VITRUVIUS (Patented Medical Device)

Innovative Rehabilitation Bench

- Helps reduce the therapist's muscle tension
- Increases therapeutic effect on the patient

REHABILITATION & PHYSIOTHERAPY

Frequent Use

- Physiotherapy
- Rehabilitation
- Osteopathy
- Chiropractic
- Postural Re-education
- Sports Medicine

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How to optimise the effectiveness of rehabilitation physiotherapy

The **Vitruvius** bench originates from the need to improve the effectiveness of rehabilitation therapies.

Rehabilitative, antalgic, pain-relieving, preventive and therapeutic gymnastics involves static and dynamic treatments of the structures that support and move our bodies.

Rehabilitation treatments put a strain on the therapist, all the more so if they are forced to operate on devices that are not fit for purpose.
The therapist is therefore exposed to the risk of occupational diseases.

The **Vitruvius** bench is **designed to facilitate the physiotherapist in the performance of their profession and to optimise the effectiveness** of therapeutic treatments.

The **simultaneous or alternating mobilisations** of the lower and upper limb supports, which can **be moved in all directions in space**, allow the therapist to **act on several parts of the body at the same time**.

In addition, the compact size of the bench makes it easy to move even to the patient's room in rehabilitation facilities.

Benefits

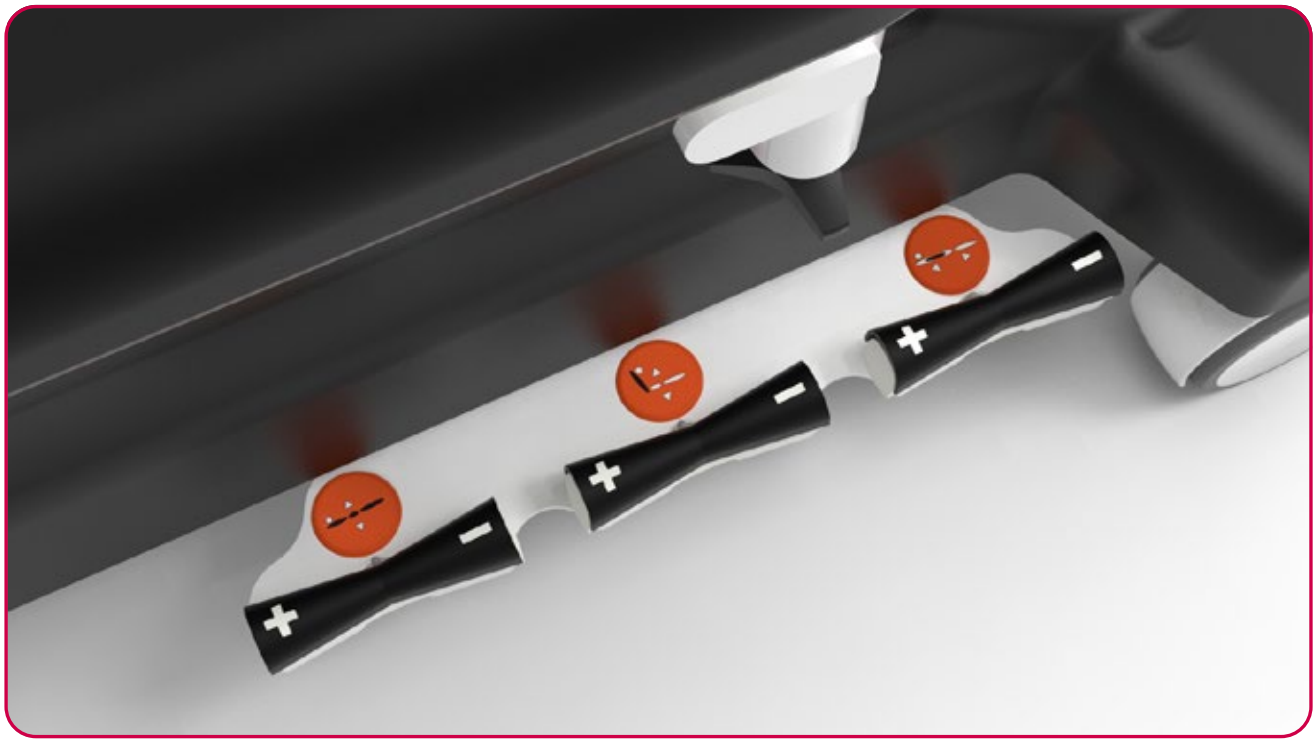
- Motorised height-adjustable bench with low-voltage lifting columns.
- The device features a heavy-duty structural steel frame designed to withstand enormous loads and stresses. All these qualities make for a long-lasting, high-quality manufactured product.
- The anti-tipping, non-deformable frame is designed and manufactured to ensure maximum safety in all working conditions, even with over-size patients.
- The upholstery is made of a special antistatic faux leather fabric, designed and certified with specific antibacterial and anti-mycotic properties. It can be sanitised with commonly used detergents and medical-surgical aids.
- The high-capacity castors, which facilitate movement even with the patient on the bench, feature a brake system that can be operated simultaneously through the foot pedal control fitted on the base of the device.

Movements

The Vitruvius **bench** enables multiple movements to optimise the effectiveness of therapeutic rehabilitation treatment.

The movements of the device segments can be differentiated into:

- **Electrically actuated movements through the two-sided foot pedal controls** fitted on the base of the device;



TWO-SIDED FOOT PEDAL CONTROLS

- **Manually** actuated **servo-assisted** movements through levers, knobs, and buttons.

