PILOT OPERATED CHECK VALVE
Model : CI06 ***
700 bar

Ref. No. D 51100
Release: 10 / 2023

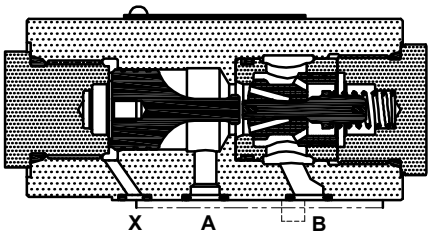
Description

Pilot operated Check valves model **CI06*** allow free flow in the direction from Port **A** to Port **B** and offer leakage free closure in opposite direction.
Reverse flow can be achieved by applying pilot pressure to their Port **X.**
The intensity of pilot pressure required to keep the valve open during reverse flow depends upon the valve model, pressure at Port **A** and pressure existing at the Port **B** when the reverse flow starts. Pilot pressure can be calculated using formulae given below.

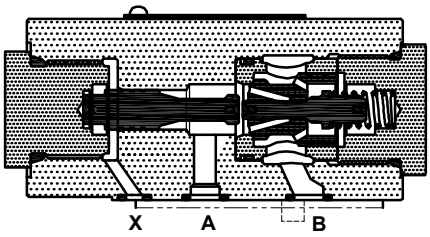
In most cases, smooth decompression and opening of the valve for flow from Port **B** to Port **A** can be effectively achieved by controlling pressure and flow to the Pilot Port **X**. However, in certain cases it is necessary to decompress the oil in the cylinder first before admitting the oil in the cylinder for the return stroke for smooth reversal.

Section

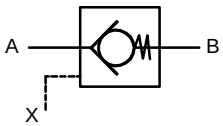
Body with A - Type piston



Body with B - Type piston



Hydraulic symbol



Technical specifications

Construction	:	Seat type valve, with decompression facility.		
Mounting style	:	Threaded port or subplate mounting.		
Mounting interface	:	Sub-plate mounting - Factory standard.		
		Threaded port body - Factory standard.		
Mounting position	:	Optional.		
Flow direction	:	Free flow from A to B.		
	:	Piloted flow from B to A.		
Cracking pressure	:	1 bar.		
Working pressure	:	700 bar for Ports A, B and X.		
Area ratios	:		**Type A**	**Type B**
		Pilot piston : Decomp. poppet	16 : 1	4 : 1
		Pilot piston : Main poppet	2 : 1	1 : 2
Hydraulic medium	:	Mineral oil.		
Temperature range	:	-20°C to + 80°C.		
Viscosity range	:	10 cSt to 380 cSt.		
Fluid cleanliness required	:	ISO 4406 20/18/15 or better.		
Max. flow handling capacity	:	30 l/min.		
Mass approx.	:	Threaded : 3.2 Kg		
		Subplate : 3.2 Kg.		

Formulae for Pilot pressure required to open the valve for flow from Port B to Port A

	Type A	**Type B**	where,
To open decompression spool	$>P_A + P_B/16 + 0.5$	$>P_A/1.5 + P_B/4 + 2$	P_A = Pressure at Port **A**.
To open the main poppet	$>P_A/2 + P_B/2 + 0.5$	$>2P_B - P_A + 2$	P_B = Pressure at Port **B** when the flow occurs.

