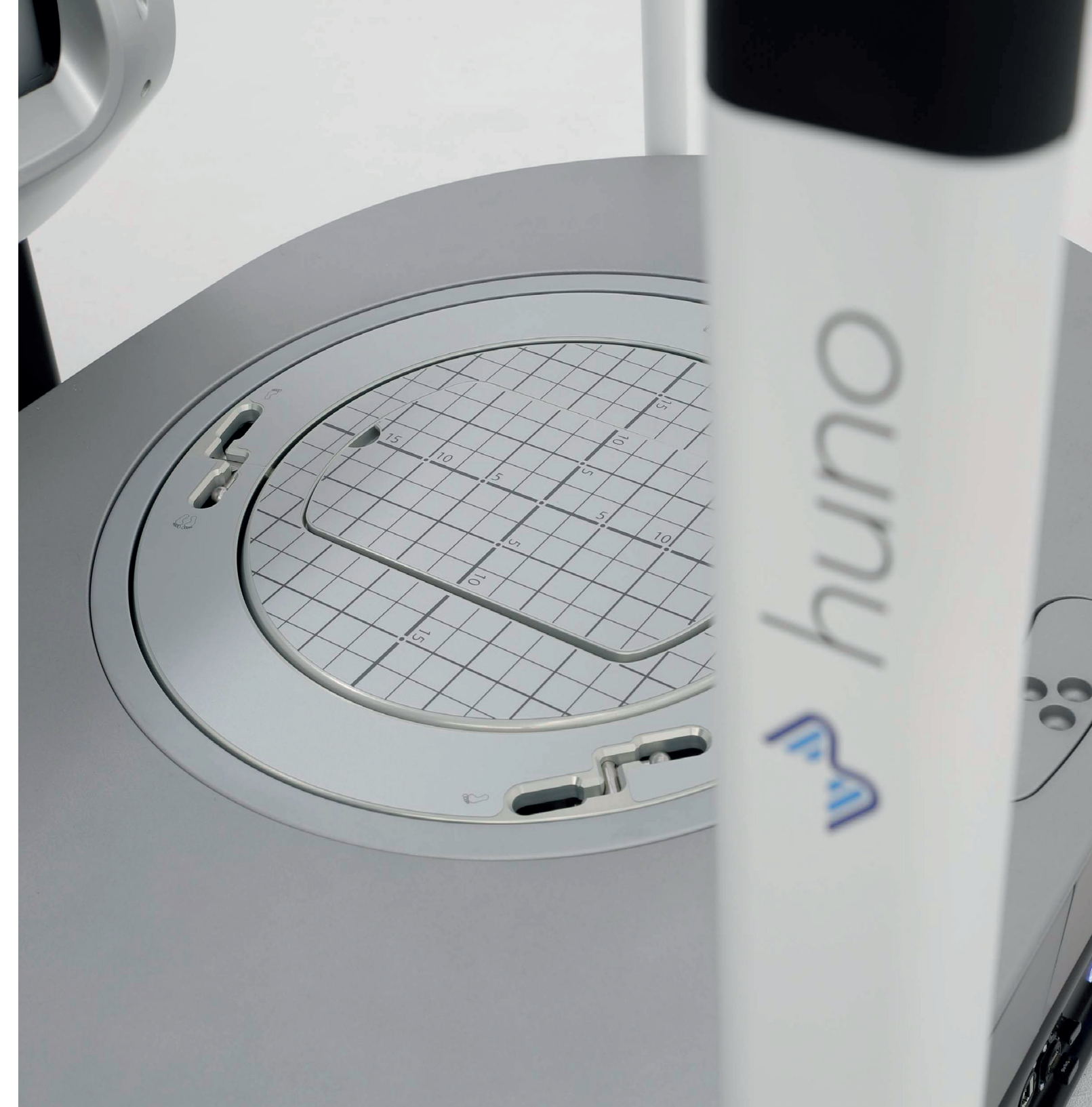




hu
no

The new era of rehabilitation is now



humo



Would you like to objectively measure outcomes and track progress in rehabilitation and training?

Are you interested in increasing patient engagement during a treatment session?

The robotic rehabilitation system that supports doctors, physiotherapists and patients throughout the course of treatment and training.

