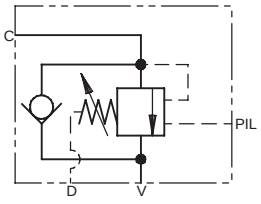
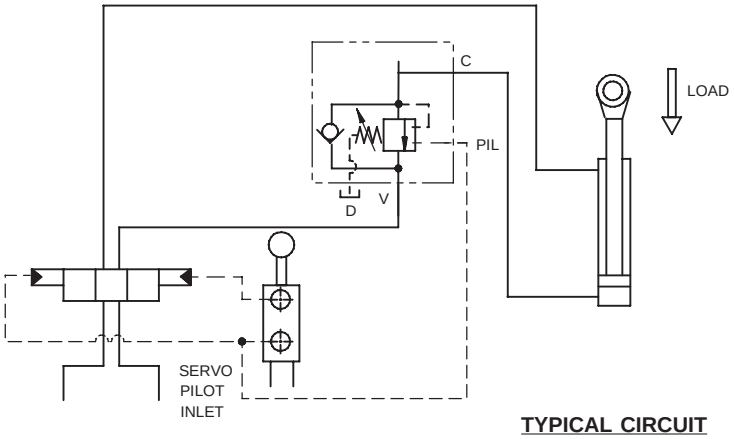
1CEBL SERIES LOAD CONTROL / HOLDING VALVE

HOSE BURST PROTECTION - LINE MOUNTED (REF: ISO 8643)

1CEBL153





TYPICAL CIRCUIT

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APPLICATION

These overcentre valves are suitable for use on the boom and dipper cylinders of an excavator to help the manufacturer or user comply with standard ISO8643.

They were designed to give relief, load holding and hose failure protection to systems where a pilot system controls the directional valves.

OPERATION

By connecting the pilot line in parallel with the spool valve pilot, the high pilot ratio allows the valve to open just prior to the spool valve, ensuring that the valve does not interfere with the normal operation of the machine.

Both the pilot and the relief sections are unaffected by back pressure, enabling the service line reliefs to operate normally, without interfering with the spool valve control as it meters the return flow. In the event of hose failure, the control will be passed from the main spool to the overcentre valve, maintaining control of the cylinder.

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

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

FEATURES

This is a compact design with good dirt tolerance. Hardened poppets and seats provide excellent load holding characteristics with all the advantages of the cartridge insert.

PILOT RATIO

22:1 To allow use with normal pilot systems which can be found on most excavators

SPECIFICATIONS

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

Rated Flow	150 litres/min (40 US GPM)
Max Setting	350 bar (5000 psi)
Cartridge Material	Working parts hardened and ground steel. External surfaces electroless nickel plated
Body Material	Bright drawn mild steel bar. Zinc plated and passivated
Mounting Position	Mount directly to the cylinder using steel pipe.
Weight	1.5 kg (3.3 lbs)
Seal Kit Number	SK924
Recommended Filtration Level	BS5540/4 Class 18/13 (25 micron nominal)
Operating Temp	-20°C to +90°C
Leakage	1.5 millilitres/min max
Nominal Viscosity Range	5 to 500 cSt

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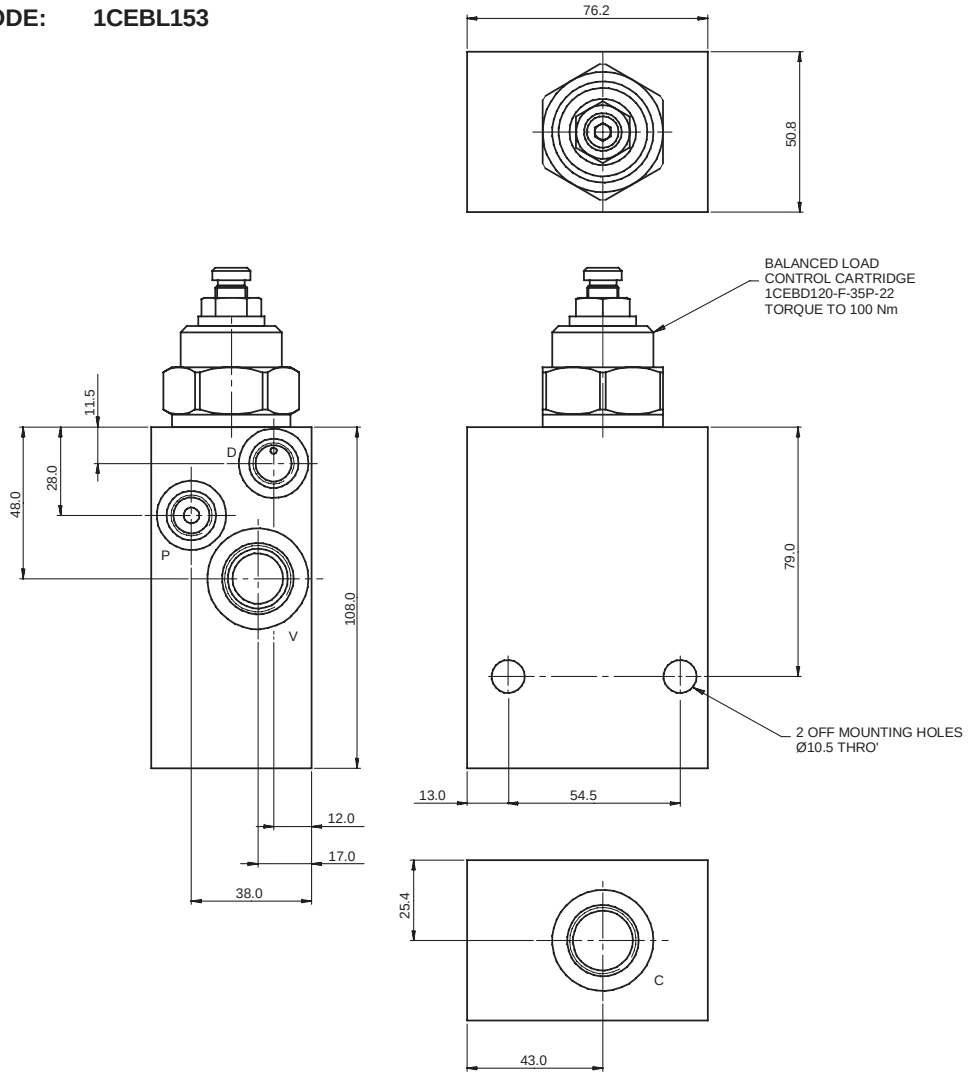
COMPLETE VALVE

BASIC CODE: 1CEBL153



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

Where measurements are critical request certified drawings

ORDERING CODE EXAMPLE

1CEBL153	F	4W	35	P

Basic Code

Adjustment Means
F = Screw Adjustment

Port Size
4W = 1/2" BSP Cylinder Port
1/2" BSP Valve Port
1/4" BSP Pilot Port/Drain Port

Pressure Range @ 4.8 l/min
35 = 70-350 bar. Std setting 350 bar
Std Setting made at 4.8 litres/min

Seals
P = Contains polyurethane and standard seal.