

Meissa OT



Meissa OT is an advanced robot designed for upper limb rehabilitation. It serves both as a training and assessment tool, utilizing a 4-channel EMG/EMS (Electromyography/Electrical Muscle Stimulation) system.



The primary functions of the Meissa OT robot include

- Continuous Active Motion (CAM) - allowing patients to perform controlled active movements to improve
- Continuous Passive Motion (CPM) - supporting passive limb movement, especially beneficial for those with limited mobility
- EMG-Triggered Robotic Assistive Movement the system responds to EMG signals, enabling patients to control the robot's movement with their own muscles
- Electromyography Measurement and Biofeedback (EMG Biofeedback) the robot can measure EMG signals and provide feedback to help patients better understand and control their muscles
- Electrical Muscle Stimulation (EMS) - the device can stimulate muscles using electrical impulses, aiding in the rehabilitation process
- Electromyography-Triggered Electrical Muscle Stimulation (EMG EMS) - this feature allows precise adjustment of muscle stimulation to the patient's muscle activity

Meissa OT enables rehabilitation through

- Assessment and training of various types of grips: cylindrical, pincer, hook, palmar, tweezers, spherical and lateral
- Functional exercises, activities of daily living (ADL) with variable strength
- Active-assistive exercises with supported movement of the upper limb (EMG activated)
- Exercises for flexion/extension and abduction/adduction of the wrist and pronation/supination of the forearm
- Each movement enables synchronised electromyography with electrostimulation, supporting muscle contraction during movement phases (Lovett D-5)
- Engaging Rehabilitation games and EMG BIOFeedback
- EMS & EMG triggered electrical muscle stimulation
- Motor with easy adjustable axis of movement





WHAT IS INCLUDED IN MEISSA OT

-  Force Sensors
-  EXCHANGABLE EXTENSIONS for occupational therapy
-  Extensions for elementary and occupational therapy movements of the hand and fingers (ball key, screwdriver, knob door handle)
-  Easy to use with quick and simple exchange of extensions and touchscreen operation
-  Device mounted to the table top and easy to adjust axis of movement to the patient
-  Can be rotated in relation to the platform horizontally in a range of 180° to 180 and vertically in the range of 0 to 90°
-  Pre-set therapeutic protocols and therapeutic games
-  Programs for home therapy and telerehabilitation

INTENDED USE FOR NEUROLOGICAL AND ORTHOPAEDIC PATIENT

-  Helps to relearn voluntary motor functions of the upper extremities
-  Maintaining or increasing range of motion
-  Measurement evaluation and increase of upper limbs strength
-  Relaxation of muscle spasms
-  Prevention or retardation of disuse atrophy
-  Increasing local blood circulation

EVALUATION

-  Range of Motion
-  Force
-  Muscle activity

Meissa OT is an advanced rehabilitation robot that is suitable for both adults and children, providing effective rehabilitation solutions for in-clinic and home-use applications.