

# **IVS3 & IVS4**

Intensive Visual Simulation System

Origin: France Certificate: CE Class 1, IEC 60601-1



## **IVS4 for Lower Limbs**

Adapted to wheelchairs, IVS4 allows patients to work seated to learn basic movements and more complex coordinations, then in a standing position for a functional approach to balance and walking.

# **IVS3 for Upper Limbs**

The IVS3 system is an innovative rehabilitation device based on the fundamental principles of visuomotor simulation training. The system generates visual illusions, a unique technology dedicated to action oberservation, motor imagery and mirror therapy.





## **Sector** Features

- To work specifically on action planning, potential of actions, motor planification and motor recovery
- Relearn the movement by stimulating brain plasticity
- Reduce spasticity, promote body awareness recovery, and alleviate central pain in patients
- Intense immersion allowing the patient to focus on their movement
- Early start of therapy in the rehabilitation process, accessible flaccid patients

- Unilateral work and attention focused on the injured limb only
- Fine-tuned dexterity work: meticulous tweaking of the movements worked, amplitude and speed
- Construction of personalized sessions with a wide range of movements
- Constraint-Induced MovementTherapy (CIMT)
- Task oriented training

# **Motor Control Principles**

 For many Stroke or CRPS patients, Action Planning is altered or non-existent. They lost awareness of their own body, but also the memory of motor functions.





## **ACTION PLANNING**

Perception

Body awareness
Potential of actions

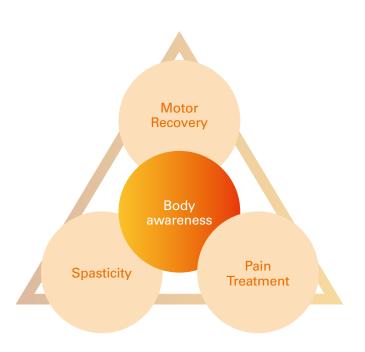
Motion
Planification

**MOTOR EXECUTION** 

TRIGGER Motor Execution Feedbacks

# **Rehabilitation Objectives**

 IVS relies on brain plasticity principles. Integrating IVS among the therapeutic pathway stimulates the central control of movement and bolster patients' abilities in action planning.



#### 1 • Lack of Movement

I can't move due to the injury I don't want to move to avoid pain

#### 5 · Non-Use

Body exclusion and compensation

## 5 bis • Pain

In some cases, increase and installation of chronic pain



#### 2 · Brain Activations

The brain area dedicated to motor command is less and less active

# 4 • Body Ownership Decrease in body ownership

## 3 • Motor Command Loss in movement representation

and action planning

Pain CRPS, PLP, burnt... Neuro Stroke, TBI, SCI, MS... Orthopedics
Trauma, immobilization...

## With the help of IVS3 / IVS4

# 1 • I see and I can feel the movement

It improves my motivation and participation

#### 5 · Motor learning

I reduce the mismatch between motor intention and the visual feedback

## 5 bis • Pain

Movement or even movement perception can reduce pain



#### 2 · Brain Activations

Even if I don't move, my brain is automatically activated through Action Observation

## 4 · Body Ownership

I can see my body in movement and integrate the affected side in my body image

## 3 · Motor Command

I can imagine my body moving and promote the motor command at the same time

## **Hardware Features**

- 3 axes adjustable monitor with high grade interactive active displays touch screen
- Intelligent algorithm-based therapy assistance
- Ergonomic work surface with object storage space
- Embedded industrial computer system
- Height adjustable table with three electric actuators and electronic control unit
- High definition image acquisition and processing system
- Laterally and depth-adjustable patient's integrated screen



## Software Features

- Presentation
- Care Programs
- Over 800 Exercises
- Activity Reports
- Evaluation





# **Enhance Recovery with NIRSIT Lite (Optional)**

IVS3 and NIRSIT Lite work together to enhance neurorehabilitation by combining intensive visual simulation with real-time brain monitoring. IVS3 promotes motor relearning through mirror therapy and action observation, helping patients regain movement control, while NIRSIT Lite tracks cortical activation, ensuring therapy effectively engages the affected brain areas. This integration provides objective, data-driven insights, allowing clinicians to personalize treatment and optimize recovery outcomes with validated neuroplasticity and measurable progress.



# **IVS** | Indications

- Stroke
- Cerebral palsy
- Brain injury
- SCI
- Multiple sclerosis
- Immobilization
- CRPS
- Plexus iniurv
- Amputation
- IIIIIIODIIIZatioi
- Trauma

# **Large Inclusion Criteria**

- Flaccid limbs
- Spasticity
- Hemineglect
- Apraxia
- Body image disorders
- Bimanual impairments
- Aphasia
- Cognitive disorders
- Attention deficits
- Learning disabilities
- Pain
- Allodynia...



# ExoMotus<sup>TM</sup> M4 NEW

Lower Limb Exoskeleton

Origin: China Certificate: CE Class 1, IEC 60601-1, IEC 60601-2



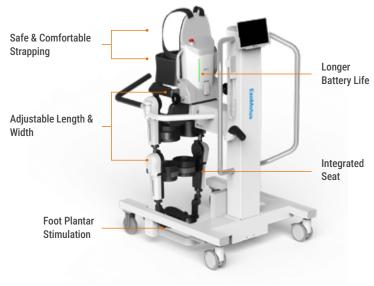
ExoMotus<sup>™</sup> M4 adopts an ergonomic design with an integrated balancing support frame providing a comfortable and safe environment for gait training.

