Grease layer thickness measuring device *SonicControl*

**Product Advantages**

- Measurement, display and control of the depth of the grease layer
- Ultrasonic sensor for precision measurement accurate to centimetres
- Monitoring of wastewater temperature in the separator
- Protective rating ultrasonic probe IP 68
- Battery back-up in the event of power failure
- Can be combined with all KESSEL grease separators
- Easy installation (inc. installation set)

- [Picture shows No. 917821]

**Installation**

Installation of this unit should be carried out by a licensed professional servicer:

Company / Telephone No.

Edition: 08/2010
Number: 395-016EN
Subject to technical amendments
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1. Security Instructions

Dear customer,

Before you put your KESSEL SonicControl into operation, please read through the installation instructions carefully and follow them.

Check first whether the system has arrived undamaged. In case of any transport damage, please refer to the instructions in chapter 12 "Warranty".

1. Safety instructions:
During installation, operation, maintenance or repair of the system, the regulations for the prevention of accidents, the pertinent DIN and VDE standards and directives, as well as the directives of the local power supply industry must be heeded. Before putting the device into operation, make sure through professional examination that the necessary protective features are available. Grounding, neutral, residual current-operated protective circuit etc. must correspond to the requirements of the local power supply industry. The system must not be operated in potentially explosive areas. The system contains electric charges. Non-compliance with the operating instructions may result in considerable damage to property, personal injuries or even fatal accidents. The system must be disconnected from the mains before any work is carried out on it. It must be ensured that the electric cables as well as all other electrical system equipment are in a faultless condition. In case of damage, the system may on no account be put into operation or must be stopped immediately.

The regulations set out by the directive VDE 0100 must be heeded. The switch unit must not be installed in rooms where there is an explosion hazard. The system must be inspected and serviced regularly to maintain its operational ability. We recommend that you conclude a servicing contract with your installation company.
Dear customer,

we are pleased that you have decided to buy a KESSEL product. The entire system was subjected to a stringent quality control before it left our factory. Nevertheless, please check immediately whether the system has been delivered to you complete and undamaged. In case of any transport damage, please refer to the instructions in the chapter “Warranty” in this manual.

These installation, operating and maintenance instructions contain important information that has to be observed during assembly, operation, maintenance and repair. Prior to carrying out any work on the system, the operator and the responsible technical personnel must carefully read and heed these installation and operating instructions.

**Areas of application for the switch unit:**
The switch unit monitors the depth of the grease layer in KESSEL grease separators accurate to centimetres.
3. Installation and Assembly

3.1 Installation of the switch unit

The safety instructions in chapter 1 must be heeded!

The switch unit is installed in a suitable spot, e.g. at eye level on the wall. Screw in place (self-cutting screws) later using max. 1 Nm. Attach the switch box to the wall as shown using the 4 wood screws M3.5x30. The wood screws, plastic dowels and a drilling template are included.

1. Hinge (2x)
2. Plastic dowel (5x25 mm) (4x)
3. Slotted head wood screw M3.5x30 (4x)
4. Cover screws max. 1 Nm (4x)

Note:
See chapter 4.4 for cable lengths
3. Installation and Assembly

3.2 Installation of sensor and sensor bracket

1. Place the drilling template on the outside of the outlet structure and drill 2 x Ø 4 mm holes (top two holes!).
2. Place the drilling template on the inside of the outlet structure and fix in place from the outside (see 3).
3. Put the upper and lower sections of the sensor bracket together and screw the pipe clamps to the sensor bracket.
4. Screw the sensor bracket to the outlet structure using a torque of 1 Nm and clip the sensor in place (see page 10).
### 3. Installation and Assembly

