

Parker Product Datasheet



With a high-definition position feedback system and an excellent price-performance ratio, Parker's pilot operated proportional directional control valves series D*1FC offer numerous competitive advantages for users - optionally with EtherCAT® interface.

PART NUMBER: D31FCB31DC4NB70
FLOW RATE: 90 L/Min
CONNECTION TYPE: 6 + PE + enable
SEAL MATERIAL: NBR
PORT CONNECTION: NG10 / CETOP 05
FLOW DIRECTION: 0-10 V = P-B
PILOT INLET / DRAIN LOCATIONS: Internal/internal
SIGNAL INPUT: 0-±10 V
VALVE OPTION: Standard
SPOOL CODE: B31

PRODUCT OVERVIEW

The pilot operated proportional directional control valves series D*1FC is characterized by a high-precision position feedback system for improved process accuracy and simple parametrization .

The D*1FC series is equipped with a modern, high-definition position feedback system. The parameters of the valve electronics can be accessed where required via the free, user-friendly ProPxD software. The integrated diagnostics function also makes optimal configuration easier.

D*1FC with EtherCAT

These valves are actuated and monitored by the EtherCAT® interface. Actual value (spool position), temperature, operating hours and different error messages are available as diagnostic signals. The valve parameters are factory set and can be adapted with the Parker ProPxD software via the parametrizing interface.

In addition to the fieldbus communication, the valves provide the range of functions of the standard version including E2analogue command signal and diagnostic spare stroke. Thus they can be operated independent of the fieldbus control, particularly during commissioning and maintenance.

Markets:

- Industrial
- Power generation
- Machine tools
- Rubber & tire processing

Features/Benefits:

- High-quality mechanical design - pilot valve is based on the tried and tested D1FB control valve with spool/sleeve design and guarantees pilot control with high precision
- Progressive flow characteristics - allows sensitive adjustment of flow rate
- Low hysteresis - ensures high repeatability and thus improved process and product accuracy
- High dynamics - suitable for demanding open loop applications
- High flow capacity - optimum efficiency in relation to valve size
- Parametrizable via Parker ProPxD soft - quick and easy adjustment of parameters
- Excellent price-performance ratio - fast return of investment
- Short delivery time - no storage necessary
- Centre position monitoring optional
- A-regeneration optional - for new energy saving circuits with differential cylinders
- Switchable hybrid version optional - can switch between regenerative mode and standard mode at any time
- Version with EtherCAT® interface, 2x M12x1 connector 4-Pin (EtherCAT® In and EtherCAT® Out)

Applications:

- General presses
- Tire presses
- Machine tool
- Injection molding

TECH SPECIFICATIONS

DIVISION	Hydraulic Valve Systems Division Europe
MAXIMUM OPERATING PRESSURE	350 bar
FLOW RATE	90 L/min
FOR FLUID TYPE	Hydraulic Oil according to DIN 51524 ... 535
FOR FLUID TYPE	Water-Glycol
BODY MATERIAL	Cast Iron
PRODUCT SERIES	Proportional DC Valve
SEAL MATERIAL	NBR
WEIGHT	9 kg
MAXIMUM FLOW RATE	n/a
MOUNTING TYPE	Subplate
FUNCTION	3-way
ACTUATION TYPE	Proportional
ACTUATION TYPE	Solenoid
OPERATION TYPE	Pilot
RESPONSE TIME	2.9 ms
LEAK RATE	200 ml/min
MOUNTING POSITION	Unrestricted
ELECTRONICS TYPE	Onboard
MAXIMUM AMBIENT TEMPERATURE	60 °C
MINIMUM AMBIENT TEMPERATURE	-20 °C
MAXIMUM KINEMATIC VISCOSITY	400 cSt
MINIMUM KINEMATIC VISCOSITY	20 cSt

INGRESS PROTECTION RATING	IP65 in accordance with EN 60529
FILTER EFFICIENCY RATING	ISO 4406 18/16/13
HYSTERESIS	≤ 0.1 %
MOUNTING STYLE	ISO 4401
MOUNTING STYLE	CETOP RP121
MOUNTING STYLE	DIN 24340
MOUNTING STYLE	NFPA
PRESSURE DIFFERENTIAL	5 bar
POWER SUPPLY VOLTAGE	18 to 30 VDC electric shut-off at < 17, ripple < 5 % eff., surge free
MINIMUM PILOT PRESSURE	20 bar
VIBRATION RESISTANCE	10 Sinus 5...2000 Hz acc. IEC 68-2-610 (RMS) Random noise 20...2000 Hz acc. IEC 68-2-3615 Shock acc. IEC 68-2-27 g
MAXIMUM PILOT PRESSURE	350 bar
VARIATION OF OPENING POINT	set to 10 % command signal