

WE Series Directional Control Valves ISO4401 Size 03

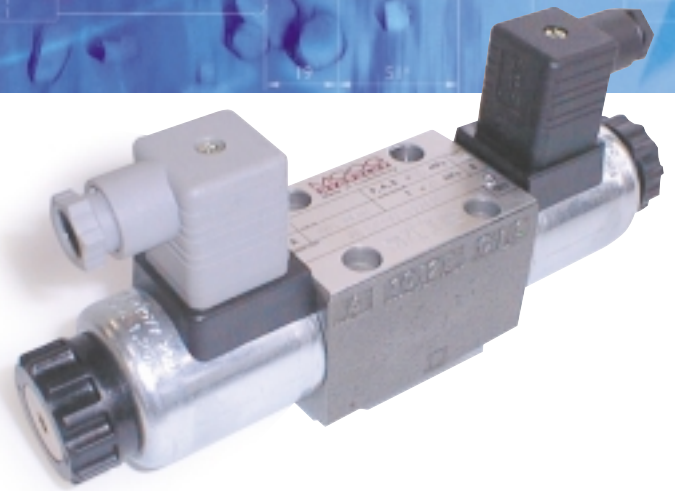
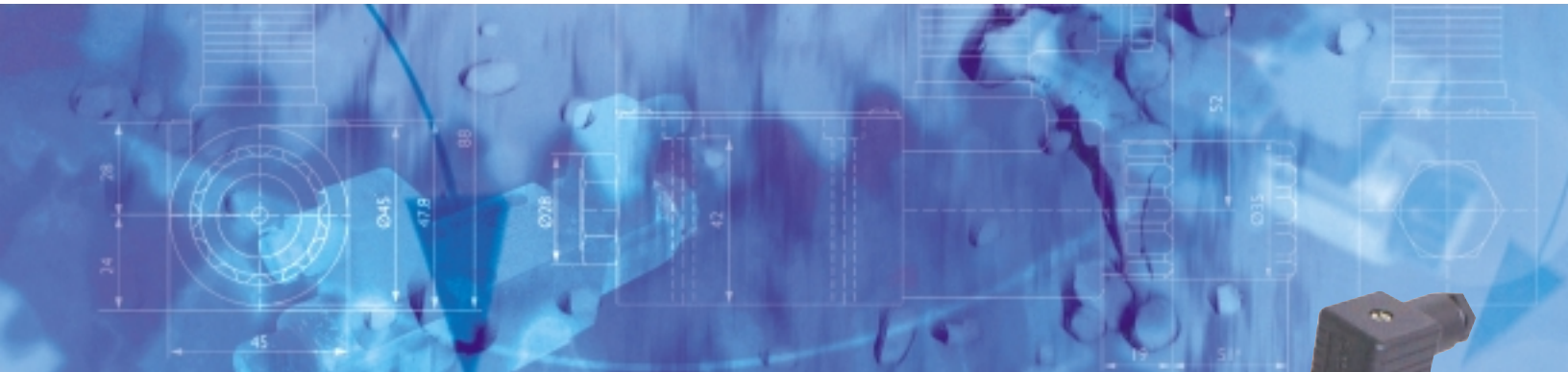


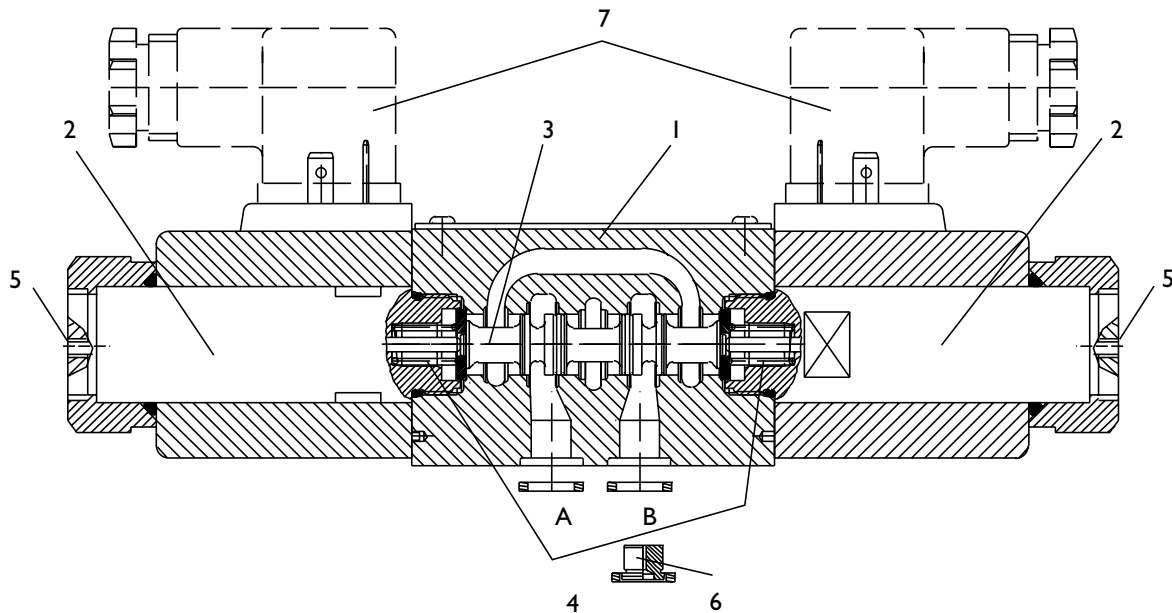
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Features and General Description

