

DV, DVE, & DVP Series Needle Valves



DV Series
Inline Mounting



DVP Series
Manifold Mounting

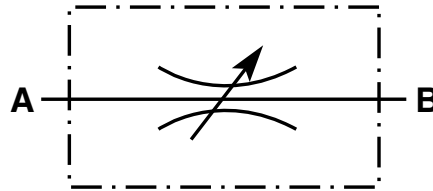


DVE Series
Cartridge Valve

Specifications

- 5000 psi operating Pressure
- 8 Sizes, 1/8" - 1-1/2"
- SAE O-Ring, NPT or BSPP Threaded Connections; Manifold Mounting; and Cartridge Type
- Flows to 80 gpm
- Carbon steel housing
- FPM (Fluoroelastomer) O-Rings (standard)
- Color coded spindle for accurate flow control
- Provision for panel mounting
- Unique safety spindle design
- Temperature Range: -4° to 212°F at full pressure

Hydraulic Symbol



Model Code

DV - 06 - 01 .X / 5 - S - M

Needle Valve

- DV = Inline Mounting
- DVP = Manifold Mounting
- DVE = Cartridge Valve

Nominal Sizes

DV & DVP Nom. Size	SAE (DV only) Tube Size	Thread Size	NPTF (DV Only) Pipe Size	Pipe OD	BSPP (DV Only) Thread Size
06	=		1/8"	0.405"	G1/8
08	= -4	7/16-20 UNF	1/4"	0.540"	G1/4
10	= -6	9/16-18 UNF	3/8"	0.675"	G3/8
12	= -8	3/4-16 UNF	1/2"	0.840"	G1/2
16	= -12	1-1/16-12 UN	3/4"	1.050"	G3/4
20	= -16	1-5/16-12 UN	1"	1.315"	G1
25	= -20	1-5/8-12 UN	1-1/4"	1.660"	G1 1/4
30	= -24	1-7/8-12 UN	1-1/2"	1.900	G1 1/2

DVE Nom Size	SAE Cavity	BSPP Cavity
08	= 3/4-16 UNF	G1/2
10	= 7/8-14 UNF	G1/2
12	= 1-1/16-12 UN	G3/4
16	= 1-5/16-12 UN	G1

Housing Material

- 01 = Carbon Steel

Modification Number

Port Configuration

- (omit) = DVP Only
- 5 = NPTF - ANSI B1.20.3
- 12 = SAE - SAEJ1926 Ports with ISO 725 Threads and O-Ring Sealing
- 0 = BSPP to DIN 3852, Part 2-X

Supplementary Details

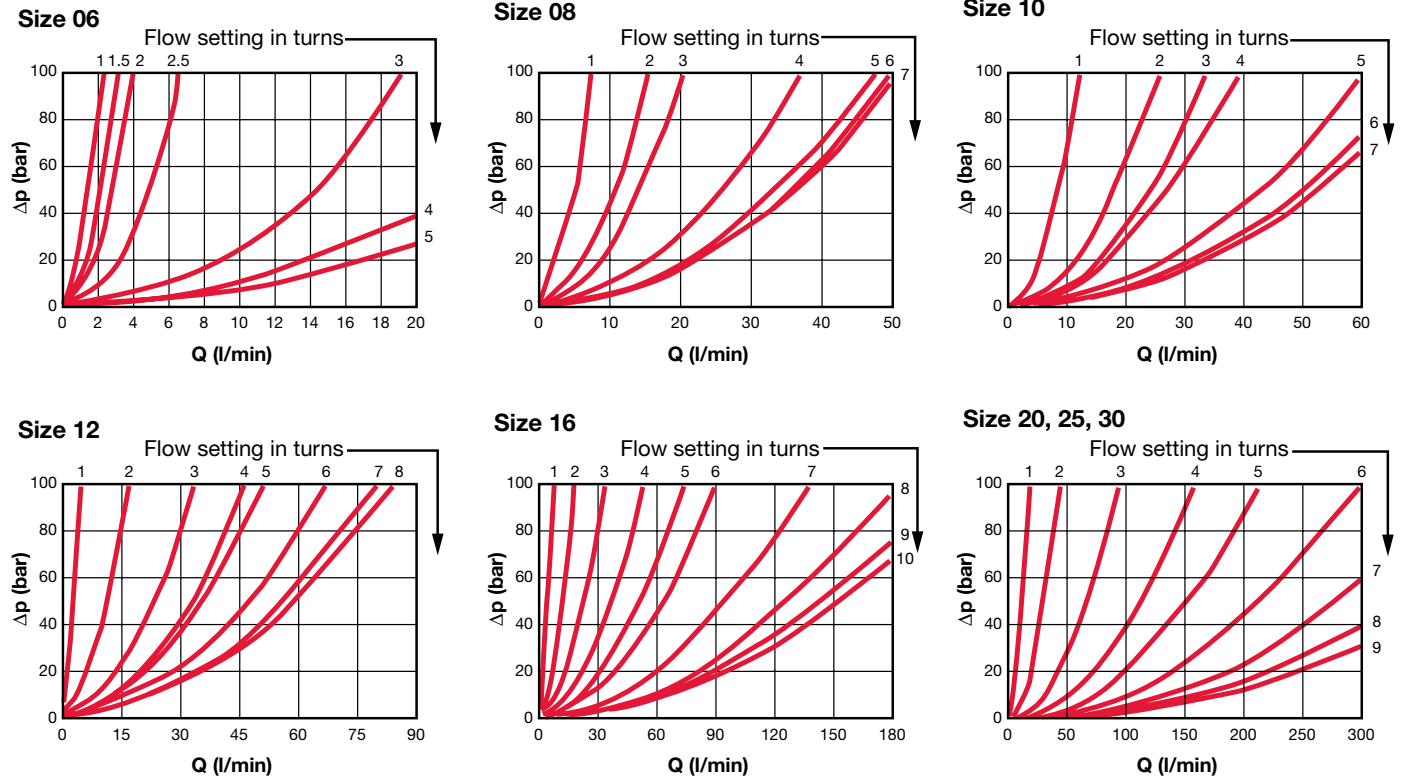
- S = Panel Mounting Kit (not available in sizes 20, 25, 30)

