

MOTORE is a new portable robot developed by Humanware and conceived for upper limb rehabilitation: it is used for treatment of brain stroke patients or head injury patients and helps both the patient and the therapist to get the maximum output from the therapy.

Benefits for the patient

Motore bears the weight of the arm during treatment. It helps the patient to move or even prevents the movements in wrong directions according to the patient's need. While the patient is playing enthralling games, the audio-visual feedback and the force feedback effectively stimulate his/her brain. A therapy protocol can be customized for the patient and the patient's motivation is enhanced by the awareness of improvements and by the challenging games. The size and the ease of use of the device make Motore suitable for a safe home based therapy.

Benefits for the therapist

At any given moment, the robot measures the force and the movement of the patient, providing a quantitative and objective assessment of therapy outcomes. After a quick set up of the device, the patient can autonomously execute the proposed exercises and thus the therapist can treat several patients at the same time.



Clinical studies demonstrated the effectiveness of robotic rehabilitation.

Motore is a unique autonomous mobile robot with a great ability able to sense and react to the force exerted by the patient; with this feature the device can guess the patient's intention and react with a proper force for a better functional recovery.

A software suite with several exercises and parameters is a powerful tool for the therapist to easily refine the rehabilitation protocol to match the patient's needs.

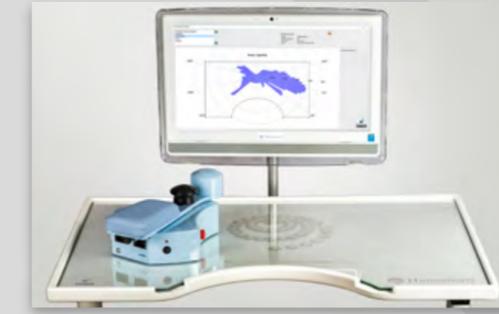
The measurement of force, acceleration and speed at any given time allows the robot to automatically adapt its behaviour according to patient's performance and at the same time provides the therapist with an objective assessment of the therapy.

Motore detects even the smallest forces exerted by the patient and working as a force multiplier, it is very effective in case of hypotonia.

Motore moves smoothly and can also properly deal with the patient's spasms: clinical studies provided evidence of spasticity reduction in treated patients.



Utilizzo confortevole grazie all'appoggio per il braccio rotante e alla possibilità di usare impugnature diverse.



The software suite includes games to train sensory-motor control, cognitive games and daily activities simulations for **functional recovery**.

The software also includes data analysis and visualisation of the values recorded during the training: the evaluation results are calculated and recorded at the end of each exercise and can be retrieved at any moment from the patients' database. The progresses can be monitored and evaluated.

The range of motion and the forces are assessed with specific exercises and the major assessment scales are integrated in the software.

MOTORE is used for:

- Neuro-rehabilitation
- Post-stroke rehabilitation
- Cognitive recovery
- Post-trauma rehabilitation
- After surgery rehabilitation
- Sports medicine
- Occupational health

DEVICE FEATURES:

- ① Portable, autonomous, haptic, wireless, battery powered robot
- ② Adaptive device: it can help the patient to accomplish the movement and at the same time it can prevent the patient from moving in wrong directions
- ③ It has been proven effective in reducing spasticity
- ④ Safe and user friendly
- ⑤ The system includes a PC with the software suite preinstalled and an electrically height-adjustable table
- ⑥ Software suite including rehabilitation games, assessment exercises, data analysis of patient's performance
- ⑦ Suitable for telemedicine applications



The driver of your health

Humanware is a spin-off company of Scuola Superiore Sant'Anna Pisa and has been developing medical devices since 1996.



Patented medical device compliant with Council directive 93/42/EEC - BF type

humanware

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