

# hirob







The first  
step back  
to life.



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# What works, when nothing else will.

**hirob** enables effective motion therapy to improve torso control and stability – even during the early phases of treatment. The therapy robot optimally supports patients and therapists in hospitals, rehabilitation centres and during follow-up treatment through physiotherapy.

After a stroke, traumatic brain injury or other neurological pathologies, doctors and therapists work closely with their patients to restore their mobility – a key milestone in their recovery. Being able to move autonomously improves the patient's quality of life and allows them to take back their independence.

**hirob** is the only therapy solution in the world that assists and supports patients and therapists in these efforts. Its effectiveness has been clinically proven.





# For diagnoses with neurological deficiencies.



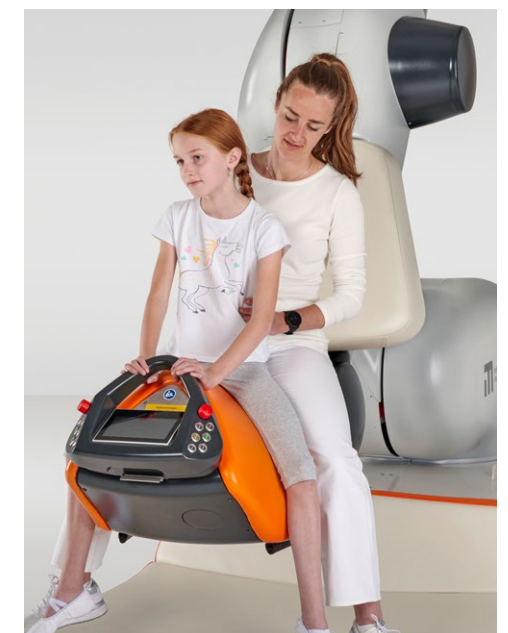
**hirob** supports cases involving neurological deficiencies – following a stroke, traumatic brain injury, multiple sclerosis and cerebral palsy. As soon as the patient is stable, they can begin treatment. The solution supports successful outcomes during the early stages of treatment right through to the managing of chronic conditions.

Therapy using  
**hirob** leads to

- increased activity in the muscles of the torso and back
- improved selective pelvic mobility
- improved pelvic and torso alignment
- improved torso stability
- improved static and dynamic balance



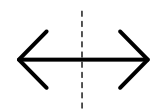
The therapist can give their undivided attention to the patient.



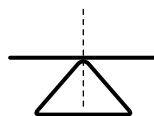
# Rooted in tried-and-test therapy.



sensor-based  
motion capture



transfer to  
robot control



increased  
trunk stability

**hirob** precisely mimics the movement of a horse's back at a walking pace. The robot-assisted treatment is safe for patients and therapists, saves time and can be administered without time-consuming patient transport. **hirob** also offers 5 additional movement patterns that can be used to customise the individual therapy to the patient's unique abilities.



„Most of all, I'm impressed by hirob's rapid transfer and set-up time. It's so quick to adjust hirob to the exact requirements of each patient. We're able to use it in the early phases of treatment because the speed and range of motion can be adjusted to the individual patient's needs.“

Dr. Andreas Mayr  
Head of Treatment at LKH Hochzirl





# People-centric technology

- In the control cabinet, the electrical components, the robot control and the isolating transformer are installed.



- **hirob** was developed, built and clinically tested in Austria and is the only solution of its kind in the world.

- **hirob** is a class IIa medical device according to Directive 93/42/EEC.

- The shape of the seat also helps the patient to sit upright.

- The ergonomic seat is akin to an unsaddled horse's back and plays a significant part in relieving spasticity thanks to the resulting open position of the legs.



- The intensity and speed of the movement can be adjusted to the patient.

- The exact walking motion of a horse was recorded using a motion capture system, analysed and transferred to the robot controller.

- At the click of a button, the seat is moved into a comfortable position to help transfer the patient onto the **hirob**.





Fast, uncomplicated patient transfer and safe therapy.

Doctors and therapists want to help - that is their key concern. But at the end of the day, hospitals, rehabilitation centres, practices and healthcare institutions also need to be healthy businesses in their own right. **hirob** not only impresses as a therapeutic solution, but also boasts excellent longevity in every other respect.



# How hirob is assessed

## Benefits

### Therapeutically valuable

- Clinically proven to enhance torso stability
- Immediately deployable as soon as the patient is stable all the way through to managing chronic conditions
- Intensity, seat height and speed can be adjusted to suit the patient
- Secure, clean and hygienic

### User-friendly

- Low risk of injury for users
- Optimal ergonomics
- Easy, intuitive application
- Fast and straightforward patient transfer process

### Cost-effective

- Broad scope for effective therapy
- No time-consuming patient transport needed
- Low-maintenance and 24/7 availability
- Short payback periods depending on usage

### Additional benefits

- The therapist can focus intensely on the patient and their responses to the movement.
- The treatment can be supplemented with additional exercises e.g. with balls and hoops, as required.

### Technical features

- Soft treatment mat protects against injury
- Stable ergonomic handle gives patient more security
- Easy selection of movement pattern thanks to touchscreen
- Intuitive usability (start, stop, height, speed and intensity) with illuminated buttons.
- Excellent build quality ensures significant longevity of the solution
- High-quality, easy-to-clean surfaces



# Support throughout all treatment phases.

Regaining mobility is often an intense and potentially time-consuming process. Patients respond best when treatment begins as soon as possible, once intensive care is no longer required. Of course, medical institutions also benefit from a solution that effectively supports all phases of treatment.

Phase	B	C	D	E
Phase Description	Intensive care treatment options still need to be available.	Patients can already participate in therapy, but still need to receive curative medical care and require a high level of patient care.	Rehabilitation phase following completion of early mobilisation (corresponds to medical rehabilitation in the non-neurological field).	Follow-up rehabilitation services and professional rehabilitation.
Therapy with <i>hirob</i>	Application in phases C, D and E, partly in phase B.			





intelligent motion improves the ability to move in rehab,  
where it could hardly be less. And the performance in top-  
class sport, where hardly any improvement can be achieved.  
intelligent motion develops robotic and sensor-based devices  
for success in medical therapy and top-class sport.

Ready  
for the  
next step.



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