



# Curapuls 670

Top model for  
pulsed shortwave therapy



PARTNER FOR LIFE



# Curapuls 670

A very easy-to-administer treatment, based on clinical evidence Enraf-Nonius' revolutionary and new Curapuls 670 offers an effective, safe and easily administered therapy for various disorders of the locomotor system and for the restoration of soft tissue.

## New evidence

There has been a strong evidence base for the application of radio frequency energy for many years now. Recent literature, too, shows a scientific evidence base, particularly for the pulsed application of this therapy in highly relevant medical issues such as post-operative pain and swelling, as well as wounds that are not healing well.

Easy to use and efficient!

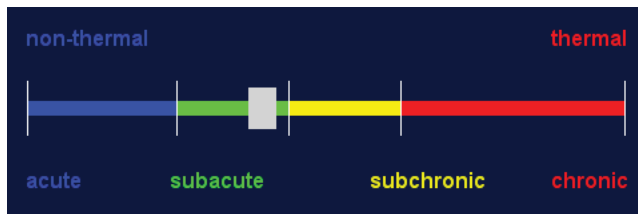


# Curapuls 670

## Device featuring all the knowledge

Enraf-Nonius has successfully incorporated all the available scientific knowledge on the application of this therapy in this device. The unique algorithm and the highly user-friendly user interface, supported by the intuitive use of colours, make it very easy indeed for you to help your patient.

It will only take you a few seconds to select the best possible treatment for various types of pain and inflammation, depending on how acute or chronic the disorder is.



## Light ring

The unique and good-looking light ring provides both the therapist and the patient with a clear indication of the amount of energy and the nature of the treatment being administered.

## Application

This therapy is commonly used for the palliative treatment of pain and swelling (both post-operative and regular), among other things, and as a very effective tool that will help wounds heal.



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## A-thermal and thermal

With its low-power settings, this device is exceptionally well suited to the treatment of acute conditions. Recent large-scale research has shown that this method is particularly well suited to the relief of post-operative pain and the promotion of post-operative wound healing.

However, the device can also be used to achieve thermal effects, as well. Even these higher levels of power can be safely administered, and they are very effective in the relief of pain caused by chronic conditions such as osteoarthritis.

## Easy to use and hands free

This therapy can be administered entirely hands free using the convenient arm, which can be fixed in the right position with just one button. This makes the device a clear improvement on labour-intensive therapies such as Thecar, which are generally administered to treat the same problems. The clever user interface and the touch screen also help therapists administer the therapy easily and without any effort.

A second arm can be affixed if necessary. Therapists can simultaneously use two circuplodes to approach the treatment area in a highly effective manner. Thanks to its two completely independent channels, the device can even be used to treat two areas at once, or even to treat two different patients at the same time.



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## The therapy

The device transmits electromagnetic energy in the radio frequency spectrum. This therapy is known as PRFE (pulsed radio frequency energy) or PSWT (pulsed shortwave therapy).

Curapuls 670 generates electromagnetic energy with a frequency of 27.12 MHz.

Due to the pulsed nature of the energy, the device can very briefly transmit high peak power Watts, followed by relatively long periods of inaction. As a result, the patient's tissue receives intense stimulation, although the therapy is very safe and comfortable for the patient.

Due to the nature of the electromagnetic energy, it is mainly absorbed by tissue with a low level of impedance, such as well-vascularised tissue (muscle tissue) or tissue featuring oedema or recent haematomas. Absorption of this energy promotes tissue recovery and improves circulation. Shortwave therapy is not very physically demanding and is effective very deep inside the body. The patient hardly experiences any thermal sensation, but the effect on his or her deep tissue is significant!

