



**VORTEX<sup>®</sup>**

IMPLANTABLE PORTS

**ANGIODYNAMICS<sup>®</sup>**

# Better Outcomes. Fewer Complications.

## IMPLANTABLE PORTS

The tangential outlet and clear-flow technology behind Vortex® implantable ports set up efficient flushing action to hyper cleanse the entire reservoir, resist sludge build up, and reduce occlusions and infections.

All titanium models are latex free/MRI conditional – 3 Tesla, and plastic models are MRI Safe.



### Vortex® LP

- > Available in plastic and titanium, with single, dual and low-profile options
- > Large septum diameter offers greater target area
- > Tapered, atraumatic-tip catheter reduces vessel trauma
- > Patented Bayonet locking mechanism
- > Choice of silicone or polyurethane catheters



### Vortex® TR

- > Available in plastic and titanium, with single and low-profile options
- > Silicone-filled suture holes in titanium models prevent tissue ingrowth
- > 100 PSI rated silicone catheters
- > Large septum diameter offers greater target area
- > One-step locking mechanism means fast, simple and secure procedures



### Vortex® MP

- > Low-profile design ideal for chest or peripheral placement
- > Largest septum diameter of any peripheral port currently on the market
- > High radiopaque tip FluoroMax® catheter aids in confirming ideal tip placement
- > Marked catheters are available in polyurethane and silicone
- > Snap-lock™ locking mechanism confirms secure attachment with feel, sight and sound



### Vortex® VX

- > Atraumatic-tip catheter tapered to reduce vessel trauma
- > Blue boot strain-relief mechanism offers a secure feel and a snug fit
- > Available in single and low-profile models

# VORTEX TECHNOLOGY

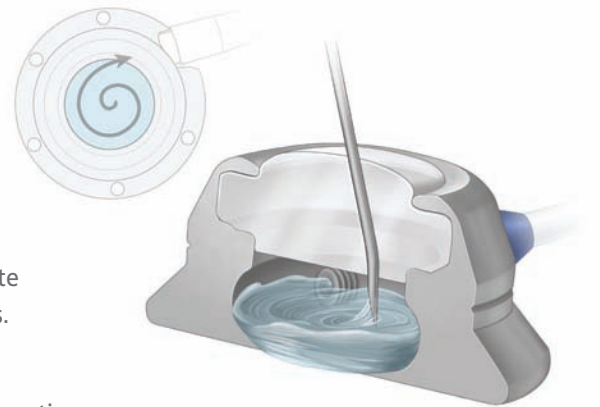
## >> ROUND CHAMBER

Design allows fluid to reach all surfaces in the chamber, helping eliminate dead spaces, resist sludge build-up, and reduce occlusions and infections.

## >> OFF-SET OUTLET

Set at a tangent rather than perpendicularly, it helps to create a flushing action within the port to hyper cleanse the entire chamber leading to decreased sludge build-up and a reduced rate of occlusions.

Complications noted and interventions taken during the use of either a Vortex® port with vortex technology or conventional port in oncology patients.<sup>1</sup> Use of vortex technology results in an average savings per patient of \$1,224 over conventional ports.<sup>2</sup>



**100% Guaranteed  
Against Sludge Buildup**

Ask your AngioDynamics sales representative for details

	Vortex® Port	Conventional Port
Total port occlusion	0	9
Partial port occlusion (infuse but not aspirate)	57	141
<b>Occlusions as % of total access attempts</b>	<b>7%</b>	<b>26%</b>
Repositioned needle	39	91
Changed position with cough or deep breath	55	131
Used extra flush solution	51	104
Instilled urokinase	8	15
Surgical removal of port	0	4
<b>Interventions as % of total access attempts</b>	<b>19%</b>	<b>62%</b>

<sup>1</sup> Stevens B, Barton SE, Brechbill M, et. al. A Randomized, Prospective Trial of Conventional Vascular Ports vs. The Vortex "Clear-Flow" Reservoir Port in Adult Oncology Patients. JVAD 2000; (Summer).  
<sup>2</sup> Third party verification by Pinnacle Healthcare Management.

