Product Sampler:
Desiccators
Cleanroom Storage & Handling
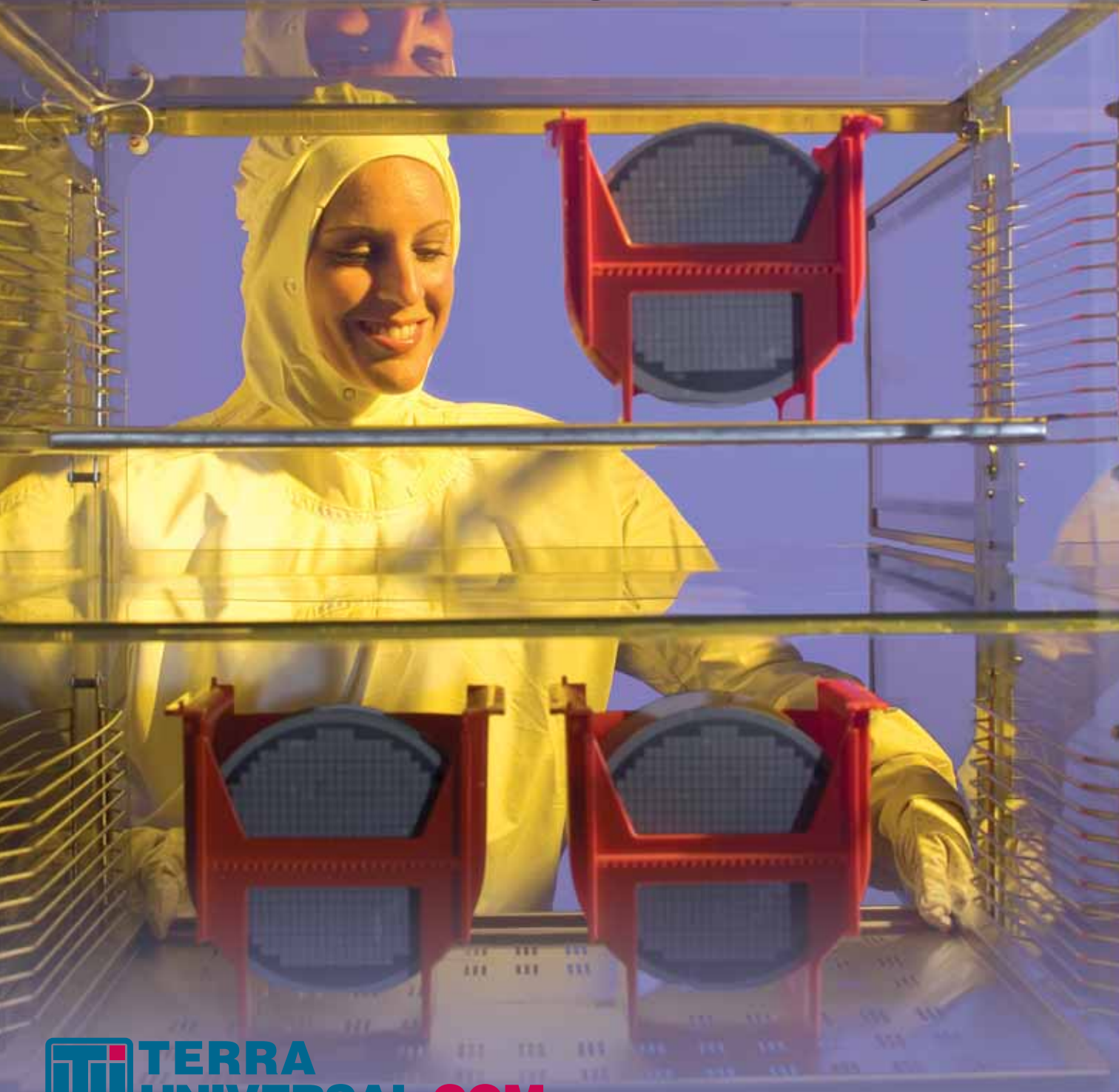
TERRA
UNIVERSAL.COM
Critical Environment Solutions

NitroPlex™ — Zero Tolerance Moisture Control

Terra's NitroPlex™ Desiccator Control System optimizes nitrogen purge efficiency for the most demanding applications, when every second of moisture exposure counts.

The NitroPlex™ is the only humidity control system that combines the monitoring and control capabilities required in zero-tolerance applications with miniaturized semiconductor components, bio/pharmaceutical samples and other moisture-sensitive materials.

Chamber-by-Chamber Multiplexed %RH Monitor/Control

A separate high-accuracy, miniaturized humidity module in each desiccator chamber provides independent monitor/control capability. Each module can be programmed locally or remotely to maintain a humidity set point from ambient down to 0%RH.

Nitrogen is directed only where needed to keep the %RH level below the critical set point.

Cuts System Recovery Time to Seconds

Desiccators controlled by a flowmeter may require an hour or more to regain a humidity set point after a chamber access door is opened. When doors are opened repeatedly, humidity levels can remain above the critical set point for an entire work day.

Testing shows that the NitroPlex™ cuts this recovery time by over 400% in a 4-chamber desiccator (see sidebar below). In Terra's Microccator™ this recovery time is cut to a matter of seconds, eliminating moisture-caused damage (see photo on facing page).

Product Safety Alarm

The NitroPlex™ eliminates another common cause of moisture exposure: access doors mistakenly left open or ajar. The system directs a high-flow nitrogen purge to any chamber the moment its door is opened. If the door remains opened longer than a specified delay time, the NitroPlex™ issues warning alarms to alert personnel to the problem.

## Recovery Time Comparison — The NitroPlex™ Advantage

Almost any desiccator maintains a low-RH storage environment under ideal conditions. Problems begin when someone opens a door.

Immediately, moisture-laden air backfills the cabinet. The measure of an efficient humidity control system is how quickly the cabinet can remove moisture and recover the initial humidity set point.

In a large desiccator with a flowmeter and a single bleed valve, this recovery can take up to an hour. If, during this recovery period, another door is opened, the process begins again. Moisture may remain present in the storage enclosure during the entire duration of a working shift — negating your investment in desiccator storage and slashing your product yields.

Terra's Dual Purge™ and NitroWatch™ systems improve system recovery time by initiating a high-flow purge when a door opens or humidity creeps above a set point threshold. This variable purging speeds up moisture removal, but recovery can still take up to 40 minutes if only one bleed valve is present (see Figure 1).

Simply by installing Terra's Automatic RB™ (Relief/Bleed) Valve in each chamber, you can cut both the system recovery time and the nitrogen consumption in half (see Figure 2). This configuration minimizes moisture migration – water vapor is purged out of the chamber it enters.
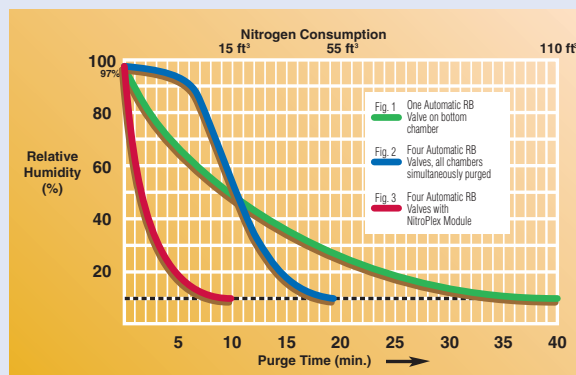
Nitrogen Consumption

Fig. 1: 110 ft³
Fig. 2: 55 ft³ (100% improvement)
Fig. 3: 15 ft³ (nearly 300% improvement)

Recovery Time

Fig. 1: 40 minutes
Fig. 2: 20 minutes (100% improvement)
Fig. 3: 10 minutes (400% improvement)

For optimal efficiency, however, a desiccator requires chamber-by-chamber humidity sensing and purge control. Only Terra's NitroPlex™ system delivers this purge efficiency (see Figure 3). A NitroPlex™ desiccator typically saves up to 77% in nitrogen cost. More importantly, it cuts system recovery time by 400%, ensuring dry storage under real-world operating conditions.

Datalogging – Complete Product Assurance

The NitroPlex™ control system includes capabilities for logging data to a remote PC for subsequent analysis.

A serial port downloads data to a remote PC for display and analysis. For optimal convenience, Terra offers the SmartPlex™: a hand-held computer with software customized to your NitroPlex™ cabinet and application requirements. The SmartPlex™ allows convenient remote programming of chamber set points. It also provides a graphical display of current humidity and set point conditions in each NitroPlex™ chamber and records these data for archiving or analysis.

This datalogging capability provides a detailed, traceable storage and access history for every chamber of a NitroPlex™ desiccator – an invaluable tool in R&D experiments.

System Recovery in Seconds!

Microccator™ No. 9010-10, used with critical night-vision goggle electronics/optics

Activity Report, 4-Chamber Cabinet
Date 6/7/03

Chamber Number	R/H Set Point	R/H In Chamber	Door Open/Closed	Time
1.	2%	2%	Open	8:10 a.m.
		14%	Closed	8:15 a.m.
		2%	Closed	8:20 a.m.
2.	10%	10%	Open	12:05 p.m.
		45%	Closed	12:20 p.m.
		25%	Closed	12:21 p.m.
		10%	Closed	12:23 p.m.
3.	1%	1%	Closed	4:00 p.m.
		1%	Open	4:10 p.m.
		50%	Closed	4:15 p.m.
		1%	Closed	4:20 p.m.
4.	2%	1%	Closed	5:10 p.m.
	20%	2%	Closed	5:15 p.m.
		8%	Closed	5:30 p.m.
		15%	Closed	6:10 p.m.
		20%	Closed	7:20 p.m.
		20%	Closed	8:10 p.m.

SmartPlex™ option datalogs access history and environmental conditions for analysis or printing at a remote PC

Humidity Uniformity

In a large, multi-chamber cabinet with only one humidity sensor, the %RH level can vary as much as 50% from one chamber to another. Because humidity levels in portions of the cabinet remain well above the set point level, moisture can degrade parts before you even realize there's a problem! By sensing humidity levels in each chamber independently, the NitroPlex™ provides complete RH uniformity to eliminate this problem.

Multiplexed Control for Moisture Exposure Studies

Multiplexed humidity monitoring and control also allows a different humidity set point in each desiccator chamber.

This flexibility has several important application benefits. It allows a single cabinet to store parts with varying moisture sensitivities. It also allows accelerated life testing under varying humidity levels for everything from pharmaceuticals to semiconductor ICs. You can even monitor the effects of varying humidity levels on cosmetics and other moisture-sensitive chemical compounds.

Application Versatility

Add the NitroPlex™ to any Terra desiccator cabinet to create a state-of-the-art automated humidity control system. Or customize a NitroPlex™ cabinet to the unique demands of your application.

See page 5 for complete ordering information

Fig. 1:
Dual Purge™/NitroWatch® Systems, One Automatic RB® Valve
Moisture migrates through cabinet

Fig. 2:
Dual Purge™/NitroWatch® Systems, Four Automatic RB® Valves
Moisture migration eliminated

Fig. 3:
NitroPlex™ System
Efficient moisture removal, fast recovery time, reduced N₂ use

Refer to Control System Comparison Chart on page 2 for more information. See NitroPlex™ ordering information on page 5.

What's Your Application?

The standard NitroPlex™ system provides unsurpassed moisture control in dozens of storage applications. Temperature, gas or biological sensors expand the range of critical operations.

- **Microelectronics components, SMDs, hybrid packages**
- **Storage of PCBs for rework**
- **Pharmaceutical R&D studies**
- **Kitting of high-precision watch components**
- **Pass-through transfer of night-vision electronics**
- **Lithium battery development**
- **Humidity testing of cosmetics**
- **Accelerated life testing of ICs**
- **Animal inhalation and toxicology research**

Which critical control application can you find in your facility?

Save Time!

Terra's online *QuickQuote Planner* configures a system to your specifications:
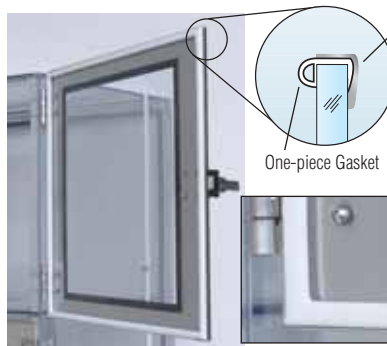**www.TerraUniversal.com**
Just click on **Desiccators**

Compare!
Terra's Designs and Fabrication Techniques

Full Plenum Chambers
- Uniform gas distribution
- Minimizes backfill when a door is opened
- Greater cabinet rigidity

Stainless Steel Door Frames
- Strongest, most durable doors in the industry
- Designed for years of heavy use without bowing or cracking
- LiftLatches™ eliminate rotary stress

Stainless Steel Frame

One-piece Gasket

Leaks develop as weather stripping creeps.

Heat-Fused, One-Piece Seals
- Mechanically attach to stainless steel frames to eliminate adhesives and outgassing problems
- Will not creep or deform like adhesive "weather stripping"-style gaskets
- Hollow-formed "e"-profile Santoprene™ construction enhances resiliency — seals better and longer!

Compare!
Terra's Desiccator Cleanliness

Terra desiccators feature non-particulating, easy-clean, cleanroom-compatible materials to ensure a non-contaminating environment for sensitive materials.

Particle deposition testing reveals minimal detectable contamination of test wafers stored inside a Terra desiccator — an average of much less than one particle @ 0.16 micron over a 12-hour period, which lies within the typical deviation of the test equipment.

Overnight Particle Deposition Rate (12-hour test period)

	Single Cassette/Chamber*					Multiple Test Cassettes**				
Chamber	**1 (top)**	**2**	**3**	**5 (bottom)**	**Total**	**Cassette No.**	**1**	**2**	**3**	**4**	**Total**
@ 0.16µm particles	0.20	-0.40	0.24	0.28	0.08	@ 0.16 µm particles	0.52	0.60	1.20	0.80	0.78
@ 0.20µm particles	0.24	0.24	-0.24	0.40	0.16	@ 0.20 µm particles	0.48	0.44	0.92	0.36	0.55

Performed in 5-chamber Wafer Box Desiccator No. 9130-21A equipped with NitroWatch and Dual Purge systems, using Tencor 6220 particle scanner. Results indicate average difference between measured particle counts before and after the test period, during which time filtered nitrogen was purged through the cabinet to maintain a 15% RH.

* Single Cassette Test: one test wafer cassette installed in each of four chambers.
** Multiple Cassette Test: Each of four test wafer cassettes installed inside chamber 5 (bottom chamber).

Compare!
Which Control System is Best for My Application?

Every time a door opens, your system is potentially exposed to particles and humidity. Terra offers several nitrogen control systems that minimize the impact of this exposure by reducing system recovery time.

Control System	Relative Humidity Set Point Control (to 0% RH)*	Access & RH Datalogging	Multiplexed Relative Humidity Monitor/Control (to 0% RH)**	Multiple RH Set Points in a Single Cabinet	Use in Large, Multi-chamber Desiccators	Use in Small Desiccators	Variable N₂ Purge Compensates for Frequent Access	Requires Automatic RB® Valve(s)***
SmartDesiccator™ (page 3)	●					●	●	●
NitroPlex™ System (page 4)	●	●	●	●	●		●	Included
Dual Purge™/NitroWatch® Systems	●				●	●	●	●
Dual Purge™ System (page 18)					●	●	●	●
Flowmeter (page 18)						●		●

* RH maintained through nitrogen purge; system includes moisture sensor(s).
** Nitrogen purge delivered only to chamber that exceeds RH set point.
*** One recommended per chamber to ensure rapid contaminant purging and fast humidity recovery.

Miniaturized LED monitors humidity and displays set point

Reduces nitrogen cost by 78%!

Dissipative PVC SmartDesiccator™

No. 1911-26B (shelves optional)

Seconds to install and program!

QUICK Ship

304 Stainless Steel SmartDesiccator™
22"W x 20.75"D x 16.625"H

Cat. #	$/Each
1911-02A	**2,507.00**

SmartDesiccator™ Benchtop Storage System

- **Automates dry benchtop storage to eliminate moisture-related degradation and optimize yields**
- **First-of-its-kind gas control system conserves nitrogen**
- **Fully integrated turnkey system takes 30 seconds to install**

Terra Universal's SmartDesiccator™ maximizes yields of sensitive materials by automatically maintaining a user-determined humidity set point.

Its quick-response feedback system continuously monitors the cabinet's relative humidity level and activates a purge of dry nitrogen only when needed. The system thus economizes on gas consumption and minimizes the possibility of overpressures that can stress cabinet seals. Comparison testing reveals that the SmartDesiccator™ maintains a low relative humidity level using only 22% of the nitrogen required by a flowmeter-based system of the identical size (see below).

Stainless steel doors (optional on plastic cabinets) restrict the door from flexing or bending, thereby preventing the cracks and fatigue that occur in all-plastic cabinets. A specially designed lift latch eliminates hinge and door damage caused by the strain of twisting and turning conventional latch systems. The SmartDesiccator™ also incorporates a one-piece, nonadhesive, nonoutgassing gasket specially formulated to retain sealing integrity in extreme low humidity. Because it won't sag or migrate, it extends the service life of the cabinet.

Prices include the humidity control module and sensor. To ensure safe pressure release, order the Automatic RB Valve. Systems are available in stainless steel, acrylic or transparent static-dissipative PVC, which helps control static charges and the particles they attract.

Automatic RB® (Relief/Bleed) Valve	Cat. #	$/Each
	1600-60B	94.00

Plastic SmartDesiccators™ (See above for stainless steel)							Shelf		Door Frame	
Chambers	Overall Dimensions (W x D x H)	Materials					Perf. Stainless Steel		304 Stainless Steel	
		Acrylic		Dissipative PVC						
		Cat. #	$/Each	Cat. #	$/Each		Cat. #	$/Each	Cat. #	$/Each
1	12" x 12" x 13.25"	1911-15B	821.00	1911-21B	981.00		1935-02	85.00	2200-14A	81.00
2	17.12" x 18" x 25.25"	1911-16B	1,299.00	1911-22B	1,960.00		1976-02	121.00	2200-70A	145.00
2	22.62" x 18" x 25.25"	1911-17B	1,418.00	1911-23B	2,277.00		1977-02	135.00	2200-71A	164.00
2	22.62" x 24" x 25.25"	1911-18B	1,641.00	1911-24B	2,577.00		1978-02	151.00	2200-71A	164.00
3	17.12" x 18" x 37.25"	1911-19B	1,901.00	1911-25B	2,585.00		1976-02	121.00	2200-72A	151.00
3	22.62" x 18" x 37.25"	1911-20B	2,023.00	1911-26B	3,137.00		1977-02	135.00	2200-73A	169.00

* Acrylic is damaged by alcohol and other cleaning agents.
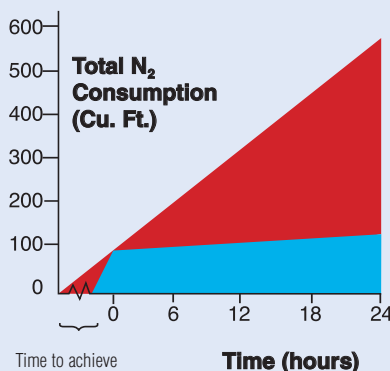
Save Time!

Terra's online *QuickQuote Planner* configures a system to your specifications:

www.TerraUniversal.com

Just click on **Desiccators**

Smart Performance — and Big Savings!

Testing demonstrates the cost benefit of the SmartDesiccator's automated nitrogen control system.

