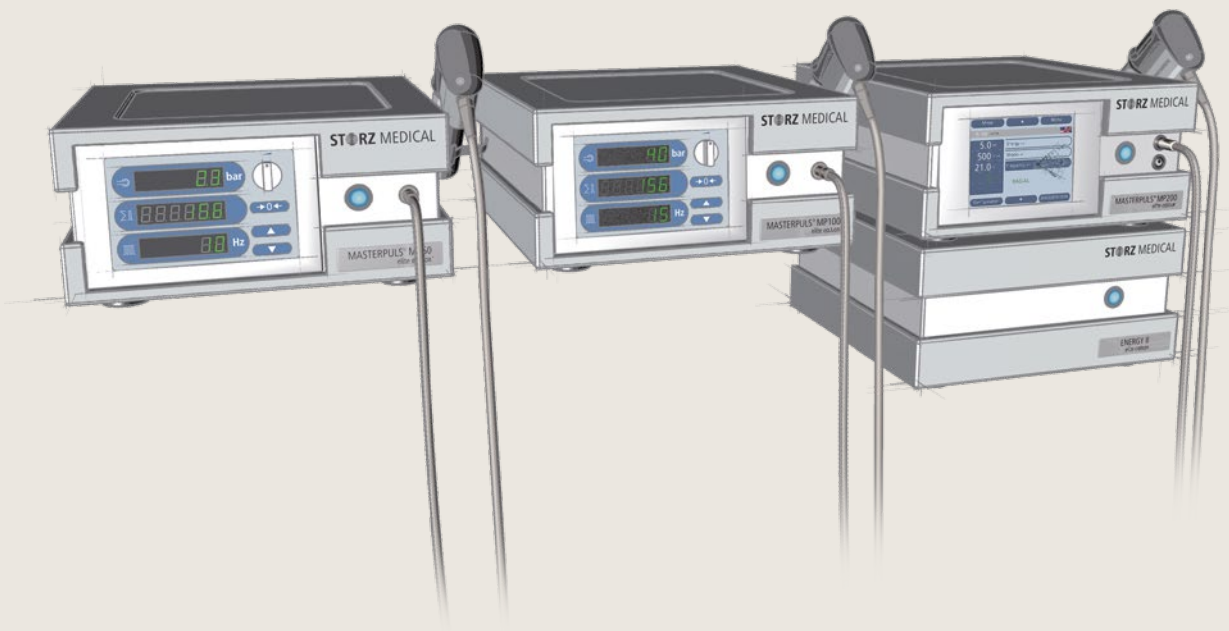


MASTERPULS® »elite edition«  
RADIAL SHOCK WAVE THERAPY SYSTEM



# Modern technology in the service of people



## Our objective

Better therapies through new technologies. Established in 1987, STORZ MEDICAL AG is a Swiss member company of the KARL STORZ Group. The objective pursued by our physicists and engineers is to conduct ongoing research into shock wave technology and to develop new system concepts. Our products have proved their efficacy all over the world in the fields of urology, orthopaedics, physiotherapy, rehabilitation, gastroenterology, cardiology, dermatology and aesthetic medicine. New compact systems have recently been developed so that other medical disciplines can also gain access to the benefits of non-invasive shock wave technology.

With its pioneering technological innovations, STORZ MEDICAL is setting new standards in the treatment of pain in close-to-bone soft tissue of the postural and locomotor systems.

As a reliable partner of doctors, we are committed to making a vital contribution to medical progress in the service of new therapy methods.

# MASTERPULS® MP50, MP100, MP200 »elite edition«



# Shock wave energy that goes under your skin



▶ **Myofascial trigger points**

Dissolution of contraction knots, elimination of dysfunctions and stimulation of metabolic activity in the affected muscle fibres



▶ **Shoulder pain**

Elimination of pain-induced restriction of mobility



▶ **Radial humeral epicondylitis (tennis elbow)**

Treatment of chronic insertional tendinitis or pain-inducing trigger points

# Standard indications

▶ **Patellar tendinitis and achillodynia**

Rapid achievement of the desired regenerative effect of shock wave therapy with the MASTERPULS® »elite edition« and fully restored load bearing capacity of the treated tendons



▶ **Plantar fasciitis/Heel spur**

Elimination of pain symptoms for rapid pain relief and increased load-bearing capacity of the affected foot



▶ **Tibial stress syndrome**

Successful treatment of chronic medial tibial stress syndrome with radial shock waves



# Myofascial trigger point therapy

## Myofascial pain syndrome

Trigger points are groupings of microscopic muscular nodules (sarcomeres) that form into a palpable trigger node within a hardened muscle band. Active trigger points are sensitive and painful, causing radiating sensations and reflex pain when palpated with the fingers or with the handpiece. Latent trigger points only cause pain during palpation.

