

Evolution Flow Retrograde

Evolution Flow Retrograde 15.5 Fr

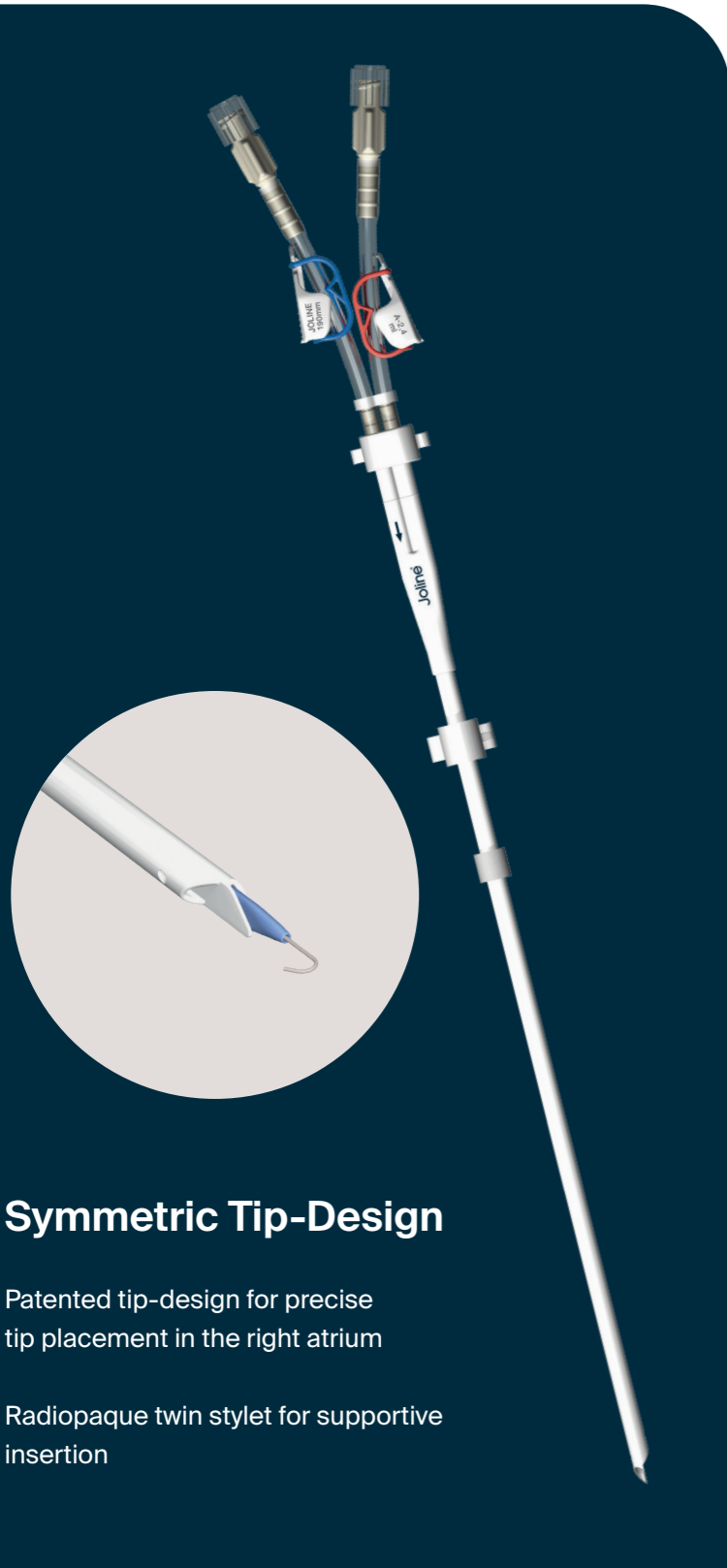


Long Term Catheters



Evolution Flow Retrograde 15.5 Fr

Implantation procedure 'Over The Wire'



Symmetric Tip-Design

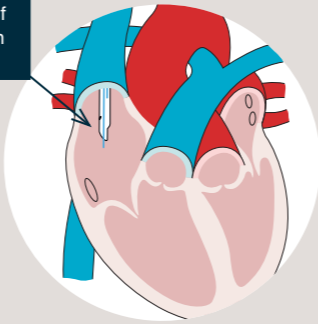
Patented tip-design for precise tip placement in the right atrium

