MODULAR
CLEANROOMS | PRODUCT CATALOG

CONTENTS

WHY SIMPLEX?

Simplex Isolation Systems is a prominent leader in critical environment solutions. With over 35 years of industry expertise, Simplex designs and manufactures custom cleanrooms and enclosure systems that are robust, modular and expandable. Simplex's complete line of hardwall and softwall enclosures are ideal for a variety of applications.

Allow Simplex to assist with your next critical environment enclosure project to ensure satisfaction from initial concept to installation.

» QUALITY
We set the quality standard in the industry. Our parts and materials are long-lasting and perform as designed, ultimately saving you money.

» INNOVATION
Simplex is known for innovation and new product development. Owing to our philosophy of continuous improvement, we source new materials and develop new construction methods and products to help our customers achieve their objectives.

» SERVICE
Supporting our product is important to us. At whatever level you utilize Simplex, you are always backed by industry expertise, product knowledge and product warranties.

OUR PROCESS
*From Concept to Installation*

» CONCEPT
The Simplex team works closely with customers to identify any specific requirements and cleanroom classifications to design a custom enclosure.

» DESIGN & LAYOUT
With over 35 years of experience in cleanroom design, the Simplex team develops drawings with a focus on efficiency, compliance and scalability.
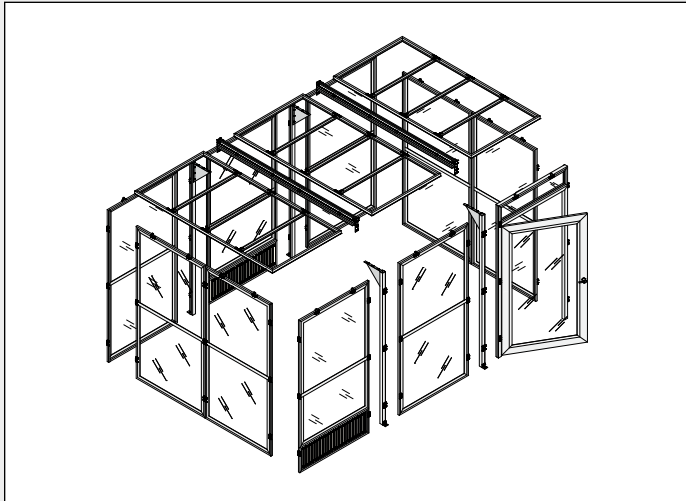
» INSTALLATION
Simplex has a network of installation providers to ensure efficient assembly and faster enclosure utilization.
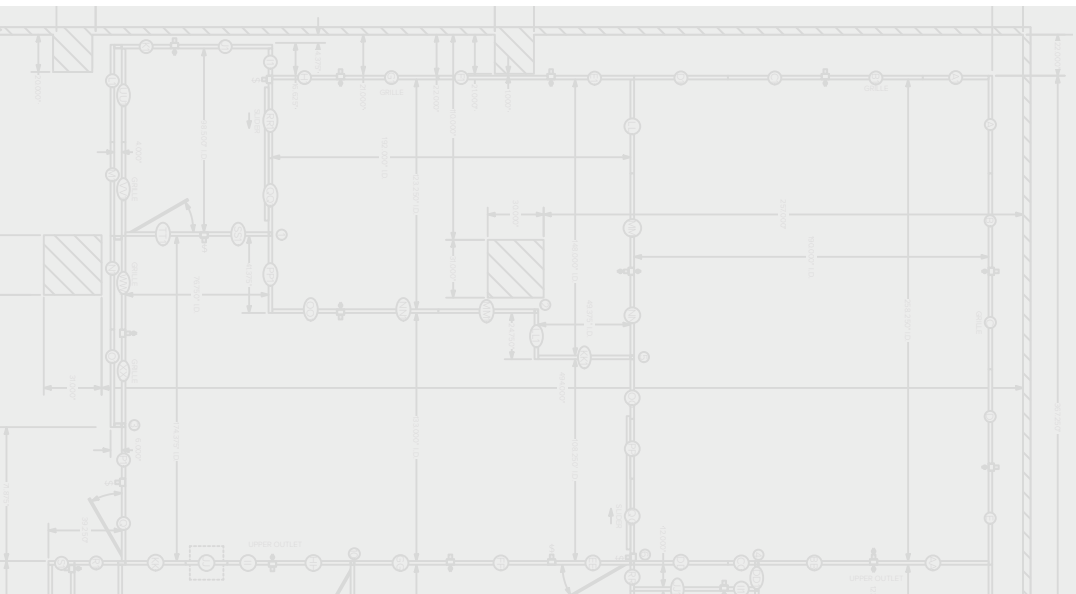
WHY MODULAR?

When building a new cleanroom or converting an existing space, there are two types of construction to consider: modular or stick-built.

Modular cleanrooms are affordable, pre-fabricated enclosures. These cleanrooms offer a quality finish, professional look and can be custom built to meet the needs of the application. Modular cleanrooms can be integrated into current architecture and mechanical systems and generally do not disrupt current operations during installation.

Stick-built construction consists of modifying the current facility architecture (e.g. fixed walls, doors, flooring) with a construction manager and subcontractors. While this approach offers the flexibility of choosing the building materials like flooring and cabinetry, the installation is invasive and complicated. Ultimately, the best fit should be determined by the square footage available, anticipation of growth in the future and the overall desired look. The below chart lists the advantages of modular cleanrooms over traditional stick-built construction.

	Modular Cleanroom	Stick-Built Construction
Affordability	More affordable than traditional stick-built. Modular cleanrooms can be considered capital equipment rather than capital improvements; therefore, can be depreciated at an accelerated rate. This results in tax savings.	Being complicated construction projects, these rooms require permits and renovating the entire building structure, which can bring a high cost and extended tax depreciation periods.
Scalability	Can be easily expanded or reconfigured.	Facilities with already limited space lose additional flexibility for growth. Scalability is limited and varies on available square footage.
Installation Time	Manufactured off-site, shipped and then installed on-site. Typically completed 30% - 50% faster than conventional construction.	Time frame varies, but generally take longer to complete due to material lead times and subcontractor scheduling.
Relocatability	Can be disassembled and moved in its entirety.	Designed and constructed to be immovable.

SIMPLEX IS COMMITTED TO OUR CUSTOMERS

Simplex is firmly committed to manufacturing quality enclosures at a competitive price and providing our customers exceptional customer service and technical support. We strive to exceed expectations every day. In support of this commitment, we:

➢ *Build quality into our products and services, striving for zero defects in everything we do.*

➢ *Partner with our customers from initial concept through installation to deliver solutions that help overcome challenges and meet individual requirements.*

➢ *Continuously source new materials and develop new construction methods and products to help our customers achieve their objectives.*

➢ *Support our products with industry expertise, product knowledge and product warranties.*

➢ *Provide fast lead-times and low-cost domestic and international shipping.*

To further support our customers' needs, Simplex offers a wealth of technical information online at www.simplex.is. Visit our Resources section to:

➢ *Download specification sheets, product catalogs, material maintenance sheets and more from our library of technical documents.*

➢ *Access online installation guides, sizing charts and other helpful information.*

➢ *Reference application knowledge and experience in our White Paper section.*

CONFIGURATION GUIDELINES

Use this overview to help select the Simplex Modular Cleanroom for your specific application.

SIS 797 Hardwall Cleanroom - *page 6*
Sleek, Easy-to-Clean

- *Modular construction system.*
- *Smooth, easy-to-clean internal surfaces.*
- *Can be easily expanded.*
- *Holds positive or negative pressure.*
- *Accepts 1/8" to 3/8" rigid panels.*
- *Suitable for ISO Class 8 to ISO Class 4 environments.*

Ideal for:
- *Pharmaceutical compounding*
- *Semiconductor manufacturing*
- *Aerospace manufacturing*
- *Microelectronics manufacturing*
- *Medical and healthcare applications*
- *E-liquid manufacturing*
- *Food and beverage preparation*

AirLock Cleanroom - *page 10*
Easy-to-Build, Latch-Together

- *Latch-together system for quick and easy assembly/disassembly.*
- *Can be easily expanded or reconfigured.*
- *Holds positive or negative pressure.*
- *Accepts 1/8" rigid or softwall panels.*
- *Suitable for ISO Class 8 to ISO Class 4 environments.*

Ideal for:
- *Pharmaceutical compounding*
- *Process isolation applications*
- *Microelectronics manufacturing*
- *Medical and healthcare applications*
- *Assembly and packaging lines*
- *Hazmat handling isolation*

SIS 212 Softwall Cleanroom - *page 14*
Adaptable, Heavy-Duty

- *Modular construction or latch-together system.*
- *Heavy-duty framing with softwall panel perimeter and strip door entrance.*
- *Available with casters for portability.*
- *Suitable for ISO Class 8 to ISO Class 5 environments*

Ideal for:
- *Industrial applications*
- *Laser applications*
- *Paint rooms*
- *Machinery enclosures*
- *Welding enclosures*
- *Process isolation applications*
- *Assembly and packaging lines*

CUSTOM CAPABILITIES

Simplex cleanrooms are available in standard floor plans or in custom configurations that can be customized to accommodate any size, layout or application requirement. Customization options include:

- ISO Class
- Configuration
- Framing Finish
- Wall Panel Inserts
- Door Options
- Venting Options

- Ceiling Components
- Electrical Outfitting
- Floor, Wall & Ceiling Attachments
- Support Posts
- Accessories
- Structural Calculations

Refer to page 31 for a Custom Design Guide or consult a Simplex Representative to get started.

SIS 797
HARDWALL CLEANROOM

Standard 8' x 12' SIS 797 Hardwall Cleanroom designed in a positive pressure configuration. Shown with ante-room.

KEY BENEFITS

» Promotes better quality and better yields.

» USP <797> and USP <800> compliant.

