

# V70000

2-Way Normally Open or Normally Closed Shut-Off Solenoid Valve



Valcor Engineering Corporation



## DESCRIPTION

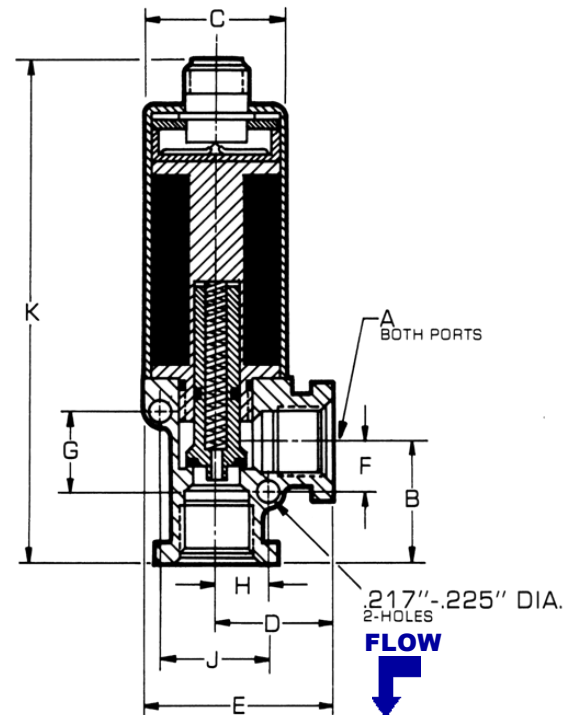
V70000 are direct acting solenoid valves with a balanced poppet. They are designed for use with aviation fuels, non-corrosive gases, and non-aromatic hydraulic fluids, and are well-suited for the extreme vibration, temperature, and cycle life requirements found in the most severe aircraft operating conditions. The compact size and low weight allow these valves to be used in the tightest space available. They utilize an elastomeric poppet seal that provides tight shut-off and long service life without leaking. V7000 valves do not require system pressure to operate, and are available in a normally closed or normally open configuration.

## APPLICATION

V70000 valves are typically used on aircraft pneumatic, fuel, and hydraulic systems. A high temperature option enables them for use with hot engine bleed air.

## FEATURES

- Maximum Operating Pressure: 0-1000 PSIG
- Proof Pressure: 1500 PSIG
- Burst Pressure: 3000 PSIG
- Flow Rate: Cv 0.78, 1.70 and 4.15; Cd=0.65
- Leak Rate: Internal is 0 cc/min liquid, 4 cc/min gas. External is 0 cc/min at 1000 PSIG
- Temperature: -65°F to +165°F (standard), -65°F to +450°F (special construction)
- Wetted Materials: Aluminum, CRES 303, 430F, 302, Fluorosilicone
- 3/8", 1/2", and 3/4" OD line ports
- Inline or right-angle porting
- Weight: 1.3 lbs. to 2.0 lbs.
- Self-cleaning, wear compensating, seal design
- Fully customizable to your application



Custom designs are our specialty. Contact us today to see how we can help on your next project.

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### Tabulation

| Port Size | Inches |      |      |      |      |      |      |      |      |      |      |
|-----------|--------|------|------|------|------|------|------|------|------|------|------|
|           | A      | B    | C    | D    | E    | F    | G    | H    | I    | J    | K    |
| -6        | 1.25   | 1.31 | 1.06 | 1.75 | 0.50 | 0.75 | 1.75 | 1.00 | 4.78 | 1.00 | 4.80 |
| -8        | 1.31   | 1.50 | 1.22 | 2.00 | 0.56 | 2.00 | 0.87 | 1.15 | 5.63 | 1.00 | 4.80 |
| -12       | 1.65   | 1.87 | 1.63 | 2.63 | 0.75 | 2.63 | 1.50 | 1.50 | 6.25 | 1.00 | 4.80 |

### Operating Pressure & Flow Ranges

| Port Size | Equiv. Sharp Edged Orifice<br>CD=0.65 | Cv  | Operating Pressure<br>(PSIG) | Ambient Temp. | Min. Volts DC |
|-----------|---------------------------------------|-----|------------------------------|---------------|---------------|
| -6        | 0.2                                   | 0.8 | 0-1000                       | 165°F         | 18            |
| -8        | 0.3                                   | 1.7 | 0-1000                       | 165°F         | 18            |
| -12       | 0.46                                  | 4.1 | 0-500                        | 165°F         | 18            |

These ratings are based on using hydraulic fluids. For higher temperatures, the pressure rating must be reduced. The following table approximates the derating required.

| Temperature | Derating Factor |
|-------------|-----------------|
| 250°F       | 0.71            |
| 350°F       | 0.62            |

### Electrical Data

|                      |                                     |
|----------------------|-------------------------------------|
| Voltage              | 18 to 30 VDC                        |
| Duty                 | Continuous                          |
| Current              | 1.5 amps max. at 30 VDC at 70°F     |
| Electrical Connector | MS 3102-10SL-4P top mount standard. |

### Leakage

|          |  |
|----------|--|
| External | Zero over range of 0 cc/min at 1000 PSIG           |
| Internal | Liquid Service: 0 cc/min<br>Gas Service: 4 cc/min. |

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