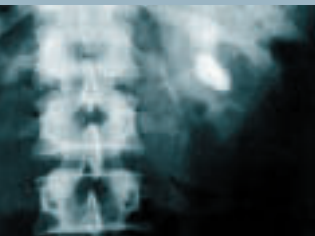


MODULITH® SLK
New Flexibility

STORZ MEDICAL

Universal Shock Wave Therapy – shock wave therapy for use in any hospital



Urology

Today's urological practitioners are increasingly put under economic pressure. Nevertheless, many urological departments wish to offer their patients a complete treatment spectrum. This is where the MODULITH® SLK opens up new opportunities. And being designed for interdisciplinary use, the MODULITH® SLK allows even more applications to be handled.

Gastroenterology

Biliary lithotripsy is on the upswing once again. This therapy allows stones to be entirely disintegrated and the patient to be fully cured – all this with minimum risks, without surgery or anaesthesia and without involving long recovery periods. Careful selection of patients and of the ESWL procedure is obviously a prerequisite to ensure successful treatment.

2

In the past, the restricted indications for shock waves in gastroenterology often did not justify the purchase of a shock wave device. With the MODULITH® SLK those days are gone!

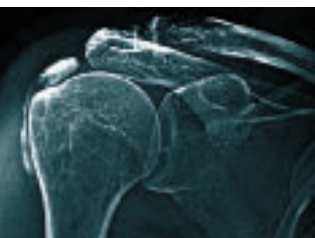
It can be shared between departments, which means that patients will never again have to undergo surgery when medical considerations rather suggest lithotripsy treatment.



Rheumatology & Orthopaedics

The expanding field of applications for shock waves in rheumatology rouses more and more interest in the therapy. Despite its medical success, financing the investment of a shock wave device has been difficult.

With the MODULITH® SLK now there's a chance for shock wave therapy to get a foothold in rheumatology. The orthopaedic surgeon will not only appreciate the high flexibility of the MODULITH® SLK. Furthermore, its ability to produce highest energy shock waves also allows all kinds of pseudarthrosis treatment.



"Owing to its superior flexibility, the MODULITH® SLK can be optimally adjusted to the patient's individual anatomy, thus allowing us to treat even difficult to access stones. Especially our younger colleagues enjoy working with the MODULITH® SLK and use it in a most effective and amazingly time-saving manner."

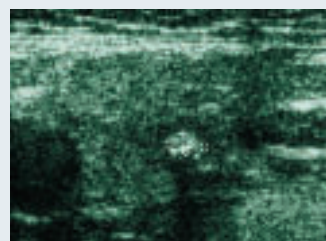
Dr. Kai Uwe Köhrmann



Otorhinolaryngology (ENT)

Lithotripsy is an established method for the treatment of salivary gland stones. However, the lack of an appropriate device often means that more invasive treatment methods, which involve greater risks, have to be resorted to.

With a MODULITH® SLK in their hospital, ENT specialists can select the ideal glandula parotis treatment for their patients and take their decision on the basis of medical reasons alone.



Flexibility³ – wider use, better results, lower costs



Indication

The MODULITH® SLK is the first shock wave device for uncompromising interdisciplinary use,

- kidney stones, ureteral stones, bladder stones
- gallbladder stones, bile duct stones
- pancreatic stones
- salivary gland stones
- enthesopathy, tendopathy and calcification
- pseudarthrosis
- Peyronie's disease
- endourological procedures

Installation

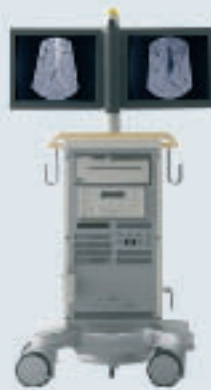
The modular concept allows individual set-ups to be implemented to meet the specific requirements of your hospital,

- easy and fast plug-in installation
- in-line ultrasound localization with compact table-top or powerful stand-alone ultrasound device (various brands available)
- computer-aided X-ray localization can be carried out, with various C-arcs without the need to fix or adjust the position of the C-arc
- mobile and transportable
- maximum capacity utilization of imaging devices due to possibility of independent use

