



4/3- and 4/2- way Directional Control Valves  
Model: 4DE10 with Wet Pin AC or DC Solenoids

ENGINEERING 1/4

Y02101/07.06

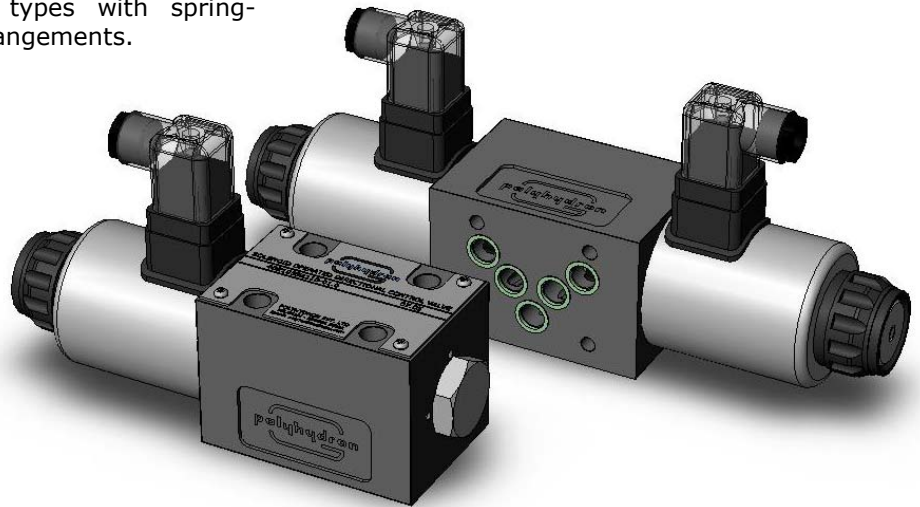
Size 10 (D 05)

