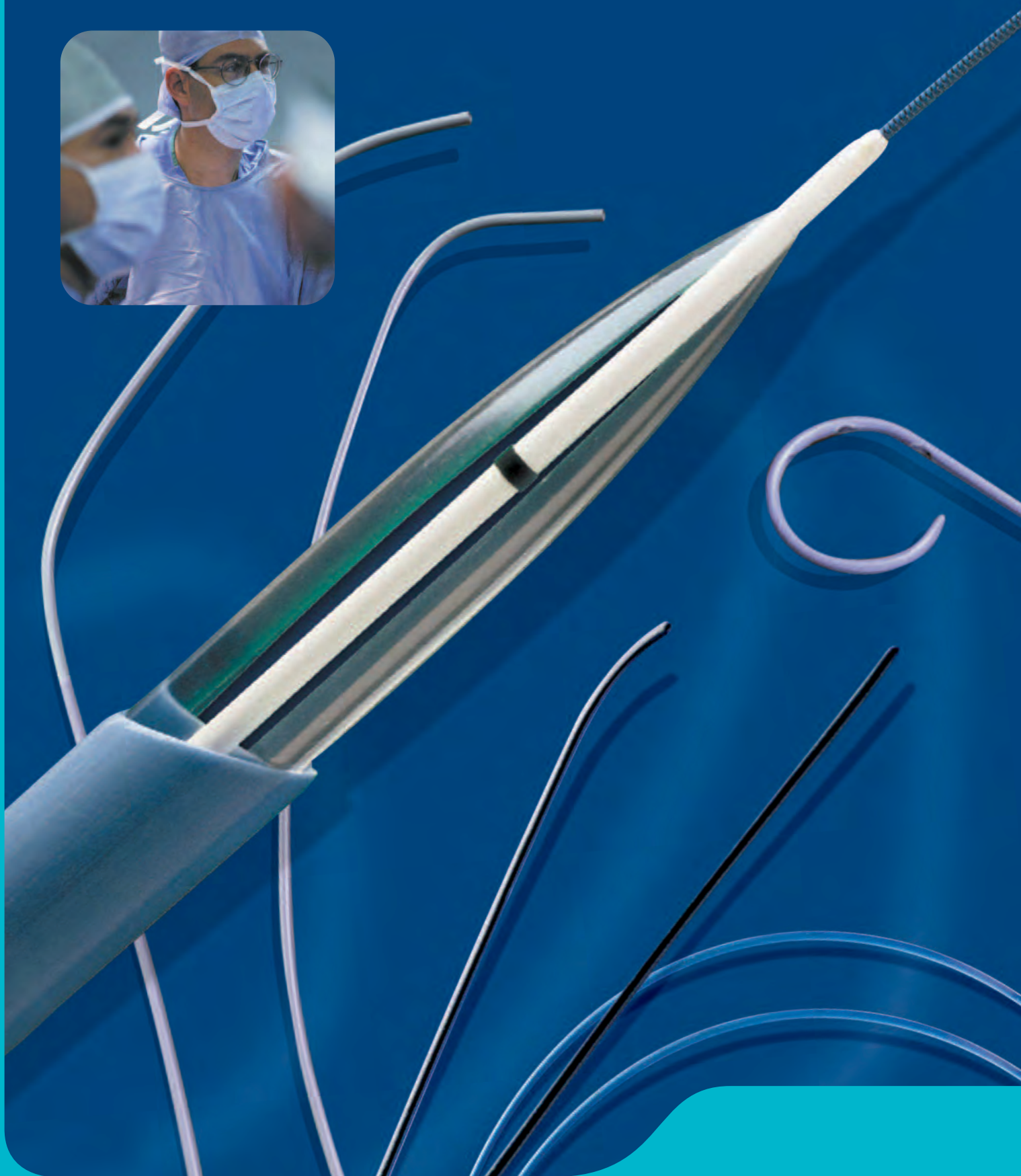


Products for Percutaneous Nephrolithotomy

Boston
Scientific

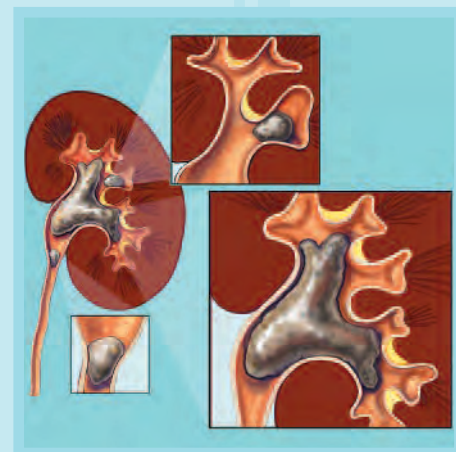


Percutaneous Nephrolithotomy

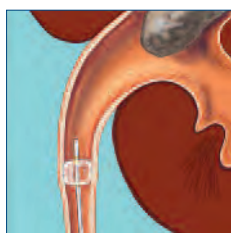
Percutaneous nephrolithotomy provides the urologist with an important treatment option for patients with:

