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# SPHERA DUO

HYDROCEPHALUS SHUNT SYSTEM



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Sphera Duo valves were developed for a precise control of cerebral intraventricular pressure. The adult and infantile sizes design present low profile of implant and flexible body with anatomical shape to contour the curvature of the cranium.

The valves are made of transparent medical grade silicone with internal structure in polysulfone. They have pumpable central reservoir with needle guard that protects against perforations on puncturing or sampling procedures.

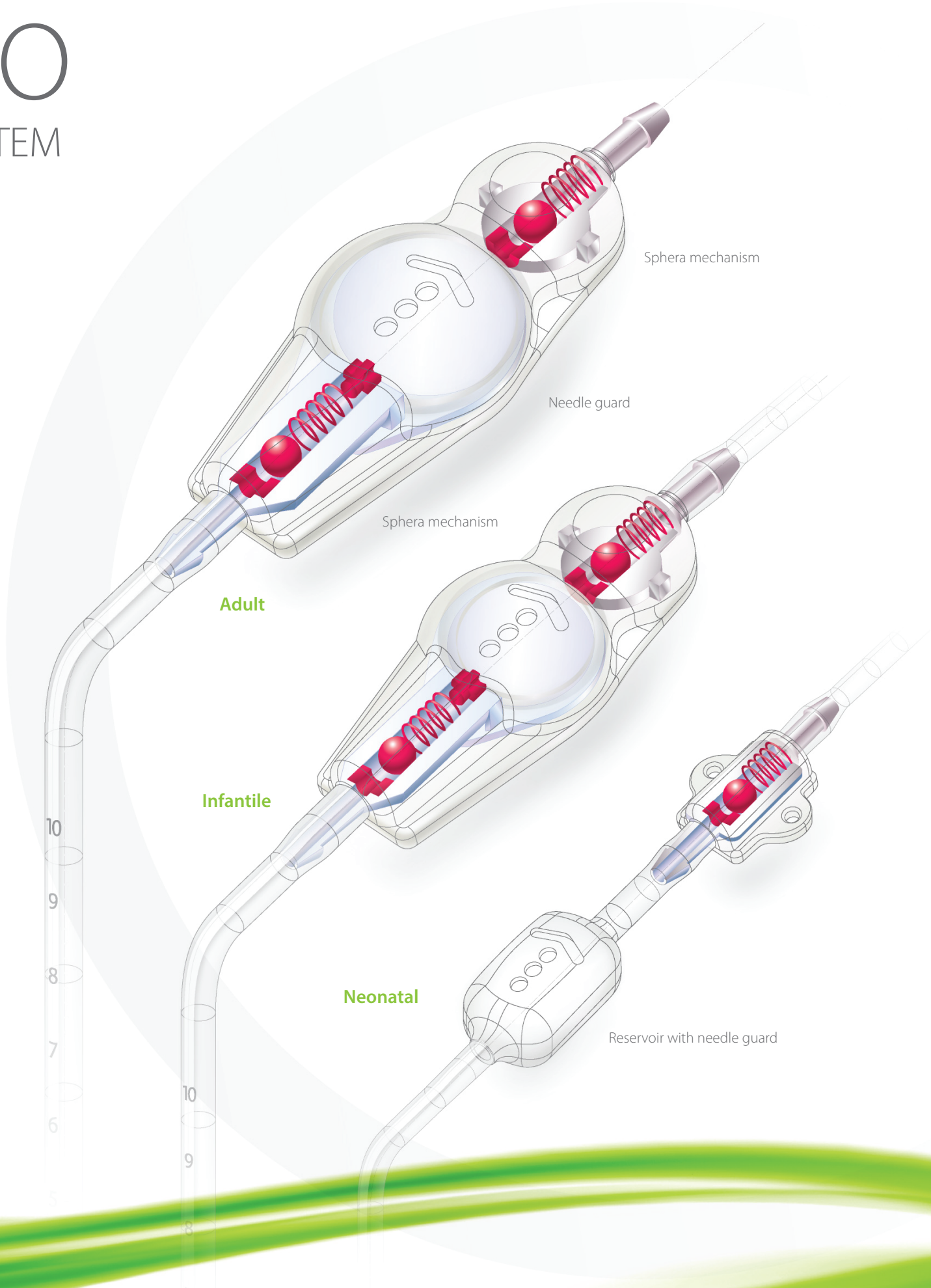
The Neonatal size has no pumping chamber, as the design prioritizes low profile and minimum implant volume. The system can be combined to a reservoir connected to the ventricular catheter to enable puncturing and CSF sampling.

### SPHERA MECHANISM: PRECISE MANAGEMENT

The pressure control system is composed of ruby ball and conic seat and stainless steel spring. The perfect match between ball and seat can safely set the pressures of opening and closing of the system, providing precise control of intracranial pressure.

Adult and Infantile sizes have a dual pressure control encased in the input and output occluders. The Neonatal model encases a single mechanism for pressure control.

