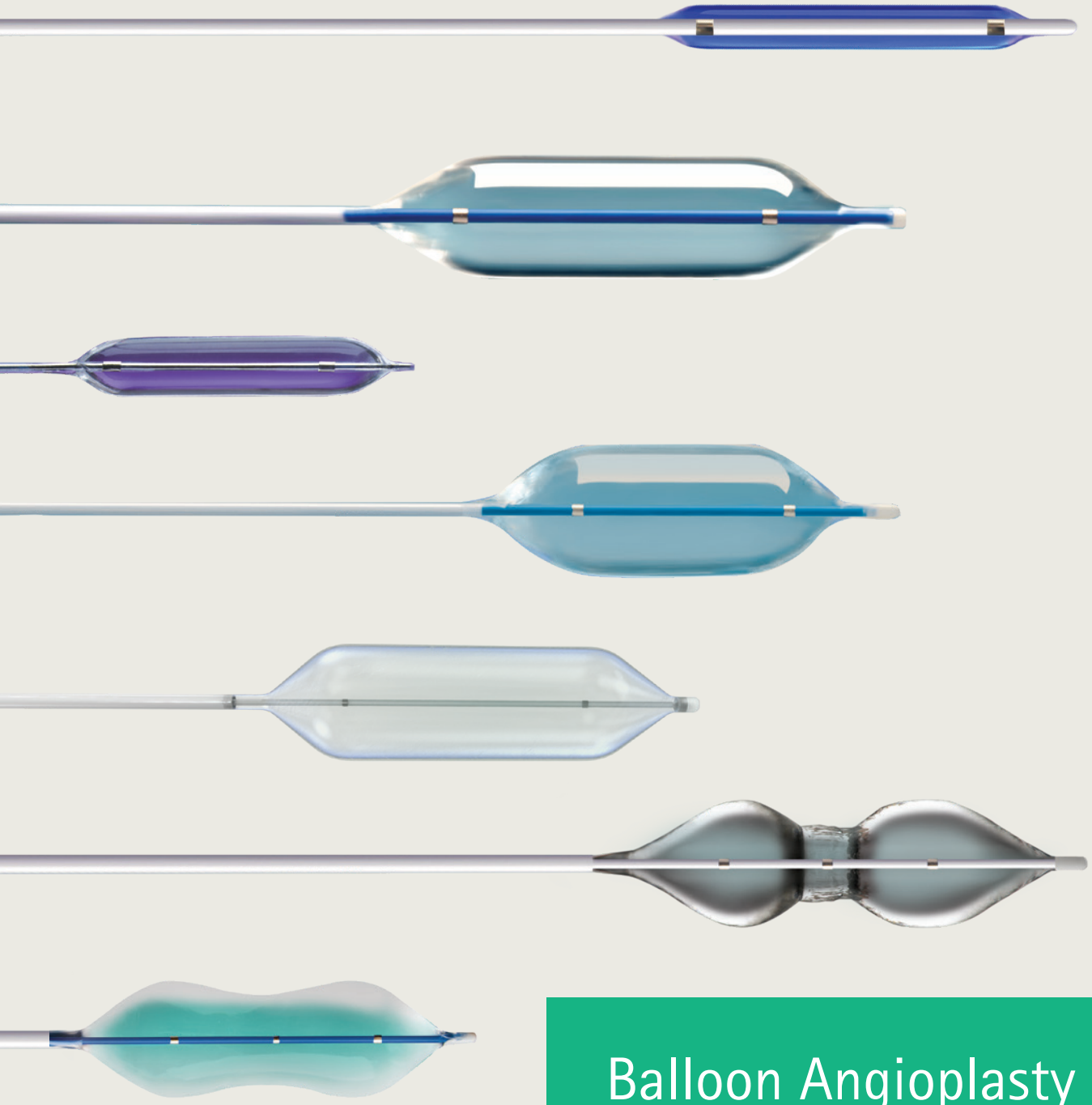

Balloon Angioplasty and Valvuloplasty Portfolio

Full line of Percutaneous Transluminal Angioplasty (PTA), Percutaneous Transluminal Valvuloplasty (PTV) and Balloon Aortic Valvuloplasty (BAV) Catheters

Interventional Systems
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SHARING EXPERTISE

Committed to Pediatric and Congenital Interventional Care for More Than 30 Years and Counting.

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INDICATIONS FOR USE:

The Mini Ghost™ Dilatation Catheters are recommended for Percutaneous Transluminal Angioplasty (PTA) of the femoral, iliac and renal arteries. These catheters are not designed to be used in the coronary arteries.

The NuCLEUS-X™, Tyshak-X™, Tyshak NuCLEUS®, Tyshak II®, Z-MED™, Z-MED-X™, Z-MED II™ and Z-MED II-X™ Catheters are recommended for Percutaneous Transluminal Valvuloplasty (PTV) of the pulmonary valve.

- A patient with isolated pulmonary stenosis.
- A patient with valvular pulmonary stenosis with other minor congenital heart disease that does not require surgical intervention.

The NuCLEUS-X™, Z-MED™, and Z-MED II™ Valvuloplasty Catheters are recommended for Balloon Aortic Valvuloplasty (BAV) of the Aortic valve.

