



Negative Pressure Glove Boxes (Series 200)

- Ideal for drying, degassing, and ventilation applications
- Clear construction (of acrylic or polycarbonate) provides full visibility of work in progress
- Sturdy construction allows sustained negative pressure operation at 5" WG (29.9"Hg in vacuum antechamber)
- Solvent welding and chrome-plated hardware ensure a completely noncontaminating environment
- Optional remote filter/blower module provides safe exhaust fume venting or purification
- Select cylindrical vacuum chamber for higher vacuum levels
- 8" round arm ports accommodate port caps and sleeve/glove combinations
- Vacuum safety valve included to prevent damage to walls or seal

These economical vacuum glove boxes are designed for degassing operations, chemical mixing, biological tests, and other processes requiring sustained negative pressure.

Clean, Sturdy, Versatile

Each chamber is fabricated out of solvent-welded .5" transparent material that combines full visibility with light weight, cleanliness and durability. Dual glove ports allow full access to work in progress. Select acrylic for general applications, or polycarbonate for resistance to a wide range of chemicals and thermal stress.

Equipped with a vacuum safety valve on a standard basis, these chambers are designed for operations with sustained negative pressures down to 5" WG (Water Gauge). All hardware, including latches and hinges, is chrome-plated, and solvent welding ensures a strong, seamless, air-tight structure that won't leak or outgas.

Improved Access Doors Reduce Wear, Enhance Performance

Dual side access doors open inward to allow easy parts transfer from inside the chamber. Doors feature stainless steel reinforcement frames that increase the structural rigidity of the door by a factor of five. A built-in LiftLatch securely seals the door without applying lateral torque that could damage hinges.

All doors include unique, one-piece "e"-profile elastomer gaskets that will not compress or migrate over time. Their superb sealing capability saves nitrogen, eliminates maintenance, and extends the service life of access doors—typically the only component of a glove box that shows wear.

Versatile Configurations Support Many Negative Pressure Applications

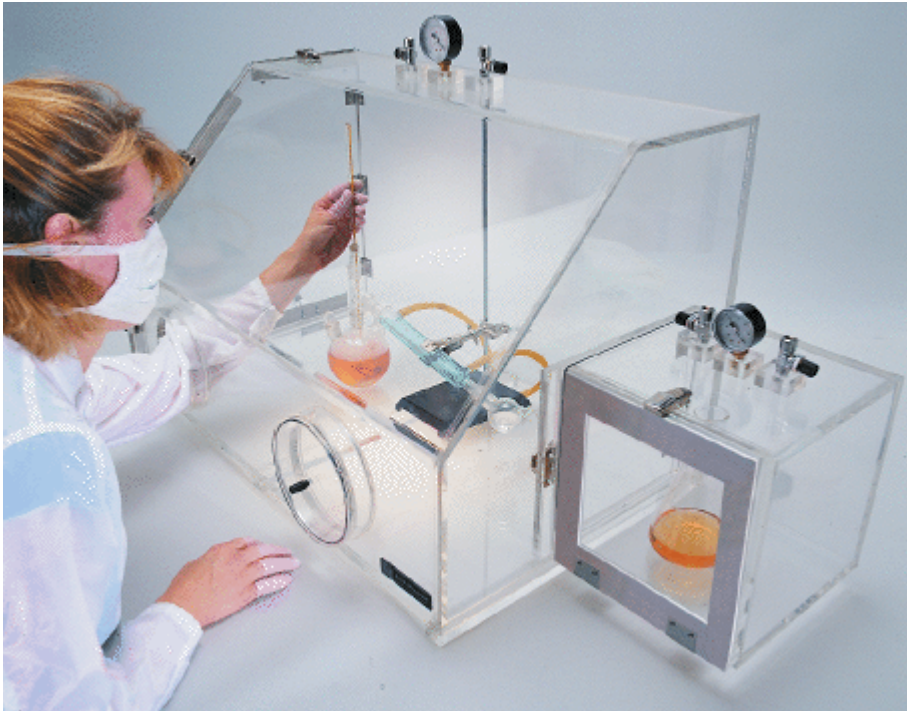
These glove boxes are designed for applications requiring low-level negative pressures, continuous high-volume ventilation, or sustained vacuum at one atmosphere. See following pages for more information on each configuration outlined below.

