

**Manual**

**Purusaqua  
Air dryer**


## Dear Customer

We are honoured that you have chosen for the products of **Tol WaterTechniek** (hereinafter referred to as TWT). Read this manual carefully so you will use the product correctly and so a correct functioning is guaranteed. If after reading this manual or while using our product you have any questions, please contact your dealer or TWT. We will be happy to help!

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# 1 EG declaration

<b>EC DECLARATION OF CONFORMITY</b>	
<b>MANUFACTURER</b>	
Company name:	Tol Watertechniek
Full address:	Eesveenseweg 54
Postal code:	8347 JE
Place:	Eesveen
Country:	The Netherlands
<b>DESCRIPTION AND IDENTIFICATION OF THE PRODUCT CONCERNED</b>	
Generic name:	Purusaqua® ozone installation
Function:	Ozone Installation for the treatment of (waste) water
Model:	HD
Type:	200, 250, 400, 500, 800
Serial number:	
Commercial name:	Purusaqua® ozone installation
<b>COMPLIANCE</b>	
<i>The manufacturer declares that the above mentioned machinery fulfils all relevant provisions of</i>	
Machine Directive 2006/42/EC	Low Voltage Directive 2006/95/EC
EMC Directive 2004/108/EC	
<i>In conjunction with the following harmonised standards and where appropriate other technical standards and specifications</i>	
<i>for the risk assessment</i>	
EN-ISO 12100:2010	
<i>for the design and manufacture</i>	
EN-ISO 12100:2010; EN-IEC 60204-1:2006/AC:2010; EN 349:1993+A1:2008; EN 61310-2:2008; EN-IEC 61310-3:2008; EN 61000-6-1:2007; EN-IEC 61000-6-2:2005/C11:2005; EN 61000-6-3:2007/A1:2001; EN 61000-6-4:2007/A1:2011; EN-ISO 3744:2010;	
Place: Eesveen	Identity: Bas van Tol
	Position: Owner
Date: 14 March 2013	Signature: 

# EC DECLARATION OF CONFORMITY

## MANUFACTURER

Company name: Tol Watertechniek  
Full address: Eesveenseweg 54  
Postal code: 8347 JE  
Place: Eesveen  
Country: The Netherlands

## DESCRIPTION AND IDENTIFICATION OF THE PRODUCT CONCERNED

Generic name: Purusaqua® ozone installation  
Function: Ozone Installation for the treatment of (waste) water  
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## COMPLIANCE

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EN-ISO 12100:2010

*for the design and manufacture*

EN-ISO 12100:2010; EN-IEC 60204-1:2006/AC:2010; EN 349:1993+A1:2008;  
EN 61310-2:2008; EN-IEC 61310-3:2008; EN 61000-6-1:2007;  
EN-IEC 61000-6-2:2005/C11:2005; EN 61000-6-3:2007/A1:2001;  
EN 61000-6-4:2007/A1:2011; EN-ISO 3744:2010;

Place: Eesveen

Identity: Bas van Tol  
Position: Owner

Date: 14 March 2013

Signature: 

## 2 Safety

### 2.1 *Intended scope*

The product described in this manual should only be used for drying air. Using it for other applications may result in personal injury or damage of the product.

### 2.2 *Risks in the use of air dryers*

Despite the fact that our products are designed in such a way that the risks are minimized there is always a risk of dangerous situations. **Our air dryers use heat for the regeneration process. Some parts (the tubes on top) will get very hot.**  
**Be sure not to touch them because this can result in serious injury!**

We strongly advise to annually service your air dryer to be sure that it is in perfect condition all the time.

### **3 Requirements regarding the installation environment**

Air dryers should be placed in a dry and cool environment protected against direct sunlight and rain. Good ventilation should be provided as well. During the regeneration process the moist is forced out of the drying tubes. If there is not sufficient ventilation the humidity levels will rise to unacceptable levels.

The air dryer is only suitable for vacuum operation. In other words, the air must be sucked through the air dryer. This can be done by the use of a venturi injector or by a pump.

Some parts (the tubes) of the air dryer will get hot. Don't place any flammable materials near or above the air dryer!

