

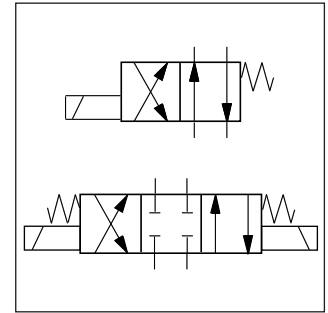
**Characteristics**

The new NG06 directional control valve is available with both Parker (D1VW) and Denison (4D01) model codes.

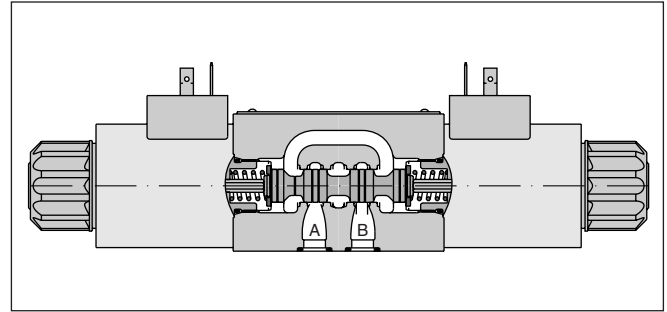
The new design provides high functional limits up to 80 l/min in combination with a very low, energy-saving pressure drop.

A wide variety of spool options allows to design an unlimited number of hydraulic circuits.

Versions with 8 watt coils, position control, Atex approval, surface protection and connector variants are shown in the following chapters.



**2**



**Technical data**

<b>General</b>		Directional spool valve											
Design		Solenoid											
Actuation		DIN NG06 / CETOP 03 / NFPA D03											
Nominal size		DIN 24340 A6 / ISO 4401 / CETOP RP 121-H / NFPA D03											
Mounting interface		unrestricted, preferably horizontal											
Mounting position		unrestricted, preferably horizontal											
Ambient temperature		[°C]	-25...+50										
Weight		[kg]	1.5 (1 solenoid), 2.1 (2 solenoids)										
<b>Hydraulic</b>													
Max. operating pressure		[bar]	P, A B: 350; T: 210 (DC), T: 140 (AC)										
Fluid		Hydraulic oil in accordance with DIN 51524 / 51525											
Fluid temperature		[°C]	-25 ... +70										
Viscosity permitted		[cSt] / [mm²/s]	2.8...400										
Viscosity recommended		[cSt] / [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										
<b>Static / Dynamic</b>													
Step response		see table response time											
<b>Electrical characteristics</b>													
Duty ratio		100% ED; CAUTION: coil temperature up to 150 °C possible											
Max. switching frequency		[1/h]	15000										
Protection class		IP 65 in accordance with EN 60529 (plugged and mounted)											
Code		<table border="1"> <tr> <th>K</th> <th>J</th> <th>U</th> <th>G</th> <th>Y</th> <th>T</th> </tr> </table>						K	J	U	G	Y	T
K	J	U	G	Y	T								
Supply voltage		[V]	12 V =	24 V =	98 V =	205 V =	110V at 50Hz/ 120V at 60Hz	230V at 50Hz/ 240V at 60Hz					
Tolerance supply voltage		[%]	±10	±10	±10	±10	±5	±5					
Current consumption hold		[A]	2.58	1.29	0.32	0.15	0.6 / 0.55	0.3 / 0.27					
Current consumption in rush		[A]	2.58	1.29	0.32	0.15	2.5 / 2.4	1.25 / 1.2					
Power consumption hold			31 W	31 W	31 W	31 W	70 / 70 VA	70 / 70 VA					
Power consumption in rush			31 W	31 W	31 W	31 W	280 / 290 VA	280 / 290 VA					
Solenoid connection		Connector as per EN 175301-803, solenoid identification as per ISO 9461 (code W).											
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.

Ordering Code

Directional Control Valve  
Series D1VW (PARKER)

**D**

Directional control valve

**1**

Size  
DIN NG06  
CETOP 03  
NFPA D03

**V**

3-chamber valve

**W**

Wet pin armature solenoid, threaded in tube

□

Spool type

□

Spool position

□

Seals

2

3 position spools	
Code	Spool type
	a 0 b
001	
002	
003	
004	
005	
006	
007	
008 <sup>1)</sup>	
009 <sup>1)</sup>	
010	
011	
014	
015	
016	
021	
022	
031	
032	
034	
035	
061	
081	
082	
102	
204 <sup>1)</sup>	
205 <sup>1)</sup>	

2 position spools	
Code	Spool type
	a b
020	
026	
030	
083 <sup>1)</sup>	
101	
208	

<sup>1)</sup> Consider specific spool position.

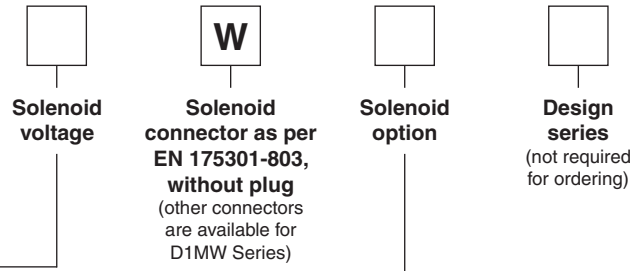
Code	Seals
N	NBR
V	FPM

3 position spools			
Code	Spool position		
C			<b>3 positions.</b> Spring offset in position "0". Operated in position "a" or "b".
	Standard	Spool type 008,009, 204, 205	
E			<b>2 positions.</b> Spring offset in position "0".
	Operated in position "a".		Operated in position "b".
F			2 positions. Operated in position "0".
	Spring offset in position "b".		Spring offset in position "a".
K			<b>2 positions.</b> Spring offset in position "0".
	Operated in position "b".		Operated in position "a".
M			2 positions. Operated in position "0".
	Spring offset in position "a".		Spring offset in position "b".

2 position spools			
Code	Spool position		
	Standard	Spool type 083	
B			<b>2 positions.</b> Spring offset in position "b". Operated in position "a".
D			<b>2 positions.</b> Operated in position "a" or "b". No centre or offset position.
H			<b>2 positions.</b> Spring offset in position "a". Operated in position "b".

