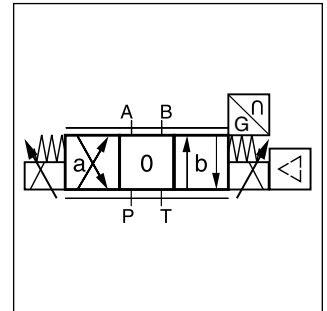


Characteristics

The new direct operated proportional DC valve series D3FC (NG10) with digital onboard electronics and position feedback provides high dynamics combined with high flow.

The LVDT is completely integrated into the housing and therefore it does not require an exposed cable connection. Thus an unintended disconnection is impossible.

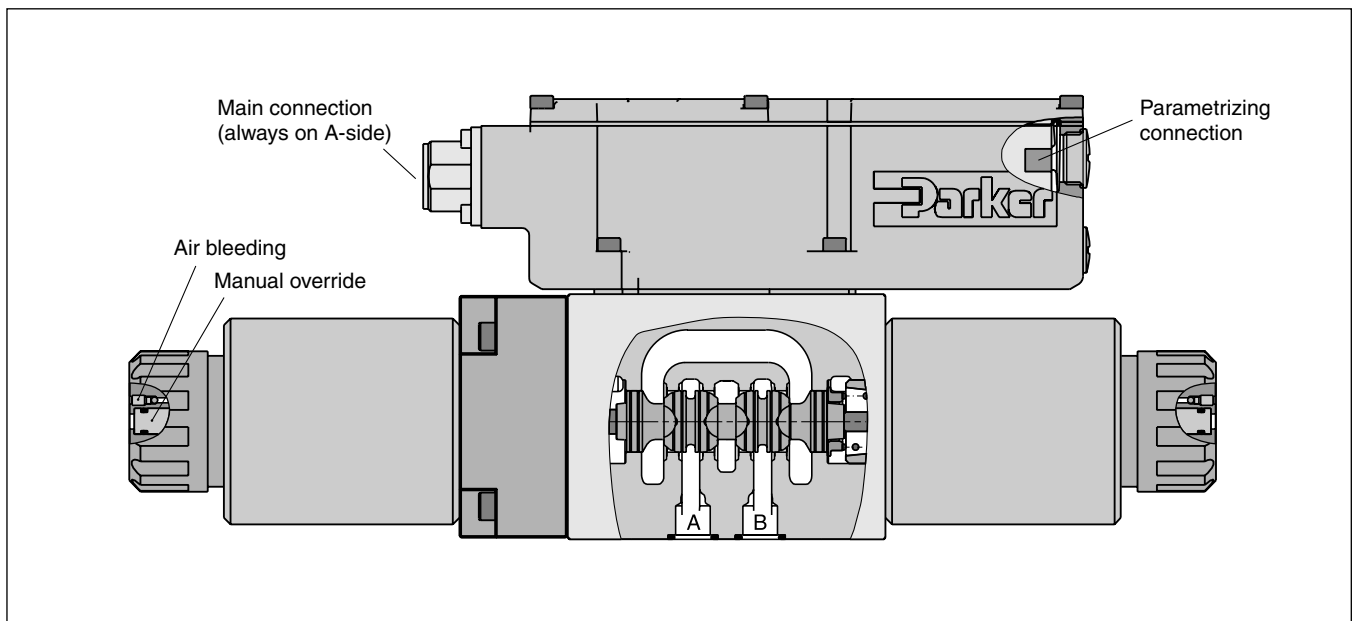
The digital onboard electronics is situated in a robust metal housing, which allows the usage under rough environmental conditions. The nominal values are factory set. The cable connection to a serial RS232 interface is available as accessory.



