

Medtronic

Bio-Medicus™ NextGen

Cannula technologies

Advanced femoral cannulae backed by
30+ years of Bio-Medicus family performance

Adult femoral
venous cannula
now with multi-
stage design

Medtronic in cardiac surgery

Innovative
like no other



Cannula innovation that keeps up with you

We believe in the power of technology to improve lives. And, we believe improving lives means giving you the enabling technologies needed to provide the best care for your patients.

That's why we brought Bio-Medicus cannulae into the Medtronic family of cardiovascular technologies all those years ago. Even then, we recognized that cardiac surgery was changing – and that femoral cannulation would be playing an even larger role in minimally invasive and traditional cases.



1990

• Bio-Medicus becomes a part of the Medtronic family.

• Arterial and venous options are available for adults and pediatric patients.



2015

• The Bio-Medicus NextGen platform with advanced design features is incorporated across arterial, venous, and pediatric models. Also, a jugular venous indication is launched.

• **More than 30 enhancements**

We've never stopped innovating

2006

• Medtronic introduces a Bio-Medicus multi-stage cannula. This was a first-to-market solution for femoral cannulation.

2022

• The timing seemed just right to build some of the same NextGen enhancements into our most popular multi-stage model.

Bio-Medicus NextGen multi-stage adult venous is introduced



Versatile positioning for MICS and traditional cases

Bio-Medicus NextGen is an advanced cannula platform that offers a versatile range of cardiopulmonary bypass options for MICS or traditional therapies. Choose the cannulation strategy that meets your preferences.

One cannula, two positions

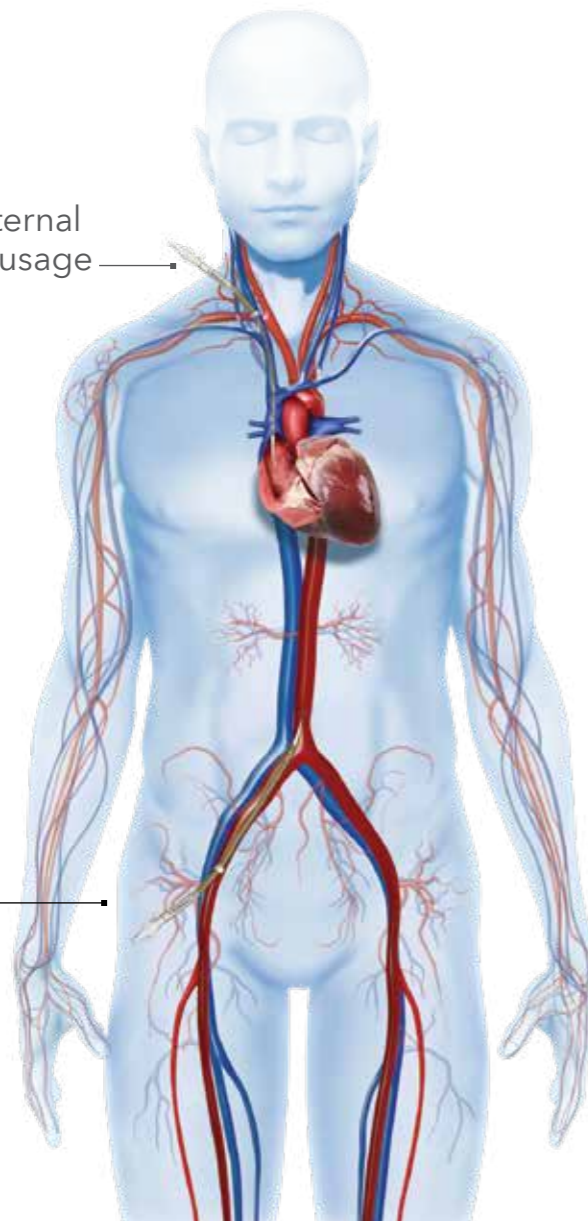
Bio-Medicus NextGen arterial models offer a versatile and convenient platform beyond traditional femoral access,¹ and expand your alternative access options for cardiopulmonary bypass cases. A jugular positioning option offers another choice for your cardiac procedures.

The multi-stage side hole configurations are now available with the advanced features of our NextGen platform.

