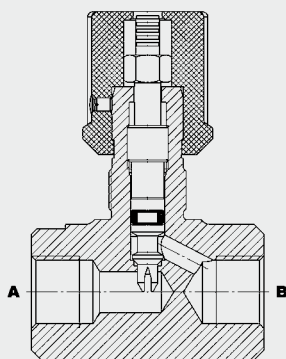


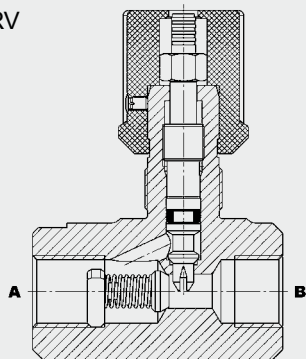
Up to 180 l/min  
Up to 350 bar

## FUNCTION

DV



DRV



The DV is an inline mounted flow control valve which controls the flow by adjusting the cross-section. The flow rate is therefore dependent on the pressure differential and viscosity. Starting with the throttle spindle in the fully closed position, the flow rate increases in accordance with the appropriate curve as the control knob is turned. The flow is controlled in both directions.

The scale on the lower edge of the control knob enables accurate repeat setting. The DRV is a flow control valve in the same design which also allows the same fine flow adjustment, but in one direction only. Unrestricted flow in the reverse direction is via the built-in check valve (cracking pressure 0.5 bar).

## Needle Valves with and without Reverse Flow Check Direct-Acting Inline Mounted - 350 bar DV, DRV 06 to 16

### FEATURES

- For regulating the speed of loads
- For fine adjustment and shut-off of the flow
- For system-related damping in hydraulic circuits
- To release pressure from accumulator systems
- As an emergency drain for lowering a load without a dead man's circuit
- High level of safety provided by patented spindle safety mechanism
- A set-screw locks the setting by allen screw
- Choice of five sizes ensures best possible adaptability to the system
- Optional zinc-plated version available

### SPECIFICATIONS

Operating pressure:	max. 350 bar	
Nominal flow:	DV, DRV-06 max. 20 l/min DV, DRV-08 max. 50 l/min DV, DRV-10 max. 60 l/min DV, DRV-12 max. 90 l/min DV, DRV-16 max. 180 l/min	
Cracking pressure (on DRV):	0.5 bar	
Media operating temperature range:	min. -20 °C to max. +100 °C	
Ambient temperature range:	min. -20 °C to max. +100 °C	
Operating fluid:	Hydraulic oil to DIN 51524 Part 1 and 2	
Viscosity range:	min. 2.8 mm <sup>2</sup> /s to max. 800 mm <sup>2</sup> /s	
Filtration:	Class 21/19/16 according to ISO 4406 or cleaner	
MTTF <sub>d</sub> :	150 years (see "Conditions and instructions for valves" in brochure 5.300)	
Installation:	no orientation restrictions, preferably horizontal	
Materials:	Valve body:	steel
	Piston:	hardened and ground steel
	Seals:	FKM (standard)
	Back-up rings:	PTFE
Weight:	DV 06 = 0.10 kg	DRV 06 = 0.10 kg
	DV 08 = 0.26 kg	DRV 08 = 0.28 kg
	DV 10 = 0.38 kg	DRV 10 = 0.41 kg
	DV 12 = 0.62 kg	DRV 12 = 0.65 kg
	DV 16 = 1.04 kg	DRV 16 = 1.14 kg

## MODEL CODE

**DRV - 08 - 01 . X / 0**

### Basic model

DV = Needle valve  
 DRV = Needle valve with reverse flow check

### Nominal size

06, 08, 10, 12, 16

### Type

01 = standard, housing phosphated  
 11 = housing zinc-plated, fine throttle spindle in stainless steel  
 12 = housing zinc-nickel coated (seawater-resistant), fine throttle spindle in steel, with protective dome nut - adjustment with tool  
 30 = housing stainless steel  
 Other types on request

### Series

(to be determined by manufacturer)

### Threaded connection

0 = Whitworth thread, threaded connection Form X to DIN 3852 Part 2  
 5 = NPT thread  
 12 = UNF thread