LOWER LIMBS
SUPPORTS TILTING LEVER

UPPER LIMBS
SUPPORTS ADJUSTMENT KNOBS AND BUTTON

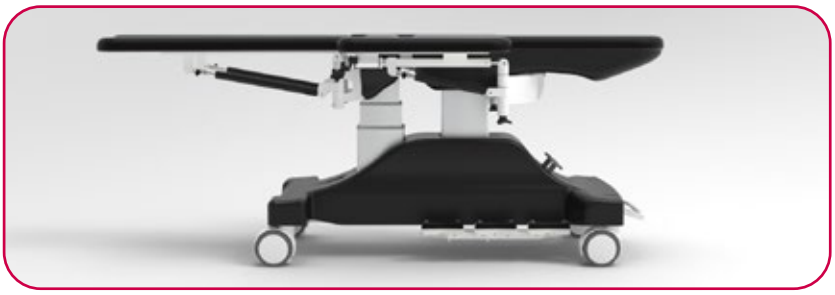
Electrically actuated movements

Variable height

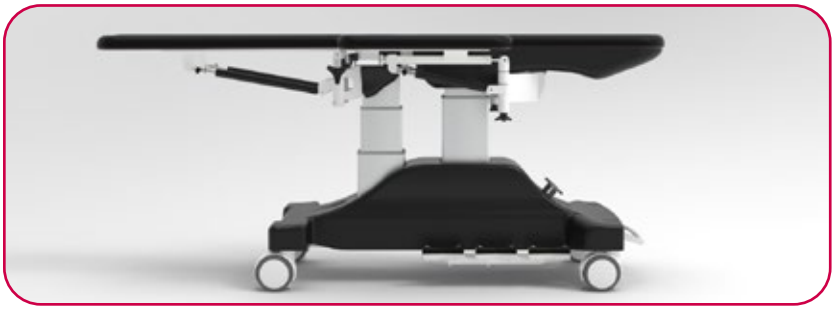
The **variable height** can be electrically adjusted and is controlled through the two-sided foot pedal control.

FOOT PEDAL CONTROL FOR VARIABLE HEIGHT ADJUSTMENT

MINIMUM ACCOMMODATION HEIGHT



EXAMPLE OF INTERMEDIATE HEIGHT



MAXIMUM HEIGHT

Electrically actuated movements

Backrest tilt adjustment

The **backrest tilt adjustment** is electrically operated through the foot pedal controls fitted on both sides of the device's base. The pedal adjusts the backrest tilt from a maximum angle of 50° to a minimum of -23°.

FOOT PEDAL CONTROL FOR ADJUSTING BACKREST TILT

MAXIMUM BACKREST TILT

MINIMUM BACKREST TILT

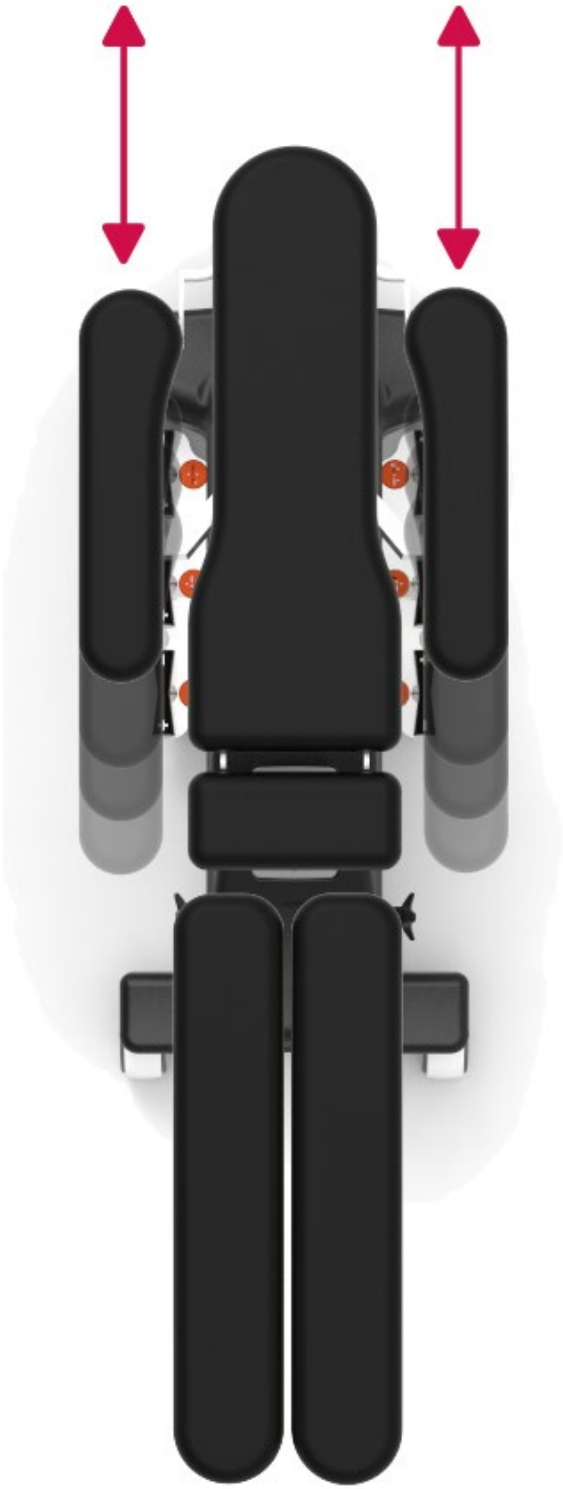
Electrically actuated movements

Upper limbs supports

This medical device features an electrically-operated system (two-sided foot pedal control) that allows to **simultaneously move** the upper limb supports along the direction of the backrest, achieving the correct alignment between the shoulders and the resting point where the support rotation takes place.

The effective stroke of the movement is 150 mm.

FOOT PEDAL CONTROL FOR UPPER LIMB SUPPORTS MOVEMENT



Manual and servo-assisted movements

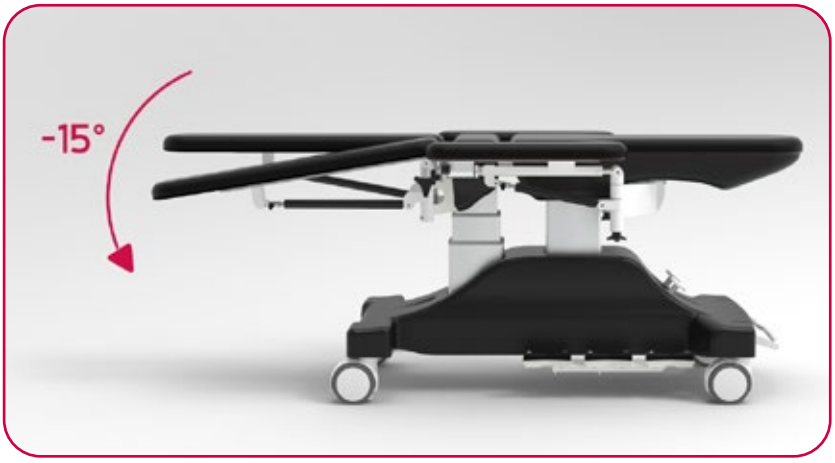
Lower limb

supports

The **tilting** of the lower limb support is servo-assisted by a gas piston which supports the therapist in lifting the limb and is operated by levers.

