Fixed differential pressure valve

- Adjustable differential pressure versus adjustable gravitational valves in pediatric hydrocephalus
- Programmable gravitational valves in idiopathic normal pressure hydrocephalus: long-term outcomes after a 3-year follow-up
- Fixed versus Adjustable differential pressure valves in case of idiopathic normal pressure hydrocephalus treated with ventriculoperitoneal shunt. A systematic review and meta-analysis of proportion
- Effect of antisiphon devices on ventriculoperitoneal shunt drainage dynamics in growing children
- Neurosurgical shunt treatment of pediatric hydrocephalus: epidemiology and influencing factors on revision surgeries: a single-center retrospective analysis of 131 patients
- A high throughput microfluidic system with large ranges of applied pressures for measuring the mechanical properties of single fixed cells and differentiated cells
- An adjustable gravitational valve for initial VP-shunt treatment in hydrocephalic preterm neonates and infants below 1 year of age
- Efficacy and safety of the Miethke programmable differential pressure valve (proGAV2.0): a single-centre retrospective analysis

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A Fixed differential pressure valve also known as a differential pressure regulator, is a type of control valve used in various fluid systems to maintain a specific pressure difference (differential pressure) between two points in the system. These valves are designed to regulate the flow of fluid to ensure that the pressure difference across them remains constant, regardless of variations in upstream or downstream pressure.

The primary purpose of a fixed differential pressure valve is to protect downstream equipment from excessive pressure by controlling the flow rate to maintain a specified pressure drop. These valves are often used in applications where precise pressure control is critical, such as in steam systems, HVAC systems, and industrial processes.

Fixed differential pressure valves typically consist of a diaphragm or piston mechanism that responds to changes in the pressure difference between the inlet and outlet. When the differential pressure exceeds the setpoint, the valve will modulate to reduce the flow and maintain the desired pressure differential. Conversely, if the differential pressure falls below the setpoint, the valve will open further to increase the flow and restore the proper pressure difference.

These valves are available in various designs and configurations to suit different applications and pressure ranges. Some of them may have a setpoint adjustment mechanism that allows users to customize the desired differential pressure.

In summary, a fixed differential pressure valve is a type of control valve used to maintain a specific pressure drop between two points in a fluid system by adjusting the flow rate, helping to protect downstream equipment and ensure the proper functioning of the system.

Examples

Delta valve

Gravitational valve

Ball in cone valve

Low pressure valve

Integra™ Horizontal-Vertical (H-V) Lumbar Valve System