

Parker Product Datasheet



Parker's P.O. check valve assemblies allow flow up to 150 lpm (40 gpm) with pressures up to 420 bar (6,000 psi). Return flow can be enabled by an external pilot supply, which shifts the internal poppet into an open position.

PART NUMBER: CPH104P

SEAL MATERIAL: D-Ring (Standard)

MAXIMUM FLOW RATE: 8 GAL/MIN, 30 L/MIN

CRACKING PRESSURE: 20 PSI, 1.4 BAR

PRODUCT OVERVIEW

Parker's reliable pilot piston style P.O. check valves are designed for critical applications where safety and load holding is required and flows from 19 to 150 lpm (5 to 40 gpm) and pressures up to 420 bar (6,000 psi) are needed. These valves are available with pilot supply to either the 1st port or 3rd port depending on circuit need, and are generally used in conjunction with linear actuators across several markets within mobile or industrial hydraulics, such as aerials, material handling, and construction where durable and low leak valves are necessary to keep the machinery and operators safe.

Markets:

- Aerial
- Construction
- Material Handling
- Miscellaneous Mobile

Features/Benefits:

- Spherical poppet for low leakage
- Hardened precision ground parts for durability
- “D”-Ring design eliminates back-up rings
- Optional sealed pilot piston

Applications:

- Load holding without fine metering

Additional Technical Insight:

Pilot operated check valves, also known as P.O. checks, are used to lock a cylinder in a holding position with minimal leakage or drift. P.O. check valves that can be opened to allow flow in the reverse direction with an external signal to the pilot port. The valves work best when used in conjunction with a control valve that vents the valve ports to tank when centered. Pilot pressure to open the checks for reverse flow is a ratio of the holding pressure, and are typically 3:1 or 4:1. A 3:1 ratio with a 3000psi load requires a 1000psi signal to the pilot port.

TECH SPECIFICATIONS

MAXIMUM OPERATING TEMPERATURE	200 °F
MAXIMUM OPERATING TEMPERATURE	93 °C
DIVISION	Hydraulic Systems Division
DIVISION	Hydraulic Valve Systems Division
MAXIMUM OPERATING PRESSURE	5000 psi
MAXIMUM OPERATING PRESSURE	350 bar
FLOW RATE	n/a
MINIMUM OPERATING TEMPERATURE	-37 °C
MINIMUM OPERATING TEMPERATURE	-35 °F
FOR FLUID TYPE	Synthetic Hydraulic Fluids
FOR FLUID TYPE	Mineral-based Hydraulic Fluids

BODY MATERIAL	n/a
SEAL MATERIAL	D-Ring (Standard)
WEIGHT	0.2 lb
WEIGHT	0.9 kg
OPERATING TEMPERATURE	-35 to 200 °F
OPERATING TEMPERATURE	-37 to 93 °C
MAXIMUM FLOW RATE	8 gal/min
MAXIMUM FLOW RATE	30 L/min
FUNCTION	Single Pilot to Open Check
ACTUATION TYPE	Pilot Operated
LEAK RATE	2 drops/min @ 5000 Psi (350 bar)
MAXIMUM KINEMATIC VISCOSITY	45-2000 SSU (6 to 420 cSt)
FILTER EFFICIENCY RATING	ISO 4406 18/16/13
FILTER EFFICIENCY RATING	SAE Class 4
CRACKING PRESSURE	1.4 bar
CRACKING PRESSURE	20 psi
FLOW DIRECTION	2-3 Free Flow
MAXIMUM INLET PRESSURE RATING	350 bar
MAXIMUM INLET PRESSURE RATING	5000 psi
VALVE MATERIAL	Steel (all parts)
VALVE MATERIAL	Hardened Steel (all operating parts)
PILOT PRESSURE RATIO	4:1
CAVITY SIZE	C10-3
INSTALLATION TORQUE	48 lb-ft
INSTALLATION TORQUE	65 Nm
PILOT LOCATION	1

