

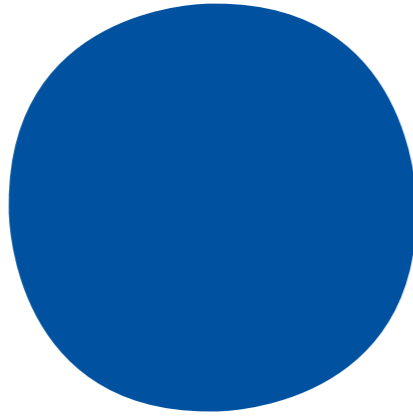
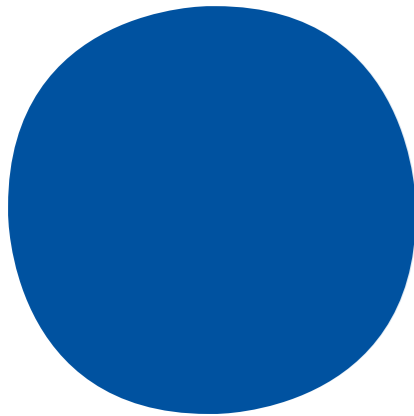
**Medtronic**

Bio-Medicus Life Support™ Catheters

# Individualized ECLS care

Indicated for long-term† ECLS





# For the full range of patients you treat.

Bio-Medicus Life Support portfolio is part of our ongoing commitment to ECLS.

As ECLS therapy evolves and expands, so does the variety of patients you treat. This makes it challenging to provide the best individualized care for each patient.

The Bio-Medicus Life Support catheter portfolio helps address many of these challenges.

Developed with extensive user input, the Bio-Medicus Life Support catheter offers more lengths, sizes, and configurations than any other brand, giving you the choices you need to individualize your patient's ECLS care.

# Designed for performance<sup>1</sup>

## Optimizing flow

Thin, kink-resistant wall design promotes optimized flow rates.

## Ease of insertion

Features such as fingerlet tip supports create a no-step transition allowing for smooth insertion.

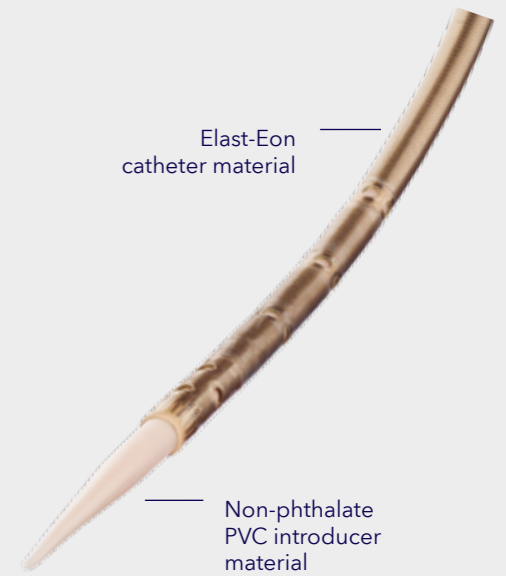
## Advanced biostable material

Bio-Medicus Life Support cannulae are made with Elast-Eon™, a biocompatible and biostable polyurethane/silicone copolymer.†

Elast-Eon is commonly used in prolonged-use and implantable medical devices, including ECLS dual lumen catheters.

†Elast-Eon™ is a siloxane urethane copolymer.

