

# ENRAF-NONIUS

## Contents

Enraf-Nonius - A story of success.....	2	EN-Car U	
		EN-Car U .....	46
The 6-series: effective treatment freedom .....	8		
6-Series characteristics .....	10	Traction therapy	
Total adaptability of the Enraf-Nonius 6-series equipment	12	Eltrac 471 .....	48
Combination, Ultrasound, Electrotherapy		Presso therapy	
Sonopuls 692.....	14	EndoPress 442 .....	50
Sonopuls 692V S .....	16		
Sonopuls 492.....	18	Shortwave and microwave therapy	
Sonopuls 491.....	20	Curapuls 670.....	52
		Curapuls 970.....	54
Ultrasound therapy		Radarmed 650+.....	56
Sonopuls 490.....	22	Radarmed 950+.....	57
Sonopuls 190.....	24	Circuplode & Flexiplode .....	58
		Furniture for short and microwave therapy.....	59
Electrotherapy		Thermo therapy	
Endomed 684V .....	26	Fangoheater & Paraffin-bath .....	60
Endomed 682V .....	28	Packheater, Enno Moist & Hot/Coldpacks .....	61
Endomed 482 .....	30	Packheaters .....	62
Endomed 182 .....	32	Chilling units & Packs.....	63
Vacotron S .....	34		
Vacotron 460 .....	35		
		Miscellaneous	
Electrotherapy - TENS		Infrared Radiators & Monark 970 Cycle.....	64
EN-Stim 4 .....	36	Quadriceps Bench & Other exercise materials.....	65
TensMed S84.....	37	Small practice materials .....	66
TensMed S82 & P82 .....	37		
		EN-Cardio	
Biofeedback therapy		EN-Motion treadmill .....	68
Myomed 632V.....	38	EN-Mill treadmill .....	70
Myomed 134.....	40		
		Explanation of the symbols .....	72
Laser therapy			
EndoLaser 422.....	44		



# ENRAF-NONIUS

## A story of success

### The company history

More than 80 years ago, in 1925, the First Dutch Röntgen Device Factory (ENRAF) in Rijswijk started developing equipment for röntgen applications and diathermy. The production facility was later moved to the city of Delft, known not only for its world-famous Delft Blue porcelain, but also for its university, which for centuries has produced the country's top engineers and where research has always been a core activity. In 1948 the instrument maker firm Nonius was set up by the founder of Enraf. The company specialised in precision measuring instruments. Enraf, meanwhile, had not stood still, and had started making a name for itself in electro surgery, with, for example, the Curatis.

With participation in Enraf by the English company Evershed & Vignoles (it is by now 1955), the rights to the manufacturing and sale of a very advanced range of electronic measuring and control equipment were acquired. 1965 was an important year, which saw the merger of Enraf and Nonius into Enraf-Nonius and the coming into force of the Dutch Physiotherapists Decree. Physiotherapists, masseurs and specialists were awarded the official status of paramedics, a development that also took place in surrounding countries.

The wide product range of Enraf-Nonius was at that time geared to precision and came to include industrial measuring and control equipment and medical applications. A conspicuous product at that time was the Curamed 401, the first safe and reliable diathermy device for treatment of the locomotor apparatus. During the active seventies, various acquisitions took place and our production site in Brunssum was opened.

Enraf-Nonius was a leading specialist in its field, active in three high technology areas: industrial measuring equipment, röntgen diffraction and medical equipment. The Sonopuls 407 and 417, the Endomed 415 and 422, the Dynapuls 417, 421 and 424 and the Curapuls 418 were developed during this time and became known worldwide.

The Manulekt treatment couches completed the practical product range. The couches were a welcome addition for therapists and eagerly snapped up. After a period of internationalisation and expansion during the nineties, Enraf-Nonius has since 2000 concentrated on the market for physiotherapy and rehabilitation equipment. Enraf-Nonius kept in step with a world in motion and developed into the leading specialist in the field of kinesitherapy. An international network of highly trained, reliable product experts make our products available to motion specialists around the globe.

Functionality, reliability and durability are concepts that were associated with Enraf-Nonius products then as they are now. The latest production techniques, workmanship and the company's continuing interest to optimise its products through customer feedback, confirm the company's image of "passion for motion", in which the human being has a central position and is a true *partner for life*.

EN-Projects, a subsidiary of Enraf-Nonius, contributes to the international success and reputation of the company. EN-Projects specialises in Turn Key Medical Equipment and realises large-scale global projects in hospitals and rehabilitation centres. With many years' experience and proven reliability, EN-Projects is a valued partner for international ministries, health and other government bodies. EN-Projects have been realised in Europe, Latin America, Asia and the Middle East, and with its current large-scale schemes EN-Projects is providing an ongoing contribution to the development of physiotherapy in less developed countries.

**Our product catalogues are divided into three sections:**

### Technical physiotherapy equipment

This is characterised by a selection of unsurpassed, contemporary, high technology physiotherapy equipment. A wide assortment of electro and ultrasound therapy, electro stimulation, vacuum therapy, biofeedback, shortwave and microwave therapy, thermotherapy and traction. Special attention has been paid to our new products in the Technical Physiotherapy section. Equipment for top performance and quality!

newcomer in our range, the result of advanced technology combined with user feedback and the expertise of our developers to meet this need. An extremely attractive, safe and stable standard couch that will appeal to everyone. It projects strength, safety and functionality, and comes at an attractive price. The couch that completes the famous Enraf-Nonius treatment couch collection.

### Active rehabilitation and medical fitness

This section provides a complete overview of our products for active and functional rehabilitation and medical fitness products.

the functionality, quality and reliability of this equipment. We also have something new for you in this section: the EN-Motion, a physio treadmill fitted with the latest techno gadgets and unique options.

With our extensive knowledge, customer-orientation and continuous urge to adapt our products to today's customers, using the latest technological developments, Enraf-Nonius also professionally advises on the setup of your exercise area. Our experts will be pleased to offer advice and guidance in creating a contemporary, functional, stylishly designed

with you, to help improve the quality of life of all people. In Rotterdam we do this within R&D, national and international sales and marketing, technical service, the administrative department and EN-Projects. Our logistics team does this every day in Brunssum.



### The treatment couches

The Manumed treatment couches form a comprehensive range of specialist couches with ultimate stability, easy adjustability and total comfort. Couches that can be adapted for every personal requirement. The Manumed treatment couch is used in practices, hospitals and healthcare centres worldwide. We also have a

Products that show that we have blended quality, functionality and design into a whole. Equipment designed with the utmost care, meeting the most stringent requirements of the MDD (Medical Devices Directory). Motion specialists, Olympic athletes, impaired patients, the young, the pregnant, top football clubs and many other users have been convinced of

exercise area using our quality equipment. Enraf-Nonius has always been characterised as a market leader in the world of physiotherapy, with its unprecedented quality equipment. The basis for our unparalleled success formula was established in the past: the coming together of expertise, the delivery of quality and customer-orientation. Enraf-Nonius will continue to work

Enraf-Nonius:

**“Partner for Life”**  
with a  
**“Passion for Motion”**



**Endomed** TensMed EndoPress  
EndoLaser **Sonopuls**  
**Myomed** EN-Stim Curapuls Radarmed  
**Circuplode** Eltrac Vacotron







With products for röntgen applications and equipment for diathermy, Enraf-Nonius's roots are in the important field of physiotherapy. Shortwave devices for physiotherapy have been manufactured since the company's founding in 1925. Experience gained over many years, workmanship and the connection with the University of Delft have all contributed to the success of Enraf-Nonius's technological physiotherapy products.

Physical therapy is the combined action of therapies using light, air, water, electricity, heat, cold and waves of various forms and composition, as well as biological and mechanical effects resulting from various physical stimuli. Enraf-Nonius grew during a period when concepts such as physiotherapy technology and rehabilitation were first introduced, enabling the development of equipment and systems. At that time (during the mid-fifties) Enraf-Nonius already had equipment such as Either UED/UE/GFPZ and the Curatis.

High, low and medium frequency devices, equipment for ultrasound, ultraviolet and laser therapy, massage, traction and suspension, exercise and measurement equipment, as well as examination and thermo-devices for hydrotherapy and kinesitherapy. All these devices have continued to be developed further and are sold worldwide. Sonopuls, Endomed, Curapuls and Myomed, each of them concepts in their own right in the world of technological physiotherapy. Technological advances have enabled Enraf-Nonius to increase the efficiency and effectiveness of its existing therapies and equipment even further. Whether it concerns a shorter treatment time, a more precise physical stimulation of the tissue response, or easier operation, Enraf-Nonius products for physical therapy continue to stand out with their state-of-the-art technology. Technology makes the impossible possible: a sensational innovation from Enraf-Nonius has got the physioworld sitting up, with the 6-series treatment units for ultrasound electrotherapy and combination therapy. This unique innovation from Enraf-Nonius makes practice work a lot more pleasant and efficient and helps to further increase the intensity (and the effect) of the treatment. The smooth, contemporary design of the housing makes the device a pleasant addition to any practice.

Enraf-Nonius products are designed under the most stringent requirements for use and safety. Awareness of quality at Enraf-Nonius is extremely high, and its products are consequently sold worldwide. Despite worldwide differences in circumstances, Enraf-Nonius products always deliver the same reliable output. Quality that is visible in durability and reliability, year after year. The future will continue to bring more remarkable products. We hope that our equipment will continue to surprise you with its functionality and design. Our R&D experts are constantly striving to create advanced technological equipment for you and the world of physiotherapy, products that meet the highest quality requirements and the strictest safety standards.

**Enraf-Nonius** has been at the top of its field  
of technological **physiotherapy equipment**  
for many decades, and from this background,  
as well as from our **passion** for technology and motion,  
we look forward to continuing to supply you with  
**state-of-the-art products** for  
**technological physiotherapy treatment methods.**



# The 6-series: effective treatment freedom



Technology makes the impossible possible: a sensational innovation from Enraf-Nonius has got the physioworld sitting up with the 6-series treatment units for ultra and/or electrotherapy and combination therapy. This unique innovation from Enraf-Nonius makes practice work a great deal more pleasant and efficient, and helps to further increase the intensity (and the effect) of the treatment. The smooth, contemporary design of the housing makes the device a pleasant addition to any practice.

The 6-series offers 1, 2 or 4-channel electrotherapy, diagnostic and ultrasound therapy, if required in combination with an integrated vacuum unit. A further option with this product series is biofeedback, with or without electrotherapy. The new stationary ultrasound unit is extremely user-friendly.

The 6-series is a particularly efficient therapy assistant, a treatment aid that will become indispensable in any practice. The unit has an ultra-modern, functional design, is easy to operate and is reliable. The 6-series is the result of 80 years of know-how, experience and innovation in physiotherapy. The 6-series provides instant access to all the relevant treatment protocols. A separate protocol can be created and saved for each client. At the next treatment, the client's details are instantly accessible.

The functions can be controlled with one hand, including information about the most effective positioning of the electrodes or the required therapy. The information is clearly displayed on the LCD colour screen, which can be optimally adjusted to the lighting conditions. The clear contrast comes into its own in particular in the differentiation between parts, for instance in an anatomical diagram.

As a physiotherapist you know the importance of physical contact with your client. If you constantly have to switch your attention from the device to your client, this contact is broken, adversely affecting the intensity (and therefore the effect) of the treatment. The intuitive operation of the 6-series allows you to work more comfortably and give your full attention to your client. The result is optimal efficiency at every consultation.

The new 6-series has a flexible housing with a modern, sleek design. The device is future-proof, with a number of free slots for new therapy module insertion cards. With this flexible design you can build up the device around your needs. With the Enraf-Nonius 6-series you will always be up-to-date and assured of many years of comfortable operation.

The Sonopuls 692 (a complete device for ultrasound, combination and electrotherapy) forms part of the 6-series, such as the

Endomed 682/684 (a 2/4 channel device for electrotherapy and diagnostics). These devices can be expanded with a vacuum unit, which makes fitting electrodes particularly easy and comfortable. The Myomed 632 is the most recent addition to the range and further completes the series, offering you even greater comfort. Combined with electrotherapy, this device for EMG feedback can deliver fast, functional recovery from many conditions.

The stylish 6-series offers the ultimate treatment freedom. Not only are you free to give your clients the attention they deserve, but also to select precisely the therapy you need, now and in the future.





The devices in the Enraf-Nonius 6-series have 16 types of current that can be used in 36 therapeutic applications. The devices in the 6-series give you all the low, medium and high-frequency currents, including TENS and high voltage. The 6-series also has eight different interference forms: the classic bipolar and tetrapolar interference, but also isoplanar, dipole vector and manual, with many variables in operating time.

The new 6-series is built into a flexible cabinet. With an eye to future developments, there are free slots for other therapy module insertion cards (just as in your PC). With the Enraf-Nonius 6-series equipment you will therefore always be up-to-date.

The 6-series products are fully software controlled. With the aid of a simple SD card (like the one in a digital camera) you can adapt and upgrade your equipment. This means that the 6-series will always keep up-to-date with the latest innovations and therapy options.

The 6-series equipment is ready for the protocols card, which will allow you to enter specific protocols in the future in a straightforward way. These can be both specific to the region and fully individualised protocols.

Enraf-Nonius equipment has a triple safety concept. If the primary control system fails, an independent secondary system ensures that adequate action is taken (depending on the operating mode at the time). In the unlikely event that both the primary and secondary systems fail

at the same time, there is a third, back-up system. The equipment therefore has an exceptionally high safety level.

The connection options for electrodes, the remote control and other cabling are clear and straightforward. There are no inconvenient plugs or adaptors, just robust terminal boxes with clear descriptions in the shape of coloured rings and form.

The Help button provides all the answers you need within easy reach. No matter what your question or where you are in the menu, one push of the Help button will take you to the Help menu. This operation is handy, efficient and safe, which means peace of mind for you.

If the area to be treated absorbs ultrasound, the intensity is automatically adapted. More absorption means a higher intensity, less absorption a lower one. As this absorption is measured in the treatment head, the effect of reflection of ultrasound is included in this control, so that there is never any danger of overdosing.

Enraf-Nonius has a worldwide network of authorised dealers and service agents. These service centres can check and calibrate your Sonopuls with specially developed Enraf-Nonius service equipment. With the high standards required of ultrasound equipment, you will always be assured of a reliable unit that meets all the legal requirements as well as your own.

Extensive options for mono-applications of electrotherapy (through two independent channels or through linked channels), ultrasound therapy or combination applications of both, so that a wide variety of conditions can be treated effectively.

Apart from the ergonomic treatment button, the whole device is fitted with ergonomic features. The 6-series has a soft-touch support. The central control button also has a soft-touch layer, as well as a turning mechanism of the highest quality. The display is fully adjustable to obtain the ideal viewing angle. The whole design is intended for right and left-handed users.

The ergonomic shape of the head means that it is easy to hold, so that you do not become tired during treatment. The head and the hand have to form a whole and the ingenious design allows you to achieve this in both the lower, the upper and the pinch hold.

The Sonopuls head holder is self-centering and fitted with an auto-lock mechanism. Thanks to this mechanism you will never again experience the treatment head falling out because it was not fully positioned in the holder. When you place the head in the holder it will always fall effortlessly into the correct position.

The 6-series allows three clients to be treated at the same time with the same machine. The completely galvanised division between

the various components makes this a safe procedure. The menu-controlled interface provides a clear view of each client. (Please note: Multi-client use of the device is not permitted in all countries).

With this you can treat with 1 or 3 MHz without the need to change the head.

The ERA (Effective Radiating Area, in  $\text{cm}^2$ ) is the effective radiating area of the treatment head. The ERA determines the relationship between the total delivered capacity (in watts) and the delivered intensity (in  $\text{watts}/\text{cm}^2$ ). As both the delivered capacity and the ERA are precisely determined with Enraf-Nonius treatment heads, the delivered intensity is therefore also precisely known. With the Sonopuls equipment this delivered intensity is displayed on the screen. The heads have an ERA that practically corresponds with the visible surface of the contact area. With this unique control technology, the Sonopuls can supply an effective bundle of  $5 \text{ cm}^2$ , so that you know exactly what dose you are supplying.

The crystal-clear display provides you with all the information you need. With its scratch-resistant covering, the display will continue to provide crystal-clear images even after many years of use in a busy practice.

Wherever you are in the world, you can always connect the 6-series without problems thanks to the intuitive mains connector. Whether you

are working with a mains voltage of 110 V/50 Hz or 230 V/60 Hz, it makes no difference to the 6-series. You do not need to use external transformers or other mains adaptors, as everything is integrated in the Endomed 682(V) and the Sonopuls 692(V).

The vacuum unit of the 6-series is the thinnest of its type, at only 5 cm in height, which means that it looks good and does not take up much space. The unit is virtually silent, which further increases the comfort factor.

The vacuum units are fitted with a water overflow detection signal. The sponge electrodes are moist and the vacuum unit will suck up this moisture. The moisture is collected in a reservoir and you will automatically be alerted when the reservoir needs to be emptied. Your equipment is therefore available at all times and internal damage through moisture is avoided.

Total adaptability of the Enraf-Nonius 6-series equipment

Enraf-Nonius is proud to present the complete, modular 6-series machine. You can configure your Endomed, Sonopuls or Myomed exactly the way you want. Even better, you can upgrade your existing device. This means that you can start with a relatively simple device and upgrade it later with added functionality. This allows you to spread your investment over time, while you still have the device that meets the needs of your practice, now and in the future!

Is it an **Endomed?**  
Is it a **Sonopuls?**  
Is it a **Vacotron?**  
Is it a **Myomed?**  
  
It's **whatever you want it to be!**

- Just as with your PC, you can now change the functionality of your device by adding modules. You can start, for instance, with a two-channel electrotherapy machine (the Endomed 682) and later add the Sonopuls module. Or, if you have a Sonopuls, you can extend it with biofeedback functionality.
- Three types of vacuum modules. With these modules you can integrate a vacuum machine into your system.
  - An EMG module. With this module you can add biofeedback options to your device, in the form of both EMG and pressure feedback.
  - A TFT screen module for the EMG unit. With this module you can display EMG and pressure feedback data on a large TFT screen.

Six available functionalities

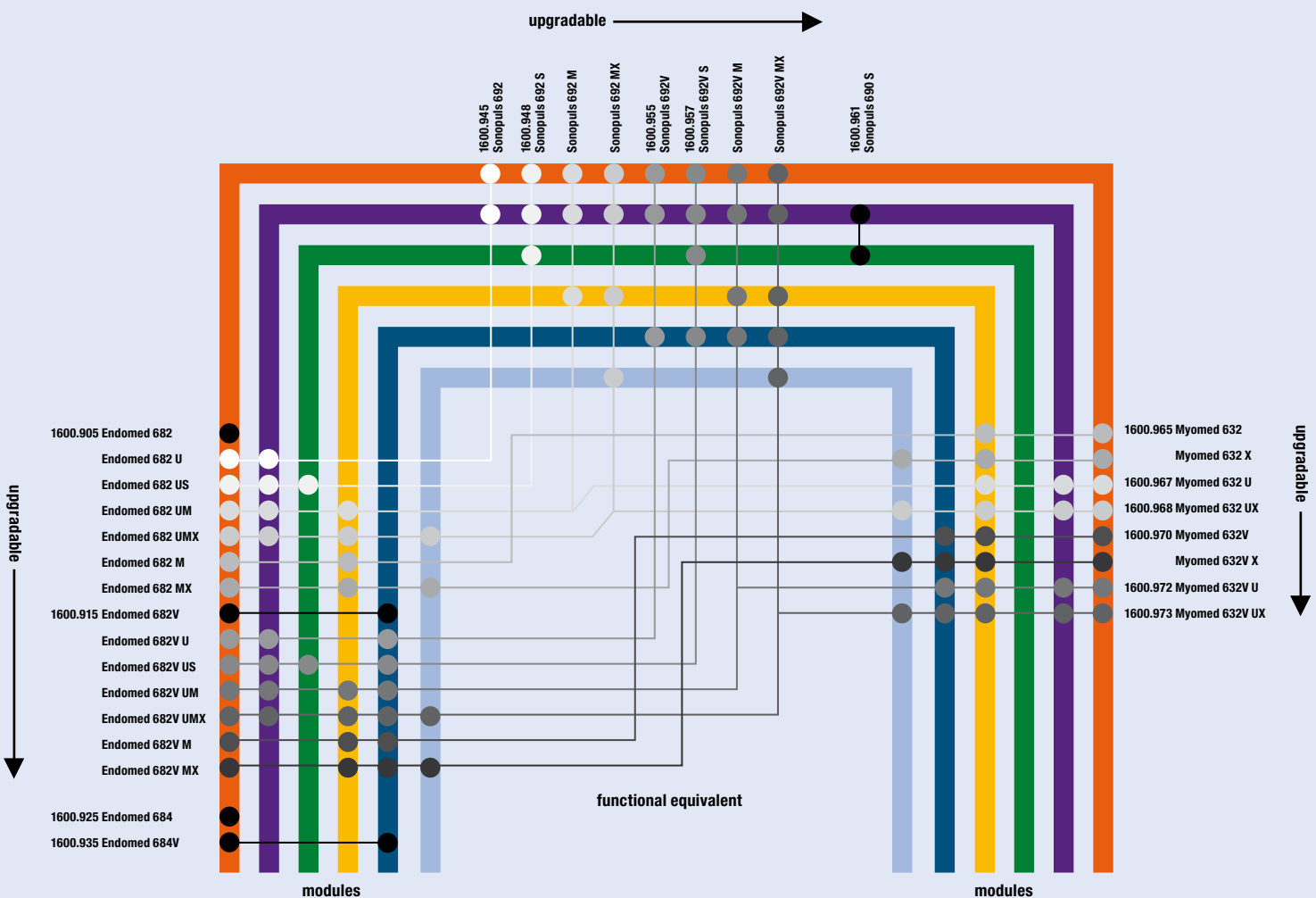
There are at present eight modules with six functionalities available for your 6-series devices, namely:

- A current module. With this module you can extend a 2-channel electrotherapy machine into a 4-channel electrotherapy machine.
- An ultrasound module. With this module you can add ultrasound functionality to your device.
- A StatUS module. This module allows you to add the revolutionary new Stationary Ultrasound (StatUS) to your device.

