



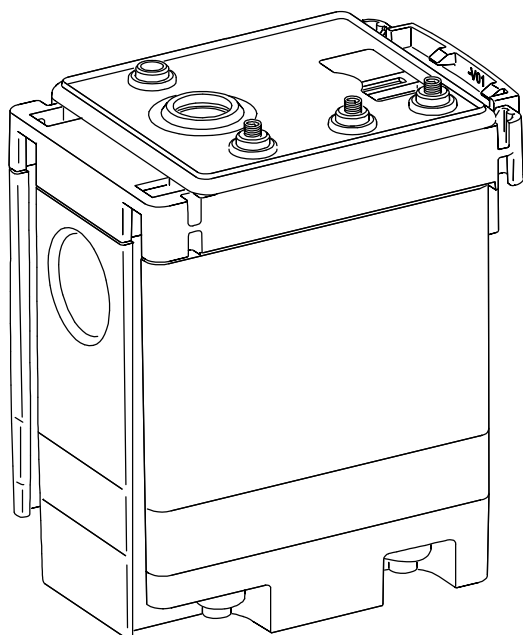
EN-US - english US

## Instructions for installation and operation

Replacement unit

**Service-Unit BEKOMAT® 31U / 31U F**

(SUBM31U / SUBM31UF)





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### 1 Pictograms and symbols



Observe the installation and operating instructions



Observe the installation and operating instructions  
(on the type plate)



General danger symbol (danger, warning, caution)



General danger symbol (danger, warning, caution) for supply voltage and supply voltage-carrying plants components

### 2 Safety instructions



**Please check whether or not these instructions correspond to the device type.**

Adhere to all advice given in these operating instructions. They include essential information which must be observed during the installation, operation and maintenance. Therefore it is imperative for the service technician and the responsible operator / technical staff to read these operating instructions prior to installation, start-up and maintenance.

The operating instructions must be accessible at any time at the place of application of the BEKOMAT® 31U.

In addition to these operating instructions, local or national regulations must be complied with, if necessary.

Make sure that the BEKOMAT® 31U is operated only within the permissible limit values indicated on the type plate. Any deviation involves a risk for persons and materials, and may result in malfunction and service failures.

If you have any queries regarding these installation- and operating instructions, please contact BEKO TECHNOLOGIES CORP.



**Danger!**

**Compressed air!**

**Risk of serious injury or death through contact with quickly or suddenly escaping compressed air or through bursting plant components or plant components which are not secured.**

#### Measures:

- Do not exceed the maximum operating pressure (see type plate).
- **Only carry out service measures when the system is pressure less.**
- Use pressure-resistant installation material only.
- The feed pipe must be tubed firmly. Discharge pipe: short, fixed pressure hose onto pressure-resistant pipe.
- Make sure that persons or objects cannot be hit by condensate or escaping compressed air.



### **Danger!**

#### **Supply voltage!**

**There is the risk of an electric shock involving injury or death when coming into contact with non-insulated components carrying supply voltage.**

#### **Measures:**

- During electric installations, all regulations in force need to be adhered to (e.g. VDE 0100 / IEC 60364).
- **When the control unit is open, service and installation works must only be undertaken when the system is deactivated.**
- **The removed control unit has no IP degree of protection.**
- All types of electrical works must be carried out by authorized and qualified personnel only.

#### **Further safety instructions:**

- For installation and operation, the national regulations and safety codes in force must also be adhered to.
- Do not use the BEKOMAT® 31U in hazardous areas.
- Regarding the inlet screw joints, excessive tightening forces must be avoided. This applies in particular to conical screw joints.
- The BEKOMAT® 31U will only function when voltage is applied.
- Do not use the test button for permanent drainage.
- Use genuine spare parts only. This is imperative to ensure perfect functioning.

#### **Additional advice:**

- The removed control unit has **no IP degree of protection**.
- During installation, use spanner flat at the feed pipe (wrench size SW27) as a back rest.
- The service unit must not be dismantled.