By attaching a vacuum pump and vacuum controller, you can dry or degas components at up to 5" WG of negative pressure in either the main chamber or negative pressure air lock. In this application, dual vacuum shut-off valves allow connection to the pump and vacuum bleeding. A safety pressure valve ensures that internal pressure does not exceed 5" WG.

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Company Reg No. 191 02 63 VAT Reg No: 429 0172 65



Stainless steel door frames with unique "e" profile elastomer gasket increase structural rigidity, extend service life, improve sealing performance.

For degassing at one atmosphere (29.9" Hg), select the vacuum antechamber. The pass-through design of this antechamber lets you introduce parts measuring up to 10" x 10" into the glove box for packaging or other processing following vacuum cycling.

Two configurations are available for continuous ventilation of the glove box during soldering, chemical mixing, or other operations that generate noxious fumes. A remote filter/blower module can be connected to the glove box via a 6" flange. Fumes are drawn through the conduit for remote exhausting or vapour removal. Make-up air enters the chamber either through iris glove ports or a HEPA-filtered intake port on top of the box. As an alternative to remote ventilation, a filter/fan unit can be installed directly on top of the glove box. Its ventilation fan draws fumes through a charcoal filter for purification or into an exhaust conduit for remote exhausting. Make-up air enters the chamber through iris glove ports.

Two .5"-thick Plexiglas port caps are included with each Negative Pressure Glove Box to allow the 8" round arm ports to be sealed. These caps are recommended during processes with negative pressure in order to relieve strain on gloves and glove clamps (gloves must be ordered separately).

Note: The vacuum safety valves provided with each Series 200 Negative Pressure Glove Box and Negative Pressure Air Lock are essential to safe operation of this system, especially when operated with a vacuum pump. Removal of these valves could result in damage to your equipment!

Specifications

Construction:	Solvent-welded .5"-thick clear acrylic or polycarbonate; chrome-plated hardware
Door Openings:	10" x 10" gasketed (accommodates either vacuum interchange chamber or standard Air Lock); gasketed front access door optional (for introduction of large objects)
Arm Ports:	8" round with flange for connecting glove assembly/port caps
Vacuum Control:	0-30" vacuum gauge provided with dual shutoff valves and barbed-hose fittings. Flange with outlet port provided with selection of remote filter/blower module.

Note: Vacuum gauge and shutoff valves are standard with all applications that include vacuum service. For applications with a filter/fan unit, this hardware is not included. See following pages for more information.

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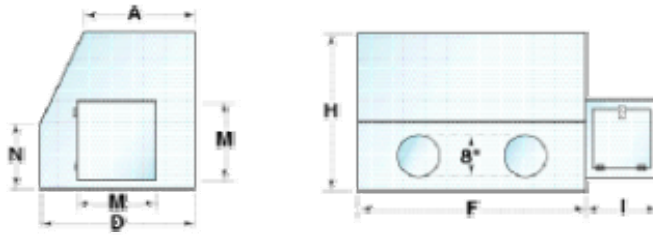
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How to Order:

1. Select the glove box of the desired material (either Plexiglas or polycarbonate). Models are available with or without the swing-up front access panel. Note: we recommend selection of a stainless steel work surface to prevent scratching in all plastic chambers.



2. Read across the ordering table to select a vacuum antechamber or air lock (price includes standard right-side installation). Refer to description on following page for more information on these options.

Glove Ports	A	D	F	H	I	M	N
2	16.25	24	35	22.125	11.5	10	11

3. Select other accessories below.

Cat. #

Operating Manual **1800-42**



Available in Static-Dissipative PVC for long-lasting ESD & particle control.

