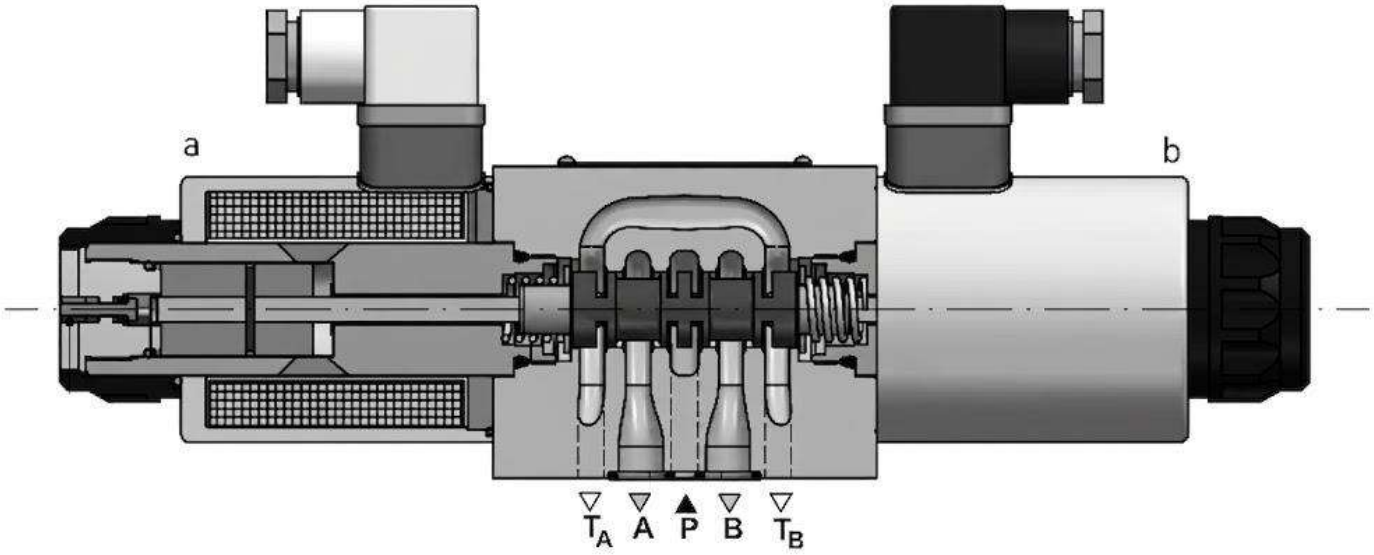
HYDROWEST

Direction valve

