

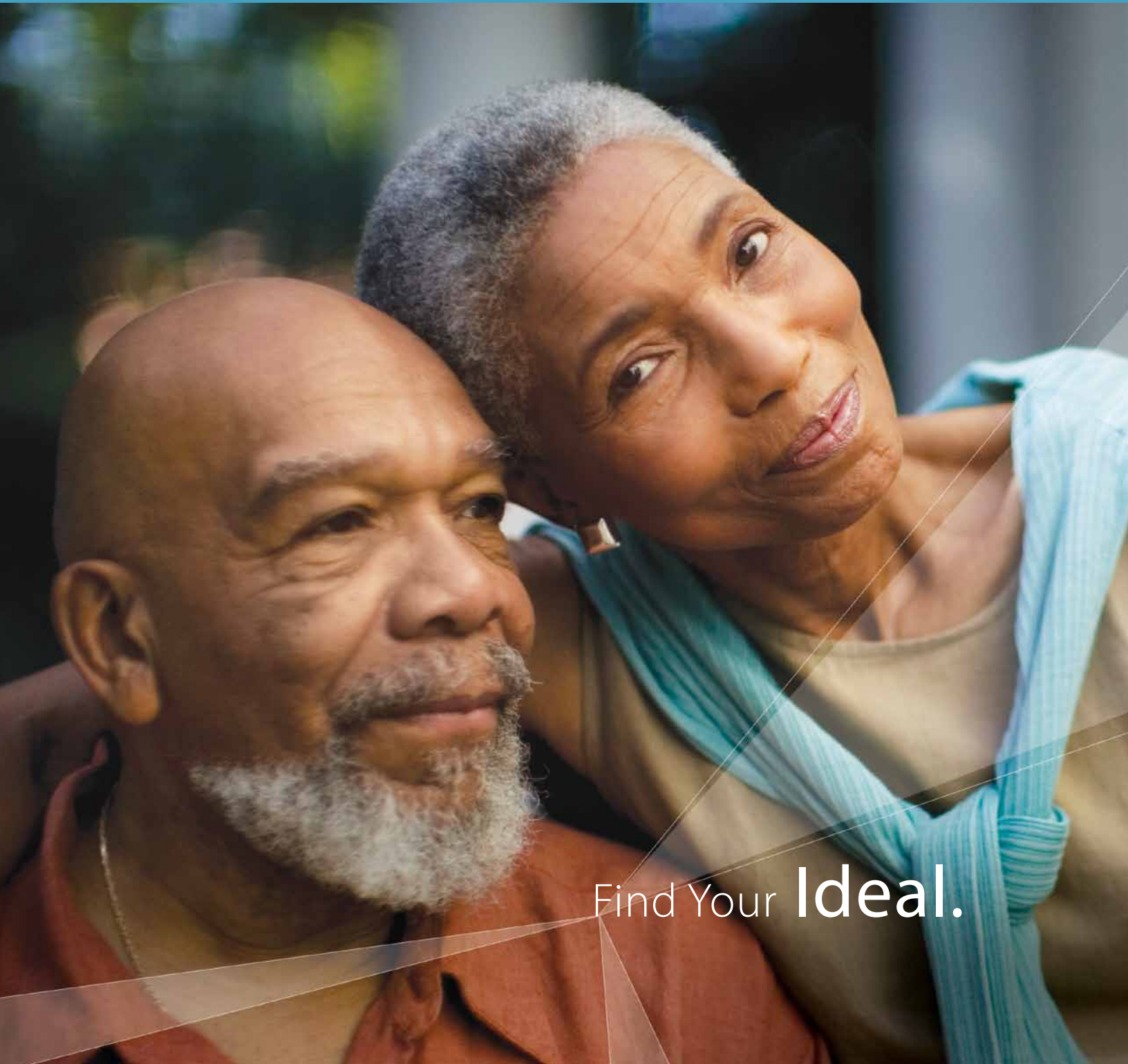


Medtronic

2011

Cannulae Catalog

Delivering Market **L**eading **P**roducts...
our tradition continues.



Find Your **Ideal.**

Extracorporeal Circuit Cannulae {ARTERIAL}

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

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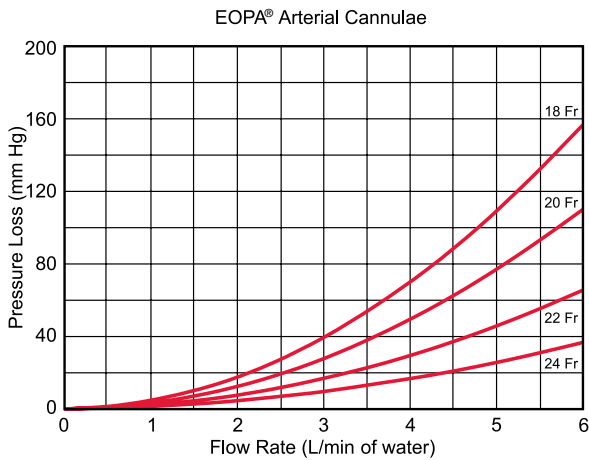
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EOPA® Arterial Cannulae

These cannulae feature thin wall tips with elongated, one-piece, kink resistant wirewound bodies. This construction allows for high flow rates with minimal pressure differential. These cannulae are available in a variety of sizes. A dilator along with depth markings and a radiopaque suture collar assist with positioning of the cannulae.



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)
77420	20 Fr (6.7 mm)
77422	22 Fr (7.3 mm)
77424	24 Fr (8.0 mm)

Non-vented $\frac{3}{8}$ in (0.95 cm) connector	
77518	18 Fr (6.0 mm)
77520	20 Fr (6.7 mm)
77522	22 Fr (7.3 mm)
77524	24 Fr (8.0 mm)

10 per carton

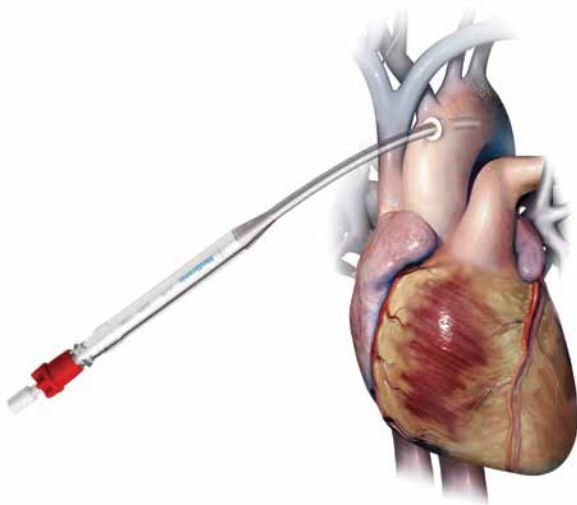


12 in (30.5 cm) overall length
Dilator tip introducer with 0.038 in (0.1 cm) guidewire

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

Non-vented $\frac{3}{8}$ in (0.95 cm) connector	
77718	18 Fr (6.0 mm)
77720	20 Fr (6.7 mm)
77722	22 Fr (7.3 mm)
77724	24 Fr (8.0 mm)

10 per carton



Important Safety Information

EOPA models: Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgical procedures. 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. For a listing of indications, contraindications, precautions and warnings, 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® Pediatric One-Piece Arterial Cannulae

These cannulae feature beveled, thin wall tips with elongated, one-piece, kink resistant wirewound bodies. An adjustable Flow-Guard™ style introducer along with depth markings assist with positioning of the cannulae.

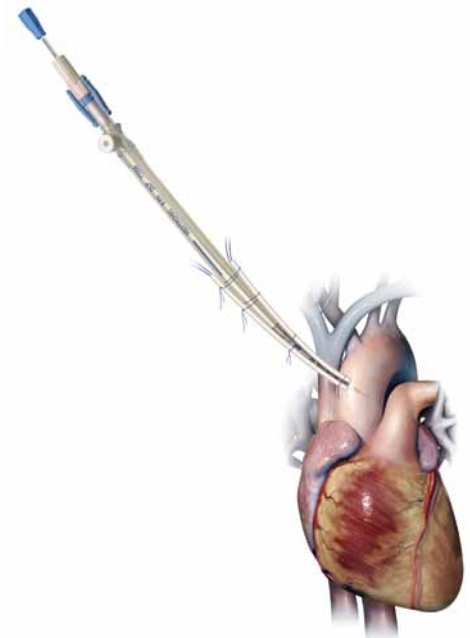
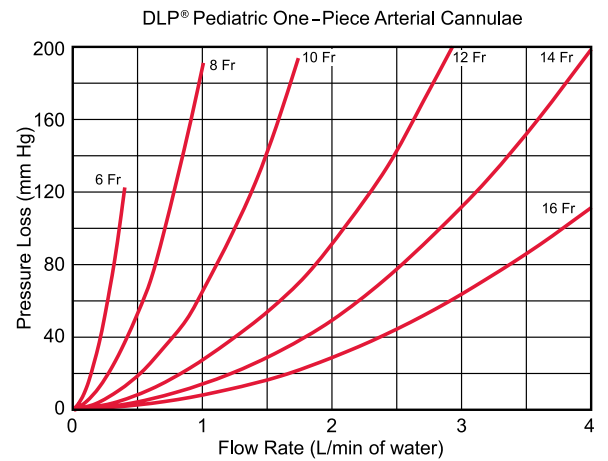


9 in (22.9 cm) overall length

Vented ¼ 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 ¼ 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 ⅜ 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 ⅜ 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	

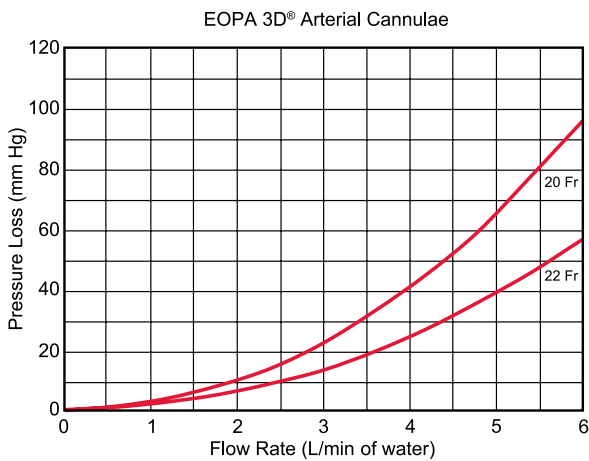


Important Safety Information

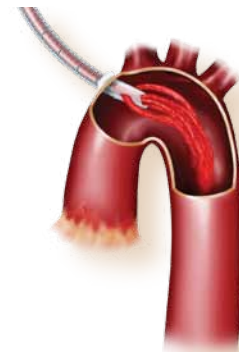
Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures. For a listing of indications, contraindications, precautions and warnings, please refer to the Instructions for Use.

EOPA 3D[®] Arterial Cannulae

These cannulae feature unique tapered diffuse flow tips, kink resistant elongated wirewound bodies, adjustable suture rings, and obturator with hemostasis cap. The 3D tips have three integrated flutes to diffuse and disperse blood flow. Depth marks and orientation line on the elongated body assist with positioning of the cannulae.



Vented $\frac{3}{8}$ in (0.95 cm) connector	
78220	20 Fr (6.7 mm)
78222	22 Fr (7.3 mm)
Non-vented $\frac{3}{8}$ in (0.95 cm) connector	
78320	20 Fr (6.7 mm)
78322	22 Fr (7.3 mm)
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. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

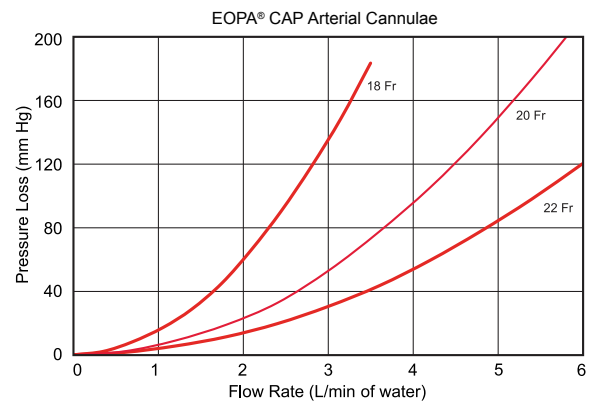
EOPA CAP® Arterial Cannulae

These cannulae feature thin wall tips with elongated, one-piece, kink resistant wirewound bodies. The tips have an integrated pressure monitoring port. The pressure monitoring port on the tip of the cannulae can be used to provide central arterial pressure. These cannulae are available in a variety of sizes. A dilator along with depth markings and a radiopaque suture collar assist with positioning of the cannulae.



12 in (30.5 cm) overall length
Blunt tip introducer

Vented $\frac{3}{8}$ 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 $\frac{3}{8}$ 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 and warnings, please refer to the Instructions for Use.

DLP® Straight Tip Arterial Cannulae

These cannulae feature beveled, thin wall tips attached to tapered cannulae bodies. They are available in pediatric and adult sizes. This construction allows for high flow rates with minimal pressure differential. A tip orientation line assists with positioning of the cannulae.



8 in (20.3 cm) overall length

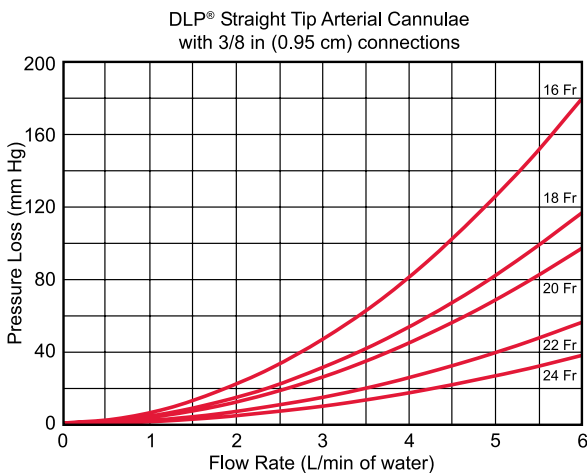
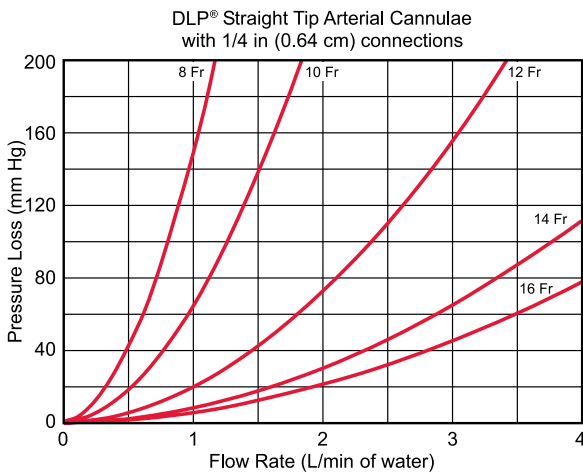
Vented 3/8 in (0.95 cm) connector	
76020	20 Fr (6.7 mm)
76022	22 Fr (7.3 mm)
76024	24 Fr (8.0 mm)
Non-vented 3/8 in (0.95 cm) connector	
76118	18 Fr (6.0 mm)
76120	20 Fr (6.7 mm)
76122	22 Fr (7.3 mm)
76124	24 Fr (8.0 mm)
20 per carton	

10 in (25.4 cm) overall length

Vented 3/8 in (0.95 cm) connector	
74322	22 Fr (7.3 mm) soft body
76320	20 Fr (6.7 mm)
76322	22 Fr (7.3 mm)
76324	24 Fr (8.0 mm)
20 per carton	

7 in (17.8 cm) overall length

Connection site 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
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	



Important Safety Information

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

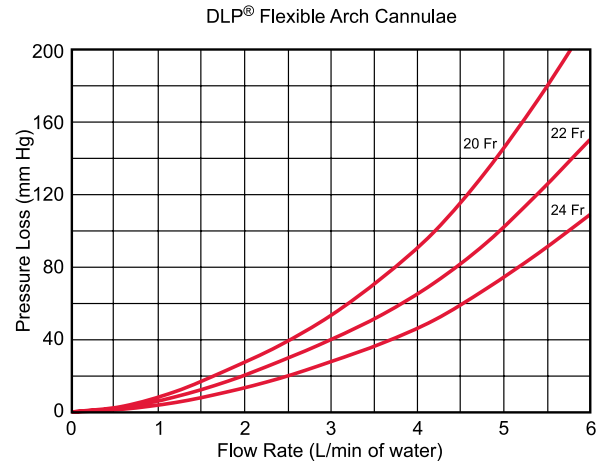
DLP® Flexible Arch Arterial Cannulae

These cannulae feature beveled tips with tapered, one-piece bodies. This construction allows for high flow rates with minimal pressure differential. An adjustable depth ring together with tip orientation and depth markings assists with positioning of the cannulae.



11 in (27.9 cm) overall length

Vented 3/8 in (0.95 cm) connector	
70420	20 Fr (6.7 mm)
70422	22 Fr (7.3 mm)
70424	24 Fr (8.0 mm)
Non-vented 3/8 in (0.95 cm) connector	
71420	20 Fr (6.7 mm)
71422	22 Fr (7.3 mm)
71424	24 Fr (8.0 mm)
20 per carton	



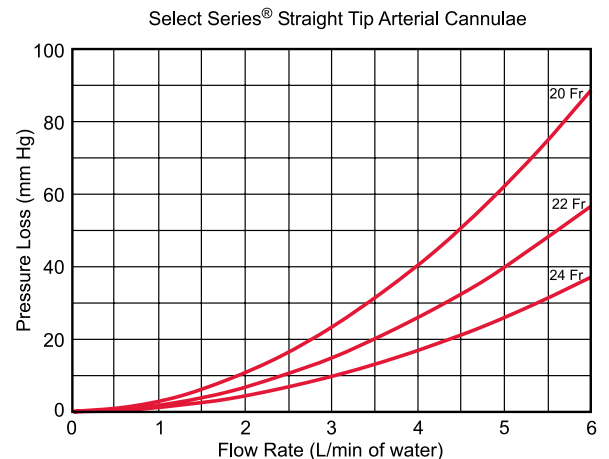
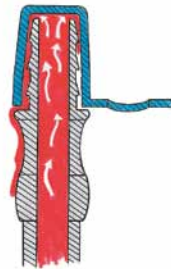
Select Series® Straight Tip Arterial Cannulae

These cannulae feature beveled, thin wall tips with tapered, one-piece, kink resistant wirewound bodies. This construction allows for high flow rates with minimal pressure differential. A tip orientation line assists with positioning of the cannulae.



12 in (30.5 cm) overall length

Vented 3/8 in (0.95 cm) connector	
72120	20 Fr (6.7 mm)
72122	22 Fr (7.3 mm)
72124	24 Fr (8.0 mm)
Non-vented 3/8 in (0.95 cm) connector	
72220	20 Fr (6.7 mm)
72222	22 Fr (7.3 mm)
72224	24 Fr (8.0 mm)
20 per carton	

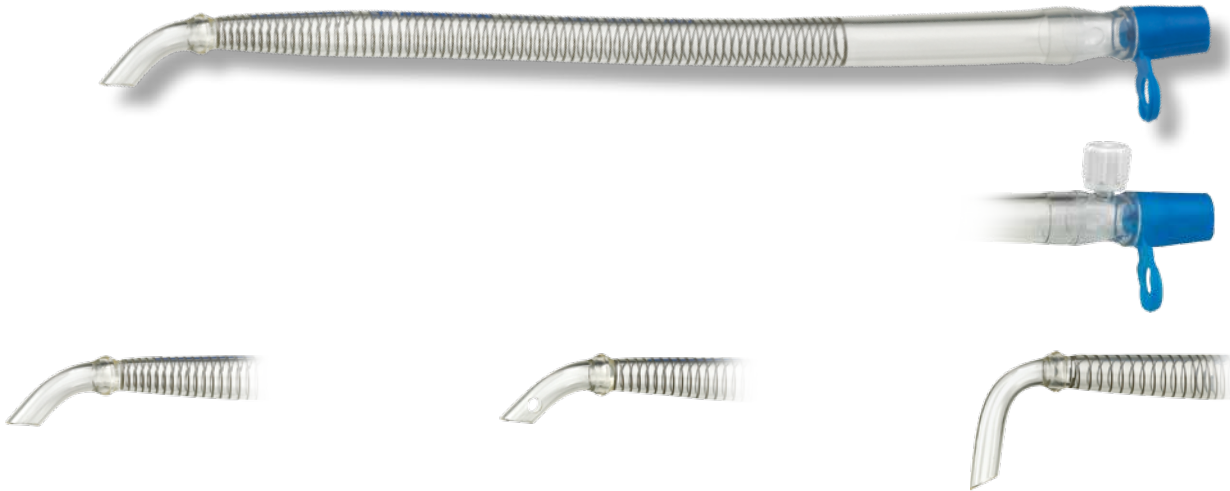


Important Safety Information

For a listing of indications, contraindications, precautions and warnings, please refer to the Instructions for Use. Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

Select Series® Angled Tip Arterial Cannulae

These cannulae feature beveled, thin wall tips with tapered, one-piece, kink resistant wirewound bodies. This construction allows for high flow rates with minimal pressure differential. A tip orientation line assists with positioning of the cannulae.