315 bar

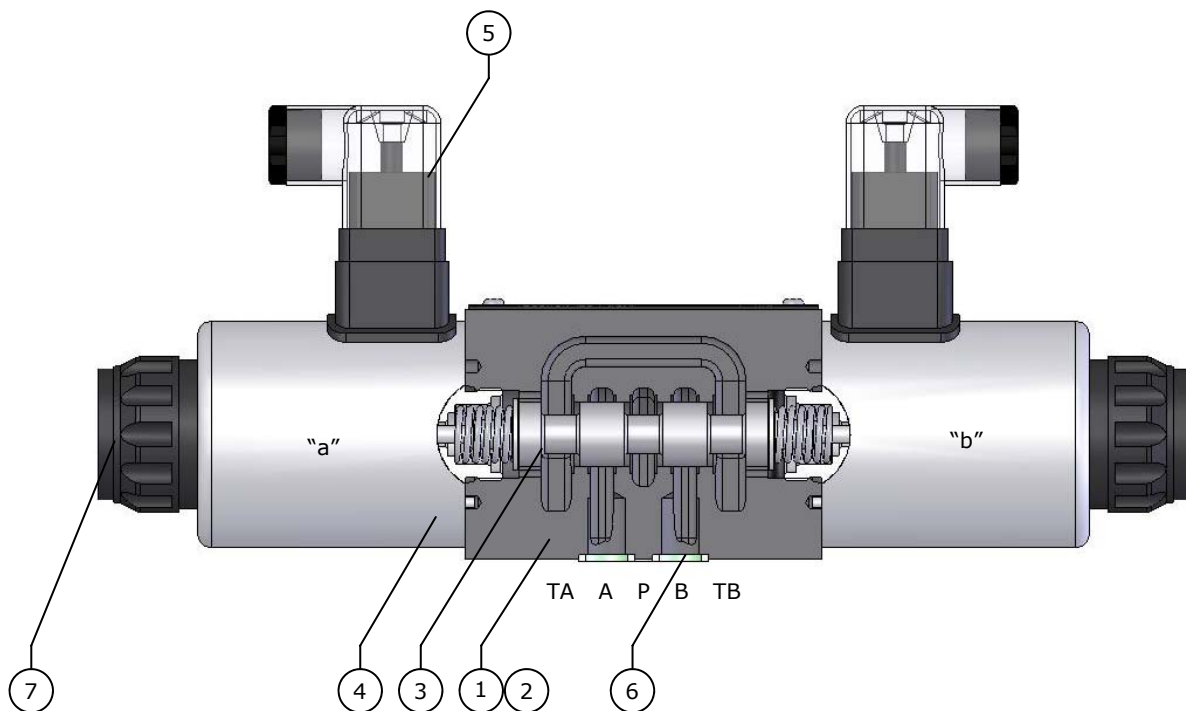
120lpm

### Description

4-port, spool type, solenoid operated, directional control valves with wet armature AC or DC coils and wide variety of spool types with spring-centered and spring-offset arrangements.



### Features



1. Five chamber body and spool design to facilitate high flow.
2. Conforms to ISO4401-5, NFPA T3.5.1M R1 and ANSI B93-7 D 05 interface.
3. Available in 52 standard, interchangeable spool configurations.
4. Removable wet-armature AC and DC solenoids for quick replacement and conversions. Moulded solenoid coils to protect against moisture and ingress of dust.
5. Individual solenoid plug-in connectors with indicator lights to ISO 4400 and DIN 43650.
6. Special R-rings for high extrusion resistance. Increased stability under high dynamic condition.
7. Override for operation of valve without electrical power.

*Note on solenoid identification:  
Solenoid "a" is close to Port "A" and Solenoid "b" is close to Port "B" for a direct operated valve.*



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315 bar

120lpm

**Technical data**

**General**

Weight		AC	DC
Valve with 1 solenoid	kg	4.2	4.3
Valve with 2 solenoids	kg	5.7	5.8

**Hydraulic**

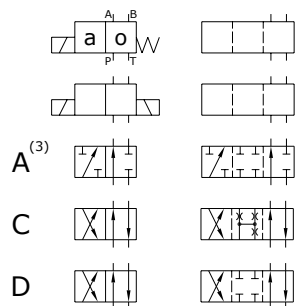
Nominal Pressure			
Ports P, A and B	bar	315	
Port T	bar	175	
Maximum Flow	lpm	120	
Flow Area			
Spool Q, A/B → T, position "0"		6%	5.9mm <sup>2</sup>
Spool R, B → P, position "b"		50%	49.3mm <sup>2</sup>
Spool V, A/B → T, position "0"		12%	11.8mm <sup>2</sup>
P → A/B, position "0"		10%	9.9mm <sup>2</sup>
Spool W, A/B → T, position "0"		3%	3.0mm <sup>2</sup>
Others			>98.0mm <sup>2</sup>
Hydraulic Fluid		Mineral Oil	
Fluid Temperature			
NBR	°C	-30 to 80°C	
FKM	°C	-20 to 80°C	
Maximum degree of fluid contamination		Class 18/15 according to ISO 4406 Filter β <sub>10</sub> ≥ 75	

**Electrical**

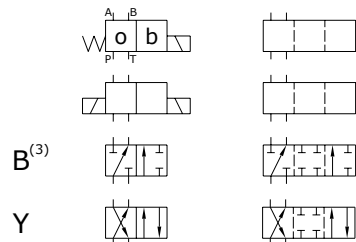
Power Requirement	W	35	
Duty Cycle		Continuous	
Shifting Time			
ON	ms	60	
OFF	ms	30	
Insulation		IP 65	

