Multifunctional unit Etius ULM found its application in electrotherapy, ultrasound therapy, combined therapy, laser therapy and locally focused magnetotherapy. The unit has the possibility of performing semi-automatic electrodiagnostics of nervous muscle system.

Etius ULM unit is equipped with two fully independent electrotherapy treatment channels with the possibility of performing treatment procedures on 4 electrodes as well as channels using ultrasounds, laser radiation and low frequency magnetic field.

Basic area of its functionality is electrotherapy, in which the unit provides the availability of all typical and commonly used currents. Additionally, the unit offers completely new possibilities: application of microcurrents, unipolar sine surge and specially designed TENS currents used in spastic paralysis therapy.

Thanks to the application of modern technical solutions, the Etius ULM unit enables performing combined therapy treatments without the necessity of connecting an external electrostimulator or ultrasound therapy unit.

Additionally, the unit is equipped with specially dedicated modes for operation with the use of different types of optical fiber applicators that improve the effectiveness of treatments.

Versatility of the unit allows to perform simultaneous treatments with different parameters on one or two patients.

Etius ULM unit has got a data base of 449 preset treatment programs and sequences specially developed in cooperation with physiotherapy experts. In addition, the device possesses a concise, easily customizable list of favorite programs, where the users can save their most commonly used treatment programs.

Due to its vast functionality, the unit is perfectly suited for home healthcare environment therapy. Therefore, a special bag for the unit and accessories which facilitates fieldwork was designed.
Electrotherapy, ultrasound therapy, combined therapy, laser therapy and magnetotherapy

**SPECIFICATION**

**ELECTROTHERAPY – CURRENTS**
- interferential (isoplanar, dynamic, static, one-channel (AMF) currents)
- TENS (symmetric, asymmetric, alternating, burst)
- TENS to spastic paralysis therapy
- Kotz’/Russian stimulation
- tonolysis
- diadynamic (MF, DF, CP, CP-ISO, LP)
- pulse (rectangular, triangular)
- pulse – Trabert, Leduc’, faradic
- USS – unipolar sine surge
- galvanic
- microcurrents

**ELECTRODIAGNOSTICS**
- electrodiagnostics with graphic presentation of I/t curve
- automatic calculation of rheobase, chronaxie and quotient of accommodation

**ULTRASOUND THERAPY (optional)**
- 1 MHz, 1 cm² ultrasound head
- 1 MHz, 4 cm² ultrasound head
- continuous emission – thermal effect
- pulse emission – micro-massage
- ultrasound head provided with contact control connected to treatment timer
- stabilization of output power

**LASER THERAPY (optional)**
- point probe R 660 nm/40 mW
- point probe R 660 nm/80 mW
- point probe IR 808 nm/200 mW
- point probe IR 808 nm/400 mW
- scanning applicator R+IR 50 mW + 400 mW
- scanning applicator R+IR 100 mW + 450 mW
- cluster laser applicator CL1800 5Rx40 mW + 4IRx400 mW
- emission of laser radiation in continuous and pulse mode
- regulation of duty factor or pulse time
- regulation of laser power radiation
- optical fiber applicators for laser acupuncture and laryngological application

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Electrotherapy, ultrasound therapy, combined therapy, laser therapy and magnetotherapy

**Etius UL**

**MAGNETOTHERAPY (optional)**
- CPE type plate applicators intended for locally focused magnetotherapy
- optional – magnetic field application with the use of one or two coupled applicators
- convenient fastening of applicators by velcro belts
- field type: sine, triangular, rectangular, half sine, half triangular, half rectangular
- continuous and interrupted emission
- wide range of frequencies

**MANUAL MODE**
complete control over parameters for advanced users

**TREATMENT PROGRAMS**
- simplification of the unit operation
- treatment programs chosen by name
- 449 preset treatment procedures
- 150 user-defined programs
- 160 favorite programs
- naming individual user programs
ERGONOMICS
- two independent treatment channels
- operation mode: program/manual
- easy-to-read display
- operation in graphic mode
- preset treatment program base
- treatment programs chosen by name
- treatment timer
- electrodes test
- statistics – the number of performed treatments
- buzzer volume setting
- precise control over the ultrasound wave emission while performing treatment
- head sensitivity calibration
- operation comfort – temporal loss of contact does not interrupt treatment procedure e.g. in the bone area
- dedicated modes of operation for optical fiber applicators
- convenient fastening of magnetic field applicators by velcro belts

STRUCTURE
- graphic LCD display
- modern design
- heavy-duty and reliable keyboard
- operation in CC (stabilized output current) or CV (stabilized output voltage) modes
- complete galvanic isolation between channels in each mode
- self-test – systematic control of the unit
- light weight and compact dimensions enables easy transportation

TECHNICAL PARAMETERS
controller – maximum constant current in patient’s circuit (CC mode):
- interferential, Kotz’, unipolar sine surge 100 mA
- TENS 140 mA
- diadynamic, pulse 60 mA
- galvanic 40 mA
- tonolysis 100 mA
- microcurrents 1 000 µA
- max. voltage in patient’s circuit (CV mode) 140 V
- max. ultrasound wave intensity 3 W/cm²
- pulse frequency 16 Hz, 48 Hz, 100 Hz
- duty cycle for pulse mode 10 %, 25 %, 50 %, 75 %
- max. magnetic field induction 10 mT (100 Gs)
- laser therapy device class 3B
- mains supply 230 V, 50 Hz, 70 W, 100 VA
- weight max. 6 kg
Etius ULM

Technical specification

STANDARD ACCESSORIES
- mains cable
- patient’s cable (2 pcs.)
- electrode 6x6 cm (4 pcs.); 7,5x9 cm (2 pcs.)
- viscose cover 6x6 cm (8 pcs.); 7,5x9 cm (4 pcs.)
- velcro belt 40x10 cm (2 pcs.); 100x10 cm (2 pcs.)
- spare fuse WTA-T 1 A/250 V (2 pcs.)
- DOOR – remote interlock connector (1 pcs.)
- user guide (1 pc.)

OPTIONAL ACCESSORIES
- disposable self-adhesive electrodes 3x4 cm; 5,5x5,5 cm; 5,5x12,5 cm
- point electrodes 5 mm, 10 mm, 15 mm, 20 mm
- sand-filled bag 21x14 cm, 21x28 cm
- crocodile clip
- 1 MHz, 1 cm² ultrasound head with holder
- 1 MHz, 4 cm² ultrasound head with holder
- gel 0,5 l (1 pc.)
- point probe R 660 nm/40 mW with holder
- point probe R 660 nm/80 mW with holder
- point probe IR 808 nm/200 mW with holder
- point probe IR 808 nm/400 mW with holder
- scanning applicator R+IR 50 mW + 400 mW with a stand
- scanning applicator R+IR 100 mW + 450 mW with a stand
- cluster laser applicator CL1800 5Rx40 mW + 4IRx400 mW with holder
- magnetic field applicator – CPE type with covers
- patient’s stop switch
- Elf, Elf X trolley
- PRO bag

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