



Air-filled Mattress and Positioning Aids for Equine and Large Animal Veterinary

USER MANUAL

PLEASE READ THIS MANUAL FULLY BEFORE USING THE EQUIPMENT

This equipment is both a support and a positioning aid.

The objective is to lift the patient off the hard surface on which they are lying and cradle them on the softer inflated surface. The level of inflation should only be enough to create padding shaped to the patients' body. No benefit is gained from inflating the equipment to a rock hard state.

The benefit of an inflatable system is that it can be used to fill exactly any spaces between the patient and the imaging or surgery table. This then holds the patient in the position required. A foam wedge or similar will rarely fill these spaces properly.



HOW TO SET UP YOUR INFLATABLE MATTRESS

FOR SURGERY OR IMAGING

Place all mattress elements required on the surface it is to be used on **uninflated**. Where you have a multilayered kit such as the FTL, the layers should be attached together using the press studs.

Attach any side cushions in use via the press studs. The withers cushions should be laid on the uninflated mattress in the required position, themselves uninflated.

Place the patient on the mattress before inflating. This will ensure the patient is cradled by the cushion surface and minimise pressure points.

Unscrew the valve caps and raise the valve pin by applying light pressure with a finger and turning clockwise.

Inflate the largest section of the mattress first. If using a multilayered mattress such as the FTL or IVEST, start with the base layer and work up.

With the patient in place, put the pump hose into the valve and start the pump. It does not matter if there is not a good seal between the valve and the pump hose, it will just take longer to inflate.

Replace the valve caps once a section has been inflated. This keeps the valves clean and prevents them being damaged.



Do not over-inflate

The mattress should be inflated sufficiently to lift the patient clear of the surface that the mattress is sitting on, but remain quite soft. If the surface is drum tight, it has too much air in it so is providing little benefit.

Inflate multilayer cushions from the base up

If using a multilayered system, the base layer(s) should be firm to ensure stability, but the top surface that the patient is lying on should be softer, just cradling the patient.

