

## WHAT IS A BLEED/FEED VALVE?

A Bleed/Feed valve acts as a 3-way, 3-position, closed center control valve, with two solenoid operators. As you can see from the pictures to the right, the Bleed/Feed valve is essentially two DASH 1 valves that have been mounted together with special porting, depending on customer requirements.

## HOW DOES IT WORK?

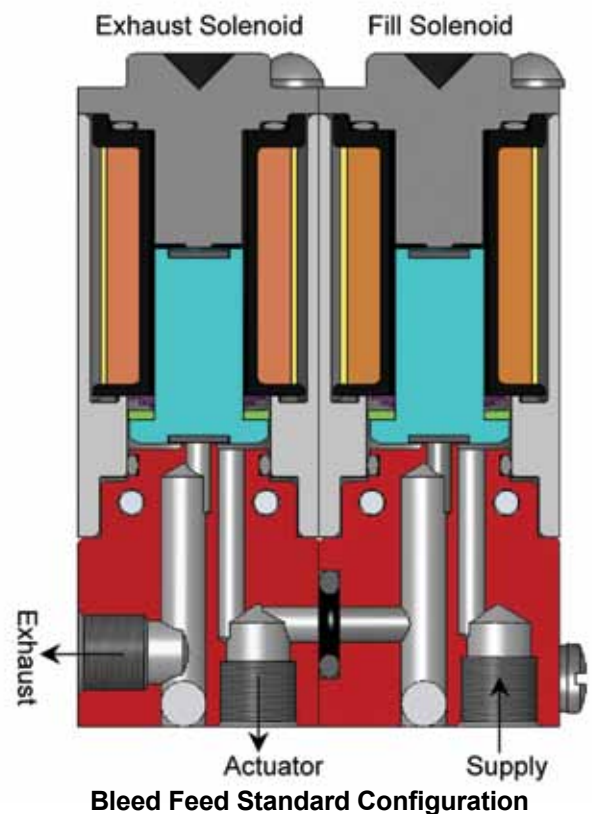
Each Bleed/Feed valve has 3 ports and two solenoids. There are two primary configurations: *standard* and *fail-safe*.

**Standard configuration:** The air source is supplied to the supply port. When the “fill” solenoid is energized, air flows from the supply port to the actuator port. When the “exhaust” solenoid is energized, air flows from the actuator port to the exhaust port. When neither solenoid is energized, the valve is in a closed position, with no flow passing through the valve.

**Fail-safe configuration\*:** performs the same function, but is designed to exhaust when neither solenoid is energized. As before, the air supply enters the valve at the supply port. When both the fill and exhaust solenoids are energized together, air flows from the supply port to the actuator port. When only the exhaust solenoid is energized, the valve is in the closed position, with no flow passing through the valve. Finally, when neither solenoid is energized, the air flow flows from the actuator port to the exhaust port.

Applications abound for this type of control and we have been involved with customers driving pump systems for medical applications, designing industrial pressure transducers, and even controlling suspension systems for automobiles.

