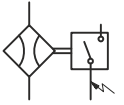




## Volume flow indicator KUI-A01

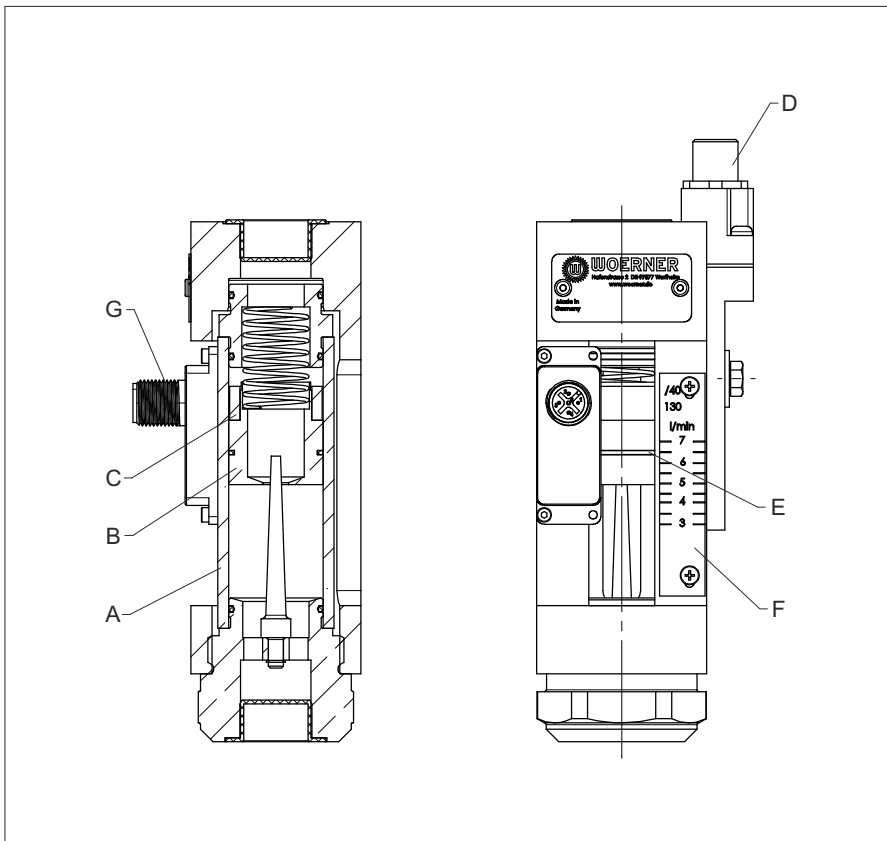


Volumetric flow meter suitable for pipe mounting

### Application:

For oil circulation systems

- **Optical and electrical monitoring of flow**
- **A variety of control elements permit target volume flow rates with diverse ranges of tolerance to be electrically monitored**
- **Control elements optionally with function display (cable socket with LED)**



### Construction and function:

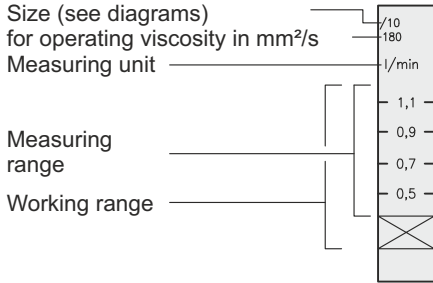
A float **B** with screen hole moves in a cylindrical viewing tube **A**. When flow through from bottom to top, the float **B** adjusts itself to a certain height and visually shows the volume flow by means of a ring mark **E** available on the scale **F**. The control element **D** or **G** can monitor the float body's position electrically.