What is huno

huno is a robotic system designed to objectively evaluate patients and athletes to provide rehabilitation strategies and improve the performance of trunk, hips, knee and ankle.

huno introduces a new approach to rehabilitation and training. Thanks to the gaming activity, the user is engaged and motivated by dynamic and interactive exercises. The system is designed with sport and orthopedic rehabilitation in mind, utilizing audio and video biofeedback.

" Intended use: huno is a device for the rehabilitation and functional sensory-motor evaluation of lower limbs and torso. In particular, it is designed for use in orthopedics, neurology and geriatrics."

Would you like to improve your rehab and training process?

Would you like to present the exercises as gaming?



The objective is to improve performance through prevention, rehabilitation and training by developing services, solutions and innovative technologies made in Italy.

Movendo Technology was founded through financing from Sergio Dompé of the Dompé farmaceutici group, one of the leading Italian biopharma companies. Dompé farmaceutici focuses on innovation, where a long tradition in the field of healthcare goes hand in hand with a commitment to

research and development, to meet unsatisfied therapeutic needs.

A challenge that the Company has pursued with passion, expertise and courage, to make a difference to people's lives around the globe.



Movendo Technology

The Development of Clinical Technology

Movendo Technology develops medical devices that use the most advanced technologies and are, at the same time, effective, simple to use, and easy to interact with. They are created in Italy with the taste for aesthetics, design and functionality that distinguishes our country.





Robotic Rehabilitation System

huno was designed through a collaboration and synergy between Movendo Technology and its orthopedic, clinical and sports network, resulting in an intuitive and easy to use robotic device for physical therapy.



Orthopedic Treatment

huno focuses on the orthopedic treatment of **trunk, hip, knee and ankle**. Thanks to the mechatronic platform and to the force and position sensors, the system provides a personalized and selective treatment, offering the highest quality standards.



Total hip replacement
 Fracture
 Tendinopathy

Hips

This block features a light blue header with the text 'Total hip replacement', 'Fracture', and 'Tendinopathy'. Below the header is a photograph of a person running, with a yellow highlight on their hip area to indicate the focus of treatment. The word 'Hips' is centered at the bottom.

Low back pain
 Sciatica
 Spinal stabilization
 Back surgery
 Fracture of lumbar spine

Trunk

This block features a light blue header with the text 'Low back pain', 'Sciatica', 'Spinal stabilization', 'Back surgery', and 'Fracture of lumbar spine'. Below the header is a photograph of a person in a white tank top and black shorts performing a side plank or similar trunk-strengthening exercise. The word 'Trunk' is centered at the bottom.

ACL reconstruction
 Total knee replacement
 Tibial plateau fracture
 ACL sprain
 Meniscal tear
 Meniscectomy
 Patellofemoral syndrome

Knee

This block features a light blue header with the text 'ACL reconstruction', 'Total knee replacement', 'Tibial plateau fracture', 'ACL sprain', 'Meniscal tear', 'Meniscectomy', and 'Patellofemoral syndrome'. Below the header is a photograph of a person in a crouching position, with a red highlight on their knee area. The word 'Knee' is centered at the bottom.

Vestibular rehab
 Muscle spasm
 Muscle strain

Total body

This block features a light blue header with the text 'Vestibular rehab', 'Muscle spasm', and 'Muscle strain'. Below the header is a photograph of a person in a blue long-sleeved shirt and black leggings running up a set of stairs. The word 'Total body' is centered at the bottom.

Ankle arthroplasty
 Achilles Tendon injuries
 Ankle arthroscopy

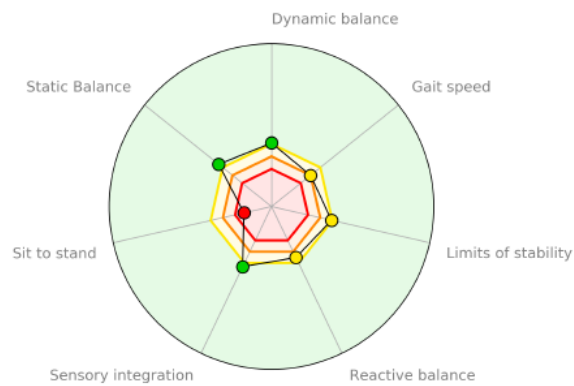
Ankle

This block features a light blue header with the text 'Ankle arthroplasty', 'Achilles Tendon injuries', and 'Ankle arthroscopy'. Below the header is a close-up photograph of a person's foot and ankle, with a yellow highlight on the ankle area. The word 'Ankle' is centered at the bottom.



