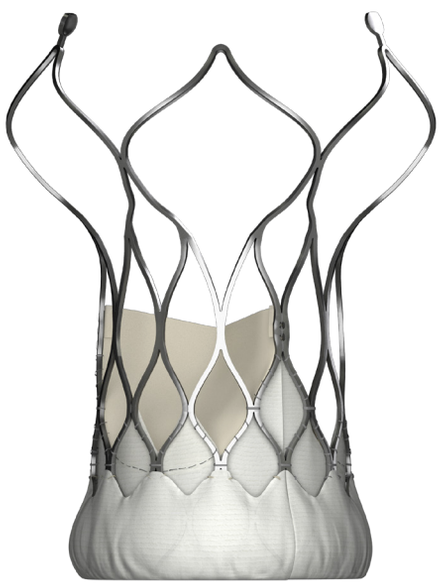
mermaid medical®

Interventional Cardiology & Structural Heart Therapies







MicroPort® CardioFlow

Jenscare

STRUCTURAL HEART SOLUTIONS FAMILY

Mermaid Medical Family of Structural Heart Solutions

At Mermaid Medical, our Cardiology solutions combine advanced technology with clinical insight to deliver minimally invasive solutions for structural heart therapies.

Our portfolio now spans the aortic valve, the left atrial appendage and the tricuspid valve – offering transcatheter options across the structural heart.NEW

Our portfolio is designed to support cardiologists in treating complex cardiac anatomies – with precision, safety, and a focus on improving patient quality of life.

Through precision in every beat, we believe in innovative solutions that improve the rhythm of life.

We strive to advance heart care – **one beat at a time.**



Mermaid Medical Group is a Nordic, privately owned company established in 2007 and headquartered in Copenhagen, Denmark. We develop, manufacture, and distribute medical devices to hospitals and end users across Europe, the U.S., and Asia. We primarily work within solutions to diseases in the vascular system as well as other devices used in interventional radiology. We strive to be the preferred partner for manufacturers as well as hospitals and healthcare professionals.

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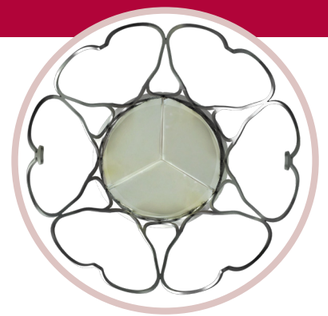
MicroPort CardioFlow



VitaFlow Liberty® – Precision, Performance, and Safety in One Solution

VitaFlow Liberty® is a groundbreaking transcatheter aortic valve (TAVI) developed by MicroPort®, specifically designed to meet the needs of patients with severe aortic stenosis. With advanced technology and innovative design, the system offers a safe, effective, and gentle treatment – even for complex anatomical conditions.

As the world's first motorized delivery system, VitaFlow Liberty® ensures stable valve release, reduces the risk of valve displacement, and makes procedures more controllable. Its flexible catheter with 360° range of motion allows for easy navigation and precise positioning.

The valve is fully retrievable and repositionable when released up to 75%, offering up to three retrieval opportunities per procedure – enhancing safety and confidence during implantation.

Large Cells Design

- Reserved space for coronary intervention.

Supra-Annular Valve Design

- Larger effective orifice area (EOA).
- Improved hemodynamic results.

Double-Layer PET Skirt

- 11mm-12mm skirt edge, providing a larger effective landing zone.
- Reduce paravalvular leakage and regurgitation effectively.

Low Density Cells

- Excellent coaxial alignment during the release.
- Reduced risk of coronary artery occlusion.

Bovine Pericardial Leaflets

- Unique anti-calcification technology.

High Density Cells

- High radial support.
- Suited for severe calcified and/or bicuspid aortic valves.

