MERIT MEDICAL®

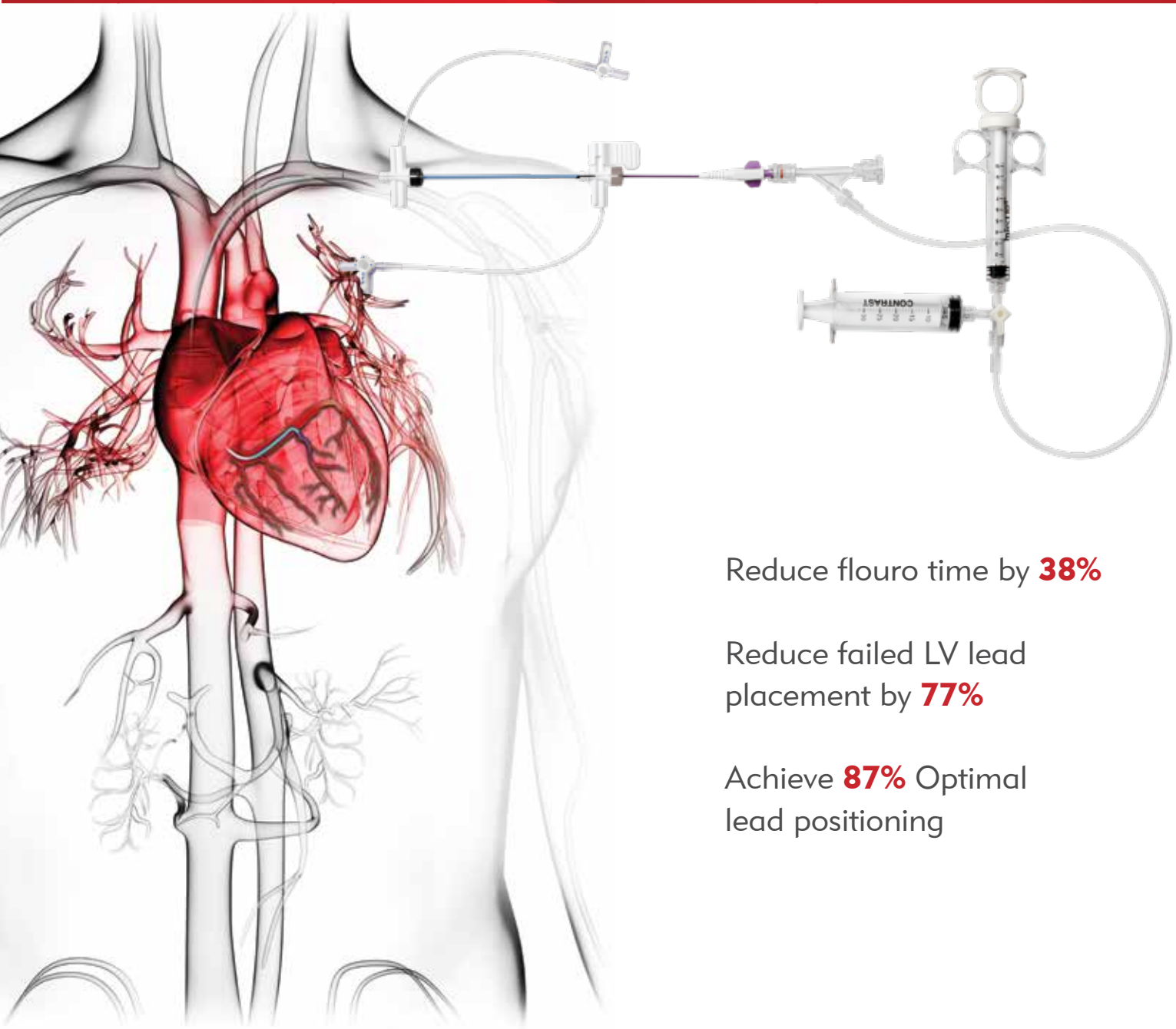
Interventional CRT Tools

Advanced CSG

Advanced LVI

Vein Selector

Advanced CA Kit



Reduce flouro time by **38%**

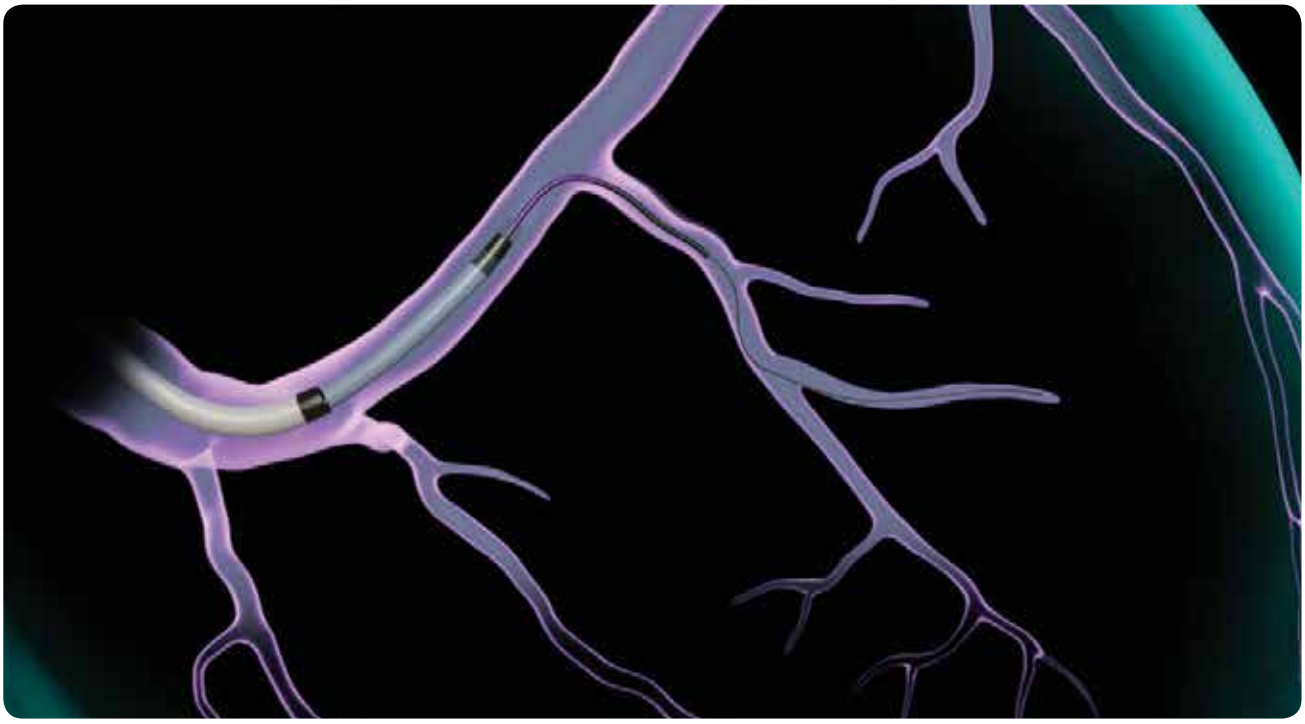
Reduce failed LV lead placement by **77%**

Achieve **87%** Optimal lead positioning

Worley™ Advanced LV Delivery System

RELIABLE ACCESS & ACCURATE DELIVERY

To meet the challenges of cardiac resynchronization therapy (CRT), you need advanced LV delivery systems to match the tortuosity of your patient's anatomy. The Worley Advanced LV Lead Delivery System is designed to offer you the flexibility you need to reliably and accurately place your LV leads at the target location.



The **Worley Advanced LV lead delivery system** is made up of 4 main parts. Each component plays an intricate role in helping you efficiently and accurately place your LV lead.

Advanced CSG

Advanced LVI

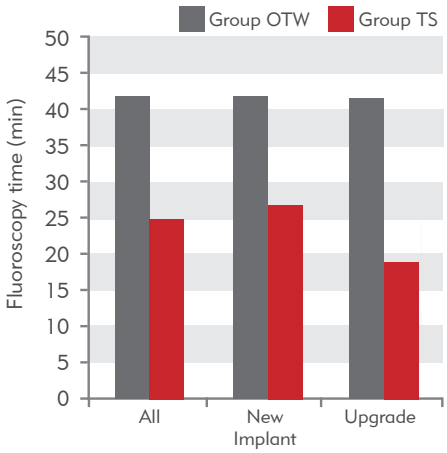
