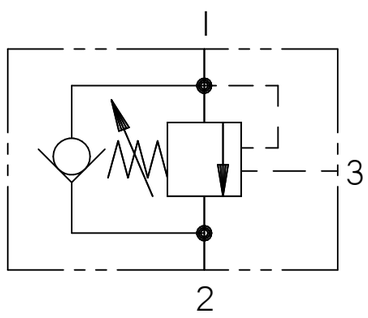
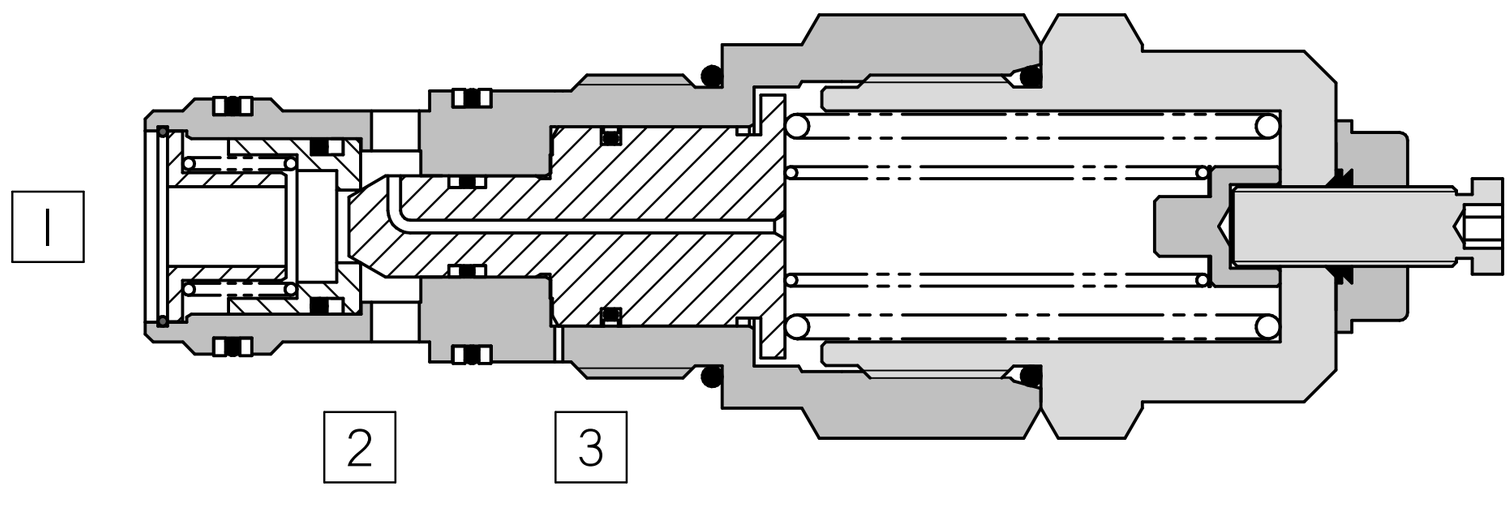
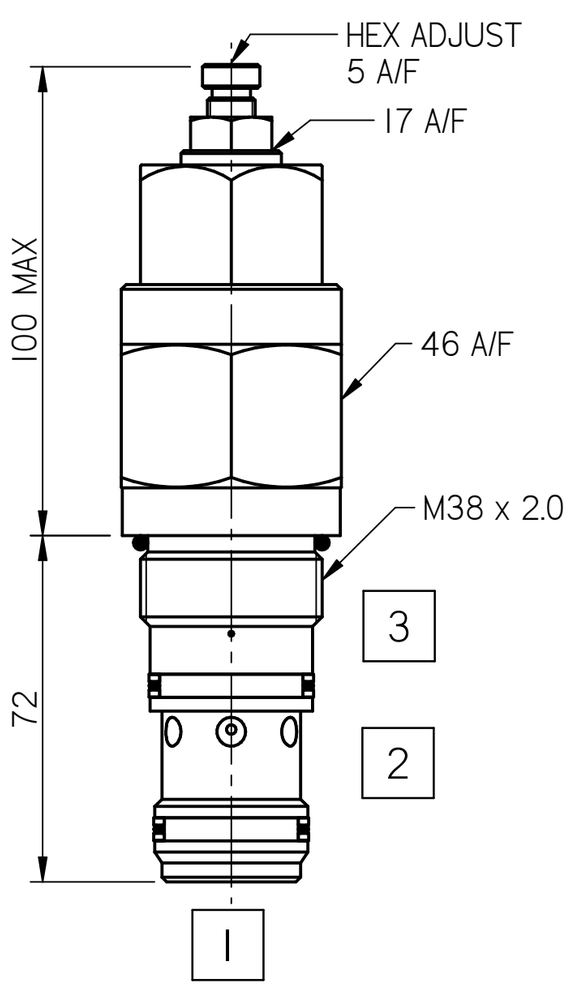
OSII45 OVERCENTRE VALVE

