



- Datasheet -

Richard Wolf Piezolith 3000

Lithotripter



Dimensions and weight (control unit)

Dimensions (L x W x H)1200mm x 720 mm x 1000mm
Weight240kg

Treatment room

Recommended room size4x 5m

Electrical connections

Voltage requirements..... 100 – 127 VAC / 200 – 240 VAC
Max. current rating.....8 A / 4A
Max power consumption.....800 VA
Electrical fusing.....T8AH 250V

Classification (acc. to EN 60601-1)

Index of protection.....I
Application unit TypeB
Operating mode Continuous operation

Water supply

Integrated water circuit with automatic processing.
No water inflow and outflow required.

Pressure wave source (therapy head)

Type of generation..piezoelectric
Focusing method..... self focusing sphere
Garantueed number of shocks..... 5 million
Opening diameter..... 270 mm
Focal distance..... 165 mm
Penetration depth.....200mm
Opening angle.....74°
Orbital movement of therapy head ± 50°
Swiveling range from therapy to park position..... 180°
Trigger frequencies..... 0.5, 1, 1.5, 2, 3, 4, 6 Hz, ECG

Focus point

Focal points.....3
F1 pressure range.....16 – 126MPa
F1 typical volume..... Ø 3.7 x 30 mm
F2 pressure range14 – 123MPa
F2 typical volume..... Ø 4.8 x 32 mm
F3 pressure range.....8 – 63MPa
F3 typical volume..... Ø 8.7 x 63 mm

User interface

Control panel with softkey buttons
7 segment display

X-ray localization

Localization principle..... outline
manual angulation of c-arc..... ± 30
Multiple choice of c-arcs available

Ultrasound localization

Localization principle..... inline
Motorized vertical movement of transducer.....120mm
Motorized rotation of transducer..... ± 90
Multiple choice of ultrasound device available

Treatment table

Motorized axis.....5
Max. patient weight..... 220kg
Vertical travel range (z).....200mm
Longitudinal travel range (x).....120mm
Transversal travel range (y).....120mm



- Datasheet -

Richard Wolf treatment table

Multifunctional treatment table



System

- Multifunctional treatment table for Lithotripsy and endourology
- Max. patient weight 220kg
- Dimensions L x W x H 1800mm x 756mm x 745mm (without extensions)
- Isocentric Trendelenburg (around table middle) $\pm 15^\circ$
- Isoclinic Trendelenburg (in direction of table end) $\pm 12^\circ$
- Vertical movement range 200mm
- Longitudinal movement range 120mm
- Transversal movement range 120mm
- Softkey handheld control
- Controllable from Piezolith P3000+ (if connected)
- Two table extension of 300mm respectively

Options

- Footswitch
- Legholders
- Urocatcher holder
- Distal radiolucent cutouts (bilaterally)

System

- Multifunktionaler Behandlungstisch für Lithotripsie und Endourologie
- Max. Patientengewicht 220kg
- Maße L x B x H 1800mm x 756mm x 745mm (ohne Verlängerungen)
- Isozentrische Trendelenburg (Kippung um Tischmitte) $\pm 15^\circ$
- Isoklinische Trendelenburg (Kippung um Tischende) $\pm 12^\circ$
- Vertikaler Verfahrbereich 200mm
- Longitudinaler Verfahrbereich 120mm
- Transversale Verfahrbereich 120mm
- Handbedienfeld mit Folientastatur
- Steuerbar vom Piezolith P3000+ (falls verbunden)
- Zwei Tischverlängerung jeweils 300mm

Optionen

- Fusschalter
- Beinhalter
- Halter für Uro-Beutel
- Distale röntgentransparente Bereiche (beidseitig)

SAMSUNG MEDISON

HS40

Powered by CrystalLive™

Data Sheet

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SPECIFICATION SUMMARY

PHYSICAL SPECIFICATION

- Height: 1,354 ~ 1,620mm (with monitor)
- Width: 520 mm
- Depth: 730 mm
- Weight: 54 Kg (without accessories)
- Weight: Approx. 57 Kg (with Safe Working Load)

IMAGING MODES

- **2D-Mode**
- **M-Mode**
- Color M-Mode
- Anatomical Mode
- Color Doppler Mode
- **Pulsed Wave (PW) Spectral Doppler Mode**
- **Continuous Wave (CW) Doppler Mode**
- Tissue Doppler Imaging (TDI) Mode
- Tissue Doppler Wave (TDW) Mode
- Power Doppler (PD) Mode
- ElastoScan Mode
- 3D/4D/XI STIC imaging Mode
- Freehand 3D Mode
- Dual Mode
- Quad Mode
- Combined Mode
- Simultaneous Mode
- Zoom Mode
- S-Flow Mode

FOCUSING

- Transmit focusing, maximum of eight points (four points simultaneously selectable)
- Digital dynamic receive focusing (continuous)

PROBE CONNECTIONS

- 3 or 4 Probe Connectors (Selectable)
- CW Probe Connector (Optional)

MONITOR

- Main Monitor
 - Resolution: 1,920 x 1,080
 - **21.5 Inch LED Monitor**
- Touch Screen Monitor
 - Resolution: 1,280 x 800
 - 10.1 Inch LED Monitor

