

Application

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. 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.

The Motor Mounted bodies reduce the need for excessive piping and instead give a clean interface for the Overcentre Valve to be used in conjunction with your motor. The prime sized ports allow for directly connecting the valve bank to the Overcentre valve .

Operation

The check section allows free flow into the actuator (from 2 to 1) then holds and locks the load against movement (from 1 to 2). The pilot pressure in the pilot port (3) will give a

controlled movement to piston when the pressure is applied. The pressure required to open the valve and allow movement depends on the pilot ratio of the valve. The pressure required to open the valve and start actuator movement can be calculated as follows:

Pilot Ratio

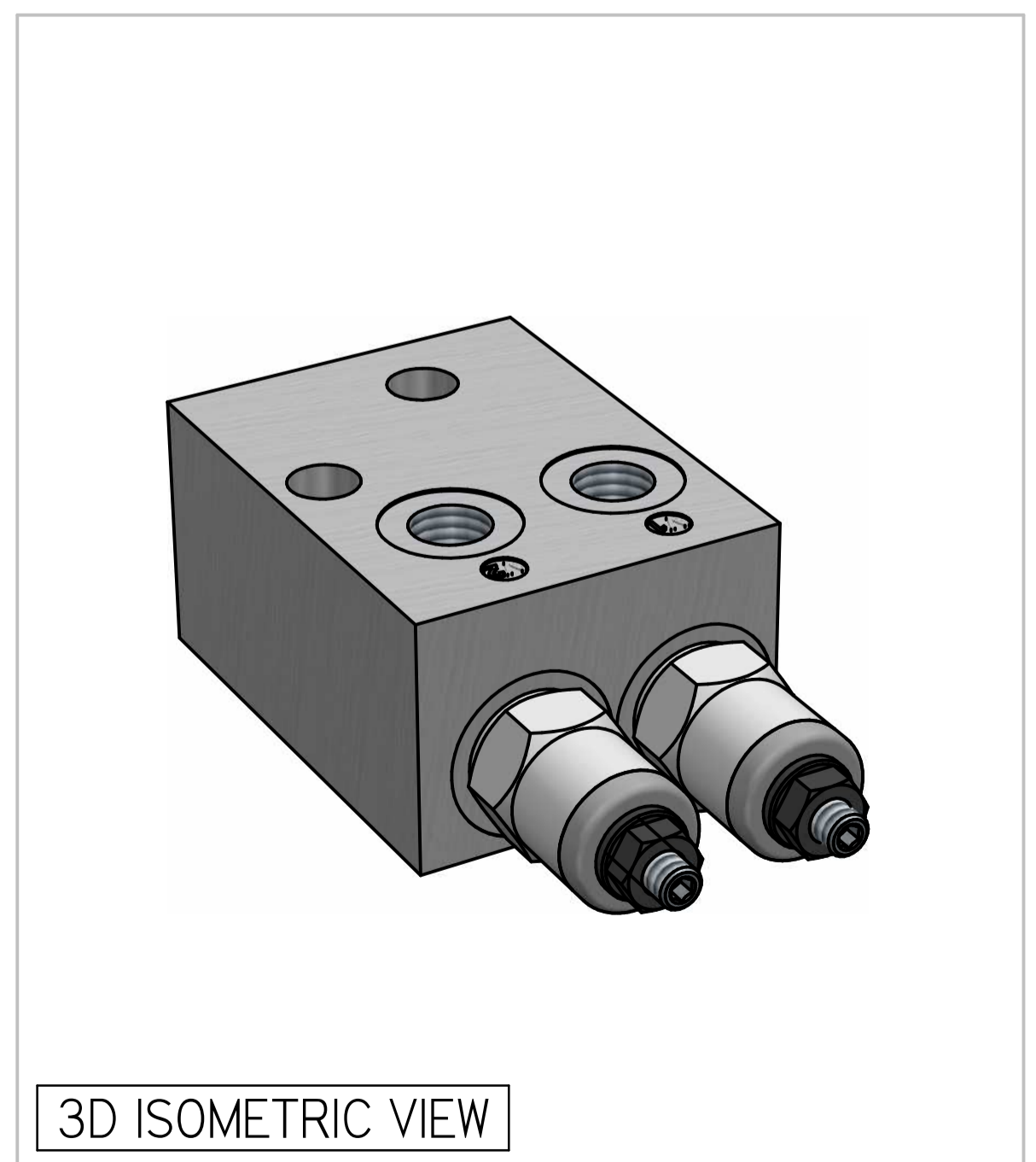
4:1 Best suited for applications where the load varies and machine structure can induce instability. Other ratios can be made available upon request.

