

air purifier

# VIROXX E150++

## instruction manual



version: 1.4  
state: January 2019

manufacture and sales:

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In case of any questions according to operation or maintenance of the **VIROXX E150++** please indicate the following information's:

- unit model
- unit number.

You will find the unit model and number on the type designation plate at the frontside of the unit.

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The manufacturer of the **VIROXX E150++** reserves all further rights.

*Version 1.4 (January 2019)*

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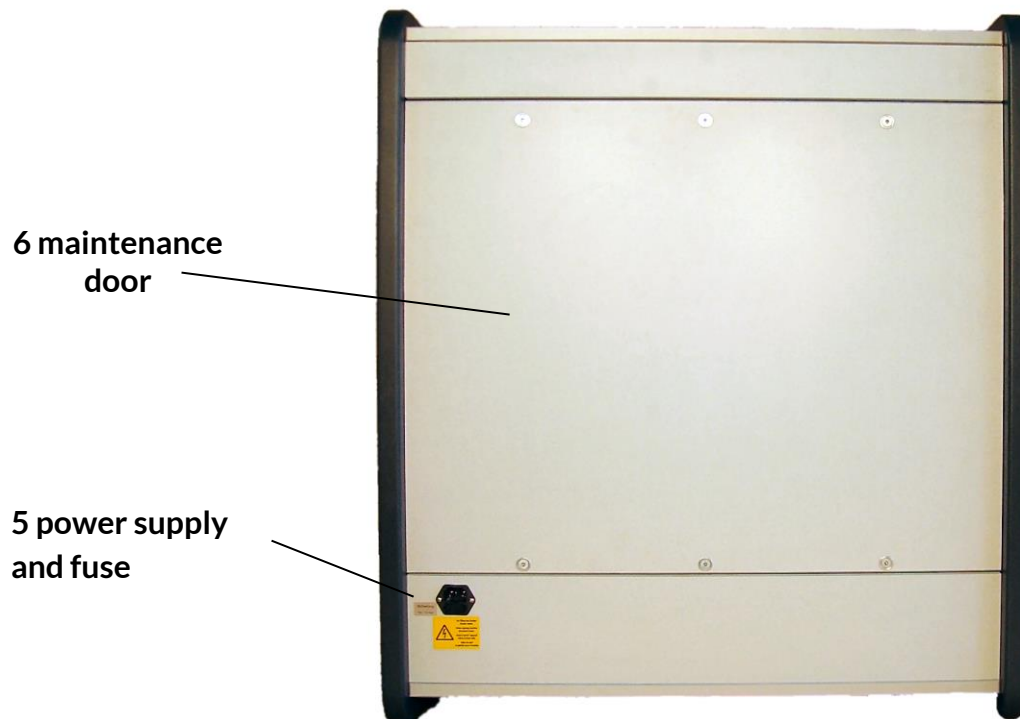
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**overview**

