

Instruction manual

VWR® Vacuum Aspiration System

EU cat. no 181-0658 4L Vacuum Aspiration System
181-0659 2L Vacuum Aspiration System



CE

UK
CA

Legal address of Manufacturer

Europe

VWR International bv,
Researchpark Haasrode 2020
Geldenaaksebaan 464 B-
3001 Leuven
+3216385011
be.vwr.com

UK Importer:
VWR International Ltd
Hunter Boulevard, Magna Park
Lutterworth, Leicestershire, LE17 4XN
uk.vwr.com

Country of Origin

China

Table of Contents

Safety information	4
Package Contents	4
Unpacking	5
Installation	5
Intended Use	5
Symbols and conventions	5
Product Specifications	5
Overview	6
Description of Parts	7
Operation	8
Non-contact Liquid Level Sensor for 4L Installation Instructions (Optional)	9
Troubleshooting	10
User replaceable spare parts	11
Technical Service	11
Warranty	11
Compliance with local laws and regulations	12
Disposal	12
Appendix	13

Safety Information

Please follow the guidelines below and read this manual in its entirety to ensure safe operation of the unit. The Manufacturer recommends the following guidelines for the use of the Device:

- The inside of the device is a high-voltage area. Adequate Precaution to be taken and the device handled by trained personnel only.
- Do not disassemble the device.
- Disconnect the device from the mains supply before carrying out maintenance work or changing the fuses.
- Do not use the device if it is damaged, especially if the main power cable way is in any damaged or defective.
- Repairs may only be carried out by the service technicians from your local VWR office and authorized service partners.
- The device must be connected to a power outlet that has a protective ground connection.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Do not allow any liquid to enter into the device control unit.
- Do not operate the device in a hazardous location or potentially explosive environment.

Package Contents

Package Contents	181-0658 (4L)	181-0659 (2L)
Main Unit	1pc	1pc
User Manual	1pc	1pc
Short User Manual	1pc	1pc
Vacuum Bottle	1pc	1pc
Hand operator	1pc	1pc
Power Adapter	EU/UK/CH plug	EU/UK/CH plug
Tubing for vacuum	1set	1set
Lid	2pcs	2pcs
Single channel ejector	2pcs	2pcs
Eight-channel ejector	1pc	1pc
Eight needle holders	1pc	1pc
Bottle Adapter (2L)	/	1pc
Bottle handle (4L)	1pc	/
Level sensor (4L)	1pc	/
Level sensor cable (4L)	1pc	/

Unpacking

Open the package and check the contents per the packing list, if any part is found missing or is damaged, please contact your local VWR office / authorized partners.

Installation

Placement-Place the Device on a level surface carefully



Link the Power Cord - Check to confirm that the Device's power switch is turned off. Plug the power cord into the power supply socket.

Intended use

Vacuum Aspiration System is designed for laboratory waste recovery and separation of liquid and solid. It can be widely used in cell culture, DNA extraction, microplate waste removal, and any other liquid separation or recovery.

Symbols and conventions

The following chart is an illustrated glossary of the symbols that are used in this manual.

	CAUTION This symbol indicates a potential risk and alerts you to proceed with caution
	CAUTION This symbol indicates the presence of high voltage and warns the user to proceed with caution