Application

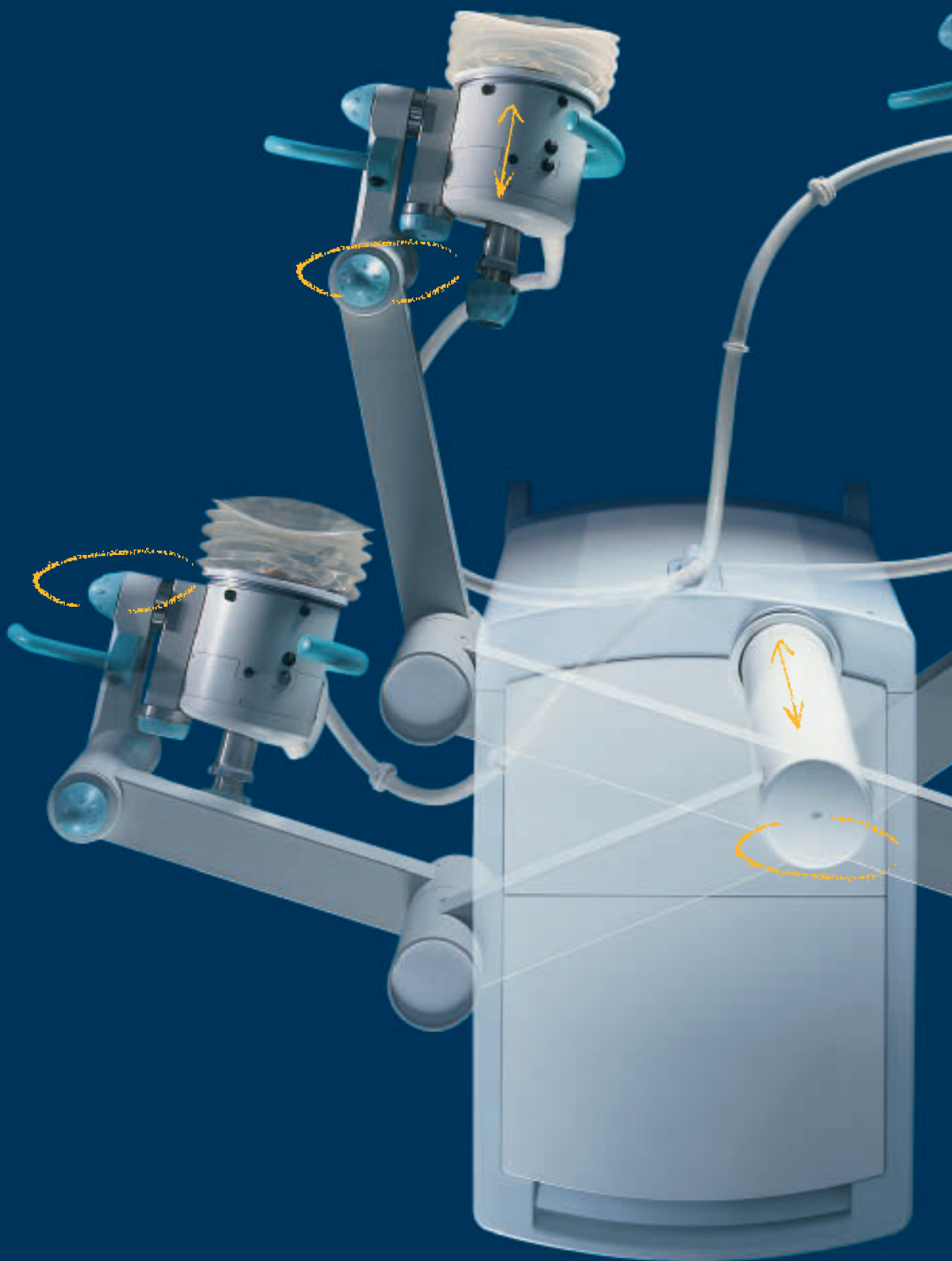
Outstanding in the field of shock wave technology, this therapy device adapts itself to the specific treatment requirements and in doing so further enhances the options available to the attending physician,