ECG

- USB Type (Type CF)

IMAGE STORAGE

- **Maximum 45,000 Frames for Cine memory**
- Maximum 14,000 Lines for Loop memory
- Image filing system

REAR PANEL INPUT/OUTPUT CONNECTIONS

- Audio Output Port (Right/Left)
- VGA monitor
- S-Video Output
- LAN
- USB Port
- HDMI Output

GENERAL SPECIFICATION

PHYSICAL SPECIFICATION

- Height: 1,354 ~ 1,620mm (with monitor)
- Width: 520 mm
- Depth: 730 mm
- Weight: 54 Kg (without accessories)
- Weight: Approx. 57 Kg (with Safe Working Load)

CONSOLE DESIGN

- **3 or 4 Active Probe Ports (Optional)**
- 4 Swivel Wheel Cart Based Type
- Articulated Monitor Arm
- Built-in Printer Storages
- Ergonomic Operation Panel
- Touch Screen
- Alpha-Numeric Keyboard(Optional)
- Trackball
- Probe Holder / Gel Holder
- Front Handle
- Integrated PC Module
- Integrated SSD
- Windows10 IoT Enterprise
- ODD (Optional)
- Gel Warmer (Optional)
- ECG (Optional)

MAIN MONITOR

- 21.5 Inches High Resolution LED Monitor
- Resolution: 1,920 x 1,080 (16:9)
- Number of Color: 16.7 M
- Brightness Adjustment
- Interactive Dynamic Software Menu

- Articulated Monitor Arm
 - Swivel: +/- 160 °
 - Tilt: + 10 ° / - 75 °
 - Lift: 180 mm

CONTROL PANEL

- Touch Screen
 - 10.1 Inches High Resolution LED Monitor
 - Resolution: 1,280 X 800
 - Capacitive Touch Type
 - Virtual Alpha Numeric KBD
- Alpha-Numeric KBD
- 4 User Keys
- Tri-Status backlit
- 5 Probe Holders
- Height Adjustment: 100 mm

PC

- Main Processor: Intel i3-8100H
- Main Memory: 8 GB
- **Built-in SSD: 512GB**

ELECTRICAL SPECIFICATIONS

- Frequency: 50/60 Hz
- Voltage: 100 ~ 240 VAC
- Power Consumption: Max.620 VA with Peripherals
- Heat Dissipation: 2,729.7 [BTU/h]
- System Noise: under 40dBA[MAX.]
- Built-in Equipotential Circuit
- Battery (Optional)
 - Scan time: 30 min. (Basic mode Live scan)
 - Wake up time from sleep mode: About 30 sec.
 - 14.4VDC, 6900mAh, 99.36Watt Lithium-ion Battery
 - Charging time: About 5 Hours

SYSTEM SPECIFICATION

APPLICATIONS

- Abdomen
- Cardiac
- Gynecology
- MSK
- Obstetrics
- Pediatric
- Small Parts
- **Urology**
- Vascular

PRESETS

- Abdomen
- Adult Echo
- Adnexa
- Aorta
- Aortic Arch
- Arterial
- Bladder
- Bowel
- Breast
- Carotid
- Deep
- Fetal Heart
- General
- Neo Head
- NT
- Ped Abd

- Ped Echo
- Ped Hip
- Prostate
- **Renal**
- Spine
- Superficial
- Thyroid
- Testicle
- TCD
- Uterus
- Venous
- 1st Trimester
- 2nd Trimester
- 3rd Trimester

OPERATION MODE

- **B-Mode (2D)**
- Color Doppler Mode (C)
- Pulse Wave Doppler (PWD)
- Continuous Wave Doppler(CWD): Steered / Static
- Power Doppler Mode (PD)
- S-Flow™ Mode
- M-Mode (M)
- Anatomical M Mode
- Single/Dual/Quad Mode
- Volume Mode
 - 3D / 4D / 3D XI / XI STIC™
- TDI/TDW
- ElastoScan Mode

DISPLAY MODE

- Dual Mode

- B+B, B+B/C, B+B/PD, B+B/S-Flow

- ElastoScan + ElastoScan

■ Dual Live Mode

- B+B, B+B/C, B+B/PD, B+B/S-Flow

- B+ElastoScan

■ Real-Time Triplex Mode (Simultaneous Mode)

- B+C+PW, B+PD+PW, B+S-Flow+PW, B+TDI+TDW

■ Duplex, Triplex Mode

- B+C, B+M, B+3D, B+4D, B+PW, B+PD, B+S-Flow, B+CW,

B+C+PW, B+C+CW, B+C+M, B+ElastoScan, B+TDI,

B+TDW

■ Quad Mode

- Combinations of B/B, B/C, B/PD and B/S-Flow,

ElastoScan

■ Zoom Mode

- Write Zoom / Read Zoom / Pen zoom/ Panning

■ Needle Mate+

■ Panoramic

■ Trapezoid

- Endo-Cavity Volume: V5-9, EV2-10A

SYSTEM STANDARD FEATURES

■ Hybrid Full Digital Beam-forming

■ Frequency Range: 2 ~ 16MHz

■ Displayed Imaging Depth (Probe dependent)

