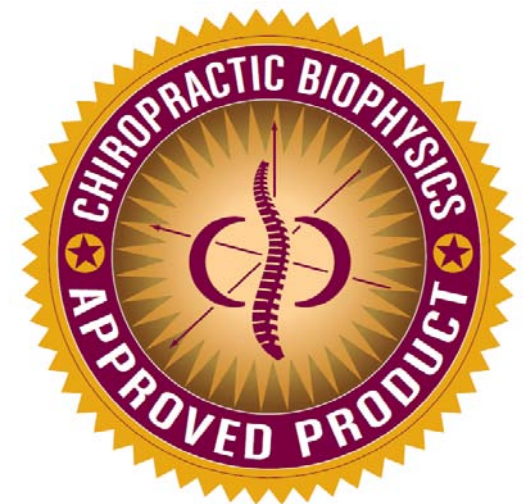
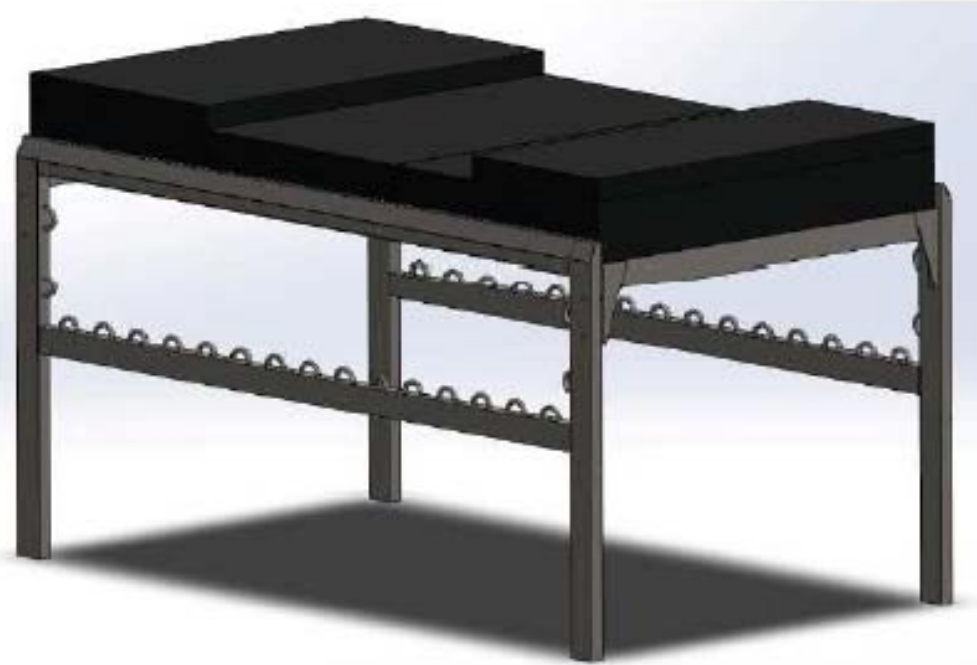
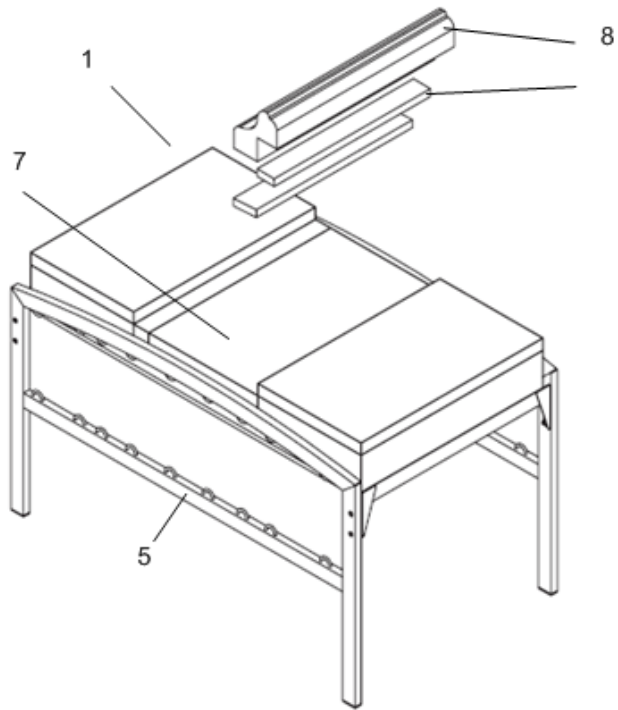


