SPHERA PRO

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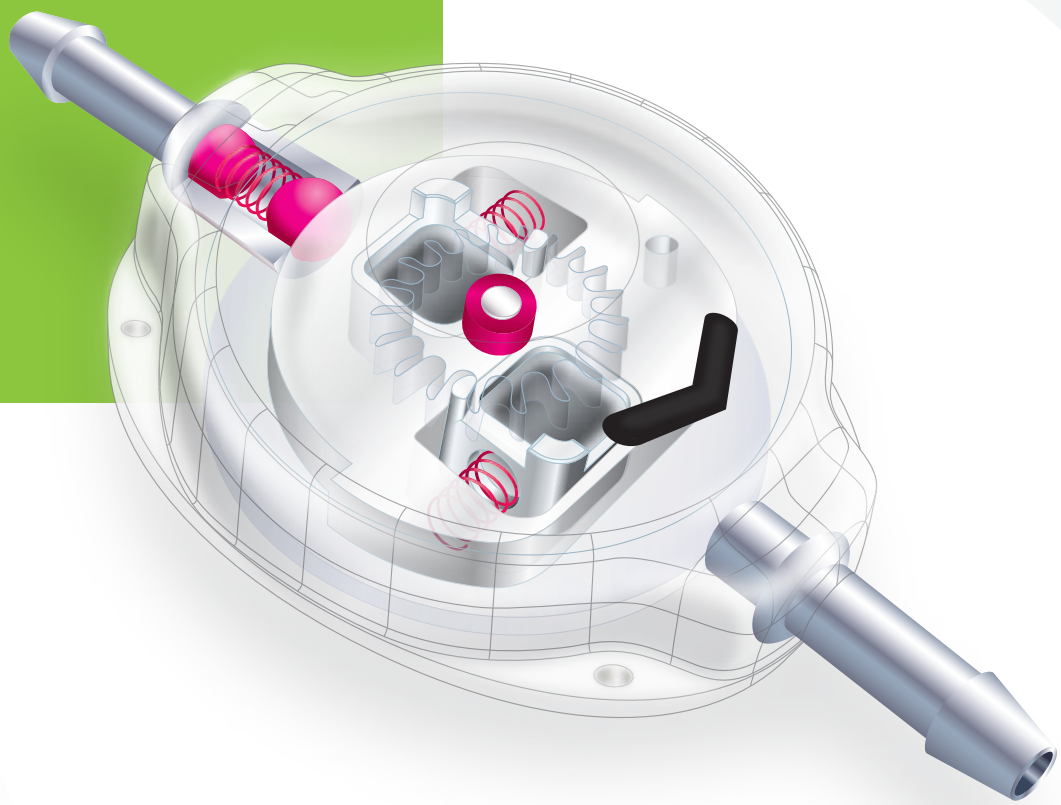


HYDROCEPHALUS PROGRAMMABLE SHUNT

SPHERA PRO

HYDROCEPHALUS PROGRAMMABLE SHUNT

Sphera Pro is a cerebral shunt system for intraventricular pressure control with a programmable valve. This product has been developed to provide ACCURACY on pressure control, SECURITY against deprogramming and EASY ADJUSTMENT procedure.

The valve has 08 different pressure settings, and pressure adjustment can be performed whenever necessary by a non-invasive device and painless to patients.

Safety against magnetic fields deprogramming is provided by an exclusive double locking system, which holds the valve at the chosen pressure even when the patient undergoes MR examinations of up to 3 teslas.

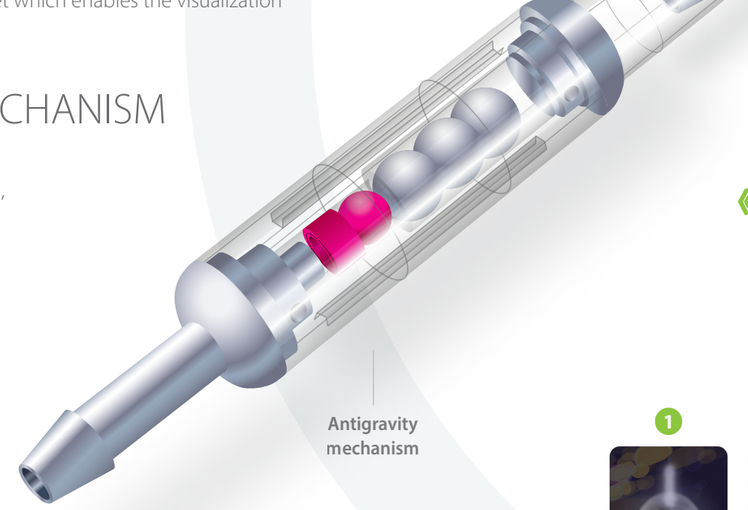
The Sphera Pro system can be supplied along with the Sphera Grav antigravity device which acts in intraventricular pressure control when the patient changes from the horizontal to the vertical position, preventing overdrainage especially for patients with Normal Pressure Hydrocephalus (NPH).