Radiopaque twin stilet for supportive insertion

Patented Tip-Design

- Symmetric tip-design with additional side holes to reduce recirculation²

Tip Position:
in the middle of
the right atrium



Retrograde Implantation

- For precise placement of the catheter, first the tip is positioned in the middle of the right atrium, followed by subcutaneous tunneling of the catheter

Shaft

- Biocompatible, long lasting thermosensitive Polyurethane (Carbothane™)

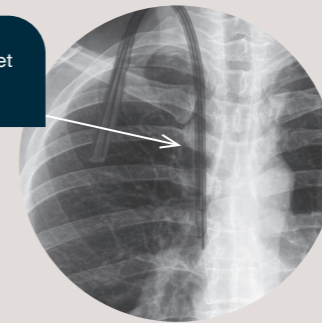
- Large Double-D-Design



High X-Ray Visibility

- The twin stilet displays the complete catheter shaft during x-ray episode and indicates the arterial and venous tip. This facilitates the exact tip-positioning of the catheter in the right atrium

Radiopaque stilet
(X-ray visible)

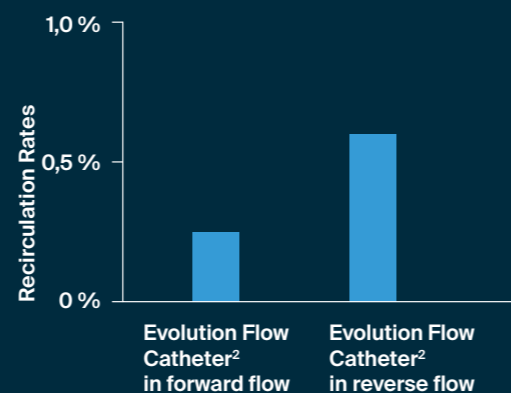


MRI Safe

- Metal free catheter

Reduced Recirculation²

Average recirculation rate less than
0.25 % in forward flow and
0.60 % in reverse flow