FLUID POWER SYMBOL







Application

Overcentre valves give static and dynamic control of loads by regulating flow into and out of hydraulic actuators. The Overcentre valve will stop the load from running away in the event of a hose burst. If open center directional control valves are used, they will allow the thermal expansion relief of the hydraulic fluid. These valves provide excellent hose burst protection.

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:

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

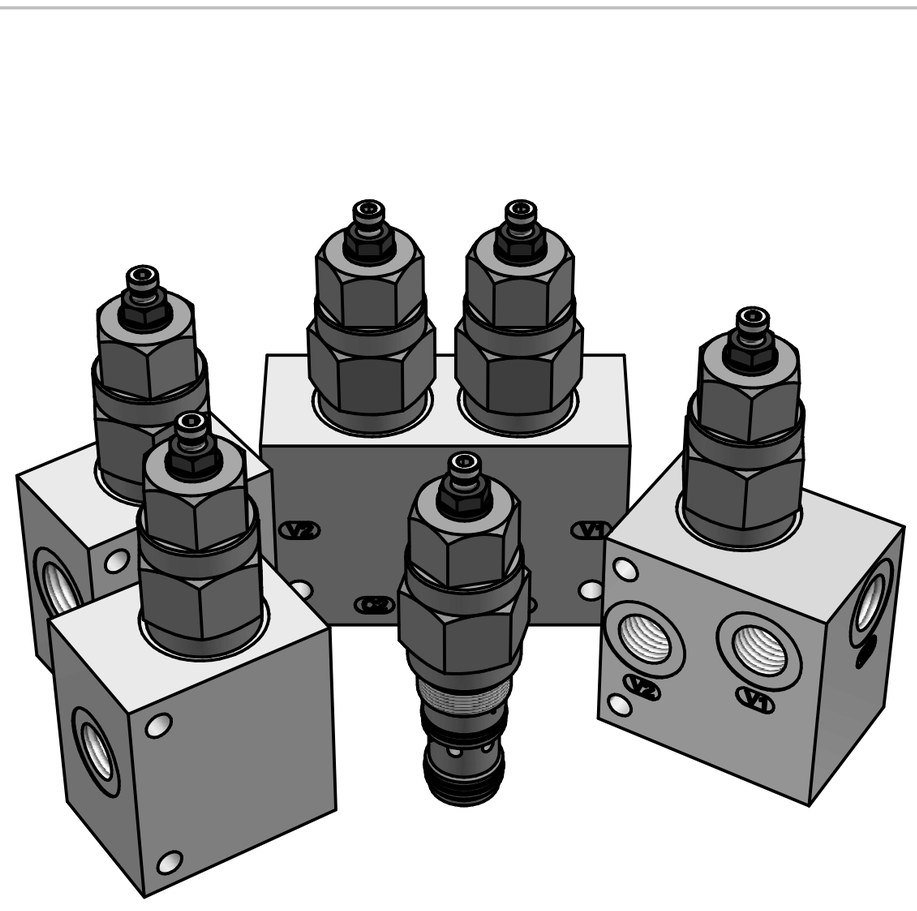
Pilot Ratio

5:1 Best suited for applications where the load varies and machine structure can induce instability. Other ratios can be made available upon request.