## Vortex® implantable port options



> Vortex® LP Single Plastic



> Vortex® LP Dual Titanium

AngioDynamics' Vortex® implantable ports are available in a number of options to fit the needs of physicians and their patients. Port body options include plastic and titanium, as well as single, dual and low-profile models. Attached and detached catheters are available in silicone and polyurethane in a variety of French sizes.

>> Refer to the complete product list on the back for more information.

<b>VORTEX® LP</b>	Introducer Size (F)	Catheter Size (F)	Part #
<b>Single Titanium Port</b>			
Detached silicone catheter	n/a	9.6	LVTX1013
Detached silicone catheter	10	9.6	LVTX5013
Attached silicone catheter	10	9.6	LVTX5015
Detached polyurethane catheter	9	8.4	LVTX5513
<b>Dual Titanium Port</b>			
Detached silicone catheter	12	11.4	LVTX5213
<b>Low-Profile Titanium Port</b>			
Detached silicone catheter	n/a	6.9	LVTX1055
Detached silicone catheter	10	8.4/9.6	LVTX5057
Detached polyurethane catheter	6	5.7	LVTX5555
Detached polyurethane catheter	9	8.4	LVTX5557
<b>Single Plastic Port</b>			
Detached silicone catheter	10	9.6	LVTX7013
Attached silicone catheter	10	9.6	LVTX7015
Detached polyurethane catheter	9	8.4	LVTX7513
Attached polyurethane catheter	9	8.4	LVTX7515

**Kit Components:** (1) Vortex LP port system, (1) Catheter, (1) Infusion set, (2) Locking mechanisms, (1) Non-coring needle, 22 Ga  
**Tray components:** (1) Vortex LP port system, (1) Catheter, (2) Locking mechanisms (detached models), (1) Non-coring needle, 22 Ga, (1) Introducer needle, 18 Ga, (1) Vein pick, (1) PeelPro™ PTFE introducer, (1) 0.035" x 50 cm guidewire, (1) Infusion set\*, (1) Blunt needle (detached models), (1) Tunneler, (2) 10 mL syringes, \*dual model contains 2 infusion sets

<b>VORTEX® MP</b>	Introducer Size (F)	Catheter Size (F)	Part #
<b>Single Titanium Port</b>			
Detached polyurethane catheter	n/a	5	MP-P5PK
Detached polyurethane catheter	5	5	MP-P5PT
Attached silicone catheter	5	5	MP-P5SAT
Detached silicone catheter	5	5	MP-P5SDT

**Kit Components:** (1) Vortex MP titanium low-profile port system, (1) Catheter, (2) Locking mechanisms, (1) Non-coring needle, 22 Ga, (1) Blunt needle, 18 Ga, (1) Vein pick  
**Tray components:** (1) Vortex MP titanium low-profile port system, (1) Catheter, (2) Locking mechanisms (detached models), (1) Non-coring needle, 22 Ga, (1) Blunt needle, 18 Ga, (1) Introducer needle, 21 Ga x 7 cm (2.75 in), (1) PeelPro™ PTFE micro-access introducer, 5 Fr x 10 cm, (1) PeelPro™ PTFE introducer, 5 Fr x 15 cm, (1) Nitinol guidewire, .018 x 125 cm, marked, (1) Nitinol guidewire, .018 x 40 cm, (2) 10 mL syringes, (1) Vein pick, (1) LifeGuard™ safety infusion set, (1) Tunneler (silicone models only)

<b>VORTEX® VX</b>	Introducer Size (F)	Catheter Size (F)	Part #
<b>Single Titanium Port</b>			
Attached silicone catheter	8	7.2	P5305K
Detached silicone catheter	8	7.2	P5355K
Attached silicone catheter	10	9.6	P5405K
Detached silicone catheter	10	9.6	P5455K
<b>Low-Profile Titanium Port</b>			
Attached silicone catheter	6	5.1	P12105K
Detached silicone catheter	6	5.1	P12155K
Attached silicone catheter	8	7.2	P12305K
Detached silicone catheter	8	7.2	P12355K