Trigger point shock wave therapy eliminates end-plate dysfunction or contraction nodes and stimulates metabolism in the affected muscle fibres.

## Types of trigger points

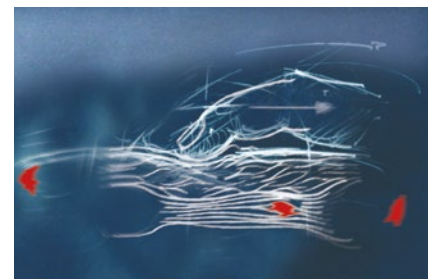
In order to ensure reliable trigger point diagnosis, one has to distinguish between distant and structural trigger points. Trigger point shock wave therapy can only be started after the trigger points have been precisely localised inside the muscle. Moreover, it is essential to find out whether the thickened or hardened muscle band is located in the pain region or whether pain is felt in an entirely different area distal from the trigger points.

## Indications for trigger point shock wave therapy

Patients suffering from intervertebral disk disease, ischialgia, spinal disorders, neck/shoulder pain, tensed-up muscles, tendon and joint disorders or headache, who have undergone conventional or alternative therapies without any success, are the major target group for trigger point shock wave therapy.



Example: periarticular shoulder pain



Palpation



# Trigger point shock wave application

As trigger points cannot be diagnosed by means of imaging systems, manual examination is required for trigger point localisation. Deep trigger points can also be diagnosed by shock wave application to the affected tissue. Pressure exerted on the trigger points in conjunction with shock wave application will cause exactly the kind of pain reported by the patient.



Example: cervical syndrome



Example: tibial compartment syndrome



Example: glutealgia

## Trigger points example: craniomandibular dysfunction (CMD)

Craniomandibular dysfunction is a pathological condition involving a variety of symptoms that may suggest temporomandibular joint disorders. The symptoms of craniomandibular dysfunction include ear pain, ringing ears, clicking or popping sound when opening the jaws or while chewing or strained masseter muscles.

Shock wave therapy has become a mainstay in the treatment of myofascial pain of masseter and shoulder girdle muscles associated with temporomandibular joint disorders. In the treatment of myofascial pain, the MASTERPULS® »elite edition« has greatly improved the CMD therapy success by providing fast and lasting pain relief.



Myofascial pain caused by trigger points in the masseter muscle

# MASTERPULS® »elite edition«





# Compact – Powerful – Superior

## MASTERPULS® MP50 »elite edition+«



- ▶ Built-in »Silent« compressor
- ▶ Frequency/pressure:  
8 Hz/4.0 bar, 11 Hz/3.4 bar,  
15 Hz/2.8 bar
- ▶ V-ACTOR® vibration therapy:  
1 – 21 Hz (optional)
- ▶ Bag or case for transport
- ▶ Recommended shock transmitters:  
R15, DI15, D20-S
- ▶ Available colours:  
blue, silver

## MASTERPULS® MP100 »elite edition+«



- ▶ Built-in high-performance  
»Silent« compressor
- ▶ Frequency/pressure:  
12 Hz/5.0 bar, 16 Hz/4.5 bar,  
21 Hz/4.0 bar
- ▶ Precision pressure controller
- ▶ V-ACTOR® vibration therapy:  
1 – 31 Hz (optional)
- ▶ Bag or case for transport
- ▶ Recommended shock transmitters:  
R15, DI15, D20-S
- ▶ Available colours:  
blue, silver

## MASTERPULS® MP200 »elite edition«



- ▶ High-performance ENERGY II  
»elite edition« compressor
- ▶ Frequency: 1 – 21 Hz
- ▶ Pressure: 1.0 – 5.0 bar
- ▶ V-ACTOR® vibration therapy:  
1 – 35 Hz (optional)
- ▶ Two R-SW connectors
- ▶ Image-based treatment guide
- ▶ Recommended shock transmitters:  
R15, DI15, D20-S, C15
- ▶ Available colours:  
blue, silver

## Radial shock waves



The power, durability and effectiveness of the radial handpiece are the result of over 25 years of experience and technological leadership of STORZ MEDICAL in the development of shock wave systems.

# Shock transmitters

## Shock transmitters at a glance



### A6

- ▶ Ø 6 mm, AkuSt transmitter
- ▶ Shock wave acupuncture



### F15

- ▶ Ø 15 mm, »Focus-Lens« transmitter, Energy »Point Focus«
- ▶ Close to surface pain areas, masseter muscles, neck



### T10

- ▶ Ø 10 mm, Trigger transmitter
- ▶ Myofascial trigger therapy, »palpation finger«



### D20-S

- ▶ Ø 20 mm, D-ACTOR® transmitter
- ▶ Myofascial trigger therapy, muscle- and connective tissue



### C15

- ▶ Ø 15 mm, CERAmA-x®, ESWT transmitter
- ▶ Gel free shock wave therapy for all tendinopathies



