

# INTERVENTIONAL PRODUCTS



NuMED is the world leader in interventional pediatric cardiology devices. For over 30 years, we have been developing, manufacturing and delivering innovative cardiovascular products for patients with heart defects.

Our mission is to provide healthcare providers the most advanced and highest quality devices for diagnosing and treating congenital heart conditions or peripheral vascular disease. Through the help of our worldwide network of partners, we have improved the lives of patients in more than 100 countries by supplying the most comprehensive portfolio of innovative products, with a focus on pediatrics.

Working in collaboration with thought leaders around the globe, we continue to pioneer new solutions to meet the evolving clinical needs of interventionalists. We are committed to exceeding our customer's expectations through creating the highest quality products and providing an unsurpassed level of customer service to improve the lives of patients with heart defects.



## NuMED INTERVENTIONAL PRODUCTS

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Refer to Instructions for Use booklet for a complete listing of indications, warnings and precautions.

The devices listed have CE Mark approval. Any customer or distributor outside of the EU will be subject to their individual country's regulations in regards to the importation and sale of these products.



## Z-MED™ Line

Z-MED™ catheters are suitable for percutaneous transluminal valvuloplasty (PTV) and pre-dilatation in transcatheter heart-valve replacement procedures. They are available in the widest range of sizes (2.0 – 40.0 mm) and feature high rated burst pressures suitable for resistant stenosis. Rapid inflation and deflation times minimize procedure times and maximize reperfusion. Short, flexible distal tips with short balloon tapers aid maneuverability and trackability through tortuous anatomy.

### Benefits

**Balloon** The Z-MED™ PTV balloons are coaxially constructed with a distally mounted non-compliant high pressure balloon suitable for resistant stenosis.

**Inflation and deflation times** The Z-MED™ PTV balloons have extremely fast in- and deflation times for a quick procedure.

**Maximum Trackability** The distal shaft through the balloon is highly flexible for exceptional maneuverability. This, combined with the pushability of the coaxial shaft, provides outstanding tracking performance.

**Radiopaque Marker** Platinum image bands facilitate reliable positioning of the balloon.

**Low profile** The low profile of the Z-MED™ require a small introducer for a high pressure balloon.

**Large range of sizes available** Z-MED™ balloon catheters are available in multiple configurations ranging in diameter from 2.0 to 40.0 mm.

	Z-MED™	Z-MED II™	Z-MED-X™	Z-MED II-X™
Details		Higher rated burst pressures than Z-MED™ and Z-MED-X™	<ul style="list-style-type: none"> <li>• Braided inner tubing</li> <li>• Extra high inner lumen strength</li> <li>• Increased pushability</li> <li>• Radiopaque inner tubing</li> </ul>	Higher rated burst pressures than Z-MED™ and Z-MED-X™
<b>CE</b>	Class III			
Catheter Body	Polymeric, DEHP-free, Latex-free			
Balloon	Thermoplastic Elastomer (Non-compliant – The balloon will not exceed +/- 10% of the labeled balloon size at Rated Burst Pressure or Nominal Pressure), DEHP-free, Latex-free			
Image Band	Platinum/Iridium			
Balloon Diameter (mm)	2.0 – 40.0	4.0 – 30.0	8.0 – 30.0	8.0 – 30.0
Balloon length (cm)	2.0 – 8.0	2.0 – 10.0	2.0 – 6.0	2.0 – 6.0
Rated Burst Pressure (ATM)	1 – 10	3 – 15	2 – 10	3 – 15
Introducer Size (FR)	6 – 16	5 – 16	7 – 13	7 – 16
Indication	PTV of Pulmonary Valve, Mitral Valve, Aortic Valve		PTV of the Pulmonary Valve	
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## TYSHAK® Line

TYSHAK® catheters are designed with a low profile that delivers high performance. Manufactured from a micro-thin, non-compliant balloon material, these innovative balloon catheters require small introducers. The reduced sheath size helps minimize vessel trauma and entry-site complications. Short, flexible distal tip gives you superior maneuverability. With well-defined shoulders and minimum balloon tapers, TYSHAK® catheters glide easily through smaller and difficult-to-negotiate vessels. They are available in the range of sizes (2.0 – 30.0 mm).

### Benefits

**Balloon** The TYSHAK® PTV balloons are coaxially constructed with a distally mounted non-compliant balloon for correct inflation size.

**Micro-thin** The TYSHAK® balloon is made of a micro-thin material which allows an exceptionally low profile and requires therefore the smallest introducers possible.

**Inflation and deflation times** The TYSHAK® PTV balloons have extremely fast in- and deflation times for a quick procedure.

**Maximum Trackability** The distal shaft through the balloon is highly flexible for exceptional maneuverability.

This, combined with the pushability of the coaxial shaft, provides outstanding tracking performance.

**Radiopaque Marker** Platinum image bands facilitate reliable positioning of the balloon.

**Large range of sizes available** TYSHAK® balloon catheters are available in multiple configurations ranging in diameter from 2.0 to 30.0 mm.

	TYSHAK®	TYSHAK II®	TYSHAK-X™	TYSHAK MINI®
Details		Lower profile and lower rated Burst Pressures than TYSHAK®	<ul style="list-style-type: none"> <li>• Braided inner tubing</li> <li>• Extra high inner lumen strength</li> <li>• Increased pushability</li> <li>• Radiopaque inner tubing</li> </ul>	Super thin balloon – lowest profile of any TYSHAK® balloon in it's diameter
<b>CE</b> Class III				
Catheter Body	Polymeric, DEHP-free, Latex-free			
Balloon	Thermoplastic Elastomer (Non-compliant – The balloon will not exceed +/- 10% of the labeled balloon size at Rated Burst Pressure or Nominal Pressure), DEHP-free, Latex-free			
Image Band	Platinum/Iridium			
Balloon Diameter (mm)	2.0 – 25.0	4.0 – 30.0	8.0 – 25.0	4.0 – 10.0
Balloon length (cm)	1.0 – 10.0	2.0 – 10.0	2.0 – 6.0	1.0 – 4.0
Rated Burst Pressure (ATM)	1.5 – 10	1.5 – 6	1.5 – 5	3.5 – 6
Introducer Size (FR)	4 – 11	4 – 10	6 – 11	3 – 4
Indication	PTV of the Pulmonary Valve			Pediatric PTV of the Pulmonary Valve
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## NuCLEUS™ Line

NuCLEUS™ catheters are suitable for percutaneous transluminal valvuloplasty (PTV) and pre-dilatation in transcatheter heart-valve replacement procedures. The balloon is designed with a waist formed into the middle of the balloon. Upon reaching a specified pressure, the waist will expand between 90% to almost 100% of the rated balloon diameter. The innovative balloon design enables accurate positioning prior to and during inflation. NuCLEUS™ sizes start from 10.0 mm and TYSHAK NuCLEUS® sizes begin with 4.0 mm.

### Benefits

**Balloon** The NuCLEUS™ PTV balloons are coaxially constructed with a distally mounted non-compliant high pressure balloon suitable for resistant stenosis.

**Precise positioning** The innovative balloon design of NuCLEUS™ facilitates positive positioning while holding the balloon in the correct location prior to and during inflation.

**Inflation and deflation times** The NuCLEUS™ PTV balloons have extremely fast inflation and deflation times for a quick procedure.

**Maximum Trackability** The distal shaft through the balloon is highly flexible for exceptional maneuverability. This, combined with the pushability of the coaxial shaft, provides outstanding tracking performance.

**Radiopaque Marker** Platinum image bands facilitate reliable positioning of the balloon.

**Low profile** The low profile of the NuCLEUS™ PTV balloons require a small introducer.

**Large range of sizes available** NuCLEUS™ balloon catheters are available in multiple configurations ranging in diameter from 4.0 to 30.0 mm.

	NuCLEUS™	NuCLEUS-X™	TYSHAK NuCLEUS®
Details		<ul style="list-style-type: none"> <li>• Extra high inner lumen strength</li> <li>• Increased pushability from new braided inner tubing</li> <li>• Radiopaque inner tubing</li> </ul>	Smaller Introducer sizes and lower rated Burst pressures than NuCLEUS™
<b>CE</b>	Class III		
Catheter Body	Polymeric, DEHP-free, Latex-free		
Balloon	Thermoplastic Elastomer (Non-compliant – The balloon will not exceed +/- 10% of the labeled balloon size at Rated Burst Pressure), DEHP-free, Latex-free		
Image Band	Platinum/Iridium		
Balloon Diameter (mm)	10.0 – 30.0	18.0 – 30.0	4.0 – 25.0
Balloon length (cm)	3.0 – 6.0	4.0 – 6.0	2.0 – 4.0
Rated Burst Pressure (ATM)	2 – 9	2 – 4	2 – 5
Introducer Size (FR)	7 – 14	10 – 14	6 – 11
Indication	PTV of the Mitral & Aortic Valve		PTV of the Pulmonary Valve
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## COEfficient™

The COEfficient™ Pediatric Valvuloplasty catheter is engineered for maximum steering and tracking. The coaxial shaft design provides enhanced column strength and pushability combined with a flexible distal tip for optimum steerability. The distinguishing feature of this high-pressure balloon catheter is its extremely slim profile. It can be used with even the smallest introducer sheaths (4–7 FR at 7–13 ATM).

### Benefits

**Micro-thin** The COEfficient™ balloon is made of a micro-thin material which allows an exceptionally low profile and therefore, requires small introducers.

**Balloon** The COEfficient™ balloon is coaxially constructed with a distally mounted non-compliant high pressure balloon suitable for resistant stenosis.

**Maximum Trackability** The distal shaft through the balloon is highly flexible for exceptional maneuverability.

This, combined with the pushability of the coaxial shaft, provides outstanding tracking performance.

**Radiopaque Marker** Platinum image bands facilitate reliable positioning of the balloon.

	COEfficient™
<b>CE</b>	Class III
Catheter Body	Polymeric, DEHP-free, Latex-free
Balloon	Thermoplastic Elastomer (Non-compliant – The balloon will not exceed +/- 10% of the labeled balloon size at Rated Burst Pressure), DEHP-free, Latex-free
Image Band	Platinum/Iridium
Balloon Diameter (mm)	4.0 – 12.0
Balloon length (cm)	2.0 – 4.0
Rated Burst Pressure (ATM)	7 – 13
Introducer Size (FR)	4 – 7
Indication	Pediatric PTV of the Pulmonary Valve
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## Mullins-X™

The Mullins-X™ is an ultra high pressure dilatation balloon catheter. It is the specialist when it comes to indications calling for extremely high pressure. It can be used either for percutaneous transluminal valvuloplasty or angioplasty of the femoral, iliac & renal arteries.

### Benefits

#### Very high Rated Burst Pressures

Mullins-X™ special laminated construction provides a rated burst pressure (RBP) of up to 14 ATM.

#### Four Platinum marker bands for precise positioning

Two bands are fitted below the shoulder of the balloon and two are in the middle section of the balloon.

**Balloon** The Mullins-X™ PTV and PTA balloon is coaxially constructed with a distally mounted non-compliant high pressure balloon suitable for resistant stenosis.

**Maximum Trackability** The distal shaft through the balloon is highly flexible for exceptional maneuverability. This, combined with the pushability of the coaxial shaft, provides outstanding tracking performance.

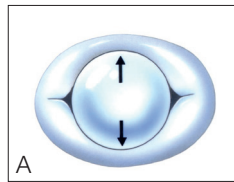
Mullins-X™	
Details	<ul style="list-style-type: none"> <li>• Extra high inner lumen strength</li> <li>• Increased pushability from new braided inner tubing</li> <li>• Radiopaque inner tubing</li> </ul>
CE	Class III for PTV, Class IIa for PTA
Catheter Body	Polymeric, DEHP-free, Latex-free
Balloon	Thermoplastic Elastomer (Non-compliant – The balloon will not exceed +/- 10% of the labeled balloon size at Rated Burst Pressure), DEHP-free, Latex-free
Image Band	Platinum/Iridium
Balloon Diameter (mm)	12.0 – 25.0
Balloon length (cm)	3.0 – 4.0
Rated Burst Pressure (ATM)	9 – 14
Introducer Size (FR)	9 – 16
Indication	PTV of the Pulmonary valve and PTA of the femoral, iliac & renal arteries
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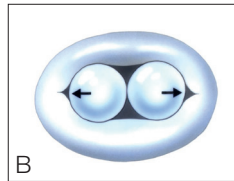
## Mitral Dilatation Kit

The Bonhoeffer Multi-Track Mitral Dilatation Kit is a well-established innovative system for Mitral Dilatation. It consists of a double balloon technique while using a simple, single guidewire approach. It was invented to solve the problem of the mismatch between the round shape of a single balloon (A) and the oval mitral orifice. The procedure times easily match those of single balloon techniques while achieving consistently higher valve areas post dilatation.

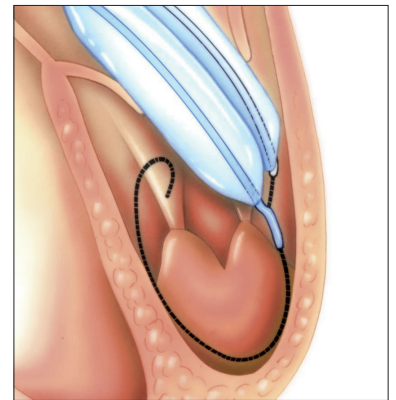
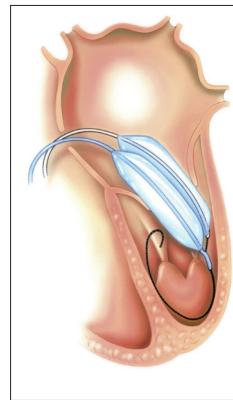
### Procedure



A  
30 mm Balloon



B  
Two 18 mm Balloons



Both balloons in the mitral orifice are inflated simultaneously.

	Bonhoeffer Multi-Track Mitral Dilatation Kit (BMK)
<b>CE</b>	Class III
Catheter Body	Polymeric, DEHP-free, Latex-free
Balloon	Thermoplastic Elastomer (Non-compliant – The balloon will not exceed +/- 10% of the labeled balloon size at Rated Burst Pressure), DEHP-free, Latex-free
Content Bonhoeffer Multi-Track Mitral Dilatation Kit	<ul style="list-style-type: none"> <li>• 1 x Multi-Track balloon dilatation catheter (MTK) (14, 16, 18 or 20 mm in diameter) x 5 cm in length</li> <li>• 1 x matched rapid Exchange balloon dilatation catheter (REMC)</li> <li>• 1 x 14 FR, 70 cm Dilator (D)</li> <li>• 1 x Multi-Track™ angiographic catheter (5 FR X 80 cm) (MMTA)</li> <li>• 1 x Super Stiff, performed 0.035" guidewire (– SS) with floppy tip</li> </ul>
Indication	For Percutaneous Transvenous Mitral Commissurotomy in patients with hemodynamically significant mitral valvular stenosis.
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## Atrioseptostomy Balloon Catheter

### Z-5™

The NuMED Z-5™ Atrioseptostomy catheter is engineered for maximum steering and tracking. The dual lumen shaft design provides pushability, coupled with exceptional pull strength. This innovation in Atrioseptostomy catheter design is of potential importance in patients who are subject to a small left atrium and in small neonates with congenital heart disease requiring Atrioseptostomy.



### Benefits

#### Radiopaque Catheter Body & Balloon Image Band

The NuMED Z-5™ Atrioseptostomy catheter body is radiopaque to facilitate reliable positioning of the catheter. A platinum image band is placed under the balloon for clear identification under fluoroscopy.

