CE

MEDICAL DEVICE

KSP® ITALIA

PATIENT LIFTS FOR HOME USE
N305-150, N315-150, N505-170, N515-150, N705-200, N715-170, N715-200

PATIENT STAND-UP LIFTS FOR HOME USE
N815-170, N815-200, N825-170, N825-200

Instructions and maintenance manual

Class I Medical Device in accordance with Annex VIII, Regulation (UE) 2017/745 (rule 1 and rule 13).

Manual Version 4-2023 - REV.01 – Date of version approval: 2023-08-07

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1. Declarations of Conformity

Declaration of Conformity
(in accordance with ISO/IEC 17050-1)

2) No. 476/2023 - **Date 07/08/2023**

2) Issuer's name: KSP ITALIA SRL
Issuer's adress: **VIA DELL'ARTIGIANATO 1, 06031 BEVAGNA (PG), ITALY Tel. 0742.36.19.47 Fax 0742.36.19.46 www.kspitalia.com, e-mail: ksp@kspitalia.com**

EUDAMED SRN: **IT-MF-000009316**

3) Object of the declaration: **HYDRAULIC PATIENT LIFTER, models N305/150 - N505/170 - N705/200**

4) The Manufacturer KSP Italia declares under his sole responsibility that the medical device above described complies with all applicable requirements of the following legislation and fulfils all applicable provisions thereof (and any other relevant UE legislation providing for the issuance of EU declaration of conformity):

	Documents No.	Title	Edition/Date of issue
5)	Regulation (EU) 2017/745	Medical Devices Regulation	Emission: 5 April 2017
	Regulation 2011/65/EU	Restriction of the use of certain hazardous substances in electrical and electronic equipment	Emission: 8 June 2011

Additional information:

6) Medical devices designed and manufactured with quality management system compliant to ISO 13485.
CE Marked Medical device in accordance with Annex II and III, Regulation (UE) 2017/745.
Class I medical device as for rule 1 and rule 13, Regulation (UE) 2017/745, Annex VIII.
Registered at the Italian Ministry of Health with numbers:

N305/150: 227264238, N505/170: 2272680, N705/200: 2272767.

BASIC UDI (GMN): 805577318SOLLEVAT-OLEO3C

Signed for and on behalf of:

KSP Italia Srl

Bevagna, 07/08/2023

7) **Claudio Emanuelli,**
Legal Representative

Declaration of Conformity
(in accordance with ISO/IEC 17050-1)

1) No. 470/2023 - **Date 07/08/2023**

2) Issuer's name: KSP ITALIA SRL
Issuer's adress: **VIA DELL'ARTIGIANATO 1, 06031 BEVAGNA (PG), ITALY Tel. 0742.36.19.47**
Fax 0742.36.19.46 www.kspitalia.com, e-mail: ksp@kspitalia.com

No. EUDAMED SRN: **IT-MF-000009316**

3) Object of the declaration: **ELETRIC PATIENT LIFTER, models N315/150 – N515/150**

4) The Manufacturer KSP Italia declares under his sole responsibility that the medical device above described complies with all applicable requirements of the following legislation and fulfils all applicable provisions thereof (and any other relevant UE legislation providing for the issuance of EU declaration of conformity):

	Documents No.	Title	Edition/Date of issue
5)	Regulation (EU) 2017/745	Medical Devices Regulation	Emission: 5 April 2017
	Regulation 2011/65/EU	Restriction of the use of certain hazardous substances in electrical and electronic equipment	Emission: 8 June 2011

Additional information:

6) Medical devices designed and manufactured with quality management system compliant to ISO 13485.
CE Marked Medical device in accordance with Annex II and III, Regulation (UE) 2017/745.
Class I medical device as for rule 1 and rule 13, Regulation (UE) 2017/745, Annex VIII.
Registered at the Italian Ministry of Health with numbers:
N315/150: 2272678, N515/150: 2272682.

BASIC UDI (GMN): 805577318SOLLEVAT-ELETZD

Signed for and on behalf of:

KSP Italia Srl

Bevagna, 07/08/2023

7) Claudio Emanuelli,
Legal Representative

Declaration of Conformity
(in accordance with ISO/IEC 17050-1)

1) No. 472/2023 - **Date 07/08/2023**

2) Issuer's name: KSP ITALIA SRL
Issuer's adress: **VIA DELL'ARTIGIANATO 1, 06031 BEVAGNA (PG), ITALY Tel. 0742.36.19.47**
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No. EUDAMED SRN: **IT-MF-000009316**

3) Object of the declaration: **ELETRIC PATIENT LIFTER GEMINI, models N715/170 – N715/200**

4) The Manufacturer KSP Italia declares under his sole responsibility that the medical device above described complies with all applicable requirements of the following legislation and fulfils all applicable provisions thereof (and any other relevant UE legislation providing for the issuance of EU declaration of conformity):

	Documents No.	Title	Edition/Date of issue
5)	Regulation (EU) 2017/745	Medical Devices Regulation	Emission: 5 April 2017
	Regulation 2011/65/EU	Restriction of the use of certain hazardous substances in electrical and electronic equipment	Emission: 8 June 2011

Additional information:

6) Medical devices designed and manufactured with quality management system compliant to ISO 13485.
CE Marked Medical device in accordance with Annex II and III, Regulation (UE) 2017/745.
Class I medical device as for rule 1 and rule 13, Regulation (UE) 2017/745, Annex VIII.
Registered at the Italian Ministry of Health with numbers:
N715/170: 2257594, N715/200: 2272696.

BASIC UDI (GMN): 805577318SOLLEVAT-ELETZD

Signed for and on behalf of:

KSP Italia Srl

Bevagna, 07/08/2023

7) Claudio Emanuelli,
Legal Representative

Declaration of Conformity
(in accordance with ISO/IEC 17050-1)

1) No. 405/23- **Date 07/08/2023**

2) Issuer's name: KSP ITALIA SRL
Issuer's adress: **VIA DELL'ARTIGIANATO 1, 06031 BEVAGNA (PG), ITALY Tel. 0742. 36.19.47**
Fax 0742.36.19.46 www.kspitalia.com, e-mail: ksp@kspitalia.com

N° EUDAMED SRN: **IT-MF-000009316**

3) Object of the declaration: **PATIENT STAND-UP HOISTS, models:**
N815/170 - N825/170 - N815/200 - N825/200

4) The Manufacturer KSP Italia declares under his sole responsibility that the medical device above described complies with all applicable requirements of the following legislation and fulfils all applicable provisions thereof (and any other relevant UE legislation providing for the issuance of EU declaration of conformity):

	Documents No.	Title	Edition/Date of issue
5)	Regulation (EU) 2017/745	Medical Devices Regulation	Emission: 5 April 2017
	Regulation 2011/65/EU	Restriction of the use of certain hazardous substances in electrical and electronic equipment	Emission: 8 June 2011

Additional information:

6) Medical devices designed and manufactured with quality management system compliant to ISO 13485.
CE Marked Medical device in accordance with Annex II and III, Regulation (UE) 2017/745.
Class I medical device as for rule 1 and rule 13, Regulation (UE) 2017/745, Annex VIII.
Registered at the Italian Ministry of Health with number:
N815/170: 2272706, N825/170: 2272716, N815/200: 2272723, N825/200: 2272720.

BASIC UDI-DI (GMN): **805577318VERTICAL-ELETT3**

Signed for and on behalf of:

KSP Italia Srl

Bevagna, li 07/08/2023

7) Claudio Emanuelli,
Legal Representative

2. The Manual

The contents of this user and maintenance manual together with the instructions listed on the label, includes all the information provided by the Manufacturer in conformity with Annex VIII, Regulation (UE) 2017/745.

This medical device must be accompanied by all information required to ensure its safe use. Such information must take into account the training background and expertise of the potential users.

This manual is an integral part of the device. It must therefore be stored carefully and always accompany the device if the latter is transferred to a third person.

The manual contained in the packaging is to be considered an integral part of the device and must always be kept with the device as it contains information required for its safe use.

It is intended for operators/end users, the owner, the users and maintenance technicians.

This manual provides indications on the technical features of the device, on its proper use, transport, storage, maintenance, disposal and relevant safety precautions.

The owners/end users of this product shall be promptly informed by the Manufacturer through the appropriate channels of any changes to the instructions which might, in any way, be relevant to the safety of patients and/or the operator/user.

The Manufacturer is not obliged to notify any other type of amendment and/or supplementary information.

Should this manual, the labels and/or the markings on the product be damaged, even partially, become faded or partially/wholly illegible, another copy must be immediately requested from the dealer or Manufacturer.

This manual refers to the devices listed in the section which contains the declaration of conformity. Unless otherwise indicated, the instructions are to be considered valid for all versions. The specific features of each model will be explicitly highlighted in this manual.

2.1 Definitions

This manual contains terminology the meaning of which is provided below.

Medical Device: A device intended by the Manufacturer for use by people for the treatment, diagnosis or alleviation of a disease/sickness. The patient lift and stander are medical devices.

End User: The person who uses the medical device. In this manual, it is the individual/patient who is lifted and/or transported by the patient lifts and standers.

Operator: The person in charge of manoeuvring the device and/or the patient.

Hereinafter, both the patient lift and the stander will be referred to as the ‘device’. For features exclusively referring to one or the other, the specific names ‘patient lift’ or ‘’stander’ will be used.

Domestic environment: environment referring to the place where the User normally lives or is cared for, with intended residential use. For example, house, apartment, etc. Buildings or places with other intended use, such as hospitals, nursing homes, retirement homes, communities, rehabilitation and geriatric centers are not included in the domestic environment. Medical/ assistance environments with characteristics similar in size to a home residence, such as clinics, etc. are also excluded.

Domestic or home use: Use in a domestic environment, dedicated to no more than two people in the same environment.

Internal use: Domestic use within the walls of the building. Outdoor use, in gardens, terraces, verandas and similar is considered outdoor use.

2.2 Graphic Symbols

The meaning of the graphic symbols used in this manual and on the device itself is provided in the table below.

Symbol	Meaning	Notes
	Mark of conformity to European standards	-
	Waste symbol in compliance with Directive 2012/19/EC (WEEE)	-
	Date of manufacture	-
	Manufacturer	-
	Model	-
	Serial number	-
	Instruction manual	-
	Do not use outdoors. Keep dry	-
	General warning sign	-
	Warning: hazardous voltage	-
	Warning: risk of crushing of limbs	-
	Warning: Moving mechanical parts	-
	General prohibition sign	-

	High heels forbidden	-
	It is forbidden to push the patient lift sideways	-
	General mandatory conduct	-
	Refer to instruction leaflet	-
	Alternating current	-
	Applied parts - type B	-

3. Intended use

This manual was drawn up taking into account the characteristics, knowledge, education and training of the Operator/End user.

The Operator handling the device must:

- Be perfectly acquainted with the product;
- Be over the age of 18;
- Be physically strong and in good mental health (e.g. not be under the influence of alcohol or drugs and not suffering from any mental illness which might cause hallucinations, loss of balance, or similar symptoms; if in doubt, please contact the Manufacturer);
- Be capable of assessing any dangerous situations, tackling them with composure and cautiously;
- Have an excellent grasp of written and spoken English in order to be able to read and understand the manual;
- Know the meanings of the symbols and markings;
- Be able to move the device forward and backward;
- Have no trouble standing up or keeping their balance;
- Be physically capable of handling and supporting the patient when the latter is raised/lowered, lifted and transferred.

CHECK THE SUITABILITY OF THE ENVIRONMENT BEFORE USE!!

The Operator/End user is fully responsible for the suitability/compatibility of the rooms where the product is to be used.
To verify the suitability of the space where the device will be used, it is also possible to request a demonstration visit performed by authorised personnel for the purpose of determining the compatibility of the medical device and the site where it will be used.
The environment must be absolutely domestic, you have to avoid using the device in nursing homes, retirement homes, hospitals, etc.

THE DEVICE IS NOT SUITABLE FOR OUTDOOR USE BUT IS INTENDED FOR DOMESTIC INDOOR USE ONLY.

The device is an aid for the disabled that allows individuals with reduced mobility to move with the help of an operator.
It is a class-I medical device as for Annex VIII of Regulation (UE) 2017/745. It has been manufactured in compliance with Italian national and international regulations on medical devices & aids for the disabled and figures on the Register of the Ministry of Health for Medical Devices.
The device can be transported and used in various room types, ensuring the mobility, safety and comfort of the User, while minimising the effort required by the Operator.
The device is intended for persons unable to walk and who need to be moved around on a single floor or on different floors inside buildings, with the assistance of one or more operators; or, in the

stander version, it can also be helpful in achieving an erect posture.

It consists of a metal frame powered by a direct-current motor or by a manual oil-hydraulic actuator, powered (optionally) by a rechargeable battery which can be removed and is interchangeable.

In the case of the patient lift, movement is accomplished by means of a horizontal boom hinged to a vertical column on one end and to a spreader bar on the opposite end, on which the force of the above-mentioned actuator is applied. A rigid/flexible sling, or stretcher, is attached to the spreader bar to support the patient.

In the case of patient stands up lift, the far end of the patient stander boom has two upward-facing arms to which the lifting sling is attached.

The device is intended for transporting people only as described in this manual.

It must be used within the limits and according to the methods explicitly set forth by the Manufacturer in this Manual. The Manufacturer is not liable for any damage resulting from improper use of the product by untrained persons, as well as from unauthorised modifications or interventions, including the use of spare parts not purchased directly from KSP (or not authorised thereof), exceptional occurrences or total/partial failure to observe the instructions in this manual.

The device is used exclusively for IN A DOMESTIC ENVIRONMENT, it is not suitable for environments such as hospitals, nursing homes, retirement homes, communities, etc.

4. Safety requirements

4.1 General warnings

Use this device as intended and in accordance with the instructions and manner indicated; the Manufacturer assumes no liability for damages to objects or injury to persons caused by incorrect and/or improper use of the device or for purposes other than those intended by the Manufacturer.

The environment of use is exclusively the domestic one, its use in a care or hospital environment is prohibited, such as nursing homes, retirement homes, hospitals, rehabilitation centers and similar.

Use of the device implies that the Operator/User has read and understood the contents of this Manual and relative user instructions, and is aware of the risks related to its incorrect and improper use.

Therefore, it is understood that persons without sufficient knowledge of the device and its operating modes/features are forbidden from using it. The Operator/User having any doubts and/or uncertainties regarding its operation and use must contact the authorised dealer and/or the Manufacturer directly, who will provide explanations/clarifications. Where necessary and expressly requested, specific assistance will be provided in accordance with the terms and conditions outlined in the purchase documents.

BEFORE USING THE DEVICE, READ THIS MANUAL AND THE WARNINGS CAREFULLY

In order to ensure the continued conformity and/or essential features of the device, the following must be avoided:

- Incorrect installation;
- Improper use;
- Using the device with incompatible body support units;
- Using the device to place the User into, or lift out of, a bathtub;
- Using the device with beds lacking the minimum clearance space below (see following paragraphs);
- Use to store / extract the user laterally with respect to the lift. In addition, the harness must not go outside the perimeter of the lift;
- Use to place the user on examination tables, magnetic resonance imaging, etc.;
- Using non-original parts and/or accessories without approval from the Manufacturer;
- Interventions and/or tampering by unauthorised personnel;

- Failure to carry out maintenance, or improper maintenance.
- Non-domestic use.

The following are warnings and precautions to be observed during the installation, use and maintenance of the device, in order to fulfil the safety requirements safeguarding the Operator and End user and to ensure that the device works properly.