Hybrid Cell Density Frame

Low Density Cells Provide an Easy-to-Bend Section

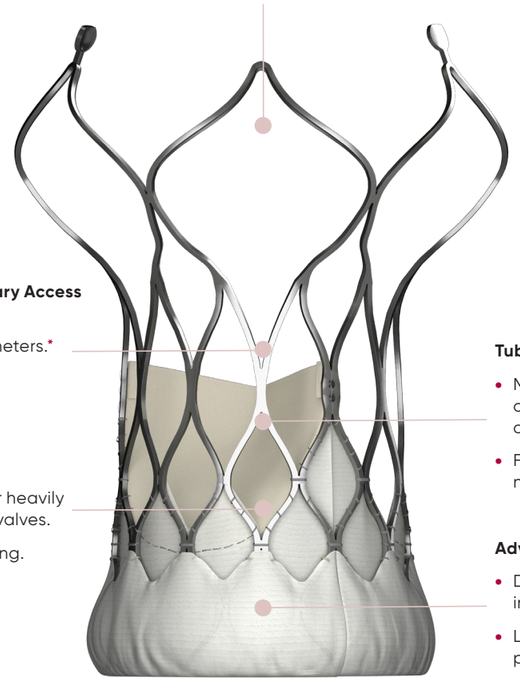
- Enhanced deliverability, suitable for aortic arches with acute angulation.
- Coaxial alignment during valve deployment.

Large Cells Preserve Coronary Access

- Able to simultaneously pass-through two 12F catheters.*
- 14F catheter can easily pass through.

High Density Cells

- High radial force suited for heavily calcified and/or bicuspid valves.
- Strengthens valve anchoring.



Tubular-Shaped Frame

- Minimizes downward pressure during deployment, improving deployment accuracy.
- Forms better sealing with native annulus.

Advanced Double-Layer PET Skirt

- Double-layer PET skirt, 11-12mm in height.
- Larger functional area for paravalvular leak prevention.



Electrically Enabled Delivery System

For control, stability, and accuracy.



Hybrid Cell-Density Frame

Catered to varied clinical needs at different stages of implantation.



Advanced Double-Layer PET Skirt

Prevent paravalvular leaks.



VITAL-X™ Anti-Calcification Technology with Bovine Pericardial Leaflets

Extends valve durability.

*TAVI24 and above

World's First Motorized TAVI Delivery System

The VitaFlow Liberty® delivery system from MicroPort® is one of the most advanced and innovative systems in the field of transcatheter aortic valve implantation.
Combining precision engineering with clinical flexibility to support safer and more effective procedures.

Integrated Sheath – Flexible Access With Maximum Control

- Innovative integrated sheath design.
- 16F/17F - equivalent integrated sheath.

Equal Response And Precision

- Electrically enabled motorized handle, designed to offer precise, responsive, and intuitive control during TAVI procedures.
- Smart Limit Switch with Visual and Audible Feedback. Provides real-time alerts during deployment, improving safety and operator confidence.
- 1:1 instant response, the system reacts immediately to operator input—critical for precise valve placement when timing and accuracy matter most.
- Simultaneous control of the handle and guidewire.

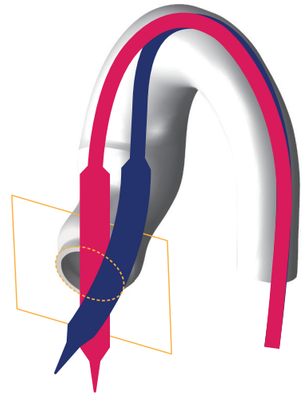
Flexibility for Coaxial Alignment

- 360-degree omni-directional flexibility.
- The world's first double reinforced spiral design.

