



HEALTHCARE LABORATORIES CLEANROOMS

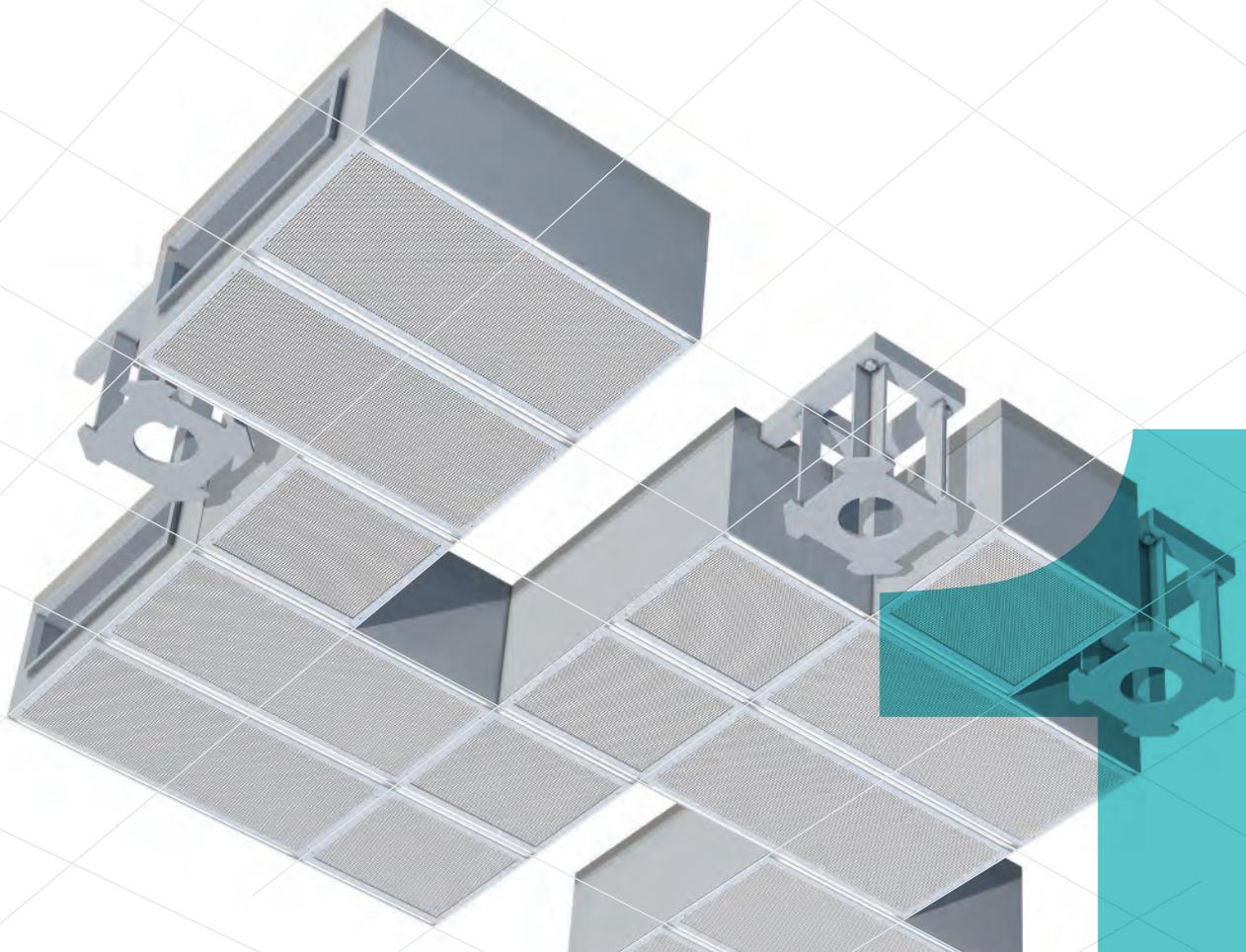
Greenheck Operating Room Clean Air Systems are designed, engineered, and tested to meet or exceed today's critical environment standards for performance and energy efficiency.

