Class I Medical Device, compliant with the Medical device directive 93/42/EEC

Warning
The information contained in this manual is subject to change without notice.
The Diagrams are inserted only for reference and may vary slightly from the actual device.
Spencer Italia S.r.l. assumes no responsibility for any errors contained herein or for damage, accidents or consequences connected with the supply, performance or use of this manual.

First edition: 16/01/2015
Rev.2 28/11/2017
# INDEX

1. MODELS  
2. INTENDED USE  
3. REFERENCE STANDARD  
4. INTRODUCTION  
   4.1 USE OF THE MANUAL  
   4.2 LABELLING AND TRACKING CONTROL OF THE DEVICE  
   4.3 SYMBOLS  
   4.4 WARRANTY AND SUPPORT  
5. WARNINGS  
6. SPECIFIC WARNINGS  
   6.1 PHYSICAL REQUIREMENTS OF OPERATORS  
7. RESIDUAL RISK  
8. TECHNICAL DATA AND COMPONENTS  
9. INSTALLATION AND START-UP  
10. FUNCTIONAL CHARACTERISTICS  
11. INSTRUCTIONS FOR USE  
   11.1 MEDICAL VEHICLE REQUIREMENTS  
   11.2 STATIONING BRAKES  
   11.3 LOWERING THE CART  
   11.4 LOADING OF CROSS CHAIR ON THE CROSS CHAIR TROLLEY  
   11.5 TROLLEY LIFTING  
   11.6 LOADING AND UNLOADING THE TROLLEY FROM THE MEDICAL VEHICLE  
   11.7 REMOVING CROSS CHAIR FROM CROSS CHAIR TROLLEY  
   11.8 TWIST SYSTEM (ONLY CROSSOVER CHAIR)  
12. CLEANING AND MAINTENANCE  
   12.1 CLEANING  
   12.2 PRECAUTIONARY MAINTENANCE  
   12.3 PERIODIC MAINTENANCE  
   12.4 SPECIAL SERVICING  
   12.5 LIFE SPAN  
13. TROUBLESHOOTING  
14. ACCESSORIES  
   14.1 STANDARD EQUIPMENT  
   14.2 ACCESSORIES  
15. SPARE PARTS  
16. DEMOLITION

---

**Warning**

The information contained in this document could be modified without any warning and is not to be intended as a commitment on behalf of Spencer Italia S.r.l. Spencer products are exported to many countries and the same identical regulations are not always valid. For this reason there could be differences between the description here described and the product actually delivered. Spencer continually strives to reach the perfection of all items sold. We therefore hope you will understand if we reserve the right, at any time, to modify the shape, equipment, lay-out or technical aspects that are herein described.

© Copyright Spencer Italia S.r.l.

All rights reserved. No part of this document can be photocopied, reproduced or translated into another language without the written approval of Spencer Italia S.r.l.
1. MODELS

The standard following models can undergo change, revision and implementation without any notice.
- CROSS CHAIR – TROLLEY
- CROSSOVER CHAIR - TROLLEY

2. INTENDED USE

The trolley CROSS CHAIR is a self-loading trolley for transport of patient to be used in combination with the stretcher/chair Cross Chair in rescue operations on road or in medical vehicles. It’s equipped with folding legs to facilitate loading and unloading on medical vehicles. The medical vehicle must be equipped with a dedicated Spencer fixing system.
The patient should not intervene on the device.

3. REFERENCE STANDARD

As a distributor or end user of products manufactured and/or marketed by Spencer Italia S.r.l. you are strictly required to have basic knowledge of any legal requirements applying to the devices contained in this supply that are in power in the goods final destination Country (including laws and norms regarding technical specifications and/or safety requirements) and therefore you are strictly required to have the necessary knowledge to guarantee all aspects regarding the total conformity of the products to the regulations in the relevant territory.

<table>
<thead>
<tr>
<th>REFERENCE</th>
<th>TITLE OF DOCUMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNI EN ISO 1865-1</td>
<td>Patient handling equipment used in road ambulances - Part 1: Specification for general stretcher systems and patient handling equipment</td>
</tr>
<tr>
<td>UNI EN 1789</td>
<td>Medical vehicles and their equipment - Road ambulances</td>
</tr>
</tbody>
</table>

4. INTRODUCTION

4.1 USE OF THE MANUAL

This manual is intended to provide the health care operator with all the necessary information for its safe and appropriate use as well as adequate maintenance of the device

_Note_: The manual is an integral part of the device. It must be kept for the duration of the device and must accompany the device in case of change of ownership or destination. If the operating instructions received relate to products not received, you must immediately contact the manufacturer before use.

The Spencer product manuals can be downloaded from the website or can be requested by http://support.spencer.it or by contacting the manufacturer. Exceptions are items whose essentiality for reasonable and predictable use is such as to make it unnecessary to prepare instructions in addition to the following warnings and directions on the label.

Regardless of the level of experience gained in the past with similar devices, it is recommended that you carefully read this manual before installing, operating or using the product or any maintenance.

4.2 LABELLING AND TRACKING CONTROL OF THE DEVICE

Each device has got an identification label positioned on the device itself and/or on its box, which includes identification data about the manufacturer, the product, the CE mark, the serial number (SN) or lot number (LOT).

It must never be removed or covered.

In case of damage or loss, request a duplicate from the manufacturer. Failure to do so will interrupt the validity of the guarantee as the device can no longer be traced.

