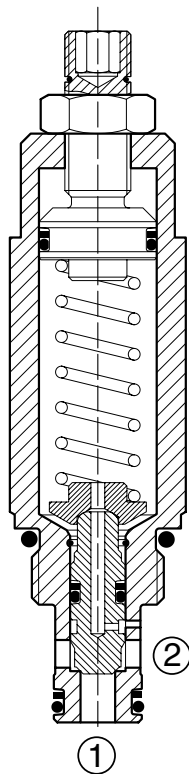
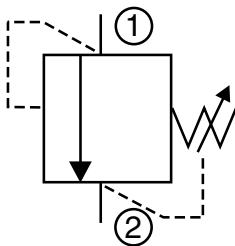


# PRESSURE CONTROL VALVES

## DB08A-01

### Pressure Relief, Direct Acting, Poppet Type

10 gpm (38 l/min) • 6000 psi (420 bar)



#### Description

A screw-in cartridge, direct acting, poppet type relief valve intended for use as pressure limiting device in hydraulic circuits which require low internal leakage and fast response to pressure changes.

#### Operation

The DB08A blocks flow from port 1 to port 2 until the pressure setting is reached at port 1 to lift the spring opposed poppet from its seat, allowing flow from port 1 to port 2. Pressure at port 2 is directly additive to valve pressure setting. Flow from port 2 to port 1 is checked.

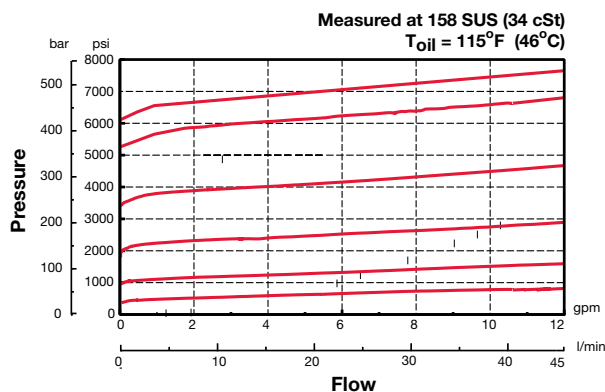
#### Features

- Spring ranges up to 6000 psi (420 bar)
- Positive stop prevents spring from over adjustment (*options V,H*)
- Adjustable under full pressure
- Stroke limiting device for enhanced safety
- Fast response
- All external surfaces zinc-plated
- Hardened poppet to ensure minimal wear and extend service life
- One piece body maximizes reliability and minimizes the effects of eccentricity
- Industry common cavity

