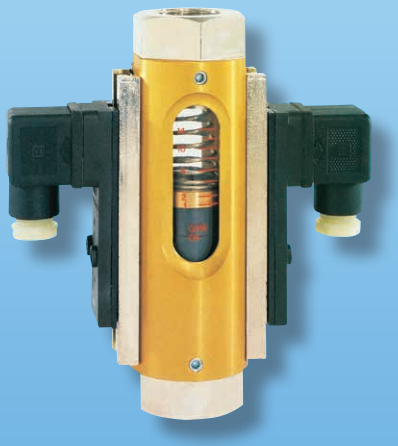
Viscosity Compensated Flowmeter and Switch

measuring • monitoring • analyzing

VKG



- ±5% Full Scale Accuracy
- For High and Low Viscosity Liquids
- Viscosity-Compensated up to Δv=540 cSt (No Scale Recalibration Necessary)
- Density-Compensated up to Δp=30 lb/ft^3
- Direct Reading Scales for Oil
- Universal Mounting Positions
- In-line Connections for Easy Installation
- Max. Pressure: 175 PSI
- Brass or Stainless Steel Construction Available

KOBOLD companies worldwide:

ARGENTINA, AUSTRALIA, AUSTRIA, BELGIUM, BULGARIA, CANADA, CHILE, CHINA, COLOMBIA, CZECH REPUBLIC, EGYPT, FRANCE, GERMANY, HUNGARY, INDIA, INDONESIA, ITALY, MALAYSIA, MEXICO, NETHERLANDS, PERU, POLAND, REPUBLIC OF KOREA, ROMANIA, SINGAPORE, SPAIN, SWITZERLAND, TAIWAN, THAILAND, TUNISIA, TURKEY, UNITED KINGDOM, USA, VIETNAM

KOBOLD Instruments, Inc.
1801 Parkway View Drive
Pittsburgh, PA 15205
Main Office:
1.800.998.1020
1.412.788.4890
info@koboldusa.com
www.koboldusa.com

05/12-13-2019

Description

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 largely insensitive to viscosity and density changes during operation. This development in flow and measurement control technology has resulted in an extremely versatile instrument for almost any application.

VKG-6105

VKG-7107

Specifications

Base Accuracy:	±5% Full Scale (Add ±5% Max. for Viscosity Changes Over a 1...540 cSt Range)
Flow Media:	Oil, Water, and Other Liquids
Mounting:	Universal, without Recalibration
Measuring Principle:	With Float, Spring Loaded
Max. Temperature:	212 °F
Max. Pressure:	175 PSI
Viscosity-Compensated:	Up to Δv = 540 cSt with Same Scale
Density-Compensated:	Up to Δp = 30 lbs/ft^3 with Same Scale
Housing:	Anodized Aluminum (non-wetted)
Glass:	Borosilicate
Fittings:	Ni-plated Brass or SS 304
Float:	Ni-plated Brass or SS 304
Orifice:	SS 301
Spring:	SS 301
Seals:	NBR for Brass Units, FKM for SS Units
Elect. Switch Housing:	Plastic
Reed Contact:	Standard: N/O, Optional: SPDT Max. 230 VDC/0.26 A/60 W 60 VDC/1 A/60 W Max. 240 VAC/0.42 A/100 W 100 VAC/1 A/100 W cCSAus Approved
Electrical Connection	
Standard:	DIN 43 650 w/Cable Gland
Optional:	DIN 43 650 w/1/2" NPT Conduit
Ingress Protection:	IP65 (Electrical Switch)

