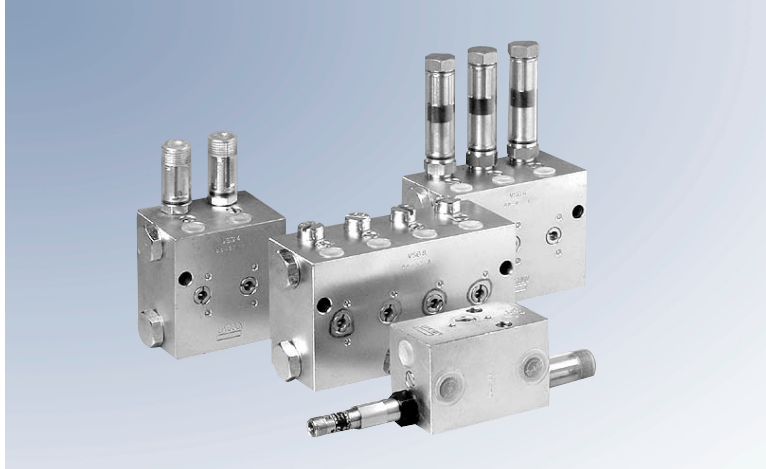


VSG, VSL, VSKH and VSKV Two-line Metering Devices



VSG-KR

These high quality, galvanized steel metering devices are designed for high-pressure (up to 400 bar) two-line systems. They can also be used in low to medium-pressure systems. They are available with up to 8 outlets. Each outlet pair is equipped with an indicator pin for visual monitoring. Additional optional

features include rust proof material, rust and acid proof material, electrical monitoring, adjusting device with magnetically operated function for rigorous environments, viton seals for high temperature applications, and NPT inlet/outlet threads. Refer to the identification code for model designations to order these devices with the additional features.

All models function on the same principle. The difference between VSL, VSG and VSKH lies in the output per outlet. Model VSKV has the same features as the VSKH with the exception that the outlet ports are located on the front face (vertical positioning). This provides an alternative for applications requiring a different tube orientation. Versions ... MD (with magnetically operated indication of function) are designed without dynamic seals and can work under extremely adverse ambient conditions: water, dust, high temperature up to 120° C (176° F).

VSG-KR Models

VSG-KR

Indicator Pin and Adjustable Output 0–2.2 cm³ (0–0.13 in³)

Connection Thread BSPP	Connection Thread BSPP	Number of Outlets	Connection Thread BSPP	Connection Thread NPTF	Connection Thread NPTF
Carbon Steel Galvanized	Stainless Steel (VA 1.4305/303)		Stainless Steel (VA 1.4571/316 Ti)	Carbon Steel Galvanized	Stainless Steel (VA 1.4305)
620-40022-1	620-40567-1	1		620-40022-2	
620-40015-1	620-40567-2	2	620-40839-2	620-40015-2	
620-40022-3	620-40567-3	3		620-40022-4	
620-40015-3	620-40567-4	4	620-40839-4	620-40015-4	
620-40022-5	620-40567-5	5		620-40022-6	
620-40015-5	620-40567-6	6	620-40839-6	620-40015-6	
620-40022-7	620-40567-7	7		620-40022-8	
620-40015-7	620-40567-8	8	620-40839-8	620-40015-8	

VSG, VSL, VSKH and VSKV Two-line Metering Devices



VSG-KD and D

Indicator Pin and Fixed Output* 2.2 cm³ (0.13 in³) Metering Screw (KD) VSG8-D
or with Metering Screw only (D) as Shown

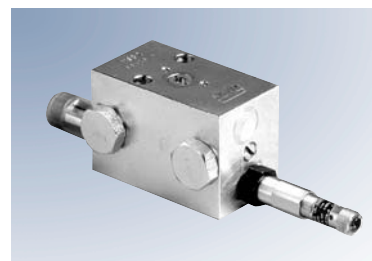
KD		D		KD		D	
Connection Thread BSPP		Number of Outlets	Connection Thread NPTF				
Carbon Steel Galvanized			Carbon Steel Galvanized				
620-40023-1	620-40025-1	1	620-40023-2	620-40025-2			
620-40023-3	620-40025-3	2	620-40023-4	620-40025-4			
620-40023-5	620-40025-5	3	620-40023-6	620-40025-6			
620-40023-7	620-40025-7	4	620-40023-8	620-40025-8			
620-40024-1	620-40026-1	5	620-40024-2	620-40026-2			
620-40024-3	620-40026-3	6	620-40024-4	620-40026-4			
620-40024-5	620-40026-5	7	620-40024-6	620-40026-6			
620-40024-7	620-40026-7	8	620-40024-8	620-40026-8			