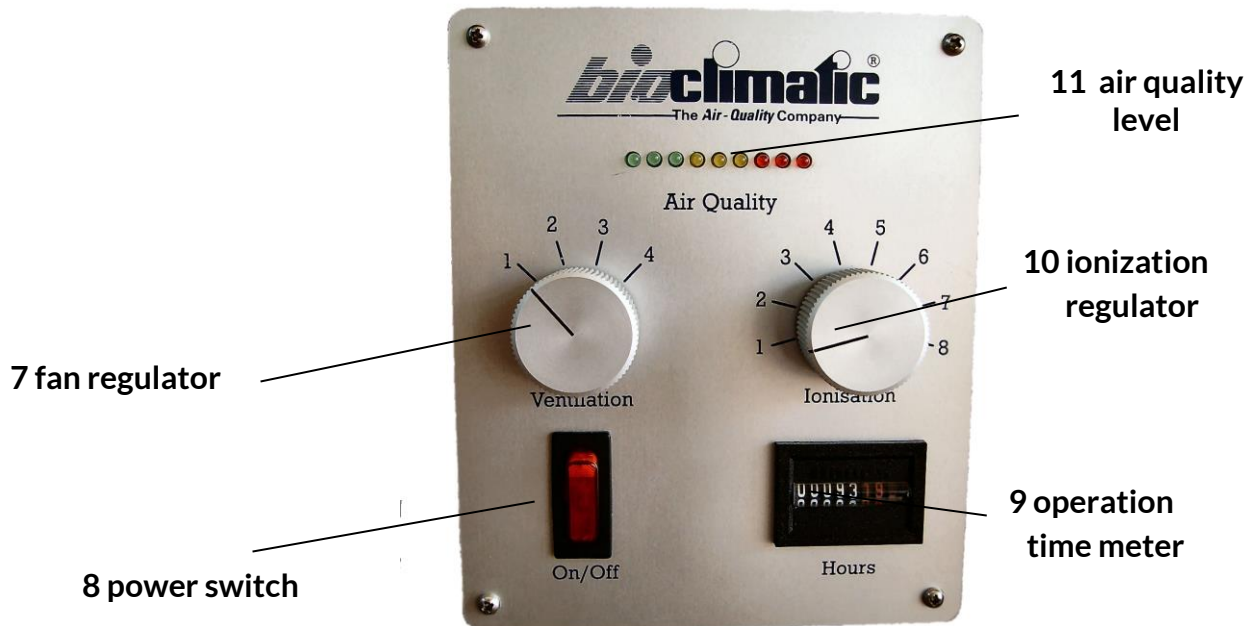
front side



back side



control panel



## 1 device description of the **VIROXX E150++**

### 1.1 purpose of use

The **VIROXX E150++** air purifier inactivates germs like viruses, bacteria's, moulds and yeasts and abates airborne pollutants and particles as well as odours of the indoor air.

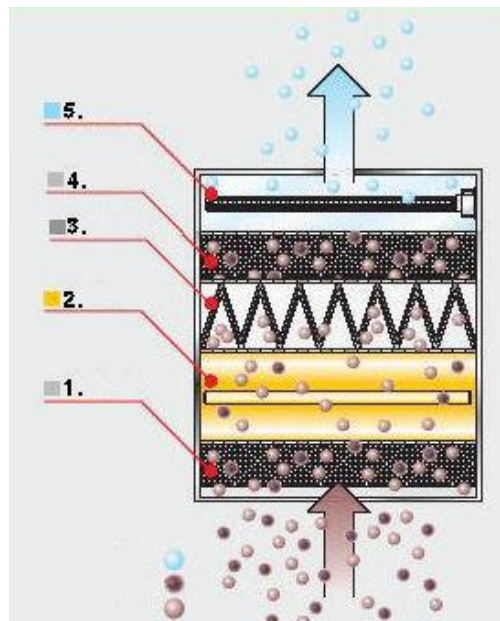
The combination of prefiltration, photochemical disinfection, catalytical oxidation, high performance micro filtration and bipolar ionization purifies the indoor air.

The air purification level of the **VIROXX E150++** is adjustable to the real air indoor contamination level. By use of an Air Quality Detector The mobile and self-contained **VIROXX E150++** can be installed in any kind of places.

## 1.2 functional description

This chapter describes the main technical basics of the working function of **VIROXX E150++**.

The patented **VIROXX-Technology** guarantees that, dangerous airborne contaminants and microorganisms are inactivated and particles are abated effectively.



pic. 1: VIROXX working function

### 1. step: prefiltration

A fine filter, installed at the entrance of the system (2), removes dust particles from the incoming air.

### 2. step: photochemical disinfection

The combination of photo-oxidation and photo-catalysis allows the simultaneous inactivation of micro-organisms and viruses and the degradation of odour molecules. For achieving high abatement efficiencies, lamps emitting powerful short UVC waves and photo-active catalysts have been used.

### 3. step: catalytic oxidation

On the downstream side of the photo-chemical disinfection step, an extra catalyst is installed in order to improve the abatement efficiency.

**4. step: high performance micro filter**

The high performance micro filter guarantees the effective abatement of airborne particles.

