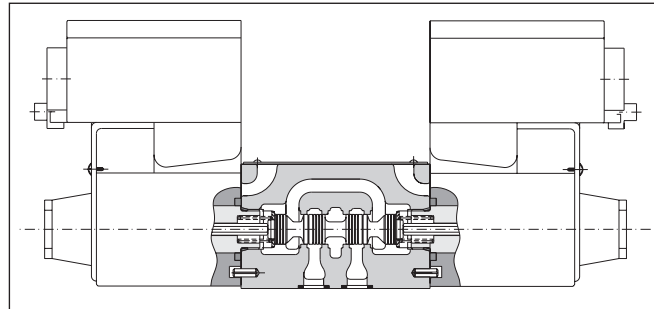
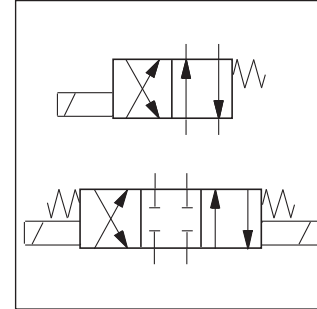
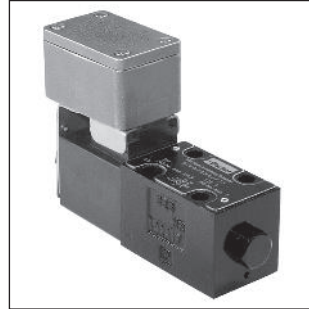


The D1VW is a 3-chamber, electrically controlled 4/3 or 4/2 way directional control valve. It is activated directly by solenoids with screwed-in wet pin armature. The explosion proof class is

CE Ex II 2 G
 EEx me II T4

for use in zone 1.

All explosion proof solenoids are DC solenoids. For voltage code "P" and "N", the input voltage is AC and rectified on the coil.



2

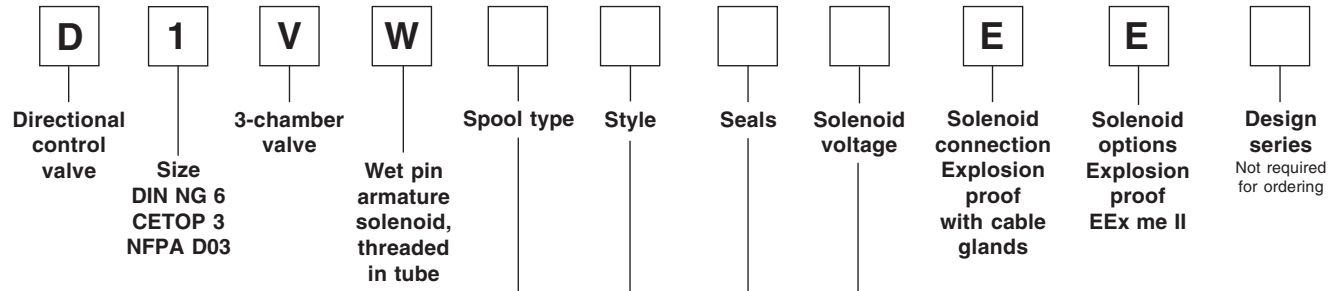
Technical data

General				
Design		Directional spool valve		
Actuation		Solenoid		
Size		DIN NG6 / CETOP 03 / NFPA D03		
Mounting interface		DIN 24340 A6 / ISO 4401 / CETOP RP 121-H / NFPA D03		
Mounting position		Unrestricted, preferably horizontal		
Ambient temperature	[°C]	-25...+50		
Weight	[kg]	1.5 (1 solenoid), 2.1 (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 ... +60		
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]	80		
Leakage at 50 bar	[ml/min]	Up to 10 per flow path, depending on spool		
Static / Dynamic				
Step response at 95%	[ms]	Energized: 32 (DC) De-energized: 40 (DC)		
Electrical characteristics				
Duty ratio		100% ED; CAUTION: coil temperature up to 130 °C possible		
Max. switching frequency	[1/h]	15000		
Protection class		CE Ex II 2 G , EEx me II T4		
Supply voltage / ripple	[V]	J 24 VDC	P 110/50Hz	N 230/50Hz
Tolerance supply voltage	[%]	±10	±5	±5
Current consumption hold	[A]	1.25	0.32	0.15
Power consumption hold	[W]	30	30	30
Solenoid connection		Box with M20x1.5 entry for cable glands. Solenoid identification 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.