Specifications

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

Max Flow	180 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)	OSII45: 1.200 kg
Cavity Number	TH20081 (Refer Cavities Section)
Manifold Material	Aluminium (upto 250 bar) Add Suffix '729' for SG Iron (350 bar)
Torque into Cavity	150 Nm
Mounting	Line
Seal Kit Number	SKOSII45 (Nitrile) SKOSII45 V (Viton®)
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



3D ISOMETRIC VIEW

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

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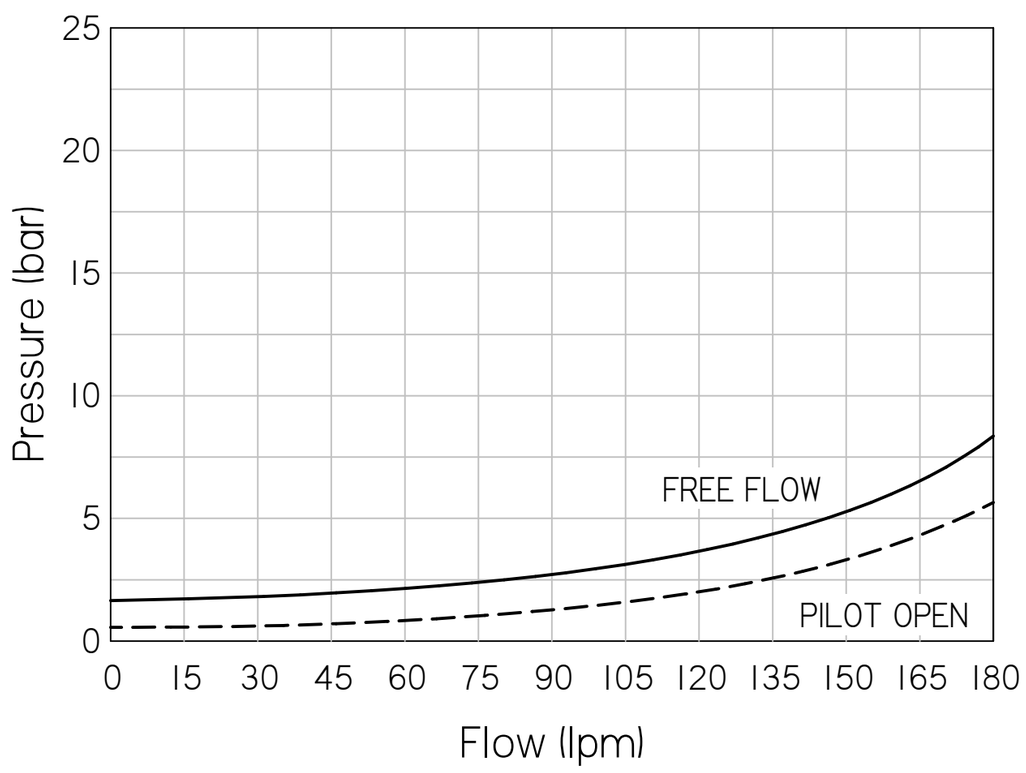
TO ORDER

OSII45 F 6W 35 N 5 INI

- BASIC CODE
- ADJUSTMENT
  F: SCREW ADJUST
- PORT SIZE
  6W: 3/4 BSP PORTS
  8W: I BSP PORTS
  OMIT FOR CARTRIDGE
- PRESSURE RANGE
  20: 140 to 250 bar. Std setting 190 bar
  35: 220 to 330 bar. Std setting 270 bar
- SEAL KIT
  N: NITRILE
  V: VITON
- AREA RATIO
  5: RATIO OF 5:1
- INTERNAL PILOT

PRESSURE CHARACTERISTICS

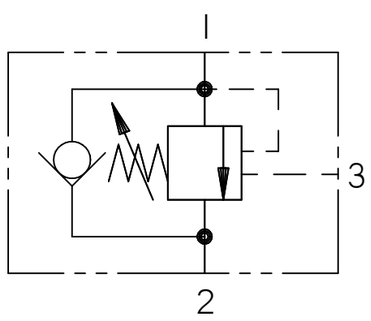


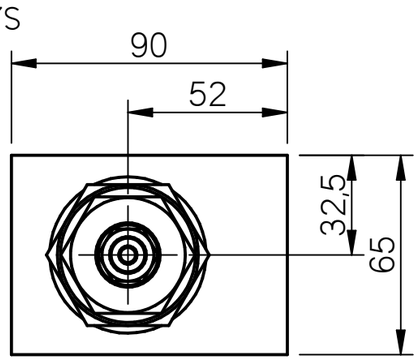
COMPLETE VALVE 3/4" I" BSP PORTS

BASIC CODE: OSII45 6W / OSII45 8W

ONLY Body Part Numbers (BSP)