The Tyshak Mini® Catheters are recommended for Percutaneous Transluminal Valvuloplasty (PTV) of the pulmonary valve in pediatric applications.

- A patient with isolated pulmonary stenosis.
- A patient with valvular pulmonary stenosis with other minor congenital heart disease that does not require surgical intervention.

QUICK REFERENCE GUIDE:

Catheter Brand	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (Fr)	Recommended Guidewire (in)	Rated Burst Pressures (ATM)	Features	Indication			Page Ref
							PTA	PTV	BAV	
NuCLEUS-X™	18 - 30	4 - 6	10 - 14	0.035	2 - 4	Waist formed in middle for accurate placement, braided inner lumen, dual indication		•	•	p. 4
Tyshak-X™	8 - 25	2 - 6	6 - 11	0.035	1.5 - 5	Braided inner lumen		•		p. 5
Tyshak Mini®	4 - 10	1 - 4	3 - 4	0.014	3.5 - 6	Pediatric PTV, smallest introducer size		•		p. 6
Tyshak NuCLEUS®	4 - 25	2 - 4	6 - 11	0.035	2 - 5	Waist formed in middle for accurate placement		•		p. 7
Tyshak II®	4 - 30	2 - 8	4 - 10	0.021 - 0.035	1.5 - 6	Extremely low profile		•		pp. 8-9
Z-MED™	14- 40	2 - 8	9 - 16	0.025 - 0.035	1 - 6	Balloon diameters up to 40 mm, dual indication		•	•	pp. 10-11
Z-MED II™	4 - 30	2 - 6	5 - 16	0.035	3 - 15	High rated burst pressure, dual indication		•	•	pp. 12-13
Z-MED-X™	12 - 30	2 - 6	7 - 13	0.035	2 - 7	Braided inner lumen		•		p. 14
Z-MED II-X™	8 - 30	2 - 6	7 - 16	0.035	3 - 15	High rated burst pressure, braided inner lumen		•		p. 15
Mini Ghost™	2 - 6	1 - 10	4	0.018	12 - 20	Smallest balloon diameters, comprehensive size offering	•			pp. 16-17

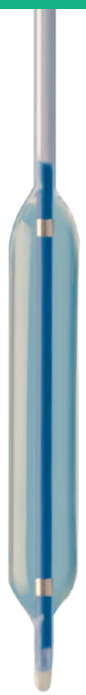
Designed with a waist formed in the middle to facilitate seating in the valve annulus and a braided inner lumen for optimal performance.

NUCLEUS-X™ Balloon Aortic and Pulmonic Valvuloplasty Catheters

Reference Number	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (Fr)	Shaft Size (Fr)	Usable Length (cm)	Rated Burst Pressure (ATM)	Guidewire Size (in)
612038	18	4	10	9	110	4	0.035
612021	18	5	10	9	110	4	0.035
612039	18	6	10	9	110	4	0.035
612023	20	4	12	9	110	4	0.035
612024	20	5	12	9	110	4	0.035
612025	20	6	12	9	110	4	0.035
612026	22	4	12	9	110	3	0.035
612027	22	5	12	9	110	3	0.035
612028	22	6	12	9	110	3	0.035
612029	25	4	12	9	110	3	0.035
612040	25	5	12	9	110	3	0.035
612031	25	6	12	9	110	3	0.035
612032	28	4	12	9	110	2	0.035
612033	28	5	12	9	110	2	0.035
612034	28	6	12	9	110	2	0.035
612035	30	4	14	9	110	2	0.035
612036	30	5	14	9	110	2	0.035
612037	30	6	14	9	110	2	0.035

TYSHAK-X™ Percutaneous Transluminal Valvuloplasty Catheters

Reference Number	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (Fr)	Shaft Size (Fr)	Usable Length (cm)	Rated Burst Pressure (ATM)	Guidewire Size (in)
618300	8	2	6	6	100	5	0.035
618306	9	3	6	6	100	5	0.035
618310	10	2	6	6	100	5	0.035
618314	10	6	6	6	100	5	0.035
618315	12	2	7	6	100	4.5	0.035
618317	12	4	7	6	100	4.5	0.035
618320	14	3	8	7	100	3.5	0.035
618321	14	4	8	7	100	3.5	0.035
618326	15	5	8	7	100	3.5	0.035
618327	15	6	8	7	100	3.5	0.035
618328	16	3	8	7	100	3.5	0.035
618329	16	4	8	7	100	3.5	0.035
618330	16	5	8	7	100	3.5	0.035
618331	16	6	8	7	100	3.5	0.035
618333	18	4	9	8	100	2	0.035
618334	18	5	9	8	100	2	0.035
618335	18	6	9	8	100	2	0.035
618336	20	3	10	8	100	2	0.035
618337	20	4	10	8	100	2	0.035
618338	20	5	10	8	100	2	0.035
618339	20	6	10	8	100	2	0.035
618340	22	3	10	9	100	2	0.035
618341	22	4	10	9	100	2	0.035
618342	22	5	10	9	100	2	0.035
618343	22	6	10	9	100	2	0.035
618345	25	4	11	9	100	1.5	0.035
618346	25	5	11	9	100	1.5	0.035
618347	25	6	11	9	100	1.5	0.035



Features well-rounded shoulders and minimum tapers, enabling the catheter to guide through small vessels, along with a braided inner lumen designed for optimal pushability, trackability and kink resistance.

