

LCBEA

Counterbalance Valve
Standard

DESCRIPTION

A cartridge-style standard capacity counterbalance valve

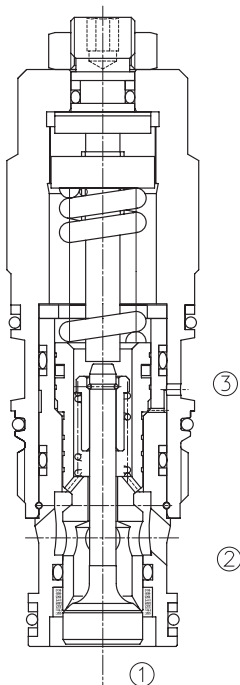
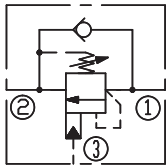
OPERATION

Counterbalance valves with pilot assist are meant for control on overrunning load. The check valve allows free flow from port ② to 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.

FEATURES

- Counterbalance valves should be set at least 1.3 times the maximum load induced pressure.
- Backpressure at port ② adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Reseat exceeds 85% of set pressure when the valve is standard set. Setting lower than the standard set pressure may result in lower reseal percentages.
- Factory pressure setting established at 30cc/min(2 in³/min).

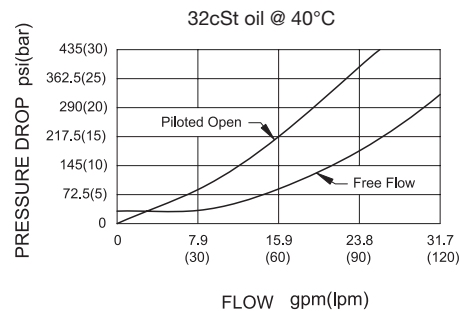
SYMBOL



SPECIFICATIONS

Max. Setting	280 bar
Max. Recommended Load Pressure at Max. Setting	215bar
Flow	See PRESSURE DROP VS.FLOW graph.
Internal Leakage	5 drops/min.
Pilot Ratio	3: 1
Temperature	-40°F to +250°F(-40°C to +120°C)
Filtration	See page N-1
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	SUN T-2A, See page M-6
Housing Material	6061-T6 aluminum alloy rated to 207bar, Steel & Ductile iron rated to 350bar

PRESSURE DROP VS.FLOW



TO ORDER

LCB * * - * * * - * *

1 2 3 4 5 6 7

1 Function
LCB=Counterbalance Cartridge Valve

2 Flow
E=120L/min

3 Pilot Ratio
A=3:1

4 Control
L=Standard Screw Adjustment

5 Spring Ranges
H=1000-4000psi(70-280bar)
Preset:3000psi(210bar)(Check:1.7bar)
I=400-1500psi(28-105bar)
Preset:1000psi(70bar)(Check:1.7bar)
A=1000-4000psi(70-280bar)
Preset:3000psi(210bar)(Check:0.3bar)
B=400-1500psi(28-105bar)
Preset:1000psi(70bar)(Check:0.3bar)

6 Seal Kits
N=Buna N
V=Viton

7 Port Size
Omit=None
8T=SAE8
10T=SAE10
3G=G 3/8
4G=G 1/2

※ See page K-23—K-24 for detail of housing
※ Other port sizes are available

INSTALLATION DIMENSIONS

Unit=Millimeters

Number of Counter-clockwise Turns :3.75 Turns