### Note to functional drawing:

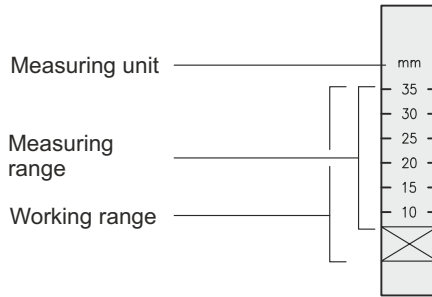
- A = Cylindrical viewing tube
- B = Float
- C = Magnet
- D = Control element
- E = Ring mark
- F = Scale
- G = Analog transmitter



### Display scale (A) (B) (C)



### Display scale (M)



### Technical data:

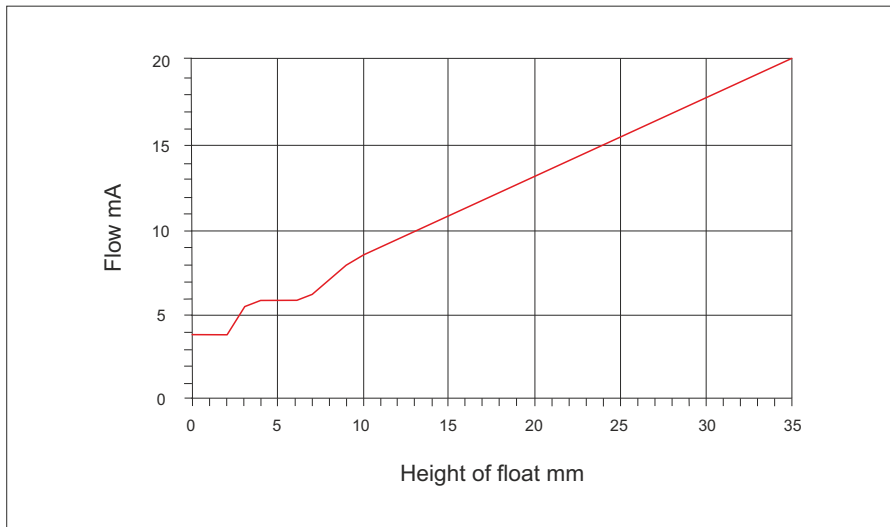
Operating pressure:	max. 16 bar
Temperature range:	-10 ... +90 °C
Mounting position:	vertical ±5°
Materials:	Al and CuZn
Viewing tube:	Glass
Gasket material:	FPM

Within the working range the float with its ring mark can move.

The volume flow indicator should be chosen so that during normal operation the float with its ring mark will remain within the measuring range (accuracy of indication).

Special scales available upon request (e. g. measuring unit pt/min)

### Diagram



### Electrical monitoring with analog transmitter ("T")

#### General:

The float position can be monitored electrically. The float is fitted with a magnet. The magnetic field of the solenoid excites the analog transmitter, which is built-in the control element, but apart from the oil flow.

Varying the flow rate in the KUI, the current in the analogue output changes as well according to the height position of the float (see diagram).

#### Electrical data:

Power supply:	max. 30 VDC
Power consumption:	<1 W
Type of protection:	DIN EN 60529 IP67
Temperature range:	-20 ... +70 °C
Electr. connection:	Plug M12x1, 5-pin
Material:	Aluminium, blue anodized
Weight:	0,015 kg

- Subject to modifications -



- Subject to modifications -

MX Medium switching band	OFF	Float rising	
	ON	Float falling	
	ON	Float rising	
	OFF	Float falling	
LX Long switching band	OFF	Float rising	
	ON	Float falling	
	ON	Float rising	
	OFF	Float falling	
UX Ultralong switching band	no switching off towards the top:		
	ON	Float rising	
	OFF	Float falling	

### Electrical monitoring for KUI-A01

#### General:

The float position can be monitored electrically.

The float is fitted with a magnet. A reed switch, which has been built into the control element, outside the oil flow, is activated by the magnet. The control element can be adjusted vertically to suit the flow.

The switching point has been indicated on the face of the control element. When the float is approaching the switching point either rising or falling the reed switch contact closes at the moment the ring indicator on the float is in line with the inner mark. The contact opens again as soon as the float has moved past the indicated faint mark. The hysteresis between switch-on and switch-off point is about 1,3 mm.

The switching status of the version with LED is indicated by an LED in the cable box.

#### Switching band:

The contact closes when the float with its ring indicator passes the inner mark on the control element either falling or rising.

The contact opens again when the float passes the outer mark either rising or falling. Referring to the length of the switching band there are three different versions of control elements available.

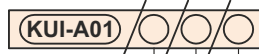
#### Control element fastening:

The base body is provided with two fastening threads. In delivery condition, the control element is mounted in the upper fastening thread. The lower fastening thread should only be used in case of special applications, e. g. when a permanent switch-on function in the lower float end position is required.