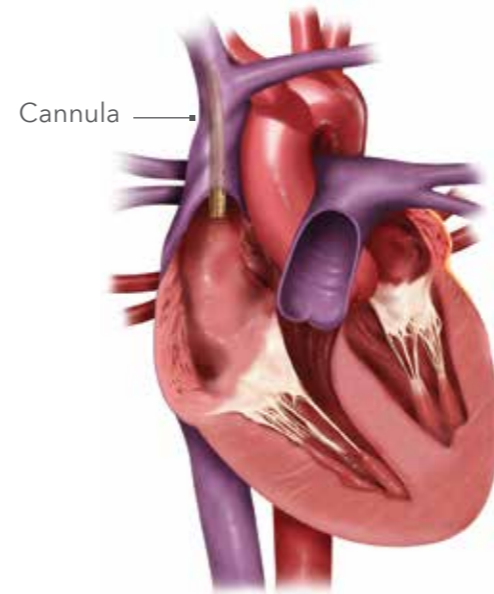
Intended for internal jugular venous usage

Traditional femoral arterial insertion

Achieves high flow rates with minimal pressure differential.²



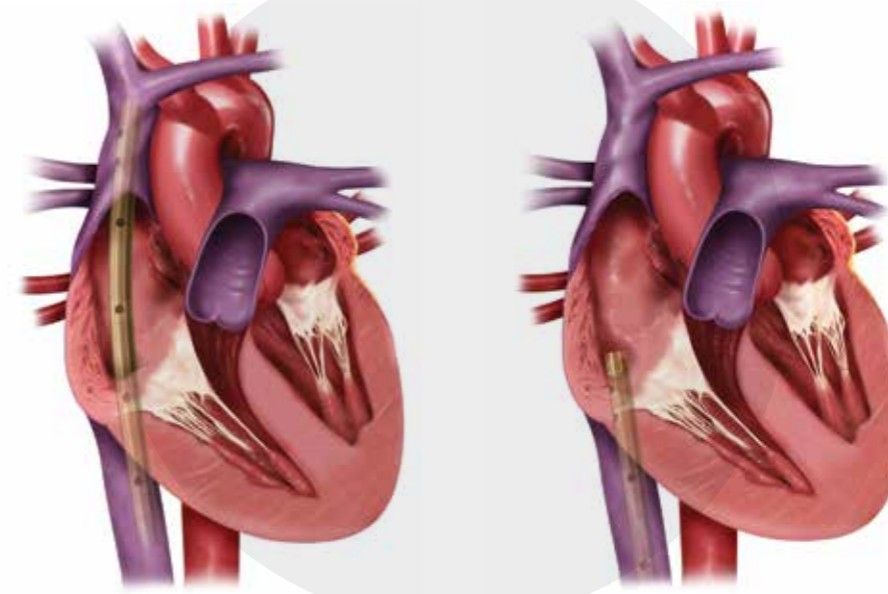
Jugular venous



Internal jugular venous position

Offers enhanced return with high flow rates and minimal pressure differential.²

Multi-stage femoral venous



Advanced multi-stage design

Designed for easy placement across the atrium during MICS procedures.

Optimizes drainage of the entire circulation by accessing the IVC, atrium, and SVC.

Bi-caval femoral venous



Bi-caval capability with optimized basket placement

Designed to enable right atrium occlusion and access – 27 Fr and 29 Fr models.

