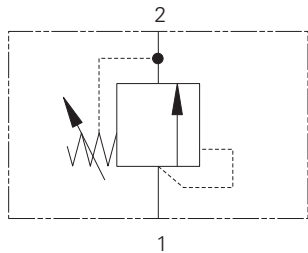


# 1DR30 - Relief Valve

Poppet, Direct Acting

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



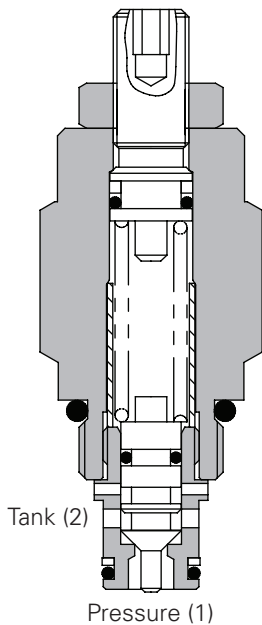
## Operation

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.<br>External surfaces zinc plated.        |
| Cavity                       | C-8-2 (see Section M)   |
| Standard housing materials   | Aluminum (up to 210 bar)<br>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:<br>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<br>SK243V Viton*   |

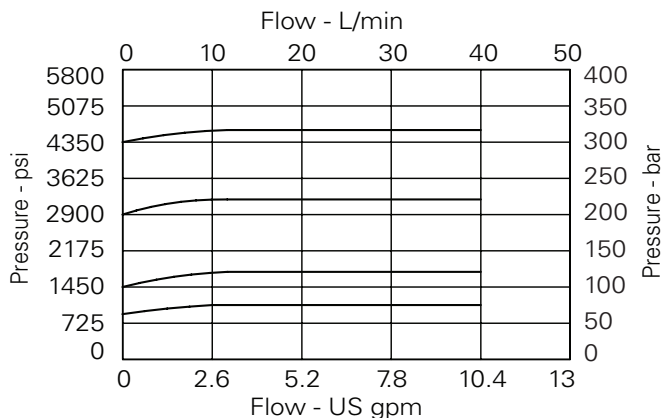
Viton is a registered trademark of E.I. DuPont

## 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

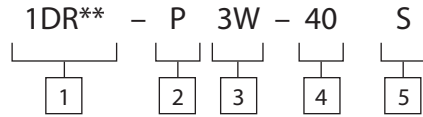


# 1DR30 - Relief Valve

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

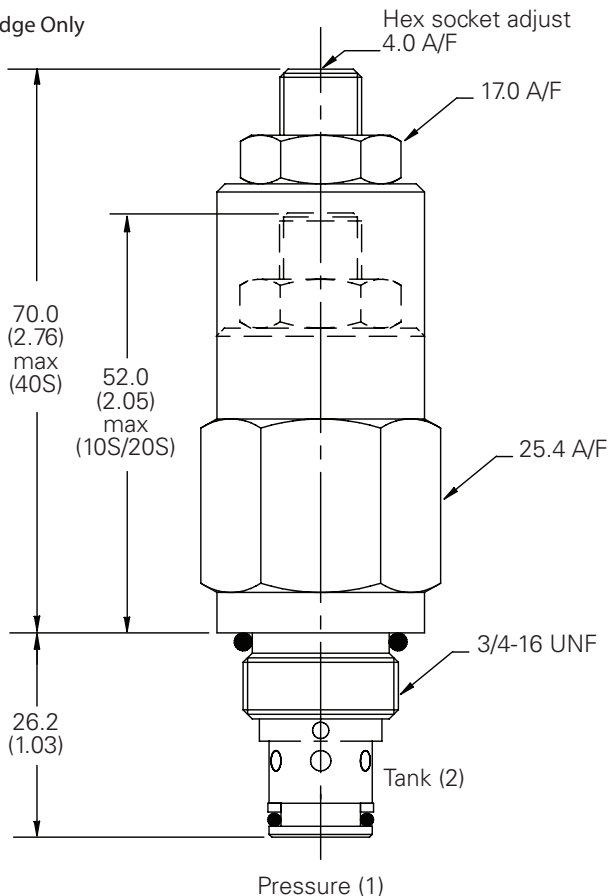
mm (inch)

Torque cartridge in housing

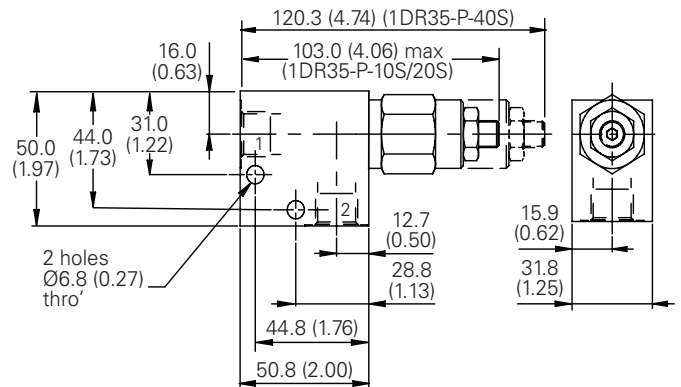
A - 47-54 Nm (35-40 ft. lbs)

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).