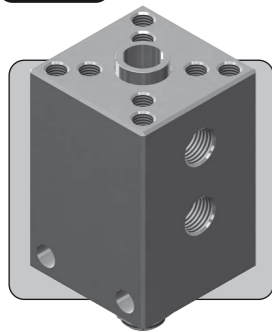


# 3B25

## DIRECTIONAL CONTROL VALVE

1/4" UP TO 690 BAR 10,000 PSI



The 3B25 is a 1/4" nominal bore 2 position 3 way directional control valve. It is available with many types of actuator, including hydraulic and pneumatic pilots, cam, and lever operators.

The valve uses a balanced spool and seat design, such that pressure in the main lines has a negligible effect on the actuator force required. It

may be used as either a normally closed or normally open valve, and offers bi-directional flow and low leakage from a well proven design.

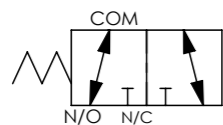
- 2 position 3 way directional control valve
- Stainless steel construction, low leakage
- Balanced spool design, with spring return
- Available with various actuator types
- Subsea, sea water tolerant and NACE MR01-75 compliant variants available, contact us for advice
- Vent chamber prevents mixing of main line and pilot fluid
- Suitable for use with mineral oils and water glycols
- Suitable for many other media, contact us for advice
- Various porting and seal options available

### Specifications

**BASIC MODEL NUMBER**

**3B25**

**SYMBOL**



**MAX WORKING PRESSURE**

690 bar  
(10,000 psi)

**CV (FLOW CAPACITY)**

0.44

**FLUID**

Liquids only  
See materials section

**TEMPERATURE RANGE**

See Product Selector opposite  
and Technical Data section

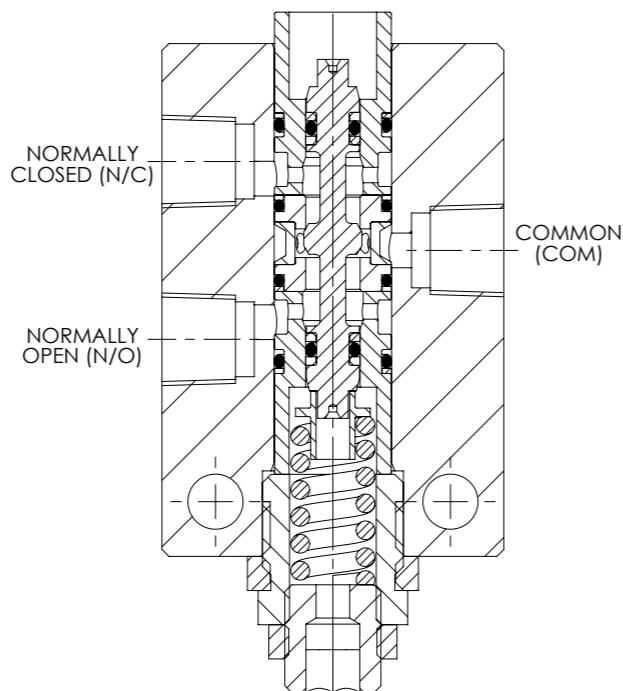
**PORT SIZE**

1/4"

**WEIGHT**

<b>H0/H1/C1</b>	1.9 kg (4.2 lb)
<b>H3</b>	2.7 kg (6.0 lb)
<b>C0</b>	2.1 kg (4.6 lb)
<b>L/DL</b>	2.8 kg (6.2 lb)

