

[Product Features]

1. Direct-acting solenoid operational direction valve as standard type.
2. Installation area by DIN24 340 type A
3. DC or AC wet-type solenoid that can be arbitrary rotation and with detachable coil.
4. Coil can be replaced without oil.
5. Equipped with manual emergency operation push rod.

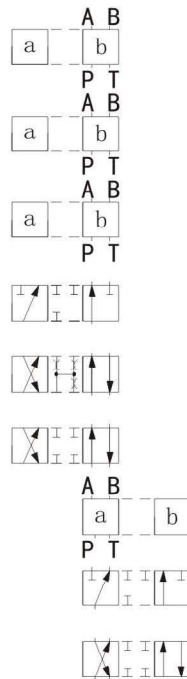


【 Model Code 】

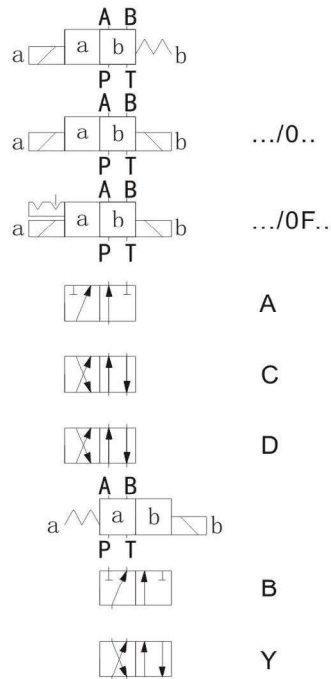
4	WE	6	E	6X	E	D24	L	L
<p>3channel=3 4channel=4</p> <p>Solenoid Operated Directional Valves</p> <p>Drift diameter : 3=3diameter</p> <p>Function Symbol:</p> <p>60~69 series =6X (60~69: installation and linking size remains the same)</p> <p>O=no spring-return OF=no spring-return, with positioning Spring return unmarked</p> <p>Solenoid thread linkage: =E</p> <p>D12 D24=DC12V 24V A110 A220=RC110V/50Hz 220V/50Hz R110 R220=RAC110V 220V</p> <p>No marks = manual override NP = with self-locking manual emergency push rod</p> <p>H: DIN43650 plug L: DIN43650 plug (with light) F: DEUTSCH, protection class IP69K/Deutsch A: AMP plug, protection class IP66/AMP Junior-Timer D: Double leads B: Terminal box</p> <p>No marks = no cartridge choke B08=orifice Φ0.8mm (0.031") B12=orifice Φ1.0mm (0.04") B12=orifice Φ1.2mm (0.047")</p> <p>Nitrile rubber seal = no mark V=Fluorine rubber sealing ring</p> <p>The valve body coating H: black L: blue</p>								

【 SPOOL SYMBOLS 】

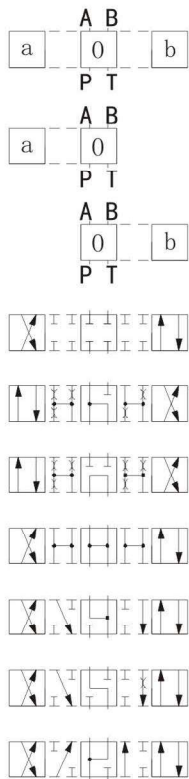
TRANSITION SPOOL



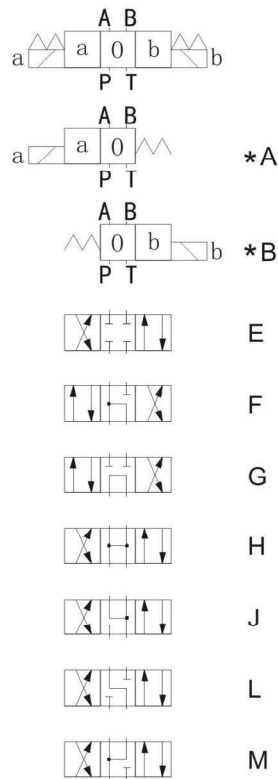
SLIDE VALVE SPOOL



transition spool



slide valve spool



☆ Spool symbol with core a or b then code should be XA or XB
For example : spool E with core position a , then code should be EA