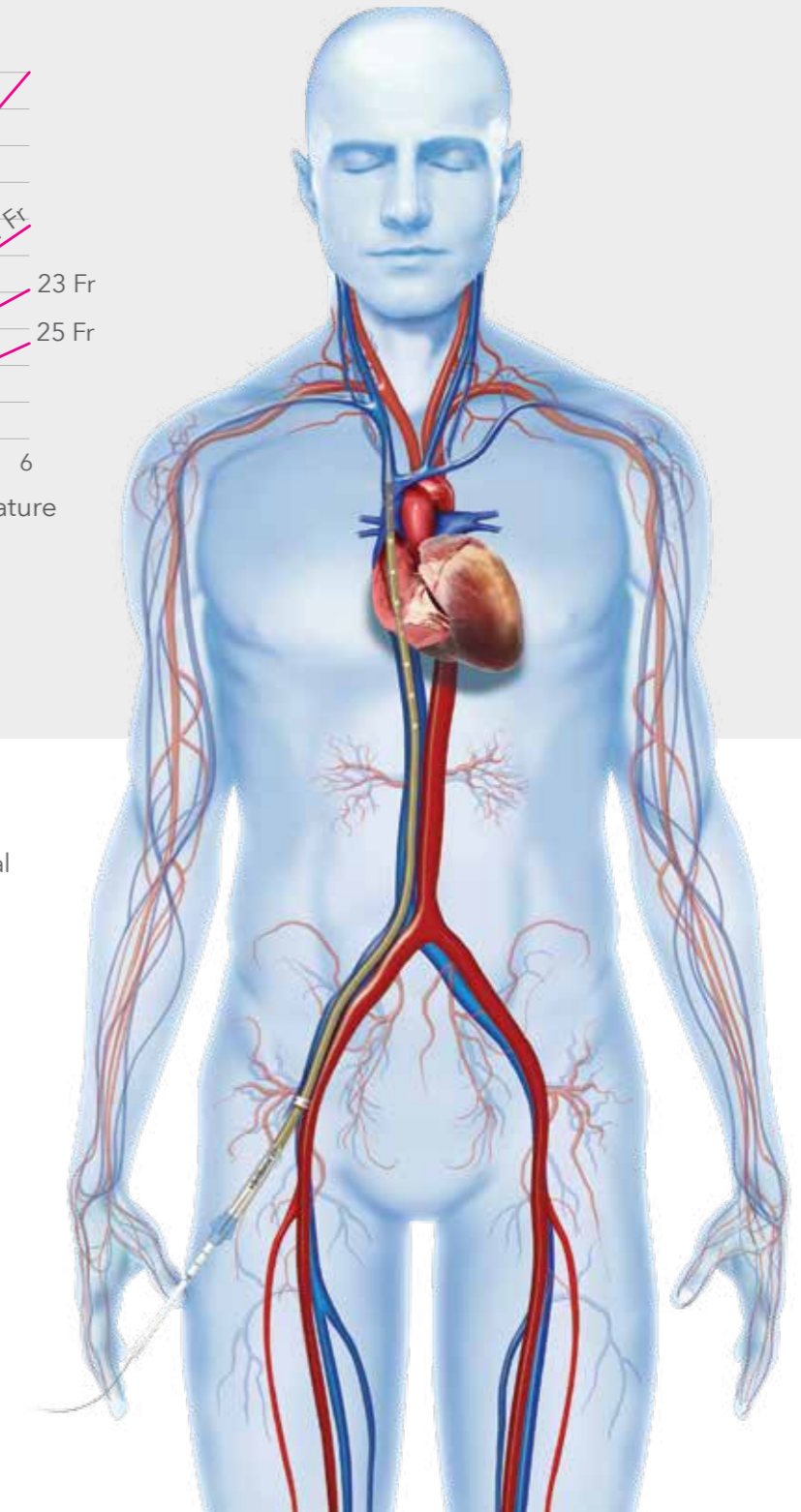
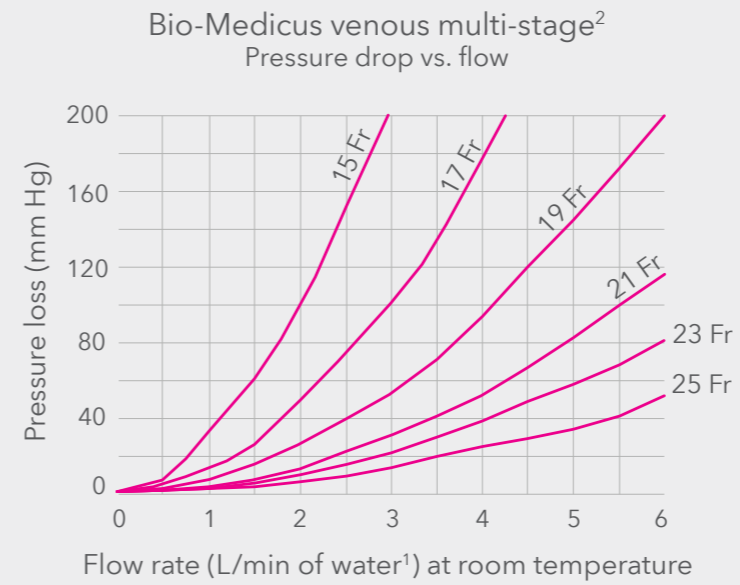
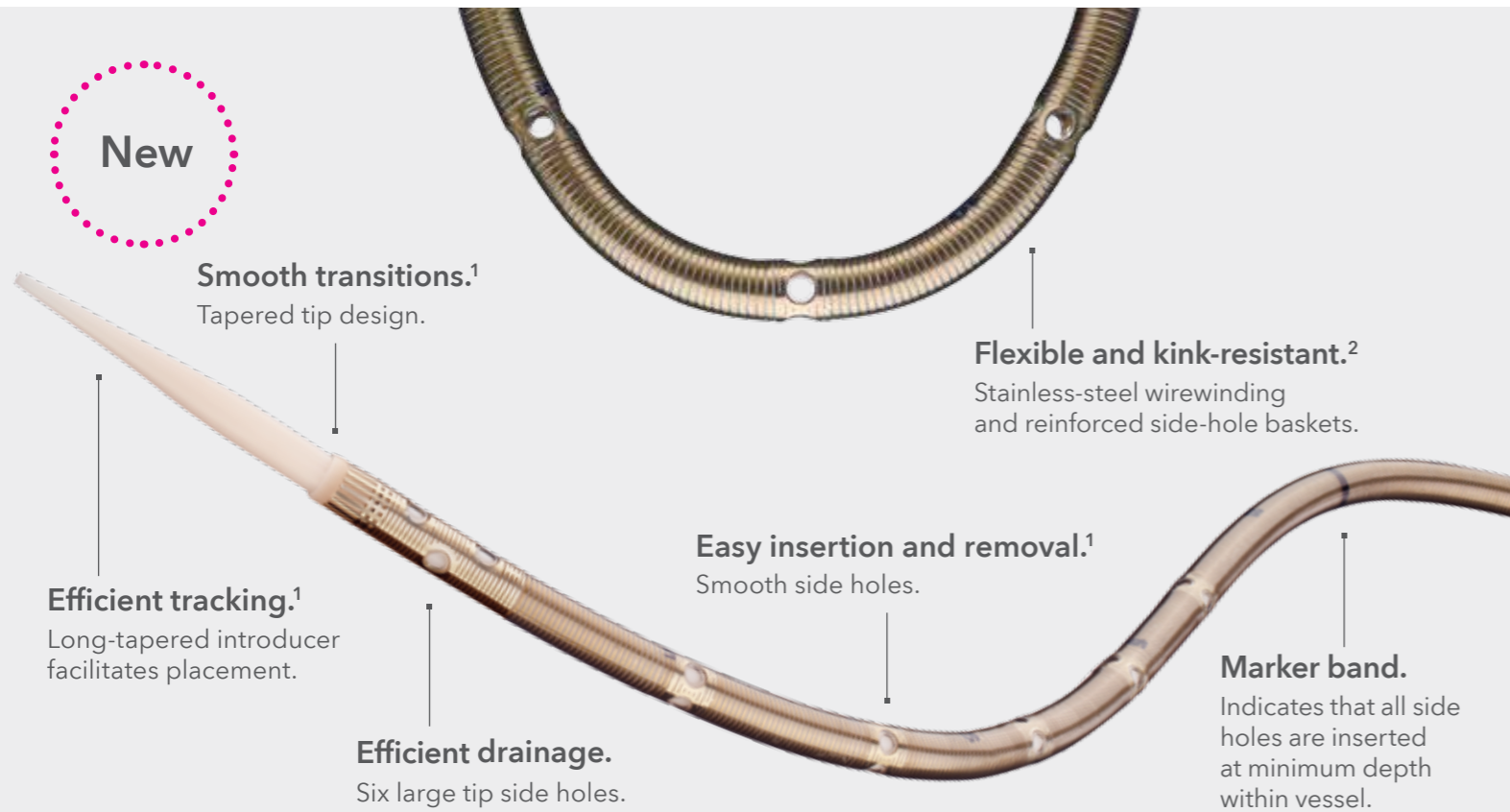
¹ Medtronic data on file.