The test below was conducted on a 24"W x 18"D x 24"H desiccator equipped with a flowmeter and then with a SmartDesiccator™ control system, under the following conditions:

- Ambient Humidity: 60% RH
- Temperature: 70°F
- RH Setpoint: 10% RH
- Test Period: Achieve setpoint and then maintain it for 24 hours
- Chamber Access: Door opened once every 30 minutes; remains open for one minute

Total N$_2$ Consumption (Cu. Ft.)

Time to achieve 10% RH

Time (hours)

Desiccator with 0 - 20 SCFH flowmeter
(red area on chart)

- To achieve setpoint: 85 cubic feet (requires over 4 hours @ 20 CFH)
  Note: setpoint measured with a hygrometer, since this set up does not monitor humidity level.
- Maintain for 24 hrs: 480 cubic feet (24 x 20)
- Total N$_2$ Consumed: 565 cubic feet

SmartDesiccator™ (blue area on chart)

- To achieve setpoint: 85 cubic feet (required 30 minutes @ 170 cubic/hour on high flow)
- Maintain for 24 hrs: 40 cubic feet
- **Total N$_2$ Consumed: 125 cubic feet**

SmartDesiccator™ uses 22% of nitrogen consumed by standard cabinet—a 78% saving!

Portable PC docking station

Sensor/Display Modules (one/chamber). Allow multiplexed humidity control

SmartPlex™ Portable PC (order separately) allows convenient RH display, programming, database management, and downloading to remote PC.

Cuts Nitrogen Costs, Increases Efficiency!
See page 1 for more information.

Model shown: No. 3950-36NP, with ten (10) control modules (No. 1911-31A) and optional SmartPlex™ computer, stainless steel door frames, and stand.

NitroPlex™ Humidity Control System

- **Increases desiccator efficiency up to 400% to minimize nitrogen waste and moisture exposure**
- **Senses and displays relative humidity in each desiccator chamber independently for more efficient, cost-effective moisture control**
- **Cuts nitrogen expenses by over 75%**
- **Prevents moisture and contamination migration from one chamber to another**
- **Lets you specify a different humidity set point for each chamber**
- **Automatically delivers a high-flow nitrogen purge only to the chamber where it's needed, and only as long as it's needed to restore RH set point**
- **Ergonomic design allows easy viewing, eliminates chamber lip for easier parts removal**
- **Convenient hand-held computer (optional) monitors humidity conditions in each chamber, facilitates easy set point programming, datalogs chamber RH, and allows stored data to be transferred to a remote PC**
- **Can be integrated into almost any Terra desiccator line**

Miniature LEDs display current humidity and RH set point

Increased Efficiency Lowers Recovery Time, Increases Yields

The NitroPlex™ system provides state-of-the-art automated humidity control to guarantee the integrity of stored components.

Each microprocessor-based multiplexed sensor/display module, one installed in each chamber, enhances desiccator performance and economizes on nitrogen expenses. It contains a miniaturized moisture sensor that reads the internal humidity level within ± 2% of full scale. The LED readout displays this value or the programmable set point for that chamber.

When the humidity climbs above the set point in any chamber, the NitroPlex automatically directs a high-flow purge of clean, dry nitrogen only to the chamber where it is needed, and only for as long as necessary to bring the humidity back below the set point value.

Specifications

Dimensions: (Humidity Module)	1.5"W x 2.75"D x 1.5"H; increases height of affected chamber by 1.25"
Housing Material:	Stainless steel (chamber humidity modules)
Power Requirement:	110VAC, 50/60Hz or 220VAC, 50Hz (universal power supply)
Display:	5-digit LED
Display Resolution:	± 0.1% RH
Sensor Accuracy:	± 2%RH @ 20°C
Measuring Range:	0 - 100% RH
Calibration:	None required. A calibration mode is included for applications that require calibration to an NIST-traceable instrument.

Save Time! Terra's online *QuickQuote Planner* configures a system to your specifications: **www.TerraUniversal.com** Just click on **Desiccators**

Stainless Steel Systems Available! See page 11.

NitroPlex™
Ordering Information

You can convert any of Terra's standard desiccators into a NitroPlex™ System simply by adding an "NP" to the desiccator part number. Then, order one NitroPlex™ module (Cat. No. 1911-31A) for each desiccator chamber.

Example: Cat. No. 3950-36NP is a NitroPlex™ version of Terra's standard Adjust-A-Shelf desiccator. To complete the order, specify (10) chamber sensor/display modules.

	Cat. #	$/Each
NitroPlex™ Module	**1911-31B**	**595.00**

Includes humidity and door sensor switches, 5-digit LED display, Automatic RB® Valve. Order one per chamber.

Many Other NitroPlex™ Systems Available!
See Catalog 105, page 85, for an overview of Terra's other NitroPlex™-ready desiccator storage systems.

60"

18" or 24"   34" or 45"   **A**

60"

18" or 24"   17¹⁄₈" or 22⁵⁄₈"   **B**

T Y P E	Specifications		NitroPlex™ Desiccators				304 Stainless Steel Door Frames		Corresp. Stainless Steel Shelves		Corresp. Stands (leveling feet incl.)	
	Overall Dim.		**Static Dissipative PVC**		**Clear Acrylic**		Select appropriate quantity for your desiccator		**Perforated Shelf**		**Stainless Steel** 4" High	
	(W" x D" x H")		Cat. # ⊘	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
A	45 x 24 x 60	Two chambers per tier	3950-06ANP	8,313.00	3950-36ANP	3,977.00	2200-30A	145.00	1978-02	151.00	1740-92A	512.00
	34 x 18 x 60		3950-07ANP	6,388.00	3950-37ANP	3,466.00	2200-31A	127.00	1976-02	121.00	1740-94A	484.00
	45 x 18 x 60		3950-08ANP	7,578.00	3950-38ANP	3,794.00	2200-30A	145.00	1977-02	135.00	1740-96A	498.00
B	22⁵⁄₈ x 24 x 60	One chamber per tier	3950-18ANP	4,928.00	3950-48ANP	2,476.00	2200-60A	145.00	1978-02	151.00	1740-44A	378.00
	17¹⁄₈ x 18 x 60		3950-19ANP	3,524.00	3950-49ANP	1,972.00	2200-61A	127.00	1976-02	121.00	1740-48A	321.00
	22⁵⁄₈ x 18 x 60		3950-20ANP	4,323.00	3950-50ANP	2,197.00	2200-60A	145.00	1977-02	135.00	1740-52A	351.00

SmartPlex™
Hand-Held Monitor/Display Computer & Software

Includes software package customized for the specified NitroPlex™ desiccator configuration. Provides easy-view monitoring of humidity level, humidity set point, and alarm status in each desiccator chamber. Simplifies programming of separate humidity set point for each desiccator chamber. Includes 12VDC power supply and transformer for operation from 110VAC, 50/60Hz or 220VAC, 50Hz power supply. Serial interface allows downloading of storage data.

Standard Software Updates Inventory
The SmartPlex™ onboard database software lets you configure the system for your application. You specify number of chambers and contents of each chamber, including detailed information on each product stored (description, part number, quantity and more).

The SmartPlex™ then searches by product name or part number and provides detailed information on quantities on hand, storage history, and environmental conditions. This information can then be downloaded to a remote PC for analysis or print-outs.

	Cat. #	$/Each
	1911-33	**2,457.00**

Chamber #1
R/H = 14.2   0
Setpoint = 15.0   0

Chamber #2
R/H = 12.7   0
Setpoint = 15.0   0

Chamber #3
R/H = 14.5   0
Setpoint = 15.0   0

Chamber #4
R/H = 12.0   ●
Setpoint = 10.0   ●

Open-door warning
High-flow purge warning

SmartPlex™ displays detailed chamber information in one screen

SmartPlex™ hand-held computer allows convenient RH display, programming, database management, and downloading to remote PC

A *Polyethylene Frame*

B *Stainless Steel Frame (shown with optional shelves)*

C *Cushioned ride for optimal product protection of wafers and other delicate parts.*

DesiCart™
Low Humidity Transport Carts

These mobile storage carts transport components from one location to another while maintaining critical low-humidity and low-particle conditions.

Each houses a hermetically sealed desiccator storage chamber, which maintains clean, dry storage conditions during parts transport. Desiccators feature opposing access doors for pass-through convenience, and every door is equipped with a LiftLatch™.

Quick connect/disconnect fittings (optional) enable you to purge the system with nitrogen while it is stationary. Reinforced door construction and gasketing provide air-tight seals that maintain a clean, dry storage environment while the DesiCart is in motion.

Quick Connect/Disconnect Fitting

	Cat. #	$/Each
(installed; requires RB Valve)	1601-06	29.00

Automatic RB® (Relief/Bleed) Valve

(Required for safe gas purging)	1600-60B	94.00

Note: Models below feature chrome-plated racks and opposing doors for pass-through access.

A Polyethylene Frame			**Ordering Information**			**Corresponding Shelves**		
Overall	**Shelving**	**Doors (8)**	**with Acrylic* Desiccator**	**with Static-Dissipative ⊗ PVC**	**Acrylic* Desiccator**	**Shield**	**304 Stainless Steel**	
H x W x L	W x D	H x W				**Tray**	Cat. # 4002-53 $/Each 168.00	
(inches)	(inches)	(inches)	Cat. # $/Each	Cat. # $/Each	Cat. # $/Each		Cat. # 4002-54 $/Each 168.00	
33 1/4 x 27 x 39 1/2	15 x 22	9 x 15	4002-50B 2,547.00	4002-51B 3,827.00	4002-52 61.00	**Shelf**	Cat. # 4002-55 $/Each 168.00	

* Acrylic is damaged by alcohol and other cleaning agents.

B Stainless Steel Frame			**Ordering Information**			**Corresponding Shelves**		
Overall	**Shelving**	**Doors (8)**	**with Acrylic* Desiccator**	**with Static-Dissipative ⊗ PVC**	**Acrylic* Desiccator**	**Shield**	**304 Stainless Steel**	
H x W x L	W x D	H x W				**Tray**	Cat. # 4001-96 $/Each 166.00	
(inches)	(inches)	(inches)	Cat. # $/Each	Cat. # $/Each	Cat. # $/Each		Cat. # 4001-97 $/Each 166.00	
38 x 24 x 36	13 3/4 x 20	20 1/2 x 15 3/4	4001-90B 3,254.00	4001-91B 4,388.00	4001-92 55.00	**Shelf**	Cat. # 4001-95 $/Each 166.00	

* Acrylic is damaged by alcohol and other cleaning agents.

C **Wafer Box DesiCart™**

This DesiCart™ ensures clean, dry, secure transport of delicate wafers. Its 6"-diameter spring-loaded casters provide a cushioned ride, and ultra-clean materials of construction, including electropolished stainless steel shelves, ensure surfaces that won't slough or outgas.

Overall dimensions: 50.88"W x 26.25"D x 38"H (including hardware). Holds up to 12 200mm wafer boxes.*

Ordering Information

Enclosure Material	Cat. #	$/Each
Acrylic	4002-48B	5,877.00
Static-Dissipative PVC	4002-49B	6,597.00

*Based on Empak model TR-08A. Custom sizing is available for other carrier sizes.

Low-Humidity Mini-Environment
Desiccator Storage System
(please turn the page for ordering information)

***Dual Purge™ System**
- Maintains positive internal pressure
- Provides low and high purge to save N₂
- Blocks out contamination and moisture
- Activates alarm if door is left open

***NitroWatch®**
- Displays RH level inside desiccator
- Operates with **Dual Purge™ System** to maintain a low humidity level automatically

Grounding terminals ground entire cabinet with a single connection

* Sensor Switches provide reliable control of high- and low-flow purging—rated for over 10 million operations!

Plenum Chamber minimizes backfill, ensures homogeneous positive pressure

***Automatic RB® Valve**
- Reduced size allows mounting in each chamber for improved performance
- Bleeds off excess gas
- Makes cabinet rupture-proof
- Calibrated to maintain the required positive pressure

*One-piece nonadhesive gaskets eliminate flaking, shrinking, slippage; ensure tight seal and prevent sagging

Chrome-Plated Wire Racks support slide-out stainless steel trays and shelves

* Stainless steel conductive shelf electrically grounded to protect stored parts and devices against electrostatic discharge

* Grounded door latch discharges the operator before stored components are damaged

* Stands available in stainless steel, with and without casters

* Stainless Steel door frame improves sealing, extends service life of cabinet

Tamper-proof hinge available

QUICK Ship on selected models

* **Options**—refer to separate catalog listings for full descriptions

Two Chambers Per Tier

Standing Adjust-A-Shelf™ Desiccators with Interchangeable Shelving

Shelving (including shields and trays) of models listed on these pages can be used interchangeably in any desiccator chamber with the same nominal dimensions.

36" 18" or 24" 34" or 45" **A**

48" 18" or 24" 34" or 45" **B**

60" 18" or 24" 34" or 45" **C**
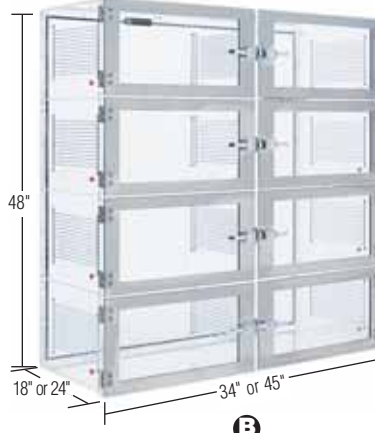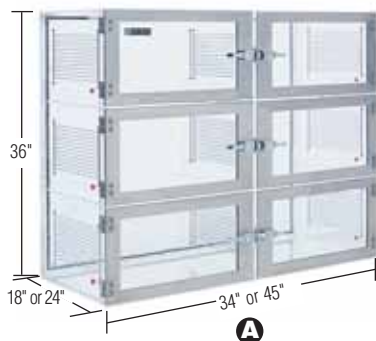
Pass-Through models available for dual-side access—see TerraUniversal.com

TYPE	Overall Dimensions (W" x D" x H")	No. of Doors	I.D. of Shelves (useable area) (W" x D")	Static Dissipative* PVC Cat. #	$/Each	Clear Acrylic*** Cat. #	$/Each	Amber Acrylic*** Cat. #	$/Each	Corresponding Acrylic Shelf Includes Bow Guard** Cat. #	$/Each	304 Stainless Steel Door Frames Cat. #	$/Each
A	45 x 24 x 36	6	19⁷/₈ x 21	3950-00A	5,299.00	3950-30A	2,792.00	3950-60A	3,034.00	1978-01	53.00	2200-30A	145.00
	34 x 18 x 36	6	14¹/₄ x 14¹/₂	3950-01A	4,081.00	3950-31A	2,420.00	3950-61A	2,625.00	1976-01	40.00	2200-31A	127.00
	45 x 18 x 36	6	19⁷/₈ x 14¹/₂	3950-02A	4,747.00	3950-32A	2,638.00	3950-62A	2,866.00	1977-01	46.00	2200-30A	145.00
B	45 x 24 x 48	8	19⁷/₈ x 21	3950-03A	6,772.00	3950-33A	3,384.00	3950-63A	3,674.00	1978-01	53.00	2200-30A	145.00
	34 x 18 x 48	8	14¹/₄ x 14¹/₂	3950-04A	4,947.00	3950-34A	2,692.00	3950-64A	2,911.00	1976-01	40.00	2200-31A	127.00
	45 x 18 x 48	8	19⁷/₈ x 14¹/₂	3950-05A	6,387.00	3950-35A	3,067.00	3950-65A	3,324.00	1977-01	46.00	2200-30A	145.00
C	45 x 24 x 60	10	19⁷/₈ x 21	3950-06A	8,313.00	3950-36A	3,977.00	3950-66A	4,311.00	1978-01	53.00	2200-30A	145.00
	34 x 18 x 60	10	14¹/₄ x 14¹/₂	3950-07A	6,388.00	3950-37A	3,466.00	3950-67A	3,753.00	1976-01	40.00	2200-31A	127.00
	45 x 18 x 60	10	19⁷/₈ x 14¹/₂	3950-08A	7,578.00	3950-38A	3,794.00	3950-68A	4,110.00	1977-01	46.00	2200-30A	145.00
D	22⁵/₈ x 24 x 24	2	19⁷/₈ x 21	3950-09A	2,104.00	3950-39A	1,168.00	3950-69A	1,198.00	1978-01	53.00	2200-60A	145.00
	17¹/₈ x 18 x 24	2	14¹/₄ x 14¹/₂	3950-10A	1,485.00	3950-40A	825.00	3950-70A	895.00	1976-01	40.00	2200-61A	127.00
	22⁵/₈ x 18 x 24	2	19⁷/₈ x 14¹/₂	3950-11A	1,795.00	3950-41A	998.00	3950-71A	1,060.00	1977-01	46.00	2200-60A	145.00
E	22⁵/₈ x 24 x 36	3	19⁷/₈ x 21	3950-12A	3,047.00	3950-42A	1,663.00	3950-72A	1,811.00	1978-01	53.00	2200-60A	145.00
	17¹/₈ x 18 x 36	3	14¹/₄ x 14¹/₂	3950-13A	2,111.00	3950-43A	1,427.00	3950-73A	1,552.00	1976-01	40.00	2200-61A	127.00
	22⁵/₈ x 18 x 36	3	19⁷/₈ x 14¹/₂	3950-14A	2,662.00	3950-44A	1,548.00	3950-74A	1,685.00	1977-01	46.00	2200-60A	145.00
F	22⁵/₈ x 24 x 48	4	19⁷/₈ x 21	3950-15A	3,986.00	3950-45A	1,976.00	3950-75A	2,148.00	1978-01	53.00	2200-60A	145.00
	17¹/₈ x 18 x 48	4	14¹/₄ x 14¹/₂	3950-16A	2,845.00	3950-46A	1,608.00	3950-76A	1,745.00	1976-01	40.00	2200-61A	127.00
	22⁵/₈ x 18 x 48	4	19⁷/₈ x 14¹/₂	3950-17A	3,491.00	3950-47A	1,785.00	3950-77A	1,942.00	1977-01	46.00	2200-60A	145.00
G	22⁵/₈ x 24 x 60	5	19⁷/₈ x 21	3950-18A	4,928.00	3950-48A	2,476.00	3950-78A	2,694.00	1978-01	53.00	2200-60A	145.00
	17¹/₈ x 18 x 60	5	14¹/₄ x 14¹/₂	3950-19A	3,524.00	3950-49A	1,972.00	3950-79A	2,141.00	1976-01	40.00	2200-61A	127.00
	22⁵/₈ x 18 x 60	5	19⁷/₈ x 14¹/₂	3950-20A	4,323.00	3950-50A	2,197.00	3950-80A	2,386.00	1977-01	46.00	2200-60A	145.00
H	12 x 12 x 12	1	9³/₄ x 9¹/₄	3950-21A	507.00	3950-51A	345.00	3950-81A	418.00	1935-01	25.00	2200-14A	81.00

Note: Types A–C are "Two Chambers Per Tier"; Types D–H are "One Chamber Per Tier".

* Constructed of transparent static-dissipative PVC; removable back wall made of nondissipative material. **For use in acrylic cabinets. Select stainless steel shelves for use with static-dissipative PVC cabinets. *** Acrylic is damaged by alcohol and other cleaning agents.

Better Doors — Long-Lasting Cabinets!

Doors are typically the only desiccator component to show signs of wear. These improvements safeguard your investment in clean, dry storage!

LiftLatches™ — Standard on all models, these noncontaminating, durable lifting latches operate without straining hinges. Locking LiftLatches are available.
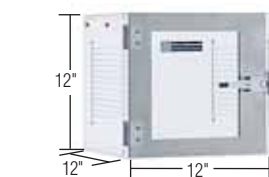
Stainless Steel Door Frames — A highly recommended option that lends strength and rigidity to plastic doors!

