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Система VACUSAFE—устройство для вакуумной аспирации жидкостей



VACUSAFE The Aspiration System For Safe Disposal Of Liquids

VACUSAFE



Vacuum systems are widely used for aspiration of liquids and their subsequent disposal. Common applications include the removal of media from cell cultures, of supernatants after centrifugation and of wash solutions from immuno-assay well-plates.

Protecting the vacuum source from contamination by liquids and aerosols with an overflow trap and a filter is not only good laboratory practice, but also imperative as a personal protection measure when working with biological, chemical or radioactive liquids.

As an alternative to “do-it-yourself” systems typically found in laboratories, the VACUSAFE aspiration system offers increased safety, exceptional user-friendliness and high versatility.

Safety first: protection for yourself and the lab

The VACUSAFE product range offers different levels of safety depending on the requirements of specific applications. Basic safety characteristics that apply to all models include the:

- hydrophobic filter for vacuum source protection,
- shatterproof bottle for prevention of spills,
- stand for securely holding the bottle in place,
- autoclavability of the system components that contact liquid.

For total containment of hazardous liquids, the best choice is one of the closed systems with additional safety features:

- Integrated pump with vacuum control (no risk of contaminating house vacuum pipelines and reduced environmental impact by evaporation of volatile solvents).
- Self-closing connectors for avoiding escape of drops or aerosols from disconnected bottle and tubing.
- Level sensor detecting when the bottle is full and so preventing liquid overflow.



User-friendly system for productive aspiration

A simple routine task like the aspiration of liquids requires user-friendly equipment that is easy to install and convenient to operate. Only so it is possible for the user to fully concentrate on relevant and complex work. Several aspects make the VACUSAFE a convenient tool for productive aspiration:

- All-in-one system includes all necessary components. Consumables and spare parts are always available from the same source.
- Straightforward operation – simply switch on, set the desired vacuum and start working.
- The integrated pump or valve is switched off automatically when the vacuum is established in the bottle and is switched on again when the vacuum is used – this way unnecessary noise is avoided and the pump's lifetime increased.
- The noise of the integrated pump is well below 65 dB(A), the level recommended by the European agency for health and safety at work.
- The quick tubing connectors speed up bottle removal and also make this operation safer.
- Carrying and emptying the bottle is much easier and safer with the specially designed handle.



Versatile tools for all liquid aspiration tasks

An important component contributing to the versatility of the VACUSAFE system is the vacuum aspiration tool VACUBOY because it can be fitted with different adaptors for removal of liquids from virtually every laboratory vessel. The application range is further expanded by the possibility to adjust the vacuum level depending on the needs: from gentle removal of supernatants from a centrifuge tube or 96-well plate to fast emptying of a large culture flask.

The system's versatility is increased by the option to connect two VACUBOY aspirators to the same VACUSAFE, which is particularly important for busy laboratories where often two persons work simultaneously in the same biosafety cabinet.





VACUSAFE product range

158 320

158 310

158300

Features common to all models:

- Shatterproof autoclavable waste collection bottle and handle.
- Hydrophobic filter for protection against overflow of liquid and escape of aerosols.
- Autoclavable VACUBOY aspiration tool with different adaptors and tubing.
- Vacuum control: noise reduction, increased pump's lifetime, minimised evaporation of volatile solvents.



- Electronic level detection: prevention of liquid overflow.

- Autoclavable quick couplings made of PVDF: lid is autoclavable, bottle and tubing couplings are self-sealing for full containment of biohazardous liquids.

- 4 L polypropylene bottle

- 2 L safety coated glass bottle, for fast autoclaving (20 min. at 121°C).

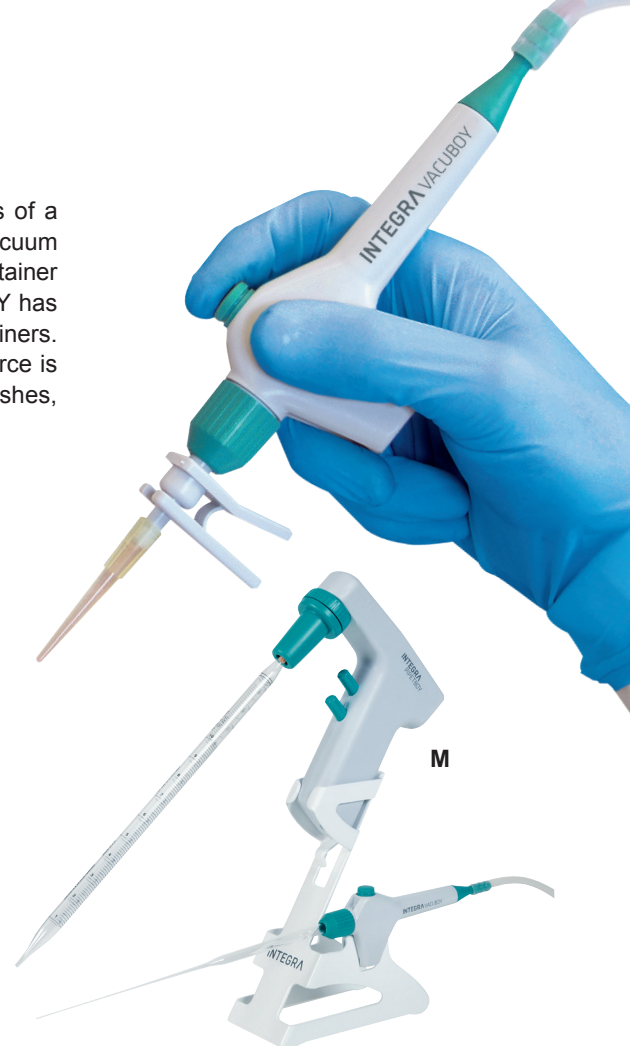
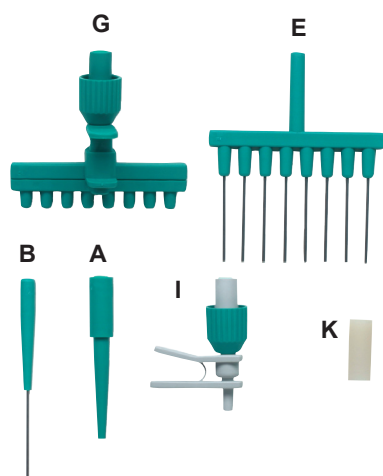
■ Electronic level detection: prevention of liquid overflow.		●	●
■ Autoclavable quick couplings made of PVDF: lid is autoclavable, bottle and tubing couplings are self-sealing for full containment of biohazardous liquids.		●	●
■ 4 L polypropylene bottle	●	●	
■ 2 L safety coated glass bottle, for fast autoclaving (20 min. at 121°C).			●