D1VW EX-PROOF.PMD RH





2

3 position spools	
Code	Spool type
1	
2	
3	
4	
5	
6	
7	
10	
11	
14	
15	
16	
21	
22	
31	
32	
76	
78	
81	
82	
102	

3 position spools	
Code	Spool type
8	
9	

2 position spools	
Code	Spool type
20	
26	
30	
101	

3 position spools (except spool 8 and 9)	
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 and 9)	
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".

Code	Voltage
J	24V=
P	110V 50Hz
N	220V 50Hz

Code	Seals
N	NBR
V	FPM

Further spool types, styles, and combinations 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

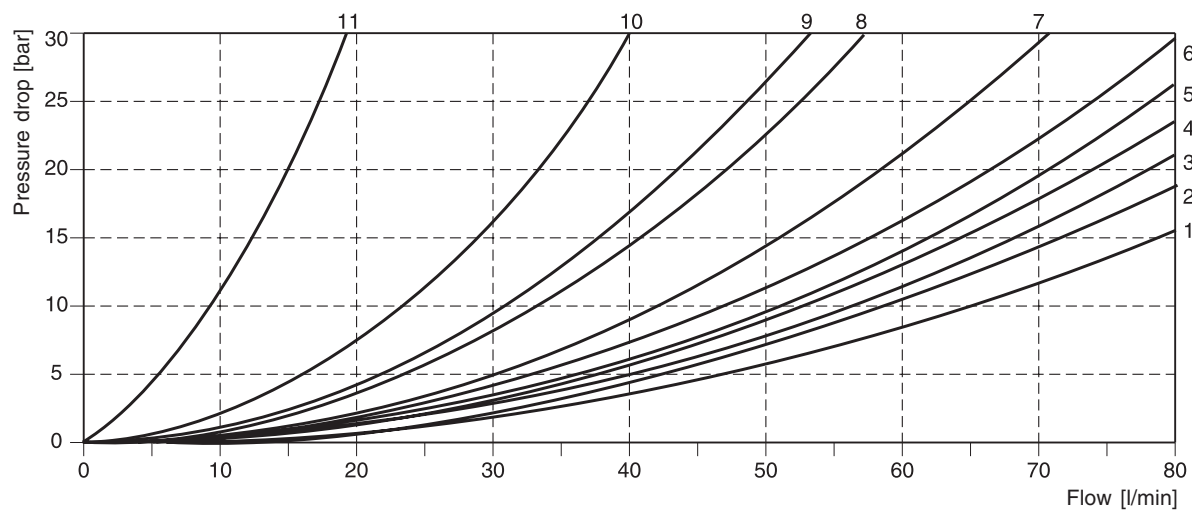
desired operating position must first be determined from the table below.

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	1	4	1	-	-	-	-	-	-
2	5	2	5	2	4	4	1	1	6	1
3	4	1	4	2	-	-	8	-	-	-
4	4	2	4	2	-	-	7	7	-	9
5	4	1	5	1	9	-	-	-	-	-
6	5	1	5	1	9	9	-	-	-	9
7	5	2	4	1	-	5	-	1	7	-
10	4	-	4	-	-	-	-	-	-	-
11	4	2	4	2	-	-	11	11	-	-
14	4	1	5	2	5	-	1	-	7	-
15	4	2	4	1	-	-	-	8	-	-
16	5	1	4	1	-	9	-	-	-	-
20	5	1	5	1	-	-	-	-	-	-
26	6	-	6	-	-	-	-	-	-	-
30	5	1	5	1	-	-	-	-	-	-
76	-	2	-	-	-	-	3	-	-	-
78	-	-	-	2	-	-	-	3	-	-
81	10	10	10	10	-	-	-	-	-	-
82	10	10	10	10	-	-	1)	1)	-	-
	P->B	A->T	P->A	B->T	P->A	P->B	A->T	B->T	P->T	A->B
8	2	2	2	2	-	-	-	-	8	-
9	3	3	3	3	-	-	-	-	9	-
	Position "b"		Position "a"							
	P->A	P->B	A->B	P->B	A->T					
21	3	3	3	6	1					
	P->A	B->T		P->A	P->B	A->B				
22	6	1		3	3	3				

2

1) Only for pressure compensation, no high flow possible.