#### Micro-Thin Non-Compliant Balloon

The NuMED Z-5™ Atrioseptostomy balloon is micro-thin for low deflated profile that maintains its flexibility. The inflation of the balloon is controlled by volume. (see volumetric chart-Instructions for Use)

**Reduced Balloon Size** The reduced inflated balloon size should make Atrioseptostomy easier to perform on neonates with a small left atrium.

**Tip Angulation** The tip of the catheter is angled at 35° to facilitate passage into the left atrium.

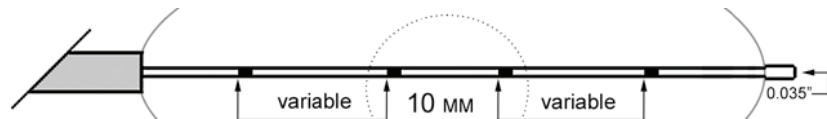
**Dual Lumen** The NuMED Z-5™ Atrioseptostomy catheter has a dual lumen, with an end hole that can accommodate a guidewire.

	Z-5™
<b>CE</b>	Class III
Catheter Body	Polymeric, DEHP-free, Latex-free
Balloon	Thermoplastic Elastomer (Non-compliant), DEHP-free, Latex-free
Image Band	Platinum/Iridium
Balloon Diameter (mm)	9.5 and 13.5
Balloon length (cm)	0.95 and 1.35
Maximum Volume (CC)	1 – 2
Introducer Size (FR)	5 – 6
Indication	Recommended for balloon atrioseptostomy
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## Sizing Balloon Catheter

### PTS® / PTS-X™

The PTS® / PTS-X™ Sizing Balloon catheters has been designed for use in patients with cardiovascular defects where accurate measurement of the defect is important to select the appropriately sized occluder device.



### Benefits

**Radiopaque Marker** Platinum image bands facilitate reliable positioning of the balloon for accurately sizing the defect.

**Super-Thin Balloon** The PTS® Sizing Balloon catheter is super-thin for a low deflated profile that maintains tip flexibility.

**Double Tapered Balloon** The PTS® Sizing Balloon has short tapers at the distal and proximal ends for enhanced transition across the stenosis and post dilatation ease of withdrawal into the introducer.

	PTS®	PTS-X™
Details		<ul style="list-style-type: none"> <li>• Extra high inner lumen strength</li> <li>• Increased pushability from new braided inner tubing</li> <li>• Radiopaque inner tubing</li> </ul>
<b>CE</b>	Class III	
Catheter Body	Polymeric, DEHP-free, Latex-free	
Balloon	Thermoplastic Elastomer (Non-compliant – The balloon will not exceed +/- 10% of the labeled balloon size at Rated Burst Pressure), DEHP-free, Latex-free	
Image Band	Platinum/Iridium	
Balloon Diameter (mm)	20.0 – 40.0	10.0 – 40.0
Balloon length (cm)	3.0 – 5.0	1.0 – 6.0
Rated Burst Pressure (ATM)	0.5 – 1.5	0.5 – 2.5
Introducer Size (FR)	8 – 9	6 – 9
Indication	Recommended for use in those patients with cardiovascular defects wherein accurate measurement of the defect is important to select the appropriately sized occluder device.	
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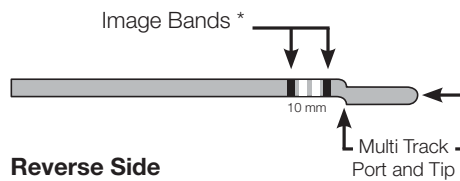
## Diagnostic Catheter

### Multi-Track™

The Multi-Track™ angiographic catheter utilizes a unique concept of guidewire location to increase flow rate and maneuverability of the catheters. Designed from radiopaque materials, the catheters are easily placed and can be used in conjunction with different types of interventional catheters. It's innovative offset distal tip passes over-the-wire, leaving the catheter shaft free for infusion of contrast media or for obtaining pressure measurements. This allows the guidewire to remain in position throughout the procedure. The catheter provides high quality angiography during diagnostic and interventional cardiac catheterization.



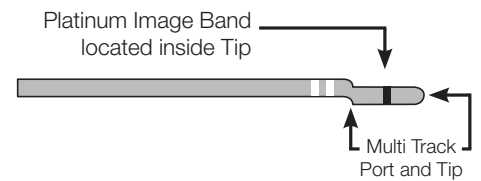
#### 5.0 French Shaft



Reverse Side



#### Other than 5.0 French Shaft



**NOTE:**

x = is the hole facing you

0 = is the hole on the opposite side of the shaft

\* = Image Bands are 10.0 mm leading edge to edge

	Multi-Track™
Details	<ul style="list-style-type: none"> <li>• Perform angiography without removing and repositioning the guidewire.</li> <li>• Obtain simultaneous gradient pressure measurements.</li> <li>• Place multiple catheters on the guidewire.</li> <li>• Precisely control pull-back or push-up pressure tracings.</li> </ul>
CE	Class III
Catheter Body	Polymeric, DEHP-free, Latex-free
Image Band	Platinum/Iridium
Maximum Injection (PSI)	1000
Flow rate (ml/sec)	4.0 – 25
Introducer Size (FR)	5 – 8
Shaft Size (FR)	3.0 – 6.0
Indication	Recommended for use in catheterization for angiography of cardiovascular vessels and / or chambers. It can be used for injection of contrast medium and pressure measurement in any chamber or vessel.
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## Stent placement

### BIB®

The Balloon-in-Balloon catheter (BIB®) is used to insert stents in a two-stage implantation process. This enables stents to be opened or expanded evenly and positioned correctly. The inner balloon of the BIB® Catheter is half the diameter of the outer balloon and is 1.0 cm shorter in length.

### Benefits

**Stent placement with BIB®** reduces the risk of asymmetric stent opening and stent dislodgement.

**Inner balloon inflation** When the inner balloon is inflated, the stent expansion begins from the center of the stent. The stent is firmly gripped on to the balloon to allow for fine positioning before the final expansion by inflating the outer balloon.

**Outer balloon inflation** If the stent is placed in the right position, the outer balloon can be inflated.

	BIB®
Details	Special Balloon-in-Balloon catheter for two-stage placement of stents The diameter of the inner balloon is half the diameter of the outer balloon diameter. The length of the inner balloon is 1.0 cm shorter than the outer balloon length.
<b>CE</b>	Class III
Catheter Body	Polymeric, DEHP-free, Latex-free
Balloon	Thermoplastic Elastomer (Non-compliant – The balloon will not exceed +/- 10% of the labeled balloon size at Rated Burst Pressure), DEHP-free, Latex-free
Image Band	Platinum/Iridium
Balloon Diameter (mm)	12.0 – 30.0
Balloon length (cm)	2.5 – 6.0
Outer Balloon Rated Burst Pressure (ATM)	2 – 7
Introducer Size (FR)	8 – 16
Indication	Indicated for stent placement in vessels over 8 mm in diameter.
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CP Stent®



Covered CP Stent®

## Bare and Covered CP Stent™

The CP Stent® is composed of 0.013" Platinum/Iridium wire that is arranged in a “zig” pattern, laser welded at each joint and over brazed with 24K Gold. It allows expansion from 12.0 mm to 24.0 mm for the 8 Zig and 26.0 mm to 30.0 mm for the 10 Zig. The Covered CP Stent™ is comprised of the bare CP Stent® that is covered with an expandable sleeve of ePTFE.

### Benefits

**High quality** The CP Stent® is made of a 0.013" thick Platinum/Iridium wire arranged in a zig-zag pattern. Every point of intersection is laser welded and brazed with 24K Gold.

**High expansion range** It has an expansion range of 12.0 mm – 24.0 mm for the 8 Zig and 26.0 mm – 30.0 mm for the 10 Zig.

**Bare & Covered** The CP Stent® is available in a bare version or covered with an expandable sheath of ePTFE.

**Adjustable fit** Thanks to its considerable capacity for expansion, the stent just needs to be re-dilated to accommodate the patient's natural growth. Therefore it may reduce the need for additional stent implantation.

	CP Stent®	Covered CP Stent™
<b>CE</b>	Class III	
Wire	0.013" Platinum/Iridium	
Brazing	24K Gold	
Stent length (cm)	8 Zig: 1.6 – 6.0 10 Zig: 3.9 – 6.0	
Indication	<p>Indicated for implantation in the native and/or recurrent coarctation of the aorta on patients with the following clinical conditions:</p> <ul style="list-style-type: none"> <li>• Stenosis of the aorta resulting in significant anatomic narrowing as determined by angiography or non-invasive imaging, i.e. echocardiography, magnetic resonance imaging (MRI), CT Scan</li> <li>• Stenosis of the aorta resulting in hemodynamic alterations, resulting in systolic pressure gradient, systemic hypertension or altered left ventricular function</li> <li>• Stenosis of the aorta where balloon angioplasty is ineffective or contraindicated</li> <li>• Stenosis diameter &gt;20% of the adjacent vessel diameter</li> </ul>	<ul style="list-style-type: none"> <li>• Stenosis of the aorta resulting in significant anatomic narrowing as determined by angiography or non-invasive imaging, i.e. echocardiography, magnetic resonance imaging (MRI), CT Scan</li> <li>• Stenosis of the aorta resulting in hemodynamic alterations, resulting in systolic pressure gradient, systemic hypertension or altered left ventricular function</li> <li>• Stenosis of the aorta where balloon angioplasty is ineffective or contraindicated</li> <li>• Stenosis diameter &lt;20% of the adjacent vessel diameter</li> <li>• Stenosis that would present increased risk of vascular damage or disruption</li> <li>• Aneurysm associated with coarctation of the aorta</li> </ul>
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Mounted CP Stent™



Covered Mounted CP Stent™

## Mounted and Covered Mounted CP Stent™

The Mounted and Covered Mounted CP Stent™ consists of a bare/covered CP Stent® premounted on a BIB® Catheter. This system allows the physician the flexibility of using a pre-mounted system and will save the time required to mount the stent on the catheter.

### Benefits

**High quality** The CP Stent® is made of a 0.013" thick Platinum/Iridium wire mesh arranged in a zig-zag pattern. Every point of intersection is laser welded and brazed with 24K Gold.

**High expansion range** It has an expansion range of 12.0 mm – 24.0 mm for the 8 Zig and 26.0 mm – 30.0 mm for the 10 Zig.

**Bare & Covered** The CP Stent® is available in a bare version or covered with an expandable sheath of ePTFE.

**Adjustable fit** Thanks to its considerable capacity for expansion, the stent just needs to be redilated to accommodate the patient's natural growth. Therefore it may reduce the need for additional stent implantation.

**Premounting** saves time and reduces risk of dislodgement.

	Mounted CP Stent™ (MCP)	Covered Mounted CP Stent™ (CMCP)
<b>CE</b>	Class III	
Wire	0.013" Platinum/Iridium	
Brazing	24K Gold	
Stent length (cm)	8 Zig: 1.6 – 6.0 10 Zig: 3.9 – 6.0	
Balloon Diameter (mm)	12.0 – 30.0	
Balloon length (cm)	2.5 – 6.0	
Indication	<p>Indicated for implantation in the native and/or recurrent coarctation of the aorta on patients with the following clinical conditions:</p> <ul style="list-style-type: none"> <li>• Stenosis of the aorta resulting in significant anatomic narrowing as determined by angiography or non-invasive imaging, i.e. echocardiography, magnetic resonance imaging (MRI), CT Scan</li> <li>• Stenosis of the aorta resulting in hemodynamic alterations, resulting in systolic pressure gradient, systemic hypertension or altered left ventricular function</li> <li>• Stenosis of the aorta where balloon angioplasty is ineffective or contraindicated</li> <li>• Stenosis diameter &gt;20% of the adjacent vessel diameter</li> </ul>	<ul style="list-style-type: none"> <li>• Stenosis of the aorta resulting in significant anatomic narrowing as determined by angiography or non-invasive imaging, i.e. echocardiography, magnetic resonance imaging (MRI), CT Scan</li> <li>• Stenosis of the aorta resulting in hemodynamic alterations, resulting in systolic pressure gradient, systemic hypertension or altered left ventricular function</li> <li>• Stenosis of the aorta where balloon angioplasty is ineffective or contraindicated</li> <li>• Stenosis diameter &lt;20% of the adjacent vessel diameter</li> <li>• Stenosis that would present increased risk of vascular damage or disruption</li> <li>• Aneurysm associated with coarctation of the aorta</li> </ul>
		Indicated for treatment of right ventricle to pulmonary artery (Right Ventricular Outflow Tract) conduit disruptions that are identified during conduit pre-dilatation procedures performed in preparation for transcatheter pulmonary valve replacement.
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## NuDEL™

The NuDEL™ is an all-in-one stent delivery system which is designed for the efficient and effective treatment of Coarctation of the Aorta and Right Ventricular Outflow Tract (RVOT). It includes the proven technologies of the Covered CP Stent™, mounted on a Balloon-In-Balloon catheter (BIB®), which is then covered by an introducer sheath.

Only available in 8 Zig Configuration.

### Benefits

**Pre-loaded system** All components are already pre-loaded. This saves time and allows quick actions in emergency situations.

**All-in-one stent system**

The NuDEL includes a BIB® balloon catheter and a Covered CP Stent™, which is then covered by a sheath.

**High quality** The CP Stent® is made of a 0.013" thick Platinum/Iridium wire mesh arranged in a zig-zag pattern. Every point of intersection is laser welded and brazed with 24K Gold.

**Adjustable fit** Thanks to its considerable capacity for expansion, the stent just needs to be re-dilated to accommodate the patient's natural growth. Therefore it may reduce the need for additional stent implantation.

	NuDEL™
CE	Class III
Wire	0.013" Platinum/Iridium
Brazing	24K Gold
Stent length (cm)	1.6 – 4.5
Catheter Body	Polymeric, DEHP-free, Latex-free
Balloon	Thermoplastic Elastomer (Non-compliant – The balloon will not exceed +/- 10% of the labeled balloon size at Rated Burst Pressure), DEHP-free, Latex-free
Image Band	Platinum/Iridium
Balloon Diameter (mm)	12.0 – 24.0
Balloon length (cm)	2.5 – 5.0
Outer Balloon Rated Burst Pressure (ATM)	3 – 7
Indication	<p>Indicated for implantation in the native and/or recurrent coarctation of the aorta on patients with the following clinical conditions:</p> <ul style="list-style-type: none"> <li>• Stenosis of the aorta resulting in significant anatomic narrowing as determined by angiography or non-invasive imaging, i.e. echocardiography, magnetic resonance imaging (MRI), CT Scan</li> <li>• Stenosis of the aorta resulting in hemodynamic alterations, resulting in systolic pressure gradient, systemic hypertension or altered left ventricular function</li> <li>• Stenosis of the aorta where balloon angioplasty is ineffective or contraindicated</li> <li>• Stenosis diameter &lt; 20% of the adjacent vessel diameter</li> <li>• Stenosis that would present increased risk of vascular damage or disruption</li> <li>• Aneurysm associated with coarctation of the aorta</li> </ul> <p>Indicated for treatment of right ventricle to pulmonary artery (Right Ventricular Outflow Tract) conduit disruptions that are identified during conduit pre-dilatation procedures performed in preparation for transcatheter pulmonary valve replacement.</p>
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## D'VILL™

The D'VILL™ is a long-length, kink-resistant hemostasis introducer which is designed for the safe and effective introduction of large diameter interventional devices. The D'VILL™ set includes one braided sheath with radiopaque marker band and dilator compatible with 0.035" guidewire.

