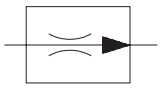
- ❑ **Wide range of throttling oriffices**
- ❑ **Two models:**
  - cartridge
  - screw-in cartridge valve

VSK4



VSK2

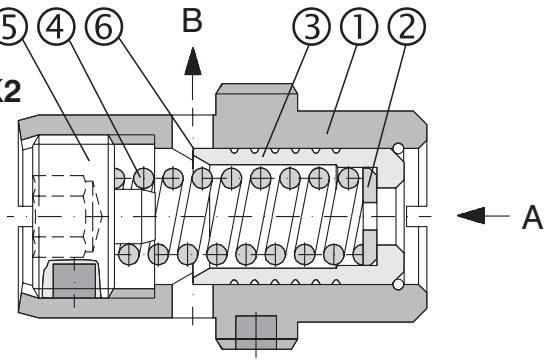
Functional Description

The pressure compensated flow control valves VSK are designed to control flow rates practically independent of pressures and temperatures. The set up flow rate is constant and depends on the orifice area. The 2-way flow control valves can be used in meter-in, meter out or bleed-off applications.
The valve consists of housing (1), throttling orifice (2), pressure compensator (3), spring (4) and adjustment screw (5).
Throttling in the direction A→ B takes place on the throttling area of the orifice (2). To provide for the independence between flow rate and pressure, a pressure compensator (3) with the metering edge (6) is located behind the throttling orifice. The spring (4) pushes the compensator to its extreme right position. Provided that there is flow passing through the valve, the input pressure acts on the face area of the pressure compensator and shifts it to the left, thus reducing the flow area of the metering edge (6) which results in decreasing the pressure difference at the throttling orifice. The movement of the compensator stops as soon as the equilibrium is reached and the pressure difference returns to its required value. The pressure compensator continuously compares the pressure difference at the orifice area (2) with the value preset by the spring pretension and ensures the necessary control, thus holding the flow rate constant. The flow rate of the VSK2 can be adjusted in a small range by setting the adjustment screw (5).

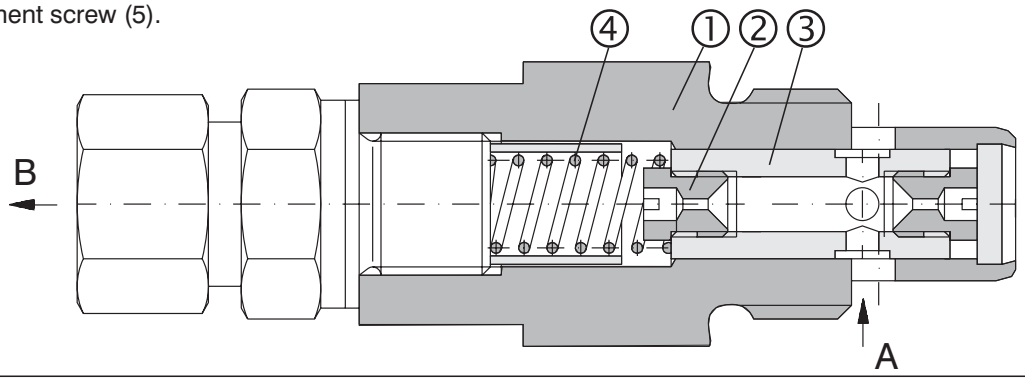
The flow rate in direction B→ A is also given by the orifice area (2), but the function of the pressure compensator is excluded.
The function of the VSK4 is similar, but in this case, the pressure compensator (3) is located in front of the throttling orifice (2).

The housing of the VSK2 valve does not have any surface treatment, the housing of the VSK4 is phosphate coated. All the other parts are zinc coated.

VSK2



VSK4



Ordering Code

VSK □ - □ - □ / □

Constant Flow-Control Valve

Model

Cartridge	**2**
Screw - in cartridge	**4**

Connectiong thread

Metric thread (M18x1.5 for VSK2)	**M2**
Metric thread (M22x1.5 for VSK4)	**M4**
Pipe thread (G 3/8 only for VSK2)	**G4**

Type

no designation	Standard

Orifice diameter in mm/100																
VSK2	55	80	100	-	120	-	-	-	-	160	180	-	210	230	-	260
VSK4	-	-	100	110	120	130	135	140	150	160	180	200	-	-	250	-

Technical Data

Nominal size	mm	06
Maximum flow	L/min	See table of flow rates
Maximum working pressure	bar	320
Minimum pressure difference	bar	See the performance curves
Hydraulic fluid		Hydraulic oils of power classes (HL, HLP) to DIN 51 524
Fluid temperature range for (NBR)	°C	-30 ... +100
Viscosity range	mm^2/s	20 ... 400
Maximum degree of fluid contamination		Class 21/18/15 to ISO 4406
Weight - VSK2 VSK4 with connector	kg	0,025 00,2
Mounting position		unrestricted