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	

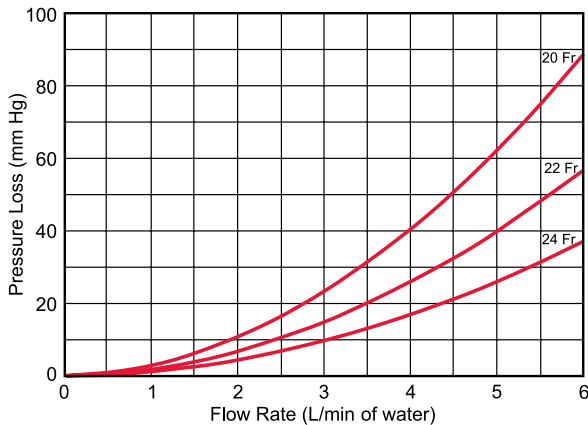
12 in (30.5 cm) overall length
45° tip with side holes

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	

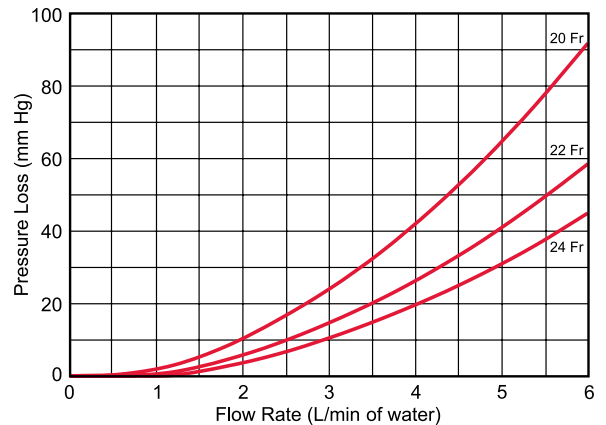
12 in (30.5 cm) overall length
80° tip without side holes

Vented 3/8 in (0.95 cm) connector	
72720	20 Fr (6.7 mm)
72722	22 Fr (7.3 mm)
72724	24 Fr (8.0 mm)
Non-vented 3/8 in (0.95 cm) connector	
72820	20 Fr (6.7 mm)
72822	22 Fr (7.3 mm)
72824	24 Fr (8.0 mm)
20 per carton	

Select Series® Straight Tip Arterial Cannulae



Select Series® 80° Tip Arterial Cannulae



Important Safety Information

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

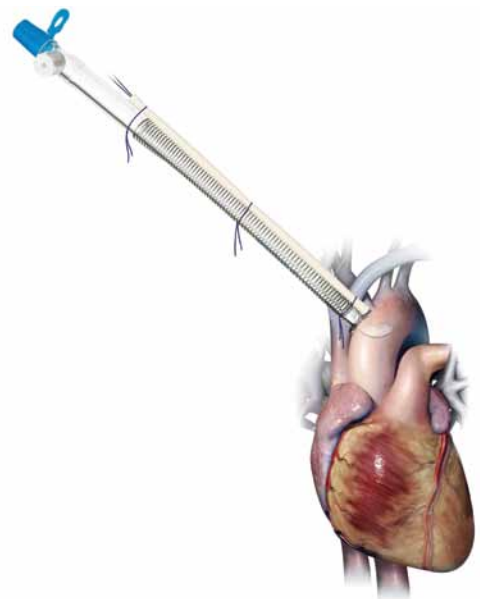
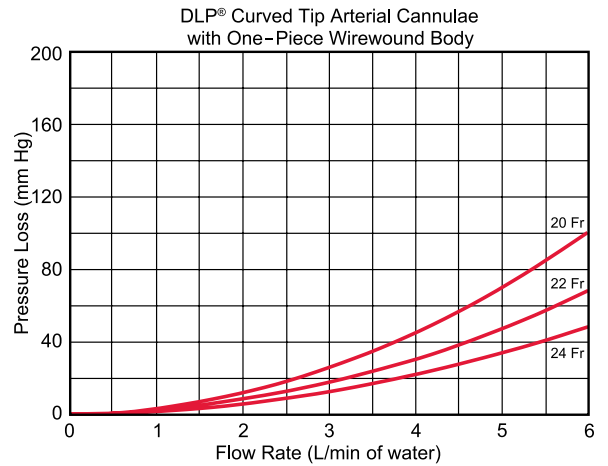
DLP® Curved Tip Arterial Cannulae with One-Piece Wirewound Body

These cannulae feature beveled, thin wall, curved tips with tapered, one-piece, kink resistant wirewound bodies. This construction allows for high flow rates with minimal pressure differential. A tip orientation line assists with positioning of the cannulae.



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)
Rotated vented 3/8 in (0.95 cm) connector	
87520	20 Fr (6.7 mm)
87522	22 Fr (7.3 mm)
87524	24 Fr (8.0 mm)
10 per carton	

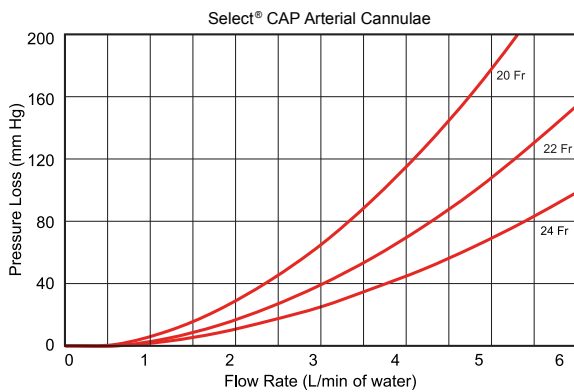
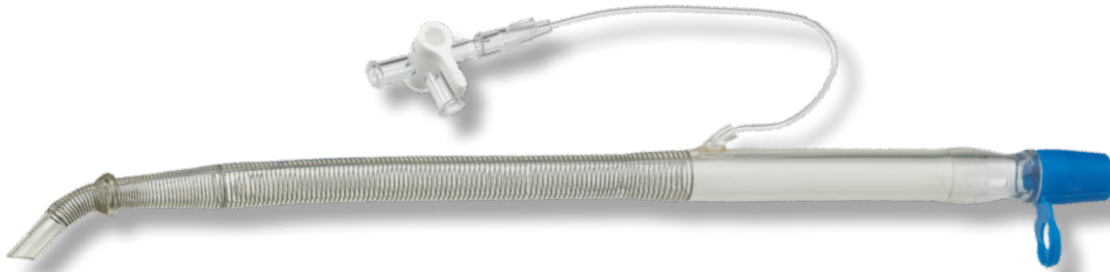


Important Safety Information

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

Select CAP[®] Arterial Cannulae

These cannulae feature beveled, thin wall tips with tapered, one-piece, kink resistant wirewound bodies. The tips have an integrated pressure monitoring port. The pressure monitoring port on the tip of the cannulae can provide a real-time display of accurate central arterial pressure. These cannulae are available in a variety of sizes. A tip orientation line assists with positioning of the cannulae.



12 in (30.5 cm) overall length
45° tip

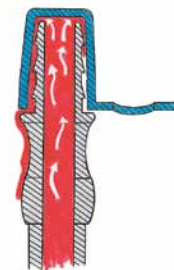
Non-vented $\frac{3}{8}$ in (0.95 cm) connector

78920 20 Fr (6.7 mm)

78922 22 Fr (7.3 mm)

78924 24 Fr (8.0 mm)

20 per carton



Important Safety Information

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

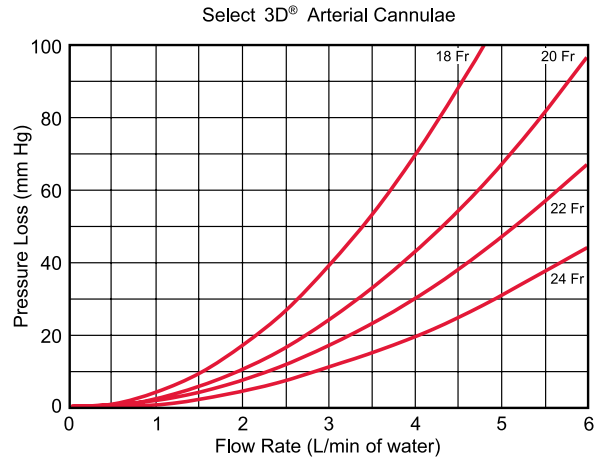
Select 3D[®] Arterial Cannulae

These cannulae feature beveled, thin wall tips with tapered, one-piece, kink resistant wirewound bodies. The tips have three integrated flutes which help diffuse and disperse blood flow. A tip orientation line assists with positioning of the cannulae.



11.5 in (29.2 cm) overall length
45° tip

Vented 3/8 in (0.95 cm) connector	
78618	18 Fr (6.0 mm)
78620	20 Fr (6.7 mm)
78622	22 Fr (7.3 mm)
78624	24 Fr (8.0 mm)
Non-vented 3/8 in (0.95 cm) connector	
78718	18 Fr (6.0 mm)
78720	20 Fr (6.7 mm)
78722	22 Fr (7.3 mm)
78724	24 Fr (8.0 mm)
20 per carton	



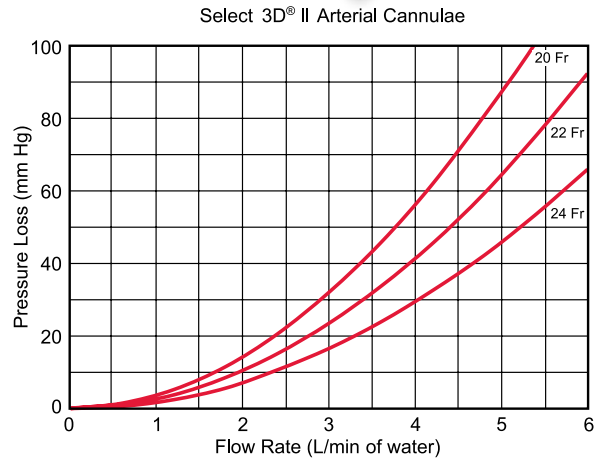
Select 3D[®] II Arterial Cannulae

These cannulae feature beveled, thin wall tips with tapered, one-piece, kink resistant wirewound bodies. The tips have three integrated flutes which help diffuse and disperse blood flow. A tip orientation line assists with positioning of the cannulae.



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	

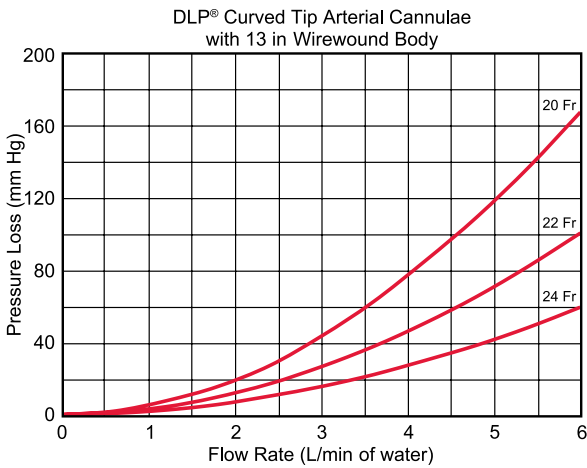


Important Safety Information

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

DLP® Curved Tip Arterial Cannulae with Wirewound Body

These cannulae feature beveled, thin wall, curved tips with longer, kink resistant wirewound bodies. This construction allows for high flow rates with minimal pressure differential and positions the connection site further away from the surgical field. A tip orientation line assists with positioning of the cannulae.



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

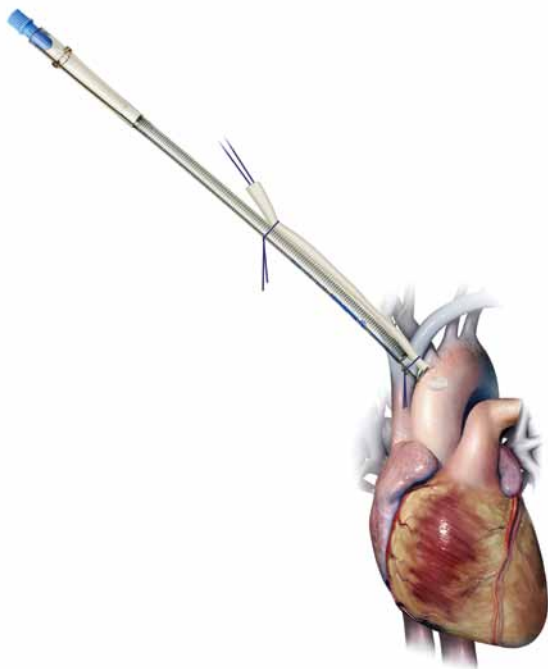
Connection site $\frac{3}{8}$ in (0.95 cm)

87020 20 Fr (6.7 mm)

87022 22 Fr (7.3 mm)

87024 24 Fr (8.0 mm)

10 per carton



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

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

87920 20 Fr (6.7 mm)

87922 22 Fr (7.3 mm)

87924 24 Fr (8.0 mm)

10 per carton

Important Safety Information

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

DLP® Curved Tip Arterial Cannulae

These cannulae feature beveled, thin wall, curved tips attached to tapered cannulae bodies. This construction allows for high flow rates with minimal pressure differential. These cannulae are available in a variety of sizes. A tip orientation line assists with positioning of the cannulae.



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

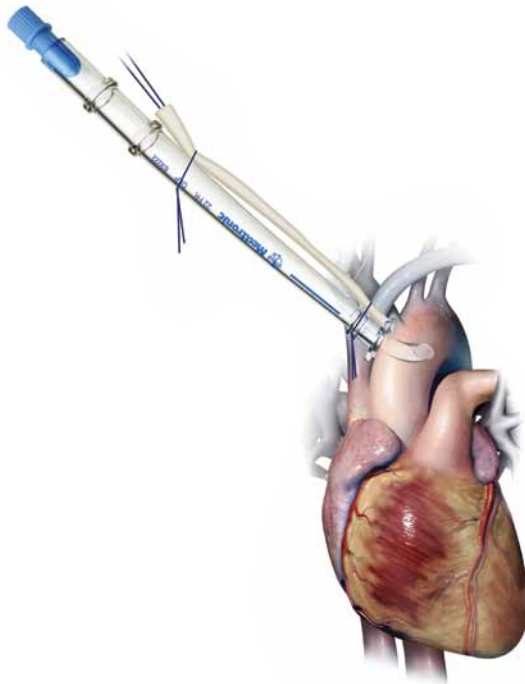
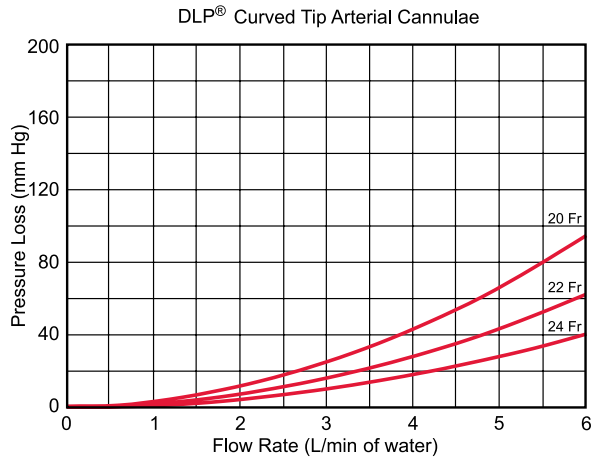
Vented $\frac{3}{8}$ in (0.95 cm) connector	
89020	20 Fr (6.7 mm)
89022	22 Fr (7.3 mm)
89024	24 Fr (8.0 mm)
Non-vented $\frac{3}{8}$ in (0.95 cm) connector	
89120	20 Fr (6.7 mm)
89122	22 Fr (7.3 mm)
89124	24 Fr (8.0 mm)
20 per carton	

Important Safety Information

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, thin wall, curved tips attached to tapered cannulae bodies. This construction allows for high flow rates with minimal pressure differential. These cannulae are available in a variety of sizes. A tip orientation line assists with positioning of the cannulae.



10 in (25.4 cm) overall length
Curved tip with flange and soft body

Vented 3/8 in (0.95 cm) connector	
81020	20 Fr (6.7 mm)
81022	22 Fr (7.3 mm)
81024	24 Fr (8.0 mm)
Non-vented 3/8 in (0.95 cm) connector	
81120	20 Fr (6.7 mm)
81122	22 Fr (7.3 mm)
81124	24 Fr (8.0 mm)
20 per carton	

10 in (25.4 cm) overall length
Curved tip without flange and soft body

Vented 3/8 in (0.95 cm) connector	
82020	20 Fr (6.7 mm)
82022	22 Fr (7.3 mm)
82024	24 Fr (8.0 mm)
Non-vented 3/8 in (0.95 cm) connector	
82120	20 Fr (6.7 mm)
82122	22 Fr (7.3 mm)
82124	24 Fr (8.0 mm)
20 per carton	

Important Safety Information

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

DLP® Metal Tip Arterial Cannulae

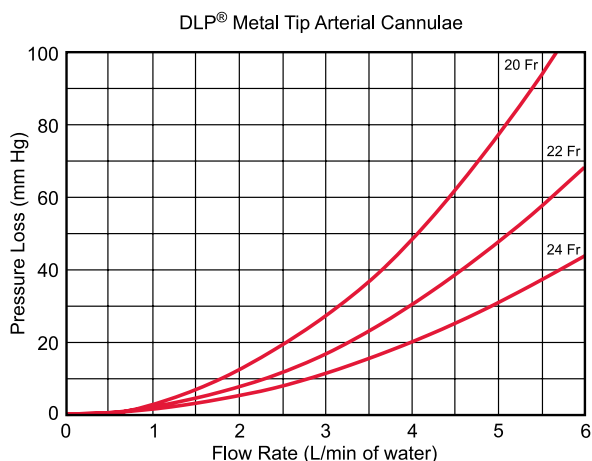
These cannulae feature beveled, thin wall, curved metal tips attached to tapered cannulae bodies. This construction allows for high flow rates with minimal pressure differential. A choice of either standard or soft flange is available. The soft flanges conform to the shape of the aorta. A tip orientation line assists with positioning of the cannulae.



8.5 in (21.6 cm) overall length

Soft flange

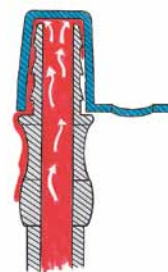
Vented $\frac{3}{8}$ in (0.95 cm) connector	
80020	20 Fr (6.7 mm)
80022	22 Fr (7.3 mm)
80024	24 Fr (8.0 mm)
Non-vented $\frac{3}{8}$ in (0.95 cm) connector	
80120	20 Fr (6.7 mm)
80122	22 Fr (7.3 mm)
80124	24 Fr (8.0 mm)
20 per carton	



8.5 in (21.6 cm) overall length

Rigid flange

Vented $\frac{3}{8}$ in (0.95 cm) connector	
80220	20 Fr (6.7 mm)
80222	22 Fr (7.3 mm)
80224	24 Fr (8.0 mm)
Non-vented $\frac{3}{8}$ in (0.95 cm) connector	
80320	20 Fr (6.7 mm)
80322	22 Fr (7.3 mm)
80324	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. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

Extracorporeal Circuit Cannulae {FEMORAL}

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-walled 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® One-Piece Arterial 19

- Bio-Medicus® One-Piece Venous 20

- Bio-Medicus® Kits 21

- Bio-Medicus® Standard Insertion Kit 23

- Carpentier Bi-Caval Venous 24

- DLP® Venous 25

- DLP® Arterial 26

- DLP® Cannulae and Insertion Kits 27

Bio-Medicus® One-Piece Femoral Arterial Cannulae

These pediatric and adult cannulae feature elongated, one-piece, kink resistant wirewound bodies. Pediatric sizes have beveled tips while the adult sizes have multi-port tips. This construction allows for high flow rates with minimal pressure differential. An introducer along with depth markings assists with positioning of the cannulae. These Bio-Medicus® cannulae are available with Carmeda®* BioActive coating and are designated with a “CB” prefix.

7.5 in (19 cm) overall length

Non-vented ¼ in (0.64 cm) connector		
96820-008	CB96825-008	8 Fr (2.7 mm)
96820-010	CB96825-010	10 Fr (3.3 mm)
96820-012	CB96825-012	12 Fr (4.0 mm)
96820-014	CB96825-014	14 Fr (4.7 mm)
1 per carton		

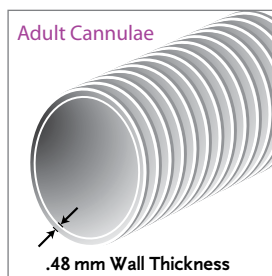
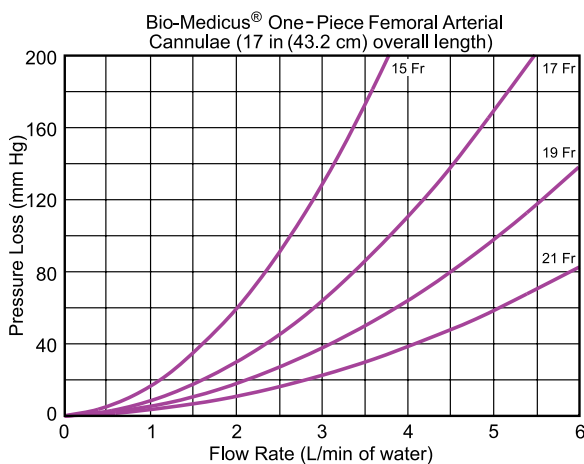
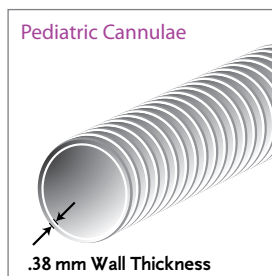
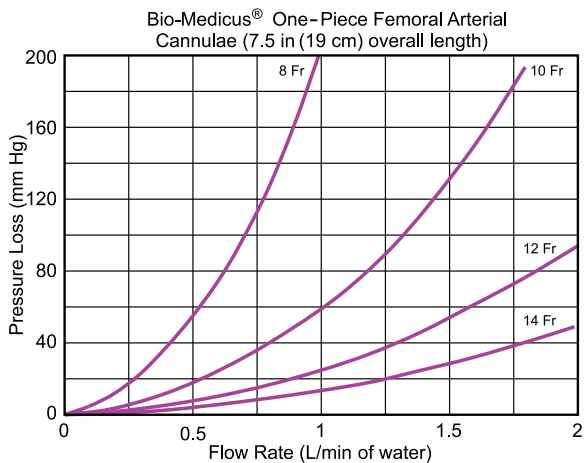
CB prefix indicates Carmeda

17 in (43.2 cm) overall length with 7.1 in (18 cm) tip

Vented ⅜ in (0.95 cm) connector		
96570-015	CB96570-015	15 Fr (5.0 mm)
96570-017	CB96570-017	17 Fr (5.7 mm)
96570-019	CB96570-019	19 Fr (6.3 mm)
96570-021	CB96570-021	21 Fr (7.0 mm)
1 per carton		

CB prefix indicates Carmeda

* Manufactured under license from Carmeda AB, Sweden.
Carmeda is a registered trademark of Carmeda AB.



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 and warnings, please refer to the Instructions for Use. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

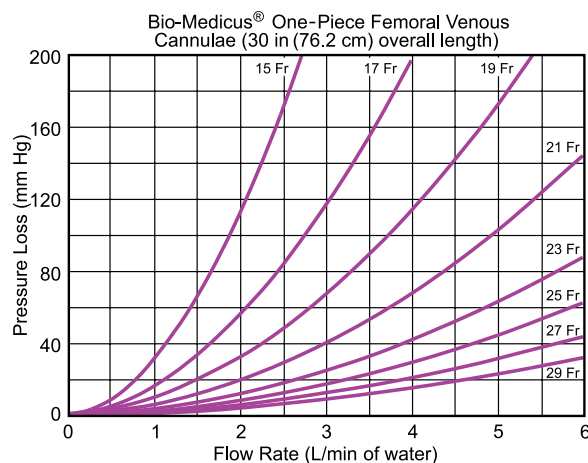
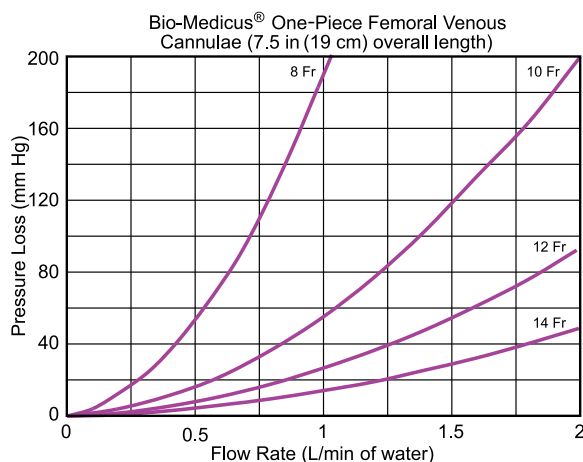
Bio-Medicus® One-Piece Femoral Venous Cannulae

These pediatric and adult cannulae feature elongated, one-piece, kink resistant wirewound bodies. Pediatric sizes have multi-port, beveled tips while the adult sizes have multi-port tips. This construction allows for high flow rates with minimal pressure differential. An introducer with depth markings assists with positioning of the cannulae. These Bio-Medicus® cannulae are available with Carmeda®* BioActive coating and are designated with a "CB" prefix.