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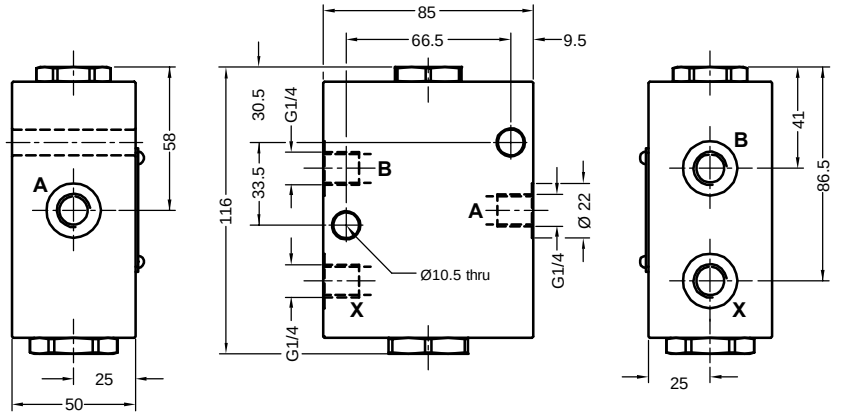
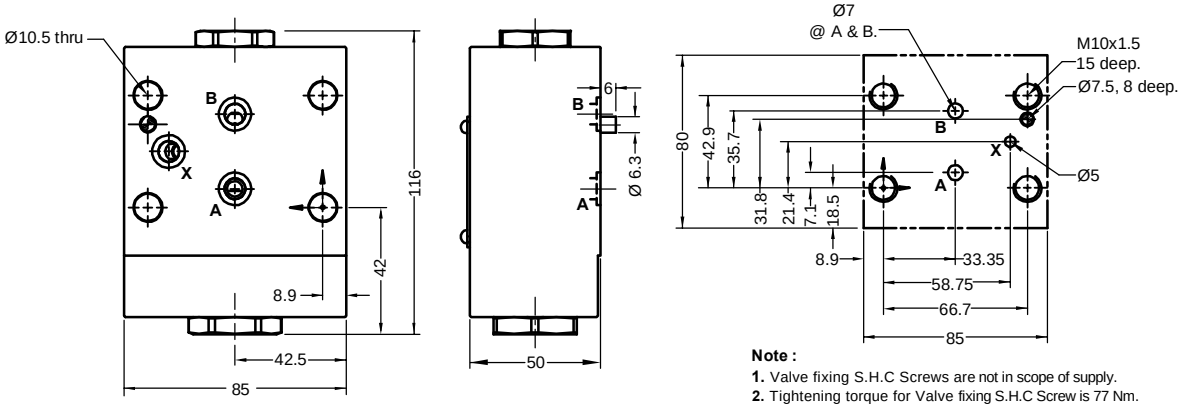
Unit dimensions

Dimensions in mm.

Threaded port body



Sub-plate mounting body

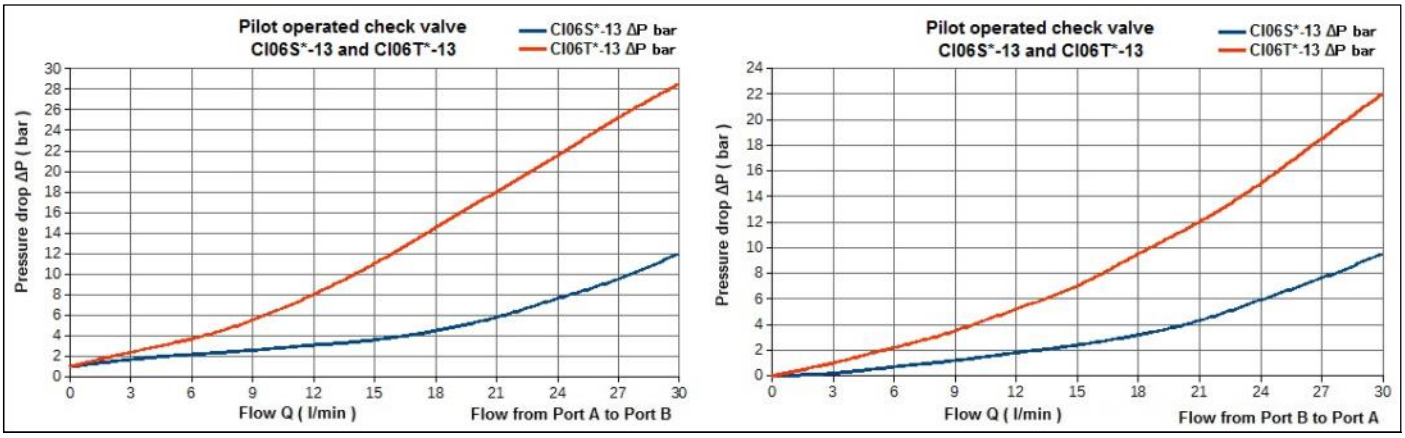


Note :

1. Valve fixing S.H.C Screws are not in scope of supply.

2. Tightening torque for Valve fixing S.H.C Screw is 77 Nm.

Performance graph



Ordering code

CI	06	T	A — 14

Pilot operated check valve internal drain

Port size		
Threaded body	Subplate mounting	Size
G1/4	Ø 7 max	**06**

Subplate mounting body	**S**
Threaded port body	**T**

Design code subjected to Change . installation dimensions remain same for design code 09 thru 19.

A	Pilot piston : Decomp poppet = 16:1 Pilot piston : Main poppet = 2:1
B	Pilot piston : Decomp poppet = 4:1 Pilot piston : Main poppet = 1:2