**5. step: bipolar ionisation**

This last air treatment step charges the disinfected air with healthy air ions before its release in the ambience. High concentrations of air ions are not only healthy for humans but also abate micro-organisms and viruses in the air and on surfaces and neutralize unpleasant odours.

**sensor supported regulation**

The integrated Air Quality Detector adjusts the intensity of air purification automatically to the real air contamination level.

## **2 safety instructions**

For your own safety and regarding please note the following advices:

- Please study this instruction manual carefully. It's a part of the **VIROXX E150++** and must be available every time.
- Use the **VIROXX E150++** only for the described applications.
- The supply voltage of the unit and on site must correspond to each other.
- The **VIROXX E150++** sucks ambient air during operation. Therefore do not cover the unit during operation.
- Please don't use **VIROXX E150++** in damp locations or outdoor.
- Please use the **VIROXX E150++** only with products recommend in this manual. Bioclimatic can not guarantee a malfunction free operation of the unit by using other products with the unit.
- The claims of guarantee and liability expire by using not recommend or original products/spare parts with the **VIROXX E150++**.

Do not throw or push the unit and don't positioning it close to heat sources or isolation directly.

*bioclimatic* assumes no guarantee for damage, which results from neglect of this manual or from not intended use of the unit.

### 3 Technical Data







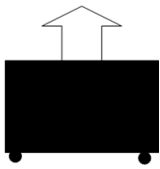


|   |                                  |
|---|----------------------------------|
| Room volume                                 | ca. 150 m <sup>3</sup>           |
| Dimensions                                  | ca. 710/335/815 mm (W x H x D)   |
| weight                                      | ca. 45 kg                        |
| Ambient temperature<br>operation<br>storage | +5 to + 40 °C<br>0 to + 50 °C    |
| relative humidity                           | max. 85 %                        |
| Power supply                                | 230 V AC / 50Hz                  |
| Power consumption (max.)                    | ca. 240 W                        |
| Air flow volume (max.)                      | ca. 250 m <sup>3</sup> /h        |
| UV-lamp                                     | 1 x 430/A (ozone free)           |
| Ionisation tube                             | 2 x IRF                          |
| fuse  | 1.6 A (slow blow)                |
| Radio shielding<br>EMC                      | DIN EN 55011<br>EN/IEC 61000-4-3 |
| Degree of Protection                        | IP44*                            |

\* only electrical components with installed tube socket seal

Tab. 1: Technical Data VIROXX E150++



## 4 Safety instructions

|  |  |   |
|--|--|---|
|   | <p style="text-align: center;"> <b>Caution, high voltage!</b></p> <p><b>Electrical danger!</b><br/>Unplug the mains plug before working on the unit or moving it. Respectively all poles of the the device must be disconnected from the mains!</p>   |    |
|   | <p style="text-align: center;"> <b>Warning</b></p> <p><b>Only qualified staff may work on the device!</b><br/>All works concerning mounting, start-up and maintenance must be carried out by qualified staff only.</p>  |    |
| <p style="text-align: center;">OZONE</p>  | <p style="text-align: center;"> <b>Caution</b></p> <p><b>Take the ozone concentration in the room into account!</b><br/>Take the dimensioning specifications into account, as the device produces ozone during operation.</p> <p>If the dimensioning table is taken into account and the device is set in accordance with the User Manual, the ozone produced will not exceed the maximum admissible concentration.</p> |  |

## 5 operation

### 5.1 switch-on and off

The operation panel (3) of the **VIROXX E150++** is located on the side of the unit.

In order to put the **VIROXX E150++** into operation press the power switch (8).

- The orange power control lamp (8) shines continuously.
- The unit is now in operation and works continuously.
- The flow rate of the **VIROXX E150++** could be adjusted in 4 steps by use of the fan regulator (7).
- The output of activated oxygen could be adjusted in 8 steps by use of the ionization regulator (10).

