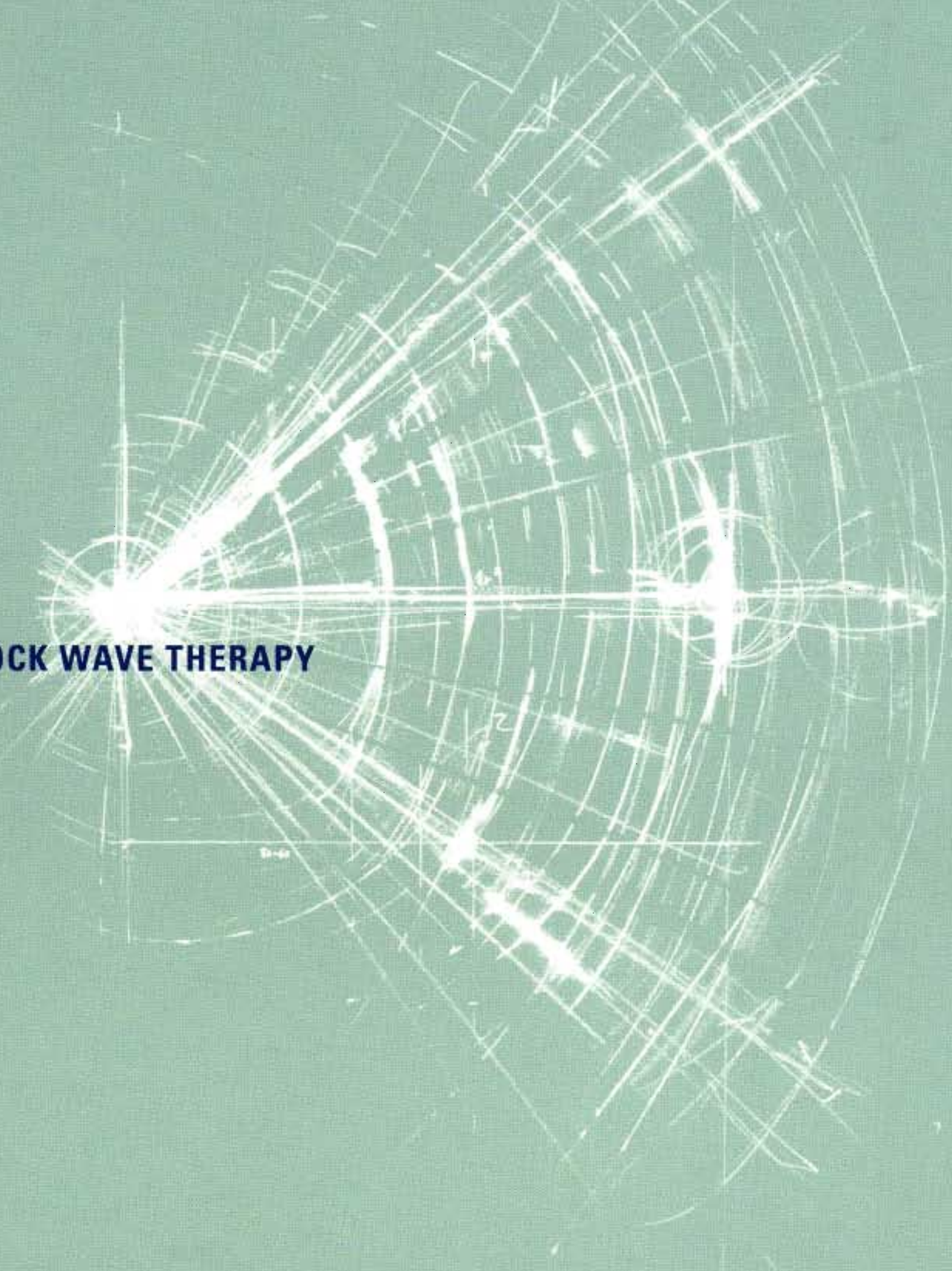


MASTERPULS MP100

ESWT – EXTRACORPOREAL SHOCK WAVE THERAPY

STORZ MEDICAL

Convincing physics!

