

Discover the future of urology today

LITHOSKOP

Answers for life.

SIEMENS

LITHOSKOP

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LITHOSKOP®, the multifunctional lithotripter by Siemens, is dedicated to exceed today's demands for efficiency, workflow optimization, and the highest possible degree of patient care. On account of its sophisticated design, the versatile system can perform much more than just lithotripsy. It covers a wide range of urological applications and can even be utilized for interventions and orthopedic* applications.

LITHOSKOP excels in treatment efficiency as well as in image quality, ergonomics, and user-friendliness. With its unique features, LITHOSKOP is the first system specifically designed to adapt to the patient's needs. It helps elevate you to the next level of lithotripsy and puts the future of urology at your fingertips today.



Your benefits at a glance

- The adaptable shockwave head for over- and undertable therapy makes patient repositioning a thing of the past.
- Pulso™, the proven and efficient shockwave technology, reduces retreatment rates to a minimum.
- Brilliant image quality in X-ray and ultrasound allows for effective patient care.
- Multifunctionality optimizes workflow in the urological department and facilitates high utilization rates.
- Sophisticated ergonomic design enables unrestricted patient access from all sides and optimum working conditions.

*Approved only in the EU and CIS (Commonwealth of Independent States).

“On account of the ingenious rotating therapy head, the table is ideal for covering stone treatment needs and makes therapy more patient friendly. Only with LITHOSKOP can stone patients be treated in the supine position. This makes the system perfect for facilitating ESWL treatment options all over the world.”

Prof. Dr. Christian Chaussy
Munich-Harlaching Municipal Hospital, Germany





LITHOSKOP

Trendsetting design

An engineering masterpiece

LITHOSKOP's most exciting feature is its unique design – consisting of two parallel C-arms. For the first time ever, the therapy head rotates around the patient and adapts to the patient's position. This makes patient repositioning unnecessary and at the same time enables easy patient access from all sides of the table. This significantly enhances the quality of care and at the same time streamlines the clinical workflow.

Flexible shockwave head allows over- and undertable positioning



Synchronous movements

Mounted on an isocentric C-arm, the shockwave head can be moved from the under-left or under-right position to the overtable position or vice versa. During fine positioning within a $\pm 10^\circ$ range, the X-ray C-arm for localization follows every movement of the therapy head synchronously. All these movements can be executed by pressing a single button.

One-time positioning

LITHOSKOP features a uniquely versatile therapy head that fully adapts to the clinical needs. Its two undertable positions are ideal for the therapy of kidney and upper urethral stones, while the overtable position is well suited for the treatment of urethral and bladder stones, orthopedic applications, and the treatment of the Peyronie's disease. Therefore, patient repositioning is no longer necessary – not even for auxiliary procedures. Your patient can remain in supine position. Moreover, even anesthesia stays at one end of the table.



The bottom line

Treating patients without repositioning them saves valuable time and labor, and improves your workflow. Hence, LITHOSKOP's innovative design helps you provide better patient care while, at the same time, increase efficiency.





“The new shockwave technology Pulso allows for fragmentation of even those ureter stones that normally had to be treated with invasive and more complex procedures because of hardness, size, or location.”

Prof. Dr. med. Joachim Thüroff
Mainz Johannes Gutenberg-University Hospital,
Urology Department, Germany

