



Pilot-operated, 3-way directional cartridges (1 blocked, 2-to-3 open) are switching devices typically used in moderate-flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-21A
Series	1
Capacity	7 gpm
Maximum Operating Pressure	5000 psi
Control Pilot Flow	7 - 10 in ³ /min.
Factory Pressure Settings Established at	4 gpm
Maximum Valve Leakage at 110 SUS (24 cSt)	1 in ³ /min. @1000 psi
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	7/8 in.
Valve Installation Torque	30 - 35 lbf ft
Adjustment Screw Internal Hex Size	5/32 in.
Locknut Hex Size	9/16 in.
Locknut Torque	80 - 90 lbf in.
Model Weight	.60 lb
Seal kit - Cartridge	Buna: 990-021-007
Seal kit - Cartridge	Polyurethane: 990-021-002
Seal kit - Cartridge	Viton: 990-021-006

OPTION SELECTION EXAMPLE: DPBOLANV

CONTROL	(L)	ADJUSTMENT RANGE	(A)	SEAL MATERIAL	(N)	MATERIAL/COATING
L		A		N		Standard Material/Coating
C		B		V		IAP Stainless Steel, Passivated
		D				
		E				
		W				

TECHNICAL FEATURES

- Port 4 can be blocked to prevent the valve from shifting.
- Port 3 can be used as a work port.
- Direct-acting and pilot-operated versions of these valves are interchangeable. They fit the same cavities and have the same flow paths.
- Pressure at port 4 is directly additive to the setting of the valve.
- This valve is not bistable; it is capable of modulating between the two positions shown.
- Maximum pressure at port 3 should be limited to 3000 psi (210 bar). This is due to fatigue strength limits not hydraulic operating limits.
- When pilot pressure exceeds the valve setting, pilot flow may be a consideration. See performance curves for pilot consumption vs. load pressure above the valve setting. If this is a problem, the direct acting version of this valve would be a solution.
- Incorporates the Sun floating-style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES



