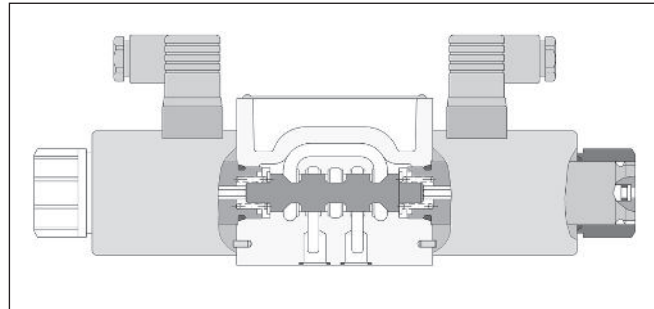
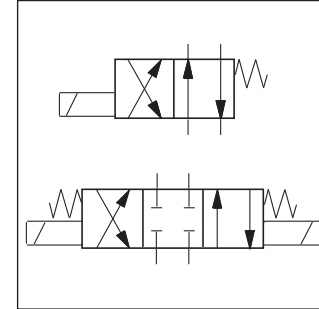
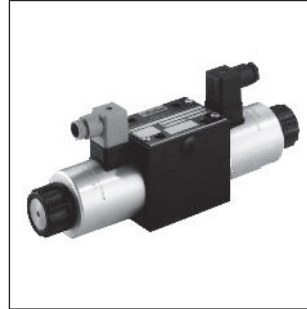


The D3MW is a 3-chamber, electrically controlled 4/3 or 4/2 way directional control valve. It is activated directly by solenoids with screwed-in wet pin armature.

The series D3MW is a high-quality valve for usage in applications with a maximum pressure of 350 bar and maximum flow of 150 l/min.

With the optional high corrosion protection and the solenoid interfaces offered, the D3MW is a valve designed for mobile or marine applications.



2

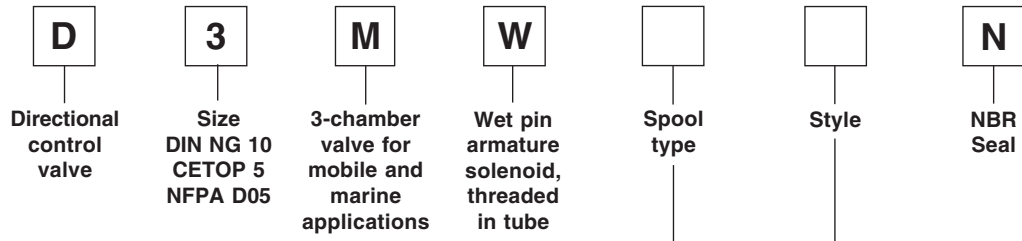
Technical data

General		Directional spool valve	
Design		Solenoid	
Actuation		DIN NG10 / CETOP 05 / NFPA D05	
Size		DIN 24340 A10 / ISO 4401 / CETOP RP 121-H / NFPA D05	
Mounting interface		Unrestricted, preferably horizontal	
Mounting position			
Ambient temperature		[°C]	-25...+50
Weight		[kg]	4.8 (1 solenoid), 6.3 (2 solenoids)
Hydraulic			
Max. operating pressure		[bar]	P, A B: 350 T: 210
Fluid		Hydraulic oil in accordance with DIN 51524 / 51525	
Fluid temperature		[°C]	-25 ... +70
Viscosity permitted		[mm²/s]	2.8...400 (2.8...400 cSt)
Viscosity recommended		[mm²/s]	30...80
Filtration		ISO 4406 (1999); 18/16/13 (meet NAS 1638: 7)	
Flow max.		[l/min]	150
Leakage at 50 bar		[ml/min]	Up to 20 per flow path, depending on spool
Static / Dynamic			
Step response at 95%		[ms]	Energized: 105 De-energized: 85
Electrical characteristics			
Duty ratio		100% ED; CAUTION: coil temperature up to 150 °C possible	
Max. switching frequency		[1/h]	10000
Protection class		IP 65 in accordance with DIN 40050 (plugged and mounted)	
		Code	
Supply voltage / ripple		K	J
		12 VDC	24 VDC
Tolerance supply voltage		±10	±10
Current consumption hold		[A]	3
Power consumption hold		[W]	36
Solenoid connection		Connector as per EN 175301-803, AMP Junior Timer, Solenoid ident. as per ISO 9461.	
Wiring min.		[mm²]	3 x 1.5 recommended
Wiring length max.		[m]	50 recommended

With electrical connections the protective conductor (PE ↓) must be connected according to the relevant regulations.

