

# Relief Valves

## 1AR100

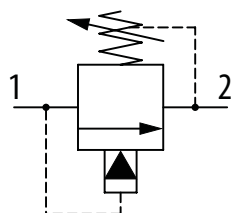
Relief valve, Pilot operated, Spool Type

400 bar [5800 psi] • 150 l/min [40 US gpm]

### DESCRIPTION AND OPERATION

This is a pilot operated, spool type relief valve that relieves from port 1 to port 2. It can be used to limit pressure in a system while maintaining accurate pressure control with constant or varying flows.

### SCHEMATIC



### PERFORMANCE DATA

|                |                         |
|----------------|-------------------------|
| Rated pressure | 400 bar [5800 psi]      |
| Rated flow     | 150 l/min [40 US gpm]   |
| Leakage        | 20 to 65 ml/min nominal |
| Weight         | 0.14 kg [0.3 lb]        |
| Cavity         | A881                    |

### MODEL CODE

**1AR100 - P - 3W - 7 - S - 377 - 60**

#### Basic Code

1AR100 - No Housing  
1AR145 - Cartridge and housing  
1AR150/1AR155 - Cartridge and housing  
Through ported

#### Adjustment Option

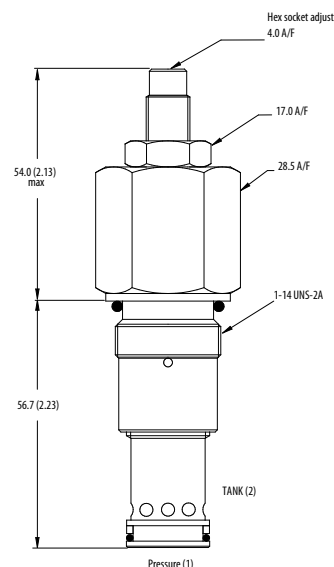
P - External  
R - Knob  
G - Tamper resistant

#### Housing

| Code | Ports      | Housing Model Code |                    |                 |                    |                 |
|------|------------|--------------------|--------------------|-----------------|--------------------|-----------------|
|      |            | Aluminum<br>1AR145 | Aluminum<br>1AR150 | Steel<br>1AR150 | Aluminum<br>1AR155 | Steel<br>1AR155 |
| Omit | No Housing |                    |                    |                 |                    |                 |
| 3W   | 3/8" BSP   |                    | C1084              |                 |                    |                 |
| 4W   | 1/2" BSP   | B4851              | C1044              | C593            |                    |                 |
| 6W   | 3/4" BSP   | B3954              | C1086              | C4917           |                    |                 |
| 8W   | 1" BSP     |                    |                    |                 | B1617              | B4596           |
| 6T   | 3/8" SAE   |                    | B10784             |                 |                    |                 |
| 8T   | 1/2" SAE   | B19403             | C7140              |                 |                    |                 |
| 12T  | 3/4" SAE   | B19404             | B10506             | B10742          |                    |                 |
| 16T  | 1" SAE     |                    |                    |                 | B1037              | B24040          |

### DIMENSIONS

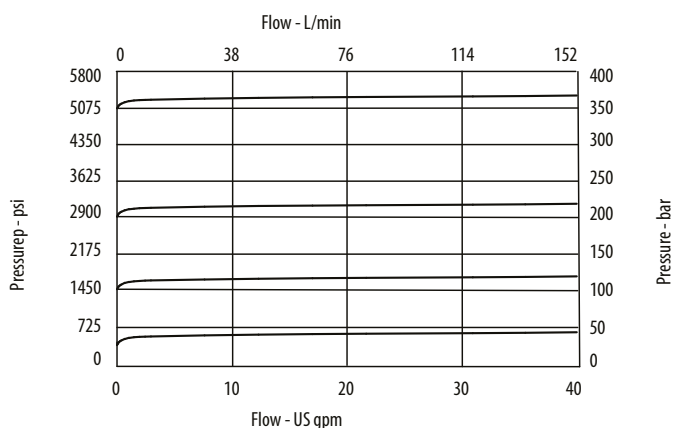
mm [in]



Installation Torque:  
60 Nm [44 ft. lbs]

### PERFORMANCE CURVES

#### Pressure Override



#### Pressure Setting

Code-Pressure setting in bar  
(5 bar increments within  
specified Pressure Range)  
XXX-Standard setting  
(see Pressure Range for value)  
Example:

| Code | Bar | Psi   |
|------|-----|-------|
| 60   | 60  | [870] |

#### Housing Material

Omit - Aluminum/No housing  
377 - Steel

#### Seal Option

| Code      | Seal Kit |
|-----------|----------|
| S-Nitrile | SK164    |
| SV-Viton  | SK164V   |

#### Pressure Range

| Code             | Bar    | Psi        |
|------------------|--------|------------|
| 7                | 10-70  | [145-1015] |
| Standard Setting | 35     | [510]      |
| 20               | 10-210 | [145-3000] |
| Standard Setting | 100    | [1450]     |
| 40               | 50-400 | [725-5800] |
| Standard Setting | 280    | [4060]     |

\* Aluminum bodies are to be used for pressures less than 210 bar [3000 psi].

\* Additional housings available