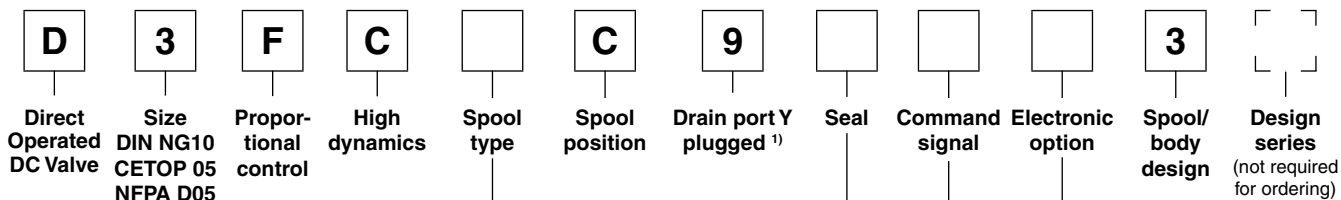
3

Features

- Progressive flow characteristics for sensitive adjustment
- Low hysteresis
- High dynamics
- High flow capacity
- Compact dimensions



Ordering Code



3

Code	Spool type	Flow [l/min] at Δp 5 bar per metering edge
Overlap		
E01M		35
E01S		55
E01U		75
E02M		35
E02S		55
E02U		75
B31M		17 / 35
B31S		27 / 55
B31U		37 / 75
B32M		17 / 35
B32S		27 / 55
B32U		37 / 75

Code	Electronic option ²⁾
0	6+PE acc. EN175201-804
5	11+PE acc. EN175201-804
7	6+PE + enable acc. EN175201-804

Code	Command signal	Function
B	0...±10 V	0...+10 V P -> A
E	0...±20 mA	0...+20 mA P -> A
S	4...20 mA	12...20 mA P -> A

Code	Seal
N	NBR
V	FPM

Short delivery time for all variations

Parametrizing cable OBE → RS232, item no. 40982923

¹⁾ Plug in port Y needs to be removed at tank pressure >35 bar.
²⁾ Please order connector separately, see chapter 3 accessories.

General			
Design	Direct operated proportional DC valve with position feedback		
Actuation	Proportional solenoid		
Size	NG10 / CETOP 05 / NFPA D05		
Mounting interface	DIN 24340 / ISO 4401 / CETOP RP121 / NFPA		
Mounting position	unrestricted		
Ambient temperature	[°C]	-20...+60	
MTTF _D value ¹⁾	[years]	150	
Weight	[kg]	7.7	
Vibration resistance	[g]	10 Sinus 5...2000 Hz acc. IEC 68-2-6	
		30 Random noise 20...2000 Hz acc. IEC 68-2-36	
		15 Shock acc. IEC 68-2-27	
Hydraulic			
Max. operating pressure	[bar]	Ports P, A, B 350, port T max. 35; 210 (external drain); port Y max. 35	
Max. pressure drop PABT / PBAT	[bar]	350	
Fluid	Hydraulic oil according to DIN 51524 ... 535, other on request		
Fluid temperature	[°C]	-20...+60 (NBR: -25...+60)	
Viscosity	permitted	[cSt] / [mm ² /s]	20...400
	recommended	[cSt] / [mm ² /s]	30...80
Filtration	ISO 4406 (1999); 18/16/13		
Nominal flow at Δp=5 bar per control edge ²⁾	[l/min]	35 / 55 / 75	
Leakage at 100 bar	[ml/min]	<100	
Opening point	[%]	set to 10 command signal (see flow characteristics)	
Static / Dynamic			
Step response at 100 % step	[ms]	40	
Hysteresis	[%]	<0.1	
Temperature drift	[%/K]	<0.01	
Electrical characteristics			
Duty ratio	[%]	100	
Protection class	IP65 in accordance with EN 60529 (with correctly mounted plug-in connector)		
Supply voltage/ripple DC	[V]	18...30, electric shut-off at < 17, ripple < 5 % eff., surge free	
Current consumption max.	[A]	3.5	
Pre fusing medium lag	[A]	4.0	
Command Code B	voltage	[V]	+10...0...-10, ripple < 0.01% eff., surge free, 0...+10 V P→A
	impedance	[kOhm]	100
	Code S current	[mA]	4...12...20, ripple < 0.01 % eff., surge free, 12...20 mA P→A < 3.6 mA = enable off, > 3.8 mA = enable on (according to NAMUR NE43)
	Code E impedance	[Ohm]	<250
Differential input max. Code 0/7	current	[mA]	+20...0...-20, ripple < 0.01 % eff., surge free, 0...+20 mA P→A
	impedance	[Ohm]	<250
Adjustment ranges	Min	[%]	0...50
	Max	[%]	50...100
	Ramp	[s]	0...32.5
Parametrizing interface	RS232C, parametrizing connection 5pole		
Enable signal (code 5/7)	[V]	5...30	
Diagnostic signal	[V]	+10...0...-10 / +12.5 error detection, rated max. 5 mA	
EMC	EN 61000-6-2, EN 61000-6-4		
Electrical connection	Code 0/7	6 + PE acc. to EN 175201-804	
	Code 5	11 + PE acc. to EN 175201-804	
Wiring min.	[mm ²]	7 x 1.0 (AWG 16) overall braid shield	
Wiring length max.	[m]	50	