The valve and reservoir are made of polysulfone with a silicone coating and titanium connectors. The system's ventricular and peritoneal catheter are made of transparent silicone with a radiopaque fillet which enables the visualization in imaging tests and minimizes the occurrence of calcification in its path.

ACCURACY WITH THE ADJUSTMENT MECHANISM

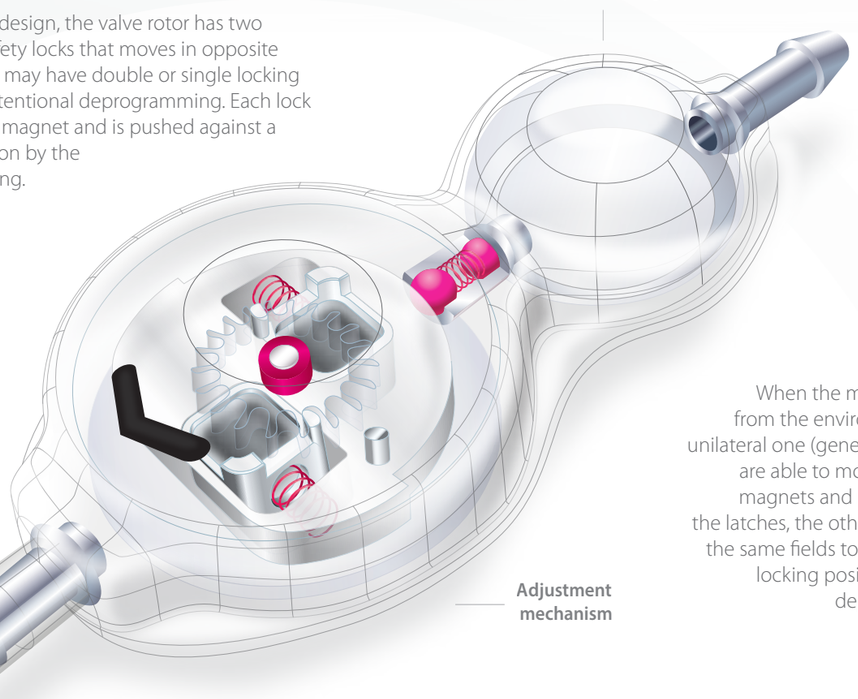
During the adjustment, the rotor movement changes the distance between the rotor axis and the Sphera mechanism (spring, sphera and conical ruby seat), increasing or decreasing the valve pressure.

The precise rotor radius dimensional control allows the accurate definition of the 08 different levels of opening and closing pressures, providing a real intracranial pressure control when the pressure adjustment is performed.

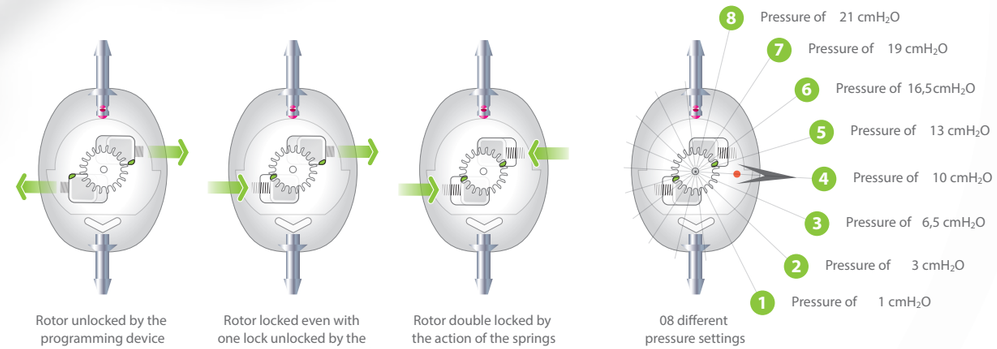


SECURITY AGAINST DEPROGRAMMING

With a unique design, the valve rotor has two mechanical safety locks that moves in opposite directions, and may have double or single locking against non-intentional deprogramming. Each lock is located on a magnet and is pushed against a pressure position by the action of a spring.



