



*USER GUIDE*  
**ELECTRIC STRETCHER SUPPORT  
SERIES PB460 AND PB455**

*Review 2022/02*



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# 01 INTRODUCTION














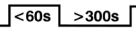

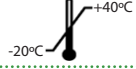
## 01.1 Using of manual

The manual provides using and maintenance instructions of the product as well as technical aspects, functioning, spare parts and safety.

It is recommended before the operation of the product to read carefully this manual in order to avoid damages caused by a misuse.

Do not lose this document. It should be accessible to any doubt that could appear by medical personnel. Remember that a good use and maintenance are necessary for the proper operation of the product.

## 01.2 Legend of Symbols

SYMBOL	EXPLANATION / DESCRIPTION
	MANUFACTURER symbol. This symbol is accompanied by the name and address of the manufacturer, adjacent to the symbol (PRODUCTOS METÁLICOS DEL BAGÉS S.L., Ctra. C-16 Km 59.5, 08650 Sallent (Barcelona)).
	Indicates the manufacturer's reference number to identify the medical device. PROMEBA, S.L. uses this symbol to set each internal reference for each configuration and business variant.
	Indicates the manufacturer's serial number to identify a specific medical device.
	Indicates the manufacturing date. The symbol must be accompanied by a manufacturing date (yyyy-mm), adjacent to the symbol.
	It is placed to inform that the product is a "Medical Device".
	CE symbol without the intervention of a Notified Organism, as a Medical Device classified as Class I according to the EU Regulation 2017/745 on Medical Devices.
	Symbol for the Unique Device Identifier.
	Symbol "See instructions for use or operating instructions".
	Symbol "caution". This symbol is placed to warn of the need for the user to refer to important precautionary information in the operating instructions, such as warnings and cautions not otherwise found on the label.
	Waste symbol for electrical and electronic equipment "WEEE" (Waste Electrical and Electronic Equipment). Recycle: Electronic equipment. DO NOT THROW GARBAGE
	"Dangerous voltage" symbol. To warn of electricity.
	Symbol "Caution". For a general warning.
	"Double insulation" symbol. The protection of appliances marked with this symbol is ensured by double insulation and does not require a safety electrical connection to earth (ground).
	Cot duty cycle: 16.7% (less than 60 seconds on, more than 300 seconds off)
	Warning, crushing of hands
	Indicates the temperature limits. The upper and lower temperature limits should be indicated adjacent to the horizontal lines.

## 01 INTRODUCTION

### 01.3 Servicing request

For information of the correct interpretation of the instruction manual, the use, maintenance, installation and restoration of the product, please contact Promeba customer service: T. 93 837 12 00, email promeba@promeba.com or write to PROMEBA, S.L. - Ctra C-16 Km 59.5 · 08650 Sallent (Barcelona) · SPAIN.

### 01.4 Demolition

When the devices are no longer suitable for use, they must be correctly recycled according to whether it is electrical and electronic equipment, batteries or normal solid waste, following current regulations on demolition:

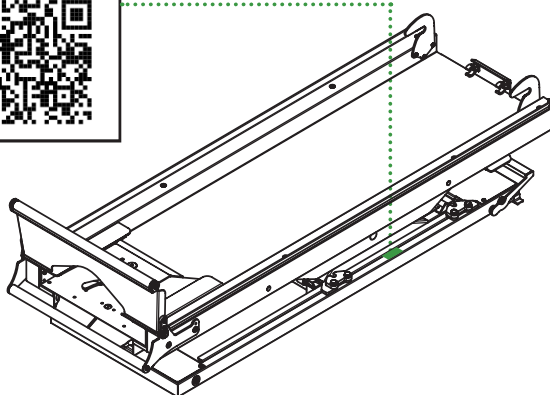
**WARNINGS FOR THE CORRECT DISPOSAL OF THE PRODUCT IN ACCORDANCE WITH EC DIRECTIVE 2012/19/EU WEEE:** At the end of his life, the product must not be disposed as household waste. Can be taken to special recycling centers provided by local government, or return it to the dealer on purchase of a new device of the same type and used for the same functions. Dispose of the product separately avoids possible negative consequences for the environment and human health resulting from inappropriate disposal and allows to recover the materials in order to obtain significant savings in energy and resources. The symbol on the label indicates separate collection of electrical and electronic equipment.



**WARNING:** An incorrect disposal of electrical and electronic equipment could result in sanctions.

### 01.5 Labelling

Each product incorporates an identification label, placed on the device itself and/or on the box. It must never be removed or covered. This label includes the serial number and the product code. Please keep these numbers so you can inform the dealer if necessary.



### 01.6 Contraindications and adverse effects

The use of this device, if used as described in this manual, does not present any contraindications or collateral effects.

# 01 INTRODUCTION

## 01.7 Physical requirements of the operators

Promeba stretcher support is destined to professional use only.

The operators must be trained in efficient, effective and safe patient transport and must have the following minimum requirements:

- Physical capacity for operating the device
- They must be able to assess the integrity of the fixation.
- They must be able to assess any anomaly by communicating the problem to the responsible figures, interrupting the use of the devices.

It is recommended the employment of one operator equipped with strength, balance, coordination and common sense. Patient loading procedures for extremely heavy patients, operations in rough terrain and in particular situations more operators may be needed.



The capabilities of different operators should be considered before determining the role they will have in managing the device.

## 01.8 Intended purpose

The product ELECTRIC STRETCHER SUPPORT is indicated to effortlessly load, unload and position stretchers in emergency vehicles while supporting them by remaining anchored during transport

## 01.9 General warnings

1. The product must be used by trained personnel only, having attended specific training for this device and not for similar products.
2. At least every 6 months, is important to verify if updated User Manuals are available or there is any change involving your product. This information is freely available on the website <http://promeba.com/>
3. Training routines must be registered on a special register in which the names of those trained, of the trainers, date and place are indicated. This register, which will certify the eligibility of the operators to use the Promeba, S.L. device, has to be kept for a period of 10 years after the disposal of the device itself. This register will be made available to the competent authorities and/or manufacturer if requested.
4. Promeba, S.L. is always at your disposal to plan trainings on products.
5. Before carrying out any kind of operation on the appliance (training, installation, use), the operator must carefully read the enclosed instructions, paying particular attention to the correct safety precautions and to the procedures to be followed for installation and for correct use.
6. If the instructions belong to another device and not the device received, inform the manufacturer immediately and avoid use of the device.
7. In the case of any doubts as to the correct interpretation of the instructions, please contact Promeba, S.L. for any necessary clarifications.
8. Do not allow untrained persons to help during the use of the device, because they could cause damage to the patient or to themselves.
9. Regularly check the appliance and carry out the prescribed maintenance.

## 01 INTRODUCTION

10. Before each use of device the perfect operating state of the device must be checked as specified in the instruction manual. If any damage or abnormalities which could in any way influence the correct functioning and the safety of the device, of the patient and/or of the user are detected, the device must be immediately removed from service and the manufacturer must be contacted.
11. If any failure or incorrect functioning of the device is detected, it must be immediately substituted with a similar item so that the rescue procedures are guaranteed without any interruption.
12. Use of the device in anyway other than described in this manual is forbidden.
13. Do not alter or modify in any way the appliance; any such interference could cause malfunctions and injury to the patient and/or rescuer.
14. The appliance must not in any way be tampered with (modification, adjustment, addition, replacement). In such cases all responsibility will be denied for any malfunctions or injuries caused by the appliance itself; moreover CE certification and product warranty will be considered void.
15. Those who modify or have modified, prepare or have prepared medical appliances in such a way that they no longer serve the purpose for which they were intended, or no longer supply the intended service, must satisfy the valid conditions for the introduction onto the market.
16. Handle with care.
17. Ensure that all the necessary precautions are taken in order to avoid the hazards that can arise as the result of contact with blood or body fluids.
18. Register and store with these instructions: lot number, place and date of purchase, first date of use, date of checks, name of users, any comments.
19. When the device is being used, the assistance of qualified staff must be guaranteed.
20. Do not store the device underneath any heavy objects which could cause structural damage.
21. Store in a cool, dry, dark place and do not expose to direct sun.
22. Store and transport device in its original packaging.
23. The device must not be exposed or come into contact with any source of combustion or inflammable agents.
24. Position and adjust the device taking care not to cause any obstruction to rescuers and or any other rescue equipment.
25. Attention: laboratory testing, post production tests and instruction manuals cannot always consider every possible scenario for use. This means that in some cases the performance of the product could be notable different from results to date obtained. Instructions are continually being updated and are under tight surveillance of fully qualified staffs with adequate technical formation.
26. Both public and private operators are obliged to inform the manufacturer of any measures that should be adopted to guarantee the safety and the health of the patients and the users of any medical device.
27. Promptly notify PROMEBA regarding any revisions to be made by manufacturer in order to guarantee the conformity of the product to the territory's legal specifications (including those resulting from rules and/or norms of other nature).

