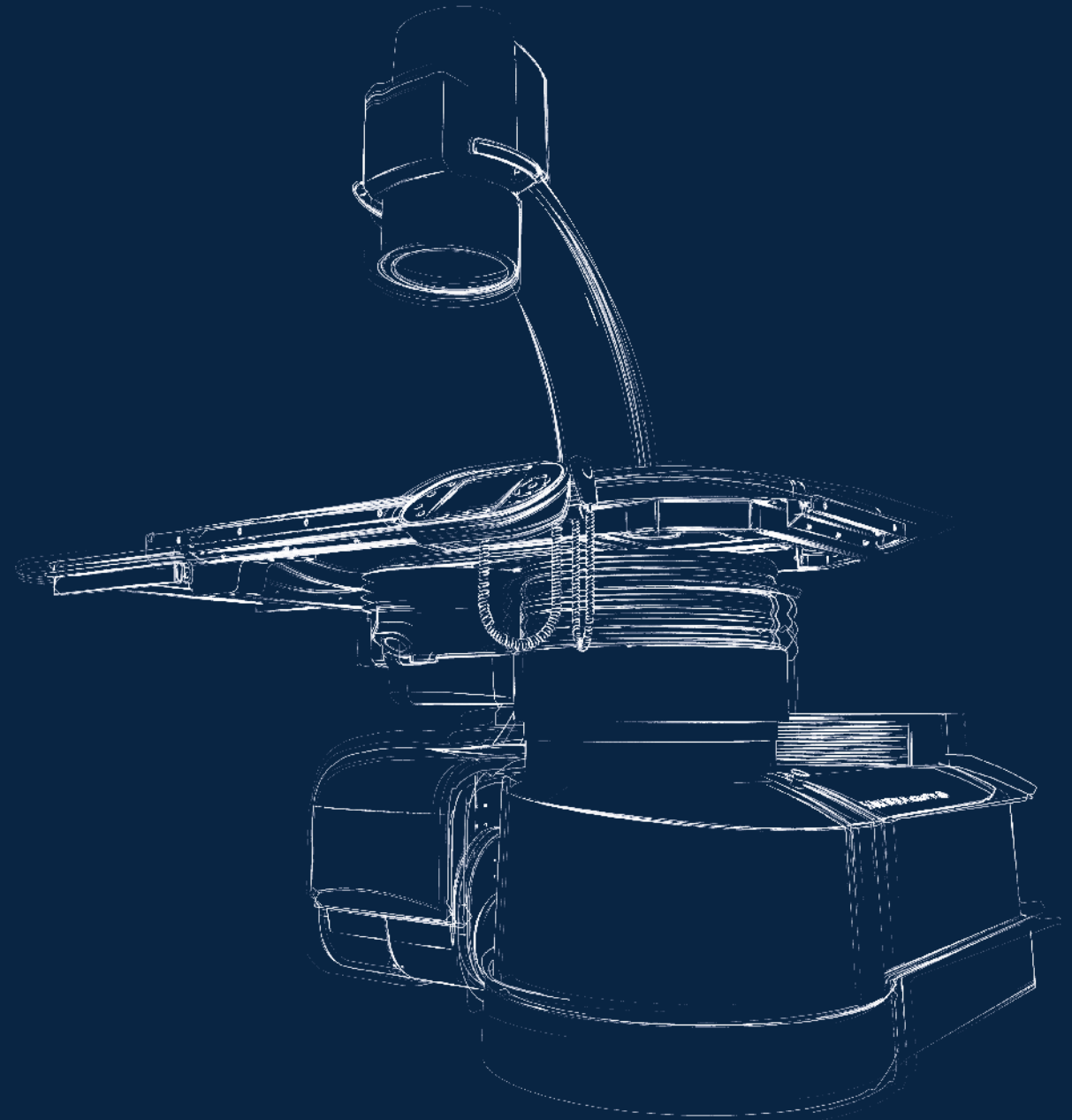


MODULITH® SLX-F2
UROLOGICAL WORKSTATION





Non-invasive therapy in the service of people

Established in 1987, STORZ MEDICAL AG is a Swiss member company of the KARL STORZ Group. From our headquarters in Tägerwil, on the Swiss side of Lake Constance right in the heart of Europe, we develop innovative shock wave systems that meet the highest standards of precision.

Our lithotripters have proved their efficacy in urology in millions of cases. With its state-of-the-art technological innovations, STORZ MEDICAL is setting new standards also in orthopaedics, cardiology, rheumatology, rehabilitation medicine, aesthetic medicine, dermatology and veterinary medicine.

Pioneering achievements such as the invention of the electromagnetic cylindrical source, the first application of shock waves in cardiac revas-

cularization and combined shock wave therapy (focused, planar and radial shock waves) provide ample proof of the vast performance spectrum of STORZ MEDICAL in the field of shock wave therapy.



MODULITH® SLX-F2 – more than just a lithotripter

Urological stone therapy is no longer an isolated discipline in medicine. Today, it embraces a wide spectrum of minimally invasive and extracorporeal procedures. While extracorporeal shock wave lithotripsy (SWL) is the method of choice, it is complemented by transurethral and percutaneous procedures for stone fragmentation.

Innovation and experience

The MODULITH® SLX-F2 is the result of over 20 years of experience in the design of lithotripters and of millions of cases of successful stone fragmentation in the human body.

The MODULITH® SLX-F2 is a fully integrated stone therapy system with a wide spectrum of general endourological and diagnostic features. The central control platform StorM-Touch ensures true centralized control of all subsystems and instruments.

Integrated high-quality X-ray and ultrasound systems facilitate lithotripsy applications and turn the MODULITH® SLX-F2 into a highly flexible, versatile multifunctional workstation for stone therapy.

