



STARRCO

Revolutionizing Interior Construction

Superior Pre-engineered Cleanroom Systems



WHEN CLEAN IS CRITICAL

Precision Manufacturing Ensures a Sealed, Controlled Environment

Starrco modular cleanroom systems are manufactured to meet exacting cleanroom construction standards and offer an industry-leading fit and finish that prevents contaminant seepage through joints and gaps.

Starrco Pre-engineered Cleanroom Systems

Superior Fit and Finish Ensures an Air-tight Environment



Starrco pre-engineered cleanroom systems are custom designed and built with precise tolerances to meet your specific needs and classification requirements.

We manufacture our interfacing walls, floors, and ceilings with smooth edges, accurate cuts, and precisely mitered joints. This precision engineering ensures a tight, air-leak proof construction and assembly that facilitates air particle filtration, and the control of air flow, pressure, temperature and humidity.

Starrco cleanroom interior surfaces and air plenums are made from non-particulate shedding materials such as vinyl, fiberglass, and pre-finished aluminum.

All Starrco cleanroom systems are manufactured in St. Louis, Missouri, by master craftspeople and experienced technicians.

Starrco Offers:

- ISO Class 5 to ISO Class 8, USP compliant cleanrooms.
- Cleanroom construction consulting.
- Custom designs along with all necessary construction and installation drawings.
- Starrco modular cleanrooms can be dismantled, moved and reassembled. They can even be reconfigured to accommodate changing needs.
- Starrco's modular cleanrooms are manufactured and installed 75 percent faster than conventional construction.
- Clean installation. Your cleanroom is delivered finished and ready to assemble. All the cutting, sanding and mess happens at our St. Louis facility, not at your site.

We GUARANTEE Starrco modular cleanroom systems meet or exceed classification requirements.

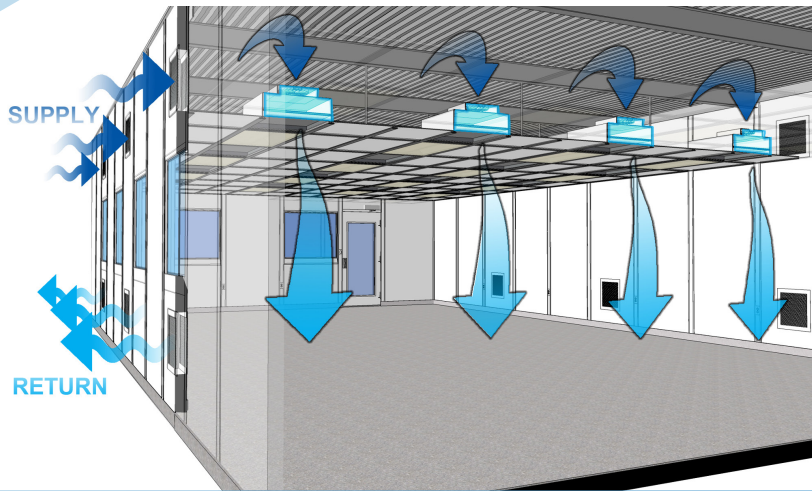
Custom Built to Meet Your Specifications

Your Starrco representative will conduct a full needs assessment to determine your building's size, features, facilities, and desired cleanroom classification. Starrco cleanroom systems are available in almost any size and configuration, and can be constructed with or without a load-bearing deck. They are designed to be installed inside existing buildings and facilities.

Starrco's industry-leading fit and finish is durable, air-tight, non-shedding, and guaranteed to meet or exceed your cleanroom classification needs.

Starrco features you can choose from:

- Cleanroom suspended ceiling grid systems.
- Factory framed openings for air devices, pass through cabinets and product conveying.
- A variety of windows including fixed windows with quarter inch tempered safety glass and aluminum frames.
- Multiple door options including swing and automatic doors.
- Power and data outlets where you need them via the raceways built into every aluminum stud.
- Connections to plumbing and other services.



Once-through System

Do You Need a Once-through System?

A once-through or single pass cleanroom draws air from the adjacent conditioned space through fan powered HEPA filter units mounted in the cleanroom ceiling grid system.

