

# Hydrocephalus Catalog

1<sup>st</sup> edition





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# Valves

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# MRI-Stable Adjustable Valve

**Polaris®**

## Polaris® Adjustable Valves

The Polaris® Adjustable Valve is a high precision ball-in-cone valve, with a self-locking magnetic rotor.

Its pressure can be adjusted percutaneously with a dedicated adjustment kit.

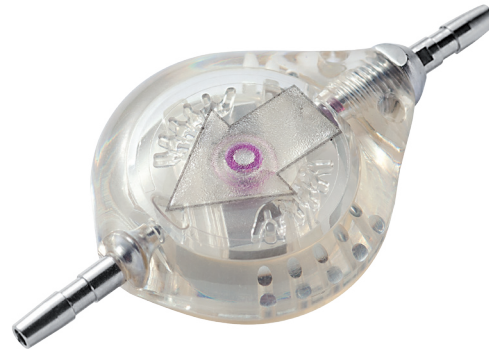
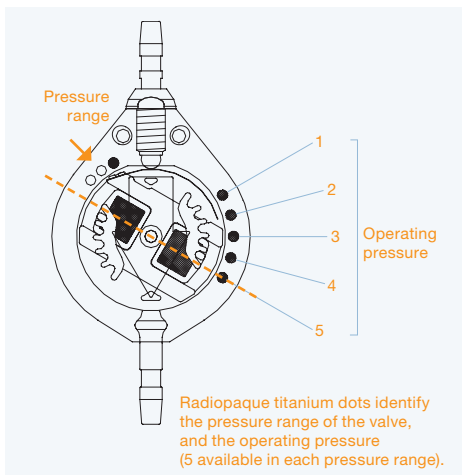
Each Polaris® Valve model offers 5 operating pressure levels.

The operating pressure range of the standard Polaris® valve is 30 to 200 mmH<sub>2</sub>O.

Three additional special pressure ranges are also available, to address specific clinical needs:

10 to 140 mmH<sub>2</sub>O, 50 to 300 mmH<sub>2</sub>O, and 80 to 400 mmH<sub>2</sub>O.

Each Polaris® Valve is individually tested, and identified by a unique serial number.



	Product code	Description
<p>No dot</p>	SPV-140	<b>Polaris® Adjustable Valve, 10-140</b> 5 operating pressure levels from 10 to 140 mmH <sub>2</sub> O: 10, 40, 80, 110, 140 mmH <sub>2</sub> O.
<p>One dot</p>	SPV	<b>Polaris® Adjustable Valve, 30-200</b> 5 operating pressure levels from 30 to 200 mmH <sub>2</sub> O: 30, 70, 110, 150, 200 mmH <sub>2</sub> O.
<p>Two dots</p>	SPV-300	<b>Polaris® Adjustable Valve, 50-300</b> 5 operating pressure levels from 50 to 300 mmH <sub>2</sub> O: 50, 100, 150, 220, 300 mmH <sub>2</sub> O.
<p>Three dots</p>	SPV-400	<b>Polaris® Adjustable Valve, 80-400</b> 5 operating pressure levels from 80 to 400 mmH <sub>2</sub> O: 80, 150, 230, 330, 400 mmH <sub>2</sub> O.

## Polaris® Adjustable Valves with Reservoir

Polaris® valves are also available with integrated reservoirs, for direct CSF access.



	Product code	Description
	SPVA-140	<b>Polaris® Adjustable Valve, 10-140, Antechamber</b> 5 operating pressure levels from 10 to 140 mmH <sub>2</sub> O: 10, 40, 80, 110, 140 mmH <sub>2</sub> O. Integrated antechamber.
<p>With Antechamber</p>	SPVA	<b>Polaris® Adjustable Valve, 30-200, Antechamber</b> 5 operating pressure levels from 30 to 200 mmH <sub>2</sub> O: 30, 70, 110, 150, 200 mmH <sub>2</sub> O. Integrated antechamber
	SPVA-300	<b>Polaris® Adjustable Valve, 50-300, Antechamber</b> 5 operating pressure levels from 50 to 300 mmH <sub>2</sub> O: 50, 100, 150, 220, 300 mmH <sub>2</sub> O. Integrated antechamber.
	SPVA-400	<b>Polaris® Adjustable Valve, 80-400, Antechamber</b> 5 operating pressure levels from 80 to 400 mmH <sub>2</sub> O: 80, 150, 230, 330, 400 mmH <sub>2</sub> O. Integrated antechamber.
<p>With Burr-Hole Reservoir</p>	SPVB	<b>Polaris® Adjustable Valve, 30-200, Burr-Hole Reservoir</b> 5 operating pressure levels from 30 to 200 mmH <sub>2</sub> O: 30, 70, 110, 150, 200 mmH <sub>2</sub> O. Integrated Burr-Hole reservoir.

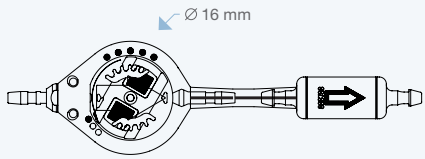
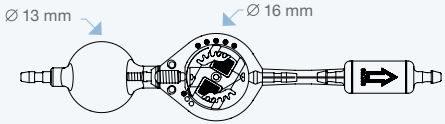
# MRI-Stable Adjustable Valve

**Polaris®**

## Polaris® Adjustable Valves with preconnected SiphonX®

SiphonX® is a valve accessory designed to limit the siphon effect during cerebro-spinal fluid drainage. It gives an additional resistance to the operating pressure of the valve depending upon the position of the patient (maximum: + 200 mmH<sub>2</sub>O in the vertical position).



	Product code	Description
	SPV140-SX	<b>Polaris® Adjustable Valve, 10-140, SiphonX®</b> 5 operating pressure levels from 10 to 140 mmH <sub>2</sub> O: 10, 40, 80, 110, 140 mmH <sub>2</sub> O. Preconnected anti-siphon device: up to +200 mmH <sub>2</sub> O in vertical position.
	SPV-SX	<b>Polaris® Adjustable Valve, 30-200, SiphonX®</b> 5 operating pressure levels from 30 to 200 mmH <sub>2</sub> O: 30, 70, 110, 150, 200 mmH <sub>2</sub> O. Preconnected anti-siphon device: up to +200 mmH <sub>2</sub> O in vertical position.
	SPVA140-SX	<b>Polaris® Adjustable Valve, 10-140, Antechamber, SiphonX®</b> 5 operating pressure levels from 10 to 140 mmH <sub>2</sub> O: 10, 40, 80, 110, 140 mmH <sub>2</sub> O. Integrated antechamber. Preconnected anti-siphon device: up to +200 mmH <sub>2</sub> O in vertical position.
	SPVA-SX	<b>Polaris® Adjustable Valve, 30-200, Antechamber, SiphonX®</b> 5 operating pressure levels from 30 to 200 mmH <sub>2</sub> O: 30, 70, 110, 150, 200 mmH <sub>2</sub> O. Integrated antechamber. Preconnected anti-siphon device: up to +200 mmH <sub>2</sub> O in vertical position.



## Polaris® Adjustable Valve Kits

Polaris® Adjustable Valves are also available in Kits, including Polaris® valve, with 5 operating pressure levels from 30 to 200 mmH<sub>2</sub>O: 30, 70, 110, 150, 200 mmH<sub>2</sub>O, with or without reservoir, with pre-attached distal catheter (B905S) and separate ventricular catheter (BO19-10).



	Product code	Description
	SPV-2010	<b>Polaris® SPV Kit B905S/BO19-10</b> Right Angle Adapter on the ventricular catheter.
<p>With Antechamber</p>	SPVA-2010	<b>Polaris® SPVA Kit B905S/BO19-10</b> Integrated Antechamber. Right Angle Adapter on the ventricular catheter.
<p>With Burr-Hole Reservoir</p>	SPVB-2010	<b>Polaris® SPVB Kit B905S/BO19-10</b> Integrated Burr-Hole Reservoir.


# MRI-Stable Adjustable Valve

**Polaris®**

## Polaris® Adjustment Kit-2

For optimal adjustment and reading comfort.



	Product code	Description
	PAK2	<b>Polaris® Adjustment Kit-2</b> Complete kit for the adjustment of the Polaris® Adjustable Valve, containing Locating Instrument (PAK2-LI), Reading Instrument (PAK2-RI), Setting Instrument (PAK2-SI), and Polaris® Demo Valve (SPV-Demo-00) - Shielded case.

	Product code	Description
	PAK2-LI	<p><b>Locator</b></p> <p>Choice of the pressure range: able to display the 4 pressure ranges available with a rotating ring, graduated in mmH<sub>2</sub>O. Localization of the valve under the skin.</p>
	PAK2-RI	<p><b>Compass</b></p> <p>Localization of the valve center (for locator centering), its patented mechanism making it possible to locate the valve center through the skin and thus fine-tune the positioning of the Locator. Pressure reading: allows a precise and reliable reading of the selected pressure.</p>
	PAK2-SI	<p><b>Magnet</b></p> <p>Unlocking of the valve. New pressure adjustment: a true "magnetic key", it makes fast unlocking and precise valve adjustment possible because of an exclusive combination of several powerful magnets.</p>
	SPV- DEMO-00	<p><b>Polaris® Demo Valve</b></p> <p>Allows the user to train himself to adjust the Polaris® valve.</p>

# Adjustable Valves

## Sophy® Mini SM8

### Sophy® Mini SM8 Adjustable Valves

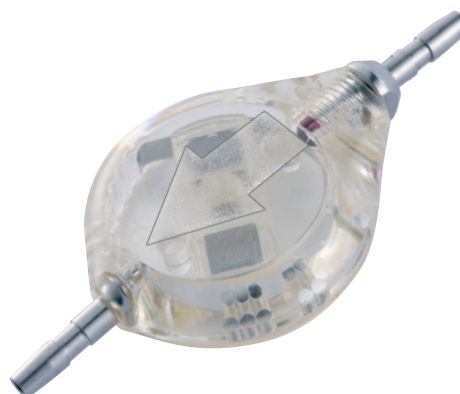
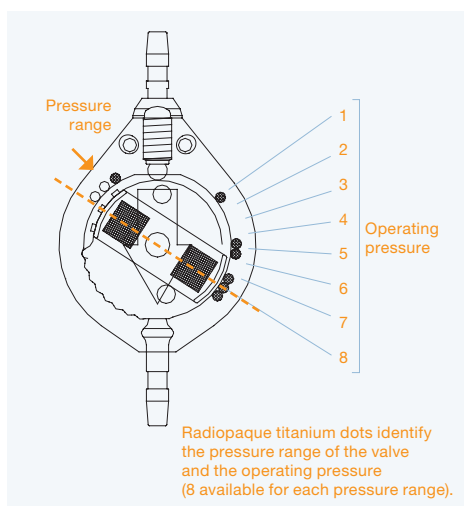
The Sophy® Mini Adjustable Valve is a high precision ball-in-cone valve, with a magnetic rotor. Its pressure can be adjusted percutaneously with a dedicated adjustment kit.

