



**READ AND SAVE THESE INSTRUCTIONS**

# OPERATION MANUAL

Air humidifier  
Condair **505**

# Thank you for choosing Condair

Installation date (MM/DD/YYYY):

Commissioning date (MM/DD/YYYY):

Site:

Model:

Serial number:

Fill in data at the commissioning!

## Proprietary Notice

This document and the information disclosed herein are proprietary data of Condair Group AG. Neither this document, nor the information contained herein shall be reproduced, used, or disclosed to others without the written authorisation of Condair Group AG, except to the extent required for installation or maintenance of recipient's equipment.

## Liability Notice

Condair Group AG does not accept any liability due to incorrect installation or operation of the equipment or due to the use of parts/components/equipment that are not authorised by Condair Group AG.

## Copyright Notice

© Condair Group AG, All rights reserved.

Technical modifications reserved.

# Contents

---

|           |                                                                 |           |
|-----------|-----------------------------------------------------------------|-----------|
| <b>1</b>  | <b>Introduction</b>                                             | <b>4</b>  |
| 1.1       | To the very beginning                                           | 4         |
| 1.2       | Notes on the operation manual                                   | 4         |
| <b>2</b>  | <b>For your safety</b>                                          | <b>6</b>  |
| 2.1       | General                                                         | 6         |
| 2.2       | Qualification of personnel                                      | 6         |
| 2.3       | Intended and non intended use                                   | 6         |
| 2.4       | Danger that may arise from the Condair 505                      | 7         |
| 2.5       | Behavior in case of danger                                      | 8         |
| 2.6       | Prohibited modifications to the unit                            | 8         |
| <b>3</b>  | <b>Product overview</b>                                         | <b>9</b>  |
| 3.1       | Unit overview                                                   | 9         |
| 3.2       | Description of product                                          | 10        |
| 3.2.1     | Special version                                                 | 10        |
| 3.2.2     | Functional description                                          | 10        |
| 3.2.3     | Accessories and options                                         | 10        |
| <b>4</b>  | <b>Location and installation</b>                                | <b>12</b> |
| 4.1       | Notes on correct positioning                                    | 12        |
| 4.2       | Installation work (Condair 505 S only)                          | 12        |
| <b>5</b>  | <b>Operation</b>                                                | <b>13</b> |
| 5.1       | Refilling                                                       | 13        |
| 5.2       | Setting the unit into operation                                 | 14        |
| 5.3       | Controls in daily operation                                     | 15        |
| 5.4       | Setting the unit out of service                                 | 15        |
| <b>6</b>  | <b>Maintenance and cleaning</b>                                 | <b>16</b> |
| 6.1       | Cleaning intervals                                              | 16        |
| 6.2       | Dismantling and assembly                                        | 17        |
| 6.3       | Cleaning and disinfection                                       | 19        |
| 6.4       | Replacement of defective parts                                  | 20        |
| <b>7</b>  | <b>Troubleshooting</b>                                          | <b>21</b> |
| <b>8</b>  | <b>Specifications</b>                                           | <b>22</b> |
| <b>9</b>  | <b>Hygiene</b>                                                  | <b>23</b> |
| 9.1       | Important notes on hygiene                                      | 23        |
| 9.2       | Hygiene risk management                                         | 23        |
| 9.2.1     | Guidelines to keep a clean system and prevent legionella growth | 24        |
| 9.2.2     | Risk Monitoring and Assessment                                  | 25        |
| <b>10</b> | <b>Spare parts list</b>                                         | <b>26</b> |

# 1 Introduction

---

## 1.1 To the very beginning

We thank you for having purchased the **Condair 505 air humidifier**.

The Condair 505 is a compact humidifier that is easy to operate and maintain. A selection of optional accessories are available to customize the humidifier to your particular requirements.

The Condair 505 air humidifier is designed in accordance with the latest state of the art and the present safety regulations. In the event of improper use, however, danger can arise for the user or third parties and or impairment of the unit or other material assets. Carefully read this operation manual prior to setting the humidifier into operation as they contain valuable information on safe and economic use of your Condair 505.

If you have questions after reading this documentation, please contact your Condair representative. They will be glad to assist you.

## 1.2 Notes on the operation manual

### Limitation

**The subject of this operation manual is the Condair 505 air humidifier.** The various options and accessories are only described insofar as this is necessary for proper operation of the equipment. Further information on options and accessories can be obtained in the respective instructions.

This operation manual is restricted to the **commissioning, operation, maintenance and troubleshooting** of the Condair 505 air humidifier and is meant for **sufficiently qualified persons and familiar with the Condair 505**.

## Symbols used in this manual



### CAUTION!

The catchword "CAUTION" used in conjunction with the caution symbol in the circle designates notes in this operation manual that, if neglected, may cause **damage and/or malfunction of the unit or other material assets**.



### WARNING!

The catchword "WARNING" used in conjunction with the general caution symbol designates safety and danger notes in this operation manual that, if neglected, may cause to **injury to persons**.



### DANGER!

The catchword "DANGER" used in conjunction with the general caution symbol designates safety and danger notes in this operation manual that, if neglected, may lead to **severe injury or even death of persons**.

## Safekeeping

Please safeguard this operation manual in a safe place, where it can be immediately accessed. If the equipment changes hands, the operation manual must be passed on to the new operator.

If the operation manual gets mislaid, please contact your Condair representative.

## Language versions

This operation manual is available in various languages. Please contact your Condair representative for information.

## 2 For your safety

### 2.1 General

Every person working with the Condair 505 air humidifier must have read and understood the operation manual of the Condair 505 before operating the unit or carrying out any work on the unit.

Knowing and understanding the contents of the operation manual is a basic requirement for protecting the personnel against any kind of danger, to prevent faulty operation, and to operate the unit hygienically, safely and correctly.

All ideograms, signs and markings applied to the Condair 505 must be observed and kept in readable state.

### 2.2 Qualification of personnel

All work described in this operation manual **may only be carried out by qualified persons familiar with the equipment.**

For safety and warranty reasons any action beyond the scope of this manual must be carried out only by qualified personnel authorised by the manufacturer.

