



AERIAL®

Instruction manual

Dehumidifier	AD 230 / AD 250
Laundry dryer	WT 230 / WT 250
Laundry dryer with final switch off	WT 230-E / WT 250-E

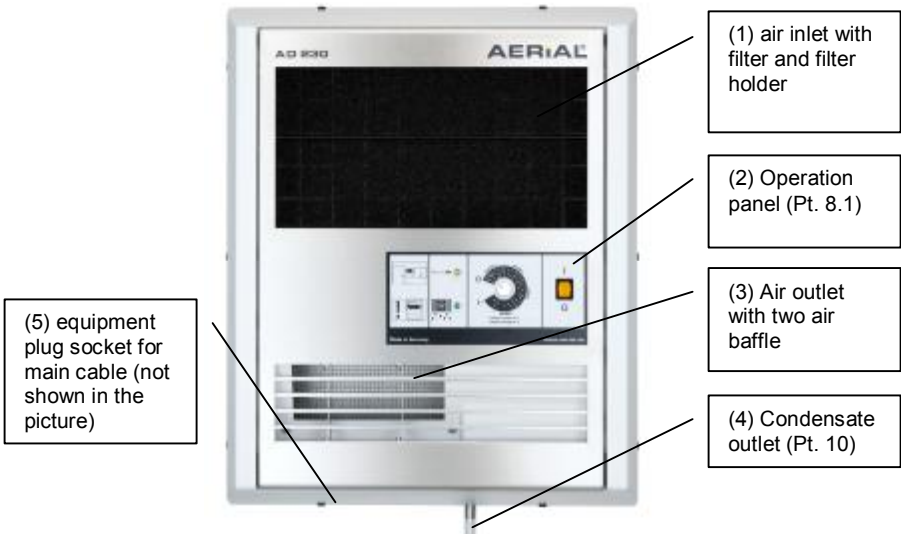


Index

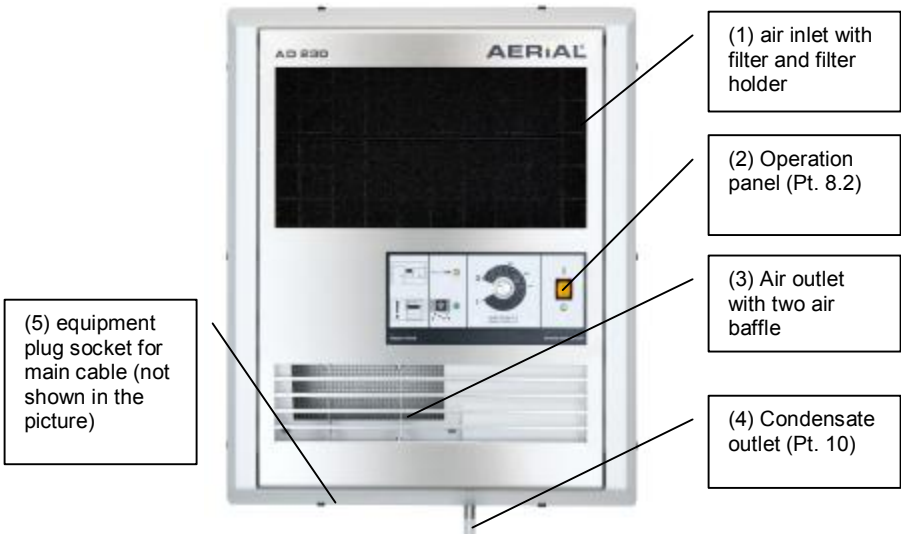
1. Illustration	
1.1. AD 230 / 250 Dehumidifier	3
1.2. WT 230 / WT 250 Laundry dryer	3
1.3. WT 230-E / WT 250-E Laundry dryer with final switch off	4
1.4. View from rear	4
2. General advice	5
3. Mode of functioning	5 - 6
4. Safety	7
5. Installation and transport	7
5.1. Dimensional drawing	8
5.2. Fixing at a wall	8 - 9
6. Electrical connection	9
7. Putting into operation	9
8. Operation panel	
8.1. AD 230 / 250 dehumidifier	10
8.2. WT 230 / WT 250 laundry dryer	10
8.3. WT 230-E / WT 250-E laundry dryer with final switch off	11
9. Hygrostat control	11
9.1. AD 230 / 250 dehumidifier	12
9.2. WT 230 / WT 250 laundry dryer	12
9.3. WT 230-E / WT 250-E laundry dryer with final switch off	13
10. Condensate outlet	13
11. Automatic defrosting	13
12. Operating conditions	13 - 14
13. Technical data	14 - 15
14. Service and maintenance	15
15. Trouble shooting	15 - 16
16. Disposal	17
17. Manufacturer's declaration	17