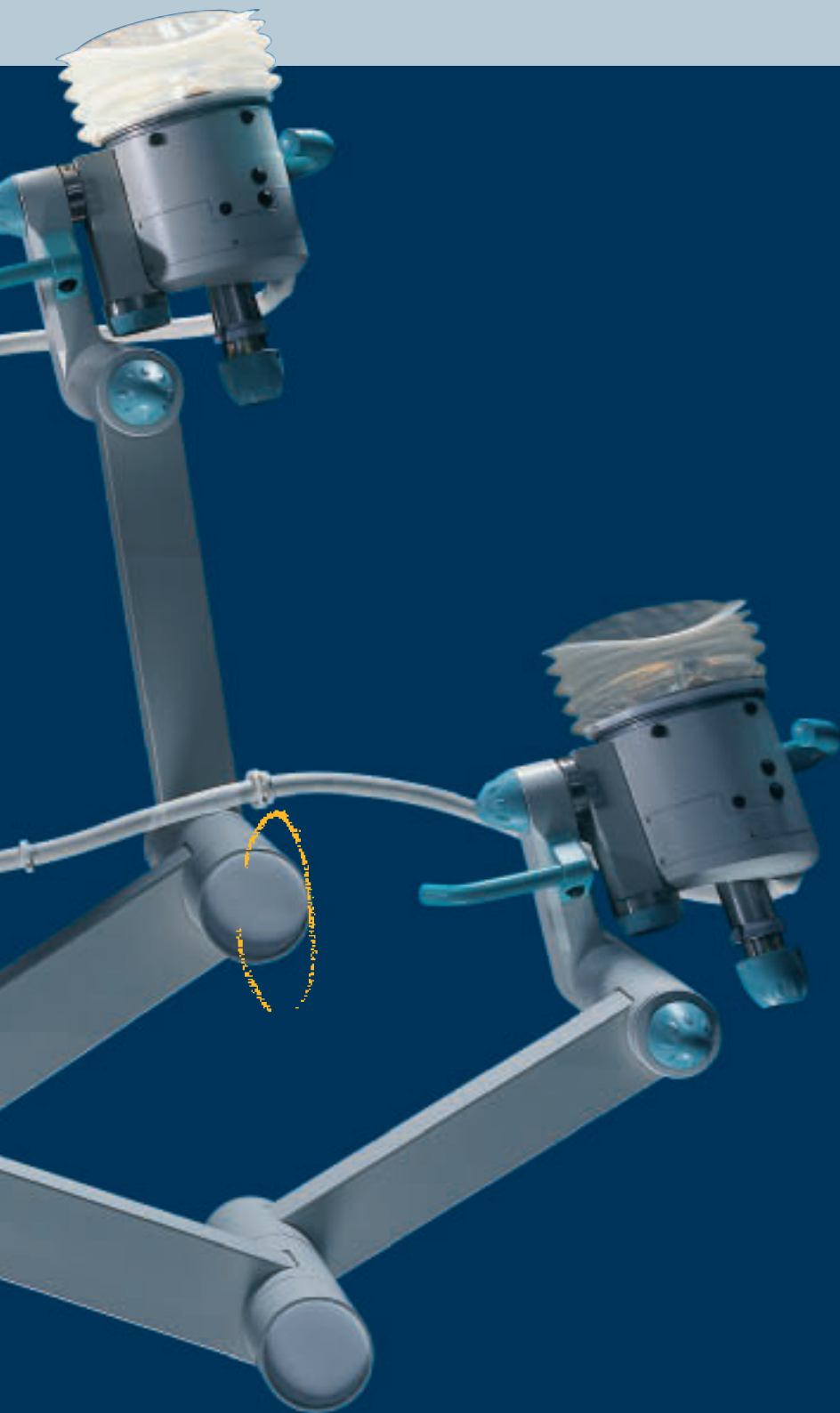
- easy, efficient, fast treatment
- free choice of coupling area and entrance window for shock waves
- easily moveable therapy head designed to cover all areas of body
- quick and simple ultrasound localization
- in-line ultrasound localization, transducer integrated within therapy head
- modern and accurate computer-aided localization with X-ray imaging
- treatment of stones which could not be reached or localized by means of other treatment methods.



Fast set-up, easy transportation and quick treatment make the MODULITH® SLK an ideal solution for mobile use.

Unique Design – for a unique treatment





The transmission of the shock wave depends on the anatomy.

A moveable source means

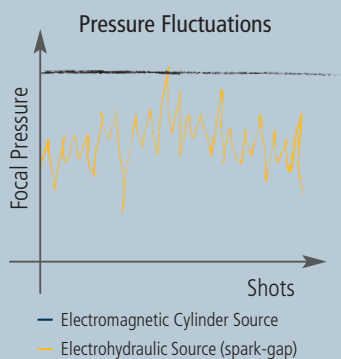
- *choice of optimum entrance window*
- *better results*
- *wider spectrum of indications*

Unrestricted freedom

For the first time ever a shock wave source of this power range has been detached from its mechanical ties. Supported on a completely balanced flexible arm, the source can be positioned. When the flexible arm is hydraulically fixed, fine tuned aiming or slight adjustments in the treatment area can be accomplished by means of the hand wheels. This is shock wave treatment with all modern conveniences.

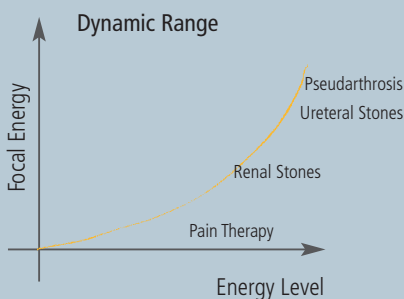
Shock waves under control

The STORZ MEDICAL cylinder source gives you complete control of the shock wave application. The desired energy is accurately generated and precisely reproduced from shock to shock over the complete service life of the coil. This guarantees safe treatment with hardly any side effects.