👉 3D DENNEROLL SYSTEM 👈

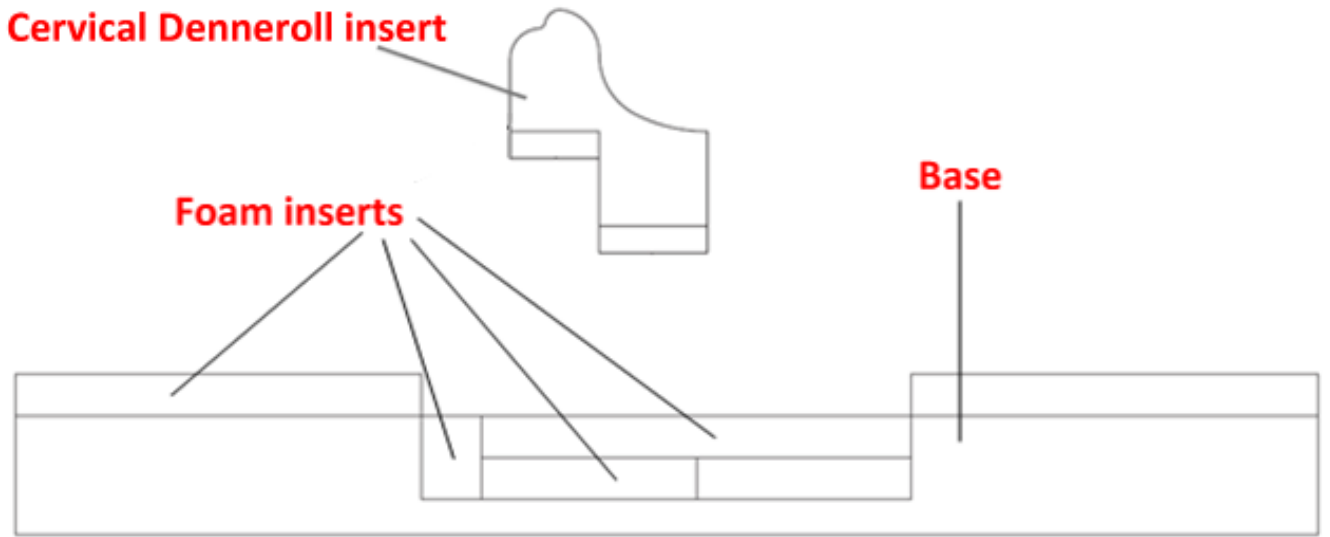




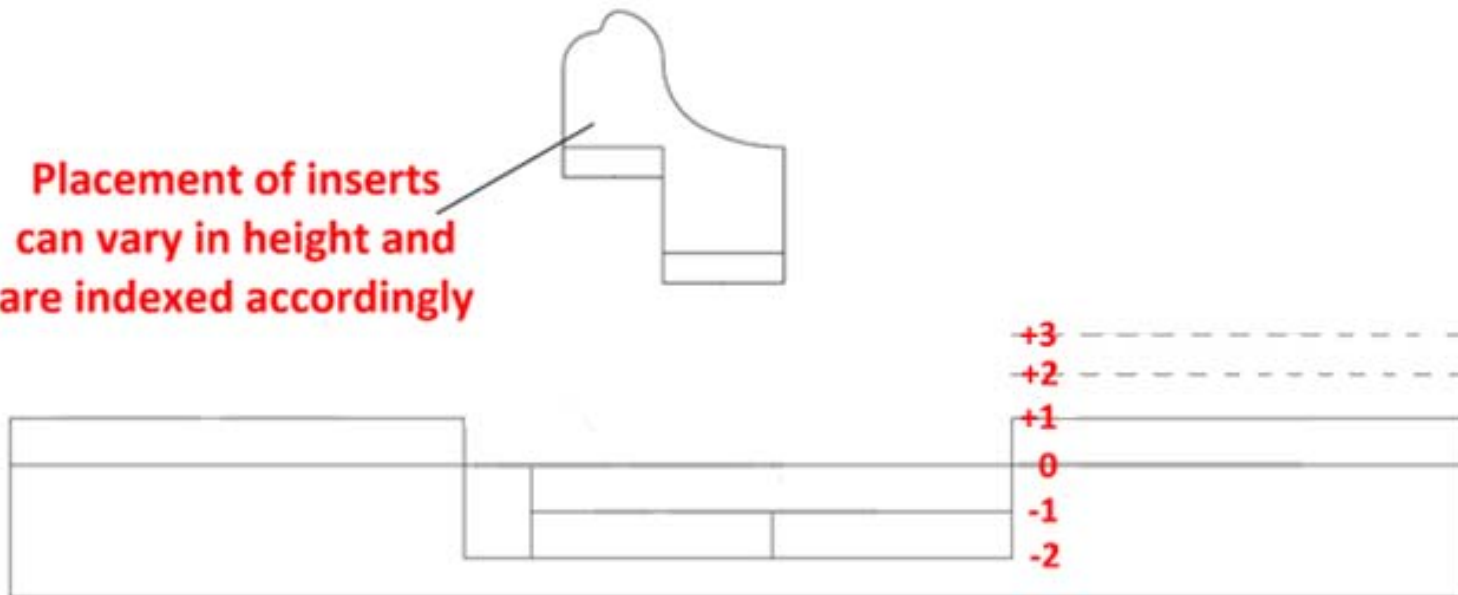
Cervical Denneroll insert

Foam inserts

Base



**Placement of inserts
can vary in height and
are indexed accordingly**





FULL SPINE TREATMENT WITH THE 3D – DENNEROLL SYSTEM

The 3D-Denneroll System allows for full spine traction set ups in both supine and side lying position. The design of the system enables multiple simultaneous use of Denneroll Spinal Orthotics. This is achievable due to the unique foam insert and pulley system. This Denneroll system, with use of the spinal orthotic Scolirolls, also allows for full spine set ups in the coronal plane (side lying) position.

The below set ups and many more are achievable due to the simple, versatile, insert and pulley system. **Translation (Height) Indexes are shown**

Supine

Cervical Denneroll = -1 Lumbar Denneroll = 0



Cervical Denneroll = +1 Lumbar Denneroll = 0



Thorax = +2 Pelvis = -1



Side Lying

Pelvis = 0 Thorax = -2 Head Support = +1



Pelvis = 0 Wedge Insert = -1



Pelvis = +1 Thorax = 0 Head Support = +1



ScoliRoll Set Ups

Lumbar Scoliroll = 0



Thoracic Scoliroll = +1 Head Support = +3



The below example set ups show explanations of the effects achieved.

Translation (Height) Index – Cervical Denneroll Insert = +1 Lumbar Denneroll Insert = 0

1. Set up position Creates:

- a. Thoracic flexion with anterior translation. Note the translation can easily be reversed using the blocks depending on the patient's requirements.
- b. Cervical lordosis with the denneroll insert.
- c. Smaller sized lumbar denneroll is used to preserve the lumbar lordosis. A larger size lumbar denneroll could be used to increase the lumbar extension but it is not the objective of this presentation.



2. Set up position Creates:

- a. Head strap is used to stabilize head into compression extension increasing the cervical lordosis and improving head posture.
- b. Increases thoracic kyphosis.
- c. Stabilizes lumbar lordosis.
- d. Flexion of the top of the ribcage relative to the lower ribcage.



Translation (Height) Index – Cervical Denneroll Insert = -1 Lumbar Denneroll Insert = 0

3. Set up position Creates:

- a. Increased cervical lordosis.
- b. Increases thoracic kyphosis.
- c. Stabilizes-increases lumbar lordosis.
- d. Keeps ribcage neutral in line with itself and the pelvis so as not to create flexion/extension or translation postures.



Translation (Height) Index – Lumbar Scoliroll Insert = 0

4. ScoliRoll Set up position Creates:

- a. Fulcrum bend over the new ScoliRoll
- b. Place at the apex of the curve and contralateral bending and y-axis rotation of a scoliotic curve will occur.
- c. Effectively un bends and twists thoraco-lumbar curves when selected appropriate..
- d. Keeps ribcage neutral in line with itself and the pelvis so as not to create translation posture in this case.



