



A New Generation of Pressure-Controlled PCNL Systems



NAGELE Modular Minimally Invasive PCNL System



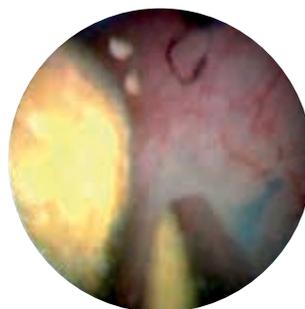
“In an era where computed tomography is used to confirm stone-free status, the trend towards endourological stone treatment has become more firmly established. However, the initial euphoria surrounding the introduction of the third generation of flexible uretero-renoscopes has subsided due to limitations of use in routine urological practice. Percutaneous nephrolitholapaxy has proved superior in terms of stone-free rates with regard to the treatment of larger stone burdens and particularly in cases of unfavorable kidney geometry. It also presents an alternative for the treatment of small stones, particularly if the complication rate for the minimally invasive procedure is low but high for primary freedom from calculi.

In recent years, the concept of minimally invasive percutaneous stone treatment (MIP) has become an accepted standard in miniaturized percutaneous surgery. This has been corroborated in numerous publications.

The key features of our system – single step dilation; automatic pressure control; stone extraction in the irrigation flow (= vacuum cleaner effect) and the possibility to close the access tract using a gelatin-thrombin matrix in conjunction with ultrasound-guided puncture of the kidney – allow atraumatic and effective stone treatment with fewer complications.

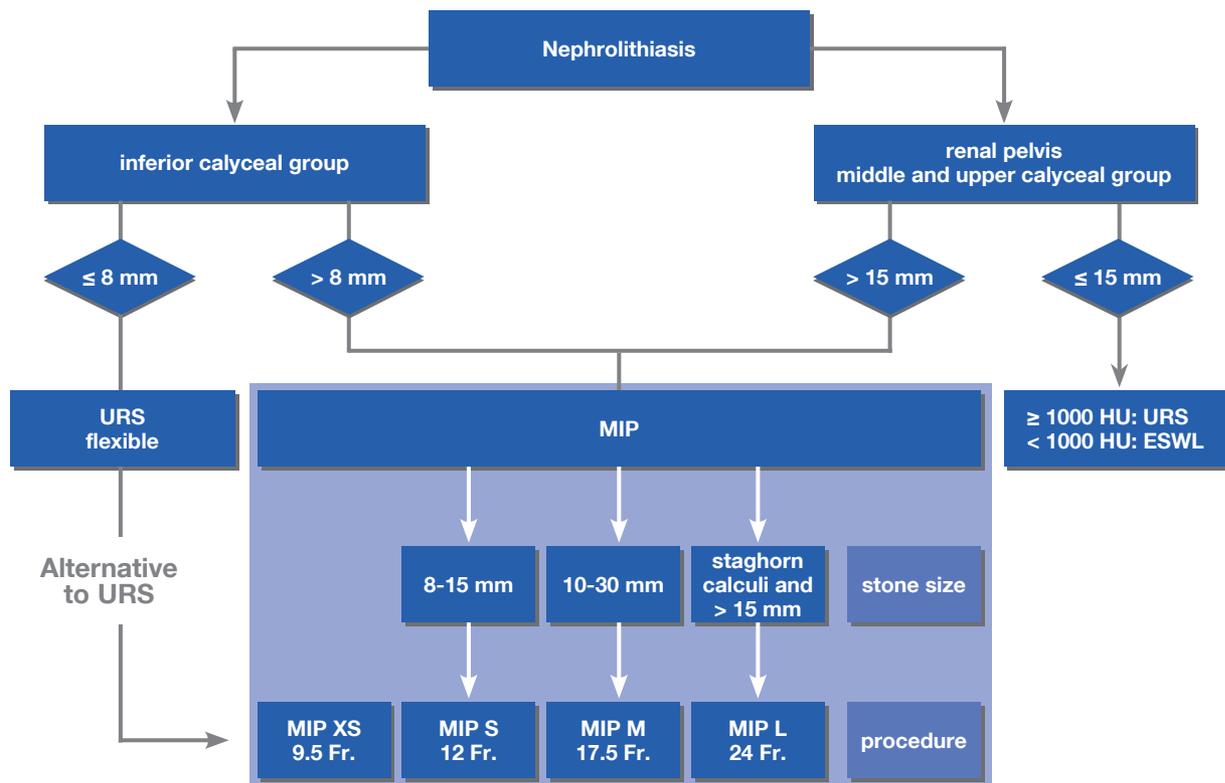
The successful outcome of the first-generation MIP system created the incentive to meet future challenges in endourology and to switch to a new generation.