Complete package

All upgrades are supplied as a complete package, including all accessories, so that your upgrade is operational immediately after installation. The ultrasound heads are supplied with the ultrasound modules. All cables and electrodes are supplied with the vacuum, electrotherapy and EMG modules.

- 1604950 6-series module AC/DC current function
- 1605950 6-series module ultrasound function
- 1608950 6-serie module StatUS function
- 1607950 6-series module EMG function
- 1606950 6-series module vacuum function 2 channel incl. pump
- 1606951 6-series module vacuum function 4 channel incl. pump
- 1606952 6-series module vacuum function 4 channel excl. pump
- 1607960 6-series module for remote LCD display function

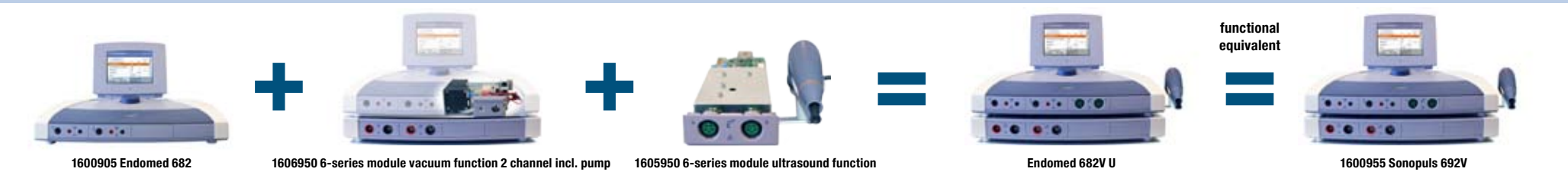


Example 1

**ORDERING DATA**  
1604950 6-series module AC/DC current function  
1605950 6-series module ultrasound function  
1608950 6-series module StatUS function  
1607950 6-series module EMG function  
1606950 6-series module vacuum function 2 channel incl. pump  
1606951 6-series module vacuum function 4 channel incl. pump  
1606952 6-series module vacuum function 4 channel excl. pump  
1607960 6-series module for remote LCD display function



Example 2





Complete equipment for ultrasound, electro and combination therapy

The comfort of ease of use

Imagine: Operating all forms of therapy with just one hand. Purely by touch, just like your computer's mouse. And being able to call up the treatment protocol of your choice directly on the colour LCD screen, so that you can fully concentrate on your client. Doesn't that sound comfortable? Well, it is possible. With the fully intuitively operated 6 series of treatment units for ultrasound and/or electrotherapy. This unique innovation from Enraf-Nonius makes work in your practice that bit more pleasant and efficient and also helps you to increase further the intensity (and the effect) of the treatment.

Versatile

The Sonopuls 692 is a versatile and highly advanced piece of equipment for ultrasound, electro and combination therapy. It offers all the options for the universal application of ultrasound with frequencies of 1 and 3 MHz. With these frequencies, both deep and surface tissue structures can be selectively treated. Continuous and pulsed applications of ultrasound are both possible. In addition, the Sonopuls 692 offers sixteen different types of current that can be applied as desired, in combination with the ultrasound.

Precise and helpful information on the display

The crystal clear and scratch-resistant LCD colour screen does not leave anything to be desired regarding clarity. The Sonopuls 692 is equipped with an exceptionally efficient therapy 'assistant'; an aid that will quickly prove to be indispensable in your practice.



You have all the relevant treatment protocols ready to hand. You can access all functions with the fingers of one hand, including information on the desired placement of the electrodes or the therapy that you wish to apply.

In addition, for each client you can create a separate protocol with the therapy wizard and store it in memory. At the next repeat consultation, you have the information available again in seconds and can 'get to work' straightaway.

The optimal ultrasound dosage

The Sonopuls 692 provides you with certainty concerning the actual power given from the ultrasound heads. The Enraf-Nonius equipment responds to the impedance of the underlying tissue and thus offers the possibility of setting the dosage extremely accurately.

V for vacuum

The Sonopuls 692V combines the Sonopuls 692 with a vacuum unit. This vacuum unit is a whisper quiet suction device with the possibility of applying four vacuum electrodes. The suction power can be set across a broad range and can be applied either continuously or pulsed. A regulator system activates the pump only when the vacuum has fallen below a certain minimum.

The vacuum electrodes are quick and easy to attach. They fit fully and comfortably to the body's surface. The electrode positioning is straightforward and easy and a good contact across the full surface of the electrode is ensured.

Combination therapy

Combination therapy is an extremely efficient form of treatment. In combination therapy, simultaneous use is made of the pain-reducing action of electrotherapy with the local metabolic changes through ultrasound therapy. This means it is possible to intervene at an early stage without imposing an inconvenient load to the client. In addition, results can also be achieved with chronic conditions since the continuance of a poor local circulation can be changed if both pain reducing yet stimulating treatment can be provided at the same time.

The Sonopuls 692V is the complete equipment for ultrasound, electro and combination therapy, with the possibility of application by means of vacuum electrodes.

This unit can be extended by means of functional modules. See page 13 for a more extensive explication and ordering data.

ORDERING DATA

- 1600945 Sonopuls 692
- 1600955 Sonopuls 692V

This unit can be extended by means of functional modules.

- 1608950 6-series module StatUS function
- 1607950 6-series module EMG function
- 1607960 6-series module for remote LCD display function

STANDARD ACCESSORIES

- 3444503 Vacuum electrodes Ø 60 mm, set of 2x2
- 1601901 Multi-frequency treatment head, large (5 cm<sup>2</sup>), 1 & 3 MHz
- 3444020 Strap 100x3 cm
- 3444021 Strap 250x3 cm
- 3444129 Rubber electrodes 6x8 cm, 2 mm female, 2x2 pc.
- 3444290 Mains cable 230V-EUR
- 1460266 Moist pads for rubber electrode 6x8 cm, set of 4
- 3444508 Vacuum electrode cable black, 2x
- 3444209 Patient cable 2-core & 2 mm male plugs-purple
- 1600810 Holder treatment head for 1 treatment head, 6-serie
- 9999408 Contact-gel, bottle 250 ml, 1 piece

- 3444505 Sponges Ø 65 mm, set of 4 (for vacuum electrodes Ø 60 mm)
- 3444078 Dummy plug
- 3440001 Screwdriver 6-series
- 3444208 Patient cable 2-core & 2 mm male plugs-black
- 3444507 Vacuum electrode cable red, 2x

OPTIONAL ACCESSORIES

- 1600820 EN-Point
- 1468940 EN-Car U
- 1497801 Remote control, 2 channels for 182, 482, 492 and 6-series
- 3444022 Strap 100x5 cm
- 3444023 Strap 250x5 cm
- 2523523 Adapter plug, 2 mm female, 4 mm male, black
- 2523524 Adapter plug, 2 mm female, 4 mm male, red
- 1601911 Multi-frequency treatment head, small (0,8 cm<sup>2</sup>), 1 & 3 MHz
- 3442929 Contact-gel, bottle 250 ml, box of 12
- 3442930 Contact-gel, bottle 850 ml, box of 12
- 3442931 Contact-gel, canister of 5 l

- 3442932 Dispenser-set for 5 l canister
- 3444056 EN-Trode Ø 3,2 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444135 EN-Trode Ø 5,0 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444057 EN-Trode 5x5 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444058 EN-Trode 5x9 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444146 EN-Trode 5x10 cm, double lead, packing of 10 sheets of 2 pcs.
- 3444128 Rubber electrodes 4x6 cm, 2 mm female, set of 2
- 3444130 Rubber electrodes 8x12 cm, 2 mm female, set of 2
- 1460273 Moist pads for rubber electrode 4x6 cm, set of 4
- 1460275 Moist pads for rubber electrode 8x12 cm, set of 4
- 3444504 Vacuum electrodes Ø 90 mm, set of 2
- 3444506 Sponges Ø 95 mm, set of 4 (for vacuum electrodes Ø 90 mm)

TECHNICAL SPECIFICATIONS

- Current channels: 2, independent, fully galvanically isolated
- Current types: 16 current types-36 variants (see table)
- Ultrasound frequencies: 1 and 3 MHz
- Ultrasound: continuous and pulsed
- Pulse frequency / duty cycle: 100 Hz/ 5, 10, 20, 50, 80% 16 Hz / 20% -48 Hz / 20%
- Number of US connections: 2
- Number of vacuum electrode connections: 4
- Intensity: 0-2 W/cm<sup>2</sup> continuous, 0-3 W/cm<sup>2</sup> pulsed
- Programmable positions: unlimited
- Pre-programmed protocols: 60 items
- Supply voltage: 100-240 V ± 10% (50/60 Hz)
- Dimensions (wxdxh): 45x37x29,5 cm
- Weight: 6.2 kg



## StatUS



Stationary US treatment (stationary ultrasound, or StatUS) is the latest development in the field of treatment comfort. Ultrasound treatment has been well-proven for muscle/ligament disorders and for ligament injuries. Of all the treatment strategies, local stimulation with ultrasound is the most efficient, because it provides optimal stimulation of complex and often moderately vasculated ligament tissue areas, with both mechanical and thermal stimuli. Tissue repair and function regeneration occur more quickly than with alternative methods.

The ultrasound application itself, however, is time-consuming and labour-intensive. An effective ultrasound treatment session traditionally consists of an application lasting several minutes, whereby the treatment head is moved over the area. This dynamic approach is necessary due to possible cavitation and hotspots that can occur in the tissue. With the revolutionary new technique of the StatUS, this dynamic method is no longer necessary.

With StatUS, the ultrasound application remains stationary. Thanks to intensity modulation,

invented by Enraf-Nonius, hotspots no longer occur. With this technique the ultrasound head is kept at the same place, so that the stimulation occurs precisely where it is required. An added advantage is that the therapist does not need to hold the head in place, thus saving valuable time.

With the StatUS you can work faster, more specifically and efficiently. StatUS takes ultrasound to a new level, with increased comfort for both the patient and the physiotherapist.

## ORDERING DATA

**1600948** Sonopuls 692 S  
**1600957** Sonopuls 692V S  
**1600961** Sonopuls 690 S

## STANDARD ACCESSORIES

**xxx** Gelpad StatUS (8x)  
**3442942** Fixation ring gelpad StatUS (3x)  
**3444209** Patient cable 2-core & 2 mm male plugs-purple  
**3440001** Screwdriver 6-series  
**3444020** Strap 100x3 cm  
**3444021** Strap 250x3 cm  
**1600810** Holder treatment head for 1 treatment head, 6-series  
**9999408** Contact-gel, bottle 250 ml, 1 piece  
**1460266** Moist pads for rubber electrode 6x8 cm, set of 4  
**3444290** Mains cable 230V-EUR  
**3444208** Patient cable 2-core & 2 mm male plugs-black  
**3444503** Vacuum electrodes Ø 60 mm, set of 2x2  
**3444505** Sponges Ø 65 mm, set of 4  
(for vacuum electrodes Ø 60 mm)  
**3444507** Vacuum electrode cable red, 2x

**3444508** Vacuum electrode cable black, 2x  
**3444078** Dummy plug  
**3444129** Rubber electrodes 6x8 cm, 2 mm female, 2x2 pc.  
**1601901** Multi-frequency treatment head, large (5 cm<sup>2</sup>), 1 & 3 MHz  
**1601921** Ultrasound treatment head, large (5 cm<sup>2</sup>), 1 & 3 MHz StatUS

## OPTIONAL ACCESSORIES

**3442940** Gelpad StatUS (48x)  
**3442941** Gelpad StatUS (240x)  
**1468940** EN-Car U  
**1497801** Remote control, 2 channels for 182, 482, 492 and 6-series  
**1600820** EN-Point  
**3444022** Strap 100x5 cm  
**3444023** Strap 250x5 cm  
**2523523** Adapter plug, 2 mm female, 4 mm male, black  
**2523524** Adapter plug, 2 mm female, 4 mm male, red  
**3442929** Contact-gel, bottle 250 ml, box of 12  
**3442930** Contact-gel, bottle 850 ml, box of 12  
**3442931** Contact-gel, canister of 5 l  
**3442932** Dispenser-set for 5 l canister  
**3444056** EN-Trode Ø 3,2 cm, 2 mm female, packing of 10 sheets of 4 pcs.  
**3444135** EN-Trode Ø 5,0 cm, 2 mm female, packing of 10 sheets of 4 pcs.  
**3444057** EN-Trode 5x5 cm, 2 mm female, packing of 10 sheets of 4 pcs.  
**3444058** EN-Trode 5x9 cm, 2 mm female, packing of 10 sheets of 4 pcs.  
**3444146** EN-Trode 5x10 cm, double lead, packing of 10 sheets of 2 pcs.  
**3444128** Rubber electrodes 4x6 cm, 2 mm female, set of 2  
**3444130** Rubber electrodes 8x12 cm, 2 mm female, set of 2  
**1460273** Moist pads for rubber electrode 4x6 cm, set of 4  
**1460275** Moist pads for rubber electrode 8x12 cm, set of 4  
**3444504** Vacuum electrodes Ø 90 mm, set of 2  
**3444506** Sponges Ø 95 mm, set of 4  
(for vacuum electrodes Ø 90 mm)

## TECHNICAL SPECIFICATIONS

**Current channels:** 2, independent, fully galvanically isolated  
**Current types:** 16 current types-36 variants (see table)  
**Ultrasound frequencies:** 1 and 3 MHz  
**Ultrasound:** continuous and pulsed  
**StatUS:** duty cyle modulation and amplitude modulation  
**Pulse frequency / duty cycle:** 100 Hz / 5, 10, 20, 50, 80%-16 Hz / 20%-48 Hz / 20%  
**Number of US connections:** 2  
**Number of vacuum electrode connections:** 4  
**Intensity:** 0-2 W/cm<sup>2</sup> continuous, 0-3 W/cm<sup>2</sup> pulsed unlimited  
**Programmable positions:**  
**Pre-programmed programmes:** 60 items  
**Supply voltage:** 100-240 V ± 10% (50/60 Hz)  
**Dimensions (wxdxh):** 45x37x29,5 cm  
**Weight:** 6.2 kg





# SONOPULS 492

## Complete unit for ultrasound and combination therapy

High quality, extreme functionality and an eye-catching design, provide the professional physiotherapist with all modern current forms and multi-frequency ultrasound. With this technology it is possible to generate three different applications at the same time:

- Current over channel 1
- Current over channel 2
- Ultrasound

For optimal use, we have created more than 60 pre-programmed protocols, providing you with not only the best way to treat your patient, but also the most efficient way.

To work in style and comfort, Enraf-Nonius has created the EN-Car U. This stylish cart has been designed to accommodate the Vacotron 460 vacuum unit with our Sonopuls 492, providing an attractive and totally practical storage as well as a solution to your requirements.

With a battery (optional) you change the Sonopuls 492 from a tabletop into a portable unit. For ambulant treatments, carrier systems are available.

The remote control (optional) is a perfect aid to involve the patient in the treatment. The patient can easily set the intensity independently.

In combination with the Vacotron S, you have a perfect table model that takes up little space, is easy to operate and offers a good overview.

- Multi-frequency treatment head 1 & 3 MHz
- Contact control
- Combination therapy
- 19 Current forms for electrotherapy
- 10 Free programmable memory positions for simple protocols
- 10 Free programmable memory positions for sequential protocols
- 10 Treatment suggestions for ultrasound
- 51 Treatment suggestions for electrotherapy



## Combination, Ultrasound, Electrotherapy

### ORDERING DATA

**1497921** Sonopuls 492

### STANDARD ACCESSORIES

**9999408** Contact-gel, bottle 250 ml, 1 piece  
**3444290** Mains cable 230V-EUR  
**1458901** Multi-frequency treatment head, large, 1 & 3 MHz  
**3444119** Patient cable 2-core & 2 mm male plugs-purple  
**1497761** Protocol book for Sonopuls 492  
**1497752** Operating manual Sonopuls 492  
**3444021** Strap 250x3 cm  
**3444020** Strap 100x3 cm  
**1460266** Moist pads for rubber electrode 6x8 cm, set of 4  
**3444129** Rubber electrodes 6x8 cm, 2 mm female, 2x2 pc.  
**3444102** Patient cable 2-core & 2 mm male plugs-black  
**3444101** Cable adapter for 3444102 / 3444119  
**3444127** Adapter ENA-1550 100-240V

### OPTIONAL ACCESSORIES

**3444658** Bag for Endomed and Sonopuls 4-series, black  
**3444650** Case for Endomed and Sonopuls 4-series, grey  
**1468940** EN-Car U  
**1497801** Remote control, 2 channels for 182, 482, 492 and 6-series  
**2501016** Battery 12.0V 1.8AH  
**3444023** Strap 250x5 cm  
**3444022** Strap 100x5 cm  
**2523523** Adapter plug, 2 mm female, 4 mm male, black  
**2523524** Adapter plug, 2 mm female, 4 mm male, red  
**1458911** Multi-frequency treatment head, small, 1 & 3 MHz  
**1497811** Holder for 2 treatment heads, 4-serie  
**1497810** Holder remote control or 1 treatment head, 4-serie  
**3442929** Contact-gel, bottle 250 ml, box of 12  
**3442930** Contact-gel, bottle 850 ml, box of 12  
**3442931** Contact-gel, canister of 5 l

**3442932** Dispenser-set for 5 l canister

**3444056** EN-Trode Ø 3,2 cm, 2 mm female, packing of 10 sheets of 4 pcs.

**3444135** EN-Trode Ø 5,0 cm, 2 mm female, packing of 10 sheets of 4 pcs.

**3444057** EN-Trode 5x5 cm, 2 mm female, packing of 10 sheets of 4 pcs.

**3444058** EN-Trode 5x9 cm, 2 mm female, packing of 10 sheets of 4 pcs.

**3444146** EN-Trode 5x10 cm, double lead, packing of 10 sheets of 2 pcs.

**3444128** Rubber electrodes 4x6 cm, 2 mm female, set of 2

**3444130** Rubber electrodes 8x12 cm, 2 mm female, set of 2

**1460273** Moist pads for rubber electrode 4x6 cm, set of 4

**1460275** Moist pads for rubber electrode 8x12 cm, set of 4

**1480800** Electrode holder for 1480801

**1480801** Point electrode Ø 5 mm, 4 mm female (in combination with 2523523)

### TECHNICAL SPECIFICATIONS

**Current channels:** 2, independent  
**Ultrasound:** 1  
**Ultrasound frequencies:** 1 and 3 MHz  
**Ultrasound:** continuous and pulsed  
**Pulse frequency / duty cycle:** 100 Hz  
**Number of connections:** 1  
**Intensity:** 0-2 W/cm<sup>2</sup>, 0-3 W/cm<sup>2</sup>, duty cycle 5, 10, 20, 50%  
**Programmable positions:** 10 single, 10 sequential  
**Pre-programmed:** 50  
**Type mains adapter:** ENA-1550  
**Mains voltage:** 100-240 V ± 10% (50/60 Hz)  
**Output:** 15 VDC/3,3 A  
**Dimensions (wx dxh):** 29x28x11 cm  
**Weight:** 4 kg





# SONOPULS 491

Combination unit for ultrasound, electro and combination therapy

With this combination unit, you have all possibilities for a universal application of ultrasound therapy with 2 frequencies: 1 and 3 MHz.