Pneumatically generated acoustic pulses (shock waves) are introduced into the body over a large surface area by means of a freely moved applicator and cover the entire PAIN REGION.

The projectile located in the applicator of the MASTERPULS MP100 is accelerated to high speed by a pneumatic pulse. The therapeutic shock wave, which is generated as the projectile strikes the shock wave transmitter integrated into the applicator, is introduced from the transmitter surface into the pain region to exert its curative action.

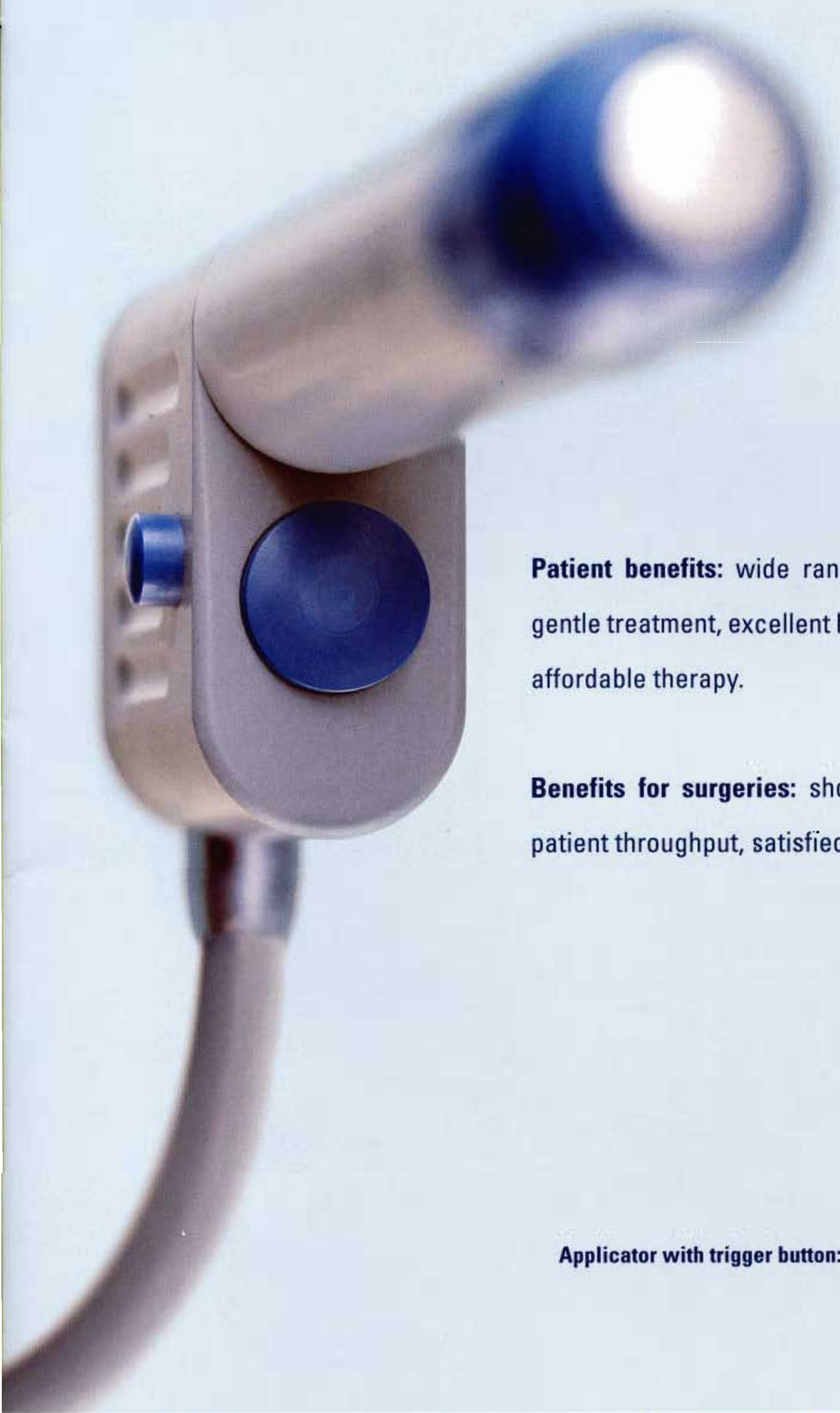
Medical devices operating on the basis of the above principle are generally referred to as extracorporeal shock wave systems in modern medical literature.

