



SHUNT COMPONENTS

FOR MIETHKE SHUNT SYSTEMS

Catheters

- + All catheters are made of radiopaque silicone with barium sulfate

Catheter diameter: $d_i = 1.2 \text{ mm}$, $d_o = 2.5 \text{ mm}$

Peritoneal Catheter

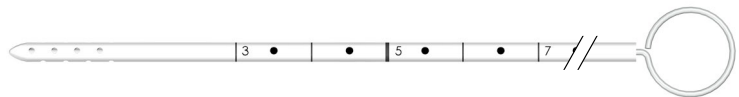
Art. no	Length
FV070P	600 mm
FV071P	900 mm
FV072P	1200 mm



Ventricular Catheter

with stylet, graduated, 16 holes

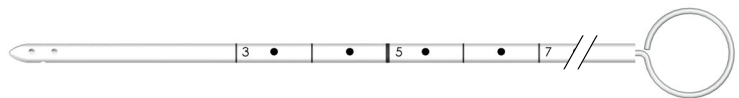
Art. no	Length
FV074P	180 mm
FV077P	250 mm



THOMALE CATHETER

with stylet, graduated, 6 holes

Art. no	Length
FV093P	180 mm



- + Design acc. Dr. Ulrich Thomale

Catheters

- + All catheters are made of radiopaque silicone

Catheter diameter: $d_i = 1.2 \text{ mm}$, $d_o = 2.5 \text{ mm}$

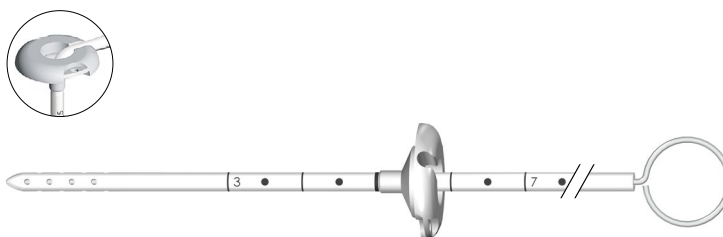
Burrhole Deflector

- + With suture fixation eyelets
- + Made of titanium
- + Radiopaque
- + Allows 90° deflection of the ventricular catheter in the burrhole without kinking the catheter
- + Adjustable on catheter
- + Allows precise setting of the penetration depth of the ventricular catheter prior to implantation

Ventricular Catheter

with *Burrhole Deflector*, 16 holes

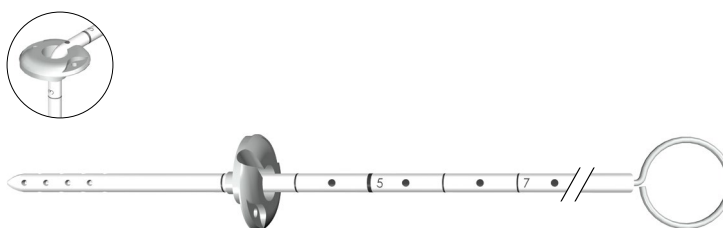
Art. no	Set
FV075P	Ventricular Catheter, 180 mm, with stylet, graduated Burrhole Deflector, 16 mm
FV078P	Ventricular Catheter, 250 mm, with stylet, graduated Burrhole Deflector, 16 mm



Ventricular Catheter

with *Pediatric Burrhole Deflector*, 16 holes

Art. no	Set
FV076P	Ventricular Catheter, 180 mm, with stylet, graduated Pediatric Burrhole Deflector, 13 mm



Burrhole Deflectors

- + With suture fixation eyelets
- + Made of titanium
- + Radiopaque
- + Allows 90° deflection of the ventricular catheter in the burrhole without kinking the catheter
- + Adjustable on catheter

Art. no	Burrhole Deflector
FV010T	16 mm



16 mm



9.5 mm

Art. no	Pediatric Burrhole Deflector
FV011T	13 mm



13 mm



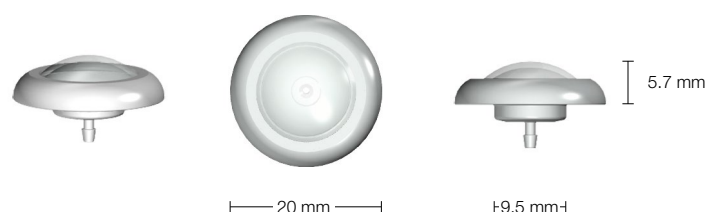
3 mm

Burrhole Ports

- + Made of titanium
- + Radiopaque
- + Low overall height for easy and safe positioning and fixation of the ventricular catheter
- + Solid titanium base preventing penetration with a syringe needle
- + Allows puncture of the silicone membrane with a pointed syringe needle