*also available: 0.55, 1.1, 1.65 cm³ (0.0336, 0.067, 0.1 in³)

VSG-KR-NP

Indicator Pin, Proximity Switch for Circular Plug M12 (237-13442-4)
and Adjustable Output 0–2.2 cm³ (0–0.13 in³)

Connection Thread BSPP	Number of Outlets	Connection Thread NPTF
Carbon Steel Galvanized		Carbon Steel Galvanized
620-40733-1	1	
620-40733-2	2	
620-40733-3	3	
620-40733-4	4	
620-40733-5	5	
620-40733-6	6	
620-40733-7	7	
620-40733-8	8	



VSG2KR-NP

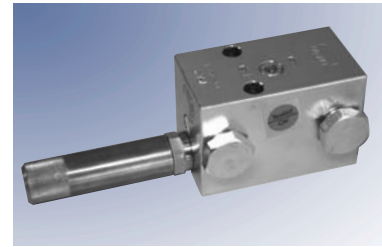
Note: High pressure-rated proximity switch is available as a retrofit for
VSG models beyond series 9905. Part Number: 520-34018-1

MD Magnetic Indicator Device

The MD magnetic indicator device is completely maintenance free and is suitable for extreme ambient conditions in the heavy industry. Even at temperatures of up to 120°C the device is resistant to dust and steam penetration. Therefore it is ideal for application in continuous casters or rolling mills. In conventional two-line metering devices the indicator pin has been the weak spot when the metering device is subjected to full operating pressure. However, with the magnetic indicator device, seals are not required. The movement of the

indicator pin is conveyed without contact by the aid of a strong magnet to the outer control ring sleeve. The control ring is coated with a bright colour so that it is visible even in poorly lit conditions.

The output of the two-line metering devices is adjusted by means of metering screws available in different sizes.



VSL-MDMS

Technische Daten

Operating pressure: max. 400 bars
Operating temperature: max. 120° C

VSG with magnetic indicator device

Protection cap		Adjusting device
Brass	Plastic	
520-33105-1	520-33270-1	A 0.55 cm ³
520-33106-1	520-33271-1	B 1.10 cm ³
520-33107-1	520-33272-1	C 1.65 cm ³
520-33073-1	520-33273-1	D 2.20 cm ³

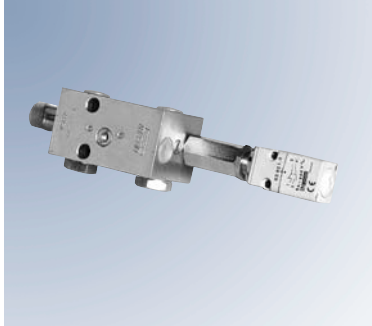
VSL with magnetic indicator device

Protection cap		Adjusting device
Brass	Plastic	
520-33103-1	520-33274-1	A 1.25 cm ³
520-33104-1	520-33275-1	B 2.50 cm ³
520-33108-1	520-33276-1	C 3.75 cm ³
520-33074-1	520-33277-1	D 5.00 cm ³

VSKH/VSKV with magnetic indicator device

Protection cap		Adjusting device
Brass	Plastic	
520-33109-1	520-33266-1	A 0.30 cm ³
520-33110-1	520-33267-1	B 0.60 cm ³
520-33112-1	520-33268-1	C 1.20 cm ³
520-33075-1	520-33269-1	D 1.50 cm ³

VSG, VSL, VSKH and VSKV Two-line Metering Devices



VSG2-KR-KS

VSG-KR-KS Indicator Pin/Limit Switch Adjustable Output 0–2.2 cm³ (0–0.13 in³)

Connection Thread BSP	Number of Outlets	Connection Thread NPTF
Carbon Steel Galvanized		Carbon Steel Galvanized
620-40027-1	1	620-40027-2
620-40027-3	2	620-40027-4
620-40027-5	3	620-40027-6
620-40027-7	4	620-40027-8
620-40028-1	5	620-40028-2
620-40028-3	6	620-40028-4
620-40028-5	7	620-40028-6
620-40028-7	8	620-40028-8



VSG2-KR-KA

VSG-KR-KA Indicator Pin & Adapter for Proximity Switch (Thread M12 x 1) Adjustable Output 0–2.2 cm³ (0–0.13 in³)

Connection Thread BSP	Number of Outlets	Connection Thread NPTF
Carbon Steel Galvanized		Carbon Steel Galvanized
620-40605-1	2	
620-40605-2	4	
620-40605-3	6	
620-40605-4	8	