**Defects caused by neglecting these installation requirements will not be covered by warranty!**

## 4 Air dryer

This chapter describes the regenerative air dryer, model RG-16

### 4.1 Explanation of the product

The air dryer absorbs moist from the air by the use of an absorbent. Inside the air dryer there are two tubes filled with this absorbent.

There are two states in which the tubes can be, "in use" and "regeneration". If one tube is "in use" the other one will be in "regeneration".

If a tube is "in use" it means that it currently is absorbing moist from the air, it is producing dry air. During this process moist is being absorbed in the absorbent, this only can happen for a certain time. After a few hours the absorbent is saturated with moist.

During the "regeneration" process the absorbent is heated which forces the moist out of the tube. During this process you may see some water vapour getting out of the top of the tube which is being regenerated.

Below the main control elements are explained:

#### Mains connection

The mains connection powers the air dryer. The air dryer may only be used on sockets which have a proper ground/earth connection! The air dryer is rated for 230V and a frequency of 50Hz.

#### Air output

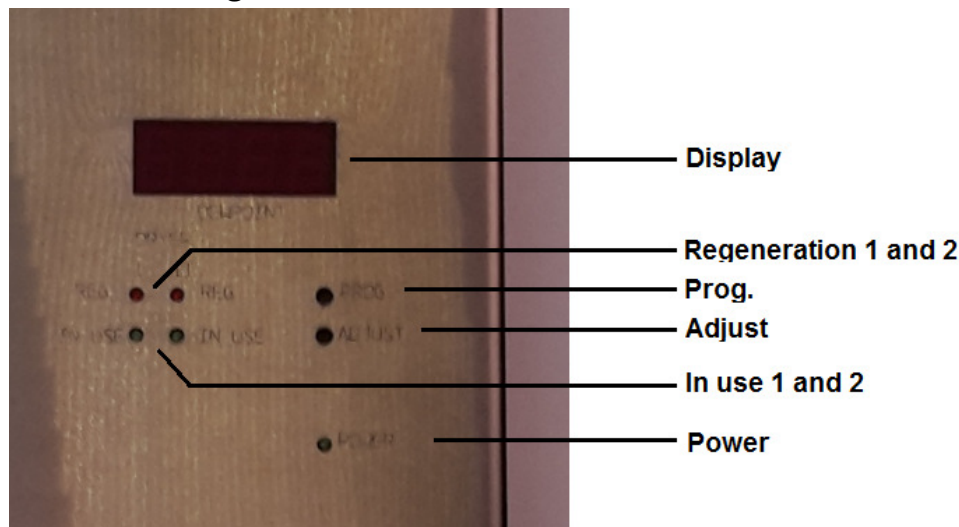
This is the hose connection at the bottom of the air dryer. The injector or air pump should be connected to this connection.

#### Air intake / Moist outlet

On top of both tubes the air is sucked in during the time that a tube is producing dry air "in use". During the regeneration process water vapour and hot air will come out here.

**Be very careful to not touch these tubes because they can be very hot!**

#### 4.1.1 Meaning of the buttons and LED's





## **Power**

This LED is light up if the air dryer is connected to the mains

## **Reg 1 / Reg 2**

These LED's indicate which tubes is in the "regeneration" state

## **In use 1 / In use 2**

These LED's indicate which tube currently is producing dry air

## **Prog.**

This switch has multiple functions

## **Adjust**

This switch is used to adjust the desired dew point.

## **Dew point "display"**

During normal operation this display shows the actual dew point of the produced air.

## **4.2 Installation of the air dryer**

Place the air dryer on a flat surface, preferably in a dry and well ventilated room protected form direct sunlight and rain. Be sure that there are no flammable materials located closely to the air dryer. The top of the drying tubes should at least have 50cm of free space above them.

Only supply power to the air dryer by a wall socked which is earthed. Connecting the air dryer to a non earthed wall socket can have life threatening consequences.

## **4.3 Control if the air dryer is properly connected**

First carefully check if all hoses are connected in the right way and if the air dryer is connected to an earthed wall socket.

To check if the air flow is right keep your hands above the tubes. You only should feel air flowing into one of the tubes.

## **4.4 Commissioning the air dryer**

Make sure there is an air flow trough the air dryer before you turn on the air dryer. After that you can turn on the air dryer by connecting the mains power cable.