- To prevent improper use by unauthorised persons, remove the starter key (if present) or the battery (for electric devices) when the device is not needed; for non-electric devices, attach a key locking device (such as a cable or chain used for locking bicycles);
- Any manipulation, replacement or intervention on the device by people not authorised by the Manufacturer voids the warranty and exempts the Manufacturer from any whatsoever liability for direct and/or indirect damage to people or objects;
- For the electric version, use an appropriate power cable. Only use a power cable that is approved and certified for the country of use. Periodically check the condition of the cable. Push the power plug fully into the socket located on the back of the device;
- For the electric version, use a power supply voltage between 220–230 VAC 50/60 Hz (or nonetheless not different to the voltage shown on the data plate);
- To prevent any hazard for people or property, observe the data plate ratings and symbols on the product. Consult the manual before making electrical connections and using the device;
- For the electric version, ensure there aren't exposed circuits. Do not touch any live wires or exposed parts when the device is plugged in;
- Do not operate if a fault is suspected or if there are signs of breakage on the casing;
- If you suspect the device has a fault and/or is damaged, have it inspected by specialised technicians authorised by the Manufacturer;
- Only perform cleaning and maintenance work after the device has been disconnected from the mains power supply and is switched off, and after the battery has been removed;
- Avoid any dust or liquids from coming into contact with or penetrating the device;
- Do not operate the device in potentially explosive atmospheres and/or in the presence of flammable mixtures;

- Avoid exposure to high temperatures. The operating temperature must be between 10°C and 35°C;
- Do not use the device outdoors. It was designed and manufactured for use in enclosed environments protected against the elements;
- Use only original spare parts supplied by the Manufacturer;
- Ensure that the characteristics of the mains power supply conform to the power requirements of the device, as indicated on the latter's data plate and in this manual;
- Do not use other devices on the patient while the lift or stander is being used;
- For the electric version, do not use the device in the presence of strong electromagnetic fields which could cause malfunctions to the product and to other devices in the surrounding area. Keep mobile phones away from the area of use;
- Carry out maintenance work in accordance with the Manufacturer's provisions;
- The device must be installed and commissioned in accordance with the provisions of the EMC Directive provided in this manual;
- Wireless equipment and mobile devices could affect the operation of the electric versions of the device;
- Do not operate the electric version near (within 1 metre) a shortwave or microwave therapy DEVICE;
- Do not connect the patient simultaneously to high-frequency electrosurgical equipment;

Warning: the use of controls and adjustment devices, or the execution of procedures other than those specified in this manual, could result in risks for the User and the Operator.

The Manufacturer assumes no responsibility for damage, accidents or injury resulting from failure to observe the safety provisions and indications/guidelines outlined in this Manual.

Therefore, KSP Italia is not responsible for any damage that may result from misuse and/or unauthorised use of the product. Furthermore, it cannot be held responsible for any damage deriving from wear, negligence, carelessness, tampering, incorrect/faulty installation and/or connection of products, namely the incorrect and/or inappropriate use of the product by the Operator/End user, or any unauthorised third parties.

4.2 Contraindications and possible side effects

The device must only be used by trained personnel and after carefully considering the following warnings/contraindications.

The device is not suitable for moving people who appear 'agitated', or who are suffering from illnesses or taking medications which might cause them to make sudden movements, such as Alzheimer's disease, or patients whose mental-health problems cause 'agitation' or similar symptoms. If in doubt, please contact the Manufacturer and the attending physician to verify whether the device is suitable for transporting the patient.

- The device must only be operated by personnel instructed on its use;
- Please note that the electric version of the device must never be used with patients carrying a pacemaker or other devices, as these are affected by electromagnetic fields and electrostatic charges (for example, insulin pumps). If in doubt, consult the doctor;
- Do not use the device with patients who are pregnant or who suspect they may be pregnant;
- Do not use the device with patients suffering from serious heart or neurological disorders;
- Persons under the age of 18 years are forbidden from using the device without the assistance of an adult;
- Never use the device on wet, slippery, smooth, waxed, icy or similar surfaces, as they could cause Operators to lose their balance or interfere with the wheel brakes;
- Carpets, rugs and floor mats could be hazardous;
- Always keep holding the device and never leave it for any a reason during the transfer operations;
- Make sure there aren't persons or objects along the route;
- Always wear closed-toe shoes with non-slip soles, and make sure that the laces are securely tied to prevent them from getting caught in the moving mechanical parts;
- Never place the hands in the open slots or between moving machine parts;
- This device and its components have an expected service life of 8 years.

4.2.1 Other specific interference risks

In addition to the above, physical interference with persons/objects may occur.

Therefore:

- Make sure there aren't persons or objects along the route;
- When using the device to transfer the User from a bed, ensure there is a free space of at least 15 cm in height by 1.5 m width centred on the symmetrical axis, so that the base of the device does not interfere with parts of the bed and/or objects/pets.

Warning! The device is not suitable for transferring patients to/from bathtubs. To perform this operation, use specialised devices.

Verify that the layout of the rooms allows for using and handling the device with the User on board, without causing a hazard.

For this purpose, ensure:

- That the minimum door width is at least 5 cm greater than the base of the device in the transport position (with the legs of the base completely extended longitudinally and with minimum opening angle).
- That the minimum manoeuvring space is compatible with the dimensions of the purchased device.

4.2.2 User warnings

A risk assessment must be performed in order to ensure that the body support unit used with the patient is of the correct size, type and shape.

4.3 Improper use

Operators and Users must avoid any behaviour not expressly envisaged or recommended in this manual, even if it might seem risk-free.

Foreseeable incorrect use includes:

a) Normal negligence and unintentional incorrect use of the device;

b) Using the device outdoors for transfers given that it is only for domestic indoor use;

c) Instinctive reactions if a malfunction, accident or failure occurs during use;

d) Use in combination with other devices, objects or furnishings that is not permitted;

e) Use in unsuitable or incompatible environments;

f) If a malfunction/accident/failure occurs during the transfer, never leave the device with the

boom in the suspended position with the User on board. Secure it in the safety position as described in the section, 'Instructions for Emergency Situations'. Do not try to resolve the problem during the transfer, especially when a person is on board. Ask other staff members to assist and never leave the User unattended, unless this is unavoidable;

g) Behaviour which stems from 'taking the path of least resistance' when performing a task. The device is only designed to transport persons. Therefore, the transport of objects is strictly prohibited. The same also applies to the transport of persons who are holding objects, belongings or pets;

h) Foreseeable behaviour by certain patient categories (children, the disabled, etc.,). Also in this case, it is essential to use only properly selected personnel who has undergone appropriate training. Never allow unauthorised personnel to handle the device. If no authorised personnel is available, remove the starter key or battery and store it in a safe place. For non-electric devices, attach a key locking device, such as a anti-theft cable or chain used for bicycles. Only personnel with adequate knowledge of the device and the use and maintenance manual is authorised to use it;

i) Use in unauthorized environments. The environment of use is exclusively domestic and internal one, its use in care or hospital environment is prohibited, such as in nursing homes, retirement homes, hospitals and rehabilitation centers.

4.4 Safety instructions for electromagnetic compatibility (EMC)

The product is suitable for domestic use and in healthcare settings.

Do not use in proximity of HF surgical equipment and rooms with RF shielding of an MRI medical electrical system, or similar environments where the intensity of electromagnetic disturbances is high.

The essential performance and destination of use of the device is for the lifting and transport of the patient. Electromagnetic disturbances can cause sudden and involuntary activation of the lifting arm or interruption of the intended movement.

“WARNING: Use of this appliance adjacent to or stacked with other appliances should be avoided, as this may lead to incorrect operation. In these cases, it is necessary that the appliance and other equipment to observe and verify their normal operation.

WARNING: Use of accessories, transducers, and cables other than those specified or provided by the manufacturer of this equipment, could result in increased electromagnetic emissions or a decreased electromagnetic immunity level of this equipment, resulting in improper operation. Obtain cables and electrical components exclusively from KSP Italia.

WARNING: Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the DEVICE COVERED BY THIS MANUAL, including cables specified by the manufacturer. Failure to do so, may result in degradation of the performance of this equipment."

Follow all the instructions and recommendations in this manual so that as a result of electromagnetic disturbances, there are no negative effects for the patient and the operator.

The emissions and immunity of the DEVICE SUBJECT TO THIS MANUAL, are in compliance with EN 60601-1-2, CISPR group 1 Class B.

5. Transport, handling and unpacking

5.1 Packaging and transport

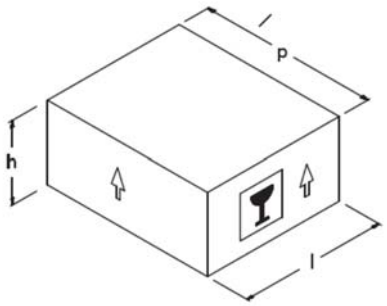
The device is shipped in cardboard packaging and is suitably protected from the vibrations caused during normal transport. The package must be transported in the upright position, avoiding any impact or sudden movements. Upon receiving the package, it must be thoroughly checked to make sure that the packaging is intact. If the package appears damaged, the courier service which performed the delivery should be notified immediately.

If the packaging was damaged during transport, the device must first be inspected by the Technical Support Service or personnel authorised by KSP Italia before it is commissioned.

- The device must not be used if, upon delivery, it shows signs of damage caused during transport. Notify the Technical Support Service to have the device inspected and overhauled.
- The Operator should be trained to use the device without a person on board, practising all the lifting, descending and manoeuvring phases on a flat surface, and in the rooms where it will actually be used, in order to acquire proficiency.
- The person operating the device must in good physical condition and capable of supporting and managing the weight of the device and of the User.
- The Operator must be fully acquainted with the contents of the manual and the symbols used.
- It is extremely important that the Operators verify their own ability to perform manoeuvres and the suitability of the rooms by completing trial runs where the device is to be used.
- Daily use of the device must only occur after ensuring that all the functional parts and safety devices are in good working order.

The packaging for the complete device includes 1 item:

Products	Dimensions W x D x H (mm)
Series 300	665 x 1160 x 270
Series 500	700 x 1330 x 470
Series 700-800	700 x 1330 x 470



When repacking the device, disassemble it into its three constituent parts – base, column and lift boom – as supplied when delivered, and place them in their original packaging. If in doubt, contact the Manufacturer. Once the device has been reassembled, carry out all the checks and adjustments listed in the section concerning the initial installation.

5.2 Packaging contents

Depending on the device model, the packaging contains the following components:

- Device support base (1)
- Vertical column (2)
- Spreader bar (patient lifts only) (3)
- User sling or body support unit (patient lifts only, if requested and of the type requested)
- Electric actuator (4)
- Battery pack (electric version only) (5)
- Control unit (electric version only) (6)
- Push-button control panel (electric version only) (7)
- Battery charger (electric version only) (8)
- Oil-hydraulic piston (oil-hydraulic version only) (9)
- Leg adjustment lever (10)
- Lift boom (11)
- Patient stander boom (12)
- Footplate/knee pad (patient stander only) (13)
- Various hardware items
- Use and maintenance manual

For the purpose of protecting the Operator from hazards resulting from the manual handling of the loads, refer to the technical specifications section which lists the weight of each individual part.

The person assigned to remove the device from its packaging must be trained in the risks involved in this operation.

To lift the load correctly without risking injury to the spine:

- The back must be kept straight
- The torso must be kept upright
- The weight being lifted must be held as tightly as possible against the body

To move loads heavier than 25 kg (if the operator is female the limit weight is 15 kg, the value set by the applicable legislation at the time this manual was revised) ask other persons for help or use an appropriate lifting device.

Do not raise the parts and carry them above shoulder level.

Place the box in an area where it is easy to unpack and assemble the parts.
When opening the packaging, do not use sharp or pointed instruments which might damage the parts inside.
It is advisable to keep the packaging for reuse should the device need to be shipped another time (e.g.: technical support); the original packaging ensures safe transport. All components on the device are easy to handle.

6. Assembly

6.1 Assembly of the model

Make sure the device has no visible signs of damage or dents caused during transport. If in doubt, contact your retailer or the Manufacturer.

The main images show the N700 and N800 models, but also apply to the N300 and N500 models.

- Remove all parts from the packaging.
- Place the packaging contents on a flat surface and make sure that all the components are in a good condition and are all present.
- Position the support column vertically (1) with respect to the base (2), aligning it with the stop, and fasten it using the bolts supplied (3).

Use an M19 hex key to tighten the bolts securely (3).

WARNING!!! THE NUTS AND BOLTS MUST BE TIGHTENED TO THE SPECIFIED TORQUE INDICATED BELOW. USE AN APPROPRIATE TORQUE SPANNER AS INDICATED BELOW.

ASSEMBLING THE LIFT BOOM (N300 - N500)

- Assemble the plastic flange (16) joining the two halves and place it between the lift boom (4) and the column (1) (Fig. A Version N300 - N500).

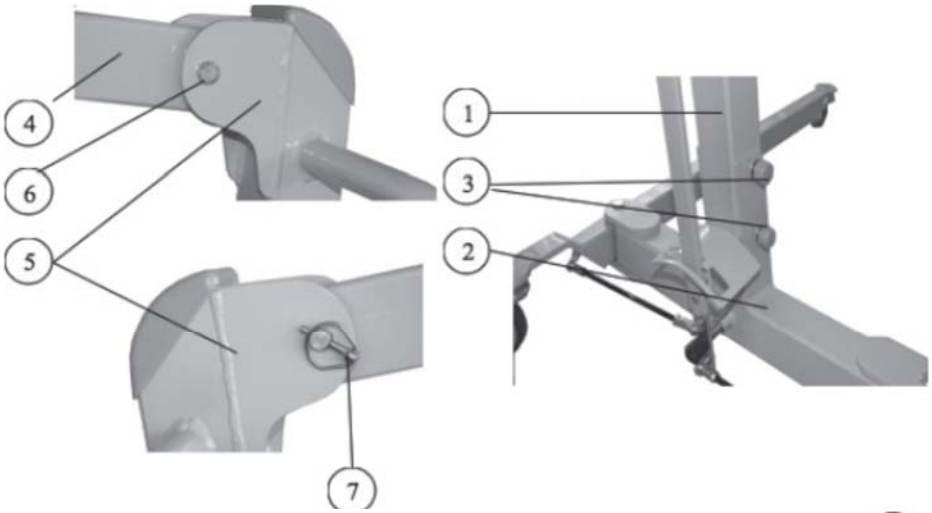
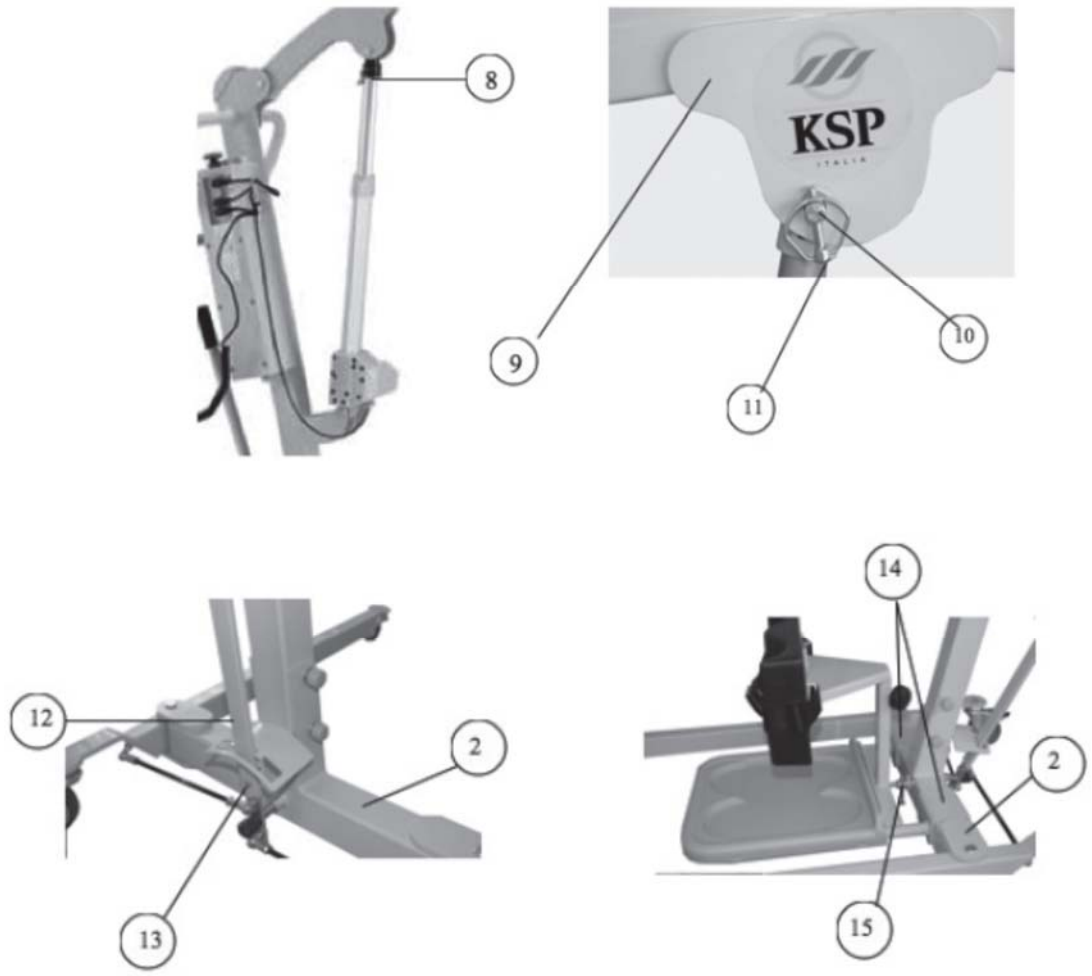


