



NexStepTM

ROBOTIC GAIT TRAINER

Entry Point to the World of Robotic Gait Therapy

REHA
TECHNOLOGY
FOR A BETTER LIFE

www.rehatechnology.com

Better Therapeutic Outcomes

Two separate groups of 15 patients (sub-acute stroke FAC 0-2 at study start)

End-Effector Gait Therapy



10/15 regain independency in walking at study end
4/15 were able to climb stairs at study end



Conventional Physiotherapy



4/15 regain independency in walking at study end
1/15 was able to climb stairs at study end



Hesse S. et al., Robot-assisted practice of gait and stair climbing in nonambulatory stroke patients, JRRD, 2012; 49: 613-622

Treatment of Multiple Patient Indications

Stroke (sub-acute and chronic)

Parkinson’s Disease

Infantile Cerebral Palsy (ICP/CP)

Multiple Sclerosis

Spinal Cord Injuries (SCI)

Traumatic Brain Injuries (TBI)

Orthopedic & Traumatic Cases



Adults



Pediatrics

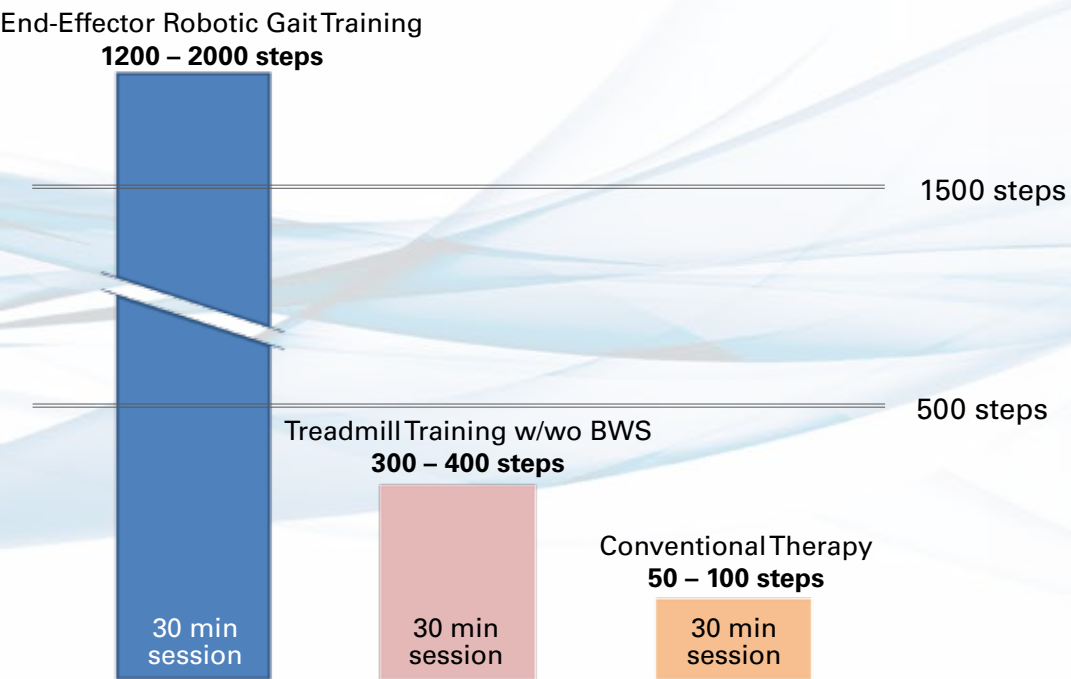
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High Number of Repetitions per Session

“Who wants to relearn walking, has to walk”

Prof. Dr. Stefan Hesse
Head of Neurology, Medical Park Berlin, Germany
Co-developer of the G-EO System

Sub-Acute Stroke Patients - Therapy Comparison



Increased Therapist Productivity

- Short patient set-up times
- Seamless adaptation of training parameters
- No interruption during therapy session
- More patient treatments per day