Indoor air safety is a critical component to overall patient health and the success of the processes and procedures within these spaces. The application of appropriate air distribution strategies has a direct impact on performance, energy efficiency, and facility maintenance. With seventy-five years of engineering and manufacturing excellence, Greenheck operating room clean air systems represent highly-effective, flexible solutions in meeting ever evolving standards, technology advancement, and patient care methodology.

Our products are certified to meet the requirements of the FGI Guidelines, ASHRAE Standard 170 and IES RP-29-16. With Greenheck engineering support from design and layout through on-site installation, you can be assured that the energy efficiency and performance demands of your projects are met.

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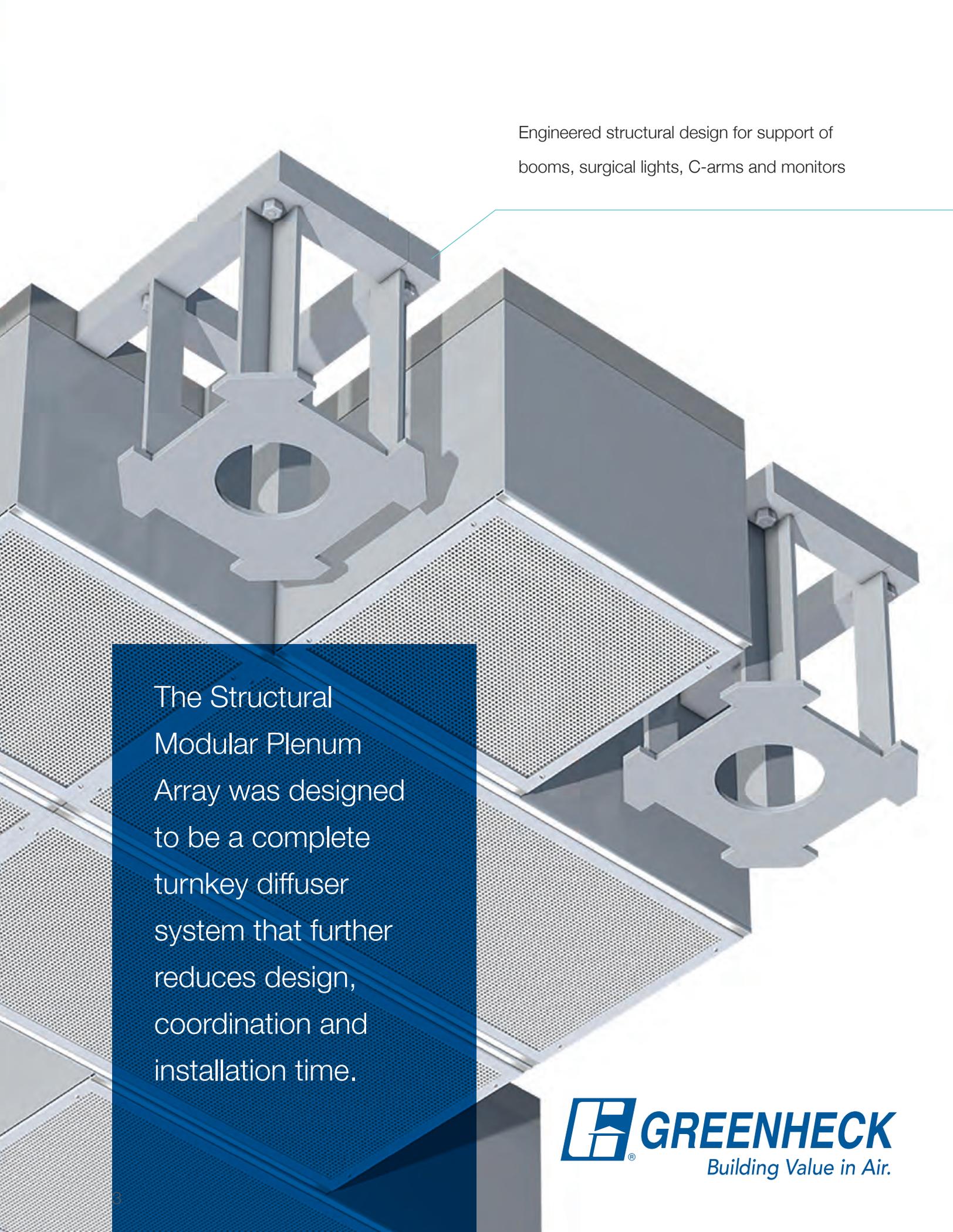