The Sophy® Mini Adjustable Valve offers 8 operating pressure levels.

The operating pressure range of the standard Sophy® Mini Adjustable Valve is 30 to 200 mmH<sub>2</sub>O.

Three additional special pressure ranges are also available to address specific clinical needs: 10 to 140 mmH<sub>2</sub>O, 50 to 300 mmH<sub>2</sub>O and 80 to 400 mmH<sub>2</sub>O.

Each Sophy® Mini Adjustable Valve is individually tested, and identified by a unique serial number.



	Product code	Description
<p>No dots</p>	SM8-140	<b>Sophy® Mini Adjustable Valve, 10-140</b> 8 operating pressure levels from 10 to 140 mmH <sub>2</sub> O: 10, 25, 40, 60, 80, 100, 120, 140 mmH <sub>2</sub> O
<p>One dot</p>	SM8	<b>Sophy® Mini Adjustable Valve, 30-200</b> 8 operating pressure levels from 30 to 200 mmH <sub>2</sub> O: 30, 50, 70, 90, 110, 140, 170, 200 mmH <sub>2</sub> O.
<p>Two dots</p>	SM8-300	<b>Sophy® Mini Adjustable Valve, 50-300</b> 8 operating pressure levels from 50 to 300 mmH <sub>2</sub> O: 50, 75, 100, 125, 150, 180, 220, 300 mmH <sub>2</sub> O.
<p>Three dots</p>	SM8-400	<b>Sophy® Mini Adjustable Valve, 80-400</b> 8 operating pressure levels from 80 to 400 mmH <sub>2</sub> O: 80, 120, 150, 190, 230, 270, 330, 400 mmH <sub>2</sub> O.

## Sophy® Mini SM8 Adjustable Valves with reservoir

Sophy® Mini Adjustable Valves are also available with integrated reservoirs, for direct CSF access.



SM8A



SM8B

Product code	Description
<p>With Antechamber</p>	<p><b>SM8A</b></p> <p><b>Sophy® Mini Adjustable Valve, 30-200, Antechamber</b></p> <p>8 operating pressure levels from 30 to 200 mmH<sub>2</sub>O: 30, 50, 70, 90, 110, 140, 170, 200 mmH<sub>2</sub>O. Integrated Antechamber.</p>
<p>With Burr-Hole Reservoir</p>	<p><b>SM8B</b></p> <p><b>Sophy® Mini Adjustable Valve, 30-200, Burr-Hole Reservoir</b></p> <p>8 operating pressure levels from 30 to 200 mmH<sub>2</sub>O: 30, 50, 70, 90, 110, 140, 170, 200 mmH<sub>2</sub>O. Integrated Burr-Hole Reservoir.</p>

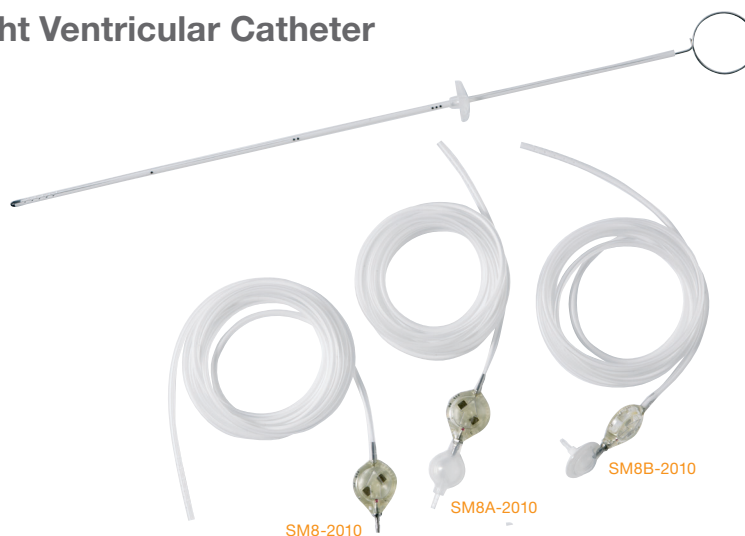
# Adjustable Valves

## Sophy® Mini SM8

### Sophy® Mini SM8 Adjustable Valves Kits

Sophy® Mini Adjustable Valves are also available in kits, including Sophy® Mini Adjustable Valve, with 8 operating pressure levels from 30 to 200 mmH<sub>2</sub>O: 30, 50, 70, 90, 110, 140, 170, 200 mmH<sub>2</sub>O, with or without reservoir, with pre-attached distal catheter (B905S) and separate straight ventricular catheter (BO19-10) OR separate right angle ventricular catheter (PROx for intracranial implantation or PLOx for pectoral implantation).

#### With Straight Ventricular Catheter



	Product code	Description
	SM8-2010	<b>Sophy® Mini SM8 Kit B905S/BO19-10</b> Right Angle Adapter on the ventricular catheter.
	SM8A-2010	<b>Sophy® Mini SM8A Kit B905S/BO19-10</b> Integrated Antechamber. Right Angle Adapter on the ventricular catheter.
	SM8B-2010	<b>Sophy® Mini SM8B Kit B905S/BO19-10</b> Integrated Burr-Hole Reservoir.

## With Right Angle Ventricular Catheter

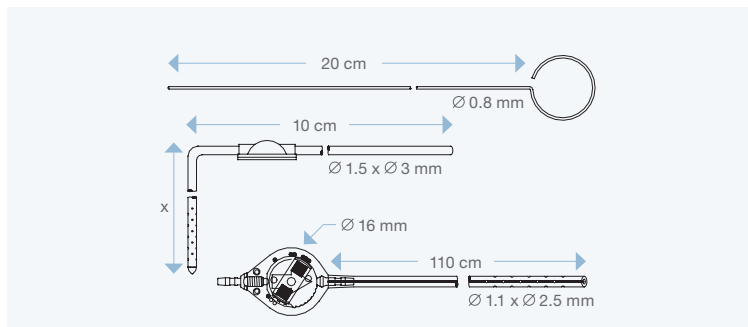
For intracranial implantation



Product code	Description
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SM8-2020	<b>Sophy® Mini SM8 Kit B905S/PR06</b> Separate Right Angle Ventricular Catheter with Reservoir (PRO6, x = 6 cm intracranial).
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SM8-2021	<b>Sophy® Mini SM8 Kit B905S/PR07</b> Separate Right Angle Ventricular Catheter with Reservoir (PRO7, x = 7 cm intracranial).
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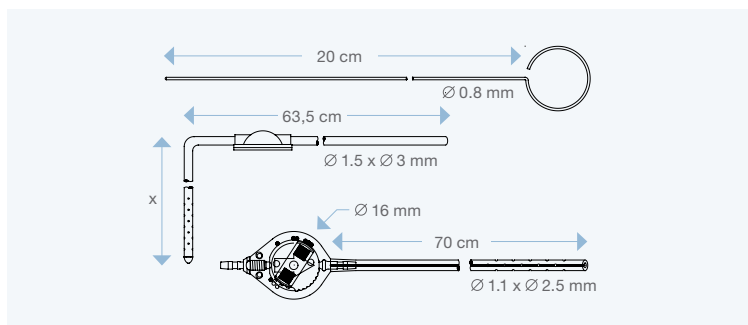
For pectoral implantation



Product code	Description
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SM8-2030	<b>Sophy® Mini SM8 Kit B905S/PL06</b> Separate Right Angle Ventricular Catheter with Reservoir for pectoral implantation, (PLO6, x = 6 cm intracranial).
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SM8-2031	<b>Sophy® Mini SM8 Kit B905S/PL07</b> Separate Right Angle Ventricular Catheter with Reservoir for pectoral implantation, (PLO7, x = 7 cm intracranial).
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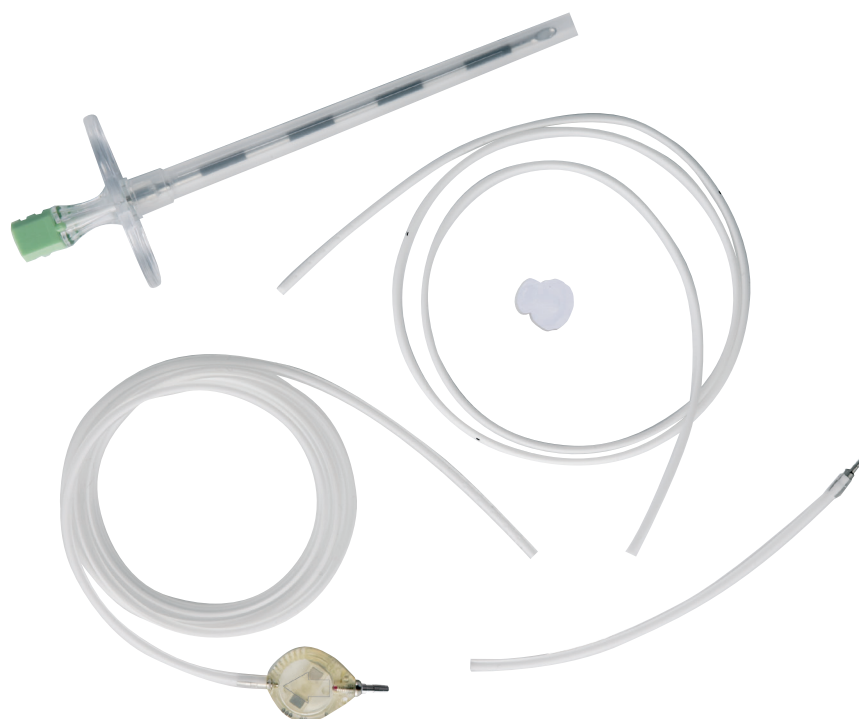


# Adjustable Valves

## Sophy® Mini SM8

### Sophy® Mini SM8 Adjustable Valve Kit for lumbo-peritoneal shunting

Sophy® Mini Adjustable Valve is also available in a kit for lumbo-peritoneal shunting.



Product code	Description
SM8-2040	<b>Sophy® Mini SM8 LP shunt Kit</b> Sophy® Mini Adjustable Valve with 8 levels of pressure from 30 to 200 mmH <sub>2</sub> O: 30, 50, 70, 90, 110, 140, 170, 200 mmH <sub>2</sub> O. <ul style="list-style-type: none"><li>• Pre-attached peritoneal catheter.</li><li>• Intermediary catheter with integral proximal asymmetric step-down connector for attachment to lumbar catheter.</li><li>• Lumbar catheter.</li><li>• Tuohy Needle.</li><li>• Female Luer-Lock connector.</li></ul>

Technical drawing showing dimensions for the SM8-2040 kit components:

- Top view: 10 cm (connector), 70 cm (intermediary catheter), 16 mm diameter (valve), 1.1 x 2.5 mm diameter (connector).
- Side view: 60 cm (intermediary catheter), 0.76 x 1.6 mm diameter (intermediary catheter).
- Bottom view: 13.8 mm (connector), 9 cm (Tuohy needle).





