



Electrotherapy, Ultrasound and Simultaneous Therapy with Vacuum application



3rd EDITION

IONOSON-Expert

Professional electro-, ultrasound and simultaneous therapy
for hospitals, rehab and physiotherapy centres



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



Combination therapy unit IONOSON-Expert and vacuum application unit PHYSIOVAC-Expert on an Expert trolley

SPECIAL FEATURES

Electrotherapy

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 self-explanatory and effective

Alternating and simultaneous stimulation

- ① Manual release key for emergency shut-off or intentional exercises (accessory option)

Ultrasound therapy

- ② The ergonomic ultrasound transducers offer maximum safety and reliability in terms of power output. They combine 1 and 3 MHz ultrasound in an extremely durable and biocompatible titanium transducer, thereby excluding metallurgical deposits and are also suitable for subaqueous treatment.

Continuous or pulsed energy output (4 duty cycles [1:10, 1:5, 1:3, 2:5])

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, therapy form, 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



Super-fast and clear working – the new user interface

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, HVS, TENS = 140 mA, DF, MF, CP, LP = 70 mA, UR, IG30, IG50, FM, STOCH, FaS, T/R = 75 mA, IF, AMF, MT, KOTS = 100 mA (bei 500 Ohm)			
Power output ultrasound max.				
Effective surface	2.5 cm ² transducer	5 cm ² transducer		
Ultrasound frequency	1 MHz	3 MHz	1 MHz	3 MHz
Mean power density	3 W/cm ²	1 W/cm ²	3 W/cm ²	1 W/cm ²
Dimensions (W x H x D)	315 x 175 x 370 mm			
Weight	7.4 kg			

STANDARD ACCESSORIES

[1] Elastic velcro strap (10 x 125 cm)
[1] Elastic velcro strap (6 x 80 cm)
[1] Mains cable
[1] Operating instructions
[1] Patient lead
[4] Plate electrodes EF 50
[1] Short introduction to electrotherapy
[1] Short introduction to ultrasound therapy
[1] Ultrasound gel 250 ml
[1] Ultrasound transducer 1/3 MHz 5 cm ² or 2.5 cm ²
[4] Viscose covers EF 50



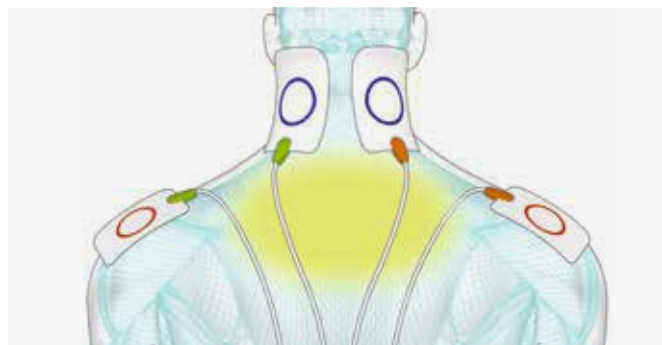
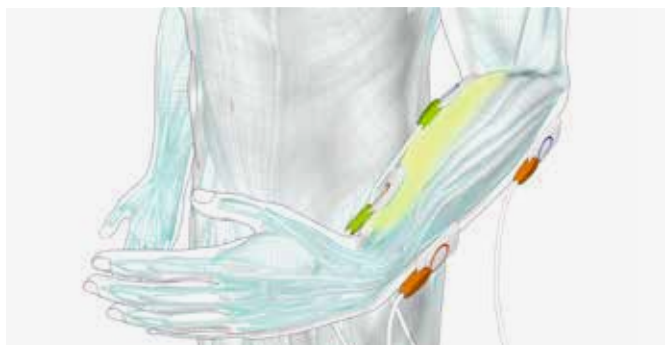
3rd EDITION