Aluminium		SG Iron	
3/4"	ZI0046	3/4"	ZI0046S
I"	ZI0437	I"	ZI0437S



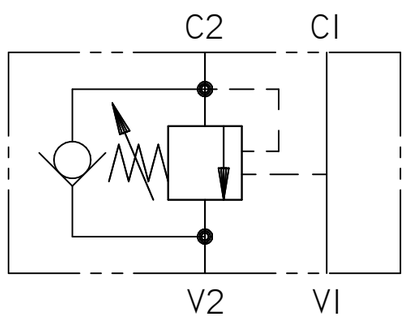


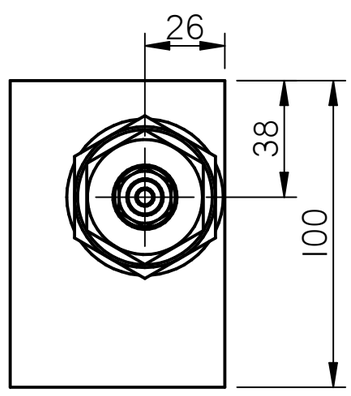
COMPLETE VALVE 3/4" BSP PORTS

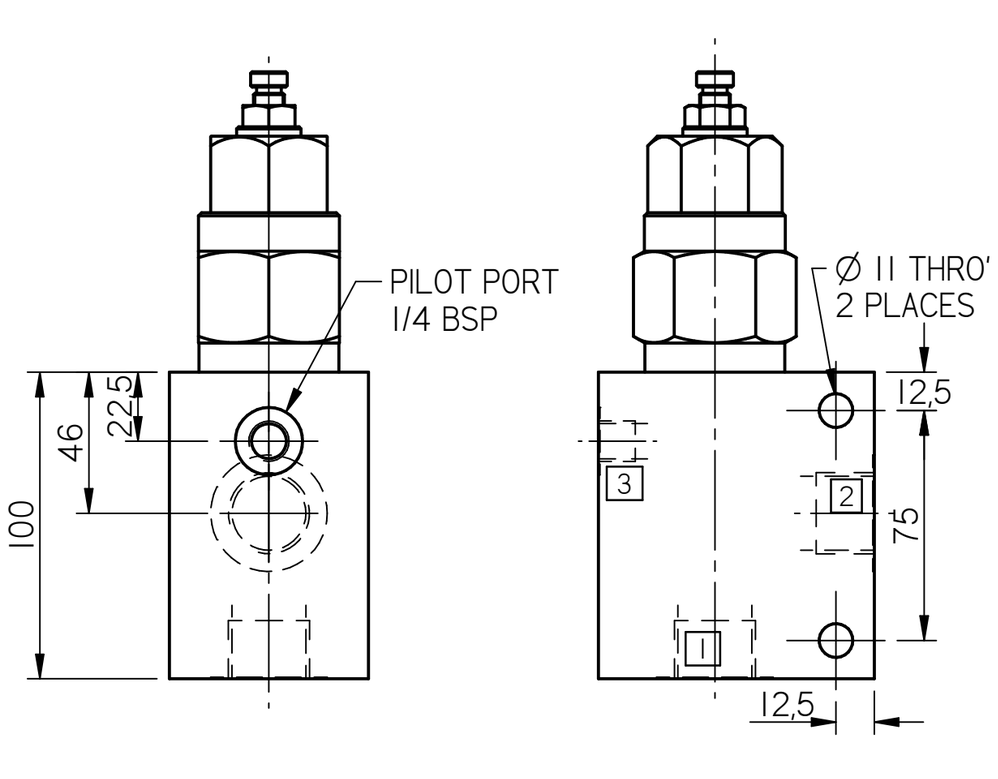
BASIC CODE: OSII45 6W INI (INTERNAL PILOT)