Electrical data:		without LED MX / LX / UX	with LED MBX / LBX / UBX
Switching surge:	max.	130 VUC	30 VDC
Switching current:	max.	0,5 A	
Switching capacity:	max.	10 W/VA	
Protection type:		DIN EN 60529 IP65	
Temperature range:		0 ... 90 °C	
Electr. connection:		Plug M12x1	
Material:		Polypropylene	
Weight:		0,050 kg	
Wiring diagram:			



**Order designation:**



Display scale	Size	electrical monitoring		
for operating viscosity 130 mm <sup>2</sup> /s (A)	Display range see diagrams	without LED indication	medium (MX)	
for operating viscosity 46 mm <sup>2</sup> /s (B)			long (LX)	
for operating viscosity 180 mm <sup>2</sup> /s (C)			ultralong (UX)	
		with LED	medium (MBX)	
			long (LBX)	
			ultralong (UBX)	
Scale with spacing in mm (M)		without	(O)	
without (e. g. for special scale) (O)			with analog transmitter (T)	

**Order example:**

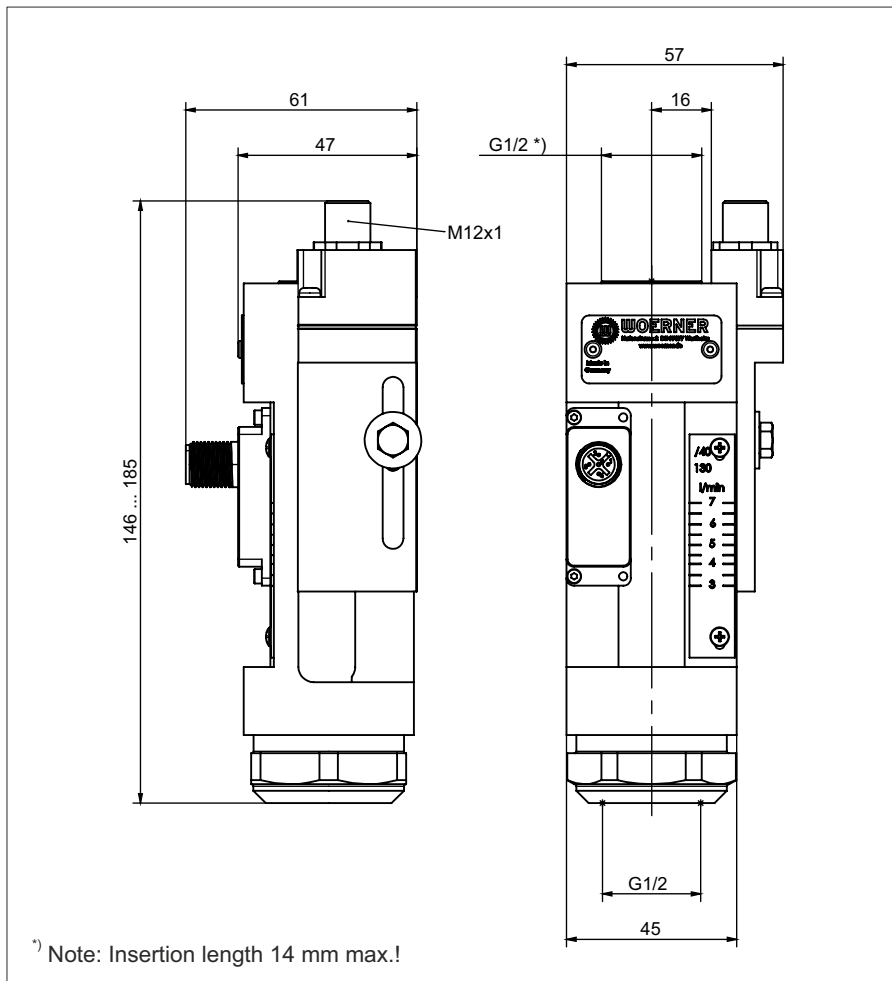
Volume flow indicator with display scale for oil with 130 mm<sup>2</sup>/s operating viscosity

Indication range size (10)