1.Illustration

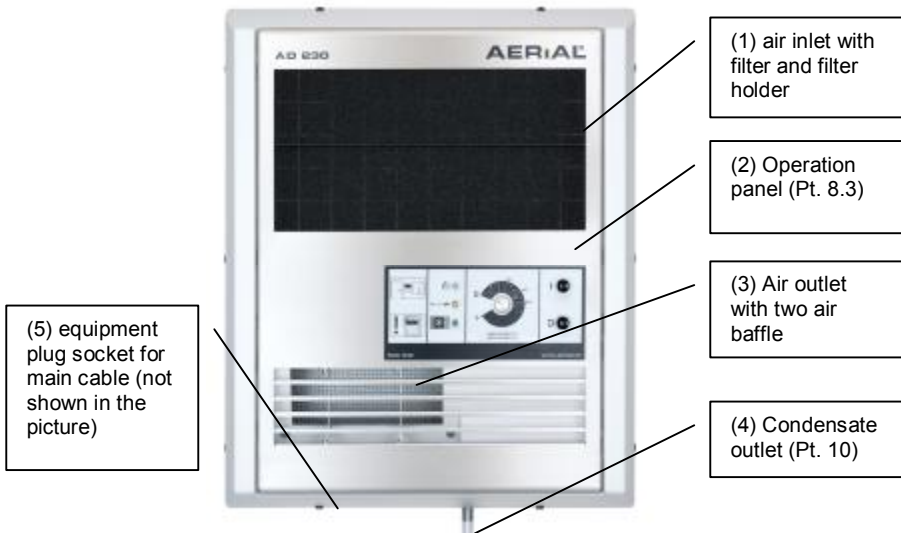
1.1 Series AD 230 / AD 250



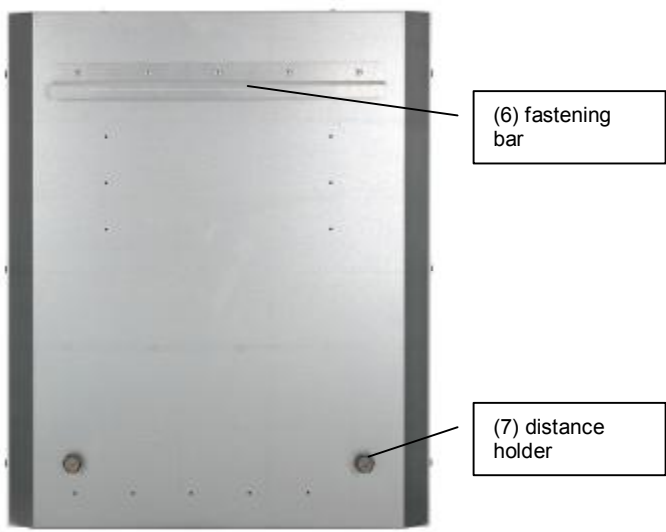
1.2 Series WT 230 / WT 250



1.3 Series WT 230-E / WT 250-E



1.4 View from rear



2. General advice

You have bought an air dryer made by AERIAL thus deciding for a proven quality product "Made in Germany". If there are any questions, you will find some advice in this manual how to eliminate such difficulties as quickly as possible.

ATTENTION:

Immediately after receipt, you should check your air dryer for transport damage! In the case of damage, you should inform the forwarding agent, parcel service, post office etc. accordingly upon receipt, and make a note of it on the forwarding documents!

If a transport damage should be noticed after unpacking the equipment, please contact immediately your respective seller or specialized dealer.

Before putting your air dryer into operation for the very first time, these instructions for operation should be studied very thoroughly. Thus, you can make sure that this appliance will operate perfectly for a long period of time saving yourselves unnecessary repairs and expenses.

In the case of malfunction disconnect your appliance and ensure that it is not connected again by taking the mains plug out of the socket.

Please, keep the device wrapping in order to be able to send the device safe for guarantee repair. In order to save space you open simply the adhesive tape with a knife and you fold the carton.