Model Codes containing selections listed in RED are non-standard items – Minimum quantities will apply – Contact HYDAC for information and availability
Not all combinations are available

Pressure Drop Curves

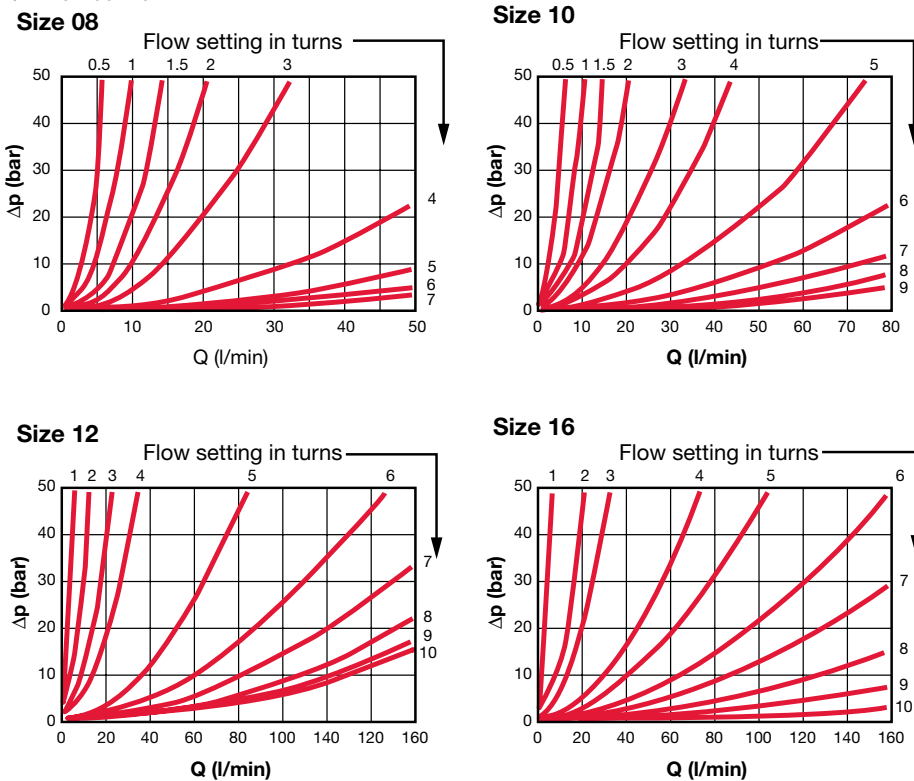
DV, DVP, DRV, DRVP Series

Flow Direction: A to B / Throttled Flow



DVE Cartridge Flow Control Valves

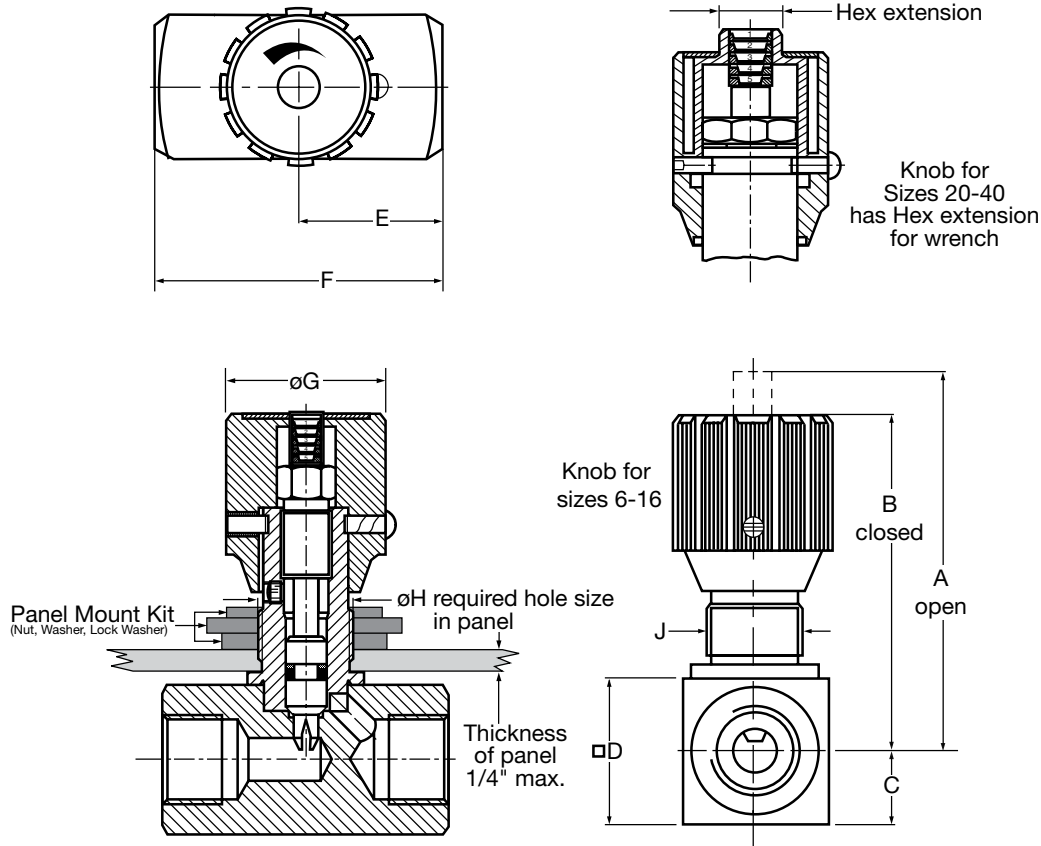
Flow Direction: A to B / Throttled Flow



Pressure Drop curves were established by using mineral oil with kinematic viscosity 165 SUS at 112°F / 50°C

Dimensions

DV Series Inline Needle Valve



Model Code	Port Size		A	B	C	D	E	F	øG	øH	J ¹⁾	Hex	Weight
	NPTF	SAE											
DV-06	1/8"	5/16-24UNF	2.16 (55)	1.97 (50)	0.31 (8)	0.63 (16)	0.75 (19)	1.50 (38)	0.94 (24)	0.51 (13)	Pg 7 thread	-	0.26 (0.12)
DV-08	1/4"	7/16-20UNF	2.83 (72)	2.56 (65)	0.49 (12.5)	0.98 (25)	0.94 (24)	1.89 (48)	1.14 (29)	0.75 (19)	Pg 11 thread	-	0.55 (0.25)
