

Parker Product Datasheet



Capable of flows from 3.5 to 303 lpm (0.9 to 80 gpm) and pressure as high as 420 bar (6,000 psi), Parker's poppet and ball style check valves have a simple and robust design which are used to block flow in one direction, and allow flow in the opposite.

PART NUMBER: D02B2-1.0N
SEAL MATERIAL: Nitrile
MAXIMUM FLOW RATE: 21 GAL/Min, 80 L/MIN
CRACKING PRESSURE: 15 PSI, 1 BAR

PRODUCT OVERVIEW

Parker's robust poppet and ball style check valves are designed for the most demanding applications with flows up to 303 lpm (80 gpm) and pressures as high as 420 bar (6,000 psi) across several markets such as agriculture, construction, and industrial manufacturing. These valves feature a hardened poppet or ball and seat design that keeps leakage as low as 5 drops per minute or less while lengthening service life due to improved wear characteristics, and the wide selection of crack pressures available ensures easy system integration with reliable performance.

Markets:

- Agriculture
- Construction Equipment
- Material Handling Equipment
- Miscellaneous Industrial
- Miscellaneous Manufacturing
- Miscellaneous Mobile

Features/Benefits:

- Wide range of body sizes, crack pressures, and flow capacities
- Low leakage – less than 5 drops/min
- Simple construction – extremely cost effective
- High tolerance for contamination
- All external parts zinc plated

Applications:

- Load holding
- Component isolation
- Backflow prevention
- Anti-cavitation
- Markets where cleanliness is an issue

Additional Technical Insight:

Parker ball type check valves are designed with a ball held against a seat by a spring. This prevents flow in one direction at all times, but permits flow in the opposite direction when the pressure is high enough to lift the ball off its seat. The pressure at which reverse flow is permitted is called the cracking pressure. By using a hardened ball and finished seat, leakage rates are less than 5 drops per minute in the blocking direction.

TECH SPECIFICATIONS

MAXIMUM OPERATING TEMPERATURE	250 °F
MAXIMUM OPERATING TEMPERATURE	121 °C
DIVISION	Hydraulic Valve Systems Division
DIVISION	Hydraulic Valve Systems Division Europe
MAXIMUM OPERATING PRESSURE	6000 psi
MAXIMUM OPERATING PRESSURE	420 bar
FLOW RATE	45 L/min @ 100 Psi (7 bar) Nominal
FLOW RATE	12 gal/min @ 100 Psi (7 bar) Nominal

MINIMUM OPERATING TEMPERATURE	-34 °C
MINIMUM OPERATING TEMPERATURE	-30 °F
FOR FLUID TYPE	Synthetic Hydraulic Fluids
FOR FLUID TYPE	Mineral-based Hydraulic Fluids
BODY MATERIAL	N/A
SEAL MATERIAL	Nitrile
WEIGHT	0.05 kg
WEIGHT	0.11 lb
OPERATING TEMPERATURE	-34 to 121 °C
OPERATING TEMPERATURE	-30 to 250 °F
MAXIMUM FLOW RATE	21 gal/min
MAXIMUM FLOW RATE	80 L/min
FUNCTION	Standard Check
ACTUATION TYPE	Pressure Sensing
LEAK RATE	< 3 drops/min @ 6000 Psi (420 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	15 psi
CRACKING PRESSURE	1 bar
FLOW DIRECTION	1-2 Free Flow
FLOW DIRECTION	2-1 Checked
MAXIMUM INLET PRESSURE RATING	420 bar
MAXIMUM INLET PRESSURE RATING	6000 psi

VALVE MATERIAL	Steel (all parts)
VALVE MATERIAL	Hardened Steel (all operating parts)
CAVITY SIZE	C08-2
INSTALLATION TORQUE	40 Nm
INSTALLATION TORQUE	30 lb-ft