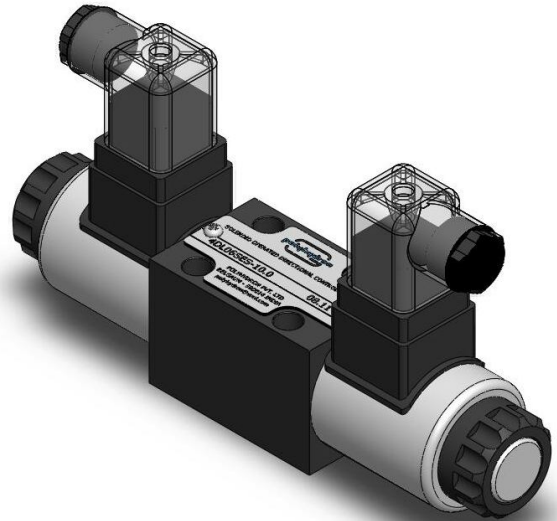
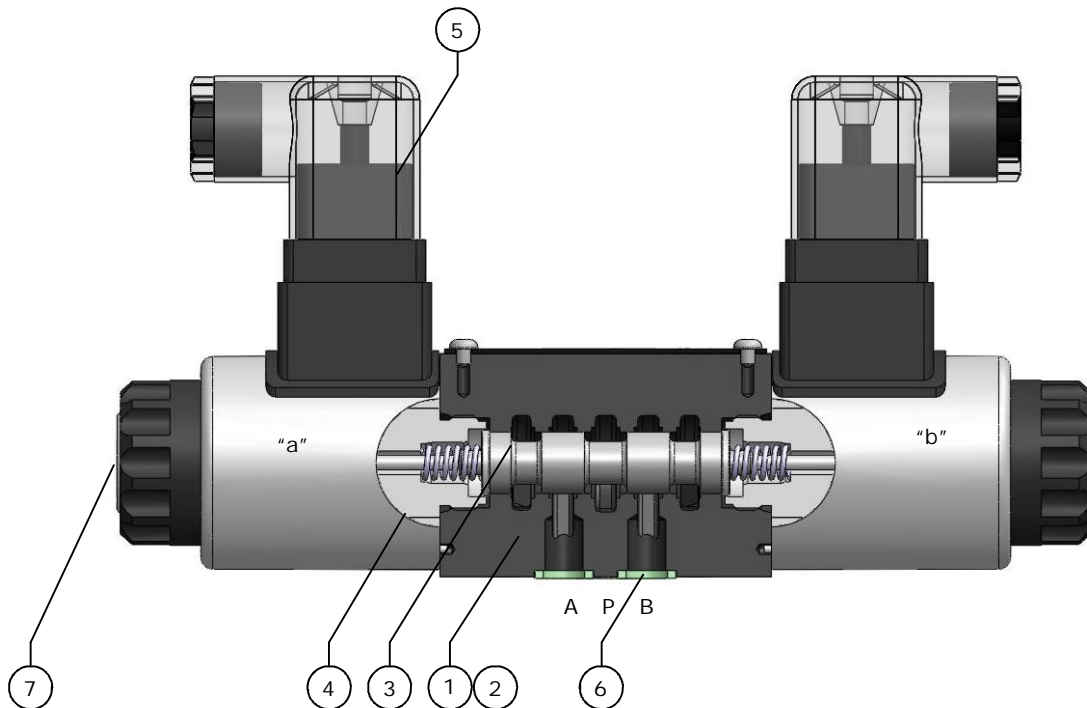


Description

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.*

Technical data

General

Weight		AC	DC
Valve with 1 solenoid	kg		
Valve with 2 solenoids	kg		

Hydraulic

Nominal Pressure			
Ports P, A and B	bar	350	
Port T	bar	210	
Maximum Flow	lpm	60	
Flow Area			
Spool Q, A/B → T, position "0"		6%	
Spool R, B → P, position "b"		50%	
Spool V, A/B → T, position "0"		12%	
P → A/B, position "0"		10%	
Spool W, A/B → T, position "0"		3%	
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 ₁₀ ≥ 75	