7.5 in (19 cm) overall length

Non-vented ¼ in (0.64 cm) connector		
96830-008	CB96835-008	8 Fr (2.7 mm)
96830-010	CB96835-010	10 Fr (3.3 mm)
96830-012	CB96835-012	12 Fr (4.0 mm)
96830-014	CB96835-014	14 Fr (4.7 mm)
1 per carton		

CB prefix indicates Carmeda



30 in (76.2 cm) overall length with 19.7 in (50 cm) tip

Non-vented ⅜ in (0.95 cm) connector		
96670-015	CB96670-015	15 Fr (5.0 mm)
96670-017	CB96670-017	17 Fr (5.7 mm)
96670-019	CB96670-019	19 Fr (6.3 mm)
96670-021	CB96670-021	21 Fr (7.0 mm)
Non-vented ½ in (1.27 cm) connector		
96370-023	CB96345-023	23 Fr (7.7 mm)
96370-025	CB96345-025	25 Fr (8.3 mm)
96370-027	CB96345-027	27 Fr (9.0 mm)
96370-029	CB96345-029	29 Fr (9.7 mm)
1 per carton		

CB prefix indicates Carmeda

* Manufactured under license from Carmeda AB, Sweden. Carmeda is a registered trademark of Carmeda AB.

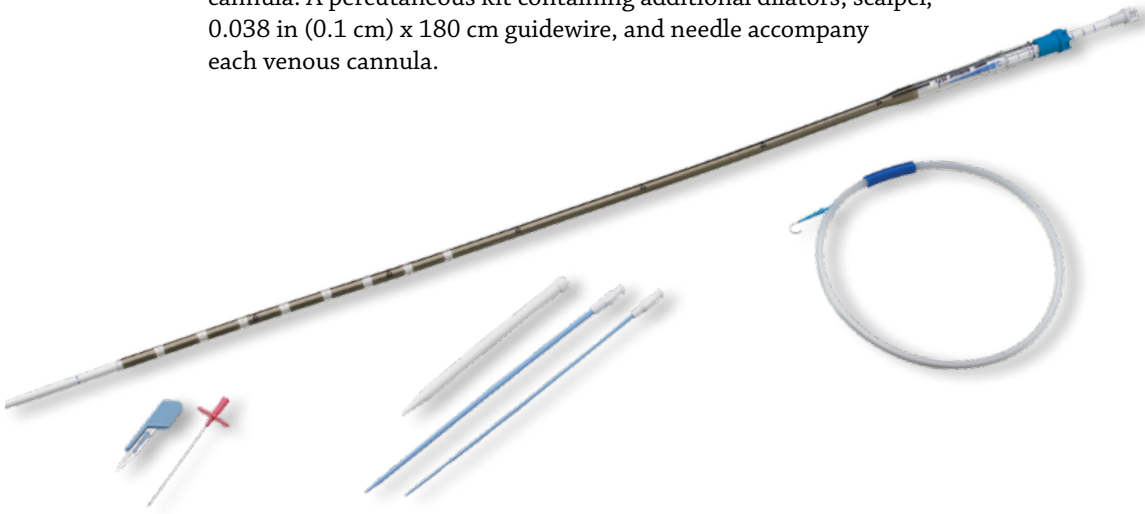


Important Safety Information

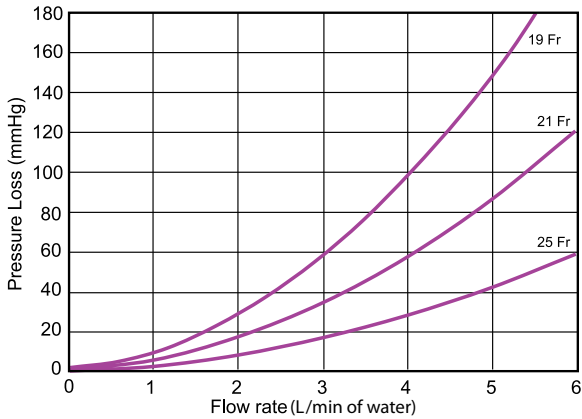
Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures. For a listing of indications, contraindications, precautions and warnings, please refer to the Instructions for Use.

Bio-Medicus® Multi-Stage Femoral Venous Cannulae with Percutaneous Kit

This adult cannula features a one-piece, kink resistant wirewound body with multiple side holes that provide for additional drainage sites. An introducer featuring depth marks, along with a tip taper location indicator, assists in positioning of the cannula. A percutaneous kit containing additional dilators, scalpel, 0.038 in (0.1 cm) x 180 cm guidewire, and needle accompany each venous cannula.



Bio-Medicus® Multi-Stage
19, 21 and 25 Fr

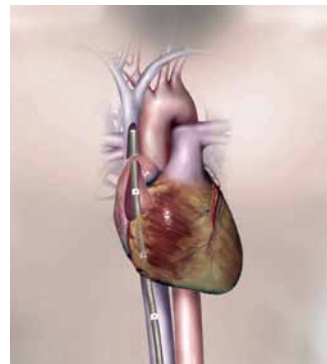
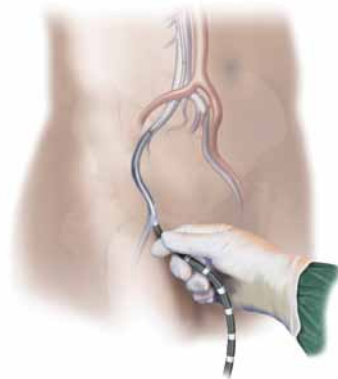
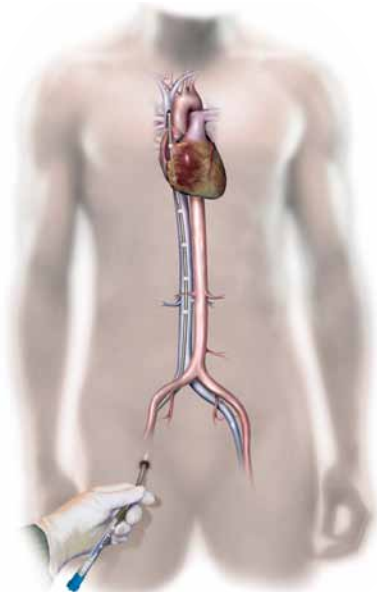


30 in (76.2 cm) overall length with
23.6 in (60 cm) tip

Non-vented $\frac{3}{8}$ 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



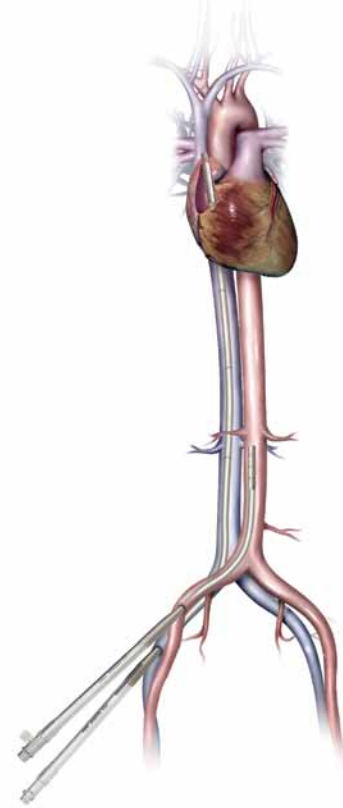
Important Safety Information

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

Bio-Medicus® One-Piece Femoral Cannulae Kits

These kits provide the appropriate size femoral arterial or venous cannula for femoral access cardiopulmonary bypass. These Bio-Medicus® cannulae are available with Carmeda®* BioActive coating and are designated with a “CB” prefix. Designed for percutaneous or direct visualization insertion, these kits contain the following insertion components:

Kit Information	
1 each	Femoral (arterial or venous) cannula with introducer
1 each	Hemostasis cap
1 each	18 ga Seldinger style needle
1 each	8/10 Fr (2.7/3.3 mm) stepped dilator
1 each	12/14 Fr (4.0/4.7 mm) stepped dilator
1 each	0.038 in (0.1 cm) x 150 cm guidewire (venous cannulae)
1 each	0.038 in (0.1 cm) x 100 cm guidewire (arterial cannulae)
1 each	#11 scalpel blade



17 in (43.2 cm) overall length arterial
with 7.1 in (18 cm) tip

Vented ⅜ in (0.95 cm) connector		
96530-015	CB96535-015	15 Fr (5.0 mm)
96530-017	CB96535-017	17 Fr (5.7 mm)
96530-019	CB96535-019	19 Fr (6.3 mm)
96530-021	CB96535-021	21 Fr (7.0 mm)
Non-vented ½ in (1.27 cm) connector with radiopaque marker, no hemostasis cap		
96540-023	CB96540-023	23 Fr (7.7 mm)
1 per carton		

CB prefix indicates Carmeda

30 in (76.2 cm) overall length venous
with 19.7 in (50 cm) tip

Non-vented ⅜ in (0.95 cm) connector		
96600-015	CB96605-015	15 Fr (5.0 mm)
96600-017	CB96605-017	17 Fr (5.7 mm)
96600-019	CB96605-019	19 Fr (6.3 mm)
96600-021	CB96605-021	21 Fr (7.0 mm)
96600-023	CB96605-023	23 Fr (7.7 mm)
1 per carton		

CB prefix indicates Carmeda

* Manufactured under license from Carmeda AB, Sweden.
Carmeda is a registered trademark of Carmeda AB.

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 and warnings, please refer to the Instructions for Use.

Bio-Medicus® Standard Insertion Kit

This kit provides components for femoral access cardiopulmonary bypass. Designed for percutaneous or direct visualization insertion, these kits contain the following insertion components:

Kit Information	
96550	
1 each	60 cc catheter tip syringe
1 each	18 ga Seldinger style needle
1 each	8/10 Fr (2.7/3.3 mm) stepped dilator
1 each	12/14 Fr (4.0/4.7 mm) stepped dilator
1 each	0.038 in (0.1 cm) x 180 cm guidewire
1 each	#11 scalpel blade
<i>5 kits per carton</i>	



Important Safety Information

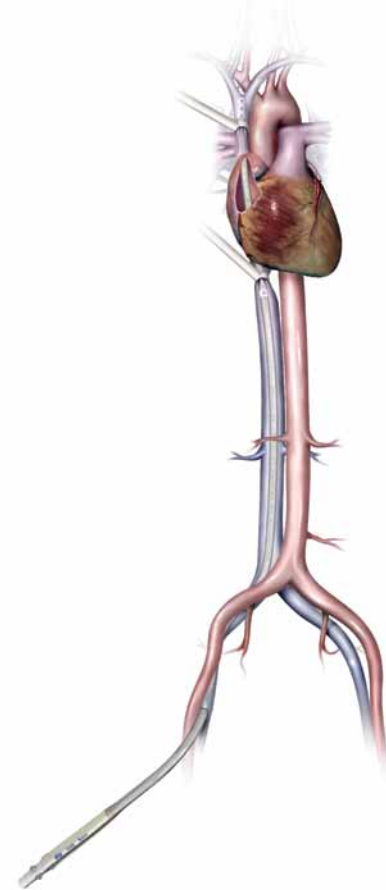
Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

Carpentier Bi-Caval Femoral Venous Cannulae

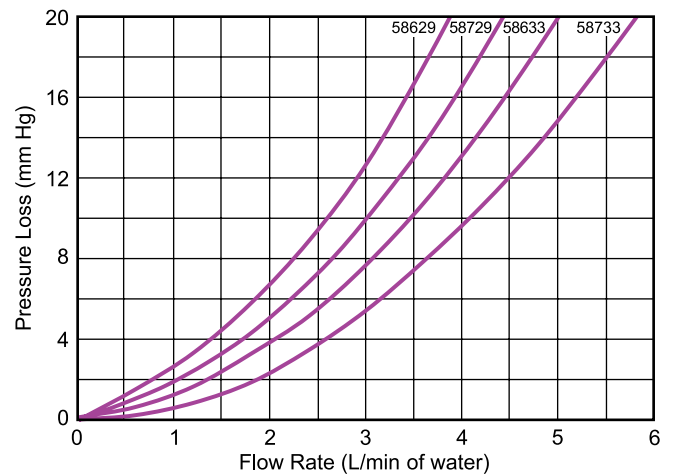
These cannulae have a unique wirewound, kink resistant, two stage design, to drain the heart by meeting the IVC/SVC drainage requirements. This design eliminates the need for two cannulae (one in the IVC and one in the SVC), which occupy a large portion of a very limited space, making these cannulae ideal for use during mitral valve, tricuspid valve, and ASD heart cases. Depth markings assist with positioning of the cannulae. All cannulae are supplied with a tapered tip dilator and 0.038 in (0.1 cm) x 180 cm guidewire.

27.75 in (70.5 cm) overall length

Non-vented $\frac{3}{8}$ in (0.95 cm) connector	
58629	24/29 Fr (8.0/9.7 mm)
58633	30/33 Fr (10.0/11.0 mm)
Non-vented $\frac{1}{2}$ in (1.27 cm) connector	
58729	24/29 Fr (8.0/9.7 mm)
58733	30/33 Fr (10.0/11.0 mm)
4 per carton	



Carpentier Bi-Caval Femoral Venous 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. For a listing of indications, contraindications, precautions and warnings, please refer to the Instructions for Use.

DLP® Femoral Venous Cannulae

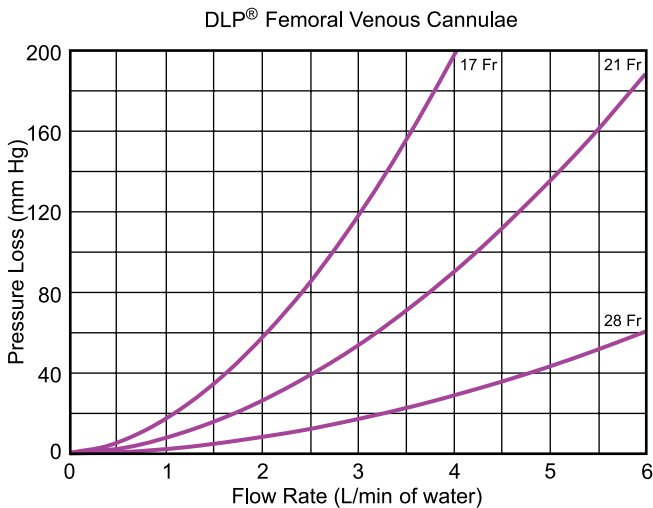
These cannulae feature kink resistant, thin wall, radiopaque bodies with multiple side holes. Depth markings assist with positioning of the cannulae. All cannulae are supplied with a tapered tip dilator which facilitates insertion over 0.038 in (0.1 cm) guidewire.

21 in (53.3 cm) overall length

Non-vented 3/8 in (0.95 cm) connector (guidewires not included)	
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 3/8 in (0.95 cm) and 0.038 in (0.1 cm) x 180 cm guidewire	
96328	28 Fr (9.3 mm)
Non-vented 3/8 in (0.95 cm) connector and 0.038 in (0.1 cm) x 180 cm guidewire	
96428	28 Fr (9.3 mm)
4 per carton	



58521

96328

Important Safety Information

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

DLP® Femoral Arterial Cannulae

These cannulae feature kink resistant, thin wall, radiopaque bodies with multiple side holes. Depth markings assist with positioning of the cannulae. All cannulae are supplied with a tapered tip dilator, which facilitates insertion over 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)

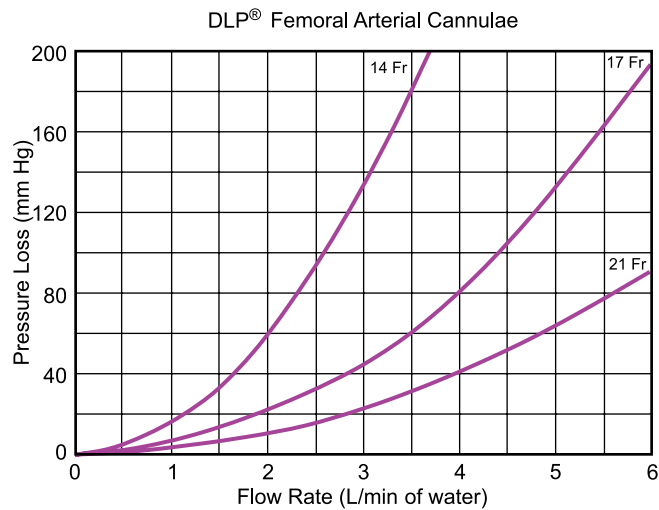
57421 21 Fr (7.0 mm)

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

57517 17 Fr (5.7 mm)

57521 21 Fr (7.0 mm)

4 per carton



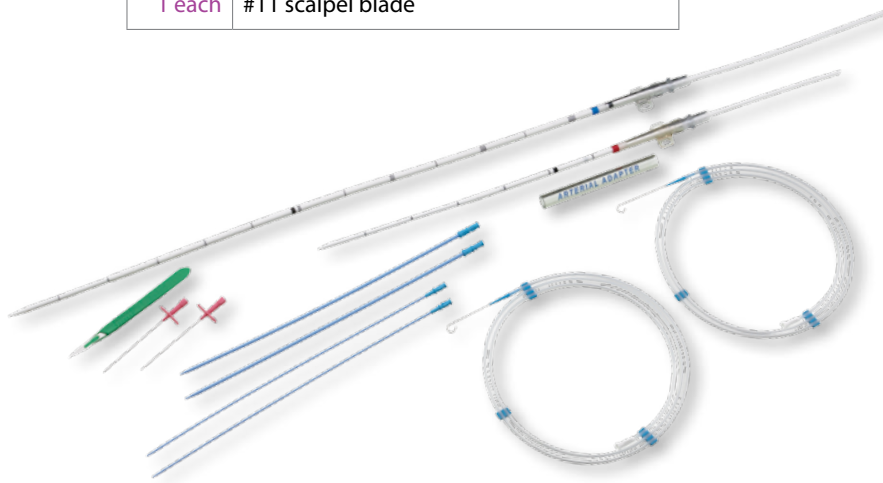
Important Safety Information

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

DLP® Femoral Cannulae and Insertion Kits

These kits are designed to provide the appropriate size femoral arterial and venous cannulae for femoral access cardiopulmonary bypass. Designed for percutaneous or direct visualization insertion, these kits contain one femoral arterial and one femoral venous cannula and the following insertion components:

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



7 in (17.8 cm) overall length arterial with non-vented 3/8 in (0.95 cm) connector and
21 in (53.3 cm) overall length venous with non-vented 3/8 in (0.95 cm) connector

96117
17 Fr (5.7 mm) arterial (57517) 21 Fr (7.0 mm) venous (58521)
96121
21 Fr (7.0 mm) arterial (57521) 21 Fr (7.0 mm) venous (58521)
<i>1 kit per carton</i>

7 in (17.8 cm) overall length arterial with vented 3/8 in (0.95 cm) connector and
21 in (53.3 cm) overall length venous with non-vented 3/8 in (0.95 cm) connector

96014
14 Fr (4.7 mm) arterial (57414) 17 Fr (5.7 mm) venous (58517)
96017
17 Fr (5.7 mm) arterial (57417) 21 Fr (7.0 mm) venous (58521)
96021
21 Fr (7.0 mm) arterial (57421) 21 Fr (7.0 mm) venous (58521)
<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 and warnings, please refer to the Instructions for Use.

