



CLEANROOMS

Modular and Stick-Built Designs and Accessories

TERRA UNIVERSAL, INC.

Tel: **+1 (714) 578-6100** or Email: info@terrauniversal.com

800 South Raymond Ave., Fullerton, CA 92831

About Terra Universal

www.terrauniversal.com / 2

Terra Universal designs, manufactures, and stocks comprehensive lines of cleanrooms, air filtration systems, and cleanroom equipment.

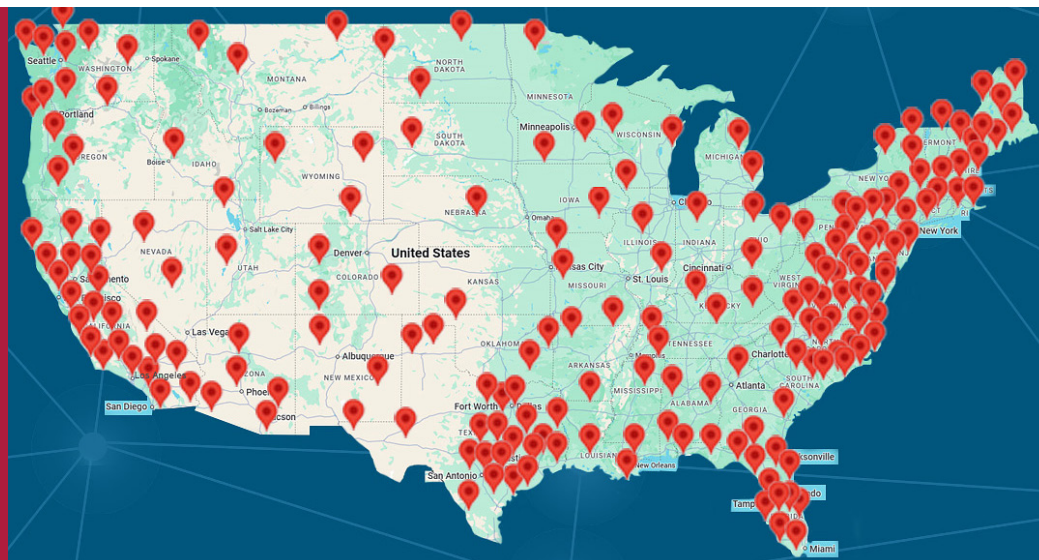
Trusted since 1975, Terra Universal has developed and manufactured innovative cleanroom solutions for over 50 years. Combining high-throughput, automated manufacturing and extensive inventory, Terra delivers cleanrooms of any design, size, and complexity with industry-best build times.

Terra builds and installs over 500 cleanrooms per year. All cleanroom components are pre-engineered, quality control tested, and stocked for quick integration and assembly. Terra also offers a wide range of value-add services, including cleanroom installation, structural seismic analysis, expedited production, qualification documentation and extended warranties. Order-specific certificates of compliance document each product's adherence to ISO, UL, OSHA and seismic standards.

The leader in Critical Environment Solutions®, Terra also designs, manufactures, and stocks comprehensive lines of cleanroom components and equipment, including: [cleanroom doors](#) and [windows](#), [pass through chambers](#), [laminar flow](#) and [fume hoods](#), [biosafety cabinets](#), [desiccator cabinets](#), [glove box isolators](#), [cleanroom furniture](#), and other [laboratory equipment](#).

End-to-End Cleanroom Solutions

NATIONWIDE CLEANROOM CONSTRUCTION



**2,000 +
CLEANROOMS
INSTALLED
SINCE 2017**



**Multi-building,
high capacity
manufacturing
line**



**Main campus
located
in Southern
California**



**Founded in
1975**



**Global Pricing
and Secure
Shipping**

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Long Standing Reputation

Since 1976, Terra has successfully designed, manufactured, and installed thousands of cleanrooms worldwide to customers in the pharmaceutical, biomedical, life science, aerospace and semiconductor industries. Terra's key customers include the largest research and production facilities across the globe.