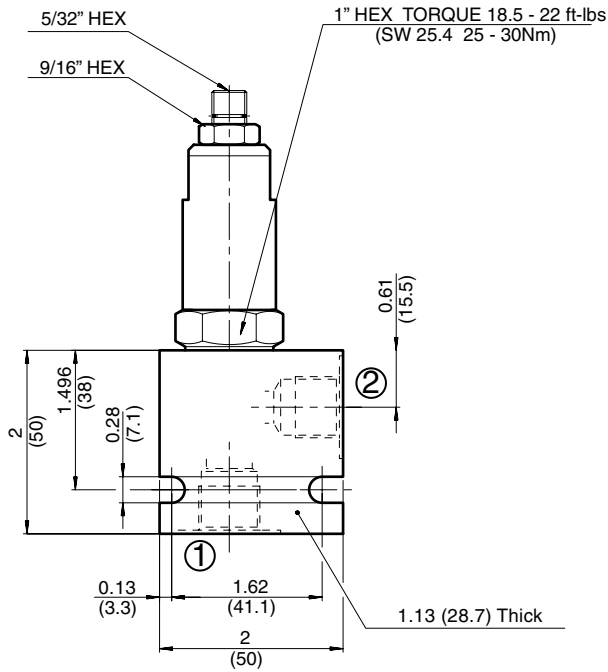
#### Specifications

|   |  |
|---|--|
| Operating Pressure  | 6000 psi (420 bar)   |
| Nominal Flow  | 10 gpm (38 l/min)  |
| Internal Leakage  | 5 drops/min. (0.25 cc/min) max. to 80% of nominal setting  |
| Reseat Pressure (Nominal)   | 80% of crack pressure  |
| Optional Pressure Ranges  | 55 to 500 psi (4 to 35 bar)<br>95 to 900 psi (6.5 to 60 bar)<br>200 to 1800 psi (14 to 125 bar)<br>370 to 3300 psi (26 to 230 bar)<br>560 to 5000 psi (39 to 350 bar)<br>670 to 6000 psi (47 to 420 bar) |
| % of Spring Pressure Range Actuated at 1 Revolution ( <i>Adjustment Type V, H</i> ) | 18%  |
| Fluid Operating Temp. Range   | -4° to 248°F (-20° to +120°C)<br>( <i>Consult factory for usage at temp. outside range.</i> )  |
| Fluid Compatibility   | Mineral-based or synthetics with lubricating properties  |
| Viscosity   | 50 to 2000 SUS (7.4 to 420 cSt)  |
| Filtration  | 21/19/16 or cleaner (per ISO 4406).<br>Use with filter rated $\beta_{10} \geq 200$ .   |
| Installation  | No orientation restrictions  |
| Cavity  | FC08-2 ( <i>see Line Bodies &amp; Cavities section</i> )   |
| Cavity Tools  | Rougher: P/N: 02580090<br>Finisher: P/N: 02580091  |
| Cartridge Weight  | 0.49 Lbs. (0.220 kg)   |
| Cartridge Material  | Steel with hardened work surfaces.<br>Zinc-plated exposed surfaces.<br>Anodized aluminum knobs. ( <i>option H</i> )<br>Buna N or Viton® o-rings, and PTFE back-up rings.                                 |
| Seal Kits   | Buna-N FS082-N P/N: 03033920<br>Viton® FS082-V P/N: 03051756   |

#### Performance



## Dimensions



## Model Code

**DB08A-01-C-N-330 V 300**

### Valve Model

### Body & Ports

- C = Cartridge only
- AS6 = SAE-6 ports, aluminum body
- SS6 = SAE-6 ports, steel body

### Seals

- N = Buna-N
- V = Viton®

### Adjustment Range

- 050 = 55 to 500 psi (4 to 35 bar)
- 090 = 95 to 900 psi (6.5 to 60 bar)
- 180 = 200 to 1800 psi (14 to 125 bar)
- 330 = 370 to 3300 psi (26 to 230 bar)
- 500 = 560 to 5000 psi (39 to 350 bar)
- 600 = 670 to 6000 psi (47 to 420 bar)

### Adjustment Options

- F = Factory pre-set, non-adjustable  
*(must specify setting below)*
- H = Knurled Hand Knob
- K = Allen Head (HEX 5/32") w/ cover cap
- V = Allen Head (HEX 5/32")

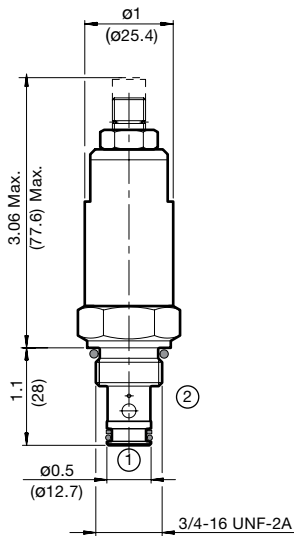
### Setting (optional)

- (omit)* = Set at min. pressure for the range
- XXX = Desired psi ÷ 10

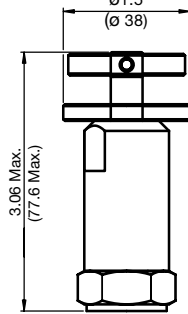
*Example: 300 = 3000 psi*

## Adjustment Options

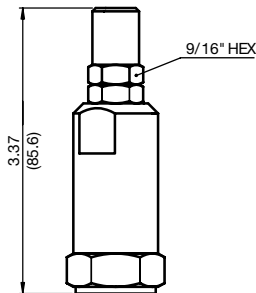
### 'V' - Allen Head (std)



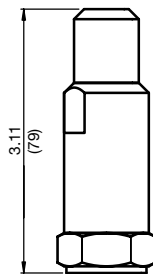
### 'H' - Hand Knob



### 'K' - Protective Cap



### 'F' - Tamper Proof Cap



All measurements in inches (mm).  
Subject to technical modifications

## Standard Line Bodies\*

| Code      | Part No  | Material           | Pressure Rating    | Weight            |
|-----------|----------|--------------------|--------------------|-------------------|
| FH082-AS6 | 03011409 | Aluminum, anodized | 3500 psi (245 bar) | 0.34 lb (0.15 kg) |
| FH082-SS6 | 00560917 | Steel, Zinc plated | 6000 psi (420 bar) | 1.00 lb (0.45 kg) |

\*Please refer to Line Bodies & Cavities section for details