



FIND YOUR **IDEAL** **CANNULAE**

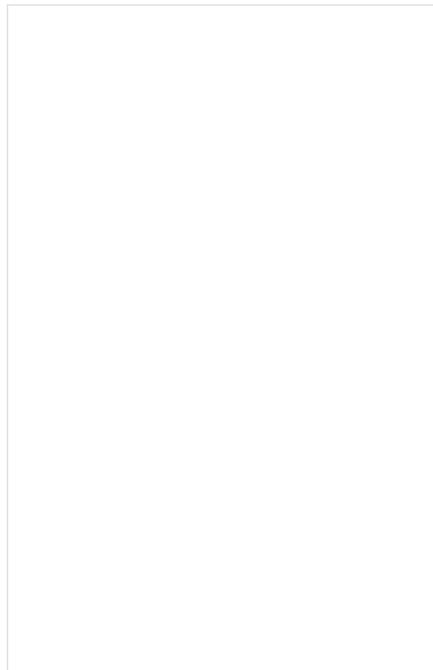
Catalog 2017

Medtronic
Further, Together

For more information, contact your local
Medtronic Cannula Products Representative.



How are we measuring up? Find your outer cannula diameters here.
The sizing shown is approximated only — so please follow the cannula
sizes listed on product package.



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[medtronic.com/cannula-catalog](https://www.medtronic.com/cannula-catalog)



CONTENTS

Extracorporeal Circuit

Arterial Cannulae	2
Femoral Cannulae	18
Venous Cannulae	30

Cardioplegia Circuit

Antegrade Perfusion Cannulae	40
Retrograde Perfusion Cannulae	48
Cardioplegia Adapters	58

Suction Circuit and Surgical Accessories

Suction Circuit Products	70
Surgical Support Products	78
Cardio-Kits and Packs	90

Appendix

Product Codes	95
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ALLEVIATE PAIN RESTORE HEALTH EXTEND LIFE

Living Our Mission With You

Our Mission guides our day-to-day work and reminds us that our efforts, large and small, transform the lives of millions of people each year.

We have been working with you to deliver trusted and innovative cannula options for more than 35 years for standard, pediatric and MICS procedures — while offering your favorite cardiac suction, surgical support items and cardio-kits.

Together, we can deliver the cardiac cannula solutions that matter most to you — and your patients.



**EXTRACORPOREAL
CIRCUIT
CANNULAE**
ARTERIAL
**FEMORAL
VENOUS**



FIND YOUR IDEAL **ARTERIAL CANNULAE**

Arterial cannulae are intended to deliver oxygenated blood to the heart. Medtronic understands the importance of gentle flow in the often fragile aorta, and we offer a number of different product variations to facilitate a variety of surgical techniques and patient anatomies. Our adult and pediatric arterial cannulae are available in sizes from 6 Fr to 24 Fr in a variety of tip configurations, lengths, and connector sizes to meet your specific needs.

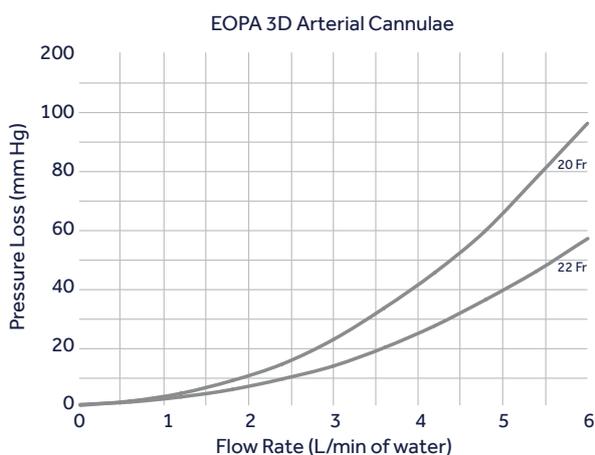


ARTERIAL CANNULAE

EOPA™ 3D	3
Select 3D™ II	4
EOPA™ CAP	5
EOPA™	6
DLP™ Pediatric One-Piece	7
DLP™ Straight Tip	8
DLP™ Flexible Arch	9
Select Series™ Straight Tip	9
Select Series™ Angled Tip	10
DLP™ Curved Tip with One-Piece Wirewound Body	11
DLP™ Curved Tip with Wirewound Body	12
DLP™ Curved Tip	13
DLP™ Metal Tip	15

EOPA™ 3D Arterial Cannulae

These cannulae offer unique tapered diffuse flow tips and kink-resistant, elongated wirewound bodies. The 3D tip is designed with three integrated flutes to diffuse and disperse blood flow. Features include adjustable radiopaque suture ring, obturator, hemostasis cap, depth markings and tip orientation line.



Vented 3/8 in (0.95 cm) connector

78220	20 Fr (6.7 mm)
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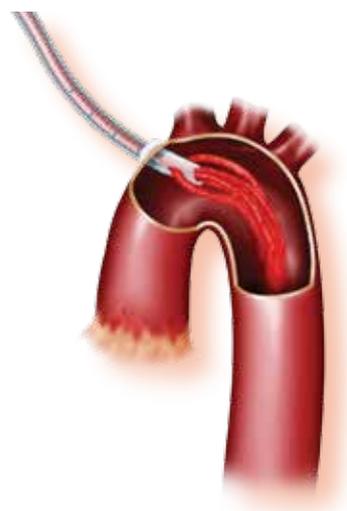
78222	22 Fr (7.3 mm)
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Non-vented 3/8 in (0.95 cm) connector

78320	20 Fr (6.7 mm)
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78322	22 Fr (7.3 mm)
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10 per carton



Important Safety Information

EOPA 3D models: Cannula tip must be inserted beyond side ports to minimum depth marks to avoid possibility of tissue dissection of the aorta. Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures. For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

Select 3D™ II Arterial Cannulae

These cannulae offer beveled tips and tapered, one-piece, kink-resistant wirewound bodies. The tips feature three integrated flutes which help diffuse and disperse blood flow.



**11.5 in (29.2 cm)
overall length
45° tip**

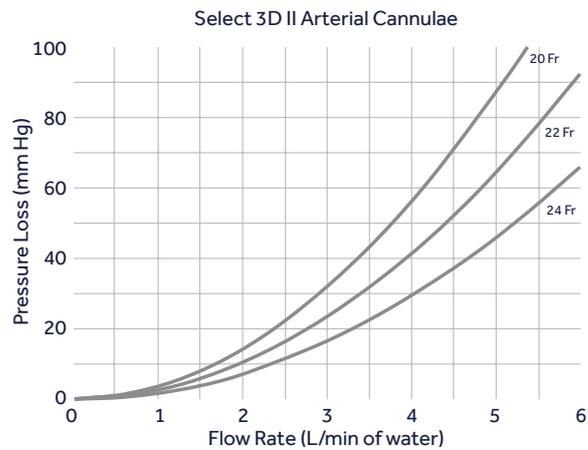
Vented 3/8 in (0.95 cm) connector

78420	20 Fr (6.7 mm)
78422	22 Fr (7.3 mm)
78424	24 Fr (8.0 mm)

Non-vented 3/8 in (0.95 cm) connector

78520	20 Fr (6.7 mm)
78522	22 Fr (7.3 mm)
78524	24 Fr (8.0 mm)

20 per carton



Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

EOPA™ CAP Arterial Cannulae

These cannulae offer elongated, one-piece, kink-resistant wirewound bodies with an introducer, hemostasis cap and an integrated pressure monitoring port. Features include depth markings and adjustable radiopaque suture ring.



**12 in (30.5 cm)
overall length**
Blunt tip introducer

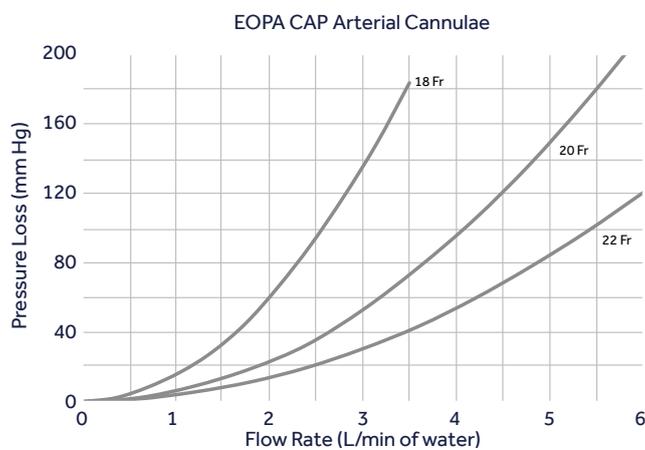
Vented 3/8 in (0.95 cm) connector

77818	18 Fr (6.0 mm)
77820	20 Fr (6.7 mm)
77822	22 Fr (7.3 mm)

Non-vented 3/8 in (0.95 cm) connector

77918	18 Fr (6.0 mm)
77920	20 Fr (6.7 mm)
77922	22 Fr (7.3 mm)

10 per carton

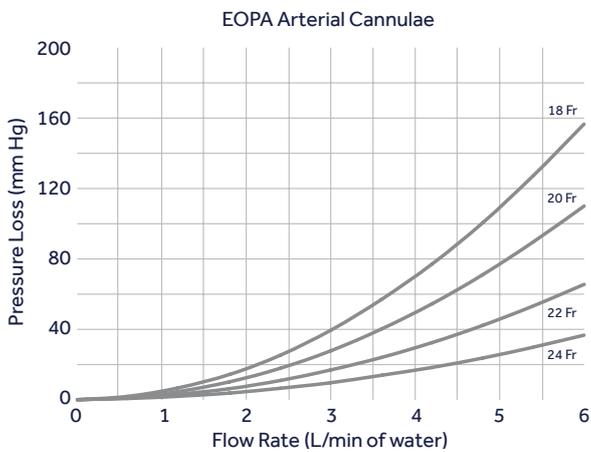


Important Safety Information

EOPA CAP models: Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgical procedures. For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

EOPA™ Arterial Cannulae

These cannulae offer elongated, one-piece, kink-resistant wirewound bodies with an introducer and hemostasis cap. Features include depth markings and an adjustable radiopaque suture ring.



**12 in (30.5 cm)
overall length
Blunt tip introducer
without guidewire**

Vented $\frac{3}{8}$ in (0.95 cm)
connector

77418	18 Fr (6.0 mm)
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77420	20 Fr (6.7 mm)
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77422	22 Fr (7.3 mm)
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77424	24 Fr (8.0 mm)
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Non-vented $\frac{3}{8}$ in (0.95 cm)
connector

77518	18 Fr (6.0 mm)
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77520	20 Fr (6.7 mm)
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77522	22 Fr (7.3 mm)
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77524	24 Fr (8.0 mm)
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10 per carton

**12 in (30.5 cm)
overall length
Dilator tip introducer
with 0.038 in (0.1 cm) guidewire**

Vented $\frac{3}{8}$ in (0.95 cm)
connector

77618	18 Fr (6.0 mm)
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77620	20 Fr (6.7 mm)
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77622	22 Fr (7.3 mm)
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77624	24 Fr (8.0 mm)
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Non-vented $\frac{3}{8}$ in (0.95 cm)
connector

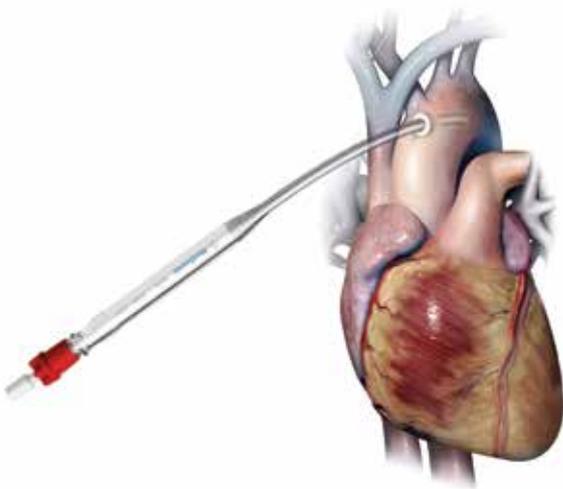
77718	18 Fr (6.0 mm)
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77720	20 Fr (6.7 mm)
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77722	22 Fr (7.3 mm)
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77724	24 Fr (8.0 mm)
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10 per carton



Important Safety Information

EOPA models with dilator tip introducer: A guidewire must be used for proper placement of introducer tip while inserting cannula to avoid trauma to the back wall of the aorta. Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgical procedures.

DLP™ Pediatric One-Piece Arterial Cannulae

These cannulae offer beveled tips with elongated, one-piece, kink-resistant wirewound bodies. Features include an adjustable hemostasis introducer system and depth markings.



9 in (22.9 cm) overall length

Vented $\frac{1}{4}$ in (0.64 cm) connector (blue hub)

77006	6 Fr (2.0 mm)
77008	8 Fr (2.7 mm)
77010	10 Fr (3.3 mm)
77012	12 Fr (4.0 mm)
77014	14 Fr (4.7 mm)
77016	16 Fr (5.3 mm)

Non-vented $\frac{1}{4}$ in (0.64 cm) connector (blue hub)

77106	6 Fr (2.0 mm)
77108	8 Fr (2.7 mm)
77110	10 Fr (3.3 mm)
77112	12 Fr (4.0 mm)
77114	14 Fr (4.7 mm)
77116	16 Fr (5.3 mm)

5 per carton



9 in (22.9 cm) overall length

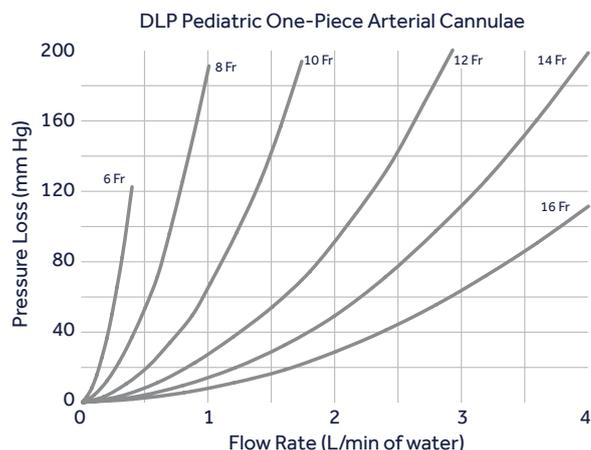
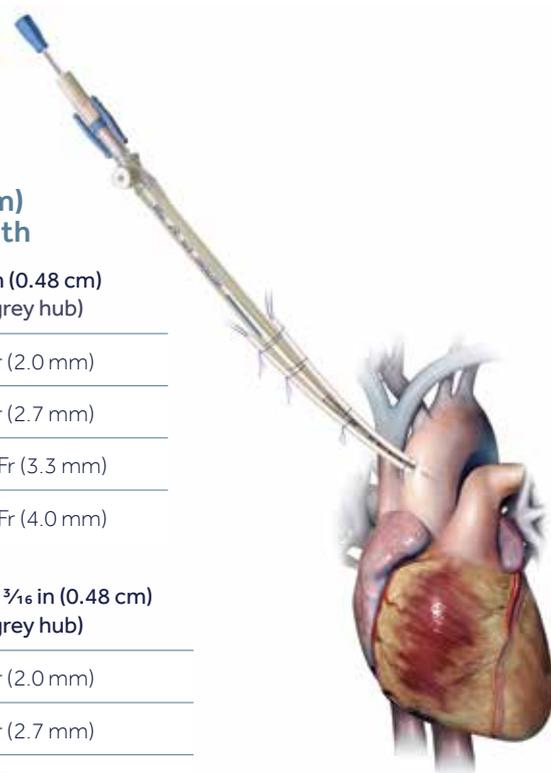
Vented $\frac{3}{16}$ in (0.48 cm) connector (grey hub)

77206	6 Fr (2.0 mm)
77208	8 Fr (2.7 mm)
77210	10 Fr (3.3 mm)
77212	12 Fr (4.0 mm)

Non-vented $\frac{3}{16}$ in (0.48 cm) connector (grey hub)

77306	6 Fr (2.0 mm)
77308	8 Fr (2.7 mm)
77310	10 Fr (3.3 mm)
77312	12 Fr (4.0 mm)

5 per carton

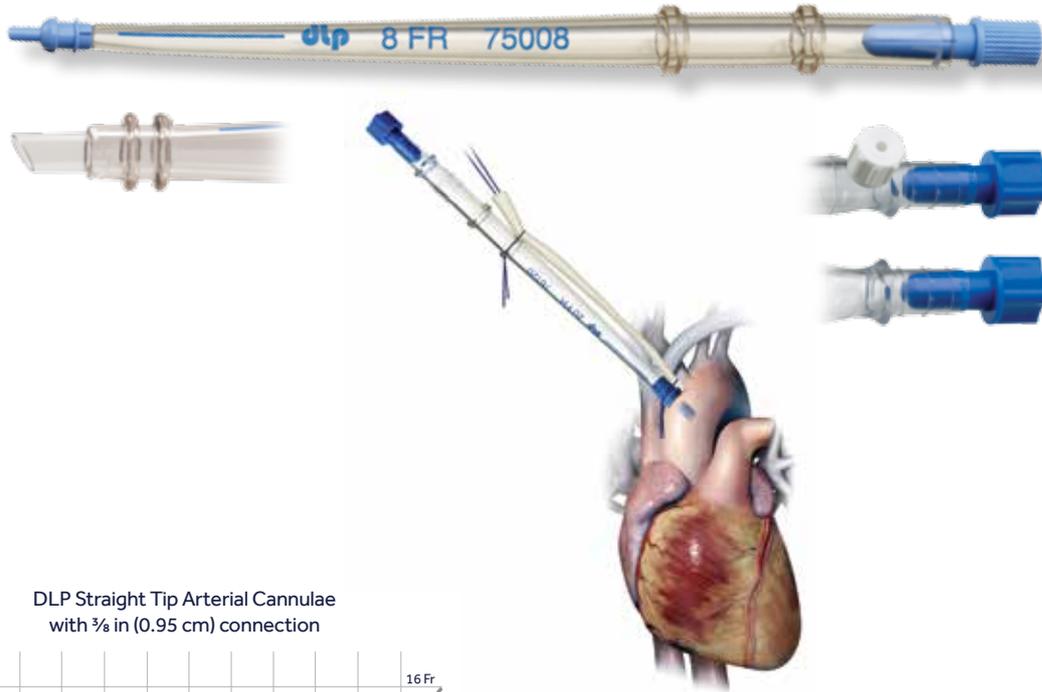


Important Safety Information

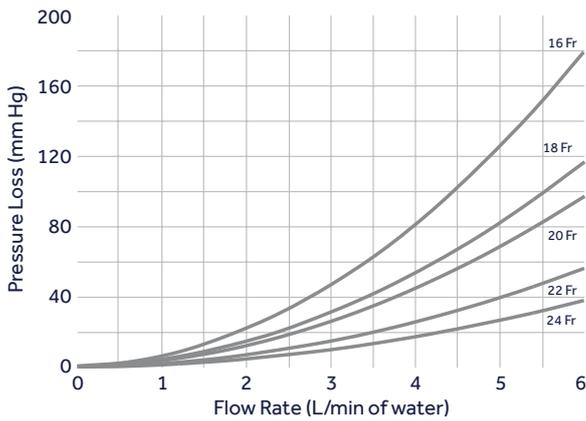
Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures. For a listing of indications, contraindications, precautions, warnings and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

DLP™ Straight Tip Arterial Cannulae

These pediatric and adult cannulae feature beveled tips and tapered bodies with an orientation line. A variety of sizes are available.



DLP Straight Tip Arterial Cannulae with 3/8 in (0.95 cm) connection



7 in (17.8 cm) overall length

Connection 1/4 in (0.64 cm)

75008	8 Fr (2.7 mm)
75010	10 Fr (3.3 mm)
75012	12 Fr (4.0 mm)
75014	14 Fr (4.7 mm)
70016	16 Fr (5.3 mm) clear tip

8 in (20.3 cm) overall length

Vented 3/8 in (0.95 cm) connector

76020	20 Fr (6.7 mm)
76022	22 Fr (7.3 mm)
76024	24 Fr (8.0 mm)

Non-vented 3/8 in (0.95 cm) connector

76118	18 Fr (6.0 mm)
76120	20 Fr (6.7 mm)
76122	22 Fr (7.3 mm)
76124	24 Fr (8.0 mm)

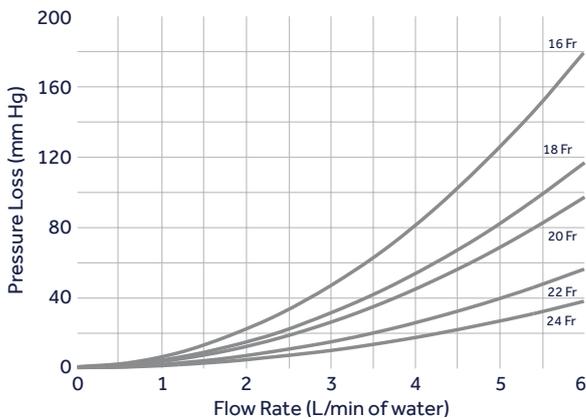
20 per carton

Connection site 3/8 in (0.95 cm)

73016	16 Fr (5.3 mm) clear tip
75318	18 Fr (6.0 mm)
75320	20 Fr (6.7 mm)
75322	22 Fr (7.3 mm)
75324	24 Fr (8.0 mm)

20 per carton

DLP Straight Tip Arterial Cannulae with 3/8 in (0.95 cm) connection



Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

DLP™ Flexible Arch Arterial Cannulae

These cannulae offer beveled tips and tapered, one-piece bodies. Features include adjustable ring, tip orientation line, and depth markings.



**11 in (27.9 cm)
overall length**

Vented 3/8 in (0.95 cm) connector

70420	20 Fr (6.7 mm)
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70422	22 Fr (7.3 mm)
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70424	24 Fr (8.0 mm)
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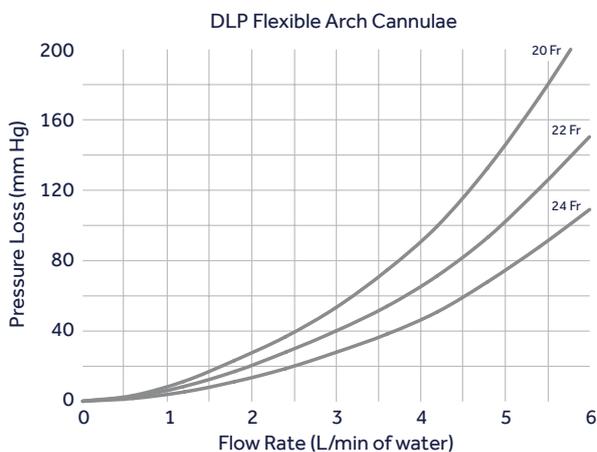
Non-vented 3/8 in (0.95 cm) connector

71420	20 Fr (6.7 mm)
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71422	22 Fr (7.3 mm)
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71424	24 Fr (8.0 mm)
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20 per carton



Select Series™ Straight Tip Arterial Cannulae

These cannulae feature beveled tips and tapered, one-piece, kink-resistant wirewound bodies, tip orientation line, and connector peel cap.



**12 in (30.5 cm)
overall length**

Vented 3/8 in (0.95 cm) connector

72120	20 Fr (6.7 mm)
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72122	22 Fr (7.3 mm)
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72124	24 Fr (8.0 mm)
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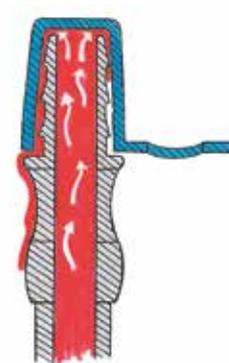
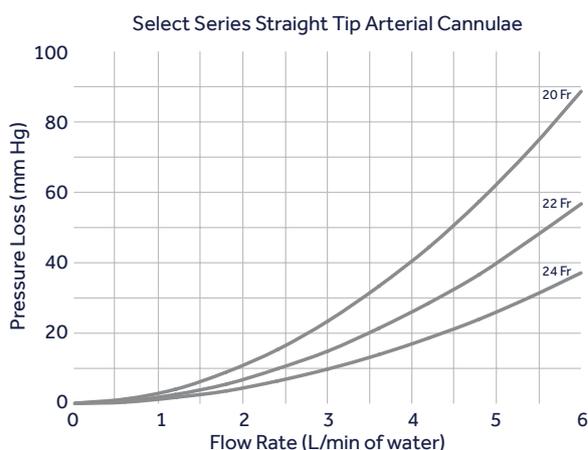
Non-vented 3/8 in (0.95 cm) connector

72220	20 Fr (6.7 mm)
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72222	22 Fr (7.3 mm)
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72224	24 Fr (8.0 mm)
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20 per carton



Important Safety Information

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Select Series™ Angled Tip Arterial Cannulae

These cannulae feature beveled tips and tapered, one-piece kink-resistant wirewound bodies, tip orientation line, and connector peel cap



12 in (30.5 cm) overall length 45° tip without side holes

Vented 3/8 in (0.95 cm) connector

72420	20 Fr (6.7 mm)
72422	22 Fr (7.3 mm)
72424	24 Fr (8.0 mm)

Non-vented 3/8 in (0.95 cm) connector

72520	20 Fr (6.7 mm)
72522	22 Fr (7.3 mm)
72524	24 Fr (8.0 mm)

20 per carton

12 in (30.5 cm) overall length 45° tip with side holes

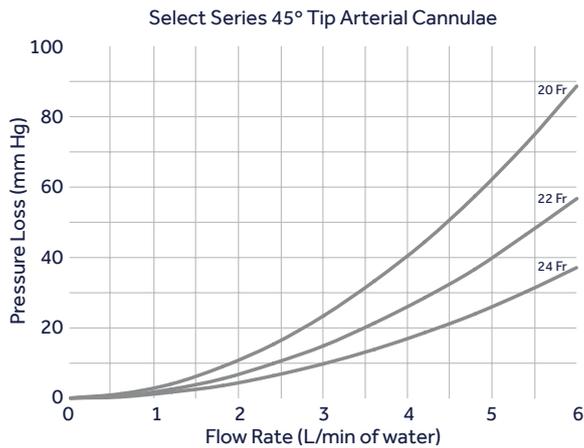
Vented 3/8 in (0.95 cm) connector

73420	20 Fr (6.7 mm)
73422	22 Fr (7.3 mm)
73424	24 Fr (8.0 mm)

Non-vented 3/8 in (0.95 cm) connector

73520	20 Fr (6.7 mm)
73522	22 Fr (7.3 mm)
73524	24 Fr (8.0 mm)

20 per carton



Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

DLP™ Curved Tip Arterial Cannulae with One-Piece Wirewound Body

These cannulae feature beveled curved tips and tapered, one-piece kink-resistant wirewound bodies, tip orientation line, and connector peel cap.



11 in (27.9 cm) overall length
Round flange

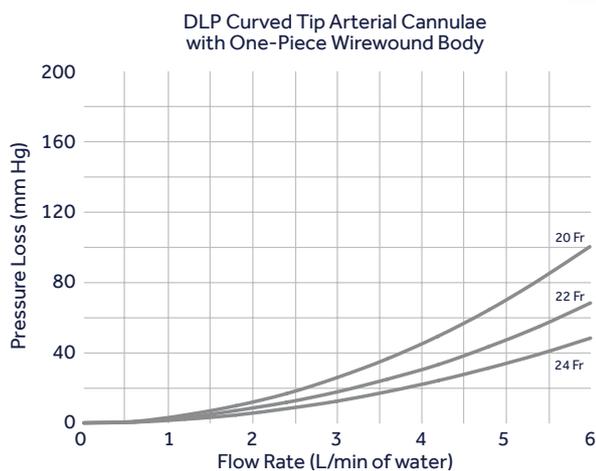
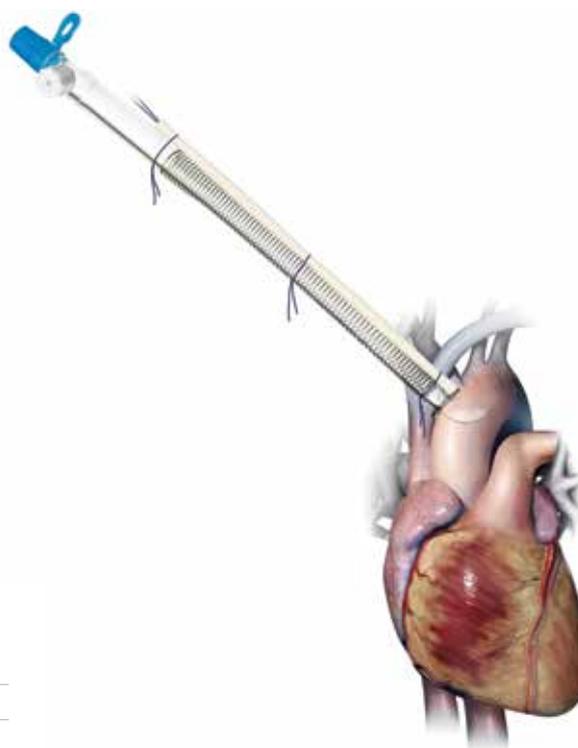
Vented 3/8 in (0.95 cm) connector

87220	20 Fr (6.7 mm)
87222	22 Fr (7.3 mm)
87224	24 Fr (8.0 mm)

Non-vented 3/8 in (0.95 cm) connector

87120	20 Fr (6.7 mm)
87122	22 Fr (7.3 mm)
87124	24 Fr (8.0 mm)

10 per carton

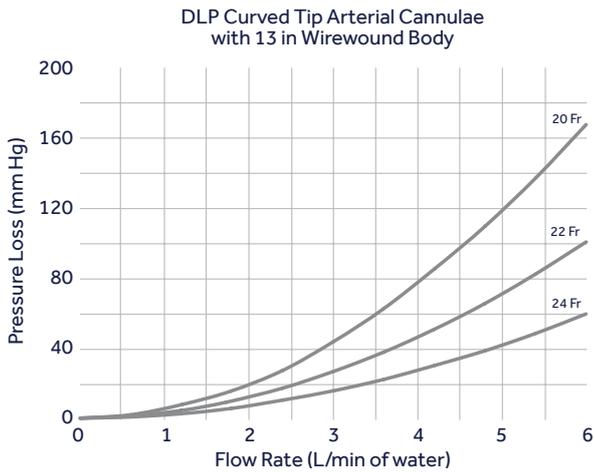


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DLP™ Curved Tip Arterial Cannulae with Wirewound Body

These cannulae feature an overall longer length, beveled curved tips, and wirewound bodies with tip orientation line.



**13 in (33.0 cm)
overall length**
Curved tip with flange

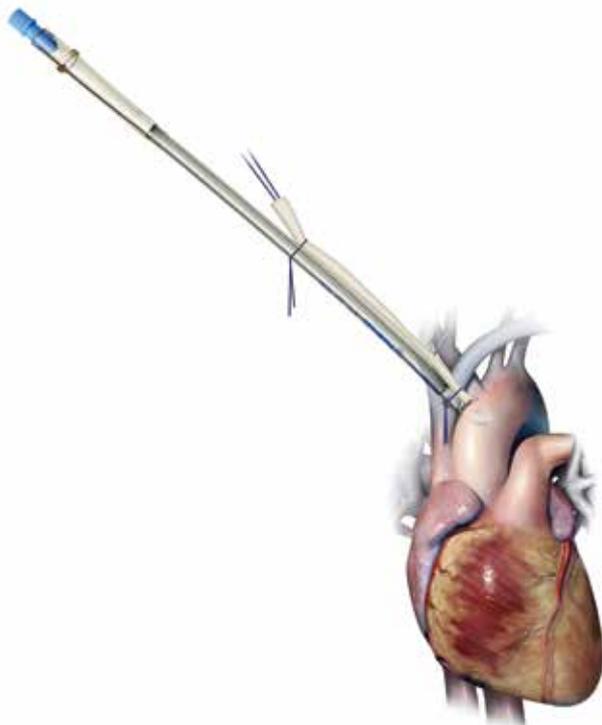
Connection 3/8 in (0.95 cm)

87020	20 Fr (6.7 mm)
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87022	22 Fr (7.3 mm)
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87024	24 Fr (8.0 mm)
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10 per carton



**13 in (33.0 cm)
overall length**
Curved tip without flange

Connection 3/8 in (0.95 cm)

87920	20 Fr (6.7 mm)
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87922	22 Fr (7.3 mm)
-------	----------------

87924	24 Fr (8.0 mm)
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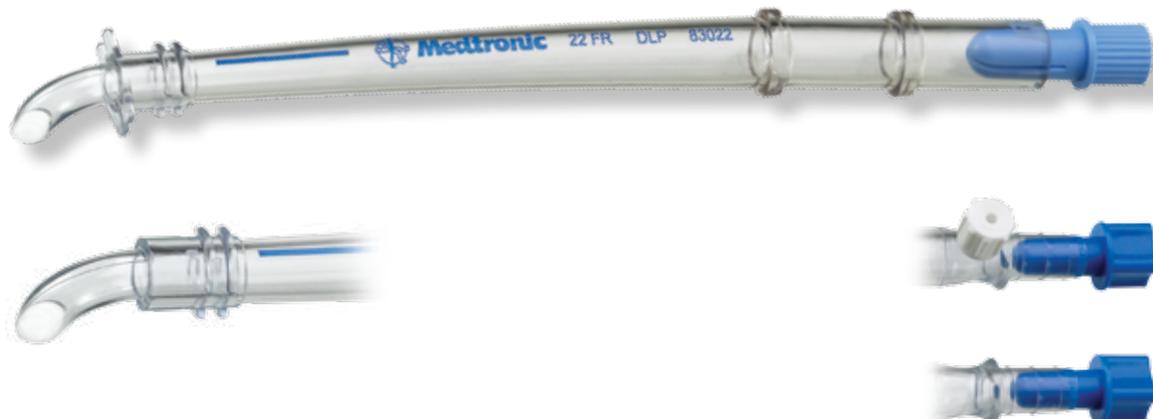
10 per carton

Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

DLP™ Curved Tip Arterial Cannulae

These cannulae feature beveled curved tips and tapered bodies with tip orientation line.