Semiconductor

Hitachi Global
Lexmark Intl.
KLA-Tencor
Intel
IBM
Samsung
Hewlett Packard
GE
Qualcomm
Triquint

Aerospace

Boeing
Lockheed Martin
Rockwell Collins, Inc.
Raytheon Systems
JPL
SpaceX
Northrop Grumman
Lawrence Livermore
Sandia National Labs
Teledyne

Medical/Hospital

Kaiser Permanente
Mountain State Health
NIH
VA Hospitals
Cardinal Health
St. Jude Medical
Carestream Health
Providence Health
Baylor Health Care
Mayo Clinic

Medical Device

Siemens Health Care
Bacterin International
OPKO Diagnostics
Medtronic, Inc.
Abbott Labs
Covidien/Tyco Healthcare
Cameron Health
GE Healthcare
Ethicon, Inc.
Boston Scientific

Biotechnology

Millipore Corporation
Genzyme Corporation
Organogenesis, Inc.
Meridian Bioscience
Affymetrix, Inc.
Celgard, LLC
Life Technologies
Becton Dickinson
MedImmune, Inc.
Alcon Labs

Pharmaceutical

Pfizer, Inc.
Genentech
Baxter Healthcare
Amgen, Inc.
Teva Pharmaceuticals
Merck
GlaxoSmithKline
Johnson & Johnson
Watson Labs
Gilead

Universities

Ohio State University
Duke University
Penn State University
UCSF
UNC
Case Western Reserve
University of Texas
MIT
Harvard
University of Toronto

Other Key Clients

Google
Kimberly Clark
3MM
FLIR Systems
Moog Inc
NIST
Naval Research Lab
Kewaunee Scientific
Corning
Dow Chemical

Seamless Facility Expansion

Michelle was extremely helpful in guiding us through the cleanroom selection process for our fabrication facility expansion. We had specific delivery requirements that she expertly coordinated to meet our needs. Terra Universal's responsive communication throughout the entire process ensured our project ran smoothly from start to finish.



Qorvo

Brett Murphy
Sr Mechanical Engineer

Repeat Customer - Superb Service and Speed

Terra Universal consistently delivers outstanding service and support that exceeds expectations. I recently purchased my third cleanroom from Terra, and my sales rep Andre Vignau was exceptionally helpful throughout the process. He went above and beyond to accommodate my urgent rush order and was instrumental in meeting all key requirements.



Aero Packaging

Carolle
CEO

Custom Cleanroom, Off-the Shelf Simplicity—Certified in 3 Days

We are a Pharma testing lab in New Jersey and needed a clean room for our expanding business. We are extremely pleased with the installation. It is not only fully functional, but looks terrific - lots of compliments. We had signed a contract with another firm previously, but opted out when we saw the Terra Universal product. It looked WAY better and was actually less expensive. Ray San Filippo of TU was extraordinarily helpful during the design stage - which was very important as this was our first clean room. The clean room we purchased included the walls, ceiling, FFUs, lights, pass thru and doors. For the installation we basically created a custom unit out of standard parts sourced from Home Depot, Amazon, etc. We chose to do the electrical, magnahelics, UVs and external air handling ourselves. Any competent contractor should be able to do the install without any problems or previous clean room experience. In 3 days we were ready for certification.



Superb Technical Support

I have been working with Taso Giokas for a couple of months now as the company I work for details out our cleanroom needs. He has been very helpful in guiding us through the nuances of getting a cleanroom on order. I would definitely recommend working with Terra because they will go the extra mile to help you understand your available choices



Turion Space

Ingrid Roldan
Senior Mission Manager

Smooth, Swift, and Stylish

Great working with Taso at Terra Universal! He is incredibly quick to respond and provide helpful feedback during the entire quote, order/build/delivery, and assembly/start-up process. The reverse-flow cleanroom looks great and works well too!



