



Bulletin HY14-2597-B1/US

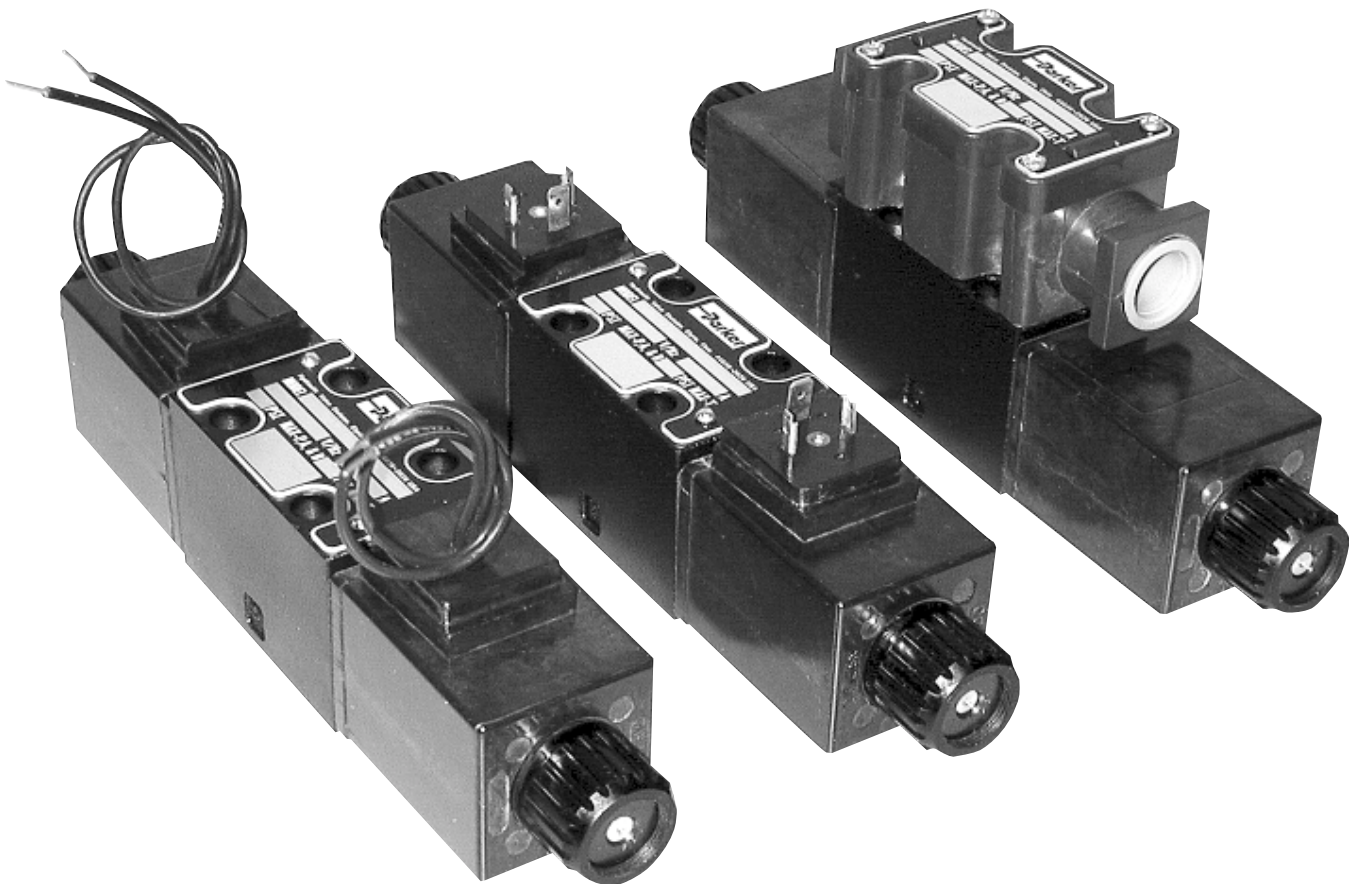
## Proportional Directional Control Valves

