# Neurological Rehabilitation Catalogue

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MEDEN INMED
PROFESSIONAL MEDICAL ENGINEERING

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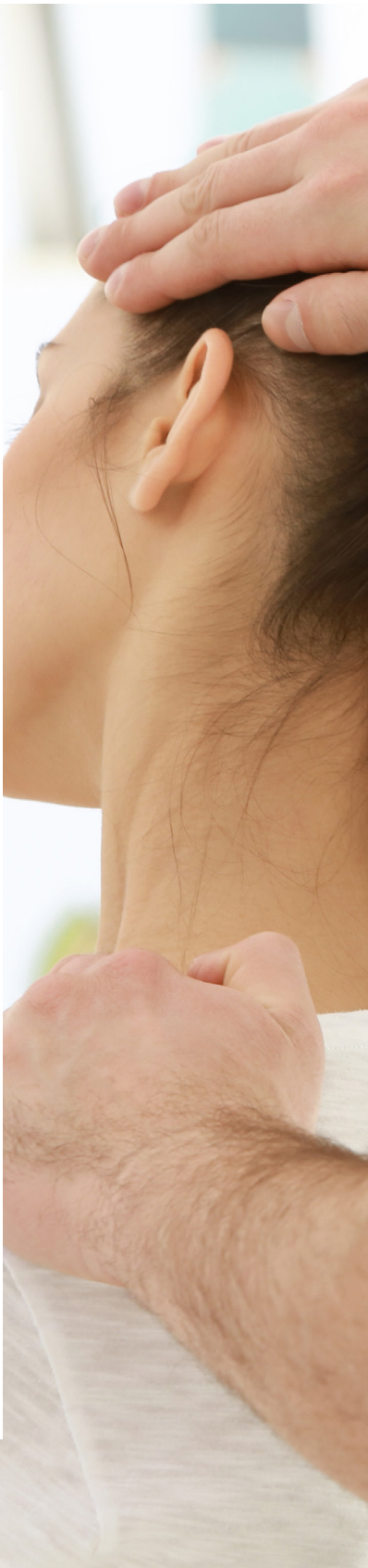
# Welcome to Neurological Rehabilitation Catalogue



## Neurological rehabilitation - what is it?

Neurological rehabilitation (rehab) is a doctor-supervised comprehensive set of activities for people after severe traumas and with central nervous system diseases (e.g. stroke, peripheral nerve damage or CNS, Parkinson's disease, multiple sclerosis or cerebral palsy). These activities aim to improve physical and mental fitness and help patients become as independent as possible. Nowadays neurological rehabilitation is a dynamically developing field of medical rehabilitation. Neurological rehab can reduce symptoms, improve function, and patient's well-being, but to be effective, it is very important to start rehabilitation as soon as reasonably possible (the best - from day one after the injury). This way, patients can fully or partially regain their motor and intellectual skills, thus improving their quality of social life.

Rehabilitation in neurological diseases must consist of activities prescribed by specialists in various fields, which determines its effectiveness. Such a multidisciplinary team very often includes: a physiotherapist, psychologist, neurologist, rehabilitation physician, and in the case of comorbidities - also other specialists.

Various exercises in sitting, lying or standing positions are used in neuro rehab. Their goal is to improve muscle strength and motor coordination. In this type of rehabilitation, gait reeducation, physical therapy, improvement of the motor skills of the face, mouth and tongue, and many others are also used.

Meden-Inmed as a leading manufacturer of medical equipment with a long tradition, pays special attention to the needs of medical personnel and their patients. We offer comprehensive solutions. This catalogue will provide you with some important information to make the best choice, when matching appropriate equipment with individual treatment needs.

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# Early intervention rehabilitation

## Vertimo Tilting tables

A tilting table is useful in the early period of neurological rehabilitation. It helps to prevent bedsores and muscle weakness at early stage, improves blood circulation and respiratory function. It is also an excellent aid for patients after prolonged immobilization in lying position at gradual adaptation exercises from lying to standing position.

### Advantages:

- Versions depends on the medical personnel needs: Classic or Hi-Lo, 1- or 2-sections, with 1 (only verticalization) or with 2 motors (for verticalization and to height adjustment).
- Therapist comfort: manual remote control, tilt angleindicator, 4 large separately lockable castors (movement and rotation lock), ergonomic table top, two-layer padding (specially selected density of foams), non-flammable/biocompatible/ scatchproof upholstery, many colors to choose.
- Patient comfort: smooth tilting, adjustable footrest (1 large or 2 separately adjustable), support table (option), arm supports (option).
- Safety: stable steel frame, function of access authorization - done by a special key placed in the remote control, brackets for the attachment of fastening belts and additional accessories, fastening belts, emergency battery back-up power supply (allows table lowering to min. height and return to horizontal position at power failures).