² Bench data on file, may not be indicative of clinical performance.

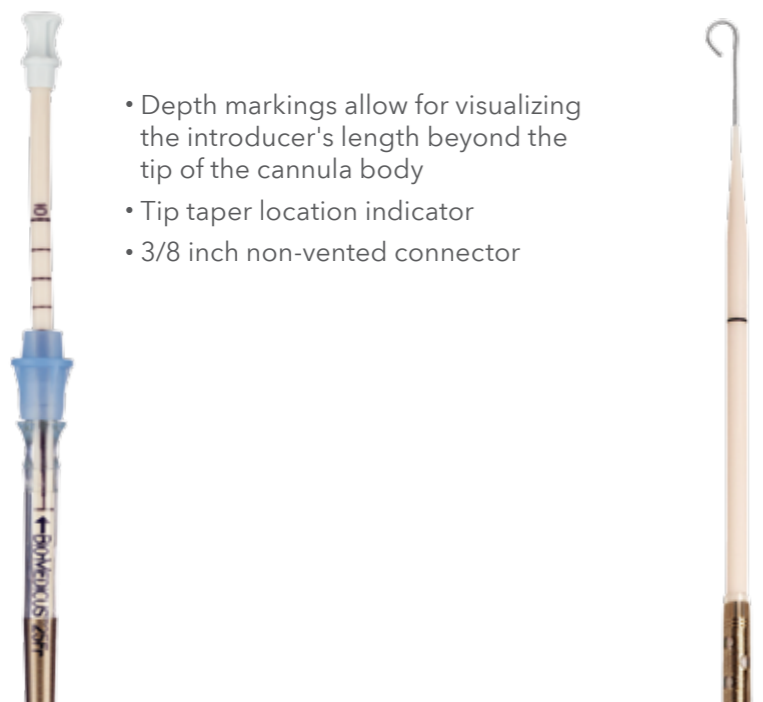
Bio-Medicus™ NextGen

Multi-stage femoral venous cannulae

Our multi-stage cannulae feature a new tip design with more side holes than any other femoral venous cannula to help make insertion, tip transition, and final positioning even easier, all while maintaining efficient drainage.



Extended-length introducer with smooth transition zone promotes ease of percutaneous femoral vein cannulation¹ and advancement through tortuous venous anatomy.



