1.0 Introduction

1.1 Notes on operating instructions

• These operating instructions contain important notes on how to operate the Hygrotherm safely, correctly and effectively. Therefore, they are intended not only for new operating personnel to be instructed in its use, but also for use as a reference manual. They help to avoid risks, and also to reduce repair costs and down-time. Furthermore, reliability and service-life of the equipment will be increased. For these reasons these operating instructions must always be kept available near the appliance.

Prior to first use please peruse the chapter “Safety advice”, in order to be prepared for any possible dangerous situations. It would be too late during in actual use.

The basic principles are:

Judicious and careful work provides best protection against accidents!

Operational safety and readiness for use depend not only on your capabilities, but also on care and maintenance given to the Hygrotherm. For this reason regular cleaning and service work are a must. Major maintenance and repair work may be carried out only by expert personnel authorised by ATMOS. In case of repairs you should insist that only original spare parts are used. You will then have the warranty that operational safety, readiness for work and the value of your appliance will be preserved.

• The product Hygrotherm bears CE Marking CE-0124 according to the EEC Directive of the council for medical products 93/42/EEC and meets the basic requirements of this guideline. The declaration of conformity will be provided on request on quoting the serial number of the unit.

• The declaration of conformity can be obtained on our website at www.atmosmed.com.

• The quality management system applied at ATMOS has been certified according to international standards EN ISO 9001 and EN ISO 13485.

• Reprints, also in extracts, only with written permission by ATMOS.

Abbreviations / symbols in these operating instructions:

• Indicating a list
  • Subdivision of a list/activity
  The recommended sequence must be followed in each case!

• Indicating particularly important advice!

• Describing the effect of an activity.
1.0 Introduction

1.2 Intended use

**Name:** ATMOS® Hygrotherm

**Main functions:**
Device for the irrigation of the auditory canal

**Med. indications/ application:**
Ear irrigation, cleaning of the ear

**Specification of the main function:**
Produces a jet of water for the ear irrigation at body temperature (37°C) with a flow rate of 400 ml/min for the removal of cerumen.

**Application organ:** Auditory canal to the drumhead

**Application time:**
For the short-term application on patients (max. 60 minutes).

**Application site:**
In clinics and practices for ENT doctors and phoniatricians. The therapy with the ATMOS irrigation devices may only be performed by medical trained staff.

**Contraindications:**
Do not apply to an infected resp. contaminated auditory canal or to a perforated eardrum.

**The product is:**

- X active
- □ not active

**Sterility:**
Not necessary

**Single use product / reprocessing:**
No single use product

1.3 Function

- When removing the irrigation handle from its holder, automatic change into the irrigation mode. Here, the auditory canal can be rinsed with water warmed up to 37°C and a flow of at least 400 ml/min.

1.4 Explanation of symbols

- **⚠** Pay attention to operating instructions!
- **łeś** Type B equipment as to IEC 417
- **°C** Temperature in degree centigrade
- **▲** Increase of setpoint value
- **▼** Decrease of setpoint value
2.0 Safety advice

- The ATMOS Hygrotherm unit is produced according to IEC 601/EN 60601 and listed in the following classes:
  - VDE Class of protection 1
  - Class IIa (EEC 93/42).

- The appliance may be installed and operated only in examination units of ATMOS.

- The Hygrotherm may be used in supervised operation by qualified personnel only who have been authorised by ATMOS and who have been trained for operating the appliance (IEC 601-1/EN 60601-1).

- The mains voltage specified on the type plate must correspond with the data of the power supply system.

- Prior to every application of the equipment make sure that it is technically safe and in proper condition. Damaged leads must be replaced immediately!

- Correct configuration in assembly of country-specific connections:
  - green/yellow: protective conductor (PE)
  - blue: neutral conductor (N)
  - black resp. brown: phase (L)

- The control panel must be well visible to and in reach of the operator.

- Metal parts can be hot!

- Prior to spraying, the water temperature must be checked by the user!

- Switch off main switch of the examination unit after finishing work in practice and close water cock of water supply.

- The ATMOS Hygrotherm may be operated only in rooms used for medical purposes, but not in areas subject to explosion hazards and in oxygen rich environments.

- Additional equipment, which is to be connected to the analog and digital interfaces of the appliance, must provably meet the requirements of relevant EN specifications (for inst. EN 60950 for data processing equipment and EN 60601 for electrical medical appliances). Furthermore, all configurations must satisfy system specification EN 60601-1-1. Whoever connects additional equipment to the signal input or signal output section is a system configuration operator and as such responsible for meeting the requirements of system specification EN 60601-1-1. In case of further questions please contact your local specialist supplier or the technical service.