**Tray components:** (1) Vortex® VX titanium port system, (1) Silicone catheter, (2) Strain reliefs (detached models), (1) Non-coring needle, 22 Ga, (1) Introducer needle, 18 Ga, (1) Vein pick, (1) PeelPro™ PTFE introducer, (1) 0.035" x 50 cm guidewire, (1) Infusion set, (1) Blunt needle (detached models), (1) Tunneler, (2) 10 mL syringes.

<b>VORTEX® TR</b>	Introducer Size (F)	Catheter Size (F)	Part #
<b>Single Titanium Port</b>			
Detached silicone catheter	7	6.6	SSDX-10-I
Attached silicone catheter	8	7.5	SSAX-14-I
Detached silicone catheter	8	7.5	SSDX-14-I
Attached silicone catheter	10	9.6	SSAX-16-I
Detached silicone catheter	10	9.6	SSDX-16-I
<b>Low-Profile Titanium Port</b>			
Attached silicone catheter	7	6.6	PSAX-10-I
Detached silicone catheter	7	6.6	PSDX-10-I
<b>Single Plastic Port</b>			
Detached silicone catheter	8	7.5	SPDX-14-I
Detached silicone catheter	10	9.6	SPDX-16-I
Attached silicone catheter	10	9.6	SPAX-16-I

**Tray components:** (1) Vortex TR port system, (1) Silicone catheter, (2) Locking mechanisms (detached models), (1) Non-coring needle, 22 Ga, (1) Introducer needle, 18 Ga, (1) Vein pick, (1) PeelPro™ PTFE introducer, (1) 0.035" x 50 cm guidewire, (1) Infusion set, (1) Blunt needle (detached models), (1) Tunneler, (2) 10 mL syringes

## IMPORTANT RISK INFORMATION

**INDICATION FOR USE:** AngioDynamics implantable access port systems are intended to facilitate frequent blood sampling or the delivery of medications, nutrients, blood products, and imaging solutions.  
**CAUTION:** Federal (USA) law restricts this device to sale by or on the order of a physician.

**CONTRAINDICATIONS:** AngioDynamics port systems should not be implanted in the presence of known or suspected infections, septicemia, or peritonitis, in patients who have exhibited prior intolerance to the materials of construction, or patients whose body size or tissue is insufficient to accommodate the size of the port or catheter.

**WARNINGS AND PRECAUTIONS:** The device is sterile and intended for single patient use. Sterile unless the package is opened or damaged. Do not re-sterilize. Use of AngioDynamics anti-coring (19 to 22 gauge Huber point) needles in all procedures is recommended. Observe all instructions for use. Failure to do so may result in patient complications or device damage.  
**POTENTIAL COMPLICATIONS:** Use of port systems involve potential risks normally associated with the insertion or use of any implanted device or indwelling catheter including but not limited to: Infection; pneumothorax; catheter malposition, migration or fragmentation; catheter pinch-off or rejection; hemorrhage; hematoma; clot formation,

thrombophlebitis or thromboembolism; vessel trauma, including puncture, laceration, and erosion of vessel and skin; cardiac arrhythmia, puncture and tamponade; endocarditis; thoracic duct injury; peritonitis; fibrin sheath; and drug extravasation (leakage). Occlusion may result from clot formation inside the lumen of the catheter, precipitate formation inside the port from incompatible drugs, or from catheter tip placement against a vein wall or valve.

Indications, contraindications, warnings and instructions for use can be found in the instructions for use supplied with each device. Observe all instructions prior to use. Failure to do so may result in patient complications.

# ANGIODYNAMICS®

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 Covered under U.S. Patent Nos. 5,951,512; 5,312,337; 5,178,612 and foreign counterparts. U.S. and foreign patents pending.

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