Structural Modular Plenum Array HLC-SPA

A complete, pre-engineered, fully customizable ceiling system

- + Engineered structural design for support of booms, surgical lights, C-arms and monitors
- + Certified structural drawings and on-site installation supervision
- + Factory coordination of electrical, mechanical and plumbing trades for ceiling system design
- + Available with integrated surgical grade LED lighting
- + All units include retainers for HEPA or ULPA filtration



Engineered structural design for support of
booms, surgical lights, C-arms and monitors

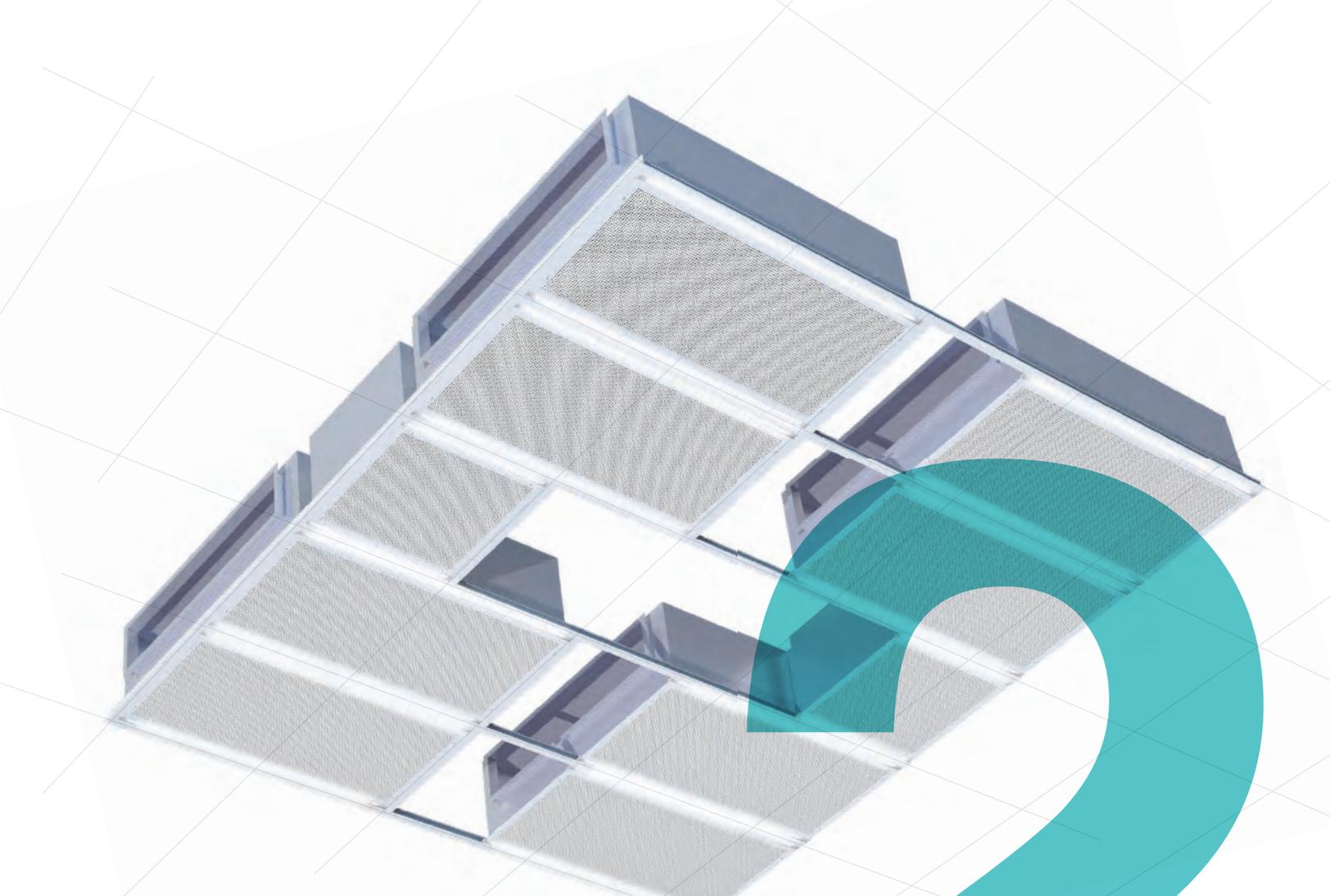
The Structural
Modular Plenum
Array was designed
to be a complete
turnkey diffuser
system that further
reduces design,
coordination and
installation time.