Electrical monitoring with ultralong switching range

**Order designation:**

**KUI-A01 / A / 10 / UX**



Cable socket M12 with screw terminals in the scope of delivery

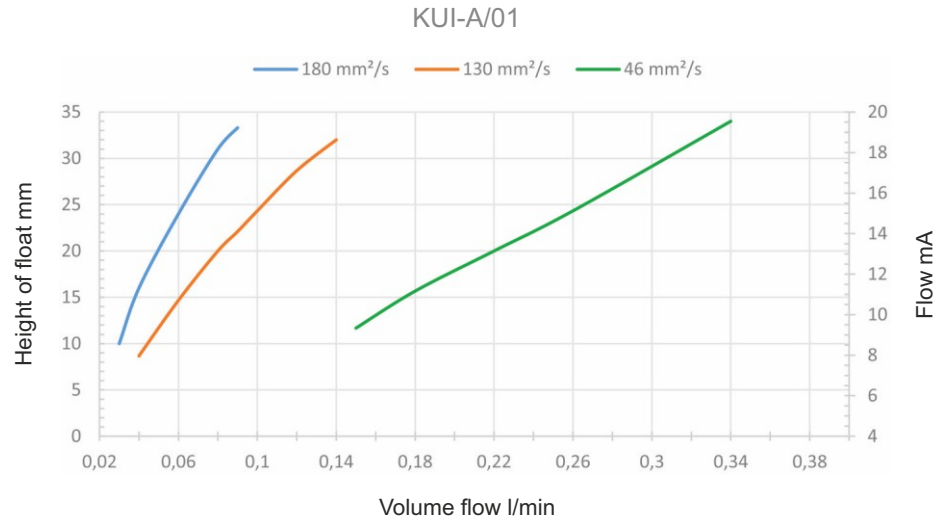
- Subject to modifications -



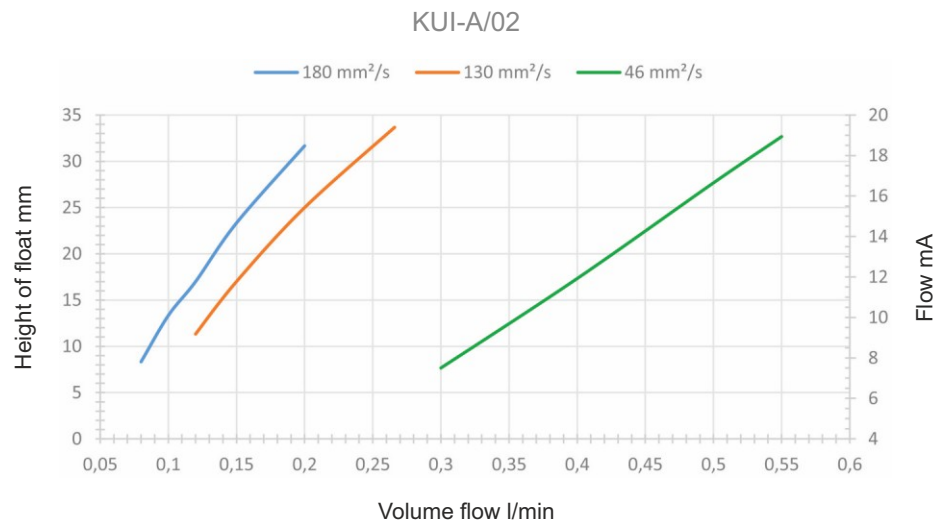
Diagrams to KUI-A01

Indication dependent on the viscosity of the medium

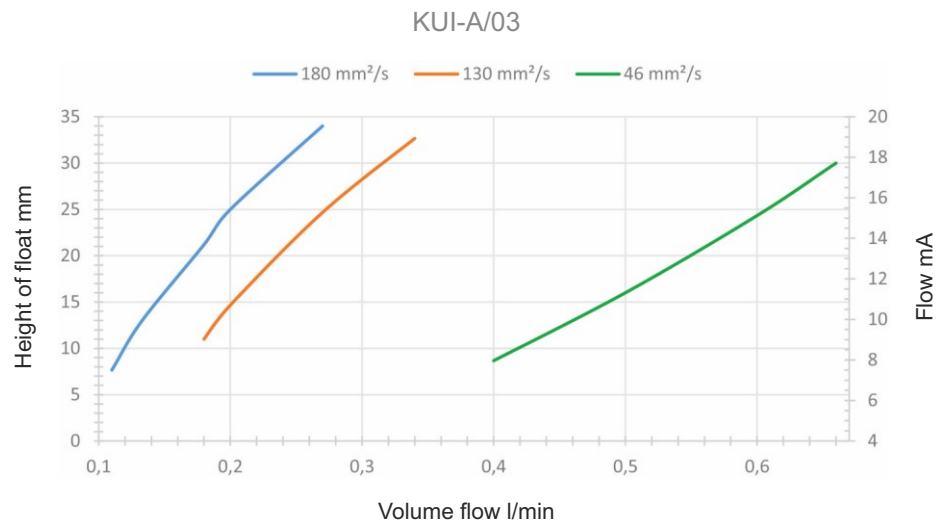
Size (01)



