

STORZ MEDICAL

MASTERPULS® ONE
APPLICATION BROCHURE



MASTERPULS® ONE
Radial Pressure Wave

STORZ MEDICAL

Contents

This brochure has been produced in cooperation with Dr Stephan Swart and Dr Carlo Di Maio, Neukirchen-Vluyn, Germany. Drawing on their in-depth experience, this brochure provides a guide to the use of the MASTERPULS® ONE radial pressure wave system. This application brochure does not replace the original instruction manual. Read the manual carefully before you first use the system! Responsibility towards the patient lies fully with the system user.

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Handpiece and transmitters



Radial transmitters for use with the SPARROW™ handpiece

Radial pressure waves (R-PW), also known in the literature as radial shock waves, propagate divergently and release their maximum energy at the skin surface. This energy diminishes with increasing penetration depth. Radial pressure waves can therefore be used for near-surface applications throughout the entire musculo-skeletal system. The wide range of transmitters allows treatment of tendons, fascia, muscles and ligaments.

Radial transmitters for treatment of enthesopathy and trigger points



R15 »Basic Energy«

- Ø 15 mm
- Any type of enthesopathy



DI15 »Deep Impact«

- Ø 15 mm
- Deep-lying pathologies, chronic conditions, high-energy application



C15 »CERAmA-x«

- Ø 15 mm
- Any type of enthesopathy

D-ACTOR® transmitters for myofascial treatment



D20-S »Basic Oscillator«

- Ø 20 mm
- Muscle tissue and connective tissue



D20-T »Golden Oscillator«

- Ø 20 mm
- For professional athletes, high-energy application

The MASTERPULS® ONE is especially suitable for the following indications:

- Achillodynia
- Plantar fasciitis / heel spur
- Tibial stress syndrome
- Patellar tendinitis
- Trochanteric tendinopathy
- Calcific tendinitis
- Lateral / medial epicondylitis

Examples of indications and regions for trigger point treatment / shock wave acupuncture:

- Calf muscles
- Thigh muscles
- Lumbago
- Dorsalgia
- Cervical syndrome

We recommend that therapists and patients wear suitable ear protectors. Please always offer these to the patient.

Treatment with the MASTERPULS® ONE is not permitted in the following cases:

- Malignant tumour in treatment area
- Brain or spine in treatment area
- Pregnancy

Caution is advised when performing pressure wave treatment above air-filled tissues (lungs), major nerves, vessels, the spine, or in the head region.

Possible side effects of treatment with the MASTERPULS® ONE:

- Swelling, reddening, haematoma
- Petechia
- Pain

These side effects usually subside within 5 – 10 days. Please ensure they have disappeared before resuming treatment.

Treatment

Preparation

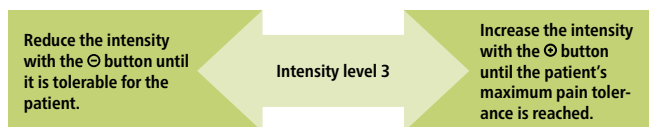
- Inform the patient as to what pressure wave therapy involves.
- Position the patient comfortably and make sure you have easy access to the structures requiring treatment.
- Always use ultrasound gel for optimum coupling.
- The intensity of treatment must not exceed the patient's comfort limits, otherwise the muscles may tense up as a protective response.
- Always hold the handpiece at a 90° angle to the skin surface. The entire surface of the transmitter should be in contact with the skin.

Good to know

- The treatment is experienced differently by each patient.
- Pain points are located in two ways: by accurate history-taking and palpation, and by localizing these points by means of pressure waves and patient feedback.
- The analgesic effect usually wears off some hours after treatment.
- Temporary worsening of pain may occur on the day after treatment. This should not give cause for concern, however, and is not a sign of deterioration.
- No more than 6,000 pulses should be applied per session. However, the actual total depends on the size of the area being treated.
- Normally, 3 – 6 sessions are required at an interval of 5 – 10 days.

How do I find the right intensity level for treatment?

The aim during treatment is to adjust the intensity level to the pain level expressed by the patient. Due to the recovery process, the intensity level applied can usually be increased at each successive session. Start treatment at intensity level 3.



Procedure



Step 1: large-area treatment of muscles with the D-ACTOR® transmitter

Select the D20-S transmitter for the radial handpiece and treat the muscles dynamically along the course of the muscle chain. Make sure the handpiece contact pressure applied to the tissue is adjusted so that it is comfortable for the patient. Experience shows that moderate contact pressure is found to be pleasant. Always use ultrasound gel to optimize energy transmission. As an alternative to the D20-S transmitter, you can use the D20-T transmitter.