LITHOSKOP

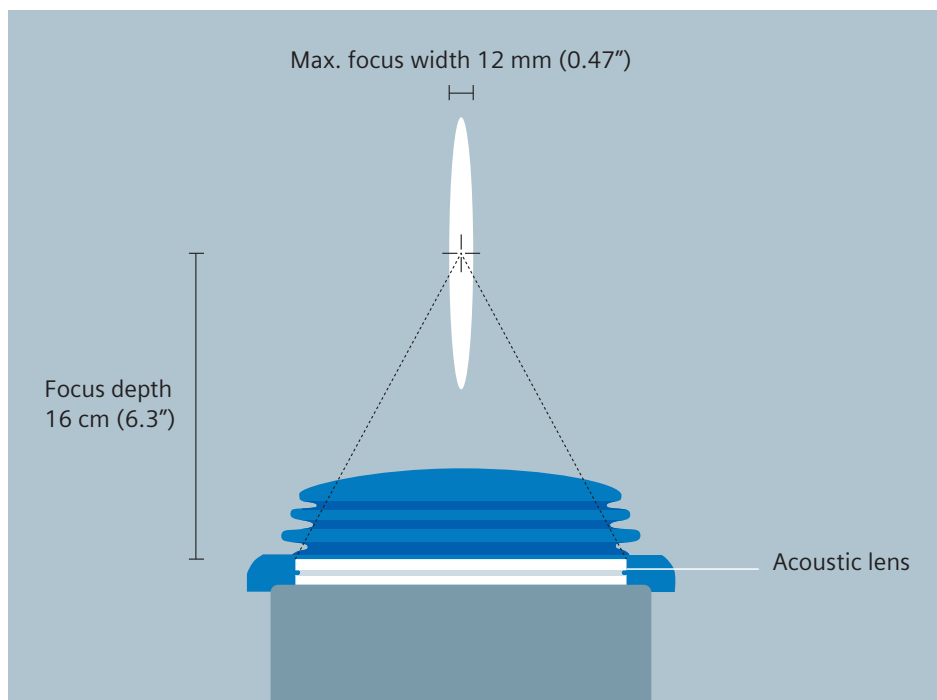
Innovative technology

Efficiency right from the start

Pulso™, Siemens' new electromagnetic shockwave technology, is designed specifically for LITHOSKOP. It provides high performance with low re-treatment rates, which should minimize side effects of the therapy.

Maximum impact, minimum side effects

Pulso is characterized by a high shockwave energy at a very large focus. This allows for maximum hit rates and optimal stone disintegration. At the same time side effects, complications, and pain are considerably reduced because energy density is kept at a minimum. As a result, patients can be treated without anesthesia, and in most cases, administration of analgesia proves sufficient.



A dedicated design of the shockwave head including the acoustic lens ensures an optimized energy distribution in the target volume.

Highly individual treatment

With its 38 power levels, LITHOSKOP enables efficient and individualized treatment of deep-seated stones as well as near-surface structures. This is being supported by intelligent features. Once the stone is localized and the shockwave positioned, final adjustments of $\pm 10^\circ$ are performed by LITHOSKOP's unique synchronized movement of the C-arm and the shock head.

While energy rates are individually adapted to the patient's needs, the accumulated value is displayed on the hand control throughout the examination.

Even more individuality is given with the extensive penetration depth of up to 16 cm (6.3 inches) – allowing efficient therapy of obese patients. For this patient group in particular, LITHOSKOP's key feature of treating patients in supine position is highly beneficial.

Designed to perform

LITHOSKOP adheres to the Siemens promise of excellent quality, durability, and reliability. Hence, in addition to its excellent disintegration capabilities, the therapy head features a lifetime of 1.5 million shocks, which is the longest available on the market today. It goes without saying that the innovative elements of LITHOSKOP, from the therapy head through the high-performance X-ray generator, the high-quality image intensifier, the digital 1K² imaging chain to the advanced ultrasound system, are ideally matched and come from a single source: Siemens.



