![Flow Sciences, Inc. logo]

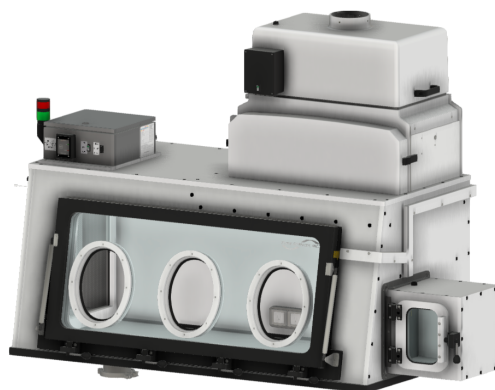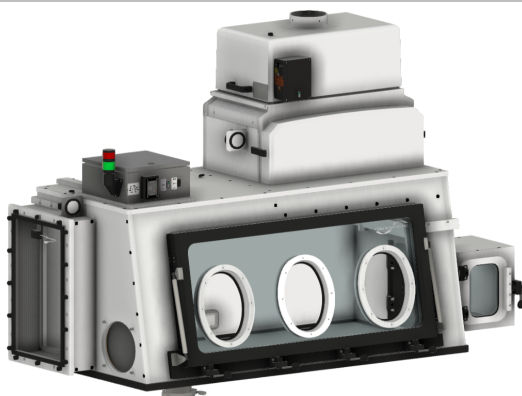2025 Mercantile Dr.
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GLOVEBOX WORKSTATION
EGP603024EBD1
TECHNICAL SPECIFICATIONS

GLOVEBOX WORKSTATION – EGP603024EBD1

GENERAL DESCRIPTION

DESIGNATED USAGE

For use with HPAPI, oncology, and ADCs. HEPA inlet filter for ISO 5 or better interior cleanliness. Surrogate Powder Testing Below 30 ng/m^3.

PRIMARY ENGINEERING CONTROL (PEC) TYPE

Glove box.

CONTAINMENT LEVEL

Heavily dependent on potency and quantity of the toxic material being worked with, this unit can contain to nanogram levels and from OEB 4-5.

MODEL SPECIFICATIONS	

CONFIGURATION

The EGP series basic setup includes a main door, with integrated gloves, for loading and unloading of equipment; inlet HEPA filter; dual HEPA exhaust filters with Bag In/Bag Out primary filter; a pass through (right side) for loading unloading small items; 4" sanitary fitting in the base (left side), blanked plate on left side for optional accessories such as continuous liner, disposal port, customized master port, RTP Alpha port; interior lighting; electrical control box with integrated alarm and go/no-go stack light.

EXTERIOR DIMENSIONS		INTERIOR DIMENSIONS	
Length:	78.50" with pass thru	Length:	58.00"
Depth:	34.05	Depth:	30.00"
Height:	55.91"	Height:	24.75"

PASS THROUGH INTERNAL DIMENSIONS		DOOR OPENING DIMENSIONS	
Length:	11.88"	7.00"	
Depth:	10.00"	N/A	
Height:	12.00"	9.50"	

MATERIALS OF CONSTRUCTION	

Wall panels:	White 0.75" Polypropylene
Work surface:	Black 1" Phenolic Resin Base dished to 0.5", Routed to Fit Sidewalls for Containment
Viewing Panels:	0.25" Acrylic
Plenums/Baffle:	White 0.25" Polypropylene

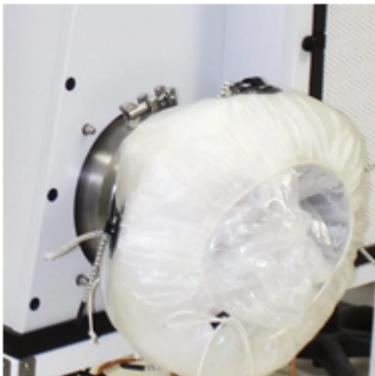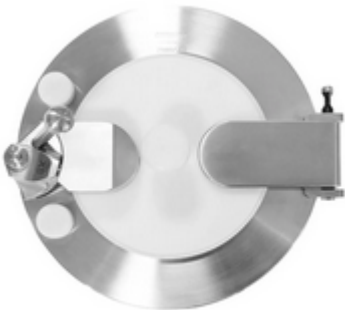| TECHNICAL SPECIFICATIONS	

LAMINAR AIR FLOW FILTRATION

- o Fan & filter modules are mounted on the top panel of the unit
- o Fan & filter modules provide HEPA (99.995% at mpps) vertically laminar filtered air
- o Air velocity: 120 ft/minute average +/-5 when measured at inlet filter
- o Inlet HEPA Filter placed at left side of unit

FAN CONSTRUCTION

- o High speed balanced galvanized steel fan impeller wheel for low vibration and high energy efficiency.
- o Fan shroud fabricated from fiberglass.
- o Impeller Diameter = 9.8"
- o Overall output of 50-55 dB @ 3 feet at maximum airflow. Entire unit affords two orders of magnitude isolation from adjacent equipment vibration and four orders of magnitude isolation from fan vibration.
- o Fan speed control unit included to properly set flow rate.

