



OPTIMAL PLACEMENT

IMPROVING OUTCOMES FOR PATIENTS

INTERVENTIONAL
CRT TOOLS

ADVANCED CSG

ADVANCED LVI

VEIN SELECTOR

ADVANCED CA KIT

RELIABLE ACCESS & ACCURATE DELIVERY

Cardiac resynchronization therapy (CRT) requires a system that delivers consistency for standard implants while also offering advanced options for complex anatomy. The Worley™ Advanced LV Lead Delivery System is designed to offer both reliability and flexibility when you need it, accurately placing LV leads at the target location.



The **Worley Advanced LV Lead Delivery System** is made up of four main parts. Each component plays an intricate role in helping you efficiently and accurately place your LV lead.



Advanced CSG



Advanced LVI



Vein Selector



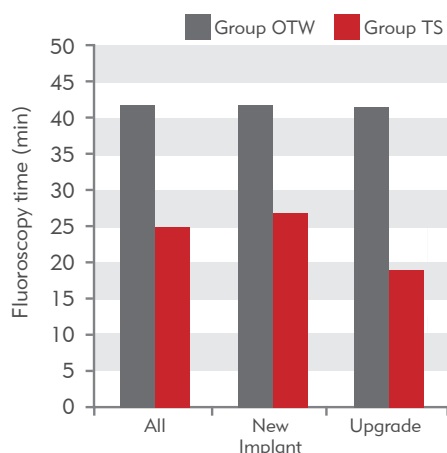
CA Kit

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

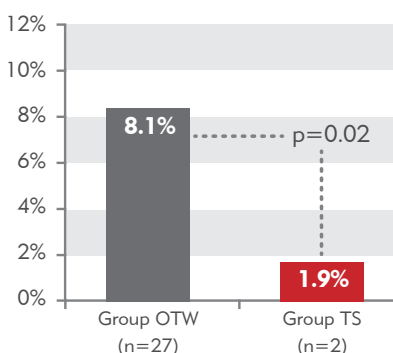
Shorter Fluoro Time

42.1 minutes vs. 26.3 minutes
($p < 0.01$) 38% Improvement



Failed LV Lead Placement

was lower 1.9% vs. 8.1%
($p = 0.02$)



Reduce fluoro
time by
38%

Reduce failed
LV lead
placement by
77%

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 vs. Anterior (%)	92/8	99/1	0.01
Basal or Mid vs. Apical (%)	82/18	87/13	0.22
Optimal vs. Non-optimal (%)*	75/25	87/13	0.01

* Optimal lead location posterior/lateral and Basal or Mid Non-optimal lead location anterior or apical. OTW = over-the-wire; TS = telescoping support.