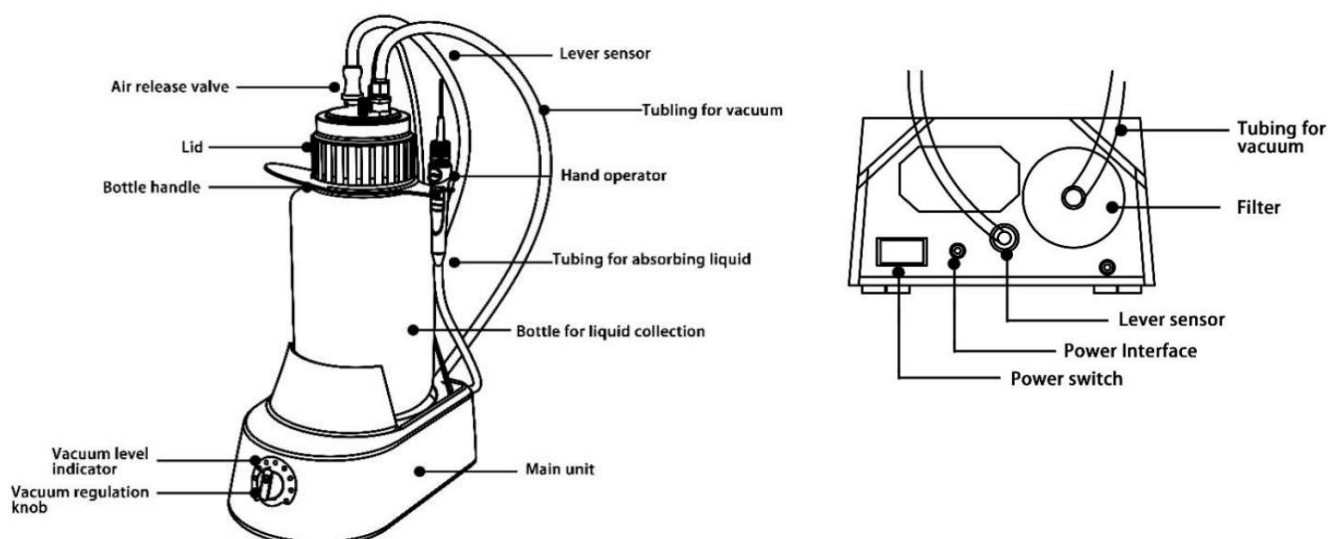
Product Specifications

Cat. No.	181-0658	181-0659
Bottle Capacity	4 liters	2 liters
Mains Voltage	100 – 240 VAC, 50/60 Hz, 0.5 A	
Unit Voltage	24V DC, 1A, Center-positive	
Vacuum range	0 to 600 mbar (adjustable)	
Pumping speed	15 L/min (air)	
Aspiration rate	15 mL/s	
Noise	55 dB +/- 5 dB at a distance of 1 meter	

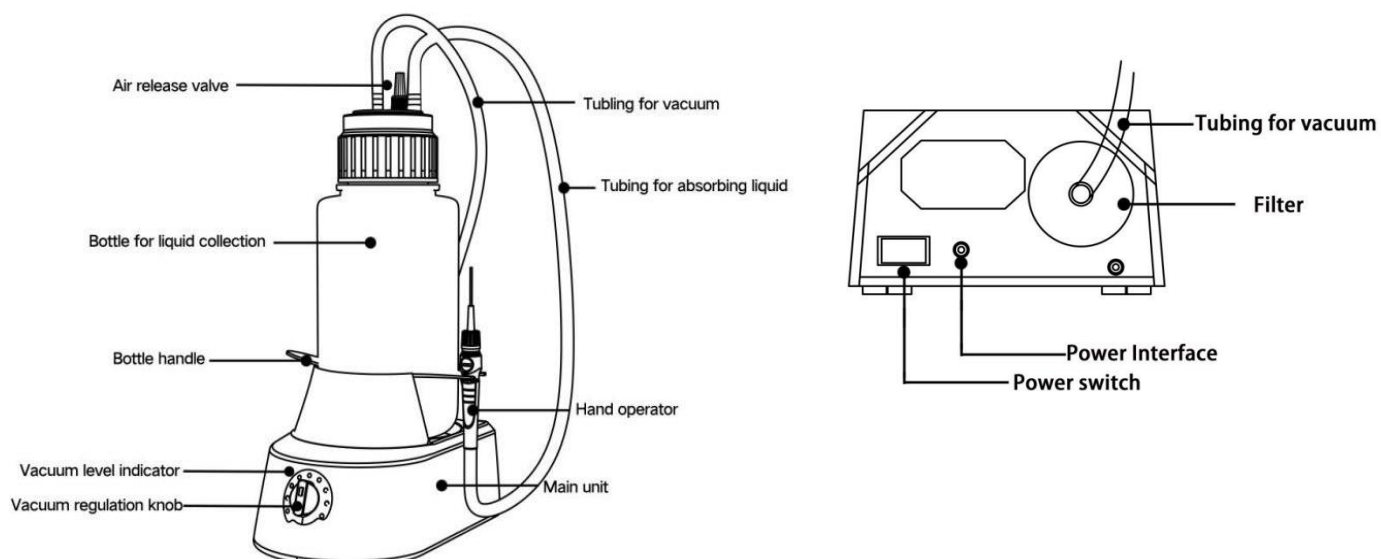
Size (H x W x D)	180x240x450 mm	180x240x340 mm
	(7.09 x 9.45 x 17.72 in)	(7.09 x 9.45 x 13.39 in)
Weight	3.0 kg (6.6 lbs.)	2.8 kg (6.2 lbs.)
Relative humidity	10 to 90% (no condensation)	
Environment	Indoor use only	
Operating Temperature	10 to 40° C (50 to 104° F)	
Altitude	0 to 2,000 m	