VSG, VSL, VSKH and VSKV Two-line Metering Devices



VSL-KR Indicator Pin and Adjustable Output 0–5 cm³ (0–0.3 in³)

Connection Thread BSPP	Number of Outlets	Connection Thread NPTF
Carbon Steel Galvanized		Carbon Steel Galvanized
620-40062-1	1	620-40062-2
620-40062-3	2	620-40062-4
620-40062-5	3	620-40062-6
620-40062-7	4	620-40062-8
620-40064-1	5	610-40064-2
620-40064-3	6	620-40064-4
620-40064-5	7	620-40064-6
620-40064-7	8	620-40064-8



VSL4-KR



VSL8-D

VSL-KD & D

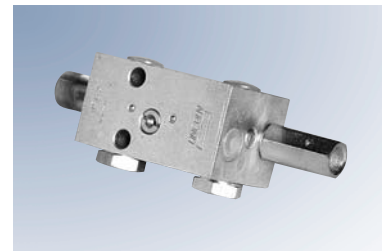
Indicator Pin and Fixed Output* 5.0 cm³ (0.3 in³) Metering Screw (KD)
or with Metering Screw only (D) as Shown

KD		Number of Outlets	D	
Connection Thread BSPP	Connection Thread NPTF			
Carbon Steel Galvanized			Carbon Steel Galvanized	
620-40065-1	620-40063-1	1	620-40065-2	620-40063-2
620-40065-3	620-40063-3	2	620-40065-4	620-40063-4
620-40065-5	620-40063-5	3	620-40065-6	620-40063-6
620-40065-7	620-40063-7	4	620-40065-6	620-40063-8
620-40066-1	620-40067-1	5	620-40066-2	620-40067-2
620-40066-3	620-40067-3	6	620-40066-4	620-40067-4
620-40066-5	620-40067-5	7	620-40066-6	620-40067-6
620-40066-7	620-40067-7	8	620-40066-8	620-40067-8

*also available: 1.25, 2.5, 3.75 cm³ (0.07, 0.15, 0.228 in³)

VSL-KR-KA Indicator Pin & Adapter for Proximity Switch (Thread M12 x 1) Adjustable Output 0–5 cm³ (0–0.3 in³)

Connection Thread BSPP	Number of Outlets	Connection Thread NPTF
Carbon Steel Galvanized		Carbon Steel Galvanized
620-40637-2	2	
620-40637-4	4	
620-40637-6	6	
620-40637-8	8	



VSL2-KR-KA

VSG, VSL, VSKH and VSKV Two-line Metering Devices



VSKV5-KR



VSKH5-KR

VSKH-KR and VSKV-KR Indicator Pin & Adjustable Output 0–1.5 cm³ (0–0.09 in³)

VSKH (Horizontal) Connection Thread BSPP			Number of Outlets	VSKV (Vertical) Connection Thread BSPP		
Carbon Steel Galvanized	303 Stainless Steel (VA 1.4305)	316Ti Stainless Steel (VA 1.4571)		Carbon Steel Galvanized	303 Stainless Steel (VA 1.4305)	316Ti Stainless Steel (VA 1.4571)
620-27438-1	620-27488-1	620-27766-1	1	620-27442-1	620-27496-1	620-27857-1
620-27418-1	620-27489-1	620-27767-1	2	620-27422-1	620-27497-1	620-27858-1
620-27439-1	620-27490-1	620-27768-1	3	620-27443-1	620-27498-1	620-27859-1
620-27419-1	620-27491-1	620-27769-1	4	620-27423-1	620-27499-1	620-27860-1
620-27440-1	620-27492-1	620-27770-1	5	620-27444-1	620-27500-1	620-27861-1
620-27420-1	620-27493-1	620-27771-1	6	620-27424-1	620-27501-1	620-27862-1
620-27441-1	620-27494-1	620-27772-1	7	620-27445-1	620-27502-1	620-27863-1
620-27421-1	620-27495-1	620-27773-1	8	620-27425-1	620-27503-1	620-27864-1

Technical Data

Model	VSL	VSG	VSKH	VSKV
output per outlet and stroke (KR versions)	0–5.0 cm ³ (0–0.3 in ³)	0–2.2 cm ³ (0–0.13 in ³)	0–1.5 cm ³ (0–0.09 in ³)	0–1.5 cm ³ (0–0.09 in ³)
inlet thread	G3/8 (BSPP) 3/8 NPTF	G3/8 (BSPP) 3/8 NPTF	G1/4 (BSPP) 1/4 NPTF	G1/4 (BSPP) 1/4 NPTF
outlet thread	G1/4 (BSPP) 1/4 NPTF	G1/4 (BSPP) 1/4 NPTF	G1/4 (BSPP) 1/4 NPTF	G1/4 (BSPP) 1/4 NPTF
maximum operating pressure	400 bars (5800 psi)			
materials available	carbon steel galvanized			
	stainless steel: 1.4305 / 303			
	stainless steel: 14571 / 316 Ti			
maximum operating temperature	120° C (248° F) for MR and viton versions (KRFKM) 80° C (176° F) for standard versions (KR)			

