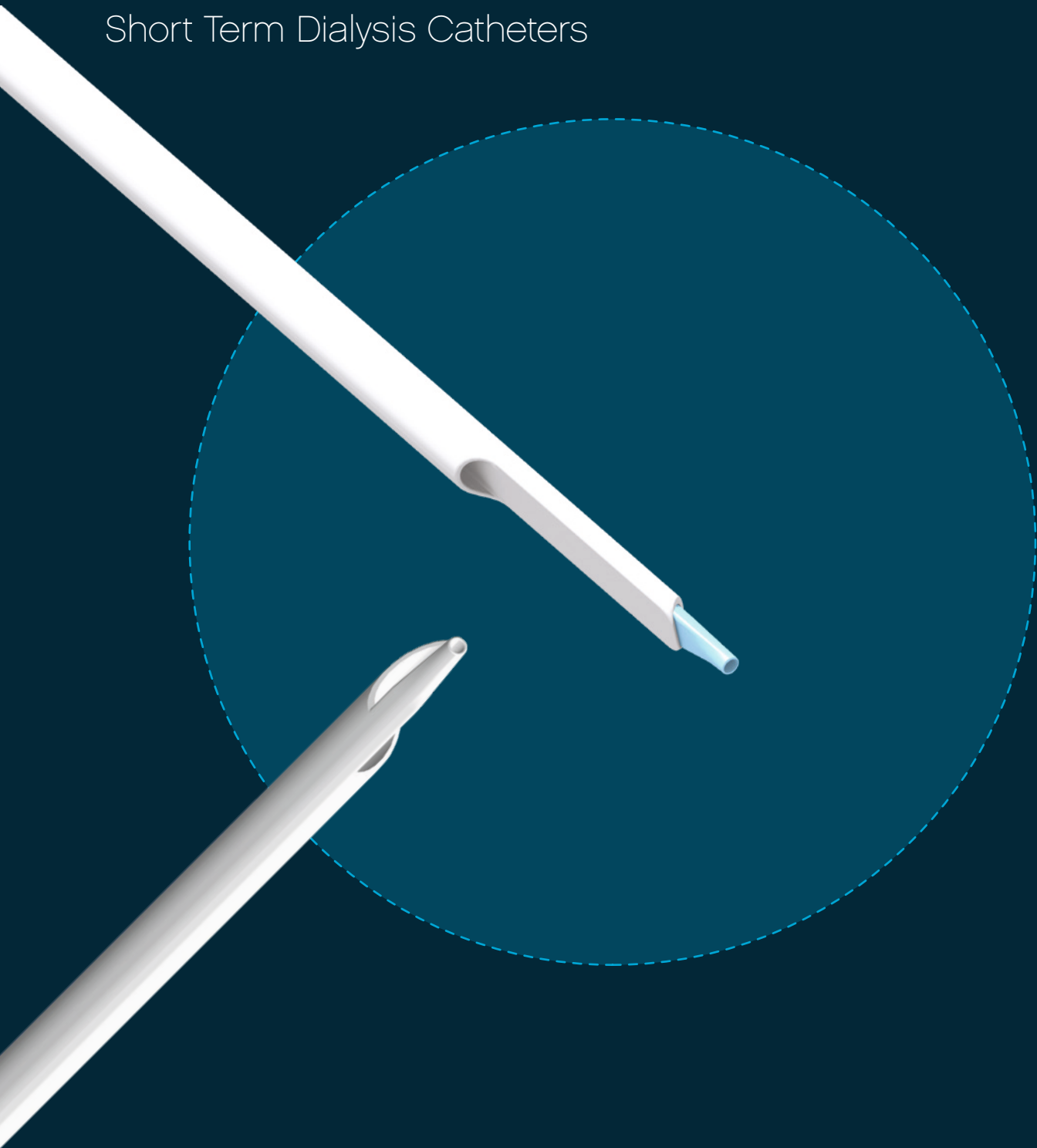


Joline®

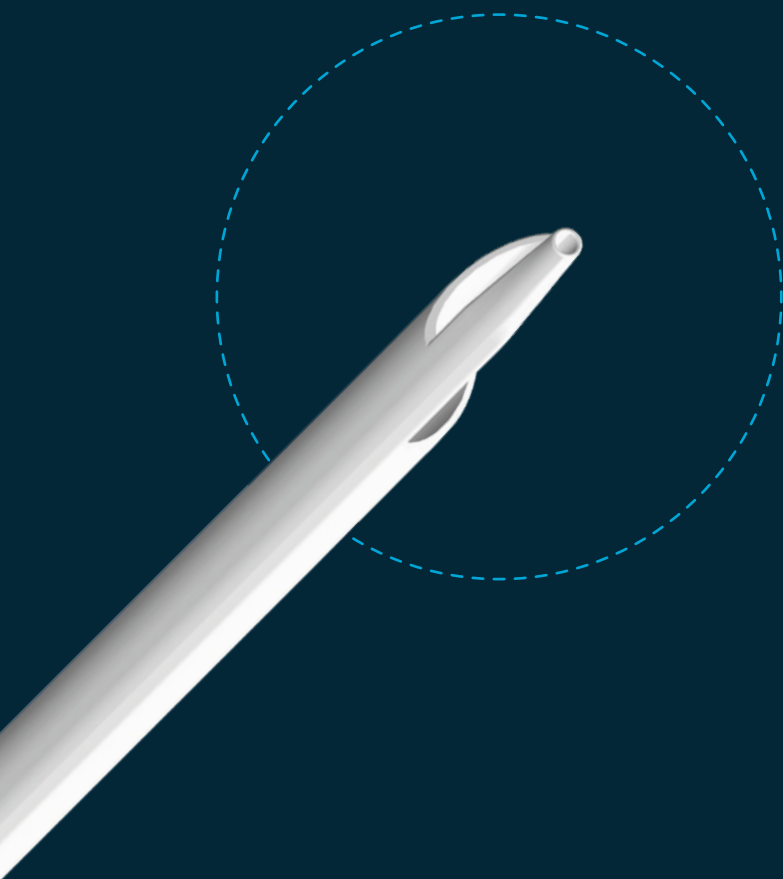
High Flow Family

Short Term Dialysis Catheters



 medical products
developed and produced
exclusively in Germany

High Flow Triple Lumen 13.5 Fr



Unique tip design, superior to the classic sidehole design:

- Clotting risk is considerably reduced