Achieve
87%
optimal lead
positioning

IN CONCLUSION

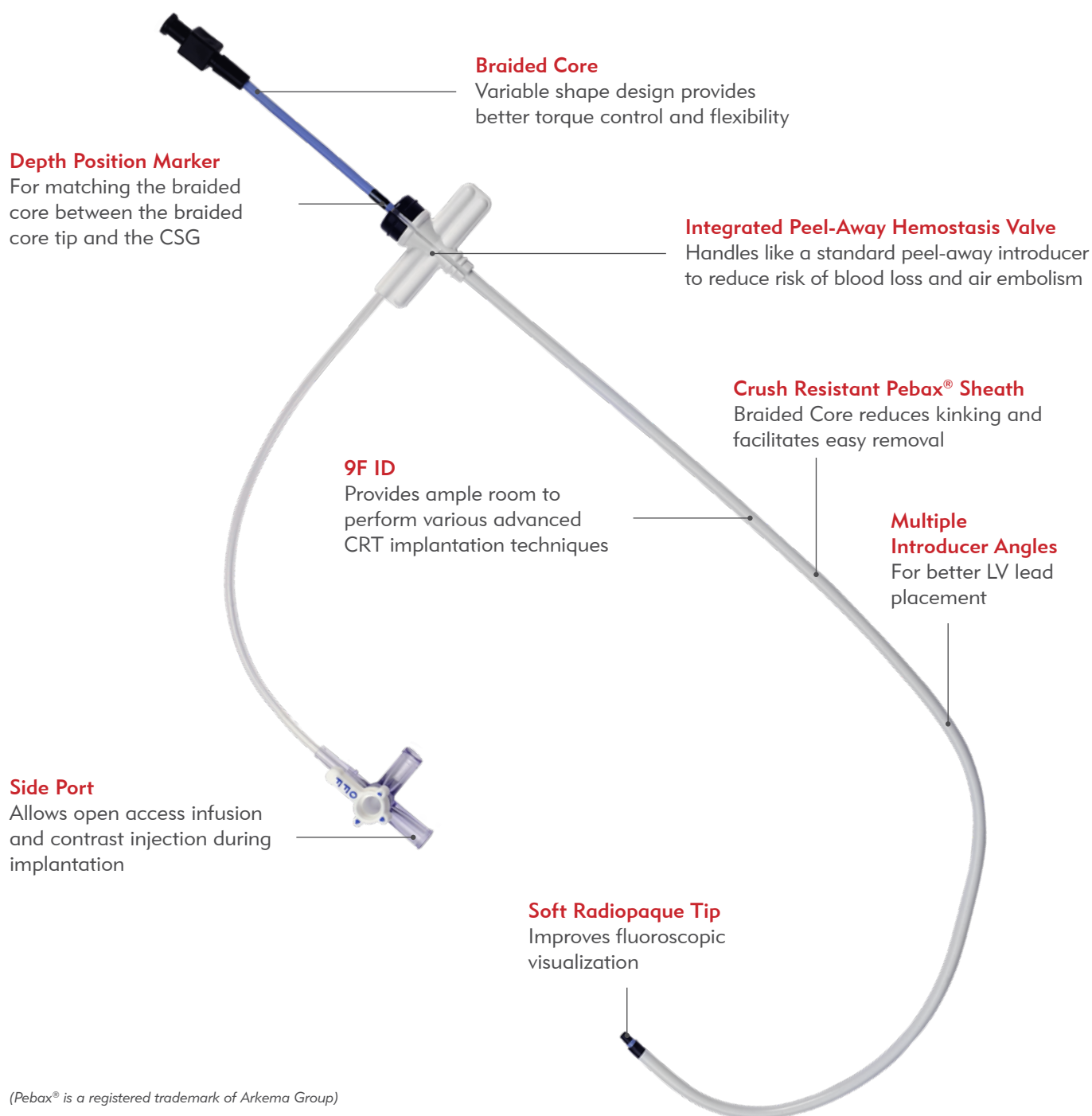
*"A CRT-implant approach using contrast injection and a telescoping-support catheter system results in **FEWER** failed LV lead implants, **IMPROVED** LV lead location, and **SHORTER** procedure times."*

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

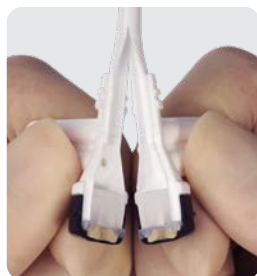
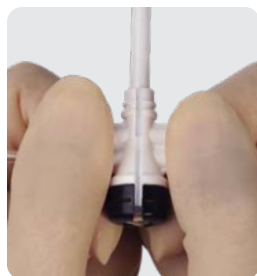
ADVANCING POSSIBILITIES FOR CORONARY SINUS CANNULATION

ONE CATHETER WITH MULTIPLE SHAPE OPTIONS

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 and manipulated to reduce the number of sheaths needed to facilitate a successful implantation.



(Pebax® is a registered trademark of Arkema Group)

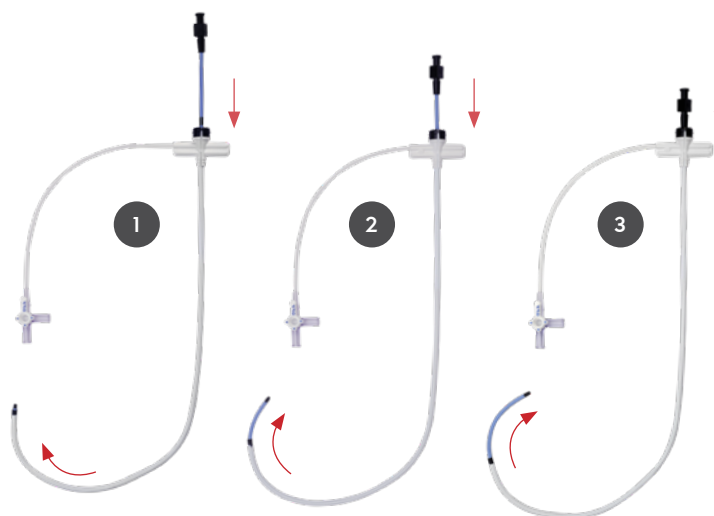
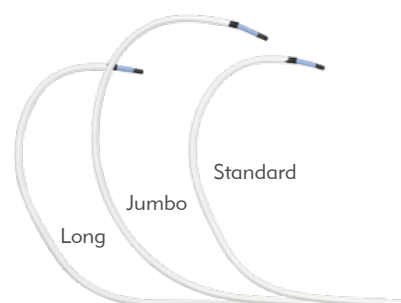