**Length:** 190 cm

**Width:** 69 cm

**Weight:** 100/130 kg

**Max. load (tilting/up-down):** 150/225 kg

**Tilting:** 0-87%

**Box dimensions/weight:** 220 x 85 x 80 cm/+50 kg

# Gait Training

## Eleveo System for dynamic unloading

Eleveo is a training device for simultaneous control of unloading, posture and balance on a treadmill or firm surfaces. Systems providing dynamic unloading are a perfect solution for training patients in a wide range of gait disorders. Adopting an upright posture improves also cardiovascular function.

**Used in:**
- Rehabilitation
- Gait reeducation
- Post-Covid-19 Rehabilitation

**Used for:**
- Therapeutic purposes
- Diagnostic purposes (training balance and gait)

**Ideal for working with:**
- Neurological patients
- Orthopedic patients
- For adults and children

### Advantages:

- Helps to maintain proper posture, reduces load, eliminates balance problems and improves motor coordination training.
- Suitable for treatment of very high (210 cm) patients.
- Compact design for easy access to rooms with low doors
- Frame with 8-step adjustment 89,4 -109,4 cm (width of 89,4 cm allows an easy passage through the most doors, width up to 109,4 cm - allows exercises on treadmill in suspension).
- Height adjustment, adjustable and interchangeable handrails maximise support during gait training.
- Adjustable unique universal harness (S-M-L-XL) and easily made gait direction changes makes it possible to adjust the system to specific needs of each patient, allows the clinics to treat various patients with a single Eleveo system, gives possibility of front, back and sideways gait training.
- Fully movable: four-wheel system (2 wheels with full and 2 with directional brake for pre-setting the direction of movement prior to the treatment).
- Therapist comfort: electronic panel (portable, magnetically attached), battery-powered electric height adjustment via manual remote control; removeable upholstered stool with wheel for manually controlled gait training.
- Long lasting battery of weighing module (up to 8 months).
- WeCoTronic (Weight Control ElecTronic), electronic panel showing real - time data (weight, unloading) from wireless tensometric sensors.

**Dimensions (H x W ext.):** 164-234 x 89,4-109,4 cm

**Max. load:** 160 kg

**Max. height of patient:** 210 cm

**Weight:** 120 kg

**Box dimensions/weight:** 220 x 95 x 56 cm/+40 kg


# Axelero I ver. Reha

**Medical treadmill in version for rehabilitation**

Axelero ver. Reha is a great solution for patients who are recovering from injury, seniors who try to keep fit and sportsmen. It can be easily adjust to different patient's condition and movement skills offering a lot of programs (MANUAL, DEFINED, USER) and functions (start/stop, incline, speed, calories, distance, time). It allows you to customize workout protocol any time, regardless of the weather, even in comfort of the home environment.

## Advantages:

- Excellent for people with movement difficulties: easy access for persons on wheelchairs, low base – easy to step-up, start from very low speed (0.2 km/h), system of gradual speed increase from 0.2 km/h to a preset value, belt speed setting every 0.1 km/h, maximum patient weight 200 kg.
- In post-Covid-19 rehabilitation: improves endurance and the functions of the circulatory and respiratory systems.
- Possibility of therapist controlled treatment of lower limbs
- Many uses: in bariatrics, neurological rehab, orthopedic, pediatrics (pediatric handlebars as option) or even in sports medicine (elevation angle 0-25%).
- Safety and comfort: easily accessible safety switch.
- Treadmill starts with a 3-second countdown with belt speed of 0.2 km/h and with the inclination of 0.0 %.
- Possibility to modify belt speed and inclination by the user when the belt is in motion.
- Control unit with color LCD display.
- Good solution in gait training is to combine Axelero Reha with Eleveo (a system for dynamic patient unloading)

