

DSG 01 \*\* D24 L



DSG 01 \*\* D24 B



DSG 01 \*\* R220 L



DSG 01 \*\* R220 B



DSG 01 \*\* A220 L



DSG 01 \*\* A220 B



DSG 01 \*\* D24 N L



DSG 01 \*\* D24 N B



DSG 03 \*\* D24 L



DSG 03 \*\* D24 B



DSG 03 \*\* R220 L



DSG 03 \*\* R220 B



DSG 03 \*\* A220 L



DSG 03 \*\* A220 B



DSG 03 \*\* D24 N L



DSG 03 \*\* D24 N B



DS	G	01	3C2	D24		L
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Solenoid directional Valves

Subplate mounting

01=Size 6  
03=Size 10

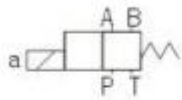
Spool symbol

D12=DC12V D24=DC24V  
A110-50/60=AC110V-50HZ/60HZ A220-50/60=AC220V-50HZ/60HZ  
R110=RAC110V R220=RAC220V

N=with manual override  
No code : without manual override

H : With DIN 43650 connector  
L : DIN 43650 connector with lamp  
B : Terminal box type

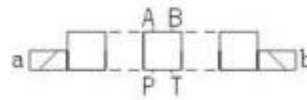
Single solenoid valve  
spring return



**2B \* BL**

- 2
- 3
- 4
- 40
- 5
- 60
- 60
- 9
- 10
- 11
- 12

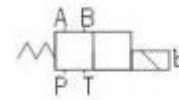
Double solenoids valve with  
three position , spring centring



**3C \***

- 2
- 3
- 4
- 40
- 5
- 6
- 60
- 9
- 10
- 11
- 12

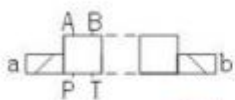
Single solenoid valve  
with spring return



**2B \* B**

- 2
- 3
- 4
- 40
- 5
- 60
- 60
- 9
- 10
- 11
- 12

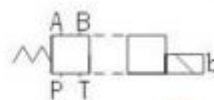
Two position without spring



**2N \***

- 2
- 3
- 4
- 7

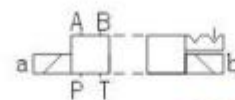
Two position with spring return



**2B \***

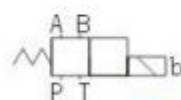
- 2
- 3
- 8

Two position with mechanical detent



**2D \***

- 2



**2B \* A**

- 2
- 3

DSH G 03 3C2 D24 L

K : With knob  
Blank = Without knob

stroke adjustment AB : both sides  
A : A side  
B : B side

H= with DIN 43650 connector  
L= DIN 43650 connector with lamp  
B = with terminal box

D12=DC12V D24=DC24V  
A110=AC110V/50HZ/60HZ A220=AC220V/50HZ/60HZ  
R110=RAC110V R220=RAC220V

Drain connection  
Blank : external drain  
T: internal drain

Pilot connection  
Blank : internal pilot  
E : external pilot

Slide valve spool

( 03=Size 10 ; 04=Size 16 ; 06=Size 25 ; 10=Size 32 )

Mounting way : subplate installation

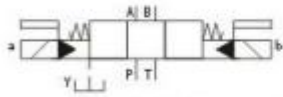
Electric-hydraulic directional valves



# SOLENOID OPERATED DIRECTIONAL CONTROL VALVES DSHG SPOOL SYMBOLS

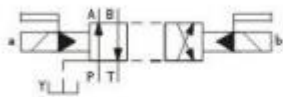
## DSHG-04/S-DSHG-04

### 3 position spring centring



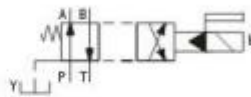
	2
	3
	4
	40
	5
	6
	60
	7
	9
	10
	11
	12

### 2 position without spring



	2
	3
	4
	40
	7

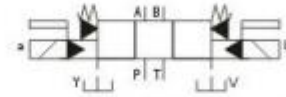
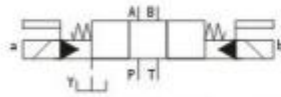
### Spring reset