# 01 INTRODUCTION

28. As a distributor or end users of products manufactured and/or marketed by Promeba, S.L., you are strictly required to have a basic knowledge of any legal requirements existing in the goods final destination country applying to the devices contained in this supply (including laws and norms regarding technical specifications and/or safety requirements) and therefore you are also strictly required to have the necessary knowledge to guarantee all aspects regarding the total conformity of the products to the regulations in the relevant territory.

29. Act with all due care and diligence, and contribute to ensure conformity to general safety requirements of all devices marketed in the territory, by providing final users with all necessary information for carrying out periodical checks on their devices, as specified in the relevant user manual.

30. Actively contribute to product safety checks on products sold, by communicating any relevant risk analysis information both to the manufacturer and to any competent authorities so that the necessary actions can be promptly taken.

31. Be aware that in the event of any failure to conform to the above mentioned requirements you will be deemed fully responsible for all damages that might occur. Therefore we expressly disclaim any responsibility and/or liability for your non-compliance with the present "Regulatory provisions".

## 01.10 Specific warnings

1. Establish a maintenance program and periodic testing, identifying a reference employee. The person to whom the ordinary maintenance of the device is entrusted must ensure the basic requirements foreseen by the manufacturer in the user's manual.

2. Always wear gloves during maintenance procedures.

3. Use only accessories/spare parts that are original or approved by Promeba, S.L. when carrying out any operation, to avoid causing any alteration or modification to the device, otherwise we assume no responsibility for the proper functioning or damage resulting from device to the patient or the operator and warranty will be considered void.

4. Always respect the maximum capacity of the device, as indicated in this user's manual. Maximum load capacity means the total weight distributed according to the human anatomy. In determining the load of the total weight on the product, the operator must consider the weight of the patient, the equipment and the accessories. Moreover, the operator must consider that the overall dimensions of the patient do not reduce the functionality of the device.

5. The stretcher support must be installed in accordance with the specifications provided by the manufacturer and ensuring its compatibility with technical specifications of the stretcher.

6. Check that the configuration and the installation of the stretcher support are suitable for the stretcher that is being used to ensure the proper use of the stretcher.

7. Promeba S.L. will not be responsible if an unauthorized stretcher anchor is used. This must comply with the requirements of the EN 1789 standard, making it able to withstand accelerations of 10 g in all directions.

8. Do not use bleach to disinfect the product, neither use water jets nor pressurized air. Use a hydro alcoholic based disinfectant and wash with water.

9. The device and all its components, after washing, should be allowed to dry completely before storing. Do not use drying machines.

10. Do not lubricate any part other than the one described in this manual. Lubrication must be carried out after cleaning and complete drying.



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11. Avoid contact with sharp objects.
12. Do not use the device if it has some kind of damage or poor cleaning condition.
13. Do not disassemble parts or components of the device, except those that are expressly indicated in this manual.
14. Do not apply devices that may interfere with the operation of the stretcher support or that may hinder your movements.
15. For the use of the device, one operator in suitable physical conditions is needed, with strength, balance, coordination, and common sense and must be trained on the correct functioning of the device Promeba, S.L. stretcher.
16. When the stretcher is loaded or unloaded from the stretcher support, the operator may have to hold heavy loads. For this reason, it is necessary to verify that both devices have been correctly adjusted to ensure that all operations are carried out safely. In case of heavy loads, the presence of at least 2 operators is required.
17. The laws relating to safety in the workplace must always be respected. Promeba S.L. is not responsible for damages caused by non-compliance with these requirements.
18. In case of breakdown, the emergency operations must be carried out by at least 2 operators.
19. The installation of the stretcher support on the vehicle floor must be carried out ensuring compliance with the safety requirements of EN 1789. In order to be in compliance with the requirements of EN 1789, the installer has the duty to check the fixation based on the exact position on the floor and based on the structure of the floor itself.
20. The device is intended to be used on Emergency vehicles.
21. The user must not have impairments that prevent proper reading and interpretation of information contained on the device labelling and in this manual, and that could prevent proper operation of controls.
22. Before and after each use, check the proper functioning of the device; if alteration or performance is noticed, it is necessary to restore its security status before the next use.
23. If the product comes with accessories with limited lifespan, do not use them after the expiration date.
24. Do not use the device if it has not been subjected to scheduled maintenance or required for normal use.
25. Avoid extreme force during the loading procedure of the stretcher on the ambulance. Too much force may have negative effects on the functioning of the trolley.
26. Make sure that the scheduled maintenance has been carried out.
27. Promeba S.L. will not accept responsibilities in the case that the support is not used as described in this user's manual
28. Do not alter or modify the stretcher arbitrarily to make it fit into the ambulance: the modification may cause unforeseeable functioning and damages to the patient and operators. In any case the warranty will be lost.
29. Condensation, water, ice and accumulations of dust can affect the correct operation of the device, making it unpredictable and causing a sudden alteration of the weight that operators have to carry.

# 01 INTRODUCTION

30. Do not change the load after the suspension function has been activated (if the device is provided with this function)

31. Always disconnect the electric stretcher support from the power supply during maintenance and cleaning.

32. The layout of the cables inside the structure should never be changed.

## 01.11 Residual risks

The residual risks listed below have been identified only with reference to the intended use of the device:

1. Use by untrained personnel may result in injury to patient, operator, or third parties.
2. Inappropriate disinfection procedures can create a risk of cross infection.
3. Installation carried out by untrained personnel, could result in inadequate fastening of the device inside the vehicle, with consequent risks related to its instability or mobility.
4. Failure to comply with the warnings for operators can create risks.
5. Failure to read and understand the product instructions can result in injury to the patient and operators.
6. Do not place body parts under the stretcher support; this may cause crushing risks when the stretcher support is moved. Never put your feet or hands under the device.
7. Crushing injuries could arise from sideways or extraction movements of the stretcher support. Always ensure that nothing interferes with the stretcher support before moving it.
8. Loading of the stretcher on the stretcher support, especially if the device is in tilted position, could need great effort from the operator, resulting in injuries. Pay attention during loading and unloading of the stretcher and, in case of heavy weight, consider that at least 2 operators are required.
9. The operation of any movement of the device when the vehicle is running, could result in extremely violent movements in case the vehicle has an impact. It is recommended to make the adjustments only when the vehicle is not moving.
10. The electro-valves temperature can reach high values (about 70°C). In case of maintenance, use appropriate Individual Protection Devices such as gloves. It is however suggested to wait for the cooling of such components.
11. The connection to a power source with improper voltage, or other than described in this manual, can make the device not usable or cause serious injuries.
12. The device is not for continuous operation. Repeated operation of controls, not consistent with normal usage practices, may damage the device and may impair its normal operation causing the impossibility to use the device when needed. Always respect the duty cycle described in following paragraphs.

# 01 INTRODUCTION

## 01.12 Reference standards

REFERENCE	TITLE OF DOCUMENT
UNI EN ISO 1865-5	Patient handling equipment used in road ambulances. Part 1. Table support brancard.
UNI EN 1789	Medical vehicles and their equipment. Road ambulances



As a distributor or end user of the products manufactured and/or distributed by Promeba, S.L., you are strictly obliged to know the legal provisions in force in the country of destination of the goods, applicable to the devices to be supplied (including the regulations relating to technical specifications and/or safety requirements) and, therefore, understand the necessary requirements to ensure compliance of the products themselves with all the legal requirements of the territory.

## 01.13 Life span

**If used as described in the following instructions, this device has a useful life of 10 years from the date of purchase.**

This useful life can be extended with annual reviews carried out by the manufacturer, which uses specialized and authorized internal and external technicians.

In case these annual checks are not carried out, the device must be disposed of according to the information in paragraph 01.4 and the manufacturer must be notified.

Only the manufacturer or an authorized center can extend the life of the device, if it meets the safety requirements.