PTV

Designed specifically for pediatric cardiology, this balloon catheter features an exceptionally low profile that is compatible with the smallest introducer size possible.

TYSHAK MINI® Pediatric Percutaneous Transluminal Valvuloplasty Catheters

Reference Number	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (Fr)	Shaft Size (Fr)	Usable Length (cm)	Rated Burst Pressure (ATM)	Guidewire Size (in)
611994	4	1	3	2.5	65	6	0.014
611985	4	2	3	2.5	65	6	0.014
611995	5	1	3	2.5	65	6	0.014
611986	5	2	3	2.5	65	6	0.014
611996	6	1	3	2.5	65	4	0.014
611987	6	2	3	2.5	65	4	0.014
612014	7	1	3	2.5	65	4	0.014
611988	7	2	3	2.5	65	4	0.014
612011	8	1	3	2.5	65	4	0.014
611989	8	2	3	2.5	65	4	0.014
611990	9	2	4	3.5	65	3.5	0.014
611992	9	4	4	3.5	65	3.5	0.014
612013	10	1	4	3.5	65	3.5	0.014
611991	10	2	4	3.5	65	3.5	0.014
611993	10	4	4	3.5	65	3.5	0.014

TYSHAK NUCLEUS® Percutaneous Transluminal Valvuloplasty Catheters

Reference Number	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (Fr)	Shaft Size (Fr)	Usable Length (cm)	Rated Burst Pressure (ATM)	Guidewire Size (in)
612062	4	2	6	5.5	100	5	0.035
612064	5	2	6	5.5	100	5	0.035
612067	6	2	6	5.5	100	5	0.035
612069	6	4	6	5.5	100	5	0.035
612070	7	2	6	5.5	100	5	0.035
612072	7	4	6	5.5	100	5	0.035
612073	8	2	6	5.5	100	5	0.035
612075	8	4	6	5.5	100	5	0.035
612076	9	2	6	5.5	100	5	0.035
612083	12	3	7	6	100	4.5	0.035
612085	14	3	8	6	100	3.5	0.035
612086	14	4	8	6	100	3.5	0.035
612088	15	4	8	7	100	3.5	0.035
612090	16	4	8	7	100	3.5	0.035
612092	18	4	9	8	100	3	0.035
612093	20	3	10	8	100	2	0.035
612094	20	4	10	8	100	2	0.035
612112	22	4	11	9	100	2	0.035
612114	25	4	11	9	100	2	0.035

This unique balloon catheter combines a low profile design with the waist of a NuCLEUS-X™ to allow for accurate balloon placement while utilizing a smaller sheath size.

PTV

Features a super thin profile balloon catheter in combination with rapid inflation/ deflation times and small introducer size options.

TYSHAK II® Percutaneous Transluminal Valvuloplasty Catheters

Reference Number	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (Fr)	Shaft Size (Fr)	Usable Length (cm)	Rated Burst Pressure (ATM)	Guidewire Size (in)
611529	4	2	4	4	70	6	0.021
611530	5	2	4	4	70	6	0.021
611780	5	3	4	4	70	6	0.021
611531	6	2	4	4	70	4	0.021
611781	6	3	4	4	70	4	0.021
611532	7	2	4	4	70	4	0.021
611538	7	3	4	4	70	4	0.021
611533	8	2	4	4	70	4	0.021
611539	8	3	4	4	70	4	0.021
611789	8	4	4	4	70	4	0.021
611790	8	6	4	4	70	4	0.021
611908	9	2	5	5	90	3.5	0.025
611534	9	3	5	5	90	3.5	0.025
611909	10	2	5	5	90	3.5	0.025
611535	10	3	5	5	90	3.5	0.025
611551	10	4	5	5	90	3.5	0.025
611791	10	5	5	5	90	3.5	0.025
611557	10	6	6	6	100	3.5	0.025
611693	11	2	5	5	90	3.5	0.025
611777	11	3	5	5	90	3.5	0.025
611552	11	4	5	5	90	3.5	0.025
611910	12	2	5	5	90	3.5	0.025
611772	12	2	6	6	90	3.5	0.035
611536	12	3	5	5	90	3.5	0.025
611537	12	4	6	6	90	3.5	0.035
611793	12	5	5	5	90	3.5	0.025
611553	12	6	6	6	90	3.5	0.035
611795	13	2	6	6	100	3	0.035
611796	13	3	6	6	100	3	0.035
611794	13	4	6	6	100	3	0.035
611654	13	5	6	6	100	3	0.035
611778	14	2	7	7	100	3	0.035
611911	14	3	7	7	100	3	0.035
611912	14	4	7	7	100	3	0.035
611913	14	5	7	7	100	3	0.035
611914	14	6	7	7	100	3	0.035
611779	14	8	7	7	100	3	0.035

