Portable Sampler
MAXX
TP5 W / P / C

TP5 W

TP5 P
(pic. with optional Box)

TP5 C
Access code for programming and settings

Password: 6299

Your Password:
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### Section 1 Specifications

These are subject to change without notice.

<table>
<thead>
<tr>
<th></th>
<th>TP5 W</th>
<th>TP5 P</th>
<th>TP5 C</th>
<th>TP5 P</th>
<th>TP5 C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without active cooling</td>
<td>With active cooling</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Electrics

<table>
<thead>
<tr>
<th>Power supply, sampler compartment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>With integrated battery</td>
<td>–</td>
</tr>
<tr>
<td>With integrated power pack</td>
<td>110–230 V/50–60 Hz.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power supply, bottle compartment</th>
<th>12 V (DC)</th>
<th>or</th>
</tr>
</thead>
<tbody>
<tr>
<td>With integrated power pack</td>
<td>–</td>
<td>110 V/60 Hz (optional) or 230 V/50 Hz (optional)</td>
</tr>
</tbody>
</table>

| Rating                           | 16 A |
| Power consumption                | approx. 30 VA | approx. 50 VA |

#### Environment

<table>
<thead>
<tr>
<th>Medium temperature</th>
<th>0 to 40°C [32 to 104 °F]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient temperature</td>
<td>0 to 50 °C [32 to 122 °F]</td>
</tr>
<tr>
<td>Delivery height</td>
<td>&lt; 6 m [20 ft], optional &lt; 8 m [26 ft]</td>
</tr>
</tbody>
</table>

#### General specifications

| Coolant                          | R134a |
| Maintenance requirements         | Maintenance-free |

#### Weight

<table>
<thead>
<tr>
<th>Top part</th>
<th>approx. 6.6 kg</th>
<th>approx. 10 kg</th>
<th>approx. 14.3 kg</th>
<th>approx. 10 kg</th>
<th>approx. 14.3 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottle compartment</td>
<td>–</td>
<td>approx. 11 kg</td>
<td></td>
<td>approx. 25 kg</td>
<td></td>
</tr>
<tr>
<td>Complete</td>
<td>–</td>
<td>approx. 22 kg</td>
<td>approx. 25 kg</td>
<td>approx. 35 kg</td>
<td>approx. 40 kg</td>
</tr>
</tbody>
</table>

#### Dimensions (W x H x D)

<table>
<thead>
<tr>
<th>Top part</th>
<th>475 x 362 x 222 [18.7 x 14.3 x 8.7]</th>
<th>445 x 442 x 222 [17.5 x 17.4 x 8.7]</th>
<th>510 x 390 x 468 [20 x 15.4 x 18.4]</th>
<th>445 x 442 x 222 [17.5 x 17.4 x 8.7]</th>
<th>510 x 390 x 468 [20 x 15.4 x 18.4]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottle compartment</td>
<td>–</td>
<td>510 x 534 x 430 [20 x 21 x 16.9]</td>
<td>550 x 775 x 468 [21.7 x 30.5 x 18.4]</td>
<td>–</td>
<td>550 x 1028 x 468 [21.7 x 40.5 x 18.4]</td>
</tr>
<tr>
<td>Complete</td>
<td>–</td>
<td>510 x 942 x 430 [20 x 37 x 16.9]</td>
<td>510 x 787 x 468 [20 x 31 x 18.4]</td>
<td>510 x 970 x 468 [20 x 38.2 x 18.4]</td>
<td>510 x 1210 x 468 [20 x 47.6 x 18.4]</td>
</tr>
<tr>
<td>With cap opened (55°)</td>
<td>–</td>
<td>510 x 970 x 468 [20 x 38.2 x 18.4]</td>
<td>–</td>
<td>510 x 1210 x 468 [20 x 47.6 x 18.4]</td>
<td>–</td>
</tr>
</tbody>
</table>

#### Certification

| Certification | CE, sampling in accordance with ISO 5667-2/3-10 |
Specifications

1.1. Dimension

TP5 W

TP5 P

TP5 C

W x H x D: see the specification table
Section 2 General Information

2.1 Safety information

Please read this entire manual before unpacking, setting up, or operating this equipment. Pay attention to all danger and caution statements. Failure to do so may result in personal injury or damage to the instrument.

To ensure that the protection provided by this equipment is not impaired, do not use or install this equipment in any manner other than that specified in this manual.

2.1.1 Use of hazard information

**DANGER**
Indicates a potentially or imminently hazardous situation which, if not avoided, will result in death or serious injury.