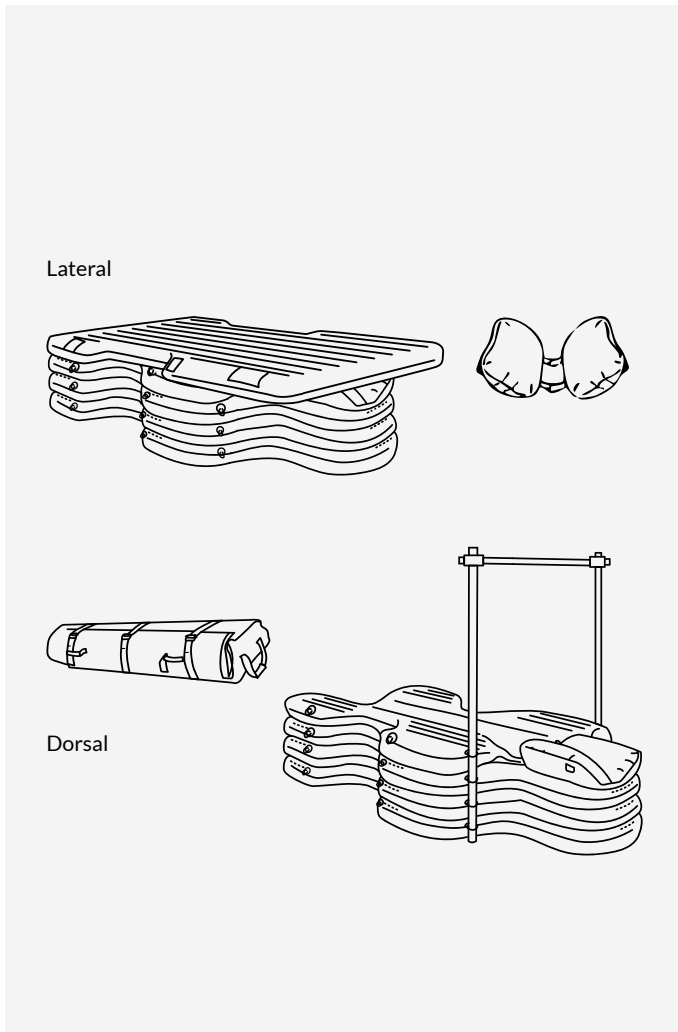
Finalise the patient position

Once the principle parts of the mattress system are inflated, you may need to use a set of withers cushions to get the patient exactly in the right position. The prepositioned, uninflated withers cushion can now be inflated just sufficiently to fill any gaps and support the patient in the position required.

Deflation

To deflate the mattress elements, unscrew the valve caps and press the valve pin down. To keep the valve venting without having to hold it, turn the pin anti-clockwise. You can also use the pump in reverse to accelerate the rate of deflation and ensure the mattress components are as flat as possible for storage. Replace the valve caps once deflated.

THE IVEST INDEPENDENT TABLE



Prior to setting up the table, establish whether dorsal or lateral recumbency is required. Ideally, when used outside of on a rough surface, position a tarpaulin under the IVEST before you start.

Patients are rolled or lifted on to the uninflated surface of the prepared table.

The table consists of three identical lifting cushions which support the working surface.

These base lifting layers should be fully inflated to create a firm, stable platform starting with the base layer first and then sequentially upwards. The IVEST can be inflated to a height comfortable for the team using it by omitting to inflate one of these lifting layers.

Dorsal Recumbency

The table is supplied out the bag arranged for dorsal recumbency. The dorsal mattress is attached to the three lifting layers while the lateral mattress is separate. The dorsal mattress is the fourth layer of the assembly and comprises three independently inflated sections. For a dorsal set up, the two outer sections are inflated leaving the central one uninflated to create a trough to support the dorsal recumbency. The V-support cushion of the head section should also be inflated.

This top section on which the patient is lying should not be inflated to full pressure but just sufficiently to lift and cradle the patient. Time to deploy from the carry case to the dorsal configuration is around 15 minutes, with an experienced operator.



Lateral Recumbency

A separate flat mattress is supplied for lateral recumbency. This is positioned on top of the dorsal cushion and secured by press studs to create the fifth layer of the table. All three sections of the dorsal mattress should be inflated when the lateral mattress is in use. The lateral mattress is large enough to accommodate the patient without a separate head support. Side insets help maintain access to the central area of the table. The supplied RTC-1 cushion should replace the V-cushion used in dorsal recumbency to aid stability of the lateral mattress.

Should the patient be relatively small, a surface for lateral recumbency can be created by inflating the central section of the dorsal mattress to provide a level surface, thereby avoiding the need to use the large top mattress for lateral placement.

Limb Support

The IVEST table has the facility to support the patients fore or hind limbs should this be appropriate to the planned procedure. A frame of tubular section stainless steel poles with adjustable height crossbar is supplied as standard. The legs of the frame are inserted vertically into D-rings located at each end of the table and the cross bar fitted at the required height. Should both hind and fore limbs require to be supported at the same time, a second frame kit will be required.

If in use, once the patient is in position, but prior to inflation, the legs of the limb support frame should be inserted in the D-rings on the 'shoulders' of the table. They will need to be held upright while the table sections are being inflated.