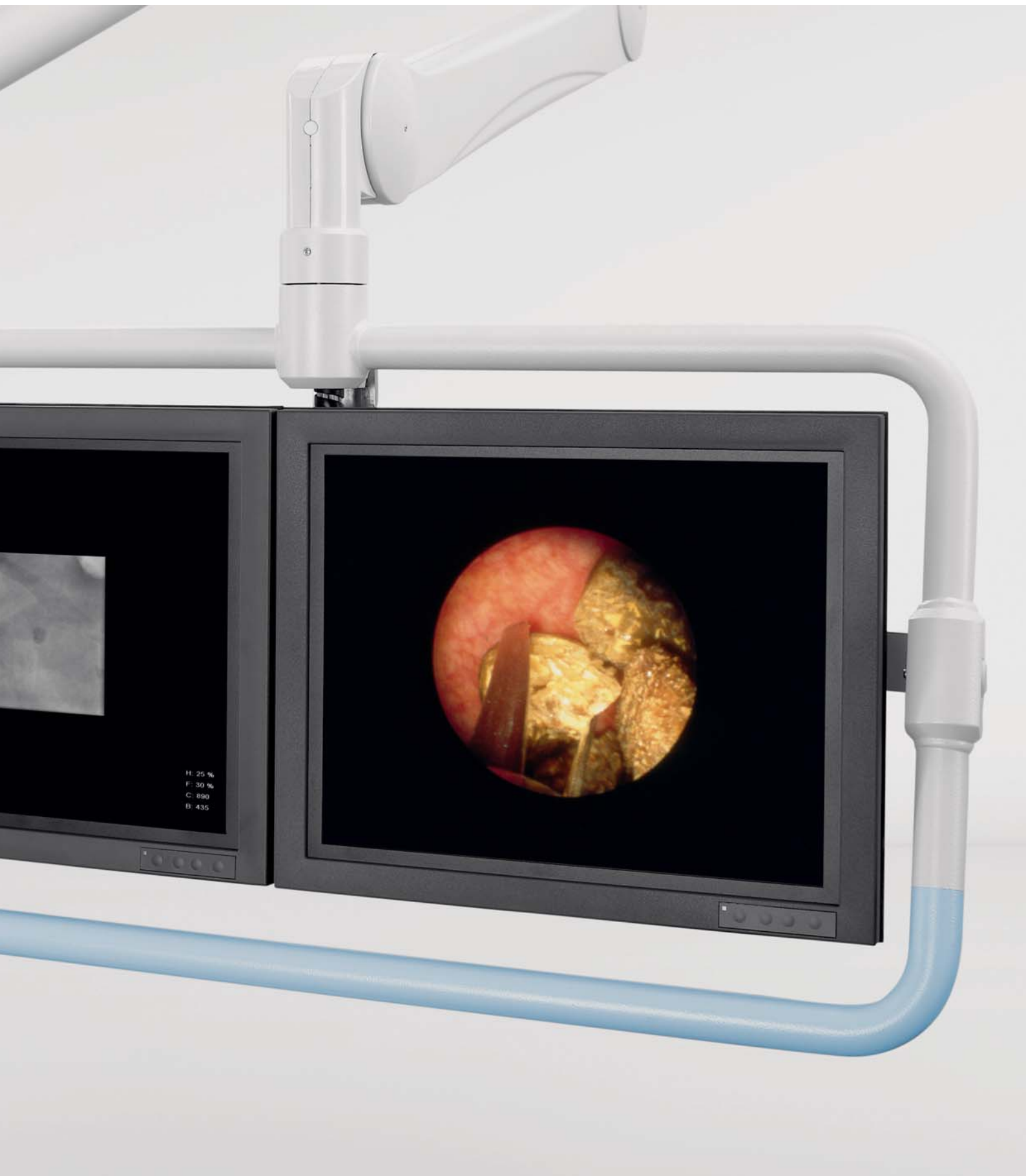
The bottom line

The highly efficient calculi disintegration performed by LITHOSKOP's therapy head leads to minimum retreatment rates. In most cases, anesthesia is not needed anymore. Therefore, LITHOSKOP paves the way for efficient patient care in Diagnostic Related Groups (DRG) management environments.

“As a result of the outstanding image quality, we need less X-ray images during diagnostics and shorter fluoro times during therapy. This leads to reduced radiation times for our patients.”

Prof. Dr. med. Joachim Thüroff
Mainz Johannes Gutenberg-University Hospital, Urology Department,
Germany





LITHOSKOP

Outstanding imaging

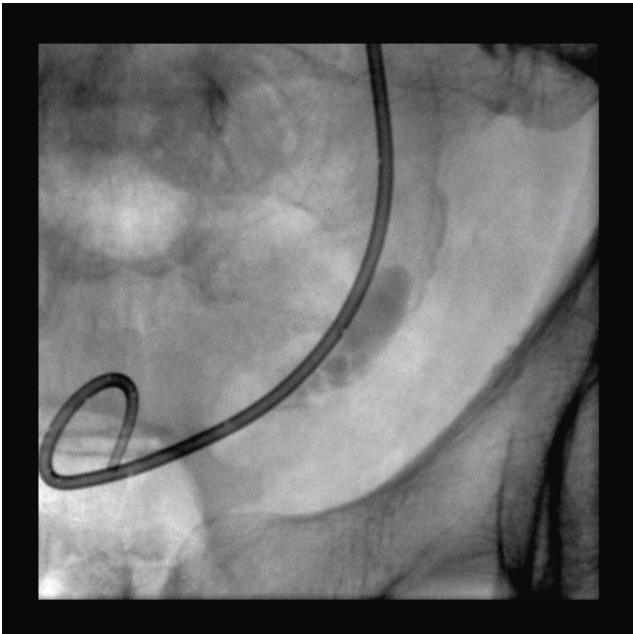
Digital X-ray from a leading provider

LITHOSKOP is equipped with a powerful X-ray tube, a state-of-the-art image intensifier, and a true 1K² digital imaging chain. All components are based on innovative Siemens technology renowned for quality and reliability. High-resolution, high-contrast flatscreen monitors display every detail – whether X-ray, ultrasound, or endoscopic images from integrated modules of other sources.

