HOODS+

Low-Cost Solutions for High Technology

TERRA UNIVERSAL.COM
Critical Environment Solutions

Vol. 8, No. 16

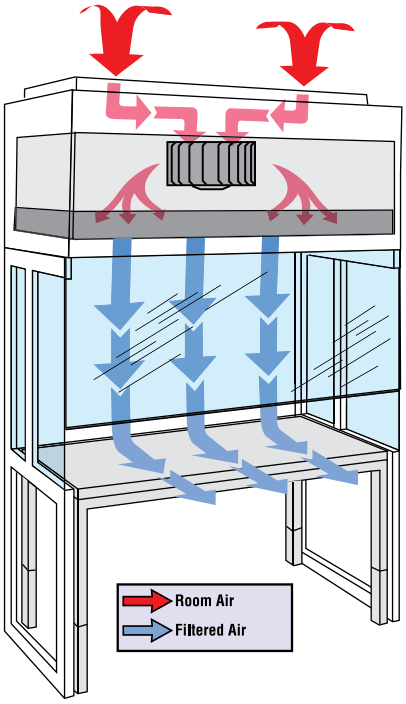
FREE-STANDING VERTICAL LAMINAR FLOW STATIONS

- **Economical system provides a laminar flow of HEPA-filtered air to meet the most critical contamination requirements**
- **Incorporates industry-leading quiet, low-vibration fan/filter modules**
- **All-stainless steel or powder-coated steel construction is cleanroom compatible and easy to clean**
- **Side panels and optional motorized front sliding shield effectively control the laminar air stream to achieve the air speed you require**
- **Fluorescent illuminators ensure easy viewing**
- **Backpressure gauge with audible alarm helps monitor filter performance**
- **Optional ionization equipment safely neutralizes static charges throughout the work area for effective ESD and particle control**
- **Accommodates standard Terra work benches in many materials, as well as standard Terra wet processing stations (see page 24)**

Terra Universal's Vertical Laminar Flow Station combines several of our most advanced products in a state-of-the-art work station that removes particulate airborne contamination.

Fan Filter Units

230V, 50Hz models available



Strip shield access curtain *

IonBar™ *— Safe static control! See page 13

*System option

NOTE: All prices and specifications are subject to change without notice.
Crating charges apply to selected items. Call for information.

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Items with **blue prices** usually ship in 1–3 days. For current lead times: TerraUniversal.com

Ordering Information

Order the Vertical Laminar Flow Station, Filter/Fan Units (FFUs), and other optional accessories separately from the charts below. Selected accessories are installed in the corresponding Vertical Laminar Flow Station and shipped as a turnkey system, ready for operation.

Sliding Shield With Motorized Control

Automatically extends and retracts at the press of a button. Static-dissipative PVC eliminates static and particle attraction. Includes installation of clean-operating brushless motor and safety mechanism that stops shield in the event of power failure. Order shield separately.

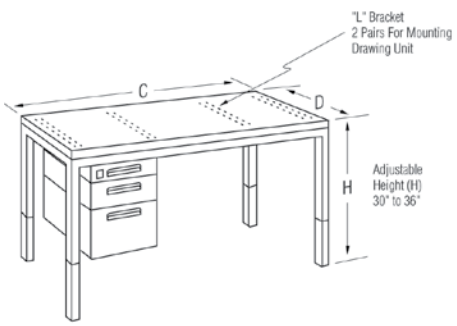
Filter/Fan Units (FFUs) 115VAC, 60Hz*
See chart below for quantity required

Nominal Dim. W x L	Avg. Flow @ Med. Speed	HEPA FFU Cat. #	HEPA FFU $/Each	Ionizing Bar** Cat. #	Ionizing Bar** $/Each
2' x 4'	717 CFM	**6601-24-H**	777.00	**2005-49**	**851.00**
2' x 3'	602 CFM	**6601-23-H**	777.00	**2005-48**	**744.00**
2' x 2'	558 CFM	**6601-22-H**	777.00	**2005-47**	**621.00**

* *ULPA versions also available. For 220VAC model, add "-220" to the part number.*
** *Includes installation kit for easy attachment to FFU. Ionizing Kit and FFU must be ordered together.*

Vertical Laminar Flow Station											Side Panel*		Motorized Sliding Shield	
Dimensions (inches)			No. of FFUs required (order above)	304 Stainless Steel (Order FFUs and Benches separately)			Powder Coated Steel (Order FFUs and Benches separately)				Static Dissipative PVC		Static Dissipative PVC	
				120VAC, 50/60Hz	220VAC, 50Hz		120VAC, 50/60Hz	220VAC, 50Hz						
A	B	C x D		Cat. #	Cat. #	$/Each	Cat. #	Cat. #	$/Each		Cat. #	$/Each	Cat. #	$/Each
52	49	48 x 30	(1) 2' x 4'	**2001-30A**	**2001-30A-220**	**6,197.00**	**2001-80A**	**2001-80A-220**	**4,403.00**		**2004-03**	**162.00**	**9207-04**	**1,712.00**
64	61	60 x 30	(1) 2' x 2' + (1) 2' x 3'	**2001-31A**	**2001-31A-220**	**6,932.00**	**2001-81A**	**2001-81A-220**	**5,071.00**		**2004-03**	**162.00**	**9207-05**	**1,949.00**
76	73	72 x 30	(2) 2' x 3'	**2001-32A**	**2001-32A-220**	**7,247.00**	**2001-82A**	**2001-82A-220**	**5,356.00**		**2004-03**	**162.00**	**9207-06**	**2,315.00**
100	97	96 x 30	(2) 2' x 4'	**2001-33A**	**2001-33A-220**	**8,192.00**	**2001-83A**	**2001-83A-220**	**6,214.00**		**2004-03**	**162.00**	**9207-07**	**2,487.00**

* *Replaces standard acrylic side panels (each station requires two). Static-Dissipative PVC is recommended on units equipped with optional dissipative sliding shield.*



Cleanroom Drawers

No. of Drawers	Min. Drawer Height	ABS Plastic (white) Cat. #	ABS Plastic (white) $/Each	304 Stainless Steel Cat. #	304 Stainless Steel $/Each
1	3"	**1740-23**	**212.00**	—	—
1	6"	**1740-02**	**221.00**	**1741-20**	**226.00**
1	12"	**1740-98**	**312.00**	**1741-21**	**351.00**
2	3", 6"	**1740-14**	**388.00**	—	—
2	6", 6"	**1740-15**	**399.00**	**1741-22**	**450.00**
2	6", 12"	**1740-06**	**440.00**	**1741-23**	**626.00**
3	3", 6", 12"	**1740-07**	**628.00**	—	—
3	6", 6", 6"	**1740-09**	**575.00**	**1741-24**	**772.00**
4	3", 3", 6", 6"	**1740-08**	**733.00**	—	—

Corresponding Solid Top Work Benches*												Perforated-Top Work Benches*			
Dimensions (inches)			Nonconductive Top		Conductive Top		304 Stainless Steel Top		Polypropylene Top			304 Stainless Steel Top		304 Stainless Steel (Polypropylene Plenum)	
A	B	C x D	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each		Cat. #	$/Each	Cat. #	$/Each
52	49	48 x 30	**1722-00**	690.00	**1728-00**	**1,012.00**	**1521-45**	1,285.00	**1522-00**	**894.00**		**1522-56**	**1,313.00**	**1526-50**	**2,298.00**
64	61	60 x 30	**1724-00**	767.00	**1730-00**	**938.00**	**1751-00**	1,236.00	**1522-01**	**929.00**		**1522-57**	**1,404.00**	**1526-51**	**2,563.00**
76	73	72 x 30	**1726-00**	756.00	**1732-00**	1,061.00	**1752-00**	1,290.00	**1522-02**	951.00		**1522-58**	**1,589.00**	**1526-52**	**2,796.00**
100	97	96 x 30	**2402-00**	937.00	**2400-00**	**1,202.00**	**1753-00**	**1,452.00**	**1522-04**	**1,177.00**		**1522-60**	**1,974.00**	**1526-54**	**3,520.00**

* *Powder-coated adjustable-height frame; top of material indicated.*

No. 2001-65

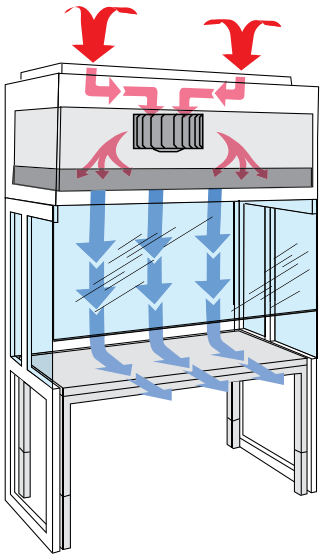
ValuLine™ Vertical Laminar Flow Work Stations

Terra's ValuLine Workstations provide a low-cost solution for laminar flow applications —

- **HEPA fan module provides laminar flow of particle-free air (measured at 0.3µm particles) to meet cleanroom requirements—9.999% efficient ULPA filters also available**
- **Differential pressure gauge monitors filter backpressure**
- **Tilt-up static-dissipative PVC sash enhances laminar flow, allows introduction of large process equipment**
- **Built-in 304 stainless steel table provides a clean, chemical-resistant work surface**
- **Removable top for easy transfer through standard doorway**
- **Includes fluorescent light, GFI duplex power outlet**

This economical free-standing workstation provides a particle-free environment for contamination-sensitive work. Select powder-coated or stainless steel construction. Dissipative PVC side panels help maintain a laminar flow of HEPA filtered air, and the tilt-up dissipative PVC sash lets the operator adjust the access area.

All models include HEPA fan/filter module(s), 0-3" WG filter backpressure gauge, tilt-up sash, a stainless steel work surface and a GFI duplex power outlet.



Fan Filter Units

230V, 50Hz models available

ValuLine Vertical Laminar Flow Station—304 Stainless Steel

Dimensions W x D x H	No. of FFUs included	304 Stainless Steel			
		120VAC, 50/60Hz		220VAC, 50Hz	
		Cat. #	$/Each	Cat. #	$/Each
52" x 32" x 90"	(1) 2' x 4'	2001-65	6,947.00	2001-65-220	6,324.00
76" x 32" x 90"	(2) 2' x 3'	2001-66	7,798.00	2001-66-220	7,097.00
100" x 32" x 90"	(2) 2' x 4'	2001-67	8,936.00	2001-67-220	8,128.00

ValuLine Vertical Laminar Flow Station—Powder-Coated Steel

Dimensions W x D x H	No. of FFUs included	Powder-Coated Steel			
		120VAC, 50/60Hz		220VAC, 50Hz	
		Cat. #	$/Each	Cat. #	$/Each
52" x 32" x 90"	(1) 2' x 4'	2001-68	5,183.00	2001-68-220	4,724.00
76" x 32" x 90"	(2) 2' x 3'	2001-69	5,809.00	2001-69-220	5,292.00
100" x 32" x 90"	(2) 2' x 4'	2001-70	6,703.00	2001-70-220	6,103.00

Ionizing Bar

This low-voltage device enhances ESD and particle control by safely neutralizing static charges. Includes installation in selected hood (not for retrofitting). 220V models available at TerraUniversal.com.

For Hood Width	Qty. Req'd.	Cat. #	$/Each
52"	1	2005-49	851.00
76"	2	2005-48	744.00
100"	2	2005-49	851.00

UV-C Sanitation Light

This economical, fast-acting system uses UV-C light to kill 99+% of bacteria and viruses in minutes. An effective, convenient alternative to manual alcohol sterilization of difficult-to-reach areas.

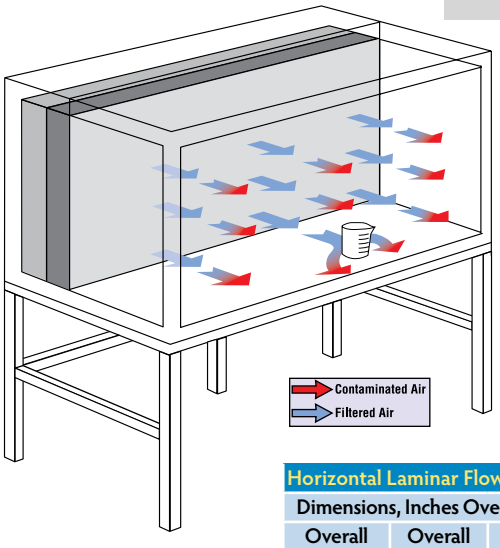
More information at TerraUniversal.com.

ValuLine™ Horizontal Laminar Flow Workstations

Terra's ValuLine now includes a horizontal laminar flow workstation—

- Fan modules includes 99.99% efficient HEPA filter to ensure clean working conditions
- Differential pressure gauge monitors filter backpressure
- Tilt-up sash is fabricated of chemical-resistant static-dissipative PVC
- Stainless steel work surface is easy to clean and sterilize
- Includes fluorescent light and GFI duplex power outlet

No. 2100-88



Terra's ValuLine Horizontal Laminar Flow Workstation provides a particle-free environment for work with bio/pharmaceutical samples, medical devices, semiconductor components, and other sensitive materials.

Its rear-mounted fan/filter unit delivers a constant flow of HEPA-filtered air to wash away contaminants. Variable speed control lets you adjust speed setting up to 100+ feet/minute and to balance units with dual fans. The dissipative PVC sash tilts down to protect the operator's face during operation. Select powder-coated or stainless steel construction. All systems are 63.4"H.

All models include HEPA fan/filter module(s), 0 – 3"W/G filter backpressure gauge, tilt-up sash, a stainless steel work surface and a GFI duplex power outlet. Select size and choice of materials below.

Horizontal Laminar Flow Station – All 304 Stainless Steel

Dimensions, Inches Overall Height: 63.4"			No. of FFUs included	120 VAC, 50/60 Hz		220 VAC, 50/60 Hz	
Overall Width	Overall Depth	Working Area (W x D x H)		Cat. #	$/Each	Cat. #	$/Each
52"	44"	48.5" x 29.6" x 29.9"	(1) 2' x 4'	2100-84	6,588.00	2100-84-220	6,693.00
76"	44"	72.5" x 29.6" x 29.9"	(2) 2' x 3'	2100-85	7,369.00	2100-85-220	7,474.00
100"	44"	96.5" x 29.6" x 29.9"	(2) 2' x 4'	2100-86	8,441.00	2100-86-220	8,546.00

Horizontal Laminar Flow Station – Powder-Coated (white) Frame and Stand; 304 Stainless Steel Interior (shown above)

Dimensions, Inches Overall Height: 63.4"			No. of FFUs included	120 VAC, 50/60 Hz		220 VAC, 50/60 Hz	
Overall Width	Overall Depth	Working Area (W x D x H)		Cat. #	$/Each	Cat. #	$/Each
52"	44"	48.5" x 29.6" x 29.9"	(1) 2' x 4'	2100-88	5,133.00	2100-88-220	5,005.00
76"	44"	72.5" x 29.6" x 29.9"	(2) 2' x 3'	2100-89	5,754.00	2100-89-220	5,597.00
100"	44"	96.5" x 29.6" x 29.9"	(2) 2' x 4'	2100-90	6,335.00	2100-90-220	6,440.00

Fan Filter Units

230V, 50Hz models available

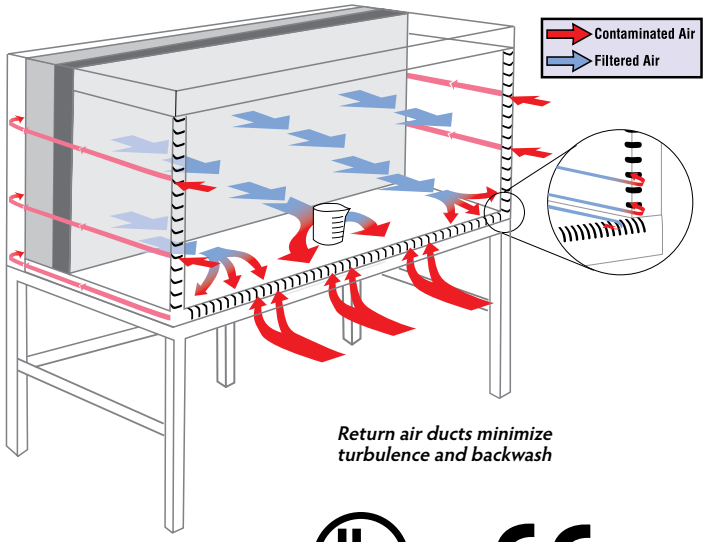
Model shown: No. 9620-64
For complete specifications: TerraUniversal.com

HORIZONTAL LAMINAR FLOW STATION

Terra's Horizontal Laminar Flow Station provides an economical work environment that exceeds the most stringent contamination requirements in the pharmaceuticals, biotech, electronics and semiconductor industries.

Powerful filter/blower modules provide a back-to-front laminar flow of filtered air across the work surface. The adjustable multi-speed, direct-drive blowers let you adjust air speed (90 – 130 feet per minute) to meet your requirements while providing low noise and vibration levels.

For enhanced air-stream control, this station also features return ducts along the front and side edges of the work area. These ducts enhance system efficiency by reducing backwash, the most common source of turbulence in a laminar flow system. Includes recessed illuminator; UV-C sterilization lamps available.



Return air ducts minimize turbulence and backwash

Petcocks	Cat. #	$/Each
Nitrogen/Clean Dry Air (CDA)	9620-07	93.00
Vacuum	9620-08	93.00
DI Water	9620-09	93.00

Ionizing Units— see page 13

Fan Filter Units

230V, 50Hz models available

Horizontal Laminar Flow Station (order filters separately)							Filters		
Overall Dimensions* (W" x D" x H")	Work Area Dimensions* (W" x D" x H")	No. of FFUs required (order at right)	Horizontal Laminar Flow: Interior Material**				HEPA Filter/Fan Units***		
			304 Stainless Steel		Electropolished SS		Size (W x L)		
			Cat. #	$/Each	Cat. #	$/Each		Cat. #	$/Each
52 x 44 x 63	48 x 30 x 28	(1) 2' x 4'	9620-63	9,858.00	9620-66	12,050.00	2' x 4'	6601-24-H	777.00
76 x 44 x 63	72 x 30 x 28	(2) 2' x 3'	9620-64	11,841.00	9620-67	13,567.00	2' x 3'	6601-23-H	777.00
88 x 44 x 63	84 x 30 x 28	(1) 2' x 4' & (1) 2' x 3'	9620-65	12,263.00	9620-68	14,574.00			

Note: All models are 115VAC, 50/60Hz. For 220VAC, 50Hz, add "-220" to the part number.
** All dimensions are nominal.*
*** Work top and side panels are of the material indicated. All exterior surfaces are powder-coated CR steel.*
**** 99.99% efficient @ 0.3 micron particles. ULPA filters also available.*

ValuLine™ WhisperFlow™ Polypropylene Laminar Flow Hoods

- **Portable, economical system converts any benchtop surface into a vertical or horizontal laminar flow station (select 36" or 48" width)**
- **Air flow speed exceeds 90 feet/minutes (measured with HEPA filter)**
- **Quiet operation: 54 dBA measured 30" from filter face**
- **Polypropylene hood construction resists a wide range of chemicals, including alcohol and other biocides**
- **Includes built-in polypropylene bottom with spill tray and coved seams for easy cleaning**

This versatile laminar flow hood gives you a particle-free work environment on any available work surface.

No. 1688-40

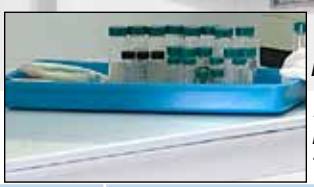
FFU: Quiet, Reliable Operation

It consists of two modules: a filter/fan unit (FFU), which houses a particle filter, and a polypropylene hood. The FFU houses a HEPA filter, rated 99.99% efficient with 0.3 micron particles. Its internal baffle system ensures uniform face velocity, and its 54 dBA noise rating ensures quiet operation. The low vibration level ensures minimal disruption of high-precision assembly or test procedures performed inside the hood. ULPA FFUs, rated 99.999% efficient @ 0.12µm particles, and ionization units are also available.

Sturdy, Chemical-Resistant Polypropylene Construction

The 0.5"-thick polypropylene construction offers excellent chemical compatibility, durability, and cleanliness. A hinged front access shield, made of static-dissipative PVC, enhances laminar flow. Continuous seams and coved corners simplify cleaning. Includes fluorescent light.

No. 1688-42



Built-in polypropylene spill tray

230V, 50Hz models available

Specifications

Full Fan Filter Unit (FFU) data at TerraUniversal.com

Material: Stress-relieved polypropylene

FFU: Motorized impeller with 3-speed control; provides minimum airflow of 650 CFM (middle speed)

Filter: 99.99% efficient HEPA (rated at 0.3 µm particles)

Dimensions: Vertical Flow Models: 36.75" / 48.75"W x 24.75"D x 39"H (42.5 w/ FFU)

Horizontal Flow Models: 36.75" / 48.75"W x 39"D x 25"H (requires minimum 2" clearance at rear for air intake)

Work Area: Vertical Flow Models: 35.75" / 47.75"W x 24"D x 28.75"H

Horizontal Flow Models: 35.75" / 47.75"W x 24"D x 24"H

Fan Filter Units

Nominal Width	Power	Vertical Flow ValuLine WhisperFlow Hood		Horizontal Flow ValuLine WhisperFlow Hood		Corresponding HEPA Fan/Filter Unit*	
		Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
48.75"	120VAC, 60Hz	**1688-40**	**1,692.00**	**1688-42**	**1,534.00**	**6601-24-H**	**777.00**
	220VAC, 50/60Hz	**1688-40-220**	**1,802.00**	**1688-42-220**	**1,644.00**	**6601-24-H-220**	**887.00**
36.75"	120VAC, 60Hz	**1688-41**	**1,517.00**	**1688-43**	**1,799.00**	**6601-23-H**	**777.00**
	220VAC, 50/60Hz	**1688-41-220**	**1,627.00**	**1688-43-220**	**1,909.00**	**6601-23-H-220**	**887.00**

** ULPA models available*

IonBar™

This low-voltage system safely neutralizes status charges under the hood. Includes mounting kit.

For Hood Width (bar length)	110VAC, 60Hz		220VAC, 50/60 Hz	
	Cat. #	$/Each	Cat. #	$/Each
36" (33")	**2005-48**	**744.00**	**2005-48-220**	**756.00**
48" (44")	**2005-49**	**851.00**	**2005-49-220**	**861.00**

Corresponding Tables

All feature powder-coated, adjustable bases and choice of sealed laminate or 304 stainless steel tops.

For Hood Style	Laminate Top		304 Stainless Steel Top	
	Cat. #	$/Each	Cat. #	$/Each
Vertical Flow				
49"W x 25"D	**1688-81**	**477.00**	**1688-83**	**888.00**
37"W x 25"D	**1688-82**	**578.00**	**1688-84**	**691.00**
Horizontal Flow				
49"W x 39"D	**1688-85**	**620.00**	**1688-87**	**991.00**
37"W x 39"D	**1688-86**	**561.00**	**1688-88**	**898.00**

Vertical Configuration (No. 1686-60C)

WhisperFlow™ Benchtop Hoods

This versatile laminar flow hood gives you a particle-free work environment on any available work surface.

It consists of two modules: a filter/fan unit (FFU), which houses a particle filter, and a hood. The 24" x 48" x 12.25" FFU houses a HEPA filter, rated 99.99% efficient with 0.3 micron particles. Its internal baffle system ensures uniform face velocity. Hood prices include tilt-up sash and fluorescent light. Other sizes available at TerraUniversal.com.