- Minimum Depth of Field: 2cm

- Maximum Depth of Field: 38cm

■ Number of Focal Points: 1 ~ 4

■ Transmission Focal Zone Position selection

- 1 ~ 8 Focal Points Selectable

(Probe and Application dependent)

■ Continuous Dynamic Receive Focus / Aperture

■ Multi-frequency / Wideband Technology

■ Frequency Compounding (FSI)

■ ClearVision

■ 256 Shades of Gray

■ System Internal Dynamic Range: 256

■ Maximum Frame Rate

- Over 2,000 fps (Hz)

■ Maximum Color Frame Rate

- Over 400 fps (Hz)

■ Image Reverse: Right/Left, Up/Down

■ Image Rotation: 90°, 180°, 270°

■ Pre Processing

■ Post Processing

■ Digital Calipers / Measurement

■ Cine Memory

- Capacity: 500 MB

- Cine loop: Max. 14,000 Lines

- Image storage: Max. 45,000 Frames / 60 Sec

■ QuickScan™

TRANSDUCER TYPES

■ Linear Array: LN5-12, L5-12/50, LA3-16AD, L4-7, LS6-15,

LA2-9S(S-Vue),

LA2-9R VET(endo linear for large animal)

■ Curved Array: C2-8, C2-5, CA2-8AD, CA2-6BM,

CA1-7AD(S-Vue)

■ Endo-Cavity: EVN4-9, ER4-9

■ Micro-Convex Array: CF4-9, CA4-10M

■ Phased Array: PN2-4, SP3-8, PA3-9B, PA1-5A

■ Pencil: DP2B, DP8B

■ Volume Probe (3D mechanical probe)

- Curved Volume: VN4-8

- EzCompare
- **Report Package**
- **Body Marker**
- System Boot up: Max. 180 Sec
- Probe Change: 2-3 Sec
- **User Programmable Preset : Over 30 Presets**
- **User Programmable Key: 4 Keys**
- **Touch Screen Menu Editable Function**
- SonoView™
- Data Backup / Restore
- Image Exporting and Importing
- PW Velocity Range: 0.1cm/s ~ 8.8m/s
- CW Velocity Range: 1cm/s ~ 19.3m/s
- Wireless Lan
- RIS Web Browser
- Q-Path/ Q-View
- Barcode/Card Reader
- XI STIC
- MultiVision
- Strain+
- SEE Stream (RU region only)
- RUS restricted mode (RU region only)
- DEU restricted mode (DE region only)
- DVD-RW
- ECG (AHA / IEC)
- Foot Switch
- Gel Warmer
- Printer Tray (Large / Small)
- 3P connector PSA
- 3P Connector PSA (with Pencil Probe Port)
- 4P Connector PSA
- 4P Connector PSA (with Pencil Probe Port)
- StressEcho
- 2D NT

SYSTEM OPTIONS

- 4D
- 3D XI™
- AutoIMT+
- Cardiac Measurement
- CW Function
- DICOM 3.0
- ElastoScan
- EzExam+
- NeedleMate+
- Panoramic+
- 5D NT
- 5D Follicle
- RealisticVue
- E-Strain
- BatteryAssist
- HQ-Vision
- 2D Follicle
- LaborAssist
- S-Detect for Breast
- CrystalVue
- Expanded Storage(1TB)
- Windows 10
- NerveTrack
- Mobile Export
- EzAssist™
- UterineAssist™

DISPLAY

DICOM

- DICOM 3.0
- DICOM Media
- DICOM Performed Procedure Step (PPS)
- DICOM Print
- DICOM Storage
- DICOM Storage Commitment (SC)
- DICOM Structured Reporting (SR)
- DICOM Verification
- DICOM Worklist
- Gray Scale Converting
- Multi Frame
- Single Frame
- 3D Volume Frame
- Transfer Mode
 - Send after acquisition
 - Send on end exam
 - Send manually
- VOI LUT Setup

IHE

- Scheduled Workflow (SWF)
- Patient Information Reconciliation (PIR)
- Portable Data for Imaging (PDI)
- Evidence Documents (ED)

PERIPHERAL INTERFACE

- Audio out L/R
- D-SUB output
- S-Video output
- HDMI output

■ USB 2.0 (6 ports)

- Ethernet 10/100/1000BASE-T
- Foot Switch: USB 2.0 (IPX 8)
- DVD Recorder: Sony DVO-1000MD
 - S-video, NTSC/PAL
 - Recording only

■ Printers

- Digital BW Video Printer: Sony UP-D897, Sony UP-D898MD, Sony UP-X898MD, Mitsubishi P95DW, Mitsubishi P95D
- Digital Color Video Printer: Sony UP-D25MD, Mitsubishi CP30DW
- USB Line Printer: Samsung CLP-620NDK, ML-2950

SCANNING PARAMETERS

2D MODE

- Angle Steering: 0°, +/-7°, +/- 12°
- Chroma Map: off, 1 ~ 11
- Cine Play: On, Off
- Cine Speed: 6, 12, 25, 50, 100, 150, 200, 300
- Depth: 2cm ~ 38cm (Probe dependent)
- Dual Live
- Dynamic Range: 30 ~ 256
- Flip: L/R, U/D
- Focus Number: 1 ~ 4
- Frequency Compounding
- Frequency: 3 ~ 5 steps (Probe Dependent)
 - Pen2, Pen1, Gen, Res1, Res2
- Gain: 0 ~ 100
- Gray Map: 1 ~ 12