Generous energy range

The MODULITH® SLK realises an energy range unequalled in the world of shock wave technology. From pain treatment in rheumatology to treatment of ureteric stones in urology or pseudarthrosis in orthopaedic surgery – the MODULITH® SLK offers the proper energy settings for every shock wave therapy. And with the system's fine energy graduation the patient can be carefully led to the desired treatment level. This reduces the demand for anaesthesia.

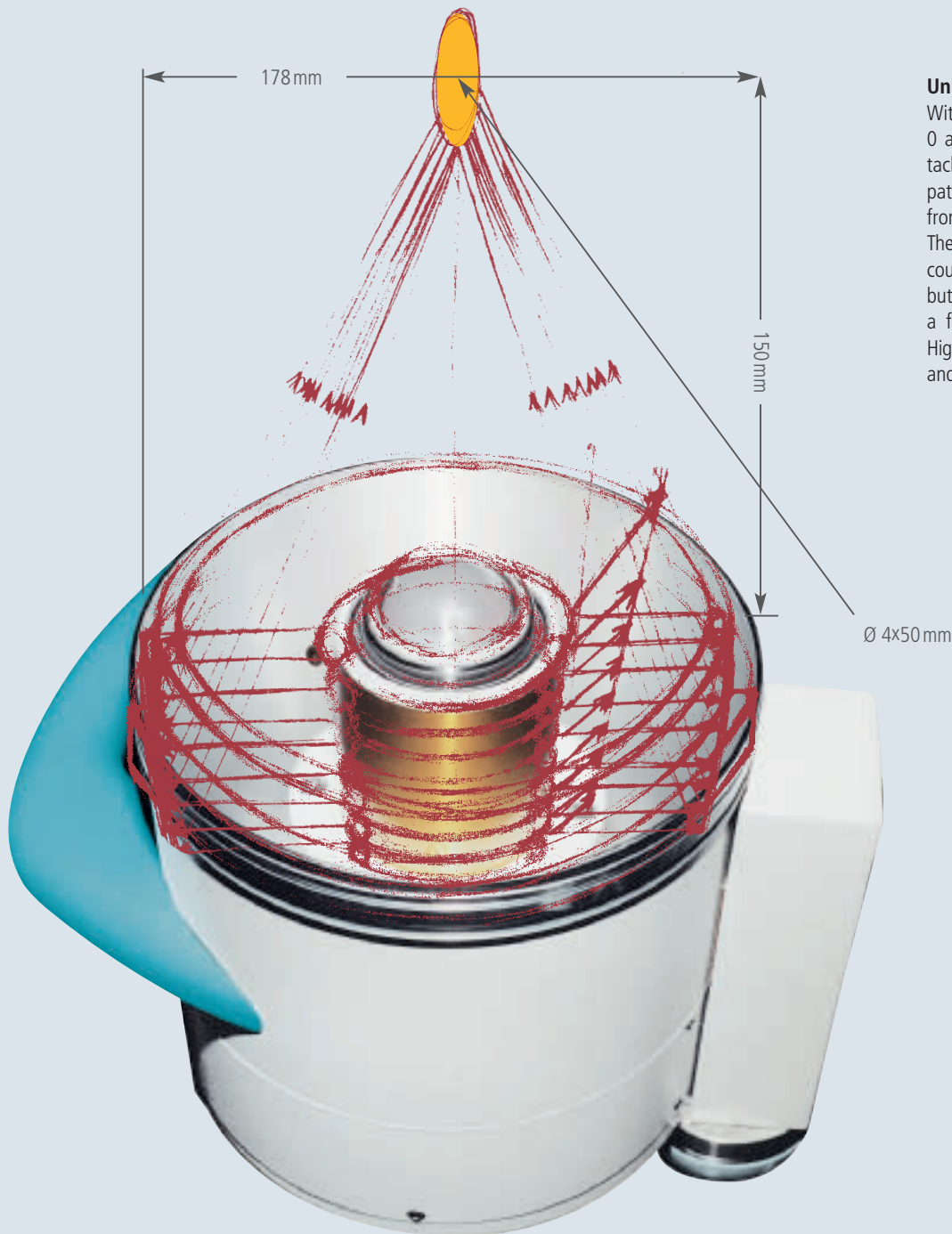


No disposable materials, no wearing lens and continuous water conditioning: this means no time consuming service breaks between treatments, low running costs and a shock wave device that is always ready for use without fluctuations.

