

# ***Vortex compact 3L***

**Nr. 2924-5000 / -6000**

**Bedienungsanleitung  
Instruction manual • Mode d'emploi  
Istruzioni d'uso • Instrucciones para el servicio  
Инструкция по эксплуатации  
操作说明书 • 取扱説明書 • 사용 설명서**



*Seriennummer, Herstelldatum und Geräte-Version befinden sich auf dem Geräte-Typenschild.*

*Serial number, date of manufacturing and unit version are shown on the type plate of the unit.*

*Le numéro de série, la date de fabrication et la version se trouvent sur la plaque signalétique de l'appareil.*

*Il numero di serie, la data di costruzione e la versione si trovano sulla targhetta dell'apparecchio.*

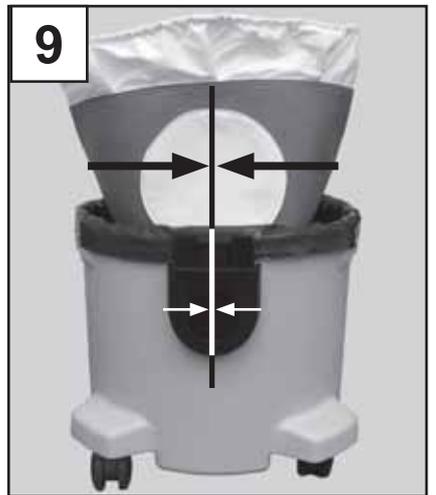
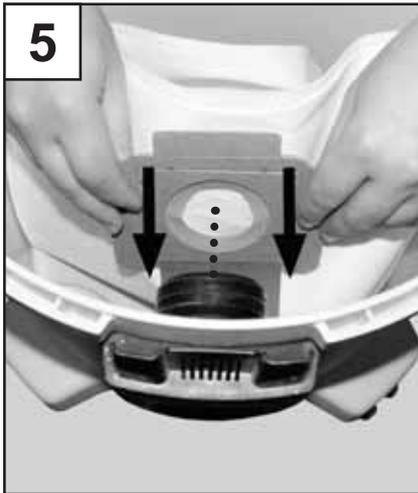
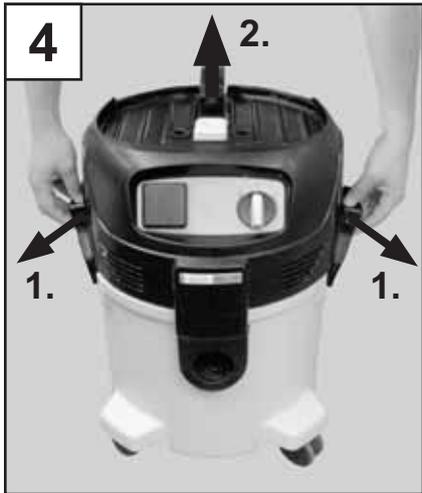
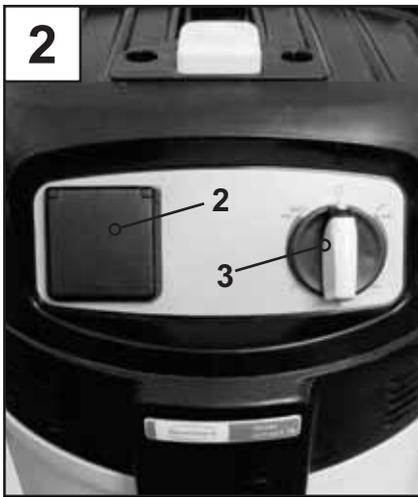
*El número de serie, la fecha de fabricación y la versión del aparato están indicados en la placa identificadora del aparato.*

