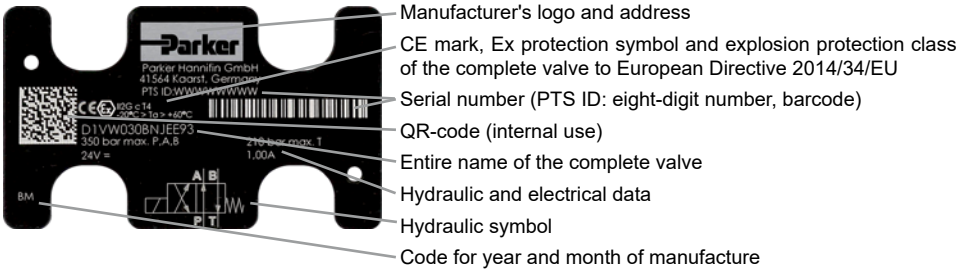


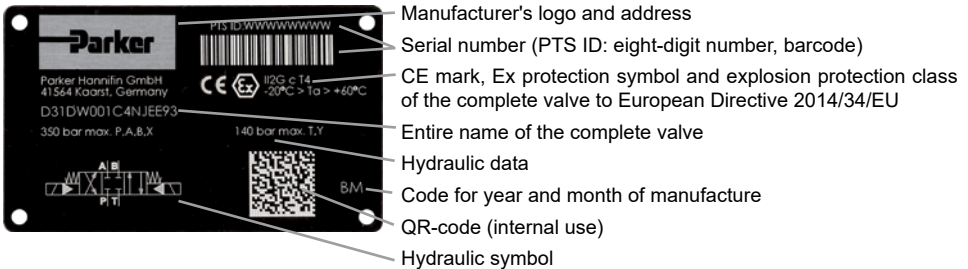
Parker SERIES D31DW, D31NW, D1VW(AP) Pilot Operated Directional Control Valve Service Manual

