

LCBDD

Counterbalance Valve
Semi-Restrictive

DESCRIPTION

A cartridge-style semi-restrictive counterbalance valve

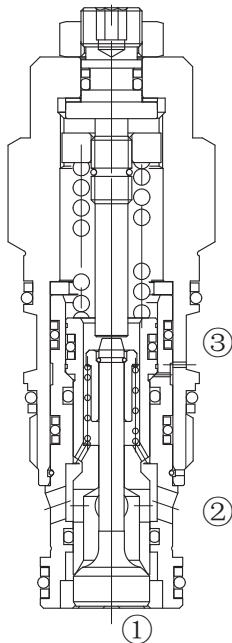
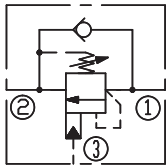
OPERATION

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).

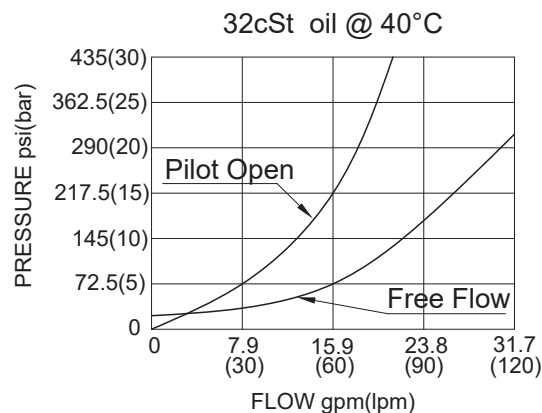
SYMBOL



SPECIFICATIONS

Max. Setting	350bar
Max. Recommended Load Pressure at Max. Setting	270bar
Flow	See PRESSURE DROP VS.FLOW graph.
Internal Leakage	5 drops/min.
Pilot Rate	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-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
D=76L/min

3 Pilot Ratio
D=4.5:1

4 Control
L= Standard screw Adjustment

5 Spring Ranges
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=1000-2500(70-175bar)
Preset:2000psi(140bar)(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

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INSTALLATION DIMENSIONS

Unit=Millimeters

Number of Counter-clockwise Turns:3.75 Turns