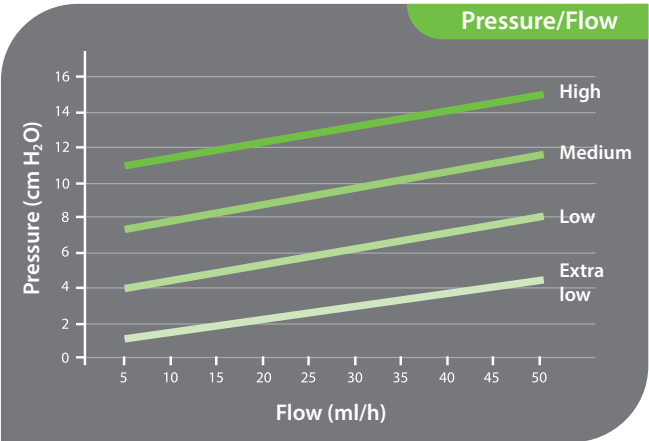
All sizes are supplied in four pressure ranges: high, medium, low and extra low, to meet the individual requirements of patients. The indications of flow and pressure printed on the valve body are radiopaque and allow visualization imaging after implantation.



### CATHETER: FLEXIBILITY AND RADIOCAPACITY

The shunt system presents the valve accompanied by cerebral ventricular catheter and peritoneal catheter. These are made of soft transparent medical grade silicone with radiopaque stripe, which ensures catheter visualization in imaging exams.

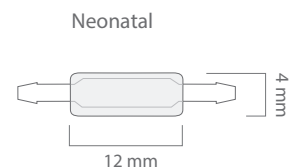
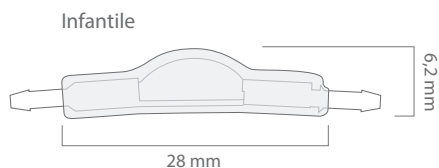
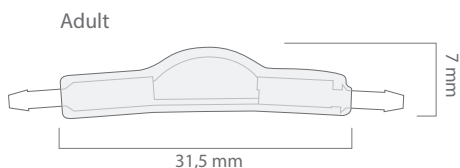
The hardness of the silicone used in the manufacture of catheters was tailored to allow adequate flexibility and at the same time, prevent the occurrence of unwanted kink in the subcutaneous route, which can cause obstruction or decrease the flow of drainage. For all valve sizes, the system can be supplied in different features of peritoneal and ventricular catheter with or without reservoir.



The graphic represents average rates. Consider a range  $\pm 1,5\text{cm H}_2\text{O}$

MARKS		
Pressure	Marks	Values (Flow of 21ml/h)
Extra low	○ ○ ○ ▶	1 a 3 cm de H <sub>2</sub> O
Low	● ○ ○ ▶	3 a 7 cm de H <sub>2</sub> O
Medium	● ● ○ ▶	7 a 11 cm de H <sub>2</sub> O
High	● ● ● ▶	11 a 14 cm de H <sub>2</sub> O

	Model	Pressure	Content
ADULT	ADE10223D ADB10223D ADM10223D ADA10223D	Extra low Low Medium High	01 Adult Hidrocephalus valve 01 Cerebral ventricular catheter straight 23,5cm with inox stylet 01 Peritoneal catheter 102cm 01 Burr hole catheter support
	ADE10215D ADB10215D ADM10215D ADA10215D	Extra low Low Medium High	01 Adult Hidrocephalus valve 01 Cerebral ventricular catheter straigh 15cm with inox stylet 01 Peritoneal catheter 102cm 01 Burr hole catheter support
INFANTILE	INE907D INB907D INM907D INA907D	Extra low Low Medium High	01 Infantile Hidrocephalus valve 01 Cerebral ventricular catheter right-angled 7cm with inox stylet 01 Peritoneal catheter 90cm
	INE9010D INB9010D INM9010D INA9010D	Extra low Low Medium High	01 Infantile Hidrocephalus valve 01 Cerebral ventricular catheter right-angled 10cm with inox stylet 01 Peritoneal catheter 90cm
	INE9015D INB9015D INM9015D INA9015D	Extra low Low Medium High	01 Infantile Hidrocephalus valve 01 Cerebral ventricular catheter straigh 15cm with inox stylet 01 Peritoneal catheter 90cm 01 Burr hole catheter support
NEONATAL	NNE907RD NNB907RD NNM907RD NNA907RD	Extra low Low Medium High	01 Neonatal Hidrocephalus valve 01 Cerebral ventricular catheter right-angled 7cm with reservoir and inox stylet 01 Peritoneal catheter 90cm
	NNE9015RD NNB9015RD NNM9015RD NNA9015RD	Extra low Low Medium High	01 Neonatal Hidrocephalus valve 01 Cerebral ventricular catheter straigh 15cm with reservoir and inox stylet 01 Peritoneal catheter 90cm 01 Burr hole catheter support
	NNE9015D NNB9015D NNM9015D NNA9015D	Extra low Low Medium High	01 Neonatal Hidrocephalus valve 01 Cerebral ventricular catheter straigh 15cm with inox stylet 01 Peritoneal catheter 90cm 01 Burr hole catheter support



The technical information for these products is not limited to the characteristics presented in this catalog. For complete information, request the Instructions for Use at [info@hpbio.com.br](mailto:info@hpbio.com.br)



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