Extracorporeal Circuit Cannulae {VENOUS}

Medtronic 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

DLP® Single Stage with Atrial Basket Tip 35

DLP® VAD 36

VC2™ Atrial Caval 37

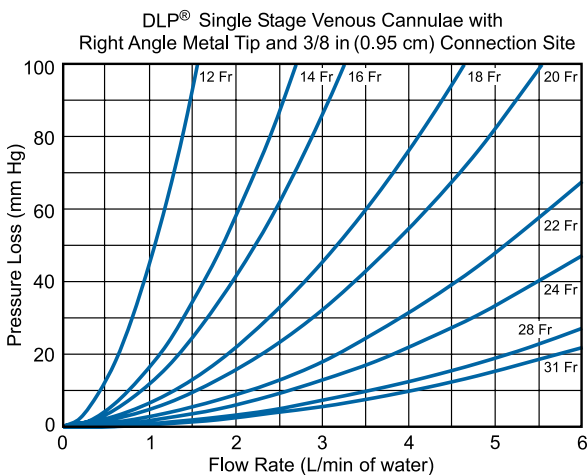
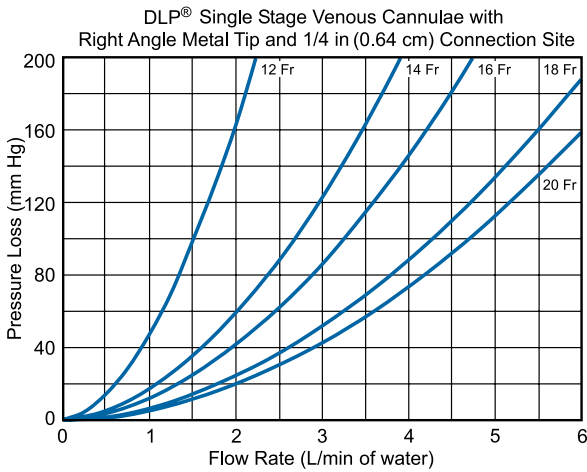
MC2® Two Stage 38

MC2X® Three Stage 39

Ultraflex® 40

DLP® Single Stage Venous Cannulae with Right Angle Metal Tip

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



14 in (35.6 cm) overall length

Connection site 1/4 in (0.64 cm)	
67312	12 Fr (4.0 mm)
67314	14 Fr (4.7 mm)
67316	16 Fr (5.3 mm)
67318	18 Fr (6.0 mm)
67320	20 Fr (6.7 mm)

Connection site 3/8 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)
69322	22 Fr (7.3 mm)
69324	24 Fr (8.0 mm)
69328	28 Fr (8.7 mm)
69331	31 Fr (10.3 mm)
10 per carton	

14 in (35.6 cm) overall length

Extended tip Connection site 3/8 in (0.95 cm)	
69424	24 Fr (8.0 mm)
69428	28 Fr (8.7 mm)
69431	31 Fr (10.3 mm)
10 per carton	

Important Safety Information

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

DLP® Single Stage Venous Cannulae

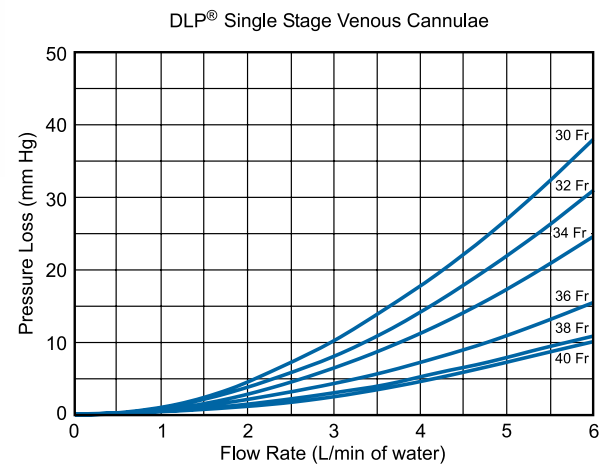
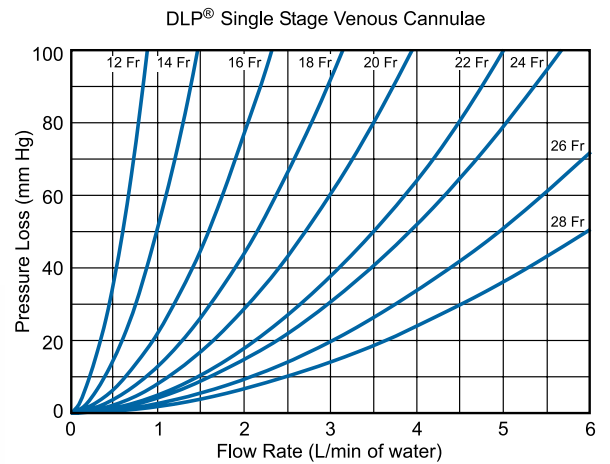
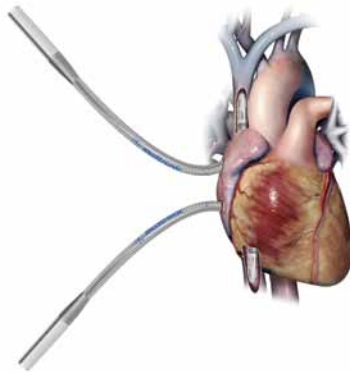
These pediatric and adult cannulae feature one-piece, kink resistant, wirewound bodies with tapered, multi-port tips. This construction allows for high flow rates with minimal pressure differential. Depth markings assist with positioning of the cannulae.



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

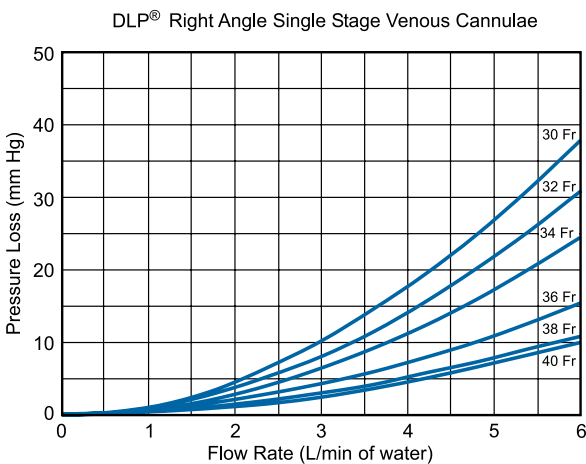
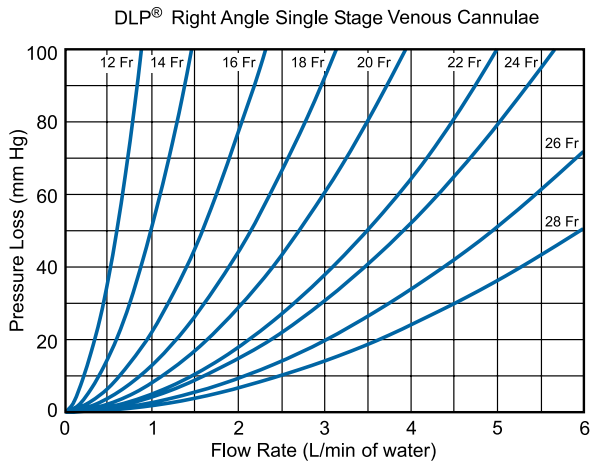


Important Safety Information

For a listing of indications, contraindications, precautions and warnings, please refer to the Instructions for Use. 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 one-piece, kink resistant, wirewound bodies with tapered, multi-port tips. This construction allows for high flow rates with minimal pressure differential. Depth markings assist with positioning of the cannulae.



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

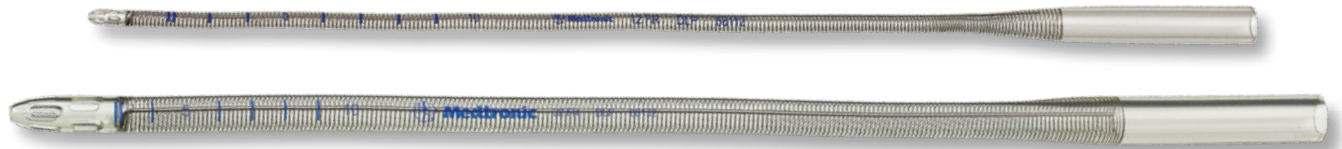
Connection site 1/4 in (0.64 cm)	
67512	12 Fr (4.0 mm)
67514	14 Fr (4.7 mm)
67516	16 Fr (5.3 mm)
Connection site 1/4 in – 3/8 in (0.64-0.95 cm)	
67518	18 Fr (6.0 mm)
67520	20 Fr (6.7 mm)
67522	22 Fr (7.3 mm)
67524	24 Fr (8.0 mm)
Connection site 3/8 in (0.95 cm)	
67526	26 Fr (8.7 mm)
67528	28 Fr (9.3 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 1/2 in (1.27 cm)	
67536	36 Fr (12.0 mm)
67540	40 Fr (13.3 mm)
10 per carton	

Important Safety Information

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

DLP® Malleable Single Stage Venous Cannulae

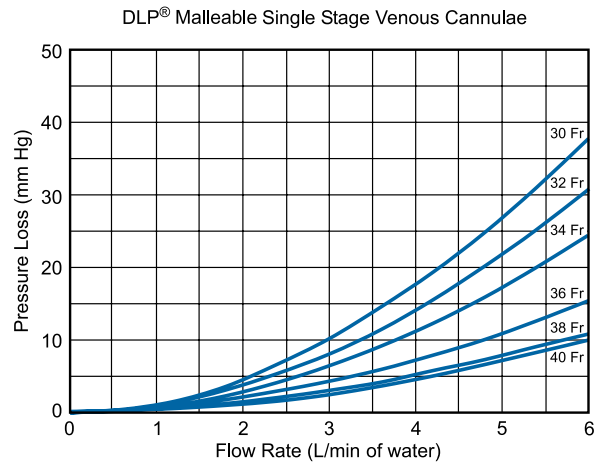
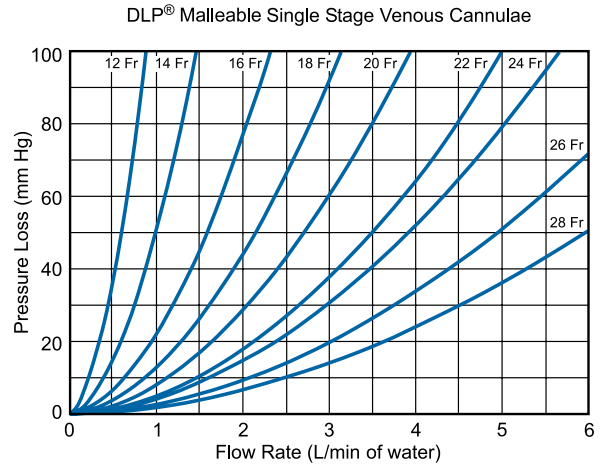
These pediatric and adult cannulae feature malleable one-piece, kink resistant, wirewound bodies with tapered, multi-port tips. This construction allows the surgeon to shape and position the cannulae to their specific needs while also allowing high flow rates with minimal pressure differential. Depth markings assist with positioning of the cannulae.



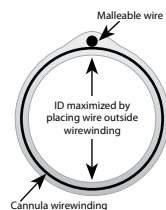
12-15 in (30.5 - 38.1 cm) overall length

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 ⅜ 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)
Connection site ½ in (1.27 cm)	
68136	36 Fr (12.0 mm)
68138	38 Fr (12.7 mm)
68140	40 Fr (13.3 mm)

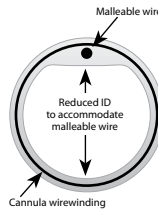
10 per carton



Medtronic DLP® Malleable Single Stage Venous Cannula



Competitive Product



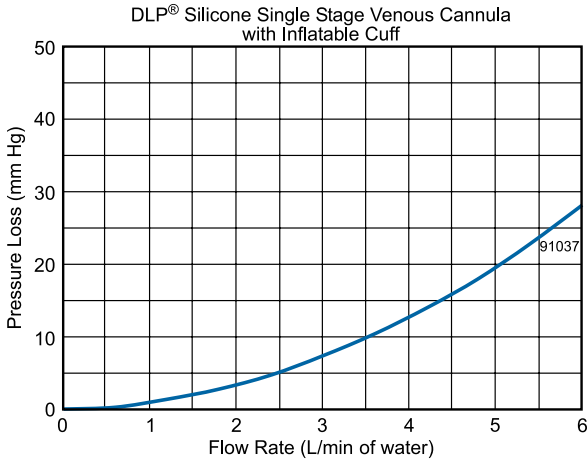
The malleable single stage venous cannulae allow the surgeon to manipulate the cannula shape into virtually any position.

Important Safety Information

For a listing of indications, contraindications, precautions and warnings, please refer to the Instructions for Use. 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 silicone, kink resistant, wirewound body with an inflatable cuff.



15 in (38.1 cm) overall length

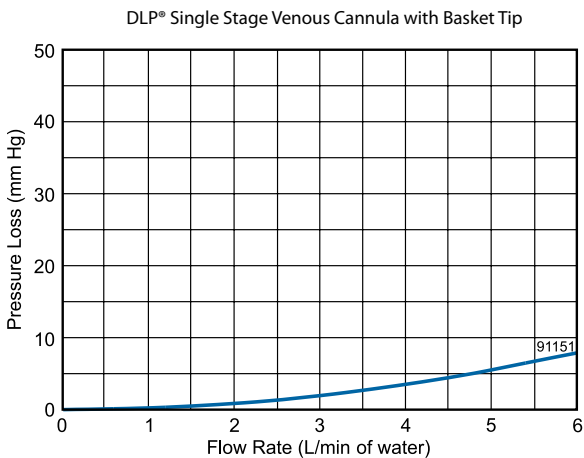
Connection site 3/8 in (1.27 cm)

91037 37 Fr (12.3 mm)

4 per carton

DLP® Single Stage Venous Cannulae with Atrial Basket Tip

This cannula features a non-wirewound body with an atrial basket. This design maximizes venous drainage flow rates.



15.5 in (39.4 cm) overall length

Connection site 1/2 in (1.27 cm)

91151 51 Fr (17.0 mm)

10 per carton

Important Safety Information

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

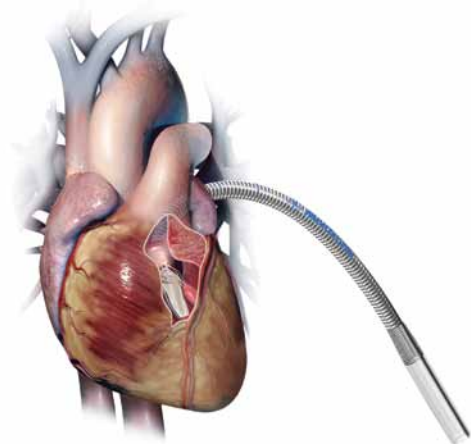
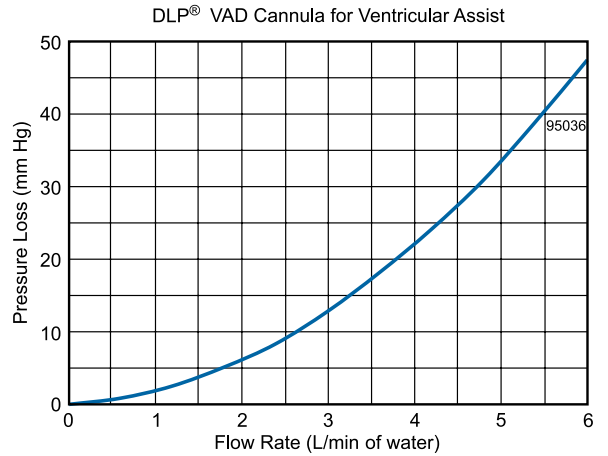
DLP® VAD Cannula for Ventricular Assist

This cannula is suited for left or right atrial cannulation. Features include a kink resistant, wirewound body with a radiopaque, right angle, swirl tip. This design maximizes continuous drainage flow rates and minimizes collapsing around the tip.



14 in (35.6 cm) overall length

Connection site $\frac{3}{8}$ in (0.95 cm)	
95036	36 Fr (12.0 mm)
10 per carton	

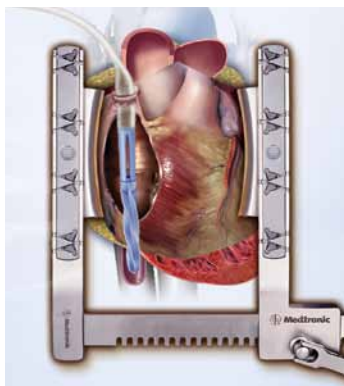
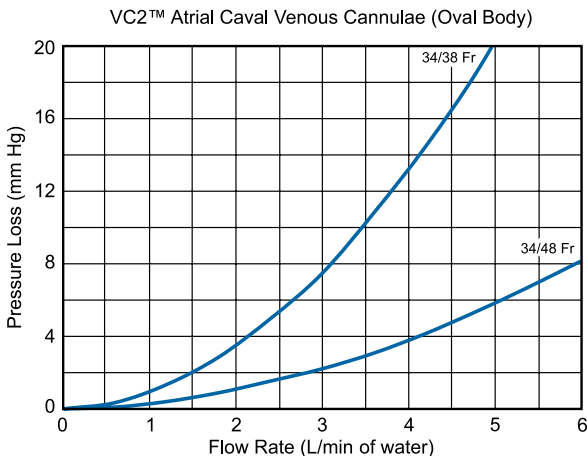
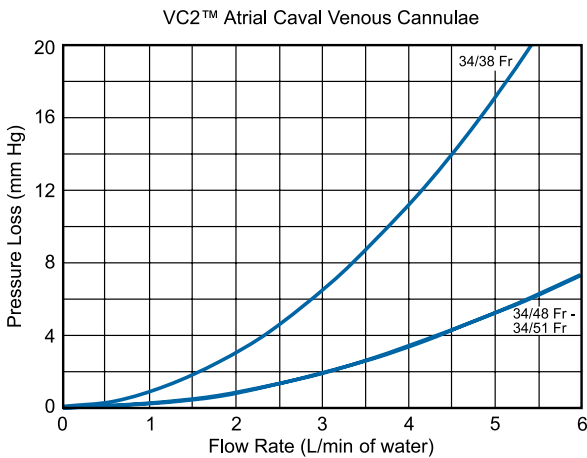


Important Safety Information

For a listing of indications, contraindications, precautions and warnings, please refer to the Instructions for Use. Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

VC2™ Atrial Caval Venous Cannulae

These cannulae feature a patented swirl tip and large slotted atrial basket with either a non-wirewound or kink resistant, wirewound body. The soft pliable swirl tip creates a stent-like action to promote continuous flow and minimize “chatter.” The oval body models have a unique, low profile body, which provides the needed drainage while taking up less space in the surgical field. Depth markings assist with positioning of the cannulae.



15 in (38.1 cm) overall length

Non-wirewound body	
Connection site ½ in (1.27 cm)	
93451	34/51 Fr (11.3/17.0 mm)
Wirewound body	
Connection site ¾ in (0.95 cm)	
93438	34/38 Fr (11.3/12.7 mm)
Wirewound body	
Connection site ½ in (1.27 cm)	
93448	34/48 Fr (11.3/16.0 mm)
Wirewound body, non-vented	
½ 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 ¾ in (0.95 cm)	
93463	34/38 Fr (11.3/12.7 mm)
Oval wirewound body	
Connection site ½ in (1.27 cm)	
93464	34/48 Fr (11.3/16.0 mm)
Oval wirewound body, non-vented	
½ 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

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

MC2® Two Stage Venous Cannulae

These cannulae feature kink resistant, wirewound bodies with multi-port tips and atrial baskets. This construction allows for high flow rates with minimal pressure differential. The oval body models have a unique, low profile body that provides needed drainage while taking up less space in the surgical field. Depth markings assist with positioning of the cannulae.



15 in (38.1 cm) overall length

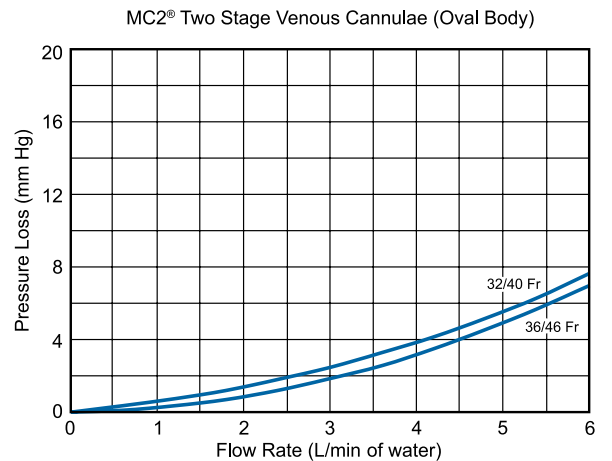
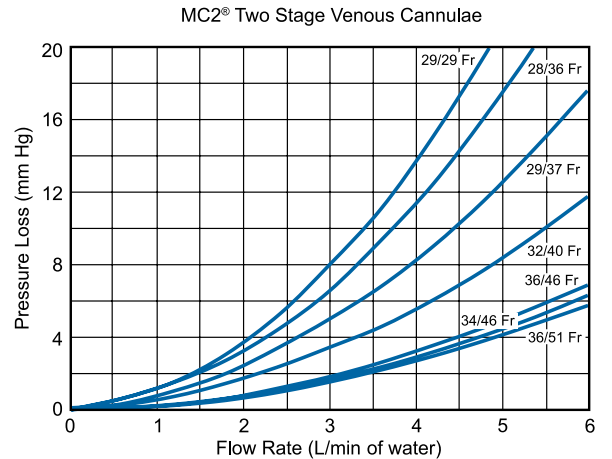
Connection site 3/8 in (0.95 cm)	
91228	28/36 Fr (9.3/12.0 mm)
Connection site 1/2 in (1.27 cm)	
91236	36/46 Fr (12.0/15.3 mm)
91240	32/40 Fr (10.7/13.3 mm)
91246	34/46 Fr (11.3/15.3 mm)
91251	36/51 Fr (12.0/17.0 mm)
Non-vented 1/2 in (1.27 cm) connector	
91228C	28/36 Fr (9.3/12.0 mm)
91236C	36/46 Fr (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 site 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	



Larger end hole of the MC2X® allows for better flow opportunity

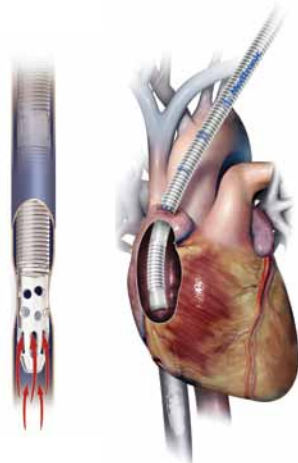


Important Safety Information

For a listing of indications, contraindications, precautions and warnings, please refer to the Instructions for Use. Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

MC2X® Three Stage Venous Cannulae

The MC2X® thin wall cannula is designed to optimize vacuum or kinetically assisted venous drainage.



15 in (38.1 cm) overall length

Connection site 3/8 in (0.95 cm)

91429	29/29/29 Fr (9.7/9.7/9.7 mm)
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Non-vented 3/8 in (0.95 cm) connector

91429C	29/29/29 Fr (9.7/9.7/9.7 mm)
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10 per carton



15.5 in (39 cm) overall length

Connection site 3/8 in (0.95 cm)

91437	29/46/37 Fr (9.7/15.3/12.3 mm)
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Non-vented 3/8 in (0.95 cm) connector

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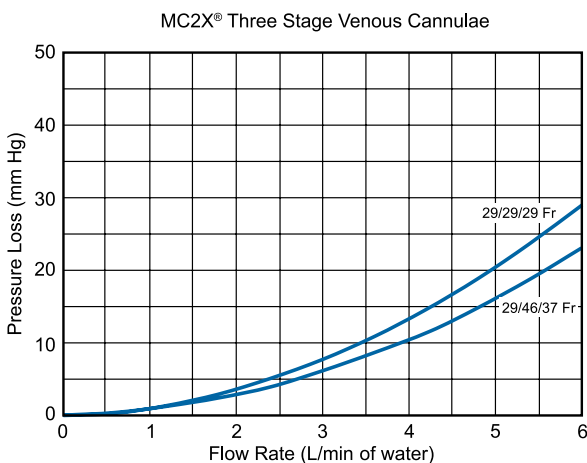
10 per carton

Thinner Wall Design



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

MC2X® has 31% thinner walls for a larger inner diameter when compared to competitive cannula



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

Ultraflex® Venous Cannulae

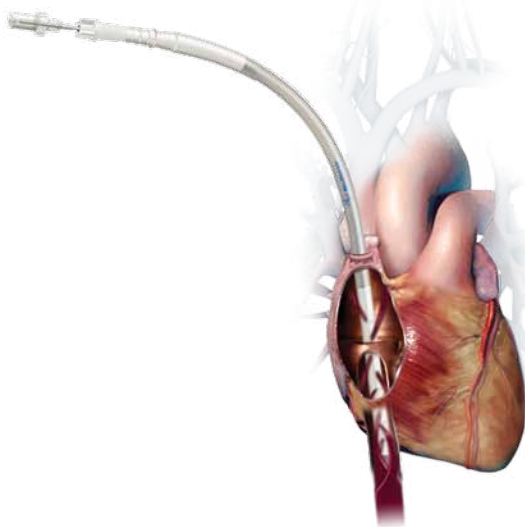
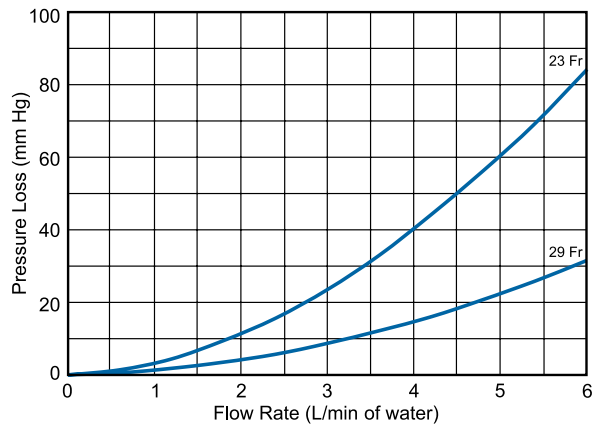
The Ultraflex® cannula is constructed of a polyurethane wirewound body with radiopaque stripes and multiple side holes at the distal tip. A malleable introducer is included to assist with introduction and positioning of the cannula.