**Spool Types**

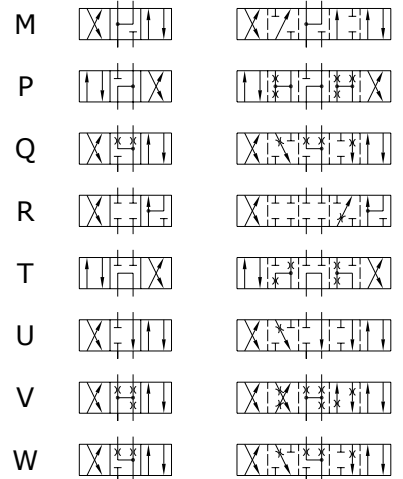
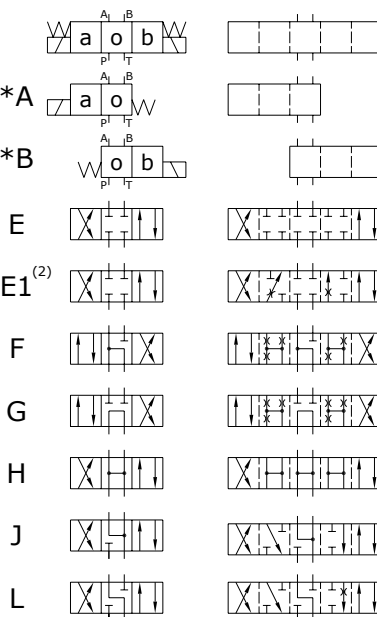
4/2 Way Valve with "0" and "a" positions



4/2 Way Valve with "0" and "b" positions



4/3 Way and 4/2<sup>(1)</sup> Way Valve



**Note:**

<sup>(1)</sup> When ordering a spool with only two positions "o" and "a" or "o" and "b", specify the desired position "A" or "B" after the spool code.  
 Example: E Spool with "o" and "a" position—4DE10EA...

<sup>(2)</sup> Please check the possibility of cylinder intensification

<sup>(3)</sup> For spool type A and B. Port T must be used as drain line



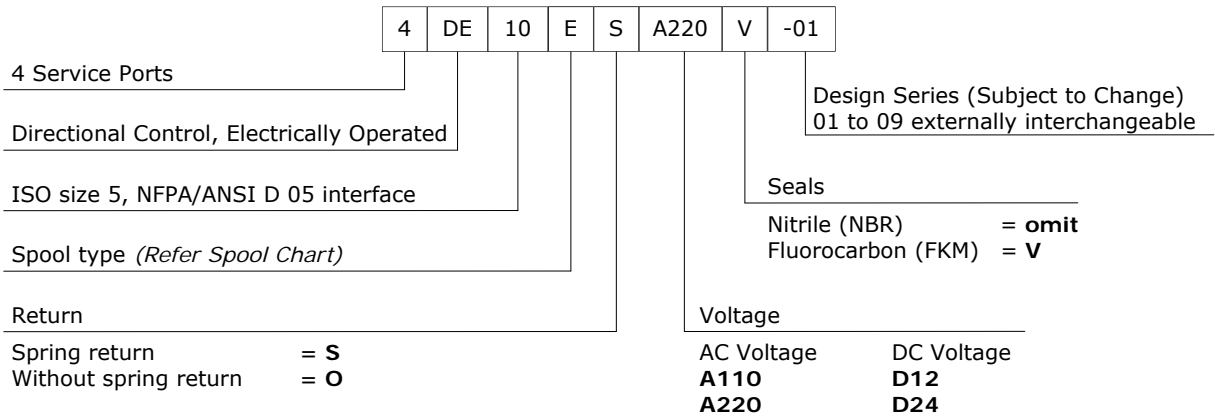
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**Model: 4DE10 with Wet Pin AC or DC Solenoids**