	2
	3
	4
	40
	7

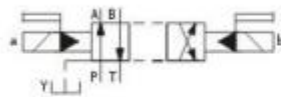
## DSHG-06/S-DSHG-06

### 3 position spring centring      pressure centring



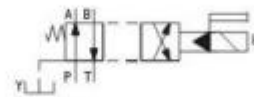
	2		2
	3		3
	4		4
	40		40
	5		5
	6		6
	60		60
	7		7
	9		9
	10		10
	11		11
	12		12

### Without spring



	2
	3
	4
	40
	7

### Spring reset



	2
	3
	4
	40
	7

DMG 02\*\*



DMG-02\*\* LR



DMG 03\*\*



DMG 03\*\* LR



Hand shank operation direction  
 No code : front and back operation  
 LR : left and right operation

O: Steel ball position  
 W: spring reset

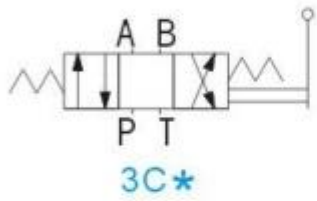
Spool symbols

02=Size 6  
 03=Size 10

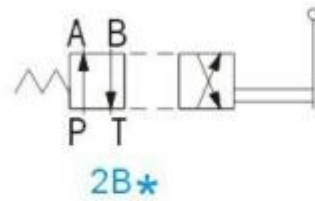
Subplate installation

Manually directional valves

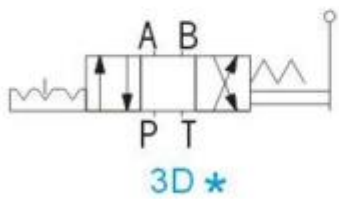
3 Position with spring centring



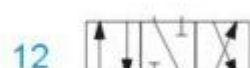
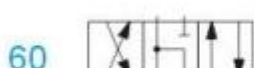
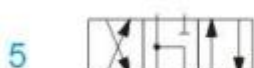
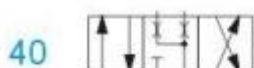
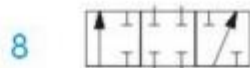
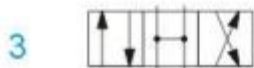
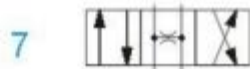
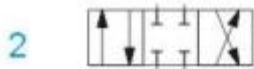
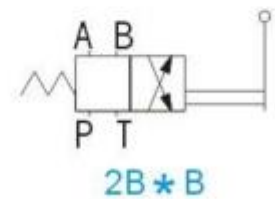
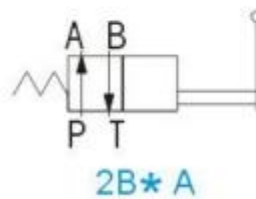
2 position with spring centring



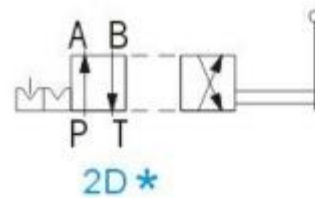
without spring with mechanical position



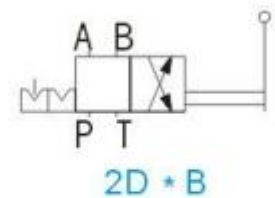
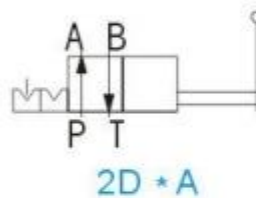
2 position spring return with 3 position extension



Without spring with mechanical position



2 position without spring with 3 position extension, mechanical position





4WE 4\*\*60 / D24 LS



4WE 4\*\*60 / D24 LM



4WE 4\*\*60 / D24 AS



4WE 4\*\*60 / D24 AM



4WE 4\*\*60 / D24 FS



4WE 4\*\*60 / D24 FM



4WE 4\*\*60 / D24 DS



4 WE 4 E 60 / D24 H S

3Main Ports=3  
4Main Ports=4

Solenoid Directional Valves

Size=4

S: Coil shell type Silver-white metal color  
M: black square type shell

No Code = NBR Seals  
V = FKM Seals

H: DIN 43650 connector  
L: DIN 43650 connector (with lamp)  
F: Deutsch type connector , IP69K  
A: AMP junior-timer IP66  
D: Double leads