Vein Selector

CA Kit

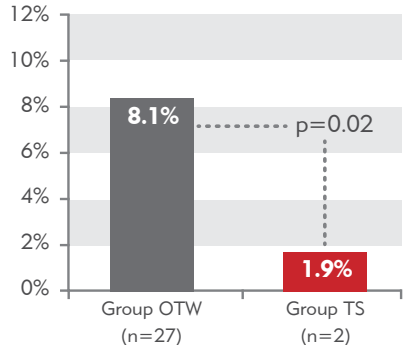
CLINICAL EVIDENCE

In a clinical study conducted at Duke University involving 437 patients who received CRT implantation, two study groups were compared, one group using a standard over-the-wire (OTW) implant technique catheter while the other used a 9F telescoping support catheter system (TS).[1]

Shorter fluoro time
42.1 Minutes vs. 26.3 Minutes
(p <0.01) 38% Improvement



Failed LV lead placement was lower
1.9% Vs. 8.1% (p=0.02)



Optimal Lead Positioning 87% vs 75% (p=0.01)

Left Ventricular Lead Location According to Implantation Technique

	Group OTW	Group TS	p Value
Posterior or lateral/anterior (%)	92/8	99/1	0.01
Basal or mid/apical (%)	82/18	87/13	0.22
Optimal/nonoptimal (%)*	75/25	87/13	0.01

** Optimal lead location posterior/lateral and basal/mid. Nonoptimal lead location anterior or apical. OTW = over-the-wire; TS = telescoping support.*