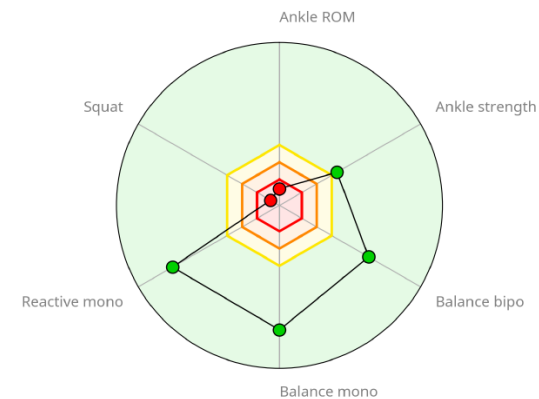
huno integrates the rehabilitation process with additional solutions tailored for the sport and geriatric population.

The silver index is an objective measure that **predicts the risk of falls** in elderly people and suggests specific exercises and protocols aimed at minimizing the identified falls risk. Core of the evaluation is a proprietary algorithm that combines the robotic measurements, summarizes the existing clinical scales and in less than 20 minutes provides a report with a personalized risk of falls map.



The performance index is a **total body evaluation** that compares the user performance with pre-defined targets. It covers multiple functional areas and identifies the areas where the user needs to be trained to **improve their performance**. The performance index is multi-sport thanks to the following:

- Quick and non-invasive screening
- Automatic generation of the overall performance
- Personalized training based on objective data



silver and performance index generate in real time an objective report that suggests personalized strategies tailored specifically for the user.



1. Adjustable touch screen
2. Tablet for remote control and operation of hunova
3. Wireless position sensor
4. Sensorized robotic platform
5. 3D seat position adjustment

! Technical aspects subject to change without notice

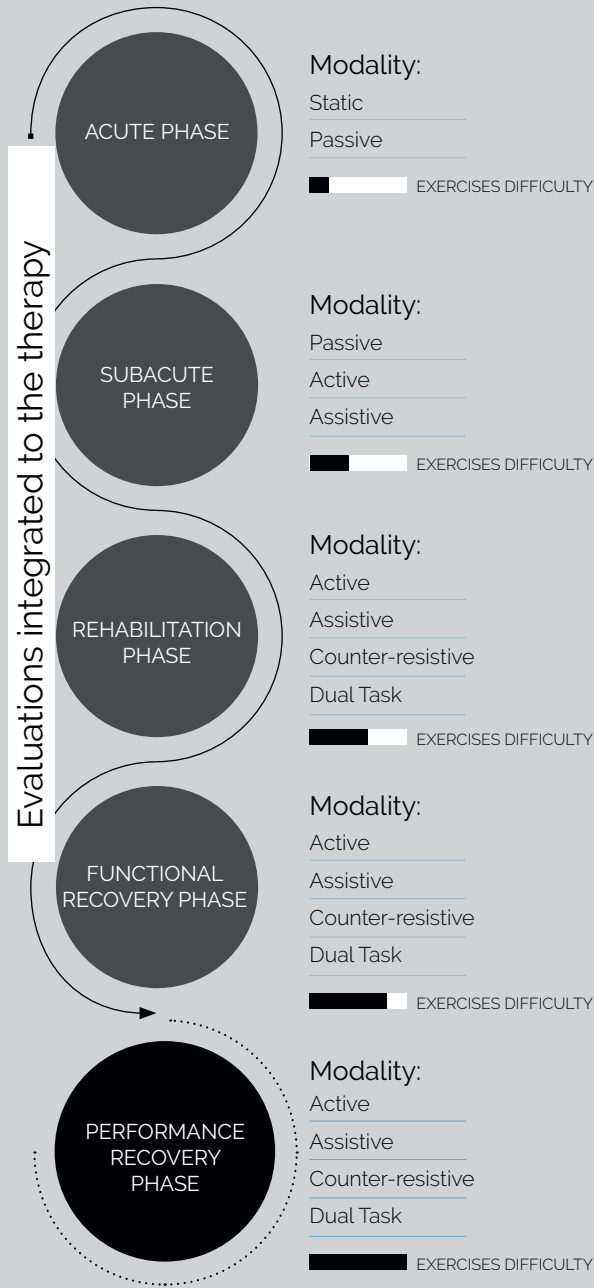
huno integrates evaluation and rehabilitation in a consistent progression that constantly monitors improvements and suggests corrections.

