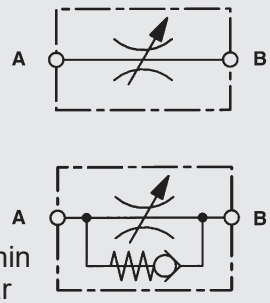


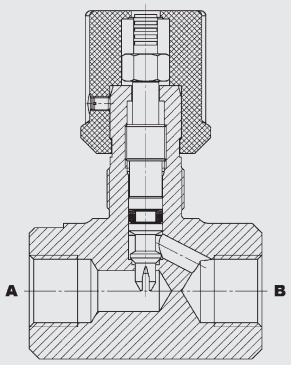
up to 180 l/min
up to 350 bar

Needle Valves with and without Reverse Flow Check Direct-Acting Inline Mounted - 350 bar

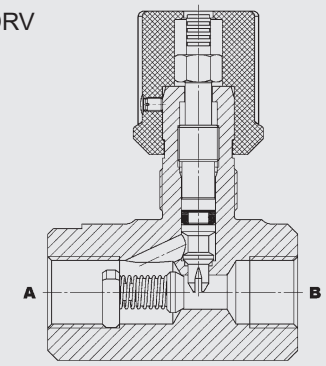
DV- / DRV- 06 to 16

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).

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
- Spindle secured before complete loosening
- An Allen set-screw locks the setting of the knob
- Choice of five sizes ensures best possible adaptability to the system
- Drop forged housings with high safety factor

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 (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, 2 and 3	
Viscosity range:	min. 2.8 mm²/s to max. 800 mm²/s	
Filtration:	Class 21/19/16 according to ISO 4406 or cleaner	
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 DV-08 = 0.26 kg DV-10 = 0.38 kg DV-12 = 0.62 kg DV-16 = 1.04 kg	DRV-06 = 0.10 kg DRV-08 = 0.28 kg DRV-10 = 0.41 kg DRV-12 = 0.65 kg DRV-16 = 1.14 kg

* see "Conditions and instructions for valves" in brochure 53.000

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 zinc-plated
11 = housing zinc-plated, fine throttle spindle in stainless steel
12 = housing zinc-nickel plated (seawater-resistant), fine throttle spindle in steel, with protective dome nut - adjustment with tool
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

Note: Spindle slightly open on delivery.

Standard models

Model code	Part No.
DV-06-01.X/0	705002
DV-08-01.X/0	705014
DV-10-01.X/0	705026
DV-12-01.X/0	705038
DV-16-01.X/0	705050
DRV-06-01.X/0	705502
DRV-08-01.X/0	705514
DRV-10-01.X/0	705526
DRV-12-01.X/0	705538
DRV-16-01.X/0	705550

Other models on request

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

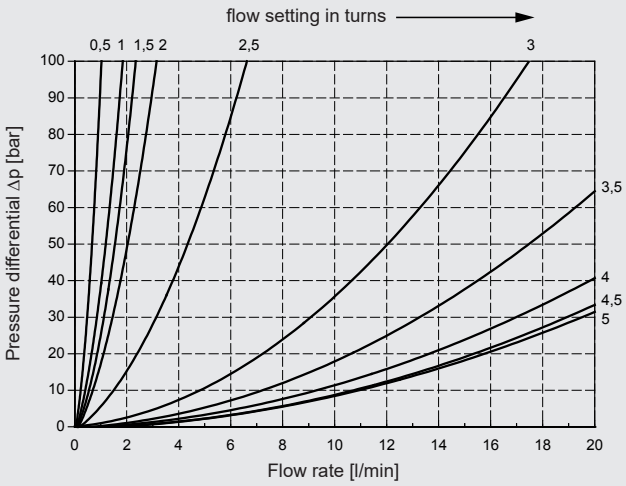
Size	Part No.
06	705309
08	705310
10	705310
12	705311
16	705311

TYPICAL PERFORMANCE

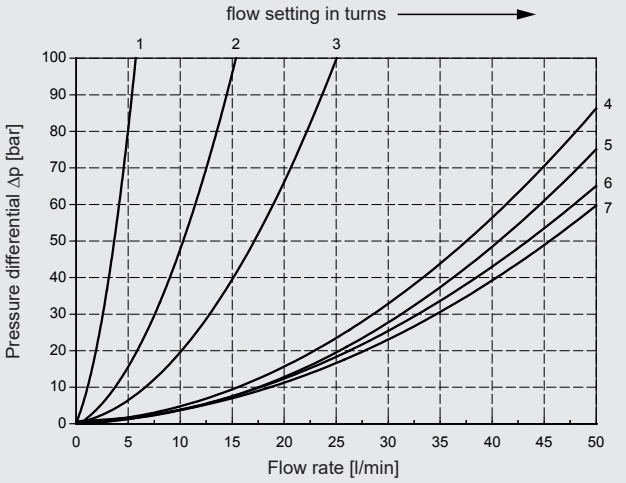
Pressure drop, dependent on flow rate
DV = flow direction A → B is equivalent to B → A
DRV = flow direction A → B

