Technology is the future

PiezoLith-3000
with F3 triple focus
RICHARD WOLF GmbH can look back on a successful medical history spanning more than a century. Endoscopy, the basis for all minimally invasive therapy, was always the speciality of the house of WOLF. With the development of the extracorporeal lithotriptor based on the principle of piezoelectric shock waves, the house of WOLF has made a further significant contribution to non-invasive stone therapy. This underlines our leading position as a high-tech manufacturer in piezoelectric shock wave technology. The company’s success is and always was based on the special relationship between engineering and medicine that developed due to close cooperation with doctors and friends of the house of WOLF.

The latest manufacturing technology and over 1,400 highly trained employees worldwide guarantee products and systems of exceptional quality ensuring maximum safety in their application. We were one of the first companies involved in medical engineering to be certified by an accredited test centre complying with EN ISO 9001. This provides our customers with the continued assurance of tested quality.
More than 20 years of piezo technology
More than 650 PiezoLiths worldwide

PiezoLith 3000 triple focus

New
- Newly developed triple focus. The optimum therapy for stones of all types because no stone is quite like any other.

PiezoLith 3000

2001
- Unique worldwide – the new piezoelectric shock wave source with two-layer technology. Maximum dynamic power range – smallest unit.

PiezoLith 2501

1995
- Interdisciplinary therapy centre with a modular design. Location units can be used separately for diagnosis.

PiezoLith 2500

1990
- The first extracorporeal lithotriptor with X-ray and ultrasound location in situ.

PiezoLith 2300

1986
- Worldwide the first ESWL device with inline ultrasound location without anaesthesia.

PiezoLith 2300

1986
Unique advantages of the PiezoLith 3000

- Worldwide, the only direct focusing lithotriptor (DFL)
- Unique: Selectable triple focus for optimum stone fragmentation
- Low, medium and high energy treatment
- Dual simultaneous real-time location (DSR): The ultimate in precision location
- Inline ultrasound location for fast and safe kidney stone location
- Outline X-ray location for low-radiation urinary stone location
- Treatment possible without anaesthesia or sedation
- Guaranteed 5 million shock waves or 2 years
- Optional: PACS/HIS network interfacing via DICOM
- Remote diagnostics for fast and cost-saving service support
Piezo technology – safe and fast, gentle and efficient

Piezo two-layer source
The shock wave source of the PiezoLith 3000 works with the two-layer technology that is unique worldwide. This advance in technology provides the PiezoLith 3000 not only with twice the power but also extends the working life by up to five times compared with electromagnetic shock wave transducers and up to 200 times compared with traditional electrohydraulic spark gap systems. The large-area energy coupling reduces the energy density on the surface of the skin and therefore considerably reduces pain.

Depending on the indications, a low, medium or high energy treatment can be selected. Three selectable focal zones, each with 20 levels of intensity and a pulse frequency of 1 to 4 Hz mean that the energy can be dosed optimally and therefore allow treatment without sedation or anaesthesia. This means that even children can be treated with great care and without any increased risk.

The depth of penetration of the focus is decided by the arching of the coupling membrane and can be adjusted continuously from 0 to 165 mm.

With the triple focus, the focusing of the shock waves can be adjusted to the ideal setting for the stone size and hardness as well as the pain sensitivity of the patient, because no stone and no patient is ever quite the same.

Focus F1 and F2 for small and for hard urinary stones.
Focus F2 and F3 for large and soft urinary stones.

Shock wave pressure
High dynamic range for low, medium and high energy treatments.

Wolf piezo technology
5 x longer working life compared with electromagnetic and 200 x longer working life compared with electrohydraulic shock wave systems.

Triple focus
Individual focus switchover, since no stone and no patient is ever quite the same.
Modular ESWL system

The modularity of the device concept allows individual system demands to be taken into account. This means that various location systems can be combined with the lithotriptor module to create an ergonomically optimised workplace. A stationary arrangement of the devices allows direct access to the system without having to readjust the components. On the other hand, since the equipment requires no installation work, it can easily be set up in another room.

To allow use at different treatment locations, the system is so flexible that it can be transported quickly from one place to another. Only very limited measures are necessary to put the unit into operation and as a result, it can also be used as a fully mobile, transportable lithotriptor.
X-ray and ultrasound location

DSR location:
- Two imaging systems
- Real-time display
- Simultaneous ultrasound and X-ray location
- Outline X-ray location ± 30° (AP/CPC)
- Inline ultrasound location 180° swivel
- Minimum radiation exposure

X-ray location
- ± 30° (AP/CPC) isocentric lateral swivel

Therapy position
110° can be set confocally for all stone indications

Ultrasound location
- Inline location adjustable along the axis and 180° isocentric swivel
Treatment tables

The WOLF treatment tables make it possible to work ergonomically with extremely comfortable positioning for the patient.

Regardless of the indications, patients can be treated in a comfortable and stable dorsal position. Standard stainless steel rails allow standard accessories to be attached.
Advantages of the WOLF treatment tables:
- Low height to allow patients to mount the table
- Optimum working height
- Simple operation
- Stainless steel standard rails
- Radiolucent in therapy area

Treatment table
- For ESWL/ESWT
- For patients up to 135 kg
- Easy to manoeuvre
- Mobile

Multi-function table “Comfort Stretcher”
- For ESWL/ESWT and endourology
- For patients up to 180 kg
- Trendelenburg up to ± 15°
- CFK radiolucent table top in the therapy areas
- Mobile

Endourology accessories “Comfort Stretcher”
- For auxiliary measures
- Irrigation bag holder with bag
- Leg holder with securing blocks
- Fourfold footswitch

Uro table
- Stainless steel sink
- Cantilever CFK table top
- Leg holder with securing blocks
- For patients up to 180 kg
X-ray location with the WOLF LITHOARM