#### 3.3 Installation dimensions of sensor

<table>
<thead>
<tr>
<th>free standing</th>
<th>Article No.</th>
<th>NS</th>
<th>Distance between the upper edge of the lower “finger” and the lower edge of the outlet (water line)</th>
<th>Drill holes in drilling template</th>
<th>Alarm level = max. grease layer thickness in cm</th>
<th>Recommended preliminary alarm level in cm (= 2/3 of the max. storage volume)</th>
<th>max. sludge layer in cm (= 50% of sludgetrap volume)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EURO &quot;G&quot;</strong></td>
<td>93002</td>
<td>2</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>23</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>93004</td>
<td>4</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>24</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>93007</td>
<td>7</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>27</td>
<td>18</td>
<td>30</td>
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<tr>
<td></td>
<td>93010</td>
<td>10</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>24</td>
<td>16</td>
<td>27</td>
</tr>
<tr>
<td><strong>EURO &quot;D&quot;</strong></td>
<td>93002.00 / D1</td>
<td>2</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>23</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>93004.00 / D1</td>
<td>4</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>24</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>93007.00 / D1</td>
<td>7</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>27</td>
<td>18</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>93010.00 / D1</td>
<td>10</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>24</td>
<td>16</td>
<td>27</td>
</tr>
<tr>
<td><strong>EURO &quot;DS&quot;</strong></td>
<td>93002.50 und .00 / DS1</td>
<td>2</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>23</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>93004.50 und .00 / DS1</td>
<td>4</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>24</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>93007.50 und .00/ DS1</td>
<td>7</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>27</td>
<td>18</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>93010.50 und .00 / DS1</td>
<td>10</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>24</td>
<td>16</td>
<td>27</td>
</tr>
<tr>
<td><strong>EURO E+S &quot;M&quot;</strong></td>
<td>93002.50 und .00 / M1</td>
<td>2</td>
<td>50 cm</td>
<td>Top two drill holes</td>
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<td>15</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>93004.50 und .00 / M1</td>
<td>4</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>24</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>93007.50 und .00 / M1</td>
<td>7</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>27</td>
<td>18</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>93010.50 und .00 / M1</td>
<td>10</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>24</td>
<td>16</td>
<td>27</td>
</tr>
<tr>
<td><strong>EURO E+S &quot;PV&quot;</strong></td>
<td>93002.50 und .00 / P1</td>
<td>2</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>23</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>93004.50 und .00 / P1</td>
<td>4</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>24</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>93007.50 und .00 / P1</td>
<td>7</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>27</td>
<td>18</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>93010.50 und .00 / P1</td>
<td>10</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>24</td>
<td>16</td>
<td>27</td>
</tr>
<tr>
<td><strong>DIN 4040 &quot;G&quot; rund</strong></td>
<td>98201</td>
<td>1</td>
<td>58 cm</td>
<td>Top two drill holes</td>
<td>16</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>98202</td>
<td>2</td>
<td>58 cm</td>
<td>Top two drill holes</td>
<td>16</td>
<td>11</td>
<td>14</td>
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<tr>
<td><strong>DIN 4040 &quot;D&quot; rund</strong></td>
<td>98201.00/D1</td>
<td>1</td>
<td>58 cm</td>
<td>Top two drill holes</td>
<td>16</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>98202.00/D1</td>
<td>2</td>
<td>58 cm</td>
<td>Top two drill holes</td>
<td>16</td>
<td>11</td>
<td>14</td>
</tr>
</tbody>
</table>
3. Installation and Assembly

Installation dimensions of sensor

<table>
<thead>
<tr>
<th>Underground Installation</th>
<th>Article No.</th>
<th>NS</th>
<th>Distance between the upper edge of the lower “finger” and the lower edge of the outlet (water line)</th>
<th>Drill holes in drilling template</th>
<th>Alarm level = max. grease layer thickness in cm</th>
<th>Recommended preliminary alarm level in cm (= 2/3 of the max. storage volume)</th>
<th>max. sludge layer in cm (= 50% of sludgetrap volume)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EURO &quot;G&quot;</strong></td>
<td>93001 / 80 / 120 B und D</td>
<td>1</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>17</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>93002 / 80 / 120 B und D</td>
<td>2</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>17</td>
<td>11</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>93004 / 80 / 120 B und D</td>
<td>4</td>
<td>50 cm</td>
<td>Top two drill holes</td>
<td>17</td>
<td>11</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>93007 / 120 B und D</td>
<td>7</td>
<td>48 cm</td>
<td>Bottom two drill holes</td>
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<td>11</td>
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<td></td>
<td>93010 / 120 B und D</td>
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<td>48 cm</td>
<td>Bottom two drill holes</td>
<td>17</td>
<td>11</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>93015 / 120 B und D</td>
<td>15</td>
<td>56 cm</td>
<td>Bottom two drill holes</td>
<td>17</td>
<td>11</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>93020 / 120 B und D</td>
<td>20</td>
<td>56 cm</td>
<td>Bottom two drill holes</td>
<td>17</td>
<td>11</td>
<td>31</td>
</tr>
<tr>
<td><strong>DIN 4040 &quot;G&quot;</strong></td>
<td>98201 / 00 / 80 / 120 B und D</td>
<td>1</td>
<td>58 cm</td>
<td>Bottom two drill holes</td>
<td>16</td>
<td>11</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>98202 / 00 / 80 / 120 B und D</td>
<td>2</td>
<td>58 cm</td>
<td>Bottom two drill holes</td>
<td>16</td>
<td>11</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>98204 / 00 / 80 / 120 B und D</td>
<td>4</td>
<td>58 cm</td>
<td>Bottom two drill holes</td>
<td>16</td>
<td>11</td>
<td>54</td>
</tr>
</tbody>
</table>