» Assembly hardware is accessed from the exterior and sealed, for a professional, high-tech look.

» Near-flush surface from insert to extrusion allows for a cleaner working environment.

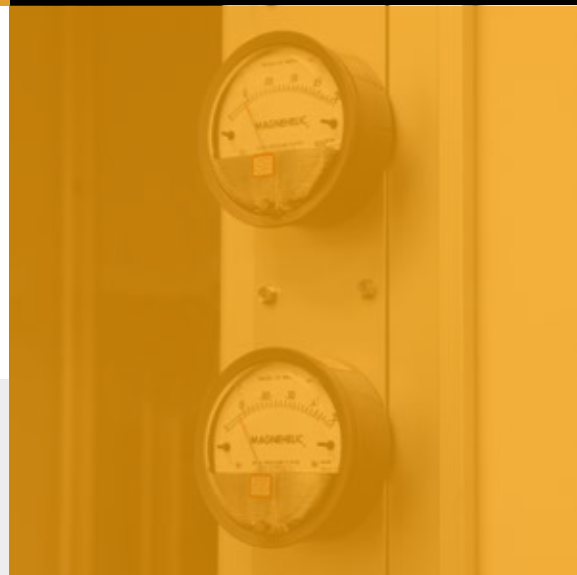» Engineered to be modular— easily expands as needs change.

THE SLEEK, EASY-TO-CLEAN
MODULAR CLEANROOM

The SIS 797 Hardwall Cleanroom is an ideal solution for small or large volume cleanroom spaces where extreme cleanliness is required.

Engineered with easy-to-clean internal features, this enclosure's frame boasts Active Channel Technology (ACT) which creates a near-flush surface between the frame and panel inserts. This technology eliminates hidden spaces where contaminants can hide and cause problems inside a clean environment.

IDEAL FOR:
- *Pharmaceutical compounding*
- *Semiconductor manufacturing*
- *Aerospace manufacturing*
- *Microelectronics manufacturing*
- *Medical and healthcare applications*
- *E-liquid manufacturing*
- *Life science and research applications*

ACTIVE CHANNEL

Insert Panel

Adjustable

ACT is an adjustable, two-piece extrusion capable of accommodating panel insert thicknesses from 1/8" to 3/8".
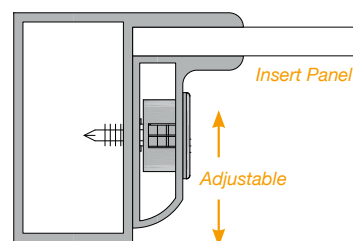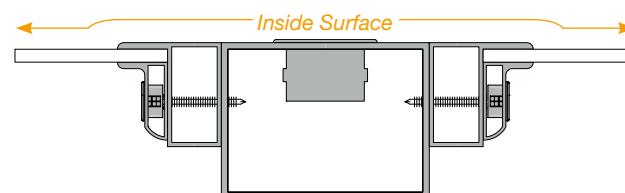
FEATURES

›› Suitable for ISO Class 8 to ISO Class 4 cleanroom applications.

›› 2" x 2" framework comes in a clear anodized aluminum or powder coated finish.

›› ACT frame allows for easy cleaning and can accommodate insert panels from 1/8" to 3/8".

›› Insert panels available in ABS, acrylic, polycarbonate, aluminum or glass.

›› Available with integrated self-supporting ceiling modules, factory-assembled for fast and simple construction.

›› Available as single-pass, re-circulating design with air-chase walls and ceiling plenum or as a hardwall partition for existing sterile environments.

›› Ships as an easy-to-build pre-assembled room.

Inside Surface

Ceiling support post connection with electrical

Inside Surface

Inside Surface

Wall-to-wall connection

Wall-to-wall corner connection
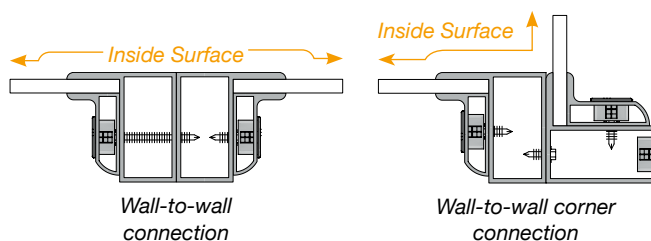
ACT provides a flush surface from insert to extrusion, even at critical points such as ceiling posts, wall-to-wall connections and wall-to-wall corner connections.

The ACT design creates a snug interior mounting of the insert panels, keeping them flush with the frame. This makes the assembled interior walls easy to keep clean.

All assembly hardware is accessed from the exterior of the assembled cleanroom. The hardware is sealed with caps to provide a clean, professional look.
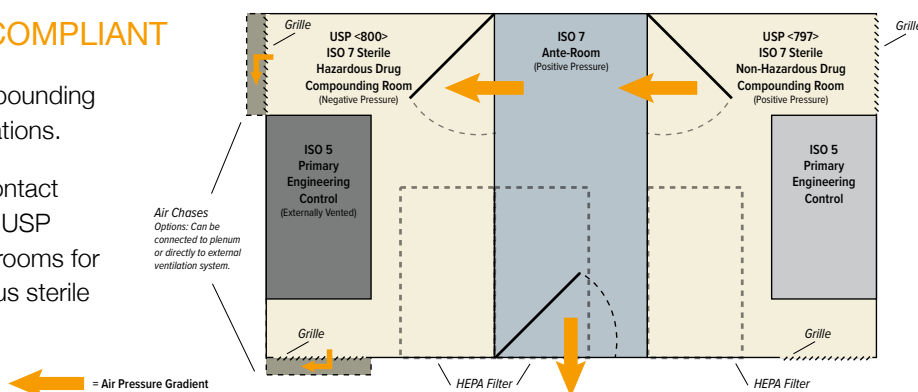

The SIS 797 Cleanroom can be ordered with the Simplex integrated ceiling system that accepts standard 2' x 4' components. Options include ceiling tiles, HEPA filters and various types of 2' x 4' lighting units.

USP <797> AND USP <800> COMPLIANT

The SIS 797 Cleanroom is ideal for compounding sterile injectables and other critical operations.

Select among standard floor plans, or contact Simplex at **800.854.7951** about custom USP <797> and USP <800> compliant cleanrooms for processing hazardous and non-hazardous sterile and non-sterile drugs.

= Air Pressure Gradient

CUSTOMIZATION OPTIONS

FEATURE	OPTIONS	SEE PAGE
ISO Class	ISO Class 8 to ISO Class 4	24
Configuration	Single-Pass, Recirculating	27
Framing	Clear Anodized Aluminum, Powder Coated Finish	31
Wall Panel Inserts	1/8" to 3/8" - ABS, Acrylic, Polycarbonate, Polypropylene, Aluminum, Glass	31
Doors	Single / Double - AirBlock™ Swing Door, Pro-Glide™ Sliding Door	26
Venting	Louvered, ABS Adjustable Sliding, Open Air Space, Duct Collar Cut-Outs, Air Change Panels	27
Ceiling Components	Light Fixtures, HEPA Filter Units, Ceiling Tiles	24
Electrical Outfitting	Component Wiring, 1-Way Switch/Outlet Wiring, 3-Way Switch/Outlet Wiring	28
Floor, Wall & Ceiling Attachments	Floor Cleats, Angle Fasteners, Wall Fasteners, 4" Base for Cove Flooring	28
Support Posts	Plumbing Post, Electrical Post	28
Accessories	Monitoring Systems, Access Openings	28
Structural Calculations	Seismic	31

AirBlock™ ABS Core Swing Door - pg. 26

Dual Magnehelic® Gauge - pg. 28

Decora® Double Switch - pg. 28

Glove Ports - pg. 29


HEPA Fan Filter Units - pg. 24

ORDERING INFORMATION

Standard SIS 797 Hardwall Cleanrooms are designed to meet positive pressure, ISO Class 7 standards. Standard model numbers listed in the chart below include the following:

- Enclosure frame and self-supporting ceiling grid
- Standard 2' x 4' ceiling tiles
- 4' x 7' AirBlock™ ABS single swing door
- ABS adjustable sliding grille(s)
- Class 100 T-8 energy efficient, 100% sealed cleanroom lights
- Fan-powered HEPA filter units that are 99.99% efficient on particles of 0.3µm or larger
- All necessary hardware and structural accessories needed for installation / execution

NOTE: Standard cleanroom height is 8 feet. Cleanrooms can be fitted for wall panel inserts of ABS composite, polycarbonate, white epoxy aluminum, acrylic, tempered glass, or other materials. SIS 797 Hardwall Cleanrooms do not include floors. They are designed for installation on a flat, sealed, non-particulating, crevice-free surface, which can be caulked to the cleanroom frame to form a seal.