Multiple Retrievable Function

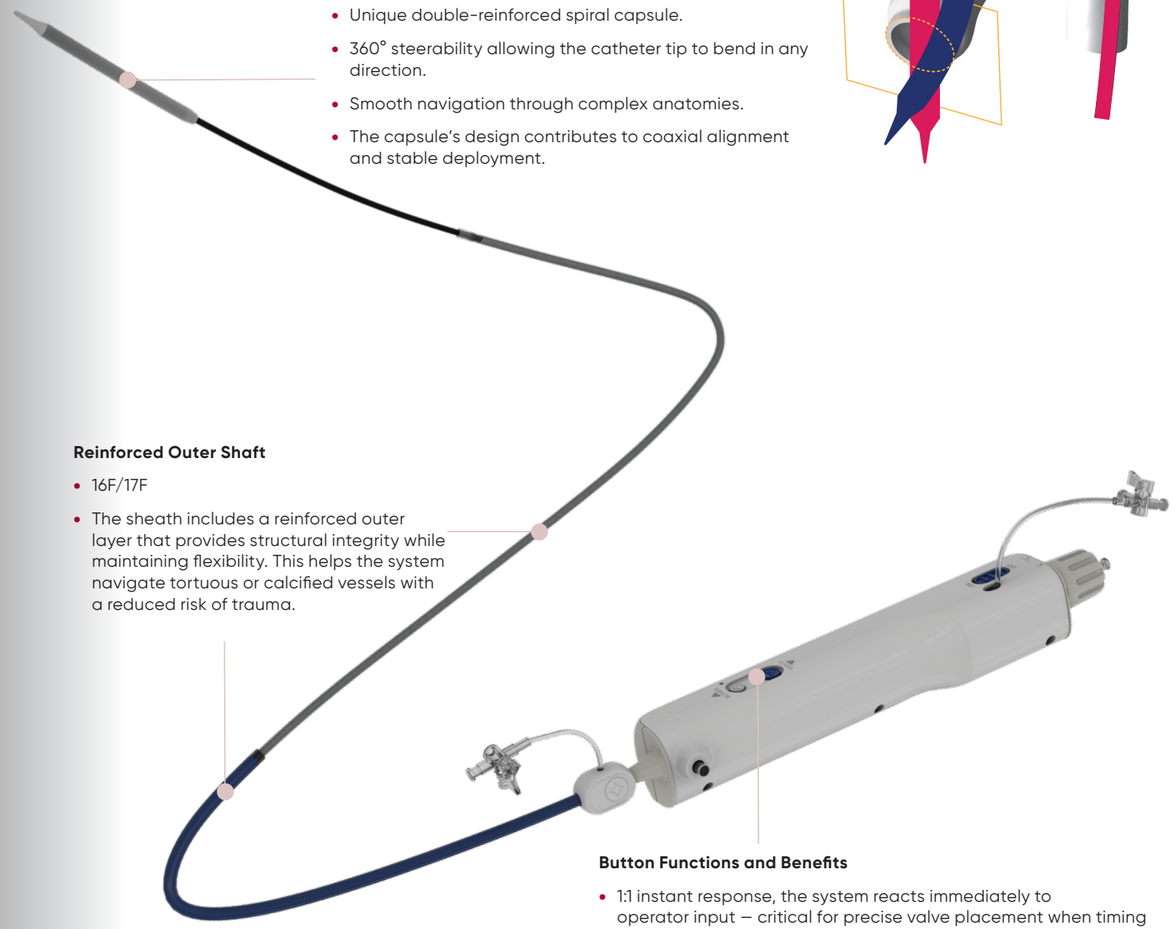
- Can recross the valve after retrieval.
- The valve is fully retrievable and repositionable when released up to 75%, offering up to three retrieval opportunities per procedure.

Electrically Enabled Delivery Device



Capsule Design – Precision and Safety in Deployment

- Unique double-reinforced spiral capsule.
- 360° steerability allowing the catheter tip to bend in any direction.
- Smooth navigation through complex anatomies.
- The capsule's design contributes to coaxial alignment and stable deployment.



Reinforced Outer Shaft

- 16F/17F
- The sheath includes a reinforced outer layer that provides structural integrity while maintaining flexibility. This helps the system navigate tortuous or calcified vessels with a reduced risk of trauma.

Button Functions and Benefits

- 1:1 instant response, the system reacts immediately to operator input – critical for precise valve placement when timing and accuracy matter most.
- Guidewire control - Integrated into the motorized delivery system, this feature enables the operator to manage both the valve release and the guidewire at the same time.
- Visual and audible feedback.
- Stable, rapid, and precise valve release and retrieval.

MicroPort CardioFlow

AnchorMan™ Left Atrial Appendage Closure System

The AnchorMan™ Left Atrial Appendage Closure System is an innovative medical device designed to reduce the risk of stroke in patients with non-valvular atrial fibrillation (NVAF).

