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BEKA[®]
ONE
LUBRICATOR

Assembly and operating
instructions

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Read all assembly and operating instructions carefully before assembling and starting-up the lubricator. In the following, you will find basic information which must be observed for assembly, operation, and maintenance. Observe the general safety instructions in chapter 02 as well as the special safety instructions in the following chapters.

Symbols and signal words



Warning of personal injury



Warning of property damage

Safety instructions

General hazard warning - residual risk

All components of the lubricator are designed according to the valid regulations on the construction of technical systems regarding operational safety and accident prevention. Nevertheless, the use of these components might involve risks for the operator or third parties as well as for other equipment. Therefore, use the lubricator only in a technically faultless condition and under observance of the relevant safety regulations as well as these assembly and operating instructions. Check the lubricator and its components regularly for damage and leakages. Liquids could escape under high pressure from pressurized components that are leaky.

Hazards in the case of non-observance of safety instructions

Results of non-observance of the safety instructions can be hazards to persons, the environment, and the device. Non-compliance with the safety instructions may result in the loss of any liability claims.

Intended use

The lubricator is only approved for industrial use. The lubricator may only be operated when installed into another machine's lube point connection and only together with it. Only use lubricants as specified by the machine manufacturer. The lubricator may only be operated in accordance with the technical data. The respective technical values may in no case be exceeded.

Unauthorized modifications to the lubricator are not permitted. BEKA assumes no liability for resulting personal injury or property damage.

Inadmissible modes of operation

Operational safety of the lubricator is only guaranteed for appropriate application as described in the assembly and operating instructions.

Scope of warranty

Warranty regarding operational safety, reliability, and performance will only be guaranteed by the manufacturer if the lubricator is used as intended and only under the following conditions:

- The lubricator is used according to the assembly and operating instructions
- Modifications or repairs of the lubricator may only be carried out by BEKA
- Liability is limited to the value of the lubricator
- Guarantee and warranty for any damage of the lubricator caused by use of improper lubricants will expire
- BEKA will generally not assume any liability for incorrect operation or adjustment of the lubricator

Owner's / operator's obligations in case of leakages

Discharge leakages of hazardous substances must be drained in a way that avoids risks for persons or the environment. Therefore, consider the data sheets and the safety data sheets of the respective manufacturer and observe all legal regulations.

Transport and storage

Do not throw the lubricator or expose it to shocks. Store the lubricator cool and dry to avoid corrosion of components and to preserve the lubricant filling.

Exchange of lubricants and disposal

Observe the disposal information of the lubricant manufacturer when the lubricant is exchanged. Lubricants or components contaminated with lubricant shall be disposed of according to valid regulations.

Dispose of the lubricator properly and professionally, in accordance with national and international laws and regulations.

The devices' batteries can be recycled when disposed of properly. They contain valuable raw materials.

Lubricant volume	120 ml
Lubricant	Oil ISO VG = 32 - 680 mm ² /s grease up to NLGI class 2 (also with solid lubricants*)
Pump type	piston pump
Dosage volume	0,24 ml / stroke
No. of discharges	max. 6**
No. of outlets	1
Connection	external thread R1/4
Service duration per filling	1-24 months
Operating pressure	max. 10 bar
Temperature range	-20 °C to +60 °C
Dimensions	70 x 127 mm (d x h)
Weight without filling	approx. 304 g
Control	microprocessor
Pressure monitoring	electronical
Capacity monitoring	LED display
Operational voltage	3,0 V Li battery
Filling zerk	according to DIN 71412
Protection class (with membrane sticker)	IP 65
Sound pressure level	< 70 dB (A)
Operation of progressive distributor	no
Order no. -> without filling	20870001
-> with Agip GR MU/EP 2 grease	20870002
-> with Total Ceran XS 80 grease	20870003

* Solid lubricant content: < 5% and < 5 µm permissible

** 6 discharges or an operational period of 48 months (whatever occurs first)



120 ml

BEKAONE is an electromechanical lubricator designed to supply single lubrication points with oil or grease.