It is assumed that all persons working with the Condair 505 are familiar and comply with the appropriate regulations on work safety and the prevention of accidents.

The Condair 505 may not be used by persons (including children) with reduced physical, sensory or mental abilities or persons with lacking experience and/or knowledge, unless they are supervised by a person responsible for their safety or they received instructions on how to operate the unit. Children must be supervised to make sure that they do not play with the Condair 505.

### 2.3 Intended and non intended use

#### Intended use

The Condair 505 is **exclusively** intended for direct room humidification under strict adherence to the information and notes given in this manual. Any use beyond this scope is considered to be a violation of the intended purpose and may endanger your safety or possibly cause the product to be damaged. Any use other than the intended purpose of the Condair 505 is **at customer's own risk and for no means the manufacturer or supplier will be liable for possible damage.**

Operation of the Condair 505 in the intended manner requires that all the information contained in this operation manual is observed (in particular the safety and hygiene instructions).

Special care must be observed to properly install, maintain, clean, and disinfect the Condair 505 to preserve acceptable levels of hygiene.

### Non intended use

The **Condair 505** is **not suitable for humidification in health-care premises**. Due to the nature of aerosol generating humidification units, it is **not** recommended to use these in environments where the occupants or materials in the space are adversely sensitive to airborne bacteria, viruses, dust, and debris.

The Condair 505 must **not be used in hazardous** locations.

## 2.4 Danger that may arise from the Condair 505



**DANGER!**  
**Risk of electric shock!**

**The Condair 505 operates at mains voltage. To prevent electric shocks please observe the following notes:**

- Before connecting the unit to the mains make sure the operating voltage of the Condair 505 (see type plate on unit) meets the local mains voltage, and the power cord is not damaged.
- The Condair 505 must be connected to a **grounded socket only**. Do not disable protection using an extension cord without ground wire. The ground wire must neither be disconnected nor interrupted inside or outside the unit as this may endanger your safety.
- Never dip the Condair 505 into water and protect the unit from splashes.
- Before cleaning or maintaining the Condair 505 disconnect the unit from the mains (pull the plug out of the socket).
- Make sure your hands are absolutely dry when pulling the mains plug out of the socket. Never remove the plug by pulling the power cord.
- Handle the power cord with care: keep it away from sharp edges and do not jam or strain it. Make sure nobody can trip over the cable.



**DANGER!**  
**Health risk because of inadequate hygiene!**

**Inadequately operated and/or poorly maintained Condair 505 air humidifiers may endanger the health. When inadequately operated and/or poorly maintained micro-organisms (including the bacterium which causes Legionnaire's disease) may grow in the unit and may affect the air humidified by Condair 505.**

**Prevention:** Therefore the Condair 505 must strictly be operated and maintained in accordance with this manual.



**DANGER!**  
**Health risk!**

**Due to health risks, the silicate content in the feed water of the Condair 505 – in any form – must not exceed 12 mg/l.**

If the silicate content is higher, the silicate in the feed water must be reduced accordingly using a silicate filter.

## **2.5 Behavior in case of danger**

If it can be assumed that safe operation is no longer possible, the Condair 505 must be put out of service without delay and secured against accidental power-up. Safe operation may be affected in the following events:

- the Condair 505 is damaged
- the Condair 505 does not operate correctly
- the power cord is damaged.

## **2.6 Prohibited modifications to the unit**

The Condair 505 may not be modified in any way without written consent from the manufacturer.

For the replacement of defective components use exclusively original accessories and spare parts available from your Condair supplier.

### 3 Product overview

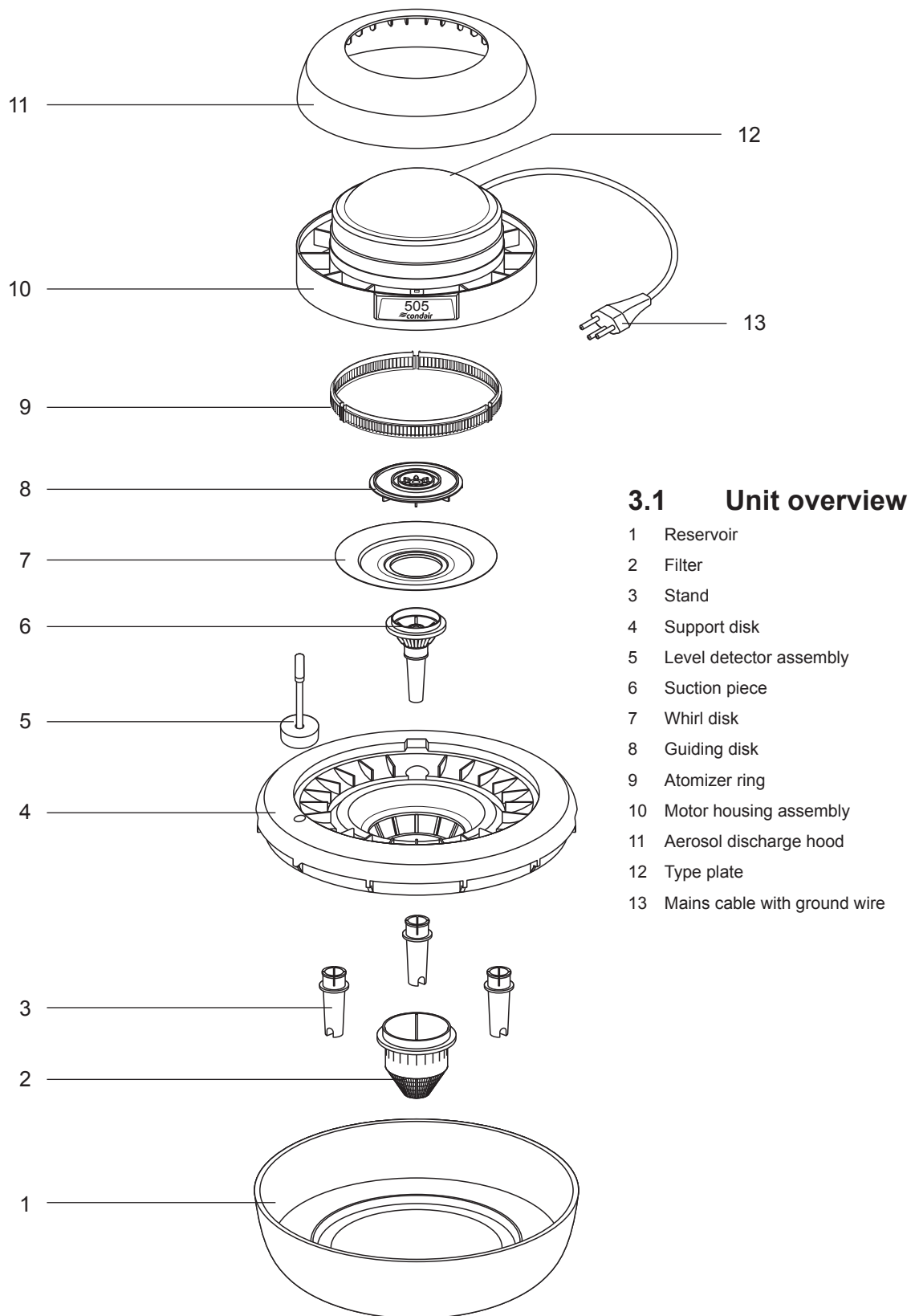
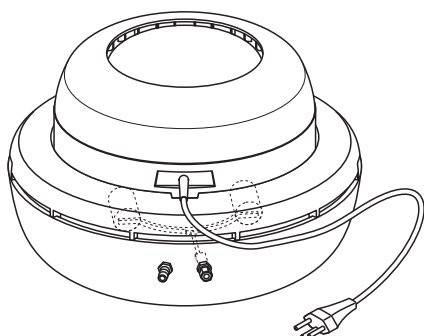


