



# AERIAL®

## Instruction manual

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### Sound box with high pressure blower Series AB 200 / AB 500 / AB 1000

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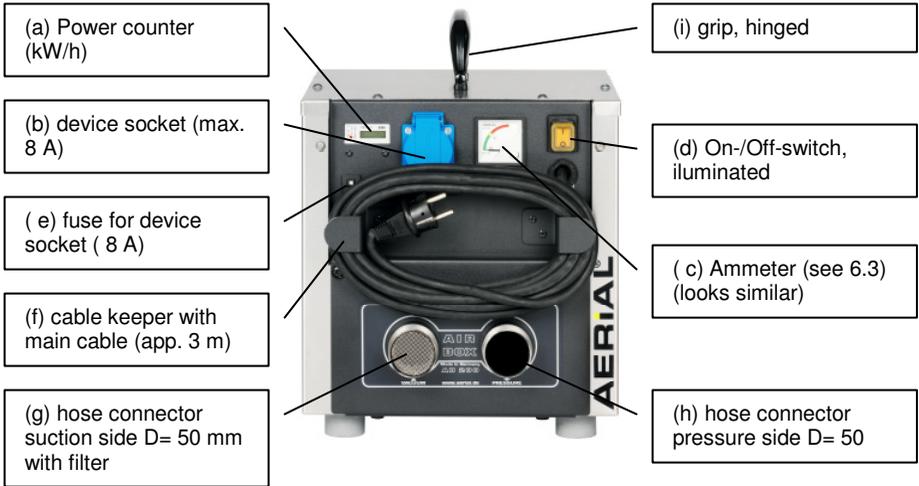


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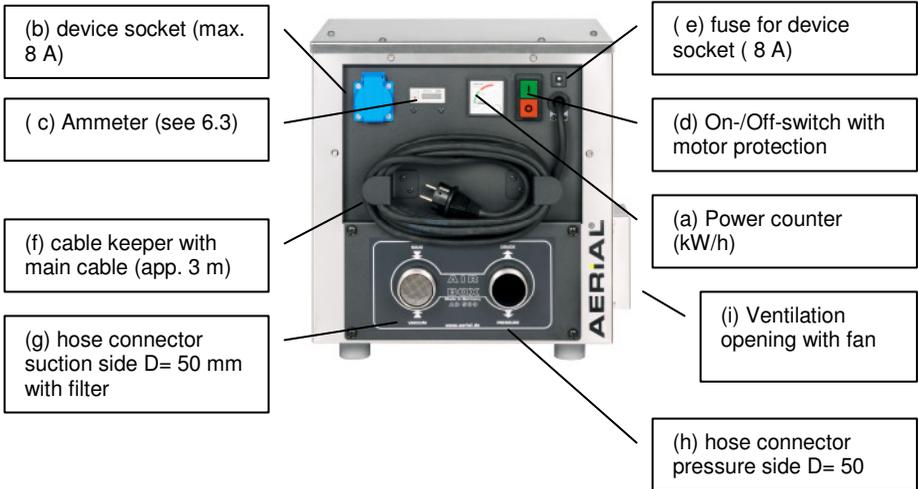
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# 1.Scetches

## 1.1 Front of AB 200



## 1.1 Front of AB 500 / AB 1000



## 2. General advice

You have bought a high pressure blower with sound box (in following mentioned as "sound box") made by AERIAL thus deciding for a proven quality product "Made in Germany". If nevertheless complications should occur, you will find some advice hereinafter how to eliminate such difficulties as quickly as possible.

### ATTENTION:

Immediately after receipt, you should check your sound box 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 sound box 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 & features

The sound box consists of a **side channel blower** model HB (in following mentioned as "high pressure blower"), that is built in a sound insulated metal case. The high pressure blower sucks room air or dried air from an adsorption dryer through the intake fitting (g). This air is compressed in the high pressure blower and blown out at the pressure fitting (h). From there the air is injected by hoses and fittings into insulated layers or cavity. The air now takes up humidity and leave the cavity / insulation layer again through relief ports.

Alternatively the sound box can be used also in suction mode. For exact informations to the installation see point 6 "operation".

In order to chill the high pressure blower during operation, the sound box is provided with ventilation openings.