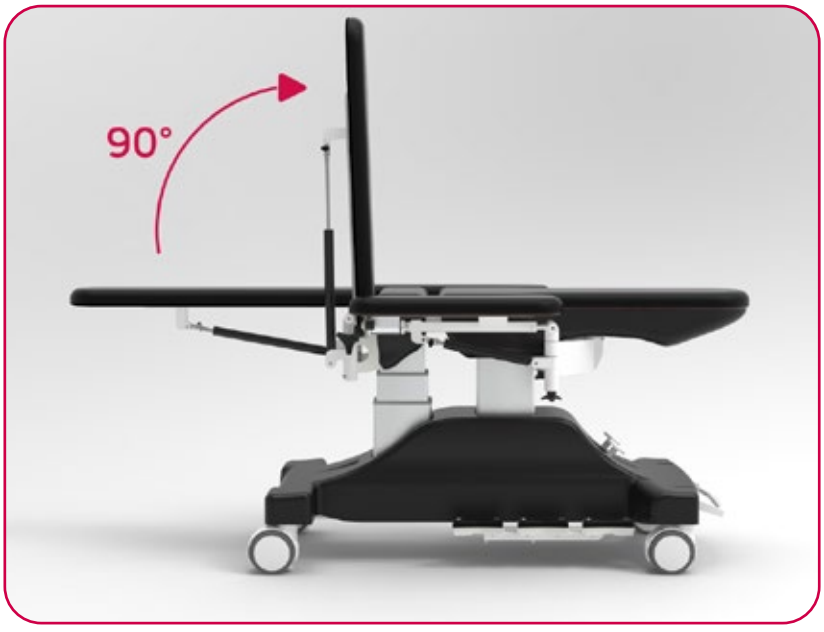
The tilt adjustment of each section ranges from a maximum of 90° to a minimum of -15°.

LOWER LIMB
SECTION TILTING LEVER



MINIMUM
LOWER LIMB SUPPORT TILT

EXAMPLE OF INTERMEDIATE
UPPER LIMB SUPPORT TILT



MAXIMUM LOWER LIMB
SUPPORT TILT

Manual and servo-assisted movements

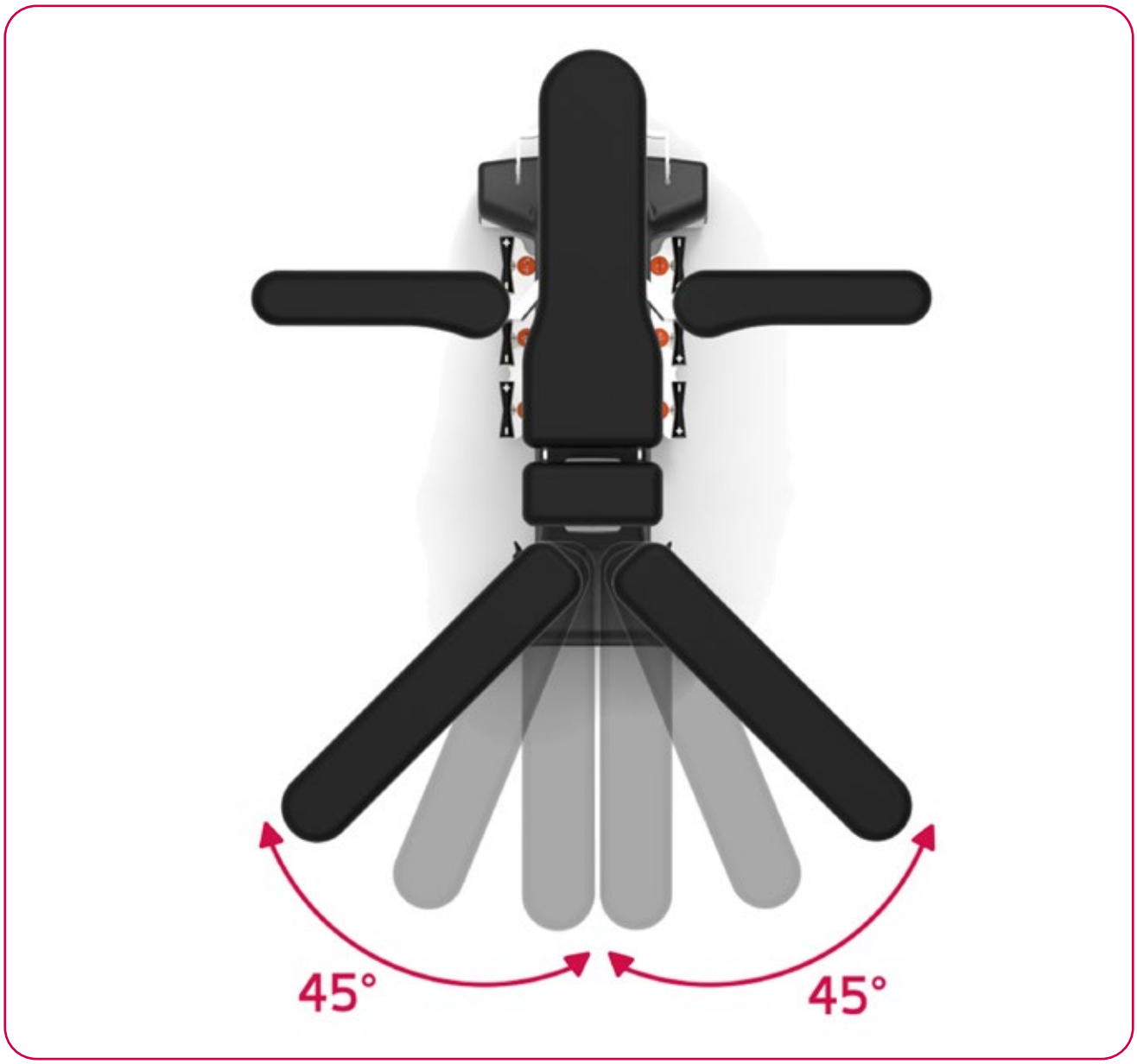
Lower limb supports

The lower limb supports can be **spread** manually by rotating them outwards.

It is possible to adjust the resistance required to rotate the sections by tightening or loosening the knob.

The lower limb supports can be spread up to 45°.