IN CONCLUSION

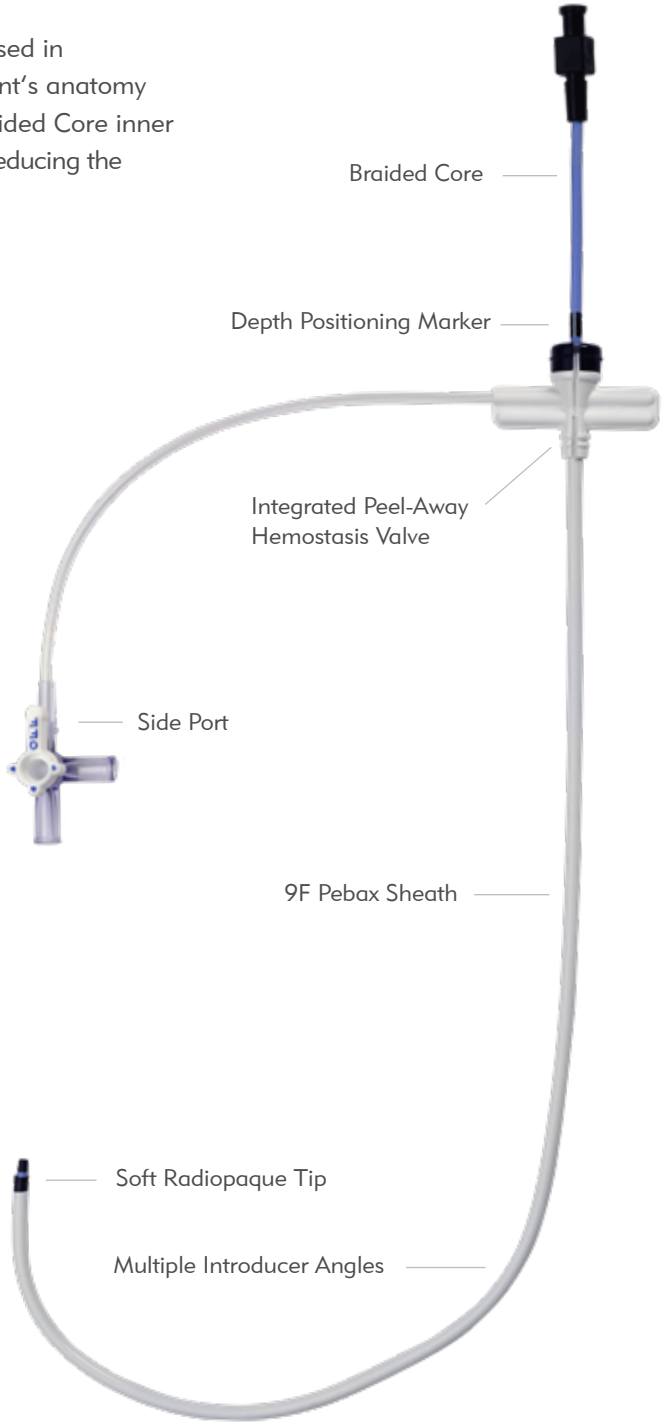
"A CRT-implant approach using contrast injection and a telescoping-support catheter system results in FEWER failed LV lead implants, IMPROVED LV lead location, and SHORTER procedure times."

[1] Jackson, Kevin P., et al. "Impact of Using a Telescoping-Support Catheter System for Left Ventricular Lead Placement on Implant Success and Procedure Time of Cardiac Resynchronization Therapy." Pacing and Clinical Electrophysiology 36.5 (2013): 553-558

Worley™ Advanced CSG

ADVANCING POSSIBILITIES FOR CORONARY SINUS CANNULATION

The Worley Advanced Coronary Sinus Guide's unique curve used in conjunction with the Braided Core helps you match your patient's anatomy to the length and curve of the Coronary Sinus Guide. The Braided Core inner catheter can be advanced as needed to create variable curves reducing the number of sheaths needed to facilitate a successful implantation.



PRODUCT FEATURES

BRAIDED CORE variable shape design provides better torque control and flexibility

DEPTH POSITION MARKER for measuring the 43.5 cm distance between the braided core tip and the CSG

INTEGRATED PEEL-AWAY HEMOSTASIS VALVE handles like a standard peel-away introducer to reduce risk of blood loss and air embolism

SIDE PORT allows open access infusion and contrast injection during implantation

CRUSH RESISTANT PEBAX® SHEATH with braided core reduces kinking and facilitates easy removal

9 FRENCH ID provides ample room to perform various advanced CRT implantation techniques

SOFT RADIOPAQUE TIP reduces risk of vessel wall trauma and improves fluoroscopic visualization

MULTIPLE INTRODUCER ANGLES for better LV lead placement

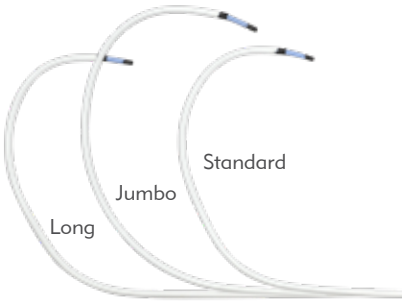
(Pebax® is a registered trademark of Arkema Group)