Size (02)



Size (03)

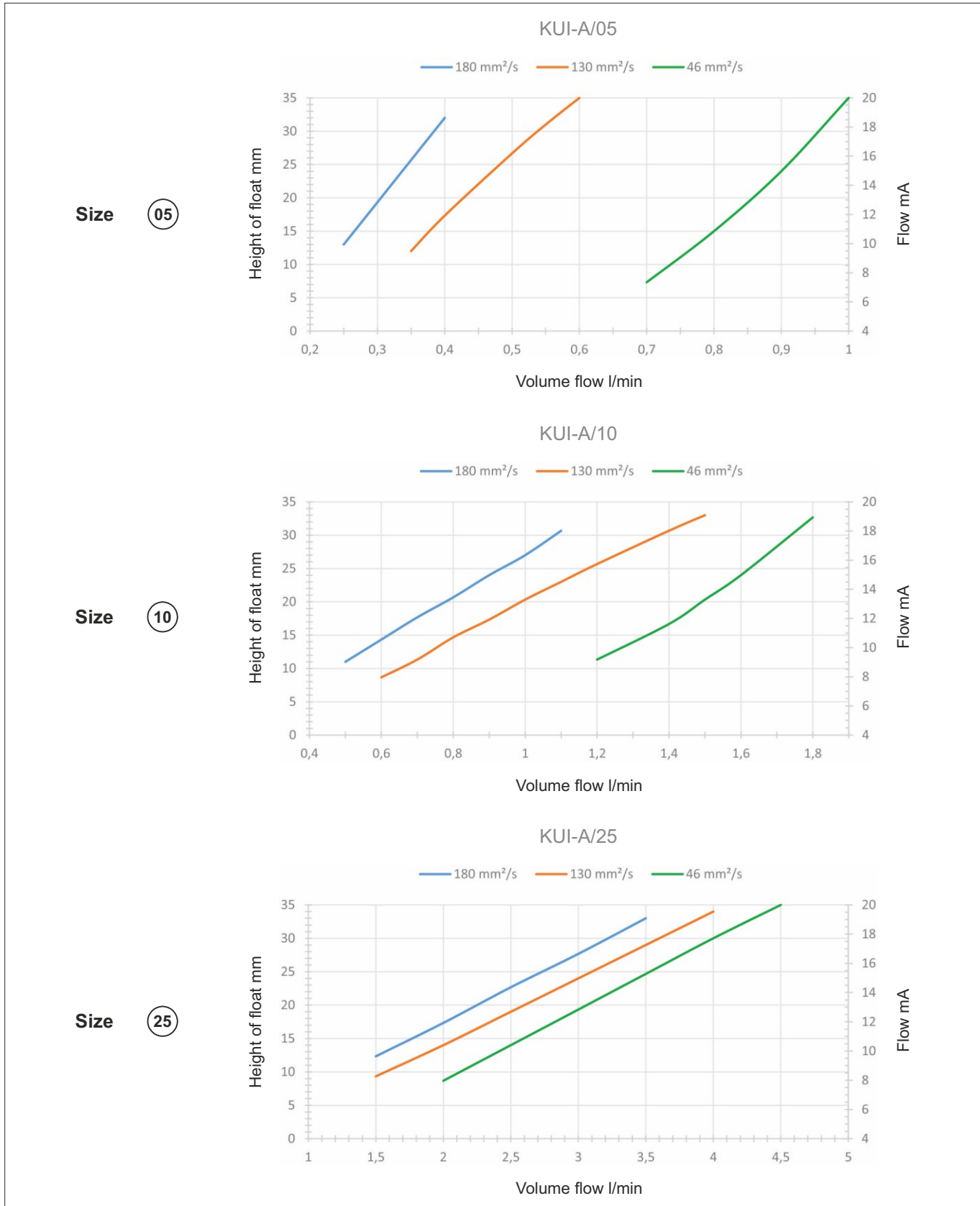


- Subject to modifications -



Diagrams to KUI-A01

Indication dependent on the viscosity of the medium



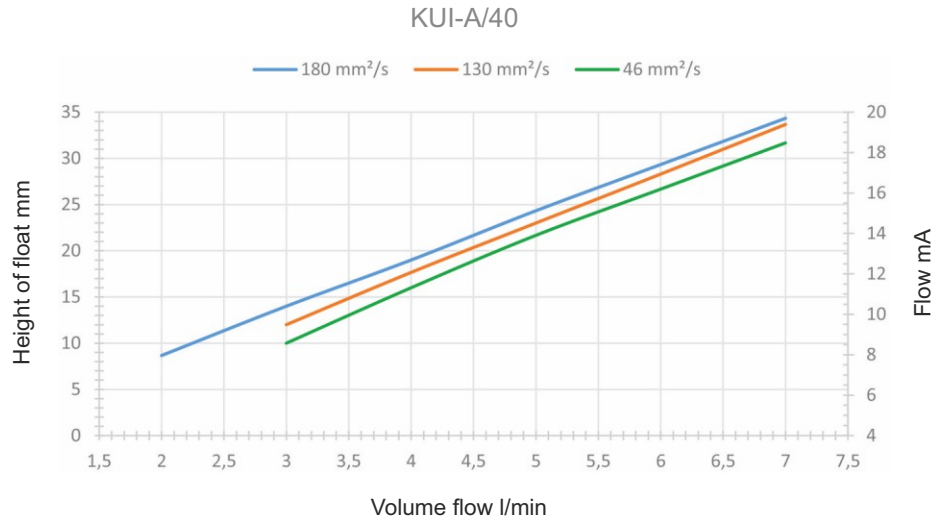