LOWER LIMB SUPPORT SPREAD ACTIVATION KNOB



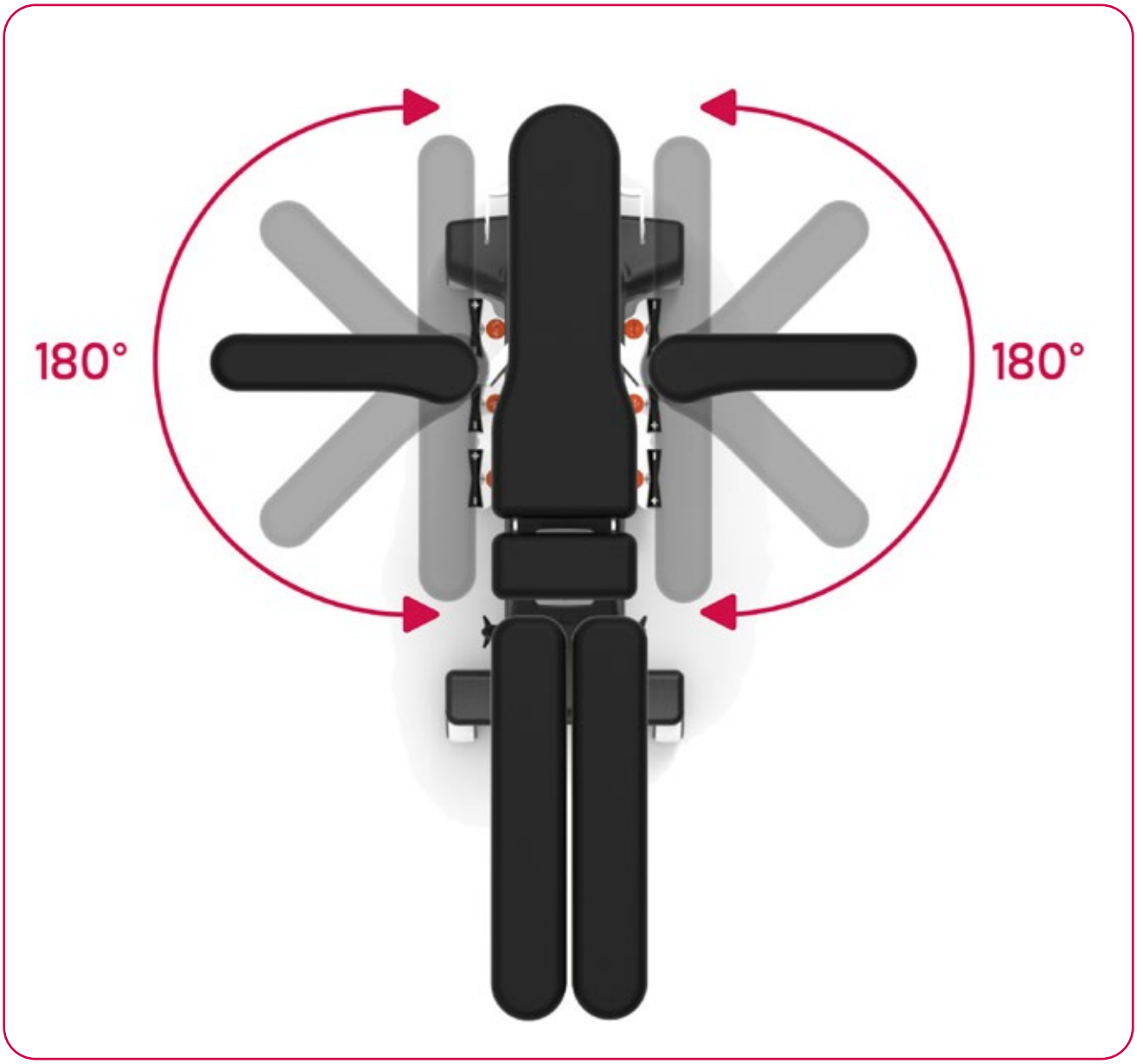
Manual and servo-assisted movements

Upper limbs supports

The **rotation** of the upper limb supports enables the upper limbs to spread apart.

It is possible to lock the resistance required to rotate the sections by tightening or loosening the knob. The sections can be spread up to 180°.