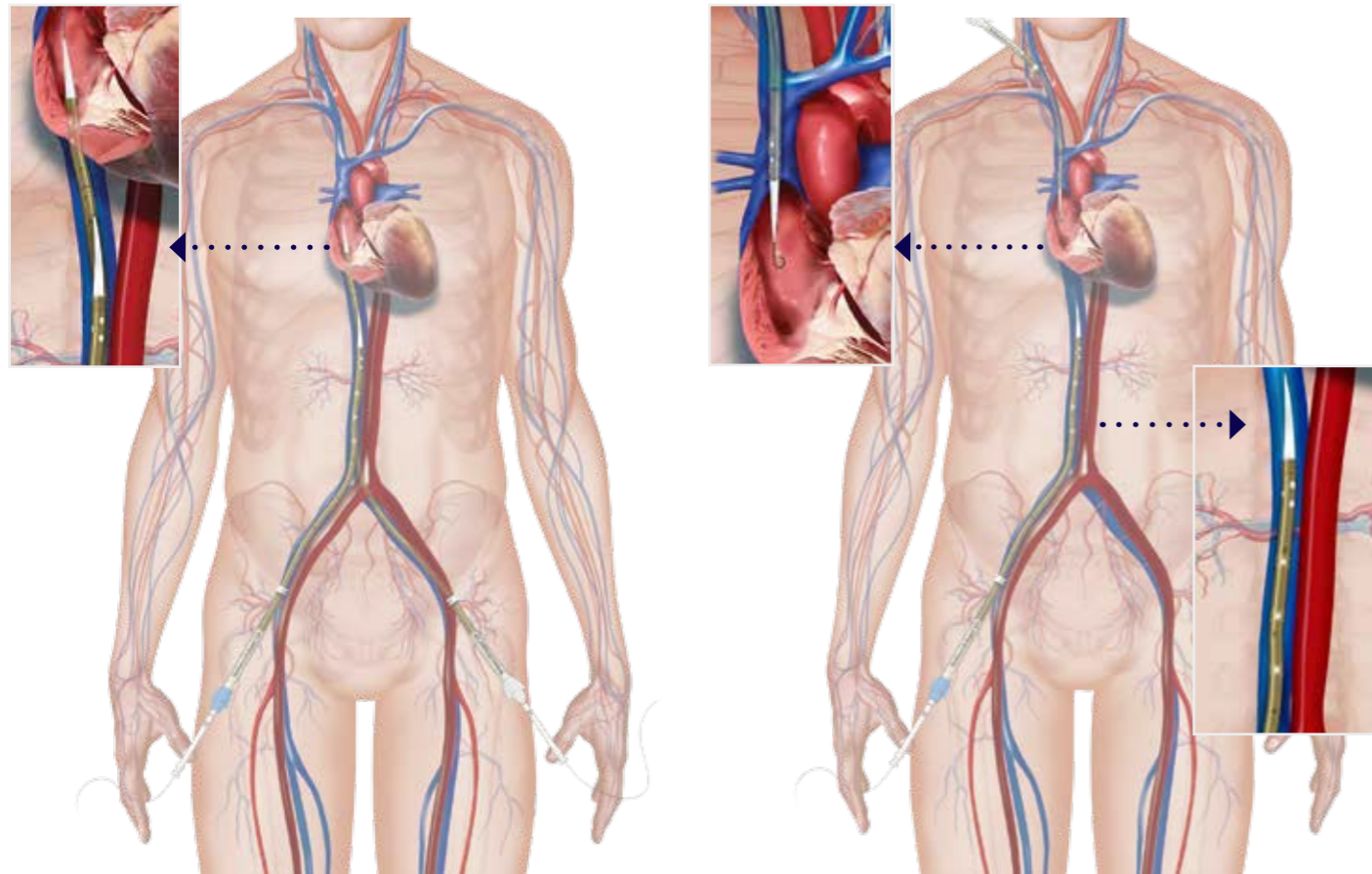
<sup>1</sup>Bench data on file, may not be indicative of clinical performance.



## Configuration options

We developed the Bio-Medicus Life Support catheter by listening to the needs of ECLS physicians regarding technique and configurations.