The exoskeleton can provide a machine-assisted rhythmic gait pattern to minimise gait abnormalities during the early stage of rehabilitation. Walking on the ground provides plantar sensory feedback during training.

ExoMotus™ M4 enable individuals with lower limb impairments to perform routine ambulatory functions (stand, walk on level surfaces and mild slopes) to increase their activity level. Gait parameters can be individualised to suit the user's needs.

## **Multiple Training Modes**

- Users can perform sit to stand training at the early stage of rehabilitation to promote ideal sensory input, improve cardiopulmonary function, and prevent muscle atrophy.
- Achieve rhythmic walking through an optimised gait cycle. Relieve muscle tone and minimise abnormal gait patterns.



## **Vertical DOF Ensuring Natural Gait Pattern**



**Specifications** 

**Device dimensions** 

840mm x 1120mm x 1500mm (±50mm)







Origin: Switzerland
Certificate: MDD Certificate of Listing No. 110193, FDA,
CE, IEC 60601-1, IEC 60601-1-2



The Lokomat is the world's leading robotic rehabilitation device that provides highly repetitive and the most physiological movement training. This is ensured by the individually adjustable exoskeleton combined with the patented dynamic body weight support system.

## **Second Features**

## Effective Gait Training

Lokomat is backed up by nearly 20 years of clinical research with over 550 publications

## Increased Efficiency

The Lokomat relieves the therapist from manually supporting the patient while walking and therefore allow therapists to focus on the patient and the actual therapy

## Most Physiological Gait

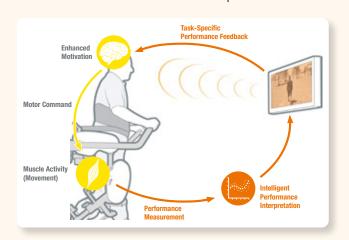
Hip and knee joint angles can be adjusted during training to the patient's specific needs

## Assist-as-Needed Support

Assist-as-needed support enables clinicians to optimally shape training challenges based on the patient's capabilities

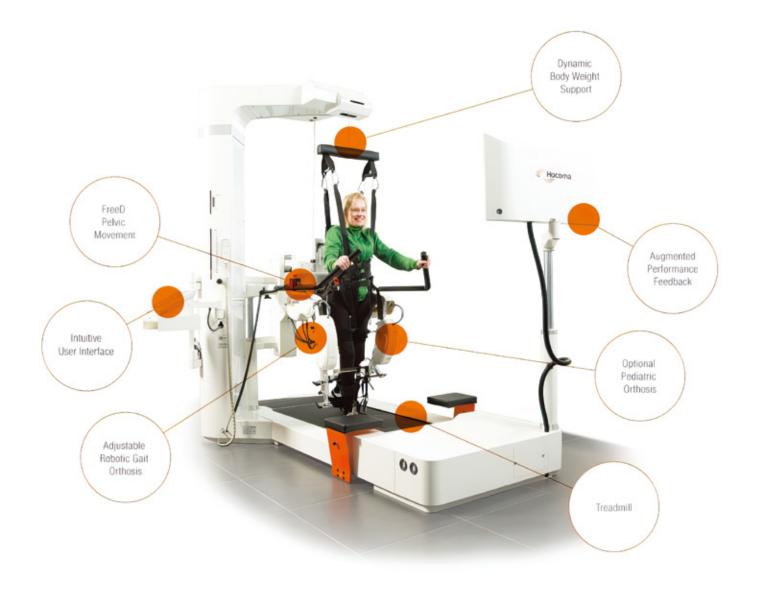
## Motivating Augmented Performance Feedback

Exciting, game-like Augmented Performance Feedback exercises increase the patient's effort



## FreeD Module

Support guiding lateral translation and transverse rotation of the pelvis



## Lokomat software

It includes a very easy and intuitive workflow, exciting features to engage and motivate patients in many exerises.

- Therapy plan
- Activity calibration
- Different avatars, visuals and difficulties
- Music feedback and auditory cueing

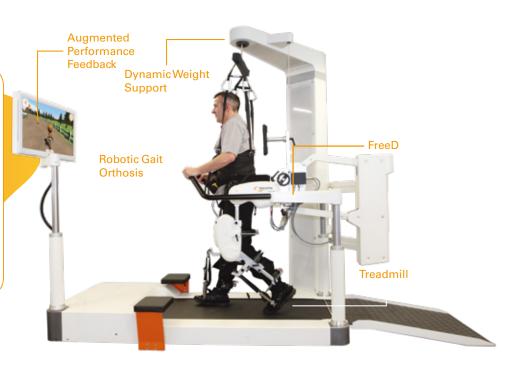


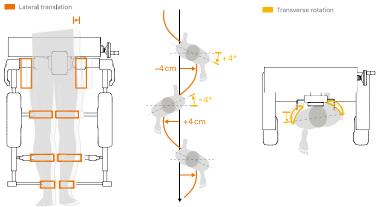
# **FreeD Module (Optional)**

**Lateral Freedom** 

FreeD module is an optional module which improves therapy by allowing lateral translation and transverse rotation of the pelvis.

Available for adult and pediatric orthoses.