UPPER LIMB SUPPORTS ROTATION ACTIVATION KNOB

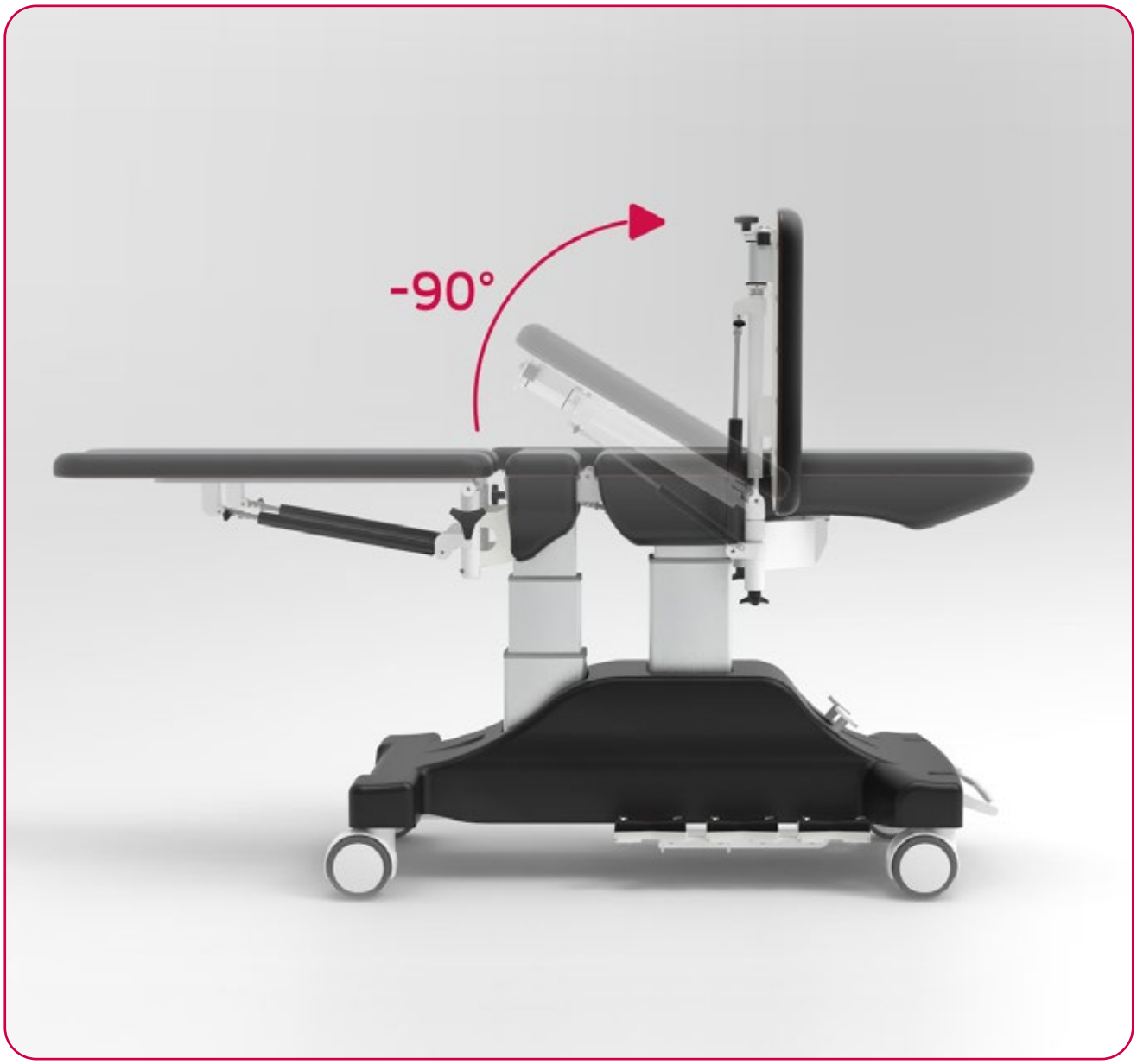


Manual and servo-assisted movements

Upper limbs supports

The **vertical tilt** adjustment of the upper limb supports is activated manually through a dedicated button. The sections can have a maximum tilt angle of 90°.

UPPER LIMB SUPPORTS TILT ACTIVATION BUTTON



Manual and servo-assisted movements

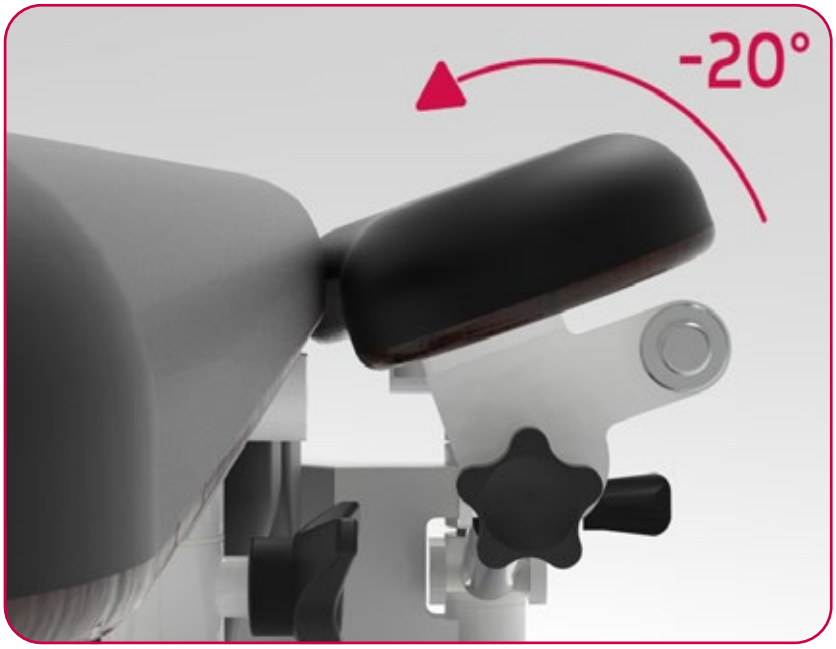
Upper limbs

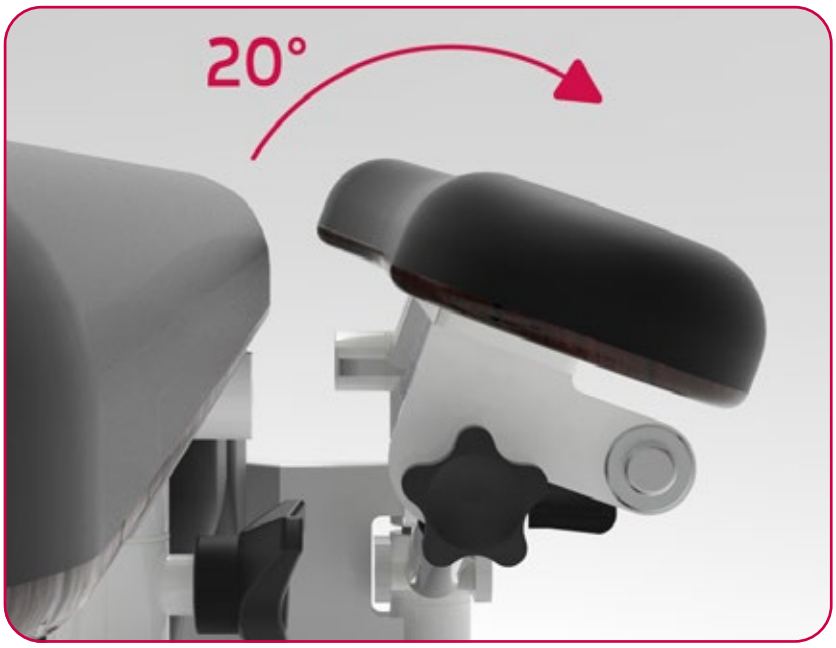
supports

The upper limb supports are designed to be **bilaterally tilted (Lateral Tilt)**. The operation is performed manually through a dedicated knob.

It is possible to lock the armrest at the desired angle by tightening the knob. The armrest tilt adjustment angle ranges from -20° to 20°.