Fig. A – Versione/*Version* N300 - N500

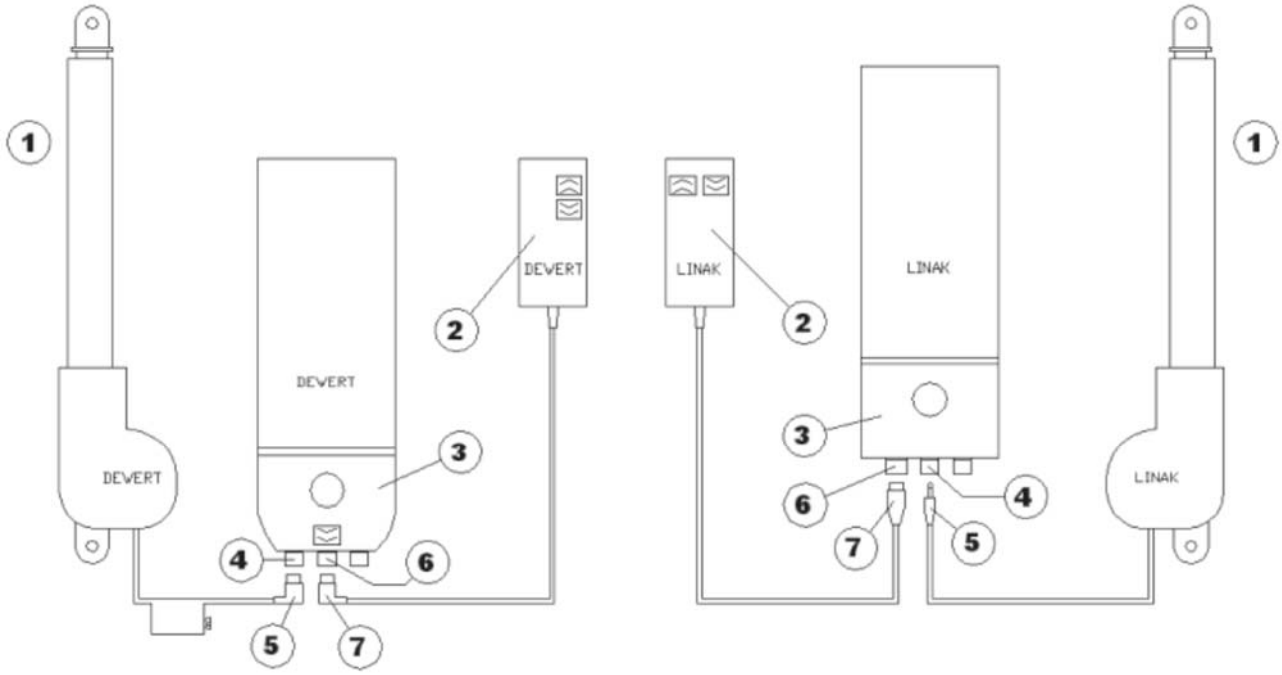
- Insert the upper end of the electric actuator (8) into the dedicated flange located on the upper boom (9) and fasten it in position with the pin (10) and the safety lock (11).
- Insert the release and actuation lever (12) in the support base (2) and fasten it in position with the screw (13). Use a male 3 mm hex key to tighten the screw (13).
- Assemble the N7953 leg rest footplate (patient stander version), inserting the relative anchor supports (14) directly in the base (2). Ensure it is locked in position by turning the locking screw (15).



Connecting the electrical wiring (the numbering refers to the figure below)

Proceed as follows:

- To connect the electrical wiring of the actuator (1), insert the electric plug (5) into the dedicated socket (4) of the control unit (3).
- To connect the electrical wiring of the push-button control panel (14), insert the electric plug (7) into the dedicated socket (6) of the control unit (3).



DEWERT **LINAK**

For correct use and the safety of the Operator and the User, all screws, bolts and nuts must be tightened to the correct tightening torque.

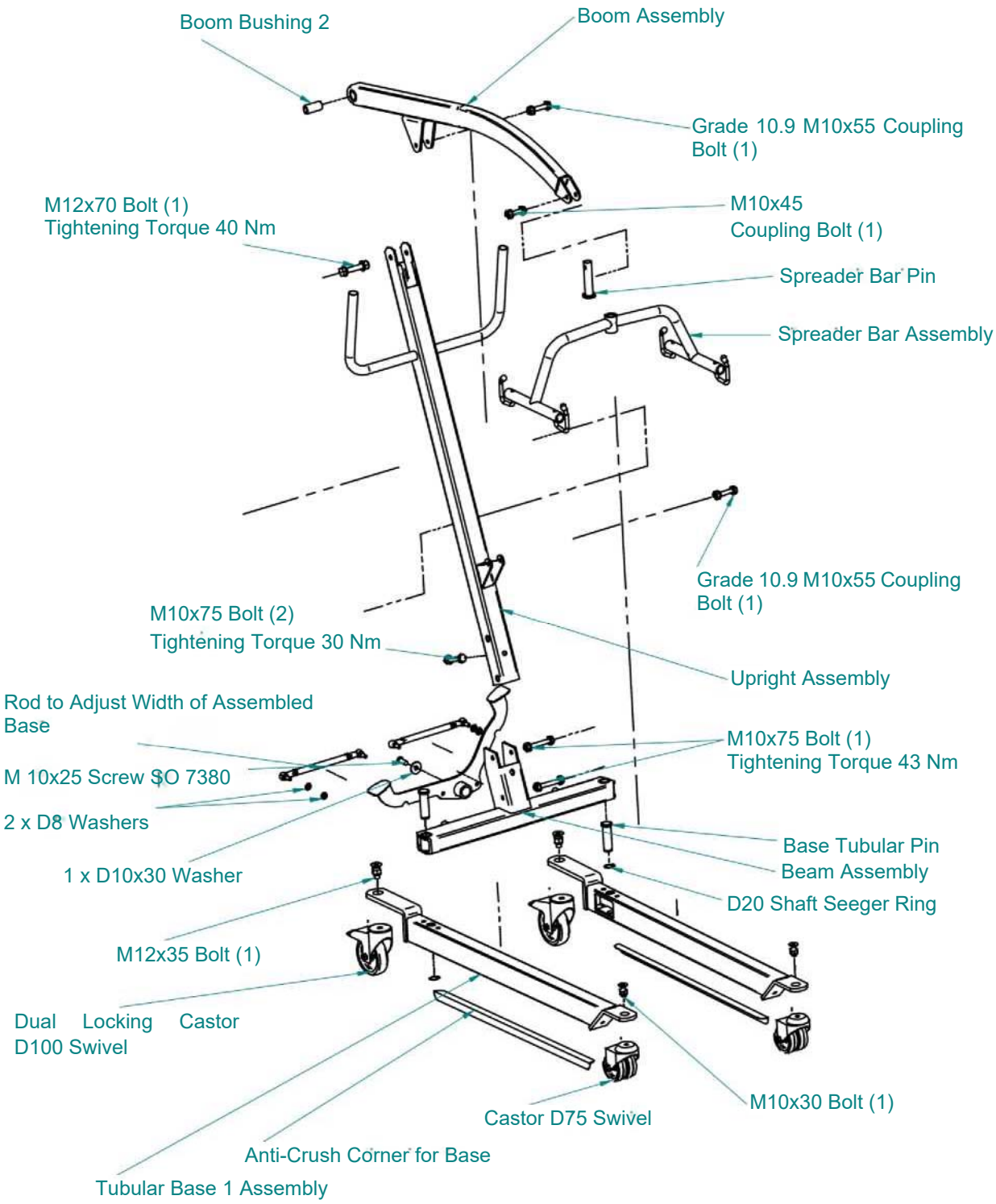
To this aim, personnel assigned to assembly, both for initial use and following disassembly for transport or repair, must use a calibrated torque spanner and tighten the components according to the tightening torque listed below.

Where the torque is indicated in the drawing, apply the indicated value.

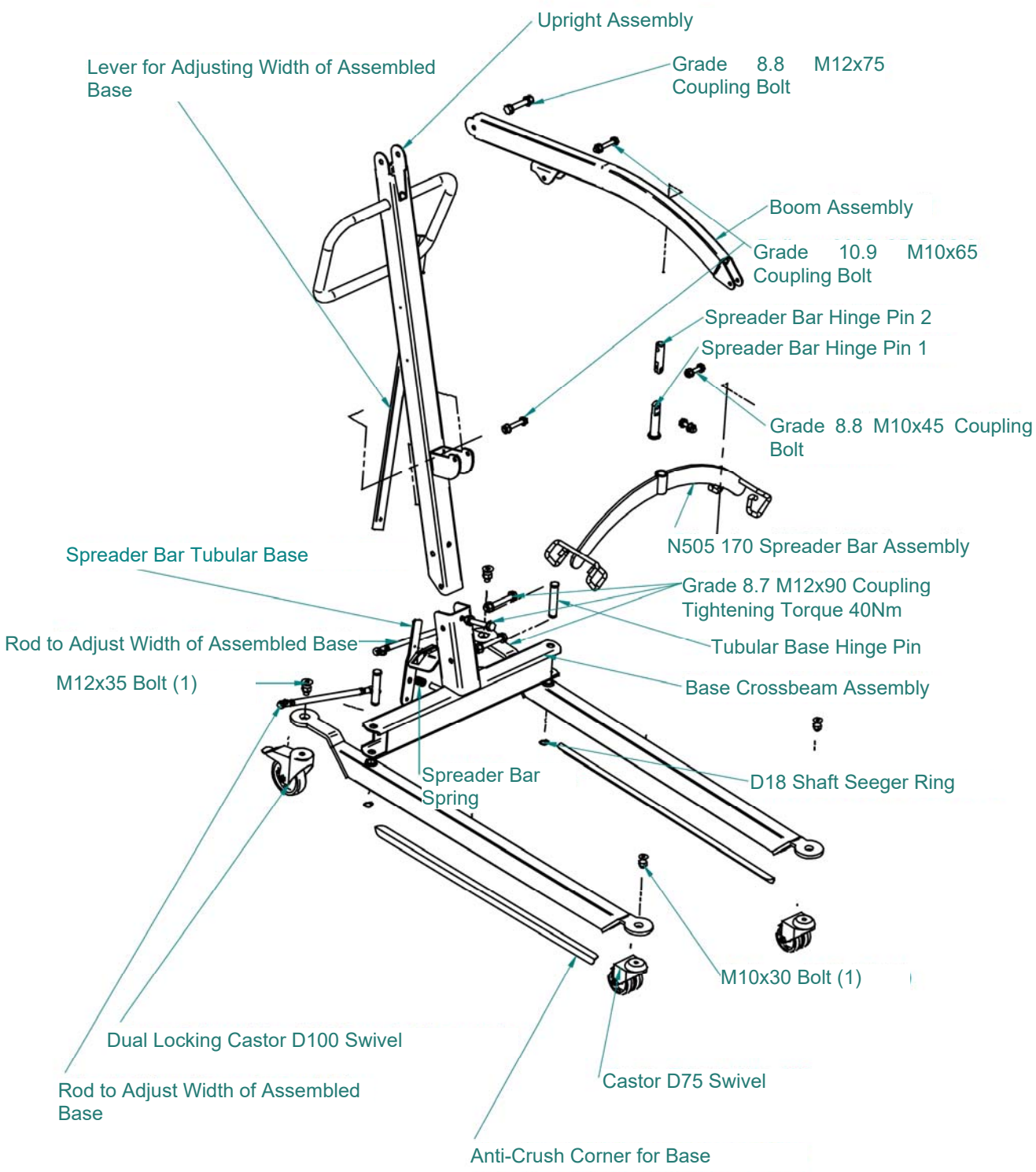
If ‘coupling’ is indicated, tighten the nut until it comes into contact with the surface and there is no axial clearance. Where no indication is provided, manually tighten until it is fully secured.

The component indicated by ‘standard anti-crush corner’, is available on request.

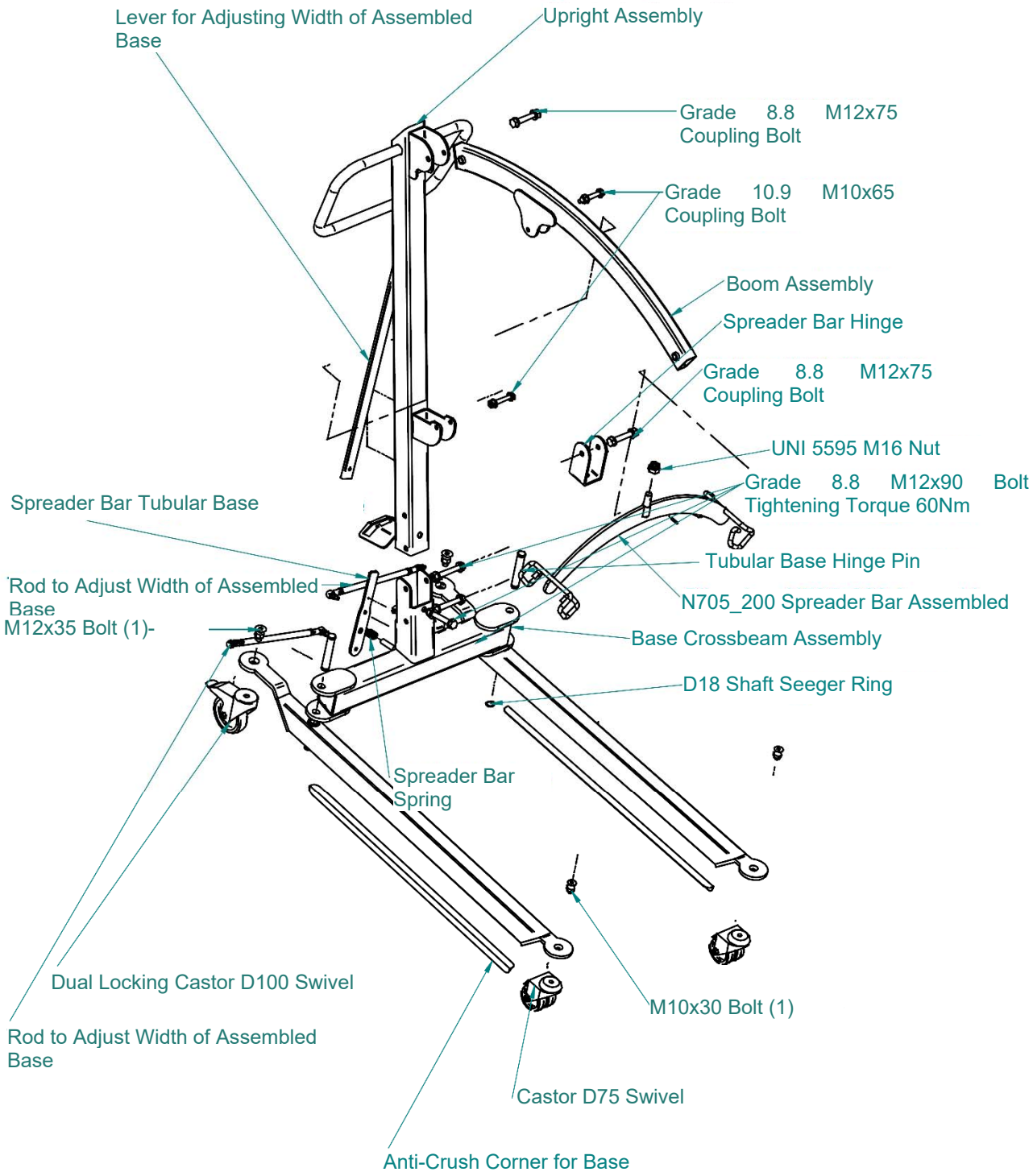
Models of the 300 series



Models of the 500 series



Models of the 700 and 800 series



N.B.: on the models of the 800 series, the lift boom and the spreader bar are replaced by the patient stander boom. This boom does not have any bolts that require tightening, and the M12x75 bolt fastening the boom to the vertical column is locked by a pin rather than a bolt.

6.2 Verifying the correct installation

Proceed as follows to verify that installation has been carried out correctly:

1. Check that all the screws and bolts are tightened in the manner and to the torques indicated in the paragraph relating to assembly.

