



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.

Other names for this valve include motion control valve and over-center valve.

### CONFIGURATION

|                                |                          |  |
|--------------------------------|--------------------------|--|
| <b>L</b>                       | Control                  | Standard Screw Adjustment  |
| <b>B</b>                       | Functional Setting Range | 400 - 1500 psi w/4 psi Check (28 - 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting |
| <b>N</b>                       | Seal Material            | Buna-N   |
| <b>(none)</b> Material/Coating |                          |  |

### TECHNICAL DATA

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

|   |                         |
|---|-------------------------|
| Pilot Ratio   | 3:1                     |
| Maximum Recommended Load Pressure at Maximum Setting    | 215 bar                 |
| Maximum Setting   | 280 bar                 |
| Factory Pressure Settings Established at                | 30 cc/min.              |
| Maximum Valve Leakage at Reset                          | 0,3 cc/min.             |
| Adjustment - No. of CCW Turns from Min. to Max. Setting | 3.75                    |
| Reset   | >85% of setting         |
| Locknut Hex Size  | 15 mm                   |
| Locknut Torque  | 9 - 10 Nm               |
| Seal kit - Cartridge                                    | Buna: 990011007         |
| Seal kit - Cartridge                                    | EPDM: 990011014         |
| Seal kit - Cartridge                                    | Polyurethane: 990011002 |
| Seal kit - Cartridge                                    | Viton: 990011006        |

### CONFIGURATION OPTIONS

Model Code Example: **CBCALBN**

| CONTROL                                 | (L) FUNCTIONAL SETTING RANGE   | (B) SEAL MATERIAL | (N) MATERIAL/COATING            |
|---|--|-------------------|---------------------------------|
| <b>L</b> Standard Screw Adjustment      | <b>B</b> 400 - 1500 psi w/4 psi Check (28 - 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting<br><b>H</b> 1000 - 4000 psi w/25 psi Check (70 - 280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting<br><b>A</b> 1000 - 4000 psi w/4 psi Check (70 - 280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting<br><b>I</b> 400 - 1500 psi w/25 psi Check (28 - 105 bar w/ 1,7 bar Check), 1000 psi (70 bar) Standard Setting | <b>N</b> Buna-N   | Standard Material/Coating       |
| <b>C</b> Tamper Resistant - Factory Set |  | <b>E</b> EPDM     | /AP Stainless Steel, Passivated |
|   |  | <b>V</b> Viton    | /LH Mild Steel, Zinc-Nickel     |
|   |  |                   |                                 |