- Field of view : 58 °
- Number of elements : 192
- Biopsy Guide : Available
- Application : Abdomen, MSK, OB, GYN, Pediatric, Vascular, Urology
- Safety Class: BF

C2-8

- Band Width: 2 ~ 8 MHz
- Radius of curvature : 51.07 mm
- Field of view : 68.176 °
- Number of elements : 128
- Biopsy Guide : Available
- Application : Abdomen, MSK, OB, GYN, Pediatric, Vascular, Urology
- Safety Class: BF

C2-5

- Band Width: 2 ~ 5 MHz
- Radius of curvature : 39.64 mm
- Field of view : 75 °
- Number of elements : 128
- Biopsy Guide : Available
- Application : Abdomen, MSK, OB, GYN, Pediatric, Vascular, Urology
- Safety Class: BF

CF4-9

- Center frequency : 5.65MHz
- Band Width: 4 ~ 9 MHz
- Radius of curvature : 14 mm

- Field of view : 92 °
- Number of elements : 128
- Biopsy Guide : Not available
- Application : Abdomen, MSK, OB, GYN, Pediatric, Vascular, Urology
- Safety Class: BF

CA4-10M

- Center frequency :5.65MHz
- Band Width: 4 ~ 10 MHz
- Radius of curvature : 14 mm
- Field of view : 92 °
- Number of elements : 128
- Biopsy Guide : Not available
- Application : Abdomen, MSK, OB, GYN, Pediatric, Vascular, Urology
- Safety Class: BF

CA2-6BM

- Center frequency : 3.5MHz
- Band Width: 2 ~ 6 MHz
- Radius of curvature : 20 mm
- Field of view : 86.08 °
- Number of elements : 144
- Biopsy Guide : Not available
- Application : Abdomen
- Safety Class: BF
-

CA1-7AD (S-Vue)

- Curved Array probe
- Frequency(Center/Range) : 3.2MHz/1~7MHz
- Radius of curvature : 45.69mm
- Field of view : 70°
- Number of elements : 160



- Datasheet -

Technix TCA6R-EYES

X-ray C-arc for Lithotripter



GENERATOR

- 5 kW high frequency generator

X-RAY TUBE

- rotating anode: 0,3mm / 0,6mm

Image intensifier (23 cm)

- magnification modes: 21 – 15 - 10 cm
- Matrix: 1024 x 1024 pixel

CONTINUOUS FLUOROSCOPY

- kVp range: 40 – 120 kV
- mA range: 0,25 - 15 mA

PULSED FLUOROSCOPY

- kVp range: 40 – 120 kV
- mA range: 0,25 - 15 mA
- Rates: 12/sec, 6/sec, 3/sec, 1/sec

DIGITAL RADIOGRAPHY (snapshot)

- kVp range: 40 – 120 kV
- mA range: 2,5- 30 mA

CONTROL PANEL

- Membrane keyboard with touch-screen 5.7" LCD
- Keyboard can be rotated of $\pm 60^\circ$

IMAGE MEMORY

- Up to 55,000 images storage capacity

VIEWING STATION

- 24" split screen monitor on trolley
- 1920 x 1200 pixel

PROCESSING

- Noise reduction through recursive filter and motion detection
- Edge enhancement
- Grey scale inversion
- Horizontal image flip
- Digital image rotation
- Contrast/brightness adjustments (window/level)
- LIH (Last Image Hold)
- Patient data entry
- electronic zoom
- Virtual collimator
- Angles and distances measurements
- Annotations

DICOM (optional)

- Store, Print, Worklist, MPPS, Media Export, Storage Commitment, Query/Retrieve, Structured Dose Report

ADDITIONAL FEATURES FOR USAGE WITH P3000 PLUS

- Motorized angulation $\pm 30^\circ$ (controlled from Lithotripter)
- X-ray image import
- Footswitch extension for remote solutions

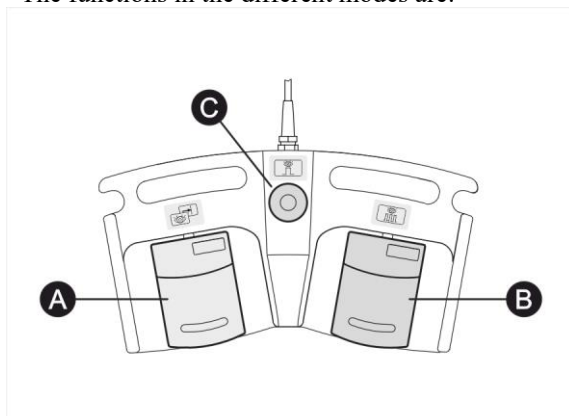
For technical details, see the brochure of the manufacturer.

Subject to technical changes.

Technische Änderungen vorbehalten.