7 in (17.8 cm) overall length Curved tip with flange

Connection site $\frac{3}{8}$ in (0.95 cm)

83020	20 Fr (6.7 mm)
83022	22 Fr (7.3 mm)
83024	24 Fr (8.0 mm)

20 per carton

7 in (17.8 cm) overall length Curved tip without flange

Connection site $\frac{3}{8}$ in (0.95 cm)

84020	20 Fr (6.7 mm)
84022	22 Fr (7.3 mm)
84024	24 Fr (8.0 mm)

20 per carton

8 in (20.3 cm) overall length Curved tip with flange

Vented $\frac{3}{8}$ in (0.95 cm) connector

88020	20 Fr (6.7 mm)
88022	22 Fr (7.3 mm)
88024	24 Fr (8.0 mm)

Non-vented $\frac{3}{8}$ in (0.95 cm) connector

88120	20 Fr (6.7 mm)
88122	22 Fr (7.3 mm)
88124	24 Fr (8.0 mm)

20 per carton

8 in (20.3 cm) overall length Curved tip without flange

Vented $\frac{3}{8}$ in (0.95 cm) connector

89020	20 Fr (6.7 mm)
89022	22 Fr (7.3 mm)
89024	24 Fr (8.0 mm)

Non-vented $\frac{3}{8}$ in (0.95 cm) connector

89120	20 Fr (6.7 mm)
89122	22 Fr (7.3 mm)
89124	24 Fr (8.0 mm)

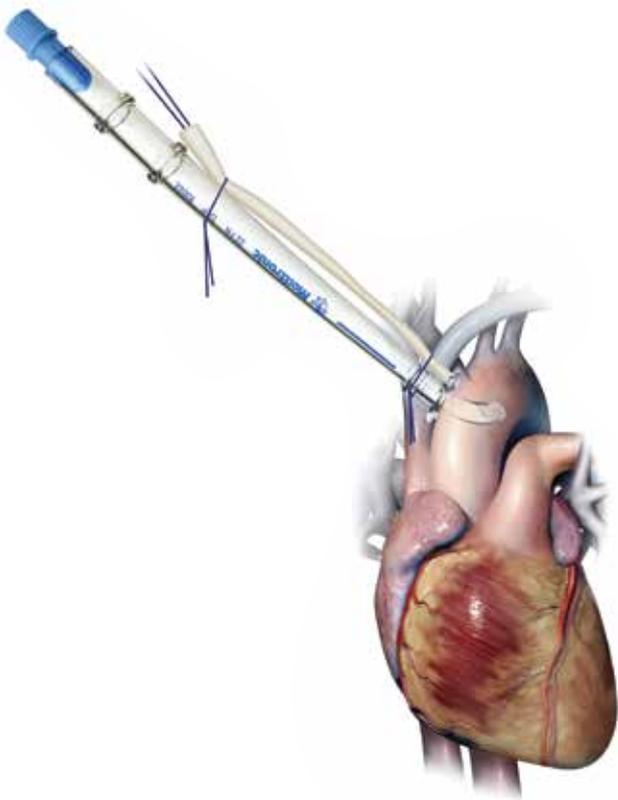
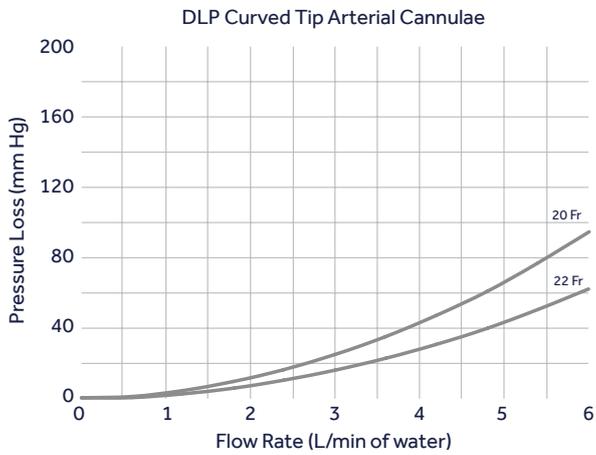
20 per carton

Important Safety Information

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DLP™ Curved Tip Arterial Cannulae

These cannulae feature beveled curved tips and tapered bodies with tip orientation line.



10 in (25.4 cm) overall length

Curved tip with flange and soft body

Vented $\frac{3}{8}$ in (0.95 cm) connector

81020	20 Fr (6.7 mm)
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81022	22 Fr (7.3 mm)
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Non-vented $\frac{3}{8}$ in (0.95 cm) connector

81120	20 Fr (6.7 mm)
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81122	22 Fr (7.3 mm)
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20 per carton

10 in (25.4 cm) overall length

Curved tip without flange and soft body

Vented $\frac{3}{8}$ in (0.95 cm) connector

82020	20 Fr (6.7 mm)
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82022	22 Fr (7.3 mm)
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Non-vented $\frac{3}{8}$ in (0.95 cm) connector

82120	20 Fr (6.7 mm)
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82122	22 Fr (7.3 mm)
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20 per carton

Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures

DLP™ Metal Tip Arterial Cannulae

These cannulae feature beveled metal tips and tapered bodies with tip orientation line. A choice of either standard or soft flange is available.



**10.5 in (26.7 cm)
overall length**
Soft flange



Vented 3/8 in (0.95 cm) connector

80020	20 Fr (6.7 mm)
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80022	22 Fr (7.3 mm)
-------	----------------

80024	24 Fr (8.0 mm)
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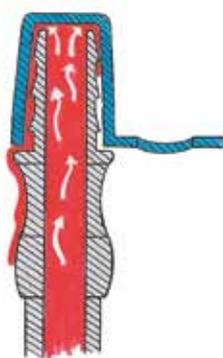
Non-vented 3/8 in (0.95 cm) connector

80120	20 Fr (6.7 mm)
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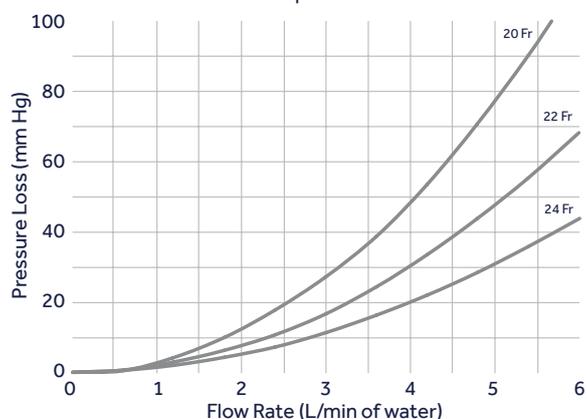
80122	22 Fr (7.3 mm)
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80124	24 Fr (8.0 mm)
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20 per carton



DLP Metal Tip Arterial Cannulae



**10.5 in (26.7 cm)
overall length**
Rigid flange

Vented 3/8 in (0.95 cm) connector

80220	20 Fr (6.7 mm)
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80222	22 Fr (7.3 mm)
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80224	24 Fr (8.0 mm)
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Non-vented 3/8 in (0.95 cm) connector

80320	20 Fr (6.7 mm)
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80322	22 Fr (7.3 mm)
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80324	24 Fr (8.0 mm)
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20 per carton

Important Safety Information

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FIND YOUR IDEAL **FEMORAL CANNULAE**

Femoral cannulae provide greater versatility of cannulation techniques to meet the needs of the changing patient population and the desire for smaller thoracic incisions. Designed to be placed in the femoral vein and/or artery, Medtronic femoral cannulae are ideally suited for both percutaneous and direct insertion. The unique flat wirewound, thin-wall construction of the Bio-Medicus Cannulae maximizes flow rates and cannula flexibility. Our various sizes in this product ensure the availability of a cannula to meet your specific needs.



FEMORAL CANNULAE

Bio-Medicus™ NextGen Pediatric Arterial and Venous	19
Bio-Medicus™ NextGen Arterial or Jugular Venous	20
Bio-Medicus™ NextGen Venous	21
Bio-Medicus™ NextGen Cannula Kits	22
Bio-Medicus™ NextGen Insertion Kits	23
Bio-Medicus™ Multi-Stage Venous with Insertion Kit	24
DLP™ Venous	25
DLP™ Arterial	26
DLP™ Cannulae and Insertion Kits	27

Bio-Medicus™ NextGen Pediatric Arterial and Venous Cannulae

These upgraded pediatric cannulae offer a flexible kink-resistant thin-wall design that promotes maximum flow rates. A re-engineered tip design eases insertion and provides a reinforced non-step transition zone along with smoother side ports. Both venous and arterial models are packaged with a tapered solid core and a percutaneous-style (0.025 mm dia) non-phthalate PVC introducer — allowing for either a traditional or percutaneous insertion. Each cannula includes a repositionable radiopaque suture ring, an improved friction-fit cap and a retention clip that aids in tubing management. These products are manufactured without DEHP.

Arterial 9 in (22.9 cm) overall length

Non-vented ¼ in (0.64 cm) connector

		Tip
96820-108	8 Fr (2.7 mm)	10.0 cm
96820-110	10 Fr (3.3 mm)	10.5 cm
96820-112	12 Fr (4.0 mm)	11.0 cm
96820-114	14 Fr (4.7 mm)	11.5 cm

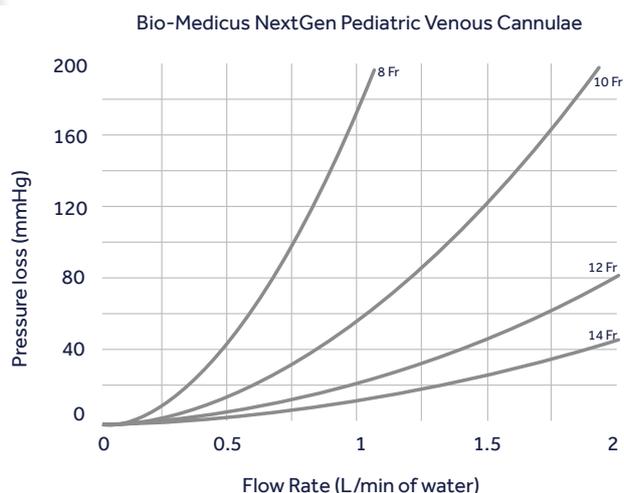
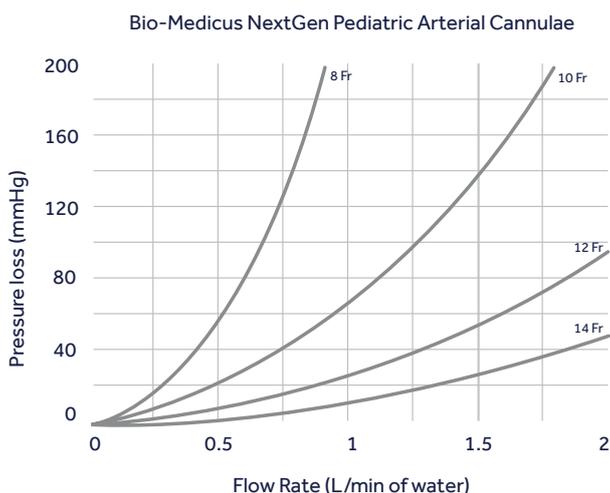
1 per carton

Venous 9 in (22.9 cm) overall length

Non-vented ¼ in (0.64 cm) connector

		Tip
96830-108	8 Fr (2.7 mm)	10.0 cm
96830-110	10 Fr (3.3 mm)	10.5 cm
96830-112	12 Fr (4.0 mm)	11.0 cm
96830-114	14 Fr (4.7 mm)	11.5 cm

1 per carton



Bio-Medicus Pediatric Cannulae



Retention Clip



See page 23 for insertion kit.

Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures. For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

Bio-Medicus™ NextGen Femoral Arterial or Jugular Venous Cannulae

These enhanced adult cannulae offer a flexible kink-resistant thin-wall design that promotes maximum flow rates. A re-engineered tip design eases insertion and features a one-piece non-phthalate PVC introducer, a reinforced non-step transition zone and smoother side ports. A silicone friction-fit cap and introducer provide improved function as well. The percutaneous-style introducer is now standard on all sizes — along with a repositionable radiopaque suture ring. A shortened clamp site eases tubing management and is equipped with a 3/8 inch standard connection site.



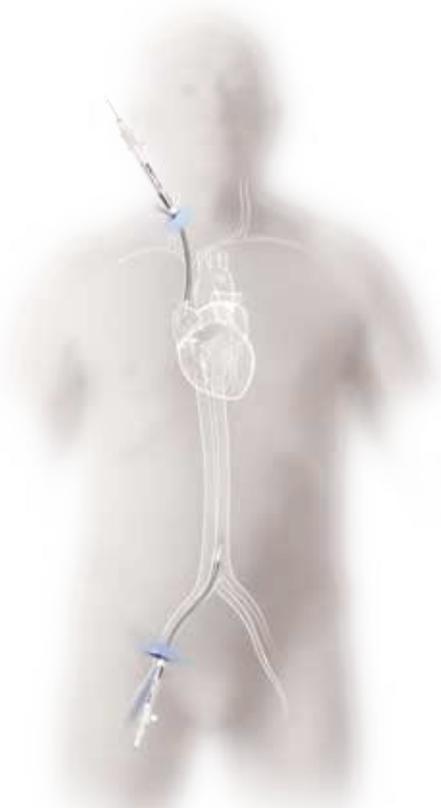
12.5 in (31.8 cm) overall length

7.09 in (18.0 cm) tip

Vented 3/8 in (0.95 cm) connector

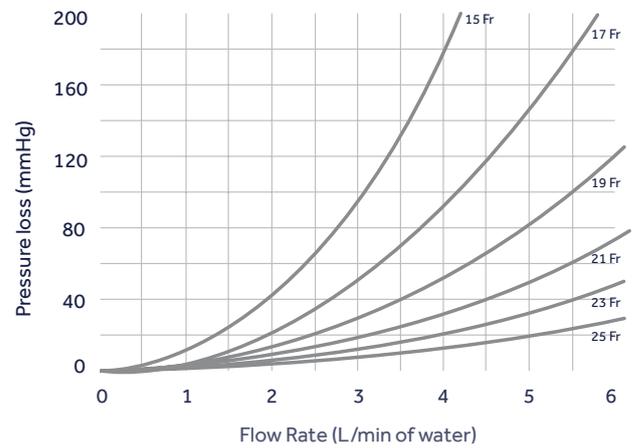
96570-115	15 Fr (5.0 mm)
96570-117	17 Fr (5.7 mm)
96570-119	19 Fr (6.3 mm)
96570-121	21 Fr (7.0 mm)
96570-123	23 Fr (7.7 mm)
96570-125	25 Fr (8.3 mm)

1 per carton

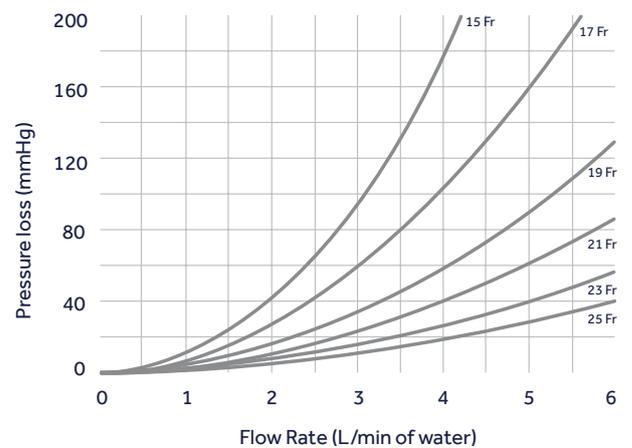


See page 23 for insertion kit.

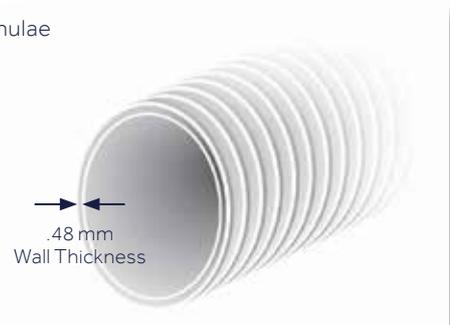
Bio-Medicus NextGen Femoral Arterial



Bio-Medicus NextGen Jugular Venous



Bio-Medicus Adult Cannulae



Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

Bio-Medicus™ NextGen Femoral Venous Cannulae

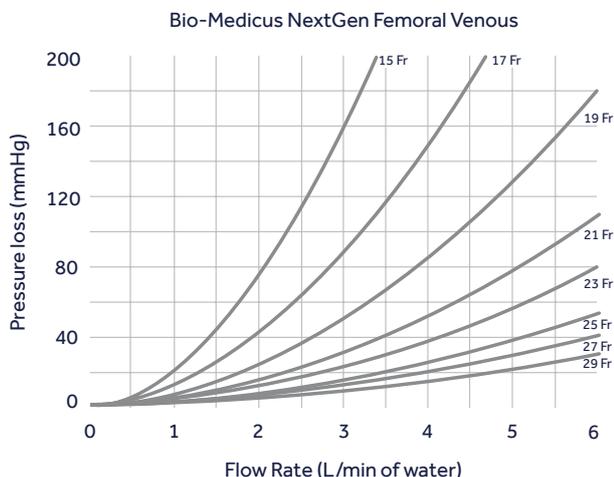
These enhanced adult cannulae feature a flexible kink-resistant thin-wall design that promotes maximum flow rates. An updated tip design offers an elongated taper, a one-piece non-phthalate PVC introducer, a reinforced non-step transition zone and smoother side ports. All of these enhancements add up to an easier insertion. Additional side ports accommodate positioning across the right atrium to allow bi-caval drainage at the SVC and hepatic veins. A silicone friction fit cap and introducer provide improved function as well. Each model is standard with a percutaneous-style introducer, a repositionable radiopaque suture ring and a 3/8 inch connection site. Larger French sizes are packaged with a 3/8 to 1/2 inch tubing adapter.



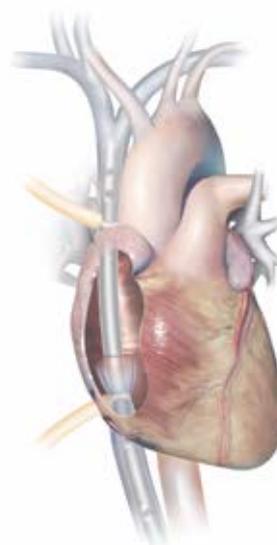
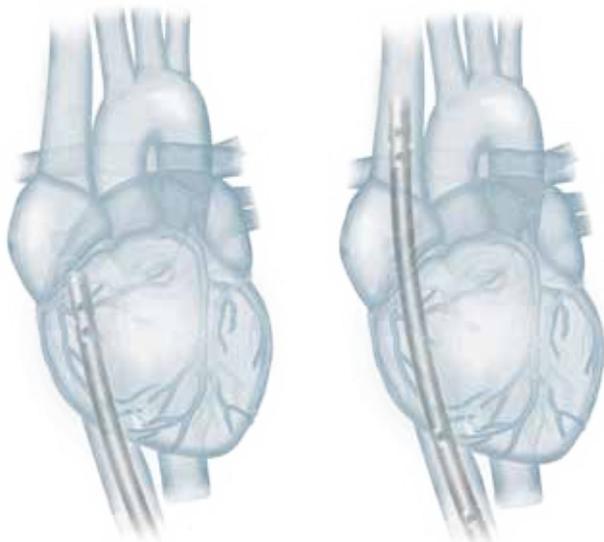
Non-vented 3/8 in (0.95 cm) connector

		Overall	Tip
96670-115	15 Fr (5.0 mm)	64.8 cm	48.9 cm
96670-117	17 Fr (5.7 mm)	64.8 cm	48.9 cm
96670-119	19 Fr (6.3 mm)	69.9 cm	54.0 cm
96670-121	21 Fr (7.0 mm)	69.9 cm	54.0 cm
96670-123*	23 Fr (7.7 mm)	76.2 cm	60.0 cm
96670-125*	25 Fr (8.3 mm)	76.2 cm	60.0 cm
96670-127*	27 Fr (9.0 mm)	76.2 cm	60.0 cm
96670-129*	29 Fr (9.7 mm)	76.2 cm	60.0 cm

1 per carton



* 1/2 in (1.27 cm) to 3/8 in (0.95 cm) tubing adapter included with venous models 23 Fr thru 29 Fr only.



Offers bi-caval capability with optimized basket placement. Bio-Medicus NextGen Cannulae are designed to enable right atrium occlusion.

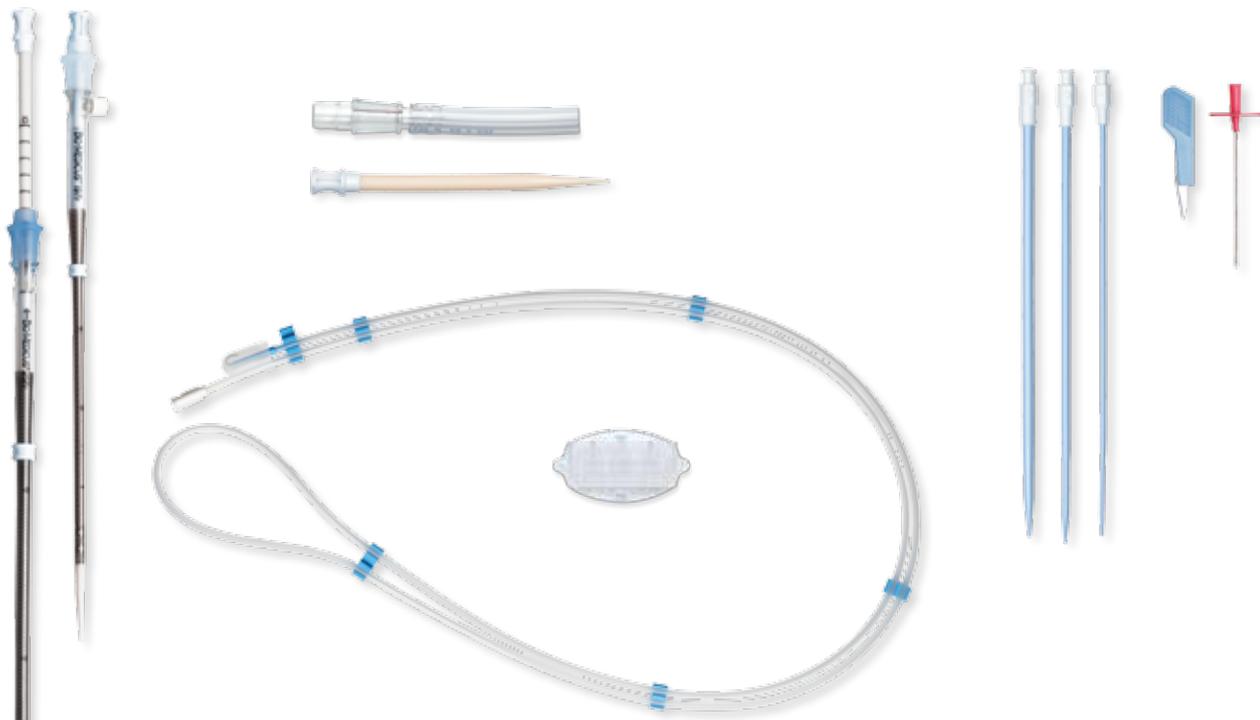
See page 23 for insertion kit.

Important Safety Information

For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

Bio-Medicus™ NextGen Cannula Kits

These adult cannula kits are now available for all sizes. A non-corrugated carton design makes this kit a convenient shelf-ready choice. Order a kit complete with everything you need or find individual cannula options on pages 20-21.



Package contents

1 each:

- Arterial/Jugular or Venous Cannula with introducer, hemostasis cap, adjustable radiopaque suture ring
- 0.038 in (0.965 mm) diameter guidewire; 180 cm (70.87 in) length included in venous models
- 0.038 in (0.965 mm) diameter guidewire; 100 cm (39.37 in) length included in arterial/jugular models
- *1/2 in (1.27 cm) to 3/8 in (0.95 cm) tubing adapter included with venous models 23 Fr, 25 Fr, 27 Fr, 29 Fr only

1 each:

- Stepped vessel dilator, 8 Fr/10 Fr, 12 Fr/14 Fr, 16 Fr/18 Fr, plus (1) additional dilator (included only with 21 Fr, 23 Fr, 25 Fr, 27 Fr, 29 Fr models)
- #11 scalpel blade, Seldinger needle, 18 ga (1.02 mm)
- Cannula/tubing retention clip

2 sterile pouches

Venous

96600-115	15 Fr (5.0 mm)
96600-117	17 Fr (5.7 mm)
96600-119	19 Fr (6.3 mm)
96600-121	21 Fr (7.0 mm)
96600-123*	23 Fr (7.7 mm)
96600-125*	25 Fr (8.3 mm)
96600-127*	27 Fr (9.0 mm)
96600-129*	29 Fr (9.7 mm)

1 kit per carton

Arterial/Jugular

96530-115	15 Fr (5.0 mm)
96530-117	17 Fr (5.7 mm)
96530-119	19 Fr (6.3 mm)
96530-121	21 Fr (7.0 mm)
96530-123*	23 Fr (7.7 mm)
96530-125*	25 Fr (8.3 mm)

1 kit per carton

Flow performance graphs available on pages 20-21.

Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

Bio-Medicus™ NextGen Insertion Kits

These adult and pediatric insertion kits provide components for peripheral cannulation via seldinger technique. Designed for percutaneous or direct visualization insertion, these kits provide the following insertion components as listed below.



Venous

96551

- 0.038 in (0.965 mm) diameter; 180 cm (70.87 in) guidewire
- #11 scalpel blade
- 10 cc syringe
- Stepped vessel dilator, 8 Fr/10 Fr, 12 Fr/14 Fr and 16 Fr/18 Fr
- Seldinger needle, 18 ga (1.02 mm)

5 kits per carton



Arterial/Jugular

96552

- 0.038 in (0.965 mm) diameter; 100 cm (39.37 in) guidewire
- #11 scalpel blade
- 10 cc syringe
- Stepped vessel dilator, 8 Fr/10 Fr, 12 Fr/14 Fr and 16 Fr/18 Fr
- Seldinger needle, 18 ga (1.02 mm)

5 kits per carton



Pediatric Arterial/Venous

96553

- 0.025 in (0.535 mm) diameter; 60 cm (23.62 in) guidewire
- #11 scalpel blade
- 10 cc syringe
- Stepped vessel dilator, 8 Fr/10 Fr, 12 Fr/ 14 Fr
- Seldinger needle, 18 ga (1.02 mm)

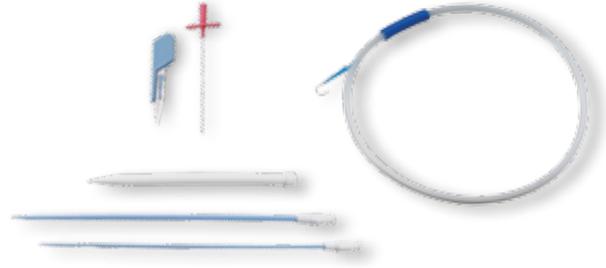
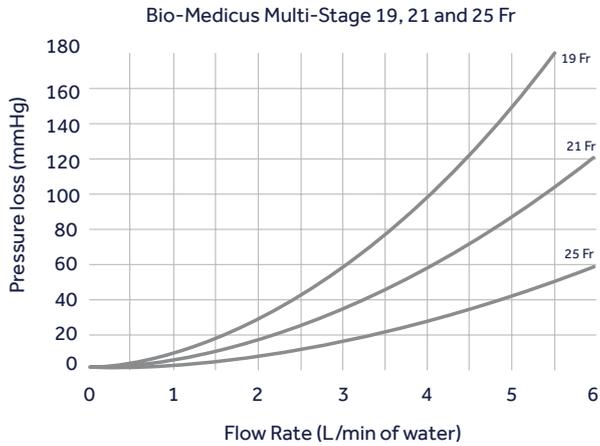
5 kits per carton

Important Safety Information

For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

Bio-Medicus™ Multi-Stage Femoral Venous Cannulae with Insertion Kit

These adult cannulae feature one-piece, kink-resistant, wirewound bodies with multiple side ports, an introducer with depth markings and tip taper location indicator. Insertion kit components are listed below.



Package contents

- Multi-Stage Venous Cannula with introducer and hemostasis cap ((19 Fr, 21 Fr, 25 Fr))
- 0.038 in (0.97 mm) diameter guidewire; 180 cm (70.87 in length)
- Stepped vessel dilator, 8 Fr/10 Fr, 12 Fr/14 Fr, plus (1) additional dilator in size of cannula ordered
- #11 scalpel blade, Seldinger needle, 18 ga (1.02 mm)

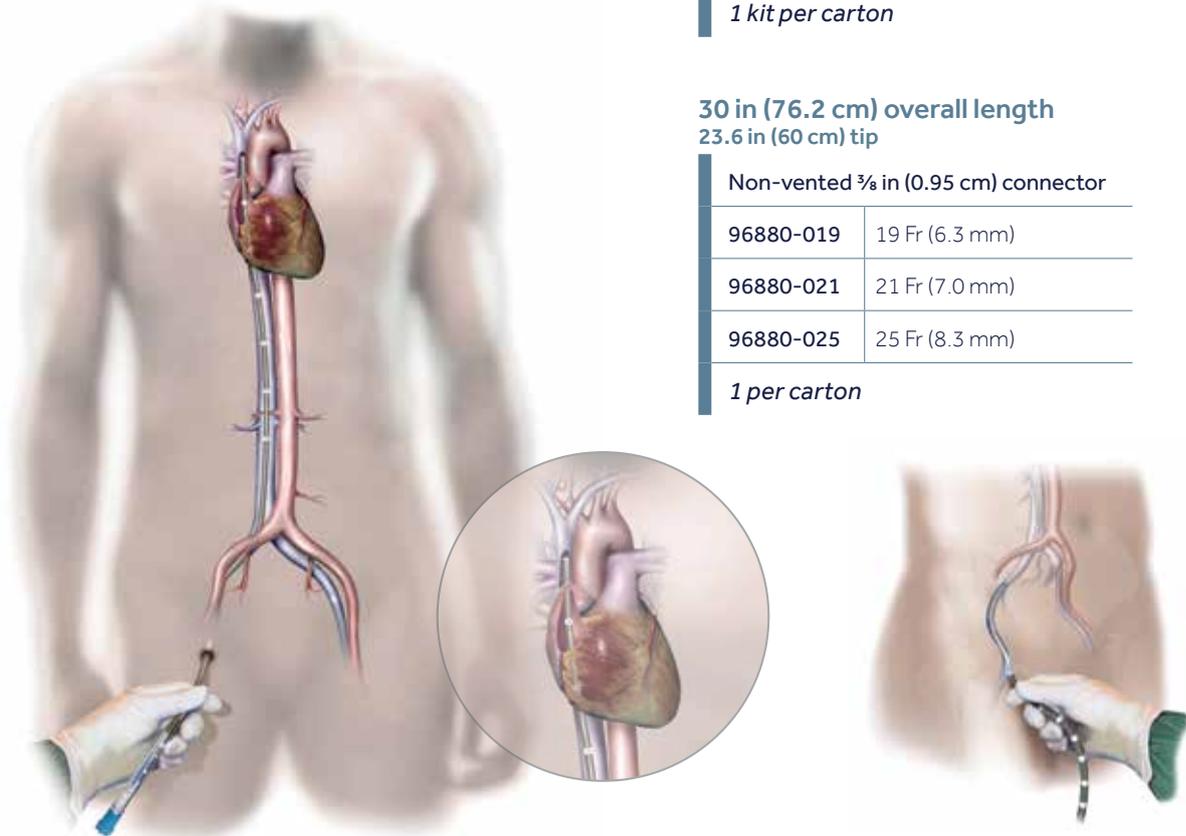
1 kit per carton

30 in (76.2 cm) overall length
23.6 in (60 cm) tip

Non-vented 3/8 in (0.95 cm) connector

96880-019	19 Fr (6.3 mm)
96880-021	21 Fr (7.0 mm)
96880-025	25 Fr (8.3 mm)

1 per carton



Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

DLP™ Femoral Venous Cannulae

These cannulae feature multiple side holes, depth markings and tapered tip introducer.



