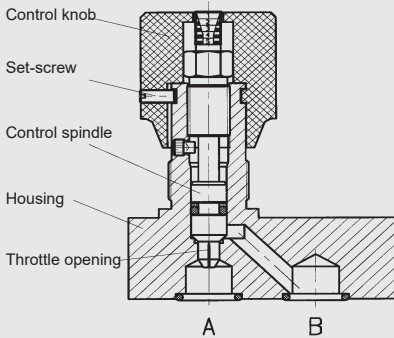
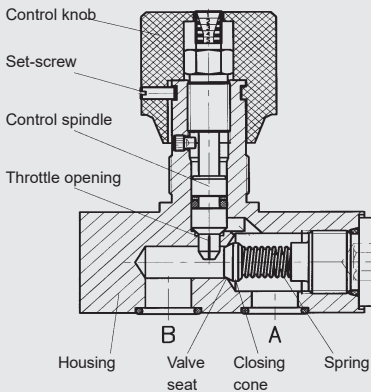


FUNCTION

DVP



DRVP



The DVP is a manifold mounted flow control valve which controls the flow rate 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 and coloured rings on the top of the control knob enable accurate repeat setting. The DRVP is a manifold mounted flow control valve which 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 Manifold Mounted – 350 bar DVP-/ DRVP- 06 to 40

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
- Spindle patented secured before complete loosening
- An Allen set-screw locks the setting of the knob
- Choice of nine sizes ensures best possible adaptability to the system
- Optional nickel-plated version available (up to size 12)

SPECIFICATIONS*

| | | |
|------------------------------------|--|---------------------------|
| Operating pressure: | max. 350 bar | |
| Nominal flow: | DVP, DRVP-06 | max. 20 l/min |
| | DVP, DRVP-08 | max. 50 l/min |
| | DVP, DRVP-10 | max. 60 l/min |
| | DVP, DRVP-12 | max. 90 l/min |
| | DVP, DRVP-16 | max. 180 l/min |
| | DVP, DRVP-20 | max. 300 l/min |
| | DVP, DRVP-25 | max. 300 l/min |
| | DVP, DRVP-30 | max. 300 l/min |
| | DRVP-40 | max. 300 l/min |
| Cracking pressure (on DRVP): | 0.5 bar | |
| Media operating temperature range: | min. -20 °C to max. +80 °C | |
| Ambient temperature range: | min. -20 °C to max. +80 °C | |
| Operating fluid: | Hydraulic oil to DIN 51524 Part 1, 2 and 3 | |
| Viscosity range: | min. 2.8 mm ² /s to max. 800 mm ² /s | |
| Filtration: | Class 21/19/16 according to ISO 4406 or cleaner | |
| MTTF _d : | 150 - 1200 years, according to DIN EN ISO 13849-1 | |
| Installation: | No orientation restrictions, preferably horizontal | |
| Materials: | Valve body: | steel |
| | Piston: | hardened and ground steel |
| | Seals: | FKM (standard) |
| | Back-up rings: | PTFE |
| Weight: | DVP 06 = 0.2 kg | DRVP 06 = 0.3 kg |
| | DVP 08 = 0.4 kg | DRVP 10 = 0.8 kg |
| | DVP 10 = 0.6 kg | DRVP 12 = 1.1 kg |
| | DVP 12 = 1.0 kg | DRVP 16 = 2.5 kg |
| | DVP 16 = 1.7 kg | DRVP 25 = 6.7 kg |
| | DVP 20 = 3.6 kg | DRVP 30 = 3.9 kg |
| | DVP 25 = 5.5 kg | DRVP 40 = 17.5 kg |
| | DVP 30 = 7.5 kg | |

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

MODEL CODE

DRVP - 08 - 01 . X

Basic model

DVP = Needle valve

DRVP = Needle valve with check valve

Nominal size

06, 08, 10, 12, 16, 20, 25, 30, 40

Type

01 = standard

(housing phosphated, seals FKM)

12 = housing nickel-plated, fine throttle spindle in steel,
with dome nut - adjustment with tool
(not for size 40)

Other types on request

Series

determined by manufacturer

Note:

Spindle slightly open on delivery.