【 Technical Data 】

General data

Mounting position	optional
Operating temperature	-30~+50 °C (nitrile rubber seal) (-22 + 122°F)
	-20~+50 °C (rubber seal) (-4 + 122°F)
weight	Single solenoid valve
	Double solenoid valve
	1.45 kg (3.20 lbs)
	1.95 kg (4.29 lbs)

Hydraulic Data

Maximum operating voltage fluid port P、 A、 B	31.5 MPa (4568 PSI)
Hydraulic fluid port	21 (MPa DC) : 16 (MPa AC) (3045 PSI DC) (2320 PSI AC) When working pressure exceeds the allowable pressure, valves with the sign bit A,B must use T as oil drain port
Maximum flow rate	80 l/min (DC) / (21.12 Gallon DC) ; 60 l/min (AC) / (15.84 Gallon AC)
Flux areas (when in the median)	Type Q
	Type W
	About 6% of the nominal cross-sectional area mm ² inch ²
	About 6% of the nominal cross-sectional area mm ² inch ²
Hydraulic oil 1、 suitable for nitrile rubber and fluoro rubber seal 2、 Fluoro seal only	Mineral oil (HL,HLP) by DIN51 524 Rapid biological solution oil by VDMA24 568 HETG 1) ; HEPG 2) ;HEES 3)
The oil temperature range	-30~+80 °C (nitrile rubber seal) (-22 + 176°F) -20~+80 °C (rubber seal) (-4 + 176°F)
Viscosity range	2.8–500 mm ² /s (0.003 inch ² /s - 0.775 inch ² /s)
Oil cleanliness	The highest oil pollution level by NAS1639 Class 9 recommend minimum filter filtration precision β10≥75

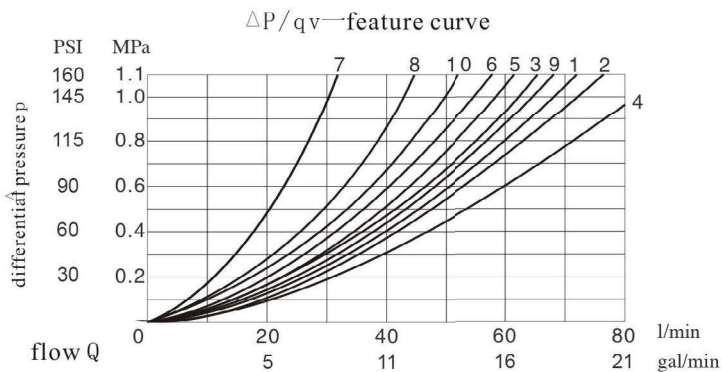
Electric data

Voltage category	DC	AC(50HZ)
Supply voltage	12, 24, 48, 110, 220 V	110 220 V
Allowable voltage tolerance	+10~-15 %	+10~-15 %
Power consumption	30 W	- W
Holding current	- A	0.27(220V) A
Starting current	- A	0.72(220V) A
Working system	100 ED%	100 ED%
Reversing time	125~145 ms	10~20 ms
Resetting time	100~250 ms	15~40 ms
Switching time	≤15000 times/h	≤7200 times/h
Protection class by DIN 40050	IP65(AMP: IP66)	(Deutsch:IP69k)
Maximum coil temperature	135 °C (Class B) (275 °F)	180 °C(Class H) (356 °F)

NOTICE: 1) Grounding according to the provision when connecting electricity to protect wires.
2) The reversing time of RAC is close to DC , but the resetting time is longer and random.

【 feature curve 】

(testing result on basis of that when $v=41\text{mm/s}$ & $t=50^\circ\text{C}$)



- Curve 7 : spool type“R”is in switch position A→B
- Curve 8 : spool type“G”and “T” are in median position P→T
- Curve 9 : spool type“H”is in median position P→T