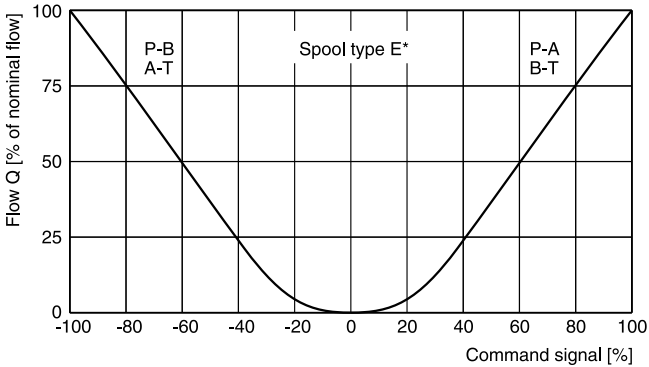
¹⁾ If valves with onboard electronics are used in safety-related parts of control systems, in case the safety function is requested, the valve electronics voltage supply is to be switched off by a suitable switching element with sufficient reliability.

²⁾ Flow rate for different Δp per control edge: $Q_x = Q_{Nom.} \cdot \sqrt{\frac{\Delta p_x}{\Delta p_{Nom.}}}$

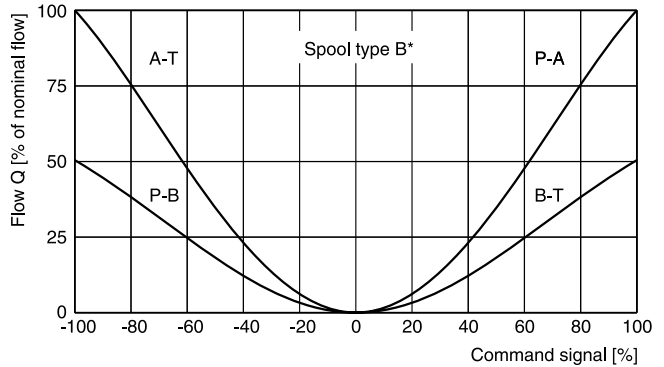
Flow characteristics

(Electrically set to opening point 10 %) at $\Delta p = 5$ bar per metering edge