**WARNING**
Indicates a potentially or imminently hazardous situation that, if not avoided, could result in death or serious injury.

**CAUTION**
Indicates a potentially or imminently hazardous situation that could result in minor or moderate injury.

*Important note:* Information that requires special emphasis.

*Note:* Information that supplements points in the main text.

2.1.2 Precautionary labels

Read all labels and tags attached to the instrument. Failure to do so may result in personal injury or damage to the instrument. A symbol, if noted on the instrument, will be included with a danger or caution statement in the manual.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Symbol]</td>
<td>This symbol, if noted on the instrument, references the user manual for operation and/or safety information.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>This symbol, when noted on a product enclosure or barrier, indicates that a risk of electrical shock and/or electrocution exists.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>This symbol may appear on the product and indicates the need for protective eye wear.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>This symbol may appear on the product and identifies the connection point for the protective ground.</td>
</tr>
</tbody>
</table>
2.2 General Information

2.2.1 Areas of application

The equipment is used for sampling aqueous liquids with a temperature of 0 °C to 50 °C (refer to Section 1 Specifications, page 5).

2.2.2 Functional description

The equipment provides temporary storage for liquids of a specified volume so that they can be analyzed.

2.3 Product contents

The equipment is supplied with a tube and brief operating instructions. Depending on the model, the equipment is also supplied with a plug (TP5 W/active cooled bottle compartment), tension belt (TP5 P) or an optional charger (TP5 P/TP5 C). If you require further information, you can order the operating instructions (refer to Section 6 Replacement parts and accessories, page 47) from the manufacturer or you can download them from the Internet.
Figure 3 Scope of delivery (TP5 P)

Figure 3a Scope of delivery Option Isobox to TP5 P

Figure 4 Scope of delivery (TP5 C)
Section 3 Installation

**DANGER**
Only qualified experts should conduct the tasks described in this section.

**DANGER**
Select an appropriate installation location for the instrument.

Plan out the mechanical mount before positioning poles or drilling holes. Make sure the mount has a sufficient bearing capacity. The dowels must be selected and authorized according to the condition of the wall. The manufacturer shall accept no liability if the instrument is installed incorrectly.

Plan how to lay cables and tubes and their path in advance. Lay the tubes, data cables and power cables without any bends and so they do not pose a tripping risk.

Do not connect the electrical supply to the mains if the equipment has not been wired and fused correctly.

Sufficiently protect the electrical power supply against short circuits.

For the external power supply, always connect a residual-current circuit breaker (trip current max.: 30 mA) between the mains and the system.

If the equipment is to be installed outdoors, switch the overload protection between mains and system.

Products intended by the manufacturer for outdoor use offer a higher level of protection against the penetration of liquids and dust. If these products are connected to a mains outlet with a cable and plug rather than a permanently connected cable, the plug and outlet are much more susceptible to liquid and dust penetration. The operator must sufficiently protect the plug and outlet against liquid and dust penetration in accordance with local safety regulations. If the instrument is to be used outdoors, it must be connected to a suitable outlet with a protection type of at least IP44 (splash protection).
3.1 Mechanical Installation

DANGER
Select an appropriate installation location for the instrument. Plan out the mechanical mount before positioning poles or drilling holes. Make sure the mount has a sufficient bearing capacity. The dowels must be selected and authorized according to the condition of the wall. The manufacturer shall accept no liability if the instrument is installed incorrectly.
Plan how to lay cables and tubes and their path in advance. Lay the tubes, data cables and power cables without any bends and so they do not pose a tripping risk.

Note: For information on installation with optional accessories, refer to the relevant installation instructions.

3.1.1 Required Tools

Figure 5 Required tools (TP5 W)

Figure 6 Required tools (TP5 P und TP5 C)
3.1.2 Installation location (TP5 W)

Select suitable fastening materials (e.g. 6 x 40 mm screws and corresponding dowels) and read all the safety information about installation and mechanical assembly.

