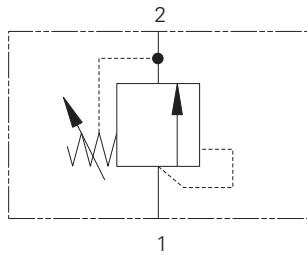


# 1DR30 - Relief Valve

Poppet, Direct Acting

30 L/min (8 USgpm) • 400 bar (5800 psi)



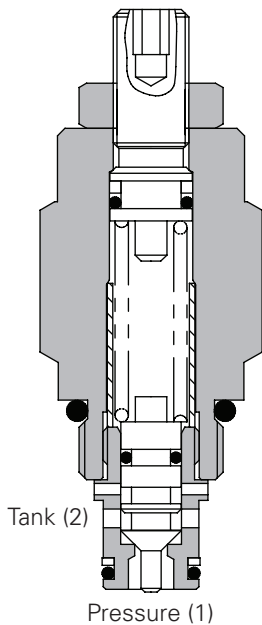
## Operation

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

## Features

Fast acting, low pressure rise due to flow for a direct acting valve.

## Sectional View



## Performance Data

### Ratings and Specifications

Performance data is typical with fluid at 32 cSt (150 SUS) and 40° C (120° F)

Typical application pressure	400 bar (5800 psi)
Rated flow	30 L/min (8 USgpm)
Cartridge Material	Working parts hardened and ground steel. External surfaces zinc plated.
Cavity	C-8-2 (see Section M)
Standard housing materials	Aluminum (up to 210 bar) or Steel (add 377 suffix for steel option)
Torque Cartridge into Cavity	45 Nm (33 lbs ft)
Temperature range	-30° to 90°C (-22° to 194°F)
Fluids	All general purpose hydraulic fluids such as: MIL-H-5606, SAE 10, SAE 20, etc.
Filtration	Cleanliness Code BS5540-4 18/13 (25 micron nominal)
Weight cartridge only	0,17 kg (0.37)
Internal leakage	0.3 ml/min nominal (5 dpm)
Nominal Viscosity Range	5 to 500 cSt
Seal kits	SK243 Buna-N SK243V Viton*

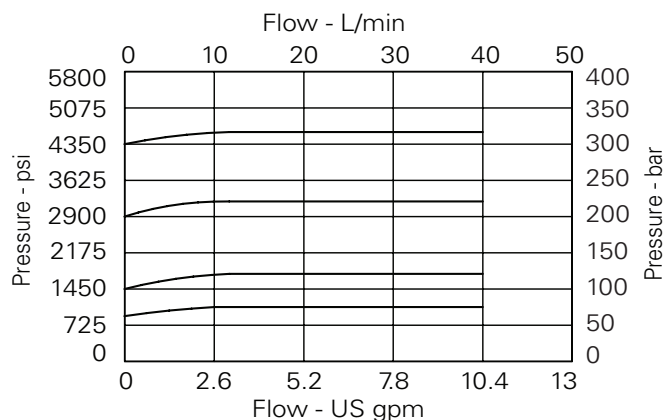
Viton is a registered trademark of E.I. DuPont

## Description

This is a direct acting, poppet style screw in cartridge relief valve, it is an economical solution for small flow systems where a fast response is required.

## Pressure Override Curves

Cartridge only

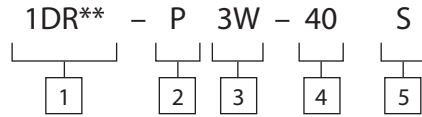


# 1DR30 - Relief Valve

Poppet, Direct Acting

30 L/min (8 USgpm) • 400 bar (5800 psi)

## Model Code



Code: 1DR30-P-40S

### 1 Function

1DR30 - Cartridge only  
1DR35 - Cartridge and body

### 2 Adjustment

P - Leakproof screw adjustment  
R - Handknob adjustment  
G - Tamperproof cap (see page E-7 for dimensions)

### 3 Port Size - Bodied Valves Only

Code	Port Size	Housing Number
		Aluminium Steel
<b>0</b>	<b>Cartridge only</b>	
2W	1/4" BSP	A1485
3W	3/8" BSP	A1043 A14175
6T	3/8" SAE	A15676 A14843

See section J for housing details.