Pressure differential Δp measured against flow rate Q, measured at constant flow setting, v = 53 mm²/s and T_{oil} = 36 °C

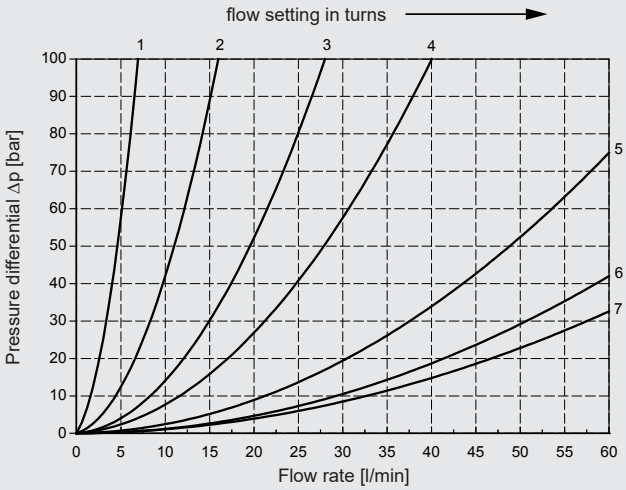
DV- / DRV-06-01 A → B



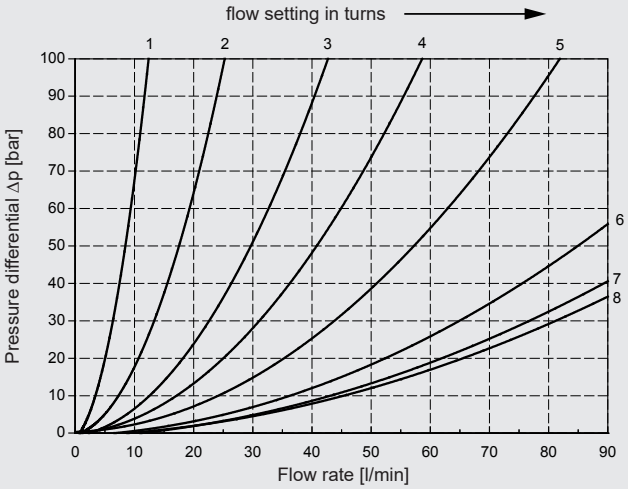
DV- / DRV-08-01 A → B



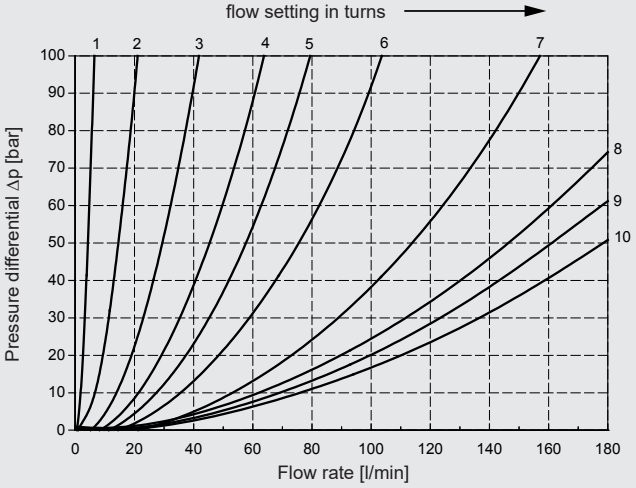
DV- / DRV-10-01 A → B



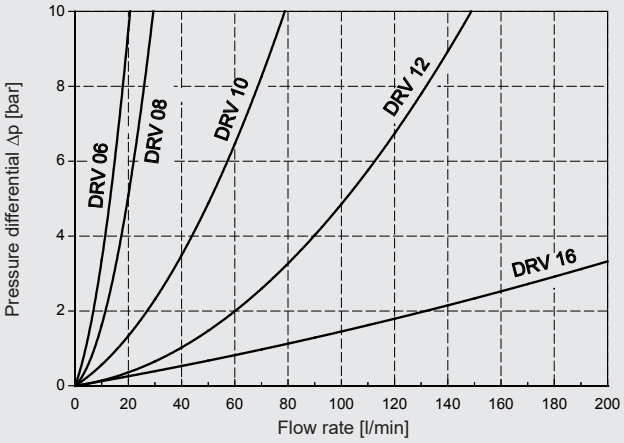
DV- / DRV-12-01 A → B



DV- / DRV-16-01 A → B



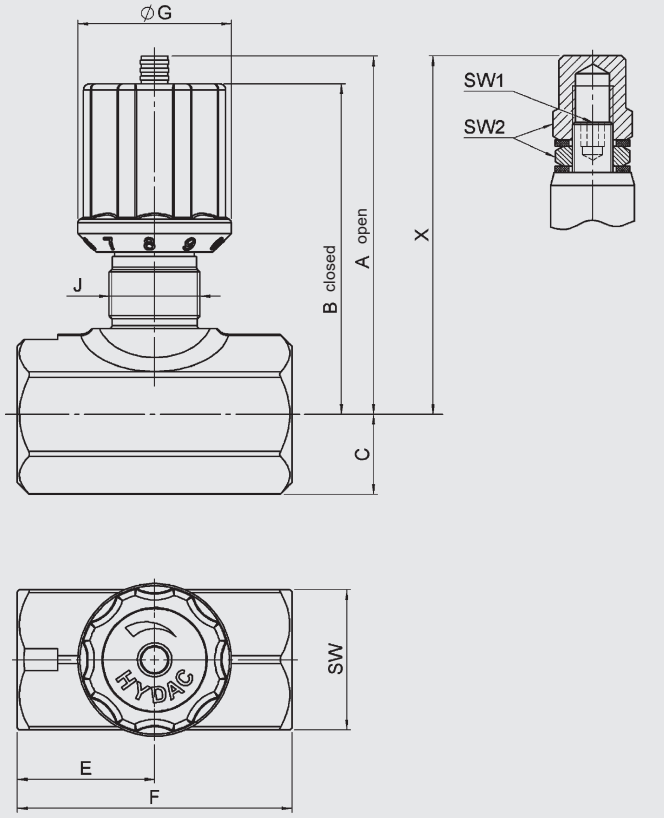
DRV-06 to 16 B → A



DIMENSIONS

DV

Type 01 and 11 12



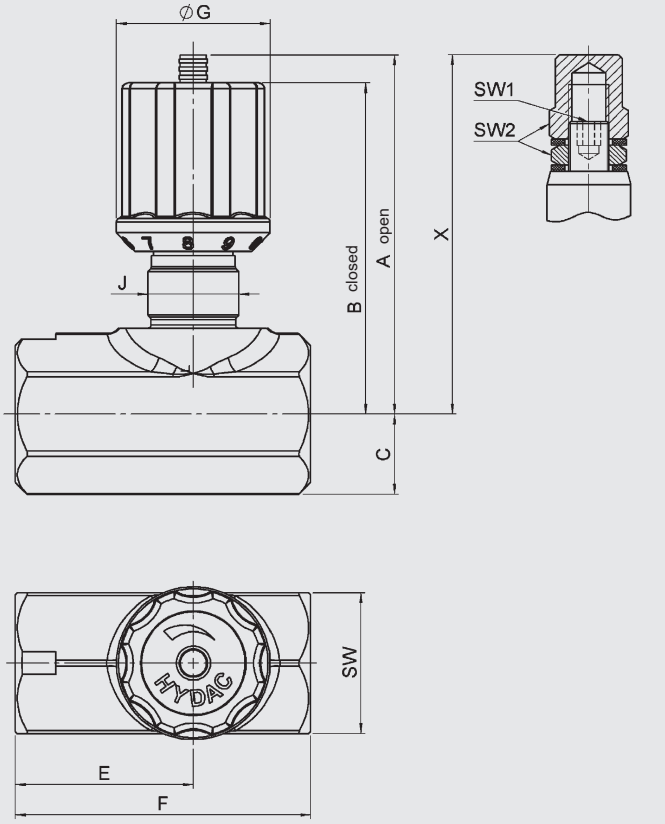
millimeter
subject to technical modifications

Size	Threaded connection	A	B	C	SW	E
06	G⅛	57	52.9	9	16	19
08	G¼	70.4	64.3	14.2	25	24
10	G⅜	76.6	70.8	17.1	30	29
12	G½	89.2	82.3	20	35	34
16	G¾	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 and 11 12



millimeter
subject to technical modifications

Size	Threaded connection	A	B	C	SW	E
06	G⅛	57	52.9	9	16	28.8
08	G¼	70.4	64.3	14.2	25	34
10	G⅜	76.6	70.8	17.1	30	42
12	G½	89.2	82.3	20	35	44
16	G¾	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
65	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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