**Bold letters =**  
Short-term availability

**Ordering Code**




2

Code	Voltage
<b>K</b>	<b>12V =</b>
<b>J</b>	<b>24V =</b>
U <sup>2)</sup>	98V =
G <sup>2)</sup>	205V =
Y	110V 50Hz / 120V 60Hz
T	230V 50Hz / 240V 60Hz

<sup>2)</sup> Rectifier needed for DC solenoid when used with AC input.

Code	Solenoid option
<b>omit</b>	<b>Standard solenoid with manual override</b>
T	without manual override
S2 <sup>3)</sup>	Soft shift orifice size 0.5 mm.
S3 <sup>3)</sup>	Soft shift orifice size 0.75 mm.

<sup>3)</sup> with built-in orifice (DC only)



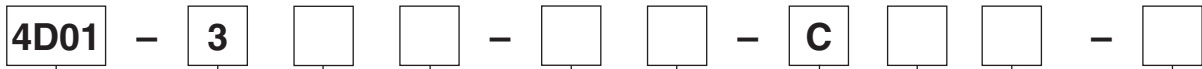
**The Parker model code should be used for all new applications. Otherwise also refer to Denison model code.**

Further spool types, solenoid voltages and connectors on request.

# Directional Control Valve Series 4D01 (DENISON)

## Ordering Code

2



**Directional control valve size DIN NG06 CETOP 03**

**Body 3-chamber design**

**Control**

**Spool type**

**Spool position**

**End cap**

**Design series**

**Seals**

**Solenoid voltage**

**Options**

Code	Control
1	1 solenoid
2	2 solenoids
7	2 solenoids and 2 pos. detents (only for spool types 11, 12, 51)

Code	Options
omit	Standard valve
G3 <sup>3)</sup>	Soft shift with 0.75 mm orifice in anchor tube
32	Solenoid tube without manual override

<sup>3)</sup> DC only

Code	Solenoid voltage
G0R	12V =
G0Q	24V =
GAR	98V =
GAG	205V =
W30	110V 50Hz/120V 60Hz
W31	230V 50Hz/240V 60Hz

3 position spools	
Code	Spool type
	a 0 b
01	
02	
03	
07	
08	
09	
10	
13	
14	
46	
55	
56	
64	
65	
AR	
OT	
OX	

Code	Seals
1	NBR
5	FPM

Code	End cap
01	for control 1
02	for controls 2 and 7

2 position spools	
Code	Spool type
	a b
11	
12	
51	
52	
71	
81 <sup>1)</sup>	
81 <sup>2)</sup>	

<sup>1)</sup> Spool position code 01

<sup>2)</sup> Spool position code 02

**DENISON** Hydraulics

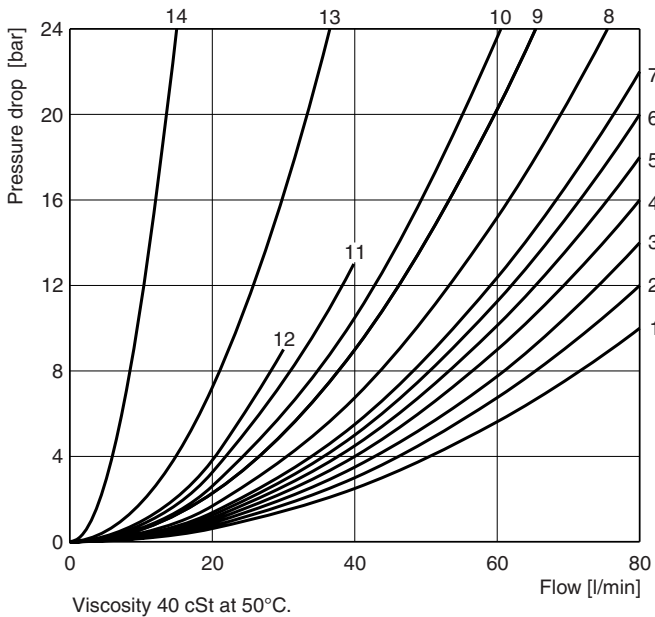
The Denison model code is available for existing applications. For new applications we advise to refer to Parker model code.

3 position spools	
Code	Spool position
03	 3 positions. Spring centered to "0".
05	 2 positions. Spring centered to "0". Energized to "b".
06	 2 positions. Spring centered to "0". Energized to "a".

2 position spools	
Code	Spool position
01	 2 positions. Spring offset to "b". Energized to "a".
02	 2 positions. Spring offset to "a". Energized to "b".
09	 2 positions detent. Operated in "a" or "b". No centre or spring offset position.

Further spool types and voltages on request.

**Flow curve**



Spool		Position "b"			Position "a"			Position "0"				
		P-A	B-T	P-B	P-B	A-T	P-A	P-A	P-B	A-T	B-T	P-T
D1VW	4D01											
001	03	2	2		2	2						
002	01	1	4		1	4		1	1	5	5	2
003	10	3	4		3	6				7		
004	08	2	3		2	3				7	7	
005	13	2	2		2	2		12				
006	46	1	4		1	4		7	7			
007		3	2		2	2			3		2	7
010	BN	3			3							
011	02	2	2		2	2				14	14	
014		3	2		2	2		3		2		7
015	09	3	6		3	4					7	
016	14	2	2		2	2			12			
020B	51	4	4		2	3						
026B	12	4			4							
030B	11	2	3		1	2						
034	AR	4		8	3	3				5	7	
035	OT	3	3		4		8			7	5	
081		13	13		13	13						
082		13	13		13	13						
101B		11	10		10	9						
102	0X	1	4		1	4		5	5	8	8	6
61		1	3		1	3		3	2			
83H	71	5	2		5	2						
104		1			2	5		3		14		14
208	52	3			2							
		P-B	A-T		P-A	B-T		P-A	P-B	A-T	B-T	P-T
008		4	5		4	5						9
009	07	5	5		6	7						7
83B		5	2		5	2						
204	64	1	3		4	3		7		4		7
205	65	4	3		1	3			7		4	5

Spool		Position "b"			Position "a"		
		P-A	P-B	A-B	P-B	A-T	
021	55	2	4		4	2	
		P-A	B-T		P-A	P-B	A-B
022	56	6	2		5	2	
	81	2	2				
	81				2	2	