- Stones located in the kidney
- Patients with urinary tract anomaly
- Stone locations that preclude effective ESWL or endoscopic retrieval

A wide variety of instrumentation is required for percutaneous nephrolithotomy. Each case will present unique challenges. It is imperative that instrumentation is properly selected to match the requirements of the case. This brochure will discuss the selection and use of Boston Scientific Urology instruments required for percutaneous access to the urinary tract for stone retrieval and the establishment of nephrostomy drainage.

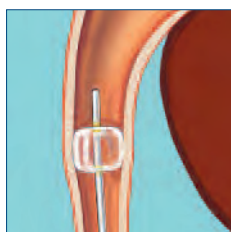


1 Advance Guidewire and Occlusion Balloon



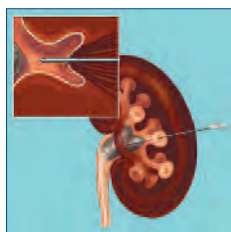
A guidewire is advanced retrograde into the renal pelvis. An occlusion balloon is advanced to the desired position. The guidewire is removed and the balloon inflated.

2 Opacify the Collecting System



The collecting system is opacified with a retrograde injection of contrast solution. Air can be injected to aid in identifying posterior calyces.

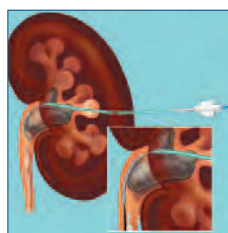
3 Puncture Calyx and Place Guidewire



An 18 gauge (O.D. 1.27mm, I.D. 0.84mm), 2-piece entry needle is advanced in a straight pathway into the selected calyx and the inner stylet is removed. Aspiration of contrast material and/or urine through the cannula confirms access to the collecting system.

The Occluder™ Occlusion Balloon is deflated and a .035" (0.89mm) ZIPwire™ Guidewire advanced through the cannula into the kidney and down the ureter. The ZIPwire Guidewire's hydrophilic coating provides a lubricious surface for smooth passage through resistant narrowings, tight obstructions and tortuous tracts.

4 Place Guidewire: Difficult Anatomy



If entering the ureter proves difficult, the Imager™ II torqueable catheters can be used to direct the guidewire into the ureter.

First, an 8F (2.67mm) dilator is passed over the ZIPwire Guidewire. Then an Imager II Torque Catheter is used to access the ureter. Now the ZIPwire Guidewire can be advanced down the ureter.

5 Place Second Guidewire



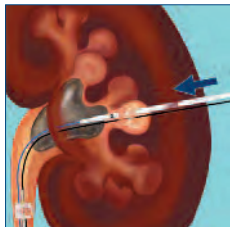
After successful access is established, the ZIPwire Guidewire should be exchanged for an Amplatz Super Stiff™ Guidewire. This is most easily done using an 8/10 Co-axial Dilatation Set. The dilator/sheath assembly is advanced over the ZIPwire Guidewire and into the ureter. The 8F (2.67mm) dilator is then removed from the sheath. A .035" (0.89mm)

Amplatz Super Stiff Guidewire can now be introduced through the 10F (3.33mm) sheath and advanced into the bladder. The ZIPwire Guidewire is then removed.

It is always advisable to place a .035" (0.89mm) J-Tip PTFE Coated Guidewire to use as a safety wire to maintain percutaneous access to the tract. When the safety wire is in place, the Occluder Occlusion Balloon may be reinflated and the 10F (3.33mm) sheath can be removed.

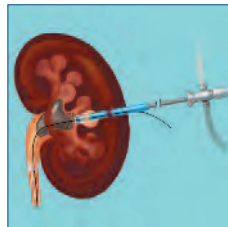
NOTE: A ZIPwire Guidewire should not be used as a safety wire.