### 5.2 the control panel



pic. 2: control panel of the VIROXX E150++

#### power switch (8):

- by use of the power switch the unit gets in operation
- the red power control lamp (8) shines continuously.
- in case of a malfunction the power control lamp don't shines (see list of malfunctions 6.1). Please contact your specialist dealer.

fan regulator (7):

- The flow rate of the unit could be adjusted in 4 steps by use of the fan regulator (7).

ionization regulator (10):

- The output of activated oxygen could be adjusted in 8 steps by use of the ionization regulator (10). The sensor will regulate the ionisation from step "1" up to the chosen step.
- This is an push / pull switch! If it is pulled out, the sensor is not in function. The ionisation works always according to the chosen step.

operation time meter (9):

For control of the service intervals; display in hours and minutes, the maximum display is 99,999.99 h.

Air Quality Level(11):

For indication of air quality level in 9 Steps.

### **5.3 decommissioning of VIROXX E150++**

If you don't want to use the unit for longer time, cover the unit to protect it for contamination with dust and store it at a dry place.

### **5.4 recommissioning of VIROXX E150++**

Check if the air inlet and outlet is free of impurities. Please clean the unit from dust agglomerations with a brush.

## 6 function control

---

**i** The maintenance and function control jobs need to be done by qualified personnel only!

---

4.000 hours of operation after commissioning, after every maintenance and quarterly check the function of the unit.

1. Press the power switch **(7)** to turn on the **VIROXX E150++**
  - The red power control lamp **(7)** is shining.
  - The ventilator and the UV-lamp are in operation.
2. Check the flow rate of the ventilator by using the fan regulator switch **(7)**. Switch up to step 4, the flow rate increases.
3. Check if the characteristic crackle of the ionization tubes could be heard at the air outlet of the unit. By increasing of the ionization intensity **(9)** the crackle sound increases.
4. Check the display of the operation time meter **(4)** if it's count up after one minute of operation.

If the unit doesn't work properly, please contact your specialist dealer.

## 7 maintenance

### 7.1 cleaning and maintenance



The maintenance jobs need to be done by qualified personnel of your specialist dealer only.

**For every maintenance job pull the plug. Caution, in case the unit is not separated from power and still switched on, there is a high voltage charge (up to 3,0 kV) at the ionization tube.**

#### 7.1.1 maintenance schedule

|                                   | service interval  | maintenance description in chapters |
|-----------------------------------|---|-------------------------------------|
| function control                  | after the first 2.000 operation hours<br>then quarterly | 4                                   |
| control of the UV-lamp *          | after the first 2.000 operation hours<br>then quarterly | contact specialist dealer           |
| exchange of the UV-lamp *         | after 8.000 operation hours or<br>after 1½ years        | contact specialist dealer           |
| control of the ionization tube    | after the first 2.000 operation hours<br>then quarterly | contact specialist dealer           |
| exchange of the ionization tube * | after 16.000 operation hours or<br>after 3 years        | contact specialist dealer           |
| control of the prefilter *        | after the first 2.000 operation hours<br>then quarterly | contact specialist dealer           |
| exchange of the prefilter         | after 3 to 6 month                                      | contact specialist dealer           |
| control of the catalyst *         | after the first 2.000 operation hours<br>then quarterly | contact specialist dealer           |
| exchange of the catalyst          | after 3 to 6 month                                      | contact specialist dealer           |

|  | service interval                                     | maintenance description in chapters |
|--|--|-------------------------------------|
| control of the high performance micro filter * | after the first 2.000 operation hours then quarterly | contact specialist dealer           |
| exchange of the high performance micro filter  | after 3 to 6 months                                  | contact specialist dealer           |

\* Spare parts could be purchased and disposed by **bioclimatic** respectively.