- Adhesion risk to the vessel wall considerably reduced
- Less complications during the treatment of septic patients
- Easy implantation due to tapered tip design

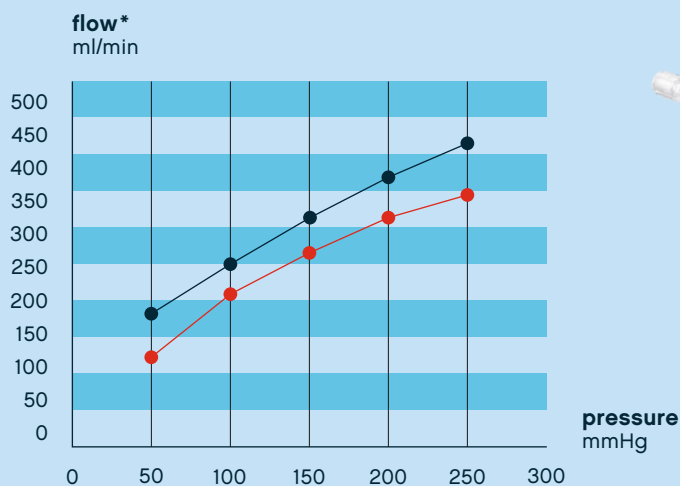
Large inner lumen:

- High blood flow
- More flexibility concerning the pump speed because lower pressure settings are possible