ENGINEERING 3/4

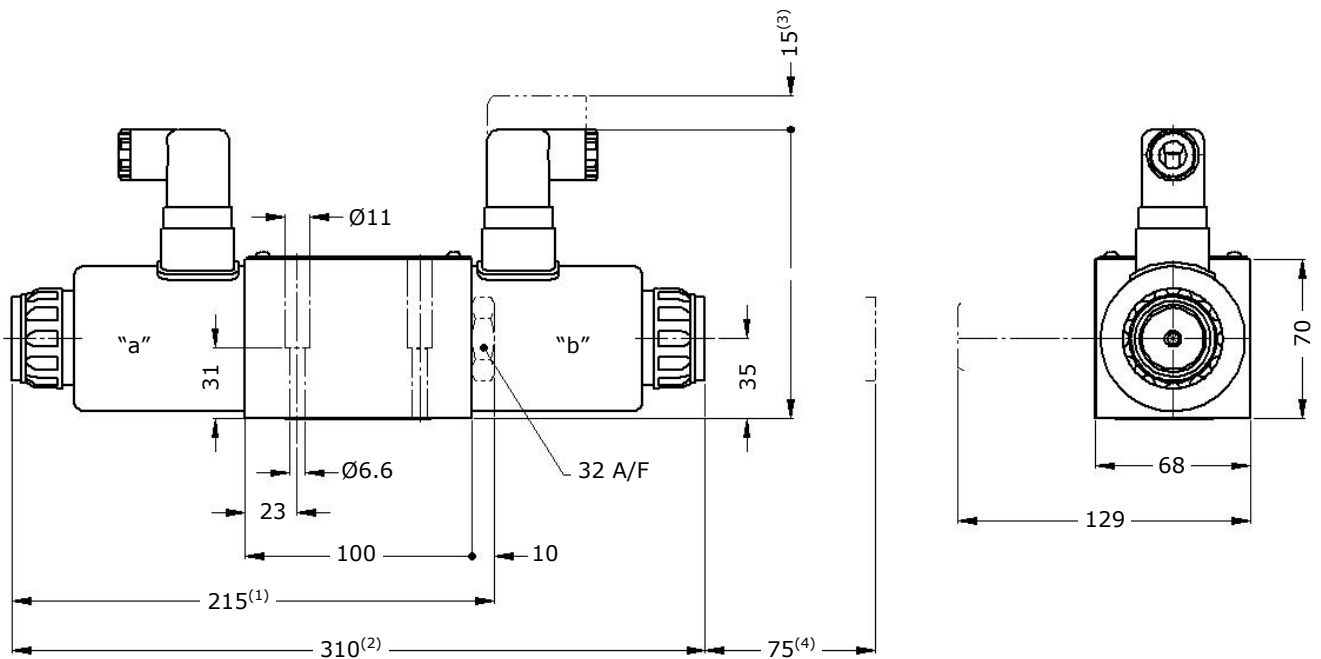
Size 10 (D 05)      315 bar      120lpm

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**Ordering Code**



**Installation**

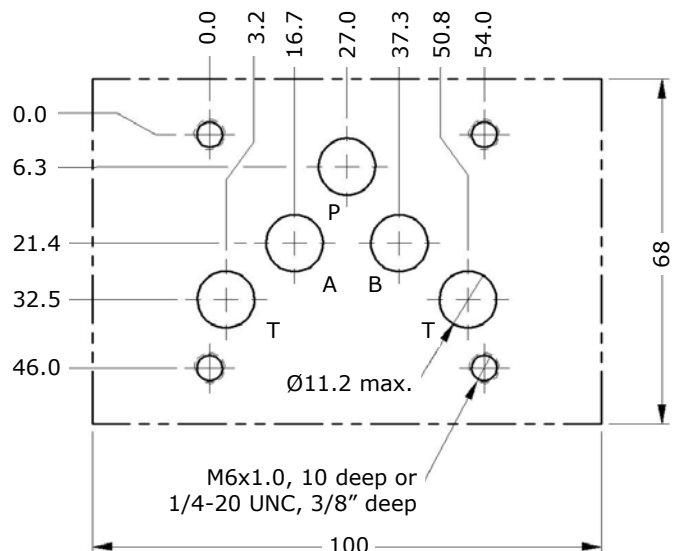
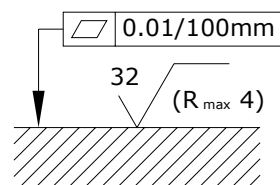


**Note:**

- (1) Length of valve with 1 solenoid
- (2) Length of valve with 2 solenoids
- (3) Space required to remove plug-in connector
- (4) Space required to remove solenoid