ELECTRICAL REQUIREMENTS

- o Fan: 120VAC, 50/60Hz, 1PH, 2.25AMPS, 270 WATTS at maximum flow, 5A FUSED.
- o LED Light: 100-240 VAC, 50/60 Hz, 2.0 Amps
- o Alarm integrated into electrical control box housing
- o Hospital grade power cord supplied

LIGHTING

- o LED Fixtures mounted in the top of the front panel all across the work surface
- o Natural cool white light. (Amber option available)
- o LED Lifetime 50,000 hours, 2600 lumens, max
- o 3.04A-0.97A @ 12V-30V DC, universal power supply
- o Luminous Efficiency: 90 Lumens/Watt typical at 24 V dc at 25°C

CONTROLS

- o Light switch on/off button
- o Fan switch on/off
- o Integrated Alarm with Lighted Status Indicator and Audible alarm
- o Hospital grade power cord

INTERIOR POWER & ACCESSIBILITY

- o Duplex Outlet in rear wall of unit
- o Pass thru on right side, blank plate on other side
- o 4" Tri-clover sanitary fitting in base

VELOCITY ALARM

- o 0.2 Amps with dry contact feature provided
- o Integrated into electrical control box housing and equipped with red light which warns of low velocity; green light which indicates normal containment velocity with proper certification

DIFFERENTIAL PRESSURE GAUGE

- o Minihelic differential pressure switch/gauges.
- o Pressure gauges (0-1" wg; 0-250 pa) installed to monitor the loading of the inlet and primary exhaust HEPA filters.

EXHAUST SPECIFICATIONS

- o Containment provided with all doors closed
- o For room recirculation, (238) total CFM required to maintain average 120 LFPM +/-5 at inlet filter
- o With thimble, (274) total CFM required to maintain average 120 +/-5 at inlet filter

EXHAUST RECOMMENDATIONS

- o Use thimble connection (FS2081MS) for House Exhaust connections.
- o No additional equipment required for independent recirculating configuration

DESIGN FEATURES	The Glovebox Workstation is designed with multiple features for maximum containment, ease of use, and ensuring a stable work environment for sensitive activities:

	EXHAUST PORT
	  o 6" thimble connections to house system
	  o Capable of being recirculated back into the lab

	FS1650 ALARM o FS1650 Integrated Face Velocity Alarm Alerts the operator when airflow is compromised.

	LED LIGHTING
	  o Standard with white light
	  o Optional add-on Amber LED Lighting

	FRONT LIFT DOORS
	  o Pneumatic assisted hinged front door that lifts for easy loading and unloading of equipment
	  o 42.00W" x 18.50"H Access Opening

	DISHED BASE o Dished phenolic base captures accidental liquid and powder spills
	SANITARY FITTING o 4" Tri-clover sanitary fitting integrated into base to allow connection of a variety of peripherals

	PLENUMS
	  o Plenums are used to direct airflow across work surface.
	  o Plenums also prevent particles from possibly falling back onto the work surface during loss of power

	BAG IN/ BAG OUT o HEPA change out system that allows for safe removal and replacement of the main 4" HEPA filter.

	PASS THRU CHAMBER
	  o One (1) transfer port included on right side
	  o Transfer Port Opening external 7"W x 9.5"H
	  o Inward swinging transfer door to access main chamber, outward swinging door to access outside

PART #: G 10B1532975A	GLOVE PORTS
	
	  o Quantity: 3
	  o Size: 10" diameter oval glove ports for the manipulation of process material
	  o Glove ports are mounted on the front door
	  o The system includes:
	     - Retaining O-rings
	     - butyl gloves (9.75 hand size, ambidextrous)

	CUSTOMIZED MASTER PORT o The blank plate can be customized to install various items such as continuous liner, RTP ports, etc.
PART #: 2092 & APS0825 	8" CONTINUOUS LINER SYSTEM o Integrated Continuous Liner System for safe waste disposal. Seal at any increment for disposal of waste in any amount.
PART #: 2093 	RTP ALPHA PORT o Accommodates a 105mm RTP Alpha port for connecting various betas or other containers
PART #: 2081MS	THIMBLE CONNECTION, 6" TO 7" TRANSITION o Thimble for connection to house exhaust.
PART #: 2062VK	VENT KIT, (8') 6" HOSE AND (2) HOSE CLAMP o Hose and Clamp for connection to house exhaust.
PART # 4185	PRIMARY 24x14 4" BAG-IN/BAG-OUT HEPA FILTER
PART # 4155	SECONDARY 24x14 4" HEPA FILTER
PART # 4155	INLET 24x14 4" HEPA FILTER
PART #: AFC241408A_(A/B)	CARBON FILTER 24x14 - ORGANIC o Powder coated carbon steel frame containing 8 ABS plastic canisters with coconut shell activated charcoal media.

