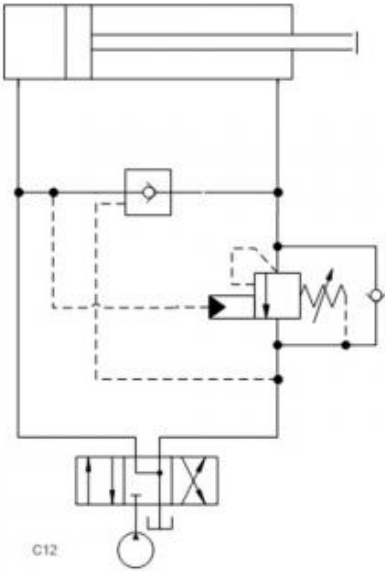


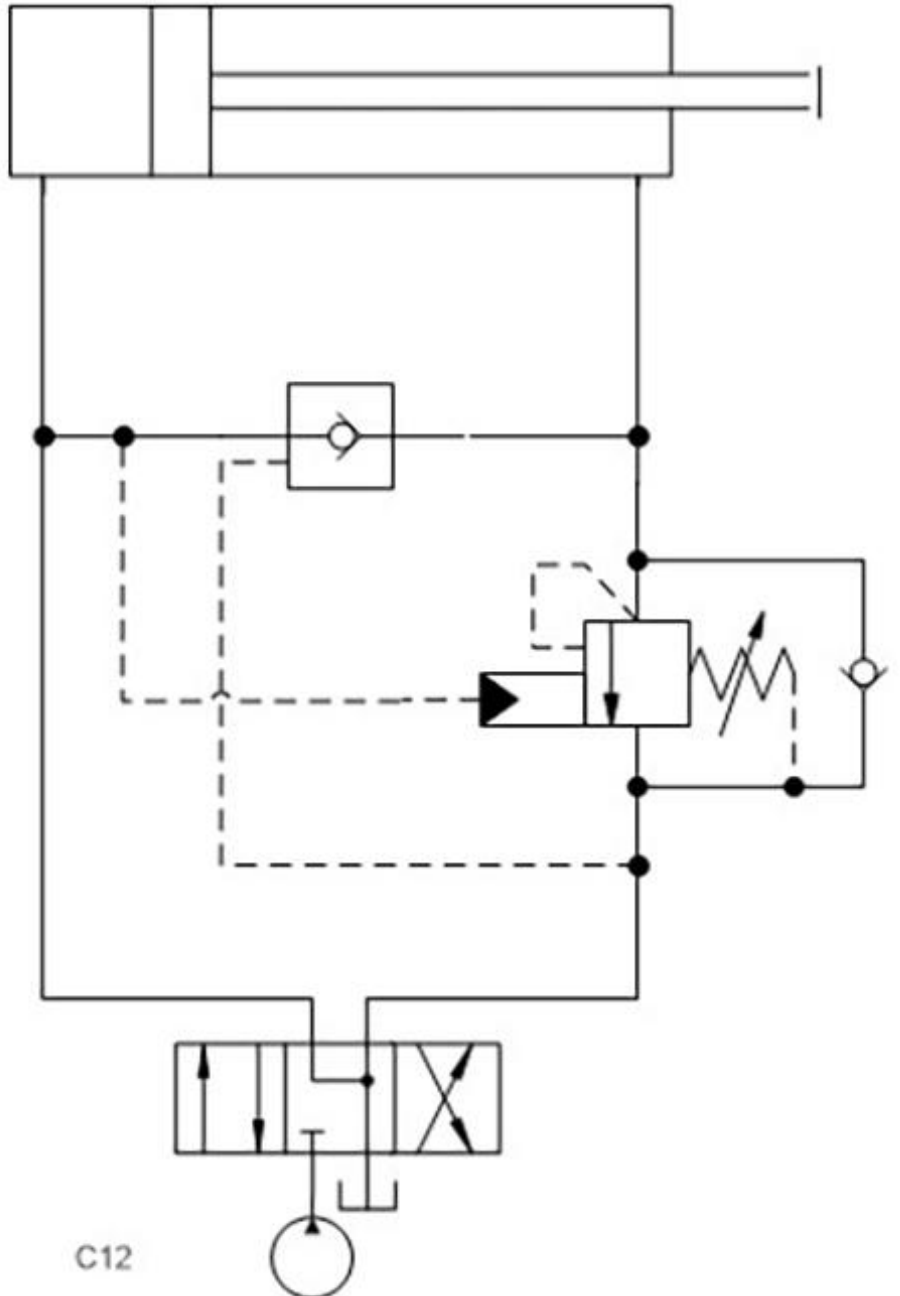
Prepared for :

Prepared by :

Schematics



Summary



Related Products

Y-assemblies

YDGC - Pressure sensitive regenerative assembly

Cartridges

CBAA - 3:1 pilot ratio, ultra-restrictive counterbalance valve
COBA - Pilot-to-close check valve

Cylinders can extend with pressure on both the piston side and rod side. This is called a regeneration circuit. The reduced effective area (rod diameter) results in a higher extension speed at a reduced force. A counterbalance valve can be used for a smooth transition from the regeneration mode of the cylinder to the standard mode when the rod side of the cylinder is diverted to tank.

- Y assemblies: [YDG*](#), [YDE*](#)
- Pilot-to-close logic valve: [CO*A-XEN](#)
- Counterbalance valve: [CB*A](#), [CBEJ](#)

Benefits of this circuit arrangement:

- For fast extension of the cylinder, the pilot-to-close CO*A valve allows flow from the rod side of the cylinder to the piston side of the cylinder. This flow is additive to the pump flow. A small directional valve is sufficient for the higher flow, as the high flow in regeneration mode does not pass through that valve.
- CB opens when the pilot pressure P, times pilot ratio (usually 3) plus pressure P on the inlet to CB exceed the setting of the CB valve. A CBEA set at 4000 psi opens to tank at P = 1000 psi.
- The special counterbalance valve CBEJ is a standard capacity 3:1 valve. It can be used instead of the more restrictive standard CBEA, as in this circuit modulation and stability are not as critical as in load-holding applications.

For Sun technical support, contact Steve Weber.