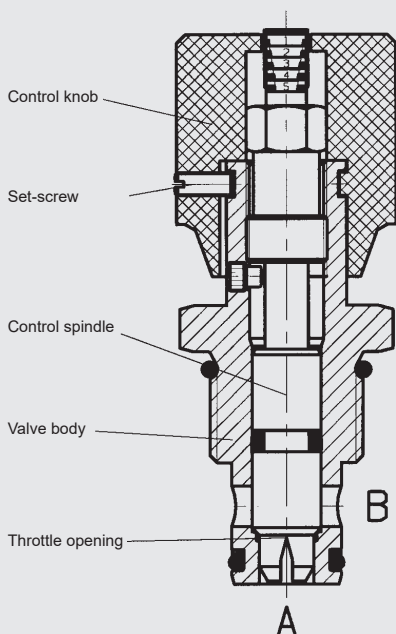


## FUNCTION



The DVE is a flow control valve which controls the flow rate by adjusting the cross section. It is available in four sizes. The flow rate is dependent on the pressure differential and the 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.

**Hint:** Spindle slightly open on delivery.

## Needle Valve direct-acting Cartridge – 350 bar DVE 08920 to 16920

### FEATURES

- For regulating the speed of loads
- For fine adjustment and shut-off of the flow
- For system-related damping in hydraulic circuits
- Spindle secured to prevent complete loosening
- An Allen set-screw locks the setting of the knob
- Choice of four sizes for optimum adaptability to the system
- Optional zinc-plated version available
- Optional version with UNF thread available

### SPECIFICATIONS\*

Operating pressure:	max. 350 bar
Nominal flow:	DVE 08920 max. 50 l/min DVE 10920 max. 80 l/min DVE 12920 max. 160 l/min DVE 16920 max. 160 l/min
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 <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 - 1200 years, according to DIN EN ISO 13849-1
Installation:	No orientation restrictions
Materials:	Valve body: steel Seals: FKM (standard) NBR (optional, media temperature range -30 °C to +80 °C)
	Back-up rings: PTFE
Cavity:	08920, 10920, 12920, 16920
Weight:	DVE 08920 = 0.15 kg DVE 10920 = 0.25 kg DVE 12920 = 0.50 kg DVE 16920 = 0.70 kg

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

## MODEL CODE

**DVE 08920 - 01 - C - V**

### Basic model

Needle valve, metric (UNF optional)

### Cavity

08920, 10920, 12920, 16920

### Type

01 = standard (phosphated, seals FKM)

11 = zinc-plated, stainless steel spindle 0.3 mm

12 = valve body nickel-plated, fine throttle spindle, protective dome nut – adjustment with tool

Other types on request

### Body and ports

C = cartridge only

### Seals

V = FKM (standard)

N = NBR

## Standard models

Model code	Part No.
DVE08920-01-C-V	705426
DVE10920-01-C-V	705430
DVE12920-01-C-V	705434
DVE16920-01-C-V	705438

Other models with metric or UNF thread on request

## Standard in-line bodies

Code	Part No.	Material	Ports	Pressure
On request				

## Seal kits

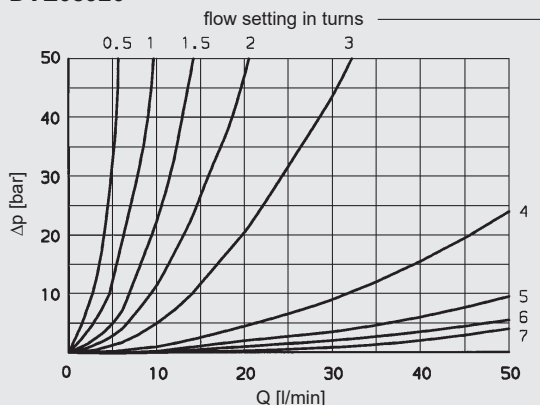
Code	Part No.
SEAL KIT 08FKM DV/P DRV/P DVE RVP SRVR/P	555090
SEAL KIT 10FKM DV/P DRV/P DVE RVP SRVR/P	555091
SEAL KIT 12FKM DV/P DRV/P DVE RVP SRVR/P	555092
SEAL KIT 16FKM DV/P DRV/P DVE RVP SRVR/P	555093