Integrated Peel-Away Hemostasis Valve

- 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 removal of the delivery sheath without the need of a splitter

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



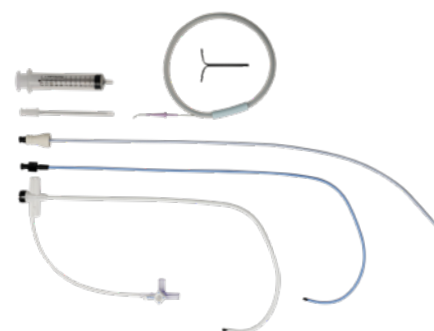
Braided Core Variable Shape Design

- 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
- 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	9F	Standard	0.157"	0.130"	0.122"
WOR-CSG-BL1-09	50 cm	9F	Long	0.157"	0.130"	0.122"
WOR-CSG-B2-09	50 cm	9F	Jumbo	0.157"	0.130"	0.122"
WOR-CSG-BR1-09	40 cm	9F	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



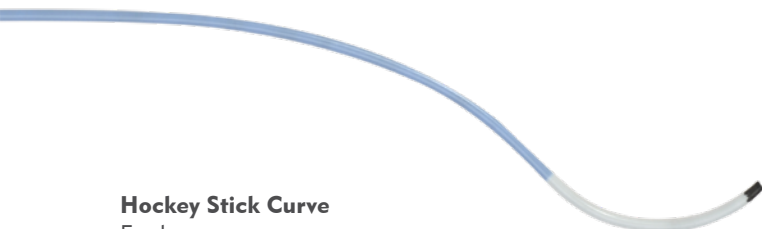
Renal Curve

For most common coronary venous anatomies



Multipurpose Curve

For other coronary venous anatomies



Hockey Stick Curve

For larger coronary venous anatomies



Hook Curve

For smaller challenging coronary venous anatomies



Integrated Valve and Hub Design

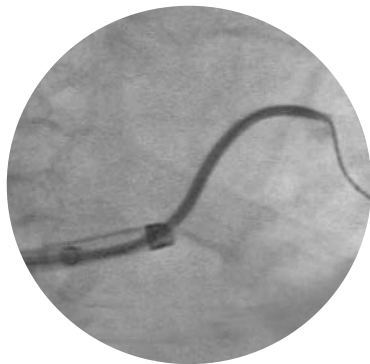
- Breakaway valve provides direct access for the slicer to engage the braided sheath
- Oversized grip reduces risk of lead movement
- Easy-to-use slicer mates to the CSG hub for improved stability during sheath removal



WORLEY ADVANCED LVI

Part Number	Length	Outer Diameter	Inner Diameter	Description
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
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

The Worley™ Vein Selector is designed to improve LV lead location. Key features include a unique accordion hub to minimize kinking and enhance steerability, along with a proprietary braided shaft for maximizing torque. The Worley Vein Selector is also highly visible under fluoroscopy.



