



# KOBOVAR

## Viscosity Compensated Flowmeter/Monitor



measuring  
•  
monitoring  
•  
analysing

### VKA



- Measuring range:  
0.1 - 0.4 ... 30 - 100 l/min oil
- Viscosity range:  
30 ... 540 cSt
- $p_{max}$ : 250 bar;  $t_{max}$ : 100 °C
- Accuracy:  $\pm 4$  % of full scale
- Material: brass
- Connection:  
G 1/4 ... G 1 female,  
1/2" NPT, 3/4" NPT

S2



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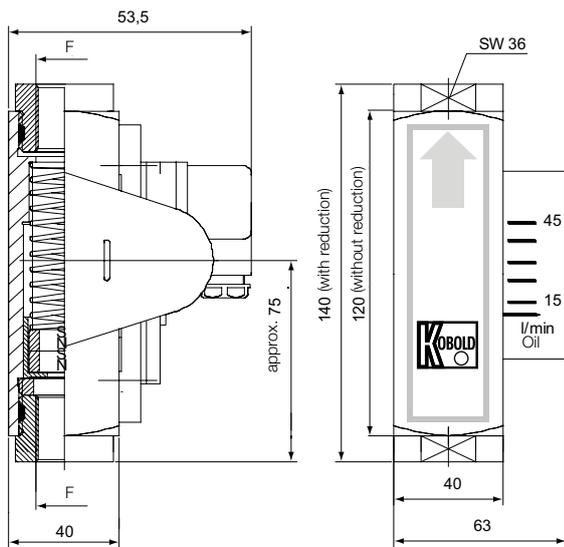
**Description**

KOBOVAR flowmeters /monitors of model VKA have been developed for measuring and monitoring of viscous flow. They employ a special float principle, with cylindrical measurement pipe, orifice and spring-loaded suspended float. This ensures an on-going viscous compensation within 30 - 540 cSt. All of these units work independent of position. The recommended position, however, is vertical, with flowdirection from below to upwards.

These units are supplied in following versions:

- VKA-1... Flow monitor with 1 contact
- VKA-2... Flowmeter with Side-display; without contact
- VKA-3... Flowmeter/monitor with side-display, and contact

**Dimensions [mm]**



**Technical Details**

- Housing: Brass, Ms 58, nickel-plated
- Connections: Brass, Ms 58, nickel-plated
- Float: Brass, Ms 58
- Orifice: Stainless steel 1.4310
- Spring: Stainless steel 1.4310
- Magnet: Ceramic-oxide
- Sealing: NBR (for 1/4" ... 3/4")
- Max. temperature: Ambient: -25 ... +75 °C  
Medium: -25 ... +100 °C
- Max. pressure: PN 250
- Mounting position: any
- Inlet/outlet path: not necessary
- Contact type: 1 N/O contact or  
1 change-over contact, adjustable from 10-90% of full scale
- Hysteresis: approx. 3.5 mm float movement
- Elect. Connection: Plug DIN 43 650
- Switching Power: max. 240V<sub>AC</sub>/max. 100VA/max. 1,5A
- Accuracy: ± 4 % of full scale (at a viscosity of 105 cSt)
- Measurement error w.r.t. variation in viscosity: Changes in viscosity within 30... 540 cSt cause additional deviation. maximum ±4 % of full scale
- Repeatability: ≤1 %
- Viscosity Range: 30 ... 540 cSt

**Applications**

- Lubrication circuits
- Paper manufacturing
- Machine-tools
- Hydraulics
- Extraction machines
- Printing machines

**Order Details** (Example: VKA-1101 R0 R15 L)

| Measuring range l/min Oil* | Flow monitor | Flowmeter with side-display | Flowmeter/monitor | Contact  | Connection female                 | Mounting position  |
|----------------------------|--------------|-----------------------------|-------------------|--|-----------------------------------|--|
| 0.1 - 0.4                  | VKA-1101...  | VKA-2101...                 | VKA-3101...       | ..00.. = without contact (only VKA-2)<br>..R0.. = 1 contact<br>..U0.. = 1 changeover contact | ..R08 = G 1/4 (up to VKA-..02)    | ..B = from bottom to the top<br>..L = from left to right<br>..R = from right to left<br>..T = from top to bottom |
| 0.35 - 1.25                | VKA-1102...  | VKA-2102...                 | VKA-3102...       |  | ..R10 = G 3/8 (up to VKA-..04)    |  |
| 1.0 - 3.5                  | VKA-1103...  | VKA-2103...                 | VKA-3103...       |  | ..R15 = G 1/2 (up to VKA-..06)    |  |
| 2 - 6                      | VKA-1104...  | VKA-2104...                 | VKA-3104...       |  | ..N15 = 1/2" NPT (up to VKA-..06) |  |
| 5 - 16                     | VKA-1105...  | VKA-2105...                 | VKA-3105...       |  | ..R20 = G 3/4 (up to VKA-..07)    |  |
| 10 - 32                    | VKA-1106...  | VKA-2106...                 | VKA-3106...       |  | ..N20 = 3/4" NPT (up to VKA-..07) |  |
| 30 - 100                   | VKA-1108...  | VKA-2108...                 | VKA-3108...       |  | ..R25 = G 1                       |  |

\* Measuring ranges in l/min water on request

For further options, please refer to a similar product in our catalogue: model VKM.