

# SONOPULS 492



The top device of the 4 series is the Sonopuls 492. This complete unit ensures that you can apply ultrasound therapy, electrotherapy and combination therapy. You will have a solution for every disorder at your fingertips with both 1 MHz and 3 MHz ultrasound, with a small and/or a large ultrasound treatment head and with all modern and effective current types that are fully integrated!

The neatly arranged touch screen operating panel makes operation extremely easy and fast. All information that you may need is displayed in a very well-organised manner. Selecting the correct parameters is also easy. Thanks to the integrated evidence-based protocols, the best recommendations will be made. The graphic help screens that display localisations and anatomic representations guarantee the correct execution of the therapy.

The Sonopuls 492 can be used as a mobile device thanks to the battery (optional). In addition to using it with a mains power supply, the equipment can also be used in a clinic, next to the bed of a patient or at home. Thus the multifunctional Sonopuls 492 can also become your assistant wherever you may go.

The Sonopuls 492 can be expanded with the Vacotron 460 suction module. With this Vacotron, that can be integrated beautifully with the Sonopuls 492, you can easily position electrodes. A combination that will make your job even easier and faster to accomplish.

The Sonopuls 492: the complete, easy-to-use, fast and responsible choice for ultrasound therapy, electrotherapy and combination therapy!



## 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.

## 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.

## 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 a minimum of time.

# SONOPULS 492

## 1498913 SONOPULS 492 WITH 2 MULTI-FREQUENCY TREATMENT HEADS (5 CM<sup>2</sup> AND 0,8 CM<sup>2</sup>)



## 1498911 SONOPULS 492 WITH MULTI-FREQUENCY TREATMENT HEAD, LARGE (5 CM<sup>2</sup>)



## 1498912 SONOPULS 492 WITH MULTI-FREQUENCY TREATMENT HEAD, SMALL (0,8 CM<sup>2</sup>)



### TECHNICAL SPECIFICATIONS

Power supply	100 – 240 V ± 10% / 50 / 60 Hz
Dimensions (WxDxH)	
Device	24 x 32 x 12 cm
Device with base	24 x 30,5 x 18,2 cm
Device with Vacotron	24 x 30,5 x 21,6 cm
Weight	2 kg
Weight, including the optional battery	3 kg

### ULTRASOUND

Ultrasound frequencies	1 en 3 MHz
Ultrasound	continuous and pulsed
Duty cycles	5, 10, 20, 33, 50, 80%
Pulse frequency	16 Hz, 48 Hz en 100 Hz
Intensity	0-2 W/cm <sup>2</sup> continuous , 0-3 W/cm <sup>2</sup> pulsed <sup>(1)</sup>
Number of US connections	2
Multi-frequency treatment head large	5 cm <sup>2</sup>
Multi-frequency treatment head small	0,8 cm <sup>2</sup>
Pre-programmed treatment suggestions	25 - Evidence Based
Programmable positions	1000+

### ELECTROTHERAPY

Current channels	2 (100% independent)
Current types	26 (per channel)
Pre-programmed treatment suggestions	42 - Evidence Based
Programmable positions	1000+

### COMBINATION THERAPY

Pre-programmed treatment suggestions	2 - Evidence Based
Programmable positions	1000+

<sup>(1)</sup> = Except 80%, which has a maximum of 2,5 W/cm<sup>2</sup>

### STANDARD ACCESSORIES SONOPULS 492

1498757	4-Series Operating Instructions (cd rom)
1498756	4-Series Information Booklet
3444290	Mains cable 230V-EUR
1498010	Device base (inclination support) (not for Vacotron 460)
xxxxxxx	Ultrasound multi-frequency treatment head(s) (model dependent)
xxxxxxx	Holder treatment head (model dependent)
3442929 <sup>(1)</sup>	Contact-gel, bottle 250 ml, 1x
3444021	Strap 250x3 cm
3444020	Strap 100x3 cm
2x 3444129	Rubber electrodes 6x8 cm, 2 mm female, set of 2 pcs.
1460266	Moist pads for rubber electrodes 6x8 cm, set of 4 pcs.
2x 3444211	Patient cable 2-core & 2 mm male plugs - black, with coloured clips

<sup>(1)</sup> = The Sonopuls is delivered with 1 bottle of contact-gel.  
The articlenumber 3442929 however represents a box of 12 bottles.