- Subject to modifications -



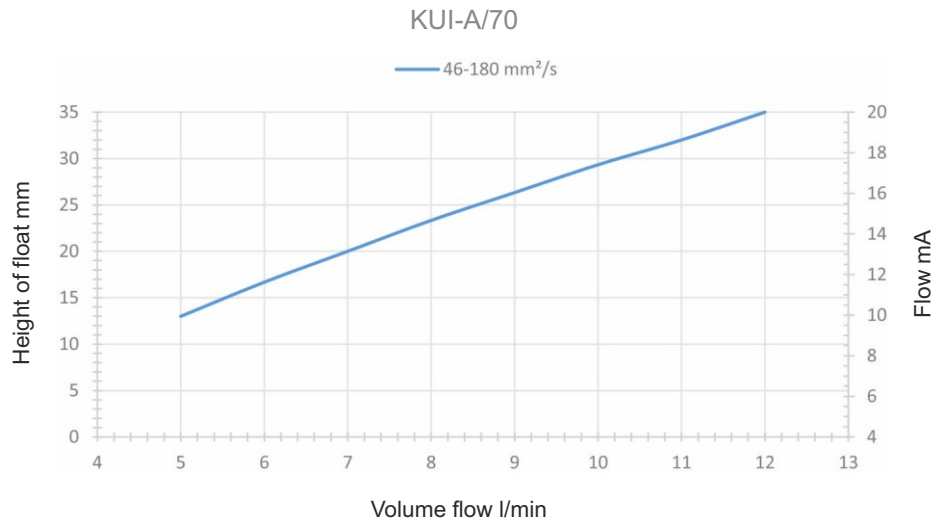
Diagrams to KUI-A01

Indication dependent on the viscosity of the medium

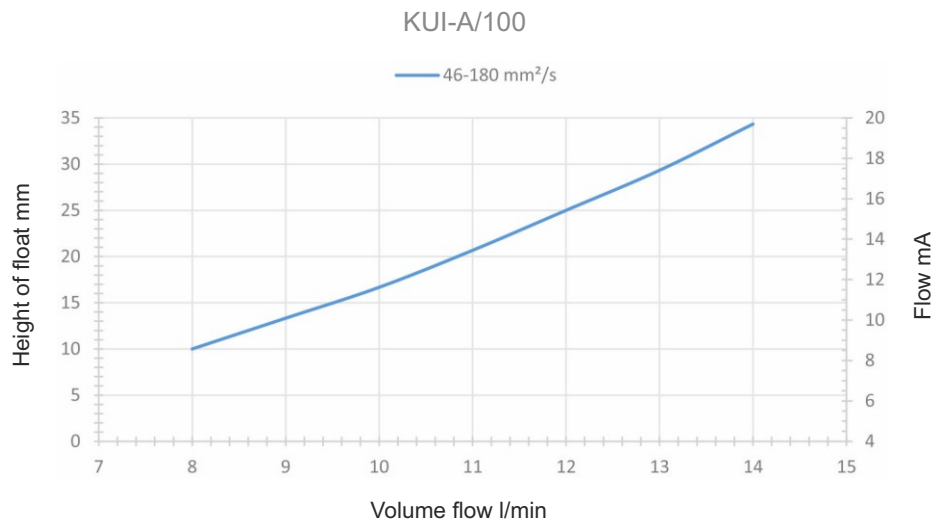
Size (40)



Size (70)



Size (100)