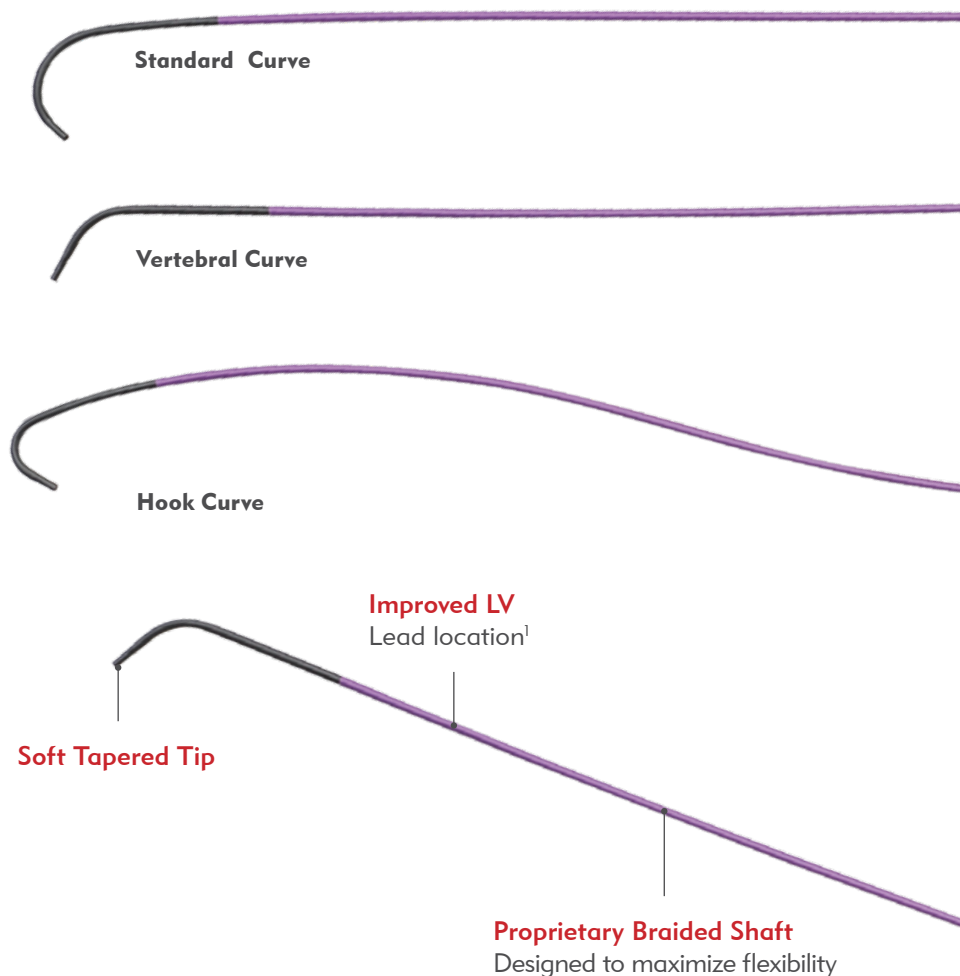
Highly Visible

Greater visibility (under fluoroscopy) for reliable access to the target vein



Unique Accordion & Ergonomic Wing Hub

Designed to minimize kinking and enhance handling and control



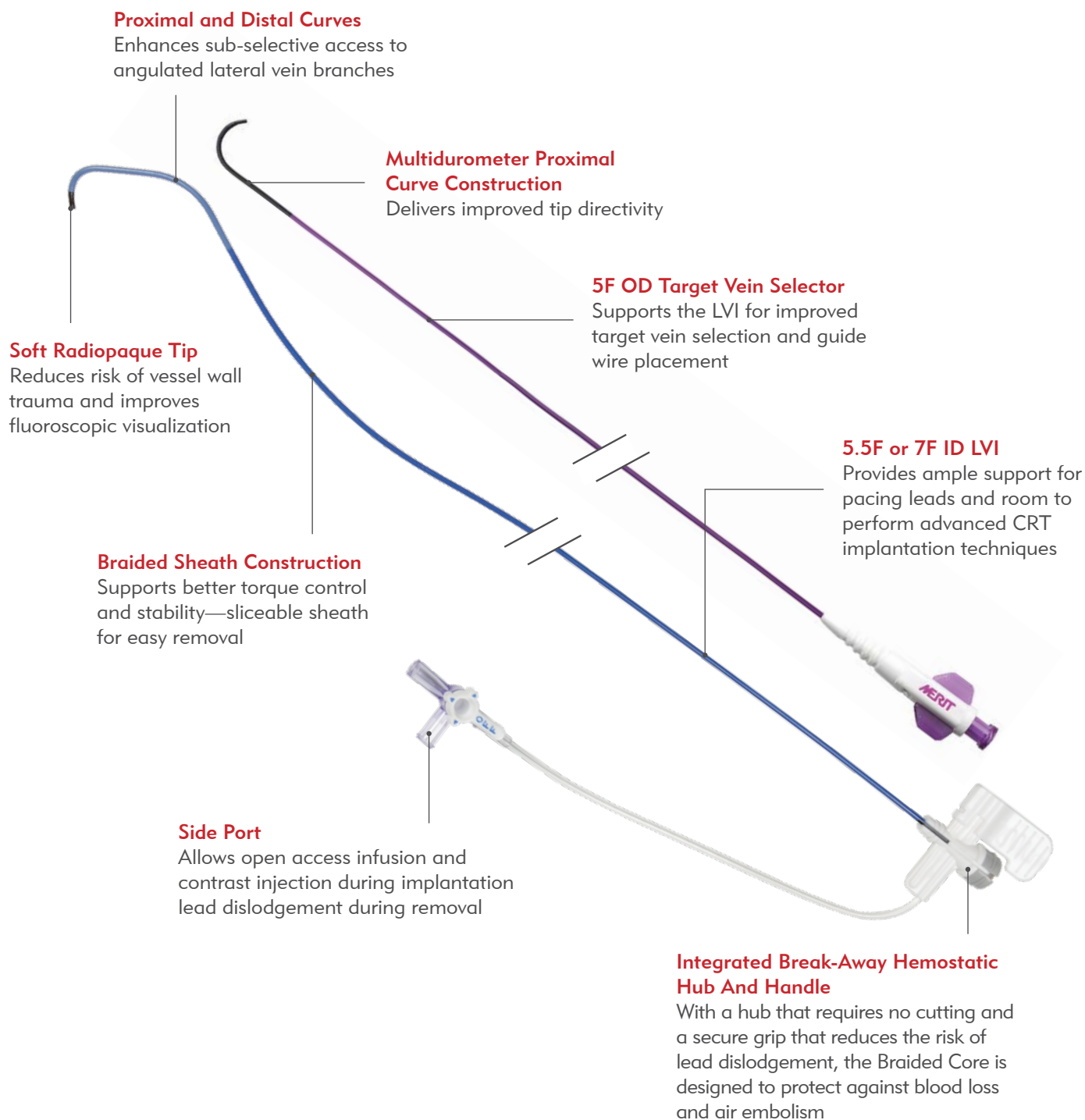
WORLEY VEIN SELECTOR

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.

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



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 (CA) Kit combines 