_The Directive 93/42/EEC requires manufacturers and distributors of medical devices to keep track of the device location. If the device was in a different location to the address where it was sent or to where it had been sold, donated, lost, stolen, exported, or destroyed, permanently removed from use, or if the device had not been delivered directly from Spencer Italia S.r.l., register your device at http://service.spencer.it or inform the customer (see § 4.4)._
4.3 SYMBOLS

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>!</td>
<td>General or specific warnings</td>
</tr>
<tr>
<td></td>
<td>Lubricate</td>
</tr>
<tr>
<td></td>
<td>See instructions for use</td>
</tr>
<tr>
<td>LOT</td>
<td>Lot number</td>
</tr>
<tr>
<td>REF</td>
<td>Product code</td>
</tr>
<tr>
<td>SN</td>
<td>Serial Number</td>
</tr>
<tr>
<td></td>
<td>The product is compliant with the requirements of Directive 93/42/EEC</td>
</tr>
</tbody>
</table>

4.4 WARRANTY AND SUPPORT

Spencer Italia S.r.l. guarantees that products are without defects for a period of one year from the date of purchase. For any information regarding the correct interpretation of the instruction manual, the use, maintenance, installation and restore of the product, contact the Spencer customer care service ph. +39.0521.541111, fax +39.0521.541222, e-mail service@spencer.it, or visit http://it.spencer.it/contatti to find the nearest service centre for assistance.

In order to facilitate the assistance service, please always indicate the lot number (LOT) or serial number (SN) shown on the label applied on the box or on the device.

Conditions for warranty and assistance can be viewed on http://support.spencer.it.

Note: Record and store; these instructions, lot (LOT) or serial number (SN) if any, date and place of purchase, date of first use, date servicing, user names and comments.

5. WARNINGS

The warnings, notes and other important safety information are indicated in this section and are clearly visible throughout the entire manual.

At least every 6 months, is important to verify if updated User Manuals are available or there is any change involving your product. This information is freely available on the website http://support.spencer.it in the section “User manuals” and “Product Updates”.

User training

Note: Laboratory testing, post production tests, instruction manuals cannot always consider every possible scenario for use. This means that in some cases the performance of the product could be notable different from results to date obtained. The best instructions are continuous use under the supervision of trained and competent staff.

- Regardless of the level of experience gained previously with similar devices, it is recommended that you carefully read this manual before installing, operating or using the product or carrying out any maintenance. If in doubt, contact Spencer Italia S.r.l. to obtain the necessary clarifications.
- The product must be used by trained personnel only, having attended specific training for this device and not for similar products.
- The suitability of the user to use the product may be attested by the records of training, where the names of those trained, of the trainers, dates and place are indicated. This register which certifies the eligibility of the operators to use the Spencer device must be kept for a period of 10 years after the disposal of the device itself. This register will be made available to the competent Authorities and/or manufacturer if requested. In the absence of such documentation, sanctions will be applied.
- Do not allow any untrained person to help during the use of the device, because they could cause damage to the patient or to themselves.
- The product should be operated only by personnel trained in the use of this product and not in others similar.

Note: Spencer Italia S.r.l. is always at your disposal to organise product training.

Installers training

The installation of the device must be carried out only by qualified and trained staff authorized by Spencer Italia S.r.l. Timing and procedures for conducting training courses shall be agreed between the customer and our Commercial offices.
**Product functionality**

*Use of the device in anyway other than described in this manual is forbidden.*

- Before each use of device the perfect operating state of the device must be checked as specified in the instruction manual. If any damage or abnormalities which could in any way influence the correct functioning and the safety of the device are detected, the device must be immediately removed from service and the manufacturer must be contacted.
- If any failure or incorrect functioning of the device is detected, it must be immediately substituted with a similar item so that the rescue procedures are guaranteed without any interruption.
- The appliance must not in any way be tampered with (modification, adjustment, addition, replacement). In such cases all responsibility will be denied for any malfunctions or injuries caused by the appliance itself; moreover CE certification and product warranty will be considered void.
- Those who modify or have modified, prepare or have prepared medical appliances in such a way that they no longer serve the purpose for which they were intended, or no longer supply the intended service, must satisfy the valid conditions for the introduction onto the market.
- During use, position and adjust the device taking care not to cause any obstruction to rescuers and or any other rescue equipment.
- Ensure that all the necessary precautions are taken in order to avoid the hazards that can arise as the result of contact with blood or body fluids, when applicable.
- For devices intended for the transport of patients, always respect the maximum load capacity of the device, as indicated in this user’s manual. Maximum load capacity means the total weight distributed according to the human anatomy. In determining the total loading weight of the product, the operator must consider the weight of the patient, the equipment and the accessories. Moreover, the operator must consider that the overall dimensions of the patient do not reduce the functionality of the device.
- For devices intended for the transport of patients, make sure, before lifting, that operators have appropriate physical conditions, as indicated in the manual.
- The maximum weight supported by each rescuer must comply with the requirements prescribed by the law of the land, in the field of Health and Safety at Work.
- The warranty seals, where present, must not be removed; in such case, the manufacturer will no longer recognize the product warranty and will accept no responsibility in case of incorrect operation or damage caused by the product itself.
- Avoid contact with sharp objects
- The installation of the device must be carried out only by qualified and trained staff authorized by Spencer Italia S.r.l. Timing and procedures for conducting training courses shall be agreed between the customer and our Commercial offices.
- Operating temperature: from -10°C to +50°C

**Storage**

- The device should not be exposed to or come into contact with any source of combustion or inflammable agents. Store in a cool, dry, dark place and do not expose to direct sun.
- Do not store the device underneath any heavy objects which could cause structural damage.
- Store and transport the device in its original packaging. Failure to do so makes the warranty void.
- Storage temperature: from -20°C to +60°C