Standard cleanroom models include fan-powered HEPA filter unit and grille quantities that are recommended by Simplex to meet positive pressure ISO Class 7 standards based on internal room dimensions. Fan-powered HEPA filters can be added or removed to accommodate specific ISO Class requirements, pressurization differentials or process exhaust.
(See page 25 for detailed ceiling component chart)
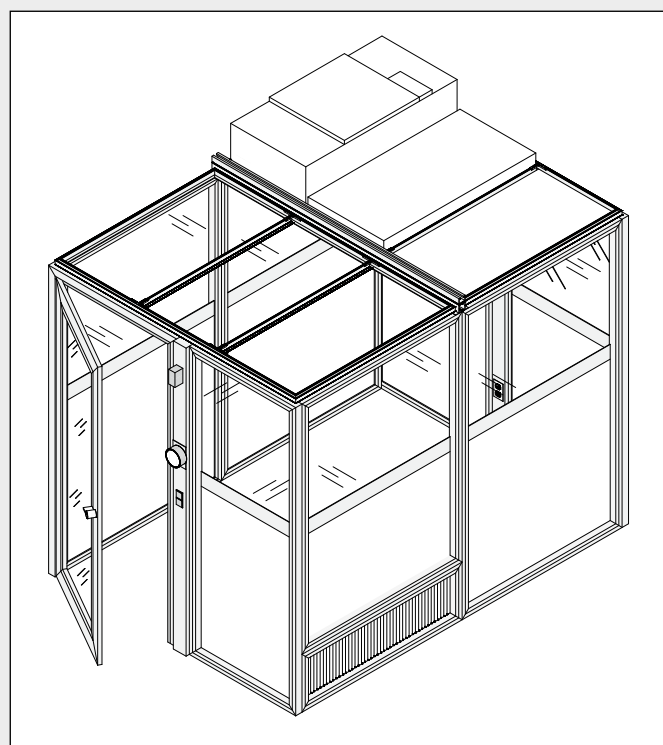
MODEL #	ROOM ID (L x W x H)	NOMINAL OD (L x W x H)	FILTERS	LIGHTS	GRILLES
SIS797-0612	6' x 12' x 8'	75.75" x 155.25" x 96"	1	2	1
SIS797-0808	8' x 8' x 8'	100.5" x 102.75" x 96"	1	2	1
SIS797-0812	8' x 12' x 8'	100.5" x 155.25" x 96"	1	2	1
SIS797-0816	8' x 16' x 8'	100.5" x 207.75" x 96"	2	3	2
SIS797-1012	10' x 12' x 8'	125.25" x 155.25" x 96"	2	3	2
SIS797-1016	10' x 16' x 8'	125.25" x 207.75" x 96"	2	3	2
SIS797-1020	10' x 20' x 8'	125.25" x 260.25" x 96"	3	4	2
SIS797-1212	12' x 12' x 8'	150" x 155.25" x 96"	2	3	2
SIS797-1216	12' x 16' x 8'	150" x 207.75" x 96"	2	4	2
SIS797-1220	12' x 20' x 8'	150" x 260.25" x 96"	3	5	2

NEED A CUSTOM CONFIGURATION? *Simplex can design a custom cleanroom to accommodate any size, layout or application requirement. Refer to page 31 for a Custom Design Guide or consult a Simplex Representative for custom sizing, components and material options.*

AIRLOCK CLEANROOM

Custom 16' x 20' AirLock Cleanroom.

KEY BENEFITS

» Ideal for ISO Class 8 to ISO Class 4 environments and can be custom designed to meet specific applications.

» Minimal tools required for assembly. Many applications can be assembled in less than one hour.

» Suitable for diverse applications and industries, such as hospitals and health care, pharmaceutical and medical device manufacturing, industrial and hazardous material applications.

» Engineered to be modular— easily expands as needs change.

THE EASY-TO-BUILD, LATCH-TOGETHER MODULAR CLEANROOM

The AirLock Cleanroom from Simplex Isolation Systems provides a reliable, proven space for controlled environments. The enclosure features modular wall panels that integrate a latch-together system for quick and easy assembly. This latch-together system provides a strong, positive connection at all attachment points on the enclosure, which helps to protect against airborne contaminants, ultraviolet rays and temperature fluctuations. The frame can accept both rigid or softwall panels.

Because of the modular design, AirLock Cleanrooms are equally effective as permanent or temporary solutions in both small environments and in large industrial applications. The AirLock Cleanroom can be easily expanded or reconfigured to meet ever-changing demands.

IDEAL FOR:
- *Pharmaceutical compounding*
- *Process isolation applications*
- *Microelectronics manufacturing*
- *Medical and healthcare applications*
- *Assembly and packaging lines*
- *Hazmat handling isolation*

AIRLOCK FRAMEWORK MODELS

Model 100	Model 200
1" x 1" Frame (standard)	1" x 2" Frame (for taller walls)

Two framework models available. Model 100, a lightweight 1" x 1" anodized aluminum frame and Model 200, a 1" x 2" anodized aluminum frame.

The latch-together design makes assembly or disassembly easy. Cleanrooms can be completely disassembled and stored, expanded or reconfigured by adding or subtracting AirLock's lightweight modular sections.

FEATURES

> Suitable for ISO Class 8 to ISO Class 4 cleanroom applications.

> Framework comes in a clear anodized aluminum or powder coated finish.

> Closed-cell foam gaskets seal frame-to-frame connections.

> Frame accepts 1/8" insert materials that lock in with a tight seal and cannot be knocked loose from accidental impacts.

> Insert materials include standard polycarbonate, clear vinyl, static dissipative vinyl or non-outgassing PolySim™ material.

> Available with integrated self-supporting ceiling modules, factory-assembled for fast and simple construction.

> Ships as an easy-to-build pre-assembled room.

AirLock is designed to keep assembly areas free of contaminants and dust. Walls and anodized aluminum frames wash down quickly and easily.

Taller, self-contained cleanrooms are achievable with AirLock's Model 200 framework system.

Use AirLock for process isolation to prevent cross contamination and control humidity and temperature.

ENDLESS APPLICATIONS & CONFIGURATIONS

AirLock's latch-together framework design allows enclosures to be built or expanded without vertical or horizontal restrictions. From mini-environments to large, self-contained cleanrooms, AirLock adapts to virtually any configuration. The latch-together system enables fast and effortless expansion or reconfiguration.

Select among standard floor plans, or contact Simplex at **800.854.7951** for custom sizing and configurations.

CUSTOMIZATION OPTIONS

| FEATURE	OPTIONS	SEE PAGE
ISO Class	ISO Class 8 to ISO Class 4	24
Configuration	Single-Pass, Recirculating	27
Framing	Clear Anodized Aluminum, Powder Coated Finish	31
Wall Panel Inserts	1/8" - Polycarbonate, Clear Vinyl, Static Dissipative Vinyl, PolySim™ Material	31
Doors	Single / Double - AirBlock™ Swing Door, Pro-Glide™ Sliding Door	26
Venting	Louvered, ABS Adjustable Sliding, Open Air Space, Duct Collar Cut-Outs, Air Change Panels	27
Ceiling Components	Light Fixtures, HEPA Filter Units, Ceiling Tiles	24
Electrical Outfitting	Component Wiring, 1-Way Switch/Outlet Wiring, 3-Way Switch/Outlet Wiring	28
Floor, Wall & Ceiling Attachments	Floor Cleats, Angle Fasteners, Wall Fasteners	28
Support Posts	Plumbing Post, Electrical Post	28
Accessories	Monitoring Systems, Access Openings	28
Structural Calculations	Seismic	31

AirBlock™ Swing Door
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Dual Magnehelic®
Gauge - pg. 28

Electrical Outlets
pg. 28

Adjustable Sliding
ABS Grille - pg. 27
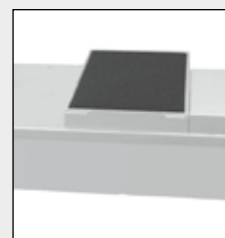

HEPA Fan Filter
Units - pg. 24

ORDERING INFORMATION

Standard AirLock Cleanrooms are designed to meet positive pressure, ISO Class 7 standards. Standard model numbers listed in the chart below include the following:

- ❯ Enclosure frame and self-supporting ceiling grid

- ❯ Standard 2' x 4' ceiling tiles

- ❯ 4' x 7' AirBlock™ single swing door

- ❯ ABS adjustable sliding grille

- ❯ Class 100 T-8 energy efficient, 100% sealed cleanroom lights

- ❯ Fan-powered HEPA filter units that are 99.99% efficient on particles of 0.3µm or larger

- ❯ All necessary hardware and structural accessories needed for installation / execution

NOTE: Standard cleanroom height is 8 feet. Cleanrooms can be fitted for wall panel inserts of polycarbonate, clear vinyl, static dissipative vinyl, non-outgassing PolySim™ or other materials. AirLock Cleanrooms do not include floors. They are designed for installation on a flat, sealed, non-particulating, crevice-free surface, which can be caulked to the cleanroom frame to form a seal.

Standard cleanroom models include fan-powered HEPA filter unit and grille quantities that are recommended by Simplex to meet positive pressure ISO Class 7 standards based on internal room dimensions. Fan-powered HEPA filters can be added or removed to accommodate specific ISO Class requirements, pressurization differentials or process exhaust. (See page 25 for detailed ceiling component chart)
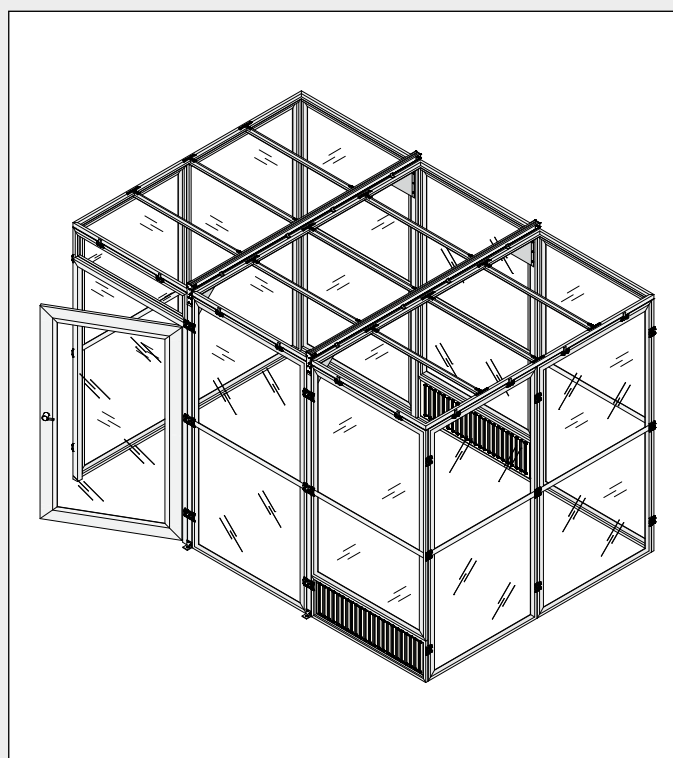
MODEL #	ROOM ID (L x W x H)	NOMINAL OD (L x W x H)	FILTERS	LIGHTS	GRILLES
AL-0612	6' x 12' x 8'	75.75" x 155.25" x 96"	1	2	1
AL-0808	8' x 8' x 8'	100.5" x 102.75" x 96"	1	2	1
AL-0812	8' x 12' x 8'	100.5" x 155.25" x 96"	1	2	1
AL-0816	8' x 16' x 8'	100.5" x 207.75" x 96"	2	3	2
AL-1012	10' x 12' x 8'	125.25" x 155.25" x 96"	2	3	2
AL-1016	10' x 16' x 8'	125.25" x 207.75" x 96"	2	3	2
AL-1020	10' x 20' x 8'	125.25" x 260.25" x 96"	3	4	2
AL-1212	12' x 12' x 8'	150" x 155.25" x 96"	2	3	2
AL-1216	12' x 16' x 8'	150" x 207.75" x 96"	2	4	2
AL-1220	12' x 20' x 8'	150" x 260.25" x 96"	3	5	2