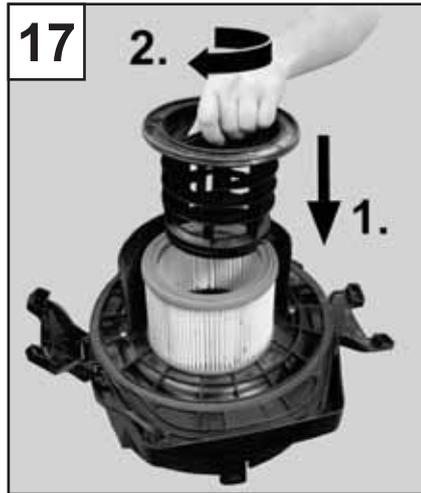
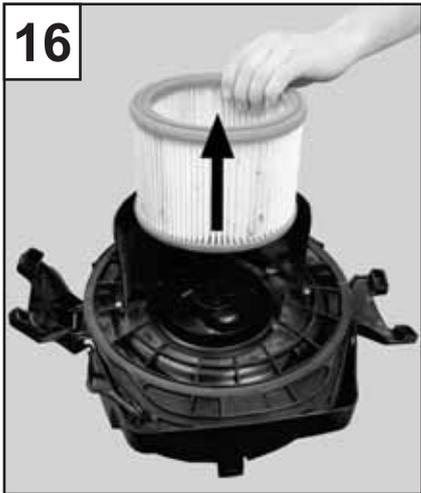
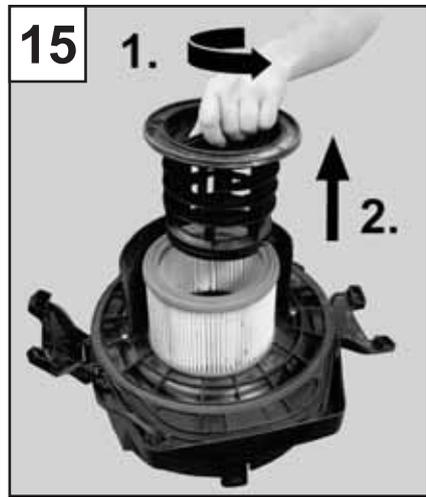
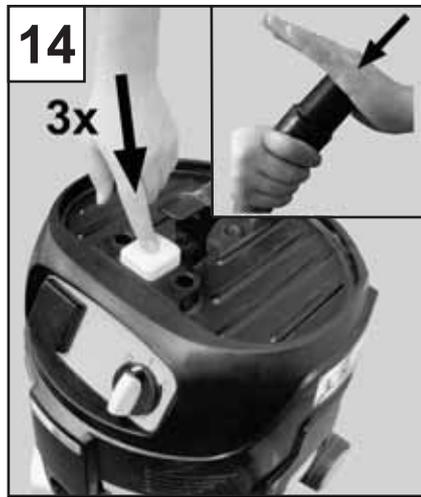
*Номер серии и дата изготовления указаны на фирменной табличке прибора.*

*产品编号和生产日期被标于本机的铭牌上。*

*シリアル番号、製造日および装置のバージョンは装置の型番号ラベルに記載されています。*

*시리얼넘버, 제조일자 및 기기 버전은 기기의 명판에 표시되어 있습니다.*





# Vortex compact 3L

No. 2924-5000 / -6000

ENGLISH

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## Introduction

We are very pleased with your decision to purchase our mobile lab dust extractor *Vortex compact 3L*.



**Before putting the device into operation, please read these operating instructions thoroughly and keep them close at hand for future reference.**



**Observe the danger advices and warnings as laid out in the „Operator's notes“.**



**Use these operating instructions to instruct the operator in the applicable range of operation, the potential risks when operating the device and how to actually operate the device.**

Always have the user's information ready at hand for the operator.

For further information, see section „Operator's notes“.