- The irrigation jet must not get into contact with contaminated material.

- Application of the warm water jet only with tube tip put on!

- Caution to be paid to avoid injury to eardrum when introducing the jet!

- For hygienic reasons jet connections must be changed after each patient. This prevents also retrograde germination of the warm water system.

- Use only for irrigation of auditory canal!

- ATMOS is not liable for personal injury and damage to property if
  - no original ATMOS parts are being used,
  - the advice for use in these operating instructions is not being observed,
  - assembly, new settings, alterations, extensions and repairs have been carried out by personnel not authorised by ATMOS.

- The validity for the enclosed certificate of conformity expires if the customer himself or a third party manipulates the appliance, e.g. with modifications of any kind, by installing non-authorized accessories, removing danger and information signs as well as in case of inappropriate applications.

- Prior to ear rinsing, the user has to control the output pressure, it may not exceed 2.2 bar.

- Please note:
  A medical insulating transformer with earth leakage monitor or any similar safety system acc. to EN 60 601-1 is required, if several devices are connected over one common power supply. The transformer must correspond to the power consumption of all the devices to be connected.

- The flow rate has to be checked after switch on or at least once a day with a measuring cup. The quantity of 500 ml/min may not be exceeded. The water jet has to be straight.
2.1 Important instructions for the maintenance of the hygiene status of warm water irrigation units

For loosening cerumen in the auditory meatus and for the stimulation of the labyrinthine system, ATMOS offers the warm water units **Hygrotherm** (37°C) and **Variotherm plus** (20° - 47°C).

These units heat the drinking water which comes from the household connection to the preselected temperature. Should the following operating instructions not be adhered to, this can lead an increased number of germs in the rinsing water at these temperatures which can in turn lead to sensitive patients being subjected an impairment of their health.

**Requirement for taking into use**

- The water which is provided by the household connection must at least meet the WHO guidelines or the country-specific guidelines for drinking water.

**Connection**

- Fresh water must flow through the wall connection for a period of approx. 1 minute prior to the ATMOS unit being connected.*
- Ensure that the installation is hygienically carried out! Before screwing them into place, disinfect threaded connections with 70 % alcohol.*
- When carrying out maintenance work on parts which come into contact with the water, wear disposable gloves.*
- Carry out thermal cleaning at least 3 times before commissioning.*

* This work is carried out by the ATMOS service technician.

**Running operation**

- Exchange and disinfection required for contact parts such as the jet connection after each patient (prevention of retrograde germification).
- Before use spray off water and check the temperature.

**Service**

- Ensure that the suspended particle filter is hygienically changed (see commissioning) (dispose of filter and carefully clean the filter glass). Ensure that no contact is made with the contaminated parts.
- Depending on the quality of the drinking water available, a biofilm growth cannot be excluded. We, therefore, recommend to test the drinking water quality at regular intervals (acc. to ISO 6222) at the drinking water connection on the unit and on the application part. In case of a significant rise of germs, a biofilm removing process with following disinfection can be carried out.
3.0 Installation and start-up

3.1 Standard delivery

**Quantity**

1  Hygrotherm basic unit
1  Irrigation handle with
   Double-barrelled hose
3  Jet connection short, straight (80 mm)
1  Splash protection
1  Rubber bush for splash protection
2  Three-holes gasket
1  Hose tips for jet connection (30 pcs)
1  Operating instructions

3.2 Illustration

*Fig 1.*

1. Temperature display (double-digit, resolution 1°C), indicates current value
2. Temperature setting
3. Arrow keys up resp. down
3.2 Illustration

Fig. 2. Irrigation handle
1. Handle
2. Connection for double-barrelled hose
3. Three-holes gasket
4. Knurled screw
5. Release lever
6. Valve plunger
7. Jet connection
8. Splash protection
9. Cap
10. Double-barrelled hose

⚠️ The sprayer tube must be exchanged after each patient.
3.0 Installation and start-up

3.3 Connections

3.3.1 Electrical connection

- See operating instructions of the ENT unit.

For connection to the mains supply we recommend a ground fault circuit interrupter!

3.3.2 Connecting a potential balance

- See operating instructions of the ENT unit.

3.3.3 Water connection

- See operating instructions of the ENT unit.