The second generation of the modular MIP system features 4 instrument sizes to match various indications. This enables urologists to adapt the benefits of minimally invasive PCNL to individual stone sizes and choose the best possible lithotripsy option for each size.

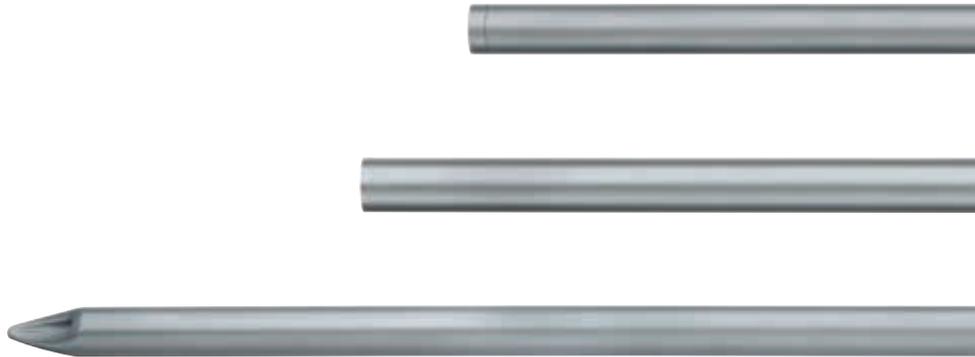




NAGELE stone concept



Modular Minimally Invasive PCNL System



Contrary to the current trend of using superlatives (ultramini, micro, nano) to denote new PCNL systems, we decided to classify our nephroscopes according to various stone sizes: XS, S, M (previous size) and L. All instrument components associated with a specific nephroscope size bear a clearly visible marking to prevent incorrect use of automatic pressure control and the vacuum cleaner effect so that danger to patients is minimized. The most important innovations are: Enhanced hydrodynamics relative to each nephroscope size; modification of the sheaths via a larger working length for the treatment of adipose patients or patients in the supine position; and the field and angle of view relative to the nephroscope size.

In contrast to larger nephroscopes, active irrigation is necessary (mandatory when using the XS system but optional for the S-system). Calculi dust following laser fragmentation is suctioned with the irrigation liquid through a ureter catheter. This represents a revolutionary approach in percutaneous stone removal.