Step 2: local treatment of the painful region

Step 2 involves working directly in the region of the tendon insertion / of the pain. Patient feedback will help you locate the painful region with the handpiece. Work slowly; therapy should be more static than dynamic. Make sure you adjust the intensity level to the pain level expressed by the patient. Always use ultrasound gel for optimum coupling. The location of trigger points requiring treatment varies individually and may differ from that in the illustrations on the following pages. Select a suitable radial transmitter depending on penetration depth and pain level expressed by the patient (see page 04).

Please note that the SPARROW™ handpiece is available in different colours. Each SPARROW™ handpiece, regardless of its colour, is compatible with each of the transmitters shown on page 04. On the following pages, the handpieces are shown in different colours so that the treatment steps to be performed are easier to understand.

Treatment recommendation: achillodynia

Preparation

- Position: prone, with a roll under the ankle joint
- For purposes of prestretching and intensification, the toes can be tucked under or the ankle joint passively mobilized.



Step 1: treatment of large areas

Pulses/
session

4000

Transmitter

D20-S

D20-T
(optional)



Step 2: local treatment

Pulses/
session

2000

Transmitter

R15

C15
(optional)



Treatment recommendation: plantar fasciitis / heel spur

Preparation

- Position: prone, with a roll under the ankle joint
- For purposes of prestretching and intensification, the toes can be tucked under or passively mobilized.



Step 1: treatment of large areas

Pulses/
session **4000**

Transmitter **D20-S**



Step 2: local treatment

Pulses/
session **2000**

Transmitter

R15

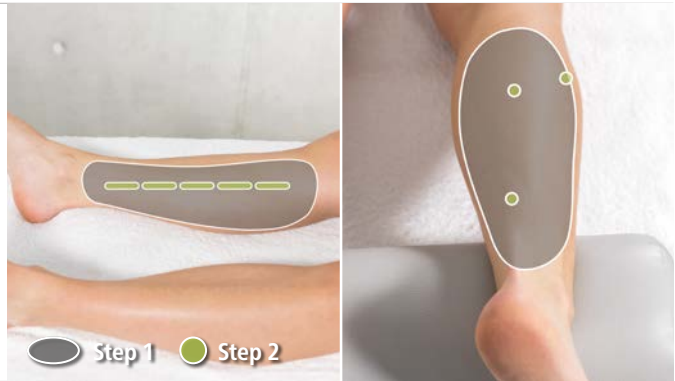
D15
(optional)



Treatment recommendation: tibial stress syndrome

Preparation

- Position: supine, with a roll placed under the knee, or with the foot flat on the table, or with the leg turned outwards
- The calf muscles are treated in prone position if required (see page 08).



Step 1: treatment of large areas

Pulses/
session

4000

Transmitter

D20-S



Step 2: local treatment

Pulses/
session

2000

Transmitter

R15

C15
(optional)



Treatment recommendation: trigger points / shock wave acupuncture – calf muscles

Preparation

- Position: prone, with a roll under the ankle joint if required
- For purposes of prestretching and intensification, the toes can be tucked under or the ankle joint passively mobilized.



Step 1: treatment of large areas

Pulses/
session **4000**

Transmitter

D20-S

D20-T
(optional)



Step 2: local treatment

Pulses/
session **2000**

Transmitter

R15

DI15
(optional)



Treatment recommendation: patellar tendinitis

Preparation

- Position: supine, with a roll placed under the knees
- To intensify treatment, the leg can be hyperflexed.



Step 1: treatment of large areas

Pulses/
session **4000**

Transmitter

D20-S

D20-T
(optional)



Step 2: local treatment

Pulses/
session **2000**

Transmitter

R15

C15
(optional)



Treatment recommendation: trigger points / shock wave acupuncture – thigh muscles

Preparation

- Position: supine
- The leg is placed in abduction on a cushion or towel.



Step 1: treatment of large areas

Pulses/
session **4000**

Transmitter

D20-S

D20-T
(optional)



Step 2: local treatment

Pulses/
session **2000**

Transmitter

R15

DI15
(optional)



Treatment recommendation: trochanteric tendinopathy

Preparation

- Position: patient on his/her side with the affected side up
- The lower leg is stretched. The upper leg is placed on a roll with the hip and knee slightly flexed.



Step 1: treatment of large areas

Pulses/
session

4000

Transmitter

D20-S

D20-T
(optional)



Step 2: local treatment

Pulses/
session

2000

Transmitter

R15

DI15
(optional)



Treatment recommendation: trigger points / shock wave acupuncture – lumbago

Preparation

- Position: prone
- You can, if required, place a flat cushion under the abdomen and a roll under the feet.