- First class lithotripter
- High-end multifunctional workstation for stone therapy





Cylindrical source

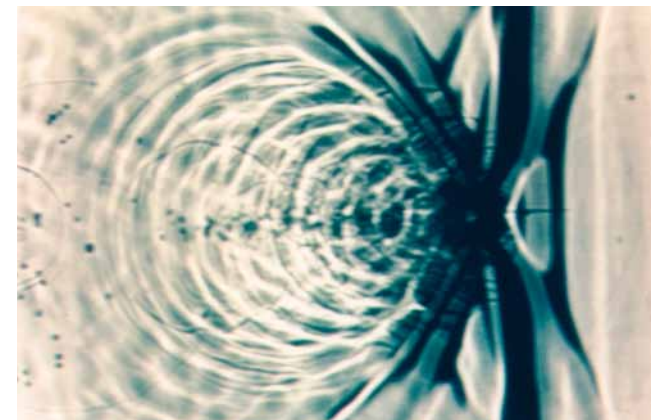
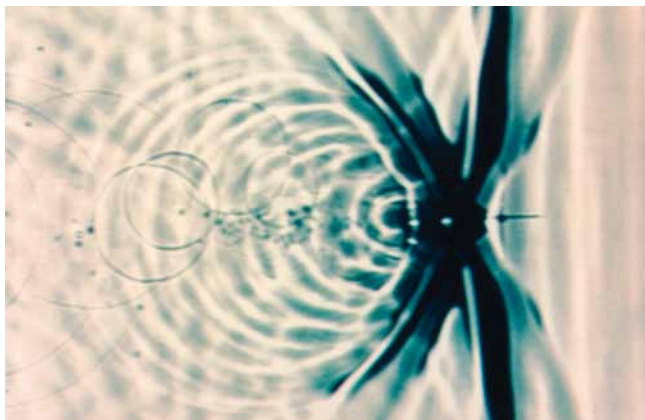
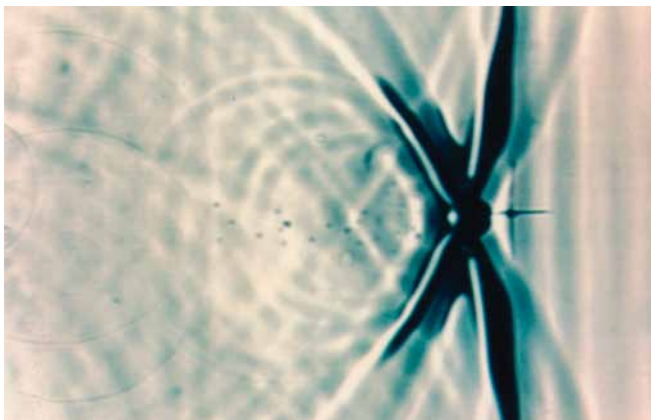
The therapy source is the essential component of lithotripters. It determines the stone disintegration efficiency and the localization systems which can be integrated into the lithotripter.

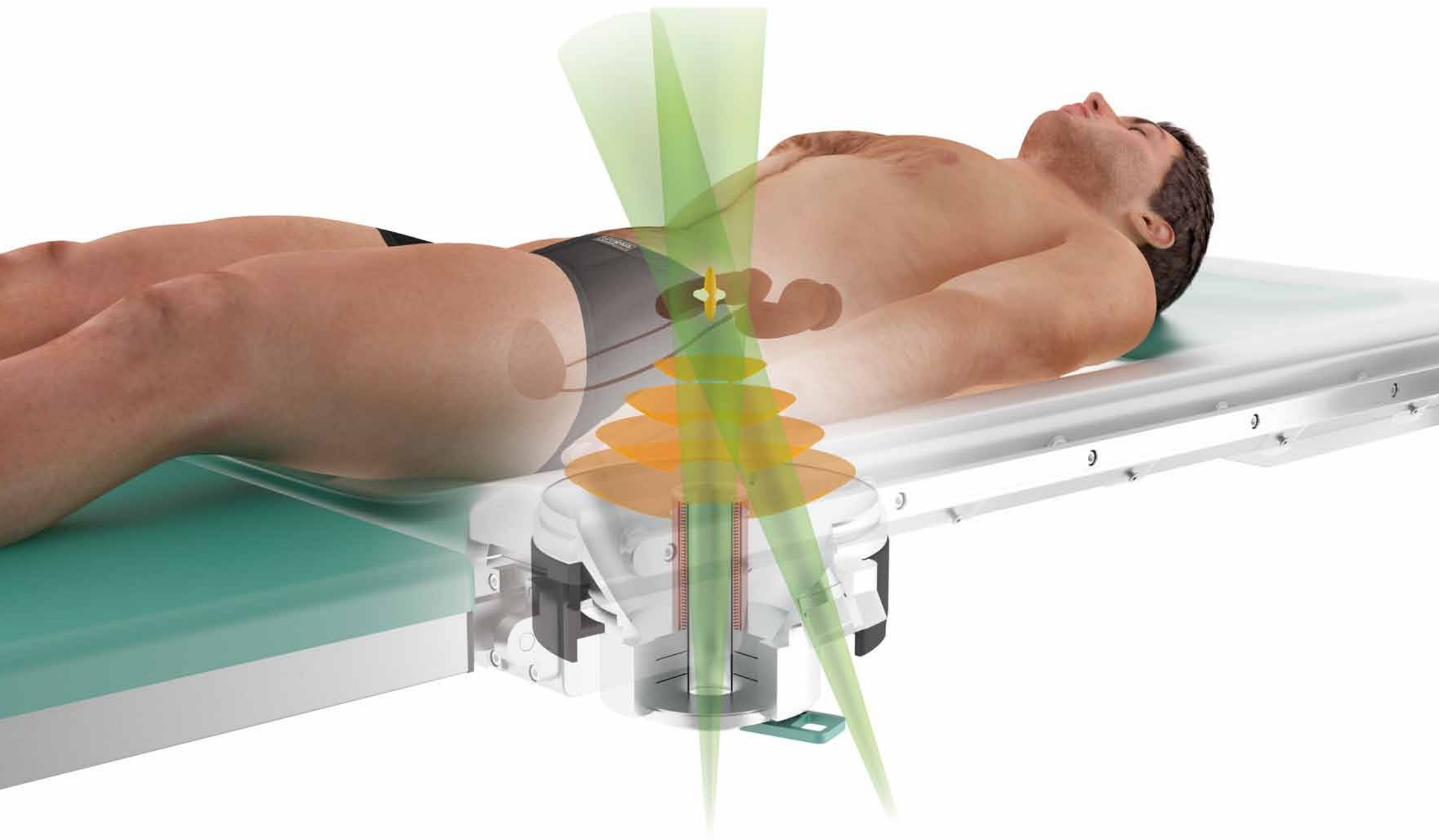
The cylindrical coil in the pioneering therapy source of STORZ MEDICAL lithotripters combines shock wave generation and in-line localization by design. This geometry allows in-line imaging to be carried out by ultrasound or X-ray fluoroscopy in the most convenient manner.