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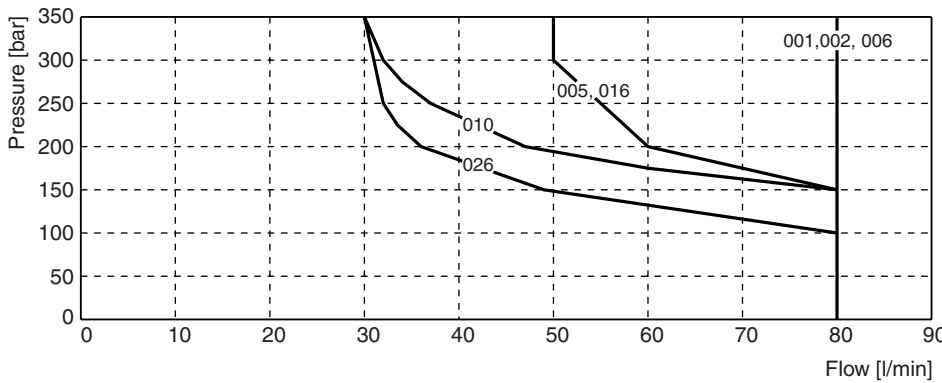
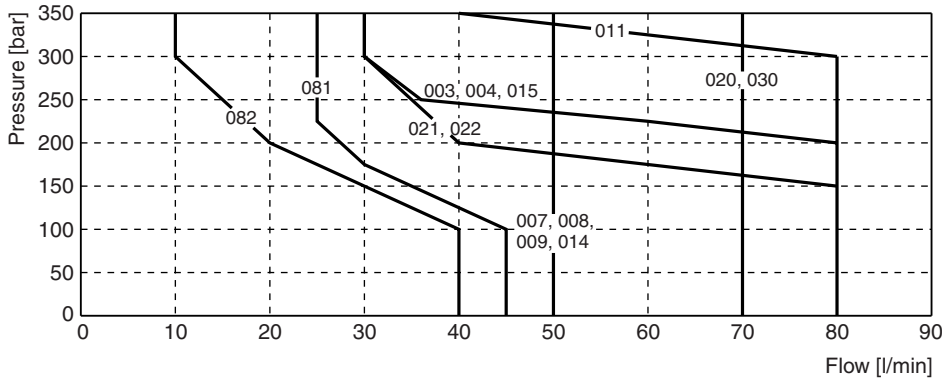
**Shift Limits**

The diagram below specifies the shift limits for valves with DC solenoids. Valves with spool position “F” or “M” can only be operated up to 70% of the limits. The specifications apply to a viscosity of 40mm<sup>2</sup>/s and balanced flow

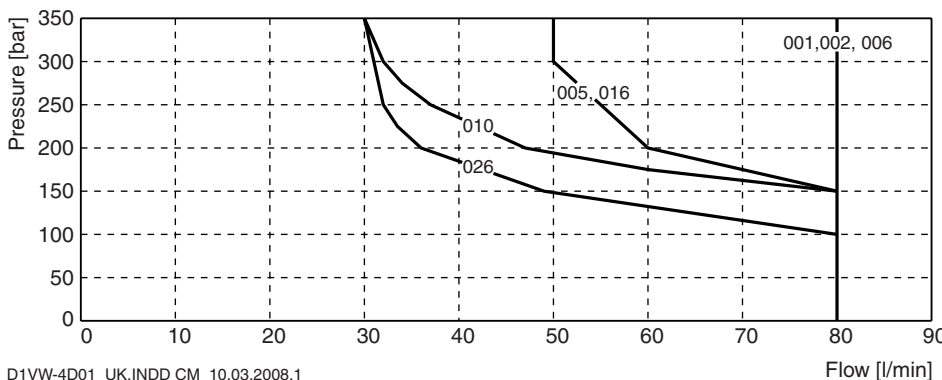
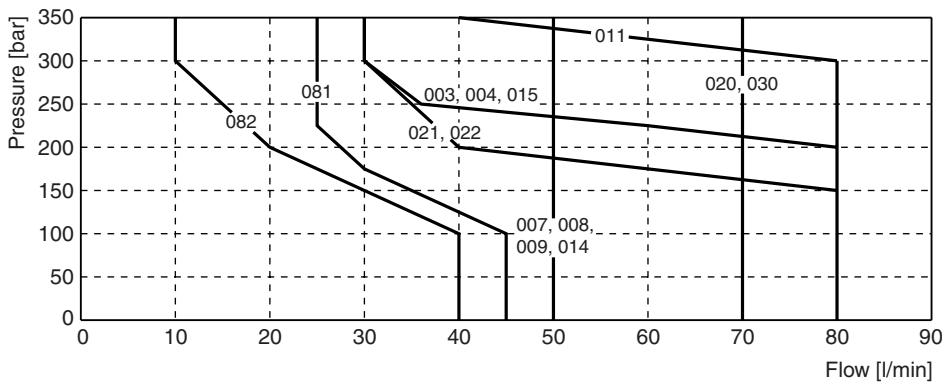
conditions. The shift limits can be considerably lower at unbalanced flow conditions. To avoid flow rates beyond the shift limits, a plug-in orifice can be inserted in the P-port.

**2**

**Valve with standard DC solenoid**



**Valve with standard AC solenoid**



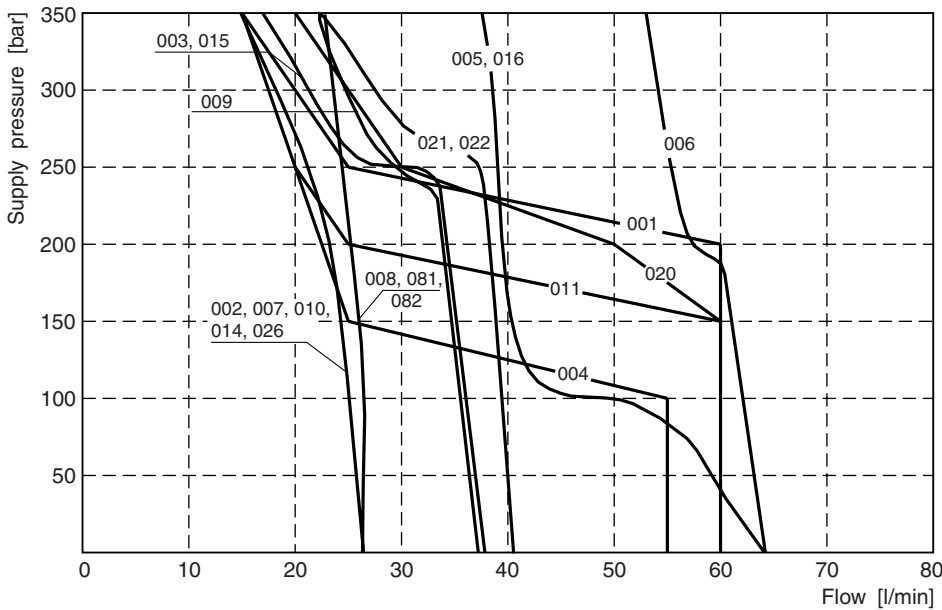
Parker	Denison
001	03
002	01
003	10
004	08
005	13
006	46
007	-
008	-
009	07
010	BN
011	02
014	-
015	09
016	14
020	51
021	55
022	56
026	12
030	11
081	-
082	-
001 F/M	81
204	64
205	65
208	52

