

Parker Product Datasheet



Pressure compensated priority flow control valves maintain constant flow regardless of changes to inlet pressure for flows up to 90 lpm (24 gpm) and pressures up to 420 bar (6000 psi); excess flow is diverted once the priority flow requirement is met.

PART NUMBER: J1A125ZN

SEAL MATERIAL: Nitrile

MAXIMUM FLOW RATE: 40 GAL/MIN, 150 L/MIN

ADJUSTMENT MECHANISM: Screw

FLOW RATE DISPLAY RANGE: N/A

STANDARD FLOW RATE SETTING: 6.6 GAL/MIN@11.9 GAL/MIN Inlet, 25 L/MIN@45 L/MIN Inlet

PRODUCT OVERVIEW

Parker's family of pressure compensated priority flow control valves feature a proven design that allows for a reliable and repeatable flow compensation curve throughout a wide pressure range while ensuring priority flow is met. These valves can operate with hydraulic system flows as high as 90 lpm and pressures up to 420 bar with a selection of adjustment and tamper-proof options. Parker's pressure compensated priority flow control valves are ideal for steering, brake, or actuator control applications within a broad range of markets, such as the agriculture, construction, material handling, industrial, and oil & gas markets.

Markets:

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

- Miscellaneous Mobile
- Oil & Gas

Features/Benefits:

- Fine adjustments
- Reverse flow function
- Hardened working parts for maximum durability
- Tamperproof options available
- All external parts zinc plated

Applications:

- Steering applications
- Actuator speed control
- Meter-in circuits

Additional Technical Insight:

Priority style pressure compensator flow control valves maintain constant priority flow to one leg of a circuit regardless of any changes in load or inlet pressure. Once the priority flow is satisfied, any excess flow may be used in other parts of the circuit. The valve consists of a control orifice housed within a spring biased compensator spool. This orifice may be fixed or adjustable. The priority port is normally open while the bypass port is normally closed. As flow enters the inlet port of the cartridge, it passes through the control orifice. A pressure differential is created across the compensator spool. If the inlet flow exceeds the setting of the valve, the force produced by this pressure differential exceeds the spring force and shifts the compensator spool; opening up the bypass port, and bypassing the excess flow. If the load pressure at the bypass port is greater than the load pressure at the priority port, the compensator spool will further shift restricting the priority flow to that of the valve setting. However, caution should be taken if the priority gets blocked so that no flow can pass through the control orifice, the compensator spool will shift, blocking the bypass port and allowing inlet pressure to go to full system relief pressure. It is common to place an external relief valve downstream of the priority flow port to prevent a no flow condition.

TECH SPECIFICATIONS

MAXIMUM OPERATING TEMPERATURE	+121 °C
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MAXIMUM OPERATING TEMPERATURE	+250 °F
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DIVISION	Hydraulic Valve Systems Division
DIVISION	Hydraulic Valve Systems Division Europe
MAXIMUM OPERATING PRESSURE	5000 psi
MAXIMUM OPERATING PRESSURE	350 bar
FLOW RATE	150 L/min
FLOW RATE	40 gal/min
MINIMUM OPERATING TEMPERATURE	-30 °F
MINIMUM OPERATING TEMPERATURE	-34 °C
FOR FLUID TYPE	Mineral-based or synthetic hydraulic fluids
CONNECTION TYPE	N/A
CONNECTION SIZE	N/A
BODY MATERIAL	N/A
SEAL MATERIAL	Nitrile
WEIGHT	1 lb
WEIGHT	0.45 kg
OPERATING TEMPERATURE	-34 to +121 °C
OPERATING TEMPERATURE	-30 to +250 °F
MAXIMUM FLOW RATE	40 gal/min
MAXIMUM FLOW RATE	150 L/min
FUNCTION	Flow Regulator Valve
ACTUATION TYPE	Pressure Compensated
OPERATION TYPE	Manually operated
CONFIGURATION	Priority Flow
MAXIMUM KINEMATIC VISCOSITY	45-2000 SSU (6 to 420 cSt)
FILTER EFFICIENCY RATING	ISO 4406 18/16/13, SAE Class 4

MAXIMUM INLET PRESSURE RATING	5000 psi
MAXIMUM INLET PRESSURE RATING	350 bar
ADJUSTMENT MECHANISM	Screw
VALVE MATERIAL	All parts steel. All operating parts hardened steel
FLOW RATE ACCURACY	N/A
FLOW RATE DISPLAY RANGE	N/A L/min This is the regulated flow range (min - max)
CAVITY SIZE	3A
INSTALLATION TORQUE	63 lb-ft
INSTALLATION TORQUE	85 Nm
STANDARD FLOW RATE SETTING	25 L/MIN@45 L/MIN Inlet L/min
STANDARD FLOW RATE SETTING	6.6 GAL/MIN@11.9 GAL/MIN Inlet gal/min
MAXIMUM REGULATED FLOW RATE	90 L/min
MAXIMUM REGULATED FLOW RATE	24 gal/min
MAXIMUM PRIORITY FLOW	N/A L/min