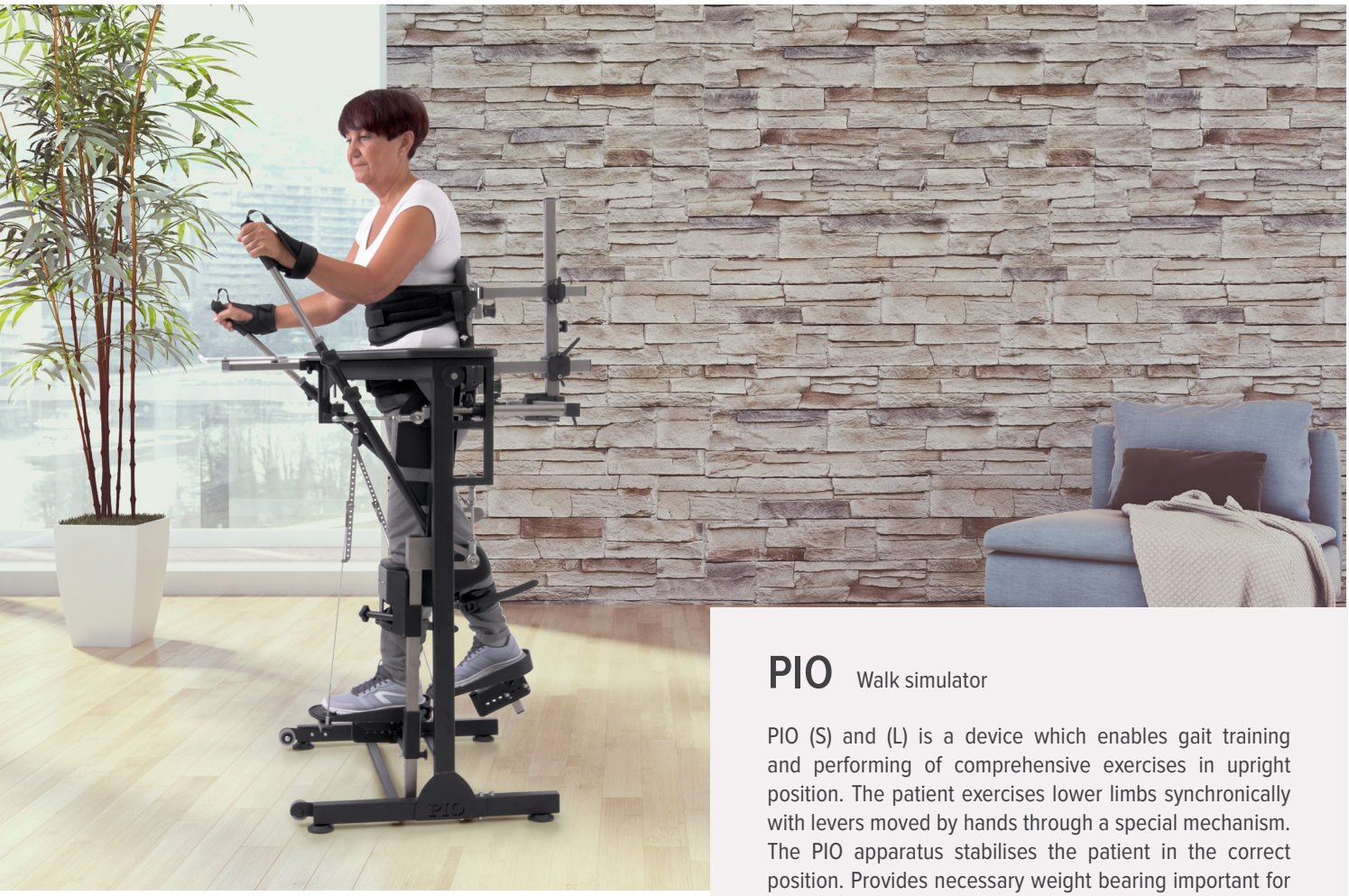

**Max. load:** 200 kg

**Belt speed:** 0,2-25 km/h

**Belt elevation:** 0-25%

**Weight:** 200 kg

**Box dimensions/weight:** 230 x 90 x 73 cm/+50 kg



# PIO Walk simulator

PIO (S) and (L) is a device which enables gait training and performing of comprehensive exercises in upright position. The patient exercises lower limbs synchronically with levers moved by hands through a special mechanism. The PIO apparatus stabilises the patient in the correct position. Provides necessary weight bearing important for proper movement of the hips, knees and tarsal joints which promotes synchronised movements simulating natural gait. Recommended for hospitals, rehabilitation centers and homes.

## Advantages:

- Versions for adults (L) and for children (S).
- For patients with paraparesis or paraplegics.
- Gait cycles counter and timer (1-59 min.) with alarm.
- Shelf for accessories.
- Promotes upright position.
- Increases breath capacity.
- Stimulates circulatory system.
- Prevents urinary system infections (helps to remove sediments in urinary tract).
- Provides dynamic load to osteoarticular system (e.g. reduces the risk of osteoporosis).
- Prevents muscle contracture and arthrosis.
- Adjustable foot rests, knee support, handles, backrest.
- Torso and shanks stabilization belts.
- Shock absorbers in back rests enables natural swing of the pelvis and help to rotate the spine.

**PIO for adult (L):**

**Box dimensions/weight:**
135 x 95 x 71 cm/+36 kg

**PIO for children (S):**

**Box dimensions/weight:**
80 x 80 x 135 cm/+16 kg

**Height of patient S/L:**
125-145/165-190 cm

**Max. load S/L:**
90/95 kg

**Weight S/L:**
41/61 kg

# Freewalker Neurological walker

Walker is designed for people with disabilities to restore and practice the skills of standing and walking with or without the assistance of another person. It is good solution for people suffering from neurological impairment with postural instability (e.g., stroke, multiple sclerosis (MS), Parkinson's disease).

## Advantages:

- 2 versions: FREEWALKER (without handbrake (A)), FREEWALKER-B (with handbrake (B)).
- Can be used by patients of different posture - walker has adjustable height.
- Padded support - aids in assuming and maintaining upright position by the user and during walk re-education rehabilitation.
- Improves posture, increases stability and relieves tension in neck and shoulders.
- Patient also can lean on upholstered supports in order to relieve the lower limbs.
- Mobile, robust construction with 4 wheels.