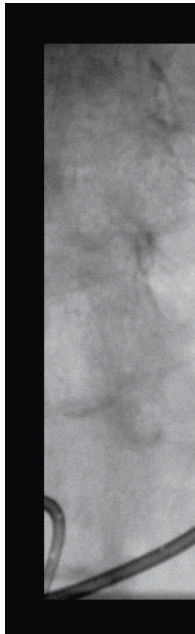
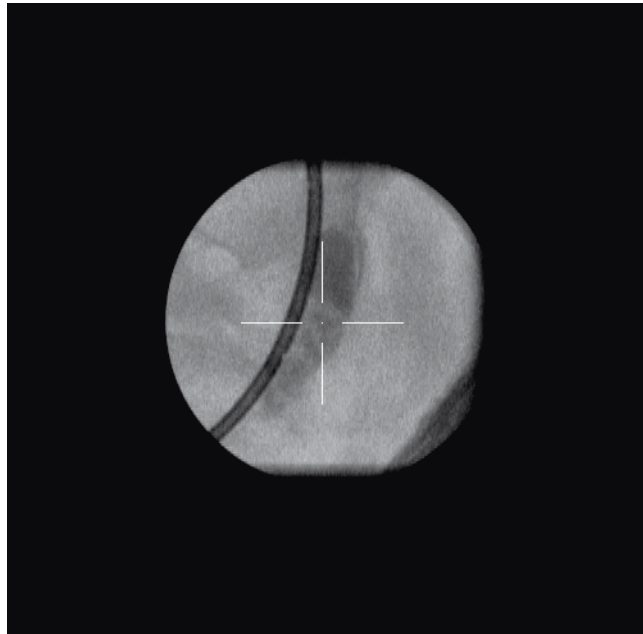
A plus in versatility

Its exceptional image quality makes LITHOSKOP a true multifunctional system. Thanks to high-resolution X-ray and fluoro images, a variety of diagnostics, auxiliary procedures before lithotripsy, and even endourologic interventions can be performed on LITHOSKOP. This can increase patient comfort and enhance workflow for physicians and medical staff.

DR image before the ESWL treatment



Inline fluoroscopy image during the ESWL treatment



Source: Regensburg University Hospital, Urology Department, Germany

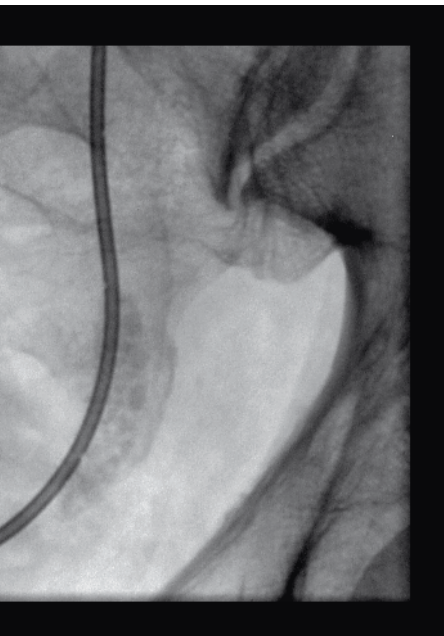
High power and maximum dose savings

The diagnostic value of an examination greatly depends on the accuracy of the X-ray and fluoro images. LITHOSKOP's high capacity X-ray system helps you see the relevant details at first pass. The need for additional exposures is reduced to a minimum, which significantly contributes to time and dose savings. Above all, pulsed fluoroscopy and CARE Vision allow for intelligent and effective dose reduction. Even better, most cases can be evaluated with fluoroscopy, which means a further reduction of exposure times.

Inline imaging makes the difference

With its versatile therapy head, LITHOSKOP makes patient repositioning a thing of the past. Even fine positioning becomes a snap: Inline imaging provides an imaging view that is identical to the path and angle the shockwaves will take. And thanks to the synchronous movements of the therapy head and X-ray C-arm, which are easily performed via the centralized manual control, you can localize calculi and bypass any obstruction effortlessly and accurately.