With its unique semi-closed design and flexible deployment options, AnchorMan™ provides physicians with enhanced control and safety during procedures.

Semi-Closed Structure

- The AnchorMan™ device features a semi-closed cage formed by twelve 3D folding units, this design merges the advantages of both open and closed occluders.
- The semi-closed design allows for secure placement without requiring deep sheath insertion into the LAA, which is a common challenge with plug-type devices.
- The semi-closed structure of the AnchorMan™ is a key innovation that sets it apart from traditional LAA closure devices.

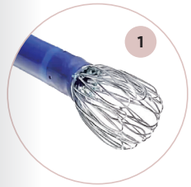
Rounded and Soft Distal End

- Reduced Tissue Damage: The rounded, soft distal end minimizes trauma to the delicate LAA tissue during deployment and retrieval.
- Lower Depth Requirements: Because of its cage-like structure, the device can be anchored effectively even in shallower LAA anatomies.

Deployment Flexibility

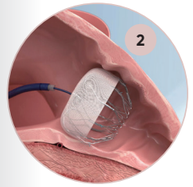
- The AnchorMan™ Left Atrial Appendage Closure System provides physicians with flexibility during implantation by offering two different deployment methods: advancement and unsheathing.

Adaptation to Anatomy for Effective Closure



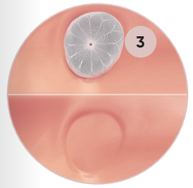
Round Distal End

- Unique “3D-folding” design.
- Confidence when advancing and releasing with ease.



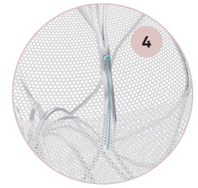
Semi-Closed Design

- Enhanced adaptation to native LAA anatomy.
- Better device stability.



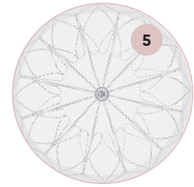
160-Micron PET Membrane

- 160-micron membrane.
- Accelerated endothelialization and occlusion.



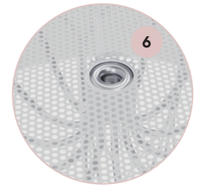
Fixation Anchors

- Twelve fixtion anchoring hooks with meticulous design on both length and angle.
- Stable fixation to prevent device migration.



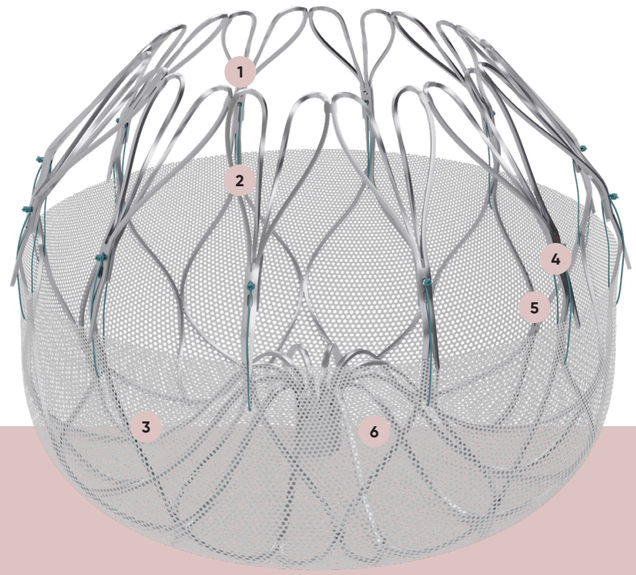
Dense Metal Frame

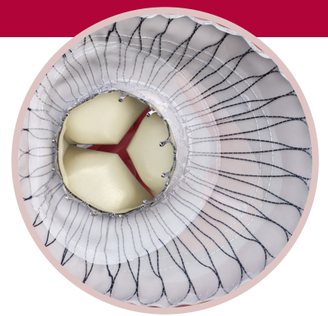
- With a tool of 12*2 sealing rods.
- More contact points for sealing.