## Standard models

Model code	Part No.
DV-06-01.3/0	705002
DV-08-01.3/0	705014
DV-10-01.3/0	705026
DV-12-01.3/0	705038
DV-16-01.3/0	705050
DRV-06-01.3/0	705502
DRV-08-01.3/0	705514
DRV-10-01.3/0	705526
DRV-12-01.3/0	705538
DRV-16-01.3/0	705550

Other models on request

## Accessories

Panel mounting sets, nickel-plated, consisting of locking washer, disc and hex. nut

Size	Part No.
06	705309
08	705310
10	705310
12	705311
16	705311

# PERFORMANCE

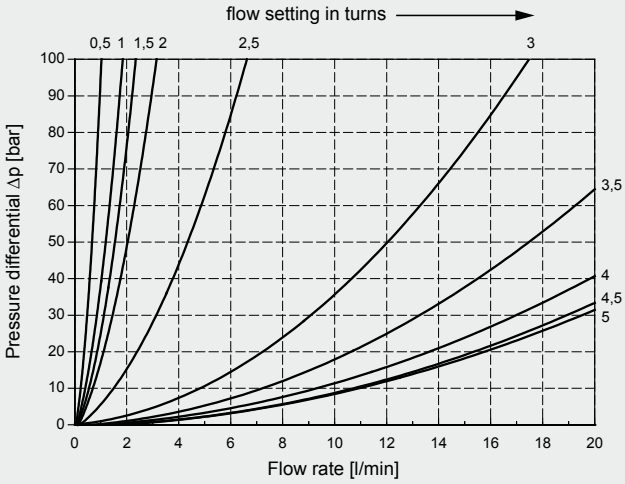
## Pressure drop, dependent on flow rate

DV → → flow direction A → B and B → A

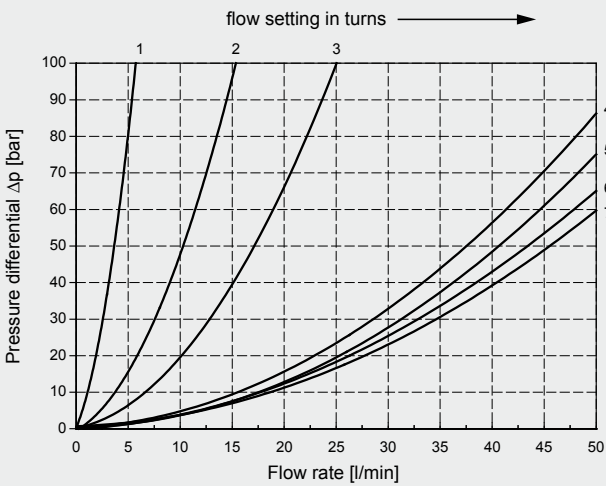
DRV → → flow direction A → B

Pressure differential  $\Delta p$  measured against flow rate  $Q$ , measured at constant flow setting,  $v = 53 \text{ mm}^2/\text{s}$  and  $T_{\text{oil}} = 36 \text{ }^\circ\text{C}$

