

**Positions Paper of ISDE
regarding
Machinery Directive 2006/42/EC
EN ISO 13849**



Products made by the Industrial Systems Division Europe (ISDE) of Parker Hannifin GmbH are excluded from the scope of the machinery directive following the "CETOP Position Paper PP 07, Machinery Directive 2006/42/EC" (26.05.2010).

The only exceptions are products placed on the market as safety components for certain applications that have to be treated as machines within the meaning of the machinery directive 2006/42/EC.

All ISDE products that are listed in the following product index are designed and manufactured considering the basic and proven safety principles according to EN 13849-2:2012, so that the machine in which the products are incorporated can meet the essential health- and safety requirements.

Components that fall within the scope of EN ISO 13849-1:2015, *Safety of machinery – Safety related components of controls – part 1: General principles for design*, do not necessarily have to be placed on the market as safety components in accordance with the machinery directive 2006/42/EC. A component that is placed on the market but not as a safety component does not necessarily provide a lower safety level.

Confirmations for components to be proven components, e.g. for validation of hydraulic systems, can only be provided after an analysis of the specific application, as the fact to be a proven component mainly depends on the specific application.

MTTF_d values for our products are part of the technical data within our catalogue.

B10_d, DC and CCF values depend on cycle time, running time and system design. Therefore they can only be provided application specific.

Analogous to EN ISO 13849-1:2015, a maximum operating life T_M of 20 years can be assumed for the following industrial valves if the use is according to the data sheet resp. operating instructions and particularly in compliance with oil cleanliness. In the sense of preventive maintenance, an earlier replacement is recommended, no later however when exceeding 10 million switching cycles before the end of the operating life T_M.

When using the valves with fire-resistant pressure fluids HFC a reduced operating life must be assumed, depending on the respective application.

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Function	Description	Series
2-way cartridge	Cover without auxiliary function	C*A
	Cover for pressure relief function	C*F
		C*G
	Cover with stroke limiter	C*B
		C*H
	Cover with shuttle valve	C*V
		C*W
	Cover for pilot system mounting	C*C
	Slip-in cartridge without cover	CE, CP
	Complete valve, with position control	C10C*E
Complete valve, directional function, active	TDW	
Check valve	C1DB	
Cover plate		D51*
Check and throttle valve	Needle valve, screw-In mounting	MVI
		MV / 9MV
	Needle valve, pipe mounting	N / 9N NS
Adaptor plate		PADA
Subplate	For regenerative function	A10
	For pressure valves	A102 SPP
	For DC valves	A SPD
Body for 2/2-way slip-in cartridge	Cartridge block	CB
Throttle check valve	Pipe mounting	F / 9F
	Subplate mounting	FS
	Sandwich plate	FM
	High performance, sandwich plate	ZRD
Throttle valve	Proportional, pilot operated, 2/2-way, cartridge	TDA
	Proportional, pilot operated, with shut-off valve, cartridge	TEA
	Proportional, SAE flange	F5C
Unloading valve	Manually pilot operated, cartridge	UR*E / US*E
	Subplate mounting	R4U
	Pilot operated, SAE flange	R5U
Pressure relief valve	Direct operated, screw-in mounting	EVSA
	Direct operated, subplate mounting	VB
		VS
	Direct operated, proportional, subplate mounting	RE06M*W
	Direct operated, proportional, OBE, subplate mounting	RE06M*T
	Direct operated, seated type	R1E02
	Direct operated, sandwich plate	RDM
	Pilot operated, cartridge	R / RS*E
Proportional, subplate mounting	VBY*K	

Function	Description	Series
Pressure relief valve	Pilot operated, sandwich plate	RM
	Pilot operated, subplate mounting	VBY
	Pilot operated, high performance, sandwich plate	ZDV
	Pilot operated, pipe mounting	R4V
	Pilot operated, subplate mounting	R4V / R6V
	Pilot operated, proportional, OBE, subplate mounting	R4V / R6V*P*
	Pilot operated, proportional, cartridge	RE*E*W
	Pilot operated, proportional, OBE, cartridge	RE*E*T
	Pilot operated, proportional, subplate mounting	R4V / R6V R4V*P2
	Pilot operated, proportional, SAE flange	R5V*P2
	Pilot operated, TÜV certificate, subplate mounting	R4V / R6V
Pilot operated, TÜV certificate, cartridge	DSDU	
Pressure reducing valve	Direct operated, subplate mounting	VM
	Direct operated, sandwich plate	PRDM
	Proportional, with/without OBE, subplate mounting	D1FV
	Pilot operated, high performance, sandwich plate	ZDR
	Pilot operated, sandwich plate	PRM
	Pilot operated, pipe mounting	R4R
	Pilot operated, subpl. mounting	R4R
	Pilot operated, proportional, subplate mounting	VMY
	Pilot operated, proportional, pipe mounting	R4R*P2
	Pilot operated, proportional, subplate mounting	R4R*P2
Pilot operated, proportional, SAE flange	R5R*P2	
Pressure reducing valve	Pilot operated, proportional, sandwich plate	PRPM
Pressure intensifier		SD500
Pressure compensator	2-way, sandwich plate	LCM
	3-way, SAE flange	R5P
Sequence valve	Pilot operated, subplate mounting	R4S
	Pilot operated, SAE flange	R5S
Pressure gauge valve		WM