## Symbols

The following symbols are included in these operating instructions and affixed to the device itself:



**Danger**  
**Immediate risk of injury.**



**Electric power**  
**Risk of electric shock.**



**Attention**  
**Failure to observe this note can result in damage to the unit.**



**Note**  
**Useful practical information that helps you handle and operate the unit.**



**The unit corresponds to the dust category L according to IEC/EN 60335-2-69. Suitable for dust with a MAK (Occupational Exposure Limit) value of > 1 mg/m<sup>3</sup>.**



**The extracted dust may contain health endangering substances.**  
**Always ensure adequate protection measures during disposal.**



**Read and comply with the operating instructions.**

Other symbols will be explained as they occur.

# Operating Instructions

## 1. Unpack

- Remove the unit and its accessories from its packaging.
- Open holding clamps and remove top from extractor (Fig. 4).
- Remove further accessories from the dust retainer.

## 2. Machine specifications

(see Fig. 1, 2, 3)

- 1 Clean filter element button
- 2 Power socket
- 3 Main switch (Auto-0-I) and suction control.
- 4 Hose connector
- 5 Dust retainer
- 6 Holding clamp
- 7 Fine particle filter
- 8 filter tightening disk
- 9 Filter inlet fitting

## 3. Operation

- Depending upon the type of application, a variety of different dust collecting receptacles can be used:
- Dry dust
  - dust bag
  - cloth filter and disposal bag
- wet dust
  - cloth filter and disposal bag
- water
  - cloth filter

 **When used in a laboratory floor unit, sufficient air flow needs to be guaranteed.**

### 3.1 Insert Dust bag

- Do not plug the connector into a wall outlet yet.
- Open holding clamps and remove top from extractor (Fig. 4).
- Place Dust bag in dust retainer and thoroughly push Dust bag socket onto bag connector (Fig. 5).
- Place top back on extractor and snap on holding clamps (Fig. 6). Make sure clamps fit tightly.

### 3.2 Insert cloth filter and disposal bag

Instead of a dustbag it is possible to use a cloth filter together with a disposal bag (see accessories).

 **It is recommended to use a disposal bag together with the cloth filter in order to ensure of dust free disposal of the extracted material.**

- Turn off and unplug unit from the mains.
- Open the retaining clamps and lift off the top of the extractor (Fig. 4).

- Remove the dust bag.
- Insert the disposal bag into the dust retainer and press the disposal bag socket firmly onto the filter inlet fitting (Fig. 7).
- Fold top edge of disposal bag over edge of dust retainer (Fig. 8).
- Please press the waste bag completely to the inner walls and bottom of the dust retainer.
- Insert the cloth filter into the dust retainer. Ensure the position is correct (Fig. 9).
- The ends of the cloth filter should be draped over the edge of the tank (Fig.10).
- Replace the top of the extractor and close the retaining clamps (Fig. 6). Ensure the retaining clamps are in the correct position (Fig. 11).

### 3.3 Connect dust generator

- Slot hose into hose connector (Fig. 12).
- Attach hose to dust generator (eg. Sandblaster, dry trimmer, extractor clamp). Make sure the hose fits tightly, use hose adapter (see Accessories) as necessary.

### 3.4 Connect power source

 **Check that the rated operating voltage specified on the type plate matches your local mains voltage.**

- Check that the dust extractor is off. Main switch (3, Fig. 2) in position „0“.
- Plug the lead connector into a properly installed PE contact mains outlet.
- Connect unit to a fault current circuit breaker.
- Arrange conducting parts (mains outlets, plugs and couplings) and install extension cord such that the protection class (IP) is retained.
- Check to only use waterproof plugs and couplings of mains leads.

#### 3.4.1 EXTENSION CORD

Only use an extension cord that at least complies with or exceeds OEM specifications. Check that the cord has the correct minimum cross section:

Cord length	Cross-section	
	< 16 A	< 25 A
up to 20 m	1.5 mm <sup>2</sup> (AWG 14)	2.5 mm <sup>2</sup> (AWG 12)
20 to 50 m	2.5 mm <sup>2</sup> (AWG 12)	4.0 mm <sup>2</sup> (AWG 10)

### 3.5 Manual control

- Switch extractor on and off on main switch (3, Fig. 2)

Switch setting	Function
0	OFF
I	ON (manual mode)
auto	automatic mode

### 3.6 Suction control

- Suction power is adjusted by turning the main switch (3, Fig. 2).