The lubricator is intended for stand-alone use as the energy supply is provided by a battery pack.

The lubricant is stored in a refillable reservoir with a capacity of 120 ml. Maximum output pressure is 10 bar.

When using the suitable lubricant, the battery pack enables up to 6 discharges respectively a maximum runtime of 48 months (whatever occurs first).

For information on accessory, please see the separate accessory list.

For all important information, please also consult www.bekaone.de.



Recharging the battery
Health risk from battery damage!
Never recharge the battery!



Do not open the lubricator or recharge the empty battery. Replace the lubricator if it is defective or if the battery is empty.

Suitable lubricants

Multi-purpose grease

Multi-purpose grease, KP2K-30 (DIN 51 825): **Agip GR MU/EP 2**
Lithium soap, mineral oil
 $V(40) = 110 \text{ mm}^2/\text{s}$, NLGI 2
Service temperature range of the lubricant: $-30 \text{ }^\circ\text{C}$ to $+120 \text{ }^\circ\text{C}$

Operating temperature range of **BEKA ONE** with Agip GR MU/EP 2: see chart

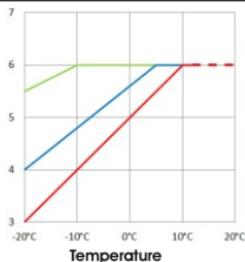
High-performance grease

High-performance grease with extended temperature range, KP1/2 N-55 (DIN 51 825):
Total Ceran XS 80
Calcium-sulfonate complex thickener, synthetic base oil
 $V(40) = 80 \text{ mm}^2/\text{s}$, NLGI 1,5
Service temperature range of the lubricant: $-55 \text{ }^\circ\text{C}$ to $+180 \text{ }^\circ\text{C}$

Operating temperature range of **BEKA ONE** with Total Ceran XS 80: see chart

For other lubricants (for example, biodegradable lubricants, lubricants with H1-license and so on), please consult BEKA.

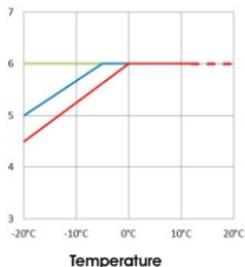
Possible discharges



Agip GR/MU EP 2

- Agip GR MU/EP 2 - directly installed
- Agip GR MU/EP 2 - hose ø 8x1, 30 cm
- Agip GR MU/EP 2 - hose ø 8x1, 100 cm

Possible discharges



Total Ceran XS 80

- Total Ceran XS 80 - directly installed
- Total Ceran XS 80 - hose ø 8x1, 30 cm
- Total Ceran XS 80 - hose ø 8x1, 100 cm

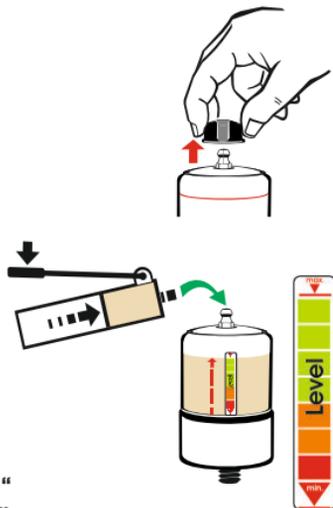
Reference values for maximal number of discharges at backpressure-less lube point

Number of possible discharges may vary depending on the backpressure of the lube point and the temperature. Therefore, regularly check the correct function of the **BEKA ONE**.

In case of indirect assembly, keep the lubrication lines as short as possible to avoid additional load on battery due to the backpressure in the lines!

Pay attention to utmost cleanness when refilling the reservoir.
Use a hand-lever grease gun to fill the **BEKA ONE**:

1. Remove the activation cap.
2. Put the filling coupling straight onto the filling zerk.
3. Slowly fill the reservoir up to the marking „max.“.
4. Disconnect the filling coupling and clean the filling zerk.
5. Put on the activation cap again.



NOTICE! Fill the lubricator slowly up to the marking „max.“
to avoid possible pump damages due to overfilling.