17 in (43.2 cm) overall length

Non-vented 3/8 in (0.95 cm) connector	
97023	23 Fr (7.7 mm)
97029	29 Fr (9.7 mm)
10 per carton	

Ultraflex® Venous Cannulae



Important Safety Information

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

Cardioplegia Circuit Products {ANTEGRADE}

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™ 43

- DLP® Dual Lumen Aortic Root
with Vent Line 43

- DLP® Aortic Root 44

- DLP® Aortic Root with Vent Line 45

- DLP® Cardioplegia Needles 46

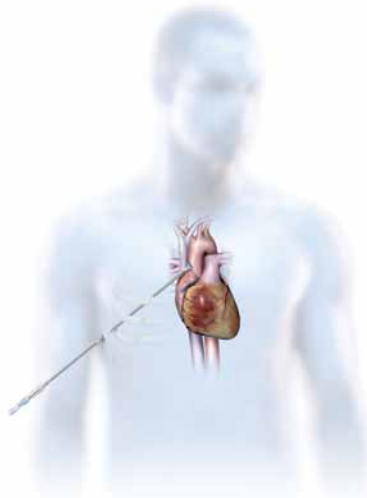
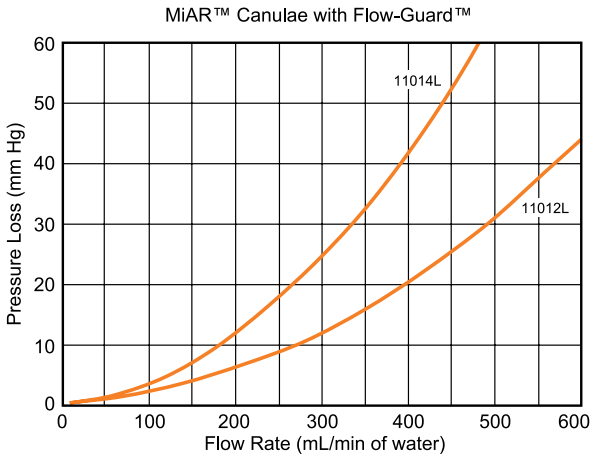
- DLP® Silicone Coronary Artery Ostial 46

- DLP® Coronary Artery Ostial 47

- DLP® High Flow Coronary Artery Ostial 48

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

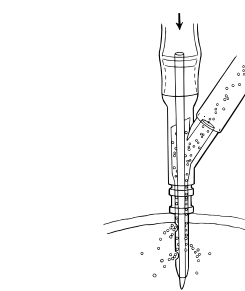
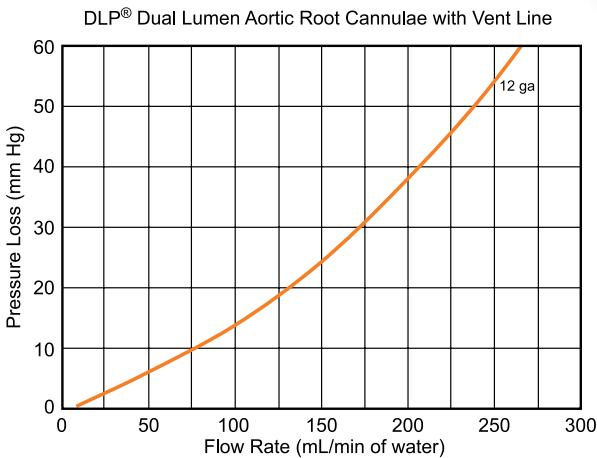
Standard tip and Flow-Guard™ introducer

11012L	12 ga (9 Fr)
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.



Dual Lumen Aortic Root Application Detail

3.25 in (8.3 cm) overall length

Standard tip

30401	12 ga (9 Fr)
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Flanged tip

30402	12 ga (9 Fr)
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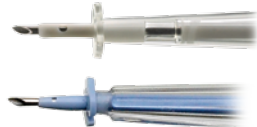
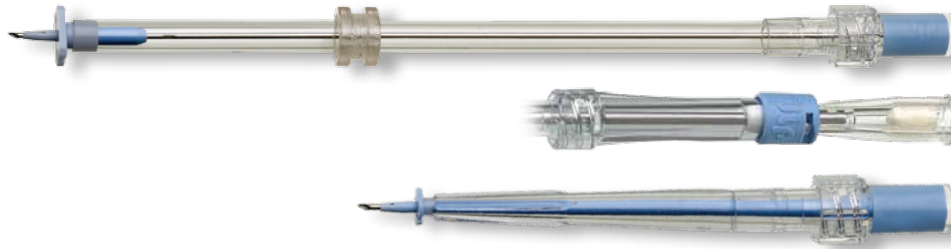
10 per carton

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. Additional care and caution may be necessary due to the unique adaptations required for minimally invasive techniques. 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.



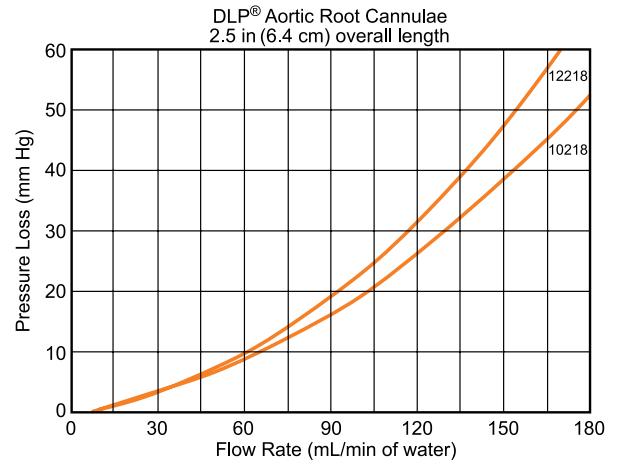
2.5 in (6.4 cm) overall length

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	



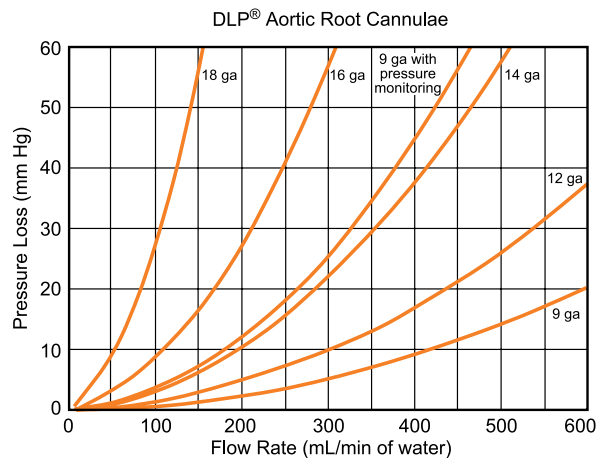
5.5 in (14.0 cm) overall length

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)
Standard tip and Flow-Guard™ introducer	
11012	12 ga (9 Fr)
11014	14 ga (7 Fr)
20 per carton	



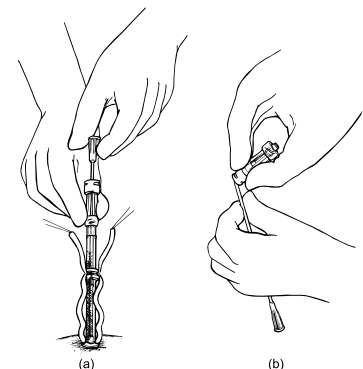
5.75 in (14.6 cm) overall length

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

Pressure monitoring tip and standard introducer	
23009	9 ga (11 Fr)
20 per carton	



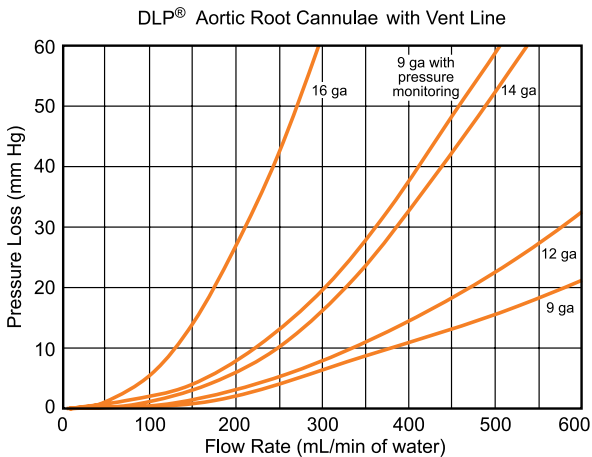
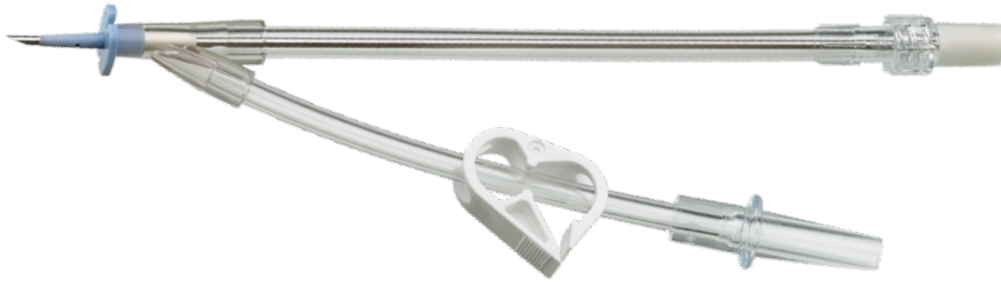
(a) (b)
Flow-Guard Introducer Application Detail

Important Safety Information

For a listing of indications, contraindications, precautions and warnings, please refer to the Instructions for Use. Care should be taken when inserting the needle to prevent perforation of the back wall of the aorta.

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

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)

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

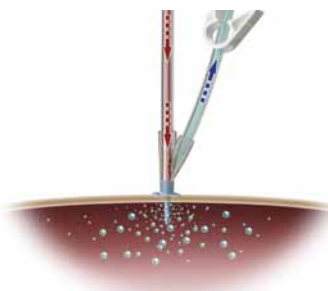
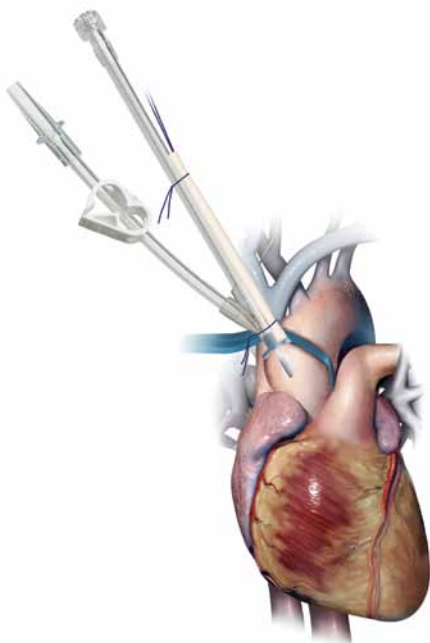


5.25 in (13.3 cm) overall length

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. 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)
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)
20 per carton	

DLP® Silicone Coronary Artery Ostial Cannulae

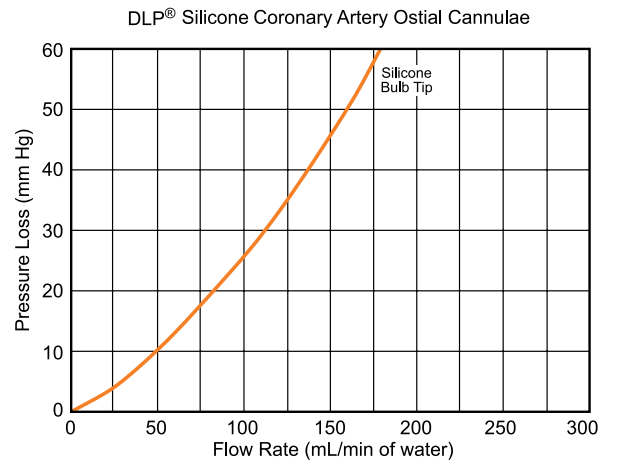
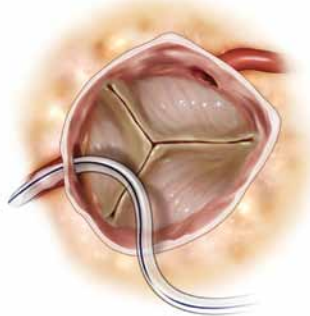
These cannulae feature silicone bodies with soft bulb shaped tips. All cannulae have a female luer connection site.



10 in (25.4 cm) overall length

30315	15 Fr (5.0 mm) bulb
30317	17 Fr (5.7 mm) bulb
30320	20 Fr (6.7 mm) bulb
10 per carton	

Intracoronary cardioplegia

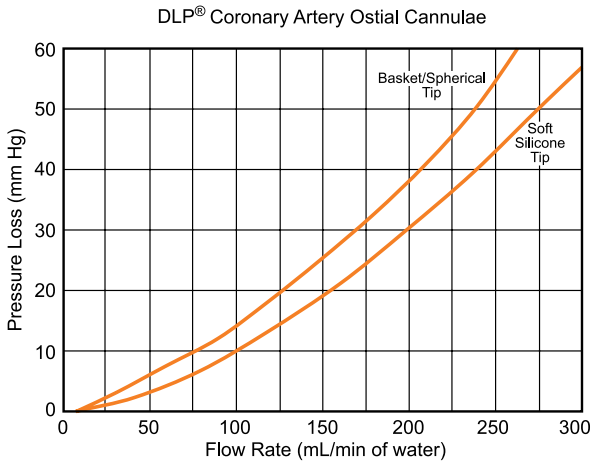


Important Safety Information

For a listing of indications, contraindications, precautions and warnings, please refer to the Instructions for Use. Care should be taken when inserting the needle to prevent perforation of the back wall of the aorta.

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



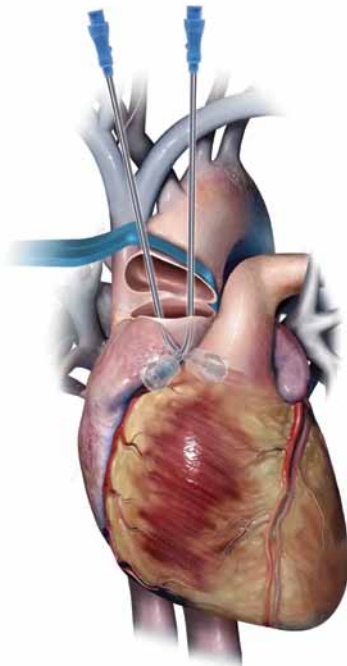
6 in (15.2 cm) overall length

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. 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)
10 per carton	



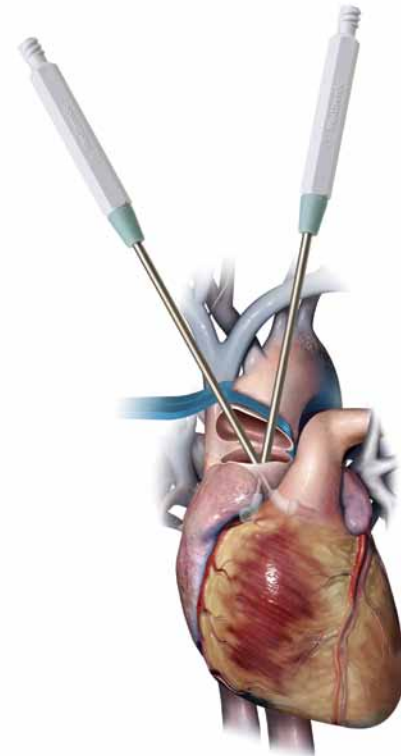
7.5 in (19.1 cm) overall length

45° angle tip	
30212	12 Fr (4.0 mm)
10 per carton	

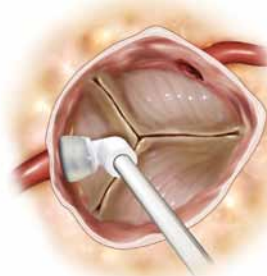


7.5 in (19.1 cm) overall length

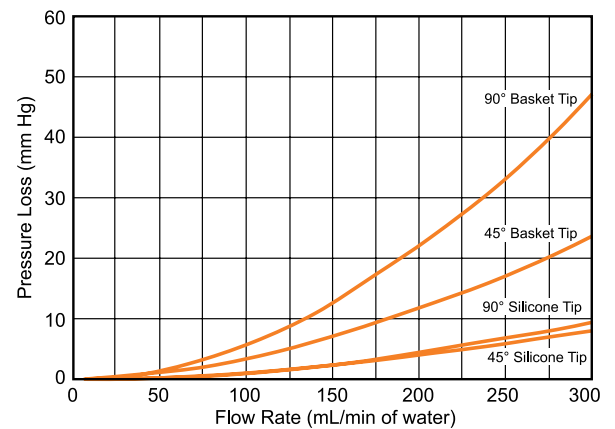
45° angle soft silicone tip	
30255	10 Fr (3.3 mm)
10 per carton	



Ostial antegrade cardioplegia



DLP® High Flow Coronary Artery Ostial 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. Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.

Cardioplegia Circuit Products {RETROGRADE}

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® 51

Gundry® Silicone with Manual-Inflate Cuff 52

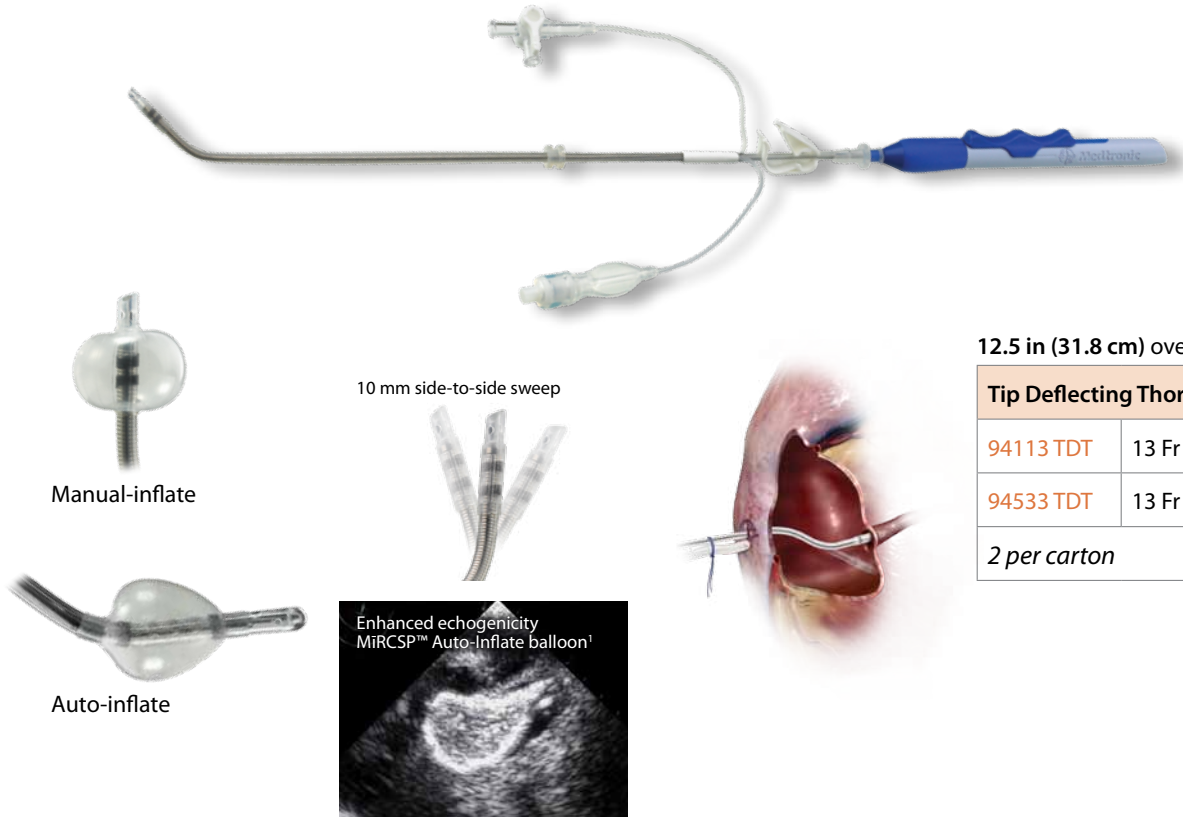
DLP® Silicone with Manual-Inflate Cuff..... 53

DLP® Silicone with Auto-Inflate Cuff 55

DLP® PVC with Auto-Inflate Cuff 56

MiRCSP® Cannulae

The MiRCSP cannula is a retrograde cardioplegia cannula for cardiac surgeons who seek to differentiate themselves through use of less invasive valve procedures performed through small thoracic incisions. Unlike traditional retrograde coronary sinus perfusion cannulae, the new 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.