NEED A CUSTOM CONFIGURATION? *Simplex can design a custom cleanroom to accommodate any size, layout or application requirement. Refer to page 31 for a Custom Design Guide or consult a Simplex Representative for custom sizing, components and material options.*

SIS 212
SOFTWALL CLEANROOM

Standard 8' x 8' SIS 212 Softwall Cleanroom with leg levelers.

KEY BENEFITS

» 100% customizable to suit the needs of the application.

» Minimal tools required for assembly. Designed for fast construction.

» Suitable for diverse applications, such as isolation enclosures, machinery and welding enclosures, wall systems and partitions.

» Engineered to be modular—easily expands or reconfigures to meet ever-changing demands.

THE ADAPTABLE, HEAVY-DUTY
SOFTWALL CLEANROOM

Built around simple, strong and easy to assemble modules, the SIS 212 Softwall Cleanroom is designed for fast construction and can be 100% customized to suit the requirements of any applications.

The framework integrates with Simplex's self supporting ceiling system, allowing enclosures to be fitted with HEPA filters and modular air conditioning units or adapted to existing ventilating and dust collection systems. The framework also integrates with the Hookbead softwall mounting system and Simplex's sliding, swing and strip door systems. Numerous floor, wall and ceiling attachment options are also available making the SIS 212 Softwall Cleanroom the most versatile modular enclosure on the market.

IDEAL FOR:
- *Industrial applications*
- *Laser and welding enclosures*
- *Paint rooms*
- *Machinery enclosures*
- *Process isolation applications*
- *Assembly and packaging lines*

Typical applications include isolation enclosures, machinery and welding enclosures, wall systems and partitions.

FEATURES

- Suitable for ISO Class 8 to ISO Class 5 cleanroom applications.

- Heavy-duty 2 1/8" x 2 1/8" anodized aluminum extrusion framework available in clear anodized or powder coated finish.

- Choice of compression latch or bolt together designs, both ensure a strong structural connection.

- Frame integrates with Simplex's Flatwall Hookbead Mounting Bar.

- Standard softwall materials include clear vinyl, anti-static vinyl and non-outgassing PolySim™ material. Class 1 fire-rated FlexSim™, light filtering laser/welding and sound control material also available.

- Optional: Frame can also accept rigid material inserts from 1/8" to 1/4". Options include aluminum composites, acrylic, polycarbonate, ABS and PVC.

- Available with integrated self-supporting ceiling modules, factory-assembled for fast and simple construction.

- Available with casters for portability or leg levelers for critical room placement on uneven floors.

- Available with numerous floor, wall and ceiling attachment hardware.

- Ships as an easy-to-build pre-assembled room.

Frame construction features knock-in corners which allows for easy installation and replacement of individual parts if needed.

The SIS 212 Softwall Cleanroom can be ordered with casters to make the enclosure portable.
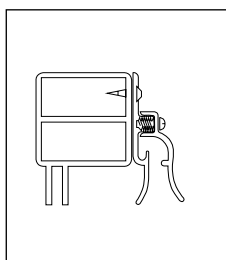
SIS 212 Softwall Cleanrooms are available with corner tube gussets in varying lengths for additional structural support.
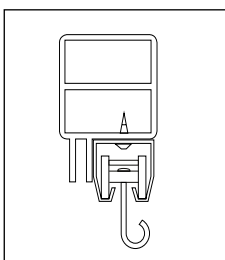
One extrusion does it all. Aluminum corners insert for fast "knock together" assembly.
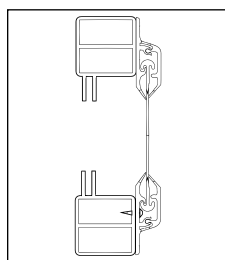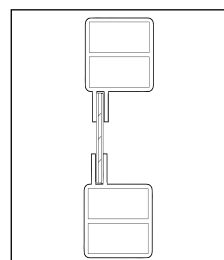
SOFTWALL & HARDWALL ATTACHMENTS

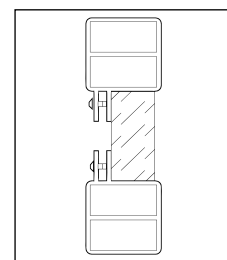*Typical softwall attachment with Simplex Hookbead mounting bar.*

Typical sliding curtain track and roller attachment.

Softwall attachment with Simplex FlexTrack mounting top and bottom.

Double-channel supports many different hardwall materials.

Attachment for insulated core panel up to 1.375" thick.

CUSTOMIZATION OPTIONS

FEATURE	OPTIONS	SEE PAGE
ISO Class	ISO Class 8 to ISO Class 5	24
Configuration	Single-Pass, Recirculating	27
Framing	Clear Anodized Aluminum, Powder Coated Finish	31
Wall Panel Inserts	1/8"–1/4" Polycarbonate, Clear Vinyl, Static Dissipative Vinyl, PolySim™ Material, Acrylic, ABS	31
Doors	Single / Double - AirBlock™ Swing Door, Pro-Glide™ Sliding Door	26
Venting	Louvered, ABS Adjustable Sliding, Open Air Space, Duct Collar Cut-Outs, Air Change Panels	27
Ceiling Components	Light Fixtures, HEPA Filter Units, Ceiling Tiles	24
Electrical Outfitting	Component Wiring, 1-Way Switch/Outlet Wiring, 3-Way Switch/Outlet Wiring	28
Floor, Wall & Ceiling Attachments	Floor Cleats, Angle Fasteners, Wall Fasteners, Casters, Leg Levelers	28
Support Posts	Plumbing Post, Electrical Post	28
Accessories	Monitoring Systems, Access Openings	28
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*Leg Levelers
pg. 29*

*Wall Flush Mount
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*Decora® Double
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*Static Dissipative
Vinyl - pg. 19*

*HEPA Fan Filter
Units - pg. 24*

ORDERING INFORMATION

Standard SIS 212 Softwall Cleanrooms are designed to meet positive pressure, ISO Class 7 standards. Standard model numbers listed in the chart below include the following:

› Enclosure frame and self-supporting ceiling grid

› Standard 2' x 4' ceiling tiles

› Class 100 T-8 energy efficient, 100% sealed cleanroom lights

› Fan-powered HEPA filter units that are 99.99% efficient on particles of 0.3µm or larger

› Softwall panels (in material of choice) pre-fabricated as integral units ready for installation

› Hookbead Flatwall Mounting Bar pre-fabricated as integral units ready for installation

› All necessary hardware and structural accessories needed for installation / execution

NOTE: Standard cleanroom height is 8 feet. Standard SIS 212 Cleanrooms are fitted with softwall panels of standard clear vinyl, static dissipative vinyl or non-outgassing PolySim™. SIS 212 Softwall Cleanrooms do not include floors.

Standard cleanroom models include fan-powered HEPA filter unit and grille quantities that are recommended by Simplex to meet positive pressure ISO Class 7 standards based on internal room dimensions. Fan-powered HEPA filters can be added or removed to accommodate specific ISO Class requirements, pressurization differentials or process exhaust. (See page 25 for detailed ceiling component chart)
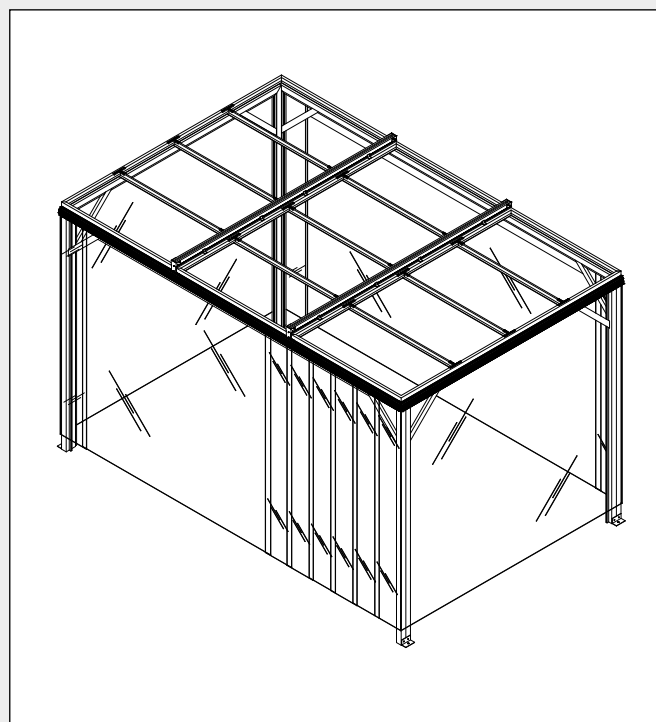
MODEL #	ROOM ID (L x W x H)	NOMINAL OD (L x W x H)	FILTERS	LIGHTS	GRILLES*
SIS212-0612	6' x 12' x 8'	75.75" x 155.25" x 96"	1	2	0
SIS212-0808	8' x 8' x 8'	100.5" x 102.75" x 96"	1	2	0
SIS212-0812	8' x 12' x 8'	100.5" x 155.25" x 96"	1	2	0
SIS212-0816	8' x 16' x 8'	100.5" x 207.75" x 96"	2	3	0
SIS212-1012	10' x 12' x 8'	125.25" x 155.25" x 96"	2	3	0
SIS212-1016	10' x 16' x 8'	125.25" x 207.75" x 96"	2	3	0
SIS212-1020	10' x 20' x 8'	125.25" x 260.25" x 96"	3	4	0
SIS212-1212	12' x 12' x 8'	150" x 155.25" x 96"	2	3	0
SIS212-1216	12' x 16' x 8'	150" x 207.75" x 96"	2	4	0
SIS212-1220	12' x 20' x 8'	150" x 260.25" x 96"	3	5	0

* SIS 212 Cleanrooms will have gaps between the softwall panels and the floor.