3.3.4 Connecting the irrigation handle

- Insert a "three-holes gasket" (1, fig. 2) in the double-barrelled hose and fix it (10, fig. 2) to the connection of the examination unit.

 thịt Only use "three-holes gaskets" as otherwise correct function of the unit is not guaranteed!

- Open the water-tap of the ENT examination unit.
  Check whether all connections are tight.

3.4 Start-up

- Insert the handle in its holder; the jet must point to reverse side of the unit.

- Switch on the examination unit.

- Automatic display test with digital figures "8 8" and audible signal.

- Automatic activation of the thermal process for reducing bacterial count. Duration: 5 min.

- When the irrigation handle is removed from its holder, the irrigation mode with a temperature of 37°C is activated.

- When the irrigation handle is again inserted in its holder, automatic change into the energy saving mode.
4.0 Operating

When the device is switched on, a segment test is performed. Here all LED light up for a short time. During this time please visually inspect perfect function of the LED.

Prior to caloric stimulation, checking of the water pressure is essential. The required pressure is 2 bar. Danger of overpressure!

ATTENTION:
Please make sure that the water supply module is switched on and that water supply is guaranteed!

4.1 Temperature adjustment

You may use the Hygrotherm at temperatures between 36°C up to 38°C verwenden.

In order to change the set temperature the set button must be kept pressed*. With the arrow keys the set temperature can be selected within 20-47°C. After release of the "set" button the new set temperature is set and on the temperature display the actual temperature is displayed.

* On the temperature display the desired value is shown.
5.1 General information on cleaning and disinfection

The jet connection which comes into contact with the patient must be disinfected after each use.
The hose tips must be exchanged after each use.

The surfaces of the Hygrotherm resist most of the common surface disinfectants.

However, do not use

– disinfectants containing concentrated organic or anorganic acids or bases, since these may cause corrosion damages;
– disinfectants containing chloramides, phenol derivatives or anionic tensides, since these may cause stress cracks in the plastic material used for the housing of the unit.

For cleaning and disinfection, you may also use disinfectant sprays or disinfectant tissues.

Switch off the examination unit by the main switch before starting cleaning and disinfection.

Wipe the unit surface with a cloth moistened with a cleaning or disinfecting solution. Make sure that no liquid penetrates the unit. You may use all cleansers and disinfectants listed in section 5.3.

Spilled liquid must immediately be dry wiped.

Always observe the instructions for use by the manufacturer of the disinfectants, above all, concentration specifications.

The above measures for cleaning and disinfecting do not replace the respective precautions for operating the unit.
5.0 Cleaning

5.2 Recommended disinfectants

### Recommended instrument disinfectants

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Korsolex basic</strong> (Application concentrate)</td>
<td>Bode Chemie, Hamburg</td>
</tr>
<tr>
<td>Glutaral</td>
<td>15.2 g</td>
</tr>
<tr>
<td>(ethylene-dioxy)dimethanol tensides, salts, corrosion inhibitors</td>
<td>19.7 g</td>
</tr>
<tr>
<td><strong>Sekusept aktiv</strong> (Application concentrate)</td>
<td>Ecolab, Düsseldorf</td>
</tr>
<tr>
<td>sodiumpercarbonate, phosphonates</td>
<td>11.0 g</td>
</tr>
<tr>
<td>non-ionic tensides</td>
<td>3.0 g</td>
</tr>
<tr>
<td><strong>Gigasept FF new</strong> (Application concentrate)</td>
<td>Schülke &amp; Mayr, Norderstedt</td>
</tr>
<tr>
<td>succinic acid dialdehyde dimethoxy tetrahydrofurane corrosion inhibitors</td>
<td>11.0 g</td>
</tr>
<tr>
<td></td>
<td>3.0 g</td>
</tr>
</tbody>
</table>

### Instruments, automatic

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Neodisher MediClean forte</strong> (Application concentrate)</td>
<td>Dr. Weigert, Hamburg</td>
</tr>
<tr>
<td>NTA non-ionic tensides</td>
<td>5-15 g</td>
</tr>
<tr>
<td>enzymes</td>
<td>&lt; 5 g</td>
</tr>
<tr>
<td>preserving agents</td>
<td></td>
</tr>
</tbody>
</table>