For further articles, please contact KESSEL Customer Services (Phone +49 (0) 8456 / 27462)

**Note:** After installation, fill the grease separator completely with water, check the installation height and correct if necessary! If mechanical correction is not possible, carry out change in “Parameters” (chapter 8.5.1). The parameters are password-protected – please contact KESSEL Customer Services. (Phone +49 (0) 8456/27462).
3. Installation and Assembly

3.4 Installation suggestion

Illustration shows free-standing grease separator Euro NS 2

* To avoid odour pollution, fasten the cable screw connection tightly.
3. Installation and Assembly

The sensor must be attached (approx. 60° angle) in such a way that there is no strutting between the two “fingers.”

Do not lay the cable under tension.
3. Installation and Assembly

During ground-moving work, a PE-HD cable conduit DN 40 (outer dia. 50 mm) must be laid. For this purpose, the tank must be scored using a 60 mm saw cap. The connection distance between separator and switch unit must be kept as short as possible. Unnecessary changes of direction, particularly ones at angles greater than 45° must be avoided. The cable conduit must have a continuous gradient to the separator. Condensation inside the cable conduit can be minimised through an airtight seal on the conduit on the switch unit side. A cable pull wire can be included for any later cable installation. The cable can be extended to a max. 30 m. When the cable is drawn into the conduit to the switch unit, the cable screw connection at the conduit cover must be tightened firmly. Then the union nut must be fixed on the end of the pipe.
3. Installation and Assembly

The enclosed sticker serves as a reminder for the disposer, in order to avoid damage to the sensor during disposal.

The sticker must be attached as follows:

**Free-standing grease separator**
At eye level on the outside of the tank

**Grease separator for underground installation**
On the inside of the attachment piece

**Note:** Draw the respective disposers’ attention to the sensor!
4. Electrical connection

4.1 External signal generator
The external signal generator (order no. 20162) for transmitting the acoustic warning to other rooms can be connected if required.

4.2 Shortening the sensor cables
The sensor cables can be shortened if required. We only recommend subsequently tin-plating the wire ends. When cable end sleeves are used, care must be taken that the connection terminals are designed for a max. cross-section of 2.5 mm². This cross-section must not be exceeded.

4.3 Potential-free switch contact
4. Electrical connection

4.4 Installation / cable connection
The connection cables must be connected exactly according to the connection diagram. To do this, first pierce the cable screw connections using a screwdriver (fig. a), insert the cable (fig. b) and connect up (fig. c). Then the nut on the cable screw connection can be tightened by hand (fig. d).

The technical data must be heeded during connection of the potential-free switch contact.

The seals on the cable screw connections that are not used, i.e. that no cables are routed through, must not be pierced. They are used to seal the housing.

Important: All the cables connected to the electrical switch unit must be fixed in place using suitable measures (e.g. cable ties) so that they do not cause a hazard in the 1-error case, i.e. if a connection becomes loose. The sensor cable must be routed separately from the mains cable to avoid perturbation.
**Possibilities of professional cable extension on site (IP 68)**

The SonicControl cable is ten metres long. On site, this cable can be extended by a qualified electrician up to max. 30 metres without any change in cross-section being necessary. If the cable is extended to more than 30 metres, proper function can no longer be guaranteed since the induction forces which occur can lead to interference.