# DUAL CHANNEL ULTRASOUND



**SAVE TIME – SAVE MONEY – EXTEND YOUR THERAPEUTIC CAPABILITIES!**



## **UP TO 4 (FOUR) TREATMENTS AT THE SAME TIME WITH 1 (ONE) DEVICE**

The new Enraf-Nonius Sonopuls 492 is available now, offering 4 completely independent channels. You will have 4 independent therapy units available for the price of 1! With just 1 unit you can apply 4 different therapies or treat on 4 different areas independently and simultaneously. Save time and money!

Perform DUAL CHANNEL ULTRASOUND: treat patients with 2 independent channels, either conventional or with the unique handsfree StatUS™. Plus, at the same time, the availability of 2 channels of electrotherapy, also perfectly suitable for combination therapy (combining ultrasound and electrotherapy).

Just one unit provides you with:

- All electrotherapy modalities for effective pain relief and muscle stimulation
- Dynamic ultrasound for rapid tissue regeneration
- Static handsfree ultrasound (StatUS™) for the most efficient application and the least time consuming method of ultrasound therapy including bone-healing
- Combination therapy for diagnostics (the best way to find for example deep trigger points) and for treatment of soft tissue injuries
- Various pain management treatments simultaneously

## **1 UNIT – 4 CHANNELS – 1 PATIENT**

With the new Sonopuls 492 you can treat different areas or different localisations at the same time. An example is ultrasound treatment of the deep tissues of the hip. Traditional treatment consists of a session at the ventral side of the hip, the lateral approach and finally the dorsal side.

## **1 UNIT – 4 CHANNELS – 4 TREATMENT AREAS**

The Sonopuls 492 with 4 independent channels also offers the possibility of treating 4 different areas at the same time. For example treat one area with dynamic ultrasound and one with handsfree StatUS™. The two remaining electrotherapy channels can be used to reduce pain or to stimulate muscle tissue. Double the result in less time! Just place the applicators, set the protocol and you are ready to start!



# DUAL CHANNEL ULTRASOUND



## SONOPULS 492 with 4 independent channels and Dual Channel Ultrasound

### SONOPULS 492 DEVICES ARE NOW:

- ..... standard equipped with 4 fully independent channels
- ..... including Dual Channel Ultrasound\* (simultaneous application of 2 ultrasound treatments)
- ..... offering you up to 4 different therapeutic options:

- Electrotherapy
- Ultrasound therapy (dynamic ultrasound)
- StatUS™ therapy (static ultrasound)
- Combination therapy

\* requires StatUS™ Pack 400 or 2 ultrasound treatment heads connected



Channel 1	Channel 2	Channel 3	Channel 4
ET	ET	US	US
ET	ET	US	StatUS™
ET	Combination therapy (ET + US)		not available
ET	ET	(StatUS™) *1	US
ET	ET	(StatUS™) *1	StatUS™
ET	Combination -> (ET)	not available	... therapy (US)

\*1 Channel 4 is the appropriate channel for the connection of the StatUS™ Pack 400, and thus for offering static ultrasound (= StatUS™ therapy). However, the StatUS Pack 400 can also be connected to channel 3. This means that Dual Channel StatUS™ is permitted on both channels 3 and 4 (but keep in mind that the Sonopuls 492 is NOT primarily designed to stack 2 StatUS™ Packs 400).



# SONOPULS 492

## EVIDENCE-BASED PROTOCOLS

- 25 Evidence-Based treatment protocols for ultrasound,
  - 42 Evidence-Based protocols for electrotherapy,
  - 2 Evidence-Based protocols for combination therapy
- Complete including the display of the anatomic localisations and the treatment instructions



## REMOTE CONTROL (OPTIONAL)

The patient can be involved in his or her own treatment by using the optional "remote control". Especially when using electrotherapy, the patient will have the possibility to control the therapy

## ERGONOMIC DESIGN

The treatment head is made to fit your hand comfortably. A design completely based on functionality and user friendliness.



## BATTERY-OPERATED (OPTIONAL) AND, THEREFORE, MOBILE

In addition to being able to use the 4-series unit connected to a mains power supply, the device can also be used with a battery-operated power supply. This will ensure that you can go everywhere with your unit, regardless of whether this is at the patient's home or at his or her hospital bed.