4.8 Fluoroscopy control footswitch

The fluoroscopy control footswitch consists of a double-step pedal and two single-step ones. The functions in the different modes are:



A - Left pedal (two steps):

Fluoroscopy Mode:

1° step: **fluoroscopy control**.

2° step: **image storage**; in continuous fluoroscopy the current image is stored.

B - Right pedal (one step):

The working mode changes according to the installed memory

C - Third pedal (one step):

Fluoroscopy mode:

"snapshot" control, high-contrast exposure with reduced background noise.

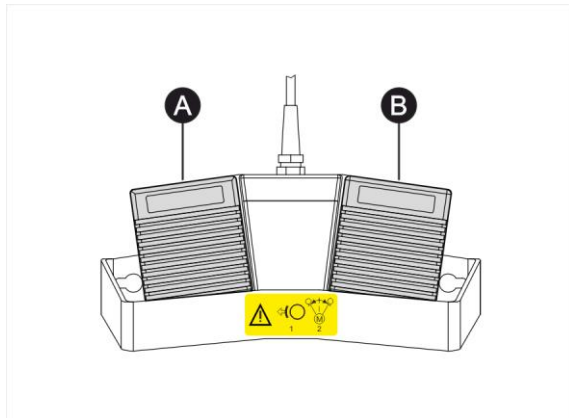
4.9 Footswitch for C-arm rotation $\pm 30^\circ$

Only for motorized version of the "C" arm rotation.



Before activating the footswitch for C-arm rotation $\pm 30^\circ$, ensure that the arm rotation brake around the horizontal axis has been disabled.

The footswitch for the C-arm rotation consists in two pedals at single step. The functions are:



A - Left pedal:

Pedal for left rotation

B - Right pedal:

Pedal for right rotation



The rotation movement stops automatically in vertical position. In order to go on with the movement, release and press again the pedal.

7.3 Total equipment filtration

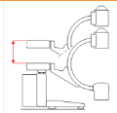
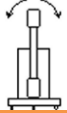
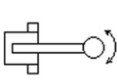
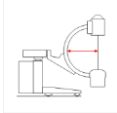
Description	Data	
Monobloc	1,4 mmAl	
Additional permanent filter	1 mmAl	
Collimator	0 mmAl	
Monobloc cover	0,1 mmAl	
Total filtration of monobloc group		2,5 mm Al
Additional permanent DAPMeter filtration	0,3 mmAl	
Total filtration		2,8 mmAl

For the HRP memories, additional permanent filter of 0,05 mm Cu.

7.4 Mechanical data

7.4.1 C-arm stand 9"

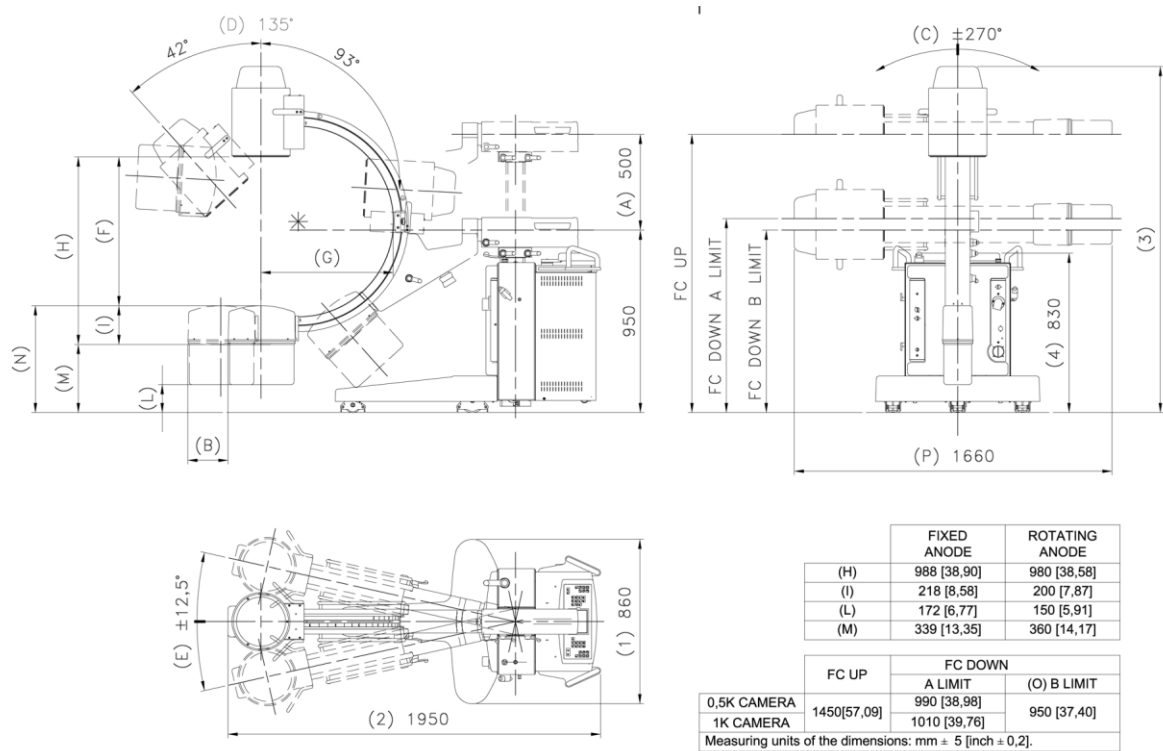
Dimensions in transport position	Data
Width	(1) 860 mm (33,9 in)
Depth	(2) 1950 mm (76,8 in)
Height	(3) 1810 mm (7,3 in) (camera 1k) 1780 mm (70,1 in) (camera 0,5k)
Control console height	(4) 830 mm (32.7 in)