Clinical References

Hesse S. et al., Robot-assisted practice of gait and stair climbing in nonambulatory stroke patients, JRRD, 2012; 49: 613-622

Smania N. et al., Improved Gait After Repetitive Locomotor Training in Children with Cerebral Palsy, CME Article, 2011; 2

Sale P. et al., Robot-assisted walking training for individuals with Parkinson’s disease: a pilot randomized controlled trial, BMC Neurology, 2013; 13: 50

Sale P. et al., Effects of robot assisted gait training in progressive supranuclear palsy (PSP): a preliminary report, Frontiers in Human Neuroscience 2014; 8: 1-7

Hesse S. et al., Innovative gait robot for the repetitive practice of floor walking and stair climbing up and down in stroke patients, JNER, 2010; 7

Mehrholz J. et al., Electromechanical-assisted gait training after stroke: A systematic review comparing end-effector and exoskeleton devices, J Rehabil Med 2012; 44: 193-199

Mehrholz J. et al., Electromechanical-assisted training for walking after stroke, Cochrane Database Syst. Rev. 2013; 25:7

Pohl M. et al., Repetitive locomotor training and physiotherapy improve walking and basic activities of daily living after stroke: a single-blind, randomized multicenter trial (DEutsche GAngrainerStudie, DEGAS), Clinical Rehabilitation 2007; 21: 17-27

Entry Point to the World of Robotic Gait Therapy

NexStep is an easy to use device for functional rehabilitation of neurological and orthopedic gait disorders. The design allows the therapist to have increased patient interaction with flexible treatment options to create the most efficient therapy conditions for each patient. The NexStep offers a perfect solution for institutions seeking an opportunity to begin using robotic technology or to complement their existing traditional therapy.

Supervision by one therapist



Proven Therapy Technology

Reha Technology's products are grounded in a deep clinical heritage that allows us to provide the most advanced and effective robot-assisted systems for gait rehabilitation. The NexStep robotic gait trainer is based on the clinically proven end-effector therapy concept (G-EO System by Reha Technology). Publications show clinical evidence that patients who receive end-effector gait therapy have a significant higher rate of independent walking and are more likely to achieve superior gait ability compared to other therapeutic approaches.

More Value for Your Therapy Environment

Patient Comfort & Safety

The intuitive and simple concept of the patented end-effector technology of the NexStep allows a quick patient set-up and increases the patient's comfort and safety during therapy. Full control over body position, dynamic body weight support and seamless adaptation of gait parameters - such as step length, walking speed and foot ankle angles - further improve treatment and give the therapist the ability to tailor the therapy to the needs of the patient.



- Intuitive and quick patient set-up
- Full control over body position
- Unrestricted access to the patient during therapy
- Seamless adaptation of gait parameters

Therapy Effectiveness

NexStep provides highly effective gait therapy technology and the possibility to perform intensive treatment with a high number of repetitions per session. A variety of parameters and training modes enable the therapist to maximize therapy outcomes for each individual patient. Simple change between various applications further improves therapy routines and reduces downtimes.



- High number of repetitions per session
- Maximizing therapy time
- Simple change-over from adult to pediatric application
- Quick access to patient's therapy data

Institution Opportunities

The NexStep robotic gait trainer can be seamlessly integrated into daily therapy routines and increase not only the therapist's productivity, but significantly enhance the efficiency of the clinic or hospital in general. The possibility to treat multiple patient indications with one device, further improves the institution's allocation of resources.