With the patented WOLF LITHOARM, we have succeeded in adapting shock wave systems to X-ray units so that the mobility of the X-ray C arm and the modularity of the individual components of the lithotripsy system are retained. The outline location makes air bags unnecessary. The visible X-ray image is not restricted. Scattered radiation is reduced to a minimum. The radiation exposure for both physician and patient is as low as possible. This means an optimum image quality combined with the lowest radiation exposure.
- Large selection of top quality X-ray systems
- Outstanding picture quality
- Low radiation exposure
- X-ray units can be used as standalone systems

Ziehm
7000, 8000, Vista, Vision, Vario
- High-frequency generator
- 23 cm image intensifier
- 17" double monitor trolley possible

Philips
Libra, Endura, Pulsera
- Microprocessor-controlled X-ray generator
- 23 cm image intensifier
- Double monitor trolley with 17" monitors

GE OEC
Fluorostar
- Digital high-frequency generator
- 23 cm image intensifier
- Touchscreen interface
- 18" double monitor trolley possible

Technix
TC46
- High-frequency generator
- 23 cm image intensifier
- 17" LCD monitors
- 1 monitor possible on C arm
Inline ultrasound location

The ultrasound probe integrated in the shock wave source allows simple and precise localization of the area to be treated. The probe can be rotated and adjusted along its axis. Direct contact with axial adjustment of the ultrasound probe avoids multiple reflections and at the same time guarantees the highest resolution and best image quality.

The advantage of continuous inline ultrasound location during treatment is that obstacles such as ribs or the ala of the ilium can be avoided and kept clear of the shock wave area.
- Fully digital
- High resolution
- Special WOLF target cross software
- WOLF inline probe 3.5 MHz
- Ultrasound can be used as separate unit
- Large selection of optional probes

SONOACE X4
- Black and white
- 12" monitor
- USB port
- Inline probe can be switched from 2.0 to 6 MHz

ALOKA Prosound 6
- Black and white
- 12" monitor
- USB port
- Inline probe can be switched from 3.0 to 6 MHz

ALOKA 3500
- Colour doppler
- 15" colour monitor
- USB port
- Inline probe can be switched from 3.0 to 6 MHz
Multi-function diagnosis and therapy centre

To allow auxiliary measures, the multifunction table can be extended to form a comfortable endourological table by adding urological accessories such as leg holders, irrigation dishes, infusion holders or shoulder supports. Richard Wolf provides you with the system solution from the lithotripter to the endoscopic work centre. Minimally invasive techniques supplement modern extracorporeal stone therapy. The unique selection of endoscopes with extensive accessories in our range reflects our orientation to the needs of the customer.
Further indications

The PiezoLift 3000 allows treatment of conditions in orthopaedics, gastroenterology and ENT.

Orthopaedic indications
- Tendinosis calcarea
  Soft tissue treatment of the rotator cuff of the shoulder with and without calcification
- Epicondilitis humeri radialis and ulnaris
  Tennis elbow tendon attachment treatment
- Patellar tip syndrome
  Treatment of the patellar tendon attachment in the knee
- Plantar fasciitis with or without heel spurs
  Treatment of the plantar fascia in the foot

Gastroenterology
- Gall bladder stones
- Common bile duct stones
- Pancreas stones

HNO
- Salivary stones

Knee
Treatment of the patellar tendon attachment “patellar tip syndrome”

Elbow
Tennis and golf elbow “epicondylitis humeri radialis and ulnaris”

Shoulder
Soft tissue treatment of the rotator cuff of the shoulder with and without calcification “tendinosis calcarea”

Foot
Treatment of the Achilles tendon attachment in plantar fasciitis with heel spurs

ENT
Salivary stones
Image archiving and data management

Professional PACS system for archiving X-ray and ultrasound images in DICOM format. Whether as a standalone device or a networked component of the information system in the hospital: stored data is archived by patient and is immediately available.
All the essential advantages of the PiezoLith 3000 – at a glance!

- Worldwide, the only direct focusing lithotripter (DFL)
- Unique: Selectable triple focus for optimum stone fragmentation
- Low, medium and high energy treatment
- Dual simultaneous real-time location (DSR): The ultimate in precision location
- Inline ultrasound location for fast and safe kidney stone location
- Outline X-ray location for low-radiation urinary stone location
- Treatment possible without anaesthesia or sedation
- Short treatment times due to double power
- Minimized pain reaction thanks to optimised focal zones
- Guaranteed 5 million shock waves or 2 years
- Optional: PACS/HIS network interfacing via DICOM
- Remote diagnostics for fast and cost-saving service support
Technical data / installation

- Simple and fast installation
- Small space required
- No fixed water connection necessary
- Low energy consumption
- Low water requirements
- Low operating and maintenance costs
- Low noise level

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<tr>
<th>Parameter</th>
<th>Specification</th>
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<tr>
<td>Power supply/frequency</td>
<td>100 - 240 V, 50/60 Hz</td>
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<td>Power consumption</td>
<td>1000 VA</td>
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<td>Energy density</td>
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<td>Peak pressure</td>
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<td>Focal zones</td>
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<td>Ultrasound location</td>
<td>inline 180° (isocentric)</td>
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<td>X-ray location</td>
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<td>Water volume of system</td>
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<td>Space required</td>
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Service / financing

Service
- Room planning
- Installation
- Maintenance
- Repair
- Remote diagnostics
- Hotline +49 (0) 70 43-35-223

Training
- Medical application training
- Technical service training

Sales/financing
- Financing
- Leasing
- Lease-purchase

Fully trained colleagues in our worldwide sales network guarantee excellent customer service and offer thorough and informative consultation.