21 in (53.3 cm) overall length

Non-vented $\frac{3}{8}$ in (0.95 cm) connector

58517	17 Fr (5.7 mm)
58521	21 Fr (7.0 mm)

4 per carton

25.5 in (64.8 cm) overall length

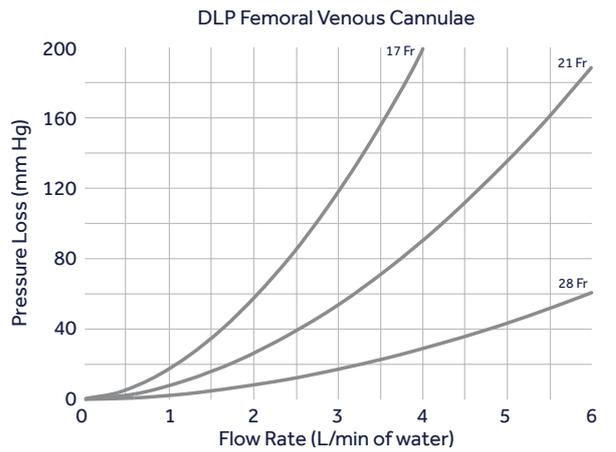
Connection site $\frac{3}{8}$ in (0.95 cm) and 0.038 in (0.1 cm) x 180 cm guidewire

96328	28 Fr (9.3 mm)
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Non-vented $\frac{3}{8}$ in (.95 cm) connector and 0.038 in (0.1 cm) x 180 cm guidewire

96428	28 Fr (9.3 mm)
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4 per carton



96328

58521

Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

DLP™ Femoral Arterial Cannulae

These cannulae feature multiple side holes, depth markings and tapered tip introducer for placement over a 0.038 in (0.1 cm) guidewire (**not included**).

7 in (17.8 cm) overall length

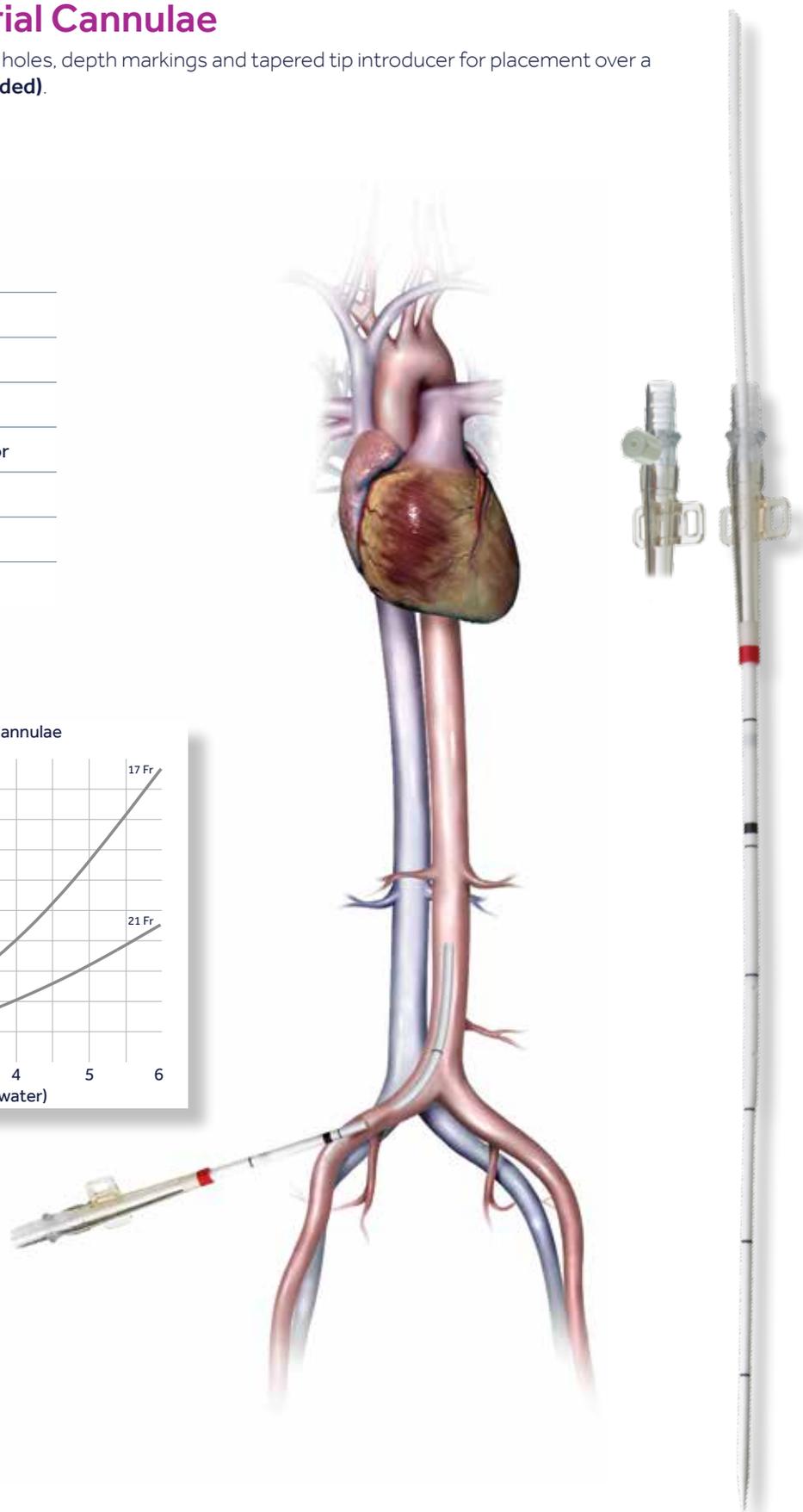
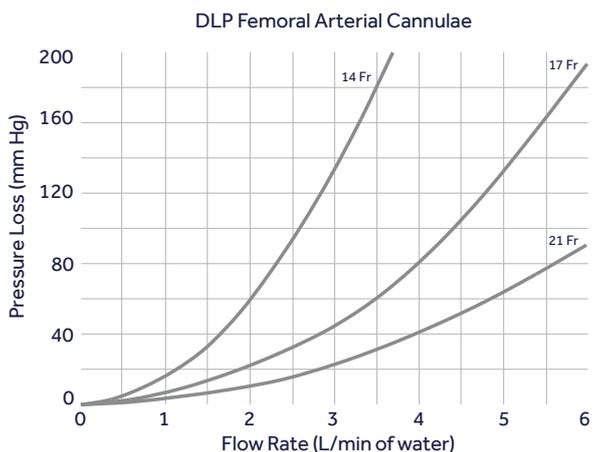
Vented 3/8 in (0.95 cm) connector

57414	14 Fr (4.7 mm)
57417	17 Fr (5.7 mm)
57421	21 Fr (7.0 mm)

Non-vented 3/8 in (0.95 cm) connector

57517	17 Fr (5.7 mm)
57521	21 Fr (7.0 mm)

4 per carton



Important Safety Information

For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

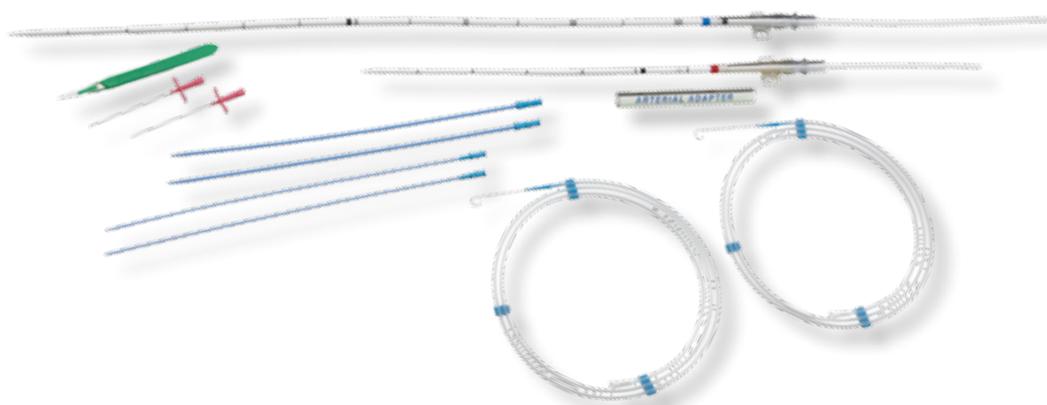
DLP™ Femoral Cannulae and Insertion Kits

For percutaneous or direct visualization insertion, these kits contain one femoral arterial and one femoral venous cannula, and come with the insertion components below.



Kit information

2 each	18 ga Seldinger style needles
2 each	8 Fr (2.7 mm) dilators
2 each	12 Fr (4.0 mm) dilators
2 each	0.038 in (0.1 cm) x 150 cm guidewires
1 each	3/8 in (0.95 cm) arterial line adapter tube
1 each	#11 scalpel blade



Arterial models are 7 in (17.8 cm) overall length
Venous models are 21 in (53.3 cm) overall length

96014	14 Fr (4.7 mm) arterial (57414) vented 3/8 in (0.95 cm) connector 17 Fr (5.7 mm) venous (58517) non-vented 3/8 in (0.95 cm) connector
96017	17 Fr (5.7 mm) arterial (57417) vented 3/8 in (0.95 cm) connector 21 Fr (7.0 mm) venous (58521) non-vented 3/8 in (0.95 cm) connector
96021	21 Fr (7.0 mm) arterial (57421) vented 3/8 in (0.95 cm) connector 21 Fr (7.0 mm) venous (58521) non-vented 3/8 in (0.95 cm) connector
<i>1 kit per carton</i>	

Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures. For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

FIND YOUR IDEAL **VENOUS CANNULAE**

Venous cannulae are designed to provide optimal venous drainage while providing flexibility and ease of use. We offer a variety of single stage venous cannulae with kink-resistant wirewound bodies in sizes from 12 Fr to 40 Fr. These cannulae are offered in both straight and right angle with multi-port tips and the option for a thin wall metal tip design. Our product breadth ensures the availability of a cannula to meet your specific needs.

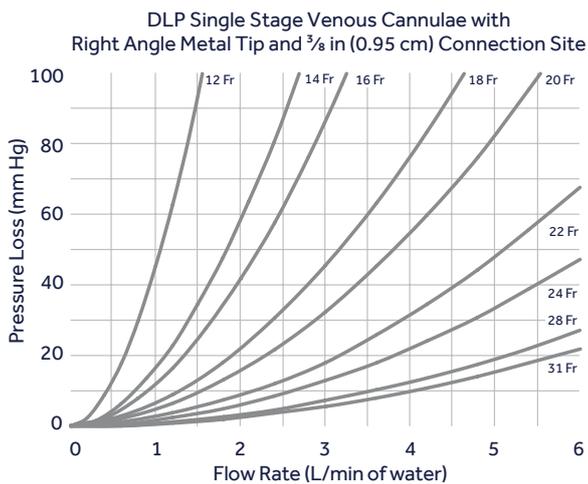
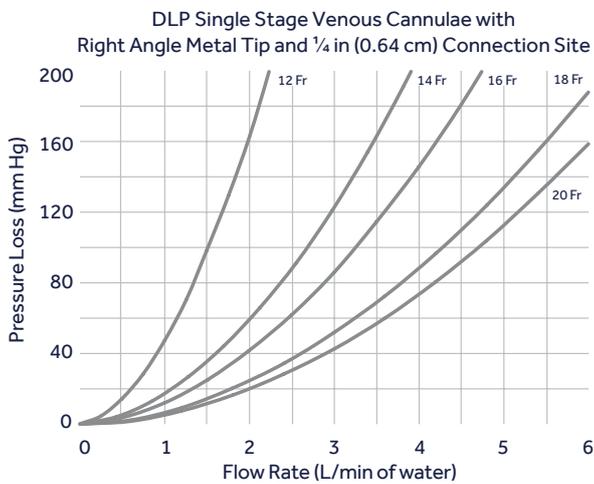


VENOUS CANNULAE

DLP™ Single Stage with Right Angle Metal Tip	31
DLP™ Single Stage	32
DLP™ Right Angle Single Stage	33
DLP™ Malleable Single Stage	34
DLP™ Silicone Single Stage with Inflatable Cuff	35
VC2™ Atrial Caval	36
MC2™ Two Stage	37
MC2X™ Three Stage	38

DLP™ Single Stage Venous Cannulae with Right Angle Metal Tip

These pediatric and adult cannulae feature beveled metal, multi-port tips and kink-resistant wirewound bodies with a tip orientation line. This construction allows for high flow rates with minimal pressure differential.



14 in (35.6 cm) overall length

Connection site ¼ in (0.64 cm)

67312	12 Fr (4.0 mm)
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67314	14 Fr (4.7 mm)
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67316	16 Fr (5.3 mm)
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67318	18 Fr (6.0 mm)
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67320	20 Fr (6.7 mm)
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Connection site ⅜ in (0.95 cm)

69312	12 Fr (4.0 mm)
-------	----------------

69314	14 Fr (4.7 mm)
-------	----------------

69316	16 Fr (5.3 mm)
-------	----------------

69318	18 Fr (6.0 mm)
-------	----------------

69320	20 Fr (6.7 mm)
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69322	22 Fr (7.3 mm)
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69324	24 Fr (8.0 mm)
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69328	28 Fr (9.3 mm)
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69331	31 Fr (10.3 mm)
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10 per carton

14 in (35.6 cm) overall length

Extended tip

Connection site ⅜ in (0.95 cm)

69424	24 Fr (8.0 mm)
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69428	28 Fr (9.3 mm)
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69431	31 Fr (10.3 mm)
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10 per carton

Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation for other cardiac surgery procedures. For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

DLP™ Single Stage Venous Cannulae

These pediatric and adult cannulae feature tapered, multi-port tips and one-piece, kink-resistant wirewound bodies with depth markings.



12-15 in (30.5 - 38.1 cm) overall length

Connection site ¼ in (0.64 cm)

66112	12 Fr (4.0 mm)
66114	14 Fr (4.7 mm)
66116	16 Fr (5.3 mm)

Connection site ¼ in - ⅜ in (0.64 - 0.95 cm)

66118	18 Fr (6.0 mm)
66120	20 Fr (6.7 mm)
66122	22 Fr (7.3 mm)
66124	24 Fr (8.0 mm)

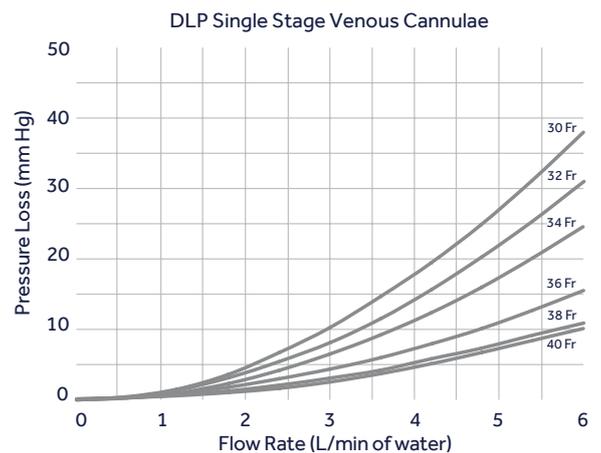
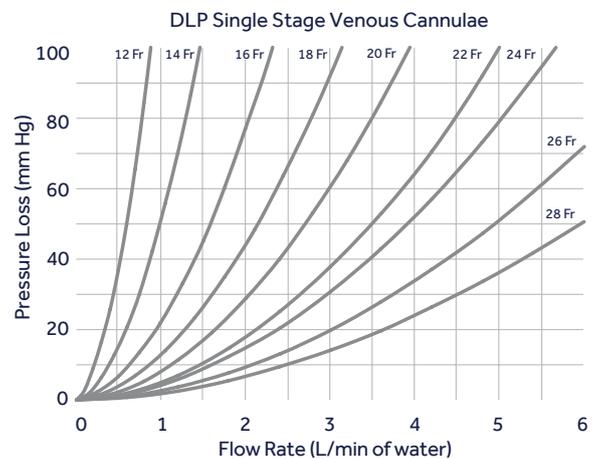
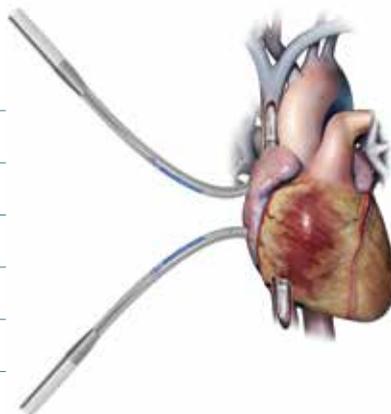
Connection site ⅜ in (0.95 cm)

66126	26 Fr (8.7 mm)
66128	28 Fr (9.3 mm)
66130	30 Fr (10.0 mm)
66132	32 Fr (10.7 mm)
66134	34 Fr (11.3 mm)
66236	36 Fr (12.0 mm)
66238	38 Fr (12.7 mm)
66240	40 Fr (13.3 mm)

Connection site ½ in (1.27 cm)

66136	36 Fr (12.0 mm)
66140	40 Fr (13.3 mm)

10 per carton

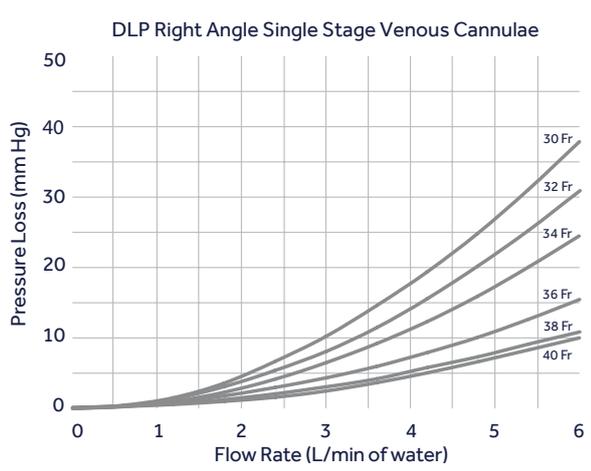
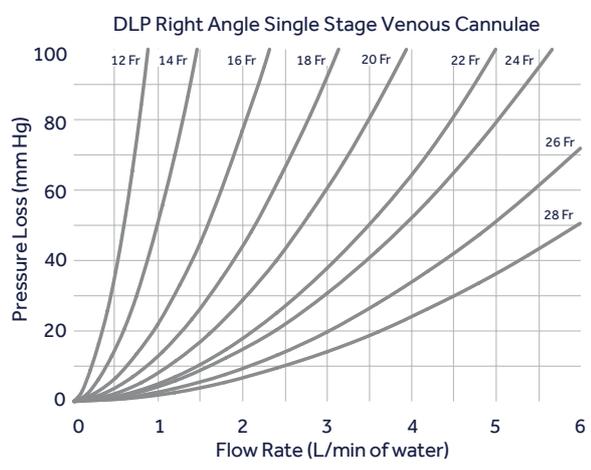


Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

DLP™ Right Angle Single Stage Venous Cannulae

These pediatric and adult cannulae feature tapered, multi-port tips and one-piece, kink-resistant wirewound bodies with depth markings.



12-15 in (30.5 - 38.1 cm) overall length

Connection site ¼ in (0.64 cm)

67512	12 Fr (4.0 mm)
67514	14 Fr (4.7 mm)
67516	16 Fr (5.3 mm)

Connection site ¼ in - ⅜ in (0.64 - 0.95 cm)

67518	18 Fr (6.0 mm)
67520	20 Fr (6.7 mm)
67522	22 Fr (7.3 mm)
67524	24 Fr (8.0 mm)

Connection site ⅜ in (0.95 cm)

67526	26 Fr (8.7 mm)
67528	28 Fr (9.3 mm)
67530	30 Fr (10.0 mm)
67532	32 Fr (10.7 mm)
67534	34 Fr (11.3 mm)
67636	36 Fr (12.0 mm)
67638	38 Fr (12.7 mm)
67640	40 Fr (13.3 mm)

Connection site ½ in (1.27 cm)

67536	36 Fr (12.0 mm)
67540	40 Fr (13.3 mm)

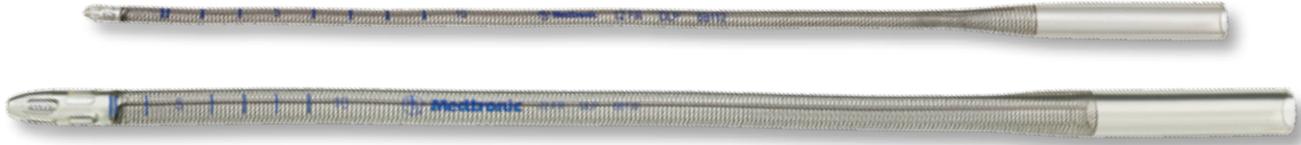
10 per carton

Important Safety Information

For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

DLP™ Malleable Single Stage Venous Cannulae

These pediatric and adult cannulae feature multi-port tips and malleable, one-piece, kink-resistant wirewound bodies with depth markings. This construction allows the surgeon to shape the cannulae. An integrated malleable wire outside the wirewinding optimizes the inner diameter (I.D.) for maximum flow performance.



12-15 in (30.5 - 38.1 cm) overall length

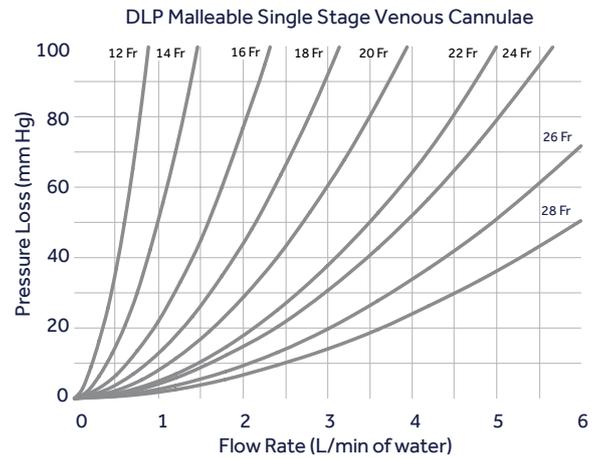
Connection site ¼ in (0.64 cm)

68112	12 Fr (4.0 mm)
68114	14 Fr (4.7 mm)
68116	16 Fr (5.3 mm)



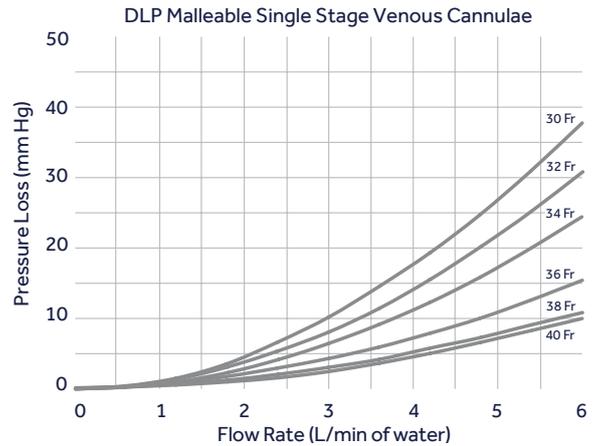
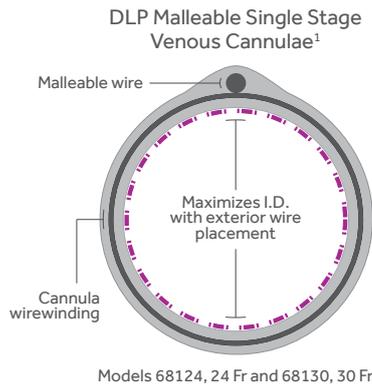
Connection site ¼ in - ⅜ in (0.64 - 0.95 cm)

68118	18 Fr (6.0 mm)
68120	20 Fr (6.7 mm)
68122	22 Fr (7.3 mm)
68124	24 Fr (8.0 mm)

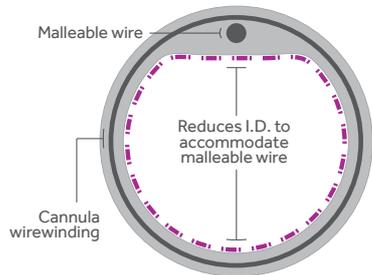


Connection site ⅝ in (0.95 cm)

68126	26 Fr (8.7 mm)
68128	28 Fr (9.3 mm)
68130	30 Fr (10.0 mm)
68132	32 Fr (10.7 mm)
68134	34 Fr (11.3 mm)



Competitive Cannulae¹



Connection site ½ in (1.27 cm)

68136	36 Fr (12.0 mm)
68138	38 Fr (12.7 mm)
66140	40 Fr (13.3 mm)

10 per carton

Edwards™ Malleable Single Stage Venous Cannula, Model TFM024L, 24 Fr
1. 2013 Medtronic data on file

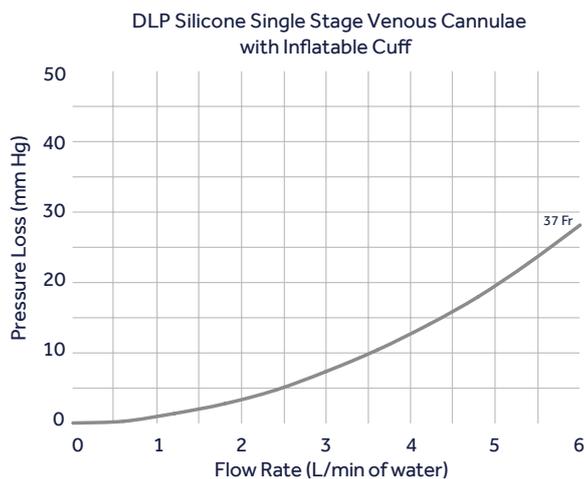
The malleable single stage venous cannulae allow the surgeon to manipulate the cannula shape into virtually any position.

Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

DLP™ Silicone Single Stage Venous Cannulae with Inflatable Cuff

This cannula features a wirewound body with an inflatable cuff.



**15 in (38.1 cm)
overall length**

Connection site $\frac{3}{8}$ in (1.27 cm)

91037	37 Fr (12.3 mm)
-------	-----------------

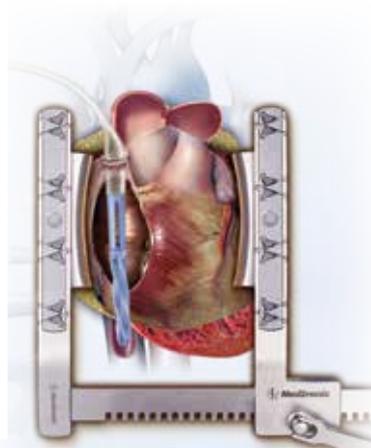
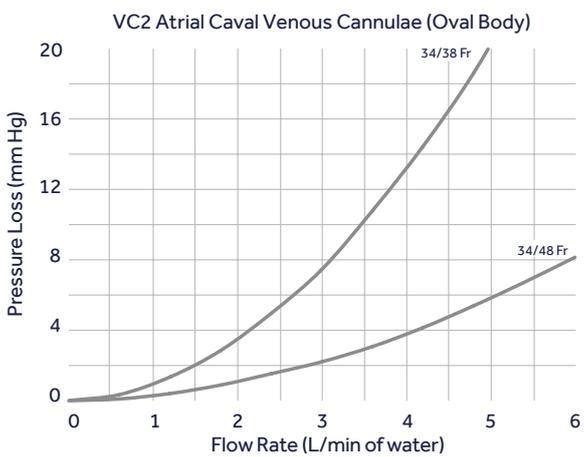
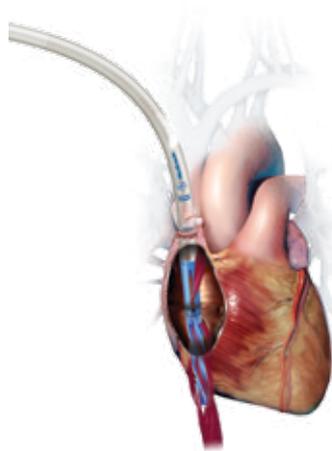
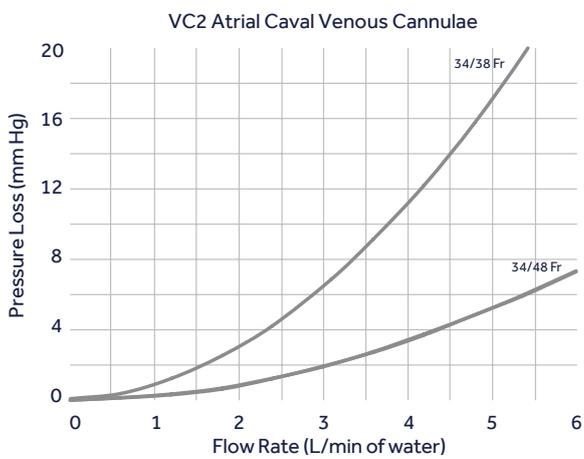
4 per carton

Important Safety Information

For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

VC2™ Atrial Caval Venous Cannulae

These cannulae offer swirl tips with slotted atrial baskets and kink-resistant, wirewound bodies that feature depth markings. The oval body presents a lower profile in the surgical field.



15 in (38.1 cm) overall length

Wirewound body
Connection site $\frac{3}{8}$ in (0.95 cm)

93438	34/38 Fr (11.3/12.7 mm)
-------	-------------------------

Wirewound body
Connection site $\frac{1}{2}$ in (1.27 cm)

93448	34/48 Fr (11.3/16.0 mm)
-------	-------------------------

Wirewound body, non-vented
 $\frac{1}{2}$ in (1.27 cm) connector

93438C	34/38 Fr (11.3/12.7 mm)
--------	-------------------------

93448C	34/48 Fr (11.3/16.0 mm)
--------	-------------------------

Oval wirewound body
Connection site $\frac{3}{8}$ in (.95 cm)

93463	34/38 Fr (11.3/12.7 mm)
-------	-------------------------

Oval wirewound body
Connection site $\frac{1}{2}$ in (1.27 cm)

93464	34/48 Fr (11.3/16.0 mm)
-------	-------------------------

Oval wirewound body, non-vented
 $\frac{1}{2}$ in (1.27 cm) connector

93463C	34/38 Fr (11.3/12.7 mm)
--------	-------------------------

93464C	34/48 Fr (11.3/16.0 mm)
--------	-------------------------

10 per carton

Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

MC2™ Two Stage Venous Cannulae

These cannulae feature multi-port tips with atrial baskets and kink-resistant, wirewound bodies with depth markings. The oval body presents a lower profile in the surgical field.



15 in (38.1 cm) overall length

Connection site 3/8 in (0.95 cm)

91228	28/36 Fr (9.3/12.0 mm)
-------	------------------------

Connection site 1/2 in (1.27 cm)

91236	36/46 Fr (12.0/15.3 mm)
-------	-------------------------

91240	32/40 Fr (10.7/13.3 mm)
-------	-------------------------

91246	34/46 Fr (11.3/15.3 mm)
-------	-------------------------

91251	36/51 Fr (12.0/17.0 mm)
-------	-------------------------

Non-vented

1/2 in (1.27 cm) connector

91228C	28/36 Fr (9.3/12.0 mm)
--------	------------------------

91236C	36/46 Fr (12.0/15.3 mm)
--------	-------------------------

91240C	32/40 Fr (10.7/13.3 mm)
--------	-------------------------

91246C	34/46 Fr (11.3/15.3 mm)
--------	-------------------------

91251C	36/51 Fr (12.0/17.0 mm)
--------	-------------------------

10 per carton

15 in (38.1 cm) overall length

Reduced stage body

Connection site 1/2 in (1.27 cm)

91229	29/37 Fr (9.7/12.3 mm)
-------	------------------------

Non-vented

1/2 in (1.27 cm) connector

91229C	29/37 Fr (9.7/12.3 mm)
--------	------------------------

Thin wall body

Connection 3/8 in (0.95 cm)

91329	29/29 Fr (9.7/9.7 mm)
-------	-----------------------

Non-vented

3/8 in (0.95 cm) connector

91329C	29/29 Fr (9.7/9.7 mm)
--------	-----------------------

Oval body

Connection site 1/2 in (1.27 cm)

91263	32/40 Fr (10.7/13.3 mm)
-------	-------------------------

91265	36/46 Fr (12.0/15.3 mm)
-------	-------------------------

Non-vented

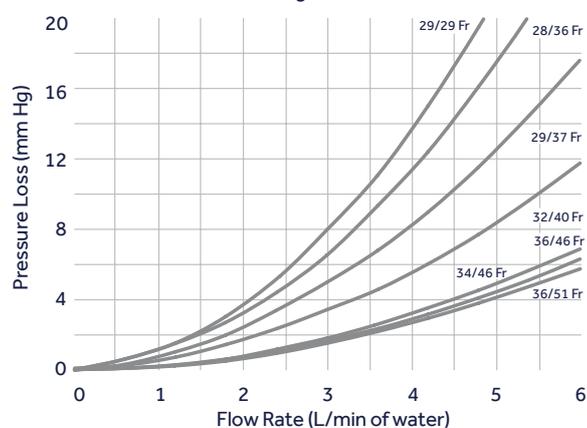
1/2 in (1.27 cm) connector

91263C	32/40 Fr (10.7/13.3 mm)
--------	-------------------------

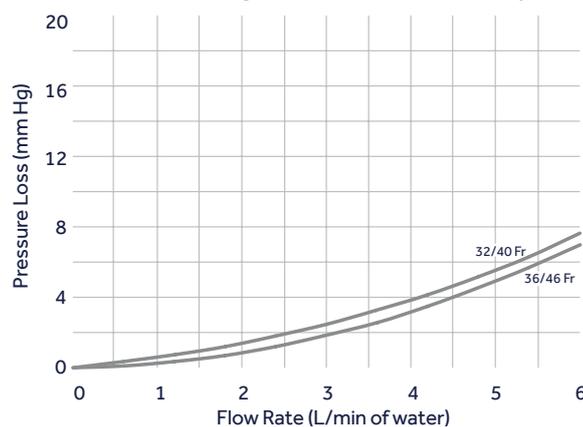
91265C	36/46 Fr (12.0/15.3 mm)
--------	-------------------------

10 per carton

MC2 Two Stage Venous Cannulae



MC2 Two Stage Venous Cannulae (Oval Body)



Important Safety Information

For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

MC2X™ Three Stage Venous Cannulae

These cannulae feature a thin-wall design that provides minimal pressure differential for use with vacuum or kinetically assisted venous drainage.