### Series D1FW, NG06 (03) and D3FW, NG10 (05)

Effective: June 1, 2001

Supersedes: Bulletin 2597-B1 dated March 27, 2000

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**Series D1FW and D3FW**

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 **WARNING**

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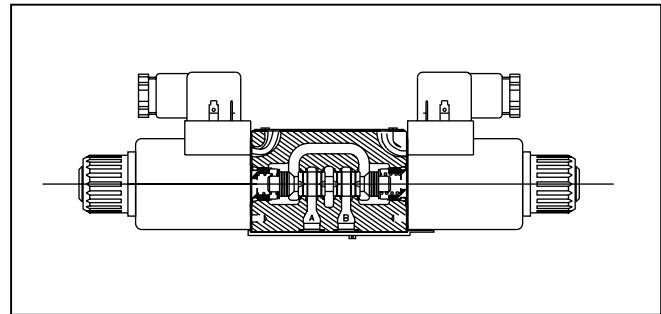
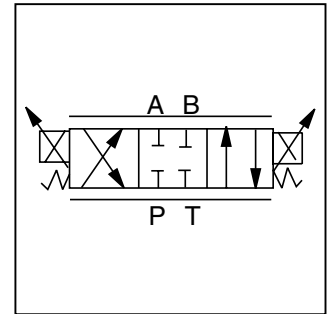
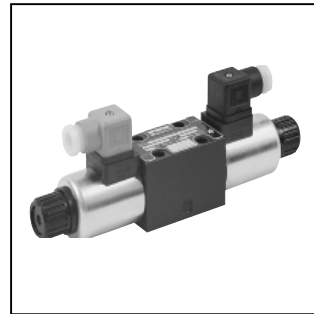
### General Description

The D\*FW series direct operated proportional directional control solenoid valves provide variable flow output in response to variable current input. Valves are available in sizes NG06 (CETOP3) and NG10 (CETOP 5).

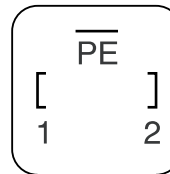
Typical applications include reproducible control of actuator speed in rapid/slow speed profiling, and smooth acceleration and deceleration performance.

### Features

- Standard DIN/ISO/CETOP/NFPA interfaces.
- Conduit box, lead wire and DIN connector options for coil wire connections.
- Low leakage.
- Progressive flow characteristics for improved low flow resolution.
- Spring centered spool.
- Wide selection of spool options and flow capacity.
- Custom configurations available to meet specific OEM customer requirements.
- Manual overrides.