PHYSIODYN-Expert

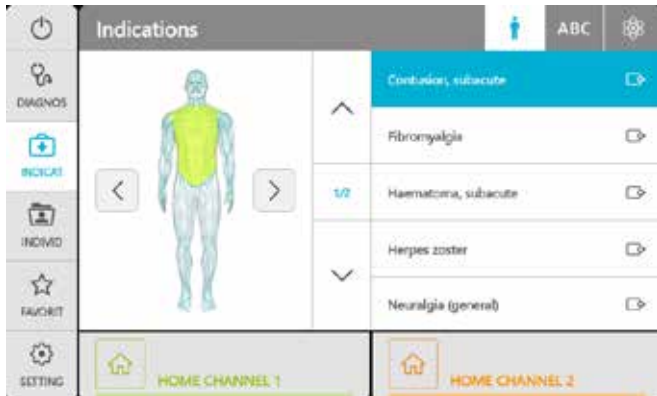
Professional electrotherapy and diagnostics for hospitals,
rehab and physiotherapy centres



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



Detailed illustrations facilitate even complex stimulation current treatments



The comprehensive indication menu with practical filter functions



In addition to the standard I/T curve, the diagnostics menu also offers a time-saving quick test



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, HVS, TENS = 140 mA, DF, MF, CP, LP = 70mA, UR, IG30, IG50, FM, STOCH, FaS, T/R = 75 mA, IF, AMF, MT, KOTS = 100 mA (bei 500 Ohm)
Dimensions (W x H x D)	315 x 175 x 370 mm
Weight	6.2 kg

SPECIAL FEATURES

Electrotherapy

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

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

GENERAL FEATURES

- 1 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)

SD card slot for product updates

STANDARD ACCESSORIES

[1] Elastic velcro strap (10 x 125 cm)

[1] Elastic velcro strap (6 x 80 cm)

[1] Mains cable

[1] Operating instructions

[1] Patient lead

[4] Plate electrodes EF 50

[1] Short introduction to electrotherapy

[4] Viscose covers EF 50



3rd EDITION

PHYSIOVAC-Expert

User-friendly vacuum application with Expert-Line devices



SPECIAL FEATURES

Vacuum application

Vacuum and pulsation adjustable in 10 steps

Individually adjustable lower limit of vacuum power during pulsation for optimum sticking of the electrodes in any therapy situation

Self-adjusting vacuum pump ensures constant vacuum

Vibration and noise-optimised

Water separator with safety switch for automatic shut-off (with audible and visual warning)

GENERAL FEATURES

Fastest therapy start

① Logical colour coding of electrotherapy and vacuum application accessories for quick and accurate allocation of channels and polarity

TECHNICAL DATA

Protection class	1, type BF
Power connection	100 – 240 VAC
Mains frequency	50 – 60 Hz
Current consumption	0.1 A (at 230 V) or 0.2 A (at 115 V)
Power consumption	60 VA
Vacuum	0 – 0.6 bar
Pulsation	0 – 60 pulsations/min adjustable in 10 steps
Dimensions (W x H x D)	250 x 100 x 350 mm
Weight	6 kg

STANDARD ACCESSORIES BASIC

[2] Blind plug – single
[1] Connection cable
[1] Connection cable (electrotherapy/vacuum)
[1] Operating instructions
[4] Vacustop vacuum electrodes 6 cm
[4] Vacuum hoses
[4] Viscose sponges 6 cm



Vacuum application

Vacuum application devices make it possible for you to apply stimulation currents via vacuum electrodes. The vacuum electrodes are gently affixed to the patient's skin with the help of adjustable underpressure. This method is especially suited for affixing electrodes to the buttocks, since there is no need for expensive fixation aids.

The suction action and the associated blood flow stimulation result in improved conduction qualities for the currents. With smooth adjustments, pulsing waves of suction permit enhanced stimulation during therapy.

Thanks to special suctionwave cups (Luran), vacuum application units are also suited for manual suction wave massage.