# Adjustable Valves

## Other Sophy® Valves

### Other Sophy® Valves

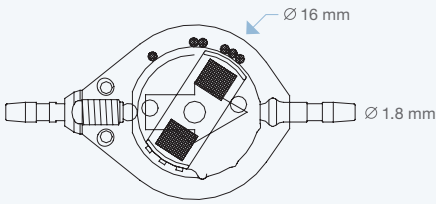
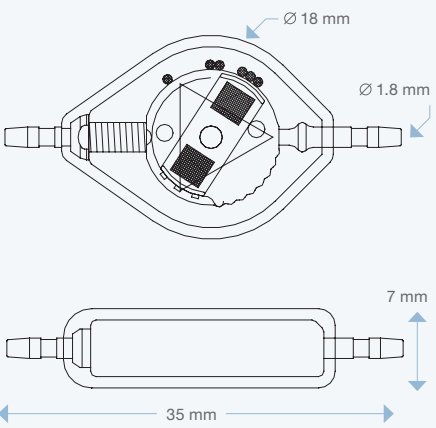
Two additional valves complete the Sophy® range.



SM3



SU8

	Product code	Description
	SM3	<p><b>Sophy® Mini Adjustable Valve - 3 pressures</b></p> <p>3 operating pressure levels from 50 to 170 mmH<sub>2</sub>O: 50, 110, 170 mmH<sub>2</sub>O.</p>
	SU8	<p><b>Sophy® Adjustable Valve - 8 pressures</b></p> <p>First generation of Sophy® valves. Silicone elastomer extra-housing facilitating palpation for lumbo-peritoneal or pectoral implantations. 8 operating pressure levels, 50 to 170 mmH<sub>2</sub>O: 50, 65, 80, 95, 110, 130, 150, 170 mmH<sub>2</sub>O.</p>

## Other Sophy® Kits

Sophy® Adjustable Valves are also available in kits for pectoral placement.

Sophy® SU8 has a silicone elastomer extra-housing facilitating palpation, which may be preferable for pectoral implantation.

Sophy® SU8 Adjustable Valve pectoral kits include the Sophy® SU8 Adjustable Valve with 8 operating pressure levels from 50 to 170mmH<sub>2</sub>O: 50, 65, 80, 95, 110, 130, 150, 170 mmH<sub>2</sub>O, pre-attached distal catheter (B905S) and separate right angle ventricular catheter (PLOx, x= intracranial length in cm).



	Product code	Description
	SU8-2030	<b>Sophy® SU8 Kit B905S/PL06</b> Intracranial length x = 6 cm.
	SU8-2031	<b>Sophy® SU8 Kit B905S/PL07</b> Intracranial length x = 7 cm.
	SU8-2032	<b>Sophy® SU8 Kit B905S/PL08</b> Intracranial length x = 8 cm.
	SU8-2033	<b>Sophy® SU8 Kit B905S/PL05</b> Intracranial length x = 5 cm.


# Adjustable Valves






| Sophy®

## Sophy® Adjustment Kit

A single adjustment kit is used, for all Sophy® and Sophy® Mini valves.  
This adjustment kit offers optimal adjustment and reading comfort.



	Product code	Description
	SAK	<b>Sophy® Adjustment Kit</b> Complete kit for the adjustment of Sophy® Adjustable Valves, containing Locating Instrument (SAK-LI1), Reading Instrument (SAK-RI), Setting Instrument (SAK-SI) and a Sophy® Mini SM8 Demo-Valve (SM8-DEMO-00) in a shielded case.

	Product code	Description
	SAK-LI1	<p><b>Locator (Sophy® Mini SM8)</b></p> <p>Choice of the pressure range: able to display the 4 pressure ranges available with a rotating ring, graduated in mmH<sub>2</sub>O. Localization of the valve under the skin.</p>
	SAK-LI2	<p><b>Locator (Sophy® Mini SM3 and Sophy® SU8)</b></p> <p>Choice of the pressure range able to display the 2 pressure ranges of Sophy® Mini SM3 valve and Sophy® SU8 valve, with a rotating ring, graduated in mmH<sub>2</sub>O. Localization of the valve under the skin.</p>
	SAK-RI	<p><b>Compass</b></p> <p>Localization of the valve center (for locator centering), its patented mechanism making it possible to locate the valve center through the skin and thus fine-tune the positioning of the Locator. Pressure reading: allows a precise and reliable reading of the selected pressure.</p>
	SAK-SI	<p><b>Magnet</b></p> <p>Magnet for adjusting Sophy® Adjustable Valves operating pressure setting.</p>
	SM8-DEMO-00	<p><b>Sophy® Mini SM8 Demo Valve</b></p> <p>Allows the user to train himself to adjust the Sophy® Mini SM8 Valve.</p>

# Monopressure Valves

## Ball-in-cone Valve

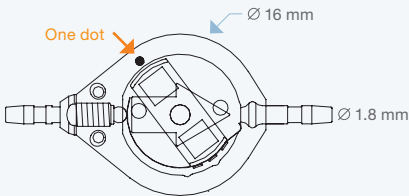
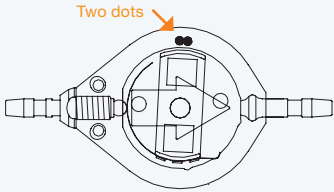
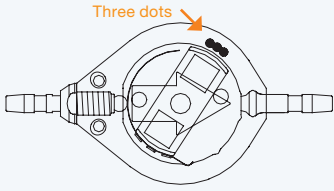
### Sophy® Mini Monopressure Valve

Sophy® Mini Monopressure Valves are fixed-pressure CSF valves, incorporating the same size, shape, material and reliability of the ball-in-cone mechanism as the Sophy® Mini Adjustable Valves.

It is available in low, medium, and high pressures.

Each Sophy® Mini Monopressure Valve is individually tested, and identified by a unique serial number.



	Product code	Description
	SM1-L	<b>Sophy® Mini Monopressure Valve, Low Pressure</b> Fixed operating pressure of 50 mmH <sub>2</sub> O.
	SM1-M	<b>Sophy® Mini Monopressure Valve, Medium Pressure</b> Fixed operating pressure of 110 mmH <sub>2</sub> O.
	SM1-H	<b>Sophy® Mini Monopressure Valve, High Pressure</b> Fixed operating pressure of 170 mmH <sub>2</sub> O.

## Sophy® Mini Monopressure Valve with Reservoir

Sophy® Mini Monopressure Valves are also available with integrated reservoirs, for direct CSF access.



SM1A



SM1B

	Product code	Description
<p>With Antechamber</p>	SM1A-L	<b>Sophy® Mini Monopressure Valve Low Pressure, Antechamber</b> Fixed operating pressure of 50 mmH <sub>2</sub> O. Integrated Antechamber.
	SM1A-M	<b>Sophy® Mini Monopressure Valve Medium Pressure, Antechamber</b> Fixed operating pressure of 110 mmH <sub>2</sub> O. Integrated Antechamber.
	SM1A-H	<b>Sophy® Mini Monopressure Valve High Pressure, Antechamber</b> Fixed operating pressure of 170 mmH <sub>2</sub> O. Integrated Antechamber.
<p>With Burr-Hole Reservoir</p>	SM1B-L	<b>Sophy® Mini Monopressure Valve Low Pressure, Burr-Hole Reservoir</b> Fixed operating pressure of 50 mmH <sub>2</sub> O. Integrated Burr-Hole Reservoir.
	SM1B-M	<b>Sophy® Mini Monopressure Valve Medium Pressure, Burr-Hole Reservoir</b> Fixed operating pressure of 110 mmH <sub>2</sub> O. Integrated Burr-Hole Reservoir.
	SM1B-H	<b>Sophy® Mini Monopressure Valve High Pressure, Burr-Hole Reservoir</b> Fixed operating pressure of 170 mmH <sub>2</sub> O. Integrated Burr-Hole Reservoir.

# Monopressure Valves

## Ball-in-cone Valve

### Sophy® Mini Monopressure Valve Kits

Sophy® Mini Monopressure Valves are also available in kits.

Sophy® Mini Monopressure Valve kits include a Sophy® Mini Monopressure Valve, pre-attached distal catheter (B905S), and ventricular catheter (BO19-10).



	Product code	Description
	SM1-2010L	<b>Sophy® Mini Monopressure Low Pressure Valve Kit B905S/BO19-10</b> Fixed operating pressure level of 50 mmH <sub>2</sub> O.
	SM1-2010M	<b>Sophy® Mini Monopressure Medium Pressure Valve Kit B905S/BO19-10</b> Fixed operating pressure level of 110 mmH <sub>2</sub> O.
	SM1-2010H	<b>Sophy® Mini Monopressure High Pressure Valve Kit B905S/BO19-10</b> Fixed operating pressure level of 170 mmH <sub>2</sub> O.
	SM1A-2010L	<b>Sophy® Mini Monopressure SM1A Low Pressure Valve Kit B905S/BO19-10</b> Fixed operating pressure level of 50 mmH <sub>2</sub> O. Integrated antichamber.
	SM1A-2010M	<b>Sophy® Mini Monopressure SM1A Medium Pressure Valve Kit B905S/BO19-10</b> Fixed operating pressure level of 110 mmH <sub>2</sub> O. Integrated antichamber.
	SM1A-2010H	<b>Sophy® Mini Monopressure SM1A High Pressure Valve Kit B905S/BO19-10</b> Fixed operating pressure level of 170 mmH <sub>2</sub> O. Integrated antichamber.





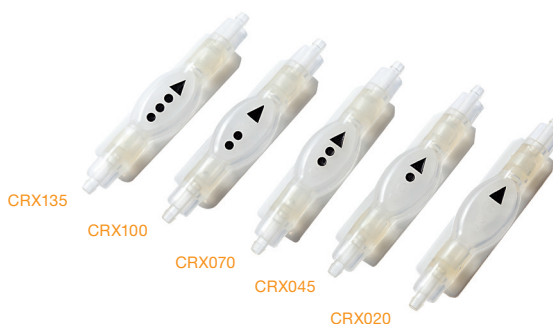
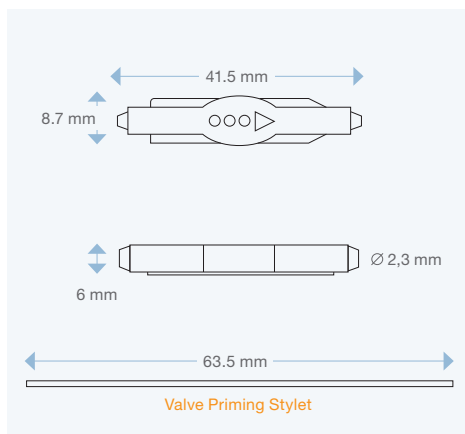
# Monopressure Valves

## Cruciform™ Mechanism Valve

### CRx™ Monopressure Valves

The CRx™ monopressure valve is a silicone Cruciform™ mechanism valve.