### Wiring D\*FW — Solenoid Coil



- 1 = coil connection
- 2 = coil connection
- PE = ground potential

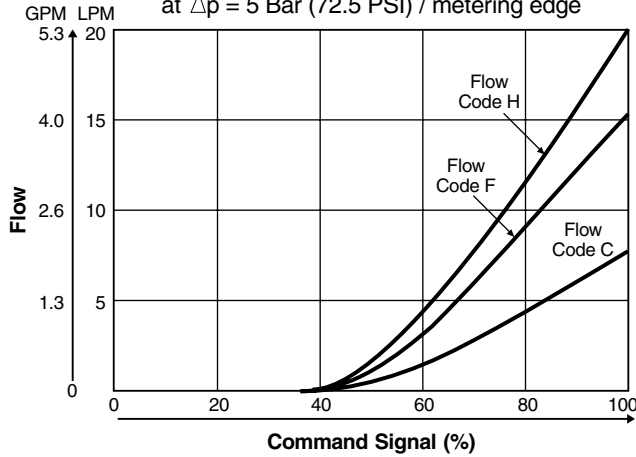
### Specifications

Interface DIN (NFPA/ISO/CETOP)		NG06 (03)			NG10 (05)	
<b>Flow Rating</b> @10 Bar (150 PSI) Δp (P→A, B→T) (spool options up to)	LPM (GPM)	20 (5.3)			60 (15.9)	
<b>Maximum Flow</b> (refer to operating limits curves)	LPM (GPM)	47 (12.5)			170 (45)	
<b>Step Response</b>	ms	100			165	
<b>Weight</b>	kg. (lbs.)	2.5 (5.5)			6.8 (15)	
<b>Recommended Dither – 1% of rated current</b>		8% @ 100 Hz			8% @ 70 Hz	
<b>Solenoid Order Code</b>		<b>J</b>	<b>K</b>	<b>M</b>	<b>K</b>	
Nominal Resistance	ohms	24	6	3.3	4	
Nominal Current	amps	0.9	1.8	2.5	2.5	
Nominal Voltage	voltage	24	12	9	12	
<b>Mating Connectors – Solenoid (DIN 43650)</b> (optionally included with valve: see Ordering Information, Solenoid Accessory code “P”)		Part #692914 (Black) Part #692915 (Gray)				
<b>Hysteresis</b>	%	<8			<b>Fluid Viscosity, Recommended</b>	
<b>Repeatability</b>	%	<2			80 – 1000 SSU	
<b>Max. Operating Pressure</b> Port P, A, B <sup>(1)</sup> Bar (PSI) Port T	315 (4500) 35 (500)	<b>Fluid Temperature, Recommended</b>			0°C to +60°C (+32°F to +140°F)	
		<b>Environmental Protection Class</b>			NEMA 1 (IP54)	
<b>Fluid Cleanliness Level</b>	ISO Class 16/13	<b>Ambient Operating Temperature</b>			-20°C to +60°C (-4°F to +140°F)	

(1) Consult factory for 345 Bar (5000 PSI) applications.

**D1FW Flow Characteristics**

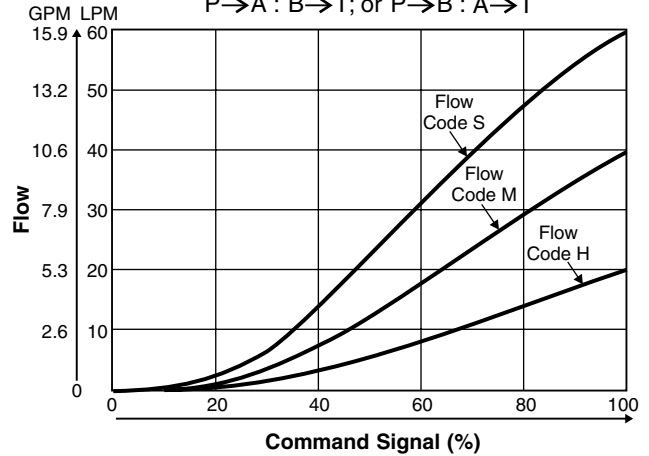
at  $\Delta p = 5 \text{ Bar (72.5 PSI)}$  / metering edge