Set up 2 – Step by Step instructions



First place Denneroll insert into table. Use the blocks to determine translation.
This set up = Cervical Denneroll = +1 Lumbar Denneroll = 0



When placing the patient onto the cervical Denneroll, first place a shoulder strap across Cervical Denneroll as shown below.



The strap size will depend on the size of your patient. A large strap for a medium to tall adult. A medium shoulder strap for a small adult or child.

Next: Lower the patient's shoulders/neck onto the Cervical Denneroll whilst holding the shoulder strap in place. The cervical Denneroll placement to the patient can vary as required.



If the does not lie to the placement desired, you can ask them to move or you can ask the patient to reposition themselves or to raise their shoulders and you can move the cervical Denneroll to them

Next: **ADDING THE LUMBAR DENNEROLL**

Whilst on the Cervical Denneroll, ask the patient to raise their buttocks off the table so to enable placement of the lumbar Dennerroll to the lumbar spine (as shown in the picture on the right). The Lumbar Dennerroll placement to the patient can vary as required.



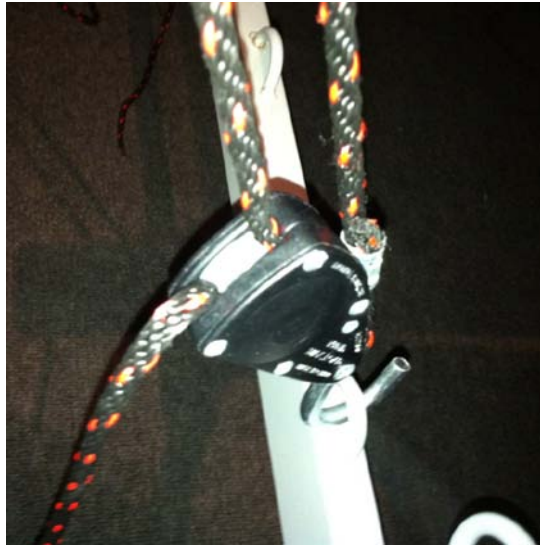
Next:

After adding the lumbar Dennerroll re-check the cervical Dennerroll placement. If the patient has moved, you may ask the patient to raise their shoulders and move the Cervical Dennerroll to the required placement.



CONNECTING THE STRAPS AND/OR BOLSTER WITH THE PULLEY'S

Attach the pulley to the hook required. Make sure the silver 'release' lever is on the outside of the table. The silver lever releases the rope in the pulley.



Next attach the pulley to the **bolster or strap** required with the link as below



Next:

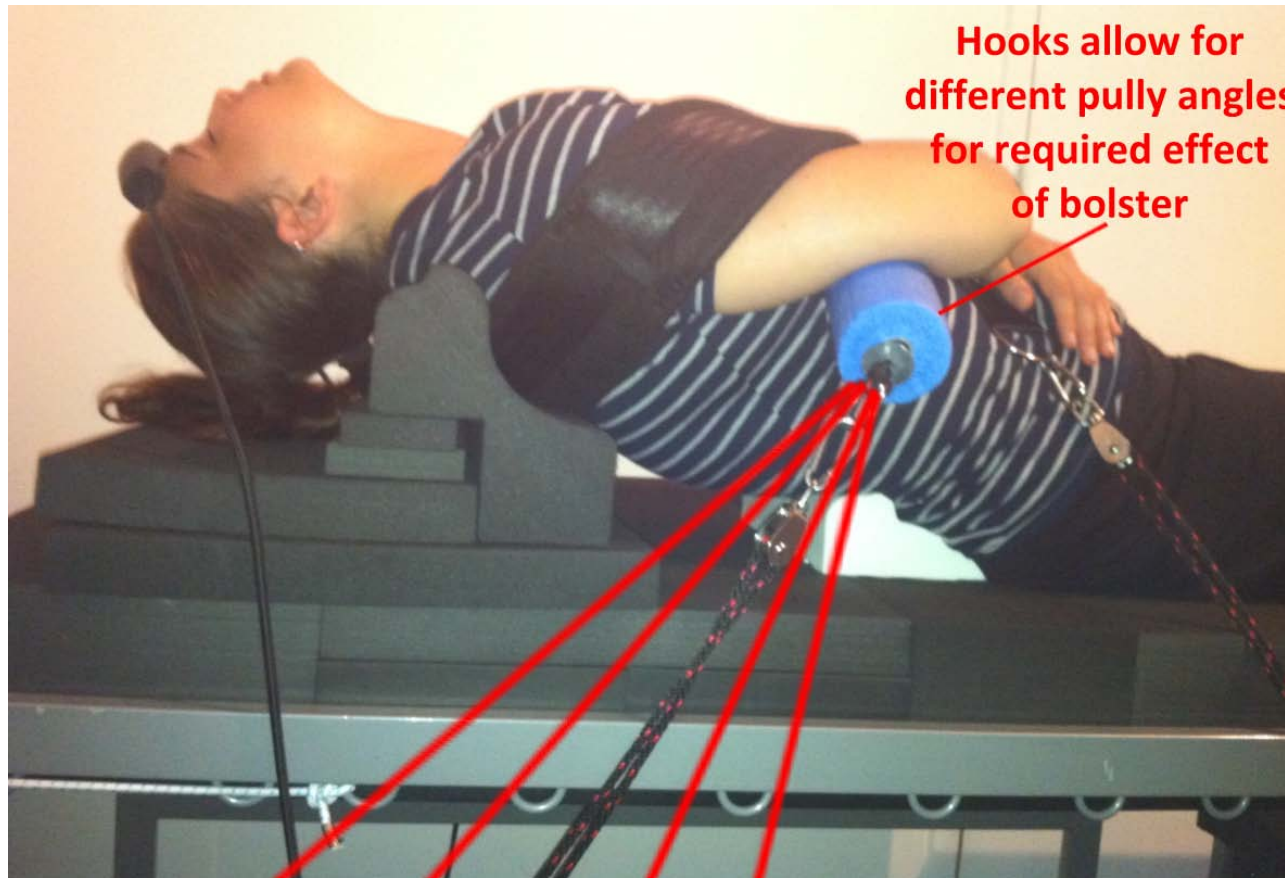
Place the bolster over their thorax to the required position. When doing so, ask the patient to raise their arms so the bolster may be placed under the patient's arms, so the patient's arms remain over the bolster.



The bolster allows for greater specificity of placement than the strap. For female patients it is best to have the patient self - guide the highest allowable placement of the bolster. This guidance will minimize injury to the breast area.

When positioning the traction bolster or straps to the thorax, you must be aware that the lower thoracic ribs are more fragile than the upper thoracic ribs. Risk of injury is increased in this area if too much pressure is applied to the lower ribs.

The attachment hooks labelled A – S allow for different pulley angles for the required effect on the spine. In this case, the angle of the straps will be decided by the placement of the bolster, and the angle you wish to effect the kyphosis in the thoracic spine.



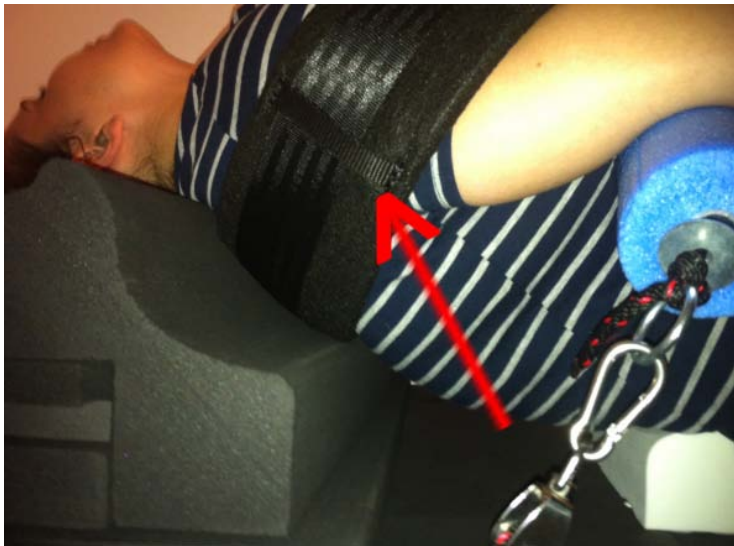
Once attached, you can then draw a comfortable tension through the bolster.

The lettering on the hooks can be used to ensure that both pulley's on the bolster are even on both sides.