Standard models

| Code | Part No. |
|--------------|----------|
| DVP-06-01.X | 705351 |
| DVP-08-01.X | 705353 |
| DVP-10-01.X | 705355 |
| DVP-12-01.X | 705357 |
| DVP-16-01.X | 705359 |
| DVP-20-01.X | 705361 |
| DVP-25-01.X | 705363 |
| DVP-30-01.X | 705365 |
| DRVP-06-01.X | 705777 |
| DRVP-08-01.X | 705779 |
| DRVP-10-01.X | 705781 |
| DRVP-12-01.X | 705783 |
| DRVP-16-01.X | 705785 |
| DRVP-20-01.X | 705787 |
| DRVP-25-01.X | 705789 |
| DRVP-30-01.X | 705791 |
| DRVP-40-01.X | 705792 |

Other models on request

Seal kits

| Code | Part No. |
|--|----------|
| SEAL KIT 06FKM DV/P DRV/P RVP | 555089 |
| SEAL KIT 08FKM DV/P DRV/P DVE RVP SRVR/P | 555090 |
| SEAL KIT 10FKM DV/P DRV/P DVE RVP SRVR/P | 555091 |
| SEAL KIT 12FKM DV/P DRV/P DVE RVP SRVR/P | 555092 |
| SEAL KIT 16FKM DV/P DRV/P DVE RVP SRVR/P | 555093 |
| SEAL KIT 20FKM DV/P DRV/P RVP SRVR | 555094 |
| SEAL KIT 25FKM DV/P DRV/P RVP | 555095 |
| SEAL KIT 30FKM DV/P DRV/P RVP | 555096 |
| SEAL KIT 40FKM DV/P DRV/P RVP | 561456 |

TYPICAL PERFORMANCE

Pressure drop, dependent on flow rate

DVP = flow direction A → B and B → A

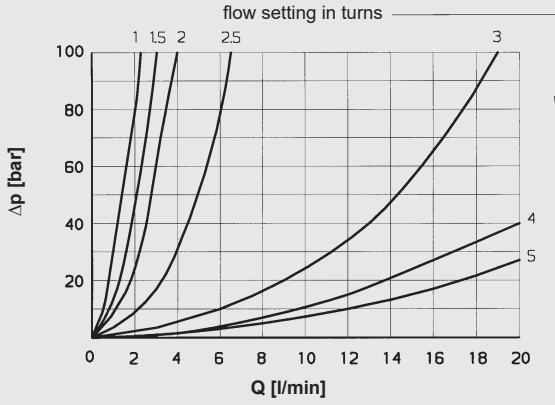
DRVP = flow direction A → B

Pressure differential Δp measured against flow rate

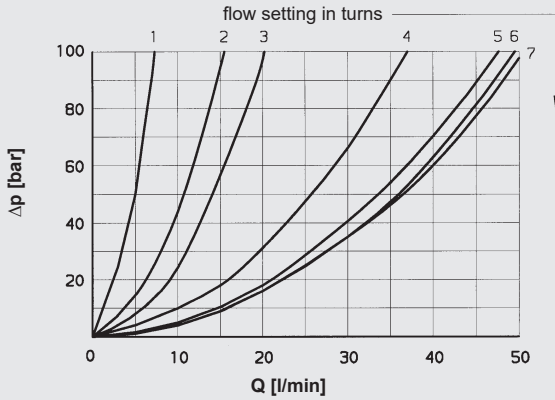
Measured at constant flow setting, $v = 54 \text{ mm}^2/\text{s}$