Molten Industries

Caleb Boyd
Co Founder

Pharmaceutical Testing

Lou Lu
Project Manager



Cleanroom Exceeds Expectations

We purchased a modular cleanroom last year, and it has performed exceptionally well for all of our applications. The ongoing support has been both timely and effective across all areas of service. Chris Taylor was particularly helpful in guiding us through the various configuration options and provided quick turnaround times on both quotes and orders. We highly recommend Terra's cleanroom solutions.



Teva Pharmaceuticals

Dax Lamar
Biological Researcher II

Excellent Service and On-Time Delivery for Our Cleanroom

We ordered two sets of 12x20ft cleanrooms and put them next to each other to create a bigger clean space. I've been working with Taso throughout the project and it has been a great and happy experience. He always responds to our emails in the same day even for ones in late hours. We were given very helpful guidance to select the product and clear instructions to set things up. Both orders arrived on time with good quality packaging and protection.



Applied Materials

Daihua Zhang
Director of System Engineering

Flexible Cleanroom Solutions for Fast-Growing Needs

Inkbox has been using Terra Universal clean rooms for over two years, and they've enabled us to grow our business without costly building renovations. When our requirements change, we simply purchase additional clean rooms to meet our needs.



Inkbox Ink

Diego Giugovaz
Lead Process Engineer



★★★★★ 4.9 Google Reviews

★★★★★ Trustpilot
Based on 1200+ Reviews!

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Terra's Capabilities

01

Scope Definition and Cleanroom Design

During this initial phase, Terra's in-house team generates a detailed quote for the cleanroom portion of the project while defining the classification requirements, regulations, and technical specifications. The scope of the entire project is codified, including timeline, delivery schedule, critical terminations, and coordination with outside stakeholders.

02

Engineering

During the project-engineering phase, Terra's in-house mechanical engineers design the cleanroom footprint while working in tandem with our strategic partners to produce HVAC, mechanical, electrical and plumbing definitions.

03

Manufacturing and Construction

After project release, Terra manufactures all modular cleanroom components, including wall panels, ceilings, filter fan units, entry doors, viewing windows, pass through chambers, storage solutions and furniture at our 350,000 square foot manufacturing campus in Southern California. All cleanroom components are manufactured using high-precision fabrication machinery, tested to ensure quality, performance guaranteed, and delivered on time to the construction site. No matter the scale of the project, Terra's high capacity, streamlined production line is capable of manufacturing your cleanroom at industry-leading build times.

04

Procurement

Leveraging Terra's network of over 80 major suppliers and vendors, our project management team coordinates with project stakeholders to ensure cost savings and timely delivery of value-add products from brands like [Labconco](#), [Thermo Fisher](#), [Metro](#), [Eagle](#), [Biofit](#), [Rubbermaid](#), [Germfree](#) and more.

05

Shipping, Installation, and Logistics

Terra's logistics team coordinates with vendors, suppliers and project stakeholders to ensure consolidated, timely delivery of the cleanroom, and all associated equipment, to the construction site. Specialty freight services, such as white glove delivery, overnight shipping, and weekend deliveries are available. Terra's experienced, skilled installation team executes zone-build methodology, coordinates with specialty tradesmen, performs on-site validation, and handles equipment move-in.

06

Cleanroom Start-Up and Pre-Validation

During cleanroom pre-certification and pre-validation, Terra's engineers perform an array of tests to ensure the cleanroom operates according to design objectives and specifications, including air balancing, particulate counts, atmospheric control, air changes and pressurization. If required, equipment validation and testing, such as IQ, OQ and PQ, is performed and submitted prior to close-out inspection.

07

Maintenance

Terra's offers an array of comprehensive 24/7 service programs, such as planned maintenance, cleanroom shutdown and decommissioning, testing and balancing, filter replacement and equipment installation.

Cleanroom Solutions & Expertise

Terra Universal stands as a comprehensive cleanroom solutions provider, specializing in both traditional design-build construction and innovative modular cleanroom systems. With decades of experience serving industries from pharmaceuticals and biotechnology to aerospace and microelectronics, we deliver turnkey cleanroom projects ranging from compact 100-square-foot environments to expansive 50,000-square-foot facilities.