Spool type E01



Spool type B31

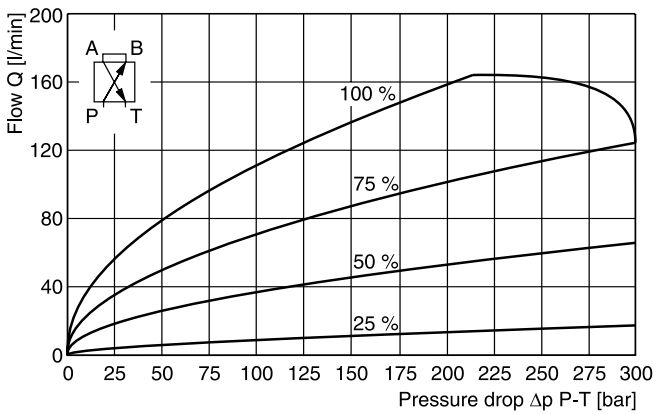


Functional limits

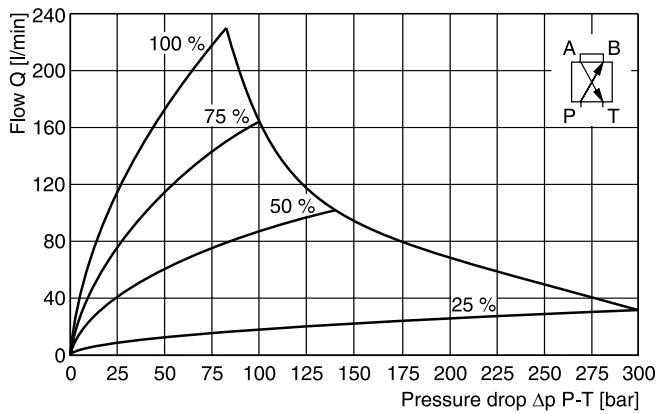
25 %, 50 %, 75 % and 100 % command signal (symmetric flow).

At asymmetric flow a reduced flow limit has to be considered.

Spool type E01M



Spool type E01U

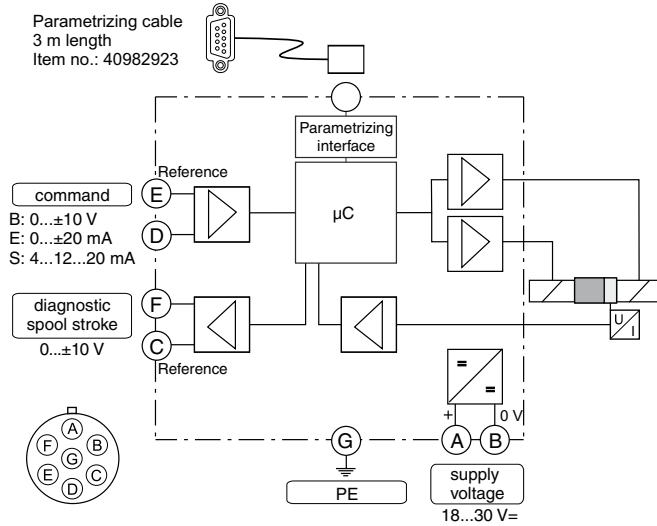


All characteristic curves measured with HLP46 at 50 °C.

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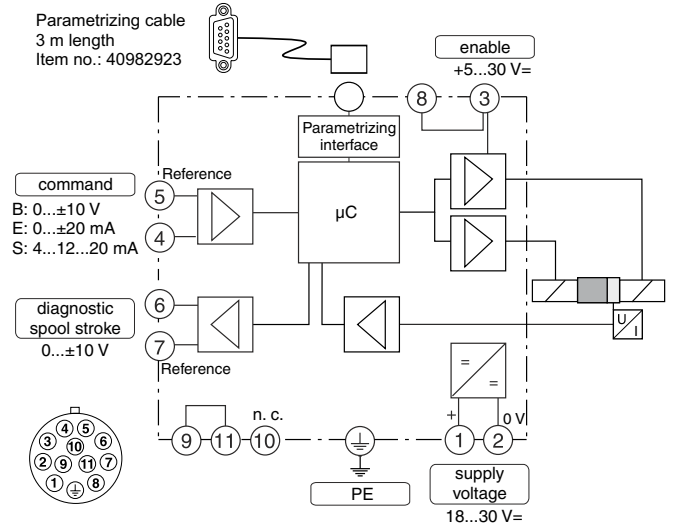
Code 0