Flow curve



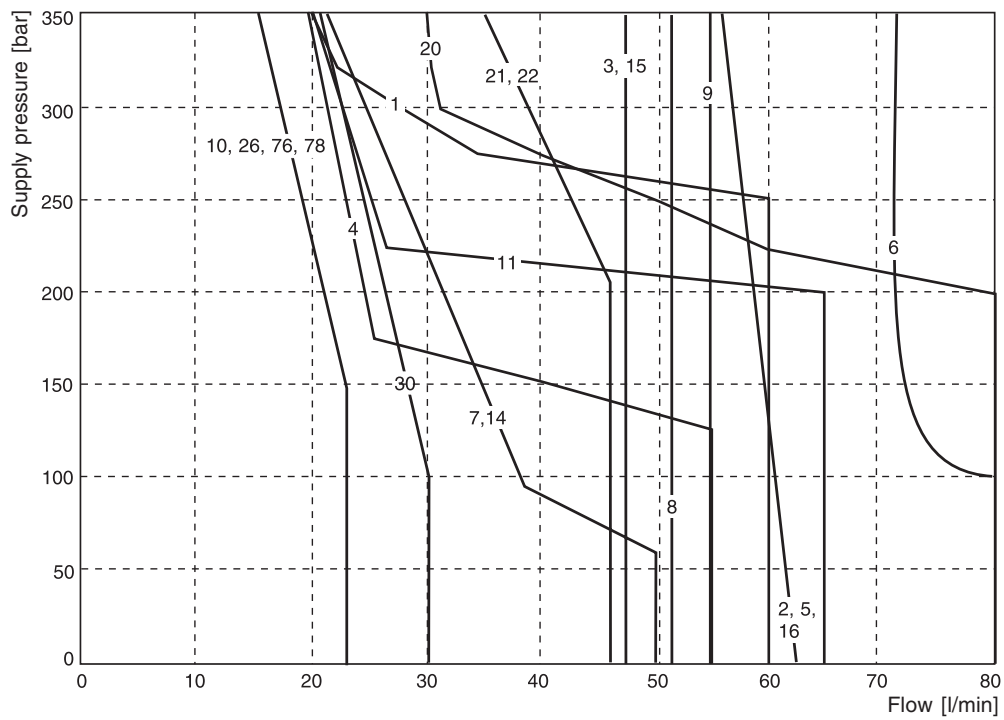
D1VW EX-PROOF.PMD RH



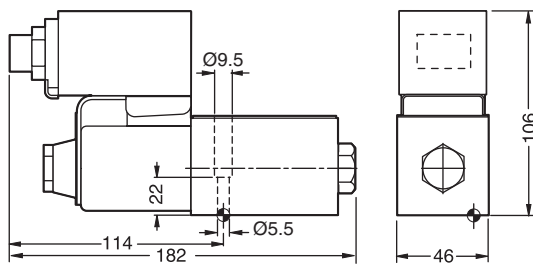
The diagram below specifies the shift limits for valves with DC solenoids. Valves of style "F" and "M" may only be loaded at 70% of the value. The specifications apply to a viscosity of 35 mm²/s and equal flow at A and B port.

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.

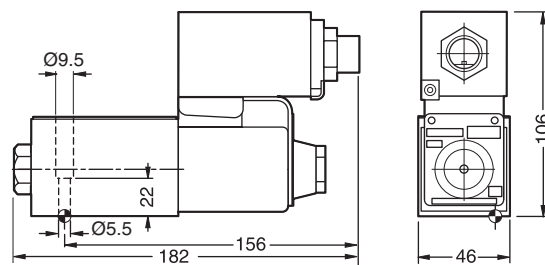
2



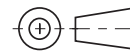
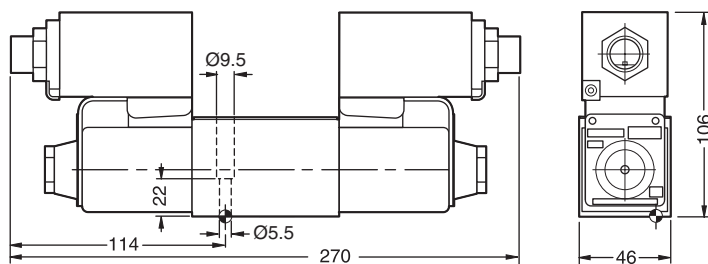
Dimensions
B, E, F -style







H, K, M -style



C, D -style



Surface finish	 Kit			 Kit
$\sqrt{R_{max} 6.3}$ $\square 0.01/100$	BK375	4x M5x30 DIN 912 12.9	6.8 Nm ± 15%	NBR: SK-D1VW-70 FPM: SK-D1VW-V70

D1VW EX-PROOF.PMD RH