To protect the engine of the side channel blower against overload, the sound box is furnished with a **thermal over-current safety switch**. This disconnects the side channel blower if the operating current is for a long time higher than the maximally permissible operating current.

The ammeter ( c ) which announces the value of the operating current.

A **temperature sensor** is placed in the engine of the blower. If the winding of the engine exceeds a critical temperature, the blower is disconnected. Restart occurs automatically after sufficient cooling the winding.

The sound box is furnished also with a **power counter** ( ( a) shows kWh from the very first start of the unit) and a **device socket** (b) max. 8 A). During the using of the sound box in connection with an adsorption dryer, the electrical supply of the dryer can occur via this device socket.

**Maximal connection: 8A**

The sound box is equipped with **handles for transportation**. (at Ab 200 one handle on the top, at AB 500 and AB 1000 two lateral handles)

The rubber bumpers of the sound box are set up from not coming off, food genuine material.

Optionally the AB 500 and AB 1000 is also available with transport frame and big wheels.

The side channel blower is stored in the sound box on oscillation dampening grommets.

For the connection of hose systems and air filters, the sound box has tube double nipple of the size 1½").

#### **4. Safety**

The sound boxes 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 sound boxes with blower are intended for the drying out of cavities.

***Risk by accessory***

Hoses, fittings and air filters must be fit expertly and must not take the protective devices of the sound box out of operation. The control elements must always remain freely amenable.

***Authorized users***

The service of the sound boxes AB 200, AB 500 and AB 1000 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 amenable for the user and make sure that the user did understand the manual.

## 5. Installation and transport

The AB-sound boxes has been designed for mobile application. For installation and transport, the following instructions must be adhered to:

- The sound boxes must be installed so that the air can pass through it without any obstacles. The side, reverse and front wall of the case must not be covered!
- Before any change of the place of installation, the appliance is to be switched off by the ON-OFF-switch, the mains plug is to be removed from the socket!
- The sound box must be moved only using the provided handle system!
- The appliance must be used exclusively for cavity drying.
- Be careful while using on flammable grounds! Bottom of sound box case can get warm.

### **ATTENTION:**

*Do never pull or move the device at the power cable*

## 6.Operation

### 6.1 electrical connection

Before connecting the sound box, 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 a perfect grounding?

### **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!

### 6.2 Putting into operation

### **ATTENTION:**

Before putting the sound box 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.

**An air filter (serially equipped at this AB-series) is to be mounted on the suction side if the sound box is used not in combination with an adsorption dryer!**

**A permissible water separator is to be pre-connected always if the sound box is used fur sucking.**

For using the sound box, please proceed as follows:

- Set up sound box.

#### **Operation mode: Pressure**

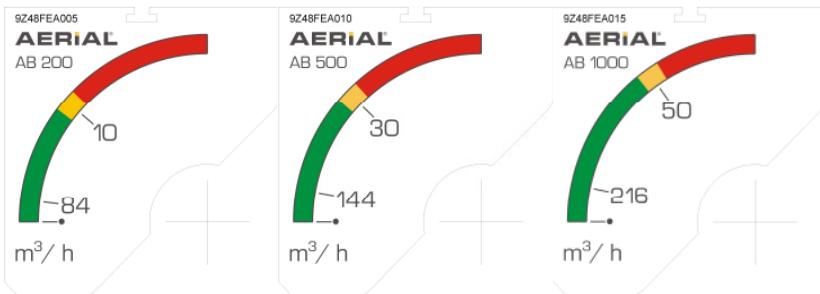
- Install hose (D= 50 mm, optional extra) at pressure outlet of the blower and pass the air from there into the cavity.
- Connect filter (optional extra) or adsorption dryer (optional extra) at the suction fitting of the blower

#### **Operation mode: Suction**

- Connect water separator (optional extra) at the suction fitting of the blower.
- Install hose (D= 50 mm, optional extra) at the pressure fitting and – if possible - guide the hose out of the room.
- Put the plug into the building socket.
- Switch on the unit at the On-/off-switch.
- Control value of the operating current at the ammeter and match with the maximally permissible values for the respective system. During transgression of the permissible value, a suitable measure is to be taken for lowering the current (see 6.3 “Ammeter / current power”).