Thinner Wall Design



MC2X (29/29/29) Cannula Competitive 29 Fr Cannula

MC2X has a 31% thinner wall for a larger inner diameter when compared to competitive cannula²

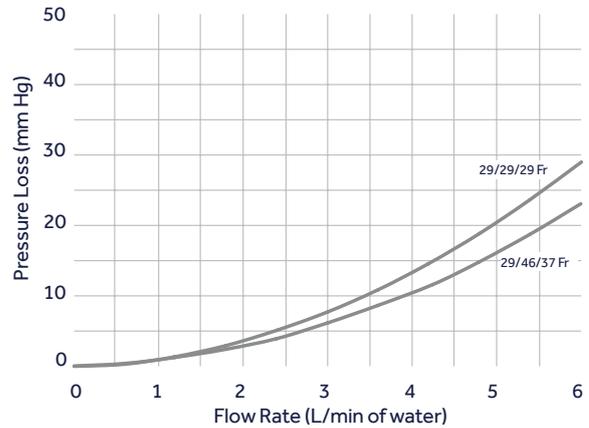


MC2X 29/29/29 Cannula Competitive 29 Fr Cannula

Larger end hole of the MC2X allows for better flow opportunity³

2,3. 2013 Medtronic data on file.

MC2X Three Stage Venous Cannulae



15 in (38.1 cm) overall length

Connection site $\frac{3}{8}$ in (0.95 cm)

91429 29/29/29 Fr (9.7/9.7/9.7 mm)

Non-vented

$\frac{3}{8}$ in (0.95 cm) connector

91429C 29/29/29 Fr (9.7/9.7/9.7 mm)

10 per carton

15.5 in (39 cm) overall length

Connection site $\frac{3}{8}$ in (0.95 cm)

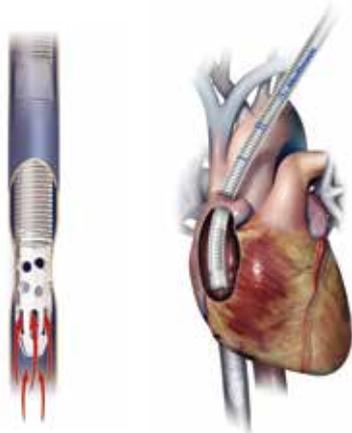
91437 29/46/37 Fr (9.7/15.3/12.3 mm)

Non-vented

$\frac{3}{8}$ in (0.95 cm) connector

91437C 29/46/37 Fr (9.7/15.3/12.3 mm)

10 per carton



Important Safety Information

The introduction of air into the right heart may result in the immediate total loss of venous drainage to the extracorporeal circulation. Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures. For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

**CARDIOPLEGIA
CIRCUIT
PRODUCTS**
ANTEGRADE
RETROGRADE
ADAPTERS

FIND YOUR IDEAL **ANTEGRADE CANNULAE**

Antegrade cannulae are designed to deliver cardioplegia solution to the heart via the coronary ostia in the normal direction of blood flow (antegrade perfusion). Aortic root cannulae are intended to either aspirate air from the aorta or infuse cardioplegia solution directly into the aortic root near the aortic valve. We offer adult and pediatric aortic root cannulae in varying lengths to accommodate various techniques and patient anatomies. Our product breadth ensures the availability of a cannula to meet your specific needs.

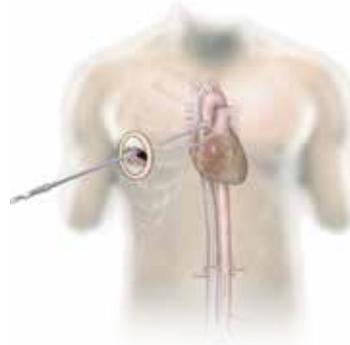
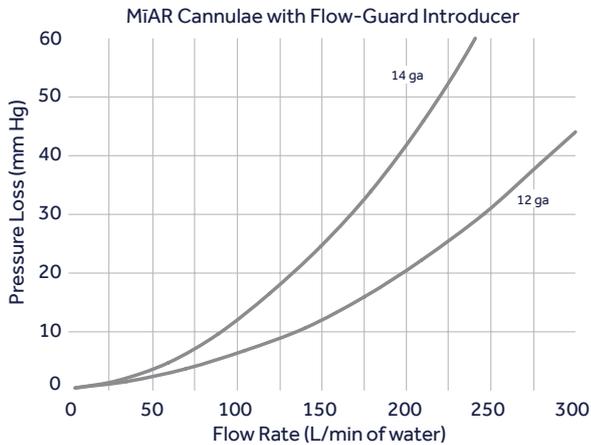


ANTEGRADE CANNULAE

MiAR™	41
DLP™ Dual Lumen Aortic Root with Vent Line	41
DLP™ Aortic Root	42
DLP™ Aortic Root with Vent Line	43
DLP™ Cardioplegia Needles	44
DLP™ Silicone Coronary Artery Ostial	44
DLP™ Coronary Artery Ostial	45
DLP™ High Flow Coronary Artery Ostial	46

MiAR™ Cannulae

These Minimally Invasive Aortic Root (MiAR) models feature a 12.25 in (31 cm) cannula body to allow access into the chest for small incision techniques. This length also allows positioning of the luer connection to the cardioplegia line out of the surgeon's way, outside the chest incision. Additionally, these MiAR models include the Flow-Guard™ feature to maintain hemostasis during removal of the needle from the cannula.



**12.25 in (31 cm)
overall length**

Flanged standard tip and
Flow-Guard introducer

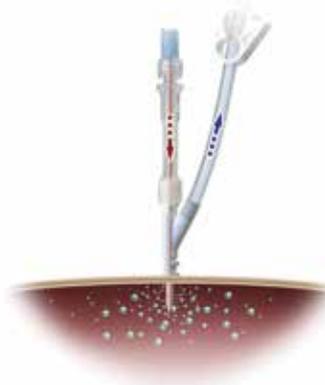
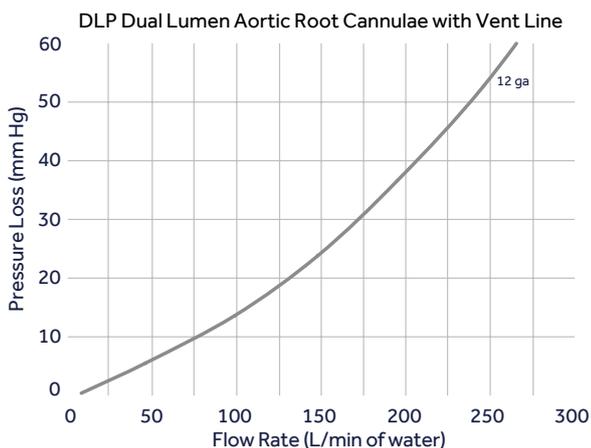
11012L	12 ga (9 Fr)
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11014L	14 ga (7 Fr)
--------	--------------

10 per carton

DLP™ Dual Lumen Aortic Root Cannulae with Vent Line

These cannulae feature dual lumen tips attached to clear bodies with separate vent line. Additional features available with these cannulae include left heart venting and simultaneous cardioplegia delivery and aspiration. All cannulae are supplied with a stainless steel introducer needle.



**3.25 in (8.3 cm)
overall length**

Standard tip

30401	12 ga (9 Fr)
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Flanged standard tip

30402	12 ga (9 Fr)
-------	--------------

10 per carton

Dual Lumen Aortic Root Application Detail

Important Safety Information

Care should be taken when inserting the needle to prevent perforation of the back wall of the aorta. Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures. Additional care and caution may be necessary due to the unique adaptations required for minimally invasive techniques. For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

DLP™ Aortic Root Cannulae

These pediatric and adult cannulae feature radiopaque tips attached to clear PVC bodies. Additional features available with these cannulae include: aortic root pressure monitoring and left heart venting. All cannulae are supplied with a stainless steel introducer needle. All DLP Aortic Root Cannulae can be used to aspirate air emboli as well as administer cardioplegia.



2.5 in (6.4 cm) overall length

Flanged standard tip and standard introducer

10218	18 ga (4 Fr) white tip and clear flange
12218	18 ga (4 Fr) blue one-piece tip and flange

20 per carton



5.75 in (14.6 cm) overall length

Slotted long tip and standard introducer

10112	12 ga (9 Fr)
10114	14 ga (7 Fr)

Long tip and standard introducer

10114B	14 ga (7 Fr)
--------	--------------

20 per carton



5.5 in (14.0 cm) overall length

Flanged standard tip and standard introducer

10009	9 ga (11 Fr)
10012	12 ga (9 Fr)
10014	14 ga (7 Fr)
10016	16 ga (5 Fr)
10018	18 ga (4 Fr)

Flanged standard tip and Flow-Guard introducer

11012	12 ga (9 Fr)
11014	14 ga (7 Fr)

20 per carton



5.75 in (14.6 cm) overall length

Flanged long tip and standard introducer

10112WF	12 ga (9 Fr)
10114WF	14 ga (7 Fr)

20 per carton

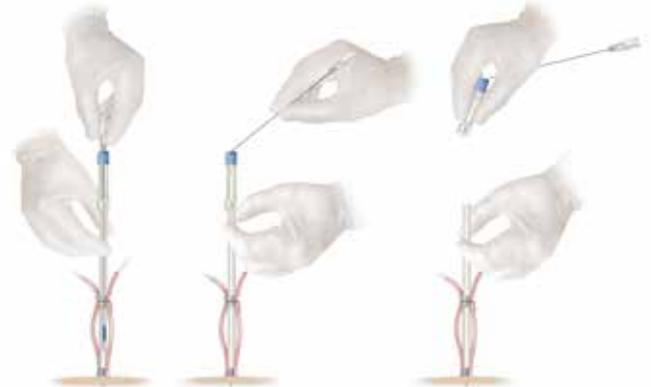
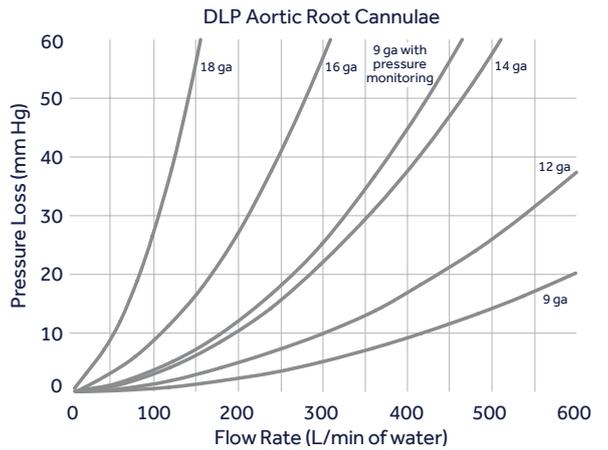
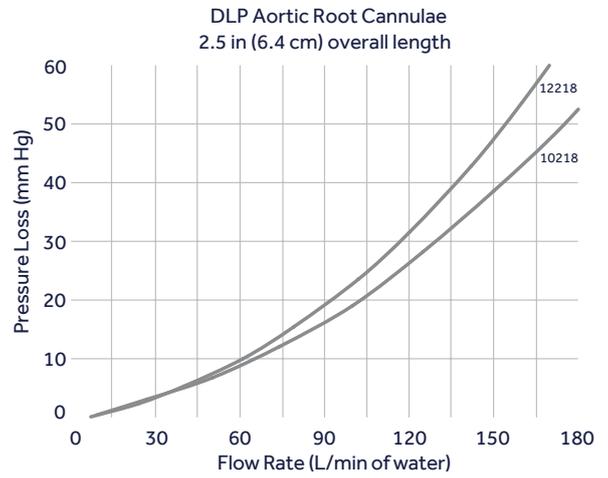


5.25 in (13.3 cm) overall length

Flanged pressure monitoring tip and standard introducer

23009	9 ga (11 Fr)
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20 per carton

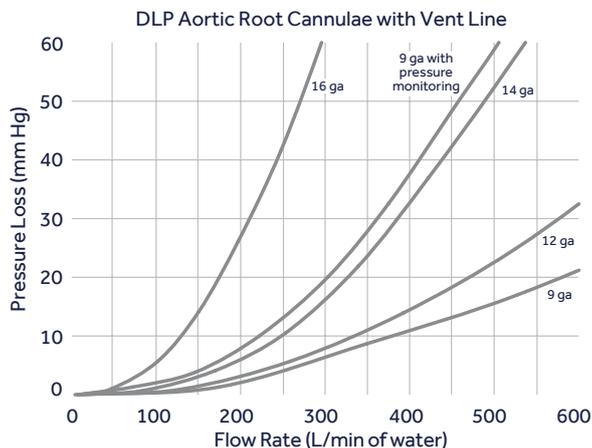


Important Safety Information

Care should be taken when inserting the needle to prevent perforation of the back wall of the aorta. Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

DLP™ Aortic Root Cannulae with Vent Line

These cannulae feature radiopaque tips attached to clear bodies with separate vent lines. Additional features available with these cannulae include aortic root pressure monitoring and left heart venting. All cannulae are supplied with a stainless steel introducer needle.



5.5 in (14.0 cm) overall length

Flanged standard tip and standard introducer

20009	9 ga (11 Fr)
20012	12 ga (9 Fr)
20012S	12 ga (9 Fr) with two clamps
20014	14 ga (7 Fr)
20014L	14 ga (7 Fr) 8 in (20.3 cm) vent line
20016	16 ga (5 Fr)

Flanged standard tip and Flow-Guard™ introducer

21012	12 ga (9 Fr)
21014	14 ga (7 Fr)

20 per carton

5.75 in (14.6 cm) overall length

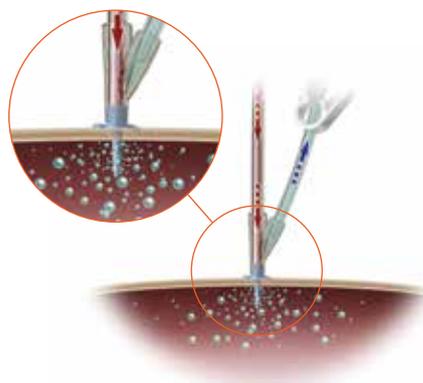
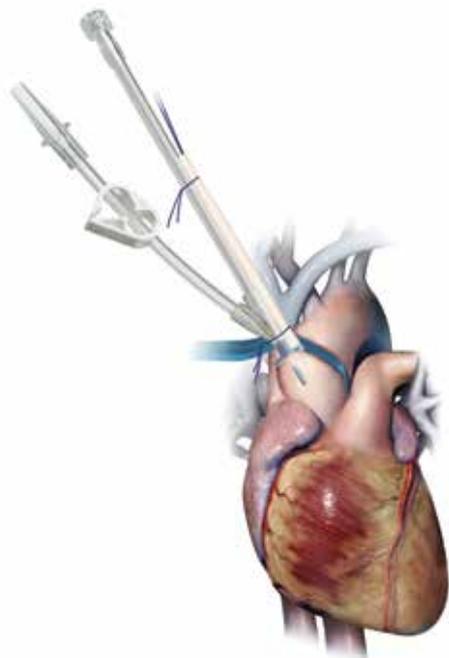
Slotted long tip and standard introducer

20112	12 ga (9 Fr)
20114	14 ga (7 Fr)

Long tip and standard introducer

20112B	12 ga (9 Fr)
20114B	14 ga (7 Fr)

20 per carton



5.75 in (14.6 cm) overall length

Flanged long tip and standard introducer

20114WF	14 ga (7 Fr)
20114HWF	14 ga (7 Fr) with side holes

20 per carton



5.25 in (13.3 cm) overall length

Flanged pressure monitoring tip and standard introducer

24009	9 ga (11 Fr)
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20 per carton

Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures. For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

DLP™ Cardioplegia Needles

These needles feature stainless steel tips with a plastic depth stop. These needles are attached to flexible tubing with drape clamp and female luer.



Neonatal

6.5 in (16.5 cm) overall length

Tip length ¼ in (0.64 cm) with hub stop

11316	16 ga (5 Fr)
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20 per carton

Adult

10 in (25.4 cm) overall length

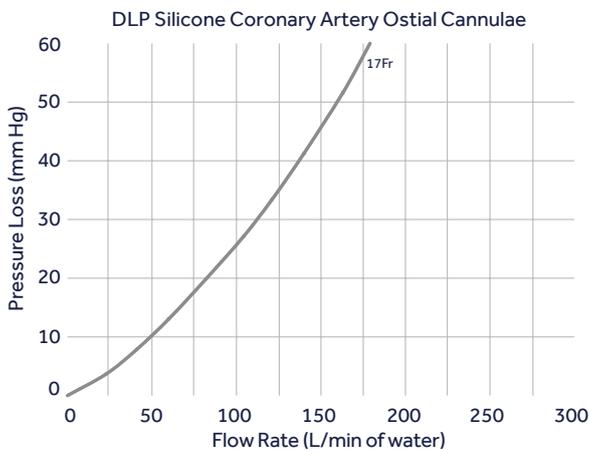
Tip length ⅝ in (1.59 cm) with 4 side holes and flange stop

10313	13 ga (8 Fr)
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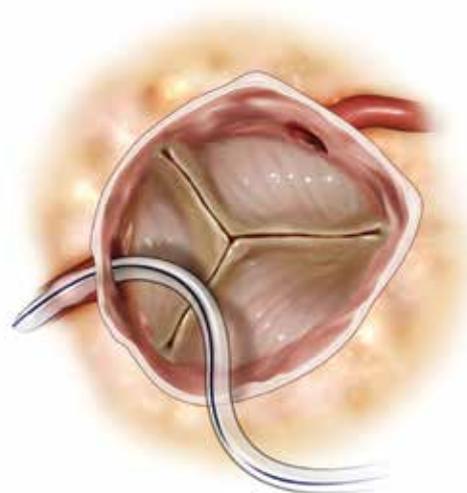
20 per carton

DLP™ Silicone Coronary Artery Ostial Cannulae

These cannulae feature silicone bodies with soft bulb-shaped tips. All cannulae have a female luer connection site.



Intracoronary cardioplegia



10 in (25.4 cm) overall length

30315	15 Fr (5.0 mm) bulb
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30317	17 Fr (5.7 mm) bulb
-------	---------------------

30320	20 Fr (6.7 mm) bulb
-------	---------------------

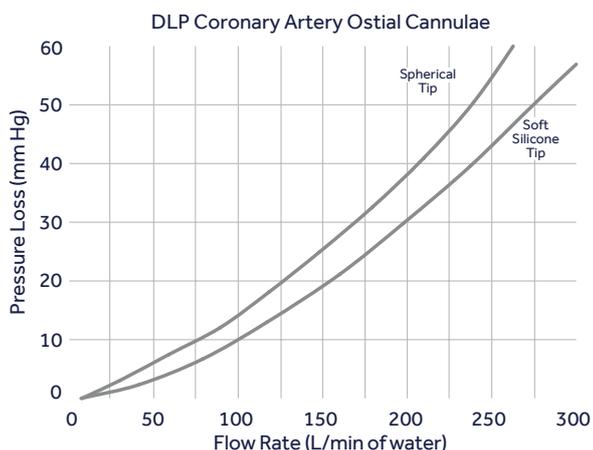
10 per carton

Important Safety Information

Care should be taken when inserting the needle to prevent perforation of the back wall of the aorta. Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

DLP™ Coronary Artery Ostial Cannulae

These cannulae feature flanged, radiopaque basket tips or soft tips attached to malleable stainless steel shafts. All cannulae have a female luer connection site.



**6 in (15.2 cm)
overall length**

Basket tip

30010	10 Fr (3.3 mm)
30012	12 Fr (4.0 mm)
30014	14 Fr (4.7 mm)

20 per carton

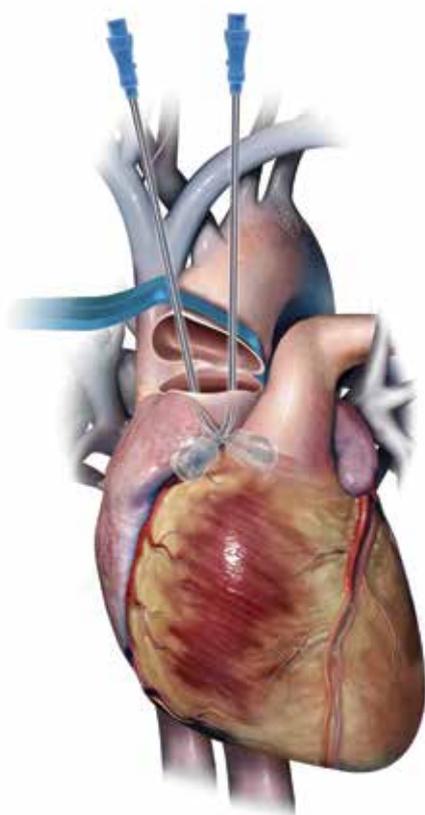


**6 in (15.2 cm)
overall length**

Spherical tip

30011

20 per carton



**6 in (15.2 cm)
overall length**

Soft, concave tip

30050

10 per carton



**6 in (15.2 cm)
overall length**

Soft, convex tip

30055

10 per carton

Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures. For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

DLP™ High Flow Coronary Artery Ostial Cannulae

These cannulae feature flanged, radiopaque basket tips or soft silicone tips attached to large bore, malleable stainless steel shafts. All cannulae have a female luer connection site.



**7.5 in (19.1 cm)
overall length**

90° angle tip

30110	10 Fr (3.3 mm)
30112	12 Fr (4.0 mm)
30114	14 Fr (4.7 mm)

10 per carton

**7.5 in (19.1 cm)
overall length**

90° angle soft silicone tip

30155	10 Fr (3.3 mm)
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10 per carton



**7.5 in (19.1 cm)
overall length**

45° angle tip

30212	12 Fr (4.0 mm)
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10 per carton

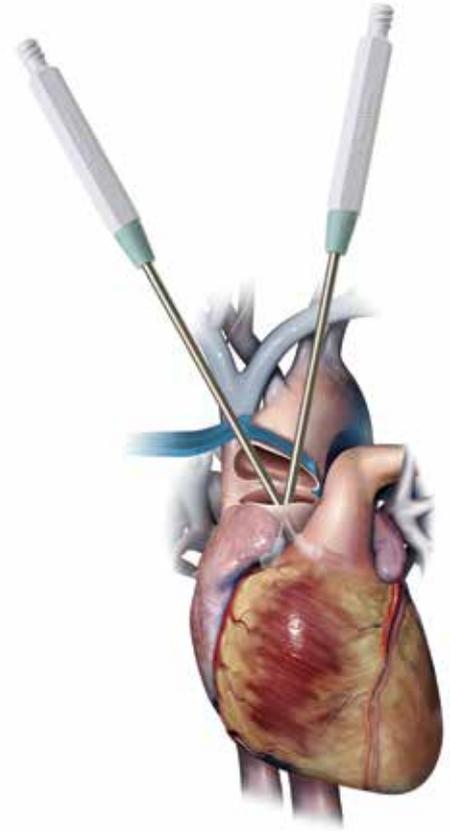


**7.5 in (19.1 cm)
overall length**

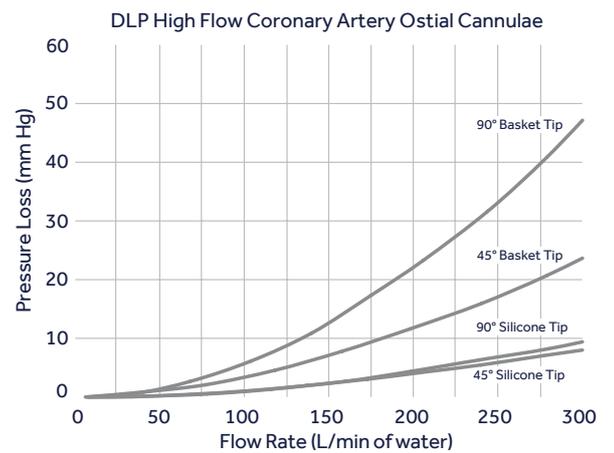
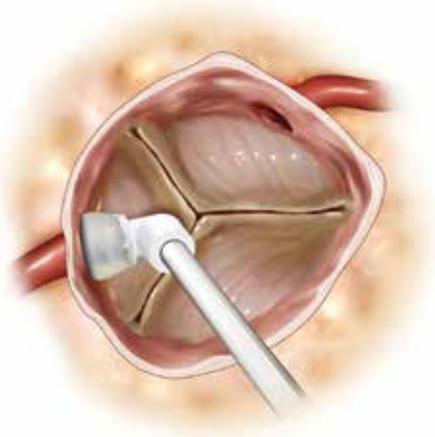
45° angle soft silicone tip

30255	10 Fr (3.3 mm)
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10 per carton



Ostial antegrade cardioplegia



Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures. For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

FIND YOUR IDEAL **RETROGRADE CANNULAE**

Retrograde cannulae are designed to deliver cardioplegia solutions to the heart via the coronary sinus in the reverse direction of normal blood flow (retrograde perfusion). We offer the retrograde cannulae in pediatric and adult sizes. The pediatric cannulae are offered with silicone bodies, with or without a guidewire stylet, and a manual-inflate cuff. Adult models are offered with a silicone or PVC body, a solid or guidewire stylet with a variety of handle options, and an auto- or manual-inflate cuff. The purpose of the cuff is to occlude the opening of the coronary sinus, forcing cardioplegia flow to the coronary vessel bed of the heart. Manual-inflate models require the clinician to inflate the cuff prior to delivering cardioplegia. Our product breadth ensures the availability of a cannula to meet your specific needs.

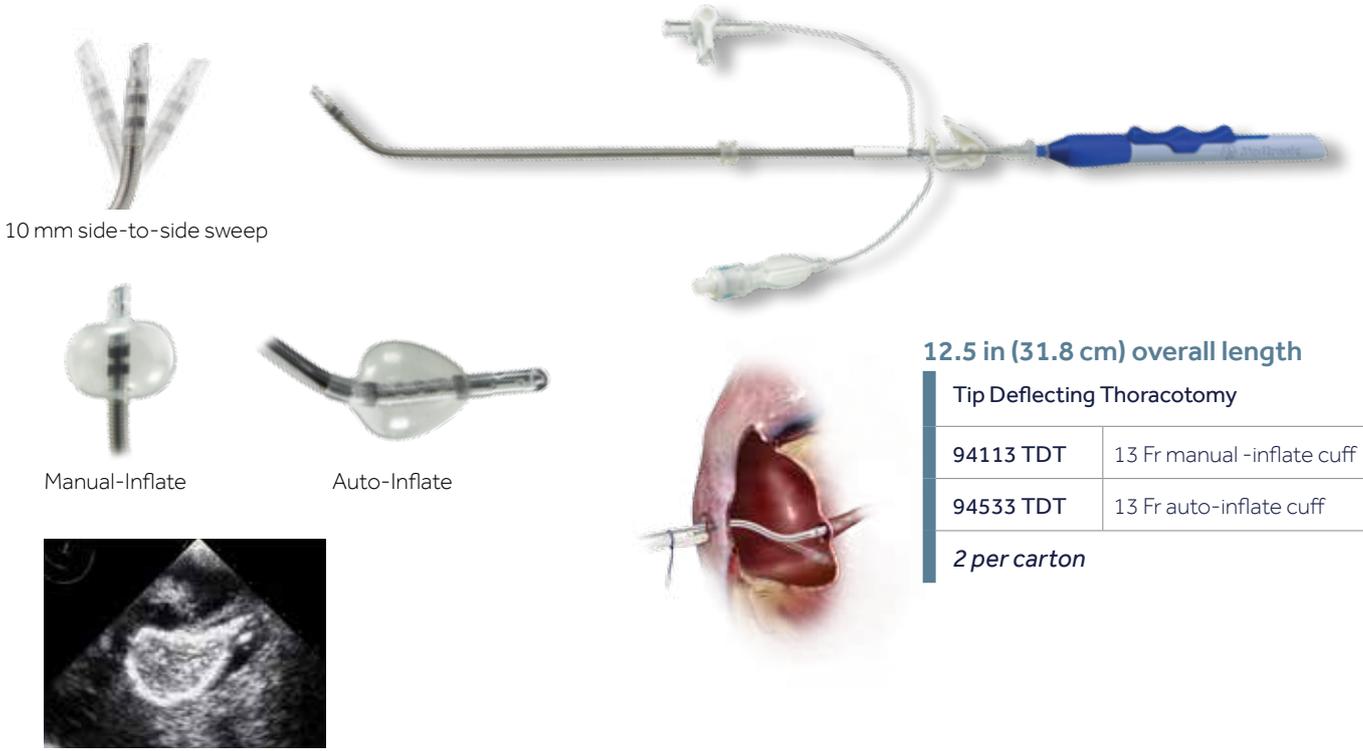


RETROGRADE CANNULAE

MiRCSP™	49
Gundry™ Silicone with Manual-Inflate Cuf	50
DLP™ Silicone with Manual-Inflate Cuff	51
DLP™ Silicone with Auto-Inflate Cuff	53
DLP™ PVC with Auto-Inflate Cuff	54

MiRCSP™ Cannulae

The MiRCSP cannula is a retrograde cardioplegia cannula for cardiac surgeons who seek to differentiate themselves through the use of less invasive valve procedures performed through small thoracic incisions. Unlike traditional retrograde coronary sinus perfusion cannulae, the MiRCSP cannula includes the unique features of tip deflection and sweep that allow the surgeon to place it trans-atrial into the coronary sinus through small thoracic incisions (mini-sternotomy or right thoracotomy). Additional features enhance visibility on echocardiography or fluoroscopy to further facilitate cannula placement.