6 Dilate Track: Advance Balloon over Wire



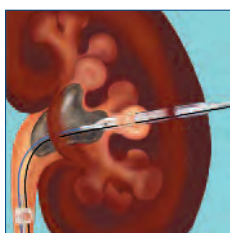
The percutaneous nephrostomy track is created with a NephroMax™ High Pressure Balloon Catheter and a 30F (10mm) PTFE Sheath. The sheath is preloaded onto the NephroMax High Pressure Balloon Catheter. The NephroMax High Pressure Balloon Catheter is advanced over the Amplatz Super Stiff™ Guidewire until the distal tip of the balloon is positioned in the calyx.

9 Perform Lithotripsy



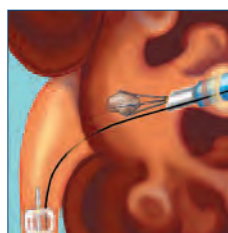
Lithotripsy can be performed with the Swiss Lithoclast™ Ultra Pneumatic Lithotripter or the Holmium Laser.

7 Dilate Track: Inflate Balloon



The balloon is then inflated using the Encore™ Inflator. The balloon is inflated with a 50% solution of sterile saline and contrast media to a minimum of 12 ATM (1216kPa). The balloon is left inflated until the “waist” disappears. The pressure can be increased to 17 ATM (1722kPa), if necessary.

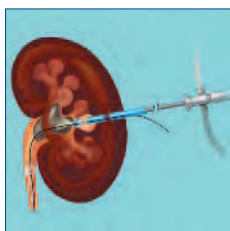
10 Remove Stone Fragments



Remove stone fragments using stone retrieval devices such as ZeroTip™ Baskets and Tricep™ Hooked-Prong Grasping Forceps.

The use of flexible nephroscopy to thoroughly inspect the entire renal collecting system helps ensure a stone-free outcome.

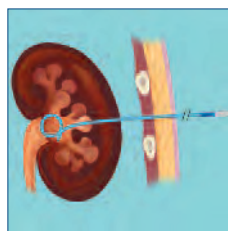
8 Perform Nephroscopy



Nephroscopy can be performed through the PTFE sheath. The Amplatz Super Stiff Guidewire should be removed once nephroscopy has confirmed satisfactory location of the PTFE Sheath in the calyx. The shaft of the Amplatz Guidewire could injure the endothelial lining of the collecting system during manipulations of the nephroscope, subsequent

lithotripsy and stone fragment retrieval. Both rigid and flexible nephroscopes can be introduced through the PTFE Sheath.

11 Place Nephrostomy Drainage Catheter



Finally, a Re-Entry™ Malecot Nephrostomy Catheter or a Percuflex™ Locking Loop Nephrostomy Catheter is placed to establish urinary drainage. The Amplatz Super Stiff Guidewire is reintroduced through the PTFE Sheath and advanced into the bladder. The extra stiffness of this guidewire facilitates advancement of the Re-Entry Malecot Nephrostomy Catheter or the Percuflex™ Locking Loop Nephrostomy Catheter.

The stiffener supplied with the nephrostomy catheter is used to straighten the malecot wings. The Re-Entry Malecot Nephrostomy Catheter is advanced over the Amplatz Super Stiff Guidewire and positioned with malecot wings within the renal pelvis. The stiffener is removed allowing the malecot to form. The PTFE Sheath and Amplatz Super Stiff Guidewire are then removed.

Educational Programmes



CONGRESS EVENTS

Boston Scientific offers endourology courses and symposia with a broad range of subjects at major urological congresses. These courses include expert urological surgeon faculty from all over the world and offer a chance to learn from their experience in complex endourology procedures. The events include didactic presentations, as well as hands-on training, utilising inanimate training models and the latest technology for performing endourology.

Look out for announcements at all International Urology Congress events.

MASTERCLASSES AND WORKSHOPS

Boston Scientific offers a full offering of Masterclass and Workshop programmes throughout the year for training the whole urology team. These programmes offer advanced training in endourology, which includes the ability to observe several live procedures, didactic presentations and hands-on training with inanimate models.

Contact your local sales representative for a schedule of programmes that are being offered.

VIEWPOINT™ IN-SERVICE PROGRAMMES

Boston Scientific offers Viewpoint In-Service Programmes in PCNL and ureteroscopy.