SonicControl probe extension to max. 30 metres 0,75 mm²

**Note:**
The regulations set out by the directive VDE 0100 must be heeded. The switch unit must not be installed in potentially explosive areas. The 510 m cable can be extended on site to up to 30 m. If the cable is routed in a cable channel with cables from other frequency-controlled units, a shielded cable has to be used!

Fig. 1: Crimp cable extension with butt joint
Fig. 2: Shell is placed around the cable, both shell ends are sealed
Fig. 3: Cast the shell with prepared casting resin
Fig. 4: Final state with sealing plug

Individual parts on request
4. Electrical connection

1. Display
2. Movement keys / direction keys for moving through the program menu
3. Enter key/OK key
4. Back key/ESC key
5. Pilot lamp indicating readiness for operation
6. Pilot lamp for malfunction message
7. Mains power supply cable
8. Modem connection
9. Connection for ultrasonic sensor
10. Connection options for external signal generator
11. Connecting socket for potential-free switch contact
4. Electrical connection

4.5 Connection diagram

NETZ
Mains
Réseau
230VAC 50Hz

L N PE
NETZ

X1

X3

X4

X5

ALARM

POTENTIALFREIER KONTAKT
Potential free switch contact
Connexion libres de contact
max: 42V 0.5A

SCHWIMMER
flosster
flotteur
230V 50Hz

Sensor
Sensible
Sensor

395-008 09/11
5. Operation

5.1 Getting the system ready for operation
Plug the mains plug of the control unit into the socket. The system will initialise automatically. During initial initialisation of the system, the control unit requests four basic settings.
1. Language
2. Date/time
3. Type of system*
4. Type of grease separator*

Selection using
Correct enter necessary for measuring

Fixed in system memory by pressing “OK”
After setting 1 to 4.
Switch unit loads program memory
Start operating mode
System is ready for operation

5.2 Operator's duties
Checking
- for transport or installation damage
- for structural defects of all electrical and mechanical components for seat and function
- the cable connections

Customer instruction based on the installation and operating instructions
- Go through installation and operating instructions with the customer
- System operation (explaining and describing)
- Explanation to the customer about the operator's duties
- Remind about regular servicing (see chapter 6)

5.3 Instruction / handover
The chapter "Safety instructions" must be heeded (page 4)!
Commissioning is carried out by a specialised firm or by an authorised KESSEL agent (at an additional charge). The following persons should be present for the handover:
- Person authorised to perform the acceptance on behalf of the building owner
- Specialised firm

In addition, we recommend the participation of operating personnel/operator and the waste disposal contractor.
Summary of instruction:
- Get the system ready for operation
- Check the system
- Instruction based on the installation and operating instructions
- Preparation of the handover certificate (see chapter 13)

> Once instruction is completed, the system must be made ready for operation.

* see page 29
6. Inspection and Maintenance

Please heed the safety instructions in chapter 1.
The switch unit must be completely disconnected from the mains for cleaning. When replacing the batteries, use Mignon AA 1200 mAh. Repairs may only be carried out by the manufacturer.
The switch unit does not require any maintenance.
The connection cables must be checked for damage. If any damage can be detected, the system must be put out of operation immediately.
The sensor has to be cleaned at regular intervals.

Every time disposal takes place the sensor must be cleaned with warm/hot water*. When a high-pressure jet cleaner is used, maintain a safe distance of 30 cm.
The sensor does not have to be removed for cleaning.

* In the case of KESSEL M and PV grease separator systems, cleaning can wait until the next servicing date since the separator is automatically cleaned with warm water. If necessary (heavy sensor soiling) carry out cleaning every time disposal is carried out.
7. Errors and Malfunction

Please heed the safety instructions in chapter 1.