MASTERPULS MP100 applicator: radial shock wave propagation inside the body

Quick, safe, successful treatment!

ESWT – EXTRACORPOREAL SHOCK WAVE THERAPY FOR THE TREATMENT OF SOFT TISSUE PAIN.

SHORT THERAPY SESSIONS PROVIDE SUCCESSFUL RELIEF OF CHRONIC PAIN TO RESTORE PAINLESS MOBILITY.

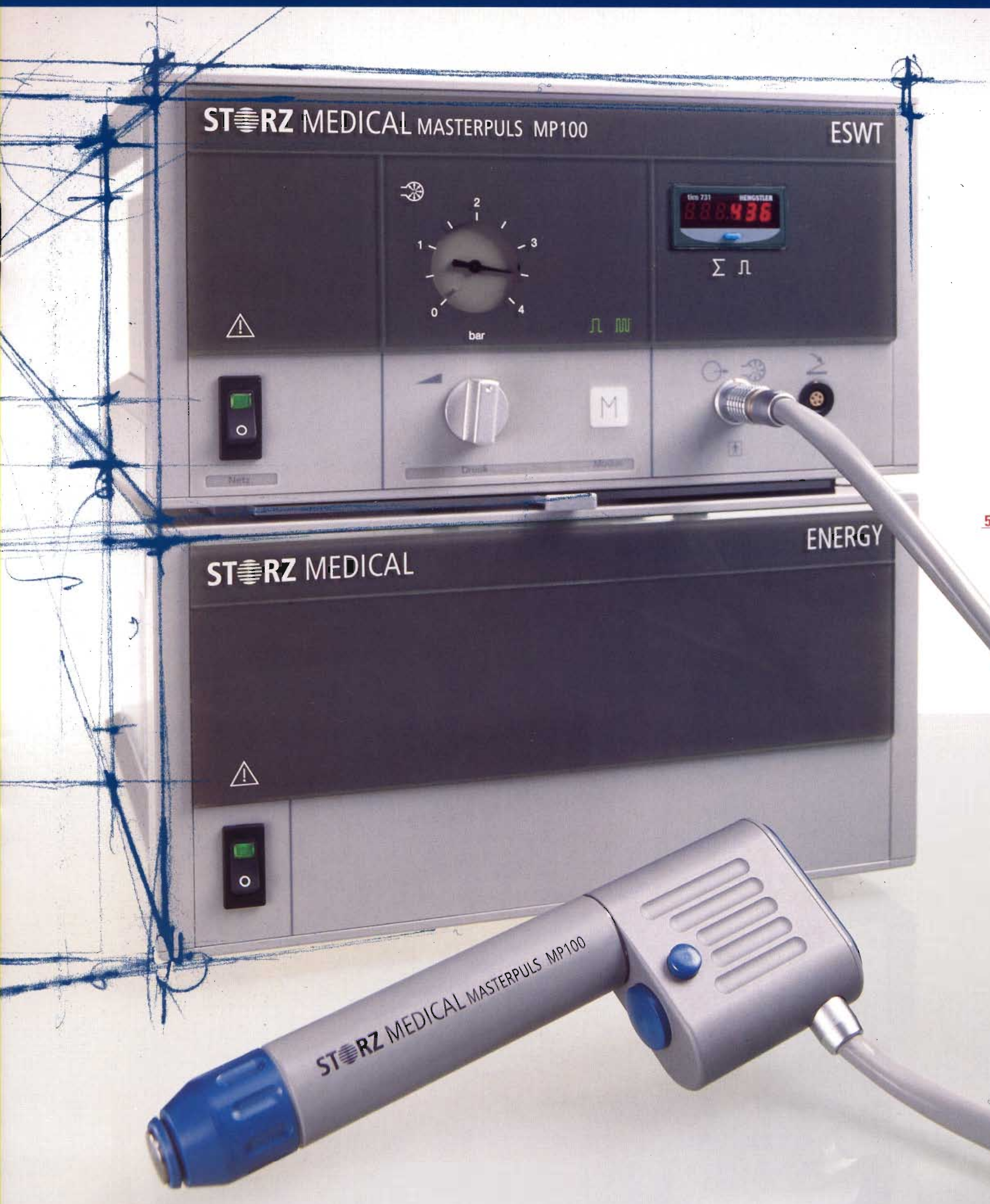


Patient benefits: wide range of applications, no anaesthetics required, gentle treatment, excellent healing rate, restored mobility and quality of life, affordable therapy.

Benefits for surgeries: short treatment sessions, safe application, high patient throughput, satisfied patients, rapid payoff and low follow-up costs.

Applicator with trigger button: easy applicator handling with trigger button and locking button

Innovative and profitable solution for medical surgeries!



Versatile and cost-effective application!

ESWT shock transmitter

Pain therapy (ESWT): treatment of pain in close-to-bone soft tissue of the postural and locomotor systems. Enthesopathies/tendinopathies are the most frequent indications for shock wave application by means of the ESWT shock transmitter (see range of applications on page 8).