Overview

Cat.no.:181-0658



Cat.no.:181-0659



Description of Parts

Main unit	Main part of the instrument, has a vacuum pump inside
Bottle	Bottle for liquid collection
Lid	<p>Lid with opening for tubing. have the fast-inserting joints, lever sensor interface and the air release valve</p> <p>Note: Please hold the metal shrapnel on the double sealing quick connect plug - out (socket) and then pull out the tubes from the fast-inserting joint</p>
Hand operator	Aspirate liquid by pressing the button of the Hand operator
Lever sensor	Used to prevent the overflowing of the liquid. As soon as the overflow detected, the pump switches off and alarms
Tubing for vacuum	Connect the main unit to the bottle, providing negative pressure environment
Tubing for absorbing liquid	Connect the hand operator to bottle, absorbs the liquid to the bottle
Bottle handle	Between the lid and the bottle for moving the bottle
Air release valve	Unscrew the valve to release the vacuum before open the lid.
Vacuum level indicator	Indicates the vacuum degree. They will keep flashing until the target vacuum is reached
Vacuum regulation knob	Rotate to adjust the target vacuum
Filter	Keep liquid away from the pump
Power interface	Connect the power cable
Power switch	Power on/off

Operation

1) Installation: Make sure all parts put into position (Non-contact Liquid Level Sensor for 4 liters model is optional).

2) Make sure the air release valve closed

3) Power on

4) Adjust the Vacuum regulation knob clockwise to increase the setting vacuum level, vacuum level indicator will turn on in sequence. Adjust the Vacuum regulation knob anticlockwise to decrease the setting vacuum level, vacuum level indicator will turn off in sequence.

5) When the vacuum level indicator turns to normally on, that means the bottle vacuum level has reached the set value. Then you can aspirate liquid by pressing the button of the Hand operator.

Note: The level sensor is used to prevent the overflowing of the liquid. As soon as the overflow detected, the pump switches off and alarms. Please dispose the liquid of the bottle or replace an empty bottle as soon as possible.

6) Power off

7) Unscrew the valve to release the vacuum

Note: when you want to open the lid, please release the vacuum first

8) Pls make sure the bottle lid is taken off or unscrewed during autoclaving.

Non-contact Liquid Level Sensor for 4L Installation Instructions (Optional)



Figure 1

- 1- Snap the open ring end of the sliding rod into the bottle opening as shown in Figure 2



Figure 2

- 2- Insert the Non-contact Liquid Level Sensor into the vertical end of the sliding rod from the bottom up (Figure 3)
- 3- Then plug the external sensor cable into the sensor connector at the back of the main unit (Figure 3)



Figure 3

- 4- There are three screws, including a sensor fixing screw (metal), two electrode sheet affixing screws (nylon). Tightening these three screws with a Phillips screwdriver (Figure 4)



Figure 4

Note: There is a sensitivity adjustment function on the right side of the Non-contact Liquid level sensor, which requires the use of a one-pronged screwdriver to turn clockwise or counterclockwise to raise or lower the sensor's sensitivity value.

- 5- After the installation is completed, normal operation can be used, no obvious difference from internal level sensor.

Troubleshooting

Review the information in the table below to troubleshoot operating problems.

