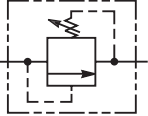
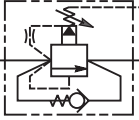
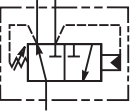
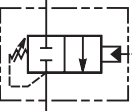
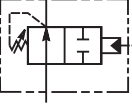
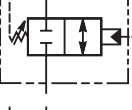
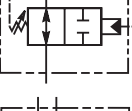
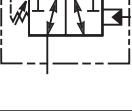
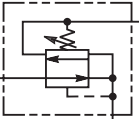
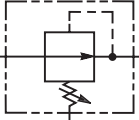
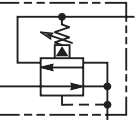


|           |                      |
|-----------|----------------------|
| <b>CV</b> | Check Valves         |
| <b>SH</b> | Shuttle Valves       |
| <b>LM</b> | Load/Motor Controls  |
| <b>FC</b> | Flow Controls        |
| <b>PC</b> | Pressure Controls    |
| <b>LE</b> | Logic Elements       |
| <b>DC</b> | Directional Controls |
| <b>MV</b> | Manual Valves        |
| <b>SV</b> | Solenoid Valves      |
| <b>PV</b> | Proportional Valves  |
| <b>CE</b> | Coils & Electronics  |
| <b>BC</b> | Bodies & Cavities    |
| <b>TD</b> | Technical Data       |

| SERIES                                   | CAVITY | DESCRIPTION   | FLOW LPM/GPM | PRESSURE BAR/PSI | PAGE NO.  |
|--|--------|---|--------------|------------------|-----------|
| <b>RELIEF VALVES</b>                     |        |   |              |                  |           |
| <b>DIRECT ACTING</b>                     |        |   |              |                  |           |
|  |        |  |              |                  |           |
| RDH042                                   | C04-2  | Direct Acting Relief, Poppet Type   | 3.8/1        | 350/5000         | PC7-PC8   |
| ☆ RDH081                                 | C08-2  | Direct Acting Relief, Ball Type   | 1.9/5        | 380/5500         | PC9-PC10  |
| RDH082                                   | C08-2  | Direct Acting Relief, Poppet Type   | 30/8         | 380/5500         | PC11-PC12 |
| ☆ RDH101                                 | C10-2  | Direct Acting Relief, Ball Type   | 1.9/5        | 380/5500         | PC13-PC14 |
| A02A2                                    | C08-2  | Direct Acting Relief, Ball Type   | 6/1.6        | 420/6000         | PC15-PC16 |
| A02B2                                    | C08-2  | Direct Acting Relief, Poppet Type   | 8/30         | 420/6000         | PC17-PC18 |
| ☆ RD102                                  | C10-2  | Direct Acting Relief, Poppet Type   | 38/10        | 250/3600         | PC19-PC20 |
| A04B2                                    | C10-2  | Direct Acting Relief, Poppet Type   | 100/26       | 420/6000         | PC21-PC22 |
| A04B2*CE                                 | C10-2  | Direct Acting Relief, Poppet Type*  |              |                  | PC23-PC24 |
| A04C2                                    | C10-2  | Direct Acting Relief, Spool Type  | 200/53       | 100/1450         | PC25-PC26 |
| <i>*CE marked, PED Compliant</i>         |        |   |              |                  |           |
| <b>DIFFERENTIAL AREA</b>                 |        |   |              |                  |           |
| RDH083                                   | C08-2  | Direct Acting Differential Area Relief  | 45/12        | 350/5000         | PC27-PC28 |
| ☆ RDH103                                 | C10-2  | Direct Acting Differential Area Relief  | 75/20        | 350/5000         | PC29-PC30 |
| ☆ RDCH103                                | C10-2  | Direct Acting Differential Relief Assembly with Reverse Check                     | 60/16        | 380/5500         | PC31-PC32 |
| RD163                                    | C16-2  | Direct Acting Differential Area Relief  | 151/40       | 210/3000         | PC33-PC34 |
| <b>PILOT OPERATED</b>                    |        |   |              |                  |           |
| ☆ RAH081                                 | C08-2  | Pilot Operated Spool Type   | 75.8/20      | 350/5000         | PC35-PC36 |
| ☆ RAH101                                 | C10-2  | Pilot Operated Spool Type   | 113/30       | 350/5000         | PC37-PC38 |
| RAH121                                   | C12-2  | Pilot Operated Spool Type   | 190/50       | 350/5000         | PC39-PC40 |
| RAH161                                   | C16-2  | Pilot Operated Spool Type   | 303/80       | 380/5500         | PC41-PC42 |
| A06G2                                    | C16-2  | Pilot Operated Spool Type   | 400/106      | 420/6000         | PC43-PC44 |
| RAH201                                   | C20-2  | Pilot Operated Spool Type   | 379/100      | 350/5000         | PC45-PC46 |
| A04K2                                    | C10-2  | Pilot Operated Spool Type Kick Down   | 160/42       | 420/6000         | PC47-PC48 |
| <b>SOLENOID OPERATED</b>                 |        |   |              |                  |           |
| AS04G2                                   | C10-2  | Solenoid Operated Unloading Relief  | 90/24        | 220/3200         | PC49-PC50 |
| <i>*See page PC49 for symbol</i>         |        |   |              |                  |           |
| <b>VENTABLE</b>                          |        |   |              |                  |           |
| ☆ RAH101V                                | C10-3  | Pilot Operated Vented Relief  | 68/18        | 380/5500         | PC51-PC52 |
| A04H3                                    | C10-3S | Pilot Operated Vented Relief  | 190/50       | 420/6000         | PC53-PC54 |
| A06H3                                    | C16-3S | Pilot Operated Vented Relief  | 400/106      | 420/6000         | PC55-PC56 |
| <b>CROSS-OVER</b>                        |        |   |              |                  |           |
| XR101                                    | C10-2  | Direct Acting Cross-over Relief   | 61/16        | 245/3500         | PC57-PC58 |
| A04J2                                    | C10-2  | Direct Acting Cross-over Relief   | 120/32       | 350/5000         | PC59-PC60 |
| A04J2*CE                                 | C10-2  | Direct Acting Cross-over Relief*  | 120/32       | 350/5000         | PC61-PC62 |
| ☆ XRDH101                                |        | Direct Acting Cross-over Relief   | 75/20        | 380/5500         | PC63-PC64 |
| ☆ XRDH102                                |        | Direct Acting Cross-over Relief with Anti-Cav Check                               | 60/16        | 380/5500         | PC65-PC66 |
| ☆ XRDH103                                |        | Direct Acting Cross-over Relief, Motor Mount                                      | 75/20        | 380/5500         | PC67-PC68 |
| <i>*CE marked, PED Compliant</i>         |        |   |              |                  |           |
| <b>UNLOADING</b>                         |        |   |              |                  |           |
| RU101                                    | C10-3  | Direct Acting Unloading   | 3.75/1       | 210/3000         | PC69-PC70 |
| *M04A4J                                  | C10-4  | Direct Acting Piloting Unloading  | 2/0.53       | 420/6000         | PC71-PC72 |
| <i>*See page PC71 for symbol</i>         |        |   |              |                  |           |
| <b>PILOT OPERATED WITH REVERSE CHECK</b> |        |   |              |                  |           |
| A06P2                                    | C16-2  | Pilot Operated Poppet Type  | 400/106      | 420/6000         | PC73-PC74 |
| <b>SEQUENCE VALVES</b>                   |        |   |              |                  |           |
| <b>PILOT OPERATED</b>                    |        |   |              |                  |           |
| ☆ SVH081                                 | C08-3  | Pilot Operated, Int. Pilot, Ext. Drain  | 45/12        | 350/5000         | PC75-PC76 |
| ☆ SVH101                                 | C10-3  | Pilot Operated, Int. Pilot, Ext. Drain  | 56.3/15      | 350/5000         | PC77-PC78 |
| SVH161                                   | C16-3  | Pilot Operated, Int. Pilot, Ext. Drain  | 151.6/40     | 350/5000         | PC79-PC80 |
| ☆ SVH102                                 | C10-3  | Pilot Operated, Ext. Pilot, Int. Drain  | 56.3/15      | 350/5000         | PC81-PC82 |
| SVH162                                   | C16-3  | Pilot Operated, Ext. Pilot, Int. Drain  | 151.6/40     | 350/5000         | PC83-PC84 |
| ☆ SVCH101                                |        | Pilot Operated with Reverse Check Assy  | 56/15        | 380/5500         | PC85-PC86 |

☆ Denotes New Winner's Circle Product Line.

|   | SERIES                            | CAVITY | DESCRIPTION  | FLOW<br>LPM/GPM                   | PRESSURE<br>BAR/PSI | PAGE NO.    |             |
|---|-----------------------------------|--------|--|-----------------------------------|---------------------|-------------|-------------|
| <b>SEQUENCE VALVES</b>  |                                   |        |  |                                   |                     |             |             |
|    | <b>Pilot Operated (Continued)</b> |        |  |                                   |                     |             |             |
|   | B04D3                             | C10-3S | Pilot Operated, Reverse Check, Ext. Drain            | 120/32                            | 420/6000            | PC87-PC88   |             |
|   | B04C3                             | C10-3S | Pilot Operated, Kick Down                            | 160/42                            | 420/6000            | PC89-PC90   |             |
| <hr/>   |                                   |        |  |                                   |                     |             |             |
|    | <b>DIRECT ACTING</b>              |        |  |                                   |                     |             |             |
|   | B02E3F                            | C08-3  | Direct Acting, 2P-3W, Int. Pilot, Int. Drain         | 30/8                              | 420/6000            | PC91-PC92   |             |
|   | B04E3                             | C10-3  | Direct Acting, 2P-3W, Int. Pilot, Int. Drain         | 50/13                             | 420/6000            | PC93-PC94   |             |
| ☆   | SV103                             | C10-3  | Direct Acting, 2P-3W, Int. Pilot, Ext. Drain         | 56/15                             | 250/3600            | PC95-PC96   |             |
| <hr/>   |                                   |        |  |                                   |                     |             |             |
|    | ☆                                 | SV105  | Direct Acting, 2P-2W, NC, Ext. Pilot, Int. Drain     | 38/10                             | 250/3600            | PC97-PC98   |             |
|   | B04F3                             | C10-3  | Direct Acting, 2P-2W, NC, Ext. Pilot, Int. Drain     | 34/9                              | 420/6000            | PC99-PC100  |             |
|    | B04G3                             | C10-3  | Direct Acting, 2P-2W, NO, Ext. Pilot, Int. Drain     | 40/10.6                           | 420/6000            | PC101-PC102 |             |
|   | <hr/>                             |        |  |                                   |                     |             |             |
|    | B04H4                             | C10-4  | Direct Acting, 2P-2W, NC, Ext. Pilot, Ext. Drain     | 47/12                             | 420/6000            | PC103-PC104 |             |
|   | ☆                                 | SV104  | Direct Acting, 2P-2W, NO, Ext. Pilot, Ext. Drain     | 30/8                              | 250/3600            | PC105-PC106 |             |
|  | B04J4                             | C10-4  | Direct Acting, 2P-2W, NO, Ext. Pilot, Ext. Drain     | 47/12                             | 420/6000            | PC107-PC108 |             |
|   | <hr/>                             |        |  |                                   |                     |             |             |
|  | B04K4                             | C10-4  | Direct Acting, 2P-3W, NO, Ext. Pilot, Int. Drain     | 42/11                             | 420/6000            | PC109-PC110 |             |
|   | <hr/>                             |        |  |                                   |                     |             |             |
| <b>REDUCING VALVES</b>  |                                   |        |  |                                   |                     |             |             |
|  | <b>DIRECT ACTING</b>              |        |  |                                   |                     |             |             |
|   | C02A3                             | C08-3  | Direct Acting Reducing/Relieving                     | 20/5                              | 420/6000            | PC111-PC112 |             |
| ☆   | PR103                             | C10-3  | Direct Acting Reducing/Relieving                     | 56/13                             | 210/3000            | PC113-PC114 |             |
| <hr/>   |                                   |        |  |                                   |                     |             |             |
|  | <b>PILOT OPERATED</b>             |        |  |                                   |                     |             |             |
|   | ☆                                 | PRH082 | C08-3  | Pilot Operated Reducing           | 30/8                | 350/5000    | PC115-PC116 |
| ☆   | PRH102                            | C10-3  | Pilot Operated Reducing                              | 56.3/15                           | 350/5000            | PC117-PC118 |             |
|   | PRH122                            | C12-3  | Pilot Operated Reducing                              | 113.7/30                          | 350/5000            | PC119-PC120 |             |
|   | PRH162                            | C16-3  | Pilot Operated Reducing                              | 150/40                            | 350/5000            | PC121-PC122 |             |
| <hr/>   |                                   |        |  |                                   |                     |             |             |
|  | ☆                                 | PRH081 | C08-3  | Pilot Operated Reducing/Relieving | 30/8                | 350/5000    | PC123-PC124 |
|   | ☆                                 | PRH101 | C10-3  | Pilot Operated Reducing/Relieving | 56.3/15             | 350/5000    | PC125-PC126 |
|   | PRH121                            | C12-3  | Pilot Operated Reducing/Relieving                    | 113.7/30                          | 350/5000            | PC127-PC128 |             |
|   | PRH161                            | C16-3  | Pilot Operated Reducing/Relieving                    | 150/40                            | 350/5000            | PC129-PC130 |             |
| ☆   | PRCH101                           |        | Pilot Operated Reducing/Relieving with Reverse Check | 56/15                             | 380/5500            | PC131-PC132 |             |

☆ Denotes New Winner's Circle Product Line.



**CV**

Check Valves

**SH**

Shuttle Valves

**LM**

Load/Motor Controls

**FC**

Flow Controls

**PC**

Pressure Controls

**LE**

Logic Elements

**DC**

Directional Controls

**MV**

Manual Valves

**SV**

Solenoid Valves

**PV**

Proportional Valves

**CE**

Coils & Electronics

**BC**

Bodies & Cavities

**TD**

Technical Data

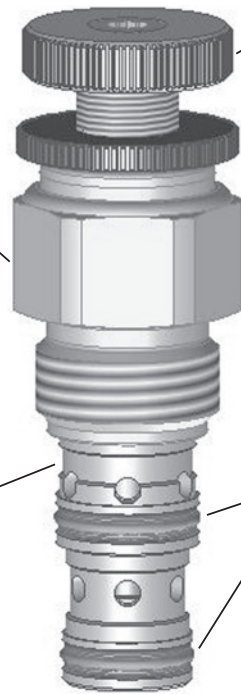
**INTRODUCTION**

This technical tips section is designed to help familiarize you with the Parker line of Pressure Controls. In this section we highlight new products to this catalog as well as some design features of our pressure control line. In addition we present common options available to help you in selecting products for your application. Finally we give a brief synopsis of the operation and applications of the various product offered in this section.

**NEW PRODUCTS**

There are several new additions and product improvements to our Pressure Controls product line.

*Here are just some of the design features and advantages to the "Winner's Circle" product line.*



**Yellow Zinc Coating**  
Steel adapters are coated with yellow zinc di-chromate for protection from salt spray.

**Variety of Adjustments**  
Pressure controls are offered in screw adjust, knob adjust, fixed and tamper resistant configurations.

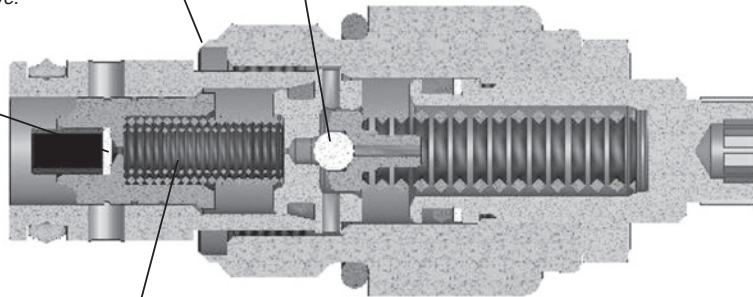
**High Pressure Design**  
Pilot operated valves are rated to 350 Bar (5000 PSI) for use at elevated pressure.

**"D"-Ring**  
Standard 4301 Polyurethane Seal eliminates the need for backup rings providing easier manifold installation. (For more information on "D"-Ring see Technical Data Section)

**Crimp Design**  
Fold over crimp provides secure holding and eliminates the need for adhesive.

**Guided Pilot**  
Pilot is fully guided providing a more consistent reseat.

**Internal Screen**  
A small internal screen protects the pilot orifice and spring chamber from debris.



**High Rate Bias Spring**  
Pilot operated reducing and sequence valves are designed with a high rate bias spring pressure, enhancing stability.

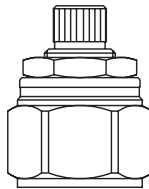
**Low Profile Adapter**  
The low profile shape of the pilot operated pressure controls reduces the manifold clearance required.

**COMMON OPTIONS**

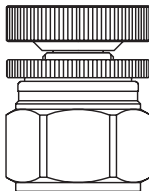
As you will see, Parker offers a variety of Pressure Control products. As such, some of the options mentioned below may not be available on all valves. Consult the model coding and dimensions for each valve for specifics. Here are some of the common options available.

**Adjustment Types:** Parker offers four primary types of adjustments for most of the pressure control products. Samples of these types are shown below. Please note all options may not be available for all valves. Consult the individual catalog pages for more details.

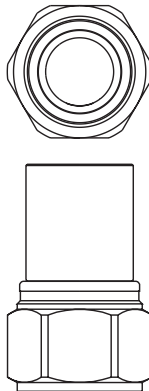
**Screw Adjustment** - Valve can be adjusted with an allen wrench. Lock nut included to maintain desired setting after adjustment. This is the most common adjustment option available on most Parker products.



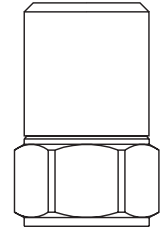
**Knob Adjustment** - An aluminum knob is added to the standard screw adjustment. A lock knob is provided to help maintain the desired setting after adjustment. Parker offers knob conversion kits for most pressure control valves. For kit numbers consult individual valve pages.



**Fixed Style** - In most cases, the Fixed Style product is a screw adjustable product with a steel collet threaded over the screw adjustment. These valves are preset at the factory.



**Tamper Resistant** - The tamper resistant option is a screw adjustable valve with a steel cap installed to conceal the adjustment. The cap is designed so that the internal edges clamp into the groove of the valve adapter. Once the cap is installed, it cannot be removed without damaging the cap and the valve. When a valve is ordered with the tamper resistant option, it will be preset at the factory, and the cap will be included in a separate plastic bag to allow for fine tuning at the customer site. Parker offers tamper resistant cap conversion kits for most pressure control valves. For kit numbers consult individual valve pages.



**Seals:** The Winner's Circle products feature a standard 4301 Polyurethane "D"-Ring. The "D"-Ring eliminates the need for backup rings. The majority of the products are available in Nitrile or Fluorocarbon Seals. You should match the seal compatibility to the temperature and fluid being used in your application.

**Pressure Range:** Parker offers a range of spring settings for the Pressure Control product line. You want to choose the setting that best meets the operating range. The model callout is equivalent to the maximum setting (in psi) of the spring divided by 100 (i.e. 50 = 5000 psi).

CV

Check Valves

SH

Shuttle Valves

LM

Load/Motor Controls

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PC

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Directional Controls

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Solenoid Valves

PV

Proportional Valves

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BC

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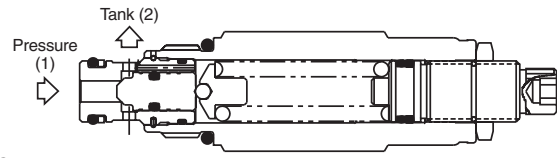
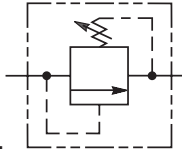
TD

Technical Data

PRODUCT TYPES / APPLICATIONS

**Direct Acting Relief Valves**

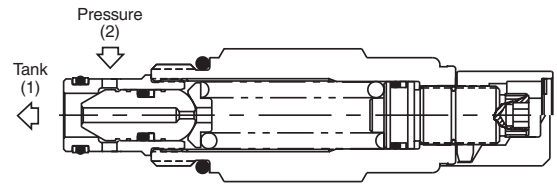
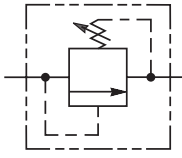
Direct acting relief valves are designed for fast response in intermittent duty applications. They are often used as an economical solution to clip pressure spikes. The poppet design allows for low leakage.



**OPERATION** - The valve poppet is held against the seat by the spring force. Inlet pressure on the nose (port 1) of the poppet acts against the spring force to unseat the poppet at the valve setting and allow flow to pass to tank. Since the pressure is working directly on the spring, this valve is very fast responding. It is not the best choice for system pressure regulation as it is slightly noisier than pilot operated relief valves and has higher pressure rise. *Note:* Any backpressure on port 2 would be additive to the spring setting.

**Differential Area Relief Valves**

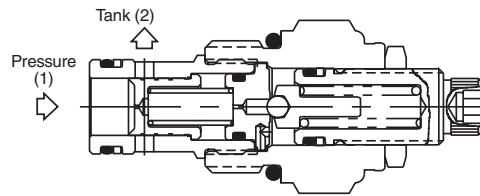
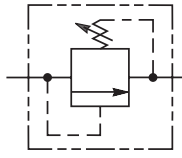
Differential area relief valves also are also best suited for intermittent applications where fast response is critical. These valves are often used as cross-over relief valves to chop pressure spikes. Due to their design, they generally can handle a larger flow rate and have a lower pressure rise than the standard directing acting relief. The poppet design allows for low leakage.



**OPERATION** - Pressure on the inlet (port 2) of the valve acts on the differential area of the poppet (difference between the O.D. of the poppet and the seat diameter) to produce a force which is opposed by the spring force. When pressure reaches the valve setting, the poppet is pushed off its seat, permitting flow to tank. *Note:* Any backpressure on port 1 would be additive to the spring setting.

**Pilot Operated Relief**

Pilot operated relief valves are designed for continuous duty applications. Due to their stability and low pressure rise, the pilot operated relief is the best option for setting the pressure of a hydraulic system.

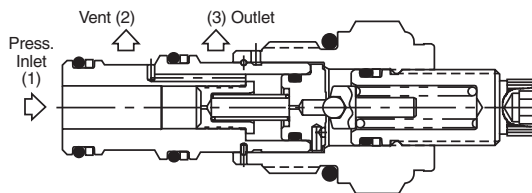
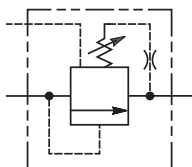


**OPERATION** - When inlet pressure at the nose (port 1) exceeds the valve setting, the pilot ball unseats. The pilot flow creates a pressure imbalance across the main spool causing the spool to move and allowing flow from inlet (port 1) to tank (port 2.) *Note:* Any backpressure on port 2 would be additive to the spring setting.



**Ventable Pilot Operated Relief**

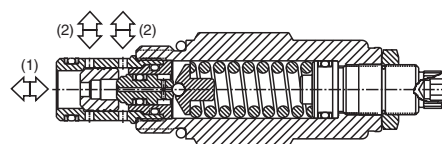
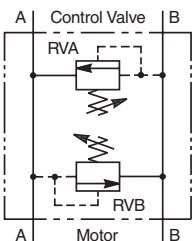
Ventable relief valves are a unique type of pilot operated relief. With this valve, you can control the pressure setting with the internal adjustment as well as via remote circuit. These valves are ideal in circuits where multiple pressures are needed.



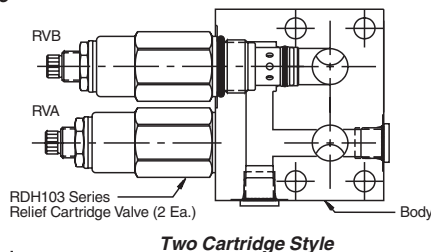
**OPERATION** - This valve can be controlled by the adjustment setting on the valve, or a remote circuit via the vent line. When the vent line is used, the smaller of the two pressure settings will determine the valve setting. In other words, if the pressure setting of the remote circuit is less than the adjusted setting, then the valve will relieve at the remote setting. If the pressure setting of the remote circuit is greater than the adjusted setting, then the valve will relieve at the adjusted setting. With the vent port (port 2) blocked, the valve operates like a standard pilot operated relief valve. Thus, a solenoid valve could be used on the vent port to select control between this valve another remote valve.

**Dual Crossover Relief Valves**

Dual crossover relief valves provide pressure surge protection for double acting hydraulic actuators. For best results, you always want to install the valve as close to the actuator as possible. The dual crossover feature can be achieved in two different methods. One way is to manifold two Differential Area Relief Valves into a single body. Parker offers three versions of this two cartridge arrangement. The advantage gained is higher flows can be pushed through this arrangement. The second method is to combine this dual function into a single cartridge. The single cartridge arrangement reduces cost considerably of the total package. In addition, a standard common cavity line body can be used instead of a special two body arrangement. The operation for the single cartridge style is shown below.



Single Cartridge Style

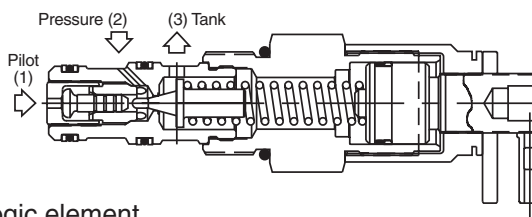
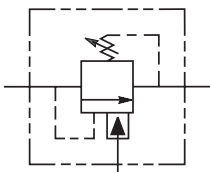


Two Cartridge Style

**OPERATION** - Pressure at port 1 acts on the spool to produce a force which is opposed by the spring setting. When pressure reaches the valve setting, the spool and poppet move relieving flow from port 1 to port 2. When port 2 is pressurized, the pressure acts on the differential area poppet to produce a force which is opposed by the spring force. When the pressure reaches the valve setting, the poppet is pushed off of its seat, relieving flow from port 2 to port 1. *Note:* Due to the construction and flow paths through the valve, the relief pressure settings may vary by approximately 300 psi from one direction to the other.

**Differential Area Unloading Relief Valve**

Unloading valves are differential area relief valves that can also be fully dumped or unloaded via a remote signal. They are best suited for low flow accumulator unloading circuits. They provide a fixed percentage between load and unload pressures. This pilot valve would generally be used in conjunction with a logic element.



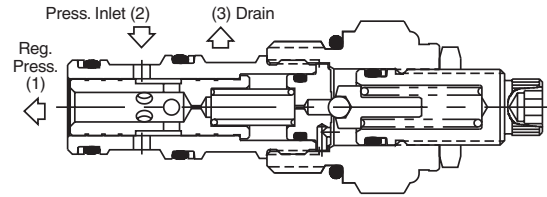
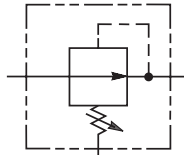
**OPERATION** - The fixed differential is provided by the pilot piston which has greater area than the dart seat. With its greater area, the piston is able to hold the dart off its seat, permitting flow from pressure to tank, until pressure on the pilot piston falls below the fixed percentage of the valve settings.

- CV**
- Check Valves
- SH**
- Shuttle Valves
- LM**
- Load/Motor Controls
- FC**
- Flow Controls
- PC**
- Pressure Controls
- LE**
- Logic Elements
- DC**
- Directional Controls
- MV**
- Manual Valves
- SV**
- Solenoid Valves
- PV**
- Proportional Valves
- CE**
- Coils & Electronics
- BC**
- Bodies & Cavities
- TD**
- Technical Data

- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data

**Pilot Operated Reducing Valve**

Pilot operated pressure reducing valves can be used to reduce the pressure in a leg of the circuit lower than system pressure. Thus, they can be used to provide protection to downstream components from higher pressures.



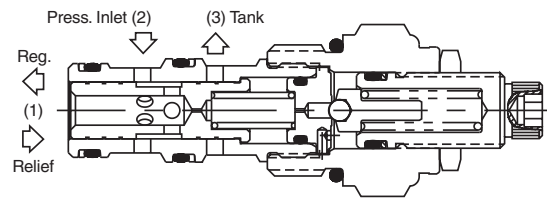
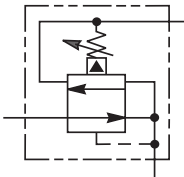
**OPERATION** - The pilot section controls the valve setting when reducing. As pressure at the regulated port exceeds the valve setting, the pilot ball is unseated. The pilot flow creates a pressure imbalance across the main spool causing the spool to throttle in order to maintain constant downstream pressure. The normally open design will allow flow to pass from inlet to reduced port with the only restriction being the pressure drop.

**Pressure Reducing / Relieving Valves**

Pressure reducing / relieving valves can be used to reduce the pressure in a leg of the circuit lower than system pressure. The valve also acts as a relief valve, relieving any shocks or surges that occur between the regulated port and the actuator. When the valve is in the relieving mode, the inlet port is blocked. Parker offers pressure reducing/relieving valves in both pilot operated and directing acting styles. The direct acting version is generally used in static applications where response is critical, or leakage is a concern.

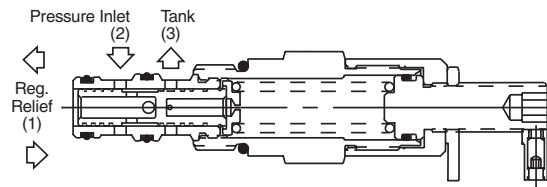
**Pilot Operated**

**OPERATION** - The pilot section controls the valve setting when reducing. As pressure at the regulated port exceeds the valve setting, the pilot ball is unseated. The pilot flow creates a pressure imbalance across the main spool causing the spool to throttle in order to maintain constant downstream pressure. A shock or surge at the regulated port shifts the spool, relieving flow to tank.



**Direct Acting**

**OPERATION** - As pressure at the regulated port exceeds the valve setting, the valve throttles or closes in order to maintain constant downstream pressure. A shock or surge at the regulated port further shifts the spool, relieving flow to tank. This valve is not intended for rapidly changing flows which could lead to instability.

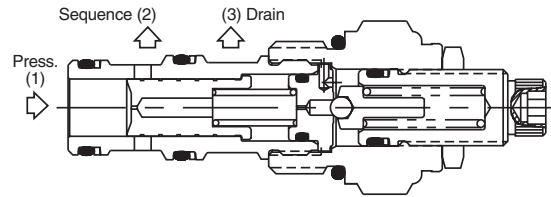


**Pilot Operated Sequence Valves**

Sequence valves are used to control the sequence of operation of two or more hydraulic actuators. The sequence valve pressure is set higher than the first actuator operation pressure. Once the first actuator has completed its cycle, the sequence valve opens allowing the second actuator to move. Parker's line of pilot operated sequence valves include a series of internally piloted, externally drained valves and a series of externally piloted, internally vented valves. Parker also offers a line of direct acting sequence valves which are ideal for piloting logic elements in steady state applications.

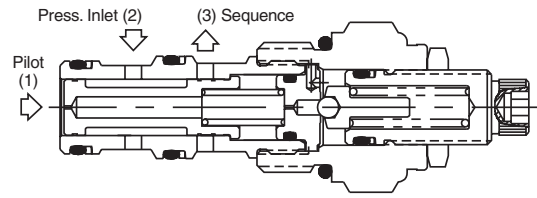
**P.O. Sequence (Internally Piloted, Externally Drained)**

**OPERATION** - For this valve, the pilot pressure is sensed from the inlet of the valve (port 1). When the pilot pressure exceeds the valve setting, the pilot section opens creating a pressure imbalance across the main spool. This causes the spool to move allowing the flow to pass from the nose of the cartridge (port 1) to the actuator port (port 2). By externally draining the pilot flow directly to tank (port 3), the valve is insensitive to back pressure at the sequence port.



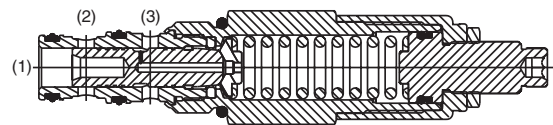
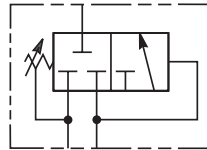
**P.O. Sequence (Externally Piloted, Internally Vented)**

**OPERATION** - For this valve, the pilot pressure is obtained from an external source and not from the pressure port. When the external pilot pressure (port 1) exceeds the valve setting, the pilot section opens creating a pressure imbalance across the main spool. This causes the spool to move allowing the flow to pass from the side of the cartridge (port 2) to the actuator port (port 3). Any pressure at port 3 is additive to the pressure setting. It is most common for port 3 to be connected to tank.



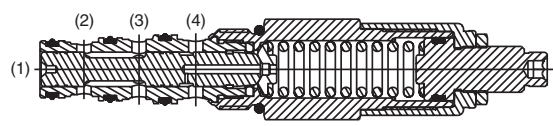
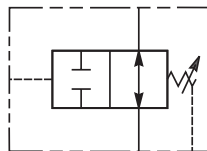
**D.A. Sequence (Internally Piloted, Externally Drained)**

**OPERATION** - In the steady state condition, all three ports are blocked with the spring chamber drained to port 3. When the pressure at port 1 exceeds the valve setting, the spool moves allowing flow from the nose of the cartridge (port 1) to the actuator port (port 2). By externally draining the spring chamber directly to tank (port 3), the valve is insensitive to back pressure at the sequence port.



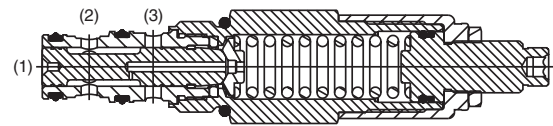
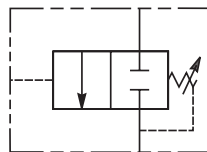
**D.A. Sequence, N.O. (Externally Piloted, Externally Drained)**

**OPERATION** - With no pressure at the pilot port (port 1), bi-directional flow is allowed between port 3 and port 2. When the pilot pressure at port 1 exceeds the valve setting the spool moves blocking both port 3 and port 2. By externally draining the spring chamber to tank (port 4), the valve is insensitive to back pressure at the sequencing ports.



**D.A. Sequence, N.C. (Externally Piloted)**

**OPERATION** - With no pressure at the pilot port (port 1), both port 3 and port 2 are blocked. When the pilot pressure at port 1 exceeds the valve setting, the spool moves opening a path and allowing flow from port 3 to port 2. This valve internally drains the spring chamber to tank via the sequencing port, thus any backpressure on port 2 would be additive to the spring setting.



|                      |
|----------------------|
| <b>CV</b>            |
| Check Valves         |
| <b>SH</b>            |
| Shuttle Valves       |
| <b>LM</b>            |
| Load/Motor Controls  |
| <b>FC</b>            |
| Flow Controls        |
| <b>PC</b>            |
| Pressure Controls    |
| <b>LE</b>            |
| Logic Elements       |
| <b>DC</b>            |
| Directional Controls |
| <b>MV</b>            |
| Manual Valves        |
| <b>SV</b>            |
| Solenoid Valves      |
| <b>PV</b>            |
| Proportional Valves  |
| <b>CE</b>            |
| Coils & Electronics  |
| <b>BC</b>            |
| Bodies & Cavities    |
| <b>TD</b>            |
| Technical Data       |



Technical Information

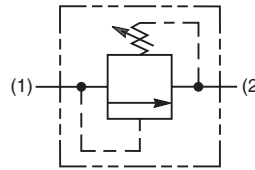
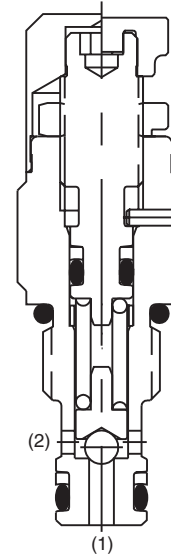
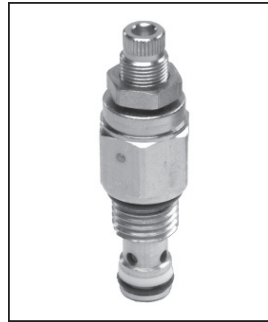
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
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- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Direct Acting Ball-Type Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Hardened, precision ground parts for durability
- Compact size for reduced space requirements
- Low leakage design
- Fast response
- All external parts zinc plated



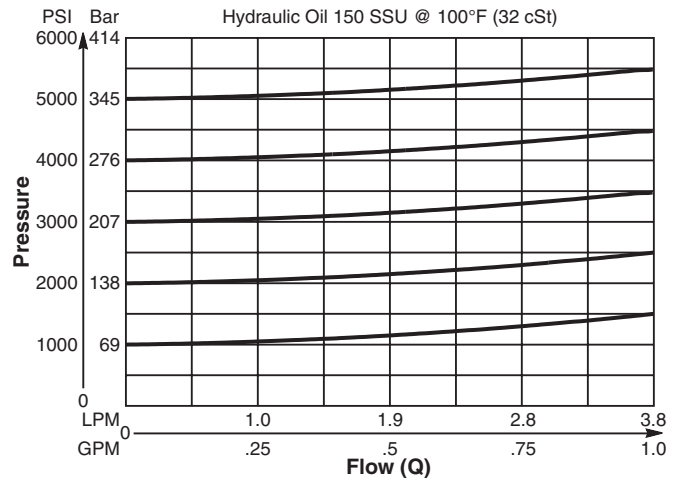
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 3.8 LPM (1 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>      | 350 Bar (5000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 350 Bar (5000 PSI)   |
| <b>Reseat Pressure</b>               | 80% of crack pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 10 drops/min. (.66 cc/min.) @75% of crack pressure   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | .03 kg (.07 lbs.)  |
| <b>Cavity</b>                        | C04-2 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher None<br>Finisher NFT04-2F  |

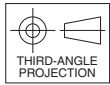
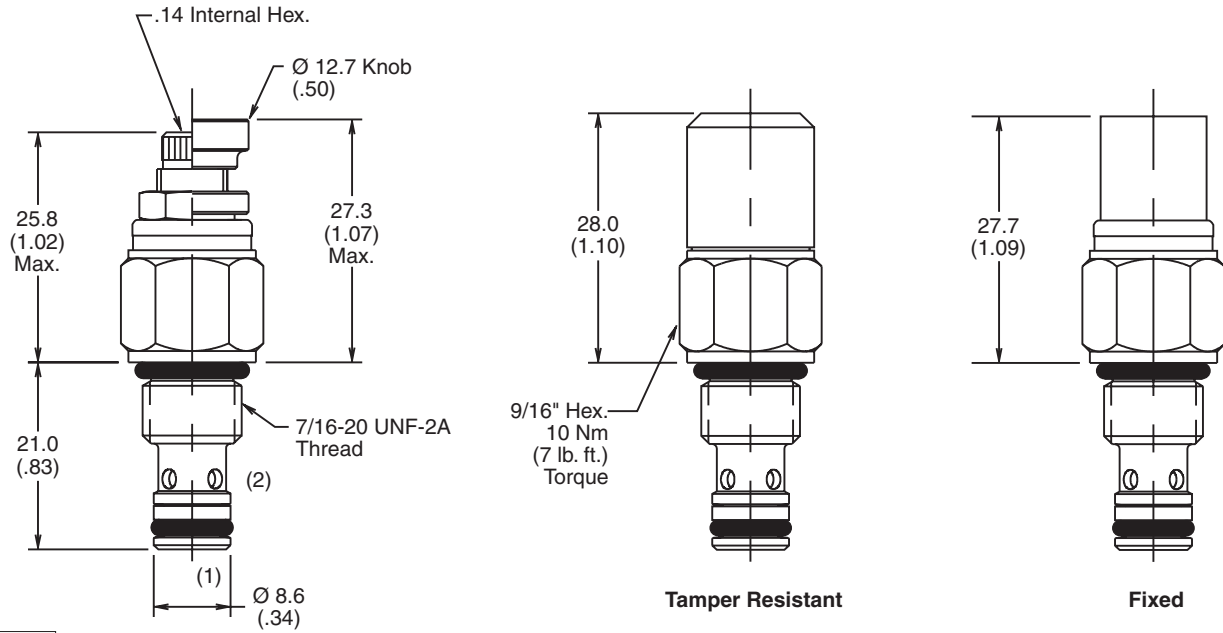
**Performance Curve**

**Flow vs. Inlet Pressure**

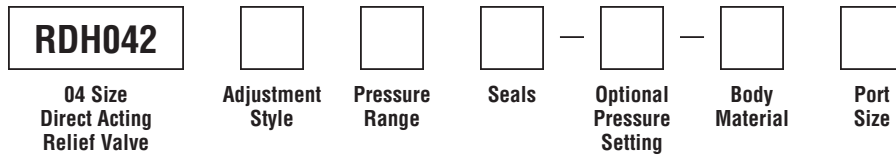
(Pressure rise through cartridge only)



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (852544)            |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (852519)   |

| Code | Pressure Range   |
|------|--|
| 30   | 6.9 - 207 Bar (100 - 3000 PSI)<br>Standard Setting:<br>103 Bar (1500 PSI)<br>@ 1.9 LPM (.5 GPM)  |
| 50   | 103 - 345 Bar (1500 - 5000 PSI)<br>Standard Setting:<br>172 Bar (2500 PSI)<br>@ 1.9 LPM (.5 GPM) |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | Nitrile / (SK04-2)       |
| V    | Fluorocarbon / (SK04-2V) |

| Optional Pressure Setting   |
|---|
| Pressure ± 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI<br>All settings at 1.9 LPM (.5 GPM) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4T   | SAE-4          | (B04-2-*4T)   |

\* Add "A" for aluminum, omit for steel.

- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data

Technical Information

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
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- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
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- CE** Coils & Electronics
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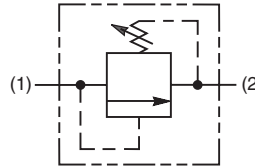
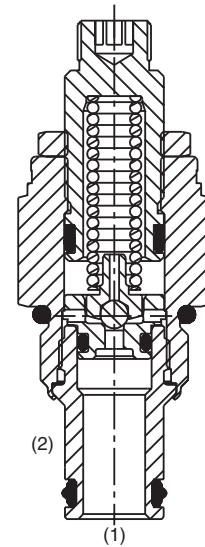
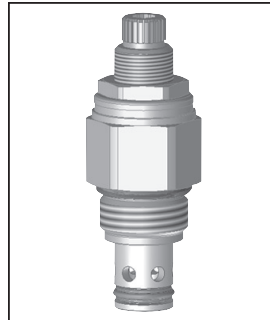
**General Description**

Direct Acting Relief Valve. This valve is designed for pilot flow circuits. For additional information see Technical Tips on pages PC1-PC6.



**Features**

- Hardened, precision ground parts for durability
- Low profile adapter for minimal space requirements
- Fully guided pilot for more consistent reseal
- Steel adapters are coated with yellow zinc dichromate for protection from salt spray
- Polyurethane "D"-Ring eliminates backup rings and prevents hydrolysis



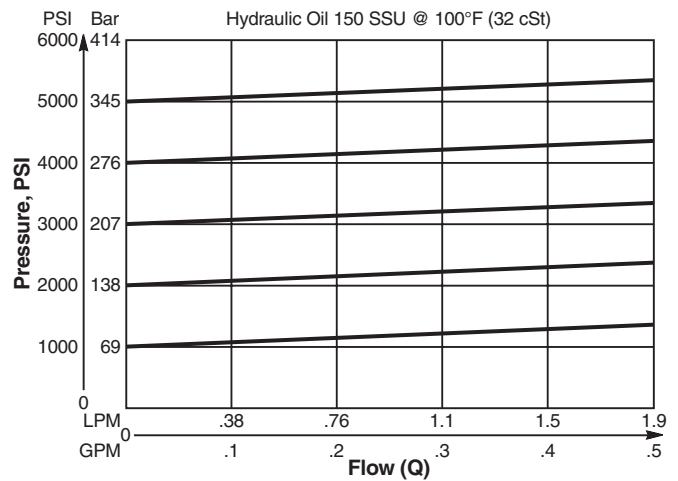
**Specifications**

|                                       |  |
|---------------------------------------|--|
| <b>Rated Flow</b>                     | 1.9 LPM (.5 GPM)   |
| <b>Maximum Inlet Pressure</b>         | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>       | 350 Bar (5000 PSI)   |
| <b>Reseat Pressure</b>                | 90% of crack pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>    | 5 drops/min. (.33 cc/min.) @75% of crack pressure  |
| <b>Cartridge Material</b>             | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>    | -45°C to +93.3°C ("D"-Ring) (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)  |
| <b>Fluid Compatibility/ Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                     | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                 | .09 kg (.20 lbs.)  |
| <b>Cavity</b>                         | C08-2 (See BC Section for more details)  |
| <b>Form Tool</b>                      | Rougher None<br>Finisher NFT08-2F  |

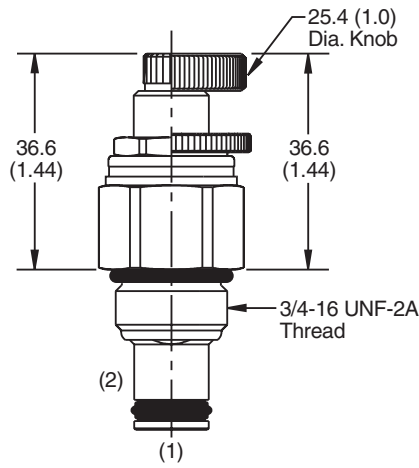
**Performance Curve**

**Flow vs. Inlet Pressure**

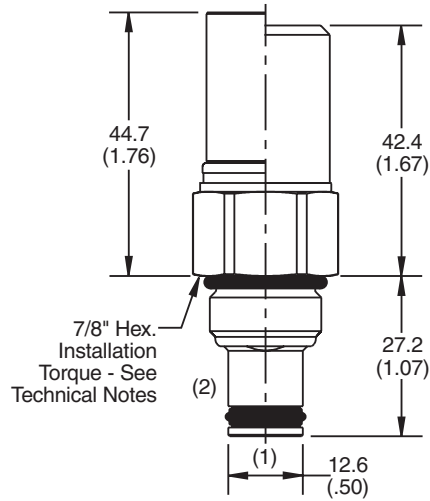
(Pressure rise through cartridge only)



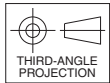
**Dimensions** Millimeters (Inches)



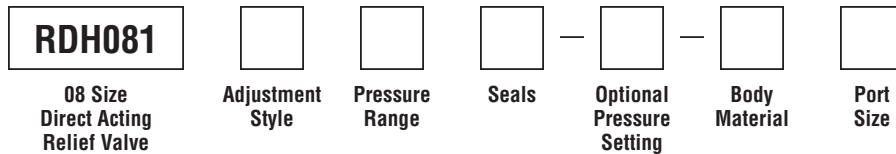
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717943)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK08-2)      |
| N    | Nitrile / (SK08-2N)      |
| V    | Fluorocarbon / (SK08-2V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range  |
|------|---|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI) @ crack pressure,<br>approximately 100 cc/min (6.1 in <sup>3</sup> /min)     |
| 20   | 6.9 - 138 Bar (100 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI) @ crack pressure,<br>approximately 100 cc/min (6.1 in <sup>3</sup> /min)     |
| 30   | 13.8 - 207 Bar (200 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI) @ crack pressure,<br>approximately 100 cc/min (6.1 in <sup>3</sup> /min) |
| 50   | 13.8 - 345 Bar (200 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) @ crack pressure,<br>approximately 100 cc/min (6.1 in <sup>3</sup> /min) |

| Optional Pressure Setting   |
|---|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)  |
| Setting Range:<br>100 to 5000 PSI<br>All settings at crack pressure,<br>approximately 100 cc/min (6.1 in <sup>3</sup> /min) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 6P   | 3/8" NPTF      | (B08-2-*6P)   |
| 4T   | SAE-4          | (B08-2-*4T)   |
| 6T   | SAE-6          | (B08-2-*6T)   |
| 6B   | 3/8" BSPG      | (B08-2-*6B)   |

\* Add "A" for aluminum, omit for steel.

**Technical Information**

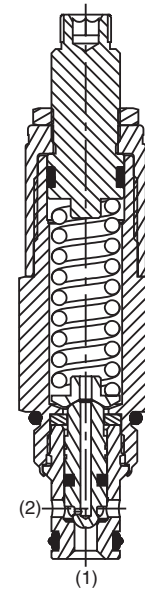
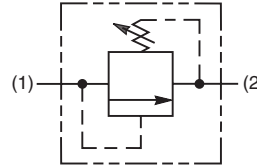
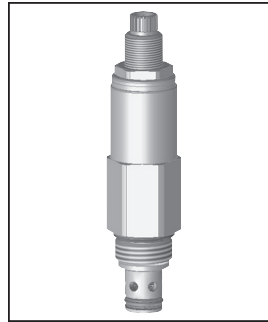
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Direct Acting Poppet-Type Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Hardened, precision ground parts for durability
- Fast response
- Spherical poppets for low leakage
- Internal mechanical stop limits poppet travel eliminating spring solidification
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.
- Polyurethane "D"-Ring eliminates backup rings and prevents hydrolysis



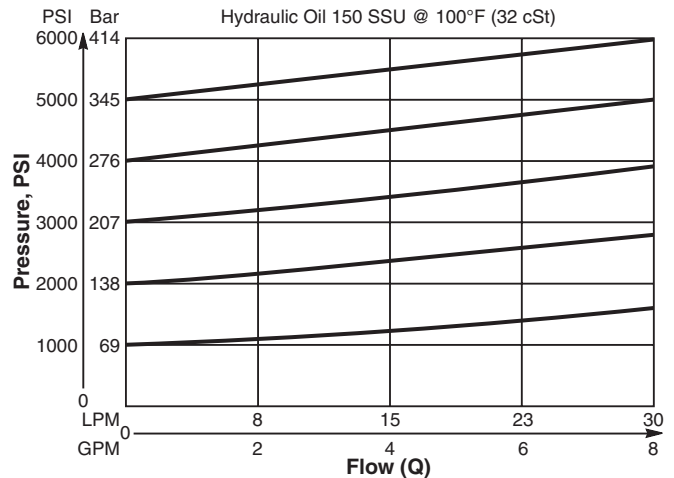
**Specifications**

|                                       |  |
|---------------------------------------|--|
| <b>Rated Flow</b>                     | 30 LPM (8 GPM)   |
| <b>Maximum Inlet Pressure</b>         | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>       | 350 Bar (5000 PSI)   |
| <b>Reseat Pressure</b>                | 85% of crack pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>    | 5 drops/min. (.33 cc/min.) @75% of crack pressure  |
| <b>Cartridge Material</b>             | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>    | -45°C to +93.3°C ("D"-Ring) (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)  |
| <b>Fluid Compatibility/ Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                     | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                 | .18 kg (.40 lbs.)  |
| <b>Cavity</b>                         | C08-2 (See BC Section for more details)  |
| <b>Form Tool</b>                      | Rougher None<br>Finisher NFT08-2F  |

**Performance Curve**

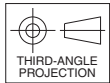
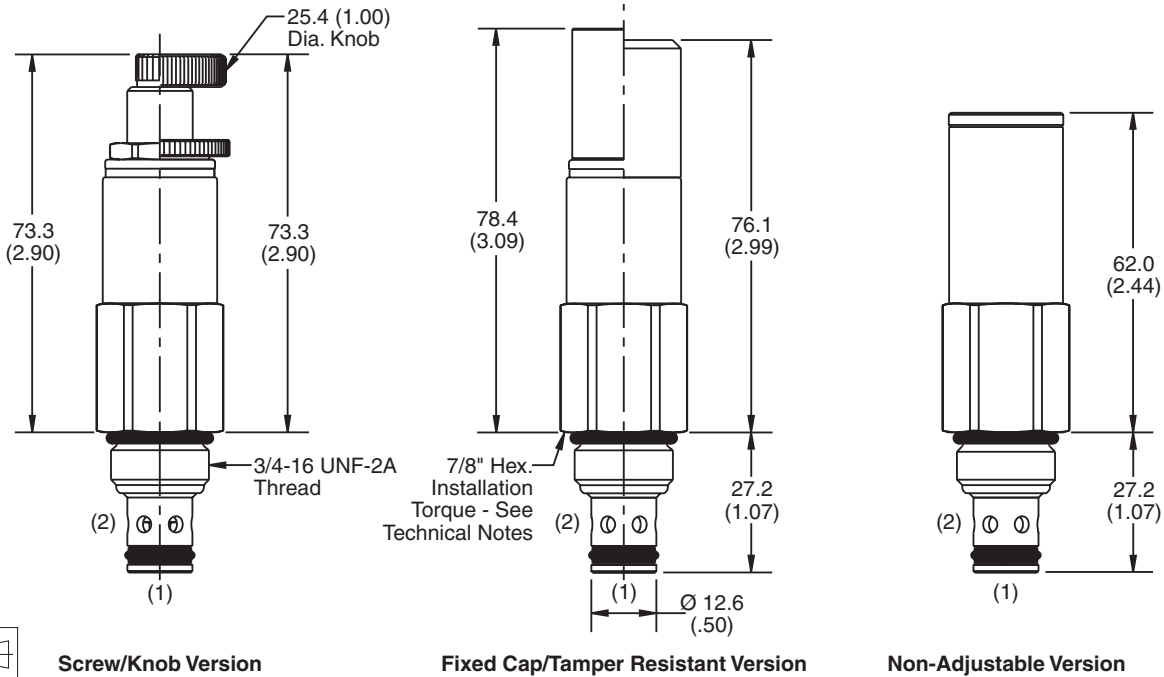
**Flow vs. Inlet Pressure**

(Pressure rise through cartridge only)





**Dimensions** Millimeters (Inches)

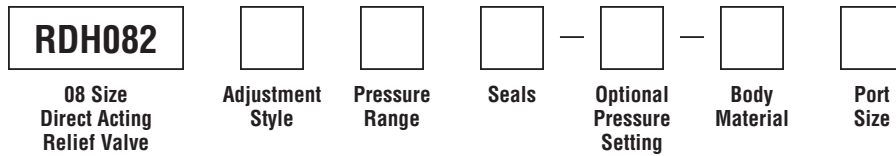


**Screw/Knob Version**

**Fixed Cap/Tamper Resistant Version**

**Non-Adjustable Version**

**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| N    | Non-Adjustable                  |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717943)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK08-2)      |
| N    | Nitrile / (SK08-2N)      |
| V    | Fluorocarbon / (SK08-2V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range   |
|------|--|
| 15   | 6.9 - 103 Bar (100 - 1500 PSI)<br>Standard Setting:<br>51.7 Bar (750 PSI) @ crack pressure<br>approximately .95 LPM (.25 GPM)    |
| 30   | 17.2 - 207 Bar (250 - 3000 PSI)<br>Standard Setting:<br>103 Bar (1500 PSI) @ crack pressure<br>approximately .95 LPM (.25 GPM)   |
| 50   | 34.5 - 345 Bar (500 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) @ crack pressure<br>approximately .95 LPM (.25 GPM) |

| Optional Pressure Setting   |
|---|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI<br>All settings at crack pressure,<br>approximately .95 LPM (.25 GPM) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 6P   | 3/8" NPTF      | (B08-2-*6P)   |
| 4T   | SAE-4          | (B08-2-*4T)   |
| 6T   | SAE-6          | (B08-2-*6T)   |
| 4B   | 1/4" BSPG      | (B08-2-*4B)   |
| 6B   | 3/8" BSPG      | (B08-2-*6B)   |

\* Add "A" for aluminum, omit for steel.

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

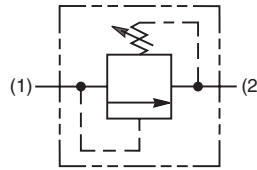
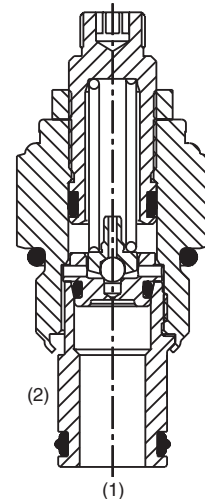
**General Description**

Direct Acting Relief Valve. This valve is designed for pilot flow circuits. For additional information see Technical Tips on pages PC1-PC6.