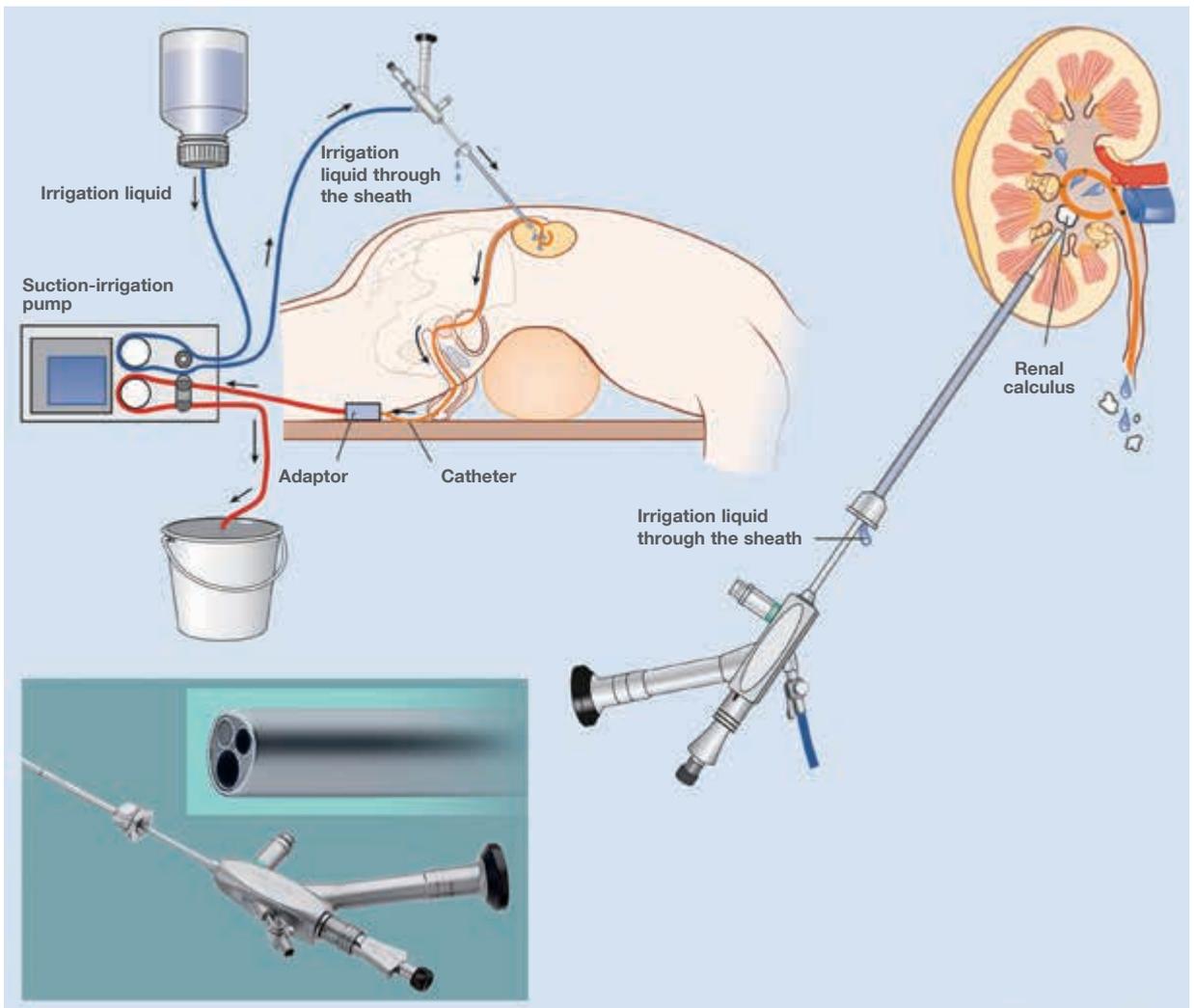
The series of minimally invasive percutaneous instruments now available makes it possible to expand the spectrum of percutaneous stone treatment. This fills the treatment gap for narrow regions that were previously inaccessible for the flexible uretero-renoscope or for impassable calculi following ESWL treatment.

In the case of multiple concretions in several calices or if endoscopy is required to control stone elimination, the L system enables the use of flexible nephroscopes.”

Prof. Dr. med. U. NAGELE,
Landeskrankenhaus,
Hall in Tirol, Austria



Systematic presentation MIP XS



The New Family of MIP Systems and Innovative Features



Versatility



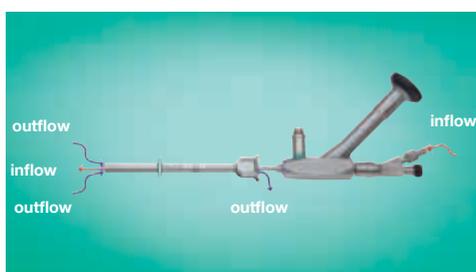
The right instrument is available for every stone indication. The systems stand out due to their exceptional quality and durability as well as safe and careful handling.

One-step bougie



Following a skin incision, a single dilator can widen the port to allow the sheath to be advanced into the kidney. Telescope bougies or bougies in several sizes are no longer required for individual sheath sizes.

Innovative pressure management



All systems from the MIP series are designed as open systems, i.e. the sheath and telescope are not locked together and there is no second system connection to the system where irrigation liquid can flow off. With the MIP series, the irrigation liquid flows out via the space between the telescope and the operating sheath. Discontinuation of the outflow, which would lead to pressure build-up in the kidney, is not possible.

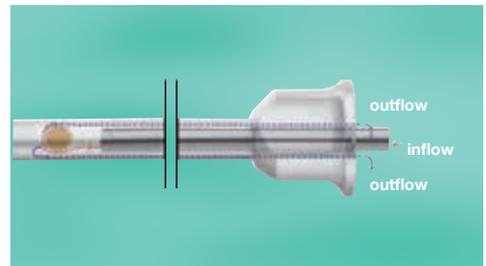
Innovative pressure management with MIP-XS



Due to the small lumen of the MIP XS system, use of the UROMAT E.A.S.I.® pump is absolutely necessary to ensure adequate fluid irrigation and/or suction. This ensures optimal vision, extremely secure pressure management and flushing of calculus dust.