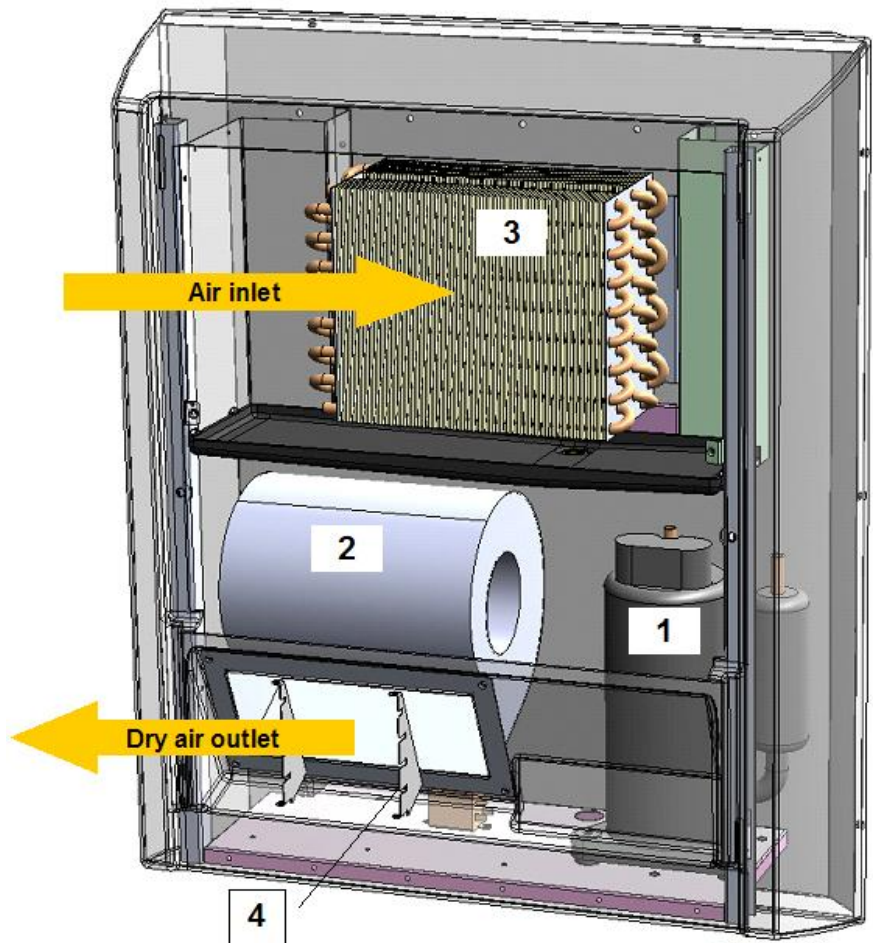
3. Mode of functioning

The AD-/WT-air dryer is built particularly for air drying and laundry drying in closed rooms.

That dehumidifier can prevent the formation of condensation, eliminate too high air humidity, dry laundry and hold a specific air humidity constant. The time which the dryer requires in order to achieve a specific humidity or to dry a bulk of laundry depends essentially on the environmental conditions. The attainable humidity value is equally dependent on the environmental conditions.

The AD-/WT-dehumidifier works according to the condensation principle with heat recovery. The fan (Pos. 2) suck the moist air through a cool register (evaporator, Pos 3). The air becomes so far chilled under the point of condensation here, that the moist air condense as water and flows through the condensate outlet. The chilled and dried air is warmed up at the condenser (Pos. 3) again. Due to the heat pump effect, the outlet air is some degrees warmer than the sucked room air. Useful energy can conducted up to 3-fold of the electrical power consumption. The absolute moisture of air is lowered continuously by the continuous circulation of the room air through the device. The surplus moisture is removed safely and efficiently.

The Serial AD 2xx / WT 2xx is equipped with a radial fan (Pos 2), with that the air is blown up to 10 mtrs. far into the room.
Thus these devices are particularly for the laundry drying process or suitable for the employment in long areas. The air can be steered with the help of the two air baffle (Pt1 – Pos 3) in different directions.



- 1 - compressor
- 2 - radial fan
- 3 - Heat exchangers, consisting of evaporator (front) and condenser (in the back)
- 4 - air baffle

4. Safety

The condensation dryers AD 2xx / WT 2xx are furnished with protective devices. The devices were subjected to a safety examination. Dangers threaten in the case of operating error or abuse

- for the user.
- for the machine and other real values.
- for the efficient work of the machine.

All persons who have to do with the installation, service and maintenance of the devices must be qualified correspondingly and consider this operating manual precisely.

Using as directed

The condensation dryers are intended for the drying of air with atmospheric pressure.

Risk by accessory

Hoses for condensate removal and air filters must be fit expertly and must not take the protective devices of the condensation dryers out of operation. The control elements must always remain freely amenable.

Authorized users

The service of the condensation dryers AD 550 / AD 650 may only be carried out by persons, that were instructed from the operator. The user is responsible in the field of action third parties compared to.

Responsibilities for different activities on the device must of course be determined and kept. Unclear competences are a safety hazard.