and $T_{\text{oil}} = 36 \text{ }^\circ\text{C}$

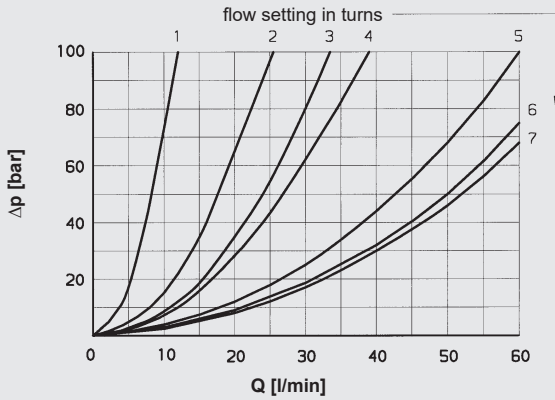
DVP/DRVP-06-01.X



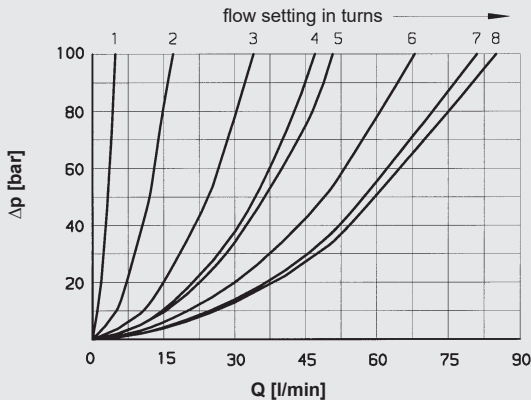
DVP-DRVP-08-01.X



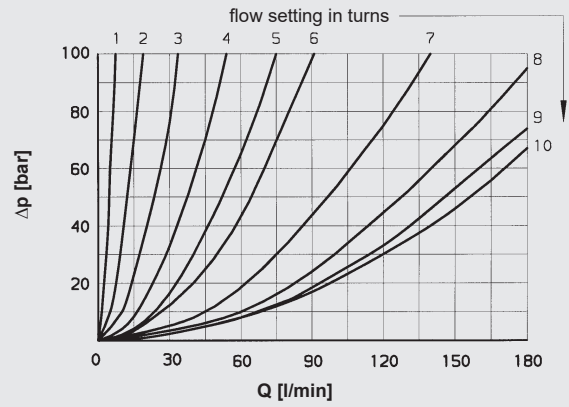
DVP/DRVP-10-01.X



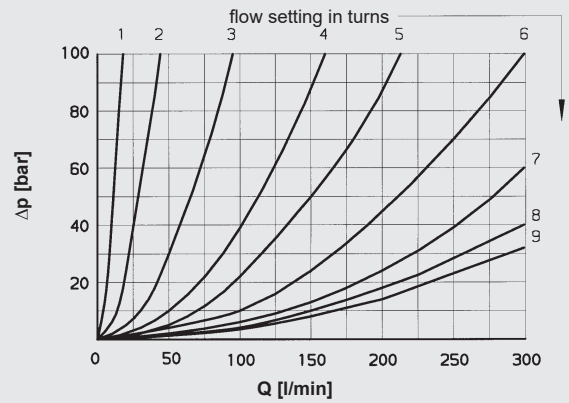
DVP/DRVP-12-01.X



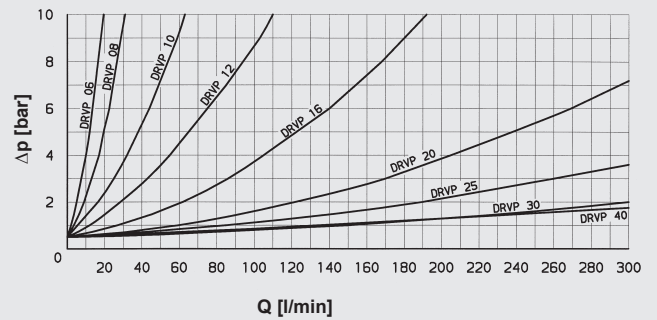
DVP/DRVP-16-01.X



DVP/DRVP-20 to 40-01.X

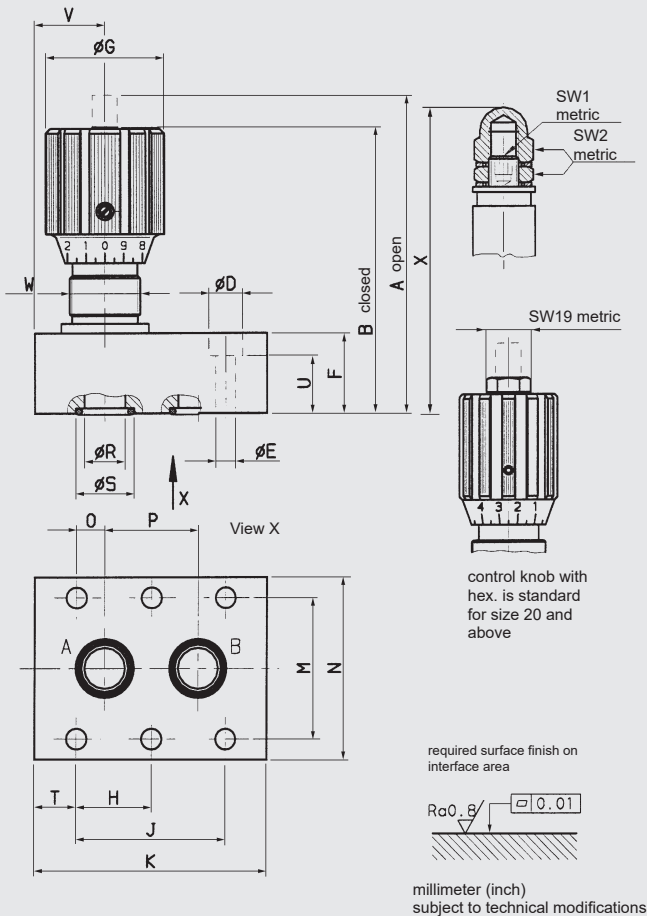


DRVP-06 to DRVP-40-01.X



DIMENSIONS

DVP

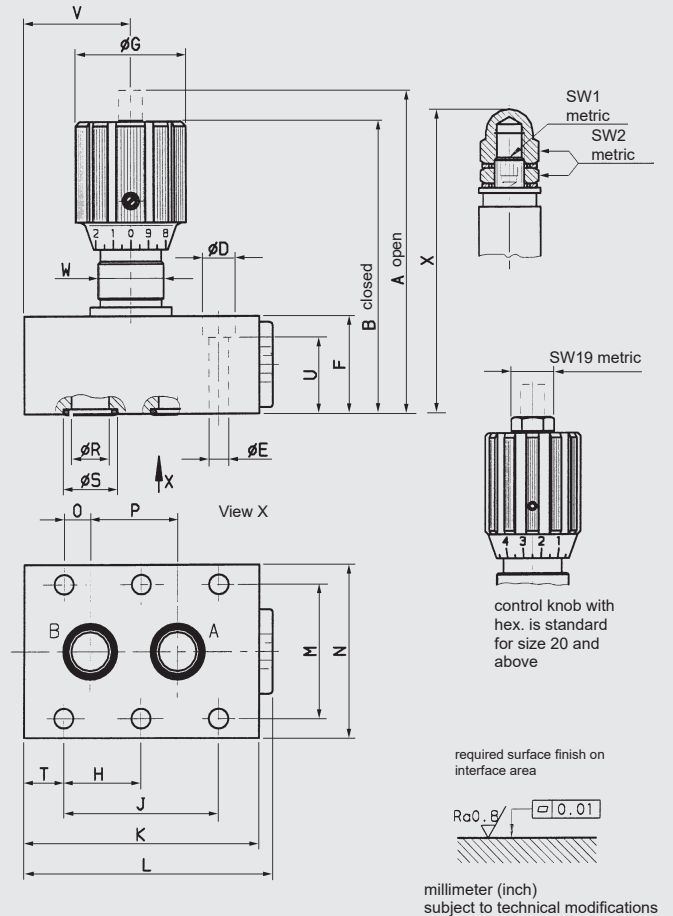


| Size | A | B | D | E | F | G | H | J | K | M |
|------|-----|-----|----|------|----|----|------|-------|-------|-------|
| 06 | 63 | 58 | 11 | 6.6 | 16 | 24 | - | 19.0 | 35.0 | 28.5 |
| 08 | 79 | 72 | 11 | 6.6 | 20 | 29 | - | 35.0 | 47.5 | 33.5 |
| 10 | 84 | 77 | 11 | 6.6 | 25 | 29 | - | 33.5 | 51.0 | 38.0 |
| 12 | 99 | 89 | 11 | 6.6 | 25 | 38 | - | 38.0 | 75.0 | 44.5 |
| 16 | 113 | 103 | 14 | 9.0 | 30 | 38 | 38.0 | 76.0 | 93.5 | 54.0 |
| 20 | 165 | 148 | 14 | 9.0 | 45 | 49 | 47.5 | 95.0 | 111.0 | 60.0 |
| 25 | 165 | 148 | 18 | 11.5 | 45 | 49 | 60.0 | 120.5 | 143.0 | 76.0 |