The CRx™ valve is available in 5 operating pressures: 20, 45, 70, 100 and 135 mmH<sub>2</sub>O.



	Product code	Description
	CRX020	<b>CRx™ Valve, Very Low Pressure</b> 20 mmH <sub>2</sub> O fixed operating pressure
	CRX045	<b>CRx™ Valve, Low Pressure</b> 45 mmH <sub>2</sub> O fixed operating pressure
	CRX070	<b>CRx™ Valve, Medium Pressure</b> 70 mmH <sub>2</sub> O fixed operating pressure
	CRX100	<b>CRx™ Valve, Medium/High Pressure</b> 100 mmH <sub>2</sub> O fixed operating pressure
	CRX135	<b>CRx™ Valve, High Pressure</b> 135 mmH <sub>2</sub> O fixed operating pressure

## CRx™ Valve Kits

The CRx™ monopressure valves are also available in kits. The CRx™ valve kits include a CRx™ valve, a 23.5 cm ventricular catheter with its stylet, a right-angle clip and a 120 cm distal catheter.



	Product code	Description
	CRXK5	<b>CRx™ Valve Kit, Very Low Pressure</b> 20 mmH <sub>2</sub> O fixed operating pressure
	CRXK4	<b>CRx™ Valve Kit, Low Pressure</b> 45 mmH <sub>2</sub> O fixed operating pressure
	CRXK3	<b>CRx™ Valve Kit, Medium Pressure</b> 70 mmH <sub>2</sub> O fixed operating pressure
	CRXK2	<b>CRx™ Valve Kit, Medium/High Pressure</b> 100 mmH <sub>2</sub> O fixed operating pressure
	CRXK1	<b>CRx™ Valve Kit, High Pressure</b> 135 mmH <sub>2</sub> O fixed operating pressure

# Monopressure Valves

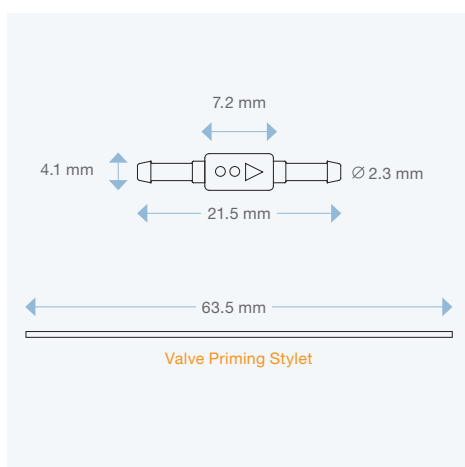
## Cruciform™ Mechanism Valve




### Single Monopressure Valves

The Single monopressure valve is a silicone Cruciform™ mechanism valve.

The Single valve has a really small size and pressure range dedicated to preterm and newborn babies.

The Single valve is available in 3 operating pressures: 20, 45 and 70 mmH<sub>2</sub>O.



	Product code	Description
	PV020	<b>Single Valve, Very Low Pressure</b> 20 mmH <sub>2</sub> O fixed operating pressure
	PV045	<b>Single Valve, Low Pressure</b> 45 mmH <sub>2</sub> O fixed operating pressure
	PV070	<b>Single Valve, Medium Pressure</b> 70 mmH <sub>2</sub> O fixed operating pressure

## Single Valve Kits

The Single monopressure valves are also available in kits. The Single valve kits include a Single valve, a right-angle ventricular catheter (intracranial length = 7 cm) with its stylet and a 90 cm distal catheter.



Product code	Description
<p>Valve Priming Stylet</p>	<b>PV020K</b> <b>Single Valve Kit, Very Low Pressure</b> 20 mmH <sub>2</sub> O fixed operating pressure
<p>Ventricular Catheter Stylet</p>	<b>PV045K</b> <b>Single Valve Kit, Low Pressure</b> 45 mmH <sub>2</sub> O fixed operating pressure
<p>Right-angle Clip</p>	<b>PV070K</b> <b>Single Valve Kit, Medium Pressure</b> 70 mmH <sub>2</sub> O fixed operating pressure

# Monopressure Valves

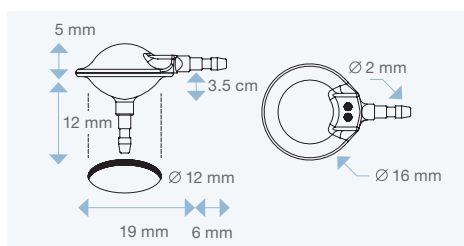
## Membrane Valve

### Pulsar® Monopressure Valves

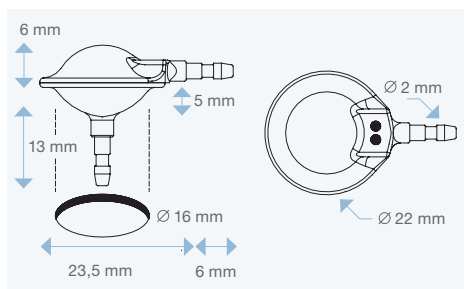
The Pulsar® Valve is a monopressure valve which uses a silicone elastomer membrane calibrated to low, medium or high pressure, protected by a polypropylene guard.

The Pulsar® valve is available in 2 sizes: 12 mm for pediatric use, 16 mm for adult use.

With no metallic component the Pulsar® valve does not cause any artefact during medical imaging.



PLR-12



PLR-16

	Product code	Description
	PLR-12L	<b>Pulsar® valve, 12 mm, Low Pressure</b> Fixed operating pressure level between 10 and 60 mmH <sub>2</sub> O. 12 mm Burr-Hole reservoir.
	PLR-12M	<b>Pulsar® valve, 12 mm, Medium Pressure</b> Fixed operating pressure level between 60 and 120 mmH <sub>2</sub> O. 12 mm Burr-Hole reservoir.
	PLR-12H	<b>Pulsar® valve, 12 mm, High Pressure</b> Fixed operating pressure level between 120 and 190 mmH <sub>2</sub> O. 12 mm Burr-Hole reservoir.
	PLR-16L	<b>Pulsar® valve, 16 mm, Low Pressure</b> Fixed operating pressure level between 10 and 60 mmH <sub>2</sub> O. 16 mm Burr-Hole reservoir.
	PLR-16M	<b>Pulsar® valve, 16 mm, Medium Pressure</b> Fixed operating pressure level between 60 and 120 mmH <sub>2</sub> O. 16 mm Burr-Hole reservoir.
	PLR-16H	<b>Pulsar® valve, 16 mm, High Pressure</b> Fixed operating pressure level between 120 and 190 mmH <sub>2</sub> O. 16 mm Burr-Hole reservoir.

## Pulsar® Kits

Pulsar® Valves are also available in kits. Pulsar® kits include a Pulsar® valve, a separate distal catheter (B905S), and a separate ventricular catheter (BO19-10).



	Product code	Description
	PLR12-1010L	<b>Pulsar® valve 12 mm, Low Pressure Kit B905S/BO19-10</b> Fixed operating pressure level between 10 and 60 mmH <sub>2</sub> O. 12 mm Burr-Hole reservoir.
	PLR12-1010M	<b>Pulsar® valve 12 mm, Medium Pressure Kit B905S/BO19-10</b> Fixed operating pressure level between 60 and 120 mmH <sub>2</sub> O. 12 mm Burr-Hole reservoir.
	PLR12-1010H	<b>Pulsar® valve 12 mm, High Pressure Kit B905S/BO19-10</b> Fixed operating pressure level between 120 and 190 mmH <sub>2</sub> O. 12 mm Burr-Hole reservoir.
	PLR16-1010L	<b>Pulsar® valve 16 mm, Low Pressure Kit B905S/BO19-10</b> Fixed operating pressure level between 10 and 60 mmH <sub>2</sub> O. 16 mm Burr-Hole reservoir.
	PLR16-1010M	<b>Pulsar® valve 16 mm, Medium Pressure Kit B905S/BO19-10</b> Fixed operating pressure level between 60 and 120 mmH <sub>2</sub> O. 16 mm Burr-Hole reservoir.
	PLR16-1010H	<b>Pulsar® valve 16 mm, High Pressure Kit B905S/BO19-10</b> Fixed operating pressure level between 120 and 190 mmH <sub>2</sub> O. 16 mm Burr-Hole reservoir.





# Catheters

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# Ventricular Catheters

## Straight Catheters

Sophysa Ventricular Catheters are specifically designed for CSF drainage between the ventricles and the valve.

### Standard Catheters

Available in different sizes for both children and adults, they are made of transparent silicone elastomer, with a radiopaque stripe entirely embedded within the silicone wall, and with a tantalum-labelled tip. All models are delivered with right angle adapter and introducing stylet.

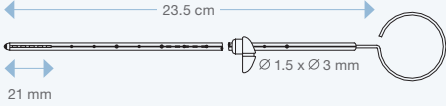
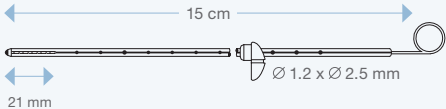
	Product code	Description
	BO19-10	<b>Catheter, Ventricular, Straight, Standard 1.3 x 2.5 mm</b> Depth markings at 5, 10, 15 cm from the proximal tip.
	BO19	<b>Catheter, Ventricular, Straight 1.5 x 3.0 mm</b> Depth markings at 5, 10, 15 cm from the proximal tip.
	BO19-20	<b>Catheter, Ventricular, Straight, Graduated 1.3 x 2.2 mm</b> Depth markings every cm starting 2 cm from the proximal tip.
	BO15	<b>Catheter, Ventricular, Straight, Pediatric 1.3 x 2.2 mm</b> Depth markings at 5, 10 cm from the proximal tip.

## Anti-Blok™ Catheters

Available in two sizes for both children and adults, they are made of transparent silicone elastomer, with a radiopaque stripe. The Anti-Blok™ ventricular catheters are designed with four axial channels at the tip, each with recessed rectangular molded holes.

The channels promote free CSF flow and discourage occlusion of the holes by debris, tissue or choroid plexus.

All models are delivered with right angle adapter and introducing stylet.

Product code	Description
SC02E	<p><b>Straight Standard Anti-Blok™ Ventricular Catheter 1.5 x 3 mm</b></p> <p>Depth markings every cm starting 3 cm from the proximal tip until 10 cm and then at 15 and 20 cm</p> 
NNSC01E	<p><b>Straight Pediatric Anti-Blok™ Ventricular Catheter 1.2 x 2.5 mm</b></p> <p>Depth markings every cm starting 3 cm from the proximal tip until 12 cm</p> 

# Ventricular Catheters

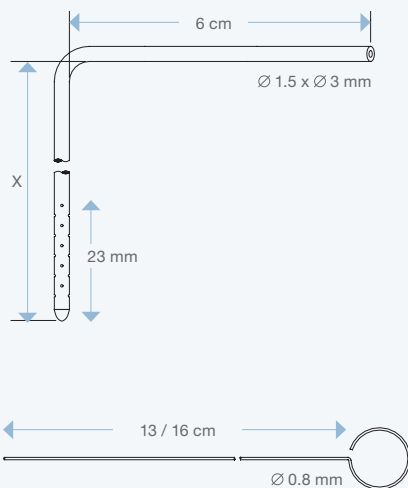
## Right-Angle Catheters

### Catheters without Reservoirs – Standard

#### Adult size

The Right Angle Ventricular Catheters, adult size, 1.5 mm ID, 3.0 mm OD, with various intracranial lengths (x in cm) and with an extracranial length of 6 cm, are multiperforated over a distance of 23 mm from the proximal tip. They are made of radiopaque silicone elastomer and include an introducing stylet.