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**Response Times**

**Shift limit diagram - Soft shift**



2

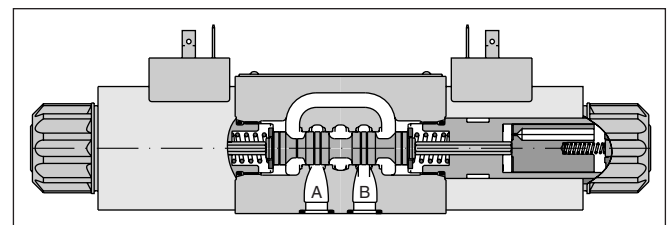
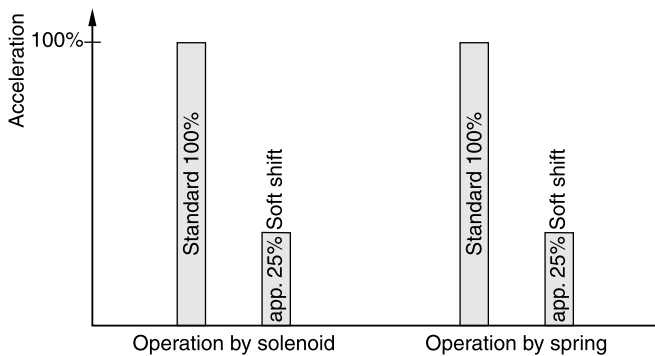
**Response times D1VW Standard and Soft Shift**

X-Number	Orifice size	3 positions: spool center condition				2 positions	
		Closed		Open		Energize	De-energize
		Energize	De-energize	Energize	De-energize		
(Standard)	-	32 ms (DC) 13 ms (AC)*	40 ms (DC) 20 ms (AC)*	32 ms (DC) 13 ms (AC)*	40 ms (DC) 20 ms (AC)*	32 ms (DC) 13 ms (AC)*	40 ms (DC) 20 ms (AC)*
S2	0.50	200 ms (DC)	650 ms (DC)	700 ms (DC)	650 ms (DC)	175 ms (DC)	225 ms (DC)
S3 (G3)	0.75	125 ms (DC)	325 ms (DC)	550 ms (DC)	550 ms (DC)	100 ms (DC)	100 ms (DC)

\* For AC input and soft shift use rectifier plug.

Step response times were obtained under the following conditions:  $v = 40 \text{ mm}^2/\text{s}$  at  $50^\circ\text{C}$  with the valve operating at nominal pressure and flow. Published response times are nominal and may vary with spool, flow, pressure and temperature.

**Acceleration for orifice size 0.75, code "S3" (archived against a valve without soft shift)**

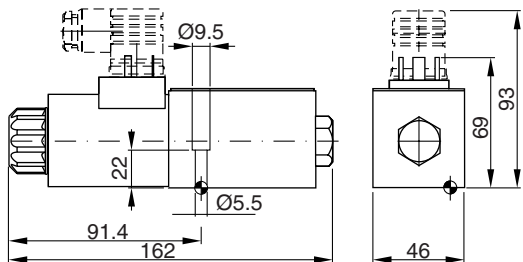


For even softer shifting, the proportional spools 081, 082, 101 and 102 can be used.

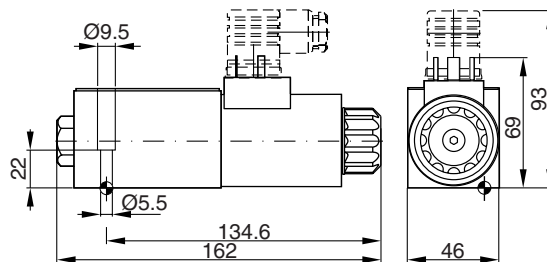
**Dimensions**

2

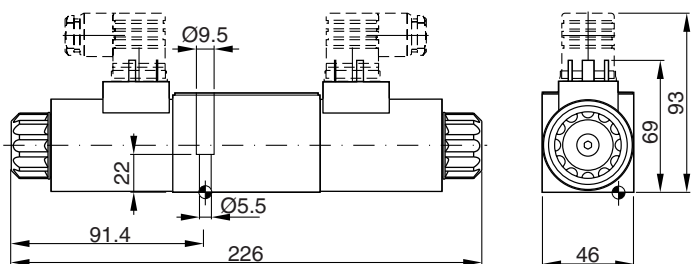
**Interface EN 175301-803, DC solenoid  
B, E, F / 01, 06 -style**