Efficient stone retrieval with the “vacuum cleaner effect”

The hydrodynamic effect (“vacuum cleaner effect”) achieved by the innovative inflow and outflow constellation makes it possible to retrieve stones without forceps, graspers or stone baskets. A continuous irrigation flow also enables the residue-free elimination of small stone fragments and calculus dust.



Direct closure of the access tract

Access tracts to the kidney can be directly closed after stone retrieval using a gelatin-thrombin matrix. This eliminates the need for nephrostomy (kidney fistula) in standard PCNL access tracts.



Longer sheaths for the “supine technique”

To meet the needs of the emerging market trend for the “supine technique”, KARL STORZ now offers dedicated “supine sheaths” for all MIP systems for the first time. As the supine sheaths can be used with standard telescopes, this offers the user a flexible, yet cost-effective solution.



Use in pediatric applications

Due to its minimal sheath diameter, the MIP system ensures that both adult and pediatric patients benefit from atraumatic treatment. The optimal system pressure management, in conjunction with the UROMAT E.A.S.I.® pump, allows minimally invasive treatment.



MIP L – Percutaneous Nephroscope



Special Features:

- Open system allows a particularly atraumatic therapy under low-pressure conditions
- One step dilator with a second eccentric channel for guide wire deflection enables precise steering of the wire
- Large working channel allows the use of rigid standard instruments and large lithotripsy probes up to 11.5 Fr.
- For large stone burden
- “Vacuum cleaner effect”

Specifications:

Instrument sheath:	19.5 Fr.
Working channel:	12.4 Fr. for use with instruments up to 11.5 Fr.
Telescope:	HOPKINS® rod lens telescope
Direction of view	12°
Length:	22 cm
Eyepiece:	angled



27840 KAK Nephroscope for MIP L, autoclavable

The following accessories are included in delivery:



27840 GP **Instrument Port with Sealing System and Quick Release Lock, 1 channel**

27500 **LUER-Lock Tube Connector, male, tube diameter 9 mm**

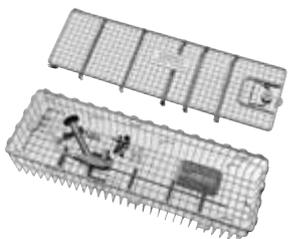
27502 **LUER-Lock Tube Connector, with stopcock, dismantling**



27001 E **Insertion Aid, for guide wires**

30160 XA **Silicone Leaflet Washer, diameter 3-5.5 mm, type dome valve, package of 10**

30160 XB **Seal, package of 10**



39501 XKL **Wire Tray including: Cleaning Adaptor, for Instrument Port 27840 GP**

Dilators, Sheaths and Applicators for MIP L



27840 AA **One Step Dilator**, 23/24 Fr., with central channel and a second eccentric channel for guide wires, for use with 23/24 Fr. Operating Sheaths 27840 BA/BAS

27840 AB **Same**, 25/26 Fr., for use with 25/26 Fr. Operating Sheaths 27840 BB/BBS



27840 BA **Operating Sheath**, 23/24 Fr., working length 15 cm, for continuous irrigation and suction

27840 BB **Same**, 25/26 Fr.

27840 BAS **Operating Sheath**, for the supine position, 23/24 Fr., working length 18 cm, for continuous irrigation and suction

27840 BBS **Same**, 25/26 Fr.



27840 CF **Applicator for Sealant**, including sheath and rod, for use with Operating Sheaths 27840 BA/BB

27840 CFS **Applicator for Sealant**, for the supine position, including sheath and rod, for use with Operating Sheaths 27840 BAS/BBS

MIP M – Percutaneous Nephroscope



Special Features:

- Well-proven miniature nephroscope with optimized design
- One step dilator with a second eccentric channel for guide wire deflection enables precise steering of the wire
- Large working channel allows the use of rigid standard instruments and large lithotripsy probes up to 5 Fr.
- For medium stone burden
- “Vacuum cleaner effect”

Specifications:

Instrument sheath:	12 Fr.
Working channel:	6.7 Fr. for use with instruments up to 5 Fr.
Telescope:	Fiber optic system
Direction of view:	12°
Length:	22 cm
Eyepiece:	angled



27830 KAK Nephroscope for MIP M, autoclavable

The following accessories are included in delivery:



27001 GP **Instrument Port with Sealing System and Quick Release Lock, 1 channel**



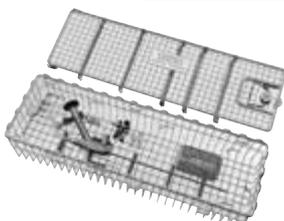
27550 N **Seal, for Instrument Ports 27001 G/GF/GH/GP, package of 10, single use recommended**