TrST shock transmitter

Trigger point shock wave therapy (TrST) of myofascial pain syndromes: the applicator with TrST shock transmitter is positioned directly in the trigger point area. High frequency acoustic pulses (10 Hz) are introduced into the trigger zone and provide gradual elimination of the trigger points (see range of applications on page 9).

AkuST shock transmitter

Therapeutic shock wave application in acupuncture (AkuST): the AkuST shock transmitter (developed by Everke) is designed to allow physical energy in the form of precisely applied acoustic pulses to be introduced into acupuncture points without causing any pain. Only few pulses are required to alleviate pain and produce a curative effect (see range of applications on page 10).

Acoustic impedance adapter: hygienic patient treatment with shock wave coupling cushion

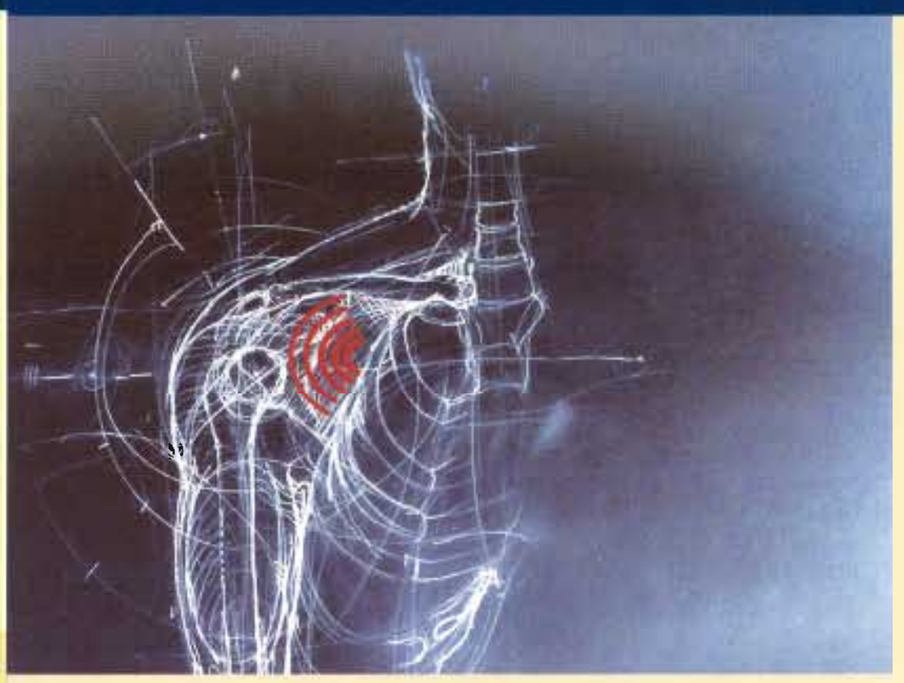
State-of-the-art ergonomic applicator!

