prevention	Personal protection wear, gloves, safety shoes, helmets, goggles and masks for welding and grinding operations. Use of lifting means according to EC standards. Appropriate tools and equipment in Unit IV Chap. 2.7 Qualified personnel Specific instructions on operations in Unit IV Chap.2 and 3 Strictly follow the instructions to prevent specific risks existing on place of assembly, provided by Customer
Main operation	Positioning and fixing
Secondary operation	Electric connection, adjustment of the equipment
Danger connected	Danger due to mechanical handling of the components and electrical contact. Danger linked to operations being carried out under precarious conditions and when lifted from ground.
Other risks	Bruises, fractures, falls, falling material.
Prevention	Personal protection wear, gloves, safety shoes, helmets and goggles. Safety belts Appropriate tools and equipment in Unit IV Chap. 2.7 Safety ladder, scaffolds Qualified personnel. Specific instructions on operations in Unit IV Chap. 2, and 3

Main operation	Use
Secondary operation	
Danger connected	Accidental closing - Mechanical and electric danger
Other risks	Bruises, fractures, squeezing, dragging and electric shock.
Prevention	Safety conditions are guaranteed by safety edges and photocell barriers, which in case of malfunction prevent the the door to close. A self- braking motor with automatic brake prevents accidental falls of the fabric in case of missing power supply. Manual controls have a system which blocks dangerous operations. The control panel has an emergency button which immediately stops the movements of the fabric. All handling parts, motoreducer, transmissions and lifting shaft are protected by a casing. To avoid electric shocks the panel must be connected to a power supply line provided with thermal magnetic switch and residual-current device set at 30mA.(See chapt. 2.6 Electric System). Always for danger prevention the equipment must be connected to collectors positioned to ground with proper cables. The collector connected to the supply cable must be three-phase +ground (see Unit IV chapt. 2.6. Electric System). The system must have warning and prohibition signs. The fabric movements are signalled by flashing lights. For planned preventive maintenance see Unit IV Chapt. 5.2. Operators must be specialized.
Main operation	Maintenance and repair
Secondary operation	
Danger connected	Danger due to mechanical handling of the components and electrical contact. Danger linked to operations being carried out under precarious conditions and when lifted from ground.
Other risks	Bruises, fractures, falls, falling material. Falling danger or falling objects.
Prevention	Personal protection wear, gloves, safety shoes, helmets and goggles and masks for welding and grinding. Safety belts Appropriate tools and equipment. Safety ladder, scaffolds Qualified personnel. Specific instructions on operations in Unit IV Chap.5

CHAPTER 1

ACOUSTIC

1.1 NOISE PRODUCED

The noise produced by the equipment does not exceed 78 dB, measured with a sound level meter with an A-frequency weighting filter and a slow time weighting.

CHAPTER 2

ENVIRONMENTAL



2.1 GREASE WASTE DISPOSAL

Grease waste must be taken to grease waste dumps.
In case of accidental spilling of hydraulic liquids cover with sawdust before throwing in proper bins .



2.2 PLANT DISMANTLING

Disconnect the plant from all the energy sources of the building.
Before dismantling the equipment this must be totally cleaned from hydraulic liquid which must be disposed as indicated in part IV Chap. 2.1 'Grease waste disposal'
Divide material to dispose according to type
The material used is mainly the following:

- Metal
- Plastic
- Electric components.
- Electric wires



All electric material must be disposed according to local regulations.

CHAPTER 1

SPARE PARTS

1.1 SPARE PARTS

Orders for spare parts must always indicate serial numbers and year of construction, data which can be picked from the EC plate (See Unit I chapt. 1.3) **The use of non original spare parts is considered improper.** This will imply for Buyer to take his own responsibilities and the loss of guarantee.

CHAPTER 1

GUARANTEE

1.1 GUARANTEE STANDARDS

- 1 - Kopron S.p.A. grant a guarantee period of 12 months from delivery date except for electric and electronic parts for which there is no guarantee, these components used for production have their own guarantee, established by the relevant suppliers, which as well does not exceed 12 months from delivery.
- 2 - Kopron S.p.A. undertake to remove any defect due to error in design or to material/production faults occurring within the terms mentioned at point 1.
- 3 - For each faulty part, Dealer/Contractor must give Kopron written notice within eight days. Dealer/Contractor will be charged with transport costs and risks plus eventual customs expenses for faulty parts as well as for the supply of parts repaired or sent for replacement.
- 4 - Upon request of Dealer/Contractor, service under guarantee can be carried out locally where the door has been assembled, in this case intervention plus expenses for travel, food and lodging will be charged to Customer.
- 5 - Guarantee is valid only in case equipment has been correctly used according to instructions contained in the Use and Maintenance Manual. Guarantee will not cover faults caused by Buyer in case of maintenance or interventions not authorized by Kopron S.p.A. in writing, or due to wear. Guarantee will not cover any damages caused directly or indirectly by tools, or due to missing production.
- 6 - Dealer/Contractors must provide Kopron S.p.A. all information about supposed defects, to give Kopron S.p.A. the full possibility to identify the reason of the defect.
- 7 - Dealer/Contractors must keep records on requested maintenance activity on products. Guarantee will automatically expire in case of this is missing.
- 8 - Material subject to normal wear is not under guarantee.
- 9 - The duration of the guarantee does not exclude the obligation on behalf of Customer to stock up with spare parts in due time, as suggested by Kopron S.p.A..
- 10 - The obligations implied in the guarantee have nothing to do with the economical conditions agreed upon and do not authorize interruptions or changes in payment modalities.

Should instructions contained in this manual not be followed strictly, or if any negligence occur during maintenance, or repairs not be carried out properly, or should non original spare parts be used, this will be considered improper and will imply Buyer to take his own responsibilities plus the loss of guarantee.

Kopron S.p.A.

REVISION LIST

07-2019 First release (*only in Italian language*)

11-2019 Release 2 (*only in Italian language*)

12-2019 Release 3 -

modifica normativa DPR 524 del 08-06-82 CEE 79/640 a favore della D. Lgs 493/96 del 16/08/1996 92/58/CEE (pag. 24/35)

09-2020 Release in *English language*

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Welding of Metallic Materials UNI EN ISO 3834-2 Certified
Steel Processing Center N° 2533/13
Applicable Standard: UNI EN 13241-1



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

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



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