One-Piece, Nonadhesive Gaskets — Standard on all models with stainless steel frames, these durable gaskets are mechanically attached to eliminate adhesives.
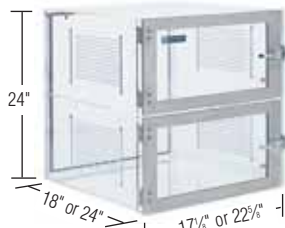
One Chamber Per Tier

12"
12"   12"

H

24"
18" or 24"   17⅛" or 22⅝"

D

36"
18" or 24"   17⅛" or 22⅝"

E

48"
18" or 24"   17⅛" or 22⅝"

F

60"
18" or 24"   17⅛" or 22⅝"

G

QUICK Ship on selected models
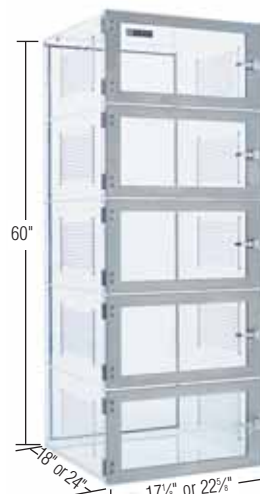
Corresponding 304 Stainless Steel Shelves**					Corresponding Stands (leveling feet Included) (see information on casters at right)			Other Options (See page 18)
					Stainless Steel			$/Each 1,712.00 67.00 94.00 866.00 490.00 223.00
Perforated Shelf Cat. #	**Non-Perforated Tray** Cat. #	**Non-Perforated Shelf** Cat. #	**Non-Perforated Shield** Cat. #	**Price** (Includes Installation) $/Each	**3" High** Cat. #	**12"High** Cat. #	**3" & 12"** $/Each	
1978-02	1978-04	1978-05	1978-06	151.00	1740-92A	1740-56A	512.00	
1976-02	1976-04	1976-05	1976-06	121.00	1740-94A	1740-60A	484.00	
1977-02	1977-04	1977-05	1977-06	135.00	1740-96A	1740-64A	498.00	
1978-02	1978-04	1978-05	1978-06	151.00	1740-92A	1740-56A	512.00	
1976-02	1976-04	1976-05	1976-06	121.00	1740-94A	1740-60A	484.00	
1977-02	1977-04	1977-05	1977-06	135.00	1740-96A	1740-64A	498.00	
1978-02	1978-04	1978-05	1978-06	151.00	1740-92A	1740-56A	512.00	
1976-02	1976-04	1976-05	1976-06	121.00	1740-94A	1740-60A	484.00	
1977-02	1977-04	1977-05	1977-06	135.00	1740-96A	1740-64A	498.00	
1978-02	1978-04	1978-05	1978-06	151.00	1740-44A	1740-80A	378.00	
1976-02	1976-04	1976-05	1976-06	121.00	1740-48A	1601-10A	321.00	
1977-02	1977-04	1977-05	1977-06	135.00	1740-52A	1740-88A	351.00	
1978-02	1978-04	1978-05	1978-06	151.00	1740-44A	1740-80A	378.00	
1976-02	1976-04	1976-05	1976-06	121.00	1740-48A	1601-10A	321.00	
1977-02	1977-04	1977-05	1977-06	135.00	1740-52A	1740-88A	351.00	
1978-02	1978-04	1978-05	1978-06	151.00	1740-44A	1740-80A	378.00	
1976-02	1976-04	1976-05	1976-06	121.00	1740-48A	1601-10A	321.00	
1977-02	1977-04	1977-05	1977-06	135.00	1740-52A	1740-88A	351.00	
1978-02	1978-04	1978-05	1978-06	151.00	1740-44A	1740-80A	378.00	
1976-02	1976-04	1976-05	1976-06	121.00	1740-48A	1601-10A	321.00	
1977-02	1977-04	1977-05	1977-06	135.00	1740-52A	1740-88A	351.00	
1935-02	1935-04	1935-05	1935-06	85.00	—	1605-09A	307.00	

Other Options Cat. #: 1606-61, 1600-49, 1600-60B, 9500-00A, 9500-02A, 1700-44

Dual Purge™ System
Dual Purge™ Sensor Switches (one/desiccator door required)
Automatic RB™ Valve
NitroWatch™
NitroWatch™ Sensor (one/desiccator required)
Casters (Heavy-duty, low-profile, set of 4, including 2 with brakes)

** Price for a shelf, shield, or tray of a given size is the same. To order electropolished stainless steel shelving, add "-2" to the catalog no. and 30% to the price.

Silica Gel   *Molecular Sieve*

No Nitrogen Required!

DesiTray™ Renewable Drying Tray

Desiccant tray (select silica gel or molecular sieve) maintains humidity down to 5% RH in any standard Terra desiccator cabinet.

Regenerates in minutes for repeated use. See page 19.

Smart Desiccator™— Saves up to 78% of nitrogen costs!

Miniature LEDs display current humidity and RH set point

See page 3 for the SmartDesiccator™, Terra's automated storage environment that incorporates a humidity control system.

A Model shown is 1610-32A

B Model shown is 1678-10A

C Shown with optional gas controls and castered stand.

D Gas controls optional. No. 1991-56A

E No. 1991-58

Series 100-300
Stainless Steel Desiccators

Terra manufactures several lines of stainless steel desiccators, for applications ranging from benchtop storage to multiplexed humidity control. All feature the one-piece gaskets and LiftLatches for superior service life and sealing performance.

Note: Series 100 and 300 desiccators include shelf racks on a standard basis. Racks must be specified for other models if shelves are required.

A/B. Series 100 Benchtop Stainless Steel Desiccator

Air-tight seals and all-stainless steel construction maintain a low-humidity storage environment to keep parts clean and dry. Inlet/outlet ports allow nitrogen purging (see page 18 for ordering information on optional nitrogen controllers). Transparent static-dissipative PVC windows protect against static and particle build-ups.

QUICK Ship

Electropolishing Available!

C. Series 200 Double-Wall Stainless Steel Desiccators

Smooth-profile stainless steel design ensures a static-safe environment that won't shed or accumulate particles. Built-in gas plumbing and Automatic Relief/Bleed Valve in each chamber allow easy, safe connection to nitrogen or clean dry air purge line.

Shelves	Cat. #	$/Each
Perforated	**1610-35**	**143.00**
Solid	**1679-45**	**143.00**
Stands		
4" High	**9606-29A**	**307.00**
12" High	**9606-32A**	**307.00**

D./E. Series 300 Stainless Steel Desiccator

Provides all the humidity control features of the Series 100 and 200 models above, but features easy-open double doors for fast, easy access to the whole cabinet.

No Nitrogen?
DesiTray™ Renewable Drying Tray
Humidity to 5% RH —See page 19.

Series 100 Stainless Steel Desiccator: Subtract 2" from OD to get ID					
Outside Dimensions (W" x D" x H")	Tempered Glass Windows	Dissipative PVC Windows		Corresponding Shelves Perforated Non-Perforated	
	Cat. #	Cat. # $/Each		Cat. #	Cat. # $/Each
12 x 10³/4 x 12	**1678-00A**	**1610-34A** 923.00		**1610-40**	**1678-05** 91.00
12¹/4 x 16 x 12¹/4	**1690-00A**	**1610-91A** 1,027.00		**1610-92**	**1610-93** 99.00
16 x 13 x 16	**1678-10A**	**1610-33A** 1,239.00		**1610-41**	**1679-01** 143.00
22 x 21⁵/8 x 16	**1679-06A**	**1610-32A** 1,615.00		**1610-42**	**1679-45** 143.00

Series 200 Stainless Steel Adjust-A-Shelf™ Desiccators				
No. of Chambers	Chamber Dimensions (W" x D" x H")	Overall Dimensions (W" x D" x H")	Stainless Steel	Electropolished Stainless Steel
			Cat. # $/Each	Cat. # $/Each
1	20 x 20 x 14	23¹/2 x 22¹/2 x 16¹/2	**9606-20A** 2,240.00	**9606-00A** 2,629.00
2	20 x 20 x 14	23¹/2 x 22¹/2 x 33¹/2	**9606-21A** 4,748.00	**9606-01A** 5,127.00
3	20 x 20 x 14	23¹/2 x 22¹/2 x 50	**9606-22A** 7,388.00	**9606-02A** 7,758.00

Series 300 Stainless Steel Desiccators			Shelf*	Stand**
	72"H x 36"W x 18"D	36"H x 36"W x 18"D		
	Cat. # $/Each	Cat. # $/Each	Cat. # $/Each	Cat. # $/Each
304 Stainless Steel	**1991-56A** 10,695.00	**1991-58** 5,650.00	**1991-51** 265.00	**1991-54A** 493.00
Electropolished SS	**1991-57A** 11,200.00	**1991-59** 6,230.00	**1991-53** 344.00	**1991-55A** 605.00

* Includes perforations along one edge to permit gas circulation. Comes with mounting clips.
** Includes leveling feet; raises cabinet 4" off floor.

Series 400
Stainless Steel Desiccators

The Series 400 Stainless Steel Desiccator provides the optimal clean, low-humidity environment for sensitive parts.

Available in many chamber configurations, it includes front and rear static-dissipative PVC viewing windows for full visibility of stored contents. Static-dissipative PVC helps control static charges and the particles they attract.

All models feature a plenum chamber that ensures uniform distribution of nitrogen purge gas.

NitroPlex™-Ready!
Terra fabricates these desiccators for use with the NitroPlex™ humidity control system, the most advanced nitrogen purge controller available. Equipped with the NitroPlex™, these systems automatically regulate a nitrogen purge in order to maintain any relative humidity set point you require—down to 0% RH. See page 4 for more information.

SmartPlex™ hand-held computer. See page 5

NitroPlex™ display modules indicate chamber % RH (optional)

Temperature/Humidity Gauge
Includes installation on any specified desiccator cabinet.

Cat. #	$/Each
5401-15	**136.00**

Heavy-Duty Cleanroom Casters
1700-43	**535.00**

Model shown: No. 1609-11A (configured for double-side access), with optional NitroPlex™ humidity control system and stainless steel casters.

Series 400 Stainless Steel Desiccators – For use with NitroPlex™ Control System, add NP to part number.

Type (See below)	No. of Chambers	Nominal Dimensions* (W" x D" x H")	Single-Side Access				Double-Side Access			
			304 Stainless Steel		Electropolished 304 Stainless Steel		304 Stainless Steel		Electropolished 304 Stainless Steel	
			Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
A	2	25 x 20.75 x 33.75	1609-01A	3,229.00	1609-01AEP	3,468.00	1609-07A	3,650.00	1609-07AEP	3,890.00
	3	25 x 20.75 x 50.62	1609-02A	5,025.00	1609-02AEP	5,385.00	1609-08A	5,655.00	1609-08AEP	6,015.00
	4	25 x 20.75 x 67.50	1609-03A	7,063.00	1609-03AEP	7,664.00	1609-09A	7,904.00	1609-09AEP	8,504.00
B	4	47 x 20.75 x 33.75	1609-04A	6,338.00	1609-04AEP	6,939.00	1609-10A	7,179.00	1609-10AEP	7,659.00
	6	47 x 20.75 x 50.62	1609-05A	9,929.00	1609-05AEP	10,649.00	1609-11A	11,190.00	1609-11AEP	11,911.00
	8	47 x 20.75 x 67.50	1609-06A	14,006.00	1609-06AEP	14,487.00	1609-12A	15,688.00	1609-12AEP	16,889.00

* Excludes hardware. Stands raise cabinets an additional 4" (with leveling feet) or 7" (with casters).

Type A

Type B

Both models shown with optional NitroPlex™ System and casters.

System Options

Accessory	Stainless Steel		Electropolished Stainless Steel	
	Cat. #	$/Each	Cat. #	$/Each
Shelf Rack**	1609-13	25.00	1609-13EP	31.00
Perforated Shelf	1609-14	125.00	1609-14EP	163.00
Solid Shelf	1609-15	125.00	1609-15EP	163.00
Stands (with levelers)				
4"H – Type "A"	1609-16	264.00	1609-16EP	384.00
4"H – Type "B"	1609-18	403.00	1609-18EP	543.00
12"H – Type "A"	1609-17	264.00	1609-17EP	384.00
12"H – Type "B"	1609-19	403.00	1609-19EP	543.00

** Required with selection of shelves. Order two per chamber.

Heavy-Duty Casters
Includes set of 4, two with locking brakes.

Cat. #	$/Set of 4
1700-43	**535.00**

Kiticcator™ Kitting Tray Desiccator

This desiccator provides organized, space-efficient storage of kitting trays (tote boxes) in a clean, dry, static-safe environment.

Electropolished stainless steel wire racks are designed specifically for secure storage of any of three common tote boxes (see ordering information below). Trays can be inserted and removed without disturbing any others in the cabinet.

Like Terra's other desiccators, these hermetically sealed cabinets are designed to maintain particle-free, low-humidity storage conditions when purged with nitrogen or clean dry air (see purge controllers on page 18).

Kiticcator™ No. 6003-00A, shown with optional stainless steel door frames, stand and nitrogen controls

Tote Boxes (for Kiticcators)

Made of durable, static-dissipative high-density polyethylene thermoplastic. Meets the minimum static decay specifications of MIL-B-81705B. See Catalog #105, page 105 for more information.

Height	Cat. #	$/Each
1.5"	6000-00	25.00
2"	6000-01	26.00
4.75"	6000-02	30.00

Kiticcators (See Catalog 105, page 105, for full specs) / Optional Accessories

Type	No. of Doors	Capacity: (No. of Totes*) 1.5"	2"	4.4"	Clear Acrylic Cat. #	$/Each	Static-Dissipative PVC Cat. #	$/Each	Door Frames** Cat. #	$/Each	Stainless Steel Stands*** Cat. #	$/Each
A	3	18	18	12	6001-00A	1,065.00	8001-00A	2,166.00				
	5	30	30	20	6002-00A	1,739.00	8002-00A	3,524.00	2200-34A	193.00	8001-02A	463.00
	7	42	42	28	6003-00A	2,427.00	8003-00A	4,989.00				
B	6	36	36	24	6004-00A	2,021.00	8004-00A	4,083.00				
	10	60	60	40	6005-00A	3,295.00	8005-00A	6,640.00	2200-62A	193.00	8001-04A	556.00
	14	84	84	56	6006-00A	4,594.00	8006-00A	9,254.00				

*   * Indicates how many boxes of specified depth fit in each cabinet. Order tote boxes separately, above.
*   ** Improves seals (see page 2); order one per door.   *** Includes levelers. Raises cabinet 4".

No Nitrogen? See pg. 19 DeskTray™ Renewable Drying Tray
Humidity to 5% RH.
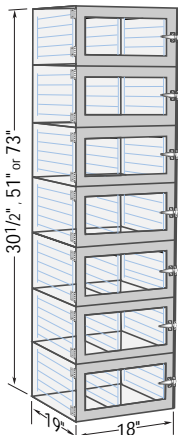
Type A Cabinets
One Chamber/Tier
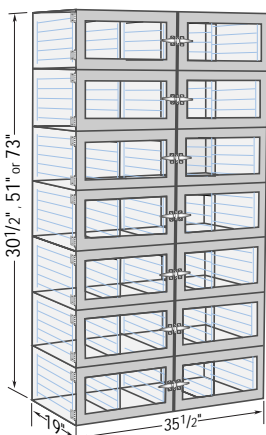
Type B Cabinets
Two Chambers/Tier

Other Configurations Available!

30 1/2", 51" or 73"   19"   18"

30 1/2", 51" or 73"   19"   35 1/2"

Save Time!

Terra's online **QuickQuote Planner** configures a system to your specifications:
www.TerraUniversal.com
Just click on **Desiccators**

Series 200 Kiticcator No. 6001-71A, Shown with Tote Boxes No. 6002-97

Series 300 Kiticcator No. 6001-82A, Shown with IC Trays No. 6001-84

Tape-and-Reel™ Desiccator

Terra's Tape-and-Reel™ Desiccator gives you the optimal storage environment for semiconductor component reels.

Mix and match reels of several sizes in one easy-access cabinet that conserves space. Adjustable stainless steel racks safely support carrier reels of many widths, up to 14" in diameter (order appropriate reel supports separately). Like Terra's other desiccators, these hermetically sealed cabinets are designed to maintain particle-free, low-humidity storage conditions when purged with nitrogen or clean dry air (see purge controllers on page 18).

Adjustable Reel Supports

Stainless steel supports can be adjusted in ¼" increments to form holding bins for many reel sizes inside Terra's Tape-and-Reel Desiccator.

	Cat. #	$/Each
4.5" Height	3607-01	3.00
7.5" Height	3607-02	4.00

Casters

Set of 4, 2 with locking brakes

	Cat. #	$/Each
	1700-44	223.00

Tape-and-Reel™ Desiccator No. 4028-00A, shown with optional stainless steel door frames, stand and nitrogen controls

Note: Dimensions given below are for chamber OD only.

Ordering Information: Tape-and-Reel Desiccators

Reel Size**	No. of Doors	Style	Overall Dimensions W x D x H (inches)	Clear Acrylic Desiccator*** Cat. # $/Each	Static Dissipative* PVC Desiccator Cat. # $/Each	Corresponding Stands — Stainless Steel 4" High Cat. #	12" High Cat. #	$/Each	Door Frames — Stainless Steel Order 1/Door Cat. # $/Each
Up to 7½" diameter	1	One Chamber Per Tier	24½ x 13 x 9	4001-00A 363.00	4015-00A 664.00	4029-01A	4033-01A	397.00	2200-32A 198.00
	3		24½ x 13 x 27	4002-00A 1,051.00	4016-00A 2,006.00	4029-01A	4033-01A	397.00	2200-32A 198.00
	5		24½ x 13 x 45	4003-00A 1,472.00	4017-00A 2,696.00	4029-01A	4033-01A	397.00	2200-32A 198.00
	7		24½ x 13 x 63	4004-00A 2,521.00	4018-00A 4,668.00	4029-01A	4033-01A	397.00	2200-32A 198.00
Up to 7½" diameter	8	Two Chambers Per Tier	48½ x 13 x 36	4005-00A 2,820.00	4019-00A 5,431.00	4030-01A	4034-01A	496.00	2200-63A 198.00
	10		48½ x 13 x 45	4006-00A 3,500.00	4020-00A 6,729.00	4030-01A	4034-01A	496.00	2200-63A 198.00
	12		48½ x 13 x 54	4007-00A 4,179.00	4021-00A 8,027.00	4030-01A	4034-01A	496.00	2200-63A 198.00
	14		48½ x 13 x 63	4008-00A 4,632.00	4022-00A 8,693.00	4030-01A	4034-01A	496.00	2200-63A 198.00
Up to 14" diameter	1	One Chamber Per Tier	24½ x 16 x 15⅜	4009-00A 553.00	4023-00A 1,144.00	4031-01A	4035-01A	408.00	2200-33A 224.00
	2		24½ x 16 x 30¾	4010-00A 1,048.00	4024-00A 2,200.00	4031-01A	4035-01A	408.00	2200-33A 224.00
	3		24½ x 16 x 46⅛	4011-00A 1,441.00	4025-00A 2,993.00	4031-01A	4035-01A	408.00	2200-33A 224.00
	4		24½ x 16 x 61½	4012-00A 2,069.00	4026-00A 4,326.00	4031-01A	4035-01A	408.00	2200-33A 224.00
Up to 14" diameter	6	Two Chambers Per Tier	48½ x 16 x 46⅛	4013-00A 2,971.00	4027-00A 6,172.00	4032-01A	4036-01A	519.00	2200-64A 224.00
	8		48½ x 16 x 61½	4014-00A 3,931.00	4028-00A 8,190.00	4032-01A	4036-01A	519.00	2200-64A 224.00

* Transparent material helps eliminate static charges and the particles they attract. See Cat. 105, page 596 for full specifications. Removable back wall is made of nondissipative material. ** Order adjustable supports separately. *** Acrylic is damaged by alcohol.