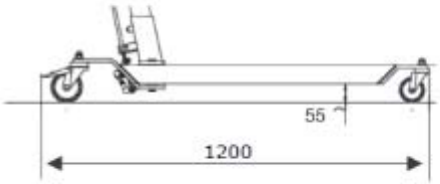
   Check the presence and assembly of the closing and locking pin between the nut and the pin welded on the rocker arm (see the image above).
2. Check the operation of the mechanism for changing the width of the base by intervening on the manual lever/pedal.
3. Check the system used to raise/lower the electric/oil-hydraulic patient lift by completing 5 movement cycles with no person on the lift, from the lowest point to the highest point, checking the correct operation and that there is no friction or abnormal noises.
4. If the previous check has a positive outcome, repeat the same test with a weight on the lift equal to the maximum load, checking the correct operation and also that there is no friction or abnormal noises.
5. Check the operation of the caster wheels, ensuring that there is no clearance and that they move freely.
6. Cover 50 linear metres then make turn the lifter on itself 5 times in one direction and 5 times in the opposite direction with no load. Repeat the operations with the maximum load, checking for correct operation and also that there is no friction or abnormal noise.
7. Place the maximum load on the device, brake the wheels and check that the device does not move.
8. Check the status of the body support unit used and the batteries.
9. Check for the presence of the battery charger and its connection.
10. Check the labelling and, if the fiscal document accompanying the device indicates the serial number, check that this number matches the number on the label.
11. Check that the instruction manual is included and verify the presence and condition of the labels, as indicated in the relevant paragraph.
12. Carry out all the checks and verifications listed in the maintenance section.
13. Check that in the areas of use there are suitable access points and manoeuvring spaces.
14. Record the installation checks in the register indicated in the maintenance paragraph with the wording ‘VERIFICATION OF CORRECT INSTALLATION’.

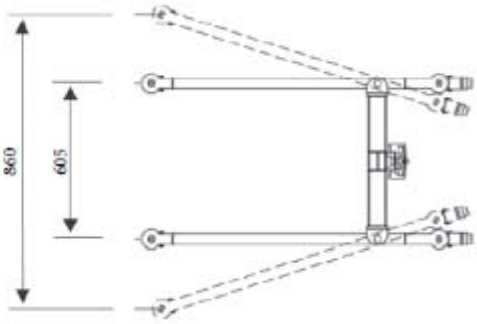
7. Technical specifications

Illustrated below are different device models with their constituent parts.

7.1 Models and components Item N305-150

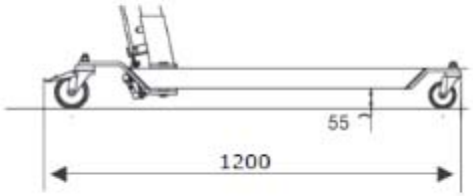
1) Handle
2) Support column
3) Lever to adjust arm opening/closing
4) Structural support base
5) Discharge valve for descent
6) Hydraulic pump
7) Control lever for lifting
8) Lift boom with spreader bar

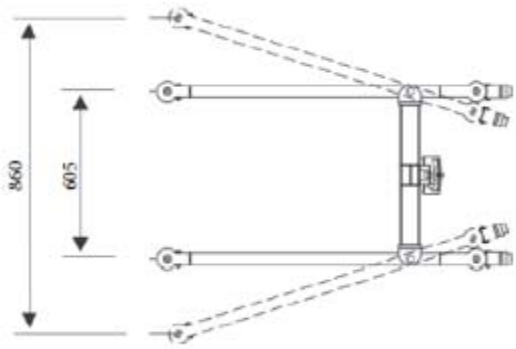




7.2 Models and components Item N315-150

1) Lifting actuator (150 kg) with emergency descent device
2) Handle
3) Push-button control panel
4) Dewert control unit with emergency descent device
5) Foot pedal to open/close the arms
6) Structural support base
7) Support column
8) Lift boom with spreader bar
9) Removable battery





7.3 Models and components Item N505-170

1) Handle

2) Support column

3) Lever to adjust arm opening/closing

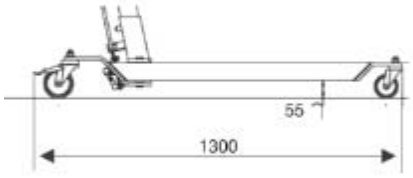
4) Structural support base

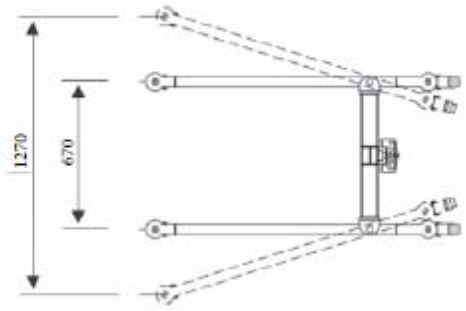
5) Discharge valve for descent

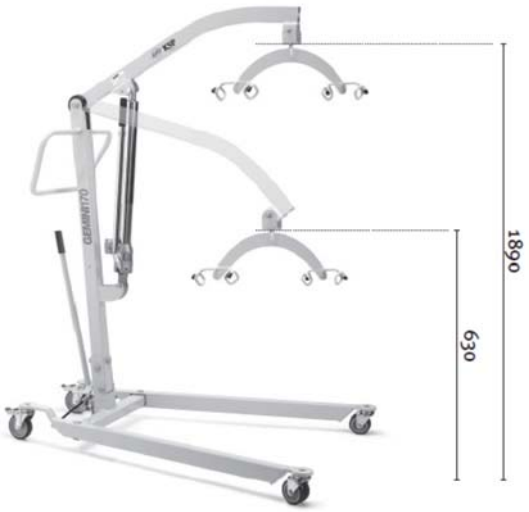
6) Hydraulic pump

7) Control lever for lifting

8) Lift boom with spreader bar







7.4 Models and components Item N515-150

1) Lifting actuator (150 kg) with emergency descent device

2) Handle

3) Push-button control panel

4) Dewert control unit with emergency descent device

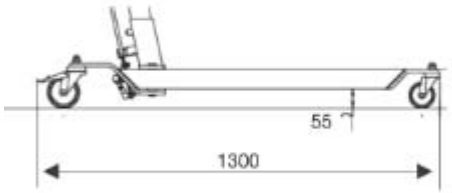
5) Lever to adjust arm opening/closing

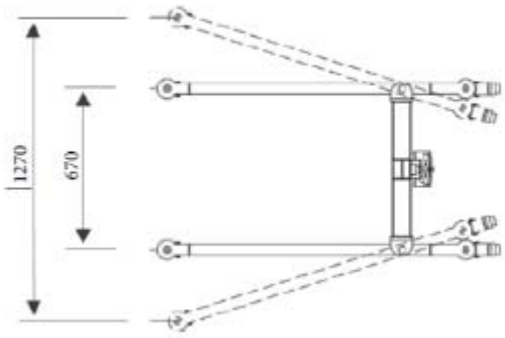
6) Structural support base

7) Support column

8) Removable battery

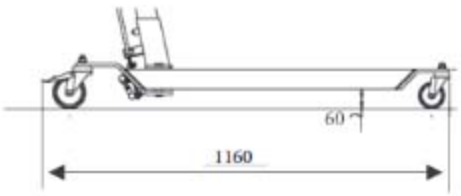
9) Lift boom with spreader bar

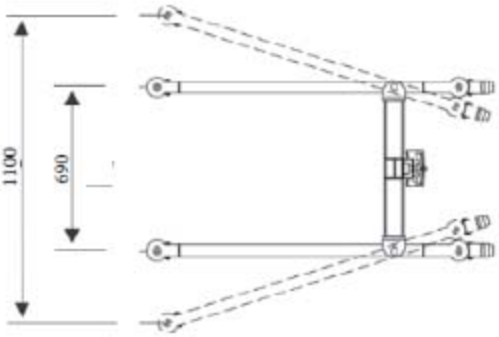




7.5 Models and components Item N705-200

1) Handle
2) Support column
3) Lever to adjust arm opening/closing
4) Structural support base
5) Discharge valve for descent
6) Hydraulic pump
7) Control lever for lifting
8) Lift boom with spreader bar





7.6 Models and components Item N715-170

1) Patient lifting actuator with emergency descent device

2) Handle

3) Push-button control panel

4) Dewert control unit with emergency descent device

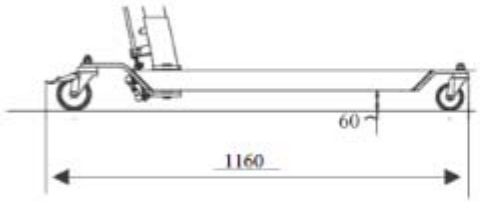
5) Lever to adjust arm opening/closing

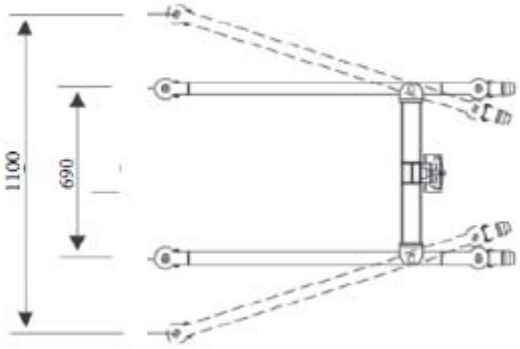
6) Structural support base

7) Support column

8) Removable battery

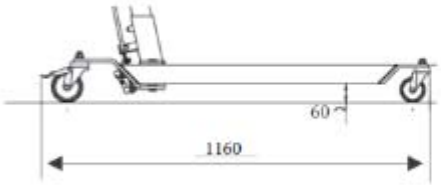
9) Lift boom with spreader bar

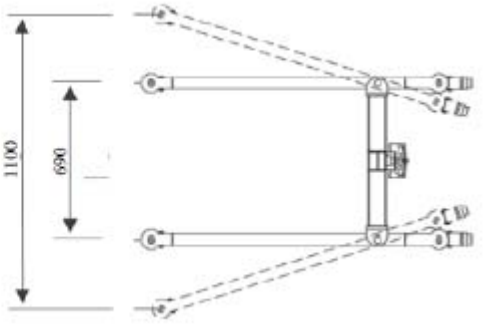




7.7 Models and components Item N715-200

1) Handle
2) Removable battery
3) Push-button control panel
4) Linak control unit with emergency descent device
5) Lever to adjust arm opening/closing
6) Structural support base
7) Support column
8) Lifting actuator (200 kg)
9) Lift boom with spreader bar





7.8 Models and components Items N815-170, N825-170

1) Patient lifting actuator with emergency descent device

2) Handle

3) Push-button control panel

4) Dewert control unit with emergency descent device

5) Lever to adjust arm opening/closing

6) Structural support base

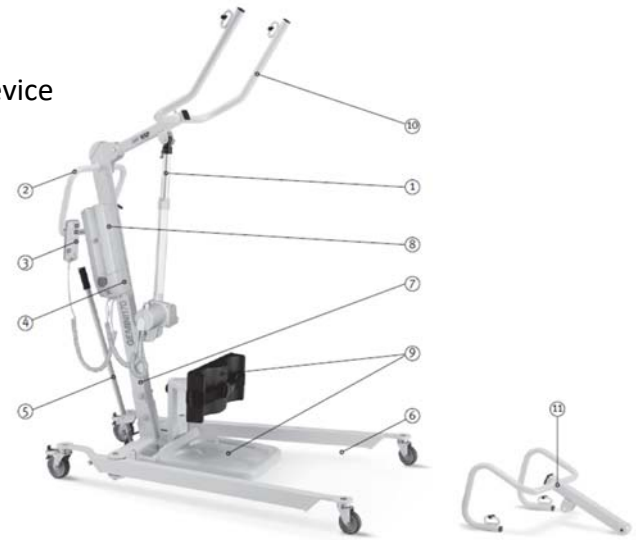
7) Support column

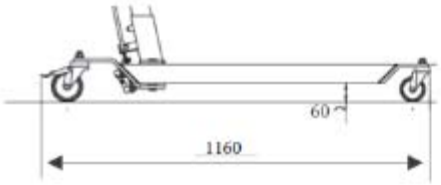
8) Removable battery

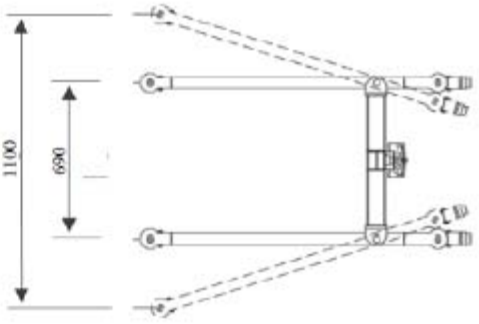
9) Footplate/knee pad

10) Stand-up boom (N7951)

11) Stand-up boom (N7952)





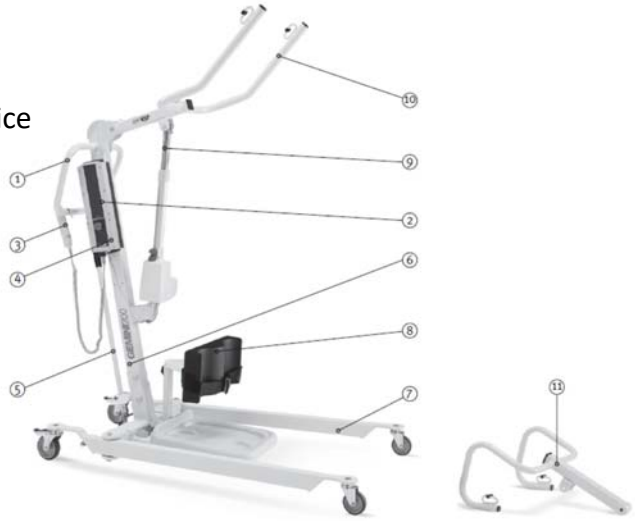


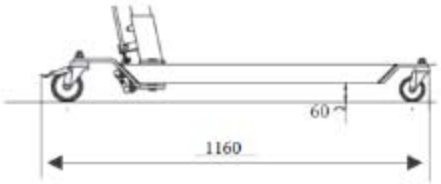
N815-170

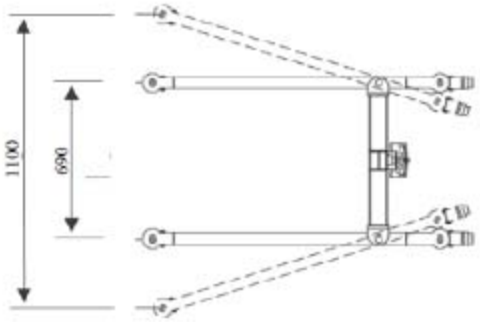
N825-170

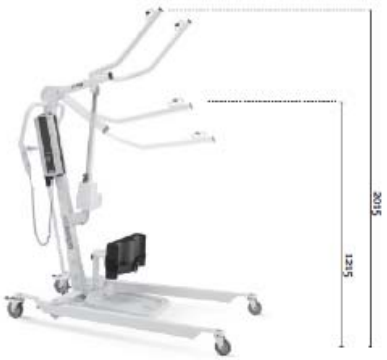
7.9 Models and components Items N815-200, N825-200

1) Handle
2) Removable battery
3) Push-button control panel
4) Linak control unit with emergency descent device
5) Lever to adjust the arm opening/closing
6) Support column
7) Structural support base
8) Footplate/knee pad
9) Lift actuator (200 kg)
10) Stand-up boom (N7951)
11) Stand-up boom (N7952)