Connector diameter: $d_o = 1.9$ mm
Catheter diameter: $d_i = 1.2$ mm, $d_o = 2.5$ mm

Art. no	<i>Burrhole Port</i>
FV030T	20 mm



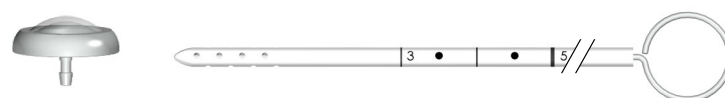
Art. no	<i>Pediatric Burrhole Port</i>
FV040T	14 mm



Art. no	<i>Burrhole Port Set</i>
50010004	Burrhole Port, 20 mm Ventricular Catheter, 180 mm, with stylet, graduated



Art. no	<i>Pediatric Burrhole Port Set</i>
FV042T	Pediatric Burrhole Port, 14 mm Ventricular Catheter, 180 mm, with stylet, graduated

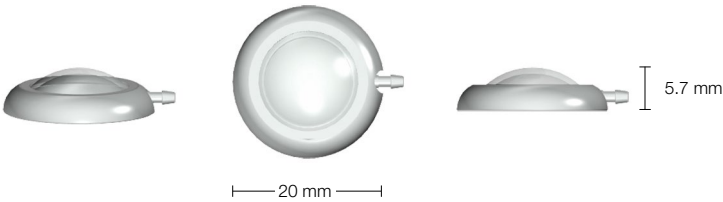


CSF Ports

- + Made of titanium
- + Radiopaque
- + Low overall height for easy and safe positioning and fixation of the ventricular catheter
- + Allows puncture of the silicone membrane with a pointed syringe needle
- + Solid titanium base preventing penetration with a syringe needle

Connector diameter: $d_o = 1.9\text{ mm}$
Catheter diameter: $d_i = 1.2\text{ mm}$, $d_o = 2.5\text{ mm}$

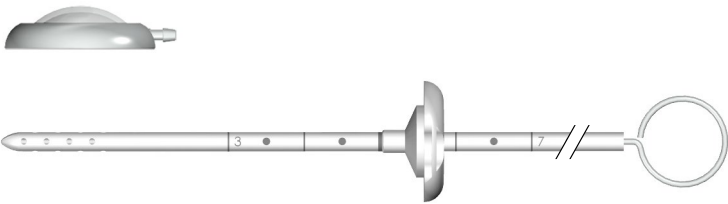
Art. no	CSF Port
FV060T	20 mm



Art. no	CSF Port with Ventricular Catheter
FV061T	With integrated Ventricular Catheter, 85 mm



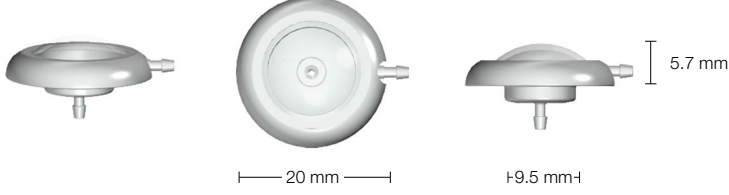



Art. no	CSF Port Set
FV062T	CSF Port, 20 mm Ventricular Catheter, 180 mm, with stylet, graduated, Burrhole Deflector, 16 mm



Burrhole Reservoirs

- + Made of titanium
- + Radiopaque
- + Low overall height for easy and safe positioning and fixation of the ventricular catheter
- + Allows puncture of the silicone membrane with a pointed syringe needle
- + Shunt function check
- + Solid titanium base preventing penetration with a syringe needle