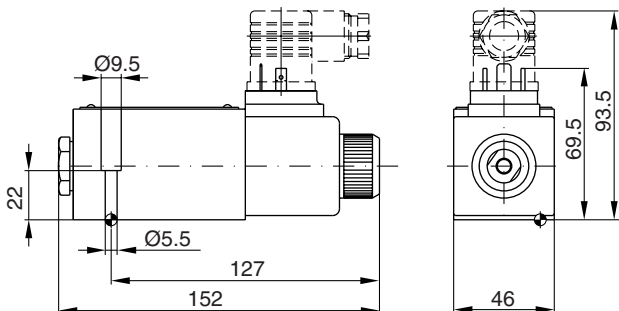
**H, K, M / 02, 05 -style**



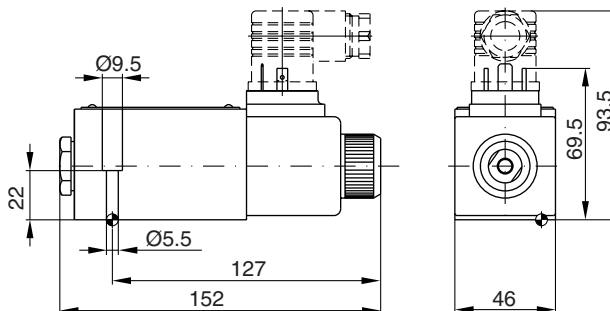
**C, D / 03, 09 -style**



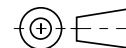
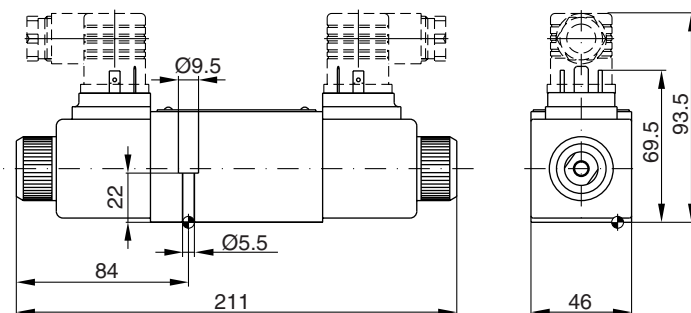
**Interface EN 175301-803, DC solenoid  
B, E, F / 01, 06 -style**





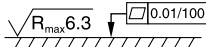


**H, K, M / 02, 05 -style**



**C, D / 03, 09 -style**



Surface finish	 Kit	 Kit	 Kit	 Kit
	BK375	4x M5x30 DIN 912 12.9	7.6 Nm ±15%	NBR: SK-D1VW-N-91 FPM: SK-D1VW-V-91

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.

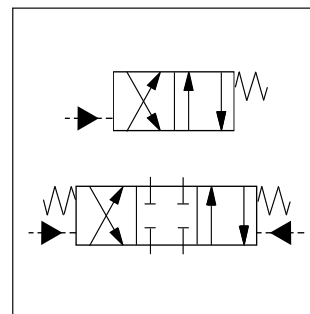
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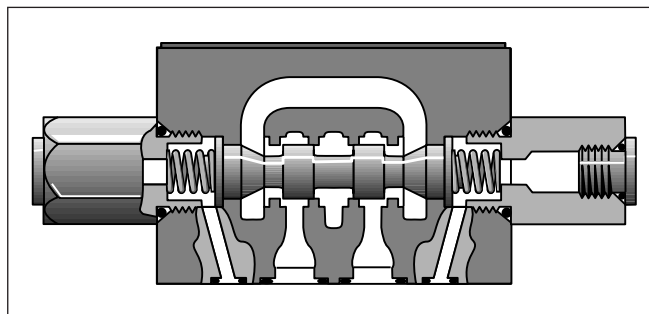
The D1VP is a hydraulically controlled 4/3 or 4/2 way directional control valve. The valve can be operated either by the pilot ports X and Y via the subplate or by the connection of an external pilot pipe directly on the valve body.

The D3DP, D4P, D9P and D11P are hydraulically controlled 4/3 or 4/2 way directional control valves. The valves are operated by the pilot ports X and Y via the subplate. Pressure and flow of the pilot oil have a significant influence on the response time of the spool.

The minimum pilot pressure must be ensured for all operating conditions of the directional valve.



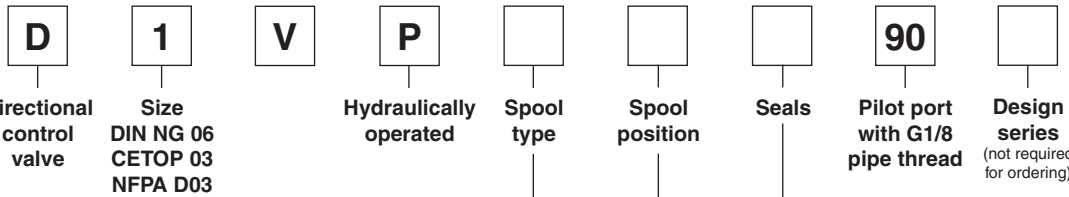
**2**



**Technical data**

<b>General</b>		Directional spool valve				
Design		Hydraulic				
Actuation		Hydraulic				
Series		<b>D1VP</b>	<b>D3DP</b>	<b>D4P</b>	<b>D9P</b>	<b>D11P</b>
Size		NG06	NG10	NG16	NG25	NG32
Weight		[kg] 1.3	3.7	9.0	17.0	66.0
Mounting interface		DIN 24340 A06 ISO 4401 NFFPA D03	DIN 24340 A10 ISO 4401 NFFPA D05	DIN 24340 A16 ISO 4401 NFFPA D07	DIN 24340 A25 ISO 4401 NFFPA D08	DIN 24340 A32 ISO 4401 NFFPA D10
Mounting position		CETOP RP 121-H				
Ambient temperature		unrestricted, preferably horizontal				
[°C]		-25...+50				
<b>Hydraulic</b>						
Max. operating pressure		[bar] P, A B, T: 350; X, Y: 210	P, A B, T: 350; X, Y: 210	P, A B, T: 350; X, Y: 350 <sup>1)</sup>	P, A B, T: 350; X, Y: 350 <sup>1)</sup>	P, A B, T: 350; X, Y: 350 <sup>1)</sup>
Fluid		Hydraulic oil in accordance with DIN 51524 / 51525				
Fluid temperature		[°C] -25 ... +70				
Viscosity permitted		[cSt] / [mm <sup>2</sup> /s] 2.8...400				
Viscosity recommended		[cSt] / [mm <sup>2</sup> /s] 30...80				
Filtration		ISO 4406 (1999); 18/16/13 (meet NAS 1638: 7)				
Flow max.		[l/min] 80	130	300	700	2000
Leakage at 350 bar (per flow path)		[ml/min] up to 60*	up to 100*	up to 200*	up to 800*	up to 5000*
Pilot supply pressure (min/max)		[bar] 15 / 210	15 / 210	5 / 350 <sup>1)</sup>	5 / 350 <sup>1)</sup>	5 / 350 <sup>1)</sup>
<b>Static / Dynamic</b>						
Step response		The response times depend on the pilot oil pressure and on the speed of the increase / decrease of the pilot pressure.				
Recommended values are (act./deact.)		[ms] 13 / 28	20 / 30	50 / 60	100 / 150	300 / 370

<sup>1)</sup> with monitor switch: 105 bar



**2**

3 position spools	
Code	Spool type
1	
2	
3	
4	
5	
6	
7	
8*	
9*	
10	
11	
14	
15	
16	
21	
22	
31	
32	
76	
78	
81	
82	
102	

2 position spools	
Code	Spool type
20	
26	
30	
101	

\* Consider specific spool position.