D12=DC12V  
D24=DC24V

O=without spring return  
OF=Without spring return with detent  
(only suit two position valve with two solenoids)

Spool Symbols:

60 series ( with four holes install )

4WE 6\*\*6X / E D24 AL



4WE 6\*\*6X / E A220 LL



4WE 6\*\*6X / E D24 LL



4WE 6\*\*6X / E D24 BL



4WE 6\*\*6X / E R220 LL



4WE 6\*\*6X / E R220 BL



4WE 6\*\*6X / E D24 FL



4WE 6\*\*6X / E A220 BL



4	WE	6	E	6X	/	E	D24	N	L			L
---	----	---	---	----	---	---	-----	---	---	--	--	---

3Main Ports=3  
4Main Ports=4

solenoid directional valves

Size=6

Spool Symbols

Series 60-90 = 6X  
(60-90 :swap the shape)

No code = with spring return  
O = without spring return  
OF= Without spring return with detent.

Connect with solenoid thread = E

DC12V= D12 DC24V= D24  
A110-50/60=AC110V-50HZ /60HZ A220-50/60=AC220V-50HZ/60HZ  
RAC110V= R110 RAC220V=R220

N=With manual override  
No code=Without manual override

H: DIN 43650 connector  
L: DIN 43650 connector (with lamp)  
F: Deutsch type connector ,IP69K  
A: AMP junior-timer IP66  
D: Double leads  
B: Terminal box

No code = without locating bore  
With locating bore B08=  $\phi$  0.8mm  
With locating bore B10=  $\phi$  1.0mm  
With locating bore B12=  $\phi$  1.2mm

No Code = NBR Seals  
V = FKM Seals

Block print  
H: Black color  
L: Blue color

4WE 10\*\*3X / C D24 AL



4WE 10\*\*3X / C A220 LL



4WE 10\*\*3X / C D24 LL



4WE 10\*\*3X / C D24 BL



4WE 10\*\*3X / C R220 LL



4WE 10\*\*3X / C R220 BL



4WE 10\*\*3X / C D24 FL



4WE 10\*\*3X / C A220 BL





3Main Ports=3  
4Main Ports=4

Solenoid directional valves

Size=10

Spool Symbols

Series 30-39 = 3X  
(30-39: no change of the installation and connection size)

No code = with spring return  
O = without spring return  
OF= Without spring return with detent.

Connect with solenoid thread = C

DC12V=D12 DC24V=D24  
A110-50/60=AC110V-50HZ/60HZ A220-50/60=AC220V-50HZ/60HZ  
RAC110V= R110 RAC220V=R220

N= with manual override  
No code =without manual override

H: DIN 43650 connector  
L: DIN 43650 connector (with lamp)  
F: Deutsch type connector , IP69K  
A: AMP junior-timer IP66  
D: Double leads  
B: Terminal box

No code = without locating bore  
With locating bore B08=φ0.8mm  
With locating bore B10=φ1.0mm  
With locating bore B12=φ1.2mm