When the magnetic fields from the environment, or an unilateral one (generated by MRI), are able to move one of the magnets and release one of the latches, the other is forced by the same fields to remain in the locking position, avoiding deprogramming of the valve.



X-ray image of Sphera Pro for the 08 pressure settings, showing the inlet and outlet connectors, both magnets, the direction arrow, and the indicative mark for the valve laterality.

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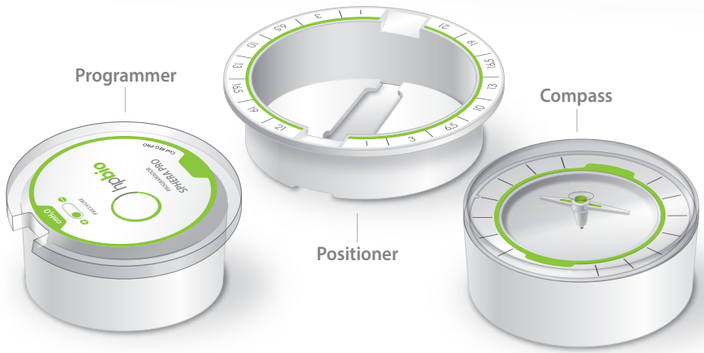
EASY PRESSURE ADJUSTMENT

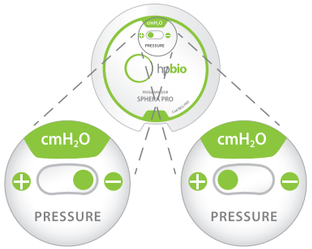


The programming device allows an easy pressure adjustment as it provides easy valve location, painless to the patient and immediate confirmation of the adjusted pressure, eliminating the necessity of image exams.

Since the correct programming device centralization upon the valve is essential to the unlocking and pressure adjustment, the reader has an indication aligment system that confirms the right position.

STEP 01

Set whether to reduce or increase the pressure by turning the top of the programmer counterclockwise or clockwise, until the indicator pin is in the "-" or "+" position.



STEP 02

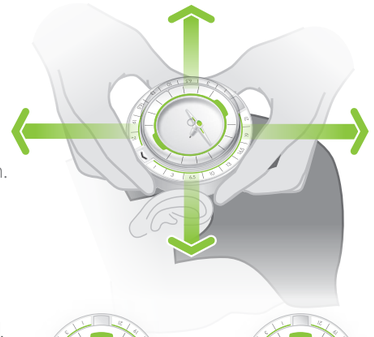
With the compass placed on the positioner, locate the valve.

Align the positioner flow indication arrow with the peritoneal catheter path.

By moving the positioner around the valve, align the center of the pointer with the center of the compass.

While moving the compass, in both directions, the pointer must remain still.

Perform the reading.



Out centered pointer: programming device on the incorrect position

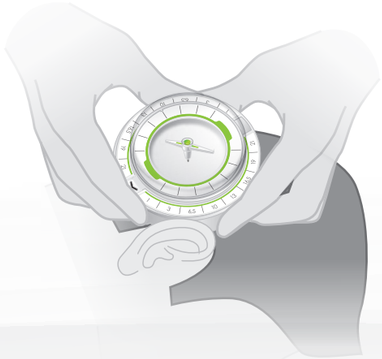
Centered pointer: programming device on the correct position

STEP 03

Keep the positioner on the same site and insert the programmer on the place of the compass. Turn counterclockwise to increase the pressure and clockwise to decrease the pressure.

STEP 04

Replace the programmer for the compass. Perform the reading of the new pressure, keeping the pointer center aligned with the center of the compass.