DR image after the ESWL treatment



LITHOSKOP

Outstanding imaging

Rounding out the picture with ultrasound

In addition to its excellent X-ray capacities, LITHOSKOP features a state-of-the-art ultrasound system equipped with comprehensive 2D and 3D imaging capabilities: The all-digital ACUSON X150 is ideal for use as inline ultrasound localization device with LITHOSKOP. It provides outstanding performance, ergonomics, and scalability – at an extraordinary value. Compact and ultra-portable, the ACUSON X150 system is designed to fit clinical needs today and evolves to meet future patient requirements and clinical applications.



Source: Regensburg University Hospital, Urology Department, Germany, 2008

Smart technologies for excellent imaging

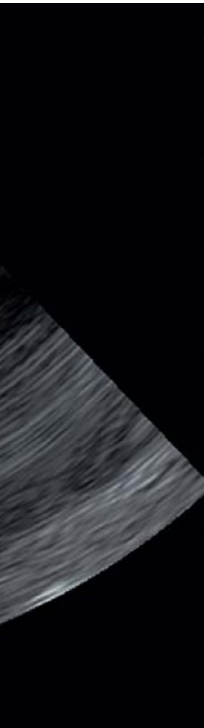
To enhance visualization, Tissue Harmonic Imaging technology improves tissue resolution and reduces noise as a standard feature of ACUSON X150 in combination with LITHOSKOP. Image quality is further enhanced as a result of the reduction of the influence of the water path coming from the coupling bellow in the inline ultrasound image.

The ACUSON X150 combines an intuitive yet powerful ergonomic user interface. Autofocus – a dedicated feature in combination with LITHOSKOP – enables automatic adaptation of the focus depth during the movement of the ultrasound probe inside the shock head.

A large 15 inch flat panel display mounted on an innovative articulating arm provides a wide range of motion.

To provide you with utmost flexibility, the transducer can be used with inline functionality or operated in the classic hand-held way. The handy “click-and-go” mechanism of the probe’s metallic fitting makes the insertion into the therapy head a snap.

This ultrasound system provides great flexibility and can be used independently or with other imaging modalities. An upgrade to color imaging or cardiac imaging functionality provides the benefit of multifunctional use.



The bottom line

The outstanding imaging quality of LITHOSKOP typically leads to a considerable reduction in imaging time. This means less radiation exposure for both patients and staff, and makes clinical workflow faster and more efficient.

LITHOSKOP

Comprehensive functionality

Ready for a multitude of applications

LITHOSKOP was designed in cooperation with leading physicians and hospitals. It was developed with practical application in mind and with the intention to meet even future urological demands. Hence, LITHOSKOP is an excellent system for virtually all applications and offers true multifunctionality. This means that you can perform almost all urological operations on a single system and without patient repositioning.

Lithotripsy

Optimized stone disintegration of virtually every type of stone is facilitated with the novel Pulso therapy head that offers high energy and a wide shockwave focus. Designed with 38 power levels and featuring an ergonomic design, it enables efficient and individualized treatment without repositioning the patient. This is even the case when changing from auxiliary measures to lithotripsy.



Endourology

The adjustable isocentric Trendelenburg tilt of $\pm 15^\circ$ provides for comfortable endourological interventions as well as for all necessary auxiliary procedures. LITHOSKOP's ergonomic table eliminates the need to reposition the patient, even when changing from endourology to lithotripsy. Endourological video sequences can be viewed directly on the monitors, and the integrated endoscopic shelf offers enough space for all equipment.

Percutaneous interventions and minimally invasive surgery

Access from all sides of the ergonomic table makes LITHOSKOP ideal for all percutaneous and surgical interventions with anesthesia – always remaining at the same end of the table. The ergonomic monitor arm is accessible to the surgeon's view from any position and the moveable monitor support allows the screens to be adjusted to any working position. This is a great convenience, which also increases efficiency.

Orthopedics and Peyronie's disease

LITHOSKOP's versatile therapy head positioning allows for efficient pain therapy, various orthopedic* applications, and the treatment of Peyronie's disease as well.



*Approved only in the EU and CIS.

LITHOSKOP

Pathbreaking operability

Ergonomic table construction

The patient can experience a high level of comfort thanks to the ergonomic table. With a mounting height of approximately 70 cm (27 inches), it offers easy access to your patient. With a maximum patient weight of 203 kg (450 lbs), LITHOSKOP is suitable for virtually all patients. A special mechanism allows you to remove and easily attach the two table cut-outs for lithotripsy.