PART #: AFC241408B_(A/B)	<u>CARBON FILTER 24x14 - ACID</u> o Powder coated carbon steel frame containing 8 ABS plastic canisters with impregnated coconut shell activated charcoal media.
PART #: AFC241408C_(A/B)	<u>CARBON FILTER 24x14 -AMINE</u> o Powder coated carbon steel frame containing 8 ABS plastic canisters with impregnated coconut shell activated charcoal media.
PART #: AFC241408D_(A/B)	<u>CARBON FILTER 24x14 - ALDEHYDE</u> o Powder coated carbon steel frame containing 8 ABS plastic canisters with impregnated coconut shell activated charcoal media.
PART #: ATC6030S	<u>TABLE, 60 X 30, POWDER COATED STEEL TABLE</u> o Powder coated carbon steel cart, on frame and feet, leveling pads (±1.25" of travel).
PART #: ATS6030S	<u>TABLE, 60 X 30, STAINLESS STEEL TABLE</u> o 304 Stainless steel table, on frame and feet, leveling pads (±1.25" of travel).
PART #: AEC6030S	<u>ADA TABLE, 60 X 30, ELECTRIC POWDER COATED TABLE</u> o Electric Ergonomic Lift Table, Powder coated carbon steel, on frame and feet, locking casters.
PART #: AES6030S	<u>ADA TABLE, 60 X 30, STAINLESS STEEL ERGONOMIC LIFT TABLE</u> o Electric Ergonomic Lift Table, 304 Stainless Steel, on frame and feet, locking casters.
PART #: ACC6030S	<u>CART, 60 X 30, POWDER COATED STEEL CART</u> o Powder coated carbon steel cart, on frame and feet, locking casters.
PART #: ACS6030S	<u>CART, 60 X 30, STAINLESS STEEL CART</u> o 304 Stainless steel cart, on frame and feet, locking casters.

INSTALLATION AND VALIDATION	Flow Sciences is delighted to offer you Installation services to ensure the complete start-up of your Biological Safety Cabinet.
INSTALLATION, START-UP AND TRAINING	INSTALLATION (at an additional charge) Flow Sciences will send One (1) Technician onsite to install equipment within your facility. Flow Sciences may require additional assistance on site. If additional assistance is required, Flow Sciences will request your assistance or provide additional technicians from Flow Sciences (at an additional charge) if no client staff is available. START-UP AND TRAINING (at an additional charge) One (1) Flow Sciences technician will demonstrate the usage of the equipment and train your personnel on the usage of the equipment after the installation is complete. Flow Sciences will provide an operating manual which will include the as built drawings and all the materials certificates. ***Please note that proposal amount for Installation, Start-up and Training is for 1 days of work for one technician. Should the labour exceed this time frame, and hourly labour rate will apply.
	SURROGATE POWDER TESTS (at an additional charge) Surrogate powder testing available during factory acceptance testing. IQOQ – INSTALLATION OPERATION QUALIFICATION (at an additional charge)

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MODEL SPECIFICATIONS	CONFIGURATION
	The EGP series basic setup includes a main door, with integrated gloves, for loading and unloading of equipment; inlet HEPA filter; dual HEPA exhaust filters with Bag In/Bag Out primary filter; a pass through (right side) for loading unloading small items; 4" sanitary fitting in the base (left side), blanked plate on left side for optional accessories such as continuous liner, disposal port, customized master port, RTP Alpha port; interior lighting; electrical control box with integrated alarm and go/no-go stack light.