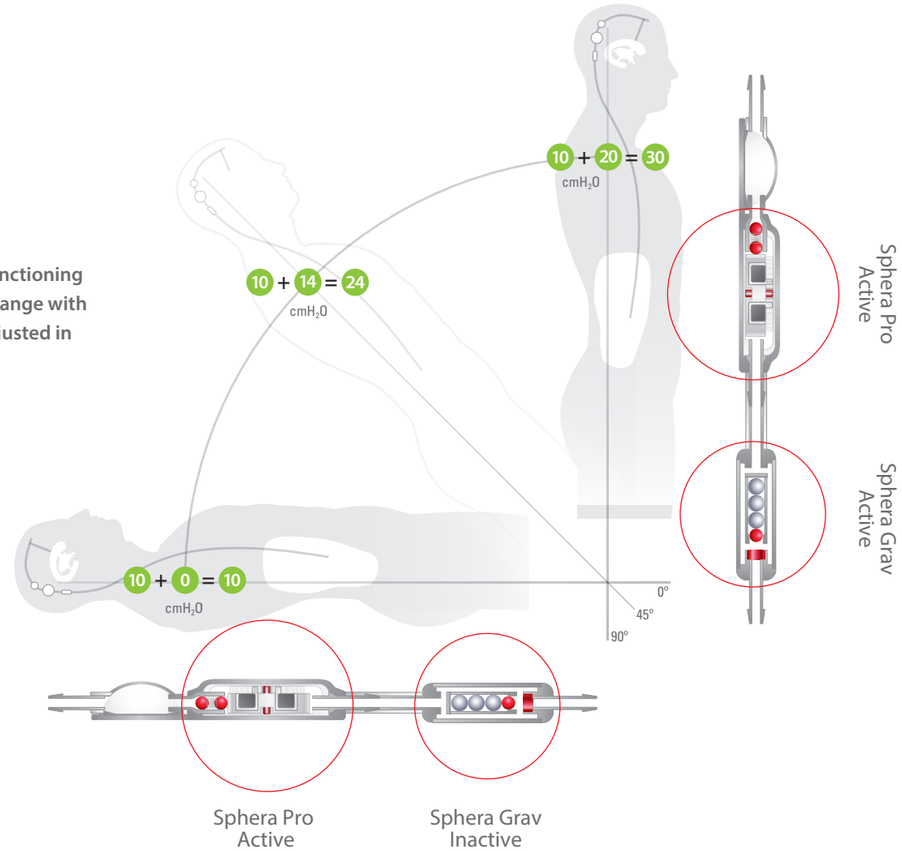


Access the QR Code and watch the video with the step by step programming tutorial.

ANTIGRAVITY DEVICE

Hiperdrainage control

Sphera Grav-20 functioning on the postural change with the Sphera Pro adjusted in 10 cmH_2O



The antigravity device Sphera Grav provides overdrainage control by performing automatic compensation for the system's opening pressure as the patient postural changes.

When the patient is in the supine position, no resistance will be built by Sphera Grav, only the Sphera Pro valve will be active.

However, when the patient is in the orthostatic position, the maximum resistance of Sphera Grav will act along with the Sphera Pro adjustment pressure, making the shunt system more physiological and maintaining the intraventricular pressure more constant and with less risks of overdrainage.

Sphera Grav has 06 resistance options (10, 15, 20, 25, 30 or 35 cmH_2O) to meet the different needs of pressure control for each patient. The device consists of tungsten and ruby spheres, polysulphone body, titanium connectors and silicone coating.

Technical information on this product is not limited to the features presented in this catalog. For more information, request the Instructions for Use at info@hpbio.com.br

	Code			Content
	Valve and catheters separated	UNISHUNT *Peritoneal catheter pre-attached to the valve*	UNITIZED *Ventricular and peritoneal catheter pre-assembled to the valve*	
SPHERA PRO	PRO10215	UPRO10215	UNPRO10215	01 Hydrocephalus valve Sphera Pro; 01 Cerebral ventricular straight catheter of 15 cm with stainless steel stylet and angle former; 01 Peritoneal catheter of 102 cm, 01 Test tube with adapter.
	PRO12015	UPRO12015	UNPRO12015	01 Hydrocephalus valve Sphera Pro; 01 Cerebral ventricular straight catheter of 15 cm with stainless steel stylet and angle former; 01 Peritoneal catheter of 120 cm, 01 Test tube with adapter.
	PRO10223	UPRO10223	UNPRO10223	01 Hydrocephalus valve Sphera Pro; 01 Cerebral ventricular straight catheter of 23.5 cm with stainless steel stylet and angle former; 01 Peritoneal catheter of 102 cm, 01 Test tube with adapter.
	PRO12023	UPRO12023	UNPRO12023	01 Hydrocephalus valve Sphera Pro; 01 Cerebral ventricular straight catheter of 23.5 cm with stainless steel stylet and angle former; 01 Peritoneal catheter of 120 cm, 01 Test tube with adapter.