NEED A CUSTOM CONFIGURATION? *Simplex can design a custom cleanroom to accommodate any size, layout or application requirement. Refer to page 31 for a Custom Design Guide or consult a Simplex Representative for custom sizing, components and material options.*

AIRBLOCK™
SOFTWALL SYSTEM

KEY BENEFITS

⟫ **MATERIAL SELECTION**
A large selection of high-performing, quality materials including clear, frosted, anti-static, PolySim™, opaques and tints.

⟫ **SEALED CORNERS**
Wraparound seals eliminate air loss or particle penetration at the corners.

⟫ **MOUNTING SYSTEMS**
A variety of mounting systems, engineered for easy installation and maximum performance.

⟫ **FRAMEWORK INTEGRATION**
The softwall mounting systems integrate with Simplex's SIS 212 framework system.

⟫ **RF WELDED SEAMS**
RF welding on all panels provides a permanent bond that is cleaner and stronger than sewing.

AirBlock™ Softwall Systems from Simplex Isolation Systems are suitable for all classes of cleanrooms and for all levels of process isolation. AirBlock™ softwalls come in a wide selection of colors, thicknesses and properties and can be customized to virtually any size or shape. Simplex offers a variety of exclusive mounting systems that are engineered for easy installation and maximum performance.

STRIP SYSTEMS
Consisting of overlapping individual 6" to 48" strips, an AirBlock™ strip system is an ideal solution for dividing cleanrooms, enclosing portable frame systems, conveyor openings or doorways where easy access is required. Individual strips are designed to hang straight and maintain their overlaps. Optional alternating clear and frosted non-stick design prevents gaps which can lead to air loss.

SOLID SOFTWALLS
Solid softwalls are constructed from 48" wide sheets of vinyl that are RF welded to form solid walls. RF welded seals provide a permanent bond that is cleaner and stronger than sewing. AirBlock™ solid walls are especially suitable for enclosing portable frame systems or improving laminar flow areas above workspaces. They can also be used to further divide existing cleanrooms to create cleaner inner zones.

MATERIAL OPTIONS

Simplex uses only the finest quality materials available. These materials have been specifically formulated and have been fully tested to meet the highest standards to insure optimum performance. Individual material specification sheets are available upon request.
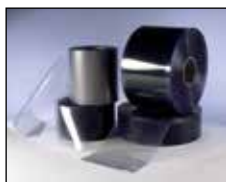
STANDARD VINYL

Simplex's standard cleanroom grade vinyl is fire retardant and is low outgassing. It is designed and formulated to resist yellowing, curling and cracking, even in the harshest environments. Available in clear and frosted matte.

ANTI-STATIC VINYL
ESD anti-static vinyl from Simplex Isolation systems is manufactured with permanent built-in inhibitors. The PVC strips or curtains will not hold a charge and attract less dust to their surface. Unlike topical coatings, these inhibitors will not wear off and will last for the life of the curtain. Available in clear

POLYSIM™ MATERIAL
As a proprietary compound—not a PVC—PolySim™ is non-outgassing and non-blooming, allowing for minimal cleaning requirements. The PolySim™ formulation has permanent static dissipation properties, which do not wear off or diminish over time like anti-static vinyls do. Available in clear, black opaque and white opaque.

OPAQUE AND TINTED COLORS
Opaque vinyl strips available in black and white. Tints available in blue, amber, red and charcoal smoke. Amber tint is suitable for light blocking. Amber tint .080 mil, red tint .040 mil and charcoal smoke .120 mil are all certified for welding applications. Charcoal smoke tint also reduces heat buildup from sunlight.

BYPASS THE CLEANING HASSLES
OF ANTI-STATIC PVC: CHOOSE POLYSIM™

With fire safety, static electricity and molecular contamination growing as concerns in today's controlled environments, PolySim™ material from Simplex Isolation Systems is an ideal choice for cleanroom softwall curtains. PolySim™ was the first clear, flexible softwall material to achieve a Class-1 fire rating. The PolySim™ formulation has permanent static dissipation properties, which do not bloom, wear off or diminish over time like anti-static vinyls can.

Choose PolySim™ material in your softwall cleanroom for higher product yields, fewer problems from regulatory authorities and performance unrivaled in the industry.

The surface of anti-static PVC can bloom over time and develop a viscous coating, requiring periodic cleaning.

PolySim™ material is an inherently static dissipative product with no outgassing and no blooming.

STANDARD VINYL SPECIFICATIONS

PROPERTY	RESULT	ASTM
Color	Clear / Frosted Matte	
Durometer Hardness, 15 Sec. Delay	79A	(D-2240)
Specific Gravity	1.21	(D-792)
Brittle Temp	-36° F / -38° C	(D-746)
Operating Temperature	0° F TO 150° F	
UV Resistance	YES	
Tensile Strength	2400 PSI	(D-412)
Ultimate Elongation	350%	(D-412)
100% Modulus Elongation	1400 PSI	(D-412)
Graves Tear Strength	440 PPI	(D-1004)
Flame Test UL 94V0	PASS	
Flame Spread	30	(E-84)
Smoke Density	450	(E-84)
NFPA-701-2004 Test Method 2	PASS	

ANTI-STATIC VINYL SPECIFICATIONS

PROPERTY	RESULT	ASTM
Color	Clear	
Durometer Hardness, 10 Sec. Delay	80A	(D-2240)
Specific Gravity	1.24	(D-792)
Brittle Temp	-36° F / -38° C	(D-746)
Operating Temperature	0° F TO 150° F	
UV Resistance	YES	
Tensile Strength	2700 PSI	(D-412)
Ultimate Elongation	350%	(D-412)
100% Modulus Elongation	1250 PSI	(D-412)
Graves Tear Strength	275 PPI	(D-1004)
Flame Test UL 94V0	PASS	
Surface Resistivity	1.8×10^{10} (OHM/CM)	(D-257)
Volume Resistivity	2.2×10^{9} (OHM/CM)	(D-257)
Static Decay Rate	0.19 SECONDS	(FED.STD.101C,M4046)

POLYSIM™ SPECIFICATIONS

PROPERTY	RESULT	ASTM
Color	Clear / Black / White	
Shore Hardness	90A / 47D	(D-2240) (Shore A)
Specific Gravity	1.16	(D-792)
Brittle Temp	0° F / -17° C	
Minimum Operating Temperature	32° F / 0° C	
UV Stability (In Sunlight)	GOOD	
Tensile Strength	3800 (26)	(D-412) (PSI)
Ultimate Elongation	450%	(D-412)
100% Modulus Elongation	1200 (8)	(D-412) (PSI)
300% Modulus Elongation	2200 (15)	(D-412) (PSI)
Surface Resistivity	5×10^{9}	(D-257) (OHMS / SQUARE)
Volume Resistivity	5×10^{9}	(D-257) (OHMS-CM)
Static Decay Time by Charge Plate Monitor	50% R.H.	0.1 SECONDS
Flame Test UL 94V0	PASS	
Class 1 - Flame Spread	10	(E-84)
Class 1 - Smoke Density	195	(E-84)
NFPA-701-2004 Test Method 2	PASS	

NOTE: Complete test results for outgassing, anti-static and flame spread available upon request. Simplex Isolation Systems believes these test results to be reliable and accurate but cannot warranty for processes or applications beyond its control.

MOUNTING SYSTEMS

All AirBlock™ softwalls and strips are available with Simplex's patented hookbead mounting system. This innovative, two-piece system makes installation of even large softwalls simple in that panels "hook" into place at any point on the track rather than having to slide into place from the track opening. Solid softwalls can be fastened at the floor level for permanent applications. Available hookbead mounting systems include:

HOOKBEAD FLATWALL BAR
Extruded from 6063-T5 aluminum, the Hookbead Flatwall Bar is ideal for mounting strips directly onto frames or vertical surfaces. Optional T-Bar clips and end-caps available.

HOOKBEAD IN-JAMB BAR
Extruded from 6063-T5 aluminum, the Hookbead In-Jamb Bar is ideal for mounting under headers, frames or on horizontal surfaces. Optional Caddy Clips and end-caps available.

HOOKBEAD FLEXTRACK BAR
Ideal for mounting onto frames or vertical surfaces, the FlexTrack is made from easy-to-clean PVC for applications which require an ultra-clean environment.

HOOKBEAD BAR END CAPS
End caps provide a clean, seamless finish to the end of any aluminum Hookbead mounting bar. End caps are ideal for cleanroom settings.

T-BAR CLIPS
T-Bar Clips are used to attach flatwall bars to T-Bar ceilings. Available in 1", 1-1/2" and 2" sizes.