# **Lokomat® Pro with Pediatric Orthoses (Optional)**



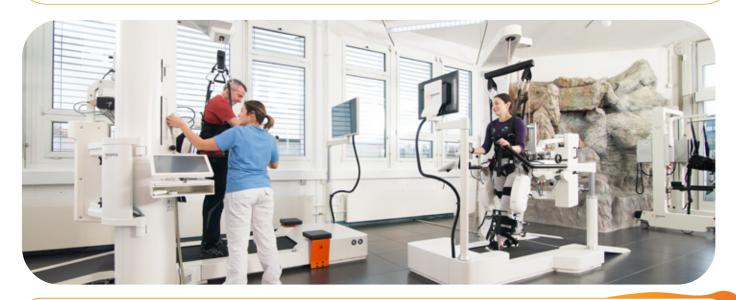
The Lokomat<sup>®</sup> Pro can be fitted with standard orthoses for adults or with Pediatric Orthoses, which are available as an optional add-on module. The Pediatric Orthoses are designed to accommodate small children by offering a special set of harnesses and cuffs that provide a precise fit for patients with femurs between 21 and 35 cm.



# Lokomat<sup>®</sup> Nanos

Relearn Walking From The Beginning

Origin: Switzerland Certificate: MDD Certificate of Listing No. 110193, FDA, CE, IEC 60601-1, IEC 60601-1-2



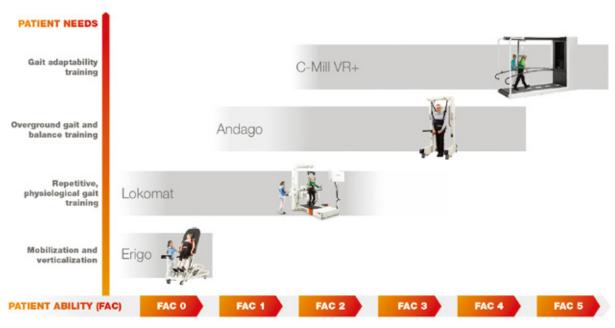
The Lokomat Nanos offers basic training modality to automate locomotion therapy on a treadmill and considerably improves the training efficiency for non-ambulatory patients and ambulatory patients compared to manually assisted therapy.



## **Solution** Use and Benefits

- The LokomatNanos provides all necessary features to perform robotic gait training
- With its compact dimension, this addition to the Lokomat product line is adapted to reduced space conditions and is the right therapy solution for out- patient as well as in-patient centers
- An integrated walking indicator monitors the patient's gait activity in real-time to motivate the patient for active participation
- The continuously adjustable level of gait assistance, the Guidance Force (for each leg between full and zero Guidance Force), allows to adapt training conditions to the individual levels of the patients

# **CONTINUUM OF GAIT REHABILITATION**



FAC: Functional Ambulation Categories

## **Lokomat Product Line**

		Lokomat® Pro	Lokomat® Nanos
Effective Gait Training	Robotic gait orthoses for adults	•	•
	Robotic gait orthoses for children	accessory	
	Training programs	•	•
	Manual training	•	
Increased Efficiency	Intuitive touch screen user interface	•	•
	Training of severely affected patients	•	•
Most Physiological Gait	Dynamic body weight support	•	•
	FreeD module for pelvis movements	module	
Assist-as-Needed Support	Dynamic Guidance Force	•	•
	Path Control	•	
Augmented Performance Feedback	Biofeedback	advanced	basic
	Automatic Activity Calibration	•	
	Therapy Plan	•	•
	Challenging therapy exercises	advanced	basic
Assessments and Reporting	Assessment tools	•	
	Training reports as PDFs and Excel	•	•
	Recorder tool	•	
	Device reports as PDFs	•	•
	Output Box for Advanced Research	module	

	Lokomat® Pro	Lokomat <sup>®</sup> Nanos	
Space (L x W)	325cm x 155cm (swivel door closed)	280cm x 153cm (swivel door closed)	
	350cm x 214cm (swivel door closed)	305cm x 212cm (swivel door closed)	
Height	339cm without extension	239cm without extension	
	246cm with extension	246cm with extension	





Origin: Switzerland Certificate: MDD Certificate of Listing No. 170019, FDA, CE, IEC 60601-1, IEC 60601-1-2



The Andago is a mobile robotic system for overground gait and balance training providing fall protection, dynamic body weight support and intuitive patient following. Bridging the gap between treadmill-based and free walking.

## **Second Proof**

## Self-Directed Gait

The Andago utilizes mobile robotic technology to sense the patient's movement intention and actively follow, while providing dynamic body weight support.

## Upright And Hands – Free Gait

With its dynamic body weight support, the Andago assists patients to walk naturally which consequently triggers continuous physiological afferent input.

## Safe And Efficient Therapy

Fall protection ensures safe training for patient and therapist at all times. Patients train confidently while therapists can focus on creating and maintaining an optimally challenging therapy.

## Flexible Use From Room To Room

The Andago provides seamless clinical integration. It can be used straight out of the box. Installation and building modification, which can be costly, are not necessary.





# **Top 10 Exercises with the Andago**



Squat on an unstable surface, to train:

- Quadricep strength
- Dynamic postural balance
- Muscle activation
- Core stability
- Balance reactions



Upright stance while reaching and assembling objects, to train:

- Core stability
- Static postural balance
- Weight Shifting
- Reaching



Walk over obstacles with variable distances and heights, to train:

- Step length
- Coordination
- Step height
- Dynamic postural balance



Sit on an unstable surface, lean backwards and forwards, to train:

- Trunk stability
- Trunck control
- Core strength
- Balance reactions



Kneel while learning backwards and forwards, to train:

- Kneeling balance
- Muscle activation
- Core stability
- Trunk control



Slalom walk around obstacles while carrying objects, to train:

- Coordination
- Spinal navigation
- Dual task
- Trunk control

# **Top 10 Exercises with the Andago**



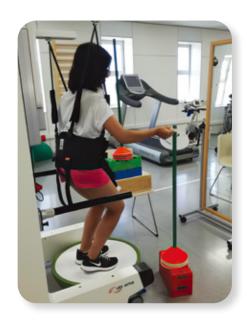
Take small steps, with slightly flexed knee, to train:

- Step initiation
- Weight shifting
- Knee joint stability
- Quadriceps activation
- Progressive loading



Step to unstable obstacles during stance, to train:

- Dynamic postural balance
- Leg muscle activation
- Coordination
- Step length



Stand with flexed knees on an unstable surface, while (laterally) moving objects, to train:

- Static postural balance
- Balance reactions
- Quadriceps strength
- Knee joint stability
- Reaching
- Coordination



Walk over unstable obstacles, to train:

- Dynamic postural balance
- Step length
- Coordination
- Leg muscle activation



# Keeogo™

Regain The Freedom To Walk & Keep On Going

Origin: Canada Certificate: MDD Certificate of Listing No. 230143, CE,TGA, FDA, Canada, IEC 60601-1



Keeogo<sup>™</sup> is an ambulatory assistive device that is fitted to the lower body, and is powered at the knee. This computer-controlled orthosis provides complementary force to the knee joint throughout a variety of activities, namely:

- Assistance with knee flexion in swing phase of gait
- Assistance with knee extension in swing phase of gait
- Assistance with eccentric knee control in weight bearing
- Assistance with knee extension in weight bearing

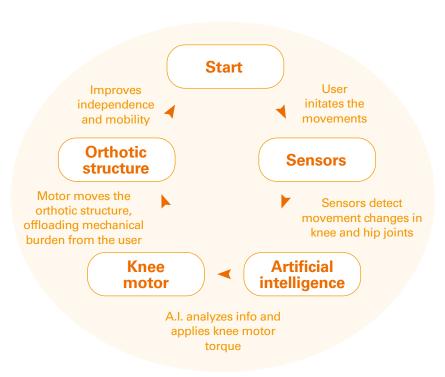
## **Use and Benefits**

Since 2010, B-TEMIA's Dermoskeleton™ technology has been investigated through numerous field tests, clinical trials, and standardized biomechanical and physiological evaluations. To date, over 100 participants have tested the device in more than 15 studies. These studies demonstrated how the Dermoskeleton™ technology has the potential to:

- Improve the stability and biomechanics of the knee joint
- Reduce knee pain
- Improve walking capacity
- Decrease compensatory movement patterns
- Improve balance measures







## Who is Keeogo<sup>™</sup> for?

Keeogo™'s intended use is to provide support in ambulation for those living with weakness, pain and decreased muscle and cardiovascular endurance due to illness or injury.

## **Patient Requirements**

- Should have the ability to initiate all movements in walking, sit-stand, stand-sit, squatting, crouching, kneeling and stair climbing
- Should be able to walk without human assistance (with or without an assistive device)
- · Should have necessary balance and core strength to remain upright when operating device

## Patient Populations Who May Benefit From Keeogo™ Include, But Are Not Limited To:

- Multiple Sclerosis
- Parkinson's Disease
- Knee and Hip Osteoarthritis
- Patients with MSK injuries
- Incomplete SCI

- Muscular Dystrophy
- Brain Injury
- Stroke
- Other

## **BestShape iAR (Optional)**

- Intuitive AR projection tool for core and lower limp functional training
- Real-time feedback for more engaging experience
- Automatic record for the training and easy-to-use for the therapist to manage 9 patterns on a tablet





**Erigo**®

Early & Safe Mobilization Even In Acute Care

Origin: Switzerland Certificate: MDD Certificate of Listing No. 130347, CE, IEC 60601-1-2

The Erigo gradually brings the patient into an upright position while moving the legs and applying cyclic leg loading. This enables safe verticalization and early functional mobilization of the lower extremity. Patients can be trained intensively and safely already in a very early stage of rehabilitation and even in the intensive care unit (ICU).



## **Use and Benefits**

- Increase tolerance to an upright or standing position
- Maintaining or increasing range of motion
- Relaxation of muscle spasms

- FES supported muscle activation
- Prevention or retardation of disuse atrophy
- Increasing local blood circulation
- 8 channels and 3 wave forms





# **BURT V1 Lite NEW**

Upper LimbTherapy Robot

Origin: China



BURT V1 Lite uses state of the art GravityCradle™ technology to support your arm as if you were in zero gravity— yes, it feels like your arm is floating!

# **⊗** Features

- End-effector 3D upper limb training device
- Integration of flexible steel cables and force feedback technology
- High-precision spatial recognition

- Real-time weight compensation adjustment
- Multiple training modes
- Scenario-based interactive training

## **Intended Use**

- Muscle strength training
- ROM training
- Cognition Training
- Entertainment





# **BURT V2**

Upper LimbTherapy Robot

Origin: China Certificate: NMPA



Burt® is an upper-limb therapy robot. It allows a patient to float weightlessly on a cushion of air with GravityCradle™ supporting the patient while applying gentle forces to resist, assist, give subtle queues, and paint a realistic game/activities environment that matches what is visually projected in front of them.