Cylinder geometry – the key to success

The shock wave source delivers energy doses between 11 mJ to 154 mJ. The corresponding peak pressures range between 5 MPa and 150 MPa. The acoustic output can be adjusted by 26 levels within these ranges. The aperture of the therapy head with a diameter of 300 mm provides an area of approximately 700 cm² for coupling. Because of this large coupling area the energy density can be kept at a very low level at the patient skin. Thus the pain sensation is reduced and the need for analgesic drugs is minimized.

- Most powerful and most dynamic shock wave source
- High fragmentation efficiency
- Minimum side effects
- Low pain sensation
- Constant energy emission
- Long service life
- Low operating costs





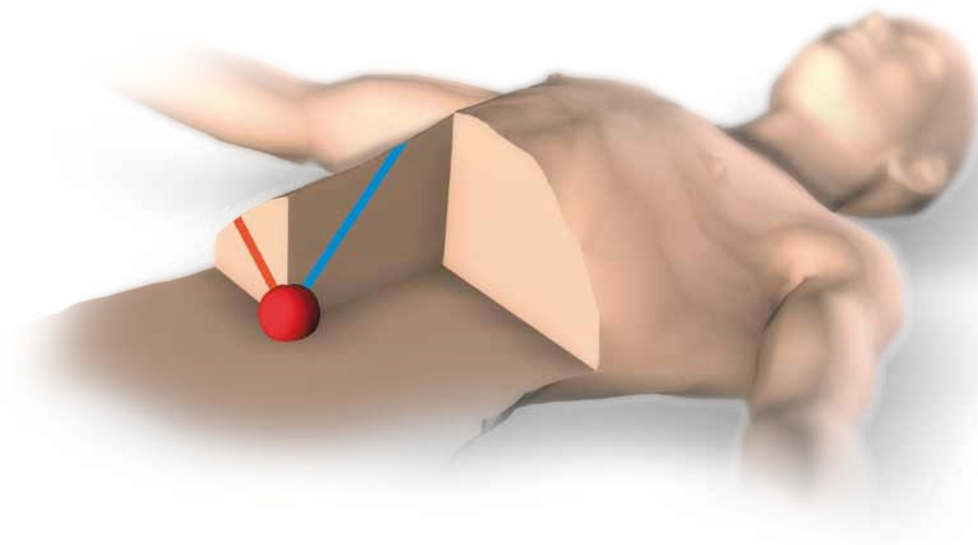
X-ray imaging system

The fluoroscopic distance in the human tissue is several centimetres longer for cranial-caudal projections than for lateral projections. Therefore the image contrast is reduced resulting in a compromised image quality.

However, anterior-posterior (AP) and lateral projections provide better image quality and ensure easy and reliable identification of the stone position.

STORZ MEDICAL has developed an isocentric mechanism for lateral swivels to ensure continuous fluoroscopy during the swivelling movement. The target area can thus be reliably controlled while the X-ray system is swivelled to change between AP and lateral projection at 30°. Positioning errors are avoided.

- High-precise stone localization
- Minimal fluoroscopic distance in tissue
- Improved image quality



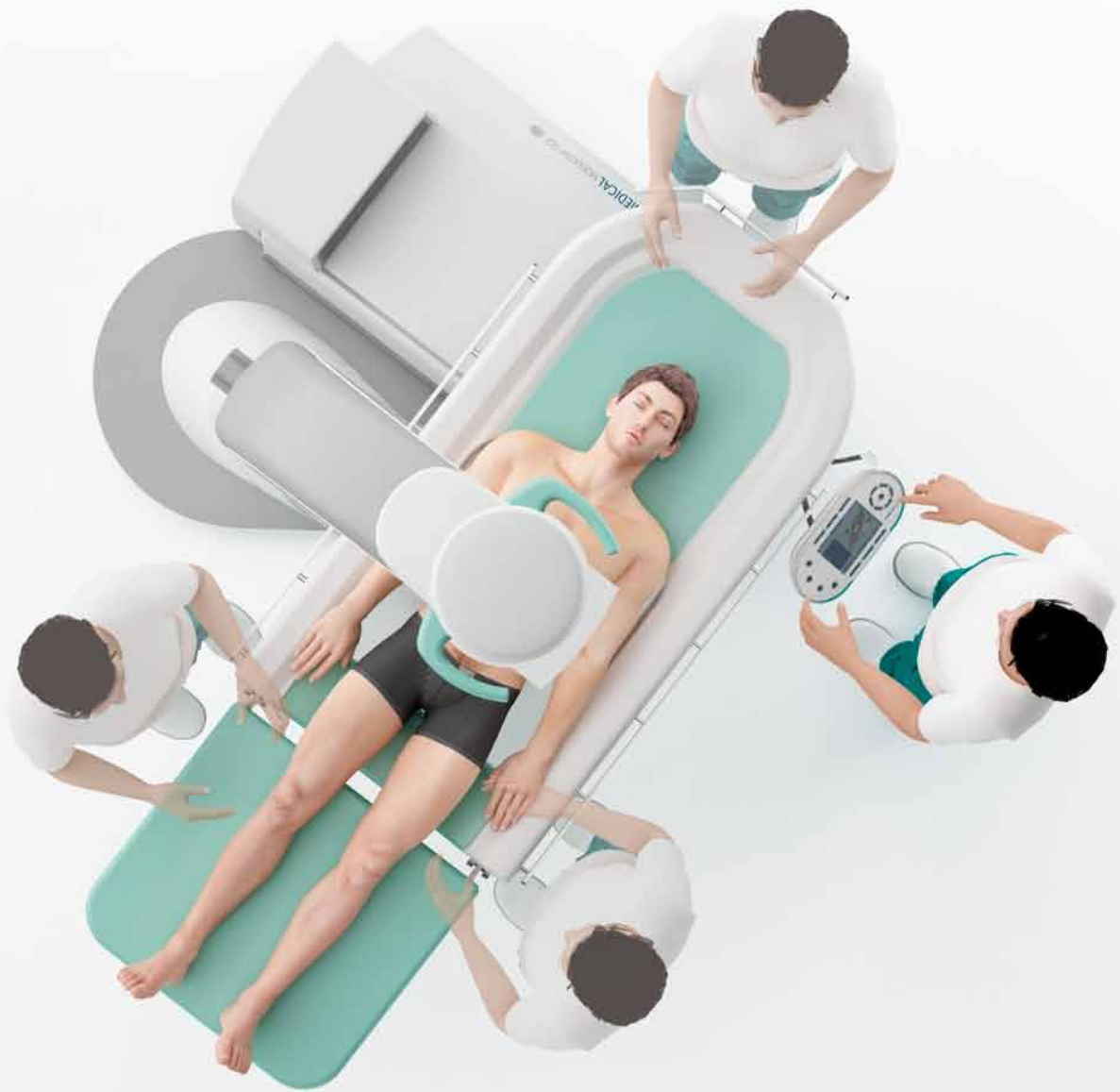
Comparison of fluoroscopic distances
lateral —
cranio-caudal —



