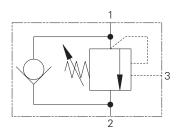
Pilot assisted relief with check 30L/min (8 USgpm) • 270 bar (4000 psi) e-mail:

www.salushydraulics.pl pl@salushydraulics.pl shop/sklep: www.sklep.salushydraulics.pl

Eaton 1CE30F35S2. 5. 10



Sectional View

Pilot (3) Valve (2)

Description

Overcenter valves give static and dynamic control of loads by regulating the flow into and out of hydraulic actuators. When installed close to or within an actuator, the overcenter valve will stop runaway in the event of hose burst and if open center directional control valves are used, will allow thermal expansion relief of the hydraulic fluid.

The overcenter cartridge is ideal for mounting directly into a cavity machined in the body of the cylinder, motor or rotary actuator. The cartridge can also be mounted directly to the ports via a specifically machined body as part of a Hydraulic Integrated Circuit or single unit, or contained within one of our standard line bodies.

Single overcenter valves are normally used when the load is unidirectional, for example an aerial platform or crane and dual overcenter valves are used for controlling loads in both directional for motor applications or for cylinders going over center.

Operation

The check section allows 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:

Pilot Pressure =

(Relief Setting) - (Load Pressure) Pilot Ratio

Features

Cartridge is economical and fits simple cavity. Allows quick, easy field service - reduces down time. Interchangeable with pilot check valve of a similar size.

Pilot Ratio

2.5:1 Best suited for extremely unstable applications such as long booms or flexible frameworks.

5:1 (standard) Best suited for applications where load varies and machine structure can induce instability.

10:1 Best suited for applications where the load remains relatively constant.

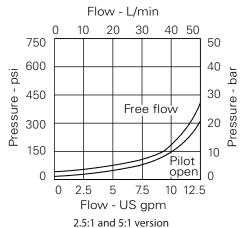
Performance Data

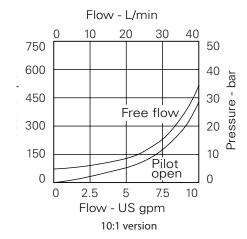
Ratings and Specifications

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Figures based on: Oil Temp = 40° C	Viscosity = 32 cSt (150 SUS)
Rated flow	30 L/min (8 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.
Standard housing material	Aluminum (up to 210 bar). Add suffix "377" for steel option.
Mounting position	Unrestricted
Cavity	A6610 (See Section M)
Torque cartridge into cavity	45 Nm (33 lbs ft)
Weight	1CE30 0.15 kg (0.33 lbs) 1CE35 0.41 kg (0.90 lbs) 1CEE34 0.90 kg (1.98 lbs)
Seal kits	SK395 (Nitrile) SK395V (Viton')
Filtration	Cleanliness code 18/13 (25 micron nominal)
Temperature range	-30°C to +90°C (-22° to +194°F)
Internal leakage	0.3 milliliters/min nominal (5 dpm)
Nominal viscosity range	5 to 500 cSt

Viton is a registered trademark of E.I. DuPont

Pressure Drop









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

1CE30 - Overcenter Valve

Pilot assisted relief with check 30L/min (8 USgpm) • 270 bar (4000 psi)

Model Code

1CE*** F **3W** 35

Function

1CE30 -Cartridge Only 1CE35 -Cartridge in body 1CEE34 -Cartridges in dual body

2 Adjustment

F - Screw adjustment

N - Cartridge in body

For fixed versions add setting in 10 barincrementstoendofpartnumber. Subject to a +/-10% tolerance.

3 Port Size

Code	Port Size	Housing Number - Body Only			
		Aluminum Single	Steel Single	Aluminum Dual	Steel Dual
3W	3/8" BSPP	B6743	B12823	B6836	B13803
6T	3/8" SAE	B10536		B10805	
8T	1/2" SAE	B7884		B30237	

Pressure Range

Note: Code based on pressure in bar.

20 - (2.5:1 and 5:1): 70-210 bar. Std setting 100 bar (10:1): 100-210 bar. Std setting 100 bar

35 - (2.5:1 and 5:1): 100-350 bar. Std setting 210 bar (10:1): 120-350 bar. Std setting 210 bar

5 | Seal Material

S - Buna-N SV - Viton

6 Pilot Ratio

2 -2:1 5 - 5:1 10 - 10:1

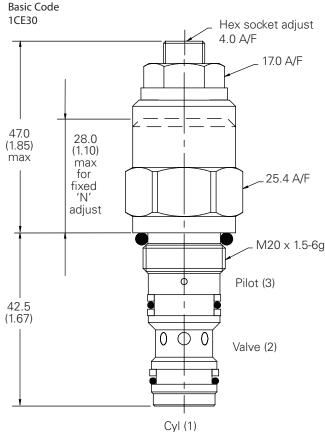
Dimensions mm (inch)

