the art of shock wave



# **MASTERPULS® ONE RADIAL PRESSURE WAVE**



#### **The new MASTERPULS® ONE**

After having launched the prototype of the world's first STORZ MEDICAL shock wave system in 1988, we have continued to develop a series of technological innovations in the field of extracorporeal shock wave therapy. Offering non-invasive solutions to pressing therapeutic challenges, STORZ MEDICAL has cemented its reputation as global leader in shock wave technology.

The new radial pressure wave system MASTERPULS<sup>®</sup> ONE has been developed with a clear focus on maximum ease of use, compact design, high efficiency and perfect mobility.

The MASTERPULS<sup>®</sup> ONE is ideal for use as a compact and flexible pressure wave starter model for the treatment of all standard indications.

- Ideal starter model or add-on
- Easy to use and versatile in the application
- Best »shock wave therapy companion«, even outside the therapist's office
- Dimensions: 289 x 238 x 310 mm
- Weight: 9.8 kg
- 6 energy levels: 6 18 Hz / max. 2.7 bar<sub>eff</sub>





## The SPARROW<sup>™</sup> handpiece of the MASTERPULS<sup>®</sup> ONE

Kinetic energy is introduced into the target area inside the patient's body as the compressed air-powered projectile strikes the elastically suspended transmitter. The pressure waves produced in this manner propagate across large tissue areas.



The newly developed SPARROW<sup>™</sup> radial handpiece is minimalist design at its best. Excellent damping during pressure wave generation reduces handpiece vibrations. As a result, the MASTERPULS<sup>®</sup> ONE is approved for operation far longer than a working day, longer than many other radial pressure wave systems available today. Thanks to its light-weight design and ergonomic shape, the SPARROW<sup>™</sup> handpiece ensures effortless handling and treatment. The handpiece can be serviced directly by the user, which saves costs.

- Energy input over large tissue areas
- Light-weight design and minimal vibrations
- Effortless treatment
- Reliable and cost-effective



Snap-in connection





## **Transmitters and handpiece replacement**

The treatment result is decisively determined by the quality and efficiency of pressure wave transmission based on the specific disorder to be treated. In addition to the D20-S transmitter delivered with the SPARROW<sup>™</sup> handpiece, other optional transmitters are available: R15, C15, DI15 and D20-T. These transmitters have been used with



great success for many years on various systems in STORZ MEDICAL's MASTERPULS<sup>®</sup> line. They are ideal for the treatment of all typical pressure wave indications such as tendinopathy, heel and shoulder pain, myofascial trigger points or fascia treatment.

The simple snap-in connection enables quick and easy replacement of the handpiece, using different transmitters.

- Proven transmitters for different indications
- Simple transmitter replacement
- Snap-in connection for handpiece replacement
- Various optional handpiece colours



### Mode of action of radial pressure waves

The mechanical action of pressure waves in tissue stimulates the nervous system and causes nitrid oxide and other messenger substances to be released. The effects produced in this manner include

Typical indications:

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

improved metabolism and angiogenesis and the release of vascular endothelial growth factors. All these effects may eventually reduce chronic pain.

- Trigger points: cervical syndrome
- Trigger points: dorsalgia
- Trigger points: forearm muscles
- Trigger points: lumbago
- Trigger points: shortened calf muscles
- Trigger points: thigh adductors

# Examples of indications for MASTERPULS® ONE





Plantar fasciitis

Lateral/medial epicondylitis





#### Good to know: What are radial pressure waves?

Radial pressure wave therapy is based on the law of »action and reaction« established by physicist Sir Isaac Newton in 1687.

In addition to focused shock waves, modern medicine also uses radial pressure waves. Physicist Sir Isaac Newton established his famous law of »action and reaction« as early as in 1687. The method of action of a ballistic pressure wave system is based exactly on the principle of linear momentum deduced from Newton's law. Mechan-



ical energy in the form of an acoustic pressure wave is transmitted effectively to the body tissue and, consequently, to the painful area by means of specially shaped metal or ceramic transmitters that can produce a healing effect. Radial pressure waves are a lower-cost alternative to manual therapy or other therapy procedures, especially in the treatment of musculoskeletal disorders.

Pressure waves are generated by the collision of solid bodies. A projectile is accelerated by compressed air to a speed of several metres per second (approx. 5 to 25 m/s) and then abruptly slowed down as it hits a transmitter. The elastically suspended transmitter is brought into direct contact with the patient's skin above the painful area, preferably using ultrasound coupling gel. The pressure wave created at the point of contact propagates radially inside the patient's body.







#### HUMANE TECHNOLOGY – TECHNOLOGY FOR PEOPLE



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