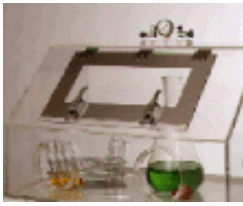
Series 200 Negative-Pressure Glove Boxes							
With Front Access Panel				Without Front Access Panel			
Acrylic		Polycarbonate		Acrylic		Polycarbonate	
Cat. #		Cat. #		Cat. #		Cat. #	
1681-13A	Call	1681-14A	Call	1681-15A	Call	1681-16A	Call

Corresponding Accessories					
Vacuum Antechamber (12" Diameter)		Negative Pressure Air Lock	Standard Air Lock		
12"L	23"L				
Cat. #	Cat. #	Cat. #		Cat. #	
1681-63	1681-67	1680-93		1680-78	

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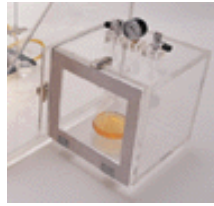
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Swing-Up Front Access Panel

Allows convenient introduction of large parts into the processing chamber. Cut-out size: 20"W x 10"H (other sizes available; specify when ordering). See ordering information above.



Air Locks

Negative pressure air locks (shown above) include a 0 - 30" Hg vacuum gauge, dual vacuum shutoff valves, and a pressure safety switch (set at 5"WG). Dimensions: 11.5" x 10" x 10". Stainless steel door frames ensure durable, rigid structure that won't crack or warp. Standard mounting is on the right side of the glove box. See ordering information above.



Changeable Sleeve and Glove Combination These accordion sleeves fit into the ports of our atmospheric chambers for safe, easy handling of materials. They can be used with a variety of gloves, allowing you to change glove size or type without changing the sleeve itself. Supplied with one pair of tempered latex industrial gloves (select desired size). Clamps included.

Changeable Sleeve and Glove Combination		
Glove Size	With 12" Sleeve	With 24" Sleeve
	Cat. #	Cat. #
8	1689-05	1681-90
9	1689-06	1681-91
10	1689-07	1681-92

Stainless Steel Work Surface

Protects the bottom of the chamber against scratching. Price includes installation.

Cat. #

1680-69

Replacement Glove Port Caps

Each 8"-diameter, .5"-thick acrylic port cap features an "O"-ring to ensure a tight seal during negative pressure service, along with a handle for easy removal.

Cat. #

1681-65

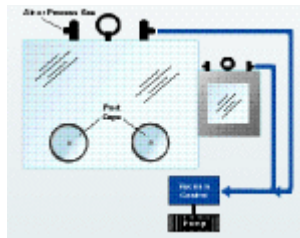
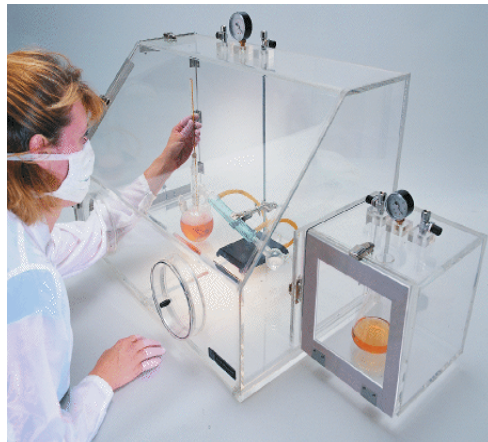


**Negative-Pressure Applications:
Series 200 Glove Box with Vacuum Service to 5" WG**

This application, which supports sustained negative pressure to 5" WG in either the main chamber or the air lock, is ideal for degassing or applications with fuming chemistries.

The Series 200 Glove Box includes dual shutoff valves (for vacuum line and backfill), vacuum gauge and pressure safety switch. Port caps, included with the box on a standard basis, allow the operator to seal the box during negative pressure processing. After bleeding the vacuum, the operator can remove these ports to allow access to the chamber.

A Low-Vacuum Control Module ensures safe, efficient pump operation. The Solenoid vacuum kit includes all vacuum connections required for turnkey operation.



Negative-Pressure Air Lock See above.

Low-Vacuum Control Module
Includes a vacuum gauge with set point control, on/off switches for pump and vacuum solenoid.

Cat. #

1685-99

1685-99-220

Low-Vacuum Solenoid Connection Kit

Includes solenoid valve and fittings necessary for connection of vacuum pump to Vacuum Control Module above.

Cat. #

5400-30

Diaphragm Vacuum Pump

Performs reliable, economical vacuum pumping for low-vacuum applications.