## **Sector**

- Quick 30-second left/right handedness swapping
- Patient safety ensured by Burt system's frictionless backdrivability in all 3 planes
- 3 planes of upper extremity facilitation transverse, sagittal, and frontal
- Multiple therapy modes graded support, robotic asssistance/resistance, and locking planes
- Gaming software leveraging cognitive

- rehabilitation strategies to work on attention, memory, and visual neglect
- Integrating assessment and treatment, BURT allows for accurate recording, real time feedback and automatic analysis
- 18 activities, including assessments and the LaundryLoader™ IADL (with more in development), to drive repetition and track outcomes

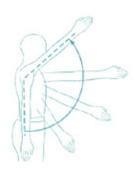
## **Function Characteristics**

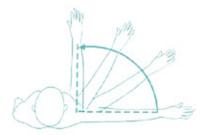
- Easily Set-up
- Gravity Compensation
- ROM Assessment
- Trajectory Learning
- Vibrant Feedback
- Active and Passive
- Assistive and Resistance
- Safety Workspace
- Locked Plane



## **Three Dimensions Treatment**

Meet the needs for shoulder flexion, extension, adduction and abduction, and flexion/extension for the elbow joint.









# Who is Burt® Good for?

## Any patient demonstrating:

- Limited upper-extremity volitional movement or sensory deficit
- Impaired proprioception
- Decreased proximal trunk control and stability
- General physical debility





# **NURT**

Bedside Rehabiliation Training System

Origin: China Certificate: NMPA

The NURT Bedside Rehabilitation Training System is designed to provide early care for disabled patients. It focuses on designing targeted care training movements that aim to exercise muscles, mobilize joints, improve circulation, reduce lower limb venous thrombosis, decrease pressure sores, promote neurological reconstruction, and accelerate lower limb functional recovery.

The Nurt Bedside Rehabilitation Training System includes a unique custom trajectory function. Caregivers have the ability to drag the robot's arm and create personalized motion trajectories tailored to the specific treatment needs of each patient. This feature enables the robot to facilitate a wide range of physical exercises for patients while also providing support to caregivers.



## **Clinical Significance**

Stimulates the reconstruction of the nervous system and promotes the restoration of upper and lower limb motor functions.

Maintain muscle strength and reduce muscle atrophy

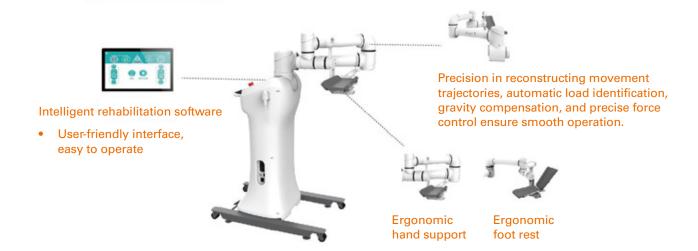


Accelerates blood circulation, reduces bedsores and prevents deep vein thrombosis



Improve joint mobility and prevent joint contracture







# **Armeo® Therapy Concept**

Arm & HandTherapy

Origin: Switzerland



The Armeo Therapy Concept combines the world's most widely used advanced arm and hand rehabilitation product line and has enabled many patients regain function after neurological injury. It is a clinically effective therapy solution, which increases the intensity of rehabilitation, with more repetitions at higher active patient effort.

The Armeo Therapy Concept covers the whole "Continuum of Rehabilitation", covering from the beginning of the rehabilitation through to home therapy

## Continuum of arm and hand rehabilitation

# Self-directed training; Increase strength & endurance Arm weight support; Improve range of motion, strength and movement coordination Robotic arm movement support; Early mobilization PATIENT ABILITY (MMT) MMT 0 MMT 1 MMT 2 MMT 3 MMT 4 MMT 5



# Armeo<sup>®</sup> Power

## Robotic Arm Exoskeleton

- Early rehabilitation with highly repetitive training for severly affected patients
- Six actuated degrees of freedom for training in extensive 3D workspace
- Assist-as-needed support from full guidance to selfinitiated active movements



# **Armeo® Spring Pro**

## Exoskeleton With Spring Mechanism

- Self-initiated, active movement therapy for severe-to-moderate patients
- Simultaneous arm and hand rehabilitation in an extensive 3D workspace
- Customizable exoskeleton from pediatrics to adults



# Armeo<sup>®</sup> Senso

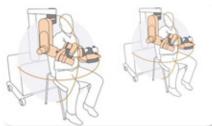
## The Sensor – Based Solution For Arm Function Recovery

- Simple, optional arm weight support through forearm
- Isolated movements not possible, no joint control
- Trunk compensation minimized
- Pressure grip for game trigger
- Training position is flexible
- Limited therapist supervision

# Why the Armeo Therapy Concept?



ModularTherapy Concept



 Arm Weight Support in an Extensive 3D Workspace



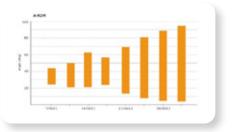
Motivating Exercises



Highly Intensive Therapy



Increased Therapy Efficiency



Objective Assessments





# Armeo<sup>®</sup> Power with Manovo<sup>®</sup> Power

Highly Intensive Early Arm Rehabilitation

Origin: Switzerland
Certificate: MDD Certificate of Listing No.
130348, FDA, CE, IEC 60601-1,
IEC 60601-1-2



The world's first robotic arm exoskeleton for integrated arm and hand therapy for severely impaired patients. The device enables patients to perform exercises with a high number of repetitions (high intensity), which is paramount for relearning motor function.