**Features**

- Hardened, precision ground parts for durability
- Low profile adapter for minimal space requirements
- Fully guided poppet for more consistent reseal
- Steel adapters are coated with yellow zinc dichromate for protection from salt spray
- Polyurethane "D"-Ring eliminates backup rings and prevents hydrolysis



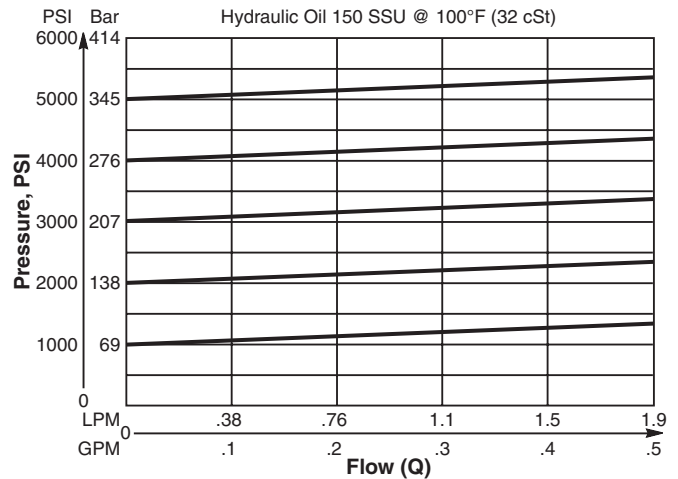
**Specifications**

|                                       |  |
|---------------------------------------|--|
| <b>Rated Flow</b>                     | 1.9 LPM (.5 GPM)   |
| <b>Maximum Inlet Pressure</b>         | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>       | 350 Bar (5000 PSI)   |
| <b>Reseat Pressure</b>                | 90% of crack pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>    | 5 drops/min. (.33 cc/min.) @ 80% of crack pressure   |
| <b>Cartridge Material</b>             | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>    | -45°C to +93.3°C ("D"-Ring) (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)  |
| <b>Fluid Compatibility/ Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                     | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                 | .18 kg (.40 lbs.)  |
| <b>Cavity</b>                         | C10-2  |
| <b>Form Tool</b>                      | Rougher None<br>Finisher NFT10-2F  |

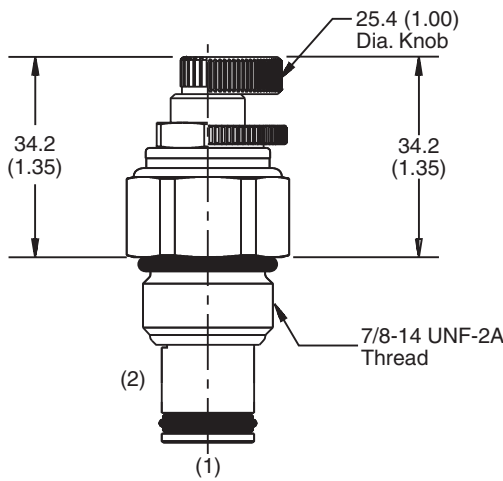
**Performance Curve**

**Flow vs. Inlet Pressure**

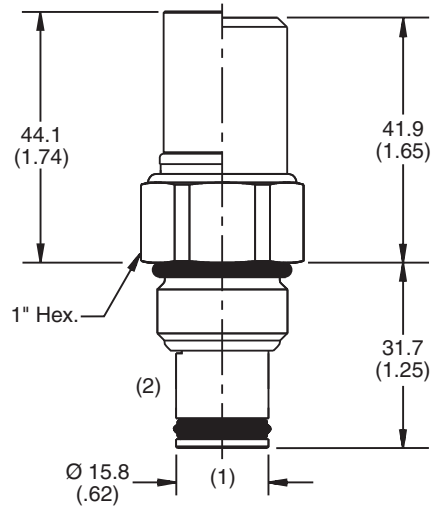
(Pressure rise through cartridge only)



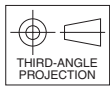
**Dimensions** Millimeters (Inches)



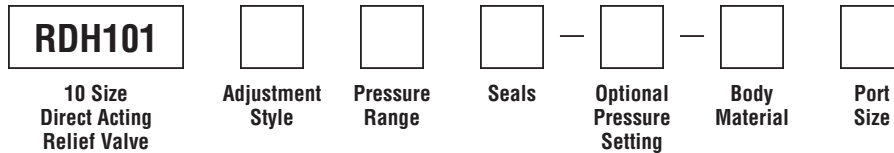
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (718083)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK10-2)      |
| N    | Nitrile / (SK10-2N)      |
| V    | Fluorocarbon / (SK10-2V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range  |
|------|---|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI) @ crack pressure,<br>approximately 100 cc/min (6.1 in <sup>3</sup> /min)     |
| 20   | 6.9 - 138 Bar (100 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI) @ crack pressure,<br>approximately 100 cc/min (6.1 in <sup>3</sup> /min)     |
| 30   | 13.8 - 207 Bar (200 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI) @ crack pressure,<br>approximately 100 cc/min (6.1 in <sup>3</sup> /min) |
| 50   | 13.8 - 345 Bar (200 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) @ crack pressure,<br>approximately 100 cc/min (6.1 in <sup>3</sup> /min) |

| Optional Pressure Setting   |
|---|
| Pressure ÷ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)  |
| Setting Range:<br>100 to 5000 PSI<br>All settings at crack pressure,<br>approximately 100 cc/min (6.1 in <sup>3</sup> /min) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-2-*4P)   |
| 6P   | 3/8" NPTF      | (B10-2-*6P)   |
| 8P   | 1/2" NPTF      | (B10-2-*8P)   |
| 6T   | SAE-6          | (B10-2-*6T)   |
| T6T  | SAE-6          | (B10-2-T6T)†  |
| 8T   | SAE-8          | (B10-2-*8T)   |
| T8T  | SAE-8          | (B10-2-T8T)†  |
| 6B   | 3/8" BSPG      | (B10-2-6B)†   |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

Technical Information

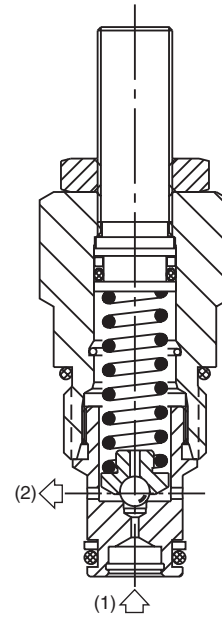
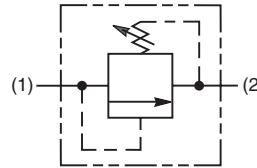
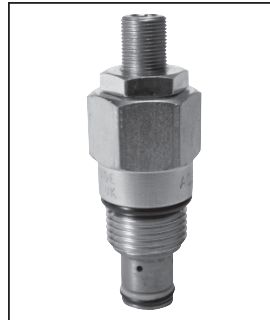
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Direct Acting Ball-Type Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Fast response
- Ideal for controlling ventable relief valves, or for thermal relief
- Hardened working parts for maximum durability
- Integral 250 micron inlet filter available
- All external parts zinc plated



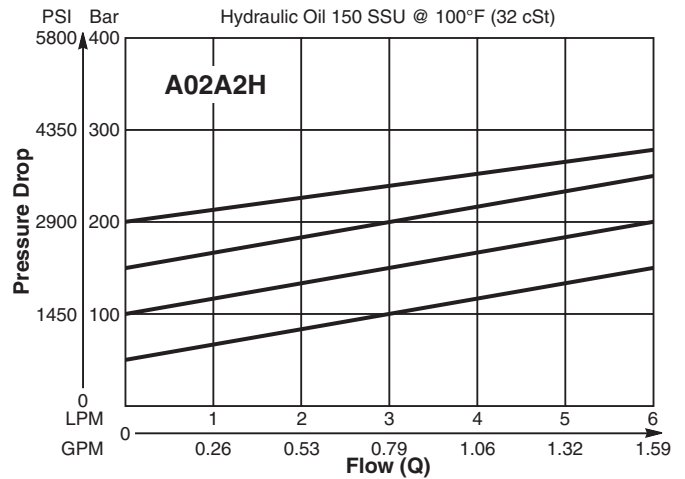
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 6 LPM (1.6 GPM)  |
| <b>Maximum Inlet Pressure</b>        | H - 10-210 Bar (145-3000 PSI)<br>P - 10-420 Bar (145-6000 PSI)   |
| <b>Maximum Pressure Setting</b>      | 420 Bar (6000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 5 drops/min.<br>@ 100 Bar (1450 PSI)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.11 kg (0.24 lbs.)  |
| <b>Cavity</b>                        | C08-2 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher None<br>Finisher NFT08-2F  |

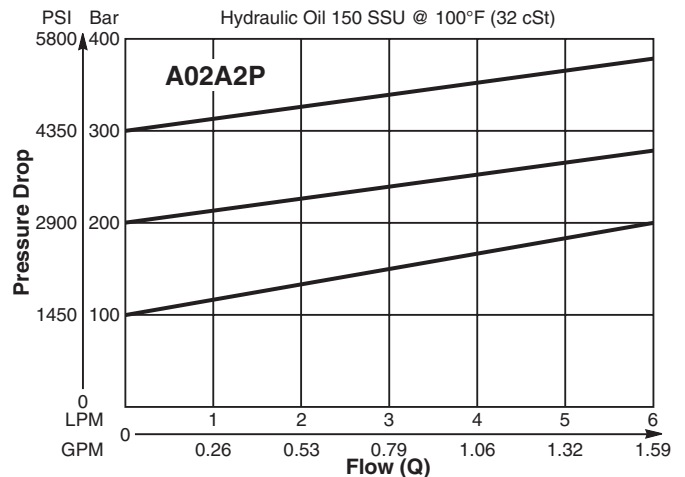
**Performance Curves**

(Pressure rise through cartridge only)

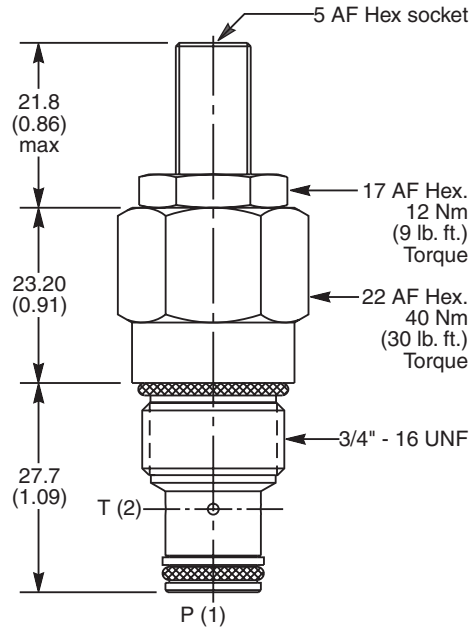
**Flow vs. Inlet Pressure**



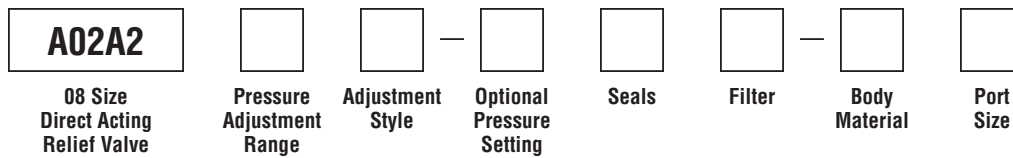
**Flow vs. Inlet Pressure**



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Pressure Adjustment Range     |
|------|-------------------------------|
| H    | 10 - 210 Bar (145 - 3000 PSI) |
| P    | 10 - 420 Bar (145 - 6000 PSI) |

| Code | Seals / Kit No.                       |
|------|---------------------------------------|
| N    | Nitrile, Buna-N (Std.) / (SK30515N-1) |
| V    | Fluorocarbon / (SK30515V-1)           |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Adjustment Style / Kit No.    |
|------|-------------------------------|
| Z    | Screw Adjust (Std.)           |
| W    | Knob Adjust                   |
| T    | Tamper Resistant Cap (TC1130) |

| Code | Filter                    |
|------|---------------------------|
| Omit | Omit for no filter (Std.) |
| F    | 250 micron inlet filter   |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B08-2-*4P)   |
| 6P   | 3/8" NPTF      | (B08-2-*6P)   |
| 4T   | SAE-4          | (B08-2-*4T)   |
| 6T   | SAE-6          | (B08-2-*6T)   |
| 6B   | 3/8" BSPG      | (B08-2-*6B)   |

\* Add "A" for aluminum, omit for steel.

| Optional Pressure Setting   |  |
|---|--|
| Specify setting if required (Bar)   |  |
| <b>A02A2H</b> Standard Setting:<br>100 Bar (1400 PSI)<br>@ 0.5 LPM (0.13 GPM) |  |
| <b>A02A2P</b> Standard Setting:<br>200 Bar (2900 PSI)<br>@ 0.5 LPM (0.13 GPM) |  |

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
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- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data



Technical Information

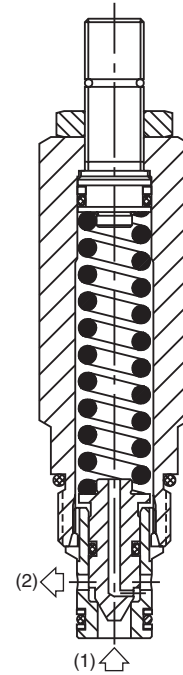
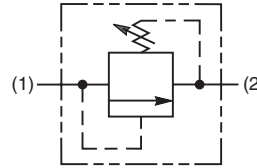
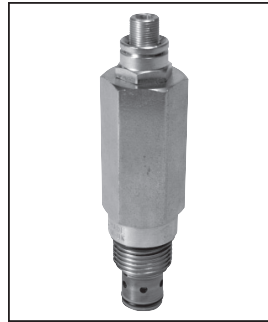
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
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- MV** Manual Valves
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- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Direct Acting Poppet-Type Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Fast response
- Excellent stability throughout flow range
- Virtually leak free
- Hardened working parts for maximum durability
- Adjustable, preset and tamper resistant versions available
- Preset version is tamper resistant and compact
- All external parts zinc plated



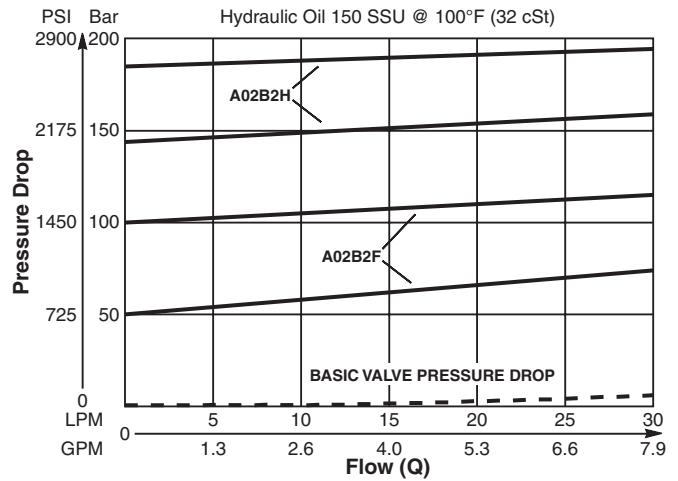
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 30 LPM (8 GPM)   |
| <b>Maximum Inlet Pressure</b>        | 420 Bar (6000 PSI)   |
| <b>Maximum Pressure Setting</b>      | F - 2-100 Bar (29-1450 PSI)<br>H - 5-210 Bar (72-3000 PSI)<br>P - 5-420 Bar (72-6000 PSI)              |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 5 drops/min.<br>@ 100 Bar (1450 PSI)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.20 kg (0.44 lbs.)  |
| <b>Cavity</b>                        | C08-2 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher None<br>Finisher NFT08-2F  |

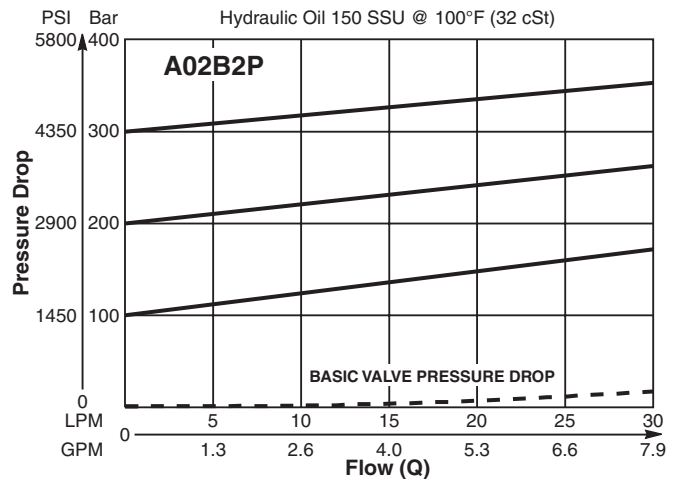
**Performance Curves**

(Pressure rise through cartridge only)

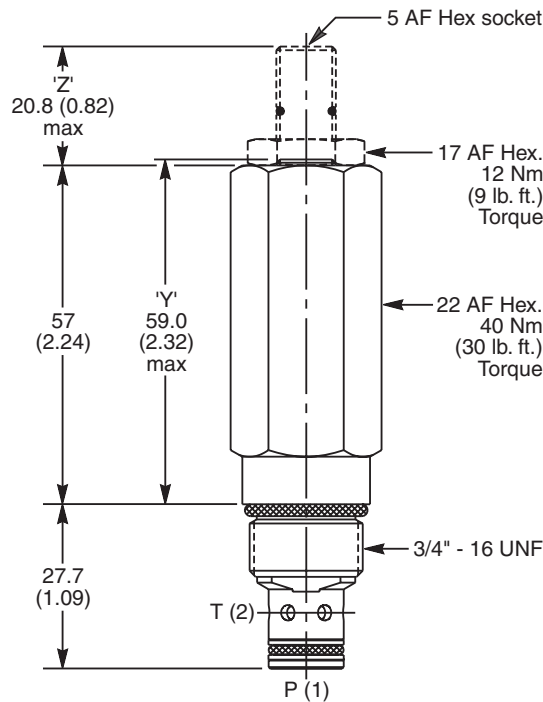
**Flow vs. Inlet Pressure**



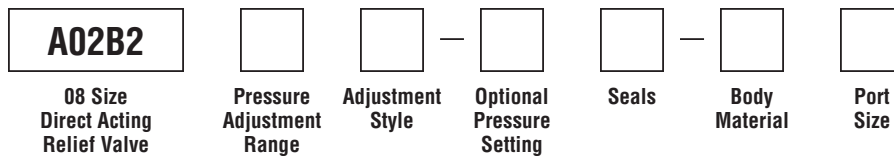
**Flow vs. Inlet Pressure**



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Pressure Adjustment Range   |
|------|-----------------------------|
| F    | 2 - 100 Bar (29 - 1450 PSI) |
| H    | 5 - 210 Bar (72 - 3000 PSI) |
| P    | 5 - 420 Bar (72 - 6000 PSI) |

| Code | Adjustment Style / Kit No.    |
|------|-------------------------------|
| Z    | Screw Adjust (Std.)           |
| W    | Knob Adjust                   |
| T    | Tamper Resistant Cap (TC1130) |
| Y    | Non Adjustable Preset         |

| Code   | Optional Pressure Setting  |
|--------|--|
|        | Specify setting if required (Bar)<br>Y Setting must be specified |
| A02B2F | Standard Setting:<br>50 Bar (725 PSI)<br>@ 2 LPM (0.5 GPM)       |
| A02B2H | Standard Setting:<br>100 Bar (1450 PSI)<br>@ 2 LPM (0.5 GPM)     |
| A02B2P | Standard Setting:<br>200 Bar (2900 PSI)<br>@ 2 LPM (0.5 GPM)     |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B08-2-*4P)   |
| 6P   | 3/8" NPTF      | (B08-2-*6P)   |
| 4T   | SAE-4          | (B08-2-*4T)   |
| 6T   | SAE-6          | (B08-2-*6T)   |
| 6B   | 3/8" BSPG      | (B08-2-*6B)   |

\* Add "A" for aluminum, omit for steel.

| Code | Seals / Kit No.                       |
|------|---------------------------------------|
| N    | Nitrile, Buna-N (Std.) / (SK30500N-1) |
| V    | Fluorocarbon / (SK30500V-1)           |

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
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Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
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Proportional Valves
- CE**  
Coils & Electronics
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Technical Data

Technical Information

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
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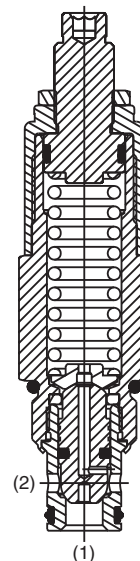
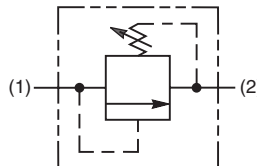
**General Description**

Direct Acting Poppet-Type Relief Valve.  
For additional information see  
Technical Tips on pages PC1-PC6.



**Features**

- Hardened, precision ground parts for durability
- Internal mechanical stop limits poppet travel eliminating spring solidification
- Spherical poppets for low leakage
- “D”-Ring eliminates backup rings
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.
- Fast response



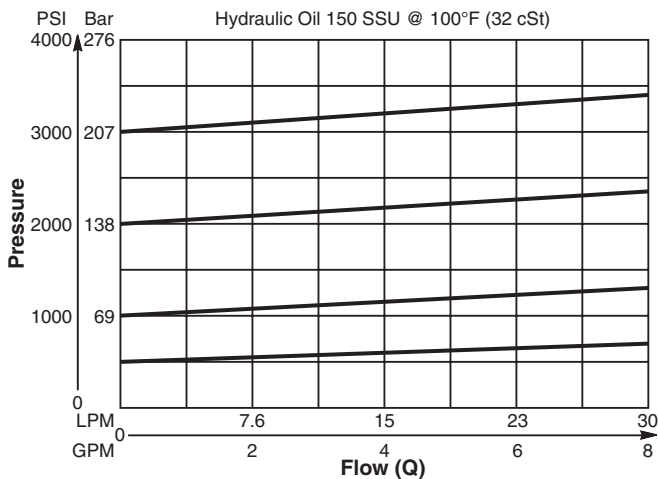
**Specifications**

|  |   |
|--|---|
| <b>Rated Flow</b>                      | 38 LPM (10 GPM)   |
| <b>Maximum Inlet Pressure</b>          | 250 Bar (3600 PSI)  |
| <b>Maximum Pressure Setting</b>        | 210 Bar (3000 PSI)  |
| <b>Maximum Tank Pressure</b>           | 210 Bar (3000 PSI)  |
| <b>Reseat Pressure</b>                 | 85% of crack pressure   |
| <b>Leakage at 150 SSU (32 cSt)</b>     | 5 drops/min. (.33 cc/min.)<br>@75% of crack pressure  |
| <b>Cartridge Material</b>              | All parts steel. All operating parts hardened steel.  |
| <b>Operating Temp. Range (Ambient)</b> | -45°C to +93.3°C (“D”-Ring)<br>(-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon)<br>(-25°F to +250°F) |
| <b>Fluids</b>                          | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)      |
| <b>Filtration</b>                      | ISO Code 16/13,<br>SAE Class 4 or better  |
| <b>Approx. Weight</b>                  | .23 kg (0.5 lbs.)   |
| <b>Cavity</b>                          | C10-2<br>(See BC Section for more details)  |
| <b>Form Tool</b>                       | Rougher None<br>Finisher NFT10-2F   |

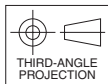
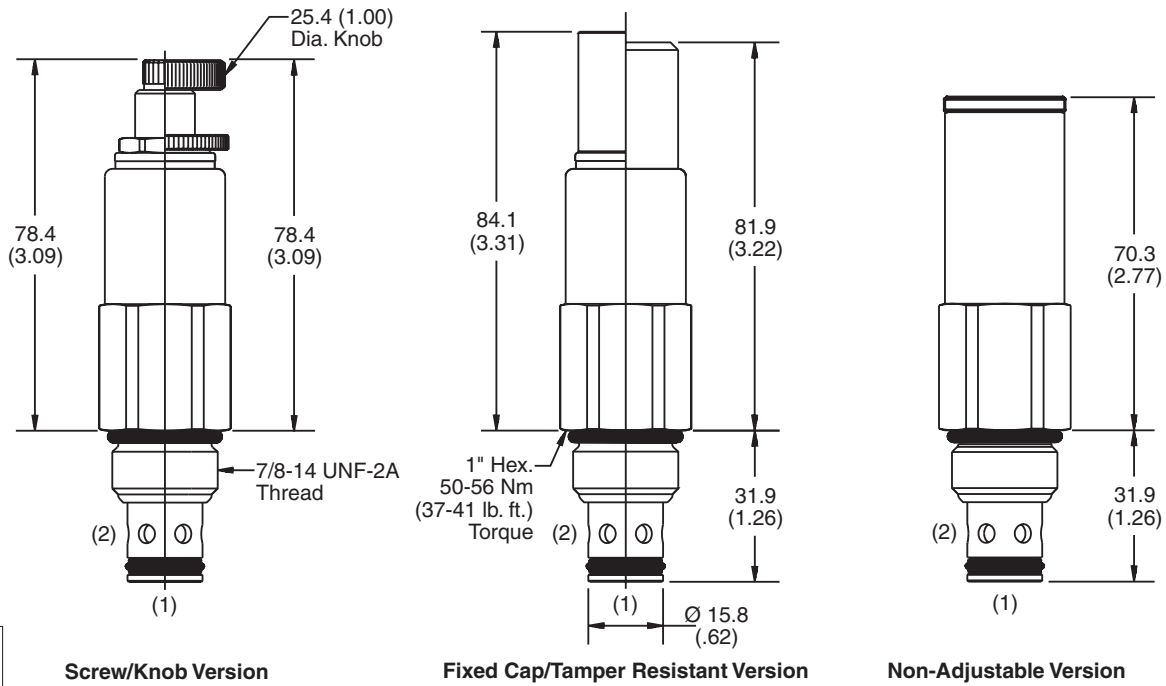
**Performance Curve**

**Flow vs. Inlet Pressure**

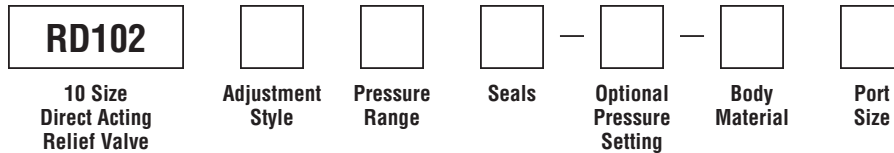
(Pressure rise through cartridge only)



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| N    | Non-Adjustable                  |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717943)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK10-2)      |
| N    | Nitrile / (SK10-2N)      |
| V    | Fluorocarbon / (SK10-2V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range  |
|------|---|
| 03   | 3.5 - 20.7 Bar (50 - 300 PSI)<br>Standard Setting:<br>10.3 Bar (150 PSI)<br>@ .95 LPM (.25 GPM)     |
| 09   | 7 - 62 Bar (100 - 900 PSI)<br>Standard Setting:<br>31.0 Bar (450 PSI)<br>@ .95 LPM (.25 GPM)        |
| 18   | 13.8 - 124 Bar (200 - 1800 PSI)<br>Standard Setting:<br>62.1 Bar (900 PSI)<br>@ .95 LPM (.25 GPM)   |
| 30   | 41.4 - 207 Bar (600 - 3000 PSI)<br>Standard Setting:<br>103.4 Bar (1500 PSI)<br>@ .95 LPM (.25 GPM) |

| Optional Pressure Setting  |
|--|
| Pressure ± 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used) |
| Setting Range:<br>100 to 3000 PSI<br>All settings at .95 LPM (.25 GPM)     |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-2-*4P)   |
| 6P   | 3/8" NPTF      | (B10-2-*6P)   |
| 8P   | 1/2" NPTF      | (B10-2-*8P)   |
| 6T   | SAE-6          | (B10-2-*6T)   |
| 8T   | SAE-8          | (B10-2-*8T)   |
| T8T  | SAE-8          | (B10-2-T8T)†  |
| 6B   | 3/8" BSPG      | (B10-2-6B)†   |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

Technical Information

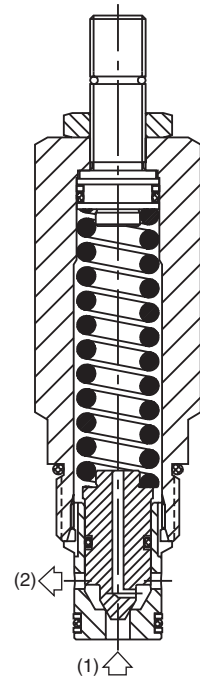
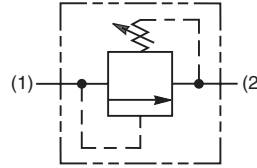
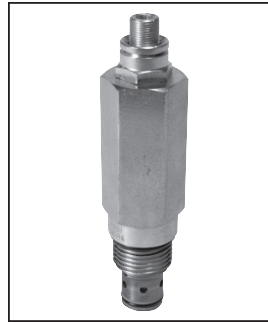
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Direct Acting Poppet-Type Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Fast response with good stability
- Virtually leak-free
- Hardened working parts for maximum durability
- Adjustable, preset and tamperproof versions available
- Preset version is tamperproof and compact
- All external parts zinc plated



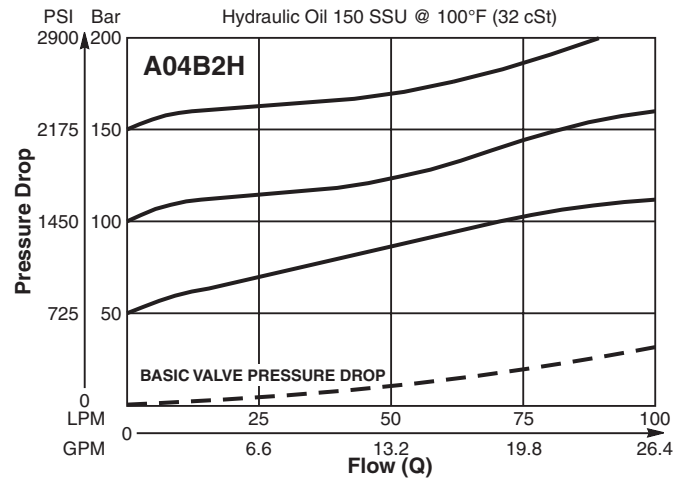
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 100 LPM (26 GPM)   |
| <b>Maximum Inlet Pressure</b>        | H - 5-210 Bar (72-3000 PSI)<br>P - 5-420 Bar (72-6000 PSI)   |
| <b>Maximum Pressure Setting</b>      | 420 Bar (6000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 5 drops/min.<br>@ 100 Bar (1450 PSI)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.28 kg (0.62 lbs.)  |
| <b>Cavity</b>                        | C10-2 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher None<br>Finisher NFT10-2F  |

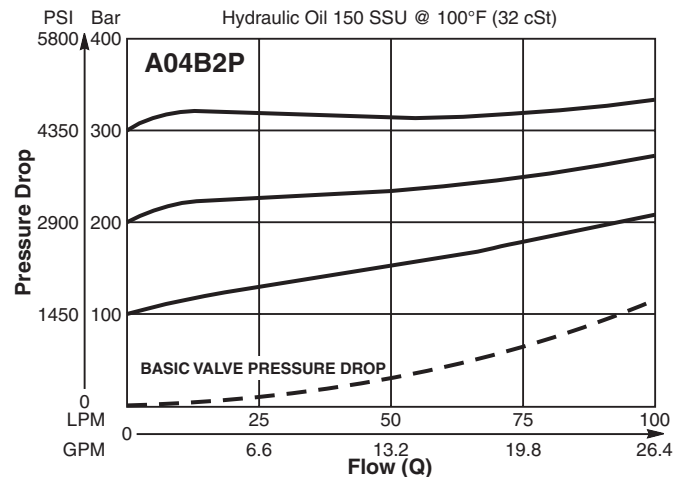
**Performance Curves**

(Pressure rise through cartridge only)

**Flow vs. Inlet Pressure**

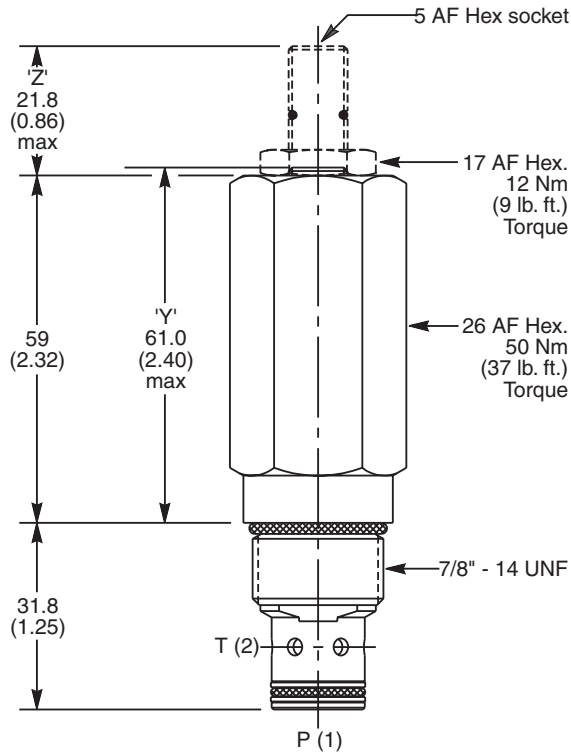


**Flow vs. Inlet Pressure**

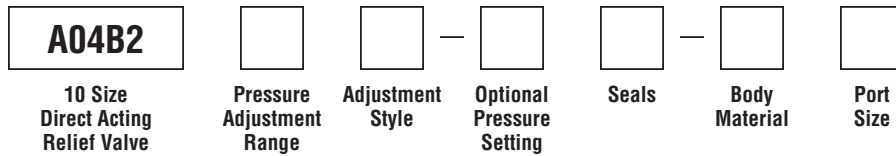




**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Pressure Adjustment Range   |
|------|-----------------------------|
| H    | 5 - 210 Bar (72 - 3000 PSI) |
| P    | 5 - 420 Bar (72 - 6000 PSI) |

| Code | Seals / Kit No.                       |
|------|---------------------------------------|
| N    | Nitrile, Buna-N (Std.) / (SK30503N-1) |
| V    | Fluorocarbon / (SK30503V-1)           |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Adjustment Style / Kit No.    |
|------|-------------------------------|
| Z    | Screw Adjust (Std.)           |
| W    | Knob Adjust                   |
| T    | Tamper Resistant Cap (TC1130) |
| Y    | Non Adjustable Preset         |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-2-*4P)   |
| 6P   | 3/8" NPTF      | (B10-2-*6P)   |
| 8P   | 1/2" NPTF      | (B10-2-*8P)   |
| 6T   | SAE-6          | (B10-2-*6T)   |
| 8T   | SAE-8          | (B10-2-*8T)   |
| T8T  | SAE-8          | (B10-2-T8T)†  |
| 6B   | 3/8" BSPG      | (B10-2-6B)†   |

| Optional Pressure Setting   |  |
|---|--|
| Specify setting if required (Bar)   |  |
| Y Setting must be specified   |  |
| <b>A04B2H</b> Standard Setting:<br>100 Bar (1450 PSI)<br>@ 15 LPM (4.0 GPM) |  |
| <b>A04B2P</b> Standard Setting:<br>200 Bar (2900 PSI)<br>@ 15 LPM (4.0 GPM) |  |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

Technical Information

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

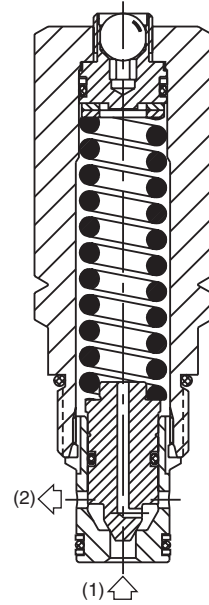
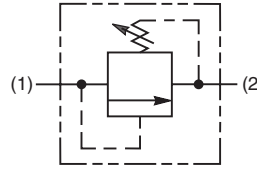
Direct Acting Poppet-Type Relief Valve. Pressure Equipment Directive (PED 97/23/EC) compliant to hazard category IV. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Fast response with good stability
- Compact space saving design
- Poppet type construction for lower leakage
- Full 420 Bar (6000 PSI) pressure capability
- Hardened working parts for maximum durability
- Tamperproof setting
- All external parts zinc plated

**Specifications**

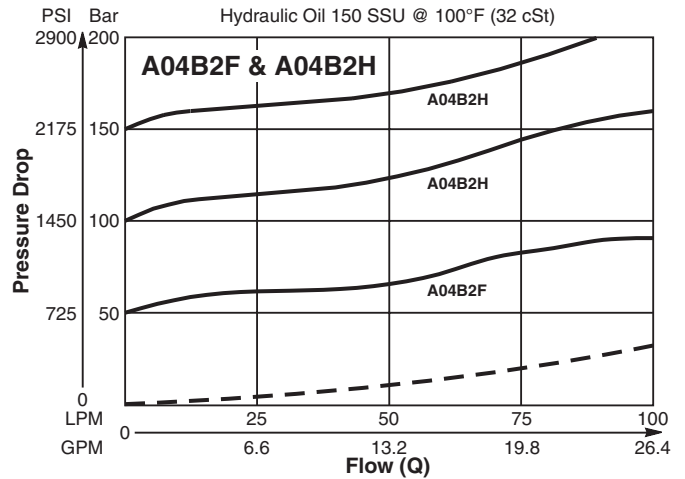
|                                      |   |
|--------------------------------------|---|
| <b>Rated Flow</b>                    | 100 LPM (26 GPM)  |
| <b>Maximum Inlet Pressure</b>        | <b>FY</b> - 2-100 Bar (29-1450 PSI)<br><b>HY</b> - 5-210 Bar (72-3000 PSI)<br><b>PY</b> - 5-420 Bar (72-6000 PSI) |
| <b>Maximum Pressure Setting</b>      | 420 Bar (6000 PSI)  |
| <b>Sensitivity: Pressure/Turn</b>    | <b>FY</b> - 11 Bar (165 PSI)<br><b>HY</b> - 21 Bar (305 PSI)<br><b>PY</b> - 44 Bar (630 PSI)                      |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 5 drops/min.<br>@ 100 Bar (1450 PSI)  |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.  |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)              |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)            |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better   |
| <b>Approx. Weight</b>                | 0.25 kg (0.55 lbs.)   |
| <b>Cavity</b>                        | C10-2 (See BC Section for more details)   |
| <b>Form Tool</b>                     | Rougher None<br>Finisher NFT10-2F   |



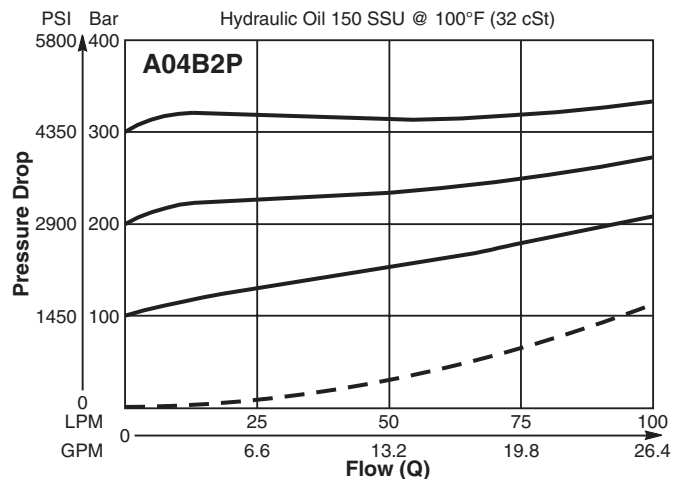
**Performance Curves**

(Pressure rise through cartridge only)

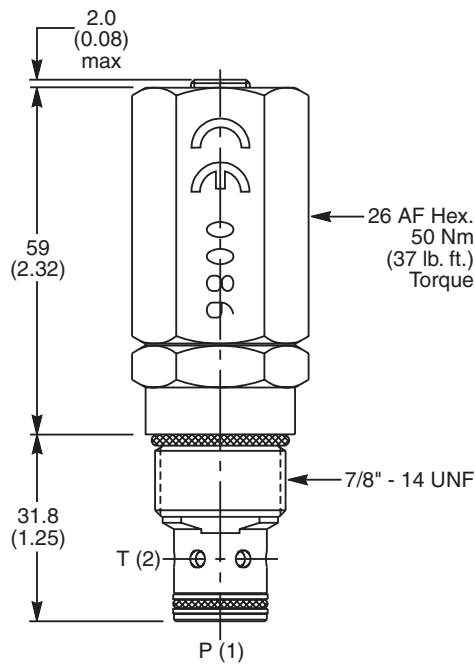
**Flow vs. Inlet Pressure**



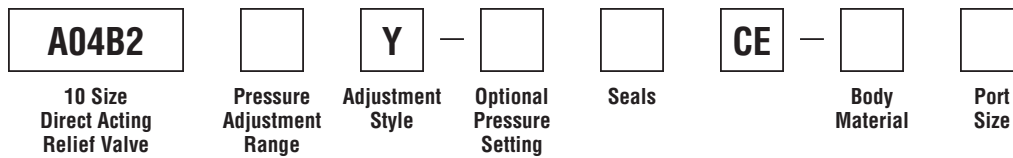
**Flow vs. Inlet Pressure**



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Pressure Adjustment Range   |
|------|-----------------------------|
| F    | 2 - 100 Bar (29 - 1450 PSI) |
| H    | 5 - 210 Bar (72 - 3000 PSI) |
| P    | 5 - 420 Bar (72 - 6000 PSI) |

| Code | Seals / Kit No.                        |
|------|--|
| N    | Nitrile, Buna-N (Std.) / (SK30503NP-1) |
| V    | Fluorocarbon / (SK30503VP-1)           |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Adjustment Style / Kit No.   |
|------|------------------------------|
| Y    | Non Adjustable Preset (Std.) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-2-*4P)   |
| 6P   | 3/8" NPTF      | (B10-2-*6P)   |
| 8P   | 1/2" NPTF      | (B10-2-*8P)   |
| 6T   | SAE-6          | (B10-2-*6T)   |
| 8T   | SAE-8          | (B10-2-*8T)   |
| T8T  | SAE-8          | (B10-2-T8T)†  |
| 6B   | 3/8" BSPG      | (B10-2-6B)†   |

| Optional Pressure Setting       |  |
|---------------------------------|--|
| Setting must be specified (Bar) |  |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

Technical Information

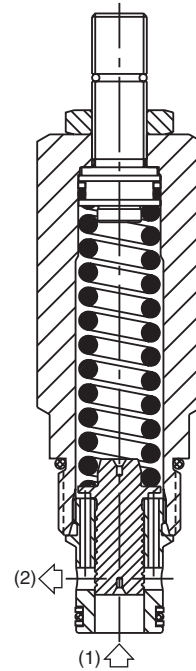
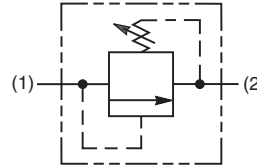
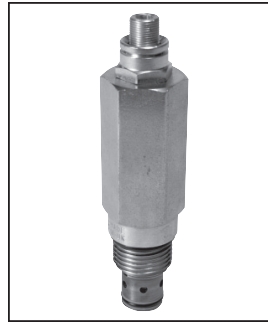
- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data

**General Description**

Direct Acting Spool-Type Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- High flow capacity
- Fast response with good stability
- Low pressure setting
- Full 420 Bar 6000 PSI tank line back pressure
- Hardened working parts for maximum durability
- Adjustable, preset and tamperproof versions available
- All external parts zinc plated



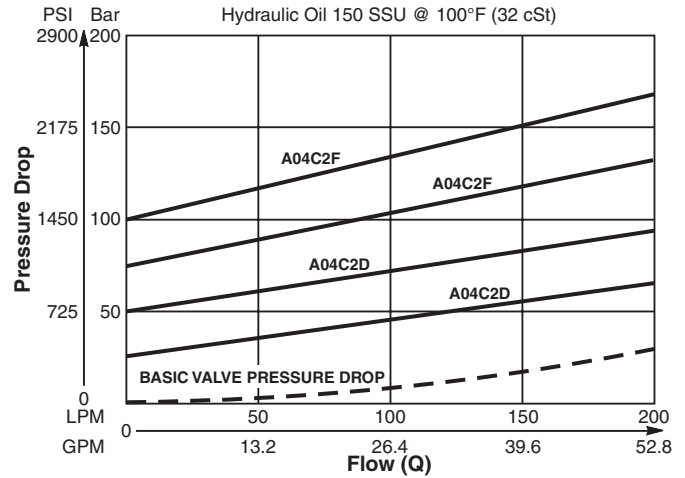
**Specifications**

|                                       |  |
|---------------------------------------|--|
| <b>Rated Flow</b>                     | 200 LPM (53 GPM)   |
| <b>Maximum Inlet Pressure</b>         | D - 2-50 Bar (29-725 PSI)<br>F - 2-100 Bar (29-1450 PSI)   |
| <b>Maximum Pressure Setting</b>       | 420 Bar (6000 PSI)   |
| <b>Maximum Tank Pressure</b>          | 420 Bar (6000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>    | 25 ml/min.<br>@ 50 Bar (725 PSI)   |
| <b>Cartridge Material</b>             | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>    | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/ Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                     | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                 | 0.28 kg (0.62 lbs.)  |
| <b>Cavity</b>                         | C10-2 (See BC Section for more details)  |
| <b>Form Tool</b>                      | Rougher None<br>Finisher NFT10-2F  |

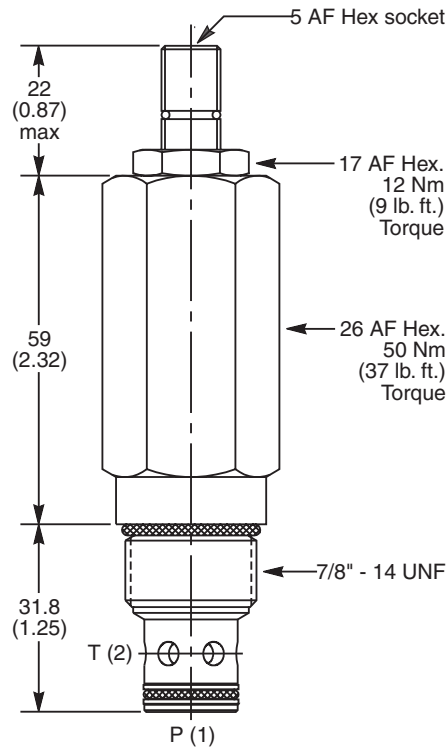
**Performance Curve**

(Pressure rise through cartridge only)

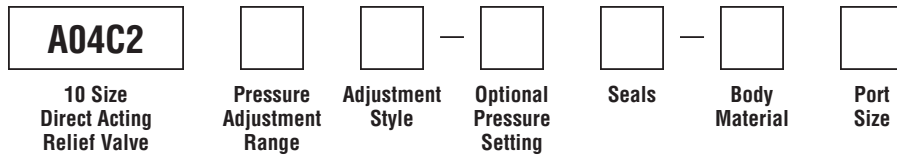
**Flow vs. Inlet Pressure**



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Pressure Adjustment Range   |
|------|-----------------------------|
| D    | 2 - 50 Bar (29 - 725 PSI)   |
| F    | 2 - 100 Bar (29 - 1450 PSI) |

| Code | Seals / Kit No.                       |
|------|---------------------------------------|
| N    | Nitrile, Buna-N (Std.) / (SK30503N-1) |
| V    | Fluorocarbon / (SK30503V-1)           |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Adjustment Style / Kit No.    |
|------|-------------------------------|
| Z    | Screw Adjust (Std.)           |
| W    | Knob Adjust (ASV014975)       |
| T    | Tamper Resistant Cap (TC1130) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-2-*4P)   |
| 6P   | 3/8" NPTF      | (B10-2-*6P)   |
| 8P   | 1/2" NPTF      | (B10-2-*8P)   |
| 6T   | SAE-6          | (B10-2-*6T)   |
| 8T   | SAE-8          | (B10-2-*8T)   |
| T8T  | SAE-8          | (B10-2-T8T)†  |
| 6B   | 3/8" BSPG      | (B10-2-6B)†   |

| Optional Pressure Setting   |  |
|---|--|
| Specify setting if required (Bar)   |  |
| <b>A04C2D</b> Standard Setting:<br>25 Bar (360 PSI)<br>@ 15 LPM (4.0 GPM) |  |
| <b>A04C2F</b> Standard Setting:<br>50 Bar (725 PSI)<br>@ 15 LPM (4.0 GPM) |  |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.



**Technical Information**

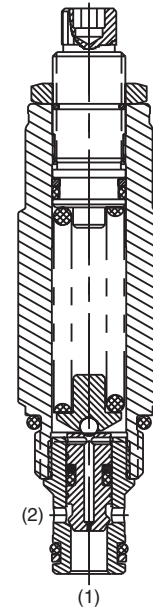
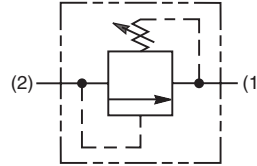
**CV** Check Valves  
**SH** Shuttle Valves  
**LM** Load/Motor Controls  
**FC** Flow Controls  
**PC** Pressure Controls  
**LE** Logic Elements  
**DC** Directional Controls  
**MV** Manual Valves  
**SV** Solenoid Valves  
**PV** Proportional Valves  
**CE** Coils & Electronics  
**BC** Bodies & Cavities  
**TD** Technical Data

**General Description**

Differential Area Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Hardened, precision ground parts for durability
- Spherical poppets for low leakage
- High flow capacity
- Internal mechanical stop limits poppet travel eliminating spring solidification
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.



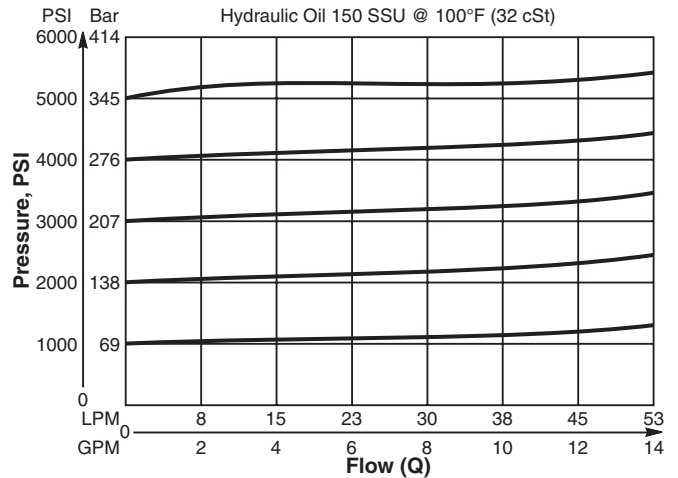
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 45 LPM (12 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>      | 350 Bar (5000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 350 Bar (5000 PSI)   |
| <b>Reseat Pressure</b>               | 75% of crack pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 10 drops/min. (.67 cc/min.) @75% of crack pressure   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | .19 kg (.43 lbs.)  |
| <b>Cavity</b>                        | C08-2 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher None<br>Finisher NFT08-2F  |

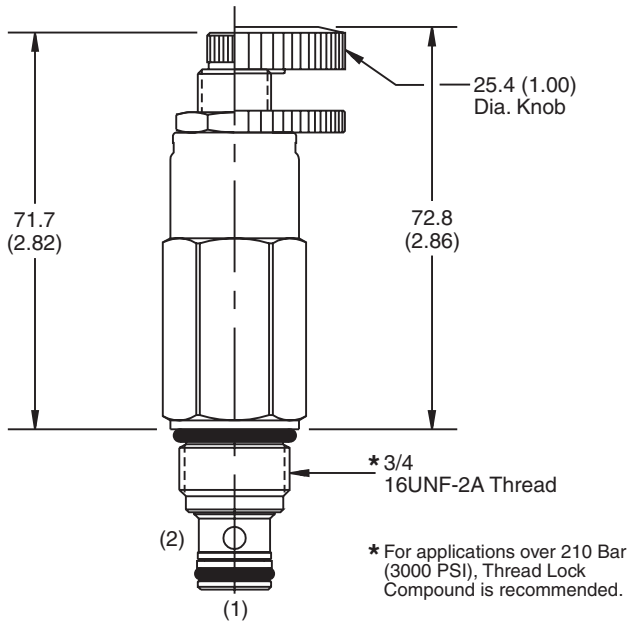
**Performance Curve**

**Flow vs. Inlet Pressure**

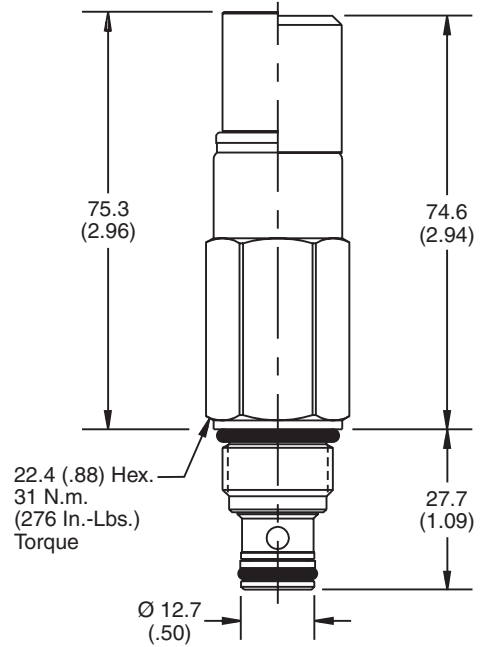
(Pressure rise through cartridge only)



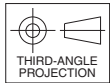
**Dimensions** Millimeters (Inches)



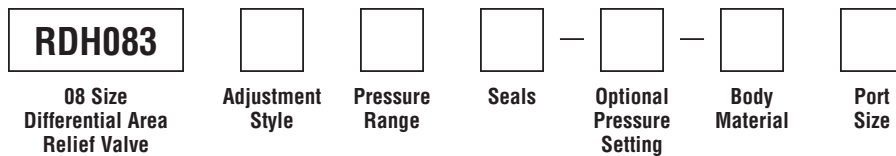
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (718083)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | Nitrile / (SK08-2N)      |
| V    | Fluorocarbon / (SK08-2V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range   |
|------|--|
| 15   | 6.9 - 103 Bar (100 - 1500 PSI)<br>Standard Setting:<br>51.7 Bar (750 PSI) @ crack pressure<br>approximately .95 LPM (.25 GPM)    |
| 30   | 69 - 207 Bar (1000 - 3000 PSI)<br>Standard Setting:<br>103 Bar (1500 PSI) @ crack pressure<br>approximately .95 LPM (.25 GPM)    |
| 50   | 138 - 345 Bar (2000 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) @ crack pressure<br>approximately .95 LPM (.25 GPM) |

| Optional Pressure Setting   |
|---|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI<br>All settings at crack pressure,<br>approximately .95 LPM (.25 GPM) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B08-2-*4P)   |
| 6P   | 3/8" NPTF      | (B08-2-*6P)   |
| 4T   | SAE-4          | (B08-2-*4T)   |
| 6T   | SAE-6          | (B08-2-*6T)   |
| 6B   | 3/8" BSPG      | (B08-2-*6B)   |

\* Add "A" for aluminum, omit for steel.

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

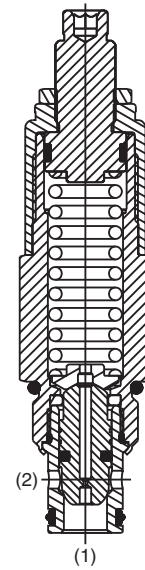
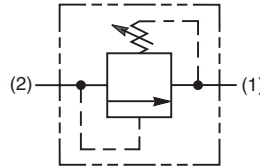
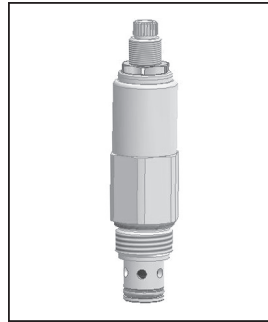
**General Description**

Differential Area Relief Valve. For additional information see Technical Tips on pages PC1-PC6.



**Features**

- Hardened, precision ground parts for durability
- Internal mechanical stop limits poppet travel eliminating spring solidification
- Spherical poppets for low leakage
- “D”-Ring eliminates backup rings
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.
- High flow capacity



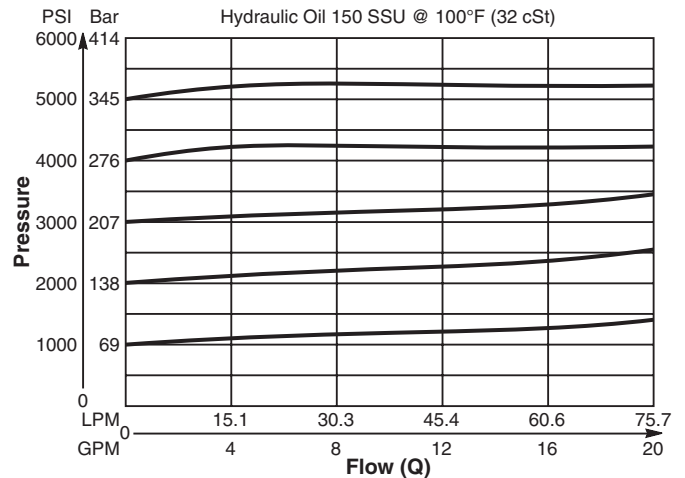
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 75 LPM (20 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>      | 350 Bar (5000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 350 Bar (5000 PSI)   |
| <b>Reseat Pressure</b>               | 85% of crack pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 5 drops/min. (.33 cc/min.) @75% of crack pressure  |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -45°C to +93.3°C (“D”-Ring) (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)  |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | .23 kg (0.5 lbs.)  |
| <b>Cavity</b>                        | C10-2 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher None<br>Finisher NFT10-2F  |

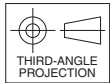
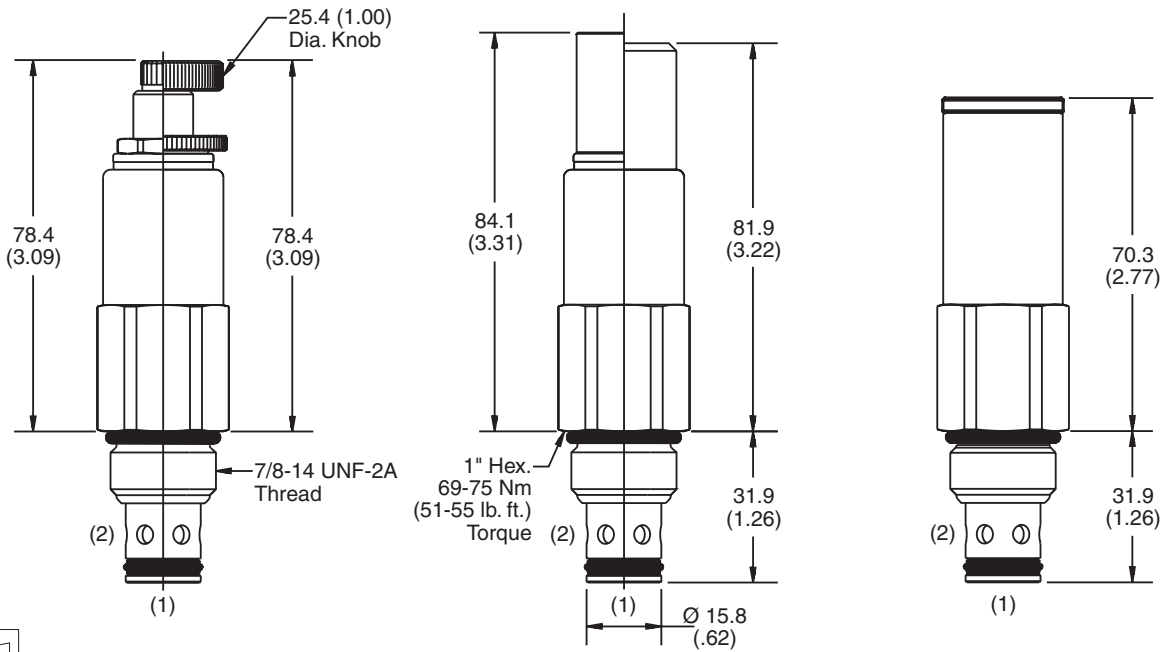
**Performance Curve**

**Flow vs. Inlet Pressure**

(Pressure rise through cartridge only)



**Dimensions** Millimeters (Inches)

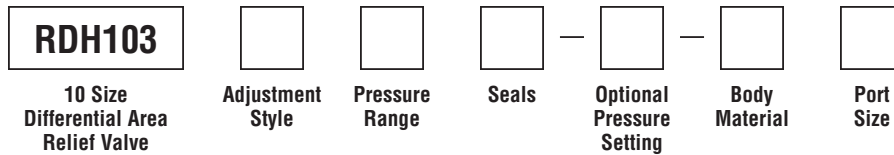


**Screw/Knob Version**

**Fixed Cap/Tamper Resistant Version**

**Non-Adjustable Version**

**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| N    | Non-Adjustable                  |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717943)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK10-2)      |
| N    | Nitrile / (SK10-2N)      |
| V    | Fluorocarbon / (SK10-2V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Optional Pressure Setting |                                    |
|---------------------------|------------------------------------|
| Pressure                  | ± 10                               |
|                           | i.e. 235 = 2350 PSI                |
|                           | (Omit if standard setting is used) |
| Setting Range:            | 100 to 5000 PSI                    |
|                           | All settings at .95 LPM (.25 GPM)  |

| Code | Pressure Range  |
|------|---|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI)<br>@ .95 LPM (.25 GPM)     |
| 20   | 34.5 - 138 Bar (500 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)<br>@ .95 LPM (.25 GPM)    |
| 30   | 34.5 - 207 Bar (500 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI)<br>@ .95 LPM (.25 GPM) |
| 50   | 34.5 - 345 Bar (500 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI)<br>@ .95 LPM (.25 GPM) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-2-*4P)   |
| 6P   | 3/8" NPTF      | (B10-2-*6P)   |
| 8P   | 1/2" NPTF      | (B10-2-*8P)   |
| 6T   | SAE-6          | (B10-2-*6T)   |
| 8T   | SAE-8          | (B10-2-*8T)   |
| 6B   | 3/8" BSPG      | (B10-2-6B)†   |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

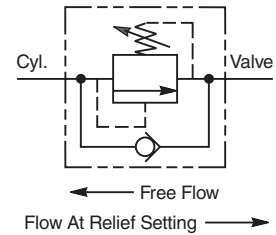
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

Technical Information

- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data

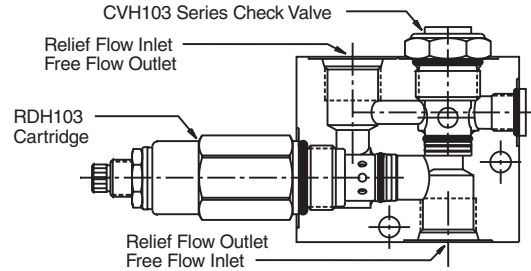
General Description

Direct Acting Relief Valve with Reverse Free Flow Check Valve. For additional information see Technical Tips on pages PC1-PC6.