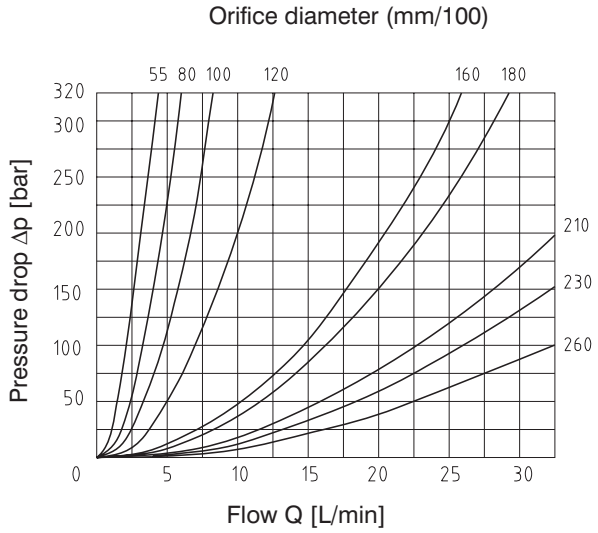
Approximate flow rates corresponding with the orifice diameter

VSK2		**VSK4**	
ID of the orifice [mm/100]	Flow range L/min adjustable through spring pretension at 32 bar	ID of the orifice [mm/100]	Flow range L/min an input presure 32 bar
55	0,3 - 0,6	100	2,1
80	1,4 - 1,7	110	2,4
100	1,8 - 2,4	120	3,0
120	3,1 - 4,0	130	3.8
160	5,5 - 6,5	140	4.3
180	5,6 - 7,1	150	4.9
210	8,5 - 10,8	160	6.3
230	10,7 - 13,3	180	6.6
260	12,0 - 16,4	200	8.7
		250	12.5
		135/S	6.0

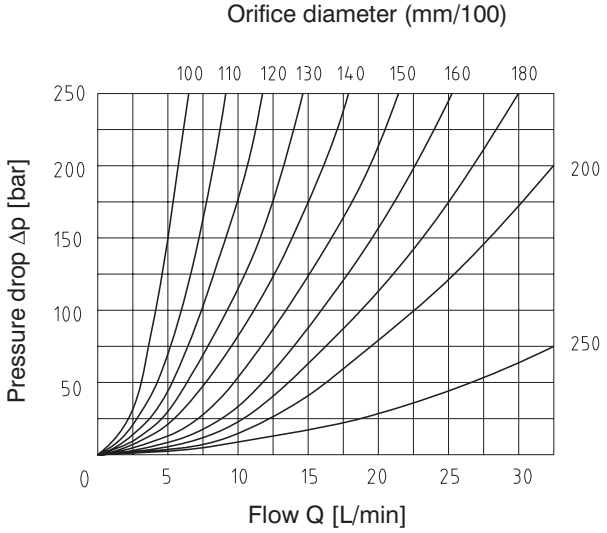
Δp-Q Characteristics (B → A)