The operator must make the operating instruction available for the user and make sure that the user did understand the manual.

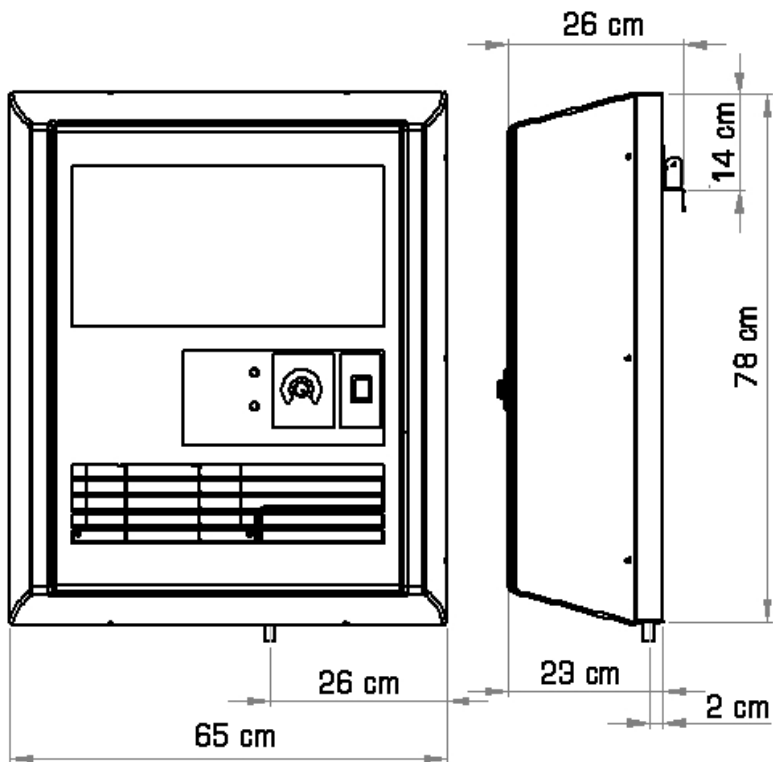
5. Installation & Transport

The dehumidifiers of series AD 2xx / WT 2xx are conceived for the stationary employment and has to be fixed at a wall.

Bei der Installation des Luftentfeuchters sind folgende Punkte zu beachten:

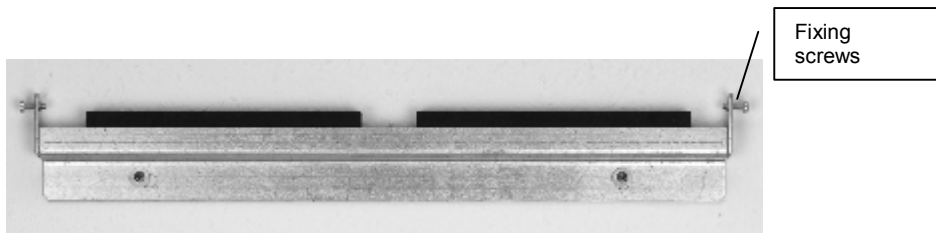
- The appliance must be used exclusively for air drying.
- That dehumidifier must be installed so that the air can circulate without obstruction through him. The air filter and also the outlet grille of the front wall must not be covered. The open space before the front must at least conduct 2 meter.
- With the selection of the installation place make sure that
 - a discharge is near the installation place to deriving the condensate.
 - a suitable plug socket is in the proximity.
 - the air can circulate as optimally as possible in the entire area.
 - With use as laundry dryers: the laundry slopes are placed along or radially in the front of the dryer.

5.1 Dimensional drawing



5.2 Fixing at a wall

The wall rail (see following figure) and fixing material is included with the delivery.



Affix the wall rail straight and safe at a suitable wall (use spirit level). Above the rail a distance must remain free from 30 cm up to the ceiling, in order to be able to hang the dryer problem-free into the wall rail.

The dryer is lifted from above in such a way into the wall rail that the fastening bar (Pt. 1.4 – Pos 6) hangs on the back of the dryer in the wall rail.

Check the position of the dryer with a spirit level!

With the help of the distance holder (Pt. 1.4 – Pos. 7) you can change the inclination. The dryer must hang on all axles straight!

Fix the dryer with the two fixing screws at both ends of the wall rail.

6. Electrical connection

Before connecting the air dryer, the following items must be checked:

- Does the mains voltage coincide with the voltage of the appliance?
- Adequate fusing of socket and supply system?
- Has a residual-current-operated circuitbreaker (r.c.c.b) been installed?
- If a cable drum is used: has it been unwound completely?
- Is the appliance connector suitable for the building socket?
- Is the socket provided with an earth connection?