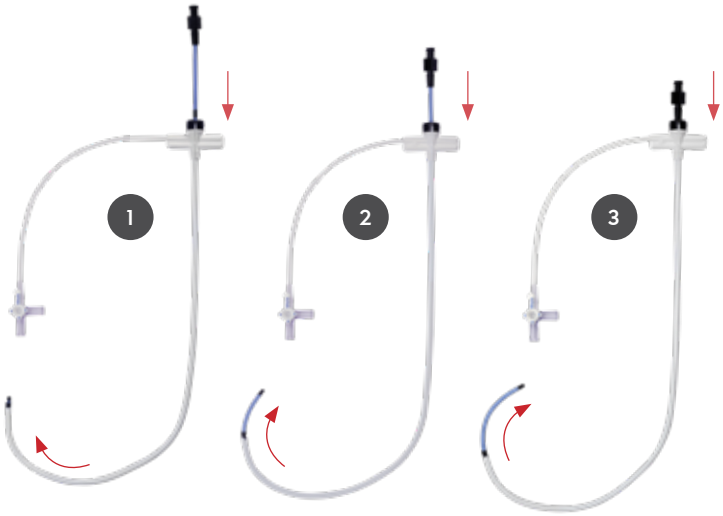
Integrated Peel-away Hemostasis Valve

- Integrated valve and hub design allows handling like a standard peel-away introducer
- Minimizes the risk of lead movement or dislodgement during catheter removal
- Provides easy splitting of the delivery sheath without the need of a separate slitter

THREE SIZES

Size	Length	Purpose
Standard	40 cm	For standard coronary anatomy
Jumbo	50 cm	Large curve for marked atrial enlargement
Long	50 cm	For deep seating and end support





Braided Core Variable Shape Design

- Reduces the number of sheaths needed to facilitate a successful implantation
- Radiopaque tip for better fluoroscopic visualization
- Inner catheter can be advanced as needed up to 6.5 cm from tip to facilitate
- CS cannulation in varying anatomy
- Greater torque control when compared to extruded Coronary Sinus Guide
- Proximal black depth-positioning marker for depth guidance and accurate placement

ADVANCED CSG CORONARY SINUS GUIDE

Part Number	Length	Size	Curve	Outer Diameter	Inner Diameter	Tip Diameter
WOR-CSG-B1-09	40 cm	9 F	Standard	0.157″	0.130″	0.122″
WOR-CSG-BL1-09	50 cm	9 F	Standard	0.157″	0.130″	0.122″
WOR-CSG-B2-09	50 cm	9 F	Jumbo	0.157″	0.130″	0.122″
WOR-CSG-BR1-09	40 cm	9 F	Right	0.157″	0.130″	0.122″

