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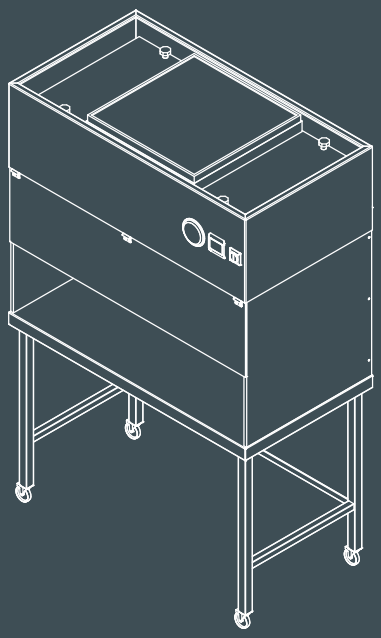

Downflow unit
VLFU-series

ISO-class 3 to 5
Vertical laminar flow

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Downflow unit VLFU-series

The VLFU-series by ProCleanroom offers a programme of high-quality downflow units. The laminar flow cabinets generate a vertical flow (a downflow), providing protection against contamination for both product and process within the flow cabinet. Inside the flow cabinets, a clean working environment is created that contains close to zero microorganisms and dust particles. Depending on the selected filter type (H14 or U15), the downflow cabinet realises an ISO Class 3 to 5 working environment (ISO14644-1).

The VLFU-series flow cabinets are available in four standard sizes, ranging in width from 670 to 2530mm. The standard-size flow cabinets are often available from stock and can be combined with various accessories. In addition to standard dimensions, ProCleanroom also provides custom made products. Each flow cabinet comes with a test certificate at delivery. **ProCleanroom: Build your expertise.**

Applications
The VLFU-series by ProCleanroom is ideally suited for industries where product or process protection is a requirement. Think of high-tech and electronics industry, research institutes and laboratories.

By placing the VLFU-series downflow unit in the inner area (warehouse, laboratories, cleanroom, etc.), you create an ultra-clean micro environment. Within this environment, critical processes (such as sampling, cleaning, packaging, etc.) can be performed in the best possible way.

1 **Prefilter**
Type G4 high capacity for longer life span.

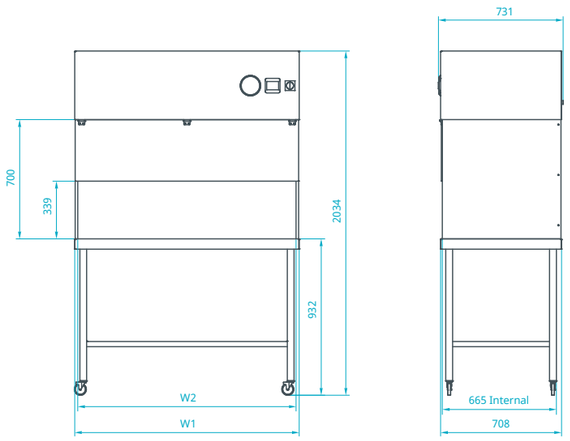
2 **Fan unit**
Unit with very low-energy ebm-papst DC ECM motor. ErP2016 compatible. Energy savings of 70% compared to conventional AC motor and thus with low operating costs.

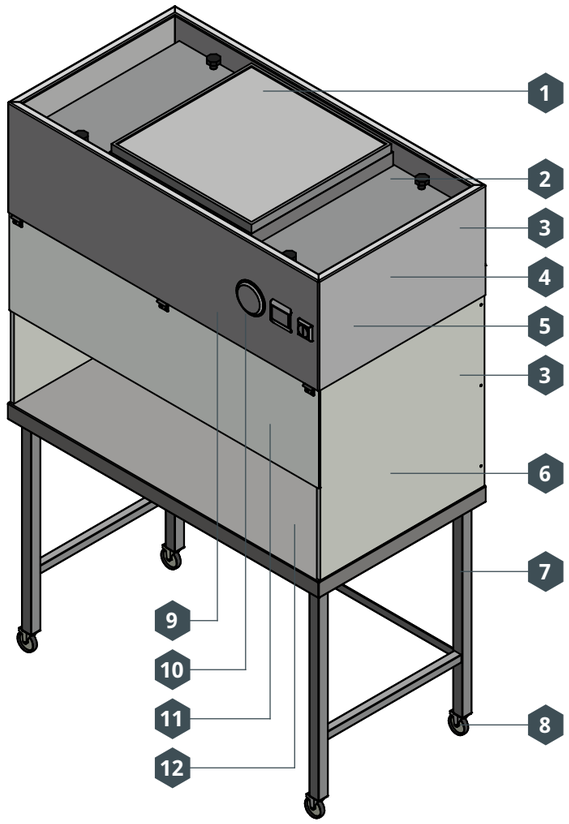
3 **Powder coated mild steel canopy and back panel**

4 **HEPA-filter type H14** (ISO-class 5) or
ULPA-filter type U15 (to ISO-class 3).