Inlaid Threaded Insert

- Reduced metal exposure, minimizing thrombosis.





LuX-Valve Plus™ – Anchored by Design, Not by Force

LuX-Valve Plus™ is a transcatheter tricuspid valve replacement (TTVR) system designed for patients with severe tricuspid regurgitation who are at high risk for open-heart surgery.

LuX-Valve Plus™ is anchored by an interventricular septal anchor and anterior leaflet graspers. This multipoint fixation makes it suitable for large, dilated and elliptical tricuspid annuli while placing minimal stress on the right ventricle.

Implanted through the internal jugular vein, LuX-Valve Plus™ offers a fully transcatheter procedure with a steerable delivery system for precise adjustment of release position and angle.

Radial Force Independent Fixation

- Multipoint anchoring through septal anchor and leaflet graspers.
- Minimal stress on the dilated annulus and right ventricle.

Steerable Delivery System

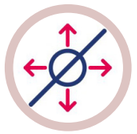
- Multi-dimensionally steerable for precise adjustment of release position and release angle.

Self-Adaptive Fabric Skirt

- Reduces postoperative paravalvular leakage.

Supports Right Heart Recovery

- Radial force independent septal anchoring is designed to facilitate right heart remodeling.
- Designed to reduce the risk of pacemaker implantation.



Radial Force Independent

No reliance on annular radial force.



Septal Anchor

Stable, predictable fixation.



Transjugular Approach

Fully transcatheter, single venous access.



Wide Size Range

Seven sizes, 40–70 mm.

LuX-Valve Plus™ is available through Mermaid Medical in Denmark only

Multipoint Fixation for the Tricuspid Anatomy



1 Septal Anchor

Three-pronged nitinol anchor fixed to the interventricular septum. Stable fixation independent of annular size.

2 Leaflet Graspers

Capture the anterior leaflet for secure fixation and reduced risk of migration.

3 Self-Adaptive Fabric Skirt

Adapts to the native anatomy to reduce paravalvular leakage.

4 Bovine Pericardial Valve

Prosthetic valve with three bovine pericardial leaflets, designed for long-term durability.

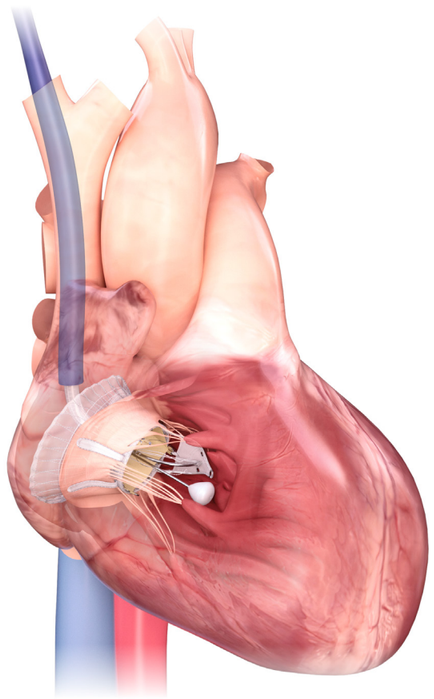
5 Atrial Disc

Conforms to the native anatomy on the atrial side, without relying on radial force.

Designed for Challenging Anatomies

LuX-Valve Plus™ is intended for patients with severe tricuspid regurgitation, including anatomies that are challenging for other transcatheter options:

- Large or highly elliptical annuli.
- Patients with prior tricuspid TEER.
- Suboptimal imaging windows for leaflet repair.
- Large coaptation gaps and advanced disease.
- Patients with pre-existing pacemaker or ICD leads.





