

Operating Instructions
for
Flow meter for Very Low Flows

Model: KSV



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2. Note

Please read these operating instructions before unpacking and putting the unit into operation. Follow the instructions precisely as described herein.

The instruction manuals on our website www.kobold.com are always for currently manufactured version of our products. Due to technical changes, the instruction manuals available online may not always correspond to the product version you have purchased. If you need an instruction manual that corresponds to the purchased product version, you can request it from us free of charge by email (info.de@kobold.com) in PDF format, specifying the relevant invoice number and serial number. If you wish, the operating instructions can also be sent to you by post in paper form against an applicable postage fee.

The devices are only to be used, maintained and serviced by persons familiar with these operating instructions and in accordance with local regulations applying to Health & Safety and prevention of accidents.

When used in machines, the measuring unit should be used only when the machines fulfil the EC-machine guidelines.

as per PED 2014/68/EU

In acc. with Article 4 Paragraph (3), "Sound Engineering Practice", of the PED 2014/68/EU no CE mark.

Diagram 8, Pipe, Group 1 dangerous fluids

3. Instrument Inspection

Instruments are inspected before shipping and sent out in perfect condition.

Should damage to a device be visible, we recommend a thorough inspection of the delivery packaging. In case of damage, please inform your parcel service / forwarding agent immediately, since they are responsible for damages during transit.

Scope of delivery:

The standard delivery includes:

- Flow Meter for very low flows model: KSV

4. Regulation Use

Any use of the Flow Meter, model: KSV, which exceeds the manufacturer's specifications, may invalidate its warranty. Therefore, any resulting damage is not the responsibility of the manufacturer. The user assumes all risk for such usage.

5. Operating Principle

The KSV flow meter for liquids or air operates on the suspended float principle. The direction of flow is from bottom to top, and the installation position is vertical. The indication point is the upper edge of the ball. The device has been designed as a simple and thus economical measuring system. The optional needle valve allows economical control. The device has been designed for panel mounting.

6. Mechanical Connection

Before Installation:

- Remove all transportation safety locks and ensure that no packing material remains within the unit.
- Be sure that the maximum allowable operating pressure and temperature is not exceeded (see Technical Data).
- Install the flow meter in the piping system, making certain the instrument is under no mechanical stress/tension (install support bracing if necessary).
- Protect the measuring tube from external damage.
- Avoid pressure peaks in the measuring tube, e.g. from sudden surges or stoppage of flow.
- If possible, immediately after making mechanical connections, check whether the connections are properly sealed with no evidence of leakage.



Detailed information regarding installation of float flow meters is available in VDI/VDE guidelines 3513.



Warning! During measuring range excesses of more than 20 % is to be counted on bearing damages and substantial measuring errors.

7. Technical Information

Connection:	1/8" NPT female Option: hose connector, Ø 8 mm, polyamide straight version (order no. ...G) angle version (order no. ...W) plastic compression fitting (order no. ...K)
Inlet & outlet:	horizontal
Measuring accuracy:	± 6 % of full scale value
Repeatability:	1 % of full scale value
Operating pressure:	max. 6.0 bar (device is not suitable for vacuum pressure)
Operating temperature:	polysulfone: - 20 °C...+ 120 °C

Material combinations

	Housing	Connection	O-rings
III	Polysulfone	Brass, nickel-plated	NBR
IV	Polysulfone	St. steel, 1.4305	FPM

8. Order Codes

Order details (Example: **KSV 1404 L**, material combination IV (PSU, VA) with control valve. Meas. range 50 – 150 NI/h air)