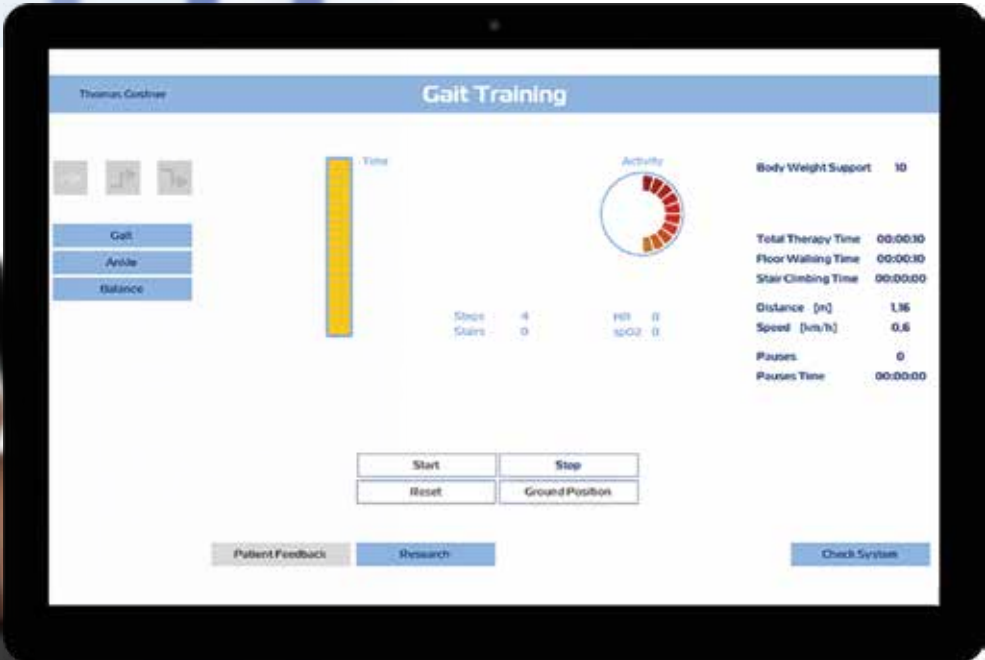
- Increased therapist productivity
- Cost effective and optimized resource allocation
- Treatment of multiple patient indications
- Wide patient range including pediatrics

Intuitive Interface & Versatile Software

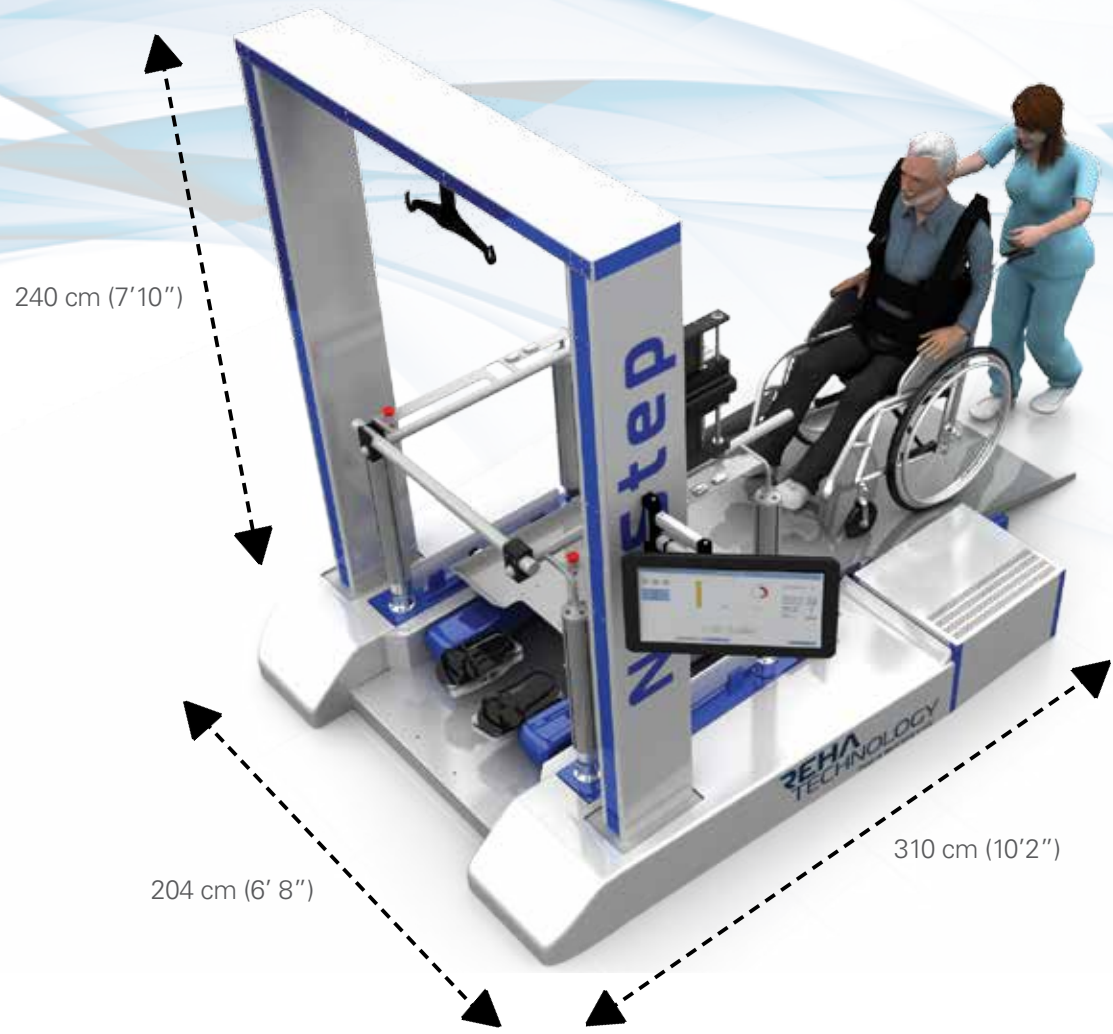
Based on the G-EO System graphical user interface the NexStep GUI offers a similar intuitive access to a variety of treatment options. The versatile software has been continuously improved since 2011 in a close collaboration with therapists and doctors all over the world.

