Vacuum Aspiration System

User manual

LLG-uni*VACUUSYS*

Index

Index 2
Introduction 2
1. Safety Precautions 2
Warranty 3
2. Range of application 3
3. Inspection 3
3.1 Unpacking 3
3.2 Packing List 3
4. Structure ..... **Fehler! Textmarke nicht definiert.**
5. Operating 5
6. Failure diagnosis 5
7. Maintenance and Cleaning 5
Related Standards 5
8. Specifications 6
9. Ordering information .... **Fehler! Textmarke nicht definiert.**

Introduction

1. Safety Precautions

	• Please read the manual carefully before operating the instrument and follow all safety instructions. • Train the user before operating the instrument.
	Safety grounding protection! Be sure the power outlet is properly grounded before turning on the instrument.

- Operate the instrument in a wide and airy place. Do not operate the instrument in the outdoor, a humid or wet or hazardous environment
- Do not use unsafe containers
- Before running the instrument check "Accessories" list and install them in accordance with the instructions. Accessories must be firmly connected to the instrument.
- During running, avoid to touch valves, injection pumps, piping and other components.
- If liquid is accidentally spilled out, immediately shut down and wipe off the liquid.
- Only unplug the instrument when fully powered down.
- Do not place heavy objects on the equipment.

If you encounter any problems during installing and using the system, please contact your local LLG Labware distributor.

Warranty

uniVACUUSYS comes with a three year warranty (excluding damages caused by improper use of the system).

2. Range of application

This instrument is for research purposes.

- The system should not be used at more than 2000 meters above sea level
- Temperature range between 0 ℃ and 40 ℃
- Product can withstand voltage fluctuations not exceeding ± 10% of normal
- The minimum distance to a wall should not be less than 100 mm.

3. Inspection

3.1 Unpacking

Please report any packaging damage.

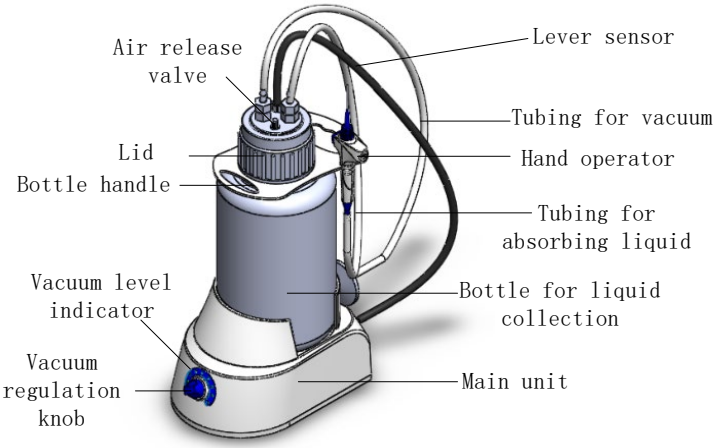
Note:
If there is any visible damage on the instrument, do not connect with power.

3.2 Packing List

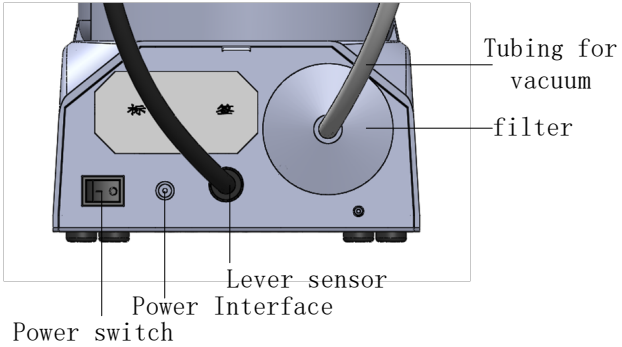
Name	Quantity
Main unit	1
Waste container	1
Pipette	1
Aspiration handle	1
Vacuuming	1
Power Adapter	1
Instructions	1

Table 1

4. System assembly



Drawing 1



Drawing 2

Main unit	The main part of the instrument, Vacuum pump inside
Waste container	Used for storing liquid waste
Waste-bottle lid	Push-in fitting with the piping, level sensor interface and release valve. Ensure connections are tight.
Aspiration handle	Press and hold the button on the handle for liquid aspiration
Level Sensors	The sensor will detect the level of the waste liquid. It will shut down the pump if the liquid waste is out of the safe level.
Suction line	Waste container is connected with aspiration handle. The Vacuum pump is connected with the container by this tube
Release valve	Screw off the device can release the vacuum degree of waste containers and balance the air pressure inside and outside the waste container.
Vacuum level indicator	Indicates the degree of vacuum, steady light means that the set vacuum has been reached while flashing light indicates that the set level has not been reached
Vacuum adjusting knob	Adjust the desired degree of vacuum (empirical)
Filter	The filter is connected with the main unit and waste containers to prevent the liquid from entering the vacuum pump.
Power Interface	Power Interface
Switch	Switch on and off Turn on or off the host

Table 2

5. Operating

1）Install piping and ensure that there is no leakage
2）Make sure the discharge valve is closed
3）Turn the power switch on
4）Turn vacuum regulator knob clockwise. Lights indicate the set vacuum level increase.
5）When the set vacuum degree has been reached (lights have stopped flashing), press the handle button. You can now aspirate the liquid into the waste container.
6）Shut down the system
7）By loosening the bleed valve, you can release vacuum
8）Remove the waste container, unscrew the waste-bottle lid, discard waste

6. Failure diagnosis

- Instruments can't start when power on:
  1) Check whether the power line is unplugged
  2) Check whether the fuse is broken or loose
- Self-test is not passed when turned on:
  1) Switch OFF the unit, then reset

If these issues are not resolved, please contact your local LLG Labware distributor

7. Maintenance and Cleaning

- Proper maintenance can prolong the instrument lifetime.
- Do not spray cleanser into the instrument when cleaning.
- Unplug the power line when cleaning.
- Only use recommended cleansers:

Dyes	Isopropyl alcohol
Construction materials	Water containing tenside / Isopropyl alcohol
Cosmetics	Water containing tenside / Isopropyl alcohol
Food	Water containing tenside
Fuels	Water containing tenside

- Wear proper protective gloves during cleaning of the instrument.
- If shipped please pack the instrument into the original packaging
- If you will not use the instrument, please switch off the power and place it in a dry, clean environment (at ambient temperature)

Warning!

Cut off power when maintenance and cleaning.

Related Standards

Instrument structure conforms to the following safety

standards:
EN 61010-1 UL 3101-1 CAN/CSA C22.2(1010-1) EN 61010-2-10
Instrument structure conforms to the following EMC standards:
EN 61326-1
Comply with the following European standards:
EMC Standard： 2004/108/EC Mechanical Design Standard：73/023/EWG

8. Specifications

Voltage	100 – 240 VAC, 50/60 Hz
Vacuum range	-300 to -600 mbar (adjustable)
Pumping speed	8 L/min (air)
Aspiration rate	17 ml/s (aspiration pipette)
Noise	< 50 dB(A) (1 Meter）
Size (H x W x D)	45 x 18 x 24 cm （for reference）
Weight	3.4 kg（for reference）

Table 3

Lab Logistics Group GmbH (LLG GmbH)

Am Hambuch 1

D-53340 Meckenheim

Tel. +49 2225 9211-0

Fax +49 2225 9211-11

www.llg-labware.com
info@llg-labware.com