

FTA-U, Universal vacuum aspirator

DESCRIPTION

FTA-U vacuum aspiration system is powerful, ergonomic, and durable benchtop vacuum system designed to improve liquid waste handling in demanding laboratory environments, including research, clinical diagnostics, pharmaceutical QC laboratories and more. It addresses common lab challenges such as inconsistent manual aspiration, biohazard contamination risks, handling viscous liquids, and ergonomic strain during repetitive tasks.

Features and Benefits

- Adjustable vacuum up to -95 kPa (-950 mbar) with a rapid aspiration speed of 12 L/min (air), ideal for efficient aspiration of viscous solutions and dense cell suspensions.
- Autoclavable quick-connect bottles available in 2L and 4L sizes.
- Integrated electronic overflow protection with clear audio-visual alerts prevents spills and contamination.
- A $0.2\ \mu\text{m}$ hydrophobic microbiological filter automatically seals when wet, protecting the pump and maintaining sterility.
- Safety - the vacuum pump stops when the threshold level is reached, preventing vacuum implosion, ensuring reliable and safe operation.
- Low-noise micro diaphragm vacuum pump delivers stable, oil-free performance with minimal vibration, housed within a compact, chemical-resistant, easy-to-clean casing suitable for biosafety cabinets and benchtop use.
- Accelerates liquid handling processes, significantly boosting productivity and workflow consistency.
- Delivers consistent, reproducible aspiration results, with hands-free foot switch control and ergonomic manual knob options to reduce operator fatigue.
- Backed by a standard 2-year warranty, extendable to 3 years upon product registration, supported globally by Biosan partner network.



Application Fields, validated through published use of Biosan FTA-1 and FTA-2i aspirators:

DNA/RNA Extraction: Efficient aspiration of alcohol, phenol-chloroform, PEG-based supernatants or others for nucleic acid purification.

Cell Culture: Gentle removal of media, PBS, and enzymatic solutions from culture vessels, preserving cell viability and integrity.

ELISA & Immunoassays: Rapid and uniform aspiration from microplates, reducing assay variability and improving accuracy.

Protein Purification: Consistent removal of buffers, lysates, detergents, and precipitation agents used in chromatography and protein concentration.

Microbial Fermentation: Reliable aspiration of dense bacterial or yeast cultures and broths for biofilm and antimicrobial research.

Clinical, Veterinary, and Forensic Diagnostics: Safe sterile handling of biohazardous fluids, maintaining biosafety and preventing contamination.

Environmental & Food Testing: Precise aspiration for chemical residue analysis, microbial assays, and toxin detection, ensuring regulatory compliance.

Quality Control Laboratories: Consistent aspiration for chromatography, dissolution testing, formulation checks, and sample prep in pharmaceutical and chemical QC, ensuring regulatory compliance and accuracy.

STANDARD ACCESSORY:

- MA-U universal adapter for 200/1000 μL single use tips
- FS-1, foot switch

OPTIONAL ACCESSORIES:

- HAS-1 Hand operator set
 - 1ch. adapter

CAT. NUMBER

4 L	4 L
BS-040122-A02	230VAC 50/60Hz Euro plug
BS-040122-A01	100-240VAC 50/60Hz Multi plug (EU, UK, AU, US)
2 L	2 L
BS-040122-A03	230VAC 50/60Hz Euro plug
BS-040122-A04	100-240VAC 50/60Hz Multi plug (EU, UK, AU, US)

- with ejector for 200 mkl tips
 - with 40 mm stainless steel pin
 - with 125 mm stainless steel pin
- 8ch. adapter
 - with ejector for 200 mkl tips
 - with 35 mm stainless steel pins
- Stand SH-6
- MA-8
 - 8-channel aspiration tip with holder

SPECIFICATIONS

Aspiration speed	up to 12 l/min (air)
Vacuum	-200 to -950 mbar (-95 kPa) (adjustable)
Trap flask	2 or 4 l, polypropylene (autoclavable)
Liquid level sensor type	invasive
Overflow protection	motor stops, light and sound signal
Noise level	62% vacuum ~46 dBA 100% vacuum ~56 dBA
Pump type	durable mini diaphragm vacuum pump
Microbiological filter	hydrophobic air filter, pore diameter 0.027 µm
Quick-coupling system	+
Dimensions with trap flask (W×D×H)	220 × 320 × 380 mm (2L flask) 220 × 320 × 460 mm (4L flask)
Weight with trap flask	2.40 kg (2L) 2.82 kg (4L)
Input current/power consumption	12 V, 2 A / 24 W
External power supply	Input AC 100–240 V; 50/60 Hz; Output DC 12 V

ACCESSORIES



HAS-1
BS-040118-PK
Hand operator set

HAS-1 Hand operator set

- 1ch. adapter
 - with ejector for 200 mkl tips
 - with 40 mm stainless steel pin
 - with 125 mm stainless steel pin
- 8ch. adapter
 - with ejector for 200 ...



MA-8
BS-040108-BK
8-channel adapter manifold

8-channel aspiration tip with holder, autoclavable



FS-1
BS-010177-AK
Foot switch

FS-1, Foot switch with USB-A connector. Wire length 2m.

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