VENOUS
SMARTCANULA

THE PARADIGM SHIFT IN VASCULAR CANULATION

smartcanula is designed for venous vascular access in conjunction with extracorporeal circulation.

SMARTCANULA

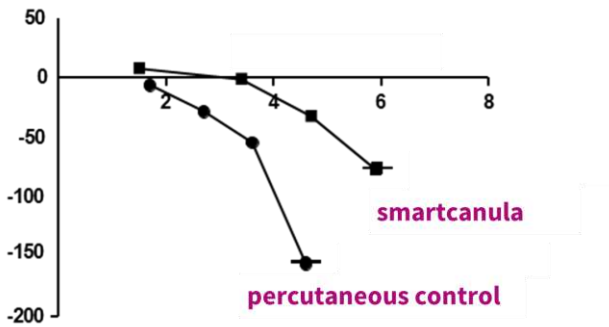
PhysioloSize your blood flow.

This document is intended to provide information to an international audience.

Superior Hemocompatibility

Minimal Punctuation

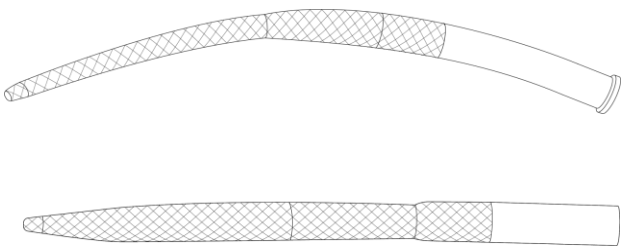
Superior Flow



SUPERIOR HEMOCOMPATIBILITY

The same flow is associated with a significantly less negative pressure and optimal venous drainage.

This low-profile canulation technique facilitates perfusion in minimally invasive cardiac valve surgery requiring low negative-drainage-pressures.[1]



MINIMAL PUNCTUATION

Reduced insertion diameter of smartcanula.

Easy insertion due to reduced insertion diameter (<18F, for all sizes of smartcanula!).

Easy bypassing of narrow vessel situation.[3]

SUPERIOR FLOW

Special design of a wall-less self-expanding hybrid canulation device.

Superior flow performance during MICS procedure over dual stage standard canula. Wall-less cannula ensure higher flow, in most cases without vacuum assistance.[2]

Shorter operation time (cardiopulmonary bypass time) and better visibility during MICS.[2]

[1] Clinical Experience With A Self-expandable Venous Cannula During Cardiopulmonary Bypass In Minimally Invasive Cardiac Surgery
Karel M. Van Praet, Gregor Richter, Simon Sündermann, Alexander Meyer, Christoph Starck, Christof Stamm, Matteo Montagner, Axel Unbehaun, Stephan Jacobs, Volkmar Falk, Jörg Kempfert. , German Heart Institute Berlin, Berlin, Germany.2018 INTERNATIONAL SOCIETY FOR MINIMALLY INVASIVE CARDIOTHORACIC SURGERY
[2] Femoral Venous Cannulation for Minimally Invasive Surgery: Three Years Experience with Wall-less, Self-expandable Cannula; Carlo Savini, Gregorio Gliozzi, Sofia Martin-Suarez, Zardin Davide, Carlo Mariani, Giulio Giovanni Cavalli, Gianluca Folesani, Davide Pacini Policlinico di Sant'Orsola, Bologna, Italy; ePoster 2022 INTERNATIONAL SOCIETY FOR MINIMALLY INVASIVE CARDIOTHORACIC SURGERY
[3] Erfahrungen mit der Smart Canula® zur venösen Drainage im Langzeiteinsatz; A. Straub, W. Schnur, E.-C. Rehn, H. Quinz, F. Oertel, M. Beyer, Klinik für Herz- und Thoraxchirurgie, (Direktor: Prof. Dr. med. Dr. h. c. M. Beyer), Zentralklinikum Augsburg, KARDIOTECHNIK 4/2011

