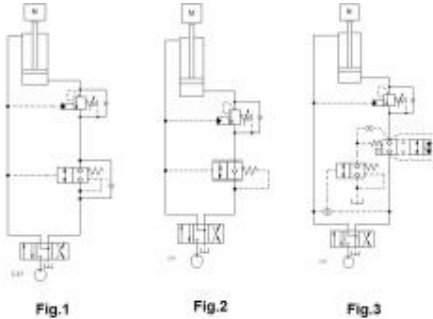


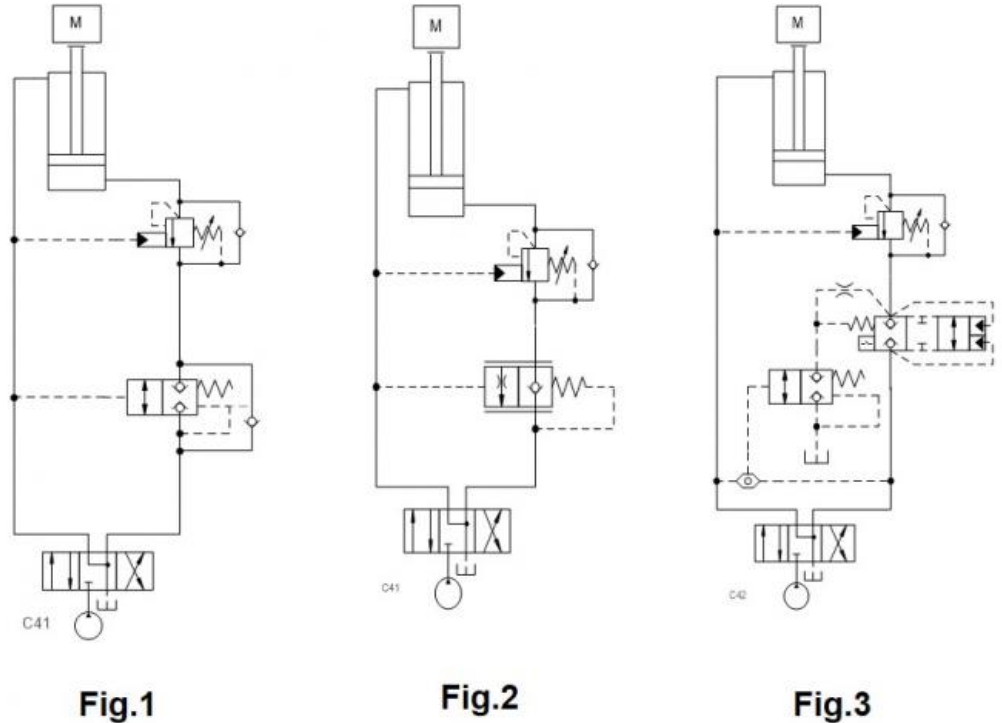
Prepared for :

Prepared by :

Schematics



Summary



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, unbalanced poppet logic element with pilot source from port 1 or 2

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

- Load-sensitive counterbalance: **CB****
- Balanced logic element: **DK*S**
- 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 check.
- **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.