**Maintenance/cleaning**

*Spencer Italia S.r.l. disclaims any liability for any damage, direct or indirect, which is a result of improper use of the product and replacement parts and/or otherwise of any repairs made by an entity other than the authorized Spencer service centres; this will also invalidate the warranty.*

- The operator must always wear adequate personal protection such as gloves and mask etc. during all checking, maintenance and cleaning procedures.
- Establish a maintenance program and periodic testing, identifying an employee responsible for overseeing. The person to whom the ordinary maintenance of the device is entrusted must ensure the basic requirements foreseen by the manufacturer in the user’s manual.
- The frequency of inspection is determined by factors such as legal requirements, the type of use, frequency of use, environmental conditions during use and storage.
- Spencer Italia S.r.l. disclaims any liability for any damage, direct or indirect, that is the result of incorrect repairs or use of products made by Spencer Italia S.r.l. Repairs must necessarily be carried out by an authorized Spencer Italia service centre, which in using original spare parts will provide a quality repair service in strict accordance with the technical specifications given by the manufacturer. Spencer Italia S.r.l. disclaims any liability for any damage, direct or indirect, which is a result of improper use of spare parts and/or otherwise of any repairs made by an entity other than the Spencer service centres authorized to repair or make substitutions on this product and parts and/or otherwise of any repairs made by an entity other than the Spencer service centres authorized to do so; the warranty will also be invalidated.
- Use only original components, spare parts and or accessories, approved by Spencer Italia S.r.l., in order to carry out any operation without causing any alteration or modification to the device.
- For any operations that are not carried out directly by the manufacturer but by an authorised centre, we have to underline that a report regarding all operations carried out must be requested. This will permit both Spencer Italia S.r.l. and the end user to keep a log book regarding the operations carried out on the device.
All maintenance and revision must be recorded and documented with the corresponding report for technical assistance; documentation shall be maintained for at least 10 years from the end of life and must be made available to the competent authorities and/or the manufacturer if requested.

The cleaning schedule for reusable products must be performed in accordance with the directions provided by the manufacturer in the user manual, in order to avoid the risk of cross-infection due to the presence of secretions and/or residuals.

The device and all its components, after washing, should be allowed to dry completely before storing.

If required, lubrication must be carried out after cleaning and complete drying.

### Regulatory requirements

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

- Promptly notify Spencer Italia S.r.l. (already during the first product enquiry) when requesting in details regarding any revisions to be made by manufacturer in order to guarantee the conformity of the products to the territory’s legal specifications (including those resulting from rules and/or norms of other kind).
- Act, with all due care and diligence, and contribute to ensure conformity to general safety requirements of all devices marketed in the territory, by providing final users with all necessary information for carrying out periodical checks on their devices, exactly as specified in the relevant user’s manual.
- Actively contribute to safety checks on product sold, by communicating any relevant risk analysis information both to the manufacturer and to any competent authorities so that the necessary action can be promptly taken.
- The distributor or final user is aware that in the event of any failure to conform to the above mentioned requirements you will be deemed fully responsible for all damages that might occur. Therefore Spencer Italia S.r.l. expressly disclaims any responsibility and/or liability for your non-compliance with the present regulatory provisions.

### General warnings for medical devices

The user must carefully read not only these general warnings, but also those listed below.

- It is not foreseen that the use of the device is prolonged beyond the time necessary for the first responders to the complete their operation and the subsequent stages of transport to the nearest rescue point.
- When the device is being used, the assistance of qualified staff must be guaranteed and at least one operator must be present.
- Follow the procedures and protocols approved by the internal organization.
- The activities of disinfection and sterilization should be carried out in accordance with the parameters given in the validated cycle as specified in the technical standards.
- With reference to the D. Lgs. 24th February 1997, n. 46 emended by D. Lgs. 25/01/2010, n. 37 – Acknowledgement of Directive 93/42/CEE and 2007/47/CE concerning Medical Devices, we remind both public and private operators, , That in the exercise of their activity detect an accident involving a medical product are required to notify the Ministry of Health, under the terms and in the manner established by the relative ministerial decrees and also to the manufacturer. Health care providers whether public or private are required to communicate to the manufacturer, any other inconvenience that may allow for the adoption of measures to ensure the protection and health of patients and users.

### 6. SPECIFIC WARNINGS

For the use of the trolley Cross Chair, the user must have read, understood and follow carefully all the instructions described in the Cross Chair Stretcher/Chair User manual.