Suction power adjustment allows you to accurately adapt the suction power to different extraction challenges in both Manual and Auto mode.

### 3.7 Automatic mode

The electrical dust generator (electrical appliance) turns the extractor on or off. Intended use includes that electrical appliances connected to the extractor must be certified for dusty environments.

**!** Observe the maximum tolerable power input of the electrical appliance to be connected: See section „Technical Data“.

**!** Before setting the selector to „auto“ check that the connected electrical appliance is turned off.

- Turn off extractor.
- Turn off electrical appliance.
- Connect suction hose to both electrical appliance and extractor.
- Plug electrical appliance into power socket on the extractor (Fig. 13).
- Switch the extractor to Automatic mode on the main switch (3, Fig. 2), switch position „auto“.
- Turn on electrical appliance.
- The extractor will start as you turn on the connected electrical appliance.

**i** When you turn off the electrical appliance, the extractor will trail off for a couple of seconds to ensure that any dust in the hose is completely blown into the dust retainer.

### 3.8 Cleaning the fine filter „Free-Filter-System“

When suction begins to be less powerful:

- Set selector to „I“ (maximum power).
- Put hand over nozzle or hose outlet (Fig. 14).
- Press „Free-Filter-System“ button three times (Fig. 14).

This will generate an airflow which blows off dust that may have settled on the slats of the Fine particle filter.

In doing so, the dust from the inside surface will also fall from the dustbag or cloth filter.

### 3.9 Extraction methods

Efficient cleaning can be reached by combining some general guidelines with your own experience from your specialist field of application.

Here is some general information.

#### 3.9.1 TO EXTRACT DRY SUBSTANCES

When extracting dry materials it is essential to use a dustbag or a cloth filter together with a disposal bag at all times (see section „Accessories“). This will provide a simple and hygienic means of disposing of the extracted material.

Extracting liquids will leave a wet fine particle filter behind. A wet fine particle filter will readily clog up if dry substances are extracted afterwards. Before you start extracting dry substances you should therefore wash and dry the fine particle filter or replace it with a dry one.

#### 3.9.2 TO EXTRACT LIQUIDS

Always remove the dust bag/disposal bag before you start extracting liquids.

We recommend using a separate fine particle filter.

**!** Immediately interrupt the work in progress and empty the dust retainer when you notice that foam is beginning to form.

After extracting liquids take off the top of the extractor housing and keep separate to allow the fine particle filter to dry.

## 4. Cleaning / Servicing

### 4.1 Check seals

Whilst changing the dustbag, the disposal bag or the fine filter, always check the condition of the dust retainer edge and seal in the extractor's top section.

**i** A dirty or damaged dust retainer rim or seal will reduce the suction power.

### 4.2 Replace Dust bag

- Turn off and unplug unit from the mains.
- Open holding clamps and remove top from extractor (Fig. 4).
- Carefully pull sleeve of dust bag off its connector.
- Push dust bag across sleeve opening.
- Dispose of dust bag according to local statutory regulations.
- Clean dust retainer.
- Place dust bag in dust retainer and thoroughly push holding sleeve onto bag connector (Fig. 5).
- Place top back on extractor and snap on holding clamps (Fig. 6). Make sure clamps fit tightly.

### 4.3 Replace disposal bag

- Turn off and unplug unit from the mains.
- Open holding clamps and remove top from extractor (Fig. 4).
- Tap the cloth filter and remove carefully.
- Use string to close disposal bag.
- Carefully pull sleeve of disposal bag off its connector.
- Push slider across sleeve opening.
- Dispose of disposal bag according to local statutory regulations.
- Place new disposal bag in dust retainer and thoroughly push holding sleeve onto bag connector (Fig. 7).
- Fold top edge of disposal bag over edge of dust retainer (Fig. 8).
- Insert the cloth filter into the dust retainer. Ensure the position is correct (Fig. 9).
- The ends of the cloth filter should be draped over the edge of the tank (Fig. 10).