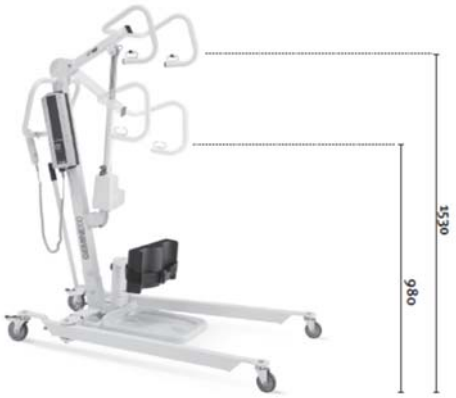








N815-200



N825-200

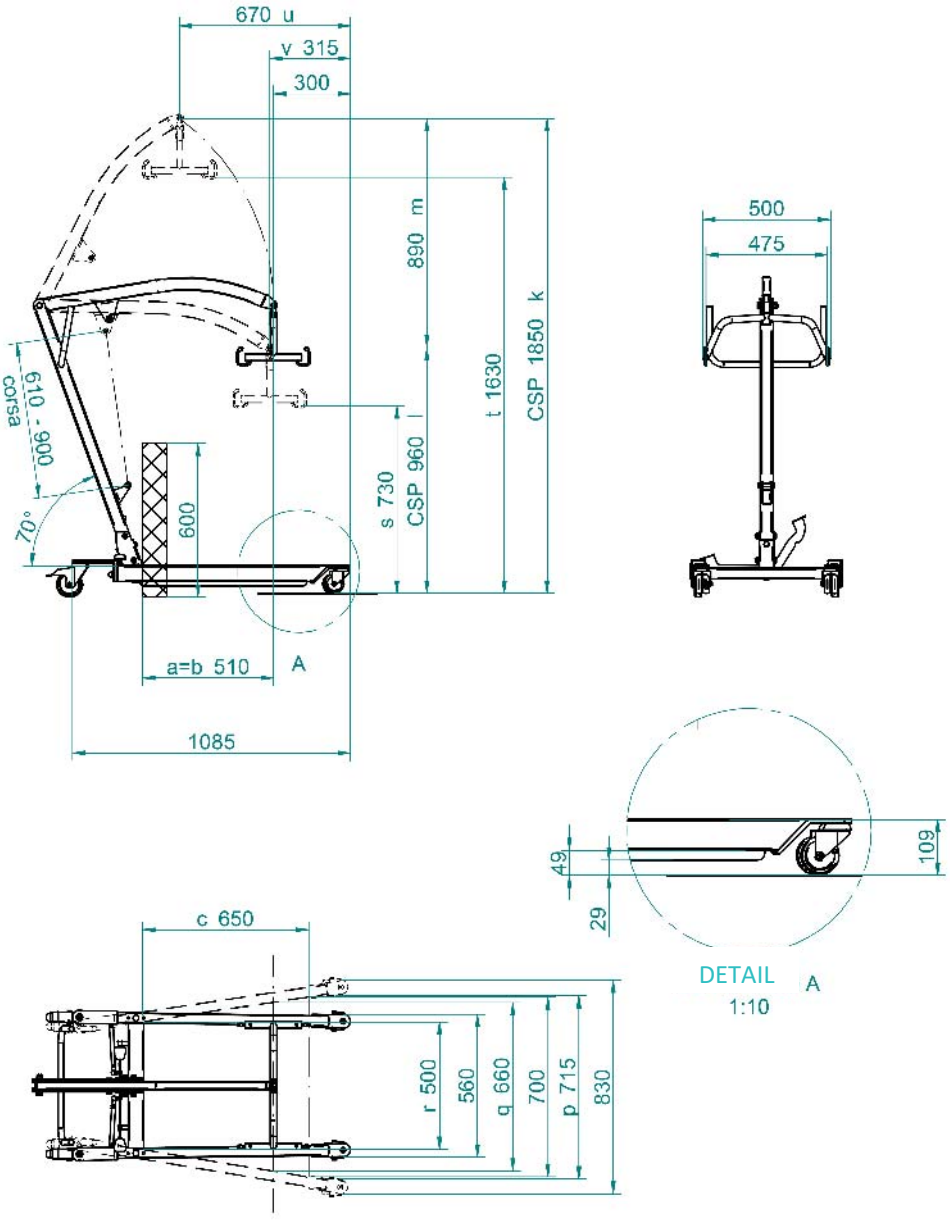
MODEL	DEVICE WEIGHT (WITHOUT BODY SUPPORT UNIT)	HEAVIEST COMPONENT OF THE PATIENT LIFT	WEIGHT OF THE HEAVIEST COMPONENT OF THE DEVICE	RADIUS OF CURVATURE	MAXIMUM LOAD CAPACITY
N305-150	kg. 34,50	Base	17,5 kg	650 mm	kg. 150
N315-150	kg. 35,00	Base	17,5 kg	650 mm	kg. 150
N505-170	kg. 45,00	Base	21 kg	740 mm	kg. 170
N515-150	kg. 44,40	Base	21 kg	740 mm	kg. 150
N705-200	kg. 50,00	Base	21,5 kg	750 mm	kg. 200
N715-170	kg. 50,00	Base	21,5 kg	750 mm	kg. 170
N715-200	kg. 52,00	Base	21,5 kg	750 mm	kg. 200
N815-170	kg. 52,00	Base	21,5 kg	750 mm	kg. 170
N825-170	kg. 52,00	Base	21,5 kg	750 mm	kg. 170
N815-200	kg. 54,00	Base	21,5 kg	750 mm	kg. 200
N825-200	kg. 54,00	Base	21,5 kg	750 mm	kg. 200

WARNING!

If the patient lift, spreader bar and sling/body support unit have different maximum load capacities, take the smallest of the three as the maximum load capacity of the whole device.

Other dimensions in mm

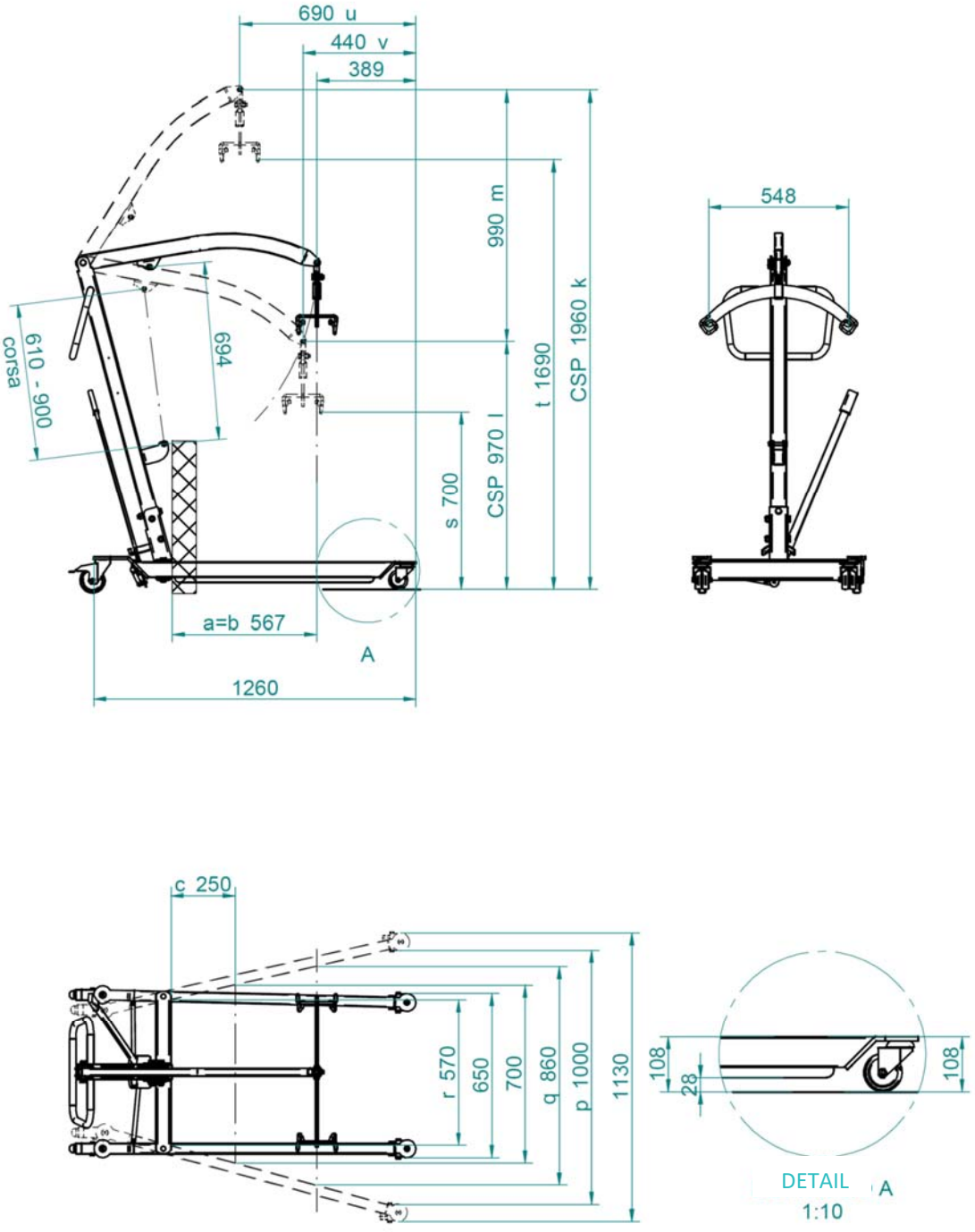
Series 300



Alternative Measurements:

	s	t	stroke	l	m	K	u	v
Electric Actuator	600mm	1570mm	from 575mm to 875mm	830mm	970mm	1795mm	590mm	350mm
Hydraulic Actuator	730mm	1630mm	from 610mm to 900mm	960mm	890mm	1850mm	670 mm	315mm

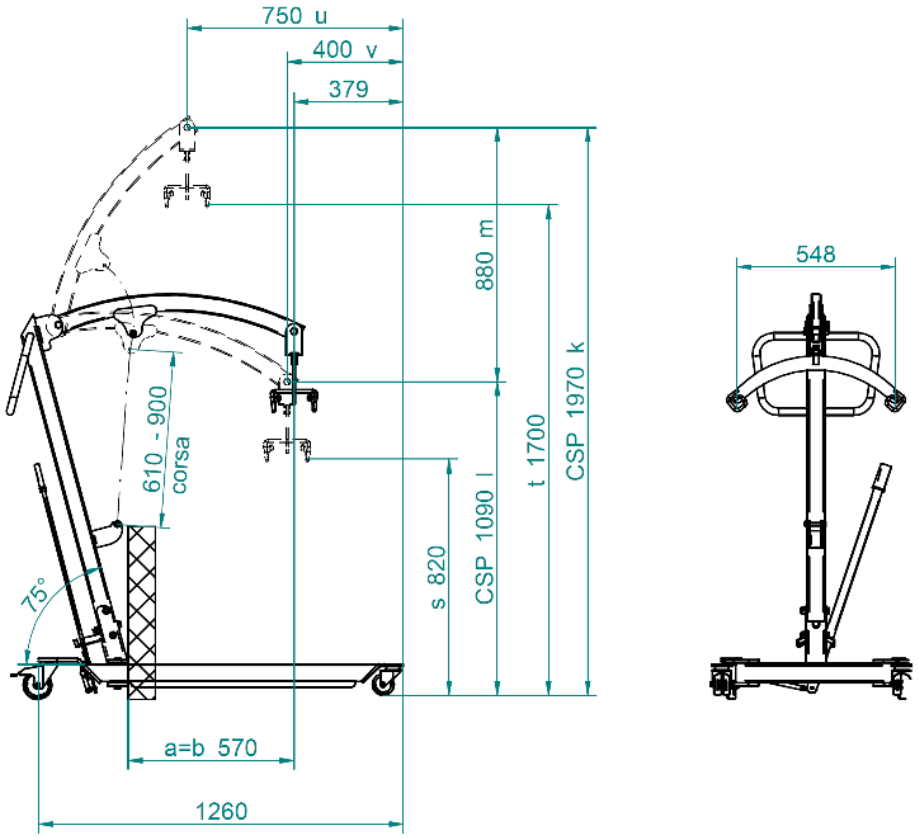
Series 500

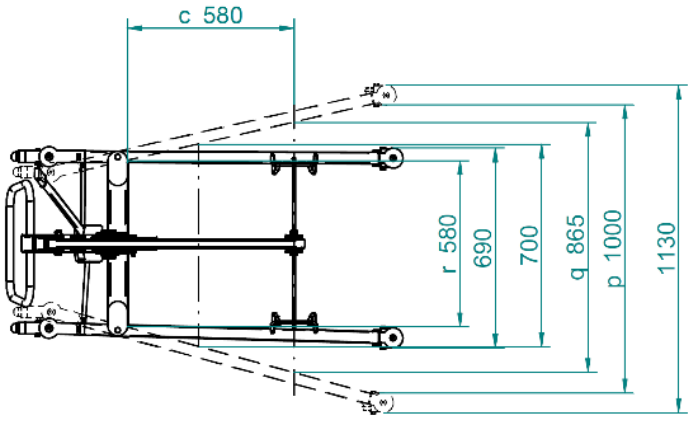


Alternative Measurements:

	s	t	stroke	l	m	K	u	v
Electric actuator	560mm	1610mm	from 575mm to 875mm	830mm	1050mm	1890mm	620mm	510mm
Hydraulic Actuator	700mm	1690mm	from 610mm to 900mm	960mm	990mm	1960mm	690mm	440mm

Series 700 (the Series 800 differs in terms of the upper boom, while the base and the column are the same)





Alternative Measurements:

	s	t	stroke	l	m	K	u	v
Electric actuator	710mm	1630mm	from 575mm to 875mm	980mm	925mm	1900mm	660mm	350mm
Hydraulic Actuator	820mm	1700mm	from 610mm to 900mm	1090mm	880mm	1970mm	750mm	400mm

Environmental requirements for transport and storage

Temperature: minimum +5°C – maximum 40°C, 93% RH

Environmental requirements for use

Temperature: minimum +5°C – maximum 40°C

Humidity: 15%–93 %

Air pressure: 700–1060 hPa

Weighted sound power level A: less than 70 dB

Technical Specifications

Applied parts: type B

Insulation Class: Internal Electric Source

Battery Charger Insulation Class: Class II

Device IP protection rating: IPx4

Battery charger IP protection rating: IPx0

Intended for use in an OXYGEN-RICH ENVIRONMENT: NO

Intermittent operation: duty cycle (active cycle) 10%, with maximum consecutive operation of two minutes, as follows:

- Continuous operation: maximum 2 minutes.
- Cycle of use: for every 2 minutes of operation (motor running), wait for 18 minutes (motor off) to allow the accumulated heat to dissipate.

Power supply (battery charger): 240 VAC, 50 Hz, single-phase

Internal power source: 24 VDC, rechargeable batteries

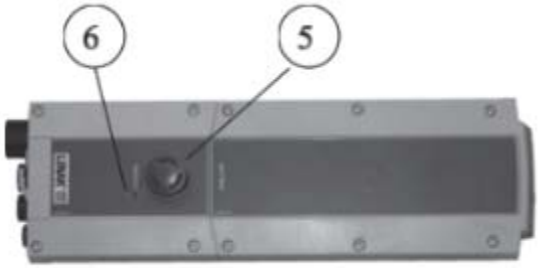
Battery charger power: 42 VA

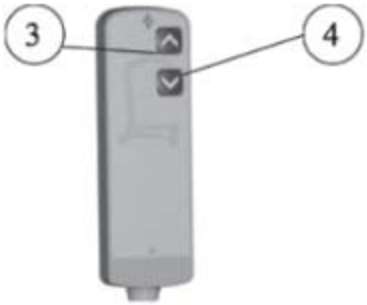
Device current draw: 8.5 A

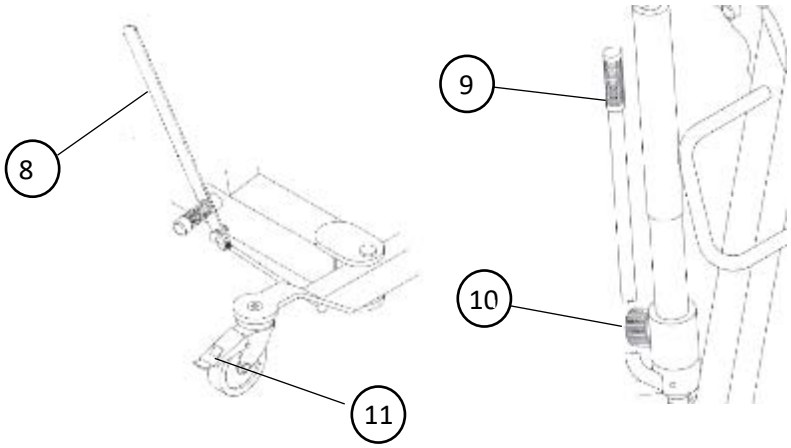
7.10 User Interface

The user interface of the device consists of buttons and levers with which the device is controlled/adjusted.

1. Footplate for adjusting the width of the base: reduce the distance
2. Footplate for adjusting the width of the base: increase the distance
3. Ascend push-button
4. Descend push-button
5. Emergency push-button
6. LED for battery charger status
7. Emergency lowering device
8. Vertical lever for adjusting the base
9. Hydraulic pusher actuator
10. Valve for lowering the hydraulic pusher
11. Foot-activated caster wheel brake

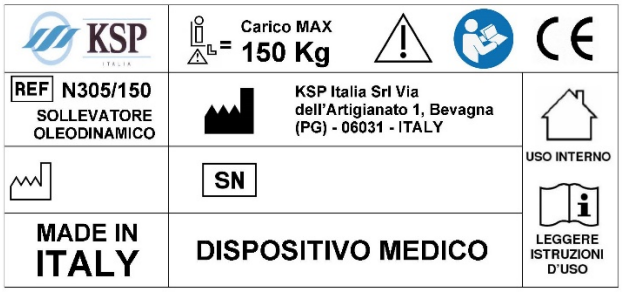


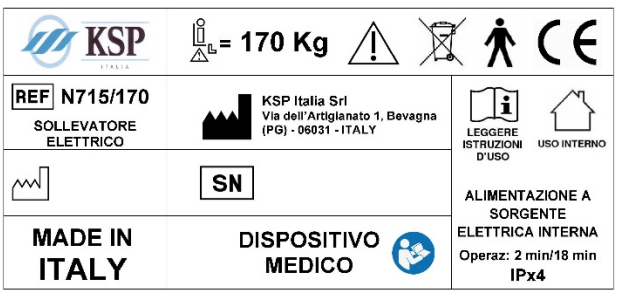




7.11 Labelling

The labels and markings constitute information which is required to ensure safe use of the device to which they are affixed. They also ensure the device's traceability. In the event of damage, loss or wear, contact the Manufacturer to have them replaced.