### **Caution!**

#### **Malfunction during operation!**

**Through incorrect installation and poor maintenance, malfunction may occur at the BEKOMAT.**

**Condensate which is not discharged may cause damage to plants and in production processes.**

#### **Measures:**

- Condensate drainage which is reliable in performance directly optimizes the compressed-air quality.
- To prevent damage and breakdowns, it is imperative to observe the following:
  - Exact compliance with the specifications of use and with the performance parameters of the BEKOMAT, in connection with the case of application (see "Proper use" section)
  - Exact compliance with the installation- and operation instructions in this manual
  - Regular maintenance and control of the BEKOMAT in accordance with the instructions in this operating manual

## Technical data

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### 3 Technical data

min./max. operating pressure (see type plate)	0,8...16 bar (12...230 psi) or 1,2...16 bar (17...230 psi)
min./max. temperature (see type plate)	+1...+60 °C (+34...+140 °F) or +1...+70 °C (+34...+158 °F)
Condensate inflow	NPT ½ (G ½) internal max. screw-in depth 13,5 mm (½")
Condensate outflow	G ¼ Ø 8 ... 10 mm hose connector
Condensate	oil-contaminated + oil-free
Housing	aluminium + plastic, glass fibre-reinforced
Weight (empty)	0,38 kg (0.8 lbs)

### 4 Control and maintenance



#### **Danger!**

#### **Compressed air!**

**Risk of serious injury or death through contact with quickly or suddenly escaping compressed air or through bursting plant components or plant components which are not secured.**

#### **Measures:**

- Do not exceed the maximum operating pressure (see type plate).
- **Only carry out service measures when the system is pressure less.**
- Use pressure-resistant installation material only.
- The feed pipe must be tubed firmly. Discharge pipe: short, fixed pressure hose onto pressure-resistant pipe.
- Make sure that persons or objects cannot be hit by condensate or escaping compressed air.



#### **Danger!**

#### **Supply voltage!**

**There is the risk of an electric shock involving injury or death when coming into contact with non-insulated components carrying supply voltage.**

#### **Measures:**

- During electric installations, all regulations in force need to be adhered to (e.g. VDE 0100 / IEC 60364).
- **When the control unit is open, service and installation works must only be undertaken when the system is deactivated.**
- **The removed control unit has no IP degree of protection.**
- All types of electrical works must be carried out by authorized and qualified personnel only.



#### **Caution!**

#### **Malfunction during operation!**

**Through incorrect installation and poor maintenance, malfunction may occur at the BEKOMAT.**

**Condensate which is not discharged may cause damage to plants and in production processes.**

#### **Measures:**

- Condensate drainage which is reliable in performance directly optimizes the compressed-air quality.
- To prevent damage and breakdowns, it is imperative to observe the following:
  - Exact compliance with the specifications of use and with the performance parameters of the BEKOMAT, in connection with the case of application (see "Proper use" section)
  - Exact compliance with the installation- and operation instructions in this manual
  - Regular maintenance and control of the BEKOMAT in accordance with the instructions in this operating manual



### Note

It is imperative to observe all hazard statements and warnings listed here.

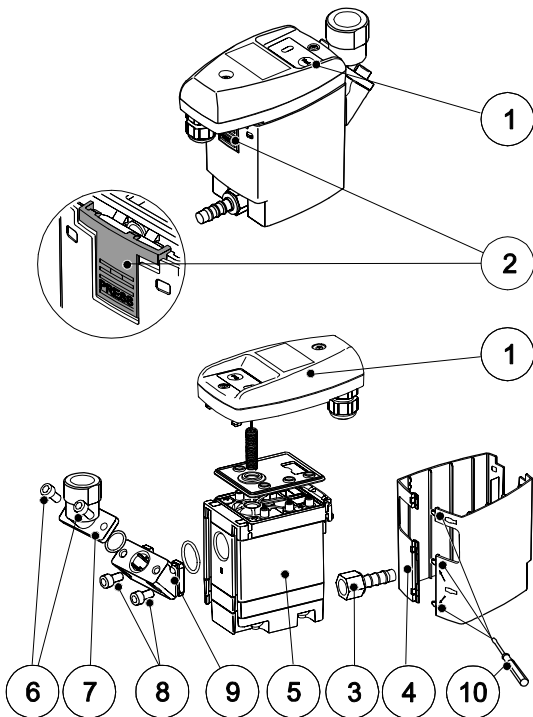
Please also observe all regulations and notes regarding industrial safety and fire prevention at the place of installation.

As a matter of principle, only use suitable and appropriate tools and materials in a proper condition.

Do not use aggressive cleaners and improper devices such as high-pressure cleaners.