The cylindrical coil source with parabolic reflector offers

- *an unequalled energy range – from pain treatment to ureteric stones and pseudarthrosis*
- *high stability of the electromagnetic coil – a precise and reliable tool at the hands of the attending physician*
- *no electrode changes, wearing lenses and performance deterioration over time – low running costs without any compromises at the patient's expense*
- *possibility of in-line localization – easy handling and precise localization is guaranteed*

Precise and Powerful – the cylindrical coil with parabolic reflector



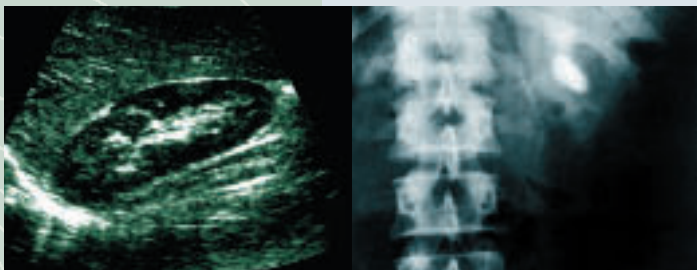
Universal Precision

With a penetration depth of between 0 and 150mm you are prepared to tackle any challenge the patient's pathology and anatomy may confront you with.

The energy enters the body over a coupling area of 250cm² (39sq.inch) but is subsequently concentrated on a focus of 4mm (0.16") diameter. High pressures where you need them – and nowhere else!

The cylindrical shock wave source is the most modern and efficient way of generating shock waves. A cylindrical coil covered with a copper membrane produces a cylindrical pressure wave. This wave travels outward and is then reflected by the parabolic reflector and thus focused precisely on the target. The cylindrical source is reliable and consistent and does not need any electrodes or acoustic lenses.

Dual Imaging – imaging as you like it



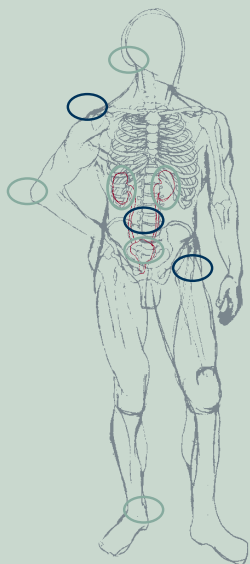
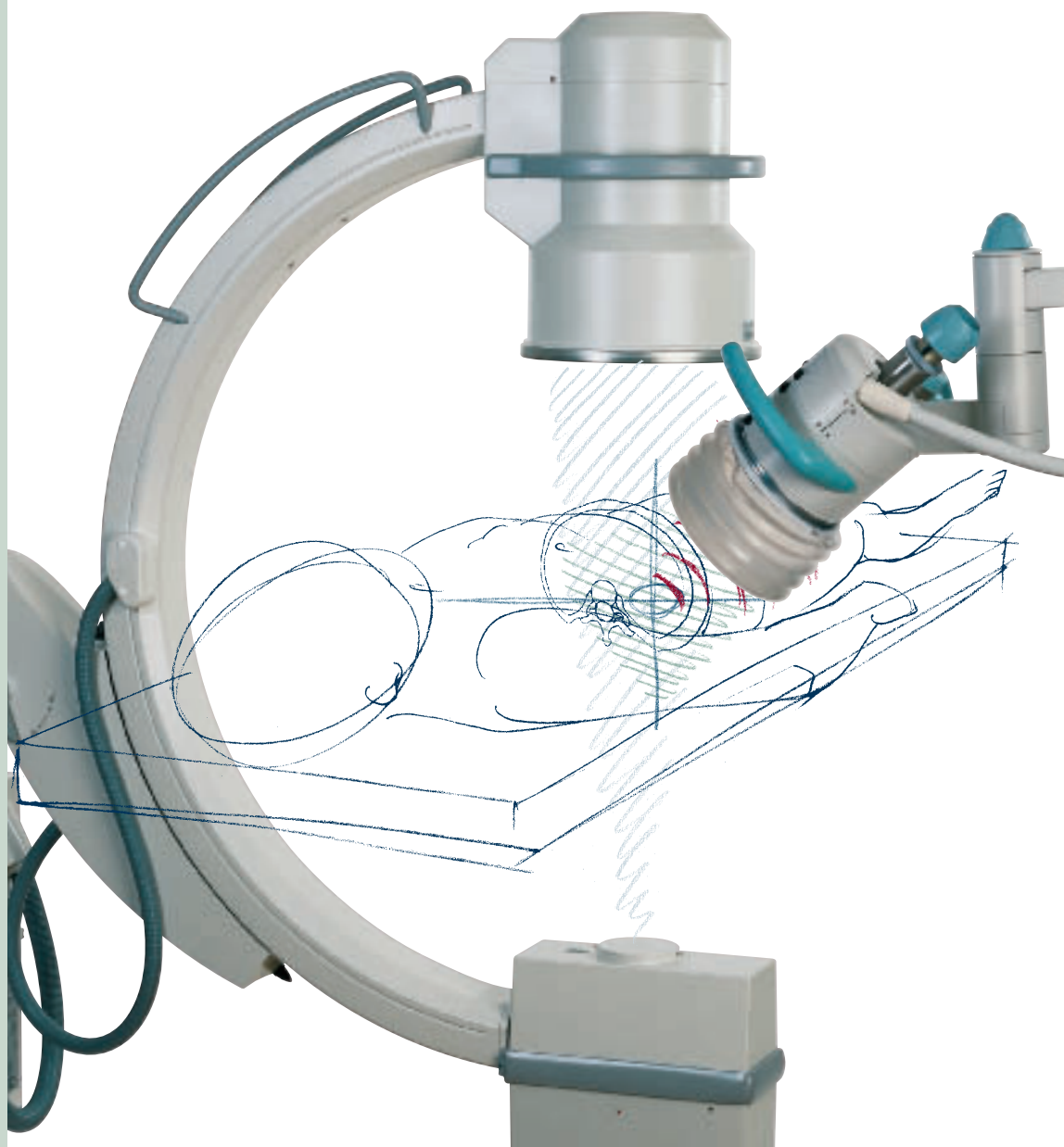
Freedom of choice

