



CLEANROOMS

Modular and Stick-Built Designs and Accessories

www.terrauniversal.com

End-to-End Cleanroom Solutions for Architects and & Contractors

Terra provides highly specialized cleanroom enclosures and components for end-to-end cleanroom construction projects. Ease of installation, in-stock products, and QuickShip options make Terra a single point of contact for cleanroom builders and contractors, especially when tight project deadlines require ready-to-ship products.

Terra's product portfolio includes over 2,400 different products in active inventory, pre-tested, packaged, and available for immediate shipment with globally honored pricing. Many of these products include best-in-class UL-listed components and CE ratings for EU safety, health, and environmental protection requirements



Cleanroom Solutions & Expertise

Terra's modular enclosures and components provide a complete system of UL-listed products that are optimized to speed up installation, streamline specification, and simplify final certification and validation. When starting from the ground up, Terra's all-in-one modular cleanroom systems are available in softwall, hardwall, BioSafe®, and specialty packages.



Hardwall Modular Cleanrooms



Softwall Modular Cleanrooms



BioSafe® Modular Cleanrooms

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.

Hybrid Modular Cleanrooms

[Hybrid Modular Biosafe® Cleanrooms](#) combine modular design principles with precision-cut prefabricated wall panels. Unlike standard modular builds, hybrid solutions are not limited by overhead clearance, size, shape, or pathways within the site. Seamless covered transitions between ceiling, walls, and floors support ISO 5 - 8 classes, GMP A-D, GLP, ASTM, and IEST requirements. Turnkey systems ship within 20 - 30 days including prefabricated, pre-engineered panels, UL-listed filter fan units, lights, power distribution modules, and control panels.



UL-Listed Cleanroom Control System



[Terra UL-Listed Control Panels and Power Distribution Modules \(PDMs\)](#) are specifically designed to simplify electrical connections, reduce headaches, and get cleanroom projects completed and certified faster. From a single point of connection, Terra's master PDM powers all cleanroom electrical components (FFUs, lights, controller, outlets), no matter the project size or scope. Quick-Connect Fittings eliminate hardwiring for the connection of lights, fan filter units, and duplex outlets. Quick connectors reduce the complexity and frequency of electrical touchpoints and allow the installation of powered cleanroom components without requiring the assistance of a licensed electrician.



[Standard FFU Control Panels](#) offer several key features that promote efficient energy and maintenance programs. Fan filter alarms detect filter blockage and alert the user when the filter requires replacement. Night mode allows the programming of reduced power states during nights, weekends, and holidays when the cleanroom is unoccupied.



[Smart® UL-Listed Fan Filter Units](#) with electrically commutated (EC) motors enable variable fan speed adjustment of from 1% - 100% power to facilitate centralized fan speed control, which can be incorporated into Building Management Systems. Energy-efficient EC FFUs are designed for minimal noise and heat generation, measuring only 40 dBA at 90 FPM. The MODBUS networking control cards support several sensor inputs including air pressure, airflow, and particle counting. The motor control panel includes diagnostic indicator lights, manual speed adjustment, test probe jacks, CAT5e ports, a control mode switch, and a MODBUS address DIP switch bank.

[Smart® Control Panels](#) allow macro control of fan filter units and custom group assignments for the control of fan filter units across 5, 6, 12, or 16 rooms. The plug-and-play design is field configurable to match your facility layout and needs and supports integration with sensors for differential pressure, temperature, and/or relative humidity.

Tier 1 Panels	50 FFUs in up to five rooms
Tier 2 Panels	100 FFUs in up to six rooms
Tier 3 Panels	120 FFUs and 12 rooms, plus fully automatic FFU control for precise pressure and air change rate management and data logging for strict cGMP and USP compliance
Tier 4 Panels	200 FFUs and 16 rooms, plus monitoring, data-logging, and automated control for large, multi-suite cleanrooms.

Learn More:

[The Complete Guide to Terra Control Panel and Power Integration](#)

Fan Filter Units

Terra ships all of its HEPA or ULPA fan filters and replacement filters from a massive in-stock, on-hand inventory. If you're a Terra customer, there's no need to worry about long lead times or stock outages affecting your completion date and most orders ship within 1 - 3 days of order confirmation. Terra sets a high standard for construction materials and integrity including all UL-rated components, factory leak-tested filters, and scalable plug-and-play control systems that simplify the certification and permitting process.