Problem	Possible Cause	Remedy
Equipment not running; no vacuum	No power line voltage	Insert mains adapter plug into suitable power outlet
	No DC supply	Connect mains adapter to instrument
	Pump switched off	Turn power switch to "ON" (I). Ensure that LED indicator under bottle is lit
Suction power inadequate or pump runs constantly	Suction power selected too low	Turn control knob clockwise
	Leak in vacuum system	Check tubes and filters
		Check lid and tighten if necessary
		Check if sealing plug/venting screw on bottle lid is leaking
		Ensure that filter is fully tightened on to unit
		Ensure that leak flow of hand tool is not excessively high
	Bottle full; liquid is sucked into filter	Remove wet filter and replace with new dry filter
		Empty excess liquid from existing bottle or replace with new empty bottle
	Tubes Blocked	Clean or replace tubes
Alarm level detection not working(4L)	Sensor cable incorrectly connected	Check that cable is correctly connected to device and lid
	Liquid in bottle has reached the sensor	Empty excess liquid from bottle

User replaceable spare parts

Cat. No.	Description	181-0659 (2L)	181-0658 (4L)
181-0663	Hydrophobic filter 0.45um	v	v
181-0666	Single needle Φ1.5mm, 40mm	v	v
181-0667	Single needle Φ1.5mm, 120mm	v	v
181-0668	Single needle Φ2.5mm, 40mm	v	v
181-0669	Single needle Φ2.5mm, 120mm	v	v
181-0671	8 channel needle Φ1.5mm	v	v
181-0670	8-channel tip adapter 200ul tip	v	v
181-0665	Tip detrusion adapter(2L)	v	
181-0662	2L Vacuum bottle	v	
181-0661	4L PPCO Vacuum bottle		v
181-0664	Tip detrusion adapter(4L)		v
181-0660	Non-contact Liquid Level Sensor (4L)-Optional		v

Technical service

Web Resources

Visit the VWR website at www.vwr.com for:

- Complete technical service contact information
- Access to the VWR Online Catalogue, and information about accessories and related products
- Additional product information and special offers

Contact us For information or technical assistance contact your local VWR representative or visit. www.vwr.com.

Warranty

VWR warrants that this product will be free from defects in material and workmanship for a period of two (2) years from date of delivery. If a defect is present, VWR will, at its option and cost, repair, replace, or refund the purchase price of this product to the customer, provided it is returned during the warranty period. This warranty does not apply if the product has been damaged by accident,

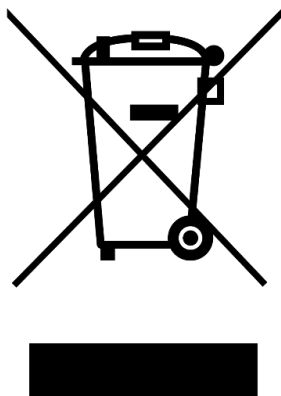
abuse, misuse, or misapplication, or from ordinary wear and tear. If the required maintenance and inspection services are not performed according to the manuals and any local regulations, such warranty turns invalid, except to the extent, the defect of the product is not due to such non-performance.

Items being returned must be insured by the customer against possible damage or loss. This warranty shall be limited to the aforementioned remedies. IT IS EXPRESSLY AGREED THAT THIS WARRANTY WILL BE IN LIEU OF ALL WARRANTIES OF FITNESS AND IN LIEU OF THE WARRANTY OF MERCHANTABILITY.

Compliance with local laws and regulations

The customer is responsible for applying for and obtaining the necessary regulatory approvals or other authorizations necessary to run or use the Product in its local environment. VWR will not be held liable for any related omission or for not obtaining the required approval or authorisation, unless any refusal is due to a defect of the product.

Equipment disposal



This equipment is marked with the crossed out wheeled bin symbol to indicate that this equipment must not be disposed of with unsorted waste.

Instead it's your responsibility to correctly dispose of your equipment at lifecycle -end by handling it over to an authorized facility for separate collection and recycling. It's also your responsibility to decontaminate the equipment in case of biological, chemical and/or radiological contamination, so as to protect from health hazards the persons involved in the disposal and recycling of the equipment.

For more information about where you can drop off your waste of equipment, please contact your local dealer from whom you originally purchased this equipment.

By doing so, you will help to conserve natural and environmental resources and you will ensure that your equipment is recycled in a manner that protects human health.