High-grade structural steel tubing creates a frame that attaches to the structure and supports all the diffuser modules as well as including boom mounts to support suspended equipment.



Everything from design including structural engineering calculations and drawings to final construction, on-site installation supervision and all coordination with the necessary trades (electrical, fire protection, medical gas and others) are provided.





Modular Plenum Array HLC-MPA

A modular, customizable option that works with your equipment

- + Blank-off panels for booms and equipment to pass through
- + Ceiling level unistrut for equipment mounting
- + Standard and customizable module sizes
- + Available with integrated surgical grade LED lighting
- + All units include retainers for HEPA or ULPA filtration

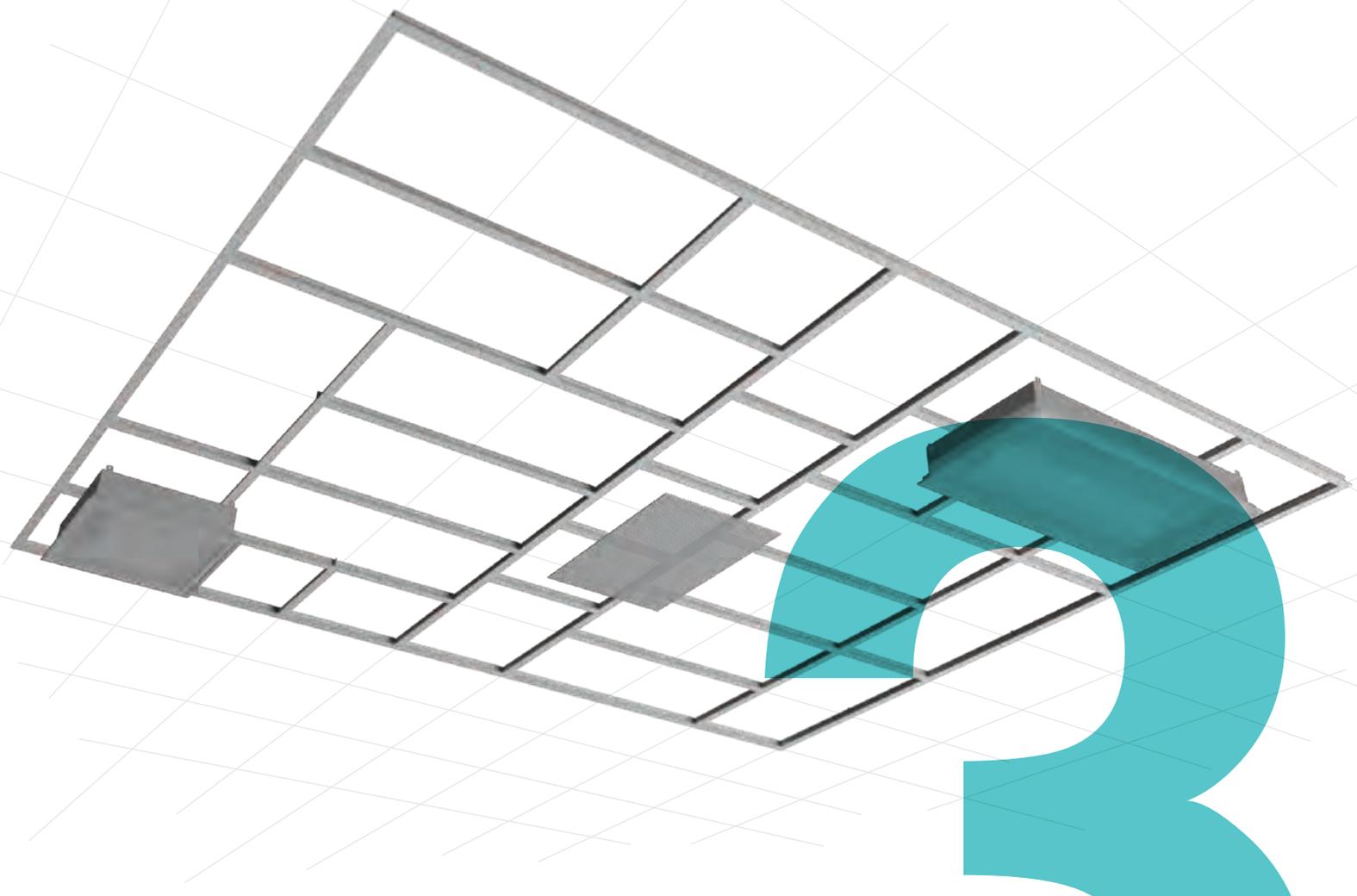


Blank-off panels for booms and equipment to pass through

The Greenheck Modular Plenum Array builds upon the Heavy-Duty Ceiling System combining the grid system and diffusers into modular segments that are assembled on-site to create a single low-profile plenum. This allows for engineers to make the most of the available ceiling space by eliminating the need to individually duct each diffuser.