**Min. height B/A:** 103/96,3 cm

**Max. height B/A:** 137,5/131,8 cm

**Weight B/A:** 31,6/23,7 kg

**Max. working load:** 150 kg

Freewalker

Freewalker B

# Upper limb disfunction therapy

Very simple and easy in usage equipment, that enables effective rehabilitation through exercises of:

- wrist (Pictor, KTM, KTM BO)
- forearm (Pictor, KTM)

in case of orthopedic, rheumatological and neurological disease of hand.

This equipment finds application in hospitals (rehabilitation, surgical or neurological wards) as well as in outpatient rehabilitation. PICTOR enables self-assisted, active and resistant exercises for the wrist area, and is supplemented with self-assisted rotational movements of the forearm. KTM, KTM BO enable improvement of the manipulation skills, motor coordination of hand and eye-hand coordination.

## Advantages:

- Intuitive usage.
- Compact design.
- BIOfeedback (Pictor) – incresing motivation during exercising; on tablet.
- Benefits for physiotherapist: saving time and effort – allows the therapist to supervise more than just one patient a time; light and portable – easy to move from one patient room to another.
- Benefits for patient: self-assisted exercising allows defines his/hers pain threshold and the device is set accordingly, ensuring the safety and comfort of exercising, improve the ability to daily activities.

### Pictor*

**Wrist FLEX/EXT, add./abd. of wrist (in sagittal plane), forarm Rot:** 90, 72, 90, 90°

### KTM BO

**DF/FLEX/Rot/add./abd. of wrist**

### KTM

**DF/FLEX/Rot of wrist, convers./Inv of forearm**

**Plummets mass:** 5x0,25 kg

* - Pictor delivered with special table

# Lower limbs rehabilitation

Simple and easy to use. Allows for:
- effective rehabilitation through selfassisted, active, resistance and functional exercises of the joints:

- ankle (Avior, Draco, UCS)
- knee (Avior)

- exercises in sitting position

Used in sport rehabilitation centers, geriatric clinics, general post traumatic rehabilitation clinics for orthopedic, neurological and geriatric patients.

## Advantages:

- Intuitive usage.
- Compact design.
- BIOfeedback (Avior, Draco) - incresing motivation during exercising.
- Benefits for physiotherapist: saving time and effort - self-assisted exercising allows the therapist to supervise more than just one patient a time; light and portable - easy to move from one patient's room to another.
- Benefits for patient: self-assisted exercising allows defines his/hers pain threshold and the device is set accordingly, ensuring the safety and comfort of exercising.

### Avior

**DF, PF, PRON/SUP, knee EXT, knee FLEX:** 40, 35, 31, 40, 30°

### Draco

**DF, PF, PRON/SUP:** 40, 47, 34°

### UCS

**Adjust. of foot (longitudinal/ transverse axis) rotation angle:** ±35°

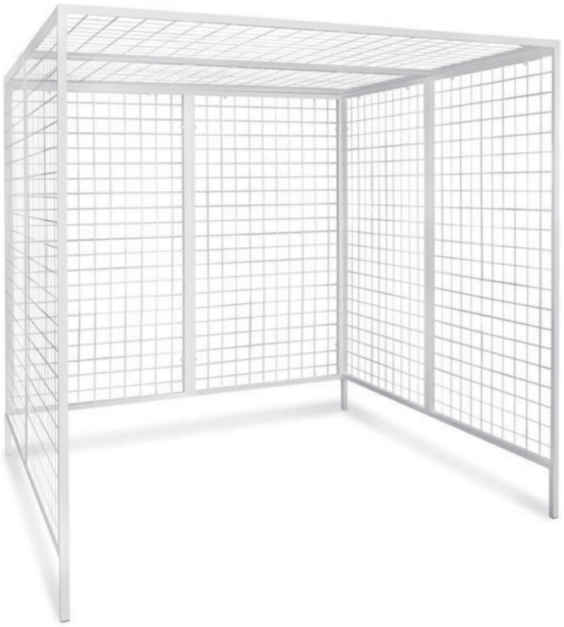
# Limb disfunction therapy

## The Cage
**for Pulley Therapy**

Allows for:

- self-assisted exercises,
- active exercises in offload,
- exercises in offload with resistance,
- active exercises with resistance with the use of pulley-weight systems.

The cage can be used in the therapeutic rehabilitation of neurological, orthopedic and rheumatological diseases.