Figure 7 Select installation location (TP5 W)

Figure 8 Attach the equipment (TP5 W)
3.1.3 Position (TP5 P und TP5 C)

Figure 9 Select the position (TP5 P und TP5 C)

Figure 10 Position the equipment (TP5 P und TP5 C)
3.1.4 Attach the sampler compartment to the bottle compartment (TP5 P)

![Figure 11 Attach the sampler compartment to the bottle compartment (TP5 P)](image)

3.2 Electrical Connections

**DANGER**

*Only qualified experts should conduct the tasks described in this section.*

**DANGER**

*Do not connect the electrical supply to the mains if the equipment has not been wired and fused correctly.*

*Sufficiently protect the electrical power supply against short circuits.*

*For the external power supply, always connect a residual-current circuit breaker (trip current max.: 30 mA) between the mains and the system.*

*If the equipment is to be installed outdoors, switch the overload protection between mains and system.*

*If the mains plug of the power supply cable is removed, a suitable double-pole one-way switch must be installed immediately next to the display unit with clear labeling for the power supply.*

*Products intended by the manufacturer for outdoor use offer a higher level of protection against the penetration of liquids and dust. If these products are connected to a mains socket with a cable and plug rather than a permanently connected*. 
**3.2.1 Electrical installation**

**3.2.1.1 Prepare the electrical installation**

<table>
<thead>
<tr>
<th>In battery mode</th>
<th>In mains power mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP5 W</td>
<td>Keine Vorbereitung notwendig</td>
</tr>
<tr>
<td>TP5 P</td>
<td>Connect the optional charger to the charge socket on the left-hand side.</td>
</tr>
<tr>
<td>TP5 C</td>
<td>Connect the Y cable as shown in Figure 12.</td>
</tr>
</tbody>
</table>

To connect the equipment to the mains, see Figure 36 Model TP5 C with Y cable and charger on page 31.
3.2.1.2 Wiring diagram

Please note:

- The assignment of the connections in the illustration below
- The cable color of the label on the cable.

Figure 13 Connection plan for the optional signal cable (0069644)
Installation

3.2.2 Installation of the optional bottle compartment with active cooling (TP5 P / TP5 C)

Figure 14 Select the cable for the optional bottle compartment with active cooling (TP5 P/TP5 C)

Figure 15 Connect the optional bottle compartment with active cooling
**Important note:** Blocked air outlets and liquids in the cooling machine or inside the optional bottle compartment with active cooling can damage the equipment. Make sure that the air outlets are always open and that no liquid is able to enter the air outlets.

![Diagram of sample distributor plate and air outlets on the optional bottle compartment with active cooling.](image)

Figure 16 Sample distributor plate and air outlets on the optional bottle compartment with active cooling

*Note:* The housing base on the bottle compartment features numbers so that the individual bottles can be assigned with a number.
3.3 Commission of the equipment

3.3.1 Tube connection

Figure 17 Connect the sample tube connection
Positioning of the tubes according to the following installation diagram.

3.3.2 Set the individual sample volumes

3.3.2.1 Plastic dosing vessel

Figure 19 Unlock the bayonet cap on the plastic dosing vessel
Figure 20 Remove the plastic dosing vessel

V-Probe [ml]

Figure 21 Cut the dosing tube to set the sample volume

= 150 ml
3.3.2.2 Glas-Dosing vessel

Figure 22 Assemble the plastic dosing vessel

Figure 23 Loosen the union nut on the glass dosing vessel
Figure 24 Remove the glass dosing vessel

Figure 25 Cut the dosing tube to set the sample volume
3.3.2.3 Dosing vessel for flow-proportional sampling

Figure 26 Assemble the glass dosing vessel

Figure 27 Calibrate the flow-proportional dosing vessel via the service menu
Figure 28  The flow-proportional dosing vessel can only be used, if there is NO counter pressure
Installation

3.3.3 Remove the top part of the housing (TP5 P)

Figure 29 Remove the top part of the housing (TP5 P)
3.3.4 Remove the top part of the housing (TP5 C)

![Figure 30 Remove the top part of the housing (TP5 C)](image)

3.3.5 Prepare the bottle compartments

![Figure 31 Place the empty bottles into the bottle compartment](image)

**Note:** The sample distributor plate works correctly in all four of its potential positions.

**Note:** The housing base of the bottle compartment features numbers so that the individual bottles can be assigned with a number.
3.3.6 Attach the top part of the housing

Figure 32 Attach the top part of the housing (TP5 P)

Figure 33 Attach the top part of the housing (TP5 C)
3.3.7 Connect the equipment to the mains

Make sure that:
- The equipment has been fully prepared for commissioning
- The data on the type plate corresponds to the data relating to the mains power supply (this applies to TP5 W as well as to TP5 P and TP5 C in connection with the charger and Y plug BM69742)
- The correct plug has been attached or the direct wire has been implemented correctly
- The equipment can be put into operation without any risks

**DANGER**

*Make sure that the power supply, cable (also refer to Figure 14, page 18) and equipment are suitable for use with each other.*
Figure 35 Possible connection configurations (TP5 W)

Figure 36 Model TP5 C with Y cable and charger
3.3.8 Switch on the device

Figure 38 Switch on the device
3.3.9 Adjust the cooling settings for the optional bottle compartment with active cooling (TP5 P / TP5 C)

The manufacturer recommends a settings range of +4 to +15 °C.