Use X-ray or ultrasound imaging depending on your actual application and personal preferences. Switch between the imaging systems without interrupting the treatment session. Even simultaneous use of both imaging systems is possible – this is what dual imaging is really about.

- ***Choice of optimum imaging system for the anatomy concerned – safe localization***
- ***Fast and accurate ultrasound localization – continuous supervision of targeting***
- ***X-rays always ready at hand – a sound fall-back strategy***
- ***High definition X-ray imaging – effortless target localization***
- ***Continuous therapy supervision via ultrasound – reduced exposure to radiation***

There is no best imaging; only the most appropriate imaging. And the decision as to which system to use is up to the attending physician! Sometimes even a combination of both, X-ray and ultrasound, serves best.

The MODULITH® SLK allows the most adequate treatment to be performed.

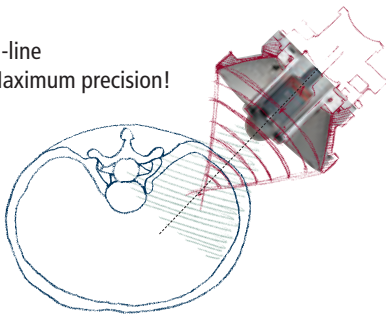


In-line Ultrasound Imaging – the most precise localization

Ultrasound localization is the fastest way to localize a target and to ensure permanently that the right target is hit – without any exposure to radiation.

The STORZ MEDICAL cylinder source allows an ultrasound transducer to be integrated within the shock wave source: localization and therapy therefore follow the same path. This is what we call "in-line". Osseous structures or tissues with gas inclusions are easily detected. When moving the therapy head the ultrasound transducer moves as well. So, the perfect path towards the target is easily found – both for diagnostic ultrasonic waves and for shock waves.

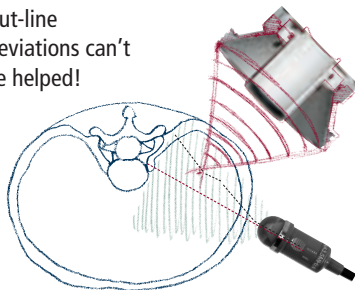
In-line
Maximum precision!



In-line or Out-line?

Looking in the same path in which you shoot (in-line), any obstacles obstructing or diminishing the energy transferred to the target are easily detected. And as shock waves and diagnostic ultrasonic waves pass the same tissue they undergo the same refractions. "What you see is what you hit!"

Out-line
Deviations can't
be helped!



- ***In-line ultrasound localization is the most accurate way of aiming at a target – higher score, better results***
- ***Continuous therapy supervision without exposure to radiation – keeps the X-ray dose low both for the patient and for the physician***
- ***Handled almost like a hand-held transducer – the target is easily found***
- ***Free choice of coupling area, entrance window and scanning plane – effective disintegration of all stones***
- ***High definition ultrasound image with transducer in skin contact – better vision for better targeting***
- ***Various ultrasound devices available – individual requirements can be met***

