



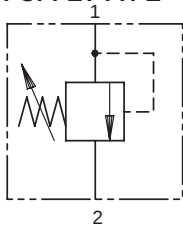
1DR SERIES RELIEF VALVE

DIRECT ACTING

2

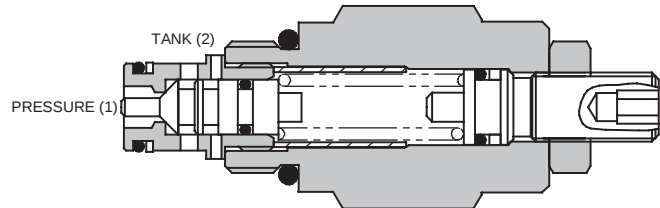
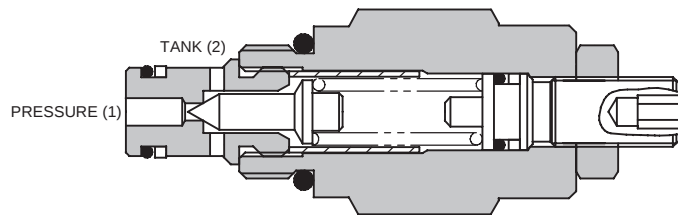
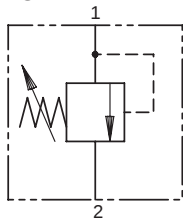
1DR2

POPPET TYPE



1DR30

POPPET TYPE



APPLICATION

Both fitting the same cavity, the 1DR2 is ideally suited for use as a pilot valve or a thermal relief, whereas the 1DR30 is an economical solution for small flow systems where a fast response is required.

OPERATION

Pressure on the nose of the cartridge acts over the seat area moving the poppet against the spring, allowing relief flow to tank.

FEATURES

1DR2 Series:
Fast acting, good reseal, ideal for remote operation of larger valves.

1DR30 Series:
Fast acting, low pressure rise due to flow for a direct acting valve.

SPECIFICATIONS

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

Rated Flow	1DR2/22 1.2 litres/min (0.3 US GPM) 1DR30/35 30 litres/min (8.0 US GPM)
Max Setting	400 bar (5800 psi)
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	A879 (See Section 17)
Torque Cartridge into Cavity	45 Nm (33 lbs ft)
Weight	1DR2 0.14 kg (0.30 lbs) 1DR22 0.28 kg (0.60 lbs) 1DR30 0.17 kg (0.37 lbs) 1DR35 0.31 kg (0.67 lbs)
Seal Kit Number	1DR2/22 SK 187-02 (Nitrile) SK 187-02V (Viton) 1DR30/35 SK243 (Nitrile) SK243V (Viton)
Recommended Filtration Level	BS5540/4 Class 18/13 (25 micron nominal)
Operating Temp	-20°C to +90°C
Leakage	0.3 millilitres/min nominal (5 dpm)
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

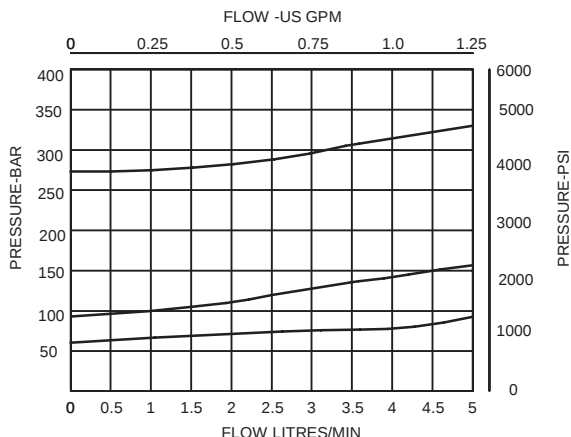
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Integrated Hydraulics Inc

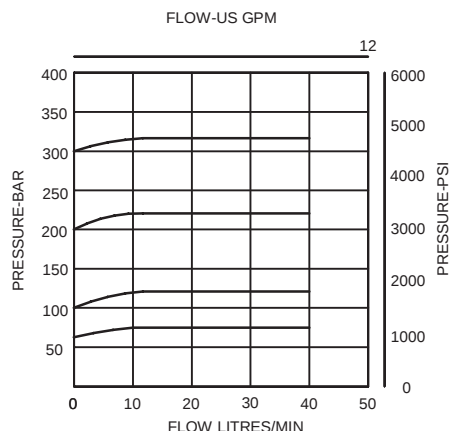
7047 Spinach Drive, Mentor, Ohio 44060, USA
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PRESSURE DROP

1DR2



1DR30



2

CARTRIDGE ONLY

BASIC CODE: 1DR2

BASIC CODE: 1DR30

COMPLETE VALVE 1/4" 3/8" PORTS

BASIC CODE: 1DR22 OR 1DR35

Body ONLY part numbers

BSP, aluminium

1/4" A1485

3/8" A1043

SAE, aluminium

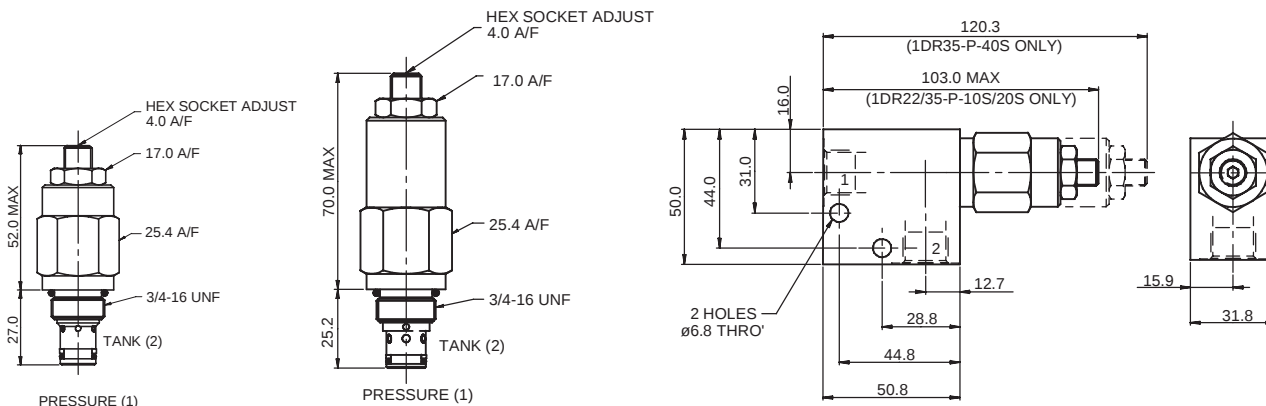
3/8" A15676

BSP, steel

3/8" A14175

SAE, steel

3/8" A14843



Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

1DR**

P

3W

40

S

Basic Code

1DR2 = Cartridge Only

1DR30 = Cartridge Only

1DR22 = Cartridge and Body

1DR35 = Cartridge and Body

Adjustment Means

P = Leakproof Screw Adjustment

R = Handknob Adjustment

G = Tamperproof Cap

(See page 2-102 for dimensions)

Port Sizes - Bodied Valves Only

2W = 1/4" BSP

3W = 3/8" BSP 6T = 3/8" SAE

Seals

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

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

Pressure Range @ 4.8 or 0.5 l/min

10 = 7-100 bar. Std setting 70 bar

20 = 35-210 bar. Std setting 100 bar

40 = 50-400 bar. Std setting 280 bar

1DR30 - Std setting made at 4.8 litres/min

1DR2 - Std setting made at 0.5 litres/min

We reserve the right to change specifications without notice