

Damcos™ DPCV-3

DPCV-3 - Double Pilot Operated Check Valve



General Description

The double pilot operated check valve is designed with Cetop R35H size 3 connections for use in vertical stacking manifold assemblies or on BRC actuator mounting blocks.

The function of the double pilot operated check valve in the hydraulic system is to hydraulically lock the piston on the

actuator and prevent the actuator from moving when it is required to be held stationary. The double pilot operated check valve is manufactured in brass for corrosion free marine service.

Operation

With the solenoid valve in the centre position both “A” and “B” ports are connected to tank (T) and both check valves are closed.

When pressure is applied to the “A” port the check valve in the “A” port opens and allows free flow of oil to the actuator “A” line. Simultaneously the pilot piston moves across and pushes the “B” port check valve open and allows the oil to flow freely to tank through the actuator “B” line.

The valve operates in a similar manner when the “B” port is pressurized.

Double pilot check valve are tested to ensure zero leakage, but care must be taken to ensure that hydraulic oil in the system is free from any foreign particles that may cause damage to the seats or the hydraulic sealing ring in the pilot piston.

Main Data

Max. working pressure	210 bar
Max. flow rate at 105 bar (through any line)	15 l/min.
Weight	0.9 kg
Hydraulic media	Acid-free hydraulic oil
Viscosity	Extreme: 15-200 cSt Running: 15-55 cSt
Filtration requirements	40 µm absolute or finer
Temperature range	-20°C to 80°C
Connection face	Cetop R35H size 3, DIN 24340

Materials

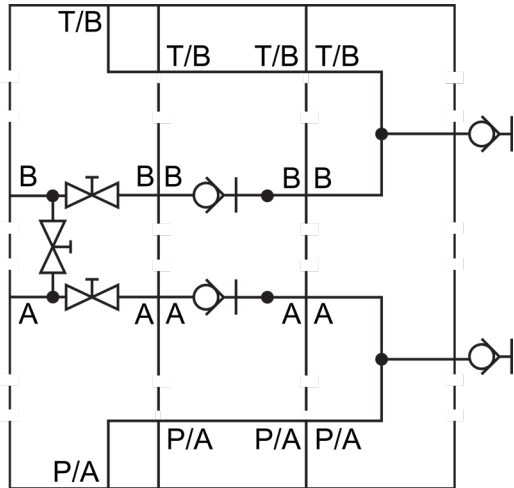
Housing	MS58 CuZn39Pb3
Pilot piston, seats, plug valve	ETG 100
Stop screws	MS58 CuZn39Pb3
Springs	Spring steel W. no. 1.0600
Seals	Perbunan/PTFE

Performance Characteristics

Typical performance with hydraulic oil at 21 cSt and 50°C:

- Check valve cracking pressure: 3 bar
- Pilot piston/check valve seat area ration: 3.5 : 1

Hydraulic Diagrams



Application example for CS-3 with DPCV and cross-over with de-air.

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