### Machine disinfection

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dismozon pur</strong> (Application concentrate)</td>
<td>Bode Chemie, Hamburg</td>
</tr>
<tr>
<td>magnesiu monoperoxyphthalate hexahydrate</td>
<td>80 g</td>
</tr>
<tr>
<td><strong>Green &amp; Clean SK</strong> (Application concentrate)</td>
<td>Metasys, Rum (Austria)</td>
</tr>
<tr>
<td>alkyl-dimethyl-benzyl-ammonium chloride</td>
<td>&lt;1 g</td>
</tr>
<tr>
<td>dialkyl-dimethyl-ammonium chloride</td>
<td></td>
</tr>
<tr>
<td>Alkyldimethylethylbenzylammoniumchlorid</td>
<td></td>
</tr>
<tr>
<td><strong>Perform</strong></td>
<td>Schülke &amp; Mayr, Norderstedt</td>
</tr>
<tr>
<td>Pentakalium bis(peroxymonosulfate)-bis(sulfate)</td>
<td>45.0 g</td>
</tr>
</tbody>
</table>

If using aldehyde-containing or amine-containing disinfectants at the same object, this may result in discolourations.

5.3 Cleaning method for handle with jet connection for water irrigation tip

The ATMOS appliances Variotherm and ATMOS Hygrotherm are used, according to the rules, with disposable hose tips (disposables). These tips must be disposed off after each application to the patient. When using the hose tips ATMOS recommends a reprocessing in line with the below cleaning and disinfection plan.

<table>
<thead>
<tr>
<th>What</th>
<th>How</th>
<th>Recommendations</th>
<th>When</th>
<th>Who</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aufzubereitende Teile</td>
<td>Reinigung</td>
<td>Desinfektion</td>
<td>Sterilisation</td>
<td>After each procedure</td>
</tr>
<tr>
<td>Ear irrigation bowl</td>
<td>x</td>
<td>x</td>
<td>Manual cleaning and disinfection</td>
<td>x</td>
</tr>
<tr>
<td>Handle</td>
<td>x</td>
<td>x</td>
<td>Wipe cleaning and wipe disinfection</td>
<td>x</td>
</tr>
<tr>
<td>Jet connection</td>
<td>x</td>
<td>x</td>
<td>Wipe cleaning and wipe disinfection</td>
<td>x</td>
</tr>
<tr>
<td>Splash protection</td>
<td>x</td>
<td>x</td>
<td>Wipe cleaning and wipe disinfection</td>
<td>x</td>
</tr>
<tr>
<td>Hose tip (disposable)</td>
<td></td>
<td></td>
<td>Exchange after each application</td>
<td>x</td>
</tr>
<tr>
<td>Rinsing attachment</td>
<td>x</td>
<td>x</td>
<td>Exchange after each application</td>
<td>x</td>
</tr>
<tr>
<td>Hygiene filter</td>
<td></td>
<td></td>
<td>See operating instructions for hygiene filter</td>
<td>x</td>
</tr>
</tbody>
</table>

Ear irrigation / Thermal nystagmus stimulation
6.0 Maintenance and service

Decalcification and change of filter (see sections 6.4, 6.5) should be carried out immediately by the user when required.

Safety-technical inspection

6.1 Functional test

Test

- Shut-off main water tap and observe temperature indication. After a few seconds error signal will appear “E1” (= no water).

- Testing the displays. All optical and audible indicators issue their signal during the first second after switching on (in particular segmental test “8 8 ”).

- Measure temperature of water splashed off at 37°C. The value may not deviate more than ± 0.5° ± 1/2 digit, i.e. 1°C in total. Typically, however, values are better than ± 0.5°C.

This measurement is critical!

Measuring probes or thermometers which are too large may cause faulty measurements because of substantial heat removal, inertia, and because their temperature sensitivity is not localised on a point but spread over a larger surface. Instruments with an immersion probe, a precision of 0.3°C and a resolution of 0.1°C or better are suitable.

After setting the temperature 1 minute at least should be waited in order that the double-barrelled hose to the handle attains correct temperature.
6.0 Maintenance and service

6.2 Visual inspection

**Test**

- Check unit for external damage (damage to cables, hoses, filter and irrigation handle).
- Check hose system for external indications for leaks (drops, water spots, corrosion deposits etc.).
- Inspect unit, insulated from power supply and with open housing, for internal damage, leaks, corrosion, and deposits (mineral scale). Close housing again and tighten screws, connect mains cable again.
- Check sign plates and inscriptions for completeness and readability.

6.3 Electrical test

**Test**

- Measure protective conductor resistance according to VDE 0751 (max. 0.3 Ohm).
- Measurement and comparison with "first value measured" of unit leakage current according to VDE 0751 (measured during operation).