# SONOPULS 492



## CRYSTAL CLEAR TFT COLOUR SCREEN

A crystal clear, full colour and scratch resistant screen that allows full visibility on all parameters from all viewing angles.

## MADE BY ENRAF-NONIUS

Made by Enraf-Nonius and, therefore, safe, reliable and durable. A device made by Enraf-Nonius, THE supplier for the physiotherapist worldwide. Where quality, reliability and durability come as standard.



*Partner for Life*



## TOUCH SCREEN USER INTERFACE

Easy to use by means of a clear menu via a touch screen interface. Extremely intuitive and as easy as a state-of-the-art smart phone.

## COMPACT AND STYLISH

An extremely compact device, small and light-weight for easy transportation. At the same time stylish and beautiful, a device that is worth-while showing!



## 2 TREATMENT HEADS POSSIBLE

You can connect both the small 0,8 cm<sup>2</sup> as well as the large 5 cm<sup>2</sup> ultrasound treatment head in order to quickly change heads.



SONOPULS 492

ENRAF-NONIUS

# SONOPULS 492



## PROGRAMMED FOR SPEED

The menu structure is optimized to speed. In most cases you can start a pathology-specific treatment in just 3 steps! Easy, quick and simple.



## CONTACT CONTROL

A 360 degrees light ring for contact control. A clear indication of the effective transfer of energy that enables you to conduct the therapy as efficient as possible.

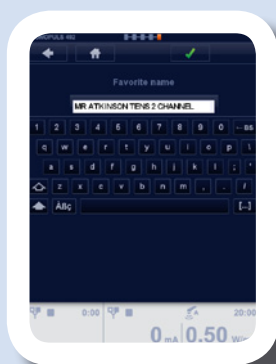
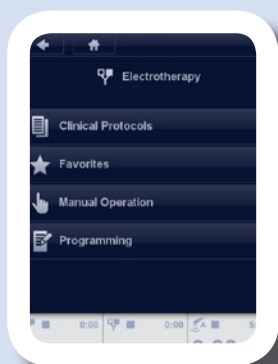
## A TREATMENT HEAD WITH ADDED VALUE

An intelligent and ergonomic treatment head, packed with electronics and covered with a special coating making it smooth and comfortable to use.



## PROGRAMMABLE

In addition to the standard treatment protocols, you can also save your personal protocols (including sequential applications) based on your own guidelines.



SONOPULS 492

# ACCESSORIES SONOPULS 492



## ULTRASOUND ACCESSORIES

### ULTRASOUND CONTACT-GEL

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



3442929



3442930



3442931



3442932



## ELECTRODES AND MOIST PADS

### ADHESIVE ELECTRODES

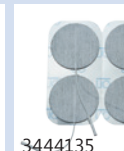
3444222	Adhesive electrodes Ø 2,2 cm, 2 mm female, 10 sheets of 8 (also for EMG)
3444056	EN-Trode Ø 3,2 cm, 2 mm female, 10 sheets of 4
3444135	EN-Trode Ø 5,0 cm, 2 mm female, 10 sheets of 4
3444057	EN-Trode 5x5 cm, 2 mm female, 10 sheets of 4
3444058	EN-Trode 5x9 cm, 2 mm female, 10 sheets of 4



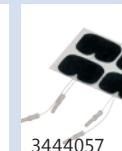
3444222



3444056



3444135



3444057

### RUBBER ELECTRODES

3444128	Rubber electrodes 4x6 cm, 2 mm female, set of 2.
3444129	Rubber electrodes 6x8 cm, 2 mm female, set of 2
3444130	Rubber electrodes 8x12 cm, 2 mm female, set of 2



3444058



3444128



3444129



3444130

### MOIST PADS FOR RUBBER ELECTRODES

1460273	Moist pads for rubber electrodes 4x6 cm, set of 4
1460266	Moist pads for rubber electrodes 6x8 cm, set of 4
1460275	Moist pads for rubber electrodes 8x12 cm, set of 4



