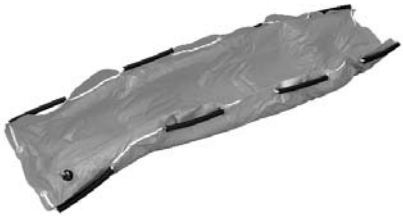
User's Manual

Vacuum Mattresses Res Q Matt - Res Q Matt Plus - CDK - Blue Matt

Res Q Matt

Res Q Matt Plus



CDK

Blue Matt

CE

This appliance conforms with the directive 93/42/CEE "Medical Devices"

Guarantee of Quality system for the production and the final control of the products certified by the notifying body TÜV Product Service GMBH.

INDEX

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Thank you for choosing a Spencer product

1 GENERAL INFORMATION

1.1 AIM AND CONTENTS

The aim of this manual is to supply all the information necessary so that the client, apart from attaining an adequate use of the appliance, will also be capable of using the instrument in the most autonomous and secure way possible. This includes information regarding technical aspects, functioning, maintenance, spare parts and safety.

1.2 CONSERVATION OF THE INSTRUCTION MANUAL

The instruction and maintenance manual must be kept with the product, inside the specially provided container and above all, away from any substances or liquids which could compromise perfect legibility.

1.3 SYMBOLS USED

SYMBOL	MEANING
	See instructions for use.

1.4 SERVICING REQUESTS

For any information regarding the use, maintenance and installation, please contact the Spencer Customer Care Service on 0039 0521 541111 - Fax 0039 0521 541222 e-mail: info@spencer.it or write to Spencer Italia S.r.l. - Strada Cavi, 7 - 43044 Collecchio (Parma) - ITALY.

1.5 DEMOLITION

Follow the current regulations.

1.6 LABELLING

The serial number as indicated below can be found on each appliance and must not be removed or covered. In order to facilitate assistance please indicate or communicate the lot number (LOT) on the label.

2 WARNINGS

2.1 GENERAL WARNINGS

- Before carrying out any kind of operation on the appliance, the operator must carefully read the enclosed instructions, paying particular attention to the correct safety precautions and to the procedures to be followed for installation and for correct use.
- In the case of any doubts as to the correct interpretation of the instructions, please contact Spencer Italia Srl, for any necessary clarifications.
- Regularly check the appliance. Carry out the prescribed maintenance in order to keep the appliance in good condition and to guarantee correct functioning and a long life.
- In the case of any abnormalities or damage to the appliance, which could jeopardize the functioning and the safety, the appliance must be immediately removed from service.
- Do not alter or modify in any way the appliance; any such interference could cause malfunctions and injury to the patient and/or rescuer.
- The appliance must not in any way be tampered with, in such cases all responsibility will be denied for any malfunctions or eventual injuries caused by the appliance itself.
- Who modifies or has modified, prepares or has 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.
- Ensure that all the necessary precautions are taken in order to avoid hazards that can arise as the result of contact with blood or body fluids.
- Handle with care.

2.2 SPECIFIC WARNINGS

- The device must be used only by trained personnel.
- Practice on an empty device to acquire confidence in the manoeuvres.
- The device must be used by at least two operators in physical condition good.
- It is not possible, using the device alone, to lift considerable weights (> 15Kg) whilst guaranteeing good stability and no deformation.
- When lifting, the rescuers must use all handles both to the keep the patient steady and to distribuite the weight evenly.
- Before moving and transport, it is important to check that the patient is restricted to the device with belts. Followinf this, the mattress and patient must be fixed to the transport stretcher with at least two belts.
- Do not transport if the weight is not evenly distributed.
- Do not leave the patient unattended when on the device.
- The device must not be exposed nor get in contact with sources of heat or combustion or flammable agents.
- In case of anomalies or damage that may compromise the functionality and safety of the device, stop using it.
- Be extremely careful that no obstacles are found on the way when transporting the device.
- During transport make sure that the patient's hands, feet and any other body part are inside the device, so to avoid any collisions that may cause lesions.
- Ensure that all precautions have been taken to avoid hazards deriving from the contact with blood or body secretions.
- The device is pressure variations and is subject to the differences to atmospheric.

2.3 PHYSICAL REQUIREMENTS OF THE OPERATORS

Vacuum mattresses are devices designed exclusively for professional use. The operators who use them must have the following characteristics:

- Sound use of hands in order to grasp the device with both of them firmly.
- Sound back, arms and legs to move the device efficiently.
- Good muscular coordination and physical capacity.