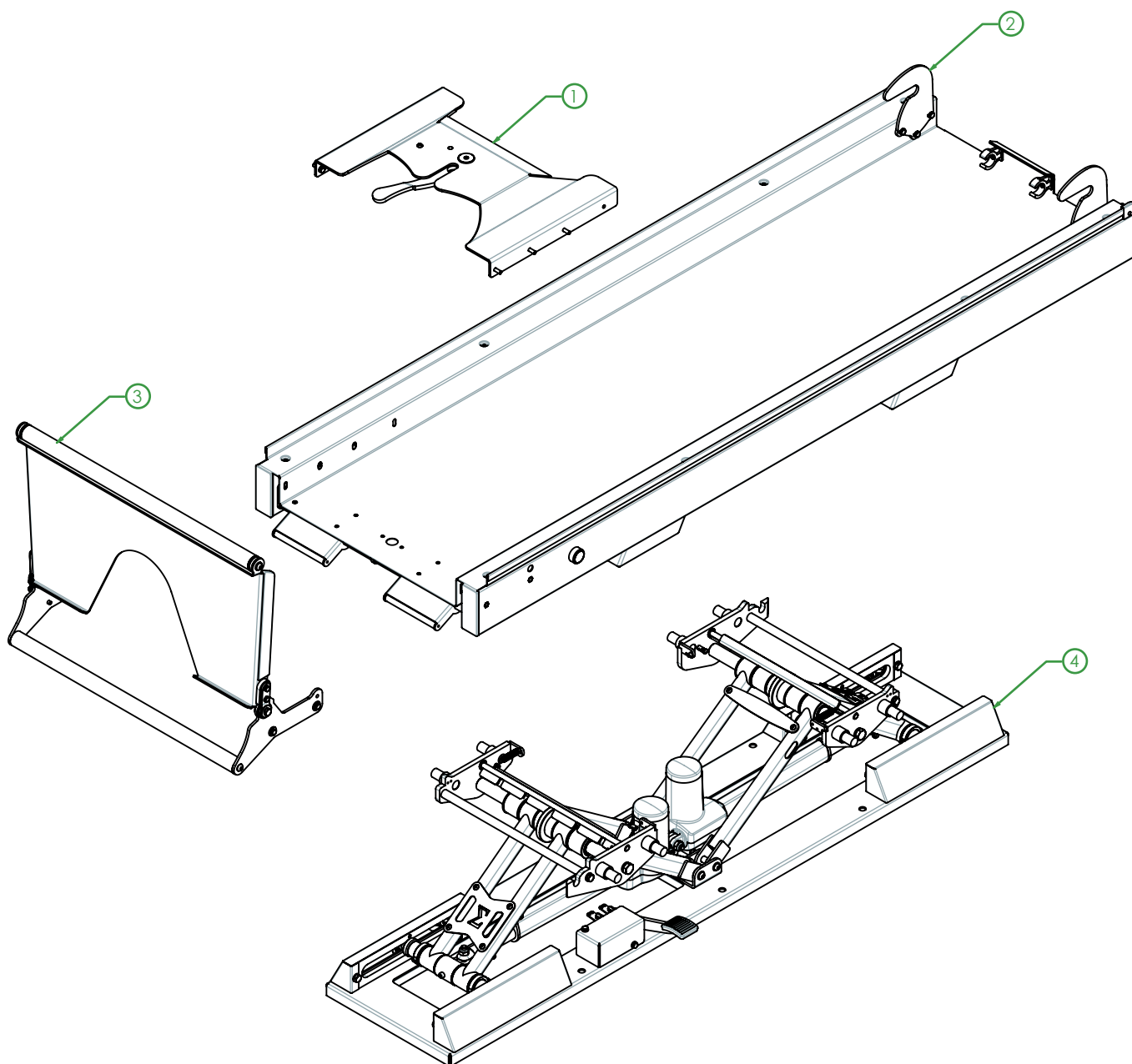
Promeba, S.L. will not accept any responsibility for malfunction or damage caused by the use of devices that have not been checked by the manufacturer or authorized center, or that have exceeded the maximum allowed useful life.



## 02 PRODUCT DESCRIPTION

### 02.1 Main components

N°	DESCRIPTION OF COMPONENTS
1	Locking assembly
2	Platform assembly
3	Ramp assembly
4	Guide assembly

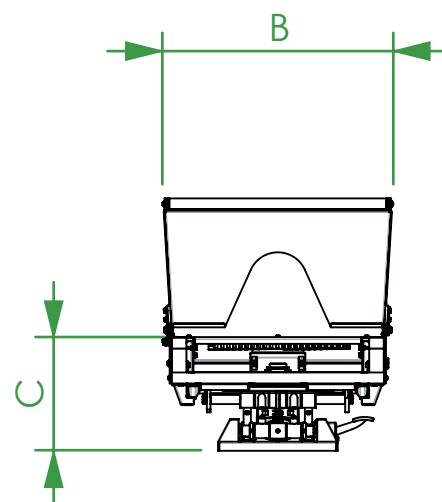
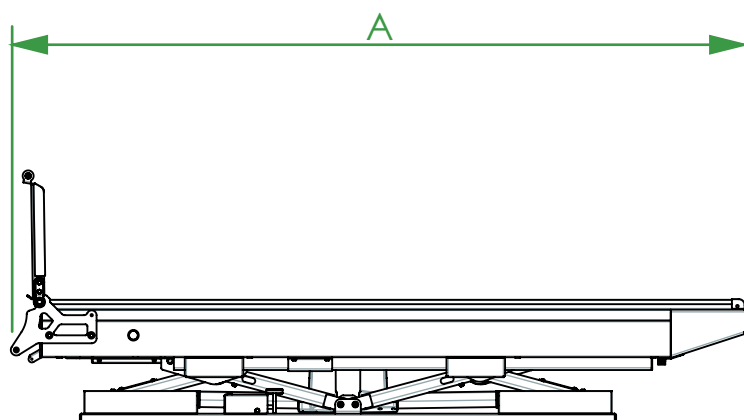


The drawing is indicative. Depending on the model obtained, it may present design variations according to its performance.

## 02 PRODUCT DESCRIPTION

### 02.2 Technical data sheet

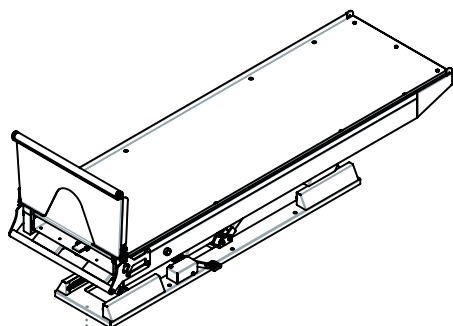
MODELS	PB460/1	PB460/2	PB460/3	PB455	PB455/4
Length (A)	2010 ±5 mm	2005 ±5 mm	1810 ±5 mm	1880 ±5 mm	2005 ±5 mm
Width (B)	630 ±5 mm	630 ±5 mm	630 ±5 mm	630 ±5 mm	630 ±5 mm
Height min. - max. (C)	310 - 470 ±5 mm	240 - 400 ±5 mm	280 - 440 ±5 mm	320 - 420 ±5 mm	390 ±5 mm
Weight	105 kg	98 kg	85 kg	125 kg	130 kg
Ramp height	350 mm	350 mm	350 mm	350 mm	350 mm
Max. load	250kg	250kg	250kg	250kg	250kg
Trendelenburg / Anti-Trendelenburg	15° / 10°	15° / 10°	15° / 10°	15° / 10°	15° / 10°
Lateral displacement	265 mm	265 mm	265 mm	265 mm	265 mm
Recommended operators	2	2	2	2	2
Needed operators	1	1	1	1	1
Operation temperature	-20 /+40 °C	-20 /+40 °C	-20 /+40 °C	-20 /+40 °C	-20 /+40 °C



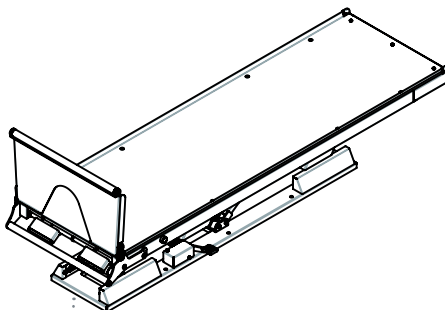
## 02 PRODUCT DESCRIPTION

### 02.3 Features

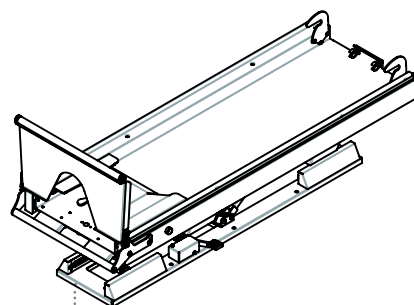
MODELS	PB460/1	PB460/2	PB460/3	PB455	PB455/4
Trendelenburg and Anti-Trendelenburg electric movement	X	X	X	X	X
Height adjustable 160mm electrically	X	X	X	X	X
Rear controls for extraction and inclination of the platform	X	X	X	X	X
Wired hand control to activate electric movement	X	X	X	X	X
Manual side displacement by foot pedal	X	X	X	X	X
With suspension				X	X
Flat tray	X	X			
Tray with accommodation and fixation for scoop stretcher	X		X	X	
Tray with double space for scoop stretcher and spine board					X
With built-in locking system			X	X	X



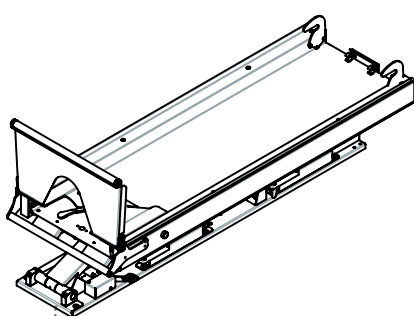
MODEL PB460/1



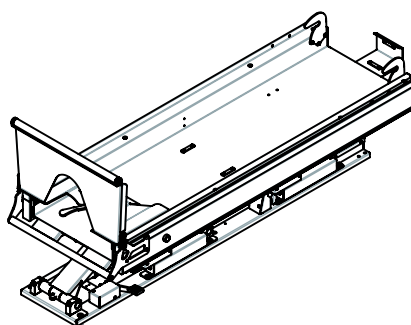
MODEL PB460/2



MODEL PB460/3



MODEL PB455



MODEL PB455/4

## 03 OPERATION

### 03.1 Transport and storage

Before transporting the product, make sure that it is properly packed. During transportation, always secure the load. Transport the load leveled and following all the precepts and rules for the transport of loads, also making sure that there are no risks of bumps or falls during the transport itself.