### Veno-venous



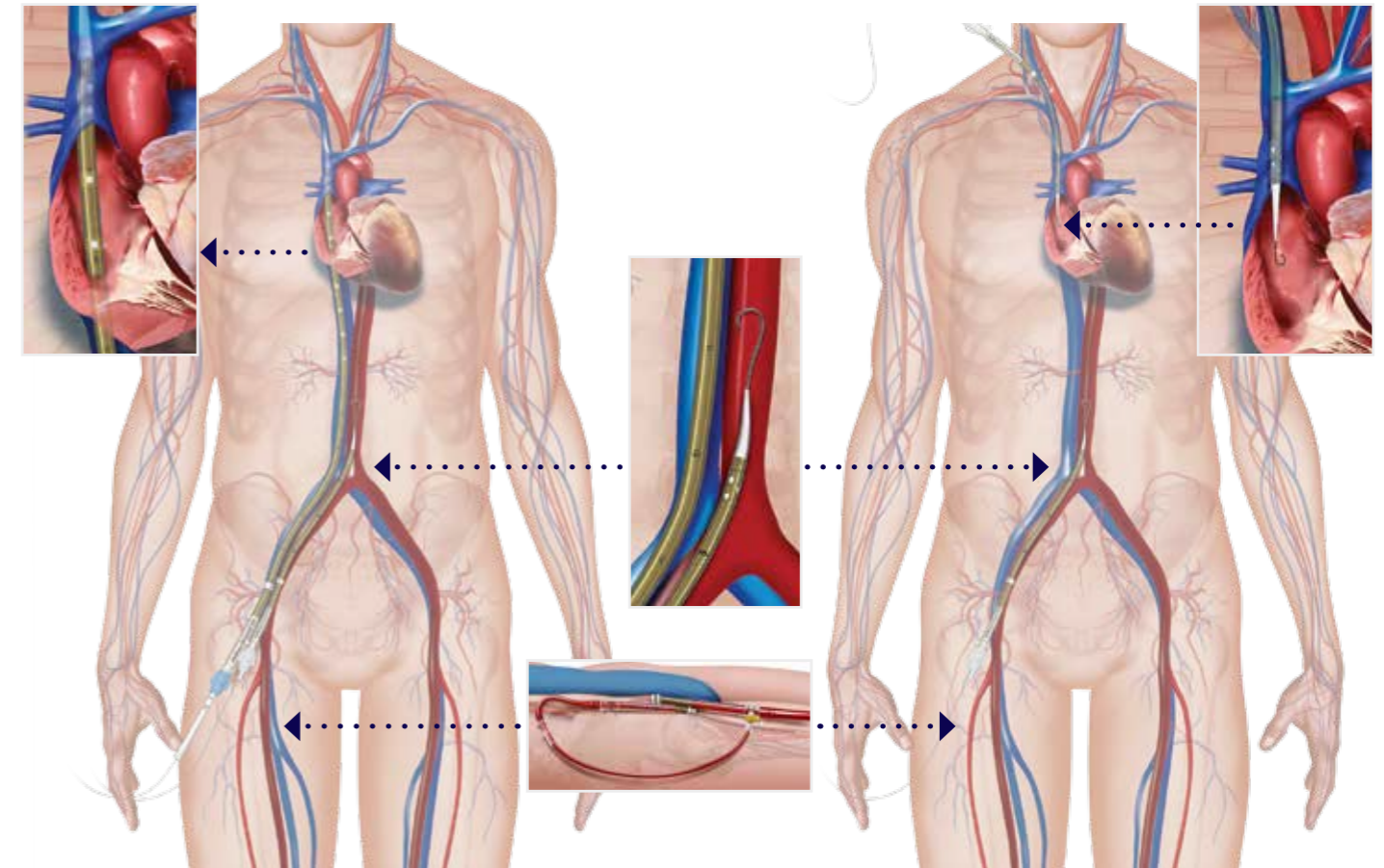
#### FEMORAL-FEMORAL VV

Femoral-venous drainage  
Femoral-venous return

#### FEMORAL-JUGULAR VV

Femoral-venous drainage  
Jugular return

### Veno-arterial



#### FEMORAL-FEMORAL VA

Femoral-venous drainage  
Femoral-arterial return

#### JUGULAR-FEMORAL VA

Jugular-venous drainage  
Femoral-arterial return

# More sizes. More lengths. More options.

Bio-Medicus Life Support offers catheter options so that you have the flexibility to uniquely treat each patient – smallest to largest, youngest to oldest – with varying extracorporeal support needs.

