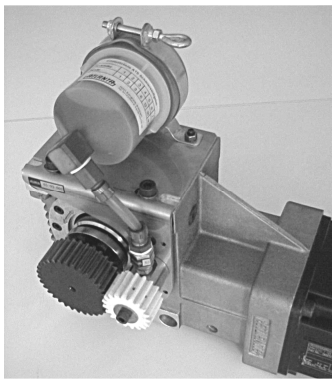
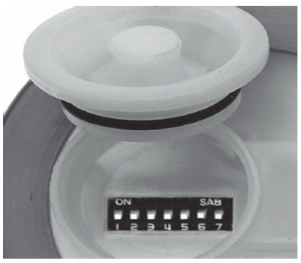
		ATLANTA		**BKI 109 e**	
		Operating Instructions		**4100-001-04/12**	
Department		**Electronically controlled lubricators**	Page	1	3
Rev. Index		**125 cm^3 – battery-operated**	Name	Schell	18.04.12
Date		applicable to 65 91 006	released	Reichert	18.04.12

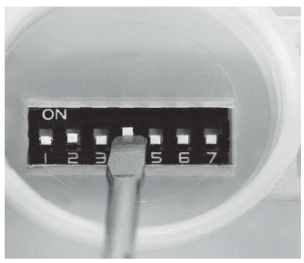


Features:
Precise dosing of lubricant.
Activation, deactivation, and
setting of grease supply via micro-switch.
Automatic pressure control from 0.2 to 3 bar.
Explosive – Ex protection BVS PP 03.2138 EG
To be mounted in any position.
Can be used again and again for many years.
Refillable.

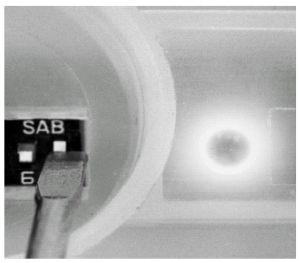
Start-up:



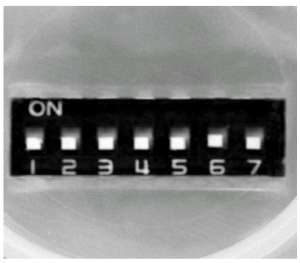
Remove protective lid and switch on lube dispenser



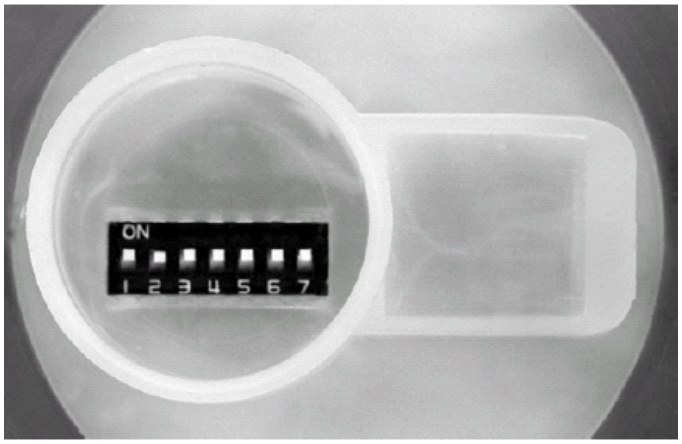
Any dosage required can be set via DIP switch combinations



DIP switch 7 active, indicator light blinks approx. every 20sec



To switch off: turn all switches down



Advantages:

Change of lubricating time or combinations of switching times possible (see also page 2 setting combinations).

Battery-operated:

Battery capacity approx. = 2600 mA

Consumption in 1 year:
25 microamperes x 8640 h = 216 mA

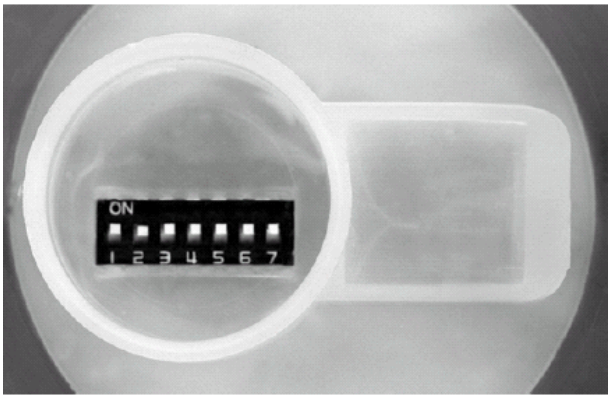
Signal light:

8 microamperes x 8640 h = 69 mA

Yearly consumption = 285 mA

Tip:
Before using the lube dispenser for the first time fill the hose with grease and soak the felt gearwheel with grease.
Visual control of the grease filling at the transparent housing of the lube dispenser.
Signal light blinks also when the lube dispenser is empty.
Optionally available are also lube dispensers with emptying monitor.