Benefits:

- integral trigger button
- reduced noise level
- hygienic patient treatment (acoustic impedance adapter)
- therapeutic efficacy > 30 mm tissue penetration depth
- shock absorber for users

What's more: the applicator can be easily overhauled by the user to reduce costs and avoid shipping expenses and down-times.

Pain therapy (ESWT):



Calcified shoulder tendonitis: the therapeutic objective is to reduce or relieve pain and to eliminate pain-induced mobility restrictions in the affected shoulder. Calcifications causing pain can be disintegrated by means of the MASTERPULS MP100.

Radial and ulnar humeral epicondylitis: the MASTERPULS MP100 provides easy radial and ulnar elbow access for therapeutic shock wave application. Chronic inflammations are eliminated to ensure successful elbow pain relief. This provides improved elbow mobility and forearm force.

Patellar tendinopathy/achillodynia: both syndromes are chronic, mostly sports induced disorders. The pathologically altered painful tendon section exhibits a relatively large volume. The MASTERPULS MP100 allows this target volume to be covered in its entirety, thus providing the desired regenerative therapeutic effects.

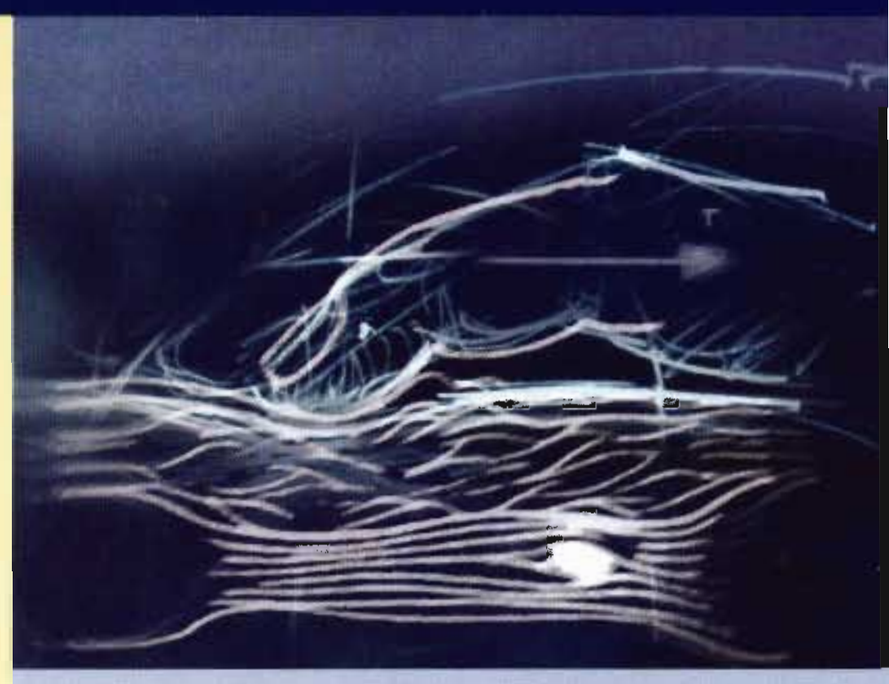
Plantar fascitis: the MASTERPULS MP100 provides a decisive improvement in the clinical development of chronic plantar fascitis ("calcaneal spur"). As pain symptoms are eliminated, the load-bearing capacity of the affected foot is rapidly increased.