## Multi-frequency treatment head

- Ergonomic design and user-friendly
- Water resistant
- Low weight
- Equipped with a visual indicator for contact control

## Simple operation

The operation buttons are conveniently arranged on the control panel. The parameters are easily set by means of one central control and remain visible on screen during treatment.

The Sonopuls 491 cannot be used in combination with the Vacotron S. The Sonopuls 491 is a portable and battery-operated unit that is suited for ultrasound therapy, interferential, TENS, direct current and combination therapy.

The Sonopuls 491 can also be connected to the mains supply for continuous use.

- Continuous and pulsed ultrasound therapy
- Multi-frequency treatment head with 1 and 3 MHz
- Contact control: automatic power switch-off and treatment time interruption in case of insufficient contact; The visual indicator of the treatment head switched on
- 3 Current types for electro-therapy
- Variable carrier frequency of 2, 4 or 10 kHz at bi-polar interferential
- Combination of ultrasound with one of the three current types
- 10 Free programmable memory positions
- Very well suited for the treatment of clinic patients or patients at home

## ORDERING DATA

**1497910** Sonopuls 491

## STANDARD ACCESSORIES

**9999408** Contact-gel, bottle 250 ml, 1 piece  
**3444111** Mains connecting cable, EUR  
**1497750** Operating manual Sonopuls 490 and 491  
**1458901** Multi-frequency treatment head, large, 1 & 3 MHz  
**3444021** Strap 250x3 cm  
**1460266** Moist pads for rubber electrode 6x8 cm, set of 4  
**1460265** Rubber electrodes 6x8 cm, 4 mm female, set of 2  
**3444088** Patient cable, 2-core & 4 mm male plugs  
**3444132** Adapter ENA 1810 100-240V (Sonopuls 490/491, EN-Free)

## OPTIONAL ACCESSORIES

**1468940** EN-Car U  
**3444281** Two-way connecting cable for multiple-electrode technique  
**3444650** Case for Endomed and Sonopuls 4-series, grey  
**3444658** Bag for Endomed and Sonopuls 4-serie, black  
**3444023** Strap 250x5 cm  
**3444020** Strap 100x3 cm  
**3444022** Strap 100x5 cm  
**1460424** Adapter plug, 4 mm female, 2 mm male  
**2523523** Adapter plug, 2 mm female, 4 mm male, black  
**2523524** Adapter plug, 2 mm female, 4 mm male, red  
**1458911** Multi-frequency treatment head, small, 1 & 3 MHz  
**1497811** Holder for 2 treatment heads, 4-serie  
**1497810** Holder remote control or 1 treatment head, 4-serie  
**3442929** Contact-gel, bottle 250 ml, box of 12  
**3442930** Contact-gel, bottle 850 ml, box of 12  
**3442931** Contact-gel, canister of 5 l

**3442932** Dispenser-set for 5 l canister

**3444056** EN-Trode Ø 3,2 cm, 2 mm female, packing of 10 sheets of 4 pcs.

**3444135** EN-Trode Ø 5,0 cm, 2 mm female, packing of 10 sheets of 4 pcs.

**3444057** EN-Trode 5x5 cm, 2 mm female, packing of 10 sheets of 4 pcs.

**3444058** EN-Trode 5x9 cm, 2 mm female, packing of 10 sheets of 4 pcs.

**3444146** EN-Trode 5x10 cm, double lead, packing of 10 sheets of 2 pcs.

**1460272** Rubber electrodes 4x6 cm, 4 mm female, set of 2  
**1460274** Rubber electrodes 8x12 cm, 4 mm female, set of 2

**1460275** Moist pads for rubber electrode 4x6 cm, set of 4  
**1460275** Moist pads for rubber electrode 8x12 cm, set of 4

**1480800** Electrode holder for 1480801

**1480801** Point electrode Ø 5 mm, 4 mm female (in combination with 2523523)

## TECHNICAL SPECIFICATIONS

**Ultrasound frequencies:** 1 and 3 MHz  
**Ultrasound:** continuous and pulsed  
**Pulse frequency / duty cycle:** 100 Hz / 5, 10, 20, 50%  
**Number of connections:** 1  
**Intensity:** 1,5 W/cm<sup>2</sup>, continuous, 0-3 W/cm<sup>2</sup>, pulsed  
**Programming positions:** memory for 10 sets of freely selectable therapy parameters  
**Model number battery charger:** ENA-1810  
**Mains voltage:** 100-240 V ± 10% (50/60 Hz)  
**Output:** 18 VDC/840 mA  
**Battery:** 12 V, 1.8Ah maintenance-free lead accumulator  
**Weight:** 4.0 kg  
**Dimensions (wxdxh):** 29x28x10.5 cm



# SONOPULS 490

Compact unit for ultrasound therapy



Ultrasound is successfully used for the treatment of wounds, post-traumatic complaints, circulatory conditions and conditions of the skin and peripheral nerves. With the Sonopuls 490, you have all the possibilities for the universal application of ultrasound with two ultrasound frequencies: 1 and 3 MHz. These frequencies have different absorption characteristics so that both surface and deep tissue structures can be treated selectively. Both continuous and pulsed applications of ultrasound are possible.

The combination of the high power of 2 W/cm<sup>2</sup> with the large ERA (Effective Radiation Area) of the Enraf-Nonius ultrasound heads ensure that you can treat at great depth and that you can reduce the treatment time compared with lower dosage equipment.

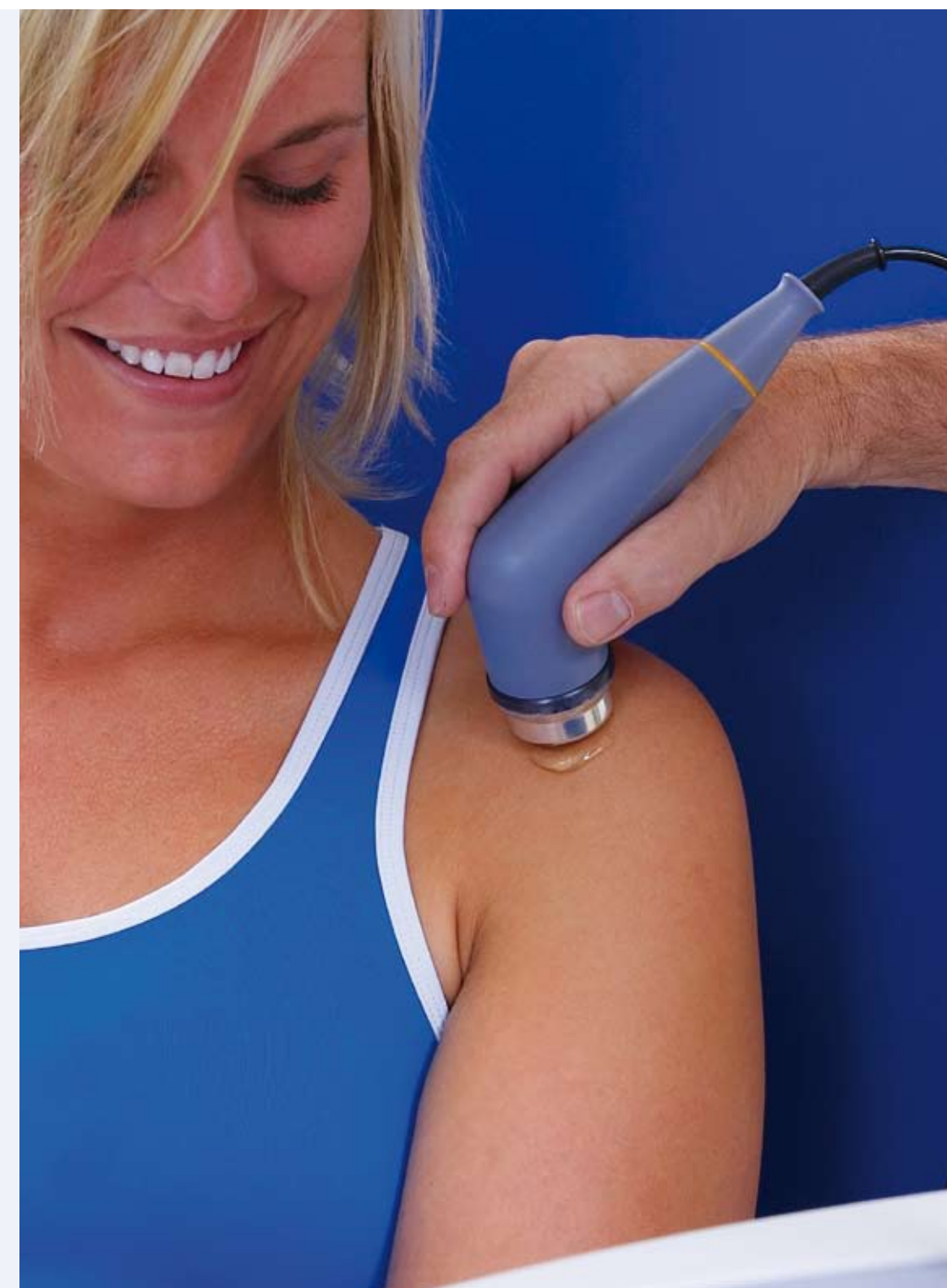
In addition, the Sonopuls 490 features nine pre-programmed protocols and has the possibility to store nine of your own protocols. As a result the Sonopuls 490 is exceptionally easy to operate.

The updated Sonopuls 490 is a mains-powered piece of equipment. This means the Sonopuls 490 is ready for use throughout the day. In addition, for ambulatory treatment or treatment at home, a rechargeable battery can be supplied as an option.

### Combination therapy

By means of a connection cable (optional accessory), the Sonopuls 490 can be used in combination with the all electrotherapy units of the 4-, 5- and 9-series.

- Continuous and pulsed ultrasound therapy
- Multi-frequency treatment head with 1 and 3 MHz
- Contact control: automatic power switch-off and treatment time interruption in case of insufficient contact; The visual indicator of the treatment head switched on
- 9 free programmable memory positions
- Well suited for treatment of hospitalised patients or patients at home



## Ultrasound therapy

### ORDERING DATA

1497906 Sonopuls 490

### STANDARD ACCESSORIES

- 9999408 Contact-gel, bottle 250 ml, 1 piece
- 3444290 Mains cable 230V-EUR
- 1497780 User Manual Sonopuls 490
- 3444127 Adapter ENA-1550 100-240V
- 1458901 Multi-frequency treatment head, large, 1&3 MHz

### OPTIONAL ACCESSORIES

- 1468940 EN-Car U
- 2501016 Battery 12.0V 1.8AH
- 1497803 Connection cable for electrotherapy and combination units of the 5- and 9-series
- 1497802 Connection cable for electrotherapy and combination units of the 4 series
- 3444650 Case for Endomed and Sonopuls 4-series, grey
- 3444658 Bag for Endomed and Sonopuls 4-series, black
- 1458911 Multi-frequency treatment head, small, 1&3 MHz
- 1497811 Holder for 2 treatment heads, 4-serie

- 1497810 Holder remote control or 1 treatment head, 4-serie
- 3442929 Contact-gel, bottle 250 ml, box of 12
- 3442930 Contact-gel, bottle 850 ml, box of 12
- 3442931 Contact-gel, canister of 5 l
- 3442932 Dispenser-set for 5 l canister

### TECHNICAL SPECIFICATIONS

- Ultrasound, frequencies: 1 and 3 MHz
- Ultrasound: continuous and pulsed Pulse
- frequency / duty cycle: 100 Hz / 5, 10, 20, 50%
- Number of connections: 1
- Intensity: 0-2 W/cm<sup>2</sup>, continuous, 0-3 W/cm<sup>2</sup>, pulsed
- Programmable positions: memory for 10 sets of freely selectable therapy parameters
- Pre-programmed positions: 9
- Type mains adapter: ENA-1550
- Mains voltage: 100-240 V ± 10% (50/60 Hz)
- Output: 15 VDC/3,3 A
- Dimensions: 29x28x10,5 cm
- Weight (wxdxh): 4.0 kg





# SONOPULS 190

## Ultrasound unit



With the Sonopuls 190, continuous and pulsed ultrasound therapy can be applied with a treatment frequency of 1 MHz. The treatment head, with large treatment surface, is permanently connected to the Sonopuls 190.

Utilising a small number of push buttons, the unit is set and ready for use. Adjusting the treatment parameters, the set values remain constantly visible on the large display. During treatment, an optimal overview of the treatment parameters is guaranteed by the arrangement of the control panel and angle in which the unit is set.

An optimal use of the set treatment time is guaranteed by the visual and/or acoustic contact control. The treatment is interrupted in case of insufficient acoustic contact until the contact is completely restored, which guarantees optimal treatment.

The treatment parameters of nine of the most common indications are pre-programmed into the Sonopuls 190. Treatment with one of these treatment options is simply started by pushing a button. A free programmable start-up program assures that the unit is set on your favourite treatment protocol as soon as the unit is turned on.

- Simple operation
- Optimal overview on the control panel
- Contact control: automatic power switch-off and treatment time interruption in case of insufficient contact
- Nine pre-programmed indications
- Free programmable start-up program



## Ultrasound therapy

### ORDERING DATA

**1416900** Sonopuls 190 100-240V

### STANDARD ACCESSORIES

**9999408** Contact-gel, bottle 250 ml, 1 piece  
**1416750** Operating manual Sonopuls 190  
**3444111** Mains connecting cable, EUR  
**3444110** Net Adapter ENB-1530 100-240VAC 15V for Sonopuls 190 and Endomed 182

### OPTIONAL ACCESSORIES

**3444061** Bag for Endomed and Sonopuls 1-series, black  
**1416800** Holder treatment head for remote control or 1 treatment head, 1-series  
**3442929** Contact-gel, bottle 250 ml, box of 12  
**3442930** Contact-gel, bottle 850 ml, box of 12  
**3442931** Contact-gel, canister of 5 l  
**3442932** Dispenser-set for 5 l canister

### TECHNICAL SPECIFICATIONS

**Ultrasound frequency:** 1 MHz  
**Ultrasound:** continuous and pulsed  
**Pulse frequency / duty cycle:** 100 Hz / 5, 10, 20, 50, 80%  
**US Intensity:** 0-3 W/cm<sup>2</sup>  
**Pre-programmed protocols:** 9  
**Model number mains adapter:** ENB-1530  
**Mains voltage:** 100-240 V ± 10% (50/60 Hz)  
**Output:** 15 VDC/3,4 A  
**Weight:** 1.7 kg  
**Dimensions:** 22 x 20 x 19,5 cm





## Compleet 4-channel unit for electrotherapy

### The comfort of ease of use

With the Endomed 684, you can operate all forms of electrotherapy with just one hand. Purely by touch, just like your computer's mouse. The ability to call up the treatment protocol of your choice directly on the colour LCD screen, allows you to concentrate fully on your client. This unique innovation from Enraf-Nonius makes work in your practice that bit more pleasant and efficient and also helps you to increase further the variation (and the effect) of the treatment.

### Versatile

The Endomed 684 is a versatile and highly advanced piece of equipment for electrotherapy. The Endomed 684 has seventeen different types of current. These current types have been shown to be effective in the fight against pain, the restoration of tissue and the stimulation of muscles. The Endomed 684 is an advanced four-channel current device for a broad application area.

### Wide range of settings

The wide settings range of the various types of current makes it possible to selectively stimulate nerve cells. The selection of the type of current depends on the objective of the treatment and the acceptance level of the client. By selecting the right current type to influence the right fibres, the optimal results can be achieved. The Endomed 684 makes it possible to find the right form of current for each client.

### Four channels

The Endomed 684 has four channels. The channels can be set independently and are fully galvanically isolated (extremely safe). With the aid of four channels, the various parts of a muscle can be selectively stimulated or a number of muscles can be stimulated at the same time. In addition, with four channels it is possible to apply local and segmental applications with various forms of current. This allows maximum results in pain reduction and stimulation to be reached.

### V for vacuum

The Endomed 684V combines the complete unit for electrotherapy, the Endomed 684 with a vacuum unit. This vacuum unit is a whisper quiet suction device with the possibility of applying eight vacuum electrodes. The suction power can be set across a broad range and can be applied either continuously or pulsed. A regulator system lets the pump work only when the vacuum has fallen below a certain minimum. The vacuum electrodes are quick and easy to attach. They fit fully and comfortably to the body's surface. The electrode positioning is straightforward and easy and you also ensure good contact across the full surface of the electrode.

This unit can be extended by means of functional modules. See page 13 for a more extensive explication and ordering data.

### ORDERING DATA

**1600925** Endomed 684  
**1600935** Endomed 684V

### STANDARD ACCESSORIES

**3444209** Patient cable 2-core & 2 mm male plugs-purple, 2x  
**3444208** Patient cable 2-core & 2 mm male plugs-black, 2x  
**3444078** Dummy plug  
**3444508** Vacuum electrode cable black, 4x  
**3444507** Vacuum electrode cable red, 4x  
**3444505** Sponges Ø 65 mm, set of 2x4  
(for vacuum electrodes Ø 60 mm)  
**3444503** Vacuum electrodes Ø 60 mm, set of 2x4  
**3444290** Mains cable 230V-EUR  
**3444129** Rubber electrodes 6x8 cm, 2 mm female, 2x4 pc.  
**3444021** Strap 250x3 cm, 2x  
**3444020** Strap 100x3 cm, 2x  
**1460266** Moist pads for rubber electrode 6x8 cm, set of 2x 4

### OPTIONAL ACCESSORIES

**1468940** EN-Car U  
**1600820** EN-Point  
**1497801** Remote control, 2 channels for 182, 482, 492 and 6-series  
**3444022** Strap 100x5 cm  
**3444023** Strap 250x5 cm  
**2523523** Adapter plug, 2 mm female, 4 mm male, black  
**2523524** Adapter plug, 2 mm female, 4 mm male, red  
**3444056** EN-Trode Ø 3,2 cm, 2 mm female, packing of 10 sheets of 4 pcs.  
**3444135** EN-Trode Ø 5,0 cm, 2 mm female, packing of 10 sheets of 4 pcs.  
**3444057** EN-Trode 5x5 cm, 2 mm female, packing of 10 sheets of 4 pcs.  
**3444058** EN-Trode 5x9 cm, 2 mm female, packing of 10 sheets of 4 pcs.  
**3444146** EN-Trode 5x10 cm, double lead, packing of 10 sheets of 2 pcs.

**3444128** Rubber electrodes 4x6 cm, 2 mm female, set of 2  
**3444130** Rubber electrodes 8x12 cm, 2 mm female, set of 2  
**1460273** Moist pads for rubber electrode 4x6 cm, set of 4  
**1460275** Moist pads for rubber electrode 8x12 cm, set of 4  
**3444504** Vacuum electrodes Ø 90 mm, set of 2  
**3444506** Sponges Ø 95 mm, set of 4  
(for vacuum electrodes Ø 90 mm)

### TECHNICAL SPECIFICATIONS

**Current channels:** 4, independent, fully galvanically separated  
**Current forms:** 16 current forms-36 varieties  
**Programmable positions:** unlimited  
**Pre-programmed programmes:** 60  
**Vacuum:** continuous and pulsed  
**Mains voltage:** 100-240 V ± 10% (50/60 Hz)  
**Measurements (wxdxh):** 39x37x29,5 cm  
**Weight:** 6.2 kg



# ENDOMED 682V

## Complete equipment for electrotherapy

The Endomed 682V combines the complete unit for electrotherapy, the Endomed 682 with a vacuum unit. This vacuum unit is a whisper quiet suction device with the possibility of applying four vacuum electrodes. The suction power can be set across a broad range and can be applied either continuously or pulsed. A regulator system lets the pump work only when the vacuum has fallen below a certain minimum.

The vacuum electrodes are quick and easy to attach. They fit fully and comfortably to the body's surface. The electrode positioning is straightforward and easy and you also ensure good contact across the full surface of the electrode.