Before moving the product, remove the packaging carefully to not damage the exterior of the stretcher support. Keep the original packaging for use in any other transportation and for storage.

To move the product, a crane (for elevated load) or a forklift can be used. Follow the instructions below in each case:

#### Transport with crane (Fig. 1)

- Pass some straps through the upper platform for transport. (As indicated in the graphics)
- Transport the load leveled and following all precepts and regulations regarding the transport of suspended loads.

#### Transport with forklift (Fig. 2)

- Put a pallet or flat surface under the stretcher support and transport crosswise.
- Do not load the stretcher support directly on the forklift without a pallet or flat support surface.
- Do not load the stretcher support longitudinally on the truck if you do not have a sufficiently long base.

Product damage caused during shipping and handling is not covered by warranty. Repair or replacement of damaged parts is customer's responsibility.

The device should be stored in a cool, dry place, away from direct sunlight. It must not be in contact with chemical substances or agents that can cause damage and reduce its safety performance.

### 03.2 Preparation

Upon receipt of the product:

- Remove the packaging and expose the material so that all components are visible.
- Check that all components/parts on the attached list are present.

The device must be checked before each use to reveal any malfunction and/or damage caused by transport and/or storage. In particular, check:

- General functionality of the device
- Cleaning of the device (remember that the lack of cleaning can cause the spread of infections)
- Absence of cuts, holes, breaks in the structure
- Correct fixing of all nuts, bolts and screws
- State of moving parts
- Component integrity
- Lubrication of moving parts
- The operation of the extraction movement and the locking in the different positions.
- The operation of the Trendelenburg and Anti-Trendelenburg movement

TRANSPORT WITH CRANE

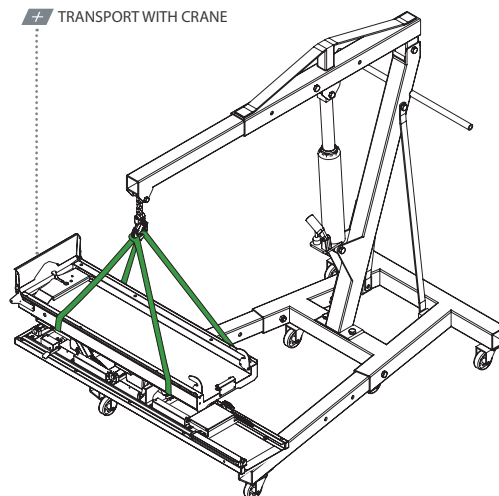


FIGURE 1

TRANSPORT WITH FORKLIIFT TRUCK

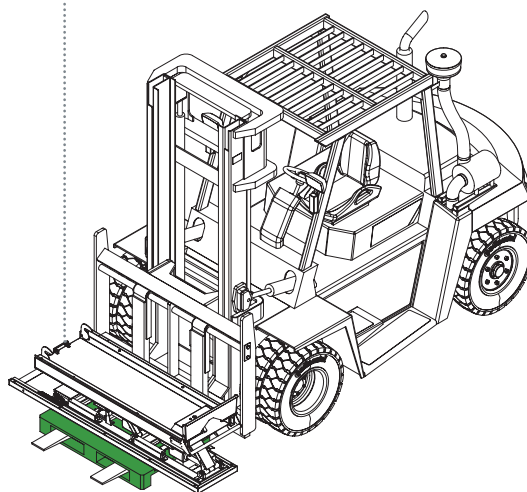


FIGURE 2



## 03 OPERATION

- The state of the springs
- That the welds are intact, without cracks or breaks.
- That there are no tubes or metal sheets that have bends or cracks.
- Make sure that the vehicle in which you want to install the device is manufactured in accordance with EN 1789 standard.
- The device is supplied in an intermediate position to facilitate installation. Do not connect the device to the power source before it has been fixed to the ground.

If the above conditions are met, the device can be considered ready for use; otherwise, it should be immediately removed from service and contact the manufacturer.

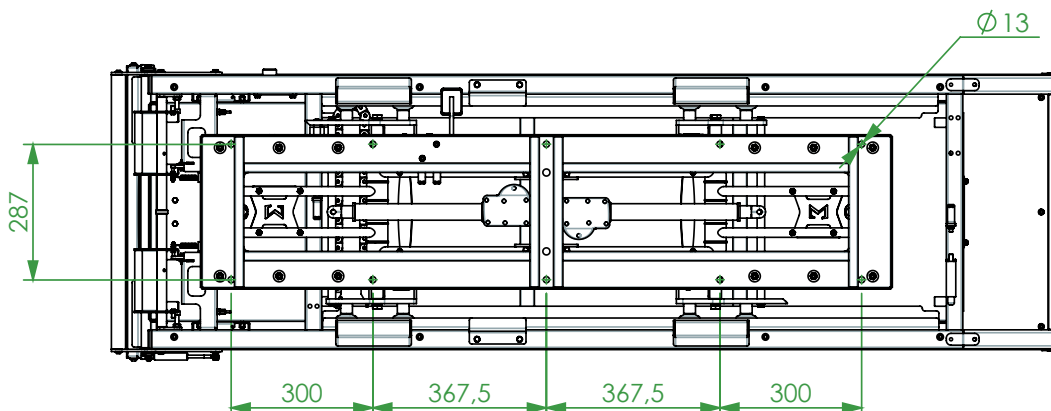
### 03.2.1 ANCHOR POINTS

Before installing the stretcher support, check that the ambulance is capable of storing it, allowing it to move in all directions.

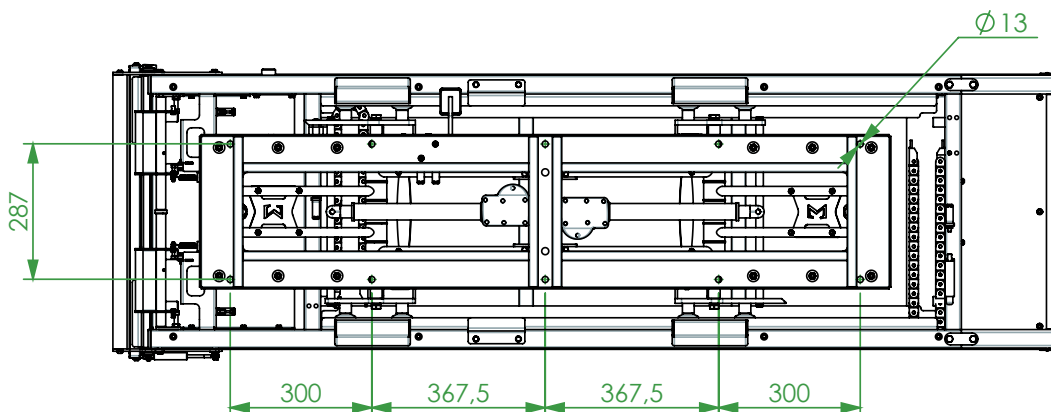
Make sure that the installation floor is perfectly flat. Non-flat surfaces or parts of the floor that are not perfectly level could compromise the correct operation of the product.

Before putting the base into operation, you must ensure that each and every one of the anchor points is in place and tightened.