CADDY CLIPS
Caddy Clips can be used to attach in-jamb bars to T-Bar ceilings. Available in 1" and 1-1/2" sizes.

CLOSURE SYSTEMS

HOOK AND LOOP FASTENER
The hook and loop fastener attaches with a plasticizer-resistant adhesive and is then sewn. Ideal for securing curtain overlaps.

FLEXIBLE MAGNET SELF-CLOSURE
This quality, flexible, chemical-resistant magnet attaches with a plasticizer-resistant adhesive and is then sewn. Ideal for overlapping areas where frequent access is required.

OVERLAP RETENTION SNAPS
Snap closure is an inexpensive way of closing overlap areas of the curtains.

DUAL LOCK FASTENER
This non-particulating, clear 3M® flexible fastening system attaches with a plasticizer-resistant adhesive and is then sewn. Ideal for attaching curtains vertically or horizontally to frames, hoods, benches or on overlaps.

ORDERING INFORMATION   *NOTE: Consult a Simplex Representative for custom sizing and material options.*

| MODEL #	WIDTH	THICKNESS	OVERLAP	MATERIAL OPTIONS
606	6"	60 mil.	1" to 2"	Clear, Frosted, Anti-Static
608	8"	60 mil.	1" to 4"	Clear, Frosted, Anti-Static
808	8"	80 mil.	1" to 4"	Clear, Frosted, Anti-Static, Blue Tint, Amber Tint, Red Tint
4012	12"	40 mil.	2" to 6"	Clear, Anti-Static, PolySim™
6012	12"	60 mil.	2" to 6"	Clear, Frosted, Anti-Static, Opaque Black, Opaque White, Amber Tint, Charcoal Smoke
6024	24"	60 mil.	4" to 12"	Clear, Anti-Static
4048	48"	40 mil.	6" to 12"	Clear, Anti-Static, PolySim™, Opaque Black, Opaque White, Amber Tint
6048	48"	60 mil.	6" to 12"	Clear
8048	48"	80 mil.	6" to 12"	Clear, Anti-Static, Amber Tint
Solid	48"	40, 60, 80 mil.	RF Welded	Clear, Anti-Static, PolySim™, Opaque Black, Opaque White, Amber Tint

# AIRBLOCK™ SELF-SUPPORTING CEILING SYSTEM

KEY BENEFITS

» Save time and labor with quick installation.

» Fully integrated and self-supported, generally requires no overhead support.

THE FULLY INTEGRATED, PRE-ASSEMBLED CEILING SYSTEM

The AirBlock™ Self-Supporting Ceiling System from Simplex Isolation Systems incorporates pre-assembled 2" T-Bar frames with standard 2' x 4' ceiling tiles and components. This ceiling system integrates with Simplex's SIS 797, AirLock and SIS 212 Cleanrooms and is structurally designed to adapt to various room configurations. The ceiling system is engineered for easy construction—when assembling the pre-fabricated modules, simply set the ceiling frame onto the enclosure and fasten down to the frame.

The ceiling structure can accommodate limited, medium and heavy ceiling load needs. Ceiling frame openings accept standard 2' x 4' ceiling tiles, HEPA filters and lighting units.
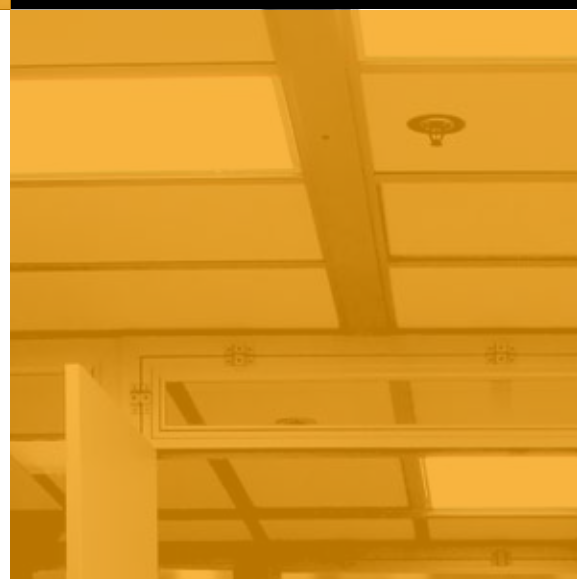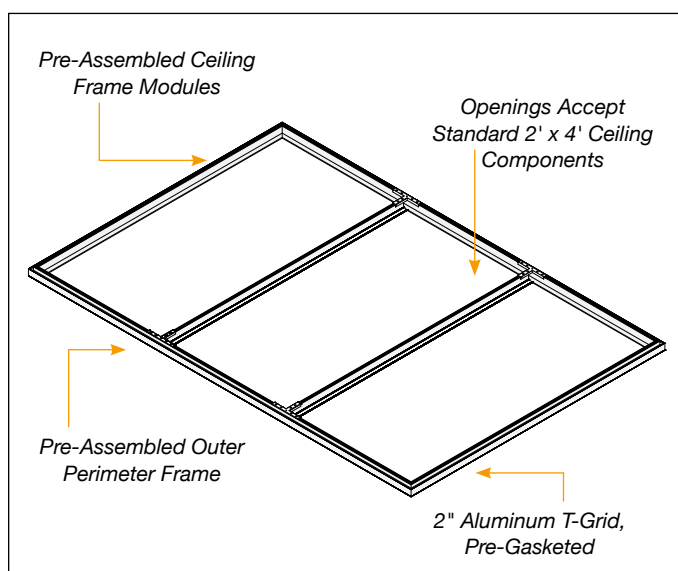
FEATURES

≫ Cleanroom-grade, fully gasketed, 2-inch T-bar grid for maximum strength and efficiency.

≫ Framing comes in standard clear anodized 6063-T5 aluminum. Black anodized or powder coated options available.

≫ Accepts standard 2' x 4' components. Options include ceiling tiles, HEPA filters and various types of 2' x 4' lighting units.

≫ Various ceiling support options available including ceiling to strut connectors and ceiling tile hold down connectors.

≫ Ships as an easy-to-build pre-assembled ceiling structure.

Pre-Assembled Ceiling Frame Modules

Openings Accept Standard 2' x 4' Ceiling Components

Pre-Assembled Outer Perimeter Frame

2" Aluminum T-Grid, Pre-Gasketed

STANDARD CEILING GRID SIZING

MODEL #	SIZE	DIMENSIONS	2' x 4' OPENINGS
CG-44-C	4' x 4'	50 1/4" x 51"	
CG-46-C	4' x 6'	50 1/4" x 75 3/4"	
CG-48-C	4' x 8'	50 1/4" x 100 1/2"	
CG-410-C	4' x 10'	50 1/4" x 125 1/4"	
CG-412-C	4' x 12'	50 1/4" x 150"	

NOTE: Consult a Simplex Representative for custom sizing, components and material options.

CEILING SUPPORT OPTIONS

MEDIUM-DUTY SUPPORT STRUTS
Support struts measure 2" x 4" and are integrated between ceiling panels for room widths up to 15 feet wide with limited ceiling loads.

STIFFENERS
Stiffeners can be added to aluminum struts measuring 2" x 4" to accommodate larger rooms up to 18 feet wide with larger ceiling loads.

HEAVY-DUTY TRUSS SYSTEMS
Truss systems can be added to standard struts to accommodate spans up to 25 feet wide and heavier ceiling loads.

THREADED ROD SUSPENDERS
Suspenders support ceiling frames or struts from any existing structure above for larger rooms of any size. Ceiling loads are limited only by the number of attachments and the strength of the existing ceiling.

CEILING TO STRUT CONNECTOR
Ceiling to strut connectors are used to connect existing ceiling frames to standard struts.

CEILING COMPONENT OPTIONS

CEILING TILES
Options include standard 2' x 4' cleanroom ceiling tiles or polypropylene ceiling tiles.

LIGHTING UNITS
Options include Class 100 T-8 energy efficient, 100% sealed fluorescent, LED, teardrop or Flow-Through lights.

➤ *Select 2' x 4' light modules for placement in Simplex's ceiling grid, or Teardrop Lights for installation below the grid.*

➤ *Flow-Through units are ideal for full HEPA fan filter ceiling coverage.*

➤ *LED lights produce less heat to reduce cooling costs.*

HEPA FAN FILTER UNITS
Options include 2' x 2' or 2' x 4' standard, reverse flow, low airflow or low profile fan-powered HEPA filter units that are 99.99% efficient on particles of 0.3µm or larger.

➤ *Reverse flow units are designed to pull contaminated air from upstream (negative pressure), filter the air, and then exhaust the air downstream.*

➤ *Low profile units can be installed in spaces where clearance space is limited.*

➤ *Roomside replacement (RSR) units available for easy filter replacement.*

➤ *Ultra-low Penetration Air (ULPA) Filters available: 99.99% efficient on particles of 0.12µm or larger.*

CLEANROOM CLASSIFICATIONS

Simplex Isolation Systems' cleanrooms are suitable for ISO Class 8 to ISO Class 4 applications. The class numbers refer to the maximum number of particles allowable per cubic meter in the room. The chart below shows the relationship of each class to the particle count and size.