Electrical

Power Requirement	W	30
Duty Cycle		Continuous
Shifting Time		
ON	ms	45ms
OFF	ms	40ms
Insulation		IP 65

Spool Types

4/2 Way Valve with "o" and "a" positions	4/3 Way and 4/2 ⁽¹⁾ Way Valve	M		
		P		
	*A	Q		
A ⁽³⁾	*B	R		
C	E	T		
D	E ⁽²⁾	U		
4/2 Way Valve with "o" and "b" positions	F	V		
	G	W		
	H			
B ⁽³⁾	J			
Y	L			

Note:

⁽¹⁾ When ordering a spool with only two positions "o" and "a" or "o" and "b", specify the desired position "A" or "B" in model code.

⁽²⁾ Please check the possibility of cylinder intensification

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

Example: E Spool with "o" and "a" position—4DE06EA220A-01

Ordering Code

4 DE 06 E S A220 V -01

4 Service Ports

Design Series (Subject to Change)

Directional Control, Electrically Operated

ISO size 3, NFPA/ANSI D 03 interface

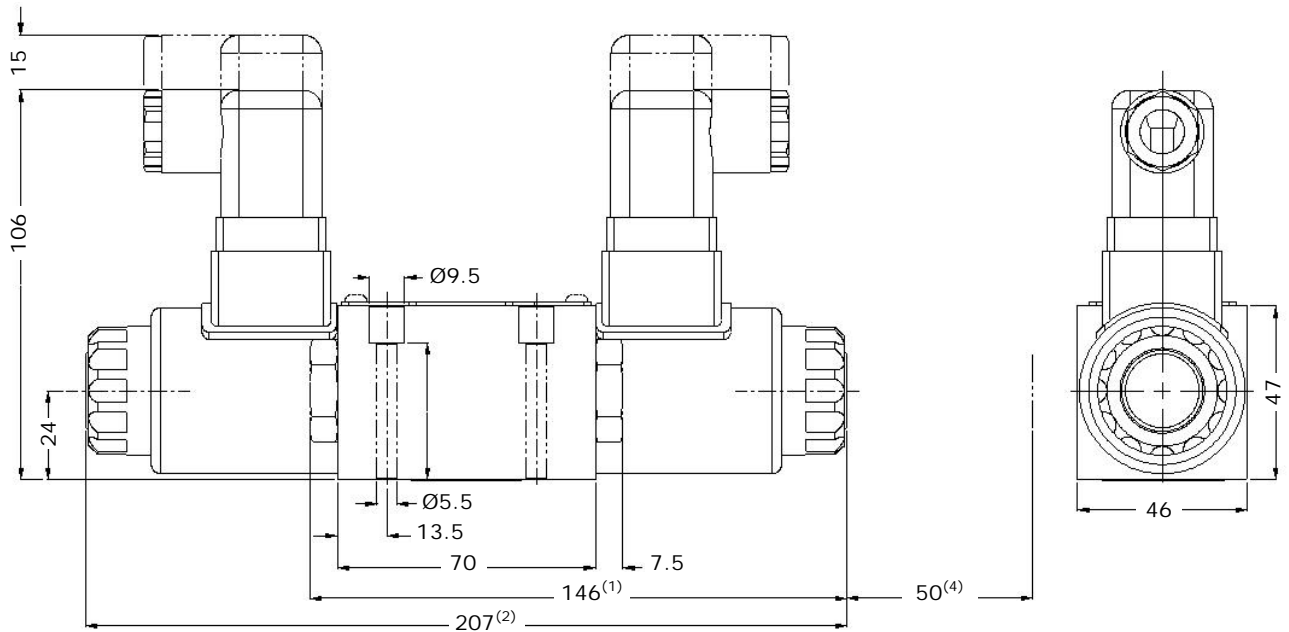
Spool type (Refer Spool Chart)

Seals	
Omit	Nitrile (NBR)
V	Fluorocarbon (FKM)