- Follow the procedures approved by the Emergency Medical Service for the immobilization and transport of patients.
- Follow the procedures approved by the Emergency Medical Service for the positioning and transport of patients.
- Do not use if the device or its parts are pierced, torn, frayed or excessively worn out.
- Make sure, before lifting, that the operators have a firm grip on the device.
- Avoid pulling the device on rough surfaces.
- Do not lift by crane or other mechanical lifters.
- Do not use drying machines.
- The device is intended for the transport of patients and cannot be used as a parking device.
- Do not use with devices other than Cross Chair if not approved by the manufacturer.
- Have practice with an empty stretcher/chair, in order to make sure you become familiar with the manoeuvres.
- For loading techniques of the patient, for particularly heavy patients, for working on uneven ground or in special and unusual circumstances, the presence of more operators is recommended (not only 2 as expected under standard conditions).
- Before loading Cross Chair with the patient on the trolley, make sure that the patient is adequately immobilized. Failure to immobilize correctly can cause serious damage.
- Make sure that the sheet does not interfere with any moving mechanism and control of the trolley.
- Do not move the device if the weight is not evenly distributed.
- Use only the handle of the frame for moving the stretcher and not the sidebars. Tabletops or other parts not suitable for such purpose.
• Avoid extreme force during the loading of the stretcher on the trolley. Too much force may have negative effect on the coupling system.
• Avoid extreme force during the loading of the assembly trolley + stretcher. Too much force may have negative effect and can adversely affect the functionality of the trolley.
• Hold the stretcher firmly still if the patient is on it.
• The Stationing brakes are aids for the operator, they can not in any way substitute his supervision.
• Pay a lot of attention to possible obstacles (water, ice, debris, etc.) on the route of the stretcher/chair, because they could cause loss of balance of the operator and compromise the proper functioning of the device. If the path free cannot be made free of obstacles, choose an alternative path.
• Water, ice or debris on the stairs can cause loss of balance for the operator and jeopardize the proper functioning of the device. In order to avoid injury, clear the way of obstacles or choose an alternative route.
• For obstacles higher than 10mm the device must be raised, making sure to hold it by the structure and not from the sidebars/platforms.
• Once the wheels of the loading carriage have been positioned on the floor of the medical vehicle, the wheels of the front leg must have a distance from the ground of at least 6 cm, that allow safe opening and locking of the front legs. Regularly check the height of the loading floor of the ambulance; if altered the trolley settings must be verified by the manufacturer or by an authorized service center. Otherwise we assume no responsibility on the improper functioning or any damage caused by the device itself.
• If the vehicle is equipped with pneumatic or hydraulic suspensions, the loading height adjustment must be carried out taking into account the worsening condition of use and/or the operating one provided by the vehicle builder.
• Problems during use and/or safety risks associated with such system, cannot be attributed to the manufacturer.
• Improper installation of the loading platform can result in enervation and consequent damage of welding of the front legs.
• Improper installation of the loading platform may cause undesired operation of the device and cause harm to the patient and to the operator.
• Do not alter or modify the stretcher arbitrarily to make it fit into the emergency vehicle: the modification may cause unforeseeable functioning and damage to the patient or operators. In any case the warranty will be void, relieving the manufacturer from any liability.
• The CROSS CHAIR TROLLEY, depending on model (verify the model in your possession), can be compliant with the standard EN 1789 if used with the CROSS CHAIR stretcher/Chair and the Spencer fastening system both compliant with the standard. Therefore, is not permitted the use of fastening systems not approved by the manufacturer. Fastening systems that have not been approved may alter the structural and functional characteristics of the device.

6.1 PHYSICAL REQUIREMENTS OF OPERATORS

CROSS CHAIR TROLLEY is a device intended for professional use only. Each operator must be trained to transport patients safely and efficiently. Do not allow untrained persons to help operators during use of the product, as this may cause injury to themselves or to other people.

The operators that use the device must have the physical ability to use it and good muscle coordination, as well as presenting strong back, arms and legs to raise and support and be able to grasp firmly the device with both hands.

Operators must be able to provide the necessary assistance to the patient.

Users should be able to lift and handle safely the weight of the trolley, stretcher/chair, the patient and any other equipment used with the device.

During patient loading procedures for extremely heavy patients, operations on rough terrains and in particular situations, more operators may be needed (not only 2 as expected in normal conditions).

The abilities of all operators must be considered before determining their role in the employment of the stretcher.

7. RESIDUAL RISK

The residual risks listed below have been identified exclusively in reference to the intended use of the device.
• The use by untrained personnel may result in injury to the patient, rescuer or others.
• Inadequate disinfection procedures may involve cross-infection risks.
• Partial opening of the legs, may result in a fall to the ground of the device. Make sure the legs are properly locked before making any movement of the trolley.
• Improper locking of Cross Chair on the trolley, or an improper positioning, can cause dangerous movement, especially if a violent deceleration of the vehicle happens. This may cause serious injury to patient and operators. Always verify the proper insertion of the locking system.
• Incorrect closure of the front telescopic handles of Cross Chair, may cause obstruction in the movement of the trolley. Verify that the handles are fully closed during transport.
• Failure to comply with warnings for operators, may cause danger of crushing cause by handling mechanisms.
• Failure to read and understand the instructions of Cross Chair stretcher chair, can have consequences for the patient and operators.
8. TECHNICAL DATA AND COMPONENTS

*Note: Spencer Italia S.r.l. reserves the right to make changes to specifications without prior notice.*

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>Material</th>
<th>No</th>
<th>Description</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sliding profile for Cross Chair</td>
<td>Al</td>
<td>9</td>
<td>Front wheels</td>
<td>PU</td>
</tr>
<tr>
<td>2</td>
<td>Cross Chair locks</td>
<td>Nylon</td>
<td>10</td>
<td>Front legs</td>
<td>Steel</td>
</tr>
<tr>
<td>3</td>
<td>Release lever</td>
<td>Steel/PE</td>
<td>11</td>
<td>Posterior piston</td>
<td>Steel/PE</td>
</tr>
<tr>
<td>4</td>
<td>Frame (Handle part)</td>
<td>Steel</td>
<td>12</td>
<td>Small Middle wheel</td>
<td>PU</td>
</tr>
<tr>
<td>5</td>
<td>Leg’s release levers</td>
<td>PE</td>
<td>13</td>
<td>Front piston</td>
<td>Steel/PE</td>
</tr>
<tr>
<td>6</td>
<td>Fifth wheel</td>
<td>Al/Steel/PU/Nylon</td>
<td>14</td>
<td>Adjustable heights unlocking lever</td>
<td>PE</td>
</tr>
<tr>
<td>7</td>
<td>Rear legs</td>
<td>Steel</td>
<td>15</td>
<td>Loading carriage wheels</td>
<td>PU</td>
</tr>
<tr>
<td>8</td>
<td>Rear wheels brake bracket</td>
<td>Chromed Iron/PE</td>
<td>16</td>
<td>Stoppers</td>
<td>Steel/PE</td>
</tr>
</tbody>
</table>

Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (mm)</td>
<td>1980 ± 10</td>
</tr>
<tr>
<td>Width (mm)</td>
<td>570 ± 5</td>
</tr>
<tr>
<td>Sliding profile height with trolley raised (mm)</td>
<td>850/900</td>
</tr>
<tr>
<td>Sliding profile height with trolley at intermediate height (mm)</td>
<td>600/680</td>
</tr>
<tr>
<td>Sliding profile height with trolley fully lowered (mm)</td>
<td>280</td>
</tr>
<tr>
<td>Loading carriage height (mm)</td>
<td>650 ± 5</td>
</tr>
<tr>
<td>Cross Chair patient floor height with raised trolley (mm)</td>
<td>1010/1040</td>
</tr>
<tr>
<td>Cross Chair patient floor height with trolley in intermediate height (mm)</td>
<td>760/830</td>
</tr>
<tr>
<td>Cross Chair patient floor height with trolley fully lowered (mm)</td>
<td>395</td>
</tr>
<tr>
<td>Loading carriage and leg’s wheels (mm)</td>
<td>Ø 200</td>
</tr>
<tr>
<td>Loading capacity (kg)</td>
<td>170 (250 Crossover Chair)</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>32</td>
</tr>
</tbody>
</table>

*Note 1: The specifications of “patient floor height”, are measured without mattress.

*Note 2: The dual dimensional values present in some fields, refer respectively to the back and front of the measured characteristic (front / rear)*)

1 Maximum load capacity means the total weight distributed according to the human anatomy. In determining the total load of the weight on the product, the operator must consider the weight of the patient, the equipment and the accessories.
9. INSTALLATION AND START-UP

Before the first use verify that:
- The packaging is intact and has protected the device during transport
- Check that are present all the components included in the accompanying list.
- Functionality of the device
- The sanitary vehicle is equipped with a Spencer fastening system dedicated to the stretcher.
- The patient board of the stretcher is flat.
- The loading floor of the stretcher wide and long enough to accommodate the stretcher and its accessories without becoming an obstacle.
- The loading floor of the stretcher wide and long enough to accommodate the stretcher and its accessories without becoming an obstacle.
- The wheels of the front leg have a distance from the ground of at least 6 cm, allowing a safe opening and locking of the front legs (see the image at point 11.6).
- The fasteners must maintain the device fixed to the body of the vehicle.
- Do not modify for any reason the stretcher in the structural, leverage and traction parts. This type of intervention could cause damage to patient and/or rescuers.

If conditions mentioned above are not satisfied, the device cannot be considered secure, compromising its safe use and making it a possible cause of injury for patient, operators and damage to the device.

To facilitate the loading of the stretcher on the ambulance, it is recommended to eliminate sharp edges on the edge of the loading floor. The stretcher must be secured with Spencer fastening systems to prevent any kind of movement during transport on the sanitary vehicle.

Practice with a stretcher without patient before the regular start-up.

For instruction about use after start-up, follow the operations described on paragraph 12.

If the above conditions are met, the device may be considered ready for use; otherwise you must immediately remove the device from service and contact the manufacturer.

Do not alter or modify in any way the appliance; any such interference could cause malfunctions and injury to the patient and/or rescuer. Moreover the manufacturer will no longer recognize the product warranty and will accept no responsibility.

10. FUNCTIONAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Cross Chair Sliding profile</td>
<td>Area of the trolley giving support to the stretcher/chair and allowing the scroll of Cross Chair facilitating it’s lock on the trolley.</td>
</tr>
<tr>
<td>B</td>
<td>Leg’s release levers</td>
<td>Color coded. Allow the disengagement of the locking mechanisms of the legs in order to load the trolley on the medical vehicle or to lower it to the ground. The release lever of the rear legs also serves as a drive of the adjustable heights mechanism.</td>
</tr>
<tr>
<td>C</td>
<td>Fifth wheel</td>
<td>Fundamental group for the fixing of the carriage inside the medical vehicle. The coupling with the fixing system installed inside the vehicle occurs thanks to this group. It also performs as a support of the stretcher when the rear legs are closed allowing to slide the trolley on the vehicle’s floor till the actioning of the fixing system.</td>
</tr>
<tr>
<td>D</td>
<td>Rear wheels brake bracket</td>
<td>Is the steering wheel assembly. They are self-positioning, have a rotation of 360° and are equipped with stationing brake.</td>
</tr>
<tr>
<td>E</td>
<td>Adjustable heights unlocking lever</td>
<td>Found on both sides of the trolley and drive the mechanism for unlocking legs necessary to reach the intermediate height position.</td>
</tr>
<tr>
<td>F</td>
<td>Loading carriage wheels</td>
<td>They are necessary to load the trolley on the vehicle. It’s indispensable that the height of the loading floor, is higher than the height measured “under the wheel” of the loading carriage, allowing to reach the “Safety height” from the ground needed during the loading and unloading procedures.</td>
</tr>
</tbody>
</table>
11. INSTRUCTIONS FOR USE

Before transferring, lifting or transporting the patient, primary medical evaluations have to be performed. Once the diagnosis has been assured, it is preferable (if possible) to suggest to the patient that he actively collaborates during transfer onto the stretcher, and to make sure the patient is fully aware of all risks. Before loading the patient, place the device near the patient; always maintain the safety belts fastened during the manoeuvres.