### 7.1.2 cleaning

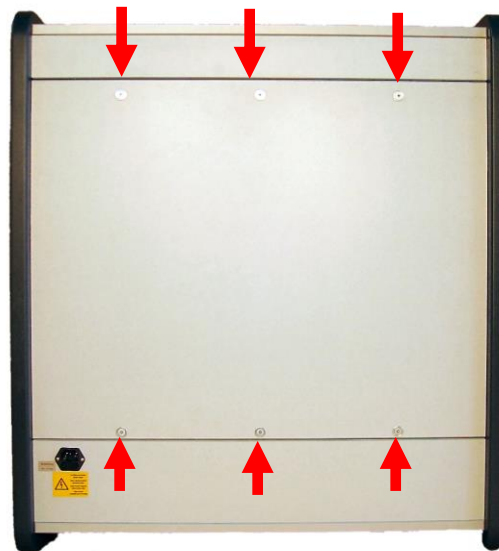
Clean the unit from time to time with a damp cloth.

## 7.2 opening of the VIROXX E150++



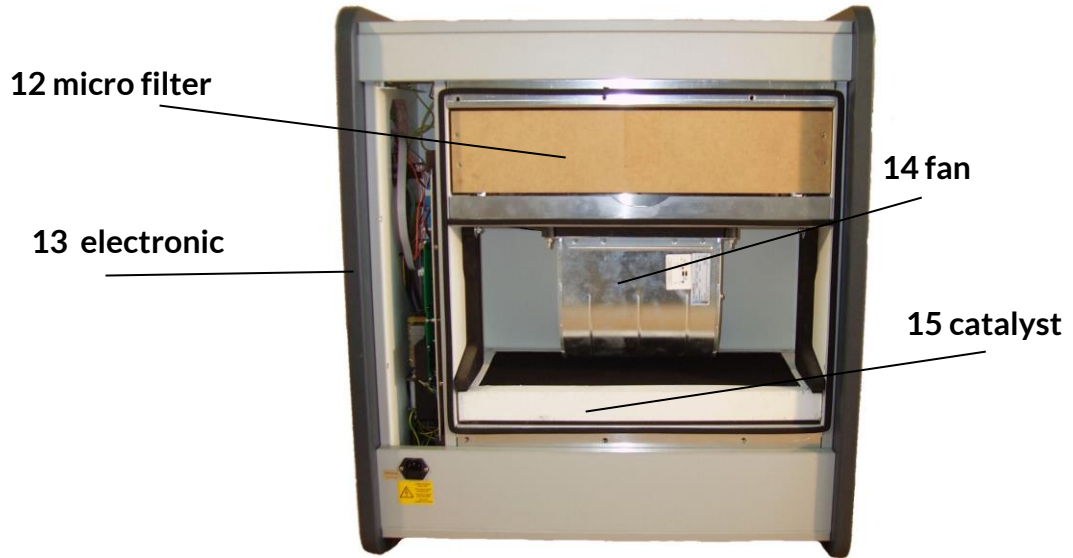
For every maintenance job pull the plug. Caution, in case the unit is not separated from power and still switched on, there is a high voltage charge (up to 3 kV) at the ionization tubes.

To open **VIROXX E150++** for maintenance jobs remove the six screws at the back side of the unit (see pic. 3.2.1).



pic. 3.2.1

Afterwards remove the maintenance door carefully.  
Now all compounds of the **VIROXX E150++** are reachable.



pic. 3.2.2

### 7.3 control and exchange of the catalyst

To check if the catalyst is damaged or contaminated with impurities please open the unit (see chapter).

Pull the two levers which fix the catalyst and the high efficiency micro filter (see. pic. 3.5.1).



pic. 3.2.3



pic. 3.2.4

Now the catalyst can be pulled out (see pic. 3.2.4).

In case of the catalyst is polluted with impurities exchange the catalyst.



**By insertion of the catalyst, please take care, that the seal at the rear side of the catalyst would not be damaged.**

Afterwards assemble the unit in reverse order.

#### **7.4 control and exchange of the ionization tubes**

Switch on the **VIROXX E 150++** and adjust with the ionisation regulator (4) to ionisation level one.

Check if the characteristic crackle could be heard at the air outlet (1).

By increasing of the ionization intensity with the ionization regulator (4) (the switch has to be pulled out!) the crackle must increase with a delay of approx. 5 seconds.