Specifications may change without notice



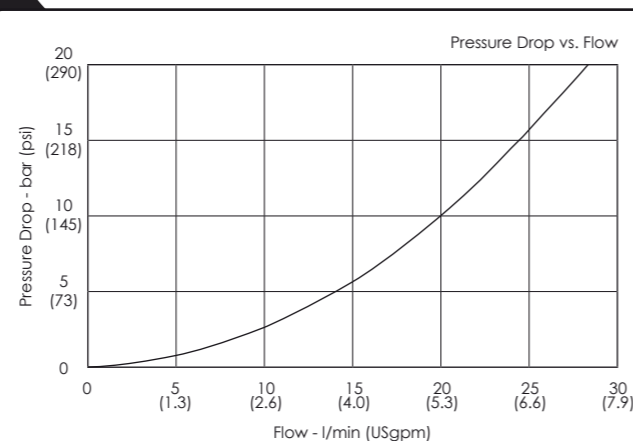
### Materials

Externally Exposed Parts: 316 stainless steel with a 302 spring and 440C stainless steel spool ends. Increased corrosion resistance options are available. Refer to the Actuator Options section for actuator materials.

Internally Wetted Parts: 316, 431 and 440C stainless steel, acetal and PTFE. The standard valve is designed for use with non-corrosive liquids only, such as mineral oil and water glycol. Other variants are available containing materials offering improved corrosion resistance, contact us for advice.

⚠ The standard valve has Viton® seals. Further seal options are available via the Product Selector. Compatibility with the working fluid at the operating temperature must be considered.

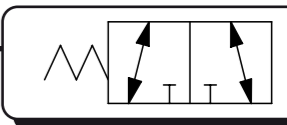
### Typical Performance



Typical performance based on water glycol

### Actuator Options

The 3B25 is available with a large number of actuator options. These allow the valve to be configured such that it may be switched manually with a lever, via a cam, or by pilot pressure.



#### Lever Actuators

Two types of lever actuator are available. The L option is a detented lever. Once operated, the lever remains in the selected position. In contrast, the DL option is a deadmans lever. When the lever is released, the spring return will switch the valve and lever back to its default position. L and DL actuator materials include 316, 440C, 302, 304, 431 stainless steel, aluminium bronze, carbon steel and plastic knob.

#### Cam Actuators

Two types of cam actuator are available. Both types are isolated from the valve spool by springs, to prevent damage to the spool and seats from excessive mechanical force. It is recommended that some form of adjustment is incorporated into the operating mechanism, to allow for tolerances in the cam actuator. C0 actuator materials include 316 and 304 stainless steel, aluminium bronze, acetal and carbon steel disc springs. C1 actuator materials include 316 and 431 stainless steel, acetal, electroless nickel plated bolts and carbon steel disc springs.

#### Hydraulic and Pneumatic Actuators

Three types of actuator are available to allow the valve to be switched using pilot pressure. H0 actuator materials include 316, 302 and 431 stainless steel and acetal. H1 actuator materials include 316, 304 and 431 stainless steel and acetal. H3 actuator materials include 316, 304 stainless steel and acetal. Each actuator type is designed to operate the valve within a particular pilot pressure range. The valve will begin to switch at pressures below the minimum quoted pilot pressure. At the minimum pilot pressure, the valve will be fully switched and will achieve minimum leakage. The valve should not be operated above the maximum pilot pressure, including during system proof tests, as damage to the spool, seats or actuator may occur. The table below shows the allowable pilot pressure range for each actuator type.

ACTUATOR TYPE	PILOT PRESSURE RANGE
H0	28 to 241 bar (400 to 3,500 psi)
H1	97 to 690 bar (1,400 to 10,000 psi)
H3	3 to 20.7 bar (44 to 300 psi)

