

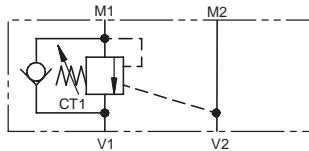


# MOTOR MOUNTED VALVES

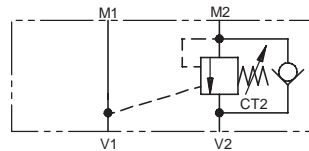
## OMP MOUNTING PATTERN

### SINGLE AND DUAL OVERCENTRE VALVE

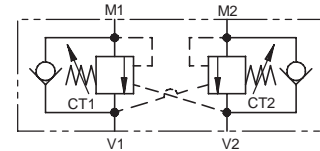
#### 1CEOMP35/1CEEOMP35



1CEOMP35-1



1CEOMP35-2



1CEEOMP35

#### APPLICATION

Overcentre 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 overcentre valve will stop runaway in the event of hose burst and if open centre directional control valves are used, will allow thermal expansion relief of the hydraulic fluid.

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

#### 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 optimisation 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. Directly interchangeable with 30 litres/min pilot check valve. See catalogue page 7-151.

#### PILOT RATIOS

- 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.

#### SPECIFICATIONS

Figures based on: Oil Temp = 40°C Viscosity = 40 cSt

<b>Rated Flow</b>	30 litres/min (8 US GPM)
<b>Max Setting</b>	Max Load Induced Pressure: 270 bar (4000 psi) Relief Setting: 350 bar (5000 psi)
<b>Cartridge Material</b>	Working parts hardened and ground steel. External surfaces zinc plated
<b>Body Material</b>	Standard aluminium (up to 210 bar*) Add suffix '377' for steel option
<b>Mounting Position</b>	Unrestricted
<b>Cavity Number</b>	A6610 (See Section 17)
<b>Torque Cartridge into Cavity</b>	45 Nm (33 lbs ft)
<b>Weight</b>	1CEOMP35 1.6 kg (3.52 lbs) 1CEEOMP35 1.66 kg (3.65 lbs)
<b>Seal Kit Number</b>	1CEOMP35 SK1285 SK1285V 1CEEOMP35 SK1284 SK1284V
<b>Recommended Filtration Level</b>	BS5540/4 Class 18/13 (25 micron nominal)
<b>Operating Temp</b>	-20°C to +90°C
<b>Leakage</b>	0.3 millilitres/min nominal (5 dpm)
<b>Nominal Viscosity Range</b>	5 to 500 cSt

\* For applications above 210 bar please consult our technical department or use the steel body option.

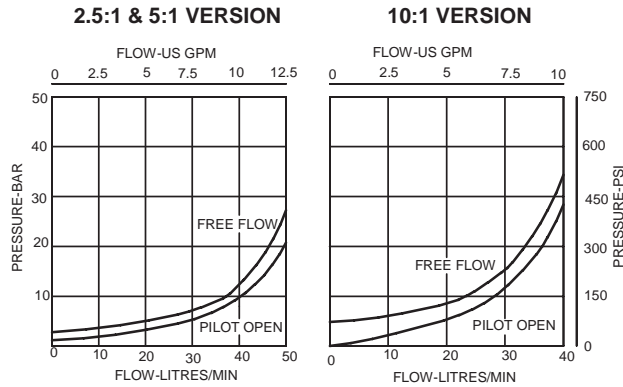
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## PRESSURE DROP



## COMPLETE VALVE 1/2" PORTS

### BASIC CODE: 1CEEOMP35

Sub-assembly part numbers

Cavity plug part number

BSP, aluminium

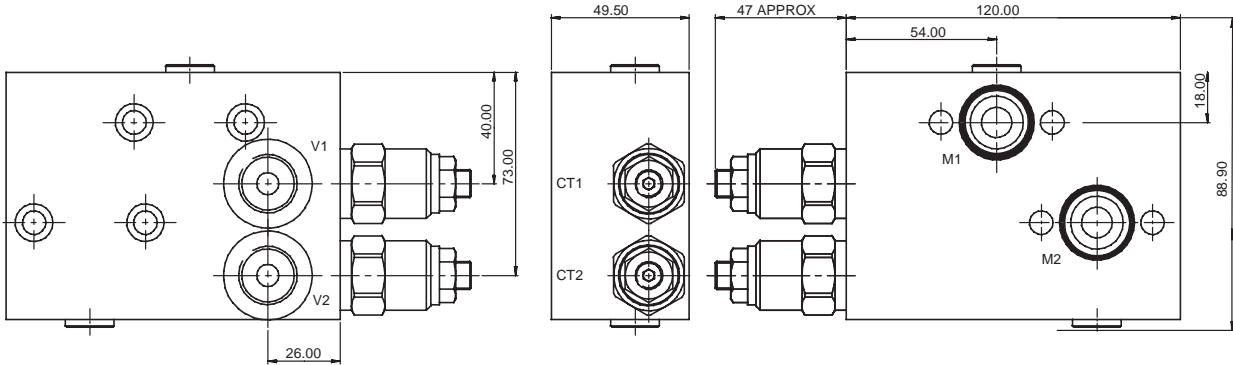
Nitrile

Viton

1/2" BXP24052-4W-S

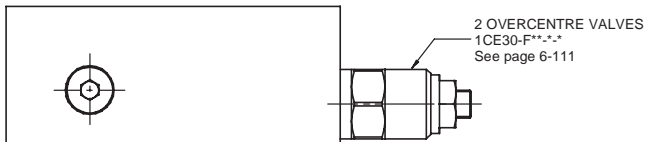
AXP13032-01-N

AXP13032-01-V



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

**CHECK MOTOR MOUNTING  
COMPATIBILITY BEFORE SPECIFYING**



Where measurements are critical request certified drawings

## ORDERING CODE EXAMPLE

**1CE\*OMP35\* F 4W 35 S 5 BK**

### Basic Code

1CEEOMP35 = Cartridge and Body

1CEOMP35-1 = Single overcentre in line V1-M1

1CEOMP35-2 = Single overcentre in line V2-M2

### Adjustment Means

F = Screw Adjustment

### Port Sizes - Bodied Valves Only

4W = 1/2" BSP

### Pressure Range

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

Std setting made at 4.8 litres/min

\* Cartridges must not be adjusted above the safe working pressure of the motor

We reserve the right to change specifications without notice

### Mounting

BK = Bolt Kit

### Pilot Ratio

2 = 2.5:1

5 = 5:1

10 = 10:1

### Seals

S = Nitrile (For use with most industrial hydraulic oils)

SV = Viton (For high temperature and most special fluid applications)