Available in an array of sizes, these diffusers can be linked together in virtually any combination to sufficiently cover the needed surgical area, producing one large combined laminar mass that flows over and blankets the operating table, helping to protect and effectively isolate the patient from contaminated air.



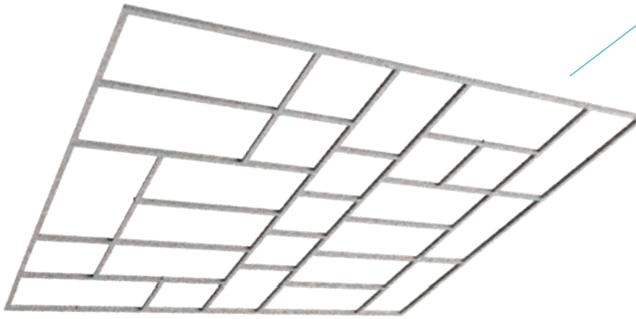


Heavy-Duty Suspended Ceiling HLC-HCG

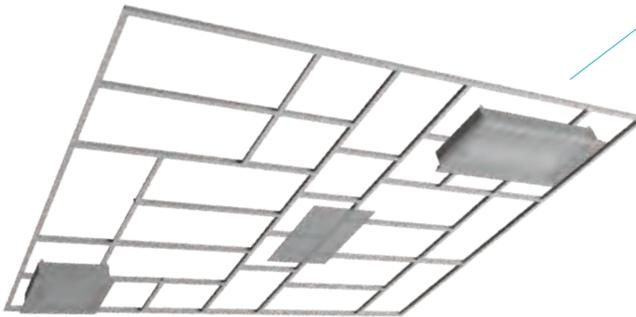
Modular components for air and lighting

- + 304 stainless steel construction with aluminum face option
- + Welded sections sized up to 60 x 72
- + Support clamps lock sections together
- + Compression clips for diffusers and blank-off panels
- + Closed-cell gasket tape for field installation

Welded grid sections bolt together on-site
expediting installation



Eases installation of laminar flow diffusers,
light fixtures and blank panels



As ceiling space over the surgical table in operating rooms becomes ever more congested, our ceiling system provides a customizable suspended grid system that can accommodate diffusers, blank panels, access panels, and lighting fixtures.