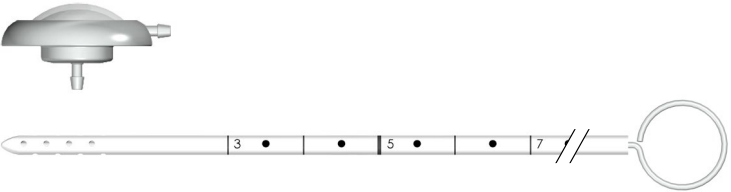
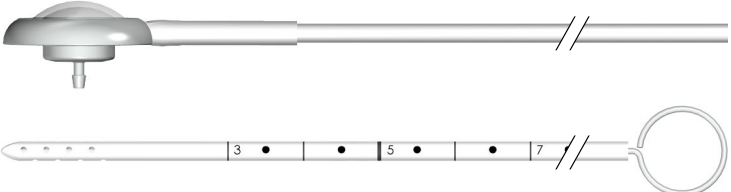
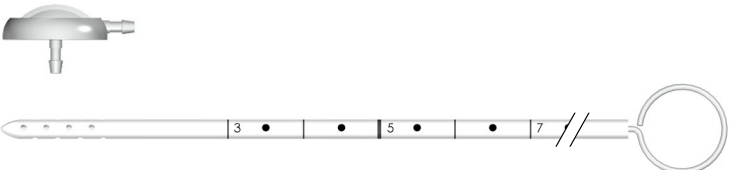
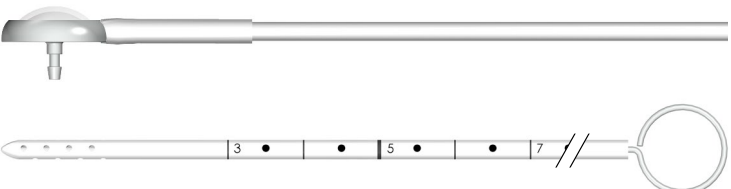
Connector diameter: $d_o = 1.9$ mm
Catheter diameter: $d_i = 1.2$ mm, $d_o = 2.5$ mm

Art. no	<i>Burrhole Reservoir</i>	
FV028T	20 mm	
Art. no	<i>Pediatric Burrhole Reservoir</i>	
FV039T	14 mm	
Art. no	<i>Burrhole Reservoir with Distal Catheter</i>	
FV027T	20 mm, with catheter, 600 mm	
Art. no	<i>Pediatric Burrhole Reservoir with Distal Catheter</i>	
FV054T	14 mm, with catheter, 200 mm	

Burrhole Reservoir Sets

- + Made of titanium
- + Radiopaque
- + Low overall height for easy and safe positioning and fixation of the ventricular catheter
- + Solid titanium base preventing penetration with a syringe needle
- + Allows puncture of the silicone membrane with a pointed syringe needle
- + Shunt function check

Connector diameter: $d_o = 1.9 \text{ mm}$
 Catheter diameter: $d_i = 1.2 \text{ mm}$, $d_o = 2.5 \text{ mm}$

Art. no	<i>Burrhole Reservoir Set</i>	
FV032T	Burrhole Reservoir, 20 mm Ventricular Catheter, 180 mm, with stylet, graduated	
Art. no	<i>Burrhole Reservoir Set</i>	
FV031T	Burrhole Reservoir, 20 mm, with catheter, 600 mm Ventricular Catheter, 180 mm, with stylet, graduated	
Art. no	<i>Pediatric Burrhole Reservoir Set</i>	
FV041T	Pediatric Burrhole Reservoir 14mm Ventricular Catheter, 180 mm, with stylet, graduated	
Art. no	<i>Pediatric Burrhole Reservoir Set</i>	
FV055T	Pediatric Burrhole Reservoir 14 mm, with catheter, 200 mm Ventricular Catheter, 180 mm, with stylet, graduated	

McLANAHAN RESERVOIR

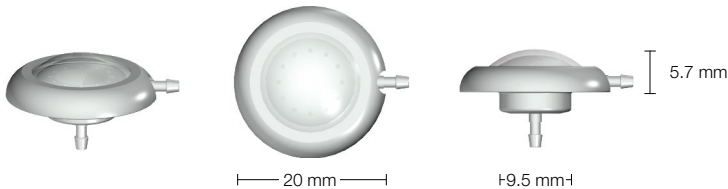
- + Made of titanium
- + Radiopaque
- + Allows checking the patency of both the ventricular catheter and the distal catheter
- + Allows puncture of the silicone membrane with a pointed syringe needle
- + Shunt function check
- + Integrated mechanism shutting off the proximal connection to the ventricular catheter during pumping
- + Integrated mechanism shutting off the distal connection during injection with syringe needle
- + Design acc. to Dr. McLanahan



Mechanism to control the flow direction

Connector diameter: $d_o = 1.9\text{ mm}$

Art. no	McLANAHAN RESERVOIR
FV082T	20 mm

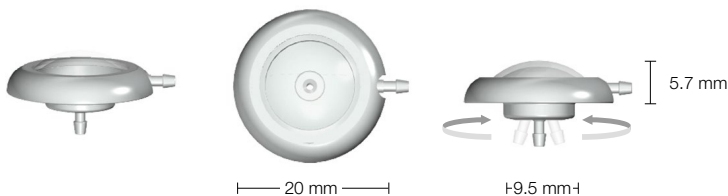


ETOU RESERVOIR

- + Made of titanium
- + Radiopaque
- + Low overall height for easy and safe positioning and fixation of the ventricular catheter
- + Solid titanium base preventing penetration with a syringe needle
- + Allows puncture of the silicone membrane with a pointed syringe needle
- + Shunt function check
- + With adjustable proximal connector