11.1 Medical vehicle requirements

The Cross Chair trolley, is designed to enter and leave the medical vehicle compartment. The vehicle must have:
- A levelled loading floor
- Loading floor sufficiently wide and long to permit a safe positioning of the trolley. The trolley must not be an obstacle for the operators.

The wheels of the front legs, when loading/unloading and the loading carriage is still on the loading floor of the vehicle, must be at a minimum distance of 6cm from the ground, to allow safe opening of the front legs.

If the above measure is not met, the device cannot be considered secure with consequent risks of injury for patient and operators and damage to the device.

11.2 Stationing brakes

To engage the parking brakes, just press with a foot the metal strips on the brackets of the rear wheels. To disengage, lift them slightly, they will return automatically in original position.

11.3 Lowering the cart

To facilitate the transfer of patient or the loading of Cross Chair, it’s advisable to bring the trolley in intermediate height or lowered position (only if the patient is not on the device).

Intermediate height
- Operate the release lever of the rear legs (green color), hold it and slightly raise the trolley to unlock the rear legs locking system. Lower the trolley about 10cm, release the lever and accompany the trolley down until the intermediate position of the posterior part has been reached.
- Operate the lever for the adjustable heights in direction of the loading carriage to unlock the movement of the front legs. Press the trolley down, release the lever and accompany down until the intermediate height has been reached. Ensure that the reached position is stable.

Lowering the trolley
This procedure allows to the trolley to reach the minimum distance from the ground.

- **It is forbidden to make this maneuver when patient is on the device.**
- Raise the trolley from the side of the levers until the loading carriage wheels have reached the ground.
- Keeping the loading carriage wheels on the ground, and ready to support the weight of the device, operate both levers (green and red) and push up the trolley to unlock front legs. Once the legs are unlocked, accompany the trolley to the ground.
- It’s now possible to load the Cross Chair stretcher/chair on the trolley as described in the following paragraph.

Note: When the trolley is fully lowered, the brakes doesn’t perform their function. Make sure that the trolley is held in place by at least one operator.
11.4 Loading of Cross Chair on the Cross Chair Trolley

Before performing any operation, the operator must have read and understood all the warnings and instructions for use of stretcher/chair Cross Chair.

The loading of Cross Chair on the Cross Chair trolley, can be done in every configuration of the trolley. The choice of the height of the trolley has to be made in relation to the place of intervention and the physical ability of the operators. Here are described some elements useful for the assessment:

**Loading if trolley is lowered**
- Advantages: less fatigue for the operator related the loading of Cross Chair on the trolley
- Disadvantages: In this configuration, the cart has no brakes and a greater effort to raise the trolley in the standard position is needed.

**Loading if trolley is in intermediate height**
- Advantages: Parking brakes work, the effort needed to rise the trolley is acceptable.
- Disadvantages: Maneuvers with the patient on the device, could be more difficult.

**Loading if trolley is in standard position**
- Advantages: Trolley ready to be handled, stationing brakes can be engaged.
- Disadvantages: Loading of Cross Chair is more difficult and require more effort due to the height.

*After considering the above, is suggested to load Cross Chair on the trolley using the intermediate height.*

- Loading operations must be always carried out by at least 2 operators.
- Get as close as possible to with the Cross chair and the patient.
- If not already done, position Cross Chair in stretcher mode.
- Align the devices so that the front wheels of Cross Chair, are just beyond the unlock lever for the adjustable heights found on the trolley.
- The anterior telescopic handles of Cross Chair, can be both in opened or closed position.
- The rear telescopic handles of Cross Chair must be closed (see the Cross Chair user manual – Rear handles Position 1) and is necessary to ensure that the mechanism for configuration change is correctly locked.
- Sidebars of Cross Chair must be in closed position.
- Parking brakes of the trolley have to be operated (which could be in standard or intermediate position) or other operators must guarantee the immobility of the device.
- Verify that top of the trolley is free from any kind of foreign element (operator’s hands, sheets, accessories).
- Lift Cross Chair and lay it on the trolley without altering the alignment previously defined.
- Check again that no operator has inadvertently placed his hands anywhere on the frame between the Cross Chair Trolley and Cross Chair – Danger of finger crush.
- If the litter is centered on the trolley, the wheels support (see Cross Chair instruction manual) are on the sliding profile of the trolley, and that the front wheel is over the adjustable heights unlocking lever, is possible to push Cross Chair forward until the insertion of the locking mechanism.
- Verify that no sheets or accessories has interfered with the insertion of the locking mechanism between Cross Chair and trolley.
- Close the front telescopic handles of Cross Chair.

11.5 Trolley lifting

To bring back the trolley to the standard height, starting from any of the previous configurations, the operators must be coordinated while lifting the front and rear of the assembly, in order to ensure the proper alignment of the patient’s board.

- In the rear part, grab the handle part of the frame.
- In the front part, use the Cross Chair’s telescopic handles in closed position.
- Lift the assembly until the leg’s locking mechanism have been activated.
- For the lifting of the rear part, use only the handle part of the main frame of the trolley.
- For the lifting of the assembly, don’t grab the area where the patient’s lie or other parts as they are not prepared for this purpose.
11.6 Loading and unloading the trolley from the medical vehicle

- Bring the trolley near the vehicle.
- Advance with the trolley sliding the loading carriage on the vehicle floor, until the front legs have reached the bodywork of the vehicle.
- Operate the red lever to unlock the front legs while pushing forward the trolley inside the vehicle, until the rear legs have reached the bodywork.
- Only after making sure that the center wheels of the trolley are on the loading floor of the vehicle, press the green lever to release the rear legs while continuing to push towards the inside of the vehicle.
- In this procedure, a considerable part of the weight of the assembly, will weigh on the operator, which must be strong enough to support and accompany the device in all its movements.
- Lock the trolley on the medical vehicle using the Spencer fixing system installed on the vehicle.