Cabinets with Slide-Out Drawers—Easy Access for reels up to 7.5"dia. Includes SS Trays

No. of Doors	Style	Overall Dimensions W x D x H (inches, OD)	Clear Acrylic Desiccator Cat. # $/Each	Static Dissipative PVC Desiccator Cat. # $/Each
1	One Chamber Per Tier	24¾ x 21 x 9	4010-01A 881.00	4010-10A 1,293.00
3		24¾ x 21 x 27	4010-02A 2,584.00	4010-11A 3,715.00
5		24¾ x 21 x 45	4010-03A 4,162.00	4010-12A 6,108.00
7		24¾ x 21 x 63	4010-04A 5,700.00	4010-13A 8,190.00
8	Two Chambers Per Tier	48¾ x 21 x 36	4010-05A 6,477.00	4010-14A 9,259.00
10		48¾ x 21 x 45	4010-06A 7,909.00	4010-15A 11,262.00
12		48¾ x 21 x 54	4010-07A 9,265.00	4010-16A 13,245.00
14		48¾ x 21 x 63	4010-08A 10,549.00	4010-17A 15,065.00

Wafer Box
Desiccator

These desiccators are designed specifically to maximize storage efficiency of standard lot boxes used for 200mm and 300mm wafers.

They feature the same advanced technology features of standard Terra desiccators, including the most efficient sealing techniques available. For optimal performance, select the optional stainless steel door frames, which extend cabinet life and improve sealing performance through the use of one-piece, non-adhesive gaskets. *See Catalog 105, page 92 for more information.*

For 200mm Wafers					
No. Of Chambers	Capacity*	Acrylic**		Static-Dissipative PVC	
		Cat. #	$/Each	Cat. #	$/Each
10	40	9130-20A	4,572.00	9130-24A	8,878.00
5	20	9130-21A	2,771.00	9130-25A	5,415.00
For 300mm Wafers					
8	16	9130-22A	3,599.00	9120-26A	6,708.00
4	8	9130-23A	2,070.00	9130-27A	3,700.00

*200 capacities based on Empac No. TR-08A (four boxes per chamber). 300 capacities based on Empac No. SX300 01 (two boxes per chamber)
** Acrylic is damaged by alcohol and other cleaning agents.

Optional Features	Door Frames		Stands*	
Cabinet Style (No. of Chambers)	See page 2.		Stainless Steel	
	Cat. #	$/Each	Cat. #	$/Each
10	9130-28A	144.00	9130-30	321.00
5	9130-34A	144.00	9130-31	250.00
8	9130-29A	146.00	9130-32	315.00
4	9130-35A	146.00	9130-33	242.00

*Includes levelers. Raises cabinet 4".

No. 9130-23A (for 300 mm wafers), shown with optional stainless steel door frames.

No. 9130-21A (for 200mm wafer carriers), shown with optional stainless steel door frames, humidity controllers, and stand.

Portable
Desiccators

- **A convenient, contamination-free, economical carrying container for moisture-sensitive devices**

- **Stackable design permits space-saving storage**

- **Optional quick-connect and Automatic RB® (Relief/Bleed) Valve allow nitrogen purge for a particle-free, low-moisture environment**

- **Static-dissipative PVC option ensures ESD-safety, eliminates particle attraction to ensure clean surfaces**

No Nitrogen?
See pg. 19 DesiTray™ Renewable Drying Tray
Humidity to 5% RH.

Save Time! Terra's online *QuickQuote Planner* configures a system to your specifications: **www.TerraUniversal.com** Just click on **Desiccators**

All models shown with standard access doors. Select stainless steel door frames for extended service.

	Specifications	Portable Desiccators						Accessories	
T Y P E	Outside Dimensions	Clear Acrylic*		Static Dissipative PVC		Amber Acrylic*		304 Stainless Steel Door Frames	
	(W" x D" x H")	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
A	12 x 12 x 12	9302-17A	265.00	9302-20A	469.00	9302-24A	317.00	2200-14A	81.00
B	10 x 10 1/2 x 8 1/2	9302-00A	218.00	9302-21A	327.00	9302-25A	259.00	2200-51A	48.00
C	12 x 6 x 6	9302-18A	210.00	9302-22A	317.00	9302-26A	251.00	2200-52A	41.00
D	20 x 6 x 6	9302-19A	250.00	9302-23A	378.00	9302-27A	298.00	2200-53A	68.00

* Acrylic is damaged by alcohol and other cleaning agents.

Optional Features:

Quick Connect Fitting
Installed, requires RB Valve.

Cat. #	$/Each
1601-06	29.00

Automatic RB® Valve
Installed; see page 18.

1600-60B	94.00

Faraccator™
Static-Safe Desiccators

These desiccators employ a Faraday-cage design that completely shields stored parts against electrostatic charges. Static-dissipative PVC construction controls surface charges and the particles they attract (acrylic models also available).

All models come with removable stainless steel trays mounted on noncontaminating runners. Select models with or without stainless steel insert packages, which provide convenient storage bins for 2" waffle (die) packs.

Configurations also available for 3"-deep and 5"-deep trays—click on "Desiccators" at TerraUniversal.com for complete ordering information.

Single chamber-width models, shown with optional gas controls and castered stands. See ordering chart for double chamber-width models.

Optional Features (see page 18 for nitrogen controllers)
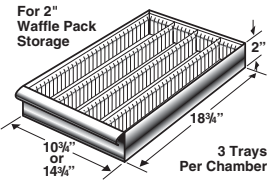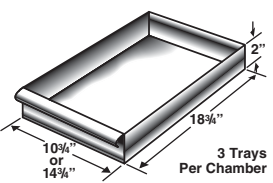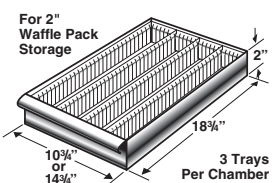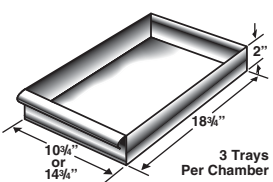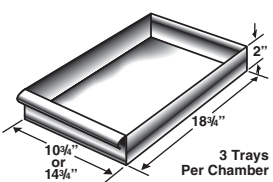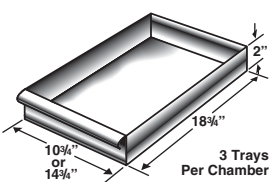
Cabinet Width	Door Frames See page 2.		Stainless Steel Stand (with levelers)			
			4" H		12" H	
	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
13.125"	2357-01A	121.00	1766-20A	371.00	1766-21A	371.00
17.00"	2357-02A	131.00	1775-12A	556.00	1775-13A	556.00
26.50"	2357-01A	121.00	2517-60	407.00	2517-62	407.00
34.25"	2357-02A	131.00	2517-61	593.00	2517-63	593.00

All models include removable stainless steel trays; inlays included on select models

		Specifications				Faraccators			
	Tray Type Load Capacity: 35 lbs./Tray	Number of Chambers (doors)	Number of Sliding Trays	Drawer Inside Dimensions W x D x H (inches)	Cabinet Overall Dimensions W x D x H (inches)	Clear Acrylic** Faraccators Cat. #	$/Each	Static Dissipative* PVC Faraccators Ⓧ Cat. #	$/Each
Cabinet Style: Single Chamber Width (13 1/8" or 17")									
With Inlays	For 2" Waffle Pack Storage	1	3	10³/₄ x 18³/₄ x 2	13¹/₈ x 22 x 13	1918-00A	1,209.00	2534-00A	1,797.00
		2	6	10³/₄ x 18³/₄ x 2	13¹/₈ x 22 x 26	1919-00A	2,267.00	2535-00A	3,265.00
		3	9	10³/₄ x 18³/₄ x 2	13¹/₈ x 22 x 39	1920-00A	3,336.00	2536-00A	4,898.00
		4	12	10³/₄ x 18³/₄ x 2	13¹/₈ x 22 x 52	1921-00A	4,382.00	2537-00A	6,223.00
		1	3	14³/₄ x 18³/₄ x 2	17 x 22 x 13	1922-00A	1,423.00	2538-00A	2,111.00
		2	6	14³/₄ x 18³/₄ x 2	17 x 22 x 26	1923-00A	2,796.00	2539-00A	3,908.00
		3	9	14³/₄ x 18³/₄ x 2	17 x 22 x 39	1924-00A	3,912.00	2541-00A	5,717.00
		4	12	14³/₄ x 18³/₄ x 2	17 x 22 x 52	1925-00A	5,156.00	2542-00A	7,490.00
Without Inlays		1	3	10³/₄ x 18³/₄ x 2	13¹/₈ x 22 x 13	1902-00A	873.00	2543-00A	1,507.00
		2	6	10³/₄ x 18³/₄ x 2	13¹/₈ x 22 x 26	1903-00A	1,672.00	2544-00A	2,708.00
		3	9	10³/₄ x 18³/₄ x 2	13¹/₈ x 22 x 39	1904-00A	2,430.00	2545-00A	4,052.00
		4	12	10³/₄ x 18³/₄ x 2	13¹/₈ x 22 x 52	1905-00A	3,198.00	2546-00A	5,113.00
		1	3	14³/₄ x 18³/₄ x 2	17 x 22 x 13	1906-00A	1,067.00	2547-00A	1,775.00
		2	6	14³/₄ x 18³/₄ x 2	17 x 22 x 26	1907-00A	1,968.00	2549-00A	3,249.00
		3	9	14³/₄ x 18³/₄ x 2	17 x 22 x 39	1908-00A	2,868.00	2550-00A	4,738.00
		4	12	14³/₄ x 18³/₄ x 2	17 x 22 x 52	1909-00A	3,768.00	2551-00A	6,190.00
Cabinet Style: Double Chamber Width (26 1/2" or 34 1/4")									
With Inlays	For 2" Waffle Pack Storage	2	6	10³/₄ x 18³/₄ x 2	26¹/₂ x 22 x 13	2517-01A	2,358.00	2517-33A	3,505.00
		4	12	10³/₄ x 18³/₄ x 2	26¹/₂ x 22 x 26	2517-02A	4,423.00	2517-34A	6,367.00
		6	18	10³/₄ x 18³/₄ x 2	26¹/₂ x 22 x 39	2517-03A	6,504.00	2517-35A	9,552.00
		8	24	10³/₄ x 18³/₄ x 2	26¹/₂ x 22 x 52	2517-04A	8,548.00	2517-36A	12,133.00
		2	6	14³/₄ x 18³/₄ x 2	34¹/₄ x 22 x 13	2517-05A	2,776.00	2517-37A	4,115.00
		4	12	14³/₄ x 18³/₄ x 2	34¹/₄ x 22 x 26	2517-06A	5,454.00	2517-38A	7,619.00
		6	18	14³/₄ x 18³/₄ x 2	34¹/₄ x 22 x 39	2517-07A	7,626.00	2517-39A	11,147.00
		8	24	14³/₄ x 18³/₄ x 2	34¹/₄ x 22 x 52	2517-08A	10,052.00	2517-40A	14,605.00
Without Inlays		2	6	10³/₄ x 18³/₄ x 2	26¹/₂ x 22 x 13	2517-09A	1,704.00	2517-41A	2,937.00
		4	12	10³/₄ x 18³/₄ x 2	26¹/₂ x 22 x 26	2517-10A	3,260.00	2517-42A	5,280.00
		6	18	10³/₄ x 18³/₄ x 2	26¹/₂ x 22 x 39	2517-11A	4,739.00	2517-43A	7,900.00
		8	24	10³/₄ x 18³/₄ x 2	26¹/₂ x 22 x 52	2517-12A	6,236.00	2517-44A	9,969.00
		2	6	14³/₄ x 18³/₄ x 2	34¹/₄ x 22 x 13	2517-13A	2,083.00	2517-45A	3,462.00
		4	12	14³/₄ x 18³/₄ x 2	34¹/₄ x 22 x 26	2517-14A	3,837.00	2517-46A	6,337.00
		6	18	14³/₄ x 18³/₄ x 2	34¹/₄ x 22 x 39	2517-15A	5,595.00	2517-47A	9,239.00
		8	24	14³/₄ x 18³/₄ x 2	34¹/₄ x 22 x 52	2517-16A	7,346.00	2517-48A	12,069.00

With Inlays trays labeled: 3 Trays Per Chamber; tray dimensions 18³/₄", 10³/₄" or 14³/₄", depth 2"

* For enhanced contamination control, select Faraccators made of Static-Dissipative PVC.
** Acrylic is damaged by alcohol and other cleaning agents.

Custom Series 300 Stainless Steel Desiccator
Ref. No. 1991-60

Custom Electropolished Stainless Steel Pass-Through Desiccator
Ref. No. 9606-36

Double-Agent Desiccator No. 2000-00
Desiccator storage inside a high-security, fire-rated safe

Security Faraccator™ — Inconspicuous, Tamper-Resistant Desiccator
No. 2030-00A, shown with optional Dual Purge and NitroWatch controllers and castered stand

Nitroplex™ Humidity Control System
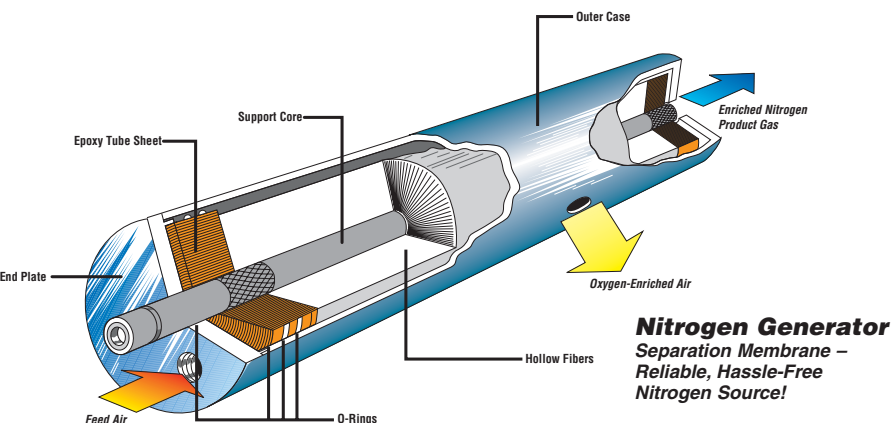Configured for multi-plexed RH control and datalogging for 20 chambers. Ref. No. 3950-85NP

Optimized to Your
Requirements

Visit Terra's web site for hundreds of innovative desiccator solutions to unique storage needs.

Save Time!

Terra's online *QuickQuote Planner* configures a system to your specifications:
www.TerraUniversal.com
Just click on **Desiccators** or call to discuss your application.

Nitrogen Generator
Separation Membrane –
Reliable, Hassle-Free
Nitrogen Source!

Labels: Outer Case, Support Core, Epoxy Tube Sheet, End Plate, Feed Air, O-Rings, Hollow Fibers, Enriched Nitrogen Product Gas, Oxygen-Enriched Air

Process Gas Generators & Dryers

Terra's gas generators and gas dryers provide several ways to produce a dry, particle-free environment inside glove boxes, desiccators, and other enclosures.

Membrane separation systems operate with no moving parts and require almost no maintenance. The Nitrogen Generator uses this technology to provide a reliable source of clean, dry nitrogen.

Nitrogen Generators
Purity vs. Flow Rates (@100 PSI inlet feed, 72°F*)

Model	Purity		
	99%	98%	97%
No. 2700-12A	7.4 CFH	10.2 CFH	12.5 CFH
No. 2700-11A	49.0 CFH	65.0 CFH	75.0 CFH
No. 2700-09A	126.0 CFH	180.0 CFH	223.0 CFH

* Higher flow rates can be achieved with higher feed temperature (see Terra's process gas heater, No. 9450-00).

No. 2700-09A   No. 2700-11A   No. 2700-12A

A Nitrogen Generator

B Dryex 80™

C Dryex 10™

Comparative Guide to Terra Gas Dryers

Product	Design Type	Outlet Flow Capacity	Service Requirement	Prefilters Included	Overall Dimensions (W x D x H inches)	Recommended Application	Cat. #	$/Each
A. Nitrogen Generator	Membrane	See performance chart	Air Compressor (#9505-47, cat. pg 482)	Yes (micro-fiber & coalescing)	18 x 18 x 81.25 24 x 12 x 49.25 20 x 12 x 35.25	Gloveboxes, desiccators & N_2-based process equipment in labs where N_2 is preferable to dry air	2700-09A 2700-11A 2700-12A	10,685.00 6,521.00 2,602.00
B. Dryex 80™ Gas Dryer	Membrane	420-900 SCFH (see performance chart, cat. pg 479)	Air Compressor (#9505-43, cat. pg 482)	Yes (micro-fiber & coalescing)	24 x 12 x 49.25	Low-humidity applications (in gloveboxes or desiccators) where clean, dry air is acceptable	9082-00	3,955.00
C. Dryex 10™ Generator	Membrane	54-105 SCFH @ 100 PSIG	Air Compressor (#9505-43, cat. pg. 482)	Yes (micro-fiber & coalescing)	16 x 7.25 x 6.5	Ideal source of purged gas in moisture-sensitive storage and processing applications	9082-01	2,220.00

Environmental Control Systems

A. NitroPlex™ Multiplexed Humidity Controller
See page 4.

B. Desiccator Dual Purge™ System
Provides variable-flow gas purge to block out moisture and contaminants. Switches to high-flow purge to compensate for pressure drop-outs or rising humidity levels. Requires RB valve for safe operation. See Catalog 105, page 128.

	Cat. #	$/Each
Dual Purge System (110/220VAC, 50/60Hz)	1606-61	1,712.00
Sensor Switch (order one per desiccator door)	1600-49	67.00

C. NitroWatch™ Humidity Controller
Operates together with the Dual Purge System to maintain a user-determined humidity level down to 0% RH. Also displays current humidity level.

	Cat. #	$/Each
Control Unit (draws power from Dual Purge)	9500-00A	866.00
Humidity Sensor (order one per cabinet)	9500-02A	490.00

D. Automatic RB® (Relief/Bleed) Valve
Automatically relieves pressure build-ups to ensure safe operating conditions with Terra's gas control systems. One valve recommended per storage chamber. See Catalog 105, page 130.

Cat. #	$/Each
1600-60B	94.00

E. Flowmeters
For static control of nitrogen purge in small benchtop desiccators. **Note:** Because flowmeters cannot vary nitrogen flow in response to operating conditions, they increase nitrogen expenses and are not recommended for large cabinets.

Flow Range	Cat. #	$/Each
1 – 10 SCFH	1600-31	94.00
2 – 20 SCFH	1600-32	94.00

F. Desiccator Ionizing Modules
These low-voltage ionizers minimize EMI/RFI and safety hazards. Emitters, mounted in a 304 stainless steel housing in the desiccator plenum chamber, direct balanced streams of positive and negative ions to safely neutralize static charges. With a gas flow of around 20 SCFH, the module provides static discharge time of less than 10 seconds (1000V to < 100V).

Terra offers a standard module for each desiccator; visit TerraUniversal.com for pricing and additional specifications.

G. GroundWatch™ Continuity Indicator
Monitors integrity of ground connections on Terra desiccators.

	Cat. #	$/Each
110VAC, 60Hz	4400-00	334.00
220VAC, 50Hz	4400-00-220	334.00

H. Ionizing Blow-Off Gun
Safely neutralizes surfaces with pinpoint accuracy. Also removes surface contaminants. Durable, noncontaminating hardware is cleanroom compatible.