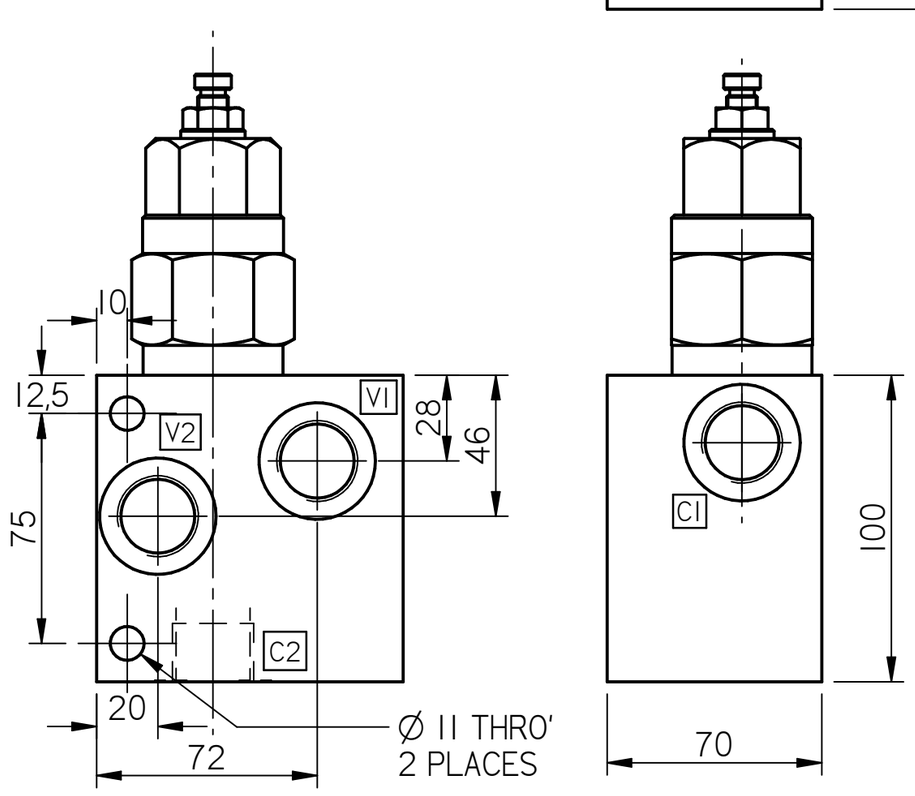
ONLY Body Part Numbers (BSP)

Aluminium		SG Iron	
3/4"	ZI0199	3/4"	ZI0199S









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OSII45 OVERCENTRE VALVE

TO ORDER

OSI2 I45 F 4W 35 N 5

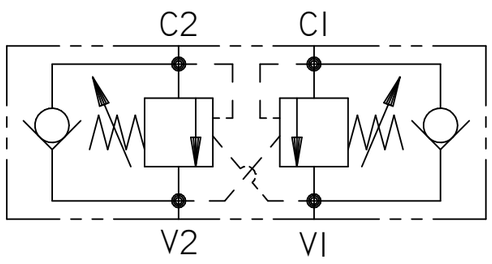
- BASIC CODE
  - OSI2 I45: DUAL OVERCENTRE VALVE
  - OSI2SHI45: SHUTTLE DUAL OVERCENTRE VALVE
- ADJUSTMENT
  - F: SCREW ADJUST
- PORT SIZE
  - 6W: 3/4 BSP PORTS
  - FOR OSISH SHUTTLE PORT 1/4 BSP
- AREA RATIO
  - 5: RATIO OF 5:1
- SEAL KIT
  - N: NITRILE
  - V: VITON
- PRESSURE RANGE
  - 20: I40 to 250 bar. Std setting I90 bar
  - 35: 220 to 330 bar. Std setting 270 bar

