HASOMED

RehaMove®

Motion training with Functional Electrical Stimulation (FES)

Functional electrical stimulation (FES) is used for stimulating the muscle directly or indirectly via the motor nerve. The aim is to produce a functional movement. Adhesive electrodes transfer the current to the nerve of the paralysed muscle in order to produce a contraction. It is a precondition that the lower motoneuron is intact and that the patient tolerates the stimulation.

RehaMove combines the proven motion training with Functional Electrical Stimulation

MOTOmed viva2
Motion trainer

RehaStim2
Electrical stimulator (FES)

RehaMove2
FES motion trainer

Active muscle training

Therapy goals for central paralysis / incomplete paraplegia:

- Avoid / Prevent secondary diseases (decubitus, thrombosis, muscular atrophy, cardiovascular problems, diabetes)
- Regain the original performance of movement (motorlearning)
- Improve neuromuscular activation
- Improve and regain voluntary motor control

Therapy goals for peripheral paralysis / complete paraplegia:

- Avoid / Prevent secondary diseases (see above)
- Activate the metabolism
- Stimulate muscular growth
- Avoid muscular atrophy
- Stimulate blood circulation
- Improve mental health

HASOMED GmbH
Paul-Ecke-Straße 1
39114 Magdeburg
Germany

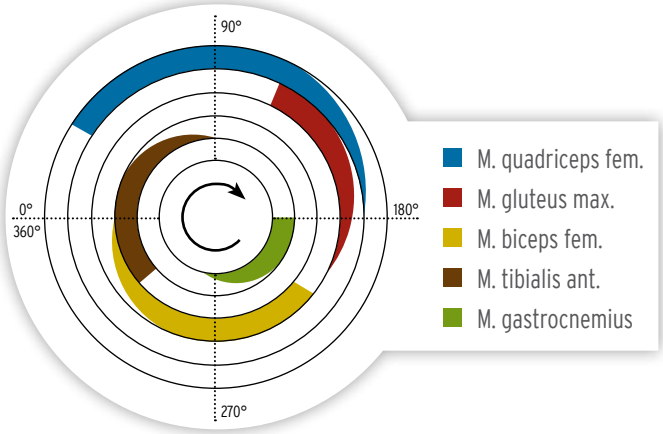
T: +49 (0) 391. 61 07 645
F: +49 (0) 391. 61 07 640

rehamove@hasomed.de
www.rehamove.com

HASOMED®
Hardware and Software for Medicine

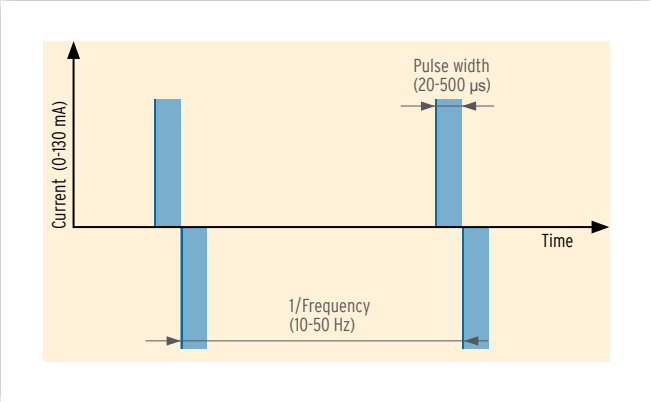
Communication RehaStim-MOTOmed

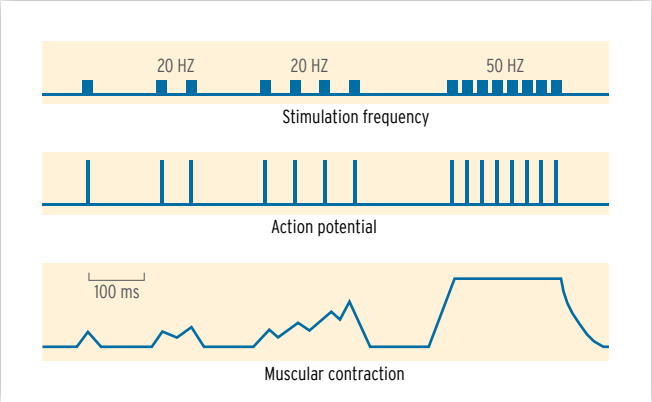
- Devices communicate via data cable
- Data exchange of all relevant parameters (angle or position of the crank arm, rpm and rotational direction, symmetry, gear, time, distance)
- Stimulation sequences are triggered by angle-based MOTOmed data



Current settings

- Stimulation with biphasic rectangular pulses over 8 channels
- Pulse width (pulse duration): 20-500 µs
- Current: 0-130 mA
- Frequency (pulses per second): 10-50 Hz
- Stimulation intensity depends on pulse width and current
- Muscular contraction intensity depends on the frequency

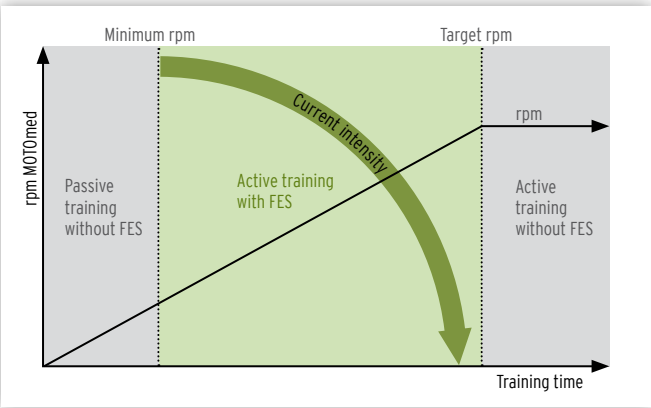




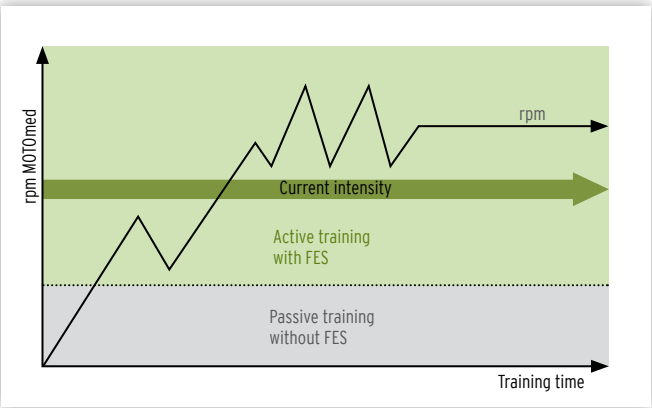
Different forms of training with the RehaMove in adaptive and constant mode

- In **adaptive** mode, the current intensity adapts to the active rpm of the patient
- Aim: support the residual muscle function of the patient, adapt the stimulation depending on muscular fatigue

- In **constant** mode, the current remains the same regardless of the active performance of the patient
- Aim: active movement even without residual muscle function



Settings of the RehaMove in adaptive mode



Settings of the RehaMove in constant mode

Ver. 2013-09