



## Pressure Reducing Valve



U. S. Patent  
No. 5,931,182  
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for cartridge  
cavity dimensions.

### Pressure Reducing Valve

- Control pressure to individual devices.
- For use in double or single acting systems.
- Direct acting, poppet style, adjustable, cartridge construction.
- Cartridge may be installed directly into your manifold.
- Model 70-5410-10 set the pressure range from 750 to 4500 psi. Repeatability  $\pm 7\%$
- Model 70-5410-01 set the pressure range from 150 to 900 psi. Repeatability  $\pm 10\%$
- Maximum inlet pressure 5,000 psi.
- Pressure Reducing Cartridge is interchangeable with the Pressure Limiting Cartridge in the same mounting cavity.
- Two-port design eliminates need for third fluid line to drain bypass flow (internal leakage) back to system reservoir.
- Recommended Filtration: 25 Micron (NOM) /40 Micron (ABS) (minimum).

**Operation:** The Pressure Reducing Valve (PRV) is a Normally Open (N/O) pressure control device. The valve remains open and fluid flows freely to downstream devices (from the valve to devices) until the pressure in the valve reaches the pressure (adjustable) set-point. At the set-point pressure, the valve closes blocking further flow and pressure rise to the downstream devices. If there is a sufficient down stream pressure loss (from the valve to devices), the PRV will re-open, allowing flow to pass through the valve until the pressure again reaches the valve set-point.

### Pressure Reducing Valve

Model No.	Inlet Pressure*	Set Pressure Range	Repeatability	A
<b>Manifold Mount Valve Assembly</b>				
70-5410-10	5000 psi	750 to 4500 psi	$\pm 7\%$	5.8
70-5410-01	< 3000 psi	150 to 900 psi	$\pm 10\%$	6.5
	> 3000 psi	300 to 900 psi		

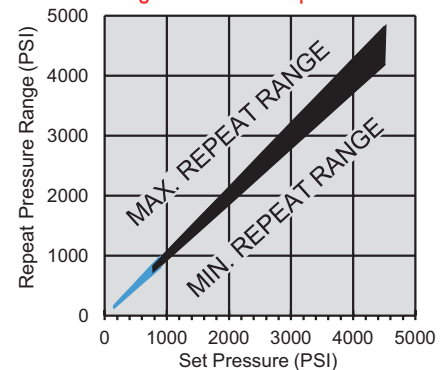
\*Maximum Inlet Pressure for PRV is 5,000 psi

**NOTE:** Maximum system flow rate is 1.5 gpm (346.5 cu. in. per minute) for all VektorFlo® special function valves, unless noted.

Excess flow voids warranty.

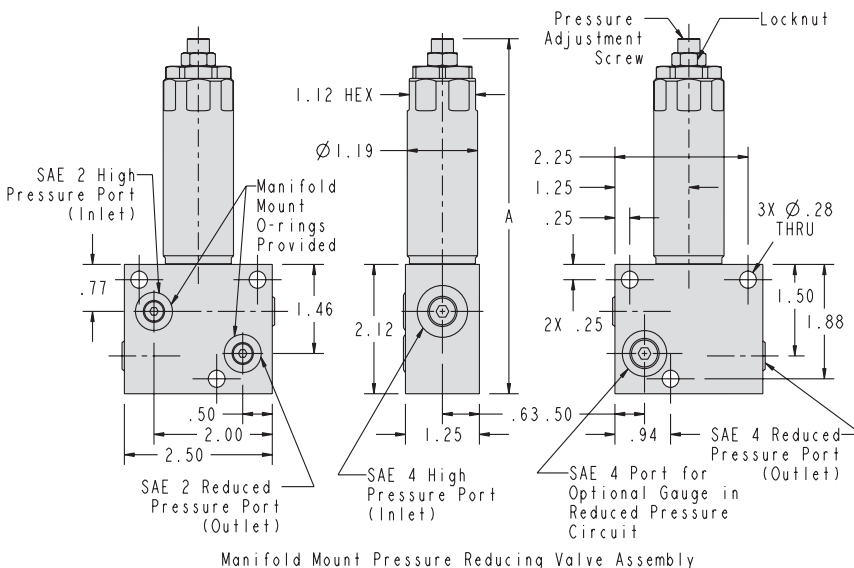
For proper sealing, mating surface must be flat within 0.003 in. with a maximum 63  $\mu$  in.  $R_a$  surface finish.