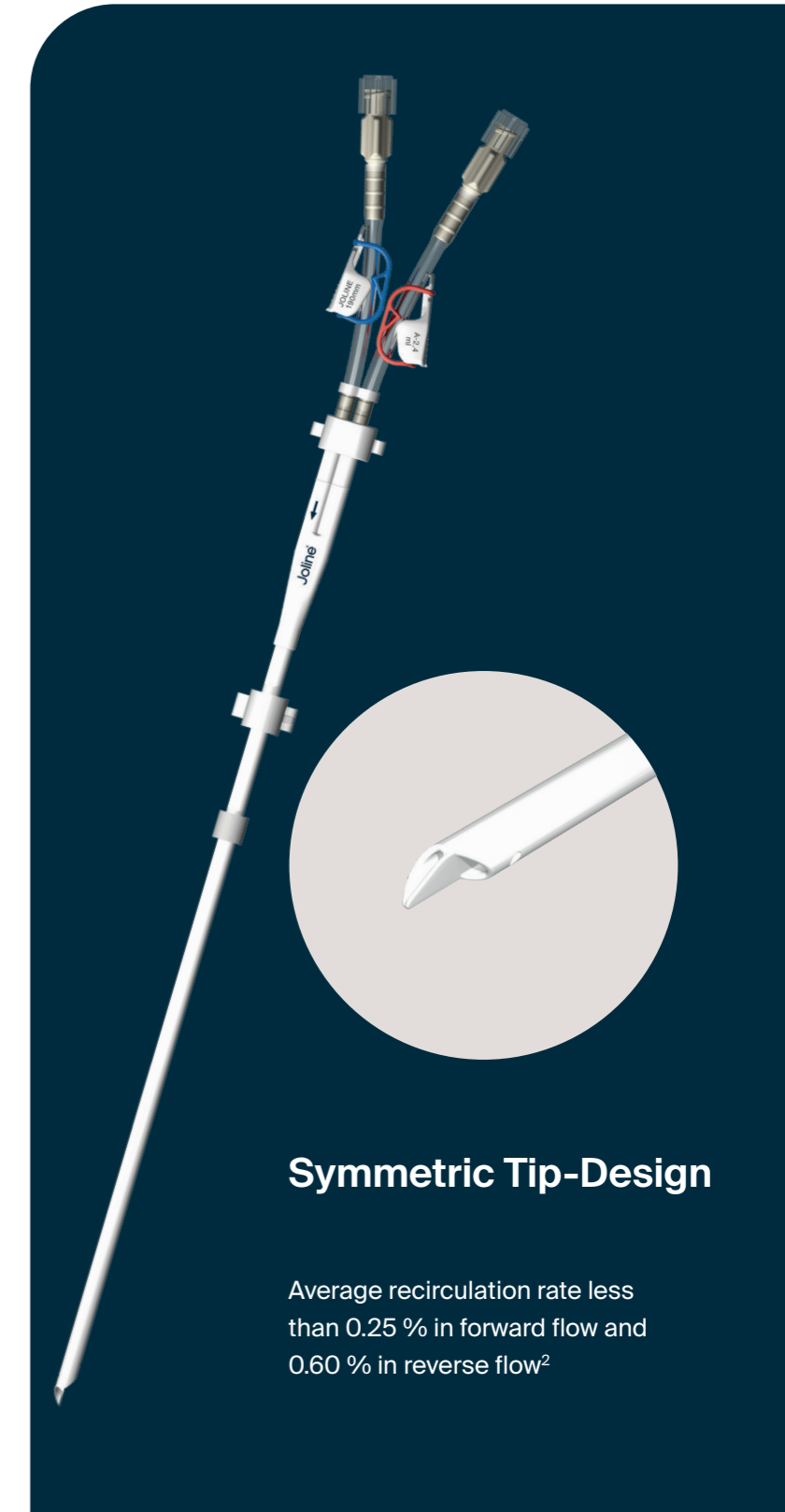


The best Design for Chronic Dialysis Therapies

- Polyurethane in combination with large Double-D-Design maximizes internal diameter and allows higher blood flow rates with adequate pressures on the machine
- Less local infection (at entry point / exit site) of the catheter³
- Reduced complication rate during implantation³

Evolution Flow Retrograde 15.5 Fr

Implantation procedure with Split Sheath



Symmetric Tip-Design

Average recirculation rate less than 0.25 % in forward flow and 0.60 % in reverse flow²

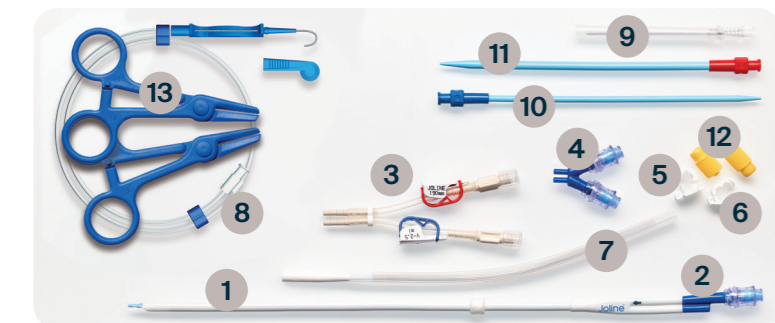
Evolution Flow Retrograde 15.5 Fr with stylet 'Over The Wire'

- Pre-loaded, radiopaque twin stylet to support insertion
- The radiopaque material ensures the precise positioning of the catheter-tip in the middle of the right atrium
- The highly visible twin stylet provides better stability and visibility during the insertion of the catheter
- Kit accessories ensure a precise placement of the catheter following the Seldinger Technique

Evolution Flow Retrograde 15.5 Fr with stylet 'Over The Wire'

Item No.	Tip-to-cuff	Tip-to-hub	Total length	Pcs per box
PKLTR15C19/40	190 mm	240 mm	412 mm	3
PKLTR15C23/44	230 mm	280 mm	452 mm	3
PKLTR15C28/49	280 mm	330 mm	502 mm	3
PKLTR15C33/54	330 mm	380 mm	552 mm	3
PKLTR15C55/76	550 mm	600 mm	772 mm	3

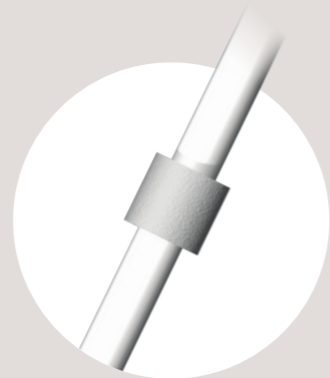
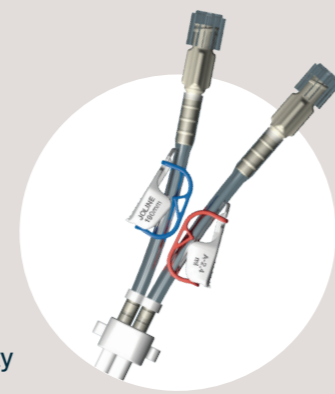
Example kit