	Cat. #	$/Each
Cleanroom Ionizing Air Gun	2005-50	548.00
AC Power Transformer		
120VAC, 50/60Hz	2005-09A	34.00
220VAC, 50/60Hz	2005-09A-220	45.00

A

Miniaturized humidity displays
B

C

D
Actual Size: 7/16" x 7/16" x 1.5"

E

F

F

G

H

I. Adjustable Support Rack

This stainless steel rack is ideal for storing carrier reels, screen frames, and similar items of various heights and thicknesses. Adjustable supports are positioned in 0.25" increments along the support frame, allow you to configure the storage slots to your requirements. Select the desired support heights and quantities separately.

	Cat. #	$/Each
Rack (7.75"W x 23.5"L)	**3607-03**	**74.00**
4.5"H Support	**3607-01**	**3.00**
7.5"H Support	**3607-02**	**4.00**

J. Humex 2™ Humidifier

Provides inline humidification of nitrogen or other process gas being fed into a desiccator, glove box or similar enclosure. Ideal for accelerated life studies at differing humidity levels, particularly in a NitroPlex cabinet with multiple set point control. Quick vaporization module eliminates moisture sputtering. Flow rate: 15 CFM.

	Cat. #	$/Each
Humex 2™ 110VAC, 50/60 Hz	**9081-02**	**2,248.00**
Humex 2™ Humidity Sensor	**9500-02A**	**490.00**

K. Adjustable Shelf Supports

Lends strength to any chamber without taking up valuable space. Retractable design makes installation easy.

	Cat. #	$/Each
15" to 26"	**2200-21**	**61.00**
21" to 35"	**2200-20**	**64.00**

L. IC Tube Inserts

Adapts a standard Adjust-A-Shelf Desiccator for IC tube storage. Each includes four horizontal shelves with slots for insertion of dividing rods, allowing versatile bin configurations.

For Shelf ID	Acrylic		Dissipative PVC	
(See page 8)	Cat. #	$/Each	Cat. #	$/Each
14.5" x 14.5"	**1508-50**	**259.00**	**1508-53**	**524.00**
19.9" x 14.5"	**1508-51**	**326.00**	**1508-54**	**711.00**
19.9" x 21"	**1508-52**	**463.00**	**1508-55**	**1,002.00**

M. DesiTray™ Renewable Drying System

These DesiTrays™ create a convenient dry storage environment inside any Terra desiccator, maintaining a humidity level down to 5% RH.

Their low-profile design allows insertion below adjustable shelving, consuming virtually no storage space. The noncontaminating stainless steel housing contains your choice of silica gel or molecular sieve. To regenerate the DesiTray™, simply heat it inside any appropriate lab oven until the indicating desiccant turns blue.

	Cat. #	$/Each
Stainless Steel DesiTray™	**1900-01**	**222.00**
Order one/chamber. Each holds two pounds of desiccant (order below)		
Silica Gel (20-lb. can)	**1900-02**	**168.00**
Molecular Sieve (20-lb. can)	**1900-03**	**240.00**

No Nitrogen Required! *DesiTrays™ convert a Terra Desiccator into a low-RH Drying Cabinet*

Silica Gel

Molecular Sieve

N. Temperature/Humidity Gauge

Ideal for monitoring humidity in a chamber equipped with a DesiTray™. Includes installation.

Cat. #	$/Each
5401-15	**136.00**

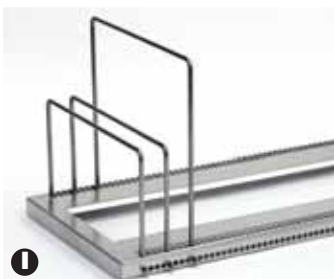## O. Imperial V Mechanical Convection Oven

Maximum Temperature: 270°C
Ideal for regeneration of DesiTray™ with silica gel or molecular sieve.

Power	Cat. #	$/Each
120VAC, 50/60Hz, 15.8A	**3700-58**	**2,775.00**
240VAC, 50Hz, 7.9A	**3700-58-220**	**2,775.00**

N *Low-cost temperature & humidity monitoring*

O *Perfect for desiccant regeneration*

General Purpose Storage Cabinets

- **Economical storage cabinets are ideal for many laboratory, cleanroom and stockroom applications**

- **HEPA-filter/blower option provides a continuous downstream of particle-free air**

- **Select acrylic for full visibility and economy, or polypropylene for strength and chemical resistance**

Clean, Durable, Economical

All cabinets feature double full-height access doors that require minimal clearance space. The durable hinges are spring-loaded and, together with gaskets, ensure a tight seal and a clean environment for stored materials.

For critical contamination-control requirements, select a model with an integral filter/blower module. This unit, mounted to the top of the cabinet, features a 740 CFM variable speed impeller that directs a continuous stream of HEPA-filtered air downward through the storage area.

All models with HEPA filter/blower modules feature shelf perforations to allow air distribution throughout the cabinet. They are available with either acrylic or static-dissipative PVC doors (dissipative PVC offers complete visibility in addition to dissipative characteristics and excellent chemical resistance).

HEPA Filters
99.99% efficient at 0.3µm particles

Cat. #	$/Each
2100-30	**126.00**

ULPA Filters
99.999% efficient at 0.12µm particles

Cat. #	$/Each
2100-29	**134.00**

Casters
Set of four, two with locking brakes. Raise stands an additional 3" off the floor.

Cat. #	$/Each
1700-44	**223.00**

HEPA Filter
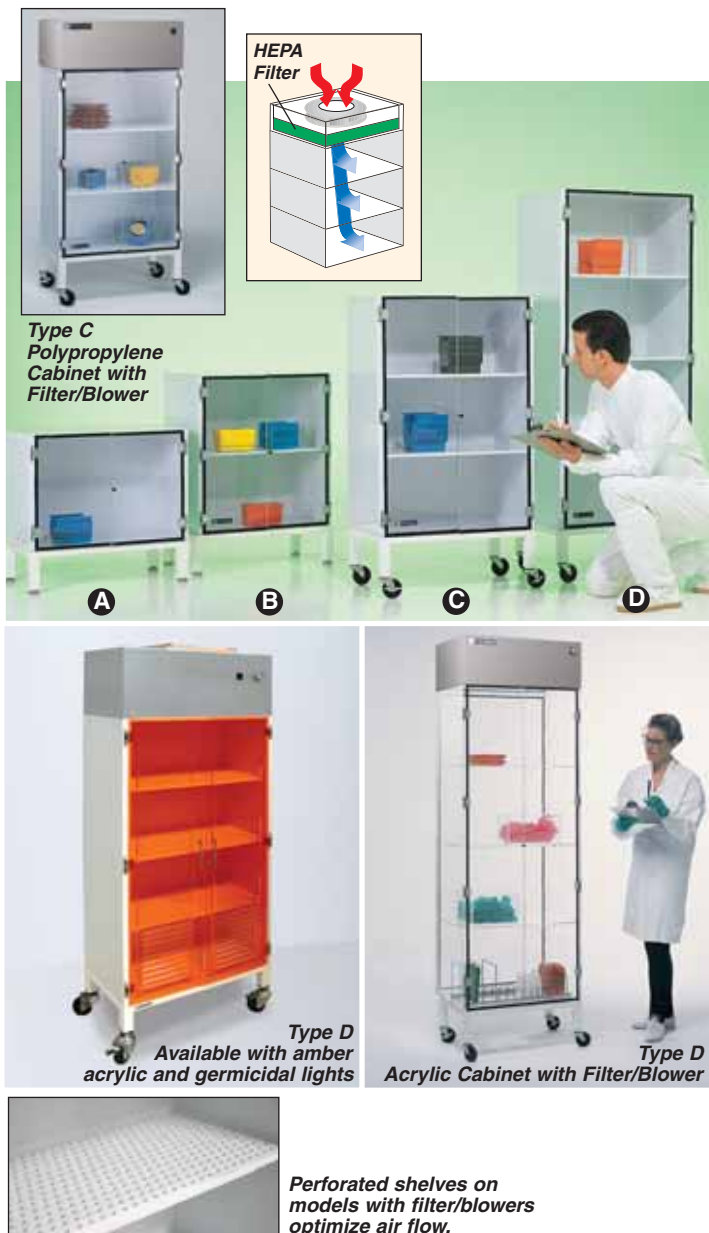
Type C Polypropylene Cabinet with Filter/Blower

Ⓐ Ⓑ Ⓒ Ⓓ

Type D Available with amber acrylic and germicidal lights

Type D Acrylic Cabinet with Filter/Blower

Silica Gel

Molecular Sieve

DesiTray™ Renewable Drying Tray Humidity to 5% RH; See page 19.

Perforated shelves on models with filter/blowers optimize air flow.

Polypropylene Storage Cabinets

TYPE	No. of Tiers	Overall Dimensions* (W x D x H inches)	Cabinets Without Filter & Blower				Cabinets With Filter & Blower**				Corresponding Stands (Includes levelers)	
			Acrylic Doors***		Static Dissipative Ⓧ PVC Doors		Acrylic Doors***		Static Dissipative Ⓧ PVC Doors			
			Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
A	1	25¾ x 20 x 22½	9010-30	432.00	9010-45	526.00	9010-60A	1,316.00	9010-75A	1,388.00	9010-90A	190.00
B	2	25¾ x 20 x 44½	9010-31	867.00	9010-46	1,031.00	9010-61A	1,733.00	9010-76A	1,892.00	9010-90A	190.00
C	3	25¾ x 20 x 66½	9010-32	1,304.00	9010-47	1,428.00	9010-62A	2,147.00	9010-77A	2,289.00	9010-90A	190.00
A	1	25¾ x 15 x 18	9010-33	417.00	9010-48	543.00	9010-63A	1,300.00	9010-78A	1,403.00	9010-91A	176.00
B	2	25¾ x 15 x 35½	9010-34	791.00	9010-49	829.00	9010-64A	1,659.00	9010-79A	1,689.00	9010-91A	176.00
C	3	25¾ x 15 x 53	9010-35	1,172.00	9010-50	1,239.00	9010-65A	2,023.00	9010-80A	2,099.00	9010-91A	176.00
A	1	25¾ x 15 x 23	9010-36	418.00	9010-51	580.00	9010-66A	1,641.00	9010-81A	1,441.00	9010-91A	176.00
B	2	25¾ x 15 x 45½	9010-37	908.00	9010-52	1,013.00	9010-67A	1,770.00	9010-82A	1,874.00	9010-91A	176.00
C	3	25¾ x 15 x 68	9010-38	1,252.00	9010-53	1,594.00	9010-68A	2,182.00	9010-83A	2,454.00	9010-91A	176.00
A	1	25¾ x 29 x 32	9010-39	1,382.00	9010-54	1,370.00	9010-69A	2,223.00	9010-84A	2,237.00	9010-92A	196.00
B	2	25¾ x 29 x 63½	9010-40	1,792.00	9010-55	2,034.00	9010-70A	2,616.00	9010-85A	2,895.00	9010-92A	196.00
B	2	25¾ x 13½ x 22½	9010-41	461.00	9010-56	556.00	9010-71A	1,343.00	9010-86A	1,543.00	9010-93A	201.00
D	4	25¾ x 13½ x 44½	9010-42	867.00	9010-57	1,110.00	9010-72A	1,733.00	9010-87A	1,971.00	9010-93A	201.00
B	2	25¾ x 15 x 27	9010-43	590.00	9010-58	745.00	9010-73A	1,464.00	9010-88A	1,606.00	9010-91A	176.00
D	4	25¾ x 15 x 53½	9010-44	1,407.00	9010-59	1,422.00	9010-74A	2,257.00	9010-89A	2,284.00	9010-91A	176.00
Acrylic Storage Cabinets												
A	1	25¾ x 16¾ x 18	9011-05	441.00	—	—	9011-08A	1,199.00	—	—	9010-94A	201.00
C	3	25¾ x 14½ x 36½	9011-06	569.00	—	—	9011-09A	1,355.00	—	—	9010-95A	198.00
D	4	25¾ x 17 x 64½	9011-07	625.00	—	—	9011-10A	1,443.00	—	—	9010-96A	201.00

* Without Filter/Blower Module. ** Order desired filter separately. Stainless Steel housing increases overall height by 10 ½".
*** Acrylic is damaged by alcohol and other cleaning agents.

CE

Heated Processing Chamber

- **Ideal for work with biological samples, microelectronics-based surgical tools, medical implants, and other critical components requiring above-ambient calibration or testing**

- **Recirculation system ensures uniform heating of the internal environment up to 140°F**

- **Transparent polycarbonate front and sides allow full visibility of chamber**

- **Hinged access door with PVC parting curtain allows introduction of large materials when opened**

Specifications

Dimensions:	19"W x 24"D x 15"H
Materials:	Polycarbonate (front and side of processing chamber); 304 stainless steel (blower/heater housing and diffusers)
Blower:	230 CFM motorized impeller with automatic thermal protection (adjustable 40-70°C)

Heated Processing Chamber	Cat. #	$ Each
110VAC/60Hz	**1530-40A**	**4,982.00**
220VAC/50Hz	**1530-40A-220**	**4,982.00**

RH/Temperature Stability Chamber

Top View
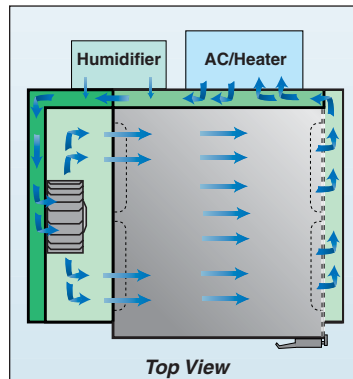
This acrylic cabinet is customized for storage of polycarbonate films used for high-precision screening of circuit boards. It maintains critical relative humidity and temperature levels to prevent dimensional aberrations that result from exposure to humidity and temperature fluctuations.

Air circulates horizontally across the shelves that hold the film. As air exits the storage area, it passes through an air conditioning/heating module that conditions it to within ± 2°F of the temperature set point. In addition, the continuously operating A/C module removes moisture to keep the %RH level within ± 3% of the set point. If humidity falls too low, an ultrasonic humidifier cycles on to add the proper amount of water vapor. If the temperature falls too low, the heater module cycles on. A water filtration system removes contaminants from the humidification feed water to eliminate the chance of mineral deposits or other vapor-borne contaminants.

As the process air exits the RH/temperature modules, an impeller blower draws it into an intake plenum area and forces it uniformly back through the storage area.
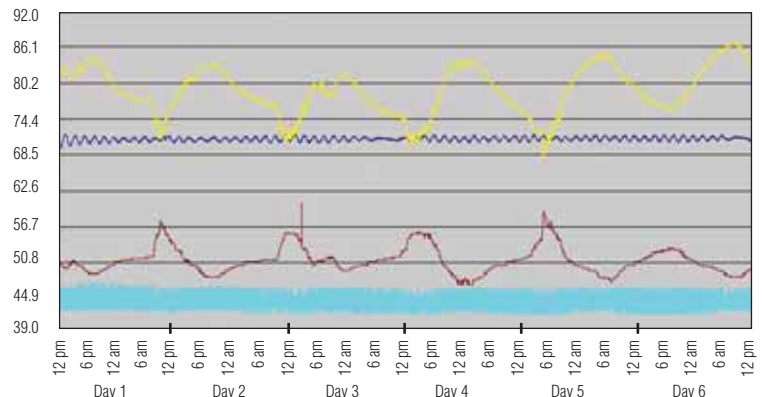
*Ref. No. 2148-10A
Available in acrylic or stainless steel*

**Humidity Accuracy:
± 3%RH within ± 20% of ambient
Temperature Accuracy:
± 2°F within ± 10°F of ambient**

Legend:
- °F ambient
- °F cabinet
- %rh ambient
- %rh cabinet
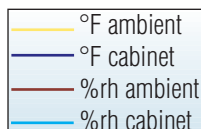
Cleanroom
METRO Shelving

A. Super Adjustable™ Wire Shelves
Just lift the release on each corner, adjust your shelf at precise 1"-increments, and clamp the release lever shut. In seconds, you can optimize your storage system to changing load requirements, with no tools, no wasted time, and no wasted space. For shelf grounding in static-sensitive applications, select conductive sleeves below.

More sizes available – www.TerraUniversal.com

A. Super Adjustable Wire Shelves

Dimensions W x L (inches)	Chrome Plated Cat. #	$/Each	Stainless Steel Cat. #	$/Each
18 x 24	1701-75	41.00	2650-35	135.00
18 x 36	1701-76	42.00	2650-37	139.00
18 x 48	1701-77	42.00	2650-39	164.00
18 x 60	1701-78	59.00	2650-41	208.00
21 x 24	1697-24	47.00	2650-43	155.00
21 x 36	1701-79	53.00	2650-45	158.00
21 x 48	1701-80	58.00	2650-47	183.00
21 x 60	1697-28	67.00	2650-49	241.00
24 x 24	1701-81	49.00	2650-51	167.00
24 x 36	1701-82	53.00	2650-53	171.00
24 x 48	1701-83	63.00	2650-55	205.00
24 x 60	1701-84	74.00	2650-57	251.00

	Cat. #	$/Pkg.
Replacement Sleeves/Wedges (pack of 4)	1571-00	5.00
Conductive Sleeves (pack of 4)	1571-01	4.00

B-C. Cleanroom Shelving with Split-Sleeve Assembly
This InterMetro shelving is fabricated of noncontaminating, cleanroom-compatible materials. Order aluminum split sleeve for shelf grounding.

B. Solid Shelves / C. Wire Shelves

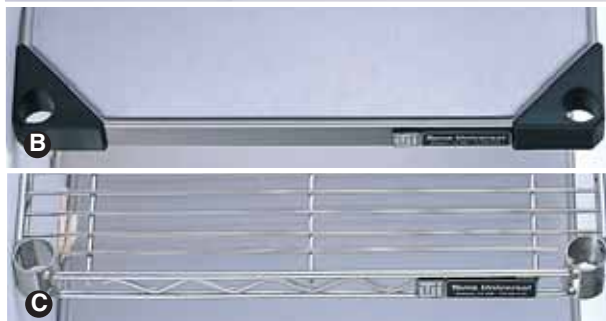| Dimens. W x L (in.)	Flat Stainless Steel Cat. #	$/Each	Chrome Plated Cat. #	$/Each	Stainless Steel Cat. #	$/Each
18 x 24	1301-06	136.00	1300-35	37.00	1300-64	131.00
18 x 36	1301-08	139.00	1300-37	38.00	1300-66	135.00
18 x 48	1301-10	170.00	1300-39	47.00	1300-68	160.00
18 x 60	1301-11	204.00	1300-40	55.00	1300-69	204.00
21 x 24	1301-12	152.00	1300-42	43.00	1300-71	152.00
21 x 36	1301-14	155.00	1300-44	46.00	1300-73	155.00
21 x 48	1301-16	194.00	1300-46	54.00	1300-75	179.00
21 x 60	1301-17	238.00	1300-47	63.00	1300-76	238.00
24 x 24	1301-18	163.00	1300-49	46.00	1300-78	163.00
24 x 36	1301-20	167.00	1300-51	49.00	1300-80	167.00
24 x 48	1301-22	203.00	1300-53	59.00	1300-82	202.00
24 x 60	1301-23	247.00	1300-54	70.00	1300-83	247.00

Plastic Split Sleeve Assembly
Included with each shelf.

Aluminum Split Sleeve
For grounding type B/C shelves.