The Keyhole-Effect – find hidden targets

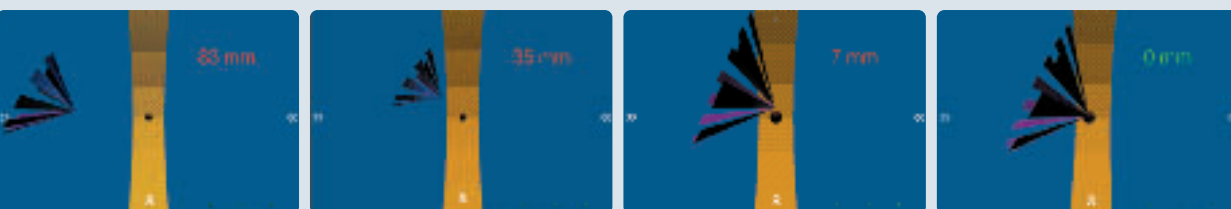
Examining the anatomy of a human body with ultrasound not only means choosing the proper orientation of the transducer but also to perform a searching motion on the skin to find the best place to scan through. Only by finding this "keyhole" can a good ultrasound image be obtained.

The therapy head of the MODULITH® SLK can be adjusted to this keyhole almost like a hand-held transducer. This not only ensures an excellent image quality but also perfect transmission of the shock waves.

Lithotrack® And X-Ray – computer-aided shock wave therapy

The greatest benefit: freedom

When utilizing shock waves in medical application, the path of the pressure pulse towards its target is always of great importance. Obstacles such as bones or gas-filled intestines will diminish the energy transferred to the target and thus affect the treatment success. For most targets there is a path that is free of obstacles, and it can be used as long as the shock wave source can be placed wherever required by the patient's anatomy. Now, the MODULITH® SLK offers this flexibility also in combination with X-ray and also for applications which, up to now, had to cope with the handicap of a fixed therapy head. For this reason, STORZ MEDICAL has invented the Lithotrack® positioning system – the key technology to computer-aided shock wave therapy (CAST).

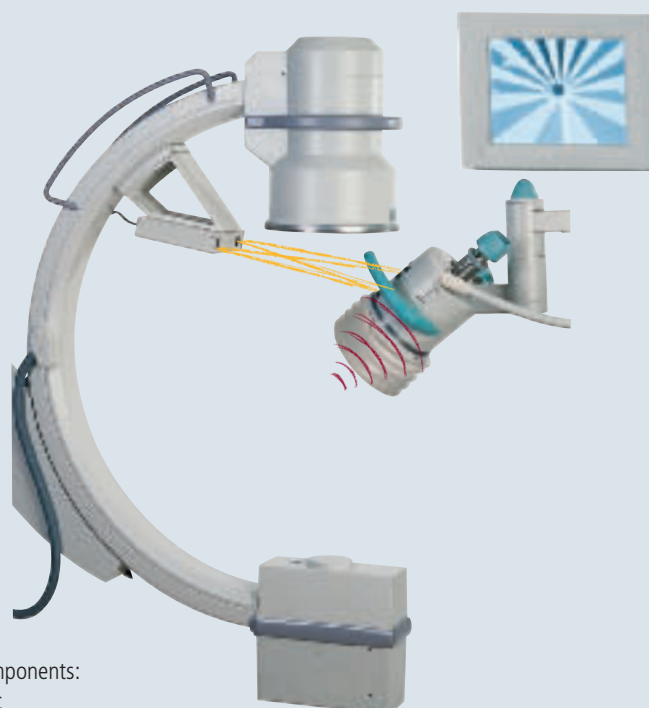


An optical link between C-arc and therapy head is established. The camera 'looks' at the shock wave source and in doing so can determine the position and orientation of the shock wave head. On the basis of this data the processing and display module generates a virtual reality scenery.

By moving the therapy head and watching the corresponding movements of the focus on the Lithotrack® display, the physician can adjust the focus of the shock wave to the centre of the X-ray with a sure and quick hand.

The Lithotrack® positioning system

- *preserves the high flexibility of the shock wave device – access to the target following anatomical requirements only*
- *protects the independence of the X-ray C-arc, which can still be used independently of the shock wave system – cost-effective multiple use*
- *gives free choice of X-ray C-arc. Almost any model can be employed – using existing X-ray equipment may save additional costs*
- *opens up the set-up – methods other than shock wave application can be used in the same work space*



Lithotrack®

positioning system comprises three components:

- stereoscopic camera fixed to the C-arc
- transmitter module integrated in the therapy head
- processing and display module

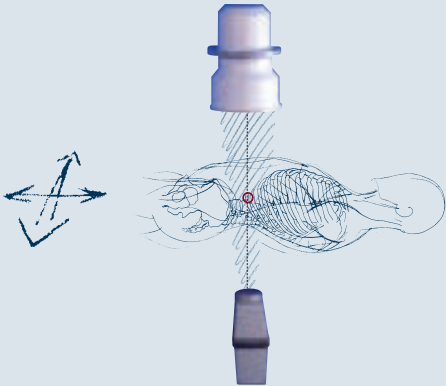
Working with X-ray localization and the Lithotrack® system is easy and fast. This localization method is also readily available whenever you need it, for example if initial localization has been performed with ultrasound imaging and further localization with X-ray becomes necessary.