**D3FW Flow Characteristics**

at  $\Delta p = 5 \text{ Bar (72.5 PSI)}$  / metering edge

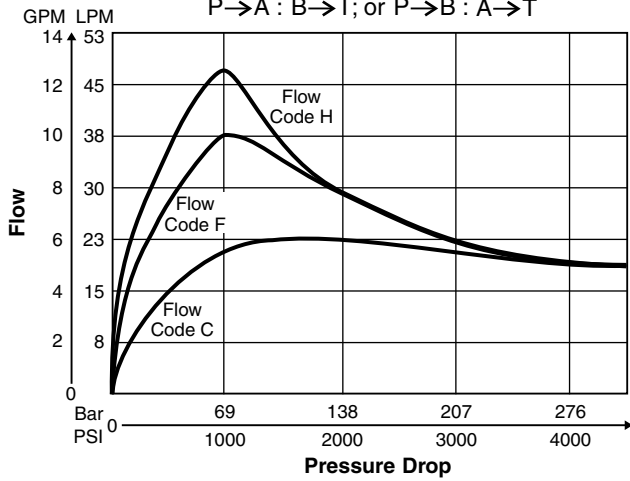
P→A : B→T; or P→B : A→T



**D1FW Operating Limits**

at 100% Nominal Current

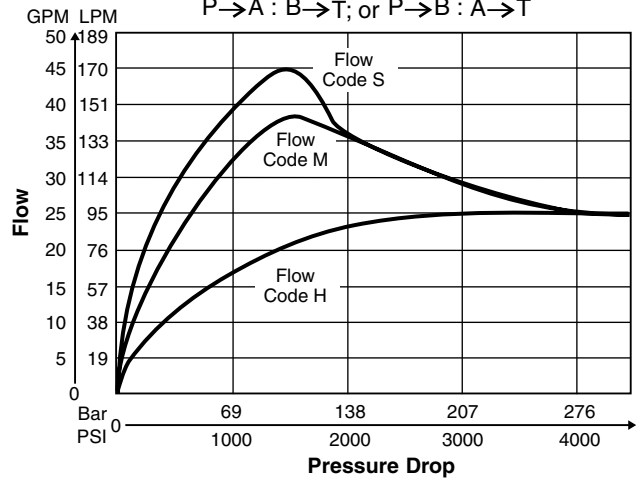
P→A : B→T; or P→B : A→T



**D3FW Operating Limits**

at 100% Nominal Current

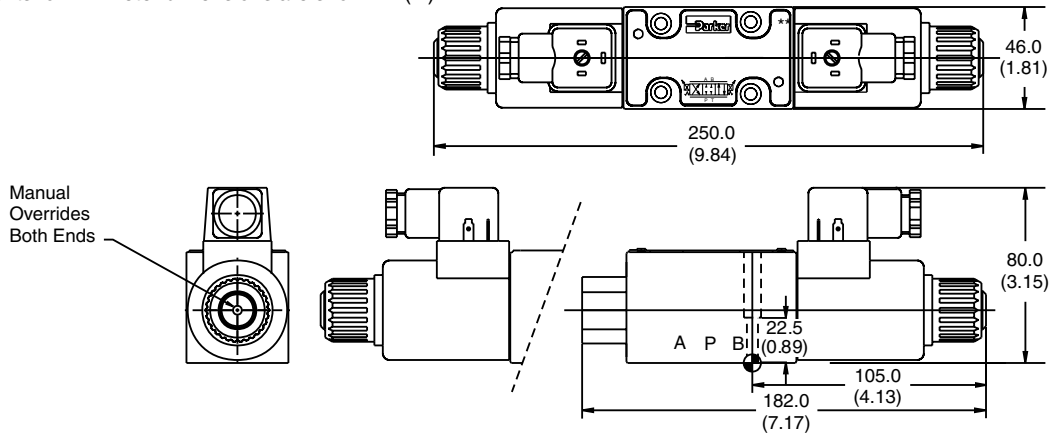
P→A : B→T; or P→B : A→T



**Dimensions**

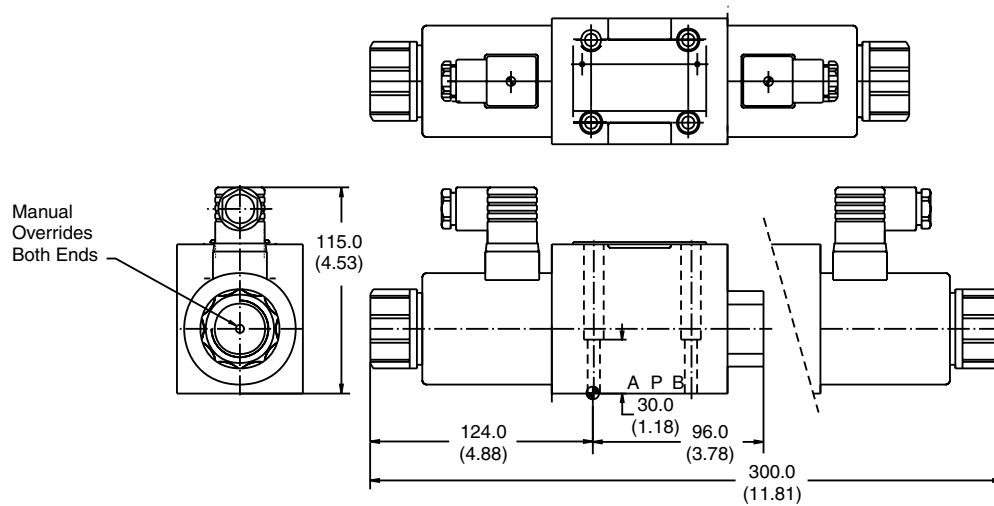
**D1FW with Hirschmann Connectors**

(Overall dimensions are the same for both can and overmolded coils. Can coils shown.)  
Inch equivalents for millimeter dimensions are shown in (\*\*)