DV-10	3/8"	9/16-18UNF	2.91 (74)	2.64 (67)	0.59 (15)	1.18 (30)	1.14 (29)	2.28 (58)	1.14 (29)	0.75 (19)	Pg 11 thread	-	0.88 (0.40)
DV-12	1/2"	3/4-16UNF	3.62 (92)	3.23 (82)	0.69 (17.5)	1.38 (35)	1.34 (34)	2.68 (68)	1.50 (38)	0.91 (23)	Pg 16 thread	-	1.5 (0.70)
DV-16	3/4"	1-1/16-12UN	4.17 (105)	3.78 (96)	0.89 (22.5)	1.77 (45)	1.53 (39)	3.07 (78)	1.50 (38)	0.91 (23)	Pg 16 thread	-	2.6 (1.2)
DV-20	1"	1-5/16-12UN	5.71 (145)	5.04 (128)	0.98 (25)	1.97 (50)	2.13 (54)	4.25 (108)	1.93 (49)	1.50 (38)	Pg 29 thread	3/4 (19)	4.6 (2.1)
DV-25	1-1/4"	1-5/8-12UN	5.91 (150)	5.24 (133)	1.18 (30)	2.36 (60)	2.13 (54)	4.25 (108)	1.93 (49)	1.50 (38)	Pg 29 thread	3/4 (19)	6.2 (2.8)
DV-30	1-1/2"	1-7/8-12UN	6.10 (155)	5.43 (138)	1.38 (35)	2.76 (70)	2.13 (54)	4.25 (108)	1.93 (49)	1.50 (38)	Pg 29 thread	3/4 (19)	7.7 (3.5)