Horizontal Configuration (No. 1686-55C-SS)

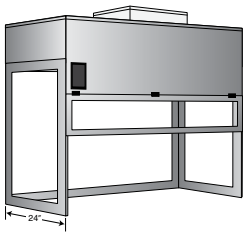
Configure a laminar-flow system to your requirements—

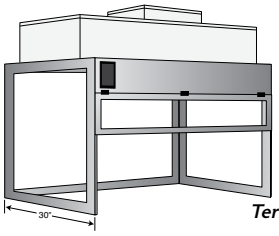
- Powder-coated or 304 stainless steel frame construction
- Vertical or horizontal flow design
- Five panel materials
- Five widths x 24" or 30" depth
- Select desired Fan Filter Unit and system options on pg. 7

CE

230V, 50Hz models available

24" Depth All models below





30" Depth Available at TerraUniversal.com

Powder-Coated WhisperFlow Benchtop Hoods: Order specified Fan/Filter Units (FFUs) on page 9

Hood Material* Order FFUs separately (page 9)	72"W x 24"D (2) 36" x 24" FFUs		60"W x 24"D (1) 36" x 24" and (1) 24" x 24" FFU		48"W x 24"D (1) 48" x 24" FFU		36"W x 24"D (1) 36" x 24" FFU		24"W x 24"D (1) 24" x 24" FFU	
	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
Vertical Flow Configurations										
Acrylic**	**1688-20C**	**3,526.00**	**1688-30C**	**3,181.00**	**1686-50C**	**2,719.00**	**1686-60C**	**2,430.00**	**1686-42C**	**2,221.00**
Static Dissipative PVC	**1688-21C**	**4,360.00**	**1688-31C**	**4,013.00**	**1686-51C**	**3,551.00**	**1686-61C**	**3,392.00**	**1686-43C**	**3,054.00**
Nondissipative PVC	**1688-22C**	**3,526.00**	**1688-32C**	**3,181.00**	**1686-52C**	**2,719.00**	**1686-62C**	**2,545.00**	**1686-44C**	**2,221.00**
Powder-Coated Steel (SDPVC)	**1688-24C**	**4,373.00**	**1688-34C**	**4,027.00**	**1686-54C**	**3,565.00**	**1686-64C**	**3,392.00**	**1686-46C**	**3,067.00**
Horizontal Flow Configurations										
Acrylic**	**1688-25C**	**3,526.00**	**1688-35C**	**3,181.00**	**1686-55C**	**2,719.00**	**1686-65C**	**2,509.00**	**1686-82C**	**2,221.00**
Static Dissipative PVC	**1688-26C**	**4,360.00**	**1688-36C**	**4,013.00**	**1686-56C**	**3,551.00**	**1686-66C**	**3,379.00**	**1686-83C**	**3,054.00**
Nondissipative PVC	**1688-27C**	**3,526.00**	**1688-37C**	**3,181.00**	**1686-57C**	**2,719.00**	**1686-67C**	**2,509.00**	**1686-84C**	**2,221.00**
Powder-Coated Steel (SDPVC)	**1688-29C**	**4,373.00**	**1688-39C**	**4,027.00**	**1686-59C**	**3,565.00**	**1686-69C**	**3,356.00**	**1686-86C**	**3,067.00**

** Unless indicated in parentheses, shield is made of the same material as the hood. Frame is white powder-coated steel.*
*** Acrylic is damaged by alcohol and other cleaning agents.*

304 Stainless Steel WhisperFlow Benchtop Hoods: Order specified Fan/Filter Units (FFUs) on page 9

Hood Material* Order FFUs separately (page 7)	72"W x 24"D (2) 36" x 24" FFUs		60"W x 24"D (1) 36" x 24" and (1) 24" x 24" FFU		48"W x 24"D (1) 48" x 24" FFU		36"W x 24"D (1) 36" x 24" FFU		24"W x 24"D (1) 24" x 24" FFU	
	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
Vertical Flow Configurations										
Acrylic**	**1688-20C-SS**	**3,872.00**	**1688-30C-SS**	**3,491.00**	**1686-50C-SS**	**2,982.00**	**1686-60C-SS**	**2,628.00**	**1686-42C-SS**	**2,437.00**
Static Dissipative PVC	**1688-21C-SS**	**4,792.00**	**1688-31C-SS**	**4,410.00**	**1686-51C-SS**	**3,901.00**	**1686-61C-SS**	**3,711.00**	**1686-43C-SS**	**3,356.00**
Nondissipative PVC	**1688-22C-SS**	**3,872.00**	**1688-32C-SS**	**3,491.00**	**1686-52C-SS**	**2,982.00**	**1686-62C-SS**	**2,791.00**	**1686-44C-SS**	**2,437.00**
304 Stainless Steel (SDPVC)	**1688-24C-SS**	**4,806.00**	**1688-34C-SS**	**4,425.00**	**1686-54C-SS**	**3,916.00**	**1686-64C-SS**	**3,724.00**	**1686-46C-SS**	**3,370.00**
Horizontal Flow Configurations										
Acrylic**	**1688-25C-SS**	**3,872.00**	**1688-35C-SS**	**3,491.00**	**1686-55C-SS**	**2,982.00**	**1686-65C-SS**	**2,755.00**	**1686-82C-SS**	**2,437.00**
Static Dissipative PVC	**1688-26C-SS**	**4,792.00**	**1688-36C-SS**	**4,410.00**	**1686-56C-SS**	**3,901.00**	**1686-66C-SS**	**3,675.00**	**1686-83C-SS**	**3,356.00**
Nondissipative PVC	**1688-27C-SS**	**3,872.00**	**1688-37C-SS**	**3,491.00**	**1686-57C-SS**	**2,982.00**	**1686-67C-SS**	**2,755.00**	**1686-84C-SS**	**2,437.00**
304 Stainless Steel (SDPVC)	**1688-29C-SS**	**4,806.00**	**1688-39C-SS**	**4,425.00**	**1686-59C-SS**	**3,896.00**	**1686-69C-SS**	**3,688.00**	**1686-86C-SS**	**3,370.00**

** Unless indicated in parentheses, shield is made of the same material as the hood. Frame is 304 stainless steel.*
*** Acrylic is damaged by alcohol and other cleaning agents.*

CleanCube™ Vertical Laminar Flow Hood

Terra's CleanCube provides a vertical laminar flow of filtered air to provide a particle-free processing environment.

Its one-piece hood design eliminates cracks and crevices where germs or particles can collect. The radius corners are easy to wipe down, and the absence of a corner support frame ensures a full view of work in progress. It also eliminates the cramped, claustrophobic feeling that operators experience when working with only partial visibility. Fan/Filter Unit (FFU) provides 310 CFM average flow of HEPA-filtered air at 260 ft./minute.

See page 33 – 34 for information on cleanroom work benches.

230V, 50Hz models available

Access shield tilts up to accommodate process equipment.

Radius corners wipe down clean!

CleanCube Vertical Laminar Flow Hood					Corresponding Filter/Fan Unit**			
Dimensions (in., nominal)	Material				With HEPA Filter			
	Acrylic*		Polycarbonate		110VAC, 60Hz		220VAC, 50/60Hz	
	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
24W x 24D x 28H	**2003-10A**	**2,007.00**	**2003-12A**	**3,467.00**	**6601-22-H**	**777.00**	**6601-22-H-220**	**887.00**
36W x 24D x 28H	**2003-11A**	**2,459.00**	**2003-13A**	**3,814.00**	**6601-23-H**	**777.00**	**6601-23-H-220**	**887.00**

** Acrylic is damaged by alcohol and other cleaning agents.*
*** Visit www.TerraUniversal.com*

Ionizing Bar (see pg. 13)

Fan Filter Units

WhisperFlow™ Benchtop Hoods, continued

Filter Fan Units: See charts on page 8 for required quantities						
Size	Avg. Flow CFM (med. speed)	Power	With HEPA Filter		With ULPA Filter	
			Cat. #	$/Each	Cat. #	$/Each
48" x 24"	717	120VAC, 50/60Hz	**6601-24-H**	**777.00**	**6601-24-U**	**887.00**
		220VAC, 50Hz	**6601-24-H-220**	**887.00**	**6601-24-U-220**	**998.00**
36" x 24"	602	120VAC, 50/60Hz	**6601-23-H**	**777.00**	**6601-23-U**	**887.00**
		220VAC, 50Hz	**6601-23-H-220**	**887.00**	**6601-23-U-220**	**998.00**
24" x 24"	558	120VAC, 50/60Hz	**6601-22-H**	**777.00**	**6601-22-U**	**887.00**
		220VAC, 50Hz	**6601-22-H-220**	**887.00**	**6601-22-U-220**	**998.00**

Stainless steel frame No. 1686-54C-SS

Vibration-Isolated Stand

Two-piece design isolates WhisperFlow Hood from sealed laminate top work surface to isolate fan vibration. Adjustable models (shown in photo) allow height adjustment in 1" increments. 30"D and other materials available at TerraUniversal.com.

For Hood Size	Nonadjustable		Adjustable	
	Cat. #	$/Each	Cat. #	$/Each
24"W x 24"D	**1688-51**	**415.00**	**1688-56**	**455.00**
36"W x 24"D	**1688-52**	**435.00**	**1688-57**	**476.00**
48"W x 24"D	**1688-53**	**482.00**	**1688-58**	**523.00**
60"W x 24"D	**1688-54**	**527.00**	**1688-59**	**555.00**
72"W x 24"D	**1688-55**	**558.00**	**1688-60**	**599.00**

Vapor-Sealed Illuminator

Standard hoods above include a fluorescent light fixture. This upgrade fixture is enclosed in a vapor-sealed static-dissipative PVC housing. Price includes installation. Operates on 120 or 220VAC (50/60Hz).

Illuminator		
Dimensions	Cat. #	$/Each
18"L x 5"W x 3"H	**2400-34**	**260.00**
38.88"L x 5"W x 3"H	**2400-40**	**401.00**

Model shown: 1715-09B

VALULINE™ DUST-FREE HOODS

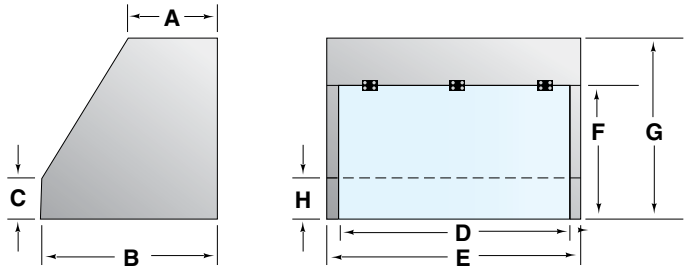
- **Modular design lets you specify hood only, or hood with 99.99% efficient HEPA Fan/Filter Unit (FFU)**
- **Provides a continuous wash of particle-free air to protect contamination-sensitive processes**
- **Operation Status Indicator glows to indicate proper fan/filter operation and blinks when fan is not operating**
- **Select single or twin models, in six application-specific materials**

These economical hoods provide a dust-free enclosure for a host of contamination-sensitive operations, including pharmaceutical packaging and weighing, microelectronics assembly and testing, and chemical processing.

To configure a system, select the desired hood size and material below, and then add Filter/Fan Unit(s). Optional accessories include vibration-isolated stands, flange adapters (for use with in-house clean air or ventilation systems), and several lights.

Includes air speed monitor

Universal Hood Nominal Dimensions (in inches)								
Type	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
Small Single	16	24	4	32	36	17	23	8
Large Single	19	28	8.5	41	45	21	27	8
Small Twin	16	24	4	67	72	17	23	8
Large Twin	19	28	8.5	87	90	21	27	8



Fan Filter Units

Narrow Fan/Filter Unit

Includes a 99.99% efficient HEPA filter and a low-noise, low-vibration 3-speed impellerized motor to provide a continuous wash of particle-free air. The narrower, 16"-deep FFU allows Terra to make space-saving enclosures with smaller footprints. An Operation Status Indicator flashes when the unit is turned off, providing a convenient visual monitor of hood operation. Select one FFU for single hoods, and two for twin models. One Power Distribution Module per hood is required (see below).

Cat. #	$/Each
6601-1636-H	777.00

Power Distribution Module

Simplifies operation by providing a single power connection for FFUs, lights, ionizers, and other electrical components. Includes relays and circuit breakers for overload protection. Operates on standard 15A circuits. One required per ValuLine Dust-Free Hood (price includes system integration of selected options).

Cat. #	$/Each
6600-59A	305.00

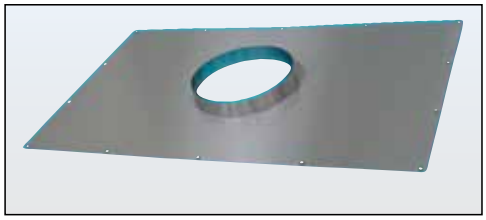
Type	Universal Hoods includes access shield of materials indicated in parentheses											
See Dimensions above	Polypropylene (Nondissipative PVC shield)		Static Dissipative PVC (Dissipative PVC shield)		Nondissipative PVC (Nondissipative PVC shield)		304 Stainless Steel (Dissipative PVC shield)		Acrylic* (Acrylic shield)		Tempered Glass (Dissipative PVC shield)	
	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
Small Single	7900-12B	1,631.00	2241-03B	2,034.00	7900-14B	1,491.00	2900-16B	2,269.00	1715-09B	915.00	2900-14B	1,684.00
Large Single	7900-13B	1,890.00	2241-04B	2,637.00	7900-15B	1,733.00	2900-17B	2,599.00	1715-10B	1,217.00	2900-15B	1,906.00
Small Twin	7900-06B	2,895.00	2242-00B	3,451.00	7900-08B	2,502.00	2900-06B	3,803.00	1715-06B	1,637.00	2900-12B	2,804.00
Large Twin	7900-07B	3,293.00	2242-01B	4,549.00	7900-09B	3,000.00	2900-07B	4,448.00	1715-08B	2,064.00	2900-13B	3,333.00

** Acrylic is damaged by alcohol and other cleaning agents.*

ACCESSORIES

Lighting Fixture
Recommended for use with stainless steel and polypropylene hoods (which permit only partial visibility of the work area). Two fixtures are recommended for twin stations.

	Cat. #	$/Each
Vapor-Proof Light Fixture Only (installed)		
115VAC, 50/60Hz	**2400-40**	**401.00**
230VAC, 50Hz	**2400-40-220**	**401.00**
Fluorescent Tube	**1682-26**	**15.00**
Standard Fixture With Stainless Steel Reflector (installed)		
115VAC, 50/60Hz	**1681-05**	**240.00**
230VAC, 50Hz	**1681-05-220**	**240.00**



Flange Adapter Panels
These panels, in materials compatible with your system, can be mounted to a filter housing, blower housing, or hood for easy connection of conduit duct. See TerraUniversal.com for more details.

STANDS

Both designs feature raised lips to hold the hood securely in place. All frames (whether isolated or not) are made of rigid square tubing with a white powder-coat finish, and include stainless steel scuff sleeves to prevent scuffing along the bottom leg support. The work surface stands 32" above the floor. Be sure to select the size (large or small, single or twin) to match your hood.

Model shown: 1715-06B

Power Strips
Provide 4 receptacles for 115VAC/60Hz equipment. Includes a master on/off switch and 15-Amp circuit breaker. Price includes installation at rear of work surface.

Cat. #	$/Each
1681-80	**167.00**

Vibration-isolated stand with free-standing hood frame isolates blower vibrations.

Non-isolated (one-piece) stand

Stands (Select the desired style)

For Hood Type	Hood Frame (Powder-Coated) Steel		Work Surface: Nonconductive Laminate		Conductive Laminate		Polypropylene		304 Stainless Steel Solid		304 Stainless Steel Perforated	
	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
Two-Piece Vibration-Isolated Stands												
Small Single	**1682-01**	**309.00**	**1682-02**	**436.00**	**1682-03**	**665.00**	**1715-17**	**771.00**	**1715-21**	**901.00**	**1715-25**	**1,194.00**
Large Single	**1715-02**	**326.00**	**1715-03**	**483.00**	**1715-07**	**701.00**	**1715-18**	**825.00**	**1715-22**	**918.00**	**1715-26**	**1,217.00**
Small Twin	**1715-11**	**558.00**	**1715-13**	**559.00**	**1715-15**	**777.00**	**1715-19**	**840.00**	**1715-23**	**1,008.00**	**1715-27**	**1,511.00**
Large Twin	**1715-12**	**823.00**	**1715-14**	**699.00**	**1715-16**	**924.00**	**1715-20**	**1,002.00**	**1715-24**	**1,194.00**	**1715-28**	**1,949.00**
One-Piece Non-Isolated Stands												
Small Single	—		**1682-16**	**582.00**	**1682-12**	**811.00**	**1715-29**	**1,028.00**	**1715-33**	**1,165.00**	**1715-37**	**1,471.00**
Large Single	—		**1682-17**	**629.00**	**1682-13**	**851.00**	**1715-30**	**1,116.00**	**1715-34**	**1,217.00**	**1715-38**	**1,513.00**
Small Twin	—		**1682-18**	**774.00**	**1682-14**	**995.00**	**1715-31**	**1,205.00**	**1715-35**	**1,230.00**	**1715-39**	**1,734.00**
Large Twin	—		**1682-19**	**875.00**	**1682-15**	**1,141.00**	**1715-32**	**1,368.00**	**1715-36**	**1,415.00**	**1715-40**	**2,178.00**

Removes micro-contaminants generated inside the enclosure

No. 1686-52C-V

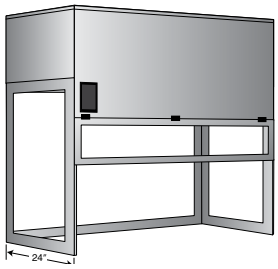
HEPA-FILTERED REVERSE FLOW VENTILATION HOOD

- **Perfect for containing contaminants produced during benchtop processes, such as milling, powder analysis and packaging**
- **99.99% efficient HEPA filter (rated @ 0.3µm particles); removes submicron particles generated in the work area to preserve clean conditions in the lab or cleanroom environment**
- **Average air flow: 650+ CFM (1095 m^3/hr) under filter load**
- **Select enclosure in several materials and depths (see ordering chart below)**
- **Price includes HEPA Exhaust Fan Filter Unit and fluorescent illumination**

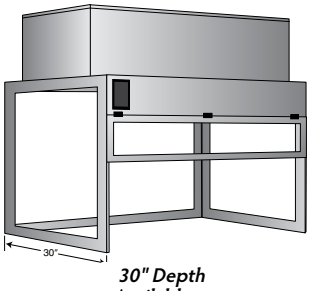
HEPA Filter/Fan Unit (FFU)

Included in the hoods above, this UL-listed FFU removes 99.99% of particles 0.3µm and larger. Its three-speed motor provides 640+ CFM of air flow under filter load at medium speed. Designed for continuous duty, these units typically operate for years without maintenance.

Models available with ULPA filters; see TerraUniversal.com



24" Depth
All models below



30" Depth
Available at
TerraUniversal.com

Horizontal airflow configurations and 220V models also available at TerraUniversal.com. Call to discuss custom requirements, including unique sizes.

HEPA-Filtered Ventilation Hood, Vertical, 120VAC

Hood Material*	24"- Deep				30"-Deep			
	Powder-Coat Steel Frame		Stainless Steel Frame		Powder-Coat Steel Frame		Stainless Steel Frame	
	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
Acrylic**	1686-50C-V	3,921.00	1686-50C-SSV	4,184.00	1686-50C-30V	4,177.00	1686-50C-30-SSV	4,469.00
Static Dissipative PVC	1686-51C-V	4,753.00	1686-51C-SSV	5,103.00	1686-51C-30V	5,095.00	1686-51C-30-SSV	5,479.00
Nondissipative PVC	1686-52C-V	3,921.00	1686-52C-SSV	4,184.00	1686-52C-30V	4,177.00	1686-52C-30-SSV	4,469.00
Powder-Coated Steel	1686-54C-V	4,767.00	—	—	1686-54C-30V	5,108.00	—	—
304 Stainless Steel	—	—	1686-54C-SSV	5,118.00	—	—	1686-54C-30-SSV	5,495.00

** Unless indicated in parentheses, shield is made of the same material as the hood.*
***Acrylic is damaged by alcohol and other cleaning agents.*

Complete line of Laser Particle Counters available at TerraUniversal.com

CleanBooth™ Laminar Flow Station

The Perfect Equipment Enclosure—specify any coverage area!

Terra's Portable CleanBooth is ideal for kitting operations, assembly, or work wi probe stations, screen printers and other free-standing or benchtop proce equipment. The backbone of the system is one or more filter/fan units (FFUs), ea with industry-leading low-noise impeller blowers. Flexible side curtains create 3-sided enclosure, enhancing the laminar flow. See other options below.

Mobile Frame Support

Includes set of 4 casters, 2 with locking brakes. Order FFUs below.

Overall Dimensions* (W x D, nominal)	No. of FFUs (order below)	Standard Height: 82" Cat. #	$/Each
49" x 25"	(1) 24" x 48"	**1870-01**	**1,230.00**
73" x 25"	(2) 24" x 36"	**1870-02**	**1,460.00**

*Filter face 70" above floor

Filter/Fan Units

Includes HEPA filter rated 99.99% efficient @ 0.3µm particles. ULPA filters and complete specifications available at TerraUniversal.com.

Nominal Dim. W x L	Power	Avg. Flow @ 90 FPM	HEPA FFU Cat. #	HEPA FFU $/Each	Ionizing Bar* Cat. #	Ionizing Bar* $/Each
2' x 4'	110VAC	644 CFM	**6601-24-H**	777.00	**2005-49**	**851.00**
2' x 4'	220VAC	644 CFM	**6601-24-H-220**	887.00	**2005-49-220**	**861.00**
2' x 3'	110VAC	477 CFM	**6601-23-H**	777.00	**2005-48**	**744.00**
2' x 3'	220VAC	477 CFM	**6601-23-H-220**	887.00	**2005-48-220**	**756.00**

* *Includes installation kit for easy attachment to FFU. Ionizing Kit and FFU must be ordered together.*

Softwall Panel Kits

40-mil curtains are 60" long. Each kit includes 2'-wide side panels and appropriate length to cover the rear of the station. Easy, no tool installation in GripTrak™ mounts installed along frame.

For CleanBooth	Cleanroom Vinyl Cat. #	Cleanroom Vinyl $/Each	Anti-Static Vinyl Cat. #	Anti-Static Vinyl $/Each
49" width	**1330-00A**	**293.00**	**1330-01A**	**370.00**
73" width	**1330-05A**	**570.00**	**1330-06A**	**721.00**

Fluorescent Light	115/277VAC, 50/60Hz Cat. #	115/277VAC, 50/60Hz $/Each
35.5" long (1)	**1870-10**	**249.00**
47" long (2)	**1870-11**	**306.00**

(1) – Two required for 73"-wide CleanBooth. Includes installation.
(2) – One required for 49"-wide CleanBooth. Includes installation.

No. 1870-02 with optional filter/fan unit, light, panel kit and table.

No. 1870-01 with optional filter/fan unit and panel kit.

Fan Filter Units

230V, 50Hz models available

Ionizing Equipment

- **Provides a balanced stream of positive and negative ions to neutralize static charges and eliminate particle attraction**
- **Ideal for use with pharmaceutical powders, ESD-sensitive microelectronics, and other delicate materials**
- **Discharge time: 1000 to 100V in less than 5 seconds (mounted in laminar flow of 90fpm, measured 24" from ionizing bar)**

Helps control static charges and the contaminants they attract!

Ionizing Equipment

Nominal Dimensions	IonBar for FFUs* Cat. #	IonBar for FFUs* $/Each	B. Ionizing Fan Module** Cat. #	B. Ionizing Fan Module** $/Each	C. IonBar™ for OEM applications*** Cat. #	C. IonBar™ for OEM applications*** $/Each
11" (2 emitters)	—	—	**2005-29**	**790.00**	**2005-05A**	444.00
22" (4 emitters)	**2005-47**	**621.00**	**2005-30**	**900.00**	**2005-06A**	560.00
33" (6 emitters)	**2005-48**	**744.00**	**2005-32**	**1,016.00**	**2005-16A**	685.00
44" (8 emitters)	**2005-49**	**851.00**	**2005-31**	**1,133.00**	**2005-07A**	806.00

* *Includes mounting hardware for Terra FFU. Must be ordered together with FFU.*
** *For 220VAC models, add "–220" to the part number.*
*** *Requires transformer: #2005-09A ($34) for 110VAC; #2005-09A-220 ($45) for 220VAC*

Ionizing Blow-Off Gun

Safely removes surface contaminants with a burst of clean, static-neutralized air or nitrogen. Low-voltage design for safe, low-EMI/RFI operation. Includes 0.4-micron capsule filter.