With the initial filling, air might get entrapped in the reservoir. These air inclusions do not affect the function of the pump, but they are transported to the lubrication point and the lubrication may possibly be delayed or interrupted.

To drain the air, fill the BEKA ONE during initial filling slowly up to approx. 1 mm above the marking „max.“, till the sealing lip of the piston slightly opens the ventilation hole. Then, the air escapes at the overflow hole.

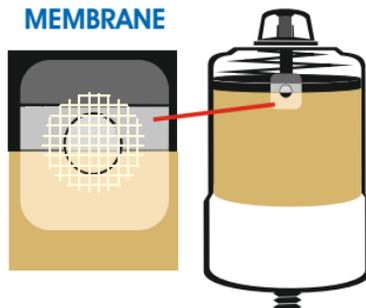
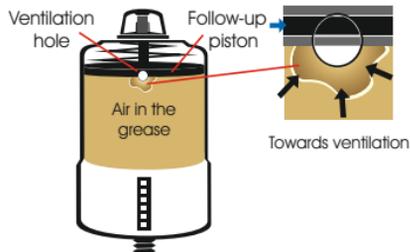
During regular filling, fill the lubricator up to the marking „max.“.

If the BEKA ONE is used outdoors, you must attach a membrane sticker over ventilation hole:

1. Fill and ventilate the lubricator.
2. Clean the surface around the ventilation hole and remove residual lubricant, if necessary.
3. Attach the membrane sticker (see picture).

Membrane sticker for ventilation hole

Order no.: 10100887



Month-setting options

The delivered quantity of lubricant varies depending on the selected Month Setting (see table).

Month Setting	Lubricant quantity per month	Lubricant quantity per week
24	5 cm ³	1,1 cm ³
12	10 cm ³	2,3 cm ³
6	20 cm ³	4,6 cm ³
3	40 cm ³	9,2 cm ³
1	120 cm ³	27,5 cm ³



Example: selected setting 12 months,
quantity of lubricant: 10 cm³ per month/2,3 cm³ per week

Correct refilling

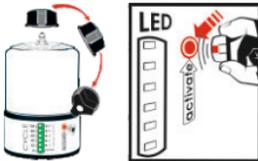
The lubricator can be refilled any time. The pump counts the already delivered quantity of lubricant, not the reservoir drains.

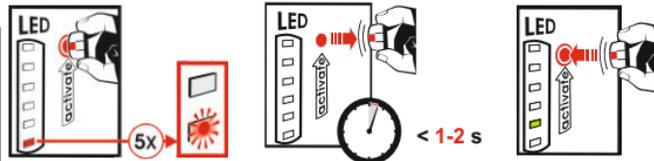
Month setting	24	12	6	3	1
Ideal refilling interval, approx.	20 months	10 months	5 months	10 weeks	4 weeks

Do not discharge the **BEKAONE** completely. Complete discharging does not damage the pump, but air is transported to the lubrication point. The lubrication point might be lubricated insufficiently, and you have to ventilate the lubrication lines again after refilling.

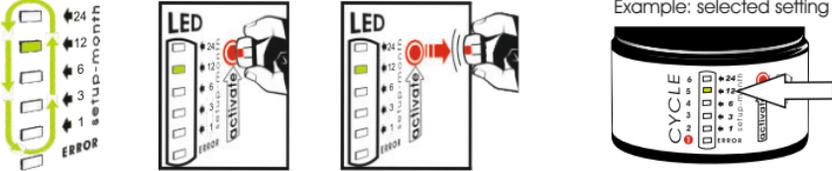
 The activation cap is the key component of the **BEKAONE**. Use the activation cap to set important functions such as power on and off or adjusting the operation time.

Switching on and adjusting the operation time

- 

Remove the activation cap and guide it to the red point above the activation zone.
- 

Place the cap on the red point and wait until the red LED has flashed **5 times**. Remove the cap for **1-2 s** and then place it immediately back on the red point.