Septal anchor



After T-TEER procedure

With pacemaker / ICD leads

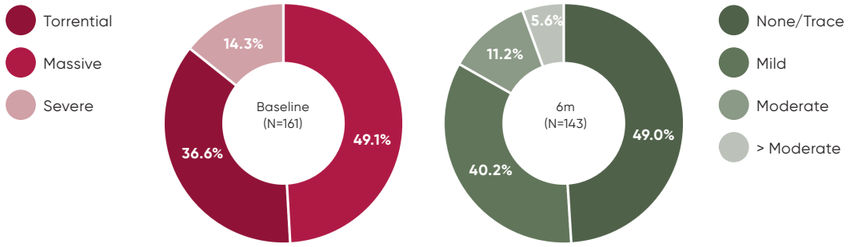
LuX-Valve Plus™ is available through Mermaid Medical in Denmark only

Clinical Evidence

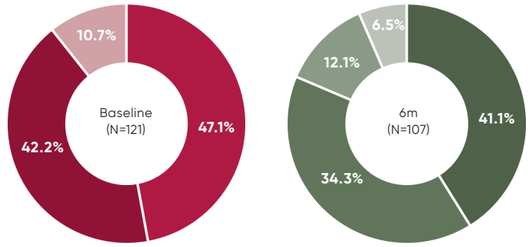
TRINITY Study – Consistent TR Reduction Across Annular Sizes

LuX-Valve Plus™ demonstrated sustained TR reduction at 6 months, with 94.4% of patients at moderate TR or less. Comparable improvement was seen in patients with a large annulus.[1,2]

FAS+Roll-in 94.4% ≤ moderate



Large annulus patients (LAP) 93.5% ≤ moderate



90.9%
of patients in NYHA class I/II

≈19 points
improvement in KCCQ score

≈97% points
device success

Clinical Programme

- CE marked under the EU MDR, 2026.
- FDA Breakthrough Device Designation and EU Expert Panel Scientific Advice Pilot.
- US pivotal IDE trial – first implants completed in 2026.
- LuX-Valve series implanted in more than 1,000 patients across five continents.
- Clinical trials in China, Europe and North America, incl. TRAVEL II.
- Implanted at leading European centres, incl. Rigshospitalet.

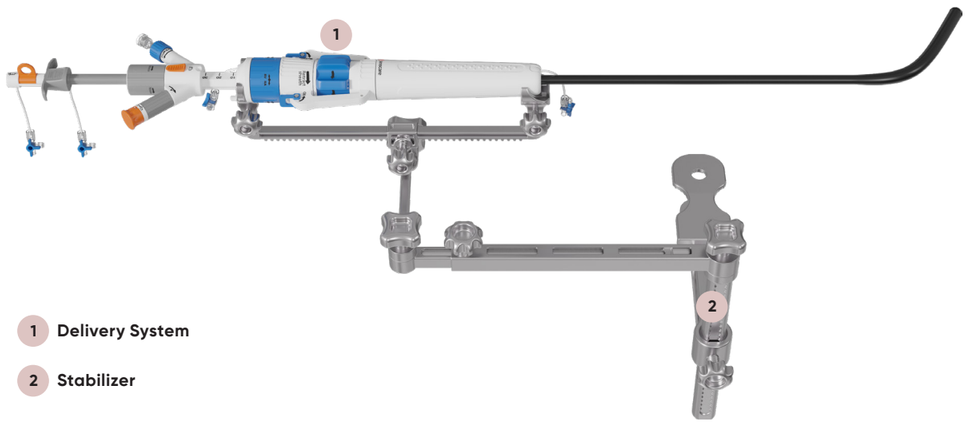
[1] Data from the LuX-Valve Plus TRINITY clinical trial statistical report and subgroup statistical report.

[2] TR graded per Hahn et al., JACC: Cardiovascular Imaging, 2019. FAS = full analysis set. LAP = patients receiving 55, 60, 65 or 70 mm valves.



Transjugular Delivery – Steerable and Controlled

The LuX-Valve Plus™ delivery system is designed for a direct transjugular route to the tricuspid valve. It combines steerability with step-by-step control, allowing the operator to optimise valve axis and position before final anchoring.



1 **Delivery System**

2 **Stabilizer**

Transjugular Delivery System

- 33 Fr delivery system via the internal jugular vein.
- Avoids transatrial surgical access.