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TYSHAK II® Percutaneous Transluminal Valvuloplasty Catheters

Reference Number	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (Fr)	Shaft Size (Fr)	Usable Length (cm)	Rated Burst Pressure (ATM)	Guidewire Size (in)
611915	15	3	7	7	100	3	0.035
611916	15	4	7	7	100	3	0.035
611917	15	5	7	7	100	3	0.035
611918	15	6	7	7	100	3	0.035
611919	16	3	7	7	100	2.5	0.035
611920	16	4	7	7	100	2.5	0.035
611921	16	5	7	7	100	2.5	0.035
611922	16	6	7	7	100	2.5	0.035
611797	16	8	7	7	100	2.5	0.035
611923	17	3	7	7	100	2.5	0.035
611924	17	4	7	7	100	2.5	0.035
611925	17	5	7	7	100	2.5	0.035
611926	17	6	7	7	100	2.5	0.035
611927	18	3	8	8	100	2	0.035
611928	18	4	8	8	100	2	0.035
611929	18	5	8	8	100	2	0.035
611930	18	6	8	8	100	2	0.035
611931	20	3	8	8	100	2	0.035
611932	20	4	8	8	100	2	0.035
611933	20	5	8	8	100	2	0.035
611934	20	6	8	8	100	2	0.035
611935	22	3	8	8	100	2	0.035
611936	22	4	8	8	100	2	0.035
611937	22	5	8	8	100	2	0.035
611938	22	6	8	8	100	2	0.035
611939	23	3	9	9	100	2	0.035
611940	23	4	9	9	100	2	0.035
611941	23	5	9	9	100	2	0.035
611942	23	6	9	9	100	2	0.035
611943	25	3	9	9	100	1.5	0.035
611944	25	4	9	9	100	1.5	0.035
611945	25	5	9	9	100	1.5	0.035
611946	25	6	9	9	100	1.5	0.035
611947	30	3	10	9	100	1.5	0.035
611948	30	4	10	9	100	1.5	0.035
611949	30	5	10	9	100	1.5	0.035
611950	30	6	10	9	100	1.5	0.035

Features high rated burst pressures suitable for resistant stenosis along with rapid inflation/deflation times to minimize procedure times and maximize reperfusion.

Z-MED™ Balloon Aortic and Pulmonic Valvuloplasty Catheters

Reference Number	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (Fr)	Shaft Size (Fr)	Usable Length (cm)	Rated Burst Pressure (ATM)	Guidewire Size (in)
611695	14	2	9	7	85	6	0.035
611650	14	2	9	7	120	6	0.035
610498	15	2	9	7	100	5	0.035
611651	16	2	9	7	120	5	0.035
611652	18	2	10	8	120	4	0.035
611685	23	2	12	9	85	3	0.035
611812	23	2	12	9	120	3	0.035
611818	23	3	12	9	120	3	0.035
611807	23	4	12	9	120	3	0.035
611565	23	5	12	9	100	3	0.035
611680	24	2	12	9	75	3	0.035
611684	24	3	12	9	100	3	0.035
611819	24	4	12	9	100	3	0.035
611817	25	3	12	9	120	3	0.035
610463	25	4	12	9	85	3	0.035
610489	25	4	12	9	100	3	0.035
610232	25	5	12	9	100	3	0.035
610496	25	5	12	9	120	3	0.035
611479	25	6	12	9	100	3	0.035
611678	25	8	12	9	100	3	0.035
611686	26	2	12	9	85	3	0.035
611821	26	2	12	9	100	3	0.035
611681	26	3	12	9	75	3	0.035
611823	26	4	12	9	75	3	0.035

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Z-MED™ Balloon Aortic and Pulmonic Valvuloplasty Catheters

Reference Number	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (Fr)	Shaft Size (Fr)	Usable Length (cm)	Rated Burst Pressure (ATM)	Guidewire Size (in)
611820	26	4	12	9	100	3	0.035
611682	26	6	12	9	100	3	0.035
611803	28	2	12	9	85	2	0.035
611813	28	2	12	9	120	2	0.035
611787	28	3	12	9	85	2	0.035
611810	28	3	12	9	120	2	0.035
611824	28	4	12	9	75	2	0.035
610465	28	4	12	9	85	2	0.035
611806	28	4	12	9	120	2	0.035
611683	28	6	12	9	100	2	0.035
611801	30	2	14	9	85	2	0.035
611814	30	2	14	9	120	2	0.035
611811	30	3	14	9	120	2	0.035
611822	30	4	14	9	75	2	0.035
610466	30	4	14	9	85	2	0.035
611815	30	4	14	9	120	2	0.035
611560	30	6	14	9	100	2	0.035
611679	30	8	14	9	100	2	0.035
611687	33	2	16	11	75	1.5	0.035
611669	33	4	16	11	100	1.5	0.035
611670	33	6	16	11	100	1.5	0.035
611671	35	4	16	11	100	1.5	0.035
611672	35	6	16	11	100	1.5	0.035
611673	40	4	16	11	100	1	0.035
611674	40	6	16	11	100	1	0.035

Offers higher rated burst pressure than the first generation Z-MED™ and Z-MED-X™.