Name plate

D1VW*EE



D31DW*EE, D31NW*EE, D*1VW*EE

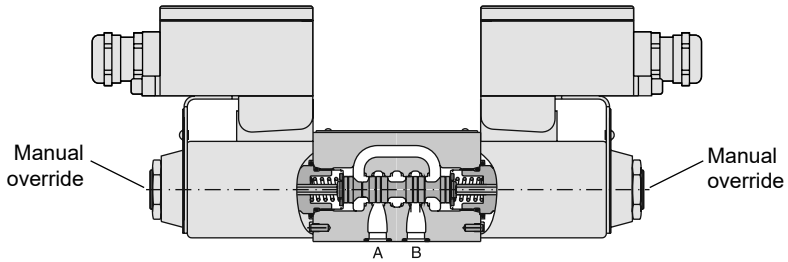


Technical data

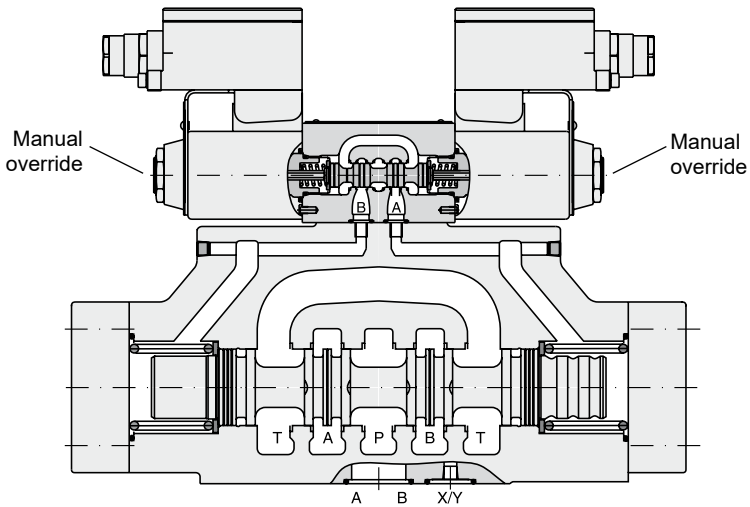
General		Directional spool valve						
Design	Solenoid							
Actuation	Solenoid							
Series	D1VW	D31DW	D31NW	D41VW	D91VW	D111VW		
Size	NG06	NG10	NG10	NG16	NG25	NG32		
Weight (1/2 solenoids)	[kg]	1.8 / 2.7	6.0 / 6.6	7.6 / 8.1	9.7 / 10.3	17.9 / 18.6	67.4 / 68.0	
Mounting interface		DIN 24340 A6 ISO 4401 NFPA D03	DIN 24340 A10 ISO 4401 NFPA D05	DIN 24340 A10 ISO 4401 NFPA D05	DIN 24340 A16 ISO 4401 NFPA D07	DIN 24340 A25 ISO 4401 NFPA D08	DIN 24340 A32 ISO 4401 NFPA D10	
Mounting position	CETOP RP 121-H							
Ambient temperature	[°C]	unrestricted, preferably horizontal						
MTTF _p value	[Jahre]	150	75					
Hydraulic		ISO 4406; 18/16/13						
Max. operating pressure	[bar]	P, A, B: 350; T: 210						
Fluid	Hydraulic oil according to DIN 51524							
Fluid temperature	[°C]	-20 ... +60						
Viscosity permitted	[cSt] / [mm ² /s]	2,8...400						
Viscosity recommended	[cSt] / [mm ² /s]	30...80						
Flow max.	[l/min]	60	150	170	300	700	2000	
Leakage at 50 bar (per flow path)	[ml/min]	up to 10*						
Leakage at 350 bar (per flow path)	[ml/min]	-	up to 100*	up to 150*	up to 200*	up to 800*	up to 5000*	
*depending on spool								
Minimum pilot supply pressure	[bar]	-	n.a.	see p/Q diagram	see p/Q diagram	see p/Q diagram	n.a.	
Minimum pilot supply pressure	[bar]	-	5	7	5			
Static / Dynamic		Energized / De-energized						
Step response at 95 %	[ms]	32 / 40 40 / 75	-					
DC solenoids		-						
AC solenoids		-						
DC solenoids	Pilot pressure	50 bar	-	60 / 40	50/60	95 / 65	150 / 170	470 / 390
		100 bar	-	55 / 40	50/60	75 / 65	110 / 170	320 / 390
		250 bar	-	55 / 40	50/50	60 / 65	90 / 170	210 / 390
		350 bar	-	55 / 40	50/50	60 / 65	85 / 170	200 / 390
AC solenoids	Pilot pressure	50 bar	-	40 / 30	30/50	75 / 55	130 / 155	450 / 375
		100 bar	-	35 / 30	30/50	65 / 55	90 / 155	300 / 375
		250 bar	-	35 / 30	30/50	40 / 55	70 / 155	190 / 375
		350 bar	-	35 / 30	30/50	40 / 55	65 / 155	180 / 375
Electrical characteristics		100 % ED; CAUTION: coil temperature up to 135 °C possible						
Duty ratio	100 % ED; CAUTION: coil temperature up to 135 °C possible							
Protection class	CE (Ex) II 2 G, Ex e mb IIC T4 Gb, IP66 (plugged and mounted correctly)							
Supply voltage / ripple	Code	J	N		P			
		24 V =	230/50 Hz		110/50 Hz			
Tolerance supply voltage	[%]	±10	±10		±10			
Current consumption	[A]	1.0	0.12		0.25			
Power consumption	[W]	24	24		24			
Solenoid connection	Box with M20x1.5 entry for cable glands. Solenoid identification as per ISO 9461.							
Wiring min.	[mm ²]	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.



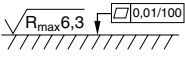
**Direct operated DC valve
D1VW**



**Pilot operated DC valve
D91VW**



Electrical connection, see D14-2128D3-* und K14-2074D3-* in the annex.

	 ISO 4762-12.9		Surface finish
D1VW	4x M5x30	7.6 Nm \pm 15 %	
D31DW, D31NW	4x M6x40	13.2 Nm \pm 15 %	
D41VW	2x M6x55; 4x M10x60	13.2 Nm; 63 Nm \pm 15 %	
D91VW	6x M12x75	108 Nm \pm 15 %	
D111VW	6x M20x90	517 Nm \pm 15 %	