

Lokomat[®] Pro with FreeD



Stroke patient during training with the LokomatPro with FreeD. Courtesy of LKH Hochzirl, Austria.



The new FreeD module allowing for lateral and rotational movements of the pelvis. Courtesy of LKH Hochzirl, Austria.

The new FreeD module further improves the therapy by supporting weight shift and balance activation through lateral and rotational movements of the pelvis. The Lokomat[®] is an ideal addition to in- and out-patient rehabilitation programs and for long term care facilities.

The FreeD Module

Available as a module for the LokomatPro, FreeD improves the therapy by allowing for lateral translation and transverse rotation of the pelvis (fig. 1). While training, patients can shift their weight completely over their stance leg and thereby activate their core muscles and experience balance aspects. This is crucial for the relearning of independent walking. The passively guided hip abduction and adduction as well as the driven lateral translation of body weight support are fully synchronized with pelvis movements and the movement of the orthoses.

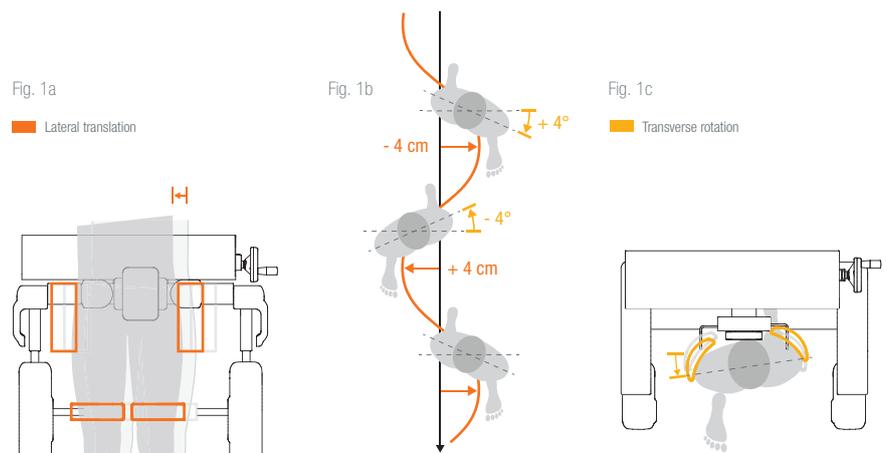


Fig. 1: Adjustable lateral translation of up to 4 cm (fig. 1a) and transverse rotation of the pelvis of up to 4° (fig. 1c) to each side during walking (fig. 1b).

The Advantages of the Therapy with the Lokomat[®] Pro

- Scientific evidence shows that Lokomat training improves the outcome of physical therapy.^{1,2}
- Therapists can provide more treatment sessions with higher intensity.
- The individually adjustable exoskeleton ensures a most physiologic gait pattern with essential sensory feedback.
- Assist-as-needed support enables clinicians to optimally shape training challenge based on the patient's capabilities.
- Exciting, game-like Augmented Performance Feedback exercises increase the patient's effort.



The new Challenge Package exercises improve the patient's long-term motivation by unlocking new levels with different designs.

Challenge Package

The Challenge Package of the LokomatPro offers highly attractive exercises that boost the patient's motivation and effort by providing competitive elements and intuitive scoring. The Augmented Performance Feedback explicitly rewards the patient for improvements in specific aspects of functional gait training such as foot clearance and step length. Even severely affected patients that still require full guidance can profit from the option to increase kinematic variability, which is beneficial for the relearning process.



Stroke patient optimally motivated by racing against a virtual opponent with the new Challenge Package. The advanced exercise allows the patient to actively increase his walking speed by putting in more effort, resulting in higher training intensity. Courtesy of LKH Hochzirl, Austria.

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¹By end of 2013 more than 150 studies have been published on the Lokomat therapy in peer reviewed journals. Please find a detailed list online at <http://knowledge.hocoma.com>

²Mehrholz J, Elsner B, Werner C, Kugler J, Pohl M. Electromechanical-assisted training for walking after stroke. Cochrane Database Syst Rev. 2013 Jul 25;7:CD006185.