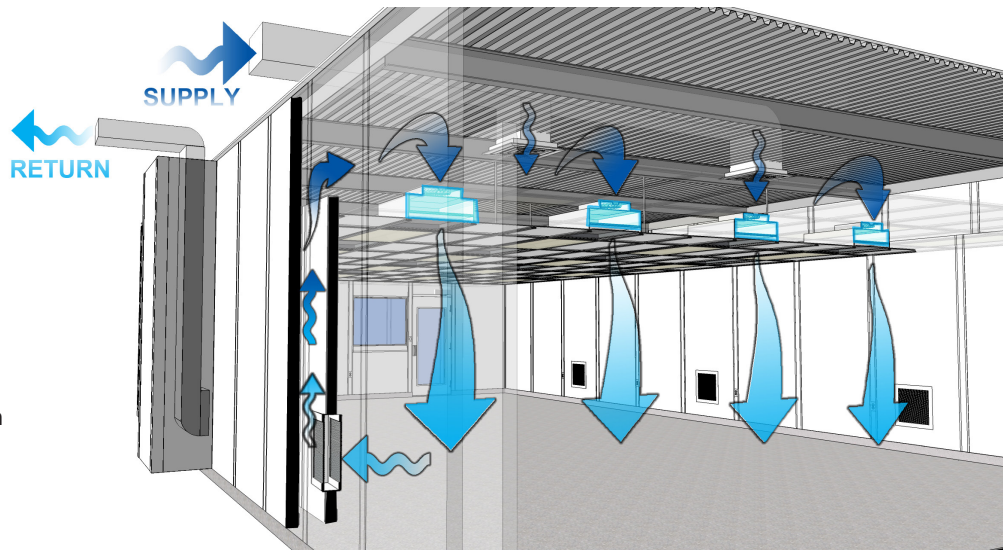
Air is returned back to the adjacent space through low-to-wall mounted grilles.

Do You Need a Recirculating System?

Conditioned air is introduced to the sealed plenum for recirculation by fan powered HEPA filter units mounted in the cleanroom ceiling grid system.

Clean air is returned to the sealed plenum through low-to-wall grilles mounted in return air chase walls.

Warm air is returned to the air handling system through conventional ductwork.



Recirculating System

Cleanroom Classifications Explained

Cleanrooms are classified by the number and size of particles found in a cubic meter of air. They are classified under ISO 14644-5:2004 and Federal Standard 209E. For example, a cubic meter of urban air has around 35,200,000 particles that are 0.5 microns or larger. By comparison, an ISO 5 cleanroom allows only 3,520 particles of that size in the same volume of air.

CLASS NAME		MAXIMUM PARTICLE SIZES					
ISO	FED STD 209E	0.1 micron	0.2 microns	0.3 microns	0.5 microns	1 micron	5 microns
ISO 1	-	10	2	1	0.35	0.083	0.0029
ISO 2	-	100	24	10	3.5	0.83	0.029
ISO 3	1	1,000	237	102	35	8.3	0.29
ISO 4	10	10,000	2370	1,020	352	83	2.9
ISO 5	100	100,000	23,700	10,200	3,520	832	29
ISO 6	1,000	1,000,000	237,000	102,000	35,200	8,320	293
ISO 7	10,000	10,000,000	23,700,000	10,200,000	352,000	83,200	2,930
ISO 8	100,000	100,000,000	237,000,000	102,000,000	3,520,000	832,000	29,300
ISO 9	-	1,000,000,000	2,370,000,000	1,020,000,000	35,200,000	8,320,000	293,000

Modular Cleanroom Applications

- Clean manufacturing
- CMM rooms
- Composite lay-up and bonding
- Controlled environments
- Laboratories
- Life science industry
- Medical device production and packaging
- Nanotechnology pharmaceutical industry
- Optic assembly and packaging
- Semiconductor wafer fabrication production
- USP compliant sterile compounding pharmacies
- USP compliant non-sterile compounding pharmacies

About Starrco

Everything we do is designed with uptime in mind, from the initial quote to the final installation. We make sure all the pieces come together with precision and personable customer service. Established in 1965, we have a legacy of product excellence and loyalty to our customers and distributors.

In addition to our pre-engineered cleanrooms, we manufacture modular office solutions; Starrguard safety guard rail systems; Starrmax tall wall systems; and pre-assembled portable buildings.



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