Viewpoint is a series of programmes designed to educate the operating room staff about minimally invasive techniques in urology. This includes equipment overview, as well as anatomy and procedure training. Many hospitals have found that this programme results in improved communication and efficiency when performing endourology procedures.

To schedule a Viewpoint In-Service programme at your facility please contact your local sales representative.

Ordering Information

Step 1. Advance Guidewire and Occlusion Balloon

Description	Order Number
.035" (0.89mm) Sensor™ Guidewire w/Straight Tip (Box 5)	M0066703051
.035" (0.89mm) Sensor Guidewire w/Angled Tip (Box 5)	M0066703061
.038" (0.97mm) Sensor Guidewire w/Straight Tip (Box 5)	M0066703091
.038" (0.97mm) Sensor Guidewire w/Angled Tip (Box 5)	M0066703101
.035" (0.89mm) ZIPwire™ Guidewire w/Straight Tip (Box 5)	M006630205B1
.035" (0.89mm) ZIPwire Guidewire w/Angled Tip (Box 5)	M006630206B1
.038" (0.97mm) ZIPwire Guidewire w/Straight Tip (Box 5)	M006630208B1
.038" (0.97mm) ZIPwire Guidewire w/Angled Tip (Box 5)	M006630209B1
.035" (0.89mm) Stiff Shaft ZIPwire Guidewire w/Straight Tip (Box 5)	M006630222B1
.035" (0.89mm) Stiff Shaft ZIPwire Guidewire w/Angled Tip (Box 5)	M006630223B1
.038" (0.97mm) Stiff Shaft ZIPwire Guidewire w/Straight Tip (Box 5)	M006630225B1
.035" (0.89mm) Amplatz Super Stiff™ Guidewire w/Straight 3.5cm Tip (Box 5)	M0066401081
.035" (0.89mm) Amplatz Super Stiff Sensor Guidewire w/J-Tip (Box 5)	M0066401081

Step 2. Opacify the Collecting System

Description	Order Number
Occluder™ Occlusion Balloon 5F (1.67mm) Catheter – 26F (8.67mm) Balloon, 65cm length	M0062201070
Occluder Occlusion Balloon 5F (1.67mm) Catheter – 26F (8.67mm) Balloon, 100cm length	M0062201080
Occluder Occlusion Balloon 7F (2.33mm) Catheter – 34F (11.33mm) Balloon, 65cm length	M0062201090
Occluder Occlusion Balloon 7F (2.33mm) Catheter – 34F (11.33mm) Balloon, 100cm length	M0062201100
Urinary Tract Occlusion Balloon 5F (1.67mm) Catheter – 26F (8.67mm) Balloon, 65cm length	M0062201020
Urinary Tract Occlusion Balloon 5F (1.67mm) Catheter – 26F (8.67mm) Balloon, 100cm length	M0062201030
Urinary Tract Occlusion Balloon 7F (2.33mm) Catheter – 34F (11.33mm) Balloon, 65cm length	M0062201040
Urinary Tract Occlusion Balloon 7F (2.33mm) Catheter – 34F (11.33mm) Balloon, 100cm length	M0062201050

Step 3. Puncture Calyx and Place Guidewire

Description	Order Number
TLA Introducer and 19 Gauge (O.D. 1.07mm, I.D. 0.69mm) Needle and Sheath Set	M0067001200
12cm Introducer and 18 Gauge (O.D. 1.27mm, I.D. 0.84mm) Needle Set	M0067001220
20cm Introducer and 18 Gauge (O.D. 1.27mm, I.D. 0.84mm) Needle Set	M0067001230

Step 4. Place Guidewire: Difficult Anatomy

Description	Order Number
Imager™ II C1 65cm Torqueable Catheters	M0064003001
Imager II C2 65cm Torqueable Catheters	M0064003011
Imager II Straight 65cm Torqueable Catheters	M0064003021
Imager II Bern 65cm Torqueable Catheters	M0064003031
Imager II JB1 65cm Torqueable Catheters	M0064003041
Imager II Straight 100cm Torqueable Catheters	M0064004021
Imager II Bern 100cm Torqueable Catheters	M0064004031
Imager II JB1 100cm Torqueable Catheters	M0064004041
Imager II Bern 40cm Torqueable Catheters	M0064005031