Features

- > Direct operated, solenoid controlled directional spool valve
- > ISO4401-03 mounting pattern
- > 2 or 3 switching positions (4/2-, 4/3- valves)
- > Three chamber design for high performance
- > Wet pin solenoids standard
- > Removable coils for easy replacement or conversion
- > Standard manual override



General Description

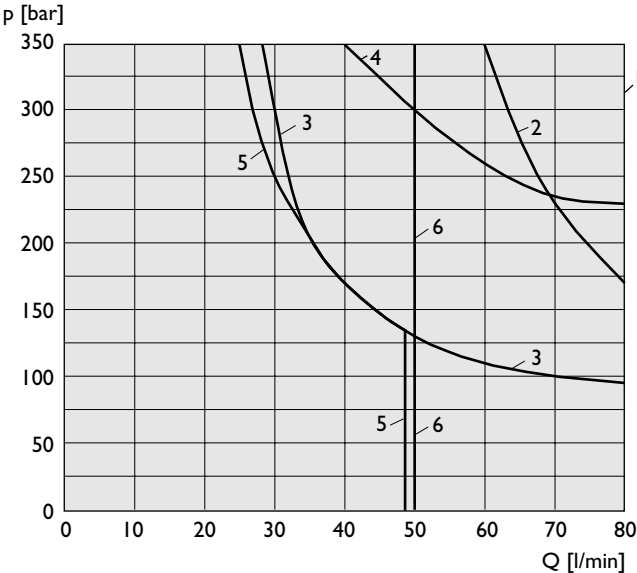
Moog's WE P06E series are directional control valves used to stop, start and control the direction of hydraulic oil flow. The WE series comes in both 4-way, 3 position and 4-way, 2 position configurations. The three position configurations contain a central or neutral position.

The WE series consists of a body (1), one or two solenoids (2), a spool (3) and a return spring or springs (4). When the solenoid or solenoids are de-energized, the spool (3) is held in place by a return spring or springs (4). The spool (3) is shifted when a solenoid (2) is energized. The force of the solenoid pushes the spool against the opposing return spring, permitting flow from P → A and B → T or P → B and A → T. When the solenoid is de-energized, the return spring returns the spool to its neutral position.

A manual override (5) allows user to shift the spool manually or without electrical power. In addition, orifice inserts (6) are available to limit maximum flows. The insert, which comes in various sizes, is installed in port P. Lastly, various mating electrical connectors (7) are available for each valve, with options listed on page 14.

Specifications

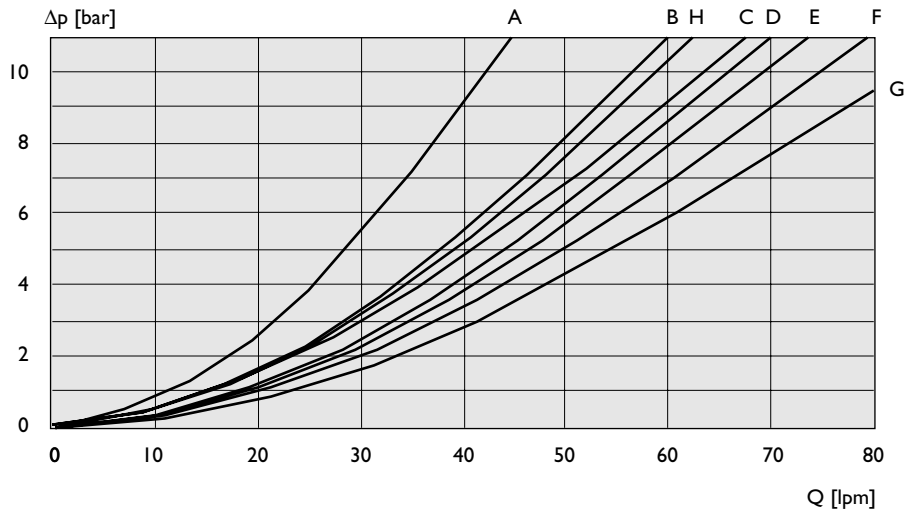
General Data	Value	Unit	Specifications
Type of Unit	—	—	Directional Control Valve Direct Operated
Model Number	—	—	Refer to Ordering Code
Design	—	—	Sliding Spool Valve
Type of Mounting	—	—	Subplate
Type of Port Connections	—	—	Threads in Subplate
Dimension of Unit	—	—	Refer to Pages 10, 11, 12, & 13
Mounting Position	—	—	Any
Ambient Temperature Range	min.	°F (°C)	-13° (-25°)
	max.	°F (°C)	140° (60°)
Mounting Size	—	—	ISO 4401-03-03-0-94
Rated Flow	Q _N	gpm (lpm)	15.8 (60)
Weight	m	lbs (kg)	1 Solenoid 3.3 (1.5) 2 Solenoid 4.4 (2.0)
Hydraulic Data			
Operating Pressure A, B, P and T	max.	psi (bar)	A, B, P = 5,075 (350) T= 3,045 (210)
Fluid Temperature	min.	°F (°C)	-4° (-20°)
	max.	°F (°C)	158° (70°)
Viscosity	min.	mm ² • s ⁻¹ [cSt]	35
	max.	mm ² • s ⁻¹ [cSt]	380
Filtration	—	—	18/14 per ISO 4406 or NAS 1638 Class 10 or Better
Electric Data			
Cyclic Duration Factor	ED	%	100%
Enclosure Type	—	—	IP65
Plug In Connectors	—	—	Connector as per DIN 43650
Solenoid Design	—	—	Wet Pin Solenoid
Voltage	—	V	Refer to Ordering Code
Power Rating	max.	W	30
Coil Temperature	max.	°F (°C)	311 (155)
Type of Current	—	—	DC
	—	—	AC
Response Times			
	Solenoid	Energizing	De-energizing
	DC-solenoid	25 to 45 ms	10 to 25 ms
	AC-solenoid	10 to 20 ms	15 to 40 ms