Thank you

Local VWR offices in Europe and Asia Pacific

Austria

VWR International GmbH
Graumannsgasse 7
1150 Vienna
Tel.: +43 1 97 002 0
Email: info.at@vwr.com

Belgium

VWR International BV
Researchpark Haasrode 2020
Geldenaaksebaan 464
3001 Leuven
Tel.: +32 016 385 011
Email: vwr.be@vwr.com

China

VWR (Shanghai) Co., Ltd
Bld.No.1, No.3728 Jinke Rd,
Pudong New District
Shanghai, 201203- China
Tel.: +400 821 8006
Email: info_china@vwr.com

Czech Republic

VWR International s. r. o.
Veetee Business Park
Pražská 442
CZ - 281 67 Strábrná Skalice
Tel.: +420 321 570 321
Email: info.cz@vwr.com

Denmark

VWR International A/S
Tobaksvejen 21
2860 Søborg
Tel.: +45 43 86 87 88
Email: info.dk@vwr.com

Finland

VWR International Oy
Valimotie 17-19
00380 Helsinki
Tel.: +358 9 80 45 51
Email: info.fi@vwr.com

France

VWR International S.A.S.
Immeuble Estréo
1-3 rue d'Aurion
93114 Rosny-sous-Bois cedex
Tel.: 0 825 02 30 30* (national)
Tel.: +33 (0) 1 45 14 85 00
(international)
Email: info.fr@vwr.com
* 0,18 € TTC/ min + prix appel

Germany

VWR International GmbH
Hilpertstrasse 20a
D - 64295 Darmstadt
Freecall: 0800 702 00 07
Tel.: +49 (0) 6151 3972 0 (international)
Email: info.de@vwr.com

Hungary

VWR International Kft.
Simon László u. 4.
4034 Debrecen
Tel.: +36 (52) 521-130
Email: info.hu@vwr.com

India

VWR Lab Products Private Limited
No.139. BDA Industrial Suburb,
6th Main, Tumkur Road,
Peenya Post,
Bangalore, India – 560058
Tel.: +91-80-28078400
Email: vwr_india@vwr.com

Ireland

VWR International Ltd
Orion Business Campus
Northwest Business Park
Ballycoolin
Dublin 15
Tel.: +353 01 88 22 222
Email sales.ie@vwr.com

Italy

VWR International S.r.l.
Via San Giusto 85
20153 Milano (MI)
Tel.: +39 02-3320311/02-487791
Email: info.it@vwr.com

Korea

Avantor Performance Materials Korea
Ltd
2F ACE Gwanggyo Tower I
Daehak 4ro 17
Yeongtong-gu Suwon
Korea 16226
Tel.: +82 31 645 7256
saleskorea@avantorsciences.com

Middle East & Africa

VWR International FZ-LLC
Office 203, DSP Lab Complex,
Dubai Science Park
Dubai, United Arab Emirates
Tel.: +971 4 5573271
info.mea@vwr.com

The Netherlands

VWR International B.V.
Postbus 8198
1005 AD Amsterdam
Tel.: +31 020 4808 400
Email: info.nl@vwr.com

Norway

VWR International AS
Brynsalleen 4
0667 Oslo
Tel.: +47 22 90 00 00
Email: info.no@vwr.com

Poland

VWR International Sp. z o.o.
Limbowa 5
80-175 Gdansk
Tel.: +48 058 32 38 210
Email: info.pl@vwr.com

Portugal

VWR International – Mat. de
Laboratório, Soc. Unipessoal, Lda
Edifício Ramazzotti
Avenida do Forte 6, P-1.09 e P-1.10
2790-072 Carnaxide
Tel.: +351 21 3600 770
Email: info.pt@vwr.com

Singapore

VWR Singapore Pte Ltd
The Metropolis
Tower 1, #05-03
9 North Buona Vista Drive
Singapore 138588
Tel: +65 6505 0760
Email: sales.sg@vwr.com

Spain

VWR International Eurolab S.L.
C/ Tecnología 5-17
A-7 Llinars Park
08450 - Llinars del Vallès
Barcelona
Tel.: +34 902 222 897
Email: info.es@vwr.com

Sweden

VWR International AB
Esbogatan 16
164 74 Kista
Tel.: +46 08 621 34 20
Email: info.se@vwr.com

Switzerland

VWR International GmbH
Lerzenstrasse 16/18
8953 Dietikon
Tel.: +41 044 745 13 13
Email: info.ch@vwr.com

UK

VWR International Ltd
Customer Service Centre
Hunter Boulevard
Magna Park
Lutterworth
Leicestershire
LE17 4XN
Tel.: +44 (0) 800 22 33 44
Email: uksales@vwr.com