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. Labels and a bowl complete the Advanced CA Kit with the accessories you need to meet your clinical needs.

Inject10n™ Coronary Control Syringe

Smaller barrel ID reduces hand fatigue and requires less force to generate high pressure during injections

Stopcock

Designed for ease of use

Medallion® Syringes

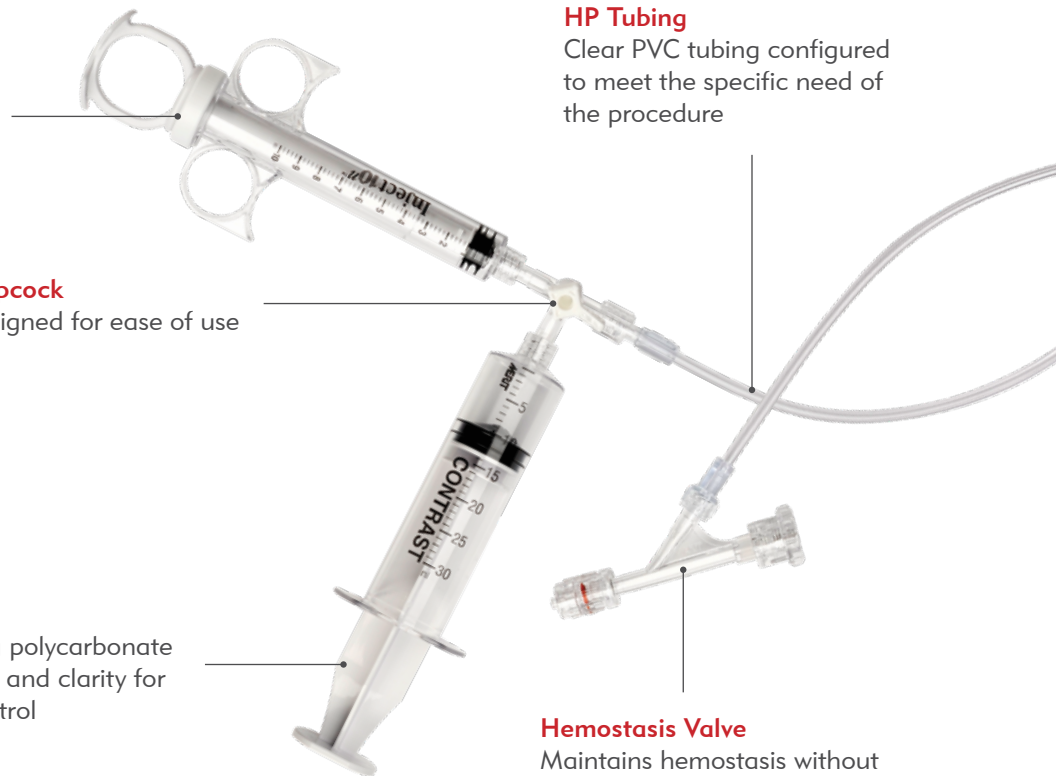
Manufactured from strong polycarbonate with glass-like smoothness and clarity for improved visibility and control