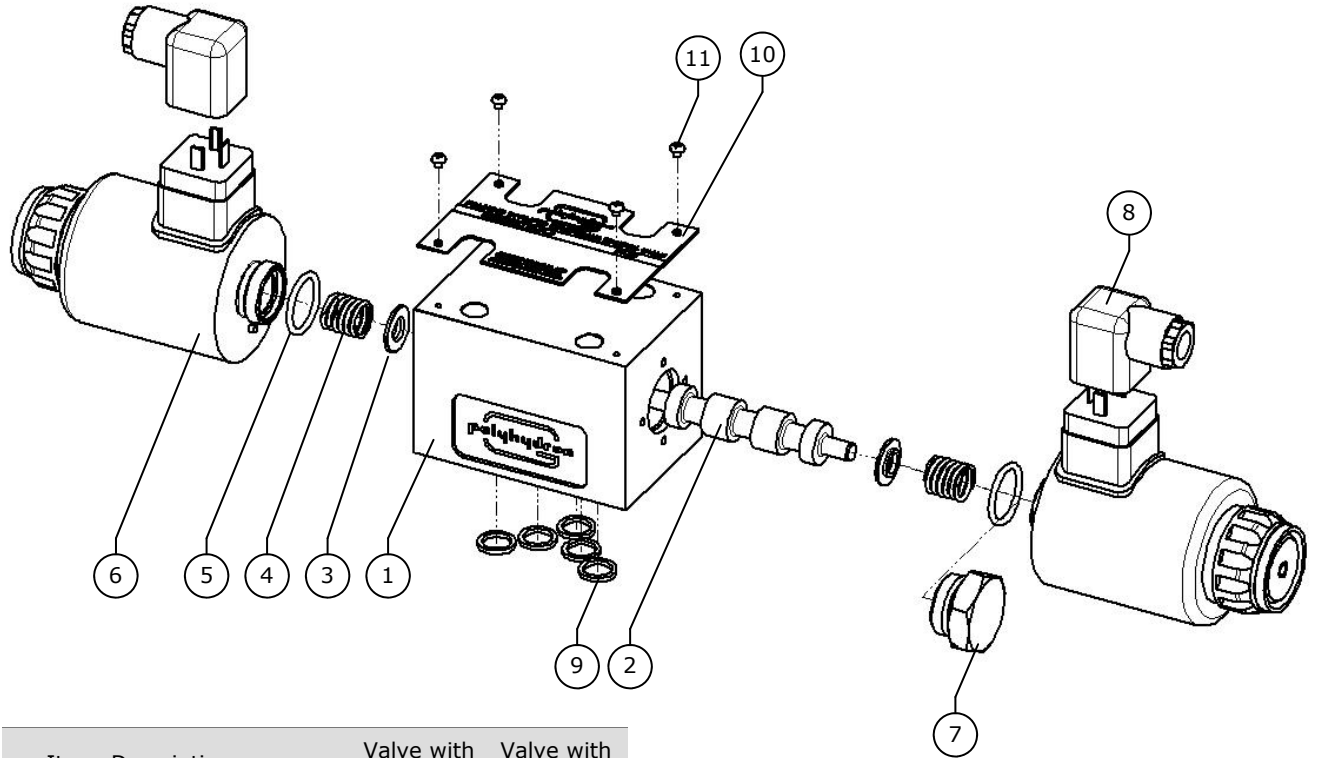
**Valve Mounting Bolts:**

M6 x 40 mm or 1/4-20 UNC x 1.1/2"  
 Tightening Torque 15.5 Nm  
 Mounting Hardware not included in scope of supply





Spares



Item	Description	Valve with 1 solenoid	Valve with 2 solenoids
1	Valve Body	1	1
2	Spool	1	1
3	Spring Pad	2	2
4	Spring	2	2
*	5 O-ring 21.9 x 2.62	2	2
6	Solenoid Coil	1	2
7	Plug	1	0
*	8 Plug-in connector	1	2
*	9 R-ring ( Alternately use O-ring 12 x 2)	5	5
10	Label	1	1
11	Screw M3	4	4

\* Recommended Spares