Available in 12FR and 14FR sheath sizes with 30 cm, 65 cm and 85 cm usable lengths.

Compatible with the CP Stent® Franchise and BIB® catheters.

### Benefits

**Next generation braided sheath** for optimal flexibility and kink resistance. The distal 20 cm is more flexible which allows for smooth delivery of devices even in complex anatomy.

**Radiopaque image band** provides improved imaging and helps ensure accurate device delivery. The **advanced hemostasis valve** is designed to minimize blood loss during difficult procedures.

**Side port and 3-way stopcock** allows for convenient flushing.

	D'Vill™
<b>CE</b>	Class IIa
Sheath Body	Two Stage Braided Nylon (distal 20 cm has additional flexibility)
Image Band	Platinum/Iridium
Usable Sheath length (cm)	30, 65 and 85
Guidewire	0.035" (not included)
Dilator	LDPE
Stopcock	Three way
Indication	Recommended for the introduction of balloons, catheters, and other diagnostic and interventional devices.
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## Mini Ghost™

The Mini Ghost™ is a coaxial catheter used for dilatations of small vessels. The catheter features a 20 or 12 ATM balloon mounted on 3.5 FR shaft. The catheter is available in balloon diameters of 2.0 mm to 6.0 mm and also a variety of balloon and usable lengths. This catheter is not for use in the coronary arteries.

### Benefits

**Visualization** Two image bands are placed beneath the shoulders of the balloon to allow reliable positioning of the balloon within the stenosis. 1cm balloon length only has one image band placed in the center of the balloon.

**Usable Lengths** Available in lengths of 40 cm, 80 cm, 120 cm, and 150 cm.

	Mini Ghost™
<b>CE</b>	Class IIa
Catheter Body	Polymeric, DEHP-free, Latex-free
Balloon	Thermoplastic Elastomer (Non-compliant – The balloon will not exceed +/- 10% of the given balloon size at Rated Burst Pressure), DEHP-free, Latex-free
Image Band	Platinum/Iridium
Balloon Diameter (mm)	2.0 – 6.0
Balloon length (cm)	1.0 – 10.0
Rated Burst Pressure (ATM)	12 – 20
Introducer Size (FR)	4
Indication	PTA of the femoral, iliac and renal arteries.
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## Tearduct™

The Tearduct™ catheter is a tipless balloon catheter that uses an inverted balloon design at the distal end. The coaxial shaft design provides enhanced trackability and pushability allowing for effective treatment of obstructions in the nasolacrimal duct system.

### Benefits

**Tipless** The Tearduct™ is a 100% tipless balloon catheter that reduces the risk of vessel trauma.

**Radiopaque Marker** A Platinum image band is placed under the distal part of the balloon for clear identification under fluoroscopy.

	Tearduct™
<b>CE</b>	Class I
Catheter Body	Polymeric, DEHP-free, Latex-free
Balloon	Thermoplastic Elastomer (Non-compliant – The balloon will not exceed +/- 10% of the given balloon size at Rated Burst Pressure), DEHP-free, Latex-free
Image Band	Platinum/Iridium
Usable length (cm)	20
Balloon Diameter (mm)	3.0
Balloon length (cm)	2.0
Rated Burst Pressure (ATM)	14
Shaft Size (FR)	3.5
Indication	Epiphora, Obstruction of the nasolacrimal duct system.
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Ordering information

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NUMED INTERVENTIONAL PRODUCTS

## Ordering information

Z-MED™ Line									
Z-MED™ Z-MED II™	Z-MED-X™ Z-MED II-X™	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length* (cm)	Guide Wire (Inches)	Rated Burst (ATM)	Nominal Pressure (ATM)
PDZ600		4.0	2.0	5	5	100	0.025	15	6
PDZ323		4.0	2.0	6	5	100	0.025	10	N/A
PDZ601		4.0	3.0	5	5	100	0.025	15	6
PDZ602		4.0	4.0	5	5	100	0.025	15	6
PDZ603		4.0	5.0	5	5	100	0.025	15	6
PDZ604		4.0	6.0	5	5	100	0.025	15	6
PDZ676		4.0	10.0	5	5	100	0.025	15	6
PDZ324		5.0	2.0	6	5	100	0.025	10	N/A
PDZ605		5.0	2.0	6	5	100	0.025	15	6
PDZ606		5.0	3.0	6	5	100	0.025	15	6
PDZ607		5.0	4.0	6	5	100	0.025	15	6
PDZ608		5.0	5.0	6	5	100	0.025	15	6
PDZ609		5.0	6.0	6	5	100	0.025	15	6
PDZ325		6.0	2.0	6	5	100	0.025	10	N/A
PDZ610		6.0	2.0	6	5	100	0.025	15	6
PDZ611		6.0	3.0	6	5	100	0.025	15	6
PDZ344		6.0	3.0	7	6	100	0.035	10	N/A
PDZ612		6.0	4.0	6	5	100	0.025	15	6
PDZ613		6.0	5.0	6	5	100	0.025	15	6
PDZ614		6.0	6.0	6	5	100	0.025	15	6
PDZ317		7.0	2.0	6	5	100	0.025	10	N/A
PDZ615		7.0	2.0	6	5	100	0.025	15	6
PDZ616		7.0	3.0	6	5	100	0.025	15	6
PDZ617		7.0	4.0	6	5	100	0.025	15	6
PDZ618		7.0	5.0	6	5	100	0.025	15	6
PDZ619		7.0	6.0	6	5	100	0.025	15	6
PDZ326	PDZ400	8.0	2.0	7	6	100	0.035	10	N/A
PDZ620	PDZ700	8.0	2.0	7	6	100	0.035	15	6
PDZ327	PDZ401	8.0	3.0	7	6	100	0.035	10	N/A
PDZ621	PDZ701	8.0	3.0	7	6	100	0.035	15	6
	PDZ402	8.0	4.0	7	6	100	0.035	10	N/A
PDZ622	PDZ702	8.0	4.0	7	6	100	0.035	15	6
	PDZ403	8.0	5.0	7	6	100	0.035	10	N/A
PDZ623	PDZ703	8.0	5.0	7	6	100	0.035	15	6
	PDZ404	8.0	6.0	7	6	100	0.035	10	N/A
PDZ624	PDZ704	8.0	6.0	7	6	100	0.035	15	6
PDZ328	PDZ405	9.0	2.0	7	6	100	0.035	10	N/A
PDZ625	PDZ705	9.0	2.0	7	6	100	0.035	14	6
PDZ329	PDZ406	9.0	3.0	7	6	100	0.035	10	N/A
PDZ626	PDZ706	9.0	3.0	7	6	100	0.035	14	6
	PDZ407	9.0	4.0	7	6	100	0.035	10	N/A
PDZ627	PDZ707	9.0	4.0	7	6	100	0.035	14	6

\* Select Z-MED/ Z-MED II catheters may be available in other usable lengths. Please refer to our website.



## Ordering information

Z-MED™ Line									
Z-MED™ Z-MED II™	Z-MED-X™ Z-MED II-X™	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length* (cm)	Guide Wire (Inches)	Rated Burst (ATM)	Nominal Pressure (ATM)
	PDZ408	9.0	5.0	7	6	100	0.035	10	N/A
PDZ628	PDZ708	9.0	5.0	7	6	100	0.035	14	6
	PDZ409	9.0	6.0	7	6	100	0.035	10	N/A
PDZ629	PDZ709	9.0	6.0	7	6	100	0.035	14	6
PDZ630	PDZ710	10.0	2.0	7	6	100	0.035	13	6
PDZ330	PDZ410	10.0	2.0	7	6	100	0.035	9	N/A
PDZ631	PDZ711	10.0	3.0	7	6	100	0.035	13	6
PDZ331	PDZ411	10.0	3.0	7	6	100	0.035	9	N/A
PDZ632	PDZ712	10.0	4.0	7	6	100	0.035	13	6
PDZ341	PDZ412	10.0	4.0	7	6	100	0.035	9	N/A
PDZ633	PDZ713	10.0	5.0	7	6	100	0.035	13	6
	PDZ413	10.0	5.0	7	6	100	0.035	9	N/A
PDZ634	PDZ714	10.0	6.0	7	6	100	0.035	13	6
	PDZ414	10.0	6.0	7	6	100	0.035	9	N/A
PDZ371		11.0	3.0	7	6	100	0.035	7	N/A
S0028		11.0	3.0	8	6	100	0.035	10	6
S0039		11.0	4.0	8	6	100	0.035	10	6
SN022	PDZ415	12.0	2.0	7	6	100	0.035	7	N/A
PDZ635	PDZ715	12.0	2.0	8	6	100	0.035	10	6
PDZ342		12.0	2.0	8	6	100	0.035	7	N/A
SN023	PDZ416	12.0	3.0	7	6	100	0.035	7	N/A
PDZ636	PDZ716	12.0	3.0	8	6	100	0.035	10	6
PDZ318		12.0	3.0	8	6	100	0.035	7	N/A
PDZ364		12.0	3.0	8	7	100	0.035	7	N/A
PDZ372		12.0	3.0	9	8	110	0.035	7	N/A
S0093		12.0	3.5	8	6	100	0.035	10	6
SN025	PDZ417	12.0	4.0	7	6	100	0.035	7	N/A
PDZ637	PDZ717	12.0	4.0	8	6	100	0.035	10	6
PDZ332		12.0	4.0	8	6	100	0.035	7	N/A
PDZ365		12.0	4.0	8	7	100	0.035	7	N/A
SN026	PDZ418	12.0	5.0	7	6	100	0.035	7	N/A
PDZ638	PDZ718	12.0	5.0	8	6	100	0.035	10	6
	PDZ419	12.0	6.0	7	6	100	0.035	7	N/A
PDZ639	PDZ719	12.0	6.0	8	6	100	0.035	10	6
PDZ378		12.0	6.0	8	6	100	0.035	7	N/A
S0068		12.0	2.5	8	6	100	0.035	10	6
SN047		13.0	3.0	9	7	100	0.035	10	5
PDZ348		13.0	3.0	9	7	100	0.035	6	N/A
SN048		13.0	4.0	9	7	100	0.035	10	5
PDZ349		13.0	5.0	9	7	100	0.035	6	N/A
PDZ681		14.0	2.0	9	7	100	0.035	10	5
SN027		14.0	3.0	7	6	100	0.035	6	N/A

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## Ordering information

Z-MED™ Line									
Z-MED™ Z-MED II™	Z-MED-X™ Z-MED II-X™	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length* (cm)	Guide Wire (Inches)	Rated Burst (ATM)	Nominal Pressure (ATM)
	PDZ420	14.0	3.0	8	7	100	0.035	6	N/A
PDZ640	PDZ720	14.0	3.0	9	7	100	0.035	10	5
PDZ333		14.0	3.0	9	7	100	0.035	6	N/A
PDZ368		14.0	3.0	9	8	100	0.035	6	N/A
PDZ380		14.0	4.0	7	6	100	0.035	6	N/A
	PDZ421	14.0	4.0	8	7	100	0.035	6	N/A
PDZ641	PDZ721	14.0	4.0	9	7	100	0.035	10	5
PDZ334		14.0	4.0	9	7	100	0.035	6	N/A
PDZ369		14.0	4.0	9	8	100	0.035	6	N/A
	PDZ422	14.0	5.0	8	7	100	0.035	6	N/A
PDZ642	PDZ722	14.0	5.0	9	7	100	0.035	10	5
PDZ351		14.0	5.0	9	7	100	0.035	6	N/A
	PDZ423	14.0	6.0	8	7	100	0.035	6	N/A
PDZ643	PDZ723	14.0	6.0	9	7	100	0.035	10	5
PDZ359		15.0	2.0	9	7	100	0.035	5	N/A
	PDZ424	15.0	3.0	8	7	100	0.035	5	N/A
PDZ335		15.0	3.0	9	7	100	0.035	5	N/A
PDZ644	PDZ724	15.0	3.0	9	7	100	0.035	8	5
	PDZ425	15.0	4.0	8	7	100	0.035	5	N/A
PDZ336		15.0	4.0	9	7	100	0.035	5	N/A
PDZ645	PDZ725	15.0	4.0	9	7	100	0.035	8	5
PDZ366		15.0	4.0	9	8	100	0.035	5	N/A
	PDZ426	15.0	5.0	8	7	100	0.035	5	N/A
PDZ361		15.0	5.0	9	7	100	0.035	5	N/A
PDZ646	PDZ726	15.0	5.0	9	7	100	0.035	8	5
	PDZ427	15.0	6.0	8	7	100	0.035	5	N/A
PDZ647	PDZ727	15.0	6.0	9	7	100	0.035	8	5
PDZ322	PDZ428	16.0	3.0	9	7	100	0.035	5	N/A
PDZ648	PDZ728	16.0	3.0	9	7	100	0.035	8	4
PDZ319	PDZ429	16.0	4.0	9	7	100	0.035	5	N/A
PDZ649	PDZ729	16.0	4.0	9	7	100	0.035	8	4
PDZ367		16.0	4.0	9	8	100	0.035	5	N/A
	PDZ430	16.0	5.0	9	7	100	0.035	5	N/A
PDZ650	PDZ730	16.0	5.0	9	7	100	0.035	8	4
PDZ370	PDZ431	16.0	6.0	9	7	100	0.035	5	N/A
PDZ651	PDZ731	16.0	6.0	9	7	100	0.035	8	4
PDZ354		17.0	3.0	10	7	100	0.035	4	N/A
PDZ355		17.0	6.0	10	7	100	0.035	4	N/A
PDZ356		18.0	3.0	10	7	100	0.035	4	N/A
PDZ373	PDZ432	18.0	3.0	10	8	100	0.035	4	N/A
PDZ652	PDZ732	18.0	3.0	10	8	100	0.035	7	4
PDZ347		18.0	4.0	9	8	100	0.035	4	N/A

\* Select Z-MED/ Z-MED II catheters may be available in other usable lengths. Please refer to our website.