The graph shows the repeat range based on set pressure



■ 70-5410-10    ■ 70-5410-01  
70-5437-70    ■ 70-5437-71

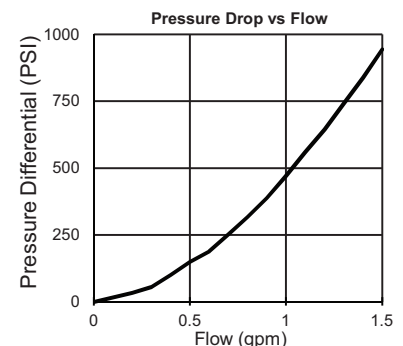
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Manifold Mount Pressure Reducing Valve Assembly

ILS705407 REV A

The graphs show the pressure drop through a PRV and manifold mount block

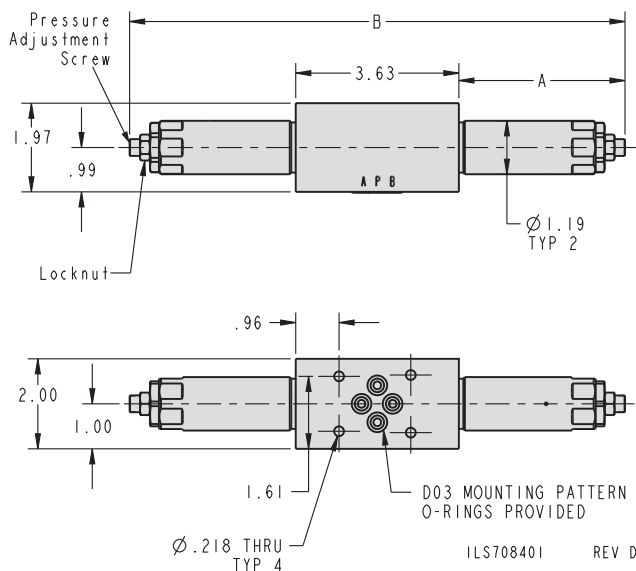


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# Accessory Valves

## Pressure Reducing Control Block



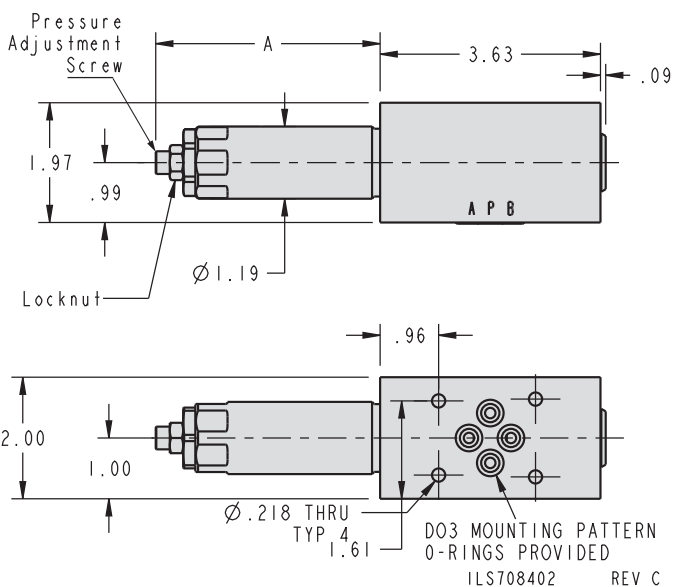
## PRV Control Blocks

- Control pressure independently on both the clamp and unclamp side of the fixture regardless of pump pressure setting.
- Eliminate the wait for full system pressure to finish cycling workholding components.
- For use in double or single acting systems.
- D03 Mounting, use on pump stack or as a remote mounted valve.
- Recommended Filtration: 25 Micron (NOM) / 40 Micron (ABS) (minimum).

## Dual PRV Control Block

Model No.	Inlet Pressure*	Set Pressure Range	Repeat	A	B
<b>Manifold Mount Valve Assembly</b>					
70-8425-50	5000 psi	750 to 4500 psi	± 7%	3.7	11.024
70-8425-53	< 3000 psi >3000 psi	150 to 900 psi 300 to 900 psi	± 10%	4.4	12.367

\*Maximum Inlet Pressure for PRV is 5,000 psi



## Single PRV Control Block

Model No.	Inlet Pressure*	Set Pressure Range	Repeat	A
<b>Manifold Mount Valve Assembly</b>				
70-8425-51	5000 psi	750 to 4500 psi	± 7%	3.7
70-8425-52	< 3000 psi >3000 psi	150 to 900 psi 300 to 900 psi	± 10%	4.4

\*Maximum Inlet Pressure for PRV is 5,000 psi

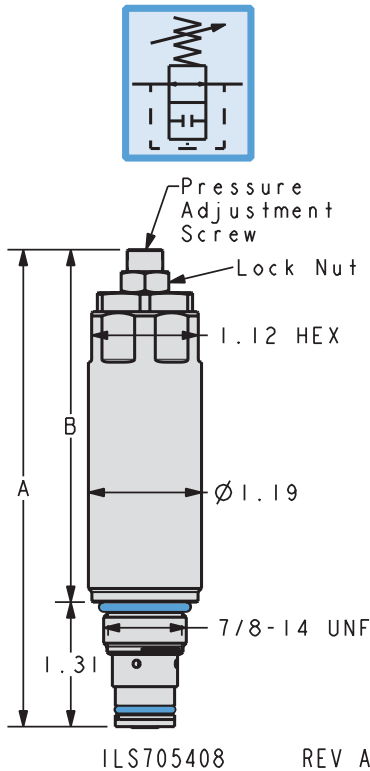
**NOTE: Maximum system flow rate is 1.5 gpm (346.5 cu. in. per minute) for all VektorFlo® special function valves, unless noted.**

Excess flow voids warranty.