Connector diameter: $d_o = 1.9\text{ mm}$

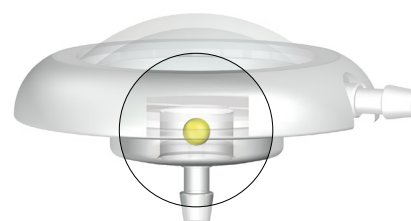
Art. no	ETOU RESERVOIR
FV029T	20 mm, with adjustable connector



SPRUNG RESERVOIR

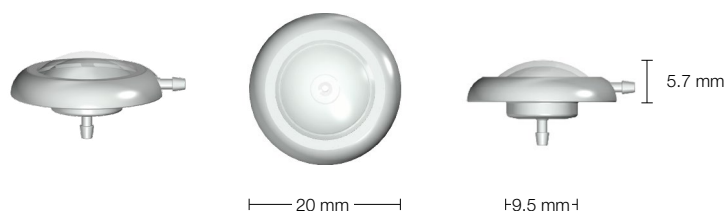
- + Made of titanium
- + Radiopaque
- + Allows checking the patency of both the ventricular catheter and the distal catheter
- + Allows puncture of the membrane with a pointed syringe needle
- + Shunt function check
- + Solid titanium base preventing penetration with a syringe needle
- + Integrated mechanism shutting off the proximal connection to the ventricular catheter during pumping
- + Design acc. to Dr. Sprung

Connector diameter: $d_o = 1.9 \text{ mm}$
Catheter diameter: $d_i = 1.2 \text{ mm}$, $d_o = 2.5 \text{ mm}$



Mechanism to control the flow direction

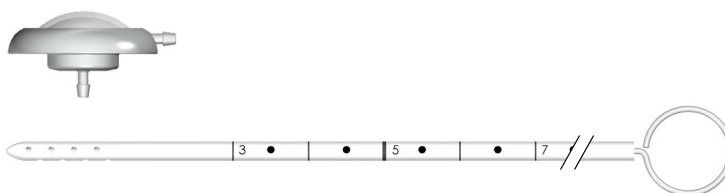
Art. no	<i>SPRUNG RESERVOIR</i>
FV043T	20 mm



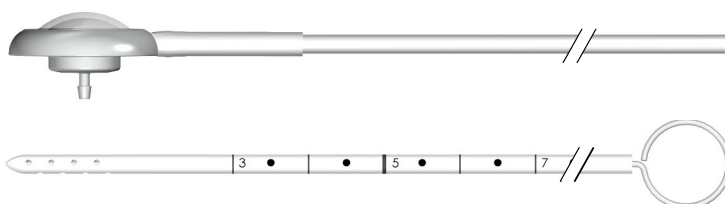
Art. no	<i>SPRUNG RESERVOIR with Distal Catheter</i>
FV044T	20 mm, with catheter, 600 mm



Art. no	<i>SPRUNG RESERVOIR Set</i>
FV045T	SPRUNG RESERVOIR, 20 mm Ventricular Catheter, 180 mm, with stylet, graduated



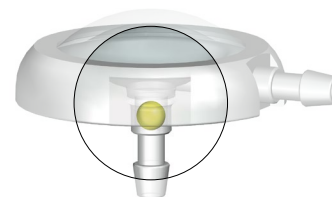
Art. no	<i>SPRUNG RESERVOIR Set</i>
FV046T	SPRUNG RESERVOIR, 20 mm, with catheter, 600 mm Ventricular Catheter, 180 mm, with stylet, graduated



Pediatric SPRUNG RESERVOIR

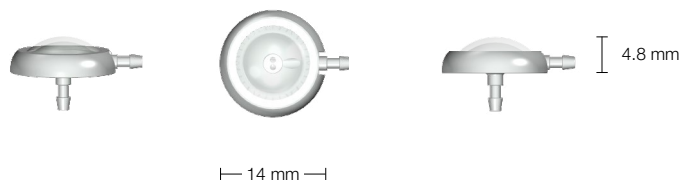
- + Made of titanium
- + Radiopaque
- + Allows checking the patency of both the ventricular catheter and the distal catheter
- + Allows puncture of the membrane with a pointed syringe needle
- + Shunt function check
- + Solid titanium base preventing penetration with a syringe needle
- + Integrated mechanism shutting off the proximal connection to the ventricular catheter during pumping
- + Design acc. to Dr. Sprung
- + Adapted to the size of a child's skull