  - The "value measured first" may not be exceeded by more than 50%.
- Documentation and recording of evaluation and tests according to VDE 0751.

6.4 Decalcification

- If the tap water in the area, where the unit is used, is known for mineral precipitation, preventive decalcification should be carried out:
  - Close water tap.
  - Unscrew screwed glass of filter.
  - Fill screwed glass with approx. 100 ml of decalcifier on acetic / citric, or lactic acid base (for inst. Citrosteril, by Fresenius).
  - Screw glass on again.
  - Open water tap again.
  - Switch on the unit.

  Decalcification now takes place automatically in the thermal process for reducing bacterial count. If after switching-on the unit has been in this mode for 5 minutes the water passages have been decalcified and cleaned, and also sufficiently flushed. The **Hygrotherm** is again fully ready for operation. When water passages are heavily calcified, a modified procedure may become necessary, with a prolonged reaction period for the decalcifier.
7.0 Trouble shooting

Error in temperature display

"E0" Not used

"E1" No water (water pressure < 0.5 bar)
- Check, whether the water supply delivers a pressure of at least 2 bar (did you open the water-tap?).
- Filter clogged?

"E2" -5V is missing (supply voltage on the control board)
- Inform service staff.

"E3" Break of the safety NTC
- Inform service staff.

"E4" Break of the safety NTC
- Inform service staff.

"E5" Break of the regulating NTC
- Inform service staff.

"E6" Not used
- Handle must be correctly inserted in its support.
- Inform service staff.

"E8" Short-circuit of the regulating NTC
- Prüfen des Regel-NTC-Temperaturfühlers durch Service-techniker.

"E9" Not used

If, nevertheless, the errors cannot be removed inform the ATMOS service staff. Do not start any attempts to repair the unit yourself!
8.0 Accessories and spare parts

8.1 Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>REF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jet connection, extra long, straight (110 mm)</td>
<td>508.0429.0</td>
</tr>
<tr>
<td>Hose attachment (luer-cone)</td>
<td>508.0442.0</td>
</tr>
<tr>
<td>Hose attachment (record-cone)</td>
<td>508.0443.0</td>
</tr>
<tr>
<td>Calcification protection device</td>
<td>502.0995.0</td>
</tr>
</tbody>
</table>

8.2 Spare parts

<table>
<thead>
<tr>
<th>Description</th>
<th>REF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigation handle</td>
<td>530.1180.0</td>
</tr>
<tr>
<td>Jet connection, short, straight (80 mm)</td>
<td>508.0427.0</td>
</tr>
<tr>
<td>Splash protection</td>
<td>501.0331.0</td>
</tr>
<tr>
<td>Rubber bush for splash protection</td>
<td>501.0331.1</td>
</tr>
<tr>
<td>Three-holes gasket device side</td>
<td>501.0320.0</td>
</tr>
<tr>
<td>Three-holes gasket handle side</td>
<td>530.1186.0</td>
</tr>
<tr>
<td>Hose double barrel for irrigation handle</td>
<td>530.1181.0</td>
</tr>
<tr>
<td>Jet connection for water irrigation</td>
<td>502.0984.0</td>
</tr>
<tr>
<td>Hygiene filter for water irrigation</td>
<td>000.0918.0</td>
</tr>
<tr>
<td>Hose tips for jet connection (30 pcs.)</td>
<td>502.0844.0</td>
</tr>
<tr>
<td>Front foil Hygrotherm</td>
<td>060.0514.0</td>
</tr>
<tr>
<td>Operating instructions</td>
<td>503.2020.B</td>
</tr>
</tbody>
</table>
### 9.0 Technical Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
</table>
| **Voltage range** | 220 - 240 V~ ± 10 % 50/60 Hz  
Special voltage: 100 - 127 V~ ± 10 % 50/60 Hz |
| **Current input** | 6.8 A (220 - 240 V~)  
14.8 A (100 - 127 V~) |
| **Power consumption** | 1500 W |
| **Operating modes** | - Thermal process for reducing bacterial count  
- Irrigation mode (water flow 0-450 ml/min at 37°C)  
- Heating off (energy saving mode) |
| **Water temperature** | 37°C |
| **Temperature indication** | Accuracy ± 0.5 °C ± ½ digit |
| **Feed temperature of the water** | +7...+36.5°C |
| **Water quality** | Drinking-water |
| **Operating pressure** | at least: +2000 hPa (2 bar), max: +6000 hPa (6 bar) |
| **Connections** | - Power connection  
- Water supply  
- Water drainage  
- Connection for double-barrelled hose |
| **Operating time** | Continuous operation |
| **Protective earth conductor resistance** | 0.1 Ω max. |
| **Earth leakage current** | 0.5 mA max. |
| **Enclosure leakage current** | 0.1 mA max. |
| **Patient leakage current** | 0.1 mA max. |
| **Ambient conditions** | -20...+50°C; 5...90 % humidity without condensing, air pressure 700...1060 hPa |
| **Transport/storage** | +10...+35°C; 20...80 % humidity without condensing, air pressure 700...1060 hPa |
| **Operation** | The safety-related inspection must be performed according to §4 clause (4) of the Medical Device Operator Ordinance, after each maintenance measure. The safety-related inspection must be performed to guarantee safety and operational reliability of the most important constructive and functional features, as far as they can be influenced by maintenance measures. However, according to §6 clause (1) of the Medical Device Operator Ordinance, the inspection must be performed at the least once a year. |
| **Protection class (EN 60601-1)** | Type B IIa |
| **Degree of protection** | IIa |
| **Classification acc. to Annex IX** | CE marking: CE 0124  
EN 60601-1-2: 1993 (EMV / EMC) |
| **UMDNS-Code** | 12-305 |
| **GMDN-Code** | 35152 |
| **Reference-No.** | 503.2020.0 |

