



Vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4). Other names for this valve include motion control valve and over-center valve.

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

Pilot Ratio	1:1
Maximum Recommended Load Pressure at Maximum Setting	3075 psi
Maximum Setting	4000 psi
Adjustment - No. of CCW Turns from Min. to Max. Setting	5
Check Cracking Pressure	40 psi
Factory Pressure Settings Established at	2 in <sup>3</sup> /min.
Maximum Valve Leakage at Reseat	5 drops/min.
Reseat	>85% of setting
Locknut Hex Size	9/16 in.
Locknut Torque	80 - 90 lbf in.
Seal kit - Cartridge	Buna: 990-021-007
Seal kit - Cartridge	Polyurethane: 990-021-002
Seal kit - Cartridge	Viton: 990-021-006

**CONFIGURATION OPTIONS**

CONTROL

- L** Standard Screw Adjustment
- C** Tamper Resistant - Factory Set

(L)

**Model Code Example: CWCKLHNV**

FUNCTIONAL SETTING RANGE (H)

- H** 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting
- I** 400 - 1500 psi (28 - 105 bar), 1000 psi (70 bar) Standard Setting

SEAL MATERIAL (N)

- N** Buna-N
- V** Viton

(N)

MATERIAL/COATING

- Standard Material/Coating**
- IAP** Stainless Steel, Passivated