



Modular Solutions

# Plascore Pharma™

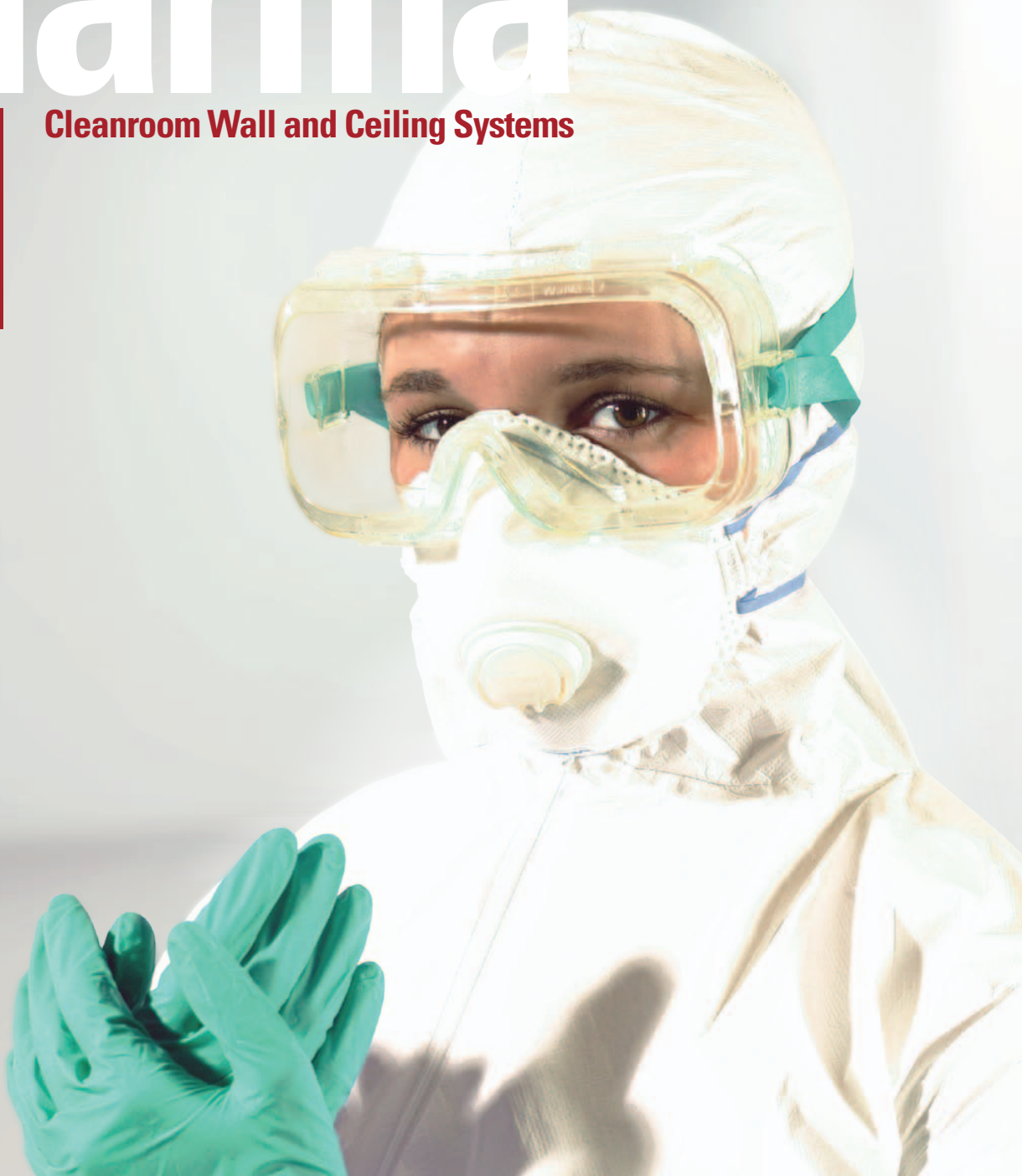
**Cleanroom Wall and Ceiling Systems**

Pharmaceutical

Biotechnology

Medical Research

Life Sciences



PLASCORE®

# Plascore Pharma™ Cleanroom System

Superior Quality, Unmatched Flexibility



The Plascore Pharma™ series of cleanroom wall and ceiling systems is designed for the most stringent medical research and aseptic process applications. Plascore Pharma is the modular cleanroom of choice in biomed, life science, biotech, medical device, nutraceutical and pharmaceutical processing.

Plascore Pharma modular wall and ceiling systems offer significant financial and performance advantages over traditional clean facility solutions.

## A Complete System

One of the greatest advantages of the Plascore Pharma design is its floating flush ceiling with 5' x 10' (1.5m x 3m) ceiling panels and 5' x 10' (1.5m x 3m) hanger spacing, allowing the installation of 4' (1.2m) fixtures, oriented in either L or W direction, without changing the ceiling panel orientation. Three modular wall types — studless walls, hollow utility walls and liner panels — provide the same flexibility, fine-line seams and finishes as the ceiling system. Several types of flush doors and windows, as well as access openings, can be integrated. Plascore Pharma arrives at a prepared job site with all components clean packaged and ready for fast installation.

## Progressive or Nonprogressive Systems

Plascore Pharma is available in progressive or nonprogressive panel systems, each offering advantages. Nonprogressive panels allow for easy removal and replacement after installation through the use of rotating splines. These panels have 3/16" (4.75mm) silicone caulk seams that facilitate the disengagement of the spline between panels. Progressive panels have tight, chemically cold-welded uPVC seams for an exceptionally smooth surface across the panel system.