Spring Return	S
Detent	D
Without spring return	O

Coil Voltage	
A110	110V AC, 50-60Hz
A220	220V AC, 50-60Hz
D12	12V DC
D24	24V DC

Installation



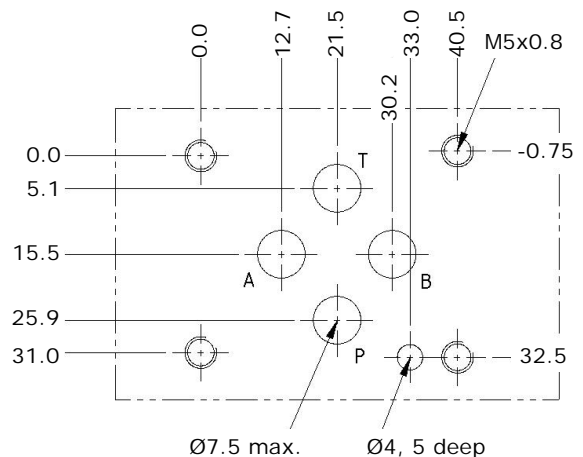
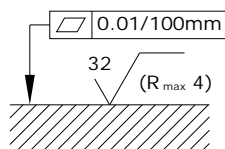
Note:

- (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

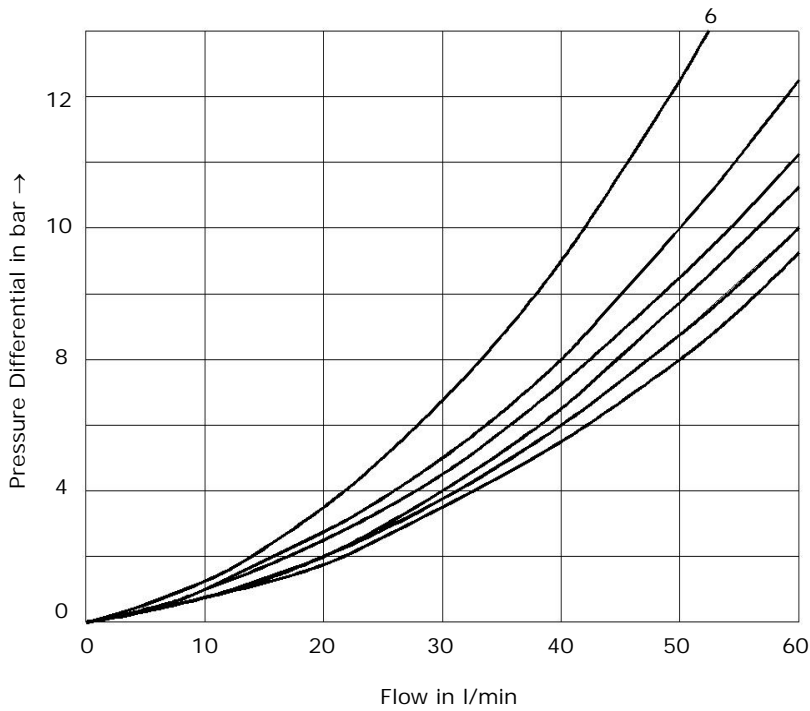
Valve Mounting Bolts:

M5 x 45 mm or #10-24 UNC x 1.3/4"
Tightening Torque 9.0 Nm
Mounting Hardware not included in scope of supply

Surface Condition of Mounting Surface



Characteristic Curves



Spool Type	Direction of Flow				
	P→A	P→B	A→T	B→T	P→T
A	3	3	-	-	-
B	3	3	-	-	-
C	3	3	4	1	-
D	3	3	4	1	-
E	2	2	4	4	-
F	2	2	2	2	-
G	6	6	6	6	5
H	2	2	1	1	3
J	2	2	1	1	-
L	2	2	1	4	-
M	2	2	4	4	-
P	2	2	2	2	-

Pressure differential measured with ISO VG46 oil at 40°C ±10°C