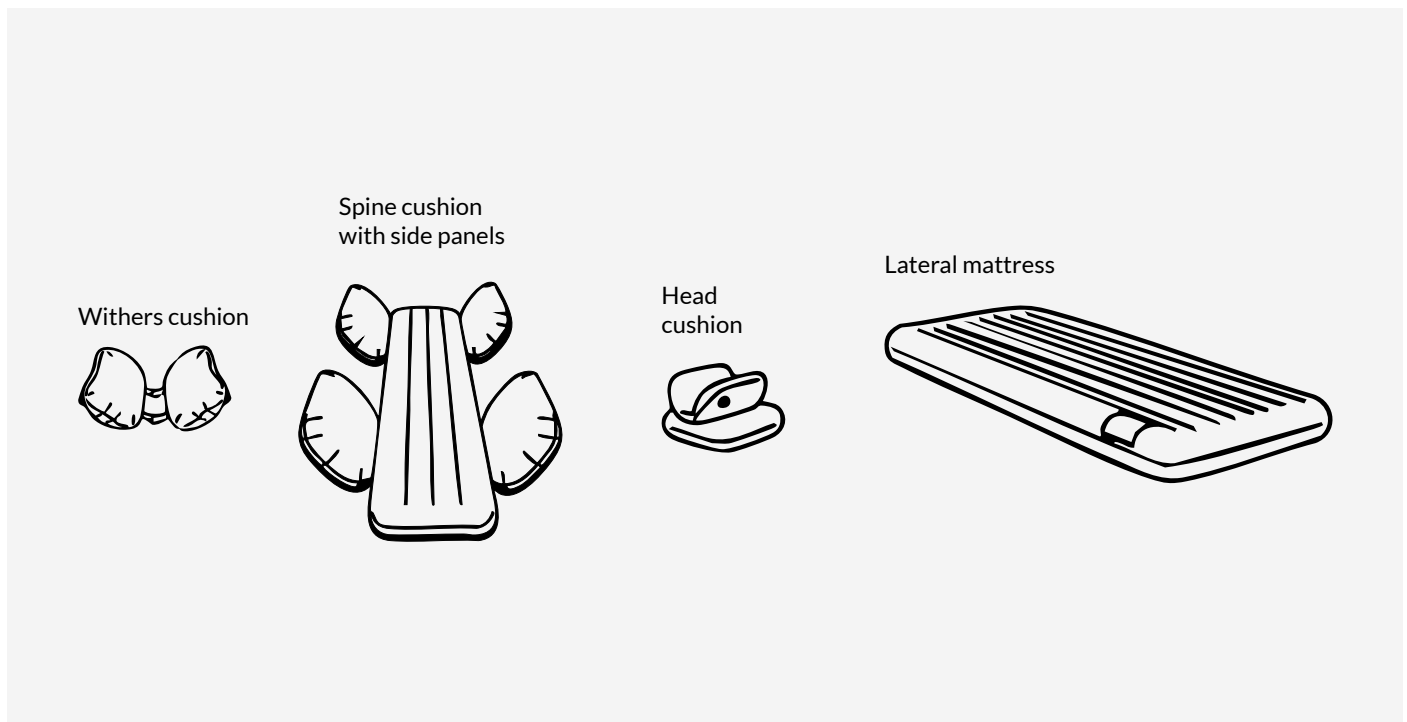
POSITIONING AIDS

The side bumpers of the FTS, foal positioning aids, limb support and withers cushions are used to position the patient exactly as required. The level of inflation can be used to make fine adjustments to that positioning.

Side bumpers should be inflated after the base mattress has been inflated. They are independent from each other and can be inflated to different levels.

The limb separator should be inflated just sufficiently to position the upper limb comfortably and eliminate any tension in the shoulder or hip.

Withers cushions should be located where they are needed and then inflated just sufficiently to fill the gap between the table and the patient. Do not pre-inflate and then try to squeeze them in. The withers cushions can also be separated and positioned uninflated where required.



CARE AND CLEANING

It is important to keep the equipment clean for infection control purposes, and to prolong its useful life. Grit in the patients' coat will abrade the surface of the equipment and eventually destroy the surface layer. This will not necessarily cause a leak since the fabric is double coated, but it will make the equipment harder to clean and hence compromise infection control.

The equipment can be washed using a cloth or sponge and soapy water. Rinse well with clean water to remove any residue.

Avoid using coarse abrasive cleaners or scrubbers.

The equipment will tolerate medical grade disinfection.

Adhesive residue can be removed using white spirit. Rinse thoroughly.