- High adjustable peak power (maximum 200 Watt)
- Pulse width and pulse frequency can be set by the therapist
- Conveniently arranged display
- Over 25 clinical treatment suggestions
- 100 free programmable memory positions
- Special induction electrodes (superficial thermal burden low)
- Indication and monitoring of the power output to ensure optimum energy transmission
- Easy-to-adjust electrode arms that can be brought into position very easily.
- Opportunity to use two circuplodes simultaneously



# Curapuls 670

A very easy-to-administer treatment, based on clinical evidence

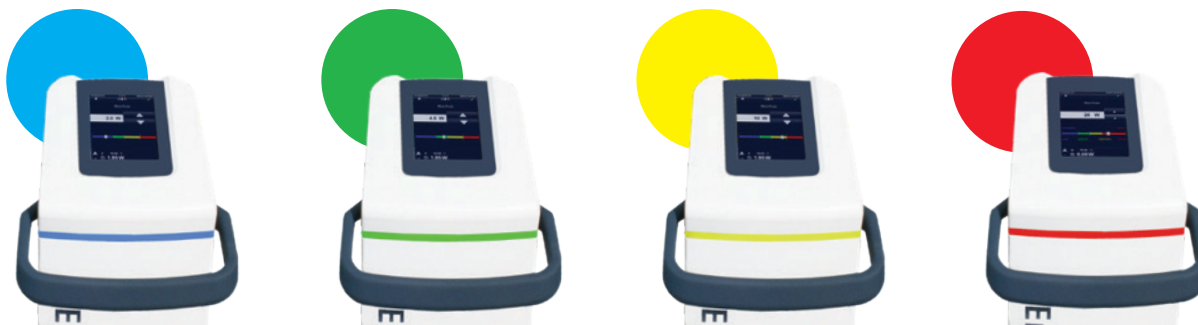
Working with Curapuls 670 is extremely easy now. Curapuls 670 has been equipped with over 25 clinically proven treatment suggestions. Moreover, all information on administering the right dose of energy has been included in the "smart mode". The only information you will have to enter yourself is the stage of the condition. This can range from acute (a-thermal) to chronic with a thermal component. This corresponds with the average power of the device. Curapuls 670 will automatically enter the correct values for parameters such as pulse duration, pulse frequency and peak power for you.

It doesn't get any easier than this!

Pulse duration = 400									
	Pulse frequency								
Peak power	26	35	46	82	110	150	200	300	400
20	0.21	0.28	0.37	0.66	0.88	1.20	1.60	2.40	3.20
30	0.31	0.42	0.55	0.98	1.32	1.80	2.40	3.60	4.80
40	0.42	0.58	0.74	1.31	1.76	2.40	3.20	4.80	6.40
50	0.52	0.70	0.94	1.64	2.20	3.00	4.00	6.00	8.00
60	0.62	0.84	1.10	1.97	2.64	3.06	4.80	7.20	9.60
70	0.73	0.98	1.29	2.30	3.08	4.20	5.60	8.40	11.20
80	0.83	1.12	1.47	2.62	3.52	4.80	6.40	9.60	12.80
90	0.94	1.26	1.66	2.95	3.96	5.40	7.20	10.80	14.40
100	1.04	1.40	1.84	3.28	4.40	6.00	8.00	12.00	16.00
110	1.14	1.54	2.02	3.61	4.84	6.60	8.80	13.20	17.60
120	1.25	1.68	2.21	3.94	5.40	7.20	9.60	14.40	19.20
130	1.35	1.82	3.31	4.26	6.00	7.80	10.40	15.60	20.80
140	1.46	1.96	2.58	4.59	6.60	8.40	11.20	16.80	22.40
150	1.56	2.10	2.76	4.92	7.20	9.00	12.00	18.00	24.00
160	1.73	2.24	2.94	5.25	7.80	9.60	12.80	19.20	25.60
170	1.77	2.36	3.13	5.58	8.40	10.20	13.60	20.40	27.20
180	1.87	2.52	3.31	5.90	9.00	10.80	14.40	21.60	28.80
190	1.98	2.66	3.50	6.23	9.60	11.40	15.20	22.80	30.40
200	2.08	2.80	3.68	6.56	10.20	12.00	16.00	24.00	32.00

Average power in Watt per second

- Acute condition
- Sub-acute condition
- Sub-chronic condition
- Chronic condition



# Curapuls 670

1670901 Curapuls 670

## Standard accessories

- 1462550 Electrode arm
- 1670752 Instructions for use (on CD)
- 1462570 Circuplade Ø 140 mm
- 2994064 Cable clamp, 2x



2994064

## ORDERING DATA



# Curapuls 670

## TECHNICAL SPECIFICATIONS

Frequency:	27.12 MHz
Channels:	2
Pulse power:	0-200 W
Average power:	0-64 W
Mains voltage:	100-240 V (50/60 Hz)
Power consumption:	max. 400 VA
Dimensions (wxdxh):	48x56x110 cm
Weight (unit):	ca. 27,5 kg

This is a medical device.