[Terra's WhisperFlow FFUs](#) feature UL-listed components and built-in baffles that quietly produce uniform laminar airflow across the face of the filter. The configuration includes a three-speed control for low (590 CFM), medium (720 CFM), and high (800 CFM). UL-listed products meet the highest manufacturing standards and reduce the risk of damage, injuries, and electrical hazards.



[Smart@ Fan Filter Units with EC Motors](#) provide filter replacement alarms and annual energy savings of nearly \$500 per fan filter unit. The control card features industry-standard MODBUS networking, for precision speed control (1-100%), and closed-loop control capability for air pressure, airflow, and particle count sensors.



[Terra Room-Side Replaceable \(RSR\) Fan Filter Housings](#) allow servicing and replacement of the filters or motors from within the cleanroom, thus, topside access or ceiling panel removal is not required for servicing.



[Need replacement filters?](#)

Terra offers in-stock, prepackaged, and ready-to-ship filter replacements for HEPA, ULPA, and MERV pre-filters in industry-standard sizes.

End-to-End Door, Window, Pass-Through Outfitting

Terra's cleanroom components are designed to accommodate virtually any industry-standard door, window, or pass-through chamber. QuickShip items are designated designs that are stocked and ready for immediate shipment in 1 - 3 days. QuickBuild products indicate items that are rapidly assembled from stocked components and ready for shipment in 3 - 5 days.

Cleanroom Pass-Throughs



[ValuLine™ Pass-Through Chambers](#) are configurable with economical black acrylic, polypropylene, and 304 stainless steel to provide a design that is both cost-effective and robust. These designs are well-suited for various hospital, laboratory, and pharmacy environments that require moderate environmental control.

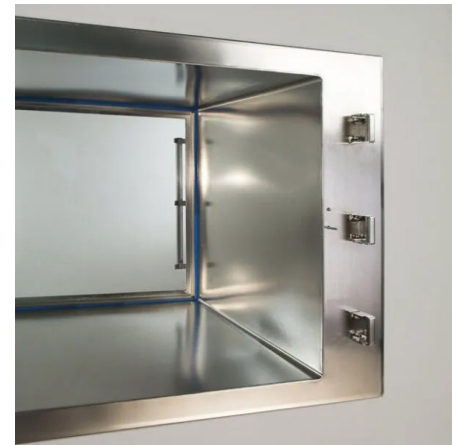


[General-Use Pass-Through Chambers](#) suit any general-use application that requires moderate particulate control but should not be considered suitable for sterile protocols. These configurations include wall-mount or floor-mount versions, and several material options including 304 stainless steel, powder-coated steel, economical clear acrylic, polypropylene, and static-dissipative PVC enclosures.

Terra's proprietary [CleanMount® Pass-Through](#) fastening system installs directly into a clean, finished opening in the wall (not a dirty, rough cut-out). The innovative design firmly clamps to a variety of wall thicknesses without penetrating or damaging the finished surrounding wall. After the wall is fully prepared, [this video demonstrates](#) how Terra's CleanMount® pass-through chamber can be installed seamlessly, within 5 minutes.



[CleanSeam™ Pass-Throughs](#) offer 304 stainless steel chambers with continuous welds, eliminating any intermittently welded gaps that harbor particulate and contamination. Continuous seam welding provides an uninterrupted, single-piece chamber to inhibit the entry or escape of contaminants from contact surfaces.



[CleanMount® CleanSeam™ Pass-Through Chambers](#) feature a hidden automatic door interlock and easy-to-sterilize 316L stainless steel for aseptic bio-pharma applications. An obstruction-free interior with lipless edges and radius corners supports easy cleaning. Flush-wall mounts allow for a 5-minute CleanMount® installation, but other mounting positions are available including flush-floor, center floor, and center wall.

[Smart® CleanMount® Pass-Throughs](#) include automatic electronic interlocks with visual and audible notifications, covered radius corners, and a 5-minute CleanMount® install. The double wall construction allows for a hidden circuit board that streamlines the integration of electronic add-ons including LEDs, UV, HEPA/ULPA recirculation, refrigeration, environmental monitoring, data logging, bar code scanning, hands-free door opening, and controlled access interfaces.