### **6.3 Ammeter / current power**

The sound boxes of AB-series have an ammeter at which the air flow - derived from operating current - can read off. The shown value should be in the green or yellow area. If the value is in the red area, suitable steps must be taken in order to lower the current consumption.



In different cases of application, the following steps lead to decompression and therefore lowering the current consumption:

- inserting additional relief wells into the ground to be dried
- installation of additional edge pointing nozzles
- installation of additional boarding cross systems or mounting a bypass

#### **Attention!**

Exceeding the maximally permissible operating currents leads to shutdown of the blower and consequently, stops the drying out. For further questions please contact your supplier or AERIAL.

## 7. Operation conditions

The sound boxes of the AB-series are suitable for application on construction sites and in residential buildings. AB-sound boxes can be operated without difficulties within a temperature range from 0 to +32°C and with a relative humidity of 40 to 95 % r.h..

### 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.*

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

**Using the sound box under inadequate operating conditions will entail that the warranty becomes null and void.**

## 8. Technical data

Among other things, many different components which are installed in the sound box 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.

### General:

Operational range: 0°C up to + 32°C / 40% r.h. up to 95% r.h.  
 Protection class: IP 23 / Class 1 acc. VDE 0106 T1  
 Voltage : 230 V / 50 Hz

	<b>AB 200</b>	<b>AB 500</b>	<b>AB 1000</b>
Type of high pressure blower	AERIAL HB 2	AERIAL HB 3	AERIAL HB 4
Air flow, free blowing	84 cbm/h	144 cbm/h	216 cbm/h
Max. diff. pressure	-110 mbar	-140 mbar	-180 mbar
Vacuum pressure	130 mbar	160 mbar	190 mbar
Noise level (3 m distance)	< 46 dB(A)	< 48 dB(A)	< 50 dB(A)
Rated current	2,6 A	5,2 A	9 A
Motor power	400 Watts	750 Watts	1500 Watts
dimensions (H / B / T)	330 x 310 x 365 mm	404 x 410 x 422 mm	470 x 470 x 480 mm
weight	19 kg	30 kg	40 kg
Recommended drying area *	10 – 15 sqm	20 – 30 sqm	40 – 50 sqm

\* Empirical values / standard values which can be depending on application different.

## 9. Service & Maintenance

### ATTENTION

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

In order to guarantee a perfect operation of the sound box, the appliance should be cleaned at regular intervals. It is recommended to proceed as follows:

- Visual inspection of the sound box.
- Check and clean filter at suction connector
- Switch on the unit at the On-/Off-switch.
- Check the case for local overheating.
- Check function of the fan (chilling fan, at AB 500 and AB 1000) (draught on the ventilation opening must be perceptible). The fan may be cleaned after every effort carefully with compressed air.
- Let sound box run without back pressure and pay attention to unusual operating noises. If subjects should be in the side channel blower (stones etc.), the side channel blower must be dismantle and must be repaired by an authorized specialized firm or the AERIAL GmbH.
- Switch off the unit and pull the plug from the socket.
- Dismantle the top cover
- Blow out device interior cautiously with compressed air. Wear protective goggles!
- Check all cable connections
- Mount top cover
- Clean sound box outside with moist cloth. (do not use aggressive detergents)

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

No other maintenance work is required for the sound box.

## 10. Trouble shooting

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

### 1. The high pressure blower does not run or has been switched off automatically:

- Has the sound box been switched on? ON-/Off-switch in Pos. 1 / On
- Is the unit supplied with voltage? Check the main cable, an additional cable, the socket and the main fuse.
- Thermal safety switch or over-current safety switch has switched the machine off. Let the device cool down and check the installation, to avoid overheating. (Pt. 6.3)

2) The compact fan in the case (for ventilation of the case) does not run (only at AB 500 / 1000):

- Check the cable connection at the fan

3) The device socket does not function

- Is the unit supplied with voltage? Check the main cable, an additional cable, the socket and the main fuse.
- Check the cable connection at the socket.
- Check the fuse (8A) for the socket.