- Replace the top of the extractor and close the retaining clamps (Fig. 6). Ensure the retaining clamps are in the correct position (Fig. 11).

#### 4.4 Replace fine particle filter

**!** Never extract dust without putting in a fine-particle filter!

- Turn off and unplug unit from the mains.
- Open holding clamps and remove top from extractor (Fig. 4).
- Turn tightening disk anticlockwise and remove (Fig. 15).
- Carefully remove fine particle filter (Fig. 16).
- Clean filter seal, check for damages and replace as necessary.
- Put in new fine particle filter.
- Put on filter tightening disk and turn clockwise to firmly lock in place (Fig. 17).
- Dispose of used fine particle filter according to local statutory regulations.
- Place top back on extractor and snap on holding clamps (Fig. 6). Make sure clamps fit tightly.

#### 4.5 Check float

- Switch the unit off and remove the plug from the socket.
- Open clamps and remove the top part of the extractor (Fig. 4)
- Turn the spring washer in a clockwise direction and remove (Fig.15).
- Check the float is clean and able to move freely (Fig.18).

### 5. Spare Parts

For the order numbers of consumables and spare parts please refer to the spare parts list at the end of this manual.

### 6. Standard Delivery

- 1 Renfert *Vortex compact 3L*
- 1 Suction hose assembly, 3m
- 1 Bag-type filter
- 1 Operating Instructions

### 7. Variants

- No. 2924-5000 *Vortex compact 3L*, 230 V, 50/60 Hz
- No. 2924-6000 *Vortex compact 3L*, 120 V, 60 Hz

### 8. Accessories

- No. 2924-5003 Set of dust bags (5 pcs)
- No. 2924-5005 Cloth filter
- No. 2924-5002 Disposal bag (5 pcs)
- No. 2924-5004 Fine particle filter 302000461
- No. 2924-5006 90° angled connector
- No. 900034305 Adapter for hose connector
- No. 900034240 Suction hose assembly, 3m
- No. 900034314 Y-shaped adapter
  
- No. 2925-0000 Extractor clamp (w/o glass pane)
- No. 2925-1000 Glass pane w/ holder (for mouthpiece)
- No. 2926-0000 Extraction distributor, including 4 sleeves (w/o hose)
- No. 2921-0003 Set of sleeves, 2 pcs
- No. 15-0823 Suction hose (by metre)

## 9. Troubleshooting

Problem	Cause	Remedy
<b>Motor won't run</b>	<ul style="list-style-type: none"> <li>• Fuse blown in mains socket.</li> <li>• Overload protection triggered.</li>   <li>• Motor defective.</li> </ul>	<ul style="list-style-type: none"> <li>• Reactivate mains fuse.</li> <li>• Turn off dust extractor and allow to cool down for 5 minutes. Contact the Renfert Service Team if the extractor still fails to restart.</li> <li>• If the extractor is to be situated in a base cabinet, ensure there is sufficient air cooling.</li> <li>• Have Renfert Service Team replace the motor.</li> </ul>
<b>Motor won't run in Auto mode</b>	<ul style="list-style-type: none"> <li>• Electrical appliance defective or not connected properly.</li> <li>• Low power consumption of electrical appliance.</li> </ul>	<ul style="list-style-type: none"> <li>• Check operability of electrical appliance and check if connector is tight.</li> <li>• Note that the min. rated power consumption is <math>P &gt; 20 \text{ W}</math>.</li> </ul>
<b>Reduced suction power</b>	<ul style="list-style-type: none"> <li>• Suction control turned down too low.</li> <li>• Suction hose/nozzle clogged.</li> <li>• Disposal bag or dust bag full.</li>   <li>• Fine particle filter dirty.</li> <li>• Seal between container and top of extractor housing defective or not there.</li> <li>• «Free-Filter-System» mechanism defective.</li> <li>• Activation button for the filter cleaning function is pressed due to coiled cable.</li> </ul>	<ul style="list-style-type: none"> <li>• Set suction control as described in "Suction control adjustment".</li> <li>• Clean suction hose/nozzle.</li> <li>• See section "Replacing the disposal bag, dust bag."</li> <li>• See section "Cleaning the fine particle filter", "Replacing the fine particle filter".</li> <li>• Replace seal.</li>   <li>• Contact Renfert Service Team.</li>   <li>• Wind the cable up so that the activation button is not actuated.</li> </ul>
<b>Extractor won't pick up wet substance</b>	<ul style="list-style-type: none"> <li>• Dust retainer full.</li> </ul>	<ul style="list-style-type: none"> <li>• Turn off unit. Empty dust retainer.</li> </ul>