### Local and segmental

The Endomed 682V has two separate channels as standard. This means that you can apply all the above types of current per channel at various locations. Thus there is the possibility of working with different current types for local and segmental applications: You can for example select bipolar interferential on one channel and use a TENS current type on the other channel.

With muscle strengthening, it is possible to set the training programmes for both channels separately and if desired change the (a)synchronisation between them. Especially for the major muscle groups such as the m. Quadriceps Femoris, this means that functional results can be quickly achieved.

Particularly for multiple channel applications of electrotherapy, a vacuum unit is indispensable. To achieve proper electrode contact on large surfaces, the use of vacuum electrodes is necessary. In addition, the application is simple and sure and thus you avoid unnecessary and lengthy actions for the proper attachment of the electrodes.

This unit can be extended by means of functional modules. See page 13 for a more extensive explication and ordering data.



### ORDERING DATA

- 1600905** Endomed 682
- 1600915** Endomed 682V

This unit can be extended by means of functional modules.

- 1604950** 6-series module AC/DC currents
- 1605950** 6-series module ultrasound function
- 1608950** 6-series module StatUS function
- 1607950** 6-series module EMG function
- 1607960** 6-series module for remote LCD display function

### STANDARD ACCESSORIES

- 3444209** Patient cable 2-core & 2 mm male plugs-purple
- 3444208** Patient cable 2-core & 2 mm male plugs-black
- 3444078** Dummy plug
- 3444508** Vacuum electrode cable black, 2x
- 3444507** Vacuum electrode cable red, 2x
- 3444505** Sponges Ø 65 mm, set of 4 (for vacuum electrodes Ø 60 mm)
- 3444503** Vacuum electrodes Ø 60 mm, set of 2x2
- 3444290** Mains cable 230V-EUR
- 3444129** Rubber electrodes 6x8 cm, 2 mm female, 2x2 pc.
- 3444021** Strap 250x3 cm
- 3444020** Strap 100x3 cm
- 1460266** Moist pads for rubber electrode 6x8 cm, set of 4

### OPTIONAL ACCESSORIES

- 1600820** EN-Point
- 1468940** EN-Car U
- 1497801** Remote control, 2 channels for 182, 482, 492 and 6-series
- 3444022** Strap 100x5 cm
- 3444023** Strap 250x5 cm
- 2523523** Adapter plug, 2 mm female, 4 mm male, black
- 2523524** Adapter plug, 2 mm female, 4 mm male, red
- 3444056** EN-Trode Ø 3,2 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444135** EN-Trode Ø 5,0 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444057** EN-Trode 5x5 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444058** EN-Trode 5x9 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444146** EN-Trode 5x10 cm, double lead, packing of 10 sheets of 2 pcs.
- 3444128** Rubber electrodes 4x6 cm, 2 mm female, set of 2
- 3444130** Rubber electrodes 8x12 cm, 2 mm female, set of 2
- 3444504** Vacuum electrodes Ø 90 mm, set of 2
- 3444506** Sponges Ø 95 mm, set of 4 (for vacuum electrodes Ø 90 mm)

### TECHNICAL SPECIFICATIONS

- Current channels:** 2, independent, fully galvanically separated
- Current forms:** 16 current forms-36 varieties
- Programmable positions:** unlimited
- Pre-programmed programmes:** 60
- Vacuum:** continuous and pulsed
- Mains voltage:** 100-240 V ± 10% (50/60 Hz)
- Measurements (wxdxh):** 39x37x29,5 cm
- Weight:** 6.2 kg



1600820 1468940 1497801 3444020 3444021 3444022 3444023 3444208 3444209 3444507 3444508 2523523 2523524 3444056



3444135 3444057 3444058 3444146 3444128 3444129 3444130 1460266 3444503 3444504 3444505 3444506 1604950 1605950



1608950 1607950 1607960

# ENDOMED 482

## 2-Channel unit for electrotherapy and diagnostics

In the field of electrotherapy and diagnostics, the Endomed 482 can do just about everything. As many as 18 current types can be selected, so that all customary forms of electrotherapy can be performed. In the development of this equipment, ease of operation and functionality were of vital importance. The large, easy-to-read display shows clear information on all parameters, both during setting up and while performing the treatment.

The Endomed 482 has two completely separate channels. For each channel you can set various current types. This means that you can, for example, work with different current types for local and segmental applications.



The Endomed 482 guarantees optimal deployability for a wide application area. In addition to all the usual direct current types and interference (both 2- and 4-pole and also with automatic vector), it is also possible with the Endomed 482 to contract very large muscle groups using interference. This is thanks to Endomed 482's high output power.

The Endomed 482 provides pre-programmed protocols, but also has freely programmable memory slots. Accessing these is straightforward and you can model the equipment precisely to your personal preferences.

In combination with a Vacotron (the Vacotron S or the Vacotron 460), even the most difficult places can be included in the treatment. Where it is difficult to apply an electrode, or Velcro is not desirable or possible, this combination offers the solution.

To use the Endomed 482 optimally in practice, an equipment trolley, the EN-Car U, is available. On the EN-Car U, you have the Endomed 482 and all accessories clearly laid out and within reach and you can always easily move the equipment to the right location for each treatment.

Besides the mains power supply, it is also possible to equip the Endomed 482 with a rechargeable battery. This means that you can use the equipment wherever you wish, at the hospital bed, at a patient's home, on location, in short anywhere!

- Low and medium frequency current types
- Variable carrier frequencies of 2, 4 or 10 kHz at bi-polar interferential
- Pre-programmed simple protocols
- Pre-programmed sequential protocols
- 10 free programmable memory positions for simple protocols
- 10 free programmable memory positions for sequential protocols of 10 steps
- Classical tetrapolar and isoplanar interferential with or without dipole vector
- Adjustable intensity per channel
- Pre-programmed treatment protocols

### ORDERING DATA

**1497965** Endomed 482 100-240 V

### STANDARD ACCESSORIES

- 1497760** Protocolbook
- 3444119** Patient cable 2-core & 2 mm male plugs-purple
- 1497759** Operating manual Endomed 482
- 3444021** Strap 250x3 cm
- 3444020** Strap 100x3 cm
- 1460266** Moist pads for rubber electrode 6x8 cm, set of 4
- 3444129** Rubber electrodes 6x8 cm, 2 mm female, 2x2 pc.
- 3444102** Patient cable 2-core & 2 mm male plugs-black
- 3444101** Cable adapter for 3444102 / 3444119
- 3444290** Mains cable 230V-EUR
- 3444127** Adapter ENA-1550 100-240V

### OPTIONAL ACCESSORIES

- 3444658** Bag for Endomed and Sonopuls 4-serie, black
- 2501016** Battery 12.0V 1.8AH
- 3444650** Case for Endomed and Sonopuls 4-series, grey
- 1497801** Remote control, 2 channels for 182, 482, 492 and 6-series
- 3444023** Strap 250x5 cm
- 3444022** Strap 100x5 cm
- 2523523** Adapter plug, 2 mm female, 4 mm male, black
- 2523524** Adapter plug, 2 mm female, 4 mm male, red
- 1497810** Holder remote control or 1 treatment head, 4-serie
- 3444056** EN-Trode Ø 3,2 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444135** EN-Trode Ø 5,0 cm, 2 mm female, packing of 10 sheets of 4 pcs.

- 3444057** EN-Trode 5x5 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444058** EN-Trode 5x9 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444146** EN-Trode 5x10 cm, double lead, packing of 10 sheets of 2 pcs.
- 3444128** Rubber electrodes 4x6 cm, 2 mm female, set of 2
- 3444130** Rubber electrodes 8x12 cm, 2 mm female, set of 2
- 1460273** Moist pads for rubber electrode 4x6 cm, set of 4
- 1460275** Moist pads for rubber electrode 8x12 cm, set of 4
- 1480800** Electrode holder for 1480801
- 1480801** Point electrode Ø 5 mm, 4 mm female ( in combination with 2523523)
- 3444380** Silicon electrode 5x5 cm TENS

### TECHNICAL SPECIFICATIONS

- Current channels:** 2, independent
- Type mains adapter:** ENA-1550
- Mains voltage:** 100-240 V ± 10% (50/60 Hz)
- Output voltage:** 15 V
- Max. output current:** 3,3 A
- Dimensions (wxdxh):** 29x28x11 cm
- Weight:** 4 kg





# ENDOMED 182

Unit for electrotherapy



The Endomed 182 is a complete unit for pain management with interferential, pre-modulated and TENS currents.

The position of the buttons alongside the large display creates an extremely user-friendly interface. This allows perfect control and an overview of the selected parameters during treatment.

The functionality of the unit is designed for maximum control with minimal action. The pre-programmed protocols are easy to activate. Full control remains available for individual adjustments.

- 2-Pole interferential, available over 2 channels
- Tetrapolar interferential
- Isoplanary interferential
- Asymmetrical biphasic pulsed current (TENS)
- Burst TENS
- 30 pre-programmed treatment suggestions, adjustable and rewritable
- Large, crystal clear parameter display
- Personalised start-up program



## ORDERING DATA

**1416920** Endomed 182 100-240V

## STANDARD ACCESSORIES

- 3444119** Patient cable 2-core & 2 mm male plugs-purple
- 1416760** Therapy protocol Endomed 182
- 1416751** Operating manual Endomed 182
- 3444021** Strap 250x3 cm
- 3444020** Strap 100x3 cm
- 1460266** Moist pads for rubber electrode 6x8 cm, set of 4
- 3444129** Rubber electrodes 6x8 cm, 2 mm female, 2x2 pc.
- 3444102** Patient cable 2-core & 2 mm male plugs-black
- 3444101** Cable adapter for 3444102 / 3444119
- 3444111** Mains connecting cable, EUR
- 3444110** Net Adapter ENB-1530 100-240VAC 15V for Sonopuls 190 and Endomed 182

## OPTIONAL ACCESSORIES

- 1497801** Remote control, 2 channels for 182, 482, 492 and 6-series
- 3444061** Bag for Endomed and Sonopuls 1-serie, black
- 3444023** Strap 250x5 cm
- 3444022** Strap 100x5 cm
- 2523523** Adapter plug, 2 mm female, 4 mm male, black
- 2523524** Adapter plug, 2 mm female, 4 mm male, red
- 1416800** Holder treatment head for remote control or 1 treatment head, 1-serie
- 3444056** EN-Trode Ø 3,2 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444135** EN-Trode Ø 5,0 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444057** EN-Trode 5x5 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444058** EN-Trode 5x9 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444146** EN-Trode 5x10 cm, double lead, packing of 10 sheets of 2 pcs.
- 3444128** Rubber electrodes 4x6 cm, 2 mm female, set of 2
- 3444130** Rubber electrodes 8x12 cm, 2 mm female, set of 2
- 1460273** Moist pads for rubber electrode 4x6 cm, set of 4
- 1460275** Moist pads for rubber electrode 8x12 cm, set of 4
- 1480800** Electrode holder for 1480801
- 1480801** Point electrode Ø 5 mm, 4 mm female (in combination with 2523523)
- 3444380** Silicon electrode 5x5 cm TENS

## TECHNICAL SPECIFICATIONS

- Type mains adapter:** ENB-1530
- Mains voltage:** 100-240 Volt ± 10% (50/60Hz)
- Output:** 15 VDC/3,4A
- Dimensions (wxhxd):** 22x20x20 cm
- Weight:** 1.8 kg



# VACOTRON S

2-channel vacuum unit

The application of electrotherapy is even easier when using the Vacotron S. Body parts where positioning of rubber electrodes is not possible, are easy to treat by means of this vacuum unit.

The Vacotron S was specially developed for the Sonopuls 492 and the Endomed 482. These pieces of equipment can be placed neatly on the Vacotron so that a stylish unity is achieved. In addition, the top of the Vacotron S has a gentle slope so that the visibility of the display of the treatment equipment is improved.

- Can be used in combination with the Endomed 482 and Sonopuls 492
- Continuous and intermittent suction
- Accurate adjustment of the suction strength
- Unique cable connection for fast application of rubber electrodes
- Can only be used as tabletop model or on the EN-Car U

## ORDERING DATA

**1452900** Vacotron S 100-240V

## STANDARD ACCESSORIES

- 3444508** Vacuum electrode cable black, 2x
- 3444507** Vacuum electrode cable red, 2x
- 3444078** Dummy plug
- 3444505** Sponges Ø 65 mm, set of 4  
(for vacuum electrodes Ø 60 mm)
- 3444503** Vacuum electrodes Ø 60 mm, set of 2x2
- 1452750** Operating manual Vacotron S

## OPTIONAL ACCESSORIES

- 3444504** Vacuum electrodes Ø 90 mm, set of 2
- 3444506** Sponges Ø 95 mm, set of 4  
(for vacuum electrodes Ø 90 mm)
- 3444127** Adapter ENA-1550 100-240V

## TECHNICAL SPECIFICATIONS

**Vacuum:** continuous and pulsed  
**Power supply:** 15 VDC  
**Current consumption:** 1,0 A  
**Dimensions (wxdxh):** 24,5x21x9 cm  
**Weight:** 4,2 kg

# VACOTRON 460

2-channel vacuum unit

The application of electrotherapy is even easier when using the Vacotron 460. Body parts where the positioning of rubber electrodes is not possible are easy to treat by means of this vacuum unit.

- Can be connected to all the electrotherapy and combination units of the 4-series
- Quick application of vacuum electrodes on positions where fixation straps cannot be used
- Continuous and intermittent suction
- Accurate adjustment of the suction strength
- Unique cable connection for fast application of rubber electrodes
- Designed for integration on the EN-Car U
- Can also be used as tabletop model



## ORDERING DATA

- 1450901** Vacotron 460 230V/50-60Hz
- 1450902** Vacotron 460 115V/50-60Hz

## STANDARD ACCESSORIES

- 3444299** Mains cable 115V-UL-CSA
- 3444508** Vacuum electrode cable black, 2x
- 3444507** Vacuum electrode cable red, 2x
- 1490750** Operating manual Vacotron 460 and 560
- 3444078** Dummy plug
- 3444098** Water reservoir for Vacotron 460 and 560

**3444505** Sponges Ø 65 mm, set of 4  
(for vacuum electrodes Ø 60 mm)

- 3444503** Vacuum electrodes Ø 60 mm, set of 2x2
- 3444112** Patient cable 2-core, with 2 mm male plugs, 2x
- 3444298** Mains cable 230V-EUR

## OPTIONAL ACCESSORIES

- 1468940** EN-Car U
- 3444504** Vacuum electrodes Ø 90 mm, set of 2
- 3444506** Sponges Ø 95 mm, set of 4  
(for vacuum electrodes Ø 90 mm)

## TECHNICAL SPECIFICATIONS

**Vacuum:** continuous and pulsed  
**Mains voltage:** 220-240 V ± 10% (50/60 Hz)  
**Current consumption:** max. 0.13 A (at 230 V)  
**Dimensions (wxdxh):** 35x36x11 cm  
**Weight:** 5.7 kg



3444507 3444508 3444127 3444503 3444504 3444505 3444506



CE 0197



1468940 3444112 3444507 3444508 3444503 3444504 3444505 3444506

CE 0197

CE 0197



# EN-STIM 4

## 4-Channel unit for electrotherapy



The 4 channels operate fully independently. This makes it possible to treat major muscle groups simultaneously or perform bilateral treatments at the same time (a left and right m. Quadriceps for example). This also means that this equipment is perfectly suited for sport and rehabilitation.

The EN-Stim 4 is a stimulation unit with 4 independent channels for muscle stimulation and pain control using TENS currents.

- Optimum control via the graphic, illuminated LCD
- Independent current channels
- Detachable support

### ORDERING DATA

**1416930** EN-Stim 4

### STANDARD ACCESSORIES

- 9999403** EN-Trode 5x9 cm, 2 mm female, 2 sheets of 4 pcs.
- 1416752** Operating manual EN-Stim 4
- 3444121** Patient cable 2-core & 2 mm male plugs-light grey
- 3444290** Mains cable 230V-EUR
- 3444131** Adapter ENA 1524 100-240V (EN-Stim 4)
- 3444129** Rubber electrodes 6x8 cm, 2 mm female, 2x2 pc.
- 3444120** Patient cable 2-core & 2 mm male plugs-grey
- 3444119** Patient cable 2-core & 2 mm male plugs-purple
- 3444102** Patient cable 2-core & 2 mm male plugs-black
- 3444021** Strap 250x5 cm

**3444020** Strap 100x3 cm

**1460266** Moist pads for rubber electrode 6x8 cm, set of 4

**1416761** Protocols EN-Stim 4

### OPTIONAL ACCESSORIES

- 1497800** Remote control, 1-4 channels, for the EN-Stim 4
- 3444023** Strap 250x5 cm
- 3444022** Strap 100x5 cm
- 3444056** EN-Trode Ø 3,2 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444135** EN-Trode Ø 5,0 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444057** EN-Trode 5x5 cm, 2 mm female, packing of 10 sheets of 4 pcs.

**3444058** EN-Trode 5x9 cm, 2 mm female, packing of 10 sheets of 4 pcs.

**3444146** EN-Trode 5x10 cm, double lead, packing of 10 sheets of 2 pcs.

**3444128** Rubber electrodes 4x6 cm, 2 mm female, set of 2

**3444130** Rubber electrodes 8x12 cm, 2 mm female, set of 2

**1460273** Moist pads for rubber electrode 4x6 cm, set of 4

**1460275** Moist pads for rubber electrode 8x12 cm, set of 4

**1480800** Electrode holder for 1480801

**1480801** Point electrode Ø 5 mm, 4 mm female

(in combination with 2523523)

### TECHNICAL SPECIFICATIONS

**Phase duration:** 10-1000 µs

**Pulse frequency:** 1-200 Hz

**Frequency modulation:** 0-180 Hz

**Pre-programmed protocols:** 39

**Programmable positions:** 100, single and sequential programs

**Type adapter:** ENA-1524

**Mains voltage:** 100-240 Volt ± 10% (50/60Hz)

**Dimensions (wxdxh):** 22x20x20 cm

**Weight:** 1,8 kg



# TENSMED

## TensMed S84

With the TensMed S84 large muscle groups can be treated simultaneously, or bilateral treatments can be given simultaneously, (for instance a left and right m. Quadriceps). This makes the machine ideal for sport and rehabilitation. The TensMed S84 is a 4-channel muscle stimulation and pain relief device with optimum operation via the graphical, backlit LCD screen.

- 28 pre-programmed positions
- 5 programmable positions (that can be set in three stages)
- High intensity -CC
- High quality patient cables
- Operating manual includes practical treatment tips



### ORDERING DATA

**1427980** TensMed S84

### STANDARD ACCESSORIES

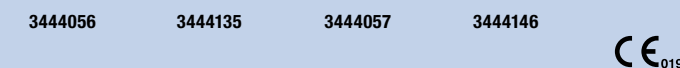
- 3444325** Battery charger for TensMed S84
- 3444330** Battery pack for TensMed S84
- 3444220** Cables for TensMed S84 (4 Cables)
- 3444344** Case for TensMed S84
- 3444345** Clip for TensMed S84
- 1427781** User manual TensMed S84
- xxx** EN-Trode 5x5 cm, 2 mm female, 1 sheet of 4 pcs.

### OPTIONAL ACCESSORIES

- 3444056** EN-Trode Ø 3,2 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444135** EN-Trode Ø 5,0 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444057** EN-Trode 5x5 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444146** EN-Trode 5x10 cm, double lead, packing of 10 sheets of 2 pcs.



**3444220** **3444325** **3444330**



# Electrotherapy

## TensMed S82 & P82

The TensMed S82 is a professional device for muscle stimulation and pain relief. TENS (Transcutaneous Electrical Nerve Stimulation) is an effective method for pain relief and muscle stimulation. The TensMed P82 is the result of developments in the field of pain relief with TENS and gives the patient control over chronic pain. The use of pain-relieving medicines can be reduced or sometimes completely stopped. TENS treatments are safe, have no side-effects and are non-addictive. The TensMed P82 is a dual-channel device with a clearly legible LCD screen.

The TensMed S82 is the ultimate choice for the professional treatment of muscle stimulation and pain relief. The device can treat chronic pain, patients recovering from a traumatic condition, immobilisation, and improve posture and stabilisation of the knee joint. The TensMed S82 is a dual-channel device with a clearly readable LCD screen.