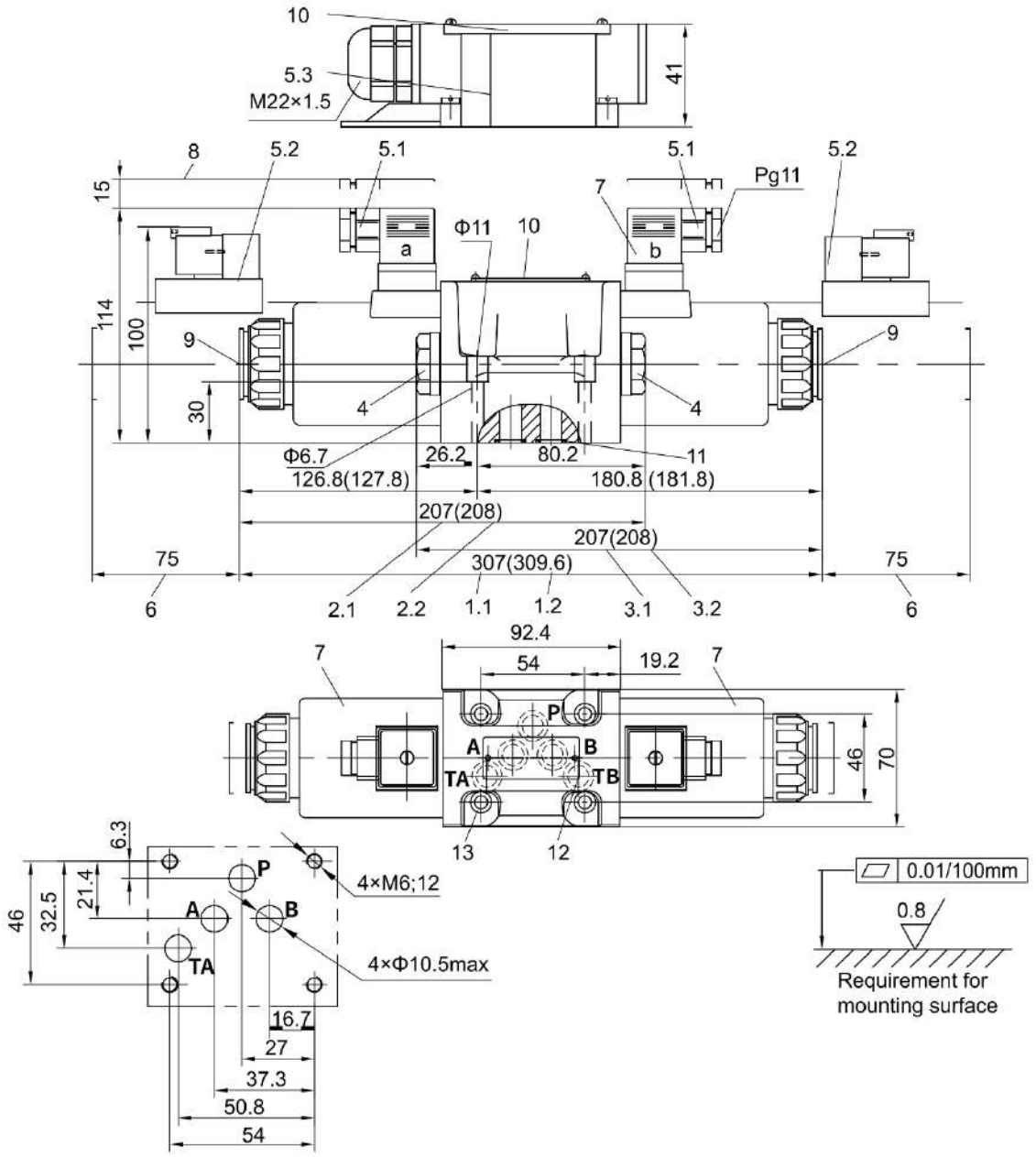
WE10



Unit dimensions

(Dimensions in mm)