Connector diameter: $d_o = 1.9 \text{ mm}$
 Catheter diameter: $d_i = 1.2 \text{ mm}$, $d_o = 2.5 \text{ mm}$



Mechanism to control the flow direction

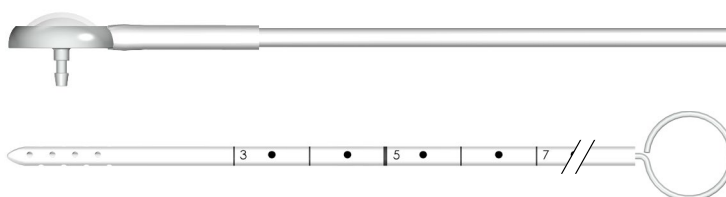
Art. no	Pediatric SPRUNG RESERVOIR
FV063T	14 mm



Art. no	Pediatric SPRUNG RESERVOIR with Distal Catheter
FV064T	14 mm, with catheter, 600 mm



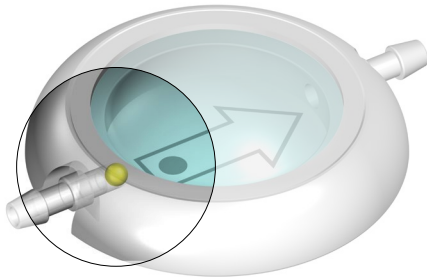
Art. no	Pediatric SPRUNG RESERVOIR Set
FV065T	Pediatric SPRUNG RESERVOIR, 14 mm, with catheter, 200 mm Ventricular Catheter, 180 mm, with stylet, graduated



CONTROL RESERVOIR

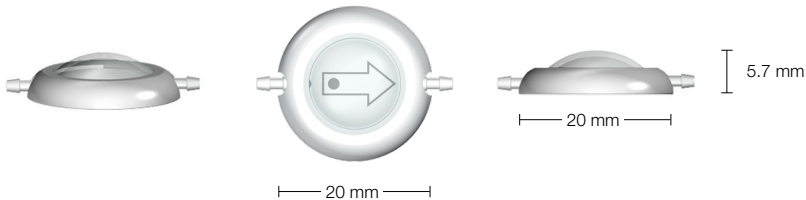
- + Made of titanium
- + Radiopaque
- + Allows checking the patency of both the ventricular catheter and the distal catheter
- + Allows puncture of the membrane with a pointed syringe needle
- + Shunt function check
- + Solid titanium base preventing penetration with a syringe needle
- + Integrated valve mechanism shutting off the proximal connection to the ventricular catheter during pumping

Connector diameter: $d_o = 1.9\text{ mm}$
 Catheter diameter: $d_i = 1.2\text{ mm}$, $d_o = 2.5\text{ mm}$



Mechanism to control the flow direction

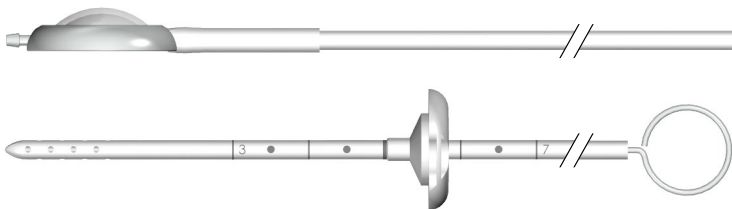
Art. no	CONTROL RESERVOIR
FV047T	20 mm



Art. no	CONTROL RESERVOIR with Distal Catheter
FV048T	20 mm, with catheter, 600 mm



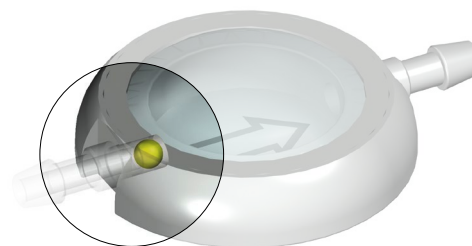
Art. no	CONTROL RESERVOIR Set
FV049T	CONTROL RESERVOIR, 20 mm, with catheter, 600 mm Ventricular Catheter, 180 mm, with stylet, graduated, Burrhole Deflector, 16 mm