KIT CONTENTS

PTFE Guide Wire:
135 Length, 45° angle,0.035″ x 135 cm J tip

Curved Guiding Core:
9F introducer, 0.118″ OD, 0.095″ ID, 0.092″ tip

Straight Vessel Dilator:
0.038″ ID Transvalvular Insertion

(TVI) Tool: 1.75″, 7F, 0.117″ OD, 0.097″ ID

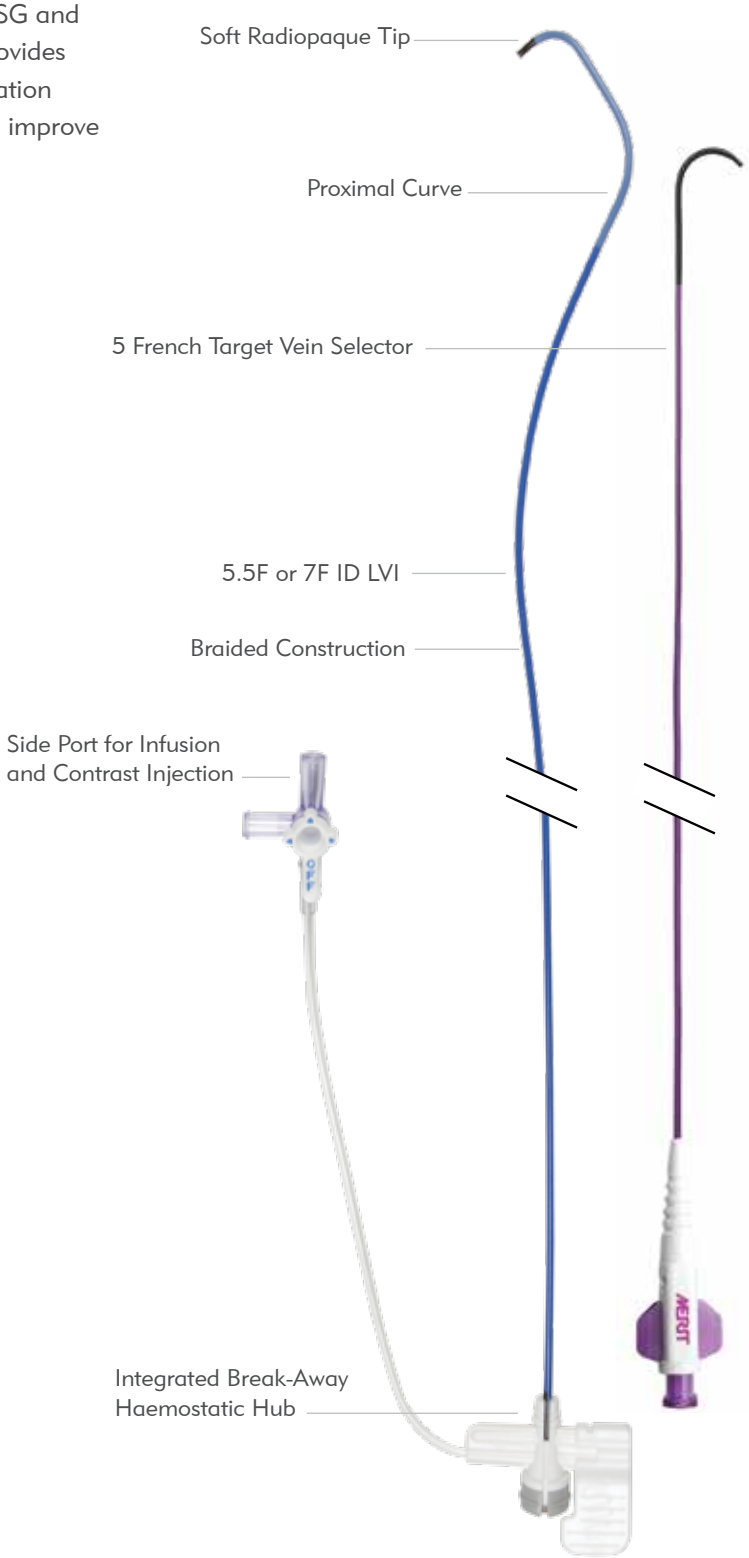
Needle: 2.75″, 18G

Syringe: 12 cc

Worley™ Advanced LVI

ADVANCING EFFICIENT & SUCCESSFUL LV LEAD IMPLANTATION

When used together with the Worley Advanced CSG and Worley Vein Selector, the Worley Advanced LVI provides the tools and solutions needed to reduce implantation times, gain easier access to the target vessel, and improve chances for successful CRT implantation.[1]



PRODUCT FEATURES

BRAIDED SHEATH CONSTRUCTION supports better torque control and stability. Sliceable sheath for easy removal.

INTEGRATED BREAK-AWAY HAEMOSTATIC HUB AND HANDLE Designed to protect against blood loss and air embolism. Hub requires no cutting. Secure hub grip reduces the risk of lead dislodgement during removal.

SOFT RADIOPAQUE TIP minimizes risk of vessel wall trauma and improves fluoroscopic visualization.

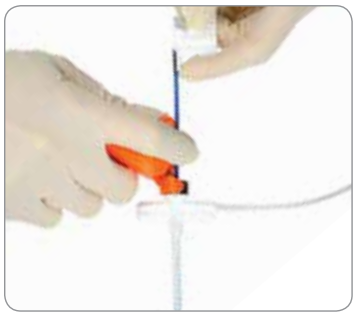
PROXIMAL AND DISTAL CURVES enhance sub-selective access to angulated lateral vein branches.

5F OD TARGET VEIN SELECTOR supports the LVI for improved target vein selection and guide-wire placement.

5.5F OR 7F ID LVI provides ample support for pacing leads and room to perform various advanced CRT implantation techniques.

MULTIDUROMETER PROXIMAL CURVE CONSTRUCTION delivers improved tip directivity.

SIDE PORT allows open access infusion and contrast injection during implantation lead dislodgement during removal.

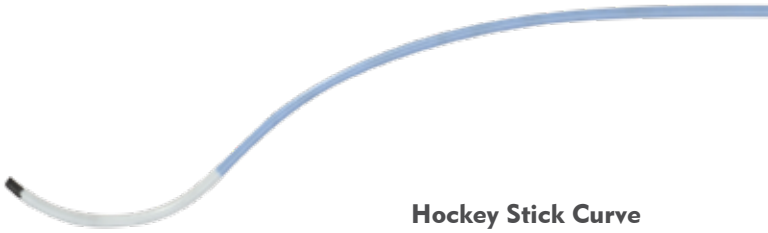


Integrated Valve and Hub Design

- Breakaway valve provides direct access for the slicer to engage the braided sheath
- Oversized grip reduces risk of lead movement
- Easy-to-use slicer mates to the CSG hub for improved stability during sheath removal

Renal Curve
For most common coronary venous anatomies

Multi Purpose Curve
For other coronary venous anatomies



Hockey Stick Curve
For larger coronary venous anatomies

Hook Curve
For smaller challenging coronary venous anatomies

WORLEY Advanced LVI

Part Number	Length	Outer Diameter	Inner Diameter	Description
7F LVI				
WORLVI-75-5-62-07-RE	62 cm	0.120″	0.090″	Renal
WORLVI-75-5-62-07-HS	62 cm	0.120″	0.090″	Hockey Stick
WORLVI-75-5-62-07-HO	62 cm	0.120″	0.090″	Hook
WORLVI-75-5-62-07-MP	62 cm	0.120″	0.090″	Multipurpose
5.5F LVI				
WORLVI-75-5-62-55-RE	62 cm	0.088″	0.072″	Renal
WORLVI-75-5-62-55-HS	62 cm	0.088″	0.072″	Hockey Stick
WORLVI-75-5-62-55-HO	62 cm	0.088″	0.072″	Hook
WORLVI-75-5-62-55-MP	62 cm	0.088″	0.072″	Multipurpose

Worley™ Vein Selector

The Worley Vein Selector is designed to improve LV lead location with its key features: unique accordion hub to minimize kinking and enhance steerability, proprietary braided shaft to maximize flexibility, and soft tapered tip to reduce vessel trauma. The Worley Vein Selector is also highly visible under fluoroscopy.