4) The Ammeter does not move / does not show a current:

- Check the cable connection at the ammeter

5) The power counter does not count:

- Check the cable connection at the power counter

### **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.

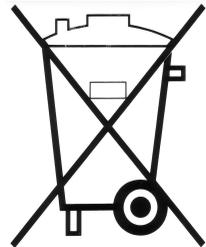
The producer AERIAL GmbH you reach under 0049-40-526879-0 or [www.aerial.de](http://www.aerial.de)

## **11.Disposal**

Please do not dispose this unit with the domestic waste and please do not dispose this unit in the environment.

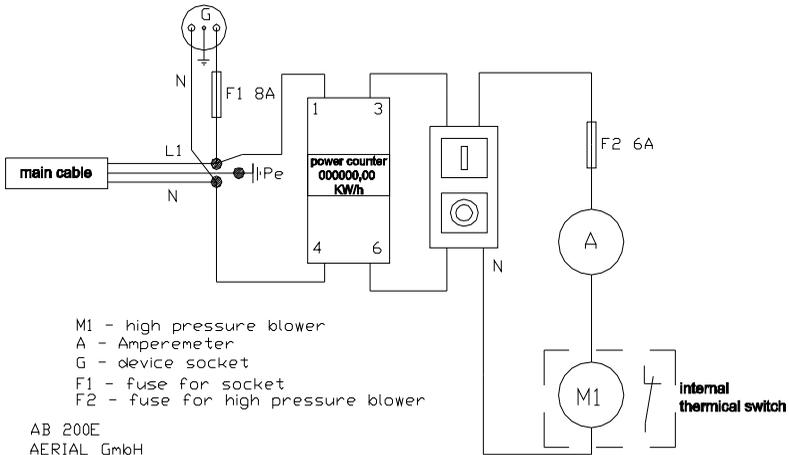
We dispose this unit for you – free of charge and environment-friendly. Please contact us!

Alternative your local waste management enterprise takes this unit for environment-friendly disposal.



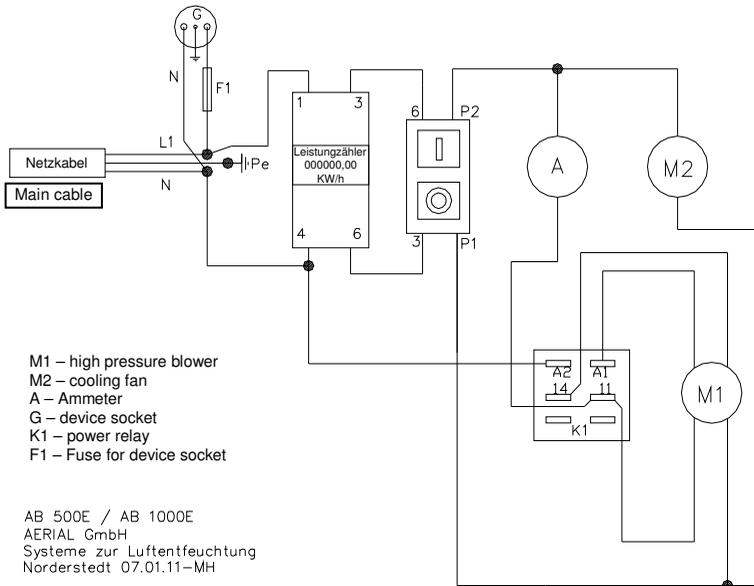
## 12. E-circuit

### 12.1. AB 200



AB 200E  
 AERIAL GmbH  
 Systeme zur Luftentfeuchtung  
 Norderstedt 05.12.07-MH

### 12.2. AB 500 / AB 1000



AB 500E / AB 1000E  
 AERIAL GmbH  
 Systeme zur Luftentfeuchtung  
 Norderstedt 07.01.11-MH

### 13. Manufacturer´s declaration

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

Manufacturer: AERIAL GmbH - Systeme zur Luftbehandlung  
Oststr. 128, D-22844 Norderstedt

Product description: sound box AB 200 with high pressure blower HB 2  
Sound box AB 500 with high pressure blower HB 3  
Sound box AB 1000 with high pressure blower HB 4

The product described above is sound box with high pressure blower for cavity drying 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, 01.12.2010

Signature and seal

Karsten Meier - CEO

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