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Function	Description	Series	
Servo proportional valve	Direct operated, subplate mounting	D1FP D3FP	
	Direct operated, with EtherCAT, subplate mounting	D*FP	
	Pilot operated, subpl. mounting	D*1FP	
	Pilot operated, with EtherCAT, subplate mounting	D*1FP	
	Pilot operated, subpl. mounting	D30FP	
	Pilot operated, with EtherCAT, subplate mounting	D30FP	
	Pilot operated, proportional, 2-way, cartridge	TDC	
	Pilot operated, VCD®, 2-way, cartridge	TDP	
	Pilot operated, VCD®, 2-way, cartridge with shut-off valve	TEP	
	Pilot operated, VCD®, 3-way, cartridge	TPQ	
Check valve	Direct operated, pipe mounting	C / 9C	
	Direct operated, subplate mounting	C4V CS	
	Direct operated, SAE flange	C5V	
	Direct operated, sandwich plate	CM ZRV	
	Block mounting	RK / RB SPV / SPZ SPZBE	
	Pilot operated, block mounting	SVLB	
	Pilot operated, pipe mounting	CP / 9CP RH	
	Pilot operated, subplate mounting	C4V CPS SVLA	
	Pilot operated, sandwich plate	CPOM	
	Pilot operated, sandwich plate, high performance	ZRE	
	Regenerative and hybrid DC valve	Pilot operated, subplate mounting	D*1VWR D*1VWZ D31NWR
		Direct operated, subpl. mounting	D3DWR
		Multi-station manifold	MSP
	Counterbalance valve	Pilot operated, high performance, sandwich plate	ZNS
Flow control valve	2-way, subplate mounting	PCMS	
	2-way, pipe mounting	PCM / 9PCM	
	2-way, subplate mounting	2F1C GFG2	
	Proportional, subplate mounting	DUR*L06	
Pilot valve, pressure function	With unloading function, subplate mounting	UR06M / US06M	
	With pressure relief function, subplate mounting	RS06M R06M	
	With preload function, subplate mounting	DSBA	
	With sequence function, subplate mounting	S06M	
	Proportional, with pressure relief function, sandwich plate	RPDM	
	With pressure reducing function, sandwich plate	ZUDB	

Function	Description	Series	
Shuttle valve	Screw-in mounting	SSR	
	Sandwich plate	ZSRA / ZSRB	
Directional seat valve	3/2-way, subplate mounting	D1SE	
	Pipe mounting	D4S	
	Subplate mounting	D4S	
DC valve, direct operated	Direct operated, hydraulically, subplate mounting	D11P D1VP D3DP D4P D9P	
		Direct operated, solenoid, 8 watt, subplate mounting	D1VW 8 Watt
		Direct operated, solenoid, explosion proof, subplate mounting	D1VW
		Direct operated, solenoid, with inductive position control, subplate mounting	D1VW D3W
		Direct operated, solenoid, subplate mounting	D1VW D1MW D3MW D3W
		Direct operated, solenoid, sandwich plate	Z1DW
		Direct operated, hand lever, subplate mounting	D1VL D3DL D4L D9L
	Direct operated, pneumatically, subplate mounting	D1VA	
	Direct operated, proportional, with CANopen, subplate mounting	D1FB D3FB	
	Direct/pilot operated, proportional, with OBE and position feedback, with EtherCAT, subplate mounting	D*FC	
	Direct operated, proportional, with OBE and position feedback, subplate mounting	D1FC D3FC	
	Direct operated, proportional, with/without OBE, subplate mounting	D1FB D3FB	
	DC valve, pilot operated	Pilot operated, subplate mounting	D*1VW D31DW D31NW
		Pilot operated, proportional, with OBE and position feedback, subplate mounting	D*1FC
		Pilot operated, proportional, with/without OBE, subplate mounting	D*1FB
	Sandwich plate		CS06 H06 H10