Abb. 1: Unit overview

## 3.2 Description of product

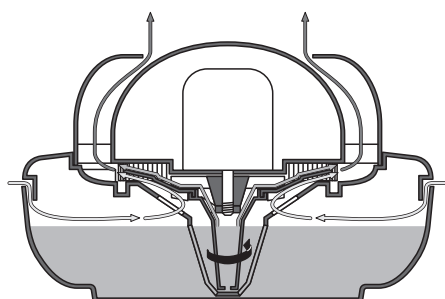
### 3.2.1 Special version



The special version **Condair 505 S** is designed for direct connection to the water supply. The Condair 505 S is equipped with a float valve and a connector for an overflow pipe.

Note: The standard Condair 505 may be upgraded to the special version at any time – please contact your Condair representative.

### 3.2.2 Functional description



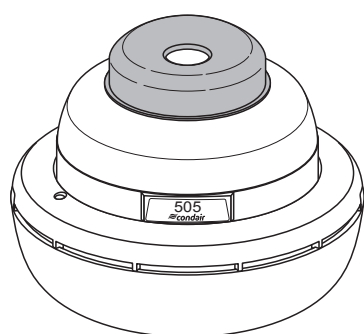
The Condair 505 uses the atomizer principle. The suction piece takes in the water from the reservoir. Then the whirl disk moves the water towards the atomizer ring where it is transformed into aerosol fog.

The vanes of the whirl disk take in the air via the radial openings of the housing. This air stream passes by the atomizer ring and directs the aerosol fog out of the humidifier in an upward direction.

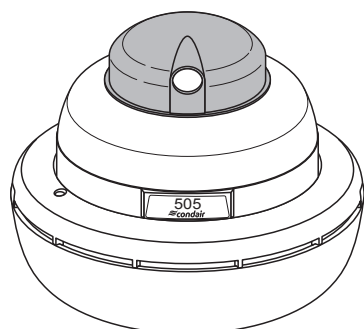
The atomizer unit is driven by a maintenance-free electric motor.

### 3.2.3 Accessories and options

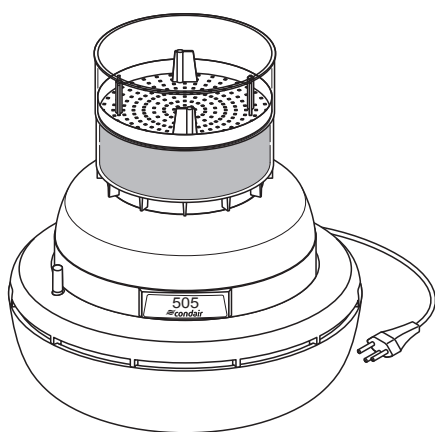
The following accessories and options are available for the Condair 505:



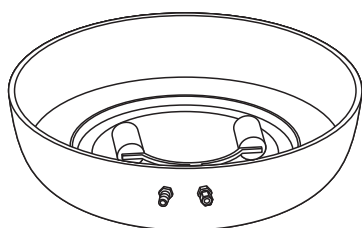
**Directional cap vertical ("Z72")** for vertical adjustment of the aerosol fog.



**Directional cap horizontal ("Z73")** for horizontal adjustment of the aerosol fog.



**Deliming cap ("Z70")** for lime-free refill.



**Water reservoir with float valve and safety overflow device** for permanent water supply to the humidifier.

**Humidistat H-4** for automatic control of the Condair 505 S.

## 4 Location and installation

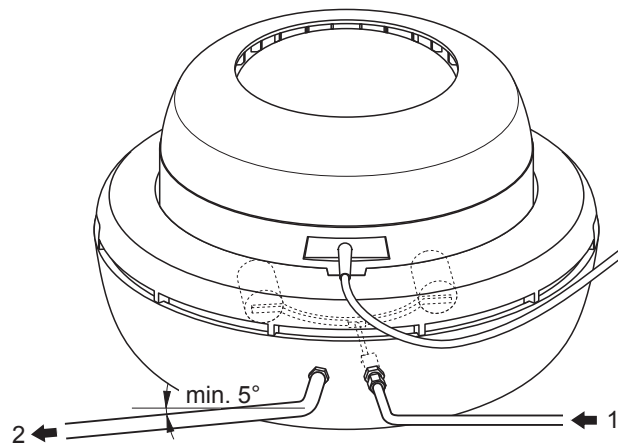
### 4.1 Notes on correct positioning

Please observe the following notes for correct location of the Condair 505:

- **Caution!** The Condair 505 must not be used in hazardous locations and areas that are exposed to water splashes.
- Locate the Condair 505 in a way that the aerosol fog **spreads freely**. Any obstacle hampering the spread of the aerosol fog causes turbulence and accumulation that may lead to condensation. Please observe the following minimum clearance between the humidifier and nearby objects:
  - **min. clearance above the unit:** **1.50 m**
  - **min. clearance around the unit:** **0.30 m**
  - **min. clearance from cold outer walls and windows:** **1.00 m**
- When using tap water or partially demineralized water the soluble mineral salts may precipitate. Use fully demineralized water if non-precipitating operation is required.