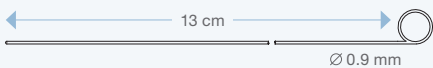
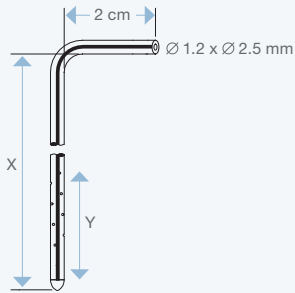
Product code	Description
BO40	<b>Right Angle Ventricular Catheter, Adult, 4 cm</b> Intracranial length x = 4 cm. Introducing stylet = 13 cm.
BO50	<b>Right Angle Ventricular Catheter, Adult, 5 cm</b> Intracranial length x = 5 cm. Introducing stylet = 13 cm.
BO60	<b>Right Angle Ventricular Catheter, Adult, 6 cm</b> Intracranial length x = 6 cm. Introducing stylet = 16 cm.
BO70	<b>Right Angle Ventricular Catheter, Adult, 7 cm</b> Intracranial length x = 7 cm. Introducing stylet = 16 cm.
BO80	<b>Right Angle Ventricular Catheter, Adult, 8 cm</b> Intracranial length x = 8 cm. Introducing stylet = 16 cm.
BO90	<b>Right Angle Ventricular Catheter, Adult, 9 cm</b> Intracranial length x = 9 cm. Introducing stylet = 16 cm.



### Pediatric size

The Right Angle Ventricular Catheters, pediatric size, 1.2 mm ID, 2.5 mm OD, with various intracranial lengths (x in cm) and with an extracranial length of 2 cm, are multiperforated over a distance of 23 mm from the proximal tip. They are made of radiopaque silicone elastomer and include an introducing stylet.

Product code	Description
NNPC05E	<p><b>Right Angle Ventricular Catheter pédiatric Pediatric, 5 cm</b></p> <p>Intracranial length x = 5 cm. Proximal tip length y = 18 mm. Introducing stylet = 13 cm</p>
NNPC06E	<p><b>Right Angle Ventricular Catheter pédiatric Pediatric, 6 cm</b></p> <p>Intracranial length x = 6 cm. Proximal tip length y = 23 mm. Introducing stylet = 13 cm.</p>
NNPC07E	<p><b>Right Angle Ventricular Catheter pédiatric Pediatric, 7 cm</b></p> <p>Intracranial length x = 7 cm. Proximal tip length y = 23 mm. Introducing stylet = 13 cm.</p>
NNPC08E	<p><b>Right Angle Ventricular Catheter pédiatric Pediatric, 8 cm</b></p> <p>Intracranial length x = 8 cm. Proximal tip length y = 23 mm. Introducing stylet = 13 cm.</p>
NNPC09E	<p><b>Right Angle Ventricular Catheter Pediatric, 9 cm</b></p> <p>Intracranial length x = 9 cm. Proximal tip length y = 23 mm. Introducing stylet = 13 cm.</p>



# Ventricular Catheters

## Right-Angle Catheters

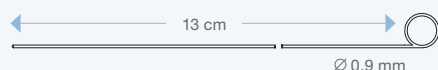
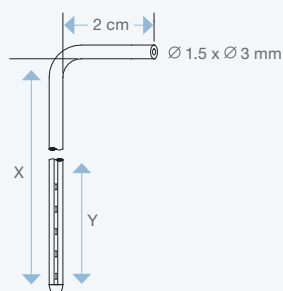
### Catheters without Reservoirs – Anti-Blok™

The Anti-Blok™ ventricular catheters are designed with four axial channels at the tip, each with recessed rectangular molded holes. The channels promote free CSF flow and discourage occlusion of the holes by debris, tissue or choroid plexus.

#### Adult size

The Right Angle Ventricular Catheters, adult size, 1.5 mm ID, 3.0 mm OD, with various intracranial lengths (x in cm) and with an extracranial length of 2 cm, are multiperforated over a distance of y mm from the proximal tip. They are made of radiopaque silicone elastomer and include an introducing stylet.

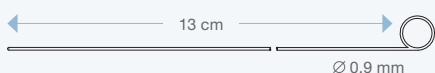
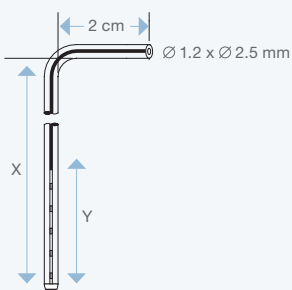
Product code	Description
SC33	<b>Right Angle Anti-Blok™ Ventricular Catheter, Adult, 3 cm</b> Intracranial length x = 3 cm. Proximal tip length y = 13 mm. Introducing stylet = 13 cm.
SC44	<b>Right Angle Anti-Blok™ Ventricular Catheter, Adult, 4 cm</b> Intracranial length x = 4 cm. Proximal tip length y = 17 mm. Introducing stylet = 13 cm.
SC05	<b>Right Angle Anti-Blok™ Ventricular Catheter, Adult, 5 cm</b> Intracranial length x = 5 cm. Proximal tip length y = 17 mm. Introducing stylet = 13 cm.
SC06	<b>Right Angle Anti-Blok™ Ventricular Catheter, Adult, 6 cm</b> Intracranial length x = 6 cm. Proximal tip length y = 21 mm. Introducing stylet = 13 cm.
SC07	<b>Right Angle Anti-Blok™ Ventricular Catheter, Adult, 7 cm</b> Intracranial length x = 7 cm. Proximal tip length y = 21 mm. Introducing stylet = 13 cm.
SC08	<b>Right Angle Anti-Blok™ Ventricular Catheter, Adult, 8 cm</b> Intracranial length x = 8 cm. Proximal tip length y = 21 mm. Introducing stylet = 13 cm.
SC09	<b>Right Angle Anti-Blok™ Ventricular Catheter, Adult, 9 cm</b> Intracranial length x = 9 cm. Proximal tip length y = 21 mm. Introducing stylet = 13 cm.



### Pediatric size

The Right Angle Ventricular Catheters, pediatric size, 1.2 mm ID, 2.5 mm OD, with various intracranial lengths (x in cm) and with an extracranial length of 2 cm, are multiperforated over a distance of y mm from the proximal tip. They are made of radiopaque silicone elastomer and include an introducing stylet.

Product code	Description
NNSC33E	<b>Right Angle Anti-Blok™ Ventricular Catheter, Pediatric, 3 cm</b> Intracranial length x = 3 cm. Proximal tip length y = 13 mm. Introducing stylet = 13 cm.
NNSC44E	<b>Right Angle Anti-Blok™ Ventricular Catheter, Pediatric, 4 cm</b> Intracranial length x = 4 cm. Proximal tip length y = 17 mm. Introducing stylet = 13 cm.
NNSC05E	<b>Right Angle Anti-Blok™ Ventricular Catheter, Pediatric, 5 cm</b> Intracranial length x = 5 cm. Proximal tip length y = 17 mm. Introducing stylet = 13 cm.
NNSC06E	<b>Right Angle Anti-Blok™ Ventricular Catheter, Pediatric, 6 cm</b> Intracranial length x = 6 cm. Proximal tip length y = 21 mm. Introducing stylet = 13 cm.
NNSC07E	<b>Right Angle Anti-Blok™ Ventricular Catheter, Pediatric, 7 cm</b> Intracranial length x = 7 cm. Proximal tip length y = 21 mm. Introducing stylet = 13 cm.
NNSC08E	<b>Right Angle Anti-Blok™ Ventricular Catheter, Pediatric, 8 cm</b> Intracranial length x = 8 cm. Proximal tip length y = 21 mm. Introducing stylet = 13 cm.
NNSC09E	<b>Right Angle Anti-Blok™ Ventricular Catheter, Pediatric, 9 cm</b> Intracranial length x = 9 cm. Proximal tip length y = 21 mm. Introducing stylet = 13 cm.



# Ventricular Catheters

## Right-Angle Catheters

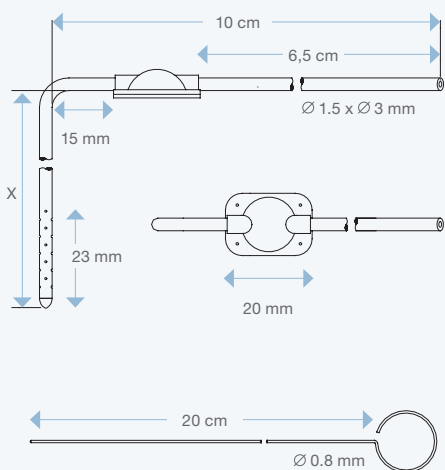
### Catheters with Reservoirs – Standard

#### For intracranial placement

##### Adult size

The Right Angle Ventricular Catheters with Reservoir, adult size, 1.5 mm ID, 3.0 mm OD, with various intracranial lengths (x in cm) and with an extracranial length of 2 cm, are multiperforated over a distance of 23 mm from the proximal tip. They are made of radiopaque silicone elastomer and include an introducing stylet. Reservoir allows CSF access and shunt testing.

Product code	Description
PRO3	<b>Right Angle Ventricular Catheter, Reservoir, 3 cm</b> Intracranial length x = 3 cm. Introducing stylet = 20 cm.
PRO4	<b>Right Angle Ventricular Catheter, Reservoir, 4 cm</b> Intracranial length x = 4 cm. Introducing stylet = 20 cm.
PRO5	<b>Right Angle Ventricular Catheter, Reservoir, 5 cm</b> Intracranial length x = 5 cm. Introducing stylet = 20 cm.
PRO6	<b>Right Angle Ventricular Catheter, Reservoir, 6 cm</b> Intracranial length x = 6 cm. Introducing stylet = 20 cm.
PRO7	<b>Right Angle Ventricular Catheter, Reservoir, 7 cm</b> Intracranial length x = 7 cm. Introducing stylet = 20 cm.
PRO8	<b>Right Angle Ventricular Catheter, Reservoir, 8 cm</b> Intracranial length x = 8 cm. Introducing stylet = 20 cm.
PRO9	<b>Right Angle Ventricular Catheter, Reservoir, 9 cm</b> Intracranial length x = 9 cm. Introducing stylet = 20 cm.
PRO10	<b>Right Angle Ventricular Catheter, Reservoir, 10 cm</b> Intracranial length x = 10 cm. Introducing stylet = 20 cm.
PRO11	<b>Right Angle Ventricular Catheter, Reservoir, 11 cm</b> Intracranial length x = 11 cm. Introducing stylet = 20 cm.
PRO12	<b>Right Angle Ventricular Catheter, Reservoir, 12 cm</b> Intracranial length x = 12 cm. Introducing stylet = 20 cm.