## Ordering information

Z-MED™ Line									
Z-MED™ Z-MED II™	Z-MED-X™ Z-MED II-X™	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length* (cm)	Guide Wire (Inches)	Rated Burst (ATM)	Nominal Pressure (ATM)
PDZ337	PDZ433	18.0	4.0	10	8	100	0.035	4	N/A
PDZ653	PDZ733	18.0	4.0	10	8	100	0.035	7	4
PDZ686		18.0	4.5	11	10	110	0.035	7	4
	PDZ434	18.0	5.0	10	8	100	0.035	4	N/A
PDZ654	PDZ734	18.0	5.0	10	8	100	0.035	7	4
PDZ357		18.0	6.0	10	7	100	0.035	4	N/A
	PDZ435	18.0	6.0	10	8	100	0.035	4	N/A
PDZ655	PDZ735	18.0	6.0	10	8	100	0.035	7	4
PDZ358		19.0	6.0	11	7	100	0.035	4	N/A
	PDZ436	20.0	3.0	11	8	100	0.035	4	N/A
PDZ382		20.0	3.0	12	8	100	0.035	4	N/A
PDZ656	PDZ736	20.0	3.0	12	8	100	0.035	5	2
	PDZ437	20.0	4.0	11	8	100	0.035	4	N/A
PDZ320		20.0	4.0	12	8	100	0.035	4	N/A
PDZ657	PDZ737	20.0	4.0	12	8	100	0.035	5	2
PDZ678		20.0	4.5	11	10	110	0.035	5	2
	PDZ438	20.0	5.0	11	8	100	0.035	4	N/A
PDZ360		20.0	5.0	12	8	100	0.035	4	N/A
PDZ658	PDZ738	20.0	5.0	12	8	100	0.035	5	2
	PDZ439	20.0	6.0	11	8	100	0.035	4	N/A
PDZ659	PDZ739	20.0	6.0	12	8	100	0.035	5	2
S0005		20.0	6.0	12	9	100	0.035	4	N/A
S0080		20.0	8.0	12	9	100	0.035	4	N/A
	PDZ440	22.0	3.0	11	9	100	0.035	3	N/A
PDZ660	PDZ740	22.0	3.0	12	9	100	0.035	4	2
	PDZ441	22.0	4.0	11	9	100	0.035	3	N/A
PDZ338		22.0	4.0	12	9	100	0.035	3	N/A
PDZ661	PDZ741	22.0	4.0	12	9	100	0.035	4	2
PDZ679		22.0	4.5	12	10	110	0.035	4	2
	PDZ442	22.0	5.0	11	9	100	0.035	3	N/A
PDZ662	PDZ742	22.0	5.0	12	9	100	0.035	4	2
	PDZ443	22.0	6.0	11	9	100	0.035	3	N/A
S0006		22.0	6.0	12	9	100	0.035	3	N/A
PDZ663	PDZ743	22.0	6.0	12	9	100	0.035	4	2
S0081		22.0	8.0	12	9	100	0.035	3	N/A
	PDZ744	23.0	3.0	13	9	100	0.035	4	2
PDZ664		23.0	3.0	14	9	100	0.035	4	2
	PDZ745	23.0	4.0	13	9	100	0.035	4	2
PDZ665		23.0	4.0	14	9	100	0.035	4	2
PDZ682		23.0	4.5	12	10	110	0.035	4	2
S0016		23.0	5.0	12	9	100	0.035	3	N/A
	PDZ746	23.0	5.0	13	9	100	0.035	4	2

\* Select Z-MED/ Z-MED II catheters may be available in other usable lengths. Please refer to our website.

## Ordering information

Z-MED™ Line									
Z-MED™ Z-MED II™	Z-MED-X™ Z-MED II-X™	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length* (cm)	Guide Wire (Inches)	Rated Burst (ATM)	Nominal Pressure (ATM)
PDZ666		23.0	5.0	14	9	100	0.035	4	2
	PDZ747	23.0	6.0	13	9	100	0.035	4	2
PDZ667		23.0	6.0	14	9	100	0.035	4	2
S0089		24.0	3.0	12	9	100	0.035	3	N/A
S0059		24.0	4.0	12	9	100	0.035	3	N/A
PDZ397		24.0	5.0	12	9	100	0.035	3	N/A
S0042		25.0	2.0	14	9	85	0.035	4	2
S0040		25.0	2.0	14	9	100	0.035	4	2
S0056	PDZ444	25.0	3.0	12	9	100	0.035	3	N/A
PDZ668	PDZ748	25.0	3.0	14	9	100	0.035	4	2
PDZ339	PDZ445	25.0	4.0	12	9	100	0.035	3	N/A
PDZ669	PDZ749	25.0	4.0	14	9	100	0.035	4	2
PDZ680		25.0	4.5	12	10	110	0.035	4	2
PDZ362	PDZ446	25.0	5.0	12	9	100	0.035	3	N/A
PDZ670	PDZ750	25.0	5.0	14	9	100	0.035	4	2
PDZ374	PDZ447	25.0	6.0	12	9	100	0.035	3	N/A
PDZ671	PDZ751	25.0	6.0	14	9	100	0.035	4	2
S0082		25.0	8.0	12	9	100	0.035	3	N/A
S0061		26.0	2.0	12	9	100	0.035	3	N/A
PDZ672		26.0	2.0	14	9	100	0.035	4	2
S0060		26.0	4.0	12	9	100	0.035	3	N/A
S0070		26.0	4.0	14	9	100	0.035	4	2
PDZ683		26.0	4.5	13	10	110	0.035	4	2
S0087		26.0	6.0	12	9	100	0.035	3	N/A
PDZ673		28.0	2.0	16	11	100	0.035	3.5	2
	PDZ448	28.0	3.0	12	9	100	0.035	2	N/A
PDZ387	PDZ449	28.0	4.0	12	9	100	0.035	2	N/A
S0071	PDZ752	28.0	4.0	16	11	100	0.035	3.5	2
PDZ684		28.0	4.5	14	11	110	0.035	3.5	2
	PDZ450	28.0	5.0	12	9	100	0.035	2	N/A
	PDZ451	28.0	6.0	12	9	100	0.035	2	N/A
S0088		28.0	6.0	12	9	100	0.035	2	N/A
S0096		28.0	8.0	12	9	100	0.035	2	N/A
PDZ674		30.0	2.0	16	11	100	0.035	3	2
	PDZ452	30.0	3.0	13	9	100	0.035	2	N/A
	PDZ453	30.0	4.0	13	9	100	0.035	2	N/A
S0072	PDZ753	30.0	4.0	16	11	100	0.035	3	2
PDZ685		30.0	4.5	14	11	110	0.035	3	2
	PDZ454	30.0	5.0	13	9	100	0.035	2	N/A
S0079		30.0	5.0	16	11	100	0.035	3	2
	PDZ455	30.0	6.0	13	9	100	0.035	2	N/A
PDZ394		30.0	6.0	14	9	100	0.035	2	N/A

\* Select Z-MED/ Z-MED II catheters may be available in other usable lengths. Please refer to our website.

## Ordering information

Z-MED™ Line									
Z-MED™ Z-MED II™	Z-MED-X™ Z-MED II-X™	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length* (cm)	Guide Wire (Inches)	Rated Burst (ATM)	Nominal Pressure (ATM)
S0013		30.0	6.0	14	9	100	0.035	2	N/A
PDZ675		30.0	6.0	16	11	100	0.035	3	2
S0083		30.0	8.0	14	9	100	0.035	2	N/A
PDZ677		30.0	10.0	16	11	100	0.035	3	2
S0099		33.0	2.0	16	11	100	0.035	1.5	N/A
S0073		33.0	4.0	16	11	100	0.035	1.5	N/A
S0074		33.0	6.0	16	11	100	0.035	1.5	N/A
S0075		35.0	4.0	16	11	100	0.035	1.5	N/A
S0076		35.0	6.0	16	11	100	0.035	1.5	N/A
S0077		40.0	4.0	16	11	100	0.035	1	N/A
S0078		40.0	6.0	16	11	100	0.035	1	N/A

\* Select Z-MED/ Z-MED II catheters may be available in other usable lengths. Please refer to our website.

TYSHAK® Line									
TYSHAK® TYSHAK II®	TYSHAK MINI® TYSHAK-X™	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length* (cm)	Guide Wire (Inches)	Rated Burst (ATM)	Nominal Pressure (ATM)
PDC162		2.0	1.0	4	3.5	70	0.018	10	N/A
	S0095	4.0	1.0	3	2.5	65	0.014	6	4.5
PDC001		4.0	1.0	4	3.5	70	0.018	5	N/A
	PDC400	4.0	2.0	3	2.5	65	0.014	6	4.5
PDC021		4.0	2.0	4	3.5	70	0.018	5	N/A
PDC500		4.0	2.0	4	4	70	0.021	6	4.5
SN003		4.0	2.0	4	4	100	0.021	6	4.5
PDC172		4.0	2.0	5	4	70	0.018	5	N/A
PDC138		4.0	2.0	6	5.5	100	0.035	5	N/A
PDC141		4.0	3.0	6	5.5	100	0.035	5	N/A
PDC551		4.0	10.0	4	4	70	0.021	6	4.5
	S0097	5.0	1.0	3	2.5	65	0.014	6	4.5
PDC002		5.0	1.0	4	3.5	70	0.018	5	N/A
	PDC401	5.0	2.0	3	2.5	65	0.014	6	4.5
PDC073		5.0	2.0	4	3.5	70	0.018	5	N/A
PDC501		5.0	2.0	4	4	70	0.021	6	4.5
SN004		5.0	2.0	4	4	100	0.021	6	4.5
PDC003		5.0	2.0	6	5.5	70	0.035	5	N/A
PDC029		5.0	2.0	6	5.5	100	0.035	5	N/A
PDC022		5.0	3.0	4	3.5	70	0.018	5	N/A
S0020		5.0	3.0	4	4	70	0.021	6	4.5
PDC049		5.0	4.0	4	3.5	90	0.018	5	N/A
PDC035		5.0	4.0	5	4	70	0.018	5	N/A
	S0098	6.0	1.0	3	2.5	65	0.014	4	3.5
PDC004		6.0	1.0	4	3.5	70	0.018	5	N/A

\* Select TYSHAK catheters may be available in other usable lengths. Please refer to our website.

## Ordering information

TYSHAK® Line									
TYSHAK® TYSHAK II®	TYSHAK MINI® TYSHAK-X™	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length* (cm)	Guide Wire (Inches)	Rated Burst (ATM)	Nominal Pressure (ATM)
PDC173		6.0	1.5	4	3.5	70	0.018	5	N/A
	PDC402	6.0	2.0	3	2.5	65	0.014	4	3.5
PDC061		6.0	2.0	4	3.5	70	0.018	5	N/A
PDC502		6.0	2.0	4	4	70	0.021	4	3.5
SN005		6.0	2.0	4	4	100	0.021	4	3.5
PDC088		6.0	2.0	5	4	70	0.021	5	N/A
PDC062		6.0	2.0	5	5	70	0.025	5	N/A
PDC005		6.0	2.0	6	5.5	70	0.035	5	N/A
PDC174		6.0	2.0	6	5.5	70	0.018	5	N/A
PDC030		6.0	2.0	6	5.5	100	0.035	5	N/A
PDC156		6.0	3.0	4	3.5	70	0.018	5	N/A
S0021		6.0	3.0	4	4	70	0.021	4	3.5
PDC023		6.0	3.0	6	5	70	0.025	5	N/A
PDC202		6.0	3.0	6	5.5	100	0.035	5	N/A
PDC087		6.0	4.0	5	5	90	0.025	5	N/A
PDC036		6.0	4.0	6	5	70	0.025	5	N/A
PDC102		6.0	5.0	6	5.5	70	0.035	5	N/A
PDC050		6.0	6.0	6	5	90	0.025	5	N/A
PDC103		6.0	8.0	6	5.5	100	0.035	5	N/A
	S0101	7.0	1.0	3	2.5	65	0.014	4	3.5
PDC006		7.0	1.5	5	4	70	0.021	5	N/A
	PDC403	7.0	2.0	3	2.5	65	0.014	4	3.5
PDC175		7.0	2.0	4	3.5	70	0.018	5	N/A
PDC503		7.0	2.0	4	4	70	0.021	4	3.5
SN006		7.0	2.0	4	4	100	0.021	4	3.5
PDC109		7.0	2.0	5	4	70	0.021	5	N/A
PDC126		7.0	2.0	5	4	70	0.018	5	N/A
PDC176		7.0	2.0	6	5.5	70	0.025	5	N/A
PDC124		7.0	2.0	7	6	75	0.035	5	N/A
PDC509		7.0	3.0	4	4	70	0.021	4	3.5
SN010		7.0	3.0	4	4	100	0.021	4	3.5
PDC118		7.0	3.0	5	4	70	0.021	5	N/A
PDC157		7.0	3.0	5	4	70	0.018	5	N/A
PDC024		7.0	3.0	6	5.5	70	0.025	5	N/A
PDC037		7.0	4.0	6	5	70	0.025	5	N/A
	S0102	8.0	1.0	3	2.5	65	0.014	4	3.5
PDC007		8.0	1.5	5	5	70	0.021	5	N/A
	PDC404	8.0	2.0	3	2.5	65	0.014	4	3.5
PDC504		8.0	2.0	4	4	70	0.021	4	3.5
SN007		8.0	2.0	4	4	100	0.021	4	3.5
PDC127		8.0	2.0	5	4	70	0.018	5	N/A
PDC177		8.0	2.0	5	5	70	0.025	5	N/A

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## Ordering information

TYSHAK® Line									
TYSHAK®	TYSHAK MINI®	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length* (cm)	Guide Wire (Inches)	Rated Burst (ATM)	Nominal Pressure (ATM)
TYSHAK II®	TYSHAK-X™								
PDC063		8.0	2.0	6	5.5	70	0.025	5	N/A
PDC045		8.0	2.0	6	5.5	100	0.035	5	N/A
	PDC300	8.0	2.0	6	6	100	0.035	5	N/A
PDC510		8.0	3.0	4	4	70	0.021	4	3.5
SN011		8.0	3.0	4	4	100	0.021	4	3.5
PDC178		8.0	3.0	5	4	70	0.025	5	N/A
PDC115		8.0	3.0	5	5	70	0.018	5	N/A
PDC025		8.0	3.0	6	5.5	70	0.035	5	N/A
PDC031		8.0	3.0	6	5.5	70	0.025	5	N/A
PDC008		8.0	3.0	6	5.5	100	0.035	5	N/A
	PDC301	8.0	3.0	6	6	100	0.035	5	N/A
S0029		8.0	4.0	4	4	70	0.021	4	3.5
PDC179		8.0	4.0	5	5	70	0.025	5	N/A
PDC038		8.0	4.0	6	5	70	0.025	5	N/A
PDC051		8.0	4.0	6	5.5	70	0.025	5	N/A
PDC067		8.0	4.0	6	5.5	100	0.035	5	N/A
	PDC302	8.0	4.0	6	6	100	0.035	5	N/A
S0032		8.0	5.0	4	4	70	0.021	4	3.5
S0011		8.0	5.0	6	5.5	70	0.035	5	N/A
	PDC303	8.0	5.0	6	6	100	0.035	5	N/A
S0030		8.0	6.0	4	4	70	0.021	4	3.5
PDC052		8.0	6.0	6	5.5	70	0.025	5	N/A
PDC068		8.0	6.0	6	5.5	100	0.035	5	N/A
	PDC304	8.0	6.0	6	6	100	0.035	5	N/A
PDC147		8.0	8.0	6	5	100	0.021	5	N/A
PDC069		8.0	8.0	6	5.5	100	0.035	5	N/A
	S0103	9.0	1.0	4	3.5	65	0.014	3.5	3
	PDC405	9.0	2.0	4	3.5	65	0.014	3.5	3
S0007		9.0	2.0	5	5	90	0.025	3.5	3
SN012		9.0	2.0	5	5	100	0.025	5	N/A
PDC155		9.0	2.0	5	5	110	0.025	5	N/A
PDC009		9.0	2.0	6	5.5	70	0.025	5	N/A
PDC113		9.0	2.0	6	5.5	100	0.035	5	N/A
	PDC305	9.0	2.0	6	6	100	0.035	5	N/A
PDC505		9.0	3.0	5	5	90	0.025	3.5	3
SN008		9.0	3.0	5	5	100	0.025	3.5	3
PDC116		9.0	3.0	6	5	70	0.018	5	N/A
PDC026		9.0	3.0	6	5.5	70	0.035	5	N/A
PDC180		9.0	3.0	6	5.5	70	0.025	5	N/A
	PDC306	9.0	3.0	6	6	100	0.035	5	N/A
	PDC407	9.0	4.0	4	3.5	65	0.014	3.5	3
PDC086		9.0	4.0	6	5.5	100	0.035	5	N/A