### ORDERING DATA

**1427960** TensMed P82

**1427970** TensMed S82

### STANDARD ACCESSORIES

- 1427771** User manual TensMed P82 & S82-English
- 3444201** Cables for TensMed P82 & S82 (2 cables)
- 3444334** Case for TensMed P82 & S82
- xxx** EN-Trode 5x5 cm, 2 mm female, 1 sheet of 4 pcs.

### OPTIONAL ACCESSORIES

- 3444332** Handswitch TensMed S82
- 3444056** EN-Trode Ø 3,2 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444135** EN-Trode Ø 5,0 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444057** EN-Trode 5x5 cm, 2 mm female, packing of 10 sheets of 4 pcs.
- 3444146** EN-Trode 5x10 cm, double lead, packing of 10 sheets of 2 pcs.

### TECHNICAL SPECIFICATIONS

- Number of channels:** 2 (non-independent)
- Constant current:** up to a resistance of 1000 ohm
- Stimulation current/channel:** 0-99,5 mA
- Waveform:** symmetrical biphasic pulse, 100% compensated
- Number of preset programs:** TensMed S82: 28  
TensMed P82: 5
- Number of custom programs:** 5 (PP1-PP5)
- Stimulation forms:** Conventional, Burst, Modulated frequency/pulse duration, Mixed frequency, Alternated modulated pulse duration, Intermittent
- Max pulse duration:** 400 µs
- Max frequency:** 120 Hz
- Timer:** 1 to 99 min./Off
- Power source:** 2x1.5 V AA non-rechargeable or 2x1.2 V AA rechargeable batteries
- Current consumption for 1 channel:** 80 Hz, 30 mA 150 mA
- r.m.s. max/channel:** 31 mA
- Size (wxdxh):** 120x50x30 mm
- Weight:** approx. 180 g



**3444332** **3444056** **3444135** **3444057** **3444146** **3444201**



# MYOMED 632V

## Unit for EMG-feedback, pressure feedback, electrotherapy and electrodiagnostics

The myofeedback unit is provided with a separate part for myofeedback, pressure feedback and combination with electrotherapy. Several surface- and cavity electrodes can be connected. This makes the unit extremely suitable for all kind of exercise- and relaxation therapies including Pelvic-floor re-education.

### EMG-feedback

At EMG-feedback, the body's own electrical muscle activity is registered by means of a surface or cavity electrode. The results are submitted to the therapist and patient.

This feedback is visual and/or auditive. For the visual feedback you can choose from different clear reproductions. For the auditive feedback you can choose from proportional reproduction, reproduction depending on a threshold or reproduction of the rough EMG-signal.



Product availability expected as of mid 2009.

### Pressure-feedback

At pressure-feedback, pressure changes are measured by means of a cavity electrode.

These pressure changes are the result of contractions of the Pelvic-floor muscles.

Feedback of the information to the therapist and patient is submitted in the same way as described above.

### Electrotherapy

For the application of electrotherapy you can choose from; electrotherapy via 2 current channels or electrotherapy via the EMG channel. This way the therapist can directly check the results of the electrostimulation with EMG-feedback and make alterations if necessary. The different possibilities for the combination of EMG-feedback and electrostimulation are: alternating or depending on a set threshold.

### V for vacuum

The Myomed 632V combines the complete unit for electrotherapy, the Myomed 632 with a vacuum unit. This vacuum unit is a whisper quiet suction wave device with the possibility of applying eight vacuum electrodes.

The suction power can be set across a broad range and can be applied either continuously

or pulsed. A regulator system lets the pump only work when the vacuum has fallen below a certain minimum.

The vacuum electrodes are quick and easy to attach. They fit fully and comfortably to the body's surface. The electrode positioning is straightforward and easy and you also ensure good contact across the full surface of the electrode. This unit can be extended by means of functional modules. See page 13 for a more extensive explication and ordering data.

- 2-channel EMG-feedback
- 1-channel pressure-feedback
- 3 Different feedback sessions; continuously, work/rest and template
- EMG- or pressure signal graphically reproduced with adjustable sensibility and time scale
- Continuous reproduction of the EMG- or pressure value
- Combined application of EMG-feedback with electrotherapy
- Combined application of EMG- with pressure-feedback
- Special cluster for analysis of the EMG- and pressure measurements
- Several surface- and cavity electrodes

### ORDERING DATA

**1600965** Myomed 632  
**1600966** Myomed 632 X  
**1600967** Myomed 632 U  
**1600968** Myomed 632 UX  
**1600970** Myomed 632V  
**1600971** Myomed 632V X  
**1600972** Myomed 632V U  
**1600973** Myomed 632V UX

### STANDARD ACCESSORIES

**3444508** Vacuum electrode cable black, 2x  
**1600781** Addendum User manual 6-serie Myomed 632  
**3444673** EMG Cable 6-series  
**3444674** Cable for reference electrode for EMG-6-series  
**1600780** Addendum User manual 6-serie Myomed 632-Dutch  
**3444078** Dummy plug  
**1460266** Moist pads for rubber electrode 6x8 cm, set of 4  
**3444507** Vacuum electrode cable red, 2x  
**3444505** Sponges Ø 65 mm, set of 4 (for vacuum electrodes Ø 60 mm)  
**3444503** Vacuum electrodes Ø 60 mm, set of 2x2

### 3444290

Mains cable 230V-EUR  
**3444129** Rubber electrodes 6x8 cm, 2 mm female, 2x2 pc.  
**3444208** Patient cable 2-core & 2 mm male plugs-black  
**3444209** Patient cable 2-core & 2 mm male plugs-purple  
**3444021** Strap 250x3 cm  
**3444020** Strap 100x3 cm

### OPTIONAL ACCESSORIES

**1600820** EN-Point  
**3444667** Snap-connector, 2 mm female, 3 pcs  
**3444302** Pregelled disposable electrodes, 25 pcs  
**3444023** Strap 250x5 cm  
**3444022** Strap 100x5 cm  
**3444117** Anal electrode with fixed cable, 2 mm female plug, to be used with cable 3444653  
**3444043** Anal pressure sensor CD  
**3444118** Vaginal electrode 2 mm Evolys, with cable  
**3444042** Vaginal pressure sensor CD, 6 pcs  
**3444048** Connecting cable for vaginal pressure probe, incl. air-inlet and syringe  
**3444045** Connecting cable for anal pressure probe 3444043  
**3444044** Connecting hose for vaginal pressure sensor

### 3444042

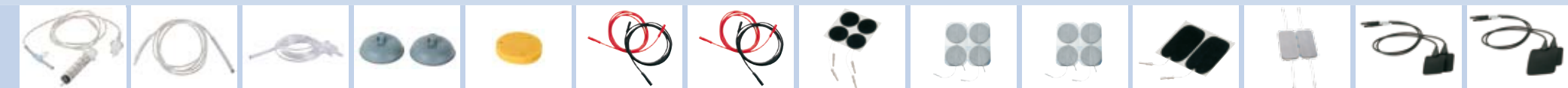
Vaginal pressure sensor CD, 6 pcs  
**3444056** EN-Trode Ø 3,2 cm, 2 mm female, packing of 10 sheets of 4 pcs.  
**3444135** EN-Trode Ø 5,0 cm, 2 mm female, packing of 10 sheets of 4 pcs.  
**3444057** EN-Trode 5x5 cm, 2 mm female, packing of 10 sheets of 4 pcs.  
**3444058** EN-Trode 5x9 cm, 2 mm female, packing of 10 sheets of 4 pcs.  
**3444146** EN-Trode 5x10 cm, double lead, packing of 10 sheets of 2 pcs.  
**3444128** Rubber electrodes 4x6 cm, 2 mm female, set of 2  
**3444129** Rubber electrodes 6x8 cm, 2 mm female, 2 pc.  
**3444130** Rubber electrodes 8x12 cm, 2 mm female, set of 2  
**3444148** Pregelled disposable electrodes oval 23x28 mm, 24 pcs  
**1460273** Moist pads for rubber electrode 4x6 cm, set of 4  
**1460266** Moist pads for rubber electrode 6x8 cm, set of 4  
**1460275** Moist pads for rubber electrode 8x12 cm, set of 4  
**3444380** Silicon electrode 5x5 cm TENS  
**1605950** 6-series module ultrasound function  
**1607960** 6-series module for remote LCD display function

### TECHNICAL SPECIFICATIONS

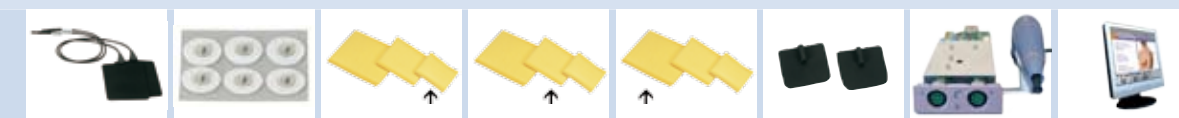
**EMG-feedback channels:** 2, independent  
**Pressure-feedback:** 1  
**Combination**  
**EMG/pressure-feedback:** yes (1 channel EMG, 1 channel pressure)  
**Measurement range EMG:** 4-10.000 µV and logarithmically  
**Measurement range pressure:** 0-360 hPa  
**Current channels:** 2, independent, fully galvanically isolated  
**Current types:** 16 current types-36 variants  
**Programmable positions:** unlimited  
**Pre-programmed programmes:** 60  
**Number of vacuum electrode connections:** 4  
**Supply voltage:** 100-240 V ± 10% (50/60 Hz)  
**Dimensions (wx dxh):** 39x37x24 cm  
**Weight:** 6.2 kg



1600820 3444302 3444667 3444673 3444020 3444021 3444022 3444023 3444208 3444209 3444117 3444043 3444118 3444042



3444048 3444045 3444044 3444503 3444505 3444507 3444508 3444056 3444135 3444057 3444058 3444146 3444128 3444129



3444130 3444148 1460273 1460266 1460275 3444380 1605950 1607960



Unit for EMG-feedback, pressure feedback, electrotherapy and electrodiagnostics

Unit for EMG-feedback and electrotherapy

Biofeedback is a training technique that teaches patients how to improve their health and physical performance by responding to signals from their own body.

Over the years the use of EMG recording has increased, especially for the relatively 'new' indications such as pelvic floor disorders and RSI prevention in VDU users. Surface electromyography is another excellent addition to the stock armoury of the physiotherapist in general practice.

Thanks to the Myomed 134, Enraf-Nonius has made it possible to use biofeedback in combination with electrotherapy.

The Myomed 134 acts like a 'stethoscope for the muscles' by showing how the patient is responding to the physiotherapist's instructions and corrective tips. The Myomed 134 gives you an especially accurate source of information that shows the precise effects of your physiotherapeutic procedures.

Biofeedback, whether or not used in combination with electrotherapy, is an effective form of therapy which has been developed as a successful alternative to surgery. It has proven to be especially successful at improving the quality of life and a feeling of freedom of incontinence patients. Being a non-invasive treatment, it's also extremely suitable for use with the elderly.

EMG on the move

Thanks to its compact size and use of batteries, the Myomed 134 can be used for both measurement and exercise on the move.

To store measurement data you can equip the Myomed 134 with a multimedia card: the results can later be read out via the PC.

- a complete device for EMG feedback, pressure feedback and electrotherapy (2-channel EMG, 2-channel TENS, 1-channel pressure feedback) - battery- powered, so can be used on the move during both diagnosis and treatment
- optional multimedia card for storing measurement results
- easy for patients to operate
- wide measurement range (0.28 µV - 150 mV) allows measurement of both large and small muscles
- connection to PC possible using standard software package
- parameters definable in the PC
- analysis of EMG/pressure measurements via PC
- excellent for sports rehabilitation

ORDERING DATA

1437910 Myomed 134 100-240V

STANDARD ACCESSORIES

- 3444667 Snap-connector, 2 mm female, 3 pcs
- 3444114 P.C. cable for Myomed 134
- 1437800 P.C. Software for Myomed 134
- 3444172 Battery package for Myomed 134
- 3444173 Cable for reference electrode for the Myomed 134
- 1437752 Operating manual Myomed 134
- 9999409 Pregelled disposable electrodes oval 23x28 mm, 6 pcs
- 3444119 Patient cable 2-core & 2 mm male plugs - purple
- 3444102 Patient cable 2-core & 2 mm male plugs - black
- 3444131 Adapter ENA 1524 100-240V (EN-Stim 4)
- 3444290 Mains cable 230V - EUR

OPTIONAL ACCESSORIES

- 3444061 Bag for Endomed and Sonopuls 1-serie, black
- 3444171 Multimedia card

3444302 Pregelled disposable electrodes, 25 pcs

3444023 Strap 250x5 cm

3444021 Strap 250x3 cm

3444020 Strap 100x3 cm

3444022 Strap 100x5 cm

3444117 Anal electrode with fixed cable, 2 mm female plug, to be used with cable 3444653

3444043 Anal pressure sensor CD

3444118 Vaginal electrode 2 mm Evolys, with cable

3444042 Vaginal pressure sensor CD, 6 pcs

3444048 Connecting cable for vaginal pressure probe, incl. air-inlet and syringe

3444045 Connecting cable for anal pressure probe 3444043

3444044 Connecting hose for vaginal pressure sensor 3444042

3444056 EN-Trode Ø 3,2 cm, 2 mm female, packing of 10 sheets of 4 pcs.

3444135 EN-Trode Ø 5,0 cm, 2 mm female, packing of 10 sheets of 4 pcs.

3444057 EN-Trode 5x5 cm, 2 mm female, packing of 10 sheets of 4 pcs.

3444058 EN-Trode 5x9 cm, 2 mm female, packing of 10 sheets of 4 pcs.

3444146 EN-Trode 5x10 cm, double lead, packing of 10 sheets of 2 pcs.

3444128 Rubber electrodes 4x6 cm, 2 mm female, set of 2

3444129 Rubber electrodes 6x8 cm, 2 mm female, 2 pc.

3444130 Rubber electrodes 8x12 cm, 2 mm female, set of 2

3444148 Pregelled disposable electrodes oval 23x28 mm, 24 pcs

1460273 Moist pads for rubber electrode 4x6 cm, set of 4

1460266 Moist pads for rubber electrode 6x8 cm, set of 4

1460275 Moist pads for rubber electrode 8x12 cm, set of 4

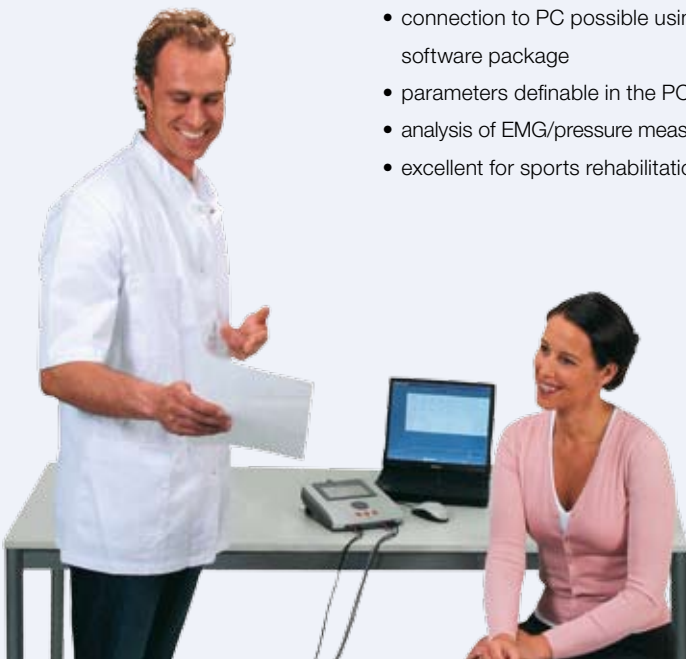
1480800 Electrode holder for 1480801

1480801 Pointelectrode Ø 5 mm, 4 mm female (in combination with 2523523)

3444380 Silicon electrode 5x5 cm TENS

TECHNICAL SPECIFICATIONS

- EMG channels: 2
- EMG sensibility: 0,28 µV-300 mV
- Pressure channels: 1
- Pressure sensibility: 0-400 cm H2O
- Current type: alternating current
- Phase duration: 10-450 µs
- Type mains supply: ENA-1524
- Mains voltage: 100-240 V ± 10% (50/60 Hz)
- Output: 15 VDC/1,6 A





**Ultrasound therapy** TENS

Electrotherapy Lymph drainage and presso therapy

Laser therapy Traction **Biofeedback**

Shortwave Microwave Thermo therapy

**Manual therapy** Vibration training

Cardiovascular Training Whole Body

**Medical Training**

Freestyle Training Strength Training



# ENDOLASER 422

## Unit for low level laser therapy

### Effective treatment at the speed of light!

The Endolaser 422 is an advanced and modern designed unit for laser therapy with interchangeable laser probes.

Laser therapy, also known as photobiomodulation, low level laser therapy (LLLT), cold laser therapy and laser biostimulation, is an effective method for:

- Pain management
- Wound healing
- Soft tissue injury treatment
- Nerve regeneration
- Skin treatment (esp. for Acne)
- Cosmetic regeneration

Laser is applied to the anatomical region of interest by means of a diode probe. This application can be static and very localized or dynamic for larger regions. In general a treatment only takes a few minutes. This effectiveness and the short application time



make laser therapy with the Endolaser 422 a valuable part of a complete treatment session.

### Standard with 2 channels

The Endolaser 422 is a 2-channel unit. This allows for simultaneous treatment of two segments within a patient or even simultaneous treatment of two patients.

### Dual probe laser therapy

Another method that rapidly gains popularity is the simultaneous treatment of one lesion with both a diffuse application in the peripheral area and a very localized, intense application at the epicentre of the lesion. This central-peripheral dual probe laser therapy approach is extremely promising in several application areas.

### Several probes available

For treatment of small surfaces with monolaser there are diodes of 25, 100 and 500 mW. For a larger area it is possible to use a cluster of 4 diodes of 100 mW each-making it a 400 mW diode in total. The probes are interchangeable which has a positive influence on the total treatment time.

### Simple user interface

The unit is software operated. A treatment program can be created or adjusted in a few steps. By means of buttons and knobs the level of energy can be adjusted simply and accurately during treatment. After each adjustment of the protocol the dose is calculated instantly.

The Endolaser 422 is also provided with an extensive number of treatment protocols for the most common treatment modalities of laser therapy (over 80 protocols at the time of publication). Besides these protocols you can also create your own programs which makes the Endolaser 422 a very effective tool in your practice.

### Safe

The Endolaser 422 is provided with a laser-test that allows for easy verification of the laser probe. This assures proper functioning of the machine and guarantees safe and accurate application of the laser energy to your patients.

Of course the Endolaser 422 is standard equipped with two pairs of safety glasses, one each for the therapist and for the patient, to protect the retina from the intense energy of the laser beam.

### Treatment at the speed of light

The Endolaser 422 is a valuable addition to your practice allowing for effective results in short treatment times.

Being an Enraf-Nonius product, the high quality of the Endolaser 422 assures years of proper functioning and good design.

With the Endolaser 422 you can treat your patients and clients at the speed of light!