It complies with all applicable medical regulations. For more details please consult the instructions for use (downloadable via [www.enraf-nonius.com](http://www.enraf-nonius.com)).



# Curapuls 670 - Circuplode

## ACCESSORIES

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 effect in 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.

Curapuls 670 comes standard with a Circuplode Ø 140 mm, which will allow you to carry out the most common treatments.

In addition, the following components are available:

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.

### Optional accessories

- 1462570 Circuplode Ø 140 mm
- 1462571 Circuplode Ø 90 mm
- 1462572 Circuplode-E
- 1462550 Electrode arm



1462570



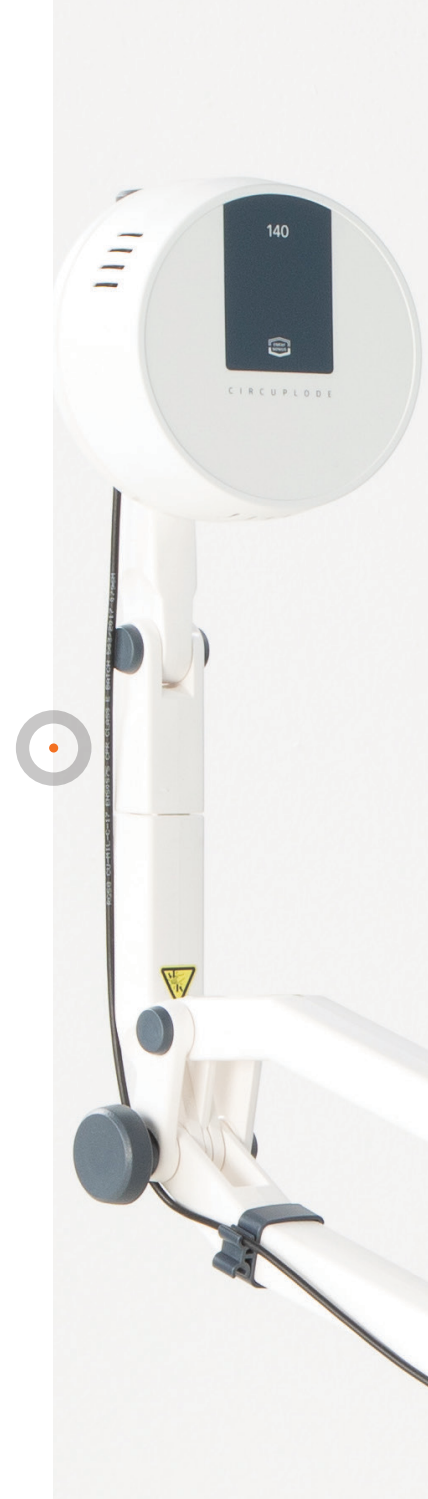
1462571



1462572



1462550



# Curapuls 670

## ACCESSORIES

### Furniture for shortwave

Special for treatment with shortwave and microwave equipment we offer various furniture. With this furniture there won't occur any heat concentrated areas.

3441401 Treatment chair, clear lacquered wood

3441337 Treatment couch, clear lacquered wood, 190x60x75 cm

3441338 Footrest, clear lacquered wood



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## Literature

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Laufer, Y., and G. Dar. "Effectiveness of Thermal and Athermal Short-Wave Diathermy for the Management of Knee Osteoarthritis: A Systematic Review and Meta-Analysis." *Osteoarthritis and Cartilage / OARS, Osteoarthritis Research Society* 20, no. 9 (September 2012): 957–66. doi:10.1016/j.joca.2012.05.005.

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Paul A. Cacolice, Jason S. Scibek, RobRoy Martin. "Diathermy: A Literature Review of Current Research and Practices." *Orthopaedic Practice* Vol. 25;3:13

Vavken, Patrick., Ferdi Arrich, Othmar Schuhfried, and Ronald Dorotka. "Effectiveness of pulsed electromagnetic field therapy in the management of osteoarthritis of the knee." *J Rehabil Med* 2009; 41: 406–411

Wish to read more? Please contact us at [www.enraf-nonus.com](http://www.enraf-nonus.com).





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