ATTENTION:

Before putting the air dryer into operation, the technical data of the appliance should be compared to the conditions prevailing in the room of installation!

Use excluding the original mains cable! In the case of loss or damage you receive original mains cables in different lengths with your Entfeuchter supplier.

- Connect the equipment plug of the main cable with the equipment plug socket of the unit. (bottom side, left)
- Put the plug into a suitable socket.

7. Putting into operation

ATTENTION:

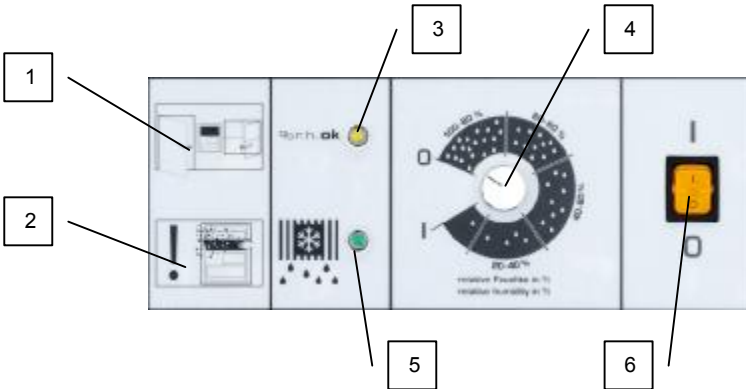
Before putting the air dryer into operation, the instruction manual should be studied carefully. Thus, damages by a false or inappropriate operation as well as by inadequate environmental conditions can be avoided.

For using the air dryer, please proceed as follows:

- Install the dryer as explained in Pt. 5.
- Connect the dryer to a socket like explained in Pt. 6.
- Make sure that a condensate hose is connected and guided with slope away from the dryer, safe into a sump. (Pt. 10).
- Switch on the dryer on On-/Off-Switch (Pt. 8)
- Adjust the humidity value like explained in Pt. 9.

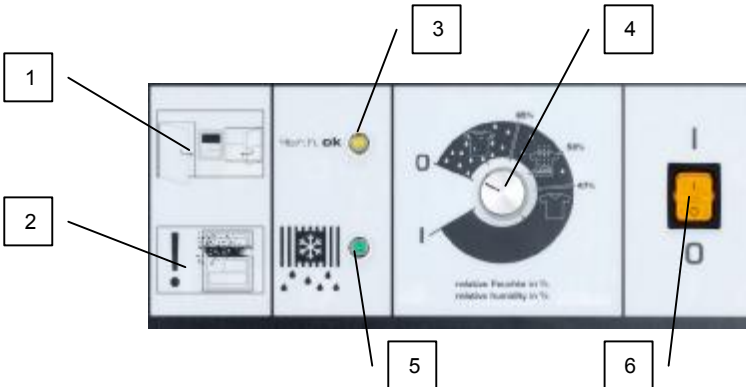
8. Operation panel

8.1 Dehumidifier AD 230 / AD 250



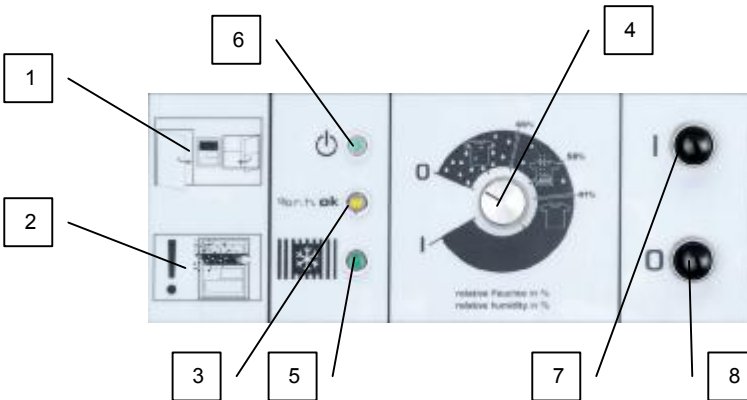
- 1 – Advice: Close windows and doors!
- 2 – Advice: Clean filter regularly.
- 3 – neon yellow: Device has been switched off, because the humidity is below the adjusted hygrosstat value.
- 4 – Hygrosstat (see Pt. 9.1)
- 5 – Device in defrost mode (see Pt. 11)
- 6 – On-/Off-switch, illuminated. Lights up when the device has been switched on.