Note: Interflow exists during switching

### Product Selector

**3B25 P - H0 - NBR - 10K**

VALVE TYPE	PORTING OPTIONS	ACTUATOR OPTIONS	SEAL OPTIONS	MAX WORKING PRESSURE
<b>3B25</b>	<b>P</b> 1/4" BSPP female	<b>H0</b> High pressure pilot	<b>NBR</b> Nitrile seals -20°C to +105°C	<b>10K</b> 690 bar (10,000 psi) Liquid
	<b>N</b> 1/4" NPT female	<b>H1</b> High pressure pilot	<b>HNBR</b> Hydrogenated Nitrile seals -20°C to +120°C	
	<b>M</b> Manifold mount	<b>H3</b> Low pressure pilot	<b>ELMF</b> Low temp Hydrogenated Nitrile seals -40°C to +120°C	
	<small>See the relevant installation drawing for pilot port type and size</small>	<b>C0</b> Cam roller actuator	<small>Leave blank for Viton® seals -10°C to +120°C</small>	
		<b>C1</b> Cam pin actuator	<small>Further seal options are available on request</small>	
		<b>L</b> Detented lever		
		<b>DL</b> Deadmans lever		

Repair and seal kits are available on request

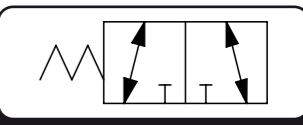
For a seal kit add SK at the end of the model code and for a repair kit add RK



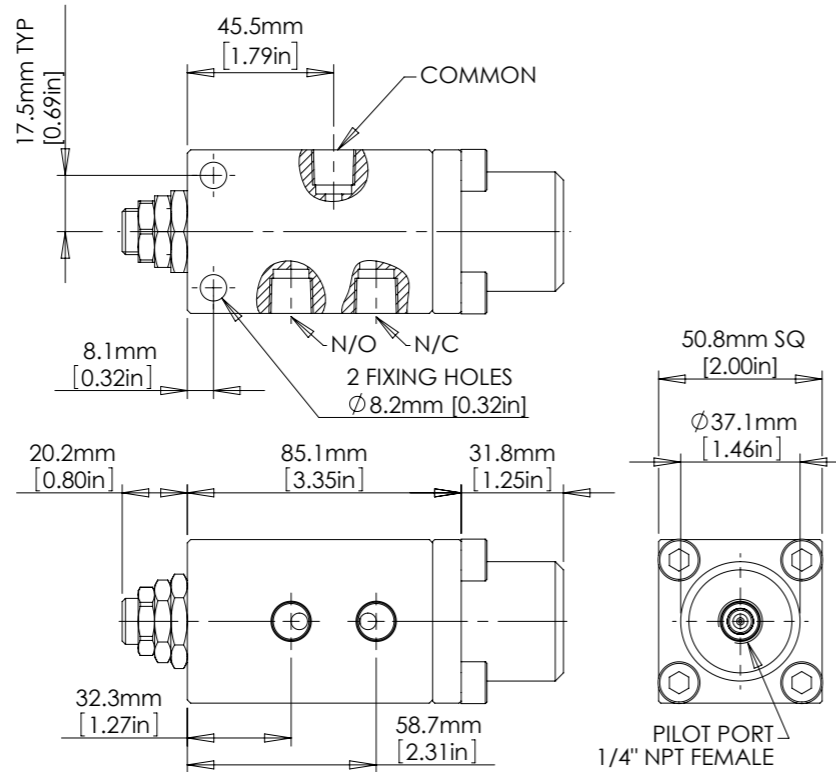
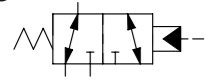
SOLENOID  
STOP AND METERING  
3 PORT DIRECTIONAL CONTROL  
4 PORT DIRECTIONAL CONTROL  
CHECK AND SHUTTLE  
PILOT OPERATED CHECK  
RELIEF  
EXCESS FLOW  
FILTERS  
PRESSURE SENSING  
PUMPS  
ACTUATORS  
TECHNICAL DATA