## Laser therapy

### ORDERING DATA

**1422911** Endolaser 422

### STANDARD ACCESSORIES

**3444290** Mains cable 230V-EUR

**1422815** Protective goggles Endolaser 422-2x

**1422750** Operating manual Endolaser 422

### OPTIONAL ACCESSORIES

**3444814** Protective goggles Endolaser 422-Extra quality

**1422816** Laserprobe 25 mW, pulsed laser diode

**1422817** Laserprobe 100 mW, pulsed laser diode,

**1422818** Laserprobe 500 mW, continuous laser diode

**1422819** Laser clusterprobe 400 mW, pulsed laser diode

### TECHNICAL SPECIFICATIONS

<b>Mains voltage:</b>	230 Vac 50-60Hz ±15% 115 Vac 50-60Hz ±15%
<b>Max. Power consumption:</b>	15 VA
<b>Double fuse protection:</b>	250 mA Rit 5x20 mm
<b>Plug for Interlock/safety key (contacts normally closed)</b>	
<b>Backlit LCD Display, to visualize and control operating parameters:</b>	6 contact DIN pluggraphic 240x128 pixel
<b>Programmable treatment time:</b>	up to 60 minutes
<b>Diode Laser Wave length for 25, 100, 400mW pulse diode:</b>	905 nm
<b>Diode Laser Wave length for 500 mW continuous laser diode:</b>	808 nm
<b>Laser classification according to EN-60825-1:</b>	3B
<b>MPE (Maximum permissible exposure):</b>	5032.06 J . m -2
<b>AEL (Accessible emission limit):</b>	77.1 mW (class 3B limit)
<b>Divergence:</b>	107 mrad
<b>NOHD (Nominal ocular hazard area) direct light:</b>	2.89 meters
<b>NOHD diffused light:</b>	0.00 meter
<b>IR radiation sensor for external laserprobe:</b>	On front panel
<b>Programmable impulse frequency:</b>	10-10.000 Hz
<b>Duty Cycle, only available with continuous laser diodes:</b>	10-9900 Hz
<b>Independent output channels:</b>	2
<b>Pre-programmed protocols:</b>	82
<b>Free programmable positions:</b>	50
<b>Plastic desktop container-external dimensions (lxhxd):</b>	29x28x11,5 cm
<b>Weight of machine body:</b>	3,2 kg



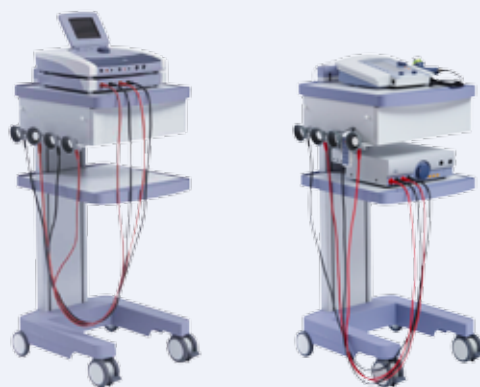
1422816 1422817 1422818 1422819





The EN-Car U is an exceptionally stable equipment trolley on which you can place your Enraf-Nonius therapy units and all the accessories. The EN-Car U is extremely well suited for the Endomed 682(V), 684(V) and Sonopuls 692(V), as well as for the 4-series equipment—that's why we call it "Universal"! With the EN-Car U you are always mobile, whilst having everything for your treatments within easy reach. The EN-Car U stands out due to its stability. Move it—shake it—turn it, the EN-Car U is as solid as a rock. This sturdiness is realized by good design that makes ample use of solid construction techniques, but also because of the use of two castors with brakes.

As a console next to the treatment couch you will find the EN-Car U an indispensable tool! With two trays that can easily be adjusted to your preferred height the EN-Car U will be your best mate in the treatment room.



Due to these features the equipment is always at the ideal working height, both in standing and in sitting position, so that the parameters on the display of the electrotherapy-units are always clearly visible at any time. All wiring and cables can be neatly hidden in the hollow frame. The EN-Car U comes standard with two trays (one of them including an auto-closing drawer). With the optional vacuum-cup holder you have a convenient and neat storage rack for all the cups and the remote control.

The EN-Car U is your companion for any piece of Enraf-Nonius equipment. For laser, ultrasound, biofeedback or electrotherapy, with the EN-Car U you have it all close at hand.

- Ample space for every therapy unit and all accessories
- Both trays can be individually adjusted in height
- Nice optional storage for vacuum electrodes and remote control
- Easily and safely movable with 4 independent rotating wheels
- Two castors with brakes
- Hollow frame for cables
- Two practical storage trays
- One convenient large drawer



**ORDERING DATA**  
1468940 EN-Car U

**OPTIONAL ACCESSORIES**  
1468932 Holder for remote control and vacuum-cups on EN-Car U



1468932



# ELTRAC 471

Traction unit for lumbar and cervical traction

The Eltrac 471 is a unique combination of computer technology, functional design and operational convenience. The unit is ideal for lumbar and cervical traction. Continuous and intermittent traction.

### For continuous and intermittent, cervical and lumbar traction

The traction force of the Eltrac 471 can be set to continuous or intermittent. A special control must be pressed for traction forces above 200 N (appr. 20 kg). This safety system prevents the accidental application of unacceptable high traction forces during, for instance, cervical traction.

**Safety**

The control panel shows various parameters which can be selected with fingertips controls like traction force, base force, base hold time and treatment time. The traction force is electronically measured and constantly monitored. A microcomputer compares the actual readings with the set values and immediately eliminates any differences. Patient movement is recorded and does not influence the traction force. The patient can gradually reduce the traction power to the minimum value (15 N) by simply pressing the safety stop switch.

- Continuous and intermittent traction
- Traction forces up to 900 N (appr. 90 kg)
- Safety control for traction forces above 200 N (appr. 20 kg)
- Constant electrical monitoring of the traction force



## Traction therapy

<b>ORDERING DATA</b>		3447624	Padded neck harness, complete with spreader bar
1471901	Eltrac 471 230V/50-60Hz	1471802	Pulley for mobile traction frame (2 required)
<b>STANDARD ACCESSORIES</b>		3445006	Clamp for fitting straps (2 required)
3444291	Mains cable 115V-USA	3445022	Pelvic belt for Manumed Traction
1471751	Operating manual Eltrac 471	3445021	Thoracic belt for Manumed Traction
3444290	Mains cable 230V-EUR	3445512	Mobile traction frame for cervical traction
1471806	Nylon cord 170 cm with carabine hook, for Eltrac 471	1471805	Wall bar bracket, for mounting of Eltrac 471 to wall bars
1471801	Fixing knobs, set of 4, for Eltrac 471	3445038	Traction frame for Manumed Optimal and Special Traction H/L (width 430mm)
1471800	Patient stop switch for Eltrac 471	3445020	Traction frame Manumed Special Traction 3450500 (width 480mm)
<b>OPTIONAL ACCESSORIES</b>		9999130	Stools and pillows
5100614	Manumed Special Traction 4-section (type 926)	<b>TECHNICAL SPECIFICATIONS</b>	
5100613	Manumed Special Traction 4-section (type 916)	Types of therapy:	static traction, intermittent traction
3450500	Manumed Special Traction 2-section, back, fixed height (type 004)	Mains voltage:	230 V ± 15% (50/60 Hz)
1471807	Remote control for Eltrac 471	Max. power consumption:	0.22A (230 V)
3013014	Flexistool grey, with separate height adjustment for each leg	Dimensions:	302x262x155 mm
		Weight:	12 kg



# ENDOPRESS 442

The EndoPress 442 is the product for lymph drainage



Lymph drainage, also called presso therapy, means stimulating the lymph knobs and the lymph circulation system through a very specific subtle massage, which results in the discharge of moisture and hence the waste products that are located in and between the cells are removed.

Lymph drainage or presso therapy gets a new image with this mobile model. The EndoPress 442 has 2 connections for the 9 segments leg compression garment or the 7 segments arm compression garment. The extremely quiet and powerful motor sees to it that the set pressure is realised quickly and accurately.

The EndoPress 442 is equipped with several programmes, which offer a great variation in the possible sequence in which the segments are raised to the set pressure values. This approach makes it possible to apply various lymph drainage techniques with the EndoPress 442. This is exactly what makes the EndoPress 442 so unique.

The pressure can be set quickly and exactly at a value between 20-150 mmHg for the entire compression garment or even for each individual segment of the garment in question. The application on a segment level makes it possible to not treat any painful places or, if required, set a very low pressure.

The EndoPress 442 is an unique universal product for the treatment of moisture accumulation. This effective treatment method offers maximum possible comfort to the patient because of the pressure that can be set for each segment. For the therapist the low-noise EndoPress 442 is an enrichment in the treatment room to replace the labour-intensive manual therapy. The EndoPress 442 has a stable and robust housing, which is mobile and can therefore be used where the therapist thinks it is best suitable. The operation is very simple through the graphic LCD screen.

- The pressure is adjustable for each segment
- A silent and powerful compressor
- Simple operation through graphic LCD-screen
- More than 15 pre-programmed sequences
- 50 freely programmable sequences
- Leg and arm compression garments that can be set for each individual segment
- Offers great comfort to patient and therapist



## Presso therapy

### ORDERING DATA

**1442911** EndoPress 442-230 VAC

### STANDARD ACCESSORIES

- 3444661** Mains cable 115V-UL-CSA
- 1442755** Operation manual EndoPress 442
- 1442754** Operation manual EndoPress 442
- 1442753** Operation manual EndoPress 442
- 1442751** Operation manual EndoPress 442
- 1442750** Operation manual EndoPress 442
- 1442010** Dummy block EndoPress 442
- 3444298** Mains cable 230V-EUR
- 1442752** Operation manual EndoPress 442

### OPTIONAL ACCESSORIES

- 1442800** 9 segments leg gaskets
- 1442801** 7 segments arm gaskets

### TECHNICAL SPECIFICATIONS

<b>Mains voltage:</b>	230 VAC 50-60 Hz ±15%
	115 VAC 50-60 Hz ±15%
<b>Maximum power consumption:</b>	220 VA
<b>LCD display graphics:</b>	240x128 pixels
<b>Pressure setting:</b>	20-150 mbar
<b>Programmable treatment time:</b>	increasing to 30 minutes
<b>Output connectors (parallel):</b>	2
<b>Pre-programmed protocols:</b>	>15
<b>Freely programmable protocols:</b>	50
<b>Dimensions (wxdxh):</b>	39x40x93 cm
<b>Weight:</b>	approx. 45kg



1442010



1442800



1442801



# CURAPULS 670

Top model for pulsed shortwave therapy



### Two outlets

The Curapuls 670 is provided with two outlets so that two electrodes can be used simultaneously. Both outlets have independently adjustable pulse width and peak (average) power.

### A-thermal effects

Usually the Curapuls 670 is used a-thermally. The comparatively high peak power has a strong stimulative effect on the biological processes. Consequently, it is very well-suited for the treatment of acute conditions.

### Thermal effects

Thermal effects originating from long pulse times and high pulse repetition frequencies make the Curapuls 670 also suitable for thermal treatments.

### User-friendly and functional

The large illuminated screen displays the parameters in an organised fashion. The

parameters remain visible during treatment.

The Curapuls 670 logically orders more than 50 of the most universal indications. After selection of the desired indication, the parameters for treatment are automatically set. Frequently used protocols can be stored into the memory.

### Three unique circuplodes

Three special induction-electrodes have been developed for the Curapuls 670. They are provided with a Faraday screen to assure a low superficial thermal load. Because of this, no energy is absorbed into the superficial fatty tissues resulting in an efficient deep treatment.

- Adjustable peak power (maximum 200 Watt)
- Adjustable pulse width and frequency
- Conveniently arranged display
- 50 Pre-programmed treatment suggestions
- 25 Free programmable memory positions
- Special induction-electrodes
- Power indicator
- Adjustable electrode arms



## Shortwave and microwave therapy

### ORDERING DATA

**1403932** Curapuls 670 230V/50-60Hz

### STANDARD ACCESSORIES

- 3444661** Mains cable 115V-UL-CSA
- 1403751** Operating manual Curapuls 670
- 3444298** Mains cable 230V-EUR
- 1462484** Circuplode Ø 140 mm, Curapuls 670
- 2994090** Cable clamp for Curapuls 670
- 1462540** Electrode arm white, for Curapuls

### TECHNICAL SPECIFICATIONS

- Frequency:** 27.12 MHz (± 0.6%)
- Channels:** 2
- Pulse power:** 0-200 W (± 20%) into 50 ohm
- Average power:** 0-64 W (± 20%) into 50 ohm
- Mains voltage:** 220-240 V ± 10% (50/60 Hz)
- Power consumption:** max. 1.6 A (230 V)
- Dimensions (wxdxh):** 39x40x93 cm
- Weight (unit):** approx. 45 kg (excluding arm)
- Electrode arm:** approx. 2.5 kg

### OPTIONAL ACCESSORIES

- 1462521** Circuplode-E
- 1462514** Circuplode Ø 90 mm
- 3441401** Treatment couch, clear lacquered wood, 190x60x75 cm
- 3441337** Treatment chair, clear lacquered wood
- 3441338** Footrest, clear lacquered wood
- 1480803** Earth potential-equalization cable 5 m



1462484



1462514



1462514



3441401



3441337



3441338



1480803

# CURAPULS 970

Unit for continuous and pulsed shortwave therapy



**Continuous and pulsed output**

The continuously adjustable intensity and the output of 400 Watt provide optimum application possibilities. Continuous shortwave therapy increases the circulation and stimulates the metabolism. The pulsed peak power can be set to a maximum of 1000 Watts. The related average power is, however, much lower.

Biological processes, which should not be heat-treated, can therefore be treated a-thermally.

**The electrodes**

An electrical field can be created with the disc electrodes or the rubber electrodes, depending on the shape and size of the body part to be treated. A choice can be made from a wide range of capacitive electrodes. A magnetic field can be created with the Circuplode or with the Flexiplode. The treatment planes of the Flexiplode can be adjusted to fit the body part.

**Striking effects**

Besides the well known effects of heat therapy with continuous radiation, the unit's pulsed mode will stimulate wound healing, oedema- and haematoma absorption, pain reduction and stimulation of the peripheral circulation.

**Easy to move**

Four large wheels make the Curapuls 970 easy to move within your practice. Two wheels can be locked to immobilise the unit.

- Continuous and pulsed
- Conveniently arranged display
- Wide range of electrodes
- Four large castors
- Adjustable electrode arms

## Shortwave and microwave therapy



**ORDERING DATA**

**1419942** Curapuls 970 230V/50-60Hz

**STANDARD ACCESSORIES**

- 1419751** Operating manual Curapuls 970
- 3441306** Neon checklight for Curapuls 970 and Radarmed
- 1462531** Disc (Schliephake) electrode Ø 130 mm for Curapuls 970, 2x
- 1462414** Cable clamp for Curapuls 970, 2x
- 1462416** Electrode cable for Curapuls 970, 2x
- 1462540** Electrode arm white, for Curapuls, 2x

**OPTIONAL ACCESSORIES**

- 1462417** Two-way plug, for multi-electrode technique, for Curapuls 970
- 1462443** Adapter for Circuplode Ø 140 mm 1462453, for Curapuls 970
- 1462453** Circuplode Ø 140 mm, Curapuls 970
- 1462423** Flexiplode for Curapuls 970

- 1462533** Disc (Schliephake) electrode Ø 42 mm for Curapuls 970
- 1462532** Disc (Schliephake) electrode Ø 85 mm, for Curapuls 970
- 1462416** Electrode cable for Curapuls 970
- 1462531** Disc (Schliephake) electrode Ø 130 mm for Curapuls 970
- 3441302** Flexible rubber electrode 15x25 cm, for Curapuls 970
- 3441301** Flexible rubber electrode 12x12 cm, for Curapuls 970
- 3441300** Flexible rubber electrode 9,5x10 cm, for Curapuls 970
- 3441346** Felt spacer 16x30 cm, for flexible electrode 15x25 cm (3441302) , for Curapuls 970
- 3441347** Felt spacer 13x17 cm, for flexible electrode 12x12 cm (3441301), for Curapuls 970
- 3441356** Felt spacer 10,5x15 cm, for flexible electrode 9,5x10 cm (3441300), for Curapuls 970

- 3441401** Treatment couch, clear lacquered wood, 190x60x75 cm
- 3441337** Treatment chair, clear lacquered wood
- 3441338** Footrest, clear lacquered wood
- 1480803** Earth potential-equalization cable 5 m

**TECHNICAL SPECIFICATIONS**

- Generator frequency:** 27.12 MHz, ± 0.6%
- Output power:** continuous HF max. 400 W, pulsed HF max. 1000 W (peak)
- Pulse duration:** ca. 400 µs
- Pulse repetition frequency:** 15-200 Hz adjustable in 10 steps
- Mains supply:** 230-240 V / 50 Hz
- Mains voltage variation:** approx. ± 10%
- Current consumption:** approx. 6 A (at 230 V)
- Dimensions (wxdxh, without arms):** 56x43x92.5 cm
- Length electrode arms:** 93 cm
- Weight:** ca. 80 kg





# RADARMED 650+

## Unit for microwave therapy

The Radarmed 650+ is a unit for microwave therapy. This unit for heat therapy offers a choice from continuous or pulsed output.

### Continuous or pulsed output

A choice can be made from a continuous output of maximum 250 Watt or pulsed output with a maximum of 1500 Watt which makes it possible to heat up deeper lying tissues with a low dosage.

### Effortless transition between continuous and pulsed therapy

During the course of treatment you can easily switch from continuous to pulsed output. In the meantime the electronic system keeps the effective dosage constant.

### Simple operation and clear reproduction

Dosage and treatment time are digitally displayed on screen. They are easy to set with the push buttons. The different radiators can easily be attached to the adjustable arm by means of a practical, quick coupling. The treatment starts as soon as the power is set. The unit automatically turns off and gives an audible signal when the treatment time ends.

#### STANDARD ACCESSORIES

- 1435750 Operating manual Radarmed 650+
- 3444298 Mains cable 230V-EUR
- 1409813 HF-cable 250 Watt, for Radarmed
- 3442039 Arm for radiator of the Radarmed

#### OPTIONAL ACCESSORIES

- 3441306 Neon checklight for Curapuls 970 and Radarmed

- 3442022 Protective goggles

- 1409812 Local field radiator Ø 17 cm for Radarmed
- 1409810 Large field radiator for Radarmed
- 1409811 Longitudinal field radiator for Radarmed
- 3441401 Treatment couch, clear lacquered wood, 190x60x75 cm
- 3441337 Treatment chair, clear lacquered wood
- 3441338 Footrest, clear lacquered wood
- 1480803 Earth for potential-equalization cable 5 m

#### TECHNICAL SPECIFICATIONS

- Operating modes: continuous and pulsed
- Frequency: 2450 MHz ± 50 MHz
- Mains voltage: 220-240 V ± 10% (50/60 Hz)
- Power consumption: 1000 VA
- Weight: 45 kg (including arm)
- Dimensions (hxxwxd, including castors): 93x39x49 cm



3441306 3442022 1409812 1409810 1409811 3441401 3441337 3441338 1480803

- Continuous or pulsed output
- Effortless transition between continuous and pulsed therapy
- Simple operation and clear reproduction

# RADARMED 950+

## Unit for microwave therapy

The Radarmed 950+ is a unit for heat therapy. This unit for heat therapy offers a choice from continuous or pulsed output.

### Continuous or pulsed output

A choice can be made from a continuous output of maximum 250 Watts or pulsed output with a maximum of 1500 Watts. Which makes it possible to heat up deeper lying tissues with a low dosage.

### Effortless transition between continuous and pulsed therapy

During the course of treatment you can easily switch from continuous to pulsed output. In the meantime the electronic system keeps the effective dosage constant.

### The LCD screen

User-friendliness and functionality are essential. The parameters are conveniently arranged on the illuminated display. The parameters are easily and swiftly installed by means of the central control and push buttons. The parameter settings remain visible on the display during treatment.

#### ORDERING DATA

- 1435901 Radarmed 650+ 230V/50Hz
- 1435911 Radarmed 950+ 230V/50Hz

#### STANDARD ACCESSORIES

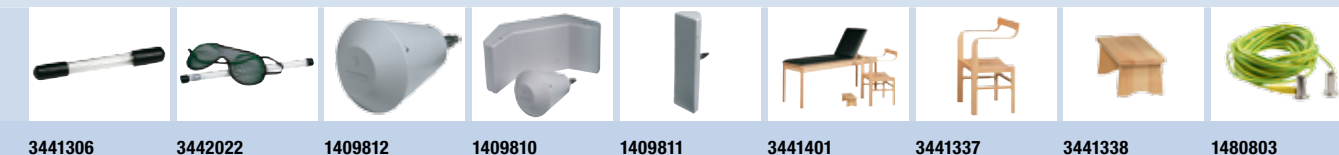
- 1435751 Operating manual Radarmed 950+
- 3444298 Mains cable 230V-EUR
- 1409813 HF-cable 250 Watt, for Radarmed
- 3442039 Arm for radiator of the Radarmed

#### OPTIONAL ACCESSORIES

- 3441306 Neon checklight for Curapuls 970 and Radarmed
- 3442022 Protective goggles
- 1409812 Local field radiator Ø 17 cm for Radarmed
- 1409810 Large field radiator for Radarmed
- 1409811 Longitudinal field radiator for Radarmed
- 3441401 Treatment couch, clear lacquered wood, 190x60x75 cm
- 3441337 Treatment chair, clear lacquered wood
- 3441338 Footrest, clear lacquered wood
- 1480803 Earth for potential-equalization cable 5 m

#### TECHNICAL SPECIFICATIONS

- Operating modes: continuous and pulsed
- Frequency: 2450 MHz ± 50 MHz
- HF power, continuous: 0-250 W at 50 Ohm
- HF power, pulsed: 0-250 W with a fixed peak power of 1500 W, ± 30%
- Programmable positions: yes
- Mains voltage: 220-240 V (± 10%)
- Frequency: 50/60 Hz
- Power consumption: 1000 VA
- Weight: 45 kg (including arm)
- Dimensions (hxxwxd including castors): 93x39x49 cm



3441306 3442022 1409812 1409810 1409811 3441401 3441337 3441338 1480803

- Continuous or pulsed output
- Effortless transition between continuous and pulsed therapy
- The parameters are conveniently arranged on the illuminated display.
- The parameter settings remain visible on the display during treatment.
- Free memory for the storage of treatment protocols

# CIRCUPLODE

The Circuplode is an advanced inductive electrode. It is provided with a Faraday screen that eliminates capacitive effects to give a virtually pure magnetic field. This means that no energy is absorbed in superficial fatty tissues, so that optimum treatment of deeper-lying tissues is obtained. This is in contrast to conventional inductive electrodes, in which the transfer of energy is limited by the capacitive currents in superficial (fatty) tissues.