Cat. #	$/Each
110VAC **2005-55**	**693.00**
Transformer 120Vac, 60Hz **2005-09A**	**38.00**
Transformer 240Vac, 50Hz **2005-09A-220**	**47.00**

Ideal for particle-free processing facilities where solvent vapors, dust and other flammable hazards may be present. No. 1686-51C-30-SSE shown.

Horizontal flow model 1686-98 showing wiring encased in filled rigid conduit terminating at power switches for lighting and rear-mounted fan/filter units. Visible along front and side edges are return air ducts that reduce backflow turbulence.

Includes selected verticle-flow enclosure with explosion-proof FFU and light specified above. Horizontal airflow configurations and 220V models also available at TerraUniversal.com. Call to discuss custom requirements, including Class I, Division 1 applications.

Explosion-Proof Hood, Vertical, 120VAC

Hood Material*	30"-Deep: Class I, Division 2			
	Powder-Coat Steel Frame		Stainless Steel Frame	
	Cat. #	$/Each	Cat. #	$/Each
Static Dissipative PVC	**1686-51C-30E**	**8,024.00**	**1686-51C-30-SSE**	**8,408.00**
Powder-Coated Steel	**1686-54C-30E**	**8,038.00**	—	—
304 Stainless Steel	—	—	**1686-54C-30-SSE**	**8,424.00**

** Unless indicated in parentheses, shield is made of the same material as the hood.*
***Acrylic is damaged by alcohol and other cleaning agents.*

EXPLOSION-PROOF HOOD

- **The ideal enclosure for particle-free processing in the presence of flammable vapors, fumes or dust**
- **Non-sparking motor, mounted in a cast-iron, explosion-proof housing, and particle filter provide uniform flow of filtered air at an average speed of 90 ft/min (.458 m/sec)**
- **99.99% efficient HEPA filter (rated @ 0.3µm particles) creates ISO 5 cleanliness conditions for contamination sensitive work**
- **Average air flow: 650+ CFM (1095 m^3/hr) under filter load**
- **Select enclosure in several materials and depths (see ordering chart below)**
- **Price includes installation of wiring in filled rigid conduit, and modification of Power Distribution Module(s) and Control Panel switches to meet NEC requirements for Class I/Class II, Division 1 Hazardous Locations**

Explosion-Proof Fan Filter Unit

This FFU is UL-listed for safe operation in Class I or Class II, Division 1 as specified by NEC code. Its direct-drive, 0.25HP fan-cooled motor and non-sparking impeller are designed for continuous duty. All system wiring is enclosed in filled rigid conduit. Provides an average flow of 650+ CFM of HEPA-filtered air.

4D LED Strip Light

Provides, bright illumination of all hoods listed above. Rated for Class I, Division 1 and 2, Groups C and D locations. Produces 3600 lumens and operates from 120 to 277VAC, 50/60 Hz

PCR WORKSTATIONS

- **Portable, economical turnkey hood converts any benchtop surface into a controlled PCR work station**
- **Safe UVC Disinfection Module with "exposure switch" to protect users from harmful UV light**
- **Fully-enclosed environment keeps UV energy safely contained during sterilization**
- **Samples and equipment introduced via large front sash**
- **Full-length front access shield enhances laminar flow when closed and gives users complete access to samples and equipment when open. It is held open, or safely closed during UV decontamination, with magnetic latches**

Terra manufactures turnkey laminar flow Polymerase Chain Reaction (PCR) Hoods with laminar flow HEPA filtering for cleanliness. The air-velocity meter monitors air flow. These lightweight models are made with acrylic or static-dissipative PVC panels. Models are available with a stainless steel work surface.

Full line of Thermal Cyclers available at TerraUniversal.com

PCR Hood Material	Dimensions W" x D" x H"	Cat. #	$/Each
Acrylic	36 x 24 x 30.25	**1692-90**	**3,909.00**
Acrylic	48 x 24 x 30.25	**1692-91**	**4,185.00**
Static-dissipative PVC	36 x 24 x 30.25	**1692-93**	**4,689.00**
Static-dissipative PVC	48 x 24 x 30.25	**1692-94**	**5,018.00**
Tempered Glass	36 x 24 x 30.25	**1692-95**	**3,576.00**
Tempered Glass	48 x 24 x 30.25	**1692-96**	**3,827.00**

PCR Workstation (No. 1692-90) on a polypropylene table (order separately)

Pipette Shelf

Portable pipette shelf organizes pipettes and micro-well. Shelf features four notches to hold single-channel pipettes.

Dimensions: 14" W x 5" D x 8" H
Material: Acrylic or Static-Dissipative PVC

Material	Cat. #	$/Each
Acrylic	**1692-99**	**170.00**
Polypropylene	**1692-98**	**170.00**

mLine® Pipette Multipacks by Sartorius

These multipacks include useful mechanical pipette accessories in one package and they are a convenient way to supply a new pipette workstation or to replace used mechanical pipettes.

Multipacks	Cat. #	$/Each
Pipette 3-pack 10	**PP03-20**	**792.00**
Pipette 3-pack 20	**PP03-21**	**792.00**
Pipette 4-pack	**PP03-22**	**995.00**
Pipette 3+1 pack	**PP03-23**	**1,314.00**
Pipette 5-pack	**PP03-24**	**1,232.00**

Ultra-Violet C Sanitizing Lamp

99+% kill rate for common bacteria and viruses within 2 minutes!

Long-lasting, low-mercury lamps can be installed in most Terra stainless steel chambers including BioSafe® Glove Boxes and Compounding Aseptic Isolators. Prices below include installation in specified chamber.

Length	Cat. #	$/Each
21"	**3305-90**	**426.00**
33"	**3305-91**	**471.00**
61"	**3305-92**	**594.00**

SPECIALTY HOODS

A. ValuLine™ Laminar Flow Containment Hood

Ideal for economical dust and chemical vapor containment. A HEPA-filtration module ensures a micro-filtered work environment, and a ventilation system removes dust and vapors. Model shown: No. 2101-20.

B. Spray Dryer Laminar Flow Enclosure

Custom-configured to enclose tablet coating Spray Dryer in an aseptic, contamination-free environment. Model shown: No. 1695-18.

Call to discuss your custom application!.

FREE-STANDING EXHAUST FUME HOODS

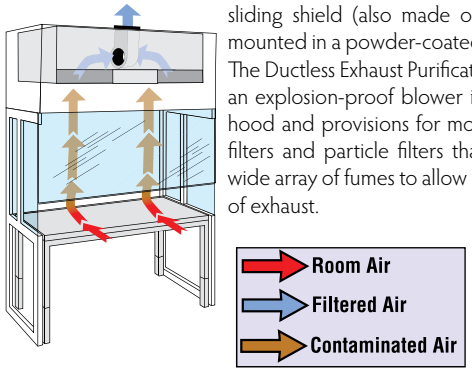
- **Stainless Steel or Powder-Coated Steel Hood safely vents fumes away from the work surface**
- **Optional Exhaust Purification System (with explosion-proof ventilator) safely removes hazardous fumes for safe indoor release**
- **Transparent PVC side panels and sliding shield control negative pressure under the hood, reducing risk of fumes escaping**
- **Steel frame provides sturdy support, isolates hood from work surface**

This Exhaust Fume Hood affords you maximum economy and flexibility in designing the system that's right for your application.

The frame is fabricated from welded 1½" x 3" powder-coated or stainless steel to ensure sturdy support for the exhaust fume hood. The frame also isolates the hood (and any vibrations the hood causes) from the work surface. A 6" round discharge allows easy connection to your in-house exhaust system to provide the internal negative pressure necessary to safely remove fumes from the work surface.

Shown with optional Cleanroom Bench. (See page 3 for complete information). Anit-microbial coatings available.

The front of the unit features an easy-glide sliding shield (also made of transparent PVC mounted in a powder-coated aluminum frame). The Ductless Exhaust Purification Hoods include an explosion-proof blower installed inside the hood and provisions for mounting purification filters and particle filters that safely remove a wide array of fumes to allow safe indoor release of exhaust.



Activated Charcoal Filter (for Ductless Exhaust Applications)

Removes a wide array of fumes for safe indoor exhaust release. Four are recommended for each hood (two stacks of two filters each). Bonded-charcoal design improves safety and performance, contains dust.

	Cat. #	$/Each
Activated Charcoal Filter	**1716-00A**	**473.00**

HEPA Particle Filters	**1681-02**	**363.00**

99.99% efficient @ 0.3µm-diameter particles. Select one for each stack of purification filters. Recommended for cleanroom applications.

Dust-Sealed Fluorescent Illuminator

Each fixture holds two 40W T-12 lamps. For Class I, Div. 2 groups A-D locations 53" x 5" x 3".

Cat. #	$/Each
3800-70	**940.00**

Vapor-sealed and explosion-proof lighting available for use with explosive fumes.

Models below are 110VAC/60Hz. To specify 220VAC/50Hz, add "-220" to the affected part number.

Dimensions			Exhaust Fume Hoods*				Ductless Exhaust Purification Hoods**			
Overall Length	Inside Length	Optional Work Surface	304 Stainless Steel		Powder-Coated CR Steel		304 Stainless Steel		Powder-Coated CR Steel	
A	B	Order below	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
52"	49"	48" x 30"	**2400-03**	**6,456.00**	**2400-08**	**4,047.00**	**2400-12**	**8,421.00**	**2400-16**	**6,482.00**
64"	61"	60" x 30"	**2400-04**	**7,197.00**	**2400-09**	**4,485.00**	**2400-13**	**10,648.00**	**2400-17**	**6,880.00**
76"	73"	72" x 30"	**2400-05**	**8,006.00**	**2400-10**	**5,369.00**	**2400-14**	**11,244.00**	**2400-18**	**7,684.00**
100"	97"	96" x 30"	**2400-06**	**8,446.00**	**2400-11**	**5,920.00**	**2400-15**	**11,965.00**	**2400-19**	**8,074.00**

* *Supporting frame is made of powder-coated steel tubing; stainless steel frame is available on a custom basis.*
** *Order Purification Filters separately. These systems include a 3/4 HP explosion-proof blower mounted for negative-pressure venting.*

Dimensions			Corresponding Cleanroom Bench†							
Overall Length	Inside Length	Optional Work Surface	With Non-Conductive Top		With Static-Dissipative Top		With Stainless Steel Top		With Polypropylene Top	
A	B	Order below	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
52"	49"	48" x 30"	**1722-00**	**690.00**	**1728-00**	**1,012.00**	**1521-45**	**1,285.00**	**1522-00**	**894.00**
64"	61"	60" x 30"	**1724-00**	**767.00**	**1730-00**	**938.00**	**1751-00**	**1,236.00**	**1522-01**	**929.00**
76"	73"	72" x 30"	**1726-00**	**756.00**	**1732-00**	**1,061.00**	**1752-00**	**1,290.00**	**1522-02**	**951.00**
100"	97"	96" x 30"	**2402-00**	**937.00**	**2400-00**	**1,202.00**	**1753-00**	**1,452.00**	**1522-04**	**1,177.00**

† *Complete with top, adjustable legs, and right/left drawer mounting brackets. Height is adjustable (30" -36"). Drawer unit optional. (See page 3.)*

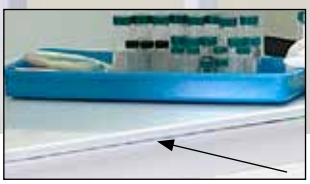
ValuLine™ High-Performance Ductless Fume Hoods

- **Portable, economical system converts any benchtop surface into a ductless fume hood**
- **Provides an average air flow speed of 90 feet/minute (measured with carbon filter)**
- **Polypropylene hood construction provides excellent chemical resistance**
- **Unitized design includes built-in polypropylene bottom with spill tray, continuous seam welds with coved corners**
- **Ventilates and removes organic vapors released inside the hood to allow safe release of exhaust fumes.**
- **Sturdy, chemical-resistant polypropylene construction**

The 0.5"-thick polypropylene construction offers excellent chemical compatibility, durability, and cleanliness. A hinged front access shield, made of static-dissipative PVC, restricts the air exit and enhances laminar flow. The fluorescent light fixture is sealed inside a dissipative PVC housing to prevent contact with chemical vapors.

The onboard 3100 RPM fan module draws fumes into activated carbon filters, which remove chemical fumes from the exhaust flow. Terra's bonded charcoal filters minimize particle sloughing and eliminate voids that can allow chemical bypass of the charcoal media.

A 0 – 3.0"WG differential pressure gauge verifies that the fan module is generating the negative pressure necessary to ventilate the work area.



Built-in polypropylene spill tray

No. 1688-46

Outside Dimensions (Inside dimensions)	No. of Fans	No. of Filters*	Power	ValuLine Ductless Fume Hood	
				Cat. #	$/Each
42"W x 29"D x 43"H (41"W x 28"D x 29"H)	1	1	120VAC, 60Hz	**1688-45**	**3,184.00**
	1	1	220VAC, 50/60Hz	**1688-45-220**	**3,284.00**
	2	3	120VAC, 60Hz	**1688-46**	**3,647.00**
	2	3	220VAC, 50/60Hz	**1688-46-220**	**3,747.00**
29"W x 29"D x 43"H (28"W x 28"D x 29"H)	1	1	120VAC, 60Hz	**1688-47**	**2,897.00**
	1	1	220VAC, 50/60Hz	**1688-47-220**	**2,997.00**

** Order activated charcoal filter(s) separately.*

Filters

Filter Type (Dimensions)	Cat. #	$/Each
Activated Charcoal (13" x 27.75" x 1.7")	**1716-00A**	**473.00**
HEPA (99.99% efficient)** 12" x 12" x 3"	**2100-30**	**175.00**
Exit Filter Housing**	**1688-49**	**125.00**

*** HEPA filter requires Exit Filter Housing, made of polypropylene, which mounts on top of the filter housing and raises the overall height by 3.5"*

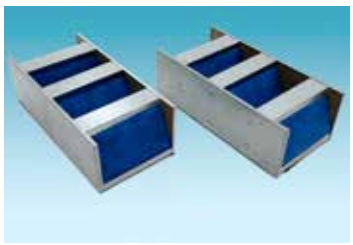
Activated Charcoal Filters

Terra ductless exhaust fume hoods employ activated charcoal filters that adsorb (bond with) a broad range of chemical vapors to remove annoying odors from the exhaust stream. They are not intended for use with hazardous compounds.

Special impregnations are used to enhance this adsorption efficiency in the presence of specific chemical compounds. See complete contamination list at TerraUniversal.com for assistance in selecting the right filter for your application.

Type A: **Activated Charcoal:** Ideal for a broad range of organic compounds
Type B: **Activated Charcoal/Permanganate Oxidant Blend:** Chlorinated aromatics, corrosives, hydrides, alcohol, VOCs
Type C: **Permanganate Oxidant:** Aldehydes
Type D: **Caustic Impregnate:** Organic and mineral acids, halides, VOCs, sulfur compounds
Type E: **Acid Impregnate:** Amines, acetate

Standard charcoal panels (see ordering chart below)



V-Bank Charcoal Filters: More charcoal with less air restriction! Complete information at TerraUniversal.com

Filter Size* (in.)	Activated Charcoal (Type A)		Type B	Type C	Type D	Type E	
	Cat. #	$/Each	Cat. #	Cat. #	Cat. #	Cat. #	$/Each
13 x 27.75 x 1.7	**1716-00A**	**473.00**	**1716-00A-B**	**1716-00A-C**	**1716-00A-D**	**1716-00A-D**	**495.00**
12 x 12 x 3	**1701-90A**	**353.00**	**1701-90A-B**	**1701-90A-C**	**1701-90A-D**	**1701-90A-E**	**370.00**

** Others available, including custom sizes.*

HIGH-CLEARANCE CHEMICAL FUME HOOD

This benchtop unit features over 28" of vertical clearance with the access shield open. The dual impeller blowers provide ample ventilation under filter load to maintain exhaust air speed ≥ 100 fpm for safe operation and worker protection. A polypropylene tray collects chemical spills, and quick-release clamps ensure easy access to activated charcoal and/or final HEPA filters. The sloped front access provides full view of and access to work in progress. Overall dimensions: 32.5"W x 25"D x 33.25"H (48"H with filter/blower module). Access shield clearance: 15.5" (closed); 28.25" (open).

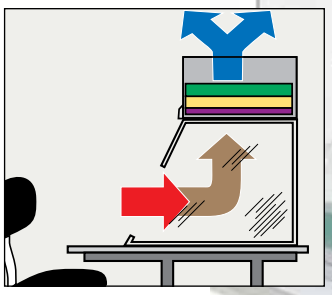
Exhaust Flow: 400 CFM (with charcoal filter)
350 CFM (charcoal and HEPA final filter)
Air Velocity: 118 ft./min. with shield down
(operated with charcoal filter only)

Hood Material*	Cat. #	$/Each
Acrylic***	**2900-30**	**3,866.00**
PVC	**2900-31**	**3,941.00**
Polypropylene (PVC shield)**	**2900-32**	**4,162.00**
Polycarbonate	**2900-33**	**4,204.00**

* *Includes filter/blower enclosure and spill tray made of white polypropylene. Order filter(s) separately.*
** *Includes Fluorescent Illuminator (110VAC). Add "-220" to the part number for 220VAC*
*** *Acrylic is damaged by alcohol and other cleaning agents.*

	Cat. #	$/Each
Charcoal Purification Filter	**1716-00A**	473.00
HEPA Final Filter	**1681-02**	363.00

Full specifications – TerraUniversal.com



Ideal for distillation and other operations with large glassware or equipment.

High capacity blower maintains air speed >100 ft./min. with 15" of vertical working clearance! No. 2900-31 shown.

High capacity blower maintains air speed 181 ft./min. with 5" of vertical working clearance!

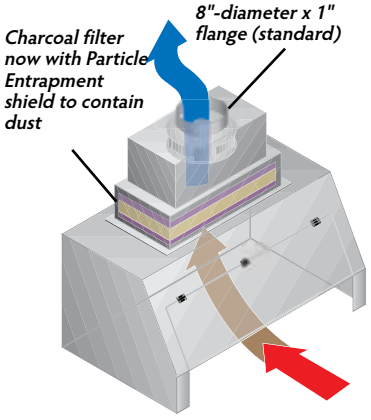
BENCHTOP DUCTLESS EXHAUST FUME HOOD

This high-capacity, turnkey fume hood features dual blowers to ensure a safe exhaust flow speed (181 ft./min.). Polypropylene construction resists chemical vapors, and an onboard air speed meter monitors operation. Includes a vapor-sealed fluorescent illuminator. Dimensions: 45"W x 28"D x 27"H. Other sizes and options available at www.TerraUniversal.com.

Cat. #	$/Each
2900-20	4,263.00

Air speed monitor ensures safe operation

Quick-release filter housing—replace filter from above or from inside enclosure!



MINI-ENVIRONMENT EQUIPMENT ENCLOSURE

Interchangeable access ports let you configure the optimal enclosure for your application —

Solid Panels	**Access Doors**
Glove Ports	**Microscope Bellows**
Iris Ports	**Custom Interface Modules**

These Mini-Environment Equipment Enclosures provide a controlled environment for delicate process equipment. Each includes dual front doors for easy access. The bottomless design allows convenient placement over equipment; select the optional spill tray if a bottom is required. Standard size: 49"W x 25"D x 30.25"H (without filter/fan module). Door opening: 22.38"W x 22.25"H (for each door).

Spill Tray
2"H tray safely contains chemical spills and is easy to clean.

	Cat. #	$/Each
Stainless steel	**2003-35**	**543.00**
Polypropylene	**2003-36**	**543.00**

Ionizing Bar
See page 13 for installation information

22"L (4 emitters)	**2005-06A**	**560.00**
22"L (4 emitters)	**2005-07A**	**806.00**

Microscope Bellows	Cat. #	$/Each
Indicate desired location.	**1681-53**	**246.00**

Vapor-Sealed Fluorescent Illuminator	**2400-40**	**401.00**

27"L x 5"W x 3"H; dissipative PVC housing. 120VAC, 60Hz. Other voltages and special lighting available, including germicidal UV.

No. 2003-20 with optional filter module and side doors.

Shown with Iris Ports
Cat. # 1685-93, $537.00/pair.

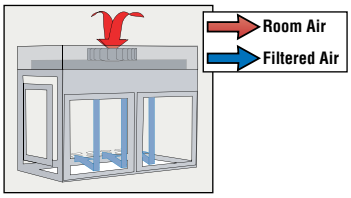
Shown with Glove Ports
Cat. # 2003-37, $302.00/each.

Mini-Environment Enclosures			Corresponding Side Access Door*			
Material			**Right Side**		**Left Side**	
	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
Acrylic**	**2003-20**	**3,143.00**	**2003-25**	**265.00**	**2003-30**	**265.00**
Static-Dissipative PVC	**2003-21**	**3,767.00**	**2003-26**	**293.00**	**2003-31**	**293.00**
Polycarbonate	**2003-22**	**3,850.00**	**2003-27**	**306.00**	**2003-32**	**306.00**

* *Front access doors included (as in photos above). Side doors feature stainless steel frame and chrome-plated lift latch. Opening: 15"W x 21"H*
** *Acrylic is damaged by alcohol and other cleaning agents.*

Filter/Fan Units (120VAC, 50/60Hz)
Includes 99.99% efficient HEPA filter. Adds 13" to height. Exit slots provided for air release.

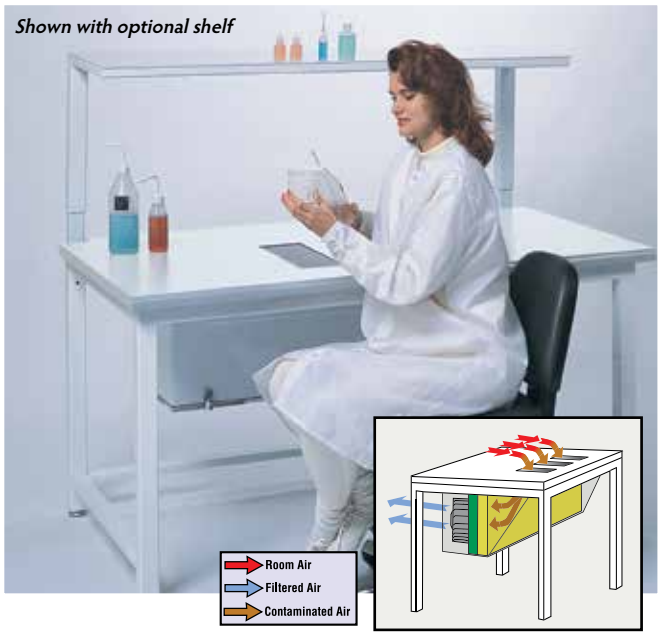
Cat. #	$/Each
6601-24-H	**777.00**



Temperature-controlled models available in sizes up to 120"W.

DOWNDRAFT WORK STATIONS

Shown with optional shelf



This work station is ideal for soldering or chemical processing that requires the removal of potentially hazardous fumes. Its powerful 1200 CFM blower draws exhaust fumes downward, away from the operator, for safe removal and purification. The activated charcoal filter removes 98% of most organic chemical vapors, allowing safe release.

Benchtops, made of cleanroom-grade white laminate, raise the work surface 32" off the floor. Exhaust fumes enter the filter through three perforated stainless steel platforms positioned at the center of the work surface. Specify other desired platform sizes or locations.