Figure 39 Adjust the cooling settings for the optional bottle compartment with active cooling
4.1 Control unit operation

All the equipment functions are software-controlled

4.1.1 Password

Password to program sampler and to change settings is: 6299

4.1.2 Programming

The menu structure resembles the directory structure of a computer hard drive and is divided into main menus and sub menus

4.1.3 Keyboard layout/function

The equipment can be programmed by the operator

![Figure 40 Control panel](image)

The key functions are configured as follows to enable highly intuitive operation:

<table>
<thead>
<tr>
<th>Tabelle 1.1 Key functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display help text</td>
</tr>
<tr>
<td>(in the case of selection fields, the cursor must be placed on the left-hand side)</td>
</tr>
<tr>
<td>Move from one menu item to the next menu selection</td>
</tr>
<tr>
<td>Select the desired menu</td>
</tr>
<tr>
<td>Move within a menu</td>
</tr>
<tr>
<td>Select from within a menu</td>
</tr>
</tbody>
</table>
**Tabelle 1 Tastenfunktion (Fortsetzung)**

<table>
<thead>
<tr>
<th>Action</th>
<th>Key(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirm the selection (automatically marked with a ✓)</td>
<td>Enter-key</td>
</tr>
<tr>
<td>Enter/change values</td>
<td>Arrow key</td>
</tr>
<tr>
<td>Confirm the entered values</td>
<td>Enter-key</td>
</tr>
<tr>
<td>Return to the next superordinate menu level</td>
<td>Back-key</td>
</tr>
<tr>
<td>Enter values</td>
<td>Numeric keypad</td>
</tr>
<tr>
<td>Initialise (Reset) of Display - Press together</td>
<td>Back-key + Enter</td>
</tr>
<tr>
<td>Wakeup sleepmode (press 5 sec. at least)</td>
<td>Back-key</td>
</tr>
<tr>
<td>Restore factory settings (Display = „load factorysettings“) Hold Back-key until boot process is finished</td>
<td>Back-key</td>
</tr>
</tbody>
</table>

**Example: A setting needs to be changed.**
1. Press Enter. The cursor then flashes.
2. Use the arrow keys to move the cursor until it is in the required position.
3. Press Enter. The selection is now confirmed and the program can be started.
Depending on the program range,
• an activity is started or
• the next menu item is automatically selected.

**Note:** The general rule:
If you press Back,
– the activity is cancelled or
– the navigation takes one step back in the menu

### 4.2 Normal operation

#### 4.2.1 Replace the sample bottles
Section 5 Maintenance and cleaning

DANGER

Only qualified experts should conduct the tasks described in this section.

WARNING

Please observe the following points for the use of chemicals and/or waste water:

Wear protective clothing:
- Laboratory coat
- Protective eyewear
- Rubber gloves

5.1 Maintenance work

The sampler is maintenance-free. Thus the operator does not need to carry out any maintenance work.

5.2 Cleaning

5.2.1 Clean the housing and distribution unit (TP5 P–TP5 C)

WARNING!

Manual rotation of the distribution unit can damage the drive. Never rotate the distribution unit manually.

Clean the interior and exterior of the housing with a damp, lint-free cloth. Add commercial household cleaner to the cleaning water as required.

1. Clean the exterior of the housing.
2. Remove the top part as shown in the illustrations Figure 29, Page 27 and Figure 30, Page 28.
3. Loosen the central nut and remove the distribution vat.
4. Clean the distribution vat

5. Attach the distribution vat again and in doing so make sure that the guide pin is positioned in the bore hole.

6. Tighten the central nut by hand again
7. Clean the sample distributor plate on the bottle compartment

Figure 45 Clean the sample distributor plate on the bottle compartment

8. Position the top part back on the bottle compartment as shown in the illustrations. Figure 32, Page 29 and Figure 33, Page 29

5.2.2 Clean the dosing vessel

Figure 46 Release the dosing vessel
Maintenance and cleaning

Figure 47 Remove the dosing vessel

Figure 48 Clean the dosing vessel
5.3 Troubleshooting

If the equipment does not work as required, check the fuse and replace if necessary.