## For the Curapuls 670:

- Circuplode Ø 140 mm: for the treatment of larger body parts such as hip and shoulder joints
- Circuplode Ø 90 mm: for the treatment of small body parts such as wrist and ankle joints
- Circuplode-E: for the treatment of large oblong shaped body parts such as knee joints.

## For the Curapuls 970:

- Circuplode Ø 140 mm: simple application (contact electrode)

## ORDERING DATA

- 1462453** Circuplode Ø 140 mm, Curapuls 970  
**1462443** Adapter for Circuplode Ø 140 mm 1462453, for Curapuls 970  
**1462484** Circuplode Ø 140 mm, Curapuls 670  
**1462514** Circuplode Ø 90 mm  
**1462521** Circuplode-E



CE 0197

# FLEXIPLODE

Induction electrodes are particularly well-suited for the treatment of deeper-lying tissues. The adjustable treatment planes of the Flexiplode ensure optimum adaptation to the body surface. The large surface totalling 412x225 mm enables treatment of larger body parts conveniently in one application. The Flexiplode is an advanced inductive electrode. It is provided with a Faraday

screen that eliminates capacitive effects to give a virtually pure magnetic field. This means that no energy is absorbed in superficial fatty tissues, so that optimum treatment of deeper-lying tissues is obtained. This is in contrast to conventional inductive electrodes, in which the transfer of energy is limited by the capacitive currents in superficial (fatty) tissues.

The Flexiplode is made of ABS plastic, combining high durability with excellent electrical insulation. Strong self-locking hinges help to ensure a long working life.

- Adjustable treatment planes for adaptation to body surfaces
- Three sided coverage of extremities provides a homogeneous induction field
- Time saving application method

## ORDERING DATA

- 1462423** Flexiplode for curapuls 970

## STANDARD ACCESSORIES

- 1462751** Operating manual Flexiplode for Curapuls 970



CE 0197

## Shortwave and microwave therapy

### Furniture for shortwave and microwave therapy



## ORDERING DATA

- 3441337** Treatment chair, clear lacquered wood  
**3441401** Treatment couch, clear lacquered wood, 190x60x75 cm  
**3441338** Footrest, clear lacquered wood

## STANDARD ACCESSORIES

- 1400743** Operating manual treatment couch, clear lacquered wood  
**1400744** Operating manual treatment chair, clear lacquered wood  
**1400745** Operating manual footrest, clear lacquered wood

CE 0197



Fangoheater

The compact design as table model makes the unit suitable to be used in any kind of practice. It is possible to process Paraligno as well as Parafango Battaglia in the heater. Because of the direct heating system, the Fango heater is highly suitable for sterilising paraffin (at 135 °C). Sterilising is only possible when Parafango Battaglia is used (Paraligno cannot stand these high temperatures). The Fango heater is glass wool isolated and is delivered including a splash cover with cold grip.



<b>ORDERING DATA</b>	<b>OPTIONAL ACCESSORIES</b>
<b>1468904</b> Fangoheater	<b>3448112</b> Paraffin wax, pure form, 25 kg
	<b>3448137</b> Parafoil, 40x60 cm, 1000 sheets
<b>STANDARD ACCESSORIES</b>	<b>3448164</b> Paraligno, 5 kg
<b>1468751</b> Operating manual fangoheater	<b>3448108</b> Parafango Battaglia, 12 kg
<b>3444290</b> Mains cable 230V-EUR	



**PARALIGNO**  
Paraligno is composed out of paraffin mixed with birch sawdust. It can be used for any packing size. Paraligno has a long term of heat development.

**PARAFANGO BATTAGLIA**  
Parafango is composed out of paraffin mixed with fango (mud). It can be used for any packing size. Parafango has a long term of heat development. Frequently heating till 130° to 140°C for sterilisation does not harm the Parafango.

**PARAFFIN**  
Pure form paraffin with a melting point of 48°-52°C.



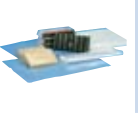
Paraffin-bath

The Enraf-Nonius paraffin bath operates on the “au-bain-marie” principle. The paraffin is heated directly by the heat transferred from a heat-transfer liquid. As heat-transfer liquid you can use water or a special thermal-oil (13 ltr). The size of the bath makes it suitable for so-called dipping treatments. It is possible to heat Paraligno, Parafango and pure paraffin in this bath.

- Quicker heating
- More even heat distribution
- Practically no temperature fluctuations in the paraffin
- Mobile
- Stainless steel inner tank with splash cover
- Thermostatic temperature control (30-90 °C)
- Overheating safety mechanism



<b>ORDERING DATA</b>	<b>3448137</b> Parafoil, 40x60 cm, 1000 sheets
<b>3448162</b> Paraffin-bath 230V/50Hz	<b>3448136</b> Heat-transfer liquid, 5 l
<b>3448163</b> Paraffin-bath 115V/60Hz	<b>3448112</b> Paraffin wax, pure form, 25 kg
<b>STANDARD ACCESSORIES</b>	<b>TECHNICAL SPECIFICATIONS</b>
<b>1400005</b> Operating manual Paraffin bath	<b>Temperature range:</b> 30-90°C
<b>OPTIONAL ACCESSORIES</b>	<b>Internal dimensions:</b> 50x30x21 cm (30 l)
<b>3448108</b> Parafango Battaglia, 12 kg	<b>External dimensions:</b> 58x32x50 cm (30 l)
<b>3448164</b> Paraligno, 5 kg	<b>Mains voltage:</b> 230 V, 50/60 Hz
	<b>Power consumption:</b> 2000 W (1760 W for the 115 V version)



3448136

Packheater

The Packheater is used for heating packs. The enamelled heater is standard delivered including base grid. The water temperature is accurately maintained by a thermostat at a pre-selected, constant value (50-95 °C).

- Table model
- Enamelled heater
- Thermostatic temperature control
- Content 29 litres
- Water temperature adjustable (50-95°C)



<b>ORDERING DATA</b>	<b>3448311</b> Stadtholder Moorpacking 13x28 cm
<b>3448191</b> Packheater 230V/50-60Hz	<b>3448310</b> Stadtholder Moorpacking 18x28 cm
<b>STANDARD ACCESSORIES</b>	<b>3448312</b> Stadtholder Moorpacking 22x40 cm
<b>1400725</b> Operating manual packheater 3448191	<b>3448313</b> Stadtholder Moorpacking 30x40 cm
<b>OPTIONAL ACCESSORIES</b>	<b>3448314</b> Stadtholder Moorpacking neck-/soulder model
<b>3448135</b> Base grid, plastic-coated for Packheater 3448191	<b>3448209</b> Hot/Cold packs 30x38 cm, 2 pieces
<b>3448199</b> Rack, stainless steel for Packheater 3448191	<b>3448208</b> Hot/Cold packs 13x30 cm, 6 pieces.
<b>3448132</b> Tongs made of wood of packs	<b>3448207</b> Hot/Cold packs 13x14 cm, 12 pieces
<b>3448166</b> Enno Moist 12x30 cm	<b>3448130</b> Towelling holder for 3 packs 3448208
<b>3448167</b> Enno Moist 25x30 cm	<b>TECHNICAL SPECIFICATIONS</b>
<b>3448281</b> Enno Moist 25x45 cm	<b>Temperature range:</b> 50-100°C
<b>3448283</b> Enno Moist 25x50 cm	<b>Tank capacity:</b> 29 l
<b>3448282</b> Enno Moist 25x60 cm	<b>Mains voltage:</b> 230 V (suitable for 220-240 V)
<b>3448169</b> Enno Moist oversize, 38x61 cm	<b>Power consumption:</b> 700 W
<b>3448168</b> Enno Moist neckmodel, 15x61 cm	<b>Dimensions:</b> height 42 cm, diameter 35 cm
	<b>Weight:</b> 7 kg



3448135



3448199



3448132



3448130



**ENNO MOIST**  
Cotton pack filled with volcanic mineral grains.

- ORDERING DATA**
- 3448166** Enno Moist 12x30 cm
  - 3448167** Enno Moist 25x30 cm
  - 3448281** Enno Moist 25x45 cm
  - 3448283** Enno Moist 25x50 cm
  - 3448282** Enno Moist 25x60 cm
  - 3448169** Enno Moist oversize, 38x61 cm
  - 3448168** Enno Moist neckmodel, 15x61 cm



**HOT/COLD PACKS**  
Synthetic pack filled with gel.


- ORDERING DATA**
- 3448209** Hot/Cold packs 30x38 cm, 2 pieces
  - 3448208** Hot/Cold packs 13x30 cm, 6 pieces.
  - 3448207** Hot/Cold packs 13x14 cm, 12 pieces

**STANDARD ACCESSORIES**  
**1400735** Operating manual hot/cold packs

**OPTIONAL ACCESSORIES**  
**3448130** Towelling holder for 3 packs 3448208


Packheater, Enno Moist and Hot/Coldpacks

All Packheaters come with a detachable insert rack in which several packs can be suspended alongside each other and heated. A sensitive thermostat helps keep the water temperature constant.




**PACKHEATER SS**  
The Packheater SS is supplied as standard with 8 Enno Moist packs of 25x30 cm.

<b>Tank capacity:</b>	31,64 l
<b>Temperature range:</b>	71-74°C
<b>Mains voltage:</b>	220-240 V
<b>Mains frequency:</b>	50/60 Hz
<b>Power consumption:</b>	1000 W
<b>Dimensions (hxdhx):</b>	49,53x44,45x39,37 cm
<b>Weight:</b>	22,39 kg




**PACKHEATER SS-2**  
The Packheater SS-2 is supplied as standard with 8 Enno Moist packs of 25x30 cm. Easily moved on the 7½ cm rubber wheels

<b>Tank capacity:</b>	49,32 l
<b>Temperature range:</b>	71-74°C
<b>Mains voltage:</b>	220-240 V
<b>Mains frequency:</b>	50/60 Hz
<b>Power consumption:</b>	1000 W
<b>Dimensions (hxlxw):</b>	85,09x52,07x39,37 cm
<b>Weight:</b>	29,85 kg




**PACKHEATER E-1**  
The Packheater E-1 is supplied as standard with 4 Enno Moist packs of 25x30 cm.

<b>Tank capacity:</b>	15,44 l
<b>Temperature range:</b>	71-74°C
<b>Mains voltage:</b>	220-240 V
<b>Mains frequency:</b>	50/60 Hz
<b>Power consumption:</b>	1000 W
<b>Dimensions (hxdxw):</b>	40,64x33,02x22,89 cm
<b>Weight:</b>	7,09 kg




**PACKHEATER M-2**  
The Packheater M-2 is supplied as standard with 12 Enno Moist packs of 25x30 cm. Easily moved on the 7½ cm rubber wheels

<b>Tank capacity:</b>	68,81 l
<b>Temperature range:</b>	71-74°C
<b>Mains voltage:</b>	220-240 V
<b>Mains frequency:</b>	50/60 Hz
<b>Power consumption:</b>	1000 W
<b>Dimensions (hxdxw):</b>	85,09x67,31x39,37 cm
<b>Weight:</b>	37,32 kg



**PACKHEATER E-2**  
The Packheater E-2 is supplied as standard with 6 Enno Moist packs of 3 different dimensions.

<b>Tank capacity:</b>	43,23 l
<b>Temperature range:</b>	71-74°C
<b>Mains voltage:</b>	220-240 V
<b>Mains frequency:</b>	50/60 Hz
<b>Power consumption:</b>	1000 W
<b>Dimensions (hxdxw):</b>	54,61x36,83x31,75 cm
<b>Weight:</b>	13,43 kg



**PACKHEATER M-4**  
The Packheater M-4 is supplied as standard with 24 Enno Moist packs of 25x30 cm. Easily moved on the 7½ cm rubber wheels

<b>Tank capacity:</b>	135,76 l
<b>Temperature range:</b>	71-74°C
<b>Mains voltage:</b>	220-240 V
<b>Mains frequency:</b>	50/60 Hz
<b>Power consumption:</b>	1500 W
<b>Dimensions (hxdxw):</b>	85,09x88,9x50,16 cm
<b>Weight:</b>	59,712 kg

- ORDERING DATA**
- 3448260** Packheater SS-2 230V
  - 3448261** Packheater M-2 230V
  - 3448262** Packheater M-4 230V
  - 3448263** Packheater SS 230V
  - 3448264** Packheater E-2 230V
  - 3448265** Packheater E-1 230V

- STANDARD ACCESSORIES**  
(PRODUCT DEPENDENT, SEE DESCRIPTION)
- 3448167** Enno Moist 25x30 cm
  - 3448169** Enno Moist oversized, 38x61 cm
  - 3448168** Enno Moist neckmodel, 15x61 cm


- OPTIONAL ACCESSORIES**
- 3448166** Enno Moist 12x30 cm
  - 3448281** Enno Moist 25x45 cm
  - 3448283** Enno Moist 25x50 cm
  - 3448282** Enno Moist 25x60 cm
  - 3448176** Protective sleeve Enno Moist standard (25x30 cm)
  - 3448175** Protective sleeve Enno Moist, oversized model (75x82 cm)
  - 3448177** Protective sleeve Enno Moist neck model
  - 3448272** Storage rack



3448272


CE 0197

Mobile quick-chiller to bring cold packs to the ideal temperature for use and to make sure they stay that way all day long. The specially designed chilling elements guarantee a rapid chilling. Easily moved on the 7½ cm rubber wheels.




**CHILLING UNIT MODEL C-2**  
The C-2 is supplied as standard with 6 Colpacs of 28x36 cm.

<b>Mains voltage:</b>	220-240 V, 50/60 Hz
<b>Current:</b>	2 A
<b>Work:</b>	0.14914 kWh or 1/5 hp
<b>Type of refrigerant:</b>	R-134A
<b>Test pressures:</b>	high 1.62 MPa (235 psi); low 1.03 MPa (150 psi)
<b>Normal operating temperature:</b>	-12°C to -6°C (+10°F to +21°F)



**CHILLING UNIT MODEL C-5**  
The C-5 is supplied as standard with 6 Colpacs of 28x36 cm and 6 Colpacs of 16x28 cm.

<b>Mains voltage:</b>	220-240 V, 50/60 Hz
<b>Current:</b>	2 A
<b>Work:</b>	0.14914 kWh or 1/5 hp
<b>Type of refrigerant:</b>	R-134A
<b>Amount of refrigerant:</b>	0.325 L (11 oz.)
<b>Test pressures:</b>	high 1.62 MPa (235 psi); low 1.03 MPa (150 psi)
<b>Normal operating temperature:</b>	-12°C to -6°C (+10°F to +21°F)



**CHILLING UNIT MODEL C-6**  
The C-6 is supplied as standard with 12 Colpacs of 28x36 cm.

<b>Mains voltage:</b>	220-240 V, 50/60 Hz
<b>Current:</b>	2 A
<b>Work:</b>	0.14914 kWh or 1/5 hp
<b>Type of refrigerant:</b>	R-134A
<b>Amount of refrigerant:</b>	0.325 l (11 oz.)
<b>Test pressures:</b>	high 1.62 MPa (235 psi); low 1.03 MPa (150 psi)
<b>Normal operating temperature:</b>	-12°C to -6°C (+10°F to +21°F)



**Colpac**  
Universal flexible cold pack in blue vinyl.



**Stadtholder Moorpacking**  
Synthetic pack filled with 'moor'.  
• Heat is given off extremely slowly  
• Can be heated in a microwave

- ORDERING DATA**
- CHILLING UNITS**
- 3448273** Chilling unit model C-2 230V
  - 3448274** Chilling unit model C-5 230V
  - 3448275** Chilling unit model C-6 230V

- MOORPACKING**
- 3448310** Stadtholder Moorpacking 18x28 cm
  - 3448311** Stadtholder Moorpacking 13x28 cm
  - 3448312** Stadtholder Moorpacking 22x40 cm
  - 3448313** Stadtholder Moorpacking 30x40 cm
  - 3448314** Stadtholder Moorpacking neck-/soulder model

- MOORPACKING**
- 3448290** Colpac 14x17 cm
  - 3448288** Colpac 16x28 cm
  - 3448284** Colpac 28x36 cm
  - 3448285** Colpac 28x53 cm
  - 3448287** Colpac 8x28 cm
  - 3448286** Colpac neck model 58 cm
  - 3448289** Colpac for the eyes



Infrared Radiators



For many years, Infrared Radiators have been a well-known accessory in the field of thermotherapy. Infra-red thermotherapy is often used for the reduction of pain as well as for general healing of wounds. The skin absorbs the heat and passes it through to the blood stream in a natural way.

- Some other fields of application for the Enraf-Nonius IR Radiator are:
- pre-treatments in massage practices;
  - face and beauty treatments;
  - cosmetic applications.

Positioning is easy because of the specially developed fast fixation device. The unit can be delivered with a stable mobile stand, with height adjustment and safety locks on the wheels.

<b>ORDERING DATA</b>	
<b>1979901</b>	IR 6 Infra-red Radiator
<b>1979902</b>	IR 3 Infra-red Radiator
<b>OPTIONAL ACCESSORIES</b>	
<b>3444639</b>	Mobile support for IR3 and IR6 radiators
<b>TECHNICAL SPECIFICATIONS IR 6</b>	
<b>Radiators:</b>	6x150 W
<b>Power consumption (220 VAC):</b>	900 W (220 VAC)
<b>TECHNICAL SPECIFICATIONS IR 3</b>	
<b>Radiators:</b>	3x150 W
<b>Power consumption (220 VAC):</b>	450 W (220 VAC)
<b>Timer adjustment:</b>	upto 30 minutes
<b>Dimensions:</b>	36x73x20 cm (WxLxD)
<b>Weight:</b>	approx. 11,3 kg



3444639

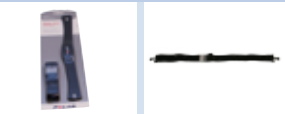
Monark 970 Cycle



A sturdy mechanically braked system with an electronic readout for clear feedback and motivation. The Enraf-Nonius Cycle 970 combines the best of mechanics and electronics at very attractive pricing.

- Easy to read display with information on: time, RPM, speed, distance and pulse
- Load range from 20 to 550 watt at 110 RPM, thus suitable for rehab and sports training
- Large transport wheels for easy mobility
- Easy workload adjustment by means of a knob
- Adjustable handlebar (can rotate 360°) and saddle, suitable for a wide variance in body sizes
- An enclosed flywheel and chain system for optimal safety

<b>ORDERING DATA</b>	
<b>3446514</b>	Monark 970 Cycle
<b>OPTIONAL ACCESSORIES</b>	
<b>3496839</b>	Chest-belt for heartbeat registration
<b>3496840</b>	Elastic strap for chest belt for heartbeat registration



3496839 3496840

Quadriceps Bench

The Quadriceps Bench is a functional muscle exerciser, allowing a large number of exercises to be performed within minimum floor surface. The bench enables exercises in a sitting position (for instance knee stretching) as well as exercises in a reclining position (for instance knee flexion and hip stretching). The adjustment of the seat and back, provides a comfortable and stable position. Additional arm rests can be installed (also suitable for press-up exercises).