Features

- Hardened, precision ground parts for durability
- Rugged steel body construction
- Spherical poppets for low leakage
- Built-in cartridge check reduces plumbing
- Differential area cartridge relief for high flow capacity
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.
- "D"-Ring eliminates backup rings



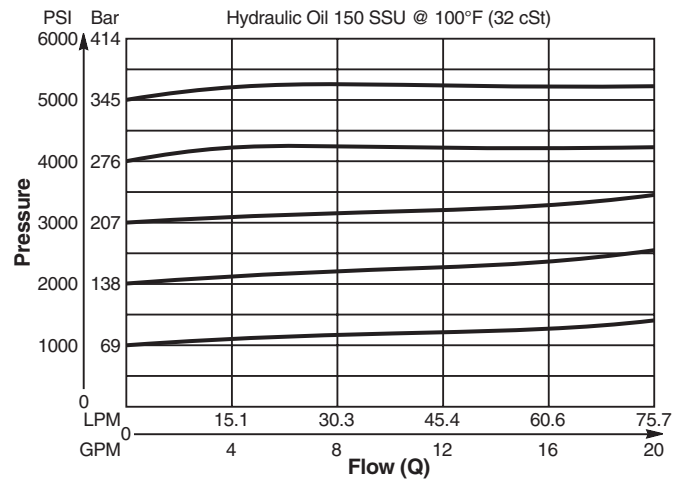
Specifications

|                               |  |
|-------------------------------|--|
| Maximum Flow                  | 60 LPM (16 GPM)  |
| Maximum Inlet Pressure        | 380 Bar (5500 PSI)   |
| Maximum Pressure Setting      | 350 Bar (5000 PSI)   |
| Reseat Pressure               | 85% of crack pressure  |
| Leakage at 150 SSU (32 cSt)   | 5 drops/min. (.33 cc/min.) @ 75% of crack pressure   |
| Cartridge Material            | All parts steel. All operating parts hardened steel.   |
| Body Material                 | Steel  |
| Operating Temp. Range/Seals   | -45°C to +93.3°C ("D"-Ring) (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)  |
| Fluid Compatibility/Viscosity | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| Filtration                    | ISO Code 16/13, SAE Class 4 or better  |
| Approx. Weight                | 1.2 kg (2.7 lbs.)  |

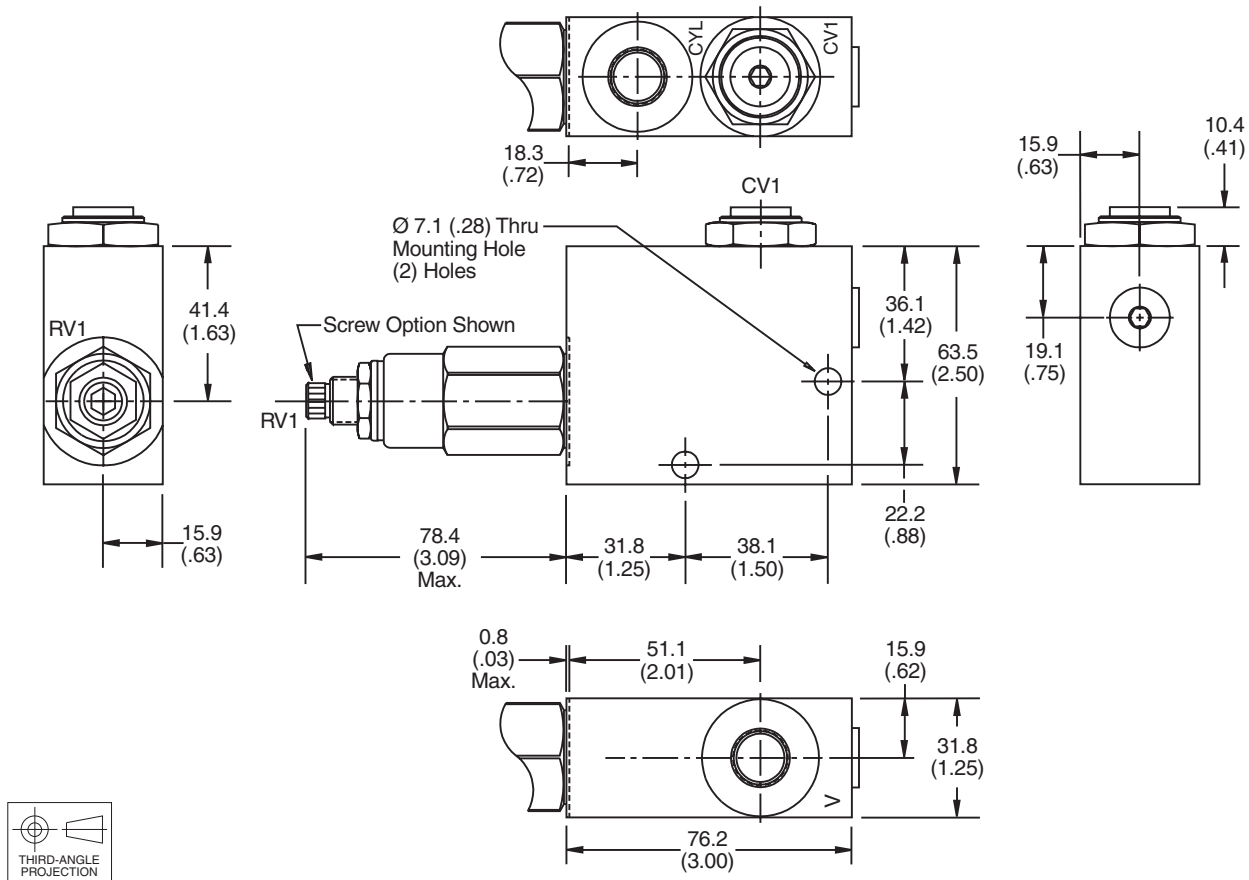
Performance Curve

Flow vs. Inlet Pressure

(Pressure rise through cartridge only)



**Dimensions** Millimeters (Inches)



**Ordering Information**

|   |                          |                          |                                 |                                     |                          |                          |
|---|--------------------------|--------------------------|---------------------------------|-------------------------------------|--------------------------|--------------------------|
| <b>RDCH103</b>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>        | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>10 Size</b><br>Direct Acting Relief Valve<br>With Reverse Flow Check | Adjustment<br>Style      | Pressure<br>Range        | Optional<br>Pressure<br>Setting | Check Valve<br>Cracking<br>Pressure | Seals                    | Port<br>Size             |

| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717943)   |

| Code | Pressure Range  |
|------|---|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI)<br>@ .95 LPM (.25 GPM)     |
| 20   | 34.5 - 138 Bar (500 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)<br>@ .95 LPM (.25 GPM)    |
| 30   | 34.5 - 207 Bar (500 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI)<br>@ .95 LPM (.25 GPM) |
| 50   | 34.5 - 345 Bar (500 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI)<br>@ .95 LPM (.25 GPM) |

| Code | Optional Pressure Setting   |
|------|---|
| Omit | Pressure + 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting<br>is used) |
|      | Setting Range:<br>100 to 5000 PSI<br>All settings at<br>.95 LPM (.25 GPM)     |

| Code | Cracking Pressure |
|------|-------------------|
| Omit | 0.3 Bar (5 PSI)   |
| P20  | 1.4 Bar (20 PSI)  |
| P50  | 3.5 Bar (50 PSI)  |
| P65  | 4.5 Bar (65 PSI)  |
| P100 | 6.9 Bar (100 PSI) |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK10-2)      |
| N    | Nitrile / (SK10-2N)      |
| V    | Fluorocarbon / (SK10-2V) |

| Code | Port Size | Part No. |
|------|-----------|----------|
| 8T   | SAE-8     | 830313   |

*Individual body requires 1 SAE 5 plug.  
 Part number 5 HP50N-S.*



**Technical Information**

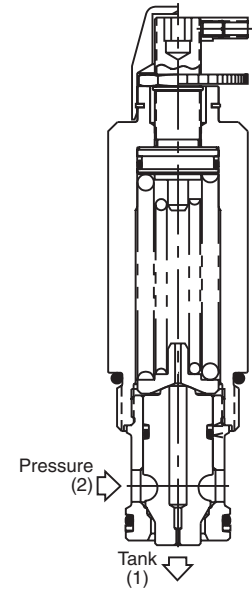
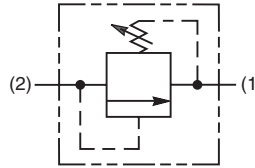
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Differential Area Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Hardened, precision ground parts for durability
- Compact size for reduced space requirements
- Low leakage design
- Fast response
- All external parts zinc plated



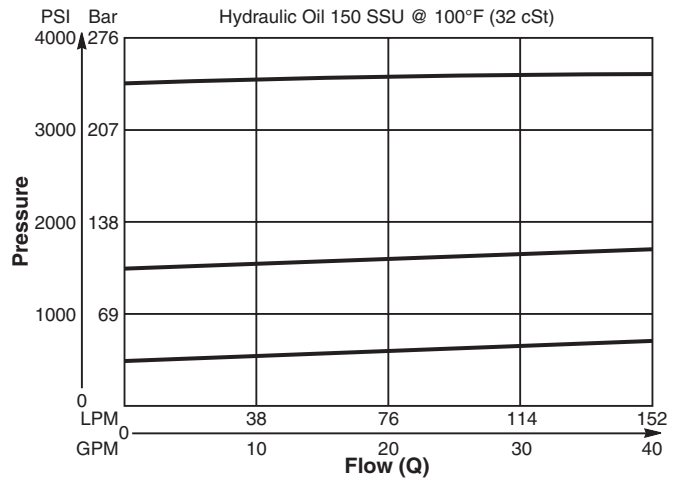
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 151 LPM (40 GPM)   |
| <b>Maximum Inlet Pressure</b>        | 240 Bar (3500 PSI)   |
| <b>Maximum Pressure Setting</b>      | 210 Bar (3000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 210 Bar (3000 PSI)   |
| <b>Reseat Pressure</b>               | 80% of crack pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 10 drops/min. (.66 cc/min.) @75% of crack pressure   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | .23 kg (0.5 lbs.)  |
| <b>Cavity</b>                        | C16-2 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher None<br>Finisher NFT16-2F  |

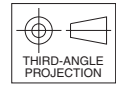
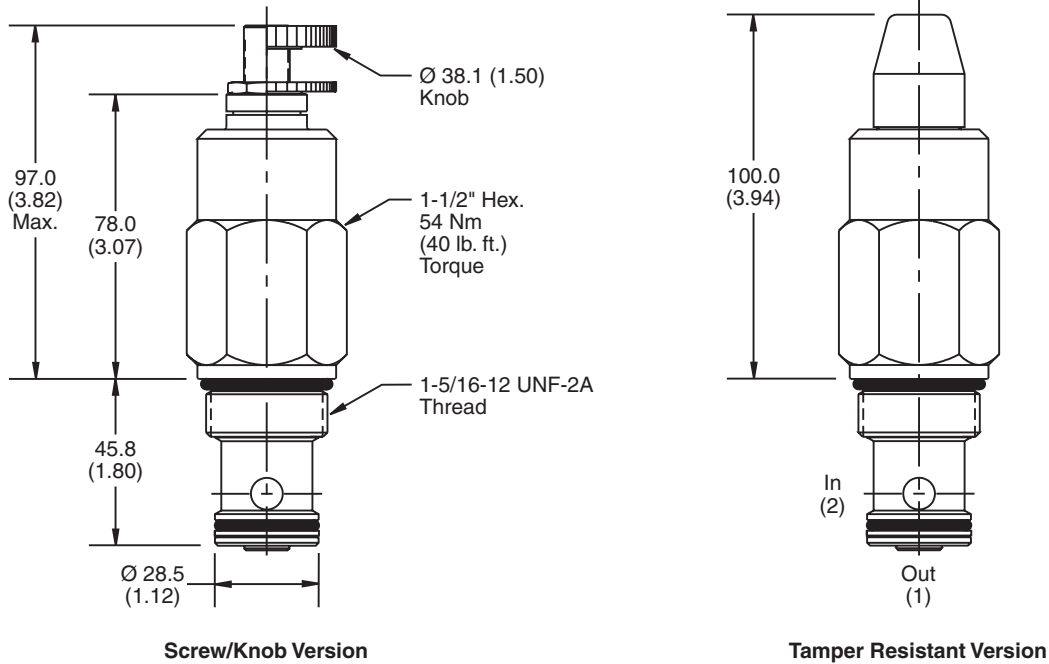
**Performance Curve**

**Flow vs. Inlet Pressure**

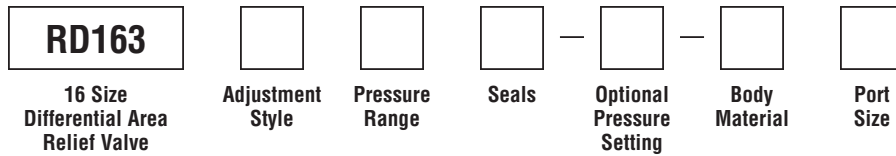
(Pressure rise through cartridge only)



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code     | Adjustment Style / Kit No.    |
|----------|-------------------------------|
| <b>K</b> | Knob Adjust (840208K)         |
| <b>S</b> | Screw Adjust                  |
| <b>T</b> | Tamper Resistant Cap (717783) |

| Code        | Seals / Kit No.          |
|-------------|--------------------------|
| <b>Omit</b> | Nitrile / (SK16-2)       |
| <b>V</b>    | Fluorocarbon / (SK16-2V) |

| Code        | Body Material |
|-------------|---------------|
| <b>Omit</b> | Steel         |
| <b>A</b>    | Aluminum      |

| Code      | Pressure Range   |
|-----------|--|
| <b>10</b> | 13.8 - 69 Bar (200 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI)<br>@ 11.3 LPM (3 GPM)    |
| <b>20</b> | 27.6 - 138 Bar (400 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)<br>@ 11.3 LPM (3 GPM)    |
| <b>30</b> | 41.4 - 207 Bar (600 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI)<br>@ 11.3 LPM (3 GPM) |

| Optional Pressure Setting   |
|---|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 3000 PSI<br>All settings at 11.3 LPM (3 GPM) |

| Code        | Port Size      | Body Part No. |
|-------------|----------------|---------------|
| <b>Omit</b> | Cartridge Only |               |
| <b>12P</b>  | 3/4" NPTF      | (B16-2-*12P)  |
| <b>16P</b>  | 1" NPTF        | (B16-2-*16P)  |
| <b>8T</b>   | SAE-8          | (B16-2-*8T)   |
| <b>12T</b>  | SAE-12         | (B16-2-*12T)  |
| <b>16T</b>  | SAE-16         | (B16-2-*16T)  |
| <b>12B</b>  | 3/4" BSPG      | (B16-2-12B)†  |
| <b>16B</b>  | 1" BSPG        | (B16-2-*16B)  |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
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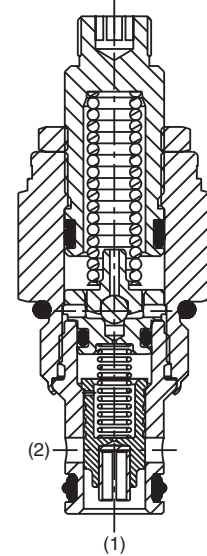
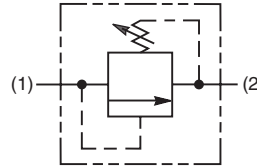
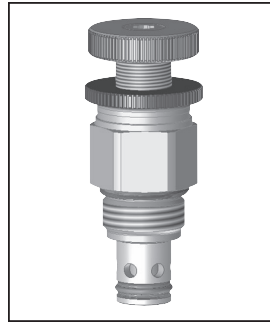
**General Description**

Pilot Operated Spool-Type Relief Valve  
For additional information see  
Technical Tips on pages PC1-PC6.



**Features**

- Hardened, precision ground parts for durability
- Low profile adapter for minimal space requirements
- Fully guided pilot for more consistent reseal
- Steel adapters are coated with yellow zinc dichromate for protection from salt spray
- Polyurethane "D"-Ring eliminates backup rings and prevents hydrolysis
- Internal screening protects pilot spring from debris



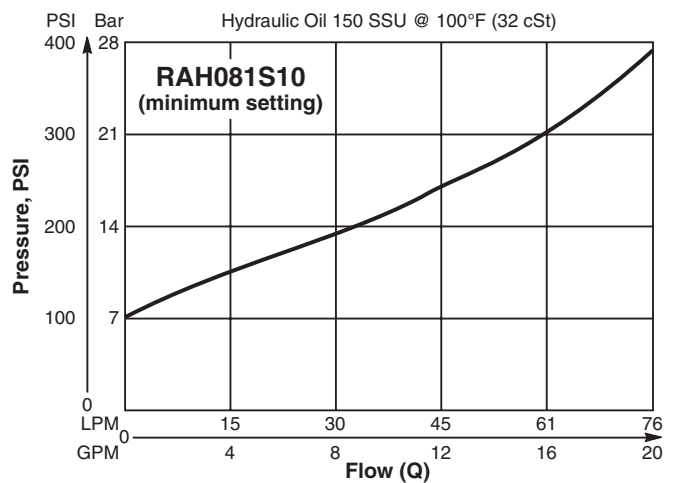
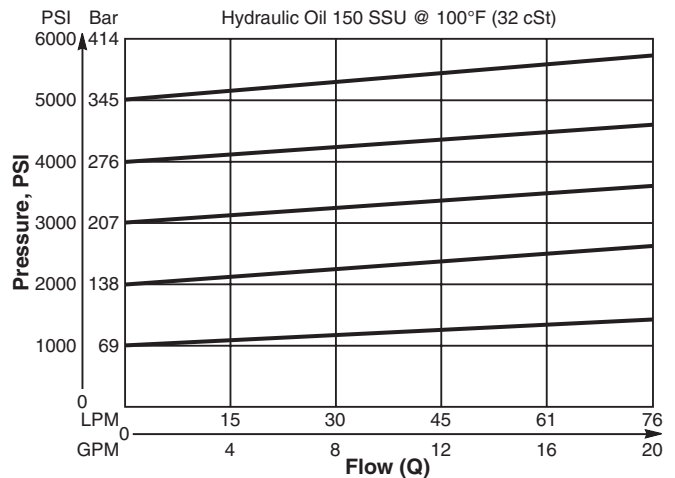
**Specifications**

|                                       |   |
|---------------------------------------|---|
| <b>Rated Flow</b>                     | 75.8 LPM (20 GPM)   |
| <b>Maximum Inlet Pressure</b>         | 380 Bar (5500 PSI)  |
| <b>Maximum Pressure Setting</b>       | 350 Bar (5000 PSI)  |
| <b>Maximum Tank Pressure</b>          | 350 Bar (5000 PSI)  |
| <b>Reseat Pressure</b>                | 90% of crack pressure   |
| <b>Leakage at 150 SSU (32 cSt)</b>    | 5 cc per 100 PSI (6.8 Bar) setting  |
| <b>Cartridge Material</b>             | All parts steel. All operating parts hardened steel.  |
| <b>Operating Temp. Range/Seals</b>    | -45°C to +93.3°C ("D"-Ring)<br>(-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon)<br>(-25°F to +250°F) |
| <b>Fluid Compatibility/ Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)      |
| <b>Filtration</b>                     | ISO Code 16/13, SAE Class 4 or better   |
| <b>Approx. Weight</b>                 | .09 kg (.20 lbs.)   |
| <b>Cavity</b>                         | C08-2<br>(See BC Section for more details)  |
| <b>Form Tool</b>                      | Rougher None<br>Finisher NFT08-2F   |

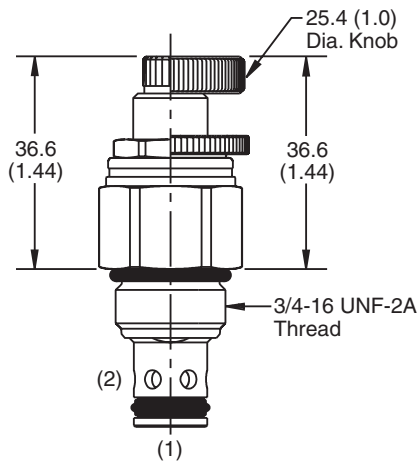
**Performance Curves**

**Flow vs. Inlet Pressure**

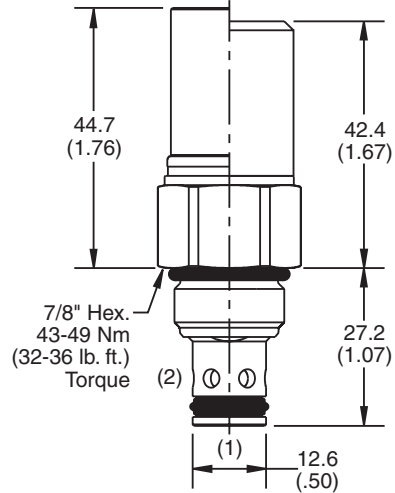
(Pressure rise through cartridge only)



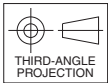
**Dimensions** Millimeters (Inches)



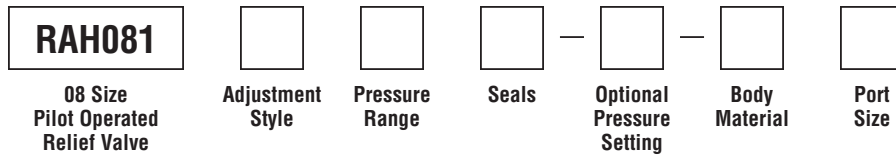
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717943)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK08-2)      |
| N    | Nitrile / (SK08-2N)      |
| V    | Fluorocarbon / (SK08-2V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range  |
|------|---|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM)     |
| 20   | 6.9 - 138 Bar (100 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM)     |
| 30   | 13.8 - 207 Bar (200 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM) |
| 50   | 13.8 - 345 Bar (200 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM) |

| Optional Pressure Setting   |
|---|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI<br>All settings at crack pressure,<br>approximately .95 LPM (.25 GPM) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B08-2-*4P)   |
| 6P   | 3/8" NPTF      | (B08-2-*6P)   |
| 4T   | SAE-4          | (B08-2-*4T)   |
| 6T   | SAE-6          | (B08-2-*6T)   |
| 6B   | 3/8" BSPG      | (B08-2-*6B)   |

\* Add "A" for aluminum, omit for steel.

**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

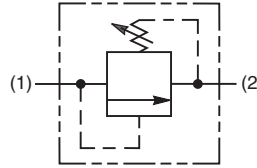
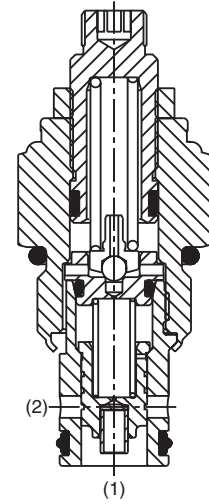
**General Description**

Pilot Operated Spool-Type Relief Valve  
For addition information see Technical Tips on pages PC1-PC6.



**Features**

- Hardened, precision ground parts for durability
- Low profile adapter for minimal space requirements
- Fully guided poppet for more consistent reseal
- Steel adapters are coated with yellow zinc dichromate for protection from salt spray
- Polyurethane "D"-Ring eliminates backup rings and prevents hydrolysis
- Internal screening protects pilot spring from debris



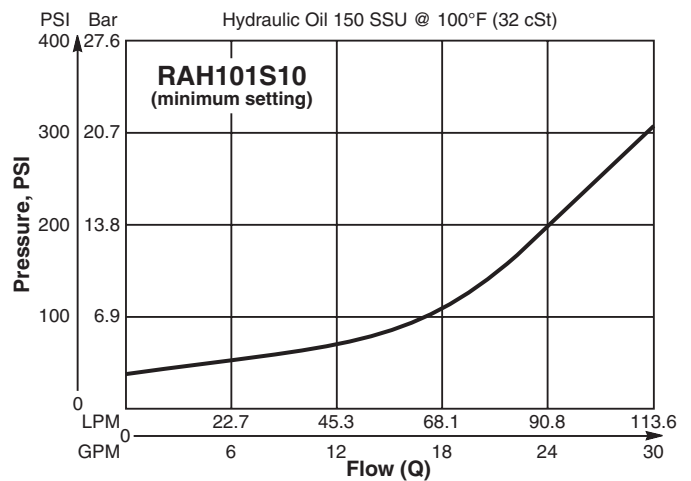
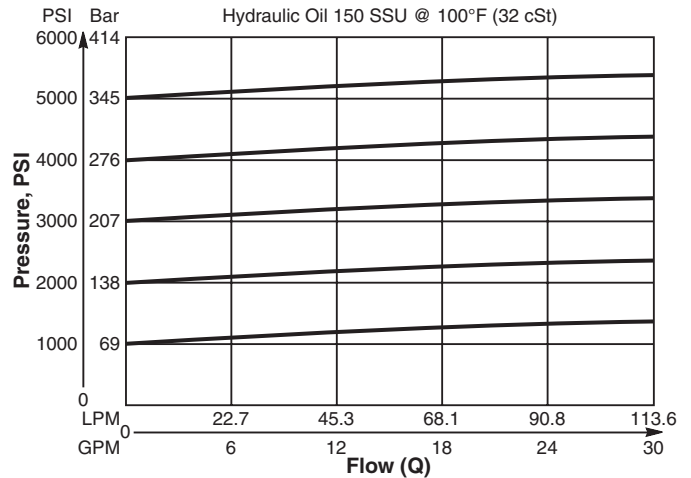
**Specifications**

|                                       |   |
|---------------------------------------|---|
| <b>Rated Flow</b>                     | 113 LPM (30 GPM)  |
| <b>Maximum Inlet Pressure</b>         | 380 Bar (5500 PSI)  |
| <b>Maximum Pressure Setting</b>       | 350 Bar (5000 PSI)  |
| <b>Maximum Tank Pressure</b>          | 350 Bar (5000 PSI)  |
| <b>Reseat Pressure</b>                | 90% of crack pressure   |
| <b>Leakage at 150 SSU (32 cSt)</b>    | 5 cc per 100 PSI (6.8 Bar) setting  |
| <b>Cartridge Material</b>             | All parts steel. All operating parts hardened steel.  |
| <b>Operating Temp. Range/Seals</b>    | -45°C to +93.3°C ("D"-Ring)<br>(-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon)<br>(-25°F to +250°F) |
| <b>Fluid Compatibility/ Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)      |
| <b>Filtration</b>                     | ISO Code 16/13, SAE Class 4 or better   |
| <b>Approx. Weight</b>                 | .23 kg (.50 lbs.)   |
| <b>Cavity</b>                         | C10-2<br>(See BC Section for more details)  |
| <b>Form Tool</b>                      | Rougher None<br>Finisher NFT10-2F   |

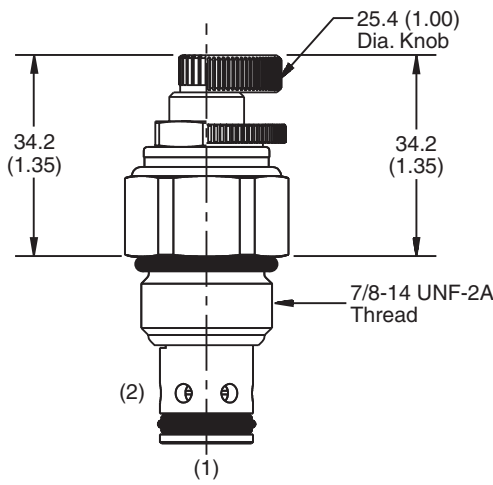
**Performance Curves**

**Flow vs. Inlet Pressure**

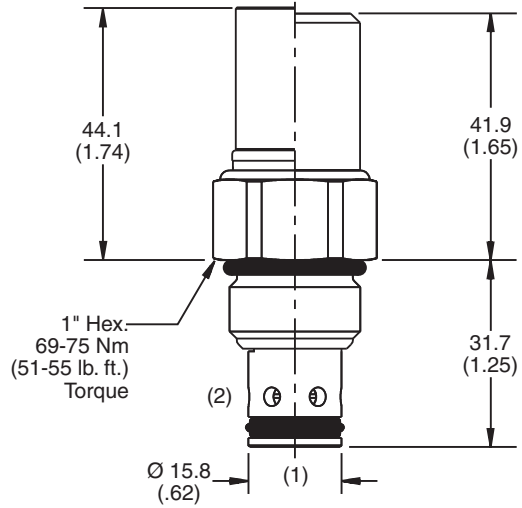
(Pressure rise through cartridge only)



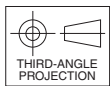
**Dimensions** Millimeters (Inches)



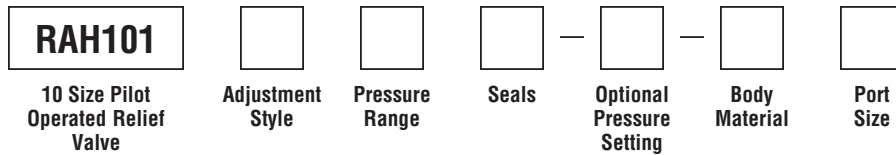
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (718083)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK10-2)      |
| N    | Nitrile / (SK10-2N)      |
| V    | Fluorocarbon / (SK10-2V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range  |
|------|---|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM)     |
| 20   | 6.9 - 138 Bar (100 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM)     |
| 30   | 13.8 - 207 Bar (200 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM) |
| 50   | 13.8 - 345 Bar (200 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM) |

| Optional Pressure Setting   |
|---|
| Pressure ÷ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI<br>All settings at crack pressure,<br>approximately .95 LPM (.25 GPM) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-2-*4P)   |
| 6P   | 3/8" NPTF      | (B10-2-*6P)   |
| 8P   | 1/2" NPTF      | (B10-2-*8P)   |
| 6T   | SAE-6          | (B10-2-*6T)   |
| 8T   | SAE-8          | (B10-2-*8T)   |
| T8T  | SAE-8          | (B10-2-T8T)†  |
| 6B   | 3/8" BSPG      | (B10-2-6B)†   |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.



**Technical Information**

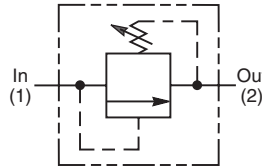
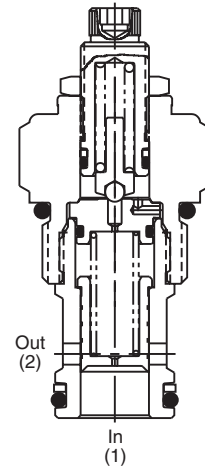
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Pilot Operated Spool-Type Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Low override curve
- Ball-type pilot for added stability
- High accuracy - pilot operated design
- Hardened, precision ground parts for durability
- Compact size for reduced space requirements
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.



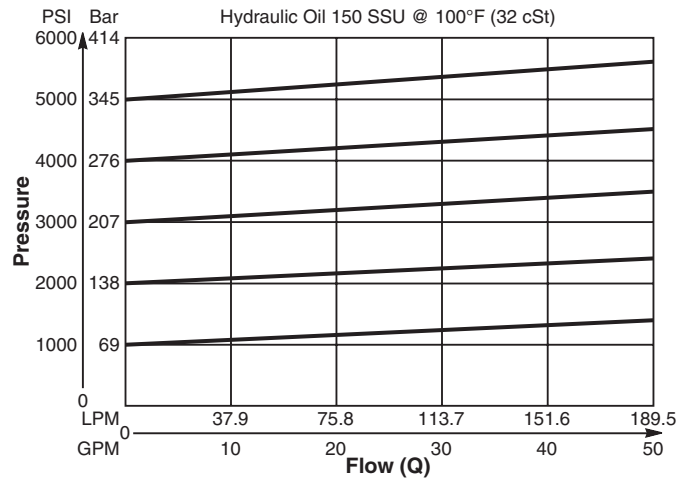
**Specifications**

|                                       |  |
|---------------------------------------|--|
| <b>Rated Flow</b>                     | 189.5 LPM (50 GPM)   |
| <b>Maximum Inlet Pressure</b>         | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>       | 350 Bar (5000 PSI)   |
| <b>Reseat Pressure</b>                | 80% of crack pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>    | 82 cc/min. (5 cu. in./min.) @ 75% of crack pressure  |
| <b>Cartridge Material</b>             | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>    | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/ Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                     | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                 | .22 kg (.48 lbs.)  |
| <b>Cavity</b>                         | C12-2  |
| <b>Form Tool</b>                      | Rougher None<br>Finisher NFT12-2F  |

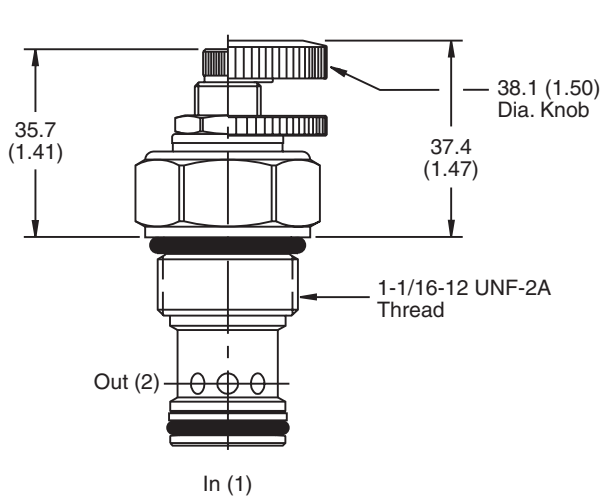
**Performance Curve**

**Flow vs. Inlet Pressure**

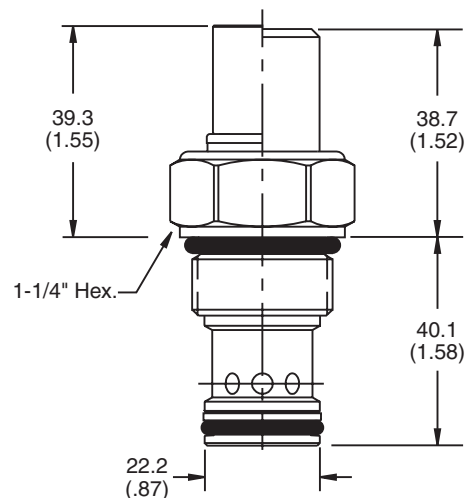
(Pressure rise through cartridge only)



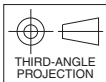
**Dimensions** Millimeters (Inches)



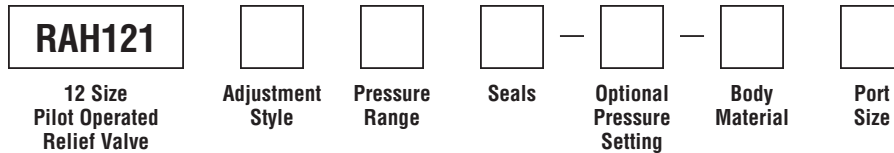
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-15)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717785)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | Nitrile / (SK12-2)       |
| V    | Fluorocarbon / (SK12-2V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range   |
|------|--|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI)<br>@ 11.3 LPM (3 GPM)     |
| 20   | 13.8 - 138 Bar (200 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)<br>@ 11.3 LPM (3 GPM)    |
| 30   | 20.7 - 207 Bar (300 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI)<br>@ 11.3 LPM (3 GPM) |
| 50   | 34.5 - 345 Bar (500 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI)<br>@ 11.3 LPM (3 GPM) |

| Optional Pressure Setting   |
|---|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI<br>All settings at 11.3 LPM (3 GPM) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 12P  | 3/4" NPTF      | (B12-2-*12P)  |
| 8T   | SAE-8          | (B12-2-*8T)   |
| 12T  | SAE-12         | (B12-2-*12T)  |

\* Add "A" for aluminum, omit for steel.

**Technical Information**

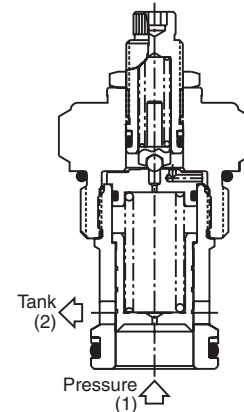
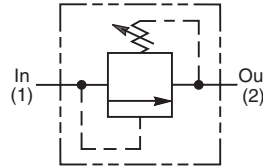
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Pilot Operated Spool-Type Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Low override curve
- Ball-type pilot for added stability
- High accuracy - pilot operated design
- Hardened, precision ground parts for durability
- Compact size for reduced space requirements
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.



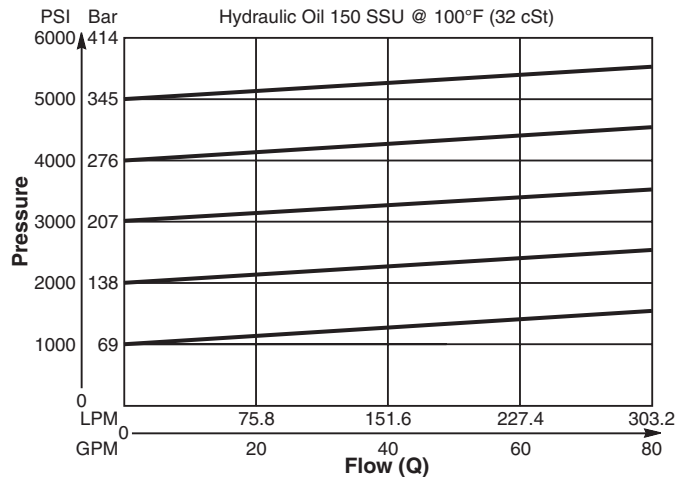
**Specifications**

|  |  |
|--|--|
| <b>Maximum Flow</b>                    | 302.8 LPM (80 GPM)   |
| <b>Maximum Inlet Pressure</b>          | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>        | 350 Bar (5000 PSI)   |
| <b>Maximum Tank Pressure</b>           | 350 Bar (5000 PSI)   |
| <b>Reseat Pressure</b>                 | 80% of crack pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>     | 5 cc per 100 PSI (6.8 Bar) setting   |
| <b>Cartridge Material</b>              | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range (Ambient)</b> | -40°C to +93.3°C (Nitrile)<br>(-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon)<br>(-25°F to +250°F) |
| <b>Fluid Compatibility/ Viscosity</b>  | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)     |
| <b>Filtration</b>                      | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                  | 0.9 kg (2.0 lbs.)  |
| <b>Cavity</b>                          | C16-2<br>(See BC Section for more details)   |
| <b>Form Tool</b>                       | Rougher None<br>Finisher NFT16-2F  |

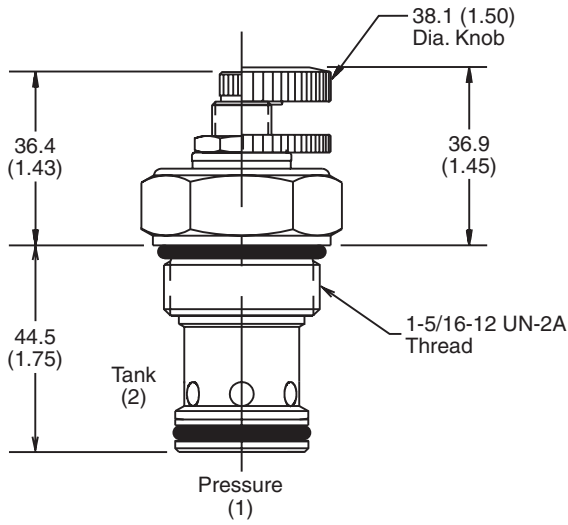
**Performance Curve**

**Flow vs. Inlet Pressure**

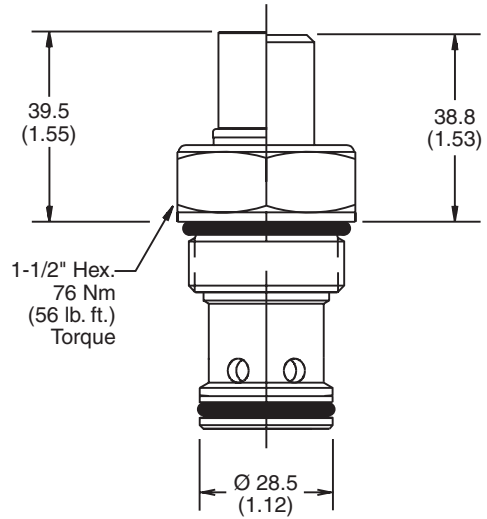
(Pressure rise through cartridge only)



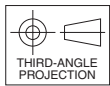
**Dimensions** Millimeters (Inches)



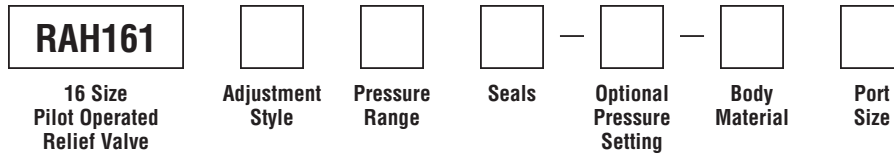
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-15)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717785)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | Nitrile / (SK16-2)       |
| V    | Fluorocarbon / (SK16-2V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range  |
|------|---|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI)<br>@ 37.5 LPM (10 GPM)     |
| 20   | 13.8 - 138 Bar (200 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)<br>@ 37.5 LPM (10 GPM)    |
| 30   | 20.7 - 207 Bar (300 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI)<br>@ 37.5 LPM (10 GPM) |
| 50   | 34.5 - 345 Bar (500 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI)<br>@ 37.5 LPM (10 GPM) |

| Optional Pressure Setting  |
|--|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI<br>All settings at 37.5 LPM (10 GPM) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 12P  | 3/4" NPTF      | (B16-2-*12P)  |
| 16P  | 1" NPTF        | (B16-2-*16P)  |
| 8T   | SAE-8          | (B16-2-*8T)   |
| 12T  | SAE-12         | (B16-2-*12T)  |
| 16T  | SAE-16         | (B16-2-*16T)  |
| 12B  | 3/4" BSPG      | (B16-2-12B)†  |
| 16B  | 1" BSPG        | (B16-2-*16B)  |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

**Technical Information**

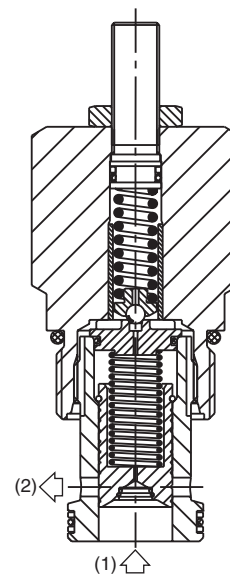
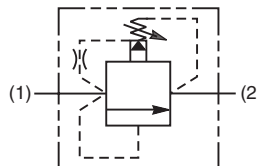
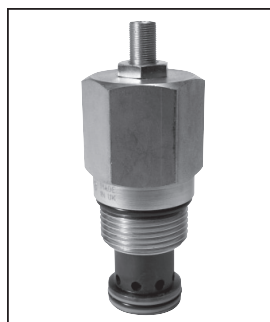
- CV** Check Valves
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- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Pilot Operated, Spool-Type Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Very high flow capacity
- Minimal pressure variation with flow change
- Full tank line back pressure capability, ideal for crossline relief applications
- Integral 250 micron pilot flow filter
- Hardened working parts for maximum durability
- Adjustable and tamperproof versions available
- All external parts zinc plated



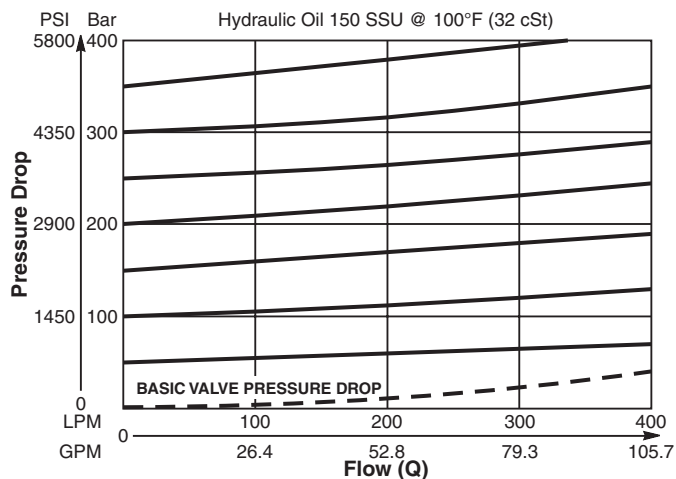
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 400 LPM (106 GPM)  |
| <b>Maximum Inlet Pressure</b>        | H - 10-210 Bar (145-3000 PSI)<br>P - 10-420 Bar (145-6000 PSI)   |
| <b>Maximum Pressure Setting</b>      | 420 Bar (6000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 100 ml/min.<br>@ 100 Bar (1450 PSI)  |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.57 kg (1.26 lbs.)  |
| <b>Cavity</b>                        | C16-2<br>(See BC Section for more details)   |
| <b>Form Tool</b>                     | Rougher None<br>Finisher NFT16-2F  |

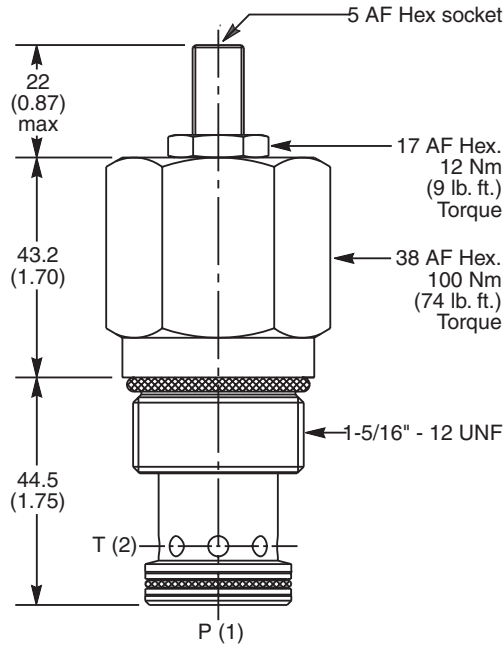
**Performance Curve**

(Pressure rise through cartridge only)

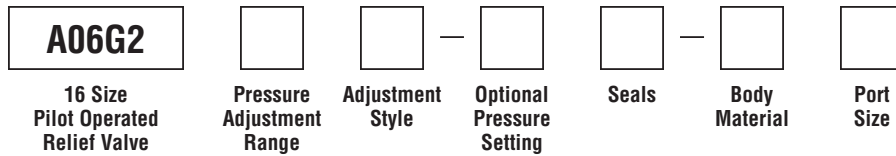
**Flow vs. Inlet Pressure**



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Pressure Adjustment Range     |
|------|-------------------------------|
| H    | 10 - 210 Bar (145 - 3000 PSI) |
| P    | 10 - 420 Bar (145 - 6000 PSI) |

| Code | Seals / Kit No.                       |
|------|---------------------------------------|
| N    | Nitrile, Buna-N (Std.) / (SK30507N-1) |
| V    | Fluorocarbon / (SK30507V-1)           |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Adjustment Style / Kit No.    |
|------|-------------------------------|
| Z    | Screw Adjust (Std.)           |
| W    | Knob Adjust                   |
| T    | Tamper Resistant Cap (TC1130) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 12P  | 3/4" NPTF      | (B16-2-*12P)  |
| 16P  | 1" NPTF        | (B16-2-*16P)  |
| 8T   | SAE-8          | (B16-2-*8T)   |
| 12T  | SAE-12         | (B16-2-*12T)  |
| 16T  | SAE-16         | (B16-2-*16T)  |
| 12B  | 3/4" BSPG      | (B16-2-12B)†  |
| 16B  | 1" BSPG        | (B16-2-*16B)  |

| Optional Pressure Setting   |  |
|---|--|
| Specify setting if required (Bar)   |  |
| <b>A06G2H</b> Standard Setting:<br>100 Bar (1450 PSI)<br>@ 15 LPM (4.0 GPM) |  |
| <b>A06G2P</b> Standard Setting:<br>200 Bar (2900 PSI)<br>@ 15 LPM (4.0 GPM) |  |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

**Technical Information**

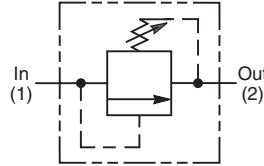
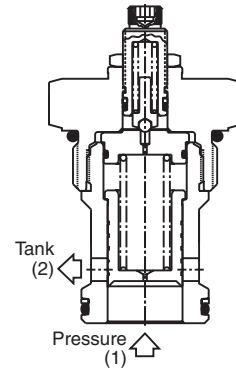
**CV** Check Valves  
**SH** Shuttle Valves  
**LM** Load/Motor Controls  
**FC** Flow Controls  
**PC** Pressure Controls  
**LE** Logic Elements  
**DC** Directional Controls  
**MV** Manual Valves  
**SV** Solenoid Valves  
**PV** Proportional Valves  
**CE** Coils & Electronics  
**BC** Bodies & Cavities  
**TD** Technical Data

**General Description**

Pilot Operated Spool-Type Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Low override curve
- Ball-type pilot for added stability
- High accuracy - pilot operated design
- Hardened, precision ground parts for durability
- Compact size for reduced space requirements
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.



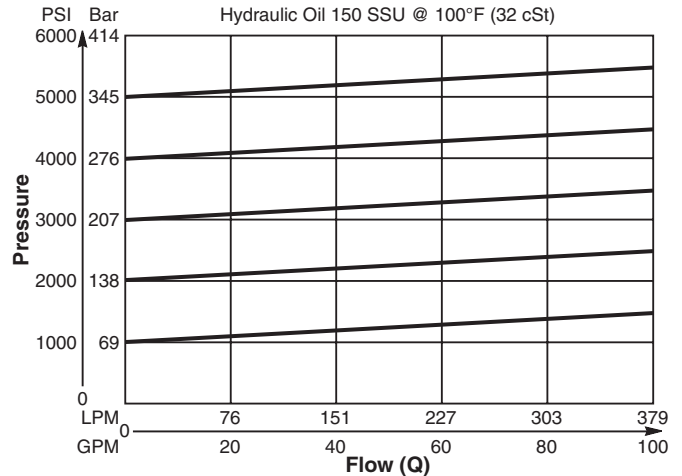
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 379 LPM (100 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>      | 350 Bar (5000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 350 Bar (5000 PSI)   |
| <b>Reseat Pressure</b>               | 80% of crack pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 5 cc per 100 PSI (6.8 Bar) setting   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.9 kg (2.0 lbs.)  |
| <b>Cavity</b>                        | C20-2 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher None<br>Finisher NFT20-2F  |

**Performance Curve**

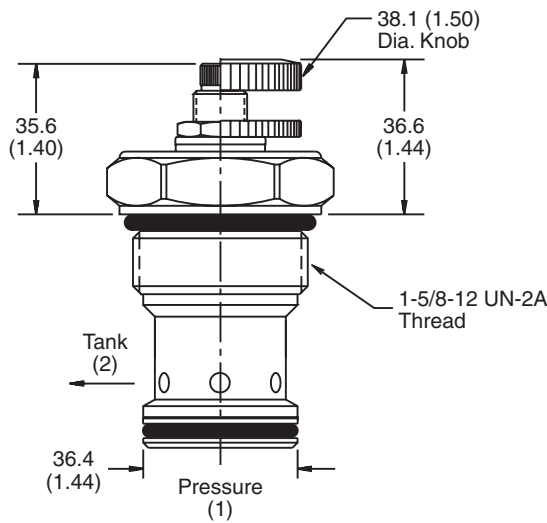
**Flow vs. Inlet Pressure**

(Pressure rise through cartridge only)

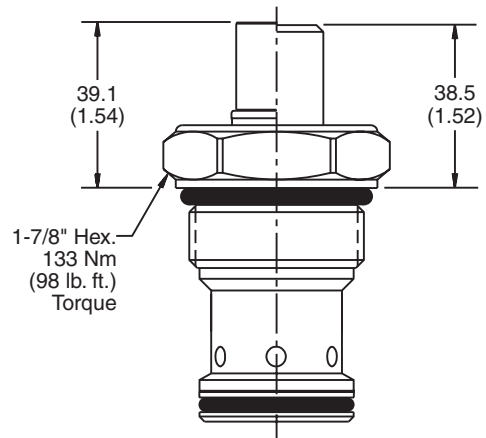




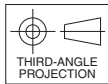
**Dimensions** Millimeters (Inches)



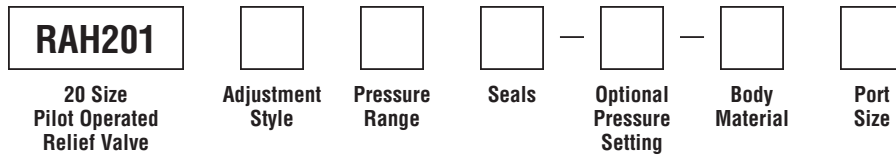
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-15)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717785)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | Nitrile / (SK20-2)       |
| V    | Fluorocarbon / (SK20-2V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |

| Code | Pressure Range  |
|------|---|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI)<br>@ 37.5 LPM (10 GPM)     |
| 20   | 13.8 - 138 Bar (200 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)<br>@ 37.5 LPM (10 GPM)    |
| 30   | 20.7 - 207 Bar (300 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI)<br>@ 37.5 LPM (10 GPM) |
| 50   | 34.5 - 345 Bar (500 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI)<br>@ 37.5 LPM (10 GPM) |

| Optional Pressure Setting  |
|--|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI<br>All settings at 37.5 LPM (10 GPM) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 20T  | SAE-20         | (B20-2-20T)   |
| 20B  | 1-1/4" BSPG    | (B20-2-20B)   |

**Technical Information**

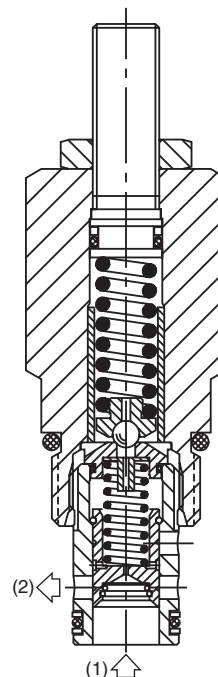
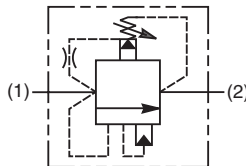
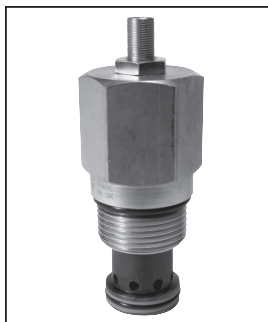
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Kick-Down, Pilot Operated Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- High flow capacity
- Integral 250 micron pilot flow filter
- Hardened working parts for maximum durability
- Adjustable and tamper resistant versions available
- All external parts zinc plated



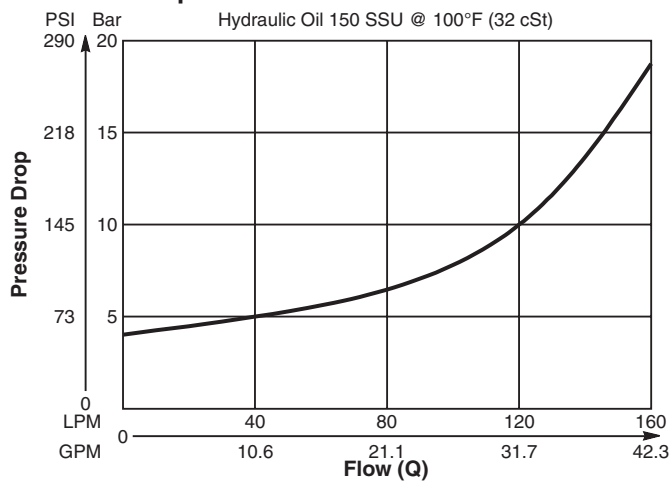
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 160 LPM (42 GPM)   |
| <b>Maximum Inlet Pressure</b>        | 420 Bar (6000 PSI)   |
| <b>Maximum Pressure Setting</b>      | H - 10-210 Bar (145-3000 PSI)<br>P - 10-420 Bar (144-6000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Sensitivity: Pressure/Turn</b>    | H - 30 Bar (435 PSI)<br>P - 55 Bar (800 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 25 ml/min.<br>@ 50 Bar (725 PSI)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.29 kg (0.64 lbs.)  |
| <b>Cavity</b>                        | C10-2 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher None<br>Finisher   |

**Performance Curve**

(Pressure rise through cartridge only)

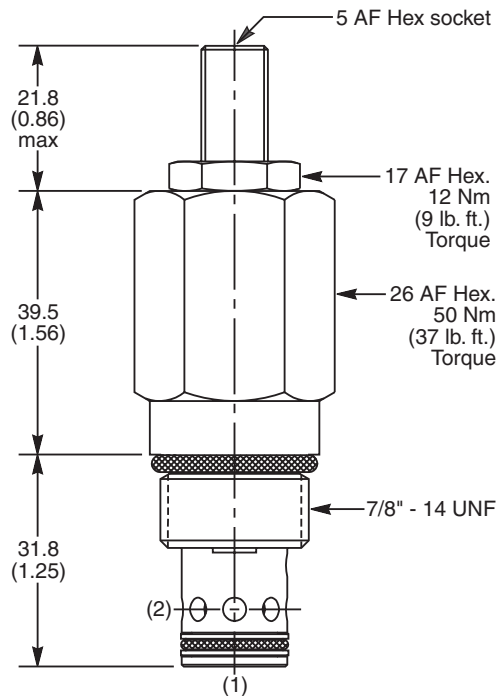
**Pressure Drop vs. Flow**



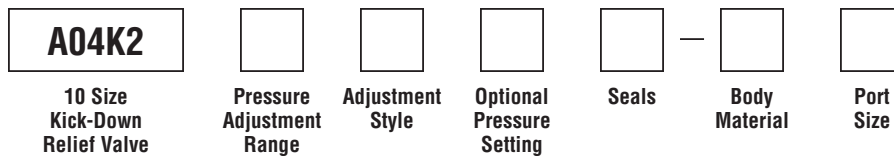
**Application Note**

Valve unloads completely when setting is reached and resets when fluid supply is removed.

**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Pressure Adjustment Range     |
|------|-------------------------------|
| H    | 10 - 210 Bar (145 - 3000 PSI) |
| P    | 10 - 420 Bar (145 - 6000 PSI) |

| Code | Seals / Kit No.                       |
|------|---------------------------------------|
| N    | Nitrile, Buna-N (Std.) / (SK30503N-1) |
| V    | Fluorocarbon / (SK30503V-1)           |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Adjustment Style / Kit No.    |
|------|-------------------------------|
| Z    | Screw Adjust (Std.)           |
| W    | Knob Adjust                   |
| T    | Tamper Resistant Cap (TC1130) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-2-*4P)   |
| 6P   | 3/8" NPTF      | (B10-2-*6P)   |
| 8P   | 1/2" NPTF      | (B10-2-*8P)   |
| 6T   | SAE-6          | (B10-2-*6T)   |
| 8T   | SAE-8          | (B10-2-*8T)   |
| T8T  | SAE-8          | (B10-2-T8T)†  |
| 6B   | 3/8" BSPG      | (B10-2-6B)†   |

| Optional Pressure Setting         |                                      |
|-----------------------------------|--------------------------------------|
| Specify setting if required (Bar) |                                      |
| <b>A04K2H</b>                     | Standard Setting: 100 Bar (1450 PSI) |
| <b>A04K2P</b>                     | Standard Setting: 200 Bar (2900 PSI) |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

**Technical Information**

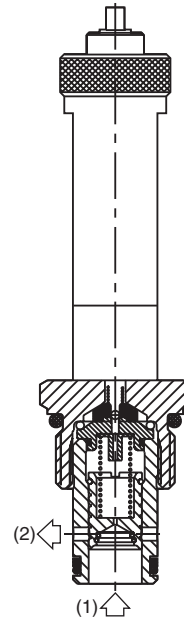
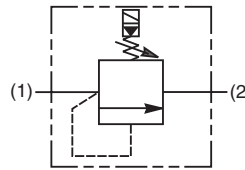
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Solenoid Operated Unloading Relief Valve. For additional information see Technical Tips on pages PV1-PV6.

**Features**

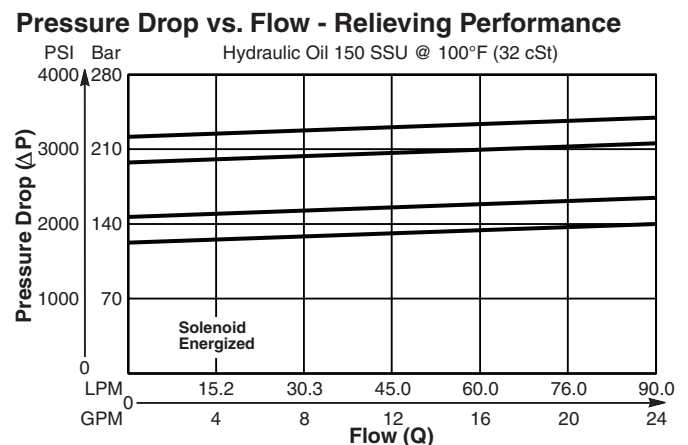
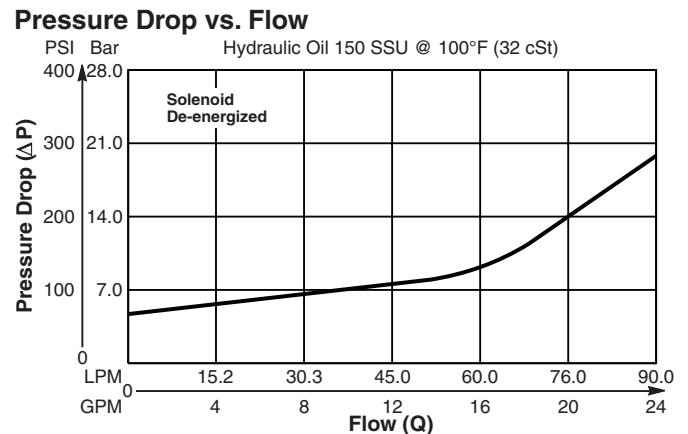
- Two functions in one valve, unloading and relieving
- Factory set relief pressure or adjustable option
- Integral 250 micron pilot flow filter
- Coil: Waterproof, hermetically sealed, requires no O’Rings; Symmetrical coil can be reversed without affecting performance.