**Pull the plug.**

**Caution, in case the unit is not separated from power and still switched on, there is a high voltage charge (up to 3 kV) at the tube socket!!!**

Open the air outlet.

Check if the ionization tubes are contaminated or damaged.



For the cleaning of the ionization tubes, take them from the socket by turning anti clockwise. During this procedure you need to lift the contact spring.

For cleaning of the ionization tubes please follow the next steps:

- Remove outer mesh from the tube carefully. If the mesh sticks to the tube, take them into both hands and move hands in opposite direction. Once loose, strip the mesh.
- Clean the mesh with antifat detergent, so that the possible fat layer can be removed completely. Hold the tube into rising warm water for cleaning.
  - Dry well, so no humidity remains in the mash or on the tube.
  - Fix again the mesh in a way that the top end of the inner and outer mesh matches.
- Fix the tubes tight to the socket.



## 7.5 control and exchange of the UV-lamp

For the function control of the UV-lamp open the **VIROXX E150++** at the backside or remove the grid of the air inlet.

- In a distance of approx. 1.5 – 2 m switch on the unit for a short moment, to check if the UV-lamp is working.
- Pull the plug of the **VIROXX E150++** afterwards.
- Remove the UV-lamp
- Check if the UV-lamps are contaminated with impurities.



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**By dismantling and mounting, as well as by cleaning of the UV-lamps please touch them only at the ceramics at the end of the UV-lamps (Don't touch the glass, also few impurities can decrease the life span!).**

---

To clean the UV-lamp use a damp cloth and dry them afterwards sufficient. Afterwards assemble the UV-lamp in reverse order.

## **7.6 control and exchange of the prefilter**

The prefilter is integrated into the air inlet. Then check the prefilter of impurities or damages removes the grid of the air inlet.

## **7.7 exchange of the fuse**

You will find the fuse of the **VIROXX E150++** in the power supply at the backside of the unit. The fuse holder can only be opened if the power cord is removed!

For the exchange of the fuse see the following steps:

1. Disconnect the power cord
2. Open the fuse holder with a screwdriver or similar
3. Change the fuse
4. Push the fuse holder back
5. Connect the power cord

## 8 malfunctions and trouble shooting

### 8.1 list of malfunctions

| malfunction   | reason   | trouble shooting                       |
|---|--|--|
| no ventilator sound, red power control lamp turned off                            | malfunction of fuse  | control / change the fuse              |
|   | no supply voltage  | connect the unit to the supply voltage |
| line cord damaged   |  | contact specialist dealer              |
| no or very low flow rate though highest ventilator level is switched on           | - malfunction of the ventilator<br>- micro filter blocked<br>- catalyst blocked<br>- prefilter blocked | contact specialist dealer              |
| no or very low abatement of particles   | high performance micro filter blocked or damaged   | contact specialist dealer              |
| no characteristic crackle of the ionization tube could be heard at the air outlet | malfunction of the ionization tube   | contact specialist dealer              |
|   | no supply voltage  | connect the unit to the supply voltage |
|   | malfunction of fuse  | control / change the fuse              |

### 8.2 disposal

For the appropriated disposal of the **VIROXX E150++** please contact your specialist dealer of **bioclimatic**.

## 9 scope of delivery

### 9.1 standard scope of delivery

2 x ionization tube type IRF  
1 x UV-lamp type 430/A  
1 x catalyst  
1 x prefilter  
1 x high performance micro filter  
1 x instruction manual

### 9.2 spare parts

The following spare parts could be sourced by **bioclimatic**.

| parts.: | spare part name               |
|---------|-------------------------------|
|         | IRF- ionization tube          |
|         | UV-lamp                       |
|         | prefilter                     |
|         | high performance micro filter |
|         | catalyst                      |