8.2 Laundry dryer WT 230 / WT 250



- 1 – Advice: Close windows and doors!
- 2 – Advice: Clean filter regularly.
- 3 – neon yellow: Device has been switched off, because the humidity is below the adjusted hygrosstat value.
- 4 – Hygrosstat (see Pt. 9.2)
- 5 – Device in defrost mode (see Pt. 11)
- 6 – On-/Off-switch, illuminated. Lights up when the device has been switched on.

8.3 Laundry dryer with final switch off WT 230-E / WT 250-E



- 1 – Advice: Close windows and doors!
- 2 – Advice: Clean filter regularly.
- 3 – neon yellow: Device has been switched off, because the humidity is below the adjusted hygostat value.
- 4 – Hygostat (see Pt. 9.3)
- 5 – Device in defrost mode (see Pt. 11)
- 6 – neon green: Unit has been switched off.
- 7 – On-switch
- 8 – Off-switch

9. Hygostat

The air dryers of the series AD 2xx / WT 2xx dispose of a hygostat for setting the required humidity value. This hygostat is located in the operation panel of the unit.

The smooth setting option of the hygostat makes a very convenient humidity control possible for you. If very precise values are requested, you should match the hygostat with the information on a precise hygrometer.

Please consider:

Humidity values of a minimum of 40 % - 45 % r.h. can be achieved with a condensation dryer. An adsorption dryer is to be employed if lower values are required.

For this purpose, ask your technical consultant.

Optimal climate:

For living rooms, environmental conditions of 20°-25°C and 50 - 60 % r.h. are recommended.

For building drying, the hygostat becomes turned at continues running (POS. I).

In the case of the drying rooms with wood equipment (e.g. floors) or paintings, antiques and similar things should not be fallen below a humidity of 55%.

Ask your technical consultant in the case of special applications.

9.1 Dehumidifier AD 230 / AD 250

Pos. 0 = Device has been switched off

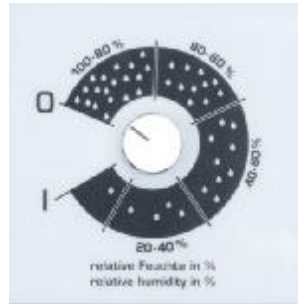
Pos. 1 = Continues operation

80 – 100% The dehumidifier switches off when a humidity of approx. 80 - 95% r.h. has achieved and switches on again when humidity is higher than 80-95%.

60 - 80% = The dehumidifier switches off when a humidity of approx. 60 - 80% r.h. has achieved. And switches on again when humidity is higher than 60-80%.

40 - 60% = The dehumidifier switches off when a humidity of approx. 40 - 60% r.h. has achieved. And switches on again when humidity is higher than 40-60%.

20 - 40% = The dehumidifier switches off when a humidity of approx. 20 - 40% r.h. has achieved. And switches on again when humidity is higher than 20-40%.



9.2 Laundry dryer WT 230 / WT 250

Pos. 0 = Device has been switched off

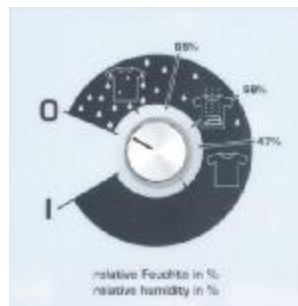
Pos. 1 = Continues operation

65% = The dehumidifier switches off when a humidity of approx. 65% has achieved and switches on again when the humidity is higher than 65% r.h..

58% = The dehumidifier switches off when a humidity of approx. 58% has achieved and switches on again when the humidity is higher than 58% r.h..
Your laundry is now ready for ironing.

47% = The dehumidifier switches off when a humidity of approx. 47% has achieved and switches on again when the humidity is higher than 47% r.h..
Your laundry is now nearly completely dried.

20 - 40% = The dehumidifier switches off when a humidity of approx. 20 - 40% has achieved and switches on again when the humidity is higher than 20 – 40 % r.h..
These low humidities are not possible with a condensation dryer.



9.3 Laundry dryer with final switch off WT 230-E / WT 250-E

The hygrostat is identical with the one of WT 230 / WT 250 (see Pt 9.2)
But the devices WT 230-E and WT 250-E are equipped with a final switch off.
That means that the device switches off with reaching the adjusted humidity value and does not restart automatically.

The drying process is considered as terminated. The laundry can be removed and new (wet) laundry be hung up.
Only when the device is started again at the On-switch (see Pt. 8.3 – Pos. 7) the drying process will start again.

10. Condensate removal

The dehumidifiers AD 2xx / WT 2xx are provided with connector for hose 15 x 2 mm. (Pt. 1 – Pos. 4).