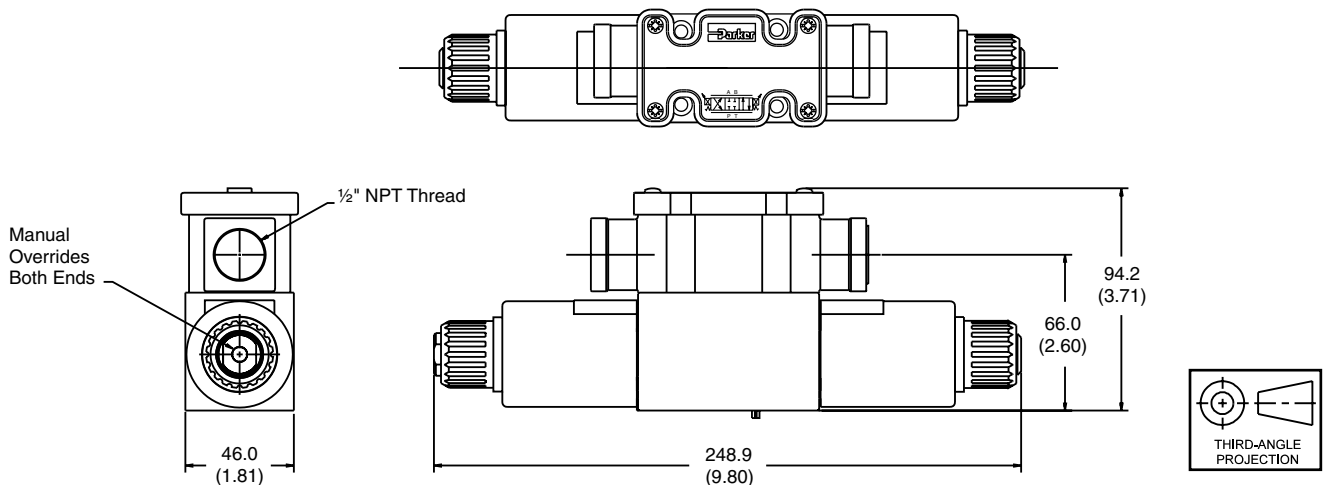
**D3FW with Hirschmann Connectors**

Inch equivalents for millimeter dimensions are shown in (\*\*)