10 mm side-to-side sweep



Manual-Inflate



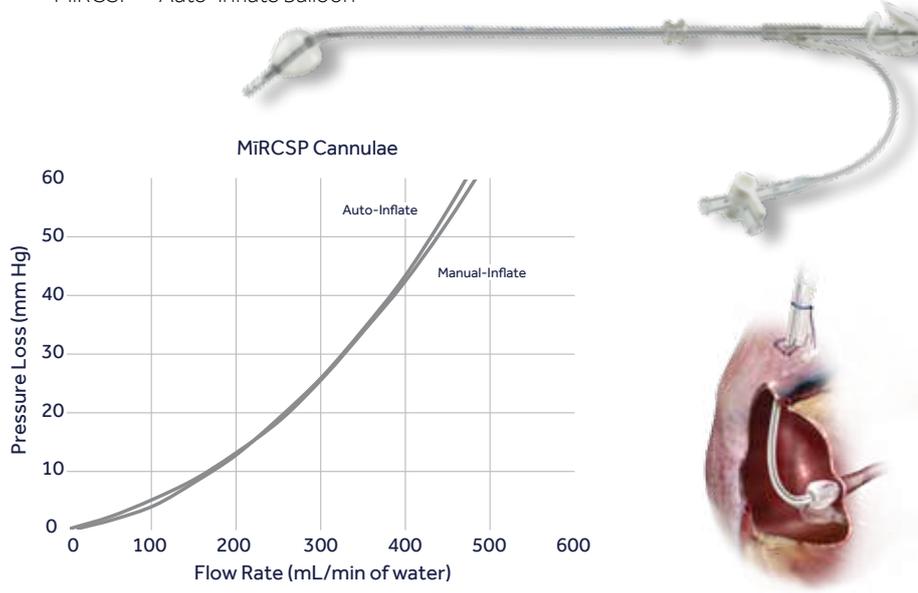
Auto-Inflate

12.5 in (31.8 cm) overall length

Tip Deflecting Thoracotomy	
94113 TDT	13 Fr manual -inflate cuff
94533 TDT	13 Fr auto-inflate cuff
2 per carton	



Enhanced echogenicity
MiRCSP™ Auto-Inflate balloon



12.5 in (31.8 cm) overall length

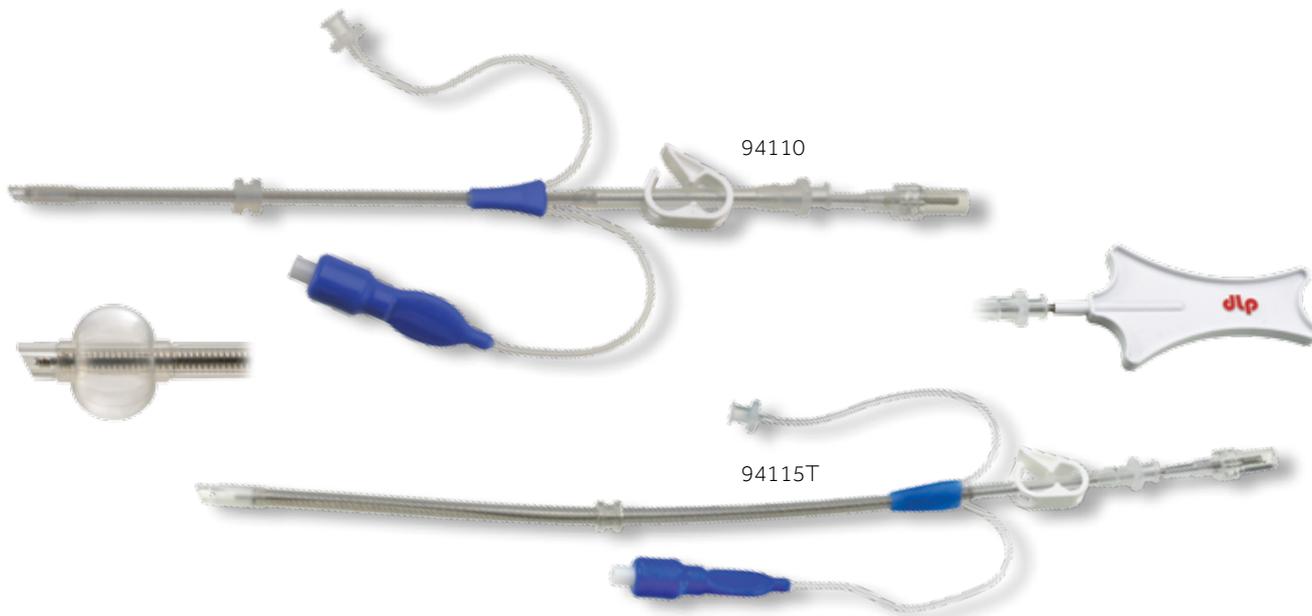
Tip Deflecting	
94113 TD	13 Fr manual -inflate cuff
94533 TD	13 Fr auto-inflate cuff
2 per carton	

Important Safety Information

Extreme caution should be exercised while introducing the cannula into the coronary sinus. Do not force the cannula into the coronary sinus as this may cause vessel damage. Additional care and caution may be necessary due to the unique adaptations required for minimally invasive techniques. Due to limitations of direct visualization during minimally invasive techniques, echocardiographic or fluoroscopic imaging is recommended. Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures. For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

Gundry™ Silicone RCSP Cannulae with Manual-Inflate Cuff

These pediatric and adult cannulae feature silicone bodies and manual-inflate cuffs with pressure monitoring lines. All cannulae have a guidewire stylet and either a male luer handle or a Tru-Touch™ handle. All cannulae come with a syringe for cuff inflation.



9 in (22.9 cm) overall length

Smooth cuff and wirewound body

94110	10 Fr (3.3 mm) guidewire stylet
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4 per carton

12.5 in (31.8 cm) overall length

Smooth cuff and wirewound body

94115T	15 Fr (5.0 mm) guidewire stylet
--------	---------------------------------

10 per carton

12.5 in (31.8 cm) overall length

Smooth cuff, wirewound body, and integral stopcock

94113T	13 Fr (4.3 mm) guidewire stylet
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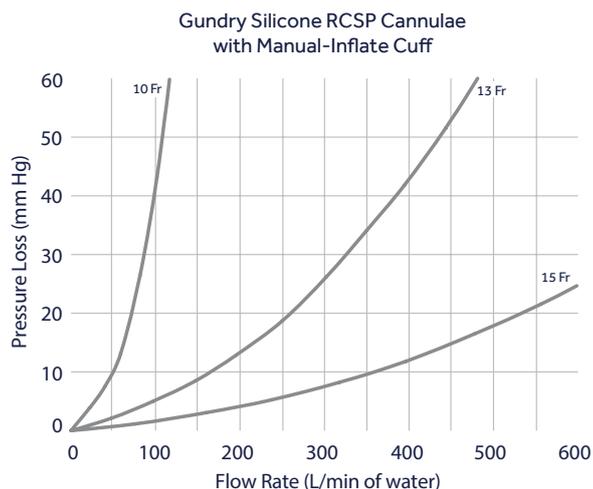
10 per carton

94615	15 Fr (5.0 mm) guidewire stylet
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4 per carton

94715	15 Fr (5.0 mm) guidewire stylet with Tru-Touch handle
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10 per carton

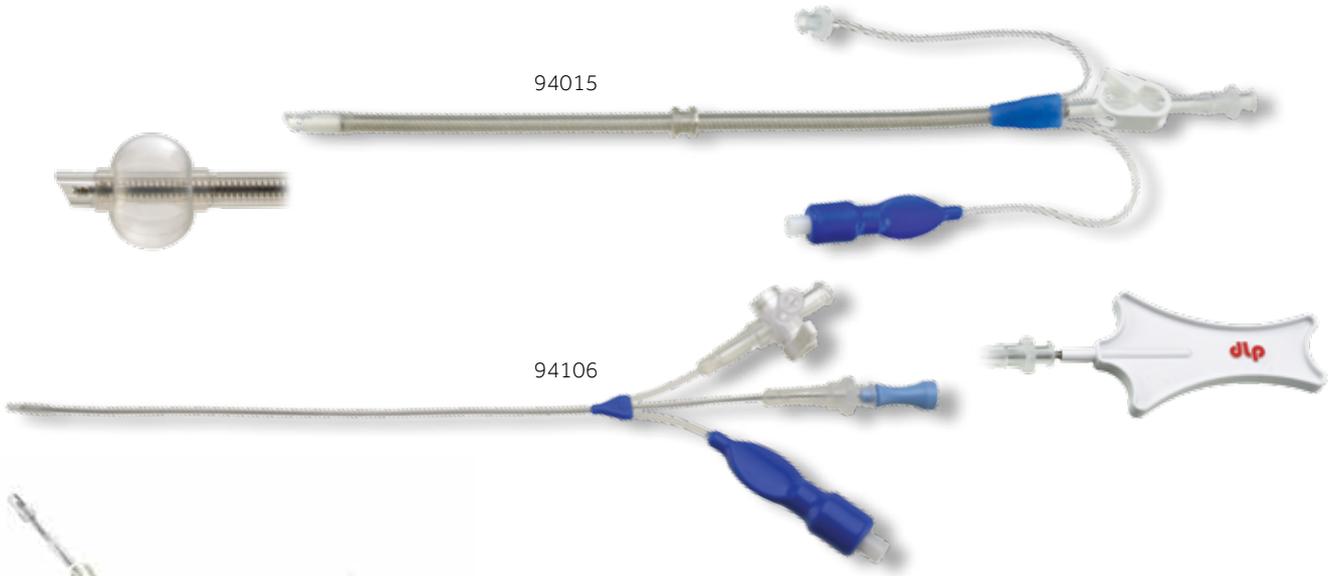


Important Safety Information

Extreme caution should be exercised while introducing the cannula into the coronary sinus. Do not force the cannula into the coronary sinus as this may cause vessel damage. Do not over inflate the balloon. Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

DLP™ Silicone RCSP Cannulae with Manual-Inflate Cuff

These pediatric and adult cannulae feature silicone bodies and manual-inflate cuffs with pressure monitoring lines. All cannulae come with a smooth cuff and a syringe for cuff inflation.



9 in (22.9 cm) overall length

Smooth cuff and wirewound body

94010	10 Fr (3.3 mm) no stylet
-------	-----------------------------

4 per carton

9.5 in (24.1 cm) overall length

Smooth cuff, non-wirewound body, and integral stopcock

94006	6 Fr (2.0 mm) no stylet
94106	6 Fr (2.0 mm) guidewire stylet

4 per carton

12.5 in (31.8 cm) overall length

Smooth cuff and wirewound body

94015	15 Fr (5.0 mm) no stylet
94215T	15 Fr (5.0 mm) solid stylet

10 per carton

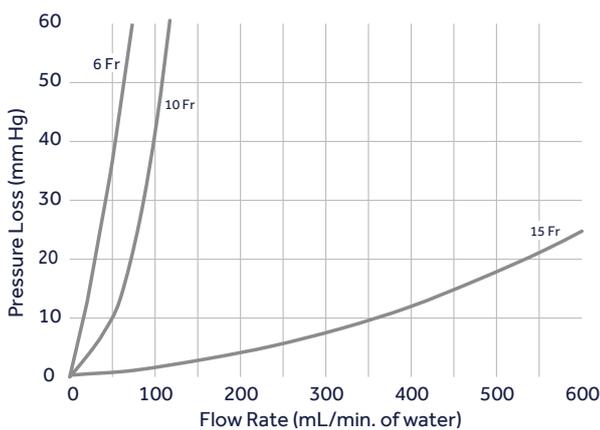
12.5 in (31.8 cm) overall length

Smooth cuff, wirewound body, and integral stopcock

94725	15 Fr (5.0 mm) solid stylet with Tru-Touch™ handle
-------	--

10 per carton

DLP Silicone RCSP Cannulae with Manual-Inflate Cuff



Important Safety Information

Extreme caution should be exercised while introducing the cannula into the coronary sinus. Do not force the cannula into the coronary sinus as this may cause vessel damage. Do not over inflate the balloon. For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

DLP™ Silicone RCSP Cannulae with Manual-Inflate Cuff

These pediatric and adult cannulae feature silicone bodies and manual-inflate cuffs with pressure monitoring lines. A variety of cuffs and stylets are available. All cannulae come with a syringe for cuff inflation.



**12.5 in (31.8 cm)
overall length**

**Preformed cuff
and wirewound body**

94515	15 Fr (5.0 mm) guidewire stylet
94525	15 Fr (5.0 mm) solid stylet

4 per carton



**12.5 in (31.8 cm)
overall length**

**Elongated cuff, wirewound body,
and integral stopcock**

94625	15 Fr (5.0 mm) solid stylet
94665	15 Fr (5.0 mm) guidewire stylet

10 per carton

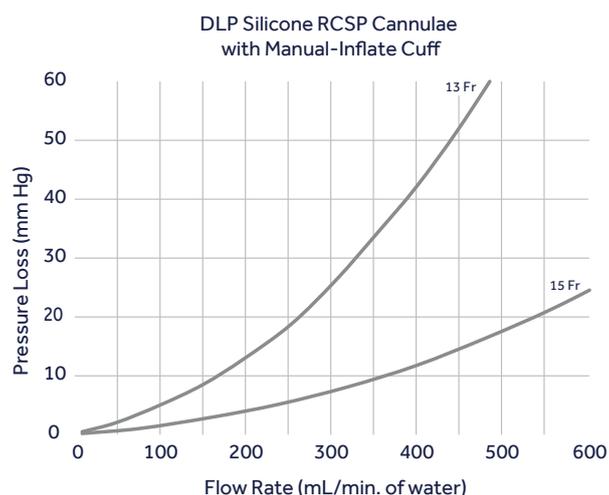
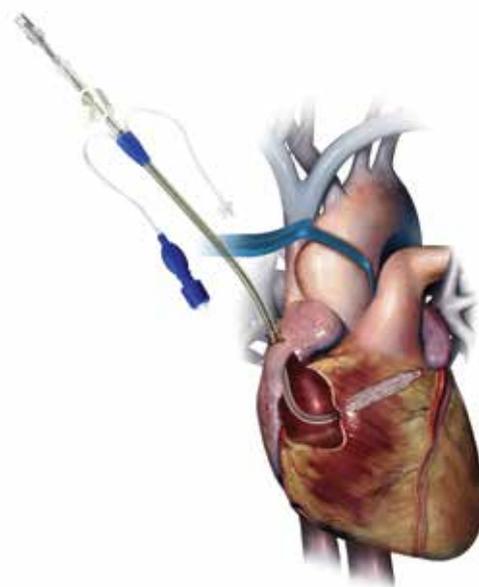


**12.5 in (31.8 cm)
overall length**

**Ridged cuff, wirewound body,
and integral stopcock**

94913	13 Fr (4.3 mm) guidewire stylet
94913L	13 Fr (4.3 mm) guidewire stylet and 6 in (15.2 cm) pressure monitoring and inflation line
94915	15 Fr (5.0 mm) guidewire stylet
94965	15 Fr (5.0 mm) guidewire stylet with Tru-Touch™ handle
94975	15 Fr (5.0 mm) solid stylet with Tru-Touch handle

10 per carton



Important Safety Information

Additional care and caution may be necessary due to the unique adaptations required for minimally invasive techniques. Due to limitations of direct visualization during minimally invasive techniques, echocardiographic or fluoroscopic imaging is recommended. Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

DLP™ Silicone RCSP Cannulae with Auto-Inflate Cuff

These cannulae feature silicone bodies and auto-inflate cuffs with pressure monitoring lines. A variety of cuffs and stylets are available.



12.5 in (31.8 cm) overall length

Smooth preformed cuff and wirewound body

94315T	15 Fr (5.0 mm) solid stylet
94415T	15 Fr (5.0 mm) guidewire stylet
94735	15 Fr (5.0 mm) solid stylet with Tru-Touch™ handle
94745	15 Fr (5.0 mm) guidewire stylet with Tru-Touch™ handle

10 per carton

12.5 in (31.8 cm) overall length

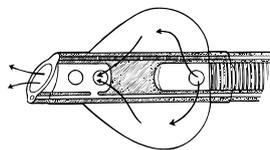
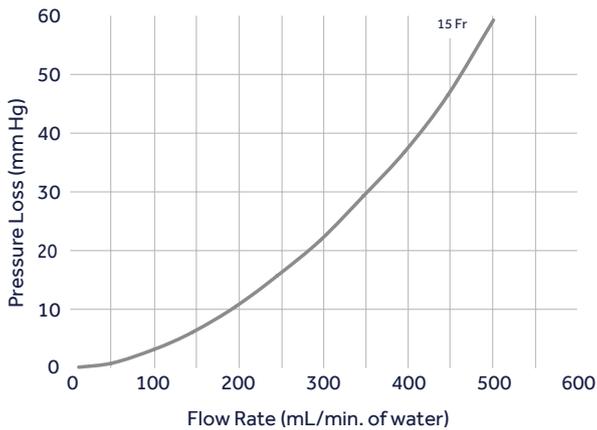
Ridged preformed cuff, wirewound body, and integral stopcock

94985	15 Fr (5.0 mm) solid stylet with Tru-Touch handle
94995	15 Fr (5.0 mm) guidewire stylet with Tru-Touch handle

10 per carton

Silicone auto-inflating cuffs offer the convenience of cuff inflation without the need for a syringe. Their unique flow-through design allows cardioplegia to circulate through the cuff before exiting the cannula tip. These cuffs also feature a dual pressure monitoring system: which normally provides intra-sinus pressure monitoring through the port in the tip. However, should the tip inadvertently become occluded, the second port will monitor intra-cuff pressure. This feature greatly reduces the potential for coronary sinus damage due to over inflation.

DLP Silicone RCSP Cannulae with Auto-Inflate Cuff



Silicone Auto-Inflate Cuff Flow Detail

Important Safety Information

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DLP™ PVC RCSP Cannulae with Auto-Inflate Cuff

These cannulae feature PVC bodies and polyurethane auto-inflate smooth cuffs with pressure monitoring lines. A variety of stylets are available.



10 in (25.4 cm) overall length

Smooth preformed cuff, short fluted bullet-nosed tip, and integral stopcock

94885K	15 Fr (5.0 mm) solid stylet with Tru-Touch™ handle
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10 per carton



11 in (27.9 cm) overall length

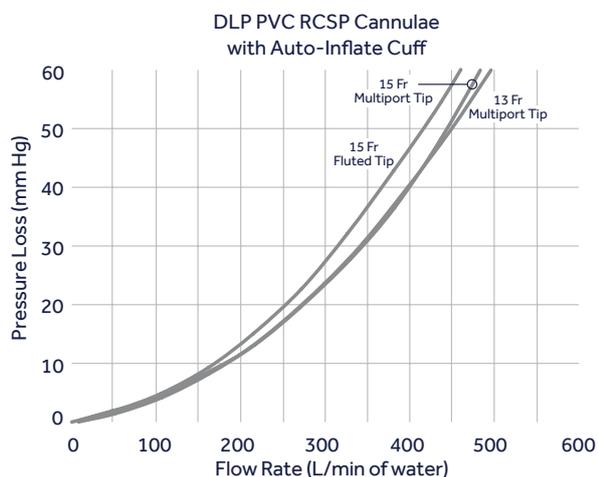
Smooth preformed cuff, multi-port tip, and integral stopcock

94523	13 Fr (4.3 mm) guidewire stylet with mini Tru-Touch handle
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94533	13 Fr (4.3 mm) solid stylet with Tru-Touch handle
-------	---

94535	15 Fr (5.0 mm) solid stylet with Tru-Touch handle
-------	---

10 per carton



Important Safety Information

Extreme caution should be exercised while introducing the cannula into the coronary sinus. Do not force the cannula into the coronary sinus as this may cause vessel damage. Do not over inflate the balloon. Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

DLP™ PVC RCSP Cannulae with Auto-Inflate Cuff

These cannulae feature PVC bodies and polyurethane auto-inflate cuffs with pressure monitoring lines. A variety of cuffs and stylets are available.



12 in (30.5 cm) overall length

Smooth preformed cuff, short fluted bullet-nosed tip, and integral stopcock

94885	15 Fr (5.0 mm) solid stylet with Tru-Touch™ handle
94895	15 Fr (5.0 mm) guidewire stylet with Tru-Touch handle

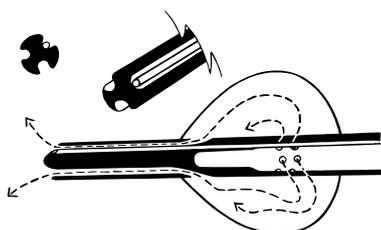
10 per carton

12.5 in (31.8 cm) overall length

Smooth preformed cuff, short fluted bullet-nosed tip, and integral stopcock

94835	15 Fr (5.0 mm) solid stylet with Tru-Touch handle
94845	15 Fr (5.0 mm) guidewire stylet with Tru-Touch handle

10 per carton



PVC Auto-Inflate Cuff Flow Detail



12.5 in (31.8 cm) overall length

Ridged preformed silicone cuff, short fluted, bullet-nosed tip, and integral stopcock

94935	15 Fr (5.0 mm) solid stylet with Tru-Touch handle
94945	15 Fr (5.0 mm) guidewire stylet

10 per carton

Important Safety Information

Additional care and caution may be necessary due to the unique adaptations required for minimally invasive techniques. Due to limitations of direct visualization during minimally invasive techniques, echocardiographic or fluoroscopic imaging is recommended. Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures. For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

FIND YOUR IDEAL **CARDIOPLEGIA ADAPTERS**

Cardioplegia adapters are designed to permit customization of the cardioplegia circuit. Medtronic adapters can be used to connect multiple cardioplegia cannulae and/or vein graft cannulae to a single inlet source, switch between antegrade and retrograde delivery of cardioplegia and provide the option for attaching a vent line to cardioplegia cannulae. Additional adapters are available to extend the length of the cardioplegia circuit, recirculate the cardioplegia solution, or provide an extension to the pressure monitoring line.



CARDIOPLEGIA ADAPTERS

DLP™ Perfusion	59
DLP™ Perfusion / Venting	59
DLP™ Extension Line	60
DLP™ Pressure Monitoring Extension Line	60
DLP™ Straight Venting	60
DLP™ “Y” Type Venting	60
DLP™ “Y” Type Recirculating	61
DLP™ “Y” Type Coronary Perfusion	61
DLP™ “Y” Type Special	62
DLP™ “Y” Type	62
DLP™ Vein Graft Cannula	63
DLP™ Cardioplegia Adapter with Pressure Port	64
ARISS™ Perfusion Switches	64
DLP™ Cardioplegia Management Set	65
DLP™ Antegrade / Retrograde	65
DLP™ Multiple Perfusion Sets	66

DLP™ Perfusion Adapters

These adapters feature a barbed connector on one end and either a male luer or female luer on the other. Some models have a length of tubing between the barbed connector and luers.



2 in (5.1 cm) overall length

Male luer	
10007	¼ in (0.64 cm) barbed connector
10008	⅜ in (0.95 cm) barbed connector
40 per carton	



3.25 in (8.3 cm) overall length

Tubing and female luer	
10022	¼ in (0.64 cm) barbed connector
40 per carton	

DLP™ Perfusion/Venting Adapter

This adapter is a combination of perfusion adapter 10007 with an added high-flow stopcock that allows for venting. This 3-way stopcock has a large bore inner diameter and has female and male luers on the ends.



Male luer	
13002	
20 per carton	

Important Safety Information

Cardioplegia adapter devices are a combination of products that have their own indications, contraindications, precautions, warnings, and potential adverse events. Refer to those components individually. Cardioplegia adapter devices are not intended for use except as indicated. Use the lowest possible pressure to reduce risk of hemolysis or risk of vessel damage. Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures. For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

DLP™ Extension Line Adapters

These adapters feature soft (silicone-like) PVC tubing with or without a clamp and male and winged female luers on the ends.

10 in (25.4 cm) overall length

Male and winged female luers

11001	without clamp
-------	---------------

10 per carton

20 in (50.8 cm) overall length

Male and winged female luers

11001G	with clamp
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20 per carton



DLP™ Pressure Monitoring Extension Line Adapters

These adapters feature combinations of male and female luers on the ends.

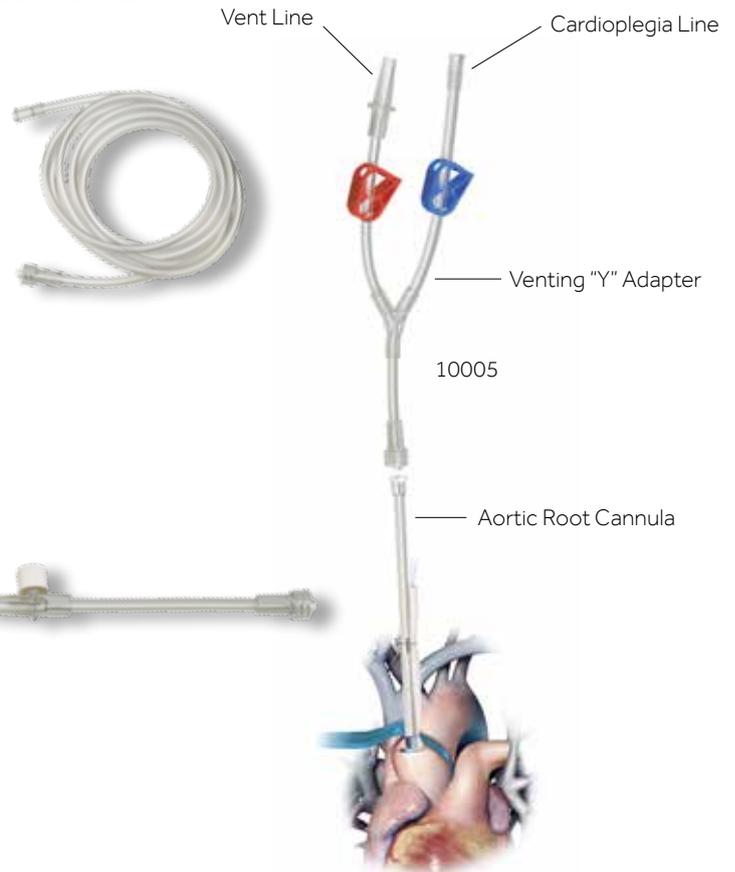
6 ft (1.8 m) overall length

Male and female luers

25009	male x female luers
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25010	male x male luers
-------	-------------------

20 per carton



DLP™ Straight Venting Adapters

These adapters have a male luer on one end and a ¼ in (0.64 cm) connector on the other.

5 in (12.7 cm) overall length

Male luers

10001	with vented ¼ in connector
-------	----------------------------

10001K	with vented ¼ in connector and clamp
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20 per carton



DLP™ "Y" Type Venting Adapters

These adapters feature a male luer on the single leg. A female luer is on the cardioplegia inlet leg and a ¼ in (0.64 cm) connector is on the venting leg.

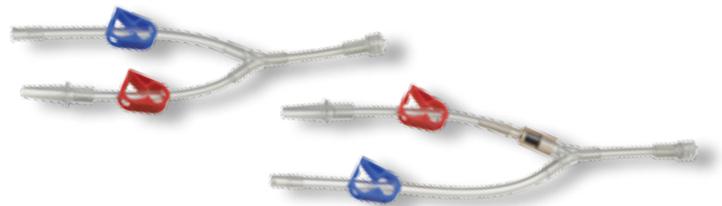
Male luer on single leg

10005*	7.5 in (19.1 cm) overall length with 3 in (7.6 cm) inlet leg and color coded clamps
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10533	15.5 in (39.2 cm) overall length with 11 in (28 cm) inlet leg and color coded clamps
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10534	8.5 in (21.6 cm) overall length with one-way valve in vent line and color coded clamps
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20 per carton



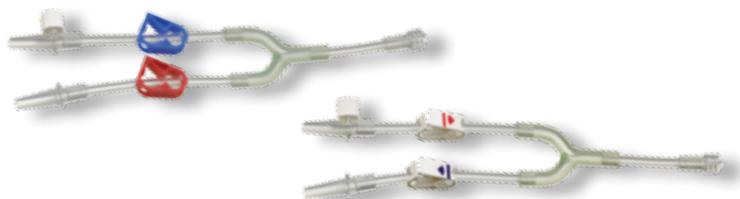
* When used with 10005 Venting "Y" Adapter an Aortic Root Cannula can be used to vent the left heart.

Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

DLP™ “Y” Type Recirculating Adapters

These adapters feature a soft “Y” that has a two leg option with ¼ in (0.64 cm) connectors and venting capabilities or a three leg option that terminates with male luers.



8 in (20.3 cm) overall length

Male luer on single leg

10003	color coded clamps
10003OS	white clamps with color coded arrows

20 per carton



14.5 in (36.8 cm) overall length

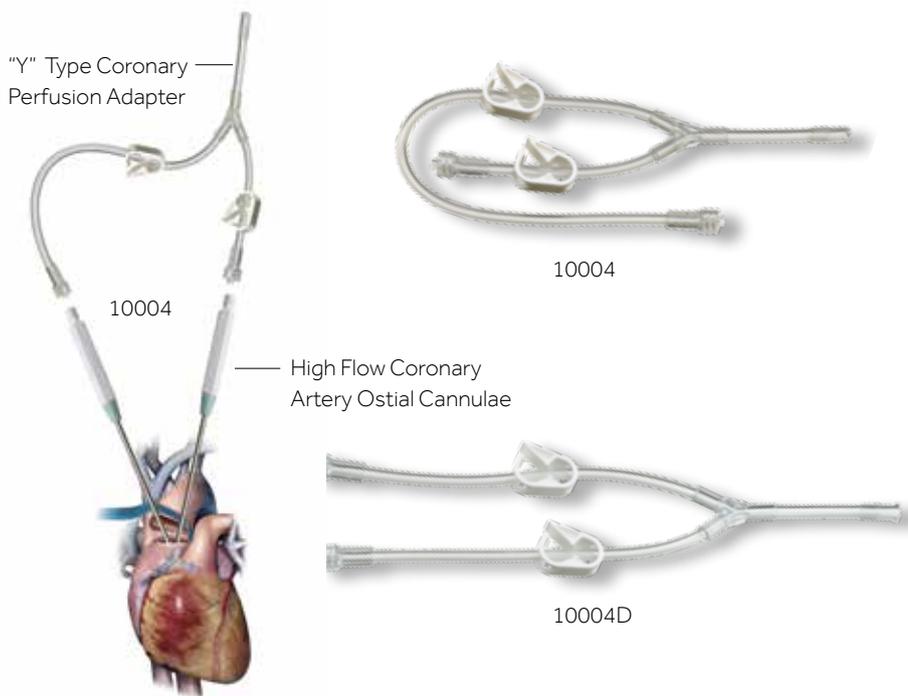
Female luer on single leg

10003S	white clamps with color coded arrows
--------	--------------------------------------

20 per carton

DLP™ “Y” Type Coronary Perfusion Adapters

These adapters feature a rigid “Y” with two legs in various lengths that terminate with male luers.



Female luer on single leg

10004	3.5 in (8.9 cm) and 10 in (25.4 cm) legs and white clamps
10004C	2 in (5.1 cm) and 10 in (25.4 cm) legs and white clamps
10004D	6 in (15.2 cm) legs and white clamps
10700	3.5 in (8.9 cm) and 10 in (25.4 cm) legs and color coded clamps
10706	6 in (15.2 cm) soft, silicone-like PVC legs and white clamps
10710	10 in (25.4 cm) soft, silicone-like PVC legs and white clamps

20 per carton

Important Safety Information

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DLP™ “Y” Type Special Adapter

This adapter features a rigid “Y” with four legs. One leg terminates in a male luer, one leg terminates in a ¼ in (0.64 cm) connector, and two legs terminate in soft silicone tips with graduated steps to fit any vessel.

19 in (48.3 cm) overall length

Female luer on single leg

10005S	white clamps
--------	--------------

10 per carton



DLP™ “Y” Type Adapter

This adapter is a combination of models 10004 and 10005 and features four legs. Two legs terminate in male luers, one terminates with a female luer, and the fourth terminates with a ¼ in (0.64 cm) connector.

20.5 in (52.1 cm) overall length

Combination with four legs

10005BH	color coded clamps
---------	--------------------

20 per carton



This adapter features a female luer on the cardioplegia inlet leg and a ¼ in (0.64 cm) connector on the venting leg.

7.5 in (19.1 cm) overall length

Male luer on single leg

10005OS	white clamps with color coded arrows
---------	--------------------------------------

20 per carton



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DLP™ Vein Graft Cannula

This product features a soft silicone tip with graduated steps to fit any vessel. The tip is attached to a "Y" adapter via tubing with clamps. The "Y" adapter terminates with a male luer.



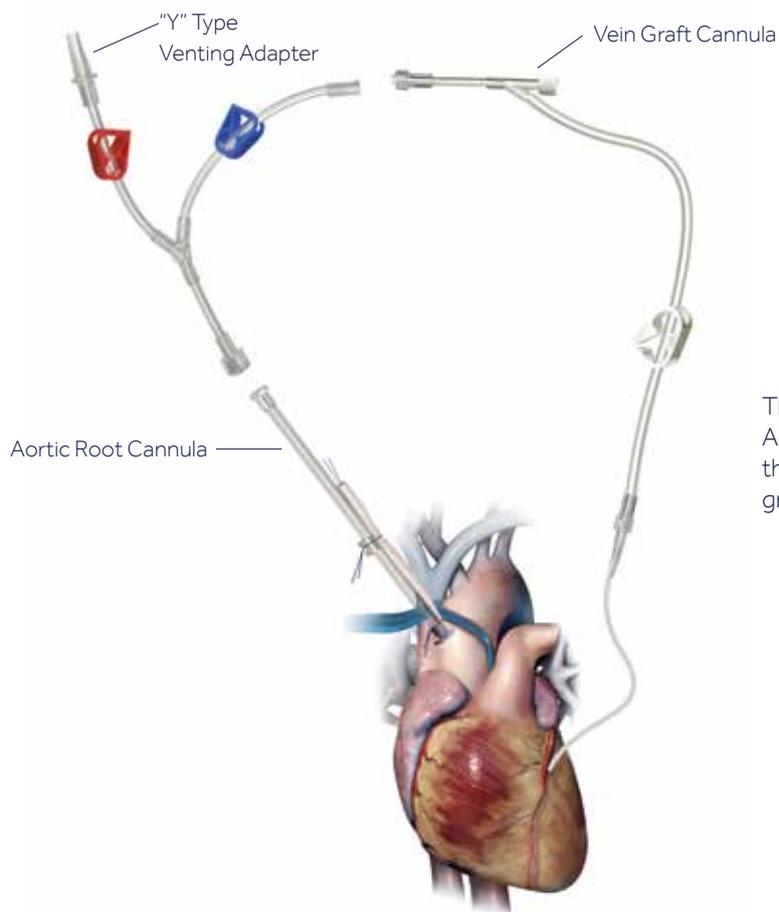
25.5 in (63.5 cm) overall length

Male luer on single inlet leg

10010

"Y" adapter with female luer and white clamp on male leg

20 per carton



The combination of a Vein Graft Cannula and an Aortic Root Cannula provides a way to perfuse the aortic root and vein graft. In this case the vein graft must be held with the fingers and not tied.

Important Safety Information

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Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

DLP™ Cardioplegia Adapter with Pressure Port

This adapter features a latex-free rubber septum to allow access for a pressure monitoring needle near the connection to the cardioplegia cannula.