Description	Data
Vertical run 	(A) Total run 500 mm (19,69 in), motorized in 60 sec
Horizontal run 	(B) Manual, 210 mm (8,27 in)
Arm rotation around the horizontal axis 	(C) Manual rotation, $\pm 270^\circ$, motorized rotation $\pm 30^\circ$ (optional)
Orbital rotation 	(D) Manual, $135^\circ (+93^\circ \div -42^\circ)$
Arm group overview 	(E) Manual, $\pm 12,5^\circ$
Useful space 	(F) 770 mm (30,31 in)
Arm depth 	(G) 690 mm (27,17 in)

Description	Fixed Anode Data	Rotating Anode Data
S.I.D.	(H) 988 mm (38,90 in)	980 mm (38,6 in)
Focus-skin distance	(I) 218 mm (8,58 in)	200 mm (7,9 in)
Min. distance from floor	(L) 172 mm (6,77 in)	150 mm (5,9 in)
Floor-focus distance	(M) 339 mm (13,35 in)	360 mm (14,2 in)
Floor-skin distance	(N) 557 mm (21,93 in)	560 mm (22,0 in)
Min. II center-floor distance in oblique projection	(O) 954 mm (37,56 in)	950 mm (37,4 in)
Width in oblique projection	(P) 1603 mm (63,11 in)	1660 mm (65,4 in)

Description	Data
Equipment movement	Rear drive wheels with manual control from the operator, front castor. Manual parking brake.
Rear wheels diameter	125 x 40 mm (4,92 x 1,57 in)
Front wheels diameter	80 x 30 mm (3,15 x 1,18 in)
Protection against the cables squeezing	Cable pusher on all wheels of the C-arm stand.

Description	Fixed Anode Version	Rotating Anode Version
Weight	340 kg (749,57 lb)	360 Kg (793,66 lb)



Overall dimensions 9"

All dimensions are in mm. Linear tolerances ±5 mm, angular ±1°

7.13.2 RTP Memory

Features	Data
Images acquirement	CCD Digital camera 1024x1024 up to 12 bit (GigE). Pulsed and continuous fluoroscopy. "cine" sequence up to 25 fps. Digital Snapshot.
Images storage	1024 x 1024 x 12 bit
Images storage on H.D	about 110.000 (expandable)
Video output	2 x DVI 1280x1024
Programmed acquirement sequences	Yes, 1, 3, 6, 12, 25 fps
Pulsed fluoroscopy	Yes
Electronic rotation at 1° steps	Yes
Image horizontal and vertical inversion	Yes
Inversione della scala dei grigi	Yes
Grey scale inversion	Yes
Recursive filter	Yes (1, 2, 4, 8, 16)
Smart Filter con "Motion Detection"	Yes
Edge enhancement Smooth, Normal, Sharp in post processing	Yes
Cineloop review	Yes
Virtual shutter	Yes
Electronic collimator (rectangular and circular)	Yes
Max. opacity fluoroscopy acquirement	Yes
Subtraction in real time with manual/automatic mask	Yes
Shifting pixels	Yes
Land Marking	Yes
Electronic zoom factor from 1,2 to 3	Yes
Electronic lens factor from 1,2 to 3	Yes
Land marking	Yes
Overview	Yes 4, 9, 16 images
Text editing	Yes
Dose report	Yes
Patient archive	Yes
Length measures	Yes
Length calibration on reference object measure	Yes
Angles measures	Yes
Stenosis measures	Yes
Interface for network Ethernet TCP/IP	Yes
Adapter of Wireless network 802.11 a/g/n	Optional
Infrared remote control	Yes
Data transmission towards PACS	Yes (DICOM 3.0)
Dicom option	Dicom VERIFY (SCU/SCP), Dicom STORAGE (SCU), Dicom WORK LIST (SCU), Dicom PRINT (SCU), Dicom CDR/DVD, Dicom QUERY/RETRIEVE (SCU), Dicom MPPS (CPU), Dicom STORAGE COMMITMENT (SCU)

7.15 Optional: laser targeting device

Device for dose reduction (only on I.I. tube)

Description	Data
Wave Length	645 ±10 nm
Optical power of the laser diode	< 1 mW
Safety class 60825-1:2007	Class 2

7.16 Optional: DAP Meter

Description	Data
Model	DIAMENTOR CM-T
Measurement category	Dose area product
Measuring unit	μGy m ²
Digital resolution	0.01 μGy m ²
Measurement category	Dose area product rate
Measuring unit	μGy m ² /s
Digital resolution	0.01 μGy m ² /s
Dose rate range	0.10 to 400 μGy/sec
Dose area product range rate	0.01 to 4500 μGy m ² /s
Tube voltage	40 to 120 kV
Chamber:	Type TA34037
Dimension of chamber field	Ø 7.2 cm
Max energy dependence	± 8 % according to IEC60580, Table 6
Min. inherent filtration	< 0.3 mmAl / 70 kV