Accurate positioning with AutoPos

After you have localized the stone on the monitor, the computer-aided 3D positioning tool AutoPos™ comes into action. It automatically moves the table, placing the stone into focus in order to direct the shockwaves with the highest precision – a comfortable approach that ensures high efficiency and accuracy.

Flexible operation

In addition to the system control in the control room, LITHOSKOP's centralized, user-friendly manual control permits easy adjustment of the table and of all system functions right at the patient. This unique control unit is equipped with a color display and enables the user to easily switch between lithotripsy and urological interventions.



Endoscopy made easy

LITHOSKOP features an endo-interface that enables connection with all common endoscopic equipment, and live sequences are directly transmitted to the right-hand LITHOSKOP monitor. Hence, the necessary information is available in the physician's field of view. In addition, the system comes with a dedicated endoscopy shelf to place the modules in a most handy manner.

Smooth data handling and network integration

Detailed digital reporting of the entire treatment substantially improves the clinical workflow. This is why LITHOSKOP comes with LithoReport™, a dedicated software solution that saves all patient, therapy and imaging data in a single system. Patient data is easily retrieved from the HIS or RIS, and all new information from stone size and location, through treatment details and up to shockwave values can be stored with a single mouse click. Thus, the data is readily available for retrieval when needed.



LITHOSKOP

Excellent service

A great system deserves great service

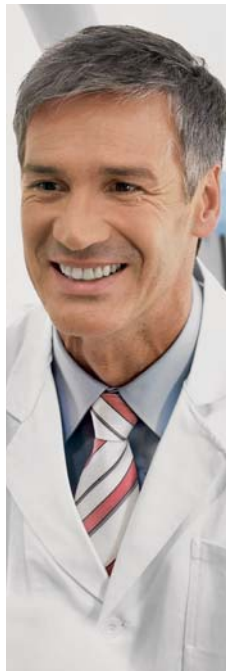
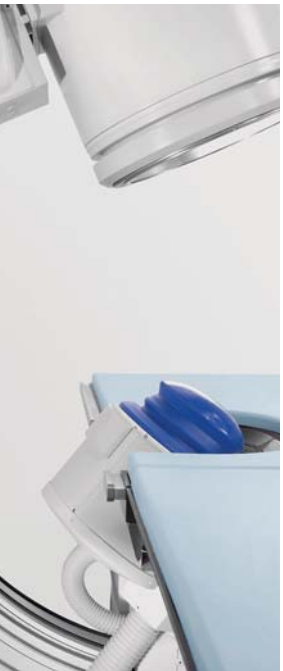
LITHOSKOP is an innovative milestone for the future of urology. With its impressive functionality, efficiency, innovative design, and outstanding comfort for patient and physician, it opens a new chapter in lithotripsy and urology. What is more, LITHOSKOP is made by one of the leading healthcare solution providers worldwide: Siemens. Dedicated to introducing cutting-edge solutions that assist healthcare providers throughout the world in delivering outstanding medical care, Siemens offers uncompromising service. Wherever your hospital or

your medical practice is located, you can rely on a worldwide service network with a local branch close to you. Quick and qualified service is always at your fingertips. Moreover, LITHOSKOP comes with comprehensive remote service options that allow for online servicing of your system and for proactive monitoring. Possible problems and deviations can be detected and settled before they even appear. This helps guarantee high uptime rates for the system, which is a great step towards higher overall efficiency.



“LITHOSKOP is a revolutionary system for all applications in urology. The flexible shockwave head adapts to all my clinical requirements. Patients can be treated in supine position. That’s a quantum leap for workflow optimization and cost efficacy – especially when considering the demands of the DRG management.”

Prof. Dr. med. Wolf Wieland
Regensburg University Hospital, Urology Department, Germany



The information in this document contains general descriptions of the technical options available and may not always apply in individual cases.

The required features should therefore be specified in each individual case at completion of contract. Siemens reserves the right to modify the design and specifications contained herein without prior notice. Please contact your local Siemens sales representative for the most current information.

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In the interest of complying with legal requirements concerning the environmental compatibility of our products (protection of natural resources, waste conservation), we recycle certain components. Using the same extensive quality assurance measures as for new components, we guarantee the quality of these recycled components.

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