- 

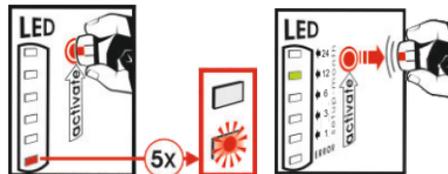
The green LEDs are now flashing in a line. Remove the activation cap when the required month setting is flashing (for example, 12). The pump is adjusted and starts lubricating after a short time.

Example: selected setting 12 months

Switching off and changing the setting

Place the activation cap on the red point and wait until the red LED has flashed **5 times**. Then remove the cap.

The pump is turned off. The red LED glows for 5 seconds. Now, you can switch the pump on again and change a setting resp. reselect it as described in steps 1-3 above.

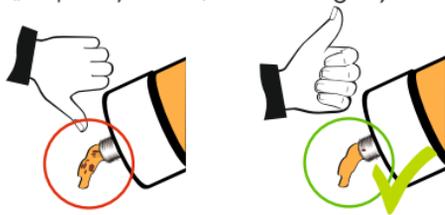


Activate the Special Lubrication:

- To ventilate the **BEKA ONE** (e. g., after the initial filling or if you want to fill the empty lubricator)
- To perform an intermediate lubrication
- To check the remaining capacity of the pump (see „Capacity check / LED messages“)

For initial filling:

Initiate Special Lubrication at least **5 times** after initial filling until the lubricant escapes with nearly no air bubbles in it.



Activation of Special Lubrication

Consider to switch on and properly adjust the **BEKA ONE** prior to starting a Special Lubrication.

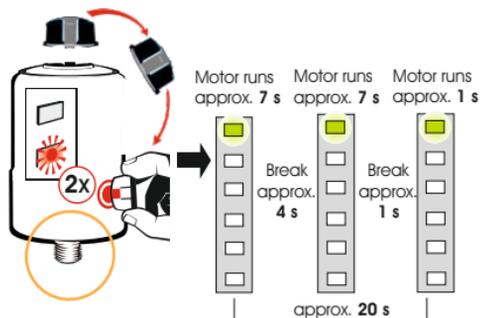
1. Remove the activation cap and guide it to the red point above the activation zone.
2. Place the cap on the red point and wait until the red LED has flashed **2 times**. Then remove the cap.

The green LED of the selected month cycle flashes.

The pump starts a Special Lubrication (approx. 20 s):

- The motor runs (approx. 7 s)
- The motor stops (approx. 4 s)
- The motor runs (approx. 7 s)
- The motor stops (approx. 1 s).
- The motor runs (approx. 1 s).

The Special Lubrication is finished.



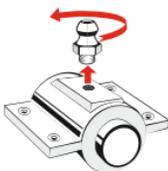
Please remember to adjust and ventilate the **BEKAONE** prior to assembling it.

Prior to assembly, prefill the lubrication point and lubrication lines or extensions with the appropriate lubricant. You can use e. g. the hand-lever grease gun for that.

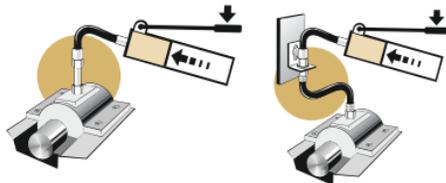
1. Clean the lubrication point



2. Remove the old fitting



3. Prefill the lubrication point and possibly lubrication lines with lubricant



4. Screw in the **BEKAONE** hand-tight.
Use an adapter, if necessary



5. Tighten the connection thread at the hexagonal bolt

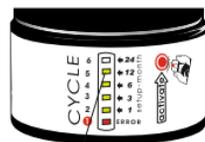


Assembly and start-up of the **BEKAONE** may be done only by qualified technical personnel with the necessary knowledge.

Take all necessary measures to properly mount the **BEKAONE** and other components to a complete machine without compromising the health and safety of those around you.

The remaining capacity of the **BEKA ONE** is indicated on the LED display after each normal lubrication cycle (see graphic and table). To check the remaining capacity explicitly, activate a Special Lubrication.