| 30 | 170 | 153 | 20 | 14.0 | 50 | 49 | 71.5 | 143.0 | 171.0 | 92.0 |
| 40 | 170 | 153 | 20 | 14.0 | 50 | 49 | 67.0 | 133.5 | 192.0 | 111.0 |

| Size | N | O | P | R | S | T | U | V | W | X | Gewicht [kg] |
|------|-------|------|------|------|------|------|----|------|-------|-------|--------------|
| 06 | 41.5 | 1.5 | 16.0 | 5.0 | 9.7 | 8.0 | 9 | 9.5 | PG 7 | 61.7 | 0.20 |
| 08 | 46.0 | 4.5 | 25.5 | 7.0 | 12.7 | 6.5 | 13 | 12.0 | PG 11 | 80.7 | 0.40 |
| 10 | 51.0 | 4.2 | 25.5 | 10.0 | 15.6 | 8.5 | 18 | 14.0 | PG 11 | 91.0 | 0.60 |
| 12 | 57.5 | 4.0 | 30.0 | 13.0 | 18.6 | 18.5 | 18 | 22.5 | PG 16 | 106.0 | 1.00 |
| 16 | 70.0 | 11.0 | 54.0 | 17.0 | 24.5 | 8.5 | 21 | 19.5 | PG 16 | 135.0 | 1.70 |
| 20 | 76.5 | 19.1 | 57.0 | 22.0 | 30.5 | 8.0 | 36 | 31.5 | PG 29 | 166.0 | 3.60 |
| 25 | 100.0 | 20.8 | 79.5 | 28.5 | 37.4 | 11.0 | 34 | 46.0 | PG 29 | 204.0 | 5.50 |
| 30 | 112.0 | 23.8 | 95.0 | 35.0 | 43.4 | 15.0 | 37 | 39.0 | PG 29 | 225.0 | 7.50 |
| 40 | 140.0 | 25.5 | 89.0 | 47.5 | 57.5 | 16.0 | 37 | 58.0 | PG 29 | - | 8.20 |