7.1 Incident display (only in the log book):

<table>
<thead>
<tr>
<th>Incident display</th>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>First initialisation</td>
<td>First initialisation</td>
<td>-</td>
</tr>
<tr>
<td>Parameters changed</td>
<td>Parameters have been changed</td>
<td>-</td>
</tr>
<tr>
<td>Type of system changed</td>
<td>Type of system has been changed</td>
<td>-</td>
</tr>
<tr>
<td>Servicing</td>
<td>Servicing date has been entered</td>
<td>-</td>
</tr>
<tr>
<td>Manual mode</td>
<td>Manual mode has been entered</td>
<td>-</td>
</tr>
<tr>
<td>Readout log book</td>
<td>Log book has been read out</td>
<td>-</td>
</tr>
<tr>
<td>Close down switch unit</td>
<td>Switch unit has been closed down</td>
<td>-</td>
</tr>
<tr>
<td>Acknowledge acoustic alarm</td>
<td>Acoustic alarm has been acknowledged</td>
<td>-</td>
</tr>
<tr>
<td>Acknowledge fault</td>
<td>Fault has been acknowledged</td>
<td>-</td>
</tr>
<tr>
<td>Default settings</td>
<td>Reset to default settings</td>
<td>-</td>
</tr>
<tr>
<td>Sensor entry 01</td>
<td>Problem with the sensor system</td>
<td>Contact Customer Services</td>
</tr>
<tr>
<td>Sensor entry 02</td>
<td>Problem with the sensor system</td>
<td>Contact Customer Services</td>
</tr>
<tr>
<td>Sensor entry 03</td>
<td>Problem with the sensor system</td>
<td>Contact Customer Services</td>
</tr>
<tr>
<td>Sensor entry 04</td>
<td>Problem with the sensor system</td>
<td>Contact Customer Services</td>
</tr>
<tr>
<td>Sensor entry 05</td>
<td>Problem with the sensor system</td>
<td>Contact Customer Services</td>
</tr>
<tr>
<td>Sensoreintrag 06</td>
<td>Problem with the sensor system</td>
<td>Contact Customer Services</td>
</tr>
</tbody>
</table>

KESSEL Customer Services Tel. +49 (0)8456/27462
### 7. Errors and Malfunction

#### 7.2 Fehleranzeige:

<table>
<thead>
<tr>
<th>Incident display</th>
<th>Fault</th>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRE-ALARM layer thickness</td>
<td>Flashing (alarm)</td>
<td>Depth of grease layer for Pre-alarm level has been reached (see 3.3)</td>
<td>Heed depth of grease height and inform the disposer if appropriate</td>
</tr>
<tr>
<td>No rest phase detected</td>
<td>Flashing (alarm)</td>
<td>Measurement takes place during operating phases (inaccuracies possible)</td>
<td>Check measuring range in the Parameters menu item and set again if necessary</td>
</tr>
<tr>
<td>ALARM layer thickness</td>
<td>Acoustic signal and flashing</td>
<td>Maximum grease layer thickness has been reached</td>
<td>Inform the disposer</td>
</tr>
<tr>
<td>ALARM temperature</td>
<td>Acoustic signal and flashing</td>
<td>Inlet temperature too high (heed standard requirements when setting the level)</td>
<td>Reduce temperature of inlet water</td>
</tr>
<tr>
<td>Battery voltage too high</td>
<td>Acoustic signal and flashing</td>
<td>Battery contact error</td>
<td>Check battery polarity and seat</td>
</tr>
<tr>
<td>Battery voltage too low</td>
<td>Acoustic signal and flashing</td>
<td>Battery defective or service life exceeded</td>
<td>Replace the battery</td>
</tr>
</tbody>
</table>
| Mains failure                 | Acoustic signal and flashing ; Power LED is flashing | - The system is currentless  
- The display is defective | - Check pre-fuse and / or RCD  
- Call Customer Services       |
### 7. Errors and Malfunction

<table>
<thead>
<tr>
<th>Incident display</th>
<th>Fault</th>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
</table>
| Communication error | Acoustic signal and flashing | Faulty modem reception | Step 1: Check basic reception possibility;  
Step 2: If no reception is possible then a modem cannot be used;  
if reception is basically possible, replace the modem |

| Sensor fault 01 | Acoustic signal and flashing | Problem with the sensor system | Contact Customer Services |
| Sensor fault 02 | Acoustic signal and flashing | Problem with the sensor system | Contact Customer Services |
| Sensor fault 03 | Acoustic signal and flashing | Problem with the sensor system | Contact Customer Services |
| Sensor fault 04 | Acoustic signal and flashing | Problem with the sensor system | Contact Customer Services |
| Sensor fault 05 | Acoustic signal and flashing | Problem with the sensor system | Contact Customer Services |
| Sensor fault 06 | Acoustic signal and flashing | Problem with the sensor system | Contact Customer Services |
| Sensor fault 07 | Acoustic signal and flashing | Problem with the sensor system | Contact Customer Services |
| Sensor fault 08 | Acoustic signal and flashing | Problem with the sensor system | Contact Customer Services |