5.3.1 Change the fuse

Open the fuse holder as shown in Figure 50 and replace the defective fuse.
Figure 50 Position of the fuse in the portable sampler

Figure 51 Position of the fuse in the optional bottle compartment with active cooling

If the error is not rectified, please contact the customer service of the manufacturer (refer to Contact information, page 55)
5.4 Instrument decommissioning and storage

1. Remove all liquids and, if necessary, solid matter from the infeed and outfeed lines and bottle compartments and clean as required.

2. Close all active programs.

3. Switch the equipment off.
6.1 Spare parts

<table>
<thead>
<tr>
<th>Description</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacement bottle, glass, 1 L</td>
<td>0030030</td>
</tr>
<tr>
<td>Cap for 1 L glass bottle</td>
<td>0060533</td>
</tr>
<tr>
<td>Replacement bottle, glass, 20 L</td>
<td>0030045</td>
</tr>
<tr>
<td>Replacement bottle, PE, 1 L</td>
<td>0060486</td>
</tr>
<tr>
<td>Cap for 1 L PE bottle</td>
<td>0060488</td>
</tr>
<tr>
<td>Replacement bottle, PE, 25 L (with cap)</td>
<td>0060046</td>
</tr>
<tr>
<td>Replacement bottle, PE, 5 L (with cap)</td>
<td>0060038</td>
</tr>
<tr>
<td>Replacement bottle, PE, 13 L (with cap)</td>
<td>0060045</td>
</tr>
<tr>
<td>Replacement battery  TP5 P</td>
<td>0010012</td>
</tr>
<tr>
<td>Replacement battery TP5 C</td>
<td>0900116</td>
</tr>
</tbody>
</table>
Replacement parts and accessories

Figure 52 Plastic dosing vessel

Plastic dosing vessel
900715

Valve system
900627
Replacement parts and accessories

Figure 53 Glass dosing vessel (350 ml)
## 6.2 Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y cable, power supply</td>
<td>0069742</td>
</tr>
<tr>
<td>Charger IP20 for TP5 P und TP5 C</td>
<td>0900026</td>
</tr>
<tr>
<td>Charger IP65 for TP5 P und TP5 C</td>
<td>0900033</td>
</tr>
<tr>
<td>Signal cable 10 m</td>
<td>0069644</td>
</tr>
<tr>
<td>Charger IP65 for TP5 P und TP5 C</td>
<td>0900033</td>
</tr>
<tr>
<td>RS232 serial data cable</td>
<td>0900021</td>
</tr>
<tr>
<td>PC Software Read Data</td>
<td>0200004</td>
</tr>
<tr>
<td>Tube connection with screw connection</td>
<td>0900300</td>
</tr>
<tr>
<td>Battery for bottle compartment with active cooling (90 Ah)</td>
<td>0010211</td>
</tr>
<tr>
<td>Sample transportation box (without bottles)</td>
<td>0900634</td>
</tr>
<tr>
<td>Replacement cooling battery</td>
<td>0060251</td>
</tr>
<tr>
<td>Transportation trolley</td>
<td>0900802</td>
</tr>
</tbody>
</table>

![Figure 54 Charger IP20](image1)

![Figure 55 Charger IP65](image2)
Figure 56 Transportation trolley (TP5 P/TP5 C)
Chapter 7  Warranty and liability

The manufacturer warrants that the product supplied is free of material and manufacturing defects and undertakes the obligation to repair or replace any defective parts at zero cost.

The warranty period is 12 months from delivery resp. invoice date. Consumables and damage caused by improper handling, poor installation or incorrect use are excluded from this clause.

With the exclusion of the further claims, the supplier is liable for defects including the lack of assured properties as follows: all those parts that, within the warranty period calculated from the day of the transfer of risk, can be demonstrated to have become unusable or that can only be used with significant limitations due to a situation present prior to the transfer of risk, in particular due to incorrect design, poor materials or inadequate finish will be improved or replaced, at the supplier's discretion. The identification of such defects must be notified to the supplier in writing without delay, however at the latest 7 days after the identification of the fault. If the customer fails to notify the supplier, the product is considered approved despite the defect. Further liability for any direct or indirect damages is not accepted.

If instrument-specific maintenance and servicing work defined by the supplier is to be performed within the warranty period by the customer (maintenance) or by the supplier (servicing) and these requirements are not met, claims for damages due to the failure to comply with the requirements are rendered void.

Any further claims, in particular claims for consequential damages cannot be made.

Consumables and damage caused by improper handling, poor installation or incorrect use are excluded from this clause.