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Series D*1FP Servo Proportional Control Valves



ENGINEERING YOUR SUCCESS.

A Perfect Match

The highly reliable D1FP voice coil servo proportional valve is now matched to our high flow main-stage sections to produce an industry leading product line.

In addition to our direct-drive D03 and D05 DFP valves, we now have four pilot-operated models ranging in size from D05 to D10.

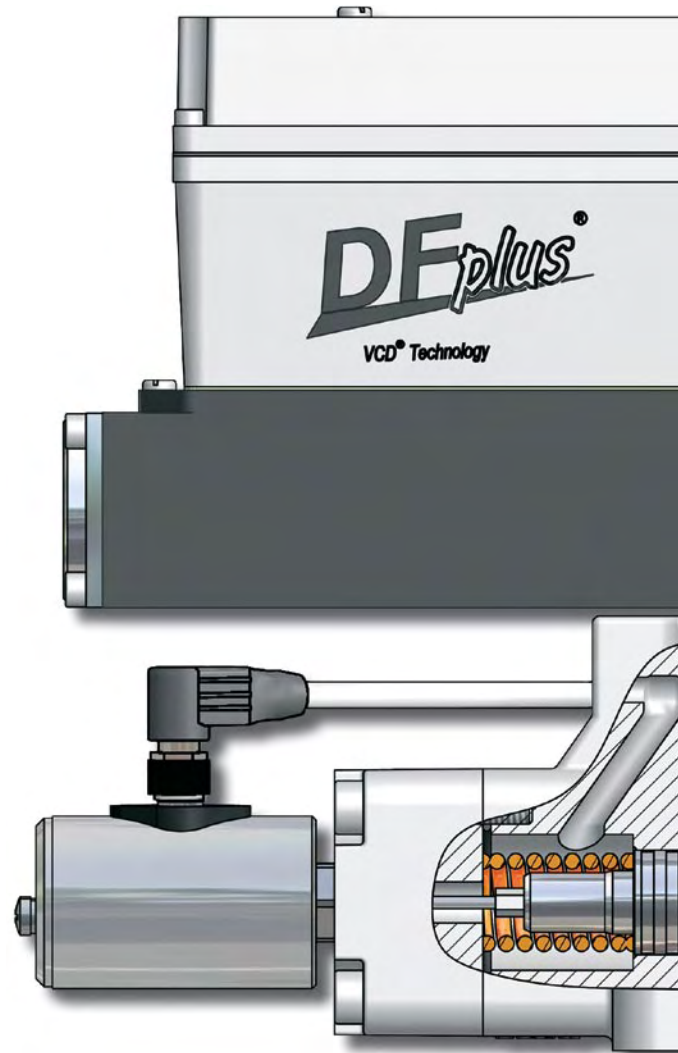
The DFP product line is designed to provide optimal control in demanding closed loop applications.

Technical Features

- ▶ Flow up to 1000 LPM (264 GPM) @ 5 Bar (73 PSI) ΔP per metering land
- ▶ VCD Voice coil provides high spool shift force
- ▶ Defined power-down position
- ▶ Accepts a voltage (+/- 10 VDC) or current (4-20ma) input signal
- ▶ Available in overlap or zerolap spool configurations

Customer Benefits

- ▶ High reliability with IP67 environmental protection and CE electromagnetic compliance
- ▶ Reduced setup time with sealed, integrated electronics
- ▶ Optimal system control even with high pressure drop
- ▶ Design flexibility with spool, connector and command input options



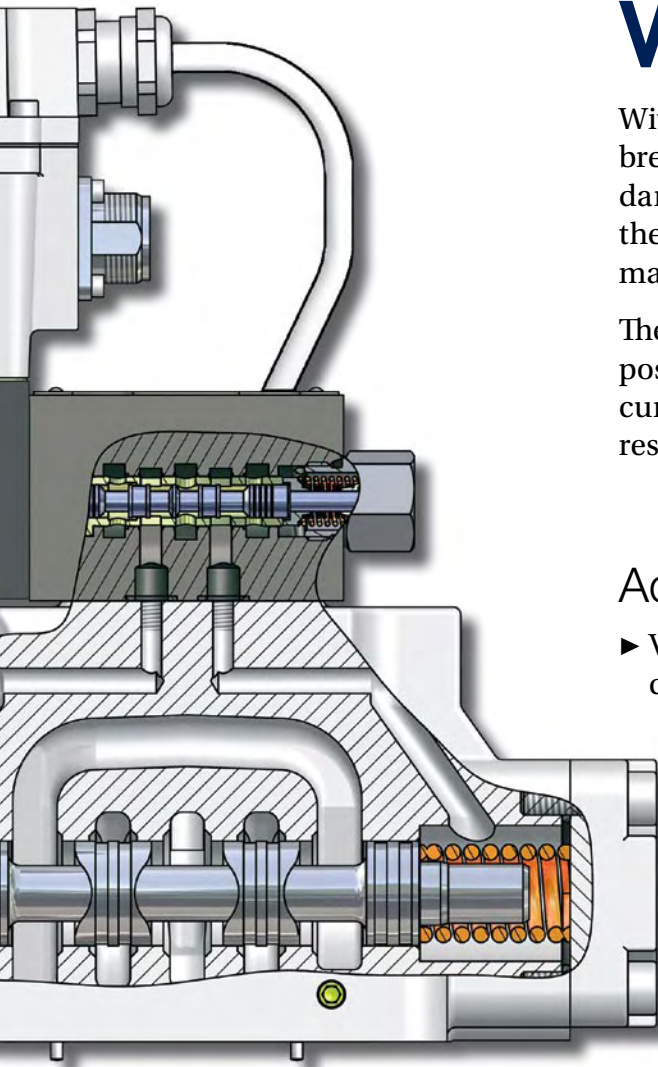
Specifications

Type	Size	Nominal flow ¹⁾ LPM (GPM)	Recomm max. LPM (G
D31FP	NG10	120 (32)	250 ()
D41FP	NG16	200 (53)	600 ()
D81/91FP	NG25	400 (106)	1000 ()
D111FP	NG32	1000 (264)	3000 ()

¹⁾ at $\Delta p = 5$ Bar (73 PSI) per metering edge

²⁾ at $\pm 5\%$ command signal and 210 Bar (3046 PSI) pilot pressure





VCD® Technology

With VCD technology, Parker has achieved a successful breakthrough in the drive technology. In contrast to standard proportional solenoid drives, this technology actuates the spool by using a movable coil over a fixed permanent magnet. The coil is mechanically connected with the spool.

The friction-free actuator drives the spool to the desired position. The direction of the movement depends on the current direction. The actual position is controlled by a high resolution feedback system.

Added Benefits

- ▶ VCD design provides high spool force and wider clearances for better contamination tolerance
- ▶ Sealed electronic package provides consistent performance from valve to valve with nothing to adjust
- ▶ High dynamic pilot and main-stage feedback provide precise control in the toughest of closed loop applications

Nominal flow (GPM)	Step response ms	Frequency response ²⁾ Hz	
		Amplitude	Phase
166)	10	128	118
159)	13	95	95
264)	19	95	90
793)	45	40	75



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