- Subject to modifications -

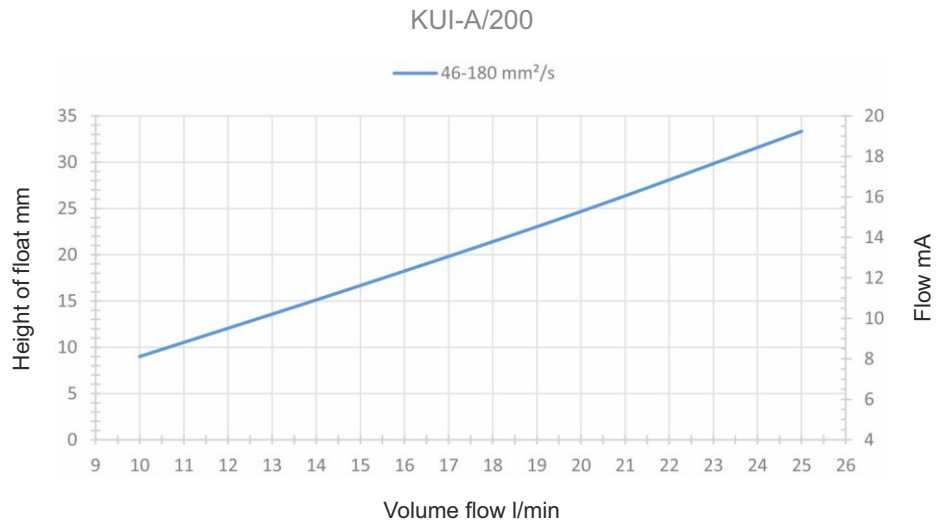


Diagrams to KUI-A01

Indication dependent on the viscosity of the medium

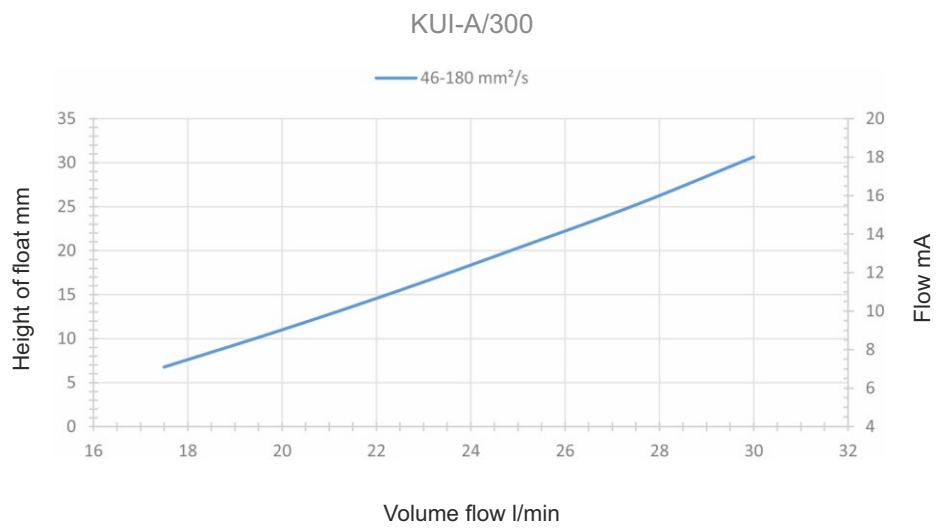
Size

200



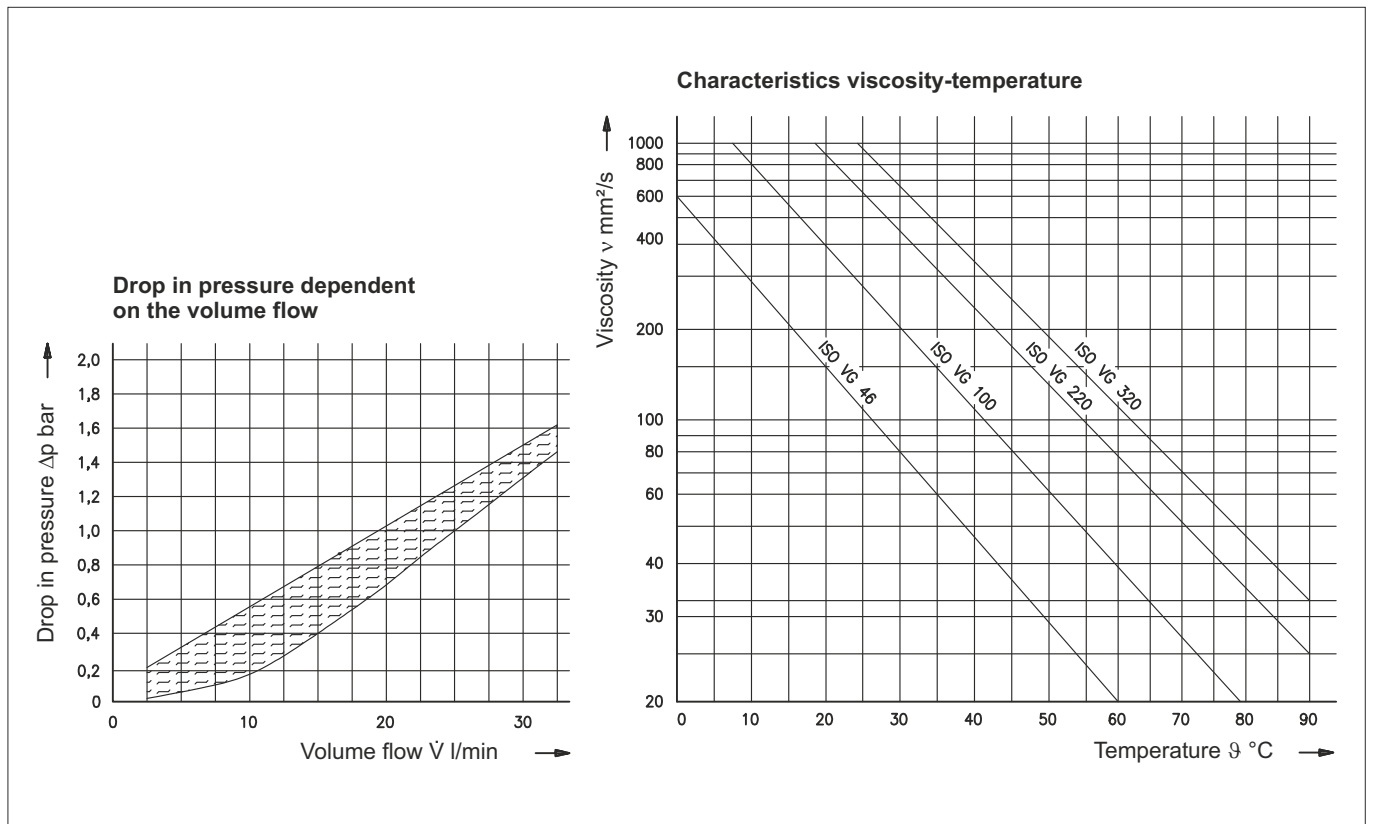
Size

300



- Subject to modifications -





- Subject to modifications -

Technical documents also valid for this product:

E9522 EN Spare parts KUI-A01

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