What sets Terra Universal apart is our unique dual capability: we offer conventional cleanroom construction with integrated architectural, HVAC, and electrical services for complex, permanent installations, while simultaneously maintaining California-based manufacturing facilities that can ship prefabricated modular cleanrooms within 1 to 3 business days. This versatility allows Terra to serve both long-term strategic projects requiring custom engineering solutions and rapid deployment needs where speed-to-market is critical, ensuring compliance with stringent regulatory standards across all applications while eliminating the complexity of managing multiple vendors.



Cleanroom Construction

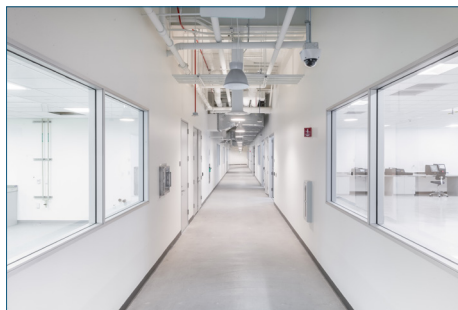
Terra Universal specializes in cleanroom construction and design build solutions, offering comprehensive services from initial consultation to turnkey installation. Our expert team ensures your cleanroom project benefits from state-of-the-art technology and precision engineering, delivering solutions tailored to meet your industry's stringent requirements.

With decades of experience in design and construction, Terra Universal provides cleanroom solutions for projects of all sizes, ranging from 100-square-foot environments to expansive 50,000-square-foot facilities. Our cleanroom systems are engineered to fit a wide range of applications, providing rapid, efficient installations that minimize disruption and deliver long-term value.

By integrating architectural, HVAC, and electrical disciplines into our design and build process, we offer a seamless, hassle-free experience from concept to completion. Our approach eliminates the complexity of managing multiple vendors, ensuring your project is completed on time and within budget.

We serve a wide range of industries, including pharmaceuticals, biotechnology, medical devices, aerospace, defense, microelectronics, and advanced manufacturing, ensuring compliance with strict regulatory standards through our expert-driven design build approach.

Terra works with your engineers to ensure that drawings are carefully evaluated and approved before work begins, eliminating last-minute surprises that can disrupt a tight schedule. Terra maintains an on-site staff of engineers ready to design custom solutions to your specifications. Terra will provide formal quotations based on detailed drawings. A comprehensive library of CSI 3-part specifications, BIM drawings, and CAD files further streamline the specification process.



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Modular Cleanrooms

Terra Universal designs, builds, and installs modular cleanrooms for every application. Unique in the industry, we offer a vast selection of prefabricated and in-stock modular cleanrooms, available to ship from our California manufacturing facilities within 1 to 3 business days.

Because they can be built and installed in a fraction of the time associated with brick-and-mortar clean rooms, modular cleanrooms are ideal for fast ramp-up projects or short production cycles that may not merit the expense and delay of a conventional room.

BioSafe® Wall Panel

[BioSafe® Wall Panel Systems](#) combine modular pre-fabricated design principles with the seamless sterile wall design of traditional stick-built cGMP cleanrooms. Seamless coved transitions between ceiling, walls, and floors support ISO 4 - 8 classes, GMP A-D, GLP, ASTM, and IEST requirements.

These UL-tested wall panels deliver laboratory-verified structural integrity for the most demanding projects. Unlike other modular designs, BioSafe® Wall Panel Systems are not limited by overhead clearance, size, shape, or pathways within the site

Cleanroom wall panels are available with a variety of cores such as lightweight foam or fire-rated aluminum honeycomb.

Turnkey BioSafe® cleanroom systems ship within 20 - 30 days including prefabricated wall panels and ceilings, UL-listed filter fan units, lights, power distribution systems, and control panels.