Seamless adjustments of all parameters improve the therapy experience for both the patient and the therapist, as there are no interruptions during treatment due to time-consuming mechanical adjustments of the device, as all the settings are controlled over the software interface.

- Full control over body position
- Quick access to patient’s therapy data
- Seamless adaptation of gait parameters
- Security measures to prevent misuse



Technical Data & Specifications



| | | | | | |
|--------|----------------|--------------|----------------------|-------------------|----------------|
| Length | 310 cm (10'2") | Weight | 800 kg (1760 lbs) | Max. step cadence | 70 steps / min |
| Width | 204 cm (6' 8") | Power supply | 110 / 230V | Max. step length | 55 cm (22") |
| Height | 240 cm (7'10") | Max. Speed | 2.3 km/h (1.43 mi/h) | Ankle angle range | -80° / +80° |

Optional Modules to Adapt to Different Patient Needs

- FES Module (F Module) by Hasomed®**
With the integration of the Functional Electrical Stimulation (FES) module, the therapist is able to add supplementary muscle activation through multiple stimulation channels. The FES is controlled through the NexStep graphical user interface and can be adjusted at any time.
- Pediatric Module (P Module)**
The NexStep offers quick transition between adult and pediatric application and the possibility to adjust the step width. The module permits treatment of children starting as small as 90 cm (3 feet).
- Visual Scenario**
The NexStep can be upgraded with a Visual Scenario that provides enhanced visualization of patient performance along with additional therapy options of walking in synchronized trails to increase patient motivation and awareness during each session.