ISO 14644-1	Standard 209E	MEASURED PARTICLE SIZE (*Micrometers*)					
		0.1 Micron	0.2 Micron	0.3 Micron	0.5 Micron	1.0 Micron	5.0 Microns
ISO Class 1	N/A	10	2	N/A	N/A	N/A	N/A
ISO Class 2	N/A	100	24	10	4	N/A	N/A
ISO Class 3	1	1,000	237	102	35	8	N/A
ISO Class 4	10	10,000	2,370	1,020	352	83	N/A
ISO Class 5	100	100,00	23,700	10,200	3,520	832	29
ISO Class 6	1,000	1,000,000	237,000	102,000	35,200	8,320	293
ISO Class 7	10,000	N/A	N/A	N/A	352,000	83,200	2,930
ISO Class 8	100,000	N/A	N/A	N/A	3,520,000	832,000	29,300
ISO Class 9	N/A	N/A	N/A	N/A	35,200,000	8,320,000	293,000

CEILING COMPONENT BREAKDOWN

ISO	ROOM ID (L x W x H)	NOMINAL OD (L x W x H)	TOTAL OPENINGS	FILTERS	LIGHTS*	GRILLES**	TILES
ISO 8 (CLASS 100,000)	6' x 12' x 8'	75.75" x 155.25" x 96"	9	1	2	1	6
	8' x 8' x 8'	100.5" x 102.75" x 96"	8	1	2	1	5
	8' x 12' x 8'	100.5" x 155.25" x 96"	12	1	2	1	9
	8' x 16' x 8'	100.5" x 207.75" x 96"	16	1	3	1	12
	10' x 12' x 8'	125.25" x 155.25" x 96"	15	1	3	1	11
	10' x 16' x 8'	125.25" x 207.75" x 96"	20	1	3	1	16
	10' x 20' x 8'	125.25" x 260.25" x 96"	25	1	4	1	20
	12' x 12' x 8'	150" x 155.25" x 96"	18	1	3	1	14
	12' x 16' x 8'	150" x 207.75" x 96"	24	1	4	1	19
	12' x 20' x 8'	150" x 260.25" x 96"	30	1	5	1	24
ISO 7 (CLASS 10,000)	6' x 12' x 8'	75.75" x 155.25" x 96"	9	1	2	1	6
	8' x 8' x 8'	100.5" x 102.75" x 96"	8	1	2	1	5
	8' x 12' x 8'	100.5" x 155.25" x 96"	12	1	2	1	9
	8' x 16' x 8'	100.5" x 207.75" x 96"	16	2	3	2	11
	10' x 12' x 8'	125.25" x 155.25" x 96"	15	2	3	2	10
	10' x 16' x 8'	125.25" x 207.75" x 96"	20	2	3	2	15
	10' x 20' x 8'	125.25" x 260.25" x 96"	25	3	4	2	18
	12' x 12' x 8'	150" x 155.25" x 96"	18	2	3	2	13
	12' x 16' x 8'	150" x 207.75" x 96"	24	2	4	2	18
	12' x 20' x 8'	150" x 260.25" x 96"	30	3	5	2	22
ISO 6 (CLASS 1,000)	6' x 12' x 8'	75.75" x 155.25" x 96"	9	3	2	2	4
	8' x 8' x 8'	100.5" x 102.75" x 96"	8	2	2	2	4
	8' x 12' x 8'	100.5" x 155.25" x 96"	12	3	2	2	7
	8' x 16' x 8'	100.5" x 207.75" x 96"	16	4	3	3	9
	10' x 12' x 8'	125.25" x 155.25" x 96"	15	4	3	3	8
	10' x 16' x 8'	125.25" x 207.75" x 96"	20	5	3	4	12
	10' x 20' x 8'	125.25" x 260.25" x 96"	25	7	4	5	14
	12' x 12' x 8'	150" x 155.25" x 96"	18	5	3	4	10
	12' x 16' x 8'	150" x 207.75" x 96"	24	6	4	4	14
	12' x 20' x 8'	150" x 260.25" x 96"	30	8	5	6	17
ISO 5 (CLASS 100)	6' x 12' x 8'	75.75" x 155.25" x 96"	9	6	2	4	1
	8' x 8' x 8'	100.5" x 102.75" x 96"	8	5	2	4	1
	8' x 12' x 8'	100.5" x 155.25" x 96"	12	8	2	6	2
	8' x 16' x 8'	100.5" x 207.75" x 96"	16	10	3	7	3
	10' x 12' x 8'	125.25" x 155.25" x 96"	15	10	3	7	2
	10' x 16' x 8'	125.25" x 207.75" x 96"	20	13	3	9	4
	10' x 20' x 8'	125.25" x 260.25" x 96"	25	16	4	11	5
	12' x 12' x 8'	150" x 155.25" x 96"	18	12	3	8	3
	12' x 16' x 8'	150" x 207.75" x 96"	24	15	4	10	5
	12' x 20' x 8'	150" x 260.25" x 96"	30	19	5	13	6
ISO 4 (CLASS 10)	6' x 12' x 8'	75.75" x 155.25" x 96"	9	9	2	6	0
	8' x 8' x 8'	100.5" x 102.75" x 96"	8	8	2	6	0
	8' x 12' x 8'	100.5" x 155.25" x 96"	12	12	2	8	0
	8' x 16' x 8'	100.5" x 207.75" x 96"	16	16	3	11	0
	10' x 12' x 8'	125.25" x 155.25" x 96"	15	15	3	10	0
	10' x 16' x 8'	125.25" x 207.75" x 96"	20	20	3	13	0
	10' x 20' x 8'	125.25" x 260.25" x 96"	25	25	4	17	0
	12' x 12' x 8'	150" x 155.25" x 96"	18	18	3	12	0
	12' x 16' x 8'	150" x 207.75" x 96"	24	24	4	16	0
	12' x 20' x 8'	150" x 260.25" x 96"	30	30	5	20	0

*Light modules to achieve ISO 4 will be Flow-Thru lights due to 100% HEPA ceiling coverage.
**Grilles are only applicable to SIS 797 and AirLock Cleanrooms. SIS 212 Cleanrooms will have gaps between the softwall panels and the floor.
NOTE: Fan-powered HEPA filter unit and grille quantities listed are recommended by Simplex to meet positive pressure ISO Class standards based on internal room dimensions. Actual quantities required may vary depending on the application or pressurization differentials.

DOOR SYSTEMS

PRO-GLIDE™ SLIDING DOOR

The Pro-Glide™ Sliding Door slides on an easy-glide track system. Magnetic sweep seal provides maximum contamination control. Durable frame designed to simplify cleaning and disinfecting. Self-closing cartridge converts to manual and can be adjusted for speed. Available in single and double-wide widths. Polycarbonate door panel inserts come standard.

SINGLE DOOR

MODEL #	MATERIAL	SIZE
SPG-3684-PC	Polycarbonate	36" x 84"
SPG-4084-PC	Polycarbonate	40" x 84"
SPG-4484-PC	Polycarbonate	44" x 84"
SPG-4884-PC	Polycarbonate	48" x 84"
SPG-5284-PC	Polycarbonate	52" x 84"

DOUBLE DOOR

MODEL #	MATERIAL	SIZE
DPG-5284-PC	Polycarbonate	52" x 84"
DPG-5684-PC	Polycarbonate	56" x 84"
DPG-6084-PC	Polycarbonate	60" x 84"
DPG-6484-PC	Polycarbonate	64" x 84"

Additional insert options include non-outgassing PolySim™, static-dissipative vinyl. Consult a Simplex Representative for custom sizing and material options.

AIRBLOCK™ SWING DOOR

AirBlock™ Swing Doors are designed to install fast, open smoothly, close quickly and provide an efficient entrance and egress. Available in single and double-wide widths. Polycarbonate door panel inserts come standard.

SINGLE DOOR

MODEL #	MATERIAL	SIZE
SSD-37-PC	Polycarbonate	3' x 7'
SSD-47-PC	Polycarbonate	4' x 7'

DOUBLE DOOR

MODEL #	MATERIAL	SIZE
DSD-47-PC	Polycarbonate	4' x 7'
DSD-57-PC	Polycarbonate	5' x 7'
DSD-67-PC	Polycarbonate	6' x 7'
DSD-77-PC	Polycarbonate	7' x 7'
DSD-87-PC	Polycarbonate	8' x 7'

Additional insert options include standard vinyl, anti-static vinyl, and non-outgassing PolySim™. Consult a Simplex Representative for custom sizing and material options.

AIRBLOCK™ ABS CORE SWING DOOR

Like the AirBlock™ Swing Doors, AirBlock™ ABS Core Swing Doors are easy to install and open/close smoothly. Available in single and double-wide widths with Single or Double Acting features. White or black ABS material comes standard.

SINGLE DOOR

MODEL #	MATERIAL	SIZE
SSD-37-ABS	White ABS	3' x 7'
SSD-47-ABS	White ABS	4' x 7'

DOUBLE DOOR

MODEL #	MATERIAL	SIZE
DSD-47-ABS	White ABS	4' x 7'
DSD-57-ABS	White ABS	5' x 7'
DSD-67-ABS	White ABS	6' x 7'
DSD-77-ABS	White ABS	7' x 7'
DSD-87-ABS	White ABS	8' x 7'

Consult a Simplex Representative for custom sizing and material color options.
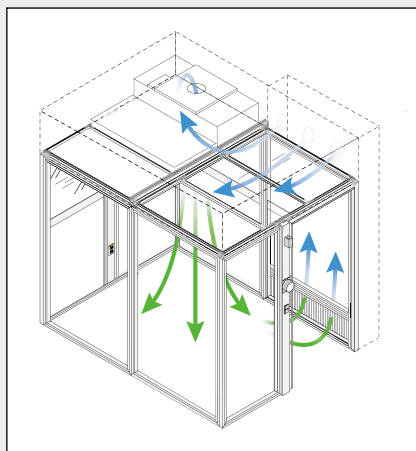
SINGLE PASS VS. RECIRCULATING DESIGN

Deciding on a single pass or recirculating cleanroom depends on the environment that the cleanroom will be placed in, as well as the preciseness of temperature, humidity and pressurization controls.
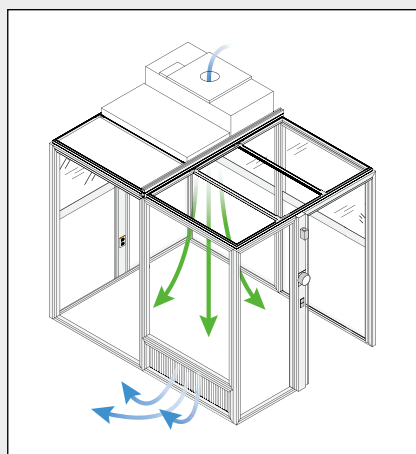
SINGLE PASS CONFIGURATION
A single pass room is a simple design in which air is pumped into the room from the top and blown out the vents at the bottom.