PiezoLith	PiezoLith (with articulated arm)	Voltage V ~	Frequency Hz	Power consumption VA	Current rating A	Fuse A
3000501	3000511	100 - 127 200 - 240	50 / 60	max. 800	max. 8 - 6.3 max. 4 - 3.3	T 8 AH 250 V

Electrical safety to	EN/IEC 60601-1
Electromagnetic compatibility (EMC) to	EN / IEC 60601-1-2
Medical devices directive 93/42/EEC	Class II b
Protection class to EN / IEC 60601-1 ; (UL 2601-1 / CSA C22.2 No.601.1 - for USA)	I
Protection against electric shock	TYPE B APPLIED PART
Degree of protection against the ingress of liquids	IP 20 (Not protected)
Operating mode	Continuous
Noise level	37 to 82 dB(A)
Degree of protection in the presence of flammable mixtures	This device is not protected against explosions (Do not operate this device in ignitable atmosphere)
Weight of control unit (300050x)	approx. 175 kg (385 lbs)
Weight of control unit (300051x)	approx. 240 kg (530 lbs)
Dimensions of control unit L x W x H (300050x)	approx. 920 mm x 720 mm x 1000 mm
Dimensions of control unit L x W x H (300051x)	approx. 1200 mm x 720 mm x 1000 mm
System water volume	9 liters
Required floor space with ultrasound	approx. 9 m ²
Localization principle	Dual Simultaneous Realtime (DSR)
Required floorspace with ultrasound and X-ray	approx. 12 m ²
Control unit interfaces	USB 2.0 LAN RJ-45

LithoMot

X-ray localization	Outline
Tilting range of therapy source	± 50° confocal
Range of rotation of X-ray localization	± 30° lateral isocentric
Weight (without therapy source)	45 kg (98 lbs)
Dimensions (L x W x H)	1100 mm x 400 mm x 700 mm

Ultrasound Probe

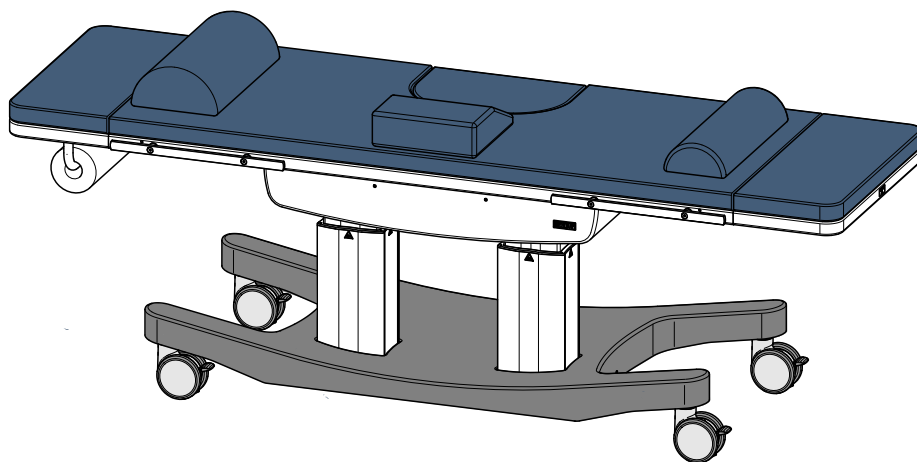
Ultrasound localization	Inline coaxial
Range of rotation	± 90° isocentric
Vertical travel	120 mm axial

Therapy Source

Model / designation	3000591 / FB27-74°
Shock wave source	Piezo-electric self-focusing spherical cup Double-layer technology (DLT)
Aperture angle	74°
Position of target mark	Center of the -6dB zone plus tolerances (see below)
Tolerance between geometrical focus (indicated by iron sphere (ball) of the target cross test device) and target localization (indicated by the target cross on the monitor of the localization system used)	Ultrasound target cross ≤ 1 mm X-ray target cross ≤ 2 mm
Distance between focus and shock wave ring	152.0 mm
Distance between focus and shock wave transducer	166.5 mm
Penetration depth	0 to 165 mm
Weight (without water)	15 kg (33 lbs)
Weight (with water)	23 kg (50 lbs)
Dimensions (diameter x height)	285 mm x 300 mm
Length of connection hose	3.0 m