HP Tubing

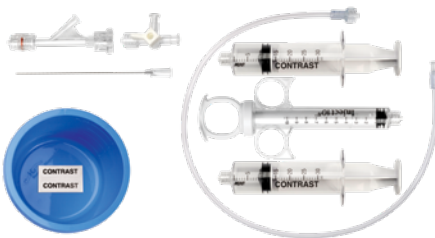
Clear PVC tubing configured to meet the specific need of the procedure

Hemostasis Valve

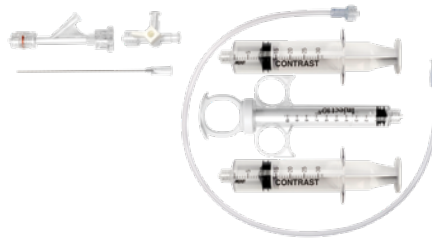
Maintains hemostasis without compromising catheter movement or restriction of contrast flow



K12-WORLEY1



K12-WORLEY2

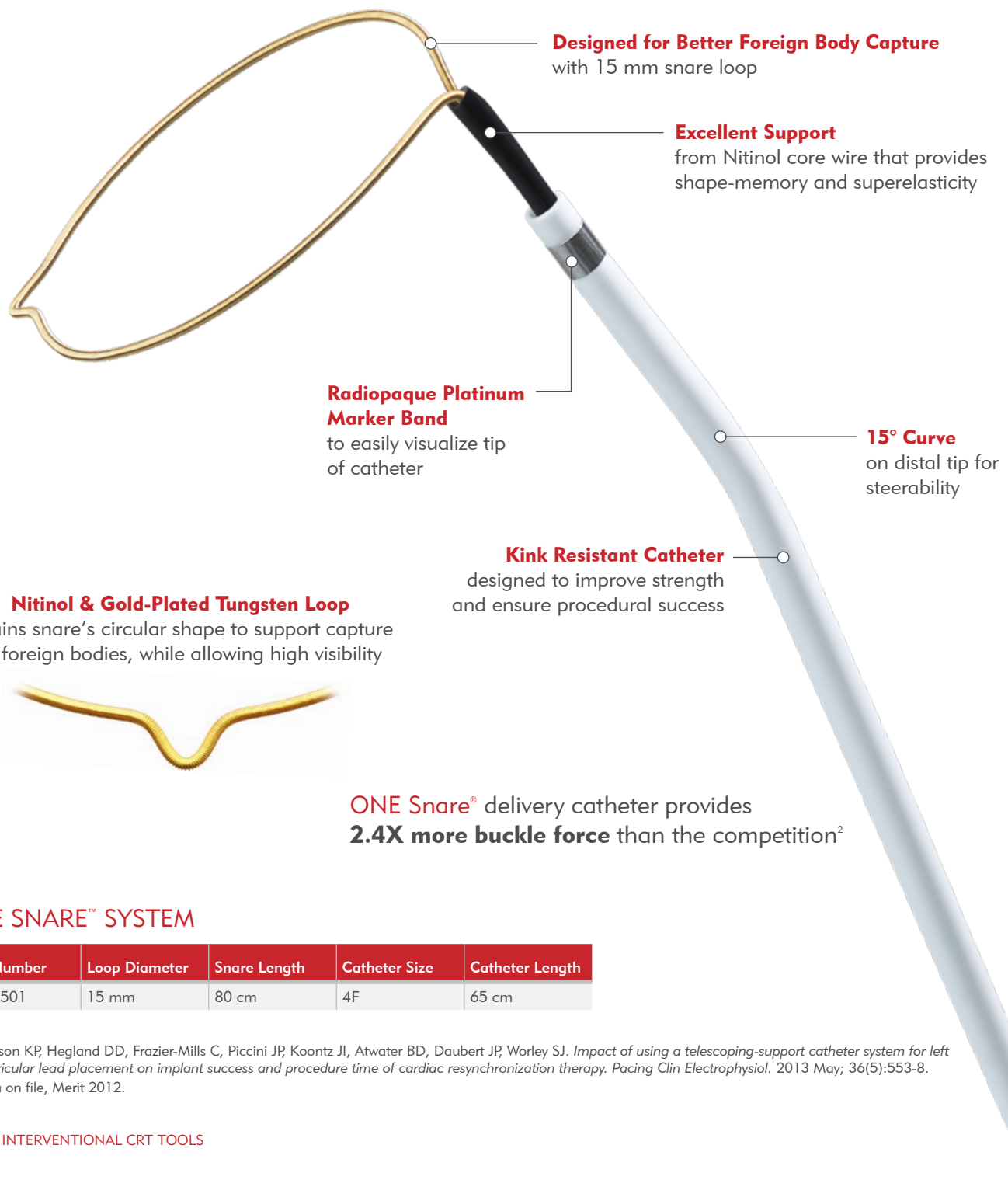


WORLEY KITS

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

LV LEAD DELIVERY OPTIONS FOR CHALLENGING ANATOMY

Used with the Worley Advanced LV Delivery system, the ONE Snare System provides another option for placing LV leads during challenging cases. Designed with a 15° tip curve to the 4F catheter and a 15 mm snare loop electrophysiologists can retrieve and manipulate foreign objects in the coronary and peripheral vascular system, allowing for optimal lead position.¹



ONE SNARE™ SYSTEM

Part Number	Loop Diameter	Snare Length	Catheter Size	Catheter Length
ONE1501	15 mm	80 cm	4F	65 cm

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.

² Data on file, Merit 2012.

PILLARS OF PERFORMANCE

Merit's Amplatz wire provides an increased level of stiffness that delivers support and stability within the vasculature for enhanced navigation.

Flat Wire Outer Coil

Allows a larger inner core to provide additional shaft support

Increased Wire Stiffness

Provides stability within the vasculature for enhanced navigation

Push and Navigation

Without compromising tip flexibility

Proprietary PTFE Coating

Reduces friction along the wire

Extra Support and Stability