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## Ordering information

TYSHAK® Line									
TYSHAK®	TYSHAK MINI®	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length* (cm)	Guide Wire (Inches)	Rated Burst (ATM)	Nominal Pressure (ATM)
TYSHAK II®	TYSHAK-X™								
	PDC307	9.0	4.0	6	6	100	0.035	5	N/A
	PDC308	9.0	5.0	6	6	100	0.035	5	N/A
	PDC309	9.0	6.0	6	6	100	0.035	5	N/A
	S0104	10.0	1.0	4	3.5	65	0.014	3.5	3
	PDC406	10.0	2.0	4	3.5	65	0.014	3.5	3
S0003		10.0	2.0	5	5	90	0.025	3.5	3
PDC010		10.0	2.0	6	5.5	85	0.025	5	N/A
PDC064		10.0	2.0	6	5.5	85	0.035	5	N/A
PDC114		10.0	2.0	6	5.5	100	0.035	5	N/A
	PDC310	10.0	2.0	6	6	100	0.035	5	N/A
PDC181		10.0	2.0	7	6	100	0.035	5	N/A
PDC506		10.0	3.0	5	5	90	0.025	3.5	3
SN009		10.0	3.0	5	5	100	0.025	3.5	3
PDC130		10.0	3.0	6	4	70	0.018	5	N/A
PDC163		10.0	3.0	6	5.5	70	0.025	5	N/A
PDC117		10.0	3.0	6	5.5	100	0.035	5	N/A
PDC081		10.0	3.0	6	6	80	0.025	5	N/A
PDC080		10.0	3.0	6	6	100	0.025	5	N/A
	PDC311	10.0	3.0	6	6	100	0.035	5	N/A
PDC164		10.0	3.0	7	6	85	0.025	5	N/A
PDC011		10.0	3.0	7	6	100	0.035	5	N/A
	PDC408	10.0	4.0	4	3.5	65	0.014	3.5	3
S0001		10.0	4.0	5	5	90	0.025	3.5	3
PDC044		10.0	4.0	6	5.5	70	0.025	5	N/A
PDC053		10.0	4.0	6	5.5	100	0.025	5	N/A
PDC182		10.0	4.0	6	5.5	100	0.035	5	N/A
	PDC312	10.0	4.0	6	6	100	0.035	5	N/A
PDC012		10.0	4.0	7	6	100	0.035	5	N/A
S0031		10.0	5.0	5	5	90	0.025	3.5	3
PDC132		10.0	5.0	6	5	70	0.025	5	N/A
PDC089		10.0	5.0	6	5.5	85	0.025	5	N/A
	PDC313	10.0	5.0	6	6	100	0.035	5	N/A
PDC047		10.0	5.0	7	6	100	0.035	5	N/A
PDC054		10.0	6.0	6	5.5	100	0.035	5	N/A
PDC055		10.0	6.0	6	5.5	100	0.025	5	N/A
S0009		10.0	6.0	6	6	100	0.025	3.5	3
	PDC314	10.0	6.0	6	6	100	0.035	5	N/A
PDC183		10.0	6.0	7	6	100	0.035	5	N/A
PDC146		10.0	8.0	6	5	100	0.025	5	N/A
PDC074		10.0	8.0	7	6	100	0.025	5	N/A
PDC129		10.0	8.0	7	6	100	0.035	5	N/A
PDC075		10.0	10.0	7	6	100	0.025	5	N/A

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## Ordering information

TYSHAK® Line									
TYSHAK®	TYSHAK MINI®	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length* (cm)	Guide Wire (Inches)	Rated Burst (ATM)	Nominal Pressure (ATM)
TYSHAK II®	TYSHAK-X™								
PDC090		10.0	10.0	7	6	100	0.035	5	N/A
S0086		11.0	2.0	5	5	90	0.025	3.5	3
SN11290		11.0	2.0	5	5	90	0.025	3.5	3
S0017		11.0	3.0	5	5	90	0.025	3.5	3
PDC150		11.0	3.0	6	5	70	0.018	4.5	N/A
PDC159		11.0	3.0	7	6	100	0.035	4.5	N/A
S0002		11.0	4.0	5	5	90	0.025	3.5	3
S0008		12.0	2.0	5	5	90	0.025	3.5	3
S0014		12.0	2.0	6	6	90	0.035	3.5	3
S0100		12.0	2.0	6	6	100	0.035	3.5	3
PDC166		12.0	2.0	7	5.5	85	0.025	4.5	N/A
PDC148		12.0	2.0	7	5.5	100	0.025	4.5	N/A
PDC186		12.0	2.0	7	5.5	100	0.035	4.5	N/A
PDC167		12.0	2.0	7	6	85	0.025	4.5	N/A
PDC032	PDC315	12.0	2.0	7	6	100	0.035	4.5	N/A
PDC165		12.0	2.5	7	5.5	85	0.025	4.5	N/A
PDC184		12.0	2.5	7	5.5	100	0.035	4.5	N/A
PDC013		12.0	2.5	7	6	85	0.025	4.5	N/A
PDC185		12.0	2.5	7	6	100	0.035	4.5	N/A
PDC507		12.0	3.0	5	5	90	0.025	3.5	3
PDC169		12.0	3.0	7	5.5	85	0.025	4.5	N/A
PDC149		12.0	3.0	7	5.5	100	0.025	4.5	N/A
PDC188		12.0	3.0	7	5.5	100	0.035	4.5	N/A
PDC170		12.0	3.0	7	6	85	0.025	4.5	N/A
PDC014		12.0	3.0	7	6	100	0.035	4.5	N/A
PDC133		12.0	3.0	7	6	100	0.025	4.5	N/A
PDC079		12.0	3.0	7	6	100	0.035	4.5	N/A
	PDC316	12.0	3.0	7	6	100	0.035	4.5	N/A
PDC168		12.0	3.5	7	5.5	85	0.025	4.5	N/A
PDC187		12.0	3.5	7	5.5	100	0.035	4.5	N/A
PDC508		12.0	4.0	6	6	90	0.035	3.5	3
PDC171		12.0	4.0	7	5.5	85	0.025	4.5	N/A
PDC015		12.0	4.0	7	6	100	0.035	4.5	N/A
PDC134		12.0	4.0	7	6	100	0.025	4.5	N/A
	PDC317	12.0	4.0	7	6	100	0.035	4.5	N/A
S0033		12.0	5.0	5	5	90	0.025	3.5	3
PDC039	PDC318	12.0	5.0	7	6	100	0.035	4.5	N/A
S0004		12.0	6.0	6	6	90	0.035	3.5	3
PDC056	PDC319	12.0	6.0	7	6	100	0.035	4.5	N/A
PDC057		12.0	7.0	7	6	100	0.035	4.5	N/A
PDC091		12.0	8.0	7	6	100	0.035	4.5	N/A
S0015		12.0	10.0	7	6	100	0.035	4.5	N/A

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## Ordering information

TYSHAK® Line									
TYSHAK® TYSHAK II®	TYSHAK MINI® TYSHAK-X™	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length* (cm)	Guide Wire (Inches)	Rated Burst (ATM)	Nominal Pressure (ATM)
SO035		13.0	2.0	6	6	100	0.035	3	2.5
SO036		13.0	3.0	6	6	100	0.035	3	2.5
SO010		13.0	3.0	7	6	100	0.035	4	N/A
SO034		13.0	4.0	6	6	100	0.035	3	2.5
PDC152		13.0	4.0	7	6	100	0.035	4	N/A
PDC098		13.0	5.0	7	6	100	0.035	4	N/A
SO069		13.0	5.0	6	6	100	0.035	3	2.5
PDC078		13.0	5.0	7	6	100	0.035	4	N/A
PDC158		13.0	6.0	7	6	100	0.035	4	N/A
SO018		14.0	2.0	7	7	100	0.035	3	2
PDC511		14.0	3.0	7	7	100	0.035	3	2
PDC190	PDC320	14.0	3.0	8	7	100	0.035	3.5	N/A
PDC189		14.0	3.5	8	7	100	0.035	3.5	N/A
PDC191		14.0	4.0	7	6	100	0.035	3.5	N/A
PDC512		14.0	4.0	7	7	100	0.035	3	2
PDC107		14.0	4.0	8	6	100	0.035	3.5	N/A
PDC192	PDC321	14.0	4.0	8	7	100	0.035	3.5	N/A
PDC513		14.0	5.0	7	7	100	0.035	3	2
	PDC322	14.0	5.0	8	7	100	0.035	3.5	N/A
PDC153		14.0	5.0	9	7	100	0.035	3.5	N/A
PDC514		14.0	6.0	7	7	100	0.035	3	2
PDC193	PDC323	14.0	6.0	8	7	100	0.035	3.5	N/A
SO019		14.0	8.0	7	7	100	0.035	3	2
PDC095		15.0	2.0	7	6	100	0.035	3.5	N/A
PDC033		15.0	2.0	8	7	100	0.035	3.5	N/A
PDC515		15.0	3.0	7	7	100	0.035	3	2
PDC016	PDC324	15.0	3.0	8	7	100	0.035	3.5	N/A
PDC516		15.0	4.0	7	7	100	0.035	3	2
PDC046	PDC325	15.0	4.0	8	7	100	0.035	3.5	N/A
PDC128		15.0	4.0	9	8	100	0.035	3.5	N/A
PDC517		15.0	5.0	7	7	100	0.035	3	2
PDC040	PDC326	15.0	5.0	8	7	100	0.035	3.5	N/A
PDC518		15.0	6.0	7	7	100	0.035	3	2
PDC058	PDC327	15.0	6.0	8	7	100	0.035	3.5	N/A
PDC119		15.0	7.0	8	7	100	0.035	3.5	N/A
PDC121		15.0	7.0	8	7	100	0.035	3.5	N/A
PDC092		15.0	8.0	8	7	100	0.035	3.5	N/A
PDC070		15.0	10.0	8	7	100	0.035	3.5	N/A
SN002		16.0	2.0	7	7	100	0.035	2.5	2
PDC519		16.0	3.0	7	7	100	0.035	2.5	2
PDC195	PDC328	16.0	3.0	8	7	100	0.035	3.5	N/A
PDC194		16.0	3.5	8	7	100	0.035	3.5	N/A

\* Select TYSHAK catheters may be available in other usable lengths. Please refer to our website.

## Ordering information

TYSHAK® Line									
TYSHAK®	TYSHAK MINI®	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length* (cm)	Guide Wire (Inches)	Rated Burst (ATM)	Nominal Pressure (ATM)
TYSHAK II®	TYSHAK-X™								
PDC520		16.0	4.0	7	7	100	0.035	2.5	2
PDC196	PDC329	16.0	4.0	8	7	100	0.035	3.5	N/A
PDC521		16.0	5.0	7	7	100	0.035	2.5	2
	PDC330	16.0	5.0	8	7	100	0.035	3.5	N/A
PDC522		16.0	6.0	7	7	100	0.035	2.5	2
PDC197	PDC331	16.0	6.0	8	7	100	0.035	3.5	N/A
PDC144		16.0	6.0	9	7	100	0.035	3.5	N/A
S0037		16.0	8.0	7	7	100	0.035	2.5	2
PDC125		16.0	9.0	9	7	100	0.035	3.5	N/A
PDC523		17.0	3.0	7	7	100	0.035	2.5	2
PDC524		17.0	4.0	7	7	100	0.035	2.5	2
PDC525		17.0	5.0	7	7	100	0.035	2.5	2
S0012		17.0	5.0	9	7	100	0.035	2	N/A
PDC526		17.0	6.0	7	7	100	0.035	2.5	2
PDC151		17.0	6.0	9	7	100	0.035	2	N/A
S0038		17.0	8.0	7	7	100	0.035	2.5	2
PDC123		17.0	8.0	9	8	100	0.035	2	N/A
PDC094		18.0	2.0	8	7	100	0.035	2	N/A
PDC034		18.0	2.0	9	8	100	0.035	2	N/A
PDC527		18.0	3.0	8	8	100	0.035	2	1.5
PDC017	PDC332	18.0	3.0	9	8	100	0.035	2	N/A
PDC528		18.0	4.0	8	8	100	0.035	2	1.5
PDC122		18.0	4.0	9	7	80	0.035	2	N/A
PDC097		18.0	4.0	9	8	85	0.035	2	N/A
PDC076	PDC333	18.0	4.0	9	8	100	0.035	2	N/A
PDC529		18.0	5.0	8	8	100	0.035	2	1.5
PDC041	PDC334	18.0	5.0	9	8	100	0.035	2	N/A
PDC530		18.0	6.0	8	8	100	0.035	2	1.5
PDC027	PDC335	18.0	6.0	9	8	100	0.035	2	N/A
PDC093		18.0	8.0	9	8	100	0.035	2	N/A
PDC135		18.0	8.0	9	8	100	0.035	2	N/A
PDC059		18.0	10.0	10	8	100	0.035	2	N/A
PDC136		19.0	6.0	9	8	100	0.035	2	N/A
PDC099		19.0	9.0	9	8	100	0.035	2	N/A
PDC137		19.0	9.0	9	8	100	0.035	2	N/A
SN001		20.0	2.0	8	8	100	0.035	2	1.5
PDC531		20.0	3.0	8	8	100	0.035	2	1.5
PDC042	PDC336	20.0	3.0	10	8	100	0.035	2	N/A
PDC532		20.0	4.0	8	8	100	0.035	2	1.5
PDC198		20.0	4.0	9	8	100	0.035	2	N/A
PDC018	PDC337	20.0	4.0	10	8	100	0.035	2	N/A
PDC533		20.0	5.0	8	8	100	0.035	2	1.5

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## Ordering information

TYSHAK® Line									
TYSHAK® TYSHAK II®	TYSHAK MINI® TYSHAK-X™	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length* (cm)	Guide Wire (Inches)	Rated Burst (ATM)	Nominal Pressure (ATM)
PDC048	PDC338	20.0	5.0	10	8	100	0.035	2	N/A
PDC534		20.0	6.0	8	8	100	0.035	2	1.5
PDC199		20.0	6.0	9	8	100	0.035	2	N/A
PDC028	PDC339	20.0	6.0	10	8	100	0.035	2	N/A
PDC140		20.0	8.0	9	8	100	0.035	2	N/A
PDC104		20.0	8.0	10	8	100	0.035	2	N/A
PDC100		20.0	9.0	9	8	100	0.035	2	N/A
PDC111		20.0	9.0	9	8	100	0.035	2	N/A
PDC060		20.0	10.0	10	8	100	0.035	2	N/A
SN013		22.0	2.0	8	8	100	0.035	2	1.5
PDC535		22.0	3.0	8	8	100	0.035	2	1.5
	PDC340	22.0	3.0	10	9	100	0.035	2	N/A
PDC065		22.0	3.0	11	9	100	0.035	2	N/A
PDC536		22.0	4.0	8	8	100	0.035	2	1.5
	PDC341	22.0	4.0	10	9	100	0.035	2	N/A
PDC019		22.0	4.0	11	9	100	0.035	2	N/A
PDC537		22.0	5.0	8	8	100	0.035	2	1.5
	PDC342	22.0	5.0	10	9	100	0.035	2	N/A
PDC108		22.0	5.5	10	9	100	0.035	2	N/A
PDC538		22.0	6.0	8	8	100	0.035	2	1.5
PDC200	PDC343	22.0	6.0	10	9	100	0.035	2	N/A
PDC131		22.0	6.0	11	7	100	0.035	2	N/A
PDC139		22.0	6.0	11	9	100	0.035	2	N/A
PDC539		23.0	3.0	9	9	100	0.035	2	1.5
PDC540		23.0	4.0	9	9	100	0.035	2	1.5
PDC541		23.0	5.0	9	9	100	0.035	2	1.5
PDC120		23.0	5.5	11	9	100	0.035	2	N/A
PDC542		23.0	6.0	9	9	100	0.035	2	1.5
PDC145		23.0	6.0	11	9	100	0.035	2	N/A
PDC543		25.0	3.0	9	9	100	0.035	1.5	1
	PDC344	25.0	3.0	11	9	100	0.035	1.5	N/A
PDC544		25.0	4.0	9	9	100	0.035	1.5	1
PDC020	PDC345	25.0	4.0	11	9	100	0.035	1.5	N/A
PDC545		25.0	5.0	9	9	100	0.035	1.5	1
	PDC346	25.0	5.0	11	9	100	0.035	1.5	N/A
PDC546		25.0	6.0	9	9	100	0.035	1.5	1
PDC201		25.0	6.0	10	9	100	0.035	1.5	N/A
PDC072	PDC347	25.0	6.0	11	9	100	0.035	1.5	N/A
PDC547		30.0	3.0	10	9	100	0.035	1.5	1
PDC548		30.0	4.0	10	9	100	0.035	1.5	1
PDC549		30.0	5.0	10	9	100	0.035	1.5	1
PDC550		30.0	6.0	10	9	100	0.035	1.5	1
PDC552		30.0	10.0	10	9	100	0.035	1.5	1

\* Select TYSHAK catheters may be available in other usable lengths. Please refer to our website.

