

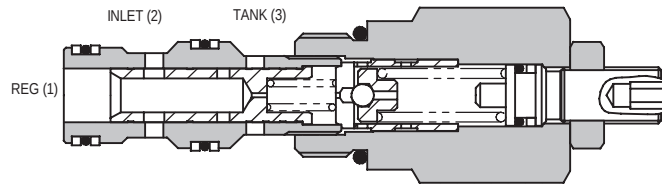
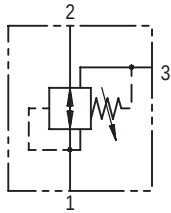


1PAA SERIES PRESSURE REDUCING / RELIEVING VALVE

PILOT OPERATED

1PAA60

GUIDED PISTON TYPE



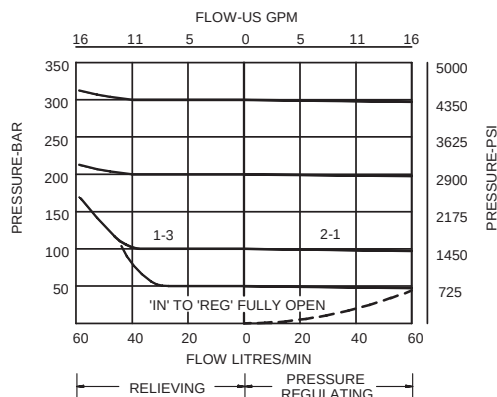
APPLICATION

This pilot operated valve can be used with flows of up to 30 litres/min (8 US GPM) and inlet pressures of up to 350 bar (5000 psi) in both reducing and relieving modes. The inbuilt relief allows externally induced pressures to be relieved back to tank. The valve is ideal for secondary pressure control in any circuit. When using at pressure below 40 bar, consult graph.

Operation

This valve is normally open allowing inlet oil to pass to the regulated line until the outlet (regulated) pressure exceeds the setting of the pilot section. When this setting is achieved a pilot flow occurs, causing a pressure imbalance across the main spool, which then moves throttling the inlet flow and preventing any further pressure rise in the regulated line. If any external force causes the regulated pressure to rise more than 5-10% above the setting, the main spool moves back further, opening the regulated port to the tank line, thus working as a relief valve.

Pressure Drop



Features

Cartridge construction with hardened, ground and honed working parts giving smooth, stable operation over all pressure ranges.

Specifications

Figures based on: Oil Temp = 40°C Viscosity = 40 cSt

Rated Flow	30 litres/min (8 US GPM) SEE GRAPH
Max Setting	350 bar (5000 psi)
Max Differential	210 bar (3000 psi) between 1 and 2
Cartridge Material	Working parts hardened and ground steel. External surfaces zinc plated
Body Material	Standard aluminium (up to 210 bar*) Add Suffix '377' for steel option
Mounting Position	Unrestricted
Cavity Number	CVB-22-06-0 (See Section 17)
Torque Cartridge into Cavity	75 Nm (55 lbs ft)
Weight	1PAA60 0.23 kg (0.50 lbs) 1PA65 1.06 kg (2.30 lbs)
Seal Kit Number	SK632 (Nitrile) SK632V (Viton)
Recommended Filtration Level	BS5540/4 Class 18/13 (25 micron nominal)
Operating Temp	-20°C to +90°C
Pilot Flow	140 millilitres/min @ standard setting
Nominal Viscosity Range	5 to 500 cSt

*For applications above 210 bar please consult our technical department or use the steel body option.

Integrated Hydraulics Ltd

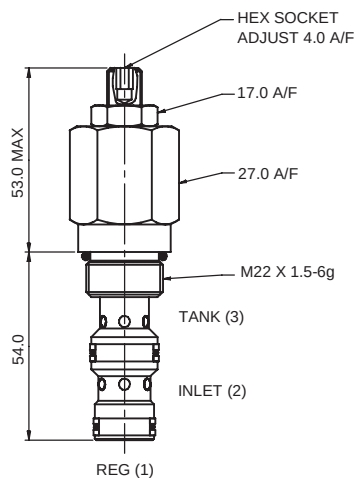
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CARTRIDGE ONLY

Basic Code: 1PAA60



COMPLETE VALVE

3/8" 1/2" PORTS

BASIC CODE: 1PAA65

Body Only Part Numbers

BSP, aluminium

3/8" B13519

1/2" B13521

SAE, aluminium

1/2" B10801

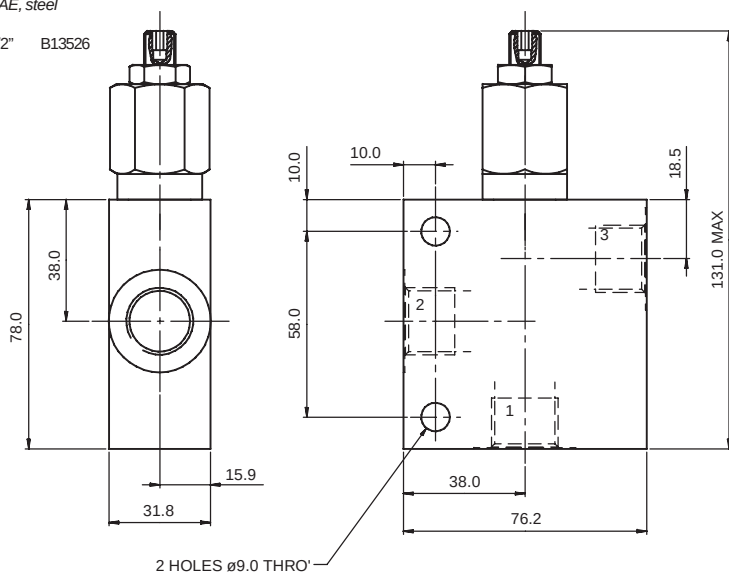
BSP, steel

3/8" B13520

1/2" B13522

SAE, steel

1/2" B13526



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

1PAA**

P

4W

35

S

Basic Code

1PAA60 = Cartridge Only

1PAA65 = Cartridge and Body

Adjustment Means

P = Leakproof Screw Adjustment

R = Handknob Adjustment

G = Tamperproof Cap

(See page 5-102 for dimensions)

Port Sizes - Bodied Valves Only

3W = 3/8" BSP

4W = 1/2" BSP 8T = 1/2" SAE

Seals

S = Nitrile (For use with most industrial hydraulic oils)

SV = Viton (For high temperature and most special fluid applications)

Pressure Range @ zero flow

10 = 10-100 bar. Std setting 35 bar

20 = 15-210 bar. Std setting 100 bar

35 = 30-350 bar. Std setting 280 bar

Std setting made at zero flow

We reserve the right to change specifications without notice