Third lumen:

- Fluid administration, vasoactive drug therapy, blood sampling

High Flow Triple Lumen 13.5 Fr



* Measured in Ringer's solution calculated for blood

High Flow Double Lumen

11 Fr & 13 Fr

medical products
developed and produced
exclusively in Germany

Pre-loaded stylet: Easy and atraumatic insertion

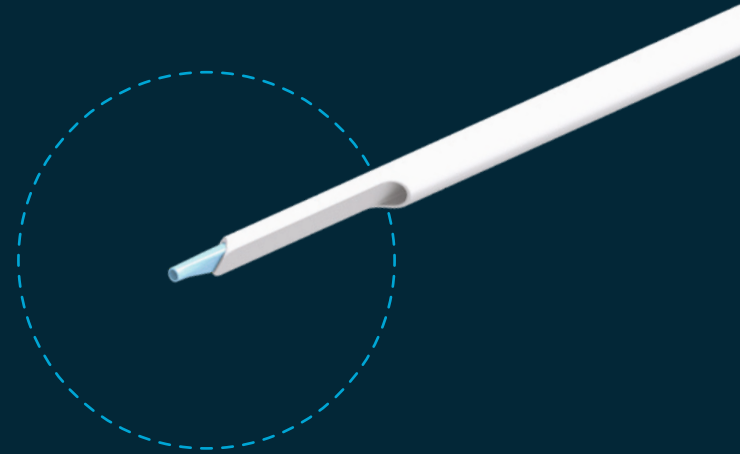
11 Fr

The new design for slow acute dialysis therapies:

- The new lumen with 11 Fr allows adequate blood flow with lower pressure rates

The special Tip-Design:

- Minimizes the insertion trauma
- Reduced clotting due to front standing openings
- Adhesion risk to the vessel wall considerably reduced



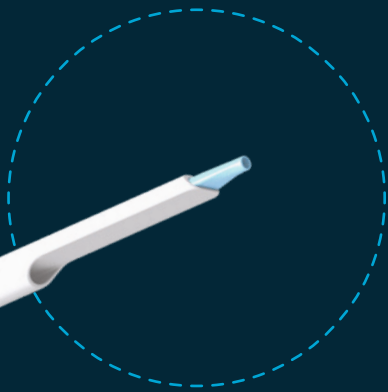
13 Fr

The best design for faster acute dialysis therapies:

- Larger inner diameters allow perfect flow rates
- More flexibility concerning the pump speed because lower pressure settings are possible

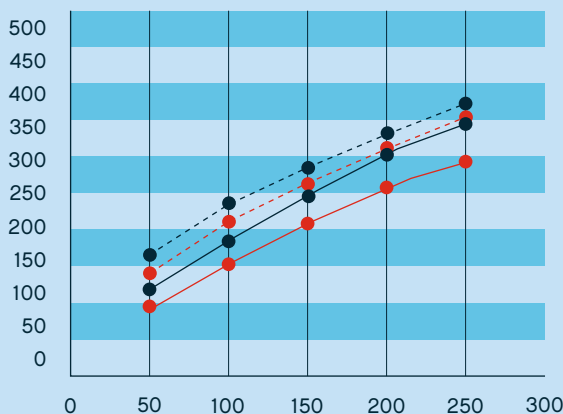
Catheter tip without sideholes:

- Reduced clotting



High Flow Double Lumen 11 Fr & 13 Fr

flow*
ml/min



pressure
mmHg



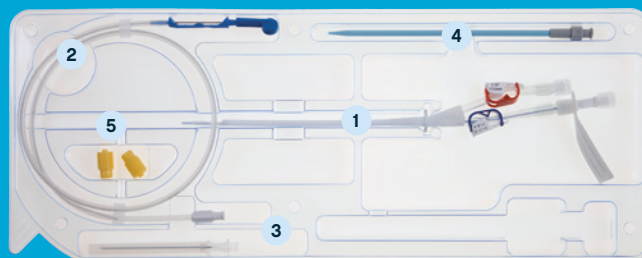
— 11 Fr - - - - 13 Fr * Measured in Ringer's solution calculated for blood

