PHYSICAL THERAPY

- Deep oscillation
- MAGCELL®
- Combination therapy
- Electrotherapy
- Ultrasound therapy
- Vacuum application
- Laser therapy
- Shockwave therapy
- Shortwave therapy
- Microwave therapy
- Traction therapy
- Cryotherapy
- Magnetotherapy
Electrotherapy

Electrotherapy is an important element of physical therapy. Current stimulation treats the tissue via electrodes (plate electrodes, adhesive electrodes, vacuum electrodes, or special electrodes such as punctiform or pad electrodes) on the selected areas. Depending on the current mode and the selection of parameters (i.e., impulse form, impulse duration, pause time, frequency, intensity) the stimulation current may have significant effects in the following areas of treatment:

- Pain reduction
- Stimulation of blood circulation and trophic enhancement
- Nerve stimulation, for example the training of innervation and treatment of paralysis
- Muscle stimulation to build up/maintain muscles
- Muscular relaxation
- Iontophoresis

The different electrotherapy currents can be classified according to their generation and specific method of treating the tissue:

- Medium-frequency current: this is an alternating current, derived from superposition of a basic frequency (2–9.5 KHz) and a modulation frequency (0-250 Hz). This superposition takes place within the equipment for AMF current (amplitude modulated medium frequency current) as well as for medium-frequency currents for muscle stimulation (e.g., KOTS). The previously modulated current can therefore be applied via only two electrodes on the patient. With classic interference current IF, however, superposition delivers both frequencies when it reaches the patient’s tissue. For this reason, in this case it is essential to always apply four electrodes for treatment. The high therapeutic effectiveness of the medium-frequency current is achieved with minimum skin irritation and broad penetration and is more acceptable to patients.

- Low-frequency current: an impulse current with frequencies under 1000 Hz is classified as a low-frequency current. The total range of application is covered by the different low-frequency currents DF, MF, CP, LP (diadynamic currents), UR (ultrastimulation current), HV (high voltage current), FaS (faradic current), TENS (mono- or biphasic rectangular impulse), MENS (variable microcurrent), IG 30 and IG 50 (impulse galvanisation), FM (frequency-modulated current), STOCH (stochastic current) and T/R (exponential current). In contrast to medium-frequency current, low frequency current can also be used for treatment of peripheral paralysis.

- Galvanic current (G) is a direct current that ensures a constant energy current flow through the tissue. Galvanic current is primarily used for stimulation of blood flow and pain reduction as well as iontophoresis (diffusion of medicaments into the tissue with the aid of current).

For more detailed information, please read our comprehensive brochure “Short introduction to electrotherapy”, which contains many practical examples.

“Clean currents” for better therapy results

Quite a few electrotherapy instruments today no longer emit stimulation currents in the form described in teaching manuals, and on which efficient electrotherapy is proven to be based. Instead of this – and in many cases due to cost savings – similar, but not identical, curve forms are used. Nobody knows exactly whether these cause the desired effects in tissue in the same way as the original currents. Instead of medium frequency currents, for example, low frequency ones are generated, and vice versa. In a direct comparison, the difference between “genuine” and “similar” currents can often be felt, but it only becomes visible when the current curves are viewed on an oscilloscope. Galvanic currents with spikes can be found, distorted instead of harmonic sinusoidal curves, or even deformed envelopes of diadynamic currents.

PHYSIOMED distances itself firmly from this trend of compromising therapeutic success only for the sake of maximising profits. PHYSIOMED instruments therefore only supply “clean” currents. This also explains the often heard opinion of competent electrotherapy users, that despite using the same parameters, they obtain better therapeutic results with PHYSIOMED instruments than with other stimulation current instruments.
Electrotherapy units

PHYSIOMED electrotherapy units enable you to start therapy with maximum speed and ease: direct selection of current, over the indication index or program memory. During treatment you have a constant overview of all parameters and timers. With decades of proven use, PHYSIOMED one-button operation permits fast intuitive control. A wide variety of safety features prevent malfunctions on all levels. For instance, a warning signal can be emitted when the recommended intensity is exceeded in relation to the selected electrode size. The emergency shut-off function can be activated over the intensity control and manual keys to ensure increased safety for both therapists and patients.

Thanks to the individual selection of additional parameters (pulse length and form, frequency, bursts, biphasic application, galvanic base etc.) the characteristics of current forms can be precisely adjusted to the desired treatment. Diagnostics programs, exhaustive indication lists with practical information, diagrams and treatment animations and patient database with ‘potpourri’ function simplify electrotherapy treatment.

Please see page 21 for an overview of the specifications for the individual units.
PHYSIODYN-Expert

Professional electrotherapy and diagnostics for hospitals, rehab and physiotherapy centres

With the brand new PHYSIOMED App treatment protocols can be created, archived and processed!

Detailed illustrations facilitate even complex stimulation current treatments
SPECIAL FEATURES

ELEKTROTHERAPIE

Two-channel electrotherapy (21 currents) with basic settings on top level and detailed parameter settings in the expert menu (with visualization of the current shape parameters)

6 diagnostic menus (incl. quick I/T curve representation): the user-guided navigation makes the diagnostic evaluation selfexplanatory and effective

Alternating and simultaneous stimulation

Spasticity treatment acc. to Hufschmidt or Jantsch

Manual release key for emergency shut-off or intentional exercises (accessory option)

GENERAL FEATURES

Perfected user guidance through combination of touch screen and PHYSIOMED one-button operation

7” colour monitor incl. screensaver, visualizing all main parameters of the active channels

Favorites menu with speed-dial memory for individual device functions

Comprehensive overview of the therapy parameters including all therapy timers

Fastest therapy start: direct, through program memory or indications index

Treatment index with intelligent filtering functions based on body region, desired therapy effect or per alphabet (incl. auto-complete of indication names) for quick location of the desired treatment proposal

Extensive therapy and dosage suggestions

Easy-to-use and extensive memory menu with cocktail and history function

Multifunctional intensity controls allowing for fast intensity reduction and quick switching between channels

Logical colour coding of electrotherapy and vacuum application accessories for quick and accurate allocation of channels and polarity

Vacuum application with PHYSIOVAC-Expert (option)

Simultaneous therapy

SD card slot for product updates

A detailed specifications overview of the PHYSIODYN-Expert can be found on page 21.

TECHNICAL DATA

Protection class 1, type BF
Power connection 100 – 240 VAC ±10 %
Mains frequency 50 – 60 Hz
Current consumption 0.6 A / 1.2 A
Power consumption 120 VA
Power output stimulation current max.
GMC, MENS = 1.000 μA, G = 25 mA, HV, HYS, TEN-S = 140 mA, DF, MF, CP, LP = 70 mA, UR, IG30, IG50, FM, STOCH, Fas, TR = 75 mA, IF, AMF, MT, KOTS = 100 mA (at 500 Ohm)
Dimensions (W x H x D) 315 x 175 x 370 mm
Weight 6.2 kg

STANDARD ACCESSORIES

[1] Elastic velcro strap (10 x 125 cm)
[1] Elastic velcro strap (6 x 80 cm)
[1] Mains cable
[1] Patient lead
[4] Plate electrodes EF50
[1] Short introduction to electrotherapy
[4] Viscose covers EF50