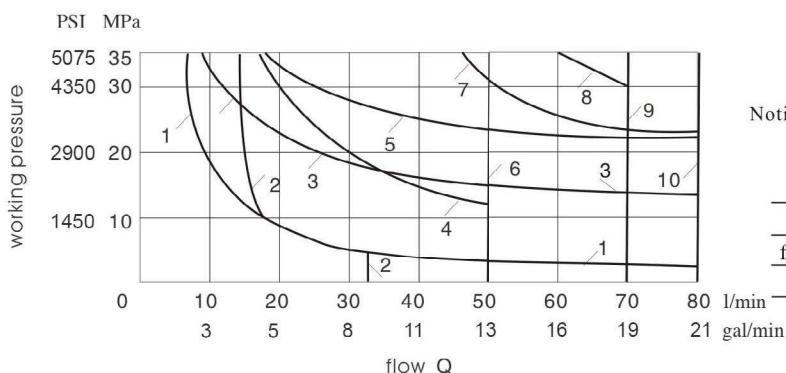
spool symbol	flow direction			
	P-A	P-B	A-T	B-T
A,B	3	3	-	-
C	1	1	3	1
D,Y	5	5	3	3
E	3	3	1	1
F	1	3	1	1
T	10	10	9	9
H	2	4	2	2
J,Q	1	1	2	1
L	3	3	4	9
M	2	4	3	3
P	3	1	1	1
R	5	5	4	-
V	1	2	1	1
W	1	1	2	2
U	3	3	9	4
G	6	6	9	9

【 switching performance limit 】

(testing result on basis of using HLP46, $t=50^\circ\text{C}$)

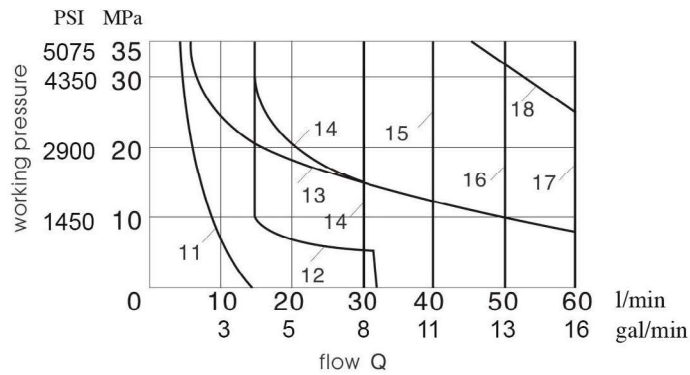
- 1.The working limit can be used for both the two flow direction (For example: Flow return from B to T, at the same time, flow from P to A)
- 2.Power limit tested when solenoid is at working temperature, under voltage 10%, and port T have no back pressure.
- 3.When unidirectional flow (if it was clogged from P to A, B port), due to the fluid power in the valve, the allowed switching limit may drop.

DC solenoid		AC solenoid-50Hz		AC solenoid-60Hz	
curve	symbol	curve	symbol	curve	symbol
1	A,B	11	A,B	19	A,B
2	V	12	V	20	V
3	A,B	13	A,B	21	A,B
4	F,P	14	F,P	22	F,P
5	J	15	G,T	23	G,T
6	G,H,T	16	H	24	J,L,U
7	A/O,A/OF,L,U	17	A/O,A/OF,C/O	25	A/O,A/OF,Q,W
8	C,D,Y		C/OFD/O,/D/OF,	26	C,D,Y
9	M		E,J,LM	27	H
10	E,R,C/O,C/OF	18	Q,R2,U,W	28	C/O,C/OF,D/C,
	D/O,D/OF,Q,W		C,D,Y		D/OF,E,M,R2



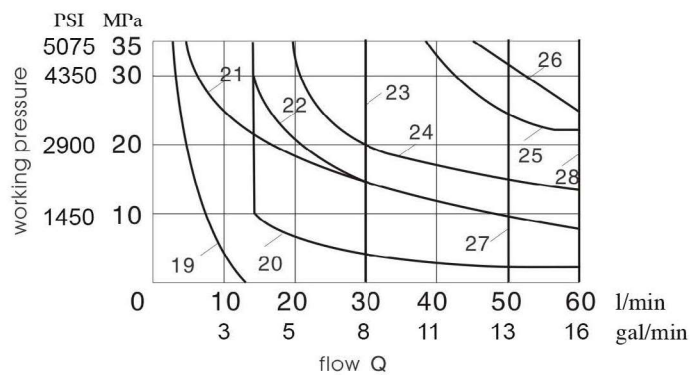
- Notice: 1) with emergency operation
2) flow from actuator components back to tank