Pediatric CONTROL RESERVOIR

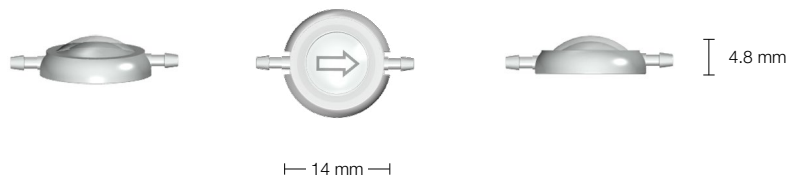
- + Made of titanium
- + Radiopaque
- + Allows checking the patency of both the ventricular catheter and the distal catheter
- + Allows puncture of the membrane with a pointed syringe needle
- + Shunt function check
- + Solid titanium base preventing penetration with a syringe needle
- + Integrated valve mechanism shutting off the proximal connection to the ventricular catheter during pumping
- + Adapted to the size of a child's skull

Connector diameter: $d_o = 1.9 \text{ mm}$
Catheter diameter: $d_i = 1.2 \text{ mm}$, $d_o = 2.5 \text{ mm}$



Mechanism to control the flow direction

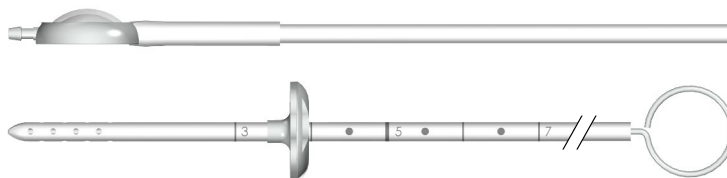
Art. no	Pediatric CONTROL RESERVOIR
FV066T	14 mm



Art. no	Pediatric CONTROL RESERVOIR with Distal Catheter
FV067T	14 mm, with catheter, 600 mm



Art. no	Pediatric CONTROL RESERVOIR Set
FV068T	Pediatric CONTROL RESERVOIR, 14 mm, with catheter, 200 mm Ventricular Catheter, 250 mm, with stylet, graduated, Pediatric Burrhole Deflector 13 mm

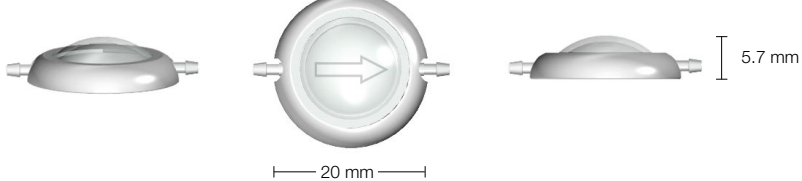
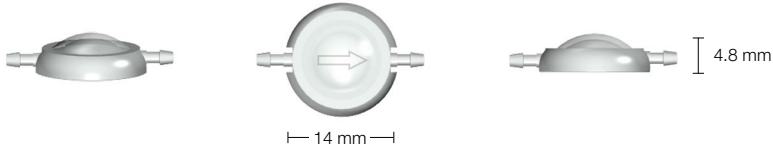
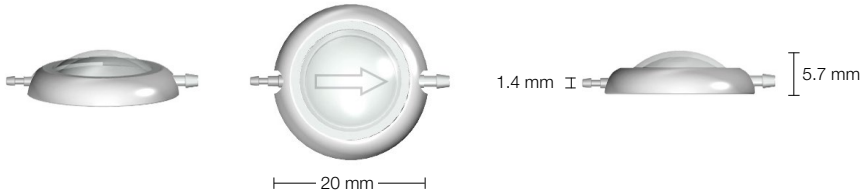





Prechambers

- + Made of titanium
- + Radiopaque
- + Allows puncture of the silicone membrane with a pointed syringe needle
- + Shunt function check
- + Solid titanium base preventing penetration with a syringe needle

