

**enPuls**  
Version 2.0

Zimmer

enPuls  
next generation

# Modern technology, innovatively designed

## Mobile radial shockwave therapy system with ballistic, high-energy pulses.

For treatment of biological tissues and structures  
in various pathologies and medical conditions.

Unique, easy-to-use system offering  
shockwave therapy access to all therapists.

enPuls



### New modern casing

Zimmer MedizinSysteme has created something really special with this new generation of enPuls products. An entire new user experience.



### Innovative user display

The new enPuls user interface is highly intuitive and easy-to-use. All parameters are optimally designed for a clear layout. Ready for your therapy.



### Touchscreen with capacitive sensors

New capacitive touch screen technology provides even simpler operation and application.



# Progressive „Softshot“ Technology

Innovative access to a non-invasive treatment, without compressor

## Radial Shockwave Therapy

efficient, easy, mobile

### Principle

A heavy, electromagnetically accelerated, ballistic projectile transfers its kinetic energy to a transmitter head in the handpiece.

The kinetic energy is transformed into impact energy in the applicator head. Shockwaves result and spread out radially from the contact area into the desired treatment region of the body.

### Special

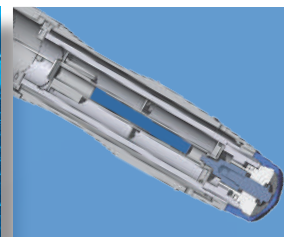
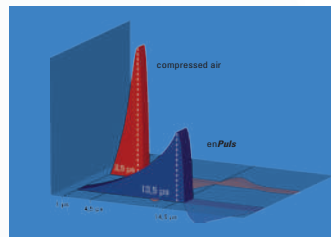
Electromagnetically accelerated projectile for:

- efficient energy transfer
- less maintenance, longer lifetime
- unique shockwave pulse with higher comfort

## Less pain, same energy – enPuls softshot technology

enPuls creates unique shockwave pulses by using a projectile 5 times heavier than standard air-pressure systems and a reduced final velocity upon contact with the applicator.

Through the force of the accelerator and the mass of the projectile, the pulses carry the same amount of mechanical energy, but are more comfortable for the patient than comparative shockwave systems.



The longer pulse rise time maintains the energy without the need for unpleasant high peak pressure amplitudes.

The lower peak and longer rise time minimize the stinging, painful sensation normally related to this therapy. Increased patient compliance results with easier treatments at higher energy levels.

Ballistic radial shockwave  
Electromagnetic generator  
High mass projectile  
Radial tissue dispersion  
Efficient down to 35 mm depth

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# Unique and powerful technology

Innovative, high-tech ballistic system with electromagnetic drive



enPuls with cart  
move (option)

## Features

- Touch-Screen operated
- Energy levels from 60 to 185 mJ (equivalent 1-5 bar);
- Pulse frequencies from 1 to 22 Hz
- Burst mode for Trigger Point Treatment
- Positive shockwave counter
- Negative shockwave counter with value preset
- Indication menu with preset treatment protocols
- SD-card for favourites

enPuls & move

## Powerful

A powerful mechanical energy generator with high precision, perfect control, and low mechanical wear provides for a successful and extended life time.

## Save

Footswitch operation by multi-directional footswitch, triggers the handpiece and enables the operator to concentrate his hand positioning on the treatment.



## Ergonomic

An ergonomic aluminium handpiece with high mass for ample inertia to receive perfect energy transfer to the patient. It also provides optimal protection against vibration for the therapist. The design allows for single-handed use, keeping the second hand free to augment therapy situation.



## Flexible

A variety of applicator heads is available with different sizes and shapes. They can be exchanged quickly and easily without tools, providing an optimal selection and adaptation.



# Ease of work

Designed for maximum functionality and ease of application



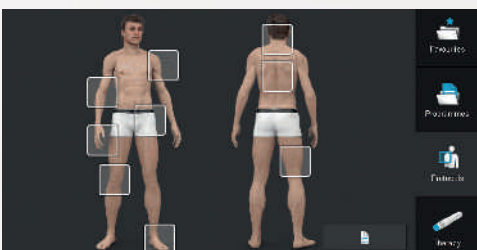
## Intuitive

Large colour touchscreen for one-touch operation. Direct access to all necessary parameters of treatment, including a list of indications with guidelines and extensive memory for individually adjusted programmes.



## Versatile

Preset therapy protocols for the major indications with extensive help function, including pictures of the treatment area.



## Mobile

An aluminium transport case containing all necessities and accessories offers mobility and convenience for treatment anytime and anywhere.



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# Action equals reaction

Following one of the most basic laws of physics, the applied mechanic action forces the hit body structures to react, almost immediately.