The operators must be trained for efficient and safe transport of the patients.
This device requires the use of at least two strong, balanced operators with good common sense. The transport techniques for loading and unloading the patient, in case of a very heavy patient, of uneven ground is irregular or any peculiar circumstances, may require more than two operators.
The capability of each operator must be taken into account before determining the roles in the use of the device.

2.4 CONTRAINDICATIONS AND SIDE EFFECTS

The use of this device, if used as described in this manual, does not present any contra-indications or side effects.

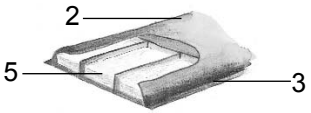
3 DESCRIPTION OF PRODUCT

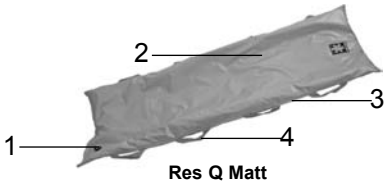
3.1 INTENDED USE

Vacuum mattresses are devices for the immobilization of the patient with suspected traumatic lesions, particularly handy to obtain personalised immobilisation, referred to particolar pathological positions which cannot be reduced. The vacuum system allows different degrees of immobilization, from the hardest to the softest, to allow both rigid immobilization and low frequency transports on vehicles offering a decent control of vibration. Excellent mechanical immobilizers and thermal and electric isolaters with high adaptibility.
The reduced dimensions of the Res Q Matt make it particularly indicated for use on stretchers and wherever stocking space is a problem.
The fabric employed for manufacturing the Res Q Matt Plus associates mechanical resistance with a versatile use in estreme temperatures. The Phoretex guarantees higher preservation of energy and as a consequence, dramatic reduction of the loss of body heat.
The Blue Matt, manufactured using high strength of materials, is adapt even for exceptional rescue conditions. The CDK has the advantage of being versatile and reliable.

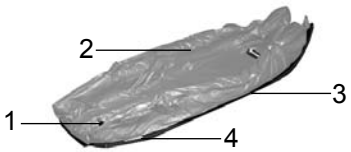
3.2 MAIN COMPONENTS

1. Decompression valve in aluminium
2. Superior cover
3. External coating
4. Transport handles
5. Internal material: Polystyrene or Phoretex





Res Q Matt



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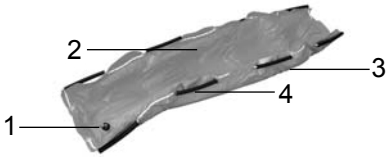

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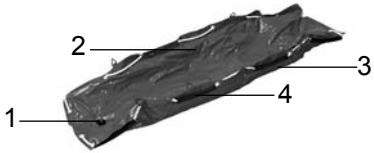

Blue Matt

The devices are made of a structure, containing polystyrene and phoretex spheres so the device becomes rigid when air is evacuated from it.
The external coating in Nylon has a protective function when in contact with the ground. The external structure, outside the patient area, has six to eight handles to allow correctly and easy patient movement.
The evacuation of air is obtained by connecting the tube and metallic decompression valve to a suction device (manual or electric vacuum pump).

3.3 MODELS

QM22100A	Res Q Matt Plus Vacuum Mattress Phoretex Orange/Blue
QM22101A	Res Q Matt Plus Vacuum Mattress Polystirene Orange/Blue
QM22206A	Res Q Matt Vacuum Mattress Orange with bag
QM22208A	Res Q Matt Vacuum Mattress Giallo with bag
QM22210A	Res Q Matt Vacuum Mattress Blue with bag
QM22212A	Res Q Matt Vacuum Mattress Military with bag
QM22300A	CDK Vacuum Mattress Orange/Grey
QM22310A	CDK Vacuum Mattress Military
QM22350A	Blue Matt Vacuum Mattress Blue