Locking male luer

15004

10 per carton



ARISS™ Perfusion Switches

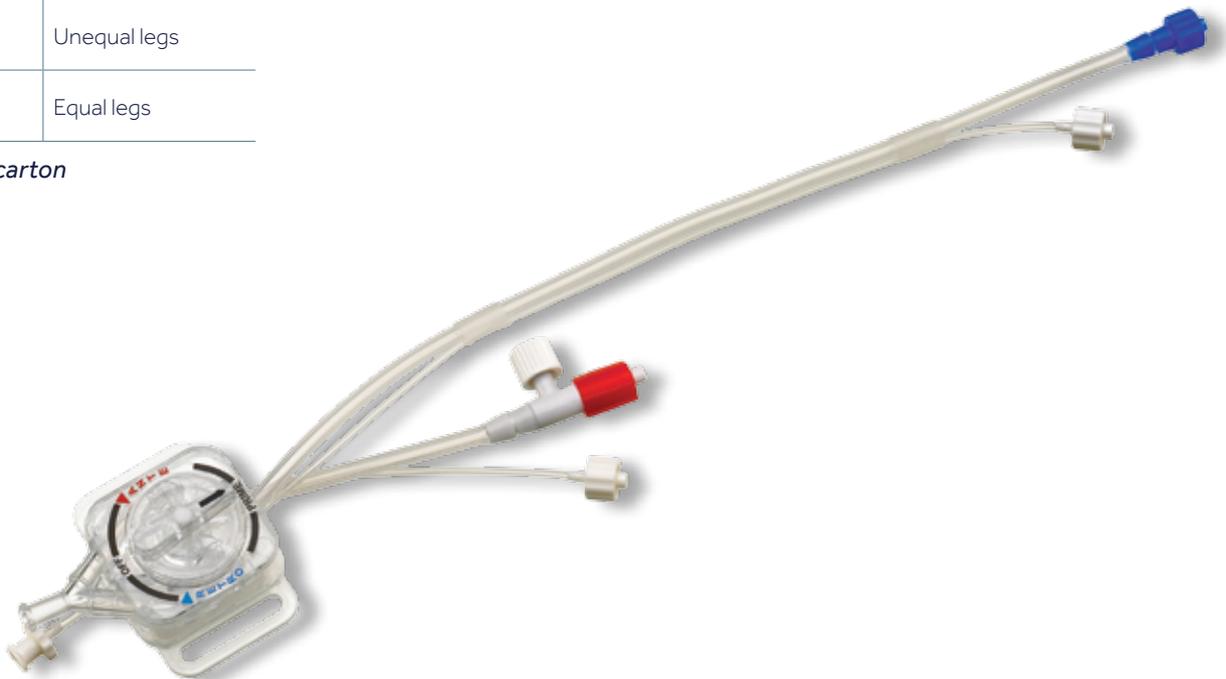
These table mount models allow the surgeon to switch between antegrade and retrograde cardioplegia delivery. These versions feature pressure monitoring lines that run alongside the inlet and outlet ports. The outlet ports are color coded for easy identification.

13 in (33.0 cm) overall length

Table mount models

13000	Unequal legs
13004	Equal legs

10 per carton



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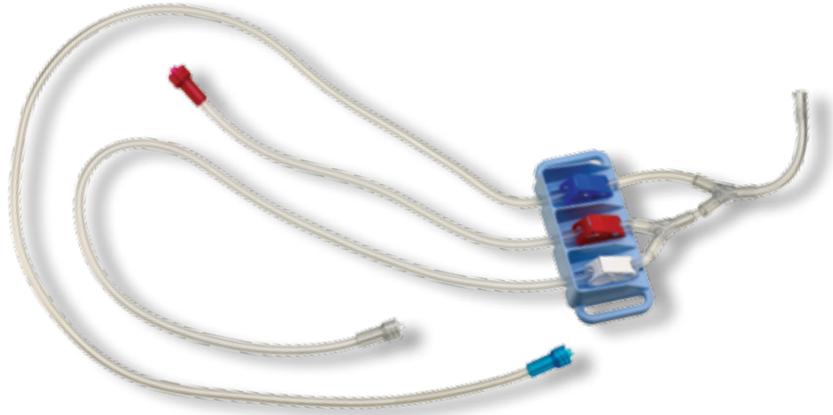
DLP™ Cardioplegia Management Set

This product features soft tubing with three legs that terminate in male luers. The legs have varying lengths and are set in a mounting bracket with adhesive pads on the back. The red clamp leg has a length of 10 in (25.4 cm), the white clamp leg has a length of 20 in (50.8 cm), and the blue clamp leg has a length of 30 in (76.2 cm).

Female luer on single leg

13003	color coded clamps
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5 per carton



DLP™ Antegrade/Retrograde Adapter

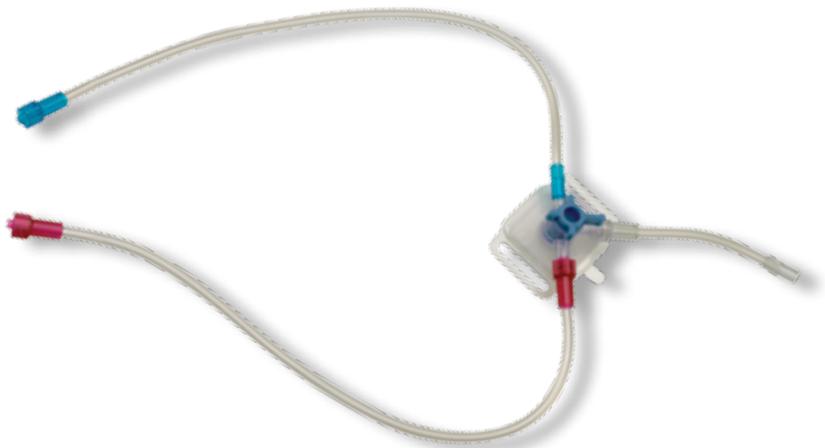
This adapter features a large bore 3-way stopcock and male luers on the outlet ports.

26.5 in (67.3 cm) overall length

Female luer on single leg

13001

10 per carton



Important Safety Information

For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use.

Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

DLP™ Multiple Perfusion Sets

These products allow for simultaneous perfusion of the aortic root and up to three or more vein grafts. They feature inlet ports with male or female luer and clamps attached to an adapter that splits into four or more legs. These legs have color coded clamps for easy identification and terminate with male luers. Models with a vent line terminate in a ¼ in (0.64 cm) connector.

12 in (30.5 cm) overall length

Female luer on single inlet leg with 4 legs

14002	4-3 in (7.6 cm) length legs with white clamps
-------	---

20 per carton

Female luer on single inlet leg with 4 legs

14003	4-8 in (20.3 cm) length legs with 3 red clamps and 1 blue clamp
-------	---

14013	4-10 in (25.4 cm) length legs with red, blue, yellow, and white clamps
-------	--

10 per carton

Male luer on single inlet leg with 4 legs

14014	4-10 in (25.4 cm) length legs with 3 red clamps and 1 blue clamp
-------	--

10 per carton



14000



14001

15 in (38.1 cm) overall length

Female luer on single inlet leg with 4 legs

14000	1-3 in (7.6 cm) length leg with blue clamp 3-10 in (25.4 cm) length legs with red clamps
-------	---

10 per carton

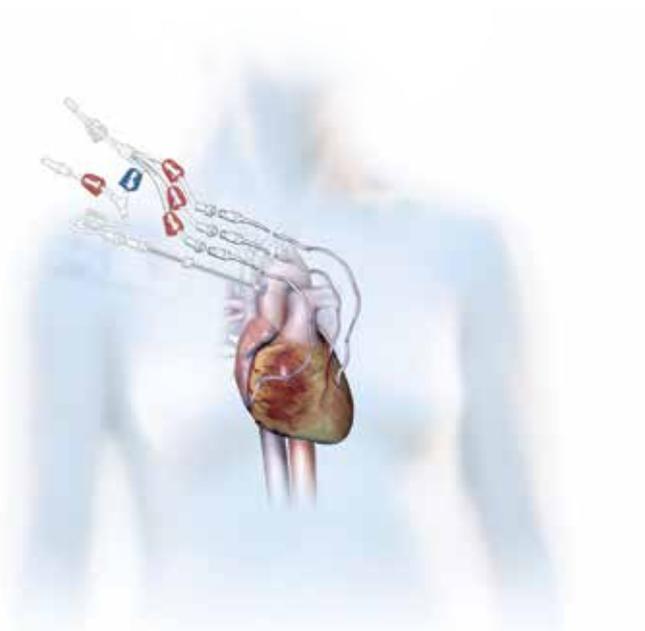
Female luer on single inlet leg with 4 legs and vent line

14001	1-8 in (20.3 cm) length vented leg with red clamp on vent line 3-10 in (25.4 cm) length legs with red clamps
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14017	1-8 in (20.3 cm) length vented leg with stiff tubing and red clamp on vent line 3-10 in (25.4 cm) lengths stiff tubing and red clamps
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14031	1-12 in (30.5 cm) length vented leg with yellow clamp on vent line 3-10 in (25.4 cm) length legs with red clamps
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10 per carton



Important Safety Information

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DLP™ Multiple Perfusion Sets

These products allow for simultaneous perfusion of the aortic root and up to three or more vein grafts. They feature inlet ports with male or female luers and clamps attached to an adapter that splits into four or more legs. These legs have color coded clamps for easy identification and terminate with male luers.



14007

15 in (38.1 cm) overall length

Female luer on single inlet leg with 4 legs and 3 free flow vessel cannulae (model 30003)

14007	1-3 in (7.6 cm) length leg with blue clamp
	3-10 in (25.4 cm) length legs with red clamps

10 per carton

Female luer on single inlet leg with 4 legs and 3 one-way valve vessel cannulae (model 30001)

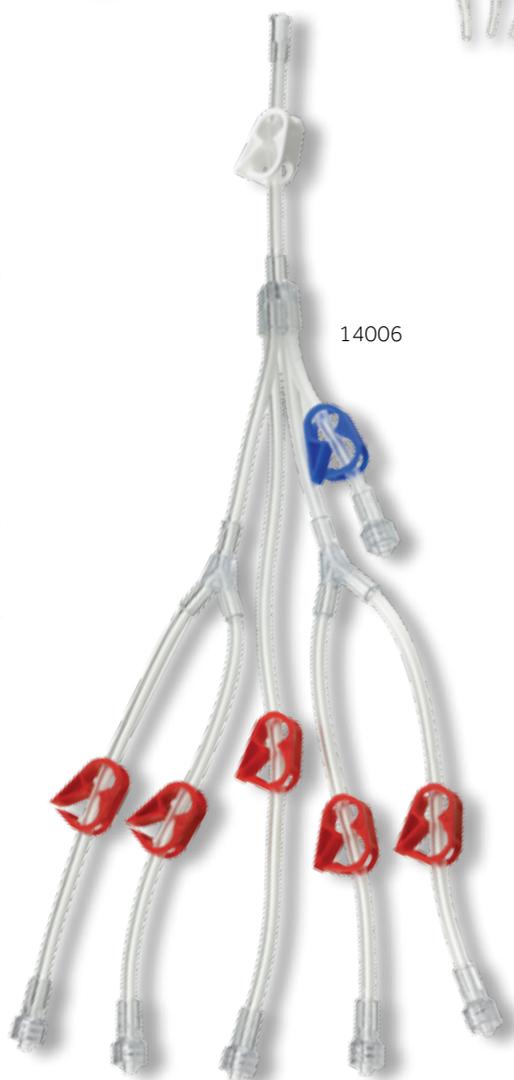
14008	1-3 in (7.6 cm) length leg with blue clamp
	3-10 in (25.4 cm) length legs with red clamps

10 per carton

Female luer on single inlet leg with 6 legs

14006	1-3 in (7.6 cm) length leg with blue clamp
	5-10 in (25.4 cm) length legs with red clamps

10 per carton



14006

Important Safety Information

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**SUCTION CIRCUIT
AND SURGICAL
ACCESSORIES
SURGICAL SUPPORT
CARDIO-KITS
AND PACKS**



FIND YOUR IDEAL **SUCTION CIRCUIT**

We offer suction products that are designed to provide either fine or gross suction to ensure a clear and dry surgical field. The Medtronic hand-held cardiac suction tubes are designed for fine suction, while our intracardiac suction tubes and sumps are intended to provide suction within and around the heart. The Medtronic left heart vent catheters are designed for indirect and direct venting of the left ventricle and feature perforated tips. These vents are offered in different lengths, introducer styles, and in both silicone and PVC body construction. Our product breadth ensures the availability of a cannula to meet your specific needs.

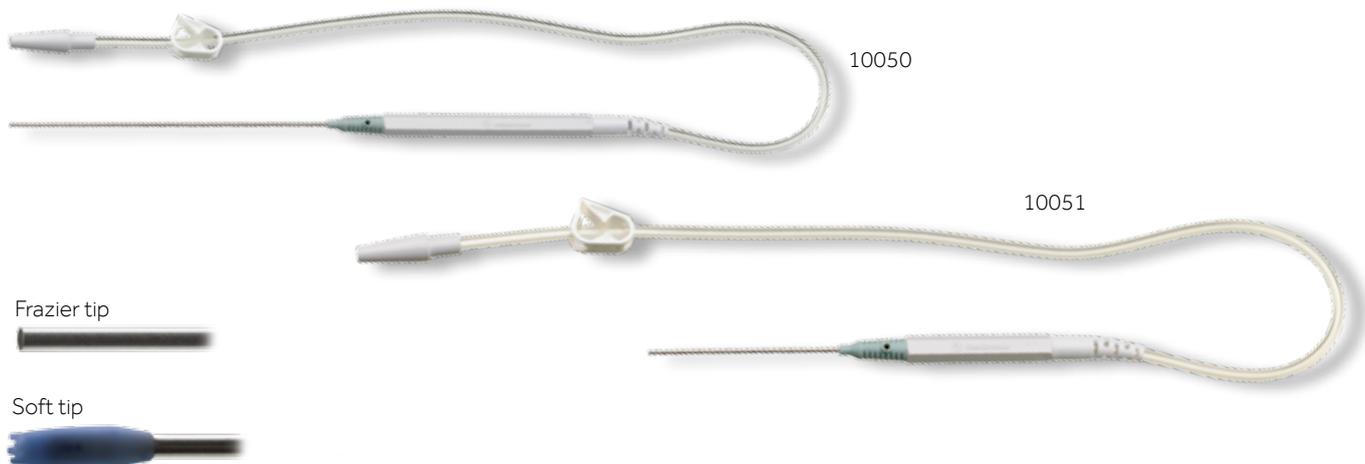


SUCTION CIRCUIT

DLP™ Cardiac Suction Tubes	71
DLP™ Intracardiac Suction Tube	71
DLP™ Rigid Suction Tubes	72
DLP™ Pericardial Sumps	73
DLP™ Pericardial / Intracardiac Sumps	73
DLP™ Intracardiac Sumps	73
DLP™ Pulmonary Artery Vent Cannula	74
DLP™ Aortic Air Aspirating Needle	74
DLP™ Left Heart Vent Catheters	75

DLP™ Cardiac Suction Tubes

These suction tubes feature comfortable hand grips with a vacuum control port. The tip shaft is made from a malleable stainless steel shaft which allows the surgeon to shape to a desired preference. Models are available with or without a soft silicone tip. All suction tubes are equipped with a length of tubing and clamp terminating with a ¼ in (0.64 cm) connector.



3 in (7.6 cm)

approx. shaft and tip length

Frazier tip

10051	6 Fr (2.0 mm) shaft
-------	---------------------

Soft tip

10053	6 Fr (2.0 mm) shaft with 10 Fr (3.3 mm) tip
-------	--

20 per carton

4.25 in (10.8 cm)

approx. shaft and tip length

Frazier tip

10054	10 Fr (3.3 mm) shaft
-------	----------------------

20 per carton

6 in (15.2 cm)

approx. shaft and tip length

Frazier tip

10050	6 Fr (2.0 mm) shaft
-------	---------------------

Soft tip

10052	6 Fr (2.0 mm) shaft with 10 Fr (3.3 mm) tip
-------	--

20 per carton

DLP™ Intracardiac Suction Tube

This suction tube features a comfortable hand grip. The tip shaft is made from a malleable stainless steel shaft which allows the surgeon to shape to a desired preference. The DLP Intracardiac Suction device offers a perforated pool tip to minimize the possibility of tissue occlusion while maintaining an opportunity for drainage. This suction tube is equipped with a length of tubing terminating with a ¼ in (0.64 cm) connector.



6 in (15.2 cm) overall length

Perforated pool tip

10060	10 Fr (3.3 mm) shaft with 20 Fr (6.7 mm) tip (28 holes in tip)
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20 per carton

Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures. For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

DLP™ Rigid Suction Tubes

These suction tubes feature a comfortable hand grip. The tip shaft is made from rigid stainless steel. The Macro Sucker offers a fluted pool tip to minimize the possibility of tissue occlusion while maintaining an opportunity for drainage. The Mini Sucker has a soft, vented tip designed to clear blood from the surgical site with gentle suction.



6 in (15.2 cm)
approx. shaft and tip length

Macro Sucker

10061	20 Fr (6.7 mm) tip with 16 Fr (5.3 mm) shaft
-------	--

20 per carton



4.75 in (12.1 cm)
approx. shaft and tip length

Mini Sucker

10062	9 Fr (3.0 mm) tip with 11 Fr (3.7 mm) shaft
-------	---

20 per carton



Important Safety Information

Neither the Model 10061 nor Model 10062 should be placed through the mitral valve. Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

DLP™ Pericardial Sumps

These sumps feature a fluted tip that is encased in a stainless steel spring and has a weight at the end. This tip is attached to soft flexible tubing terminating in a connector. The sumps are available in a variety of sizes.



15 in (38.1 cm) overall length

Weighted tip

12010	20 Fr (6.7 mm) ¼ in (0.64 cm) connector
12011	20 Fr (6.7 mm) ½ in (0.32 cm) connector

20 per carton

DLP™ Pericardial/Intracardiac Sumps

This sump features a weighted perforated pool tip to minimize the possibility of tissue occlusion while maintaining an opportunity for drainage. The perforated tip is attached to tubing that terminates with a ¼ in (0.64 cm) connector.



15 in (38.1 cm) overall length

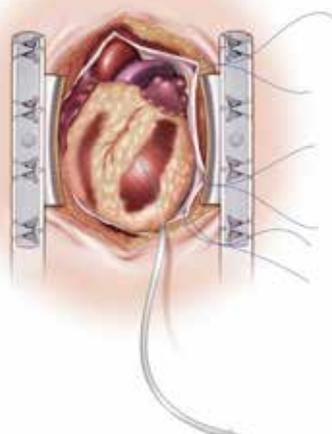
Weighted tip

12112	20 Fr (6.7 mm)
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20 per carton

DLP™ Intracardiac Sumps

These sumps feature a perforated pool tip to minimize the possibility of tissue occlusion while maintaining an opportunity for drainage. These sumps are available in pediatric and adult sizes. The perforated tip is attached to tubing that terminates with a ¼ in (0.64 cm) connector.



12 in (30.5 cm) overall length

12013	12 Fr (4.0 mm) (10 holes in tip)
-------	----------------------------------

20 per carton

15 in (38.1 cm) overall length

12012	20 Fr (6.7 mm) (28 holes in tip)
-------	----------------------------------

20 per carton



Important Safety Information

The Pericardial Sumps (models 12010 and 12011) are not intended to be placed through a valve to drain a closed cardiac chamber. For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

DLP™ Pulmonary Artery Vent Cannula

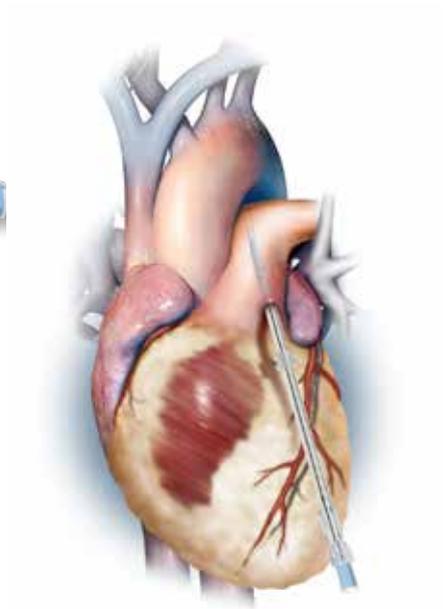
This cannula is used to empty the left atrium via the pulmonary vasculature. It features a soft, pliable tip and terminates with a female luer. An introducer needle is included for easy introduction and placement. A movable depth marker is included on the body of the cannula.



6 in (15.2 cm) overall length

12004	16 Fr (5.3 mm) (12 holes in tip)
-------	----------------------------------

20 per carton



DLP™ Aortic Air Aspirating Needle

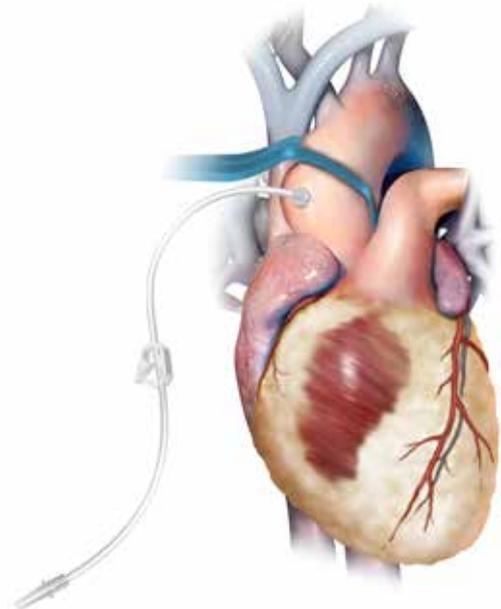
This needle features a stainless steel needle with two side slots and flange. The needle is attached to soft, flexible tubing with a clamp and terminates with a ¼ in (0.64 cm) connector. This product is used for aspirating air from the ascending aorta.



11.5 in (29.2 cm) overall length

12006	16 ga (5 Fr)
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20 per carton

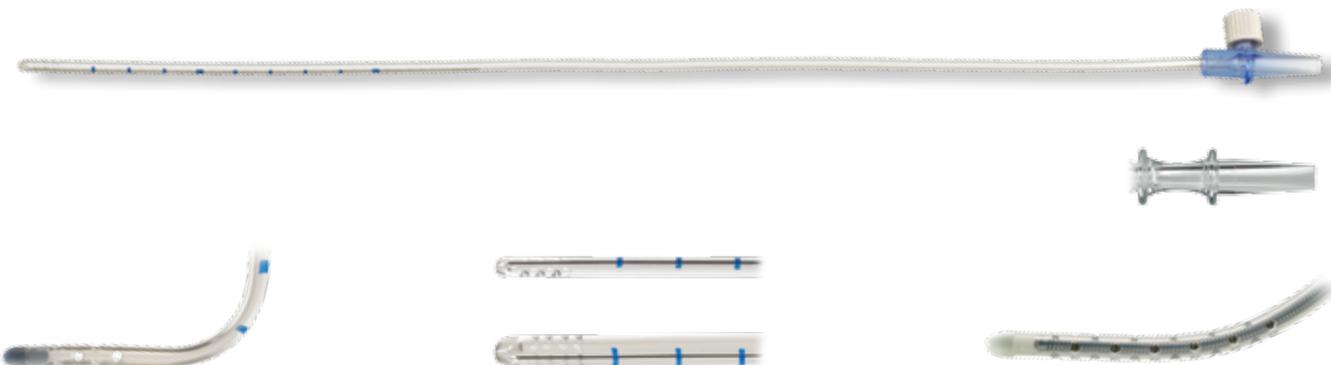


Important Safety Information

With DLP pulmonary artery vent cannulae, the degree of suction should be monitored to reduce the possibility of air embolism. Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

DLP™ Left Heart Vent Catheters

These vent catheters are for direct and indirect venting of the left ventricle and feature perforated tips. A choice of either PVC or silicone is available, along with straight, preformed, or malleable bodies with depth markings. These vents are available in pediatric and adult sizes. Straight body models come with a malleable or stiff guidewire style introducer for easy insertion and placement. All vent catheters terminate with a vented or non-vented ¼ in (0.64 cm) connector.



PVC 13 in (33.0 cm) overall length

Preformed 1.5 in (3.8 cm) tip and vented connector

12008	10 Fr (3.3 mm) (8 holes in tip)
-------	------------------------------------

20 per carton

Preformed 2 in (5.1 cm) tip and vented connector

12001	13 Fr (4.3 mm) (14 holes in tip)
-------	-------------------------------------

20 per carton

2 in (5.1 cm) tip, vented connector, and malleable introducer

12101	13 Fr (4.3 mm) (14 holes in tip)
-------	-------------------------------------

20 per carton

PVC 15 in (38.1 cm) overall length

Malleable body and vented connector

12110	10 Fr (3.3 mm) (9 holes in tip)
-------	------------------------------------

12113	13 Fr (4.3 mm) (9 holes in tip)
-------	------------------------------------

12115	15 Fr (5.0 mm) (20 holes in tip)
-------	-------------------------------------

20 per carton



PVC 15 in (38.1 cm) overall length

Malleable body and non-vented connector

12116	16 Fr (5.3 mm) (11 holes in tip)
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12118	18 Fr (6.0 mm) (11 holes in tip)
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20 per carton

Silicone 16 in (40.6 cm) overall length

Non-vented connector and malleable introducer

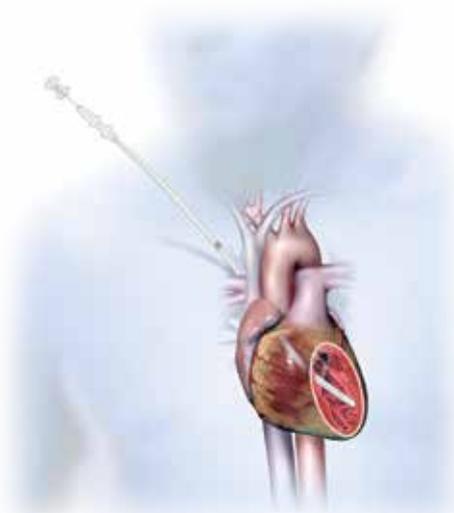
12016	16 Fr (5.3 mm) (20 holes in tip)
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12002	20 Fr (6.7 mm) (24 holes in tip)
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Non-vented connector and preformed introducer

12220	20 Fr (6.7 mm) (24 holes in tip)
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20 per carton



Important Safety Information

The degree of suction should be monitored to reduce the possibility of air embolism and over-distention of the left ventricle. For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

FIND YOUR IDEAL **SURGICAL SUPPORT**

Surgical support products are designed to provide timesaving techniques, ease of use — and to facilitate the remainder of the surgical procedure. We offer a wide range of products to ensure that your specific needs are met.

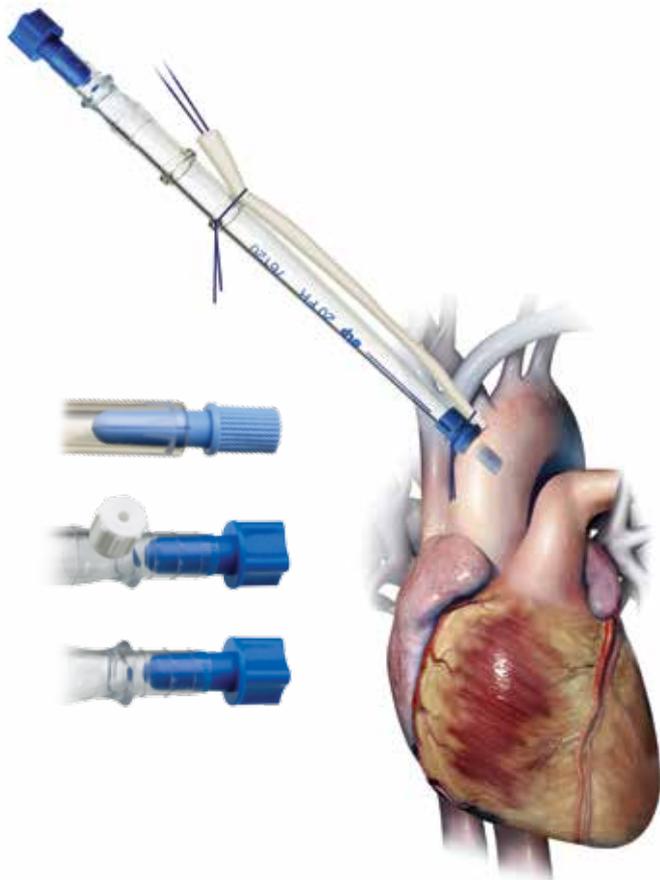


SURGICAL SUPPORT

DLP™ Arterial Vent Plugs	79
DLP™ Electro-Surgical Knife Cleaner	79
DLP™ Tourniquet Sets	80
TourniKwik™ Tourniquet Sets	81
Sure-Snare™ Tourniquet Sets	81
DLP™ Vessel Cannulae	82
DLP™ I.M.A. Cannula	82
DLP™ Arteriotomy Cannulae	83
DLP™ Pressure Sensing Syringes	83
DLP™ Phrenic Nerve Pads	84
DLP™ Cardiac Insulator	84
DLP™ Cardiac Sling	85
DLP™ Coronary Artery Retraction Clips.....	85
DLP™ Left Atrial Pressure Monitoring Catheter Placement Sets	86
DLP™ IV-Decanters	87
DLP™ Rapid Prime Sets	87
Pressure Display Box.....	88
DLP™ Disposable Pressure Display Sets	88

DLP™ Arterial Vent Plugs

These plugs are designed to fit into the connection site and/or connectors found on the arterial cannulae listed in this catalog. A slotted vent plug is designed for use with cannulae without connectors, while the porous vent plug is designed to work with cannulae with connectors.



79001



79002

Slotted plugs

79001	¼ in (0.64 cm)
79002	⅜ in (0.95 cm)

40 per carton



Porous plugs

79000	⅜ in (0.95 cm)
-------	----------------

40 per carton

DLP™ Electro-Surgical Knife Cleaner

This device keeps electro-surgical knife blades clean with a quick swipe. It features a stainless steel spring attached to a plastic base, which has a self-adhesive pad. This allows the device to be placed at the most convenient site for the surgeon.



2.5 in (6.4 cm) overall length

60001

40 per carton

Important Safety Information

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DLP™ Tourniquet Sets

These tourniquet sets consist of color coded tubes in varying lengths and color combinations. They are available for pediatric and adult uses. Wire snares are included with the tube sets.

Standard sets

Tube length of 4 in (10.2 cm) and 6 in (15.2 cm)

79016	12 Fr [3 - 4 in (10.2 cm) bronze, 3 - 6 in (15.2 cm) bronze, 2 - snares]
-------	--

40 sets per carton



79016

Tube length of 5.5 in (14.0 cm)

79003	12 Fr (1 - red, 2 - blue, 3 - clear, 1 - snare)
-------	---

79015	12 Fr (1 - red, 2 - blue, 5 - clear, 2 - snares)
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40 sets per carton



79003

Tube length of 7 in (17.8 cm)

79004	12 Fr (1 - red, 1 - blue, 1 - snare)
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79006	12 Fr (1 - red, 1 - blue, 3 - clear, 1 - snare)
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79019	12 Fr (1 - white radiopaque, 1 - looped snare)
-------	--

40 sets per carton



79022

79022	12 Fr (6 - small O.D. white radiopaque, 1 - snare)
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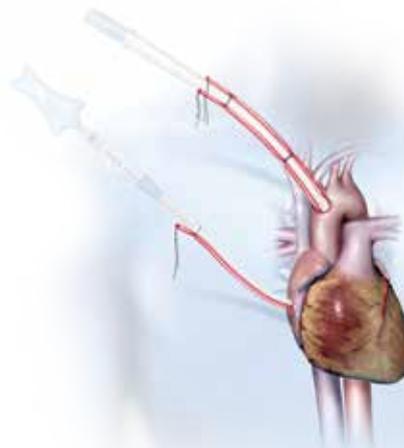
79023	19 Fr (3 - large O.D. white radiopaque, 1 - snare)
-------	--

20 sets per carton

79026	12 Fr (2 - red, 2 - blue, 2 - clear) and 16 Fr (2 - large O.D. clear, 1 - snare)
-------	--

79027	12 Fr (2 - red, 1 - blue, 1 - snare)
-------	--------------------------------------

40 sets per carton



Vena Cava sets

Tube length of 7 in (17.8 cm)

79005	12 Fr (3 - clear, 1 - snare)
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79009	12 Fr (4 - clear, 1 - snare)
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40 sets per carton



79005

Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

TourniKwik™ Tourniquet Sets

These tourniquet sets consist of bronze colored tubes in varying lengths that have a quick tie cap attached to one end. These caps eliminate the use of clamps by wrapping the suture string around the cap. Wire snares are included with each set of tubes.