C US

Order Details (Example: **VKG-7104B)**

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		Options	
			Brass	SS	Brass	SS	Brass	SS	Spec. Conn. (NPT) Suffix "B"	
0.03...0.12	1/4"	13.1	VKG-6101	VKG-6201	VKG-7101	VKG-7201	VKG-8101	VKG-8201	-	**..C** = ½" NPT Conduit Fitting **..U** = SPDT Switch Contact **..V*** = Special Inlet Fitting for BVB Manifold Mount
0.05...0.3	1/4"	14.5	VKG-6102	VKG-6202	VKG-7102	VKG-7202	VKG-8102	VKG-8202	1/2"	
0.1...0.5	1/4"	14.5	VKG-6103	VKG-6203	VKG-7103	VKG-7203	VKG-8103	VKG-8203	1/2"	
0.2...0.9	1/4"	13.1	VKG-6104	VKG-6204	VKG-7104	VKG-7204	VKG-8104	VKG-8204	1/2"	
0.5...2.0	1/4"	14.5	VKG-6105	VKG-6205	VKG-7105	VKG-7205	VKG-8105	VKG-8205	1/2"	
1.0...4.0	1/2"	14.5	VKG-6106	VKG-6206	VKG-7106	VKG-7206	VKG-8106	VKG-8206	3/4"	
1.0...5.0	1/2"	14.5	VKG-6107	VKG-6207	VKG-7107	VKG-7207	VKG-8107	VKG-8207	3/4"	
0.5...12	3/4"	5.8	VKG-6108	VKG-6208	VKG-7108	VKG-7208	VKG-8108	VKG-8208	1"	
1.0...14	3/4"	14.5	VKG-6109	VKG-6209	VKG-7109	VKG-7209	VKG-8109	VKG-8209	1"	
0.5...18	3/4"	16.0	VKG-6110	VKG-6210	VKG-7110	VKG-7210	VKG-8110	VKG-8210	1"	
2.0...21	1"	14.5	VKG-6111	VKG-6211	VKG-7111	VKG-7211	VKG-8111	VKG-8211	-	

* Not for VKG-8000 Series

Description

KOBOLD VKG flowmeters and switches with a side mounted pointer indicator fill an important gap in the high viscosity media measuring field, especially when dark color media is to be measured. Using KOBOLD's patented viscosity compensation system, these instruments are largely insensitive to viscosity and density changes during operation. This development in flow and measurement control technology has resulted in an extremely versatile instrument for almost any application.

VKG-9101

VKG-9105 R

Specifications

Base Accuracy:	±5% Full Scale (Add ±5% Max. for Viscosity Changes Over a 1...540 cSt Range)
Flow Media:	Oil, Water, and Compatible Liquids
Mounting:	Universal, without Recalibration
Measuring Principle:	With Float, Spring Loaded
Max. Temperature:	212 °F
Max. Pressure:	175 PSI
Viscosity-Compensated:	Up to Δv = 540 cSt with Same Scale
Density-Compensated:	Up to Δp = 30 lbs/ft³ with Same Scale
Housing:	Anodized Aluminum (non-wetted)
Glass:	Borosilicate
Fittings:	Ni-plated Brass or SS 304
Float:	Ni-plated Brass or SS 304
Orifice:	SS 301
Spring:	SS 301
Seals:	NBR for Brass Units, FKM for SS Units
Elect. Switch Housing:	Plastic
Reed Contact:	Standard: N/O, Optional: SPDT Max. 230 VDC/0.26 A/60 W 60 VDC/1 A/60 W max. 240 VAC/0.42 A/100 W 100 VAC/1 A/100 W cCSAus Approved
Electrical Connection	
Standard:	DIN 43 650 w/Cable Gland
Optional:	DIN 43 650 w/1/2" NPT Conduit
Ingress Protection:	IP54 (Side Indicator) IP65 (Electrical Switch)

Order Details* (Example: **VKG-9101R**)