#### STRETCHER SUPPORT PB460/1 ANCHORAGE (10 anchor points)

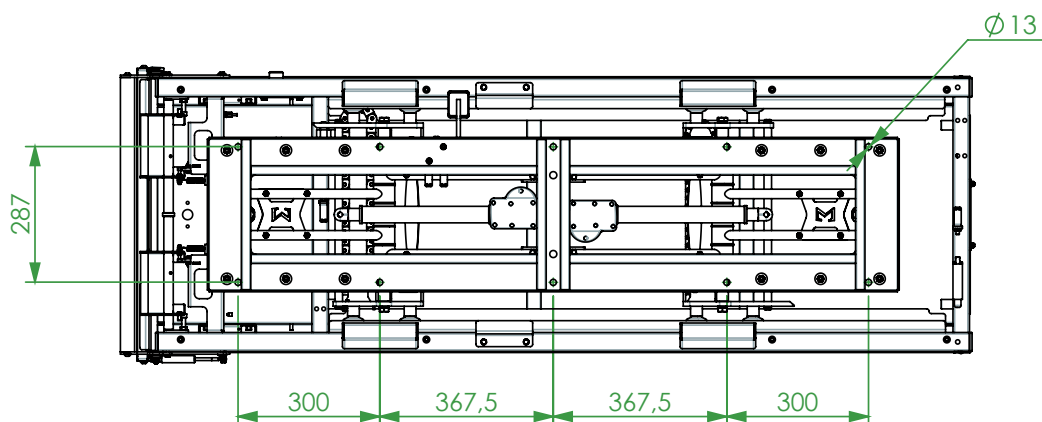


#### STRETCHER SUPPORT PB460/2 ANCHORAGE (10 anchor points)

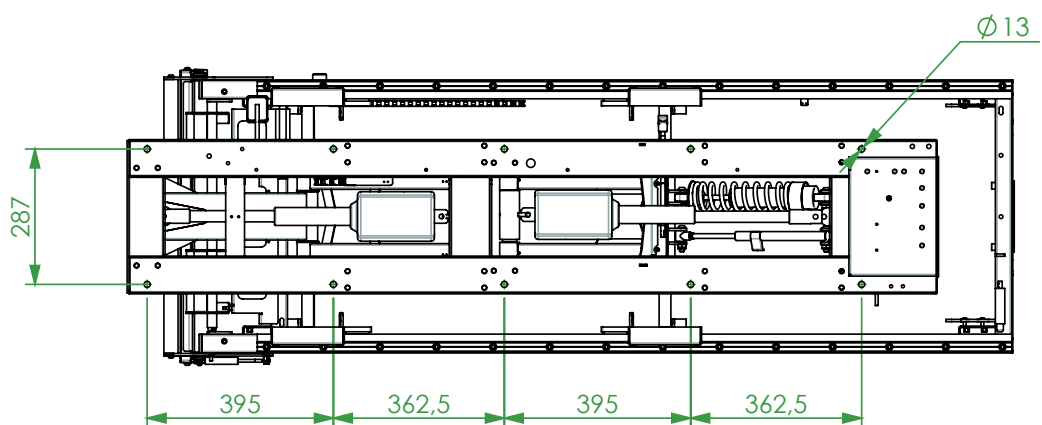


## 03 OPERATION

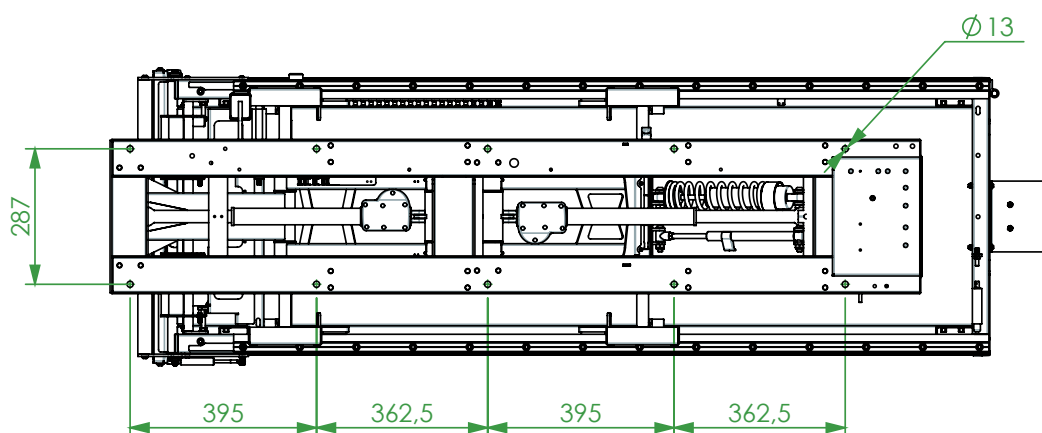
### STRETCHER SUPPORT PB460/3 ANCHORAGE (10 anchor points)



### STRETCHER SUPPORT PB455 ANCHORAGE (10 anchor points)



### STRETCHER SUPPORT PB455/4 ANCHORAGE (10 anchor points)



## 03 OPERATION

### 03.2.2 CONNECTION TO THE ELECTRIC GRID

To make the electrical connection of the stretcher support in the ambulance, follow these steps:

1. Locate the black cable placed on the front of the stretcher support (according to the direction of the ambulance)
2. Remove the plastic end of the red and black wires with a wire stripper to allow connection.
3. Use a power strip and a flathead screwdriver to connect the red and black wires with the ambulance outlet.

The voltage required for the stretcher support is 12V in direct current.

Do not leave the cables in walkways or with moving elements, it could cause breakages, cuts and failures in the system.



**ATTENTION:** Make sure you have the power line properly protected and the power along the line is stable.

### 03.2.3 STRETCHER SUPPORT PROGRAMMING

The stretcher support is delivered with two hand controls: for programming and for users. The following indicates how to program the bench with the programming and control (see figure 4).

The stretcher support must be programmed in the following positions:

#### **LOAD POSITION:**

To configure the loading height of the stretcher support, the optimal position of the stretcher for loading and unloading must be considered.

The position is as follows: when the front wheels of the stretcher are placed on the platform and the front legs touch the ramp roller, the front wheels of the stretcher must be at least 5 cm from the ground (see figure 3).

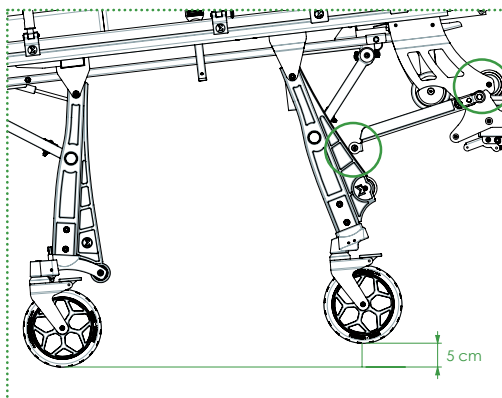


FIGURE 3



**ATTENTION:** A poor adjustment of the loading position of the stretcher support can lead to a malfunction of opening and closing of the legs of the stretcher.

#### **REST POSITION:**

It is recommended the rest position to be halfway of both motors.

This way, when you want to place the stretcher support in any other position, the two motors will already be halfway whether they have to close or open completely.

#### **TRENDELENBURG POSITION:**

It is only necessary to adjust the Trendelenburg position in the event that the stretcher support has a supplement that causes interference with the ground.

Otherwise, the stretcher support is factory set to the maximum Trendelenburg position.

When finished, store the programming remote in a separate location from the control remote to avoid confusion. When the user's hand control is used for the first time after programming, the bed will go to the rest position and then lower to its minimum position.

## 03 OPERATION

The table below shows the combinations of buttons to carry out the different commands of the programming remote control (see figure 4).

	Button	Function	Description
RESET	1+3	RESET	Keep buttons 1+3 pressed simultaneously. The stretcher support will rise to its maximum position and descend to its minimum position. Release the buttons when the hand control LED stops flashing. All saved positions will be deleted.
LOADING POSITION	1	Raise motor 1	Position motor 1 to the proper position for the load.
	2	Lower motor 1	
	3	Raise motor 2	Position motor 2 to the proper position for the load.
	4	Lower motor 2	
	5+3	Memorize load	Press and hold buttons 5+3 simultaneously until the LED on the hand control stops flashing.
REST POSITION	1	Raise motor 1	Position motor 1 to rest position.
	2	Lower motor 1	
	3	Raise motor 2	Position motor 2 to rest position.
	4	Lower motor 2	
	6+3	Memorize rest	Press and hold buttons 6+3 simultaneously until the LED on the hand control stops flashing.
TRENDLENBURG LIMIT	1	Raise motor 1	Position motor 1 to Trendelenburg position.
	2	Lower motor 1	
	3	Raise motor 2	Position motor 2 to Trendelenburg position.
	4	Lower motor 2	
	1+2	Memorize Trendelenburg limit	Press and hold buttons 1+2 simultaneously until the LED on the hand control stops flashing.

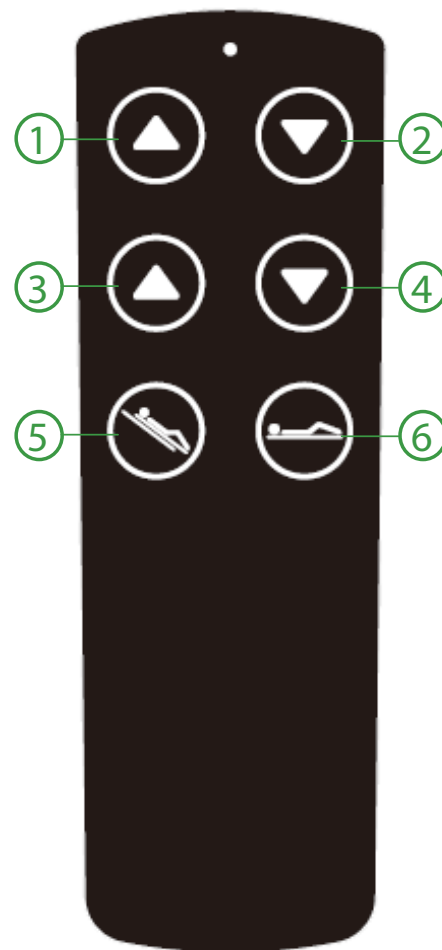


FIGURE 4

### 03.3 Functioning

#### 03.3.1 USER'S HAND CONTROL

All tilt movements and height changes of the stretcher support are done electronically. For the loading and unloading operation, the hand control or the lever on the back of the bed can be used. For movements carried out inside the ambulance, only the hand control will be used.