AP projection



lateral projection at 30°



Ergonomic design

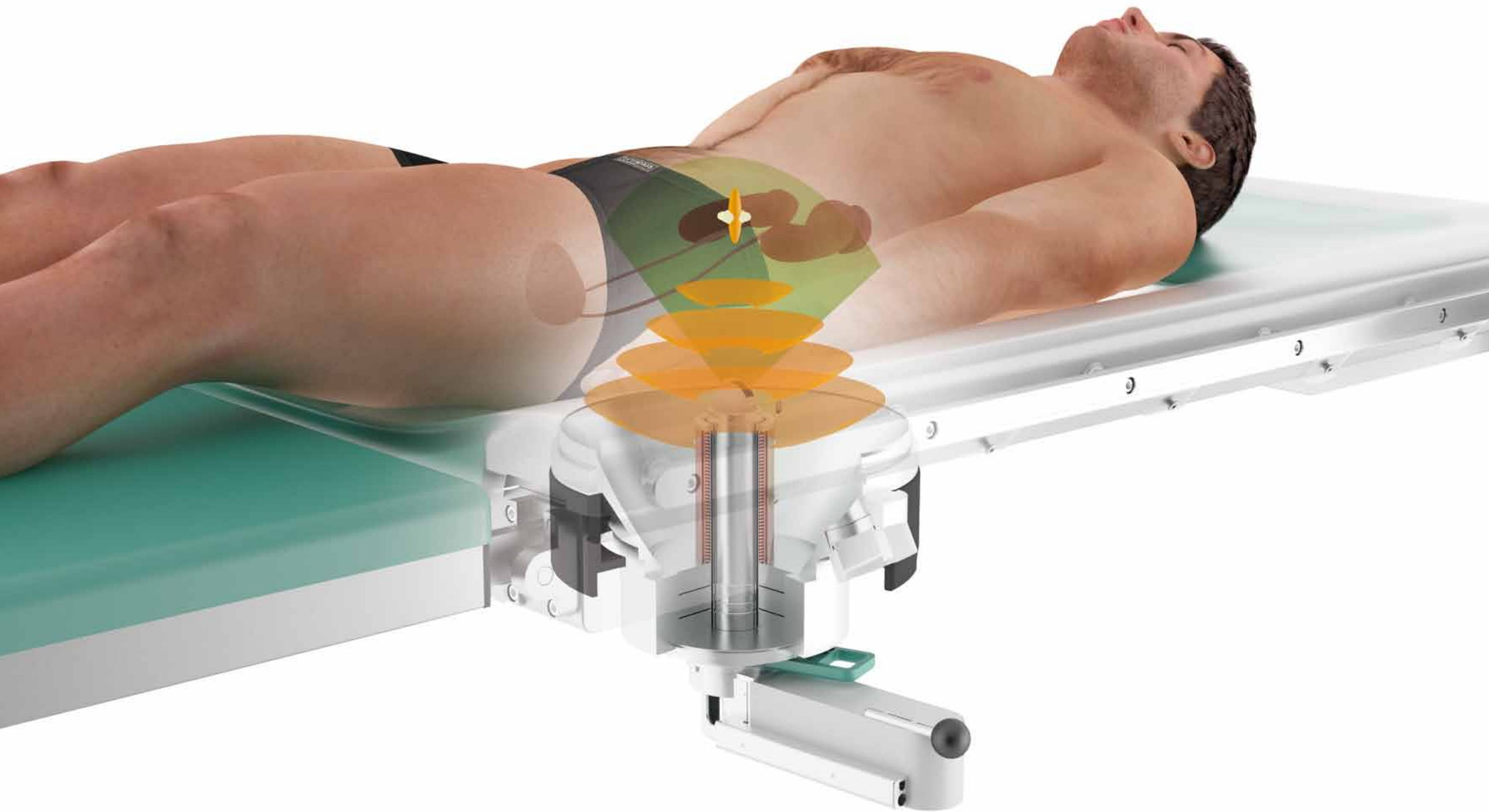
The MODULITH® SLX-F2 was developed with a focus on ergonomic design and the requirements of the daily medical routine. Fundamental design objectives included easy access to patients from all sides, especially in the head area, and an innovative control concept to relieve users of many routine tasks and enable them to concentrate on the essentials.

Vertical in-line localization

The left or right kidney can be treated without repositioning the patient. Fluoroscopic projections and localization in the commonly used vertical (AP) direction are based on the known standards of urological diagnostics to ensure clear orientation in the usual form.

- One-time patient positioning for kidney stones
- Access to patient from all sides
- Coincidence of AP projection and in-line localization





Ultrasound localization concept

The cylindrical design of the STORZ MEDICAL therapy source allows the ultrasound transducer to be installed in the centre of the therapy head so that the ultrasound image shows the stone in the central therapy head axis.