- | | |
|--------------------------------|------------------------------------|
| 1 Catheter | 8 Kink resistant Nitinol guidewire |
| 2 Stylet | 9 Introducer needle |
| 3 Extension set | 10 Dilator 12 Fr |
| 4 Prefill-adaptor | 11 Dilator 16 Fr |
| 5 Shaft-clip with suture wings | 12 Luer-Lock injection caps |
| 6 Hub-clip with suture wings | 13 Forceps |
| 7 Trocar | |

Extensions

- Connectors made of PEEK⁴ (Polyetheretherketone) show durable secure connection to bloodlines
- Silicone extensions for stable shape and longevity
- The hub-clip provides safe connection between catheter and extension lines
- Repair-Set available

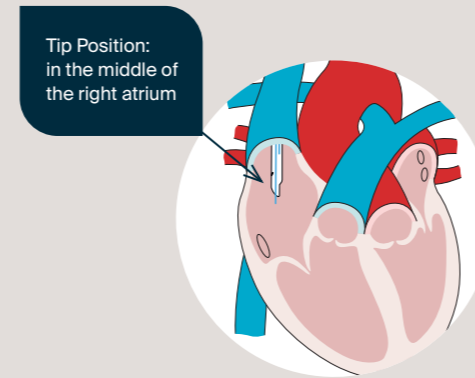


Cuff

- The wide Cuff provides unhindered healing and safe protection against catheter dislocation
- Cuffed catheters have a low dislocation risk³ (PMS)

Patented Tip-Design

- Symmetric tip-design with additional side holes to reduce recirculation²



Retrograde Implantation

- For precise placement of the catheter, first the tip is positioned in the middle of the right atrium, followed by subcutaneous tunneling of the catheter

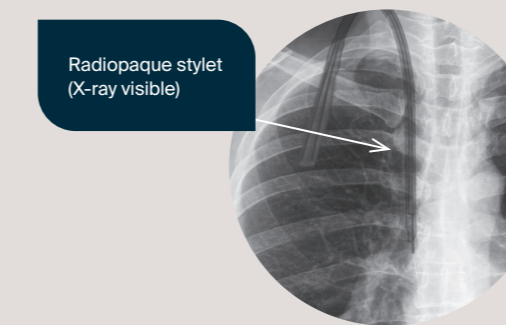
Shaft

- Biocompatible, long lasting thermosensitive Polyurethane (Carbothane™)
- Large Double-D-Design



High X-Ray Visibility

- The twin stylet displays the complete catheter shaft during x-ray episode and indicates the arterial and venous tip. This facilitates the exact tip-positioning of the catheter in the right atrium

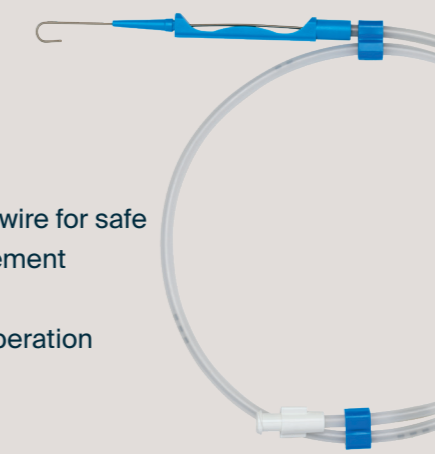


MRI Safe

- Metal free catheter

Kink Resistant Guidewire

- Kink resistant Nitinol guidewire for safe and smooth catheter placement
- Dispenser for one-hand-operation



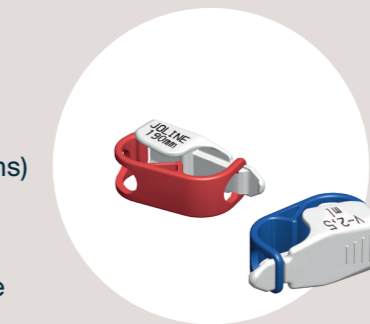
Hub-Clip & optional Shaft-Clip

- Hub-clip with suture wings
- Optional fixation using shaft-clip with suture wings



Safety Clamps

- Safety clamps with side protection, prevent the connection tube (Extensions) from slipping out
- Printing on clamps indicate priming volume and length



