

Standard capacity counterbalance valve without pilot assist

Capacity:
120 gpm (480 L/min.)

Functional Group:

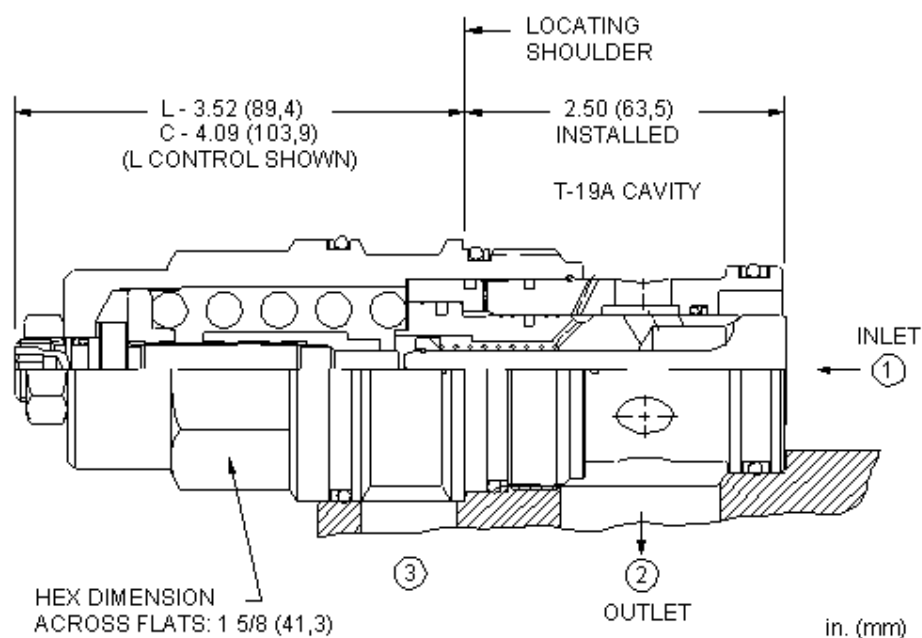
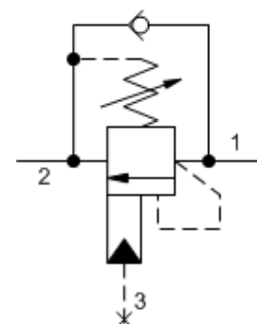
Products : Cartridges : Counterbalance : 3-Port Non-vented, Without Pilot Assist : Standard, Zero Pilot Ratio

Model:

CCIA

Product Description

Counterbalance valves without 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 relief valve controls flow from port 1 to port 2.

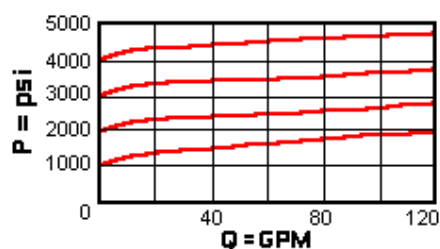
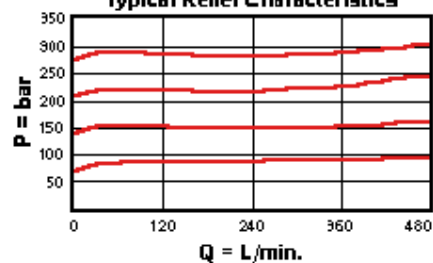


Technical Features

- Counterbalance valves should be set at least 1.3 times the maximum load induced pressure.
- Turn adjustment clockwise to decrease setting and release load.
- Full clockwise setting is less than 200 psi (14 bar).
- All 3-port counterbalance, load control, and pilot-to-open check cartridges are physically interchangeable (i.e. same flow path, same cavity for a given frame size).
- Sun counterbalance cartridges can be installed directly into a cavity machined in an actuator housing for added protection and improved stiffness in the circuit.
- Two check valve cracking pressures are available. Use the 25 psi (1,7 bar) check unless actuator cavitation is a concern.
- These valves are modified versions of our pilot assisted counterbalance valves. The pilot assist area has been nullified internally. There is no connection to port 3.
- Backpressure at port 2 is directly additive to the relief setting of the valve.
- Lower pilot ratios (pilot gain) promote machine stability. This valve has a pilot ratio of zero. Stability is gained at the expense of efficiency.
- Reseat exceeds 85% of set pressure when the valve is standard set. Settings lower than the standard set pressure may result in lower reseal percentages.
- 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-19A	
Capacity	120 gpm	480 L/min.
Pilot Ratio	Zero	
Maximum Recommended Load Pressure at Maximum Setting	3075 psi	215 bar
Maximum Setting	4000 psi	280 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75	
Factory Pressure Settings Established at	2 in ³ /min.	30 cc/min.
Maximum Operating Pressure	5000 psi	350 bar
Maximum Valve Leakage at Reseat	5 drops/min.	0,3 cc/min.
Series (from Cavity)	Series 4	
Reseat	>85% of Set Pressure	
Valve Hex Size	1 5/8 in.	41,3 mm
Valve Installation Torque	350 - 375 lbf ft	475 - 500 Nm
Adjustment Screw Internal Hex Size	7/32 in.	5,5 mm
Adjustment Locknut/Cap Hex Size	3/4 in.	19,1 mm
Adjustment Nut Torque	25 - 30 lbf ft	35 - 40 Nm
Seal Kits - Cartridge	Buna: 990-019-007	
Seal Kits - Cartridge	Viton: 990-019-006	
Model Weight	2.99 lb.	1.36 kg.

Typical Relief Characteristics**Typical Relief Characteristics****CCIA-LHN****Control****Standard Options**

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

Functional Setting Range**Standard Options**

- A** 1000 - 4000 psi w/4 psi Check (70 - 280 bar w/0,3 bar Check), 3000 psi (210 bar) Standard Setting
- B** 400 - 1500 psi w/4 psi Check (28 - 105 bar w/0,3 bar Check), 1000 psi (70 bar) Standard Setting
- H** 1000 - 4000 psi w/25 psi Check (70 - 280 bar w/1,7 bar Check), 3000 psi (210 bar) Standard Setting
- I** 400 - 1500 psi w/25 psi Check (28 - 105 bar w/1,7 bar Check), 1000 psi (70 bar)

Seal Material**Standard Options**

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

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