PRODUCT FEATURES

UNIQUE ACCORDION HUB design to minimize kinking and enhance steerabilty

PROPRIETARY BRAIDED SHAFT design to maximize flexibility

SOFT TAPERED TIP to reduce vessel trauma

HIGHLY VISIBLE under fluoroscopy

IMPROVED LV lead location.[1]

Greater visibility for reliable access to the target vein

Ergonomic wing hub enhances handling and control

WORLEY VEIN SELECTOR

Part Number	French Size	I.D.	Length	Curve
57538CS-WOR	5F	.046"/ 1.17 mm	75 cm	Standard
57538CSV-WOR	5F	.046"/ 1.17 mm	75 cm	Vertebral
57538CSHK-WOR	5F	.046"/ 1.17 mm	75 cm	Hook

1 Jackson KP, Hegland DD, Frazier-Mills C, Piccini JP, Koontz JI, Atwater BD, Daubert JP, Worley SJ. Impact of using a telescoping-support catheter system for left ventricular lead placement on implant success and procedure time of cardiac resynchronization therapy. Pacing Clin Electrophysiol. 2013 May; 36(5):553-8.

Worley™ Advanced Contrast Administration Kit

ADVANCING REAL-TIME VISIBILITY FOR ACCURATE PLACEMENT

Inserting Cardiac Resynchronization Therapy (CRT) devices requires accurate placement of LV leads quickly and efficiently. Merit Medical's Worley Contrast Administration Kits combine all of the products you need to gain sustained, clear visibility of coronary venous anatomy. The Worley CA Kit provides real-time visibility during CRT implantation for improved LV lead placement.

PRODUCT FEATURES

MEDALLION® SYRINGES Manufactured from strong polycarbonate with glass-like smoothness and clarity for improved visibility and control.

INJECT10N™ CORONARY CONTROL SYRINGE Smaller barrel ID reduces hand fatigue and requires less force to generate high pressure during injections.

HEMOSTASIS VALVE Maintains hemostasis without compromising catheter movement or restriction of contrast flow.

STOPCOCK Designed for ease of use and to give you confidence when stopping and starting flow during procedure.

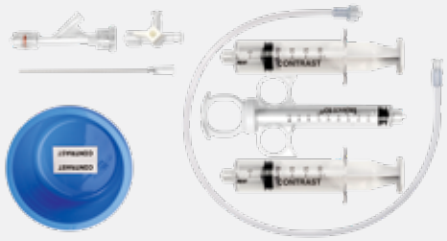
HP TUBING Clear PVC tubing configured to meet the specific need of the procedure.

ACCESSORIES Labels and bowl complete the Advanced CA Kit with the accessories you need to meet your safety goals.

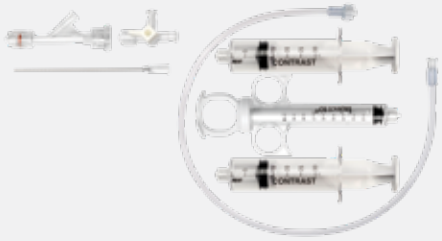
WORLEY ADVANCED CA KIT CONTRAST ADMINISTRATION KIT

Part Number	Description
K12-WORLEY1	Worley Advanced Contrast Administration Kit 1
K12-WORLEY2	Worley Contrast Administration Kit 2

K12-WORLEY1



K12-WORLEY2

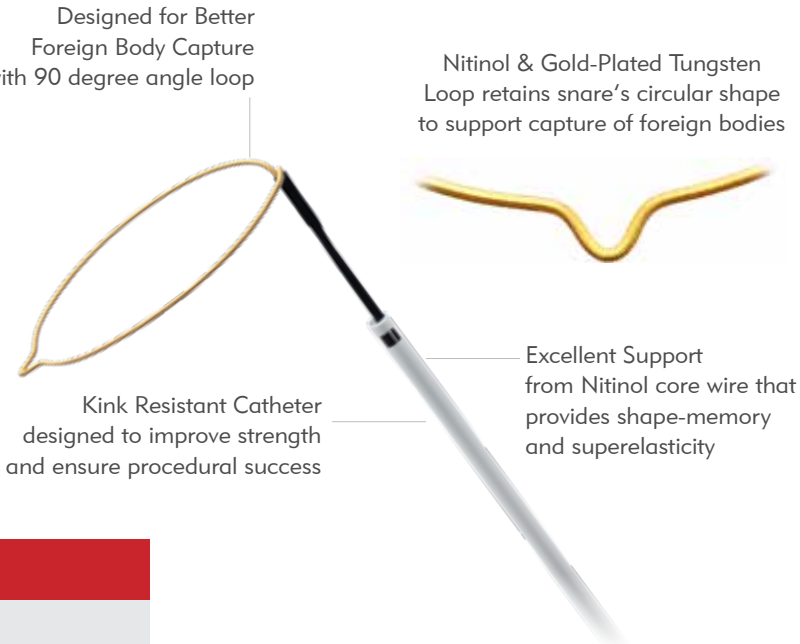


ONE Snare®

Endovascular Snare System

The ONE Snare is a single-loop snare designed to provide both accuracy and reliability for effective foreign body manipulation and retrieval. For use during antidromic and orthodromic snare techniques.

Superelastic Nitinol provides flexibility and kink resistance in the catheter. Gold-plated Tungsten is wrapped around the Nitinol loop for excellent visualisation under fluoroscopy.