Further indications:

- Proximal iliotibial band friction syndrome
- Tibial edge syndrome
- Morton's neuroma
- Dupuytren's contracture

Trigger point shock wave therapy (TrST):

Myofascial pain therapy: myofascial trigger points are painful spots inside the fibers of striated muscles, often located near ligaments and insertions. These muscle fibers are characterized by metabolic disorders.



Active trigger points are sensitive and painful, causing radiating sensations and reflex pain when palpated. **Latent** trigger points only cause pain during palpation.

Muscles with trigger points are stiff and sensitive and have reduced muscular strength, which causes dysfunction. Trigger points are mostly located in postural muscles, followed by masticatory muscles.

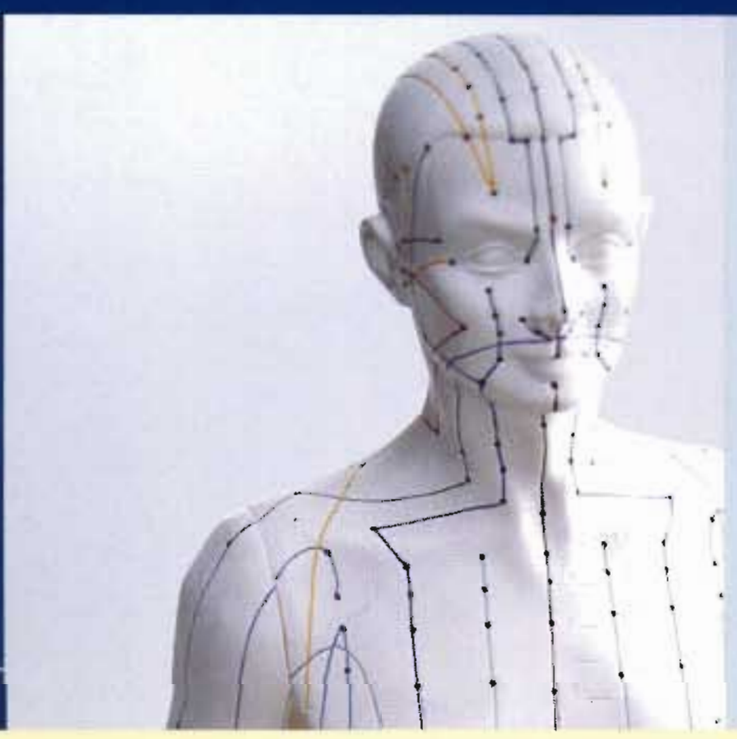
The MASTERPULS MP100 allows shock waves to be radially applied to the pain-producing trigger area within the affected muscle region. Treatment can be performed in one or several sessions.*

Elimination of end-plate dysfunction – hypoxia normalization in trigger points – dissolution of contraction nodes – stimulation of metabolism in affected muscle fibers.

TrST with MASTERPULS MP100: trigger point therapy of chronic shoulder-hand syndrome

* A sound knowledge of trigger point therapy and TrST is required for therapeutic application of the MASTERPULS MP100 in the field of trigger point shock wave therapy.

Acupuncture shock wave therapy (AkuST):



During the last few years, acupuncture has become increasingly important in the field of pain therapy. Whereas pain-producing trigger points are pathological structures, acupuncture points are entirely physiological phenomena with a topography of their own that has been known for over 2000 years.

When the MASTERPULS MP100 is used for acupuncture shock wave therapy, only few pulses are required to produce a curative effect.

Using the MASTERPULS MP100 in conjunction with a well selected combination of acupuncture points, complex disorders and pain syndromes can now be treated with extracorporeal shock waves for the first time. AkuST treatment stimulates distant points, master points and local acupuncture points in order to make their effects additive.

Mode of action of AkuST: individual acupuncture points consist of pressure receptors. The shock waves applied by means of the MASTERPULS MP100 produce stimuli and provide improved blood circulation and pain relief.

Extracorporeal AkuST with the MASTERPULS MP100 has shown to be particularly beneficial in the pain therapy of chronic joint disorders such as knee, hip or shoulder osteoarthritis.*

Patient benefits: short treatment sessions, no anaesthetics required, painless application, non-invasive method, affordable therapy, no side effects, restored mobility and quality of life.