Benchtop Dimensions (32"H, including leveling feet)	110VAC/60Hz Cat. #	220VAC/50Hz Cat. #	$/Each
48"W x 30"D	**1728-01**	**1728-01-220**	**4,361.00**
60"W x 30"D	**1728-02**	**1728-02-220**	**4,794.00**
72"W x 30"D	**1728-03**	**1728-03-220**	**5,213.00**
48"W x 34"D	**1728-06**	**1728-06-220**	**4,381.00**
60"W x 34"D	**1728-07**	**1728-07-220**	**4,815.00**
72"W x 34"D	**1728-08**	**1728-08-220**	**5,213.00**

Filters	Cat. #	$/Each
Activated Charcoal	**1716-00A**	**473.00**
HEPA	**1681-02**	**363.00**

A. Basic Laboratory Hoods

These basic lab hoods are deal for labs requiring light duty applications. The by-pass airflow maintains stable face velocity and vapor-proof or explosion-proof blower models provide safe ventilation. Various system options are available in 47" and 70" widths. Model shown: 3646-05 (70" width).

B. Fiberglass 30 Laboratory Hoods

Made with chemical resistant one-piece fiberglass interior and an epoxy-coated steel exterior, these compact by-pass models maintain stable face velocity, and the pivoting air foil maximizes containment. Select models are available with an integral exhaust blower. Model shown: 3646-49.

A. Basic 47 Laboratory Hoods: 47"W x 25"D x 53"H									Work Surface†	
Incandescent Lamp	Blower Motor	Equivalent Resistance		Shipping Weight	115VAC, 60Hz		220VAC, 50Hz***			
		10" dia	12" dia.	lbs./kg	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
Vapor Proof	1/3 HP	100'	250'	370/168	**3646-00**	4,315.00	**3646-00-220**	4,315.00	**3646-02**	1,020.00
Explosion-Proof**	1/2 HP, EP	100'	250'	375/170	**3646-01**	5,088.00	**3646-01-220**	5,088.00	**3646-02**	1,020.00
Basic 70 Laboratory Hoods: 70"W x 25"D x 53"H									**Work Surface†**	
Vapor Proof	3/4 HP	45'	100'	450/204	**3646-05**	5,575.00	**3646-05-220**	5,688.00	**3646-07**	1,406.00
Explosion-Proof**	3/4 HP EP	45'	100'	455/206	**3646-06**	6,115.00	**3646-06-220**	6,208.00	**3646-07**	1,406.00

** Maximum length of straight duct to achieve 100fpm face velocity. ** Bulb not included on explosion-proof models.*
**** International electrical configuration. †48"/72"W x 30"D x 1.25" thick black epoxy-coated steel*

B. Fiberglass 30 Laboratory Hoods: 30"W x 30.16"D x 48"H*									Work Surface†	
Blower Motor	Equivalent Resistance**		Shipping Weight lbs./kg	115VAC, 60Hz		220VAC, 50Hz***				
	6" dia	8" dia.		Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	
Yes††	20'	80'	230/104	**3646-48**	3,933.00	**3646-48-220**	4,029.00	**3646-50**	615.00	
None	—	—	210/95	**3646-49**	3,603.00	**3646-49-220**	3,712.00	**3646-50**	615.00	

**Model 3646-48-220 is 54"H*
*** Maximum length of straight duct to achieve 100fpm face velocity*
**** International electrical configuration.*
† 48"/72"W x 30"D x 1.25" thick black epoxy-coated steel
†† 1/10 HP (120V); 1/3 HP (220V)

A. Protector® XL Benchtop

Low velocity and high-performance for general chemistry

By-pass airflow units with tempered glass vertical rising sash include 2 service features, 2 electrical duplexes and containment enhancing baffles. 110V units; Cabinets and Remote Blowers available.

Width	Dimensions (W x D x H)	Depth	Cat. #	$/Each
10 ft.	120 x 37.7 x 59 in.	30"	**3649-40**	**10,920.00**
12 ft.	144 x 37.7 x 59 in.	30"	**3649-43**	**11,521.00**
16 ft.	192 x 39.2 x 59 in.	30"	**3649-46**	**17,663.00**

B. Protector XL Floor-Mount Walk-In

Low velocity and high-performance for large equipment

Models in dual tempered glass vertical (shown) and horizontal designs include 2 service features, 2 electrical duplexes and containment enhancing baffles. Remote blowers sold separately.

Width	Dimensions (W x D x H)	Depth	Cat. #	$/Each
4 ft.	48 x 37.7 x 95 in.	30"	**3651-68**	**9,364.00**
6 ft.	72 x 37.7 x 95 in.	30"	**3651-74**	**11,693.00**
8 ft.	96 x 37.7 x 95 in.	30"	**3651-77**	**13,688.00**

C. Protector Stainless Steel Radioisotope

Seamless interior and rounded corners prevent particle build-up

Models made with a 304 stainless steel, one-piece liner with coved corners effectively contain radiochemicals. Features vertical rising and anti-racking tempered safety glass sash with cable pulley. 110V units; Cabinets and Remote Blowers available.

Width	Dimensions (W x D x H)	Depth	Cat. #	$/Each
4 ft.	38.25 x 23 x 42.1 in.	31.7"	**3648-01**	**12,780.00**
6 ft.	62.25 x 23 x 42.1 in.	31.7"	**3648-09**	**16,549.00**
8 ft.	86.25 x 23 x 42.1 in.	31.7"	**3648-13**	**23,835.00**

D. Protector ClassMate®

Taller window and glass slides ideal for instructional use

Vertical and combination sash models offer full visibility. Front, back and sides are made with tempered glass. 110V units; Base Cabinets and Remote Blowers sold separately. Vertical rising sash models below.

Width ft.	Dimensions (W x D x H)	Fixture/Dup.	Cat. #	$/Each
4 ft.	48 x 32.25 x 59 in.	4/2	**3645-06**	**6,904.00**
6 ft.	60 x 32.25 x 59 in.	4/2	**3645-08**	**7,729.00**
8 ft.	72 x 32.25 x 59 in.	4/2	**3645-10**	**8,164.00**

PURIFIER LOGIC+ CLASS II BIOSAFETY CABINETS (BSC)

Purifier® Logic®+ Class II, Type A2 (BSC)
70% Air Recirculation/ 30% Exhaust

Applications: Used for containing substances generating hazardous airborne particulates such as antineoplastic drugs, genetic material, carcinogens, and allergens.

Airflow Pattern: Discharges 30% of air and recirculates approximately 70% of the HEPA-filtered air through the cabinet. Discharges HEPA-filtered exhaust air directly into lab or into exhaust system with an optional Canopy Connection.

Purifier Logic+ Class II Type A2 Bio Safety Cabinets by Labconco			
Size	**Dimensions W" x D" x H"**	Cat. #	$/Each
4' with 10" sash opening, 115V	54.3 x 31.2 x 89.2-95.2	**3642-00****	9,368.00
4' with 8" sash opening, 115V	54.3 x 31.2 x 89.2-95.2	**3642-06****	9,368.00
4' with 8" sash opening, 115V	54.3 x 31.2 x 89.2-95.2	**3645-41A***	8,852.00
6' with 10" sash opening, 115V	78.3 x 31.2 x 89.2-95.2	**3642-18****	11,546.00
6' with 8" sash opening, 115V	78.3 x 31.2 x 89.2-95.2	**3642-22****	11,546.00

** UV Light, Service Fixture, Vacu-Pass Portal (Base stand not included)*
*** UV Light, Service Fixture, Vacu-Pass Portal and Base Stand*

Purifier Logic+ Class II, Type B2 (BSC)
100% Exhaust

Applications: Used for containing agents treated with volatile toxic chemicals and radionuclides; antineoplastic drugs, genetic material, asbestos and substances that generate hazardous airborne particulates.

Airflow Pattern: A dedicated exhaust system and remote blower discharge 100% of the filtered exhaust air from the laboratory. Models are designed to be hard-ducted to the outside.

Purifier Logic+ Class II Type B2 with 8" sash, 115V by Labconco				
Description	**4' Nominal Width 54.3W x 31.2D x 72.6H inches**		**6' Nominal Width 78.3W x 31.2D x 72.6H inches**	
	Cat. #	$/Each	Cat. #	**$/Each**
Standard	**3651-60**	**12,188.00**	**3651-64**	**14,182.00**
Base Stand	**3651-61**	**12,703.00**	**3651-65**	**14,723.00**
UV Light, Service Fixtures, Vacu-Pass Portal	**3651-62**	**12,695.00**	**3651-66**	**14,686.00**
UV Light, Service Fixtures, Vacu-Pass Portal, Base Stand	**3651-67**	**15,226.00**	**3651-67-220**	**15,226.00**

Features of Labconco's Purifier Logic+ Class II, Type A2 and Type B2 Biosafety Cabinets

Ergonomically designed for operator comfort and safety, Purifier Logic+ Class II, Type A2 and B2 biosafety cabinets protect users, products and environments from hazardous agents that require Biosafety Level 1, 2 or 3 containment.

Performance: The Electronically Commutated Motor (ECM) and the Constant Airflow Profile (CAP) Technology in the Purifier Logic+ create an intelligent and accurate BSC able to maintain proper airflow. The ECM uses 60% less energy, generates less heat, is 50% quieter and has greater torque compared to conventional motors.

Safety: Units meet or exceed all minimum requirements set by NSF International including 99.99% efficient HEPA filters and nominal inflow of 105 fpm. The line of sight LCD, in constant communication with the ECM, monitors and displays cabinet performance. The "Filter Remaining" bar graph alerts when filter level is down to 20%. Visual and audible alarms alert users in the event of cabinet errors. The durable UV-opaque safety glass and stainless steel is easy to clean and decontaminate.

Comfort: Models are ergonomically designed with ADA compliant touchpad controls and service fixtures. The angled sash, curved inlet grille, flush-mounted electrical duplex covers promote easy clean-up and accessibility.

Sustainable Design: Contributes to satisfying EA Credit 1 under LEED, MR Credit 4 with 8.5% pre-consumer and 54.5% post-consumer recycled content.

Select Models *All Models*

B. Protector® XStream® Laboratory Hoods

These high-performance, low-volume benchtop by-pass models provide maximum containment and energy savings. The patented features significantly reduce contaminants near the user's breathing and behind the sash opening. The Protector XStream meets SEFA-1 low velocity hood standards when subjected to ASHRAE 110 test protocol and they yield the lowest required CFM. By-pass models are available in 4, 5, 6 and 8 foot widths. Model shown: 1538-34.

Applications: Ideal for facilities without central air-handling systems performing general chemistry applications.

- **Upper Dilution Air Supply** bathes sash interior with clean air
- **Rear Downflow Dual Baffle System**: primary and secondary baffles
- **Clean-Sweep™ Sash Handle** directs chemical fumes away from user's breathing zone; **Opti-Zone™** lowers standard face velocity variations in comparison with other baffles; **Eco-Foil™ Air Foil** lower energy usage by 7 – 10% compared to flat air foils; **Cord-Keeper™** Slots located on left and right side of air foil
- **Material:** Powder-coated stainless steel interior with glacier white powder-coated steel exterior

Protector XStream Laboratory Hoods		
Nominal Width Dim (W x D x H)	Cat. #	$/Each
4' (48.0" x 37.7" x 59.0")	**1538-30**	**6,919.00**
5' (60.0" x 37.7" x 59.0")	**1538-34**	**6,949.00**
6' (72.0" x 37.7" x 59.0")	**1538-38**	**7,691.00**
8' (96.0" x 37.7" x 59.0")	**1538-42**	**10,954.00**

B *Performs maximum containment under adverse conditions*

C. Protector® Premier® Laboratory Hoods

As the only high performance hood in the market available with a built-in blower, these benchtop models have excellent containment enhancing features. Unit dimensions match standard lab casework, base cabinets and stands. The Protector Premier is energy efficient, meets SEFA-1 regulations and operates at a face velocity as low as 60 fpm. By-pass models are available in 4, 5, 6 and 8 foot widths. Model shown: 3649-05.

Applications: General chemistry applications for effective containment of toxic, noxious and other harmful fumes.

- Sleek interior made with an easy to clean seamless one-piece fiberglass liner that is corrosion and chemical resistant
- **Eco-Foil™ Air Foil** compared to flat air foils saves energy by 7-10% with aerodynamic curve of air sweeping through work surface for maximum containment; **Clean-Sweep™** airflow openings* promote non-turbulent air streams
- Pre-set baffle(s) with flame spread less than 25 per ASTM E-84.
- 37.5" (95.3 cm) high sightline from the work surface and header panel for taller users
- Removable front and side panels, and front service access panels for plumbing and electrical wiring
- **Material:** glacier white powder-coated steel exterior

Protector Premier Laboratory Hoods		
Nominal Width Dim (W x D x H)	Cat. #	$/Each
4' (48.0" x 31.7" x 59.0")	**3649-05***	**6,974.00**
5' (60.0" x 31.7" x 59.0")	**3649-13**	**6,045.00**
6' (72.0" x 31.7" x 59.0")	**3649-24**	**6,687.00**
8' (96.0" x 31.7" x 59.0")	**3649-36**	**9,296.00**

** With built-in blower*

All models: 100-115V models listed meet UL standards. 208 – 230V (CE Listed) models also available. Models with optional service fixtures, electrical duplex, and built-in exhaust blower also available. Explosion proof model available with Protector XStream. Contact Terra for details about optional and required accessories.

C *Sleek corrosion and fire resistant interior*

A. Paramount Ductless Enclosure

Ideal in hard to duct areas; saves on installation and energy

Ductless units use carbon and 99.99% HEPA filters to remove gaseous and particulate contaminants. Patented slotted rear baffle provides horizontal airflow and tempered glass rear wall and baffle provide 360° visibility. Filters and stands sold separately.

Type/Width	Interior Dims. (W x D x H)	Cat. #	$/Each
Standard/36"	33.6 x 23.4 x 22.7 in.	**3647-05**	**5,168.00**
Tall/72"	69.6 x 23.4 x 32 in.	**3647-07**	**10,591.00**
Tall & Deep/72"	69.6 x 30 x 35 in.	**3647-08**	**11,598.00**

B. Protector XVS Ventilation Stations

Duct or connect to a portable exhauster

Units with by-pass airflow design are ideal for light-duty, fume-generating protocols. Tempered glass front sash, sides and top have a 3/16" thickness for visibility and improved resistance to fire, scratch and corrosion. 110V units; 2 utility ports.

Interior Dims. (W x D x H)	Cat. #	$/Each
24 x 29 x 32 in.	**3646-21**	**2,805.00**
36 x 29 x 32 in.	**3646-22**	**3,442.00**
48 x 29 x 32 in.	**3646-23**	**3,964.00**

C. XPert Balance Enclosures

Contains toxic airborne particulates

Designed for weighing operations, XPert Balance Enclosures accept micro and large analytical balances. The upper containment sash foil reduces turbulence and side-entry air foils sweep air across the interior surfaces for enhanced containment.

Type/Width	Interior Dims. (W x D x H)	Cat. #	$/Each
3 ft.	34.8 x 23.4 x 22.3 in.	**3644-51**	**2,307.00**
6 ft.	70.8 x 23.4 x 22.3 in.	**3644-54**	**5,432.00**
8 ft.	94.8 x 23.4 x 22.3 in.	**3644-55**	**7,409.00**

D. XPert Nano Enclosures

Effective containment for nanotechnology applications

Models with a built-in ionizer are ideal for use in nanoparticle manipulation and dry powder chemical handling. Safety features, 99.999% ULPA exhaust filter and ergonomic design are well suited for nanotechnology processes.

Type/Width	Interior Dims. (W x D x H)	Cat. #	$/Each
3 ft.	34.7 x 23.4 x 22.6 in.	**3644-57**	**6,985.00**
4 ft.	46.7 x 23.4 x 22.6 in.	**3644-58**	**7,874.00**
6 ft.	70.7 x 23.4 x 31.8 in.	**3644-61**	**13,049.00**

A. Wall-Mount Canopy Fume Hoods

Wall mounted models save bench space

Economical models are ideal in labs with limited space. Unit discharge connects to in-house ventilation system and integral high-airflow baffle with filters conduct gas flow into the hood and away from the operator. Units are equipped with a 4 speed internal blower controlled by heavy-duty stainless steel mechanical rotating switches.

Size	Integral Blower	Cat. #	$/Each
30"	600 CFM	**5015-10**	**1,949.00**
36"	1200 CFM	**5015-11**	**2,099.00**
42"	1200 CFM	**5015-13**	**2,249.00**
48"	1200 CFM	**5015-14**	**2,399.00**

B. Custom Walk-In Fume Hoods by Genie

Customized to your exact specifications

These custom walk-in fume hoods are built to house drums, large equipment and can be configured to satisfy compliance requirements. A team of professionals will provide you with the personalized attention from planning, engineering and drafting to manufacturing and installation. **Types of customized fume hoods include:**

- Floor Mounted
- Walk-In Fume Hoods
- Benchtop Fume Hoods
- Chemical Fume Hoods
- Built-In Blower Fume Hoods
- Double-Faced Fume Hoods
- Ductless Fume Hoods
- By-Pass Fume Hoods
- Extractor Arm Fume Hoods
- Radio Isotope Fume Hoods
- Perchloric Acid Fume Hoods
- Canopy and Portable Fume Hoods
- Low Air Flow Fume Hoods
- Variable Air Volume Fume Hoods

C. Protector® Downdraft Powder Stations by Labconco

Used in forensic labs; connect multiple hoods together

Ductless models keep operators safe during evidence processing by containing fingerprint powders with a quiet and energy efficient built-in motor. Units blow air down and horizontally exhaust HEPA filtered air through the back. Models can be extended with transition connectors to accommodate large-sized evidence material. Units include a built-in blower, stainless steel surface and 99.99% HEPA exhaust filter.

Width	Dimensions (W x D x H)	Cat. #	$/Each
2 ft.	24 x 25.7 x 18.75 in.	**1538-46**	**2,223.00**
3 ft.	36 x 25.7 x 18.75 in.	**1538-47**	**2,708.00**
Variable Height Bench		**1524-40**	**1,225.00**

D. Clear View Fume Hoods by Bel-Art

Provides 360° visibility and ideal in classroom labs

These clear polycarbonate fume hoods safely ventilate noxious and potentially hazardous fumes and dust. Units provide a full view of samples contained. The sliding sash can be completely lowered or set at two different heights. The top sitting 6" O.D. vent easily connects to an exhaust system. Compact units are ideal for use in laboratory classrooms by enabling complete visibility of samples and the complete process taking place within the hood.

Interior Dimensions	6" O.D. Vent Opening	Cat. #	$/Each
24 x 20 x 24 in	1 x 1	**3308-23**	**1,349.00**
42 x 20 x 24 in	2 x 1	**3308-24**	**1,582.00**

A *No. 2820-00A and No. 2800-00A*

B

C

Approval Listing and Regulation Key

- FM Factory Mutual tested and approved
- N Designed in accordance with National Fire Protection Association (NFPA) code 30 regulation
- O Complies with OSHA regulations
- U Complies with Uniform Fire Code

A. Sure-Grip® EX Safety Can Storage Cabinets

Designed to meet OSHA and NFPA standards, these cabinets are sturdily constructed of all-welded, 18-gauge, double-walled steel with 1.5" of insulating air space for fire resistance. They include spill-slope safety shelves adjustable on 3" centers and dual vents with built-in arresters. All models shut and latch automatically when fusible links melt at 165°F (74°C) under fire conditions. Patented, concealed closing mechanism in self-close style maximizes available shelf space and minimizes risk of damage to the mechanism.

U-Loc™ padlockable paddle handle with slip resistant grip offers easy fingertip operation and reduces dangerous "catches" from passing traffic. Haz-Alert™ reflective labeling bursts with high visibility when illuminated by a flashlight beam, ensuring visibility of hazardous warning message. Sturdy galvanized steel SpillSlope™ shelves safely direct incidental spills to the back and bottom of the leak-proof sump. Includes leveling feet, grounding connector, and hazard warning in three languages. Backed by a 10-year warranty.

Capacity (gal.)	Dimensions (W x D x H)	Approval Listing*	Doors/Type	Cat. #	$/Each
30	43" x 18" x 44"	FM, N. O	2 / manual	**2800-00A**	**557.00**
30	43" x 18" x 44"	FM, N. O, U	2 / self-closing	**2820-00A**	**623.00**
45	43" x 18" x 65"	FM, N. O	2 / manual	**2820-02A**	**688.00**
45	43" x 18" x 65"	FM, N. O, U	2 / self-closing	**2820-03A**	**752.00**
60	34" x 34" x 65"	FM, N. O	2 / manual	**2820-05A**	**830.00**
60	34" x 34" x 65"	FM, N. O, U	2 / self-closing	**2820-06A**	**903.00**

** See key below.*

B. Corrosive Storage Cabinets

These steel cabinets feature a two-part enamel coating which has been tested successfully with widely used acids, caustics, and alkalines, such as hydrochloric acid 37%, sulfuric acid 33%, and sodium hydroxide. This surface will not allow absorption that could cause subsequent problems. The 22-gallon model is an Under-the-Counter Cabinet, with polypropylene-lined bottom and top, and a .75-inch tray top, which can completely contain a 5-pint spill. The other three models, which are floor-mounted, feature corrosive-resistant polyethylene trays, to contain spills, on the bottom and on the shelves.

For Disposal Bottles: TerraUniversal.com

Capacity (gal.)	Dimensions (W x D x H)	Approval Listing*	Doors/Type	Cat. #	$/Each
30	43" x 18" x 44"	FM, N, O	2 / manual	**2820-09A**	**649.00**
45	43" x 18" x 65"	FM, N, O	2 / manual	**2820-10A**	**767.00**
45	43" x 18" x 65"	FM, N, O, U	2 / self-closing	**2820-11A**	**859.00**
22	35" x 22" x 35"	FM, N, O	2 / manual	**2820-12A**	**621.00**

** See key below.*

C. Polyethylene Acid Storage Cabinets

These one-piece Polyethylene Acid Storage Cabinets provide the ideal storage solution for wet processing acids and other chemistries.

Undercounter Cabinet features two internal compartments, each with an adjustable poly shelf that helps organize and segregate incompatible liquids. Separate pull-out sumps underneath the cabinet capture incidental leaks. The cabinet top doubles as a handy workspace. Two vent holes are included on the backside. The cabinet secures to the wall for stability and accepts a padlock. Capacity: (30) 1-liter bottles or a variety of containers. 36"W x 22.5"D x 36"H.

Cat. #	$/Each
2820-32	**824.00**

Countertop Cabinet includes an easy-clean internal polyethylene spill tray to contain incidental leaks. A separate polyethylene tray slides out from under the cabinet and can be used as a handy work tray. The door can be hinged from either side for best countertop surface use. Capacity: (2) 4-liter bottles of acids or bases. 14.25"W x 16.25"D x 19.5"H.

Cat. #	$/Each
2820-31	**322.00**

Polypropylene Acid/Base Etching Bench No. 2000-18
(shown with optional processing baths and controls)

Stainless Steel Solvent Cleaning Bench No. 2001-06
(shown with optional sink, gooseneck faucet, spray gun)

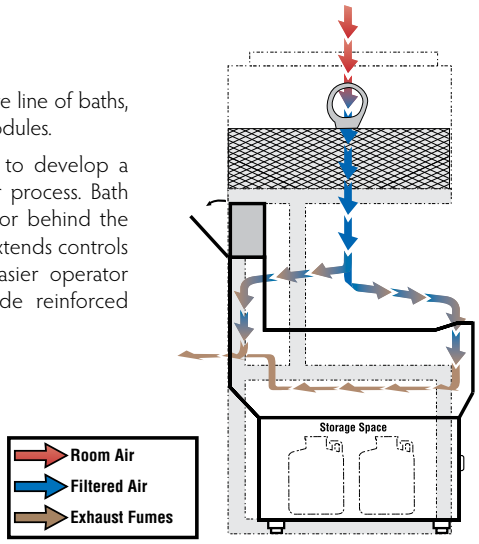
MODULAR WET PROCESSING and CLEANING CABINET

- **Modular designs accommodate process baths, tanks, goosenecks, aspirators, spray guns, fire detection/suppression systems, and other system options**
- **Isolated control can be mounted above, behind or to the side of the work deck**
- **Select Vertical Laminar Flow or Exhaust Fume Workstation to control particles, chemical vapors**
- **Incorporates all processing components into one self-contained, easy-to-clean system**
- **Whatever the requirements, Terra delivers a pre-configured, tested, turnkey system**

These benches accommodate a complete line of baths, rinsers, cleaners and other processing modules.