27500 **LUER-Lock Tube Connector, male, tube diameter 9 mm**

27502 **LUER-Lock Tube Connector, with stopcock, dismantling**



27001 E **Insertion Aid, for guide wires**



39501 XK **Wire Tray including: Cleaning Adaptor, for Instrument Ports 27001 G/GF/GH/GG**

CALCULASE II SCB Laser System for Endoscopic Treatment of Bladder, Ureter and Kidney Stones,
see catalog Urology 10th Edition 1/2015

Dilators, Sheaths and Applicators

for MIP M



- 27830 AA **One Step Dilator**, with central channel for guide wires, for use with 15/16 Fr. Operating Sheaths 27830 BA/BAS
- 27830 AB **One Step Dilator**, with central channel and a second eccentric channel for guide wires, for use with 16.5/19.5 Fr. Operating Sheaths 27830 BB/BBS
- 27830 AC **One Step Dilator**, with central channel for guide wires and distal curved channel for deflection of guide wires, for use with 21/22 Fr. Operating Sheaths 27830 BC/BCS



- 27830 BA **Operating Sheath**, 15/16 Fr., working length 15 cm, for continuous irrigation and suction
- 27830 BB **Same**, 16.5/17.5 Fr.
- 27830 BC **Same**, 21/22 Fr.
- 27830 BAS **Operating Sheath**, for the supine position, 15/16 Fr., working length 18 cm, for continuous irrigation and suction
- 27830 BBS **Same**, 16.5/17.5 Fr.
- 27830 BCS **Same**, 21/22 Fr.
- 27830 BK **Operating Sheath for Children**, 16.5/17.5 Fr., working length 7.5 cm, for continuous irrigation and suction



- 27830 CF **Applicator for Sealant**, including sheath and rod, for use with Operating Sheaths 27830 BA/BB/BC
- 27830 CFS **Applicator for Sealant**, for the supine position, including sheath and rod, for use with Operating Sheaths 27830 BAS/BBS/BCS



- 27001 GG **Instrument Port with Sealing System and Quick Release Lock**, large, 1 channel, for use with accessories up to 6 Fr. (diameter 2 mm) in combination with Nephroscope for MIP M 27830 KA

Optional Accessories for MIP L



27840 LIK **LASER Hand Instrument**, distal tip bent upwards, fixation for LASER fibers and sealing system, working length 35 cm, for use with Nephroscope for MIP L 27840 KA and Instrument Port MIP L 27840 GP as well as LASER fibers up to diameter 1 mm including:
Cleaning Adaptor Seal, package of 10



27290 F **Forceps**, for grasping stone fragments and coagula, with fenestrated jaws and U-spring handle, 11.5 Fr., length 38 cm, color code: red-black



27290 H **Forceps**, for grasping larger stones and stone fragments, with triple serrated jaws and U-spring handle, 10.5 Fr., length 38 cm, color code: red-black



27290 K **Forceps**, for grasping larger stones and stone fragments, with fenestrated jaws and ring handle, double action jaws, 10.5 Fr., length 38 cm, color code: red-black



27290 M **Forceps**, for grasping larger stones and stone fragments, with serrated jaws and ring handle, double action jaws, 10.5 Fr., length 38 cm, color code: red-black



27294 S **Knife**, straight, with 3-ring handle, 10.5 Fr., length 38 cm, color code: red-black

27294 SK **Knife**, only



27294 SH **Knife**, sickle-shaped, with 3-ring handle, 10.5 Fr., length 38 cm, color code: red-black

27294 SB **Knife**, only



27840 DS **Seal**, for Instrument Port 27840 GP, bore 0.7 mm, package of 10, for use with thin lithotripsy probes

Optional Accessories for MIP M



27830 FK

Forceps for Foreign Body Removal, double action jaws, flexible, 5 Fr., length 40 cm



27830 FL

Biopsy Forceps, double action jaws, flexible, 5 Fr., length 40 cm



27830 S

Scissors, single action jaws, semiflexible, 5 Fr., working length 40 cm



27830 H

Forceps, rigid, for grasping large stones and stone fragments, with triple serrated jaw parts and U-spring handle, 5 Fr., length 36 cm