Provides extra support to facilitate advancement while maintaining stability and access with the Coronary Sinus Guide

INQWIRE AMPLATZ GUIDE WIRE

Part Number	Diameter	Length	Flexible Tip Length	Description
IQA505	0.035" (0.89)	145 cm (57")	3.5 cm, Short Taper	3mm J
IQA506	0.035" (0.89)	180 cm (71")	3.5 cm, Short Taper	3mm J
IQA507	0.035" (0.89)	260 cm (102")	3.5 cm, Short Taper	3mm J

Ordering Information

ADVANCED CORONARY SINUS GUIDE

Part Number	Length	Size	Curve	Outer Diameter	Inner Diameter	Tip Diameter
WOR-CSG-B1-09	40 cm	9F	Standard	0.157"	0.130"	0.122"
WOR-CSG-BL1-09	50 cm	9F	Standard	0.157"	0.130"	0.122"
WOR-CSG-B2-09	50 cm	9F	Jumbo	0.157"	0.130"	0.122"
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WORLEY ADVANCED LVI

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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

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

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 CONTRAST KITS

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

INQWIRE AMPLATZ GUIDE WIRE

Part Number	Diameter	Length	Flexible Tip Length	Description
IQA505	0.035" (0.89)	145 cm (57")	3.5 cm, Short Taper	3mm J
IQA506	0.035" (0.89)	180 cm (71")	3.5 cm, Short Taper	3mm J
IQA507	0.035" (0.89)	260 cm (102")	3.5 cm, Short Taper	3mm J

ONE SNARE™ ENDOVASCULAR SNARE SYSTEM

Part Number	Loop Diameter	Snare Length	Catheter Size	Catheter Length
ONE1501	15 mm	80 cm	4F	65 cm

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



Understand. Innovate. Deliver.™

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