Z-MED II™ Balloon Aortic and Pulmonic Valvuloplasty Catheters

Reference Number	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (Fr)	Shaft Size (Fr)	Usable Length (cm)	Rated Burst Pressure (ATM)	Guidewire Size (in)
611700	4	2	5	5	100	15	0.025
611701	4	3	5	5	100	15	0.025
611705	5	2	6	5	100	15	0.025
611706	5	3	6	5	100	15	0.025
611707	5	4	6	5	100	15	0.025
611710	6	2	6	5	100	15	0.025
611711	6	3	6	5	100	15	0.025
611712	6	4	6	5	100	15	0.025
611715	7	2	6	5	100	15	0.025
611716	7	3	6	5	100	15	0.025
611717	7	4	6	5	100	15	0.025
611720	8	2	7	6	100	15	0.035
611721	8	3	7	6	100	15	0.035
611722	8	4	7	6	100	15	0.035
611725	9	2	7	6	100	14	0.035
611726	9	3	7	6	100	14	0.035
611727	9	4	7	6	100	14	0.035
611730	10	2	7	6	100	13	0.035
611731	10	3	7	6	100	13	0.035
611732	10	4	7	6	100	13	0.035
611733	10	5	7	6	100	13	0.035
611788	11	3	8	6	100	10	0.035
611799	11	4	8	6	100	10	0.035
611735	12	2	8	6	100	10	0.035
611653	12	2.5	8	6	100	10	0.035
611736	12	3	8	6	100	10	0.035
611694	12	3.5	8	6	100	10	0.035
611737	12	4	8	6	100	10	0.035
611738	12	5	8	6	100	10	0.035
611739	12	6	8	6	100	10	0.035
611740	14	3	9	7	100	10	0.035
611741	14	4	9	7	100	10	0.035
611742	14	5	9	7	100	10	0.035
611743	14	6	9	7	100	10	0.035
611744	15	3	9	7	100	8	0.035
611745	15	4	9	7	100	8	0.035
611746	15	5	9	7	100	8	0.035
611747	15	6	9	7	100	8	0.035

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Z-MED II™ Balloon Aortic and Pulmonic Valvuloplasty Catheters

Reference Number	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (Fr)	Shaft Size (Fr)	Usable Length (cm)	Rated Burst Pressure (ATM)	Guidewire Size (in)
611748	16	3	9	7	100	8	0.035
611749	16	4	9	7	100	8	0.035
611750	16	5	9	7	100	8	0.035
611751	16	6	9	7	100	8	0.035
611752	18	3	10	8	100	7	0.035
611753	18	4	10	8	100	7	0.035
611754	18	5	10	8	100	7	0.035
611755	18	6	10	8	100	7	0.035
611756	20	3	12	8	100	5	0.035
611757	20	4	12	8	100	5	0.035
611003	20	4.5	11	10	110	5	0.035
611758	20	5	12	8	100	5	0.035
611759	20	6	12	8	100	5	0.035
611760	22	3	12	9	100	4	0.035
611761	22	4	12	9	100	4	0.035
611004	22	4.5	12	10	110	4	0.035
611762	22	5	12	9	100	4	0.035
611763	22	6	12	9	100	4	0.035
611764	23	3	14	9	100	4	0.035
611804	23	3	14	9	120	4	0.035
611765	23	4	14	9	100	4	0.035
611766	23	5	14	9	100	4	0.035
611767	23	6	14	9	100	4	0.035
611800	25	2	14	9	100	4	0.035
611802	25	2	14	9	85	4	0.035
611768	25	3	14	9	100	4	0.035
611805	25	3	14	9	120	4	0.035
611769	25	4	14	9	100	4	0.035
611005	25	4.5	12	10	110	4	0.035
611770	25	5	14	9	100	4	0.035
611771	25	6	14	9	100	4	0.035
611655	26	2	14	9	100	4	0.035
611659	26	4	14	9	100	4	0.035
611656	28	2	16	11	100	3.5	0.035
611660	28	4	16	11	100	3.5	0.035
611657	30	2	16	11	100	3	0.035
611661	30	4	16	11	100	3	0.035
611675	30	5	16	11	100	3	0.035
611658	30	6	16	11	100	3	0.035

Features the same benefits of the Z-MED™ along with a braided inner lumen designed for optimal pushability, trackability and kink-resistance.