The movements are the following:

**ASCENT:** The stretcher support will be placed in horizontal position and then rise to the desired position.

**DESCENT:** The stretcher support will be placed in horizontal position and then lower to the desired position.

**ANTI-TRENDLENBURG:** The stretcher support is tilted by raising the end where the patient's head is located.

**TRENDLENBURG:** The stretcher support is tilted by raising the end where the patient's feet are.

## 03 OPERATION

**LOAD POSITION:** The platform is extracted and tilted by lowering the rear end of the stretcher support to be able to carry out the loading or unloading operation of the stretcher correctly.

**ZERO POSITION:** The stretcher support moves until it is completely horizontal.

**RESET:** It will be necessary to carry out a RESET in case any of the actuators has to be changed or if there is a fault in the electronics.

The table below shows the different commands of the hand control (see figure 5).

Function	Button	Description
ASCENT DESCENT	1	The two motors will retract synchronously and the stretcher support will rise. Keep the button pressed until you get the desired position.
	2	The two motors will extend synchronously and the stretcher support will lower. Keep the button pressed until you get the desired position.
TRENDELENBURG ANTI-TRENDELENBURG	3	Motor 1 will retract and motor 2 will extend, to obtain the Anti-Trendelenburg position. Keep the button pressed until you get the desired position.
	4	Motor 1 will extend and motor 2 will retract, to obtain the Trendelenburg position. Keep the button pressed until you get the desired position.
LOADING POSITION REST POSITION	5	Press the button for 1 second, both motors will simultaneously move to the preset load position. The buzzer will beep when reaching the position.
	6	Press the button for 1 second, both motors will move simultaneously to the preset 0 or rest position, and the buzzer will beep when reaching it. Then the two motors will continue to open simultaneously until the stretcher support descends to its minimum position. The buzzer will beep again when this position is reached.
RESET	1+3	By pressing buttons 1+3 for 3 seconds, the bed will go up to its maximum position and will go down to its minimum position. Upon completion of the operation, the remote's LED will flash 3 times and the buzzer will beep.
MAXIMUM EXTENSION	2+4	By pressing buttons 2+4 for 3 seconds all actuators will extend to their maximum stroke. Upon completion of the operation, the remote's LED will flash 3 times and the buzzer will beep.
STOP	-	To stop the movement during the load position and rest position operations, press any button on the hand control or the emergency stop button on the stretcher support and all the actuators will stop.

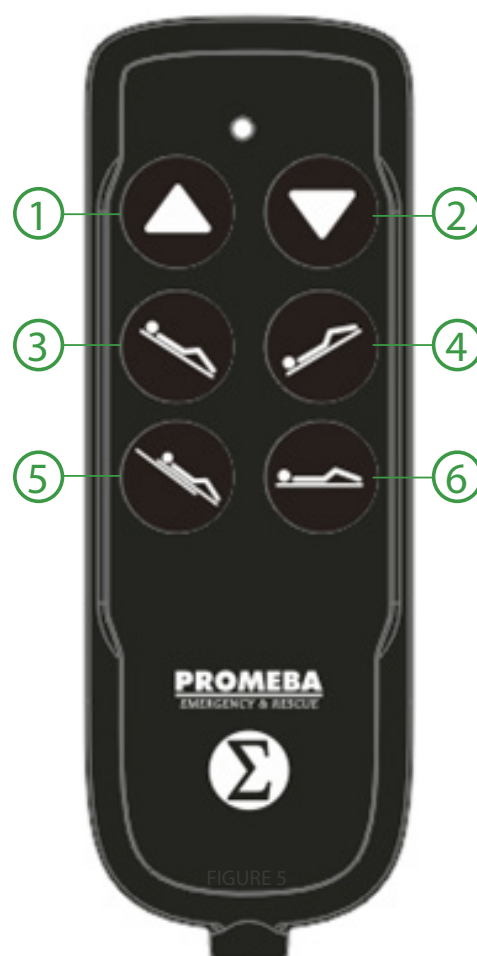


FIGURE 5

## 03 OPERATION

### 03.3.2 EMERGENCY STOP BUTTON

There is an emergency button located on the back of the right side of the stretcher support. Press it in case an emergency stop is required during any of the automatic movements of the bed.

### 03.3.3 LOADING AND UNLOADING OPERATION

To carry out the loading or unloading operation of a stretcher, you must locate the two levers placed at the back of the stretcher support (depending on the direction of the ambulance) or the hand control.

In the case of the levers, you will see by the indicative stickers that one of the controls is to place the stretcher support in the rest position and the other is to place it in the load position. In the case of the hand control, see point 03.3.1 to know the different commands.

To carry out the loading and unloading operations, follow these steps:

#### **LOAD:**

- Activate the loading position lever or push the button of the hand control. The platform will automatically tilt and extract by gravity to the loading position.
- Open the ramp by pulling on it until you meet resistance.
- Load the stretcher until it is locked with the locking system.
- Fold the ramp by pushing it until it meets resistance.
- Activate the rest position lever or push the button of the hand control, and push the platform inwards until it locks. The stretcher support will be automatically placed completely horizontal, in the rest position.

#### **DOWNLOAD:**

- Activate the loading position lever or push the button of the hand control. The platform will automatically tilt and extract by gravity to the loading position.
- Open the ramp by pulling on it until you meet resistance.
- Release the stretcher from the closure by activating the red lever and holding it until the third point of the stretcher is free.
- Pull the stretcher and remove it completely from the stretcher support.
- Fold the ramp by pushing it until it meets resistance.
- Activate the rest position lever or push the button of the hand control, and push the platform inwards until it locks. The stretcher support will be automatically placed completely horizontal, in the rest position.



**ATTENTION:** The platform extraction is done by gravity. The more inclined the stretcher support is, the faster it will move. Pay attention to the movements of the stretcher support at all times.

### 03.3.4 LATERAL DISPLACEMENT

All stretcher supports allow a lateral movement of 266mm to facilitate the movement of health technicians inside the ambulance.

To carry out this movement, you must locate the pedal that is placed at the rear of the right side of the stretcher support (according to the direction of the ambulance).

Activate the pedal with your foot and accompany the movement by pushing or pulling the bench platform sideways with your hands. Release the pedal when the base is in the desired position and move it slightly to one side and the other to ensure that the carriage is locked in one of the 5 possible positions.

## 03 OPERATION

### 03.3.5 SCOOP STRETCHER FIXATION (ONLY FOR PB460/1, PB460/3 AND PB455)

The PB460/1, PB460/3 and PB455 stretcher supports have accommodation for a scoop stretcher.

Follow the steps below for proper attachment and removal:

To place it, the scoop stretcher must be slid upside down on the base tray. Gently push it until it is in contact with the front retaining clips. Push it harder against the retaining clips until it is anchored.

To extract the scoop stretcher from the accommodation, hold it with both hands and pull it hard until it disengages from the clamps. Keep pulling it by sliding it along the base tray until it is completely removed.

### 03.3.6 SCOOP STRETCHER AND SPINAL BOARD FIXATION (ONLY FOR PB455/4)

The PB455/4 stretcher support has double accommodation for a scoop stretcher and a spinal board.

Follow the steps below for proper attachment and removal:

Take the spinal board together with the scoop stretcher and slide them onto the bed tray. Push them along the tray until they are in contact with the front stop.

In the central part of the bench you will find a belt that you must fasten around the spinal board and the scoop stretcher. You will find another belt at the front of the bench that you must pass through the tube of the scoop stretcher and one of the holes in the spine board and fasten it. Adjust the belts well so that both products are well secured and thus avoid noise during transport.