### 4.2 Installation work (Condair 505 S only)

Consult the following information for connecting the Condair 505 S to the water supply and the sewage line.



#### Water supply (1)

|                               |                                                                                                                               |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Supply line Ømin:             | 4/6 mm (copper tube)                                                                                                          |
| Admissible water pressure:    | 0,3...4,0 bar                                                                                                                 |
| Admissible water temperature: | 1 to max. 20 °C                                                                                                               |
| Water quality:                | tap water or partly/fully demineralized water with a max. silicate content of 12 mg/l and a max. of 150 CFU/ml (no pathogens) |

#### Overflow (2)

|                     |        |
|---------------------|--------|
| Overflow line Ømin: | G 1/2" |
| Min. downslope:     | 5°     |

Note: It is mandatory to connect the overflow device to the sewage line.

## 5 Operation

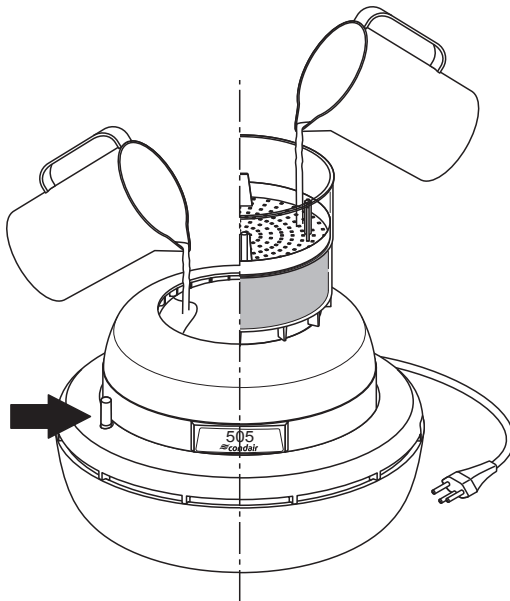
### 5.1 Refilling



**DANGER!**  
Risk of electric shock!

**Always disconnect unit from the mains before refilling water.**

- Disconnect the unit from the mains (pull the mains plug out of the socket).
- **Important:** Before refilling with fresh water, empty old water and clean the water reservoir according to [chapter 6](#).
- Pour fresh water into the aerosol discharge hood or into the deliming cap (accessory "Z70"), respectively. Watch the level indicator:
  - water reservoir **half full**:  
**grey mark** on level indicator is in view.
  - water reservoir **full**:  
**red mark** on level indicator is in view.



*Abb. 2: Refilling*

If you wish to refill the Condair 505 directly from the tap, remove the atomizer unit and the support disk from the reservoir. Pour water into the reservoir. **Do not exceed the imprinted level mark** (corresponding to the maximum filling height when the unit is reassembled). Then mount the support disk and the atomizer unit.



**CAUTION!**

Do not overfill the reservoir (watch the maximum level mark) as this may affect correct operation.



#### **WARNING!**

Use only fresh tap water or partly/fully demineralized water with a max. of 150 CFU/ml (no pathogens).

**Do not use any additives.**



#### **DANGER!**

**Health risk!**

**Due to health risks, the silicate content in the feed water of the Condair 505 – in any form – must not exceed 12 mg/l.**

If the silicate content is higher, the silicate in the feed water must be reduced accordingly using a silicate filter.

## **5.2 Setting the unit into operation**

- Check the unit for possible damage.



#### **CAUTION!**

If the unit is damaged do not set it into operation!

- Make sure the operating voltage of the Condair 505 (see type plate on unit) matches the local supply voltage, then connect the unit to the mains.

The Condair 505 starts humidification without delay.

## 5.3 Controls in daily operation

In daily operation the water level and the humidity must be monitored on a regular basis. For monitoring the humidity we recommend to use a hygrometer (e.g. the Condair hygrometer) placed in a suitable location (not too close to the humidifier). Disconnect the unit from the mains as soon as the desired level of humidity is obtained.

Please consider the following directional temperature and humidity values for **optimal humidification**:

| Room temperature | Humidity |
|------------------|----------|
| 18 °C            | 55 %rh   |
| 20 °C            | 50 %rh   |
| 22 °C            | 45 %rh   |

Note: For **semiautomatic** (Condair 505) and **fully automatic** operation (Condair 505 S) use the appropriate humidifier together with the **humidistat H-4**. The humidistat H-4 switches the humidifier on and off depending on the selected nominal humidity. The humidistat H-4 is supplied with a separate installation manual.

## 5.4 Setting the unit out of service

Disconnect the humidifier from the mains. Empty the water reservoir, then clean the unit following the instructions given in [chapter 6](#).

## 6 Maintenance and cleaning

### 6.1 Cleaning intervals

Regular checks and periodic maintenance are indispensable prerequisites for hygienic operation:

- **Regular checks**

**Once a week** you should carry out a regular check that includes the following steps:

- cleaning of the water reservoir.
- checking all components being in contact with water (i.e. filter, suction piece, whirl disk, guiding disk, atomizer ring, etc.).

- **Periodic maintenance (complete cleaning and disinfection)**

The maintenance interval of the Condair 505 depends on the operating conditions. We recommend the following intervals:

- high ratio of dust and/or hard water: **1 week**
- medium ratio of dust and/or normal water: **1 - 2 weeks**
- low ratio of dust and/or demineralized water: **2 - 4 weeks**

The periodic maintenance includes **cleaning and disinfection** of all parts coming in contact with water.

Note: please refer to [chapter 6.2](#) and [chapter 6.3](#) for detailed descriptions of the dismantling, assembly and cleaning procedures required by particular components.