Z-MED-X™ Percutaneous Transluminal Valvuloplasty Catheters

Reference Number	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (Fr)	Shaft Size (Fr)	Usable Length (cm)	Rated Burst Pressure (ATM)	Guidewire Size (in)
618415	12	2	7	6	100	7	0.035
618416	12	3	7	6	100	7	0.035
618417	12	4	7	6	100	7	0.035
618419	12	6	7	6	100	7	0.035
618420	14	3	8	7	100	6	0.035
618421	14	4	8	7	100	6	0.035
618422	14	5	8	7	100	6	0.035
618423	14	6	8	7	100	6	0.035
618424	15	3	8	7	100	5	0.035
618425	15	4	8	7	100	5	0.035
618426	15	5	8	7	100	5	0.035
618427	15	6	8	7	100	5	0.035
618428	16	3	9	7	100	5	0.035
618429	16	4	9	7	100	5	0.035
618430	16	5	9	7	100	5	0.035
618431	16	6	9	7	100	5	0.035
618432	18	3	10	8	100	4	0.035
618433	18	4	10	8	100	4	0.035
618434	18	5	10	8	100	4	0.035
618435	18	6	10	8	100	4	0.035
618436	20	3	11	8	100	4	0.035
618437	20	4	11	8	100	4	0.035
618438	20	5	11	8	100	4	0.035
618439	20	6	11	8	100	4	0.035
618440	22	3	11	9	100	3	0.035
618441	22	4	11	9	100	3	0.035
618442	22	5	11	9	100	3	0.035
618443	22	6	11	9	100	3	0.035
618444	25	3	12	9	100	3	0.035
618445	25	4	12	9	100	3	0.035
618446	25	5	12	9	100	3	0.035
618447	25	6	12	9	100	3	0.035
618448	28	3	12	9	100	2	0.035
618449	28	4	12	9	100	2	0.035
618450	28	5	12	9	100	2	0.035
618451	28	6	12	9	100	2	0.035
618452	30	3	13	9	100	2	0.035
618453	30	4	13	9	100	2	0.035
618454	30	5	13	9	100	2	0.035
618455	30	6	13	9	100	2	0.035

Z-MED II-X™ Percutaneous Transluminal Valvuloplasty Catheters

Reference Number	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (Fr)	Shaft Size (Fr)	Usable Length (cm)	Rated Burst Pressure (ATM)	Guidewire Size (in)
618700	8	2	7	6	100	15	0.035
618701	8	3	7	6	100	15	0.035
618705	9	2	7	6	100	14	0.035
618706	9	3	7	6	100	14	0.035
618710	10	2	7	6	100	13	0.035
618711	10	3	7	6	100	13	0.035
618712	10	4	7	6	100	13	0.035
618715	12	2	8	6	100	10	0.035
618716	12	3	8	6	100	10	0.035
618717	12	4	8	6	100	10	0.035
618719	12	6	8	6	100	10	0.035
618720	14	3	9	7	100	10	0.035
618721	14	4	9	7	100	10	0.035
618722	14	5	9	7	100	10	0.035
618723	14	6	9	7	100	10	0.035
618724	15	3	9	7	100	8	0.035
618725	15	4	9	7	100	8	0.035
618726	15	5	9	7	100	8	0.035
618727	15	6	9	7	100	8	0.035
618728	16	3	9	7	100	8	0.035
618729	16	4	9	7	100	8	0.035
618730	16	5	9	7	100	8	0.035
618731	16	6	9	7	100	8	0.035
618732	18	3	10	8	100	7	0.035
618733	18	4	10	8	100	7	0.035
618734	18	5	10	8	100	7	0.035
618735	18	6	10	8	100	7	0.035
618736	20	3	12	8	100	5	0.035
618737	20	4	12	8	100	5	0.035
618738	20	5	12	8	100	5	0.035
618739	20	6	12	8	100	5	0.035
618740	22	3	12	9	100	4	0.035
618741	22	4	12	9	100	4	0.035
618742	22	5	12	9	100	4	0.035
618743	22	6	12	9	100	4	0.035
618744	23	3	13	9	100	4	0.035
618745	23	4	13	9	100	4	0.035
618746	23	5	13	9	100	4	0.035
618747	23	6	13	9	100	4	0.035
618748	25	3	14	9	100	4	0.035
618749	25	4	14	9	100	4	0.035
618750	25	5	14	9	100	4	0.035
618751	25	6	14	9	100	4	0.035
618752	28	4	16	11	100	3.5	0.035
618753	30	4	16	11	100	3	0.035

Features the same benefits of the Z-MED II™ along with a braided inner lumen designed for optimal pushability, trackability and kink-resistance.

This low profile, high pressure, 0.018" guidewire compatible balloon catheter is designed to be inserted through a 4 French introducer sheath for dilatations of small vessels.