Rehabilitation Process

Performance Optimization

huno directly measures a person's biomechanical parameters and creates dedicated stimuli and perturbations to maximize functional recovery and reduce overall intervention time.

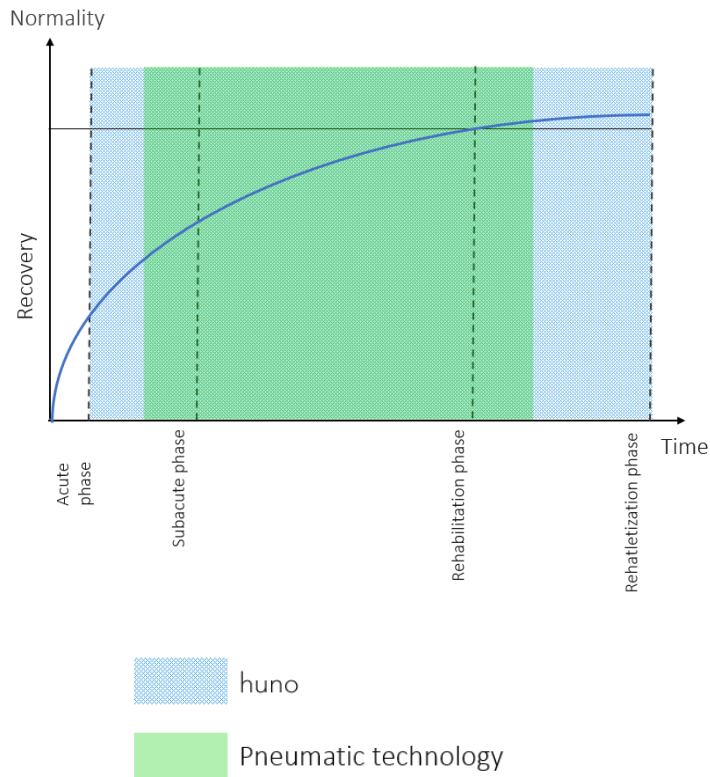
The functional indexes, together with normative data ranges, identify areas needing additional training and intervention. **huno** suggests the optimal rehabilitation process to improve performance.



Early and Fast Rehabilitation

huno implements the concept of *early and fast rehabilitation*. Thanks to robotic and sensor technology, it is possible to anticipate the appropriate rehabilitation intervention post trauma or surgical procedure (ACL, meniscectomy, lower limbs fractures, hips-knee-ankle prosthesis, Achilles tendon, ankle distortion, etc) to promote faster and improved functional recovery.

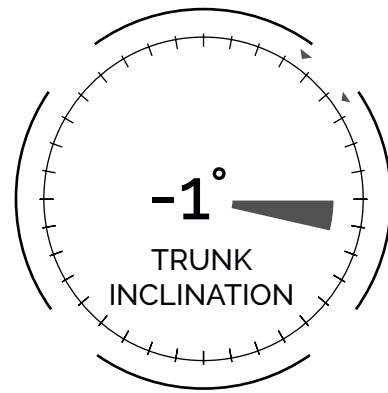
huno, thanks to its robotic and sensor technology, supports the patient even during the rehatletization phase in which other technologies cannot operate.



Personalized Rehabilitation

huno suggests the treatment difficulty level adapted to the user capabilities. The operator can also easily change the parameters. This personalized rehabilitation takes advantage of more than 150 exercises developed following the American Physical Therapy Association (APTA) guidelines adopted internationally.

“Our goal is to develop solutions tailored on age and lifestyles to promote a preventive approach based on prediction and not only prevention. Movendo Technology solutions are radically changing healthcare models, focusing the attention on the prediction strategies, positively influencing areas such as insurtech and welfare”.
Simone Ungaro, Movendo Technology CEO & Co-Founder



Automatic Real Time Report

huno stores the entire rehabilitation and generates dedicated reports outlining the user's functional performance during each session, as well as parameters that need modifications and corrections.