# 3B25

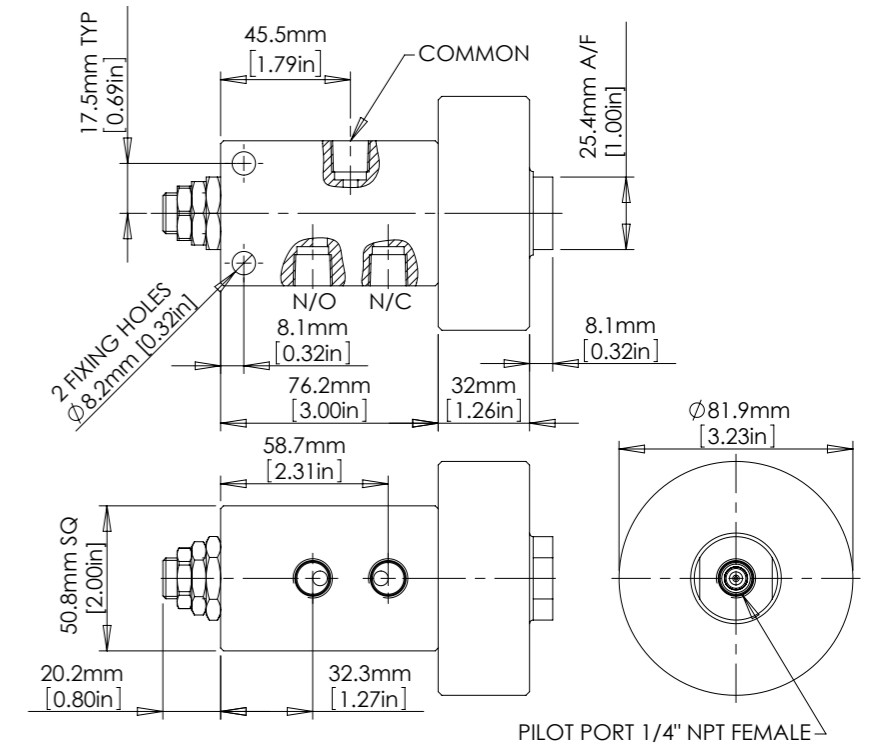
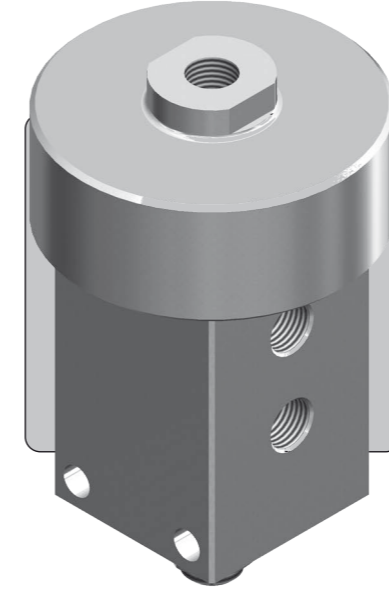
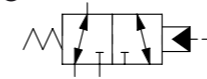
## DIRECTIONAL CONTROL VALVE