UPPER LIMB SUPPORTS TILT (LATERAL TILT) ADJUSTMENT KNOB





Examples of applications

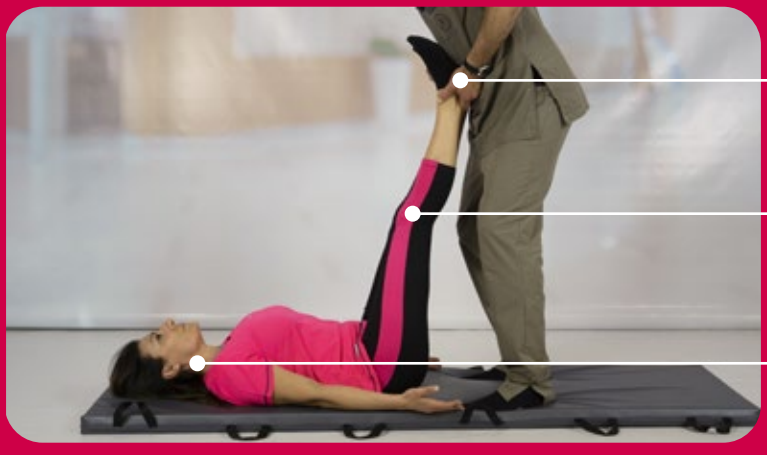
By using the Vitruvius bench with the Velcro **FASTENING STRAPS** (for upper limbs - Part No. AC169, and lower limbs - Part No. AC170) and the **POSITIONING CUSHIONS**, it is possible to **GRADUALLY** move the patient's legs and back sections, **stretching the paravertebral and the lower limb muscles at the same time.**
During the tractions (whose duration is subjective), the therapist can educate the patient on how to perform the exercise in the best way, **INCLUDING BREATHING**.

The figure shows the upper limb positioning with blocking straps designed to prevent unwanted movements.

The same exercise becomes more complex when performed with the patient lying on the floor.

Specifically, the therapist will find it difficult to: stretch the patient's legs progressively, ensuring they do not flex and the feet always remain in the "hammer" position.

Such a combination of actions affects the successful execution of the therapeutic treatment. The image below shows the example described.



Examples of applications

ASYMMETRICAL REBALANCING FOR ATHLETES

Generally, during training, athletes tend to tone a physiological "off-axis" as a result of the compensation by causing the retraction of the right diaphragmatic muscle.

In the pursuit of maximum physical performance, the athlete repeatedly exercises the same muscle groups, thus, as a direct consequence, becoming fatigued.

The Vitruvius bench allows **STRETCHING THE RIGHT DIAPHRAGMATIC MUSCLE** with simultaneous diaphragmatic breathing.

The picture shows the right lower limb support section tilted at 75° and the left lower limb support section tilted at 60° relative to the middle section, and the upper limb support sections are in 150° abduction from the backrest section.

Examples of applications

LIMB STRETCHING

In the neurological field (e.g. patients suffering from a stroke), the Vitruvius bench is particularly suitable as it allows the patient to be placed in **prolonged stretching postures** that are beneficial to the musculoskeletal system.

The therapist has the possibility of **mobilising the patient's upper limb passively** and, at the same time, **stretching the back muscles of the lower limb**. It should be noted that **the height adjustment prevents the therapist from adopting awkward postures.** The picture shows the backrest tilted at 30°, the left lower limb support at 35°, and the right support at 25° in anterior flexion.

Examples of applications

HIP FLEXION MOBILISATION THERAPY

The patient in this example is already in the healing phase with the recovery of hip flexion up to 120°. The picture shows the right lower limb support section tilted at 50° relative to the middle section, while the left lower limb support section is tilted by -15° from the middle section.

OSTEOPATHY & CHIROPRACTIC

The Vitruvius bench is also suitable for Osteopaths and Chiropractors, for example, **WHEN PREPARING FOR LUMBAR MANIPULATION**.

The following picture shows the patient lying on his right side with the right lower limb support section parallel to the mid-section, while the left lower limb support section is tilted at -15° relative to the mid-section, the backrest section is tilted at 30° relative to the mid-section, and the right upper limb support section is in 150° abduction from the backrest section.

After preparation, it is possible to perform the Trust.

Examples of applications

HIPS MOBILISATION THROUGH PASSIVE STRETCHING

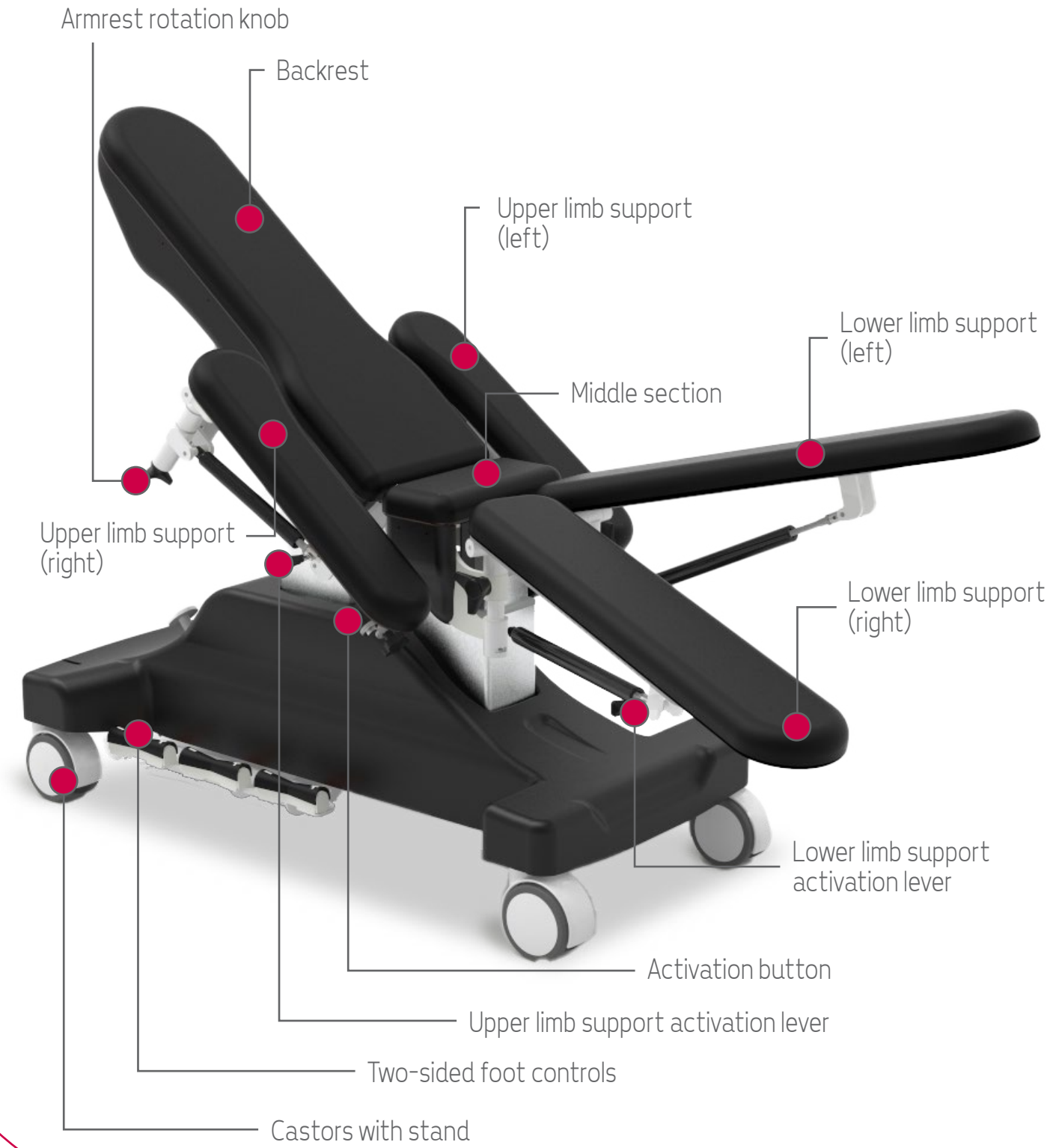
The following 4 pictures show an early phase of **HIP INTERNAL ROTATION** intended to stretch the intra-rotator muscles.