KESSEL Customer Services Tel. +49 (0)8456/27462
## 7. Errors and Malfunction

### 7.3 General faults:

<table>
<thead>
<tr>
<th>Recognised fault</th>
<th>Fault</th>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deviation between the grease layer depth in the inspection window and the measured depth of grease layer</td>
<td>Faulty function caused by faulty measurement</td>
<td>- Faulty sensor installation</td>
<td>- Tighten the cable a little and then tighten the screw connection by hand</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Positioning during installation</td>
<td>- Take the type of separator into account</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Faulty initial initialisation</td>
<td>- Re-calibration of the sensor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Dirt deposited on the sensor</td>
<td>- Check the position of the sensor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Sensor is in the blind spot</td>
<td>- Set the type of grease</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Grease separator type / and/or system type not set correctly</td>
<td>- Clean the sensor</td>
</tr>
<tr>
<td>Text message cannot be sent and/or remote servicing is not possible</td>
<td>Faulty function of remote servicing</td>
<td>Faulty modem reception</td>
<td>Step 1: Check basic reception possibility;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Step 2: If no reception is possible, then a modem cannot be used; if reception is basically possible, replace the modem</td>
</tr>
</tbody>
</table>
# 7. Errors and Malfunction

## 7.4 System faults

<table>
<thead>
<tr>
<th>Recognised fault</th>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour pollution</td>
<td>Leak in the cable duct through faulty installation</td>
<td>Tighten the cable screw connection in the tank wall so that it is odour-proof (see the operating instructions of your grease separator as well)</td>
</tr>
<tr>
<td>Water in the service room</td>
<td>Leak in the cable duct through faulty installation</td>
<td>Tighten the cable screw connection in the tank wall so that it is “odour”-proof</td>
</tr>
</tbody>
</table>
8. Switch unit

8.1 Menu guidance
The control unit's menu navigation is subdivided into the system information as well as three different main menu items. The background lighting is activated if one of the control keys is pressed once.

**OK key**    Skip to the next higher level
**ESC key**:    Skip to the next lower level
**Navigation within a level**

**Alarm key**    The acoustic signal can be acknowledged by pressing this key once..
If the fault has been eliminated, the visual fault can also be acknowledged by pressing the alarm key once more.

If the fault has not been eliminated, the acoustic alarm is triggered again when the alarm key is pressed again.

In case of a mains power failure, the system is not ready for operation. The control unit switches to stand-by mode (battery operation). This becomes noticeable by means of an acoustic and visual alarm. The acoustic alarm can be acknowledged by pressing the alarm key. Stand-by mode is maintained for at least 72 hours. Afterwards, the control unit switches off automatically. If the mains connection is re-established within one hour, the program will automatically continue with the last program phase. If this is not the case, the device re-initialises itself when the mains connection returns (programming already carried out remains). This can also be carried out manually by prolonged pressing of the alarm key.

**Note:**
Certain menus are password-protected. This serves to protect the system against inappropriate use.
If you have any questions, please contact KESSEL Customer Services (Phone +49 (0) 8456 / 27462)

8.2 System menu

![System menu diagram](image)
8. Switch unit

8.3 Information menu

8.3.1 Operating hours
Display of all system operating times.

8.3.2 Log book
Chronological display of incidents and faults (see also chapter 7 “Incidents and faults / remedial measures”)
All changes made to the settings are saved at this point.

8.3.3 Control unit type
Display of system time, grease separator type, language and software status.

8.3.3 Servicing date
Display of the next necessary and last performed servicing.
Note: Data are only available if these have been stored in the “Settings” menu by the servicing partner.

8.3.5 Current measured values
Pressing the OK key carries out a measurement of the current grease layer thickness.

8.3.6 Parameters
Display of all set control parameters of the system It is not possible to change the parameters in this menu.