## 6.2 Dismantling and assembly

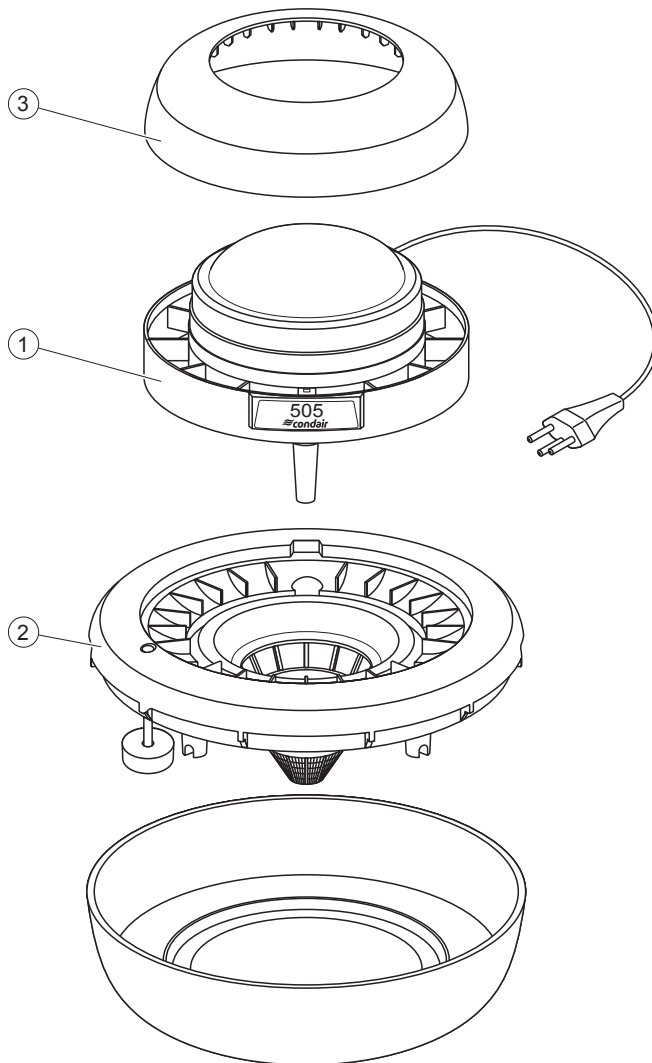


**DANGER!**  
Risk of electric shock!

**Always disconnect unit from the mains before dismantling the unit.**

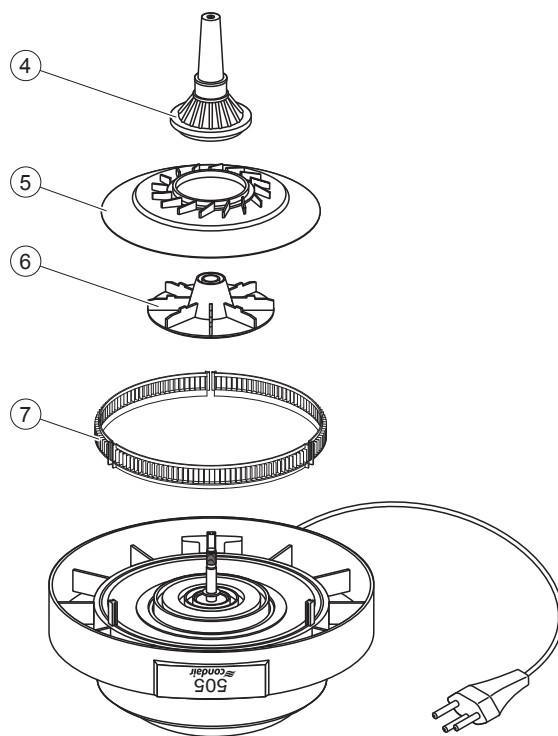
### Dismantling

- Disconnect the unit from the mains (pull the plug out of the socket).



*Abb. 3: Dismantling the unit*

- Remove the atomizer unit (1) and the support disk (2).
- Remove the aerosol discharge hood (3) from the atomizer unit (1).



*Abb. 4: Dismantling the atomizer unit*

- Firmly hold the whirl disk (5) while turning the suction piece (4) anticlockwise until it comes off.
- Remove the whirl disk (5) and the guiding disk (6).
- Carefully dismantle the segments of the atomizer ring (7).



#### CAUTION!

Cleaning and replacement of defective parts do not require **further dismantling which is inadmissible** and may void the warranty.

#### Assembly

Proceed in the reverse order of the dismantling procedure to reassemble the unit.

## 6.3 Cleaning and disinfection

Proceed as follows to clean and disinfect the parts coming in contact with water:

- Use lukewarm soapy water to clean the **water reservoir**, **support disk**, **suction piece**, **whirl disk**, **guiding disk**, **aerosol discharge hood** and the **segments of the atomizer ring**. Then thoroughly rinse all components with fresh cold tap water.  
Note: If the components are heavily encrusted with lime, soak them in citric acid until the lime layer is dissolved. Finally, clean the components as described above.
- Use an accepted disinfectant (see notes on cleaning agents below) to disinfect all parts cleaned before. Let the disinfectant work for minimum 30 minutes. Then, rinse all parts with fresh cold tap water. Make sure the parts are properly rinsed and all disinfectant has been removed, before reassembling the unit.

When cleaning make sure:

- not to damage the outer edges of the whirl disk. Defective disks reduce the efficiency of the humidifier and can cause damage to the bearing (unbalance).
- not to bend the lamellas of the atomizer ring. Bent lamellas adversely affect the atomization process.
- the inlet of the suction piece is open so that the water may pass through.

Use a cloth or a sponge moistened with soapy water to clean the **motor housing**. Then rub the components with a wet cloth (clean water) several times.

If the components are heavily encrusted with lime, rub them with a cloth soaked in a citric acid solution. Allow the acid to act for some time and then thoroughly clean the motor housing with water.



### CAUTION!

Prevent the cleaning agent from getting into the electric motor. Never clean the motor housing under the tap and never dip it in liquids of any kind.

#### Notes on cleaning and disinfection agents:

- Citric acid is available at pharmacies.