Please note that condensates may contain aggressive or harmful components. Therefore, skin contact should be avoided.

Condensate is subject to mandatory waste disposal. As such, it must be collected in suitable containers, and disposed of or processed properly.



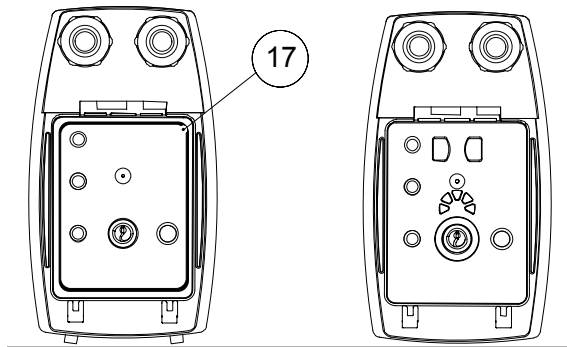
1. Prior to the replacement of the service unit, a reset needs to be carried out.  
The control unit is released by actuating the arresting hook.  
When removed, the TEST button below the LED must be pressed and held for at least five seconds.
2. Unfasten the BEKOMAT® 31U from the outlet (3).
3. Detach the service unit (5) from the tubing at the inlet.

Missing numbers are constituents of the BEKOMAT stand-alone model.

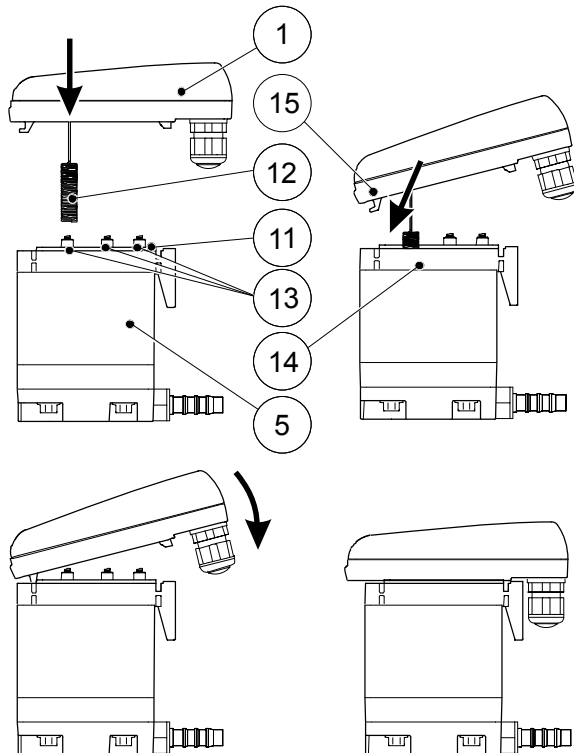


Control unit with cord packing  
(previous version)

Control unit without cord packing  
(current version)



Prior to placing a previous version of the control unit with cord packing (17) in the lower part of the cover, the sealing mat (11) must be removed from the service unit.