RECIRCULATING CONFIGURATION
A recirculating design uses a plenum system or air chase system (or both) to recirculate the air that passes out of the vents at the bottom of the room back into the room.

GRILLES, AIR CHASES & PLENUMS

SCREEN MESH
Vinyl coated, non-particulating screen mesh is an option on vinyl inserts only.

ABS ADJUSTABLE SLIDING GRILLE
Can be adjusted to accommodate air flow requirements.

OPEN AIR SPACE
Framed open air space available with vinyl flap to seal opening where room is not pressurized.

LOUVERED GRILLE
Louvered grille available with pre-filter.

AIR CHASE
Also known as a double wall system. Custom built on the interior or exterior of the cleanroom and include ABS adjustable sliding grilles

CEILING PLENUM
Also known as a double ceiling system. Custom built atop the cleanroom ceiling grid to contain and redirect air movement.

ACCESSORIES & ATTACHMENTS

SUPPORT POSTS

ELECTRICAL POST
Electrical conduit built from 3" x 4" clear anodized aluminum. Electrical junction box affixes to the top of the post and electrical wiring is routed through the frame.

PLUMBING POST
Plumbing conduit built from 3" x 4" clear anodized aluminum. Includes a 1/8" x 4" faceplate on the exterior of the post for easy access to plumbing pipes or valves.

ELECTRICAL

SWITCHES
Simplex offers standard Decora® single or double switches. Switches are installed in Simplex's standard frames and can be configured to operate the lights and/or HEPA filters.

OUTLETS
Flush mount, UL-listed 20 AMP / 120V electrical outlets are pre-wired in conduit that is concealed inside Simplex's standard wall panel framework.

MONITORING SYSTEMS

DUAL MAGNEHELIC® PRESSURE GAUGE
Use for monitoring the positive or negative pressure differential between cleanroom spaces.

ACCESS OPENINGS

PASS-THROUGH
2' x 2' Acrylic pass-through available with or without case opening in any Simplex wall panel.

ACCESS PANEL
A case opening in any Simplex wall panel that includes a hatch or dual-sliding door.

GLOVE PORTS
10" ports made of ABS plastic available to accommodate a variety of glove and sleeve options.

IRIS PORT
8.75" diameter, features 7-layer silicone rubber with ABS plastic adapter ring. Attaches to standard glove ports.

TALK-THROUGH
Allows workers on both sides of a cleanroom wall to communicate freely. Plastic frame with polycarbonate / mylar diaphragms.

FLOOR & WALL ATTACHMENTS

WALL FLUSH MOUNT FASTENER
Installs on walls, holding panels in place.

FLOOR CLEATS
Available to secure the enclosure to the floor.
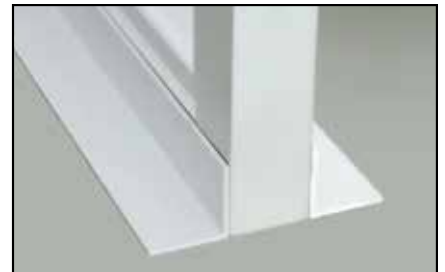
ANGLE FASTENERS
Can be installed on wall, floor or ceiling attachment.

FLOOR CASTERS
Available for enclosure portability.

LEG LEVELERS
Available for enclosure stability on uneven floors.

CLEANING & MAINTENANCE

STANDARD PVC AND POLYSIM™ STRIPS AND SOFTWALL CURTAINS

Periodically clean using one of the following cleaning compounds:

>> Mild dish soap and water solution

>> Any biodegradable cleaner

Instructions: Wash the front and back of the strips and or curtains and rinse with clear water then wipe dry with a clean, lint-free soft cloth.

POLYCARBONATE, ACRYLIC OR POLYPROPYLENE SHEETS

Periodically clean using one of the following cleaning compounds:

>> 20% isopropyl alcohol to 80% Di water mix

>> 20% white vinegar to 80% Di water mix

>> Window cleaner with vinegar (no ammonia)

Instructions: Wash the front and back of the sheets using a soft non-abrasive lint-free cloth.

ANTI-STATIC VINYLS

Anti-static vinyls have additive materials that continuously provide a naturally occurring hydro-scopic surface which is essential for the continuation of the anti-static process. Over time and with exposure to the environment the surface will develop a viscous feel. To remove the viscous coating, periodically clean using the following cleaning compounds:

>> 50/50 solution of isopropyl alcohol and water

Instructions: Wash the front and back of the strips and or curtains using a soft non-abrasive lint-free cloth.

ALUMINUM FRAMING AND BARS

Periodically clean using any of the above methods or using one of the following cleaning compounds:

>> 20% Simple Green® to 80% water mix

>> Any biodegradable cleaner

(Note: Simple Green® may leave a white film on clear PVC polycarbonate and acrylic, this can be cleaned with a 20% isopropyl alcohol to 80% Di water mix or with a 20% white vinegar to 80% Di water mix).

Instructions: Wash the front and back of the strips and or curtains using a soft non-abrasive lint-free cloth.

Note: Excessive cleaning using harsh or abrasive cleaning compounds such as ammonia, 100% isopropyl alcohol, liquids with chlorinates, anti-fungals, highly active sterile cleaning solutions and dry powder additives are not recommended and will accelerate the aging process.

WARRANTY

Simplex Isolation Systems warrants their products to be free of manufacturing defects and against product failure of any kind for a period of one year from date of shipment. This includes premature yellowing or curling of strips (excluding those components that do not have UV protection – see sales rep for details).

This warranty is limited to the repair or replacement of vinyl strips, vinyl panels or softwall materials and/or attaching hardware, and does not include damage resulting from accident or malicious use.

This warranty further applies only when the recommended material thickness and width are used for the originally specified application. Further, it applies only to Simplex doors, softwalls and frame systems which are properly installed in accordance with Simplex installation instructions.

CUSTOM DESIGN GUIDE

The Simplex technical team will work closely with you to understand any classification, layout and compliance needs, and then will submit a comprehensive proposal with project details and application engineering drawings. Drawings are developed with a focus on efficiency, compliance and scalability.

When requesting a custom cleanroom design, use the below questionnaire as a guideline. Note: Simplex may require a layout sketch in order to provide a proposal.

ROOM LAYOUT
- ☐ Size
- ☐ Ante-Room Required
- ☐ Enclosure Height
- ☐ Ceiling Required
- ☐ Existing Ceiling Height

CLASSIFICATION
- ☐ ISO Classification: _____
- ☐ Number of 2' x 4' Fan Filters
- ☐ Number of 2' x 4' Light Units

CEILING COMPONENTS
- ☐ Lighting Units
- ☐ HEPA Fan Filter Unit
- ☐ Electrical Wiring Package

TYPE OF ROOM
- ☐ Single Pass
- ☐ Recirculating:
    - ☐ Plenum
    - ☐ Plenum & Air Chases
    - ☐ Air Returns
        (with Ducted HEPA Fan Filters by HVAC Contractor)

FRAMING
- ☐ Clear Anodized
- ☐ Epoxy Powder Coated

AIR VENTING
- ☐ Standard ABS Sliding Grilles
- ☐ Louvered Grille
- ☐ Screen Mesh Grille
- ☐ Open Air Space
- ☐ Duct Collar

ACCESS OPENINGS
- ☐ Pass-Through
- ☐ Talk-Through
- ☐ Sliding / Swinging Access Panel
- ☐ Iris Ports
- ☐ Glove Ports
- ☐ Conveyor Openings

SUPPORT POSTS
- ☐ Electrical Post
- ☐ Plumbing Post

STRUCTURAL CALCULATIONS
- ☐ Seismic Structure
- ☐ Seismic Calculations

FLOOR & WALL ATTACHMENTS
- ☐ Perimeter Floor Angle *(In Lieu of Floor Cleats)*
- ☐ Floor Casters *(SIS-212 Only)*
- ☐ Leg Levelers *(SIS-212 Only)*
- ☐ 4" Base for Cove Flooring

DOORS
- ☐ AirBlock™ Swing Door *(Single / Double)*
- ☐ Pro-Glide™ Sliding Door *(Single / Double)*
- ☐ AirBlock™ ABS Core Swing Door
- ☐ AirBlock™ Strip Door *(6", 8", 12" Strips*

INSERT MATERIAL
- ☐ Softwall *(AirLock / SIS 212 Only)*:
    - ☐ PolySim™ *(Clear, Black, White)*
    - ☐ Standard Vinyl *(Clear, Frosted)*
    - ☐ Anti-Static Vinyl *(Clear, Frosted)*
    - ☐ Opaque *(White, Black)*
    - ☐ Tint *(Blue, Red, Amber, Charcoal Smoke)*
    - ☐ Other

- ☐ Hardwall:
    - ☐ Polycarbonate *(Clear)*
    - ☐ Polypropylene *(White)*
    - ☐ 50/50 Split *(Clear / White)*
    - ☐ ABS *(White / Black)*
    - ☐ Acrylic *(Clear)*
    - ☐ Aluminum *(White)*
    - ☐ Glass *(Clear)*
    - ☐ Other

MONITORING SYSTEM
- ☐ Dual Magnehelic® Pressure Gauge

DON'T KNOW WHERE TO START? TALK WITH AN EXPERT!

As a leader in cleanroom technology, Simplex has the expertise required to design, engineer and construct your cleanroom to your application's specific requirements. Contact a Simplex Representative to get started: 800.854.7951.

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