

Ventable, pilot operated, balanced piston relief valve - before check

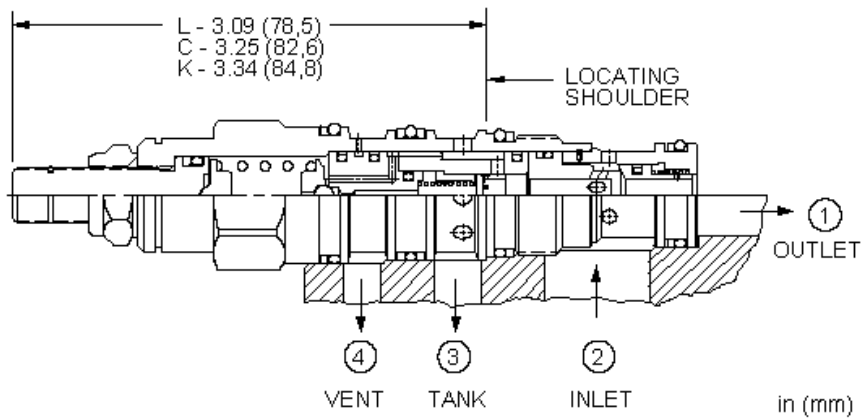
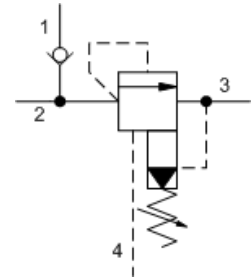
Capacity:
10 gpm (40 L/min.)

Model:
HVCA

Product Description

The ventable relief-before-check cartridge is a hybrid valve incorporating a ventable, pilot-operated, balanced piston relief tee'd in before a check function. When the pressure at the inlet (port 2) reaches the relief valve setting, the valve starts to open to tank (port 3), throttling flow to regulate the pressure. The check valve flow is from the inlet (port 2) to the system port (port 1). The valve includes a vent port (port 4) that connects between the main piston and pilot stage to provide for remote control by other pilot or 2-way valves.

These valves are accurate, have low pressure rise vs. flow, are smooth, quiet, and are moderately fast.



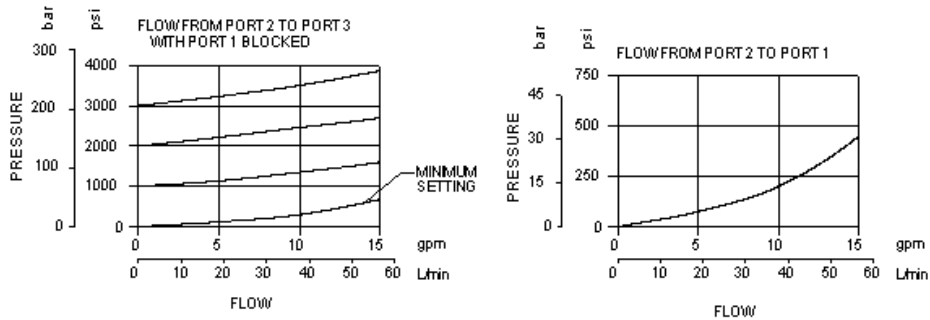
Technical Features

- Note! This valve deviates from Sun's normal flow path for relief valves. It is probably not useable in current Sun relief manifolds.
- Minimum setting is 75 psi (5 bar) for all spring ranges.
- Back pressure at port 3 (tank) is directly additive to the valve setting at a 1:1 ratio.
- The check portion of the valve has a maximum leakage rate of less than 1 drop/minute (0,07 cc/min).
- One purpose of this dual function cartridge is to offer pump isolation and relief protection in single and/or multiple pump circuits. Another purpose is to act as a main stage in an accumulator sense, pump unload circuit.
- A remote pilot relief on port 4 (vent) will control the valve below its own setting.
- 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.

Technical Data

	U.S. Units	Metric Units
Cavity	T-21A	
Capacity	10 gpm	40 L/min.
Check Cracking Pressure	25 psi	1,7 bar
Factory Pressure Settings Established at	4 gpm	15 L/min.
Maximum Operating Pressure	5000 psi	350 bar

Maximum Valve Leakage at 110 SUS (24 cSt)	2 in ³ /min.@1000 psi	30 cc/min.@70 bar
Response Time - Typical	10 ms	
Series (from Cavity)	Series 1	
Adjustment - Number of Clockwise Turns to Increase Setting	5	
Valve Hex Size	7/8 in.	22,2 mm
Valve Installation Torque	30 - 35 lbf ft	40 - 50 Nm
Adjustment Screw Internal Hex Size	5/32 in.	4 mm
Adjustment Locknut/Cap Hex Size	9/16 in.	15 mm
Adjustment Nut Torque	80 - 90 lbf in.	9 - 10 Nm
Seal Kits - Cartridge	Buna: 990-021-007	
Seal Kits - Cartridge	Viton: 990-021-006	
Model Weight	0.43 lb.	0.20 kg.



HVCA-LAN

Control	Adjustment Range	Seal Material
Standard Options	Standard Options	Standard Options
C* Tamper Resistant - Factory Set	A 75 - 3000 psi (5 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N
K Handknob	B 75 - 1500 psi (5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton
L Standard Screw Adjustment	D 75 - 800 psi (5 - 55 bar), 400 psi (28 bar) Standard Setting	
	W 75 - 4500 psi (5 - 315 bar), 1000 psi (70 bar) Standard Setting	

* Special Setting required, specify at time of order
Customer specified setting stamped on hex.