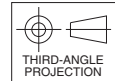
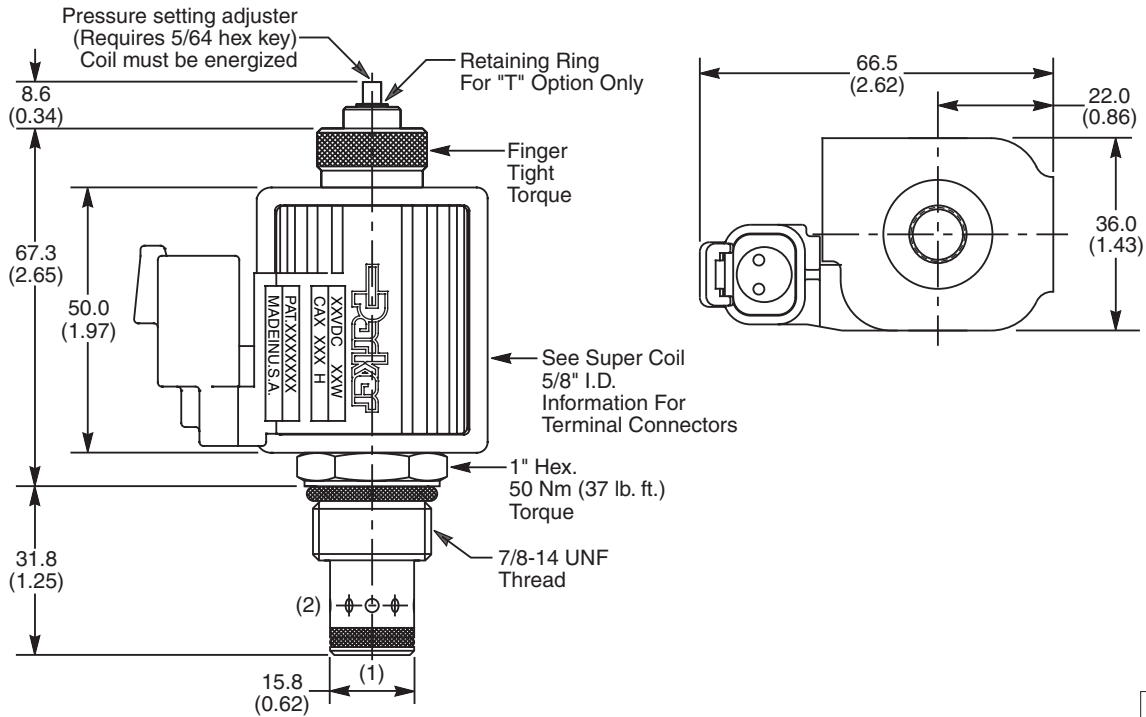
**Specifications**

|                                       |  |
|---------------------------------------|--|
| <b>Rated Flow (At 70 PSI ΔP)</b>      | 60 LPM (16 GPM)  |
| <b>Max. Pressure</b>                  | 6.9 - 276 Bar (100 - 4000 PSI)   |
| <b>Reseat Pressure 200 Hz PWM</b>     | 90% of Cracking Pressure   |
| <b>Max. Tank Pressure</b>             | 70 Bar (1000 PSI)  |
| <b>Cartridge Material</b>             | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>    | -40°C to +93.3°C (Nitrile)<br>(-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon)<br>(-25°F to +250°F) |
| <b>Fluid Compatibility/ Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)     |
| <b>Filtration</b>                     | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                 | .45 kg (.98 lbs.)  |
| <b>Cavity</b>                         | C10-2 (See BC Section for more details)  |

**Performance Curves**



**Dimensions** Millimeters (Inches)



**Ordering Information**

**AS04G2**                                   

**10 Size Proportional Relief Valve**    **Adjustment Option**    **Relief Setting**    **Seals**    **Coil Type**    **Coil Voltage**    **Coil Termination**    **Body Material**    **Port Size**

| Code | Adjustment Options |
|------|--------------------|
| T    | Tamper Proof       |
| Z    | Push and Turn      |

| Code | Seals / Kit. No.                     |
|------|--------------------------------------|
| N    | Nitrile / Buna-N (Std.) (SK30006N-1) |
| V    | Fluorocarbon / (SK30006V-1)          |

| Code | Coil Voltage |
|------|--------------|
| Omit | Without Coil |
| D012 | 12 VDC       |
| D024 | 24 VDC       |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Relief Setting              |
|------|-----------------------------|
| Omit | 124 Bar (1800 PSI) Standard |
| 14   | 140 Bar (2000 PSI)          |
| 20   | 200 Bar (2900 PSI)          |
| 22   | 220 Bar (3200 PSI)          |
| 27   | 276 Bar (4000 PSI)          |

| Code | Coil Type             |
|------|-----------------------|
| Omit | Without Coil          |
| SP   | Super Coil - 28 Watts |

| Code | Coil Termination  |
|------|-------------------|
| Omit | Without Coil      |
| D    | DIN Plug Face     |
| A    | Amp Jr. Timer*    |
| L    | Dual Lead Wire*   |
| LS   | Sealed Lead Wire* |
| H    | Molded Deutsch*   |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-2-*4P)   |
| 6P   | 3/8" NPTF      | (B10-2-*6P)   |
| 8P   | 1/2" NPTF      | (B10-2-*8P)   |
| 6T   | SAE-6          | (B10-2-*6T)   |
| 8T   | SAE-8          | (B10-2-*8T)   |
| T8T  | SAE-8          | (B10-2-T8T)†  |
| 6B   | 3/8" BSPG      | (B10-2-*6B)   |

See Super Coil 5/8" I.D.  
\*DC Only

\* Add "A" for aluminum, omit for steel.  
† Steel body only.

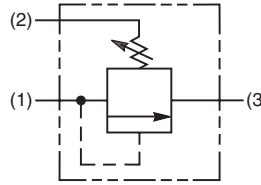
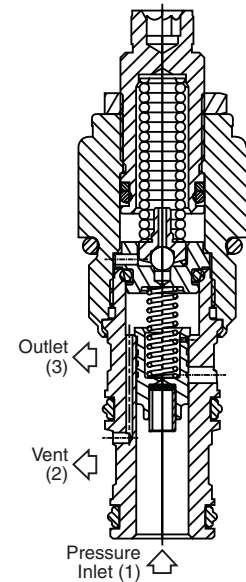
- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Ventable Pilot Operated Spool-Type Relief Valve. This valve controls pressure via the internal spring chamber or via an external vent line. For addition information see Technical Tips on pages PC1-PC6.



**Features**

- Low override curve
- Ball-type pilot for added stability
- High accuracy - pilot operated design
- Hardened, precision ground parts for durability
- Compact size for reduced space requirements
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.

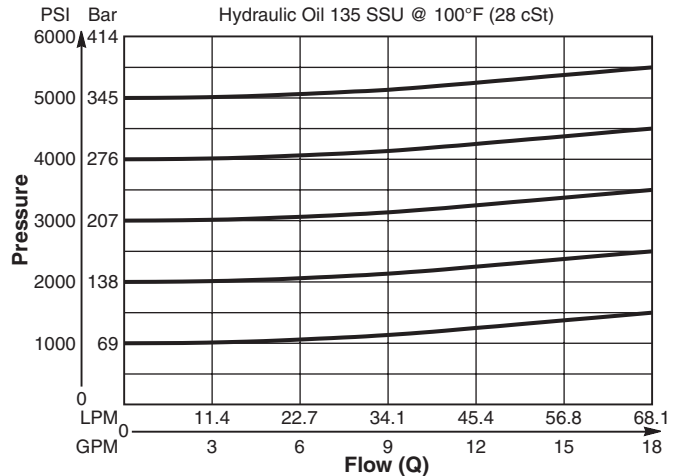
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 68 LPM (18 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>      | 350 Bar (5000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 350 Bar (5000 PSI)   |
| <b>Reseat Pressure</b>               | 80% of crack pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 5 cc per 100 PSI (6.8 Bar) setting   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -45°C to +93.3°C ("D"-Ring) (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)  |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | .23 kg (.50 lbs.)  |
| <b>Cavity</b>                        | C10-3 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher NFT10-3R<br>Finisher NFT10-3F  |

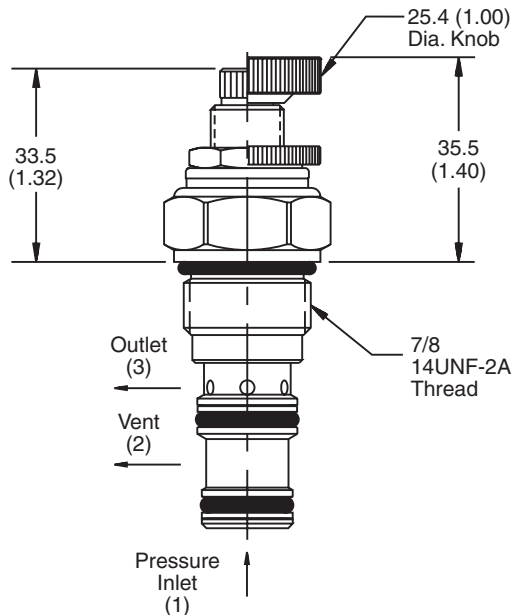
**Performance Curves**

**Flow vs. Inlet Pressure**

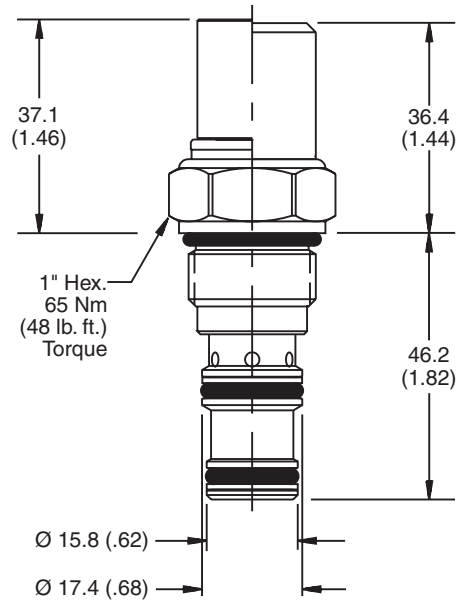
(Pressure rise through cartridge only)



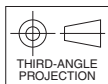
**Dimensions** Millimeters (Inches)



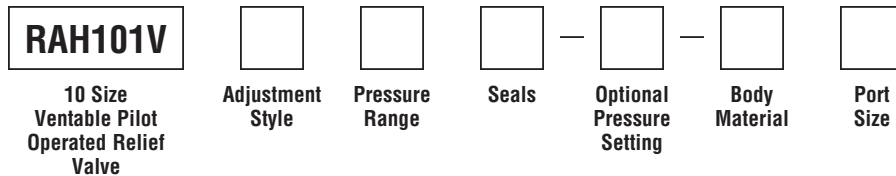
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (718083)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK10-3)      |
| N    | Nitrile / (SK10-3N)      |
| V    | Fluorocarbon / (SK10-3V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range   |
|------|--|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI)<br>@ 11.3 LPM (3 GPM)     |
| 20   | 13.8 - 138 Bar (200 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)<br>@ 11.3 LPM (3 GPM)    |
| 30   | 20.7 - 207 Bar (300 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI)<br>@ 11.3 LPM (3 GPM) |
| 50   | 34.5 - 345 Bar (500 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI)<br>@ 11.3 LPM (3 GPM) |

| Optional Pressure Setting   |
|---|
| Pressure ÷ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI<br>All settings at 11.3 LPM (3 GPM) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-3-*4P)   |
| 6P   | 3/8" NPTF      | (B10-3-*6P)   |
| 8P   | 1/2" NPTF      | (B10-3-*8P)   |
| 6T   | SAE-6          | (B10-3-*6T)   |
| 8T   | SAE-8          | (B10-3-*8T)   |
| 4B   | 1/4" BSPG      | (B10-3-4B)†   |
| 6B   | 3/8" BSPG      | (B10-3-6B)†   |
| 8B   | 1/2" BSPG      | (B10-3-*8B)   |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.



**Technical Information**

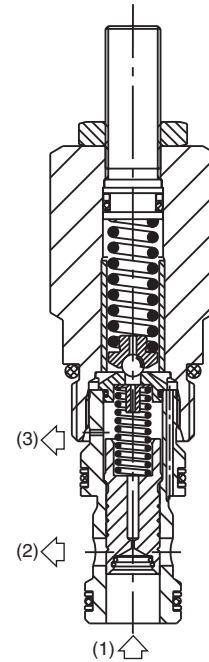
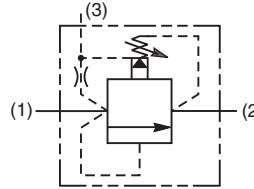
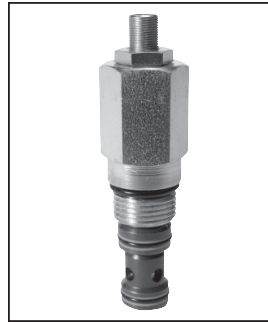
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Pilot Operated, Spool-Type, Ventable Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- High flow capacity
- Full tank line back pressure capability
- Excellent flow pressure characteristics for consistent pressure setting
- Ideal for pump relief and remote control or unloading via vent (port 3)
- Integral 250 micron pilot flow filter
- Hardened working parts for maximum durability
- Adjustable and tamperproof versions available
- All external parts zinc plated



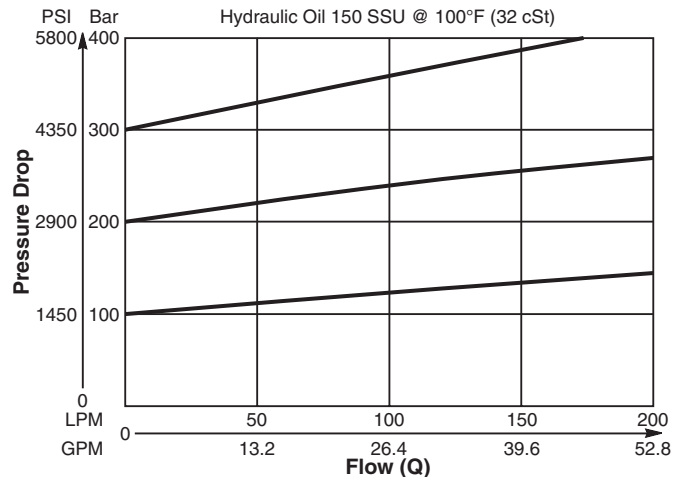
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 190 LPM (50 GPM)   |
| <b>Maximum Inlet Pressure</b>        | H - 10-210 Bar (145-3000 PSI)<br>P - 10-420 Bar (145-6000 PSI)   |
| <b>Maximum Pressure Setting</b>      | 420 Bar (6000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 25 ml/min.<br>@ 100 Bar (1450 PSI)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.25 kg (0.55 lbs.)  |
| <b>Cavity</b>                        | C10-3S (See BC Section for more details)   |
| <b>Form Tool</b>                     | Rougher None<br>Finisher   |

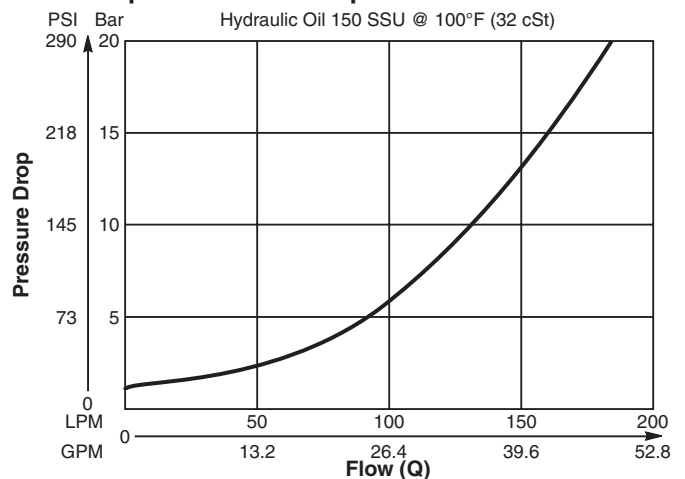
**Performance Curves**

(Pressure rise through cartridge only)

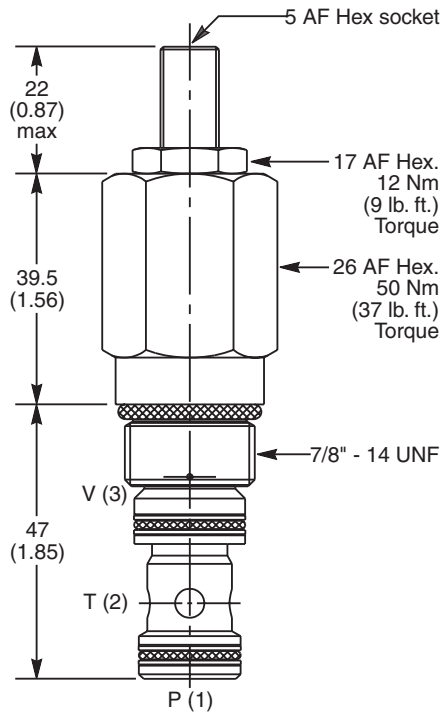
**Flow vs. Inlet Pressure 1 to 2**



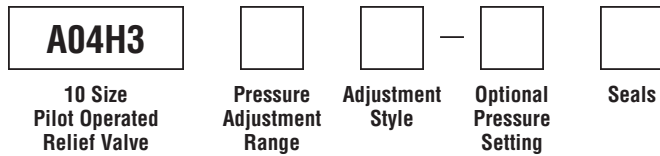
**Vented Open Pressure Drop 1 to 2**



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Pressure Adjustment Range     |
|------|-------------------------------|
| H    | 10 - 210 Bar (145 - 3000 PSI) |
| P    | 10 - 420 Bar (145 - 6000 PSI) |

| Optional Pressure Setting   |  |
|---|--|
| Specify setting if required (Bar)   |  |
| <b>A04H3H</b> Standard Setting:<br>100 Bar (1450 PSI)<br>@ 15 LPM (4.0 GPM) |  |
| <b>A04H3P</b> Standard Setting:<br>200 Bar (2900 PSI)<br>@ 15 LPM (4.0 GPM) |  |

| Code | Adjustment Style / Kit No.    |
|------|-------------------------------|
| Z    | Screw Adjust (Std.)           |
| W    | Knob Adjust                   |
| T    | Tamper Resistant Cap (TC1130) |

| Code | Seals / Kit No.                       |
|------|---------------------------------------|
| N    | Nitrile, Buna-N (Std.) / (SK30504N-1) |
| V    | Fluorocarbon / (SK30504V-1)           |

*Order Bodies Separately*



| Code | Porting                           |
|------|-----------------------------------|
| 710  | 5/8" SAE (main)<br>3/8" SAE (aux) |
| 711  | 3/4" BSP (main)<br>1/4" BSP (aux) |

| Code | Body Material |
|------|---------------|
| A    | Aluminum      |
| S    | Steel         |

**Technical Information**

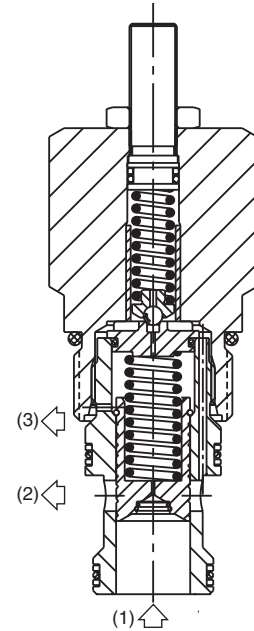
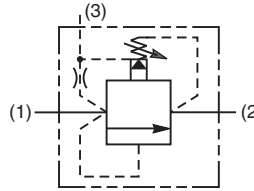
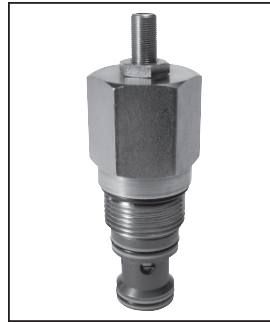
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Pilot Operated, Spool-Type, Ventable Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- High flow capacity
- Full tank line back pressure
- Excellent pressure flow characteristics
- Ideal for pump relief and remote control or unloading via vent (port 3)
- Integral 250 micron pilot flow filter
- Hardened working parts for maximum durability
- Adjustable and tamperproof versions available
- All external parts zinc plated



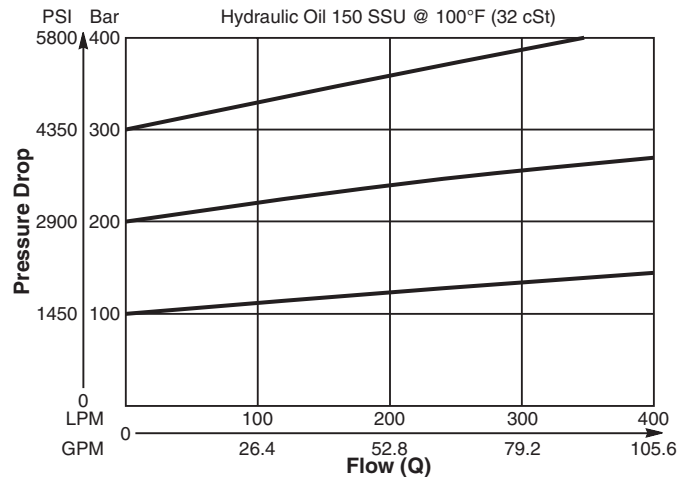
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 400 LPM (106 GPM)  |
| <b>Maximum Inlet Pressure</b>        | H - 10-210 Bar (145-3000 PSI)<br>P - 10-420 Bar (145-6000 PSI)   |
| <b>Maximum Pressure Setting</b>      | 420 Bar (6000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 100ml/min. @ 100 Bar (1450 PSI)  |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.58 kg (1.28 lbs.)  |
| <b>Cavity</b>                        | C16-3S (See BC Section for more details)   |
| <b>Form Tool</b>                     | Rougher None<br>Finisher   |

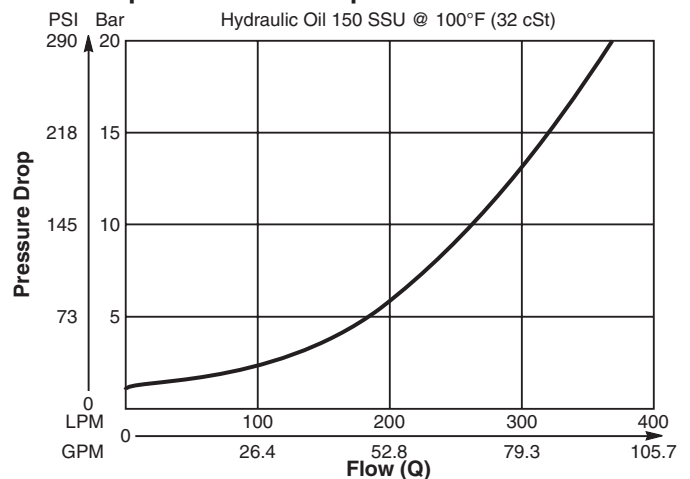
**Performance Curves**

(Pressure rise through cartridge only)

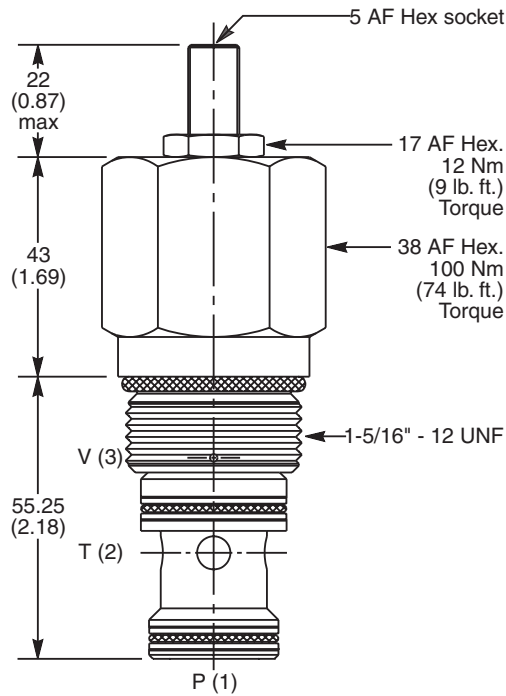
**Flow vs. Inlet Pressure 1 to 2**



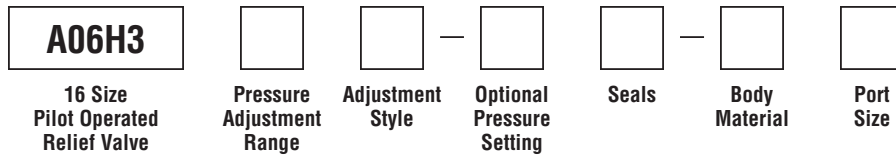
**Vented Open Pressure Drop 1 to 2**



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Pressure Adjustment Range     |
|------|-------------------------------|
| H    | 10 - 210 Bar (145 - 3000 PSI) |
| P    | 10 - 420 Bar (145 - 6000 PSI) |

| Optional Pressure Setting   |  |
|---|--|
| Specify setting if required (Bar)   |  |
| <b>A06H3H</b> Standard Setting:<br>100 Bar (1450 PSI)<br>@ 15 LPM (4.0 GPM) |  |
| <b>A06H3P</b> Standard Setting:<br>200 Bar (2900 PSI)<br>@ 15 LPM (4.0 GPM) |  |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Adjustment Style / Kit No.    |
|------|-------------------------------|
| Z    | Screw Adjust (Std.)           |
| W    | Knob Adjust                   |
| T    | Tamper Resistant Cap (TC1130) |

| Code | Seals / Kit No.                       |
|------|---------------------------------------|
| N    | Nitrile, Buna-N (Std.) / (SK30508N-1) |
| V    | Fluorocarbon / (SK30508V-1)           |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 16T  | SAE-16         | (B16-3S-*16T) |
| 16B  | 1" BSPG        | (B16-3S-*16B) |

\* Add "A" for aluminum, omit for steel.

**Technical Information**

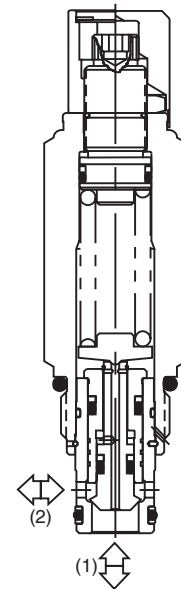
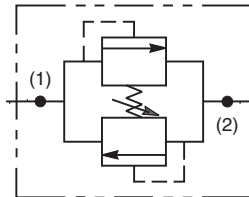
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Dual Cross-Over Relief Valve in a single cartridge. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Fast response
- Compact size for reduced space requirements
- Low leakage design
- Single cartridge reduces plumbing, component and manifold costs

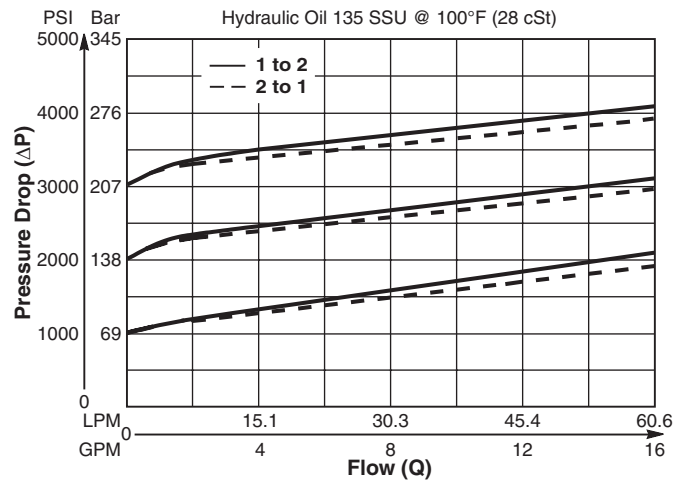


**Specifications**

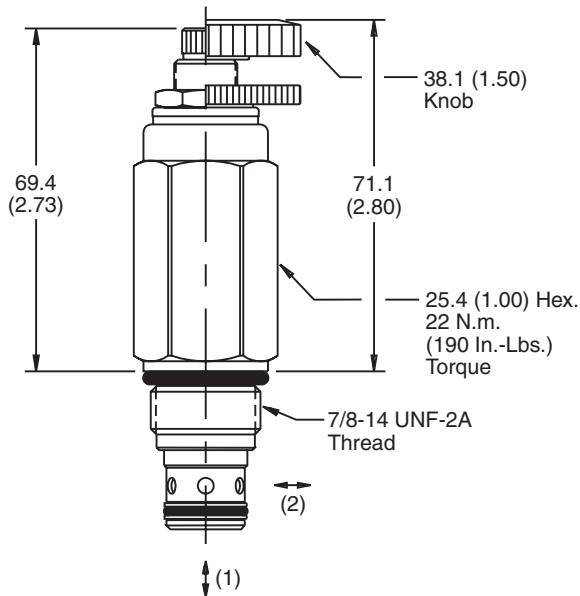
|  |  |
|--|--|
| <b>Flow Rate</b>                       | 60.6 LPM (16 GPM)  |
| <b>Maximum Inlet Pressure</b>          | 245 Bar (3500 PSI)   |
| <b>Maximum Pressure Setting</b>        | 210 Bar (3000 PSI)   |
| <b>Reseat Pressure</b>                 | 80% of crack pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>     | 10 drops/min. (.66 cc/min.) @ 75% of crack pressure  |
| <b>Cartridge Material</b>              | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range (Ambient)</b> | -40°C to +93.3°C (Nitrile)<br>(-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon)<br>(-25°F to +250°F) |
| <b>Filtration</b>                      | ISO Code 16/13, SAE Class 4 or better  |
| <b>Fluids</b>                          | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)     |
| <b>Approx. Weight</b>                  | .26 kg (.58 lbs.)  |
| <b>Cavity</b>                          | C10-2  |
| <b>Form Tool</b>                       | Rougher None<br>Finisher NFT10-2F  |

**Performance Curve**

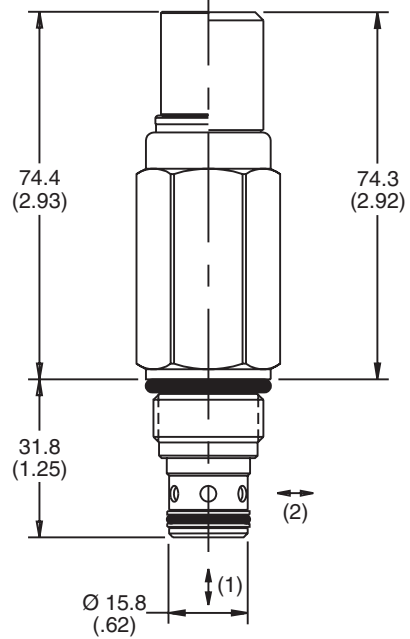
**Flow vs. Inlet Pressure**  
(Pressure rise through cartridge only)



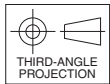
**Dimensions** Millimeters (Inches)



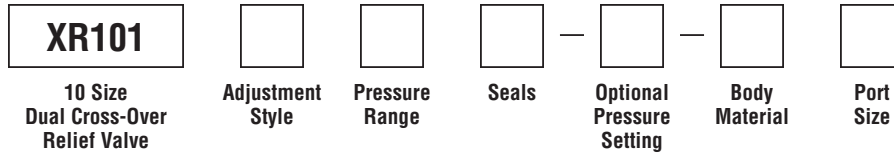
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-15)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717785)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | Nitrile / (SK10-2N)      |
| V    | Fluorocarbon / (SK10-2V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range   |
|------|--|
| 20   | 6.9 - 138 Bar (100 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)<br>@ 11.3 LPM (3 GPM)   |
| 30   | 103 - 207 Bar (1500 - 3000 PSI)<br>Standard Setting:<br>172 Bar (2500 PSI)<br>@ 11.3 LPM (3 GPM) |

| Optional Pressure Setting   |
|---|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 3000 PSI<br>All settings at 11.3 LPM (3 GPM) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 8P   | 1/2" NPTF      | (B10-2-*8P)   |
| 6T   | SAE-6          | (B10-2-*6T)   |
| 8T   | SAE-8          | (B10-2-*8T)   |

\* Add "A" for aluminum, omit for steel.

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
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- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
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**General Description**

Direct Acting, Dual Poppet-Type, Cross-over Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

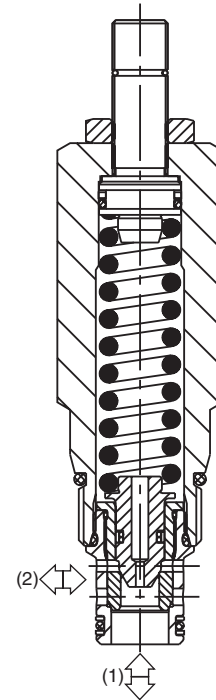
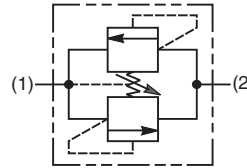
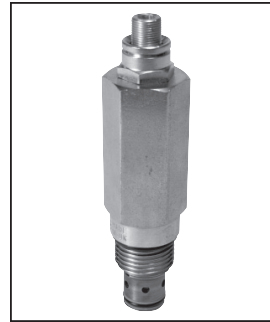
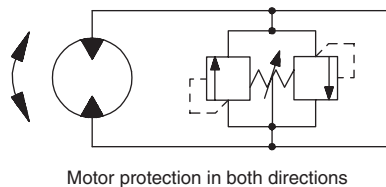
**Features**

- Compact space saving design
- Cost effective - only requires one cavity
- Poppet-type construction for lower leakage
- Full 350 Bar, 5000 PSI pressure capability
- High flow capability for the size of valve
- Minimal pressure variation with flow change
- Hardened working parts for maximum durability
- Adjustable and tamperproof versions available
- Available as CE marked valve in compliance with Pressure Equipment Directive
- All external parts zinc plated

**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 120 LPM (32 GPM)   |
| <b>Maximum Inlet Pressure</b>        | <b>H -</b> 5-210 Bar (72-3000 PSI)<br><b>M -</b> 10-350 Bar (144-5000 PSI)                             |
| <b>Maximum Pressure Setting</b>      | 420 Bar (6000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 10 drops/min.<br>@ 100 Bar (1450 PSI)  |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.29 kg (0.64 lbs.)  |
| <b>Cavity</b>                        | C10-2 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher None<br>Finisher   |

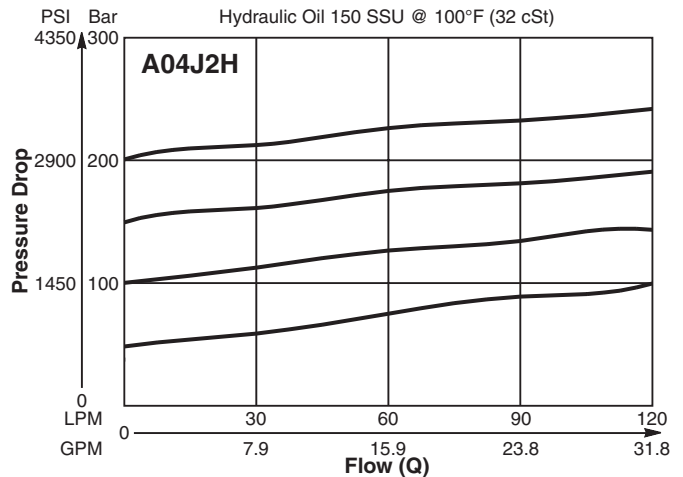
**Application**



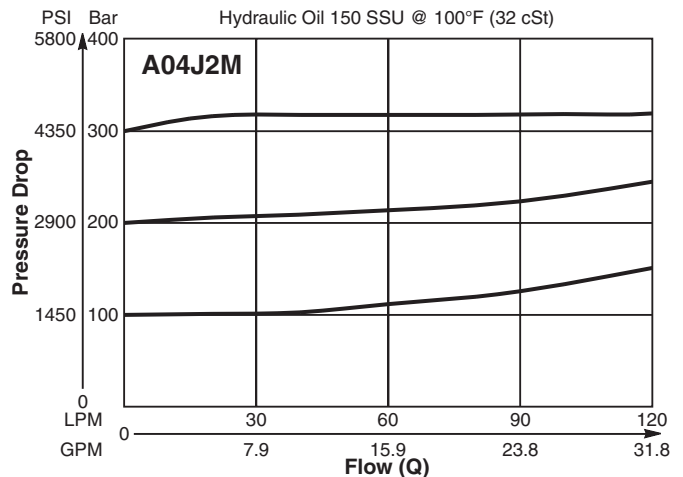
**Performance Curves**

(Pressure rise through cartridge only)

**Flow vs. Inlet Pressure 1 to 2 and 2 to 1**

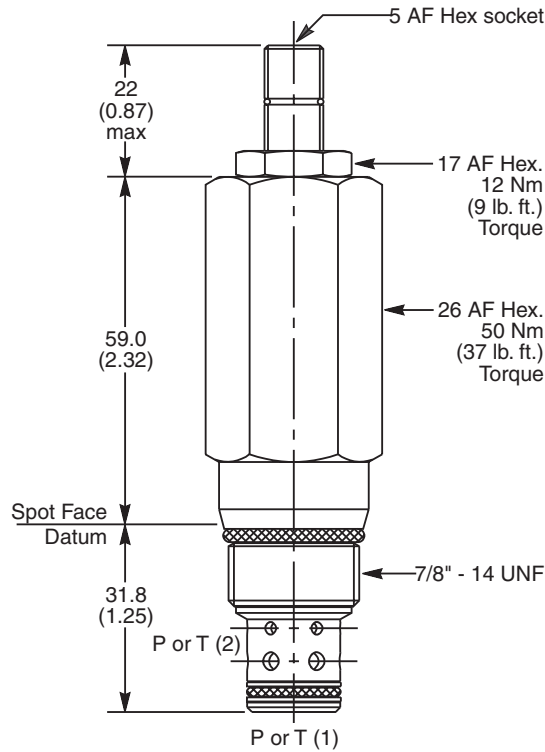


**Flow vs. Inlet Pressure 1 to 2 and 2 to 1**

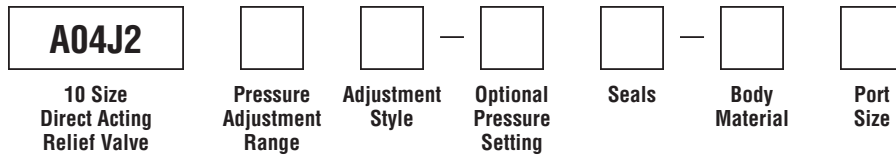




**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Pressure Adjustment Range     |
|------|-------------------------------|
| H    | 5 - 210 Bar (72 - 3000 PSI)   |
| M    | 10 - 350 Bar (144 - 5000 PSI) |

| Code | Seals / Kit No.                       |
|------|---------------------------------------|
| N    | Nitrile, Buna-N (Std.) / (SK30529N-1) |
| V    | Fluorocarbon / (SK30529V-1)           |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Adjustment Style / Kit No.    |
|------|-------------------------------|
| Z    | Screw Adjust (Std.)           |
| W    | Knob Adjust                   |
| T    | Tamper Resistant Cap (TC1130) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-2-*4P)   |
| 6P   | 3/8" NPTF      | (B10-2-*6P)   |
| 8P   | 1/2" NPTF      | (B10-2-*8P)   |
| 6T   | SAE-6          | (B10-2-*6T)   |
| 8T   | SAE-8          | (B10-2-*8T)   |
| 6B   | 3/8" BSPG      | (B10-2-6B)†   |

| Optional Pressure Setting   |  |
|---|--|
| Specify setting if required (Bar)   |  |
| <b>A04J2H</b> Standard Setting:<br>100 Bar (1450 PSI)<br>@ 15 LPM (4.0 GPM) |  |
| <b>A04J2M</b> Standard Setting:<br>200 Bar (2900 PSI)<br>@ 15 LPM (4.0 GPM) |  |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
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**General Description**

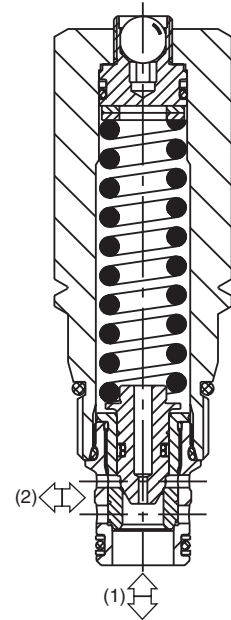
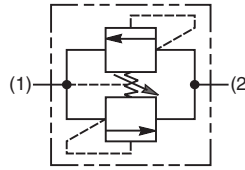
Direct Acting Poppet-Type Relief Valve. Pressure Equipment Directive (PED 97/23/EC) compliant to hazard category IV. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Bi-directional flow design for installation flexibility and security
- Compact space saving design
- Poppet type construction for lower leakage
- Full 350 Bar (5000 PSI) pressure capability
- High flow compatibility for the size of valve
- Minimal pressure variation with flow change
- Hardened working parts for maximum durability
- Tamperproof setting
- All external parts zinc plated

**Specifications**

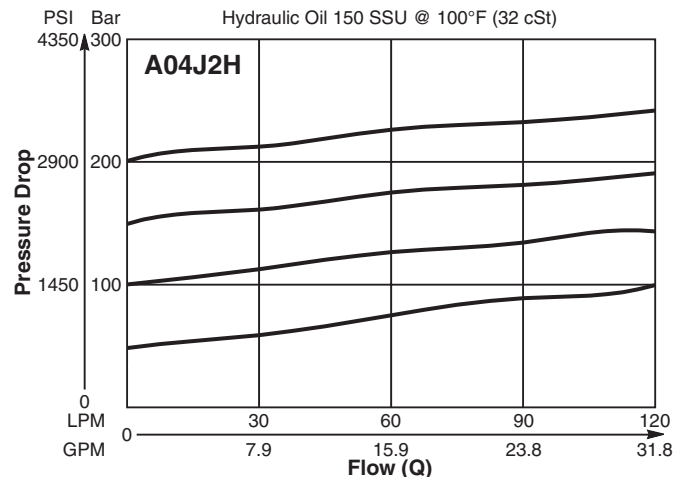
|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 120 LPM (32 GPM)   |
| <b>Maximum Inlet Pressure</b>        | 350 Bar (5000 PSI)   |
| <b>Maximum Pressure Setting</b>      | <b>HY</b> - 5-210 Bar (72-3000 PSI)<br><b>MY</b> - 10-350 Bar (145-5000 PSI)                           |
| <b>Sensitivity: Pressure/Turn</b>    | <b>HY</b> - 25 Bar (362 PSI)<br><b>MY</b> - 34 Bar (493 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 10 drops/min.<br>@ 100 Bar (1450 PSI)  |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.29 kg (0.64 lbs.)  |
| <b>Cavity</b>                        | C10-2 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher None<br>Finisher NFT10-2F  |



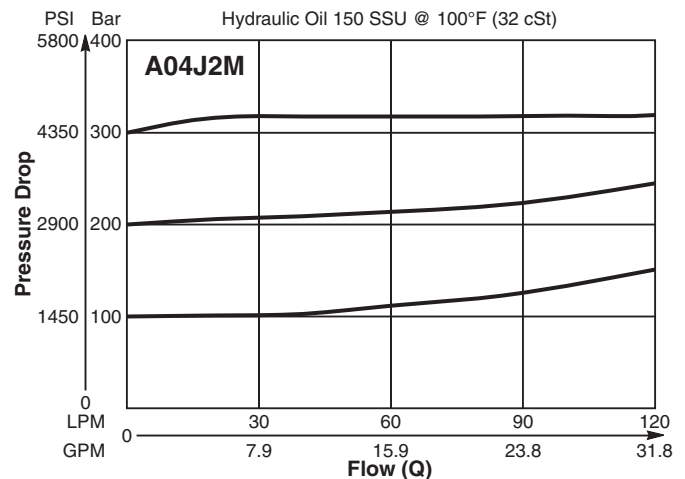
**Performance Curves**

(Pressure rise through cartridge only)

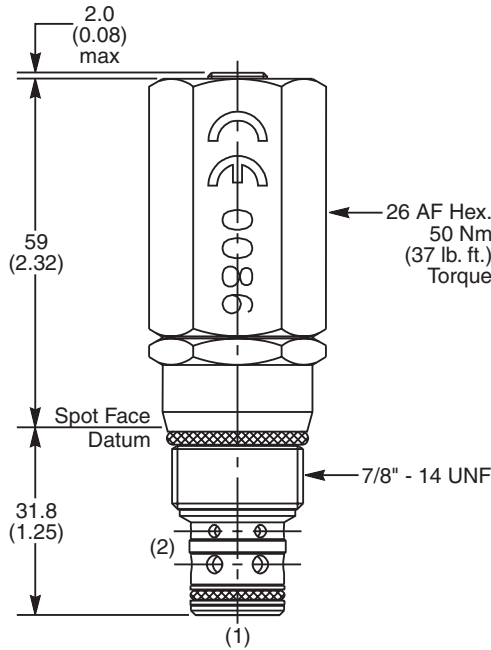
**Flow vs. Inlet Pressure 1 to 2 and 2 to 1**



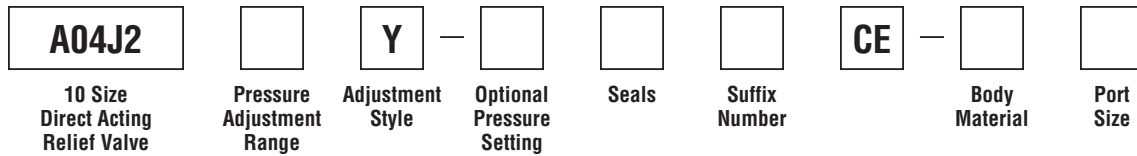
**Flow vs. Inlet Pressure 1 to 2 and 2 to 1**



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Pressure Adjustment Range     |
|------|-------------------------------|
| H    | 5 - 210 Bar (72 - 3000 PSI)   |
| M    | 10 - 350 Bar (145 - 5000 PSI) |

| Code | Seals / Kit No.                       |
|------|---------------------------------------|
| N    | Nitrile, Buna-N (Std.) / (SK30529N-1) |
| V    | Fluorocarbon / (SK30529V-1)           |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Adjustment Style / Kit No.   |
|------|------------------------------|
| Y    | Non Adjustable Preset (Std.) |

| Code | Suffix Number                                  |
|------|--|
| Omit | Omit for valve to be set side to nose (2 to 1) |
| 580  | For valve to be set nose to side (1 to 2)      |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-2-*4P)   |
| 6P   | 3/8" NPTF      | (B10-2-*6P)   |
| 8P   | 1/2" NPTF      | (B10-2-*8P)   |
| 6T   | SAE-6          | (B10-2-*6T)   |
| 8T   | SAE-8          | (B10-2-*8T)   |
| 6B   | 3/8" BSPG      | (B10-2-6B)†   |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

| Optional Pressure Setting       |
|---------------------------------|
| Setting must be specified (Bar) |

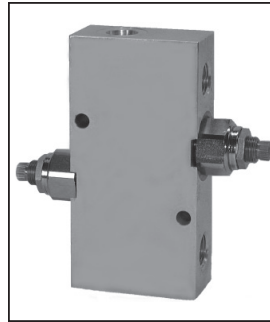
- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

Technical Information

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

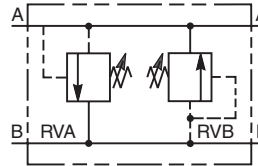
**General Description**

Dual Cross-Over Relief Valve. For additional information see Technical Tips on pages PC1-PC6.



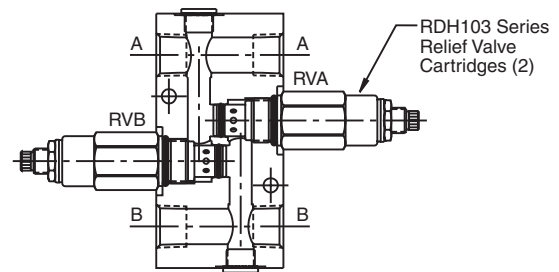
**Features**

- Fast acting differential area reliefs for high flow capacity
- Spherical poppets for low leakage
- Internal mechanical stop limits poppet travel eliminating spring solidification
- “D”-Ring eliminates backup rings
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.



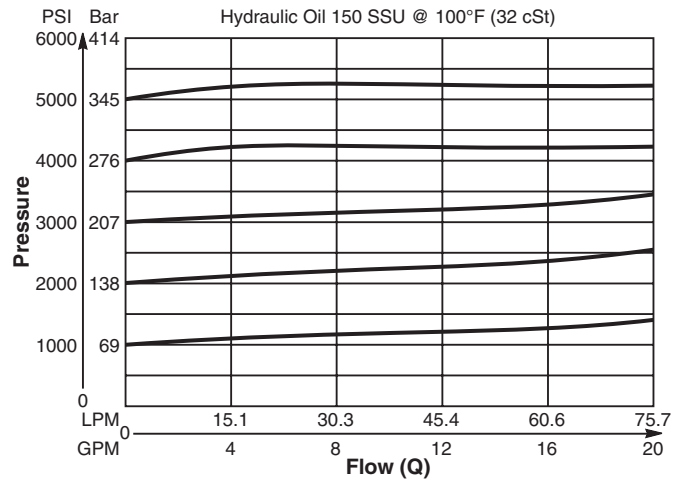
**Specifications**

|  |  |
|--|--|
| <b>Maximum Flow</b>                    | 75 LPM (20 GPM)  |
| <b>Maximum Inlet Pressure</b>          | 350 Bar (5000 PSI)   |
| <b>Maximum Pressure Setting</b>        | 350 Bar (5000 PSI)   |
| <b>Reseat Pressure</b>                 | 85% of crack pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>     | 5 drops/min. (.33 cc/min.) @ 75% of crack pressure   |
| <b>Cartridge Material</b>              | All parts steel. All operating parts hardened steel.   |
| <b>Body Material</b>                   | Steel  |
| <b>Operating Temp. Range (Ambient)</b> | -45°C to +93.3°C (“D”-Ring) (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)  |
| <b>Filtration</b>                      | ISO Code 16/13, SAE Class 4 or better  |
| <b>Fluids</b>                          | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Approx. Weight</b>                  |  |



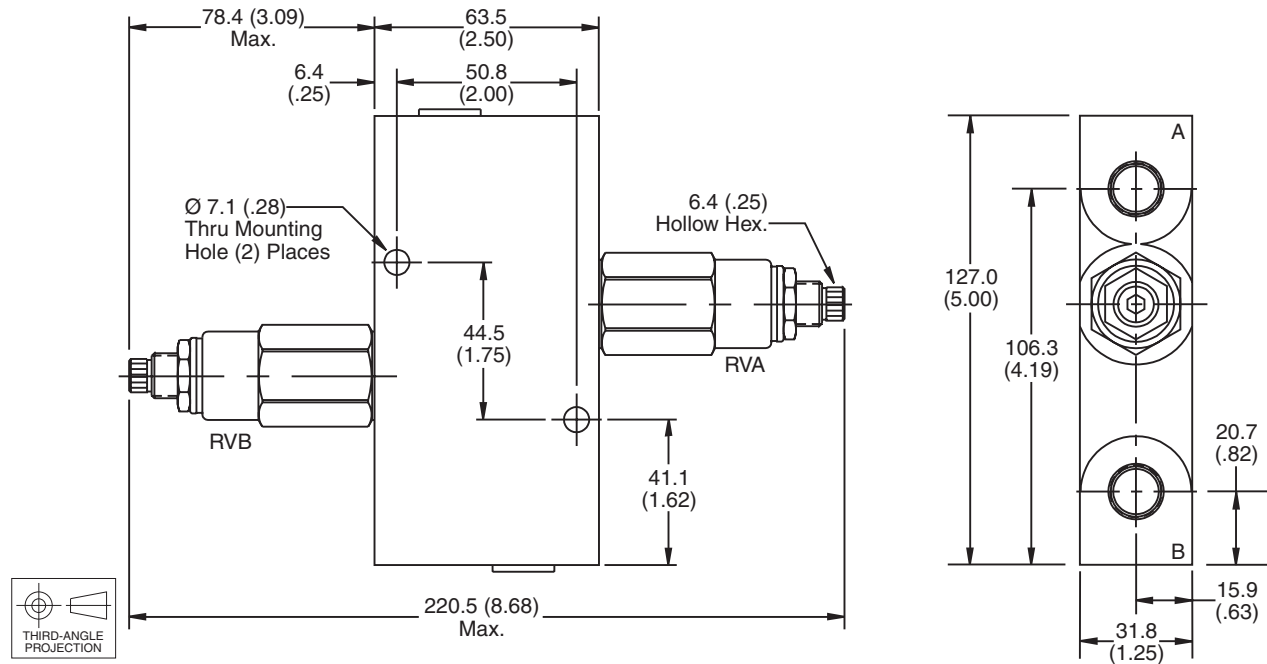
**Performance Curve**

**Flow vs. Inlet Pressure**  
(Pressure rise through cartridge only)

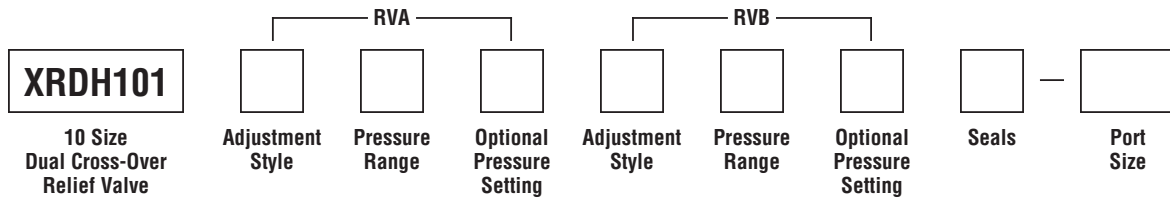


**Note:** A 6.9 Bar (100 PSI) pressure differential must be maintained between the two relief valve settings.

**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Adjustment Style / Kit No.                    |
|------|---|
| F    | Fixed style, preset at factory.               |
| K    | Knob Adjust (717784-10)<br>(Requires 2)       |
| S    | Screw Adjust                                  |
| T    | Tamper Resistant Cap (717943)<br>(Requires 2) |

| Optional Pressure Setting |   |
|---------------------------|---|
| Pressure                  | ± 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used) |
| Setting Range:            | 100 to 5000 PSI   |
| All settings at           | 11.3 LPM (3 GPM)  |

| Code | Port Size      | Part No. |
|------|----------------|----------|
| Omit | Cartridge Only |          |
| 8T   | SAE-8          | 830318   |

*Steel body only.  
 Individual body requires 2 SAE 6 plugs.  
 Part number 6 HP50N-S.*

| Code | Pressure Range  |
|------|---|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI) @ 11.3 LPM (3 GPM)     |
| 20   | 34.5 - 138 Bar (500 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI) @ 11.3 LPM (3 GPM)    |
| 30   | 69 - 207 Bar (1000 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI) @ 11.3 LPM (3 GPM)  |
| 50   | 138 - 345 Bar (2000 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) @ 11.3 LPM (3 GPM) |

| Code | Seals        |
|------|--------------|
| Omit | "D"-Ring     |
| N    | Nitrile      |
| V    | Fluorocarbon |

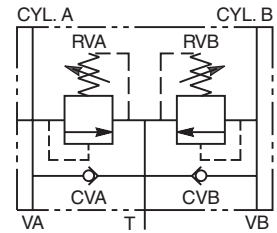
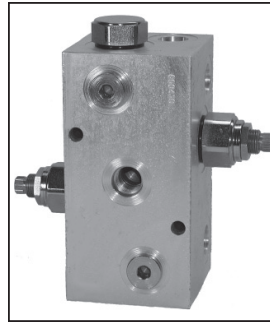
*Note: A 6.9 Bar (100 PSI) pressure differential must be maintained between the two relief valve settings. If both reliefs are adjustable and have the same pressure range; it is not necessary to repeat the adjustment and setting.  
 i.e. XRDH101S50-8T means that both A & B reliefs are screw adjustable and have a range of 138 - 345 Bar (2000 - 5000 PSI).*

Technical Information

- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data

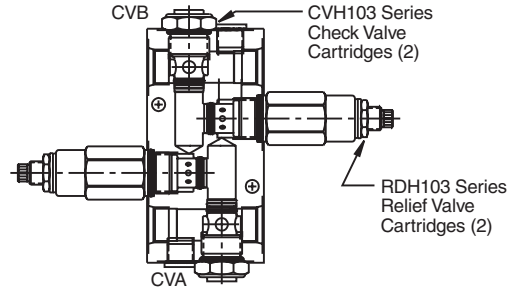
General Description

Dual Cross-Over Relief Valve with anti-cavitation checks. This valve provides both overload and shock protection for double acting hydraulic actuators as well as cavitation protection. For additional information see Technical Tips on pages PC1-PC6.



Features

- Fast acting differential area reliefs for high flow capacity
- Spherical poppets for low leakage
- Internal mechanical stop limits poppet travel eliminating spring solidification
- "D"-Ring eliminates backup rings
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.



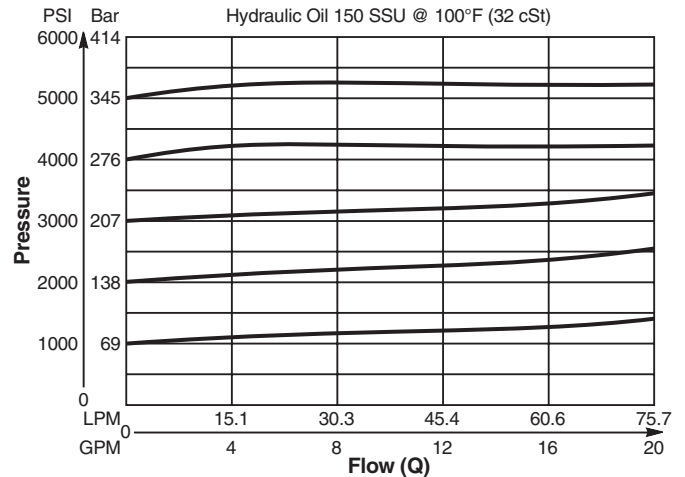
Specifications

|                               |  |
|-------------------------------|--|
| Maximum Flow                  | 60 LPM (16 GPM)  |
| Maximum Inlet Pressure        | 380 Bar (5500 PSI)   |
| Maximum Pressure Setting      | 350 Bar (5000 PSI)   |
| Reseat Pressure               | 85% of crack pressure  |
| Leakage at 150 SSU (32 cSt)   | 5 drops/min. (.33 cc/min.) @ 75% of crack pressure   |
| Cartridge Material            | All parts steel. All operating parts hardened steel.   |
| Body Material                 | Steel  |
| Operating Temp. Range/Seals   | -45°C to +93.3°C ("D"-Ring) (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)  |
| Fluid Compatibility/Viscosity | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| Filtration                    | ISO Code 16/13, SAE Class 4 or better  |
| Approx. Weight                | 1.8 kg (4.0 lbs.)  |

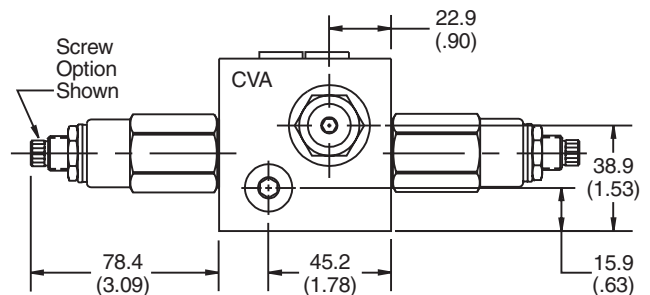
Note: A 6.9 Bar (100 PSI) pressure differential must be maintained between the two relief valve settings.