## **4.5 Changing the shown parameter on the display**

The display standard shows the current dew point. By pressing the "prog" button once it will now show the current air temperature in centigrade. By pressing it once more it will show the air temperature in Fahrenheit.

If the "prog" button is pressed once more it will show the current humidity of the air.

## **4.6 Changing the produced dew point**

If the "prog" button and the "adjust" buttons are pressed simultaneously for more then 3 seconds the air dryer will be in programming mode. The display now flashes and will show the desired dew point.

If the "prog" button is pressed shortly, it will show the current temperature of tube 1 (the left one). If the "prog" button is pressed again it will show the temperature of tube 2 (the right one).\

If the "prog" button is pressed once more it will show the desired dew point again which now can be changed by pressing the "adjust" button. This change should be confirmed by pressing the "prog" button for at least 3 seconds. The air dryer now will leave the programming mode and return to normal state.

If during programming mode no buttons are pressed or values are changed the dryer will return to normal operating mode.

## **4.7 Maintenance**

Before you start with maintenance on the air dryer be sure that it is disconnected from the mains! The maintenance on the air dryer exists out of cleaning the ventilation screen and the housing. The housing can be cleaned with a moist cloth. The ventilation screen can be cleaned with a soft brush ort carefully with compressed air.

**Never use solvents for cleaning because these can damage the absorbent!**

We advice you to sent the air dryer back to us annually for a check. We will check the tubes and internal parts.

You can sent it back directly to us or return it to your nearest dealer.

There are no serviceable parts inside the air dryer. Warranty is voided if the air dryer is opened by non authorized personnel.

## **4.8 Decommissioning the air dryer**

If you want to decommission the air dryer be sure to store it in a space were it is dry and free from dust, for example an attic.

## **4.9 Problem solving**

**The power LED doesn't light up:**

- Check if the plug is inserted in the wall socket.

**There is no air coming out of the outlet:**

- Be sure to connect the dryer to a device which sucks the air out of the dryer.
- Check the hoses for leaks and kinks.

**The set dew point isn't reached:**

- Not enough ventilation.
- The air flow is too high.
- The humidity of the surrounding air is too high.

**Water has entered the air dryer:**

- Immediately shut Off the air dryer and contact your dealer.

Repair may only be performed by qualified personnel. Repairs performed by none authorized personnel will void warranty. Maintenance only should carried out after the plug is disconnected form the wall socket. If your problem is not solved by following one of the above procedures please get in contact with your dealer.

#### **4.10 Technical details**

Model	RG-40
Maximum air flow (l/min)	40
Minimum air flow (l/min)	4
Dimensions (cm)	60x40x20
Maximum power consumption (watt)	350
Average power consumption (watt)	~50

## 5 Warranty determination

Our products come with one year warranty, defects caused by the manufacturing process within the warranty period will be repaired free of charge. The following aspects are not covered by the guarantee. Defects in our products caused by:

### General

- not following the guidelines given in this manual.
- incidents or deliberate destruction of the product.
- changes made to the products by the customer.
- natural disasters such as floods, hurricanes, etc.
- not able to submit purchase bill or warranty bill.
- placing the product in a non suited environment (direct sunlight, rain, etc)
- entering of water inside the air dryer.
- placing the air dryer in an excessively damp environment.
- using the product in an ozone gas flow rather than in an air stream.
- coming into contact with solvents.

The cost for sending the product to the service point are for the customer. If the repair is under warranty, the costs for returning the goods are on our behalf. In all other cases, all shipping costs must be paid by the customer. TWT and its dealers are not responsible for damage caused by the use of our products.

## **6 Disclaimer**

TWT has written this manual with advice to the best of intentions. However, TWT does not accept any liability with regard to this manual, nor for the application of our products in whatever form or nature whatsoever.

The copyright of this document belongs to TWT. It is forbidden to modify this manual or to copy (parts of) this manual in any way without the written consent of TWT. Copyright infringement will be contested in any way possible.

TWT reserves the right to change the information in this manual without prior notice. All photos in this manual are designed to serve as explanation element, the pictures may differ from the real product.

## 7 Contact information

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