#### **WARNING!**

Citric acid can cause skin and serious eye irritation and can attack the mucous membranes. Therefore wear protective gloves and eye protection and work in a well-ventilated room or outdoors. Observe manufacturer's safety instructions.

- **Accepted disinfectants:**

- 3 % Hydrogen Peroxide solution (available at pharmacies)
- 0,1 % Sanosil S003 solution (available from Condair, order no. 2590544)  
Active ingredients: 1.5% hydrogen peroxide, 0.003g/100g silver

After disinfection the components must be thoroughly rinsed with fresh cold tap water.

- **Caution!** Do not use solvents or other aggressive liquids for cleaning.
- **Do not use** scouring equipment (wire brush, scouring cloth, etc.) for cleaning because they leave scratches that encourage the growth of microorganisms.

## 6.4 Replacement of defective parts

The customer must not carry out repairs other than the replacement of the following parts:

- water reservoir
- support disk
- suction piece
- whirl disk
- guiding disk

Please follow the instructions given in chapter 6.2 for the dismantling of particular components.

## 7 Troubleshooting

The following table presents malfunctions that might occur during humidifier operation, explains their causes and suggests appropriate remedial action.

| Malfunction                                                                    | Cause                                                                  | Remedy                                                                                        |
|--------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Humidifier is running but there is no aerosol fog.                             | No water in the reservoir.                                             | Top up (see chapter 5).                                                                       |
|                                                                                | Suction piece clogged.                                                 | Clean suction piece (see <a href="#">chapter 6</a> ).                                         |
| Humidifier is not running although it is connected to the mains.               | Excessive heat has triggered the thermal circuit breaker of the motor. | Let the motor cool down (approximately 30 minutes), then the unit will restart automatically. |
|                                                                                | Motor defective.                                                       | Contact your local Condair representative.                                                    |
|                                                                                | Unit has been switched off by external humidistat.                     | Check external humidistat and readjust, as required.                                          |
| Overheated unit has cooled down, restarts but stops again after a short while. | Water level in the reservoir exceeds the maximum level mark.           | Check water level.                                                                            |
|                                                                                | Unit heavily soiled.                                                   | Clean the unit (see <a href="#">chapter 6</a> ).                                              |
| When running, the humidifier emits a rumbling sound.                           | Whirl disk mounted incorrectly.                                        | Mount whirl disk correctly.                                                                   |
|                                                                                | Suction piece has come loose.                                          | Fix suction piece.                                                                            |

Please contact your Condair representative in case you cannot eliminate a particular source of trouble by yourself.

## 8 Specifications

|                                     |                                                                                                                         |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Designation of unit</b>          | Condair 505                                                                                                             |
| <b>Dimensions (Ø x H )</b>          | 360 x 230 mm                                                                                                            |
| <b>Weight</b>                       | 3.5 kg (empty), 6.5 kg (ready for use)                                                                                  |
| <b>Mains connection</b>             | via built-in three-core power cord                                                                                      |
| <b>Supply voltage</b>               | 220...240 V/50...60 Hz or 100...110 V/50...60 Hz                                                                        |
| <b>Humidification capacity</b>      | approx. 500 g water/hour, suitable for locations up to 150 m <sup>3</sup>                                               |
| <b>Power consumption</b>            | 40 W                                                                                                                    |
| <b>Acoustic capacity level</b>      | 50 dBA                                                                                                                  |
| <b>Sound intensity level</b>        | 44 dBA                                                                                                                  |
| <b>Drive</b>                        | maintenance-free electric motor with thermal circuit breaker                                                            |
| <b>Water reservoir</b>              | made of polypropylene, capacity: 3 litres                                                                               |
| <b>Water quality</b>                | tap water, partly or fully demineralized water with max. silicate content of 12 mg/l and max. 150 CFU/ml (no pathogens) |
| <b>Admissible water temperature</b> | 1 to max. 20 °C                                                                                                         |
| <b>Ambient temperature</b>          | 1...30 °C (recommended due to risk of hygiene problems 1...25°C)                                                        |
| <b>Ambient humidity</b>             | 0...95 %rh                                                                                                              |

## 9 Hygiene

### 9.1 Important notes on hygiene

Observe the local health and safety executive's technical guidance on the control of Legionella in water systems.

The user is responsible for ensure that the water system complies with local regulations, bylaws, and guidelines (such as the HSE ACoP L8, ASHRAE 188, VDI 6022, ISO 22000, HACCP, or equivalent). If inadequately maintained, water systems, of which any humidifier is a part, can support the growth of microorganisms, including the bacterium responsible for Legionnaires' disease.

Any risks or hazards relating to the system, including during installation and maintenance, should be identified by a competent health and safety representative who is responsible for introducing effective control measures.

### 9.2 Hygiene risk management

If cold water humidification systems are not maintained according to this manual, they present the risk of spreading pathogenic microorganisms into the air. The Humidifier distribute tiny water droplets (mist) that are blown into the space before being absorbed into the air. If the mist was contaminated before leaving the unit and then evaporates, these contaminants are deposited onto surfaces in the space, or can be inhaled by occupants in the room.

Pathogens include, but not limited to, Legionella, E. coli, and viruses, may originate from contaminated water or the equipment.

Therefore regular cleaning and disinfecting is required to reduce health risks. Refer to [chapter 6](#) in this manual. Do **not** miss or ignore the warnings in this manual.

Follow all safety precautions and local regulations.

#### Supply Water

Pathogens can originate from the water supply, such as a tank or water line. It is important that standing water in a tank or in the water line is flushed frequently to prevent the buildup of contaminants, and the water is filtered and treated.

Pathogens may also enter the humidification system from the air. A fan blows air over the water reservoir and is mixed with aerosols when blown into the room.

#### Inside the Humidifier

A small risk of contamination may occur during manufacture, testing, delivery, and commissioning. Any water that was present during these processes is considered stagnant. Ensure that all applicable components (i.e. wet surfaces, such as mist pipes, reservoirs, and hoses) of the humidification system has been cleaned and disinfected before installation. Refer to the maintenance routines as described in [chapter 6](#).