Terra engineers work with your team to develop a deck configuration that's right for your process. Bath controls can be mounted to the side or behind the work deck. An overhead control case extends controls forward, above the work deck, for easier operator access. Standard models below include reinforced station with modular deck panels.

Standard models operate with Terra's Vertical Laminar Flow or Exhaust Fume Workstations (see pages 3 and 16)



Modular Wet Processing Station*						Vertical Laminar Flow Hood			Plenum Flush	
Overall Width	Work Area Dimensions	Polypropylene		Stainless Steel		Order Filter/Fan Units separately 115VAC	230VAC		PVC with DI Water Nozzles	
		Cat. #	$/Each	Cat. #	$/Each	Cat. #	Cat. #	$/Each	Cat. #	$/Each
48"	36"W x 23"D	**2000-16**	**8,290.00**	**2001-04**	**17,362.00**	**2004-10**	**2004-10-220**	**8,187.00**	**2001-34**	**1,168.00**
60"	48"W x 23"D	**2000-17**	**9,510.00**	**2001-05**	**19,829.00**	**2004-11**	**2004-11-220**	**9,206.00**	**2001-35**	**1,336.00**
72"	60"W x 23"D	**2000-18**	**11,926.00**	**2001-06**	**24,481.00**	**2004-12**	**2004-12-220**	**9,643.00**	**2001-36**	**1,502.00**
96"	84"W x 23"D	**2000-19**	**14,376.00**	**2001-07**	**26,045.00**	**2001-13**	**2004-13-220**	**10,955.00**	**2001-37**	**1,668.00**

* *All models on this chart are designed for rear panel mounting of controllers (as shown in photo above). Call for a quotation on models with head case panel mounts.*

FEATURES and ACCESSORIES

QuickQuote Planner
quickly configures a system to your specifications: www.TerraUniversal.com

Constant-temperature baths and dump rinsers in quartz, polypropylene, PVDF, 304/316 stainless steel and other high-purity, chemical-resistant materials

Configure baths in a single or double row to accommodate workflow

Containment hood collects and condenses vapors

A *Three-Shelf Cart (No. 1532-53) Microban Antimicrobial Formulation Available!*

B *Three-Shelf Deep-Ledge Cart (No. 1532-57) Microban® Antimicrobial Formulation Available!*

A. Polymer Utility Carts with Adjustable Shelves

Made of tough, chemical-resistant, high-density polyethylene, which provides excellent chemical resistance and wipes down easily. Raised "ship's edge" lip (.44"/11 mm) contains spills. Height: 33.25" (other sizes and configurations available). Microban® antimicrobial models available

2-Shelf Models	Gray	Blue	
W" x L"	Cat. #	Cat. #	$/Each
18 x 28	**1532-44**	**1532-12A**	**141.00**
21.5 x 33.75	**1532-49**	**1532-47A**	**152.00**
27 x 39.5	**1532-45**	**1532-13A**	**182.00**
3-Shelf Models	Gray	Blue	
W" x L"	Cat. #	Cat. #	$/Each
18 x 28	**1532-50**	**1532-14A**	**166.00**
21.5 x 33.75	**1532-55**	**1532-53A**	**186.00**
27 x 39.5	**1532-51**	**1532-15A**	**220.00**

B. Polymer "Deep Ledge" Carts with Adjustable Shelves

Similar to models above, but with 2.75" (70 mm)-deep shelf ledges for enhanced spill containment. All models are 41"H. Color: Blue.

W" x L"	Configuration	Cat. #	$/Each
21.5 x 32.75	2-shelf	**1532-56**	**157.00**
21.5 x 32.75	3-shelf	**1532-57**	**194.00**
27 x 38.75	2-shelf	**1532-58**	**184.00**
27 x 38.75	3-shelf	**1532-59**	**226.00**

C. – F. Utility Carts see below

G. MetroMax Utility Carts

High-strength reinforced polymer allows weight capacity of 600 lbs and removable grids provide easy cleaning. All shelf mats contain Microban antimicrobial polyethylene.

W" x L" x H"	Configuration	Cat#	$/Each
18 x 30 x 40	2-shelf	**1403-03**	**524.00**

C *Series 100 – Two stainless steel solid shelves (see chart below)*

D *Series 200 – Three stainless steel solid shelves (see chart below)*

E *Series 400 – Two chrome wire shelves and one stainless steel solid shelf.*

F *Series 600 – Two wire shelves, chrome or stainless steel*

Will not corrode!

G *Available in other sizes and configurations*

Ordering Information		C. Series 100		D. Series 200		E. Series 400		F. Series 600	
Dimensions (W" x L" x H")	Caster Dia.							Stainless Steel Wire Shelves	
		Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
18 x 24 x 38	4"	**1401-23**	**414.00**	**1401-44**	**554.00**	**1401-54**	**275.00**	**1402-39**	**382.00**
18 x 30 x 38	4"	**1401-24**	**494.00**	**1401-45**	**611.00**	**1401-55**	**312.00**	**1402-41**	**436.00**
18 x 36 x 38	4"	**1401-25**	**494.00**	**1401-46**	**611.00**	**1401-56**	**312.00**	**1402-43**	**436.00**
21 x 36 x 39	5"	**1401-26**	**506.00**	**1401-47**	**668.00**	**1401-57**	**340.00**	**1402-45**	**488.00**
24 x 36 x 39	5"	**1401-27**	**535.00**	**1401-48**	**710.00**	**1401-58**	**353.00**	**1402-47**	**515.00**

A

B

C

E

F

G

A. Enclosed Safety Shower

Protect your personnel against hazardous chemical burns! This fully enclosed polypropylene booth features easy-parting PVC strip curtains and immediate-response handles that activate an overhead shower and eye washers. All hardware is cleanroom compatible and chemical resistant. The sloping bottom feeds into a 2 1/2" drain line. Overall dimensions: 39"W x 42"D x 96"H.

Cat. #	$/Each
1530-50	**3,593.00**

B. – D. Acid Transport Carts

Made of stress-relieved polypropylene. All three designs feature recessed receptacles that collect spills into an easy-empty containment reservoir. Acid-resistant neoprene swivel casters are included.

Type B features 12 or 18 removable 7" x 7" inserts for one-gallon bottles.

Type C is ideal for larger, heavy containers. Compartments: two @ 17" x 26.5" x 17" and two @ 17" x 26.5" x 14"

Type D features 24 angled 7" x 7" slots for one-gallon bottles and one top compartment for gloves, safety glasses and other small items (not shown).

Polypropylene Acid Transport Carts

Type (see photos)	No. of Compnts.	Cat. #	$/Each
B	12	**3401-00**	2,617.00
	18	**3401-01**	3,022.00
C	4	**3401-30**	2,884.00
D	25	**3401-31**	3,708.00

E. Flammable Materials Cart

This cart allows safe transport of two 5-gallon chemical storage containers. Its 4"-diameter urethane locking casters ensure clean, smooth rolling and easy maneuvering. The on-board fire extinguisher helps meet OSHA and other safety requirements.

Cat. #	$/Each
7018-40	**5,005.00**

F. DesiCart™ Mobile Desiccator

Protect your stored materials against particles and moisture during transport! Equipped with an optional Quick Connect fitting, these mobile desiccators can be purged with clean, dry nitrogen when not in motion. Their sealed chamber preserves the low-humidity, particle-free environment during transit.

Material	Cat. #	$/Each
Acrylic	**4002-50B**	**2,954.00**
Static-Dissipative PVC	**4002-51B**	**4,365.00**

G. Chemical Safety Cabinet

This electropolished 304 stainless steel enclosure features adjustable perforated shelving to accommodate chemical containers of many sizes. Dual locking doors provide security, and heavy duty locking casters facilitate chemical transport throughout your facility. Complies with OSHA/ NFPA fire safety regulations. Overall dimensions: 43"W x 18"D x 65"H.

Cat. #	$/Each
6012-70	**8,503.00**

GLOVEBOXES: ISOLATION AND CONTAINMENT CHAMBERS

No. 1694-02C, shown with optional pass-through air lock

No. 1694-13B, shown with optional Dual Purge™ System, Vacuum Antechamber and Control Module

Series 300 Stainless Steel Glovebox

The ideal isolation enclosure for a wide range of operations requiring control of particles, humidity, and temperature. Select among several different sizes for one or two operators. Automatic humidity control systems regulate a purge of process gas to maintain user-determined %RH set point. Available in many configurations, with air locks, pass-through ovens, ionization, humidification and sterilization modules.

Perfect for parts degassing, temperature and humidity testing, chemical mixing, and other processes requiring a non-reactive environment.

System starts at $4,917.00

Series 400 Stainless Steel Glovebox

Like the Series 300 chamber shown at left, this isolation glovebox protects delicate materials against particles, humidity, static discharge, and other environmental threats. Its larger chamber size accommodates Terra's Vacuum Antechamber, which provides a practical way to remove moisture as items are moved in and out of the main processing chamber.

Choose between single and twin models, with right or left-side air locks. Custom modifications are available on all Terra gloveboxes; just let us know your requirements!

System starts at $8,075.00

Series 100 Polymer Gloveboxes

Terra's Series 100 Polymer Gloveboxes provide a clean, low-humidity environment for critical processing operations requiring automatic RH set-point control. Their modular design lets you select the options you need for your application.

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.

Select among a full range of options for control of particles, static charges, and humidity.

Basic Research and Processing Glove Boxes

These economical enclosures are ideal for many particle-free and low-humidity requirements. Available with micro-filtration modules for optimal contamination control. These gloveboxes are available in five materials:

Acrylic — strong, rigid material offers full visibility, No 1689-00H, $1,188
Static-Dissipative PVC — protects against static discharge and eliminates static attractions. No. 3305-00G, $2,093
Polypropylene — ideal for chemical mixing or use with acids. No. 1681-29H, $1,525.
Polycarbonate — strong and resistant to chemical and thermal shock. No. 1681-31H, $1,485.

Systems start at $1,301.00

No. 1694-33A (two linked together)

No. 9670-00B, shown with right-side air lock

Series 500 Full-View Glovebox

This enclosure features transparent front and back panels, made of static-dissipative PVC or polycarbonate, with opposing glove ports for convenient dual-side access to work in progress. This design combines full chamber visibility with the strength of a stainless steel glovebox.

It features a large chamber—up to 96"W x 36"D x 30"H—for work with bulky process equipment. A full range of controller systems provides protection against particles, static charges, and humidity. Terra's smart gas controllers regulate the purge of nitrogen or other process gas to maintain the humidity set point you require.

Systems start at $5,767.00

Series 600 Front-View Glovebox

This chamber provides a sloping front panel of transparent polycarbonate or safety glass for full visibility of work in progress. Like the Series 500 model at left, it accommodates Terra's complete line of environmental control systems to automatically maintain a particle-free, controlled-humidity, static-safe environment. Multiple chambers can be cascaded together to expand working space. Standard chamber size: 37.5"W x 29"D x 39"H.

System starts at $7,389.00

No. 2900-46C

No. 2900-62 ValuLine™ Compounding Aseptic Isolator

Compounding Aseptic Isolator

Complies with USP-797

This laminar flow glovebox provides an easy-to-clean environment for performing sterile pharmaceutical preparations. Its HEPA filtration module provides ISO 5 cleanliness conditions. A separate antechamber allows introduction of materials without contaminating the main work area. Includes polyurethane exit filter . Gloves come in a variety of materials to meet specific user requirements. Dimensions: 50"W x 30"D x 51"H.

Material	Cat. #	$/Each
304 Stainless Steel	**2900-46C**	**8,294.00**
ValuLine Polypropylene	**2900-62**	**6,496.00**

Insulated chambers available

BioSafe® Stainless Steel Glovebox

This glovebox features smooth, ultra-clean interior surfaces that eliminate germ traps, making it ideal for aseptic requirements. Continuous-seam welds and rounded corners create a hermetically sealed enclosure that's easy to clean and sterilize. Tempered glass or polycarbonate viewing windows afford full chamber visibility, and optional side air locks allow convenient parts transfer. Optional access panels are available for transfer of large process equipment. Select between two sizes, with either polycarbonate or safety glass viewing window.

System starts at $18,514.00

Custom Work is No Problem! Contact Terra to discuss your unique requirements.

WORK BENCHES and CHAIRS

Note: Benches above are pictured with optional drawer module No. 1740-07 (3", 6" and 12" drawer height); other configurations in both plastic and stainless steel are available.

Work Benches—select desired top (all bases feature a white powder-coated finish)

Base Type (Epoxy Finish)	Width (Depth=30")	A. Nonconductive Laminate		B. Stainless Steel		C. Polypropylene	
		Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
Telescoping "A" Base 25"-34"	48	1722-00	690.00	1521-45	1,285.00	1522-00	894.00
	60	1724-00	767.00	1751-00	1,236.00	1522-01	929.00
	72	1726-00	756.00	1752-00	1,290.00	1522-02	951.00
Recessed "C" Base 30"	48	1521-09	637.00	1521-54	1,057.00	1522-14	894.00
	60	1000-00	709.00	1521-55	1,315.00	1522-15	929.00
	72	1000-01	697.00	1521-56	1,182.00	1522-16	951.00

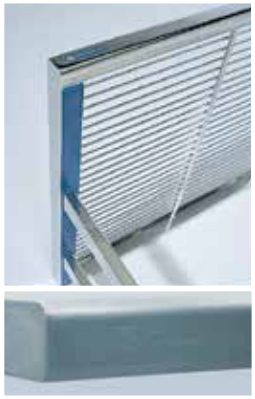
D. – H. Class 100 & Static Control

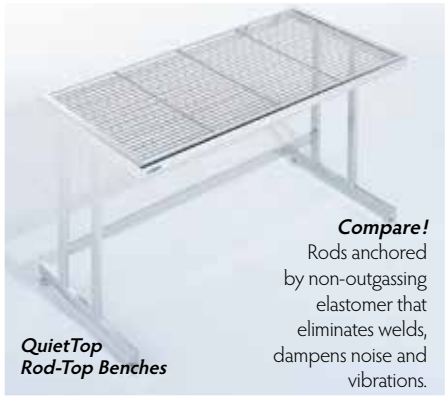
Clean vinyl meets Class 100 particle requirements. Static-Control chairs feature dissipative vinyl, conductive casters, and grounding chains.

Specs		Class 100 Static Control						Class 100				
Height	Color	D.		E.		F.		G.		Color	H.	
		Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each		Cat. #	$/Each
Desk	Black	2802-61*	427.00	2802-67*	433.00	2802-73*	441.00	1012-05*	489.00	Black	1012-11	495.00
	Blue	2802-62*	427.00	2802-68*	433.00	2802-74*	441.00	—	—	Black	1013-51*	568.00
Bench	Black	2802-64*	433.00	2802-70*	436.00	2802-76*	448.00	1012-41	450.00	Black	1012-12	495.00
	Blue	2802-65*	433.00	2802-71*	436.00	2802-77*	448.00	1013-12	529.00	Black	1013-52*	568.00

* Quick ship models—usually ship within one week!

WORK BENCHES and CHAIRS





QuietTop Rod-Top Benches

Compare! Rods anchored by non-outgassing elastomer that eliminates welds, dampens noise and vibrations.

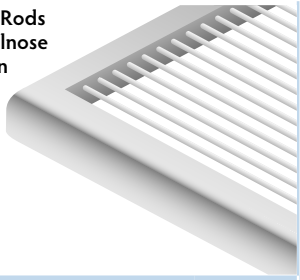
Competitor's design

Hidden reinforcements minimize dead spots, add strength, and eliminate deflection bounce-back, no matter how large the benchtop.

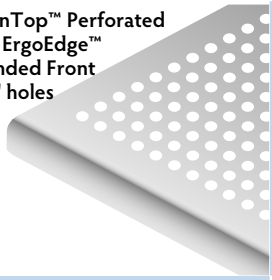
Open-Top Perf-Top Benches

Heavy-Duty All-Electropolished Stainless Steel Work Stations (800-lb. load capacity)

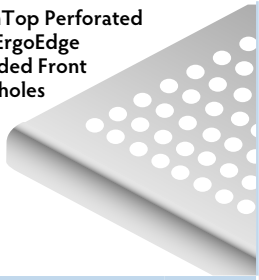
QuietTop™ Rods with Full Bullnose ø ¼" rods on 1" centers



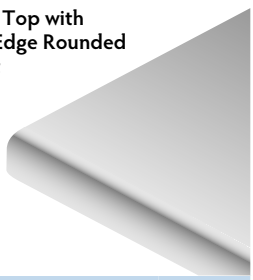
OpenTop™ Perforated with ErgoEdge™ Rounded Front ø ¼" holes



OpenTop Perforated with ErgoEdge Rounded Front ø ¾" holes



Solid Top with ErgoEdge Rounded Front



Bench Size * (W" x D")	"A" Base Cat. #	"C" Base Cat. #	$/Each	"A" Base Cat. #	"C" Base Cat. #	$/Each	"A" Base Cat. #	"C" Base Cat. #	$/Each	"A" Base Cat. #	"C" Base Cat. #	$/Each
36 x 30	9601-17	9601-18	1,685.00	9604-59	9604-80	1,714.00	9601-59	9601-60	1,494.00	9603-01	9603-02	1,314.00
48 x 30	9601-19	9601-20	1,895.00	9604-60	9604-81	2,182.00	9601-61	9601-62	2,085.00	9603-03	9603-04	1,655.00
60 x 30	9601-21	9601-22	2,124.00	9604-61	9604-82	2,347.00	9601-63	9601-64	2,111.00	9603-05	9603-06	1,637.00
72 x 30	9601-23	9601-24	2,484.00	9604-62	9604-83	2,625.00	9601-65	9601-66	2,205.00	9603-07	9603-08	1,915.00
84 x 30	9601-25	9601-26	2,648.00	9604-63	9604-84	2,746.00	9601-67	9601-68	2,342.00	9603-09	9603-10	2,038.00
96 x 30	9601-27	9601-28	3,028.00	9604-64	9604-85	3,249.00	9601-69	9601-70	2,871.00	9603-11	9603-12	2,346.00

** Prices for "A" base and "C" base designs are the same. Standard height is 30" (floor to top). Heights of 32" and 36" and widths of 34" are available at no extra charge. Specify when ordering.*

Ergonomic Upholstered #2801-05

I

Ergonomic Upholstered #2801-33

J

Ergonomic Upholstered #2801-66

K

Urethane #1013-16

L

Ergonomic ESD #1012-24

M

I. – M. Laboratory Chairs

Select from our large assortment of Laboratory Chairs. Types I–K are upholstered chairs built with ergonomic benefits. Types L and M meet durability and budget needs.

Specs		Ergonomic Upholstered Chairs*						Specs	Urethane Chairs**		ESD Chair	
Height	Color	I. w/Seat Control		J. Standard		K. Large Backrest		Color	L.		M.	
		Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each		Cat. #	$/Each	Cat. #	$/Each
Desk	Black	2801-01*	319.00	2801-33*	274.00	2801-65*	289.00	Black	1013-16	273.00	1012-14	437.00
	Blue	2801-02*	319.00	2801-34*	274.00	2801-66*	289.00		1013-17*	306.00	1012-19	498.00
Bench	Black	2801-05*	362.00	2801-37*	277.00	2801-69*	292.00	Black	1013-18*	334.00	1012-24	498.00
	Blue	2801-06*	362.00	2801-38*	277.00	2801-70*	292.00		—	—	1013-46	589.00

** Available in Grade 2 Vinyl or Grade 4 Breathable Nylon. Visit TerraUniversal.com for more color options.*
*** More configurations available on the website.*

CLEANROOM VIBRATION ISOLATION WORK STATIONS

No. 1570-53A - Stainless Steel Top

Vibration-Free Work Station

- **Pneumatic vibration-free mounts isolate up to 90% of building vibration, eliminate operator fatigue and nausea during microscope operations**
- **Low-profile, ergonomic design combines stability with convenience**
- **Built-in pneumatic controller simplifies leveling, allows continuous in-line operation**
- **Suitable for cleanroom use**
- **Bumper isolates front edge, provides an arm rest.**
- **Select work surface material for your application: nonconductive and dissipative laminates, stainless steel, and UltraClean™ electropolished stainless steel**
- **Available in UltraClean Finished Stainless Steel for the most critical contamination requirements**

Vibration-Free Work Stations			Nonconductive Laminate Top		Static Dissipative Laminate Top		304 Stainless Steel Top				Electropolished Stainless Steel Top, Frame & Legs	
Work Surface Dimensions (W" x D")	Number of Isolators	Maximum Load * (lbs.)	"A" Base Design**		"A" Base Design**		w/ Finished CR Steel Frame, Legs "A" Base Design**		All Stainless Steel Construction "A" Base Design**		"A" Base Design**	
			Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
48 x 30	4	360	1570-00A	2,098.00	1570-26A	2,309.00	1570-52A	2,544.00	1570-80A	3,041.00	1570-80A-2	3,443.00
60 x 30	4	350	1570-01A	2,134.00	1570-27A	2,346.00	1570-53A	2,624.00	1570-81A	3,149.00	1570-81A-2	3,589.00
72 x 30	6	550	1570-02A	2,149.00	1570-28A	2,368.00	1570-54A	2,678.00	1570-82A	3,261.00	1570-82A-2	3,722.00
84 x 30	6	540	1570-03A	2,205.00	1570-29A	2,538.00	1570-55A	2,804.00	1570-83A	3,424.00	1570-83A-2	3,946.00
96 x 30	6	530	1570-04A	2,412.00	1570-30A	2,752.00	1570-56A	3,012.00	1570-84A	3,663.00	1570-84A-2	4,181.00
48 x 34	4	360	1570-07A	2,042.00	1570-33A	2,339.00	1570-59A	2,625.00	1570-87A	3,138.00	1570-87A-2	3,410.00
60 x 34	4	350	1570-08A	2,100.00	1570-34A	2,397.00	1570-60A	2,746.00	1570-88A	3,243.00	1570-88A-2	3,684.00
72 x 34	6	550	1570-09A	2,194.00	1570-35A	2,426.00	1570-61A	2,904.00	1570-89A	3,424.00	1570-89A-2	3,906.00
84 x 34	6	540	1570-10A	2,308.00	1570-36A	2,637.00	1570-62A	2,997.00	1570-90A	3,710.00	1570-90A-2	3,867.00
96 x 34	6	530	1570-11A	2,443.00	1570-37A	2,867.00	1570-63A	3,235.00	1570-91A	3,852.00	1570-91A-2	4,039.00

* *Maximum loads with plate weights removed.*
** *Nonadjustable (one piece) legs also available with "A" base design at no extra cost (specify when ordering).*

High-Performance Vibration Isolation Tables, from TMC

- **Patented Gimbal Piston Isolators achieve both horizontal and vertical isolation down to very low input levels (complete isolation specs at TerraUniversal.com)**
- **Modular, ergonomic design enhances functionality and comfort**
- **Cleanroom-compatible configuration includes ducted air exhaust for clean, particle-free operation**

Top Dimensions (W x D)	Stainless Steel Top with Powder-Coated Frame		All-Stainless Steel Cleanroom Models*	
	Cat. #	$/Each	Cat. #	$/Each
30" x 30"	3435-12	3,468.00	—	—
36" x 30"	3435-13	3,488.00	3435-00	5,585.00
48" x 30"	3435-14	3,560.00	3435-01	5,692.00
60" x 30"	3435-15	3,713.00	—	—
48" x 36"	3435-16	3,658.00	3435-02	5,906.00
60" x 36"	3435-17	3,820.00	3435-03	6,003.00

** Includes armrest. Available with electropolished finish.*

These vibration-isolation tables are ideal for applications in electrophysiology, cell injection, photomicroscopy and other critical applications. All models come with stainless steel top; cleanroom-compatible models include all-SS construction and ducted exhaust. Isolation efficiency: 90 – 97% @ 10 Hz. Low input specification (natural frequency): 1.5 – 2.0 Hz (vertical), 1.2 – 1.7 Hz (horizontal). Net load capacity: 500 lbs. Requires 80 psi air or nitrogen.