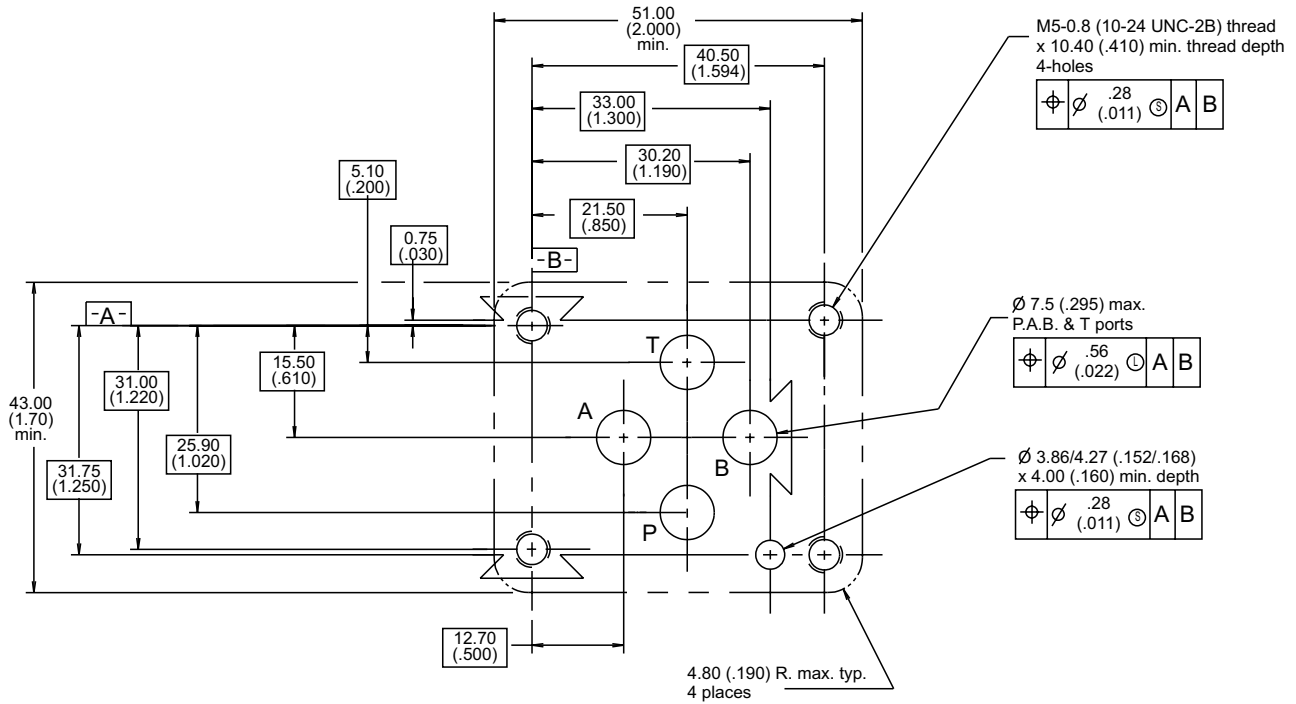
**D1FW with Conduit Box**

(Overall dimensions are the same for both can and overmolded coils. Can coils shown.)  
Inch equivalents for millimeter dimensions are shown in (\*\*)