- French sizes 9 to 29
- Insertion lengths from 10 to 61 cm
- Configurations for VA and VV ECMO or ECLS

## Drainage or return catheters – Flex

Used for VA or VV configurations

Designed for drainage or return at different insertion lengths, with side holes only near the tip

**Flex** Up to 18 cm insertion length (See Figure A below for flow data)

Side holes near tip



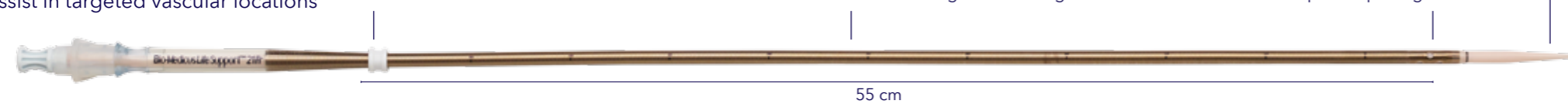
**Supports tracking over the guidewire**  
Long-tapered introducer facilitates placement

**Flex XL** 50 or 55 cm lengths to assist in targeted vascular locations

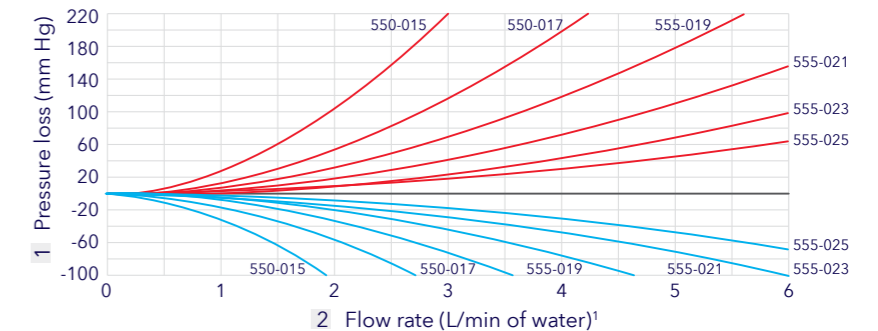
Radiopaque<sup>1</sup> Suture collar

Depth markings For visualizing insertion length

Smooth transitions Tapered tip design



Flex XL return/drainage catheters LS96550-, LS96555-<sup>1</sup>



1	2	550-015	550-017	555-019	555-021	555-023	555-025
100		2.0	2.8	3.7	4.7	>6.0	>6.0
-40		1.2	1.7	2.2	2.9	3.7	4.5

## Drainage catheters – Multi

Designed for efficient drainage and optimized flow dynamics<sup>1</sup>

**Multi** 38 cm length for drainage from inferior vena cava



**Extended introducer**  
Facilitates ease of insertion

**Multi XL** 55 and 61 cm lengths; longer insertion length allows various tip placements to support drainage flow

Marker band

Indicates that all side holes are inserted at minimum depth within vessel

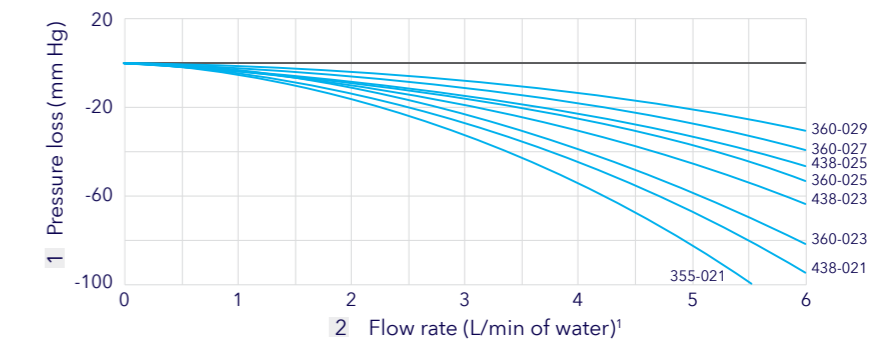
Smooth side holes

Ease insertion and removal



**Extended introducer**  
Facilitates ease of insertion

Multi and Multi XL drainage catheters LS96438-, LS96355-, LS96360-<sup>1</sup>



1	2	355-021	438-021	360-023	438-023	360-025	438-025	360-027	360-029
-40		3.4	3.7	4.1	4.6	5.1	5.5	>6.0	>6.0

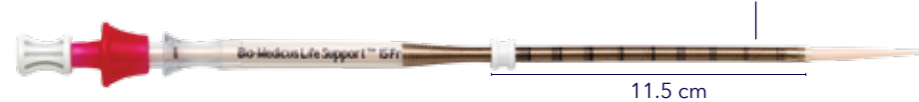
<sup>1</sup> Bench data on file, may not be indicative of clinical performance.