## Ordering information

NuCLEUS™ Line								
NuCLEUS™ TYSHAK NuCLEUS®	NuCLEUS-X™	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length (cm)	Guide Wire (Inches)	Rated Burst (ATM)
TN001		4.0	2.0	6	5.5	100	0.035	5
TN002		4.0	3.0	6	5.5	100	0.035	5
TN003		5.0	2.0	6	5.5	100	0.035	5
TN004		5.0	3.0	6	5.5	100	0.035	5
TN005		5.0	4.0	6	5.5	100	0.035	5
TN006		6.0	2.0	6	5.5	100	0.035	5
TN007		6.0	3.0	6	5.5	100	0.035	5
TN008		6.0	4.0	6	5.5	100	0.035	5
TN009		7.0	2.0	6	5.5	100	0.035	5
TN010		7.0	3.0	6	5.5	100	0.035	5
TN011		7.0	4.0	6	5.5	100	0.035	5
TN012		8.0	2.0	6	5.5	100	0.035	5
TN013		8.0	3.0	6	5.5	100	0.035	5
TN014		8.0	4.0	6	5.5	100	0.035	5
TN015		9.0	2.0	6	5.5	100	0.035	5
TN016		9.0	3.0	6	5.5	100	0.035	5
TN017		9.0	4.0	6	5.5	100	0.035	5
TN018		10.0	2.0	7	6	100	0.035	5
TN019		10.0	3.0	7	6	100	0.035	5
TN020		10.0	4.0	7	6	100	0.035	5
PVN218		10.0	3.0	7	6	110	0.035	9
PVN219		10.0	4.0	7	6	110	0.035	9
PVN236		10.0	5.0	7	6	110	0.035	9
PVN237		10.0	6.0	7	6	110	0.035	9
TN021		12.0	2.0	7	6	100	0.035	4.5
TN022		12.0	3.0	7	6	100	0.035	4.5
TN023		12.0	4.0	7	6	100	0.035	4.5
PVN220		12.0	3.0	7	6	110	0.035	7
PVN221		12.0	3.0	8	6	110	0.035	7
PVN222		12.0	4.0	7	6	110	0.035	7
PVN223		12.0	4.0	8	6	110	0.035	7
PVN238		12.0	5.0	8	6	110	0.035	7
PVN239		12.0	6.0	8	6	110	0.035	7
TN024		14.0	3.0	8	6	100	0.035	3.5
TN025		14.0	4.0	8	6	100	0.035	3.5
PVN224		14.0	3.0	9	7	110	0.035	6
PVN225		14.0	4.0	9	7	110	0.035	6
PVN240		14.0	5.0	9	7	110	0.035	6
PVN241		14.0	6.0	9	7	110	0.035	6
TN026		15.0	3.0	8	7	100	0.035	3.5
TN027		15.0	4.0	8	7	100	0.035	3.5
TN028		16.0	3.0	8	7	100	0.035	3.5
TN029		16.0	4.0	8	7	100	0.035	3.5

## Ordering information

NuCLEUS™ Line								
NuCLEUS™ TYSHAK NuCLEUS®	NuCLEUS-X™	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length (cm)	Guide Wire (Inches)	Rated Burst (ATM)
PVN226		16.0	3.0	9	7	110	0.035	5
PVN227		16.0	4.0	9	7	110	0.035	5
PVN242		16.0	5.0	9	7	110	0.035	5
PVN243		16.0	6.0	9	7	110	0.035	5
TN030		18.0	3.0	9	8	100	0.035	3
TN031		18.0	4.0	9	8	100	0.035	3
PVN228		18.0	3.0	10	8	110	0.035	4
PVN229		18.0	4.0	10	8	110	0.035	4
PVN244		18.0	5.0	10	8	110	0.035	4
PVN245		18.0	6.0	10	8	110	0.035	4
	PVN400	18.0	4.0	10	9	110	0.035	4
	PVN401	18.0	5.0	10	9	110	0.035	4
	PVN402	18.0	6.0	10	9	110	0.035	4
TN032		20.0	3.0	10	8	100	0.035	2
TN033		20.0	4.0	10	8	100	0.035	2
PVN230		20.0	4.0	12	8	110	0.035	4
PVN246		20.0	5.0	12	8	110	0.035	4
PVN247		20.0	6.0	12	8	110	0.035	4
	PVN403	20.0	4.0	12	9	110	0.035	4
	PVN404	20.0	5.0	12	9	110	0.035	4
	PVN405	20.0	6.0	12	9	110	0.035	4
TN034		22.0	3.0	11	9	100	0.035	2
TN035		22.0	4.0	11	9	100	0.035	2
PVN231		22.0	4.0	12	9	110	0.035	4
PVN248		22.0	5.0	12	9	110	0.035	4
PVN249		22.0	6.0	12	9	110	0.035	4
	PVN406	22.0	4.0	12	9	110	0.035	3
	PVN407	22.0	5.0	12	9	110	0.035	3
	PVN408	22.0	6.0	12	9	110	0.035	3
TN036		25.0	3.0	11	9	100	0.035	2
TN037		25.0	4.0	11	9	100	0.035	2
PVN232		25.0	4.0	12	9	110	0.035	4
PVN250		25.0	5.0	12	9	110	0.035	4
PVN251		25.0	6.0	12	9	110	0.035	4
	PVN409	25.0	4.0	12	9	110	0.035	3
	PVN410	25.0	5.0	12	9	110	0.035	3
	PVN411	25.0	6.0	12	9	110	0.035	3
PVN233		28.0	4.0	12	9	110	0.035	2
PVN234		28.0	4.0	14	9	110	0.035	2
PVN252		28.0	5.0	14	9	110	0.035	2
PVN253		28.0	6.0	14	9	110	0.035	2
	PVN412	28.0	4.0	12	9	110	0.035	2

## Ordering information

## NuCLEUS™ Line

NuCLEUS™ TYSHAK NuCLEUS®	NuCLEUS-X™	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length (cm)	Guide Wire (Inches)	Rated Burst (ATM)
	PVN413	28.0	5.0	12	9	110	0.035	2
	PVN414	28.0	6.0	12	9	110	0.035	2
PVN235		30.0	4.0	14	9	110	0.035	2
PVN254		30.0	5.0	14	9	110	0.035	2
PVN255		30.0	6.0	14	9	110	0.035	2
	PVN415	30.0	4.0	14	9	110	0.035	2
	PVN416	30.0	5.0	14	9	110	0.035	2
	PVN417	30.0	6.0	14	9	110	0.035	2

## COEfficient™

Usable Lengths 75 cm	Usable Lengths 135 cm	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Guide Wire (Inches)	Rated Burst (ATM)
COE101	COE128	4.0	2.0	4	3.5	0.018	13
COE102	COE137	4.0	3.0	4	3.5	0.018	13
COE103	COE138	4.0	4.0	4	3.5	0.018	13
COE104	COE129	5.0	2.0	4	3.5	0.018	12
COE105	COE139	5.0	3.0	4	3.5	0.018	12
COE106	COE140	5.0	4.0	4	3.5	0.018	12
COE107	COE130	6.0	2.0	5	3.5	0.018	12
COE108	COE141	6.0	3.0	5	3.5	0.018	12
COE109	COE142	6.0	4.0	5	3.5	0.018	12
COE110	COE131	7.0	2.0	5	3.5	0.018	11
COE111	COE143	7.0	3.0	5	3.5	0.018	11
COE112	COE144	7.0	4.0	5	3.5	0.018	11
COE113	COE132	8.0	2.0	6	3.5	0.018	10
COE114	COE145	8.0	3.0	6	3.5	0.018	10
COE115	COE146	8.0	4.0	6	3.5	0.018	10
SN032	N/A	9.0	2.0	5	3.5	0.018	10
COE116	COE133	9.0	2.0	6	3.5	0.018	10
COE117	COE147	9.0	3.0	6	3.5	0.018	10
COE118	COE148	9.0	4.0	6	3.5	0.018	10
COE119	COE134	10.0	2.0	6	3.5	0.018	10
COE120	COE149	10.0	3.0	6	3.5	0.018	10
COE121	COE150	10.0	4.0	6	3.5	0.018	10
COE122	COE135	11.0	2.0	6	3.5	0.018	8
COE123	COE151	11.0	3.0	6	3.5	0.018	8
COE124	COE152	11.0	4.0	6	3.5	0.018	8
COE125	COE136	12.0	2.0	6	3.5	0.018	7
COE126	COE153	12.0	3.0	7	3.5	0.018	7
COE127	COE154	12.0	4.0	7	3.5	0.018	7

## Ordering information

Mullins-X™							
REF	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length (cm)	Guide Wire (Inches)	Rated Burst (ATM)
PTM440	12.0	3.0	9	7	100	0.035	14
PTM441	12.0	4.0	9	7	100	0.035	14
PTM442	14.0	3.0	10	8	100	0.035	14
PTM443	14.0	4.0	10	8	100	0.035	14
PTM444	15.0	3.0	10	8	100	0.035	13
PTM445	15.0	4.0	10	8	100	0.035	13
PTM446	16.0	3.0	11	8	100	0.035	12
PTM447	16.0	4.0	11	8	100	0.035	12
PTM448	18.0	3.0	12	8	100	0.035	12
PTM449	18.0	4.0	12	8	100	0.035	12
PTM450	20.0	3.0	13	8	100	0.035	11
PTM451	20.0	4.0	13	8	100	0.035	11
PTM452	22.0	3.0	14	9	100	0.035	10
PTM453	22.0	4.0	14	9	100	0.035	10
PTM456	23.0	3.0	14	9	100	0.035	9
PTM457	23.0	4.0	14	9	100	0.035	9
PTM454	25.0	3.0	16	9	100	0.035	9
PTM455	25.0	4.0	16	9	100	0.035	9

Bonhoeffer Multi-Track Mitral Dilatation Kit							
REF Kit	Part No. included in Kit	Balloon Diameter (mm)	Balloon Length (cm)	Shaft Size (FR)	Usable Length (cm)	Guide Wire (Inches)	Rated Burst (ATM)
BMK14	MTK145	14.0	5.0	7	80	0.035	6
	REMC145	14.0	5.0	7	80	0.035	6
	MMTA0580	N/A	N/A	5	80	0.035	1000 PSI
	D1470	N/A	N/A	14	70	0.035	N/A
	J3FC-SS C 210-035	N/A	N/A	0	210	0.035	N/A
BMK16	MTK165	16.0	5.0	7	80	0.035	5
	REMC165	16.0	5.0	7	80	0.035	5
	MMTA0580	N/A	N/A	5	80	0.035	1000 PSI
	D1470	N/A	N/A	14	70	0.035	N/A
	J3FC-SS C 210-035	N/A	N/A	0	210	0.035	N/A
BMK18	MTK185	18.0	5.0	7	80	0.035	4
	REMC185	18.0	5.0	7	80	0.035	4
	MMTA0580	N/A	N/A	5	80	0.035	1000 PSI
	D1470	N/A	N/A	14	70	0.035	N/A
	J3FC-SS C 210-035	N/A	N/A	0	210	0.035	N/A
BMK20	MTK205	20.0	5.0	7	80	0.035	4
	REMC205	20.0	5.0	7	80	0.035	4
	MMTA0580	N/A	N/A	5	80	0.035	1000 PSI
	D1470	N/A	N/A	14	70	0.035	N/A
	J3FC-SS C 210-035	N/A	N/A	0	210	0.035	N/A

• 1 x Multi-Track balloon dilatation catheter (MTK) (14, 16, 18 or 20 mm in diameter) x 5 cm in length

• 1 x matched Rapid Exchange balloon dilatation catheter (REMC)  
• 1 x 14 F, 70 cm Dilator (D)

• 1 x Multi-Track™ angiographic catheter (5 F X 80 cm) (MMTA)  
• 1 x Super Stiff, preformed 0.035" guidewire (– SS)



## Ordering information

Z-5™							
REF	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length (cm)	Guide Wire (Inches)	Maximum Volume (CC)
SPT002	9.5	0.95	5	4	50	0.014	1
SPT003	13.5	1.35	6	5	50	0.021	2

PTS®							
REF	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length (cm)	Guide Wire (Inches)	Rated Burst (ATM)
PTS203	20.0	3.0	8	8	80	0.035	1.5
PTS204	20.0	3.0	8	8	110	0.035	1.5
PTS253	25.0	3.0	8	8	80	0.035	1.5
PTS254	25.0	3.0	8	8	110	0.035	1.5
PTS303	30.0	3.0	8	8	80	0.035	1.0
PTS304	30.0	4.0	8	8	80	0.035	1.0
PTS305	30.0	5.0	8	8	80	0.035	1.0
PTS306	30.0	3.0	8	8	110	0.035	1.0
PTS307	30.0	4.0	8	8	110	0.035	1.0
PTS308	30.0	5.0	8	8	110	0.035	1.0
PTS403	40.0	3.0	9	8	80	0.035	0.5
PTS404	40.0	4.0	9	8	80	0.035	0.5
PTS405	40.0	5.0	9	8	80	0.035	0.5
PTS406	40.0	3.0	9	8	110	0.035	0.5
PTS407	40.0	4.0	9	8	110	0.035	0.5
PTS408	40.0	5.0	9	8	110	0.035	0.5

PTS-X™							
REF	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length (cm)	Guide Wire (Inches)	Rated Burst (ATM)
PTSX101	10.0	1.0	6	6	80	0.035	2.5
PTSX102	10.0	2.0	6	6	80	0.035	2.5
PTSX103	10.0	3.0	6	6	80	0.035	2.5
PTSX104	10.0	1.0	6	6	110	0.035	2.5
PTSX105	10.0	2.0	6	6	110	0.035	2.5
PTSX106	10.0	3.0	6	6	110	0.035	2.5
PTSX122	12.0	2.0	6	6	80	0.035	2.0
PTSX123	12.0	3.0	6	6	80	0.035	2.0
PTSX124	12.0	2.0	6	6	110	0.035	2.0
PTSX125	12.0	3.0	6	6	110	0.035	2.0
PTSX152	15.0	2.0	6	6	80	0.035	2.0
PTSX153	15.0	3.0	6	6	80	0.035	2.0
PTSX154	15.0	4.0	6	6	80	0.035	2.0
PTSX155	15.0	2.0	6	6	110	0.035	2.0
PTSX156	15.0	3.0	6	6	110	0.035	2.0
PTSX157	15.0	4.0	6	6	110	0.035	2.0
PTSX203	20.0	3.0	8	8	80	0.035	1.5