DC solenoid	
feature curve	solenoid voltage
1~10	12, 24, 48, 96, 110



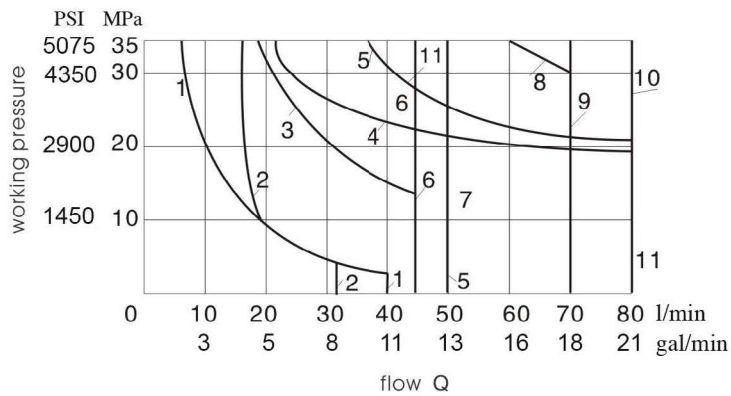
AC solenoid

feature curve	power source voltage	
	11~18	AC110
	AC220	220V,50Hz



AC solenoid

feature curve	power source voltage	
	19~28	AC110
	AC220	220V,50Hz



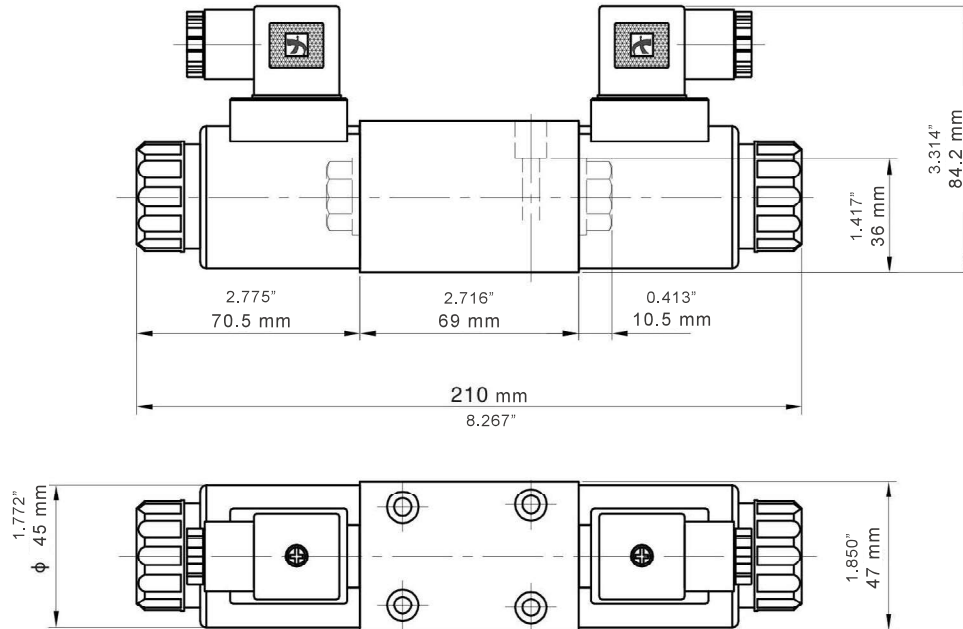
DC solenoid

feature curve	power source voltage	