### Advantages:

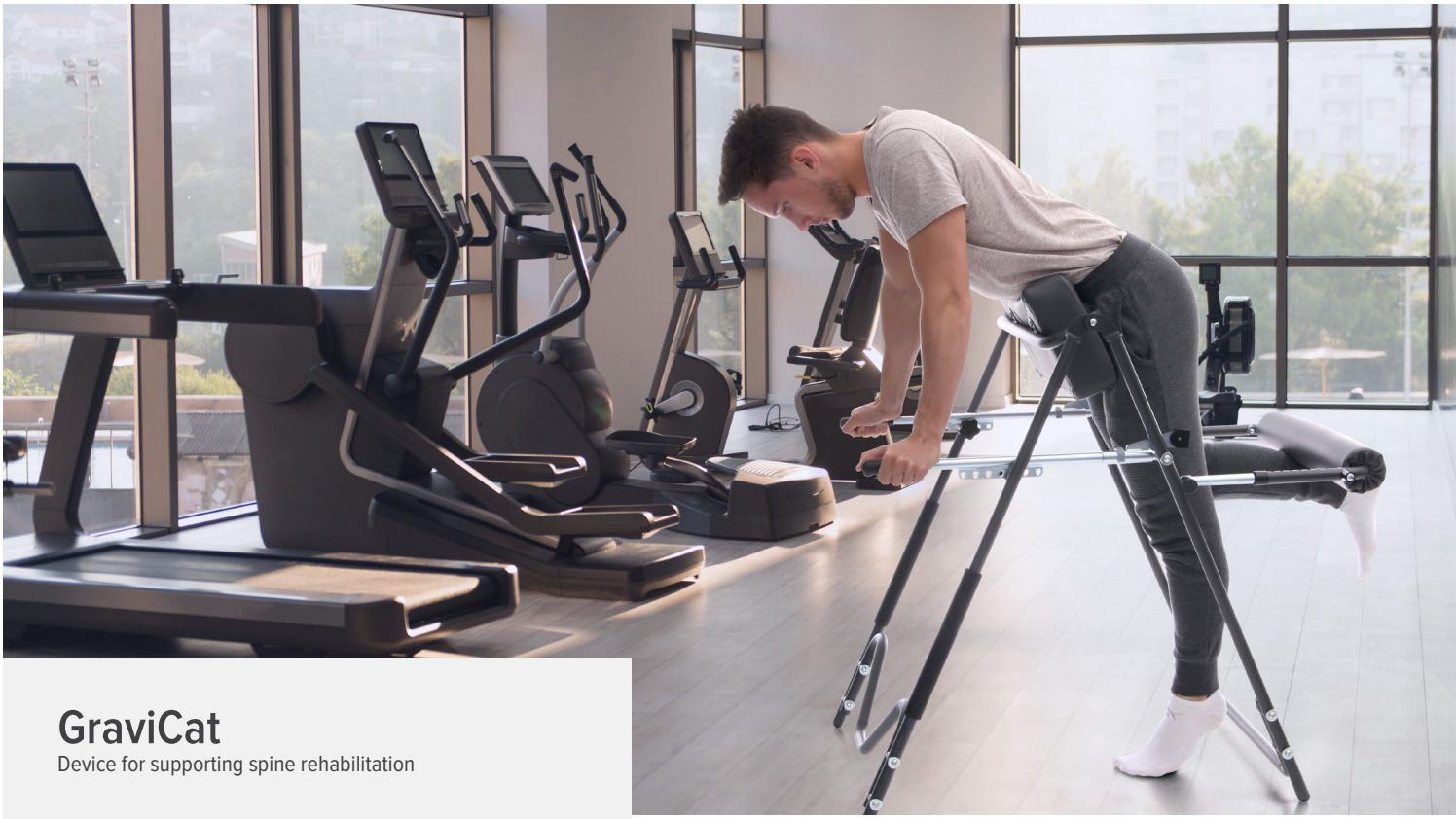
- For use in individual physiotherapy even with a few patients simultaneously
- For total or partial suspensions
- Standard cage is composed of 8 detachable panels (rectangular steel grids for attachment of various accessories during training).
- Made from steel painted with white powder epoxy
- It is possible to use there lift to the Perschl position.
- Complete workstation consists of: cage, treatment table, set of accessories (ropes, slings, etc.).

**Weight:** 180 kg

**Dimensions (H x W x D):** 200 x 200 x 200 cm

**Box dimensions/weight:** 215 x 136 x 55 cm/+50 kg

# Spine rehabilitation



## GraviCat

Device for supporting spine rehabilitation

GraviCat is designed for Inversion Trening, aiming to support the spine rehabilitation and relieve the pain of the back. Inversion devices are used to reverse the patient's position from upright to upside down with the head down. This position limits the interverterbral pressure, advantageously affects muscle stretching and posture correction.

### Advantages:

- Thanks to the special construction has a positive influence on relieving the pressure of the intervertebral without causing ankle nor knee injuries.
- Foldable, for easy storage.
- Designed to accommodate users up to 195 cm tall and up to 135 kg.
- Stable and easy to use.
- Height, thigh thickness and lenght adjustment.
- Indications: posture correction, stretching of contracted muscles, stabilization of the lumbar spine, maintaining spine mobility, increasing strength and endurance of the neck/scapular astringent/back extensor muscles, reducing lumbar back strain.

**Height (folded/unfolded):**
118/min. 88 - max. 101 cm

**Max. load:**
135 kg

**Weight:**
15 kg

**Box dimensions/weight:**
122 x 71 x 20 cm/+3 kg

# Rototrac Inversion device

Rototrac is mainly designed for Inversion Therapy, which involves using gravity to straighten and elongate the spine, which results in more relaxed back muscles. Functional gravity inversion table with “head down” position relieves the spinal discs and relaxes muscular tension. It helps in maintaining the correct posture. Rototrac improves blood circulation and tissue elasticity.