KSP
Max
200 kg
REF N715/200
SOLLEVATORE
ELETTRICO
KSP Italia Srl
Via dell'Artigianato 1, Bevagna
(PG) - 06031 - ITALY
SN
ESCLUSIVO
USO
INTERNO
ALIMENTAZIONE A
SORGENTE ELETTRICA
INTERNA
Operaz: 2 min ON/18 min
OFF
MADE IN
ITALY
DISPOSITIVO
MEDICO


KSP
Max
170 kg
REF N815/170
VERTICALIZZATORE
ELETTRICO
KSP Italia Srl
Via dell'Artigianato 1, Bevagna
(PG) - 06031 - ITALY
SN
ESCLUSIVO
USO
INTERNO
ALIMENTAZIONE A
SORGENTE ELETTRICA
INTERNA
Operaz: 2 min ON/18 min
OFF
MADE IN
ITALY
DISPOSITIVO
MEDICO


KSP
Max
200 kg
REF N815/200
VERTICALIZZATORE
ELETTRICO
KSP Italia Srl
Via dell'Artigianato 1, Bevagna
(PG) - 06031 - ITALY
SN
ESCLUSIVO
USO
INTERNO
ALIMENTAZIONE A
SORGENTE ELETTRICA
INTERNA
Operaz: 2 min ON/18 min
OFF
MADE IN
ITALY
DISPOSITIVO
MEDICO


KSP
Max
170 kg
REF N825/170
VERTICALIZZATORE
ELETTRICO
KSP Italia Srl
Via dell'Artigianato 1, Bevagna
(PG) - 06031 - ITALY
SN
ESCLUSIVO
USO
INTERNO
ALIMENTAZIONE A
SORGENTE ELETTRICA
INTERNA
Operaz: 2 min ON/18 min
OFF
MADE IN
ITALY
DISPOSITIVO
MEDICO


KSP
Max
200 kg
REF N825/200
VERTICALIZZATORE
ELETTRICO
KSP Italia Srl
Via dell'Artigianato 1, Bevagna
(PG) - 06031 - ITALY
SN
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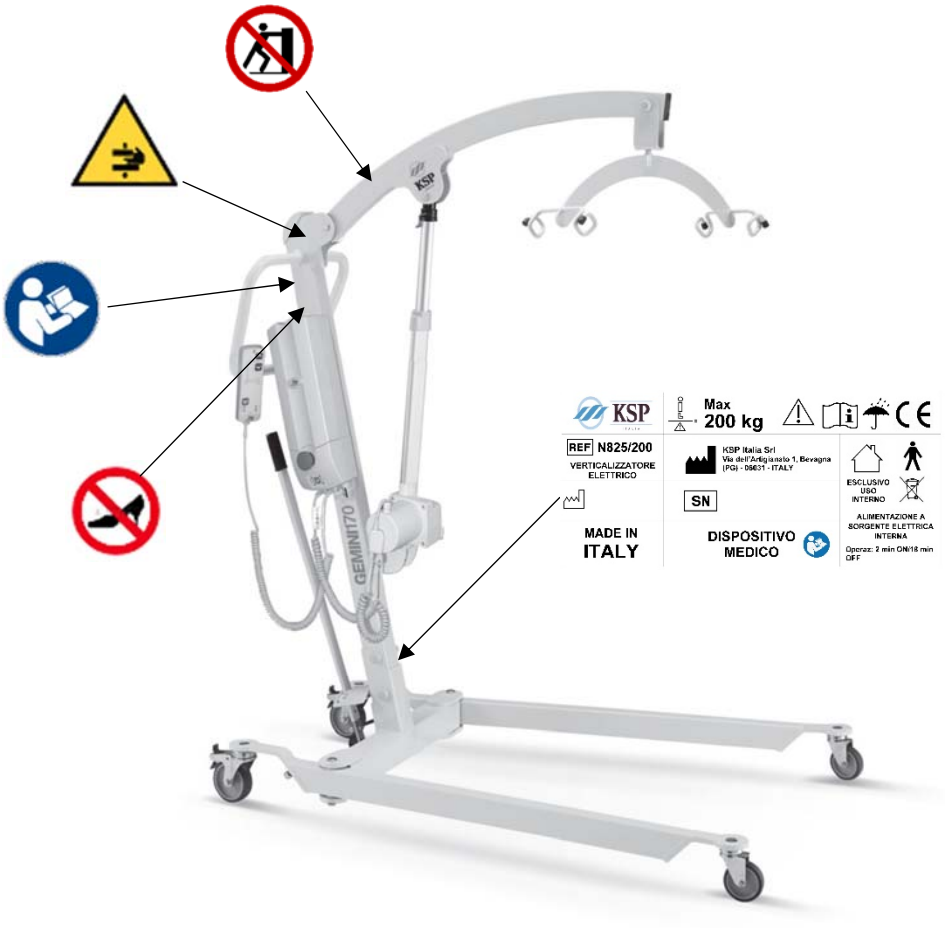
MADE IN
ITALY
DISPOSITIVO
MEDICO


KSP
Max
200 kg
REF N825/200
VERTICALIZZATORE
ELETTRICO
SN
MADE IN
ITALY
DISPOSITIVO
MEDICO
GEMINI170

8. Using the device

The device is designed to lift and move the User across short distances, within the load and use limits indicated in this manual.
The device does not generate any side effects but may lead to a situation of risk if not used within the limits and manner described in this document.

If the operating and safety levels change, for example anomalies as indicated in this manual or of any other type, that could jeopardise operation or safety of the device in any stage, including transport, use, maintenance, repair interventions, disposal etc., proceed as follows:

- immediately stop using the device;
- place the device in a safe area to which only authorised personnel has access;
- affix a sign with the words 'DO NOT USE. CONTACT THE MANUFACTURER'.

The environmental conditions of use are indicated in this manual. Do not use the device if the environmental conditions of use are different (for example, temperature, humidity, electromagnetic fields, etc.).

WARNING

The device must not be installed or connected to other devices or systems.

WARNING

Modifications to this device are strictly forbidden.

Contact the Manufacturer for additional technical descriptions.

8.1 First start-up

Check to make sure that the device has been assembled correctly. Please refer to the designated section for further details on the correct assembly procedure.

The device raising and lowering operations by the user may require the presence of more than one operator. The specific procedures depend on the health and weight of the User, and on the type of sling used. For this purpose, follow the official procedures of the facility where the patient is staying or of the attending physician.

Before starting the device, check that the batteries are fully charged by following the indications provided in the section on the interfaces or batteries.

Adjust the sling according to the instructions provided in the sling manual and by the attending physician.

DO NOT USE THE DEVICE IF THE BATTERIES ARE NOT CHARGED TO AT LEAST 40% OF THEIR FULL CHARGE. IF THE BATTERY IS DEPLETED, REPLACE IT WITH A CHARGED BATTERY OR ENSURE THAT THE BATTERY IS CHARGED BEFORE STARTING ANY OPERATION.

Checklist prior tu use:

a) Condition/integrity of the mechanical parts;

b) Condition/integrity of the sling;

c) For electrical devices, check the battery charge and also that it is not depleted.

Particurarly check:

i. for the DEWERT drive, check that the charge LED is not red and no acoustic signal is emitted while the actuator is being activated;

ii. for the LINAK drive, check that no acoustic alarm activates when the controls are operated.

d) For oil-hydraulic devices, check there are no fluid leaks from the actuator;

e) For electric devices, check the operation of the red lock ring located at the top of the actuator for moving the device manually in an emergency;

f) For electric devices, check that the emergency buttons operate properly;

g) Check that the device operates correctly when moving the boom from the highest point to the lowest point and viceversa;

h) Check that the adjustment mechanism of the base works correctly;

i) Check the condition and free movement of the caster wheels;

j) Check the operation of the wheel brakes;

k) Check that the bolts indicated as 'coupling' bolts in the diagram relating to bolt tightening are in contact with the screw-in surface and that there is no axial clearance;

l) Check that the bolts indicated as tightened to torque or not indicated as 'coupling' bolts are screwed in fully;

m) Check that the locking pins of the patient standers are present and engaged correctly;

n) Check that the closing and locking pin between the nut and the welded pin on the rocker arm of the crutch group is correctly assembled and performs its function;

Checklist after every use, check:

a) Condition of the mechanical parts;

b) Condition of the sling;

c) For electric devices, check the battery status, check there has been no abnormal energy consumption;

d) For electric devices, check there are no smells relating to overheated electric material;

e) For electric devices, check that the battery has not overheated;

f) For hydraulic devices, check there are no fluid leaks from the actuator;

g) That the bolts indicated as 'coupling' bolts in the diagram relating to bolt tightening are in contact with the screw-in surface and that there is no axial clearance;

h) That the bolts indicated as tightened to torque or not indicated as 'coupling', are fully screwed;

i) Check that any bolt locking pins are present and engaged correctly.
Check that the closing and locking pin between the nut and the welded pin on the rocker arm of the crutch group is correctly assembled and performs its function;

While using the device, the safety and well-being of the User is of the utmost priority. Therefore, follow the safety instructions provided in this manual and the indications contained in the description of this device.

The person being transferred on the device must be calm and relaxed at all times.

Make sure that the User makes no abrupt or jerky movements.

The User must not be holding any objects. Ensure that the garments or limbs of the User do not hinder the lift movements.

The raising and lowering operations are to be carried out taking into account the heightened sensitivity of the User.

With the User on the lift, the total weight of the lift itself increases.

During transport the Operator must always grip the handle of the device pusher with both hands.

N.B.: all the commands are 'hold-to-run'.

8.2 Use on flat surfaces

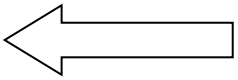
To move the device, push or pull it manually using the caster wheels.

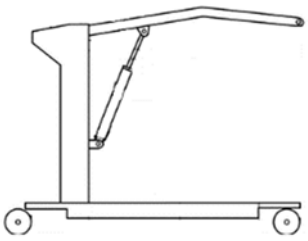
Regularly check the condition of the wheels, and check there is no excessive clearance, broken wheels or deterioration.

The device, for both the patient lift and patient stander, is equipped with caster wheels and can be moved in any direction. For transfers, only move backwards, except for specific circumstances which require the device to move forward.

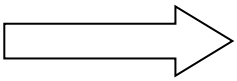
For this reason, the 300 series is not equipped with a base diversion lock therefore, when moving forwards, the legs of the base could move outwards independently.

BACKWARDS

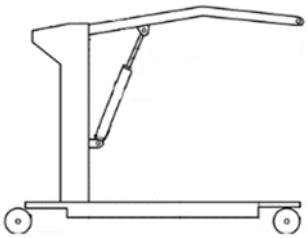




FORWARDS



Position of the operator while moving the device



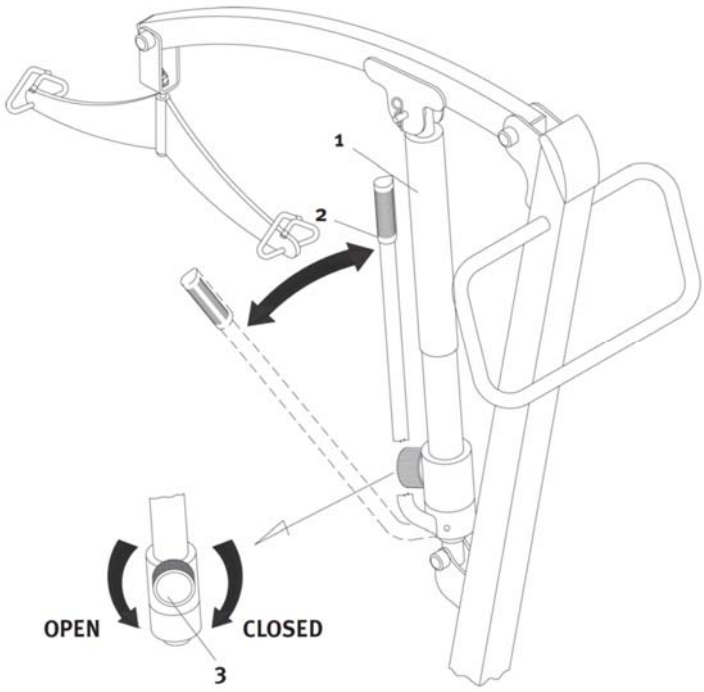
8.3 How it works

8.3.1 Device use (hydraulic version)

The numbering of the parts refers to the figure in this paragraph and is not to be confused with the numbering present in the rest of the manual.

Lifting or lowering the patient is to be carried out using the hydraulic pump (1) actuated manually using the designated lever (2).

- To lift the patient, close the discharge valve by turning the hand wheel (3) in a clockwise direction (CLOSED) and manually actuate the lever (2) until the required position is reached.
- To lower the patient, slowly open the discharge valve turning the hand wheel (3) in an anticlockwise direction (OPEN). When the required level has been reached, close the discharge valve by turning the hand wheel (3) in a clockwise direction (CLOSED).



8.3.2 Device use (electric version)

The numbering of the parts refers to the figure in this paragraph and is not to be confused with the numbering present in the rest of the manual.
The electric motor installed on the GEMINI electric actuators is of the sealed type. At the time of publication, products of the GEMINI line are available with one of two motors, LINAK and DEWERT.

This ensures a high level of safety, together with a compact, functional design. The sealed motor does not have any type of ventilation or cooling system and, therefore, the User must observe the following operating cycle which requires a 10% duty cycle (active cycle) with maximum consecutive operation of two minutes, as follows:

- Continuous operation: maximum 2 minutes.
- Cycle of use: for every 2 minutes of operation (motor running), wait for 18 minutes (motor off) to allow the accumulated heat to dissipate.

Example: an operation which lasts 1 minute must always be followed by a rest period of at least 9 minutes.

Absolutely avoid any circumstance carrying out operations that require continuous motor operations for a period of time exceeding the time specified. Failure to observe this indication will relieve the Manufacturer of any liability for damage or injury to persons or objects.

8.3.3 Lifting and lowering the User with the LINAK/DEWERT motor

Lifting or lowering the User is carried out by means of the electric actuator, controlled from the designated push-button control panel.

- to lift the patient, press the button (3). When the required level has been reached, release the button (3). The position will be locked automatically.
- to lower the patient, press the button (4). When the required level has been reached, release the button (4). The position will be locked automatically.

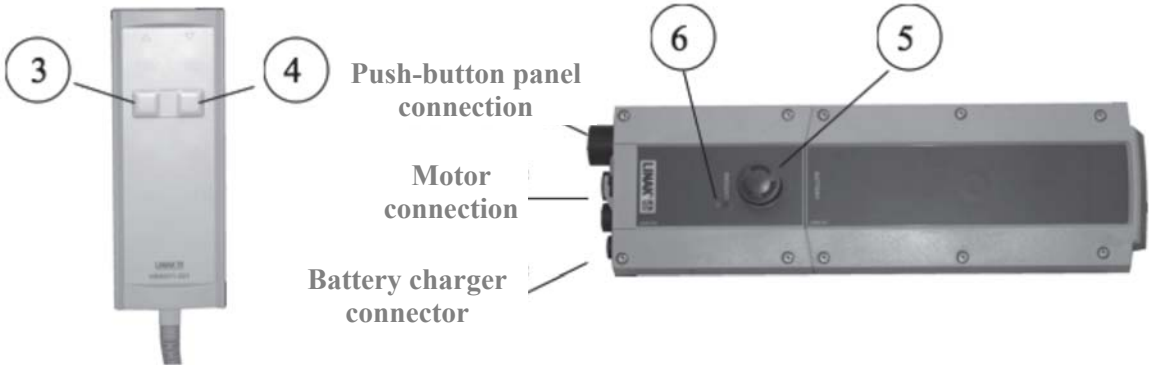
HAZARD!

If any HAZARD condition emerges while the patient is being lifted or lowered, block the system using the red emergency key (5). Once the cause of the hazard condition has been eliminated, restore the system's operation by turning the emergency key (5).