## TYPICAL PERFORMANCE

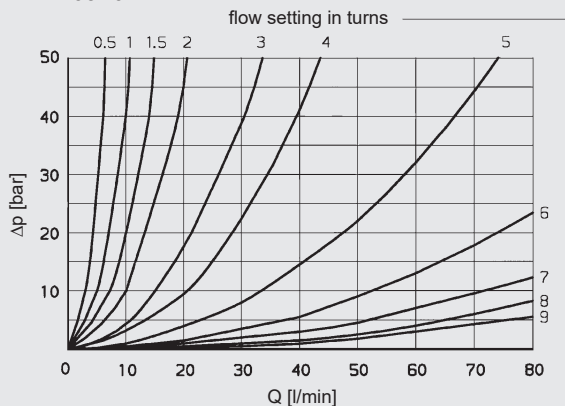
### Pressure drop, dependent on flow rate

Pressure differential  $\Delta p$  measured against flow rate  $Q$ , measured at constant flow setting,  $v = 34 \text{ mm}^2/\text{s}$  and  $T_{oil} = 46 \text{ }^\circ\text{C}$

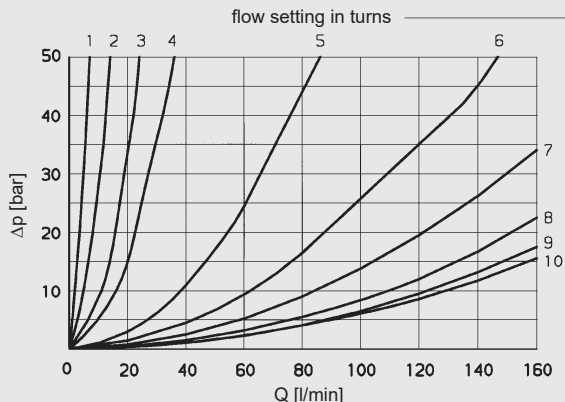
### DVE08920



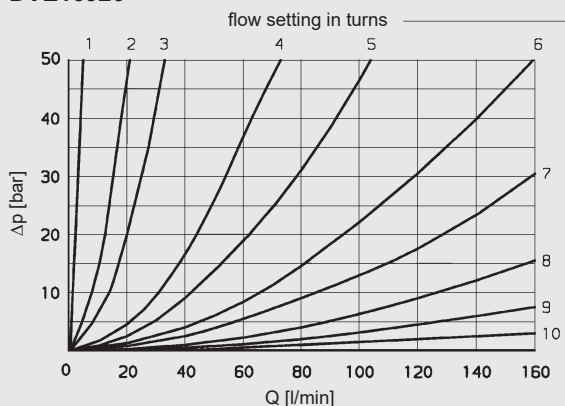
### DVE10920



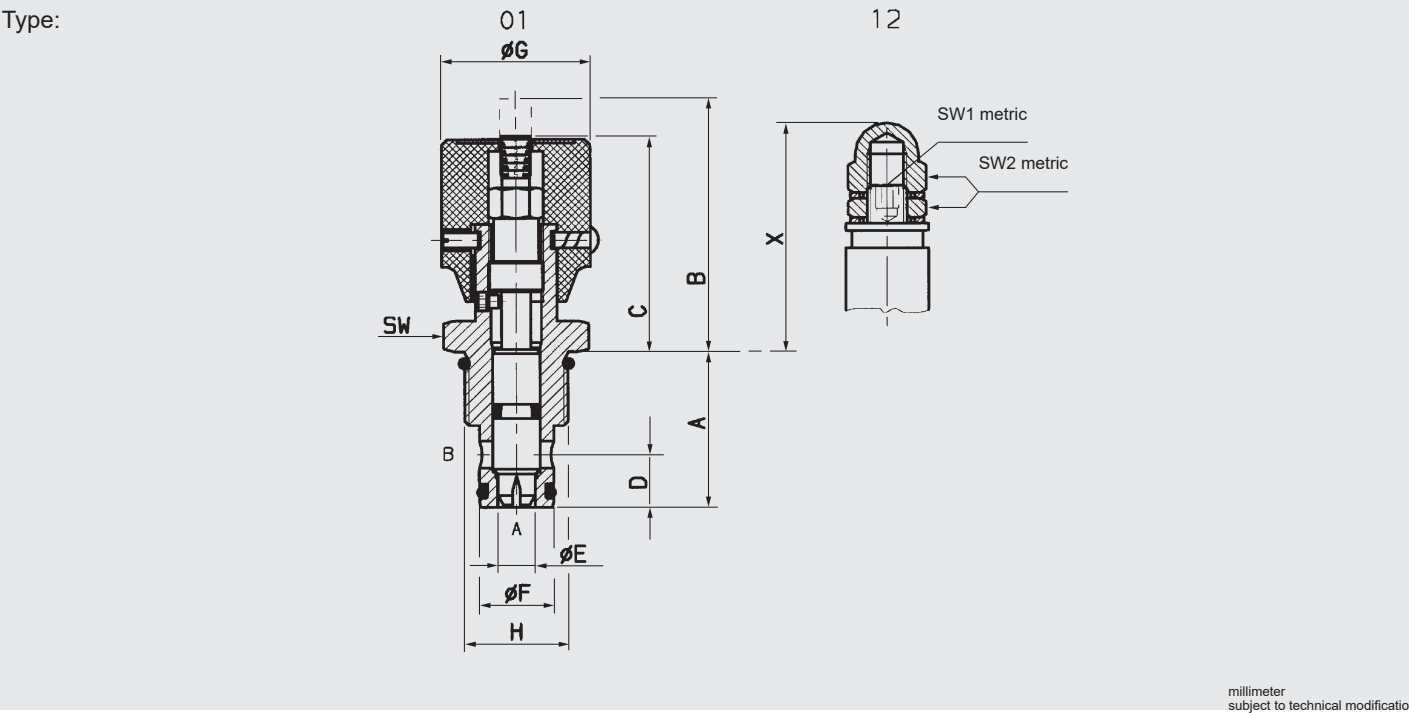
### DVE12920



### DVE16920



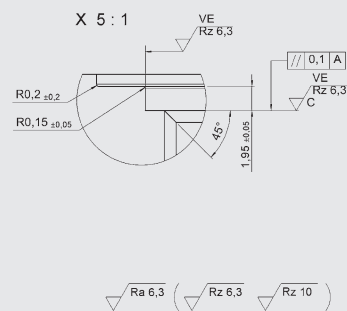
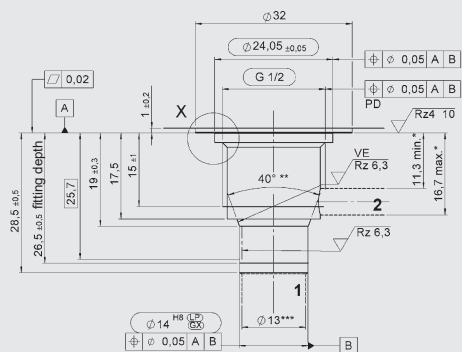
DIMENSIONS