## Advantages:

- Stable, reliable and functional table for Inversion Therapy.
- Foldable, for easy storage.
- Designed to accommodate users from 150 up to 205 cm tall and up to 136 kg.
- For comfort and support: extra-long back rest fully padded, 4 ergonomic ankle holders (foam padded), inclination angle adjustment, height adjustment, feet rest adjustment, long safety handles.
- Excellent for prevention of back pain; it releases back pain quickly and effectively.
- The device alows for exercises at home.

**Box dimensions/weight:** 180 x 90 x 50 cm/+3 kg

**Weight:** 35 kg

**Max. load:** 136 kg

**Angle adjustment:** 0, 15, 30, 45, 60, 80, 90°

# SKOL-AS

**Devices for posture faults (scoliosis) therapy**

SKOL-AS therapeutic method is one of the few documented therapeutic methods to affect both passive and active spine stabilization mechanisms along with the nervous system responsible for their control. The SKOL-AS method is based on SOSORT recommendations (Society on Scoliosis Orthopedic and Rehabilitation Treatment). SKOL-AS method and apparatus is intended for children and youth suffering from 6-40 degree Cobb's scale spine curve. Authors of the method are associate professor Ph.D. Andrzej Suchanowski and Andrzej Stolarz.

## 1st stage (recumbent pos.)

**Dimensions (H x W x D):**
62×79×98 cm

**Weight:**
35 kg

## 2nd stage (sitting pos.)

**Dimensions (H x W x D):**
132×63×54 cm

**Weight:**
40 kg

## Advantages:

- Rehabilitation in sagittal, coronal, and transverse plane.
- Nerve system stimulation to re-educate the correct posture.
- Therapy in recumbent and sitting position.
- First stage focuses on stimulation of central nervous system which activates the decreased activity of motor neurons and gamma system which connects muscle fibers, elimination of biomechanical conditions in the passive stabilization mechanism, increasing progression of spine curvature, restoring the balance between muscles and paraspinal structures, restoring the function and structure of primary and secondary muscles reference system.
- The second stage addresses the main correction of the spine, on stable and balance seats, including: posture re-education and self-correction in height positions.
- Therapist's work support.
- Correction with SKOL-AS is recommended for 6-40° COBB'S SCALE spine deformations.

# NDT-Bobath, VOJTA Therapy

## Safari Elephant

Bobath treatment table

Large tables are suitable for the worldwide- known „Bobath concept" used for rehabilitation of people with central nervous system disorders. They are perfect for therapy of children with neurological development disorders and adult neurological patients (i.e., stroke) which can be guided through a wide range of exercises and sensory experiences, as well as postural adjustments. Because neurological disorders are often associated with movement disorders, spasticity, paralysis, loss of sensation or poor balance, a large treatment table allows effective and comfortable treatment. Safari Elephant table is a perfect solution for exercising and stimulating also with the Vojta method.

### Advantages:

- Multiple construction variations: 1- or 2-sections, electric or hydraulic, with F0 or F4 frame system.
- Much larger surface than other rehabilitation tables enables safe and effective therapy.
- Although designed for rehabilitation of patients, the table is wide enough to accommodate the therapist as well (the therapist can work with the patient both supine and seated).
- Because Bobath treatment techniques sometimes require a larger weight capacity table, the table can support weights of both patient and therapist up to 200 kg.
- Low height (50 cm) provides excellent access for patients with limited mobility or for wheelchair transfers.
- Electric or hydraulic up/down height adjustment via: foot bar accessible from each side of the table (el. version), foot pedal accessible from both sides of the table (hyd. ver.).
- Excellent for postural exercises, rolling, turning and balance training.
- Most often used in the treatment of neurological diseases, but can also be used in orthopedics and rheumatology.
- For use in hospital wards, clinics, sanatoriums as well as in private rehabilitation clinics.

**Box dimensions/weight:** 220 x 136 x 75 cm/+90 kg

**Dimensions (W x L):** 120x200(203) cm

**Height:** 50-99 cm

**Weight:** 126-145 kg

**Max. load:** 200 kg

# Occupational therapy

## Moovie

**Developmental- rehabilitative puzzle blocks**

Created to support development of children with central nervous system disfunctions. Blocks are intended for occupational therapy of children with sensory movement disorders as an early rehabilitation intervention in the form of the directional play, which can help improve and compensate for deficits in children with disfunctions. Excellent aid for development of motor-auditory-visual senses.

### Advantages:

- Versions depends on the therapy needs: 15 or 23 elements.
- Big set is intended for large spaces such as gymnasiums, pre-schools, rehabilitation rooms, sanatoriums, common rooms at schools or playrooms.
- Small set for smaller spaces such as a flat, a small rehabilitation room or a common room in children's hospital.
- Can be used on land and in water thanks to their unique properties (the blocks float on water surface and dry quickly, are resistant to weather conditions and UV radiation).
- Therapist comfort: minimum dimensions after folding and maximum variety of games and exercises after unfolding, easy to clean and disinfect.
- Children comfort: modular structure - elements easy to connect and disconnect, like puzzles - can be combined with each other like putting the pieces of the puzzle together, minimal amount of color stimuli.
- Safety: made from durable, certified materials, meet the requirements of the medical devices standards.