10.0 Disposal

- The ATMOS Hygotherm does not contain any hazardous materials.
- The housing is recyclable.
- Device and accessories must be decontaminated prior to disposal.
- Please take care on a careful separation of the different materials.
- Please observe national disposal regulations (e.g. waste incineration).

Disposal within the EC

The device described above is a high-quality medical product with a long service life. After its life cycle it must be disposed of professional. According to the EC directives (WEEE and RoHS) the device may not be disposed of in domestic waste. Please observe existing national laws and rules for disposal of old devices.

Disposal within the Federal Republic of Germany

In the Federal Republic of Germany the law for electrical devices (ElektroG) rules the disposal of electrical devices. In order to guarantee a proper disposal of your old device, please either pass on your old device to your specialised dealer or send it directly to ATMOS MedizinTechnik for a professional disposal.

Before disposal respectively before transport all parts, which came into contact with the patient must be thoroughly cleaned, disinfected. The device surface must be disinfected.

11.0 Notes on EMC

The EMC notes are described in the operating instructions of the ATMOS S 61 Servant ENT workstation.
We do not take over any warranty and liability in the case of missing inscriptions. Subject to modifications and amendments are property of the respective manufacturer. All compiled data are based on manufacturers instructions. All logos, This is copyrighted. Duplication, translations, microfilming and savings on electronic systems, particularly for commercial purposes is limited to damage which is regarded as typical for that case. This also applies in the case of our culpable infringement of substantial contractual duties The indisputable conditions of German Liability Law remain unaffected thereby.

10. Reservation of Ownership We retain ownership of our goods until the receipt of all payments arising from the business relationship, including all demands arising from installation orders, subsequent orders, repairs, accessory deliveries and replacement orders. Should we have agreed upon payment on the basis of cheque and bill transactions, the ownership reservation applies until the cheque received by us has been paid in, and does not expire through our credit over receiving the client’s cheque. In the case of a breach of contract by the client, especially payment arrears, we are entitled to repossess our goods. Repossession of our goods represents a withdrawal from the contract, unless explicitly declared in writing by us. We have the right to utilise the product after its repossession, whilst deducting appropriate utilisation costs.

11. Plans and Illustrations We retain ownership of and copyrights to all plans, illustrations, calculations and other documents which are attached to our proposals. The client must receive explicit written permission before passing these on to third parties. Irregularly our legally patented products is forbidden and will be prosecuted.

12. Jurisdiction and Place of Performance Our central office is the place of performance for all disputes in connection with these General Standard Terms and Conditions and the contracts closed with clients under them. This jurisdiction excludes other jurisdiction relating to persons or subject-matter. Furthermore, our client is not entitled to bring charges against us in another court should he file counter-charges, carry out counterbalancing or declare retention. We, however, are entitled to bring charges against our client at their general place of jurisdiction or at another relevant court recognised by German or foreign law. Unless otherwise stated in the order confirmation, our central office is the place of performance.

Lenzkirch, September 2008
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