Measured at ν = 32 mm²/s

VSK2



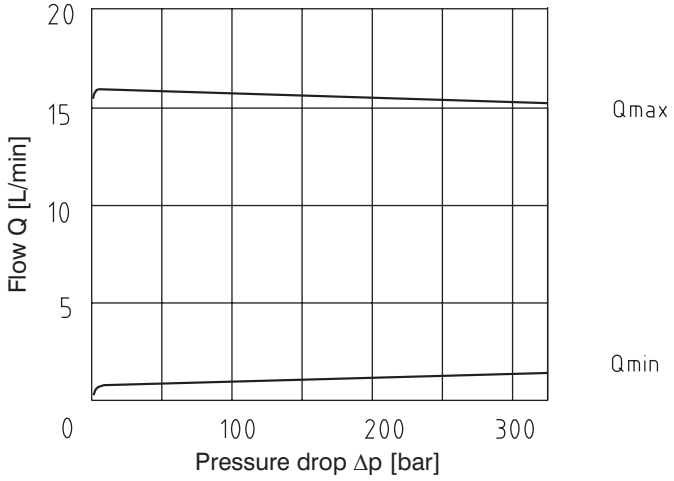
VSK4



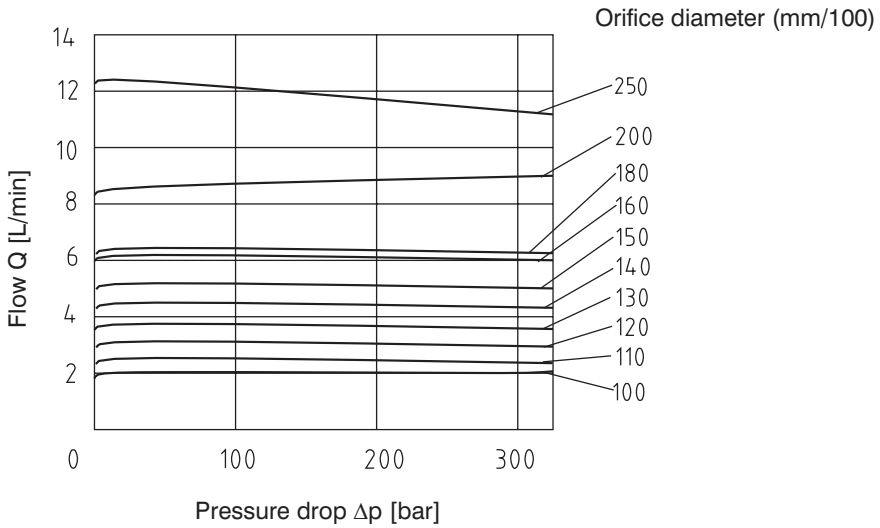
Δp-Q Characteristics (A → B)

Measured at ν = 32 mm²/s

VSK2



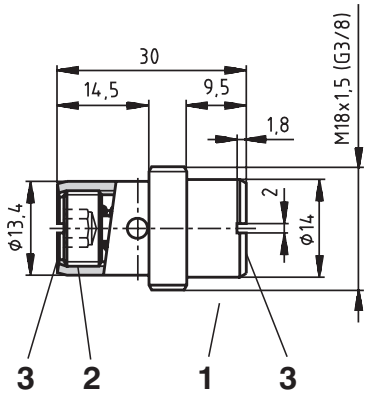
VSK4



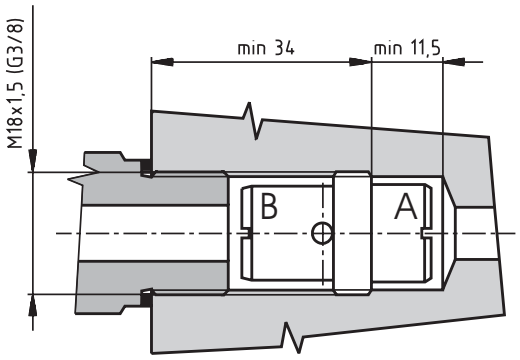
Valve Dimensions

Dimensions in millimeters

VSK2-M4-x



Cavity

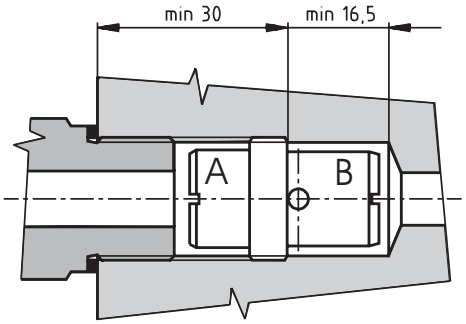


Controlled flow

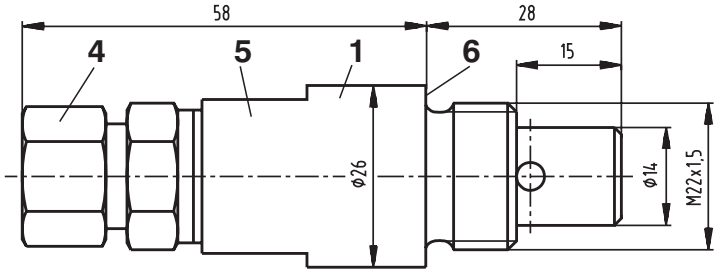
1 Type designation (stamped)
2 Screw for fine flow adjustment (with VSK2 only)
- inside HEX5
- anti clockwise rotation = flow decrease
- clockwise rotation = flow increase

3 Slot for screwing-in in mounting cavity of VSK2
4 Straight connector GE10-PRL-ED
for pipe with ∅D 10 mm
5 Wrench flats size 22 mm,
tightening torque Md = 30 Nm
6 Sealing edge

Controlled flow

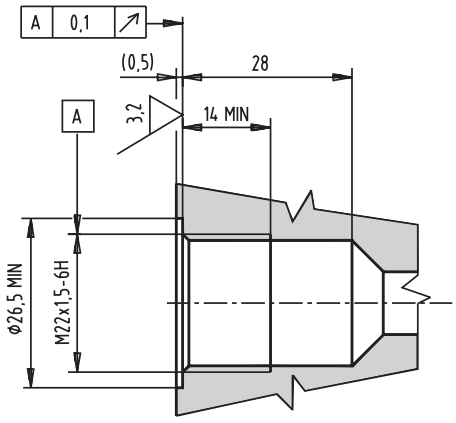


VSK4-M4-x



Controlled flow

Cavity



Caution!

- The packing foil is recyclable.
- The technical information regarding the product presented in this catalogue is for descriptive purposes only. It should not be construed in any case as a guaranteed representation of the product properties in the sense of the law.

ARGO-HYTOS s.r.o. CZ - 543 15 Vrchlabí
Tel.: +420-499-403111, Fax: +420-499-403421
E-mail: sales.cz@argo-hytos.com
www.argo-hytos.com