Granite Isolator

- **Low-cost, easy-clean platform—simple design requires no air supply**
- **Polished granite rests on silicone isolators, providing 2.4 Hz horizontal natural frequency**

Top (W x D)	Cat. #	$/Each
13" x 15"	1580-20	571.00
16" x 21"	1580-21	992.00
18" x 26"	1580-23	1,271.00

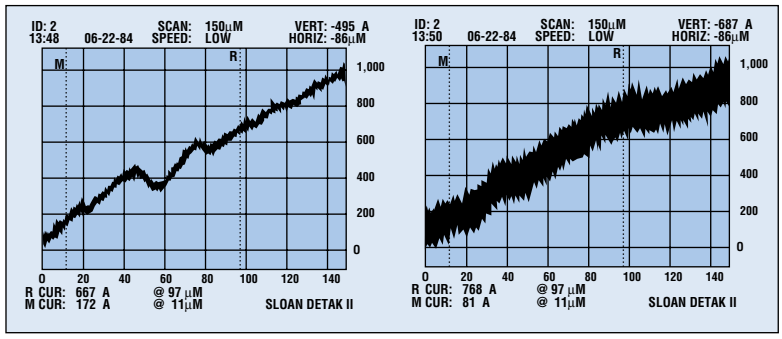
CLEANROOM VIBRATION ISOLATION WORK STATIONS

Vibration-Free Platform

- **Portable low-profile design allows for multiple vibration-free work stations on a single bench**
- **Pneumatic vibration-isolation mounts dampen up to 90% of building vibration, eliminate operator fatigue and nausea during microscope operations**
- **Also isolates vibration-producing equipment from the work surface**
- **Available in several sizes and materials, including UltraClean™ electropolished stainless steel**
- **Easy to set up and relocate**

Specifications		Vibration-Free Platform	
Work Surface (W" x D" x H")	Maximum Load* (lbs.)	UltraClean Finish 304 Stainless Steel Top	
		Cat. #	$/Each
21.75 x 18.25 x 3	213	**1580-02**	2,566.00
23 x 24 x 3	213	**1580-03**	2,766.00

* *Internal plate weight should be removed before operation with net loads over 100 lbs.*



Test results by a Sloan Dektak II Surface Profile Measuring System with and without Terra's Virbration-Free Platform.

Sneeze Guard

Ideal for microscope work. 7.12" x 7.25" with eyepiece cut-out.

Acrylic		Dissipative PVC	
Cat. #	$/Each	Cat. #	$/Each
1601-50	17.00	**1601-51**	27.00

COMPUTER CARTS

VHRC Series Monitor and Keyboard

Features slide-out keyboard mount with foot rest and left/right accessory compartments. An integrated VHRC channel accepts modular counting components; see TerraUniversal.com for details. Height: 64.5" (adjustment range: 16"; includes foot pedal for variable height adjustment). Base: 18" x 18" with 5"-diameter casters.

Cat. #	$/Each
9600-77	1,228.00

Adjustable Computer Cart

Ideal for most laboratory applications, this unit features an adjustable range of 30" to 41" (measured from floor to keyboard tray), making it suitable for sitting or standing users. It includes a 25" keyboard tray with padded wrist and embossed mouse surfaces, a tilt-adjustable mounting plate for flat panel displays and aluminum 25" base with casters.

Cat. #	$/Each
9600-76	886.00

Cleanroom Computer Cart

This easy-to-clean, all-electropolished 304 stainless steel cart features a retractable keyboard tray, CPU support stand and locking safety casters. Ideal for the cleanest locations!

	Cat. #	$/Each
Fixed Height 56" floor to keyboard tray	**9600-19**	2,405.00

MODULAR CLEANROOMS

A

B *Hardwall rooms comply with USP-797 requirements*

E *ValuLine™ Cleanrooms—ship in 5 days*

C *Multi-room hardwall cleanroom with polycarbonate panels*

F *Hardwall cleanroom with internal-mount polypropylene panels for easy cleaning, A/C, and high speed CleanSeal® Roll-Up Doors*

Hardwall Acrylic ISO 7 Cleanroom
Reference No. 131609
Total Square Footage: 1391
Cost: $159,158

D

G *304 stainless steel BioSafe Cleanroom*

H *Versatile BioSafe panels accommodate complex cleanroom designs, with interior production rooms and gowning areas dedicated to your workflow and cleanliness requirements*

MODULAR CLEANROOMS

Free-standing, all-steel structures create sturdy, versatile, clean processing solutions that meet cleanliness requirements to Class 10 (ISO 4). Whatever your application, Terra delivers a pre-tested, turnkey system.

Hardwall Designs

- Acrylic or static-dissipative rigid panels for full visibility
- Steel support frame spans up to 20 feet without internal pillars or external supports
- Mirror-finished stainless steel trim creates a showcase exterior
- A/C and humidity controls
- Available raised floors optimize laminar airflow

Models shown:

A. Static-dissipative PVC ISO 5 cleanroom interior: includes gowning antechamber with pass-through chamber and 9-foot ceilings.
B. Polycarbonate cleanroom designed to USP-797 requirements for compounding pharmacies
C. ISO 6 cleanroom with acrylic panels and multi-suite floorplan
D. ISO 7 cleanroom with acrylic panels and multi-suite floorplan

Softwall Designs

- New ValuLine™ rooms—full performance at lower cost
- Portable, expandable, easy to assemble and disassemble
- Curtain panels and parting strip shields, in anti-static cleanroom-grade vinyl
- Rigid steel support frame requires no ceiling supports
- Casters available

Models shown:

E. ValuLine Softwall Cleanroom provides value without sacrificing performance! Turnkey models start under $10,000 and ship in 3 – 4 days. Cleanliness to ISO 5 (Class 100).

Configured to Your Specifications!

- Air conditioning
- Humidification/Dehumidification
- Rapid-Operation Doors
- Raised Floor

BioSafe® All-Steel Designs

- Perfect for ultra-clean applications requiring frequent cleaning or sterilization
- Smooth interior walls with radius corners eliminate cracks that harbor germs and particles
- 304/316 stainless or powder-coated steel panels
- Negative-pressure airflow designs available for fume venting

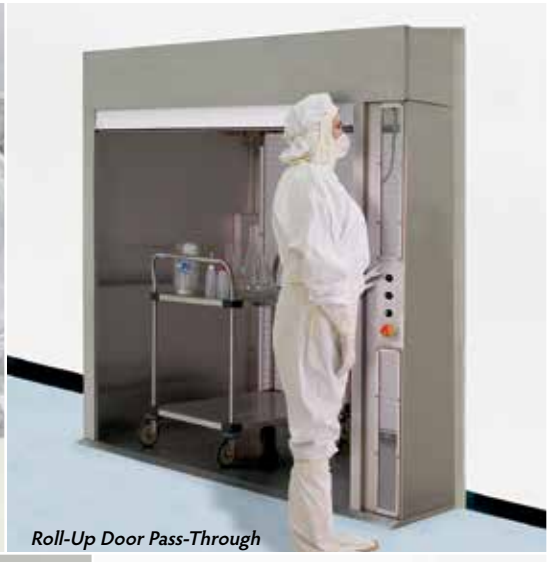
Models shown:

F. Powder-coated BioSafe room with dual quick-response roll-up doors; ideal for transfer of bulky equipment or carts.
G. Stainless steel BioSafe ISO 5 cleanroom with air shower entry and ceiling plenum.
H. Powder-coated ISO 7 BioSafe cleanroom interior

Convert any space into a controlled environment—in a fraction of the time, at a fraction of the cost!

PASS-THROUGH CHAMBERS: dozens of standard sizes

Acrylic chamber for Terra Hardwall Cleanroom, No. 6704-90B



Roll-Up Door Pass-Through

CleanSeam+, No. 2638-74A-2

CleanTop™ easy-clean sloped top, No. 6705-17

Smart Pass-Through with Automatic Door, No. 2635-10A-2

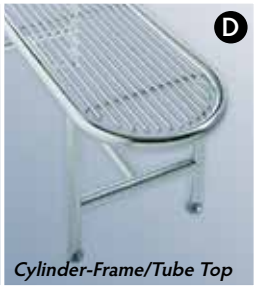
Fire-Rated Doors and Pass-Throughs

BIOSAFE+® PASS-THROUGH CHAMBER

Now with all-304/316 stainless steel latches to eliminate scratching, corrosion and contamination common with plated hardware.

- **Seamless —** Unique design eliminates cracks, corners and other contaminant traps!
- **Lipless —** Easy material transfer with no clearance obstruction
- **Easy to Clean —** Ultra-smooth internal surfaces
- **Easy to Sterilize —** 304/316 electropolished SS; removable doors can be steam sterilized
- **Double-Wall, Sealed Construction —** adds rigidity and houses interlock and standard or custom utilities without compromising the ultra-clean design
- **Flush Mount —** unique design seals flush against cleanroom wall—no cracks or horizontal surfaces to collect germs and other contaminants!

GOWNING ROOM and CLEANROOM FURNISHINGS



BioSafe® Cleanroom Mirrors

Frameless models feature a recessed mounting plate for flush-mounting on the cleanroom wall without rear offset space that can accumulate dust and germs. Caulking creates an easy-clean surface that acts as a germ barrier. Framed models include an ultra-smooth, mirror-finish SS frame with sloping edges to minimize particle build-ups.

Size W" x H"	With Frame EP 304 Stainless Steel		Frameless	
Heavy Duty	Cat. #	$/Each	Cat. #	$/Each
36 x 72	**5252-52A**	1,450.00	**5252-58B**	1,271.00
24 x 36	**5252-53**	978.00	**5252-61B**	896.00
18 x 24	**5252-54**	667.00	**5252-60B**	583.00
24 x 72	**5252-55**	1,196.00	**5252-59B**	1,046.00
24 x 48	**5252-56**	1,120.00	**5252-63B**	1,022.00
18 x 36	**5252-57**	881.00	**5252-62B**	842.00

BioSafe® Gowning Benches

Terra's all-electropolished 304 stainless steel gowning benches provide the ideal gowning surface. Their ultra-smooth surfaces won't shed particles or snag wipers. Choose among four designs; all freestanding models come with durable nylon leveling feet. Perforated top and 316 stainless steel models available at TerraUniversal.com.

Floor Mounted (see photo A)			Free Standing Design (see photos B, C, D)						Bootie Rack** (not shown)		
L" x W" x H" Nominal	A. Solid Top		L" x W" x H" Nominal	B. Solid Top		C. Tubular Top		D. Cylinder-Frame/ Tube-Top		No. of Slots	E. Installed	
	Cat. #	$/Each		Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each		Cat. #	$/Each
36 x 9 x 18	**1530-15-2**	880.00	36 x 16 x 18	**1530-25-2**	963.00	**1530-10-2**	1,331.00	**9602-96**	1,329.00	12	**1560-30-2**	698.00
48 x 9 x 18	**1530-16-2**	955.00	48 x 16 x 18	**1530-26-2**	1,063.00	**1530-11-2**	1,886.00	**9602-97**	1,520.00	15	**1560-31-2**	814.00
60 x 9 x 18	**1530-17-2**	1,051.00	60 x 16 x 18	**1530-27-2**	1,241.00	**1530-12-2**	2,015.00	**9602-98**	1,752.00	18	**1560-32-2**	927.00
72 x 9 x 18*	**1530-18-2**	1,152.00	72 x 16 x 18	**1530-28-2**	1,325.00	**1530-13-2**	2,162.00	**9602-99**	1,907.00	21	**1560-33-2**	1,044.00
84 x 9 x 18*	**1530-19-2**	1,209.00	84 x 16 x 18	**1530-29-2**	1,101.00	**1530-14-2**	2,579.00	**9600-02**	2,570.00	24	**1560-34-2**	1,159.00

** Includes center leg mount. ** Fits on free-standing benches only (order bench separately).*

A. – I. Electropolished BioSafe™ Step Stools and Ladders

Include spring-loaded safety casters that retract under load. Perforations limit particle accumulation. Custom sizes and 316 SS available.

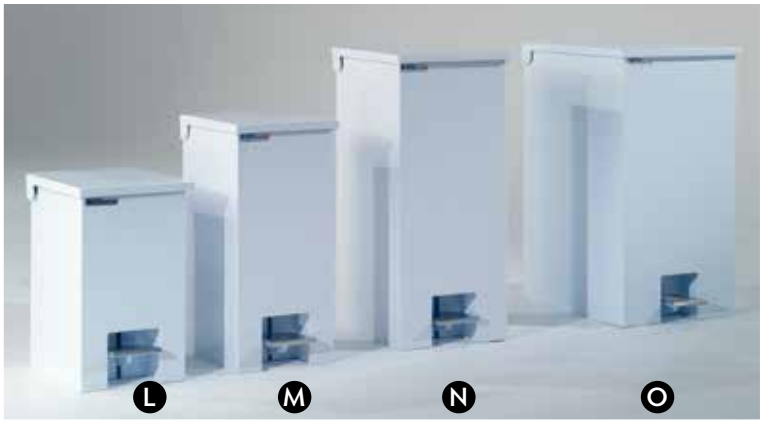
304 Stainless Steel Step Stools and Ladders

	Top Platform (W" x D")	Overall Dimensions (W" x D" x H")	No. of Steps	Electropolished 304 Stainless Steel Cat. #	$/Each
A	30 x 14	30 x 20 x 24	2	2805-50A-2	1,979.00
B	30 x 12	30 x 28 x 34	3	2805-51A-2	2,493.00
C	30 x 12	30 x 24 x 60	3*	2805-53A-2	2,888.00
D	30 x 12	30 x 30 x 70	4*	2805-52A-2	4,228.00
E	30 x 16	30 x 40 x 80	5*	2805-54A-2	5,163.00
F	30 x 36	30 x 76 x 86	5*	2805-55A-2	5,399.00
G	15 x 10	18 x 16 x 20	1	2805-80A	988.00
H	15 x 10	18 x 22 x 35	2	2805-81A	1,375.00
I	15 x 10	18 x 25 x 44	3	2805-82A	1,660.00
J	11 x 17	21 x 27 x 48	3	2805-97	2,576.00

** Includes safety handrail. C – E not shown*

K. – O. Waste Receptacles

ValuLine™ models, suitable for general use, are stainless steel. BioSafe® models, optimized for the cleanest locations, are either electropolished SS or polypropylene and feature a soft-close feature to eliminate abrupt noises when the lid closes.



BioSafe Models: eliminate piano-style hinges and other hardware that harbors contaminants; all non-corroding materials (electropolished stainless steel or polypropylene) - perfect for critical environments. SoftClose™ feature lets lid close without a loud crash!

ValuLine Models: suitable for general laboratory use.

BioSafe Cleanroom Waste Receptacles									ValuLine Waste Receptacles	
Type	Capacity (Gallons)	Dimensions W x D x H (in.)	Ship. Wt. (lbs.)	Electropolished 304 Stainless Steel Cat. #	$/Each	Ship. Wt. (lbs.)	Polypropylene Cat. #	$/Each	304 Stainless Steel Cat. #	$/Each
K	3.5	11 dia. x 17 H	9	—	—	9	—	—	1456-00	334.00
L	7	12 x 12 x 17	19	1456-16B	815.00	19	1456-25A	654.00	1456-01	518.00
M	12	12 x 12 x 23	24	1456-17B	1,050.00	24	1456-26A	799.00	1456-02	611.00
N	24	15 x 15 x 30	36	1456-18B	1,214.00	36	1456-27A	917.00	1456-03	823.00
O	40	19 x 19 x 30	48	1456-19B	1,698.00	48	1456-28A	1,093.00	1456-04	1,058.00

CLEANROOM ACCESSORIES

ErgoHeight™ Work Stations

- **Eliminates back stress and injury, enhances productivity**
- **Provides up to four programmable height settings**
- **Smooth bench motion — suitable for microscopes and delicate process equipment**
- **Supports up to 400 pounds net load**
- **No need to clear work surface for height adjustment!**
- **Cleanroom-compatible materials**

Motorized lifters raise, lower and level the work surface to any of four programmed pre-sets—without disturbing table-top set-ups. Front panel-mounted controls provide pushbutton convenience. Sealed design isolates motor for cleanroom compatibility. Models below feature powder-coated white bases; dozens of other sizes and configurations available. Standard height range: 28" – 48" floor-to-top.

Turnkey solutions for vibration isolation and exhaust fume removal: TerraUniversal.com

ErgoHeight Auto-Adjustable Cleanroom Work Stations

Benchtop Dimensions (W" x D")	Powder-Coated Steel Bases								Stainless Steel Bases			
	Nonconductive Top		Static-Dissipative Top		Polypropylene Top		Stainless Steel Top		Stainless Steel Top		Electropolished Top and Base	
	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
36 x 30	3504-16	2,598.00	3504-24	2,863.00	3504-32	2,873.00	3504-04	3,009.00	3504-40	3,365.00	3504-00	3,739.00
48 x 30	3504-17	2,698.00	3504-25	2,994.00	3504-33	3,002.00	3504-05	3,139.00	3504-41	3,514.00	3504-01	3,889.00
60 x 30	3504-18	2,889.00	3504-26	3,157.00	3504-34	3,163.00	3504-06	3,301.00	3504-42	3,640.00	3504-02	3,982.00
72 x 30	3504-19	3,002.00	3504-27	3,268.00	3504-35	3,276.00	3504-07	3,413.00	3504-43	3,753.00	3504-03	4,128.00
36 x 34	3504-20	2,691.00	3504-28	2,957.00	3504-36	2,965.00	3504-08	3,102.00	3504-44	3,458.00	3504-12	3,832.00
48 x 34	3504-21	2,758.00	3504-29	2,993.00	3504-37	3,032.00	3504-09	3,169.00	3504-45	3,578.00	3504-13	3,952.00
60 x 34	3504-22	2,920.00	3504-30	3,155.00	3504-38	3,192.00	3504-10	3,330.00	3504-46	3,703.00	3504-14	4,095.00
72 x 34	3504-23	3,032.00	3504-31	3,298.00	3504-39	3,305.00	3504-11	3,442.00	3504-47	3,816.00	3504-15	4,189.00

BUY ONLINE! Items priced in blue usually ship in 1–3 days.

A. Motorized Shoe Cleaner

Internal vacuum system removes contaminants on shoes. Five internal brushes clean deep into seams, welts.

	Cat. #	$/Each
110VAC/60Hz	1784-14	2,995.00
220VAC/50Hz	1784-14-220	3,325.00

B. Cleanline® Sticky Mats®

Peel-off sheets eliminate the need for messy cleaning and make it easy to maintain a clean surface. Models are available with full-bottom adhesive surfaces and 2" bottom adhesive strips. Optional mounting frame (shown in photo) provides a sturdy, easy-to-clean edging. Many other sizes and colors, along with high-tack models, are available at TerraUniversal.com.

Sticky Mats—All are medium tack (high tack and other sizes, colors available)

Dim. (inches)	Blue				Gray		Corresponding Frame	
	Full Bottom		2" Strip Bottom		2" Strip Bottom		(Adds 3" to each side)	
	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
18 x 36	5601-16	45.00	5601-24	43.00	5602-20	43.00	5602-92	121.00
18 x 45	5601-17	53.00	5601-25	49.00	5602-21	49.00	5602-94	130.00
24 x 36	5601-18	62.00	5601-26	60.00	5602-22	60.00	5602-97	143.00
36 x 45	5601-21	110.00	5601-29	107.00	5602-25	107.00	5603-04	194.00
36 x 60	5601-22	165.00	5601-30	165.00	5602-26	165.00	5603-05	222.00

PUREDRY™ CLEANROOM HAND AND GLOVE DRYER

- Microfilters capture sub-micron particles to reduce contamination and germs that can spread infection
- Also ideal for drying tools, bottles, microelectronic components and other small particle-sensitive materials
- ULPA (Ultra Low Penetration Air) filter—ISO 5 compatible
- Insulation and motor isolation reduce noise
- Brushless motor eliminates carbon contaminants for ultra-clean operation

Germ-Free Recirculating Model (No. 3333-33)
Eliminates filter clogs and germ accumulation.

PureDry Hand/Glove Dryer Recirculating Model		
Description	Cat. #	$/Each
120VAC/60Hz	**3333-33**	2,765.00
220VAC/50Hz	**3333-33-220**	2,765.00
Replacement ULPA Filter 99.999% efficient@ 0.12 micron	**3333-35**	**200.00**

Single-Pass Model (No. 3333-00)
Space-saving, wall-mount unit features an easy-access ULPA filter.

PureDry Hand/Glove Single Pass Model		
Description	Cat. #	$/Each
120VAC/60Hz	**3333-00**	2,092.00
220VAC/50Hz	**3333-00-220**	2,092.00
Replacement ULPA Filter 99.999% efficient@ 0.12 micron	**3333-39**	**180.00**

HAND AND GLOVE WASHING AND DRYING STATIONS

Terra specifically designed these integrated washing/drying stations for use in critical cleanroom and gowning room environments.

- Incorporates washing and ULPA-filtered drying modules in one cleanroom-compatible station
- Infrared (IR) beam activation for hands-free, non-contaminating operation
- Optional liquid soap dispenser
- Incorporates noise-absorbing insulation and isolated motor for quiet operation
- Drying module incorporates blower, energy-efficient heater with insulated air flow tubing, and an ULPA (ultra-low penetration air) filter rated 99.999% efficient @ 0.12 µm particles

Brushless motor eliminates carbon contaminants for ultra-clean operation

Hand/Glove Cleaning Station									
Dimensions Includes levelers W" x D" x H" Nominal	**No. of Sinks**	**304 Stainless Steel**				**Electropolished 304 Stainless Steel**			
		110VAC/60Hz		**220VAC/50Hz**		**110VAC/60Hz**		**220VAC/50Hz**	
		Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
24 x 22 x 61	1	**9600-60**	**5,681.00**	**9600-60-220**	**5,794.00**	**9600-05**	7,214.00	**9600-05-220**	**6,578.00**
48 x 22 x 61	2	**9600-61**	**11,188.00**	**9600-61-220**	**11,301.00**	**9600-06**	**12,834.00**	**9600-06-220**	**12,834.00**
96 x 22 x 61	4	**9600-62**	**20,677.00**	**9600-62-220**	**20,677.00**	**9600-07**	**24,181.00**	**9600-07-220**	**24,181.00**
144 x 22 x 61	6	**9600-63**	**31,329.00**	**9600-63-220**	**31,329.00**	**9600-08**	**36,584.00**	**9600-08-220**	**36,584.00**

AIR SHOWERS and TUNNELS

- **Completely self-contained, pre-wired, fully equipped Air Shower/Tunnel systems help solve decontamination problems**
- **Modular design lets you order a system to suit your cleanroom**
- **HEPA filter/blower modules (rated 99.99% efficient @ 0.3 micron particles) wash personnel with Class 100 (ISO 5) air to dislodge and remove particles**
- **Solid-state microprocessor panel provides programmable control over access door operation**
- **Interlocking doors minimize contamination, release automatically in the event of power failure**
- **Fluorescent lighting is housed in the ceiling for minimal turbulence**
- **Available in white epoxy-finished CR steel, stainless**
- **Steel, or plastic laminate to meet various cleanroom requirements**
- **Variety of sizes and door configurations**
- **Economical to operate, easy to maintain**
- **System options include HEPA-filtered ceiling, ionized grid, and safety glazing**

These Air Showers and Tunnels offer an effective way to remove surface-deposited particles from personnel—before they get to the cleanroom.