6 + PE acc. to EN 175201-804



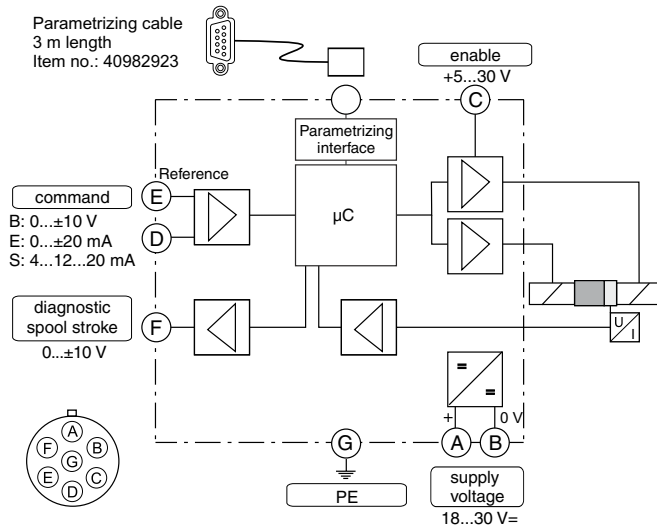
Code 5

11 + PE acc. to EN 175201-804



Code 7

6 + PE acc. to EN 175201-804 + enable



3

ProPxD interface program

The ProPxD software permits comfortable parameter setting for the module electronics. Via the clearly arranged entry mask the parameters can be noticed and modified. Storage of complete parameter sets is possible as well as printout or record as a text file for further documentation. Stored parameter sets may be loaded anytime and transmitted to other valves. Inside the electronics a non-volatile memory stores the data with the option for recalling or modification.

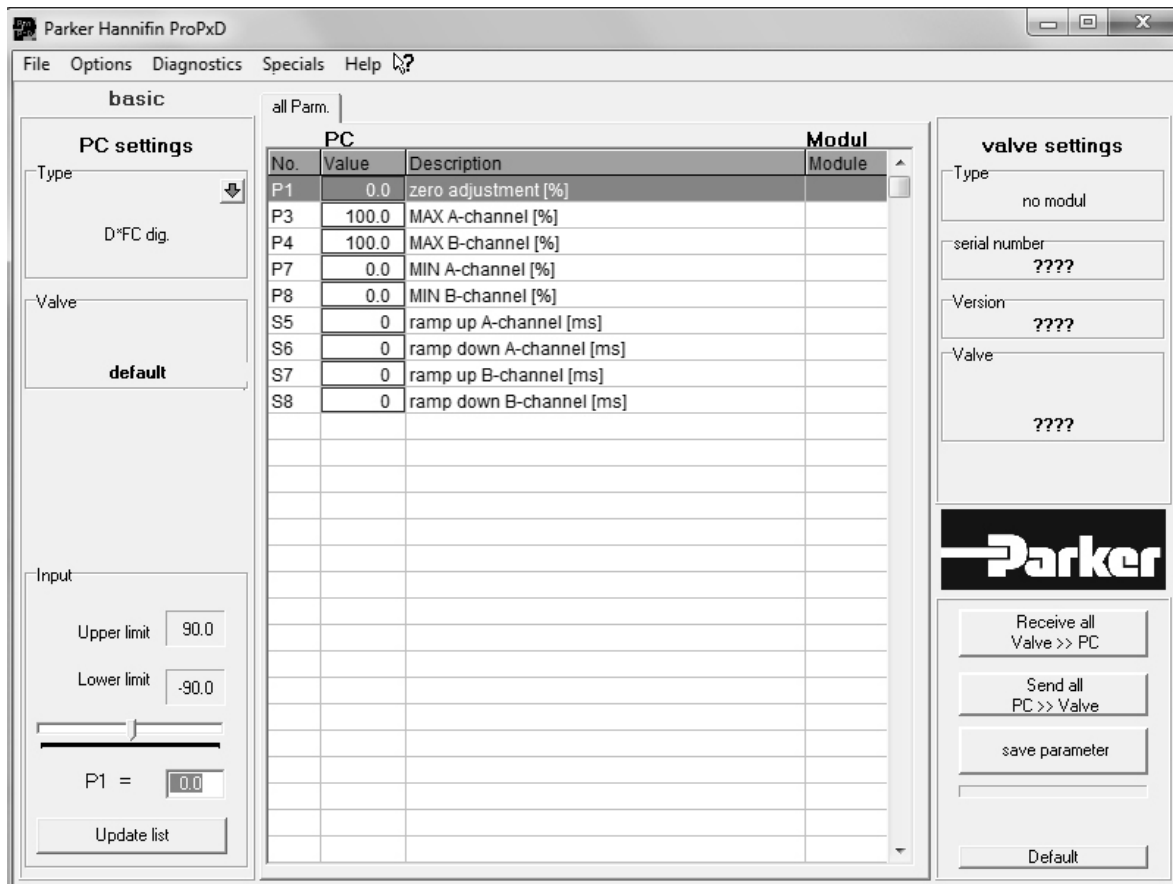
The PC software can be downloaded free of charge at www.parker.com/euro_hcd – see page "Support" or directly at www.parker.com/propxd.