Multi-Angle Steerability

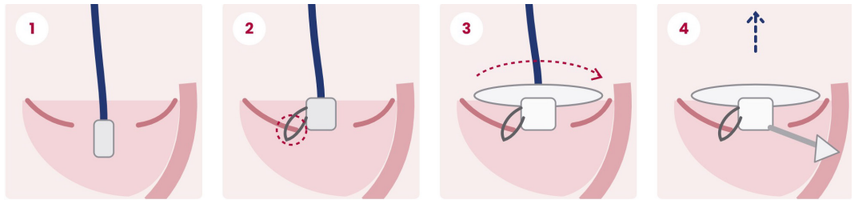
- Flexion, rotation and depth control for precise navigation.
- Rotatable valve orientation for coaxial alignment.

Controlled, Stepwise Deployment

- Leaflet capture, valve adjustment and septal anchoring as separate steps.
- Verified on TEE and fluoroscopy before anchoring.

LuX-Valve Plus™ is available through Mermaid Medical in Denmark only

Procedure in Four Steps



Access and Navigation

Delivery system advanced via the jugular vein and steered into the right ventricle.

Leaflet Capture

Graspers released to capture the anterior leaflet.

Valve Release and Adjustment

Valve deployed and axis fine-tuned under imaging guidance.

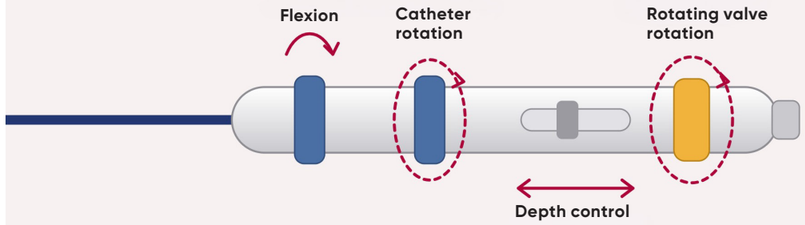
Septal Anchoring

Septal anchor deployed into the interventricular septum.

Implantation should be performed by a trained Heart Team. Refer to the Instructions for Use.

Handle Controls

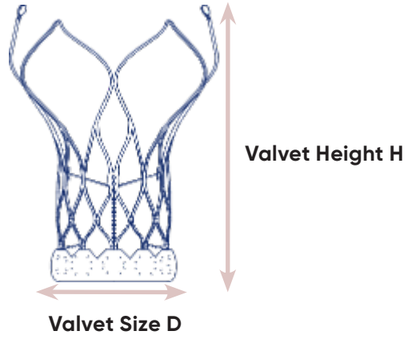
Four independent controls for precise positioning before anchoring.



Ordering and Specifications

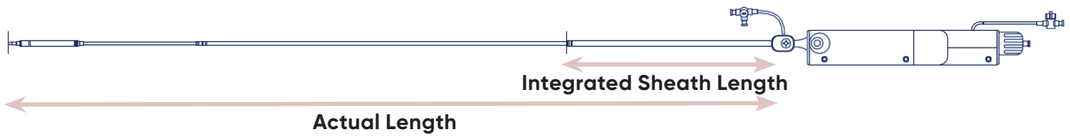
VitaFlow Liberty® Aortic Valve

Ref. no.	Valve Size D (mm)	Aortic Annulus Diameter (mm)	Valve Height H (mm)	Box
TAV21	21	17-20	50	1
TAV24	24	20-23	50	1
TAV27	27	23-26	53	1
TAV30	30	26-29	53	1