*"Measure what is
measurable, and make
measurable what is not so."*

Galileo Galilei

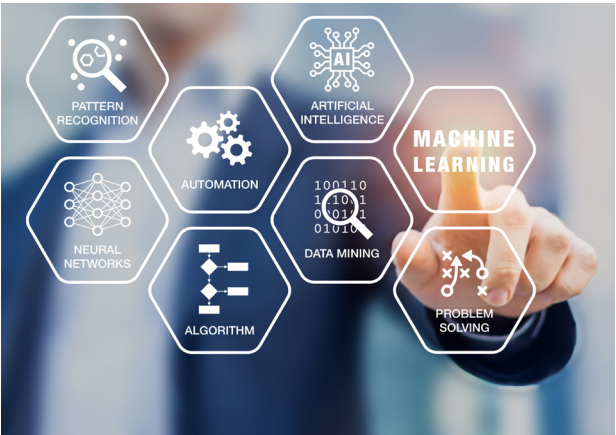
Reaction time
measurement



Artificial Intelligence and Big Data

Combining **Artificial Intelligence** and **Machine Learning**, **huno** calculates accurate biomechanical and clinical parameters to customize the rehabilitation and training process.

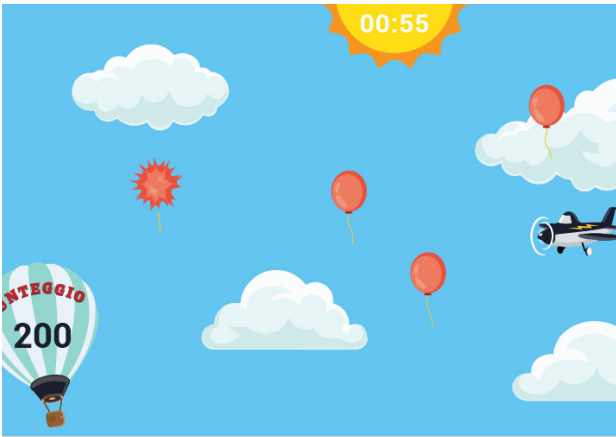
The **Artificial Intelligence** applied within the **huno** software modifies the difficulty levels during the exercise in real time, adapting it to the specific user response and performance. The rehabilitation and training suggestions will ensure the right intensity that is never boring for the patient.



Gaming

The user controls the avatars generated on the screen during the gaming activities with different body areas and joints (ankle, knee, trunk, hip).

huno uses interactive games to motivate and encourage the user to **reach goals** and score higher results, accelerating recovery and transforming therapeutic exercises into **entertaining activities**.



Fast Track “Touch and Go”

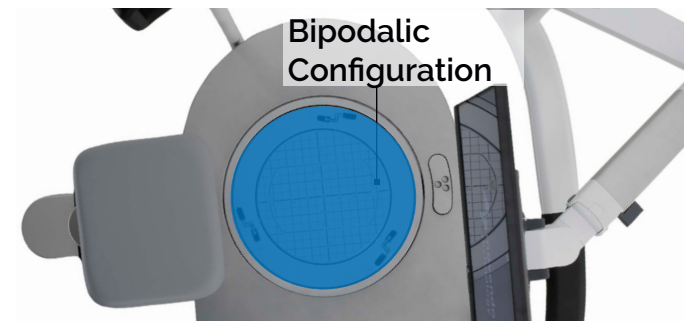
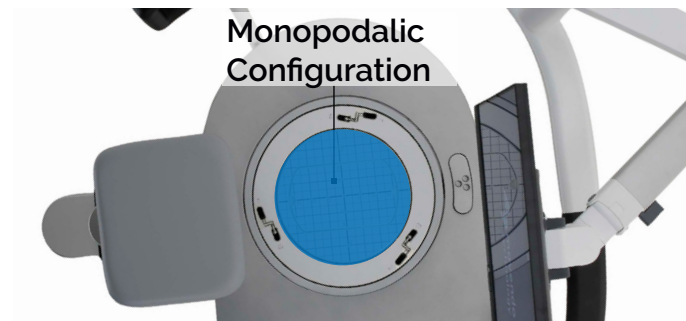
Thanks to the software installed in the robotic system **huno**, the physiotherapist implements the therapeutic programs that the patient can perform in **autonomy**, under the supervision of the operator. The Fast Track allows for an immediate access to predefined programs for an independent and immediate use of the technology by the patient.



