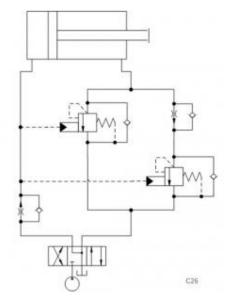


CBV Stability Improvement by Reducing Flow (1)

Machine: | Actuator: Cylinder | Function: Counterbalance

Prepared for : Prepared by :

Schematics

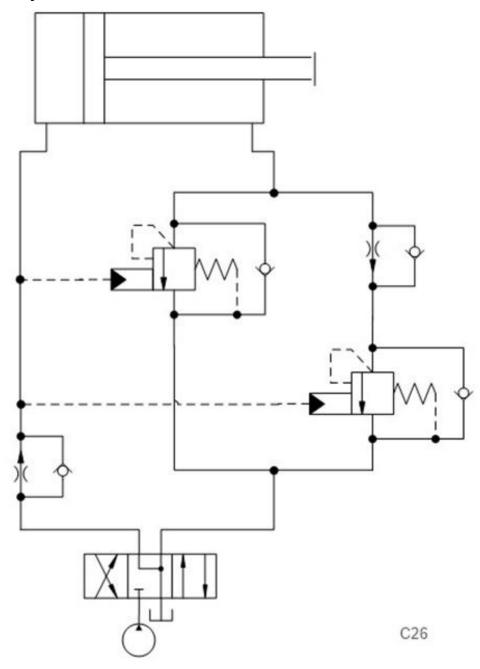


Related Products

Cartridges

CBAA - 3:1 pilot ratio, ultra-restrictive counterbalance valve FCAB - Fixed-orifice pressure compensated flow control valve with reverse flow check

Summary



For controlling overrunning loads, two counterbalance valves and a pressure-compensated flow control valve are used in the return line of an actuator.

• Load-sensitive counterbalance: <u>CB**, CW**,CA**</u>

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• Flow control valve: <u>FC*B</u>

Benefits of this circuit arrangement:

- A pressure-compensated flow control valve (FC) controls the inlet flow to the cylinder
- 75% of the outlet flow from the cylinder is passed to a high-ratio (10:1) CB via a pressure-compensated flow control valve.
- The remaining 25% of the outlet flow is controlled by a low-pilot-ratio (3:1) CB. Since the counterbalance valve can be restrictive with low pilot ratio, the circuit is more stable than a circuit with a larger counterbalance valve.

Note: Meter-in & meter-out functionality is only available during the extension of the cylinder. Flow controls for the retraction of the cylinder may be required.

For Sun technical support, contact Steve Weber.

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