Valve with DC or rectification AC solenoid

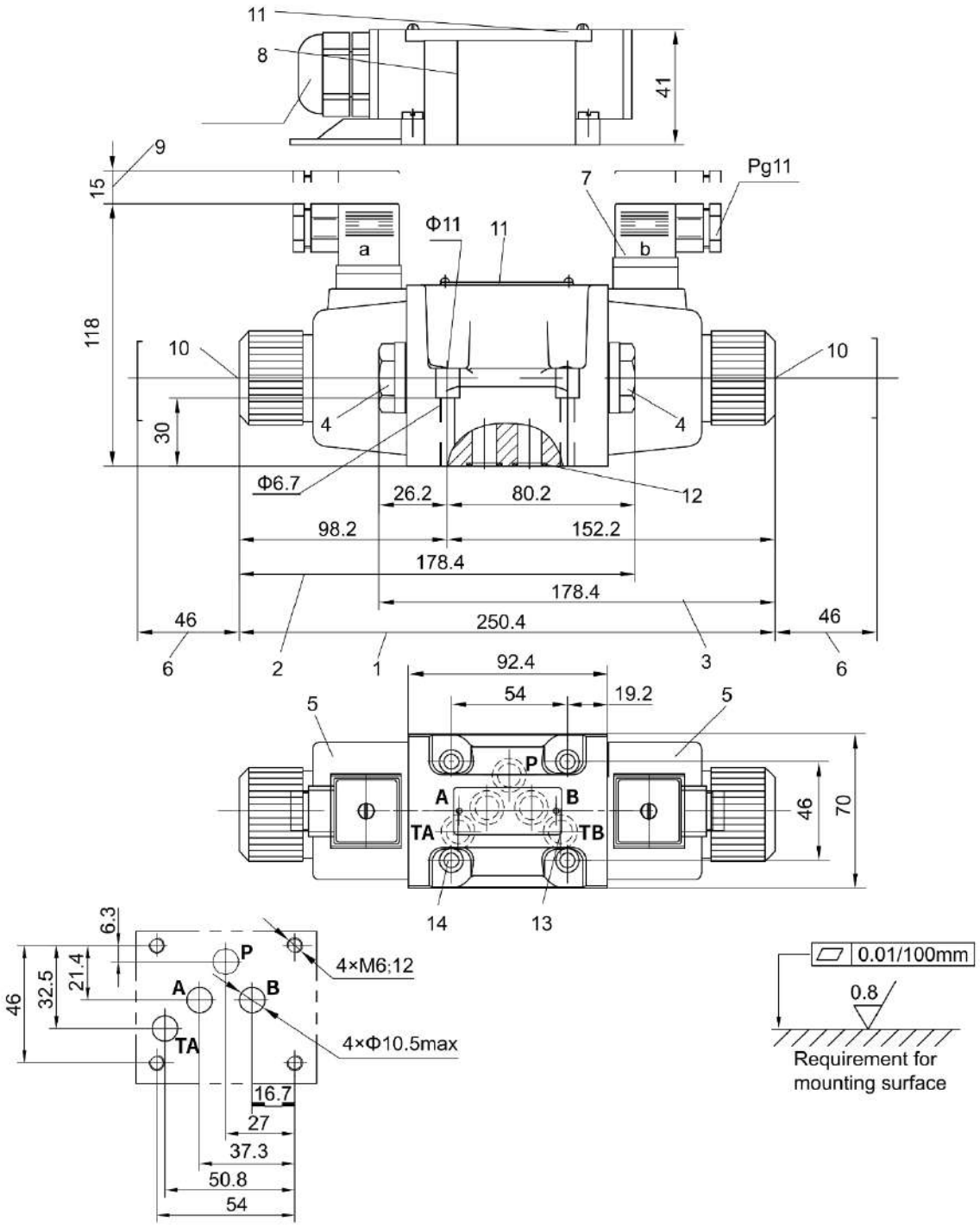


1.1 Dimension of 3-position, standard version
1.2 Dimension of 3-position, large-scope Type of voltage
2.1 Dimension of 2-position with solenoid at 'A', standard version
2.2 Dimension of 2-position with solenoid at 'A', large-scope Type of voltage
3.1 Dimension of 2-position with solenoid at 'B', standard version
3.2 Dimension of 2-position with solenoid at 'B', large-scope Type of voltage
4 Plug for valves with one solenoid
5.1 Plug-in connector to DIN 43 650 (rotatable 90 °)
5.2 Deutsch connector assembly
5.3 Junction box with lead and light, M22×1.5 interface
6 Space required to remove solenoid
7 Solenoid
8 Space required to remove Plug-in connector
9 Fault inspection override 'N' button
10 Nameplate
11 O-ring 12×2
12 Fix additional port TB on the manifold when necessary
13 Valve fixing screws:
M6×40 GB/T 70.1-10.9, Tightening torque M_A =15.5Nm, must be ordered separately.

Unit dimensions

(Dimensions in mm)

Valve with AC solenoid



1 3-position valve
2 2-position valve with one solenoid(A,C,D,EA...)
3 2-position valve with one solenoid(B,Y,EB...)
4 Plug for valves with one solenoid
5 Solenoid
6 Space required to remove the solenoid
7 Plug-in connector to DIN 43 650 (Rotatable 90°)
8 Junction box with lead and light, M22×1.5 interface
9 Space required to remove Plug-in connector
10 Fault inspection override 'N' button
11 Nameplate
12 O-ring 12×2
13 Fix additional port TB on the manifold when necessary
14 Valve fixing screws:
M6×40 GB/T 70.1-10.9, Tightening torque M_A =15.5Nm, must be ordered separately.