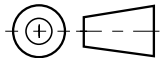
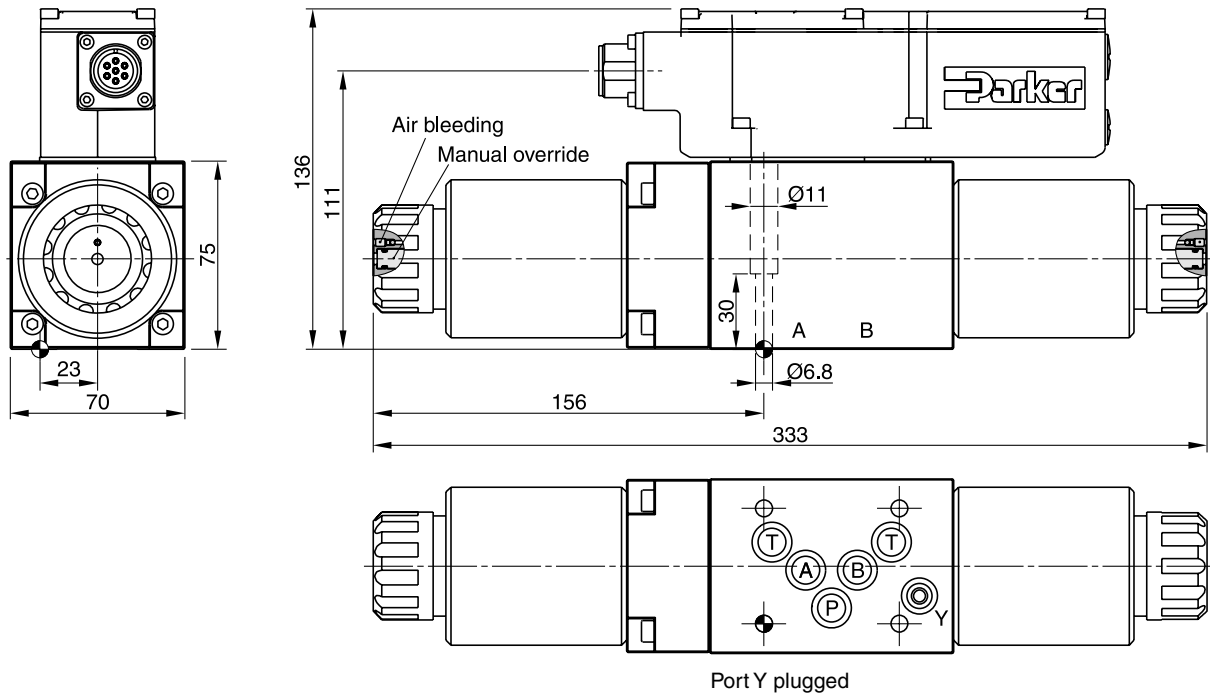
Features


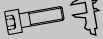


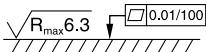
- Comfortable editing of all parameters
- Depiction and documentation of parameter sets
- Storage and loading of optimized parameter adjustments
- Executable with all actual Windows® operating systems from Windows® XP upwards
- Plain communication between PC and electronics via serial interface RS232C

The parametrizing cable may be ordered under item no. 40982923.

3





Surface finish	 Kit			 Kit NBR
	BK385	4x M6x40 ISO 4762-12.9	13.2 Nm ±15 %	NBR: SK-D3FC FPM: SK-D3FC-V