**Height:**
30 or 48 cm

**Diameter:**
90 or 180 cm

# AR in cognitive/motor functions training

## Neuroforma

**Augmented Reality platform for motor/ cognitive/balance control exercises**

Neuroforma is an innovative platform for rehabilitation centers and other institutions working with patients in therapy rooms, where a comprehensive, precise, and easy to use tool is needed. Neuroforma uses virtual reality technology and motion capture in 3D, a computerized system for data analysis and provides biofeedback elements, which makes work more effective. Unlimited access to motor-cognitive exercises and modules allows to use this tool not only with patients with neurological diseases and injuries but is excellent for post-traumatic and orthopedic rehabilitation of children and adults. It is also used in post Covid-19 Rehabilitation (patients with problems with memory, maintaining concentration, depth perception, muscle weakness, chronic fatigue, deterioration of lung function and etc.).


## Advantages:

- Created by neurorehabilitation and neuropsychology experts, supports in particular the rehabilitation of patients with multiple sclerosis and those recovering from brain strokes and brain injuries.
- User-friendly for exercising in every age.
- Allows to set an initial difficulty level appropriate for every patient's skills.
- For exercising in both standing and sitting positions; also for workouts with patients in wheelchairs.
- Benefits for patients: motivate to exercise daily, boost their mental and physical fitness, engage both motor and cognitive skills in an attractive, motivating way.
- Benefits for therapists: a wealth of options, easy insight into patient progress, increased control over exercises (decisions regarding difficulty level, number of repetitions and range of motion), mobile (can be easily moved from room to room).
- TeleNeuroforma - allowing patients to continue their therapies at home (user-friendly, supports all levels of computer literacy).

**Neuroforma station:**

**Box dimensions/weight:**
100 x 130 x 70 cm/+28 kg

**Balance control module:**

**Box dimensions/weight:**
112 x 130 x 60 cm/+28 kg

**Large display:**
40”

**Technology:**
3D

**Weight:**
65/32 kg

# AR in cognitive/motor functions training

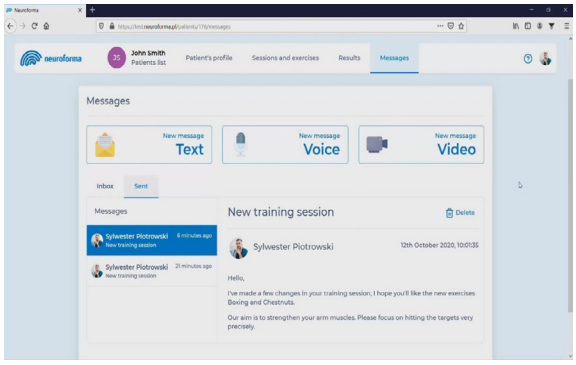
## Teleneuroforma

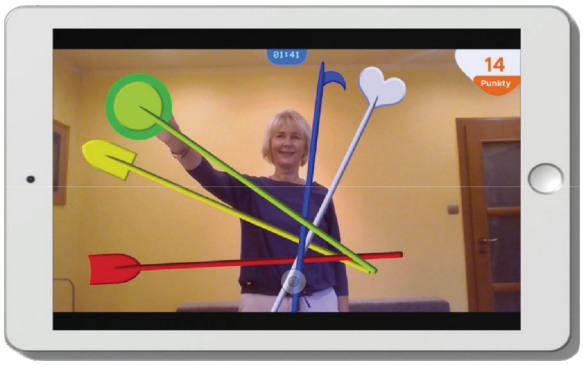
**Computer platform for telerehabilitation with biofeedback**

TeleNeuroforma is a modern and effective support for the rehabilitation process of patients who require systematic exercises. The platform allows for remote rehabilitation of patients exercising at home. The therapist can log in from a web browser or integrate TeleNeuroforma with medical information system. It is a perfect solution for neurological or geriatric patients with Alzheimer disease, dementia, after brain injury, stroke, cerebral palsy, fractures and many more.

### Advantages:

- Interactive form of home exercise.
- Patients need only a computer or tablet with a camera and internet access.
- User-friendly interface makes telerehabilitation intuitive and easy-to-use for both patient (in every age ) and therapist.
- All exercises and functions are launched in a web browser, they do not require installation or additional devices.
- Benefits for patients: can do exercises independently at home, receive tasks adjusted to their needs, receive support and communicate with a specialist that increases patient involvement and motivates to follow the exercise plans; exercises boost mental and physical fitness, engage both motor and cognitive skills in an attractive, motivating way.
- Benefits for therapists: with a large variety of exercises to choose from a specialist can individually adapt training session to patient's needs, create custom made exercises, track the progress thanks to advanced medical reports, gives feedback and works anywhere, anytime.