Curve	Spool Symbol
1	03P, 08P, 21P, 22P, 13P, 14P
2	06P
3	23P, 24P
4	00P, 09P
5	04N, 05N
6	01N, 07N

Performance Data

DC Solenoid



Symbol	Flow Direction			
	P→A	P→B	A→T	B→T
03	H	H	C	C
06	D	D	C	C
01	F	G	F	F
09	H	B	F	E
04	C	C	H	C
05	C	C	H	C
08	C	C	F	F
07	B	B	D	D
00	H	B	F	E

Symbol	Flow Direction			
	P→A	P→B	A→T	B→T
21	H	H	H	H
22	H	H	C	C
23	B	B	—	—
24	B	B	—	—
13	C	C	—	—
14	C	C	—	—

A: Symbol 07 in center position P→A

The curves refer to applications with symmetrical flow. In the case of asymmetric flow, reduced values may result.

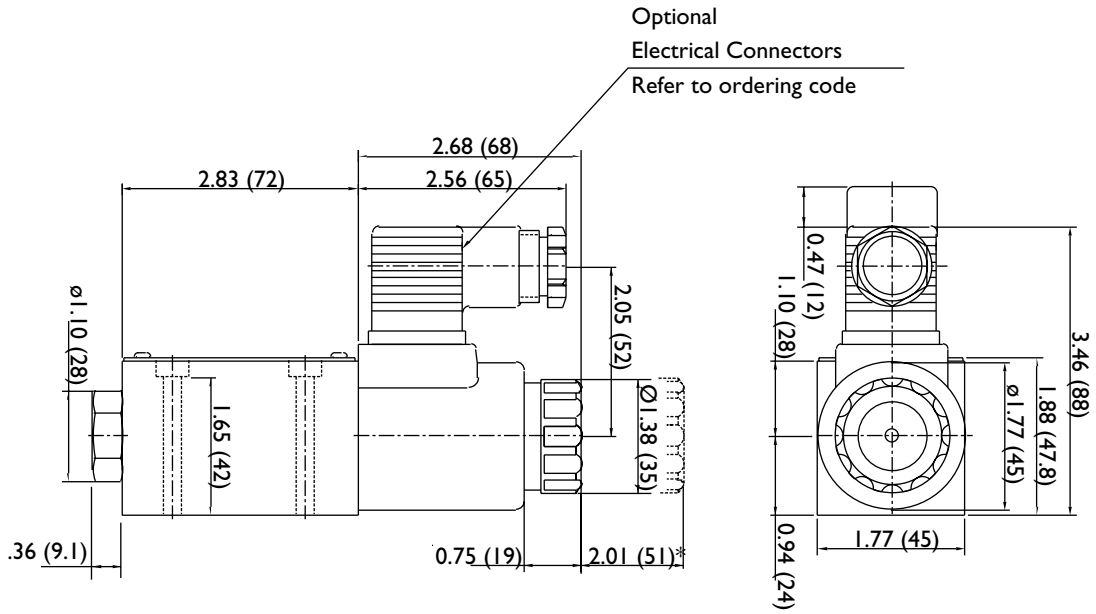
If only one direction of flow is required, for example, when a 4-way valve has one port plugged, or unbalanced flows from large rod cylinders, the permissible flow in critical cases can be considerably lower.

4/3 Directional Valve, 2 Solenoids, Standard Spool				
Spool Symbol	Spool Code	Voltage	Box Car Designation	Part Number
<p>Spool 00</p> <p>Spool Position C</p>	00	12V DC 24V DC 110V AC 50/60 Hz 220V AC 50/60 Hz	WE43P06E00PC0AN WE43P06E00PC0BN WE43P06E00PC0MN WE43P06E00PC0NN	XWB10725-000-01 XWB10676-000-01 XWB10695-000-01 XWB10696-000-01
<p>Spool 01</p> <p>Spool Position C</p>	01	12V DC 24V DC 110V AC 50/60 Hz 220V AC 50/60 Hz	WE43P06E01NC0AN WE43P06E01NC0BN WE43P06E01NC0MN WE43P06E01NC0NN	XWB10726-000-01 XWB10642-000-01 XWB10697-000-01 XWB10698-000-01
<p>Spool 03</p> <p>Spool Position C</p>	03	12V DC 24V DC 110V AC 50/60 Hz 220V AC 50/60 Hz	WE43P06E03PC0AN WE43P06E03PC0BN WE43P06E03PC0MN WE43P06E03PC0NN	XWB10727-000-01 XWB10540-000-01 XWB10699-000-01 XWB10700-000-01
<p>Spool 04</p> <p>Spool Position C</p>	04	12V DC 24V DC 110V AC 50/60 Hz 220V AC 50/60 Hz	WE43P06E04NC0AN WE43P06E04NC0BN WE43P06E04NC0MN WE43P06E04NC0NN	XWB10785-000-01 XWB10596-000-01 XWB10709-000-01 XWB10710-000-01
<p>Spool 05</p> <p>Spool Position C</p>	05	12V DC 24V DC 110V AC 50/60 Hz 220V AC 50/60 Hz	WE43P06E05NC0AN WE43P06E05NC0BN WE43P06E05NC0MN WE43P06E05NC0NN	XWB10733-000-01 XWB10598-000-01 XWB10711-000-01 XWB10712-000-01
<p>Spool 06</p> <p>Spool Position C</p>	06	12V DC 24V DC 110V AC 50/60 Hz 220V/50/60 Hz AC	WE43P06E06PC0AN WE43P06E06PC0BN WE43P06E06PC0MN WE43P06E06PC0NN	XWB10733-000-01 XWB10598-000-01 XWB10711-000-01 XWB10712-000-01
<p>Spool 07</p> <p>Spool Position C</p>	07	12V DC 24V DC 110V AC 50/60 Hz 220V AC 50/60 Hz	WE43P06E07NC0AN WE43P06E07NC0BN WE43P06E07NC0MN WE43P06E07NC0NN	XWB10729-000-01 XWB10594-000-01 XWB10703-000-01 XWB10704-000-01
<p>Spool 08</p> <p>Spool Position C</p>	08	12V DC 24V DC 110V AC 50/60 Hz 220V AC 50/60 Hz	WE43P06E08PC0AN WE43P06E08PC0BN WE43P06E08PC0MN WE43P06E08PC0NN	XWB10730-000-01 XWB10539-000-01 XWB10705-000-01 XWB10706-000-01