	With metering kit	Without metering kit
	Cat. #	Cat. #
120VAC, 60Hz	7903-00	7902-00
220VAC, 50Hz	7903-01	7902-01

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Negative-Pressure Applications:

Series 200 Glove Box with Vacuum Service to 29.9" Hg

Like the configuration above, this application supports sustained negative pressure to 5" WG in the Series 200 Glove Box. The addition of a vacuum antechamber allows drying or degassing at up to one full atmosphere (29.9"Hg). This acrylic pass-through antechamber is available in two lengths (12" or 23") and accommodates materials up to 10" x 10".

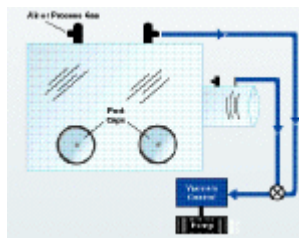
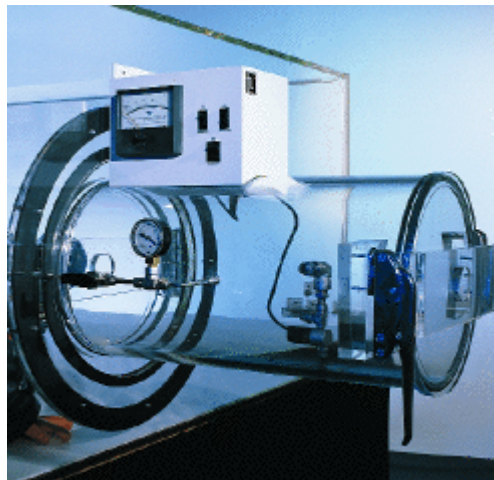
Glove box and antechamber include dual shutoff valves (for vacuum line and backfill) and a 0 - 30"Hg vacuum gauge. The glove box also features a pressure safety switch and port caps.

A Full-Vacuum Control Module maintains a user-defined pressure level and ensures safe, efficient pump operation. The Solenoid Vacuum Kit includes all vacuum connections required for turnkey operation.

Series 200 Glove Box See above.

Vacuum Antechamber

Made of .5"-thick acrylic, this antechamber safely supports vacuum to 29.9"Hg, making it ideal for degassing, vacuum encapsulation, and vacuum testing. It mounts on the right side of the Series 200 Negative Pressure Glove Box for easy pass-through operation. Includes a vacuum gauge and dual shutoff valves. Price includes installation.



Vacuum Antechamber, shown with Vacuum Control Module

Cat. #

12" Diameter x 12"L **1681-63**

12" Diameter x 23"L **1681-67**

Vacuum Control Module Cat. # 1681-75

Includes a vacuum gauge with programmable set point control, on/off switches for pump and vacuum solenoid.

Cat. #

1681-75

Solenoid Vacuum Kit

Includes solenoid valve and fittings necessary for connection of vacuum pump to vacuum antechamber Vacuum Control Module above

Cat. #

5400-20

Air-Cooled Vacuum Pump

This time-proven air-cooled vacuum pump provides reliable vacuum performance for chambers rated for 29.9" Hg/760 Torr.



	Cat. #
110VAC, 50/60 Hz	7901-00
220VAC, 50Hz	7901-08

Hazardous Fume Applications: Series 200 Glove Box with Remote Ventilation

In this configuration, noxious fumes generated inside the Series 200 Glove Box are ducted through a 6"-diameter conduit to a remote filter/blower module.

A variety of filters are available to help you meet OSHA and other environmental requirements for exhaust purification. The activated charcoal filter listed below removes most organic chemical vapours to allow safe indoor release. Specialized filters are available for other fumes. HEPA or ULPA particle filters can be used to remove particles as small as 0.12µm.

For particle-sensitive applications, an ULPA-filtered Air Inlet Module is mounted on top of the Series 200 chamber. In this application, an operator uses gloves to access materials inside the chamber.

If particles are not a concern, specify iris ports. These ports, made of multi-layered, self-closing silicone panels, allow make-up air to enter the chamber. Note: in this configuration, port caps cannot be used while the ventilation unit is turned on.

Air Inlet Module

Features a 3"-diameter inlet port. An acrylic enclosure houses an ULPA filter, rated 99.999% efficient at removing particles 0.12 microns in diameter.