5 **Various options**
Ion bar for anti-static applications, UV lamp for sterilisation and flow sensor for continuous monitoring of air speed.

6 **Side panels**
Impact-resistant clear polycarbonate for maximum open work environment (opaque if desired).





CE | **ErP2016** energy directive

Other options:
Wall sockets for electrical equipment, network connections, active carbon filter for molecular level VOCs and odour filtration, connections for pressurised air, gas and vacuum, ESD table mat for product protection.

More information: **www.procleanroom.com**

7 **Table** (optional)
Robust stainless steel 304 or 316 table with closed or perforated top. Height adjustable. Benchtop version without table.

8 **Braked wheels or adjustable feet**
Provides mobility. Also height-adjustable feet for permanent placement.

9 **LED lighting**
For optimum lighting of the work place.

10 **Control panel:**

Magnehelic pressure gauge
Provides direct insight into the performance of flow cabinet and life span of HEPA or ULPA filter.

Flow cabinet controller
Manual, stepless variable 0-100% or automatic control with weekly programme. Can be provided with direct reading of the air speed.

Switches
Single or double for control of LED lighting and other optional accessoires.

11 **Front screen** (optional)
Folding screen of transparent impact-resistant polycarbonate, equipped with magnets for optimal sealing and locking clip on top for fixation in open position.

12 **Work top**
Stainless steel or Trespa, solid or perforated. In combination with the table, a perforated worktop offers maximum laminar air flow over product or process. Worktop also available as benchtop version.

EXPERT IN FLOW UNITS

- **Fan unit with DC ECM motor, ErP2016 compatible.**
- **Lowest power consumption available in the market.**
- **Lower operating costs through cost-effective replacement filters.**
- **Heat load is nil by efficient engine technology.**
- **Robust construction and the highest quality components.**
- **User-friendly and reliable.**
- **Ergonomic design and easy to clean.**
- **On-site installation and validation possible.**

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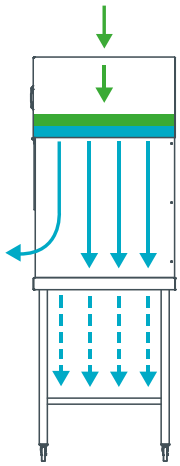
Protection of product or process
The VLFU-series offers optimal protection against contamination through the vertical laminar flow of filtered air over product and process. On the upper side of the flow cabinet, a fan draws in ambient air and conducts it through the filter to the working environment.

The air then flows out at the front of the cabinet and partly at the underside of the table - if the table is fitted with a perforated work surface.



Customisation
In case of specific requirements in terms of dimensions and specifications, ProCleanroom offers customised flow cabinets. The engineering department of ProCleanroom models the flow cabinet with Inventor 3D CAD software. The flow cabinets are optionally available in stainless steel. The possibilities are unlimited.

More information? Visit **www.procleanroom.com**

Model type		VLFU-670	VLFU-1280	VLFU-1920	VLFU-2530
Dimensions	**Unit**				
External dimensions (W1xHxD) excl. table	mm	696 x 1334 x 708	1316 x 1334 x 708	1946 x 1334 x 708	2556 x 1334 x 708
Internal dimensions (W2xHxD) excl. table	mm	670 x 750 x 665	1280 x 750 x 665	1920 x 750 x 665	2530 x 750 x 665
Height of optional table	mm	780 to 1100	780 to 1100	780 to 1100	780 to 1100
Height of working aperture (users choice)	mm	339 to 700	339 to 700	339 to 700	339 to 700
Net weight (approx., excl. table)	kg	50	75	100	130
Performance					
Downflow air speed (user set)	m/s	0,25 to 0,55	0,25 to 0,55	0,25 to 0,55	0,25 to 0,55
Lighting level	Lux	> 700 Lux	> 700 Lux	> 700 Lux	> 700 Lux
Sound level (average setting)	dB(A)	< 59	< 59	< 62	< 62
Energy consumption (average setting)	Watt	70	90	160	180
Energy consumption (max setting)	Watt	155	175	330	350
Electrics					
Required power supply		220-240V AC 1pH+E / 50Hz	220-240V AC 1pH+E / 50Hz	220-240V AC 1pH+E / 50Hz	220-240V AC 1pH+E / 50Hz
Required breaker (slow)	A	16	16	16	16
Filtration					
Prefilter (according to EN 779)		G4	G4	G4	G4
Absolute filter (according to EN 1822)		HEPA H14 or ULPA U15	HEPA H14 or ULPA U15	HEPA H14 or ULPA U15	HEPA H14 or ULPA U15
Standards (compatible)					
ISO 14644 class 3-5		Yes	Yes	Yes	Yes
GMP class A		Yes	Yes	Yes	Yes
CE		Yes	Yes	Yes	Yes

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