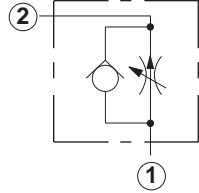
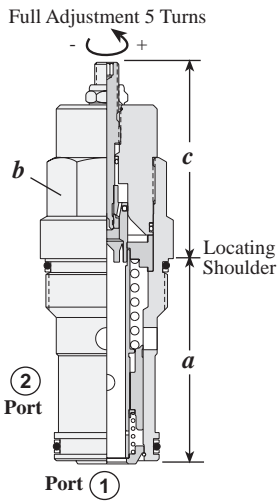


## Flow Control Valves

# FULLY ADJUSTABLE PRESSURE COMPENSATED WITH FREE FLOW CHECK



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions					Installation Torque (lb. ft.)
			a	b	c			
					L	H	K	
.1-6 GPM	<b>FDDB</b> - LAN	T - 13A	1.38	7/8"	2.27	2.44	2.31	30/35
.1-12 GPM	<b>FDCB</b> - LAN	T - 5A	1.62	1 1/8"	2.35	2.82	2.73	45/50
.2-25 GPM	<b>FDEA</b> - LAN	T - 16A	2.44	1 1/4"	2.66	3.06	2.91	150/160
.2-50 GPM	<b>FDFA</b> - LAN	T - 18A	3.13	1 5/8"	3.31	3.50	3.47	350/375

## OPTION ORDERING INFORMATION

FD ** - ** A **		Seal
Nominal Capacity	Control**	Adjustment Range
<b>BA</b> .1-6 GPM	<b>L</b> Standard Screw	<b>FDDB</b> <b>A</b> .1 - 6 GPM
<b>CB</b> .1-12 GPM	<b>H</b> Calibrated Handknob with Detent Lock	<b>FDCB</b> <b>A</b> .1 - 12 GPM
<b>EA</b> .2-25 GPM	<b>K</b> Handknob	<b>FDEA</b> <b>A</b> .1 - 25 GPM
<b>FA</b> .2-50 GPM		<b>FDFA</b> <b>A</b> .1 - 50 GPM
		<b>N</b> Buna-N <b>V</b> Viton

\*\* See page 244 for information on Control Options

# TECHNICAL TIPS / PERFORMANCE CURVES

## Flow Control Valves, Fully Adjustable, Pressure Compensated with Free Flow Check

### Applications

The fully adjustable pressure compensated flow control (FD\*\* series) is similar in function to the (FC\*B) fixed orifice model with check. However, the FD\*\* series offers full adjustment over the entire flow range of the cartridge.

### Design Concepts and Features

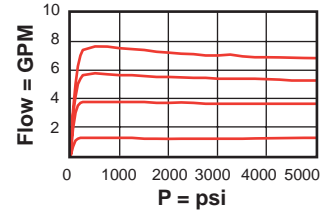
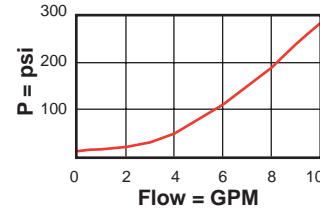
- Sharp edge orifice design to minimize flow variation with viscosity change.
- Five turns of adjustment with low operating effort at high pressure.
- Optional needle ranges to provide different flow capacity. See page 110.
- Leakage at shutoff:
  - FDBA and FDCB 0.08 GPM
  - FDEA and FDFA 0.1 GPM
- Optional adjustment control options are as follows:
  - Standard screw adjustment
  - Handknob with locking ring
  - Calibrated handknob with detent lock

### Performance Curves

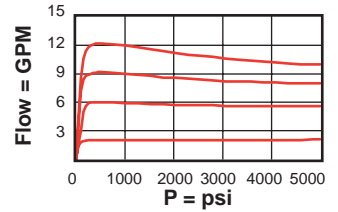
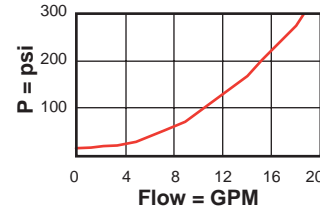
**Reverse Free Flow with Needle Closed**

**Typical Performance**

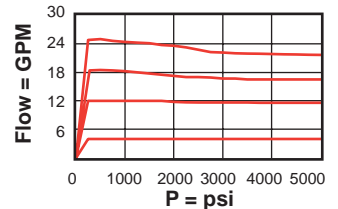
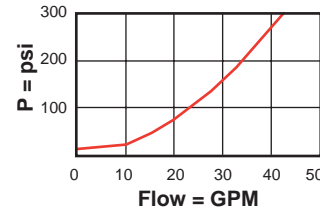
**FDBA-LAN**



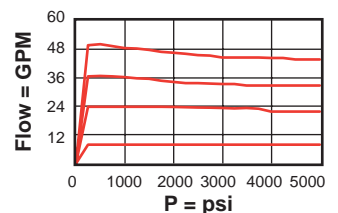
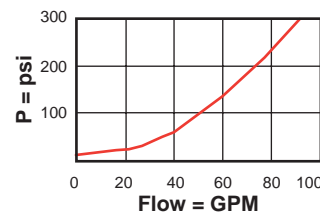
**FDCB-LAN**



**FDEA-LAN**



**FDFA-LAN**



### General Application Requirements

- Operating Temperature Range: Buna-N seals -50° F to 200° F, Viton seals 0° F to 250° F.
- Viscosity Range: 60-3000 SUS.
- Fluid Contamination Level: ISO 4406 18/15 or better; Recommend  $\beta_{10} \geq 75$  to achieve ISO 18/15 or better in most systems.
- Factory Pressure Setting for cartridge is established at a 4 GPM flow rate.