## Medical effects

- Immediate, sustaining pain relief
- Increased range of mobility
- Controlled normalized muscle tone
- Change of membrane permeability

## enPuls and Cryo 6 – a perfect team in therapy

Cryotherapy after treatment changes the pain threshold, centralises the metabolism and further regulates the muscle tone.

The use of an adjustable airflow with a temperature of  $-30\text{ °C}$  is an ideal chilling agent with perfect control of dosage and application area, delivering the desired effects with high reliability and efficacy.



enPuls and Cryo 6  
(option)

enPuls & Cryo 6

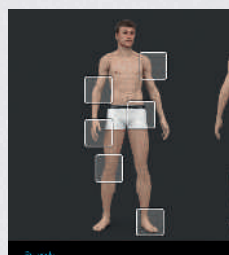
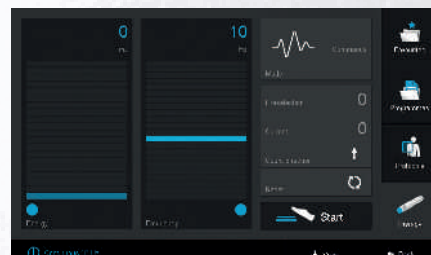
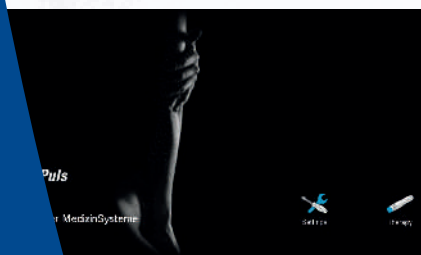
## General Effects

According to initial theories, cellular destruction resulting from micro-cavitation was believed to have beneficial effects through cellular reorganisation processes.

Current research indicates that the positive effects are not related to cavitation. The mechanical stimulation is able to trigger reactive systems in the cellular structure, even at energy inputs well below destruction level.

The observed tissue reactions and metabolic effects are basically:

- increased metabolism
- altered cell membrane permeability
- improvement of cellular structure
- improvement of tensile stability
- increased cell activity by gene expression
- expression of substance P (a growth and pain mediator hormone)



# Application know how

Quick and easy application with direct feedback of patient

Insertion Tendopathia

Heel Spur / Fascitis Plantaris

Epicondylopathia radialis / ulnaris

Patella Tip Syndrome / Achillodynia

Myofascial Pain Syndromes

Trigger Point Therapy

Tibialis anterior Syndrome

Calcific tendonitis of the shoulder

## Easy Application

Minimum treatment preparation and maximum efficacy.

The average application consists of one or two treatment sessions weekly, for a total of 6 – 10 treatment sessions.

A treatment session applies approximately 2000 pulses and takes about 10 minutes.

## Especially useful for

- Orthopaedic Treatment
- Orthopaedic Rehabilitation
- Sport Rehabilitation
- Traumatology
- Physiotherapy
- Osteopathy

Unique, easy-to-use system offering shockwave therapy access to all therapists.





#### Technical Data / Options enPuls Version 2.0

<b>Technology</b>	Compressor free ballistic radial shockwave therapy-system with electromagnetic generator as projectile accelerator
<b>Power Levels</b>	60-185 mJ freely selectable in 10 mJ steps
<b>Modes</b>	Frequencies from 1 to 22 Hz 3 Burst modes (4 / 8 / 12 pulses)
<b>Programmes</b>	7 preset programmes, adjustable
<b>Protocols</b>	More than 25 illustrated preset treatment recommendations
<b>Controls</b>	Colour touchscreen for all software operations Rotary control for energy level and for frequency Handpiece operation with multi-directional footswitch
<b>Dimensions</b>	322 x 235 x 130 mm (L/W/H)
<b>Weight</b>	2,7 kg (without handpiece)

#### Shockwave Applicator Hand Piece

	Ergonomic, with anodized aluminium casing and fan cooling
Generator	Electromagnetic, integrated
Dimensions	23 cm length, 5 cm diameter (max.)
Weight	ca. 0.85 kg (with cable)
Lifetime	2,000,000 shocks
Maintenance	Only necessary when performance drops, not obligatory at a certain amount of shocks. Exchange of generator by service
Applicator heads	Diameters of 6 / 15 (2 pieces) / 25 mm Tool free exchange possibility Lifetime 150,000 shocks per applicator head
<b>Power Consumption</b>	100 - 240 V / 50/60 Hz, max. 250 VA
<b>Package</b>	Aluminium suitcase with enPuls, handpiece, applicator head 6 / 15 (2x) / 25 mm, 10 silicone caps blue, footswitch, mains cable, 1 bottle enPuls lotion, user manual
<b>Transport / Storage</b>	-10 °C to +50 °C / 700 hPa to 1060 hPa / 10% - 90% humidity, not condensing



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