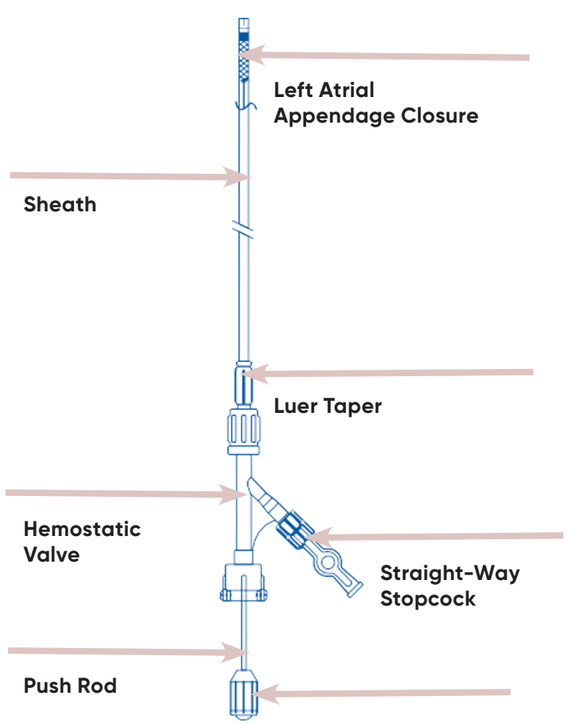
VitaFlow Liberty® Delivery System

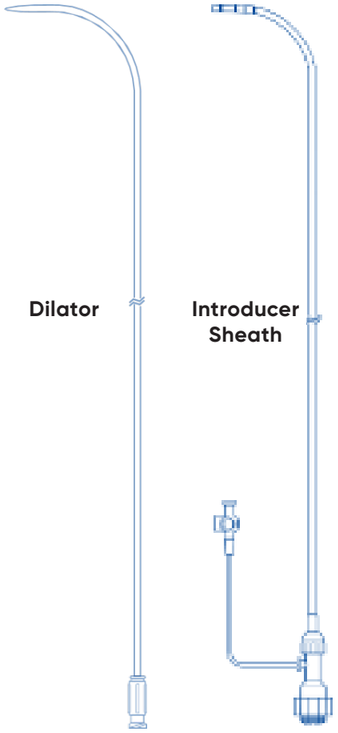
Ref. no.	Actual Length L1 (cm)	Integrated Sheath Length L2 (cm)	Box
DSR21	112	30	1
DSR24	112	30	1
DSR27	112	30	1
DSR30	112	30	1



AnchorMan™ Left Atrial Appendage Closure Device

Ref. no.	Closure Device Size	Delivery System Effctive Length	Delivery System Outside Diameter	Box
FL35	35mm	850mm	12Fr	1
FL32	32mm	850mm	12Fr	1
FL29	29mm	850mm	12Fr	1
FL26	26mm	850mm	12Fr	1
FL23	23mm	850mm	12Fr	1
FL20	20mm	850mm	12Fr	1





Ordering and Specifications

LuX-Valve Plus™ Implant

Ref. no.	Valve Size D (mm)	Valve Inner Diameter (mm)	Box
JS/TTVI-28-40	40	28	1
JS/TTVI-28-45	45	28	1
JS/TTVI-28-50	50	28	1
JS/TTVI-28-55	55	28	1
JS/TTVI-30-40	40	30	1
JS/TTVI-30-45	45	30	1
JS/TTVI-30-50	50	30	1
JS/TTVI-30-55	55	30	1
JS/TTVI-30-60	60	30	1
JS/TTVI-30-65	65	30	1
JS/TTVI-30-70	70	30	1

Valve Size

LuX-Valve Plus™ Delivery System

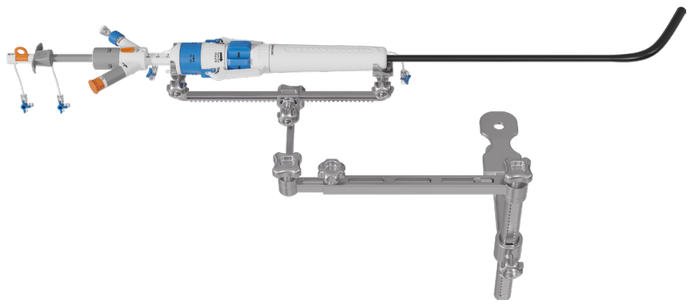
Ref. no.	Outer Diameter (Fr)	Box
JS/TTVDJ-33	33	1

LuX-Valve Plus™ Introducer Kit

Ref. no.	Size (Fr)	Box
JS/SID01-33-100	33	1

LuX-Valve Plus™ Stabilizer

Ref. no.	Description	Box
JS/STA-TJ01-01	Delivery system stabilizer	1



Delivery System & Stabilizer



Introducer Kit

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