### 5 Seal Material

S - Nitrile (for use with most industrial hydraulic oils)

SV - Viton<sup>®</sup> (for high temperature and most special fluid applications)

### 4 Pressure Range at 4.8 l/min

Note: Code based on pressure in bar.

10 - 7-100 bar (100-1450 psi)  
- std setting at 70 bar

20 - 35-210 bar (500-3000 psi)  
- std setting at 100 bar

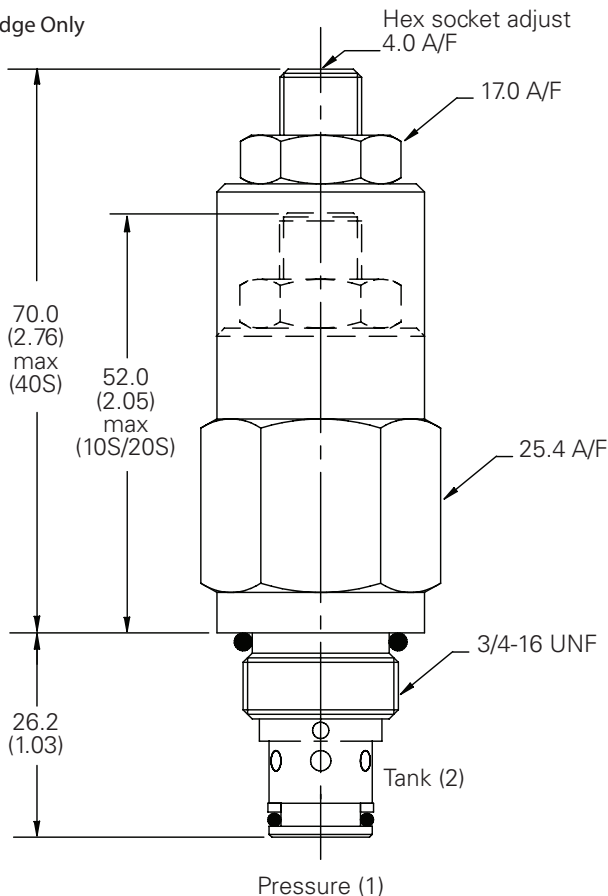
**40 - 50-400 bar (725-5800 psi)**  
- std setting at 280 bar

## Dimensions

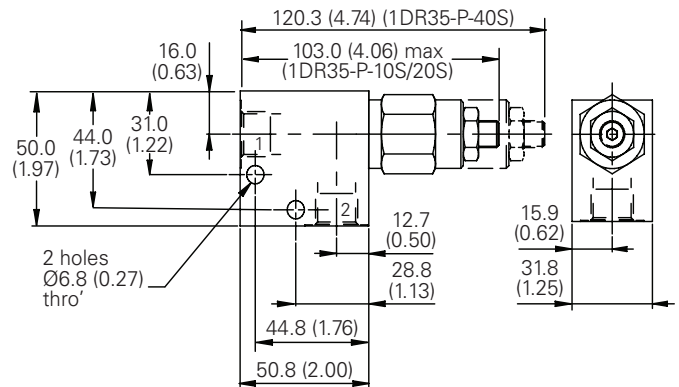
mm (inch)

Torque cartridge in housing  
A - 47-54 Nm (35-40 ft. lbs)  
S - 68-75 Nm (50-55 ft. lbs)

### Cartridge Only



### Installation Drawing



### WARNING

Aluminum housings can be used for pressures up to 210 bar (3000 psi). Steel housings must be used for operating pressures above 210 bar (3000 psi).