[BioSafe® CleanMount® Pass-Through Chambers](#) feature 316L stainless steel double wall chambers with concealed interior automatic mechanical interlocks for easy wipe down and cleaning. Autoclave-safe doors and covered radius corners support critical applications in biology, pharmaceuticals, and life sciences.

Many other styles are available including refrigerated and fire-rated pass-throughs, roll-up doors, cart transfer, sliding kiosk windows, and recirculating pass-throughs.

Cleanroom Doors & Windows

Terra offers a broad range of cleanroom doors that are designed to simplify controlled environments. Single-door options, available in standard 36" widths or customizable sizes, cater to stick-built cleanrooms, modular cleanrooms, operating rooms, and surgical suites. These doors come in both sliding and swing-out configurations, supporting left-hand and right-hand openings to accommodate unique cleanroom layouts.

Terra's cleanroom windows offer an innovative CleanMount™ clamping design that ensures a flush-mounted window installation in only a few minutes; no drilling or cutting is required. Window styles include single and double-pane versions, glass or polycarbonate viewing windows, and framed or frameless designs.

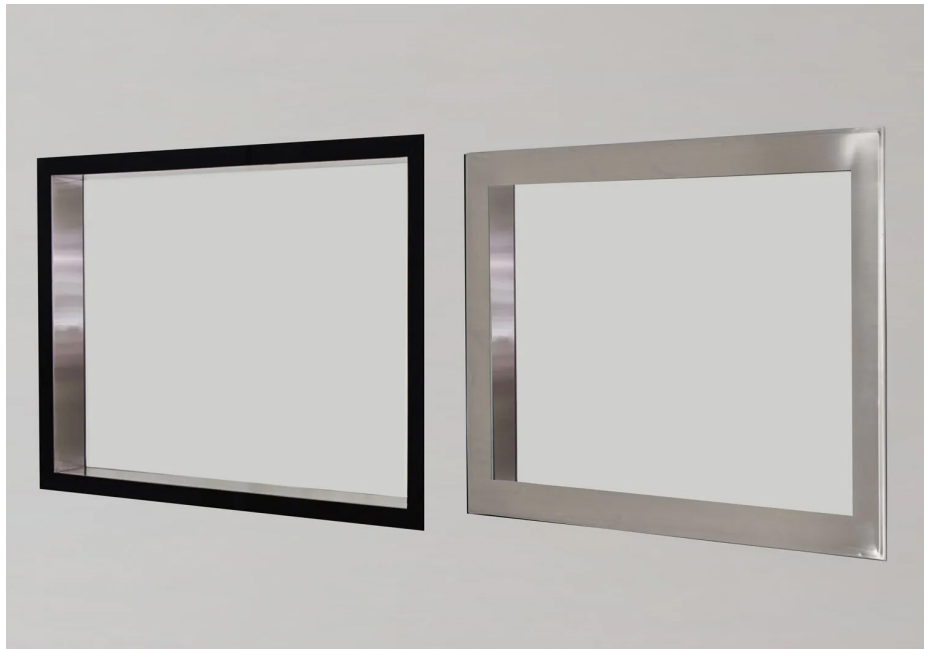
Windows

[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.



Swing & Sliding Doors

Terra's Pre-Hung [Manual Swing](#) and [Automatic Swing](#) doors arrive pre-hung on stainless steel or aluminum frames for simple installation. Formats include single or double-door, and manual or automatic door operation.



[Automatic Swing Doors](#) are equipped with motion sensors, allowing hands-free activation with a simple wave of the hand. The ADA-compliant controller incorporates an advanced power assist feature for effortless manual opening.

[Automatic Sliding Doors](#) feature touch-motion door pads for hands-free operation and a microprocessor controller to monitor door position and closing speed. These doors come pre-assembled, making them ideal for retrofit projects requiring swift and hassle-free installation.

[BioSafe® CleanSeam™ 316L Stainless Steel Doors](#) offer medical-grade, USP-compliant materials and compatibility for virtually any application within healthcare, life sciences, surgical theatres, or pharmaceutical manufacturing.