Biofeedback and Dual Task

Multimodal biofeedback (auditory, visual and proprioceptive) encourages an **enhanced training effect** during voluntary motor training.

Dual task activities simultaneously train sensory and motor activities, enhancing both **coordination and sensory integration**, which are both key components of athletic performance.



huno Multiple Configurations

huno supports exercises in standing with bipodalic and monopodalic loads, as well as seated exercises and discrete load control exercises.

Seated Configuration

Static, Active

Ankle Configuration

Active (Isometric, Isotonic, Isokinetic),
Passive, Assistive

Bipodalic Configuration

Active, Passive, Counter-resistive

Monopodalic Configuration

Active, Passive, Counter-resistive, with
total and partial load bearing

huno is available with a modular structure to integrate additional accessories, exercises and evaluations to use advanced rehabilitation approaches in multiple fields.



huno s

huno performs rehabilitation and training for multiple applications. Designed as a modular system, **huno** can be upgraded to **huno s** at any time, which integrates an optional robotic seat, extending the use of the device into neurological and core stability applications.

huno s supports additional exercises and evaluations in orthopedic, sports, and neurorehabilitation applications, leveraging simultaneously, and also independently, both the robotic seat and the robotic platform to target core strengthening, stability and, coordination.

Finally, **huno s** supports isometric and isotonic exercises focused on the spine to interact earlier during the first phases of rehabilitation that involve the trunk, balance, and coordination in the seated position.





What they say about us

ITALY

"[MT's technology] represents an innovation and revolutionizes rehabilitation [...]. Finally physiotherapists can use an instrument [...] which makes rehabilitation more objective and measurable, thus allowing to personalize the intervention and make the rehabilitation more effective."

Dr. Mariuccia Rossini,
Head of Korian Group, Italian division

"Rehabilitation with [MT's technology] makes it possible for the physiotherapist to personalize protocols for the patient, thus quickening and improving the re-education results and maintaining the same relationship between physiotherapist and patient, which is crucial in our center as we place the patient at the center of the humanization process of care."

Dr. Alessandra Mellano,
CEO of Chiros Centro Fisioterapeutico e Riabilitativo s.r.l.

"Time is precious! The first sensation I have had, which was then confirmed after using [MT's technology], was the possibility to obtain maximum rehabilitation results in a very short period of time, thanks to the device's high compliance. The robot versatility in regards to the patients allows to treat everybody, from the professional athlete to the geriatric patient, all in an entertaining circumstance, very pleasing to the users."

Dr. Giovanni Bei,
Head of Rehabilitation of Korian Villa delle Terme

"It is an exceptional device that makes it possible to rehabilitate the patient also from a seated position. Another characteristic is the informatic precision which allows to set up an objective profile of the patient. It's an amazing integration between technology and the doctor's clinical eye."

Dr. Giovanni Pietro Salvi,
Head of Rehabilitation Operational Unit of the Istituto Clinico Quarenghi

"An efficient ally of our rehabilitation équipe for a faster and complete achievement of the results set, but also a valid instrument for the evaluation of results and the rehabilitation of each patient, which can then be monitored by the medical and physiotherapy staff."

Dr. Angela Superchi,
Chief Medical Officer of Casa di Cura Privata le Terrazze

GERMANY

"This is really one of the most exciting technologies for the future, not only from a technical point of view but also from an ethical point of view."

Dr. Frank Schifferdecker-Hoch
Geschäftsführer FPZ GmbH, Inhaber./Vorstand
FPZplus AG

USA

"Falls and fall related injuries have a significant impact on the healthcare system each year. Annually, up to 1,000,000 people fall during a stay in a U.S. based hospital, leading to approximately \$50 billions in direct costs to the healthcare system. A simple, effective, and accurate fall risk assessment tool, such as the silver index, could positively affect hospitals and the health of patients worldwide."

Dr. Reagan N. Simpson,
President, Saint Lukes Rehabilitation Institute
Vice President, Saint Lukes Health System



Join
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Scientific Network



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FDA listed



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