- Depth markings allow for visualizing the introducer's length beyond the tip of the cannula body
- Tip taper location indicator
- 3/8 inch non-vented connector

- Echo-friendly cannula body design¹
- Elongated taper allows introducer to dilate the vessel over a longer distance during insertion
- Overall tip length up to 60 cm

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² Bench data on file, may not be indicative of clinical performance.

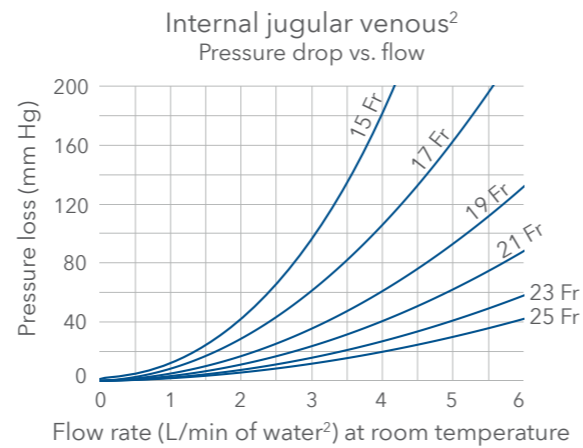
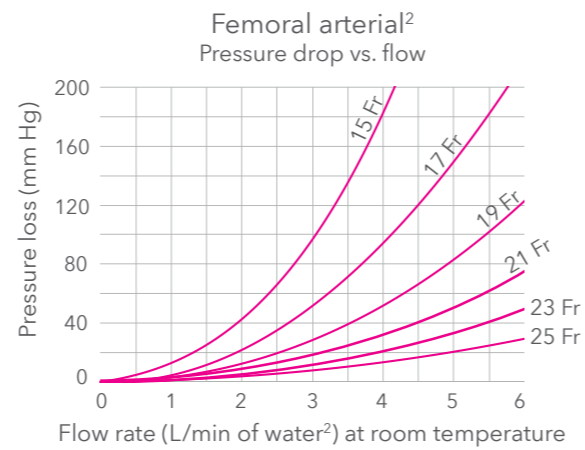
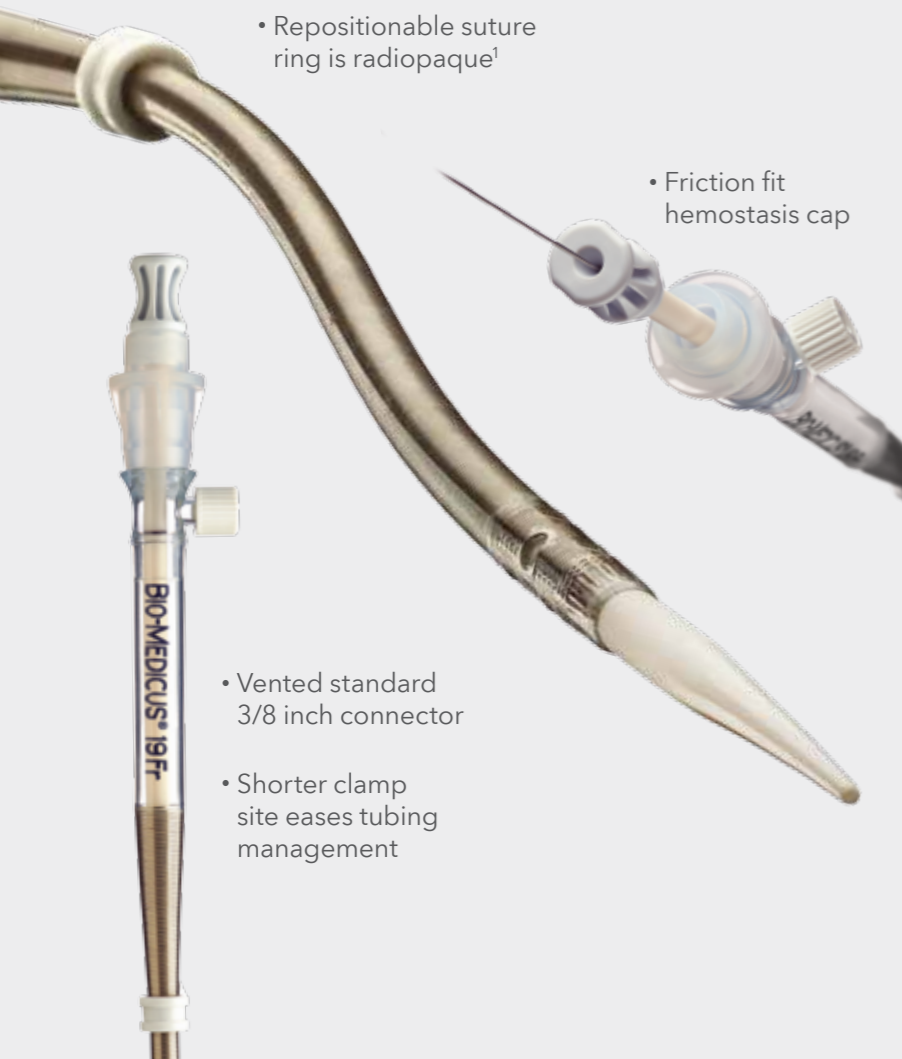
Bio-Medicus™ NextGen

Femoral arterial/internal jugular venous cannulae

Bio-Medicus NextGen cannulae offer ease of insertion and are engineered for smooth transitions. Fingerlet supports are formed into the tapered tip to create a smooth transition between the introducer and the thin cannula wall. All of these advanced Bio-Medicus cannulae design features add up to your opportunity for a smooth insertion.