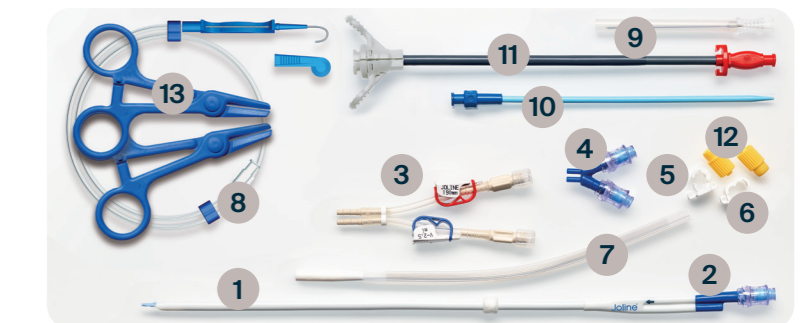
Evolution Flow Retrograde 15.5 Fr with Split Sheath

- Pre-loaded, radiopaque twin stylet to support insertion
- Valved Split Sheath protects against blood loss during catheter insertion
- Catheter kit provides "All-in-One" solution, with "Over The Wire" and Split Sheath technique for flexibility in implantation methods
- Kit accessories ensure a precise placement of the catheter following the Seldinger Technique

Evolution Flow Retrograde 15.5 Fr with Split Sheath ("All-in-One")

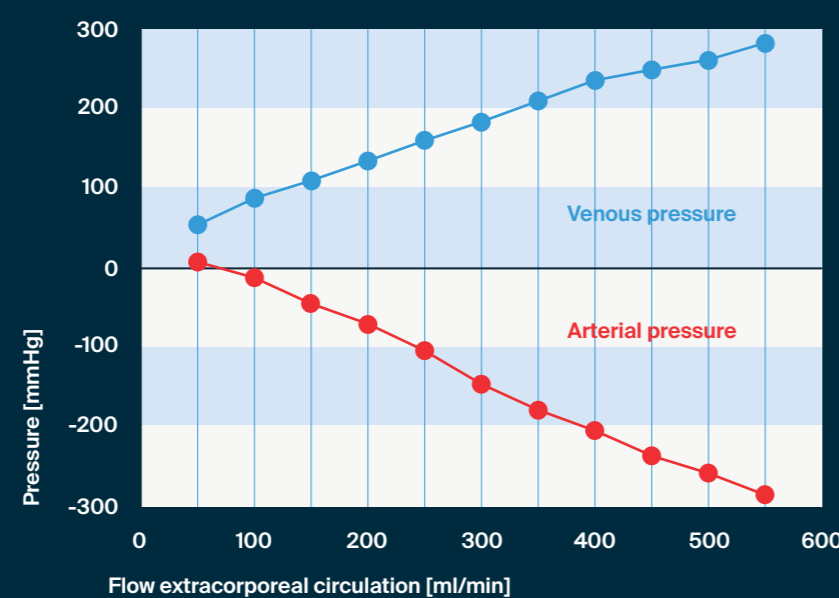
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Example kit



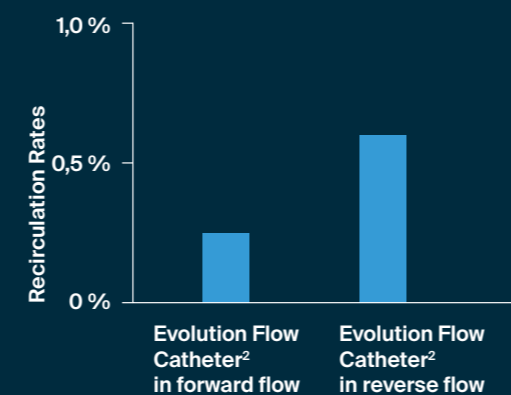
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Flow/Pressure¹



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The best Design for Chronic Dialysis Therapies

- Polyurethane in combination with large Double-D-Design maximizes internal diameter and allows higher blood flow rates with adequate pressures on the machine
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- Reduced complication rate during implantation³

Repair-Set for both implantation procedures



- 1 x Extension set
- 1 x Hub-clip with suture wings
- 1 x Shaft-clip with suture wings
- 2 x Luer-Lock injection caps
- 2 x Forceps
- 1 x Info flag "Fill Volume"

Item No.	Pcs per box
KLTR	3

References

- 1 PKLTR15C55/76 / mean catheter 1-10, each measurement 1-3 (vena cava flow: 1.7 L/min); measured ex vivo by Clinical Research Labor; CRO LS medcap GmbH
- 2 PKLTR15C55/76, measured ex vivo by Clinical Research Labor; CRO LS medcap GmbH
- 3 Customer feedback – Post-Market-Surveillance (PMS) – Clinical Research Organisation; CRO LS medcap GmbH
- 4 PEEK (PolyEtherEtherKetone)

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