	Cat. #
Air Inlet Module	1685-81
Replacement ULPA Filter	3333-35

Exhaust Flange

This 6"-diameter flange allows connection of conduit to a remote filter/blower module or other ventilation system. Specify other flange diameters.



Filter/Blower Module Provides Remote Ventilation

The 14"W x 13.5"D x 32.25"H polypropylene module houses a 740 CFM variable-speed blower that ventilates fumes inside the Series 200 Glove Box. Several filters are available for removal of organic chemical vapours or particles (order separately). All models are 110VAC/60Hz (add "-220" to part number for 220VAC/50Hz).

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Solutions for Controlled Environments, Particles, Humidity, Isolation, Static.



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Cat. #

Acrylic 1681-85

Polycarbonate 1681-86

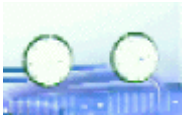
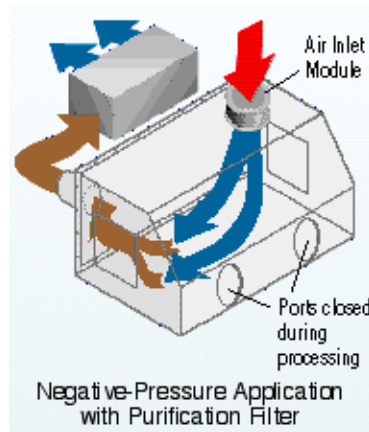
Cat. #

Remote Filter/Blower Module 1681-68A

Activated Charcoal Purification Filter 1716-00A

HEPA Filter 1681-02

ULPA Filter 1681-10



Iris Ports

These self-closing silicone ports allow convenient access to glove box without the need for special gloves. They also allow make-up air to enter the chamber in configurations without an Air Inlet Module.

Cat. #

1685-93

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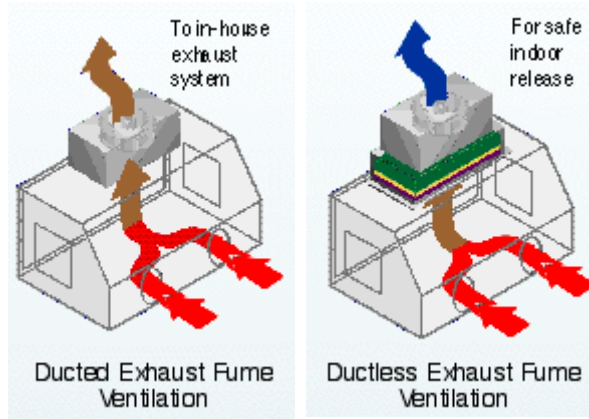
**Hazardous Fume Applications:
Series 200 Glove Box with On-Board Ventilation Module**

This configuration includes a Filter/Blower Module that ventilates fumes inside the Series 200 Glove Box.

This module, available in several materials, allows exhaust fumes to be ducted to an in-house exhaust system or purified by an activated charcoal filter for safe release. The versatile filter housing also accommodates a final particle filter (HEPA or ULPA).

Make-up air enters the chamber through iris ports made of multi-layered, self-closing silicone panels. Note: In this configuration, port caps cannot be used while the ventilation unit is turned on.

Series 200 Glove Box with Filter/Blower Module



- Exhaust Purification Filter
- Room Air
- Class 10,000 Filter
- Exhaust Fume
- ULPA/HEPA Filter
- Purified/Filtered Air Stream

Filter Module	Cat. #
Exhaust Purification Filter (activated charcoal)	1685-82
HEPA Filter (99.99% efficient @ 0.3µm)	1716-00A
ULPA Filter (99.999% efficient @ 0.12µm)	1681-02
	1681-10

The stainless steel housing accommodates a charcoal purification filter and a HEPA or ULPA final particle filter

Blower Module	Cat. #
110VAC, 60Hz	1685-83
220VAC, 50Hz	1685-83-220

The stainless steel housing encloses a 740 CFM variable-speed impeller that draws fumes upwards. One-piece gasket ensures leak-tight performance. Price includes installation on specified Series 200 chamber.

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