Ensure that the underside of the mattress is also washed since grit between the table and the mattress will cause abrasion.

Avoid dragging the mattress on rough ground or concrete floors, especially when folded as you will abrade the corners.



STORAGE

Ensure the valve caps are in place when the equipment is not in use to prevent damage to the internal mechanism and to keep dirt out.

The equipment can be stored inflated or uninflated, but is better left uninflated if not in use regularly. It can be left folded for extended periods of time, but creases may develop that will not be fully removed by inflation if left more than six months unused.

SAFETY

Do not use an electrical pump with a pressure output over 4psi/ 275mbar as you may rupture a welded seam which will prevent the mattress from inflating and require repair.

When using an electrical inflation pump, do not direct the hose towards the face of co-workers when it is switched on.

Avoid puncturing the fabric of the mattress with a scalpel or syringe.

If using the equipment in high temperatures or bright sunshine, monitor the level of inflation.

Air in the mattress elements will expand in high temperatures which may cause the patients position to alter unfavourably for the task being undertaken.

The black surface will absorb heat if used in bright sunshine and may burn the patient or personnel who touch the surface with bare hands. Do not use in temperatures over 45 degrees Celsius (113 degrees Fahrenheit). Work in shade where at all possible. Cover the top of the mattress with a blanket or similar if bright sunshine cannot be avoided.

TROUBLESHOOTING

Here are a few issues you may need to address.

PROBLEM: The mattress will not or is slow to inflate.

Improve the seal between the valve and the pump hose. Check the pump hose is not damaged and leaking air.

Check there are no holes in the body of the equipment. See below for guidance.

Dirt in a valve mechanism may be preventing the valve seating properly. Vacuum the valve to remove any loose dirt and hair. If that does not solve the problem, wash it with soapy water and lightly brush with a toothbrush.

If that makes no difference, the valve may need to be replaced. However, first check for leaks in the body of the mattress. This may be the result of a puncture or the failure of a seam. See below how to check for leaks.

PROBLEM: The mattress slowly deflates over a couple of hours.

This is mostly likely due to a fault with a valve, probably caused by dirt. The valve caps assist with keeping the air in the mattress but are not 100% airtight. The valve needs to be working too.

A small hole in a panel may also cause the mattress to deflate slowly. See check for leaks below.

PROBLEM: The mattress will not deflate.

Make sure the valve cap is removed. Press and turn the valve pin anticlockwise to lock it open.

TO CHECK IF A VALVE IS LEAKING

Apply soapy water in and around it and look for bubbles being produced. – see 'The mattress will not inflate' above for a solution.

TO CHECK FOR PUNCTURES

Move your hands over the surface of the mattress to see if you can feel any air escaping. Then brush a 10:1 dilution of washing up liquid over the suspect area. There will be bubbles from any leaks. Read repairing damage section for how to repair leaks in the mattress skin.



REPAIRING DAMAGE

Mattress walls

These can be repaired using an inflatable dinghy repair kit which can be obtained from a boat chandlery online. Very small punctures are repairable using Tear-Aid Type A self-adhesive patches which can be bought on-line.

Valves

The central section of the valve can be unscrewed and replaced should the mechanism fail. The valves are Leaffield C7 and can be bought online.

If necessary, the equipment can be returned to us for refurbishment. A charge will be made for this service.



SPECIFICATIONS

Inflation pump - Scorprega Bravo GE pump delivering a maximum pressure of 3.6psi (210millibar), made in Italy. Available in 110-120v and 220-240v

Fabric: Chiorina 1P U3-U3 N/N PUR, 1.1kg/m². Made in Italy.

Temperature resistance -30 to +65oC;

Abrasion resistance- ISO 547080,5N C517 400 cycles 1mg.

Puncture resistance – RINA 3.A1.2.7 >125 N

Further specifications available if required.

Radio-Frequency (RF) welded seams, pressure tested to 5 psi/ 344millibar

bdbco.VET