## Drainage or return catheters – Mini

For catheter placement configurations that require smaller sizes and shorter insertable lengths

**Mini** 10-11.5 cm for return

No side holes at tip



**Mini** 10-11.5 cm for drainage

Side holes only at tip

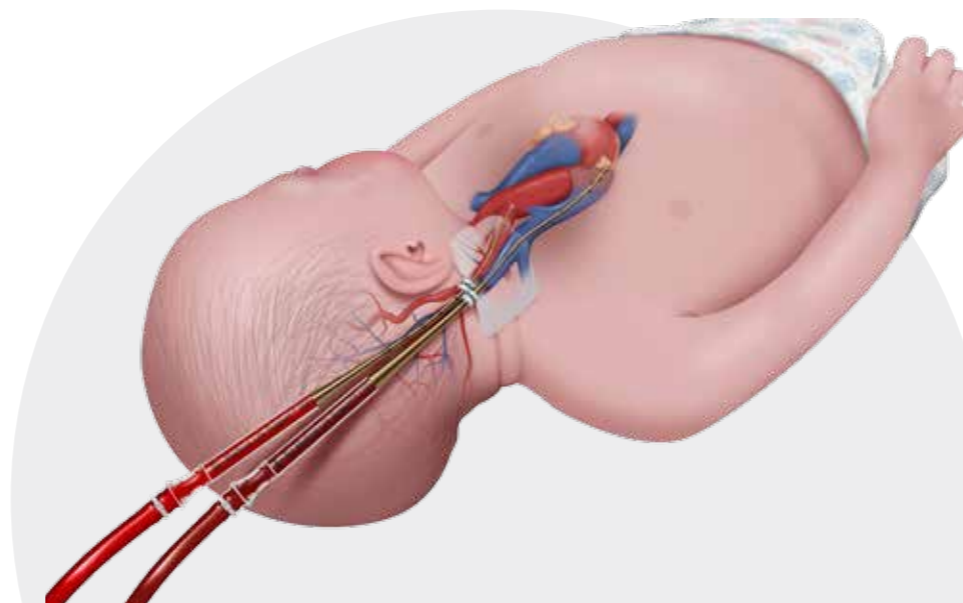
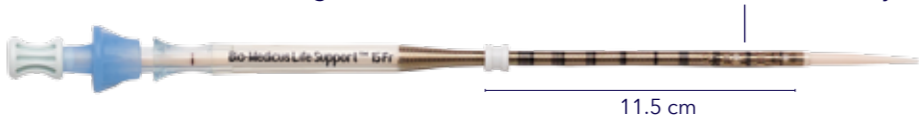
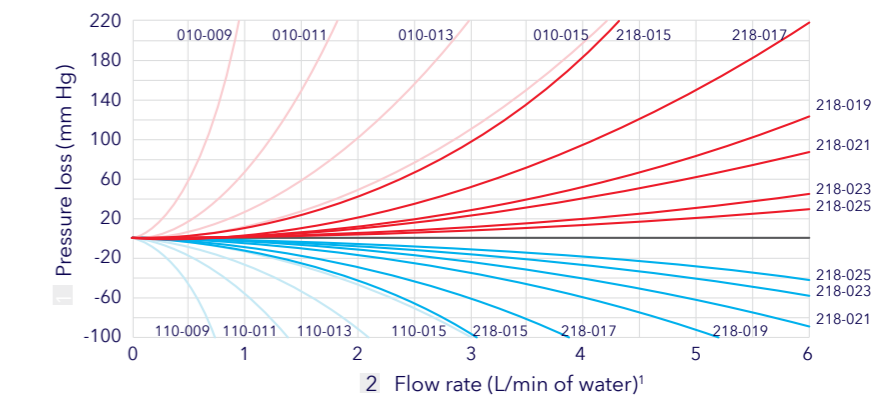


Figure A Flex and Mini return/drainage catheters LS96010-, LS96110-, LS96218-<sup>1</sup>



1	2	010-009	010-011	010-013	010-015	218-015	218-017	218-019	218-021	218-023	218-025
100		0.6	1.2	2.0	2.8	3.0	4.1	5.5	>6.0	>6.0	>6.0
-40		0.4	0.8	1.3	1.8	1.9	2.4	3.5	4.0	4.9	5.9

<sup>1</sup> Bench data on file, may not be indicative of clinical performance.