### Installation of the control unit on the service unit :

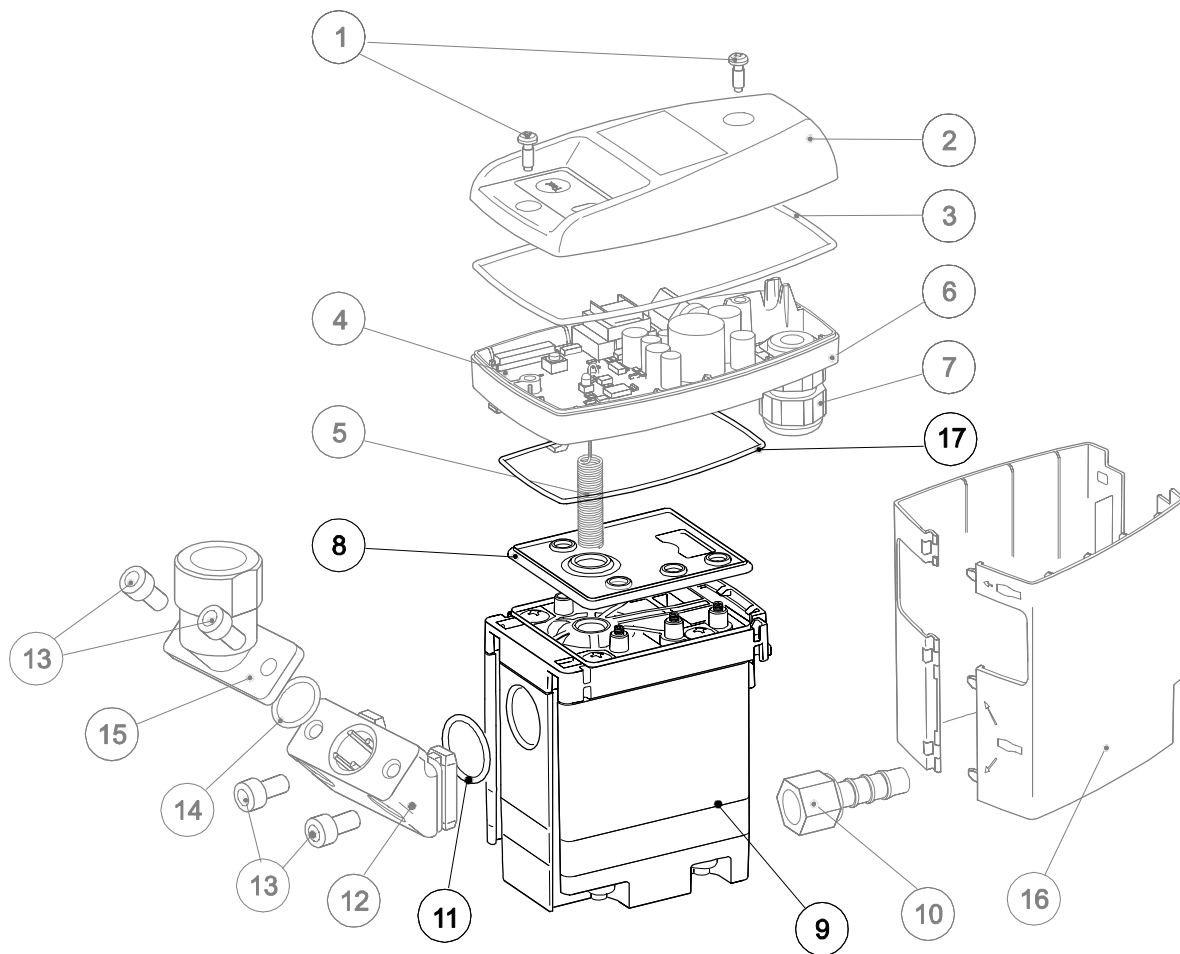
1. Check whether or not the service unit (5) goes with the control unit (1) (model designation and color of the arresting hook).
2. Check whether or not the sealing mat (11) or the sensor tube plate (14) with contact springs (13) are clean, dry, and free from impurities.
3. Introduce the sensor (12) into the sensor tube plate (14).
4. Hang the hook (15) of the control unit (1) in the sensor tube plate (14).
5. Press the control unit (1) against the service unit (5) and snap into place.

### Start-up subsequent to maintenance measures:

Always carry out prior to the start-up:

- Leak test of the screwed connector
- Check of the electrical connections
- Check of the correct engagement of the control unit

### 5 Elements and components



- 1 Screw 3.5 x 10
- 2 Upper part of the cover
- 3 Moulded gasket
- 4 Printed circuit board
- 5 Sensor
- 6 Lower part of the cover
- 7 Cable bushing
- 8 Sealing mat

- 9 Service unit
- 10 Hose connector
- 11 O-ring 20 x 2
- 12 Intermediate adapter
- 13 Screw M6 x 12
- 14 O-ring 14 x 1.78
- 15 Angle adapter
- 16 Design shell
- 17 Cord packing (only previous version)

**6 Recommended spare parts**

<b>Available sets of spare parts</b>	<b>Contents</b>	<b>Order number</b>
Service-Unit SUBM31U for BM31U or BM31UBI or BM31 or BM31BI	8, 9, 11*	4023607
Service-Unit SUBM31UF for BM31UF or BM31UBIF or BM31UIFBIF or BM31F or BM31BIF or BM31IFBIF		4023608
Gasket kit	3, 8, 11*, (17)	4024386
Design shell*	16*	4010164
Connection adapter*	11*, 12*, 13*, 14*, 15*	4010155

\* Not for BEKOMAT 31U built-in or BEKOMAT 31U built-in F

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