Connector diameter: $d_o = 1.9 \text{ mm}$

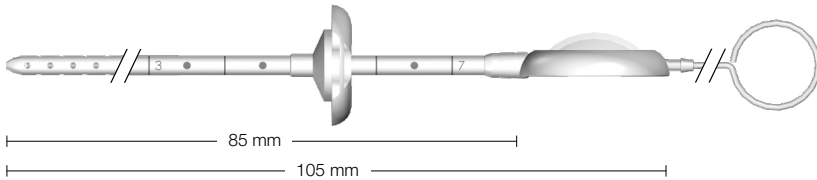
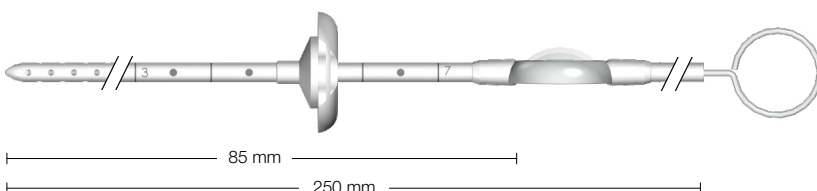
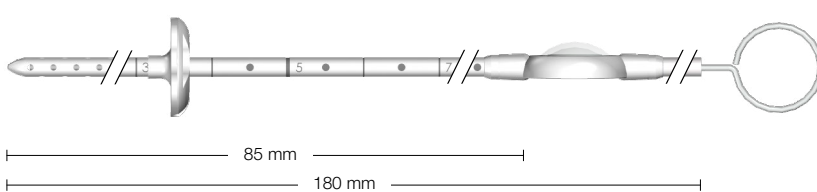
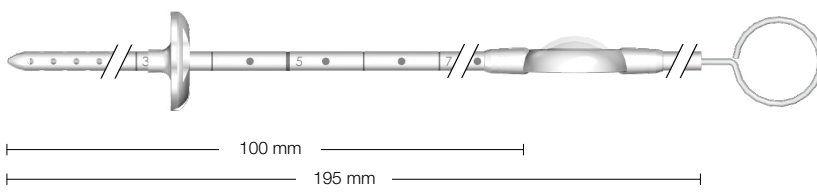
Catheter diameter: $d_i = 1.2 \text{ mm}$, $d_o = 2.5 \text{ mm}$

Art. no	<i>Prechamber</i>	
FV033T	20 mm	
Art. no	<i>Pediatric Prechamber</i>	
FV035T	14 mm	
Art. no	<i>Prechamber LP</i>	
56100000	20 mm, inlet connector with smaller diameter ($d_o = 1.4 \text{ mm}$) to connect a lumbar catheter ($d_i = 0.8 \text{ mm}$, $d_o = 1.6 \text{ mm}$)	
Art. no	<i>Prechamber with Distal Catheter</i>	
FV034T	20 mm, with catheter, 600 mm	
Art. no	<i>Pediatric Prechamber with Distal Catheter</i>	
FV081T	14 mm, with catheter, 600 mm	
Art. no	<i>Prechamber Set</i>	
FV036T	Prechamber 20 mm, with catheter, 600 mm Ventricular Catheter, 180 mm, with stylet, graduated Burrhole Deflector, 16 mm	

Prechamber Sets

- + Made of titanium
- + Radiopaque
- + Allows puncture of the silicone membrane with a pointed syringe needle
- + Shunt function check
- + Solid titanium base preventing penetration with a syringe needle

Connector diameter: $d_o = 1.9$ mm
Catheter diameter: $d_i = 1.2$ mm, $d_o = 2.5$ mm

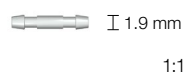
Art. no	Prechamber Set	
FV037T	Ventricular Catheter, 85 mm, graduated and integrated Prechamber, 20 mm with stylet, Burrhole Deflector, 16 mm	
Art. no	Prechamber Set	
FV079T	Ventricular Catheter, 85 mm, graduated and integrated Pediatric Prechamber, 14 mm with catheter, 153 mm and stylet, Burrhole Deflector, 16 mm	
Art. no	Pediatric Prechamber Set	
FV038T	Ventricular Catheter, 85 mm, graduated and integrated Pediatric Prechamber, 14 mm with catheter, 80 mm and stylet, Pediatric Burrhole Deflector, 13 mm	
FV080T	Ventricular Catheter, 100 mm, graduated and integrated Pediatric Prechamber, 14 mm with catheter, 80 mm and stylet, Pediatric Burrhole Deflector, 13 mm	

Titanium Connectors

- + Preferably for use with catheters of:
inner catheter diameter $d_i = 1.2 \text{ mm}$
outer catheter diameter $d_o = 2.5 \text{ mm}$
- + Connector diameter: 1.9 mm

Titanium Connector, straight

Art. no	QTY
FV012T	1 pc.
FV013T	5 pc.
FV014T	10 pc.



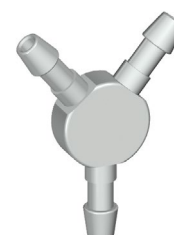
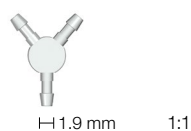
Titanium Connector, L-formed

Art. no	QTY
FV051T	1 pc.



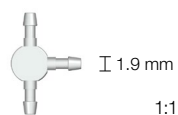
Titanium Connector, Y-formed

Art. no	QTY
FV015T	1 pc.
FV016T	5 pc.
FV017T	10 pc.