## Ordering information

PTS-X™							
REF	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length (cm)	Guide Wire (Inches)	Rated Burst (ATM)
PTSX204	20.0	4.0	8	8	80	0.035	1.5
PTSX205	20.0	3.0	8	8	110	0.035	1.5
PTSX206	20.0	4.0	8	8	110	0.035	1.5
PTSX253	25.0	3.0	8	8	80	0.035	1.5
PTSX254	25.0	4.0	8	8	80	0.035	1.5
PTSX255	25.0	3.0	8	8	110	0.035	1.5
PTSX256	25.0	4.0	8	8	110	0.035	1.5
PTSX303	30.0	3.0	8	8	80	0.035	1.0
PTSX304	30.0	4.0	8	8	80	0.035	1.0
PTSX305	30.0	5.0	8	8	80	0.035	1.0
PTSX306	30.0	3.0	8	8	110	0.035	1.0
PTSX307	30.0	4.0	8	8	110	0.035	1.0
PTSX308	30.0	5.0	8	8	110	0.035	1.0
PTSX353	35.0	3.0	9	8	80	0.035	1.0
PTSX354	35.0	4.0	9	8	80	0.035	1.0
PTSX355	35.0	5.0	9	8	80	0.035	1.0
PTSX356	35.0	6.0	9	8	80	0.035	1.0
PTSX357	35.0	3.0	9	8	110	0.035	1.0
PTSX358	35.0	4.0	9	8	110	0.035	1.0
PTSX359	35.0	5.0	9	8	110	0.035	1.0
PTSX360	35.0	6.0	9	8	110	0.035	1.0
PTSX403	40.0	3.0	9	8	80	0.035	0.5
PTSX404	40.0	4.0	9	8	80	0.035	0.5
PTSX405	40.0	5.0	9	8	80	0.035	0.5
PTSX406	40.0	6.0	9	8	80	0.035	0.5
PTSX407	40.0	3.0	9	8	110	0.035	0.5
PTSX408	40.0	4.0	9	8	110	0.035	0.5
PTSX409	40.0	5.0	9	8	110	0.035	0.5
PTSX410	40.0	6.0	9	8	110	0.035	0.5

## Multi-Track™

REF	Introducer Size (FR)	Shaft Size (FR)	Usable Length (cm)	Guide Wire (Inches)	Flow Rate (ml/sec)	Maximum Injection (PSI)
MMTA03100	5.0	3.0	100	0.025	4.0	1000
MMTA0380	5.0	3.0	80	0.025	5.5	1000
MMTA04100	6.0	4.0	100	0.035	11.0	1000
MMTA0480	6.0	4.0	80	0.035	13.0	1000
MMTA05100	7.0	5.0	100	0.035	20.0	1000
MMTA0580	7.0	5.0	80	0.035	22.0	1000
MMTA06100	8.0	6.0	100	0.035	25.0	1000

## Ordering information

BIB® Stent Placement							
REF	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length (cm)	Guide Wire (Inches)	Outer Balloon Rated Burst (ATM)
BB003	12.0	2.5	8	8	110	0.035	7
BB006	12.0	3.0	8	8	110	0.035	7
BB009	12.0	3.5	8	8	110	0.035	7
BB033	12.0	4.0	8	8	110	0.035	7
BB037	12.0	4.5	8	8	110	0.035	7
BB034	12.0	5.0	8	8	110	0.035	7
BB051	12.0	5.5	8	8	110	0.035	7
BB022	14.0	2.5	8	8	110	0.035	6
BB052	14.0	3.0	8	8	110	0.035	6
BB025	14.0	3.5	8	8	110	0.035	6
BB038	14.0	4.0	8	8	110	0.035	6
BB035	14.0	4.5	8	8	110	0.035	6
BB039	14.0	5.0	8	8	110	0.035	6
BB053	14.0	5.5	8	8	110	0.035	6
BB054	15.0	2.5	9	9	110	0.035	5
BB055	15.0	3.0	9	9	110	0.035	5
BB056	15.0	3.5	9	9	110	0.035	5
BB057	15.0	4.0	9	9	110	0.035	5
BB058	15.0	4.5	9	9	110	0.035	5
BB059	15.0	5.0	9	9	110	0.035	5
BB060	15.0	5.5	9	9	110	0.035	5
BB023	16.0	2.5	9	9	110	0.035	5
BB010	16.0	3.0	9	9	110	0.035	5
BB026	16.0	3.5	9	9	110	0.035	5
BB013	16.0	4.0	9	9	110	0.035	5
BB016	16.0	4.5	9	9	110	0.035	5
BB028	16.0	5.0	9	9	110	0.035	5
BB019	16.0	5.5	9	9	110	0.035	5
BB024	18.0	2.5	10	9	110	0.035	4
BB040	18.0	3.0	10	9	110	0.035	4
BB027	18.0	3.5	10	9	110	0.035	4
BB041	18.0	4.0	10	9	110	0.035	4
BB029	18.0	4.5	10	9	110	0.035	4
BB030	18.0	5.0	10	9	110	0.035	4
BB031	18.0	5.5	10	9	110	0.035	4
BB011	20.0	3.0	10	9	110	0.035	4
BB042	20.0	3.5	10	9	110	0.035	4
BB014	20.0	4.0	10	9	110	0.035	4
BB017	20.0	4.5	10	9	110	0.035	4
BB032	20.0	5.0	10	9	110	0.035	4
BB020	20.0	5.5	10	9	110	0.035	4
BB061	22.0	3.0	11	9	110	0.035	3
BB062	22.0	3.5	11	9	110	0.035	3
BB063	22.0	4.0	11	9	110	0.035	3

## Ordering information

BIB® Stent Placement							
REF	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Usable Length (cm)	Guide Wire (Inches)	Outer Balloon Rated Burst (ATM)
BB064	22.0	4.5	11	9	110	0.035	3
BB065	22.0	5.0	11	9	110	0.035	3
BB066	22.0	5.5	11	9	110	0.035	3
BB012	24.0	3.0	11	9	110	0.035	3
BB067	24.0	3.5	11	9	110	0.035	3
BB015	24.0	4.0	11	9	110	0.035	3
BB018	24.0	4.5	11	9	110	0.035	3
BB036	24.0	5.0	11	9	110	0.035	3
BB021	24.0	5.5	11	9	110	0.035	3
BB077	24.0	6.0	11	9	110	0.035	3
BB068	26.0	4.0	16	11	110	0.035	3
BB069	26.0	5.0	16	11	110	0.035	3
BB070	26.0	6.0	16	11	110	0.035	3
BB071	28.0	4.0	16	11	110	0.035	2
BB072	28.0	5.0	16	11	110	0.035	2
BB073	28.0	6.0	16	11	110	0.035	2
BB074	30.0	4.0	16	11	110	0.035	2
BB075	30.0	5.0	16	11	110	0.035	2
BB076	30.0	6.0	16	11	110	0.035	2

CP Stent® and Covered CP Stent™				
REF CP Stent®	REF Covered CP Stent™	Stent Length (cm)	Configuration (Number of Zigs)	Platinum Wire (Inches)
CP8Z16	CVRDCP8Z16	1.6	8	0.013
CP8Z22	CVRDCP8Z22	2.2	8	0.013
CP8Z28	CVRDCP8Z28	2.8	8	0.013
CP8Z34	CVRDCP8Z34	3.4	8	0.013
CP8Z39	CVRDCP8Z39	3.9	8	0.013
CP8Z45	CVRDCP8Z45	4.5	8	0.013
CP8Z50	CVRDCP8Z50	5.0	8	0.013
CP8Z55	CVRDCP8Z55	5.5	8	0.013
CP8Z60	CVRDCP8Z60	6.0	8	0.013
CP10Z39	CVRDCP10Z39	3.9	10	0.013
CP10Z45	CVRDCP10Z45	4.5	10	0.013
CP10Z50	CVRDCP10Z50	5.0	10	0.013
CP10Z55	CVRDCP10Z55	5.5	10	0.013
CP10Z60	CVRDCP10Z60	6.0	10	0.013

NuMED recommends using the BIB® Stent Placement Catheter.

Required Introducer Size		
BIB® delivery catheter balloon diameter and introducer size	Required introducer with CP Stent®	Required introducer with Covered CP Stent™
12 mm (8F)	10F	12F
14 mm (8F)	10F	12F
15 mm (9F)	11F	12F
16 mm (9F)	11F	12F
18 mm (10F)	11F	14F
20 mm (10F)	12F	14F
22 mm (11F)	12F	14F
24 mm (11F)	12F	14F
26 mm (16F)	16F	16F
28 mm (16F)	16F	18F
30 mm (16F)	16F	18F

For choosing the correct stent refer to the following Foreshortening Chart:

CP Stent® Foreshortening Chart										
Stent Configuration (Zigs)	Inflated Balloon Diameter	1.6 cm	2.2 cm	2.8 cm	3.4 cm	3.9 cm	4.5 cm	5.0 cm	5.5 cm	6.0 cm
		Stent Length after Expansion (PERCENTAGE SHORTENING)								
8	12 mm	1.61 cm 2.8 %	2.18 cm 0.8 %	2.62 cm 4.4 %	3.23 cm 3.1 %	3.72 cm 1.9 %	4.17 cm 3.8 %	4.71 cm 6.2 %	5.25 cm 5.0 %	5.84 cm 4.5 %
8	14 mm	1.54 cm 6.5 %	2.08 cm 5.4 %	2.56 cm 6.8 %	3.15 cm 5.4 %	3.66 cm 3.6 %	3.97 cm 8.4 %	4.58 cm 8.7 %	5.11 cm 7.6 %	5.67 cm 7.3 %
8	15 mm	1.51 cm 8.5 %	2.02 cm 7.9 %	2.51 cm 8.6 %	3.10 cm 7.0 %	3.54 cm 6.6 %	3.94 cm 9.2 %	4.5 cm 10.3 %	4.98 cm 10.0 %	5.55 cm 9.2 %
8	16 mm	1.48 cm 10.6 %	1.98 cm 10.1 %	2.45 cm 10.7 %	3.00 cm 9.8 %	3.48 cm 8.2 %	3.84 cm 11.4 %	4.42 cm 11.9 %	4.91 cm 11.2 %	5.43 cm 11.2 %
8	18 mm	1.43 cm 13.7 %	1.89 cm 14.0 %	2.38 cm 13.3 %	2.88 cm 13.5 %	3.20 cm 15.6 %	3.71 cm 14.5 %	4.21 cm 16.1 %	4.70 cm 15.1 %	5.20 cm 14.9 %
8	20 mm	1.32 cm 20.0 %	1.80 cm 17.9 %	2.30 cm 16.3 %	2.63 cm 20.9 %	2.96 cm 21.9 %	3.27 cm 24.7 %	3.96 cm 21.0 %	4.43 cm 20.0 %	4.92 cm 19.5 %
8	22 mm	1.23 cm 25.4 %	1.67 cm 23.9 %	2.09 cm 24.0 %	2.46 cm 26.0 %	2.85 cm 25.0 %	3.15 cm 27.3 %	3.71 cm 26.0 %	4.09 cm 26.1 %	4.55 cm 25.5 %
8	24 mm	1.05 cm 36.4 %	1.46 cm 33.8 %	1.91 cm 30.3 %	2.07 cm 37.9 %	2.27 cm 40.1 %	2.83 cm 34.9 %	3.33 cm 33.5 %	3.72 cm 32.8 %	4.14 cm 32.3 %
10	26 mm					3.17 cm 18.33 %	3.44 cm 22.09 %	4.10 cm 17.34 %	4.24 cm 23.32 %	4.85 cm 20.20 %
10	28 mm					2.96 cm 23.68 %	3.24 cm 26.75 %	3.71 cm 25.11 %	4.00 cm 27.58 %	4.39 cm 27.87 %
10	30 mm					2.58 cm 33.45 %	3.09 cm 30.16 %	3.26 cm 34.34 %	3.64 cm 34.17 %	4.11 cm 32.55 %

## Ordering information

Mounted CP Stent™ (MCP) and Covered Mounted CP Stent™ (CMCP)								
REF MCP™	REF CMCP™	Stent Length (cm)	# of Zig	Outer Balloon Diameter (mm)	Outer Balloon Length (cm)	Usable Length (cm)	Guide Wire (Inches)	Rated Burst (ATM) *
MCP001	CMCP001	1.6	8 Zig	12.0	2.5	110	0.035	7
MCP002	CMCP002	1.6	8 Zig	14.0	2.5	110	0.035	6
MCP003	CMCP003	1.6	8 Zig	16.0	2.5	110	0.035	5
MCP004	CMCP004	2.2	8 Zig	12.0	2.5	110	0.035	7
MCP005	CMCP005	2.2	8 Zig	14.0	2.5	110	0.035	6
MCP006	CMCP006	2.2	8 Zig	16.0	2.5	110	0.035	5
MCP007	CMCP007	2.2	8 Zig	18.0	2.5	110	0.035	4
MCP038	CMCP038	2.8	8 Zig	12.0	3.0	110	0.035	7
MCP008	CMCP008	2.8	8 Zig	14.0	3.0	110	0.035	6
MCP009	CMCP009	2.8	8 Zig	16.0	3.0	110	0.035	5
MCP010	CMCP010	2.8	8 Zig	18.0	3.0	110	0.035	4
MCP011	CMCP011	2.8	8 Zig	20.0	3.0	110	0.035	4
MCP035	CMCP035	3.4	8 Zig	12.0	3.5	110	0.035	7
MCP012	CMCP012	3.4	8 Zig	14.0	3.5	110	0.035	6
MCP013	CMCP013	3.4	8 Zig	16.0	3.5	110	0.035	5
MCP014	CMCP014	3.4	8 Zig	18.0	3.5	110	0.035	4
MCP015	CMCP015	3.4	8 Zig	20.0	3.5	110	0.035	4
MCP016	CMCP016	3.4	8 Zig	22.0	3.5	110	0.035	3
MCP036	CMCP036	3.9	8 Zig	12.0	4.0	110	0.035	7
MCP017	CMCP017	3.9	8 Zig	14.0	4.0	110	0.035	6
MCP018	CMCP018	3.9	8 Zig	16.0	4.0	110	0.035	5
MCP019	CMCP019	3.9	8 Zig	18.0	4.0	110	0.035	4
MCP020	CMCP020	3.9	8 Zig	20.0	4.0	110	0.035	4
MCP021	CMCP021	3.9	8 Zig	22.0	4.0	110	0.035	3
MCP022	CMCP022	3.9	8 Zig	24.0	4.0	110	0.035	3
MCP023	CMCP023	4.5	8 Zig	14.0	4.5	110	0.035	6
MCP024	CMCP024	4.5	8 Zig	16.0	4.5	110	0.035	5
MCP025	CMCP025	4.5	8 Zig	18.0	4.5	110	0.035	4
MCP026	CMCP026	4.5	8 Zig	20.0	4.5	110	0.035	4
MCP027	CMCP027	4.5	8 Zig	22.0	4.5	110	0.035	3
MCP028	CMCP028	4.5	8 Zig	24.0	4.5	110	0.035	3
MCP037	CMCP037	4.5	8 Zig	12.0	5.0	110	0.035	7
MCP029	CMCP029	4.5	8 Zig	14.0	5.0	110	0.035	6
MCP030	CMCP030	4.5	8 Zig	16.0	5.0	110	0.035	5
MCP031	CMCP031	4.5	8 Zig	18.0	5.0	110	0.035	4
MCP032	CMCP032	4.5	8 Zig	20.0	5.0	110	0.035	4
MCP033	CMCP033	4.5	8 Zig	22.0	5.0	110	0.035	3
MCP034	CMCP034	4.5	8 Zig	24.0	5.0	110	0.035	3

\* Outer Balloon RBP

For choosing the required introducer size please view Page 45.