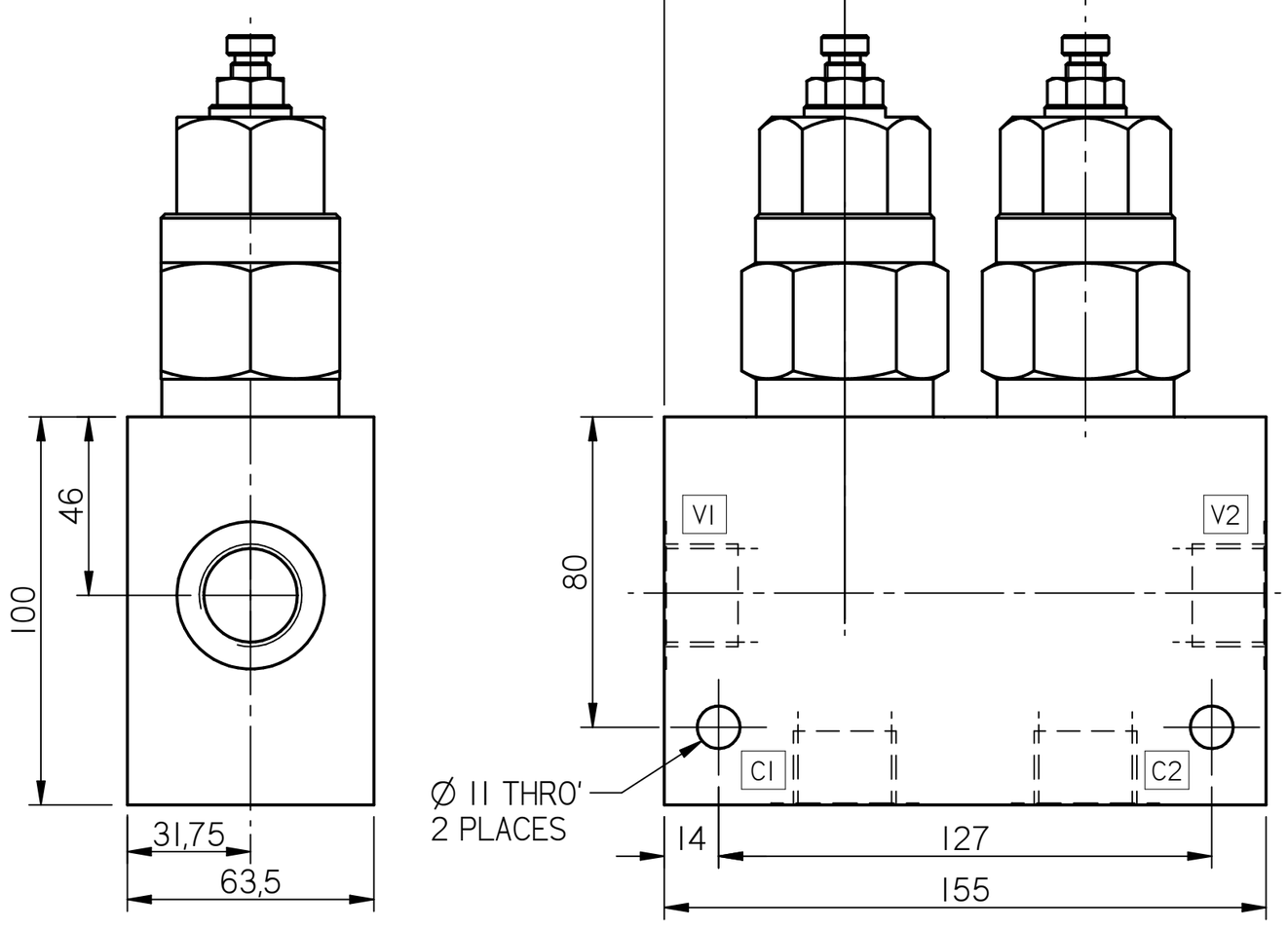
COMPLETE VALVE 3/4" BSP PORTS

BASIC CODE: OSI2 I45 6W

ONLY Body Part Numbers (BSP)