3.4 TECHNICAL DATA

Characteristics	Res Q Matt	Res Q Matt Plus Phoretex	Res Q Matt Plus Polystyrene	CDK	Blue Matt
Dimensions [mm]	2040x800	2040x950	2040x950	2130x880	2140x880
Weight [Kg]	4,6	7	4,2	4,1	4,8
Superiore coating	Nylon 400 D	Tarpaulin 600 D	Tarpaulin 600 D	Tarpaulin 500 D	Tarpaulin 1000 D
Inferior coating	Nylon 400 D	Tarpaulin 1000 D	Tarpaulin 1000 D	Tarpaulin 700 D	Tarpaulin 1000 D
Internal Material	Polystyrene spheres	Phoretex spheres	Polystyrene spheres	Polystyrene spheres	Polystyrene spheres
n° Handles Nylon	6 (3 each side)	8 (4 each side)	8 (4 each side)	-	-
n° Handles Santoprene	-	-	-	8 (4 each side)	8 (4 each side)
Unidirectional valve in aluminium	x	x	x	x	x
Tapered edge	-	x	x	x	x
Radiocompatibility	x	x	x	x	x
High frequency welding	x	x	x	x	x
Traction system compatibility	x	x	x	x	x
Loading capacity [Kg]	Max 150	Max 150	Max 150	Max 150	Max 150
Weight limit for use without adeguate supports	Max 15	Max 15	Max 15	Max 15	Max 15
Colour	See Paragraph 3.3 "Models"	Orange/Blue	Orange/Blue	See Paragraph 3.3 "Models"	Blue
Belts	-	-	-	-	n° 3 QMX351 Derlin Buckle 1pc. with carabiners

The materials used for manufacturing the device, reach fusion point at about 100 °C.

3.5 ENVIRONMENTAL CONDITIONS

The temperature and humidity range for both use and stockage should be with in those given in the following table.

Conditions	Operatine temperature	Stocking temperature	Relative humidity
Res Q Matt	-10 °C a +50 °C	-20 °C a +70 °C	15% - 90%
Res Q Matt Plus Phoretex	-30 °C a +55 °C	-30 °C a +80 °C	15% - 90%
Res Q Matt Plus Polystyrene	-30 °C a +55 °C	-20 °C a +75 °C	15% - 90%
CDK	-20 °C a +50 °C	-20 °C a +70 °C	15% - 90%
Blue Matt	-10 °C a +50 °C	-30 °C a +70 °C	15% - 90%

4 OPERATING INSTRUCTIONS

4.1 TRANSPORT AND STORAGE

Fold the device trying to keep the internal spheres adequately distributed throughout the whole structure. Decompress it lightly to remove any air and close the valve in order to reduce stocking space.
Before transport, ensure that it has been packed correctly and that it is safe from risks of bumping or breaking.
Keep the packaging for future transportation.
Any damage to the device during transport or moving is not covered by warranty. Repairing and replacing of the damaged parts are at the Customer's charge. The device must be stored in places that are:

- are dry and free from humidity;
- will not expose to risks of perforation or abrasion.

Whilst stocking do not place anything heavy on top of the device, it cannot be considered a resting surface for other objects.

4.2 PREPARATION

Upon receipt of the product:

- remove the packaging and layout the material in a visible manner;
- check that all pieces and accessories included in the list are present;

The device needs to be checked before each use, so to detect any anomalies in functioning and/or damages caused by transport and/or stocking.
Before use check:

- The general integrity of the device.
- Absence of cuts, abrasions and holes in the outer cover.
- Connection between device and unidirectional valve.
- Wear and tear status and strength of the Belts (if present).
- Wear and tear status and strength of the Handles.

If the conditions above are met, the device is ready for use.

4.3 FUNCTIONING

The rescuer at the head end of the patient is responsable for the recovery of the patient, and is the leader of the service.

Position the device as close as possibile to the patient, at the same time checking the uniform distribution of the granular material container inside the mattress. If the ground is uneven, the device must be placed on a stretcher.

Fig. A

Load the patient on the device using a suitable technique or using the appropriate instruments (scoop stretcher - fig. A). Position the patient, so that the feet are placed by the decompression valve (Fig. B). The heels must be outside the border: this avoids a compression of the spine during the aspiration of air which causes shortening of the length of the device.

Fig. B

Before starting the decompression phase, you must shape the device to suit the patient, making sure that head, shoulders, pelvis and lower limbs are correctly immobilised (Fig. C).

Shape the device to block any inertial type of movement. The containment manoeuvre must be maintained all the time of the decompression phase. Check the effective adhesion of the support to the patient in all points, making sure that the shrinking and hardening of the device causes no movement of the patient (Fig. C).

Fig. C

The control on the part which immobilizes head and shoulders is very important; it is essential that this part is set tight and at the same time that the decompression is well controlled (Fig. D). It is useful to apply some weight to the top of the device behind the head of the patient (knee of the rescuer resting on the ground) during decompression. Shape the device without restricting the area above head and below feet so as to avoid compression on the spine during transport. The first phase of decompression can be done with a suction unit, but the final part when the device is becoming hard, must be carried out with the appropriate manual pump.