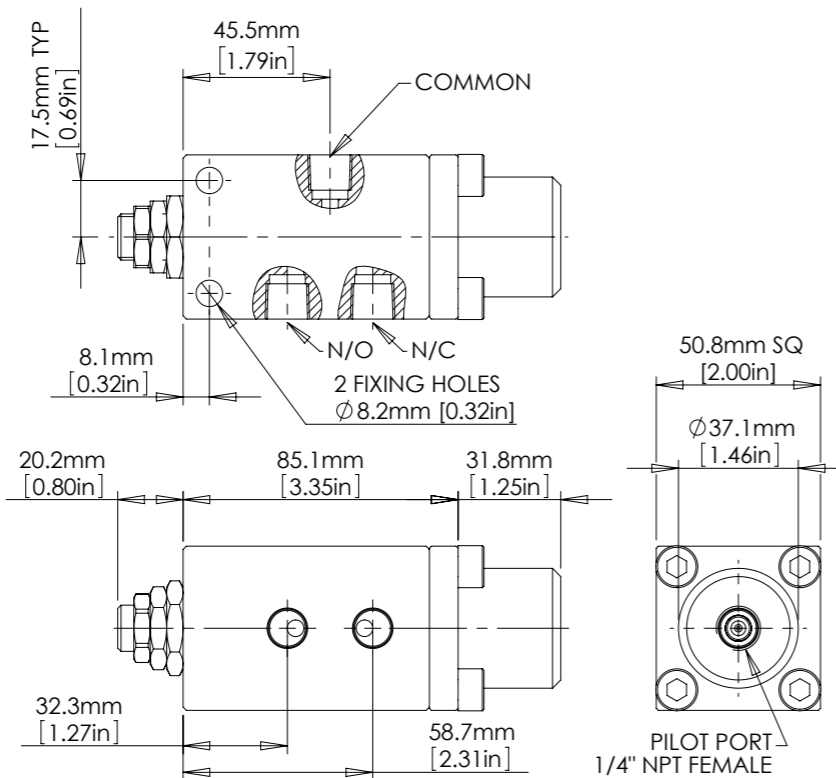
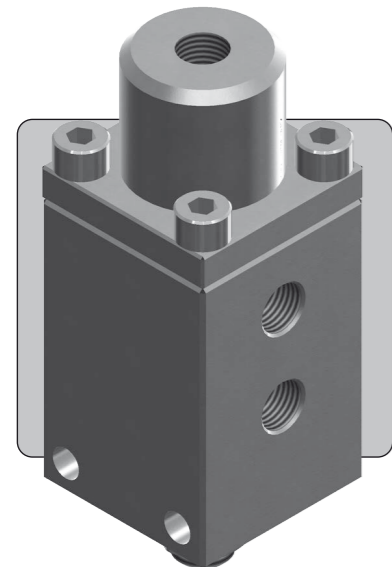
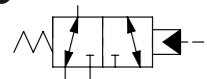
### 3B25-H0 Hydraulic and Pneumatic Actuator



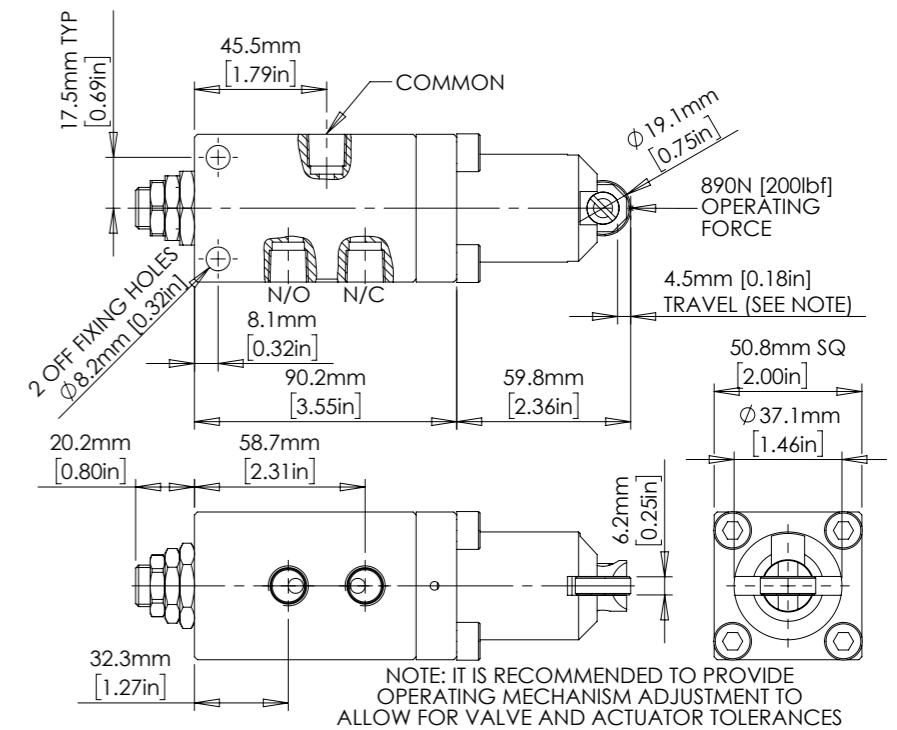
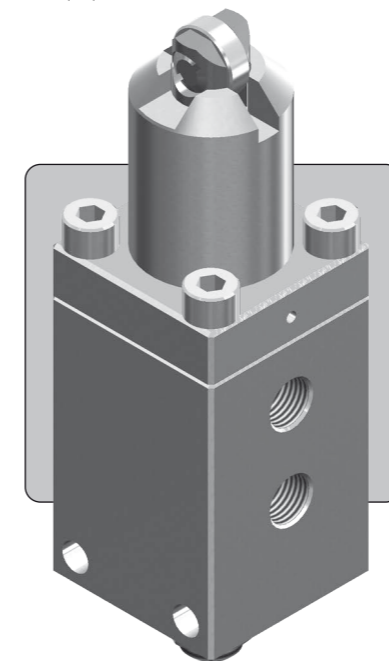
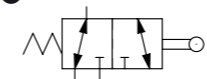
### 3B25-H3 Hydraulic and Pneumatic Actuator