MINI GHOST™ Dilatation Catheters

Reference Number	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (Fr)	Shaft Size (Fr)	Usable Length (cm)	Rated Burst Pressure (ATM)	Guidewire Size (in)
613801	2	1	4	3.5	80	20	0.018
612527	2	2	4	3.5	80	20	0.018
612554	2	2	4	3.5	120	20	0.018
612501	2	3	4	3.5	40	20	0.018
612529	2	4	4	3.5	80	20	0.018
612583	2	6	4	3.5	120	20	0.018
612588	2	8	4	3.5	150	20	0.018
612591	2	10	4	3.5	120	20	0.018
613809	2.5	1	4	3.5	80	20	0.018
612530	2.5	2	4	3.5	80	20	0.018
612557	2.5	2	4	3.5	120	20	0.018
612531	2.5	3	4	3.5	80	20	0.018
612505	2.5	4	4	3.5	40	20	0.018
612532	2.5	4	4	3.5	80	20	0.018
612559	2.5	4	4	3.5	120	20	0.018
612594	2.5	6	4	3.5	80	20	0.018
612766	2.5	8	4	3.5	150	20	0.018
612653	2.5	10	4	3.5	120	20	0.018
613817	3	1	4	3.5	80	20	0.018
612506	3	2	4	3.5	40	20	0.018
612533	3	2	4	3.5	80	20	0.018
612560	3	2	4	3.5	120	20	0.018
612507	3	3	4	3.5	40	20	0.018
612534	3	3	4	3.5	80	20	0.018
612561	3	3	4	3.5	120	20	0.018
612508	3	4	4	3.5	40	20	0.018
612535	3	4	4	3.5	80	20	0.018
612562	3	4	4	3.5	120	20	0.018
612747	3	4	4	3.5	150	20	0.018
612657	3	6	4	3.5	120	20	0.018
612661	3	8	4	3.5	120	20	0.018
612664	3	10	4	3.5	80	20	0.018
612665	3	10	4	3.5	120	20	0.018
613825	3.5	1	4	3.5	80	20	0.018
612509	3.5	2	4	3.5	40	20	0.018
612536	3.5	2	4	3.5	80	20	0.018
612537	3.5	3	4	3.5	80	20	0.018
612538	3.5	4	4	3.5	80	20	0.018
612565	3.5	4	4	3.5	120	20	0.018
612670	3.5	6	4	3.5	150	20	0.018
612674	3.5	8	4	3.5	150	20	0.018
612678	3.5	10	4	3.5	150	20	0.018
613833	4	1	4	3.5	80	20	0.018
612512	4	2	4	3.5	40	20	0.018
612539	4	2	4	3.5	80	20	0.018
612566	4	2	4	3.5	120	20	0.018
612540	4	3	4	3.5	80	20	0.018
612567	4	3	4	3.5	120	20	0.018
612514	4	4	4	3.5	40	20	0.018

Continued on next page

MINI GHOST™ Dilatation Catheters

Reference Number	Balloon Diameter (mm)	Balloon Length (cm)	Introducer Size (Fr)	Shaft Size (Fr)	Usable Length (cm)	Rated Burst Pressure (ATM)	Guidewire Size (in)
612541	4	4	4	3.5	80	20	0.018
612568	4	4	4	3.5	120	20	0.018
612682	4	6	4	3.5	150	20	0.018
612684	4	8	4	3.5	80	20	0.018
612689	4	10	4	3.5	120	20	0.018
613841	4.5	1	4	3.5	80	20	0.018
612542	4.5	2	4	3.5	80	20	0.018
612569	4.5	2	4	3.5	120	20	0.018
612516	4.5	3	4	3.5	40	20	0.018
612543	4.5	3	4	3.5	80	20	0.018
612517	4.5	4	4	3.5	40	20	0.018
612693	4.5	6	4	3.5	120	20	0.018
612698	4.5	8	4	3.5	150	20	0.018
612701	4.5	10	4	3.5	120	20	0.018
613849	5	1	4	3.5	80	12	0.018
612518	5	2	4	3.5	40	12	0.018
612545	5	2	4	3.5	80	12	0.018
612572	5	2	4	3.5	120	12	0.018
612519	5	3	4	3.5	40	12	0.018
612546	5	3	4	3.5	80	12	0.018
612573	5	3	4	3.5	120	12	0.018
612520	5	4	4	3.5	40	12	0.018
612547	5	4	4	3.5	80	12	0.018
612574	5	4	4	3.5	120	12	0.018
612705	5	6	4	3.5	120	12	0.018
612708	5	8	4	3.5	80	12	0.018
612709	5	8	4	3.5	120	12	0.018
612713	5	10	4	3.5	120	12	0.018
613857	5.5	1	4	3.5	80	12	0.018
612548	5.5	2	4	3.5	80	12	0.018
612575	5.5	2	4	3.5	120	12	0.018
612549	5.5	3	4	3.5	80	12	0.018
612523	5.5	4	4	3.5	40	12	0.018
612717	5.5	6	4	3.5	120	12	0.018
612721	5.5	8	4	3.5	120	12	0.018
612725	5.5	10	4	3.5	120	12	0.018
613865	6	1	4	3.5	80	12	0.018
612524	6	2	4	3.5	40	12	0.018
612551	6	2	4	3.5	80	12	0.018
612578	6	2	4	3.5	120	12	0.018
612763	6	2	4	3.5	150	12	0.018
612525	6	3	4	3.5	40	12	0.018
612552	6	3	4	3.5	80	12	0.018
612579	6	3	4	3.5	120	12	0.018
612526	6	4	4	3.5	40	12	0.018
612580	6	4	4	3.5	120	12	0.018
612729	6	6	4	3.5	120	12	0.018
612732	6	8	4	3.5	80	12	0.018
612738	6	10	4	3.5	150	12	0.018