D3MW.PMD RH





2

3 position spools	
Code	Spool type
1	a 0 b
2	
4	
6	
11	
21	
22	
81	
82	

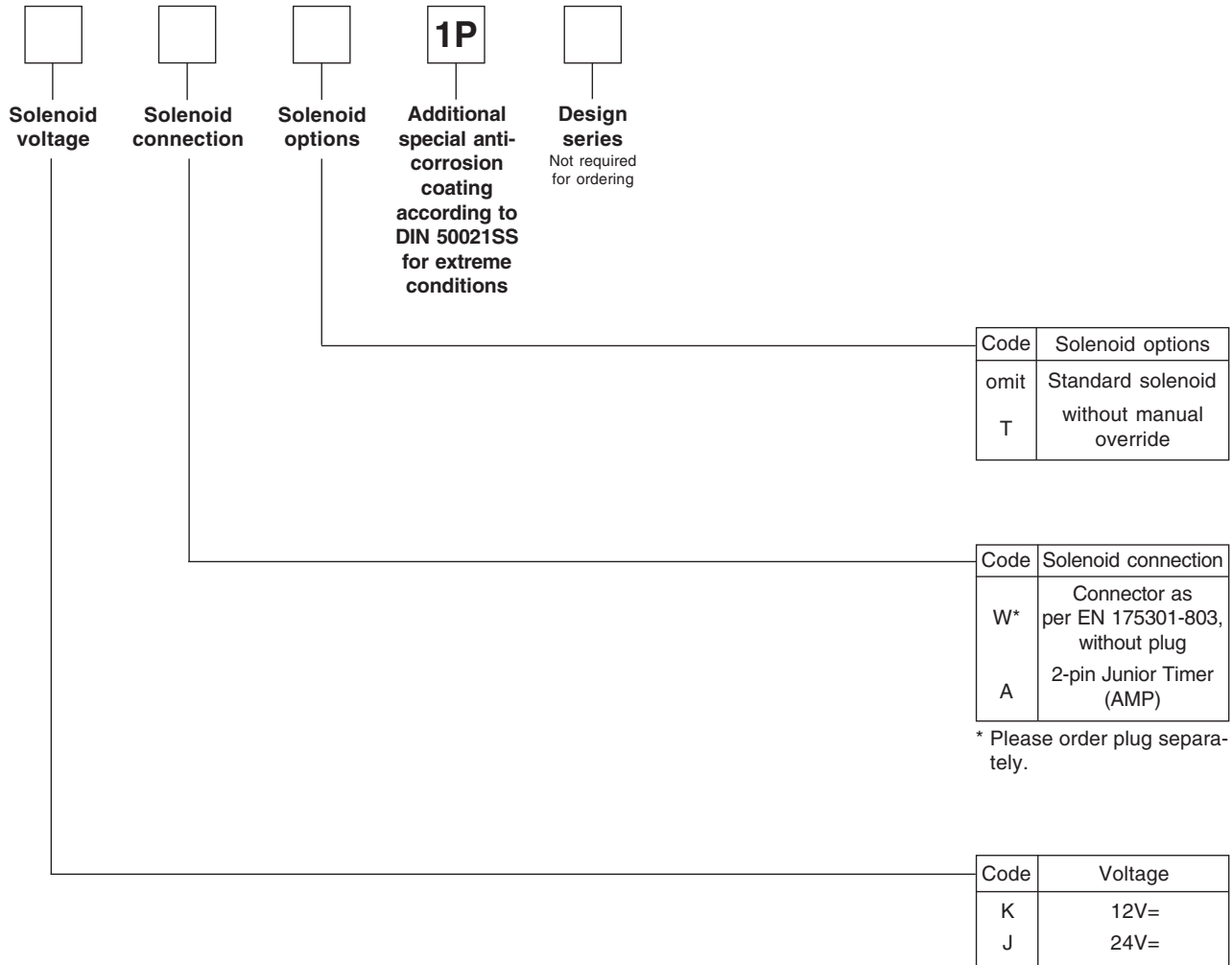
3 position spools	
Code	Spool type
8	a 0 b