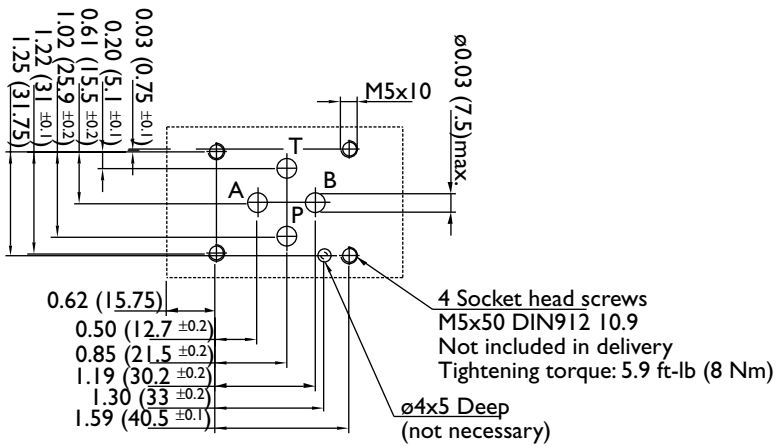
Standard Models

4/3 Directional Valve, 2 Solenoids, Standard Spool					
Spool Symbol	Spool Code	Spool Position	Voltage	Box Car Designation	Part Number
<p>Spool 09</p> <p>Spool Position C</p>	09	—	12V DC 24V DC 110V AC 50/60 Hz 220V AC 50/60 Hz	WE43P06E09PC0AN WE43P06E09PC0BN WE43P06E09PC0MN WE43P06E00PC0NN	XWB10731-000-01 XWB10677-000-01 XWB10707-000-01 XWB10708-000-01
4/2 Directional Valve, 1 Solenoid, Standard Spool					
<p>Spool 13</p> <p>Spool Position A</p>	13	Solenoid on A Side	12V DC 24V DC 110V AC 50/60 Hz 220V AC 50/60 Hz	WE42P06E13PA0AN WE42P06E13PA0BN WE42P06E13PA0MN WE42P06E13PA0NN	XWB10734-000-01 XWB10679-000-01 XWB10713-000-01 XWB10714-000-01
<p>Spool 14</p> <p>Spool Position B</p>	14	Solenoid on B Side	12V DC 24V DC 110V AC 50/60 Hz 220V AC 50/60 Hz	WE42P06E14PB0AN WE42P06E14PB0BN WE42P06E14PB0MN WE42P06E14PB0NN	XWB10735-000-01 XWB10624-000-01 XWB10715-000-01 XWB10716-000-01
<p>Spool 21</p> <p>Spool Position A</p>	21	Solenoid on A Side	12V DC 24V DC 110V AC 50/60 Hz 220V AC 50/60 Hz	WE42P06E21PA0AN WE42P06E21PA0BN WE42P06E21PA0MN WE42P06E21PA0NN	XWB10736-000-01 XWB10650-000-01 XWB10717-000-01 XWB10718-000-01
<p>Spool 22</p> <p>Spool Position B</p>	22	Solenoid on B Side	12V DC 24V DC 110V AC 50/60 Hz 220V AC 50/60 Hz	WE42P06E22PB0AN WE42P06E22PB0BN WE42P06E22PB0MN WE42P06E22PB0NN	XWB10737-000-01 XWB10651-000-01 XWB10719-000-01 XWB10720-000-01
<p>Spool 23</p> <p>Spool Position A</p>	23	Solenoid on A Side	12V DC 24V DC 110V AC 50/60 Hz 220V AC 50/60 Hz	WE42P06E23PA0AN WE42P06E23PA0BN WE42P06E23PA0MN WE42P06E23PA0NN	XWB10738-000-01 XWB10643-000-01 XWB10721-000-01 XWB10722-000-01
<p>Spool 24</p> <p>Spool Position B</p>	24	Solenoid on B Side	12V DC 24V DC 110V AC 50/60 Hz 220V AC 50/60 Hz	WE42P06E24PB0AN WE42P06E24PB0BN WE42P06E24PB0MN WE42P06E24PB0NN	XWB10739-000-01 XWB10644-000-01 XWB10723-000-01 XWB10724-000-01

WE42P06E – DC Solenoid



DIN 24340 A6 Interface

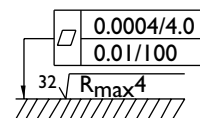


NOTES:

Valve mounting bolts must be ordered separately.

