

Back Pressure Maintaining Valves (BPMV)

The Back Pressure Maintaining Valve is designed to ensure the system does not go below a set pressure on the inlet side.

Back Pressure Maintaining Methods

Spring loaded – These valves offer robust and consistent regulating and are suitable for orifice sizes up to 5.8mm (0.220") a spring loaded seat design is used covering pressure up to 700 bar (10,000 psi).

Dome Loaded – Internally and Externally loaded - Pressurised gas is stored in a dome on one side of a diaphragm or piston to balance upstream fluid pressure on the other side. For maintaining large flows at medium and high pressures, spring sizes become too large and the high spring forces difficult to contain. A more compact and convenient solution is to use a dome loaded valve. In the case of pneumatic systems, the dome gas is obtained by bleeding a small flow from the supply side of the system until the desired dome pressure is obtained. For hydraulic systems, a separate gas pressure supply (e.g. gas bottle) is needed for the initial charging of the dome.



H210HP Dome loaded BPMV and H15 sprung loaded BPMV

Spring Loaded Back Pressure Maintaining Valves

Valve Type	Orifice mm (ins)	Ports (standard)	Pressure bar (psi)		Gas or Liquid
			Min	Max	
H10	3.2 (0.125)	3/8" BSP	35 (500)	544 (8,000)	Both
H11	4.8 (0.188)	3/8" BSP	18 (250)	306 (4,500)	Both
H12	4.8 (0.188)	3/8" BSP	0.34 (5)	68 (1,000)	Both
H15	5.8 (0.220)	3/8" BSP	10 (150)	500 (7,250)	Both
H18	4.7 (0.185)	13/16" MP	400 (5,800)	700 (10,000)	Both

Internal Dome Loaded Back Pressure Maintaining Valves

Valve Type	Orifice mm (ins)	Ports (standard)	Pressure bar (psi)		Gas or Liquid
			Min	Max	
H100	11.1 (0.44)	1/2" BSP	0.05 (0.75)	70 (1,000)	Gas
H120	25.4 (1.00)	1 1/2" BSP	0.05 (0.75)	70 (1,000)	Gas
H130	50.8 (2.00)	3" BSP	0.05 (0.75)	70 (1,000)	Gas
H200	6.3 (0.25)	3/8" BSP	2.0 (30)	415 (6,000)	Gas
H210HP	12.7 (0.50)	3/4" BSP	3.0 (44)	415 (6,000)	Gas



www.biswells.com
sales@biswells.com

External Dome Loaded Back Pressure Maintaining Valves

Valve Type	Orifice mm (ins)	Ports (standard)	Pressure bar (psi)		Gas or Liquid
			Min	Max	
H101	11.1 (0.44)	1/2" BSP	0.05 (0.75)	70 (1,000)	Both
H121	25.4 (1.00)	1 1/2" BSP	0.05 (0.75)	70 (1,000)	Both
H131	50.8 (2.00)	3" BSP	0.05 (0.75)	70 (1,000)	Both
H201	6.3 (0.25)	3/8" BSP	2.0 (30)	415 (6,000)	Both
H211HP	12.7 (0.50)	3/4" BSP	3.0 (44)	415 (6,000)	Both



www.biswells.com
sales@biswells.com