This in-line arrangement ensures that obstacles such as ribs or the iliac wing are directly visible in the ultrasound image. Moreover, sensitive regions such as the lungs, heart or gas-filled organs can be reliably identified and bypassed during shock wave application. This allows even children to be treated with maximum care and without any significant risks.

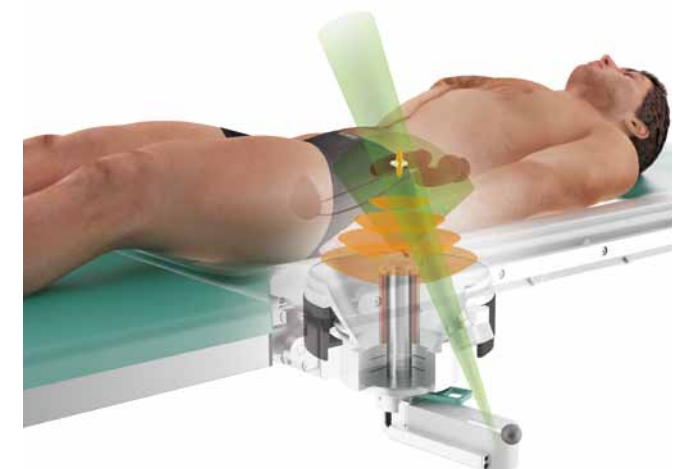
In-line localization for maximum precision

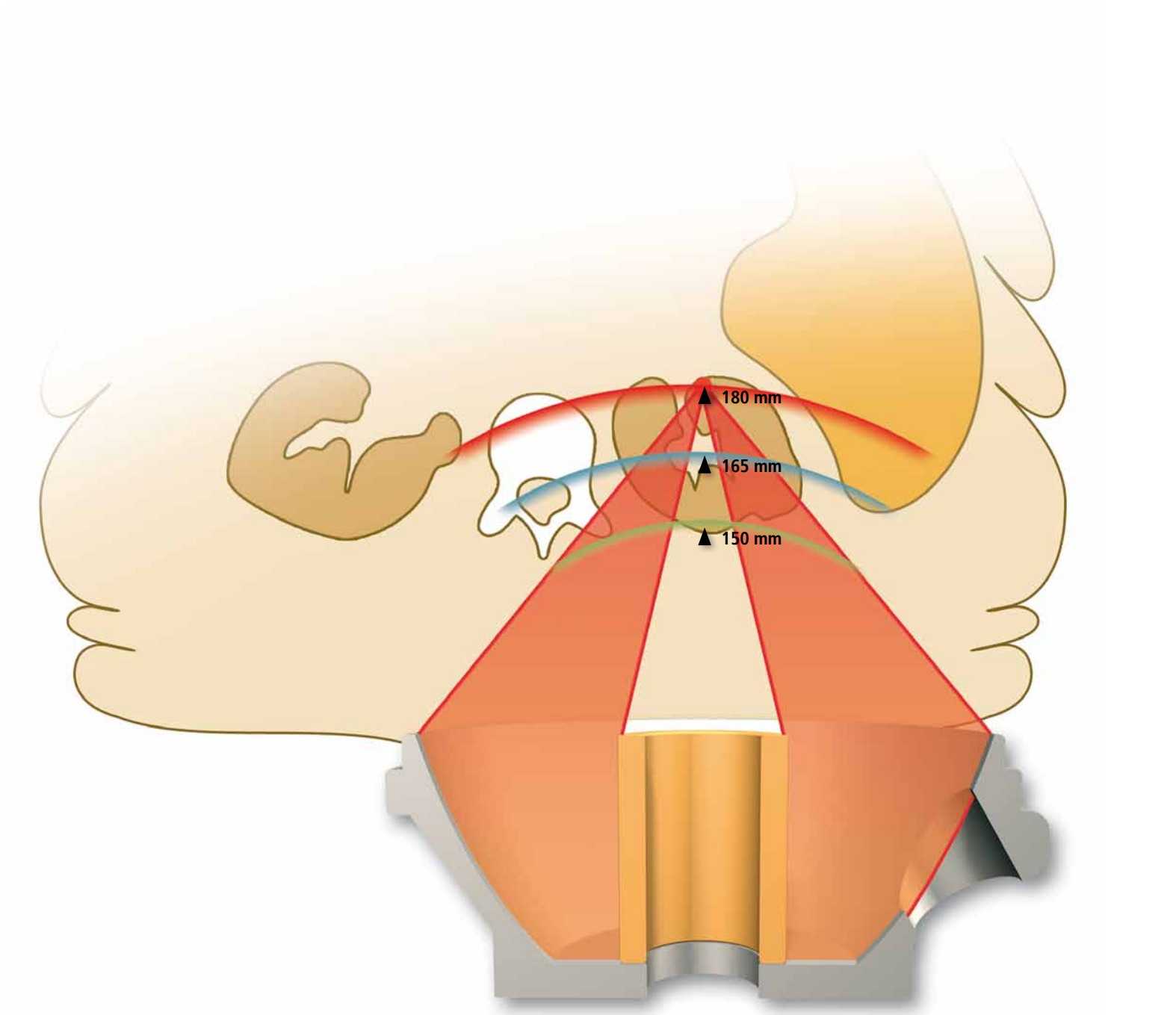
The in-line arrangement of the diagnostic ultrasound transducer in the therapeutic shock wave source ensures that shock waves and ultrasound waves pass through the same tissue regions so that deviations are minimized. The correspondence between the localized target area and the shock wave focus is guaranteed maximizing aiming accuracy and fragmentation efficiency.

Dual imaging

The combination of X-ray and ultrasound localization enables the doctor to choose the localization method best suited to a specific application or to use both localization systems simultaneously. The in-line ultrasound and X-ray images display the degree of stone fragmentation and clearly show whether the calculus is still located in the therapy focus. Unparalleled reliability and precision during localization and treatment are thus guaranteed.