### 3B25-H1 Hydraulic and Pneumatic Actuator

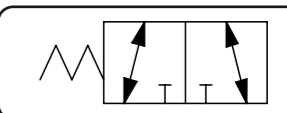


### 3B25-C0 Cam Actuator

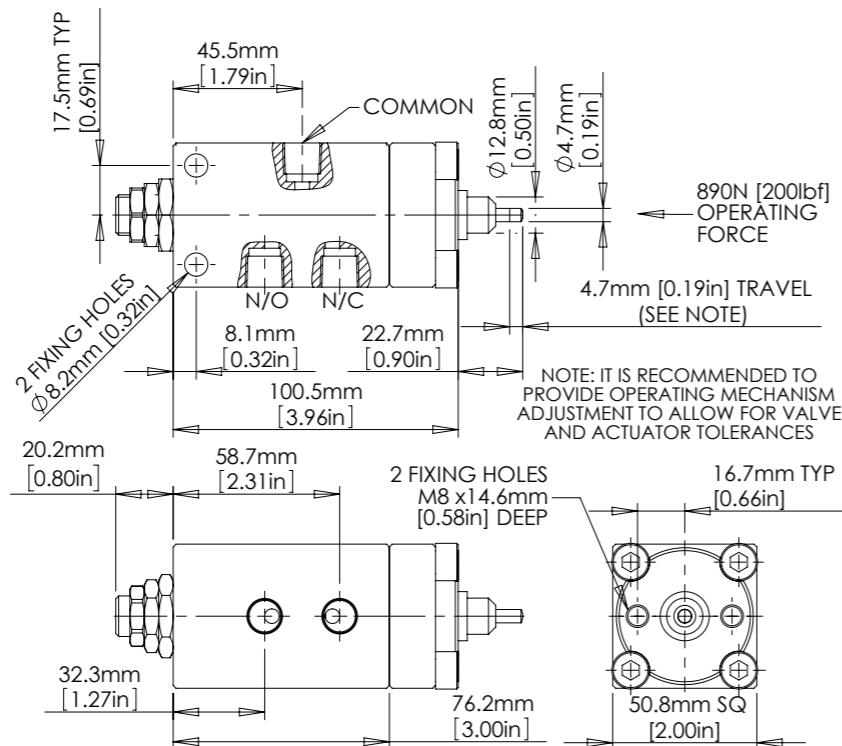
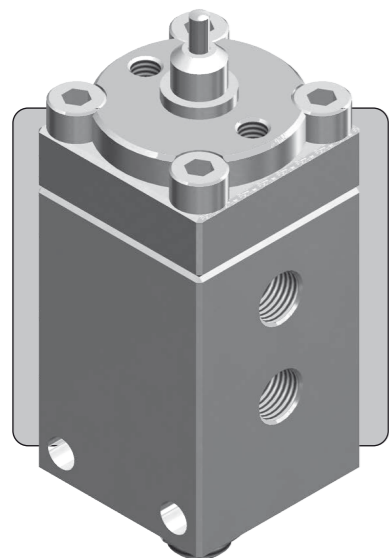
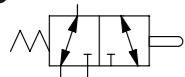


