

DUAL-OPERATOR VERTICAL LAMINAR FLOW CABINET



Dual-Operator Vertical Laminar Flow Cabinet - ToronLFCab™ DO-V

ToronLFCab™ DO-V is a professional-grade vertical laminar flow cabinet engineered to deliver ISO Class 5 (Class 100) cleanliness in shared, dual-operator laboratory settings. Designed for environments where two technicians must work simultaneously on sensitive samples, this laminar air flow cabinet combines robust construction with precision airflow management to create a consistently particle-free workspace.

Built on a cold-rolled steel chassis with an electrostatic powder-coat finish and a durable SUS304 stainless steel work surface, the ToronLFCab™ DO-V clean bench is well-suited for pharmaceutical research, microbiological culture work, electronics assembly, and any application where contamination control is critical. Its HEPA filtration system paired with a medium-efficiency pre-filter stage ensures optimal filter longevity and uninterrupted protection for your samples and processes.

APPLICATIONS

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Applications

The ToronLFCab™ DO-V laminar flow cabinet and clean bench is suited to dual-operator contamination-sensitive workflows, including:

- Microbiological and cell culture preparation
- Pharmaceutical compounding and aseptic handling
- Electronics and semiconductor component assembly
- Media preparation and sterility testing
- Tissue culture and in vitro diagnostic work

- Environmental and food safety sample analysis



FEATURES

Dual-Operator Vertical Laminar Flow Cabinet - ToronLFCab™ DO-V Key Features

- Cold-rolled steel housing finished with electrostatic powder-coat spray plastics for corrosion resistance and easy cleaning; SUS304 stainless steel work surface for chemical durability
- Low-noise centrifugal fan with stable rotational speed ensures consistent, uniform laminar airflow throughout the working zone
- LCD digital control system with touch-type switches and six-step variable fan speed adjustment for precise airflow management
- Independent UV lamp and fluorescent lamp controls with programmable sterilization timer (0-999 minutes) for flexible decontamination scheduling
- Vertical quasi-closed table configuration creates a downward laminar airflow curtain at the work opening, preventing external air infiltration and maintaining Class 100 cleanliness without a mechanical sash
- Two-sided, dual-operator design with two persons per working side accommodates collaborative workflows without compromising cleanroom conditions
- HEPA filter with integrated medium-efficiency pre-filtration stage significantly extends primary filter service life and reduces maintenance costs
- Waterproof power outlet and water vapor interface for in-cabinet equipment and liquid handling without compromising safety

THEORY & METHOD

Theory and Method of Operation

ToronLFCab™ DO-V operates on the principle of vertical unidirectional (laminar) airflow. Room air is first drawn through a medium-efficiency pre-filter that captures large particles and extends the service life of the primary HEPA filter. The centrifugal blower then forces the conditioned air downward through a High-Efficiency Particulate Air (HEPA) filter rated to capture ≥99.99% of particles ≥0.3 μm.

The resulting laminar air flow moves vertically from ceiling to work surface across the entire working zone, sweeping contaminants away from the work area and preventing turbulence-induced cross-contamination. The vertical quasi-closed table design creates a positive-pressure protective curtain at the front opening that resists ingress of ambient particles, keeping the interior consistently at Class 100 (ISO 5) cleanliness without the need for a physical barrier.

An integrated UV germicidal lamp provides additional surface decontamination capability during non-operational periods. The digital LCD control panel with touch-type switches allows operators to independently manage fan speed (six selectable steps), illumination, and UV sterilization — with a programmable sterilization timer ranging from 0 to 999 minutes.

TECHNICAL SPECIFICATIONS

Dual-Operator Vertical Laminar Flow Cabinet - ToronLFCab™ DO-V

Technical Specifications

Parameter	ToronLFCab™ DO-V
Airflow Direction	Vertical (Downflow)
Working Sides	2 sides (double-sided)
Applicable Persons per Side	2 persons per side

Parameter	ToronLFCab™ DO-V
Cleanliness Class	ISO Class 5 / Class 100
Wind Speed	0.3 – 0.6 m/s (6-step adjustable)
Noise Level	≤ 67 dB(A)
Vibration Half Peak Value (X, Y, Z)	≤ 5 μm
Illuminance	≥ 300 Lux
Internal Dimensions (W × D × H)	1,300 × 650 × 520 mm
Housing Dimensions (W × D × H)	1,460 × 700 × 1,650 mm
HEPA Filter Dimensions	1,250 × 560 × 50 mm
Number of HEPA Filters	1
Lamp (Power × Quantity)	40 W × 1
UV Light (Power × Quantity)	20 W × 1
UV Sterilization Timer Range	0 – 999 minutes
Total Power Consumption	0.3 kW
Voltage	220 V ± 10%, 50/60 Hz (110V is also available)
Net Weight / Gross Weight	181 kg / 227 kg (171 kg / 217 kg)
Package Size	1,580 × 820 × 1,820 mm
Control Interface	LCD digital display, touch-type switches



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