Patient Requirements

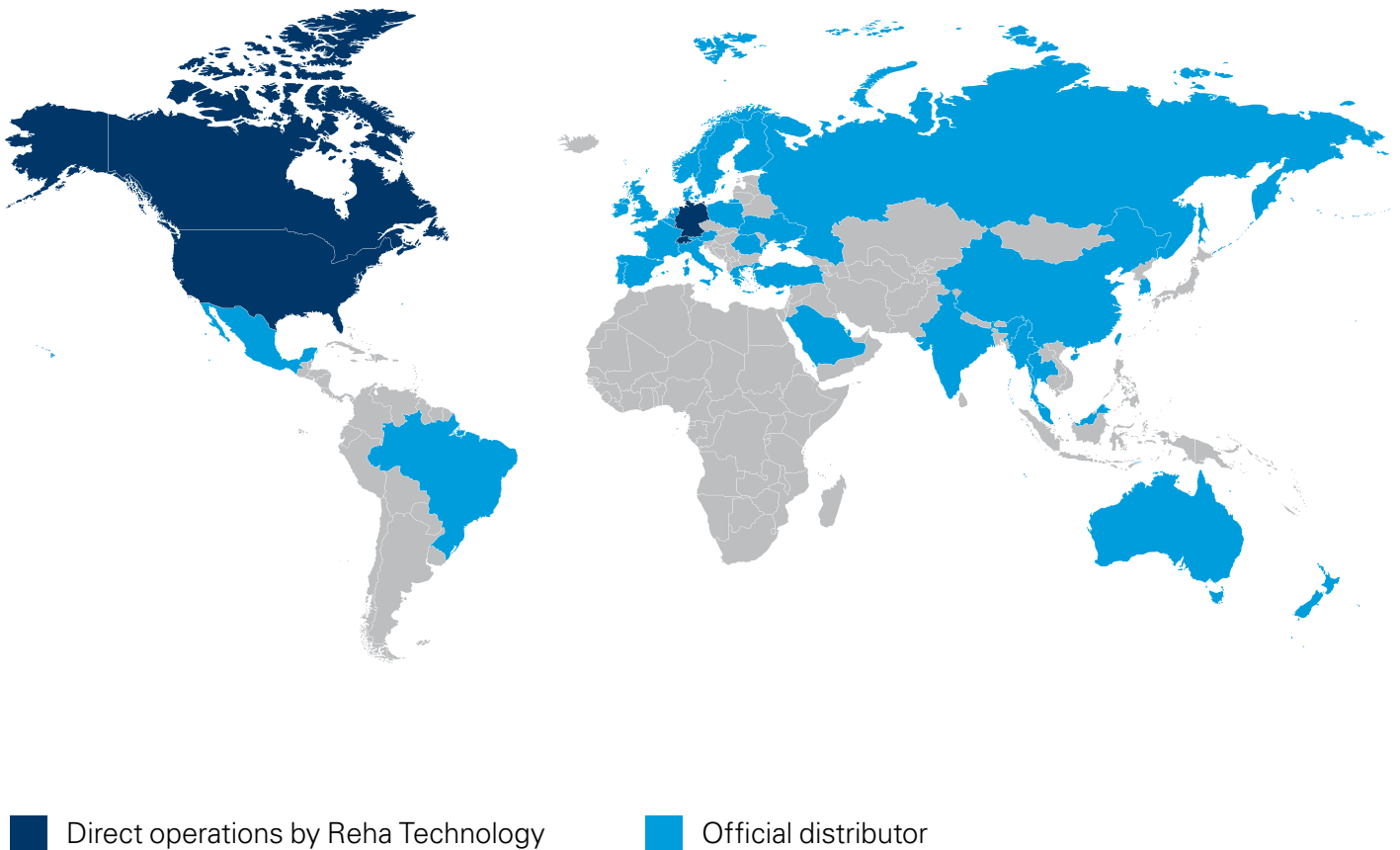
| | |
|-------------------|-------------------|
| Min. body height* | 90 cm / 3' |
| Min. body height | 110 cm / 3'7" |
| Max. body height | 200 cm / 6'7" |
| Max. body weight | 200 kg / 440 lbs. |

*with Pediatric Module



Reha Technology's Direct Operations and Worldwide Distributor Network

Reha Technology AG is distributing products through a worldwide distributor network and direct operations. This network is continuously being expanded; the following world map illustrates current activities in a global perspective:



Headquarters:

Reha Technology AG
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