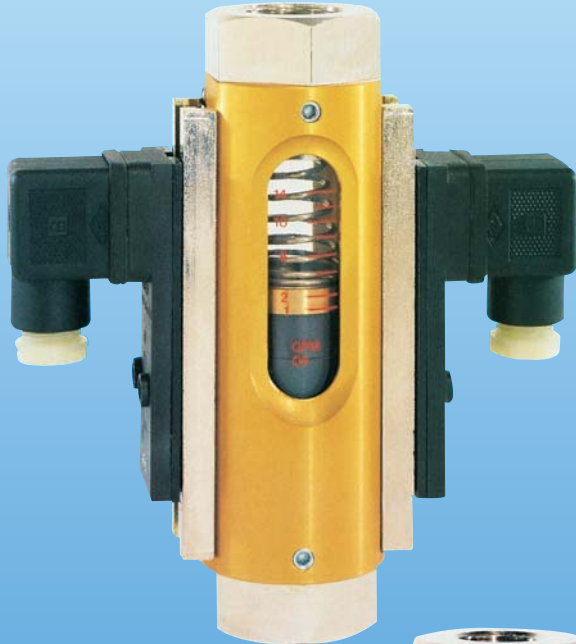


# VKG VISCOSITY COMPENSATED FLOWMETER AND SWITCH



Flow  
Pressure  
Level  
Temperature  
measurement  
monitoring  
control



- $\pm 5\%$  Full Scale Accuracy
- For High and Low Viscosity
- Viscosity-Compensated up to  $\Delta v = 540$  cSt (No Scale Recalibration Necessary)
- Density-Compensated up to  $\Delta p = 30$  lb/ft<sup>3</sup>
- Direct Reading Scales for Oil
- Installable in any Position
- Vertical Connections for Easy Installation
- Max. Pressure 175 PSI
- Brass or Stainless Steel Construction Available



S2



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Model:  
VKG

### Specifications

- Accuracy:** ±5% full scale
- Repeatability:** ±1% full scale
- Flow Media:** oil, water and other liquids
- Mounting:** universal, without recalibration
- Measuring Principle:** with float, spring-loaded
- Mode of Operation:** dependent on flow not pressure
- Max. Temperature:** 240 °F
- Max. Pressure:** 175 PSI
- Viscosity-Compensated:** up to  $\Delta v = 540$  cSt with same scale
- Density-Compensated:** up to  $\Delta \rho = 30$  lbs/ft<sup>3</sup> with same scale
- Housing:** Aluminum-anodized
- Glass:** Borosilicate
- Fittings:** Nickel-plated Brass or SS 304
- Float:** Nickel-plated Brass or SS 304
- Orifice:** SS 301
- Spring:** SS 301
- Seals:** Buna-N for Brass units, Viton for SS units
- Electr. Switch Housing:** Plastic
- Mode of Electr. Protection:** NEMA 4
- Reed Contact:**
  - N/O: AC: 1.5 A, 240 VAC, 50 VA
  - DC: 1.0 A, 200 VAC, 50 W
  - SPDT: AC: 0.8 A, 240 VAC, 30 VA



VKG 6105

KOBOLD flowmeter and switches type VKG 6000, VKG 7000, and VKG 8000 fill an important gap in the high viscosity media measurement field. Using KOBOLD's patented viscosity compensation system, these instruments are insensitive to viscosity and density changes during operation. This development in flow and measurement control technology has resulted in an extremely versatile instrument usable in almost all possible applications.