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

Specifications

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

Rated Flow	100 lpm
Max Setting	Load Induced Pressure : 270 bar Relief Setting : 350 bar
Cartridge Material	Working parts : Hardened, ground steel External surfaces : Zinc plated
Weight (Cartridge only)	OSI20MS95: 2.40 kg OSI0MS95: 2.10 kg
Manifold Material	Aluminium (upto 250 bar)
Mounting	Line
Seal Kit Number	SK0SI95 (Nitrile)
Filtration Level	BS5540/4 Class 18/13 (25µ nominal)
Operating Temp	-20°C to +90°C (Standard Seals)
Leakage	Less than 0.3 millilitres/min (5 dpm)
Viscosity Range	5 to 500 cSt



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

TO ORDER

OSI20MS95-* F 4W 35 N 4

BASIC CODE
OSI20MS95 - DOUBLE OVERCENTRE
OSI0MS95-1 - SINGLE OVERCENTRE IN A LINE
OSI0MS95-2 - SINGLE OVERCENTRE IN B LINE

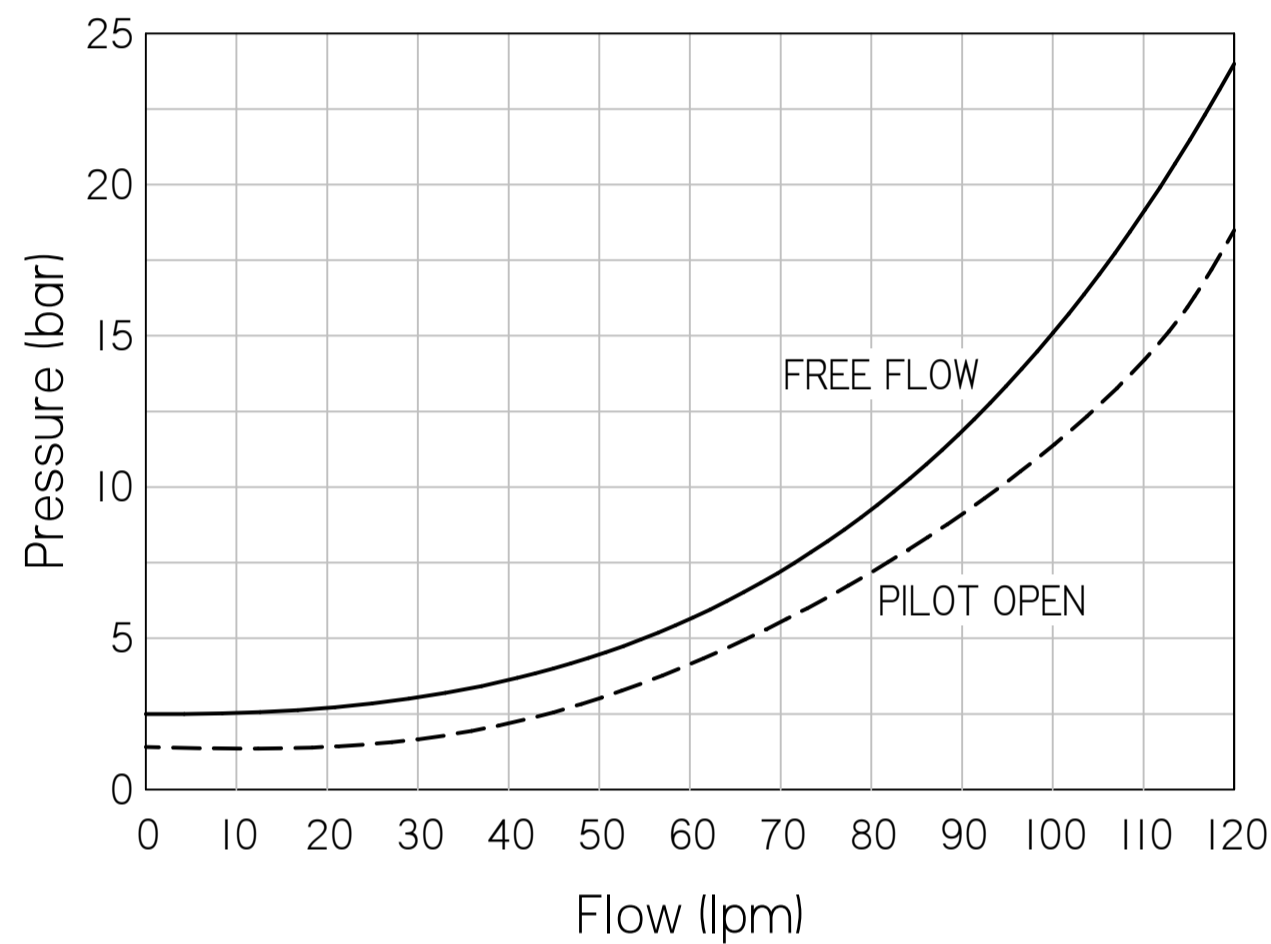
ADJUSTMENT
F: SCREW ADJUST

PORT SIZE