Cat. #	$/Pkg.
1303-70	7.00

SiteSelect™ Posts

Height (inches)	Stationary Chrome Plated Cat. #	$/Each	Stationary Stainless Steel Cat. #	$/Each	*Mobile Chrome Plated Cat. #	$/Each	*Mobile Stainless Steel Cat. #	$/Each
14 1/2	1300-85	9.00	1300-91	18.00	—	—	—	—
34 1/2	1300-86	11.00	1300-92	28.00	1307-98	11.00	2650-01	28.00
54 9/16	1300-87	13.00	1300-93	32.00	1307-90	13.00	2650-02	32.00
62 9/16	1300-88	14.00	1300-94	35.00	1307-91	14.00	2650-30	35.00
74 5/8	1300-89	15.00	1300-95	40.00	1307-92	16.00	2650-03	40.00
86 5/8	1300-90	19.00	1300-96	46.00	1307-93	19.00	2650-04	46.00

*__Make it mobile__ – Select the mobile post from chart above. Casters available at TerraUniversal.com

Wall-Mount Shelving
Order quantities indicated below to create an above-bench storage unit. Posts are 33.6"H and allow shelf adjustment. Metroseal 3 coating inhibits growth of bacteria, fungus and other microbes. Wall mounting hardware not included (varies according to wall type).

	Stainless Steel Cat. #	$/Each	Antimicrobial Metroseal 3 Cat. #	$/Each
Shelves (2*)				
18"D x 36"L	1300-66	135.00	1300-98	49.00
18"D x 48"L	1300-68	160.00	1300-99	58.00
Shelf Supports (4*)	1306-74	45.00	1306-70	28.00
Shelf Posts (2*)	2650-10	68.00	2650-09	41.00

Convenient above-bench storage!

* Order quantity indicated in parenthesis to create one shelving unit

Change Room

Racks

A/B. Upright and Wall-Mount Garment Racks

Electropolished stainless steel construction and open wire design promotes ultra-clean conditions. Features unique hanger capture mechanism to ensure proper positioning at 3" intervals and to deter theft. Both models include electropolished stainless steel hangers; upright models include leveling feet. To meet ESD requirements, select aluminum split sleeves (on facing page). All units are 24"D; upright models are 74"H.

Width	No. of Hangers	A. Upright Cat. #	$/Each	B. Wall-Mount Cat. #	$/Each
36"	11	**2650-16**	905.00	2650-20	544.00
48"	15	**2650-17**	1,121.00	2650-21	685.00
60"	19	**2650-18**	1,369.00	2650-22	868.00
72"	23	**2650-19**	1,619.00	2650-23	942.00

C. Gowning Bench

Made of 14-gauge, 304 stainless steel, with stainless steel leveling footplates.

Dimensions	Cat. #	$/Each
16" x 36"	**2650-24**	593.00
16" x 48"	**2650-25**	622.00
16" x 60"	**2650-26**	650.00
16" x 72"	**2650-27**	705.00

D. Economy Garment Rack

Made of chrome-plated wire racks, this configuration of Metro Super Erecta shelving creates a versatile garment storage rack. See Terra's Catalog 105 for other shelving.

Required Quantity	Item	Cat. #	$/Each
4	74.625" H Corner Post	**1300-89**	15.00
2	24" x 48" Chrome Wire Shelf	**1300-53**	59.00
4	Footplate	**1301-78**	7.00
1	Chrome Support Frame	**2650-28**	45.00
1	Chrome Hanger Tube	**1302-19**	26.00
15	Closed Top Loop Chrome Hanger	**2650-29**	12.00

E. Garment Storage Rack

Specify quantities below to create this convenient 20-bin mobile storage rack.

Required Quantity	Item	Cat. #	$/Each
4	62.563"H SS Corner Post	**2650-30**	35.00
5	24" x 48" SS Wire Shelf	**1300-82**	202.00
15	8"H SS Shelf Divider	**1303-32**	43.00
5	4"H SS Rear Ledge	**1302-99**	50.00
10	4"H SS Side Ledge	**1302-95**	28.00
2	5" Stem Caster	**2080-55**	34.00
2	5" Stem Caster with Brakes	**2080-56**	38.00

F. Bootie/Shoe Rack

Items listed below create a bootie/shoe rack. All components are stainless steel.

Required Quantity	Item	Cat. #	$/Each
4	62.563"H SS Corner Post	**1300-94**	35.00
5	24" x 48" SS Wire Shelf	**1300-82**	202.00
12	52" SS Rods/Tabs	**2650-31**	18.00

Class 100 Mobile Storage Cabinet

Made of 304 stainless steel, this cabinet includes five stainless steel bearing drawers, each with slides. Overall dimensions: 29"W x 20"D x 35"H.

Cat. #	$/Each
9120-60	**2,346.00**

Door locks available

Wall-Mount Cabinets

These cabinets feature a rugged aluminum internal frame, easy-clean, dent-resistant polymer shell, and clear doors. Includes two adjustable polymer shelves; order additional shelves separately. Overall dimensions: 41.3"W x 13.9"D x 32.3"H. Shelf dimensions: 37"W x 11"D.

	Cat. #	$/Each
Storage Cabinet	**1306-88**	1,114.00
Polymer Shelf	**1306-90**	55.00

No. 9600-21

No. 9600-22

No. 9600-37

Cleanroom & Lab Storage Cabinets

A – D. Wafer Box Storage Cabinets

Electropolished stainless steel cabinet features adjustable shelves to accommodate many box sizes.

Wafer Storage Cabinets		
Overall Dimensions	**Cat. #**	**$/Each**
A. 47"W x 20"D x 67"H	9600-21**	11,292.00
B. 47"W x 26"D x 77"H	9600-22**	11,772.00
C. 47"W x 26"D x 41"H	9600-37*	4,685.00
D.*** 47"W x 26"D x 41"H	9600-38**	5,045.00

* Solid front doors. ** Dissipative PVC windows. *** D (not shown).

E/F. Reticle Storage Cabinet for Vertical Storage

These systems include open-structure shelves mounted on noncontaminating, low-friction runners that provide full access to stored cassettes. Each shelf contains three removable stainless steel trays. Order filter/blower separately.

Vertical Storage: Photomask/Reticle Cabinets			
Stainless Steel		**Electropolished Stainless Steel**	
Cat. #	**$/Each**	**Cat. #**	**$/Each**
9130-00	2,834.00*	9130-02	3,708.00*
9130-01	5,595.00**	9130-03	7,226.00**

* $28\frac{1}{2}$"W x 25"D x 38"H (Capacity: 189 reticles 7" x 7" x $\frac{1}{8}$"D)
** $28\frac{1}{2}$"W x 25"D x 62"H (Capacity: 378 reticles 7" x 7" x $\frac{1}{8}$"D)

Filter/Blower Module (Includes 99.99% efficient HEPA filter).

	Cat. #	$/Each
110VAC, 60Hz	9056-02	1,009.00
220VAC, 50Hz	9056-02-220	1,009.00

Panel Set
Includes two side panels, one rear panel, and hinged door.

Acrylic		Dissipative PVC	
Cat. #	**$/Each**	**Cat. #**	**$/Each**
9130-40*	310.00	9130-04*	591.00
9130-41**	587.00	9130-05**	1,180.00

* For 38"H models** For 62"H models

No. 9130-03, with optional Filter Module and casters

No. 9130-02, with optional Filter Module and Casters

Visit TerraUniversal.com for other configurations.

QUICK Ship

MicroVac™ – 3-Way Cleaning

- **Cleans up chemical powder spills –** ULPA filter captures 99.999% of 0.12µm particles for powder clean-up and collection

- **Clean air blower –** Nozzles pinpoint ULPA-filtered air stream to clean small parts

- **Clean air ventilator –** purges glove boxes, bio cabinets, and other enclosures

	Cat. #	$/Each
110VAC/60Hz	5100-00	955.00
220VAC/50Hz	5100-00-220	955.00

Includes mini-tool kit

Step 2 Permanent Cloth Bag
Step 4 ULPA Filter
Step 1 Disposable Paper Bag
Step 3 Class 10,000 Filter
99.999 Particle Collection 0.12µm

MicroVac™ Filtration System

Racks & Shelving From Eagle Group

These economical cleanroom and laboratory shelves use four truss wires for greater strength. Posts allow shelf height adjustment at 1-inch increments. Plastic split sleeves are included with each shelf; for grounding in ESD-sensitive applications, select optional aluminum split sleeves.

Eaglegard® Hybrid Epoxy: Durability and Microbial Protection

Shelving and posts featuring Eaglegard® hybrid epoxy coatings inhibit the growth of mold, microbes and other organic contaminants. These units carry a 15-year limited warranty.

Aluminum Split Sleeve
For grounding. One per shelf required.

Cat. #	$/Each
1372-38	**11.00**

Shelves from Eagle

Dimens*	Wire Shelves						Solid Shelves	
W x L	Chrome Plated		Stainless Steel		Eaglegard®**		Stainless Steel	
(inches)	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
14 x 36	**1370-03**	29.00	**1370-34**	81.00	**1372-45**	51.00	**1370-65**	91.00
14 x 48	**1370-05**	34.00	**1370-36**	112.00	**1372-47**	61.00	**1370-67**	110.00
14 x 60	**1370-06**	38.00	**1370-37**	127.00	**1372-48**	68.00	**1370-68**	132.00
14 x 72	**1370-07**	45.00	**1370-38**	143.00	**1372-49**	77.00	**1370-69**	154.00
18 x 36	**1370-10**	32.00	**1370-41**	100.00	**1372-52**	57.00	**1370-72**	103.00
18 x 48	**1370-12**	37.00	**1370-43**	120.00	**1372-54**	69.00	**1370-74**	125.00
18 x 60	**1370-14**	44.00	**1370-45**	152.00	**1372-56**	83.00	**1370-76**	149.00
18 x 72	**1370-15**	53.00	**1370-46**	180.00	**1372-57**	95.00	**1370-77**	183.00
24 x 36	**1370-26**	39.00	**1370-57**	124.00	**1372-68**	70.00	**1370-88**	123.00
24 x 48	**1370-28**	47.00	**1370-59**	150.00	**1372-70**	86.00	**1370-90**	151.00
24 x 60	**1370-30**	55.00	**1370-61**	184.00	**1372-72**	101.00	**1370-92**	177.00
24 x 72	**1370-31**	66.00	**1370-62**	230.00	**1372-73**	119.00	**1370-93**	209.00

*Each shelf includes 4 pairs of plastic split sleeves. **Hybrid epoxy coating resists growth of microbes.*

4-Inch Shelf Ledges for Wire Shelves

Length*	Chrome		Stainless Steel	
(inches)	Cat. #	$/Each	Cat. #	$/Each
14	**1371-88**	8.00	**1371-99**	15.00
18	**1371-89**	9.00	**1372-00**	17.00
24	**1371-91**	10.00	**1372-02**	21.00
36	**1371-93**	12.00	**1372-04**	29.00
48	**1371-95**	15.00	**1372-06**	36.00
60	**1371-97**	17.00	**1372-08**	42.00
72	**1371-98**	20.00	**1372-09**	53.00

* Other sizes available

Polymer 5" Stem Casters

Use with Mobile Posts (below) to convert your shelves into a mobile shelf cart.

	Cat. #	$/Each
Swivel Caster	**1372-41**	23.00
Caster with Brake	**1372-42**	24.00

Posts—Adjust shelf height at 1" increments

Height	Stationary						Mobile					
	Chrome Plated		Stainless Steel		Eaglegard®		Chrome Plated		Stainless Steel		Eaglegard®	
(inches)	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
14	**1370-94**	7.00	**1371-01**	13.00	**1372-74**	12.00	**1371-08**	7.00	**1371-15**	13.00	**1372-81**	12.00
18	**1370-95**	9.00	**1371-02**	19.00	**1372-75**	17.00	**1371-09**	9.00	**1371-16**	19.00	**1372-82**	17.00
33	**1370-96**	9.00	**1371-03**	21.00	**1372-76**	17.00	**1371-10**	10.00	**1371-17**	23.00	**1372-83**	17.00
54	**1370-97**	11.00	**1371-04**	24.00	**1372-77**	18.00	**1371-11**	12.00	**1371-18**	24.00	**1372-84**	18.00
63	**1370-98**	11.00	**1371-05**	26.00	**1372-78**	20.00	**1371-12**	14.00	**1371-19**	28.00	**1372-85**	20.00
74	**1370-99**	12.00	**1371-06**	30.00	**1372-79**	21.00	**1371-13**	17.00	**1371-20**	30.00	**1372-86**	21.00
86	**1371-00**	15.00	**1371-07**	34.00	**1372-80**	25.00	**1371-14**	28.00	**1371-21**	34.00	**1372-87**	25.00

For mobile storage, select the correct post and find casters at TerraUniversal.com

Filtered Curing/Drying Cabinet

- **Provides continuous wash of filtered air for clean, controlled adhesive curing, PC board drying, and parts storage**

- **Exhaust purification system (optional) removes odors and chemical vapors from air-stream for safe indoor release**

Drying/Curing Cabinets: Inlet Filter/Blower and Exhaust Filter

No. of Chambers	Overall Dimensions (W" x D" x H")	Acrylic 110VAC, 50/60Hz		Static-Dissipative PVC 110VAC, 50/60Hz	
		Cat. #	$/Each	Cat. #	$/Each
3[1]	37⅜ x 24 x 36	**6082-16A**	2,477.00	**6082-24A**	4,283.00
6[1]	59¾ x 24 x 36	**6082-17A**	3,605.00	**6082-25A**	6,536.00
5[2]	37⅜ x 24 x 60	**6082-18A**	4,102.00	**6082-26A**	7,403.00
10[2]	59¾ x 24 x 60	**6082-19A**	5,602.00	**6082-27A**	10,787.00

[1] Includes inlet filter housing with one 740 CFM blower and outlet (exhaust) housing for one filter (order filters separately)

[2] Includes inlet filter housing with two 740 CFM blowers and outlet (exhaust) housing for two filters (order filters separately)

		Cat. #	$/Each
HEPA Filter	— Rated 99.99% efficient @ 0.3µm particles	**1681-02**	260.00
Stainless Steel Shelves	— (perforated)	**1978-02**	151.00

No. 6082-19A

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

A

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

B

METRO Cleanroom & Lab Utility Carts

A. Polymer Utility Carts with Adjustable Shelves

Made of tough, chemical-resistant, high-density polyethylene, an extremely resilient polyolefin that provides excellent chemical resistance and wipes down easily. Raised "ship's edge" lip (.44"/11mm) contains spills. Height: 33.25" (other sizes and configurations available). Microban antimicrobial models available (see item "C" on facing page).

2-Shelf Models	Beige		Blue	
W" x L"	Cat. #	$/Each	Cat. #	$/Each
18 x 28	**1532-08**	133.00	**1532-12**	133.00
21.5 x 33.75			**1532-47**	144.00
27 x 39.5	**1532-09**	169.00	**1532-13**	169.00

3-Shelf Models	Beige		Blue	
W" x L"	Cat. #	$/Each	Cat. #	$/Each
18 x 28	**1532-10**	156.00	**1532-14**	156.00
21.5 x 33.75			**1532-53**	177.00
27 x 39.5	**1532-11**	207.00	**1532-15**	207.00

B. Polymer "Deep Ledge" Carts with Adjustable Shelves

Similar to models above, but with 2.75" (70mm)-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**	151.00
21.5 x 32.75	3-shelf	**1532-57**	186.00
27 x 38.75	2-shelf	**1532-58**	177.00
27 x 38.75	3-shelf	**1532-59**	217.00

Dozens more at TerraUniversal.com!

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.

G

Series 700 – Shown with optional bin. Three wire shelves, in a choice of chrome or stainless steel.

H

Ordering Information		D. Series 100		E. Series 200		F. Series 400		G. Series 600 Stainless Steel Wire Shelves		H. Series 700 Stainless Steel Wire Shelves	
Dimensions (W" x L" x H")	Caster Dia.	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
18 x 24 x 38	4"	**1401-23**	409.00	**1401-44**	521.00	**1401-54**	285.00	**1402-39**	384.00	**1402-56**	490.00
18 x 30 x 38	4"	**1401-24**	442.00	**1401-45**	551.00	**1401-55**	308.00	**1402-41**	416.00	**1402-58**	539.00
18 x 36 x 38	4"	**1401-25**	463.00	**1401-46**	600.00	**1401-56**	322.00	**1402-43**	438.00	**1402-60**	572.00
21 x 36 x 39	5"	**1401-26**	500.00	**1401-47**	653.00	**1401-57**	352.00	**1402-45**	490.00	**1402-62**	641.00
24 x 36 x 39	5"	**1401-27**	529.00	**1401-48**	694.00	**1401-58**	371.00	**1402-47**	517.00	**1402-64**	683.00

Cleanroom and Wafer Fab Carts

C. Polymer Carts with Microban® Antimicrobial Product Protection
(not shown)

Built-in Microban® formulation inhibits growth of bacteria, mold and mildew. Construction is otherwise identical to corresponding carts on this page. Available in blue only.

For Molded-Handle Units (Style "A" left)

W" x L"	Configuration	Cat. #	$/Each
18 x 28	2-shelf	**1532-81**	147.00
18 x 28	3-shelf	**1532-82**	172.00
21.5 x 33.75	2-shelf	**1532-83**	158.00
21.5 x 33.75	3-shelf	**1532-84**	195.00

For Deep-Ledge Units (Style "B" left)

W" x L"	Configuration	Cat. #	$/Each
21.5 x 32.75	2-shelf	**1532-85**	167.00
21.5 x 32.75	3-shelf	**1532-86**	205.00

D – H. Super Erecta® Carts with Adjustable Shelves

Many designs available with chrome-plated and stainless steel wire and solid shelves.

I. Wafer Box Carts

Electropolished stainless steel for Class 1 cleanliness. Spring-loaded casters for smooth rolling.

	Cat. #	$/Each
Rod Shelves	**9600-14**	3,109.00
Perforated Shelves	**3505-05**	2,508.00

J. "Dead Man" Cart

Features polypropylene construction with a spill containment area. "Dead Man" braking system prevents carts from rolling while unattended.

Cat. #	$/Each
6017-73	5,976.00

K. Bottle Cart

Electropolished stainless steel construction, clean casters, and ergonomic design make this cart ideal for safely transporting 5' process gas canisters. Includes retaining chain.

	Cat. #	$/Each
12.3"W x 31"D x 57"H.	**9600-18**	1,767.00

L/N. Acid Transport Carts

Made of stress-relieved polypropylene, these carts resist acids and corrosives used in wet processing applications. All three designs feature recessed receptacles that collect spills into an easy-empty containment reservoir. Acid-resistant neoprene swivel casters are included.

Type L features removable 7" x 7" inserts

Type M is ideal for larger, heavy containers.
Compartments: two @ 17" x 26.5" x 17" and two @ 17" x 36.5" x 14"

Type N features 24 angled 7" x 7" slots for one-gallon bottles and one top compartment for gloves, safety glasses and other small items.

Polypropylene Acid Transport Carts

Type (see photos)	No. of Compnts.	Cat. #	$/Each
L	12	**3401-00**	1,965.00
	18	**3401-01**	2,395.00
M	4	**3401-30**	2,253.00
N	25	**3401-31**	2,845.00

Floor-Lock Brake	Cat. #	$/Each
	3401-04	179.00

Model Shown: No. 9600-14 Rod Shelf Cart

Model Shown: No. 3505-05 Perforated Shelf Cart

Garment and Supplies Cabinets

Now in Stainless Steel and Cleanroom Laminate Designs

Type A: Garment storage only.

Type B: Garment storage and adjustable shelves (order desired shelf type separately).

Type C: Adjustable shelves only (order desired shelf type separately).

Type D: Includes two chrome-plated wire shelves adjustable in 1" intervals.

All models are fabricated of stainless steel or cleanroom laminated fiberboard. All except type "C" are available with overhead HEPA filter/blower module that showers contents with particle-free air to dislodge and wash away contaminants.