The hose (2mtr. are included) has to be guided with slope away from the device and has to be fixed safely in a sump. (slope = 5 cm on each mtr. hose).

ATTENTION:

Make sure that the condensate can always be handled safely.

11. Automatic defrosting

During air drying, ice may form at the evaporator. The volume of ice depends on the ambient conditions prevailing in the room to be dried.

The AD 2xx / WT 2xx is equipped with an automatic hot-gas defroster. It ensures that, depending on the extent of ice formation, the appliance will be defrosted automatically according to the following principle:

- A temperature sensor measures the condition existing in a critical area of the evaporator.
 - It transmits the signal for defrosting to the DryLogic-electronic. The DryLogic finds out if defrosting is necessary, and it will start defrost-mode on its own.
 - During defrosting the compressor works and the fan does not work
- When the ice is defrosted, the dehumidifier will start again with dehumidifying.

12. Operating conditions

AD-/WT-condensation dryers are suitable for the effort in residential buildings, in basements, in garages and storerooms. AD-condensation dryers work problem-free at the temperature range of +3 to +32°C and in the case of relative humidity from 40% to 95% r.h. .

The use in rooms with higher temperatures leads to disadvantages at the compressor. The use in rooms with lower temperatures is ineffective and can lead to icing.

Also the storage of the dehumidifier at inadmissible temperature conditions can lead to damages / problems while immediate switch-on. Therefore, make possible short time for adaptation for the device before switch-on.

ATTENTION:

The appliance must not be used under the following conditions:

- in rooms of potentially explosive atmosphere
- in rooms of aggressive atmospheres, for example ammonia and wood acid
- In rooms with water which shows a pH-value outside of 7,0 to 7,4. **Remark:** In the case of lower pH-value, corrosion occurs at all metals and damages occurs at mortar containing materials. In the case of higher pH-value, it comes to irritation of skin and eye mucous membrane and extreme lime deposits.
- In rooms with salt or salty liquids. Salt content >1% (also sole baths).
- In rooms of air treated with ozone
- in rooms featuring a high concentration of solvents
- in rooms of an extremely high ratio of dust.
- Please consider also, that extremely air movings around the dryer can annoy or affect the function of the dryer as the air flow of the dryer can not flow as planned.

In the case of doubtful operating conditions it is recommended to contact the Technical Department of Messrs. AERIAL or a specialized dealer..

Using an AD-/ WT-air dryer under inadequate operating conditions will entail that the warranty becomes null and void.

13. Technical data

Among other things, many different components which are installed in the condensation dryer decide on the capacity of the device. Since these components can never be completely identical, in accordance to DIN EN 810 the capacity may deviate up to 5% of specified capacity.

Generell:

Einsatzbereich: +3°C bis + 32°C / 40% r.F. bis 95% r.F.
 Schutzart IP X2
 Spannung: 230 V / 50 Hz

Typ		AD 230 / WT 230	AD 250 / WT 250
Air volume	cbm/h	870	1000
Power consumption	Max. Watt	660	1000
Noise level (in 2,5 m Distance)	dB(A)	75	75
refrigerant (filling charge see type plate)		R407c	R407c
At 30°C / 80% r.h	l/24h Watt	30,0 660	51,0 1000
At 27°C / 60% r.h.	l/24h Watt	20,0 575	35,0 900

At 20°C / 60% r.h.	l/24h Watt	16,8 515	23,5 820
dimensions	mm	795 / 650 / 260	795 / 650 / 260
weight	kg	40	42

14. Service & Maintenance

ATTENTION

When performing any repair or maintenance, the general safety rules and provisions must be adhered to!

In order to guarantee a troublefree function of the dryer the device should be cleaned regularly. The following procedure is recommended:

- Switch off the dryer
- Pull main cable from the socket
- Remove filter holder (see Pt. 1)
- Remove filter and clean or organize new one
- Remove front cover.
- Blow out device cautiously with compressed air. (wear protective goggles!) In this case, it might ensure that all components are cleaned. (Compressor, evaporator, condenser, ect.)
- mount front cover.
- Check hose connector and connected hose
- Clean case with moist cloth. Do not use aggressive detergent
- Insert new or cleaned filter. Use only original AERIAL-filter for problemfree working.
- Insert filter holder
- Put plug into socket
- Switch on the dryer

**This cleaning is without fail regularly required!
During construction site effort, after every effort or once a week!**

15. Trouble shooting

Assign that dehumidifier a putative defect on, please, first check the following points. If this should provide no relief, please contact your technical consultant.

