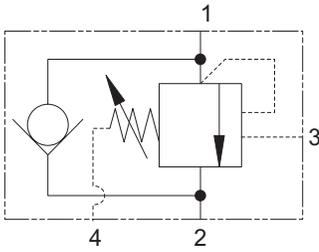
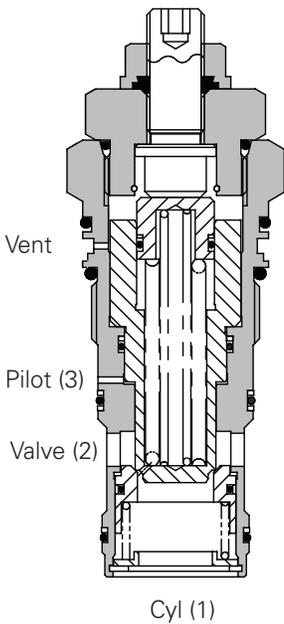


1CEBD300 - Overcenter Valve

Fully balanced, pilot assisted relief with check
300 L/min (80 USgpm) • 270 bar (4000 psi)



Sectional View



Operation

"The check section allows free flow into the actuator then holds and locks the load against movement. The pilot assisted relief valve section will give controlled movement when pilot pressure is applied. The relief section is normally set to open at a pressure at least 1.3 times the maximum load induced pressure but the pressure required to open the valve and

allow movement depends on the pilot ratio of the valve. For optimization of load control and energy usage, a choice of pilot ratios is available.

The pressure required to open the valve and start actuator movement can be calculated as follows:

$$\text{Pilot Pressure} = \frac{(\text{Relief Setting}) - (\text{Load Pressure})}{\text{Pilot Ratio}}$$

Features

Cartridge is economical and fits simple cavity. Allows quick, easy field service - reduces down time.

Pilot Ratio

3:1 Best suited for applications where load varies and machine structure can induce instability.

8:1 Best suited for applications where the load remains relatively constant.

Performance Data

Ratings and Specifications

Figures based on: Oil Temp = 40°C Viscosity = 32 cSt (150 SUS)

Rated flow	300 L/min (80 USgpm)
Max relief pressure	350 bar (5000 psi)
Max load induced pressure	270 bar (4000 psi)
Cartridge material	Working parts hardened and ground steel. External surfaces zinc plated.
Mounting position	Unrestricted
Cavity	A13098 (See Section M)
Torque cartridge into cavity	150 Nm (110 lbs ft)
Weight cartridge only	0.91 kg (2.00 lbs)
Seal kit	SK686 (Nitrile) SK686V (Viton) SK686P (Polyurethane Nitrile)
Filtration	BS5540/4 Class 18/13 (25 micron nominal)
Temperature range	-30° to +90°C (-22° to +194°F)
Internal leakage	4 milliliters/min (60 dpm)
Nominal viscosity range	5 to 500 cSt

Viton is a registered trademark of E.I. DuPont

Description

Overcenter valves give static and dynamic control of loads by supplying a counterbalance pressure to the actuator. They prevent runaway in the event of hose burst and hold the load with minimal leakage.

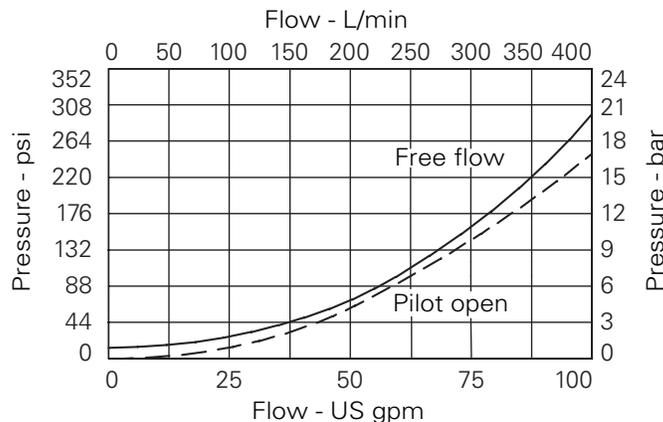
The pressure balanced valve is unaffected by back pressure, allowing service line reliefs to operate and for the valve to be used in regenerative or proportional valve systems.

The overcenter valve should be mounted either into, onto or as close to the actuator as possible to give maximum protection.

Single overcenter valves control unidirectional loads such as in aerial platforms, cranes or winches and dual overcenters are suited to bi-directional motion such as wheel motor applications or cylinders going over center.

Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.

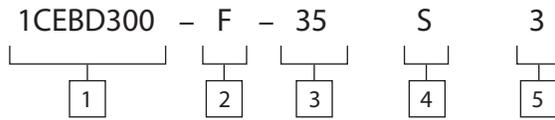
Pressure Drop



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Model Code



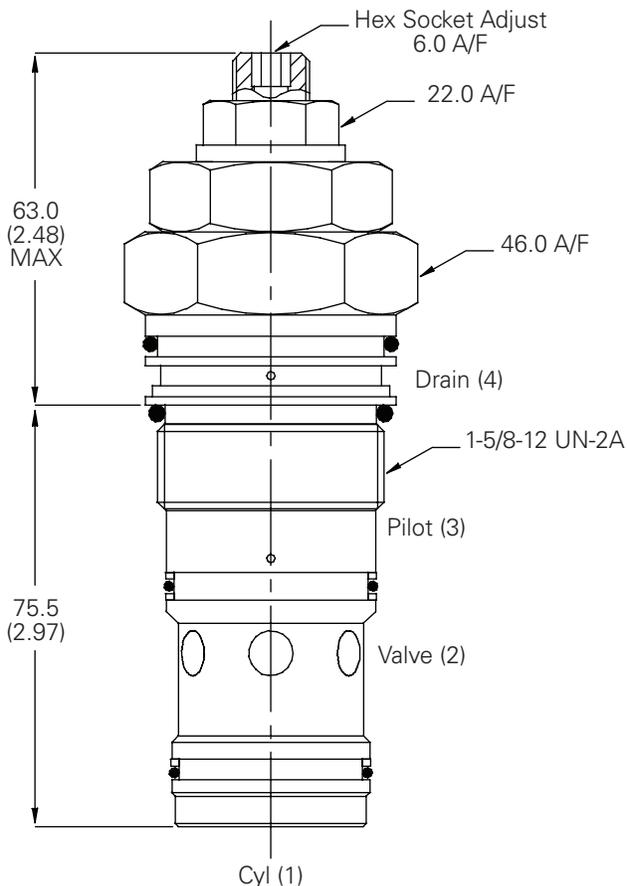
1 Basic Code 1CEBD300 - Cartridge only	3 Pressure Range @4.8 L/min Note: Code based on pressure in bar. 35 - 70-350 bar. Std setting 210 bar Std setting made at 4.8 L/min	4 Seals S - Nitrile (For use with most industrial hydraulic oils) SV - Viton (For high temperature and most special fluid applications) P - Polyurethane/Nitrile (For arduous applications)	5 Pilot Ratio 3 - 3:1 - (Standard) 8 - 8:1
2 Adjustment F - Screw adjustment			

Dimensions

mm (inch)

Cartridge Only
Basic Code
1CEBD300

F



Note: Tightening torque of "F" adjuster locknut - 20 to 25 Nm.