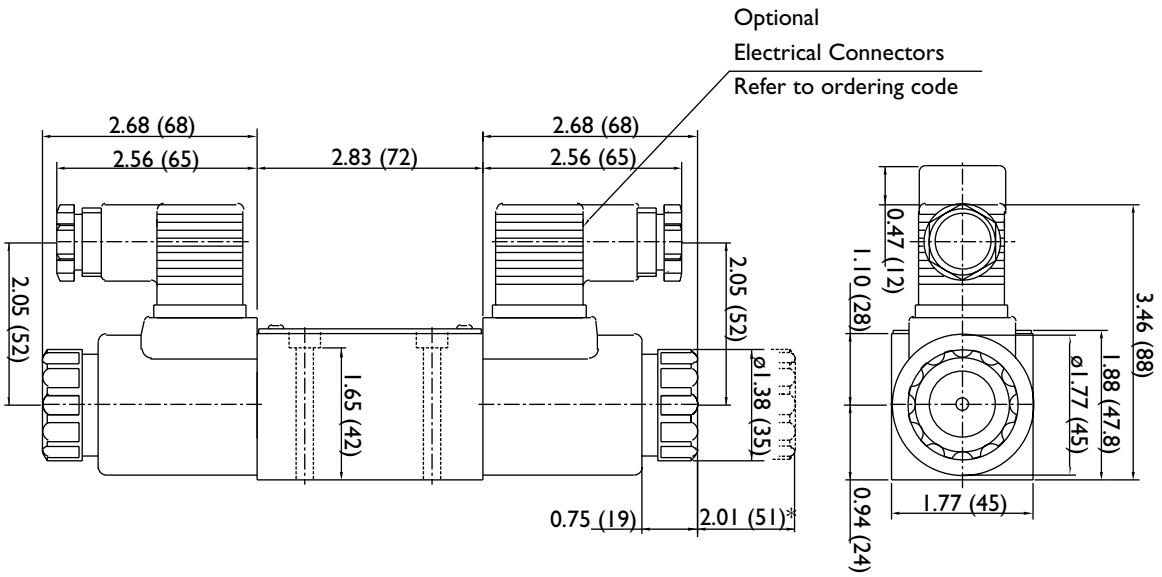
* for coil removal.

Required surface finish of surface when mounting the valve without subplate.

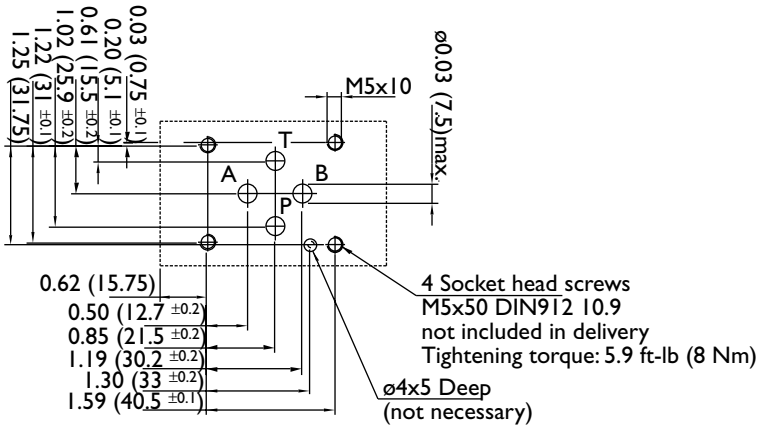


Dimensions

WE43P06E – DC Solenoid



DIN 24340 A6 Interface

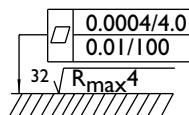


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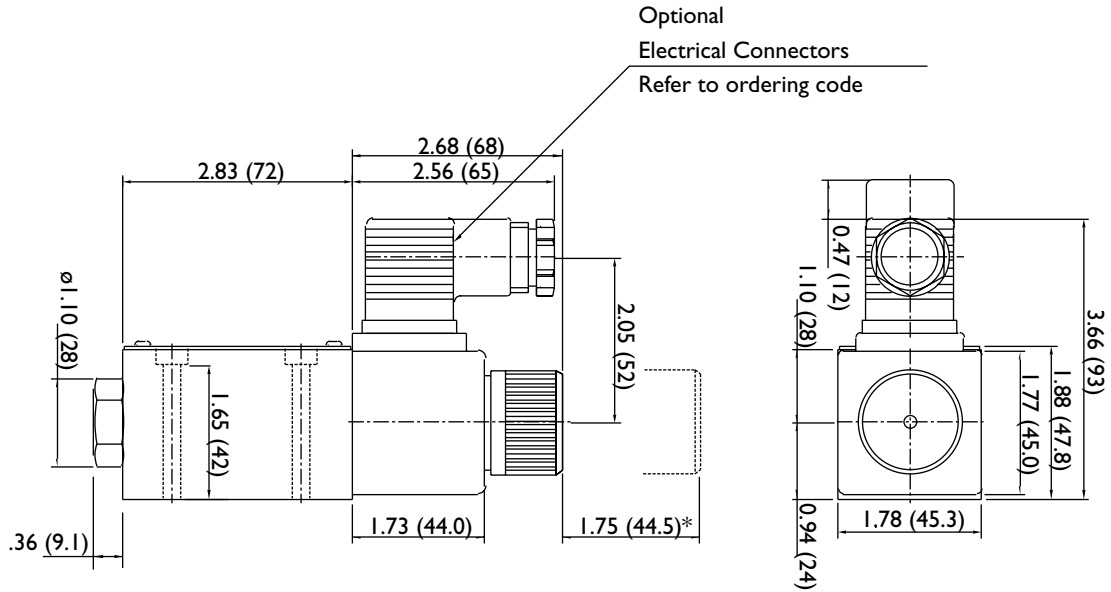
Valve mounting bolts must be ordered separately.

