

# SONOPULS 490



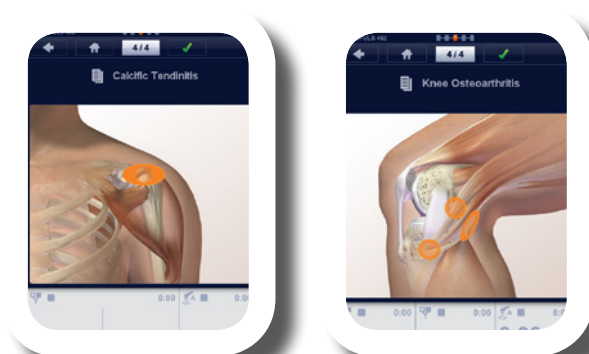
The Sonopuls 490 is the ultrasound therapy device from the Enraf-Nonius 4 series. You will be able to select the correct application for every pathology with both 1 MHz and 3 MHz applications and by selecting a small and/or large treatment head.

As is the case for all 4 series devices, the Sonopuls 490 is characterised by a beautiful design and a very easy-to-use touch screen operation. You will have configured the correct protocol with but a few taps.

The Sonopuls 490 has 25 evidence-based protocols for ultrasound therapy; all of which are substantiated applications that guarantee an effective therapy.

The Sonopuls 490 can (optionally) be provided with a battery-operated power supply, which will give you freedom. It is easy to take the Sonopuls 490 with you. The device will always be ready to use thanks to the battery-operated power supply. Regardless of whether it is next to the patient's bed, in the patient's home or in the changing room of a sports club, the Sonopuls 490 is your reliable companion where ultrasound therapy is concerned.

The Sonopuls 490: the complete, easy-to-use, fast and safe device for ultrasound 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.

# SONOPULS 490

## 1498903 SONOPULS 490 WITH 2 MULTI-FREQUENCY TREATMENT HEADS (5 CM<sup>2</sup> AND 0,8 CM<sup>2</sup>)



## 1498901 SONOPULS 490 WITH MULTI-FREQUENCY TREATMENT HEAD, LARGE (5 CM<sup>2</sup>)



## 1498902 SONOPULS 490 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+

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



### STANDARD ACCESSORIES SONOPULS 490

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

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

# SONOPULS 490



## **SONOPULS 490** *with* **Dual Channel Ultrageluid**

### **SONOPULS 490 DEVICES ARE NOW:**

- ... standard equipped with 2 fully independent channels for ultrasound therapy
- ... including Dual Channel Ultrasound\* (simultaneous application of 2 ultrasound treatments)
- ... offering you various options for dynamic and/or static ultrasound therapy (StatUS™ therapy)

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



Channel 1	Channel 2
US	US
US	StatUS™
(StatUS™) *1	US
(StatUS™) *1	StatUS™

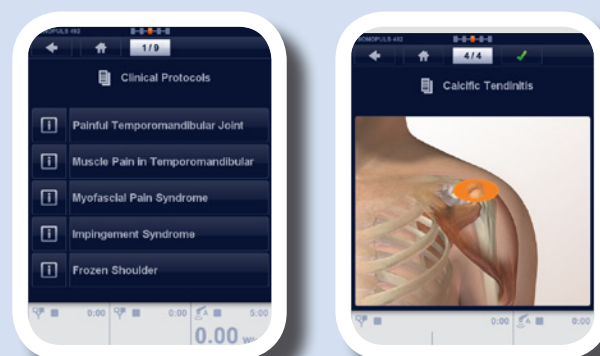
\*1 Channel 2 is the appropriate channel for the connection of the StatUS™ Pack 400, and thus for offering static ultrasound (= StatUS™ therapy). However, the StatUS Pack 400 can also be connected to channel 1. This means that Dual Channel StatUS™ is permitted on both channels 1 and 2 (but keep in mind that the Sonopuls 490 is NOT primarily designed to stack 2 StatUS™ Packs 400).



# SONOPULS 490

## EVIDENCE-BASED PROTOCOLS

25 Evidence-Based treatment protocols for ultrasound. Complete including the display of the anatomic localisations and the treatment instructions



## 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.

## ERGONOMIC DESIGN

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



# SONOPULS 490



## 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 490

ENRAF-NONIUS

# SONOPULS 490

## 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.

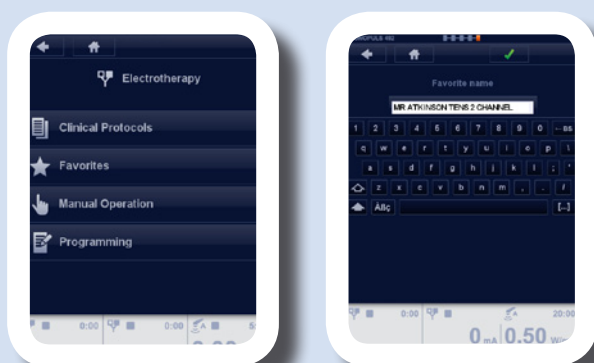
## A TREATMENT HEAD WITH ADDED VALUE

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.





# ACCESSORIES SONOPULS 490

## 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



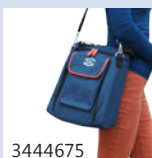
3442931



3442932

### BAG

3444675	Carrierbag 4-series
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3444675

### BATTERY

2501016	Battery 12.0V 1.8AH
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2501016

## OTHER PRODUCTS THAT MIGHT INTEREST YOU

### 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

1468960 EN-Car U3

Please also see the separate product leaflets at  
**WWW.ENRAF-NONIUS.COM**



# 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



## 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.

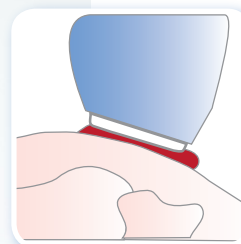
StatUS™ therapy does not really differ from conventional ultrasound therapy. The differences are found in the application method. The StatUS™ Pack 400 incorporates an unique technology and special modulations.

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.

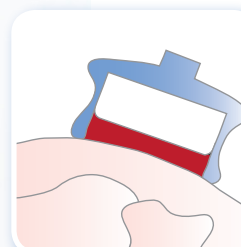


\* also known as LIPUS (Low Intensity Pulsed Ultrasound) or LIUS (Low Intensity Ultrasound)

# 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.

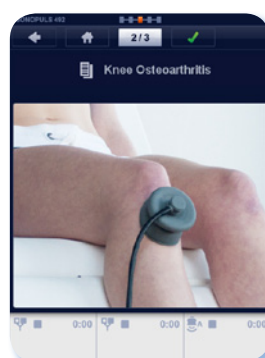
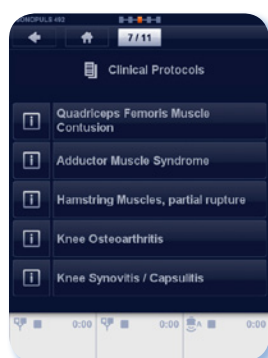
## Effective treatment

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.



# STATUS™ PACK 400



## Benefits and advantages of the StatUS™ Pack 400

### StatUS™ Hands-free 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!

### Hands-free = time saving

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

### Hands-free = less labour intensive

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

### Hands-free = Less demanding

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

### Hands-free = 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)
1498000	Stacking adapter for a combination with Sonopuls 492 and Vacotron 460



3442941



3442942



1498000

## 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>)

Please also see the separate product leaflets at  
**WWW.ENRAF-NONIUS.COM**



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