	1~10	DC110V

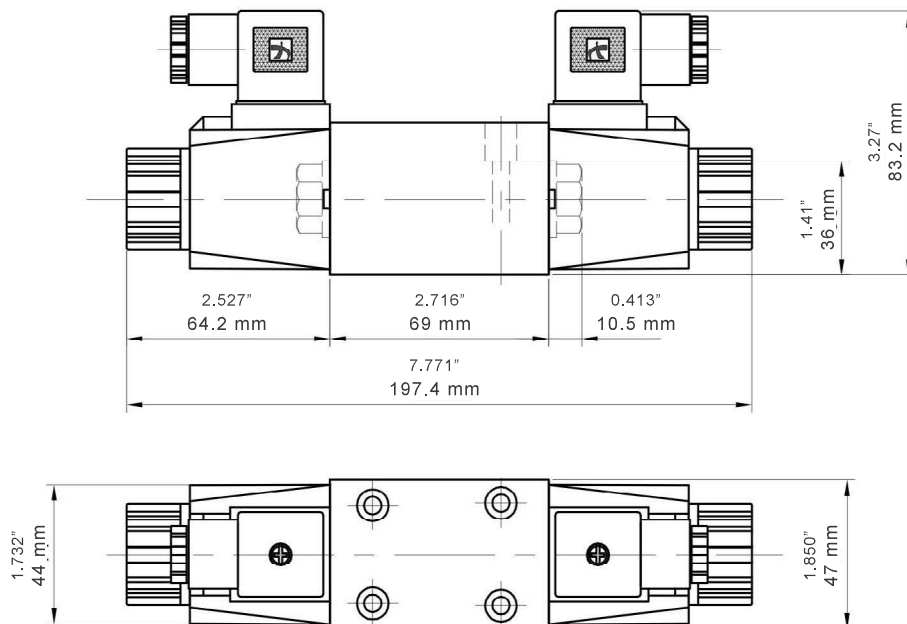
curve	symbol
1	A、B
2	V
3	F、P
4	J、L、U
5	G
6	T
7	H
8	C、D
9	M
10	E、R、C/O、C/OF、D/O、D/OF、Q、W、E1
11	A/O、A/OF
12	E

【 drawing of installation dimension 】

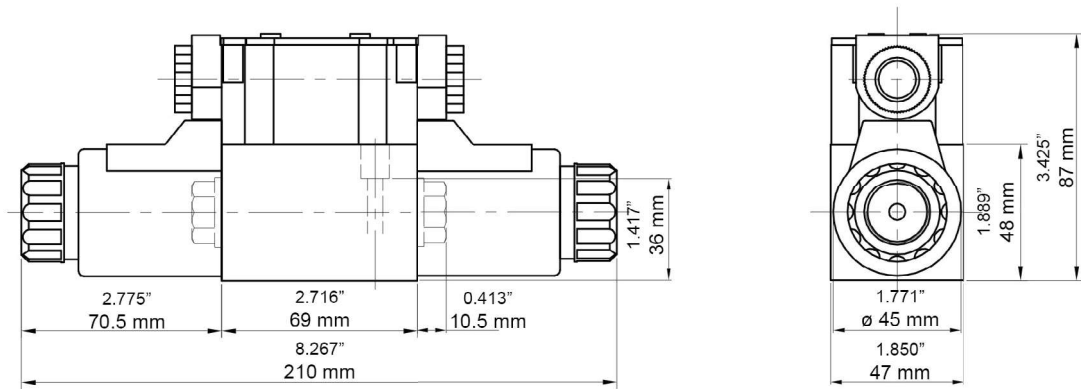
4WE6-DC-H



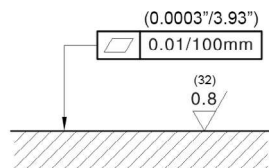
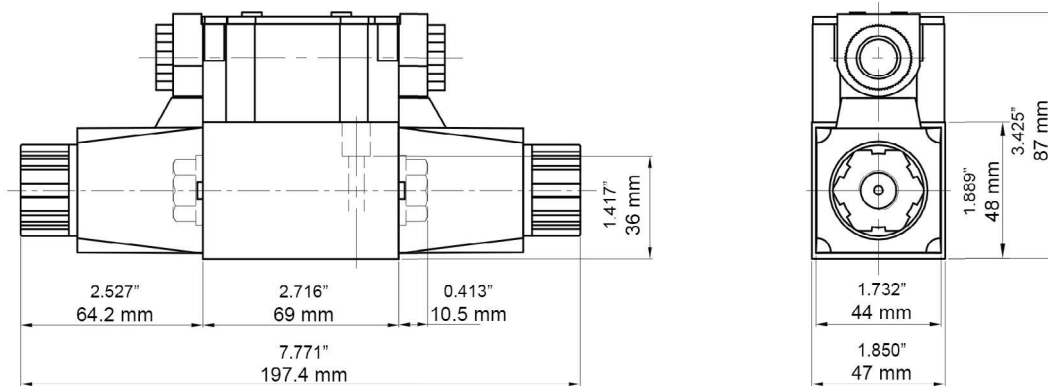
4WE6-AC-H