2 position spools	
Code	Spool type
20	a b
30	

3 position spools (except spool 8)	
Code	Description
C	 3 positions. Spring offset in position "0". Operated in position "a" or "b".
E	 2 positions. Spring offset in position "0". Operated in position "a".
F	 2 positions. Spring offset in position "b". Operated in position "0".
K	 2 positions. Spring offset in position "0". Operated in position "b".
M	 2 positions. Spring offset in position "a". Operated in position "0".

3 position spools (only for spool 8)	
Code	Description
C	 3 positions. Spring offset in position "0". Operated in position "a" or "b".
E	 2 positions. Spring offset in position "0". Operated in position "b".
F	 2 positions. Spring offset in position "a". Operated in position "0".
K	 2 positions. Spring offset in position "0". Operated in position "a".
M	 2 positions. Spring offset in position "b". Operated in position "0".

2 position spools	
Code	Description
B	 2 positions. Spring offset in position "b". Operated in position "a".
D	 2 positions, detent. Operated in position "a" or "b". No centre or offset position.
H	 2 positions. Spring offset in position "a". Operated in position "b".



2

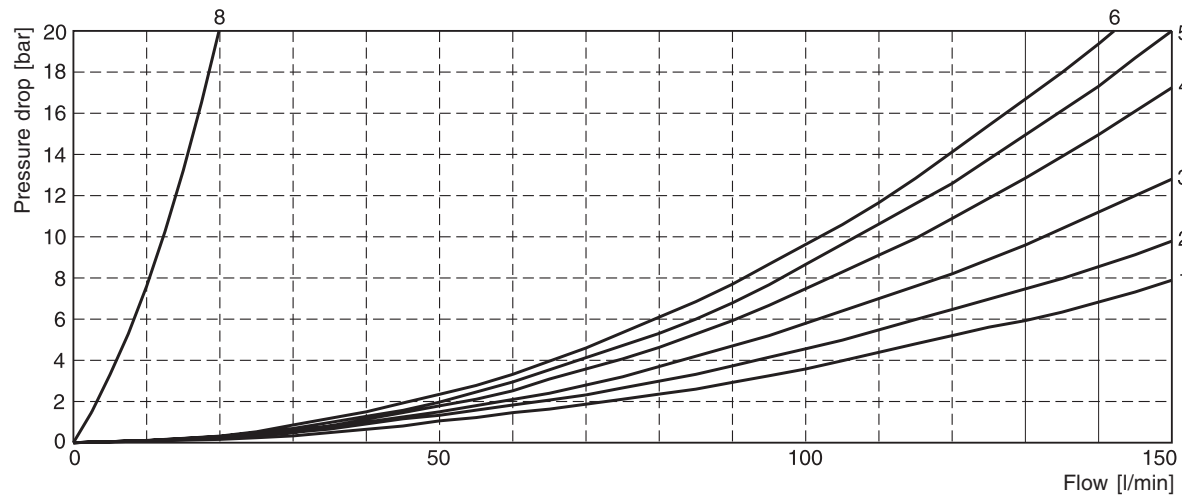
Further spool types on request.

The flow curve diagram shows the flow versus pressure drop curves for all spools shown. To read the values in the diagram, the curve number for the selected spool and desired operating position must first be determined from the table below.