## Ordering information

Bio-Medicus Life Support catheters and introducers	Catheter code	French size	Tip length	Connector
Return or drainage Flex	LS96218-015	15 Fr (5.0 mm)	18 cm	3/8 in (0.95 cm) vented
	LS96218-017	17 Fr (5.7 mm)	18 cm	3/8 in (0.95 cm) vented
	LS96218-019	19 Fr (6.3 mm)	18 cm	3/8 in (0.95 cm) vented
	LS96218-021	21 Fr (7.0 mm)	18 cm	3/8 in (0.95 cm) vented
	LS96218-023	23 Fr (7.7 mm)	18 cm	3/8 in (0.95 cm) vented
	LS96218-025	25 Fr (8.3 mm)	18 cm	3/8 in (0.95 cm) vented
Return or drainage Flex XL	LS96550-015	15 Fr (5.0 mm)	50 cm	3/8 in (0.95 cm) non-vented
	LS96550-017	17 Fr (5.7 mm)	50 cm	3/8 in (0.95 cm) non-vented
	LS96555-019	19 Fr (6.3 mm)	55 cm	3/8 in (0.95 cm) non-vented
	LS96555-021	21 Fr (7.0 mm)	55 cm	3/8 in (0.95 cm) non-vented
	LS96555-023	23 Fr (7.7 mm)	55 cm	3/8 in (0.95 cm) non-vented
	LS96555-025	25 Fr (8.3 mm)	55 cm	3/8 in (0.95 cm) non-vented
Drainage Multi	LS96438-021	21 Fr (7.0 mm)	38 cm	3/8 in (0.95 cm) non-vented
	LS96438-023	23 Fr (7.7 mm)	38 cm	3/8 in (0.95 cm) non-vented
	LS96438-025	25 Fr (8.3 mm)	38 cm	3/8 in (0.95 cm) non-vented
Drainage Multi XL	LS96355-021	21 Fr (7.0 mm)	55 cm	3/8 in (0.95 cm) non-vented
	LS96360-023	23 Fr (7.7 mm)	61 cm	3/8 in (0.95 cm) non-vented
	LS96360-025	25 Fr (8.3 mm)	61 cm	3/8 in (0.95 cm) non-vented
	LS96360-027	27 Fr (9.0 mm)	61 cm	3/8 in (0.95 cm) non-vented
	LS96360-029	29 Fr (9.7 mm)	61 cm	3/8 in (0.95 cm) non-vented
Return Mini	LS96010-009	9 Fr (3.0 mm)	10 cm	1/4 in (0.64 cm) non-vented
	LS96010-011	11 Fr (3.7 mm)	10.5 cm	1/4 in (0.64 cm) non-vented
	LS96010-013	13 Fr (4.3 mm)	11 cm	1/4 in (0.64 cm) non-vented
	LS96010-015	15 Fr (5.0 mm)	11.5 cm	1/4 in (0.64 cm) non-vented
Drainage Mini	LS96110-009	9 Fr (3.0 mm)	10 cm	1/4 in (0.64 cm) non-vented
	LS96110-011	11 Fr (3.7 mm)	10.5 cm	1/4 in (0.64 cm) non-vented
	LS96110-013	13 Fr (4.3 mm)	11 cm	1/4 in (0.64 cm) non-vented
	LS96110-015	15 Fr (5.0 mm)	11.5 cm	1/4 in (0.64 cm) non-vented

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](http://www.medtronic.eu).

For applicable products, consult instructions for use on [www.medtronic.com/manuals](http://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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