**Note:** Stagnant water may also be formed after shutting down the humidifier (and after inactivity). Ensure that the humidifier is air dried for inactivity, and cleaned before restarting.

### 9.2.1 Guidelines to keep a clean system and prevent legionella growth

- Perform a risk assessment of the water system using a competent person, and implement an appropriate monitoring and control program.
- Connect a RO-U system to a clean, potable main water supply.
- Enter a service contract that suits the needs of the company.
- Stop the system if polluted drinking water is found in the area.
- Avoid water temperatures between 20-40 °C (50-140 °F) that favor the growth of Legionella.
- If the system was stopped for more than 48 hours, complete a total system cleaning and disinfection.
- Disinfect at least once per month- and/or after every maintenance or repair.
- Analyze the water and test for harmful bacteria at least once per year.
- Conduct follow-up measurements until the system is clean if bacteria has been detected in the system.

The Condair service team can help with expert technicians who can provide:

- Bacteriological troubleshooting on-site. <sup>1)</sup>
- Cleaning and disinfecting.
- Preventative maintenance.
- Repair and fault finding.
- Training and guidance.

- <sup>1)</sup> Note: Condair uses a quick method for measuring bacterial activity in the water with the use of BactiQuant. Once the water sample has been taken, the bacteriological quality of the water is read within 30 minutes, and the Condair service team will disinfect the system if necessary.

Condair follows the guidelines in VDI 6022 for CFU counts in humidifiers. The CFU count in the humidification water must not exceed 150 CFU/ml, corresponding to a maximum BQ value of 40.

Please contact your local Condair representative for further information about our services.

## 9.2.2 Risk Monitoring and Assessment

Water hygiene assessments must be performed at the site to determine the risk and severity of hygiene hazards that affect the health and safety of the public. Performing a risk assessment with regular monitoring will allow procedures to be adjusted.

Ensure that the person conducting the assessment is qualified.

A typical assessment inspects the following:

- Supply water quality.
- Environment around the humidifier.
- Maintenance procedures.
- Water pre-treatment options (such as using UV light, using reverse osmosis or deionized water, etc.).

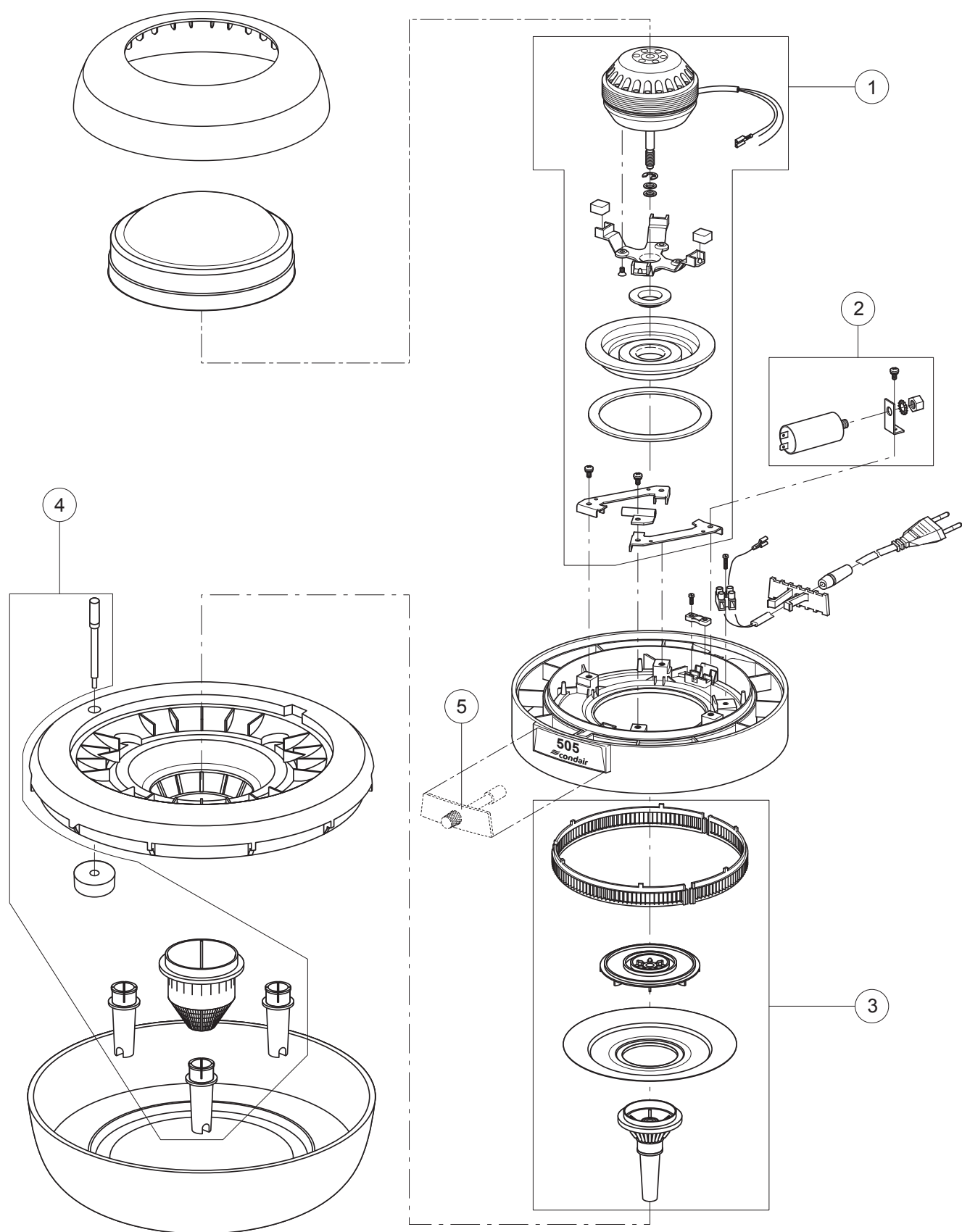
Proper maintenance procedures along with recommended site controls will help ensure compliance to local regulations and protect the public.

It is recommended to monitor the humidification system monthly. Ensure that the results of every assessment is recorded.