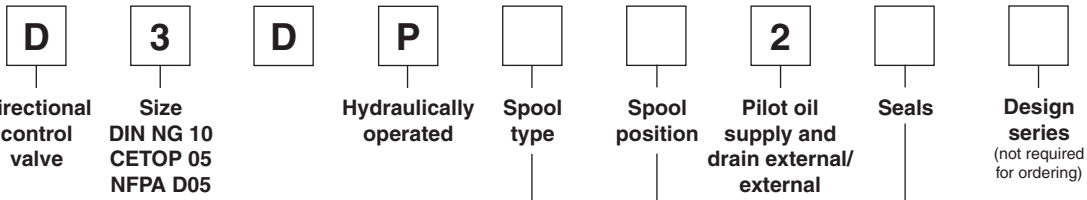
Code	Seals
N	NBR
V	FPM

3 position spools		
Code	all 3 position spools	
<b>C</b>		<b>3 positions.</b> Spring offset in position "0". Operated in position "a" or "b".
	Standard	Spool type 8 and 9
E		2 positions. Spring offset in position "0".
F		2 positions. Operated in position "0".
K		2 positions. Spring offset in position "0".
M		2 positions. Operated in position "0".

2 position spools		
Code	Spool position	
<b>B</b>		<b>Spring offset in position "b".</b> <b>Operated in position "a".</b>
<b>D</b>		<b>Detent, operated in position "a" or "b".</b> <b>No centre or offset position.</b>
<b>H</b>		<b>Spring offset in position "a".</b> <b>Operated in position "b".</b>

**Bold letters =**  
**Short-term availability**

Further spool types and styles on request.



2

3 position spools	
Code	Spool type
1	
2	
3	
4	
5	
6	
7	
8 *	
9 *	
10	
11	
14	
15	
16	
21	
22	
31	
32	
76	
78	
81	
82	
102	

2 position spools	
Code	Spool type
20	
26	
30	
101	

\* Consider specific spool position.

Code	Seals
N	NBR
V	FPM

3 position spools		
Code	all 3 position spools	
C		3 positions. Spring offset in position "0". Operated in position "a" or "b".
	Standard	Spool type 8 and 9
E		2 positions. Spring offset in position "0". Operated in position "a".
		Operated in position "b".
F		2 positions. Spring offset in position "0". Operated in position "b".
		Spring offset in position "a".
K		2 positions. Operated in position "b".
		Operated in position "a".
M		2 positions. Spring offset in position "0". Operated in position "a".
		Spring offset in position "b".

2 position spools		
Code	Spool position	
B		Spring offset in position "b". Operated in position "a".
D		Detent, operated in position "a" or "b". No centre or offset position.
H		Spring offset in position "a". Operated in position "b".

Further spool types and styles on request.

Ordering Code

**D**

**Size**

**P**

**Spool type**

**Spool position**

Directional control valve

Size

Hydraulically operated

Spool type

Spool position

2

Code	Bore	Size
4	Ø20mm	NG16
9	Ø32mm	NG25
11	Ø50mm	NG32

3 position spools	
Code	Spool type
	a 0 b
1 <sup>2)</sup>	
2 <sup>2)</sup>	
3 <sup>3)</sup>	
4 <sup>3)</sup>	
5 <sup>3)</sup>	
6 <sup>3)</sup>	
7 <sup>3)</sup>	
9 <sup>1)2)</sup>	
11 <sup>3)</sup>	
14 <sup>3)</sup>	
15 <sup>3)</sup>	
16 <sup>3)</sup>	
21 <sup>3)</sup>	
22 <sup>3)</sup>	
31 <sup>4)</sup>	
32 <sup>4)</sup>	
54 <sup>2)</sup>	
81 <sup>2)</sup>	
82 <sup>2)</sup>	

2 position spools	
Code	Spool type
	a b
20 <sup>2)</sup>	
26 <sup>3)</sup>	
30 <sup>2)</sup>	

<sup>1)</sup> Consider specific spool position  
<sup>2)</sup> All sizes (D4, D9, D11) available  
<sup>3)</sup> Only D4 and D9 available  
<sup>4)</sup> Only D9 available

3 position spools		
Code	all 3 position spools	
C <sup>2)</sup>		3 positions. Spring offset in position "0". Operated in position "a" or "b".
	Standard	Spool type 9
E <sup>2)</sup>	 Operated in position "a".	 Operated in position "b". 2 positions. Spring offset in position "0".
F <sup>2)</sup>	 Spring offset in position "b".	 Spring offset in position "a". 2 positions. Operated in position "0".
K <sup>2)</sup>	 Operated in position "b".	 Operated in position "a". 2 positions. Spring offset in position "0".
M <sup>2)</sup>	 Spring offset in position "a".	 Spring offset in position "b". 2 positions. Operated in position "0".
R <sup>3)</sup>	 No centre in offset position.	 No centre in offset position. 2 positions, detent. Operated in position "0" or "b".
S <sup>3)</sup>	 No centre in offset position.	 No centre in offset position. 2 positions, detent. Operated in position "0" or "a". No centre in offset position.

2 position spools		
Code	Spool position	
B		Spring offset in position "b". Operated in position "a".
D <sup>3)</sup>		Detent, operated in position "a" or "b". No centre or offset position.
H		Spring offset in position "a". Operated in position "b".

Further spool types and position control on request.