Technical data

Vacuum range	-300 to -600 mbar (adjustable)
Pump flow rate	8 L/min (air)
Aspiration rate of liquids	17 ml/s (aspiration pipette)
Noise emission	< 50 dB(A) at 1 m
Dimensions (H x W x D)	53 x 18 x 32 cm
Weight	3.4 kg
Input voltage	100 – 240 VAC, 50/60 Hz

VACUBOY

Successful removal of supernatants from lab containers by means of a vacuum aspiration system depends on applying the correct level of vacuum and on using an aspirator tip that matches the size and form of the container from which liquid is aspirated. The vacuum aspiration tool VACUBOY has been designed specifically to match the diversity of laboratory containers. Different adaptors fit on the hand operator so that your vacuum source is converted into a flexible system for aspirating liquids from tubes, dishes, bottles, T-Flasks, 24-well and 96-well plates.



Ordering information

Instrument		Part No.
VACUBOY hand operator (included with the VACUSAFE)	for vacuum-based aspiration of liquids, complete with:	155 510
	■ hand piece (for holding adaptors or pipettes)	H
	■ rubber adaptor for Pasteur pipettes	K
	■ 1-channel stainless steel adaptor 40 mm	B
	■ 1-channel adaptor for disposable tips with ejector	I
VACUBOY hand operator set	with additional parts L, E, A, G (see picture and accessories) and silicone tubing (length 180 cm)	155 500

Accessories		Part No.
Adaptors	Rubber adaptor for Pasteur pipettes	K 155 505
	1-channel stainless steel adaptor 40 mm	B 155 502
	1-channel stainless steel adaptor 150 mm	155 522
	1-channel stainless steel adaptor 280 mm	155 525
	1-channel adaptor for disposable tips/GripTips (with locking)	A 155 504
	1-channel adaptor for disposable tips (pack of 5)	159 023
	1-channel adaptor with ejector for disposable tips (with locking)	155 526
	1-channel adaptor with ejector for disposable tips	I 159 026
	1-channel adaptor with ejector for GripTips	159 027
	4-channel stainless steel adaptor 40 mm	155 524
	8-channel stainless steel adaptor 40 mm	E 155 503
	8-channel adaptor with ejector for disposable tips (with locking)	G 155 520
	8-channel adaptor with ejector for disposable tips	159 024
	8-channel adaptor with ejector for GripTips	159 025
Stand for hand operator	for parking VACUBOY hand operator	L 155 501
Stand	for PIPETBOY (acu or comfort) and VACUBOY	M 155 065

Ordering information

Instrument	Part No.
VACUSAFE	Complete aspiration system with integrated vacuum pump, collection bottle with closed lid, bottle handle, tubing, hydrophobic filter, mains adaptor and VACUBOY hand operator (155 510).
 158 300	■ 2 L bottle (safety-coated glass) ■ Level detection and lid with quick tubing couplings (PVDF) ■ 2 L glass bottle adaptor for base unit
 158 310	■ 4 L bottle (polypropylene) ■ Level detection and lid with quick tubing couplings (PVDF)
 158 320	■ 4 L bottle (polypropylene) ■ Lid with tubing fittings
Accessories	Part No.
Bottle	4 L, polypropylene with closed lid 158 370 2 L, safety coated glass with closed lid 158 483
Lid	for 4 L bottle, with quick couplings (PVDF) + level detection 158 401 for 4 L bottle, with tubing fittings 158 372 for 2 L bottle, with quick couplings (PVDF) + level detection 158 484
Bottle and lid	comprises part no. 158 370 and 158 401 158 431 comprises part no. 158 370 and 158 372 158 432 comprises part no. 158 483 and 158 484 158 485
Level sensor cable	to connect between base unit and lid 158 403
Level sensor part	for 2 L glass bottle lid 158 402
Bottle handle	for carrying the 2 L or 4 L bottle, removable 158 625
Bottle stand	for polypropylene bottle 158 630
2 L glass bottle adaptor	for base unit 158 631
Stand	for PIPETBOY and VACUBOY 155 065
Mains adaptor	100-240 VAC, 50/60 Hz 158 395
Air outlet connector	for connection of tubing to the air outlet of the pump (w/o tubing) 158 427
Y-connector	for connection of second VACUBOY hand operator 158 354
VACUBOY	See VACUBOY ordering information

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