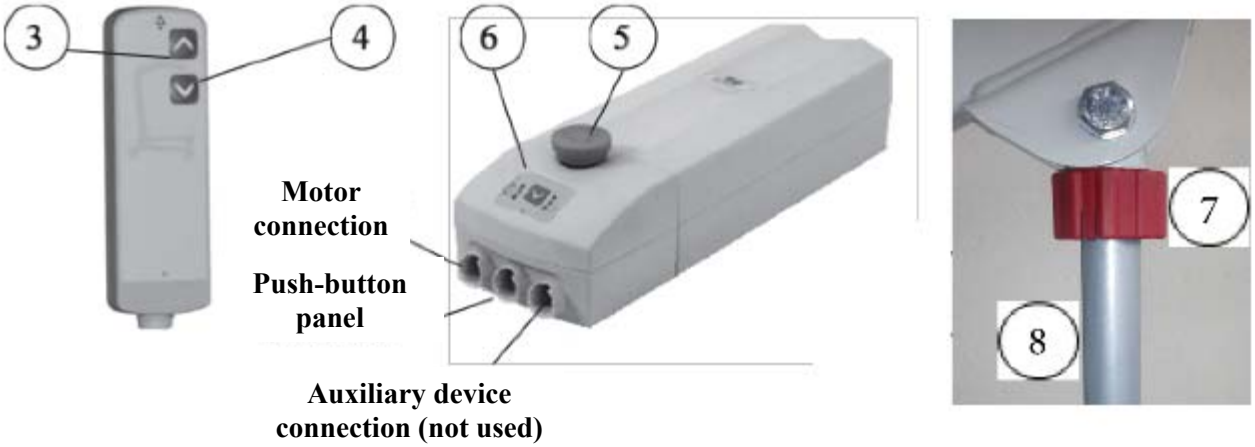
WARNING

While the device is in use, if the descend key of the push-button panel is not working correctly, the boom can be lowered by acting directly on the device (6). To restore normal operating conditions, contact the Support Centre or the dealer. If any of the electric parts break and, as a result, the device cannot be operated, the DEWERT system allows the operator to manually lower the lift boom by inserting the hex spanner (supplied) into the seat on the bottom (7) of the motor and turning the key in the relevant direction depending on the manoeuvre required. This system only works with the weight applied to the boom.

LINAK system



DEWERT system



Version with external charging connection

IMPORTANT

In the version with the DEWERT drive, there is a device for the quick-release of the electric motor in the event of a sudden fault. To activate it, grip the red lock ring (7) below the top anchor point of the motor and pull it downwards. As soon as it clicks, simply turn the motor shaft (8) in the relevant direction depending on the required movement (up or down).

To restore normal operation, push the lock ring (7) upwards to restore its normal position.
Before operating the patient lift, always check that the red lock ring (7) is correctly positioned at the top, as indicated in the figure above, particularly if the lifting movement starts from the lowest position (lifting the patient from the ground).

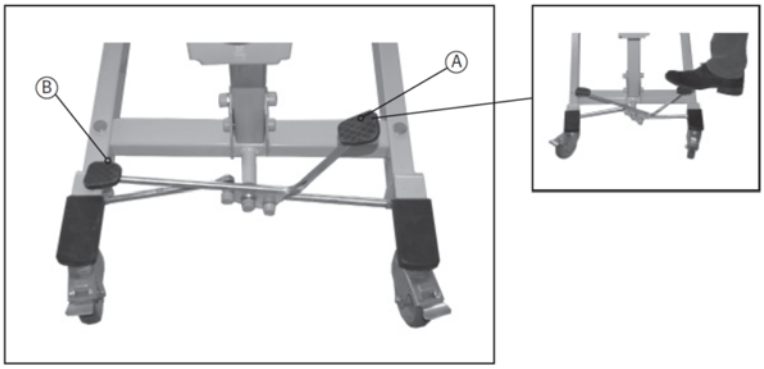
8.3.4 Using the GEMINI adjustable base

N300 Series

To move the base, refer to the following procedure:

Press the pedal (A) to open.

Press the pedal (B) to close.



Series N500 - N700 - N800

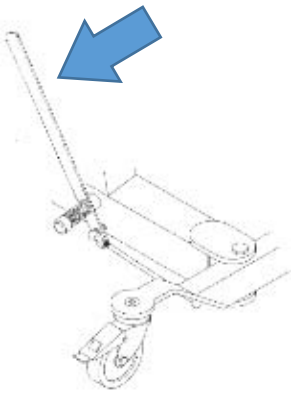
To open the base, refer to the following procedure:

Pos. A Manually pull the lever indicated below.

Pos. B Move the lever sideways to the right until the corresponding end of travel stop is reached.

Pos. C Release the lever. It will automatically move forwards to the lock position.

To close the base, repeat the procedure indicated above but in the reverse order.



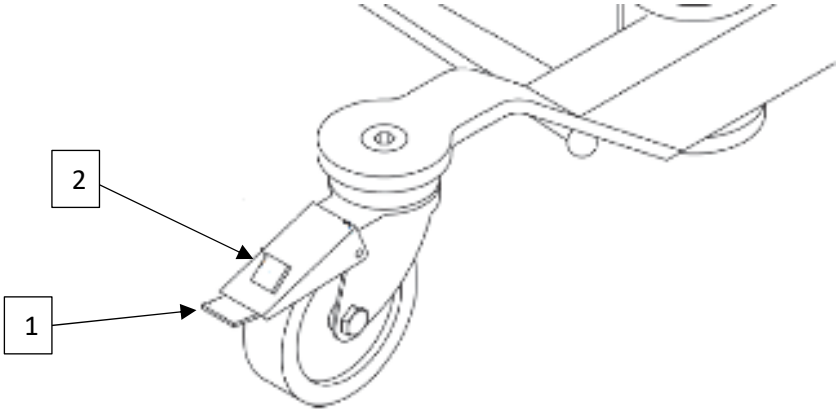
As a general rule, during lifting/lowering manoeuvres, ensure that the base is in the diverged position and the wheels are locked.

WARNING

Before lifting or moving the patient, always ensure that the lever (12) is locked in the housings present on each limit switch.
Never leave the lever (12) in an intermediate position as the legs of the patient lift are not blocked. They could move during the lifting or moving operation causing a potential risk for the patient.

8.3.5 Wheels and braking system

All versions of the device are supplied with four caster wheels, two of which can be locked using an independent brake. To lock the patient lift, press the lever (1) with your foot.
To release the patient lift, press the lever (2) with your foot.



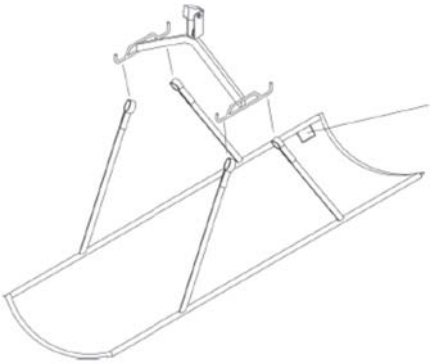
8.3.6 ACCESSORIES and SLINGS for Patient Lifts and Patient Standers

To ensure the safety of the User and the Operator, only slings and body support units supplied by KSP Italia can be used. If using slings of another type or brand, contact the Manufacturer to check compatibility.
Before using a body support unit on a User, carry out the risk analysis indicated in 4.2.2. If in doubt, contact the Manufacturer.

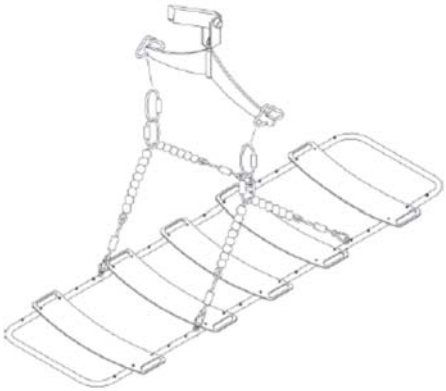
By way of example only, some of the most common types of body support units with the relative lift application instructions are listed below.
The Operator must read and carefully follow the indications provided in the body support unit manual. If in doubt, contact the Manufacturer.

- Universal sling
    - Designed to meet the requirements of the most common pathologies;

- A Stretcher sling



- Sling with cervical spine support for tetraplegic patients
    - Designed specifically for tetraplegic patients, patients with weak cervical spine and with mobility problems affecting the shoulders and legs.
    - Coloured fastening belt to identify the size.



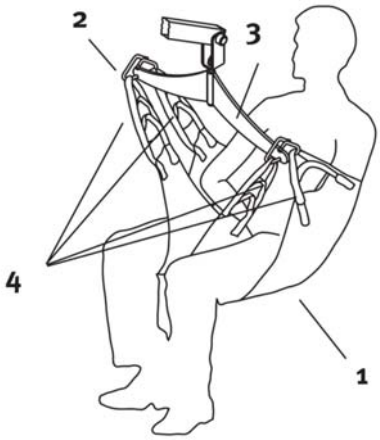
- Self-balancing stretcher
    - Particularly suitable for bed-ridden patients.

The actual procedures for using ALL SLINGS depend on the health of the user and the type of sling. For this purpose, follow the official procedure of the facility where the patient is staying or of the attending physician. The instructions provided in this manual are of general-purpose and may not be suitable for each specific case.

WARNING

To ensure the appropriate safety conditions, accessories produced by KSP Italia must be used and the indications provided in the instruction manual must be adhered to. The Manufacturer declines all liability for damage and injury resulting from uses of different accessories than that expressly indicated.

8.3.7 Use of the slings



To use the universal sling, refer to the following procedure:

- Apply the sling (1) to the patient.
- Lower the lift boom until the required level is reached.
- Secure the sling (1) to the hooks (2) of the sling support (3) and lift the patient.

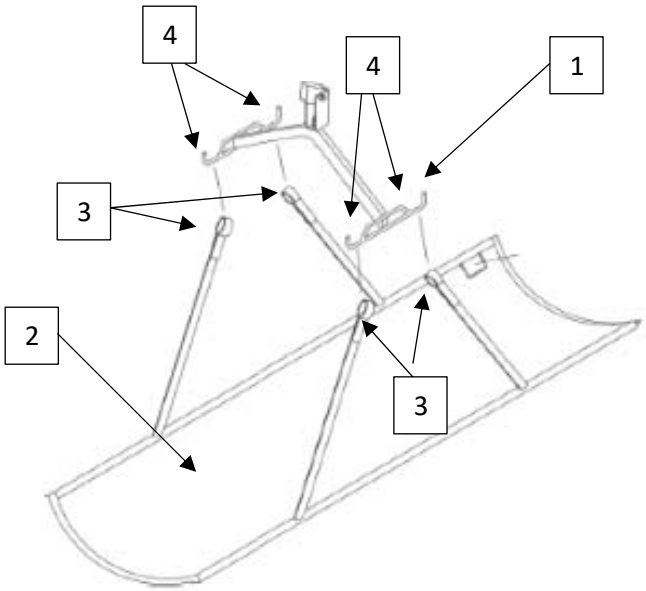
WARNING

Before carrying out a lifting operation, adapt the sling (1) to the needs of the patient, by appropriately selecting the slots (4) to be affixed to the hooks (2).

8.3.8 Use of the stretcher sling

To use the stretcher sling, refer to the following procedure:

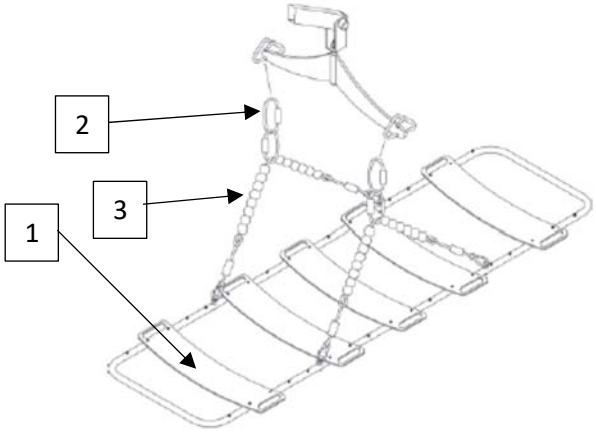
- Make sure that the patient lift is equipped with the designated support (1) prearranged for this type of stretcher sling.
- Position the patient on the stretcher sling (2).
- Lower the lift boom until the required level is reached.
- Secure the slots (3) of the four stretcher sling belts (2) to the four hooks (4) of the sling support (1) and lift the patient.



8.3.9 Use of the self-balancing stretcher

To use the self-balancing stretcher, refer to the following procedure:

- Position the patient on the rigid stretcher sling (1).
- Lower the lift boom until the required level is reached.
- Secure the slots (2) of the two rigid stretcher sling belts (1) to the hooks of the sling support (3) and lift the patient slightly.
- Make sure that the weight is distributed evenly on the stretcher and that the stretcher remains horizontal while being lifted.
- If the weight is imbalanced, lower the lift boom and move the slots (2) onto the centring balls (4) in the direction in which the weight is greater.
- Lift the patient.



8.3.10 Use of the spreader bar and other accessories

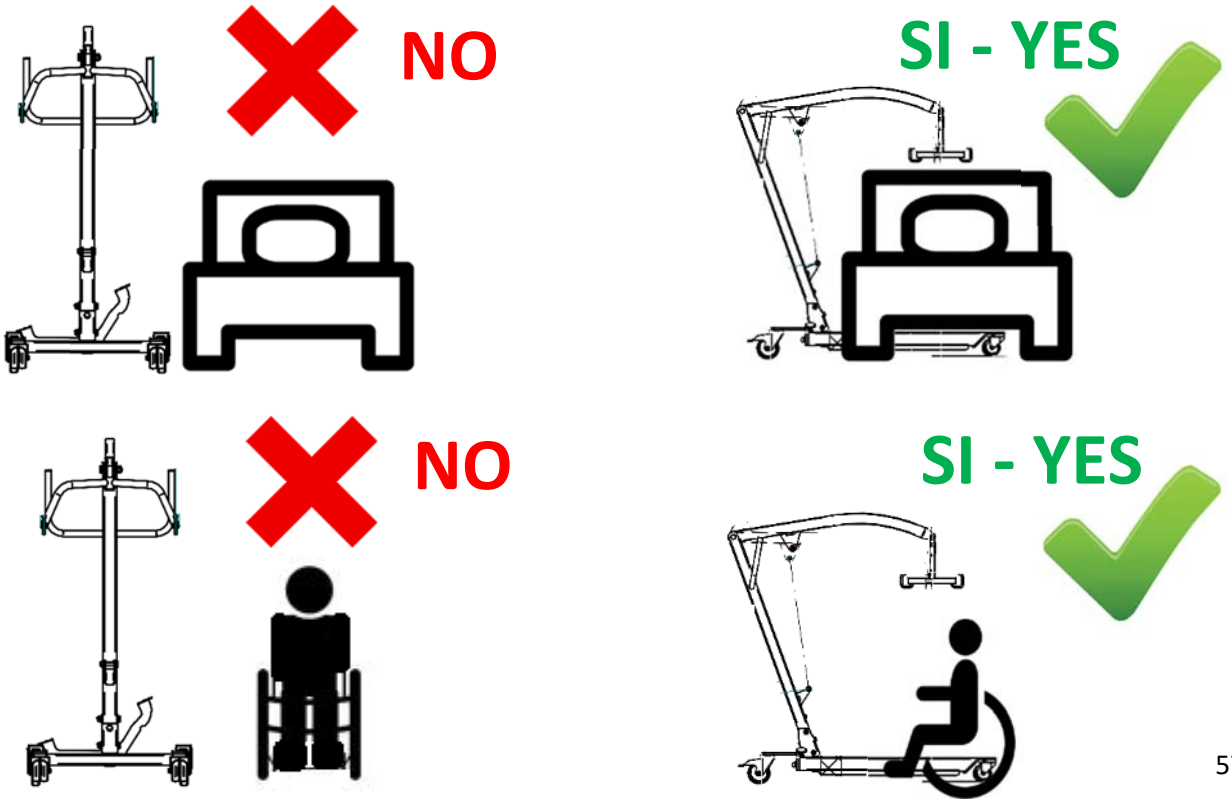
Warning

The patient lift is not intended for indiscriminate measuring activities.
On account of the legislation in force at the time of publication, use of the spreader bar for weighing patients constitutes a significant modification which requires the person carrying out the operation to carry out a separate risk analysis and metrological assessment of the new assembly and, if relevant, and to notify the Ministry of Health. In this case, KSP Italia is relieved of all liability for damage and/or injury of any type resulting from this use.

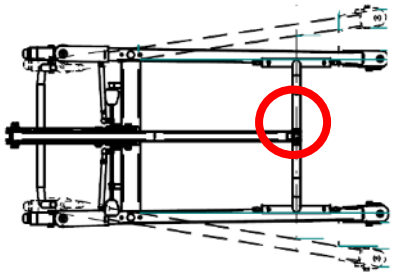
WARNING!!!