Performance Curve

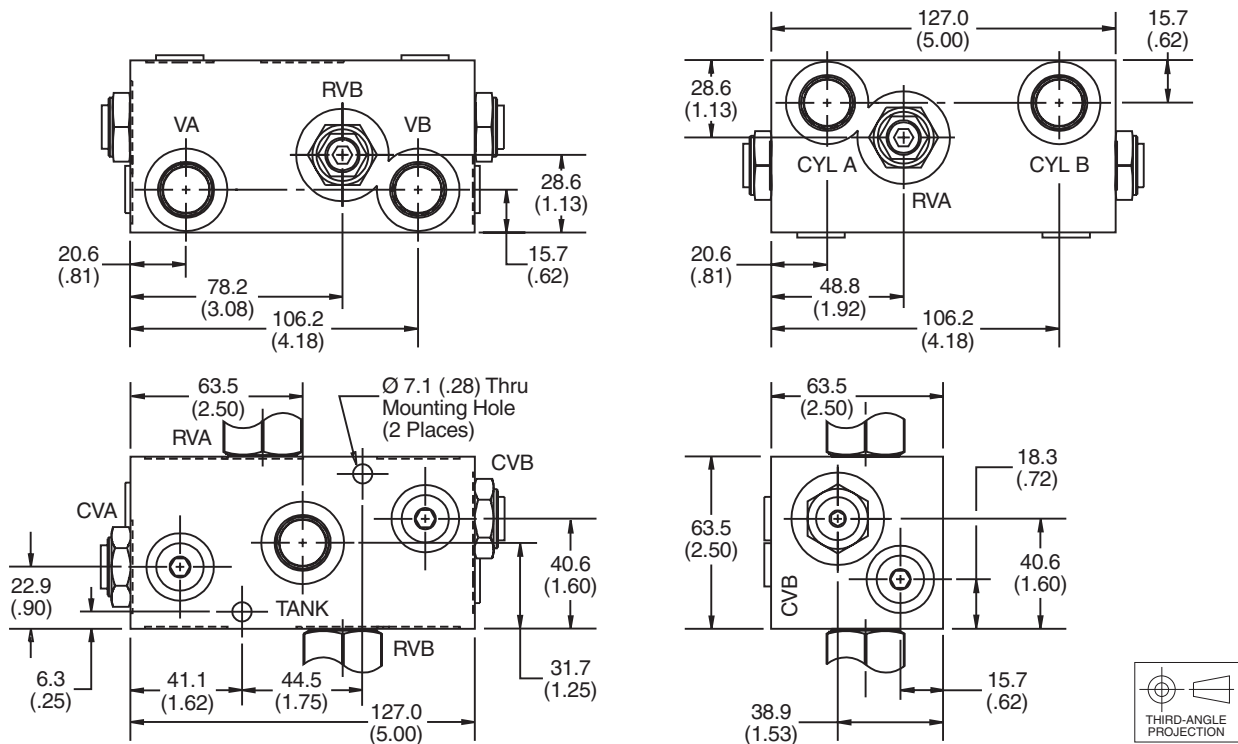
Flow vs. Inlet Pressure  
(Pressure rise through cartridge only)



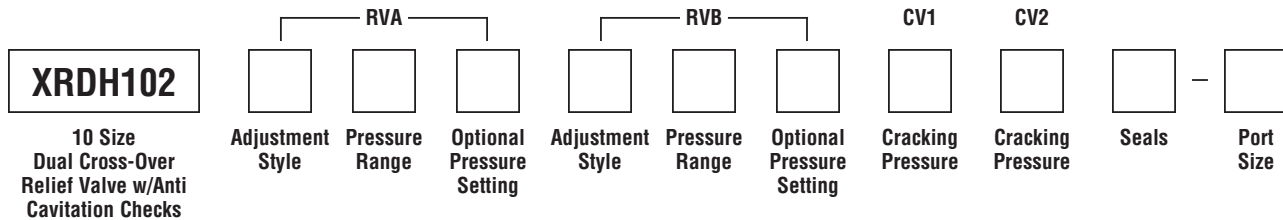
Dimensions



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Adjustment Style / Kit No.                    |
|------|---|
| F    | Fixed style, preset at factory.               |
| K    | Knob Adjust (717784-10)<br>(Requires 2)       |
| S    | Screw Adjust                                  |
| T    | Tamper Resistant Cap (717943)<br>(Requires 2) |

| Optional Pressure Setting  |  |
|--|--|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI<br>All settings at .95 LPM (.25 GPM) |  |

| Code | Seals        |
|------|--------------|
| Omit | "D"-Ring     |
| N    | Nitrile      |
| V    | Fluorocarbon |

| Code | Port Size | Part No. |
|------|-----------|----------|
| 8T   | SAE-8     | 850437   |

| Code | Pressure Range   |
|------|--|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI) @ .95 LPM (.25 GPM)     |
| 20   | 34.5 - 138 Bar (500 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI) @ .95 LPM (.25 GPM)    |
| 30   | 34.5 - 207 Bar (500 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI) @ .95 LPM (.25 GPM) |
| 50   | 34.5 - 345 Bar (500 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) @ .95 LPM (.25 GPM) |

| Code | Cracking Pressure |
|------|-------------------|
| P    | 0.3 Bar (5 PSI)   |
| P20  | 1.4 Bar (20 PSI)  |
| P50  | 3.5 Bar (50 PSI)  |
| P65  | 4.5 Bar (65 PSI)  |
| P100 | 6.9 Bar (100 PSI) |

*Note: A 6.9 Bar (100 PSI) pressure differential must be maintained between the two relief valve settings. If both reliefs are adjustable and have the same pressure range; it is not necessary to repeat the adjustment and setting.  
i.e. XRDH102S50P-T6 means that both A & B reliefs are screw adjustable and have a range of 34.5 - 345 Bar (500 - 5000 PSI).*

*Individual body requires 4 SAE 6 plugs.  
Part number 6 HP50N-S.*

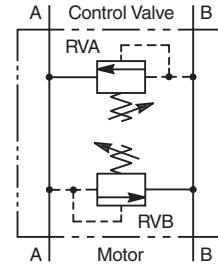
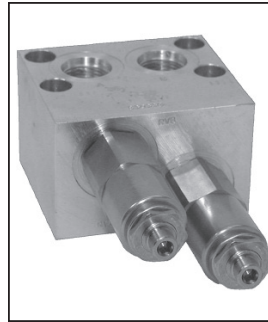


Technical Information

- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data

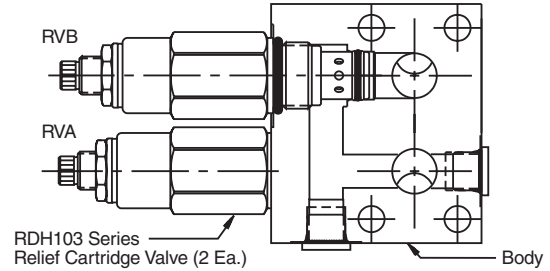
General Description

Dual Cross-Over Relief Valve with Motor Mount. This valve provides overload and shock protection for small gerotor motors with a manifold mounting pattern, such as the Parker TB and TE series. Close coupling the valve to the motor provides ideal protection and eliminates plumbing. For additional information see Technical Tips on pages PC1-PC6.



Features

- Fast acting differential area reliefs for high flow capacity
- Spherical poppets for low leakage
- Internal mechanical stop limits poppet travel eliminating spring solidification
- "D"-Ring eliminates backup rings
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.



Specifications

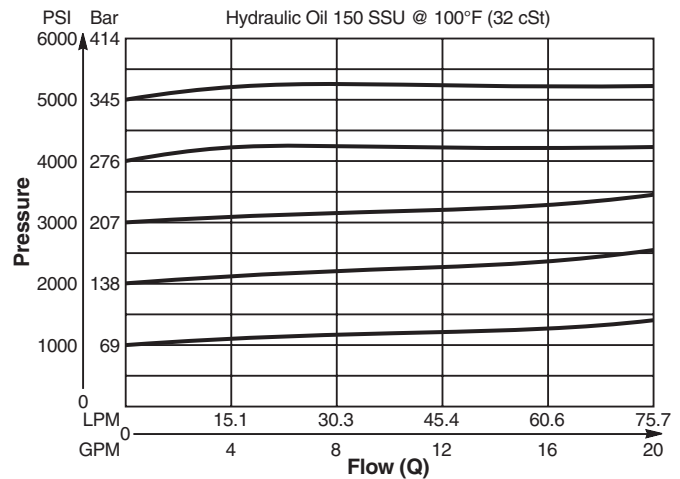
|                               |  |
|-------------------------------|--|
| Maximum Flow                  | 75 LPM (20 GPM)  |
| Maximum Inlet Pressure        | 380 Bar (5500 PSI)   |
| Maximum Pressure Setting      | 350 Bar (5000 PSI)   |
| Reseat Pressure               | 85% of crack pressure  |
| Leakage at 150 SSU (32 cSt)   | 5 drops/min. (.33 cc/min.) @ 75% of crack pressure   |
| Cartridge Material            | All parts steel. All operating parts hardened steel.   |
| Body Material                 | Steel  |
| Operating Temp. Range/Seals   | -45°C to +93.3°C ("D"-Ring) (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)  |
| Fluid Compatibility/Viscosity | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| Filtration                    | ISO Code 16/13, SAE Class 4 or better  |
| Approx. Weight                | 2.0 kg (4.5 lbs.)  |

Note: A 6.9 Bar (100 PSI) pressure differential must be maintained between the two relief valve settings.

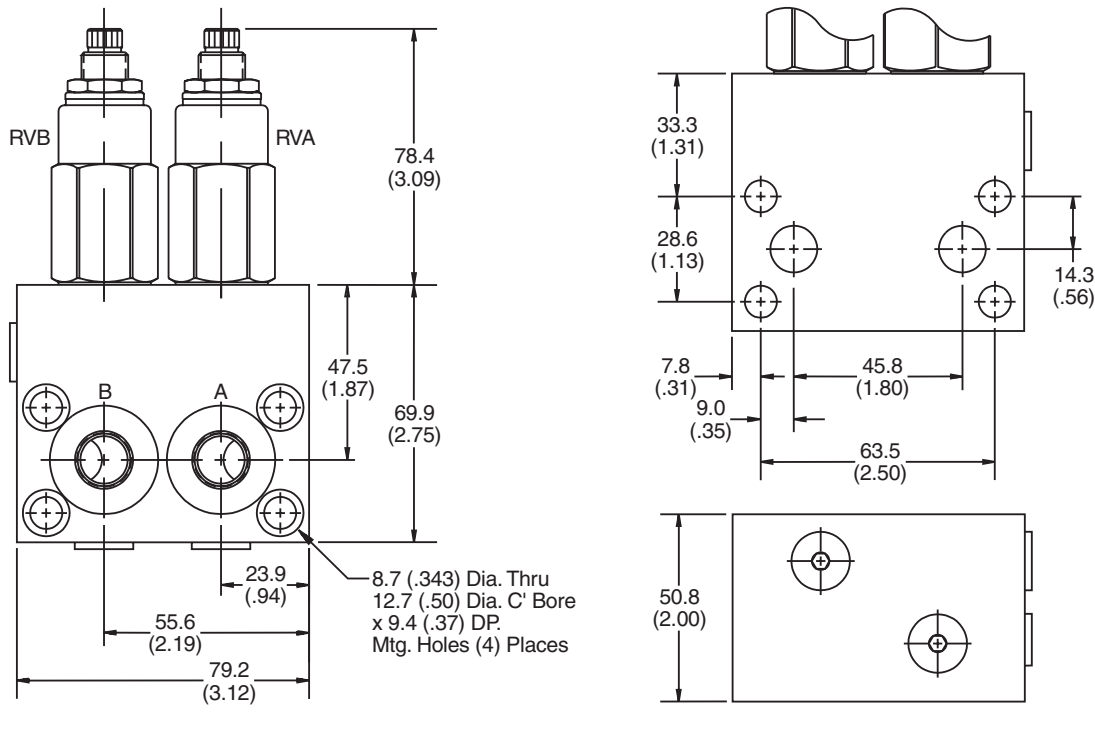
Performance Curve

Flow vs. Inlet Pressure

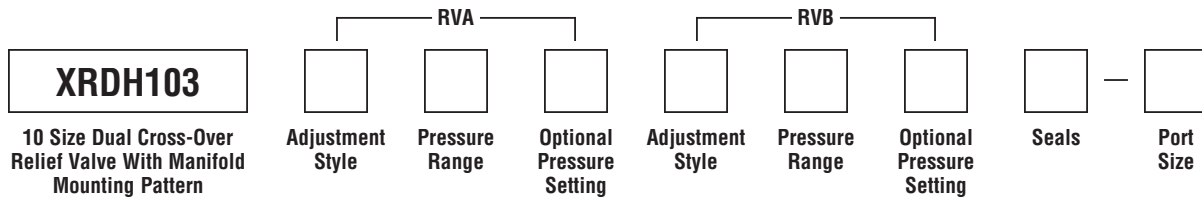
(Pressure rise through cartridge only)



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Adjustment Style / Kit No.                    |
|------|---|
| F    | Fixed style, preset at factory.               |
| K    | Knob Adjust (717784-10)<br>(Requires 2)       |
| S    | Screw Adjust                                  |
| T    | Tamper Resistant Cap (717943)<br>(Requires 2) |

| Optional Pressure Setting |                                    |
|---------------------------|------------------------------------|
| Pressure                  | ± 10<br>i.e. 235 = 2350 PSI        |
|                           | (Omit if standard setting is used) |
| Setting Range:            | 100 to 5000 PSI                    |
|                           | All settings at .95 LPM (.25 GPM)  |

| Code | Port Size | Part No. |
|------|-----------|----------|
| 8T   | SAE-8     | 830338   |

*Individual body requires 4 SAE 5 plugs.  
 Part number 5 HP50N-S.*

| Code | Pressure Range   |
|------|--|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI) @ .95 LPM (.25 GPM)     |
| 20   | 34.5 - 138 Bar (500 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI) @ .95 LPM (.25 GPM)    |
| 30   | 34.5 - 207 Bar (500 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI) @ .95 LPM (.25 GPM) |
| 50   | 34.5 - 345 Bar (500 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) @ .95 LPM (.25 GPM) |

| Code | Seals        |
|------|--------------|
| Omit | "D"-Ring     |
| N    | Nitrile      |
| V    | Fluorocarbon |

*Note: A 6.9 Bar (100 PSI) pressure differential must be maintained between the two relief valve settings. If both reliefs are adjustable and have the same pressure range; it is not necessary to repeat the adjustment and setting.  
 i.e. XRDH10350-6T means that both A & B reliefs are screw adjustable and have a range of 34.5 - 345 Bar (500 - 5000 PSI).*

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

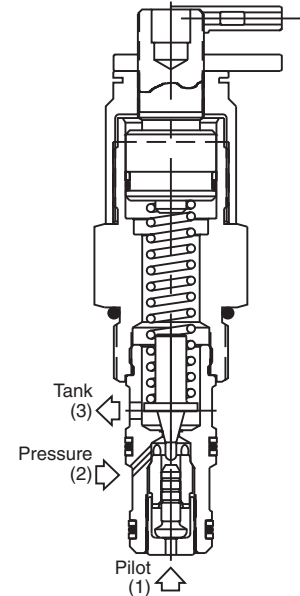
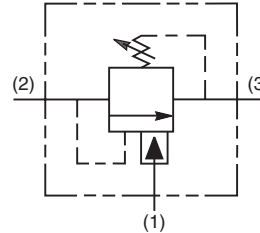
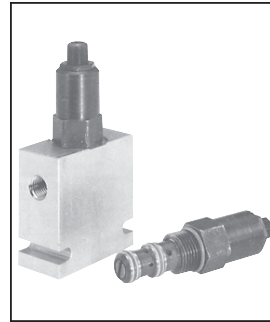
Differential Area Unloading Relief Valve. This valve is best suited for low flow accumulator unloading circuits or can be used as remote pilot valves. They provide a fixed percentage between load and unload pressures. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Low hysteresis
- Cartridge design
- All external parts zinc plated

**Specifications**

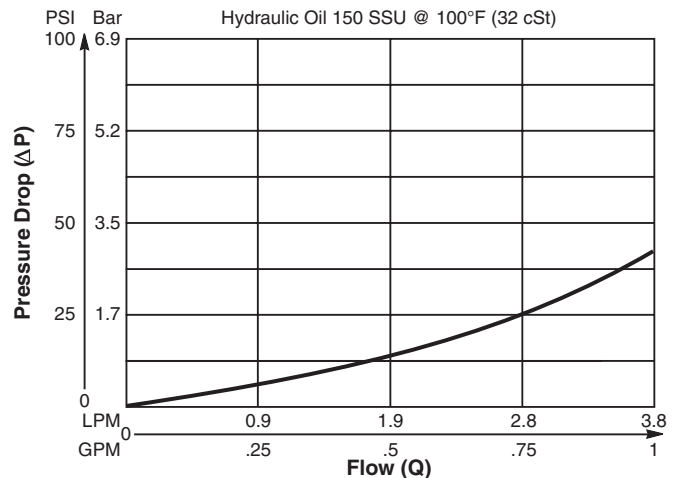
|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 3.75 LPM (1 GPM)   |
| <b>Maximum Pilot Flow</b>            | .94 LPM (.25 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 245 Bar (3500 PSI)   |
| <b>Maximum Pressure Setting</b>      | 210 Bar (3000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 210 Bar (3000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | Port 2 to 3<br>10 drops/min. (0.66 cc/min.)<br>Port 1 to 2<br>60 drops/min. (3 cc/min.)                |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | .23 kg (.50 lbs.)  |
| <b>Cavity</b>                        | C10-3 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher NFT10-3R<br>Finisher NFT10-3F  |



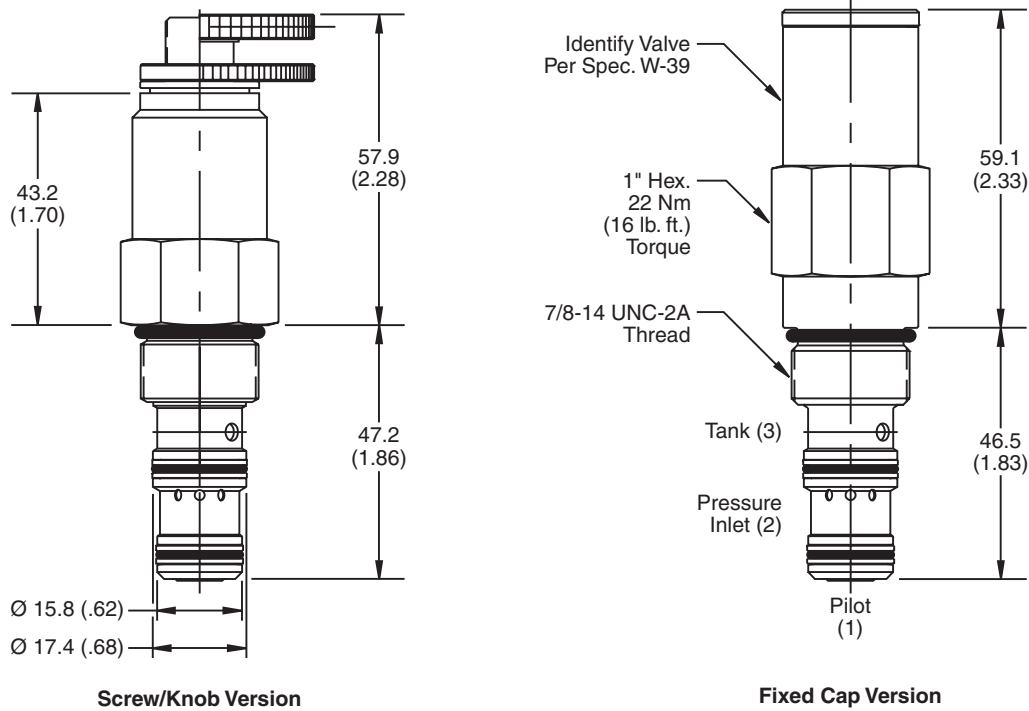
**Performance Curve**

**Inlet Flow vs. Pressure Drop**

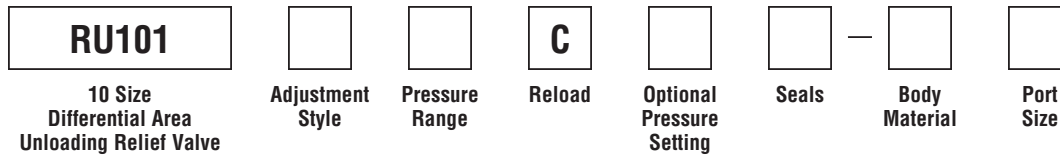
Without pilot assist (Through cartridge only)



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (840208K)           |
| S    | Screw Adjust                    |

| Code | Reload                      |
|------|-----------------------------|
| C    | 80% ±5% of Pressure Setting |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range   |
|------|--|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI)<br>@ 1.1 LPM (.3 GPM)     |
| 20   | 10.3 - 138 Bar (150 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)<br>@ 1.1 LPM (.3 GPM)    |
| 30   | 13.8 - 207 Bar (200 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI)<br>@ 1.1 LPM (.3 GPM) |

| Optional Pressure Setting  |
|--|
| Pressure ± 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 3000 PSI<br>All settings at 1.1 LPM (0.3 GPM) |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | Nitrile / (SK10-3N)      |
| V    | Fluorocarbon / (SK10-3V) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-3-*4P)   |
| 6P   | 3/8" NPTF      | (B10-3-*6P)   |
| 8P   | 1/2" NPTF      | (B10-3-*8P)   |
| 6T   | SAE-6          | (B10-3-*6T)   |
| 8T   | SAE-8          | (B10-3-*8T)   |
| 6B   | 3/8" BSPG      | (B10-3-6B)†   |
| 8B   | 1/2" BSPG      | (B10-3-*8B)   |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**Technical Information**

**CV** Check Valves  
**SH** Shuttle Valves  
**LM** Load/Motor Controls  
**FC** Flow Controls  
**PC** Pressure Controls  
**LE** Logic Elements  
**DC** Directional Controls  
**MV** Manual Valves  
**SV** Solenoid Valves  
**PV** Proportional Valves  
**CE** Coils & Electronics  
**BC** Bodies & Cavities  
**TD** Technical Data

**General Description**

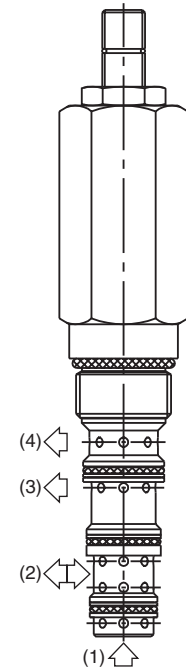
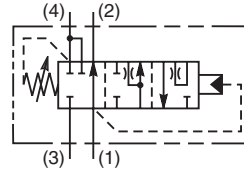
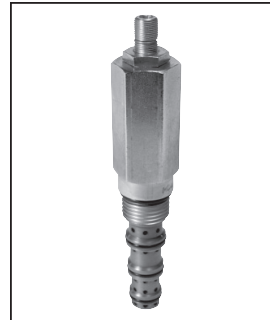
Direct Acting, Spool-Type, Unloading Relief Valve with Internal Pilot. For additional information see Technical Tips on pages PC1-PC6.

**Features**

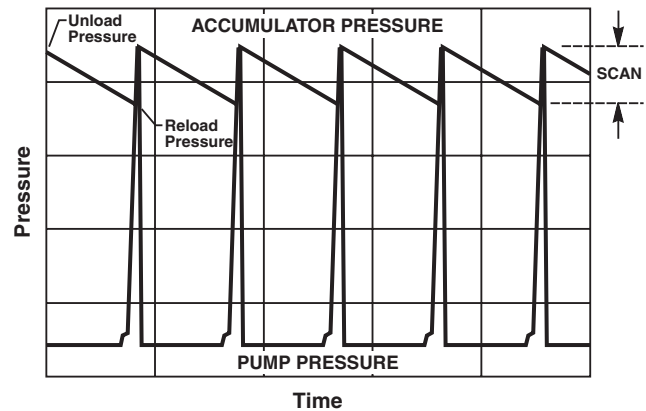
- Use to unload a load sense pump in an accumulator circuit
- One size unloading valve for all flow size applications
- Hardened working parts for maximum durability
- Adjustable and tamperproof versions available
- All external parts zinc plated

**Specifications**

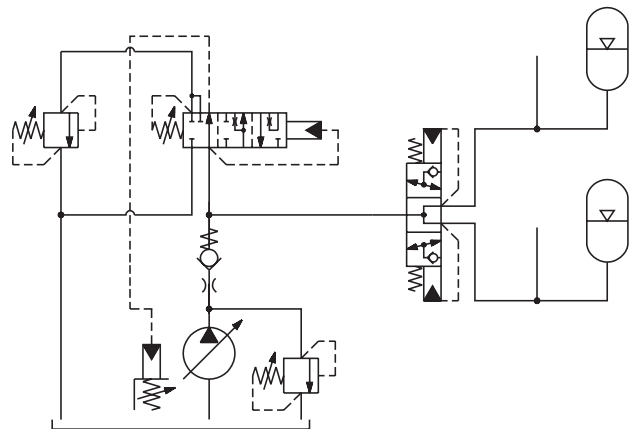
|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 2 LPM (0.53 GPM)   |
| <b>Maximum Inlet Pressure</b>        | 420 Bar (6000 PSI)   |
| <b>Maximum Pressure Setting</b>      | 200 Bar (2900 PSI)   |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 25 ml/min.<br>@ 100 Bar (1450 PSI)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile)<br>(-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon)<br>(-25°F to +250°F) |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)     |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.33 kg (0.73 lbs.)  |
| <b>Cavity</b>                        | C10-4<br>(See BC Section for more details)   |
| <b>Form Tool</b>                     | Rougher None<br>Finisher   |



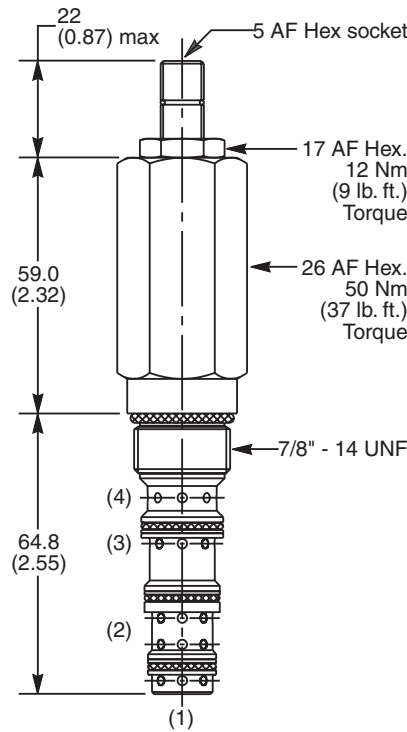
**Performance Curve  
Accumulator Circuit**



**Application**



**Dimensions** Millimeters (Inches)



**Ordering Information**

|   |   |                     |                               |       |                  |              |
|---|---|---------------------|-------------------------------|-------|------------------|--------------|
| <b>M04A4</b>  | <b>J</b>                                  |                     |                               |       |                  |              |
| 10 Size<br>Direct Acting<br>Unloading<br>Relief Valve | Reload<br>Pressure<br>Adjustment<br>Range | Adjustment<br>Style | Reload<br>Pressure<br>Setting | Seals | Body<br>Material | Port<br>Size |

| Code | Reload Pressure Adjustment Range |
|------|----------------------------------|
| J    | 50 - 200 Bar (725 - 2900 PSI)    |

| Code | Adjustment Style / Kit No.    |
|------|-------------------------------|
| Z    | Screw Adjust (Std.)           |
| T    | Tamper Resistant Cap (TC1130) |

| Code | Reload Pressure Setting   |
|------|---|
| Omit | Omit for standard setting<br>Specify setting if required<br><b>M04A4J</b> Standard Setting:<br>125 Bar (1850 PSI) |

| Code | Seals / Kit No.                       |
|------|---------------------------------------|
| N    | Nitrile, Buna-N (Std.) / (SK30530N-1) |
| V    | Fluorocarbon / (SK30530V-1)           |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Port Size | Body Part No.  |
|------|-----------|----------------|
| Omit |           | Cartridge Only |
| 4P   | 1/4" NPTF | (B10-4-*4P)    |
| 6P   | 3/8" NPTF | (B10-4-*6P)    |
| 8P   | 1/2" NPTF | (B10-4-*8P)    |
| 6T   | SAE-6     | (B10-4-*6T)    |
| 8T   | SAE-8     | (B10-4-*8T)    |
| T8T  | SAE-8     | (B10-4-T8T)†   |
| 6B   | 3/8" BSPG | (B10-4-6B)†    |

\* Add "A" for aluminum. omit for steel.  
 † Steel body only.

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

**Technical Information**

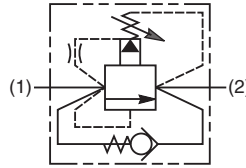
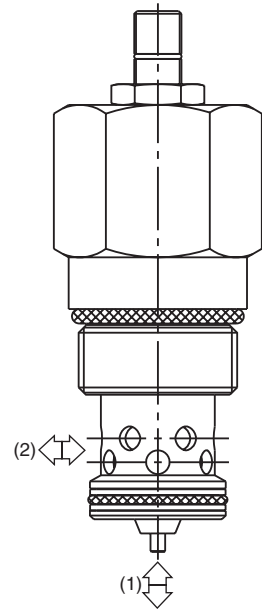
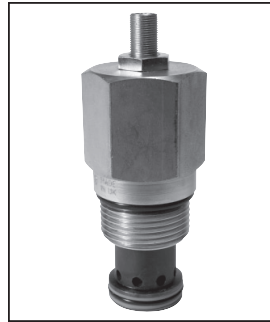
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Pilot Operated, Poppet-Type Relief Valve with Free Reverse Check. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- High flow capacity
- Virtually leak free, can be used for load holding applications
- Compact space saving design
- Hardened working parts for maximum durability
- Adjustable and tamperproof versions available
- All external parts zinc plated



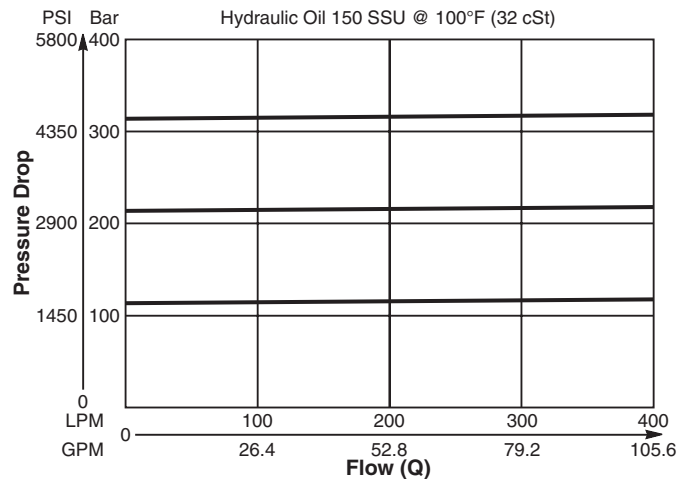
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 350 LPM (92 GPM)   |
| <b>Maximum Inlet Pressure</b>        | 420 Bar (6000 PSI)   |
| <b>Maximum Pressure Setting</b>      | H - 10-210 Bar (145-3000 PSI)<br>P - 10-420 Bar (145-6000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 5 drops/min.<br>@ 100 Bar (1450 PSI)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.57 kg (1.26 lbs.)  |
| <b>Cavity</b>                        | C16-2 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher None<br>Finisher NFT16-2F  |

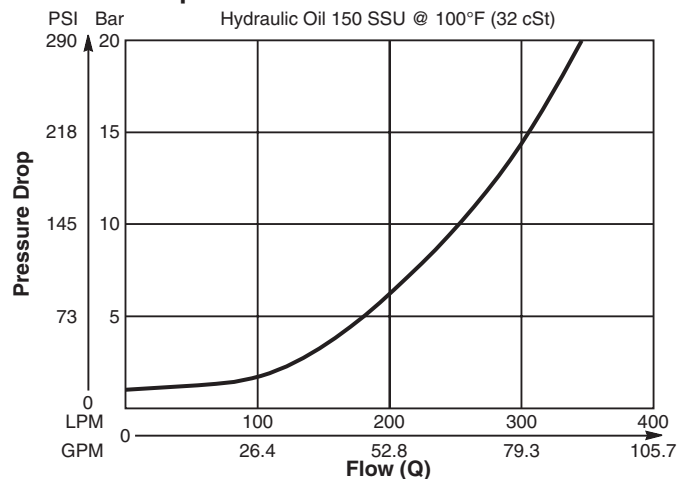
**Performance Curves**

(Pressure rise through cartridge only)

**Relief Performance 1 to 2**

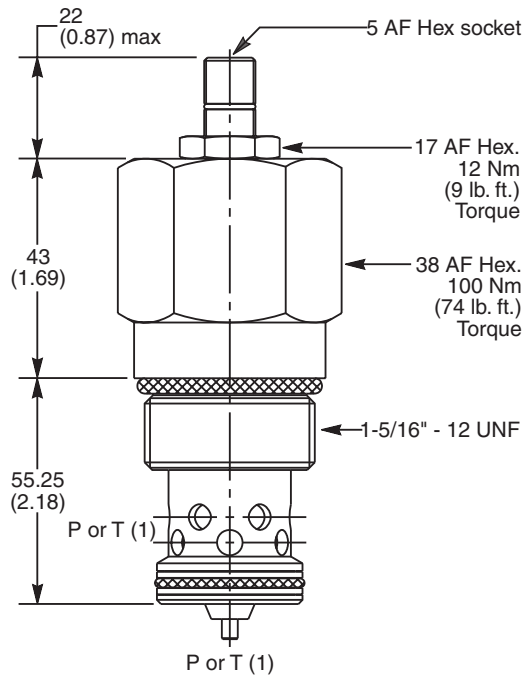


**Pressure Drop vs. Flow 2 to 1**

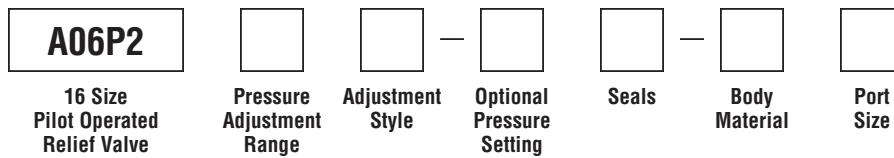




**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Pressure Adjustment Range     |
|------|-------------------------------|
| H    | 10 - 210 Bar (145 - 3000 PSI) |
| P    | 10 - 420 Bar (145 - 6000 PSI) |

| Code | Seals / Kit No.                       |
|------|---------------------------------------|
| N    | Nitrile, Buna-N (Std.) / (SK30507N-1) |
| V    | Fluorocarbon / (SK30507V-1)           |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Adjustment Style / Kit No.    |
|------|-------------------------------|
| Z    | Screw Adjust (Std.)           |
| W    | Knob Adjust                   |
| T    | Tamper Resistant Cap (TC1130) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 12P  | 3/4" NPTF      | (B16-2-*12P)  |
| 16P  | 1" NPTF        | (B16-2-*16P)  |
| 8T   | SAE-8          | (B16-2-*8T)   |
| 12T  | SAE-12         | (B16-2-*12T)  |
| 16T  | SAE-16         | (B16-2-*16T)  |
| 12B  | 3/4" BSPG      | (B16-2-12B)†  |
| 16B  | 1" BSPG        | (B16-2-*16B)  |

| Optional Pressure Setting   |  |
|---|--|
| Specify setting if required (Bar)   |  |
| <b>A06P2H</b> Standard Setting:<br>100 Bar (1450 PSI)<br>@ 20 LPM (5.3 GPM) |  |
| <b>A06P2P</b> Standard Setting:<br>200 Bar (2900 PSI)<br>@ 20 LPM (5.3 GPM) |  |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
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- MV** Manual Valves
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- BC** Bodies & Cavities
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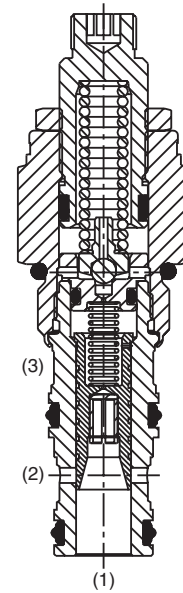
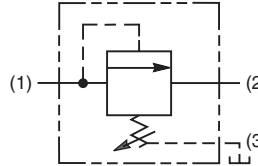
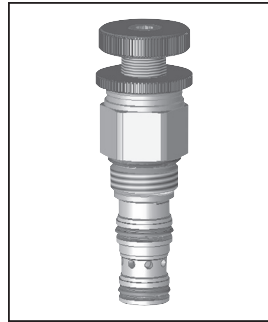
**General Description**

Pilot Operated Sequence Valve (Internally Piloted, Externally Vented). For additional information see Technical Tips on pages PC1-PC6.



**Features**

- Hardened, precision ground parts for durability
- Low profile adapter for minimal space requirements
- Fully guided pilot for more consistent reseal
- Steel adapters are coated with yellow zinc dichromate for protection from salt spray
- Polyurethane "D"-Ring eliminates backup rings and prevents hydrolysis
- Internal screening protects pilot spring from debris



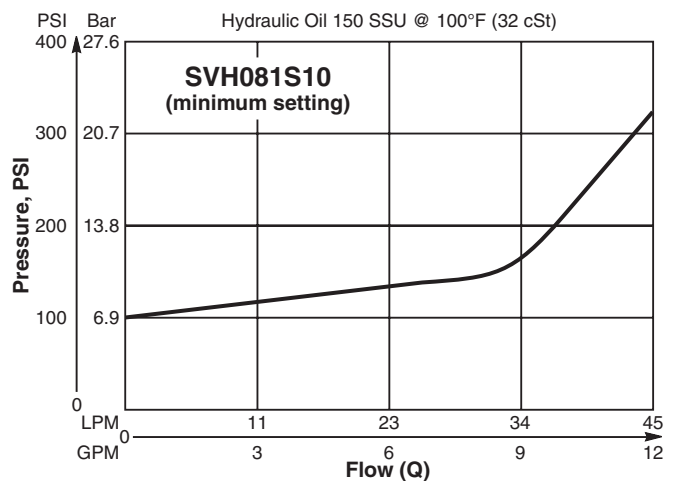
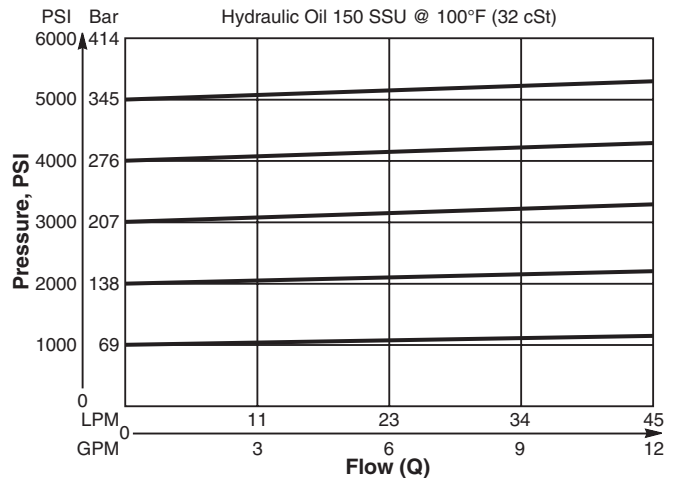
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 45 LPM (12 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>      | 350 Bar (5000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 350 Bar (5000 PSI)   |
| <b>Maximum Drain Flow</b>            | 0.56 LPM (0.15 GPM)  |
| <b>Reseat Pressure</b>               | 90% of crack pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 82 cc/min. (5 cu. in./min.) @ 210 Bar (3000 PSI)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -45°C to +93.3°C ("D"-Ring) (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)  |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | .11 kg (.25 lbs.)  |
| <b>Cavity</b>                        | C08-3 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher NTF08-3R<br>Finisher NFT08-3F  |

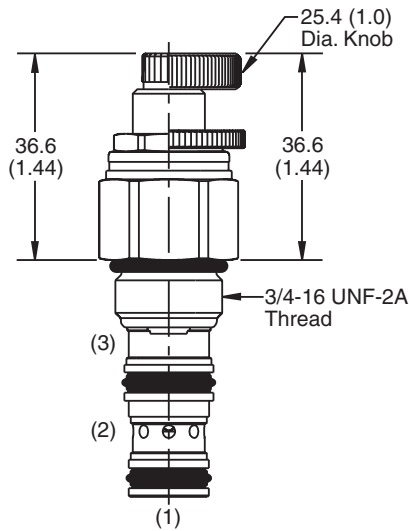
**Performance Curves**

**Flow vs. Inlet Pressure**

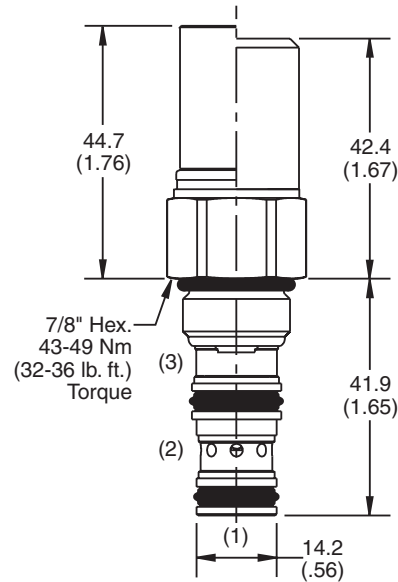
(Pressure rise through cartridge only)



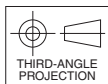
**Dimensions** Millimeters (Inches)



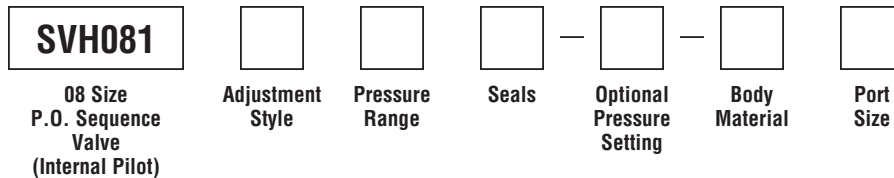
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717943)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK08-3)      |
| N    | Nitrile / (SK08-3N)      |
| V    | Fluorocarbon / (SK08-3V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range  |
|------|---|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM)     |
| 20   | 6.9 - 138 Bar (100 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM)     |
| 30   | 13.8 - 207 Bar (200 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM) |
| 50   | 13.8 - 345 Bar (200 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM) |

| Optional Pressure Setting       |   |
|---------------------------------|---|
| Pressure                        | ± 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used) |
| Setting Range:                  | 100 to 5000 PSI   |
| All settings at crack pressure, | approximately .95 LPM (.25 GPM)                                   |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B08-3-*4P)   |
| 4T   | SAE-4          | (B08-3-*4T)   |
| 6T   | SAE-6          | (B08-3-*6T)   |
| 6B   | 3/8" BSPG      | (B08-3-*6B)   |

\* Add "A" for aluminum, omit for steel.

**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

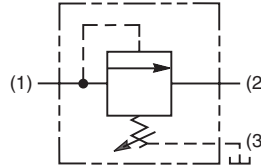
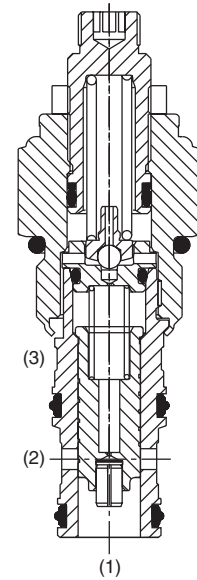
**General Description**

Pilot Operated Sequence Valve (Internally Piloted, Externally Drained). For additional information see Technical Tips on pages PC1-PC6.



**Features**

- Hardened, precision ground parts for durability
- Low profile adapter for minimal space requirements
- Fully guided poppet for more consistent reseal
- Steel adapters are coated with yellow zinc dichromate for protection from salt spray
- Polyurethane "D"-Ring eliminates backup rings and prevents hydrolysis
- Internal screening protects pilot spring from debris



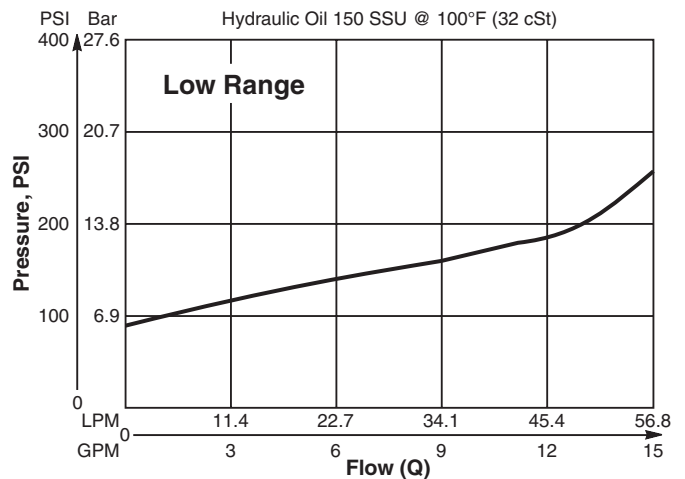
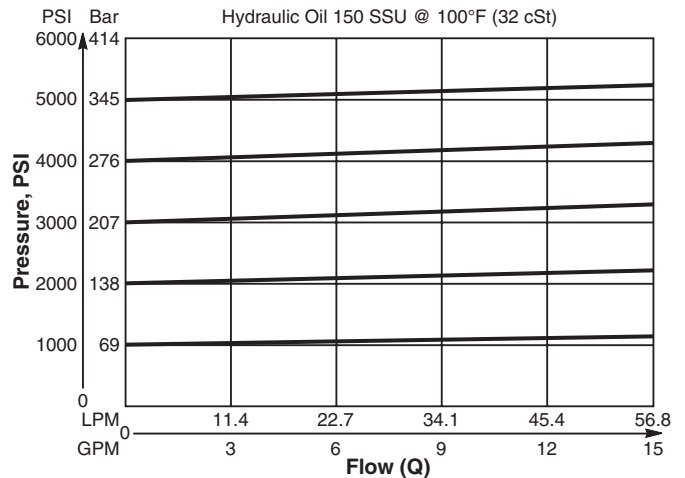
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 56.3 LPM (15 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>      | 350 Bar (5000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 350 Bar (5000 PSI)   |
| <b>Maximum Drain Flow (Port 3)</b>   | 0.94 LPM (0.25 GPM)  |
| <b>Reseat Pressure</b>               | 90% of crack pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 82 cc/min. (5 cu. in./min.) @ 210 Bar (3000 PSI)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -45°C to +93.3°C ("D"-Ring) (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)  |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | .45 kg (1.0 lbs.)  |
| <b>Cavity</b>                        | C10-3 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher NTF10-3R<br>Finisher NFT10-3F  |

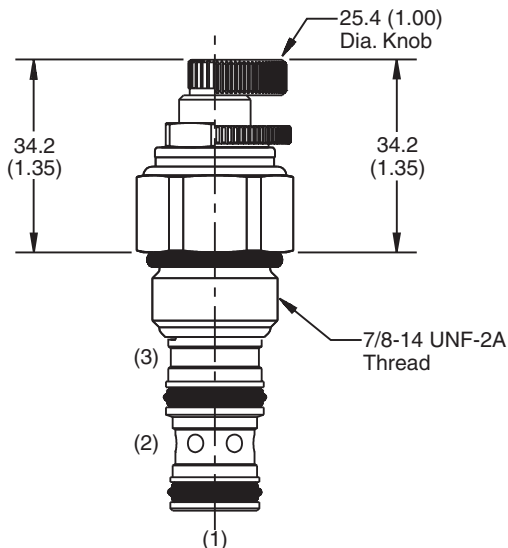
**Performance Curves**

**Flow vs. Inlet Pressure**

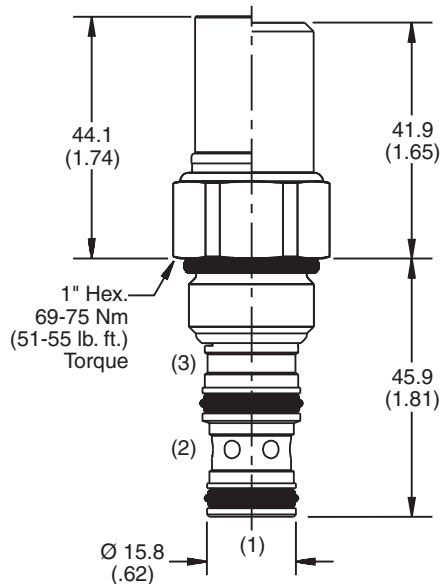
(Pressure rise through cartridge only)



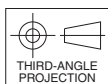
**Dimensions** Millimeters (Inches)



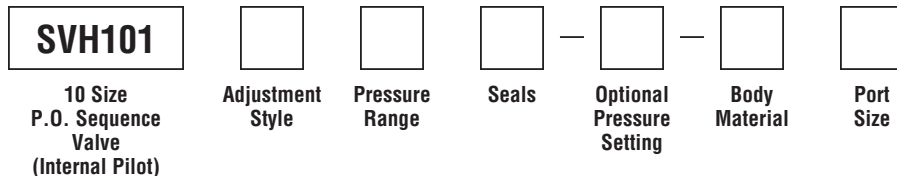
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (718083)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK10-3)      |
| N    | Nitrile / (SK10-3N)      |
| V    | Fluorocarbon / (SK10-3V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range  |
|------|---|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM)     |
| 20   | 6.9 - 138 Bar (100 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM)     |
| 30   | 13.8 - 207 Bar (200 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM) |
| 50   | 13.8 - 345 Bar (200 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM) |

| Optional Pressure Setting   |
|---|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI<br>All settings at crack pressure,<br>approximately .95 LPM (.25 GPM) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-3-*4P)   |
| 6P   | 3/8" NPTF      | (B10-3-*6P)   |
| 8P   | 1/2" NPTF      | (B10-3-*8P)   |
| 6T   | SAE-6          | (B10-3-*6T)   |
| 8T   | SAE-8          | (B10-3-*8T)   |
| 6B   | 3/8" BSPG      | (B10-3-6B)†   |
| 8B   | 1/2" BSPG      | (B10-3-*8B)   |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

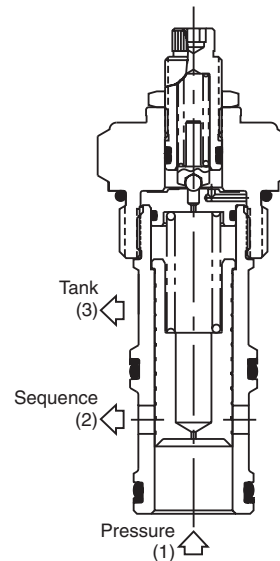
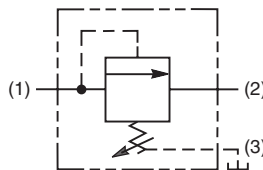
Pilot Operated Sequence Valve (Internally Piloted, Externally Drained). For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Hardened, precision ground parts for durability
- High accuracy, pilot operation design
- Ball-type pilot for added stability
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.

**Specifications**

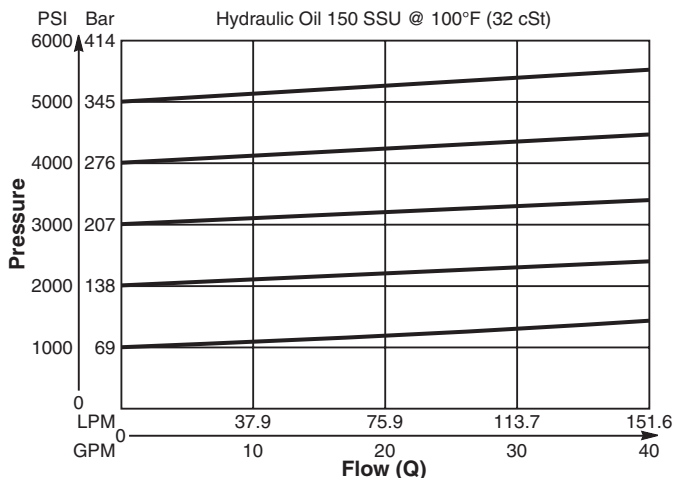
|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 151.6 LPM (40 GPM)   |
| <b>Maximum Inlet Pressure</b>        | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>      | 350 Bar (5000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 350 Bar (5000 PSI)   |
| <b>Maximum Drain Flow</b>            | 1.9 LPM (0.5 GPM)  |
| <b>Reseat Pressure</b>               | 80% of crack pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 5 cc per 100 PSI (6.8 Bar) setting   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | .45 kg (1.0 lbs.)  |
| <b>Cavity</b>                        | C16-3 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher NTF16-3R<br>Finisher NFT16-3F  |



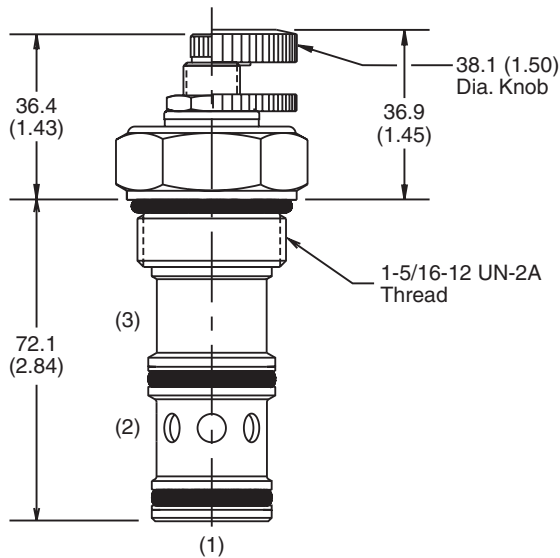
**Performance Curve**

**Flow vs. Inlet Pressure**

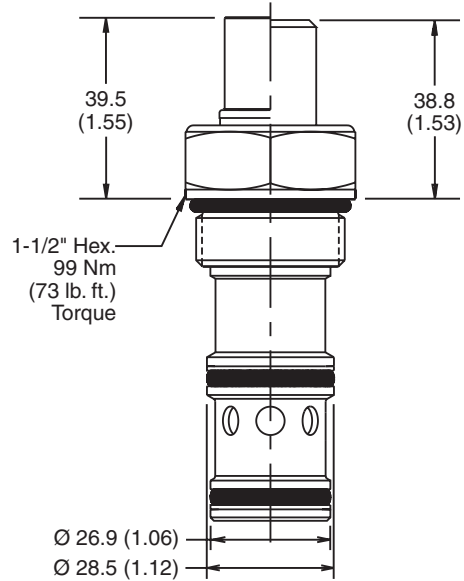
(Pressure rise through cartridge only)



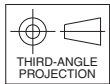
**Dimensions** Millimeters (Inches)



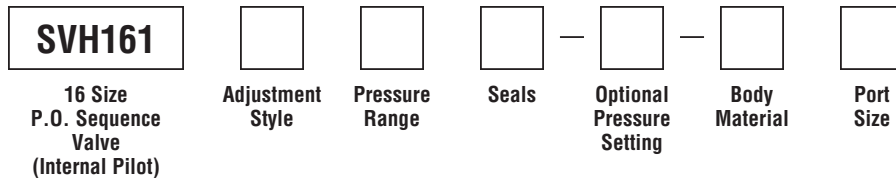
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-15)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717785)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | Nitrile / (SK16-3)       |
| V    | Fluorocarbon / (SK16-3V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range   |
|------|--|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI)<br>@ 11.3 LPM (3 GPM)     |
| 20   | 13.8 - 138 Bar (200 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)<br>@ 11.3 LPM (3 GPM)    |
| 30   | 20.7 - 207 Bar (300 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI)<br>@ 11.3 LPM (3 GPM) |
| 50   | 34.5 - 345 Bar (500 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI)<br>@ 11.3 LPM (3 GPM) |

| Optional Pressure Setting   |
|---|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI<br>All settings at 11.3 LPM (3 GPM) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 12T  | SAE-12         | (B16-3-*12T)  |
| 16T  | SAE-16         | (B16-3-*16T)  |

\* Add "A" for aluminum, omit for steel.



**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

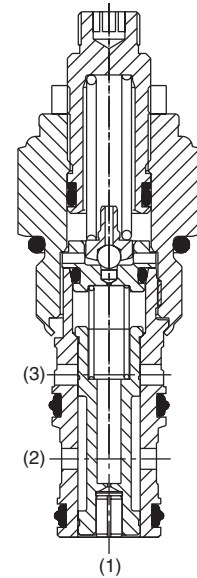
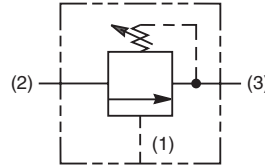
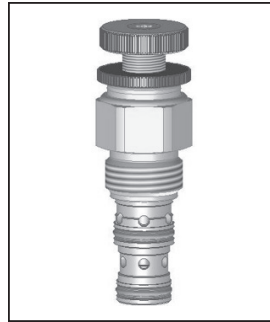
**General Description**

Pilot Operated Sequence Valve (Externally Piloted, Internally Vented). For additional information see Technical Tips on pages PC1-PC6.



**Features**

- Hardened, precision ground parts for durability
- Low profile adapter for minimal space requirements
- Fully guided poppet for more consistent reseal
- Steel adapters are coated with yellow zinc dichromate for protection from salt spray
- Polyurethane "D"-Ring eliminates backup rings and prevents hydrolysis
- Internal screening protects pilot spring from debris

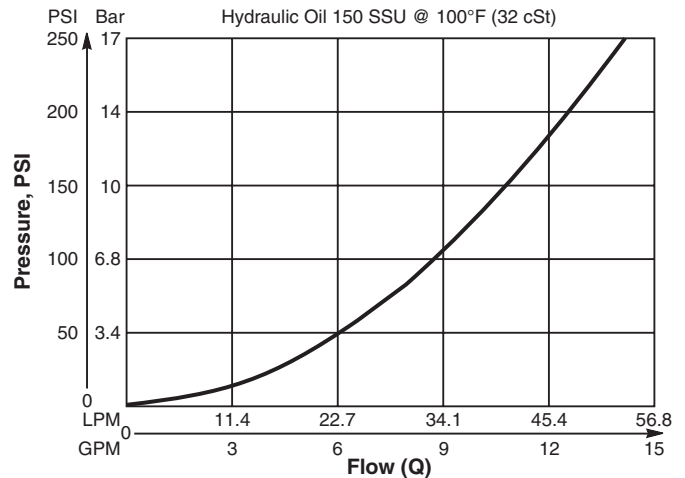


**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 56.3 LPM (15 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>      | 350 Bar (5000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 350 Bar (5000 PSI)   |
| <b>Maximum Drain Flow</b>            | See maximum drain flow chart (Lower right)   |
| <b>Reseat Pressure</b>               | 90% of crack pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 82 cc/min. (5 cu. in./min.) @ 210 Bar (3000 PSI)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -45°C to +93.3°C ("D"-Ring) (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)  |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | .45 kg (1.0 lbs.)  |
| <b>Cavity</b>                        | C10-3 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher NTF10-3R<br>Finisher NFT10-3F  |

**Performance Curve**  
**Flow vs. Inlet Pressure**

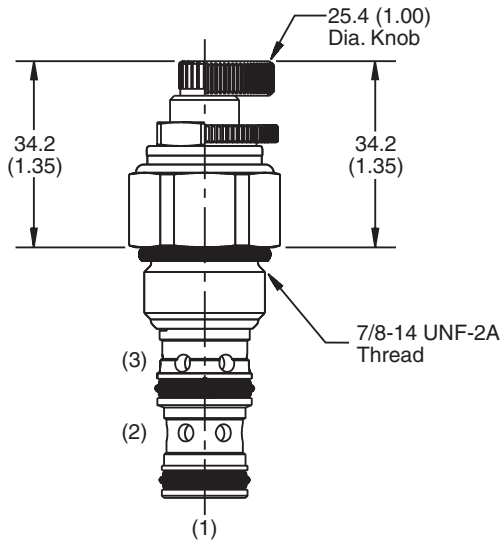
(Pressure rise through cartridge only)



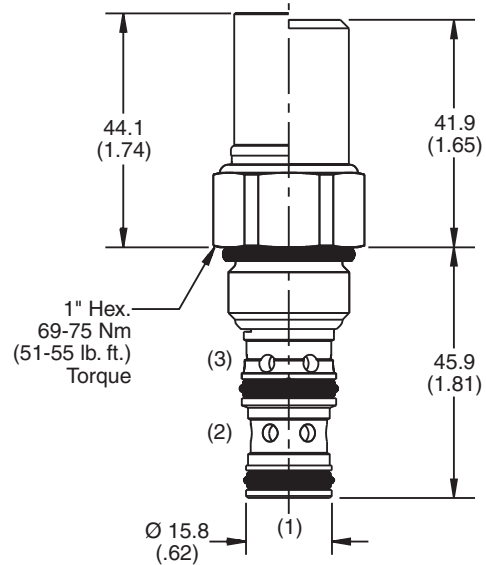
**Maximum Drain Flow**

| <b>P<sub>PILOT</sub> - P<sub>SETTING</sub></b> | <b>Drain Flow</b>   |
|--|---------------------|
| 6.9 Bar (100 PSI)                              | 0.34 LPM (0.09 GPM) |
| 35 Bar (500 PSI)                               | 0.76 LPM (0.20 GPM) |
| 69 Bar (1000 PSI)                              | 1.08 LPM (0.29 GPM) |
| 138 Bar (2000 PSI)                             | 1.53 LPM (0.40 GPM) |
| 207 Bar (3000 PSI)                             | 1.87 LPM (0.50 GPM) |

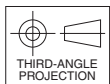
**Dimensions** Millimeters (Inches)



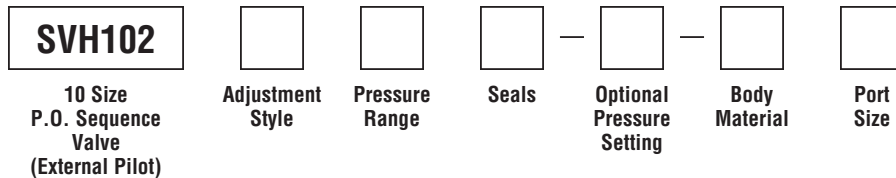
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (718083)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK10-3)      |
| N    | Nitrile / (SK10-3N)      |
| V    | Fluorocarbon / (SK10-3V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range   |
|------|--|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI) @ crack pressure,<br>approximately 11.3 LPM (3 GPM)     |
| 20   | 6.9 - 138 Bar (100 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI) @ crack pressure,<br>approximately 11.3 LPM (3 GPM)     |
| 30   | 13.8 - 207 Bar (200 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI) @ crack pressure,<br>approximately 11.3 LPM (3 GPM) |
| 50   | 13.8 - 345 Bar (200 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) @ crack pressure,<br>approximately 11.3 LPM (3 GPM) |

| Optional Pressure Setting  |
|--|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI<br>All settings at crack pressure,<br>approximately 11.3 LPM (3 GPM) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-3-*4P)   |
| 6P   | 3/8" NPTF      | (B10-3-*6P)   |
| 8P   | 1/2" NPTF      | (B10-3-*8P)   |
| 6T   | SAE-6          | (B10-3-*6T)   |
| 8T   | SAE-8          | (B10-3-*8T)   |
| 6B   | 3/8" BSPG      | (B10-3-6B)†   |
| 8B   | 1/2" BSPG      | (B10-3-*8B)   |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

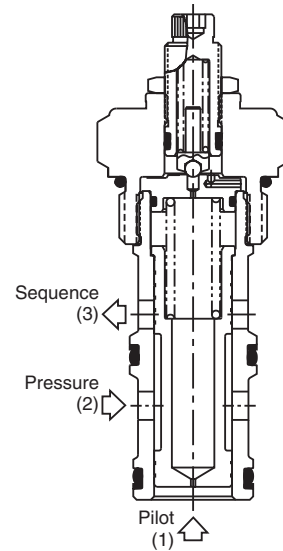
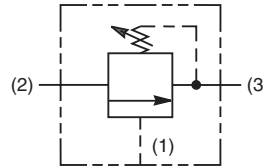
Pilot Operated Sequence Valve (Externally Piloted, Internally Vented). For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Hardened, precision ground parts for durability
- High accuracy, pilot operation design
- Ball-type pilot for added stability
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.