* for coil removal (for both ends).

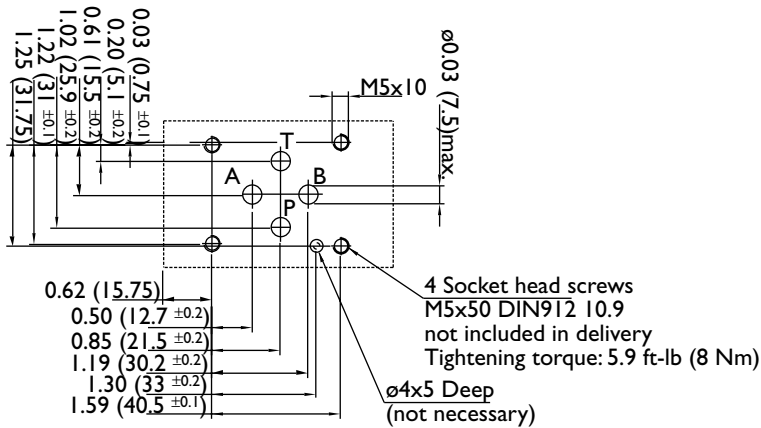
Required surface finish of surface when mounting the valve without subplate.



WE42P06E – AC Solenoid



DIN 24340 A6 Interface

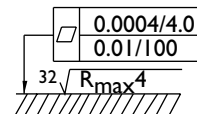


NOTES:

Valve mounting bolts must be ordered separately.

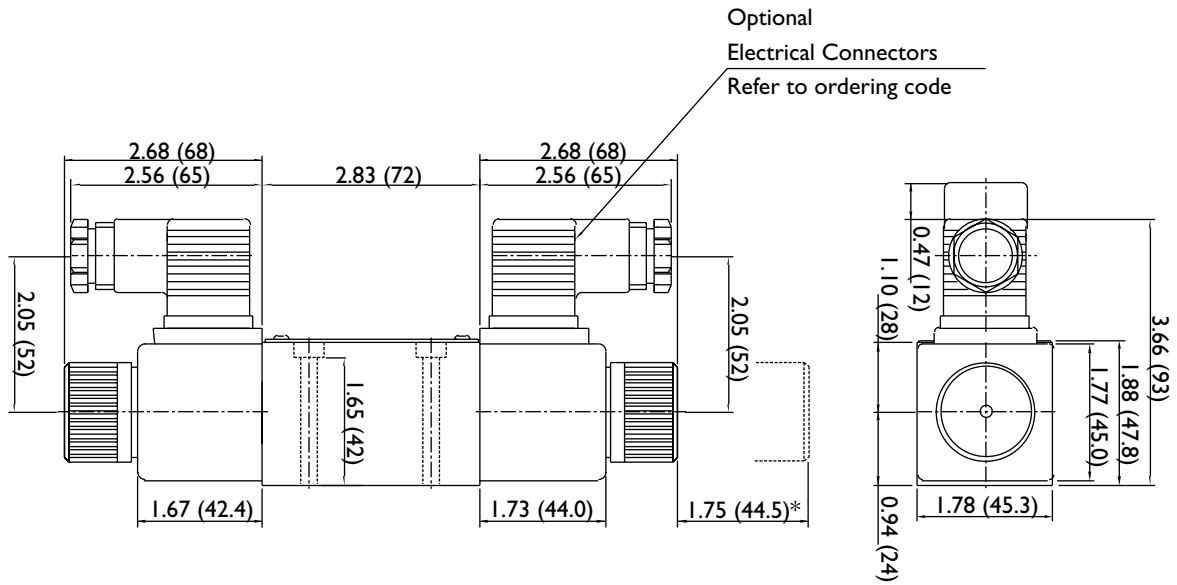
* for coil removal.

Required surface finish of surface when mounting the valve without the subplate.