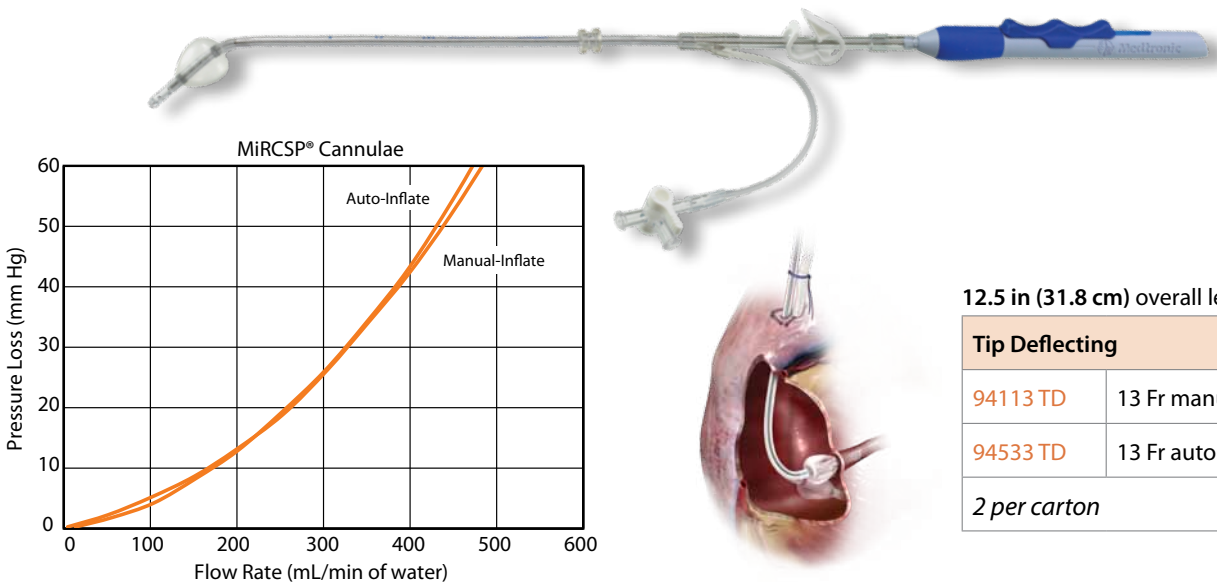


12.5 in (31.8 cm) overall length

Tip Deflecting Thoracotomy

94113 TDT	13 Fr manual-inflate cuff
94533 TDT	13 Fr auto-inflate cuff

2 per carton



12.5 in (31.8 cm) overall length

Tip Deflecting

94113 TD	13 Fr manual-inflate cuff
94533 TD	13 Fr auto-inflate cuff

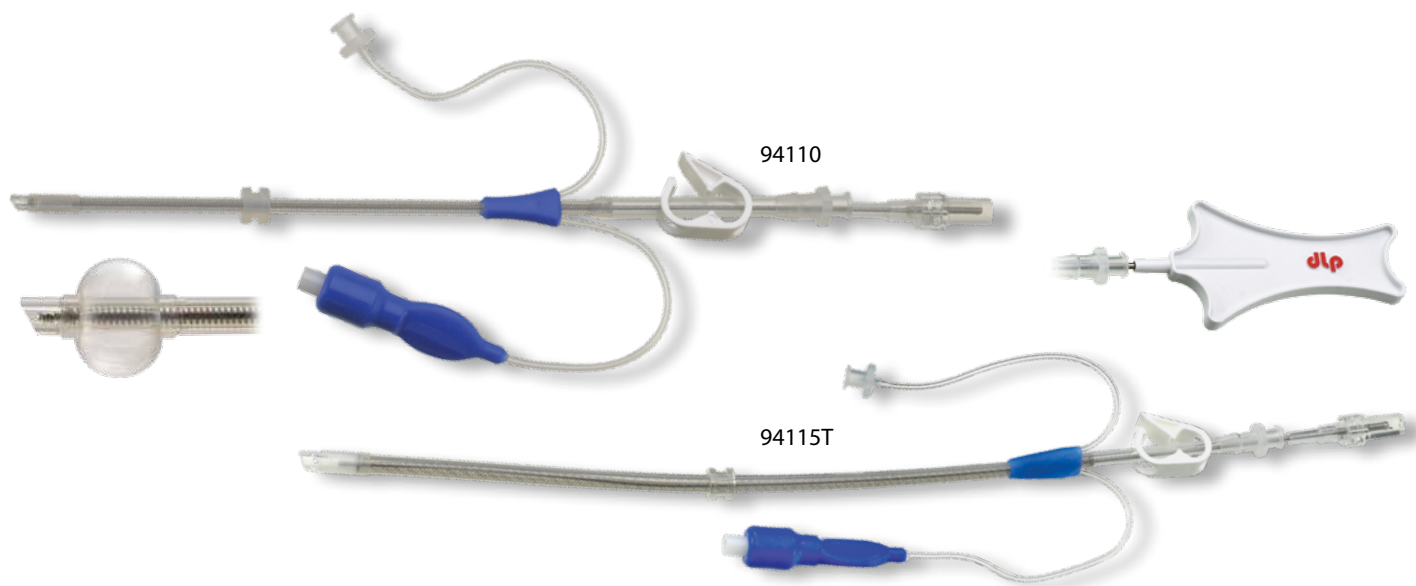
2 per carton

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. 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

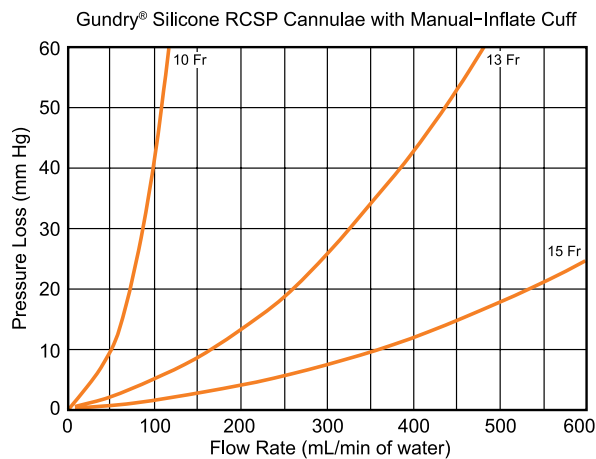
Smooth cuff and wirewound body	
94110	10 Fr (3.3 mm) guidewire stylet
4 per carton	

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
10 per carton	
94615	15 Fr (5.0 mm) guidewire stylet
4 per carton	
94715	15 Fr (5.0 mm) guidewire stylet with Tru-Touch® handle
10 per carton	

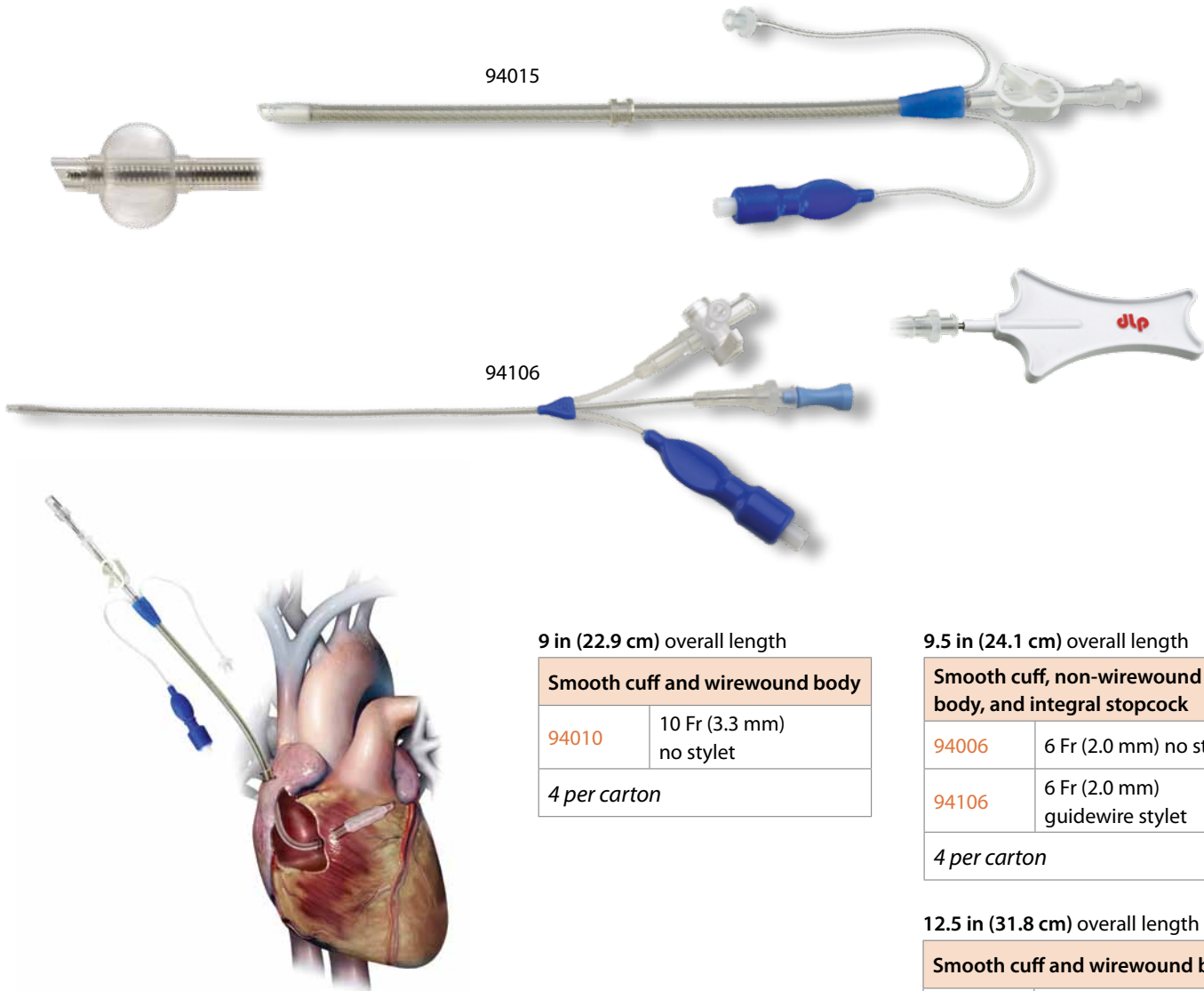


Important Safety Information

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.

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
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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
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94106	6 Fr (2.0 mm) guidewire stylet
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4 per carton

12.5 in (31.8 cm) overall length

Smooth cuff and wirewound body

94015	15 Fr (5.0 mm) no stylet
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4 per carton

94215T	15 Fr (5.0 mm) solid stylet
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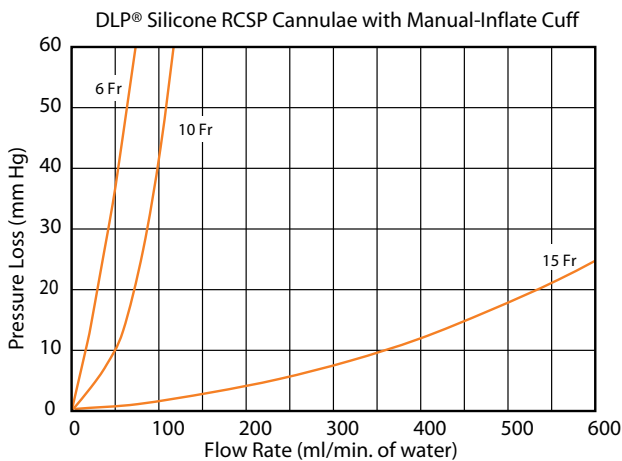
10 per carton

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
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10 per carton

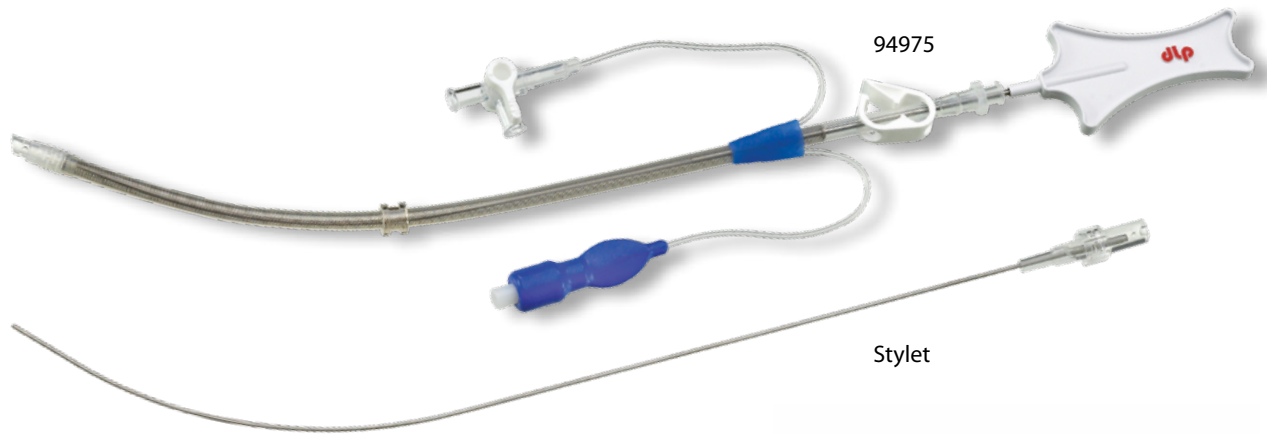


Important Safety Information

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.

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 is 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

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

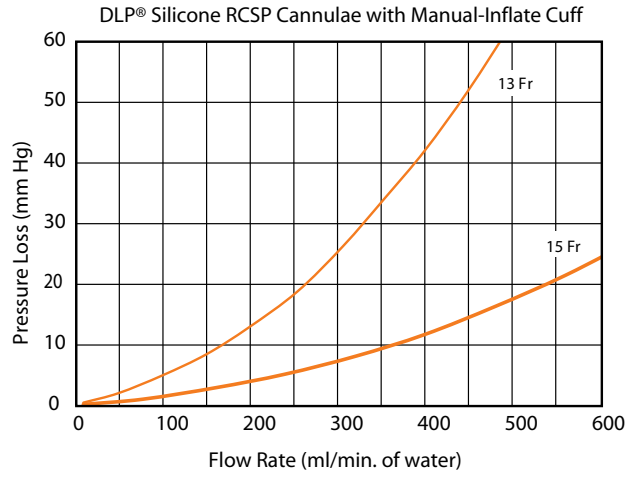
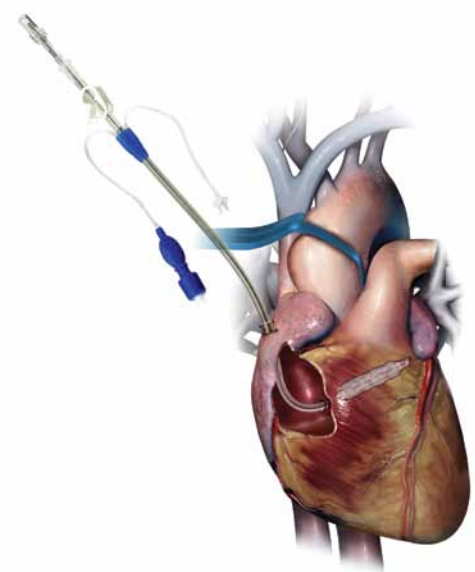


12.5 in (31.8 cm) overall length

Elongated cuff, wirewound body, and integral stopcock

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

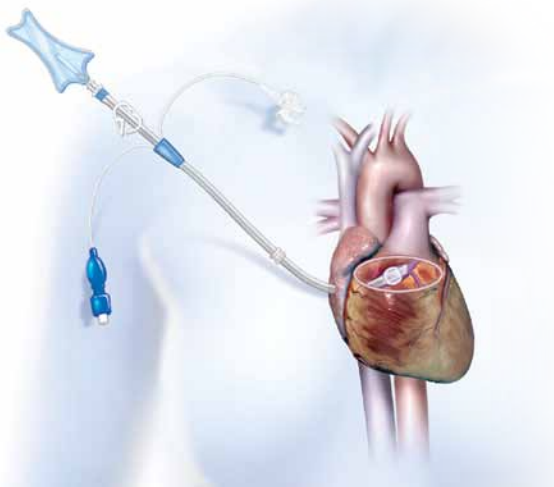
10 per carton



Important Safety Information
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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 is available.

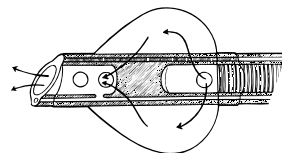
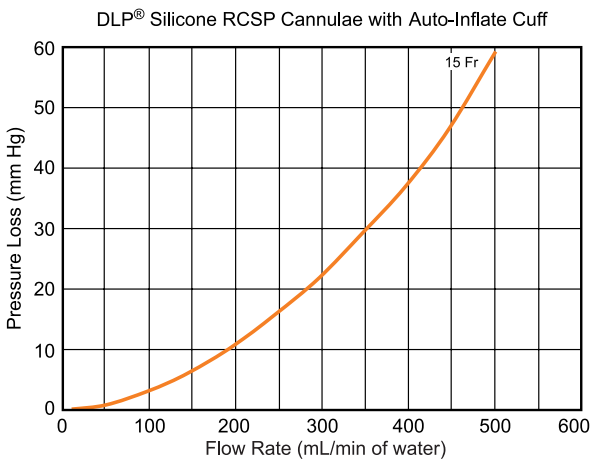


12.5 in (31.8 cm) overall length

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-Inflate Cuff Flow Detail

Silicone auto-inflating cuffs offer the convenience of cuff inflation without the need for a syringe. These cuffs' 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. This system 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.

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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 is available.



10 in (25.4 cm) overall length

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

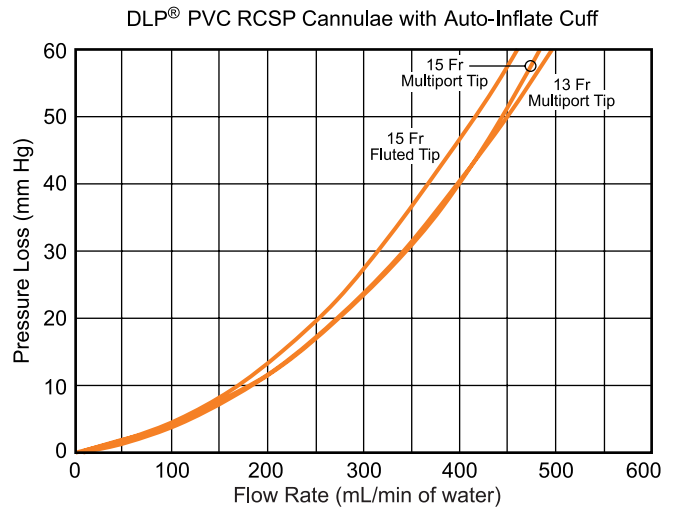
94885K	15 Fr (5.0 mm) solid stylet with Tru-Touch® handle
10 per carton	



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 Tru-Touch® handle
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

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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 is available.

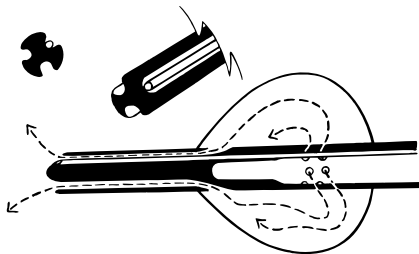


12 in (30.5 cm) length

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) length

Smooth preformed cuff, 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	



12.5 in (31.8 cm) length

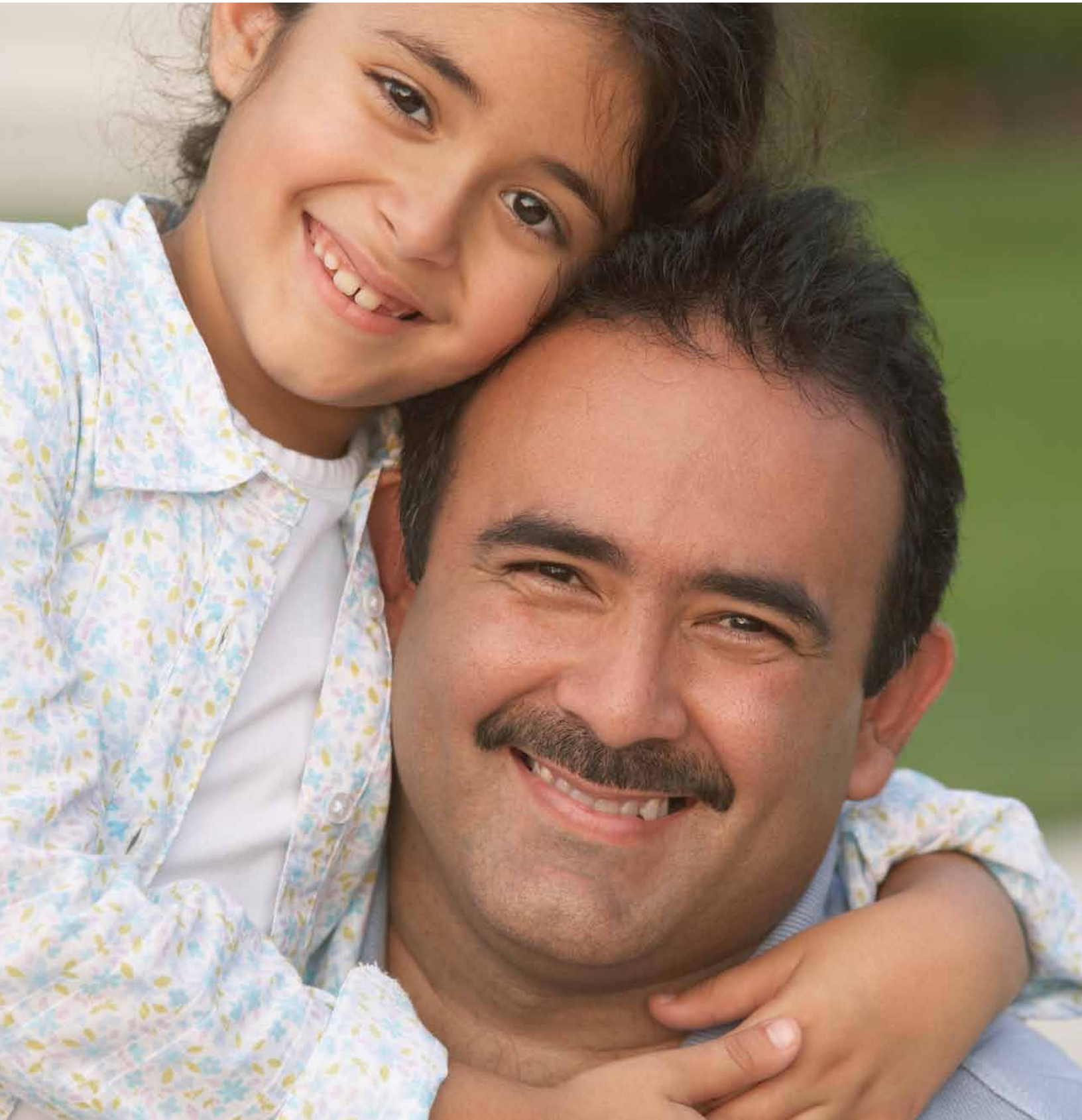
Ridged preformed silicone cuff, short fluted, bullet nosed tip, and integral stopcock	
94935	15 Fr (5.0 mm) solid stylet with Tru-Touch® handle
94945	15 Fr (5.0 mm) guidewire stylet
10 per carton	