Hemostasis management – the right fit

Our cap and introducer design for all NextGen cannulae offers improved function. The increased friction fit between cap and introducer helps prevent backing out when inserting or advancing in the vessel.¹ The introducer hub's smaller guidewire opening also equates to a reduction in blood loss.¹



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² Bench data on file, may not be indicative of clinical performance.

Bio-Medicus™ NextGen

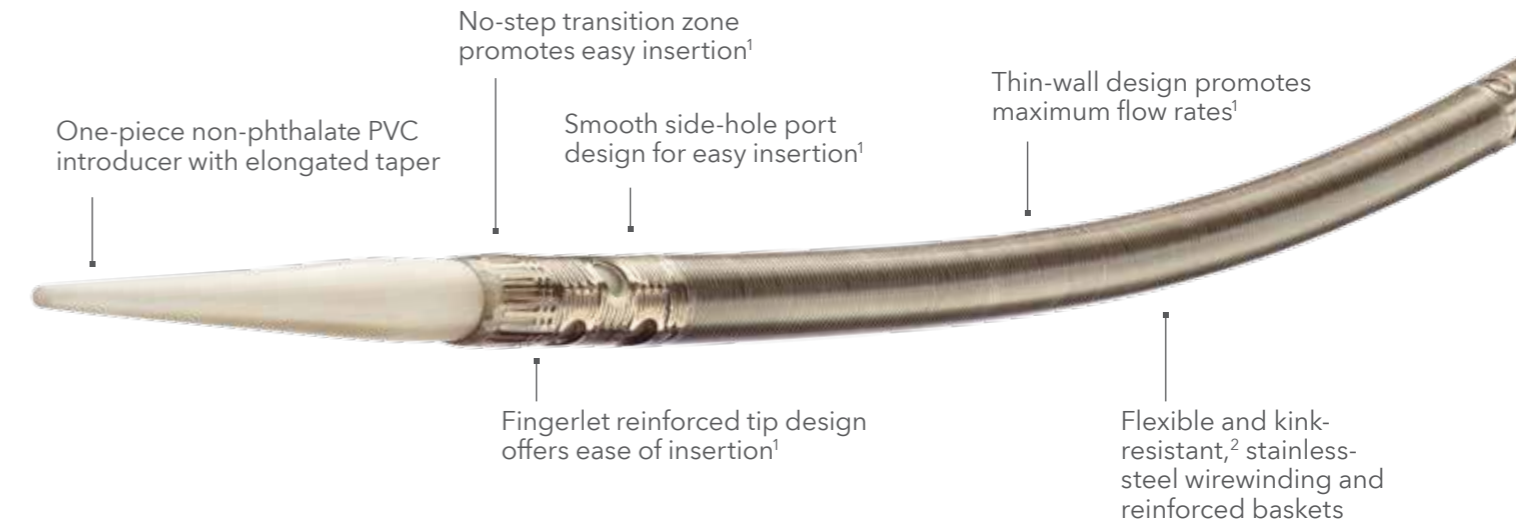
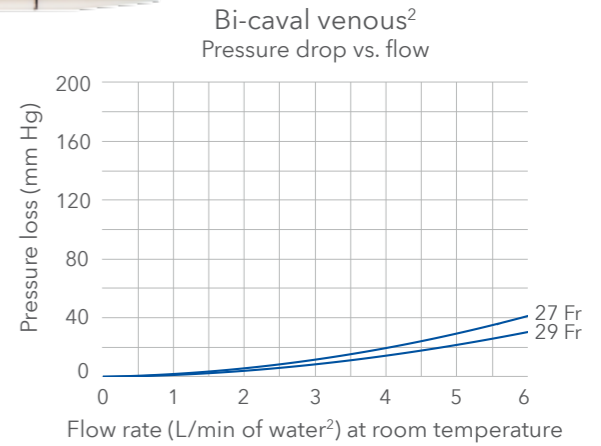
Femoral bi-caval venous cannulae



- Elongated taper on bi-caval venous cannula models offers dilation over a longer distance



- Introducer markings confirm alignment of cannulae and introducer tip



Bio-Medicus™ NextGen

Pediatric cannulae

For your smaller patients, a tapered solid core and a percutaneous-style introducer is standard with each cannula. Contents come secured in the retention clip for easier transfer into the sterile field. Choose an arterial or venous model.