### D20-T

- ▶ Ø 20 mm, D-ACTOR® transmitter
- ▶ For athletes in professional sports, deep-seated muscle trigger, high energy requirements



### R15

- ▶ Ø 15 mm, ESWT transmitter
- ▶ Radial shock wave therapy for all tendinopathies



### D35-S

- ▶ Ø 35 mm, D-ACTOR® transmitter
- ▶ Myofascial trigger therapy, muscle and connective tissue, back muscles



### D115

- ▶ Ø 15 mm, Deep Impact® transmitter, »Energy Beam«
- ▶ Deep-seated diseases, chronic diseases, high energy requirements

# V-ACTOR®



## Technical specifications

- ▶ 1 – 31/35 Hz high-frequency vibration therapy
- ▶ Energy: 1.4 – 5 bar
- ▶ Exchangeable vibration heads with the following diameters: V10 (10 mm), V25 (25 mm), V40 (40 mm)

## Applications

- ▶ Massage
- ▶ Trigger point diagnosis
- ▶ Trigger point therapy
- ▶ Lymphatic drainage
- ▶ Wellness



V10  
Treatment of muscle spots



V25  
Tissue massage and muscle smoothing



V40  
Treatment of large muscle areas

# Vibration therapy

## The ideal addition to radial shock wave therapy

### V-ACTOR® – effective vibration therapy

Physiological muscle vibrations at a frequency of up to 35 Hz act as the strongest driving force of microcirculatory processes. The fine resonance thus produced ensures that nutrients are supplied and returned through the smallest vascular and lymphatic channels of the surrounding extracellular matrix. This function cannot be managed by the cardiovascular system. Reduced physiological muscle vibrations adversely affect the cellular supply. This may produce a convulsive tendency, cause painful muscle hardening in the form of trigger points or even lead to wound healing disorders.

The V-ACTOR® enables targeted application of pneumatically generated vibration pulses to the tissue. Microcirculation is improved by compression and decompression, and metabolic waste products and toxins are removed via the blood and lymph system. Elongation of fascial and muscle fibres by means of the V-ACTOR® restores normal muscle tone as muscle shortening and hardening is eliminated.

If treatment is performed at 35 Hz, an elongation reflex will occur 35 times per second, which means that the muscle will contract more or less continuously. This reflex activity is also referred to as Tonic Vibration Reflex (TVR).

### Therapy experience

»Vibration therapy is playing an increasingly important role in our daily therapy routines. Though new to us, it has been well received by us therapists and by our athletes here and is considered an **ideal addition to shock wave therapy**.«

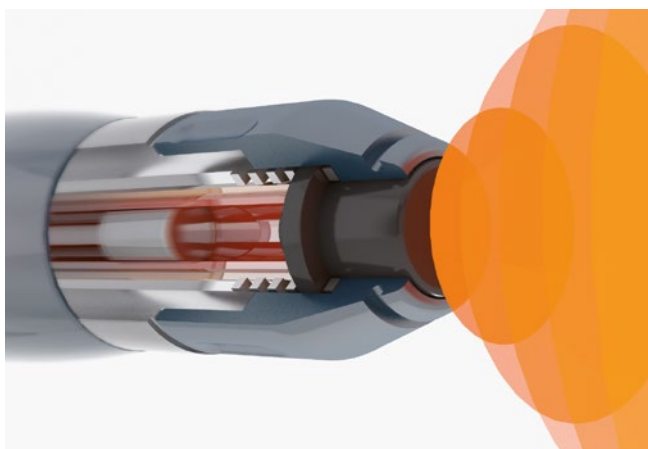
Peter Heckert, physiotherapist at the Frankfurt Olympic Training Centre

### Benefits and effects

- ▶ Muscle and connective tissue relaxation, elimination of adhesions
- ▶ Improved microcirculation
- ▶ Stimulation and acceleration of metabolic activity
- ▶ Improved neuromuscular performance
- ▶ Well-being through increased hormone release (serotonin)
- ▶ Stress reduction through lower cortisol level
- ▶ Revitalisation



# Dedication to ongoing research and development ...



Radial shock wave technology



Materials research



Energy efficiency



Design

## Worldwide sales and service

Based in Tägerwilen/Switzerland on Lake Constance, the company operates around the globe through its branch offices and partners, making sure that qualified service is always near at hand.



## Creating synergies

The customer is the focus of everything we do!

Complex technology is only as good as the skills of the people who use it. Our training concepts are geared to the interaction between doctors, systems and patients. We offer regular seminars and workshops and provide on-the-spot training to our medical partners to ensure efficient use and operation of our systems right from the very start.

## Quality

Our products are designed to satisfy all requirements in terms of quality, safety, ease of use and service life.

MAN IS THE MEASURE OF ALL THINGS  
PROTAGORAS



**STORZ** MEDICAL

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