\*Not shown



## TYPICAL APPLICATIONS:

EMT Simulations

HVAC Controls

Air Suspension Systems

Blood Pressure Monitors

Cylinder Positioning

Emissions Analysis

Kidney Dialysis Machines

Air Springs

Lumbar Support Systems

# Bleed/Feed Valve



EXAMPLE: **BF1 3 2 02**

**VALVE TYPE**  
(See Valve Characteristics Below)  
BF1  
BF2  
BF3  
BF4  
BF5

**VALVE PORT AND MOUNTING**

Ports in Body, Screw Mount..... 02  
Ports in Body, P.C. Board Mount..... 06

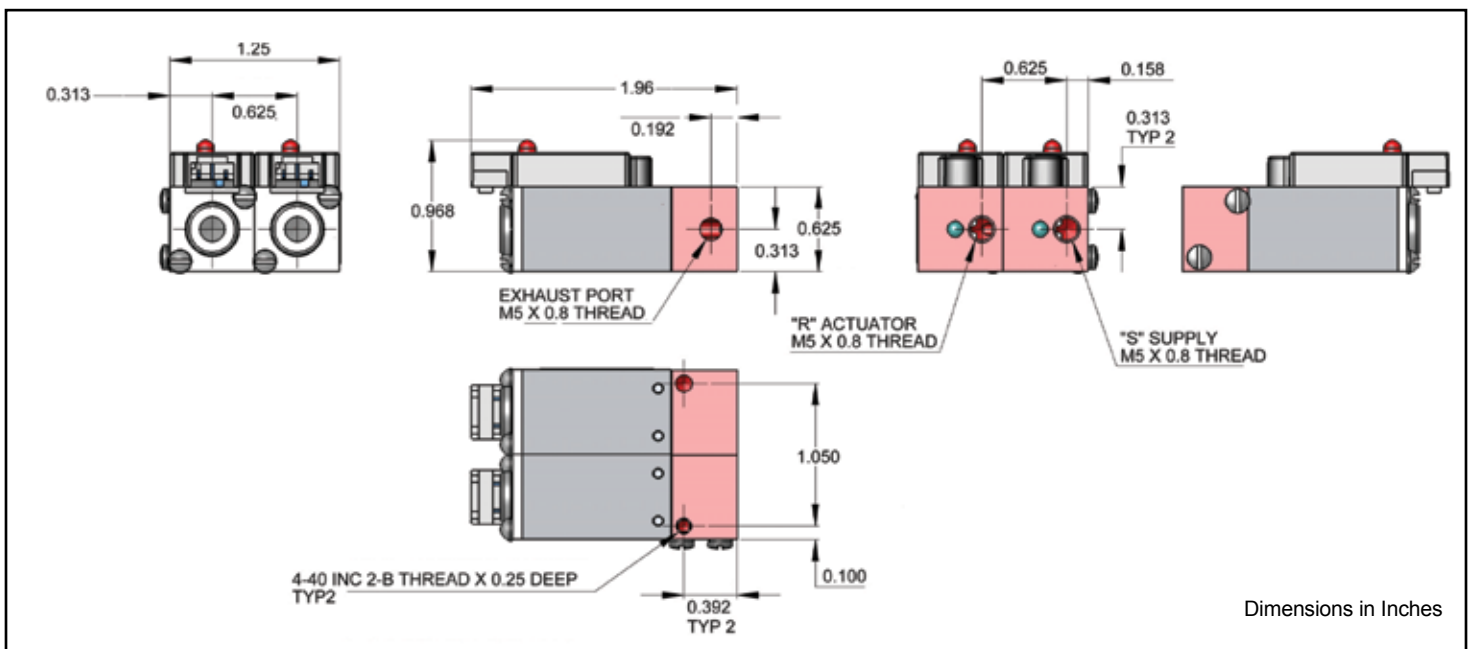
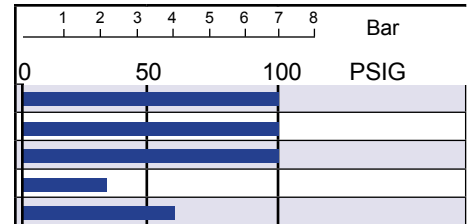
**VOLTAGE (For Both Coils)**

5 VDC..... 1  
12 VDC..... 2  
24 VDC..... 3  
5 VDC with Diode..... A  
12 VDC with Diode..... B  
24 VDC with Diode..... C

**CONNECTOR (For Both Coils)**

Electronic..... 2  
DIN ..... 3  
P.C. Board Mount..... 4

| Valve Type | Valve Function | Orifice in (MM) | Power (Watts) | Allowable Output SUP Difference |
|------------|----------------|-----------------|---------------|---------------------------------|
| BF1        | EXH. N.C.      | .031 (0.8)      | 0.6           | 50 psi                          |
| BF2        | EXH. N.C.      | .062 (1.6)      | 2.5           | 20 psi                          |
| BF3        | EXH. N.C.      | .031 (0.8)      | 1.2           | 75 psi                          |
| BF4        | EXH. N.C.      | .062 (1.6)      | 1.2           | 20 psi                          |
| BF5        | EXH. N.C.      | .089 (2.3)      | 2.5           | 10 psi                          |



Dimensions in Inches