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.

Technical specification

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

Damcos® DPCV-3

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

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

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