- High precise targeting by in-line ultrasound
- In situ monitoring of stone localization
- Simultaneous X-ray and ultrasound monitoring





▲ 180 mm

▲ 165 mm

▲ 150 mm

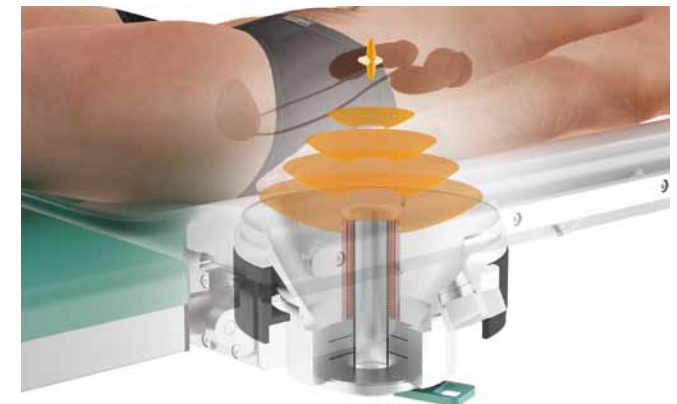
A new world record!

During the last few decades, there has been a general trend of increasing obesity in many parts of the world. This alarming development inevitably means that the weight limits of medical devices need to be increased and that shock wave sources with higher penetration depths are required.

The MODULITH® SLX-F2 has an exceptionally high weight acceptance of 225 kg and can be equipped with an optional therapy source with a hitherto unparalleled penetration depth of up to 180 mm. These features enable reliable fragmentation of deep sited stones even in extremely obese patients.

STORZ MEDICAL has set new standards in extracorporeal shock wave lithotripsy, offering a system with a 180 mm penetration depth for the fragmentation of stones that could not be reached with conventional lithotripters.

- Maximum table weight of 225 kg
- Penetration depth of 180 mm

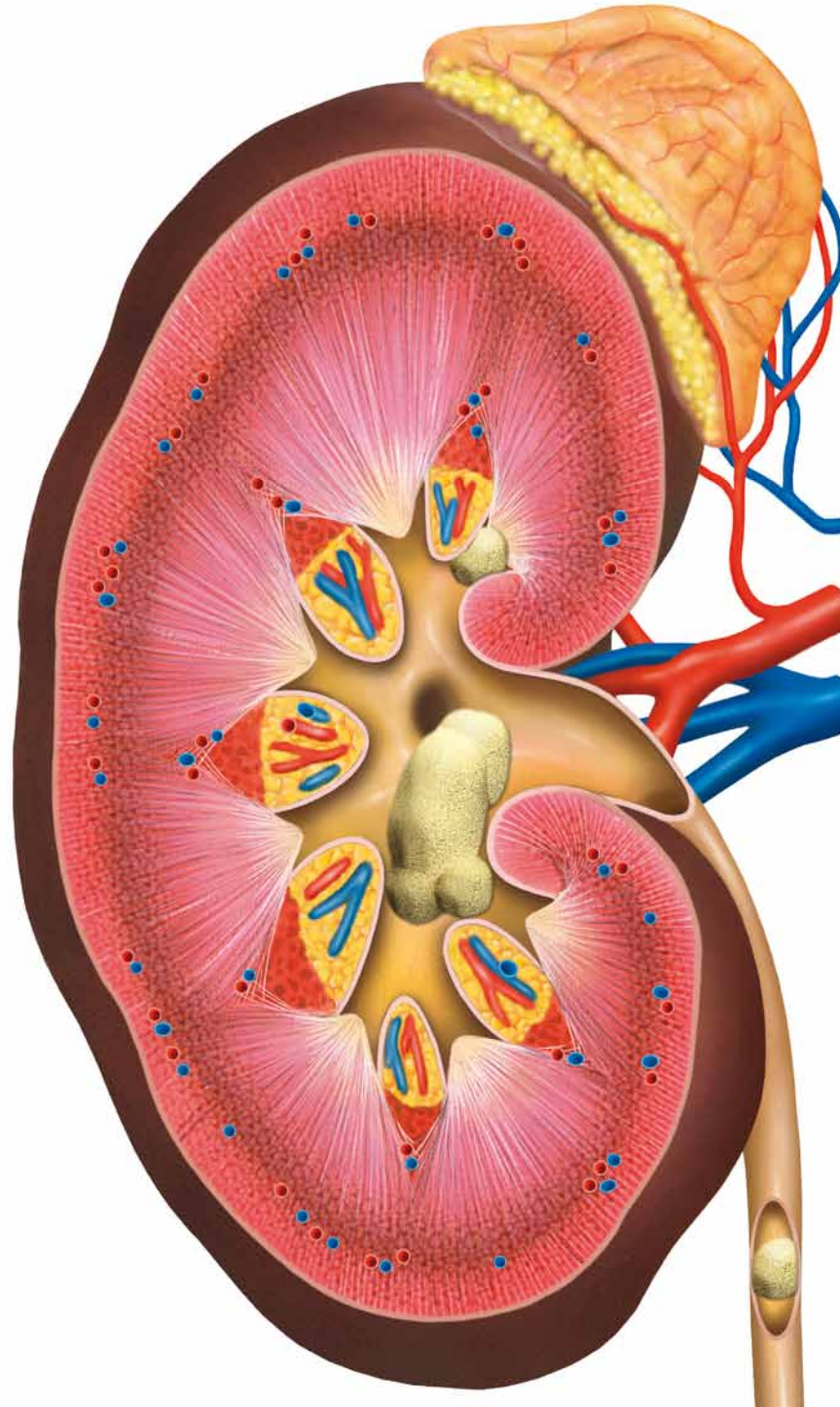




Standard focus



Enlarged focus (optional)



The dual focus

No two stones or anatomies are the same. Hence, different focal zones are required to accommodate for different stone sizes and positions. Higher pressures and precise energy concentration are necessary for the disintegration of impacted ureter stones, whereas lower pressures and larger focal zones can be used in the treatment of large stones located in the renal pelvis.

The dual focus of the MODULITH® SLX-F2 perfectly adapts shock wave parameters to specific indications and to develop individual treatment strategies.

Dual focus – the choice is yours!