4W: 1/2 BSP PORTS

AREA RATIO
4: RATIO OF 4:1
SEAL KIT
N: NITRILE

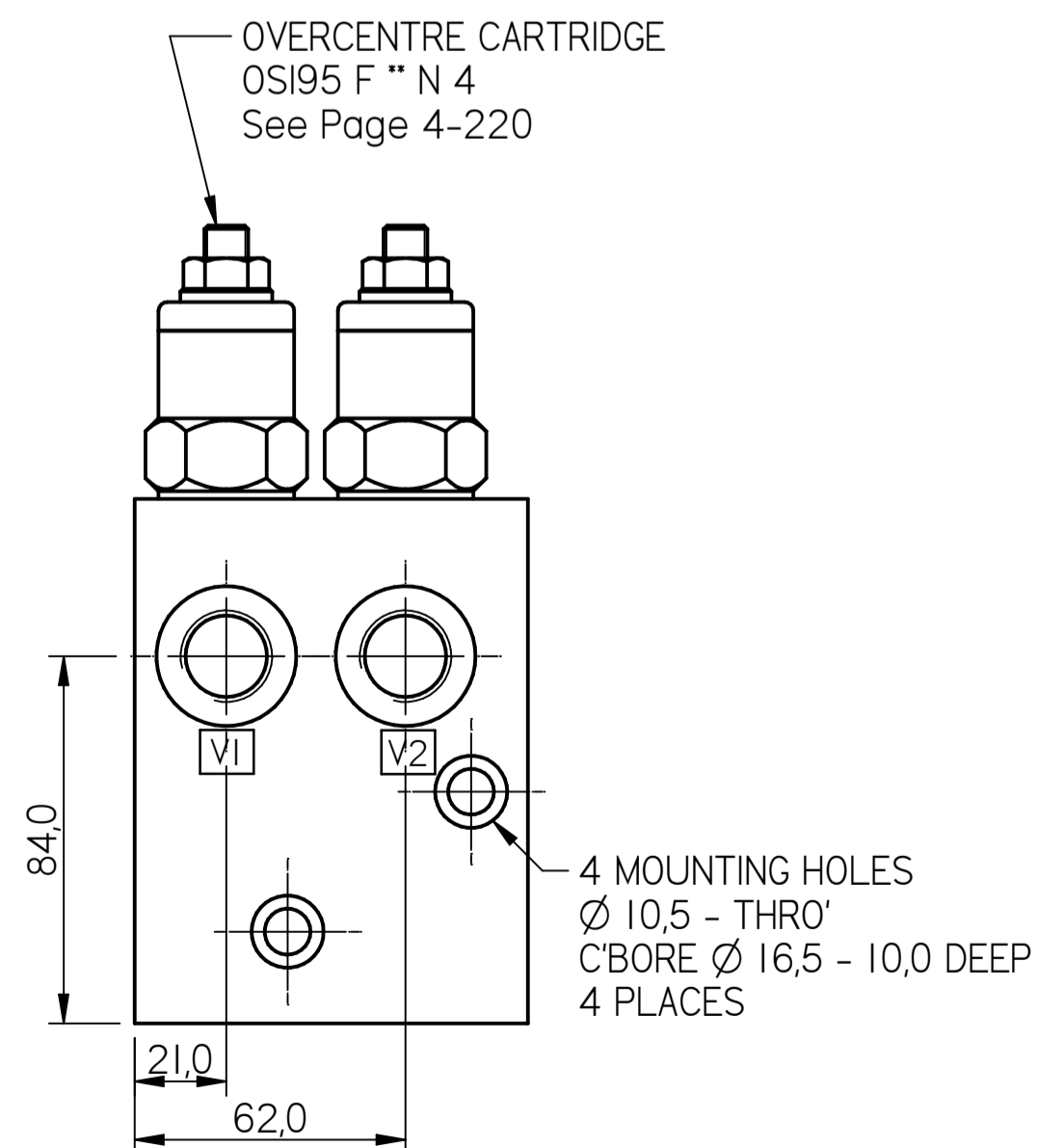
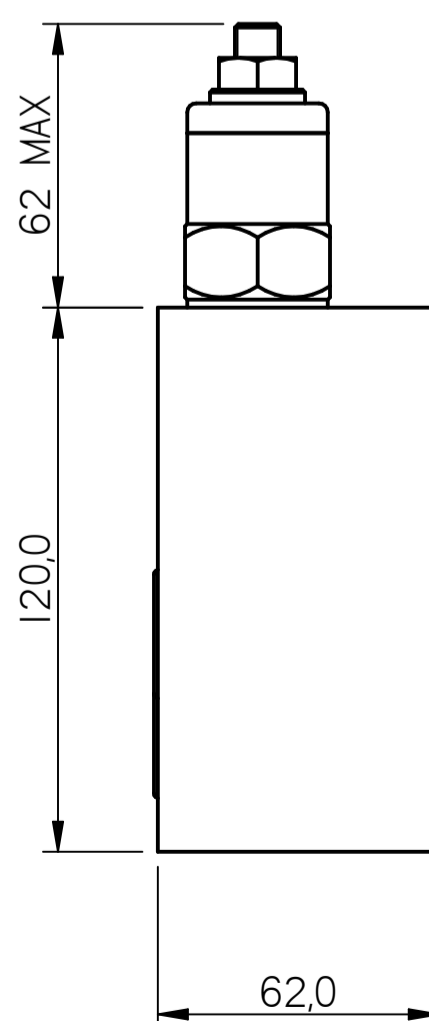
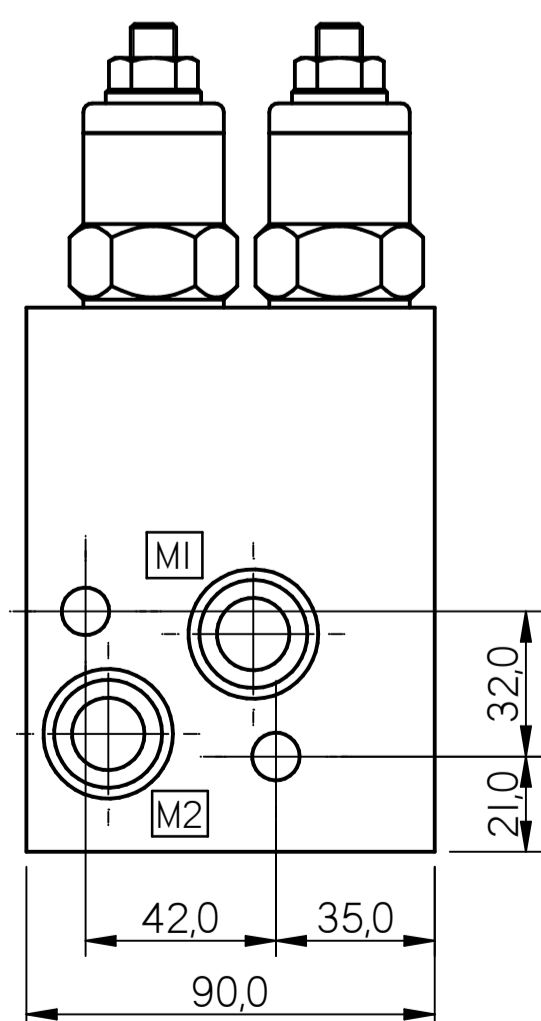
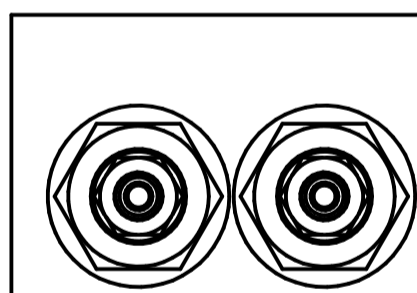
PRESSURE RANGE
20: 70 to 255 bar. Std setting 100 bar
35: 200 to 350 bar. Std setting 210 bar

PRESSURE CHARACTERISTICS



COMPLETE VALVE 1/2" BSP PORTS

BASIC CODE: OSI20MS95 4W



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