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Cardioplegia Circuit Products {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 61
- DLP® Perfusion / Venting 61
- DLP® Extension Line 62
- DLP® Pressure Monitoring Extension Line 62
- DLP® Straight Venting 62
- DLP® “Y” Type Venting 62
- DLP® “Y” Type Recirculating 63
- DLP® “Y” Type Coronary Perfusion 63
- DLP® “Y” Type Special 64
- DLP® “Y” Type 64
- DLP® Vein Graft Cannulae 65
- DLP® Emergency Shunt Kit 66
- ARISS® Perfusion Switches 67
- ARISS® Accessories 67
- DLP® Cardioplegia Management Set 68
- DLP® Antegrade / Retrograde 68
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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, warnings, and cautions. 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. 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) length

Male and winged female luers	
11001	without clamp
10 per carton	

20 in (50.8 cm) length

Male and winged female luers	
11001G	with clamp
20 per carton	

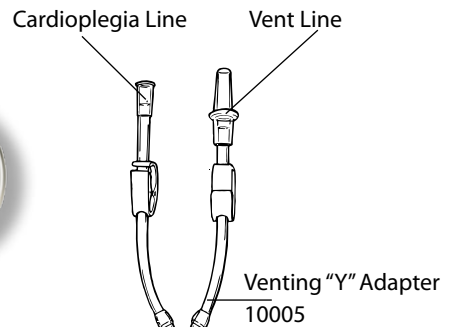


DLP® Pressure Monitoring Extension Line Adapters

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
25010	male x male luers
20 per carton	

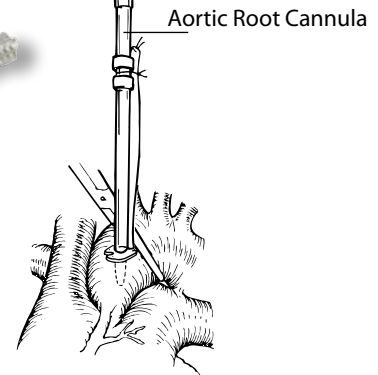


DLP® Straight Venting Adapters

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 luer	
10001	with vented ¼ in connector
10001K	with vented ¼ in connector and clamp
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
10533	15.5 in (39.2 cm) overall length with 11 in (28 cm) inlet leg and color coded clamps
10534	8.5 in (21.6 cm) overall length with one-way valve in vent line and color coded clamps
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

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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

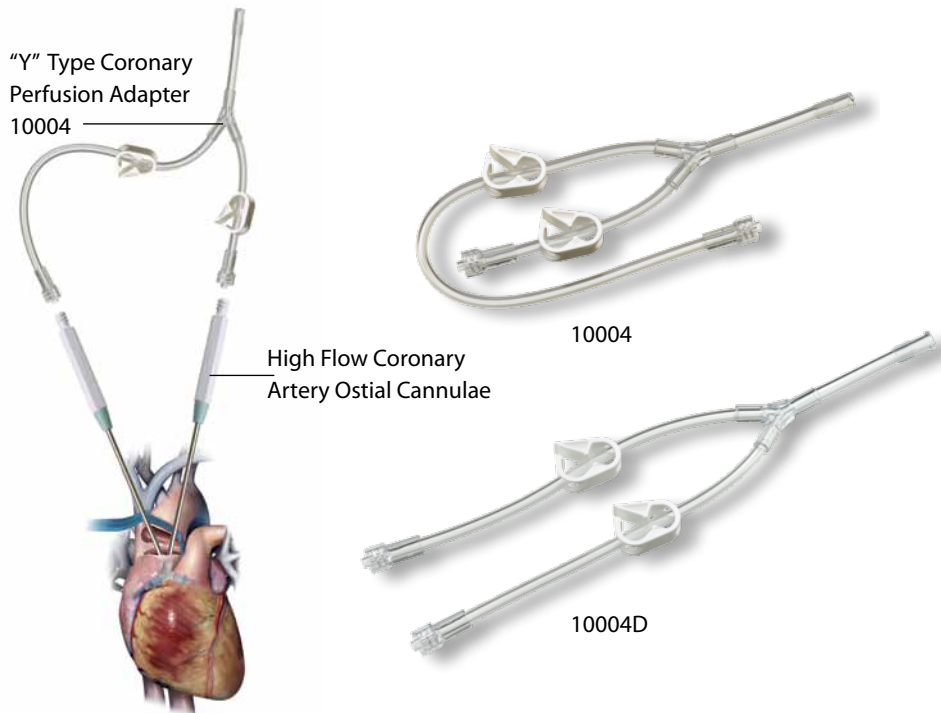
Male luer on single leg	
10003	color coded clamps
10003OS	white clamps with color coded arrows
20 per carton	

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.



“Y” Type Coronary Perfusion Adapter
10004

High Flow Coronary Artery Ostial Cannulae

10004

10004D

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	

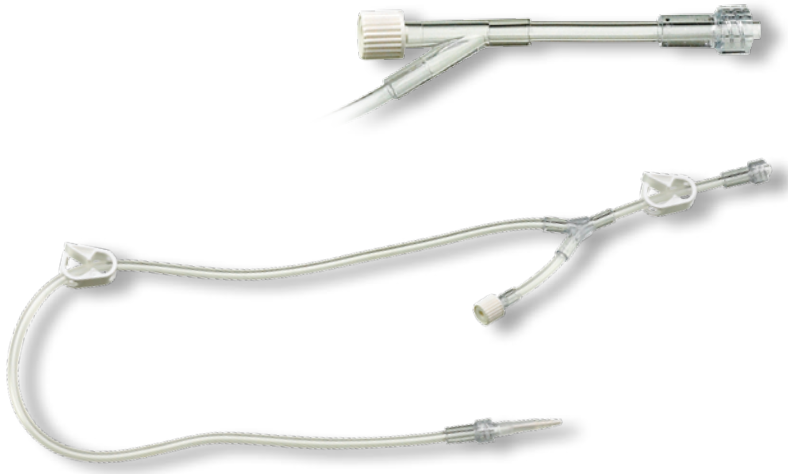


Important Safety Information

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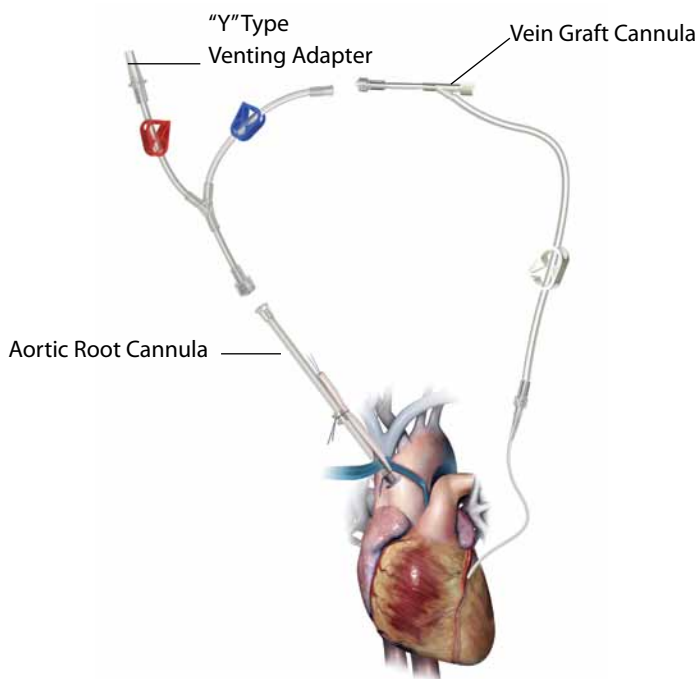
DLP® Vein Graft Cannulae

These products feature a soft silicone tip with graduated steps to fit any vessel. These tips are attached to “Y” adapters via tubing with clamps. The “Y” adapters terminate 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 luer leg
10011	“Y” adapter with female luer and white clamp on single inlet leg and white clamp on male luer leg
20 per carton	



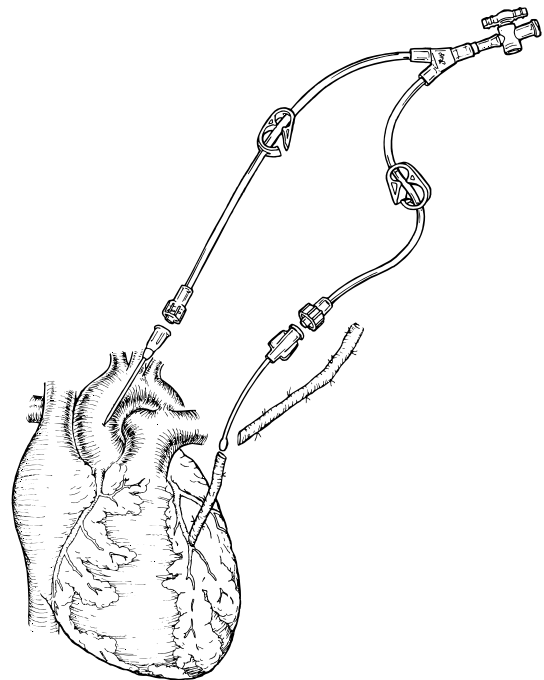
The combination of a Vein Graft Cannula and an Aortic Root Cannula also provides a way to perfuse the aortic root and vein graft. In this case the vein graft must be held with the fingers and not tied.

Important Safety Information

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DLP® Emergency Shunt Kit

This product is 12 in (30.5 cm) in length and features a stopcock attached to a “Y” adapter with two legs including clamps and terminating with male luers.



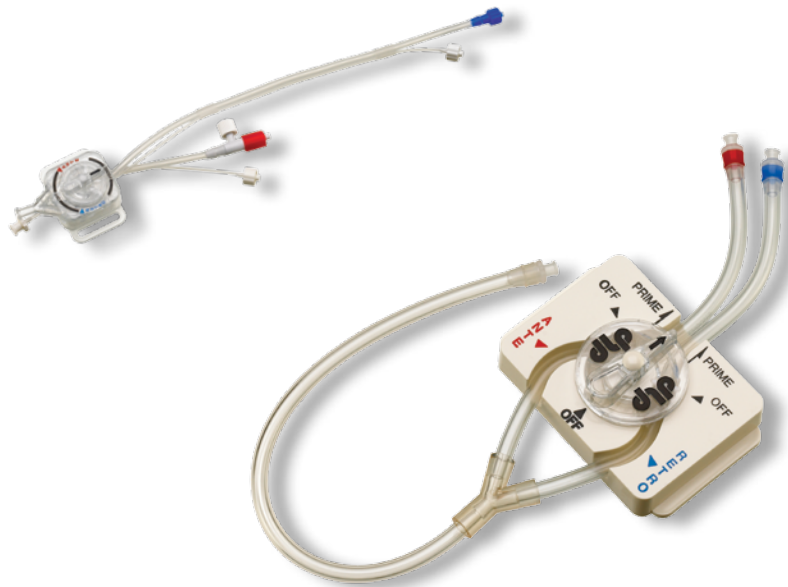
Kit Information	
33234	
1 each	shunt
2 each	2 mm arteriotomy cannulae
2 each	3 mm arteriotomy cannulae
2 each	4 mm arteriotomy cannulae
1 each	14 ga IV catheter
5 kits per carton	

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ARISS® Perfusion Switches

These products allow the surgeon or perfusionist to switch between antegrade and retrograde cardioplegia delivery. A table mounted version and pump mount version are available. The switches feature female luers on the inlet ports and male luers on the outlet ports. The table mount versions have pressure monitoring lines that run alongside the inlet and outlet ports. 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	

22.5 in (57.2 cm) overall length

Pump mount model	
13051	for use with models 13055 & 13060
5 per carton	

ARISS® Accessories

These products are for use with only the model 13051 ARISS Perfusion Switch.



8 ft (2.44 m) overall length

Perfusate delivery tubing set	
13055	for use with model 13051
5 per carton	

Mounting bracket	
13060	for use with model 13051
1 per carton	

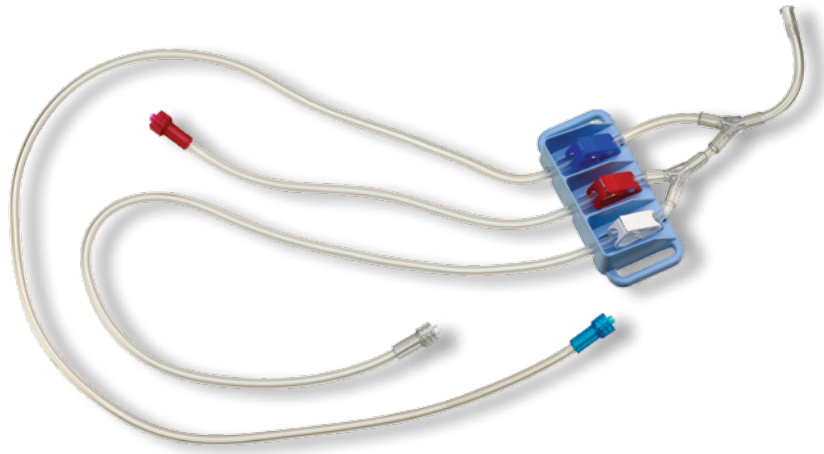
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DLP® Cardioplegia Management Set

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
10 per carton	

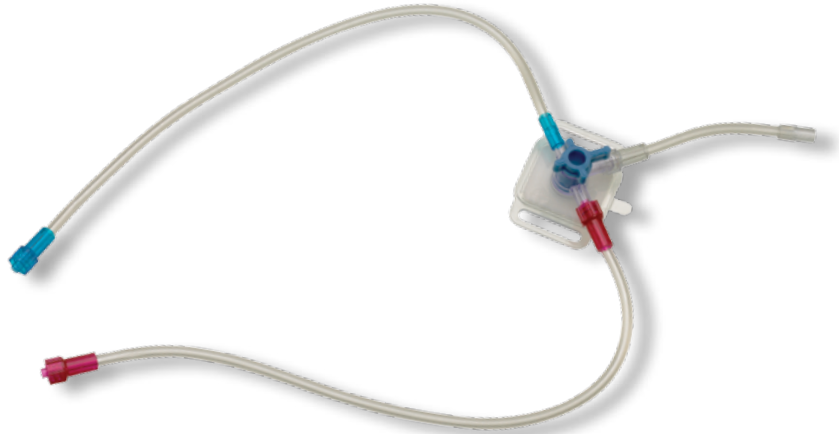


DLP® Antegrade/Retrograde Adapter

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	



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	



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Cardioplegia adapter devices are a combination of products that have their own indications, warnings, and cautions. 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.

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

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

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) length stiff tubing and red clamps

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

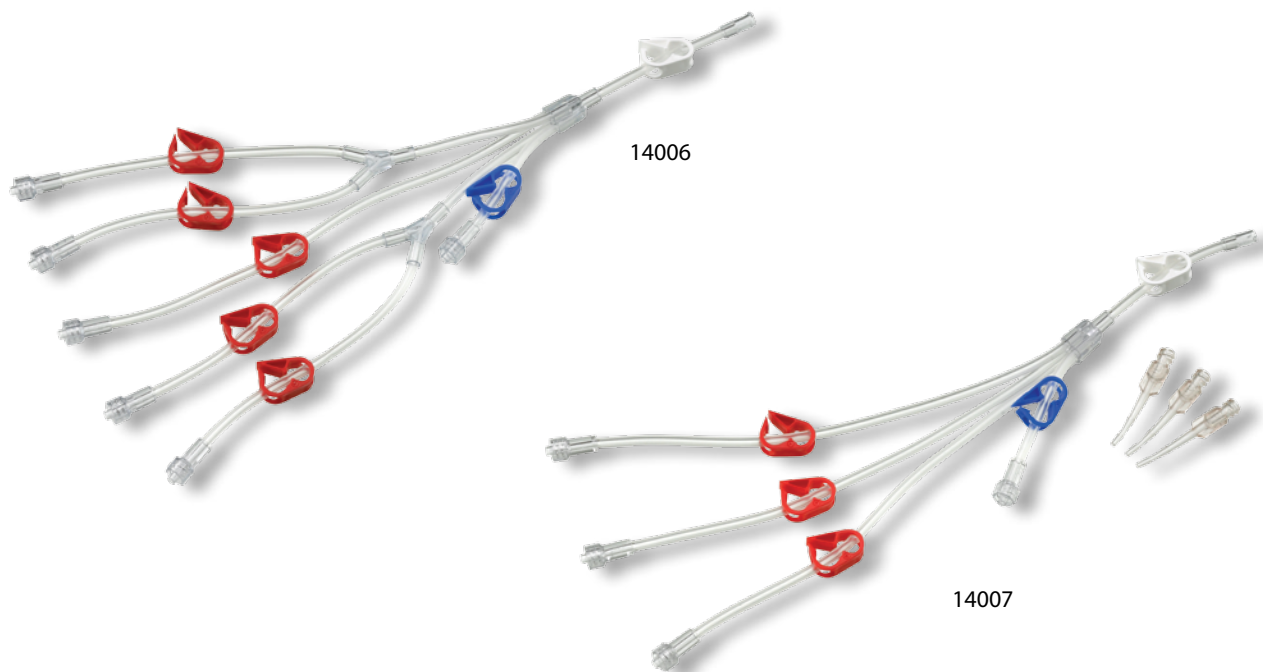
10 per carton

Important Safety Information

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



15 in (38.1cm) 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	

Important Safety Information

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Suction Circuit and Surgical Accessories {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 product to meet your specific needs.



SUCTION CIRCUIT

- DLP® Cardiac Suction Tubes 73

- DLP® Intracardiac Suction Tubes 73

- DLP® Rigid Suction Tubes 74

- DLP® Pericardial Sumps 75

- DLP® Pericardial / Intracardiac Sumps 75

- DLP® Intracardiac Sumps 75

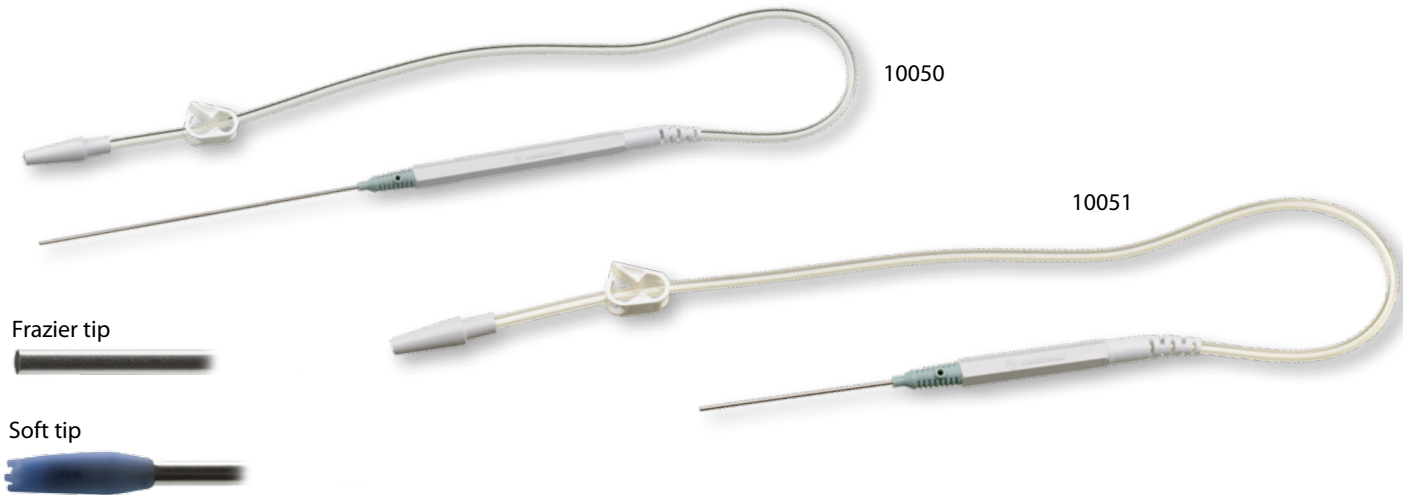
- DLP® Pulmonary Artery Vent Cannulae 76

- DLP® Aortic Air Aspirating Needle 76

- DLP® Left Heart Vent Catheters 77

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 can be shaped to the surgeon's preference, and is 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 can be shaped to the surgeon's preference, and has a perforated pool tip to maximize suction and minimize tissue trauma. 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)
20 per carton	

Important Safety Information

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 has a fluted pool tip to maximize suction and minimize tissue trauma. The Mini Sucker has a soft, vented tip designed to clear blood from the anastomotic 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

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

DLP® Pericardial Sumps

These sumps feature a fluted tip, which 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) ⅛ in (0.32 cm) connector
20 per carton	

DLP® Pericardial/Intracardiac Sumps

This sump features a weighted perforated pool tip to maximize suction and minimize tissue trauma. The tip design is ideal for atraumatic suction within the heart chambers. The perforated tip is attached to tubing which terminates with a ¼ in (0.64 cm) connector.

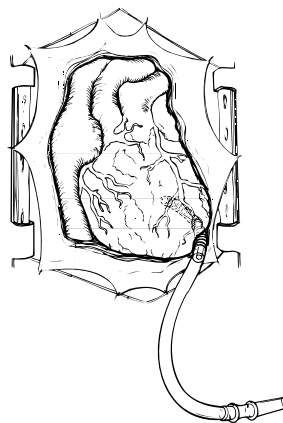


15 in (38.1 cm) overall length

Weighted tip	
12112	20 Fr (6.7 mm)
20 per carton	

DLP® Intracardiac Sumps

These sumps feature a perforated pool tip to maximize suction and minimize tissue trauma. The tip design is ideal for atraumatic suction within the heart chambers. These sumps are available in pediatric and adult sizes. The perforated tip is attached to tubing, which 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

Caution: Federal law (USA) restricts this device to sale by or on the order of a physician. The Pericardial Sumps (models 12010 and 12011) are not intended to be placed through a valve to drain a closed cardiac chamber.

DLP® Pulmonary Artery Vent Cannulae

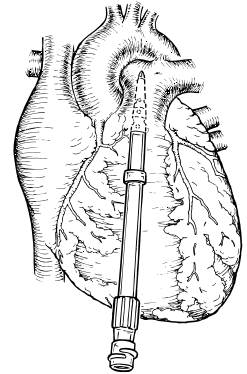
This cannula is used to empty the left atrium via the pulmonary vasculature. It features a soft, pliable tip and terminates with a female luer. An introducer needle is included for easy introduction and placement. A movable depth marker is included on the body of the cannula.