2

Spool	Position "b"		Position "a"		Position "0"					
	P->A	B->T	P->B	A->T	P->A	P->B	A->T	B->T	P->T	A->B
1	4	3	4	3	-	-	-	-	-	-
2	4	1	4	1	3	3	1	1	5	1
4	4	2	4	2	-	-	3	3	-	5
6	4	3	4	3	6	6	-	-	-	6
11	4	3	4	3	-	-	8	8	-	-
20	4	3	4	3	-	-	-	-	-	-
30	4	2	4	2	-	-	-	-	-	-
	P->B	A->T	P->A	B->T	P->A	P->B	A->T	B->T	P->T	A->B
8	4	3	4	3	-	-	-	-	6	-
	Position "b"		Position "a"							
	P->A	P->B	A->B	P->B	A->T					
21	5	4	6	3	3					
	P->A	B->T		P->A	P->B	A->B				
22	3	3		4	5	6				

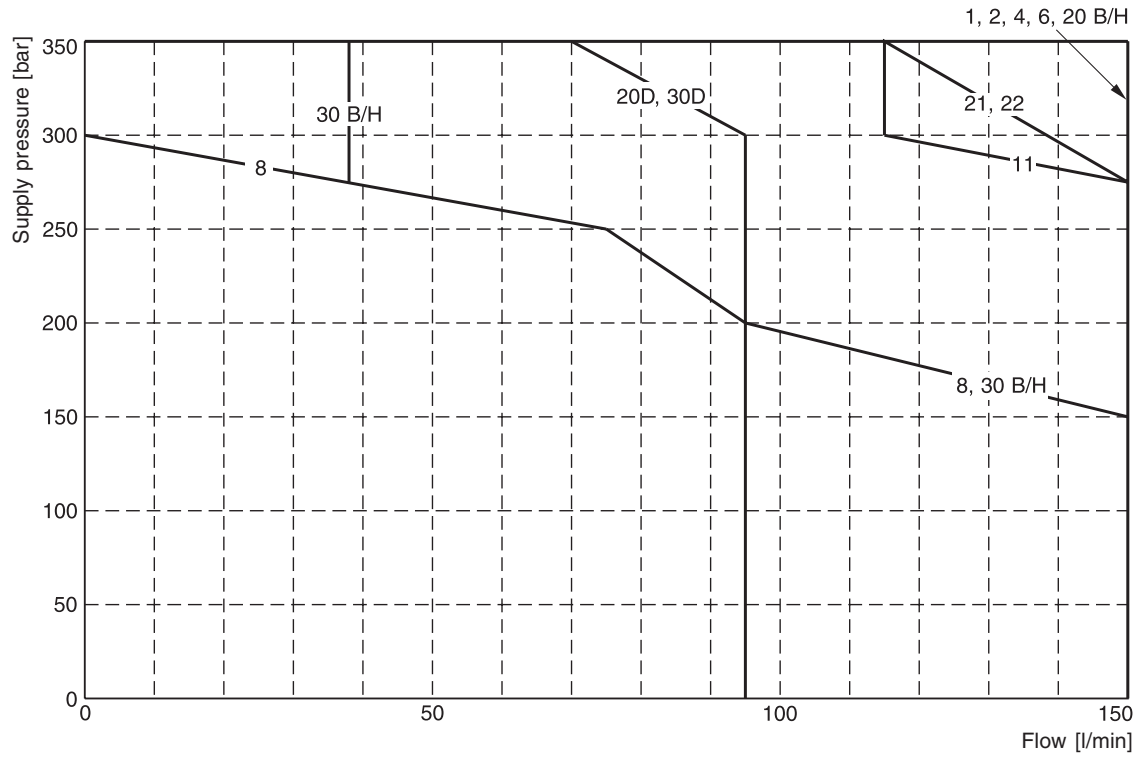
Flow curve



The diagram below specifies the shift limits for valves with DC solenoids. Valves of style "F" and "M" may only be loaded at 70% of the value. The specifications apply to a viscosity of 35 mm²/s and equal flow at A and B port.

These values can be considerably lower than the represented ones by unequal flow at A and B port. To avoid flow rates above the shift limits of the valve, a plug-in orifice can be inserted in the P port.

Shift limits, DC voltage

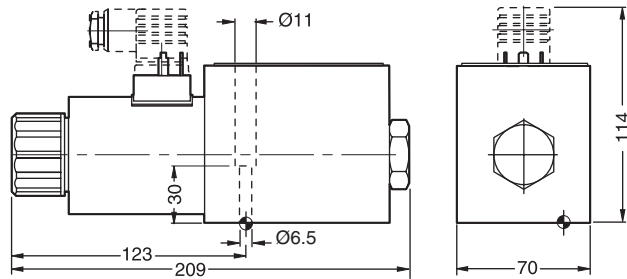


Measured at 90% U_{nom} and warm solenoids.