Fig. D

It is important that the rescuer has easy access to the valve at any time during transport. It is recommended to expose it before loading and transporting the patient (Fig. E).

Fig. E

When the desired is obtained, close the valve and disconnect the decompression device. In particular situations where high excursions in altitude are possible (substantial increase), it is recommended to keep the suction device connected. (Fig. F).

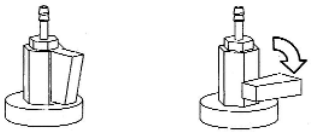

Fig. F

4.4 TROUBLESHOOTING

PROBLEM	CAUSE	REMEDY
The device stiffens as the altitude lowers	Variation of relative pressure.	Check the real state of pressure of the device opening the valve or further decompressing it using the pump. If the problem persists put the device out of use and contact the customer service centre.
The device tends to lose vacuum and regenerates internally the atmospheric pressure level	Deteriorated valve. There may be holes in the internal chamber.	Put the device out of use immediately and contact the customer service centre.
The device will not decompress	Either the pump or the connector to the device or the space between valve and device is worn out or broken.	Put the device out of use immediately and contact the customer service centre.
The device does not suit the patient's shape	The material of the device is not adeguate. Limited flexibility.	Put the device out of use immediately and contact the customer service centre.
Lesions (holes, cuts abrasions) to the external cover	Improper use. Incorrect stockage.	Put the device out of use immediately and contact the customer service centre.

5 MAINTENANCE AND CLEANING

5.1 CLEANING

Clean the exposed parts using water and a soapy sponge or delicate detergent, then dry with a soft flanel or leatherette cloth. The use of high pressure water must be avoided. Do not machine wash. Avoid in any case cleaning products or detergents like metal sponges or blades, aggressive solvents or oil detergents (like toluene, cilene, acetone…). Do not use acids or strong basics.

Failure to carry out cleaning operations may cause cross infections due to the presence of secretions or residuals.

5.2 MAINTENANCE

5.2.1 Precautionary Maintenance

Programmed interventions of ordinary maintenance are not required. The cleaning operations outlined in paragraph 5.1 are mandatory, as well as the functional check before and after each use.

5.2.2 Servicing Maintenance

The person to whom the servicing of the appliance is entrusted must guarantee the following basic requirements:

- adequate knowledge of the appliance, of its technical/construction features, of checks and final tests, of packaging, conservation and handling;
- adequate knowledge of the technology used in the making of the appliance;
- knowledge of the functions of the appliance, of any potential risks and of the probability of possible malfunctions or break-downs;
- to be in possession of all the instruments necessary for carrying out any kind of technical operation regarding servicing;
- to be in possession of original replacement parts or those authorized by the manufacturer;
- specialized technical personnel trained by the manufacturer for the servicing of the appliance in question;
- guarantee complete adherence to the instructions of the 93/42/CEE Directive also regarding the obligation towards the manufacturer to allow the aforementioned a post sales care and traceability of the appliance when requested.

The device, if used as described in the following instructions, has a life span of 5 years.

6 ACCESSORIES AND REPLACEMENT PARTS

6.1 ACCESSORIES

QM22109A	ABS piston pump Mod. 109 with double effect
QM22120A	Aluminium pump for inflating and deflating MOD. 125 with Spencer logo
QM22121A	Aluminium pump for deflating MOD. 120
QM22125A	Aluminium pump for inflating and deflating MOD. 125
QM22170A	Mod. 318 Transport bag for vacuum mattress in Orange PVC
QM22171A	Mod. 319 Transport bag for vacuum mattress with internal isothermic coating
QM22207A	Bag for Orange Res Q Matt Orange with 8 handles 830x2100 mm
QM22209A	Bag for Yellow Res Q Matt with 8 handles 830x2100 mm
QM22211A	Bag for Blue Res Q Matt with 8 handles 830x2100 mm
QM22213A	Bag for Military Res Q Matt with 8 handles 830x2100 mm
QM22351A	QMX351 2 pc. Belts with Derlin buckle and carabiner for Blue Matt
QM22199A	Repairing kit (patches of different dimensions and glue)

6.2 REPLACEMENT PARTS

QM22051A	Valve
QM22198A	Repairing element in PVC Orange

Warning

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