MIP XS/S – Percutaneous Nephroscope

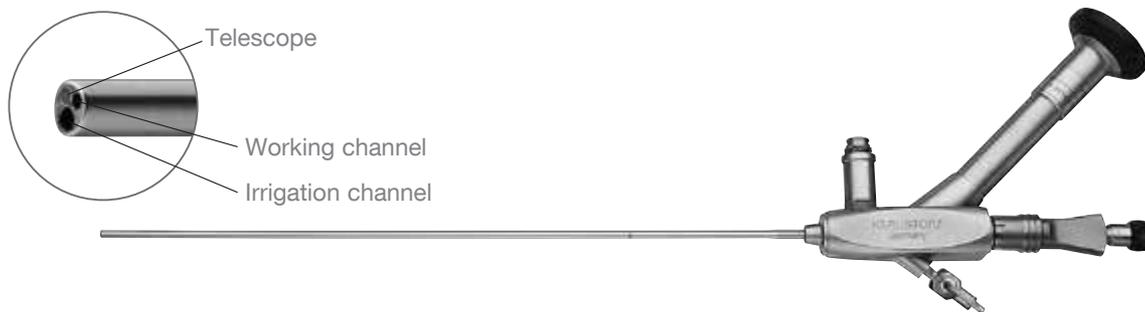


Special Features:

- **Smaller system for minimal access tract**
- **Working channel with 2 Fr. for guided laser fibers allows safe use**
- **Separate irrigation channel for optimal irrigation and good visualization**
- **For low stone burden**
- **Provides an alternative where flexible ureterorenoscopy is not possible**

Specifications:

Instrument sheath:	7.5 Fr.
Working channel:	2 Fr.
Separate irrigation channel:	3 Fr.
Telescope:	Fiber optic system
Direction of view:	6°
Length:	24 cm
Eyepiece:	angled



27820 KAK Nephroscope for MIP XS/S, autoclavable

The following accessories are included in delivery:



27001 G

Instrument Port with Sealing System and Quick Release Lock, 1 channel



27550 N

Seal, for Instrument Ports 27001 G/GF/GH/GP, package of 10, single use recommended

27500

LUER-Lock Tube Connector, male, tube diameter 9 mm

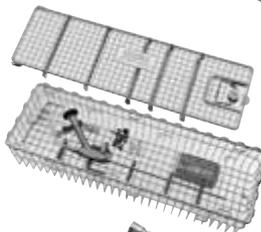
27502

LUER-Lock Tube Connector, with stopcock, dismantling



27001 E

Insertion Aid, for guide probes



39501 XK

Wire Tray including: Cleaning Adaptor, for Instrument Ports 27001 G/GF/GH/GG



39501 XRV

Multiport Bridge



39107 ALK

Cleaning Adaptor, for use with small LUER stopcocks

CALCULASE II SCB Laser System for Endoscopic Treatment of Bladder, Ureter and Kidney Stones,
see catalog Urology 10th Edition 1/2015

Dilators, Sheaths and Applicators for MIP XS/S



Dilator and operating sheaths for MIP XS



27820 AA **One Step Dilator**, with central channel for guide wires,
for use with 8.5/9.5 Fr. Operating Sheaths 27820 BA/BAS



27820 BA **Operating Sheath**, 8.5/9.5 Fr., working length 15 cm

27820 BAS **Operating Sheath**, for the supine position, 8.5/9.5 Fr.,
working length 18 cm

Dilator and operating sheaths for MIP S



27820 AB **One Step Dilator**, with central channel for guide wires,
for use with 11/12 Fr. Operating Sheaths 27820 BB/BBS



27820 BB **Operating Sheath**, 11/12 Fr., working length 15 cm,
for continuous irrigation and suction

27820 BBS **Operating Sheath**, for the supine position, 11/12 Fr.,
working length 18 cm, for continuous irrigation and suction