1) The dehumidifier shows a bad or no drying capacity

- The humidity is lower than 40% r.h. or the temperature in that room is lower than +3°C. The using of the dryer is uneconomical in the case of these conditions. It is recommended to disconnect the dryer. **Tipp:** Put the built-in hygostat on an attainable value (e.g. approx. 50%r.F.), with it the dryer punctually may switch off.
- The air filter is soiled. The dryer does not receive air sufficiently. Clean the filter and/or install a new one. A soiled air filter can in the long run lead to disadvantages at the dryer. **Tipp:** Control the filter regularly.

2) The fan of the dehumidifier does not work, the compressor still turns.

- The unit is in defrost mode. The green neon lights up (see Pt. 8 – Pos 5). In this case the compressor still runs and the fan does not run. After some minutes, the unit will start with regular working.

3) The complete dryer is out of operation. Fan and compressor does not run

- Is the dryer switched on? ‘
- Is the unit supplied with voltage?
 - o AD 2xx / WT 2xx: On-/Off-switch (Pt. 8.1 / 8.2 – Pos. 6) must be in Pos. I and light up
 - o WT 2xx-E: neon for operation (Pt.8.3 – Pos. 6) must light up.
- Check the main cable, an additional cable, the socket and the main fuse.
- The humidity value adjusted at the hygrostat is achieved. The dryer will start again after exceeding the adjusted humidity. The yellow neon (Pt. 8 – Pos. 3) lights up.
 - o AD 2xx / WT 2xx: The dryer switches on again when the humidity increases to a value above the adjusted value.
 - o WT 2xx-E: The dryer has to be switched on at the On-Switch (Pt. 8.3 – Pos 7) to start a new drying process.

4) Strong icing up at the evaporator.

- Put the dryer into a room with min. +10°C room temperature and wait until complete ice is defrosted. Switch on the unit again (in that room with min. +10°C) and let work for approx 3 hours. If there is icing up again, please contact your dealer. Otherwise make sure that the unit is only been used in rooms with more than +3°C. Also the storage of the dehumidifier at inadmissible temperature conditions can lead to damages / problems while immediate switch-on.

5) The humidity adjusted at the hygrostat does not become achieved and/or the device does not switch off automatic.:

- Is the hygrostat adjusted on a value lower than 40 – 45% r.h.? Humidity values with a minimum of 40 % - 45 % r.h. can be achieved with a condensation dryer. Adjust the hygrostat to a reachable value.
- Is the unit with enough capacity for your application? The air changing, number of the persons in the room, volume of wet clothes and open water surfaces decide on the humidity burden in the room. Let calculate the necessary capacity from your dealer
- Is there a lot of water in the walls or the floor? In that case the dryer needs some time to remove that water and to achieve an acceptable humidity in that room.

ATTENTION

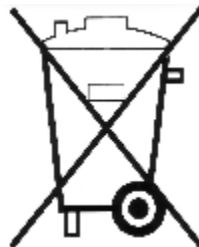
The appliance must be repaired by trained and expert personnel only. In the case of interventions by unauthorized people, any and all warranty claims shall become null and void!

If you have any questions regarding defects and malfunctions of AERIAL-air dryers we recommend get in touch with your supplier.

The producer AERIAL GmbH you reach under 0049-40-526879-0 or www.aerial.de

16. Disposal

Please do not dispose this unit with the domestic waste and please do not dispose this unit in the environment. We dispose this unit for you – free of charge and environment-friendly. Please contact us! Alternative your local waste management enterprise takes this unit for environment-friendly disposal.



17. Manufacturer's declaration

(EU-directive 2006/42/EG)
(EU-directive 2004/108/EG)
(EU-directive 2006/95/EG)

manufacturer: AERIAL GmbH - Systeme zur Luftbehandlung
Oststraße 128, D-22844 Norderstedt

Product description: - Dehumidifier AD 230 / AD 250
- Laundry dryer WT 230 / WT 250
- Laundry dryer with final switch off
WT 230-E / WT 250-E

capacity: 30,0 / 51,0 l/day

The product described above is an ambient air dryer ready for connection.

Related standards: EN ISO 12100 Safety of Machinery
EN 61 000 Electromagnetic Compatibility (EMC)
Basic Specification "Emitted Interference"
EN 60 335-2-40 Safety of electric appliances for domestic use and similar purposes

In the case of changings at the unit this manufacturer's declaration becomes void.

Norderstedt, 01.01.2012

sign / stamp

Karsten Meier – Geschäftsführer

Niederlassung Schweiz:
AERIAL GmbH
Täferstrasse 22a
5405 Baden-Dättwil
SCHWEIZ

AERIAL GmbH
Oststrasse 128
22844 Norderstedt
DEUTSCHLAND