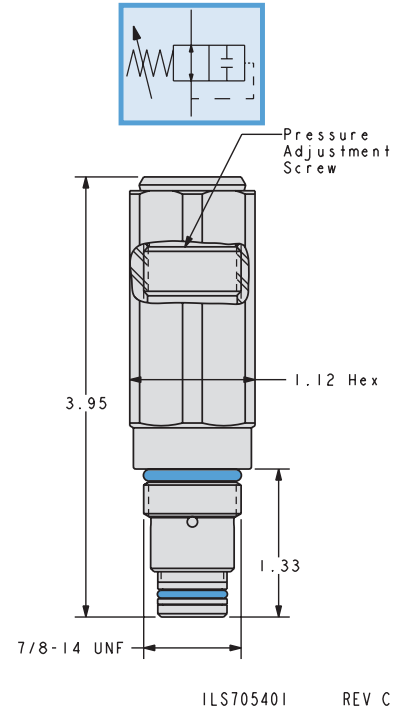


# Accessory Valves

## Pressure Limiting Cartridge and Pressure Reducing Cartridge Cavity



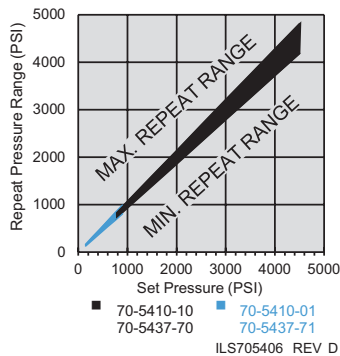
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## Pressure Reducing Cartridge

Model No.	Inlet Pressure*	Set Pressure Range	Repeatability	A	B
70-5437-70	5000 psi	750 - 4500 psi	± 7%	5.0	3.25
70-5437-71	<3000 psi >3000 psi	150 - 900 psi 300 - 900 psi	± 10%	5.7	3.96

\* Maximum Inlet Pressure for PRV is 5,000 psi



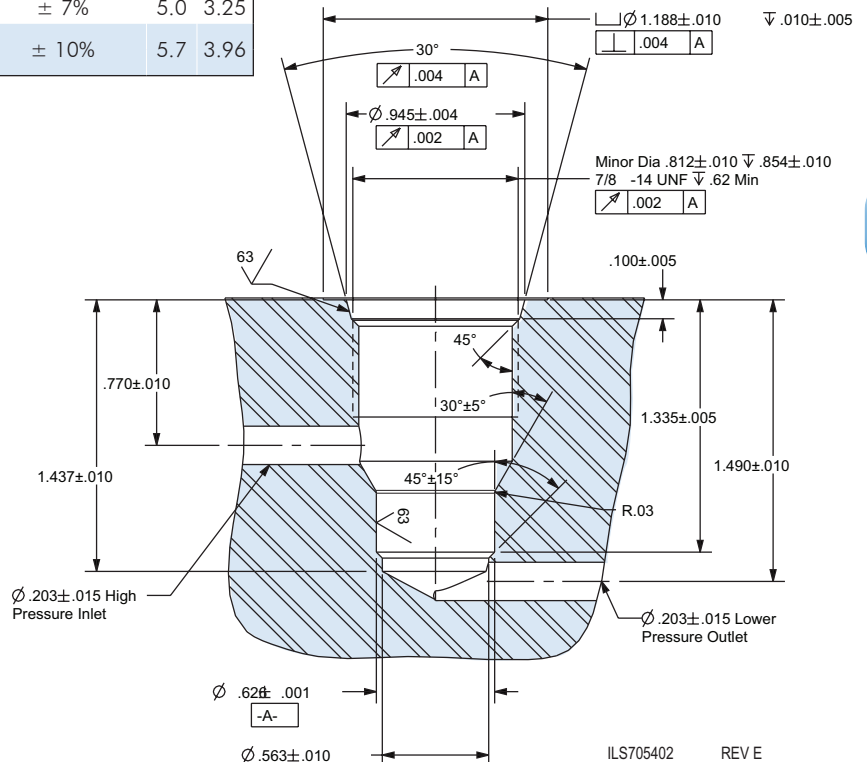
Pressure Limiting Cartridge and Pressure Reducing Cartridge use the same mounting cavity.

NOTE: For cavity tooling (multistep Reamer), order kit 62-7050-00.

If a PRV/PLV is no longer needed, use standard SAE#10 plug, 30-6011-99, to cap cavity for free fluid pass through.

## Pressure Limiting Cartridges

Model No.	Pressure Limit
70-5430-08	Pressure Limit 750-2500
70-5430-07	Pressure Limit 1000-3500
70-5430-06	Pressure Limit 1500-5000



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