A *No. 4101-00A with optional hangers*

B *No. 4101-04A with optional hangers and shelves*

Model Shown: No. 4205-11
3,880.00

Custom Configurations to Your Requirements!

C *No. 4101-09A with optional shelves*

D *No. 4205-00A, two shelves included*

Cleanroom Laminate *(see stainless steel models on facing page)*

	Specifications		Garment Storage Cabinets				Corresponding Shelves				Stands	
	Type	Outside Dimensions	Formica Laminate w/Acrylic Doors		Formica Laminate w/Dissip. PVC Doors		Polypropylene Shelves		Nonconductive Laminate Shelves		Raise cabinet 6" off floor	
		(W" x D" x H")*	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
A	Filter/Blower	36 x 20 x 94	4101-00A	2,811.00	4101-14A	3,441.00	—	—	—	—	4101-45	271.00
	Cabinet Only	36 x 20 x 78	4101-01A	1,992.00	4101-15A	2,622.00	—	—	—	—	4101-45	271.00
	Filter/Blower	36 x 24 x 83	4101-02A	2,578.00	4101-16A	3,210.00	—	—	—	—	4101-46	284.00
	Cabinet Only	36 x 24 x 67	4101-03A	1,764.00	4101-17A	2,396.00	—	—	—	—	4101-46	284.00
B	Filter/Blower	48 x 20 x 94	4101-04A	3,315.00	4101-18A	3,946.00	4101-30	39.00	4101-40	73.00	4101-47	316.00
	Cabinet Only	48 x 20 x 78	4101-05A	3,022.00	4101-19A	3,652.00	4101-30	39.00	4101-40	73.00	4101-47	316.00
	Filter/Blower	48 x 24 x 83	4101-06A	3,000.00	4101-20A	4,261.00	4101-31	39.00	4101-41	73.00	4101-48	328.00
	Cabinet Only	48 x 24 x 67	4101-07A	2,243.00	4101-21A	2,875.00	4101-31	39.00	4101-41	73.00	4101-48	328.00
C	Cabinet Only	30 x 14 x 78	4101-09A	1,388.00	4101-23A	1,955.00	4101-32	56.00	4101-42	101.00	4101-50	246.00
	Cabinet Only	30 x 18 x 78	4101-11A	1,451.00	4101-25A	2,019.00	4101-33	56.00	4101-43	101.00	4101-51	259.00
	Cabinet Only	36 x 20 x 78	4101-13A	1,577.00	4101-27A	2,144.00	4101-28	56.00	4101-44	101.00	4101-45	271.00
D	Filter/Blower	37¾ x 26½ x 86	4205-00A	2,687.00	4205-02A	3,384.00	Additional Wire Shelves (Type D) 36"W x 24"D				Cat. # 1300-51	$/Each 49.00
	Cabinet Only	37¾ x 26½ x 72	4205-01A	2,108.00	4205-03A	2,687.00						

* Height does not include stand. Order stand separately.

A/B. UltraClean™ Cylinder Tube Garment Racks

Made of high-grade electropolished stainless steel, these racks feature sloping 1½"-diameter cylindrical tube frames that are easy to wipe down. Fixed position design keeps garments firmly in place.
See ordering chart below.

C. UltraClean™ Square Tube Garment Racks

These electropolished racks can be disassembled for easy storage and shipping. They are available with one or two hanger rods, in configurations for closed-loop or detachable hangers (photos C and D).
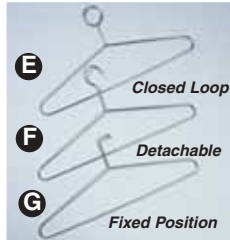*See ordering chart below.*

D. Fixed Position Hanger Rods

This style is available with square-tube racks. Slots at 3" increments keep garments from bunching together. Requires fixed-position hangers (photo G).
See ordering chart below.

H. Hook Hanger

This fixed-position hanger includes a hook for hoods, masks and other apparel.

Cat. #	$/Each
1530-33-2	17.00

Electropolished Cleanroom Hangers

Type	For Rack Type	Cat. #	$/Each
E	C	1530-30-2	13.00
F	A, B or C	1530-31-2	13.00
G	A, B or D	1530-32-2	13.00

Closed Loop
Detachable
Fixed Position

Fixed position style

Cylinder Frame Rack (1½"-diameter tubes) Overall height: 76" For use with detachable hangers.

Square-Tube Rack Sliding position style for use with closed-loop or detachable hangers. Overall height: 74"

QUICK Ship

Electropolished Stainless Steel Garment Storage Racks

Type See photos above	Dimensions	Hanger Capacity (order separately)		A/B. Cylinder Tube Frame (order hanger 1530-32-2 separately)				C/D. Square Tube Frame			
		Single Rack	Dual Rack	A. Single-Rack Cat. #	$/Each	B. Dual-Rack Cat. #	$/Each	Single-Rack Cat. #	$/Each	Dual-Rack Cat. #	$/Each
C. Sliding Position	48"W x 24"D	15	30	—	—	—	—	9230-00-2	827.00	9230-04-2	1,394.00
(order closed loop	60"W x 24"D	19	38	—	—	—	—	9230-01-2	969.00	9230-05-2	1,581.00
or detachable	72"W x 24"D	23	46	—	—	—	—	9230-02-2	1,070.00	9230-06-2	1,758.00
hangers)	84"W x 24"D	27	54	—	—	—	—	9230-03-2	1,188.00	9230-07-2	1,966.00
A. B. & D.	48"W x 24"D	15	30	9602-67	1,040.00	9602-75	2,043.00	9230-08-2	993.00	9230-12-2	1,950.00
Fixed Position	60"W x 24"D	19	38	9602-68	1,220.00	9602-76	2,319.00	9230-09-2	1,164.00	9230-13-2	2,213.00
(order fixed position	72"W x 24"D	23	46	9602-69	1,346.00	9602-77	2,580.00	9230-10-2	1,287.00	9230-14-2	2,464.00
hangers)	84"W x 24"D	27	54	9602-70	1,494.00	9602-78	2,883.00	9230-11-2	1,427.00	9230-15-2	2,752.00

Stainless Steel Garment & Supplies Cabinets *(see laminate models on facing page)*

Specifications			Garment Storage Cabinets				Shelves	
	Type	Outside Dimensions* (W" x D" x H")	Stainless Steel w/Acrylic Doors Cat. #	$/Each	Stainless Steel w/Dissip. PVC Doors Cat. #	$/Each	Stainless Steel Cat. #	$/Each
A	Filter/Blower	36 x 20 x 100	4101-57A	7,028.00	4101-68A	7,658.00	—	—
	Cabinet Only	36 x 20 x 84	4101-58A	4,979.00	4101-69A	5,610.00	—	—
	Filter/Blower	36 x 24 x 89	4101-59A	6,447.00	4101-70A	7,080.00	—	—
	Cabinet Only	36 x 24 x 73	4101-60A	4,412.00	4101-71A	5,042.00	—	—
B	Filter/Blower	48 x 20 x 100	4101-61A	8,289.00	4101-72A	8,919.00	4101-83A	265.00
	Cabinet Only	48 x 20 x 84	4101-62A	7,553.00	4101-73A	8,184.00	4101-83A	265.00
	Filter/Blower	48 x 24 x 89	4101-63A	6,240.00	4101-74A	8,006.00	4101-84A	265.00
	Cabinet Only	48 x 24 x 73	4101-64A	5,610.00	4101-75A	6,240.00	4101-84A	265.00
C	Cabinet Only	30 x 14 x 84	4101-65A	3,468.00	4101-76A	4,037.00	4101-85A	265.00
	Cabinet Only	30 x 18 x 84	4101-66A	3,628.00	4101-77A	4,195.00	4101-86A	265.00
	Cabinet Only	36 x 20 x 84	4101-67A	3,944.00	4101-78A	4,511.00	4101-87A	265.00
D	Filter/Blower	37¾ x 26½ x 90	4101-79A	6,719.00	4101-81A	7,415.00		
	Cabinet Only	37¾ x 26½ x 78	4101-80A	5,267.00	4101-82A	5,847.00		

* Height includes built-in stainless steel stand with polypropylene leveling feet.

Type D Stainless Steel Cabinet (No. 4101-80A, shown with one optional shelf)

A

B *Install next to hand washer*

C *Accommodates multiple glove sizes or materials*

D *For gloves, hoods, face masks**

E

F *Organizes small parts*

G
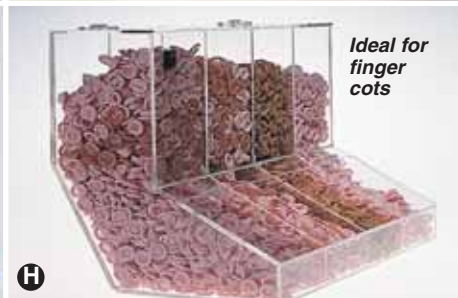
H *Ideal for finger cots*

I *Hinged top keeps wipers clean*

J *Easy-access wiper dispensing**

K

Garb and Parts Dispensers

Space-Saving Convenience!

These handy dispensers save space and organize gloves, safety glasses, wipers, hats, and other garb. They're perfect benchtop storage bins for small parts used in cleanroom processing. Select clear acrylic or static-dissipative PVC, which eliminates static charges and the particles they attract.

QUICK Ship

Item (see photos)	Dimensions W x D x H, in.	Acrylic Cat. #	$/Each	Static-Dissipative PVC Cat. #	$/Each
A. SneezeGuard™	7.12 x 7.75	1601-50	12.00	1601-51	25.00
	11 x 11	1600-25	15.00	1602-75	28.00
B. Wall-Mount Glove Dispenser (single)	16.5 x 12.5 x 17	4950-72	211.00	4950-74	285.00
C. Wall-Mount Glove Dispenser (triple)	16 x 11.5 x 12	4005-56	235.00	4005-57	354.00
D. Benchtop Glove Dispenser*	12 x 6 x 6	4951-03	73.00	4951-04	110.00
E. File Holder (4 slots)	10.5 x 5 x 15	4005-25	85.00	4005-23	151.00
F. Dispensing Bins	5 x 6.25 x 8.25	4950-12	123.00	4950-13	213.00
G. Apparel Dispenser	48.5 x 24.5 x 36	4951-06	3,147.00	4951-07	5,665.00
H. Multi-Chamber Dispenser	15.75 x 8 x 13	4005-51	312.00	4005-50	465.00
I. Wiper Dispenser (enclosed)	12 x 9 x 6	4951-01	80.00	4951-02	142.00
J. Wiper Dispenser (open top)*	10.5 x 14.5 x 4	4950-93	57.00	4950-94	110.00
K. Safety Glasses Dispensers Holds: 8	6.75 x 17	4950-45	232.00	4950-46	306.00
(all are 5.75"D) 12	9.75 x 17	4951-15	303.00	4951-16	397.00
16	6.75 x 28.25	4951-17	418.00	4951-18	550.00
Other sizes available – call Terra! 16	13.13 x 17	4951-19	418.00	4951-20	550.00
24	9.75 x 28.25	4951-21	543.00	4951-22	714.00
Now available in stainless steel—see facing page 24	19.5 x 17	4951-23	543.00	4951-24	714.00
32	13.13 x 28.25	4951-25	751.00	4951-26	990.00
48	19.5 x 28.25	4951-27	978.00	4951-28	1,284.00

Stainless Steel Dispensers

Chemical-resistant • Easy to clean and sterilize • Electropolished for optimal cleanliness

L. Shields balances and other precision instruments

Mini-hood provides the ideal equipment enclosure

M.

Clean, dry benchtop storage

N.

O. Catches run-away swabs!

Plastic models also available

R. Ideal for packed sterile gloves

S. For loose gloves, hairnets, shoe covers
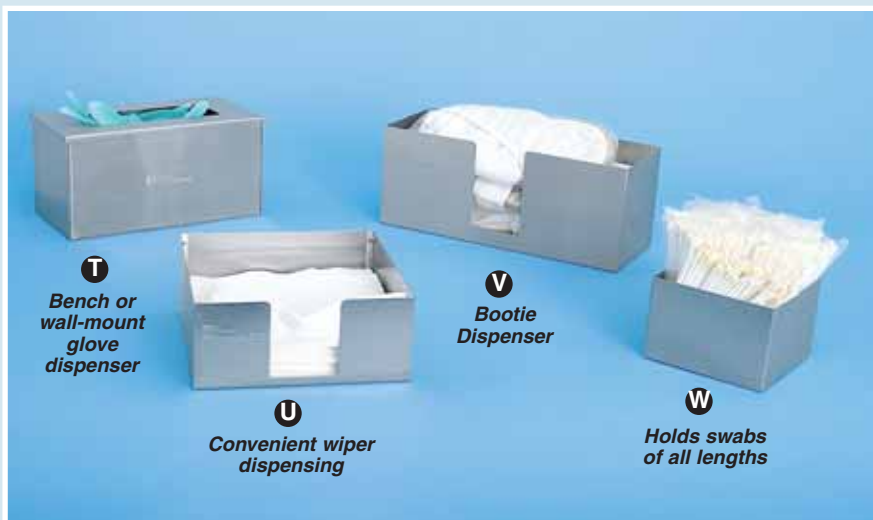
T. Bench or wall-mount glove dispenser

U. Convenient wiper dispensing

V. Bootie Dispenser

W. Holds swabs of all lengths

P. Ideal for benchtop or wall mounting

Q. Holds all common bootie sizes

Item (see photos)	Dimensions W x D x H, in.	Acrylic Cat. #	$/Each	Static-Dissipative PVC Cat. #	$/Each
L. Balance Shields	13 x 12 x 12.25	4950-55	166.00	4950-56	264.00
	16.25 x 16.25 x 22	4950-57	213.00	4950-58	355.00
M. Mini-Hood	20 x 16 x 12	4950-89	307.00	4950-90	570.00
N. Mini-Desiccators	8 x 10 x 7.25	4950-06A	312.00	4950-08A	493.00
	10 x 16 x 9.5	4950-09A	432.00	4950-11A	686.00
O. Swab Dispenser	6 x 6 x 4	4950-87	37.00	4950-88	61.00
P. Glove Box one box	11.5 x 4.375 x 5.125	4950-81	21.00	4950-82	26.00
Holders two box	12 x 4.75 x 10.125	4950-83	36.00	4950-84	51.00
three box	12 x 4.75 x 15.5	4950-85	46.00	4950-86	77.00
Q. Bootie Dispenser	15 x 6 x 6	4950-97	65.00	4950-98	92.00

Item (see photos)	Dimensions W x D x H, in.	Electropolished 304 SS Cat. #	$/Each
R. Glove Dispenser, Wall-mount	34.5 x 7 x 24 (3 compartment)	4951-30-2	1,678.00
	27 x 8 x 24 (4 compartment)	4951-31-2	1,678.00
S. Glove Dispenser, Wall-mount	24 x 8 x 24 (3 compartment)	4951-32-2	1,248.00
	32 x 8 x 24 (4 compartment)	4951-33-2	2,022.00
T. Glove Dispenser	12 x 6 x 6	4951-50-2	88.00
U. Wiper Dispenser	12 x 9 x 6	4951-40-2	96.00
	9.5 x 9.5 x 6	4951-41-2	96.00
V. Bootie Dispenser	15 x 6 x 6	4951-45-2	110.00
W. Swab Dispenser	6 x 6 x 4	4951-35-2	44.00

QUICK Ship

More Storage Solutions

No. 3603-00A   **No. 3602-00A**   **No. 3603-02A**   **No. 3602-01A**

Universal Screen Frame Storage System
Keeps screen frames clean and organized

ESD-Safe Enclosed Electronics Cart, No. 2650-99
Made of static-dissipative PVC; use DesiTray or N_2 purge for moisture control

*Gowning Room Bootie Cabinet,
No. 9600-03B*

CleanStocker, No. 9010-20
Horizontal flow of HEPA-filtered air for clean drying

Stainless Steel Storage Cabinet, No. 9010-00
Vapor-resistant gaskets for chemical storage

Acid Storage Cabinet, No. 2820-31
One-piece polyethylene body with spill tray

Bottle Safety Stocker, No. 9600-23

*Heated Dehydration
Chamber, No. 2148-02A*
Smart control system maintains
temperature and %RH set points.

Cleanroom garments courtesy of W. L. Gore & Associates

Chemical Safety Cabinets, No. 6012-70

Acid-Resistant Polypropylene, No. 1683-01

Dozens of Configurations, No. 1684-72

Cleanroom Accessories

A-F. Step Stools and Ladders

Fabricated of 304 stainless steel and electropolished to ensure an ultra-smooth surface, these step stools and ladders include spring-loaded safety casters that retract under load. Perforations limit particle accumulation. Custom sizes available.

Includes 3" Safety Ledges

	Top Platform (W" x D")	Overall Dimensions (W" x D" x H")	No. of Steps	Electropolished Stainless Steel Cat. #	$/Each
A	30 x 14	30 x 20 x 24	2	2805-50A	1,091.00
B	30 x 12	30 x 28 x 34	3	2805-51A	1,458.00
D	30 x 12	30 x 28 x 60	3*	2805-53A	1,671.00
E	30 x 12	30 x 30 x 70	4*	2805-52A	2,511.00
F	30 x 16	30 x 40 x 80	5*	2805-54A	3,178.00
C	30 x 36	30 x 76 x 86	5*	2805-55A	3,460.00

304 Stainless Steel Step Stools and Ladders

* Includes safety handrail. Styles D – F not shown.

G-K. Cleanroom Waste Receptacles

These foot-pedal operated receptacles provide the perfect solution to cleanroom waste disposal problems.

Fabricated of 304 nonmagnetic stainless steel and available with electropolishing, they are designed to provide years of constant service in the cleanroom without contamination. Their no-spring foot pedal lets an operator dispose of waste without the need to touch the receptacle, and the tight-fitting, gasketed lid forms a nearly air-tight seal to contain waste safely.

Type	Capacity (Gallons)	Dimensions W x D x H (in.)	Ship. Wt. (lbs.)	304 Stainless Steel Cat. #	$/Each	Electropolished 304 Stainless Steel Cat. #	$/Each	Ship. Wt. (lbs.)	Cat. #	$/Each
G	3.5	11 dia. x 17 H	9	1456-00	114.00	1456-15	279.00	3	1456-05	30.00
H	7	12 x 12 x 17	19	1456-01	176.00	1456-16	379.00	4	1456-06	36.00
I	12	12 x 12 x 23	24	1456-02	224.00	1456-17	447.00	5	1456-07	44.00
J	24	15 x 15 x 30	36	1456-03	314.00	1456-18	577.00	7	1456-08	54.00
K	40	19 x 19 x 30	48	1456-04	442.00	1456-19	806.00	8	1456-09	70.00

Header spanning: **Cleanroom Waste Receptacles** | **Corresponding Rigid Liner**

HEPA-filtered air jets remove contaminant's

Cleanroom Pass-Through Chambers and Air Showers

Pass-Throughs and Air Showers allow contamination-free transfer of personnel and products in and out of the cleanroom. Terra offers the most comprehensive selection of designs and features available anywhere —

Hundreds of Standard Configurations

304/316 stainless steel • chemical-resistant and static-safe plastics • clean laminates • HEPA air showers • wall and floor-mount designs • mechanical interlocks • slide-up or swing doors • shelves and special lighting

No-Clearance Roll-Up Door Pass-Throughs

Several standard sizes • PLC control panel includes safety and security features • electronic interlock prevent cross-contamination • HEPA air showers

Application-Specific Designs

Fire-rated models • active and passive ventilation modules remove fumes • electropolished models meet the most strenuous cleanliness requirements • smooth, radius corners eliminate cracks that harbor contaminant's

Custom work is no problem — Terra builds to your specifications

A. Acrylic Pass-Through No. 1993-12A / $316, mounted to a Terra hardwall modular cleanroom.

B. Stainless Steel Pass-Through No. 6705-26A / $3,002 – models available in 15 standard sizes.

C. Slide-Up Door Pass-Through No. 1993-18 / $1,074 – counterweighted sliding doors are easy to operate.

D. Roll-Up Door Pass-Through No. 6705-12A / $8,678 – PLC-controlled, electronically interlocked doors eliminate clearance requirements.