# Our website

As in this Physiotherapy Catalogue we presented only a part of our varied offer we encourage you to browse our full offer online:

**www.en.meden.com.pl**

# Product trainings

Out of concern for our business partners, we have prepared various trainings and presentations about the products from our extensive offer. In our team we have a person who is responsible for our equipments' trainings, equipment demonstrations at the customers' premises, at exhibitions and congresses.

Maciej Pawłowski
mpawlowski@meden.com.pl
+48 663 152 888

Mariusz Rubik
mrubik@meden.com.pl
+48 690 266 543

# How to order easily

If our catalogue is of interest to you and you want to order any of presented products, please don't hesitate to contact us:

*European markets (excl. GB, Ireland)*
Kamilla Modzelewska
Vice President
km@meden.com.pl
+48 94 344 90 50
+48 602 668 002

*Russian-speaking countries*
Oksana Ardan
Key Account Specialist
oardan@meden.com.pl
+48 94 347 10 67
+48 607 566 302

*North America*
Karol Wojciechowski
Key Account Specialist
& Service Coordinator
kwojciechowski@meden.com.pl
+48 609 132 477

*Europe (GB, Ireland), South America, Australia*
Maciej Pawłowski
Key Account Specialist
& Training Consultant
mpawlowski@meden.com.pl
+48 663 152 888

Mariusz Rubik
Key Account Specialist
& Training Consultant
mrubik@meden.com.pl
+48 690 266 543

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MEDEN INMED
PROFESSIONAL MEDICAL ENGINEERING

**Meden-Inmed Sp. z o.o.**
Wenedów 2, 75-847 Koszalin, Poland

Phone: +48 94 344 90 50, +48 94 347 10 40
Fax: +48 94 347 10 41

international@meden.com.pl
www.en.meden.com.pl

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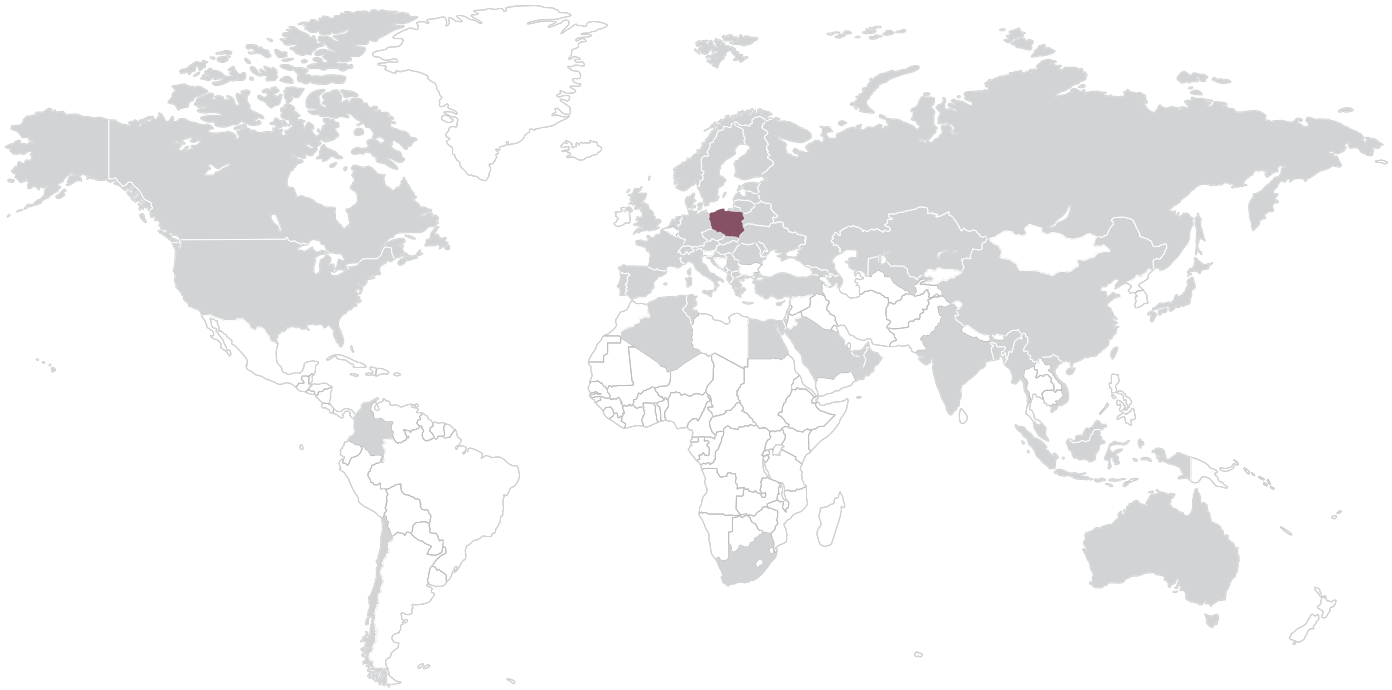

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