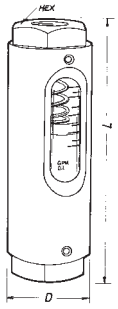
Range Oil (GPM)	Standard Connection (NPT)	Pressure Drop Max. (PSI)	Flowmeter Oil Scale		Options	
			Brass	SS	Special Connection (NPT) Suffix "B"	
0.03...0.12	1/4"	13.1	**VKG-9101**	**VKG-9201**	-	**..C** = ½" NPT Conduit Fitting
0.05...0.3	1/4"	14.5	**VKG-9102**	**VKG-9202**	1/2"	
0.1...0.5	1/4"	14.5	**VKG-9103**	**VKG-9203**	1/2"	
0.2...0.9	1/4"	13.1	**VKG-9104**	**VKG-9204**	1/2"	**..R** = N/O Switch Contact
0.5...2.0	1/4"	14.5	**VKG-9105**	**VKG-9205**	1/2"	
1.0...4.0	1/2"	14.5	**VKG-9106**	**VKG-9206**	3/4"	
1.0...5.0	1/2"	14.5	**VKG-9107**	**VKG-9207**	3/4"	**..U** = SPDT Switch Contact
0.5...12	3/4"	5.8	**VKG-9108**	**VKG-9208**	1"	
1.0...14	3/4"	14.5	**VKG-9109**	**VKG-9209**	1"	
0.5...18	3/4"	16.0	**VKG-9110**	**VKG-9210**	1"	
2.0...21	1"	14.5	**VKG-9111**	**VKG-9211**	-	

* When submitting your order, please also include the flow direction: right to left, left to right, vertical up, or vertical down.

Dimensions

Viscosity Compensated Flowmeter: VKG-6...

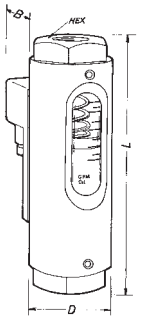
Order Number		HEX	D	L		Weight Approx. (lbs)	
Brass	SS			Standard	Suffix "B"	Standard	Special
VKG-6101 to VKG-6105	VKG-6201 to VKG-6205	1.61"	1.89"	5.63"	5.63"	1.89	1.76
VKG-6106 to VKG-6107	VKG-6206 to VKG-6207	1.61"	1.89"	5.63"	6.02"	1.76	1.76
VKG-6108 to VKG-6111	VKG-6208 to VKG-6211	1.61"	1.89"	6.02"	6.02"	1.76	-
U.S. Patent Number. 4,573,361							



VKG-6...

Viscosity Compensated Flowmeter and Switch with N/O Contact: VKG-7...

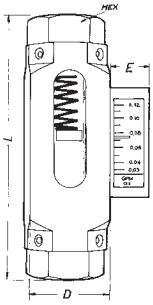
Order Number		HEX	D	L		B	Weight Approx. (lbs)	
Brass	SS			Standard	Suffix "B"		Standard	Special
VKG-7101 to VKG-7105	VKG-7201 to VKG-7205	1.89"	1.61"	5.63"	5.63"	2.09"	2.20	1.98
VKG-7106 to VKG-7107	VKG-7206 to VKG-7207	1.89"	1.61"	5.63"	6.02"	2.09"	1.98	1.76
VKG-7108 to VKG-7111	VKG-7208 to VKG-7211	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: VKG-8...

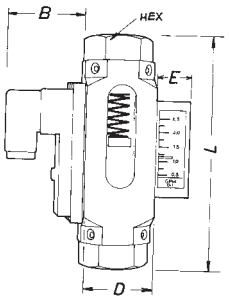
Order Number		HEX	D	L		B	Weight Approx. (lbs)
Brass	SS			Standard	Suffix "B"		
VKG-8101 to VKG-8105	VKG-8201 to VKG-8205	1.61"	1.89"	5.63"	5.63"	2.09"	2.65
VKG-8106 to VKG-8107	VKG-8206 to VKG-8207	1.61"	1.89"	5.63"	6.02"	2.09"	2.65
VKG-8108 to VKG-8111	VKG-8208 to VKG-8211	1.61"	1.89"	6.02"	6.02"	2.09"	2.43
U.S. Patent Number. 4,573,361							



VKG-9...

Viscosity Compensated Flowmeter with Additional Pointer Indicator: VKG-9...

Order Number		HEX	D	L		B	E	Weight Approx. (lbs)
Brass	SS		Suffix "B"	Standard	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... R