## **Use and Benefits**

## Assist-As-Needed Movement Guidance

Uses sensors and intelligent algorirthms to recognize when the patient is not able to carry out a movement and assists the patient's arm as much as needed to successfully reach the goal of the exercises.

# Arm Weight Support In An Extensive 3D Workspace

The ArmeoPower is the world's first commercially available robotic exoskeleton for upper extremity rehabilitation. The seven actuated degrees of freedom allow training in an extensive 3D workspace.



## **New Augmented Performance Feedback Exercises**

An extensive library of game-like exercises has been designed to train core movement patterns that are commonly used in activities of daily living.





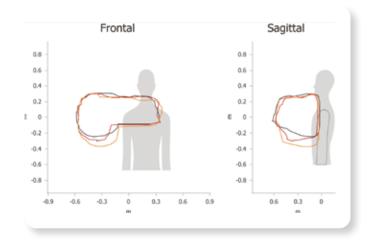


## **Objective Assessments**

Standardized Assessment Tools evaluate the sensor and motor data to investigate specific patient function including movement ranges and forces. The results can be used to analyze and document the patient's state and therapy process in order to further optimize therapy.

The Armeo software supplies accurate assessments through the options of:

- A ROM (Range of Motion)
- A GOAL (Movement quality)
- A MOVE (3D workspace)
- A FORCE (Isometric torque)



# Manovo<sup>®</sup> Power

Hand Function Training



The ManovoPower is an actuated hand module that enables severely impaired patients to relearn hand opening and closing. It enables patients to train reaching and grasping with assist-asneeded support from shoulders to fingers. Patients are motivated towards high effort with Augmented Performance Feedback exercises for hand function training.





# **Armeo<sup>®</sup> Spring Pro**

True G-True Continuous Arm Weight Support

Origin: Switzerland Certificate: CE Class 1, IEC 60601-1, FDA

The ArmeoSpring Pro is a cutting-edge medical device designed to bring upper limb rehabilitation to the next level. ArmeoSpring Pro's new arm weight support, powered by patented TrueG technology, allows patients to receive continuous arm weight support from shoulder extension to shoulder flexion.



## **Sector**

# TrueG: The true continuous gravity support

Revolutionary technology providing constant arm weight support from shoulder flexion to shoulder extension.

## Optimized Workflow

Side change with ease (in less than 15 seconds).

## Customizable Exoskeleton

Enables personalized therapy by allowing therapists to block specific joints, focusing on selective movements.

## Motivating Exercises

Game-like Augmented Performance Feedback and Virtual Reality exercises encourage active training of core movement patterns essential for daily activities.

## One Device, Multiple Therapy Goals

Enables tailored therapy plans for patients, addressing various goals such as cognitive training, range of motion improvement in different dimensions, and more.

## Visible Patient Progress

Provides comprehensive reports including data from joint Range of Motion (ROM) and reaching workspace assessments.

## Armeo Support Harness

Restricts compensatory trunk movements during therapy sessions, ensuring focused and effective rehabilitation.





ArmeoSpringPro embraces the whole arm and offers the following degrees of freedom:

- Wrist flexion / extension
- Forearm pronation / supination
- Elbow flexion / extension
- Shoulder flexion / extension, horizontal abduction / adduction, internal / external rotation

## **Use and Benefits**

- Patients with only trace motor function can integrate their remaining function into the intensive, engaging, functional exercises
- Reveals any remaining motor function
- Even moderately to severely impaired patients can practice independently and benefit from highly intensive, repetitive, self-initiated movement therapy
- The workspace is adjustable to the patients' capabilities











# Armeo<sup>®</sup> Spring Self-Initiated Movement Therapy

**Origin:** Switzerland **Certificate:** CE Class 1, IEC 60601-1, FDA



The ArmeoSpring is an instrumented arm orthosis with a spring mechanism for adjustable Arm Weight Support in a large 3D workspace that can be used as real time input device to the associated therapy software ArmeoControl. The ergonomic and adjustable exoskeleton of the ArmeoSpring embraces the whole arm, from shoulder to hand, and counterbalances the weight of the patient's arm.

## **S** Features

- Arm orthosis with integrated weight compensation mechanism
- 3D position detection of arm segments and grip strength sensing
- Game-like virtual reality and augmented performance exercises motivate patients to train actively
- Assessment Tools to record patient performance
- ManovoSpring Hand orthosis with integrated hand opening support



## Manovo® Spring- Hand Module

Optional Module of ArmeoSpring and ArmeoSpring Pro



The ManovoSpring is an instrumented hand orthosis to be used as a module in combination with Armeospring for patients with therapy goals focusing on hand rehabilitation.

ManovoSpring features a spring mechanism for adjustable hand opening support that can be used as a real-time input device to the same software as the ArmeoSpring.

Certificate: CE Class 1, FDA

## **Section**

- Easy installation and swapping between left and right hand use
- Simultaneous therapy of the complete movement chain from the shoulder to the fingers
- Adjustable support for opening of the hand with a physiological coupling of finger and thumb movements
- Captures the patient's active hand movements and facilitates reach and retrieval training with the Augmented Performance Feedback

# **Armeo<sup>®</sup> Spring Pediatric**

Certificate: CE Class 1, IEC 60601-1, FDA



The ArmeoSpring Pediatric is specifically designed for and adapted to the needs of children with movement impairements in their arms and hands resulting from neurological conditions.