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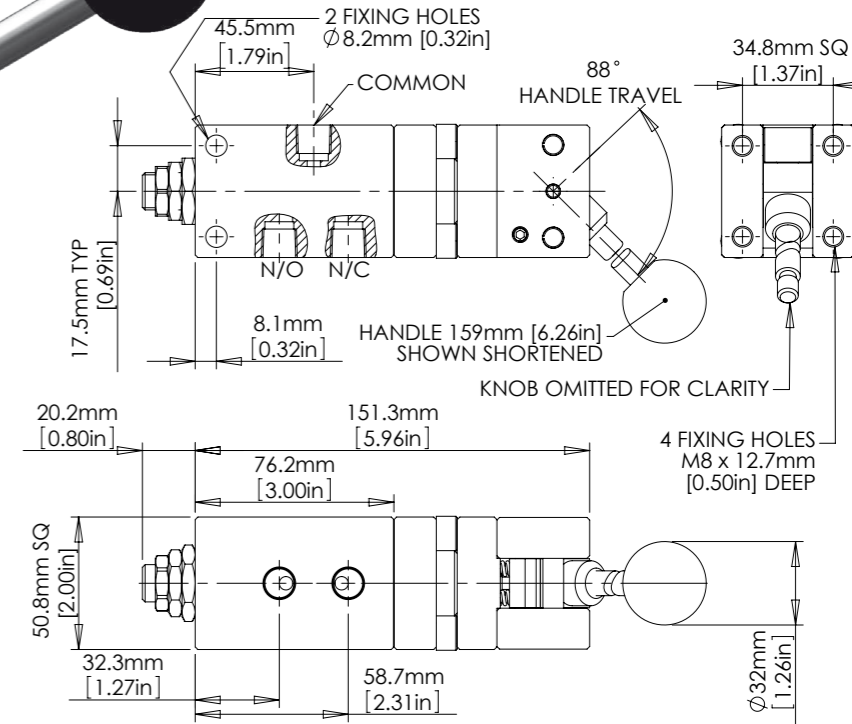
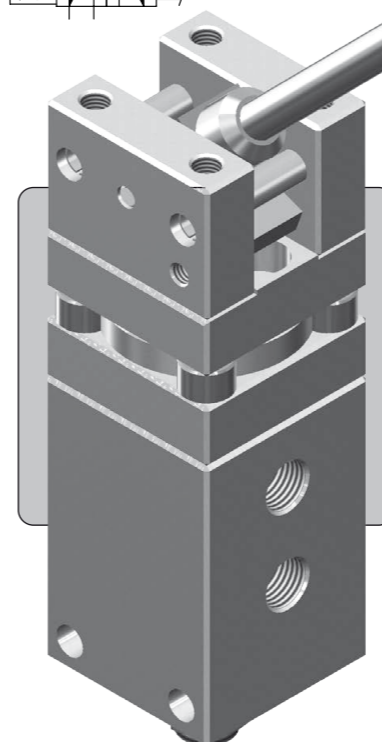
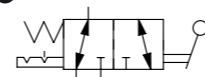
## DIRECTIONAL CONTROL VALVE