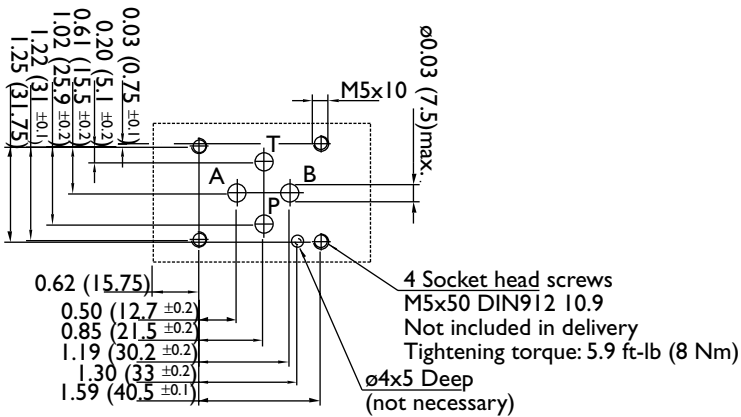


Dimensions

WE43P06E – AC Solenoid



DIN 24340 A6 Interface

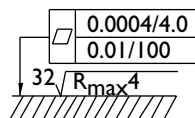


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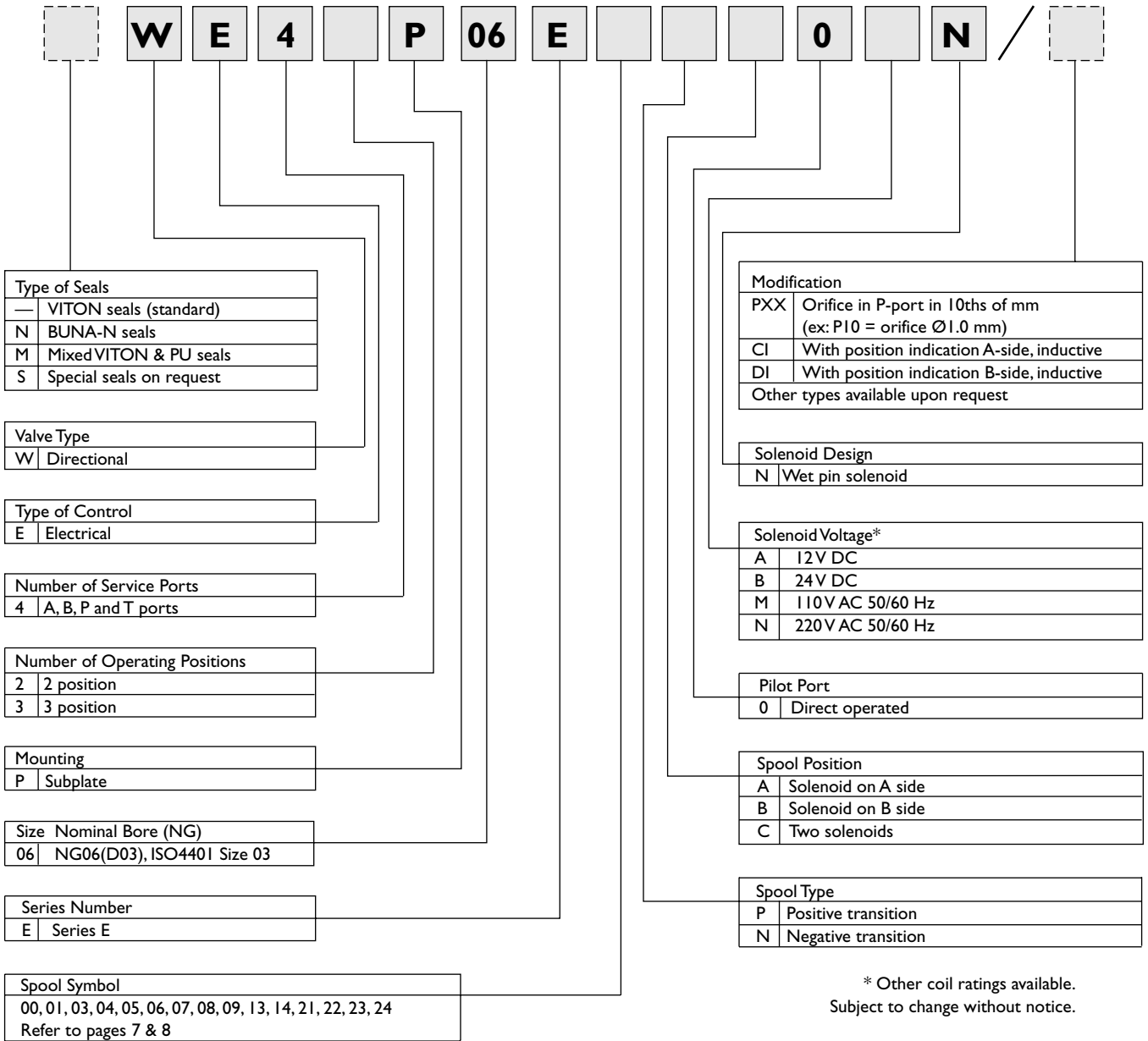
Valve mounting bolts must be ordered separately.

* for coil removal (both ends).

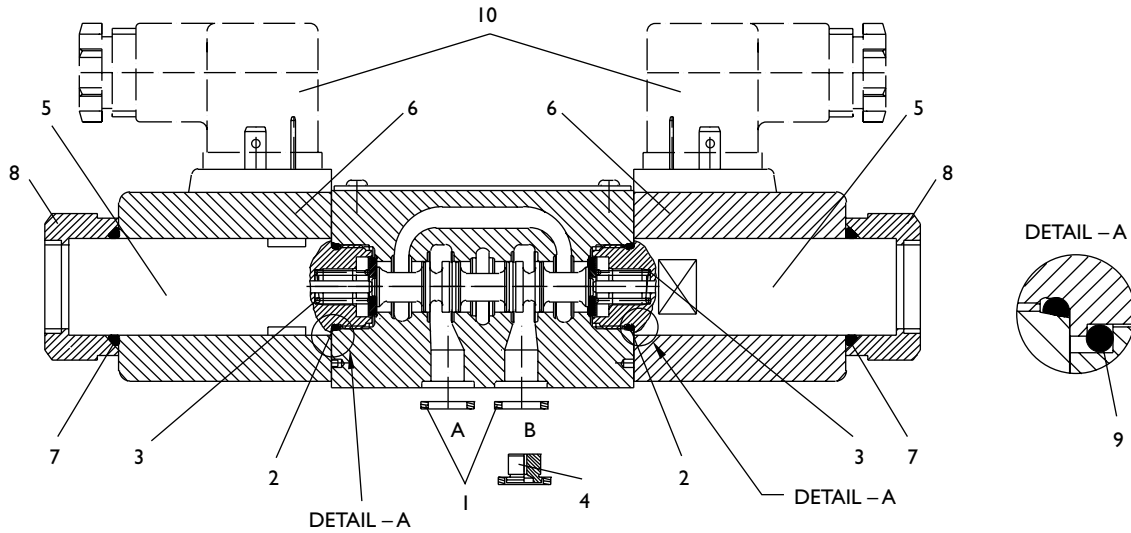
Required surface finish of surface when mounting the valve without the subplate