Focus range	F1			F2			F3		
Intensity setting	min.	med.	max.	min.	med.	max.	min.	med.	max.
Positive peak acoustic pressure (p ₊) in MPa	16	46	126	14	34	123	8	18	63
Negative peak acoustic pressure (p ₋) in MPa	-11	-17	-29	-10	-16	-26	-9	-15	-25
Derived positive pulse-intensity integral (PII ₊) in mJ/mm ²	0.1	0.4	2.1	0.1	0.4	2.0	0.04	0.2	0.7
Derived positive focal acoustic pulse energy (E ⁺ _{-6dB}) in mJ	0.85	1.2	7.3	1.2	2.7	5.6	1.2	3.0	1.9
Rise time t _r (ns)	847	360	11	685	494	11	2127	1268	657
Pressure pulse duration (t _{FWHM}) in ns	838	417	266	982	629	251	1518	1241	369
Derived acoustic pulse energy (E _{5MPa}) in mJ	8	45	239	7	45	229	4	28	135
Derived acoustic pulse energy (E _{12mm}) in mJ	11	35	123	10	34	120	7	22	79
Focal zone: f _{x/y} (-6dB) x f _z (-6dB) in mm	5.7 x 39	3.7 x 30	2.8 x 37	6.4 x 39	4.8 x 32	3.0 x 29	12 x 65	8.7 x 63	3.9 x 43
Volume of focal zone V _f (-6dB) in mm ³	656	213	151	845	382	139	5165	2492	340
Tolerance between acoustic focus and geometric focus (z _a) in mm	0	-1	2	1	0	2	-1	7	7

Instructions for use



ESWL treatment table
3000950

11.3.1 X-ray transparent area

Insert for therapy cutout The insertable TS CFRP plate (carbon-fiber-reinforced polymer) is designed to be X-ray transparent for lithotripsy (shaded area).

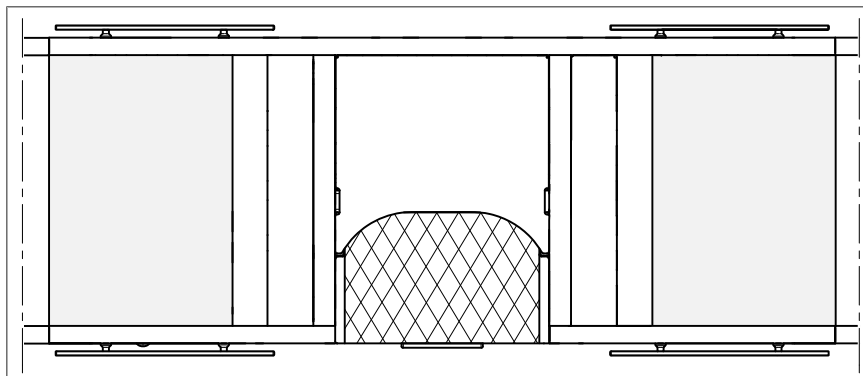


Fig. 10

Inserts for auxiliary measures (optional) The two CFRP plates (carbon-fiber-reinforced polymer) 640051213 can also be used to design the gray-marked areas for endourology with higher X-ray transparency.

For this purpose, the plates used as standard are replaced with the CFRP plates.

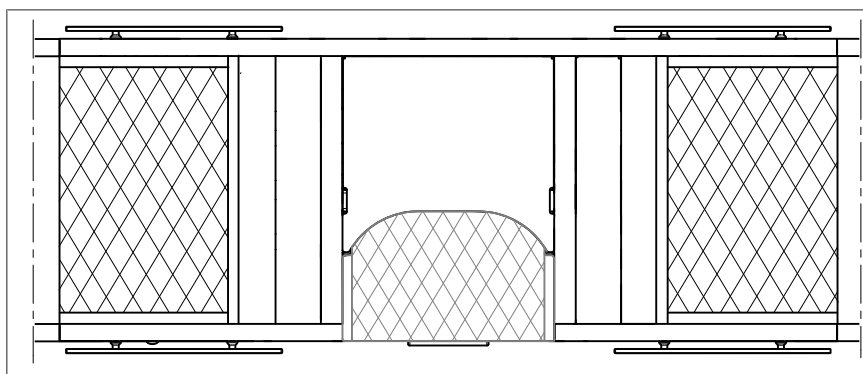


Fig. 11

13.2 Technical Data

ESWL treatment table	Voltage V ~	Frequency Hz	Power consumption VA	Current rating A	Fuse A
3000950	100 - 240	50/60	300	3.0 – 1.25	T 4 AH 250 V

Electromagnetic compatibility EMC to	EN / IEC 60601-1-2
Medical Devices Directive 93/42/EEC (MDD)	Class I
Protection against electric shock	Type B applied part
Protection class according to EN / IEC 60601-1; (ANSI/AAMI ES60601-1 / CSA C22.2 No.601.1 – for USA)	I
Degree of protection against the ingress of liquids (DIN EN/IEC 60529)	IP X2 (Protection against water falling at an angle (dripping water), 15° compared to normal operating position)
Operating mode (duty cycle)	10% (2 min on / 18 min off)
Degree of protection in the presence of flammable mixtures	This device is not protected against explosions (do not operate this device in explosive atmospheres)
Max. noise level	59 dB(A)
Weight (without optional accessories)	182 kg (399.2 lbs)
Dimensions L x W x H (without add-on parts and padding)	1800 mm x 756 mm x 745 mm
Maximum patient weight	220 kg
Maximum table extension load	80 kg
Height adjustment (vertical) travel (z)	200 mm
Longitudinal travel (x)	120 mm
Transversal travel (y)	120 mm
Isocentric tilt (about table center)	±15°
Isoclinic tilt (about table end)	±12°

13.3 Interfaces

Not applicable.

13.4 Performance characteristics

- Temporary positioning and motorized positioning of patients.
- The product does not have essential performance characteristics to IEC 60601-1