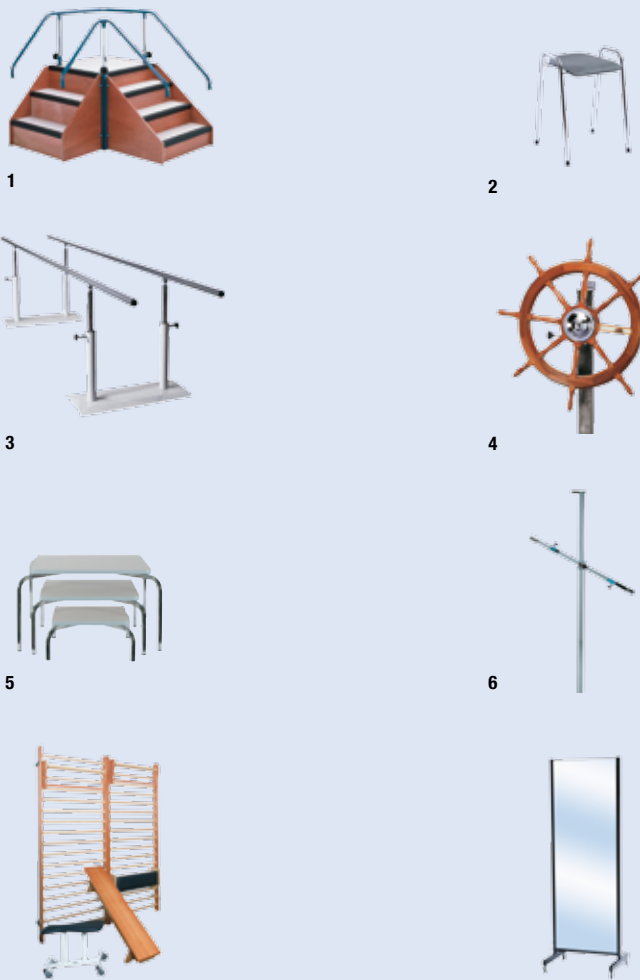


<b>ORDERING DATA</b>	
<b>3446188</b>	Quadriceps Bench
<b>STANDARD ACCESSORIES</b>	
<b>1400740</b>	Operating manual Quadriceps exercise bench
<b>OPTIONAL ACCESSORIES</b>	
<b>3446197</b>	Additional swinging arm
<b>3445023</b>	Strap with back-to-back fastening, 120 cm

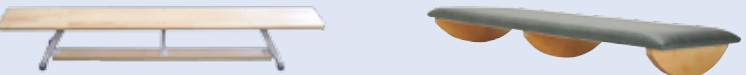


3446197 3445023

Other exercise materials



1 2 3 4 5 6 7-9 10



11 12

<b>ORDERING DATA</b>	
<b>EXERCISE MATERIALS</b>	
<b>1</b>	<b>3446396</b> Exercise stairs, right angled version, 138x123x127 cm
<b>2</b>	<b>3446189</b> Exercise stool, height 65 cm
<b>3</b>	<b>3446257</b> Parallel bars, 4 meter
<b>4</b>	<b>3446325</b> Shoulder wheel Type III
<b>5</b>	<b>3446261</b> Set of 3 exercise stools
<b>6</b>	<b>3446437</b> Shoulder wheel Type I
<b>7</b>	<b>3446375</b> Wall bars with removable headsection
<b>8</b>	<b>3446450</b> Knee support for wall bars 3446375
<b>9</b>	<b>3446483</b> Wall bars, simple model
<b>10</b>	<b>3446311</b> Correction mirror, metal frame, on wheels, 168x60 cm
<b>11</b>	<b>3446383</b> Swedish bench, 200 cm
<b>12</b>	<b>3013018</b> Balance board grey, dim. 150x60x17 cm

Small practice materials

Rep Band, the non-latex exercise band

The Rep Band exercise band is made of a non-slip, non-latex elastomer that provides just enough tack for a comfortable, sure grip. The Rep Band exercise band does not leave stains of powder and it has no odor. Innumerable possibilities for exercising come with a very comfortable price.

Eggsercizer, resistive hand exerciser

This nice looking Eggsercizer stimulates the training of the fingers, palm and wrist. The surface has a comfortable and soft feel, but gives also the proper resistance.

Rep Putty, non-toxic exercise putty

This smooth exercise putty is formulated in five progressive resistance levels for fingers, palm and wrist rehabilitation. The putty has a smooth and non-oily feeling. Not only enables the incorporation of an anti-microbial inhibitor Rep putty to resist the growth of destructive bacteria, it also promotes hygiene and odor reduction.



1-6



7-10



16



11-20



21-31

ORDERING DATA

- 1 3446570 Rep Putty extra/extra soft, light brown 80 gram
- 2 3446571 Rep Putty extra soft, peach 80 gram
- 3 3446572 Rep Putty soft, orange 80 gram
- 4 3446573 Rep Putty medium, green 80 gram
- 5 3446574 Rep Putty strong, blue 80 gram
- 6 3446575 Rep Putty extra strong, violet 80 gram

- 7 3446576 Eggsercizer extra soft orange
- 8 3446577 Eggsercizer soft green
- 9 3446578 Eggsercizer medium blue
- 10 3446579 Eggsercizer strong purple

- 11 3446695 Rep exercise tubing level 1 peach 30 m
- 12 3446696 Rep exercise tubing level 2 orange 30 m
- 13 3446697 Rep exercise tubing level 3 green 30 m
- 14 3446698 Rep exercise tubing level 4 blue 30 m
- 15 3446699 Rep exercise tubing level 5 purple 30 m
- 16 3446793 Rep exercise tubing level 1 peach 7,5 m
- 17 3446794 Rep exercise tubing level 2 orange 7,5 m
- 18 3446795 Rep exercise tubing level 3 green 7,5 m
- 19 3446796 Rep exercise tubing level 4 blue 7,5 m
- 20 3446797 Rep exercise tubing level 5 purple 7,5 m

- 21 3446776 Rep exercise band level 1 peach 5,5 m
- 22 3446777 Rep exercise band level 2 orange 5,5 m
- 23 3446778 Rep exercise band level 3 green 5,5 m
- 24 3446779 Rep exercise band level 4 blue 5,5 m
- 25 3446780 Rep exercise band level 5 purple 5,5 m
- 26 3446781 Rep exercise band level 1 peach 45 m
- 27 3446782 Rep exercise band level 2 orange 45 m
- 28 3446783 Rep exercise band level 3 green 45 m
- 29 3446784 Rep exercise band level 4 blue 45 m
- 30 3446785 Rep exercise band level 5 purple 45 m
- 31 3446786 Dispenser for 5 rolls



1-3



4-8



9



10-11



12-16



17



18-23



24-28



29



30-37

ORDERING DATA

- 1 3433432 Pump with lid for massage lotion
- 2 3445289 Enno-lin, container 5 ltr
- 3 3445290 Enno-lin massageoil, bottle 500 ml
- 4 3445332 Senator 3D massage unit
- 5 3445359 Foam rubber applicator
- 6 3445383 Burled foam applicator
- 7 3445384 Hyperaemia brush, synthetic
- 8 3445385 Hyperaemia brush, natural hair

- 9 1469911 Exercise top, Ø 50 cm, maximum 90 kg
- 10 3446151 Physioball, Ø 85 mm, red
- 11 3446152 Physioball, Ø 95 mm, blue
- 12 3446233 Dumb-bell, 1 kg, set of 2
- 13 3446234 Dumb-bell, 2 kg, set of 2
- 14 3446235 Dumb-bell, 3 kg, set of 2
- 15 3446236 Dumb-bell, 4 kg, set of 2
- 16 3446237 Dumb-bell, 5 kg, set of 2

- 17 3446211 Ball pump
- 18 3447617 Wristlet 3,5 kg
- 19 3447618 Wristlet 5,0 kg
- 20 3447656 Wristlet 0,5 kg
- 21 3447657 Wristlet 1,0 kg
- 22 3447658 Wristlet 2,0 kg
- 23 3447659 Wristlet 3,0 kg
- 24 3446273 Airex 'Corona' 185x100x1,5 cm, red
- 25 3446397 Airex 'Coronella' 185x60x1,5 cm, red
- 26 3446362 Airex 'Atlas' 200x125x1,5 cm, green
- 27 3446174 Airex 'Hercules' 200x100x2,5 cm, green
- 28 3446463 Hanging bracket for Airex mats, 150x37 cm
- 29 1441900 Wristroller, with adjustable resistance
- 30 3446251 Storage rack (without materials)
- 31 3446215 Wooden block, 10x6x4 cm
- 32 3446216 Wooden block, 20x10x5 cm
- 33 3446245 Club, original design
- 34 3446332 Exercise stick, wood, 100 cm
- 35 3446204 Medicine ball, leather, 1,5 kg
- 36 3446205 Medicine ball, leather, 2 kg
- 37 3446206 Medicine ball, leather, 3 kg





The EN-Motion treadmill is a medical training device suitable for therapy for conditions such as COPD and obesity. The EN-Motion is a universal treadmill for medical exercise therapy. The EN-Motion can also be used as a preventive exercise machine. Regular movement helps prevent cardiovascular disease, diabetes and osteoporosis.

The EN-Motion is also suitable for weight-loss programmes, or to keep the weight steady. The EN-Motion is a formidable treadmill, characterised by outstanding Enraf-Nonius design and workmanship and advanced technology, which perfectly meet today's needs. The treadmill has unique adjustable ergonomic sidebars. The innovative control panel pivots round for easy viewing by the patient or the therapist. The EN-Motion is further unique in its Dual Slope Technology (DST), which allows the easy setting of positive and negative slopes.

Therapy options are increased considerably with the adjustable direction of movement. The machine comes with functional, adjustable exercise programmes and a variety of test protocols. The EN-Motion treadmill can be controlled with EN-Track software. Its special shock absorption means that even the most sensitive patients can exercise on the EN-Motion. The extremely low step allows any patient to use it. What distinguishes the EN-Motion further from other treadmills is that this exercise machine meets the strict guidelines of the Medical Devices Directives for medically sound therapy. The EN-Motion is a professional treadmill with a powerful, quiet motor and a robust, contemporary look. It is stable and extremely safe to use.

- Dual Slope Technology (DST)
- Pivoting Panel



Product availability expected as of mid 2009.



### ORDERING DATA

**1665901** EN-Motion Standard 230V

**1665911** EN-Motion Standard 115V

### STANDARD ACCESSORIES

**1665751** User manual EN-Motion

**1665802** Hip belt with magnetic emergency stop

### OPTIONAL ACCESSORIES

**3496839** Chest-belt for heartbeat registration

**1665800** Emergency stop

**1665801** Ramp-up platform

### TECHNICAL SPECIFICATIONS

**Supply voltage:** 230 V  $\pm$  10%, 50/60 Hz

**Speed:** max. 18 km/h (adjustable in steps of 0,1 km/h)

**Speed in reverse mode:** max. 5 km/h

**Inclination (pos. and neg.):** +15% (pos.) tot -10% (neg.) adjustable in steps of 0,5%

**Belt area:** 150x50 cm

**Sidebar heights:** 70-90 cm

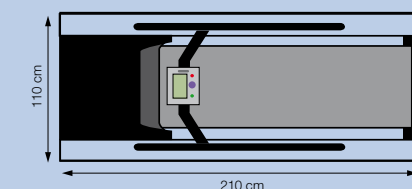
**Dimensions (lxw):** 195x85,5 cm

**Step-up height:**  $\pm$  11 cm

**Weight:**  $\pm$  90 kg

**Max. permissible client weight:** max. 235 kg

**Display:** Color LCD



**3496839**



**1665800**



**1665801**

## Cardio-respiratory exercise equipment, treadmill

The Mill is extremely suitable for a wide range of rehab and training purposes, such as active rehabilitation, mobilization, cardio-respiratory rehabilitation and/or general training and fitness. There is a choice of two basic models: one fitted with the EN-Track interface and one without this interface (thus suitable for stand-alone use).



In their standard implementations, both models meet the following specifications:

- speeds adjustable from 0.5 to 18 km/h
- approved and authorised for medical use
- easy to operate and an extremely well laid out operating panel
- programmable operating unit
- possibility for heartbeat controlled training (with a Polar® transmitter and receiver included)
- emergency stop via emergency button (standard model)
- hip belt with safety switch (for automatic stop if the client cannot maintain the running speed of the belt)

The basic models can be extended or modified with the following options:

1. speed range extra fast or extra slow
2. various front and side supports
3. various types of height adjustments
4. an access platform
5. and an extra de luxe emergency stop

The Mill features:

- Straightforward operation
- Easily readable display
- Low mounting height
- Sprung running surface
- Powerful AC motor, 2.1 HP
- Programmable
- Heart rate control and monitoring with a Polar® chest band
- Modular construction



### ORDERING DATA

- 3446692** EN-Mill Standard, basic model of the Mill as described
- 3446678** EN-Mill Track, basic model of the Mill as described and fitted with EN-Track interface

**The Mill can be extended with one or more extras. Consult your Enraf-Nonius representative for these extras.**

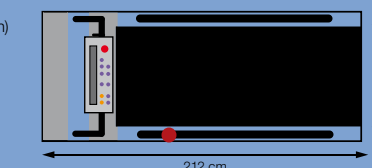
### OPTIONAL ACCESSORIES

- 3496884** Emergency stop of luxury
- 3446683** Fixed negative gradient of +/- 10% (rear-side)
- 3446555** Coated sidebars with a fixed height of 85 cm
- 3446677** Extra PVC-coated sidebars with a fixed height of 85 cm
- 3446674** Extra PVC-coated sidebars, adjustable
- 3446685** U-shaped front-bar
- 3446686** Extra PVC-coating for the standard front-bar
- 3446533** Coated sidebars, adjustable
- 3446681** Electric height-adjustment from 0 to 25% (front-side)
- 3446556** Ramp-up platform 50 cm
- 3446687** Extra low velocity range for rehabilitation (0,1-12 km/h)
- 3446688** Extra high velocity range for sports-applications (0,5-20 km/h)

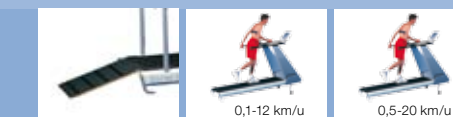
### TECHNICAL SPECIFICATIONS

- Supply voltage:** 230 V ± 10%, 50/60 Hz
- Driving force:** Frequency-controlled rotary-field electromotor
- Motor capacity:** 1500 W
- Max power consumption:** 10 A
- Min./max. speed:** 0.5-18 km/h
- Belt area:** 50x150 cm (eff.)
- Max permissible client weight:** 135 kg
- Inclination:** 0-25%
- Dimensions (lxwxh):** 212x80x138 cm
- Weight:** 145 kg

EN-Track compatible as of EN-Track version 6



349884 3446683 3446686 3446685 3446674 3446677 3446555



3446556 3446687 3446688





### ELECTROTHERAPY

Equipment for pain management, muscle stimulation and/or diagnostics. Electrotherapy applications for fast pain relief without side effects. Muscles can be stimulated to improve the function of soft tissue. Electrotherapy can be used to measure differentiated tissue response to stimulation, to provide a diagnosis about tissue quality.



### ULTRASOUND THERAPY

Equipment for therapy using high frequency sound waves. The high frequency vibrations can cause a mechanical and thermal effect in the tissue. Ultrasound therapy promotes the body's capacity for selfhealing and tissue repair.



### COMBINATION THERAPY

Equipment for electrotherapy and ultrasound therapy. This type of therapy can be applied side-by-side and at the same time, providing a very efficient therapy. Pain reduction in combination with ultrasound therapy provides rapid post-traumatic treatment, resulting in tissue repair in the minimum of time.



### MONOFREQUENCY TREATMENT HEAD (1 MHZ)

Ultrasound treatment head with a frequency of 1 MHz. This frequency has a good depth effect and can be universally used.



### MULTIFREQUENCY TREATMENT HEAD (1+3 MHZ)

An ultrasound treatment head with the option of both 1 MHz and 3 MHz combines the universal application of 1 MHz ultrasound therapy with the more specific application of 3 MHz. Particularly for superficial tendon and tendon sheath disorders, the 3 MHz application provides a solution because its effectiveness is greatest in the superficial layers.



### INTERFERENCE

Interference currents stimulate deep tissue without loading surface tissue. With multipole interference applications a high intensity is achieved on the basis of interference within the effective stimulation area. This enables precise localisation, particularly in deep tissue layers.



### RUSSIAN STIMULATION

An intermittent alternating current with a load frequency of 2500 Hz. This type of current is ideal for muscle stimulation and muscle strengthening.



### ASYMMETRICAL BIPHASAL PULSE CURRENT (TENS)

Asymmetrical biphasal pulse current is a form of TENS (transcutaneous electrical nerve stimulation), which is often used for pain relief. The biphasal character makes this type of current completely balanced and it therefore does not have a direct current. The variations of the asymmetrical component prevent undesired adaptation of the tissue.



### SYMMETRICAL BIPHASAL PULSE CURRENT (TENS)

Symmetrical biphasal pulse current is a form of TENS (transcutaneous electrical nerve stimulation), which is often used for muscle stimulation. The biphasal character makes this type of current completely balanced and it therefore does not have a direct current. The phase duration in both pulse phases is kept the same (symmetrical) so that the supplied energy is doubled.



### RECTANGULAR CURRENT

The classic rectangular current still has many applications today, but is best known as the current for the composition of the I/t curve, enabling objective pronouncements on the quality of the muscle tissue and the innervation. With the 2-5 variant (current type according to Träbert) an optimum segmental treatment can be given.



### TRIANGULAR CURRENT

The classical triangular current, like the rectangular current, has many applications. A triangular current causes the accommodation of the nerve tissue to the stimulation to be resisted. The triangular current forms a valuable addition to the diagnostic possibilities using currents. An I/t curve, expanded with a triangular current, provides insight into the accommodating capacity of the nerve tissue.



### MICRO CURRENT

Micro current uses extremely small flows and is therefore highly suitable for pain relief and for tissue repair. Micro currents can be compared to the natural currents that the body generates for tissue repair.



### HIGH VOLTAGE

The fast introductory period and the short duration of the peak voltage make high voltage ideal for muscle stimulation and pain relief, whereby a good distinction can be made between the sensory and motor response and the perception of pain. High voltage has broad applicability, from pain relief and oedema treatment to muscle stimulation and movement re-education.



### DIADYNAMIC CURRENTS

Diadynamic currents form a classic treatment among therapeutic currents. Since 1962 the different diadynamic currents (such as MF, DF, CD, LP and Lpid) have had an extensive area of application. Apart from the advantage of strong local heating, diadynamic currents are also extremely suitable for pain relief and for reducing swelling.



### INTERMEDIATE FREQUENCY INTERRUPTED DIRECT CURRENT

The intermediate frequency interrupted direct current is a rectangular current with an interruption frequency of 8000 Hz. This type of direct current is, in contrast to continuous direct current, more comfortable for the patient and enables good pain relief.



### CONTINUOUS (GALVANIC) DIRECT CURRENT

Continuous direct current is the father of all current types. In all its simplicity this type of current is effective for diagnostics and for iontoforesis.



### BURST TENS

Burst TENS is a variant of conventional TENS. With this variant short trains of impulses with a high intensity are discharged, to counteract adaptation. This type is highly suitable for pain relief through stimulation of the body's own production of endorphins.



### CONSTANT VOLTAGE / CONSTANT CURRENT

For stationary treatment constant current is an excellent solution; the fixed relationship between the current through the body (B), the voltage differential causing this (V) and the resistance (R) of all the conductors is nearly always constant. For dynamic applications the constant voltage is the appropriate form, because the variation of the resistance is compensated by the variation in current density (intensity).



### BIPOLAR INTERFERENCE

Bipolar interference provides all the benefits of classical tetrapolar interference, but the localisation deep in the body is more straightforward and can therefore be adjusted more precisely.



### CLASSIC INTERFERENCE

Classic tetrapolar interference enables a precise localisation of the treatment area. With the positioning of the electrodes and the variation of the load frequencies stimulation can be given exactly where it is needed, both on the surface and deeper in the body. Due to the four electrodes any stress on the skin is very low.



### ISOPLANAR VECTOR

Isoplanar vector interference is the ideal form for treating deep-seated, large areas. Due to the isoplanar vector, the typical advantages of interference-a lower surface load and an intensive depth effect-are ideal for large treatment areas.



### (AUTOMATIC) DIPOLE VECTOR

The Dipole vector (as a variant of interference current) can be set after applying the electrodes and is used for the exact localisation of the stimulus. With the automatic variant of the dipole vector, the current reaches a larger area of 360°. This means that accommodation occurs less quickly. With sufficiently high intensity, muscle contractions will be perceptible. This effect can be used therapeutically for the reduction of swellings and improving the circulation.