VKG 7107



VKG 8109

Order Numbers for standard types								
Range oil  GPM	Stand. conn.  NPT	Press. drop max.  PSI	Flowmeter oil scale		Flowmeter and switch 1 N/O contact, oil scale		Flowmeter and switch 2 N/O contacts, oil scale	
			Material		Material		Material	
			Brass	SS	Brass	SS	Brass	SS
0.03– 0.12	1/4"	13.1	VKG 6101	VKG 6201	VKG 7101	VKG 7201	VKG 8101	VKG 8201
0.05– 0.3	1/4"	14.5	VKG 6102	VKG 6202	VKG 7102	VKG 7202	VKG 8102	VKG 8202
0.1 – 0.5	1/4"	14.5	VKG 6103	VKG 6203	VKG 7103	VKG 7203	VKG 8103	VKG 8203
0.2 – 0.9	1/4"	13.1	VKG 6104	VKG 6204	VKG 7104	VKG 7204	VKG 8104	VKG 8204
0.5 – 2.0	1/4"	14.5	VKG 6105	VKG 6205	VKG 7105	VKG 7205	VKG 8105	VKG 8205
1 – 4	1/2"	14.5	VKG 6106	VKG 6206	VKG 7106	VKG 7206	VKG 8106	VKG 8206
1 – 5	1/2"	14.5	VKG 6107	VKG 6207	VKG 7107	VKG 7207	VKG 8107	VKG 8207
0.5 –12	3/4"	5.8	VKG 6108	VKG 6208	VKG 7108	VKG 7208	VKG 8108	VKG 8208
1 –14	3/4"	14.5	VKG 6109	VKG 6209	VKG 7109	VKG 7209	VKG 8109	VKG 8209
0.5 –18	3/4"	16.0	VKG 6110	VKG 6210	VKG 7110	VKG 7210	VKG 8110	VKG 8210
2 –21	1"	14.5	VKG 6111	VKG 6211	VKG 7111	VKG 7211	VKG 8111	VKG 8211

Options (add suffix to Order Number)	
Special connection NPT  Suffix "B"	Special contact  Suffix "U"
–	SPDT contact
1/2"	
1/2"	
1/2"	
1/2"	
3/4"	
3/4"	
1"	
1"	
1"	
–	



S2

KOBOLD VKG flowmeters and switches with pointer indicator fill an important gap in the high viscosity media measuring field. Using KOBOLD's patented viscosity compensation system, these instruments are insensitive to viscosity and density changes during operation. This development in flow and measurement control technology has resulted in an extremely versatile instrument, usable in almost all possible applications.

**Specifications**

- Accuracy:** ±5% full scale
- Repeatability:** ±1% full scale
- Flow Media:** oil, water and other liquids
- Mounting:** universal, without recalibration
- Measuring Principle:** with float, spring-loaded
- Max. Temperature:** 240°F
- Max. Pressure:** 175 PSI
- Viscosity-compensated:**  
up to  $\Delta v=540$  cSt with same scale
- Density-Compensated:**  
up to  $\Delta \rho=30$  lbs/ft<sup>3</sup> with same scale
- Housing:** Anodized Aluminum
- Glass:** Borosilicate

- Fittings:** Nickel-plated Brass or SS 304
- Float:** Nickel-plated Brass or SS 304
- Orifice:** SS 301
- Seals:** Buna-N for Brass units, Viton for SS units
- Electr. Switch Housing:** Plastic  
Nickel-plated Brass, Polycarbonate
- Mode of Electr. Protection:** NEMA 4
- Reed Contact:**  
N/O: AC: 1.5 A, 240 VAC, 50 VA  
DC: 1.0 A, 200 VDC, 50 W  
SPDT: AC: 0.8 A, 240 VAC, 30 VA

Order Numbers for standard types				
Range oil GPM	Stand. conn. NPT	Press. drop max PSI	Flowmeter with additional pointer indicator, oil scale	
			Material Brass	Material SS
0.03- 0.12	1/4"	13.1	VKG 9101	VKG 9201
0.05- 0.3	1/4"	14.5	VKG 9102	VKG 9202
0.1 - 0.5	1/4"	14.5	VKG 9103	VKG 9203
0.2 - 0.9	1/4"	13.1	VKG 9104	VKG 9204
0.5 - 2.0	1/4"	14.5	VKG 9105	VKG 9205
1 - 4	1/2"	14.5	VKG 9106	VKG 9206
1 - 5	1/2"	14.5	VKG 9107	VKG 9207
0.5 -12	3/4"	5.8	VKG 9108	VKG 9208
1 -14	3/4"	14.5	VKG 9109	VKG 9209
0.5 -18	3/4"	16.0	VKG 9110	VKG 9210
2 -21	1"	14.5	VKG 9111	VKG 9211

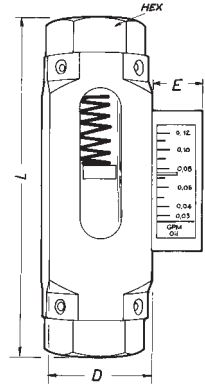
Options (add suffix to Order Number)	
Special connection NPT Suffix "B"	N/O contact Suffix "R"
-	SPDT contact Suffix "U"
1/2"	
1/2"	
1/2"	
1/2"	
3/4"	
3/4"	
1"	
1"	
-	