Enter the Cleanroom—and Leave Your Particles Behind!
Each unit is a fully equipped, protected passageway that allows large numbers of personnel to pass into controlled areas without sacrificing convenience or cleanliness.

Air Showers and Tunnels supply concentrated ISO 5 clean air flows to lift off contamination while an individual stands in, or walks through, a specially constructed air chamber. Whenever an automatic floor switch inside the unit is activated, pressurized air streams from adjustable nozzles at a velocity between 6,000 and 8,000 feet per minute (30 m/s and 41 m/s), a force that ensures efficient scrubbing action necessary to remove particulate matter. (Air showers in units without floors are activated by motion sensors.)

Air Showers

Dimensions inches			Blower/ Filter Type*	No. of Filters/ Blowers	No. of Nozzles	Shipping Weight lbs	Stainless Steel		Epoxy-Finished CR Steel		Laminated Fiber Core	
H	W	D					Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
90	52	44	1	1	20	1600	**6010-00A**	**20,195.00**	**6010-14A**	**13,233.00**	**6010-28**	**12,548.00**
90	52	56	1	1	20	1800	**6010-01A**	**21,565.00**	**6010-15A**	**16,450.00**	**6010-29**	**13,393.00**
90	52	60	2	1	32	1900	**6010-02A**	**24,018.00**	**6010-16A**	**18,362.00**	**6010-30**	**14,985.00**
90	52	72	2	1	36	2100	**6010-03A**	**25,015.00**	**6010-17A**	**19,118.00**	**6010-31**	**15,598.00**
90	52	84	2	1	40	3500	**6010-04A**	**26,619.00**	**6010-18A**	**20,339.00**	**6010-32**	**16,587.00**
90	58	44	1	1	20	2200	**6010-05A**	**21,565.00**	**6010-19A**	**16,449.00**	**6010-33**	**13,393.00**
90	58	56	2	1	32	1800	**6010-06A**	**22,502.00**	**6010-20A**	**17,206.00**	**6010-34**	**14,048.00**
90	58	60	2	1	32	2000	**6010-07A**	**25,015.00**	**6010-21A**	**19,118.00**	**6010-35**	**15,598.00**
90	58	72	2	1	36	2200	**6010-08A**	**25,768.00**	**6010-22A**	**19,692.00**	**6010-36**	**16,064.00**
90	58	84	2	1	40	3300	**6010-09A**	**27,266.00**	**6010-23A**	**20,829.00**	**6010-37**	**16,988.00**
90	64	60	2	1	32	2000	**6010-10A**	**25,762.00**	**6010-24A**	**19,685.00**	**6010-38**	**16,062.00**
90	64	72	2	1	36	2200	**6010-11A**	**27,298.00**	**6010-25A**	**20,853.00**	**6010-39**	**17,007.00**
90	70	72	2	1	40	2400	**6010-12A**	**29,533.00**	**6010-26A**	**22,554.00**	**6010-40**	**18,387.00**
90	90	96	2	2	44	5100	**6010-13A****	**53,208.00**	**6010-27A***	**41,079.00**	**6010-41***	**33,466.00**

* *See specifications above for complete information.*
** *This extra-wide unit features double doors, 3'0" x 6'8" each (914 mm x 2032 mm) at each end. It is ideal for passing large equipment into the cleanroom (features no floor so that carts can roll smoothly).*

CLEANROOM GARMENT STORAGE

Powder-Coated Steel

304 SS with steel door frames

Top component fits filter/ blower or can be used as storage

Terra's versatile cleanroom storage cabinets house a variety of garments, booties, supplies, tools and process equipment. Select models are available with HEPA filter/blower that removes 99.99% of all contaminants 0.3 microns and larger. The chrome-plate hardware, nonshedding materials ensure cleanroom compatibility. Models have double doors with self-closing hinges that require minimum clearance and provide easy access to stored items. Type A cabinets accommodate up to 30 garments.

Cabinet doors can be ordered in clear acrylic or SD-PVC. All models include a 6"H (152 mm) stand with leveling feet.

Models are also available in 220V.

* Acrylic is damaged by alcohol and other cleaning agents.

Cleanroom Garment Storage Cabinets: Powder-Coated Steel

Specifications			Powder-Coated Steel				Powder-Coated Steel w/ Steel Door Frames			
	Type	Dimensions W" x D" x H"	w/Acrylic Doors*		w/Dissp. PVC Doors		w/Acrylic Doors*		w/Dissp. PVC Doors	
			Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
A	Filter/ Blower	40 x 26.5 x 94	4101-03C	2,533.00	4101-17C	2,733.00	4101-03C-HD	2,981.00	4101-17C-HD	3,332.00
		52 x 26.5 x 94	4101-01C	2,787.00	4101-15C	3,141.00	4101-01C-HD	3,235.00	4101-15C-HD	3,582.00
	Cabinet Only	40 x 26.5 x 94	4101-02C	1,769.00	4101-16C	2,123.00	4101-02C-HD	2,218.00	4101-16C-HD	2,564.00
		52 x 26.5 x 94	4101-00C	2,012.00	4101-14C	2,371.00	4101-00C-HD	2,465.00	4101-14C-HD	2,812.00
B	Filter/ Blower	40 x 26.5 x 94	4101-04C	2,679.00	4101-18C	3,038.00	4101-04C-HD	3,132.00	4101-18C-HD	3,588.00
		52 x 26.5 x 94	4101-06C	2,947.00	4101-20C	3,307.00	4101-06C-HD	3,401.00	4101-20C-HD	3,748.00
	Cabinet Only	40 x 26.5 x 94	4101-05C	1,869.00	4101-19C	2,228.00	4101-05C-HD	2,323.00	4101-19C-HD	2,669.00
		52 x 26.5 x 94	4101-07C	2,133.00	4101-21C	2,492.00	4101-07C-HD	2,310.00	4101-21C-HD	2,933.00
C	Filter/ Blower	40 x 26.5 x 94	4205-20C	2,492.00	4205-21C	2,909.00	4205-20C-HD	3,253.00	4205-21C-HD	2,933.00
		52 x 26.5 x 94	4205-22C	2,807.00	4205-23C	3,165.00	4205-22C-HD	3,243.00	4205-23C-HD	3,606.00
	Cabinet Only	40 x 26.5 x 94	4101-11C	1,779.00	4101-25C	2,138.00	4101-11C-HD	2,220.00	4101-25C-HD	2,579.00
		52 x 26.5 x 94	4101-13C	2,030.00	4101-27C	2,651.00	4101-13C-HD	2,471.00	4101-27C-HD	2,830.00

Cleanroom Garment Storage Cabinets: 304 Stainless Steel

Specifications			304 Stainless Steel w/ shelves				304 Stainless Steel w/ SS Door Frames			
	Type	Outside Dimensions W" x D" x H"	w/Acrylic Doors*		w/Dissp. PVC Doors		w/Acrylic Doors*		w/Dissp. PVC Doors	
			Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
A	Filter/ Blower	40 x 26.5 x 94	4101-57B	5,008.00	4101-68B	5,367.00	4101-57B-HD	5,554.00	4101-68B-HD	5,913.00
		52 x 26.5 x 94	4101-59B	5,564.00	4101-70B	6,186.00	4101-59B-HD	6,110.00	4101-70B-HD	6,469.00
	Cabinet Only	40 x 26.5 x 94	4101-58B	4,080.00	4101-69B	4,440.00	4101-58B-HD	4,626.00	4101-69B-HD	4,986.00
		52 x 26.5 x 94	4101-60B	4,729.00	4101-71B	5,351.00	4101-60B-HD	4,467.00	4101-71B-HD	5,634.00
B	Filter/ Blower	40 x 26.5 x 94	4101-61B	5,159.00	4101-72B	5,518.00	4101-61B-HD	5,705.00	4101-72B-HD	6,326.00
		52 x 26.5 x 94	4101-63B	5,731.00	4101-74B	6,090.00	4101-63B-HD	6,277.00	4101-74B-HD	6,636.00
	Cabinet Only	40 x 26.5 x 94	4101-62B	4,206.00	4101-73B	4,566.00	4101-62B-HD	4,752.00	4101-73B-HD	5,112.00
		52 x 26.5 x 94	4101-64B	4,873.00	4101-75B	5,232.00	4101-64B-HD	5,419.00	4101-75B-HD	5,778.00
C	Filter/ Blower	40 x 26.5 x 94	4205-65B	5,030.00	4205-76B	5,389.00	4205-65B-HD	5,576.00	4205-76B-HD	5,935.00
		52 x 26.5 x 94	4205-67B	5,588.00	4205-78B	5,588.00	4205-67B-HD	6,134.00	4205-78B-HD	6,493.00
	Cabinet Only	40 x 26.5 x 94	4101-66B	4,098.00	4101-77B	4,457.00	4101-66B-HD	4,634.00	4101-77B-HD	5,003.00
		52 x 26.5 x 94	4205-24C	4,750.00	4205-25C	5,109.00	4205-24C-HD	5,296.00	4205-25C-HD	5,655.00

Replacement HEPA Filter

For models with filter/ blower unit. Rated 99.99% efficient @ 0.3 µm particles

Cat. #	$/Each
1681-02	363.00

Cleanroom Hangers

Electropolished SS Closed Loop

Cat. #	$/Each
1530-30-2	14.00

Detachable

Cat. #	$/Each
1530-31-2	15.00

QUICK Ship

Items in blue

** Acrylic is damaged by alcohol and strong cleaning agents*

VALULINE™ SMARTDESICCATOR™

- "Smart" relative humidity controller regulates nitrogen purge to maintain user-selected set point
- Easy two-button programming—takes seconds to install and set target relative humidity level
- Eliminates nitrogen waste by purging only when needed—cuts N_2 expenses by up to 78%
- Available in acrylic or static-dissipative PVC, which eliminates surface charges that attract particles and create electro-static discharge
- Reinforced doors and rigid cabinet construction ensure a long service life
- Chrome-plated rack allows versatile shelf positioning to accommodate various sample sizes (order plastic or electropolished stainless steel shelves separately)

Model shown is 10-chamber Acrylic, Cat. No. 3949-48A

ValuLine SmartDesiccator Plastic Desiccator					
Specifications		Clear Acrylic*		Static-Dissipative PVC	
No of Chambers	Nominal Dimensions W" x D" x H" (mm)	Cat. #	$/Each	Cat. #	$/Each
1	17.12 x 16 x 13	3949-41A	1,301.00	3949-49A	1,450.00
2	17.12 x 16 x 25	3949-42A	1,603.00	3949-50A	1,902.00
3	17.12 x 16 x 37	3949-43A	2,015.00	3949-51A	2,277.00
4	17.12 x 16 x 49	3949-44A	2,132.00	3949-52A	2,693.00
5	17.12 x 16 x 61	3949-45A	2,369.00	3949-53A	3,078.00
6	35 x 16 x 37	3949-46A	3,054.00	3949-54A	4,117.00
8	35 x 16 x 49	3949-47A	3,464.00	3949-55A	4,740.00
10	35 x 16 x 61	3949-48A	4,203.00	3949-56A	5,863.00

** Acrylic is damaged by repeated contact with strong cleaning agents, including alcohol*

CE

All plastic and stainless steel SmartDesiccator cabinets

VALULINE™ ES DESICCATORS

Extended Storage Systems

- Reinforced doors and rigid cabinet construction
- Select economical acrylic of static-dissipative PVC for electro-static protection and enhanced particle control
- Adjustable-height acrylic or electropolished stainless steel shelves (order separately)
- Easy-clean rounded corners for particle-sensitive applications
- Flowmeter and Automatic RB® (Relief/Bleed) valve allow nitrogen purging for dry storage requirements (order separately)
- Also ideal for use with desiccant or as a general-purpose dust-free storage cabinet

ValuLine Extended Storage (ES) Desiccator					
Specifications		Clear Acrylic*		Static-Dissipative PVC	
No of Chambers	Nominal Dimensions W" x D" x H" (mm)	Cat #	$/Each	Cat #	$/Each
1	19.125 x 16 x 13	3949-25B	301.00	3949-30B	450.00
2	19.125 x 16 x 25.25	3949-26B	603.00	3949-31B	902.00
3	19.125 x 16 x 37.25	3949-27B	1,015.00	3949-32B	1,277.00
4	19.125 x 16 x 49.25	3949-28B	1,132.00	3949-33B	1,693.00
5	19.125 x 16 x 61.25	3949-29B	1,369.00	3949-34B	2,078.00
6	36.75 x 16 x 37.25.	3949-35B	2,054.00	3949-38B	3,117.00
8	36.75 x 16 x 49.25	3949-36B	2,464.00	3949-39B	3,740.00
10	36.75 x 16 x 61.25	3949-37B	3,203.00	3949-40B	4,863.00

** Acrylic is damaged by repeated contact with strong cleaning agents, including alcohol*

VACUUM DESICCATORS

See specifications/ordering chart below.

A. High-Capacity Chamber (see chart below)

Ideal for degassing large assemblies. Powder-coated steel chamber with 1"-thick aluminum door. Includes 1"-thick polycarbonate viewing window, piping, fittings and solenoid valve for convenient control (order pump and vacuum controller separately). 18"W x 48"L stainless steel shelf creates a convenient platform 4.5" above chamber floor.

	Cat. #	$/Each
Powder-Coated Steel Stand Raises chamber shelf to 34.6" above floor level	**3404-04**	**1,248.00**

B. Stainless Steel Chamber (see chart below)

Double-wall construction; includes 8" x 8" tempered glass viewing window and dual metering valves and 0-30" vacuum gauge.

C. Aluminum Vacuum Chamber (see chart below)

One-inch-thick aluminum walls support sustained full vacuum without warping. Includes acrylic viewing window, dual metering valves and vacuum gauge. Many standard sizes! Model shown: 5235-34.

D. Full-View Acrylic Chamber (see chart below)

Made of 1/2"-thick cylindrical acrylic. Designed for continuous pump operation with safety relief valve.

E. – J. Acrylic Chambers

See chart below.

Ideal for degassing and transporting small parts. Designed for continuous pump operation (order below).

Vacuum Chamber Accessories

	Cat. #	$/Each
Metering Valves (installed) Two required for direct connection to pump, or one if connecting Vacuum Controller.	**5235-09**	**168.00**
Vacuum Gauge (installed) Required if selected pump does not include metering kit.	**5235-10**	**206.00**

Vacuum Controller

Recommended for all continuous vacuum applications. For Full Vacuum (to 29.9" Hg). Select appropriate Turnkey Connection Kit below.

	Cat. #	$/Each
120VAC, 60Hz	**1681-75**	**2,878.00**
220VAC, 50Hz	**1681-75-220**	**2,878.00**

Connection Kit

Includes all connections, vacuum, solenoid, turnkey installation and testing charges.

	Cat. #	$/Each
For Type A–C Chambers	**5400-25**	**1,600.00**
For Type D–J Chambers	**5400-24**	**1,600.00**

Shown with optional stand, vacuum pump and controller

Complete line of pumps at TerraUniversal.com

Vacuum Chambers						Factory Tested*		
Type	**Dimensions** (W" x D" x H" excluding hardware)		**Max. Vacuum**	Cat. #	$/Each	**Max. Vacuum**	Cat. #	$/Each
	Outside	**Inside**						
A	49L x 30 dia.	48L x 26 dia.	29.9" Hg	**3404-03**	**24,178.00**	—	—	—
B	13 x 15 x 14	8 x 12 x 8	29.9" Hg	**3404-00**	**3,476.00**	—	—	—
C	17 X 17 X 13.5	15 X 15 X 11.5	29.5" Hg	**5235-34**	**5,968.00**	—	—	—
D	12"-dia. x 14.5	11"-dia. x 13.5	29.8" Hg	**5235-08**	**2,462.00**	—	—	—
E	17 x 11 x 12.5	14 x 8 x 9.5	27.0" Hg	**5235-00A**	**2,309.00**	29.9" Hg	**5235-16**	**3,359.00**
F	13 x 13 x 7.5	10.5 x 10.5 x 4.5	27.0" Hg	**5235-01A**	**1,738.00**	29.9" Hg	**5235-17**	**2,788.00**
G	9 x 9 x 9.5	6 x 6 x 6.5	27.0" Hg	**5235-02A**	**1,508.00**	29.9" Hg	**5235-18**	**2,558.00**
H	13 x 13 x 10.5	10 x 10 x 7.5	27.0" Hg	**5235-03A**	**2,025.00**	29.9" Hg	**5235-19**	**3,075.00**
I	17 x 17 x 13.5	15 x 15 x 11.5	27.0" Hg	**5235-04A**	**2,387.00**	29.9" Hg	**5235-20**	**3,437.00**
J	26.5 x 11 x 12.5	11 x 8 x 9.5	27.0" Hg	**5235-06A**	**2,612.00**	29.9" Hg	**5235-21**	**3,662.00**

** These models are individually factory leak tested and guaranteed to hold specified vacuum level for a minimum of 96 hours.*

LAB AIDS

A

B *Polypropylene*

B *Acrylic*

C *Polypropylene*

Mini-hood provides the ideal equipment enclosure

C *Acrylic*

D

Clean, dry benchtop storage

E

F

G

Ideal for finger cots

H

I

98 Capacity #4951-05

J

	Item	Dimensions W" x D" x H"	Acrylic Cat. #	Acrylic $/Each	Static Dissipative PVC Cat. #	Static Dissipative PVC $/Each	Polypropylene Cat. #	Polypropylene $/Each
A.	Sneeze Guard	7.125 x 1.75 x 7.75	1601-50	17.00	1601-51	27.00	—	—
	Sneeze Guard	11 x 1.625 x 11	1600-25	20.00	1602-75	30.00	—	—
B.	Dispensing Bin	5 x 8 x 11.65	4950-12	156.00	4950-13	272.00	4952-06	271.00
C.	Mini-Hood	20 x 12 x 16	4950-89	450.00	4950-90	728.00	4952-00	726.00
D.	Balance Shield	12.25 x 13 x 12	4950-55	192.00	4950-56	291.00	—	—
E.	Micro-Desiccator Storage Cabinet	9 x 11 x 8.5	4950-06	464.00	4950-08	738.00	4952-01	704.00
F.	Tissue Box Holder	5.5 x 5.75 x 3.125	4950-41	20.00	4950-42	29.00	—	—
F.	Tissue Box Holder	5 x 5.125 x 4.125	4005-53	29.00	4005-54	36.00	—	—
F.	Tissue Box Holder	5.5 x 15 x 4.25	4950-43	42.00	4950-44	50.00	—	—
G.	Pigeon-Hole Organizer	16 x 16 x 7.5	4005-22	149.00	—	—	—	—
H.	Small Parts Dispenser	17.5 x 10.375 x 13	4005-51	398.00	4005-50	593.00	4952-07	623.00
I.	Safety Glasses Dispenser	6.75 x 5.75 x 17	4950-45A	296.00	4950-46A	372.00	4952-10A	391.00
J	Clip Board, Electropolished SS	12 x 9.5	1350-00A-2	62.00	Also available in stainless steel.			

STAINLESS STEEL GLOVE DISPENSERS

Models for loose or packaged gloves

Stainless Steel Glove Dispensers –Electropolished 304 (316 SS available) by Terra

	Description	Dimensions W" x D" x H"	Cat. #	$/Each
A	Glove Dispenser Wall-mount	8 x 8 x 24 (1 Compartment)	**4951-37-2**	507.00
	Glove Dispenser Wall-mount	16 x 8 x 24 (2 Compartments)	**4951-38-2**	974.00
	Glove Dispenser Wall-mount	24 x 8 x 24 (3 Compartments)	**4951-32-2**	1,226.00
	Glove Dispenser Wall-mount	34.5 x 8 x 24 (4 Compartments)	**4951-33-2**	1,559.00
B	Bagged Gloves Dispenser Wall-mount	24.5 x 7.5 x 24 (2 Compartments)	**4951-43-2**	**999.00**
	Bagged Gloves Dispenser Wall-mount	34.5 x 7.25 x 24 (3 Compartments)	**4951-44-2**	**1,242.00**
	Bagged Gloves Dispenser Wall-mount	27 x 7 x 24 (3 Compartments)	**4951-30-2**	**1,181.00**
	Bagged Gloves Dispenser Wall-mount	34.5 x 8 x 24 (4 Compartments)	**4951-31-2**	1,559.00
	Bagged Gloves Dispenser Wall-mount	27 x 8.25 x 249 (4 Compartments)	**4951-46-2**	1,493.00
C	Glove Dispenser with Waste Bin	24 x 18.5 x 59 (3 Compartments)	**4951-34-2**	**2,558.00**
	Glove Dispenser with Waste Bin	31.5 x 18.5 x 63 (4 Compartments)	**4951-39-2**	**3,104.00**
D	Glove Dispenser (not shown)	12 x 6 x 6	**4951-50-2**	138.00
E	Glove Dispenser (not shown)	5.75 x 3.875 x 11 (1 box)	**4951-53-2**	63.00
F	Glove Dispenser	12 x 3.75 x 11 (2 boxes)	**4951-54-2**	69.00
G	Glove Dispenser	18 x 3.75 x 11 (3 boxes)	**4951-55-2**	88.00
H	Glove Dispenser (not shown)	5.75 x 3.875 x 22 (2 boxes)	**4951-51-2**	70.00
I	Glove Dispenser (not shown)	5.75 x 3.875 x 33 (3 boxes)	**4951-52-2**	**78.00**

PLASTIC GLOVE DISPENSERS

Polypropylene

Polypropylene

Acrylic, Static Dissipative PVC and Polypropylene Glove Dispensers by Terra

	Glove Dispenser	Dimensions W" x D" x H"	Acrylic		Static Dissipative PVC		Polypropylene	
			Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
A	Wall Mount (3 Chamber)	16 x 11.5 x 12	**4005-56**	300.00	**4005-57**	454.00	**4952-03**	495.00
B	Wall Mount	16.5 x 12.5 x 17	**4950-72**	270.00	**4950-74**	364.00	**4952-02**	401.00
C	Plastic Boxed Gloves Holder	5.125 x 11.5 x 4.88	**4950-85**	59.00	**4950-86**	98.00	—	—
D	Benchtop	12 x 6 x 6	**4951-03**	93.00	**4951-04**	141.00	**4952-04**	**140.00**

CLEANING

Ultrasonic Cleaners

Available in digital and manual series with five capacity sizes to choose from, these ultrasonic cleaners provide thorough, safe cleaning of small and medium-sized parts. Features on select models include heating and timer configurations and de-gas functions. Models meet CE, UL, CSA and FCC regulations and standards. (#2631-00A Shown)

Tank Capacity	Cat. #	$/Each
0.5 gallons	**2631-00A**	**595.00**
0.75 gallons	**2617-00A**	**753.00**
1.5 gallons	**2618-00A**	**1,099.00**
2.5 gallons	**2619-00A**	**1,462.00**
5.5 gallons	**2637-00A**	**2,529.00**

Ionizing Blow-Off Gun

Safely removes surface contaminants with a burst of clean, static-neutralized air or nitrogen. Low-voltage design for safe, low-EMI/RFI operation. Includes 0.4-micron capsule filter.

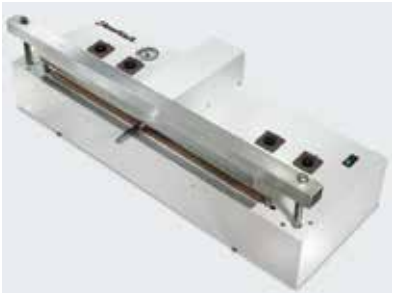
Cat. #	$/Each
110VAC	
2005-55	**693.00**
Transformer 120Vac, 60Hz	
2005-09A	**38.00**
Transformer 240Vac, 50Hz	
2005-09A-220	**47.00**

SNO GUN™ II High-Precision Cleaner

The safe, inexpensive, highly effective alternative to solvent or dry nitrogen cleaning of sensitive parts! Dry ice particles remove contaminants as small as 0.1 micron without disturbing delicate surface features. Specialized inert gas enclosure available to prevent moisture condensation.