Benefits for surgeries: very short duration of therapy sessions, safe, reliable and accurate application, satisfied patients, quick success.

* Qualified training in acupuncture and AkuST is required for therapeutic application of the MASTERPULS MP100 in the field of acupuncture shock wave therapy.

Technical specifications MASTERPULS MP100

■ Control system	Dimensions (w x h x d):	30 x 16 x 24 cm (11.8" x 6.3" x 9.5")
	Weight:	5.2 kg (11.47 lb)
■ Applicator	Weight:	445 g (0.98 lb)
■ Compressor	Dimensions (w x h x d):	30 x 16 x 24 cm (11.8" x 6.3" x 9.5")
	Weight:	10.7 kg (23.6 lb)
■ Selectable shock frequency:		single shock, 5 and 10 Hz
■ Shock release:		applicator, optional foot switch
■ Energy levels:		1-4 bar, continuously adjustable
■ Energy flux density on shock transmitter:		0.01-0.23 mJ/mm (14.3 MPa)
■ Therapy shock transmitters:	ESWT	= ø 15 mm
	TrST	= ø 10 mm
	AkuST	= ø 6 mm
■ Shock wave generation:		ballistic

Empfohlene Behandlungsparameter: Zusammenfassung

Zusammenfassung

Behandlung mit dem MASTERPULS MP100, ESWT, allgemeine Behandlungsempfehlungen:

- Keine Anästhesie
- Eingeschränkte sportliche Betätigung/Belastung während des gesamten Behandlungsverlaufs
- Applikation von 200-400 Impulsen auf niedrigem Energieniveau (1,5-2 bar), um einen analgetischen Effekt zu erzielen
- Energie immer auf den Schmerzpunkt richten (Patientenkontakt, Feedback)
- Ausreichend Ultraschallgel auf die Haut sowie auf den Applikator oder das Stosswellen-Koppelkissen auftragen

Empfohlene Behandlungsparameter

Nomenklatur			Empfohlene Behandlungsparameter						
Indikation	Hinweis	Seite	Applikator Ø	Druck (bar)	Anzahl Impulse	Applikationsdruck	Frequenz (Hz)	Anzahl Sitzungen	Sitzungsintervall (Tage)
Fasciitis plantaris	mit oder ohne Fersensporn	16	15 mm	2,5-4	2.000	mittel-hoch	5/10	3-4	5-7
Tendinosis calcarea mit oder ohne Verkalkung	Ortung der Zielregion vor Behandlung mittels Röntgen oder Ultraschall	16	10 mm/ 15 mm	3-4	2.000	mittel	5/10	3-6	5-7
Achillodynie	Behandlung erfolgt proximal und/oder distal	17	15 mm	2-3	2.000	leicht-mittel	5/10	3-4	5-7
Epicondylitis humeri radialis/ulnaris	«Tennis oder Golferellenbogen»	17	15 mm	2-3	2.000	leicht	5/10	3-4	3-5
Patellaspitzen-Syndrom	«Jumpers knee»	18	15 mm	2-3	2.000	leicht-mittel	5/10	3-4	5-7
Tibiakanten-Syndrom	flächige Behandlung	18	15 mm	1,5-2,5	2.000	leicht	5/10	3-4	3-5
Proximales Tractus iliotibialis Scheuersyndrom	weitere Schmerzpunkte in der Umgebung suchen	19	10 mm/ 15 mm	2,5-4	2.000	mittel-hoch	5/10	3-5	5-7
Akupunktur-Stosswellentherapie	Kenntnisse in Akupunktur und AkuST erforderlich	20-23	6 mm	1-2	10-50	leicht	1/5	6-12	2-3
Trigger-Stosswellentherapie	Kenntnisse in TrST erforderlich	24-25	10 mm	2,5-4	2.000-6.000	mittel-hoch	10	1-12	3-5