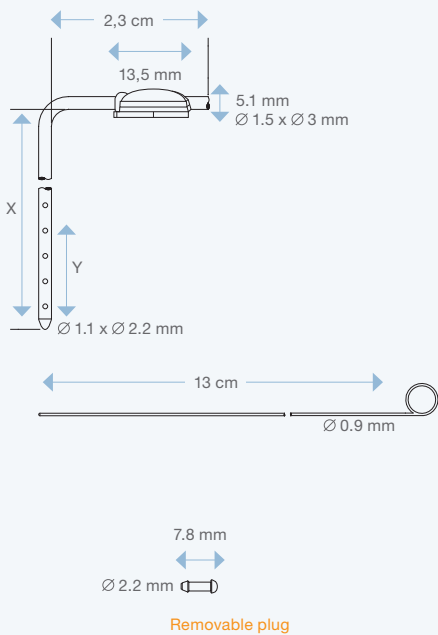


### Pediatric size

The Right Angle Ventricular Catheters with Reservoir, pediatric size, 1.1 mm ID, 2.2 mm OD, with various intracranial lengths (x in cm) and with an extracranial length of 2.3 cm, are multiperforated over a distance of y mm from the proximal tip. They are made of radiopaque silicone elastomer and include an introducing stylet. Reservoir allows CSF access and shunt testing.

A removable polysulfone plug is also provided. It allows conversion of the ventriculostomy catheter-reservoir to use as a shunt catheter-reservoir.

Product code	Description
NNCR3	<p><b>Right Angle Ventricular Catheter Reservoir, Pediatric, 3 cm</b></p> <p>Intracranial length x = 3 cm. Proximal tip length y = 12 mm. Introducing stylet = 13 cm.</p>
NNCR4	<p><b>Right Angle Ventricular Catheter Reservoir, Pediatric, 4 cm</b></p> <p>Intracranial length x = 4 cm. Proximal tip length y = 16 mm. Introducing stylet = 13 cm.</p>
NNCR5	<p><b>Right Angle Ventricular Catheter Reservoir, Pediatric, 5 cm</b></p> <p>Intracranial length x = 5 cm. Proximal tip length y = 16 mm. Introducing stylet = 13 cm.</p>
NNCR6	<p><b>Right Angle Ventricular Catheter Reservoir, Pediatric, 6 cm</b></p> <p>Intracranial length x = 6 cm. Proximal tip length y = 20 mm. Introducing stylet = 13 cm.</p>
NNCR7	<p><b>Right Angle Ventricular Catheter Reservoir, Pediatric, 7 cm</b></p> <p>Intracranial length x = 7 cm. Proximal tip length y = 20 mm. Introducing stylet = 13 cm.</p>



# Ventricular Catheters

## Right-Angle Catheters

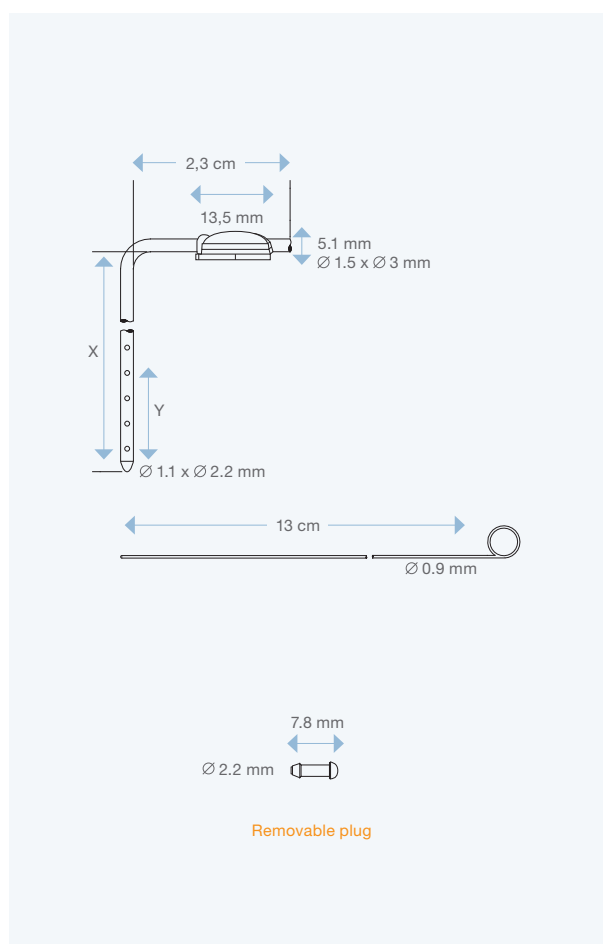
### Catheters with Reservoirs – Anti-Blok™

The Anti-Blok™ Ventricular Catheters are designed with four axial channels at the tip, each with recessed rectangular molded holes. The channels promote free CSF flow and discourage occlusion of the holes by debris, tissue or choroid plexus.

#### For intracranial placement

The Right Angle Ventricular Catheters with reservoirs, adult size, 1.5 mm ID, 3.0 mm OD, with various intracranial lengths (x in cm) and with an extracranial length of 2.3 cm, are multiperforated over a distance of y mm from the proximal tip. They are made of radiopaque silicone elastomer and include an introducing stylet. Reservoir allows CSF access and shunt testing.

A removable polysulfone plug is also provided. It allows conversion of the ventriculostomy catheter-reservoir to use as a shunt catheter-reservoir.



Product code	Description
SR33	<b>Right Angle Anti-Blok™ Ventricular Catheter Reservoir, 3 cm</b> Intracranial length x = 3 cm. Proximal tip length y = 13 mm. Introducing stylet = 13 cm.
SR44	<b>Right Angle Anti-Blok™ Ventricular Catheter Reservoir, 4 cm</b> Intracranial length x = 4 cm. Proximal tip length y = 17 mm. Introducing stylet = 13 cm.
SR05	<b>Right Angle Anti-Blok™ Ventricular Catheter Reservoir, 5 cm</b> Intracranial length x = 5 cm. Proximal tip length y = 17 mm. Introducing stylet = 13 cm.
SR06	<b>Right Angle Anti-Blok™ Ventricular Catheter Reservoir, 6 cm</b> Intracranial length x = 6 cm. Proximal tip length y = 21 mm. Introducing stylet = 13 cm.
SR07	<b>Right Angle Anti-Blok™ Ventricular Catheter Reservoir, 7 cm</b> Intracranial length x = 7 cm. Proximal tip length y = 21 mm. Introducing stylet = 13 cm.
SR08	<b>Right Angle Anti-Blok™ Ventricular Catheter Reservoir, 8 cm</b> Intracranial length x = 8 cm. Proximal tip length y = 21 mm. Introducing stylet = 13 cm.
SR09	<b>Right Angle Anti-Blok™ Ventricular Catheter Reservoir, 9 cm</b> Intracranial length x = 9 cm. Proximal tip length y = 21 mm. Introducing stylet = 13 cm.
SR10	<b>Right Angle Anti-Blok™ Ventricular Catheter Reservoir, 10 cm</b> Intracranial length x = 10 cm. Proximal tip length y = 21 mm. Introducing stylet = 16 cm.
SR11	<b>Right Angle Anti-Blok™ Ventricular Catheter Reservoir, 11 cm</b> Intracranial length x = 11 cm. Proximal tip length y = 21 mm. Introducing stylet = 16 cm.
SR12	<b>Right Angle Anti-Blok™ Ventricular Catheter Reservoir, 12 cm</b> Intracranial length x = 12 cm. Proximal tip length y = 21 mm. Introducing stylet = 16 cm.

# Ventricular Catheters

## Right-Angle Catheters

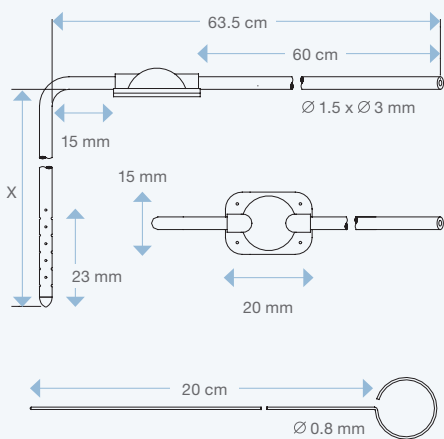
### Catheters with Reservoirs – Standard

#### For pectoral placement

The Right Angle Ventricular Catheters with reservoir for pectoral implantation of the Sophy® valves, 1.5 mm ID, 3.0 mm OD, with various intracranial lengths (x in cm), with integrated reservoir located at 1.5 cm distal from the right angle and with extracranial length of 63.5 cm, are multiperforated over a distance of 23 mm from the proximal tip. They are made of radiopaque silicone elastomer. Reservoir allows CSF access and shunt testing.

Includes an introducing stylet.

Product code	Description
PLO3	<b>Pectoral Ventricular Catheter, Reservoir, 3 cm</b> Intracranial length x = 3 cm.
PLO4	<b>Pectoral Ventricular Catheter, Reservoir, 4 cm</b> Intracranial length x = 4 cm.
PLO5	<b>Pectoral Ventricular Catheter, Reservoir, 5 cm</b> Intracranial length x = 5 cm.
PLO6	<b>Pectoral Ventricular Catheter, Reservoir, 6 cm</b> Intracranial length x = 6 cm.
PLO7	<b>Pectoral Ventricular Catheter, Reservoir, 7 cm</b> Intracranial length x = 7 cm.
PLO8	<b>Pectoral Ventricular Catheter, Reservoir, 8 cm</b> Intracranial length x = 8 cm.
PLO9	<b>Pectoral Ventricular Catheter, Reservoir, 9 cm</b> Intracranial length x = 9 cm.
PLO10	<b>Pectoral Ventricular Catheter, Reservoir, 10 cm</b> Intracranial length x = 10 cm.
PLO11	<b>Pectoral Ventricular Catheter, Reservoir, 11 cm</b> Intracranial length x = 11 cm.
PLO12	<b>Pectoral Ventricular Catheter, Reservoir, 12 cm</b> Intracranial length x = 12 cm.