With a simple press of a button you can change between a precise focus and an extended focus area or vice versa – even during the same therapy session. In this way, you are free to select the treatment strategy best suited to the patient's specific indication and anatomical conditions. A ground-breaking solution in the history of lithotripsy.

- Precise focus: 6 x 28 mm², 5 – 150 MPa
- Extended focus: 9 x 50 mm², 5 – 90 MPa





Modular design

The modular design of the MODULITH® SLX-F2 allows the workstation to be tailored to specific system requirements. In addition to permanently installed, stationary lithotripter solutions with X-ray imaging system, it is also possible to choose a concept with mobile C-arc for localization.

MODULITH® SLX-F2 stationary system with integrated X-ray system

The MODULITH® SLX-F2 with integrated X-ray system is designed as a stationary system for permanent installation. The X-ray imaging system is available with a 7.5 kW or a 50 kW X-ray generator. It is perfectly tailored to all requirements of urological treatments and includes high-resolution diagnostic imaging and storage features.



MODULITH® SLX-F2 semi-stationary system with mobile C-arc

The semi-stationary version of the MODULITH® SLX-F2 is a fully featured urological workstation. It can be transferred to other rooms without requiring any significant installation work. Mobile C-arcs are used for X-ray diagnostics and X-ray localization.



MODULITH® SLX-F2 mobile system with mobile C-arc

The fully mobile version of the MODULITH® SLX-F2 has a built-in undercarriage to allow frequent and easy transport between different treatment locations. This solution requires only minimal installation and adjustment time.



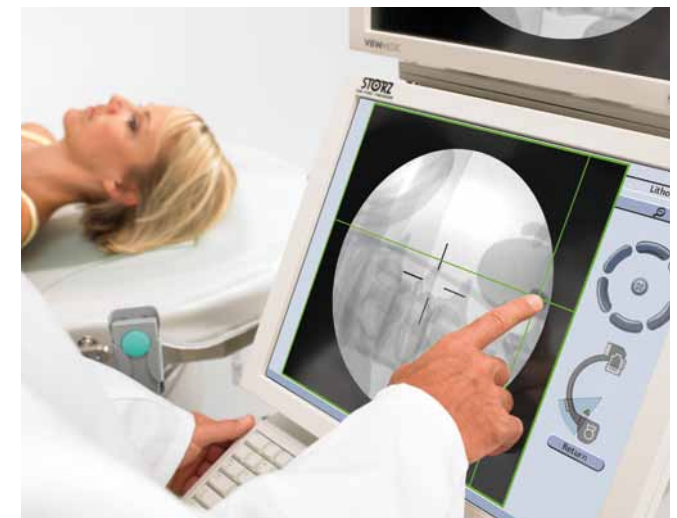


StorM-Touch – Everything under control

STORZ MEDICAL has implemented a new pioneering control concept which enables central control of the most diverse system components. All devices in the network can be easily controlled from a central touch-screen, irrespective of whether stone therapy, contrast medium imaging or percutaneous procedures are performed.

The on-screen Realistic User Interface (RUI) shows an actual picture of what the user interfaces of the individual devices look like and thus helps to avoid user errors. With StorM-Touch, the user always has everything under control, no matter whether the equipment is controlled from the local touch-screen directly at the workstation or from the remote control panel behind lead-glass windows. The central control platform provides full-range functionality, including control of the lithotripter, X-ray system, endoscopic and other devices.

- LithoPos®: automatic stone positioning system facilitates and accelerates shock wave therapy.
- StorM-Base: all relevant treatment parameters, patient information and X-ray images can be stored in a database for later evaluation.
- DICOM modules: for long-term archiving in a PACS system
- StorM-Touch control of all endoscopy devices





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LITHO POS - POSITIONING

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LithoPos

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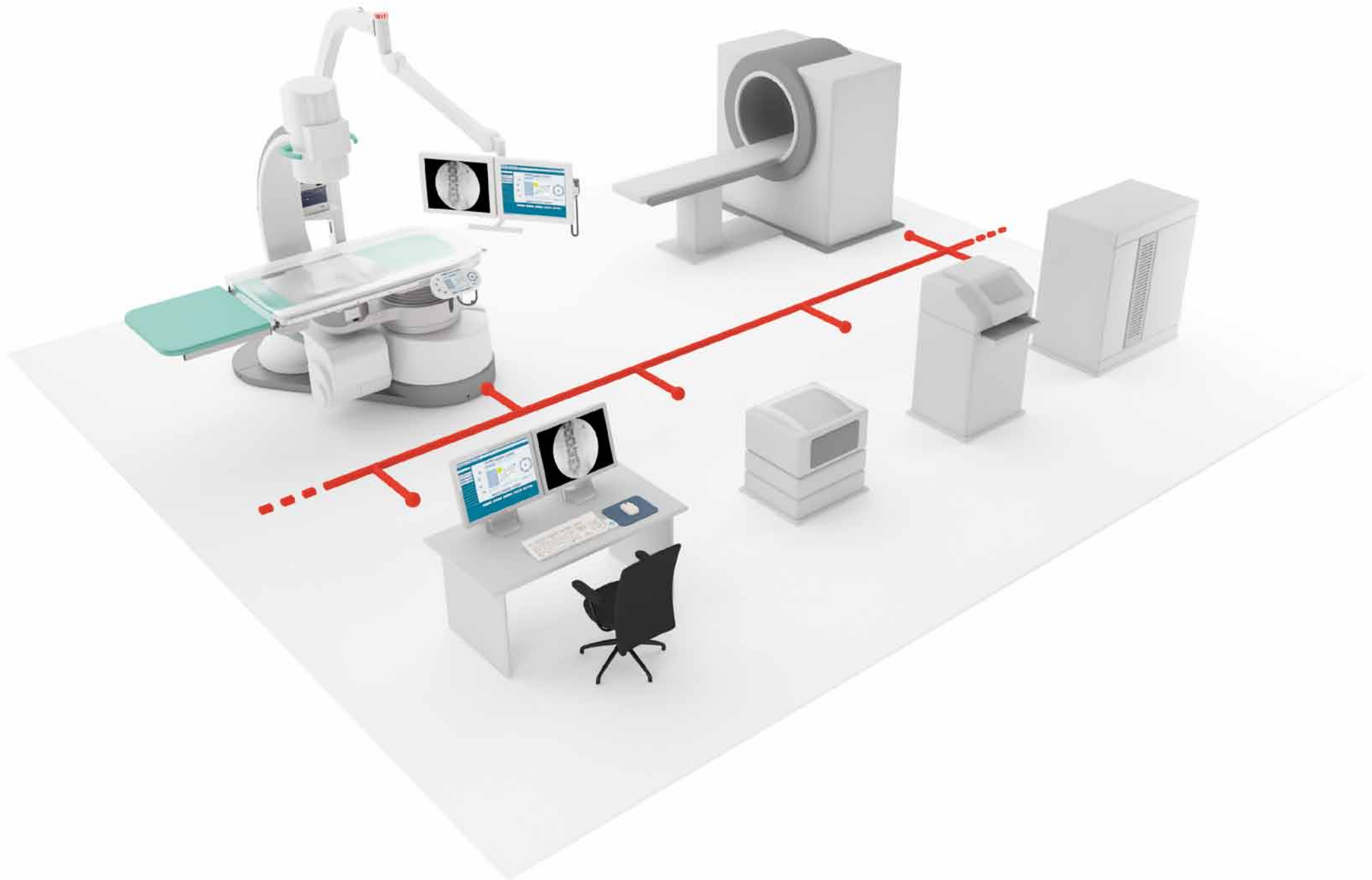
LithoPos® – Automatic stone positioning