1460273



1460266



1460275

### FIXATION STRAPS

3444020	Strap 100x3 cm
3444021	Strap 250x3 cm
3444022	Strap 100x5 cm
3444023	Strap 250x5 cm



3444020



3444021



3444022



3444023

### POINT ELECTRODES

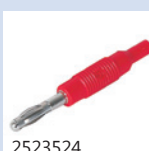
1480800	Electrode holder for 1480801
1480801	Point electrode 5 mm, 4 mm female (in combination with adapters 2523523 / 2523524)



1480800



1480801



2523524



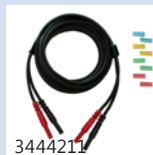
2523523



# ACCESSORIES SONOPULS 492

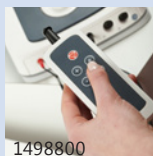
## PATIENT CABLE

3444211 Patient cable 2-core & 2 mm male plug - black, with coloured clips



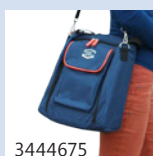
## REMOTE CONTROL

1498800 Remote control, for 4-series



## BAG

3444675 Carrierbag 4-series



## BATTERY

2501016 Battery 12.0V 1.8AH



## OTHER PRODUCTS THAT MIGHT INTEREST YOU

### VACOTRON 460

The Sonopuls 492 can be extended with a vacuum module, the Vacotron 460. A vacuum unit for easy application of vacuum electrodes for combination therapy and electrotherapy.

### EN-CAR U3

The EN-Car U3 is your companion for any piece of Enraf-Nonius equipment. For laser, ultrasound, biofeedback, shockwave or electrotherapy, with the EN-Car U3 you have it all close at hand.

### ORDERING DATA

1498950 Vacotron 460

1468960 EN-Car U3

Also see the separate product leaflets at  
[WWW.ENRAF-NONIUS.COM/ELECTROTHERAPY](http://WWW.ENRAF-NONIUS.COM/ELECTROTHERAPY)



# STATUS™ PACK 400



Did you ever think how ideal it would be if you could conduct your ultrasound treatments without having to sit with the patient, moving the treatment head over the injured tissue? And wouldn't it be great if you could really transmit ultrasound energy right there where you need it and only there! This is no longer a dream, StatUS™ makes it possible! Not only is this treatment more beneficial to your patients, but it also saves you time in order to conduct other activities. Imagine the significant cost savings!

StatUS™ (Static UltraSound) represents a new revolutionary method to apply therapeutic ultrasound in the utmost efficient way: **HANDSFREE!**

Developed by Enraf-Nonius in collaboration with international institutes, StatUS™ is a safe and effective treatment opportunity to apply therapeutic ultrasound without having to move the treatment head. StatUS™ ultrasound is the latest development in therapy and treatment comfort.

A fast and time-saving application. Do more in less time! No more time consuming treatment methods, but quick and easy. The Sonopuls 490 and 492 with the StatUS™ Pack 400 offers numerous advantages for both the therapist and the patient. Simply connect the StatUS™ Pack 400 to your Sonopuls 490 or 492 \* and you can immediately benefit from Handsfree ULTRASOUND!

Would you like to work with conventional treatment heads too? Even then there is a version that suits you! The StatUS™ Pack 400 can be connected to the Sonopuls 490 or 492 devices, that are equipped with a large or small treatment head. Once connected, you simply choose if you want to use a conventional multi-frequency treatment head (dynamic method) or the StatUS™ applicator (for handsfree ultrasound).



\* With software V009 or higher.

STATUS™ PACK 400

# STATUS™ PACK 400



## Handsfree

Handsfree ultrasound makes a difference for patient and therapist. StatUS ultrasound is a new revolutionary method of applying therapeutic ultrasound.

Over 60 years, therapeutic ultrasound appears to be one of the most frequently applied modalities within physical therapy.

These days ultrasound therapy has proven an effective method for treating numerous musculoskeletal and soft tissue disorders. Ultrasound therapy is ideal for successfully treating injuries of connective tissue (collagen) with a high density (e.g. ligaments, tendons, fascia, joint capsules and scar tissue).

Ultrasound can be applied in continuous or pulsed mode for thermal (heating) or non-thermal effects (for cell-up regulation). At a low dosage\*, ultrasound clearly appears to have a stimulating effect on bone growth (accelerated fracture consolidation) as well as tendon and nerve repair.