# Distal Catheters

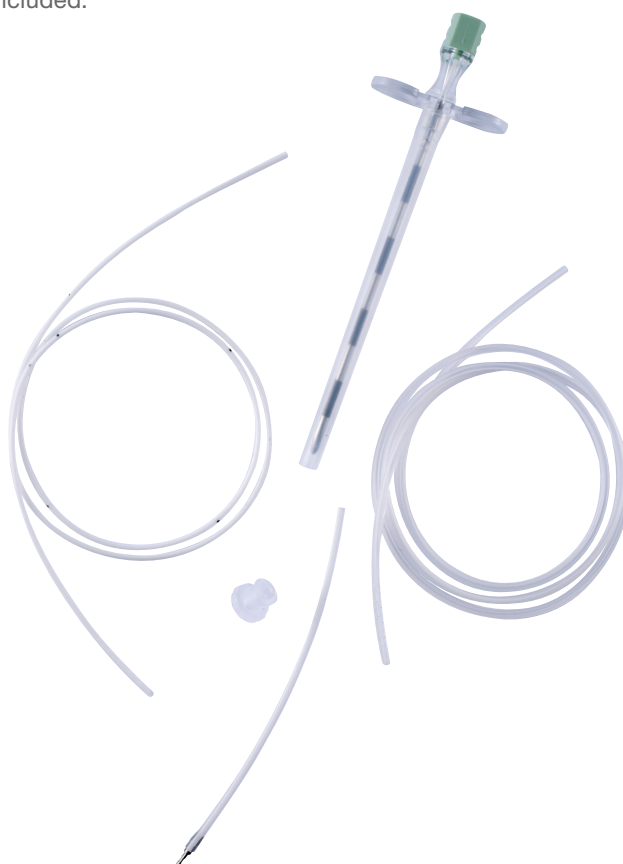
Sophysa atrial/peritoneal catheters are specifically designed for CSF drainage from the valve to the right atrium of the heart, or to the peritoneal cavity.

	Product code	Description
	B905S-10	<b>Catheter, Atrial, Anti-Reflux, 1.1 x 2.2 mm</b> Distal catheter for atrial drainage only, with an anti-reflux functionality. 1.1 mm ID, 2.2 mm OD, length 60 cm, closed-end with lateral slits, graduations at 10, 20, 30 cm from the distal tip. Made of silicone elastomer with a radiopaque stripe.
	B905S	<b>Catheter, Atrial/Peritoneal, 1.1 x 2.5 mm</b> Distal catheter for atrial or peritoneal drainage, 1.1 mm ID, 2.5 mm OD, length 110 cm, open-end, multi-perforated distal tip. Made of silicone elastomer with a radiopaque stripe.
	B905S-20	<b>Catheter, Peritoneal, Anti-Reflux, 1.1 x 2.5 mm</b> Distal catheter for peritoneal drainage only, with an anti-reflux functionality. 1.1 mm ID, 2.5 mm OD, length 110 cm, closed-end with lateral slits, graduations at 10, 20, 30 cm from the distal tip. Made of silicone elastomer with a radiopaque stripe.
	P03	<b>Catheter, Peritoneal, Pliant</b> Distal catheter for peritoneal drainage only, with narrowing diameter at 10 mm of its proximal tip, to increase catheter resistance to flow. Made of radiopaque silicone elastomer.
	P04	<b>Catheter, Peritoneal, Pliant</b> Distal catheter for peritoneal drainage only, with narrowing diameter at 70 cm of its proximal tip to increase catheter resistance to flow, with a closed distal end and lateral slits. Made of radiopaque silicone elastomer.

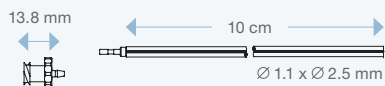
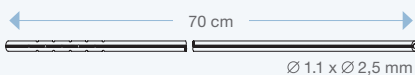
# Lumbo-Peritoneal Catheter Set

The Sophysa Lumbo-Peritoneal Catheter Set is specifically designed for CSF drainage from the subarachnoid space of the spine.

Catheters only/valve NOT included.



Product code	Description
LPS50	<p><b>Catheter, Lumbo-Peritoneal, Complete Set</b></p> <ul style="list-style-type: none"> <li>• Lumbar catheter, 0.76 mm ID, 1.6 mm OD, length 60 cm, multi-perforated proximal tip, radiopaque, depth markings at 11, 16, 21, 26 cm from the proximal tip.</li> <li>• Intermediary catheter, 1.1 mm ID, 2.5 mm OD, length 10 cm, with integrated proximal asymmetric step-down connector for attachment to lumbar catheter, radiopaque stripe.</li> <li>• Peritoneal catheter, 1.1 mm ID, 2.5 mm OD, length 70 cm, multiperforated open end, radiopaque stripe.</li> <li>• Tuohy needle 14 Gauge, length 9 cm.</li> <li>• Female Luer-Lock connector.</li> </ul>









# Anti-Siphon

ANTI-SIPHON ..... 49

# Gravitational anti-siphon device

## SiphonX®

SiphonX® is a valve accessory designed to limit the siphon effect during cerebrospinal fluid drainage. The device incorporates a ball-in-cone mechanism, well known for its precision and reliability. It is placed downstream of a CSF shunting valve for the treatment of hydrocephalus, giving it additional resistance depending on the position of the patient. This makes it possible to limit the siphon effect during CSF drainage when the patient stands up.

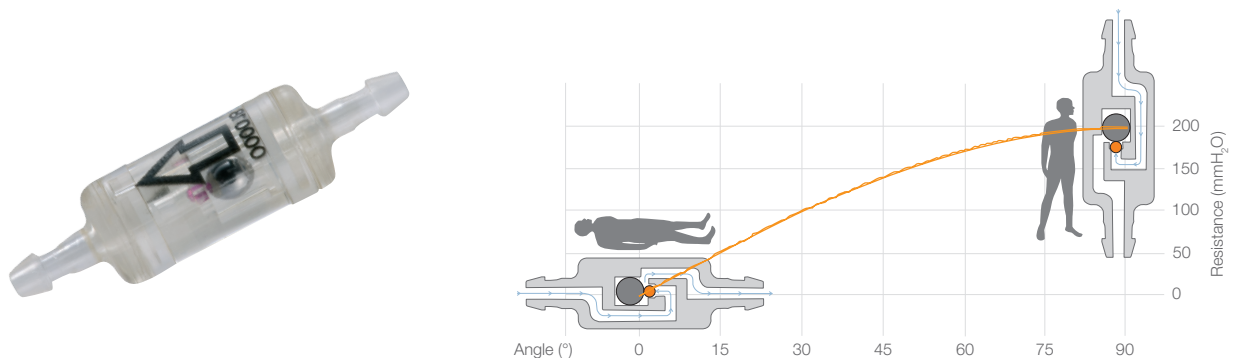
### OPERATING PRINCIPLE

A tantalum weight ball presses on a ruby ball, which occludes the aperture for the passage of the CSF. When SiphonX® is in the vertical position, the ruby ball is subjected to the full weight of the tantalum ball, occludes the anti-siphon aperture and the device adds 200 mmH<sub>2</sub>O to the operating pressure of the valve.

When SiphonX® is in the horizontal position, the ruby ball is not subjected to the weight of the tantalum ball and so does not occlude the aperture of the anti-siphon device.

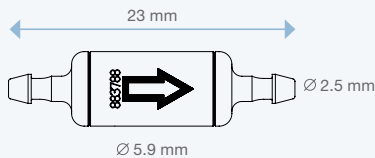
In this horizontal position, the device is therefore open and does not add any additional resistance to the operating pressure of the valve.

For all intermediate positions, SiphonX® adds a resistance which depends on the angle of inclination. By design SiphonX® is not affected by the implantation height relatively to cerebral ventricles.



SiphonX® is available as an independent valve accessory, but also preconnected to Polaris® valves (See page 8).

Product code	Description
SX-200	<b>Gravitational anti-siphon device SiphonX®</b> Adds up to 200 mmH <sub>2</sub> O in vertical position.







# Reservoirs

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# Standard Reservoirs

Standard CSF reservoirs are intended for subcutaneous CSF access.  
All reservoirs are supplied with a separate ventricular catheter.

## Bottom inlet

### Burr-Hole type



Product code	Description
RE-2010	<b>Standard CSF Reservoir, Bottom inlet, Burr-Hole, 22 mm</b> Designed to rest in the Burr-Hole. Transparent dome, impervious to needle penetration base in polypropylene and radiopaque concave bottom. 4 suture holes. Access with a 24G or smaller Huber-point needle.

## Flat Bottom



RE-2011



OS03B

Product code	Description
	<p><b>RE-2011</b>      <b>Standard CSF Reservoir, Bottom inlet Flat Bottom, 30 mm</b></p> <p>Requires smaller trephine opening, compared to the Burr-Hole model.</p> <p>Transparent dome, impervious to needle penetration base in polypropylene and radiopaque concave bottom.</p> <p>4 suture holes.</p> <p>Access with a 24G or smaller Huber-point needle.</p>
	<p><b>OS03B</b>      <b>Standard CSF Reservoir, Bottom inlet Flat Bottom, 19 mm</b></p> <p>Requires smaller trephine opening, compared to the Burr-Hole model.</p> <p>Radiopaque dome and bottom, impervious to needle penetration base in polypropylene.</p> <p>Access with a 25G or smaller Huber-point needle in the durable self-sealing dome.</p>

# Standard Reservoirs

## Side-inlet

Side-Inlet CSF Reservoirs are flat-bottom reservoirs to be implanted away from the burr-hole.



Product code	Description
	<p><b>RE-1021</b></p> <p><b>Standard CSF Reservoir, Side inlet, Flat Bottom, 20 mm</b></p> <p>Transparent dome, impervious to needle penetration base in polypropylene and radiopaque bottom. 4 suture holes. Access with a 24G or smaller Huber-point needle.</p>
	<p><b>RE-2021</b></p> <p><b>Standard CSF Reservoir, Side inlet, Flat Bottom, 30 mm</b></p> <p>Transparent dome, impervious to needle penetration base in polypropylene and radiopaque bottom. 4 suture holes. Access with a 24G or smaller Huber-point needle.</p>
	<p><b>OS03S</b></p> <p><b>Standard CSF Reservoir, Side inlet, Flat Bottom, 25 mm</b></p> <p>Radiopaque dome and bottom, impervious to needle penetration base in polypropylene. Access with a 25G or smaller Huber-point needle in the durable self-sealing dome.</p>





# Convertible Reservoirs

Convertible reservoirs are designed to be connected to a shunt, should this conversion become necessary. For that purpose, they include a silicone lateral catheter closed at its distal end. This outlet catheter may be cut and connected to a valve.