E. Air Shower No. 6010-14A / $11,019 – directs high-speed HEPA-filtered air through adjustable nozzles to remove contaminant's from personnel before they enter the cleanroom.

F. Air Shower Pass-Through No. 6705-70 / $8,788 – ideal for removing contaminant's from carts

Fire-Rated Model No. 6705-00A

Ventilation Modules

Curved corners eliminate particle traps

BioSafe Models– Easy to Sterilize

Air-Conditioned Pass-Through

Modular
Cleanrooms

Free-standing, all-steel structures create sturdy, versatile clean processing solutions that meet cleanliness requirements to Class 10 (ISO 3). 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

Configured to Your Specifications!
- Air conditioning
- Humidification/Dehumidification
- Rapid-Operation Doors
- Raised Floor

Softwall Designs
- 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

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

Work Benches & Chairs

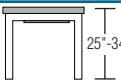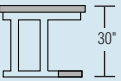*Benchtop designs for all applications—*

A *Cleanroom laminate*

B *Stainless steel*

C *Dampens 90% of building vibrations*

D *Vibration platform*

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. Vibration-Free Laminate Top	
		Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
Telescoping "A" Base 25"–34"	48	1722-00	552.00	1521-45	960.00	1570-00A	1,704.00
	60	1724-00	608.00	1751-00	1,037.00	1570-01A	1,734.00
	72	1726-00	617.00	1752-00	1,088.00	1570-02A	1,748.00
Recessed "C" Base 30"	48	1521-09	552.00	1521-54	960.00	–	–
	60	1000-00	608.00	1521-55	1,037.00	–	–
	72	1000-01	617.00	1521-56	1,088.00	–	–

D. Vibration-Free Platform

Work Surface	Electropolished Stainless Steel Top	
(W" x D" x H")	Cat. #	$/Each
21¾ x 18¼ x 3	1580-02	2,166.00
23 x 24 x 3	1580-03	2,430.00

Visit TerraUniversal.com for other bench styles:
- ErgoHeight™ Adjustable Height Tables
- Acid-resistant polypropylene tops
- Dozens of standard sizes

E *Class 100 Static Control #2802-62*

F *Class 100 Static Control #2802-68*

G *Class 100 Static Control #2802-73*

H *Class 100 #2803-05*

I *Class 100 #2802-94*

E - I. Class 100 and Static Control

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

Specifications		Class 100 Static Control								Class 100			
Height	Color	E		F		G		H		I	
		Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
Desk	Black	2802-61	469.00	2802-67	426.00	2802-73	455.00	2803-01	460.00	2802-93	429.00
	Blue	2802-62*	469.00	2802-68*	426.00	2802-74*	455.00	2803-02	460.00	2802-94	429.00
Bench	Black	2802-64	476.00	2802-70	428.00	2802-76	464.00	2803-05	468.00	2803-09	482.00
	Blue	2802-65*	476.00	2802-71*	428.00	2802-77*	464.00	2803-06	468.00	2803-10	482.00

* Quick ship models – usually ship within one week!

Work Benches & Chairs

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

QuietTop™ Rod-Top Benches

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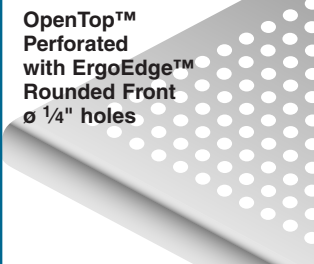
Open-Top Perf-Top Benches

HEAVY-DUTY All-Electropolished Stainless Steel Work Stations (800-lb. load capacity)
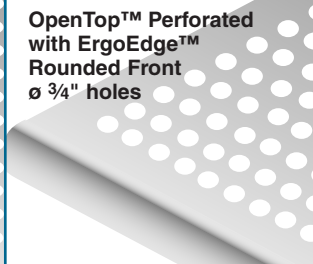
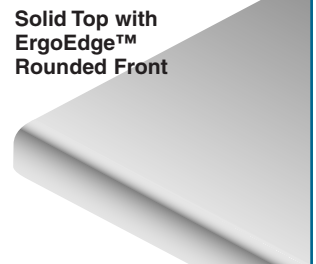**QuietTop™ Rods with Full Bullnose** ø ¼" rods on 1" centers

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	"A" Base	"C" Base		"A" Base	"C" Base		"A" Base	"C" Base		"A" Base	"C" Base	
(W" x D")	Cat. #	Cat. #	$/Each	Cat. #	Cat. #	$/Each	Cat. #	Cat. #	$/Each	Cat. #	Cat. #	$/Each
36 x 30	9601-17	9601-18	1,300.00	9604-59	9604-80	1,513.00	9601-59	9601-60	1,373.00	9603-01	9603-02	1,196.00
48 x 30	9601-19	9601-20	1,448.00	9604-60	9604-81	2,017.00	9601-61	9601-62	1,923.00	9603-03	9603-04	1,360.00
60 x 30	9601-21	9601-22	1,635.00	9604-61	9604-82	2,180.00	9601-63	9601-64	1,948.00	9603-05	9603-06	1,483.00
72 x 30	9601-23	9601-24	1,929.00	9604-62	9604-83	2,452.00	9601-65	9601-66	2,041.00	9603-07	9603-08	1,672.00
84 x 30	9601-25	9601-26	2,064.00	9604-63	9604-84	2,571.00	9601-67	9601-68	2,174.00	9603-09	9603-10	1,877.00
96 x 30	9601-27	9601-28	2,297.00	9604-64	9604-85	2,973.00	9601-69	9601-70	2,603.00	9603-11	9603-12	2,087.00

Class 1 #2805-06

Class 10 with Microfiber #2803-49

Class 10 with Microfiber #2803-57

Class 10 with Breather Lung #2803-22

Class 10 with Breather Lung #2803-38

J **K** **L** **M** **N**

J - N. Class 10 and Cleaner!

Select from several base styles. Types J - L feature a microfiber fabric that allows chair to breathe through micropores. Types M and N feature a breather lung that contains contaminant's.

Specifications		Class 1 Chair		Class 10 Microfiber				Class 10 Breather Lung			
Height	Color	J		K. Standard Back		L. Ergo Back		M. Standard Vinyl		N. ESD Vinyl*	
		Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
Desk	Black	—	—	2803-49	470.00	2803-57	464.00	2803-17	418.00	2803-33	447.00
	Blue	—	—	2803-50	470.00	2803-58	464.00	2803-18	418.00	2803-34	447.00
Bench	Black	2805-05	655.00	2803-53	477.00	2803-73	537.00	2803-21	426.00	2803-37	454.00
	Blue	2805-06*	655.00	2803-54	477.00	2803-74	537.00	2803-22	426.00	2803-38	454.00

* This ESD model includes a grounding chain.

Polypropylene Cabinet No. 7018-00: ideal for acids (shown with optional gooseneck faucets, spray guns, casters and duplex outlet)

Stainless steel Cabinet No. 7018-01: recommended for solvents and flammable chemicals (shown with optional casters and spray gun)
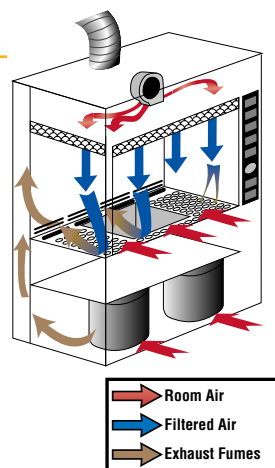
Wet Processing
& Cleaning Cabinet

- **Incorporates all processing components into one self-contained, easy-to-clean system**

- **Isolated control panel allows safe, convenient operation of baths, rinsers and other process modules**

- **Whatever the requirements, Terra delivers a pre-configured, tested, turnkey system**

These self-contained Wet Processing Cabinets are ideal for a wide range of cleaning and processing requirements.

Standard models below include a reinforced cabinet of the specified size and material, a sliding access shield, and a fluorescent illuminator. Select sinks, baths, etchers and other processing modules to suit your application. A raised lip surrounds the work area to contain spills, and a full-length plenum sink located under the deck contains overflow for easy disposal (select plenum flush for easy cleaning).

A control panel mounted to the side of the deck provides safe, convenient access to all system controls (order processing sinks and baths separately; see pricing and specifications at TerraUniversal.com). Optional Filter/Blower Module provides a vertical laminar flow of HEPA-filtered air for particle-sensitive applications.

→	Room Air
→	Filtered Air
→	Exhaust Fumes

Wet Processing Cabinets (standard height = 72")						Filter Blower Module			Plenum Flush		Ionizing Bar	
Overall Width	**Work Area Dimensions**	**Polypropylene**		**Stainless Steel**		Includes 99.99% efficient HEPA filter 115VAC, 60Hz 230VAC, 50Hz			PVC with H$_2$O Nozzles & Valves			
		Cat. #	$/Each	Cat. #	$/Each	Cat. #	Cat. #	$/Each	Cat. #	$/Each	Cat. #	$/Each
84"	72"W x 24"D	7018-00	19,792	7018-01	31,227	7018-04	7018-04-220	3,027	7018-50	937	2005-37	892
108"	96"W x 24"D	7018-02	22,444	7018-03	34,011	7018-05	7018-05-220	3,315	7018-51	1,081		

Note: All models listed above include an adjustable PVC sliding sash (to restrict airflow to the work area), a static pressure exhaust meter (to monitor the pressure differential in the exhaust line), and a fluorescent illuminator. All electronic controls are located on a vertical panel to the right of the work area (left side mounting may be specified at no extra charge). PLC controllers are also available; call for quotation.

Features & Accessories

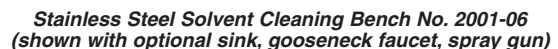**You Specify the Process Workflow— Let Terra Take Care of the Rest!**

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

Carboys and Reclamation Tanks

Sinks, goosenecks, air/de-ionized water spray guns, aspirators and other utilities

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 & Cleaning Station

- **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**

Like the models on the previous page, these benches accommodate a complete line of baths, rinsers, cleaners and other processing modules.

Terra engineers work with yours 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.

Room Air
Filtered Air
Exhaust Fumes
Storage Space

Modular Wet Processing Station*						Vertical Laminar Flow Hood			Plenum Flush	
Overall Width	Work Area	Polypropylene		Stainless Steel		Order Filter/Fan Units separately			PVC with DI Water Nozzles	
(nominal)	(W" x D")	Cat. #	$/Each	Cat. #	$/Each	115 VAC Cat. #	230 VAC Cat. #	$/Each	Cat. #	$/Each
48"	36 x 23	2000-16	7,161.00	2001-04	16,535.00	2004-10	2004-10-220	6,751.00	2001-34	1,009.00
60"	48 x 23	2000-17	8,215.00	2001-05	18,885.00	2004-11	2004-11-220	7,591.00	2001-35	1,153.00
72"	60 x 23	2000-18	10,302.00	2001-06	21,148.00	2004-12	2004-12-220	7,952.00	2001-36	1,297.00
96"	84 x 23	2000-19	12,418.00	2001-07	24,805.00	2001-13	2004-13-220	9,033.00	2001-37	1,441.00

* 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 & Accessories

Save Time!

Terra's *QuickQuote Planner* configures a system to your specifications: **www.TerraUniversal.com** Just click on **Wet Processing Stations**

Standard models operate with Terra's Vertical Laminar Flow or Exhaust Fume Workstations (see following page)

Configure baths in a single or double row to accommodate workflow.

Containment hood collects and condenses vapors

Laminar Flow Hoods & Work Stations

These economical, HEPA and ULPA-filtered systems provide a particle-free environment for work with contamination-sensitive materials.

- **Front and side access shields confine the clean processing area**

- **Ionization module controls surface static charges and the particles they attract**

- **Free-standing and benchtop configurations**

- **Fluorescent and germicidal lighting**

Save Time!

Terra's *QuickQuote Planner* configures a system to your specifications:
www.TerraUniversal.com
Just click on **Hoods**

A. **Vertical Laminar Flow Station** – Available in powder-coated or 304 stainless steel, this free-standing system can be used with Terra's Wet Processing Stations. Optional motorized sliding shield restricts access to the work surface and improves system efficiency. Model shown: No. 2001-83 / $7,327 (100"W x 35"D x 91"H), with optional work bench and drawer unit. Order filter fan modules separately.

B. **CleanBooth™ Laminar Flow Station** – Standard unit includes a mobile support frame and choice of HEPA or ULPA filter/fan units. Optional side panel kits enhance system efficiency. Model shown: No. 1870-02 / $1,045 (73"W x 25"D x 82"H with filter/fan unit; order HEPA or ULPA filter/fan units separately).

C. **PureFlow™ Laminar Flow Cart** – onboard power cell ensures continuous HEPA filtration of the storage area while materials are transferred across a facility. Model shown: No. 1529-63A / $12,900 (order power cell separately).

Complete Specs and Pricing: TerraUniversal.com

Laser Particle Counters

Comprehensive Environmental Monitoring!

Handheld Particle Counters/ RH/Temperature Meters

These NIST-traceable units offer six simultaneous particle-count ranges and display both cumulative and differential particle count data as well as temperature/RH on a touch-screen display. Complete line of options includes printer, air velocity probe, differential pressure probe, and transfer software for data downloading to PC. Meets JIS standards. Flow rate: 0.1 CFM.

Channel Sizes (µm)	Cat. #	$/Each
0.2, 0.3, 0.5, 0.7, 1.0, 2.0	**1509-01**	5,433.00
0.3, 0.5, 0.7, 1.0, 2.0, 5.0	**1509-03**	3,277.00
0.3, 0.5, 1.0 3.0, 5.0, 10.0	**1509-04**	3,277.00
0.5, 0.7, 1.0, 3.0, 5.0, 10.0	**1509-08**	3,183.00

3100+/5100+ Portable Particle Counters

These NIST-traceable units display up to six simultaneous particle-count ranges on a 5.7" color touch screen. They store data (up to 3,000 samples) from up to four environmental sensors (4-20 mA). Includes a built-in printer and internal audible alarm. Meets JIS standards. Flow rate: 1.0 CFM.

Channel Sizes (µm)	Cat. #	$/Each
0.3, 0.5, 1.0 3.0, 5.0, 10.0	**1509-21**	7,922.00
0.5, 0.7, 1.0, 3.0, 5.0, 10.0	**1509-23**	7,641.00

Handheld Laser Particle Counter
Rechargeable internal battery.

Particle Size Ranges	Cat. #	$/Each
0.5µm & 5µm & larger	**1506-02**	2,693.00
0.3µm & 0.5µm& larger	**1506-03**	2,805.00

Particle Concentration Meter/Particle Counter

Particle counter – provides continuous count for one minute.

Particle Size Ranges	Cat. #	$/Each
>0.5µm	**1506-97**	1,876.00
>0.3µm	**1506-98**	2,102.00

Concentration meter – samples air every 6 seconds.

Particle Size Ranges	Cat. #	$/Each
>0.5µm	**1506-95**	1,876.00
>0.3µm	**1506-96**	2,102.00

Exhaust Fume Hoods

These systems incorporate activated charcoal filtration modules for ductless removal of chemical fumes. Dozens of standard design are available, in vertical and horizontal flow configurations, including models with large access openings for large process equipment or chemical flasks.

- **Polypropylene designs resist wide range of acids**
- **Explosion-proof blowers and lighting available for use with flammable vapors**
- **Final HEPA/ULPA filters remove sub-micron particles for cleanroom use**
- **Options include air flow monitoring equipment, ionizers, and complete line of work benches, including vibration-isolated tables**

D. Exhaust Fume Hood – Sliding access shield restricts work area and enhances system efficiency. Connects to in-house ventilation system; select optional filter/blower module for ductless operation. Model shown: No. 2400-05 / $7,613 (76"W x 35"D x 98"H), shown with optional work bench.

E. High-Clearance Fume Hood – Ideal for use with bulky process equipment, glassware, or other large parts. Available in several hood materials. Dual impeller blower maintains exhaust flow of 10 fpm; charcoal filter removes vapors. Model shown: No. 2900-30 / $3,171 (32.5"W x 25"D x 48"H)

F. Benchtop Ductless Exhaust Fume Hood – This high-capacity, turnkey system features dual blowers to ensure a safe exhaust flow speed of 100 fpm. Polypropylene construction resists acids, and air speed meter monitors operation. Includes vapor-sealed fluorescent illuminator. Model shown: No. 2900-20 / $3,180 (45"W x 28"D x 27"H).

Gloveboxes

Terra Universal's plastic and stainless steel gloveboxes provide the perfect controlled environment for a host of containment and isolation applications. Select the standard control modules to your requirements and let Terra deliver a pre-tested, turnkey system.

Dehumidification: nitrogen controllers maintain programmable humidity levels to 0% RH (< 0.5 ppm water vapor)

Humidification: using water vapor or ultrasonic misters

Temperature: -40°C to +300°C

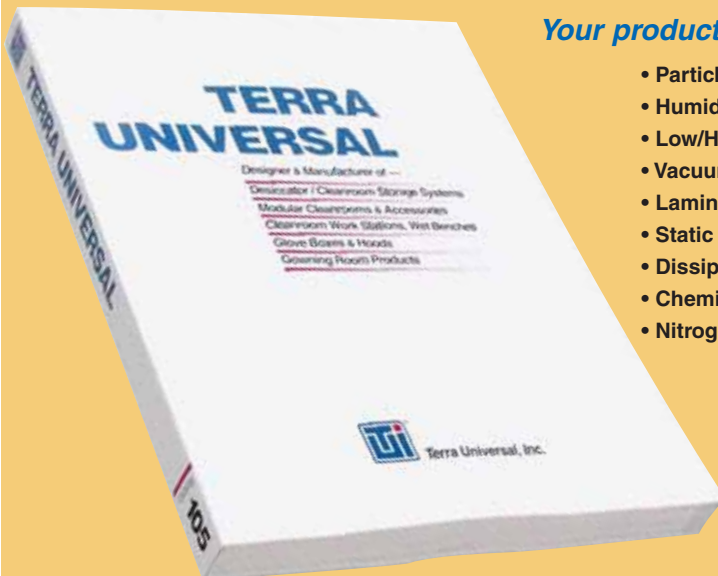**Particle and Germ Control:** HEPA and ULPA filtration modules

Static Safety: ionization modules and dissipative materials

Vacuum: pass-through chambers and negative-pressure gloveboxes

Save Time! Terra's *QuickQuote Planner* configures a system to your specifications: **www.TerraUniversal.com** Just click on **Gloveboxes.**

G. Hazardous Material Containment Chamber – This 12-gauge, 304 stainless steel glovebox features counter-balanced port hatches and bag-in/bag-out ports for easy material transfer. Smooth, radius corner simplify cleaning and eliminate particle traps. Maintains a low leak rate < 0.5% of internal volume/hour (tested under vacuum). Ref. No. 1695-10.

H. Series 400 Stainless Steel Glovebox – This versatile design allows attachment of air locks, vacuum antechambers, or pass-through vacuum/nitrogen ovens. This chamber is designed for purging with clean, dry process gas; optional controllers allow precise control of water vapor or trace gas. Model shown: No. 1694-13A / $7,692, shown with vacuum antechamber, vacuum controller, and Dual Purge nitrogen controller.