Tube length of 6 in (15.2 cm)	
79010	12 Fr (2 - tubes, 1 - snare)
79011	12 Fr (4 - tubes, 1 - snare)
40 sets per carton	

Tube length of 7.5 in (19.1 cm)	
79012	12 Fr (2 - tubes, 1 - snare)
79013	12 Fr (4 - tubes, 1 - snare)
40 sets per carton	



Sure-Snare™ Tourniquet Sets

These tourniquet sets consist of bronze colored tubes in varying lengths that have a plug attached to one end. These plugs eliminate the use of clamps by pushing the plug into the tube end where the suture string exits.

Tube length of 5 in (12.7 cm)	
79020	22 Fr (2 - tubes, 2 - umbilical tapes, 2 - plastic snares)
20 sets per carton	



Tube length of 7.5 in (19.1 cm)	
79008	12 Fr (2 - tubes, 1 - wire snare)
20 sets per carton	



Important Safety Information

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DLP™ Vessel Cannulae

These cannulae feature clear and radiopaque bodies and are available with or without a one-way valve. All the cannulae terminate with a female luer and have tips in various sizes and shapes.



2 in (5.1 cm) overall length

Clear body

30003	3 mm blunt tip
30004	2 mm blunt tip
30005	4 mm acorn tip
30007	3 mm beveled tip

40 per carton

2 in (5.1 cm) overall length

Clear body with radiopaque band

30022	3 mm blunt tip
-------	----------------

20 per carton

2 in (5.1 cm) overall length

Radiopaque body

30006	3 mm beveled tip
30023	3 mm blunt tip

40 per carton



2.5 in (6.4 cm) overall length

Clear body with one-way valve

30000	3 mm beveled tip
30001	3 mm blunt tip

40 per carton

2.5 in (6.4 cm) overall length

Radiopaque body with one-way valve

30021	3 mm blunt tip
-------	----------------

40 per carton

DLP™ I.M.A. Cannula

This cannula features a stainless steel shaft with a bulb-shaped tip terminating with a female luer.

1.8 in (4.6 cm) overall length

31001	1 mm tip
-------	----------

20 per carton



Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

DLP™ Arteriotomy Cannulae

These cannulae feature a polyurethane tube with a bulb-shaped radiopaque tip connected to a winged female luer.

1.3 in (3.3 cm) overall length

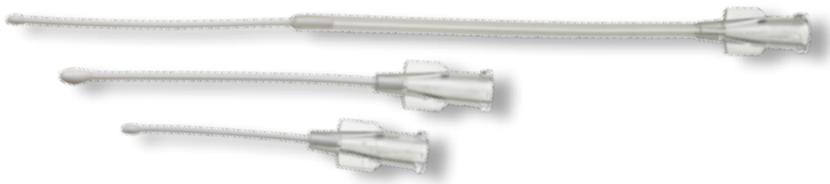
31002	2 mm tip
31003	3 mm tip
<i>20 per carton</i>	

2.3 in (5.8 cm) overall length

31102	2 mm tip
31103	3 mm tip
31104	4 mm tip
31105	5 mm tip
31106	6 mm tip
<i>20 per carton</i>	

6.3 in (16.0 cm) overall length

31202	2 mm tip
31203	3 mm tip
31204	4 mm tip
<i>20 per carton</i>	



DLP™ Pressure Sensing Syringes

These syringes have a predetermined pressure setting and a 30 cc volume. The plungers give tactile feedback upon reaching the predetermined pressure. All syringes have a male luer at the tip.



Pre-set pressure point

65000	240 mmHg
65125	125 mmHg
<i>10 per carton</i>	

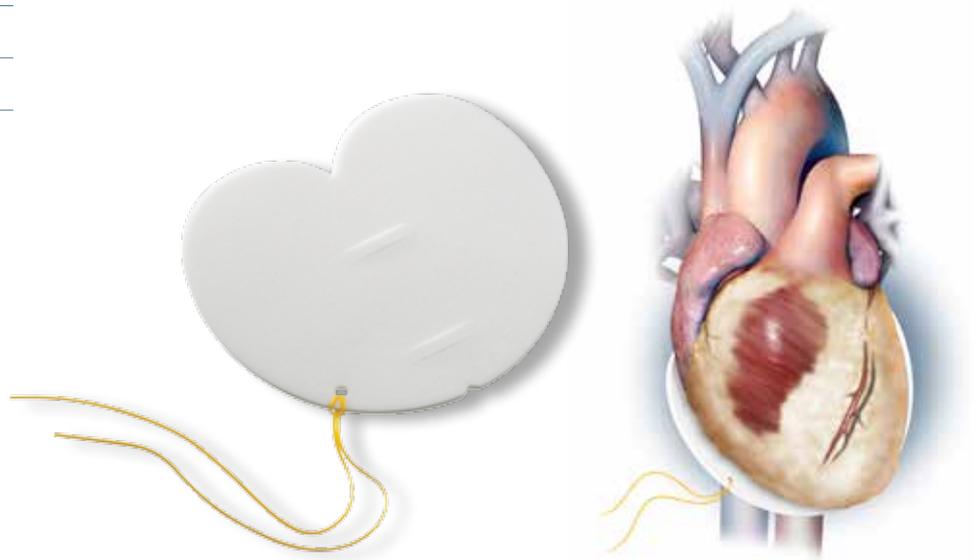
Important Safety Information

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DLP™ Phrenic Nerve Pads

These pads are designed to help protect the phrenic nerve from the extreme cold during surgery. They are made of a closed-cell foam and contain slots. These slots can hold a pericardial sump in place. A radiopaque marker is tied to the pad.

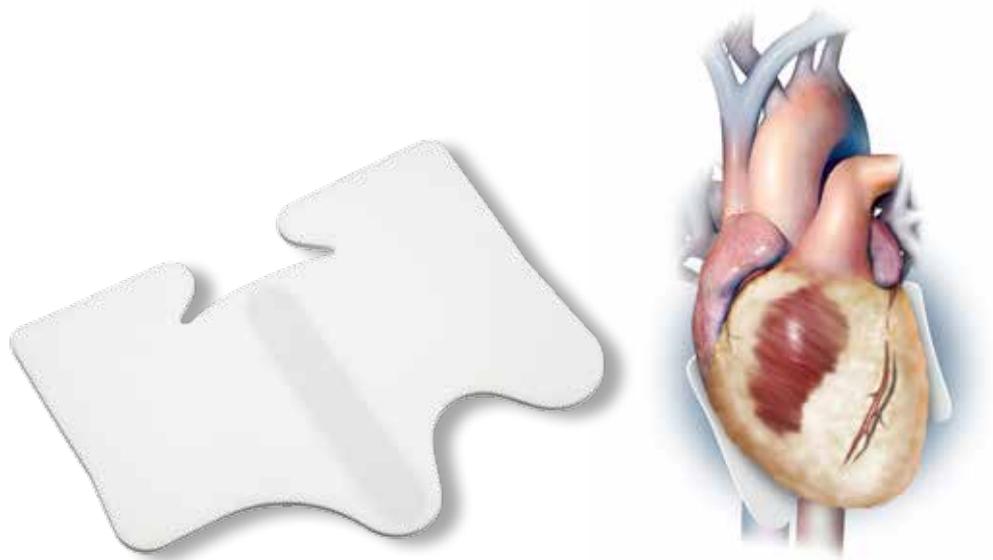
38002	Medium
38003	Large
10 per carton	



DLP™ Cardiac Insulator

This insulator is designed to protect the heart against heat transfer. This product features a malleable closed-cell foam that conforms to the desired shape.

38202	Medium
10 per carton	



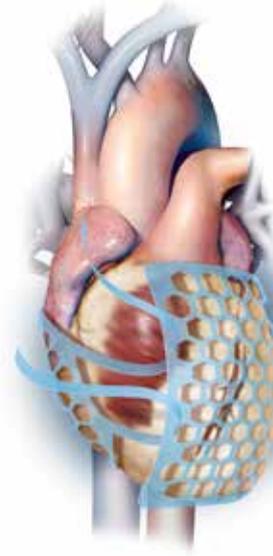
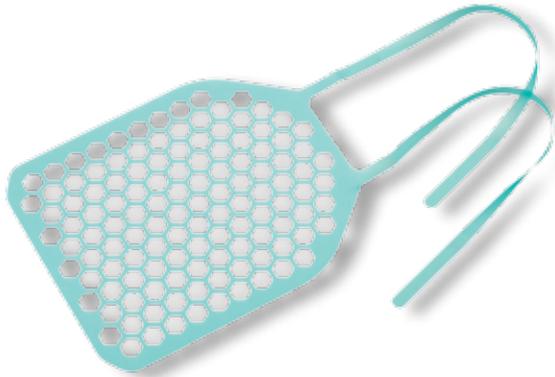
Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

DLP™ Cardiac Sling

This sling is designed to support the heart and improve exposure. It reduces the need for additional assistants during the anastomosis of the circumflex vessels.

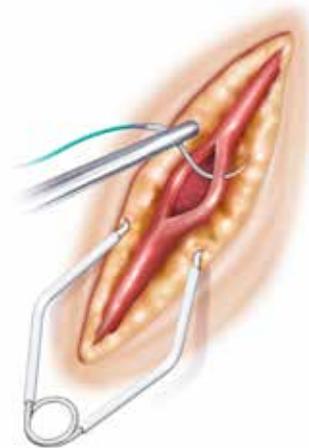
39000	Cardiac Sling
10 per carton	



DLP™ Coronary Artery Retraction Clips

These clips are designed to help improve exposure to a coronary anastomosis site. Small prongs grab and gently hold tissue away from the vessel to improve vision.

16130	3.0 mm prong length
16150	5.0 mm prong length
10 per carton	



Important Safety Information

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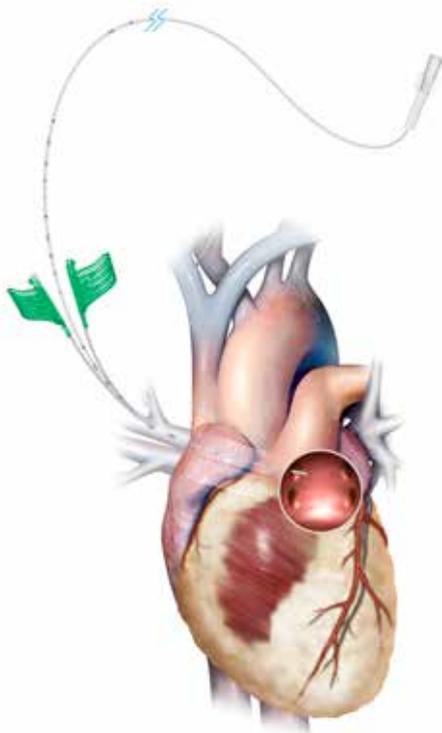
DLP™ Left Atrial Pressure Monitoring Catheter Placement Sets

These sets are an ideal option for measuring cardiac performance postoperatively. The catheters measure left atrial pressure in real time to accurately display critical pre-load pressures of the left heart. The catheter tubing has depth markings and is attached to a female luer. There is a self adhesive anchoring collar for securing the catheter at the desired location.



24 in (61.0 cm) overall length

50010	3 Fr (1.0 mm) catheter with 2 - 17 ga peel away needles
50011	5 Fr (1.7 mm) catheter with 2 - 14 ga peel away needles
10 per carton	



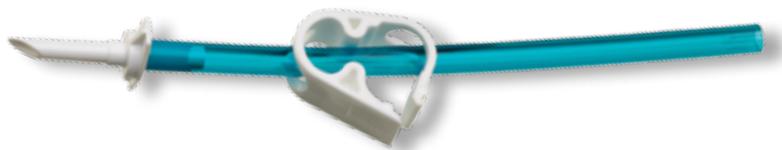
Catheter models 50010 and 50011 are inserted through the chest wall and into the right superior pulmonary vein using two peel away needles. The peel away needles permit catheter insertion through the chest wall and pulmonary vein without utilizing an integral introducer.

Important Safety Information

Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

DLP™ IV-Decanters

These decanters include several features to facilitate aseptic decanting of fluids from intravenous containers. They include large bore spikes attached to rigid or flexible tubing. Some decanters have clamps, thereby eliminating spillage and reducing contamination.



8.5 in (21.6 cm) overall length

40040	Flexible tubing and clamp
40045	Rigid tubing
<i>20 per carton</i>	

DLP™ Rapid Prime Sets

These sets facilitate the transfer of fluids during the priming of the circuit. They feature large bore spikes attached to flexible tubing with a clamp, and terminate with either an open end tube or a male luer.

14 in (35.6 cm) overall length

With male luer
10021
<i>10 per carton</i>

16 in (40.6 cm) overall length

With open end tube
10023
<i>10 per carton</i>



Important Safety Information

For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

Pressure Display Box

The Pressure Display Box is ideal for monitoring line pressures in the extracorporeal and cardioplegia delivery circuits along with a variety of other sites where real time pressure readouts are critical.

Features include:

- Large easy-to-read display
- Variable alarm settings (high or low)
- Protective guards on switches
- Readouts in systolic, diastolic, or mean pressures
- Zero functions
- Compact size
- Pole mount clamp
- Battery operated
- Integral alarm with warning light and mute switch
- Uses disposable Pressure Display Sets



66000

1 per carton

DLP™ Disposable Pressure Display Sets

These display sets are for use with the Pressure Display Boxes. They feature a silicone diaphragm inside a plastic dome with a stopcock that attaches to the transducer fitting on the Pressure Display Box. This dome is attached to a coil of tubing that terminates with either a male luer or a stopcock for convenient handling.



45 in (1.14 m) overall length

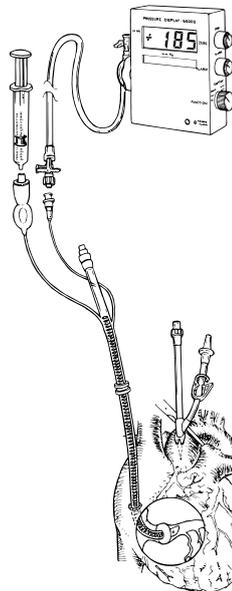
61000	Stopcock
62000	Male luer

10 per carton

72 in (1.83 m) overall length

61006	Stopcock
62006	Male luer

5 per carton



Important Safety Information

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FIND YOUR IDEAL **CARDIO-KITS AND PACKS**

The Medtronic Cardio-Kit is designed for you. Medtronic understands that each surgeon and cardiopulmonary circuit are unique, and we offer you the ability to customize a Cardio-Kit of Medtronic Cannulae to your specifications. The Cardio-Kit provides simplified packaging, procedure efficiency, and a streamlined ordering process designed to meet your specific needs.



CARDIO-KITS AND PACKS

DLP™ Cardio-Kits 91

DLP™ Cardioplegia Pack 91

DLP™ Cardio-Kits

Instead of ordering all your products separately, have a custom kit made specifically for you. Medtronic Cardio-Kits contain invaluable tools for surgeons, nurses, and purchasing teams.

Built to Your Specification

This enables the surgical team to choose the Medtronic DLP Cannulae they prefer.

Simplified Packaging

Keeps products neatly organized and reduces unnecessary waste of multiple product pouches.

Easy to Order

Instead of ordering multiple product codes separately, only one code is ordered and stocked.

Easy to Use

All Medtronic DLP products are placed on the surgical field at one time and ready to use.

Personalized Tray and Label

The products you need are in one package with a label that we'll personalize with the surgeon's name, procedure being performed, or other title of your choice.

5 kits/packs per carton



DLP™ Cardioplegia Pack



Pack Information

11440

1 each 10014 DLP Aortic Root Cannula

1 each 14001 DLP Multiple Perfusion Set

3 each 30003 DLP Vessel Cannulae

10 per carton

Important Safety Information

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APPENDIX

PRODUCTS APPENDIX





Product Code Index

10001	DLPTM Straight Venting Adapters	60
10001K	DLPTM Straight Venting Adapters	60
10003	DLPTM "Y" Type Recirculating Adapters	61
10003OS	DLPTM "Y" Type Recirculating Adapters	61
10003S	DLPTM "Y" Type Recirculating Adapters	61
10004	DLPTM "Y" Type Coronary Perfusion Adapters	61
10004C	DLPTM "Y" Type Coronary Perfusion Adapters	61
10004D	DLPTM "Y" Type Coronary Perfusion Adapters	61
10005	DLPTM "Y" Type Venting Adapters.....	60
10005BH	DLPTM "Y" Type Adapters.....	62
10005OS	DLPTM "Y" Type Adapters.....	62
10005S	DLPTM "Y" Type Special Adapters.....	62
10007	DLPTM Perfusion Adapters, ¼ in (0.64 cm) barbed connector	59
10008	DLPTM Perfusion Adapters, ⅜ in (0.95 cm) barbed connector	59
10009	DLPTM Aortic Root Cannulae, 9 ga (11 Fr).....	42
10010	DLPTM Vein Graft Cannula.....	63
10012	DLPTM Aortic Root Cannulae, 12 ga (9 Fr).....	42
10014	DLPTM Aortic Root Cannulae, 14 ga (7 Fr).....	42
10016	DLPTM Aortic Root Cannulae, 16 ga (5 Fr).....	42
10018	DLPTM Aortic Root Cannulae, 18 ga (4 Fr).....	42
10021	DLPTM Rapid Prime Sets	87
10022	DLPTM Perfusion Adapters, ¼ in (0.64 cm) barbed connector	59
10023	DLPTM Rapid Prime Sets	87
10050	DLPTM Cardiac Suction Tubes, 6 Fr (2.0 mm)	71
10051	DLPTM Cardiac Suction Tubes, 6 Fr (2.0 mm)	71
10052	DLPTM Cardiac Suction Tubes, 6 Fr (2.0 mm)	71
10053	DLPTM Cardiac Suction Tubes, 6 Fr (2.0 mm)	71
10054	DLPTM Cardiac Suction Tubes, 10 Fr (3.3 mm)	71
10060	DLPTM Intracardiac Suction Tube, 10 Fr (3.3 mm)	71
10061	DLPTM Rigid Suction Tubes, Macro Sucker, 20 Fr (6.7 mm)	72
10062	DLPTM Rigid Suction Tubes, Mini Sucker, 9 Fr (3.0 mm).....	72
10112	DLPTM Aortic Root Cannulae, 12 ga (9 Fr).....	42
10112WF	DLPTM Aortic Root Cannulae, 12 ga (9 Fr).....	42
10114	DLPTM Aortic Root Cannulae, 14 ga (7 Fr).....	42
10114B	DLPTM Aortic Root Cannulae, 14 ga (7 Fr).....	42
10114WF	DLPTM Aortic Root Cannulae, 14 ga (7 Fr).....	42
10218	DLPTM Aortic Root Cannulae, 18 ga (4 Fr).....	42
10313	DLPTM Cardioplegia Needles, 13 ga (8 Fr)	44
10533	DLPTM "Y" Type Venting Adapters.....	60
10534	DLPTM "Y" Type Venting Adapters.....	60
10700	DLPTM "Y" Type Coronary Perfusion Adapters	61
10706	DLPTM "Y" Type Coronary Perfusion Adapters	61
10710	DLPTM "Y" Type Coronary Perfusion Adapters	61

11001	DLPTM Extension Line Adapters, 10 in (25.4 cm) length	60
11001G	DLPTM Extension Line Adapters, 20 in (50.8 cm) length	60
11012	DLPTM Aortic Root Cannulae, 12 ga (9 Fr).....	42
11012L	MiARTM Cannulae, 12 ga (9 Fr)	41
11014	DLPTM Aortic Root Cannulae, 14 ga (7 Fr).....	42
11014L	MiARTM Cannulae, 14 ga (7 Fr)	41
11316	DLPTM Cardioplegia Needles, 16 ga (5 Fr).....	44
11440	DLPTM Cardioplegia Pack.....	91
12001	DLPTM Left Heart Vent Catheters, 13 Fr (4.3 mm)	75
12002	DLPTM Left Heart Vent Catheters, 20 Fr (6.7 mm)	75
12004	DLPTM Pulmonary Artery Vent Cannulae, 16 Fr (5.3 mm)	74
12006	DLPTM Aortic Air Aspirating Needle, 16 ga (5 Fr)	74
12008	DLPTM Left Heart Vent Catheters, 10 Fr (3.3 mm)	75
12010	DLPTM Pericardial Sumps, ¼ in (0.64 cm) connector	73
12011	DLPTM Pericardial Sumps, ⅜ in (0.32 cm) connector	73
12012	DLPTM Intracardiac Sumps, 20 Fr (6.7 mm)	73
12013	DLPTM Intracardiac Sumps, 12 Fr (4.0 mm)	73
12016	DLPTM Left Heart Vent Catheters, 16 Fr (5.3 mm)	75
12101	DLPTM Left Heart Vent Catheters, 13 Fr (4.3 mm)	75
12110	DLPTM Left Heart Vent Catheters, 10 Fr (3.3 mm)	75
12112	DLPTM Pericardial/Intracardiac Sumps, 20 Fr (4.0 mm)	73
12113	DLPTM Left Heart Vent Catheters, 13 Fr (4.3 mm)	75
12115	DLPTM Left Heart Vent Catheters, 15 Fr (5.0 mm)	75
12116	DLPTM Left Heart Vent Catheters, 16 Fr (5.3 mm)	75
12118	DLPTM Left Heart Vent Catheters, 18 Fr (6.0 mm)	75
12218	DLPTM Aortic Root Cannulae, 18 ga (4 Fr).....	42
12220	DLPTM Left Heart Vent Catheters, 20 Fr (6.7 mm)	75
13000	ARISSTM Perfusion Switches	64
13001	DLPTM Antegrade/Retrograde Adapter	65
13002	DLPTM Perfusion/Venting Adapter.....	59
13003	DLPTM Cardioplegia Management Set	65
13004	ARISSTM Perfusion Switches	64
14000	DLPTM Multiple Perfusion Sets	66
14001	DLPTM Multiple Perfusion Sets	66
14002	DLPTM Multiple Perfusion Sets	66
14003	DLPTM Multiple Perfusion Sets	66
14006	DLPTM Multiple Perfusion Sets	67
14007	DLPTM Multiple Perfusion Sets	67
14008	DLPTM Multiple Perfusion Sets	67
14013	DLPTM Multiple Perfusion Sets	66
14014	DLPTM Multiple Perfusion Sets	66
14017	DLPTM Multiple Perfusion Sets	66
14031	DLPTM Multiple Perfusion Sets	66
15004	DLPTM Cardioplegia Adapter with Pressure Port	64
16130	DLPTM Coronary Artery Retraction Clips	85

16150	DLPTM Coronary Artery Retraction Clips	85
20009	DLPTM Aortic Root Cannulae with Vent Line, 9 ga (11 Fr).....	43
20012	DLPTM Aortic Root Cannulae with Vent Line, 12 ga (9 Fr)	43
20012S	DLPTM Aortic Root Cannulae with Vent Line, 12 ga (9 Fr)	43
20014	DLPTM Aortic Root Cannulae with Vent Line, 14 ga (7 Fr)	43
20014L	DLPTM Aortic Root Cannulae with Vent Line, 14 ga (7 Fr)	43
20016	DLPTM Aortic Root Cannulae with Vent Line, 16 ga (5 Fr)	43
20112	DLPTM Aortic Root Cannulae with Vent Line, 12 ga (9 Fr)	43
20112B	DLPTM Aortic Root Cannulae with Vent Line, 12 ga (9 Fr)	43
20114	DLPTM Aortic Root Cannulae with Vent Line, 14 ga (7 Fr)	43
20114B	DLPTM Aortic Root Cannulae with Vent Line, 14 ga (7 Fr)	43
20114HWF	DLPTM Aortic Root Cannulae with Vent Line, 14 ga (7 Fr)	43
20114WF	DLPTM Aortic Root Cannulae with Vent Line, 14 ga (7 Fr)	43
21012	DLPTM Aortic Root Cannulae with Vent Line, 12 ga (9 Fr)	43
21014	DLPTM Aortic Root Cannulae with Vent Line, 14 ga (7 Fr)	43
23009	DLPTM Aortic Root Cannulae, 9 ga (11 Fr).....	42
24009	DLPTM Aortic Root Cannulae with Vent Line, 9 ga (11 Fr).....	43
25009	DLPTM Pressure Monitoring Extension Line Adapters.....	60
25010	DLPTM Pressure Monitoring Extension Line Adapters.....	60
30000	DLPTM Vessel Cannulae, 3 mm beveled tip	82
30001	DLPTM Vessel Cannulae, 3 mm blunt tip.....	82
30003	DLPTM Vessel Cannulae, 3 mm blunt tip.....	82
30004	DLPTM Vessel Cannulae, 2 mm blunt tip.....	82
30005	DLPTM Vessel Cannulae, 4 mm acorn tip.....	82
30006	DLPTM Vessel Cannulae, 3 mm beveled tip	82
30007	DLPTM Vessel Cannulae, 3 mm beveled tip	82
30010	DLPTM Coronary Artery Ostial Cannulae, 10 Fr (3.3 mm)	45
30011	DLPTM Coronary Artery Ostial Cannulae.....	45
30012	DLPTM Coronary Artery Ostial Cannulae, 12 Fr (4.0 mm)	45
30014	DLPTM Coronary Artery Ostial Cannulae, 14 Fr (4.7 mm)	45
30021	DLPTM Vessel Cannulae, 3 mm blunt tip.....	82
30022	DLPTM Vessel Cannulae, 3 mm blunt tip.....	82
30023	DLPTM Vessel Cannulae, 3 mm blunt tip.....	82
30050	DLPTM Coronary Artery Ostial Cannulae.....	45
30055	DLPTM Coronary Artery Ostial Cannulae.....	45
30110	DLPTM High Flow Coronary Artery Ostial Cannulae, 10 Fr (3.3 mm)	46
30112	DLPTM High Flow Coronary Artery Ostial Cannulae, 12 Fr (4.0 mm).....	46
30114	DLPTM High Flow Coronary Artery Ostial Cannulae, 14 Fr (4.7 mm).....	46
30155	DLPTM High Flow Coronary Artery Ostial Cannulae, 10 Fr (3.3 mm)	46
30212	DLPTM High Flow Coronary Artery Ostial Cannulae, 12 Fr (4.0 mm).....	46
30255	DLPTM High Flow Coronary Artery Ostial Cannulae, 10 Fr (3.3 mm)	46
30315	DLPTM Silicone Coronary Artery Ostial Cannulae, 15 Fr (5.0 mm).....	44
30317	DLPTM Silicone Coronary Artery Ostial Cannulae, 17 Fr (5.7 mm)	44
30320	DLPTM Silicone Coronary Artery Ostial Cannulae, 20 Fr (6.7 mm)	44
30401	DLPTM Dual Lumen Aortic Root Cannulae with Vent Line, 12 ga (9 Fr)	41

30402	DLP™ Dual Lumen Aortic Root Cannulae with Vent Line, 12 ga (9 Fr)	41
31001	DLP™ I.M.A. Cannulae, 1 mm tip	82
31002	DLP™ Arteriotomy Cannulae, 2 mm tip	83
31003	DLP™ Arteriotomy Cannulae, 3 mm tip	83
31102	DLP™ Arteriotomy Cannulae, 2 mm tip	83
31103	DLP™ Arteriotomy Cannulae, 3 mm tip	83
31104	DLP™ Arteriotomy Cannulae, 4 mm tip	83
31105	DLP™ Arteriotomy Cannulae, 5 mm tip	83
31106	DLP™ Arteriotomy Cannulae, 6 mm tip	83
31202	DLP™ Arteriotomy Cannulae, 2 mm tip	83
31203	DLP™ Arteriotomy Cannulae, 3 mm tip	83
31204	DLP™ Arteriotomy Cannulae, 4 mm tip	83
38002	DLP™ Phrenic Nerve Pads	84
38003	DLP™ Phrenic Nerve Pads	84
38202	DLP™ Cardiac Insulator	84
39000	DLP™ Cardiac Sling	85
40040	DLP™ IV-Decanters	87
40045	DLP™ IV-Decanters	87
50010	DLP™ Left Atrial Pressure Monitoring Catheter Placement Sets, 3 Fr (1.0 mm).....	86
50011	DLP™ Left Atrial Pressure Monitoring Catheter Placement Sets, 5 Fr (1.7 mm).....	86
57414	DLP™ Femoral Arterial Cannulae, 14 Fr (4.7 mm)	27
57417	DLP™ Femoral Arterial Cannulae, 17 Fr (5.7 mm)	27
57421	DLP™ Femoral Arterial Cannulae, 21 Fr (7.0 mm)	27
57517	DLP™ Femoral Arterial Cannulae, 17 Fr (5.7 mm)	27
57521	DLP™ Femoral Arterial Cannulae, 21 Fr (7.0 mm)	27
58517	DLP™ Femoral Venous Cannulae, 17 Fr (5.7 mm)	26
58521	DLP™ Femoral Venous Cannulae, 21 Fr (7.0 mm)	26
58629	Carpentier Bi-Caval Femoral Venous Cannulae, 24/29 Fr (8.0/9.7 mm).....	25
58633	Carpentier Bi-Caval Femoral Venous Cannulae, 30/33 Fr (10.0/11.0 mm)	25
58729	Carpentier Bi-Caval Femoral Venous Cannulae, 24/29 Fr (8.0/9.7 mm).....	25
58733	Carpentier Bi-Caval Femoral Venous Cannulae, 30/33 Fr (10.0/11.0 mm).....	25
60001	DLP™ Electro-Surgical Knife Cleaner	79
61000	DLP™ Disposable Pressure Display Sets	88
61006	DLP™ Disposable Pressure Display Sets	88
62000	DLP™ Disposable Pressure Display Sets	88
62006	DLP™ Disposable Pressure Display Sets	88
65000	DLP™ Pressure Sensing Syringes, 240 mmHg pre-set.....	83
65125	DLP™ Pressure Sensing Syringes, 125 mmHg pre-set.....	83
66000	Pressure Display Box	88
66112	DLP™ Single Stage Venous Cannulae, 12 Fr (4.0 mm)	32
66114	DLP™ Single Stage Venous Cannulae, 14 Fr. (4.7 mm)	32
66116	DLP™ Single Stage Venous Cannulae, 16 Fr (5.3 mm)	32
66118	DLP™ Single Stage Venous Cannulae, 18 Fr (6.0 mm)	32
66120	DLP™ Single Stage Venous Cannulae, 20 Fr (6.7 mm)	32
66122	DLP™ Single Stage Venous Cannulae, 22 Fr (7.3 mm).....	32

66124	DLP™ Single Stage Venous Cannulae, 24 Fr (8.0 mm)	32
66126	DLP™ Single Stage Venous Cannulae, 26 Fr (8.7 mm)	32
66128	DLP™ Single Stage Venous Cannulae, 28 Fr (9.3 mm)	32
66130	DLP™ Single Stage Venous Cannulae, 30 Fr (10.0 mm)	32
66132	DLP™ Single Stage Venous Cannulae, 32 Fr (10.7 mm).....	32
66134	DLP™ Single Stage Venous Cannulae, 34 Fr (11.3 mm)	32
66136	DLP™ Single Stage Venous Cannulae, 36 Fr (12.0 mm)	32
66140	DLP™ Single Stage Venous Cannulae, 40 Fr (13.3 mm)	32
66236	DLP™ Single Stage Venous Cannulae, 36 Fr (12.0 mm)	32
66238	DLP™ Single Stage Venous Cannulae, 38 Fr (12.7 mm)	32
66240	DLP™ Single Stage Venous Cannulae, 40 Fr (13.3 mm)	32
67312	DLP™ Single Stage Venous Cannulae with Right Angle Metal Tip, 12 Fr (4.0 mm)	31
67314	DLP™ Single Stage Venous Cannulae with Right Angle Metal Tip, 14 Fr (4.7 mm)	31
67316	DLP™ Single Stage Venous Cannulae with Right Angle Metal Tip, 16 Fr (5.3 mm)	31
67318	DLP™ Single Stage Venous Cannulae with Right Angle Metal Tip, 18 Fr (6.0 mm)	31
67320	DLP™ Single Stage Venous Cannulae with Right Angle Metal Tip, 20 Fr (6.7 mm)	31
67512	DLP™ Right Angle Single Stage Venous Cannulae, 12 Fr (4.0 mm)	33
67514	DLP™ Right Angle Single Stage Venous Cannulae, 14 Fr (4.7 mm)	33
67516	DLP™ Right Angle Single Stage Venous Cannulae, 16 Fr (5.3 mm)	33
67518	DLP™ Right Angle Single Stage Venous Cannulae, 18 Fr (6.0 mm)	33
67520	DLP™ Right Angle Single Stage Venous Cannulae, 20 Fr (6.7 mm)	33
67522	DLP™ Right Angle Single Stage Venous Cannulae, 22 Fr (7.3 mm)	33
67524	DLP™ Right Angle Single Stage Venous Cannulae, 24 Fr (8.0 mm)	33
67526	DLP™ Right Angle Single Stage Venous Cannulae, 26 Fr (8.7 mm)	33
67528	DLP™ Right Angle Single Stage Venous Cannulae, 28 Fr (9.3 mm)	33
67530	DLP™ Right Angle Single Stage Venous Cannulae, 30 Fr (10.0 mm)	33
67532	DLP™ Right Angle Single Stage Venous Cannulae, 32 Fr (10.7 mm)	33
67534	DLP™ Right Angle Single Stage Venous Cannulae, 34 Fr (11.3 mm)	33
67536	DLP™ Right Angle Single Stage Venous Cannulae, 36 Fr (12.0 mm)	33
67540	DLP™ Right Angle Single Stage Venous Cannulae, 40 Fr (13.3 mm)	33
67636	DLP™ Right Angle Single Stage Venous Cannulae, 36 Fr (12.0 mm)	33
67638	DLP™ Right Angle Single Stage Venous Cannulae, 38 Fr (12.7 mm)	33
67640	DLP™ Right Angle Single Stage Venous Cannulae, 40 Fr (13.3 mm)	33
68112	DLP™ Malleable Single Stage Venous Cannulae, 12 Fr (4.0 mm)	34
68114	DLP™ Malleable Single Stage Venous Cannulae, 14 Fr (4.7 mm).....	34
68116	DLP™ Malleable Single Stage Venous Cannulae, 16 Fr (5.3 mm)	34
68118	DLP™ Malleable Single Stage Venous Cannulae, 18 Fr (6.0 mm)	34
68120	DLP™ Malleable Single Stage Venous Cannulae, 20 Fr (6.7 mm)	34
68122	DLP™ Malleable Single Stage Venous Cannulae, 22 Fr (7.3 mm).....	34
68124	DLP™ Malleable Single Stage Venous Cannulae, 24 Fr (8.0 mm)	34
68126	DLP™ Malleable Single Stage Venous Cannulae, 26 Fr (8.7 mm)	34
68128	DLP™ Malleable Single Stage Venous Cannulae, 28 Fr (9.3 mm)	34
68130	DLP™ Malleable Single Stage Venous Cannulae, 30 Fr (10.0 mm)	34
68132	DLP™ Malleable Single Stage Venous Cannulae, 32 Fr (10.7 mm).....	34
68134	DLP™ Malleable Single Stage Venous Cannulae, 34 Fr (11.3 mm)	34