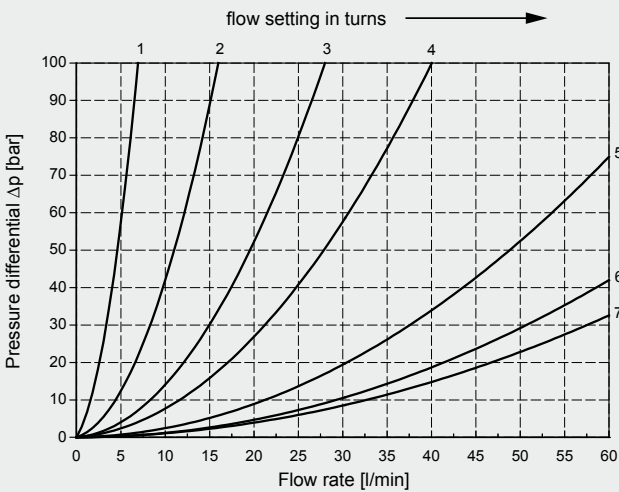
DV-06-01.3/0 A → B



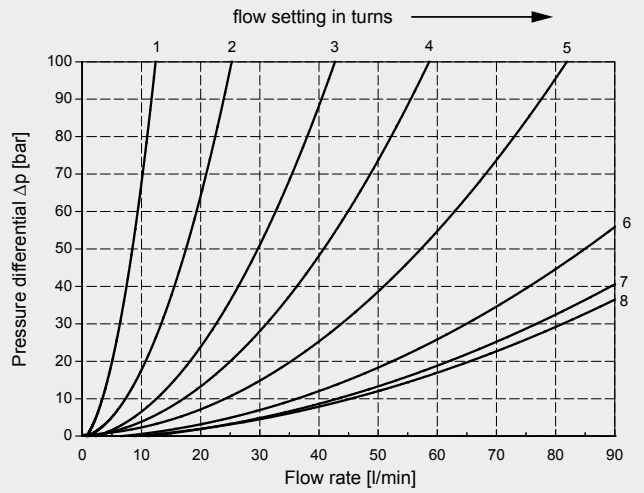
DV-08-01.3/0 A → B



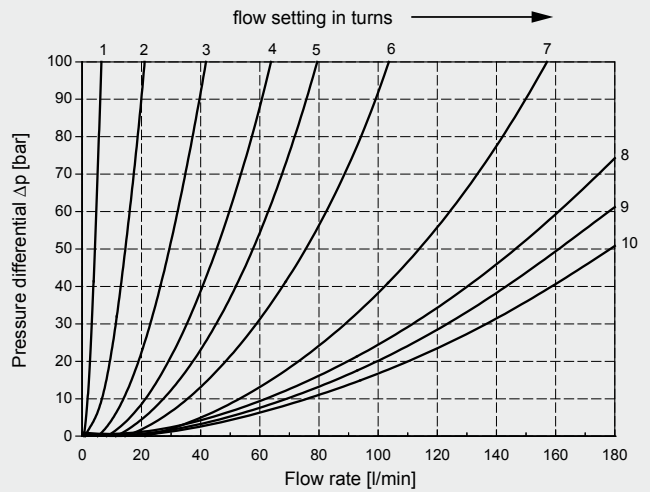
DV-10-01.3/0 A → B



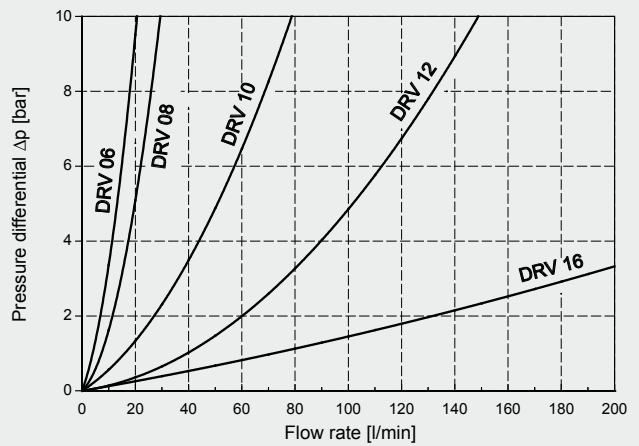
DV-12-01.3/0 A → B



DV-16-01.3/0 A → B



DRV-06-16 B → A

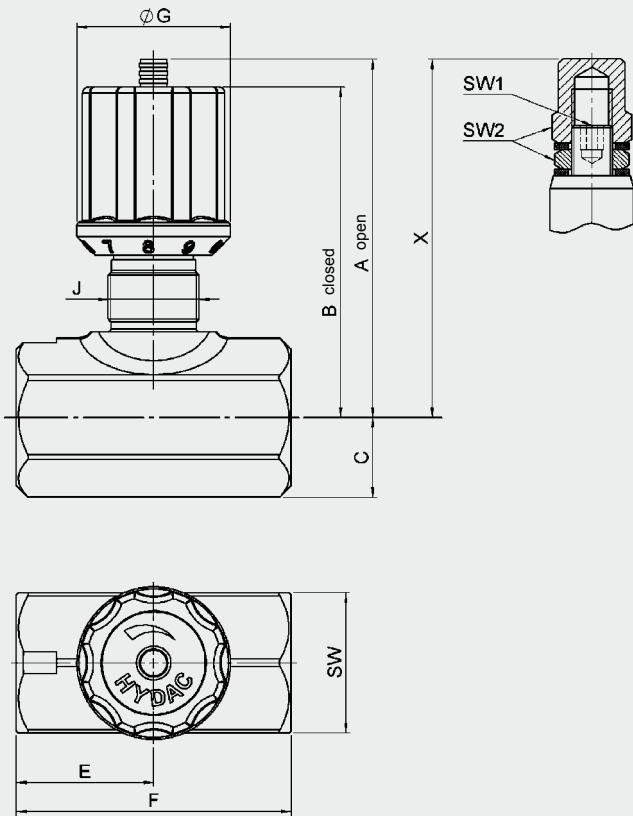


## DIMENSIONS

DV

Type 01 30 11

12



millimeter  
subject to technical modifications

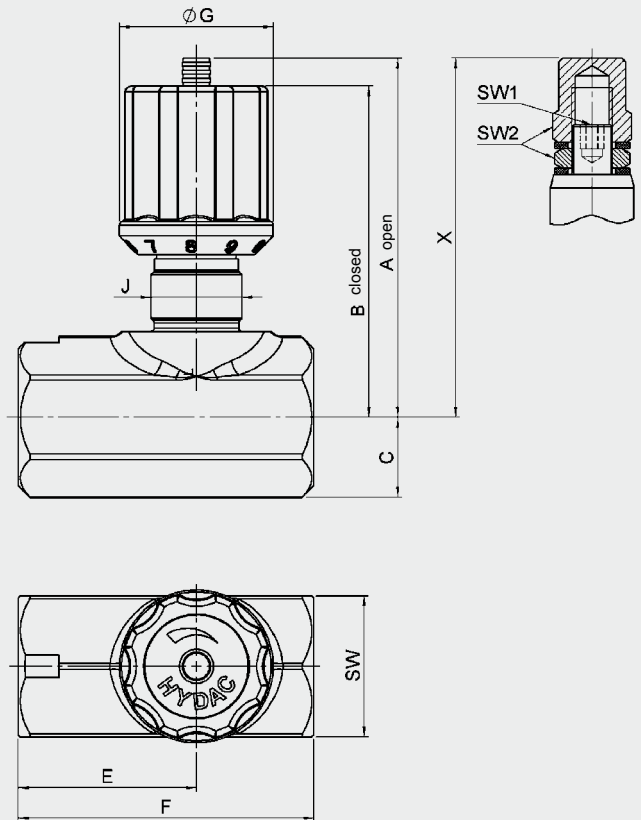
Size	Threaded connection	A	B	C	SW	E
06	G $\frac{1}{8}$	57	52.9	9	16	19
08	G $\frac{1}{4}$	70.4	64.3	14.2	25	24
10	G $\frac{3}{8}$	76.6	70.8	17.7	30	29
12	G $\frac{1}{2}$	89.2	82.3	20	35	34
16	G $\frac{3}{4}$	106.2	97.3	25.7	45	39

F	G	J	SW1	SW2	X	Weight [kg]
38	25.2	Pg7	3	10	58.6	0.094
48	30.5	Pg11	4	13	72.3	0.257
58	30.5	Pg11	4	13	78.8	0.378
68	38	Pg16	5	17	89.3	0.618
78	38	Pg16	6	19	111.3	1.038

DRV

Type 01 30 11

12



millimeter  
subject to technical modifications

Size	Threaded connection	A	B	C	SW	E
06	G $\frac{1}{8}$	57	52.9	9	16	28.8
08	G $\frac{1}{4}$	70.4	64.3	14.2	25	34
10	G $\frac{3}{8}$	76.6	70.8	17.7	30	42
12	G $\frac{1}{2}$	89.2	82.3	20	35	44
16	G $\frac{3}{4}$	106.2	97.3	25.7	45	57

F	G	J	SW1	SW2	X	Weight [kg]
45	25.2	Pg7	3	10	58.6	0.103
55	30.5	Pg11	4	13	72.3	0.277
58	30.5	Pg11	4	13	78.8	0.407
73	38	Pg16	5	17	89.3	0.644
88	38	Pg16	6	19	111.3	1.139

### NOTE

The information in this brochure relates to the operating conditions and applications described.  
For applications or operating conditions not described, please contact the relevant technical department.  
Subject to technical modifications.

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