Panel Mount Kits

Size	Model Code	Part Number
6	Kit Panel Mount DV06	00705300
8/10	Kit Panel Mount DV08	00705310
12/16	Kit Panel Mount DV12	00705302

1) Note: Pg style thread per DIN 40430

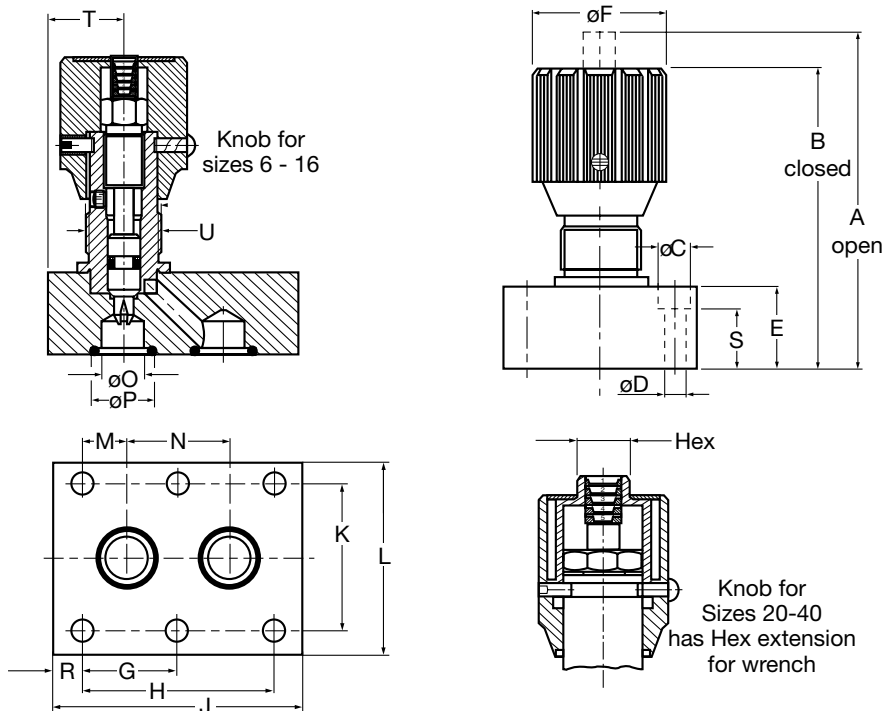
Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.

Dimensions are in inches/(mm) and lbs./(kg.)

*Dependent upon valve and seal materials selected.