Filling cycles	Remaining capacity	Remaining reservoir discharges (complete reservoir)	Possible lubrication pulses (cycles)
6	> 600 cm ³	>5	> 2500
5	600 cm ³ - 481cm ³	>4	2500 - 2001
4	480 cm ³ - 361cm ³	>3	2000 - 1501
3	360 cm ³ - 241cm ³	>2	1500 - 1001
2	240 cm ³ - 121cm ³	>1	1000 - 501
1	< 120 cm ³	<1	< 500



Example: 5 filling cycles (<4 remaining reservoir discharges)

LED messages

LED	Status	Cause	Troubleshooting
green	ON	Device is currently lubricating	
	Flashes every 60 s	Function control (=ok), device is activated	
red	Flashes 2x shortly every 5 s	Backpressure is too high	Unscrew the device, switch it off and on: - Pump is running → check the lube point for too high backpressure → correct error → screw the device in again - Device does not work → replace the device
	Flashes every 5 s	Max. number of cycles is reached	Replace the device
	Low battery		



EG-Konformitätserklärung nach der Richtlinie 2004/108/EG (EMV)

Hiermit erklärt der Hersteller

BAIER + KÖPPEL GmbH + Co. KG
Präzisionsapparatfabrik
Beethovenstrasse 14
91257 Pegnitz / Germany,
dass das Produkt

Bezeichnung: **EINZELPUNKTSCHMIERGERÄT**

Typ: **BEKA ONE**

Artikel-Nr.: **2087**

konform ist mit den Bestimmungen folgender Richtlinie:

Richtlinie 2004/108/EG des Europäischen Parlaments und des Rates vom 15. Dezember 2004 zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit und zur Aufhebung der Richtlinie 89/336/EWG.

Folgende harmonisierte Normen wurden angewandt:

EN 61000-6-3:2007

EN 61000-6-2:2005-08

EN 61000-6-2:AC:2005-09

Anmerkung:

Die Messung wurde durch ein akkreditiertes EMV-Prüflabor durchgeführt.

Pegnitz, den 27.06.2014

pps. J. Brandel (Technischer Leiter)



Einbauerklärung für unvollständige Maschinen

(nach EG-RL 2006/42/EG)

Der Hersteller: **BAIER + KÖPPEL GMBH + Co. KG**
Beethovenstrasse 14
91257 Pegnitz / Germany
Tel.: +49 9241 729-0

erklärt hiermit, dass folgende unvollständige Maschine:

Produktbezeichnung: **EINZELPUNKTSCHMIERGERÄT**
Typenbezeichnung: **BEKA-ONE**
Artikelnummer: **2087 ...**
Seriennummer: **von AB0829000 bis AB0999999**

den folgenden grundlegenden Anforderungen der Richtlinie **Maschinen (2006/42/EG)** entspricht: Anhang I, Artikel 1.1.2, 1.1.3, 1.1.5, 1.3.2, 1.3.4, und 1.5.1.

Folgende harmonisierte Normen wurden angewandt:

DIN EN 809

DIN EN ISO 12100

Folgende sonstige Spezifikationen/Normen wurden angewandt:

VDE 0530

Die Schutzziele der Richtlinie **Elektrische Betriebsmittel 2006/95/EG** wurden gemäß Anhang I, Nr. 1.5.1 der Maschinenrichtlinie eingehalten.

Die unvollständige Maschine darf erst dann in Betrieb genommen werden, wenn festgestellt wurde, dass die Maschine, in welche die unvollständige Maschine eingebaut werden soll, den Bestimmungen der Richtlinie Maschinen (2006/42/EG) entspricht. Die zur Maschine gehörenden speziellen technischen Unterlagen nach Anhang VII Teil B wurden erstellt.

Der Hersteller (Abt. Dokumentation, Tel.: +49 9241 729-779 E-Mail: tb3@beka-lube.de) verpflichtet sich, die speziellen Unterlagen zur unvollständigen Maschine einzelstaatlichen Stellen auf Verlangen elektronisch zu übermitteln.

Pegnitz, den 27.02.2014

pps. A. Zapf (Verantwortung)



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