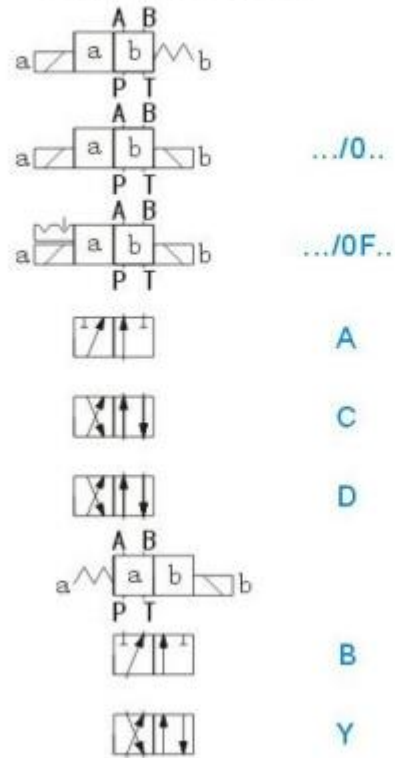
No Code = NBR Seals  
V = FKM Seals

Block print  
H: Black color  
L: Blue color

Transition spool

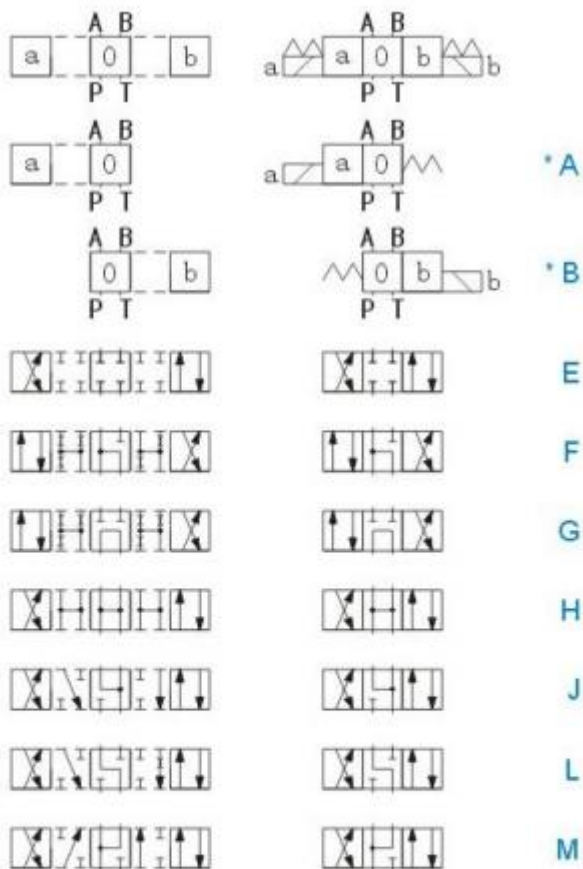


Slide valve spool



Transition spool

Slide valve spool



★ Spool symbol with core a or b , then code have to be XA or XB ,  
For example : spool E with core position a , then code will be EA .



Working pressure  
28MPa  
= No code  
35 MPa  
=H

10=Size 10  
16=Size 16  
25=Size 25  
32=Size 32

No code =  
with spring return or centring  
H =  
with hydraulic return or centring

Take reference the spool of slide valves

Series 60-69=6X

when pilot valve is two solenoids two position valve,  
pilot valve is with hydraulic reset :  
O= without spring return  
OF= without spring return with detent

Pilot control valve  
Standard solenoid valve = 6A  
High capability solenoid valve = 6E

D12=DC12V D24=DC24V  
A110=AC110V-50HZ/60HZ A220=AC220V-50HZ/60HZ  
R110=RAC110V R220=RAC220V

**Notes:**

No code = mineral  
substance hydraulic oil  
V= phosphate ester  
hydraulic oil

No code = without  
pressure reducing valve  
D1= with pressure  
reducing valve  
( reducing rate 1:0.66)

No code = without  
pre-load valve  
P0.45 = with pre-load  
valve :P=0.45 Mpa

No code = without insert damper  
B08=damper 0.8mm  
B10=1.0mm  
B12=1.2mm  
B15=1.5mm

H= with DIN 43650 connector  
L= DIN 43650 connector with lamp

No code = without switching time adjustment  
S= switching time adjustment as meter-in control  
S2=switching time adjustment as meter-out control

