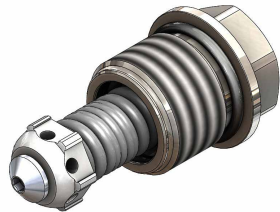


Relief and Anti-Cavitation Valves

IRA0.M18 Valve Series

- METRIC Cartridge - 420 bar
- Direct acting with anti-cavitation
- Poppet type

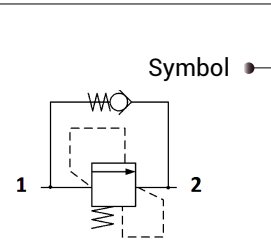


Description

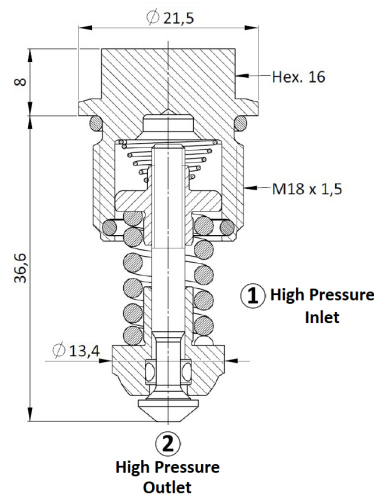
The IRA valve combines in one compact insert cartridge the typical function of shock relief valve and anti-cavitation through the check valve. In the pressure relief function it's a side-in nose-exhaust valve, with very low pressure rise thanks to the smart deflector design. When the pressure at the high pressure inlet (1) reaches the valve setting, the valve starts to open to tank (2). In the free reverse flow function a very light bias spring allows for ease of flow passage from nose to side (2 to 1). High precision machining guarantees quick response to load changes, limited hysteresis and reduced internal and external leakage.

Technical Features

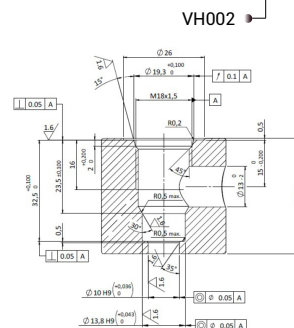
All external surfaces are zinc plated and corrosion-proof. All valve parts are made of high strength steel. Both internal and external poppets are hardened and ground to guarantee minimal wear and to extend service life. Pressure setting is pre-adjusted by the factory and cannot be changed. Optional spring ranges to 420 bar (6000 psi). 1-piece design. Metric cavity.



Cross Section



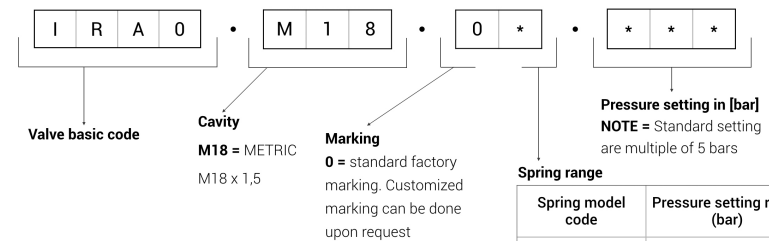
Cavity Details



Technical Data

Maximum operating pressure	420 bar
Maximum flow	60 l/min
Setting Pressure	See table below
Ant-cav cracking pressure	<0,5 bar
Maximum internal leakage	1 cm ³ /min to 80% of nominal set point
External component treatment	Zn/Fe - standard (96h) Zn/Ni (720h)
O-ring Temperature Range	-30° C to 110° C (standard sealing NBR - BUNA-N)
Oil Temperature Range	-30° C to 110° C
Pressure settings established	@10 l/min
Reseat pressure	nominal 90% of cracking pressure
Fluids	Mineral - based or synthetics with lubricating properties
Viscosities	7,4 to 420 cSt
Filtration	20/18/15 ISO 4406 (maximum filtration admitted)
Orientation	No restrictions
Installation torque	35-40 Nm
Technical specifications for characterization	See page 480
Oil testing condition	ISO VG 46 cSt
Seal kit code	SK.005
Coining Kit	CK.002 (for more details see page 428-429)
Weight	0,060 kg

Ordering Code



Spring range	Spring model code	Pressure setting range (bar)
	N	20-70
	B	71-130
	G	131-210
	V	211-280
	W	281-350
	R	351-420

Relief and Anti-Cavitation Valves

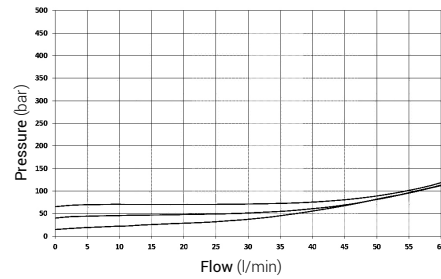
IRA0.M18 Valve Series

Springs' Graphs

Note: The performance chart illustrates flow handling capacity for each spring bias options. p/Q curves are recorded at T_{Oil} = 40°C and 46 cSt

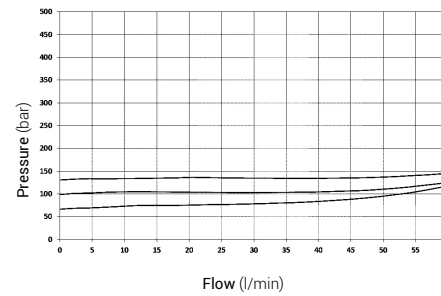
Spring = N (20 - 70bar)

p/Q performance



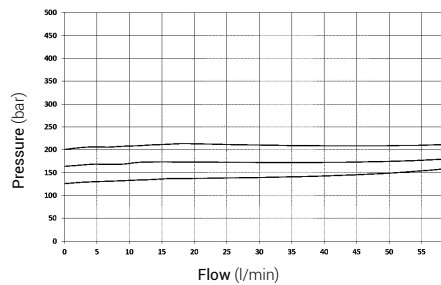
Spring = B (71 - 130bar)

p/Q performance



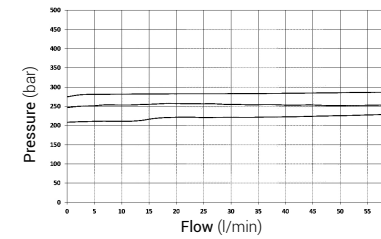
Spring = G (131 - 210bar)

p/Q performance



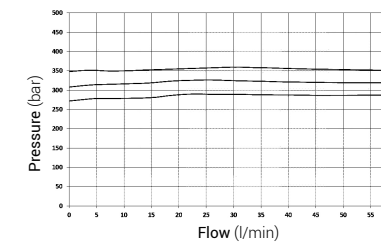
Spring = V (211 - 280bar)

p/Q performance



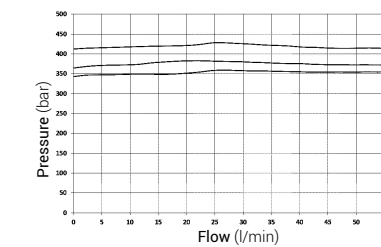
Spring = W (281 - 350bar)

p/Q performance



Spring = R (351 - 420bar)

p/Q performance



Anti-cavitation function

p/Q performance