To unload the device from the medical vehicle, proceed as follow:
- Unlock the trolley from the Spencer dedicated fixing system.
- Pull the trolley outside of the vehicle, without operating any linkage, using the handle point in the rear of the frame. Support the weight of the device until the locking mechanism of the rear legs has been inserted. As for the loading procedures, the operator must be able to support the weight of the device.
- Pull the trolley out from the vehicle until the front legs are completely opened. The loading carriage can’t leave the loading floor until the locking of the front legs hasn’t been verified.
- Terminate by extracting the trolley from the vehicle.

11.7 Removing Cross Chair from Cross Chair Trolley

- This operation is easier if the trolley is in intermediate position as described previously.
- Operate the parking brakes.
- If the patient is on the device, don’t lower the trolley to the ground.
- Pull up the litter release lever.
- Slide Cross Chair in direction of the rear part of the trolley to reach the position of alignment described in paragraph 11.4.
- Ensure that the rear telescopic handles of Cross Chair are in closed position.
- Lift Cross Chair and accompany it to the ground.

11.8 Twist System (only Crossover Chair)

The Crossover Chair version is equipped with a mechanism that will unlock the pivoting of the front wheels which will improve manoeuvrability of the trolley in difficult conditions.

If it is necessary that the wheels pivot, the lever shown in the picture must be turned about 90° towards the outer part. To return to the locked mode, the lever must be returned to its original position while at the same time the trolley should be pushed forwards until the wheels return to the neutral position as illustrated in the picture below.

During the unlocking of the wheels and following operations an additional operator is necessary at the front part (head side), in order to move the device safely.
12. CLEANING AND MAINTENANCE

12.1 CLEANING

Failure to carry out the correct cleaning routine could increase the risk of cross infection, due to presence of body fluids and/or residuals. The operator must always wear adequate personal protection such as gloves and mask, etc. during all checking and cleaning procedures.

The exposed metal parts are usually treated and/or painted in order to increase their resistance to external agents. Clean the exposed parts with water and delicate soap; **never use solvents or stain removers**. Rinse thoroughly with warm water making sure that you have removed all traces of detergent, which could degrade or compromise the integrity and durability of the device. **The use of high pressure water should be avoided** because water penetrates the joints and removes the lubricant, creating the risk of corrosion of components. Allow the device to dry thoroughly before storing. Drying after washing or after use in wet environments must be natural and not forced; do not use flames or other sources of direct heat.

If you need to carry out disinfection, use products that do not have corrosive or solvent action on the materials constituting the device Be sure to take every precaution to ensure that there is no risk of cross-infection or contamination for patients and/or operators.

To maintain the polished appearance of the frame parts we recommend the use of polish cleaner Spencer STX 99 or in alternative creams or waxes used for polishing car bodywork.

12.2 PRECAUTIONARY MAINTENANCE

Establish a maintenance program and periodic testing routine, identifying an employee responsible for this. The person to whom the ordinary maintenance of the device is entrusted must ensure the basic requirements foreseen by the manufacturer in following paragraphs are inspected.

All maintenance and periodic servicing activities must be registered and kept together with the servicing reports. These documents have to be kept for a period of 10 years after the disposal of the device itself. This register will be made available to the competent authorities and/or manufacturer if requested.

Routine maintenance of the device must be carried out by operators in possession of specific qualifications, trained and experienced in the use and maintenance of the device.

The operator must always wear adequate personal protection such as gloves and mask, etc. during all checking and cleaning procedures.

Checks to be carried out before and after each use and at deadline indicated above, are as follows:

- General functionality of the device
- Cleanliness of the device (remember that the failure of cleaning may cause the risk of cross infections)
- Correct fixation of all nuts, bolts and screws
- Absence of cuts, holes, tears on the structure, including the straps
- None of the tubes or metal sheets present bends or cracks
- Welded areas are intact, without any cracks or breaks
- Moving parts, wheels, levers, handles are intact and work properly
- Lubrication of moving parts
- State of use of wheels and breaking system
- The wheels are correctly fixed, they are stable and turn properly
- The wheels are free from debris.
- The device opens and locks properly
- The device opens and closes properly
- Functioning of springs
- Verify the functionality of the release lever placed on the trolley needed to unlock the sliding of Cross Chair. Pull up the lever as if to unlock the stretcher/chair, release it and verify that it returns in original position immediately and with no hesitation.
- The stretcher easily enters the ambulance
- The emergency vehicle is equipped with a Spencer fastening system intended for the stretcher
- The coupling between Cross Chair and Cross Chair Trolley takes place smoothly and without problems.
- The fastening between the two devices is always correctly inserted and safe.

The inspection frequency is determined by factors such as legal requirements, the type of use, frequency of use, environmental conditions during use and storage.
The parts to be lubricated if necessary and at least once a month are:

- The terminal part of the unlocking mechanism of the rear and front legs movement drive piston.
- The bearing placed on the bracket of rear wheels.

Before lubricating anywhere, be sure to remove any dust or dirt in the areas.

Please note that you must do the cleaning as described in this manual and verify functionality before and after each use. Spencer Italia S.r.l. declines any responsibility for the improper functioning or damages caused to the patient or user by the use of devices not subject to routine maintenance and will void the warranty and the compliance to the Medical Device Directive 93/42/CEE.

Use only accessories/original spare parts approved by Spencer Italia S.r.l., otherwise we will accept no responsibility for the incorrect functioning and/or damage caused by the use of any device which has not been repaired, or certified on expiry date by the manufacturer or by one of the manufacturer’s authorised service centres. Warranty will be considered void in compliance with the Medical Device Directive 93/42/EEC.