DIMENSIONS

DRVP



| Size | A | B | D | E | F | G | H | J | K | L | M | N |
|------|-----|-----|----|------|-----|----|------|-------|-------|-------|-------|-------|
| 06 | 63 | 58 | 11 | 6.6 | 16 | 24 | - | 19.0 | 41.5 | 46.0 | 28.5 | 41.5 |
| 08 | 79 | 72 | 11 | 6.6 | 20 | 29 | - | 35.0 | 63.5 | 67.0 | 33.5 | 46.0 |
| 10 | 84 | 77 | 11 | 6.6 | 25 | 29 | - | 33.5 | 70.0 | 74.0 | 38.0 | 51.0 |
| 12 | 106 | 96 | 11 | 6.6 | 32 | 38 | - | 38.0 | 80.0 | 84.5 | 44.5 | 57.5 |
| 16 | 128 | 118 | 14 | 9.0 | 45 | 38 | 38.0 | 76.0 | 104.0 | 109.5 | 54.0 | 70.0 |
| 20 | 170 | 153 | 14 | 9.0 | 50 | 49 | 47.5 | 95.0 | 127.0 | 133.0 | 60.0 | 76.5 |
| 25 | 175 | 158 | 18 | 11.5 | 55 | 49 | 60.0 | 120.5 | 165.0 | 172.0 | 76.0 | 100.0 |
| 30 | 195 | 178 | 20 | 14.0 | 75 | 49 | 71.5 | 143.0 | 186.0 | 196.0 | 92.0 | 115.0 |
| 40 | 220 | 203 | 20 | 14.0 | 100 | 49 | 67.0 | 133.5 | 192.0 | 201.0 | 111.0 | 140.0 |

| Size | O | P | R | S | T | U | V | W | SW1 | SW2 | X | Gewicht [kg] |
|------|------|------|------|------|------|----|------|-------|-----|-----|-------|--------------|
| 06 | 1.6 | 16.0 | 5.0 | 9.7 | 6.4 | 9 | 13.5 | PG 7 | - | - | 61.7 | 0.26 |
| 08 | 4.8 | 25.5 | 7.0 | 12.7 | 14.2 | 13 | 31.0 | PG 11 | - | - | 72.2 | 0.50 |
| 10 | 4.0 | 25.5 | 10.0 | 15.6 | 18.0 | 18 | 29.5 | PG 11 | 6 | 13 | 81.0 | 0.80 |
| 12 | 4.0 | 30.0 | 13.0 | 18.6 | 21.0 | 25 | 36.5 | PG 16 | 6 | 17 | 33.5 | 1.10 |
| 16 | 11.0 | 54.0 | 17.0 | 24.5 | 14.0 | 36 | 49.0 | PG 16 | 8 | 19 | 124.5 | 2.50 |
| 20 | 19.0 | 57.0 | 22.0 | 30.5 | 16.0 | 41 | 49.0 | PG 29 | - | - | 150.0 | 3.90 |
| 25 | 20.6 | 79.5 | 28.5 | 37.4 | 15.0 | 44 | 77.0 | PG 29 | - | - | 182.0 | 6.70 |
| 30 | 23.8 | 95.0 | 35.0 | 43.4 | 15.0 | 62 | 85.0 | PG 29 | - | - | 210.0 | 11.00 |
| 40 | 25.5 | 89.0 | 47.5 | 57.5 | 16.0 | 87 | 64.0 | PG 29 | - | - | - | 17.50 |

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.

HYDAC Fluidtechnik GmbH
Justus-von-Liebig-Str.
D-66280 Sulzbach/Saar
Tel: 0 68 97 / 509-01
Fax: 0 68 97 / 509-598
E-Mail: valves@hydac.com