Failure to make adequate provision against the outbreak of disease, such as Legionnaires' disease, may cause fatalities, illness, and liabilities.

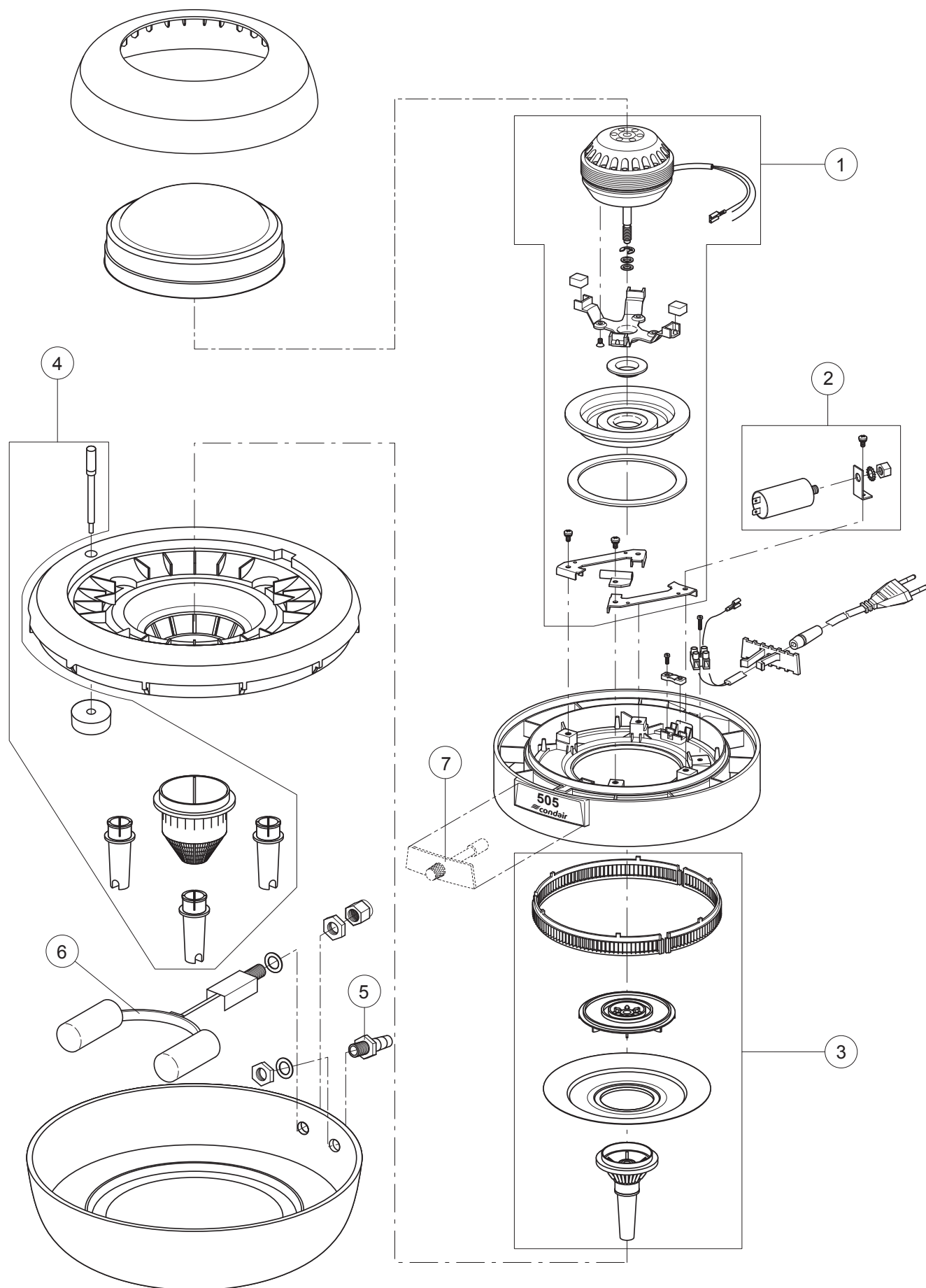
# 10 Spare parts list

## Condair 505



| <b>Pos.</b> | <b>Spare parts</b>                      | <b>Order No.</b> |
|-------------|-----------------------------------------|------------------|
| 1           | Motor cpl. 220...240V/50...60Hz         | 22.1491          |
|             | Motor cpl. 100...110V/50...60Hz         | 22.1490          |
| 2           | Capacitor 1 $\mu$ F, 220...240V/50+60Hz | 22.0006          |
|             | Capacitor 4 $\mu$ F, 100...110V/50Hz    | 22.0007          |
|             | Capacitor 3 $\mu$ F, 100...110V/60Hz    | 22.0008          |
| 3           | Atomizer assembly                       | 22.0608          |
| 4           | Level unit                              | 22.0585          |
| 5           | Switch cpl. (green version only)        | 22.0293          |

## Condair 505S



| <b>Pos.</b> | <b>Spare parts</b>                      | <b>Order No.</b> |
|-------------|-----------------------------------------|------------------|
| 1           | Motor cpl. 220...240V/50...60Hz         | 22.1491          |
|             | Motor cpl. 100...110V/50...60Hz         | 22.1490          |
| 2           | Capacitor 1 $\mu$ F, 220...240V/50+60Hz | 22.0006          |
|             | Capacitor 4 $\mu$ F, 100...110V/50Hz    | 22.0007          |
|             | Capacitor 3 $\mu$ F, 100...110V/60Hz    | 22.0008          |
| 3           | Atomizer assembly                       | 22.0608          |
| 4           | Level unit                              | 22.0585          |
| 5           | Drain connection                        | 22.0009          |
| 6           | Double float cpl.                       | 20.0471          |
|             | Double float cpl. (NL)                  | 22.0010          |
| 7           | Switch cpl. (green version only)        | 22.0293          |

**Notes**



CONSULTING, SALES AND SERVICE:



CH94/0002.00

Condair Group AG  
Gwattstrasse 17, 8808 Pfäffikon SZ, Switzerland  
Phone +41 55 416 61 11, Fax +41 55 588 00 07  
[info@condair.com](mailto:info@condair.com), [www.condairgroup.com](http://www.condairgroup.com)