Further advantages of our High Flow Catheters

- Thermosensitive polyurethane Tecoflex®: After implantation the catheter shaft and tip become softer and therefore reduce the risk of vessel wall irritation
- Radiopaque catheter shaft: ensures X-ray visibility
- Rotatable Suture wing
- Safety clamps, with side-protection, preventing the extension-tube from slipping out. Indication of priming volume, Fr-size and length with a durable printing quality
- MRI compatible

All kits include

Example kit High Flow Double Lumen 13 Fr



- 1 Catheter
- 2 Kink resistant J-Guide wire (Nitinol)
- 3 Introducer needle 18 G
- 4 Dilatator
- 5 Luer Lock injection caps

Kink resistant guide wire

The new generation of Nitinol Seldinger Guide

The high content of titanium ensures extremely high flexibility and kink resistance. Additional comfort is provided by PTFE coating, which guarantees a smooth surface and best gliding.



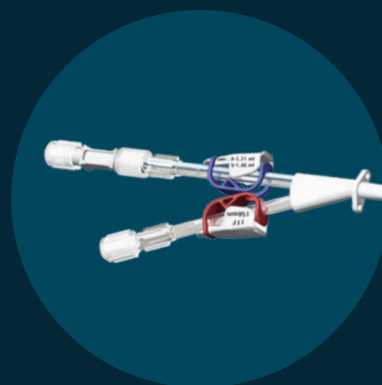
High Flow Family

Ordering Information

High Flow Triple Lumen 13.5 Fr

Straight Extensions		Curved Extensions		pcs. per box
Item No.	Length (mm)	Item No.	Length (mm)	
PKTHF13P150	150	PKTHF13P150R	150	5
PKTHF13P175	175	PKTHF13P175R	175	5
PKTHF13P200	200	PKTHF13P200R	200	5
PKTHF13P250	250	PKTHF13P250R	250	5

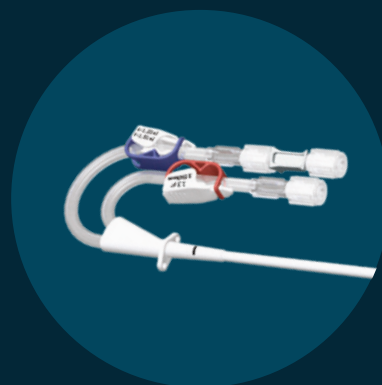
Straight Extensions



High Flow Double Lumen 11 Fr

Straight Extensions		Curved Extensions		pcs. per box
Item No.	Length (mm)	Item No.	Length (mm)	
PKHF11P150	150	PKHF11P150R	150	3
PKHF11P175	175	PKHF11P175R	175	3
PKHF11P200	200	PKHF11P200R	200	3
PKHF11P250	250	PKHF11P250R	250	3

Curved Extensions



High Flow Double Lumen 13 Fr

Straight Extensions		Curved Extensions		pcs. per box
Item No.	Length (mm)	Item No.	Length (mm)	
PKHF13PH150	150	PKHF13PH150R	150	3
PKHF13PH175	175	PKHF13PH175R	175	3
PKHF13PH200	200	PKHF13PH200R	200	3
PKHF13PH250	250	PKHF13PH250R	250	3
PKHF13PH300	300	-	-	3

About Joline

Joline is an internationally active medical device company located in the South of Germany with more than 15 years experience in minimally invasive therapies.

Joline is an expert provider of catheter, balloon and stent technology for various medical applications and maintains an important tradition of 'Made in Germany' quality in all its products and services.

All Joline products are developed and produced exclusively in Germany. We integrate quality aspects in our daily work and strive to meet the high standards of our customers. The highest priority we place on the health and safety of our patients.



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