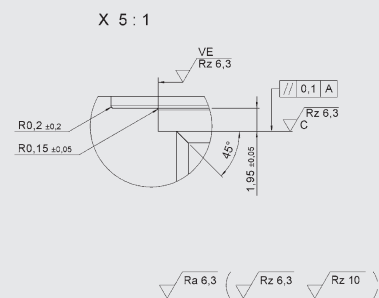
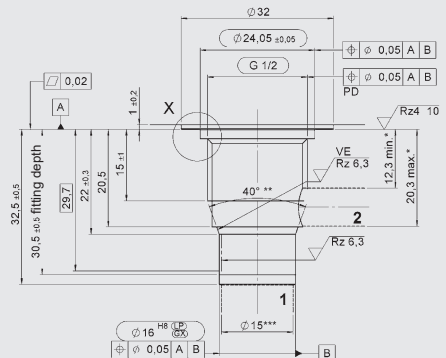
A	B	C	D	E	F	G	H	SW	SW1	SW2	X	Torque
26	47	40	12	5	14	29	G ½ A	27	4	13	44	30 + 5
30	64	54	12.5	8	16	38	G ½ A	27	5	17	58	40 + 5
40	65	54	13.5	9.5	19	38	G ¾ A	32	6	19	64	50 + 5
43.5	65	55	17.5	11	27	38	G 1 A	41	6	19	64.5	75 + 5

# CAVITY

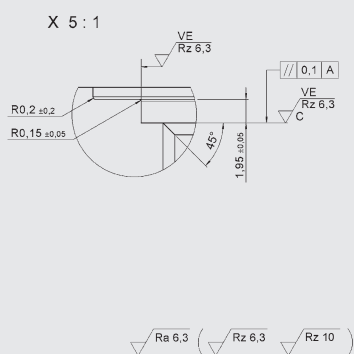
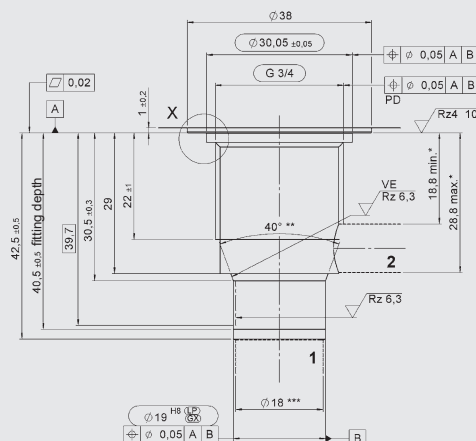
08920



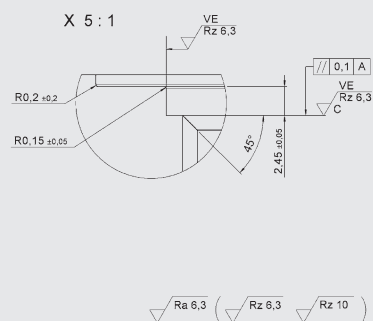
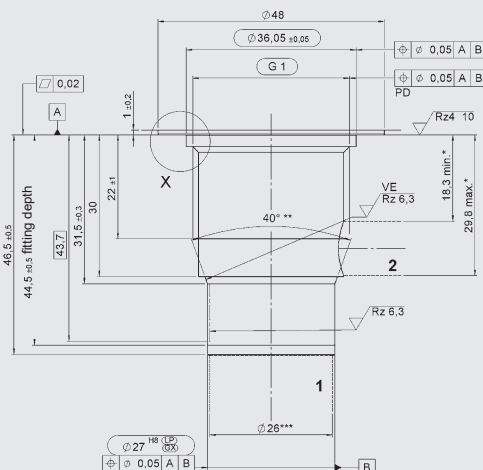
10920



12920



16920



VE = Visual Examination

\* Allowed drilling zone (for manifold design)

\*\* Sharp edges should be avoided by rounding to a radius of 0.1 mm to 0.2 mm

\*\*\* largest pre-drilling diameter (nominal tool diameter)

millimeter  
subject to technical modifications

## Form tools

Tool	Cavity / Part No.			
	08920	10920	12920	16920
Countersink	170854	170863	170862	170861
Forming tool	169169	169169	170844	170843
Reamer	1014205	1000772	1000778	1014208
Tap	1002667	1002667	1002663	1002661
Plug gauge	173839	173840	173841	—