Technical data

Fixing position			Optional	
Environment temperature range		°C	-30 to +50 (NBR seal)	
			-20 to +50 (FKM seal)	
Weight			Independently wiring	central monitoring station
	Single solenoid	kg	4.3(DC), 3.5(AC)	4.4(DC), 3.6(AC)
	Double solenoids	kg	5.9(DC), 4.3(AC)	6.0 (DC), 4.4(AC)
Max.operating pressure	Port A,B,P	bar	315	
	Port T	bar	210 (DC),160 (AC), when the operating pressure exceeds the permission value, spool symbol A and B must make the port T for draining.	
Max. flow-rate		L/min	120	
Flow cross section (switching neutral position)	Version V	mm^2	11(A/B to T), 10.3(PtoA/B)	
	Version W	mm^2	2.5(A/B to T)	
	Version Q	mm^2	5.5(A/B to T)	
Fluid			Mineral oil suitable for NBR and FKM seal	
			Phosphate ester for FKM seal	
Fluid temperature range		°C	-30 to +80 (NBR seal)	
			-20 to +80 (FKM seal)	
Viscosity range		mm^2/s	2.8 to 500	
Degree of contamination			Maximum permissible degree of fluid contamination: Class 9. NAS 1638 or 20/18/15, ISO4406	

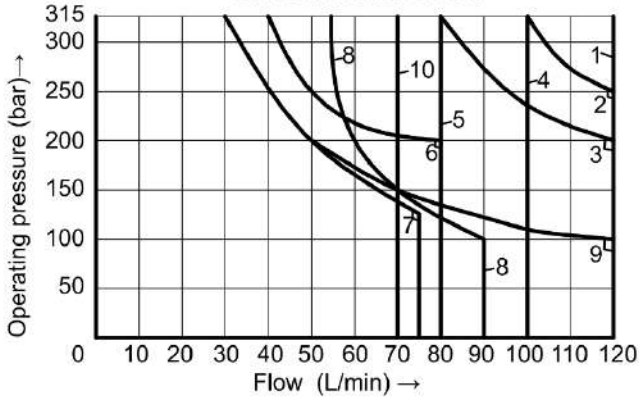
Electric data

Type of voltage			DC	AC 50Hz
Available voltage		V	12,24,28[1)],48,96,110,205,220	110,127,220
Voltage tolerance (nominal voltage)		%	Standard solenoid:+10~-15, large-scope solenoid:+20~-30	
Power consumption		W	Standard solenoid: 35, large-scope solenoid: 42	
Holding power		VA	-	50
Making capacity		VA	-	550
Duty			Continuous working	
Switching time to ISO 6403	ON	ms	45 to 60	15 to 25
	OFF	ms	20 to 30	20 to 30
Switched frequency		times/h	to 15000	to 7200
Type of protection to DIN 40050			IP65(Z4,Z5L plug), IP67 (K7 Deutsch)	
Max. coils temperature		°C	+150	+180

Performance limits

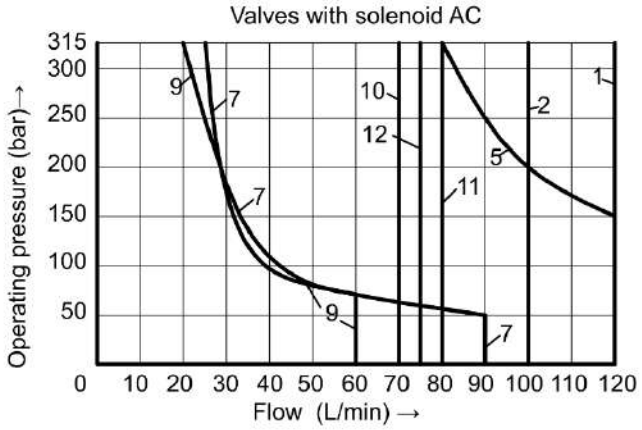
The performance limits shown are valid when the valve is used with two directions of flow.
Due to the flow forces occuring within the valves, the permissbile switching performance limits can be significantly lower with only one direction of flow! (For these applications, please consult us.) The performance limit was determined with the solenoids at their operating temperature, 15% under voltage and with no pre-loading of the tank.