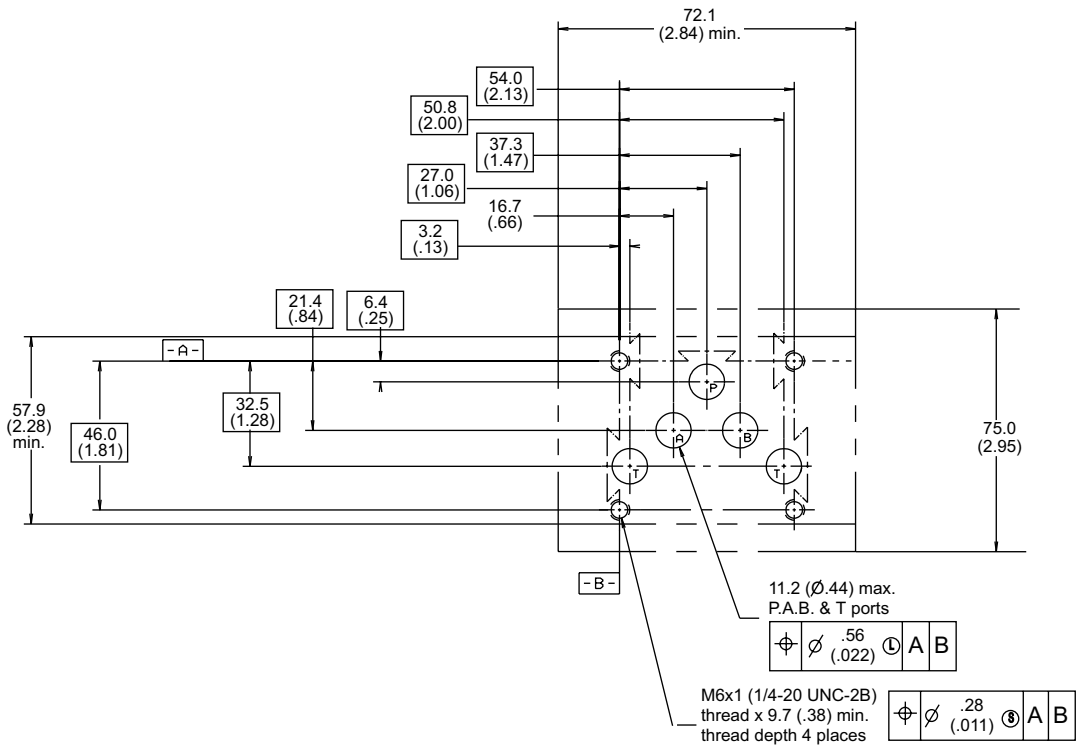
**Size NG6 (NFPA/ISO/CETOP 03)**

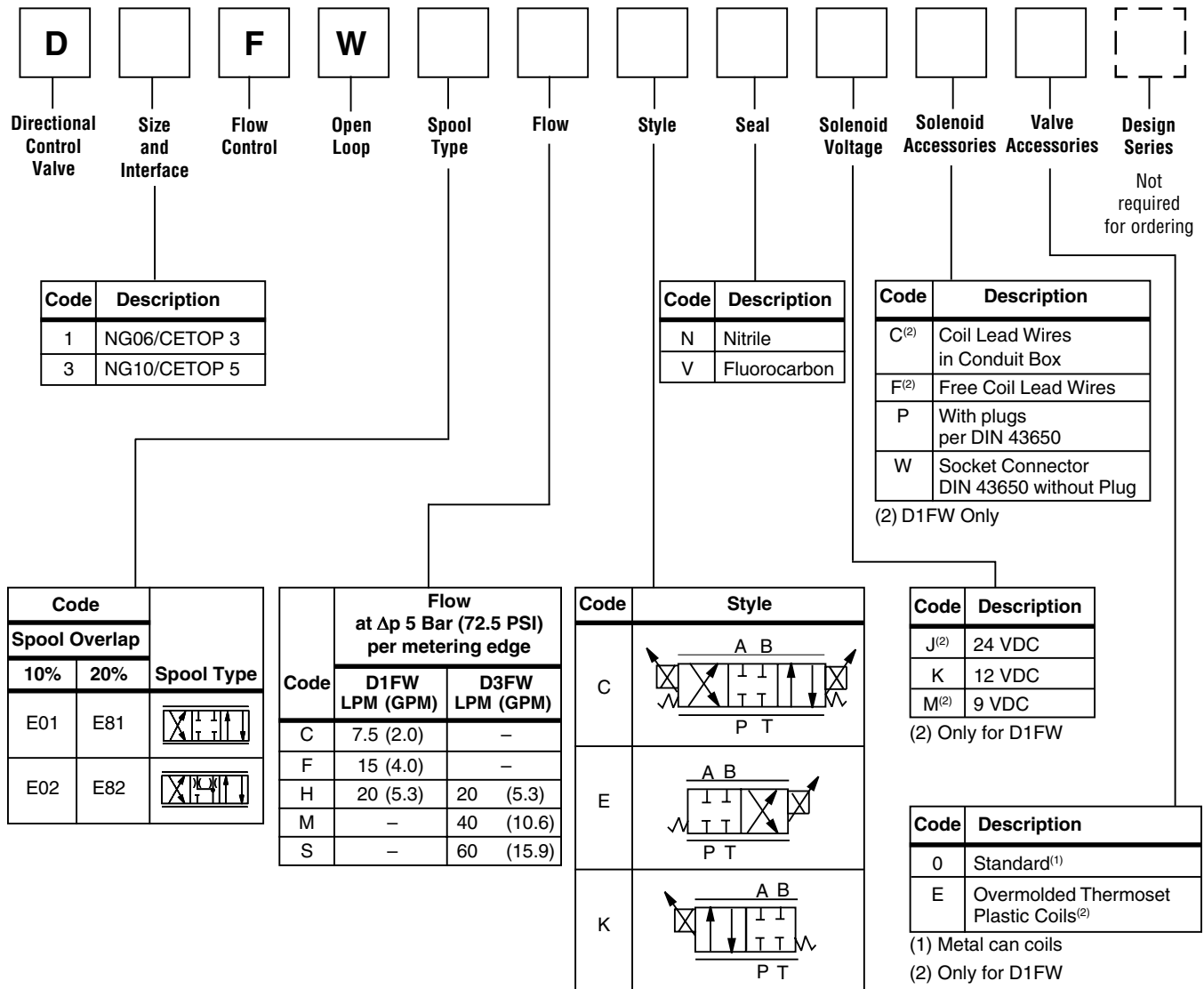
Inch equivalents for millimeter dimensions are shown in (\*\*)



**Size NG10 (NFPA/ISO/CETOP 05)**

Inch equivalents for millimeter dimensions are shown in (\*\*)





**Weight:**

NG6	2.5 kg (5.5 lbs.)
NG10	6.8 kg (15.0 lbs.)

**Bolt Kits:**

**NG06/CETOP 3**

- BK209 (4) 10-24 X 1.25"
- BK375 (4) M5 X 30mm

**NG10/CETOP 5**

- BK98 (4) 1/4-20 X 1.625"
- BK385 (4) M6 X 40mm

**Our Specialty.....**

Custom spool configurations for OEM's.  
 Contact your local Parker representative with your requirements.