The lower limb supports are in maximum abduction (45°), while the upper limb supports are in 90° abduction from the back section to achieve adequate tension/elongation of the pectoralis major.

In a subsequent phase, the **EXTRA-ROTATION OF THE HIPS IS PERFORMED** by tilting the lower limb supports at 45° relative to the middle section. The patient should keep their feet together, the knees flexed, and the hips rotated externally to achieve adequate tension/elongation of the extra-rotators. At the same time, the upper limb supports are in 90° abduction from the back section to achieve adequate tension/elongation of the pectoralis major.

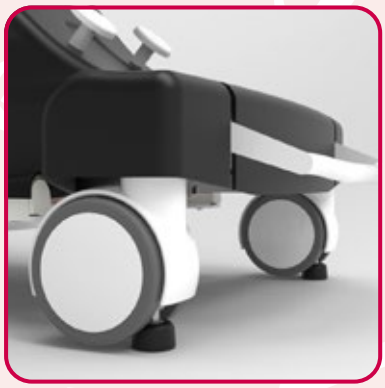
During therapy, the tilt angles may be adjusted by increasing or decreasing the tension, depending on the sensations reported by the patient.

VITRUVIUS


Armrest rotation knob
Backrest
Upper limb support (left)
Lower limb support (left)
Middle section
Upper limb support (right)
Lower limb support (right)
Lower limb support activation lever
Activation button
Upper limb support activation lever
Two-sided foot controls
Castors with stand

Standard equipment

- Medical device consisting of an anti-tipping frame manufactured in thermosetting powder-coated steel.
- Laying surface divided into 6 sections, 5 of which are movable (backrest, (two) independent upper limb supports, (two) independent lower limb supports).
- Height adjustment through telescopic columns with rectangular cross-section.
- Upper limb supports with extension adjustment through low voltage electric actuators.
- Double swivel castors, 125 mm diameter, non-marking and complete with retractable stand operated by foot pedal mechanism.
- Pair of Velcro straps for upper limbs - Part number AC169.
- Pair of Velcro straps for lower limbs - Part number AC170.
- Motor battery box - Part number AC17P.
- Cable reel.
- 3 thermoformed covers to protect the base, the backrest and the seat.



DETAIL OF THE BRAKING SYSTEM

Available attachments

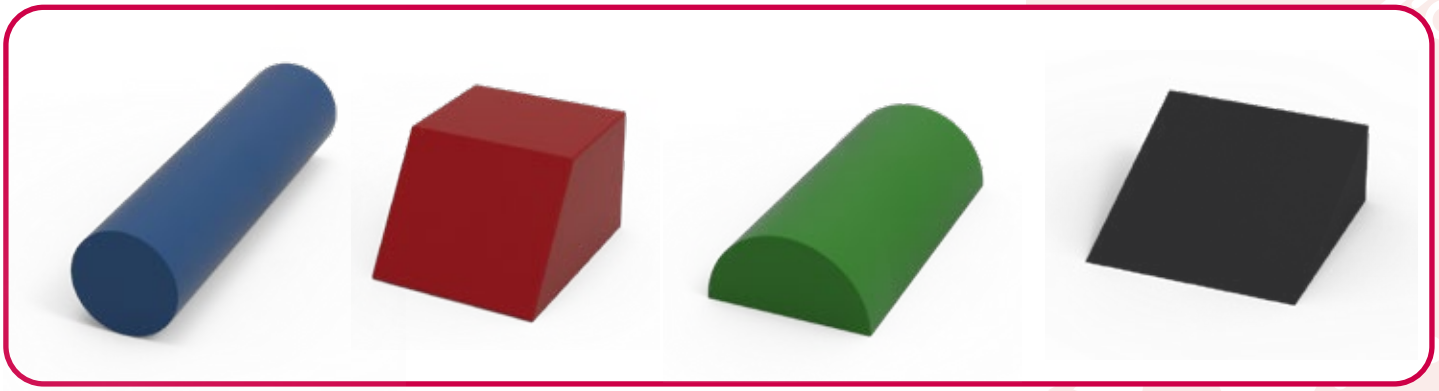
- Positioning cushions - As per catalogue.

Positioning cushions are medical devices of invaluable help for therapists and patients during the postoperative course and rehabilitation.

Used in combination with the Vitruvius **bench**, they enhance the patient's well-being by supporting them in maintaining a correct posture during treatment.

Our positioning cushions are manufactured in polyurethane foam and can optionally be upholstered in black PVC water-repellent fabric or faux leather, available in various colours.