**Specifications**

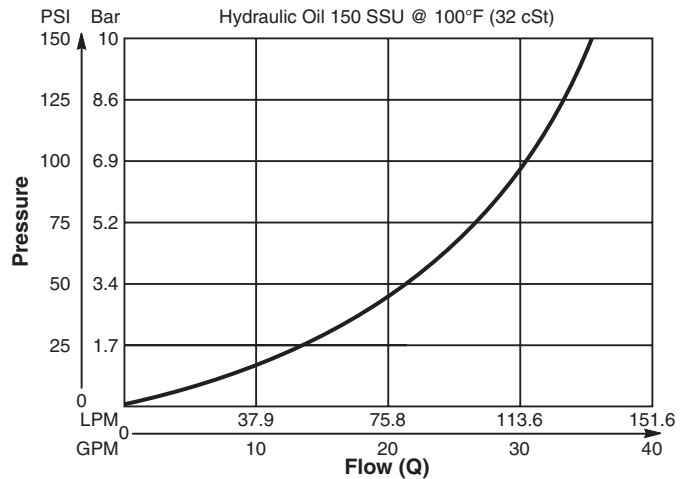
|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 151.6 LPM (40 GPM)   |
| <b>Maximum Inlet Pressure</b>        | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>      | 350 Bar (5000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 350 Bar (5000 PSI)   |
| <b>Maximum Drain Flow</b>            | See maximum drain flow chart (Lower right)   |
| <b>Reseat Pressure</b>               | 80% of Crack Pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 82 cc/min. (5 cu. in./min.) @ 75% of Crack Pressure  |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | .45 kg (1.0 lbs.)  |
| <b>Cavity</b>                        | C16-3 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher NFT16-3R<br>Finisher NFT16-3F  |



**Performance Curve**

**Flow vs. Inlet Pressure**

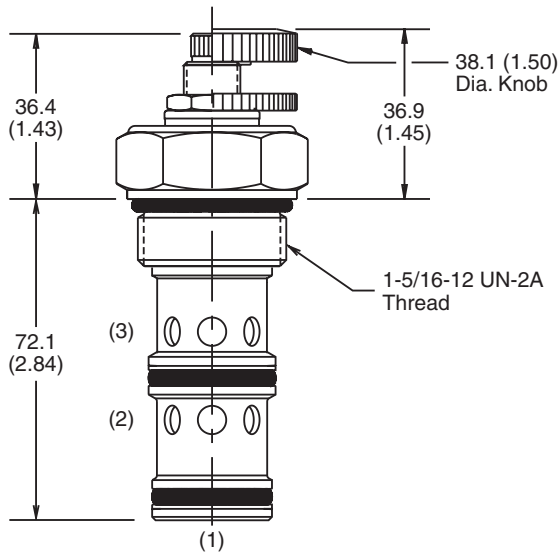
(Pressure rise through cartridge only)



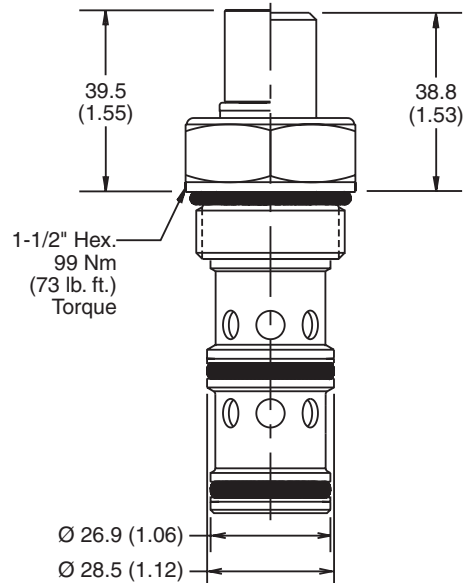
**Maximum Drain Flow**

| <b>P<sub>PILOT</sub> - P<sub>SETTING</sub></b> | <b>Drain Flow</b>   |
|--|---------------------|
| 6.9 Bar (100 PSI)                              | 0.69 LPM (0.18 GPM) |
| 35 Bar (500 PSI)                               | 1.55 LPM (0.41 GPM) |
| 69 Bar (1000 PSI)                              | 2.19 LPM (0.58 GPM) |
| 138 Bar (2000 PSI)                             | 3.10 LPM (0.82 GPM) |
| 207 Bar (3000 PSI)                             | 3.79 LPM (1.00 GPM) |

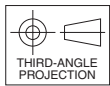
**Dimensions** Millimeters (Inches)



**Screw/Knob Version**



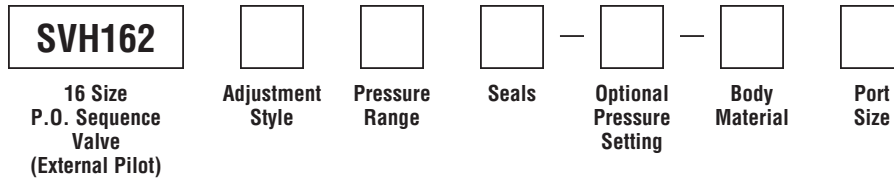
**Fixed Cap/Tamper Resistant Version**



**Screw/Knob Version**

**Fixed Cap/Tamper Resistant Version**

**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-15)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717785)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | Nitrile / (SK16-3)       |
| V    | Fluorocarbon / (SK16-3V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range   |
|------|--|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI)<br>@ 11.3 LPM (3 GPM)     |
| 20   | 13.8 - 138 Bar (200 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)<br>@ 11.3 LPM (3 GPM)    |
| 30   | 20.7 - 207 Bar (300 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI)<br>@ 11.3 LPM (3 GPM) |
| 50   | 34.5 - 345 Bar (500 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI)<br>@ 11.3 LPM (3 GPM) |

| Optional Pressure Setting   |
|---|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI<br>All settings at 11.3 LPM (3 GPM) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 12T  | SAE-12         | (B16-3-*12T)  |
| 16T  | SAE-16         | (B16-3-*16T)  |

\* Add "A" for aluminum, omit for steel.

**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

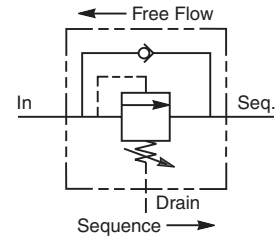
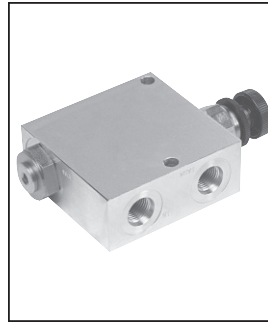
**General Description**

Pilot Operated Sequence Valve with Reverse Flow Check. For additional information see Technical Tips on pages PC1-PC6.



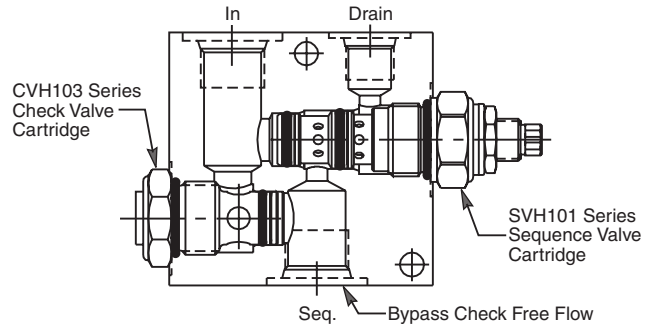
**Features**

- Hardened, precision ground parts for durability
- Built-in reverse flow check reduces plumbing
- Cartridge design
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.



**Specifications**

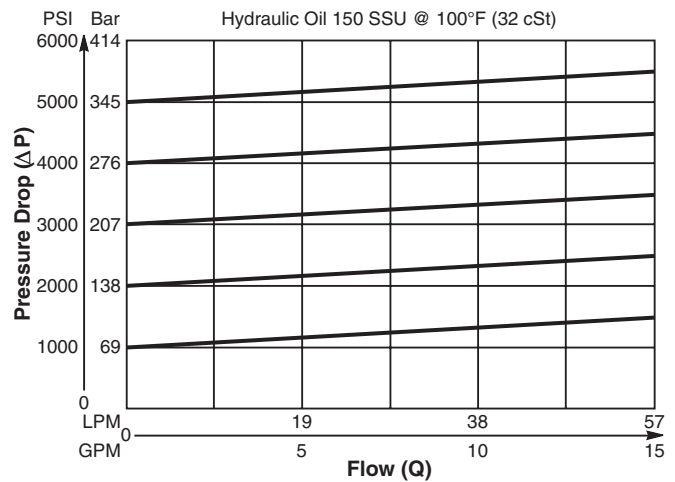
|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 56.3 LPM (15 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>      | 350 Bar (5000 PSI)   |
| <b>Maximum Drain Flow</b>            | .94 LPM (0.25 GPM)   |
| <b>Reseat Pressure</b>               | 90% of Crack Pressure  |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 82 cc/min. (5 cu. in./min.) at 210 Bar (3000 PSI)  |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Body Material</b>                 | Steel  |
| <b>Operating Temp. Range/Seals</b>   | -45°C to +93.3°C ("D"-Ring) (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)  |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 1.6 kg (3.5 lbs.)  |



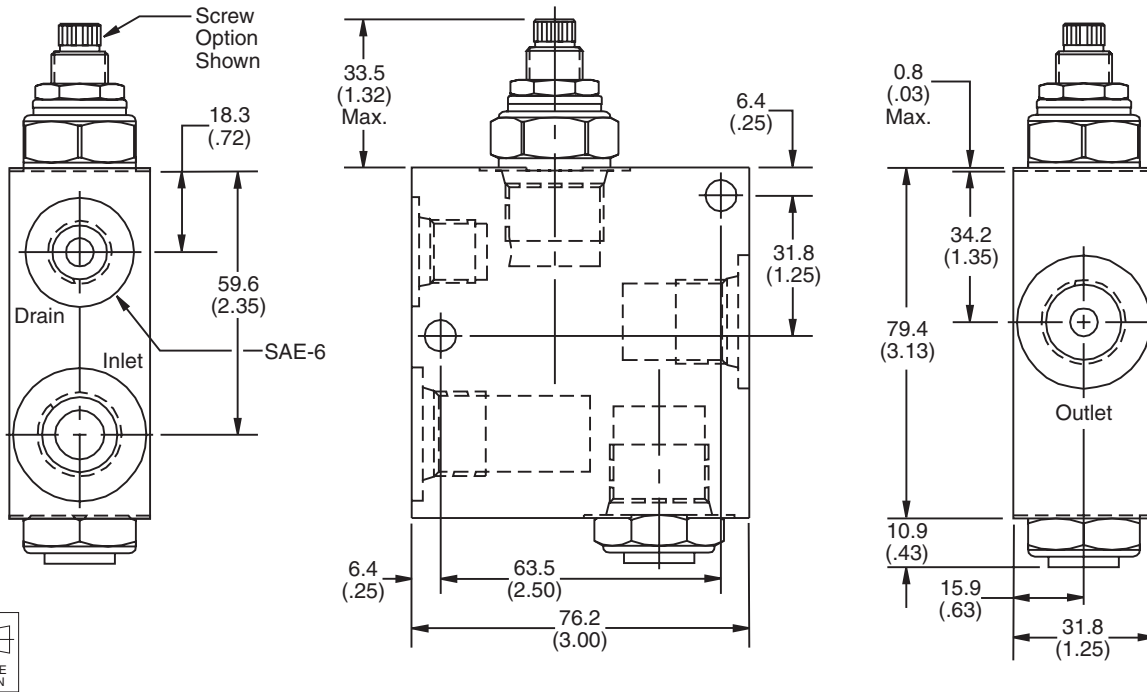
**Performance Curve**

**Flow vs. Inlet Pressure**

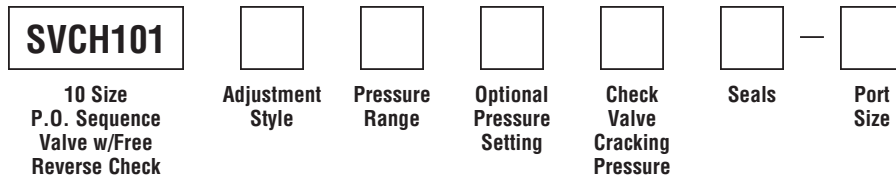
(Pressure rise through cartridge only)



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (718083)   |

| Optional Pressure Setting       |   |
|---------------------------------|---|
| Pressure                        | ± 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used) |
| Setting Range:                  | 100 to 5000 PSI   |
| All settings at crack pressure, | approximately .95 LPM (.25 GPM)                                   |

| Code | Seals        |
|------|--------------|
| Omit | "D"-Ring     |
| N    | Nitrile      |
| V    | Fluorocarbon |

| Code | Pressure Range  |
|------|---|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM)     |
| 20   | 6.9 - 138 Bar (100 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM)     |
| 30   | 13.8 - 207 Bar (200 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM) |
| 50   | 13.8 - 345 Bar (200 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM) |

| Code | Cracking Pressure |
|------|-------------------|
| Omit | 0.3 Bar (5 PSI)   |
| P20  | 1.4 Bar (20 PSI)  |
| P50  | 3.5 Bar (50 PSI)  |
| P65  | 4.5 Bar (65 PSI)  |
| P100 | 6.9 Bar (100 PSI) |

| Code | Port Size | Part No. |
|------|-----------|----------|
| 8T   | SAE-8     | 830343   |

**Technical Information**

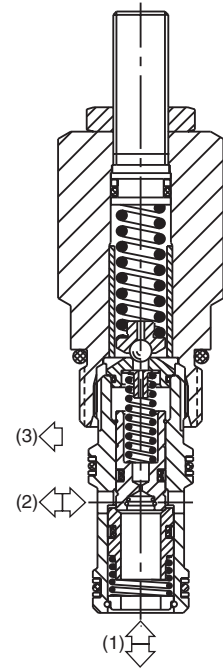
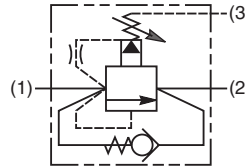
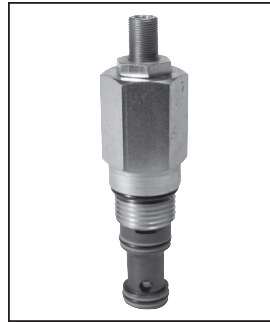
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Pilot Operated Sequence Valve with Reverse Flow Check. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- High flow capacity
- For use on clamp and drill circuits where pressure is to be maintained regardless of drop in system pressure
- Integral 250 micron pilot flow filter
- Hardened working parts for maximum durability
- Adjustable and tamperproof versions available
- All external parts zinc plated



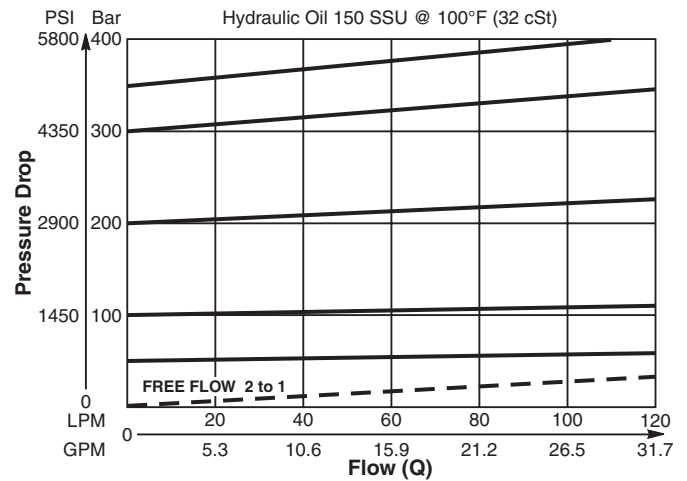
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 70 LPM (18.5 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 420 Bar (6000 PSI)   |
| <b>Maximum Pressure Setting</b>      | H - 10-210 Bar (145-3000 PSI)<br>P - 10-420 Bar (145-6000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 50 drops/min.<br>@ 100 Bar (1450 PSI)  |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.25 kg (0.55 lbs.)  |
| <b>Cavity</b>                        | C10-3S (See BC Section for more details)   |
| <b>Form Tool</b>                     | Rougher NFT10S-3R<br>Finisher NFT10S-3F  |

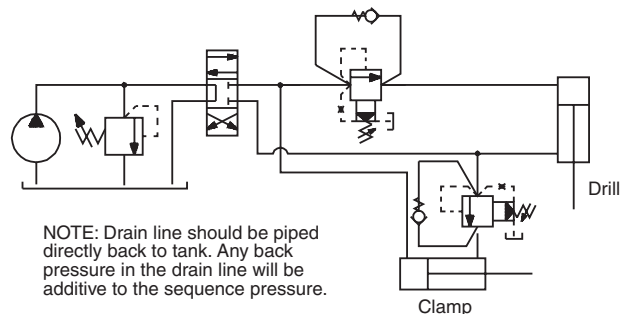
**Performance Curve**

(Pressure rise through cartridge only)

**Flow vs. Inlet Pressure 1 to 2**

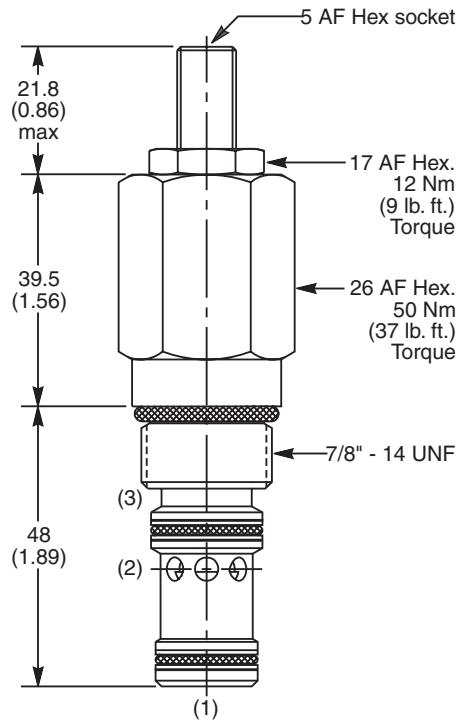


**Application**





**Dimensions** Millimeters (Inches)



**Ordering Information**

|  |                                  |                          |                                  |                          |
|--|----------------------------------|--------------------------|----------------------------------|--------------------------|
| <b>B04D3</b>                                 | <input type="checkbox"/>         | <input type="checkbox"/> | <input type="checkbox"/>         | <input type="checkbox"/> |
| <b>10 Size Pilot Operated Sequence Valve</b> | <b>Pressure Adjustment Range</b> | <b>Adjustment Style</b>  | <b>Optional Pressure Setting</b> | <b>Seals</b>             |

| Code | Pressure Adjustment Range     |
|------|-------------------------------|
| H    | 10 - 210 Bar (145 - 3000 PSI) |
| P    | 10 - 420 Bar (145 - 6000 PSI) |

| Optional Pressure Setting   |  |
|---|--|
| Specify setting if required (Bar)   |  |
| <b>B04D3H</b> Standard Setting:<br>100 Bar (1450 PSI)<br>@ 15 LPM (4.0 GPM) |  |
| <b>B04D3P</b> Standard Setting:<br>200 Bar (2900 PSI)<br>@ 15 LPM (4.0 GPM) |  |

| Code | Adjustment Style / Kit No.    |
|------|-------------------------------|
| Z    | Screw Adjust (Std.)           |
| W    | Knob Adjust                   |
| T    | Tamper Resistant Cap (TC1130) |

| Code | Seals / Kit No.                       |
|------|---------------------------------------|
| N    | Nitrile, Buna-N (Std.) / (SK30504N-1) |
| V    | Fluorocarbon / (SK30504V-1)           |

**Order Bodies Separately**

|                  |                          |                          |
|------------------|--------------------------|--------------------------|
| <b>LB10</b>      | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Line Body</b> | <b>Porting</b>           | <b>Body Material</b>     |

| Code | Porting                           |
|------|-----------------------------------|
| 710  | 5/8" SAE (main)<br>3/8" SAE (aux) |
| 711  | 3/4" BSP (main)<br>1/4" BSP (aux) |

| Code | Body Material |
|------|---------------|
| A    | Aluminum      |
| S    | Steel         |

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

**Technical Information**

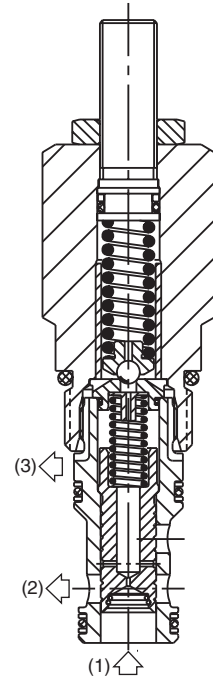
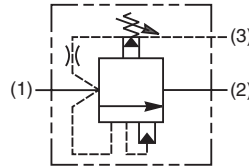
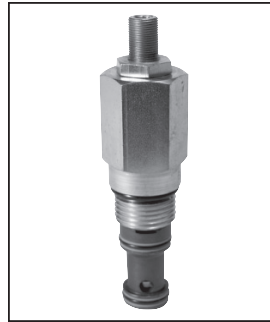
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Kick-Down, Spool Type, Pilot Operated Sequence Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- High flow capacity
- Integral 250 micron pilot flow filter
- Hardened working parts for maximum durability
- Adjustable and tamperproof versions available
- All external parts zinc plated



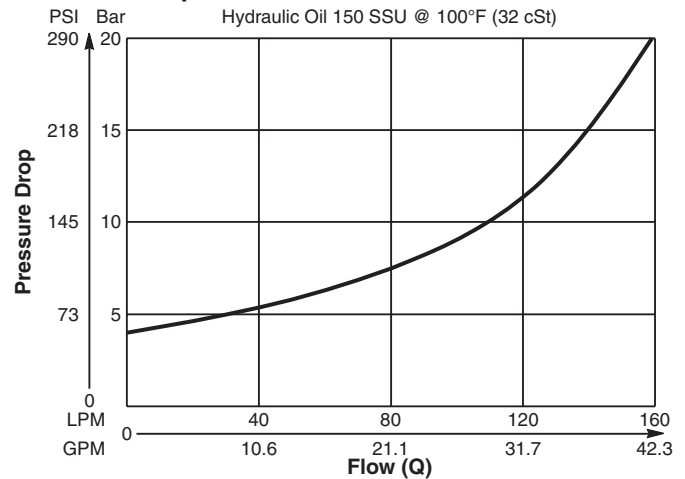
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 160 LPM (42 GPM)   |
| <b>Maximum Inlet Pressure</b>        | 420 Bar (6000 PSI)   |
| <b>Maximum Pressure Setting</b>      | H - 10-210 Bar (145-3000 PSI)<br>P - 10-420 Bar (145-6000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Sensitivity: Pressure/Turn</b>    | H - 30 Bar (435 PSI)<br>P - 55 Bar (800 PSI)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.27 kg (0.55 lbs.)  |
| <b>Cavity</b>                        | C10-3S (See BC Section for more details)   |
| <b>Form Tool</b>                     | Rougher NFT10S-3R<br>Finisher NFT10S-3F  |

**Performance Curve**

(Pressure rise through cartridge only)

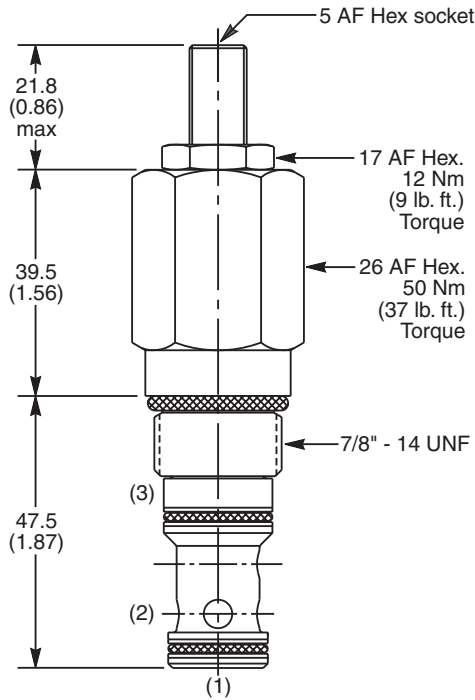
**Pressure Drop vs. Flow 1 to 2**



**Application Note**

Valve unloads completely when setting is reached and resets when fluid supply is removed.

**Dimensions** Millimeters (Inches)



**Ordering Information**

|  |                                  |                          |                                  |                          |
|--|----------------------------------|--------------------------|----------------------------------|--------------------------|
| <b>B04C3</b>   | <input type="checkbox"/>         | <input type="checkbox"/> | <input type="checkbox"/>         | <input type="checkbox"/> |
| <b>10 Size Kick-Down Pilot Operated Sequence Valve</b> | <b>Pressure Adjustment Range</b> | <b>Adjustment Style</b>  | <b>Optional Pressure Setting</b> | <b>Seals</b>             |

| Code | Pressure Adjustment Range     |
|------|-------------------------------|
| H    | 10 - 210 Bar (145 - 3000 PSI) |
| P    | 10 - 420 Bar (145 - 6000 PSI) |

| Optional Pressure Setting         |                                      |
|-----------------------------------|--------------------------------------|
| Specify setting if required (Bar) |                                      |
| <b>B04C3H</b>                     | Standard Setting: 100 Bar (1450 PSI) |
| <b>B04C3P</b>                     | Standard Setting: 200 Bar (2900 PSI) |

| Code | Adjustment Style / Kit No.    |
|------|-------------------------------|
| Z    | Screw Adjust (Std.)           |
| W    | Knob Adjust                   |
| T    | Tamper Resistant Cap (TC1130) |

| Code | Seals / Kit No.                       |
|------|---------------------------------------|
| N    | Nitrile, Buna-N (Std.) / (SK30504N-1) |
| V    | Fluorocarbon / (SK30504V-1)           |

*Order Bodies Separately*

|             |                          |                          |
|-------------|--------------------------|--------------------------|
| <b>LB10</b> | <input type="checkbox"/> | <input type="checkbox"/> |
| Line Body   | Porting                  | Body Material            |

| Code | Porting                           |
|------|-----------------------------------|
| 710  | 5/8" SAE (main)<br>3/8" SAE (aux) |
| 711  | 3/4" BSP (main)<br>1/4" BSP (aux) |

| Code | Body Material |
|------|---------------|
| A    | Aluminum      |
| S    | Steel         |

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

**Technical Information**

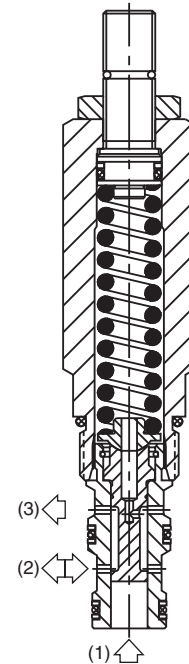
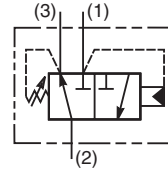
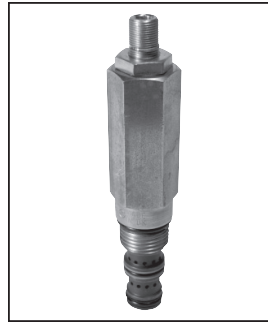
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Direct Acting Sequence Valve with Internal Pilot and Drain. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Hardened working parts for maximum durability
- All external parts zinc plated
- Adjustable and tamperproof versions available



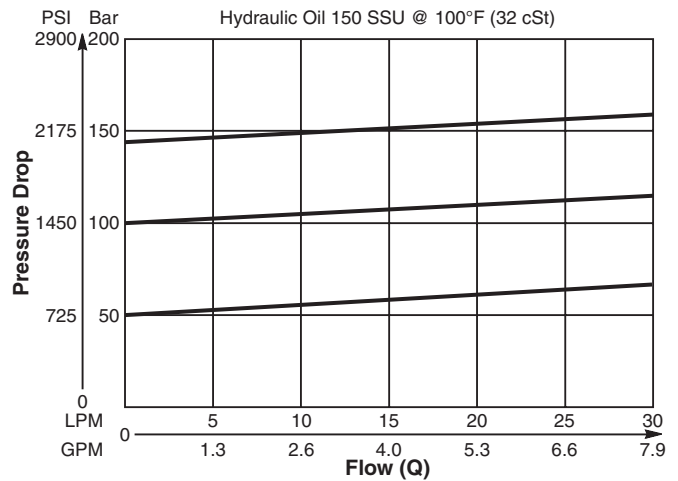
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 30 LPM (8 GPM)   |
| <b>Maximum Inlet Pressure</b>        | 420 Bar (6000 PSI)   |
| <b>Maximum Pressure Setting</b>      | 2-148 Bar (30-2150 PSI)  |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 25 ml/min. @ 35 Bar (580 PSI)  |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.21 kg (0.46 lbs.)  |
| <b>Cavity</b>                        | C08-3 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher NFT08-3R<br>Finisher NFT08-3F  |

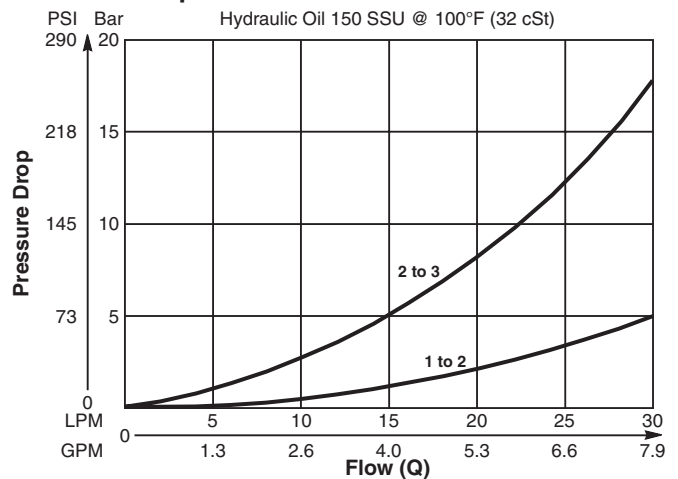
**Performance Curves**

(Pressure rise through cartridge only)

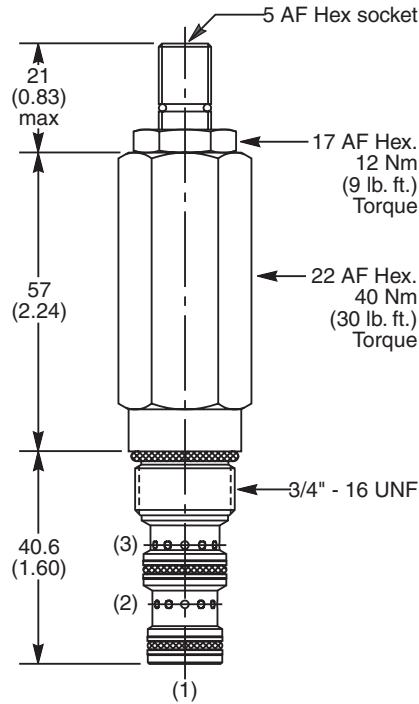
**Flow vs. Inlet Pressure 1 to 2**



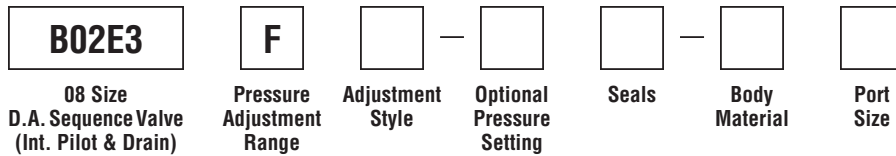
**Pressure Drop vs. Flow**



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Pressure Adjustment Range   |
|------|-----------------------------|
| F    | 2 - 148 Bar (30 - 2150 PSI) |

| Code | Seals / Kit No.                       |
|------|---------------------------------------|
| N    | Nitrile, Buna-N (Std.) / (SK30501N-1) |
| V    | Fluorocarbon / (SK30501V-1)           |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Adjustment Style / Kit No.    |
|------|-------------------------------|
| Z    | Screw Adjust (Std.)           |
| W    | Knob Adjust                   |
| T    | Tamper Resistant Cap (TC1130) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B08-3-*4P)   |
| 4T   | SAE-4          | (B08-3-*4T)   |
| 6T   | SAE-6          | (B08-3-*6T)   |
| 6B   | 3/8" BSPG      | (B08-3-*6B)   |

| Optional Pressure Setting   |
|---|
| Specify setting if required (Bar)   |
| <b>B02E3F</b> Standard Setting:<br>75 Bar (1100 PSI)<br>@ 5 LPM (1.3 GPM) |

\* Add "A" for aluminum, omit for steel.

**Technical Information**

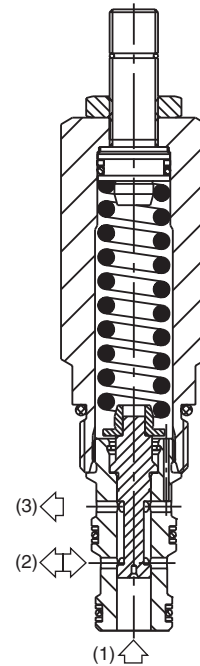
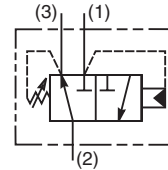
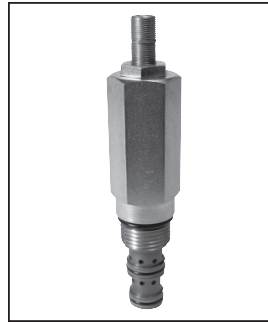
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Direct Acting Sequence Valve with Internal Pilot and Drain. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Hardened working parts for maximum durability
- All external parts zinc plated
- Adjustable and tamperproof versions available



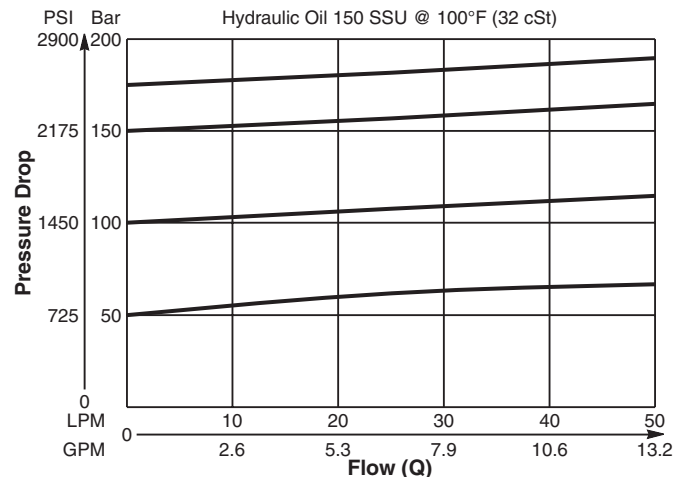
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 50 LPM (13 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 420 Bar (6000 PSI)   |
| <b>Maximum Pressure Setting</b>      | <b>E</b> - 2-80 Bar (30-1160 PSI)<br><b>G</b> - 2-166 Bar (30-2400 PSI)                                |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 25 ml/min.<br>@ 60 Bar (870 PSI)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.27 kg (0.60 lbs.)  |
| <b>Cavity</b>                        | C10-3 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher NFT10-3R<br>Finisher NFT10-3F  |

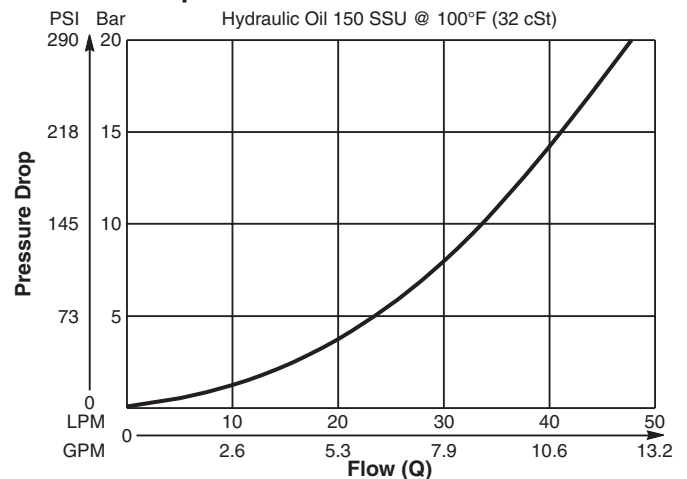
**Performance Curves**

(Pressure rise through cartridge only)

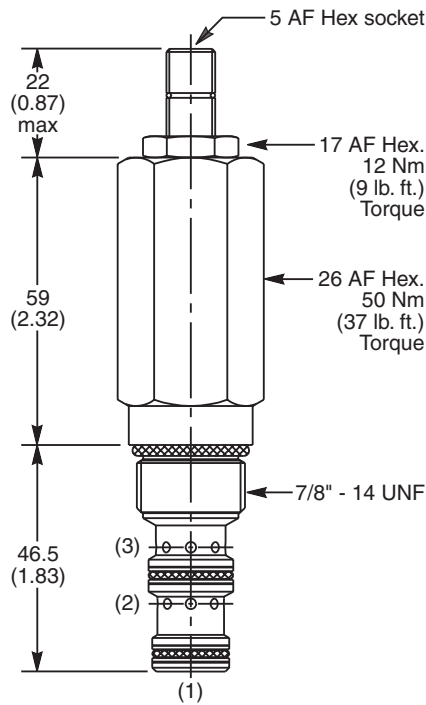
**Flow vs. Inlet Pressure 1 to 2**



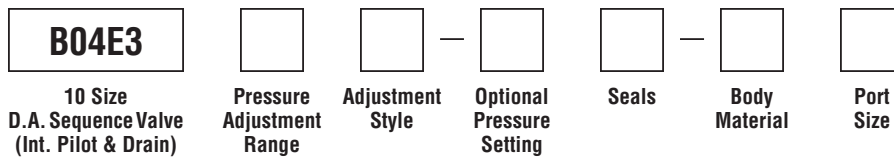
**Pressure Drop vs. Flow 1 to 2 and 2 to 3**



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Pressure Adjustment Range     |
|------|-------------------------------|
| E    | 2 - 80 Bar (30 - 1160 PSI)    |
| G    | 2 - 166 Bar (30 - 2400 PSI)   |
| J    | 40 - 240 Bar (580 - 3500 PSI) |

| Code | Seals / Kit No.                       |
|------|---------------------------------------|
| N    | Nitrile, Buna-N (Std.) / (SK30505N-1) |
| V    | Fluorocarbon / (SK30505V-1)           |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Adjustment Style / Kit No.    |
|------|-------------------------------|
| Z    | Screw Adjust (Std.)           |
| W    | Knob Adjust                   |
| T    | Tamper Resistant Cap (TC1130) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-3-*4P)   |
| 6P   | 3/8" NPTF      | (B10-3-*6P)   |
| 8P   | 1/2" NPTF      | (B10-3-*8P)   |
| 6T   | SAE-6          | (B10-3-*6T)   |
| 8T   | SAE-8          | (B10-3-*8T)   |
| 6B   | 3/8" BSPG      | (B10-3-6B)†   |
| 8B   | 1/2" BSPG      | (B10-3-*8P)   |

| Optional Pressure Setting         |   |
|-----------------------------------|---|
| Specify setting if required (Bar) |   |
| <b>B04E3E</b>                     | Standard Setting:<br>40 Bar (580 PSI) @ 5 LPM (1.3 GPM)   |
| <b>B04E3G</b>                     | Standard Setting:<br>80 Bar (1160 PSI) @ 5 LPM (1.3 GPM)  |
| <b>B04E3J</b>                     | Standard Setting:<br>120 Bar (1750 PSI) @ 5 LPM (1.3 GPM) |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

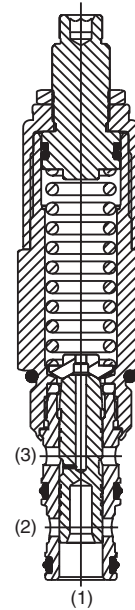
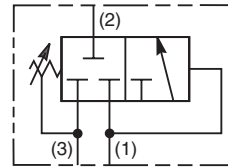


**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Direct Acting Sequence Valve (Internally Piloted, Externally Drained). In the steady state condition, all three ports are blocked with the spring chamber drained to port 3. When the pressure at port 1 exceeds the valve setting, the spool moves allowing flow from the nose of the cartridge (port 1) to the actuator port (port 2). By externally draining the spring chamber directly to tank (port 3), the valve is insensitive to back pressure at the sequence port.



**Features**

- Hardened, precision ground parts for durability
- Internal mechanical stop limits spool travel eliminating spring solidification
- “D”-Ring eliminates backup rings
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.
- Fast response

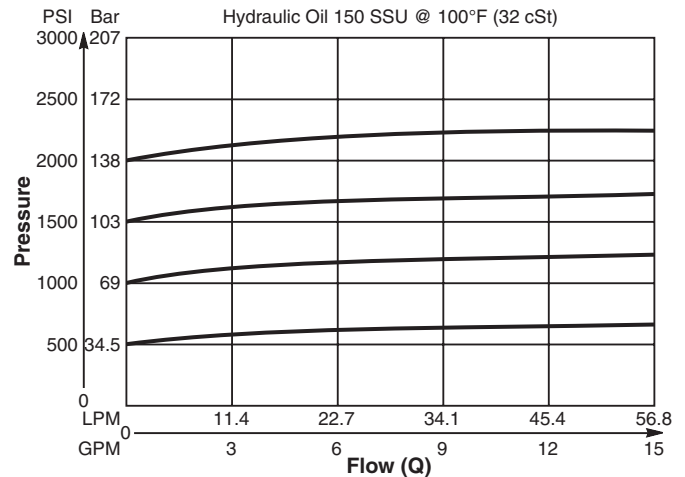
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Flow Rate</b>                     | 56 LPM (15 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 250 Bar (3600 PSI)   |
| <b>Maximum Pressure Setting</b>      | 138 Bar (2000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 82 cc/min. (5 cu. in./min.) at 210 Bar (3000 PSI)  |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -45°C to +93.3°C (“D”-Ring) (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)  |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | .45 kg (1.0 lbs.)  |
| <b>Cavity</b>                        | C10-3  |
| <b>Form Tool</b>                     | Rougher NFT10-3R<br>Finisher NFT10-3F  |

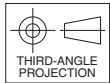
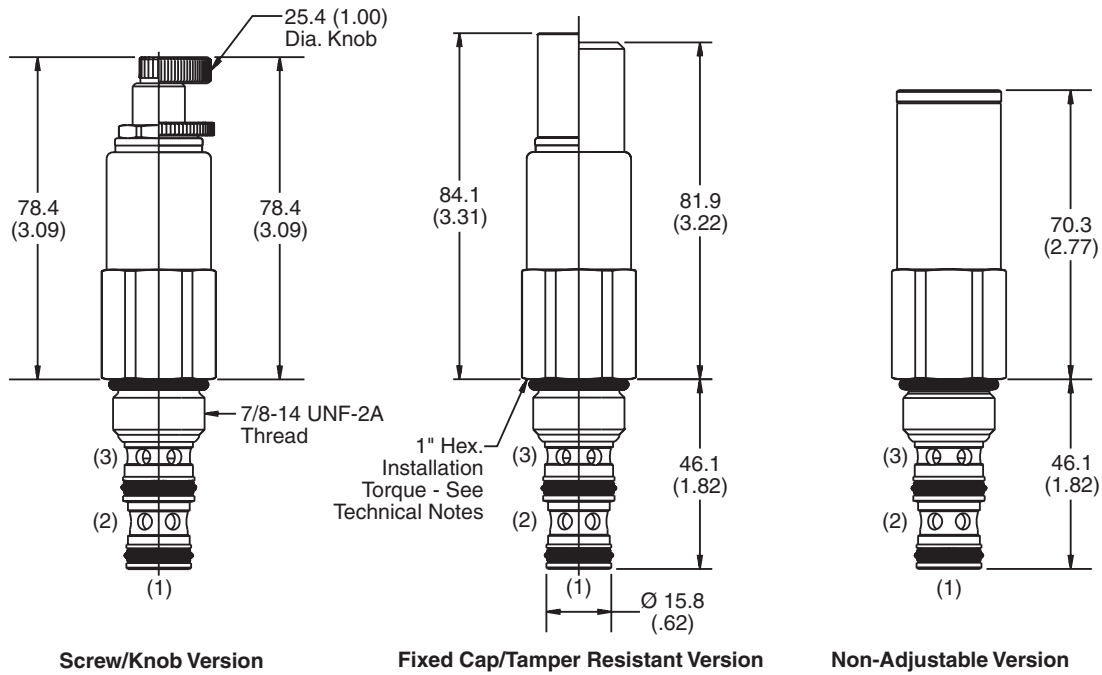
**Performance Curve**

**Flow vs. Inlet Pressure**

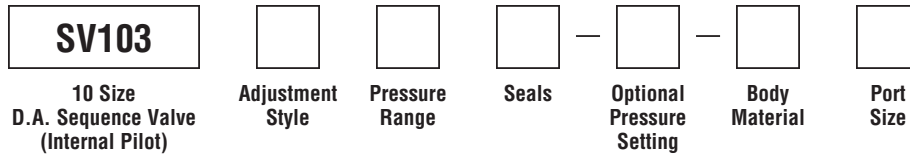
(Pressure rise through cartridge only)



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, covered adjustment |
| K    | Knob Adjust (717784-10)         |
| N    | Non-Adjustable                  |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717943)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK10-3)      |
| N    | Nitrile / (SK10-3N)      |
| V    | Fluorocarbon / (SK10-3V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Optional Pressure Setting                                       |  |
|---|--|
| Pressure ÷ 10   |  |
| i.e. 150 = 1500 PSI   |  |
| (Omit if standard setting is used)                              |  |
| Setting Range:  |  |
| 100 to 2000 PSI   |  |
| All settings at crack pressure, approximately .95 LPM (.25 GPM) |  |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-3-*4P)   |
| 6P   | 3/8" NPTF      | (B10-3-*6P)   |
| 8P   | 1/2" NPTF      | (B10-3-*8P)   |
| 6T   | SAE-6          | (B10-3-*6T)   |
| 8T   | SAE-8          | (B10-3-*8T)   |
| 6B   | 3/8" BSPG      | (B10-3-6B)†   |
| 8B   | 1/2" BSPG      | (B10-3-*8B)   |

\* Add "A" for aluminum, omit for steel..  
 † Steel body only.

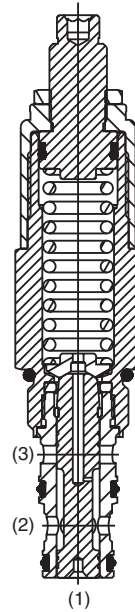
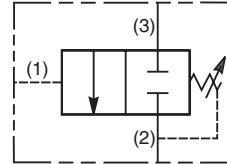
| Code | Pressure Range  |
|------|---|
| 02   | 5.1 - 14 Bar (75 - 200 PSI)<br>Standard Setting:<br>6.9 Bar (100 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)   |
| 06   | 6.9 - 42 Bar (100 - 600 PSI)<br>Standard Setting:<br>21 Bar (300 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)   |
| 12   | 14 - 83 Bar (200 - 1200 PSI)<br>Standard Setting:<br>42 Bar (600 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)   |
| 20   | 28 - 138 Bar (400 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI) @ crack pressure, approximately .95 LPM (.25 GPM) |

**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Direct Acting, Normally Closed Sequence Valve (Externally Piloted). With no pressure at the pilot port (port 1), both port 3 and port 2 are blocked. When the pilot pressure at port 1 exceeds the valve setting, the spool moves opening a path and allowing flow from port 3 to port 2. This valve internally drains the spring chamber to tank via the sequencing port, thus any backpressure on port 2 would be additive to the spring setting.



**Features**

- Hardened, precision ground parts for durability
- Internal mechanical stop limits spool travel eliminating spring solidification
- “D”-Ring eliminates backup rings
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.
- Fast response

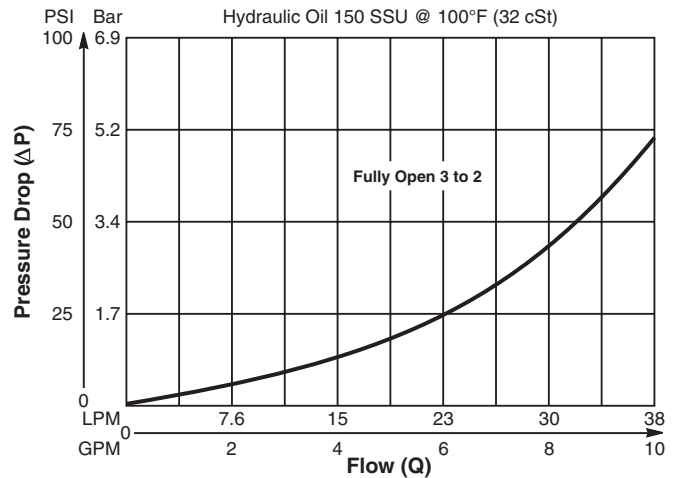
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 38 LPM (10 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 250 Bar (3600 PSI)   |
| <b>Maximum Pressure Setting</b>      | 138 Bar (2000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 82 cc/min. (5 cu. in./min.) at 210 Bar (3000 PSI)  |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -45°C to +93.3°C (“D”-Ring) (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)  |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | .45 kg (1.0 lbs.)  |
| <b>Cavity</b>                        | C10-3  |
| <b>Form Tool</b>                     | Rougher NFT10-3R<br>Finisher NFT10-3F  |

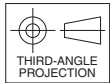
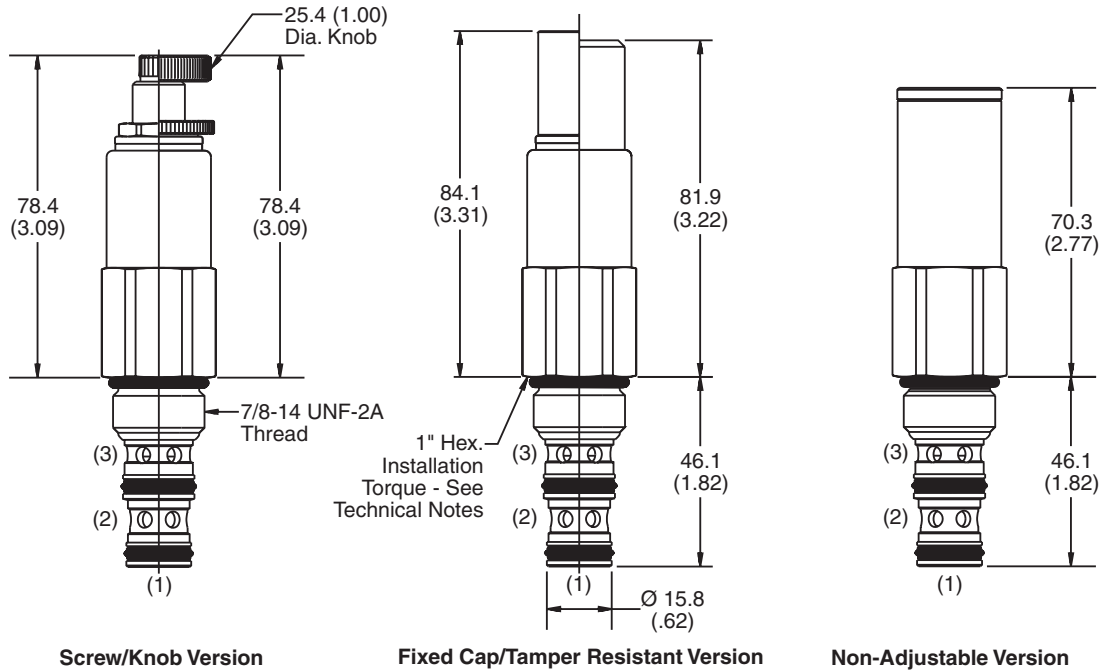
**Performance Curve**

**Flow vs. Inlet Pressure**

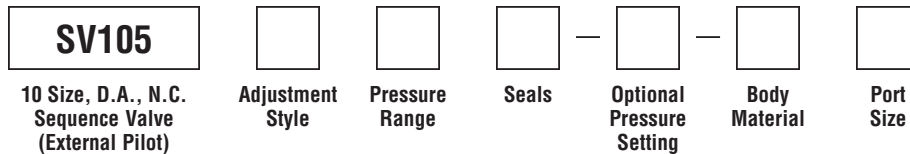
(Pressure rise through cartridge only)



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, covered adjustment |
| K    | Knob Adjust (717784-10)         |
| N    | Non-Adjustable                  |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717943)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK10-3)      |
| N    | Nitrile / (SK10-3N)      |
| V    | Fluorocarbon / (SK10-3V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Optional Pressure Setting          |  |
|------------------------------------|--|
| Pressure ÷ 10                      |  |
| i.e. 150 = 1500 PSI                |  |
| (Omit if standard setting is used) |  |
| Setting Range:                     |  |
| 100 to 2000 PSI                    |  |
| All settings at crack pressure,    |  |
| approximately .95 LPM (.25 GPM)    |  |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 6P   | 3/8" NPTF      | (B10-3-*6P)   |
| 6T   | SAE-6          | (B10-3-*6T)   |
| 8T   | SAE-8          | (B10-3-*8T)   |
| 4B   | 1/4" BSPG      | (B10-3-4B)†   |
| 6B   | 3/8" BSPG      | (B10-3-6B)†   |

\* Add "A" for aluminum, omit for steel..  
 † Steel body only.

| Code | Pressure Range   |
|------|--|
| 02   | 5.1 - 14 Bar (75 - 200 PSI)<br>Standard Setting:<br>6.9 Bar (100 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM)   |
| 06   | 6.9 - 42 Bar (100 - 600 PSI)<br>Standard Setting:<br>21 Bar (300 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM)   |
| 12   | 14 - 83 Bar (200 - 1200 PSI)<br>Standard Setting:<br>42 Bar (600 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM)   |
| 20   | 28 - 138 Bar (400 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM) |

**Technical Information**

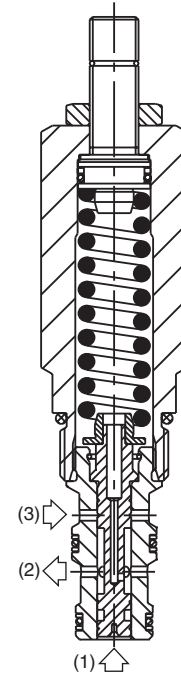
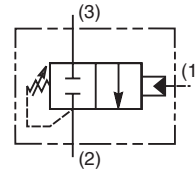
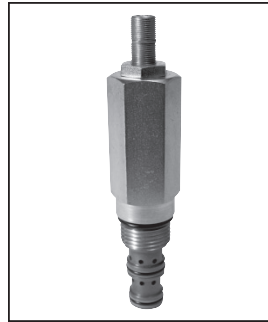
- CV** Check Valves
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**General Description**

Direct Acting, Normally Closed Sequence Valve with External Pilot and Internal Drain. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Sealed pilot option available
- Hardened working parts for maximum durability
- All external parts zinc plated
- Adjustable and tamperproof versions available



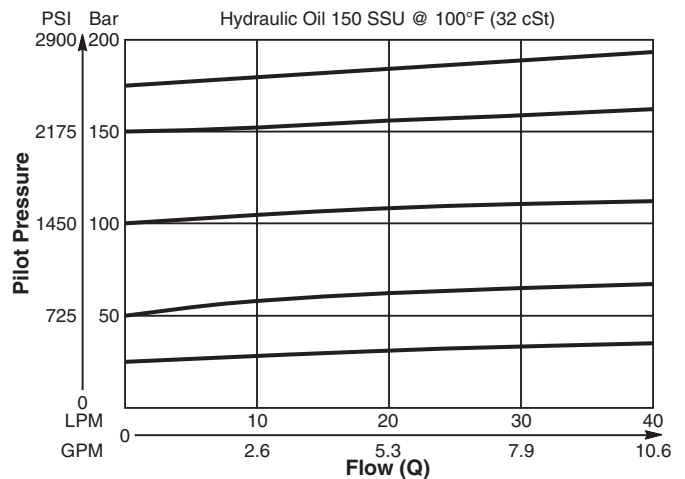
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 34 LPM (9 GPM)   |
| <b>Maximum Inlet Pressure</b>        | 420 Bar (6000 PSI)   |
| <b>Maximum Pressure Setting</b>      | <b>E</b> - 2-80 Bar (30-1160 PSI)<br><b>G</b> - 2-166 Bar (30-2400 PSI)                                |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 25 ml/min.<br>@ 100 Bar (1450 PSI)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.30 kg (0.66 lbs.)  |
| <b>Cavity</b>                        | C10-3 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher NFT10-3R<br>Finisher NFT10-3F  |

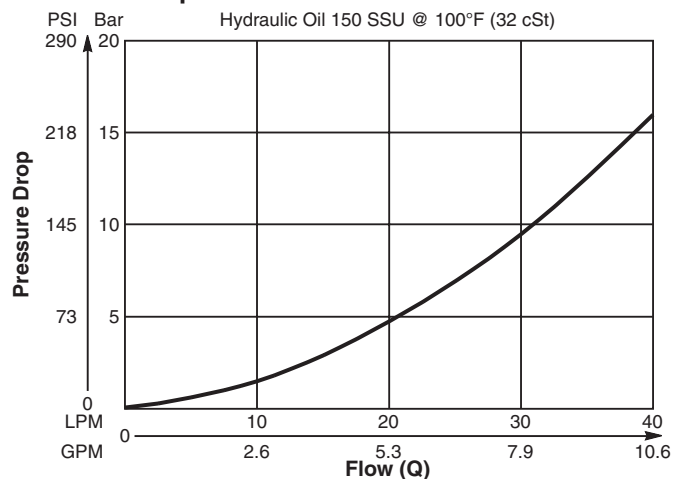
**Performance Curves**

(Pressure rise through cartridge only)