Ordering Information

Step 5. Place Second Guidewire

Description	Order Number
8/10 Dilator Sheath Set – 8F (2.67mm) Stylet, 10F (3.33mm) O.D.	M0062601200
.035" (0.89mm) Amplatz Super Stiff™ Guidewire w/Straight 3.5cm Tip (Box 5)	M0066401081
.035" (0.89mm) Amplatz Super Stiff Sensor Guidewire w/J-Tip (Box 5)	M0066401051
.035" (0.89mm) Sensor™ Guidewire w/Straight Tip (Box 5)	M0066703051
.035" (0.89mm) Sensor Guidewire w/Angled Tip (Box 5)	M0066703061
.035" (0.89mm) J-Tip PTFE Coated Guidewire (Each)	M0066201110

Step 6. Dilate Track: Advance Balloon over Wire

Description	Order Number
NephroMax™ High Pressure Nephrostomy Balloon Dilator Catheter	M0062101170
NephroMax High Pressure Nephrostomy Balloon Dilatation Catheters Kit w/Encore™ Inflator	M0062101180
Clear Renal Sheath – O.D. Size 34F (11.33mm), I.D. Size 30F (10mm)	M0062601600

Step 7. Dilate Track: Inflate Balloon

Description	Order Number
20cm³ (cc) Encore™ 26 Inflator with Pressure Gauge (Box 5)	M0067101131
20cm³ (cc) Encore™ 26 Inflator with Pressure Gauge (Box 1)	M0067101140
10cm³ (cc) Encore™ Inflator with Pressure Gauge (Box 5)	M0067101111

Step 8. Perform Nephroscopy

Step 9. Perform Lithotripsy

Step 10. Remove Stone Fragments

Description	Order Number
ZeroTip™ Nitinol Stone Retrieval Baskets* – 3F (1mm), 90cm length	M0063901020
Graspit™ Nitinol Stone Retrieval Forceps* – 3.3F (1.1mm), 90cm length	M0063204020
Tricep™ Hooked-Prong Grasping Forceps* – 3F (1mm), 90cm length	M0063701220

* Additional sizes available. Please see Product Catalogue for details.

Step 11. Place Nephrostomy Drainage Catheter

Description	Order Number
Percuflex™ Locking Loop Nephrostomy Catheters with Fader Tip™ – 8F (2.67mm)	M0064102040
Percuflex Locking Loop Nephrostomy Catheters with Fader Tip – 10F (3.33mm)	M0064102050
Percuflex Locking Loop Nephrostomy Catheters with Fader Tip – 12F (4mm)	M0064102060
Re-Entry™ Malecot Nephrostomy Catheter – 14F (4.67mm) Catheter, 6F (2mm) Tip	M0064101040
Re-Entry Malecot Nephrostomy Catheter – 16F (5.33mm) Catheter, 6F (2mm) Tip	M0064101050
Re-Entry Malecot Nephrostomy Catheter – 20F (6.67mm) Catheter, 8F (2.67mm) Tip	M0064101060
Re-Entry Malecot Nephrostomy Catheter – 24F (8mm) Catheter, 8F (2.67mm) Tip	M0064101070
Malecot Nephrostomy Catheter – 14F (4.67mm)	M0064101000
Malecot Nephrostomy Catheter – 16F (5.33mm)	M0064101010
Malecot Nephrostomy Catheter – 20F (6.67mm)	M0064101020
Malecot Nephrostomy Catheter – 24F (8mm)	M0064101030

General

Description	Order Number
Percutaneous Nephrostomy Kits Jinro™ – Pigtail Design, O.D. 8.3F (2.77mm), Working length 25cm	M0064202020
Percutaneous Nephrostomy Kits Jinro – Pigtail Design, O.D. 10F (3.33mm), Working length 25cm	M0064202040
Percutaneous Nephrostomy Replacement Kits Jinro – Pigtail Design, O.D. 8.3F (2.77mm), Working length 25cm	M0064202060
Percutaneous Nephrostomy Replacement Kits Jinro – Pigtail Design, O.D. 10F (3.33mm), Working length 25cm	M0064202080
Percutaneous Nephrostomy Kits Jinro – Flexima™ Pigtail Design, O.D. 6.3F (2.10mm), Working length 20cm	M0064202000
Lingeman Percutaneous Tract Kit with NephroMax™ High Pressure Nephrostomy Balloon Dilatation Catheter	M0064501150
Percutaneous Tract Kit with NephroMax High Pressure Balloon Dilatation Catheter	M0064501140
Percutaneous Access Kit (without Balloon or Amplatz Dilators)	M0064201100

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