68136	DLP™ Malleable Single Stage Venous Cannulae, 36 Fr (12.0 mm)	34
68138	DLP™ Malleable Single Stage Venous Cannulae, 38 Fr (12.7 mm)	34
68140	DLP™ Malleable Single Stage Venous Cannulae, 40 Fr (13.3 mm)	34
69312	DLP™ Single Stage Venous Cannulae with Right Angle Metal Tip, 12 Fr (4.0 mm)	31
69314	DLP™ Single Stage Venous Cannulae with Right Angle Metal Tip, 14 Fr (4.7 mm)	31
69316	DLP™ Single Stage Venous Cannulae with Right Angle Metal Tip, 16 Fr (5.3 mm)	31
69318	DLP™ Single Stage Venous Cannulae with Right Angle Metal Tip, 18 Fr (6.0 mm)	31
69320	DLP™ Single Stage Venous Cannulae with Right Angle Metal Tip, 20 Fr (6.7 mm)	31
69322	DLP™ Single Stage Venous Cannulae with Right Angle Metal Tip, 22 Fr (7.3 mm)	31
69324	DLP™ Single Stage Venous Cannulae with Right Angle Metal Tip, 24 Fr (8.0 mm)	31
69328	DLP™ Single Stage Venous Cannulae with Right Angle Metal Tip, 28 Fr (9.3 mm)	31
69331	DLP™ Single Stage Venous Cannulae with Right Angle Metal Tip, 31 Fr (10.3 mm)	31
69424	DLP™ Single Stage Venous Cannulae with Right Angle Metal Tip, 24 Fr (8.0 mm)	31
69428	DLP™ Single Stage Venous Cannulae with Right Angle Metal Tip, 28 Fr (9.3 mm)	31
69431	DLP™ Single Stage Venous Cannulae with Right Angle Metal Tip, 31 Fr (10.3 mm)	31
70016	DLP™ Straight Tip Arterial Cannulae, 16 Fr (5.3 mm) clear tip	8
70420	DLP™ Flexible Arch Arterial Cannulae, 20 Fr (6.7 mm)	9
70422	DLP™ Flexible Arch Arterial Cannulae, 22 Fr (7.3 mm)	9
70424	DLP™ Flexible Arch Arterial Cannulae, 24 Fr (8.0 mm)	9
71420	DLP™ Flexible Arch Arterial Cannulae, 20 Fr (6.7 mm)	9
71422	DLP™ Flexible Arch Arterial Cannulae, 22 Fr (7.3 mm)	9
71424	DLP™ Flexible Arch Arterial Cannulae, 24 Fr (8.0 mm)	9
72120	Select Series™ Straight Tip Arterial Cannulae, 20 Fr (6.7 mm)	9
72122	Select Series™ Straight Tip Arterial Cannulae, 22 Fr (7.3 mm)	9
72124	Select Series™ Straight Tip Arterial Cannulae, 24 Fr (8.0 mm)	9
72220	Select Series™ Straight Tip Arterial Cannulae, 20 Fr (6.7 mm)	9
72222	Select Series™ Straight Tip Arterial Cannulae, 22 Fr (7.3 mm)	9
72224	Select Series™ Straight Tip Arterial Cannulae, 24 Fr (8.0 mm)	9
72420	Select Series™ Angled Tip Arterial Cannulae, 20 Fr (6.7 mm)	10
72422	Select Series™ Angled Tip Arterial Cannulae, 22 Fr (7.3 mm)	10
72424	Select Series™ Angled Tip Arterial Cannulae, 24 Fr (8.0 mm)	10
72520	Select Series™ Angled Tip Arterial Cannulae, 20 Fr (6.7 mm)	10
72522	Select Series™ Angled Tip Arterial Cannulae, 22 Fr (7.3 mm)	10
72524	Select Series™ Angled Tip Arterial Cannulae, 24 Fr (8.0 mm)	10
73016	DLP™ Straight Tip Arterial Cannulae, 16 Fr (5.3 mm) clear tip	8
73420	Select Series™ Angled Tip Arterial Cannulae, 20 Fr (6.7 mm)	10
73422	Select Series™ Angled Tip Arterial Cannulae, 22 Fr (7.3 mm)	10
73424	Select Series™ Angled Tip Arterial Cannulae, 24 Fr (8.0 mm)	10
73520	Select Series™ Angled Tip Arterial Cannulae, 20 Fr (6.7 mm)	10
73522	Select Series™ Angled Tip Arterial Cannulae, 22 Fr (7.3 mm)	10
73524	Select Series™ Angled Tip Arterial Cannulae, 24 Fr (8.0 mm)	10
75008	DLP™ Straight Tip Arterial Cannulae, 8 Fr (2.7 mm)	8
75010	DLP™ Straight Tip Arterial Cannulae, 10 Fr (3.3 mm)	8
75012	DLP™ Straight Tip Arterial Cannulae, 12 Fr (4.0 mm)	8
75014	DLP™ Straight Tip Arterial Cannulae, 14 Fr (4.7 mm)	8

75318	DLP™ Straight Tip Arterial Cannulae, 18 Fr (6.0 mm)	8
75320	DLP™ Straight Tip Arterial Cannulae, 20 Fr (6.7 mm)	8
75322	DLP™ Straight Tip Arterial Cannulae, 22 Fr (7.3 mm)	8
75324	DLP™ Straight Tip Arterial Cannulae, 24 Fr (8.0 mm)	8
76020	DLP™ Straight Tip Arterial Cannulae, 20 Fr (6.7 mm)	8
76022	DLP™ Straight Tip Arterial Cannulae, 22 Fr (7.3 mm)	8
76024	DLP™ Straight Tip Arterial Cannulae, 24 Fr (8.0 mm)	8
76118	DLP™ Straight Tip Arterial Cannulae, 18 Fr (6.0 mm)	8
76120	DLP™ Straight Tip Arterial Cannulae, 20 Fr (6.7 mm)	8
76122	DLP™ Straight Tip Arterial Cannulae, 22 Fr (7.3 mm)	8
76124	DLP™ Straight Tip Arterial Cannulae, 24 Fr (8.0 mm)	8
77006	DLP™ Pediatric One-Piece Arterial Cannulae, 6 Fr (2.0 mm)	7
77008	DLP™ Pediatric One-Piece Arterial Cannulae, 8 Fr (2.7 mm)	7
77010	DLP™ Pediatric One-Piece Arterial Cannulae, 10 Fr (3.3 mm)	7
77012	DLP™ Pediatric One-Piece Arterial Cannulae, 12 Fr (4.0 mm)	7
77014	DLP™ Pediatric One-Piece Arterial Cannulae, 14 Fr (4.7 mm)	7
77016	DLP™ Pediatric One-Piece Arterial Cannulae, 16 Fr (5.3 mm)	7
77106	DLP™ Pediatric One-Piece Arterial Cannulae, 6 Fr (2.0 mm)	7
77108	DLP™ Pediatric One-Piece Arterial Cannulae, 8 Fr (2.7 mm)	7
77110	DLP™ Pediatric One-Piece Arterial Cannulae, 10 Fr (3.3 mm)	7
77112	DLP™ Pediatric One-Piece Arterial Cannulae, 12 Fr (4.0 mm)	7
77114	DLP™ Pediatric One-Piece Arterial Cannulae, 14 Fr (4.7 mm)	7
77116	DLP™ Pediatric One-Piece Arterial Cannulae, 16 Fr (5.3 mm)	7
77206	DLP™ Pediatric One-Piece Arterial Cannulae, 6 Fr (2.0 mm)	7
77208	DLP™ Pediatric One-Piece Arterial Cannulae, 8 Fr (2.7 mm)	7
77210	DLP™ Pediatric One-Piece Arterial Cannulae, 10 Fr (3.3 mm)	7
77212	DLP™ Pediatric One-Piece Arterial Cannulae, 12 Fr (4.0 mm)	7
77306	DLP™ Pediatric One-Piece Arterial Cannulae, 6 Fr (2.0 mm)	7
77308	DLP™ Pediatric One-Piece Arterial Cannulae, 8 Fr (2.7 mm)	7
77310	DLP™ Pediatric One-Piece Arterial Cannulae, 10 Fr (3.3 mm)	7
77312	DLP™ Pediatric One-Piece Arterial Cannulae, 12 Fr (4.0 mm)	7
77418	EOPA™ Arterial Cannulae, 18 Fr (6.0 mm)	6
77420	EOPA™ Arterial Cannulae, 20 Fr (6.7 mm)	6
77422	EOPA™ Arterial Cannulae, 22 Fr (7.3 mm)	6
77424	EOPA™ Arterial Cannulae, 24 Fr (8.0 mm)	6
77518	EOPA™ Arterial Cannulae, 18 Fr (6.0 mm)	6
77520	EOPA™ Arterial Cannulae, 20 Fr (6.7 mm)	6
77522	EOPA™ Arterial Cannulae, 22 Fr (7.3 mm)	6
77524	EOPA™ Arterial Cannulae, 24 Fr (8.0 mm)	6
77618	EOPA™ Arterial Cannulae, 18 Fr (6.0 mm)	6
77620	EOPA™ Arterial Cannulae, 20 Fr (6.7 mm)	6
77622	EOPA™ Arterial Cannulae, 22 Fr (7.3 mm)	6
77624	EOPA™ Arterial Cannulae, 24 Fr (8.0 mm)	6
77718	EOPA™ Arterial Cannulae, 18 Fr (6.0 mm)	6
77720	EOPA™ Arterial Cannulae, 20 Fr (6.7 mm)	6

77722	EOPA™ Arterial Cannulae, 22 Fr (7.3 mm)	6
77724	EOPA™ Arterial Cannulae, 24 Fr (8.0 mm)	6
77818	EOPA CAP™ Arterial Cannulae, 18 Fr (6.0 mm)	5
77820	EOPA CAP™ Arterial Cannulae, 20 Fr (6.7 mm)	5
77822	EOPA CAP™ Arterial Cannulae, 22 Fr (7.3 mm)	5
77918	EOPA CAP™ Arterial Cannulae, 18 Fr (6.0 mm)	5
77920	EOPA CAP™ Arterial Cannulae, 20 Fr (6.7 mm)	5
77922	EOPA CAP™ Arterial Cannulae, 22 Fr (7.3 mm)	5
78220	EOPA 3D™ Arterial Cannulae, 20 Fr (6.7 mm)	3
78222	EOPA 3D™ Arterial Cannulae, 22 Fr (7.3 mm)	3
78320	EOPA 3D™ Arterial Cannulae, 20 Fr (6.7 mm)	3
78322	EOPA 3D™ Arterial Cannulae, 22 Fr (7.3 mm)	3
78420	Select 3D™ II Arterial Cannulae, 20 Fr (6.7 mm)	4
78422	Select 3D™ II Arterial Cannulae, 22 Fr (7.3 mm)	4
78424	Select 3D™ II Arterial Cannulae, 24 Fr (8.0 mm)	4
78520	Select 3D™ II Arterial Cannulae, 20 Fr (6.7 mm)	4
78522	Select 3D™ II Arterial Cannulae, 22 Fr (7.3 mm)	4
78524	Select 3D™ II Arterial Cannulae, 24 Fr (8.0 mm)	4
79000	DLP™ Arterial Vent Plugs, ⅜ in (0.95 cm)	79
79001	DLP™ Arterial Vent Plugs, ¼ in (0.64 cm)	79
79002	DLP™ Arterial Vent Plugs, ⅜ in (0.95 cm)	79
79003	DLP™ Tourniquet Sets	80
79004	DLP™ Tourniquet Sets	80
79005	DLP™ Tourniquet Sets	80
79006	DLP™ Tourniquet Sets	80
79008	Sure-Snare™ Tourniquet Sets	81
79009	DLP™ Tourniquet Sets	80
79010	TourniKwik™ Tourniquet Sets	81
79011	TourniKwik™ Tourniquet Sets	81
79012	TourniKwik™ Tourniquet Sets	81
79013	TourniKwik™ Tourniquet Sets	81
79015	DLP™ Tourniquet Sets	80
79016	DLP™ Tourniquet Sets	80
79019	DLP™ Tourniquet Sets	80
79020	Sure-Snare™ Tourniquet Sets	81
79022	DLP™ Tourniquet Sets	80
79023	DLP™ Tourniquet Sets	80
79026	DLP™ Tourniquet Sets	80
79027	DLP™ Tourniquet Sets	80
80020	DLP™ Metal Tip Arterial Cannulae, 20 Fr (6.7 mm)	15
80022	DLP™ Metal Tip Arterial Cannulae, 22 Fr (7.3 mm)	15
80024	DLP™ Metal Tip Arterial Cannulae, 24 Fr (8.0 mm)	15
80120	DLP™ Metal Tip Arterial Cannulae, 20 Fr (6.7 mm)	15
80122	DLP™ Metal Tip Arterial Cannulae, 22 Fr (7.3 mm)	15
80124	DLP™ Metal Tip Arterial Cannulae, 24 Fr (8.0 mm)	15

80220	DLP™ Metal Tip Arterial Cannulae, 20 Fr (6.7 mm).....	15
80222	DLP™ Metal Tip Arterial Cannulae, 22 Fr (7.3 mm).....	15
80224	DLP™ Metal Tip Arterial Cannulae, 24 Fr (8.0 mm).....	15
80320	DLP™ Metal Tip Arterial Cannulae, 20 Fr (6.7 mm).....	15
80322	DLP™ Metal Tip Arterial Cannulae, 22 Fr (7.3 mm).....	15
80324	DLP™ Metal Tip Arterial Cannulae, 24 Fr (8.0 mm).....	15
81020	DLP™ Curved Tip Arterial Cannulae, 20 Fr (6.7 mm).....	14
81022	DLP™ Curved Tip Arterial Cannulae, 22 Fr (7.3 mm).....	14
81120	DLP™ Curved Tip Arterial Cannulae, 20 Fr (6.7 mm).....	14
81122	DLP™ Curved Tip Arterial Cannulae, 22 Fr (7.3 mm).....	14
82020	DLP™ Curved Tip Arterial Cannulae, 20 Fr (6.7 mm).....	14
82022	DLP™ Curved Tip Arterial Cannulae, 22 Fr (7.3 mm).....	14
82120	DLP™ Curved Tip Arterial Cannulae, 20 Fr (6.7 mm).....	14
82122	DLP™ Curved Tip Arterial Cannulae, 22 Fr (7.3 mm).....	14
83020	DLP™ Curved Tip Arterial Cannulae, 20 Fr (6.7 mm).....	13
83022	DLP™ Curved Tip Arterial Cannulae, 22 Fr (7.3 mm).....	13
83024	DLP™ Curved Tip Arterial Cannulae, 24 Fr (8.0 mm).....	13
84020	DLP™ Curved Tip Arterial Cannulae, 20 Fr (6.7 mm).....	13
84022	DLP™ Curved Tip Arterial Cannulae, 22 Fr (7.3 mm).....	13
84024	DLP™ Curved Tip Arterial Cannulae, 24 Fr (8.0 mm).....	13
87020	DLP™ Curved Tip Arterial Cannulae with Wirewound Body, 20 Fr (6.7 mm).....	12
87022	DLP™ Curved Tip Arterial Cannulae with Wirewound Body, 22 Fr (7.3 mm).....	12
87024	DLP™ Curved Tip Arterial Cannulae with Wirewound Body, 24 Fr (8.0 mm).....	12
87120	DLP™ Curved Tip Arterial Cannulae with One-Piece Wirewound Body, 20 Fr (6.7 mm).....	11
87122	DLP™ Curved Tip Arterial Cannulae with One-Piece Wirewound Body, 22 Fr (7.3 mm).....	11
87124	DLP™ Curved Tip Arterial Cannulae with One-Piece Wirewound Body, 24 Fr (8.0 mm).....	11
87220	DLP™ Curved Tip Arterial Cannulae with One-Piece Wirewound Body, 20 Fr (6.7 mm).....	11
87222	DLP™ Curved Tip Arterial Cannulae with One-Piece Wirewound Body, 22 Fr (7.3 mm).....	11
87224	DLP™ Curved Tip Arterial Cannulae with One-Piece Wirewound Body, 24 Fr (8.0 mm).....	11
87920	DLP™ Curved Tip Arterial Cannulae with Wirewound Body 20 Fr (6.7 mm).....	12
87922	DLP™ Curved Tip Arterial Cannulae with Wirewound Body 22 Fr (7.3 mm).....	12
87924	DLP™ Curved Tip Arterial Cannulae with Wirewound Body 24 Fr (8.0 mm).....	12
88020	DLP™ Curved Tip Arterial Cannulae 20 Fr (6.7 mm).....	13
88022	DLP™ Curved Tip Arterial Cannulae 22 Fr (7.3 mm).....	13
88024	DLP™ Curved Tip Arterial Cannulae 24 Fr (8.0 mm).....	13
88120	DLP™ Curved Tip Arterial Cannulae 20 Fr (6.7 mm).....	13
88122	DLP™ Curved Tip Arterial Cannulae 22 Fr (7.3 mm).....	13
88124	DLP™ Curved Tip Arterial Cannulae 24 Fr (8.0 mm).....	13
89020	DLP™ Curved Tip Arterial Cannulae 20 Fr (6.7 mm).....	13
89022	DLP™ Curved Tip Arterial Cannulae 22 Fr (7.3 mm).....	13
89024	DLP™ Curved Tip Arterial Cannulae 24 Fr (8.0 mm).....	13
89120	DLP™ Curved Tip Arterial Cannulae 20 Fr (6.7 mm).....	13
89122	DLP™ Curved Tip Arterial Cannulae 22 Fr (7.3 mm).....	13
89124	DLP™ Curved Tip Arterial Cannulae 24 Fr (8.0 mm).....	13
91037	DLP™ Silicone Single Stage Venous Cannulae with Inflatable Cuff, 37 Fr (12.3 mm).....	35

91228	MC2™ Two Stage Venous Cannulae, 28/36 Fr (9.3/12.0 mm)	37
91228C	MC2™ Two Stage Venous Cannulae, 28/36 Fr (9.3/12.0 mm)	37
91229	MC2™ Two Stage Venous Cannulae, 29/37 Fr (9.7/12.3 mm)	37
91229C	MC2™ Two Stage Venous Cannulae, 29/37 Fr (9.7/12.3 mm)	37
91236	MC2™ Two Stage Venous Cannulae, 36/46 Fr (12.0/15.3 mm)	37
91236C	MC2™ Two Stage Venous Cannulae, 36/46 Fr (12.0/15.3 mm)	37
91240	MC2™ Two Stage Venous Cannulae, 32/40 Fr (10.7/13.3 mm)	37
91240C	MC2™ Two Stage Venous Cannulae, 32/40 Fr (10.7/13.3 mm)	37
91246	MC2™ Two Stage Venous Cannulae, 34/46 Fr (11.3/15.3 mm)	37
91246C	MC2™ Two Stage Venous Cannulae, 34/46 Fr (11.3/15.3 mm)	37
91251	MC2™ Two Stage Venous Cannulae, 36/51 Fr (12.0/17.0 mm)	37
91251C	MC2™ Two Stage Venous Cannulae, 36/51 Fr (12.0/17.0 mm)	37
91263	MC2™ Two Stage Venous Cannulae, 32/40 Fr (10.7/13.3 mm)	37
91263C	MC2™ Two Stage Venous Cannulae, 32/40 Fr (10.7/13.3 mm)	37
91265	MC2™ Two Stage Venous Cannulae, 36/46 Fr (12.0/15.3 mm)	37
91265C	MC2™ Two Stage Venous Cannulae, 36/46 Fr (12.0/15.3 mm)	37
91329	MC2™ Two Stage Venous Cannulae, 29/29 Fr (9.7/9.7 mm)	37
91329C	MC2™ Two Stage Venous Cannulae, 29/29 Fr (9.7/9.7 mm)	37
91429	MC2X™ Three Stage Venous Cannulae, 29/29/29 Fr (9.7/9.7/9.7 mm)	38
91429C	MC2X™ Three Stage Venous Cannulae, 29/29/29 Fr (9.7/9.7/9.7 mm)	38
91437	MC2X™ Three Stage Venous Cannulae, 29/46/37 Fr (9.7/15.3/12.3 mm)	38
91437C	MC2X™ Three Stage Venous Cannulae, 29/46/37 Fr (9.7/15.3/12.3 mm)	38
93438	VC2™ Atrial Caval Venous Cannulae, 34/38 Fr (11.3/12.7 mm)	36
93438C	VC2™ Atrial Caval Venous Cannulae, 34/38 Fr (11.3/12.7 mm)	36
93448	VC2™ Atrial Caval Venous Cannulae, 34/48 Fr (11.3/16.0 mm)	36
93448C	VC2™ Atrial Caval Venous Cannulae, 34/48 Fr (11.3/16.0 mm)	36
93463	VC2™ Atrial Caval Venous Cannulae, 34/38 Fr (11.3/12.7 mm)	36
93463C	VC2™ Atrial Caval Venous Cannulae, 34/38 Fr (11.3/12.7 mm)	36
93464	VC2™ Atrial Caval Venous Cannulae, 34/48 Fr (11.3/16.0 mm)	36
93464C	VC2™ Atrial Caval Venous Cannulae, 34/48 Fr (11.3/16.0 mm)	36
94006	DLPT™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 6 Fr (2.0 mm)	51
94010	DLPT™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 10 Fr (3.3 mm)	51
94015	DLPT™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 15 Fr (5.0 mm)	51
94106	DLPT™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 6 Fr (2.0 mm)	51
94110	Gundry™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 10 Fr (3.3 mm)	50
94113T	Gundry™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 13 Fr (4.3 mm)	50
94113TD	MiRCSP™ Cannulae with Manual-Inflate Cuff, 13 Fr 12.5 in (31.8 cm)	49
94113TDT	MiRCSP™ Cannulae with Manual-Inflate Cuff, 13 Fr 12.5 in (31.8 cm)	49
94115T	Gundry™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 15 Fr (5.0 mm)	50
94215T	DLPT™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 15 Fr (5.0 mm)	51
94315T	DLPT™ Silicone RCSP Cannulae with Auto-Inflate Cuff, 15 Fr (5.0 mm)	53
94415T	DLPT™ Silicone RCSP Cannulae with Auto-Inflate Cuff, 15 Fr (5.0 mm)	53
94515	DLPT™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 15 Fr (5.0 mm)	52
94523	DLPT™ PVC RCSP Cannulae with Auto-Inflate Cuff, 13 Fr (4.3 mm)	54
94525	DLPT™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 15 Fr (5.0 mm)	52

94533	DLP™ PVC RCSP Cannulae with Auto-Inflate Cuff, 13 Fr (4.3 mm)	54
94533TD	MiRCSP™ Cannulae with Auto-Inflate Cuff, 13 Fr 12.5 in (31.8 cm)	49
94533TDT	MiRCSP™ Cannulae with Auto-Inflate Cuff, 13 Fr 12.5 in (31.8 cm)	49
94535	DLP™ PVC RCSP Cannulae with Auto-Inflate Cuff, 15 Fr (5.0 mm)	54
94615	Gundry™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 15 Fr (5.0 mm)	50
94625	DLP™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 15 Fr (5.0 mm)	52
94665	DLP™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 15 Fr (5.0 mm)	52
94715	Gundry™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 15 Fr (5.0 mm)	50
94725	DLP™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 15 Fr (5.0 mm)	51
94735	DLP™ Silicone RCSP Cannulae with Auto-Inflate Cuff, 15 Fr (5.0 mm)	53
94745	DLP™ Silicone RCSP Cannulae with Auto-Inflate Cuff, 15 Fr (5.0 mm).....	53
94835	DLP™ PVC RCSP Cannulae with Auto-Inflate Cuff, 15 Fr (5.0 mm).....	55
94845	DLP™ PVC RCSP Cannulae with Auto-Inflate Cuff, 15 Fr (5.0 mm).....	55
94885	DLP™ PVC RCSP Cannulae with Auto-Inflate Cuff, 15 Fr (5.0 mm).....	55
94885K	DLP™ PVC RCSP Cannulae with Auto-Inflate Cuff, 15 Fr (5.0 mm).....	54
94895	DLP™ PVC RCSP Cannulae with Auto-Inflate Cuff, 15 Fr (5.0 mm).....	55
94913	DLP™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 13 Fr (4.3 mm).....	52
94913L	DLP™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 13 Fr (4.3 mm).....	52
94915	DLP™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 15 Fr (5.0 mm).....	52
94935	DLP™ PVC RCSP Cannulae with Auto-Inflate Cuff, 15 Fr (5.0 mm).....	55
94945	DLP™ PVC RCSP Cannulae with Auto-Inflate Cuff, 15 Fr (5.0 mm).....	55
94965	DLP™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 15 Fr (5.0 mm).....	52
94975	DLP™ Silicone RCSP Cannulae with Manual-Inflate Cuff, 15 Fr (5.0 mm).....	52
94985	DLP™ Silicone RCSP Cannulae with Auto-Inflate Cuff, 15 Fr (5.0 mm).....	53
94995	DLP™ Silicone RCSP Cannulae with Auto-Inflate Cuff, 15 Fr (5.0 mm).....	53
96014	DLP™ Femoral Cannulae and Insertion Kits, 14 Fr (4.7 mm) arterial, 17 Fr (5.7 mm) venous...28	
96017	DLP™ Femoral Cannulae and Insertion Kits, 17 Fr (5.7 mm) arterial, 21 Fr (7.0 mm) venous...28	
96021	DLP™ Femoral Cannulae and Insertion Kits, 21 Fr (7.0 mm) arterial, 21 Fr (7.0 mm) venous...28	
96328	DLP™ Femoral Venous Cannulae, 28 Fr (9.3 mm).....	26
96428	DLP™ Femoral Venous Cannulae, 28 Fr (9.3 mm).....	26
96530-115	Bio-Medicus™ NextGen Femoral Arterial/Jugular Venous Cannula Kits, 15 Fr (5.0 mm).....	22
96530-117	Bio-Medicus™ NextGen Femoral Arterial/Jugular Venous Cannula Kits, 17 Fr (5.7 mm)	22
96530-119	Bio-Medicus™ NextGen Femoral Arterial/Jugular Venous Cannula Kits, 19 Fr (6.3 mm).....	22
96530-121	Bio-Medicus™ NextGen Femoral Arterial/Jugular Venous Cannula Kits, 21 Fr (7.0 mm)	22
96530-123	Bio-Medicus™ NextGen Femoral Arterial/Jugular Venous Cannula Kits, 23 Fr (7.7 mm)	22
96530-125	Bio-Medicus™ NextGen Femoral Arterial/Jugular Venous Cannula Kits, 25 Fr (8.3 mm)	22
96551	Bio-Medicus™ NextGen Femoral Venous Insertion Kit.....	23
96552	Bio-Medicus™ NextGen Femoral Arterial/Jugular Venous Insertion Kit.....	23
96553	Bio-Medicus™ NextGen Pediatric Femoral Arterial/Venous Insertion Kit.....	23
96570-115	Bio-Medicus™ NextGen Femoral Arterial or Jugular Venous Cannulae, 15 Fr (5.0 mm)	20
96570-117	Bio-Medicus™ NextGen Femoral Arterial or Jugular Venous Cannulae, 17 Fr (5.7 mm).....	20
96570-119	Bio-Medicus™ NextGen Femoral Arterial or Jugular Venous Arterial Cannulae, 19 Fr (6.3 mm) ..20	
96570-121	Bio-Medicus™ NextGen Femoral Arterial or Jugular Venous Arterial Cannulae, 21 Fr (7.0 mm) ..20	
96570-123	Bio-Medicus™ NextGen Femoral Arterial or Jugular Venous Arterial Cannulae, 23 Fr (7.7 mm) ..20	
96570-125	Bio-Medicus™ NextGen Femoral Arterial or Jugular Venous Arterial Cannulae, 25 Fr (8.3 mm) ..20	

96600-115	Bio-Medicus™ NextGen Femoral Venous Cannula Kits, 15 Fr (5.0 mm).....	22
96600-117	Bio-Medicus™ NextGen Femoral Venous Cannula Kits, 17 Fr (5.7 mm)	22
96600-119	Bio-Medicus™ NextGen Femoral Venous Cannula Kits, 19 Fr (6.3 mm).....	22
96600-121	Bio-Medicus™ NextGen Femoral Venous Cannula Kits, 21 Fr (7.0 mm)	22
96600-123	Bio-Medicus™ NextGen Femoral Venous Cannula Kits, 23 Fr (7.7 mm)	22
96600-125	Bio-Medicus™ NextGen Femoral Venous Cannula Kits, 25 Fr (8.3 mm).....	22
96600-127	Bio-Medicus™ NextGen Femoral Venous Cannula Kits, 27 Fr (9.0 mm).....	22
96600-129	Bio-Medicus™ NextGen Femoral Venous Cannula Kits, 29 Fr (9.7 mm).....	22
96670-115	Bio-Medicus™ NextGen Femoral Venous Cannulae, 15 Fr (5.0 mm)	21
96670-117	Bio-Medicus™ NextGen Femoral Venous Cannulae, 17 Fr (5.7 mm)	21
96670-119	Bio-Medicus™ NextGen Femoral Venous Cannulae, 19 Fr (6.3 mm)	21
96670-121	Bio-Medicus™ NextGen Femoral Venous Cannulae, 21 Fr (7.0 mm)	21
96670-123	Bio-Medicus™ NextGen Femoral Venous Cannulae, 23 Fr (7.7 mm)	21
96670-125	Bio-Medicus™ NextGen Femoral Venous Cannulae, 25 Fr (8.3 mm).....	21
96670-127	Bio-Medicus™ NextGen Femoral Venous Cannulae, 27 Fr (9.0 mm)	21
96670-129	Bio-Medicus™ NextGen Femoral Venous Cannulae, 29 Fr (9.7 mm)	21
96820-108	Bio-Medicus™ NextGen Pediatric Femoral Arterial Cannulae, 8 Fr (2.7 mm)	19
96820-110	Bio-Medicus™ NextGen Pediatric Femoral Arterial Cannulae, 10 Fr (3.3 mm)	19
96820-112	Bio-Medicus™ NextGen Pediatric Femoral Arterial Cannulae, 12 Fr (4.0 mm)	19
96820-114	Bio-Medicus™ NextGen Pediatric Femoral Arterial Cannulae, 14 Fr (4.7 mm)	19
96830-108	Bio-Medicus™ NextGen Pediatric Femoral Venous Cannulae, 8 Fr (2.7 mm)	19
96830-110	Bio-Medicus™ NextGen Pediatric Femoral Venous Cannulae, 10 Fr (3.3 mm)	19
96830-112	Bio-Medicus™ NextGen Pediatric Femoral Venous Cannulae, 12 Fr (4.0 mm)	19
96830-114	Bio-Medicus™ NextGen Pediatric Femoral Venous Cannulae, 14 Fr (4.7 mm)	19
96880-019	Bio-Medicus™ Multi-Stage Femoral Venous Cannulae with Insertion Kit, 19 Fr (6.3 mm)	24
96880-021	Bio-Medicus™ Multi-Stage Femoral Venous Cannulae with Insertion Kit, 21 Fr (7.0 mm).....	24
96880-025	Bio-Medicus™ Multi-Stage Femoral Venous Cannulae with Insertion Kit, 25 Fr (8.3 mm)	24



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