Valves with solenoid DC

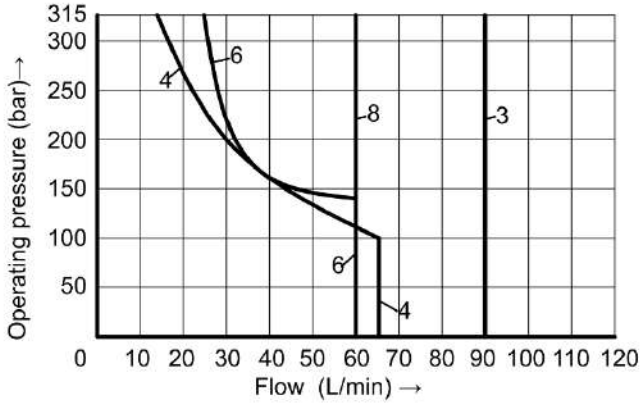


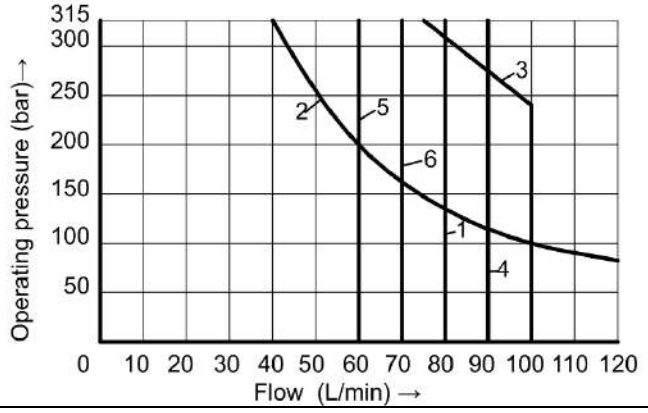
Curve	Spool symbol	Curve	Spool symbol
1	C, C/O, C/OF; D,D/O,D/OF; Y, M	5 1)	R,L2),U2)
		6	G
2	E	7	T
3	A/O, A/OF; L, U, J, Q, W	8	F, P
		9	A,B
4	H	10	V

Valves with solenoid AC



Curve	Spool symbol	Curve	Spool symbol
1	C, C/O, C/OF; D, D/O, D/OF; Y	6	G
		7	F,P
		8	V
2	E, L, U, Q, W	9	T
3	M	10	H
4	A, B	11	R
5	A/O, A/OF, J	12 1)	L,U