## Safe and effective

We have all learned that the ultrasound energy is applied by moving the treatment head (dynamic or semi-stationary method). Moving the treatment head is necessary because within an ultrasound bundle, as well as in the tissue, certain phenomena may occur which can lead to tissue damage in the form of hotspots. In addition, this application method is time consuming and labour intensive.

Although it is a static application method, StatUS™ therapy is safe and effective.

StatUS™ therapy does not really differ from conventional ultrasound therapy. The differences are found in the application method. The StatUS™ Pack 400 incorporates an unique technology and special modulations.

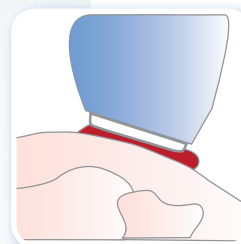
The StatUS™ applicator is a multi-frequency ultrasound treatment head that is integrated in a vacuum cup. In just a few seconds the applicator can be attached to the body.



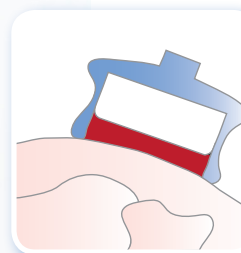
\* also known as LIPUS (Low Intensity Pulsed Ultrasound) or LIUS (Low Intensity Ultrasound)



# STATUS™ PACK 400



Contact surface when applying a traditional applicator and normal gel.



Contact surface when applying a StatUS™ applicator and the special gelpad.

Combine the StatUS™ Pack 400 with the Sonopuls 490 and explore immediately the advantage of the therapeutical time-saver!

## Non-liquid gelpad

A non-liquid gelpad ensures good transmission of the ultrasound energy. The gelpad is held in place with a fixing ring. The vacuum pressure creates a perfect seal between the body, the gelpad and the treatment head. The constant perpendicular position of the fixed StatUS™ applicator reduces dosage variations as in dynamic ultrasound applications. This enhances clinical effectiveness and patient safety.

Despite the stationary application hot spots will not occur during StatUS™ treatment, due to two innovative and intelligent forms of modulation: Amplitude Modulation and Duty Cycle Modulation. These (patented) forms of modulation ensure safe treatments without the peak intensities that can create hot spots.

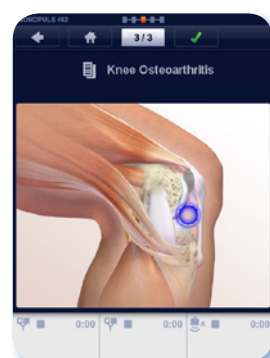
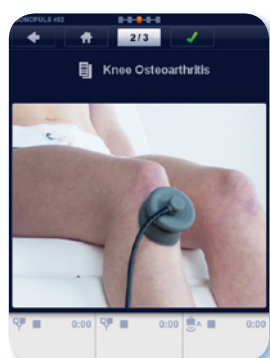
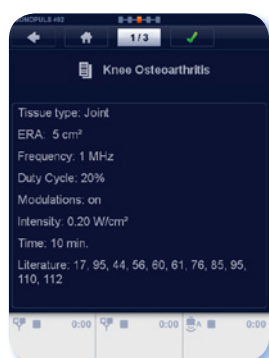
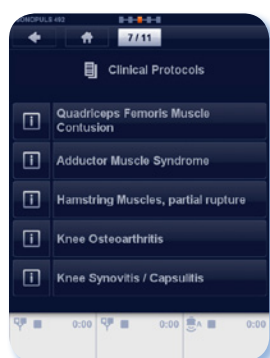
## Effective treatment

StatUS™ offers unprecedented advantages. StatUS™ therapy is the ideal and effective treatment method for musculoskeletal and soft tissue disorders. With the Sonopuls 490 or 492 and StatUS™ Pack 400 from Enraf-Nonius you can work both thermally and a-thermally. The Sonopuls 490 and 492 with StatUS™ Pack 400 are also ideally suited for LIPUS applications.

StatUS™ therapy is relatively simple. The parameters for StatUS™ therapy can be selected quickly and easily via the touchscreen. To simplify the therapy options, a number of pre-programmed StatUS™-protocols are stored in the Sonopuls 490 and 492. These evidence based protocols provide you with clear treatment instructions while the treatment parameters are set automatically.