Dimensions for Standard KR Versions

Model	Height	Width	Depth
VSG-KR	122 mm (4.86 in)	2 outlet: 44.5 mm (1.78 in) 4 outlet: 76 mm (3.04 in)	54 mm (2.16 in)
VSL-KR	140 mm (5.6 in)	6 outlet: 108 mm (4.32 in) 8 outlet: 140 mm (5.6 in)	
VSKH-KR VSKV-KR	124 mm (4.96 in)	2 outlet: 52 mm (2.08 in) 4 outlet: 80 mm (3.2 in) 6 outlet: 108 mm (4.32 in) 8 outlet: 136 mm (5.44 in)	57 mm (2.28 in)

Identification Code

VSG, VSL, VSKH and VSKV

Two-line Metering Devices



VSKV	6	VA	-KR	FKM	-KN			-01	(1.4571)
VSKV	2	VA	-KR						(1.4305)
VSG	4		-KR		-NP				
VSKV	5		-KR		-KS	C			
VSKV	8		-KR		-KN	TU		-A	
VSKH	4	VA			-KS	H			(1.4305)
VSKV	4		-D	0,6	-KS	H			
VSKH	2		-KR						(1.4305)

Basic Types:

- VSKV = outlet vertical
- VSKH = outlet horizontal
- VSG/VSL = outlet horizontal

Number of Outlets (max. 8):

Standard Version

Steel Body Galvanized:

- VA = stainless steel body

Adjustment Device & Monitoring:

- KR = with indicator pin and infinitely variable adjustment device
- KRFBKM = with indicator and infinitely variable adjustment device with viton seals (max. operating temp. 120 °C / 248 °F)
- MDMS = magnetic indicator and infinitely variable adjustment device
- KD = with indicator pin and metering screw
- D = with metering screw
0.1; 0.3; 0.6; 0.9; 1.2; 1.5 cm³

Adjustment Device Standard Version Galvanized:

- NP = piston detector
- KN = indicator pin and proximity switch
- KS = indicator pin and limit switch
- KA = indicator pin and adapter
(proximity switch to be supplied by customer)

- BA = internal abbreviations
- TU = internal abbreviations
- H = internal abbreviations
- C = internal abbreviations

- 01, 02, 03 = two-digit number for special versions
- A = US-version (NPT - thread)

Stainless Steel (Except VSL Models)

Material Number:

- 1.4305
- 1.4571 (acid resistant) for VSKH/VSKV/VSG only

VSG, VSL, VSKH and VSKV Two-line Metering Devices



Accessories

Part No.	Description
303-17526-2	closure plug for VSG/VSL
420-22139-1	outlet extension VSG (R1/4 x R1/4)
420-22140-1	outlet extension VSL (R1/4 x R1/4)
420-23628-1	outlet extension VSKH (R1/4 x R1/4)
420-23790-1	outlet extension VSKH (R1/4 x R1/4) stainless steel
303-17505-1	metering screw VSG 0.55 cm ³ (0.021 in ³)
303-17506-1	metering screw VSG 1.10 cm ³ (0.043 in ³)
303-17507-1	metering screw VSG 1.65 cm ³ (0.065 in ³)
303-17508-1	metering screw VSG 2.2 cm ³ (0.087 in ³)
303-17509-1	metering screw VSL 1.25 cm ³ (0.05 in ³)
303-17510-1	metering screw VSL 2.50 cm ³ (0.099 in ³)
303-17511-1	metering screw VSL 3.75 cm ³ (0.15 in ³)
303-17512-1	metering screw VSL 5.00 cm ³ (0.196 in ³)
223-13052-1	outlet check valve for 6 mm tube*
223-13052-2	outlet check valve for 8 mm tube*
223-13052-3	outlet check valve for 10 mm tube*
421-21288-1	mounting spacer ring 8.5 x 18 x 5

* Outlet check valves are recommended when secondary progressive metering devices are used, or when the compression volume of the grease (about 2%) in the feed line to the lubrication point exceeds the output per outlet.

Welding mounting plates are available for all metering devices – ask your Lincoln representative for details.