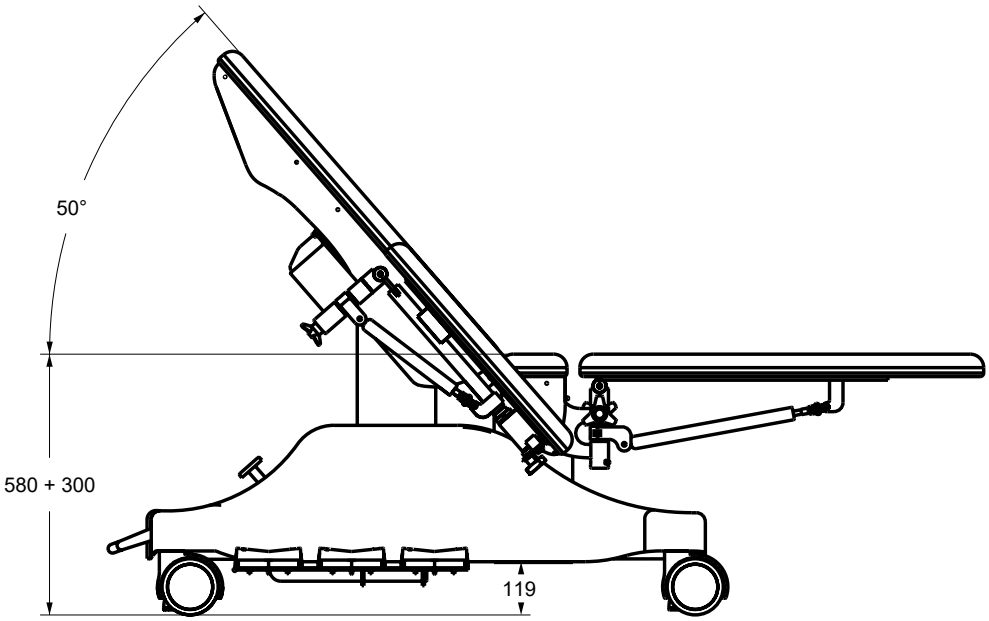
PAIR OF VELCRO STRAPS

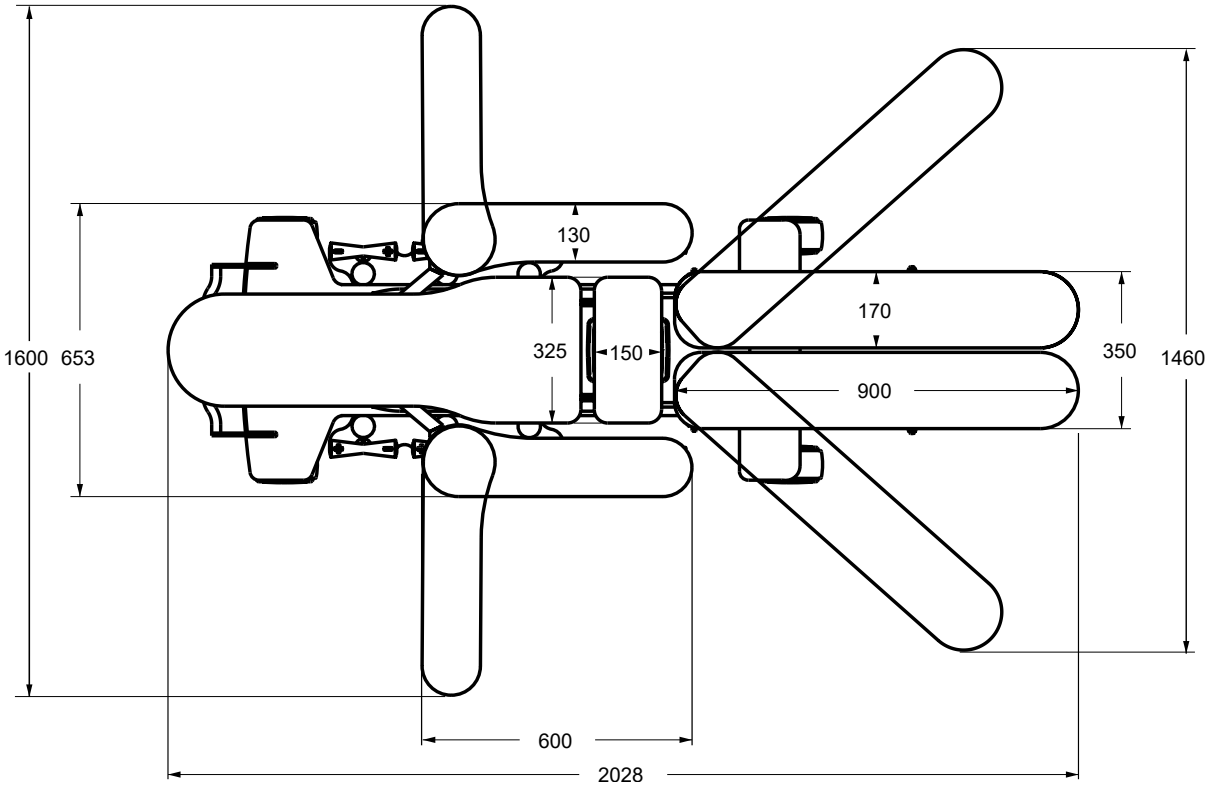


SOME POSITIONING CUSHIONS

Positioning Cushions Catalogue
Scan the QR code and discover the full range of our upholstered positioning cushions.

Dimensions





Technical data sheet

CND Code	**Z1206**
Progressive/R No.	**2247928/R**
Part Number	**GB0357.SP**
Intended use	Rehabilitation and physiotherapy bench.
Manufacturer	GARDHEN BILANCE SRL
Spare parts availability	Not less than 10 years
Weight of the medical device	90 kg
Control type	Electric foot pedals / Knobs, Manual levers and buttons.
Power supply	Multi-voltage 100-240 Vac 50-60 Hz
Power cord type	Schuko or other upon request
Castors	4 double swivelling stainless steel castors Ø 125 mm with braking system
Electric motors	Low voltage (24 V)
Max. power consumption	460 VA
Insulation	IP44
Maximum loading capacity	200 kg
Safe working load	235 kg

MAIN CORD


Type F - Schuko


Type L - 16A


Type I - Australia


Type B - Canada and USA


Type G - UK plug

For the relevant certifications, refer to the section "Certifications and Quality System"

The bench is intended for experienced therapists; therefore, any manoeuvres should be performed under the therapist's supervision and according to the patient's clinical condition. The therapist is then responsible for the applicability of each manoeuvre in relation to the health and safety of the patient.

The pictures provided in this document are purely indicative. The manufacturer reserves the right to make changes to the designs without prior notice. Refer to the accessories catalogue and/or sales proposals to identify the standard equipment and to select any additional components. In the event of discrepancies, the content of business proposals shall prevail.

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VITRUVIUS

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