8.3.7 Measured data memory
Display of the last layer thickness and temperature stored (max. 400 values).

8.3.8 Disposal
Display of details of the last disposal carried out (if stored)
8. Switch unit

8.4 Servicing menu

8.4.1 Manual mode
Manual operation overrides automatic operation.

8.4.2 Automatic test mode

8.4.3 Servicing date
Entry of the last servicing to be carried out and the next servicing date by the servicing partner.

8.4.4 Disposal date
Entry of the last disposal carried out (e.g. by the disposal partner)
8. Switch unit

8.5 Settings menu

8.5.1 Parameters
Changes to default parameter settings (refer also to 3.3)
Note: Every change is immediately accepted when the OK key is pressed. In addition, on quitting this menu it is possible to save these values in the profile memory under a separate name.

8.5.2 Profile memory
Loading of the values accepted on initialisation and of the values added under a new name (see 8.5.1).

8.5.3 Date/time
Setting the current date and time.

8.5.4 Type of system
Selection of the average grease content occurring and type of grease.

8.5.5 Type of grease separator
Selection of the type of grease separator.

8.5.6 Language
Display / change the language.

8.5.7 Communication
Input / change of the station name, the device number, the modem type, the PINS and the number of the mobile phone to which possible malfunctions can be sent by text message (for a detailed description see separate operating instructions).

8.5.8 Sensors
Sensor address assignment.

8.5.9 Reset
Reset the switch unit to the default setting (operating hours are not reset).
## 9. Technical data

### General technical data

<table>
<thead>
<tr>
<th>Specification</th>
<th>Specification Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing dimensions (L x W x H)</td>
<td>180 x 200 x 70 mm</td>
</tr>
<tr>
<td>Weight of switch unit</td>
<td>approx 1 kg</td>
</tr>
<tr>
<td>Permissible temperature range</td>
<td>0 bis 50 °C</td>
</tr>
<tr>
<td>Mains standby (ready for operation)</td>
<td>14 mA</td>
</tr>
<tr>
<td>Mains current in operation</td>
<td>35 mA</td>
</tr>
<tr>
<td>Protective class</td>
<td>I</td>
</tr>
<tr>
<td>Type of protection</td>
<td>IP 54</td>
</tr>
<tr>
<td>Electrical connections suitable for all copper conductors</td>
<td>0,08 - 2,5 mm</td>
</tr>
<tr>
<td>Cable sheath diameter</td>
<td>5 - 9 mm</td>
</tr>
</tbody>
</table>

### Supply

<table>
<thead>
<tr>
<th>Specification</th>
<th>Specification Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage</td>
<td>230 V AC 1~</td>
</tr>
<tr>
<td></td>
<td>50 Hz ± 10% L / N</td>
</tr>
<tr>
<td>Mains connection</td>
<td>Safety plug on the switch unit with 1.4 m connection cable</td>
</tr>
<tr>
<td>Pre-fuse required</td>
<td>max. 16 A (provide on installation side), all-pole main switch in the supply cable</td>
</tr>
</tbody>
</table>

### Inputs

| Sensor input                              | SonicControl sensor input                     |

### Outputs

| Potential-free switch contact             | • Changeover contact: centre contact,         |
| (Artikel-Nr. 80072)                      | • Make contact; break contact                 |
|                                           | • max. 42 VAC / 0.5 A                        |
|                                           | • With fuse protection within device         |
| Option: Signal generator                  | With protective cut-off for inductive load within devicet |
| (Artikel-Nr. 20162)                      | Connection possibility for an external signal generator |
10. Accessories

<table>
<thead>
<tr>
<th>Order-Nr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Control unit</td>
</tr>
<tr>
<td>395-005</td>
</tr>
<tr>
<td>2. Ultrasonic sensor</td>
</tr>
<tr>
<td>395-004</td>
</tr>
<tr>
<td>3. Duct set for installation in the ground</td>
</tr>
<tr>
<td>917822</td>
</tr>
</tbody>
</table>
EC DECLARATION OF CONFORMITY

According to the Low Voltage Guidelines 2006/95/EG, Electromagnetism Guidelines 2004/108/EG