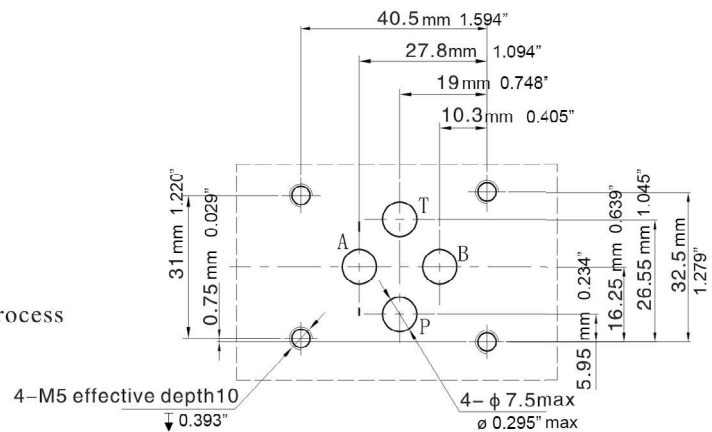
4WE6 E-D24-B



4WE6 E-A220-B

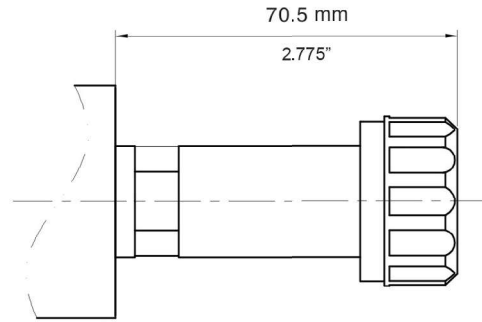


the surface of mating parts request precision process



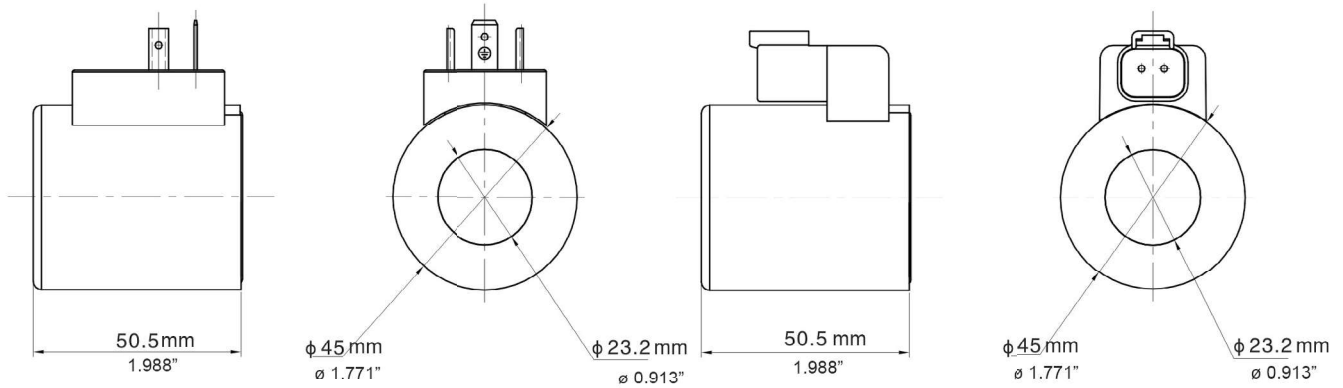
【 option of electronic connector 】

Without coil, fastening the tube and locknut on the homologous valve body, according to the different IP grade, then choose the coil with homologous structure.



Coil with connector meets
DIN43650EN175301-803 ISO4400

Coil with connector AMP, the IP grade of coil house is IP67



coil with connector
DEUTSCH DT04-2P, the IP grade of coil house is IP-69K

apply to pin type coil with connection type B