## **Section**

- The Augmented Performance Feedback motivates the patient with intensive and functional movement exercises
- The Assessment Tools allow an easy documentation and precise assessment of the therapy process
- The Arm Weight Support helps to reveal any remaining motor functions and increases movements within a 3D workspace
- The length of the orthosis and the amount of Arm Weight Support can be adjusted to children in the age group of about 4-12 years
- All the benefits and features of the adult version are included



# Armeo<sup>®</sup> Senso

The Sensor-Based Solution For Self-Directed Arm Therapy

**Origin:** Switzerland **Certificate:** CE Class 1, IEC 60601-1



ArmeoSenso is a versatile and easy-to-use solution to motivate and challenge patients with moderate to mild impairments of the upper extremity. It combines self-directed movement exercises with Augmented Performance Feedback and Assessments driven by the associated therapy software Armeocontrol.

## **Second Proof**

## Highly Intensive Arm Therapy

Self-initiated, active, motivating, and repetitive arm movement in a 3D workspace for patients with mild to moderate impairments.

## Versatile and Easy To Use

Easily adaptable to different settings and safely operated by patients.

## Compact and User – Friendly Design

Mobile, portable with intuitive user interface and workflow.

## Optimized Efficiency

Enables group settings and Extra Time settings to maximize therapy time.

## Hand Module

A hand module allows the patient to interact with the Augmented Performance Feedback through gripped function.

## Optional Arm Weight Support – SaeboMAS Mini

A table-mounted mobile arm weight support provides an adjustable functional assistance during the exercises.

# Specifications

- 6 degrees of freedom (shoulder: flexion/extension, horizontal abduction/adduction, internal/external rotation; elbow: flexion/extension, pronation/supination; wrist flexion/extension)
- Compensatory movements of trunk detected
- Assessments for analysis and documentation of patient progress



# **ArmMotus™ EMU**

3D Upper Limb Rehabilitation Robot

Origin: China
Certificate: NMPA, IEC 60601-1, IEC 60601-1-2, TGA,
MDD Certificate of Listing No. 251783



ArmMotus™ EMU is a 3D back-drivable upper limb rehabilitation robot that adopted an innovative cable-driven mechanism, combined with a parallel structure made of lightweight carbon fibre rods which perfectly reduces the friction and inertia of the device. This enables the control system to respond and execute more efficiently, resulting in higher compliance in human-machine interaction.

## **Section**

- Compliant Motion Control Support All Training Modes
  - Supports easy training setup in sitting and standing position as well as accommodating different training arms
  - Integrates different scenarios in the game so that users can train on strength, motor control and joint ROM in one training









Combining Actual Object



**Bilateral Training** 

- The force feedback technology can stimulate different force environments that can be integrated into the training making them more interesting, immersive and motivating
- The real-time visual, audio, and haptic feedback can diversify the training and provides intuitive guidance to the users







**Motor Control** 

**ADLTraining** 

**Reaction Training** 







**ROM Training** 

**Strength Training** 

**Bilateral Training** 

## Personalised Training Trajectory

 Provides a comprehensive upper limb training trajectory in which the therapist can select and customize different movements according to the user's needs

## Quantifiable Training

 It can precisely measure every movement trajectory, strength, cognitive ability, ROM, motor control ability and generate a report after the training

## Covers the Whole Continuum of Rehabilitation

- The force feedback technology enables the device to simulate the therapist's hands
- Supports the user to adjust the assistance or resistance according to different rehabilitation needs







# **ArmMotus™ M2 Pro**

**Upper Extremity Intelligent Rehabilitation Robotics** 

Origin: China Certificate: NMPA, IEC 60601-1, IEC 60601-1-2



ArmMotus™ M2 Pro upper extremity intelligent rehabilitation robotics is applicable to neurological and musculoskeletal disorders. It adopts the innovative integrated design as well as the ultra-thin training platform to provide extraordinary rehabilitation experience. With smart haptic feedback technology and high-performance motor, ArmMotus™ M2 Pro can deliver precise "assist-as-needed" movement guidance, which allows for a more effective rehabilitation process.

## **Sector** Features

- Real-Time Force Feedback Device, Effective For Users With Different Demands
- Multiple Training Modes Integrated In One Device (Passive Mode, Assistive Mode, Active Mode, Resistive Mode)
- Customised Training Prescriptions

- Immersive Interactive Experience
- Data-Based Rehab Process





# rebless<sup>™</sup>

A Single Exercise Device For Wrist, Elbow, Ankle & Knee

Origin: Korea Certificate: DA, CE, Japan, IEC 60601-1, IEC 60601-1-2, MDD Certificate of Listing No. 250599



## **Sector**

## Wide Rehabilitation Scope

Applicable for treating neurological and musculoskeletal movement disorders

## Diverse Exercise Modes

Continuous passive motion (CPM) and assistas-needed technology allow patients to change exercising modes depending on their abilities

## Various Functions

Passive range of motion, active range of motion, active-assisted and active-resistive exercises are essential for recovery from pain and injury

## rebless clinic (for clinicians)

Web-based app to prescribe exercise regimens, manage and export patient output, and perform telemedicine visits

## rebless apps (for patients)

To operate the device, track his/her improvements

## Multiple Control App

This app can connect to max 5 rebless devices and control them all at the same time.