**VISCOSITY COMPENSATED FLOWMETER WITH ADDITIONAL POINTER INDICATOR**

Order Number (Brass)	Order Number (SS)	HEXAGONAL (Standard)	D	Dimensions			E	Weight approx. lbs.
				Suffix "B"	Conn.	Suffix "B"		
VKG 9101 to VKG 9105	VKG 9201 to VKG 9205	1.61"	1.81"x1.81"	5.63"	5.63"	2.09"	0.87"	2.43
VKG 9106 to VKG 9107	VKG 9206 to VKG 9207	1.61"	1.81"x1.81"	5.63"	6.02"	2.09"	0.87"	2.20
VKG 9108 to VKG 9111	VKG 9208 to VKG 9211	1.61"	1.81"x1.81"	6.02"	6.02"	2.09"	0.87"	2.20

U.S. Patent Number. 4,573,361

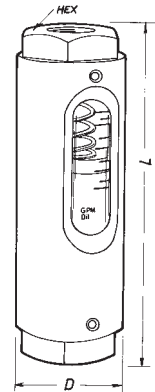


VKG-9...

**VISCOSITY COMPENSATED FLOWMETER**

Order Number (Brass)	Order Number (SS)	HEXAGONAL	D	Dimensions			Weight approx. lbs.	
				Standard	Suffix "B"	B	Standard	Special
VKG 6101 to VKG 6105	VKG 6201 to VKG 6205	1.61"	1.89"	5.63"	5.63"	-	1.98	1.76
VKG 6106 to VKG 6107	VKG 6206 to VKG 6207	1.61"	1.89"	5.63"	6.02"	-	1.76	1.76
VKG 6108 to VKG 6111	VKG 6208 to VKG 6211	1.61"	1.89"	6.02"	6.02"	-	1.76"	-

U.S. Patent Number. 4,573,361

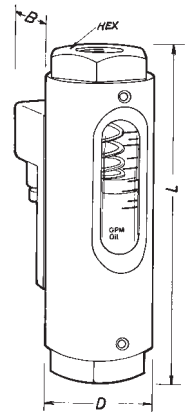


VKG-6...

**VISCOSITY COMPENSATED FLOWMETER AND SWITCH WITH N/O CONTACT**

Order Number (Brass)	Order Number (SS)	HEXAGONAL	D	Dimensions			Weight approx. lbs.	
				Standard	Suffix "B"	B	Standard	Special
VKG 7101 to VKG 7105	VKG 7201 to VKG 7205	1.89"	1.61"	5.63"	5.63"	2.09"	2.20	1.98
VKG 7106 to VKG 7107	VKG 7206 to VKG 7207	1.89"	1.61"	5.63"	6.02"	2.09"	1.98	1.76
VKG 7108 to VKG 7111	VKG 7208 to VKG 7211	1.89"	1.61"	6.02"	6.02"	2.09"	1.98	1.76

U.S. Patent Number. 4,573,361

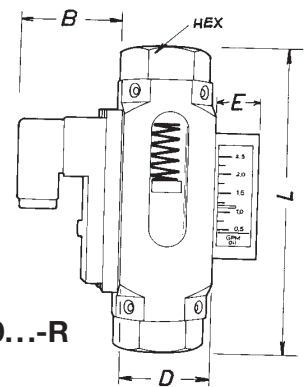


VKG-7...

**VISCOSITY COMPENSATED FLOWMETER AND SWITCH WITH 2 N/O CONTACTS**

Order Number (Brass)	Order Number (SS)	HEXAGONAL	D	Dimensions			B	Weight approx. lbs.
				Standard	Suffix "B"	Suffix "B"		
VKG 8101 to VKG 8105	VKG 8201 to VKG 8205	1.61"	1.89"	5.63"	5.63"	2.09"	2.65	
VKG 8106 to VKG 8107	VKG 8206 to VKG 8207	1.61"	1.89"	5.63"	6.02"	2.09"	2,65	
VKG 8108 to VKG 8111	VKG 8208 to VKG 8211	1.61"	1.89"	6.02"	6.02"	2.09"	2.43	

U.S. Patent Number. 4,573,361



VKG-9...-R