

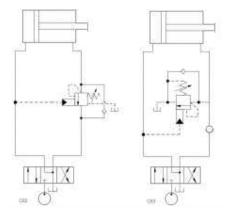
Prepared for:

# **Cushion Lock on One Side of a Cylinder Only**

Machine: Industrial | Actuator: Cylinder | Function: Counterbalance, Cushion Lock

Prepared by:

### **Schematics**



### **Related Products**

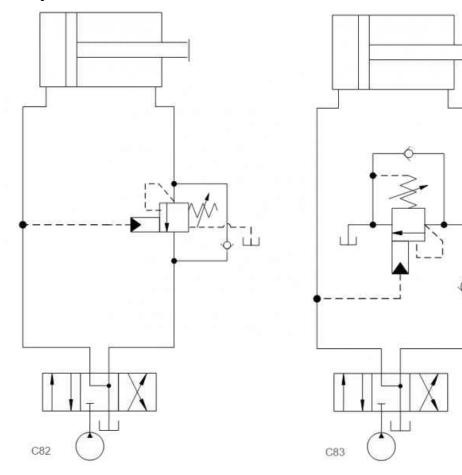
#### **Cartridges**

CWIK - 1:1 pilot ratio, vented counterbalance valve

CBEA - 3:1 pilot ratio, standard capacity counterbalance valve

CXEC - Free flow side to nose check valve with auxiliary external port and Delrin seat

## **Summary**



The example shows advantages of replacing a vented counterbalance valve with a standard valve plus check valve.

Vented counterbalance valve: <u>CW\*\*</u>
Standard counterbalance valve: <u>CB\*\*</u>
Standard check Valve: CX\*\*

Benefits of this circuit arrangement:

- Fig.1 shows a circuit with a vented counterbalance valve that is used for high pressure in the return line.
- Fig. 2 shows a less expensive standard counterbalance valve as alternative. This circuit will require an additional tank port.
- Fig. 2 also allows sizing the counterbalance valve for the actual flow through the valve during load lowering and using a check valve for higher flow during lifting. The vented counterbalance valve in figure 1 may have been chosen for sufficient capacity across the reverse free flow check (50 gpm). The oversized counterbalance valve then is potentially unstable during load lowering (25 gpm).

For Sun technical support, contact Bernhard Kristen

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