Hardwall

[Hardwall modular cleanrooms](#) provide a completely enclosed, rigid free-standing structure with light-weight and rigid transparent walls. Terra Universal pre-fabricates the framing from powder-coated or stainless steel; rigid wall panels are available in clear acrylic, static-dissipative PVC, polycarbonate and tempered glass. Opaque white polypropylene is also available for privacy and chemical applications.

Hardwall clean rooms can maintain pressure differentials required to meet ISO 4 – 8 cleanliness ratings, as well as USP <797/800> pharmaceutical compounding regulations. Hardwall designs are also ideal for maintaining positive or negative pressure gradients, as well as temperature and humidity control.



Softwall

[Softwall modular cleanrooms](#) use a simpler steel frame structure with flexible PVC (or non-out-gassing Polysim) wall curtains. The curtain design makes softwall cleanrooms lower-cost and easier to install than rigid wall cleanrooms. They are typically used in Class 100 – Class 100,000 cleanliness ratings. Due to the open curtain design, they are not suitable for maintaining pressure gradients and not recommended for temperature or humidity control.



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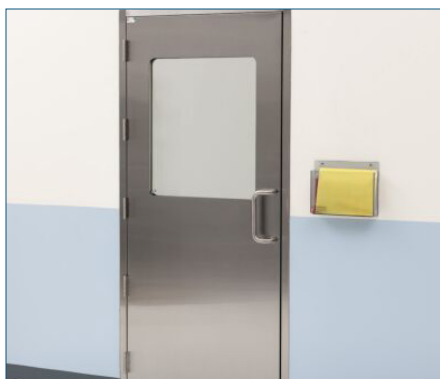
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Cleanroom Components

Cleanroom Doors



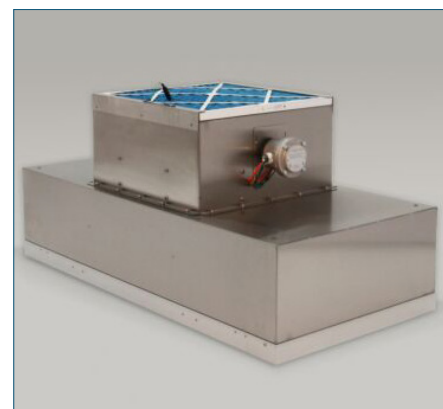
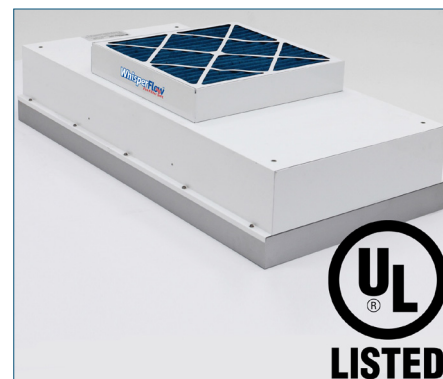
- Choose from manual and automatic designs
- Select sliding, swing-out, bi-parting and roll-up doors
- BioSafe® doors mount flush to the cleanroom wall
- Popular sizes and styles stocked for immediate shipment
- Compliant with cGMP, GLP, ASTM and ISO standards
- Pre-hung designs streamline installation
- Specialty fire-rated and high-speed systems available
- Interlocking systems available for GMP spaces
- Hermetically-sealed models available for BSL-rated areas
- Stocked units feature full-length or partial windows
- In-house engineering staff creates customized designs
- Select from left-swing or right-swing orientations

Pass Through Chambers



- Select from wall-mount or floor-mount models
- BioSafe® units feature rounded corners and autoclave-safe doors
- Smart units include an array of optional upgrades
 - HEPA Filtration
 - Refrigeration
 - UV Sterilization
 - Automatic, hands-free doors
 - Key Card Readers
 - Biometric Scanners
- All units include interlocks to prevent cross-room contamination
- CleanMount® systems install flush to the cleanroom wall
- CleanSeam™ units eliminate crevices where microbes colonize
- Popular models in stock for immediate shipment