Aluminium		SG Iron	
3/4"	ZI0213	3/4"	ZI0213S



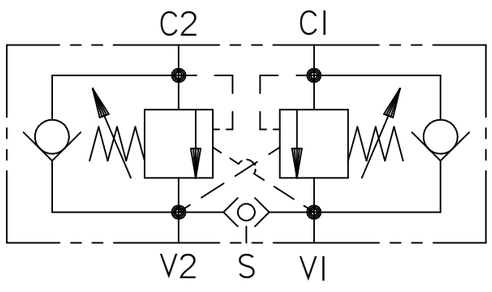


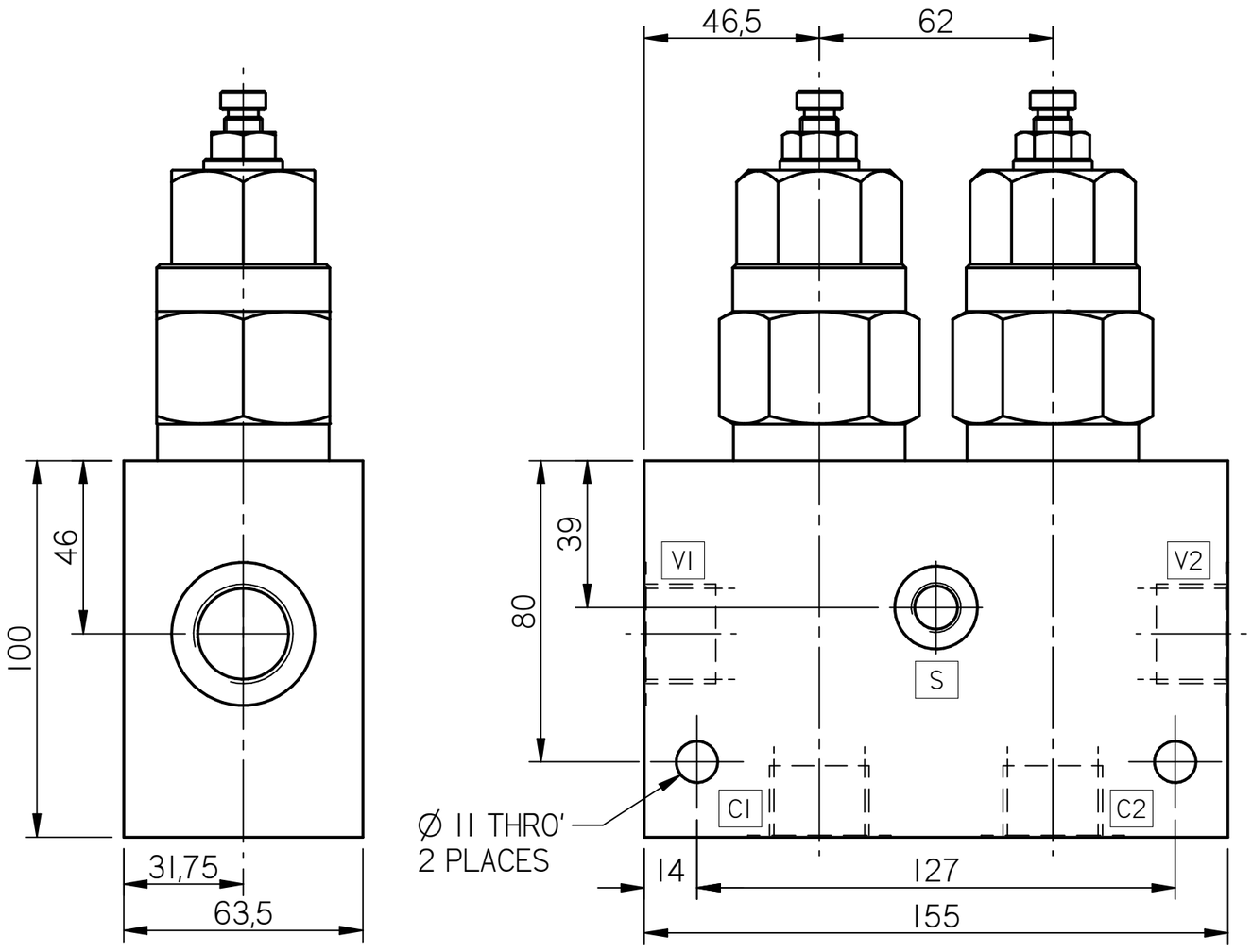
COMPLETE VALVE 3/4" BSP PORTS

BASIC CODE: OSI2SHI45 6W

ONLY Body Part Numbers (BSP)

Aluminium		SG Iron
3/4"	ZI0213SH	-





Application

These Dual Overcentre valves also contain a brake shuttle valve which ensures that pressure is applied to a brake release circuit regardless of whether pressure is applied to Ports VI or V2. These multifunction valves are normally used for the static and dynamic control of systems using motors or semi rotary actuators.

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NOTES

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