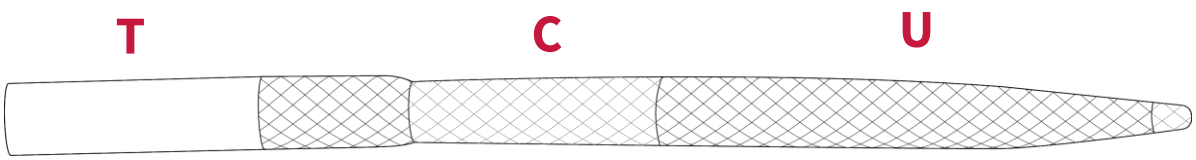
INTENDED USE

The smartcanula is designed for cannulation of the cardio-vascular system in conjunction with extracorporeal circulation.

Application period: 6 hours

KEY FUNCTIONAL ELEMENTS

The self-expanding **smartcanula** is made of braids from shape memory alloy (stainless steel). The canula is formed by a tubular connecting section **(T)**, which is the connection point to the extracorporeal circuit, a covered section **(C)** intended to provide the seal with a vessel of the circulatory system, an uncovered drainage section **(U)**, and a canula tip.



The canula is delivered with a **mandrel** (consisting of a hollow tube and a stopper), which allows stretching of the canula for the collapsed insertion. A guidewire can be inserted through the mandrel, which remains in the canula during insertion and is removed afterwards.

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TECHNICAL DATA

Reference number	Diameter	Connecting Diameter	Length					UDI-DI / GTIN
			Total	Sleeve (T)	Covered (C)	Uncovered (U)	Max. intravascular	
V 1/4 20F 530 ST	20 Fr (6,7 mm) Collapsed: ~15 Fr (5 mm)	1/4" (6,35 mm)	530	100	80	350	430	07649994109011
V 1/4 20F 430 ST			430	100	80	250	330	07649994109028
V 1/4 20F 340 ST			340	100	80	160	240	07649994109035
V 1/4 20F 260 ST			260	100	80	80	160	07649994109042
V 3/8 24F 730 ST	24 Fr (8 mm) Collapsed: ~18 Fr (6 mm)	3/8" (9,53 mm)	730	100	170	460	630	07649994109059
V 3/8 24F 680 ST			680	100	170	410	580	07649994109066
V 3/8 24F 630 ST			630	100	170	360	530	07649994109073
V 3/8 24F 530 ST			530	100	80	350	430	07649994109080
V 3/8 24F 430 ST			430	100	80	250	330	07649994109097
V 3/8 24F 340 ST			340	100	80	160	240	07649994109103
V 3/8 24F 260 ST			260	100	80	80	160	07649994109110
V 3/8 36F 680 S	36 Fr (12 mm) Collapsed: ~18 Fr (6 mm)		680	100	170	410	580	07649994109127
V 3/8 36F 630 S			630	100	170	360	530	07649994109134
V 3/8 36F 530 S			530	100	80	350	430	07649994109141
V 3/8 36F 430 S			430	100	80	250	330	07649994109158
V 3/8 36F 340 S			340	100	80	160	240	07649994109165
V 3/8 36F 260 S			260	100	80	80	160	07649994109172

Guidewire size 0.035” and dilation set are not included. Commercially available standard guidewires and dilation sets can be used in conjunction with smartcanula.
Recommended guidewire length: smartcanula <430 mm – 100 cm guidewire / smartcanula >430 mm – 180 cm guidewire.

PERFORMANCE SPECIFICATIONS

Variant	Length Range	Maximum Flow	Typical augmentation during application
36 French 3/8” (S)	260 mm – 680 mm	> 6.0 l/min for all lengths	None
24 French 3/8” (ST)	260 mm – 730 mm	> 6.0 l/min for all lengths	0 – 40 mmHg
20 French 1/4” (ST)	260 mm – 530 mm	> 4.0 l/min for all lengths	

LEARN MORE

short video clip on the smartcanula concept

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