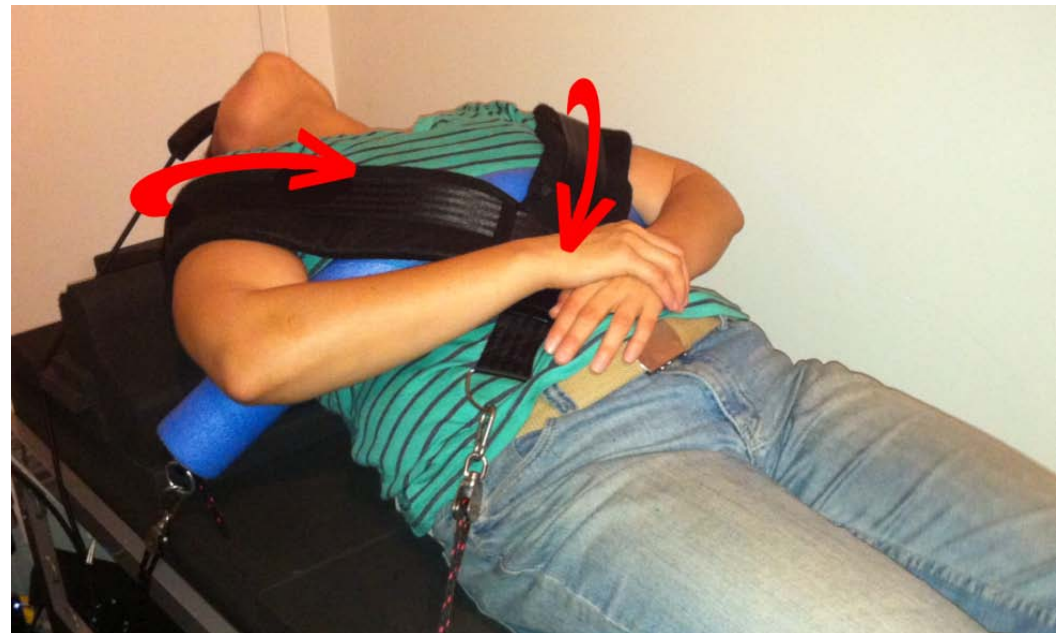
Next:

After drawing a comfortable tension through the bolster, you can begin to create rounding of the shoulders using the shoulder straps. The pulleys are often used at position 'Q' for the shoulder straps however it can be varied to the desired effect on the shoulders.



Alternately tighten the straps to ensure even pressure so that both shoulders are rounded evenly unless alternatively required.

Each end of shoulder strap is attached to the pulley on the opposite side of the table.



As the straps go around the shoulders, make sure the patient's hands remain free. The straps should be placed under the forearms so to not trap the patient's forearms to the body.



Rounding the shoulders is an important feature in creating thoracic kyphosis. Tension can be created accordingly to the patient's tolerance. As tension is created, make sure the straps are not slipping off the shoulders. This may happen if the straps are either too high toward the neck or too low down the arms. The straps can be shifted as tension is created and the pulley's can be loosened by pressing the silver lever on the pulley if needed.



Then the tension can be increased evenly and alternately between the thoracic bolster and the shoulder straps again to the patient's tolerance levels. As you tighten the shoulder straps, the bolster tension will need to be tightened also in accordance to the patient's tolerance level.

To increase tension in the pulley it is best to draw the rope around your hand, then with your hand in a central position to your body, gently pull the rope upward in small increments, again to the patient's tolerance. A second hand can be used to maintain more control.

Side Lying

There is a quick release buckle which can be positioned appropriate for patient safety and comfort. The strap can be positioned so the buckle is accessible by the patient for a quick release in case of an emergency.





When tightening the pulleys, even tension in both pulleys will minimize rotation, or rotation can be assisted by tightening one pulley more than the other.



RELEASING THE STRAPS

When releasing the tension on the straps, you should first 'take up' the tension on the pulley with one hand (1) before pressing the silver lever (2) with your other hand.

This technique is important for patient safety to ensure the pressure is not released too quickly from a traction position.

Whilst holding the silver lever (2), you can then slowly release the tension through the pulley with your other hand. Once the tension is released adequately, you can then unclip the strap to release the patient.