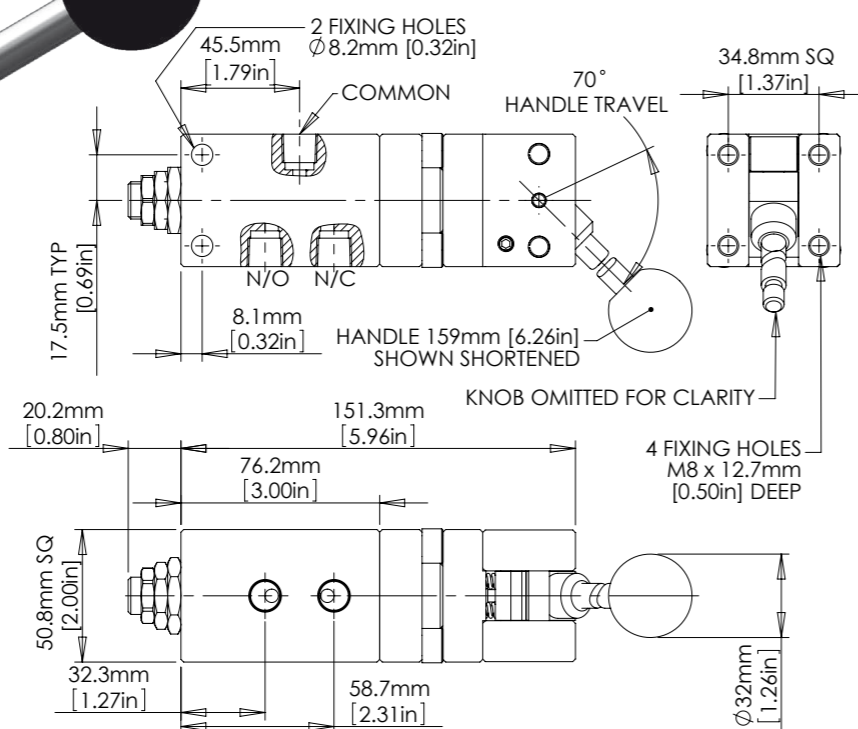
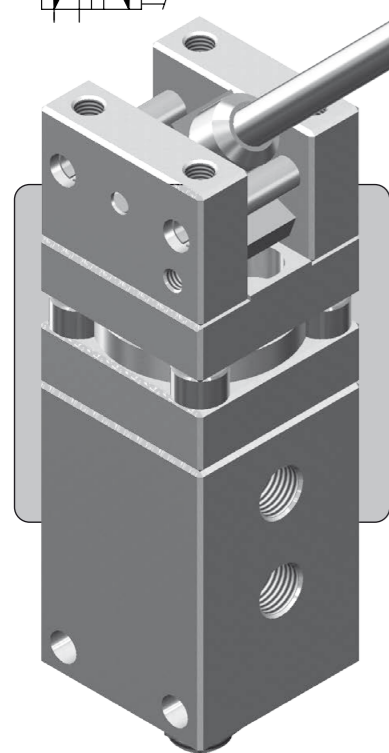
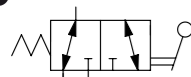
### 3B25-C1 Cam Actuator



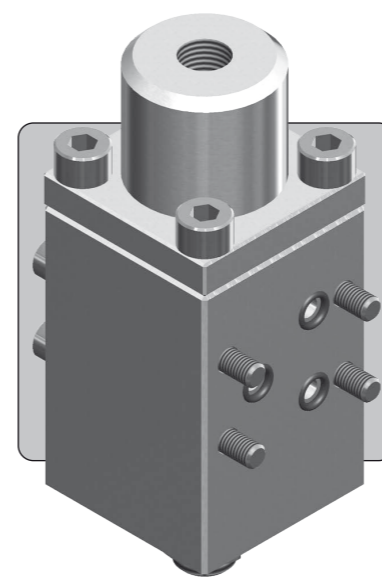
### 3B25-L Detented Lever Actuator



### 3B25-DL Deadmans Lever Actuator



### 3B25M Manifold Mounted



Shown with H0 actuator  
Ensure manifold designs take into account overhanging actuators (eg. H3, DL and L types)