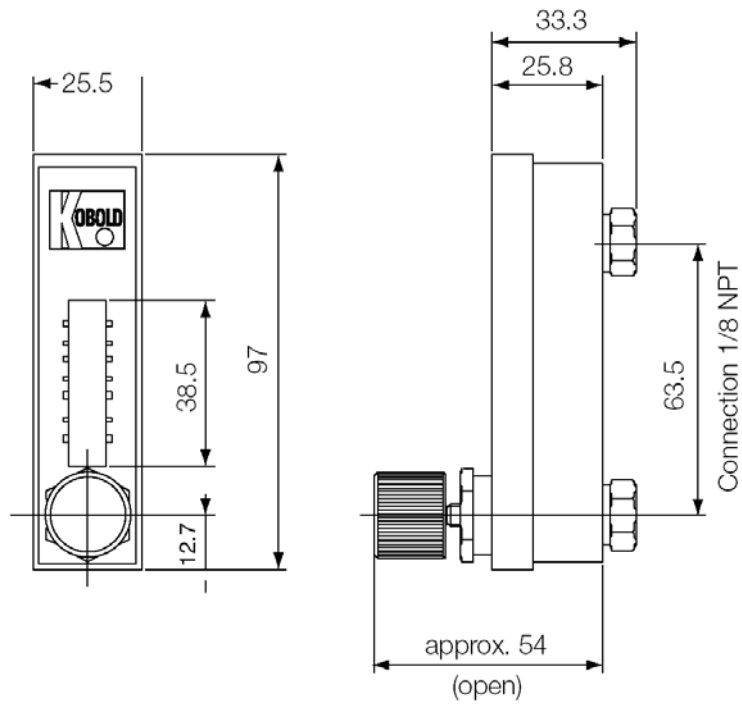
Water L/h	Float	with control valve material combination		without control valve material combination		Air (Add suffix “..L” to code) NI/h*
		III	IV	III	IV	
0.25-1.5	Glass	KSV 1301	KSV 1401	KSV 2301	KSV 2401	20-80
1-4	St. steel	KSV 1304	KSV 1404	KSV 2304	KSV 2404	50-150
0.5-6	Glass	KSV 1306	KSV 1406	KSV 2306	KSV 2406	50-300
2.5-15	St. steel	KSV 1316	KSV 1416	KSV 2316	KSV 2416	50-500
5-30	Titanium	KSV 1335	KSV 1435	KSV 2335	KSV 2435	0.35-1.5 Nm ³ /h
10-80	Hard metal	KSV 1380	KSV 1480	KSV 2380	KSV 2480	0.5-2.4 Nm ³ /h

Option: hose connector, straight version item code. Suffix G / angle version item code.

Suffix W plastic coupling for PE and PP (polypropylene) piping ND 6 mm with box nut Suffix K.

*At 1.2 bar abs.; 20°C.

9. Dimensions



Panel cut-out: $93 + 0.5 \text{ mm} \times 23 + 0.5 \text{ mm}$

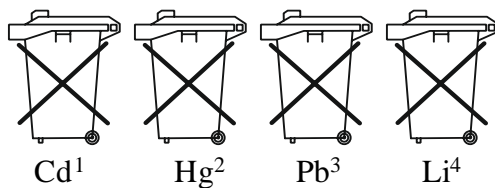
10. Disposal

Note!

- Avoid environmental damage caused by media-contaminated parts
- Dispose of the device and packaging in an environmentally friendly manner
- Comply with applicable national and international disposal regulations and environmental regulations.

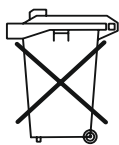
Batteries

Batteries containing pollutants are marked with a sign consisting of a crossed-out garbage can and the chemical symbol (Cd, Hg, Li or Pb) of the heavy metal that is decisive for the classification as containing pollutants:



1. „Cd" stands for cadmium
2. „Hg" stands for mercury
3. „Pb" stands for lead
4. „Li" stands for lithium

Electrical and electronic equipment



11. EU Declaration of Conformance

We, KOBOLD Messring GmbH, Hofheim-Ts, Germany, declare under our sole responsibility that the product:

Flowmeter for very Low Flows model: KSV -...

to which this declaration relates is in conformity with the standards noted below:

DIN EN IEC 63000:2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

Also, the following EC guidelines are fulfilled:


2011/65/EU
2015/863/EU

RoHS (category 9)
Delegated Directive (RoHS III)



Hofheim, 14 Jan. 2021

H. Peters
General Manager



M. Wenzel
Proxy Holder

12. UK Declaration of Conformity

We, KOBOLD Messring GmbH, Hofheim-Ts, Germany, declare under our sole responsibility that the product:

Flowmeter for very Low Flows model: KSV -...

to which this declaration relates is in conformity with the standards noted below:

BS EN IEC 63000:2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.

Also, the following UK guidelines are fulfilled:

S.I. 2012/3032 The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012



H. Peters
General Manager



M. Wenzel
Proxy Holder

Hofheim, 14 Jan. 2021