## Ordering information

Mounted CP Stent™ (MCP) and Covered Mounted CP Stent™ (CMCP)								
REF MCP™	REF CMCP™	Stent Length (cm)		Outer Balloon Diameter (mm)	Outer Balloon Length (cm)	Usable Length (cm)	Guide Wire (Inches)	Rated Burst (ATM) *
			# of Zig					
MCP059	CMCP059	5.0	8 Zig	12.0	5.5	110	0.035	7
MCP060	CMCP060	5.0	8 Zig	14.0	5.5	110	0.035	6
MCP061	CMCP061	5.0	8 Zig	16.0	5.5	110	0.035	5
MCP062	CMCP062	5.0	8 Zig	18.0	5.5	110	0.035	4
MCP063	CMCP063	5.0	8 Zig	20.0	5.5	110	0.035	4
MCP064	CMCP064	5.0	8 Zig	22.0	5.5	110	0.035	3
MCP065	CMCP065	5.0	8 Zig	24.0	5.5	110	0.035	3
MCP066	CMCP066	5.5	8 Zig	12.0	6.0	110	0.035	7
MCP067	CMCP067	5.5	8 Zig	14.0	6.0	110	0.035	6
MCP068	CMCP068	5.5	8 Zig	16.0	6.0	110	0.035	5
MCP069	CMCP069	5.5	8 Zig	18.0	6.0	110	0.035	4
MCP070	CMCP070	5.5	8 Zig	20.0	6.0	110	0.035	4
MCP071	CMCP071	5.5	8 Zig	22.0	6.0	110	0.035	3
MCP072	CMCP072	5.5	8 Zig	24.0	6.0	110	0.035	3
MCP073	CMCP073	6.0	8 Zig	12.0	6.0	110	0.035	7
MCP074	CMCP074	6.0	8 Zig	14.0	6.0	110	0.035	6
MCP075	CMCP075	6.0	8 Zig	16.0	6.0	110	0.035	5
MCP076	CMCP076	6.0	8 Zig	18.0	6.0	110	0.035	4
MCP077	CMCP077	6.0	8 Zig	20.0	6.0	110	0.035	4
MCP078	CMCP078	6.0	8 Zig	22.0	6.0	110	0.035	3
MCP079	CMCP079	6.0	8 Zig	24.0	6.0	110	0.035	3
MCP040	CMCP040	3.9	10 Zig	26.0	4.0	110	0.035	3
MCP041	CMCP041	3.9	10 Zig	28.0	4.0	110	0.035	2
MCP042	CMCP042	3.9	10 Zig	30.0	4.0	110	0.035	2
MCP044	CMCP044	4.5	10 Zig	26.0	5.0	110	0.035	3
MCP045	CMCP045	4.5	10 Zig	28.0	5.0	110	0.035	2
MCP046	CMCP046	4.5	10 Zig	30.0	5.0	110	0.035	2
MCP048	CMCP048	5.0	10 Zig	26.0	5.5	110	0.035	3
MCP049	CMCP049	5.0	10 Zig	28.0	5.5	110	0.035	2
MCP050	CMCP050	5.0	10 Zig	30.0	5.5	110	0.035	2
MCP052	CMCP052	5.5	10 Zig	26.0	6.0	110	0.035	3
MCP053	CMCP053	5.5	10 Zig	28.0	6.0	110	0.035	2
MCP054	CMCP054	5.5	10 Zig	30.0	6.0	110	0.035	2
MCP056	CMCP056	6.0	10 Zig	26.0	6.0	110	0.035	3
MCP057	CMCP057	6.0	10 Zig	28.0	6.0	110	0.035	2
MCP058	CMCP058	6.0	10 Zig	30.0	6.0	110	0.035	2

\* Outer Balloon RBP

For choosing the required introducer size please view Page 45.

## Ordering information

NuDEL™								
REF	Stent Configuration (Zigs)	Stent Length (cm)	Outer Balloon Diameter (mm)	Outer Balloon Length (cm)	Profile Size (FR)	Usable Length (cm)	Guide Wire (Inches)	Rated Burst (ATM) *
DEL001	8	1.6	12	2.5	12	100	0.035	7
DEL002	8	1.6	14	2.5	12	100	0.035	6
DEL003	8	1.6	16	2.5	12	100	0.035	5
DEL004	8	2.2	12	2.5	12	100	0.035	7
DEL005	8	2.2	14	2.5	12	100	0.035	6
DEL006	8	2.2	16	2.5	12	100	0.035	5
DEL007	8	2.2	18	2.5	14	100	0.035	4
DEL008	8	2.8	14	3.0	12	100	0.035	6
DEL009	8	2.8	16	3.0	12	100	0.035	5
DEL010	8	2.8	18	3.0	14	100	0.035	4
DEL011	8	2.8	20	3.0	14	100	0.035	4
DEL012	8	3.4	14	3.5	12	100	0.035	6
DEL013	8	3.4	16	3.5	12	100	0.035	5
DEL014	8	3.4	18	3.5	14	100	0.035	4
DEL015	8	3.4	20	3.5	14	100	0.035	4
DEL016	8	3.4	22	3.5	14	100	0.035	3
DEL017	8	3.9	14	4.0	12	100	0.035	6
DEL018	8	3.9	16	4.0	12	100	0.035	5
DEL019	8	3.9	18	4.0	14	100	0.035	4
DEL020	8	3.9	20	4.0	14	100	0.035	4
DEL021	8	3.9	22	4.0	14	100	0.035	3
DEL022	8	3.9	24	4.0	14	100	0.035	3
DEL023	8	4.5	14	5.0	12	100	0.035	6
DEL024	8	4.5	16	5.0	12	100	0.035	5
DEL025	8	4.5	18	5.0	14	100	0.035	4
DEL026	8	4.5	20	5.0	14	100	0.035	4
DEL027	8	4.5	22	5.0	14	100	0.035	3
DEL028	8	4.5	24	5.0	14	100	0.035	3

\* Outer Balloon RBP



## Ordering information

D'VILL™			
REF	Introducer size (FR)	Usable Length (cm)	Guide Wire (Inches)
DV1230	12	30	0.035
DV1430	14	30	0.035
DV1265	12	65	0.035
DV1465	14	65	0.035
DV1285	12	85	0.035
DV1485	14	85	0.035
0.035" guidewire not included			

Each D'VILL™ set includes (1) One Sheath and (1) One Dilator.



Ordering information

Mini Ghost™									
Usable length				Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Guide Wire (Inches)	Rated Burst (ATM)
40 cm	80 cm	120 cm	150 cm						
MG317	MG318	MG319	MG320	2.0	1.0	4	3.5	0.018	20
MG321	MG322	MG323	MG324	2.0	1.5	4	3.5	0.018	20
MG100	MG101	MG103	MG263	2.0	2.0	4	3.5	0.018	20
MG155	MG156	MG157	MG264	2.0	3.0	4	3.5	0.018	20
MG104	MG105	MG106	MG265	2.0	4.0	4	3.5	0.018	20
MG182	MG183	MG184	MG266	2.0	6.0	4	3.5	0.018	20
MG185	MG186	MG187	MG267	2.0	8.0	4	3.5	0.018	20
MG188	MG189	MG190	MG268	2.0	10.0	4	3.5	0.018	20
MG325	MG326	MG327	MG328	2.5	1.0	4	3.5	0.018	20
MG329	MG330	MG331	MG332	2.5	1.5	4	3.5	0.018	20
MG107	MG108	MG109	MG269	2.5	2.0	4	3.5	0.018	20
MG158	MG159	MG160	MG270	2.5	3.0	4	3.5	0.018	20
MG110	MG111	MG112	MG271	2.5	4.0	4	3.5	0.018	20
MG191	MG192	MG193	MG272	2.5	6.0	4	3.5	0.018	20
MG194	MG195	MG196	MG273	2.5	8.0	4	3.5	0.018	20
MG197	MG198	MG199	MG274	2.5	10.0	4	3.5	0.018	20
MG333	MG334	MG335	MG336	3.0	1.0	4	3.5	0.018	20
MG337	MG338	MG339	MG340	3.0	1.5	4	3.5	0.018	20
MG113	MG114	MG115	MG275	3.0	2.0	4	3.5	0.018	20
MG161	MG162	MG163	MG276	3.0	3.0	4	3.5	0.018	20
MG116	MG117	MG118	MG277	3.0	4.0	4	3.5	0.018	20
MG200	MG201	MG202	MG278	3.0	6.0	4	3.5	0.018	20
MG203	MG204	MG205	MG279	3.0	8.0	4	3.5	0.018	20
MG206	MG207	MG208	MG280	3.0	10.0	4	3.5	0.018	20
MG341	MG342	MG343	MG344	3.5	1.0	4	3.5	0.018	20
MG345	MG346	MG347	MG348	3.5	1.5	4	3.5	0.018	20
MG119	MG120	MG121	MG281	3.5	2.0	4	3.5	0.018	20
MG164	MG165	MG166	MG282	3.5	3.0	4	3.5	0.018	20
MG122	MG123	MG124	MG283	3.5	4.0	4	3.5	0.018	20
MG209	MG210	MG211	MG284	3.5	6.0	4	3.5	0.018	20
MG212	MG213	MG214	MG285	3.5	8.0	4	3.5	0.018	20
MG215	MG216	MG217	MG286	3.5	10.0	4	3.5	0.018	20
MG349	MG350	MG351	MG352	4.0	1.0	4	3.5	0.018	20
MG353	MG354	MG355	MG356	4.0	1.5	4	3.5	0.018	20
MG125	MG126	MG127	MG287	4.0	2.0	4	3.5	0.018	20
MG167	MG168	MG169	MG288	4.0	3.0	4	3.5	0.018	20

## Ordering information

Mini Ghost™									
40 cm	Usable length			Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (FR)	Shaft Size (FR)	Guide Wire (Inches)	Rated Burst (ATM)
	80 cm	120 cm	150 cm						
MG128	MG129	MG130	MG289	4.0	4.0	4	3.5	0.018	20
MG218	MG219	MG220	MG290	4.0	6.0	4	3.5	0.018	20
MG221	MG222	MG223	MG291	4.0	8.0	4	3.5	0.018	20
MG224	MG225	MG226	MG292	4.0	10.0	4	3.5	0.018	20
MG357	MG358	MG359	MG360	4.5	1.0	4	3.5	0.018	20
MG361	MG362	MG363	MG364	4.5	1.5	4	3.5	0.018	20
MG131	MG132	MG133	MG293	4.5	2.0	4	3.5	0.018	20
MG170	MG171	MG172	MG294	4.5	3.0	4	3.5	0.018	20
MG134	MG135	MG136	MG295	4.5	4.0	4	3.5	0.018	20
MG227	MG228	MG229	MG296	4.5	6.0	4	3.5	0.018	20
MG230	MG231	MG232	MG297	4.5	8.0	4	3.5	0.018	20
MG233	MG234	MG235	MG298	4.5	10.0	4	3.5	0.018	20
MG365	MG366	MG367	MG368	5.0	1.0	4	3.5	0.018	12
MG369	MG370	MG371	MG372	5.0	1.5	4	3.5	0.018	12
MG137	MG138	MG139	MG299	5.0	2.0	4	3.5	0.018	12
MG173	MG174	MG175	MG300	5.0	3.0	4	3.5	0.018	12
MG140	MG141	MG142	MG301	5.0	4.0	4	3.5	0.018	12
MG236	MG237	MG238	MG302	5.0	6.0	4	3.5	0.018	12
MG239	MG240	MG241	MG303	5.0	8.0	4	3.5	0.018	12
MG242	MG243	MG244	MG304	5.0	10.0	4	3.5	0.018	12
MG373	MG374	MG375	MG376	5.5	1.0	4	3.5	0.018	12
MG377	MG378	MG379	MG380	5.5	1.5	4	3.5	0.018	12
MG143	MG144	MG145	MG305	5.5	2.0	4	3.5	0.018	12
MG176	MG177	MG178	MG306	5.5	3.0	4	3.5	0.018	12
MG146	MG147	MG148	MG307	5.5	4.0	4	3.5	0.018	12
MG245	MG246	MG247	MG308	5.5	6.0	4	3.5	0.018	12
MG248	MG249	MG250	MG309	5.5	8.0	4	3.5	0.018	12
MG251	MG252	MG253	MG310	5.5	10.0	4	3.5	0.018	12
MG381	MG382	MG383	MG384	6.0	1.0	4	3.5	0.018	12
MG385	MG386	MG387	MG388	6.0	1.5	4	3.5	0.018	12
MG149	MG150	MG151	MG311	6.0	2.0	4	3.5	0.018	12
MG179	MG180	MG181	MG312	6.0	3.0	4	3.5	0.018	12
MG152	MG153	MG154	MG313	6.0	4.0	4	3.5	0.018	12
MG254	MG255	MG256	MG314	6.0	6.0	4	3.5	0.018	12
MG257	MG258	MG259	MG315	6.0	8.0	4	3.5	0.018	12
MG260	MG261	MG262	MG316	6.0	10.0	4	3.5	0.018	12

Tearduct™						
REF	Balloon Diameter (mm)	Balloon Length (cm)	Shaft Size (FR)	Usable Length (cm)	Guide Wire (Inches)	Rated Burst (ATM)
TD100	3.0	2.0	3.5	20	0.018	14



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Z-MED® Line

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TYSHAK® Line

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Z-5™

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Holzer R, Qureshi S, Ghasemi A, Vincent J, Sievert H, Gruenstein D, Weber H, Alday L, Peirone A, Zellers T, Cheatham J, Slack M, Rome J.  
*Catheterization and Cardiovascular Interventions* (2010); October; 76 (4): pp. 553-63.

**Covered stents in patients with complex aortic coarctations.**

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*American Heart Journal* (2007); October; 154 (4): pp. 795-800.

**Results and mid-long-term follow-up of stent implantation for native and recurrent coarctation of the aorta.**

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**Initial experience using the NuMED Cheatham Platinum (CP) stent for interventional treatment of coarctation of the aorta in children and adolescents.**

Haas NA, Lewin MA, Knirsch W, Nossal R, Ocker V, Uhlemann F.  
*Zeitschrift für Kardiologie* (2005); February; 94 (2): pp. 113-20.

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**Coarctation Of the Aorta Stent Trial (COAST: NCT00552812)**

The CP Stent® was tested and found to be safe and effective to widen the narrow part of the aorta related to coarctation of the aorta.

**Covered CP Stents for the Prevention or Treatment of Aortic Wall Injury Associated With Coarctation of the Aorta (COASTII: NCT 01278303)**

The Covered CP Stent® was tested and found to be safe and effective to repair aortic wall injuries and widen the narrow part of the aorta related to coarctation of the aorta.

**Pulmonary Artery Repair With Covered Stents (PARCS: NCT01824160)**

The Covered CP Stent® was tested and found to be safe and effective to use as a treatment of right ventricle to pulmonary artery (right ventricular outflow tract) conduit disruptions that are identified during conduit pre-dilatation procedures performed in preparation for transcatheter pulmonary valve replacement (TPVR).



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