# Operator's Notes

The sections below are intended to help operators make safe and proper use of the unit in their lab.

 **Use these operating instructions to instruct the operator in the applicable range of operation, the potential risks when operating the device and how to actually operate the device.**

Always have the user's information ready at hand for the operator.

## A. Application

### A.1 Intended use

Use the unit for extracting dry, non-combustible dust and liquids.

The unit is suitable for commercial use, e.g. in dental labs.

 **When used properly, the safety vacuum cleaner described in this manual is suitable for vacuuming up dry, non-flammable dusts and liquids. It is properly suited for the vacuuming up and off of health endangering, non-flammable dusts with TLV values greater than 1 mg/m<sup>3</sup> in accordance with the dust class 'L' as per EN 60335-2-69.**

 **In order to protect the health of persons working in a dental laboratory, the law requires that specialised dust extractors must be used. National regulations state the MAK value - maximum concentration of suspended particles in the air. Find out about the legal national threshold value and the type of dust generated in your laboratory.**

Any other use is not „as intended“. The manufacturer shall not be liable for any damages resulting from any such other use.

The „use as intended“ includes compliance with the operating, servicing and preventive maintenance conditions defined by the manufacturer.

## B. Danger Notices and Warnings

 **Top part of extractor housing contains live (conducting) parts.**

Contacting live parts will cause serious injury or death.

Never spray top part of extractor housing with water.

 **Risk of electric shock from a broken mains lead.**

Contacting a broken mains lead may cause serious injury or death.

**Avoid damaging the mains lead (e.g. by pulling, squashing or driving over it). Regularly check mains lead for damages (e.g. rips, wear).**

Before making further use of the unit, have the Renfert Service Team or a skilled electrician replace the broken mains lead.

 **The mains socket on the unit is only designed for the purposes specified in the Operating Instructions. Connecting other devices may cause material damage.**

Before connecting another device, turn off both the dust extractor and the other device.

Read the operating instructions of the other device and comply with the safety instructions contained in the document.

 **Risk of damage by non-compliant mains voltages.**

You may damage the unit if you connect it to any other than the specified mains voltage.

Check the type plate to verify that your local mains voltage matches the rated voltage.

 **Extracting liquids.**

Immediately interrupt the work in progress and empty the dust retainer when you notice any foam beginning to form or liquid escaping.

 **Regularly clean the built-in water level control float and check for damages.**

 **Dangerous substances.**

Extracting dangerous substances may cause serious injury or death.

Do not extract any of the following materials:

- Health endangering dust with a MAK value of < 1 mg/m<sup>3</sup>,
- hot materials (glowing cigarettes, hot ash, etc.),
- combustible, explosive, aggressive liquids (e.g. petrol, solvents, acids, caustic solutions, etc.),
- combustible, explosive dust (e.g. magnesium dust, aluminium dust, etc.).