Cat. #	$/Each
4545-00A	**1,797.00**

VACUUM SEALERS



AV Vacuum Sealer With Gas Purge

The foot-pedal-activated, retractable nozzle AV series vacuum sealers offer gas-flush vacuum packaging at its finest. The 0.25"-wide sealing element delivers a leak-proof seal for electronic devices that require moisture barrier bags. With one touch of the pedal, the AV flushes out oxygen and moisture with nitrogen, and your sensitive components are sealed in seconds. Also great for dry packaging applications and shipping containers. Compressed air required.

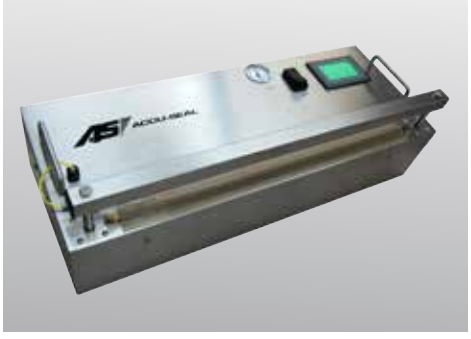
	120VAC		220VAC	
Seal Length	Cat. #	$/Each	Cat. #	$/Each
20"	**4052-15***	**1,621.00**	**4052-15-220***	**1,905.00**
20"	**4052-19**	**2,031.00**	**4052-19-220**	**2,316.00**
25"	**4052-20**	**2,425.00**	**4052-20-220**	**2,710.00**
30"	**4052-21**	**2,588.00**	**4052-21-220**	**2,872.00**
35"	**4052-22**	**2,750.00**	**4052-22-220**	**3,035.00**

**** These models do not include the gas flush feature.***

Digital Vacuum Sealers

Digital controls ensure repeatable, uniform sealing cycles. The standard cycle is gas-vacuum-seal; optional firmware change allows vacuum-gas-seal cycling. All units feature gas purge and have 0.25" seal elements. Three-year standard warranty.

	120VAC, 50/60Hz		220VAC, 50Hz	
Seal Length	Cat. #	$/Each	Cat. #	$/Each
15"	**4053-01**	**1,706.00**	**4053-01-220**	**1,950.00**
20"	**4053-02**	**1,869.00**	**4053-02-220**	**2,113.00**
25"	**4053-03**	**2,234.00**	**4053-03-220**	**2,478.00**
30"	**4053-04**	**2,356.00**	**4053-04-220**	**2,600.00**
35"	**4053-05**	**2,559.00**	**4053-05-220**	**2,803.00**



Validatable Accu-Sealers 5300 & 5400

Validatable Accu-Sealers give you absolute process control for validation, and provides uniform, reliable seals without the need for adjustment of machine settings in a production run. Designed to meet cleanroom requirements and seals a wide range of medical packaging materials. The 5400 series has a built in air compressor for plug and seal performance.

	5300 Series		5400 Series w/ Compressor	
Seal Length	Cat #	$/Each	Cat #	$/ Each
15"	**4049-81**	**5,039.00**		
20"	**4049-82**	**5,266.00**	**4049-84**	**6,149.00**
25"	**4049-83**	**5,494.00**	**4049-85**	**6,306.00**

Validatable Impulse Heat Sealer

The 6300 series is designed for repeatable and reliable medical sealing of pre-made pouch materials that meet cleanroom standards. The seamless stainless steel case is easily sanitized and built for long lasting and low maintenance operation. It is 100% validatable and calibratable.

Seal Length	Cat #	$/ Each
15"	**4049-65**	**6,752.00**
20"	**4049-66**	**6,755.00**
25"	**4049-67**	**7,105.00**
30"	**4049-68**	**7,455.00**
35"	**4049-69**	**7,805.00**

Nilfisk Cleanroom Vacuum Cleaner With ULPA Filtration

A four-stage filtration system, which includes a final ULPA filter, rated 99.999% efficient @ 0.12 µm particles, and quiet operation (59 dBA at 6.5 feet) make this vacuum ideal for cleanroom use. Includes filter set and tool kit with two 22" stainless steel tubes, 3" round brush, combination 12" floor nozzle, 6'6" conductive plastic hose, trolley, 30' power cord, conductive crevice nozzle and 5" utility nozzle. Tank capacity: 3.25 gallons.

	Cat. #	$/Each
120VAC	**1764-00**	1,089.00
240VAC	**1764-00-220**	1,148.00

Minuteman Explosion-Proof Vacuum

This 15 gal., wet/dry vacuum is ideal for picking up flammable liquids, finely pulverized dust, and other hazardous materials. Operates wet and dry in Class I Group D and Class II Group F & G atmospheres. Features a 22-gauge non-sparking stainless steel tank, with ULPA filter, manometer, and static conductive casters and wheels.

	Cat. #	$/Each
115VAC	**1001-70**	**6,377.00**
Tool Kit	**1001-71**	**1,026.00**

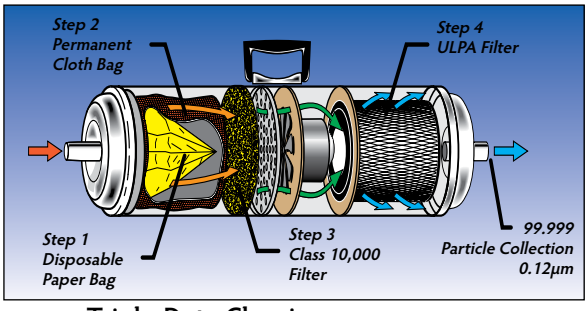
Nilfisk SS Cleanroom Vacuum with Safe-Pak

Designed for cleanroom environments down to ISO 4 (Class 10), this compact and quiet cleanroom vacuum has the Safe-Pak function that effectively contains and disposes of hazardous materials. The multi-stage ULPA filtration system removes particles down to 0.12 microns at 99.999% efficiency. Safe-Pak can be interchanged with standard vacuum collection containers. Lightweight units are constructed with pharmaceutical standard AISI 316 stainless steel. Vacuum is easy to clean with autoclavable parts. Tank capacity: 3.25 gallons.

	Cat. #	$/Each
110/120V	**1764-37**	1,625.00
Safe-Pak Replacement Collection Container	**1764-43**	362.00

Compact, Versatile MicroVac™ — Vacuum or Clear Air Blower

- Includes 99.999% efficient ULPA filter to capture sub-micron particulates
- Four-stage filtering system
- Ideal for cleaning up hazardous powders, pharmaceutical spills
- Ventilates bio cabinets, glove boxes and other small enclosures
- Provides burst of particle-free air to clean keyboards, PCBs and other delicate surfaces
- Mini-tool kit pinpoints small surface features



Triple-Duty Cleaning —

- Cleans up dust and chemical spills
- Clean air blower pinpoints ULPA-filtered air
- Ventilates glove box or other enclosure

MicroVac	Cat. #	$/Each
110VAC/60Hz	**5100-00**	1,219.00
220VAC/50Hz	**5100-00-220**	1,346.00
MicroVac Tool Kit	**5100-05**	**35.00**
Replacement Filters		
Stage 1 Disposable Paper Bag	**5100-01**	89.00
Stage 3 Class 10,000 Filter	**5100-02A**	**17.00**
Stage 4 Class Replacement ULPA Filter	**5100-04**	**173.00**

CENTRIFUGES by Thermo Scientific

Heraeus Multifuge X1

As the only 1-liter centrifuge capable of spinning 14 x 50 ml conical tubes in angle configuration at over 12000 xg, the energy saving Multifuge X1 accepts various swinging bucket, fixed-angle and lightweight carbon fiber rotors. Features: 3-second rotor exchange; biocontainment solution; powersave; auto-correct detection.

Select models are UL, CE, or CSA certified; Max Speed: 15,200 rpm (depending on rotor); Max RCF: 25,000 to 25,999 x g; Dimensions: 17.3W x 23.8D x 14.2H in. (Ventilated)/ 24.5W x 23.8L x 14.2H in. (Refrigerated).

	Cat. #	$/Each
Ventilated	**1538-52**	**4,921.00**
Refrigerated	**1538-54**	**7,048.00**

Heraeus Multifuge X3

With nearly twice the capacity for standard tubes compared to same-sized centrifuges, the energy saving, 3-liter Multifuge X3 is ideal for high throughput environments. Units accept a wide range of rotors. Features: 3-second rotor exchange; biocontainment solution; powersave; auto-correct detection.

Select models are UL, CE, or CSA certified; Max Speed: 6000 to 15200 rpm; Max RCF: 7164 to 25314; Dimensions: 22.2 x 26.4 x 14.2 in. (Ventilated)/ 29.3 x 26.4 x 14.2 in. (Refrigerated). Available in benchtop and floor models.

	Cat. #	$/Each
Ventilated	**3618-71**	**6,879.00**
Refrigerated	**3618-73**	**9,231.00**
Floor Standing Models		
Ventilated	**3618-75**	**7,795.00**
Refrigerated	**3618-77**	**10,066.00**

Heraeus™ Megafuge™ 8 Benchtop Centrifuge

These ventilated centrifuges accommodate swing-out and fixed-angle rotors for application flexibility. The Megafuge 8 also features a 3-second rotor exchange and processes 8 x 50 mL conical tubes and 24 x 5/7 mL blood tubes. Pre-saved protocols and password protection provide security. Economical Centrifuge Start-Up Packages for research and Stand-Out Packages for clinical applications are available with rotors, bucks and adapters.

Select models are UL, CE and IVD; Max Speed: 16,000 (Fixed Angle MicroClick 24 x 20 rotor); Max RCF: 24,328 (Fixed Angle MicroClick 24 x 20 rotor); Dimensions: 14.6W x 18.9D x 12.2H in. (lid closed)

120V Models	Cat. #	$/Each
Heraeus Megafuge 8	**1716-01**	**2,188.00**
High Capacity Stand-Out	**1717-04**	**3,848.00**
High-Capacity, Cell Culture Start-Up	**1717-01**	**3,796.00**

Heraeus Clinifuge Centrifuge

Ideal for clinical blood sample processing in small labs and medical practices, the Heraeus Clinifuge is also an excellent standby unit for larger labs. The unit protects against user error by displaying faults and accepts a wide range of adapters. Rotor chambers are completely sealed during centrifugation and the brushless motor eliminates carbon brusher replacement purchases. Autoclavable rotor is easy to remove and clean. This centrifuge is also able to self-diagnose by detecting and displaying faults.

CSA Certified; Capacity: 12 x 15mL; Max Speed: 5000rpm; Max RCF: 2600 x g.

	Cat. #	$/Each
120V, 60Hz	**1798-58**	**1,579.00**

CENTRIFUGES by Benchmark Scientific

MyFuge™ Mini

This personal centrifuge is small and silent, but powerful. The rotor instantly reaches 6,000 rpm once the lid is closed and quickly stops once the lid is open. Ideal for quick spin downs of microtubes and PCR tubes. The unit comes with an installed eight position microtube rotor and the second PCR 0.2 ml rotor is conveniently stored in the bottom compartment.

Color	Cat. #	$/Each
Red	**BR04-05**	**230.00**
Blue	**BR04-06**	**230.00**
Clear	**BR04-07**	**230.00**
Green	**BR04-08**	**230.00**
Purple	**BR04-09**	**230.00**

MyFuge™ 12 MiniCentrifuge

The convenient low profile design of the MyFuge 12 features the COMBI-Rotor™, which eliminates the need to change rotors when switching between microtubes and PCR strips. With twice the capacity of most mini centrifuges, silent operation and the quick start and stop action by just opening and closing the lid, the MyFuge 12 is an ideal personal centrifuge or as an additional unit to any laboratory. .

Capacity: 12 x 15/2.0ml tubes; 32 x 0.2ml tubes; 4 x PCR strips (8x 0.2ml) Speed Range: 5,500rpm/2,000xg; Dimensions: 5.5" x 7.9" x 4.4" (140 x 201 x 112 mm).

	Cat. #	$/Each
115V, 60Hz	**BR15-00**	**306.00**
230V, 60Hz	**BR15-01**	**306.00**

MaxQ 5000 *by Thermo Scientific*

Foot pedal-operated shaker comes in analog and digital models

Perfect for cell cultures, solubility studies, extraction procedures and more.

	Cat. #	$/Each
Analog	**5322-20-220**	**10,021.00**

MaxQ 4450 Orbital Shaker

by Thermo Scientific

Combines incubated/refrigerated temperatures

Analog or digital, the unit fulfills a variety of molecular biology, cell culture, and dissolution study purposes.

	Cat. #	$/Each
Analog	**5322-02**	**10,016.00**

MaxQ 2000 *by Thermo Scientific*

Analog or digital units use triple eccentric drive to ensure smooth, uniform agitation

Operate in continuous or timed mode for applications including cell cultures, bacterial suspensions, solubility studies, staining, and hybridization.

	Cat. #	$/Each
Analog	**5322-00**	**1,499.00**

Incu-Shaker™ 10L *by Benchmark Scientific*

Magnetic platform and clamps for easy shake and change of various size flasks

Ideal for busy labs, this quiet, heavy duty unit provides temperature accuracy and uniformity, reduces separation and it includes an optional shelf.

	Cat. #	$/Each
10L	**BR13-00**	4,868.00
10L (Ref.)	**BR13-29**	7,093.00
Mini	**BR13-02**	2,412.00

Orbi-Shaker™ Orbital Shaker

by Benchmark Scientific

Powerful motor drive able to shake a 14 lb. load at up to 300 rpm

The optional MAGic Clamp platform (14" x 12") makes it easy to shake and change flasks and racks. The non-slip, rubber coated surface provides extra protection.

	Cat. #	$/Each
115V	**BR09-12**	1,318.00
MAGicClamp™ Platform	**BR09-09**	199.00

Multi-Therm™ Vortexer

by Benchmark Scientific

Ideal for molecular biology applications, this 8" x 11" vortexer is compatible with many popular tubes and plates. Heat/cool or Heat models are available in 115V and 230V.

115V	Cat. #	$/Each
Heat/Cool	**BR14-02**	2,179.00
Heat	**BR14-00**	1,530.00

WATER SYSTEMS: DI and RO – COMPLETE SPECS AT TERRAUNIVERSAL.COM

Barnstead MicroPure

by Thermo Scientific

These ultrapure water systems provide 15 liters per day of Type 1 water for molecular biology, microbiology, and analytical chemistry laboratories.

	Cat. #	$/Each
Analytical and UV System	**3614-91**	3,375.00
UV-ST System	**3614-96**	3,531.00

Barnstead GenPure Water Purification Systems

by Thermo Scientific

Produces up to 200L/day of GLP-Compliant Type 1 ultrapure water

Able to mix and match UF, UV and TOC systems for user specific water purity levels, GenPure models are ideal for use in life sciences and analytical chemistry.

	Cat. #	$/Each
GenPure	**1714-32**	**5,049.00**
GenPure UF	**1714-33**	**5,507.00**

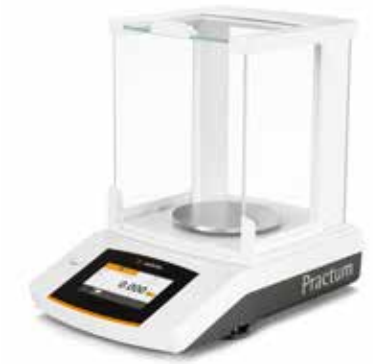
LabTower TII Water Purification System *by Thermo Scientific*

Produces and stores GLP-Compliant Type 2 water

This standalone unit with casters has an integrated 100L tank that recirculates reservoir water to preserve purity even during periods of stagnation.

	Cat. #	$/Each
20L/hour	**1108-50**	8,327.00
40L/hour	**1108-53**	**9,731.00**

ANALYTICAL BALANCES by Sartorius



Practum® Analytical Balances

Foolproof with rugged weigh cell for reliable results, the Practum is ideal for busy labs and new operators. These units feature: sturdy draft shield, menu-lock, touchscreen, easy data transfer, weighing port, overload protection and level indicator. Dimensions: 8.5"W x 14.1"D x 12.6"H.

Weighing Capacity	Cat. #	$/Each
120 g	**5701-18**	1,654.00
220 g	**5701-17**	2,008.00

Quintix® Analytical Balances

Built-in applications, intuitive operating design and extensive accessories in the Quintix allow users to customize settings to achieve their desired weight measurement tasks easily, reliably and efficiently. Dimensions: 8.5"W x 14.1"D x 12.6"H.

Weighing Capacity	Cat. #	$/Each
120 g	**5702-01**	2,545.00
220 g	**5702-02**	2,885.00

Secura® Analytical Balances

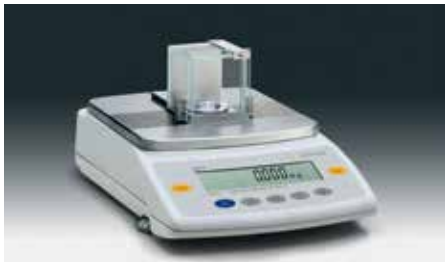
Ideal for use in pharmaceutical weighing applications, the Secura features Advanced Pharma Compliance, LevelControl, and USP Minimum sample weight measurement to ensure the precision and quality of measurements in regulated areas. Dimensions: 8.5"W x 14.1"D x 12.6"H.

Weighing Capacity	Cat. #	$/Each
120 g	**5702-03**	3,393.00
220 g	**5702-04**	3,765.00

Cubis MSA2255-000-DM Semi Micro-Balance

The unique built in "NICE" (Neutralization by Ionic Charge Elimination) static eliminator neutralizes electrostatic charges on the samples.

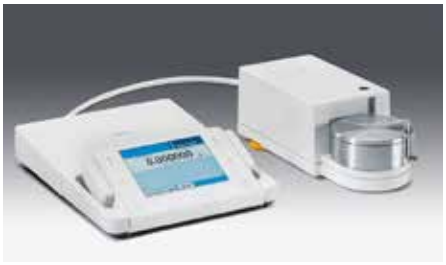
Cat. #	$/Each
5701-04	**13,558.00**



Cubis MSA3.6P Micro-Balance

Micro-balances combine speed, weighing sensitivity, and precision. This unit offers PolyRange weighing with readability to 0.002 mg and weighing capacity down to 0.5 g. Repeatability: ≤ 0.001 mg. Response time: ≤ 10 seconds.

Cat. #	$/Each
5701-02	**18,692.00**



Cubis MSA6.6S Micro-Balance

These micro-balances feature SQmin minimal sample weight function for US Pharmacopeia compliance. Readability to 0.1 µg. Weighing capacity down to 6.1 g. Repeatability: ≤ 1.0 µg. Response time: 10 seconds.

Cat. #	$/Each
5701-01	**24,041.00**

THERMAL CYCLER by Benchmark Scientific

TC9639 Thermal Cycler

Ideal for medium to high throughput laboratories, the TC9636 Thermal Cycler makes it quick and easy for users to set up programs and protocols. The large, full color touch screen allows the creation of icons for most used programs. The program wizard guides users through protocol set-up in a single screen and allows for program edits and alphanumeric naming of programs and folders. Condensation and evaporation of samples are prevented by the fully adjustable heated lid. Units also feature programmable lid temperature and the lid automatically shuts off when the block temperature is below 35°C. A proprietary algorithm with tight tolerances accurately controls heating and cooling of the block. The multi-format block of the TC9636 eliminates the expense and need for multiple interchangeable blocks and the model accepts 96 x 0.2ml tubes, a 96 well plate or 39 x 0.5ml tubes. For high-throughput labs, the T5000-384 with 384-well block is available.

	Cat. #	$/Each
TC9639 US plug	**BR19-43**	3,850.00
TC9639 EU plug	**BR19-44**	3,850.00
T5000-384 US plug	**BR19-46**	4,250.00
T5000-384 EU plug	**BR19-47**	4,250.00

Provides consistent and reliable results with unlimited program storage capability

Oasis™ CO_2/O_2 Incubators

by Caron Products

This compact, stackable unit saves lab work space while providing intuitive operation and precise control. A highly reliable IR sensor ensures quick recovery after the door is opened, and a tri-zone temperature control system enhances heating efficiency and uniformity. A decon system cleans the incubator overnight. Temperature range: 5° above ambient to 60°C. Capacity: 10 cu. ft. Power: 115VAC (230VAC models available)

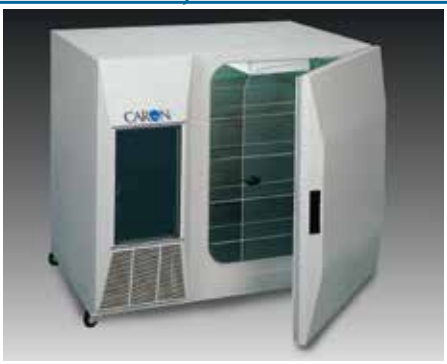
Type	Cat. #	$/Each
CO_2	**5757-25**	**6,084.00**
CO_2/O_2	**5757-31**	**7,847.00**

Reach-In CO_2 Incubator

by Caron Products

This series provides the perfect conditions for high-volume cell culture. Control parameters and uniformity rival any conventional incubator. A drift-resistant RTD sensor provides precise temperature control from 10° above ambient to 60°C. Power: 115VAC (230VAC and other temperature models available).

Capacity	Cat. #	$/Each
25 cu. ft.	**5757-22**	**13,434.00**
33 cu. ft.	**5757-29**	**14,341.00**



Environmental Chambers

by Caron Products

Microprocessor-controlled chambers provide precise control over environmental conditions for repeatable results. ***Refrigerated Incubators*** provide precise temperature control from 5°C to 60°C. ***Stability Chambers*** add a relative humidity system with solid-state humidity sensor and controller that allow humidification and dehumidification for operation from 20% to 98% RH. All incorporate environmentally friendly HFC refrigerant and CFC-free insulation. Light packages and chart recorders are optional.

Models below are 115VAC; 230VAC also available.

10 Cubic-Foot Capacity	Cat. #	$/Each
Refrigerated Incubator	**5757-03**	**11,077.00**
Stability Chamber	**5757-05**	**14,247.00**

HOT PLATES

Hot Plates

by Benchmark Scientific

Made with durable, chemical resistant white ceramic top plate, these hot plates are ideal for use inside bio-hoods and crowded benchtops. Advanced microprocessor controls with turn knobs provide precise adjustments and maintenance of heating and mixing. Units are compatible with various sizes of borosilicate glass beakers, flasks, and bottles. Surface dimension: 7.5" x 7.5" with an 8" x 9" footprint.

	Cat. #	$/Each
115V, 50/60Hz	**BR05-01**	**183.00**

Super-Nuova® Digital Hot Plates/ Stirrers

by Thermo Fisher Scientific

Aluminum and ceramic hot plate stirrers feature a bright LCD display for temperature, RPM and time. Units also have over temperature protection, temperature probe, program settings, HOT TOP warning and a spill deterrent design that protects electronics.

Aluminum top models are also available. Heating surface: 7" x 7" and 10" x 10"

	Cat. #	$/Each
110V Ceramic Stirring Hotplate 7" x 7"	**5324-00**	**680.00**

Explosion-Proof Hot Plate

by Thermo Scientific

This corrosion-resistant, easy-to-clean unit is specifically designed to ensure safe heating in potentially explosive situations. The cast-aluminum top plate provides effective heat transfer, and all controls are contained in an aluminum housing, protected from the explosive atmosphere. Heating surface: 6" x 6". Temperature range: to 220°C (428°F). UL-listed for Class 1 and Group D.

	Cat. #	$/Each
Hot Plate	**4000-92**	**1,022.00**

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