It's an air distribution system that's specially designed and engineered for hospital surgical suites, laboratories and cleanrooms where ceiling access is needed. The grid system eases installation of devices such as laminar flow diffusers and light fixtures, compared to a hard ceiling surface.





Laminar Flow Diffusers HLC-GSL

Non-aspirating diffusers maintain an aseptic environment

- + Filtered diffusers meet leakage requirements per IEST RP-CC-034
- + HEPA or optional ULPA filters
- + Available with integrated surgical grade LED lighting
- + Optional antimicrobial finish

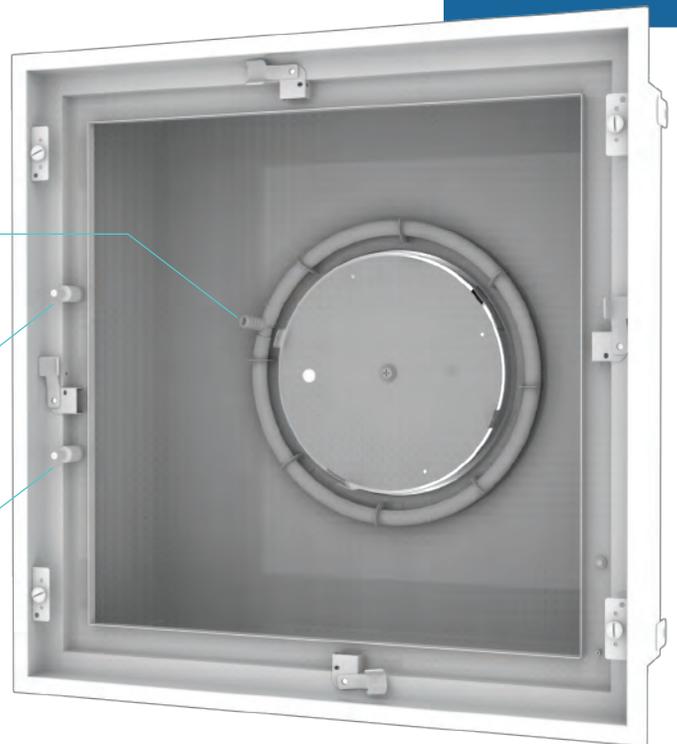
Greenheck non-aspirating diffusers have been engineered to provide a vertical projection of low velocity supply air. The laminar flow diffuser introduces clean supply air without the entrainment of contaminated air in the space due to its low velocity. These diffusers play a critical role in maintaining an aseptic environment in operating rooms, patient isolation rooms, pharmacies and cleanrooms.

Diffusers can be ordered with or without a gel seal HEPA or ULPA filter, which can easily be replaced from the face of the unit. These diffusers are also available with optional integrated tunable and dimmable energy-efficient LED lighting. White lighting is standard, but as an option, green lights can be included on the same board. This requires half the number of drivers, less wiring, and less time and effort during installation. This integrated lighting provides uniform lighting over the surgical table providing superior illumination than traditional surgical luminaires installed around the perimeter of the sterile field.



Aerosol Challenge Manifold

1/2-inch barbed fittings for aerosol injection and measurement



1 HLC-SPA 2 HLC-MPA 3 HLC-HCG + HLC-GSL

	1	2	3
Structural support for equipment	✓		
Certified structural drawings	✓		
Blank-off panels for equipment	✓	✓	✓
Modular design	✓	✓	
Fully customizable	✓	✓	
On-site support during installation	✓		
Stainless steel construction	✓	✓	✓
HEPA or optional ULPA filters	✓	✓	✓
Optional LED lighting	✓	✓	✓
Optional antimicrobial finish	✓	✓	✓

All Greenheck Operating Room Clean Air Systems are available with optional surgical grade LED lighting:

- ⊕ 88 Lumens per watt; 8,800 lumens per 48X24 module
- ⊕ Tunable White: 2700-6500K, Tunable Green: Green-6500K
- ⊕ Remote LED driver enclosure, surface or recessed mounted
- ⊕ 90+ CRI