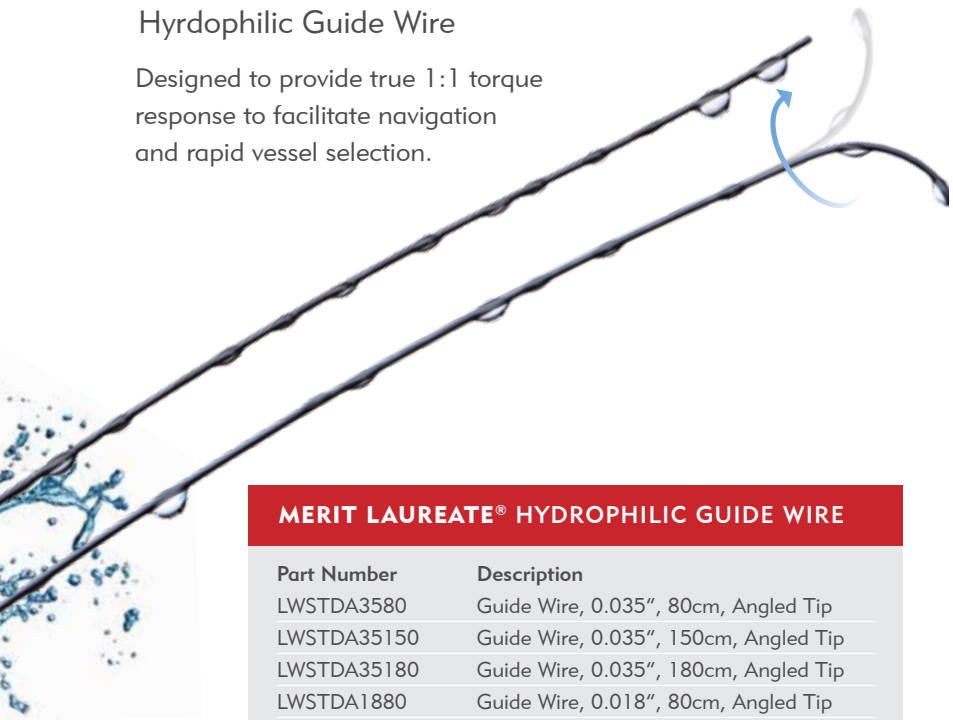
ONE SNARE® ENDOVASCULAR SNARE SYSTEM

Part Number	Description
ONE1000	4F ONE Snare, 10mm loop, 120cm length

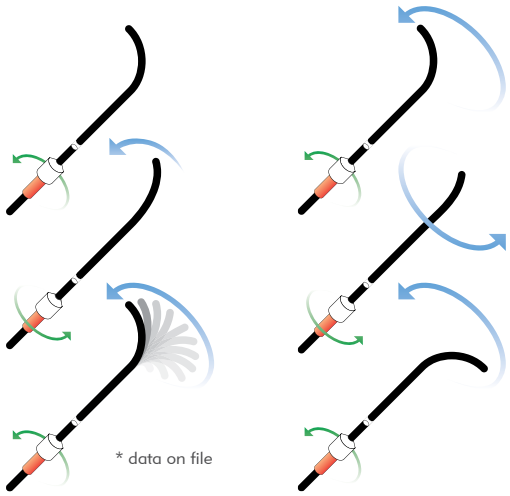
Merit Laureate®

Hyrdophilic Guide Wire

Designed to provide true 1:1 torque response to facilitate navigation and rapid vessel selection.



Market Leader | **Merit Laureate**



The market leader shows a slow torque response followed by rapid exaggerated movement.

The Merit Laureate shows definitive turn for turn responsiveness (1:1 torque).

MERIT LAUREATE® HYDROPHILIC GUIDE WIRE

Part Number	Description
LWSTDA3580	Guide Wire, 0.035", 80cm, Angled Tip
LWSTDA35150	Guide Wire, 0.035", 150cm, Angled Tip
LWSTDA35180	Guide Wire, 0.035", 180cm, Angled Tip
LWSTDA1880	Guide Wire, 0.018", 80cm, Angled Tip
LWSTDA18150	Guide Wire, 0.018", 150cm, Angled Tip
LWSTDA18180	Guide Wire, 0.018", 180cm, Angled Tip

DiamondTOUCH™

Digital Inflation Device

The DiamondTOUCH provides expanded capacity for inflation. With 35 atm pressure capability and 30 mL syringe volume, the DiamondTOUCH is ideal for any interventional lab using high pressure, large volume balloons. With wider threads and quick-release handle, the DiamondTOUCH offers rapid inflation and deflation.

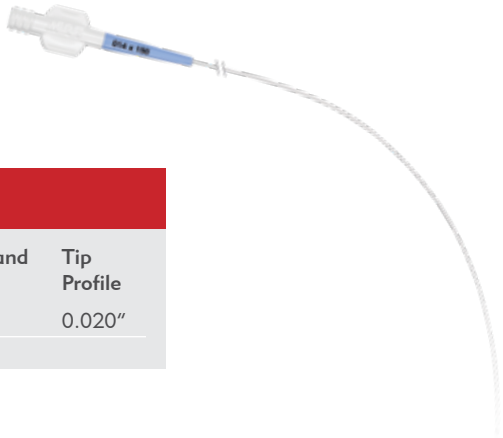
DiamondTOUCH™ DIGITAL INFLATION DEVICE

Part Number	Description
IN9135	35 ATM/BAR

Merit SureCross®

Support Catheter

Engineered to optimize pushability and flexibility which maximizes guide wire support, trackability and lesion crossing.