Filter Fan Units



- UL-listed, ISO-rated, and CE-marked
- Thousands of units stocked for immediate shipment
- Choose from room-side and top-side replaceable systems
- Select from energy saving EC and standard AC motors
- HEPA and ULPA filtered models
- Wide selection of specialty configurations
 - Battery powered
 - Integrated LED light and ionizer
 - Explosion-proof (Class 1/ Division 1)
 - Reverse flow
 - Laminar flow terminal diffusers
 - Low profile and narrow footprint designs
 - GMP-compliant stainless steel models
- Optional audible filter replacement alarm system

UL-Listed Power and Control Systems



- Powers complete network of FFUs, lights, duplex outlets
- Scalable, plug-and-play system completely eliminates hard wiring
- Streamlines room permitting, compliance and certification
- Optimizes cleanroom relocation, maintenance and filter replacement
- Supports rapid cleanroom installation for time-sensitive projects
- Significant cost savings compared to standard, hard-wired systems

Cleanroom Lighting



- UL-listed, ISO-rated LED panels stocked for immediate delivery
- LED lights reduce cooling costs, exhibit longer life spans
- Choose from white, amber, red and blue colors
- Battery-powered LED emergency lights available
- Germicidal UV lighting available for GMP, biologics applications
- Teardrop and strip lighting for ISO class 4 and 5 environments

HVAC and Accessories



- HVAC and modular air conditioning systems
- Fire suppression and sprinkler systems
- Cleanroom intercoms, talk through panels, and phone systems
- Bumper rails and crash guards
- Access controllers: Biometric key cards readers, fingerprint scanners, and iris scanners

Windows

[Terra Cleanroom Windows](#) are designed for quick, easy installation in a variety of industry-standard sizes and materials. Formats include frameless or framed flush-mount windows and single or double-pane designs compatible with any wall material or thickness. Terra also offers custom windows that are built-to-order when a client requires extra large, extra tall, or extra wide windows.

[Terra's Cleanroom Window Configurator](#) allows you to input your desired width, height, and wall thickness for instant part numbers to obtain pricing easily.

[BioSafe® Windows](#) are designed without exposed hardware or crevices where microbes can colonize and include compression fittings for fast, hardware-free installation. The framed and frameless designs are compliant with BSL-rated rooms and ISO 4-compliant spaces. ValuLine Windows offer an economical alternative with polypropylene frames.

[Fire-rated](#) windows are tested and certified to ANSI/UL 9 standards, withstanding a 45-minute fire exposure and meet essential building code requirements.



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Air Showers

[Air Showers](#) and [Air Shower Tunnels](#) are designed to decontaminate personnel and equipment before entering or exiting a controlled environment, such as a cleanroom. High-velocity, HEPA or ULPA-filtered air shoots from jet nozzles on the walls and ceiling to dislodge and vacuum away contaminants in a closed-loop air filtration system.

Airshowers are available either as preinstalled systems for streamlined installation, or [knockdown configurations](#) for areas with restricted access. [Low-profile designs](#) are suitable for rooms with height restrictions.

Our UL-listed Airshowers meet the highest standards for electrical safety, and help meet municipal and other permitting requirements necessary prior to operation.

Smart air shower features include motion detection, energy efficient LED lighting, touchscreen panels for programming, and email alerts for filter change notifications. Electromagnetic door interlocks improve contamination control by allowing only one door to open at a time, preventing airflow between adjacent spaces. Optional automatic swing, sliding, or high-speed roll-up doors allow for clean and efficient hands-free operation.



