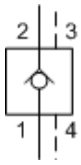
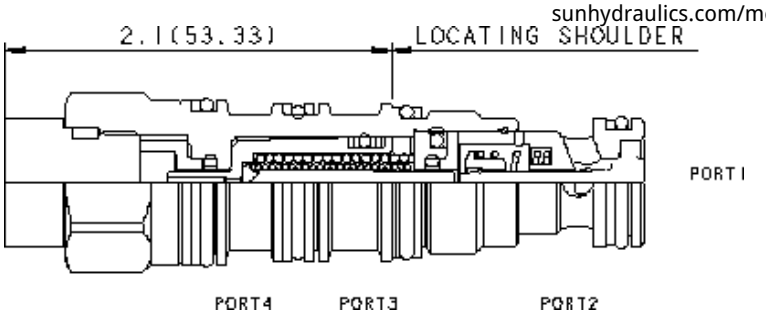
MODEL
CVCV

Vented pilot-to-open check valve
SERIES 1 / CAPACITY: 15 gpm / CAVITY: T-21A

sunhydraulics.com/model/CVCV





CONFIGURATION

X	Control	Standard Pilot
E	Cracking Pressure	75 psi (5 bar)
N	Seal Material	Buna-N
(none)	Material/Coating	

This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed to open the valve is directly proportional to the load pressure at port 1. The valve is insensitive to pressure at port 2 because the spring chamber is referenced to the vent (port 4).

TECHNICAL DATA

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

Cavity	T-21A
Series	1
Capacity	15 gpm
Maximum Operating Pressure	5000 psi
Pilot Ratio	3:1
Maximum Valve Leakage at 110 SUS (24 cSt)	1 drops/min.
Valve Hex Size	7/8 in.
Valve Installation Torque	30 - 35 lbf ft
Adjustment Screw Internal Hex Size	1/8 in.
Locknut Hex Size	7/16 in.
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	EPDM: 990021014
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006
Model Weight	0.39 lb.

CONFIGURATION OPTIONS

Model Code Example: CVCVXEN

CONTROL (X)	CRACKING PRESSURE (E)	SEAL MATERIAL (N)	MATERIAL/COATING
X Standard Pilot	**E** 75 psi (5 bar)	**N** Buna-N	Standard Material/Coating
L Manual Load Release	**C** 30 psi (2 bar)	**E** EPDM	**/AP** Stainless Steel, Passivated
	A 4 psi (0,3 bar)	**V** Viton	**/LH** Mild Steel, Zinc-Nickel
	B 15 psi (1 bar)		
	D 50 psi (3,5 bar)		
	F 100 psi (7 bar)		

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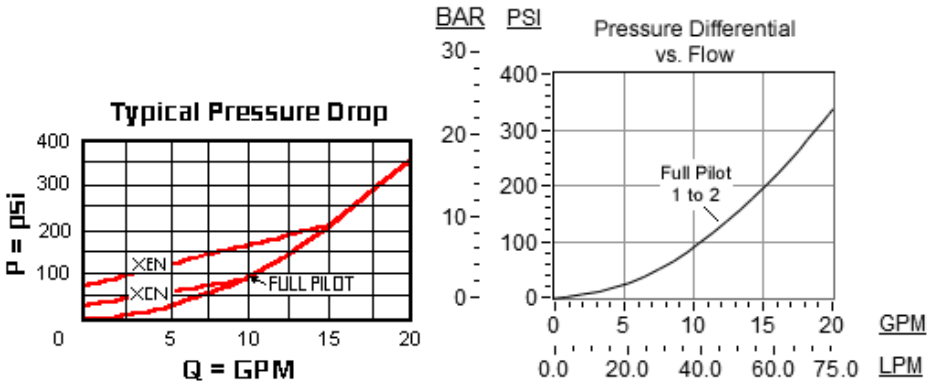
TECHNICAL FEATURES

- Pilot pressure as low as 75 psi (5 bar) higher than the pressure at the vent can prevent the valve from closing.
- Will accept pressure at port 4 (vent) but can not exceed 5000 psi (350 bar).
- Pilot-to-open check cartridges are locking valves, not motion control valves. For motion control applications, use counterbalance valves.
- Four-port pilot-to-open check cartridges and four-port counterbalance cartridges are physically interchangeable (i.e. same cavities, same flow path for a given frame size). However, cartridge extension dimensions from the mounting surface may vary.
- Approximately 1 drop (0,07 cc) of fluid will pass from the pilot area to the vented spring chamber every 4000 cycles.
- For models with manual load release control option, turn load release clockwise to release load.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Provides hose break protection, prevents loads from drifting and positively locks pressurized loads.
- Extremely low leakage. The seat and poppet are heat treated for long life. If the load drifts due to the valve, the seat has probably been damaged by contamination and the valve should be replaced.
- Sealed pilot for use in circuits where cross port leakage is undesirable.
- Port 4 (vent) should never be blocked as seal weepage will eventually cause valve to malfunction.
- 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



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