**2**

**Pilot oil supply and drain external/external**

**Seals**

**Accessories**

**Design series**

Code	Seals
N	NBR
V	FPM

Code	Accessories
omit <sup>2)</sup>	Standard valve w/o accessories
7 <sup>2)</sup>	Pilot choke, meter-out
8 <sup>3)</sup>	Stroke adjustment side B
9 <sup>3)</sup>	Stroke adjustment side A
60 <sup>2)</sup>	Pilot choke, meter-in
89 <sup>3)</sup>	Stroke adjustment side A and B

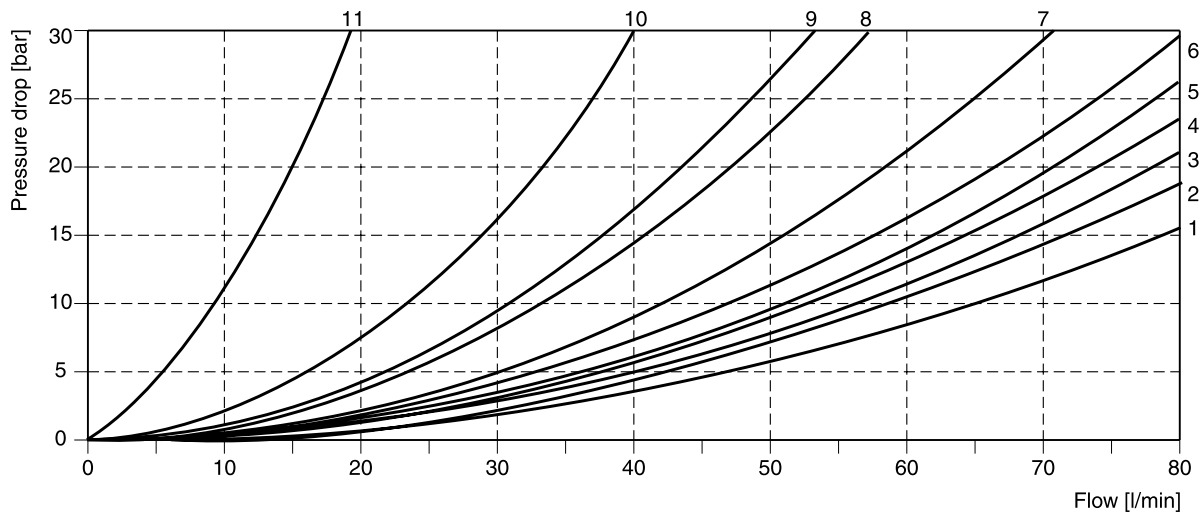
**2**

The flow curve diagram shows the flow versus pressure drop for each spool type, operating position and flow direction curves for all spool types. The relevant curve number is given in 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	-	-	*	*	-	-
	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				

\* Only for pressure compensation, no high flow possible.

**Flow curve**

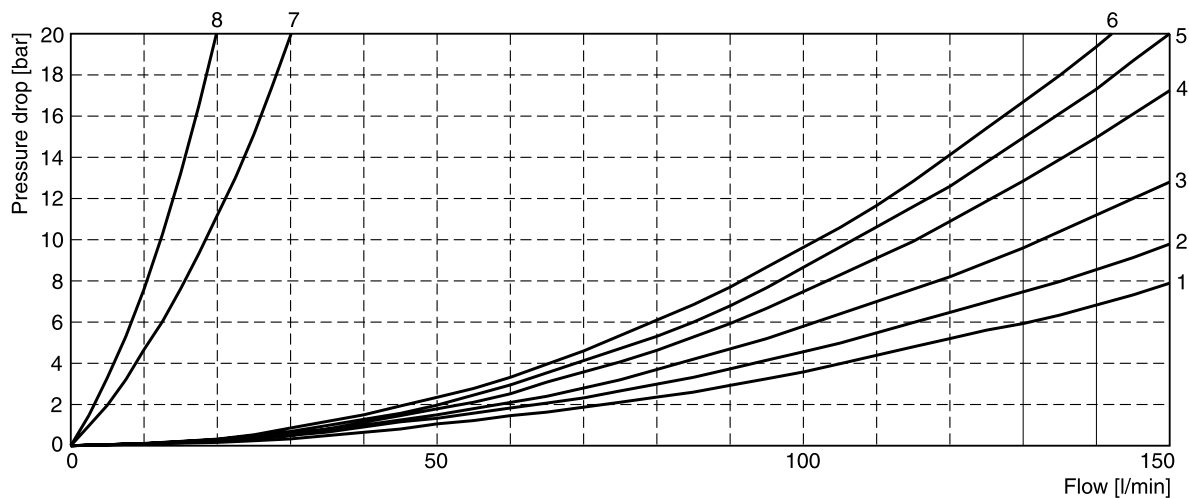


The flow curve diagram shows the flow versus pressure drop curves for all spool types. The relevant curve number is given in the table below.

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	3	4	3	—	—	—	—	—	—
2	4	1	4	1	3	3	1	1	5	1
3	4	3	5	2	—	—	4	—	—	—
4	4	2	4	2	—	—	3	3	—	5
5	4	3	5	3	5	—	—	—	—	—
6	4	3	4	3	6	6	—	—	—	6
7	5	1	4	3	—	4	—	2	6	—
10	4	—	4	—	—	—	—	—	—	—
11	4	3	4	3	—	—	8	8	—	—
12	4	3	4	3	7	7	7	7	8	8
14	4	3	5	1	4	—	2	—	6	—
15	5	2	4	3	—	—	—	4	—	—
16	5	3	4	3	—	5	—	—	—	—
20	4	3	4	3	—	—	—	—	—	—
26	4	—	4	—	—	—	—	—	—	—
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	—
9	4	4	4	4	—	—	—	—	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				

**2**

**Flow curve**

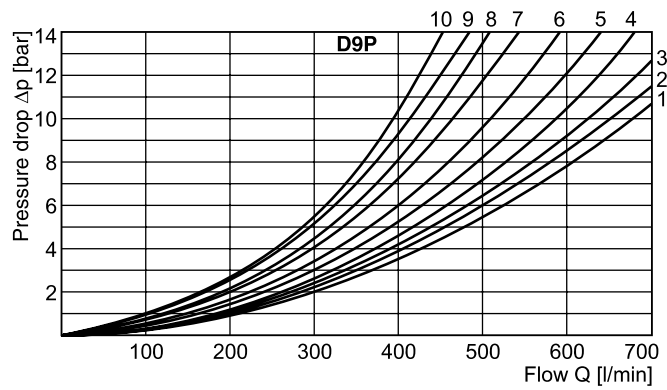
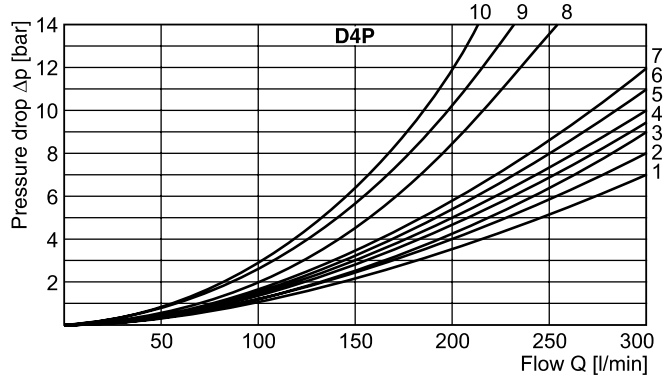


The flow curve diagram shows the flow versus pressure drop curves for all spool types. The relevant curve number

for each spool type, operating position and flow direction is given in the table below.