Cold Rooms

- In-stock [pre-fabricated designs](#)
- [Custom-designed cold rooms](#) built to your exact specifications
- Temperature range: -40°C to +65°C with $\pm 0.5^\circ\text{C}$ uniformity
- Temperature ramp rate up to $5^\circ\text{C}/\text{min}$
- Humidity control: 0-95% RH $\pm 5\%$
- Digital monitoring system with remote access capability
- High-performance 4" polyurethane foam core panels with R-30 insulation
- Vapor-tight cam-lock panel system for optimal environmental control
- Choice of panel finishes: stainless steel, aluminum, or galvanized steel



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Gowning Equipment & Furniture

Browse a wide selection of cleanroom furnishings including glove boxes, pass-through chambers, desiccator cabinets, laminar flow benches, and cleanroom-compliant furnishings. Website listings include both standard and metric units for universal convenience.

Mirrors



Terra's [BioSafe® Mirrors](#) are offered in three configurations: dual-sided, standard wall-mount, and frameless. Frameless mirrors mount flush against the wall to eliminate cracks and seams and feature a recessed mounting system that minimizes ledges (available with LED backlighting).

Dispensers



Terra's innovative line of [cleanroom compliant dispensers](#) provide smart solutions for all types of applications to help support clean protocol and streamline operations.

Storage Cabinets



[HEPA-Filtered Storage Cabinets](#) provide an easy-to-clean and organized storage area for booties and shoes. A built-in HEPA filtration unit protects contamination-sensitive garments and materials inside the cabinet. The double-sided design allows quick access and re-stocking of supplies from either side.

Carts



[BioSafe® Ultra-Clean Cleanroom Carts](#) meet ISO 5 cleanroom standards with all-stainless steel construction, continuous-seam welds, and reinforced shelves, ideal for sterile environments.

Gowning Benches



Terra Universal's [Solid Top Gowning Benches](#) feature a free-standing design made from 304 stainless steel square tube that is easy to clean and maintain.

Sinks



Terra's in-stock selection of cGMP Hands-Free [BioSafe® Sinks and Hand Dryer Stations](#) combine an IR-activated water faucet with two HEPA-filtered, air-blade hand dryers within a single system.

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Workstations and Tables

Terra offers several workstation and table models to support any compliance requirement including CGMP, EU, USP, GLP, and ISO cleanliness ratings down to ISO Class 3. Factory-assembled workstations are highly customizable, featuring options like mobile castors, modular drawers, and integrated power strips. BioSafe® designs entail a gapless, creviceless surface that is easy to wipe down and eliminates areas where microbes can accumulate.



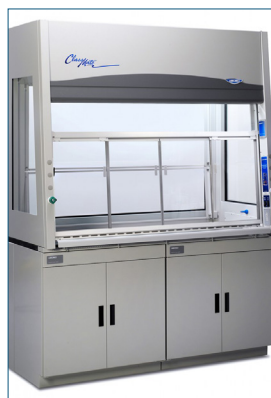
[BioSafe® Ultra-Clean Tables](#) with fully welded, fully encapsulated legs and surfaces offer the ultimate hygienic solution for ISO 5+ environments. A fully encapsulated stainless steel work surface is ideal for high-end applications where cleanliness is critical for sterility assurance programs.



Terra's [BioSafe ErgoHeight™ Adjustable Cleanroom Workstations](#) allow the user to easily alter the viewing position between multi-shift operations or amidst changing workflow requirements. An on-board controller includes 4 saved height settings for quick and easy adjustment

Laboratory Equipment

Fume Hoods & Biosafety Cabinets



Refrigerators & Freezers



Aseptic Glove Box Isolators



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Source Smarter, Source Faster

[Shop Terra Universal Online](#) for thousands of configurable cleanroom enclosures, equipment, and furnishings, many with in-stock and ready-to-ship availability. For nearly 40 years, Terra Universal has served the life science, pharmaceutical, biotechnology, and medical device markets.

The Terra network includes over 20 global sales regions with a wide range of global shipping options, including door-to-door international delivery. Terra provides comprehensive installation resources and access to certification and other 3rd-party testing services.

For detailed specs and product data, view Terra's [Architects & Builders Selection](#) online. get a free quote, and stay on budget with price matching for equivalent competitor products. [Contact a Terra Specialist](#) for quantity discounts and project pricing.



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