# **Exercise Positions**

## **Upper Limb**

- Elbow Flexion & Extension (Neutral / Pronated / Supinated)
- Wrist Radial Deviation
- Wrist Extension / Flexion

## **Lower Limb**

- Knee Flexion & Extension (Sitting / Supine)
- Ankle Dorsiflexion & Plantar Flexion (Sitting / Supine)



Dimensions (L x W x H) 79cm x 36cm x 24cm

Unit Weight 18 kg



Wrist Flexion



Knee Flexion & Extension (Sitting)



Elbow Flexion & Extension (Neutral)



Ankle Dorsiflexion & Plantar Flexion (Supine)



## ema

Smart Treadmill For Gait Rehabilitation

Origin: France Certificate: CE, IEC 60601-1, IEC 60601-1-2



The device verticalizes the patient and allows a 0% to 100% weight lightening from the pelvis. The device provides cognitive stimulation during walking through series of games, allowing the user to work in double task.

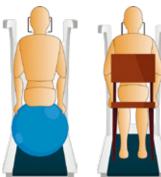
## **Second Proof**

- Access ramp for wheelchairs
- Verticalization and securing of the patient up to 130 kg
- Low speed (1.5 km/h)
- Less than 1m<sup>2</sup> folded and less than 2m<sup>2</sup> unfolded
- Automatic safety stops

## **Balance Exercises and Analysis Static Exercises**

Provided with static balance report

# Seated Balance



Plastic ball



Chair



Foam





Balance board



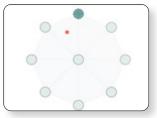
Lateral SupportTransfers



Antero-Posterior Support Transfer



Multidirectional

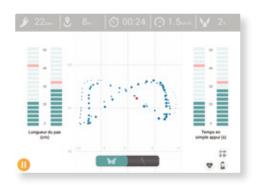


Static Balance Report

# **Landscapes, Biofeeedback And Gait Analysis**



- Motivation
- Exploration
- Double task
- Cognitive stimulation



- Position of the center of pressure (COP)
- Guided exercises
- Real-time measurements

# **VR Kit (optional)**

## **Lower Limb Training Module**

- Motivation
- Reflex stimulation
- Hemispatial neglect

ema® is the first and only walking rehabilitation treadmill incorporating immersive 360° virtual reality.















**amy**Safe Balance & GaitTraining At Home

Origin: France



## **Section**

## Balance

- Sitting and standing
- Games
- Analysis

## Gait

- Anti-fall safety
- Walking landscapes
- Analysis

## Cognitive

- Concentration
- Reactivity
- Memory



## **Balance Games**

- Lateral support transfers
- Multi-directional
- Anterior-posterior support transfer
- Static balance report



# **Walking Landscapes**

- Exploration
- Double task
- Cognitive stimulation



- Position of the center of pressure (COP)
- Guided exercises
- Real-time measurements



<sup>\*</sup> Virtual Reality Training Available



# VR Kit NEW

Virtual Reality Kit For Functional Rehabilitation

Origin: France



**Ezygain VR Kit combines** multiple exercises to create a motivating and immersive rehabilitation.

## **Sector**

- All in one kit (No WiFi needed)
- Compatible with all EzyGain products
- Facing Camera Exercises (upper and lower limb, hand, - balance and more)
- Reach, Grasp, Pinch, Sort Exercises (upper limb, hand, and fingers)
- Cycle or walk with real 360° images and sound
- Relaxation and pain relief
- Analysis and reports available in the EzyGain app



Use the VR with any bike / exerciser / treadmill





**Facing Camera Exercises** (No Headset Required)





**Upper Limb, Hand and Fingers** 







## **Relaxation and Pain Relief**





## Analysis and reports available in the EzyGain app





# Harmony SHR Coming Soon

Bilateral, Upper-Extremity Exoskeleton

Origin: USA

Harmony SHR is a bilateral, upper-extremity exoskeleton dynamically designed to provide unique value in three areas of practice: neuroscience and movement science research, movement disorder assessment, and rehabilitation.



## **S** Features

## **Multi-Planar Design**

- Moving in multiple planes
- · Anatomically matched design maintains the scapulohumeral rhythm of the shoulder for a large, natural range of motion

## **Bilateral SyncTherapy**

- Unique bilateral design enables mirror image movement allowing a precise comparative assessment of upper-extremity function
- Recording and replicating the healthy arm motion onto the stroke-affected side in real time for patient-driven therapy
- The Weight Support mode allows for bilateral upper-extremity exercise with minimal gravitational resistance

## Functional Repetition

With Preprogrammed Exercises, Harmony SHR facilitates functional recovery by simulating everyday, multiplanar movements with automated repetition

## Customizability

- Allows for a wide range of size adjustments to perfectly match user needs
- Position and torque control modes enable researchers to apply subject-specific assistance within a predetermined range

## Measurable, Objective, Exportable Data

 High-speed and high-resolution sensors allow for accurate assessment of the participant's abilities measuring both motion (kinematics) and effort (force generation)

# Assessments

- Act as a diagnostic tool to record a patient's ability at baseline and throughout the recovery process
- With over 80 sensors, recording measurements at 2000 times per second, precisely measure functionality including range of motion, force generation, and number of repetitions completed





# **Applications**

Harmony, as an upper-extremity exercise device, may assist in the treatment of upper-body movement impairments, including:

- Neurological injury
   Stroke, spinal cord injury, incomplete cervical, traumatic brain injury, brachial plexus injury
- Neuromuscular disease/disorder
   Multiple sclerosis, Guillain-Barré syndrome, Lou Gehrig's disease
- Musculoskeletal disease
   Duchenne muscular dystrophy
- Musculoskeletal rehabilitation post-procedure Shoulder arthroplasty, rotator cuff tear, upper limb prosthetic or transplant rehabilitation