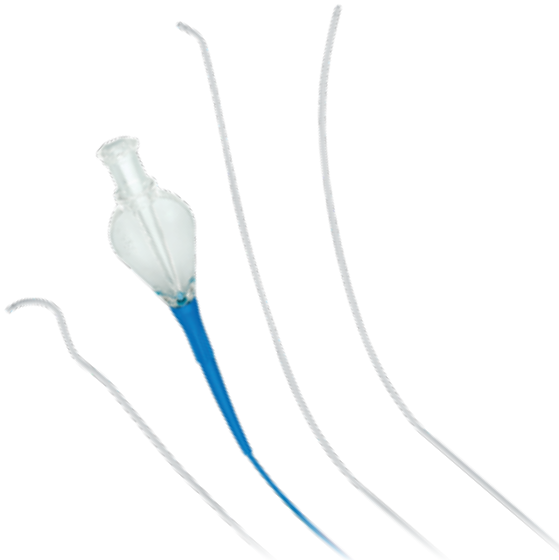
MERIT SURECROSS® SUPPORT CATHETER

Part Number	Guide Wire Diameter	Effective Length	Hydrophilic Coating Length	Marker Band Spacing	Tip Profile
SC1490	0.014″ (0.36 mm)	90cm	40cm	15mm	0.020″

Merit Maestro®

Microcatheter

A Multipurpose Microcatheter with Nylon Ribbon Braiding that provides excellent pushability, trackability and kink recovery when crossing small tortuous vessels.



MERIT MAESTRO® MICROCATHETER

Part Number	Description
28MC2411OST	Proximal 2.8F Distal 2.4F, 110cm Straight Tip

Ordering Information

ADVANCED CSG CORONARY SINUS GUIDE

Part Number	Length	Size	Curve	Outer Diameter	Inner Diameter	Tip Diameter
WOR-CSG-B1-09	40 cm	9 F	Standard	0.157″	0.130″	0.122″
WOR-CSG-BL1-09	50 cm	9 F	Standard	0.157″	0.130″	0.122″
WOR-CSG-B2-09	50 cm	9 F	Jumbo	0.157″	0.130″	0.122″
WOR-CSG-BR1-09	40 cm	9 F	Right	0.157″	0.130″	0.122″

WORLEY ADVANCED LVI

Part Number	Length	Outer Diameter	Inner Diameter	Description
7F LVI				
WORLVI-75-5-62-07-RE	62 cm	0.120″	0.090″	Renal
WORLVI-75-5-62-07-HS	62 cm	0.120″	0.090″	Hockey Stick
WORLVI-75-5-62-07-HO	62 cm	0.120″	0.090″	Hook
WORLVI-75-5-62-07-MP	62 cm	0.120″	0.090″	Multipurpose
5.5F LVI				
WORLVI-75-5-62-55-RE	62 cm	0.088″	0.072″	Renal
WORLVI-75-5-62-55-HS	62 cm	0.088″	0.072″	Hockey Stick
WORLVI-75-5-62-55-HO	62 cm	0.088″	0.072″	Hook
WORLVI-75-5-62-55-MP	62 cm	0.088″	0.072″	Multipurpose

WORLEY VEIN SELECTOR

Part Number	French Size	I.D.	Length	Curve
57538CS-WOR	5F	.046″/ 1.17 mm	75 cm	Standard
57538CSV-WOR	5F	.046″/ 1.17 mm	75 cm	Vertebral
57538CSHK-WOR	5F	.046″/ 1.17 mm	75 cm	Hook

WORLEY ADVANCED CA KIT CONTRAST ADMINISTRATION KIT

Part Number	Description
K12-WORLEY1	Worley Advanced Contrast Administration Kit 1
K12-WORLEY2	Worley Contrast Administration Kit 2

ONE SNARE® ENDOVASCULAR SNARE SYSTEM

Part Number	Description
ONE1000	4F ONE Snare, 10mm loop, 120cm length

MERIT LAUREATE® HYDROPHILIC GUIDE WIRE

Part Number	Description
LWSTDA3580	Guide Wire, 0.035″, 80cm, Angled Tip
LWSTDA35150	Guide Wire, 0.035″, 150cm, Angled Tip
LWSTDA35180	Guide Wire, 0.035″, 180cm, Angled Tip
LWSTDA1880	Guide Wire, 0.018″, 80cm, Angled Tip
LWSTDA18150	Guide Wire, 0.018″, 150cm, Angled Tip
LWSTDA18180	Guide Wire, 0.018″, 180cm, Angled Tip

DIAMONDTOUCH™ DIGITAL INFLATION DEVICE

Part Number	Description
IN9135	35 ATM/BAR

MERIT SURECROSS® SUPPORT CATHETER

Part Number	Guide Wire Diameter	Effective Length	Hydrophilic Coating Length	Marker Band Spacing	Tip Profile
SC1490	0.014″ (0.36 mm)	90cm	40cm	15mm	0.020″

MERIT MAESTRO® MICROCATHETER

Part Number	Description
28MC2411OST	Proximal 2.8F Distal 2.4F, 110cm Straight Tip

Before using refer to Instructions for Use for indications, contraindications, warnings, precautions, and directions for use.

MERIT MEDICAL®

Understand. Innovate. Deliver.™

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