	Code	Content
SPHERA PRO WITH RESERVOIR	PRO10215R	01 Hydrocephalus valve Sphera Pro with reservoir; 01 Cerebral ventricular straight catheter of 15 cm with stainless steel stylet and angle former; 01 Peritoneal catheter of 102 cm, 01 Test tube with adapter
	PRO12015R	01 Hydrocephalus valve Sphera Pro with reservoir 01 Cerebral ventricular straight catheter of 15 cm with stainless steel stylet and angle former 01 Peritoneal catheter of 120 cm, 01 Test tube with adapter
	PRO10223R	01 Hydrocephalus valve Sphera Pro with reservoir 01 Cerebral ventricular straight catheter of 23.5 cm with stainless steel stylet and angle former 01 Peritoneal catheter of 102 cm, 01 Test tube with adapter
	PRO12023R	01 Hydrocephalus valve Sphera Pro with reservoir 01 Cerebral ventricular straight catheter of 23.5 cm with stainless steel stylet and angle former 01 Peritoneal catheter of 120 cm, 01 Test tube with adapter
SPHERA GRAV	SPHERAGRAV-10	01 Antigravity device with resistance equivalent to pressure of 10cmH_2O
	SPHERAGRAV-15	01 Antigravity device with equivalent resistance to pressure of 15cmH_2O
	SPHERAGRAV-20	01 Antigravity device with equivalent resistance to pressure of 20cmH_2O
	SPHERAGRAV-25	01 Antigravity device with equivalent resistance to pressure of 25cmH_2O
	SPHERAGRAV-30	01 Antigravity device with equivalent resistance to pressure of 30cmH_2O
	SPHERAGRAV-35	01 Antigravity device with equivalent resistance to pressure of 35cmH_2O
SPHERA PRO WITH RESERVOIR + SPHERA GRAV	UPRO10223-G10	01 Hydrocephalus valve Sphera Pro with reservoir pre-assembled to 01 Sphera Grav-10 device and 01 Peritoneal catheter of 102 cm. 01 Cerebral ventricular straight catheter of 15 cm with stainless steel stylet and angle former; 01 Test tube with adapter.
	UPRO10223-G15	01 Hydrocephalus valve Sphera Pro with reservoir pre-assembled to 01 Sphera Grav-15 device and 01 Peritoneal catheter of 102 cm. 01 Cerebral ventricular straight catheter of 23 cm with stainless steel stylet and angle former; 01 Test tube with adapter.
	UPRO10223-G20	01 Hydrocephalus valve Sphera Pro with reservoir pre-assembled to 01 Sphera Grav-20 device and 01 Peritoneal catheter of 102 cm. 01 Cerebral ventricular straight catheter of 23 cm with stainless steel stylet and angle former; 01 Test tube with adapter.
	UPRO10223-G25	01 Hydrocephalus valve Sphera Pro with reservoir pre-assembled to 01 Sphera Grav-25 device and 01 Peritoneal catheter of 102 cm. 01 Cerebral ventricular straight catheter of 23 cm with stainless steel stylet and angle former; 01 Test tube with adapter.
	UPRO10223-G30	01 Hydrocephalus valve Sphera Pro with reservoir pre-assembled to 01 Sphera Grav-30 device and 01 Peritoneal catheter of 102 cm. 01 Cerebral ventricular straight catheter of 23 cm with stainless steel stylet and angle former; 01 Test tube with adapter.
	UPRO10223-G35	01 Hydrocephalus valve Sphera Pro with reservoir pre-assembled to 01 Sphera Grav-35 device and 01 Peritoneal catheter of 102 cm. 01 Cerebral ventricular straight catheter of 23 cm with stainless steel stylet and angle former; 01 Test tube with adapter.

PROGRAMMING DEVICE	
REG-PRO	01 Positioner; 01 Compass; 01 Programmer

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The available models of these products are not limited to the codes shown here. To get the complete list request the Instructions for Use at info@hpbio.com.br

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