



## NuCLEUS™ Line

NuCLEUS™ Line 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 already begin with 4.0 mm.

### Benefits

**Balloon** The NuCLEUS™ Line 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™ Line facilitates positive positioning while holding the balloon in the correct location prior to and during inflation.

**In- and deflation times** The NuCLEUS™ Line 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 marker bands facilitate reliable positioning of the balloon.

**Low profile** The exceptionally low profile of the NuCLEUS™ Line PTV balloons require the smallest introducers possible.

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

**Customized Sizes upon request** If you don't find the appropriate size for your procedure, we can make customized sizes upon request. Additional regulatory approvals may be needed for customized sizes.

	NuCLEUS™	NuCLEUS-X™	TYSHAK NuCLEUS™
Details		<ul style="list-style-type: none"> <li>• Extra high inner lumen strength</li> <li>• Extra fast guidewire movement (even with balloon inflated)</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
Class III			
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)	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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## 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
PVN226		16.0	3.0	9	7	110	0.035	5



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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
	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

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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

other usable lengths available

COEfficient™							
Usable Lengths	(Shaft Length)	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	N/A	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