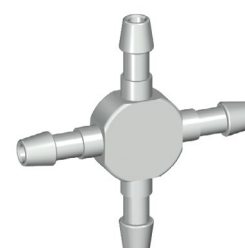
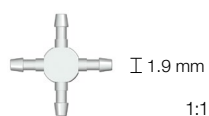
Titanium Connector, T-formed

Art. no	QTY
FV018T	1 pc.
FV019T	5 pc.
FV020T	10 pc.



Titanium Connector, X-formed

Art. no	QTY
FV021T	1 pc.
FV022T	5 pc.
FV023T	10 pc.



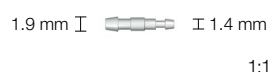
Titanium Connectors

Step-down & LP

- + Step-down connectors are designed for connecting standard catheters to lumbar catheters
- + Step-down connector outer diameters: 1.9 mm to 1.4 mm
- + LP connectors are designed for connecting two lumbar catheters
- + LP connectors diameters: 1.4 mm

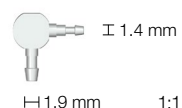
Titanium Connector, step-down

Art. no	QTY
FV050T	1 pc.



Titanium Connector, L-formed, step-down

Art. no	QTY
FV052T	1 pc.



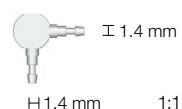
Titanium Connector, straight, LP

Art. no	QTY
07000010	1 pc.



Titanium Connector, L-formed, LP

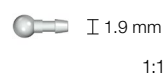
Art. no	QTY
FV053T	1 pc.



Titanium Shutting Plug

- + Preferably for use with catheters of:
inner catheter diameter $d_i = 1.2$ mm
outer catheter diameter $d_o = 2.5$ mm
- + Plug diameter: 1.9 mm

Art. no	QTY
FV024T	1 pc.
FV025T	5 pc.
FV026T	10 pc.



- + Impregnated with Clindamycin (0.15%) and Rifampicin (0.054%)
- + Catheters are made of radiopaque silicone

Catheter diameter: $d_i = 1.2 \text{ mm}$, $d_o = 2.5 \text{ mm}$

XABO Peritoneal Catheter

Art. no	Length
FY010A	600 mm
FY011A	900 mm
FY012A	1200 mm



XABO Ventricular Catheter

with stylet, graduated, 16 holes

Art. no	Length
FY020A	180 mm
FY021A	250 mm



XABO Ventricular Catheter

with Burrhole Deflector, 16 holes

Art. no	Set
FY022A	XABO Ventricular Catheter, 180 mm, with stylet, graduated Burrhole Deflector, 16 mm
FY023A	XABO Ventricular Catheter, 250 mm, with stylet, graduated Burrhole Deflector, 16 mm



XABO Ventricular Catheter

with Pediatric Burrhole Deflector, 16 holes

Art. no	Set
FY024A	XABO Ventricular Catheter, 180mm, with stylet, graduated Pediatric Burrhole Deflector, 13 mm
FY025A	XABO Ventricular Catheter, 250 mm, with stylet, graduated Pediatric Burrhole Deflector, 13 mm



XABO®

Catheter Sets

+ Set consists of one ventricular catheter and one peritoneal catheter

Catheter diameter: $d_i = 1.2 \text{ mm}$, $d_o = 2.5 \text{ mm}$

XABO Catheter Set

Art. no	Set
FY040A	XABO Peritoneal Catheter, 1200 mm XABO Ventricular Catheter, 180 mm with stylet, graduated
FY041A	XABO Peritoneal Catheter, 1200 mm XABO Ventricular Catheter, 250 mm with stylet, graduated



XABO Catheter Set with Burrhole Deflector

Art. no	Set
FY042A	XABO Peritoneal Catheter, 1200 mm XABO Ventricular Catheter, 180 mm with stylet, graduated Burrhole Deflector, 16 mm
FY043A	XABO Peritoneal Catheter, 1200 mm XABO Ventricular Catheter, 250 mm with stylet, graduated Burrhole Deflector, 16 mm



XABO Catheter Set with Pediatric Burrhole Deflector

Art. no	Set
FY044A	XABO Peritoneal Catheter, 1200 mm XABO Ventricular Catheter, 180 mm with stylet, graduated Pediatric Burrhole Deflector, 13 mm
FY045A	XABO Peritoneal Catheter, 1200 mm XABO Ventricular Catheter, 250 mm with stylet, graduated Pediatric Burrhole Deflector, 13 mm





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