KESSEL AG, Bahnhofstraße 31, D-85101 Lenting

Herewith we declare, that the product

KESSEL- SonicControl
917821

is in agreement with


Lenting, 8.12.2009

A. Kessel
Managing Board

E. Thiemt
Managing Board
12. Guarantee

1. In the case that a KESSEL product is defective, KESSEL has the option of repairing or replacing the product. If the product remains defective after the second attempt to repair or replace the product or it is economically unfeasible to repair or replace the product, the customer has the right to cancel the order / contract or reduce payment accordingly. KESSEL must be notified immediately in writing of defects in a product. In the case that the defect is not visible or difficult to detect, KESSEL must be notified immediately in writing of the defect as soon as it is discovered. If the product is repaired or replaced, the newly repaired or replaced product shall receive a new warranty identical to that which the original (defective) product was granted. The term defective product refers only to the product or part needing repair or replacement and not necessarily to the entire product or unit. KESSEL products are warranted for a period of 24 month. This warranty period begins on the day the product is shipped form KESSEL to its customer. The warranty only applies to newly manufactured products. Additional information can be found in section 377 of the HGB.

In addition to the standard warranty, KESSEL offers an additional 20 year warranty on the polymer bodies of class I / II fuel separators, grease separators, inspection chambers, wastewater treatment systems and rainwater storage tanks. This additional warranty applies to the watertightness, usability and structural soundness of the product.

A requirement of this additional warranty is that the product is properly installed and operated in accordance with the valid installation and user's manual as well as the corresponding norms / regulations.

2. Wear and tear on a product will not be considered a defect. Problems with products resulting from improper installation, handling or maintenance will also be considered a defect.

Note: Only the manufacturer may open sealed components or screw connections. Otherwise, the warranty may become null and void

01.06.2010
### 13. Handover certificate

<table>
<thead>
<tr>
<th>Description</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type description *</td>
<td></td>
</tr>
<tr>
<td>KESSEL order number *</td>
<td></td>
</tr>
<tr>
<td>Date of manufacture *</td>
<td>(* according to type plate/invoice)</td>
</tr>
<tr>
<td>Object description / system operator</td>
<td></td>
</tr>
<tr>
<td>Planner</td>
<td></td>
</tr>
<tr>
<td>Adress / Telephone</td>
<td></td>
</tr>
<tr>
<td>Planner</td>
<td></td>
</tr>
<tr>
<td>Adress / Telephone</td>
<td></td>
</tr>
<tr>
<td>Installation company involved</td>
<td></td>
</tr>
<tr>
<td>Adress / Telephone</td>
<td></td>
</tr>
<tr>
<td>Person authorised to perform the acceptance</td>
<td></td>
</tr>
<tr>
<td>Adress / Telephone</td>
<td></td>
</tr>
<tr>
<td>Person responsible for handover</td>
<td></td>
</tr>
<tr>
<td>Other remarks</td>
<td></td>
</tr>
</tbody>
</table>

The initial installation and instruction listed was carried out in the presence of the person authorised to perform the acceptance and the system operator.

<table>
<thead>
<tr>
<th>Place, date</th>
<th>Signature of authorised person</th>
<th>Signature of system operator</th>
</tr>
</thead>
</table>
Übergabeprotokoll (Auszuführung für das einbauende Unternehmen)

☐ Die Inbetriebnahme und Einweisung wurde im Beisein des Abnahmeberechtigten und des Anlagenbetreibers durchgeführt.

☐ Der Anlagenbetreiber/Abnahmeberechtigte wurde auf die Wartungspflicht des Produktes gemäß der beiliegenden Bedienungsanleitung hingewiesen.

☐ Die Inbetriebnahme und Einweisung wurde nicht durchgeführt

Dem Auftraggeber/Inbetriebnehmer wurden folgende Bauteile und/oder Produktkomponenten übergeben**:


Die Inbetriebnahme und Einweisung wird durchgeführt durch (Firma, Adresse, Ansprechpartner, Tel.):


Die exakte Terminabstimmung der Inbetriebnahme/Einweisung wird durch den Anlagenbetreiber und Inbetriebnehmer durchgeführt.

Ort, Datum Unterschrift Abnahmeberechtigter Unterschrift Anlagenbetreiber Unterschrift einbauendes Unternehmen

35
Everything for Drainage

Solutions from a single source

- Backwater valves and cleanouts
- Volatile liquid traps
- Lifting stations, pumps, warning and control units
- Rainwater management systems
- Grease, starch and oil / fuel separators
- Inspection chambers
- Custom projects for industrial applications
- Polymer pipe fittings
- Stainless steel drains and channels