To pick up / put away the user from the bed you must always insert the legs of the lift under the bed and proceed with the operation. Never load the lift sideways. In any case, whatever the type of operation and support, you must always pick up and put away the user coming from the front of the lift, never from the side parts.

UNBALANCING DANGER!!!



In any case, the center of mass of the raised patient must always be directly under the barbell (red circle in the figure below), in order to avoid oscillations and imbalances.



8.4 Emergency instructions

In the event of any problems arising during transfer, it may be necessary to put the device into the safety position. This involves stopping the lift, applying the brake and lowering the sling to the ground, if necessary. In this position the patient lift is immobilised and stable.

These indications are general-purpose. Specific situations will depend on the type of environment and emergency. For example, in the event of flooding, the patient lift should not be lowered to prevent it from coming into contact with the water.

With regards to the patient stander, the safety position involves stopping the patient stander, applying the brake if necessary, bringing the patient stander to a seat and lowering the sling until the User is resting on the seat.

The person sitting on the patient lift must be calm and relaxed at all times. It is fundamental that the person being transferred refrains from making any abrupt or jerky movements.

The device contains electronic parts, therefore only CO_2 extinguishers are to be used in the event of fire.

Possible emergency situations	Recommended steps
Batteries discharge while a movement is in progress.	- Assume the safety position as indicated above, lowering the actuator using the emergency mechanism - Change the batteries - If a battery pack is not available, ask for assistance
Generic fault during transfer, proceeding is not possible.	- Put the device in the safety position - Ask for assistance
The person being transferred feels unwell or nauseous.	- Stop the device immediately and provide medical care or help - If necessary, put the device in the safety position - If necessary, ask for assistance

8.5 Residual risks

The residual risks of the patient lifter are considered acceptable and not reducible further while maintaining device performance.

Mainly:

1. risk of overturning due to the longitudinal and lateral forces acting on the patient.

   Description: lateral or longitudinal forces can make the patient swing once lifted, potentially destabilising the device.

   Reduction measures: procedural, transfer the patient without any brusque movement and avoiding swinging actions of the suspended mass in any direction. Operator information/training.

2. mechanical risk

   Description: crushing, shearing, collision with moving mechanical parts.

   Reduction measures: information/training: check that the label as indicated in the relevant paragraph is affixed, inform/train the operators.

9. Charging the batteries

The batteries must be charged when the device is empty (no person on the device) and using only the battery charger provided.

The electrical system which the power cable is plugged into must have an efficient earthing system and be sufficiently protected in accordance with applicable laws. Avoid using extension cables, adaptor or other such devices.

To charge the battery pack, only use the battery charger provided.

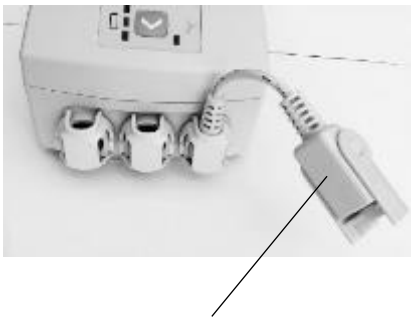
DEWERT Drive

Multicolour LED

The models with the DEWERT drive have 3 LEDs located on the control unit (see the figure to the side). These LEDs show different colours depending on the state of charge detected when the lifting/lowering operations are carried out.

The LED is green when the battery is fully charged, yellow when the charge is approximately 50% and red when the battery needs to be charged.
When the LED is red, the device must not be used and the battery must be charged immediately. This is to prevent any deep discharging which could irreparably damage the battery and to prevent the battery from discharging fully while a patient is being transferred, with the subsequent condition of risk.

To charge the battery, first remove it by holding it at the top, then press the red tab which will be below your finger and extract it with an upwards movement.



Adapter

At this point, the battery charger connector is to be connected to the socket at the bottom of the extracted battery.
Some versions may have an external adapter (figure to the side) which allows the battery charger to be connected without having to remove the battery.

A full charge requires approx. 8–10 hours.

LINAK Drive

The models with the LINAK drive have an acoustic signal which, during the lifting/lowering operations, indicates that the battery needs to be charged. At the same time, the LED shown in the figure to the side activate.

When the LED activates, the device must not be used and the battery must be charged immediately. This is to prevent any deep discharging which could irreparably damage the battery.

Battery charging can take place in two ways:

- with the battery fitted, namely without it having been removed from its seat and by simply introducing the battery charger connector into the free socket at the bottom of the control unit.
- with the battery removed from its seat. To remove it, hold the top part, pull the internal release lever with your fingers and then angle the battery and extract it with an upwards movement. Insert the battery charger connector into the socket at the bottom of the extracted battery. A full charge requires approx. 10–12 hours.

General precautions when charging the battery

- Due to the internal leaks (auto discharge), the battery pack supplied with the patient lift may not be fully charged. The Operator must therefore ensure that the battery is charged for at least 24 hours before the device is used.
- Intensive use of the device will reduce the design life of the battery pack.
- For optimal design life of the battery pack, keep the battery charging for as long as possible using the battery charger supplied.
- To ensure battery pack design life, do not wait for the battery to fully discharge before charging it.
- If the device is used sporadically, charge the battery pack at least once a month.

THE BATTERIES NEED CHARGING AT LEAST EVERY 30 DAYS EVEN WHEN THE DEVICE IS NOT BEING USED. BATTERIES LEFT UNCHARGED WILL BE IRREPARABLY DAMAGED.

WARNING!!! NEVER USE THE DEVICE WHEN THE BATTERIES ARE CHARGING.

If the device is to be stored for a long period, or if not used for more than one week, remove the battery and keep it in a place with a maximum temperature of 25°C.

WARNING! ONLY USE BATTERIES SUPPLIED BY THE MANUFACTURER TO ENSURE FULL DEVICE COMPATIBILITY.

WARNING! THE LACK OF POWER MAY GENERATE AN UNACCEPTABLE RISK. ALWAYS MONITOR THE STATE OF CHARGE BEFORE USING THE ELECTRIC VERSION OF THE DEVICE.

10. Troubleshooting for problems, causes

WARNING

The interventions mentioned may be dangerous, and must therefore only be carried out by suitably trained technicians.
The most frequent problems are indicated below. If a problem arises that is not listed in the table, contact the Technical Support Service.

Problems	Causes	Solutions
When the button is activated, the lift boom/patient stander does not go up/down.	Generic	- Check that there is nothing blocking the mobile parts of the patient lift. - Check that the electrical wiring is connected properly. - Check the electrical wiring for damage or interruptions. - Check the state of charge of the battery pack. If the LED turns red when the keys of the push-button control panel are pressed, this indicates that the battery pack has no charge. Charge the battery. - Check if the lift boom is folded. - If the boom is not folded, replace the electric motor or the battery pack.
The actuation and release lever of the patient lift legs does not go back to the locked position.	Generic	- Check that there is nothing hindering the actuation lever of the patient lift. - Check that the linkages are correctly secured and that the spring is sufficiently compressed. - If necessary, remove the plastic plug and use a flat 19 mm spanner to compress the spring and tighten the nut. Refit the plastic plug.
In the hydraulic version, the boom does not move when the lifting lever is operated.	No oil in the oil-hydraulic actuator. Descent valve in the open position.	- Check there are no oil leaks - Close the valve


If, despite all the checks made and steps taken to resolve the problem, the device continues to have anomalies that limit (even partially) correct operation, the Operator and person assigned to device use must contact the authorised Technical Support Service, the dealer or the Manufacturer without delay.

11. Maintenance

This section describes the maintenance work which the Operator is allowed to carry out.

All maintenance work must be performed with the cable disconnected from the electricity supply.

Before buying or selling a used device, make sure that maintenance work has been duly carried out and that it has been reconditioned by the Manufacturer.

Inspections, carried out at least once a month, must be recorded in the periodic inspection log indicated in the paragraphs below. It is to make photocopies of the empty pages to be used as a template for the entire working life of the device.

The following must be recorded:

- Date
- Name and surname of the person who carried out the inspection
- Any accessories used for the test. These must be marked to ensure identification
- Any operating or structural faults identified
- Corrective actions taken
- Notification to the manufacturer of the faults identified

WARNING

During the periodic inspections or repairs, if any fault is identified or the product is left temporarily unattended, a sign with the words 'OUT OF SERVICE' must be affixed to the patient lift.

11.1 Body support unit check (for example, stretcher slings) each time before use

Check the condition, check for damage, wear or potential yielding of the slings, rings, slots, or supporting ropes. If wear or deterioration of the lifting slots, belts or sling fabric is identified during the periodic inspections, replace the part immediately.

11.2 Cleaning operations (as required)

Any painted parts must be carefully cleaned with a soft damp cloth. Chromed parts may be cleaned with any spray normally found on sale. Do not spray the parts of the machine directly. Dry thoroughly.

11.3 Cleaning the wheels (as required)

The wheels must be checked and cleaned for any metal parts or sticky residue which might have collected on the surface.

11.4 Disinfection (as required)

The patient lift/patient stander must be disinfected with suitable, non-corrosive products. The disinfectants used must not contains phosphates, phosphorus or formaldehyde and must have a pH of between 6 and 8. To disinfect the body support unit, refer to the use and maintenance manual of the unit itself.

11.5 Replacing worn parts (as required)

If, during the periodic inspections, parts are identified as being damaged or worn, replace them immediately by contacting the authorised support centres or by contacting the Manufacturer directly. For the replacement of damaged parts, always use original KSP Italia parts and ensure they are replaced by suitably trained technicians. Failure to do so will relieve KSP Italia of any liability for damage or injury to persons or objects. Please refer to the specific paragraph for information regarding the validity, limits and application of the warranty.

11.6 Lubrication (monthly)

Periodically and after any cleaning operation, it is recommended that the articulations are lubricated with a few drops of pure Vaseline.

Never use jets of sprays of water or other substances on the device as this will damage the surfaces.

11.7 Check the state of wear of the wheels (prior to each use)

Periodically check the condition of the wheels. Should they be damaged or worn out, you must get in touch with the Technical Support Service.

11.8 Batteries

Batteries need maintenance too, but especially charging. If lead batteries are allowed to run too low, their working life is reduced.
Lead batteries will last a long time provided they are charged regularly and immediately after use.

11.9 Checking the safety systems (prior to each use)

Prior to each use, lift and lower the device boom without any load and extend and retract the base. Check that the brake is working correctly.
Check that the locking pin between the nut and the welded pin on the rocker arm of the Crutch Group is present and works correctly when moving the group itself.

11.10 Presence and correct tightening of screws and knobs (prior to each use)

Before using, check that the screws and knobs are tightened correctly and check that the pin lock and brakes are present.

11.11 Visual checks on the structure (weekly)

At least once a week, make sure that the structure of the device is intact and that the yoke and moving metal parts are not bent, cracked, slippery or apparently deteriorated.
For all damage/interventions not included in those described, please contact the Manufacturer.

11.12 Check the tightening torques (monthly)

Once a month and using a calibrated torque wrench, check that the nuts/bolts are tightened to the specified torque as indicated in the paragraph relating to assembly.

11.13 Periodic inspection log

Body support unit inspection log

Inspection date	Code and serial number of the body support unit	Information regarding the conditions of the body support unit	Intervention type (indicate the number of the paragraph or note down the intervention)	Date of next inspection	Corrective actions or feedback	Identification and Signature of the Inspection Manager

Patient lift/Patient stander inspection log

Inspection date	Serial number of the body support unit	Information regarding the conditions of the body support unit	Intervention type (indicate the number of the paragraph or note down the intervention)	Faults identified	Accessories used	Date of next inspection	Corrective actions or feedback	Identification and Signature of Inspection Manager

11.14 Routine maintenance

To ensure that the device maintains its level of efficiency and characteristics, routine servicing must be carried out on an annual basis at the premises of the authorised Support Centres. To find out where the Support Centres are located, please contact your local representative/dealer or directly:

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Via Dell'Artigianato, 1

06031 Bevagna (PG) Italy

Tel. +39 0742 361947 - Fax +39 0742 361946

ksp@kspitalia.com - www.kspitalia.com

Routine maintenance includes the following:

- checking the electrical system
- checking the resistance with load cycle
- checking the drive buttons
- checking the actuator
- checking the wheel-movement system
- checking the state of wear of the wheels
- checking the safety devices and the status of the battery-charging unit
- checking battery efficiency levels
- checking the condition of the frame, lift boom and spreader bar
- checking the lifting system
- checking the mechanical transmission system
- checking the body support unit
- checking the fixing systems
- checking the locking pin between the nut and the welded pin on the rocker arm of the lifting group
- checking current dispersion
- checking braking efficiency
- checking of the load-bearing structure and lifting mechanism with relative connections, brakes, safety device controls and patient support devices.
- testing the working load of a lifting cycle with maximum load

Periodic maintenance is to be recorded in the register indicated in the previous paragraphs,

together with the code of the body support unit and the place of use of the device.
If the periodic inspection identifies fault, sign of wear or other damage which could compromise safety, the owner must be informed immediately. In the event of an immediate risk to safety, the device must be put out of service and must not be used until the fault has been eliminated.

11.15 Spare parts

A list of spare parts is available upon request.
The Manufacturer will, upon request, provide the wiring diagrams, list of components, descriptions and other information/instructions which may be of use to the technical assistance personnel when carrying out repairs on the parts of the device which the Manufacturer deems repairable by such personnel.

12. Disposal

The device does not have any specific unexpected risks associated with its disposal.

The device and its various parts must be sorted so everything can be recycled, treated or disposed of using environment-friendly methods. This will avoid any negative impact on the environment and on people's health. It also makes it easier for the various materials to be recycled and reused.

The symbol of the crossed-out bin on the device means that it must be disposed of separately at the end of its working life.

The electric lifter is an electrically powered medical device and its disposal must be done as non-professional domestic RAEE. Illegal disposal of the product involves the application of administrative sanctions pursuant to current legislation. Unlawful disposal by the User will lead to administrative sanctions as for current legislation.

WARNING! This section concerning the disposal is valid and therefore applies only to the product users that are located in Italy (not overseas or in European Union).

The batteries must be disposed of separately in accordance with Legislative Decree 188/2008 which transposes the European directive on batteries and accumulators.

The operations to be carried out for disposal are indicated below:

- Remove the battery pack from the device
- Remove the batteries from the battery pack
- Dispose of the batteries in accordance with current Legislation;

Non-electrical devices are not subject to the regulations on electrical products and are disposed of according to the national and regional legislation in force at the time of decommissioning.

13. Warrantly

For a new product, the warranty is valid for 24 months whereas for a used product (already designated for professional use) it lasts 12 months; in both cases, the warranty starts from the delivery date as shown on the invoicing and delivery documents. **The batteries are guaranteed for 6 months.**

When the warranty period has elapsed, the purchaser/End user (or any other holder of the sales contract) must report any obvious defects no later than two months after the delivery date. Any hidden defects must be reported as soon as they are discovered, in any case not after the end of the warranty period.

Any complaints or requests must be made in writing and sent by registered letter with proof of receipt, by ordinary or certified e-mail or by telegram either to KSP Italia or to the authorised dealer who made the sale. Any repairs must be carried out by the technical support service of the authorised dealer or by personnel of Ksp Italia S.r.l.; repairs by any unauthorised technicians will cause the immediate voiding of the warranty.

The warranty entails the free replacement or repair within a set time limit of the constituent parts of the device which, **upon the Manufacturer's unquestionable judgement,** are deemed to have manufacturing defects.

The warranty does not cover any damage caused by poor maintenance and/or failure to observe the operating procedures and the warnings/instructions contained in this Manual. Neither does it cover damage due to incorrect transport (scratches, dents, etc...), harm caused by falls, negligence, tampering, inability to use the device or repairs carried out by unauthorised personnel, or damage incurred by poor installation by the User or unauthorised personnel, by dirt, stains, liquids or scratches on the outside, from power surges and black-outs, or modifications caused by environmental and climate conditions as well as damage caused by events not related to normal operation. In any case, the warranty does not cover defects caused by normal wear and tear, negligence and neglect, misuse and/or ill-usage and anything contrary to the instructions in this Manual.

The replacement of any component parts does not imply the extension of the overall warranty for the device. This includes the replaced part.

14. Assistance, On-site service

KSP ITALIA offers a Technical On-Site Support Service which can be activated by your authorised dealer or by contacting KSP Italia directly.

WARNING! This section concerning the assistance is valid and therefore applies only to the product users that are located in Italy (not overseas or in European Union).

15. Feedback - Alerts

Any accidents, malfunctions and/or breakdowns, change in the features or performance of the device that have caused or might cause damage to the Operator/User must be reported without delay either to the dealer, at the address indicated in the purchase documents, or to the Manufacturer. Either the dealer or the Manufacturer will take all necessary steps to solve the problem, including launching possible recall campaigns.

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