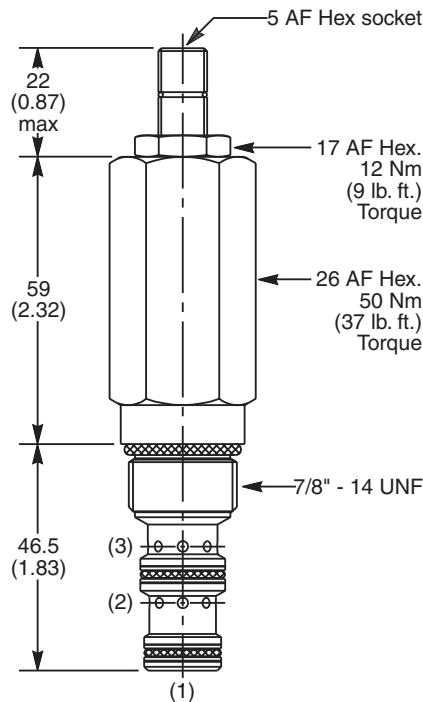
**Flow vs. Inlet Pressure 3 to 2**



**Pressure Drop vs. Flow 3 to 2**



**Dimensions** Millimeters (Inches)



**Ordering Information**

|  |  |                          |                                 |                          |                          |                          |                          |
|--|--|--------------------------|---------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <b>B04F3</b>   | <input type="checkbox"/>               | <input type="checkbox"/> | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>10 Size D.A. Sequence Valve (External Pilot &amp; Internal Drain)</b> | <b>Pilot Pressure Adjustment Range</b> | <b>Adjustment Style</b>  | <b>Pilot Switching Pressure</b> | <b>Seals</b>             | <b>Sealed Pilot</b>      | <b>Body Material</b>     | <b>Port Size</b>         |

| Code     | Pilot Pressure Adjustment Range |
|----------|---------------------------------|
| <b>E</b> | 2 - 80 Bar (30 - 1160 PSI)      |
| <b>G</b> | 2 - 166 Bar (30 - 2400 PSI)     |
| <b>J</b> | 40 - 240 Bar (580 - 3500 PSI)   |

| Code     | Seals / Kit No.                       |
|----------|---------------------------------------|
| <b>N</b> | Nitrile, Buna-N (Std.) / (SK30505N-1) |
| <b>V</b> | Fluorocarbon / (SK30505V-1)           |

| Code        | Body Material |
|-------------|---------------|
| <b>Omit</b> | Steel         |
| <b>A</b>    | Aluminum      |

| Code     | Adjustment Style / Kit No.    |
|----------|-------------------------------|
| <b>Z</b> | Screw Adjust (Std.)           |
| <b>W</b> | Knob Adjust                   |
| <b>T</b> | Tamper Resistant Cap (TC1130) |

| Code        | Sealed Pilot         |
|-------------|----------------------|
| <b>Omit</b> | Omit if not required |
| <b>S</b>    | Sealed Pilot         |

| Code        | Port Size      | Body Part No. |
|-------------|----------------|---------------|
| <b>Omit</b> | Cartridge Only |               |
| <b>4P</b>   | 1/4" NPTF      | (B10-3-*4P)   |
| <b>6P</b>   | 3/8" NPTF      | (B10-3-*6P)   |
| <b>8P</b>   | 1/2" NPTF      | (B10-3-*8P)   |
| <b>6T</b>   | SAE-6          | (B10-3-*6T)   |
| <b>8T</b>   | SAE-8          | (B10-3-*8T)   |
| <b>6B</b>   | 3/8" BSPG      | (B10-3-6B)†   |
| <b>8B</b>   | 1/2" BSPG      | (B10-3-*8P)   |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

| Code        | Pilot Switching Pressure  |
|-------------|---|
| <b>Omit</b> | Omit for no setting (Std.)  |
|             | <b>B04F3E</b> Standard Setting:<br>40 Bar (580 PSI) @ 5 LPM (1.3 GPM)   |
|             | <b>B04F3G</b> Standard Setting:<br>80 Bar (1160 PSI) @ 5 LPM (1.3 GPM)  |
|             | <b>B04F3J</b> Standard Setting:<br>120 Bar (1750 PSI) @ 5 LPM (1.3 GPM) |
|             | Specify setting if required   |

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**Technical Information**

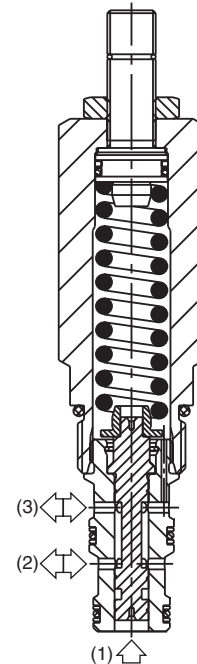
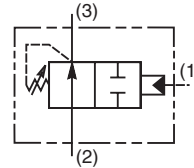
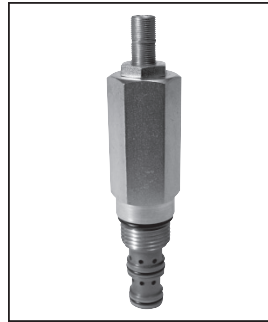
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**General Description**

Direct Acting, Normally Open Sequence Valve with External Pilot and Internal Drain. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Sealed pilot option available
- Hardened working parts for maximum durability
- All external parts zinc plated
- Adjustable and tamperproof versions available



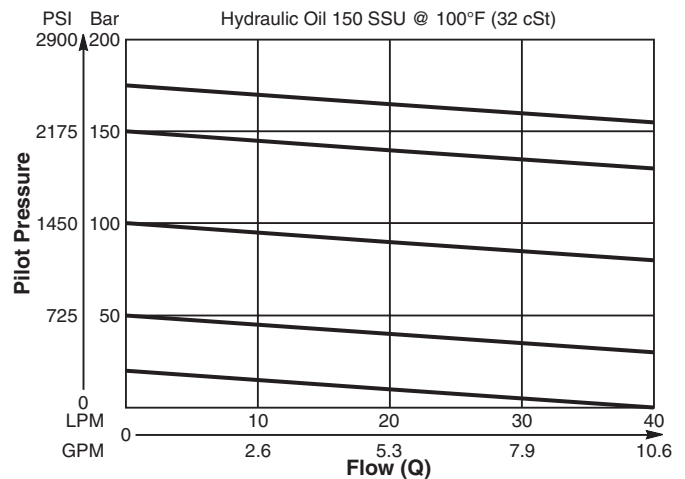
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 40 LPM (10.6 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 420 Bar (6000 PSI)   |
| <b>Maximum Pressure Setting</b>      | <b>E</b> - 2-80 Bar (30-1160 PSI)<br><b>G</b> - 2-166 Bar (30-2400 PSI)                                |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 25 ml/min.<br>@ 100 Bar (1450 PSI)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.30 kg (0.66 lbs.)  |
| <b>Cavity</b>                        | C10-3 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher NFT10-3R<br>Finisher NFT10-3F  |

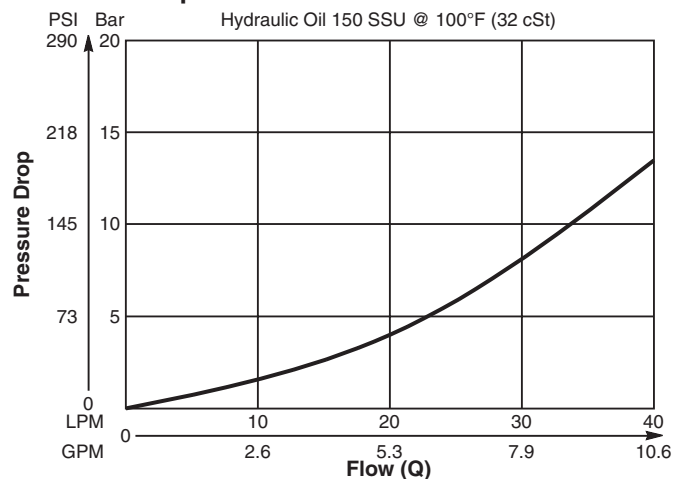
**Performance Curves**

(Pressure rise through cartridge only)

**Flow vs. Inlet Pressure 2 to 3**

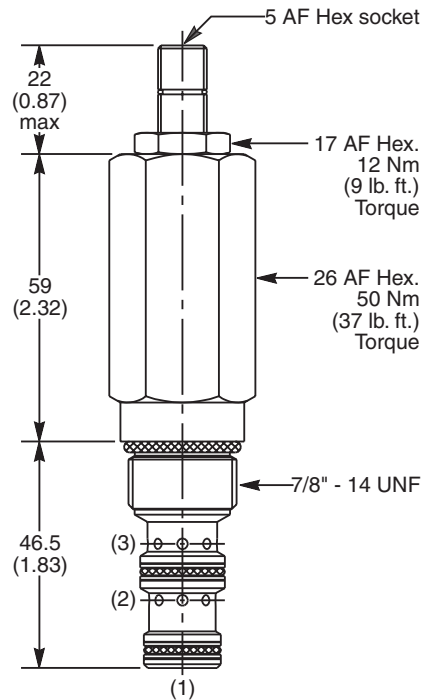


**Pressure Drop vs. Flow 2 to 3**





**Dimensions** Millimeters (Inches)



**Ordering Information**

|   |  |                            |                                    |              |                     |                      |                  |
|---|--|----------------------------|------------------------------------|--------------|---------------------|----------------------|------------------|
| <b>B04G3</b>  |  |                            |                                    |              |                     |                      |                  |
| <b>10 Size</b><br>D.A. Sequence Valve<br>(External Pilot &<br>Internal Drain) | <b>Pilot Pressure</b><br>Adjustment<br>Range | <b>Adjustment</b><br>Style | <b>Pilot Switching</b><br>Pressure | <b>Seals</b> | <b>Sealed Pilot</b> | <b>Body Material</b> | <b>Port Size</b> |

| Code     | Pilot Pressure Adjustment Range |
|----------|---------------------------------|
| <b>E</b> | 2 - 80 Bar (30 - 1160 PSI)      |
| <b>G</b> | 2 - 166 Bar (30 - 2400 PSI)     |
| <b>J</b> | 40 - 240 Bar (580 - 3500 PSI)   |

| Code     | Seals / Kit No.                       |
|----------|---------------------------------------|
| <b>N</b> | Nitrile, Buna-N (Std.) / (SK30505N-1) |
| <b>V</b> | Fluorocarbon / (SK30505V-1)           |

| Code        | Body Material |
|-------------|---------------|
| <b>Omit</b> | Steel         |
| <b>A</b>    | Aluminum      |

| Code     | Adjustment Style / Kit No.    |
|----------|-------------------------------|
| <b>Z</b> | Screw Adjust (Std.)           |
| <b>W</b> | Knob Adjust                   |
| <b>T</b> | Tamper Resistant Cap (TC1130) |

| Code        | Sealed Pilot         |
|-------------|----------------------|
| <b>Omit</b> | Omit if not required |
| <b>S</b>    | Sealed Pilot         |

| Code        | Port Size      | Body Part No. |
|-------------|----------------|---------------|
| <b>Omit</b> | Cartridge Only |               |
| <b>4P</b>   | 1/4" NPTF      | (B10-3-*4P)   |
| <b>6P</b>   | 3/8" NPTF      | (B10-3-*6P)   |
| <b>8P</b>   | 1/2" NPTF      | (B10-3-*8P)   |
| <b>6T</b>   | SAE-6          | (B10-3-*6T)   |
| <b>8T</b>   | SAE-8          | (B10-3-*8T)   |
| <b>6B</b>   | 3/8" BSPG      | (B10-3-6B)†   |
| <b>8B</b>   | 1/2" BSPG      | (B10-3-*8P)   |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

| Code        | Pilot Switching Pressure  |
|-------------|---|
| <b>Omit</b> | Omit for no setting (Std.)<br><b>B04G3E</b> Standard Setting:<br>40 Bar (580 PSI) @ 5 LPM (1.3 GPM)<br><b>B04G3G</b> Standard Setting:<br>80 Bar (1160 PSI) @ 5 LPM (1.3 GPM)<br><b>B04G3J</b> Standard Setting:<br>120 Bar (1750 PSI) @ 5 LPM (1.3 GPM)<br>Specify setting if required |

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**Technical Information**

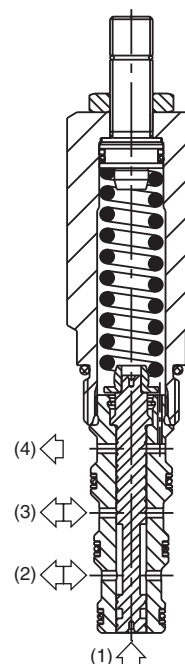
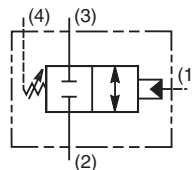
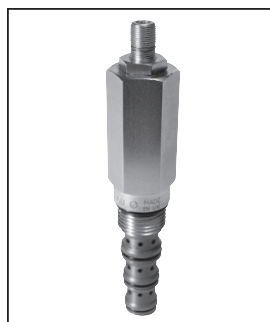
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- BC** Bodies & Cavities
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**General Description**

Direct Acting, Normally Closed Sequence Valve with External Pilot and Drain. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Sealed pilot option available
- Hardened working parts for maximum durability
- All external parts zinc plated
- Adjustable and tamperproof versions available



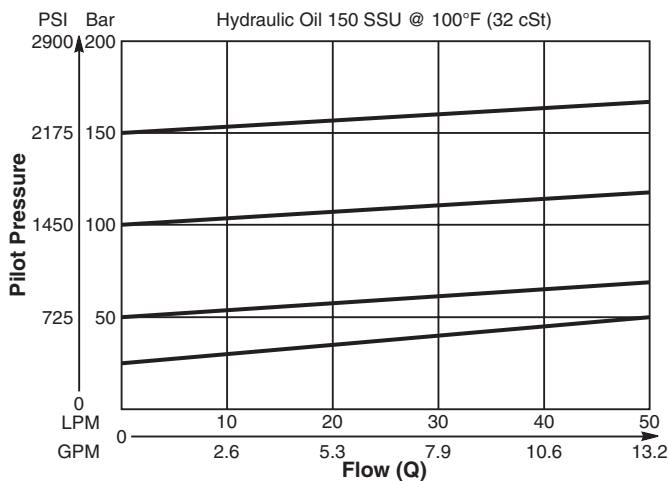
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 47 LPM (12 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 420 Bar (6000 PSI)   |
| <b>Maximum Pressure Setting</b>      | <b>E</b> - 2-80 Bar (30-1160 PSI)<br><b>G</b> - 2-166 Bar (30-2400 PSI)                                |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 25 ml/min.<br>@ 100 Bar (1450 PSI)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.33 kg (0.73 lbs.)  |
| <b>Cavity</b>                        | C10-4<br>(See BC Section for more details)   |
| <b>Form Tool</b>                     | Rougher NFT10-4R<br>Finisher NFT10-4F  |

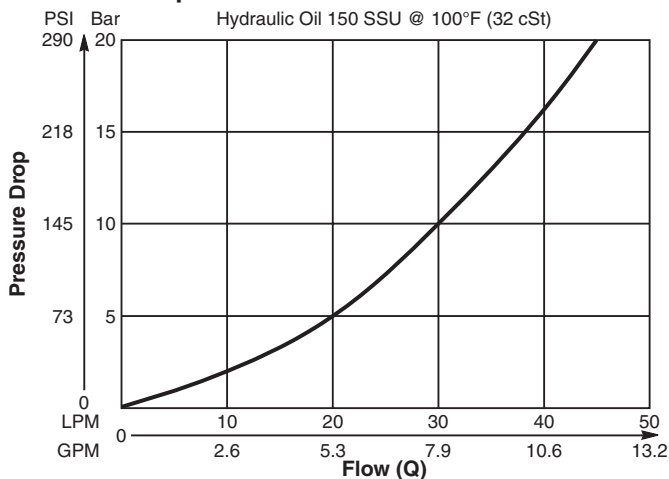
**Performance Curves**

(Pressure rise through cartridge only)

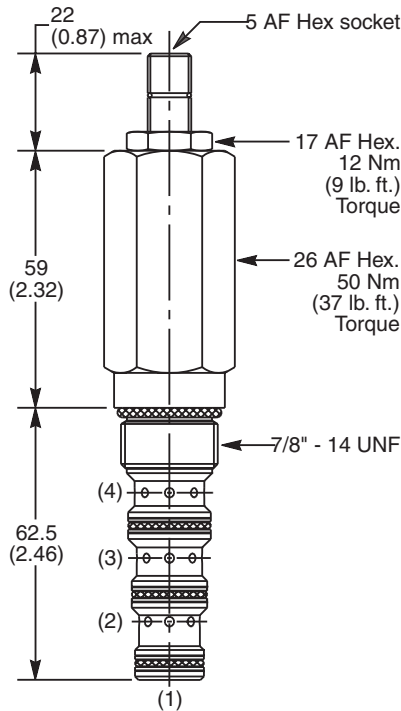
**Flow vs. Inlet Pressure 2 to 3**



**Pressure Drop vs. Flow 3 to 2**



**Dimensions** Millimeters (Inches)



**Ordering Information**

|   |  |                         |                                 |              |                     |                      |                  |
|---|--|-------------------------|---------------------------------|--------------|---------------------|----------------------|------------------|
| <b>B04H4</b>  |  |                         |                                 |              |                     |                      |                  |
| <b>10 Size D.A. Sequence Valve (External Pilot and Drain)</b> | <b>Pilot Pressure Adjustment Range</b> | <b>Adjustment Style</b> | <b>Pilot Switching Pressure</b> | <b>Seals</b> | <b>Sealed Pilot</b> | <b>Body Material</b> | <b>Port Size</b> |

| Code     | Pilot Pressure Adjustment Range |
|----------|---------------------------------|
| <b>E</b> | 2 - 80 Bar (30 - 1160 PSI)      |
| <b>G</b> | 2 - 166 Bar (30 - 2400 PSI)     |
| <b>J</b> | 40 - 240 Bar (580 - 3500 PSI)   |

| Code     | Seals / Kit No.                       |
|----------|---------------------------------------|
| <b>N</b> | Nitrile, Buna-N (Std.) / (SK30506N-1) |
| <b>V</b> | Fluorocarbon / (SK30506V-1)           |

| Code        | Body Material |
|-------------|---------------|
| <b>Omit</b> | Steel         |
| <b>A</b>    | Aluminum      |

| Code     | Adjustment Style / Kit No.    |
|----------|-------------------------------|
| <b>Z</b> | Screw Adjust (Std.)           |
| <b>W</b> | Knob Adjust                   |
| <b>T</b> | Tamper Resistant Cap (TC1130) |

| Code        | Sealed Pilot         |
|-------------|----------------------|
| <b>Omit</b> | Omit if not required |
| <b>S</b>    | Sealed Pilot         |

| Code        | Port Size      | Body Part No. |
|-------------|----------------|---------------|
| <b>Omit</b> | Cartridge Only |               |
| <b>6P</b>   | 3/8" NTPF      | (B10-4-*6P)   |
| <b>6T</b>   | SAE-6          | (B10-4-*6T)   |
| <b>8T</b>   | SAE-8          | (B10-4-*8T)   |
| <b>6B</b>   | 3/8" BSPG      | (B10-4-6B)†   |

\* Add "A" for aluminum, omit for steel.  
 † Steel bodies only

| Code        | Pilot Switching Pressure  |
|-------------|---|
| <b>Omit</b> | Omit for Standard Setting   |
|             | <b>B04H4E</b> Standard Setting:<br>40 Bar (580 PSI) @ 5 LPM (1.3 GPM)   |
|             | <b>B04H4G</b> Standard Setting:<br>80 Bar (1160 PSI) @ 5 LPM (1.3 GPM)  |
|             | <b>B04H4J</b> Standard Setting:<br>120 Bar (1750 PSI) @ 5 LPM (1.3 GPM) |
|             | Specify setting if required   |

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**Technical Information**

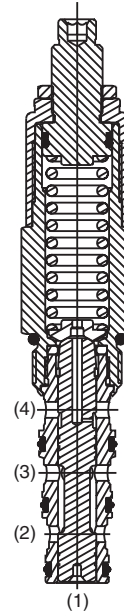
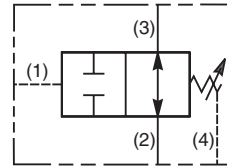
- CV** Check Valves
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**General Description**

Direct Acting, Normally Open Sequence Valve (Externally Piloted, Externally Drained). With no pressure at the pilot port (port 1), bi-directional flow is allowed between port 3 and port 2.



When the pilot pressure at port 1 exceeds the valve setting the spool moves blocking both port 3 and port 2. By externally draining the spring chamber to tank (port 4), the valve is insensitive to back pressure at the sequencing ports.



**Features**

- Hardened, precision ground parts for durability
- Internal mechanical stop limits spool travel eliminating spring solidification
- “D”-Ring eliminates backup rings
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.
- Fast response

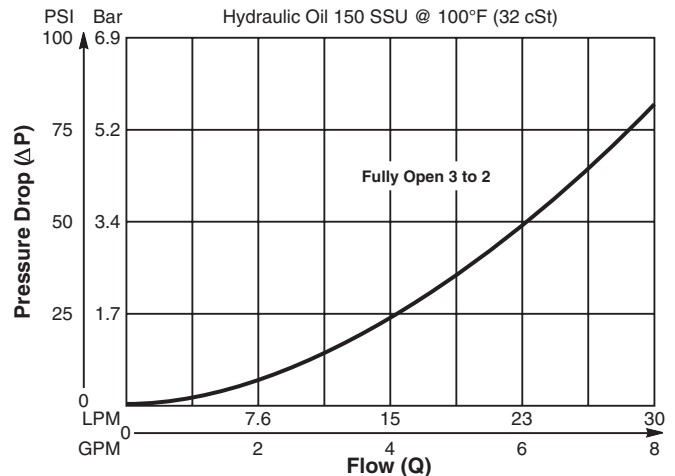
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 30 LPM (8 GPM)   |
| <b>Maximum Inlet Pressure</b>        | 250 Bar (3600 PSI)   |
| <b>Maximum Pressure Setting</b>      | 138 Bar (2000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 82 cc/min. (5 cu. in./min.) at 210 Bar (3000 PSI)  |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -45°C to +93.3°C (“D”-Ring) (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)  |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | .45 kg (1.0 lbs.)  |
| <b>Cavity</b>                        | C10-4  |
| <b>Form Tool</b>                     | Rougher NFT10-4R<br>Finisher NFT10-4F  |

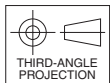
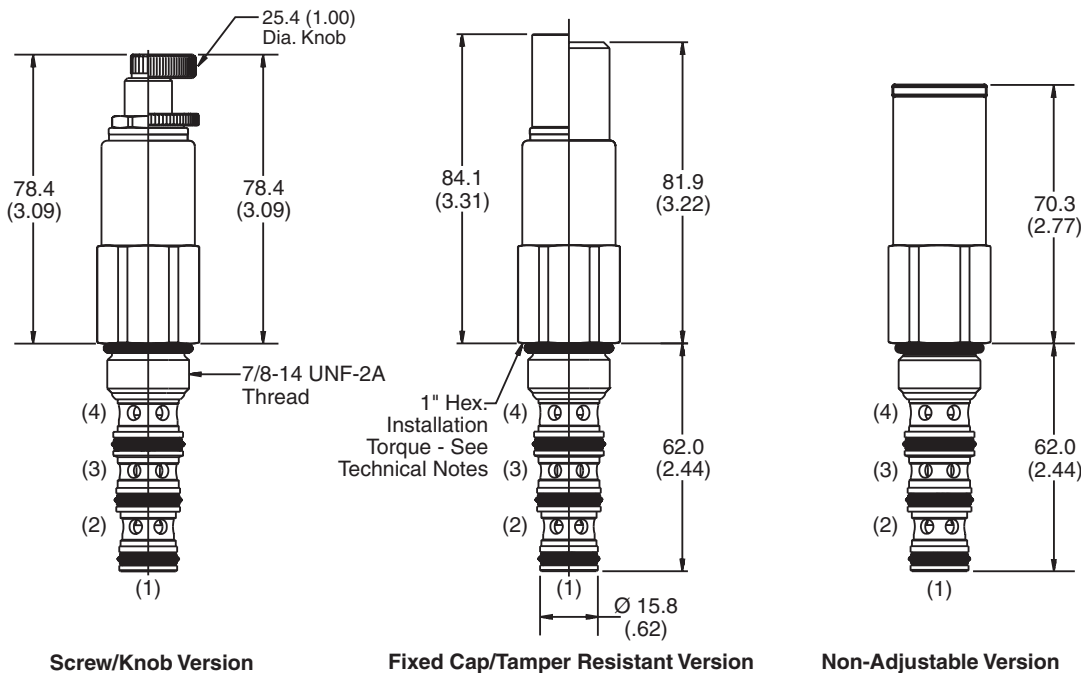
**Performance Curve**

**Flow vs. Inlet Pressure**

(Pressure rise through cartridge only)

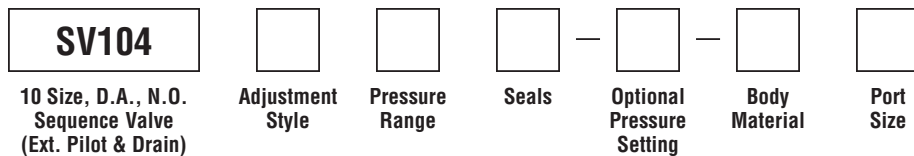


**Dimensions** Millimeters (Inches)



- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, covered adjustment |
| K    | Knob Adjust (717784-10)         |
| N    | Non-Adjustable                  |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717943)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK10-4)      |
| N    | Nitrile / (SK10-4N)      |
| V    | Fluorocarbon / (SK10-4V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range   |
|------|--|
| 02   | 5.1 - 14 Bar (75 - 200 PSI)<br>Standard Setting:<br>6.9 Bar (100 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM)   |
| 06   | 6.9 - 42 Bar (100 - 600 PSI)<br>Standard Setting:<br>21 Bar (300 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM)   |
| 12   | 14 - 83 Bar (200 - 1200 PSI)<br>Standard Setting:<br>42 Bar (600 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM)   |
| 20   | 28 - 138 Bar (400 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM) |

| Optional Pressure Setting   |
|---|
| Pressure ÷ 10<br>i.e. 150 = 1500 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 2000 PSI<br>All settings at crack pressure,<br>approximately .95 LPM (.25 GPM) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 6P   | 3/8" NPTF      | (B10-4-*6P)   |
| 6T   | SAE-6          | (B10-4-*6T)   |
| 8T   | SAE-8          | (B10-4-*8T)   |
| 6B   | 3/8" BSPG      | (B10-4-6B)†   |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

**Technical Information**

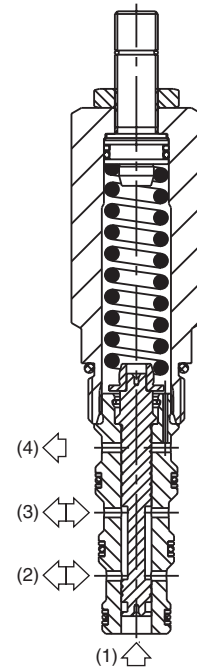
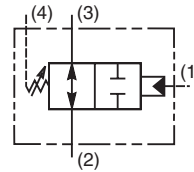
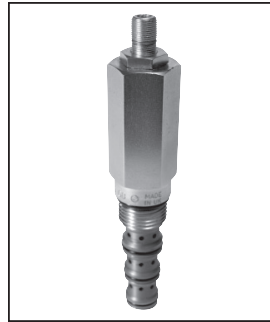
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- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Direct Acting, Normally Open Sequence Valve with External Pilot and Drain. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Sealed pilot option available
- Hardened working parts for maximum durability
- All external parts zinc plated
- Adjustable and tamperproof versions available



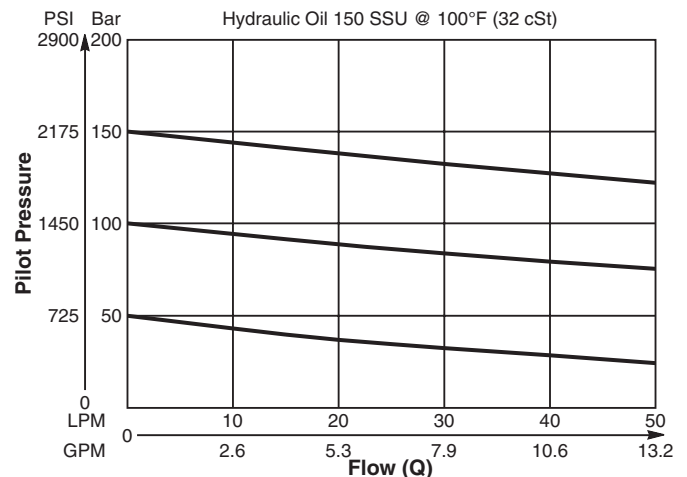
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 47 LPM (12 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 420 Bar (6000 PSI)   |
| <b>Maximum Pressure Setting</b>      | <b>E</b> - 2-80 Bar (30-1160 PSI)<br><b>G</b> - 2-166 Bar (30-2400 PSI)                                |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 25 ml/min.<br>@ 100 Bar (1450 PSI)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.33 kg (0.73 lbs.)  |
| <b>Cavity</b>                        | C10-4<br>(See BC Section for more details)   |
| <b>Form Tool</b>                     | Rougher NFT10-4R<br>Finisher NFT10-4F  |

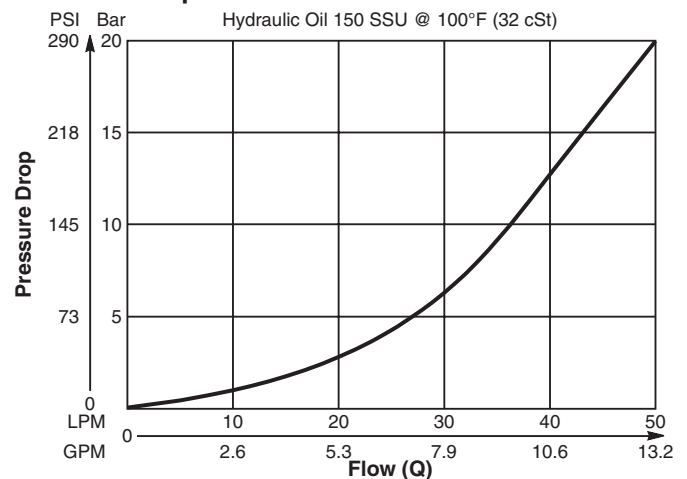
**Performance Curves**

(Pressure rise through cartridge only)

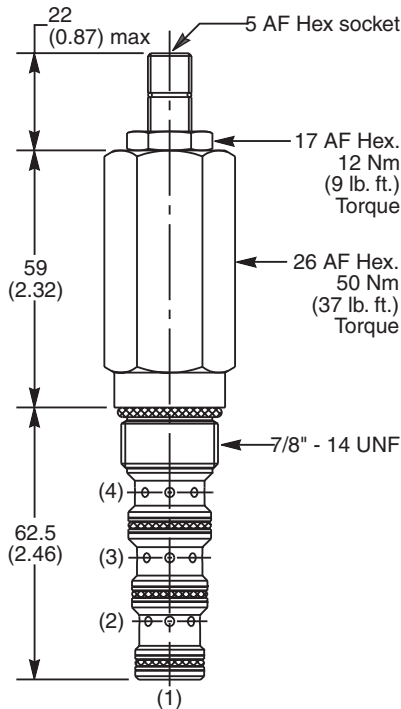
**Flow vs. Inlet Pressure 2 to 3 & 3 to 2**



**Pressure Drop vs. Flow 2 to 3 & 3 to 2**



**Dimensions** Millimeters (Inches)



**Ordering Information**

|   |  |                         |                                 |              |                     |                      |                  |
|---|--|-------------------------|---------------------------------|--------------|---------------------|----------------------|------------------|
| <b>B04J4</b>  |  |                         |                                 |              |                     |                      |                  |
| <b>10 Size D.A. Sequence Valve (External Pilot and Drain)</b> | <b>Pilot Pressure Adjustment Range</b> | <b>Adjustment Style</b> | <b>Pilot Switching Pressure</b> | <b>Seals</b> | <b>Sealed Pilot</b> | <b>Body Material</b> | <b>Port Size</b> |

| Code | Pilot Pressure Adjustment Range |
|------|---------------------------------|
| E    | 2 - 80 Bar (30 - 1160 PSI)      |
| G    | 2 - 166 Bar (30 - 2400 PSI)     |
| J    | 40 - 240 Bar (580 - 3500 PSI)   |

| Code | Seals / Kit No.                       |
|------|---------------------------------------|
| N    | Nitrile, Buna-N (Std.) / (SK30506N-1) |
| V    | Fluorocarbon / (SK30506V-1)           |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Adjustment Style / Kit No.    |
|------|-------------------------------|
| Z    | Screw Adjust (Std.)           |
| W    | Knob Adjust                   |
| T    | Tamper Resistant Cap (TC1130) |

| Code | Sealed Pilot         |
|------|----------------------|
| Omit | Omit if not required |
| S    | Sealed Pilot         |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 6P   | 3/8" NTPF      | (B10-4-*6P)   |
| 6T   | SAE-6          | (B10-4-*6T)   |
| 8T   | SAE-8          | (B10-4-*8T)   |
| 6B   | 3/8" BSPG      | (B10-4-6B)†   |

\* Add "A" for aluminum, omit for steel.  
 † Steel bodies only

| Code | Pilot Switching Pressure  |
|------|---|
| Omit | Omit for no setting (Std.)  |
|      | <b>B04J4E</b> Standard Setting:<br>40 Bar (580 PSI) @ 5 LPM (1.3 GPM)   |
|      | <b>B04J4G</b> Standard Setting:<br>80 Bar (1160 PSI) @ 5 LPM (1.3 GPM)  |
|      | <b>B04J4J</b> Standard Setting:<br>120 Bar (1750 PSI) @ 5 LPM (1.3 GPM) |
|      | Specify setting if required   |

- CV** Check Valves
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- FC** Flow Controls
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**Technical Information**

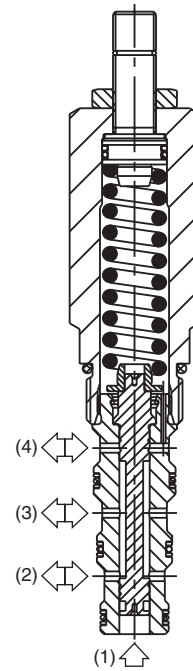
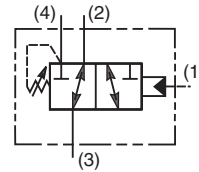
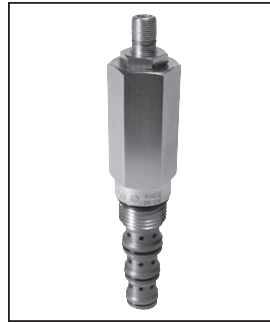
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**General Description**

Direct Acting, Normally Open, 3 Way Sequence Valve with Internal Pilot and External Drain. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Sealed pilot option available
- Hardened working parts for maximum durability
- All external parts zinc plated
- Adjustable and tamperproof versions available



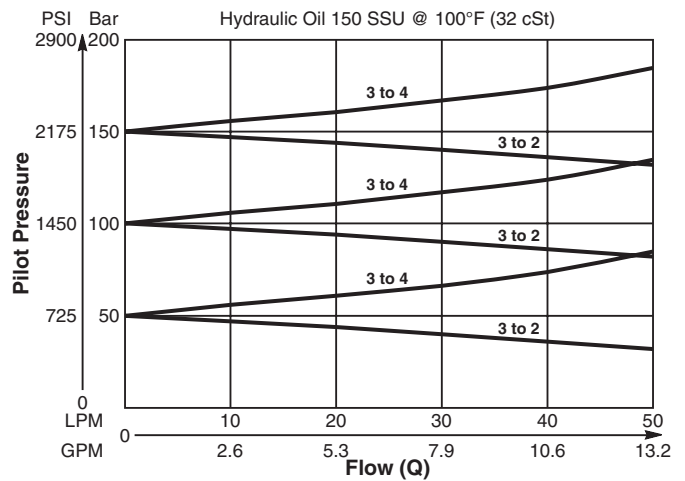
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 42 LPM (11 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 420 Bar (6000 PSI)   |
| <b>Maximum Pressure Setting</b>      | <b>E -</b> 2-80 Bar (30-1160 PSI)<br><b>G -</b> 2-166 Bar (30-2400 PSI)                                |
| <b>Maximum Tank Pressure</b>         | 420 Bar (6000 PSI)   |
| <b>Leakage at 150 SSU (32 cSt)</b>   | 40 ml/min.<br>@ 100 Bar (1450 PSI)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.33 kg (0.73 lbs.)  |
| <b>Cavity</b>                        | C10-4<br>(See BC Section for more details)   |
| <b>Form Tool</b>                     | Rougher NFT10-4R<br>Finisher NFT10-4F  |

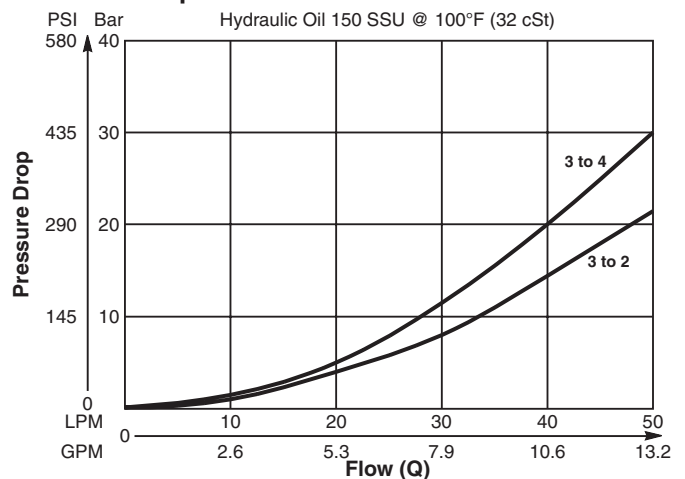
**Performance Curves**

(Pressure rise through cartridge only)

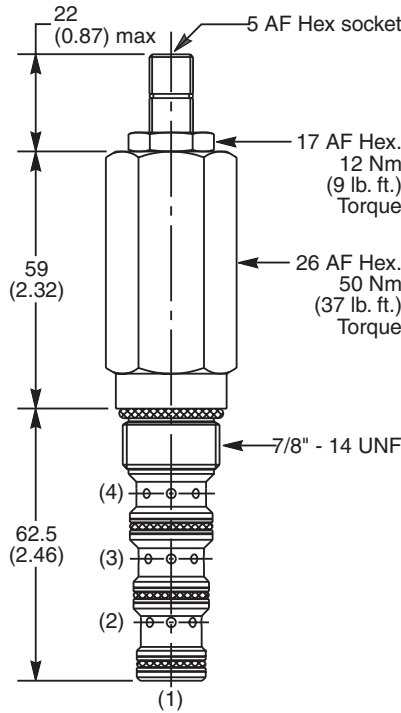
**Flow vs. Inlet Pressure**



**Pressure Drop vs. Flow**



**Dimensions** Millimeters (Inches)



**Ordering Information**

|  |  |                          |                                 |                          |                          |                          |                          |
|--|--|--------------------------|---------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <b>B04K4</b>   | <input type="checkbox"/>               | <input type="checkbox"/> | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>10 Size D.A. Sequence Valve (Internal Pilot &amp; External Drain)</b> | <b>Pilot Pressure Adjustment Range</b> | <b>Adjustment Style</b>  | <b>Pilot Switching Pressure</b> | <b>Seals</b>             | <b>Sealed Pilot</b>      | <b>Body Material</b>     | <b>Port Size</b>         |

| Code     | Pilot Pressure Adjustment Range |
|----------|---------------------------------|
| <b>E</b> | 2 - 80 Bar (30 - 1160 PSI)      |
| <b>G</b> | 2 - 166 Bar (30 - 2400 PSI)     |
| <b>J</b> | 40 - 240 Bar (580 - 3500 PSI)   |

| Code     | Seals / Kit No.                       |
|----------|---------------------------------------|
| <b>N</b> | Nitrile, Buna-N (Std.) / (SK30506N-1) |
| <b>V</b> | Fluorocarbon / (SK30506V-1)           |

| Code        | Body Material |
|-------------|---------------|
| <b>Omit</b> | Steel         |
| <b>A</b>    | Aluminum      |

| Code     | Adjustment Style / Kit No.    |
|----------|-------------------------------|
| <b>Z</b> | Screw Adjust (Std.)           |
| <b>W</b> | Knob Adjust                   |
| <b>T</b> | Tamper Resistant Cap (TC1130) |

| Code        | Sealed Pilot         |
|-------------|----------------------|
| <b>Omit</b> | Omit if not required |
| <b>S</b>    | Sealed Pilot         |

| Code        | Port Size      | Body Part No. |
|-------------|----------------|---------------|
| <b>Omit</b> | Cartridge Only |               |
| <b>6P</b>   | 3/8" NTPF      | (B10-4-*6P)   |
| <b>6T</b>   | SAE-6          | (B10-4-*6T)   |
| <b>8T</b>   | SAE-8          | (B10-4-*8T)   |
| <b>6B</b>   | 3/8" BSPG      | (B10-4-6B)†   |

\* Add "A" for aluminum, omit for steel.  
 † Steel bodies only

| Code        | Pilot Switching Pressure  |
|-------------|---|
| <b>Omit</b> | Omit for Standard Setting   |
|             | <b>B04K4E</b> Standard Setting:<br>40 Bar (580 PSI) @ 5 LPM (1.3 GPM)   |
|             | <b>B04K4G</b> Standard Setting:<br>80 Bar (1160 PSI) @ 5 LPM (1.3 GPM)  |
|             | <b>B04K4J</b> Standard Setting:<br>120 Bar (1750 PSI) @ 5 LPM (1.3 GPM) |
|             | Specify setting if required   |

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
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- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**Technical Information**

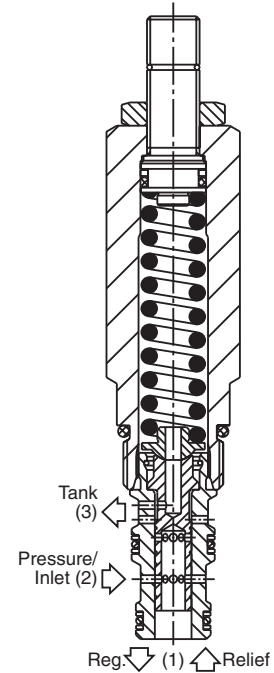
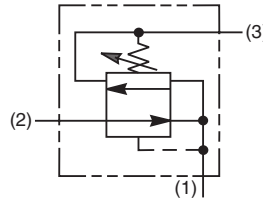
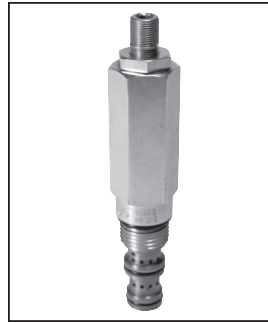
- CV** Check Valves
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**General Description**

Direct Acting Pressure Reducing/Relieving Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Maximum pressure setting up to 150 Bar, 2175 PSI
- Three pressure ranges available for more accurate pressure control
- Partial reverse flow capability
- Hardened working parts for maximum durability
- Adjustable and tamperproof versions available
- All external parts zinc plated



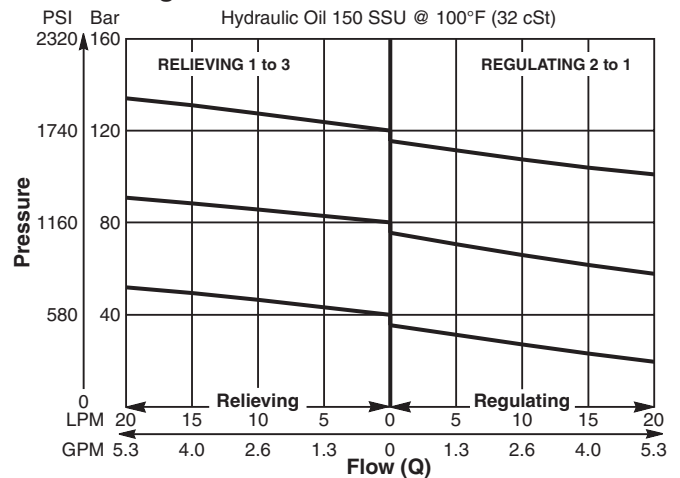
**Specifications**

|                                       |   |
|---------------------------------------|---|
| <b>Rated Flow</b>                     | 20 LPM (5 GPM)  |
| <b>Maximum Inlet Pressure</b>         | 420 Bar (6000 PSI)  |
| <b>Maximum Pressure Setting</b>       | <b>C</b> - 5-40 Bar (73-580 PSI)<br><b>E</b> - 25-75 Bar (363-1088 PSI)<br><b>G</b> - 50-150 Bar (725-2175 PSI) |
| <b>Maximum Tank Pressure</b>          | 420 Bar (6000 PSI)  |
| <b>Cartridge Material</b>             | All parts steel. All operating parts hardened steel.  |
| <b>Operating Temp. Range/Seals</b>    | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)            |
| <b>Fluid Compatibility/ Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)          |
| <b>Filtration</b>                     | ISO Code 16/13, SAE Class 4 or better   |
| <b>Approx. Weight</b>                 | 0.20 kg (0.44 lbs.)   |
| <b>Cavity</b>                         | C08-3 (See BC Section for more details)   |
| <b>Form Tool</b>                      | Rougher NFT08-3R<br>Finisher NFT08-3F   |

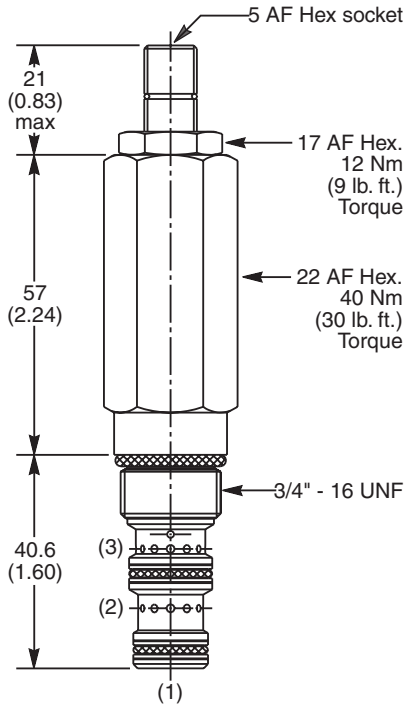
**Performance Curve**

(Pressure rise through cartridge only)

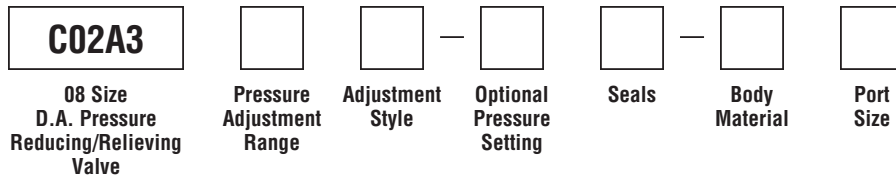
**Flow vs. Regulated Pressure**



**Dimensions** Millimeters (Inches)



**Ordering Information**



| Code | Pressure Adjustment Range     |
|------|-------------------------------|
| C    | 5 - 40 Bar (73 - 580 PSI)     |
| E    | 25 - 75 Bar (363 - 1088 PSI)  |
| G    | 50 - 150 Bar (725 - 2175 PSI) |

| Code | Seals / Kit No.                       |
|------|---------------------------------------|
| N    | Nitrile, Buna-N (Std.) / (SK30501N-1) |
| V    | Fluorocarbon / (SK30501V-1)           |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Adjustment Style / Kit No.    |
|------|-------------------------------|
| Z    | Screw Adjust (Std.)           |
| W    | Knob Adjust                   |
| T    | Tamper Resistant Cap (TC1130) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B08-3-*4P)   |
| 4T   | SAE-4          | (B08-3-*4T)   |
| 6T   | SAE-6          | (B08-3-*6T)   |
| 6B   | 3/8" BSPG      | (B08-3-*6B)   |

\* Add "A" for aluminum, omit for steel.

| Optional Pressure Setting         |                                     |
|-----------------------------------|-------------------------------------|
| Specify setting if required (Bar) |                                     |
| <b>C02A3C</b>                     | Standard Setting: 20 Bar (290 PSI)  |
| <b>C02A3E</b>                     | Standard Setting: 38 Bar (551 PSI)  |
| <b>C02A3G</b>                     | Standard Setting: 75 Bar (1088 PSI) |

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**Technical Information**

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**General Description**

Direct Acting Pressure Reducing/Relieving Valve. For additional information see Technical Tips on pages PC1-PC6.



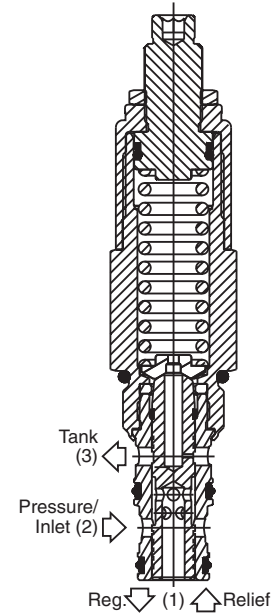
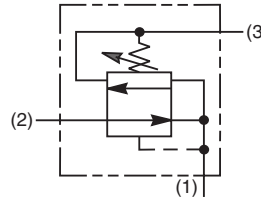
**Note:** The differential between system pressure and pressure setting of the valve can greatly affect the stability of this valve. For best performance, the inlet pressure setting should not exceed 69 Bar (1000 PSI) above the reducing valve setting.

**Features**

- Hardened, precision ground parts for durability
- Internal mechanical stop limits spool travel eliminating spring solidification
- “D”-Ring eliminates backup rings
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.

**Specifications**

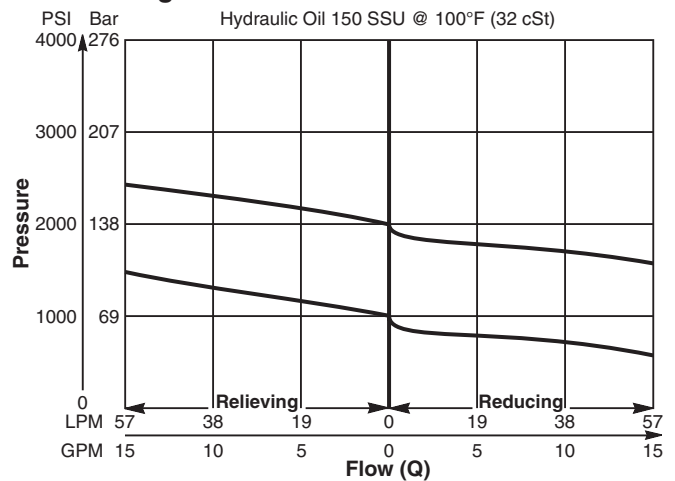
|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 56 LPM (15 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 210 Bar (3000 PSI)<br>69 Bar (1000 PSI) maximum differential above valve setting for best stability    |
| <b>Maximum Pressure Setting</b>      | 124 Bar (1800 PSI)   |
| <b>Maximum Tank Pressure</b>         | 124 Bar (1800 PSI)   |
| <b>Maximum Drain Flow</b>            | 120 mL/min. (0.03 GPM)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -45°C to +93.3°C (“D”-Ring) (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)  |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | .23 kg (0.5 lbs.)  |
| <b>Cavity</b>                        | C10-3 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher NTF10-3R<br>Finisher NFT10-3F  |



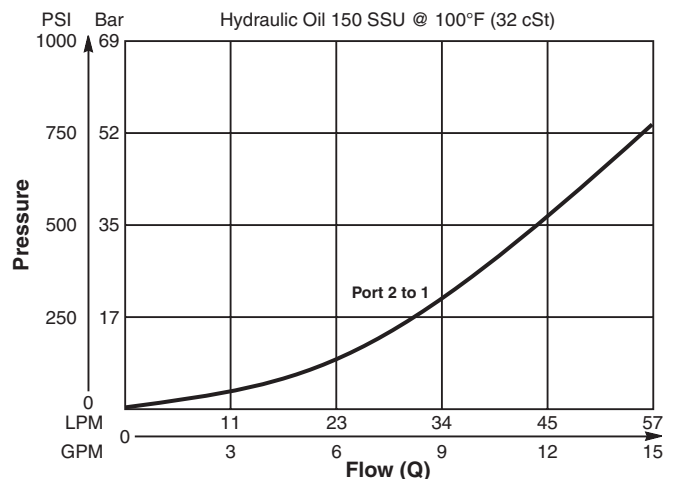
**Performance Curves**

(Pressure rise through cartridge only)

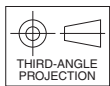
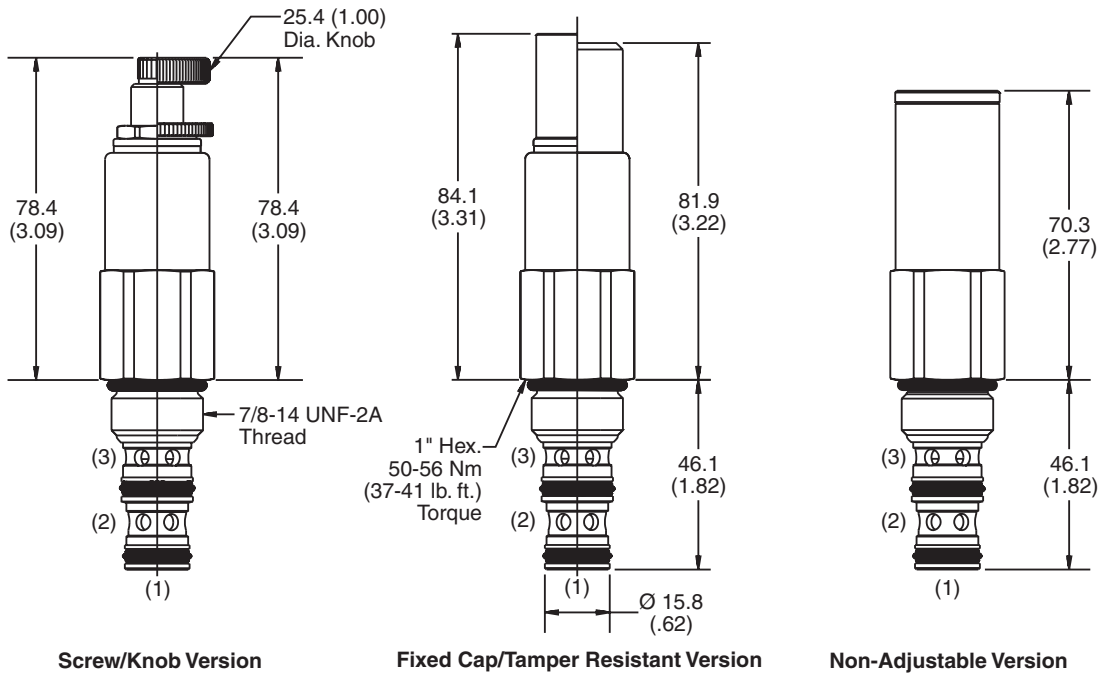
**Flow vs. Regulated Pressure**



**Pressure vs. Flow**



**Dimensions** Millimeters (Inches)

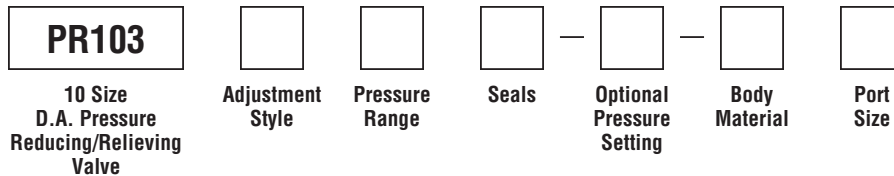


**Screw/Knob Version**

**Fixed Cap/Tamper Resistant Version**

**Non-Adjustable Version**

**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| N    | Non-Adjustable                  |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717943)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK10-3)      |
| N    | Nitrile / (SK10-3N)      |
| V    | Fluorocarbon / (SK10-3V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range  |
|------|---|
| 02   | 5.2 - 13.8 Bar (75 - 200 PSI)<br>Standard Setting:<br>6.9 Bar (100 PSI) @ .95 LPM (.25 GPM)     |
| 06   | 17.2 - 41.4 Bar (250 - 600 PSI)<br>Standard Setting:<br>20.7 Bar (300 PSI) @ .95 LPM (.25 GPM)  |
| 12   | 39.3 - 83 Bar (570 - 1200 PSI)<br>Standard Setting:<br>41.4 Bar (600 PSI) @ .95 LPM (.25 GPM)   |
| 21   | 41.4 - 124.1 Bar (600 - 1800 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI) @ .95 LPM (.25 GPM) |

| Optional Pressure Setting  |
|--|
| Pressure $\div$ 10<br>i.e. 150 = 1500 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>50 to 2100 PSI<br>All settings at .95 LPM (.25 GPM) |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-3-*4P)   |
| 6P   | 3/8" NPTF      | (B10-3-*6P)   |
| 8P   | 1/2" NPTF      | (B10-3-*8P)   |
| 6T   | SAE-6          | (B10-3-*6T)   |
| 8T   | SAE-8          | (B10-3-*8T)   |
| 6B   | 3/8" BSPG      | (B10-3-6B)†   |
| 8B   | 1/2" BSPG      | (B10-3-*8B)   |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
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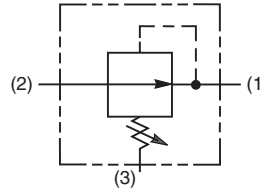
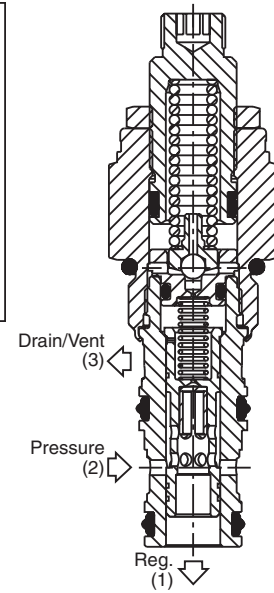
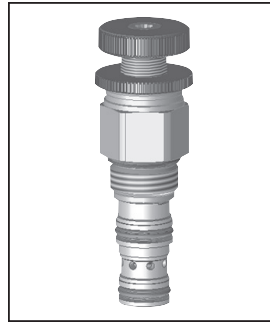
**General Description**

Pilot Operated Pressure Reducing Valve. For additional information see Technical Tips on pages PC1-PC6.



**Features**

- Hardened, precision ground parts for durability
- Low profile adapter for minimal space requirements
- Fully guided pilot for more consistent reseal
- Steel adapters are coated with yellow zinc dichromate for protection from salt spray
- Polyurethane "D"-Ring eliminates backup rings and prevents hydrolysis
- Internal screening protects pilot spring from debris

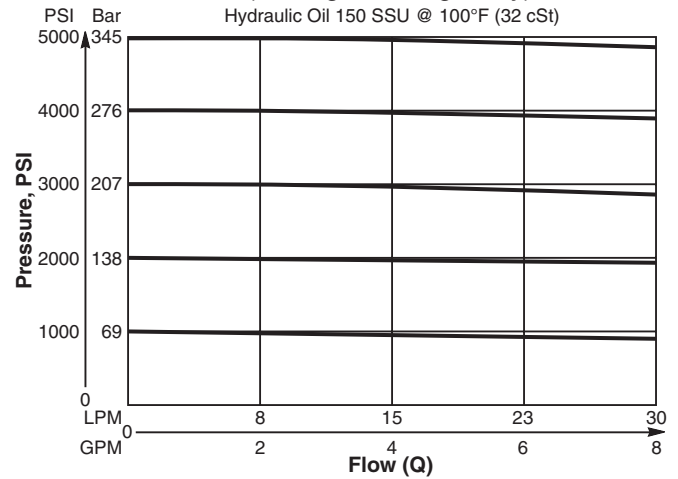


**Specifications**

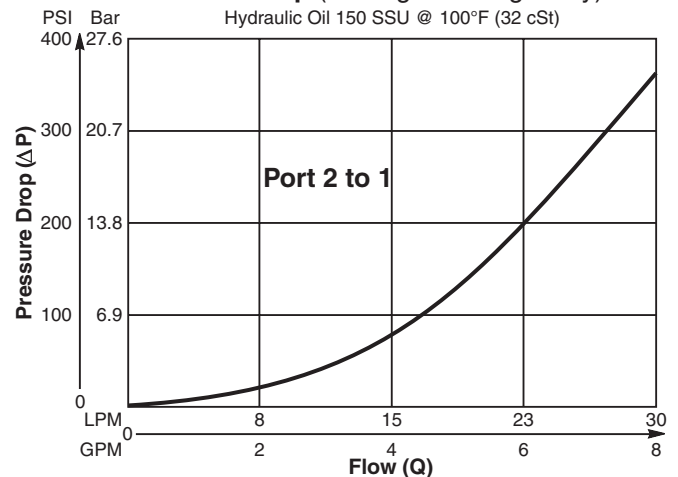
|                                      |   |
|--------------------------------------|---|
| <b>Rated Flow</b>                    | 30 LPM (8 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 380 Bar (5500 PSI)  |
| <b>Maximum Pressure Setting</b>      | 350 Bar (5000 PSI)  |
| <b>Maximum Tank Pressure</b>         | 350 Bar (5000 PSI)  |
| <b>Maximum Drain Flow</b>            | 0.56 LPM (0.15 GPM)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.  |
| <b>Operating Temp. Range/Seals</b>   | -45°C to +93.3°C ("D"-Ring)<br>(-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon)<br>(-25°F to +250°F) |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)      |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better   |
| <b>Approx. Weight</b>                | .11 kg (.25 lbs.)   |
| <b>Cavity</b>                        | C08-3<br>(See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher NTF08-3R<br>Finisher NFT08-3F   |

**Performance Curves**

**Flow vs. Pressure (Through cartridge only)**

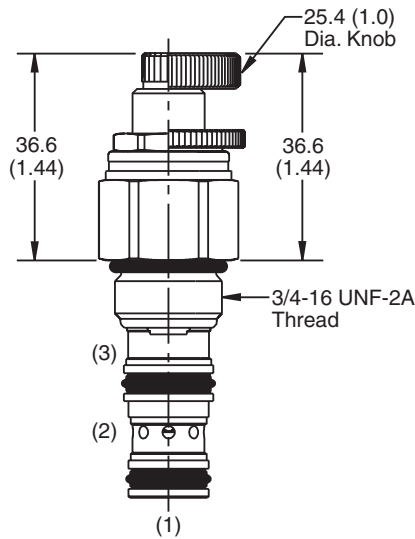


**Flow vs. Pressure Drop (Through cartridge only)**

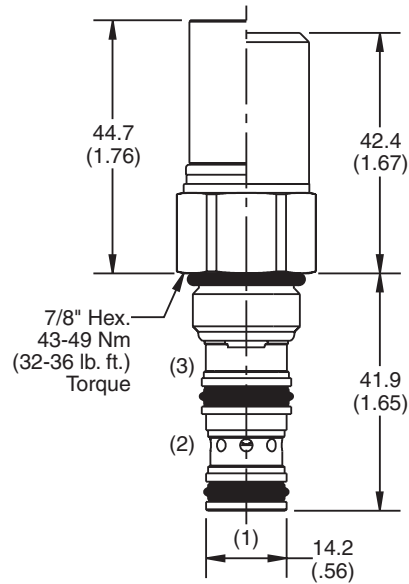




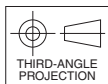
**Dimensions** Millimeters (Inches)



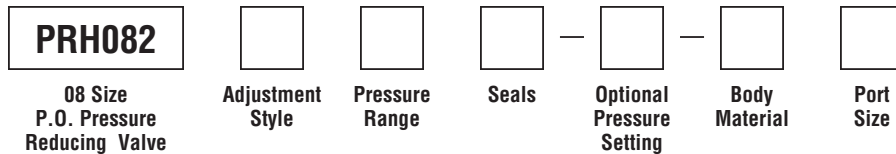
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717943)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK08-3)      |
| N    | Nitrile / (SK08-3N)      |
| V    | Fluorocarbon / (SK08-3V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range   |
|------|--|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI)     |
| 20   | 6.9 - 138 Bar (100 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)     |
| 30   | 13.8 - 207 Bar (200 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI) |
| 50   | 13.8 - 345 Bar (200 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) |

| Optional Pressure Setting   |
|---|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B08-3-*4P)   |
| 4T   | SAE-4          | (B08-3-*4T)   |
| 6T   | SAE-6          | (B08-3-*6T)   |
| 6B   | 3/8" BSPG      | (B08-3-*6B)   |

\* Add "A" for aluminum, omit for steel.