## Burr-Hole type



Product code	Description
	<p><b>RE-1030</b>      <b>Convertible CSF Reservoir, Burr-Hole, 16 mm</b></p> <p>Transparent dome, impervious to needle penetration base in polypropylene and silicone closed-end catheter with a radiopaque stripe.</p> <p>4 suture holes.</p> <p>Provided with a separated ventricular catheter.</p> <p>Access with a 24G or smaller Huber-point needle.</p>
	<p><b>RE-2030</b>      <b>Convertible CSF Reservoir, Burr-Hole, 22 mm</b></p> <p>Transparent dome, impervious to needle penetration base in polypropylene and silicone closed-end catheter with a radiopaque stripe.</p> <p>4 suture holes.</p> <p>Provided with a separated ventricular catheter.</p> <p>Access with a 24G or smaller Huber-point needle.</p>
	<p><b>VR05</b>      <b>Convertible CSF Reservoir, Burr-Hole, 15 mm</b></p> <p>Radiopaque dome and bottom, impervious to needle penetration base and removable plug in polysulfone. The removable plug allows the reservoir conversion in shunt reservoir.</p> <p>Access with a 25G or smaller Huber-point needle in the durable self-sealing dome.</p>

## Flat Bottom



RE-1031

RE-2031

Product code	Description
	<p><b>RE-1031</b>      <b>Convertible CSF Reservoir, Flat Bottom, 22 mm</b></p> <p>Transparent dome, impervious to needle penetration base in polypropylene, radiopaque bottom and silicone closed-end catheter with a radiopaque stripe.</p> <p>4 suture holes.</p> <p>Provided with a separated ventricular catheter.</p> <p>Access with a 24G or smaller Huber-point needle.</p>
	<p><b>RE-2031</b>      <b>Convertible CSF Reservoir, Flat Bottom, 30 mm</b></p> <p>Transparent dome, impervious to needle penetration base in polypropylene, radiopaque bottom and silicone closed-end catheter with a radiopaque stripe.</p> <p>4 suture holes.</p> <p>Provided with a separated ventricular catheter.</p> <p>Access with a 24G or smaller Huber-point needle.</p>

# Shunt Reservoirs

In-Line CSF Reservoirs incorporate an outlet catheter designed to be attached to a CSF shunt system. The outlet catheter, 20 mm long, 1.1 mm ID, 2.2 mm OD, is made of silicone elastomer with a radiopaque stripe. All reservoirs are supplied with a separate ventricular catheter



Product code	Description
	<p><b>RE-1141</b></p> <p><b>In-Line CSF Reservoir, Single Dome, 20 mm</b></p> <p>Side-inlet, flat bottom base.            Transparent dome, impervious to needle penetration base in polypropylene and radiopaque bottom.            4 suture holes.            Access with a 24G or smaller Huber-point needle.</p>
	<p><b>RE-1241</b></p> <p><b>In-Line CSF Reservoir, Double Dome, 20 mm</b></p> <p>Side-inlet, flat bottom base.            Transparent domes, impervious to needle penetration base in polypropylene and radiopaque bottom.            6 suture holes.            Access with a 24G or smaller Huber-point needle.</p>



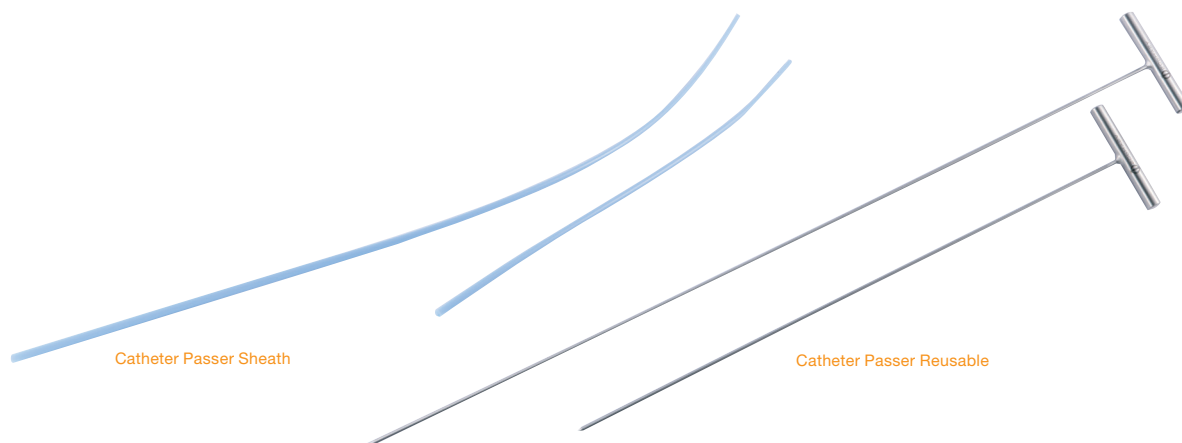


# Accessories

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# Catheter Passers

## Reusable



	Product code	Description
	TUN-45	<b>Catheter Passer, 45 cm</b> Reusable stainless steel catheter passer, 45 cm length, for use with sheath TUG-45. Shipped non-sterile. Must be sterilized before use.
	TUN-65	<b>Catheter Passer, 65 cm</b> Reusable stainless steel catheter passer, 65 cm length, for use with sheath TUG-65. Shipped non-sterile. Must be sterilized before use.
	TUG-45	<b>Catheter Passer Sheath, Disposable, 45 cm</b> Polyethylene disposable sheath for TUN-45 catheter passer. Sterile. 25 per package.
	TUG-65	<b>Catheter Passer Sheath, Disposable, 65 cm</b> Polyethylene disposable sheath for TUN-65 catheter passer. Sterile. 25 per package.



# Catheter Passers

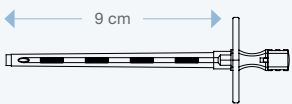
**Disposable**



Product code	Description
	<p><b>TUD-30</b>      <b>Catheter Passer, Disposable, 30 cm, with sheath</b></p> <p>Single use stainless steel catheter passer, 30 cm length, pre-inserted in a 28 cm polyethylene sheath. Sterile.</p>
	<p><b>TUD-45</b>      <b>Catheter Passer, Disposable, 45 cm, with sheath</b></p> <p>Single use stainless steel catheter passer, 45 cm length, pre-inserted in a 43 cm polyethylene sheath. Sterile.</p>
	<p><b>TUD-65</b>      <b>Catheter Passer, Disposable, 65 cm, with sheath</b></p> <p>Single use stainless steel catheter passer, 65 cm length, pre-inserted in a 63 cm polyethylene sheath. Sterile.</p>

# Tuohy Needle



	Product code	Description
	TU-9321	<p><b>Tuohy needle, 14 G</b></p> <p>Tuohy needle is used to insert the lumbar catheter. Length : 9 cm. 10 per package.</p>



# Connectors

## 2-way

### Symmetrical



CO-1010



CS1



NNCS1

	Product code	Description
	CO-1010	<b>Catheter Connector, Straight, Symmetrical, Titanium</b> 1.2 mm ID, 1.9 mm OD. Length: 11.5 mm. 5 per package.
	CS1	<b>Catheter Connector, Straight, Symmetrical, 316L Steel</b> 1.1 mm ID, 2.1 mm OD. Length: 12.7 mm. 5 per package.
	NNCS1	<b>Catheter Connector, Straight, Symmetrical, 316L Steel, Neonatal</b> 0.5 mm ID, 1.65 mm OD. Length: 12.7 mm. 1 per package.

## Asymmetrical



CO-2010



CS2

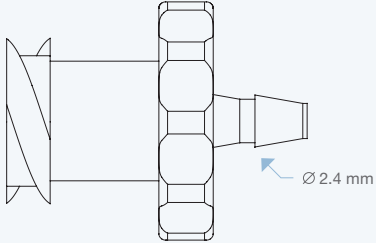
	Product code	Description
	CO-2010	<p><b>Catheter Connector, Straight, Asymmetrical, Titanium</b></p> <p>Inlet connector: 0.75 mm ID, 1.2 mm OD.                      Outlet connector: 1.2 mm ID, 1.9 mm OD.                      Length: 11.5 mm.                      5 per package.</p>
	CS2	<p><b>Catheter Connector, Straight, Asymmetrical, 316L Steel</b></p> <p>Inlet connector: 0.7 mm ID, 1.6 mm OD.                      Outlet connector: 1 mm ID, 2.1 mm OD.                      Length: 13 mm.                      1 per package.</p>

# Connectors

| **2-way**

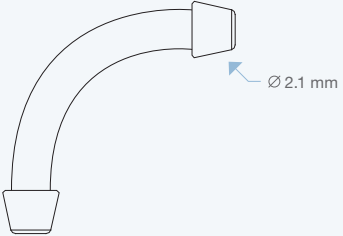
## Luer-Lock Connector



	Product code	Description
	CO-LPS50	<b>Luer-Lock Connector</b> Polypropylene. 1.2 mm ID, 2.4 mm OD. 5 per package.

## Right Angle



	Product code	Description
	CR1	<b>Catheter Connector, Right Angle, 316L Steel</b> 1.1 mm ID, 2.1 mm OD. Length: 12.7 mm. 5 per package.

# Connectors

## 3-way

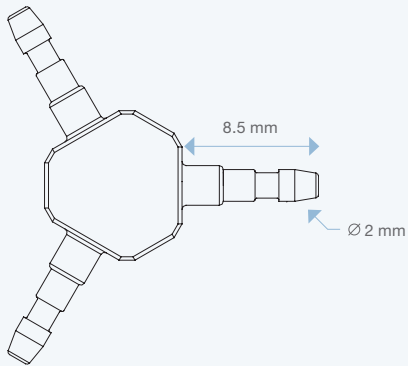
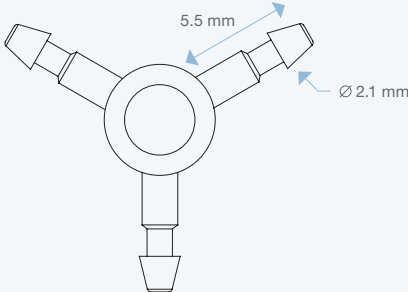
### Y-Connectors



CO-3010

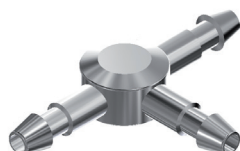


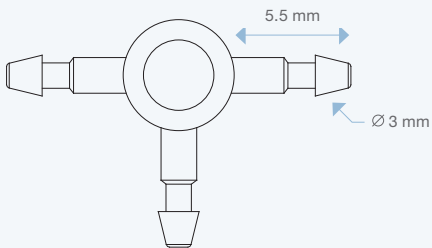
CY1

	Product code	Description
	CO-3010	<p><b>Catheter Connector, Three-Way, Polypropylene</b></p> <p>Allows the connection of two ventricular catheters to one valve.</p> <p>1 mm ID, 2 mm OD.</p> <p>1 per package.</p>
	CY1	<p><b>Catheter Connector, Three-Way, 316L Steel</b></p> <p>Allows the connection of two ventricular catheters to one valve.</p> <p>1.1 mm ID, 2.1 mm OD.</p> <p>1 per package.</p>



## T-Connector



Product code	Description
 <p>The technical drawing shows a top-down view of the connector. A horizontal dimension line indicates a length of 5.5 mm between the centers of the two side ports. A vertical dimension line indicates a diameter of 3 mm for the central hub, labeled as <math>\varnothing 3 \text{ mm}</math>.</p>	<p><b>CT1</b></p> <p><b>Catheter Connector, Three-Way, 316L Steel</b></p> <p>Allows the connection of two ventricular catheters to one valve.</p> <p>1.1 mm ID, 2.1 mm OD.</p> <p>1 per package.</p>

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Ing. Brutos N° 91436

**Habilitado por el Ministerio de Salud**

Subsecretaría de Asistencia en Salud Pública

DISPOSICIÓN SASP N° 994

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