Ultrasound therapy

Ultrasound therapy, along with electrotherapy, is one of the popular treatment forms of physical therapy. Therapeutic ultrasound is used at a frequency of 1 MHz or 3 MHz, as continuous output or pulsed output in different duty cycles. Ultrasound therapy is classified as mechanical thermal therapy due to its complex effects. Depending on therapy parameters (therapy frequency, output type, dose, therapy duration and mode), the emphasis is on a thermal effect that results from ultrasound therapy (thermal growth and reflection from tissue barriers such as bones or joints) or a micromassage in the treated tissue segments. The main effect of ultrasound therapy is the musculoskeletal pain reduction.

Since ultrasound is reflected by air, you should use a coupling agent (ultrasound gel) or connect under water (subaqueous) for optimum conduction of the ultrasonic waves from the transducer to the tissue.


For more detailed information, please read our comprehensive brochure "Short introduction to ultrasound therapy", which contains many practical examples.



Simultaneous therapy

The transducer acts as the electrical stimulation cathode and a plate or vacuum electrode acts as anode in simultaneous therapy using electrotherapy and ultrasound (with a cumulative therapy effect). Simultaneous therapy is available by using combination units as well as by combining any electrotherapy unit with the related ultrasound therapy unit. Simultaneous therapy is used particularly in pain therapy. Current selection combined with ultrasound parameters ensure a wide variety of treatment combinations.



		 IONOSON-Expert	 PHYSIODYN-Expert
Combination therapy			
Currents	IF (Classic interference current)	x	x
	AMF (Bipolar interference current)	x	x
	MT (Medium-frequency muscle stimulation)	x	x
	KOTS (Russian stimulation)	x	x
	G (Galvanisation)	x	x
	GMC (Galvanisation with microcurrent)	x	x
	DF (Diadynamic current diphasé fixe)	x	x
	MF (Diadynamic current monophasé fixe)	x	x
	CP (Diadynamic current modulé en courtes périodes)	x	x
	LP (Diadynamic current modulé en longues périodes)	x	x
	UR (Ultra stimulation current acc. to Träbert)	x	x
	HV (High voltage current)	x	x
	TENS (Transcutaneous electric nerve stimulation)	x	x
	MENS (Electric nerve stimulation with microcurrent)	x	x
	IG 30 (Pulse galvanization 30)	x	x
	IG 50 (Pulse galvanization 50)	x	x
	FM (Frequency-modulated current)	x	x
	STOCH (Stochastic current)	x	x
	FaS (Faradic surge current)	x	x
	HVS (Current mode with high voltage stimulation characteristics)	x	x
	T/R (Pulses with adjustable parameters)	x	x
Diagnostics	Faradic excitability test	x	x
	Medium-frequency test (Lange)	x	x
	Accommodation quotient	x	x
	Rheobase/chronaxy	x	x
	I/T curve	x	x
Treatment	Alternating and simultaneous stimulation	x	x
	Two-channel electrotherapy	x	x
	Simultaneous therapy	x	
Ultrasound	1 MHz ultrasound	x	
	3 MHz ultrasound	x	
	Biocompatible titanium transducer	x	
	Subaqueous treatment	x	
Other features	Touch screen	x	x
	Treatment index with filtering functions	x	x
	One-button operation	x	x
	Multifunctional intensity controls	x	x
	Favorites menu	x	x
	Patient database	x	x
	SD card slot for product updates	x	x



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:

- » Musculoskeletal pain
- » Venous insufficiency/ulcers
- » Pressure ulcers
- » Muscle strengthening
- » 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 increase of muscle strength.
- » 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.



PHYSIOMED®

A brand of

PHYSIOMED ELEKTROMEDIZIN AG

Hutweide 10 | 91220 Schnaittach, Germany

☎ +49 9126 2587-0

☎ +49 9126 2587-25

✉ info@physiomed-group.com

🌐 www.physiomed.de