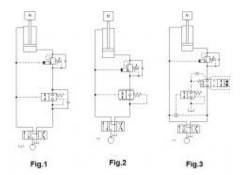


CBVs In Redundant Safety Circuits (2)

Machine: Industrial | Actuator: Cylinder | Function: Counterbalance

Prepared for : Prepared by :

Schematics



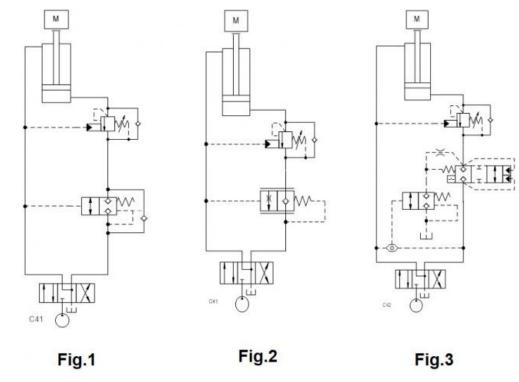
Related Products

Cartridges

CBAA - 3:1 pilot ratio, ultra-restrictive counterbalance valve DKDC - Normally closed, balanced poppet, logic element - pilot-to-open MWCA - Vented, 3:1 pilot ratio, load reactive, load control valve LODD - Vent-to-open, spring-biased closed,

LODD - Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1 or 2

Summary



The circuits show three examples for redundancy in load-holding applications with counterbalance valves using balanced logic valves.

Load-sensitive counterbalance: <u>CB**</u>
Balanced logic element: <u>DK*S</u>

Load-insensitive counterbalance : MB*M, MW*M
Logic element with position indicator: LO*C-Z**

Benefits of this circuit arrangement:

- Fig.1 shows a CBV with a balanced logic valve in the return line. The DK*S opens at 200 psi regardless of trapped pressure between counterbalance and DK*S. An additional reverse free flow check is required for lifting the load.
- Fig.2 shows a CBV valve with a balanced load control valve MB*M that incorporates the reverse free-flow
- Fig.3 shows a CBV with an unbalanced logic valve LO*C-Z** with position indication for safety indication. The LO*C is pilot operated via a balanced logic element (DK*S) which in turn is also piloted via a shuttle valve CS** for flow in both directions.

For Sun technical support, contact Steve Weber.

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