 **Spare parts and accessories.**

The use of other than OEM spare parts and accessories may be an impediment to the safety of the unit.

Use OEM spare parts and accessories supplied by Renfert GmbH only.

 **Environmentally hazardous extraction substances.**

Extracted substances may be a risk to the environment.

Dispose of extracted material according to local statutory regulations.

## C. Admitted Persons

Unit

- to be operated, cleaned and serviced by instructed and authorised persons only,
- to be operated under supervision only,
- not to be operated by children.

Corrective actions not described in this user information document to be taken by a skilled electrician only.

## D. Repairs

Repairs to be made by skilled electricians and specialised dealers only.

## E. Disposal

Immediately render the unit useless at the end of its service life.

Unplug from mains and cut mains lead.

### E.1 Disposal of consumables

Dispose of dust bag, disposal bags and fine particle filters according to local statutory regulations.

### E.2 Disposing of the unit

Unit to be disposed of by a commercial waste elimination company only. Inform the company of any hazardous substances remaining in the unit.

### E.3 Waste elimination notice for EU member states

To maintain and protect the environment, prevent environmental pollution, and to improve the recycling of raw materials, the European Commission issued a directive ruling that manufacturers must take back electrical and electronic devices and transfer it to proper waste elimination or recycling dumps or processes.

In the member states of the European Union, devices carrying this symbol must not therefore be disposed of by throwing them into the unsorted household waste:



For more information regarding proper disposal please apply at your local authorities.

## F. Technical Data

Nominal voltage	230 V / 120 V
Voltage range (230 V)	230 – 240 V
Mains frequency	50/60 Hz (230 V) 60 Hz (120 V)
Mains fuse	16 A (230 V) / 12 A (120 V)
Power consumption IEC	1200 W (230 V) / 840 W (120 V)
Power sustained by unit's mains socket	2400 W (230 V) / 600W (120 V)
Total connected power	3600 W (230 V) / 1440 W (120 V)
Air/volume flow	3700 l/min. (230 V) / 3200 l/min. (120 V)
Hypobaric pressure	250 mbar (230 V) / 230 mbar (120 V)
Sound pressure level at 1 m's distance, EN 60704-1	62 dB(A)
Mains lead: Length	7.5 m
Protection class	I
IP protection	IP X4
Radio interference suppression	EN 55014-1
Capacity of dust retainer	30 l
Width	385 mm
Depth	480 mm
Height	600 mm
Weight	10 kg

## G. Non-Liability Clause

Renfert GmbH shall waive any and all claims for damages and warranty if:

- **the product is used for any other than the intended use specified in the operating instructions document;**
- **the product is modified in any way - except for the modifications described in the operating instructions document;**
- **product repairs are not made by specialised dealers or if repairs are not made with OEM spare parts supplied by Renfert;**
- **continued use of the product is made despite obviously reduced safety or obvious damages;**
- **the product is exposed to mechanical impact or if it is dropped.**

## H. Warranty

***i*** ***Please note: The Vortex compact 3 L collector motor is excluded from the guarantee due to system related reasons. The motor is subject to wear, depending upon frequency of use and selected extraction level / power. The service life varies greatly according to demand. The average life span is approx. 800hrs.***

Renfert gives you a **3-year warranty** on all parts of *Vortex compact 3L*, assuming the unit is used as intended.

Claims under this warranty must be backed up by presenting your dealer's original sales invoice.

This warranty does not cover any parts exposed to natural wear and tear nor consumables (such as dust bags, fine particle filter, suction turbine, etc. ...).

Warranty expires in the following cases: use of unit other than for the intended use; non-compliance with the operating, cleaning, servicing or power connection instructions; repairs made yourself or not made by specialised dealers; installation of spare parts supplied by other manufacturers; unusual influences or influences that are not permitted by the usage instructions.

Satisfaction of claims under this warranty does not extend the warranty period.