Bio-Medicus NextGen Pediatric arterial and venous

(1 unit per carton)

Arterial or venous cannula, hemostasis cap, adjustable radiopaque suture ring

Tapered solid-core and percutaneous-style introducer

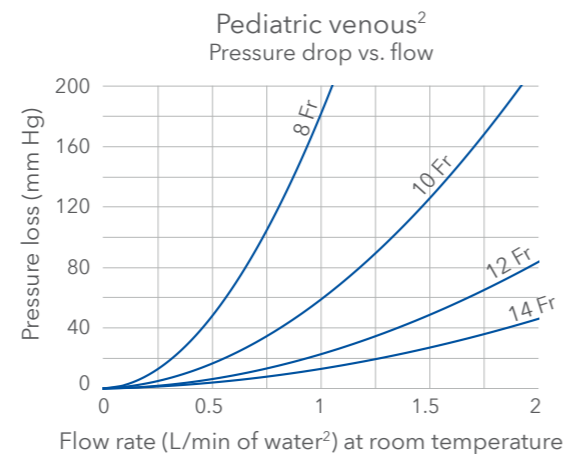
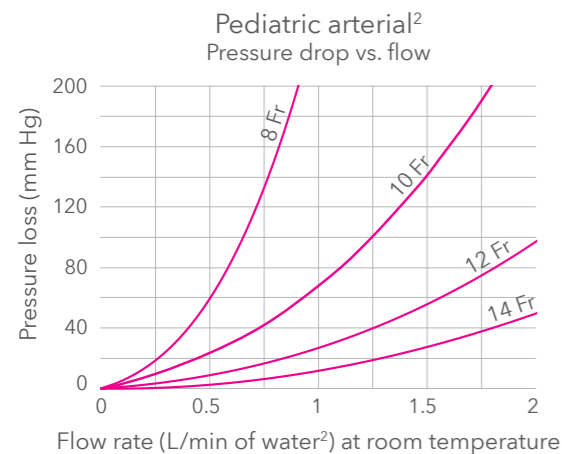
Cannula/tubing retention clip

Pediatric arterial

- Tapered percutaneous-style 0.025 mm guidewire

Pediatric venous

- Reinforced side holes support smooth insertion¹



¹ Medtronic data on file.

² Bench data on file, may not be indicative of clinical performance.

Bio-Medicus NextGen packaged for convenience

Our NextGen cannulae are offered in a variety of configurations that meet the growing demands of physicians and their teams.

We offer individual cannula or cannula kits. A separate insertion kit is also available for all adult and pediatric models.



Bio-Medicus™ NextGen Cannula kits

Choose your cannula kit – these kits are available with a standard set of insertion components. A noncorrugated carton design makes this kit a ready choice.

Bio-Medicus NextGen Femoral venous kit

(1 unit per carton)

Multi-stage or bi-caval venous cannula with introducer, hemostasis cap, adjustable radiopaque suture ring

0.038 in (0.965 mm) diameter guidewire;
180 cm (70.87 in) length

1/2 in (1.27 cm) to 3/8 in (0.95 cm) tubing adapter
(included only with venous models 23 Fr, 25 Fr, 27 Fr,
29 Fr)

Stepped vessel dilator, 8 Fr/10 Fr, 12 Fr/14 Fr, 16 Fr/18 Fr,
plus (1) additional larger dilator (included only with
21 Fr, 23 Fr, 25 Fr, 27 Fr, 29 Fr models)

#11 scalpel blade

Seldinger needle – 18 ga (1.02 mm)

Cannula/tubing retention clip



Bio-Medicus NextGen Femoral arterial/internal jugular venous kit

(1 unit per carton)

Femoral arterial/internal jugular venous cannula
with introducer, hemostasis cap, adjustable radiopaque
suture ring

0.038 in (0.965 mm) diameter guidewire;
100 cm (39.37 in) length

Stepped vessel dilator, 8 Fr/10 Fr, 12 Fr/14 Fr, 16 Fr/18 Fr,
plus (1) additional larger dilator (included only with 21 Fr,
23 Fr, 25 Fr models)

#11 scalpel blade

Seldinger needle – 18 ga (1.02 mm)

Cannula/tubing retention clip



†DEHP free IV tubing.

Bio-Medicus™ NextGen Insertion kits

Our insertion kits offer components for peripheral cannulation via Seldinger technique. Cannulae are sold separately.