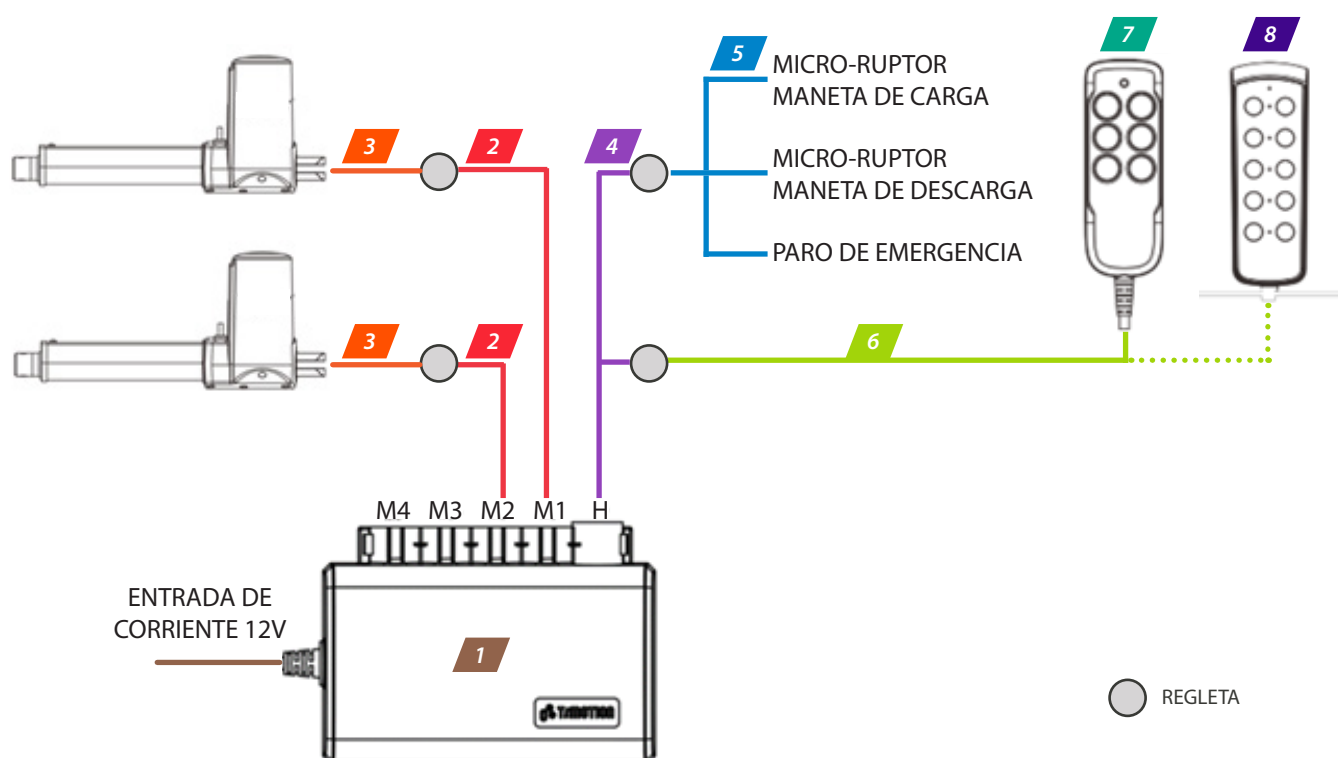
To remove the scoop stretcher and the spinal board from the accommodation, unfasten the two belts. Hold both products together with both hands and pull them out by sliding them along the base tray until they are completely removed.

## 03 OPERATION

### 03.4 Electric diagram

#### 03.4.1 COMPONENTS ELECTRIC DIAGRAM

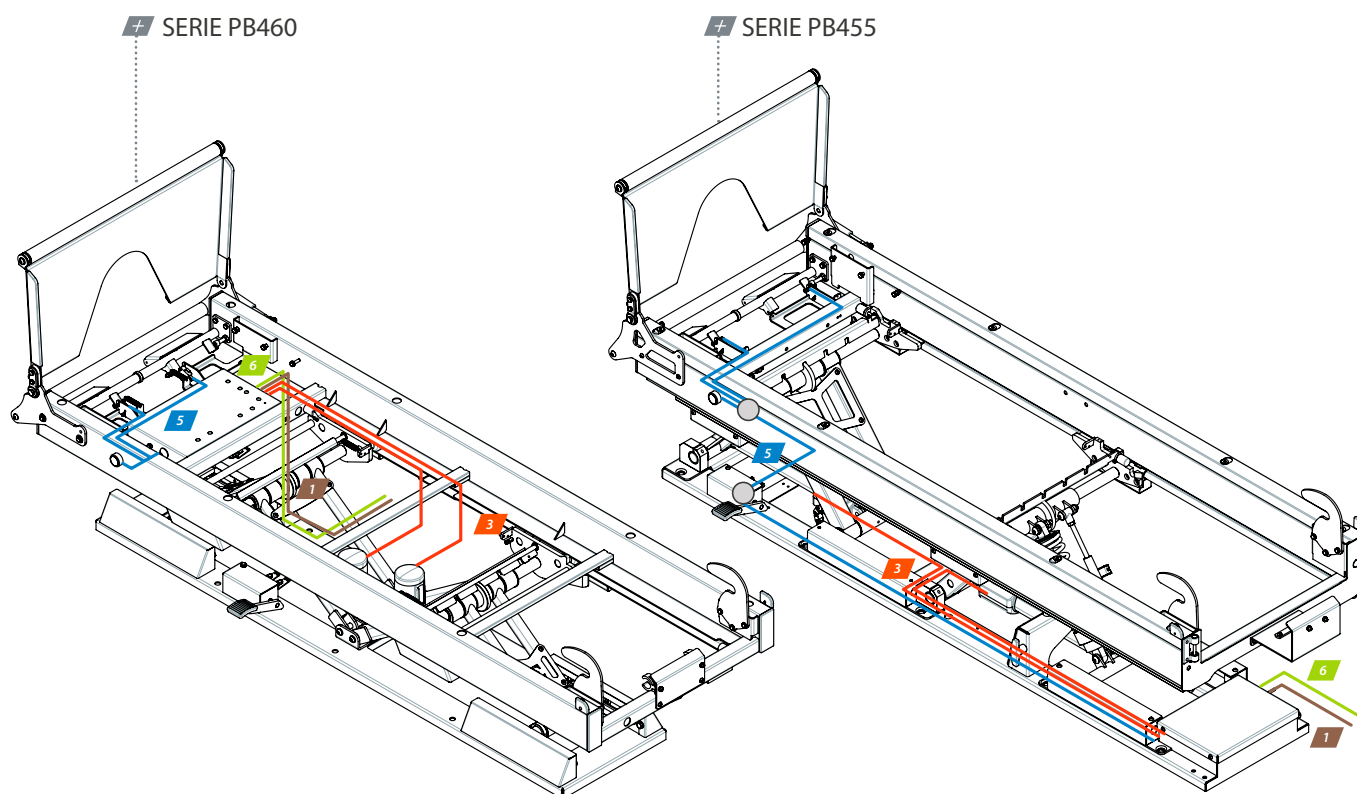
Nº	Reference	Units	Description
1	PB4620-05270	1	Electronic box with 12V current input cable
2	PB4620-05250	2	Extension cable for motors connection
3	PB4620-05240	2	Motor connection cable
4	PB4620-05260	1	Extension cable for microswitches, emergency stop and controls connection
5	PB4620-05310	1	Emergency stop and charge and discharge micro-switches connection cable SERIE PB460
	PB4550-00090	1	Emergency stop and charge and discharge micro-switches connection cable SERIE PB455
6	PB4620-05300	1	Controls connection cable
7	PB4620-05290	1	Stretcher support hand control
8	PB4620-05280	1	Programming hand control





## 03 OPERATION

### 03.4.2 WIRING LINES



### 03.5 Troubleshooting

PROBLEM	CAUSE	SOLUTION
Structural damage	Improper use or operators not properly trained	Take the stretcher support out of service immediately and contact the technical service
The lock lever does not return to its position.	The spring is damaged	Replace spring. If the problem persists, contact the technical service.
When operating the levers the controls the platform does not extract	The cables are not tight enough	Tighten the cables with the tensioners. If the problem persists, contact the technical service.
When activating the pedal, the platform cannot be moved laterally.	The cables are not tight enough	Tighten the cables with the tensioners. If the problem persists, contact the technical service.
When operating the controls, the bed does not tilt	The microswitches are poorly positioned	Reposition the microswitches so that they make contact with the lever stop. If the problem persists, contact the technical service.

## 04 GENERAL MAINTENANCE

### CLEANING

It is essential to keep the equipment clean to ensure a proper use and durability of the set. A thorough clean must be done periodically, especially in areas exposed to dirt that may be damaged such as gears or mobile elements.

Do not use high-pressure cleaning systems, neither bleach to disinfect the product, they can damage it. Instead, use a hydroalcoholic based disinfectant, wash with water and let it dry naturally, do not use sources of direct heat to dry.

MAKE SURE TO KEEP AREAS FROM FIGURE 5 FREE OF WATER AND HUMIDITY. TAKE SPECIAL CARE NOT TO GET THEM WET WHILE WASHING THE SET.

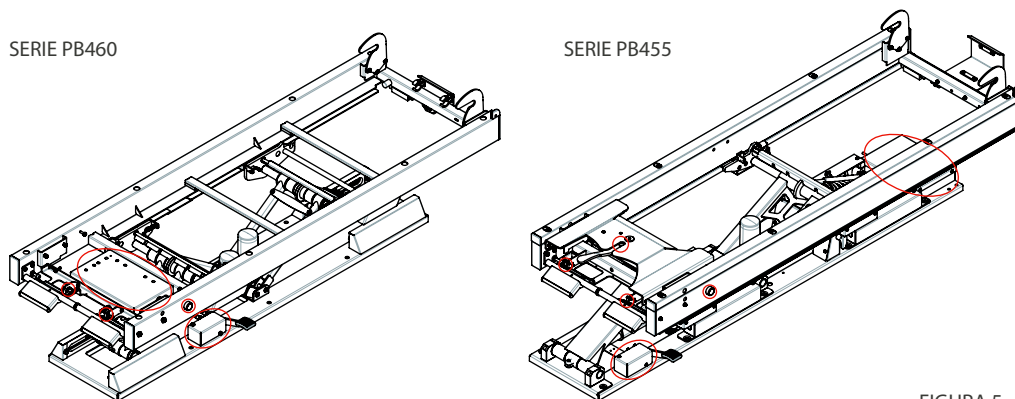


FIGURA 5

### MOBILE ELEMENTS

Due to the intense and continuous use of mobile elements such as levers or commands, periodically examine its proper operating.