EXTERIOR DIMENSIONS		INTERIOR DIMENSIONS	
Length:	78.50" with pass thru	Length:	58.00"
Depth:	34.05	Depth:	30.00"
Height:	55.91"	Height:	24.75"

PASS THROUGH INTERNAL DIMENSIONS		DOOR OPENING DIMENSIONS	
Length:	11.88"	7.00"	
Depth:	10.00"	N/A	
Height:	12.00"	9.50"	

MATERIALS OF CONSTRUCTION		
	Wall panels:	White 0.75" Polypropylene
	Work surface:	Black 1" Phenolic Resin Base dished to 0.5", Routed to Fit Sidewalls for Containment
	Viewing Panels:	0.25" Tempered Safety Glass
	Plenums/Baffle:	White 0.25" Polypropylene

TECHNICAL SPECIFICATIONS
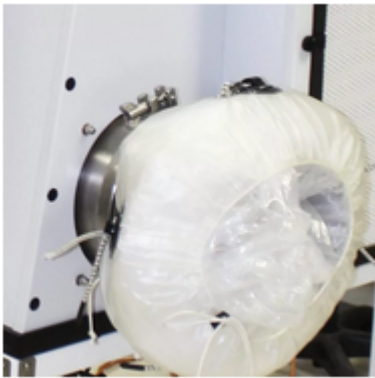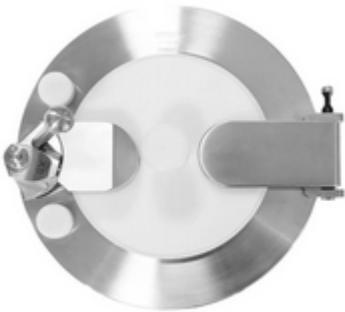
LAMINAR AIR FLOW FILTRATION
- Fan & filter modules are mounted on the top panel of the unit
- Fan & filter modules provide HEPA (99.995% at mpps) vertically laminar filtered air
- Air velocity: 120 ft/minute average +/-5 when measured at inlet filter
- Inlet HEPA Filter placed at left side of unit

FAN CONSTRUCTION
- High speed balanced galvanized steel fan impeller wheel for low vibration and high energy efficiency.
- Fan shroud fabricated from fiberglass.
- Impeller Diameter = 9.8"
- Overall output of 50-55 dB @ 3 feet at maximum airflow. Entire unit affords two orders of magnitude isolation from adjacent equipment vibration and four orders of magnitude isolation from fan vibration.
- Fan speed control unit included to properly set flow rate.

ELECTRICAL REQUIREMENTS

- o Fan: 120VAC, 50/60Hz, 1PH, 2.25AMPS, 270 WATTS at maximum flow, 5A FUSED.
- o LED Light: 100-240 VAC, 50/60 Hz, 2.0 Amps
- o Alarm integrated into electrical control box housing
- o Hospital grade power cord supplied

LIGHTING

- o LED Fixtures mounted in the top of the front panel all across the work surface
- o Natural cool white light. (Amber option available)
- o LED Lifetime 50,000 hours, 2600 lumens, max
- o 3.04A-0.97A @ 12V-30V DC, universal power supply
- o Luminous Efficiency: 90 Lumens/Watt typical at 24 V dc at 25°C

CONTROLS

- o Light switch on/off button
- o Fan switch on/off
- o Integrated Alarm with Lighted Status Indicator and Audible alarm
- o Hospital grade power cord

INTERIOR POWER & ACCESSIBILITY

- o Duplex Outlet in rear wall of unit
- o Pass thru on right side, blank plate on other side
- o 4" Tri-clover sanitary fitting in base

VELOCITY ALARM

- o 0.2 Amps with dry contact feature provided
- o Integrated into electrical control box housing and equipped with red light which warns of low velocity; green light which indicates normal containment velocity with proper certification

DIFFERENTIAL PRESSURE GAUGE

- o Minihelic differential pressure switch/gauges.
- o Pressure gauges (0-1" wg; 0-250 pa) installed to monitor the loading of the inlet and primary exhaust HEPA filters.

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	EXHAUST PORT ○ 6" thimble connections to house system ○ Capable of being recirculated back into the lab
	FS1650 ALARM ○ FS1650 Integrated Face Velocity Alarm Alerts the operator when airflow is compromised.
	LED LIGHTING ○ Standard with white light ○ Optional add-on Amber LED Lighting
	FRONT LIFT DOORS ○ Pneumatic assisted hinged front door that lifts for easy loading and unloading of equipment ○ 42.00W" x 18.50"H Access Opening
	DISHED BASE ○ Dished phenolic base captures accidental liquid and powder spills
	SANITARY FITTING ○ 4" Tri-clover sanitary fitting integrated into base to allow connection of a variety of peripherals
	PLENUMS ○ Plenums are used to direct airflow across work surface. ○ Plenums also prevent particles from possibly falling back onto the work surface during loss of power
	BAG IN/ BAG OUT ○ HEPA change out system that allows for safe removal and replacement of the main 4" HEPA filter.
	PASS THRU CHAMBER ○ One (1) transfer port included on right side ○ Transfer Port Opening external 7"W x 9.5"H ○ Inward swinging door to access main chamber, outward swinging door to access outside

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