Venous 96551

(5 units per carton)

0.038 in (0.965 mm) x 180 cm (70.87 in) guidewire

Stepped vessel dilator, 8 Fr/10 Fr, 12 Fr/14 Fr, and 16 Fr/18 Fr

#11 scalpel blade

Seldinger needle – 18 ga (1.02 mm)

10 cc syringe (1) each



Arterial 96552

(5 units per carton)

0.038 in (0.965 mm) x 100 cm (39.37 in) guidewire

Stepped vessel dilator, 8 Fr/10 Fr, 12 Fr/14 Fr, and 16 Fr/18 Fr

#11 scalpel blade

Seldinger needle – 18 ga (1.02 mm)

10 cc syringe (1) each



Pediatric 96553

(5 units per carton)

0.025 in (0.535 mm) x 60 cm (23.62 in) guidewire

Stepped vessel dilator, 8 Fr/10 Fr and 12 Fr/14 Fr

#11 scalpel blade

Seldinger needle – 18 ga (1.02 mm)

10 cc syringe (1) each

Ordering information

Femoral arterial/internal jugular venous cannulae (1 unit per carton)

Cannula code	Cannula kit code	French size	Overall length	Tip length	Connector
96570-115	96530-115	15 Fr (5.0 mm)	31.8 cm	18.0 cm	3/8 in (0.95 cm), vented
96570-117	96530-117	17 Fr (5.7 mm)	31.8 cm	18.0 cm	3/8 in (0.95 cm), vented
96570-119	96530-119	19 Fr (6.3 mm)	31.8 cm	18.0 cm	3/8 in (0.95 cm), vented
96570-121	96530-121	21 Fr (7.0 mm)	31.8 cm	18.0 cm	3/8 in (0.95 cm), vented
96570-123	96530-123	23 Fr (7.7 mm)	31.8 cm	18.0 cm	3/8 in (0.95 cm), vented
96570-125	96530-125	25 Fr (8.3 mm)	31.8 cm	18.0 cm	3/8 in (0.95 cm), vented

Pediatric arterial and venous cannulae (1 unit per carton)

Arterial code	Venous code	French size	Overall length	Tip length	Connector
96820-108	96830-108	8 Fr (2.7 mm)	22.9 cm	10.0 cm	1/4 in (0.64 cm), non-vented
96820-110	96830-110	10 Fr (3.3 mm)	22.9 cm	10.5 cm	1/4 in (0.64 cm), non-vented
96820-112	96830-112	12 Fr (4.0 mm)	22.9 cm	11.0 cm	1/4 in (0.64 cm), non-vented
96820-114	96830-114	14 Fr (4.7 mm)	22.9 cm	11.5 cm	1/4 in (0.64 cm), non-vented

Femoral bi-caval venous cannulae (1 unit per carton)

Cannula code	Cannula kit code	French size	Overall length	Tip length	Connector
96670-127 [†]	96600-127 [†]	27 Fr (9.0 mm)	76.2 cm	60.0 cm	3/8 in (0.95 cm), non-vented
96670-129 [†]	96600-129 [†]	29 Fr (9.7 mm)	76.2 cm	60.0 cm	3/8 in (0.95 cm), non-vented

[†]1/2 in (1.27 cm) to 3/8 in (0.95 cm) tubing adapter included.

Bio-Medicus multi-stage femoral venous cannulae (1 unit per carton)

Cannula code	Cannula kit code	French size	Overall length	Tip length	Connector
96670-115	96600-115	15 Fr (5.0 mm)	64.8 cm	50.0 cm	3/8 in (0.95 cm), non-vented
96670-117	96600-117	17 Fr (5.7 mm)	64.8 cm	50.0 cm	3/8 in (0.95 cm), non-vented
96670-119	96600-119	19 Fr (6.3 mm)	69.9 cm	55.0 cm	3/8 in (0.95 cm), non-vented
96670-121	96600-121	21 Fr (7.0 mm)	69.9 cm	55.0 cm	3/8 in (0.95 cm), non-vented
96670-123 [§]	96600-123 [§]	23 Fr (7.7 mm)	76.2 cm	60.0 cm	3/8 in (0.95 cm), non-vented
96670-125 [§]	96600-125 [§]	25 Fr (8.3 mm)	76.2 cm	60.0 cm	3/8 in (0.95 cm), non-vented

[§]1/2 in (1.27 cm) to 3/8 in (0.95 cm) tubing adapter included with venous models 23 Fr and 25 Fr models.

Multi-stage sizes for varying patient anatomies

To accommodate patient sizes, we offer a multi-stage cannula in six sizes. To provide easier positioning and improved drainage, the number of side-hole locations is based on cannula Fr size and cannula length.



See the device manual for detailed information regarding the instructions for use, indications, contraindications, warnings, precautions, and potential adverse events. For further information, contact your local Medtronic representative and/or consult the Medtronic website at www.medtronic.eu.

For applicable products, consult instructions for use on www.medtronic.com/manuals.
Manuals can be viewed using a current version of any major internet browser.
For best results, use Adobe Acrobat® Reader with the browser.

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