Inspect the mechanical connections that may exist.

### LUBRICATE

Generally, all moving parts must be lubricated. Our products leave the factory completely lubricated. However, it is possible that the elements lose lubrication with the passage of time and the use of the product, either due to loss of lubricant or dirt.

Periodically clean and lubricate affected areas according to manufacturer's specifications.

Check for loose, missing or worn parts. Periodically inspect all moving parts to ensure components are tight.

### WEAR AREAS

Inspecting regularly on the system components for signs of wear is a preventive measure that can reduce breakdowns. Check possible lubricant leakages, grooves or bearing in poor condition.

### MECHANICAL FIXING

We call mechanical fixing elements to the components used to fix the product as a whole, mainly screws and derivatives.

To some terms of use, due to vibrations or impacts, certain elements may lose their tightening torque or fixing properties. Periodically review that there are no loose elements, especially on moving parts. Please note and always respect the recommended tightening torques.

### REPLACEMENT OF COMPONENTS

In the event that certain mechanical parts need to be replaced by qualified service personnel, they should contact our sales department for more information on ordering spare parts and their installation.

MAINTENANCE SUMMARY	EVERY USE	WHEN NEEDED	EVERY MONTH	EVERY YEAR	EVERY 4 YEARS
DISINFECT	X				
CLEAN		X			
INSPECT		X	X		
LUBRICATE		X		X	
SPRINGS REPLACEMENT				X	

## 05 SPARE PARTS AND ACCESSORIES

To request a spare part, indicate:

- **Model** of stretcher support that needs the replacement
- **Number and description** of the set in which the needed part is located (see table on the right)
- **Point out** the part in the drawing, or the area where it is located.

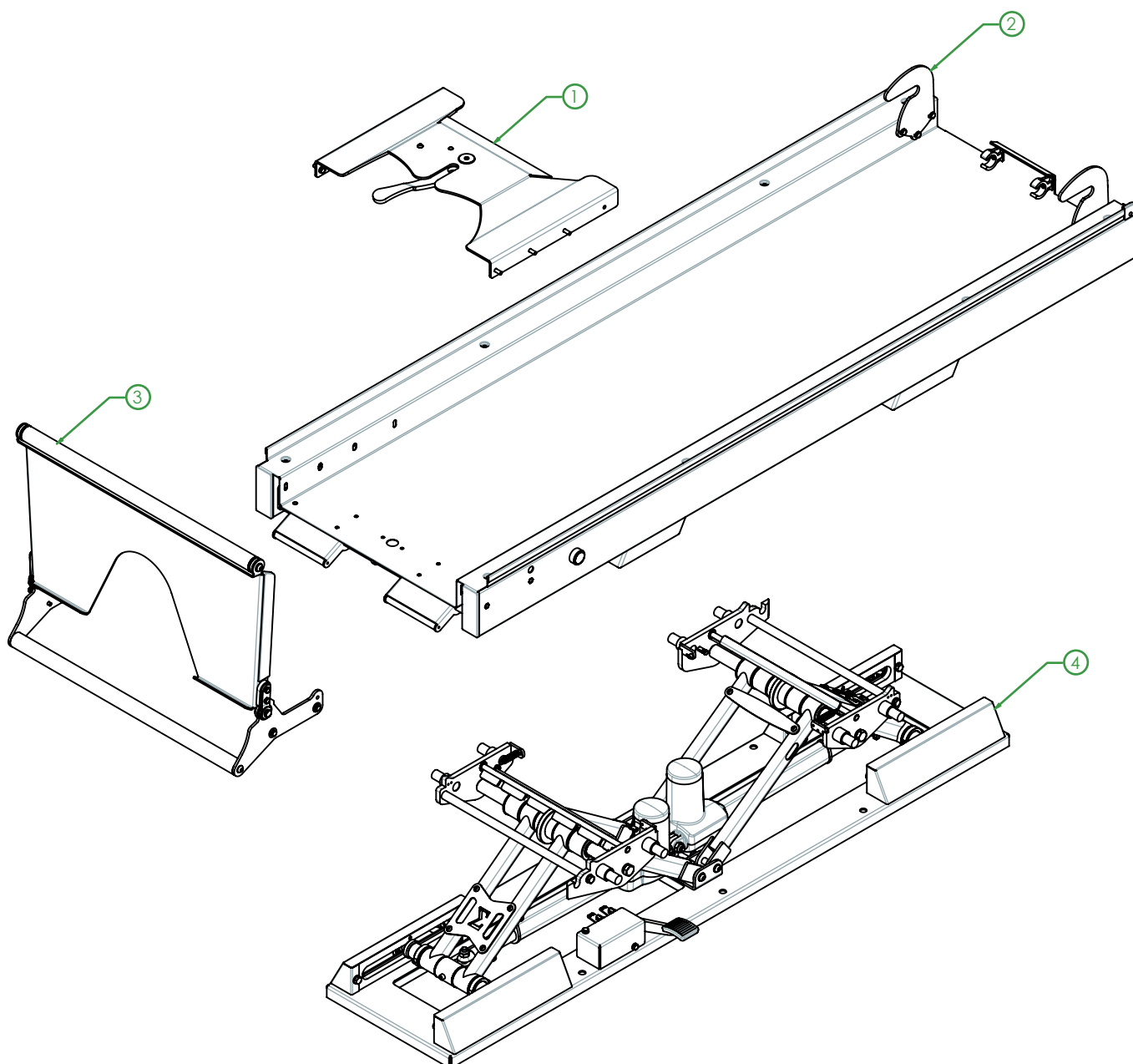
Following these indications, our sales department will provide you with a detailed drawing of the set so that you can specify the reference of the required spare part.



The drawing is indicative. Depending on the model obtained, it may present design variations according to its performance.

N°	DESCRIPTION OF COMPONENTS
----	---------------------------

- |   |                   |
|---|-------------------|
| 1 | Locking assembly  |
| 2 | Platform assembly |
| 3 | Ramp assembly     |
| 4 | Guide assembly    |



## 6 TRAINING REGISTER

The product must be used by trained personnel only, having attended specific training for this device and not for similar products.

Keep this document at least 10 years from the end of life of the device.

PLACE AND DATE	NAME OF THE OPERATOR	NAME OF TRAINER	TYPE OF TRAINING

## 7 MAINTENANCE REGISTER

Perform the required maintenance as indicated by the manufacturer in this user's manual.

Keep this document at least 10 years from the end of life of the device.

[illegible]

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This guarantee will be valid only when it is presented with the original invoice or proof of purchase (indicating the date of purchase, model and the name of the distributor) together with the defective product during the period covered by the guarantee. Promeba, S.L. reserves the right not to offer the free warranty service if the indicated documents are not presented or if the information they contain is incomplete or illegible.

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2. This guarantee does not cover transportation costs or risks derived from the transportation of your product to and from Promeba, S.L.

3. This warranty does not cover any of the following:

a) Periodic maintenance and repair or replacement of parts derived from normal wear and tear.

b) Expendable material (components that are expected to need periodic replacement during the life of the product, such as non-rechargeable batteries, light bulbs, etc.).

c) Damages or defects derived from the improper use, operation or treatment of the product and not due to normal use of the product.

d) Damages derived from:

i. Misuse, including:

- Treatment that results in damages or physical, superficial or appearance changes of the product.

- Installation, use or storage of the product in a way that does not respect the instructions described by Promeba, S.L.

- Maintenance of the product in a way that does not respect the instructions of Promeba, S.L. for proper maintenance.

- Installation or use of the product in a way that does not respect the technical or safety regulations of the country where it is used or installed.

iii. Use of components not provided with the product or incorrect installation of accessory parts not previously tested.

iii. States or defects of the system in which the product is used or incorporated with the exception of other products Promeba, S.L. designed for use with the product.

iv. Use of the product with accessories, peripheral units and other products of a type, condition or standards not established by Promeba, S.L.

v. The manufacturer or distributor will be solely responsible for deciding whether to send the parts for repair, or to replace the product in its entirety. In no case will operators be sent to repair or replacement of the product.

Except in the cases mentioned above, Promeba, S.L. will make no warranties in relation to product, performance, accuracy, reliability, or fitness for logic purpose of the equipment or other type. If this exception is not legal or contemplated by current law, Promeba, S.L. will limit or exclude your warranties only to the extent permitted by applicable law.

The only obligation on the part of Promeba, S.L. in connection with this warranty is to repair or replace parts subject to the terms and conditions of this warranty.

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