**NOTE:** For settings below 20.7 Bar (300 PSI), flow rating is limited to 11.3 LPM (3 GPM).

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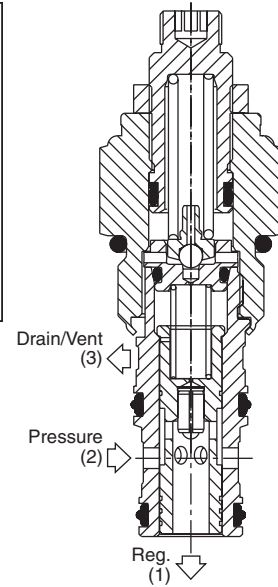
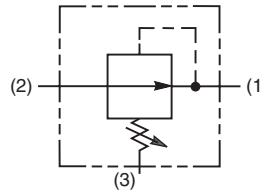
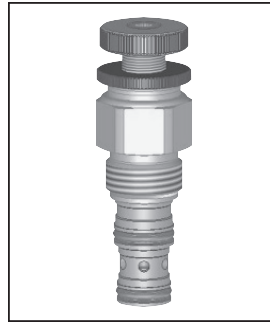
**General Description**

Pilot Operated Pressure Reducing Valve. For additional information see Technical Tips on pages PC1-PC6.



**Features**

- Hardened, precision ground parts for durability
- Low profile adapter for minimal space requirements
- Fully guided poppet for more consistent reseal
- Steel adapters are coated with yellow zinc dichromate for protection from salt spray
- Polyurethane "D"-Ring eliminates backup rings and prevents hydrolysis
- Internal screening protects pilot spring from debris

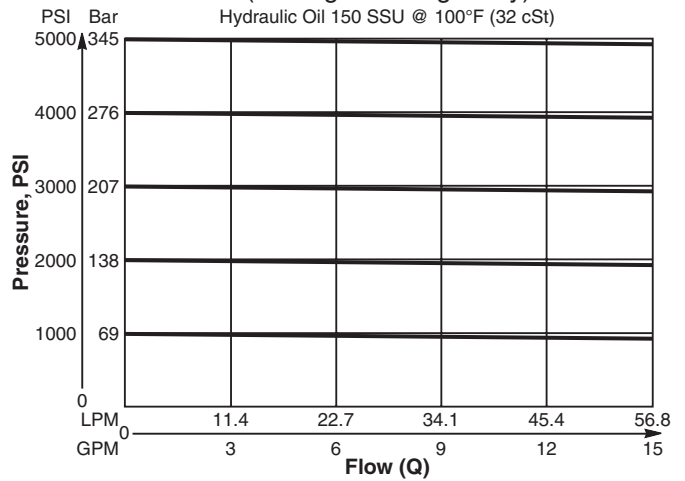


**Specifications**

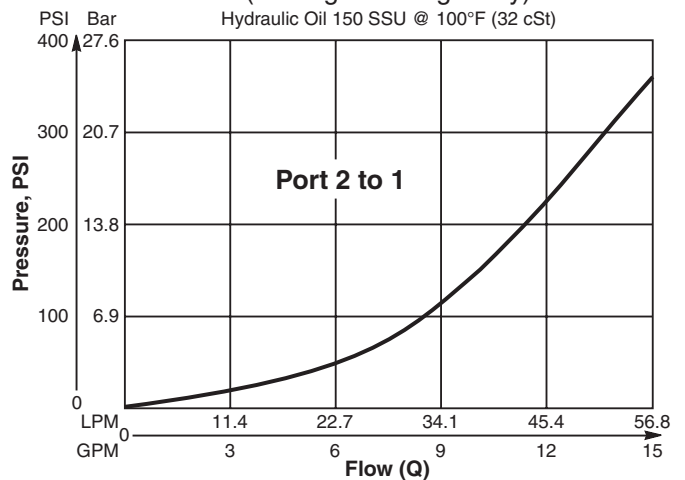
|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 56.3 LPM (15 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>      | 350 Bar (5000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 350 Bar (5000 PSI)   |
| <b>Maximum Drain Flow</b>            | 0.94 LPM (0.25 GPM)  |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -45°C to +93.3°C ("D"-Ring) (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)  |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | .23 kg (0.5 lbs.)  |
| <b>Cavity</b>                        | C10-3 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher NTF10-3R<br>Finisher NFT10-3F  |

**Performance Curves**

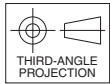
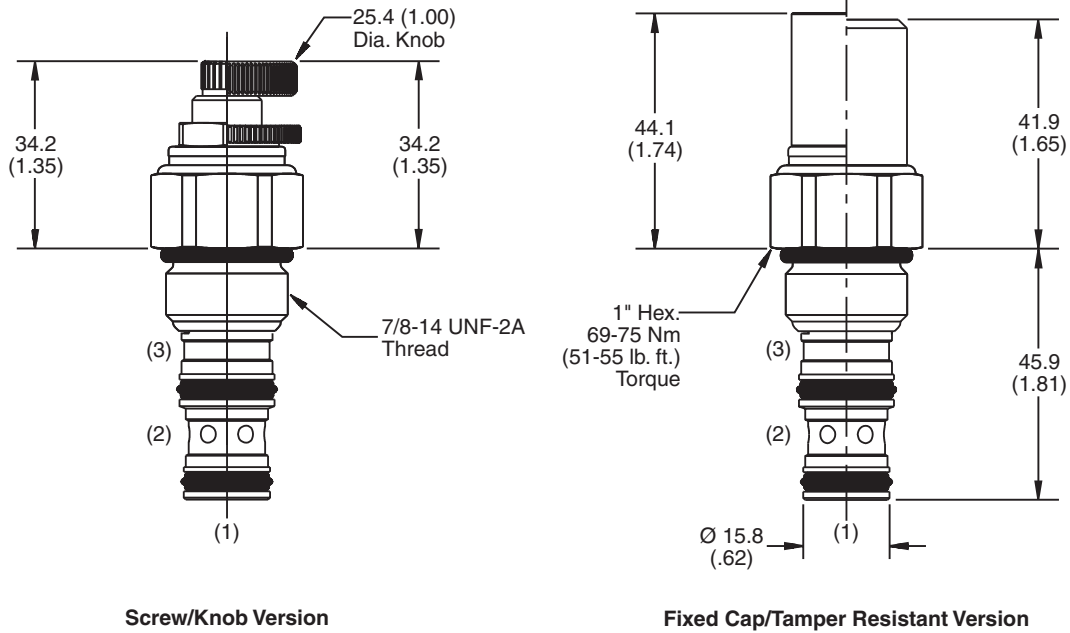
**Flow vs. Pressure (Through cartridge only)**



**Pressure vs. Flow (Through cartridge only)**



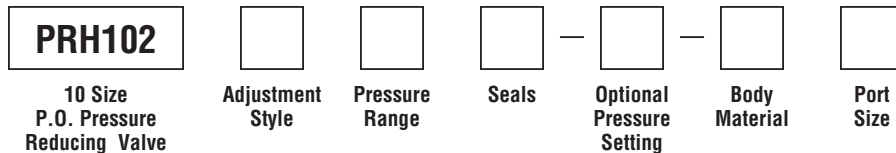
**Dimensions** Millimeters (Inches)



**Screw/Knob Version**

**Fixed Cap/Tamper Resistant Version**

**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (718083)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK10-3)      |
| N    | Nitrile / (SK10-3N)      |
| V    | Fluorocarbon / (SK10-3V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range  |
|------|---|
| 03   | 6.9 - 34.5 Bar (100 - 500 PSI)<br>Standard Setting:<br>17.2 Bar (250 PSI)     |
| 10   | 13.7 - 69 Bar (200 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI)     |
| 20   | 27 - 138 Bar (400 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)       |
| 30   | 41.4 - 207 Bar (600 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI)  |
| 50   | 82.8 - 345 Bar (1200 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) |

| Optional Pressure Setting   |
|---|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-3-*4P)   |
| 6P   | 3/8" NPTF      | (B10-3-*6P)   |
| 8P   | 1/2" NPTF      | (B10-3-*8P)   |
| 6T   | SAE-6          | (B10-3-*6T)   |
| 8T   | SAE-8          | (B10-3-*8T)   |
| 6B   | 3/8" BSPG      | (B10-3-6B)†   |
| 8B   | 1/2" BSPG      | (B10-3-*8B)   |

\* Add "A" for aluminum, omit for steel.  
 † Steel Body only.

**NOTE:** For settings below 20.7 Bar (300 PSI), flow rating is limited to 11.3 LPM (3 GPM).

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

**Technical Information**

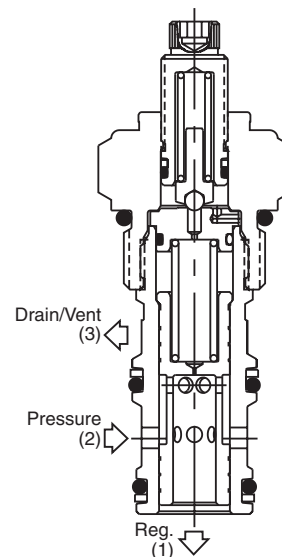
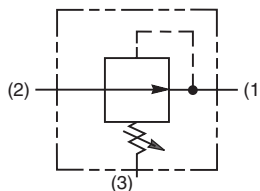
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Pilot Operated Pressure Reducing Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Hardened, precision ground parts for durability
- High accuracy, pilot operation design
- Ball-type pilot for added stability
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.



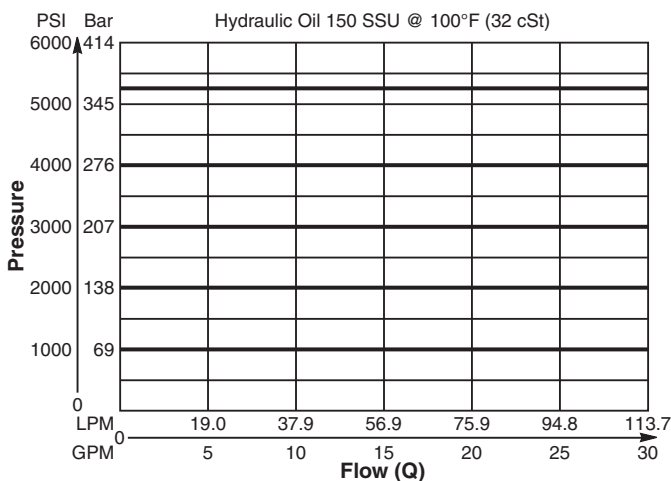
**Specifications**

|  |  |
|--|--|
| <b>Rated Flow</b>                      | 113.7 LPM (30 GPM)   |
| <b>Maximum Inlet Pressure</b>          | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>        | 350 Bar (5000 PSI)   |
| <b>Maximum Tank Pressure</b>           | 350 Bar (5000 PSI)   |
| <b>Maximum Drain Flow</b>              | 1.9 LPM (0.50 GPM)   |
| <b>Cartridge Material</b>              | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range (Ambient)</b> | -40°C to +93.3°C (Nitrile)<br>(-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon)<br>(-25°F to +250°F) |
| <b>Fluid Compatibility/ Viscosity</b>  | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)     |
| <b>Filtration</b>                      | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                  | .27 kg (0.6 lbs.)  |
| <b>Cavity</b>                          | C12-3<br>(See BC Section for more details)   |
| <b>Form Tool</b>                       | Rougher NFT12-3R<br>Finisher NFT12-3F  |

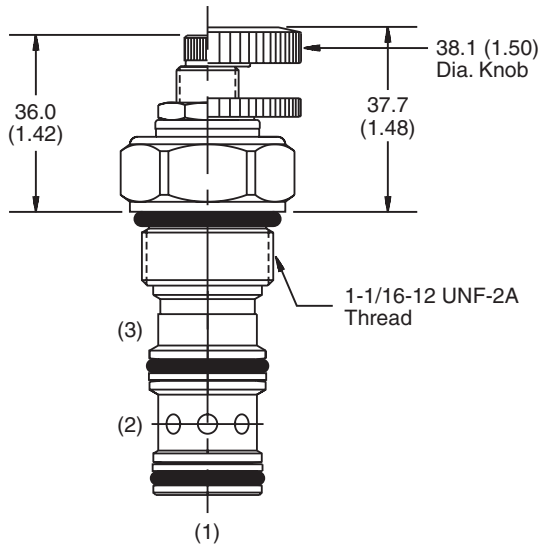
**Performance Curve**

**Flow vs. Pressure**

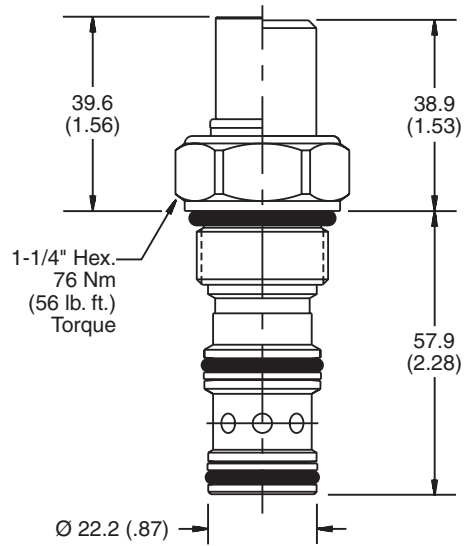
(Pressure rise through cartridge only)



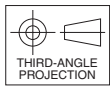
**Dimensions** Millimeters (Inches)



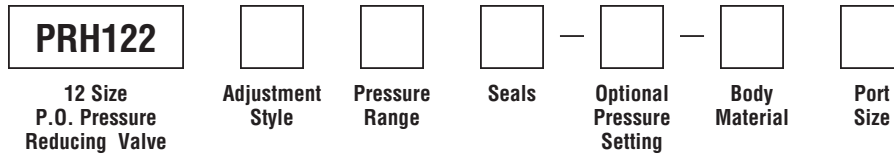
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-15)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717785)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | Nitrile / (SK12-3)       |
| V    | Fluorocarbon / (SK12-3V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range   |
|------|--|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI)     |
| 20   | 13.8 - 138 Bar (200 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)    |
| 30   | 20.7 - 207 Bar (300 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI) |
| 50   | 34.5 - 345 Bar (500 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) |

| Optional Pressure Setting   |
|---|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit is standard setting is used)<br>Setting Range:<br>100 to 5000 PSI |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 12T  | SAE-12         | (B12-3-*12T)  |
| 8B   | 1/2" BSPG      | (B12-3-8B)†   |

\* Add "A" for aluminum, omit for steel.  
 † Steel Body only.

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

**Technical Information**

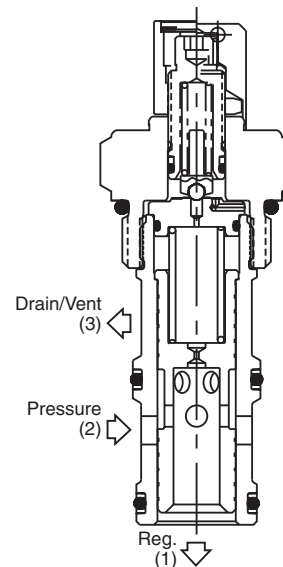
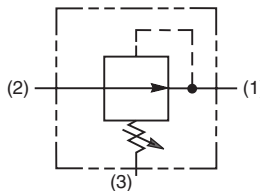
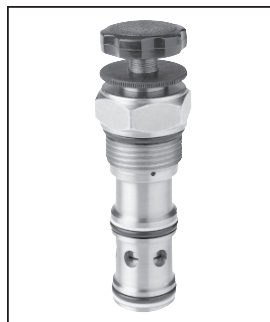
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Pilot Operated Pressure Reducing Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Hardened, precision ground parts for durability
- High accuracy, pilot operation design
- Ball-type pilot for added stability
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.



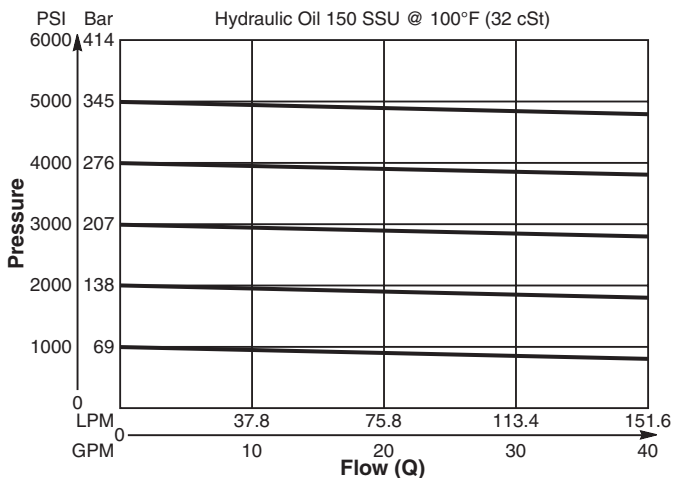
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 150 LPM (40 GPM)   |
| <b>Maximum Inlet Pressure</b>        | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>      | 350 Bar (5000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 350 Bar (5000 PSI)   |
| <b>Maximum Drain Flow</b>            | 0.94 LPM (0.25 GPM)  |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.9 kg (2.0 lbs.)  |
| <b>Cavity</b>                        | C16-3 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher NTF16-3R<br>Finisher NFT16-3F  |

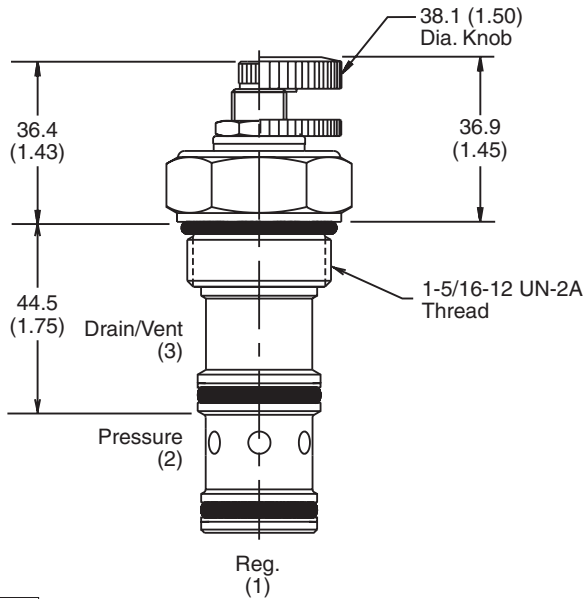
**Performance Curve**

**Flow vs. Pressure**

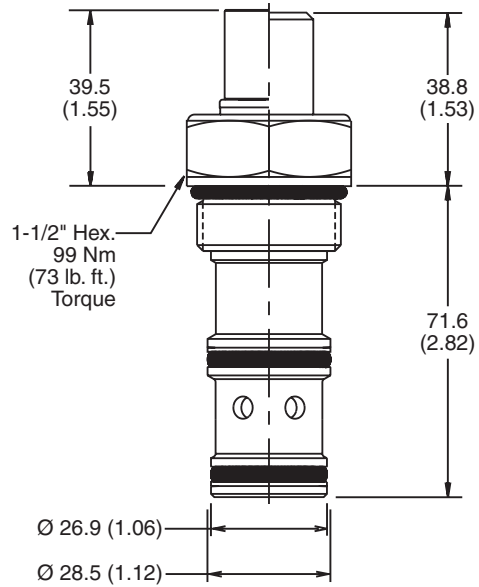
(Pressure rise through cartridge only)



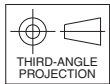
**Dimensions** Millimeters (Inches)



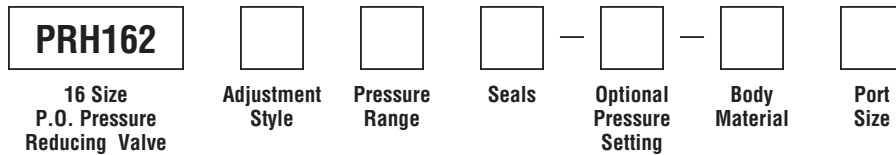
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-15)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717785)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | Nitrile / (SK16-3)       |
| V    | Fluorocarbon / (SK16-3V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range   |
|------|--|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI)     |
| 20   | 13.8 - 138 Bar (200 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)    |
| 30   | 20.7 - 207 Bar (300 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI) |
| 50   | 34.5 - 345 Bar (500 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) |

| Optional Pressure Setting   |
|---|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 12T  | SAE-12         | (B16-3-*12T)  |
| 16T  | SAE-16         | (B16-3-*16T)  |

\* Add "A" for aluminum, omit for steel.

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data



**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

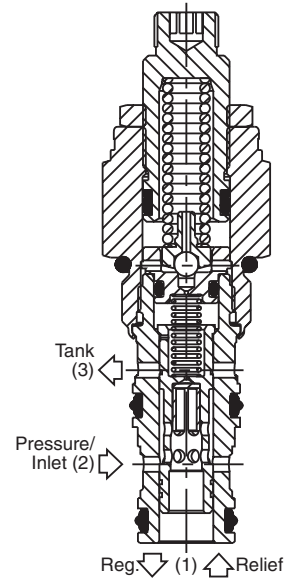
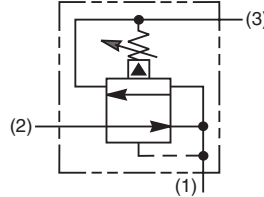
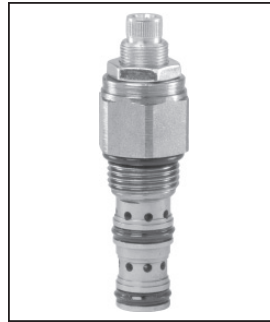
**General Description**

Pilot Operated Pressure Reducing/Relieving Valve. For additional information see Technical Tips on pages PC1-PC6.



**Features**

- Hardened, precision ground parts for durability
- Low profile adapter for minimal space requirements
- Fully guided pilot for more consistent reseal
- Steel adapters are coated with yellow zinc dichromate for protection from salt spray
- Polyurethane "D"-Ring eliminates backup rings and prevents hydrolysis
- Internal screening protects pilot spring from debris

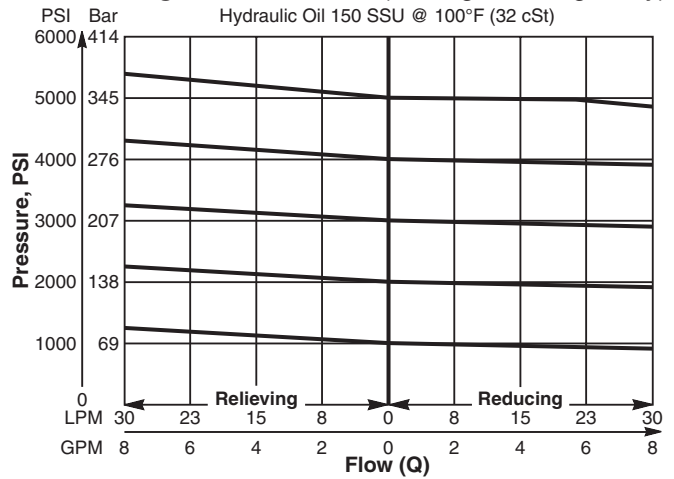


**Specifications**

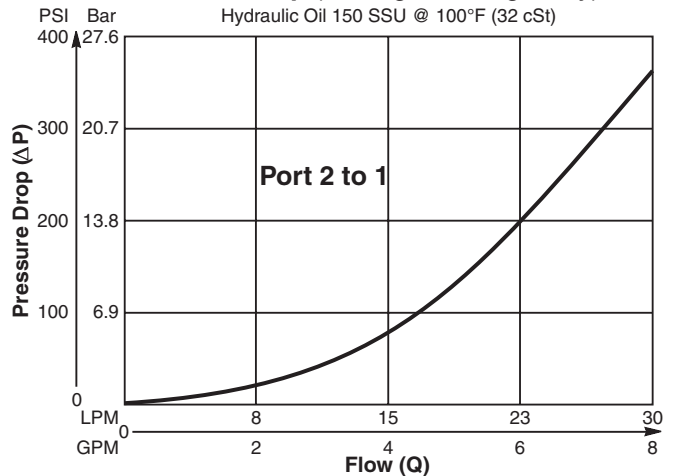
|                                      |   |
|--------------------------------------|---|
| <b>Rated Flow</b>                    | 30 LPM (8 GPM)  |
| <b>Maximum Inlet Pressure</b>        | 380 Bar (5500 PSI)  |
| <b>Maximum Pressure Setting</b>      | 350 Bar (5000 PSI)  |
| <b>Maximum Tank Pressure</b>         | 350 Bar (5000 PSI)  |
| <b>Maximum Drain Flow</b>            | 0.56 LPM (0.15 GPM)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.  |
| <b>Operating Temp. Range/Seals</b>   | -45°C to +93.3°C ("D"-Ring)<br>(-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon)<br>(-25°F to +250°F) |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)      |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better   |
| <b>Approx. Weight</b>                | .11 kg (.25 lbs.)   |
| <b>Cavity</b>                        | C08-3<br>(See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher NTF08-3R<br>Finisher NFT08-3F   |

**Performance Curves**

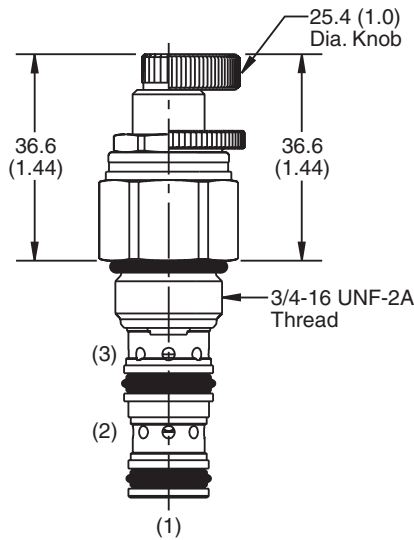
**Flow vs. Regulated Pressure (Through cartridge only)**



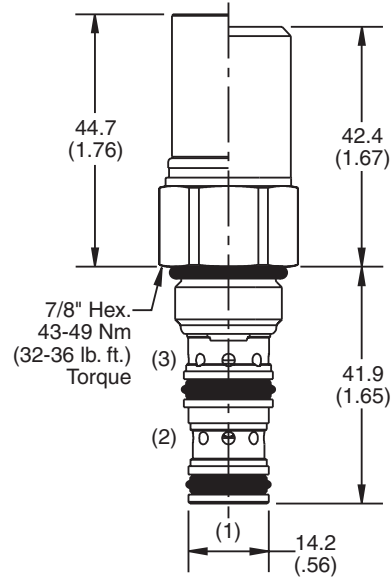
**Flow vs. Pressure Drop (Through cartridge only)**



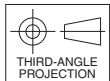
**Dimensions** Millimeters (Inches)



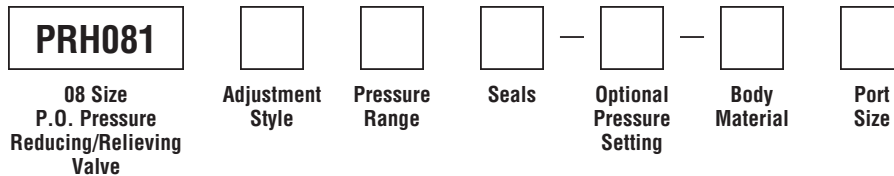
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717943)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK08-3)      |
| N    | Nitrile / (SK08-3N)      |
| V    | Fluorocarbon / (SK08-3V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range   |
|------|--|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI)     |
| 20   | 6.9 - 138 Bar (100 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)     |
| 30   | 13.8 - 207 Bar (200 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI) |
| 50   | 13.8 - 345 Bar (200 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) |

| Optional Pressure Setting   |
|---|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B08-3-*4P)   |
| 4T   | SAE-4          | (B08-3-*4T)   |
| 6T   | SAE-6          | (B08-3-*6T)   |
| 6B   | 3/8" BSPG      | (B08-3-*6B)   |

\* Add "A" for aluminum, omit for steel.

**NOTE: For settings below 20.7 Bar (300 PSI), flow rating is limited to 11.3 LPM (3 GPM).**

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

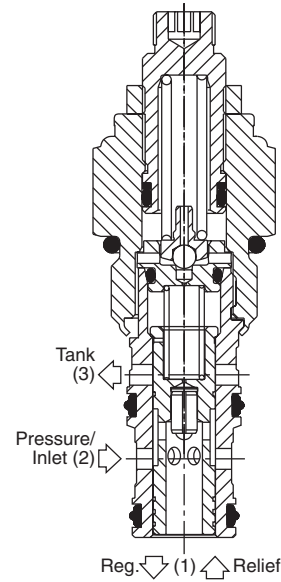
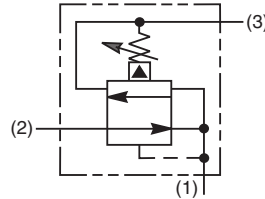
**General Description**

Pilot Operated Pressure Reducing/Relieving Valve. For additional information see Technical Tips on pages PC1-PC6.



**Features**

- Hardened, precision ground parts for durability
- Low profile adapter for minimal space requirements
- Fully guided poppet for more consistent reseal
- Steel adapters are coated with yellow zinc dichromate for protection from salt spray
- Polyurethane "D"-Ring eliminates backup rings and prevents hydrolysis
- Internal screening protects pilot spring from debris

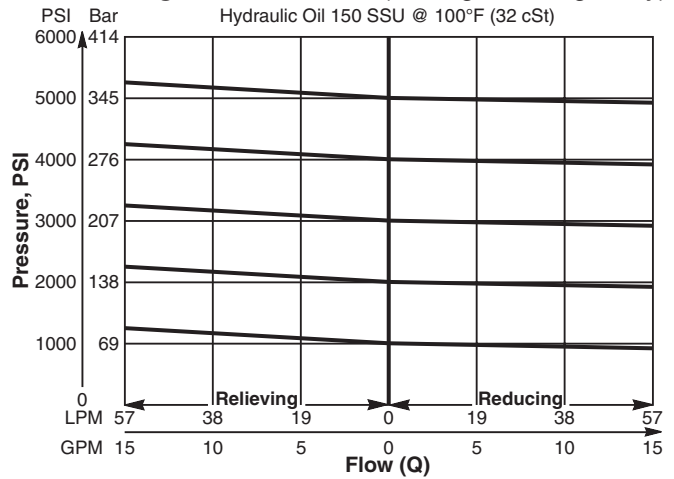


**Specifications**

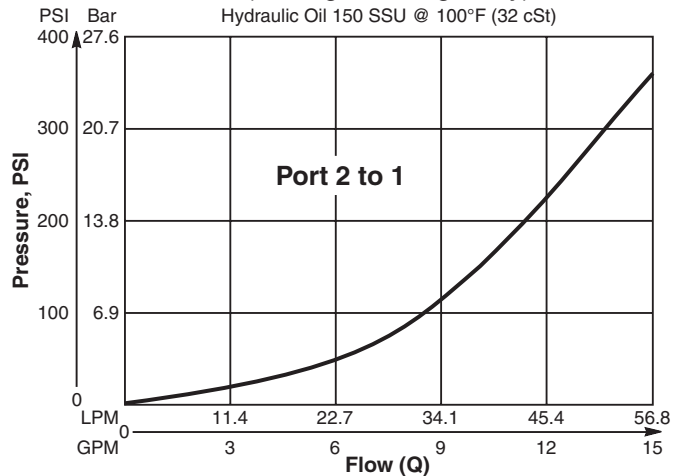
|                                      |   |
|--------------------------------------|---|
| <b>Rated Flow</b>                    | 56.3 LPM (15 GPM)   |
| <b>Maximum Inlet Pressure</b>        | 380 Bar (5500 PSI)  |
| <b>Maximum Pressure Setting</b>      | 350 Bar (5000 PSI)  |
| <b>Maximum Tank Pressure</b>         | 350 Bar (5000 PSI)  |
| <b>Maximum Drain Flow</b>            | 0.94 LPM (0.25 GPM)   |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.  |
| <b>Operating Temp. Range/Seals</b>   | -45°C to +93.3°C ("D"-Ring)<br>(-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon)<br>(-25°F to +250°F) |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)      |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better   |
| <b>Approx. Weight</b>                | .23 kg (0.5 lbs.)   |
| <b>Cavity</b>                        | C10-3<br>(See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher NTF10-3R<br>Finisher NFT10-3F   |

**Performance Curves**

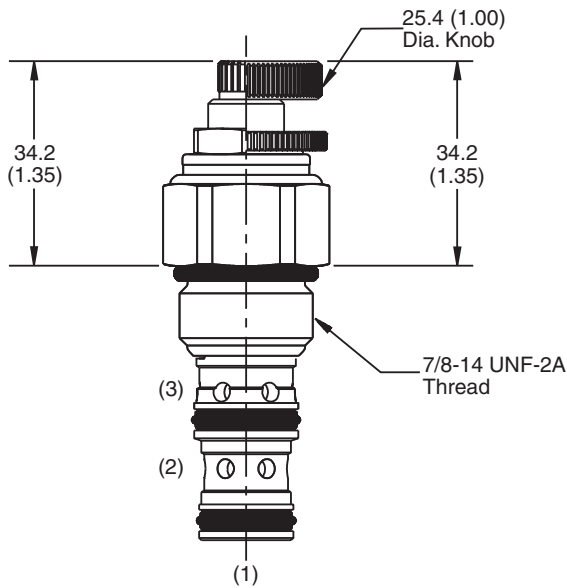
**Flow vs. Regulated Pressure (Through cartridge only)**



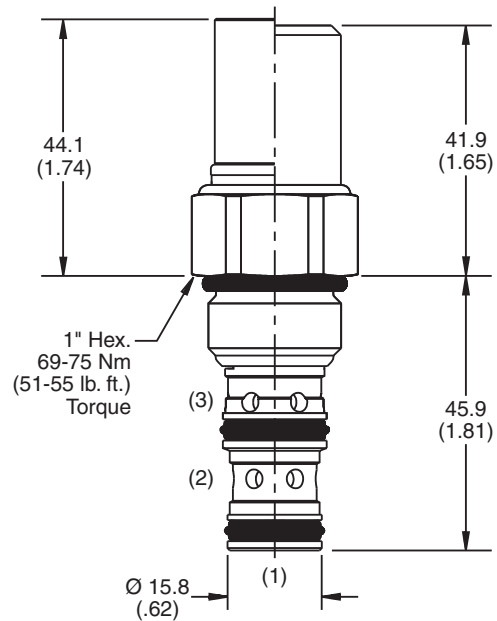
**Pressure vs. Flow (Through cartridge only)**



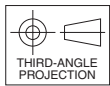
**Dimensions** Millimeters (Inches)



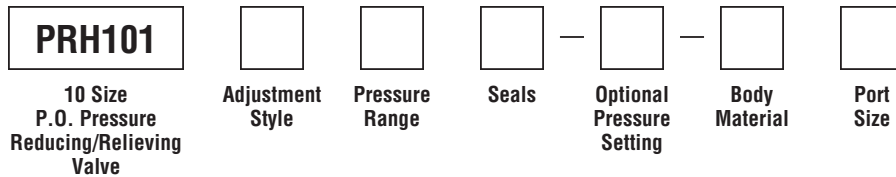
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (718083)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | "D"-Ring / (SK10-3)      |
| N    | Nitirle / (SK10-3N)      |
| V    | Fluorocarbon / (SK10-3V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range  |
|------|---|
| 03   | 6.9 - 34.5 Bar (100 - 500 PSI)<br>Standard Setting:<br>17.2 Bar (250 PSI)     |
| 10   | 13.7 - 69 Bar (200 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI)     |
| 20   | 27 - 138 Bar (400 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)       |
| 30   | 41.4 - 207 Bar (600 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI)  |
| 50   | 82.8 - 345 Bar (1200 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) |

| Optional Pressure Setting   |
|---|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 4P   | 1/4" NPTF      | (B10-3-*4P)   |
| 6P   | 3/8" NPTF      | (B10-3-*6P)   |
| 8P   | 1/2" NPTF      | (B10-3-*8P)   |
| 6T   | SAE-6          | (B10-3-*6T)   |
| 8T   | SAE-8          | (B10-3-*8T)   |
| 6B   | 3/8" BSPG      | (B10-3-6B)†   |
| 8B   | 1/2" BSPG      | (B10-3-*8P)   |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

**NOTE:** For settings below 20.7 Bar (300 PSI), flow rating is limited to 11.3 LPM (3 GPM).

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

**Technical Information**

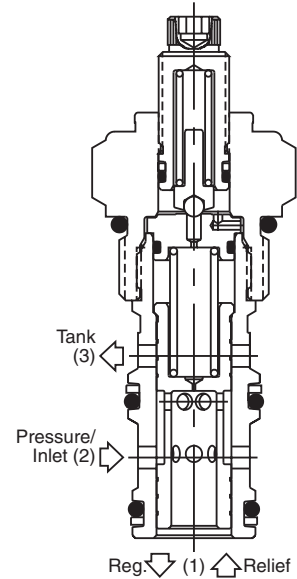
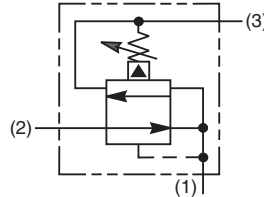
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Pilot Operated Pressure Reducing/Relieving Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Hardened, precision ground parts for durability
- Ball-type pilot for added stability
- Full capacity reducing/relieving
- Performs job of two separate valves in one
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.



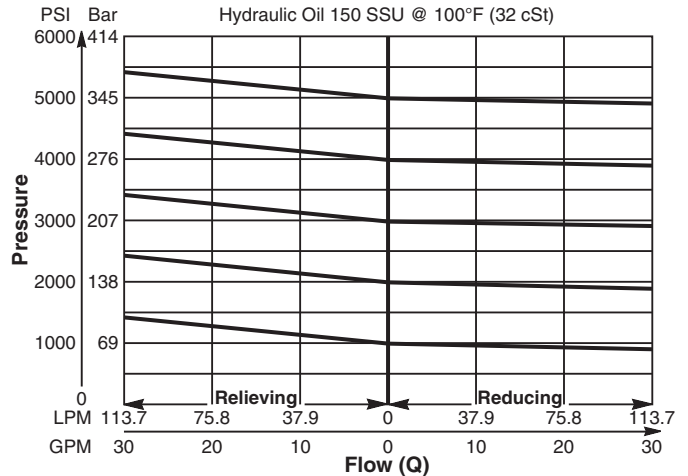
**Specifications**

|                                       |  |
|---------------------------------------|--|
| <b>Rated Flow</b>                     | 113.7 LPM (30 GPM)   |
| <b>Maximum Inlet Pressure</b>         | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>       | 350 Bar (5000 PSI)   |
| <b>Maximum Tank Pressure</b>          | 350 Bar (5000 PSI)   |
| <b>Maximum Drain Flow</b>             | 0.94 LPM (0.25 GPM)  |
| <b>Cartridge Material</b>             | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>    | -40°C to +93.3°C (Nitrile)<br>(-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon)<br>(-25°F to +250°F) |
| <b>Fluid Compatibility/ Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)     |
| <b>Filtration</b>                     | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                 | .27 kg (0.6 lbs.)  |
| <b>Cavity</b>                         | C12-3<br>(See BC Section for more details)   |
| <b>Form Tool</b>                      | Rougher NTF12-3R<br>Finisher NFT12-3F  |

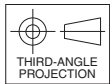
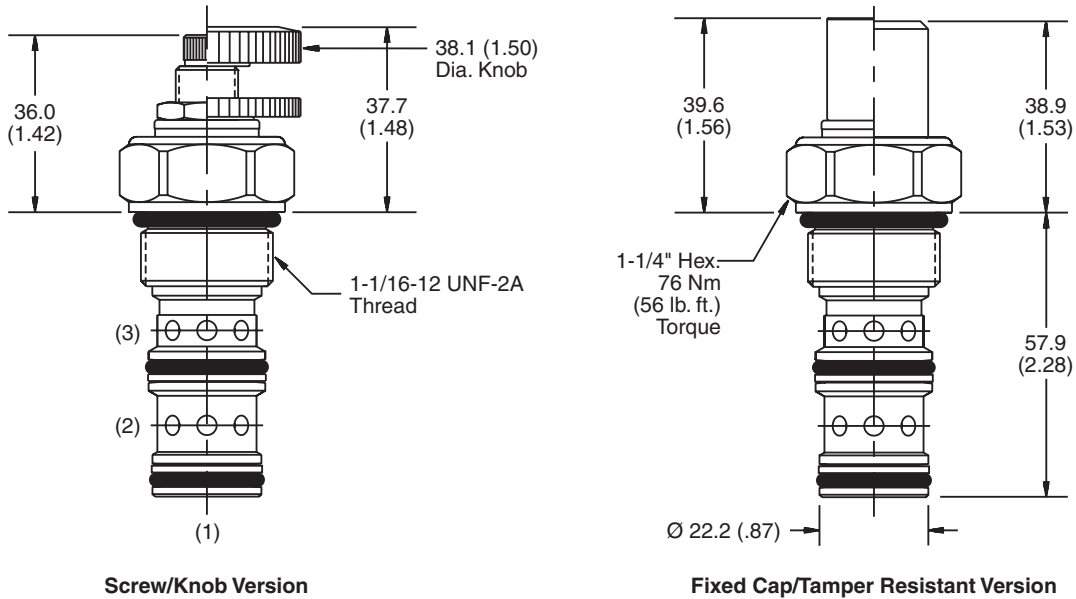
**Performance Curve**

**Flow vs. Regulated Pressure**

(Pressure rise through cartridge only)



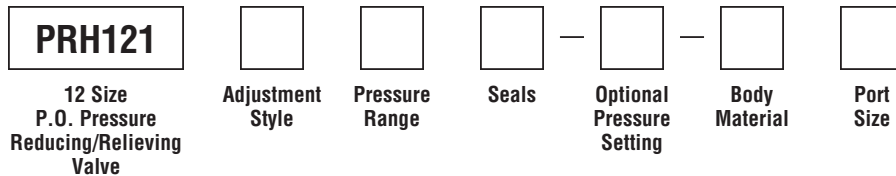
**Dimensions** Millimeters (Inches)



**Screw/Knob Version**

**Fixed Cap/Tamper Resistant Version**

**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-15)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717785)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | Nitrile / (SK12-3)       |
| V    | Fluorocarbon / (SK12-3V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range   |
|------|--|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI)     |
| 20   | 13.8 - 138 Bar (200 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)    |
| 30   | 20.7 - 207 Bar (300 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI) |
| 50   | 34.5 - 345 Bar (500 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) |

| Optional Pressure Setting   |
|---|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 8T   | SAE-8          | (B12-3-*8T)   |
| 12T  | SAE-12         | (B12-3-*12T)  |
| 8B   | 1/2" BSPG      | (B12-3-8B)†   |

\* Add "A" for aluminum, omit for steel.  
 † Steel body only.

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

**Technical Information**

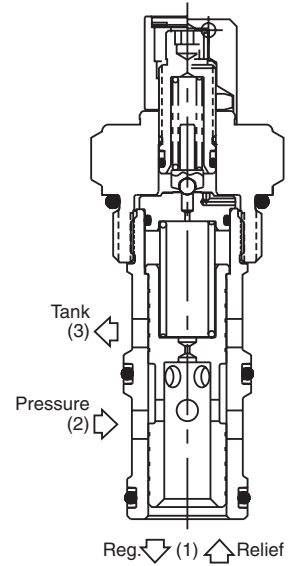
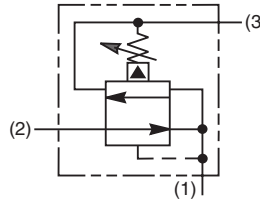
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Pilot Operated Pressure Reducing/Relieving Valve. For additional information see Technical Tips on pages PC1-PC6.

**Features**

- Hardened, precision ground parts for durability
- Ball-type pilot for added stability
- Full capacity reducing/relieving
- Performs job of two separate valves in one
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.



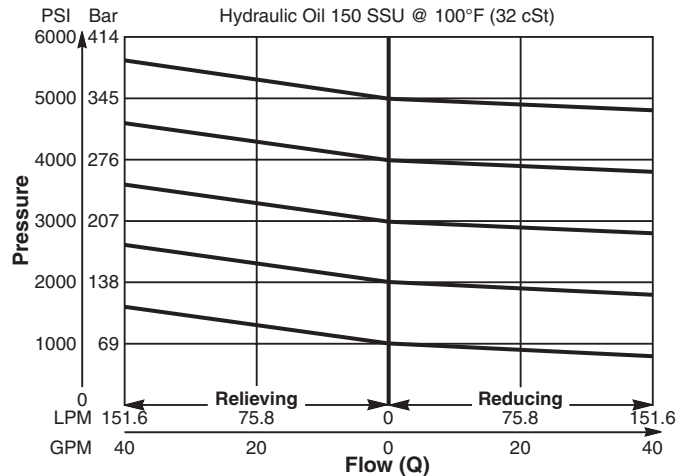
**Specifications**

|                                      |  |
|--------------------------------------|--|
| <b>Rated Flow</b>                    | 150 LPM (40 GPM)   |
| <b>Maximum Inlet Pressure</b>        | 380 Bar (5500 PSI)   |
| <b>Maximum Pressure Setting</b>      | 350 Bar (5000 PSI)   |
| <b>Maximum Tank Pressure</b>         | 350 Bar (5000 PSI)   |
| <b>Maximum Drain Flow</b>            | 1.9 LPM (0.5 GPM)  |
| <b>Cartridge Material</b>            | All parts steel. All operating parts hardened steel.   |
| <b>Operating Temp. Range/Seals</b>   | -40°C to +93.3°C (Nitrile) (-40°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b> | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                    | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                | 0.9 kg (2.0 lbs.)  |
| <b>Cavity</b>                        | C16-3 (See BC Section for more details)  |
| <b>Form Tool</b>                     | Rougher NTF16-3R<br>Finisher NFT16-3F  |

**Performance Curve**

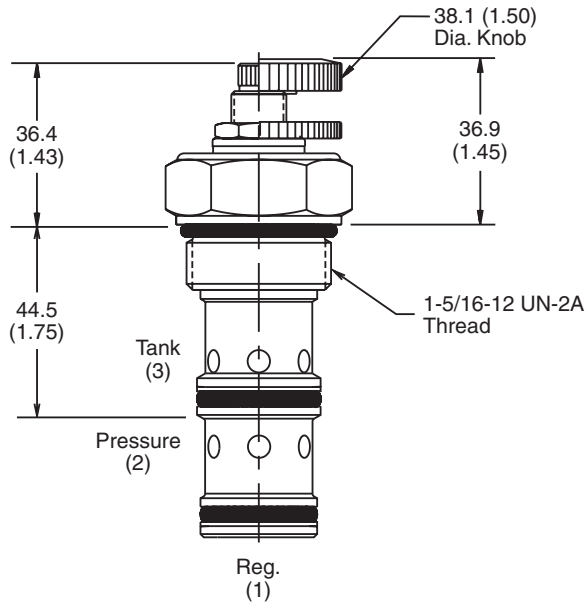
**Flow vs. Regulated Pressure**

(Pressure rise through cartridge only)

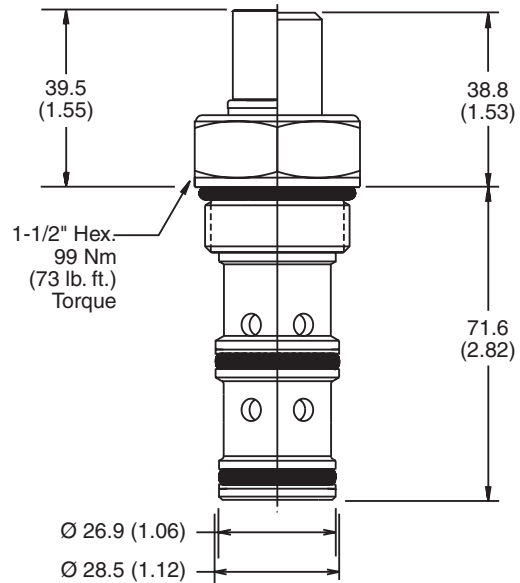




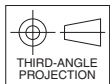
**Dimensions** Millimeters (Inches)



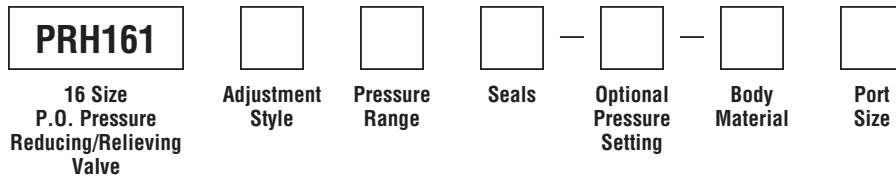
**Screw/Knob Version**



**Fixed Cap/Tamper Resistant Version**



**Ordering Information**



| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-15)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (717785)   |

| Code | Seals / Kit No.          |
|------|--------------------------|
| Omit | Nitrile / (SK16-3)       |
| V    | Fluorocarbon / (SK16-3V) |

| Code | Body Material |
|------|---------------|
| Omit | Steel         |
| A    | Aluminum      |

| Code | Pressure Range   |
|------|--|
| 10   | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI)     |
| 20   | 13.8 - 138 Bar (200 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI)    |
| 30   | 20.7 - 207 Bar (300 - 3000 PSI)<br>Standard Setting:<br>103.5 Bar (1500 PSI) |
| 50   | 34.5 - 345 Bar (500 - 5000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) |

| Optional Pressure Setting   |
|---|
| Pressure $\pm$ 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used)<br>Setting Range:<br>100 to 5000 PSI |

| Code | Port Size      | Body Part No. |
|------|----------------|---------------|
| Omit | Cartridge Only |               |
| 12T  | SAE-12         | (B16-3-*12T)  |
| 16T  | SAE-16         | (B16-3-*16T)  |

\* Add "A" for aluminum, omit for steel.

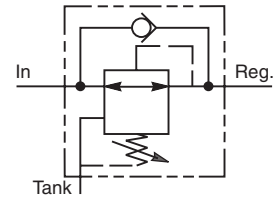
- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

Technical Information

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

Pilot Operated Pressure Reducing/Relieving Valve with Reverse Flow Check Valve. For additional information see Technical Tips on pages PC1-PC6.

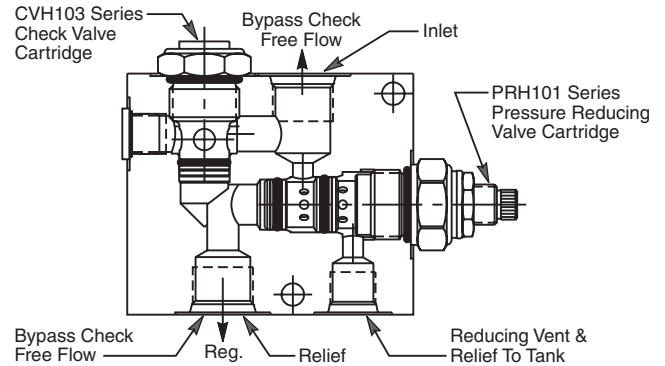


**Features**

- Hardened, precision ground parts for durability
- Built-in reverse flow check reduces plumbing
- Cartridge design
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.

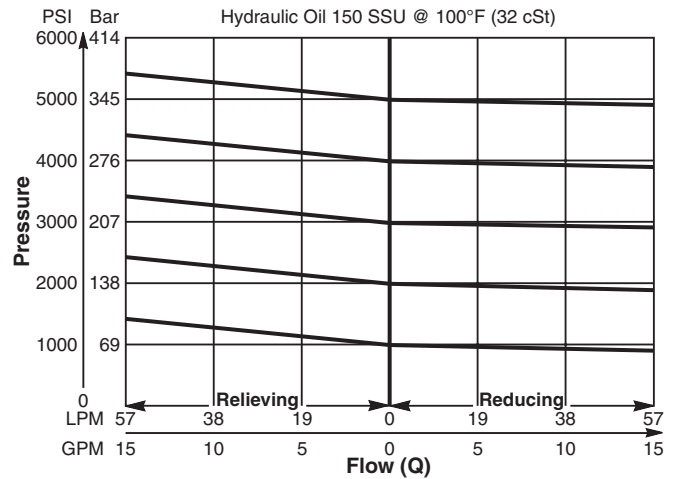
**Specifications**

|   |  |
|---|--|
| <b>Rated Flow</b>                                       | 56.3 LPM (15 GPM)  |
| <b>Maximum Inlet Press. (Reducing/Relieving mode)</b>   | 380 Bar (5500 PSI)   |
| <b>Maximum Setting Press. (Reducing/Relieving mode)</b> | 350 Bar (5000 PSI)   |
| <b>Maximum Inlet Press. (Free Flow Check mode)</b>      | 380 Bar (5500 PSI)   |
| <b>Maximum Drain Flow</b>                               | 0.94 LPM (0.25 GPM)  |
| <b>Cartridge Material</b>                               | All parts steel. All operating parts hardened steel.   |
| <b>Body Material</b>                                    | Steel  |
| <b>Operating Temp. Range/Seals</b>                      | -45°C to +93.3°C ("D"-Ring (-50°F to +200°F)<br>-31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)   |
| <b>Fluid Compatibility/Viscosity</b>                    | Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt) |
| <b>Filtration</b>                                       | ISO Code 16/13, SAE Class 4 or better  |
| <b>Approx. Weight</b>                                   | 1.0 kg (2.2 lbs.)  |

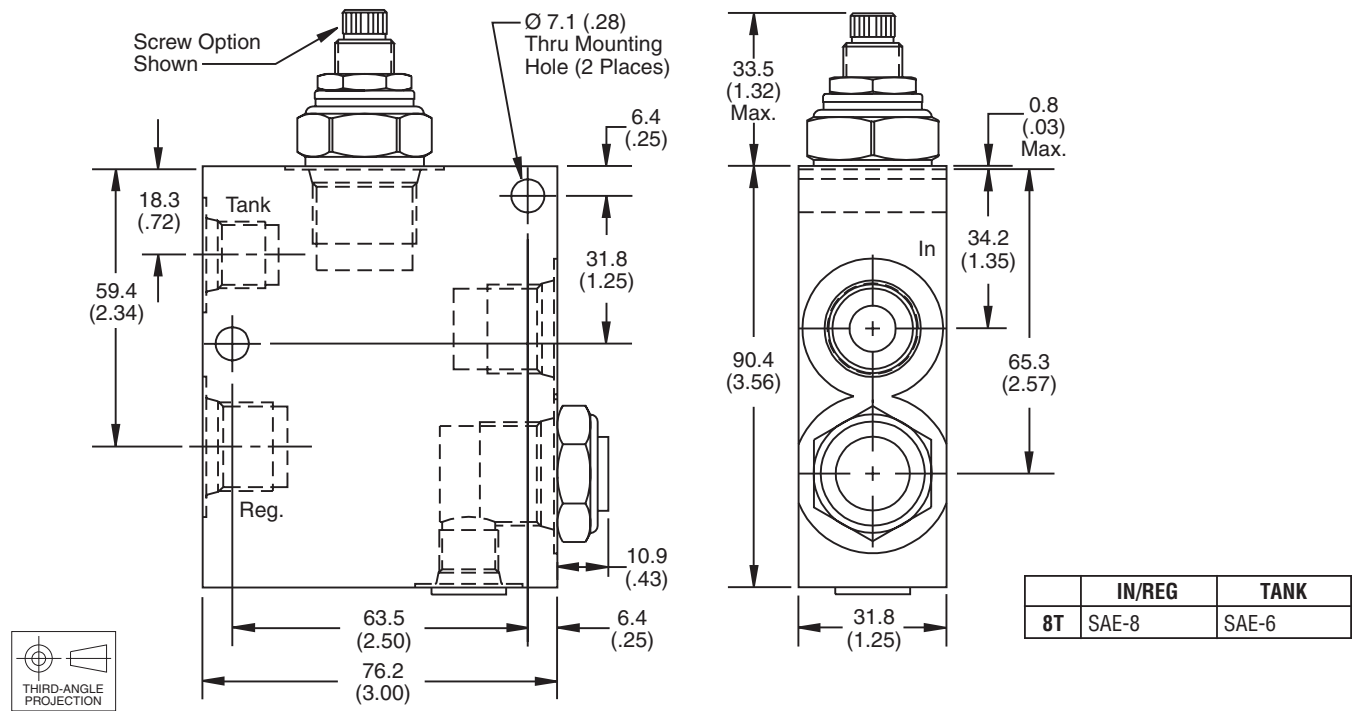


**Performance Curve**  
**Flow vs. Inlet Pressure**

(Pressure rise through cartridge only)



**Dimensions** Millimeters (Inches)



**Ordering Information**

**PRCH101**                         -

**10 Size**  
 P.O. Pressure Reducing/  
 Relieving Valve  
 w/Reverse Flow Check

**Adjustment Style**    **Pressure Range**    **Optional Pressure Setting**    **Check Valve Cracking Pressure**    **Seals**    **Port Size**

| Code | Adjustment Style / Kit No.      |
|------|---------------------------------|
| F    | Fixed style, preset at factory. |
| K    | Knob Adjust (717784-10)         |
| S    | Screw Adjust                    |
| T    | Tamper Resistant Cap (718083)   |

| Optional Pressure Setting       |   |
|---------------------------------|---|
| Pressure                        | ± 10<br>i.e. 235 = 2350 PSI<br>(Omit if standard setting is used) |
| Setting Range:                  | 100 to 5000 PSI   |
| All settings at crack pressure, | approximately .95 LPM (.25 GPM)                                   |

| Code | Seals        |
|------|--------------|
| Omit | "D"-Ring     |
| N    | Nitrile      |
| V    | Fluorocarbon |

| Code      | Pressure Range  |
|-----------|---|
| <b>10</b> | 6.9 - 69 Bar (100 - 1000 PSI)<br>Standard Setting:<br>34.5 Bar (500 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM)     |
| <b>20</b> | 6.9 - 138 Bar (100 - 2000 PSI)<br>Standard Setting:<br>69 Bar (1000 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM)     |
| <b>30</b> | 13.8 - 207 Bar (200 - 3000 PSI)<br>Standard Setting:<br>172.4 Bar (2500 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM) |
| <b>50</b> | 13.8 - 345 Bar (200 - 5000 PSI)<br>Standard Setting:<br>241.4 Bar (3500 PSI) @ crack pressure,<br>approximately .95 LPM (.25 GPM) |

| Code | Cracking Pressure |
|------|-------------------|
| Omit | 0.3 Bar (5 PSI)   |
| P15  | 1.0 Bar (15 PSI)  |
| P20  | 1.4 Bar (20 PSI)  |
| P40  | 2.8 Bar (40 PSI)  |
| P50  | 3.5 Bar (50 PSI)  |
| P65  | 4.5 Bar (65 PSI)  |
| P80  | 5.5 Bar (80 PSI)  |

| Code      | Port Size | Part No. |
|-----------|-----------|----------|
| <b>8T</b> | SAE-8     | 830349   |

Individual body requires 1 SAE 5 plug.  
 Part number 5 HP50N-S.

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data