Ordering Information



Spare Parts



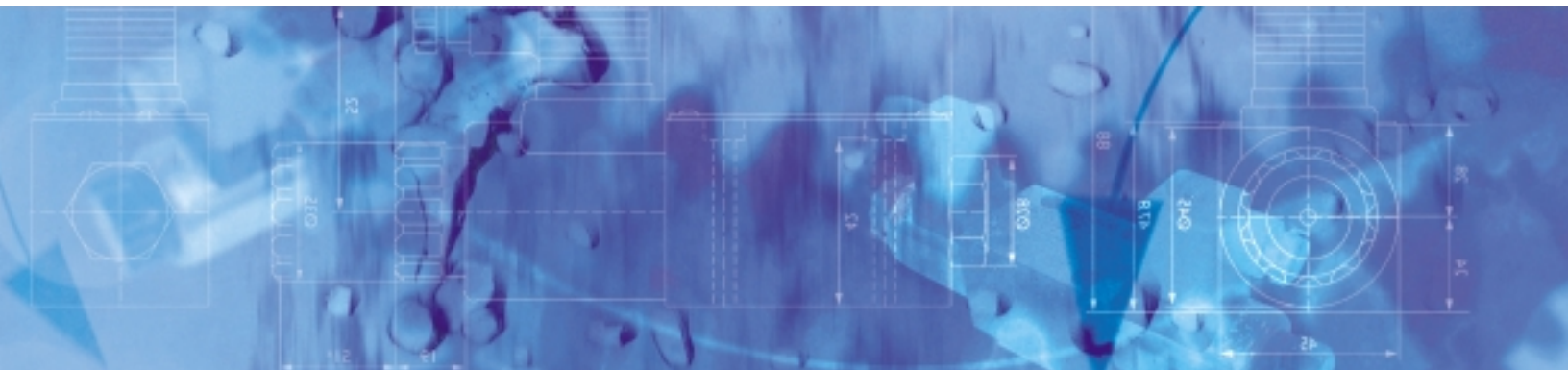
Pos.	Description	Order Number			
–	Seal Kit for WEP06E	XEB	16512		
1	O-Ring,Viton 9.25 x 1.78	X980 –	02012		
2	O-Ring,Viton 17, 17 x 1.78	X980 –	02017		
3a	Spring P06E – DC solenoid	XEF	10368		
3b	Spring P06E – AC solenoid	XEF	10362		
4	Orifice Insert Ø 0.6	X784 –	90006		
4	Orifice Insert Ø 0.8	X784 –	90008		
4	Orifice Insert Ø 1.0	X784 –	90010		
4	Orifice Insert Ø 1.2	X784 –	90012		
4	Orifice Insert Ø 1.5	X784 –	90015		
4	Orifice Insert Ø 1.8	X784 –	90018		
4	Orifice Insert Ø 2.0	X784 –	90020		
4	Orifice Insert Ø 2.5	X784 –	90025		
4	Orifice Insert Ø 3.0	X784 –	90030		
5a	Core tube with manual override – DC solenoid	X788 –	00025		
5b	Core tube with manual override – AC solenoid	X788 –	00035		
6a	Coil 12V DC	X788 –	00020		
6b	Coil 24V DC	X788 –	00021		
6c	Coil 110V AC 50/60 Hz	X788 –	01109		
6d	Coil 220V AC 50/60 Hz	X788 –	02209		
7	O-Ring NBR 21.82x3.53	X788 –	00027		
8a	Handknob – DC solenoid	X788 –	00026		
8b	Handknob – AC solenoid	X788 –	00038		
9*	O-Ring VITON 22.0x2.0	X788 –	00037		
5,6,7,8	Solenoid 12V DC complete	XEB	16583		
5,6,7,8	Solenoid 24V DC complete	XEB	16584		
5,6,7,8,9	Solenoid 110V AC 50/60 Hz complete	XEB	16966		
5,6,7,8,9	Solenoid 220V AC 50/60 Hz complete	XEB	17011		
Pos.	Connector DIN 43650/ISO 4400	Valve side A color grey		Valve side B color black	
		Order number		Order number	
10	Plug connector DIN 43650/ISO 4400 (PG 9)	X798 –	00005	X798 –	00004
10	Big plug connector DIN 43650/ISO 4400 without LED (PG 11)	XEB	16577	XEB	16580
10	Big plug connector DIN 43650/ISO 4400 with LED and free wheeling (PG 11)	XEB	16578	XEB	16581

Order example: O-Ring Viton 17,17 x 1.78 Pos.2
Order number X980 – 02017

* Only with AC solenoid models



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