In addition to Terra's in-house door families, several specialty models from Dortek are available:

- [Hermetic Sliding Doors](#)
- [Hygienic FRP Fire Doors](#)
- [Hygienic Glass Sliding](#)

Smart® Central Control Door Modules

Smart® Cleanroom Doors feature an electronic mag lock for interlocking up to 6 doorways. Maglocks engage with 600lb of holding force and in case of an emergency or power outage, the electromagnetic locks automatically release. Electromagnetic Interlocks, compatible with many of Terra's manual and automatic swing doors, can be retrofitted as needed.

Fire-Rated Cleanroom Doors

[Terra's Fire-Rated Cleanroom Doors](#) feature a thermally insulated honeycomb core, a 16 gauge steel frame, and Terra's signature white powder-coated steel finish. Impact-rated safety windows include 1/4 inch thick wired glass and a surface-applied fire-rated laminate that is held in place with non-contaminating silicone caulk.

Get a Same-Day Cleanroom Door Quote

[Contact a Terra Sales Engineer](#) for quotes and pricing. Be sure to specify the number of doors, desired interlock parameters, and any other accessories (e.g. doors, automatic door operators, scanners) that you may need.

Gowning Equipment & Furniture

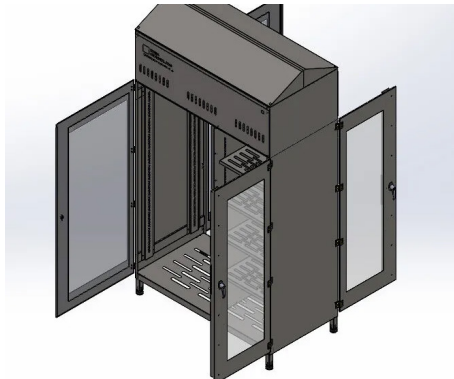
Browse a wide selection of cleanroom furnishings including glove boxes, pass-through chambers, desiccator cabinets, laminar flow benches, and cleanroom-compliant furnishings. Website listings include both standard and metric units for universal convenience.

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). The low-profile mirror and 304 stainless steel frame hermetically seal against the wall to ensure easy cleaning in ISO 5-rated cleanrooms.

Garment Racks



[Double-Sided Garment 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.



[Mobile Laminar Flow Cabinets](#) ensure safe and contamination-free material transport in ISO 5 Class 100 cleanroom environments and a UPS system for 1 - 2 hours of battery power backup. Equipped with an energy-efficient EC motor, it's ideal for storing particle-sensitive materials, including semiconductors, microelectronics, and medical devices, and can even facilitate drying or curing processes.

Gowning Room Equipment



[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. Its solid top offers a sturdy and stable platform for gowning activities, and its seamless welds ensure a smooth, easy-to-clean surface that reduces microbial contamination risks.



[BioSafe® Free Standing Bootie Racks](#): Designed for life science applications, feature a crevice-free, stainless steel design for easy disinfection.



[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.



[BioSafe® Cleanroom Lean Rails](#): Cleanroom Lean Rail provides an easy-to-clean and ergonomic gowning station to don and doff garments

Sinks & Hand Dryers



Terra's [BioSafe® Wall-Mounted, ADA-Compliant Sinks](#) and modular, pedestal sinks feature hands-free operation, rigid, durable 304-grade stainless steel construction, and sloping drains to prevent water spillage



BioSafe® cGMP Hands-Free Sinks and Drying Stations

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



[Terra Universal PureDry](#) cleanroom hand and glove dryers ([in stock selection](#)) supply ULPA-filtered, contamination-free air for drying hands, gloves, medical devices, electronic components, and reagent bottles. Recirculating, wall-mounted models feature integral air returns and catch basins to prevent water spillage.

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.

Tables & Work Stations



[Terra's BioSafe® Work Tables](#) are fully welded stainless steel work surfaces for strict cleaning compliance and ISO Class 6+ environments.



[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.

[Cabinet Workbenches for Cleanrooms and Labs:](#) Terra's Cabinet Workbenches boast 304 stainless steel construction, easy cleaning, and an ISO-5 cleanroom rating. They come with electrical outlets and storage areas for equipment access and support Terra benchtop laminar flow or fume hoods.



[Vibration Isolation Work Stations](#)



[ErgoHeight™ Adjustable Height Work Stations](#)



[Laminate and Corian Work Stations](#)



[All Polypropylene Work Stations](#)

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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