With its LithoPos® option, STORZ MEDICAL has reinvented the automatic stone positioning method. LithoPos® significantly accelerates and facilitates stone positioning. The stone merely needs to be tapped on the touch-screen and is then automatically moved into the shock wave focus.

This solution offers users maximum simplicity and convenience. It substantially reduces fluoroscopy times for patients.

- Fast and easy stone positioning
- Reduced radiation doses





StorM-Base – Lithotripsy database with extensive functionalities

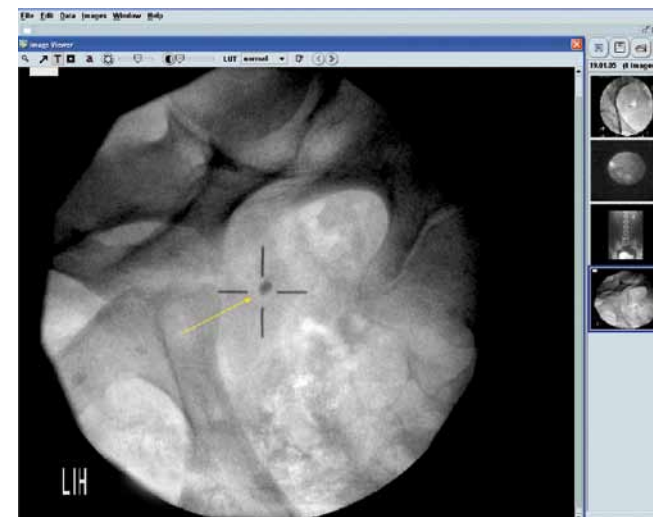
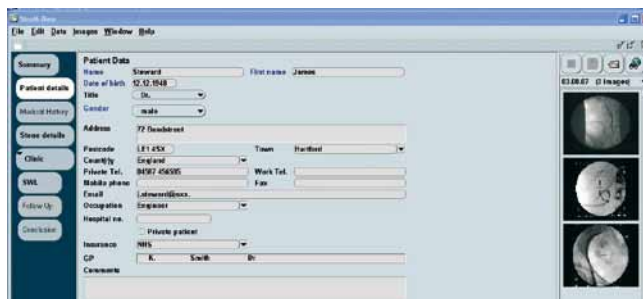
The StorM-Base software package has been specially developed for therapy and image archiving applications. It offers a multitude of features both for lithotripsy treatments and for scientific purposes.

Data can be retrieved according to user-defined combinations of criteria. Retrospective evaluation of data collected over several years is thus possible within seconds.

With the DICOM imaging module of the StorM-Base lithotripsy database, image data can be archived locally or sent into a PACS system. Various DICOM modules are available to suit different requirements.

Patient information can be retrieved from the hospital information system (DICOM Worklist Management).

- Archive for patient and treatment data
- SQL database with query module for scientific studies
- Full DICOM connectivity





Central control of endoscopy devices

In addition to being a fully integrated workstation for extracorporeal lithotripsy and diagnostic X-ray, various endourological devices can be linked to the MODULITH® SLX-F2 by the Storz Communication Bus (SCB) to cover the entire spectrum of therapy options for successful stone fragmentation. With the help of a dedicated software solution, all endourological devices currently available from KARL STORZ can be controlled directly from the StorM-Touch user interface.

STORZ MEDICAL demonstrates once again how simple it is to keep everything under control. The user-friendly central touch-screen enables easy management of the complex interaction between separate system components.

- SCB interface
- Touch-screen control
- Realistic user interfaces (RUI)





Remote control

Remote control of the workstation from behind lead-glass windows provides perfect radiation protection of operators. However, this should not be achieved at the expense of ease of use and therapy monitoring. This is why the remote control option of the MODULITH® SLX-F2 enables 100 percent control of all movements and all therapy and X-ray functions.

The remote control panel is used exactly in the same way as the touchscreen located at the workstation. Thanks to the central control of all components via the StorM-Touch platform, the remote control panel requires only minimal space and ensures maximum user-friendliness even in space restricted environments. This solution guarantees excellent ease of use and perfect operator protection.

- Perfect radiation protection
- Remote StorM-Touch control





Service worldwide

Medical specialists all over the world benefit from our experience using systems developed by STORZ MEDICAL AG.

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

Training and education

Complex technology only provides optimum benefits if the user knows how to make most of it. Our training programmes are tailored to the interaction between doctors, systems and patients. We provide on-the-spot training making sure that our systems can be efficiently operated right from the very start.

You can also rely on our assistance and support in the development of new application methods. After all, it is your know-how and your ideas that pave the way for the further development of a leading technology.



HUMANE TECHNOLOGY – TECHNOLOGY FOR PEOPLE



STORZ MEDICAL

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