## 10 technical specifications

|  | <b>VIROXX E150++</b>              |
|--|-----------------------------------|
| dimensions L / W / H   | approx. 710 / 335 / 815 mm        |
| weight   | approx. 45 kg                     |
| ambient air temperature<br>- operation<br>- storage  | + 5 to + 40 °C<br>0 to + 50 °C    |
| relative air humidity  | max. 85 %                         |
| electrical connection  | 230 V AC / 50Hz                   |
| power consumption  | approx. 240 W max.                |
| flow rate  | approx. 250 m <sup>3</sup> /h max |
| UV-lamp  | 1 x 430/A                         |
| ionization tube  | 2 x IRF                           |
| main fuse  | 1.6 A T                           |
| electromagnetically compatibility<br>- rayed emitted interference<br>- interference resistance | DIN EN 55011<br>2014/30/EU        |

\* The above mentioned values are measured under standard conditions (230 V AC / 50 Hz; 20 °C; 50 % relative humidity). In case of different supply voltage and/or frequency the values could vary.

Production revision reserved.

## 11 declaration of the manufacturer

The manufacturer is only responsible for the security, reliability and merchantability of the unit in case of:

- modifications or reparations are conducted by persons, who are authorized by the manufacturer,
- the electrical connection corresponds to the required specifications of the manual and
- the unit is utilized considering the instructions of the manual.

## 12 guarantee bond

The **VIROXX E 150++** was produced for you with extraordinary diligence. Each unit is tested according to the legally prescribed regulations, in order to prevent damage to humans and / or to **VIROXX E 150++**.

Nevertheless, a defect of the unit due to a production error or a material occurs, it is subject to the legally prescribed terms of warranty. The warranty claim is to be proven by delivery note which is delivered together with the unit by the specialist dealer or importer.

**bioclimatic** grant no guarantee at:

- non-observance of the manual
- operation errors
- improper usage and handling of the unit
- unauthorized interference by a third party
- damage due to an Act of God, e.g. lightning, damage by water etc.
- transport damage as a result of improperly packaging by return of the unit
- non-compliance of the maintenance
- operational wear of compounds like:
  - prefilter
  - catalyst
  - UV-lamps
  - high performance micro filter
  - ionization tubes
- usage of not original spare parts.

Maintenance and service jobs at the **VIROXX E 150++** may be accomplished exclusively by service stations authorized by the manufacturer or by the manufacturer.

**bioclimatic** reserves the right to correct the defect, to deliver a defect free product or to decrease the purchase price.

Please send the **VIROXX E 150++** with an exact defect description to your specialist dealer or to the manufacturer directly.

Assure that by dispatching of the unit, it can not take any further damage. The sender has to pay the forwarding charges. Units which have been send freight collect to the specialist dealer or the manufacturer will not be accepted.

Guaranteeing accomplished at the unit extend the guarantee time in no case.

## 13 EC Declaration of Conformity

bioclimatic GmbH  
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fax: +49-5723-9440-30  
e-mail: info@bioclimatic.de  
URL: www.bioclimatic.de



### EG - Konformitätserklärung EC Declaration of Conformity

**Der Hersteller**  
*The manufacturer*

bioclimatic GmbH  
Im Niedernfeld 4  
31542 Bad Nenndorf  
Germany

**erklärt hiermit, dass die nachfolgenden Produkte**  
*herewith declare that the following products*

**Produktbezeichnung:** Luftreiniger  
*product designation: air purifier*

**Typenbezeichnung:**  
*product identification:*

**VIROXX E150++, VIROXX KWL plus!**

den Bestimmungen der nachfolgenden EU-Richtlinien entsprechen, soweit sie gemäß den Montage- und Betriebsvorschriften, wie in der Produkt-Dokumentation angegeben, installiert sind:  
*are in conformity with the provisions of the following EU Directives when installed in accordance with the installation instructions contained in the product documentation:*

**2014/35/EU (Niederspannungsrichtlinie)**  
*2014/35/EU (Low Voltage Directive)*

**2014/30/EU (EMV-Richtlinie)**  
*2014/30/EU (EMC Directive)*

Bad Nenndorf, June 1<sup>st</sup>, 2018

(Marion Krome)  
Geschäftsführerin  
General Manager