INFLATION DEVICES

SwitchBack™ QL®
Inflation Device

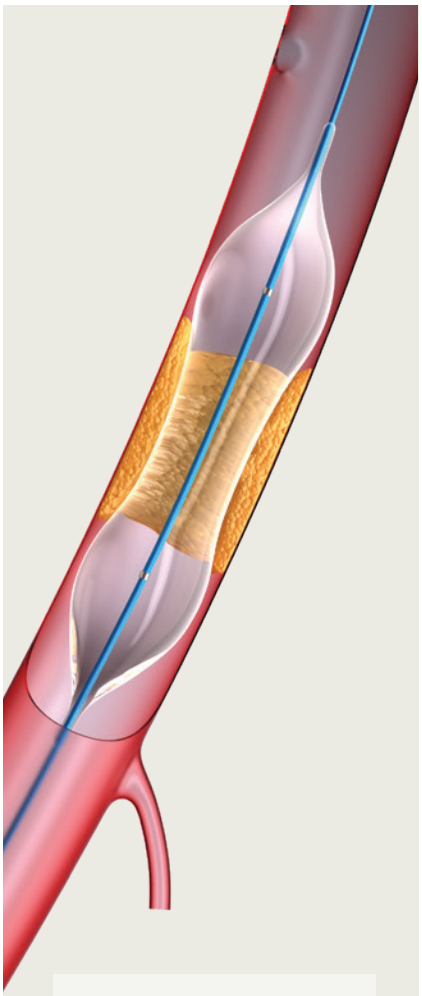
Solace™ QL® Voluminous
Inflation Device

INFLATION DEVICES

Designed to provide precise control with repeatable accurate pressure for use in a wide array of clinical applications such as balloon dilation and stent delivery.

Reference Number	Description	Volume (cc)	Maximum Pressure (ATM)
622520	SwitchBack™ QL® Inflation Device	14 cc	55 ATM
622518	SwitchBack™ QL® Inflation Device	25 cc	40 ATM
622513	SwitchBack™ QL® Voluminous™ Inflation Device	40 cc	15 ATM
622519	SwitchBack™ QL® Voluminous™ Inflation Device	60 cc	15 ATM
622517	Solace™ QL® Press-to-Release Inflation Device	20 cc	30 ATM

Indications for Use:
The Switchback™ QL® and Solace QL® Inflation Devices are recommended for use while performing balloon dilation procedures to inflate the balloon, monitor the pressure within the balloon and deflate the balloon.



PTA

Mini Ghost™

Angioplasty

Pulmonic Valvuloplasty

PTV

NuCLEUS-X™
Tyshak-X™
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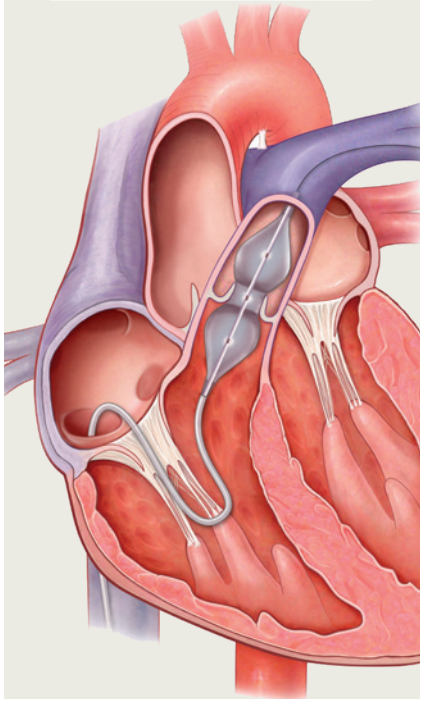
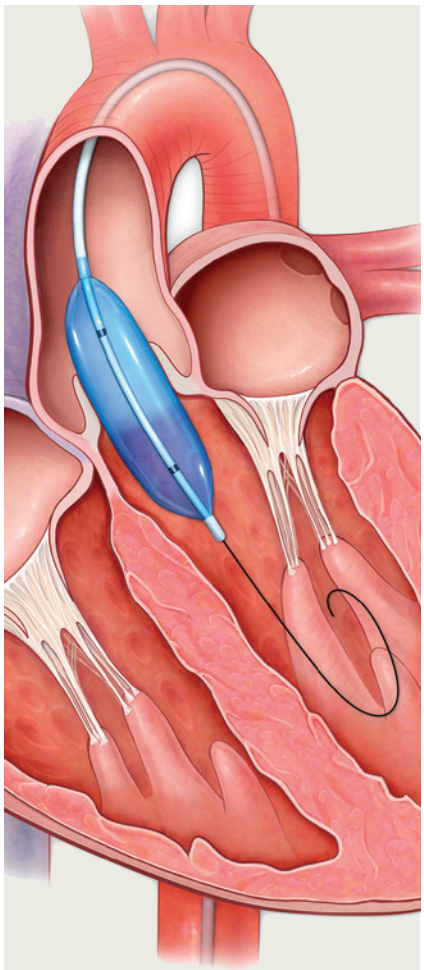
Tyshak NuCLEUS®
Tyshak II®
Z-MED™
Z-MED-X™
Z-MED II™
Z-MED II-X™





BAV

NuCLEUS-X™
Z-MED™
Z-MED II™

Aortic Valvuloplasty

NuMED For Children

Interventional Systems
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Refer to the Product Instructions for Use for relevant warnings, precautions complications and contraindications.

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