6 in (15.2 cm) overall length

12004	16 Fr (5.3 mm) (12 holes in tip)
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20 per carton



DLP® Aortic Air Aspirating Needle

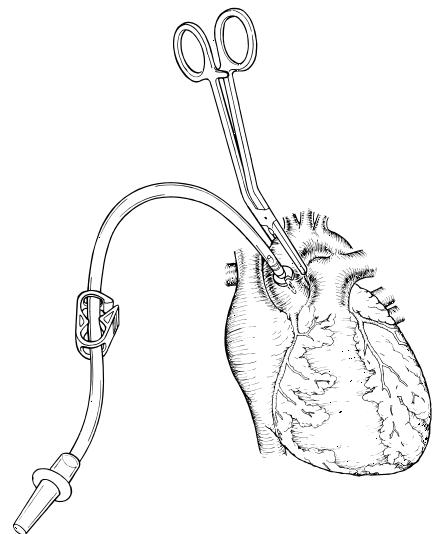
This needle features a stainless steel needle with two side slots and flange. The needle is attached to soft, flexible tubing with a clamp and terminates with a ¼ in (0.64 cm) connector. This product is used for aspirating air from the ascending aorta.



11.5 in (29.2 cm) overall length

12006	16 ga (5 Fr)
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20 per carton



Important Safety Information

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

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, and 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)
12118	18 Fr (6.0 mm) (11 holes in tip)
20 per carton	

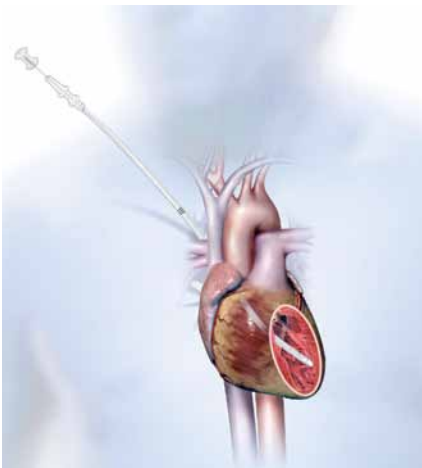
PVC 17 in (43.2 cm) overall length

Integrated pressure monitoring lumen and ⅜ in barbed connector	
12524	24 Fr (8.0 mm) (6 holes in tip)
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)
12002	20 Fr (6.7 mm) (24 holes in tip)
Non-vented connector and preformed introducer	
12220	20 Fr (6.7 mm) (24 holes in tip)
20 per carton	



Important Safety Information

Caution: Federal law (USA) restricts this device to sale by or on the order of a physician. The degree of suction should be monitored to reduce the possibility of air embolism and over-distention of the left ventricle.

Suction Circuit and Surgical Accessories {SURGICAL SUPPORT}

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



SURGICAL SUPPORT

- DLP® Arterial Vent Plugs 81
- DLP® Tourniquet Sets 82
- TourniKwik™ Tourniquet Sets 83
- Sure-Snare™ Tourniquet Sets..... 83
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DLP® Arterial Vent Plugs

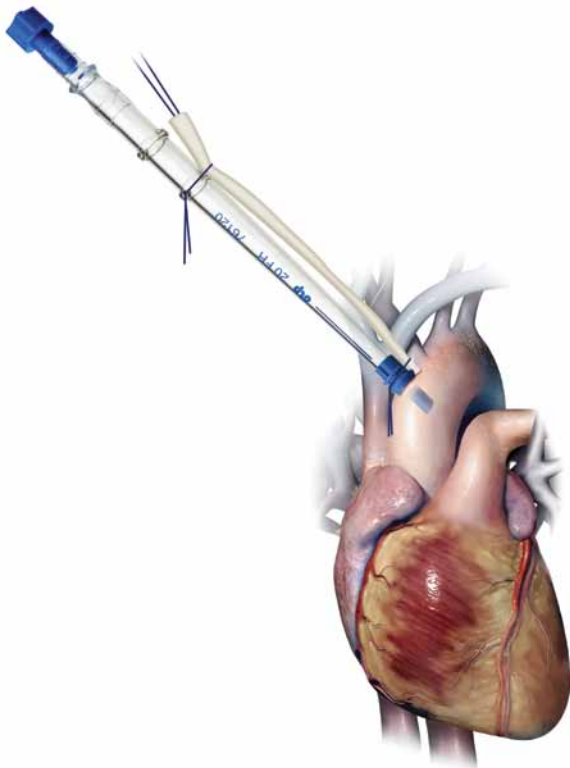
These plugs are designed to fit into the connection site and/or connectors found on the arterial cannulae listed in this catalog. A slotted vent plug is designed for use with cannulae without connectors, while the porous vent plug is designed to work with cannulae with connectors.



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	



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

DLP® Tourniquet Sets

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

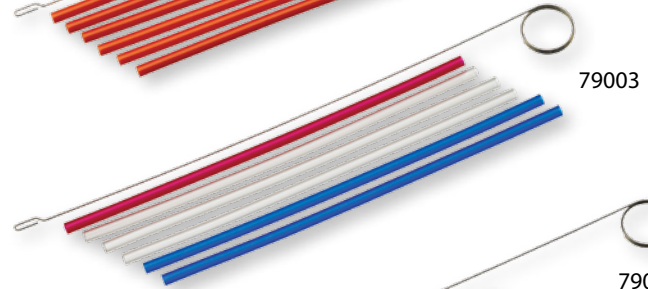
Standard sets

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)
40 sets per carton	

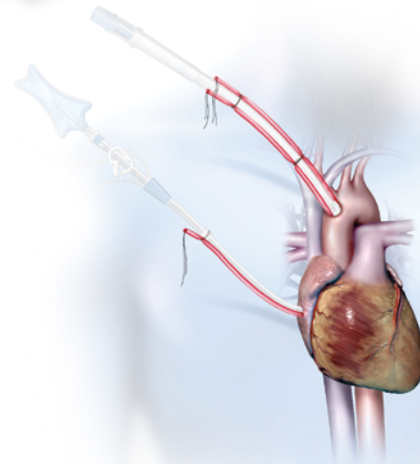


79003

Tube length of 7 in (17.8 cm)	
79004	12 Fr. (1 - red, 1 - blue, 1 - snare)
79006	12 Fr. (1 - red, 1 - blue, 3 - clear, 1 - snare)
79019	12 Fr. (1 - white radiopaque, 1 - looped snare)
40 sets per carton	
79022	12 Fr. (6 - small O.D. white radiopaque, 1 - snare)
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	



79022



Vena Cava sets

Tube length of 7 in (17.8 cm)	
79005	12 Fr. (3 - clear, 1 - snare)
79009	12 Fr. (4 - clear, 1 - snare)
40 sets per carton	



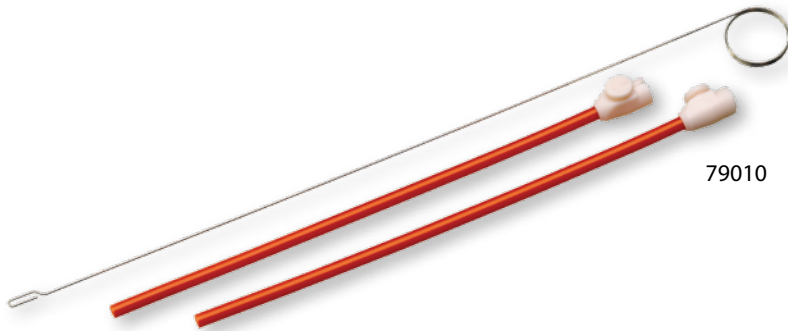
79005

Important Safety Information

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TourniKwik™ Tourniquet Sets

These tourniquet sets consist of bronze colored tubes, in varying lengths, which 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.



79010

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, which 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.



79020

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



79008

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

30005



30022



30007



30006



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	

30001



30021



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. Cannulae

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	

31001



Important Safety Information

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

DLP® Arteriotomy Cannulae

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



1.3 in (3.3 cm) overall length	
31002	2 mm tip
31003	3 mm tip
20 per carton	

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
20 per carton	

6.3 in (16.0 cm) overall length	
31202	2 mm tip
31203	3 mm tip
31204	4 mm tip
20 per carton	

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
10 per carton	

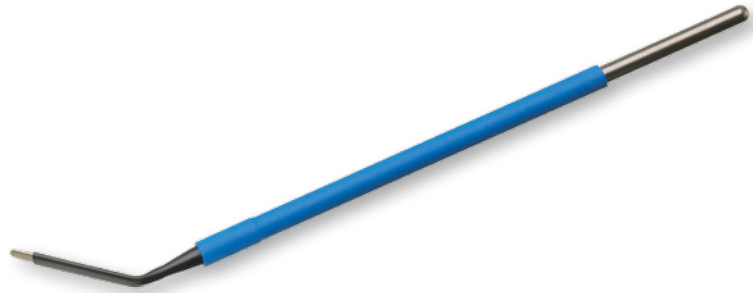
Important Safety Information

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

DLP® I.M.A. Electro-Surgical Knife Blades

These Electro-Surgical Unit (ESU) Electrode knife blades have extended length specifically designed to improve access to the I.M.A. during dissection. The spatulated tip features a 2 mm exposed surface and is angled to precisely dissect delicate tissues surrounding the vessel. They have a malleable shaft enclosed with a plastic sheathing (not CE approved).

60002	3.9 in (9.9 cm) overall length
60003	5.8 in (14.7 cm) overall length
20 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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Pressure Display Box

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

Features include:

- Large easy-to-read display
- Variable alarm settings (high or low)
- Protective guards on switches
- Read outs 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



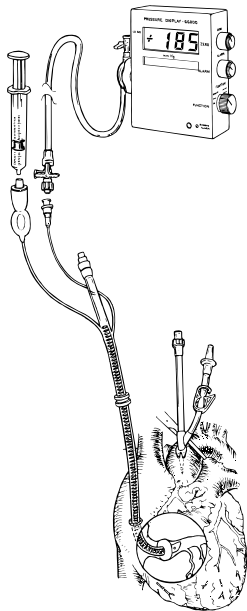
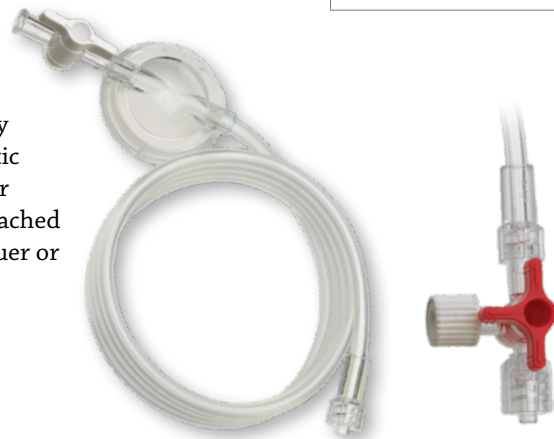
Ordering Information

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 which attaches to the transducer fitting on the Pressure Display Boxes. 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	

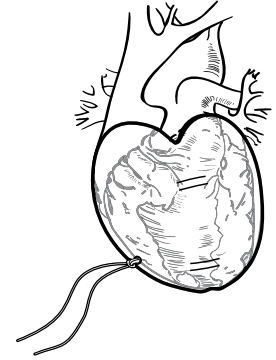
Important Safety Information

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

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 with slots. These slots can hold a pericardial sump in place. A radiopaque marker is tied to the pad.

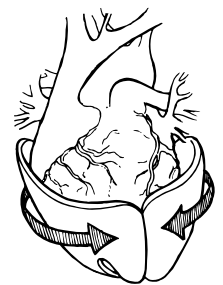
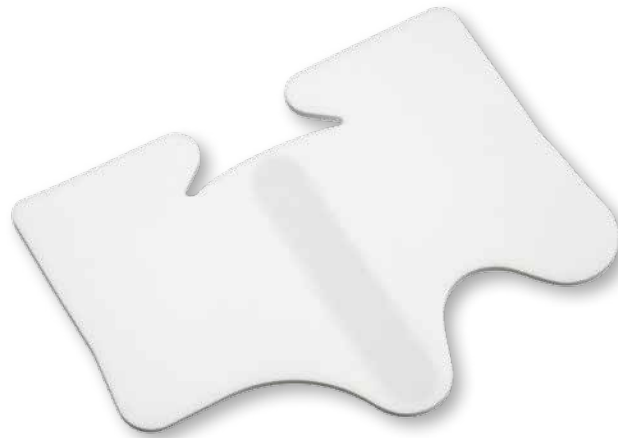
38002	Medium
38003	Large
10 per carton	



DLP® Cardiac Insulators

These insulators are designed to protect the heart against heat transfer. They are malleable closed-cell foam so they can conform to the desired shape.

38201	Small
38202	Medium
10 per carton	

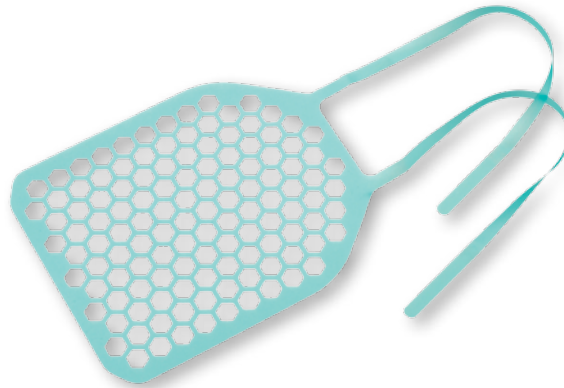
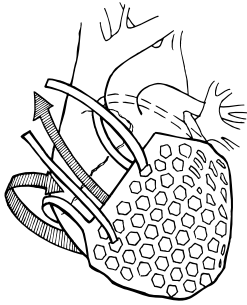


Important Safety Information

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

DLP® Cardiac Sling

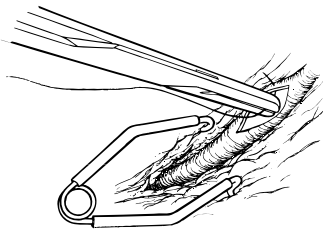
This sling is designed to support the heart and improve exposure. It reduces the need for additional assistants during the anastomosis of the circumflex vessels.



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

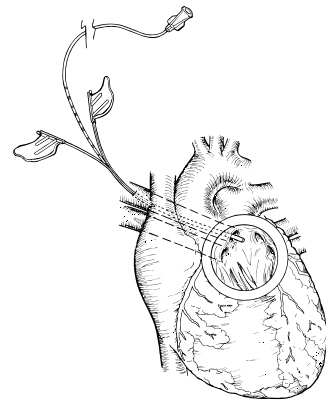
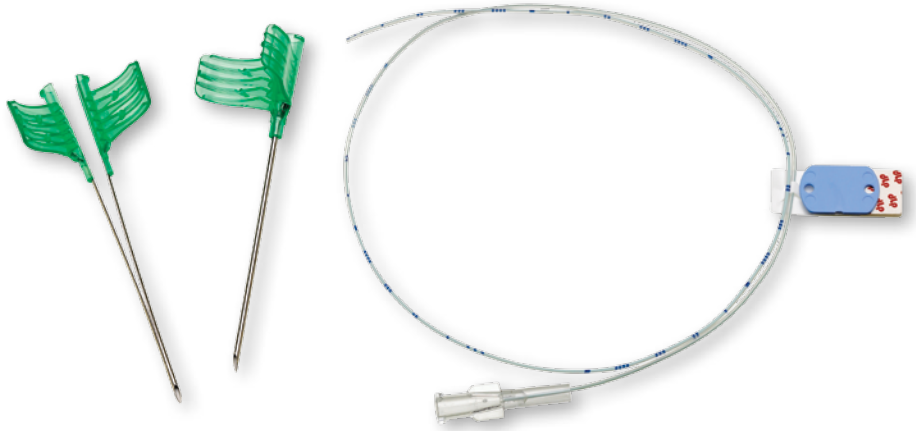
Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

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	



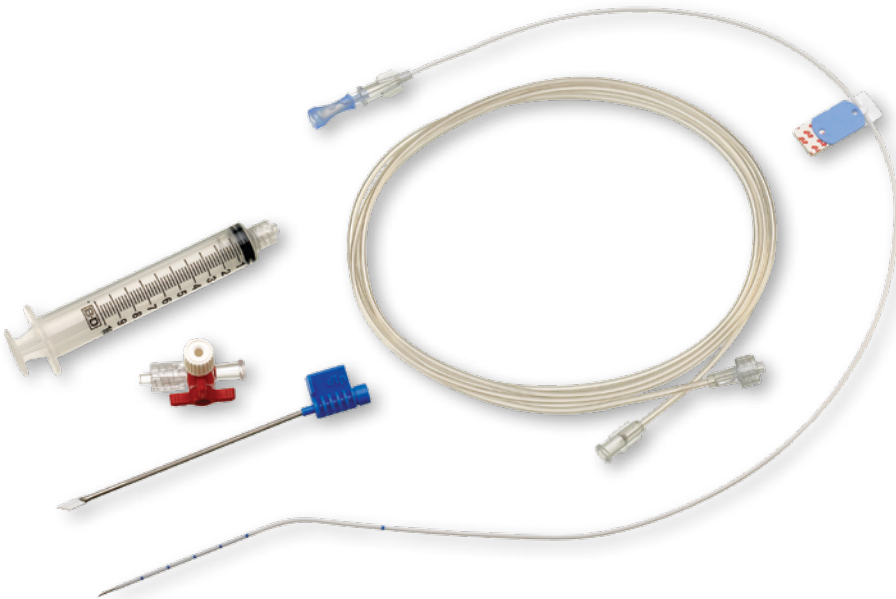
Catheter models 50010 and 50011 are inserted through the chest wall and into the right superior pulmonary vein using two peel away needles. The peel away needles permit catheter insertion through the chest wall and pulmonary vein without utilizing an integral introducer.

Important Safety Information

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

DLP® Left Atrial Pressure Monitoring Catheter Placement Sets

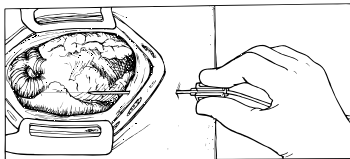
These sets are an ideal alternative for measuring cardiac performance postoperatively. The catheters measure left atrial pressure in real time to accurately display critical pre-load pressures of the left heart. The catheter tubing has depth markings and are attached to a female luer. There is a self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



24 in (61.0 cm) overall length

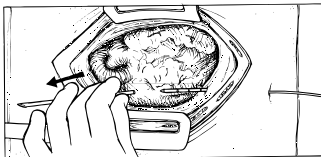
50005	5 Fr (1.7 mm) catheter
50015	5 Fr (1.7 mm) catheter with 1 - 3-way stopcock 1 - 10 cc syringe 1 - 6 ft (1.8 m) IV pressure tubing
5 per carton	

Left Atrial Pressure Monitoring Catheter Placement Set Application (models 50005, 50015)



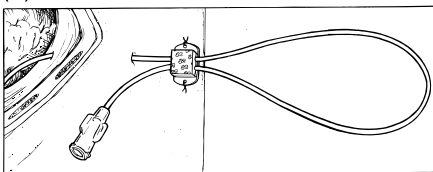
(a)

(a) The Scabbard™ Needle facilitates insertion of the catheter through the chest wall.



(b)

(b) The Scabbard™ needle also protects the catheter tip during insertion and is easily removed.



(c)

(c) Self adhesive anchoring collar attaches the catheter to the skin at the desired location.

Important Safety Information

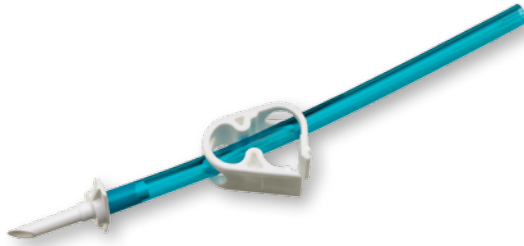
Care and caution should be taken to avoid damage to vessels and cardiac tissue during cannulation or other cardiac surgery procedures.

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
20 per carton	



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	
10 per carton	

16 in (40.6 cm) overall length

With open end tube	
10023	
10 per carton	



DLP® Rapid Prime “Y” Sets

This set facilitates the transfer of fluids during the priming of the extracorporeal circuit. It features two large bore spikes attached to flexible tubing with clamps. These are attached to a “Y” adapter with a length of tubing and another clamp.

42 in (1.1 m) overall length

10024	
10 per carton	



Important Safety Information

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

Suction Circuit and Surgical Accessories {**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

Kits 95

Packs 95

DLP® Cardio-Kits

Instead of ordering all your products separately, have a custom kit made specifically for you. Medtronic Cardio-Kits contain tools invaluable to 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 Packs



Pack Information	
11440	
1 each	10014 DLP® Aortic Root Cannula
1 each	14001 DLP® Multiple Perfusion Set
3 each	30003 DLP® Vessel Cannulae
<i>10 per carton</i>	

APPENDIX

























French Size Conversion Table 99

Product Code Index 100

French Size Conversion Table

This table shows the various outer diameters of products in this catalog. Use this table as a quick reference when determining the size of the product to be used during cardiopulmonary bypass surgery.

The circles shown represent the actual outer diameter of the product tips. Each circle is followed by its corresponding French size, diameter in millimeters, and diameter in inches.

	3 Fr	1.0 mm	0.039 in
	4 Fr	1.35 mm	0.053 in
	5 Fr	1.67 mm	0.066 in
	6 Fr	2.0 mm	0.079 in
	7 Fr	2.3 mm	0.092 in
	8 Fr	2.7 mm	0.105 in
	9 Fr	3.0 mm	0.118 in
	10 Fr	3.3 mm	0.131 in
	11 Fr	3.7 mm	0.144 in
	12 Fr	4.0 mm	0.158 in
	13 Fr	4.3 mm	0.170 in
	14 Fr	4.7 mm	0.184 in
	15 Fr	5.0 mm	0.197 in
	16 Fr	5.3 mm	0.210 in
	17 Fr	5.7 mm	0.223 in
	18 Fr	6.0 mm	0.236 in
	19 Fr	6.3 mm	0.249 in
	20 Fr	6.7 mm	0.263 in
	22 Fr	7.3 mm	0.288 in
	24 Fr	8.0 mm	0.315 in
	26 Fr	8.7 mm	0.341 in
	28 Fr	9.3 mm	0.367 in
	30 Fr	10.0 mm	0.393 in
	32 Fr	10.7 mm	0.419 in
	34 Fr	11.3 mm	0.445 in

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