

LCBBA/LCBBG

Counterbalance Valve
Restrictive

DESCRIPTION

A cartridge-style restrictive counterbalance valve

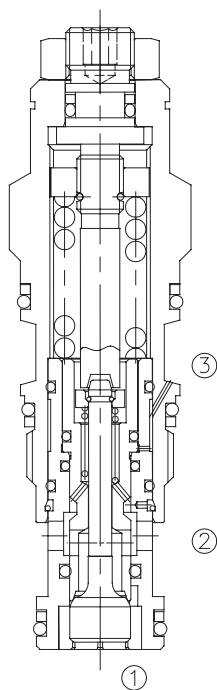
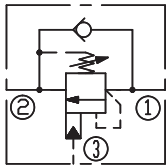
OPERATION

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.
- Full clockwise setting is less than 14 bar.
- 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).

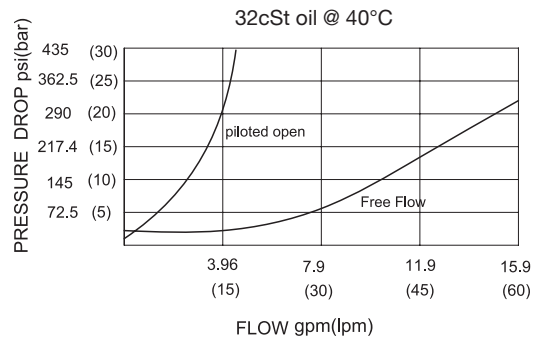
SYMBOL



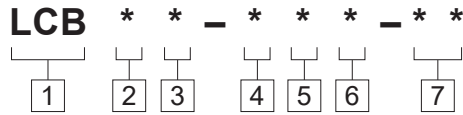
SPECIFICATIONS

| | |
|--|--|
| Max. Setting | 280 bar(LCBBA) 350 bar(LCBBG) |
| Max. Recommended Load Pressure at Max. Setting | 215 bar(LCBBA) 270 bar(LCBBG) |
| Flow | See PRESSURE DROP VS.FLOW graph. |
| Internal Leakage | 5 drops/min. |
| Pilot Ratio | (LCBBA) 3:1; (LCBBG) 4.5:1 |
| 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-11A, 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



- 1 Function**
LCB=Counterbalance Cartridge Valve

- 2 Flow**
B=15L/min

- 3 Pilot Ratio**
A=3:1 G=4.5:1

- 4 Control**
L=Standard Screw Adjustment

- 5 Spring Ranges**

- 6 Seal Kits**
N= Buna N
V= Viton

- 7 Port Size**
Omit=None
4T=SAE4
6T=SAE6
3G=G 3/8
4G=G 1/2

Spring Ranges LCBBA

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)

Spring Ranges LCBBG

J=2000-5000psi(140-350bar)
 Preset:3000psi(210bar)(Check:1.7bar)
 K=1000-2500psi(70-175bar)
 Preset:2000psi(140bar)(Check:1.7bar)
 C=2000-5000psi(140-350bar)
 Preset:3000psi(210bar)(Check:0.3bar)
 D=1000-2500psi(70-175bar)
 Preset:2000psi(140bar)(Check:0.3bar)

※ See page K-17—K-22 for detail of housing
 ※ Other port sizes are available

INSTALLATION DIMENSIONS

Unit=Millimeters

Number of Counter-clockwise Turns :3.75 Turns

