the PROBLEMS
AIRBORNE PARTICLES CAUSE INFECTION! While this may seem obvious, the HVAC ventilation standards don’t measure efficacy of a system’s ability to remove particles. If dangerous particles are causing infection, then let’s focus our attention on the reduction of particles that reach the patient.

OPERATING ROOM TEMPERATURE IS CRITICAL. House systems don’t provide the precise control desired for staff & patient. The LIFESuite™ system provides rapid cooling and heating with precision control.

focusing on PATIENT OUTCOMES
The costs associated with Surgical Site & Post-Operative Infections are enormous. Not only are there billions of dollars spent annually for treatment of infected patients, there is human pain, suffering, and death. Our systems control airborne particulate with 4 basic principles: Distribution, Dilution, Diversion, Deflection. Each factor is CRITICAL for the overall protection of the patient & staff.

precision RESULTS
Particles matter. The LIFESuite™ system actively removes dangerous particles away from the patient and surgical team.

Contact Precision Air Products for professional design support
With the experience of thousands of Operating Room ceiling layouts, our engineers can assist with any design challenge and can recommend the best solution for your unique room. Before designing your next OR ventilation system, contact us at www.precisionairproducts.com for professional design support.
precision PARTICLE CONTROL
The LIFESuite™ system delivers ultraclean air to individual ORs by combining point-of-delivery HEPA filtration with increased dilution rates. Using dedicated plenum booster fans, supply air is mixed with pre-filtered, local return air before delivering laminar flow to the OR at 40-70 air changes per hour (ACH). With 99.99% HEPA filtration and precision laminar flow performance, potentially harmful particles are “washed” away from critical areas, then captured by system filters.

Each system is customized for ASHRAE Standard 170 compliance while accommodating the locations of light booms, med-gas columns, and other ceiling mounted apparatus. Applications for these systems include: Orthopedic, Cardiovascular, Organ Transplant, and other high-risk surgical procedures where harmful airborne particulates are especially dangerous.

precision TEMPERATURE CONTROL
The LIFESuite™ system has optional capabilities that allow the user to not only monitor and control room temperature for comfort, but to rapidly alter room temperature in support of the unique needs of a surgical procedure. Applications include open-heart, neurological, and other surgeries which carry a high risk of surgical site or post-operative infections and are conducted in an environment requiring fast, yet stable temperature changes.

The surgical suite is not only about the safety of the patient and the medical staff, it is also about the comfort of those performing delicate procedures. When you need FAST and accurate temperature control, the LIFESuite™ system delivers. Dedicated coils and corresponding temperature control valves are typically sized to cool the space 10° F in 10 minutes or heat the space 10° F in 5 minutes using existing building services*. This system heats & cools independently of the main air handling unit without placing challenging temperature control demands on air handlers serving multiple spaces.

* Heating & Cooling capabilities are dependent on room size.
**an integrated SOLUTION**

The complete LIFESuite™ system includes:

- Special laminar flow plenums with integral knife-edge
- Room-side accessible terminal HEPA filtration with gel-seal
- Re-circulating fans with variable frequency drives
- Fan cabinets
- MERV 8 pre-filters on local return
- A pre-welded, heavy duty ceiling framing matrix
- Fill-in panels for trimming ceiling penetrations
- An intuitive OR touch-screen user interface
- A UL control cabinet (mounted remotely)

**OPTIONAL:**

- Heating and cooling coils, coil cabinets, and drain pans
- Temperature sensors and control valves
- Temperature controls with automatic tuning algorithms

Each system includes no-fee engineering assistance, factory site support including installation supervision, start-up, check-out, and in-service training for facilities and surgical personnel.

**compliant designs—ASHRAE STANDARD 170**

ORs present unique challenges meeting the ASHRAE Standard 170 directive requiring a non-aspirating, unidirectional diffuser array covering at least 70% of a critical zone equal to the footprint of the operating table plus a 12” perimeter around the table.

The following illustration shows a Precision Air Products ultraclean system installed at a facility in Southern California. The design exceeded the ASHRAE 170 directive.

Please visit our website at www.precisionairproducts.com for additional information, sample drawings, schematics, and guide specifications for the LIFESuite™ systems.
Meeting ASHRAE Standard 170 directives with booms, med-gas columns, equipment rails, and other ceiling mounted apparatus complicate OR ceiling ventilation system design. That’s where we can lend a hand. With thousands of systems installed worldwide over the past 40 years, Precision Air Products has the experience and the expertise to help. No matter how complicated the ceiling!

Our engineering team can assist you in developing an economical solution that works within given space limitations while meeting ASHRAE Standard 170 directives. Contact us to learn how we can help with the heavy lifting.

- Concept drawings
- Reflected ceiling plan recommendations
- Schematics
- Mechanical calculations
- Component sizing
- Regulatory compliance review
- Guide specifications
- Custom applications
- Project management
- Installation supervision, certification, in-service training

**Point-of-delivery HEPA UNITS**

Precision Air Products’ systems include room-side accessible terminal HEPA filter assemblies with integral gel-seals rated at 99.99% effective against 0.3 µm particles. Our proven design produces unidirectional, non-aspirating flow profiles with unprecedented laminar airflow performance.

Robust construction minimizes the potential for flow bypassing the filter.

You get the flexibility of standard or custom diffuser sizes and design points to fit almost any healthcare application, economically.

**A family of INTEGRATED SYSTEMS**

Precision Air Products manufacturers a comprehensive family of integrated ceiling ventilation systems for critical environments. For more information about our Lami-Air™, Lami-Air™ EQ, and Lami-Air™ IP, please contact us at sales@precisionairproducts.com.

**LIFESuite™ Surgical Cleanroom**

Robust construction minimizes the potential for flow bypassing the filter.

You get the flexibility of standard or custom diffuser sizes and design points to fit almost any healthcare application, economically.

**Precision Air Products Co.**

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