Pressure build-up times:
The batteries need a certain time to build up the pressure. They induce an electro-pneumatic reaction in the built-in nitrogen chamber and transmit the pressure to the piston via a bellows. This chamber has to be replaced at the end of the lubricating time.
.



Simply set the desired operating time and mount it. The resulting pressure build-up times are then as follows:

Setting time in months	1	2	3	6	12	18
DIP switch	1	2	3	4	5	6
Pressure build-up time in days	1	2	3	6	10	14

Lubrication starts after the appropriate pressure build-up. The pressure remains built-up even if the lubricator is switched off for some time.
Therefore lubrication begins immediately after switching on the lubricator again because the pressure remains built-up.

Immediate lubrication and safety check
Set all switches to the "on" position. Pressure build-up time approx. 6 – 8 hours. Then reset all switches and set the desired operating time. The signal light blinks.

Visual control of the pressure build-up by marking the filling state at the transparent housing. Depending upon the dosage chosen the piston in the lube dispenser should move downward from the marking for more or less time during the pressure build-up.

Important information!
Ambient temperature max. -20℃ to max. +50℃.
Avoid electrostatic charging of the lube dispenser (e.g. due to friction with cloth or strong air currents).

Setting combinations for lube dispenser

DIP switch position	Daily amount of lubricant	Lubricating time of lubricator
7 = switch for „ON“ - signal light blinks at short intervals .		
6 = 18 M	0.175 cm³	18 months
5 = 12 M	0.35 cm³	12 months
4 = 6 M	0.70 cm³	6 months
3 = 3 M	1.30 cm³	3 months
2 = 2 M	2.10 cm³	2 months
1 = 1 M	4.00 cm³	1 month
All switches activated	9.00 cm³	14 days
Combinations:		
5 + 4	1.05 cm³	121 days
5 + 3	1.74 cm³	71 days
4 + 3	2.08 cm³	57 days
5 + 4 + 3	2.35 cm³	52 days
5 + 2	2.45 cm³	51 days
4 + 2	2.60 cm³	45 days
3 + 2	3.48 cm³	35 days
5 + 3 + 2	3.83cm³	30 days
4 + 3 + 2	4.16 cm³	28 days
5 + 4 + 3 + 2	4.53 cm³	27 days
4 + 1	4.80 cm³	24 days
3 + 1	5.56 cm³	23,5 days
2 + 1	6.26 cm³	20 days
5 + 2 + 1	6.61 cm³	19 days
3 + 2 + 1	7.65 cm³	17 days
5 + 3 + 2 + 1	8.00 cm³	16 days
4 + 3 + 2 + 1	8.33 cm³	15 days
5+4+3+2+1	8.70 cm³	14.5 days

Technical tips:
Extension with hose or tube is possible up to approx. 1.5 m for grease lubrication and 5 m with oil lubrication. In this case the lubrication charts do not apply because the viscosity of the lubricant and the length of the hose influence the flow behaviour of the lubricant. Mind the correction factors on page 3. There is less resistance in case of oil filling; therefore we recommend to use a check valve with 0.2 bars. The lube dispenser lubricates constantly, i.e. no impulse lubrication.

Technical data:
Supply voltage (2 x 1.5V) 3V
BSV 03 ATEX E 223
Standard type: Varta Electric Power 8008 for Groups I and IIC T 3
Special type: Varta Industrial Mignon / AA for Groups I and IIC T 4

II 2G EEx ib IIC T4/T3 Gb
I M2 EEx ib I Mb

Correction factors for lubricant dosage:

Tube/hose length mm	Synchronous operation with machine f_{sy}	Tube/hose connecting set f_{SR}
<200	1,25	1
>200	1,25	1,16

If not synchronised with the machine operating time (in the case of continuous lubrication), only the factor f_{SR} will be considered.

Temperature factor **f_T:**

Temperature range	Microlube GB O	Structovis AHD
-20 …+15℃	2	1,5
+15 …+35℃	1	1
+35 …+50℃	0,5	0,7

Note:
The correction factors are based upon experience values determined by experiments. If required and/or for specific applications they should be verified and adapted as necessary.

Example:
A toothed-rack gear unit m=2 with a travelling speed of v =1,5m/s shall be lubricated with an electronically controlled lube dispenser via a felt gearwheel with Klüber Structovis AHD. The following parameters are to be considered:
- The grease supply from the lube dispenser to the felt gearwheel runs through a hose which is 600 mm long.
- The lube dispenser shall be synchronised with the machine.
- Ambient temperature 10℃.

According to the grease dosage diagram for felt-wheel lubrication (catalogue Servo-drive Systems) the dosage for this type of drive is approx. 0,35 cm^3 of grease.

The actually needed amount of lubricant, if the described parameters are considered, can be calculated as follows:

$$0{,}35 \times 1{,}16 \times 1{,}25 \times 1{,}5 = 0{,}76\ cm^3$$

In the chart „setting combinations for lube dispensers“ the lubricant quantity of 0,7 cm^3, corresponds to the DIP-switch position 4 .