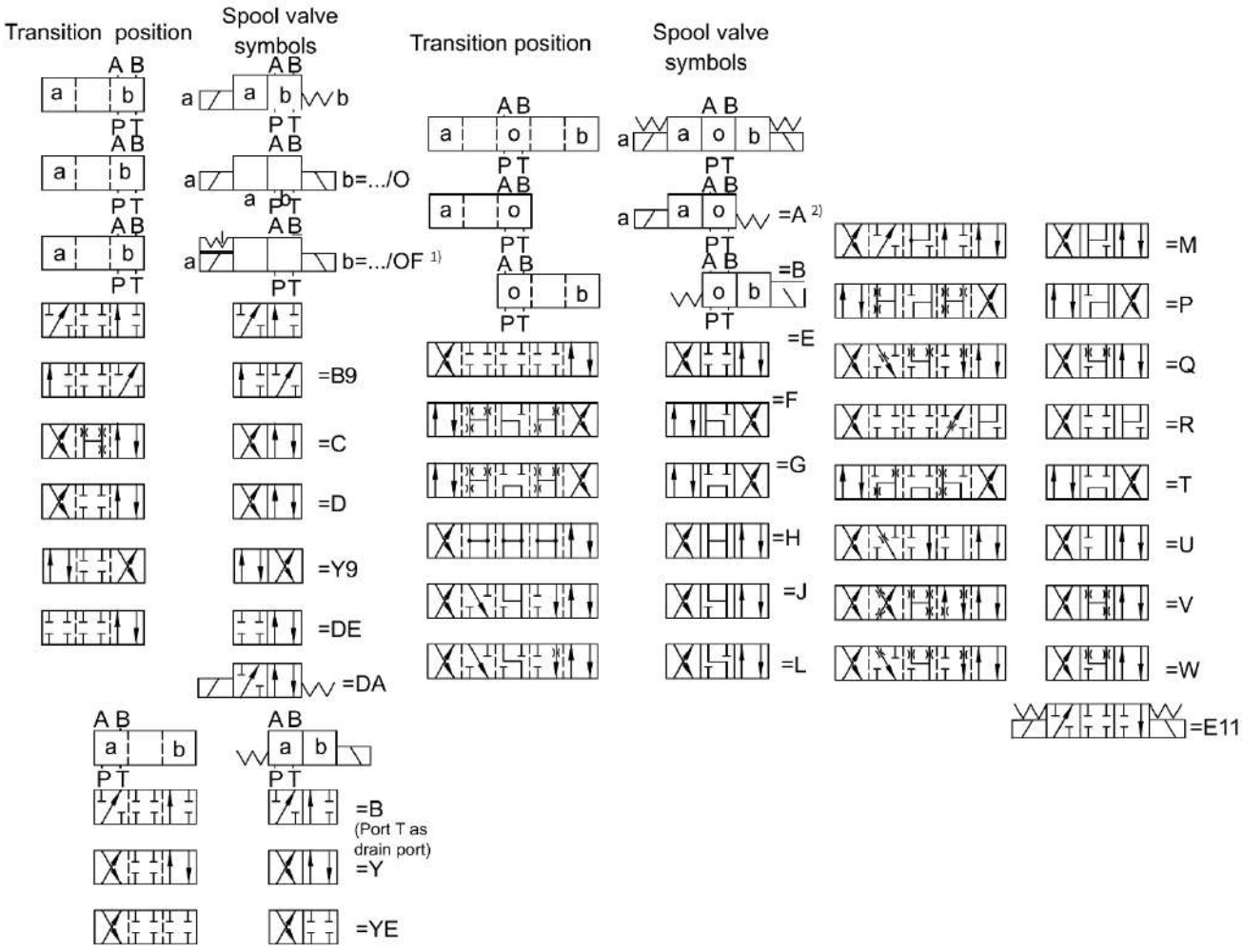




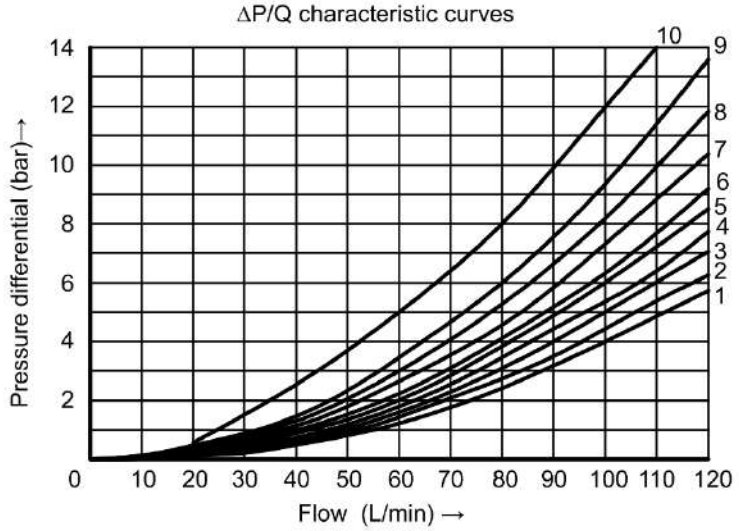
Curve	Spool symbol	Curve	Spool symbol
1	C, C/O, C/OF; D, D/O, D/OF; Y	3	E
		4	M
		5	V
2	A/O, A/OF	6	H

48V 60Hz, 110V 60Hz, 127V 60Hz, 220V 60Hz

Symbols



Characteristic curves (Measured at t=40°C ±5°C , using HLP46)



Open position		P to A	B to A	A to T	P to T
R		-	9	-	-
Open position	P to A	P to B	B to T	A to T	P to T
F	4	-	-	9	9
P	-	5	8	-	10
G,T			-	-	9
H			-	-	3

Spool symbol	Flow direction			
	P to A	P to B	A to T	B to T
A,B	3	3	-	-
C	3	3	4	5
D,Y	5	5	6	6
E	1	1	4	4
F	2	3	7	4
G	3	3	6	7
H	1	1	6	7
J	1	1	3	3
L	2	2	3	5
M	1	1	4	5
P	4	2	5	7
Q	1	2	1	3
R	3	6	4	-
T	3	3	6	7
U,V	2	2	3	3
W	2	2	4	5

Specification