

Muscle Stimulator – Paresis – Gait Training



... the + of function



- Versatile digital one-channel-device
- Suited for stimulation of paretic muscles, TENS- and EMS-treatment
- 1 diagnostic-program to create a strength/duration-curve (SDC)
- 11 preset treatment programs with different shapes of pulses
 - Single pulses triangular (form of triangle is adjustable)
 - Single pulses trapezoidal (form of trapeze is adjustable)
 - Biphasic or monophasic current
- 3 preset programs for training of walking (peroneal palsy)
- 5 custom programs: single phase / single pulse, multiple phase biphasic or monophasic current and for training of walking
- Foot switch for gait-training is included
- Automatic or manual trigger of pulses
- Indication of pulseform, intensity and remaining treatment time
- Statistics showing important global treatment data or detailed statistics of each session for 60 days of treatment
- Real time clock
- **CE 0123**

Stimulation of paretic muscles

If any patient suffers by paresis the nerves that activate a muscle or group of muscles are disturbed for various reasons. The deliberate contraction of the muscle is not possible anymore and the muscle is inactive. Due to this inactivity, the number of active muscle fibers will reduce and the muscle mass will decrease within a few weeks (atrophy).

The initial treatment usually consists of long single pulses in a triangular or trapezoidal shape (exponential current), as the paretic muscle does not respond well to the usual short rectangular pulses of normal muscle stimulation. The length of ascent ensures a reaction of the paretic muscle and helps to avoid the contraction of the surrounding healthy muscles (selective stimulation). In the regeneration phase of the nerve, muscular atrophy shall be prevented or at least retarded by repetitions of short single twitches.

One of the most common kinds of palsy is peroneus-paralysis or foot-dorsiflexion. If the muscle responds to rectangular pulses, it is possible to start the second phase of treatment with normal muscle training by short biphasic rectangular pulses in a certain frequency and using work and rest periods. At this stage, gait-training can start as well. It is supported by a foot-switch that triggers current for the swing-phase of the step. An adjustable delay-time allows gait-synchronous stimulation.

Technische Daten:

- Intensity: 0 – 60 mA
- Power supply: 4 rechargeable NiMH-batteries 1,5 V Type AA

Single pulses:

- Monophasic triangular or trapezoidal with continuously changing polarity
- Pulse width: 1 ms – 1000 ms

Enveloped pulses:

- Biphasic, symmetrical, rectangular or monophasic positive, rectangular
- Frequency: 1 – 120 Hz
- Pulse width: 50 μ s – 35 ms (positiver Anteil)
- Delay-time (gait-training): 0 – 1000 ms

Geräte-Set: (Art.-Nr. 010E-112)

- 1 PeroBravo
- 4 self-adhesive electrodes (40 x 40 mm)
- 1 lead wire to connect the electrodes
- 1 foot switch
- 2 rubber electrodes (50 x 50 mm)
- 2 sponge bags
- 2 tapes to fix the electrodes
- 4 rechargeable batteries type AA
- 1 battery charger
- 1 carrying case and 1 operators manual