Dimensions

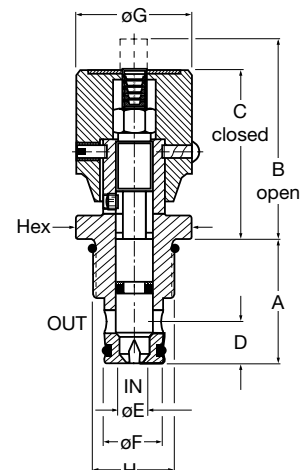
DVP Manifold Mount Needle Valve



Model Code	Nom. Size	A	B	øC	øD	E	øF	G ⁽¹⁾	H	J	K	L	M	N	øO	øP	R	S	T	U ⁽²⁾	Hex	Wt.
DVP-06	1/8"	2.48 (63)	2.28 (58)	.43 (11)	.26 (6.6)	.63 (16)	.94 (24)	-	.748 (19)	1.38 (35)	1.112 (28.5)	1.63 (41.5)	0.059 (1.5)	.630 (16)	0.197 (5)	0.382 (9.7)	0.315 (8)	0.35 (9)	0.37 (9.5)	Pg 7 thread	-	0.44 (0.2)
DVP-08	1/4"	3.11 (79)	2.83 (72)	.43 (11)	.26 (6.6)	.79 (20)	1.14 (29)	-	1.378 (35)	1.87 (47.5)	1.319 (33.5)	1.81 (46)	0.177 (4.5)	1.004 (25.5)	0.276 (7)	0.500 (12.7)	0.256 (6.5)	0.51 (13)	0.47 (12)	Pg 11 thread	-	0.88 (0.4)
DVP-10	3/8"	3.31 (84)	3.03 (77)	.43 (11)	.26 (6.6)	.98 (25)	1.14 (29)	-	1.319 (33.5)	2.01 (51)	1.496 (38)	2.01 (51)	0.165 (4.2)	1.004 (25.5)	0.394 (10)	0.614 (15.6)	0.335 (8.5)	0.71 (18)	0.55 (14)	Pg 11 thread	-	1.3 (0.6)
DVP-12	1/2"	3.90 (99)	3.50 (89)	.43 (11)	.26 (6.6)	.98 (25)	1.50 (38)	-	1.496 (38)	2.95 (75)	1.752 (44.5)	2.26 (57.5)	0.157 (4.0)	1.181 (30)	0.512 (13)	0.732 (18.6)	0.728 (18.5)	0.71 (18)	0.89 (22.5)	Pg 16 thread	-	2.2 (1.0)
DVP-16	3/4"	4.45 (113)	4.05 (103)	.55 (14)	.35 (9.0)	1.18 (30)	1.50 (38)	1.496 (38)	2.992 (76)	3.68 (93.5)	2.126 (54)	2.76 (70)	0.433 (11)	2.126 (54)	0.669 (17)	0.965 (24.5)	0.335 (8.5)	0.83 (21)	0.77 (19.5)	Pg 16 thread	-	3.7 (1.7)
DVP-20	1"	6.5 (165)	5.83 (148)	.55 (14)	.35 (9.0)	1.77 (45)	1.98 (49)	1.870 (47.5)	3.740 (95)	4.37 (111)	2.362 (60)	3.01 (76.5)	0.753 (19.1)	2.244 (57)	0.866 (22)	1.201 (30.5)	0.315 (8)	1.42 (36)	1.24 (31.5)	Pg 29 thread	3/4 (19)	8.0 (3.6)
DVP-25	1 1/4"	6.5 (165)	5.83 (148)	.71 (18)	.45 (11.5)	1.77 (45)	1.93 (49)	2.362 (60)	4.744 (120.5)	5.63 (143)	2.992 (76)	3.94 (100)	0.819 (20.8)	3.130 (79.5)	1.122 (28.5)	1.472 (37.4)	0.433 (11)	1.34 (34)	1.81 (46)	Pg 29 thread	3/4 (19)	12.1 (5.5)
DVP-30	1 1/2"	6.69 (170)	6.02 (153)	.79 (20)	.55 (14)	1.97 (50)	1.93 (49)	2.815 (71.5)	5.630 (143)	6.73 (171)	3.622 (92)	4.53 (115)	0.937 (23.8)	3.740 (95)	1.378 (35)	1.709 (43.4)	.591 (15)	1.46 (37)	1.53 (39)	Pg 29 thread	3/4 (19)	16.6 (7.5)

DVE Cartridge Valve

Size	A	B	C	D	øE	øF	øG	H	Hex	Wt.
DVE-08	1.00 (26)	1.85 (47)	1.57 (40)	0.472 (12)	0.177 (4.5)	0.559 (14.2)	1.14 (29)	3/4-16UNF	1 1/16 (27)	0.33 (0.15)
DVE-10	1.18 (30)	2.52 (64)	2.13 (54)	0.492 (12.5)	0.315 (8)	0.622 (15.8)	1.50 (38)	7/8-14UNF	1 1/16 (27)	0.55 (0.25)
DVE-12	1.57 (40)	2.56 (65)	2.17 (55)	0.531 (13.5)	0.375 (9.5)	0.807 (20.5)	1.50 (38)	1-1/16-12UNF	1 5/16 (32)	1.10 (0.50)
DVE-16	1.71 (43.5)	2.56 (65)	2.17 (55)	0.689 (17.5)	0.433 (11)	1.060 (26.9)	1.50 (38)	1-5/16-12UNF	1 5/8 (41)	1.54 (0.70)



1) Only 4 mounting holes are used on sizes 06, 08, 10, and 12

2) Pg Style Thread per DIN 40430

Note: Contact factory for certified drawing of cartridge valve cavity.

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Dimensions are in inches/(mm) and lbs./(kg.)