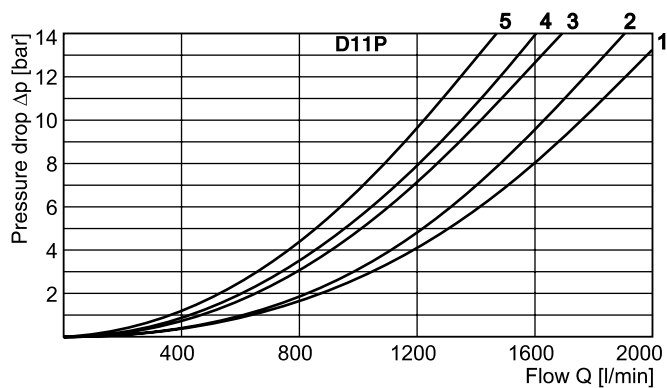
**D4P**

Spool Code	Curve number				
	P-A	P-B	P-T	A-T	B-T
1	1	1	-	4	5
2	1	2	6	4	6
3	1	2	-	5	6
4	1	1	-	5	5
5	2	2	-	3	5
6	1	2	-	3	6
7	1	1	6	4	5
9	2	9	8	7	10
11	1	1	-	4	5
14	1	1	6	4	5
15	1	2	-	4	6
16	2	2	-	3	5
20	3	5	-	3	5
21	2	8	-	2	-
22	8	2	-	-	3
26	3	5	-	-	-
30	2	3	-	6	7
54	2	3	-	6	7



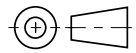
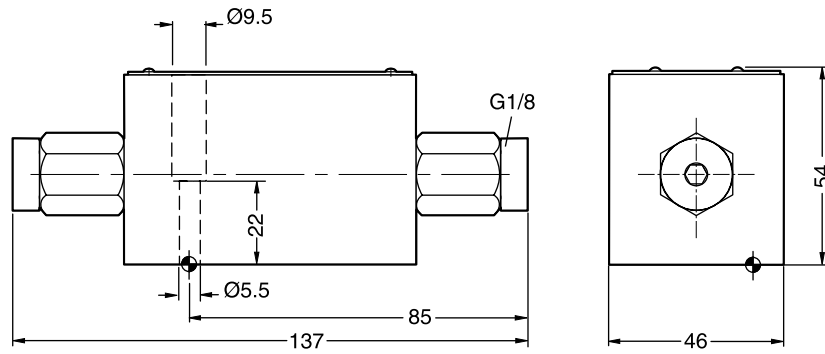
**D9P and D11P**

Spool Code	Curve number									
	P-A		P-B		P-T		A-T		B-T	
	D9	D11	D9	D11	D9	D11	D9	D11	D9	D11
1	3	5	2	5	-	-	3	4	5	1
2	2	5	1	5	1	5	3	4	5	1
3	4	-	2	-	-	-	3	-	6	-
4	4	-	3	-	-	-	3	-	5	-
5	1	-	2	-	-	-	4	-	5	-
6	2	-	2	-	-	-	4	-	6	-
7	3	-	1	-	7	-	3	-	5	-
9	4	3	8	3	9	2	4	3	10	1
11	3	-	2	-	-	-	3	-	5	-
14	1	-	2	-	8	-	3	-	5	-
15	3	-	3	-	-	-	4	-	5	-
16	3	-	3	-	-	-	4	-	5	-
20	6	5	5	5	-	-	6	3	8	-
21	5	-	10	-	-	-	3	-	-	-
22	10	-	5	-	-	-	-	-	5	-
26	6	-	5	-	-	-	-	-	-	-
30	3	5	2	5	-	-	3	4	5	1
54	-	5	-	5	-	-	-	4	-	1


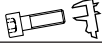


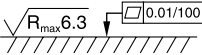




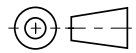
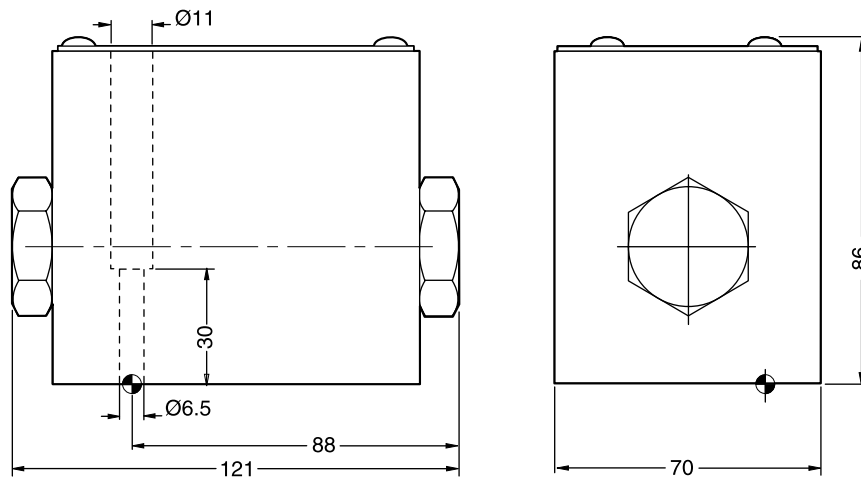
**D1VP**





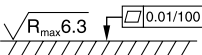


**2**

Surface finish	 Kit			 Kit
	BK375	4x M5x30 DIN 912 12.9	7.6 Nm ±15%	<b>NBR: SK-D1VP-70</b> FPM: SK-D1VP-V70

**D3DP**



Surface finish	 Kit			 Kit
	BK385	4x M6x40 DIN 912 12.9	13.2 Nm ±15%	<b>NBR: SK-D3DP-35</b> FPM: SK-D3DP-V35