## More efficient

StatUS™ does this work for you, without compromising efficiency and effectiveness. StatUS™ makes your job faster, more targeted and more efficient.







## Benefits and advantages of the StatUS™ Pack 400

### StatUS™ Handsfree ultrasound

The Sonopuls 490 and 492 with StatUS™ Pack 400 offer the possibility of HANDSFREE ULTRASOUND. A fast and time-saving application. Do more in less time!

### Handsfree = time saving

As StatUS™ is a handsfree therapy, the therapist has valuable extra time during treatment.

### Handsfree = less labour intensive

As the therapist does not have to hold the head, StatUS™ is ideally suited for long(er) treatments.

### Handsfree = Less demanding

As the therapist does not have to hold the head, a StatUS™-treatment is physically less demanding.

### Handsfree = greater ease of use

Increased comfort for both the patient and the therapist.

### Fast and easy

StatUS™-therapy is instantly available and easy to set up.

### Non-liquid gelpads

- No more gel residu
- Easy to clean / hygiënic
- Efficient energy transmission

### Safe

Special modulation forms ensure that undesired intensity peaks in the ultrasound bundle are considerably reduced. The chance of cavitation is reduced and the occurrence of hotspots is counter-acted.

### Efficient

The treatment head is always at the right angle. The special gelpad follows the body's contours. This combination ensures an even and constant transfer of energy along the whole surface of the head.

### Effective

The set treatment time is also the effective treatment time. The set capacity is effectively transferred to the appropriate tissue.

### 52 Evidence based StatUS™ protocols

The Sonopuls 490 and 492 with StatUS pack offer a full library with 52 evidence based protocols. Just with a few clicks you will get all information and the proper settings for the pathology selected.

# STATUS™ PACK 400



## STATUS™ PACK 400

1629902 StatUS™ Pack 400  
for use in combination with Sonopuls 490 / 492 \*

## STANDARD ACCESSORIES (STATUS™ PACK 400)

xxxxx	Head holder StatUS™ applicator (pre-mounted)
0629902	StatUS-applicator™ 400
3442942	Fixation ring gelpad StatUS™ (3x)
3442941	Gelpad StatUS™ (240x)
1629767	User manual StatUS™ Pack 400 (CD-Rom)
1629769	Information booklet StatUS™ Pack 400

## OPTIONAL ACCESSORIES (STATUS™ PACK 400)

3442941	Gelpad StatUS™ (240x)
3442942	Fixation ring gelpad StatUS™ (3x)

\* Note: the StatUS™ Pack 400 has not been designed to be combined with the Vacotron.



3442941



3442942

## OTHER PRODUCTS THAT MIGHT INTEREST YOU

### SONOPULS 492

The top device of the 4 series is the Sonopuls 492. This complete unit ensures that you can apply ultrasound therapy, electrotherapy and combination therapy.

### SONOPULS 490

The Sonopuls 490 is the ultrasound therapy device from the Enraf-Nonius series. You will be able to select the correct application for every pathology with both 1 MHz and 3 MHz applications and by selecting a small and/or large treatment head.

### ORDERING DATA

1498913 Sonopuls 492 with 2 multi-frequency heads (5 cm<sup>2</sup> and 0,8 cm<sup>2</sup>)  
1498911 Sonopuls 492 with multi-frequency head (5 cm<sup>2</sup>)  
1498912 Sonopuls 492 with multi-frequency head (0,8 cm<sup>2</sup>)

1498903 Sonopuls 490 with 2 multi-frequency heads (5 cm<sup>2</sup> and 0,8 cm<sup>2</sup>)  
1498901 Sonopuls 490 with multi-frequency head (5 cm<sup>2</sup>)  
1498902 Sonopuls 490 with multi-frequency head (0,8 cm<sup>2</sup>)

Also see the separate product leaflets at  
[WWW.ENRAF-NONIUS.COM/ELECTROTHERAPY](http://WWW.ENRAF-NONIUS.COM/ELECTROTHERAPY)



**ENRAF-NONIUS B.V.**  
Vareseweg 127  
3047 AT Rotterdam  
The Netherlands  
T.: +31-(0)10 - 203 06 00  
E: info@enraf-nonius.nl  
www.enraf-nonius.com

STATUS™ PACK 400