27820 BK **Operating Sheath for Children**, 11/12 Fr., working length 7.5 cm,
for continuous irrigation and suction

Applicator for MIP XS/S

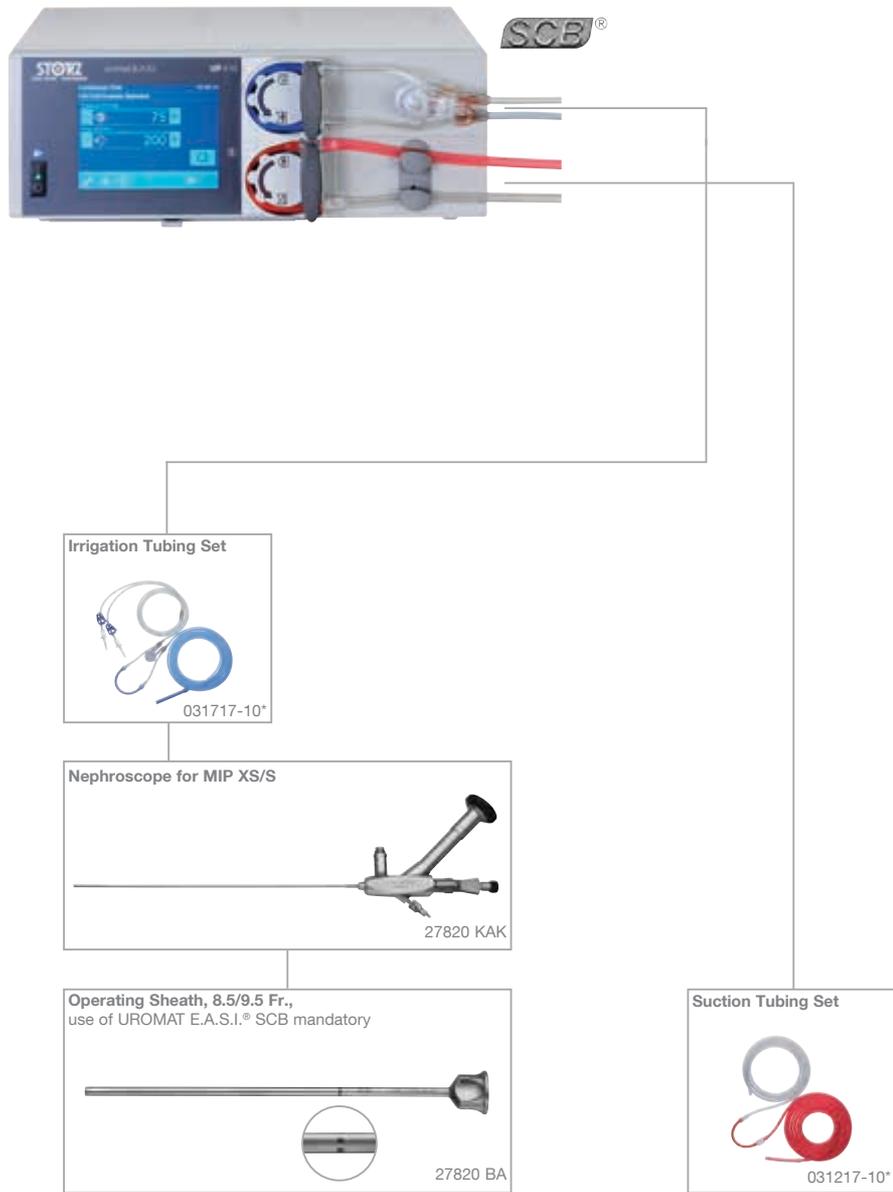


27820 CF **Applicator for Sealant**, including sheath and rod,
for use with Operating Sheaths 27820 BA/BB

27820 CFS **Applicator for Sealant**, for the supine position, including sheath and rod,
for use with Operating Sheaths 27820 BAS/BBS

UROMAT E.A.S.I.® SCB

System Components for MIP XS



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UROMAT E.A.S.I.® SCB

Pressure-regulated suction and irrigation system

Special Features:

- **Innovative:**
Intelligent, pressure-regulated double roller pump (ensures a constant balance between inflow and outflow for highest patient safety)
- **Powerful:**
Optimal power values for several endourological applications
- **Cost-efficient:**
Continuous comparison of pressure and flow values enables optimal fluid use
- **Convenient:**
Preset parameters for endo-urological applications
- **Intuitive:**
Pump parameters can be selected via touch screen
- **Market-oriented:**
BOLUS function with adjustable parameters which can be activated via footswitch or touch screen
- **Easier identification:**
Color coding of the tubing set
Blue: Irrigation
Red: Suction
- **Can be used for all indications in urology**



UP410 S1 **UROMAT E.A.S.I.® SCB**, power supply 100 – 240 VAC, 50/60 Hz, UROMAT E.A.S.I.®: SCB ready, compatible from RUI Release 45 including:
SCB Connecting Cable, length 100 cm
Basic Tubing Set*, for single use
Control Cable

Accessories:

- 031717-10* **Irrigation Tubing Set**, with two puncture needles, sterile, for single use, package of 10, for use with HYSTEROMAT E.A.S.I.® and UROMAT E.A.S.I.® SCB
- 031217-10* **Suction Tubing Set**, sterile, for single use, package of 10, for use with HYSTEROMAT E.A.S.I.® and UROMAT E.A.S.I.® SCB

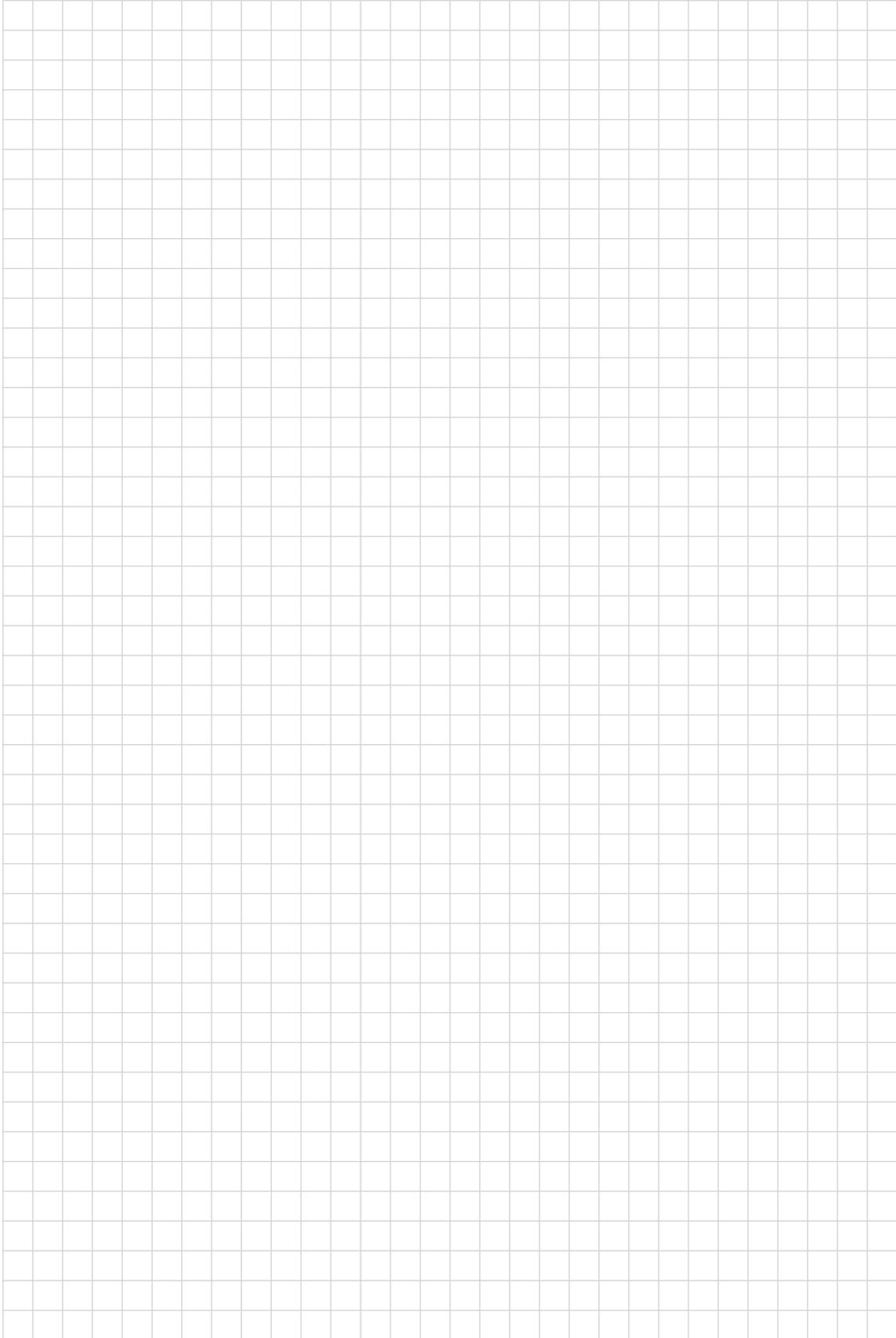
Specifications

Flow-regulated	depending on mode	Dimensions w x h x d	447 x 155 x 313 mm
Irrigation pressure	adjustable 20-200 mmHg	Weight	8.8 kg
Suction	100-1800 ml/min suction power	Certified to	IEC 60601-1, CE acc. to MDD
Power supply	100-240 VAC, 50/60 Hz		

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Notes





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