The Lithotrack® positioning system is independent of the actual position of the C-arc relative to the shock wave device. It also ensures continuous monitoring of the adjustment of the shock wave head without exposure to radiation.

Working with computer-aided shock wave therapy is as easy as can be:

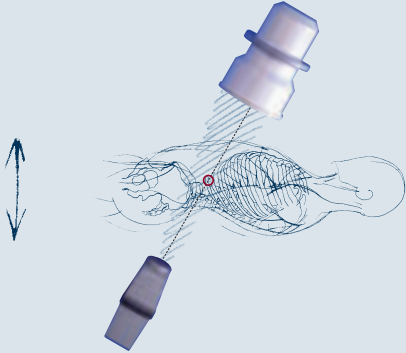
Step 1: Localizing the stone

The C-arc is in vertical position. Performing a fluoroscopy the patient is adjusted horizontally, i.e. cranio-caudally and laterally, until the target is adjusted to the centre of the cross hairs on the X-ray monitor. The target is now on the centre line connecting the X-ray tube and image intensifier.



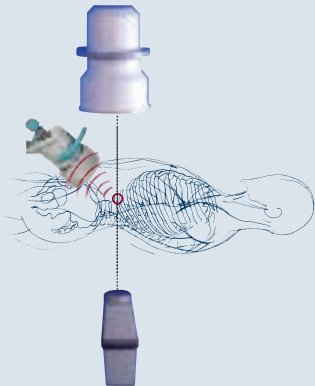
Step 2: Localizing the stone

The C-arm is swivelled cranio-caudally at approx. 30°. Usually the target is now outside the cross hairs on the fluoroscopic image. The patient is moved vertically until the target is in the centre of the cross hairs once again. It is now adjusted to the iso-centre of the X-ray C-arc.

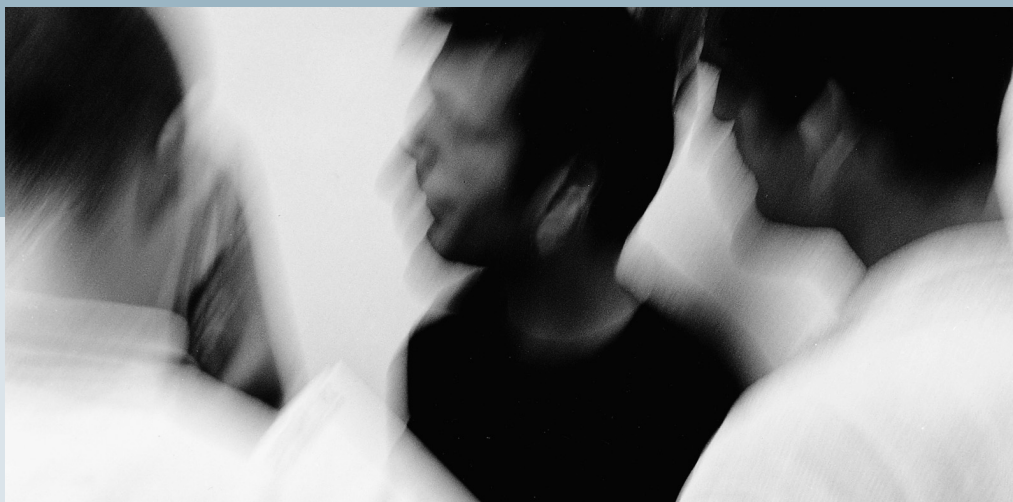


Step 3: Positioning the source

Finally, the physician adjusts the therapy head according to the Lithotrack® display. The shock wave access can be chosen independently according to individual anatomical conditions. Now the shock waves are aimed precisely at the centre of the C-arc – treatment can begin!



Service – always by your side



- *Site planning*
- *System installation*
- *Application training*
- *Service training*
- *User communication*
- *Preventive maintenance*
- *Hotline*
- *Repair*

The services offered by STORZ MEDICAL range from pre-installation consulting right up to prompt support during every-day operation.

Extensive user training and application support are of course included in the scope of delivery. STORZ MEDICAL also organizes technical training sessions so that minor problems can be rectified immediately by a hospital in-house technician. The MODULITH® SLK is characterized by its excellent reliability. But should any faults be encountered, our worldwide service network ensures that qualified help is always near at hand.



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