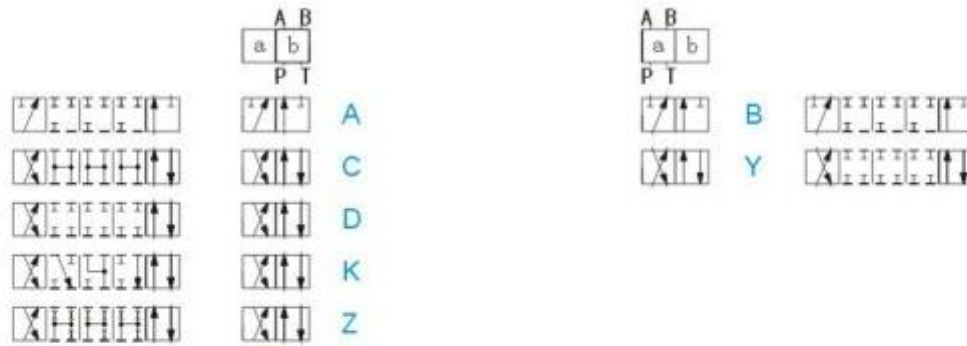
No code = external pilot oil supply , external pilot oil drain  
E=internal pilot oil supply , external pilot oil drain  
ET=internal pilot oil supply , internal pilot oil drain  
T=external pilot oil supply , internal pilot oil drain  
( 3 position valve not suit for E and Et )

no code = without manual override  
N= with manual override



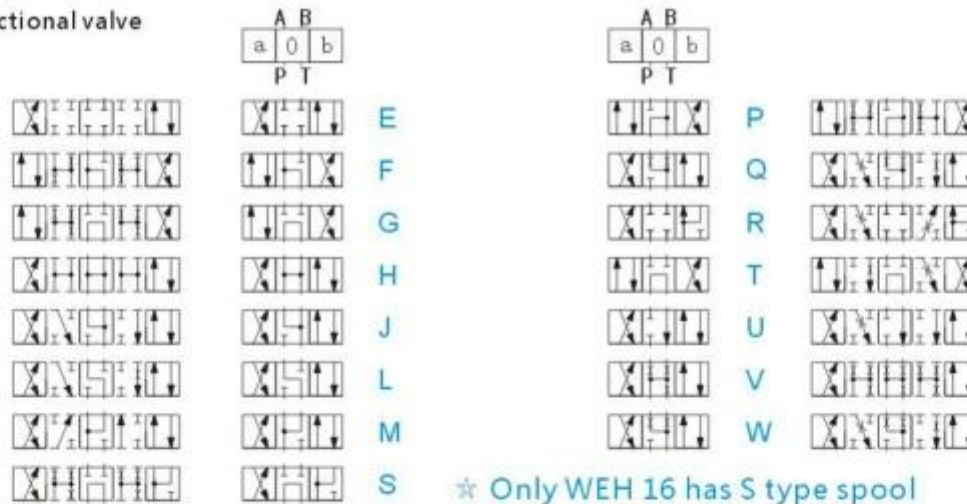


2 position valve spool symbols



Core	Form	Hydraulic drive WH	Electric-hydraulic drive WEH	Core	Form	Hydraulic drive WH	Electric-hydraulic drive WEH
A C D K Z	..I..			B, Y	..I..		
	..H..I..				..H..I..		
	..H..I/O						
	..H/OF						

3 position directional valve spool symbols



\* Only WEH 16 has S type spool

Core spool	Direction	valve core reset	Hydraulic drive WH	Electric-hydraulic drive WEH	Direction	valve core reset	Hydraulic drive WH	Electric-hydraulic drive WEH
E, F, G, H, J, L, M, Q, R, S, T, U, V, W		..I..				..H..I..		
		.A				H.A		
		.B				H.B		

\* If \* type valve is single solenoid A/B, then ordering NO. is \*A/\*B  
 For example : E spool, sol A, then ordering NO. is EA.

4WMM 4\*\* 61/F



4WMM 4\*\* 61/F LR



4WMM 6\*\* 61/F



4WMM 6\*\* 61/F LR



4WMM 10\*\* 61/F



4WMM 10\*\* 61/F LR





4 WMM 6 E 61 / F

Hand shank operation direction  
 No code : front and back operation  
 LR : left and right operation

No code = mineral substance hydraulic oil  
 V= phosphate ester hydraulic oil

no code = without insert damper  
 B08= damper 0.8mm  
 B10= damper 1.0mm  
 B12= damper 1.2mm

No code= with spring return  
 F=with detent

Series code

Spool symbols

4=Size 4  
 6=Size 6  
 10=Size 10

Operate with hand shank

3 Position=3  
 4 Position=4