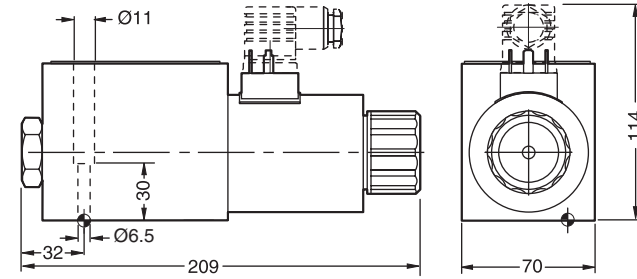
2

2

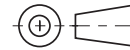
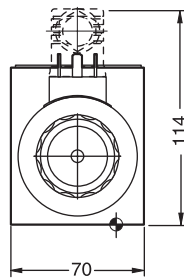
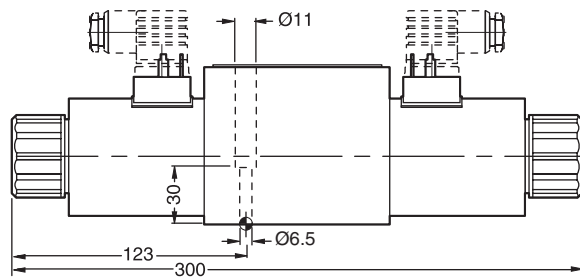
**Interface EN 175301-803, DC-solenoid
 B, E, F -style**



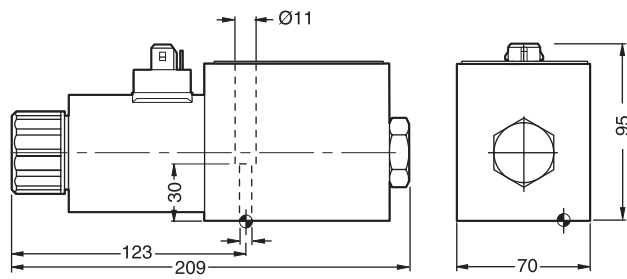
H, K, M -style



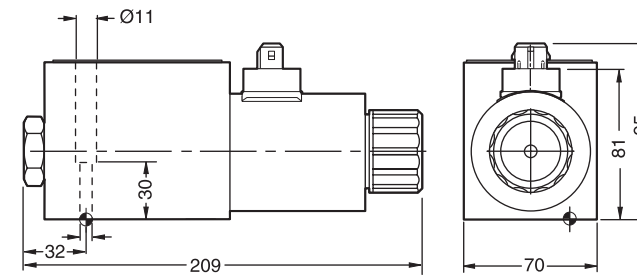
C, D -style



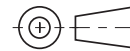
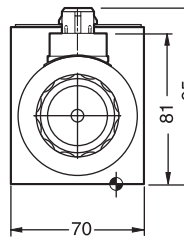
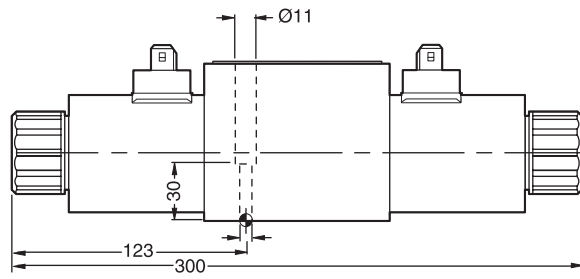
**Dimensions with AMP Connector
 B, E, F -style**





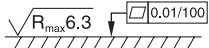


H, K, M -style



C, D -style



Surface finish	 Kit	 Kit	 Kit	 Kit
	BK385	4x M6x40 DIN 912 12.9	11 Nm ± 15%	NBR: SK-D3W-30 FPM: SK-D3W-V30

The space necessary to remove the plug per EN 175301-803, design type AF is at least 15 mm.
 The torque for the screw M3 of the plug has to be 0.5 to 0.6 Nm.

D3MW.PMD RH