Step 1: treatment of large areas

Pulses/
session 4000

Transmitter

D20-S

D20-T
(optional)



Step 2: local treatment

Pulses/
session 2000

Transmitter

R15

C15
(optional)



Treatment recommendation: trigger points / shock wave acupuncture – dorsalgia

Preparation

- Position: prone
- You can place a flat cushion under the abdomen if required.



Step 1: treatment of large areas

Pulses/
session

4000

Transmitter

D20-S



Step 2: local treatment

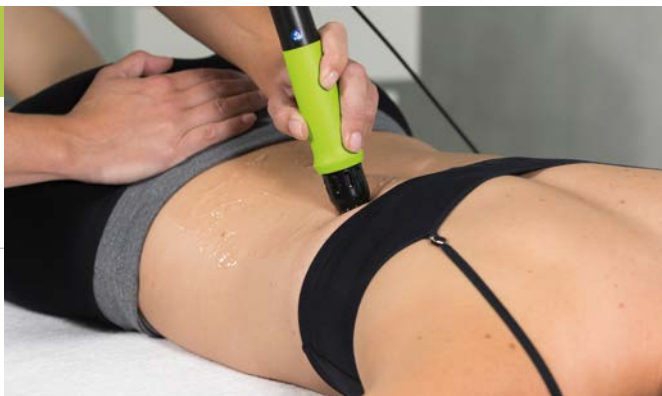
Pulses/
session

2000

Transmitter

R15

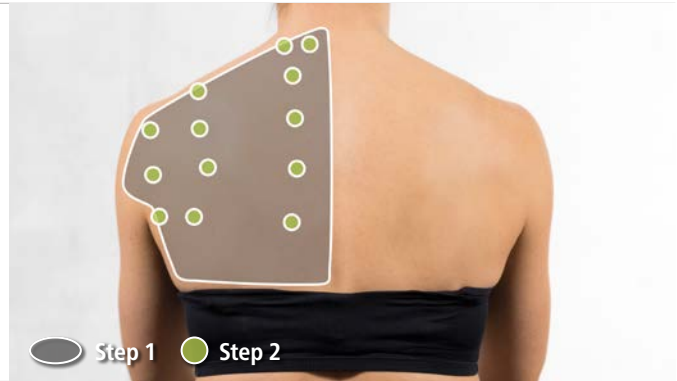
C15
(optional)



Treatment recommendation: trigger points / shock wave acupuncture – cervical syndrome

Preparation

- Position: seated on a stool; the arms can be rested on a roll or cushion.
- Alternative: prone



Step 1: treatment of large areas

Pulses/
session 4000

Transmitter D20-S



Step 2: local treatment

Pulses/
session 2000

Transmitter

R15

C15
(optional)



Treatment recommendation: calcific tendinitis

Preparation

- Position: seated on a stool; the arms can be rested on a roll or cushion.
- Alternative: prone or supine



Step 1: treatment of large areas

Pulses/
session

4000

Transmitter

D20-S

D20-T
(optional)



Step 2: local treatment

Pulses/
session

2000

Transmitter

R15

DI15
(optional)



Treatment recommendation: lateral / medial epicondylitis

Preparation

- Left: lateral epicondylitis
Right: medial epicondylitis
- Position: seated with the arm on the table and the elbow bent
- Alternative: supine



Step 1: treatment of large areas

Pulses/
session **4000**

Transmitter **D20-S**



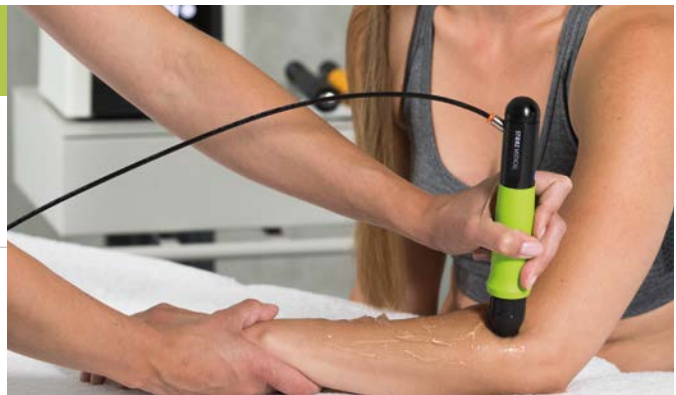
Step 2: local treatment

Pulses/
session **2000**

Transmitter

R15

C15
(optional)



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Subject to change without notice. The information in this brochure is only intended for medical and healthcare professionals. The brochure provides information on products/indications that may not be available/relevant in all countries. The treatment recommendations provided in this brochure are based on advice from Dr Stephan Swart and Dr Carlo Di Maio, Neukirchen-Vluyn, Germany.