12.3 PERIODIC MAINTENANCE

The device must be serviced by the manufacturer or by an authorised centre, every year.

If the correct revision is not carried out, the device MUST BE PUT OUT OF SERVICE, because the CE branding will no longer be considered valid and consequently it is no longer compliant with the safety standards declared by the manufacturer at time of purchase. Spencer Italia S.r.l. will take no responsibility for the incorrect functioning or any damage caused by a device that has not undergone regular revision.

Legs movement drive pistons, are components subjected to periodic replacement depending on intensity of use. The following table shows some replacement intervals related to the number of average uses. The evaluation of needed maintenance, must be carried out by people responsible for maintenance of the device, according to this table. The replacement is mandatory in order to ensure the safety of the product.

<table>
<thead>
<tr>
<th>Intensity of use</th>
<th>Heavy usage (over 30 times/month)</th>
<th>Medium usage (less than 30 times/month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pistons replacement frequency</td>
<td>Every 3 years</td>
<td>Every 5 years</td>
</tr>
</tbody>
</table>

For any operations that are not carried out directly by the manufacturer but by an authorised centre, we have to underline that a report regarding all operations carried out must be requested. This will permit both Spencer Italia S.r.l. and the end user to keep a log book regarding the operations carried out on the device.

12.4 SPECIAL SERVICING

Only the manufacturer or centres with written authorisation are authorised to complete any special servicing operations.

For any operations that are not carried out directly by the manufacturer but by an authorised centre, we have to underline that a report regarding all operations carried out must be requested. This will permit both Spencer Italia S.r.l. and the end user to keep a log book regarding the operations carried out on the device.

The end user is authorised to replace only the spare parts indicated in the paragraph 15.

12.5 LIFE SPAN

The device, if used as indicated in the following instruction manual, has an average life span of 5 years starting from the purchase date.

The life span of the device is of 5 years from the purchase date and can be extended for up to another 5 years following the annual revision.

General revisions must be carried out by the manufacturer or by a centre authorised by the manufacture. If such annual revisions are not carried out, the device MUST BE DISPOSED ACCORDING TO THE PROCEDURES SPECIFIED IN PARAGRAPH 16 AND THIS EVENT MUST BE NOTIFIED TO THE MANUFACTURER.

Spencer Italia S.r.l. will accept no responsibility for the incorrect functioning and/or damage caused by the use of any device which has not been serviced by the manufacturer or authorised centre, or of any device for which the life span is expired.
### 13. TROUBLESHOOTING

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>CAUSE</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>The leg’s release levers don’t work properly or are difficult to operate</td>
<td>The moving mechanisms are damaged</td>
<td>Put the stretcher immediately out of service and contact the service centre</td>
</tr>
<tr>
<td></td>
<td>Parts are not lubricated</td>
<td>Carry out the cleaning procedures and lubricate as described in the instruction manual.</td>
</tr>
<tr>
<td></td>
<td>Means of connection between components have been lost.</td>
<td>Put the stretcher immediately out of service and contact the service centre</td>
</tr>
<tr>
<td>The fixing of Cross Chair is not stable or isn’t secure.</td>
<td>Wear or damage of the components that constitute the locking mechanisms.</td>
<td>Put the stretcher immediately out of service and contact the service centre</td>
</tr>
<tr>
<td>It’s not possible to fix Cross Chair on Cross Chair Trolley.</td>
<td>The alignment between the litter and the trolley was not observed</td>
<td>Lift Cross Chair, align it in the position described in this manual and fix it on the trolley</td>
</tr>
<tr>
<td>Damage to the structure</td>
<td>Improper use</td>
<td>Put the stretcher immediately out of service and contact the service centre</td>
</tr>
<tr>
<td>It’s not possible to place the trolley in intermediate position.</td>
<td>The moving mechanisms are damaged</td>
<td>Put the stretcher immediately out of service and contact the service centre</td>
</tr>
<tr>
<td></td>
<td>Parts are not lubricated</td>
<td>Carry out the cleaning procedures and lubricate as described in the instruction manual.</td>
</tr>
<tr>
<td>During unloading procedures, front legs don’t reach the locking position.</td>
<td>The moving mechanisms are damaged</td>
<td>Put the stretcher immediately out of service and contact the service centre</td>
</tr>
<tr>
<td></td>
<td>The height of the loading floor is not suited to the device, the security height described in the instruction manual is not respected.</td>
<td>Adjust the loading floor height to meet the requirements described in this manual. If the loading floor does not allow adjustments, put the device immediately out of service and contact the service centre.</td>
</tr>
</tbody>
</table>

### 14. ACCESSORIES

#### 14.1 Standard equipment

There are no standard accessories

#### 14.2 Accessories

- **CR00080C** CROSS CHAIR
- **ST42702C** R-MAX B 10G CERTIFIED
- **ST42100A** Posterior fastener (FP) **
- **ST42200A** Anterior fastener (FA) **

**Warning:** Doesn’t meet the requirements of EN 1789 – Not suitable for use with 10G Certified Stretchers

### 15. SPARE PARTS

- **RIBA002A** Black Wheel ø200mm w/bearing
- **RIBA003A** Black Wheel ø200 mm without bearing
- **RIST002A** Black Wheel ø 100mm w/bushings
- **RIBA001A** Anti-vibration kit for stretcher brackets

### 16. DEMOLITION

When the device is no longer suitable for use, if they haven’t been contaminated by any particular agents, they can be disposed of as normal solid waste, otherwise follow the current regulations for demolition.