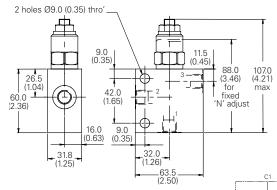
Cartridge Only Basic Code

Note: For applications above 210 bar - please consult our technical department or use the steel body option

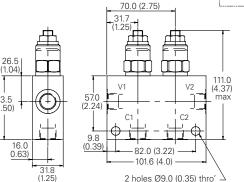
Note: Tightening torque of "F" adjuster locknut -20 to 25 Nm

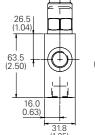
Single Valve with Housing Basic Code 1CE35





Double Valve with Housing **Basic Code** 1CEE34









1CE Series - Overcenter Valve

Alternative body arrangements for 30 L/min valves

Model Code

1C**** -	- F	3W -	35	S	5	230 /	50
1	2	3	4	5		7	8

- 1 Function 1CE36/1CEB36/1CER36/ 1CEL36
- Cartridge & Body Through Ported 1CBE35/1CBEB35/1CBER35/ 1CBEL35
- Cartridge & Body Banjo 1CEG35/1CEBG35/ 1CERG35/1CELG35
- Cartridge & Body Gasket 1CEE35/1CEEB35/1CEER35/ 1CEEL35
- Cartridges & Dual Body

3	Port	Sizes
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Code	Port Size	Housing Number		
		Aluminium	Steel	
Through	Ported			
3W	3/8" BSP - Body ONLY	B13542	B13543	
Banjo M	ounted			
3W	3/8" BSP - Sub Assembly	AXP13617-3W-S		
Gasket N	Mounted			
3W	3/8" BSP - Sub Assembly	BXP13621-3W-S		
Dual Ov	ercenter (Internally Cross Piloted)			
3W	3/8" BSP - Sub Assembly	BXP24147-3W-S	BXP24147-3W-S-377	
6T	3/4" SAE - Sub Assembly	BXP24147-6T-S		

- 2 Adjustment Means
- F Screw Adjustment
- **N** Fixed State pressure setting required

For fixed versions add setting in 10 barincrements to end of partnumber. Subject to a ±10% tolerance.

- Pressure Range @ 4.8 L/min See cartridge data sheet
- 5 Seals
- S Nitrile (For use with most industrial hydraulic oils)
- SV Viton (For high temperature and most special fluid applications)
- 7 High Pressure Setting (1CEL30 based options only) bar in 10 bar increments.

(See cartridge details)

8 Counterbalance Setting (1CEL30 based options only) bar in 10 bar increments.

1CE Series - Overcenter Valve

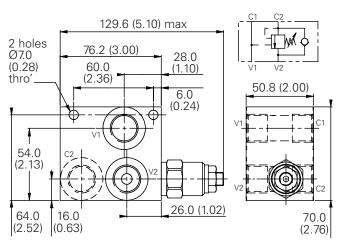
Alternative body arrangements for 30 L/min valves

Dimensions

mm (inch)

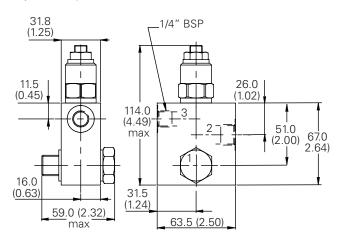
Complete Valve - Through Ported 3/8" Ports Basic Code 1CE36/1CEB36/1CER36/1CEL36

Banjo Bolt torque - 47 Nm

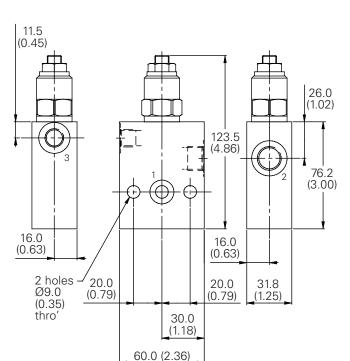


Complete Valve - Banjo Mounted 3/8" Ports Basic Code 1CBE35 / 1CBEB35 / 1CBER35 / 1CBEL35

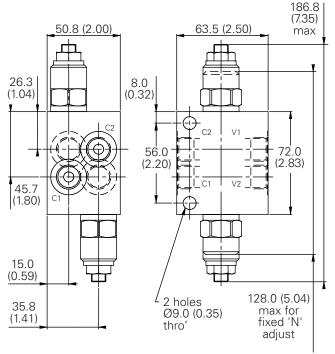
Banjo Bolt torque - 47 Nm



Complete Valve - Gasket Mounted 3/8" Ports Basic Code 1CEG35/1CEBG35/1CERG35/1CELG35



Complete Valve - Dual Overcenter 3/8" Ports
Basic Code
1CEE35/1CEEB35/1CEER35/1CEEL35
(Internally Cross-Piloted)



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