## Features Summary:

- Versatile system configurations
- Built to drawing layout; minimal alterations required
- Flush ceiling system with wide hanger spacing
- Studless, utility and liner wall options
- Aluminum honeycomb panel core for greater stiffness and fire resistance
- Progressive or nonprogressive panel joints
- Multiple door and hardware options
- Anti-microbial uPVC surfaces, coves and chemically cold-welded seams
- Stainless steel surface options for panels and doors
- Virtually flush seams for more effective sanitation wash-down and fumigation
- Backed by world-class service

# Walkable Ceiling System



Walkable ceilings allow easy access to mechanical systems without disrupting the cleanroom envelope.

The Plascore Pharma ceiling system is a platform of adjoining 5' x 10' (1.5m x 3m) panels, suspended by turnbuckle/hanger assemblies bolted to the corners of four adjoining panels. Cutouts for light fixtures and filters can be placed anywhere, oriented in the L or W direction, without having to change the ceiling panel orientation. The ceiling is capable of supporting a wide variety of mechanical systems, accommodating lighting, sprinklers, HEPA filters, utilities and small equipment. Interior wall panels are attached to the bottom surface of the ceiling panels. Since the bottom surface is flush, free from protrusions, wall/ceiling covings can be run at any location without concern about grid layouts.

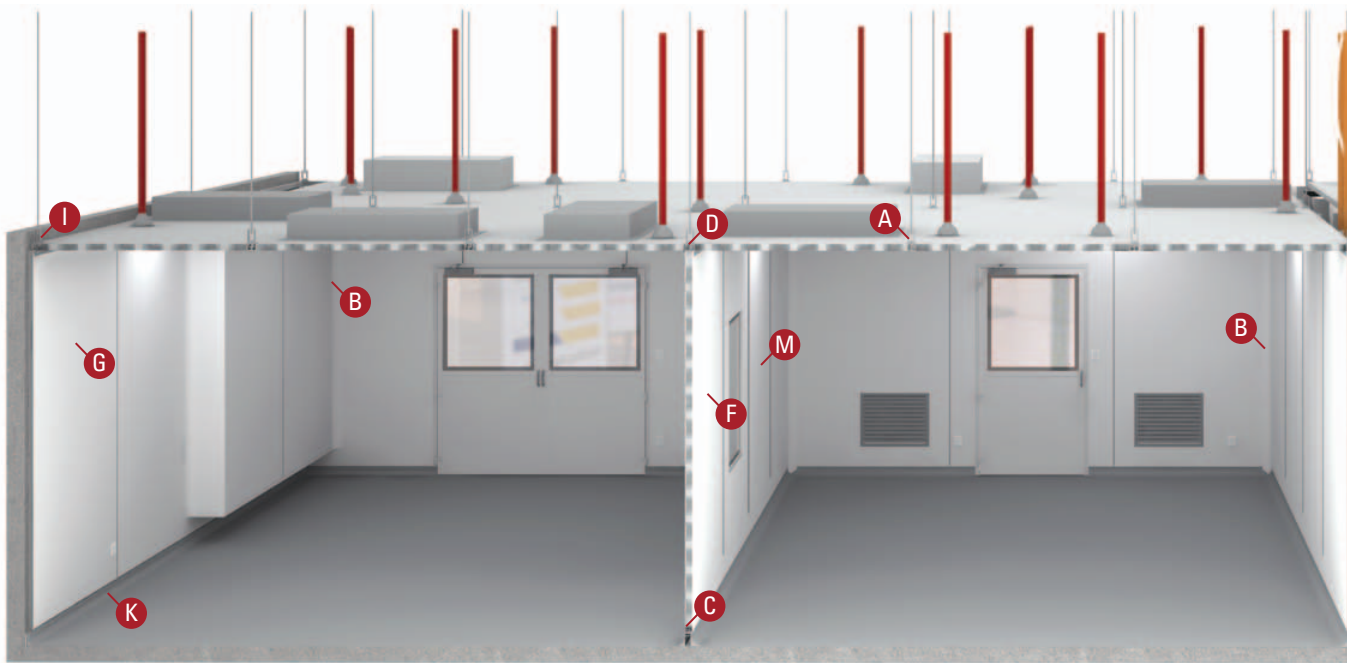
- No T-grid to support ceiling panels required
- 5' (1.5m) wide panel width allows both length and width orientation of light and filter housings
- 20% reduction in the number of seams
- Large hanger spacing provides generous space for ducting and maintenance access
- Additional hangers in heavily loaded areas or areas with excessive equipment penetrations can be added in the field
- Ceiling expansion in any direction is readily accommodated
- Fully walkable by maintenance personnel; entire top surface is free of trip hazards
- Pharma ceiling systems are offered in both progressive and nonprogressive panel configurations

Like Plascore Pharma wall panels, ceiling panels consist of rolled-edge top and bottom steel or aluminum skins bonded to an aluminum honeycomb core for a total thickness of 2" (51mm). An aluminum perimeter frame is bonded between the skins to provide additional support, as well as a mounting area for additional hangers. Progressive ceiling panel edges are tightly engaged to adjoining panels with a fixed metal spline, while nonprogressive ceiling panels utilize a rotary spline, which can be disengaged, allowing panel removal at a later time.

Openings for equipment (lights, filters, etc.) can be located anywhere within the ceiling layout. Cutouts can be cut in the factory, or field cut by the installer. Prefabricated, powder coated metal inserts are available to support HEPA filters and lighting fixtures in the prepared cutouts.



# Liner, Studless and Utility Wall Systems



Plascore Pharma wall systems are offered in three designs to address typical site and functional requirements:

## Liner Wall System

Liner wall panels are 0.5" (13mm) thick and are attached to existing facility walls to give them the same finish and appearance as adjoining new construction.

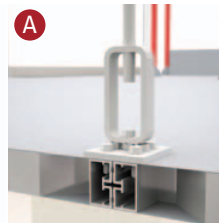
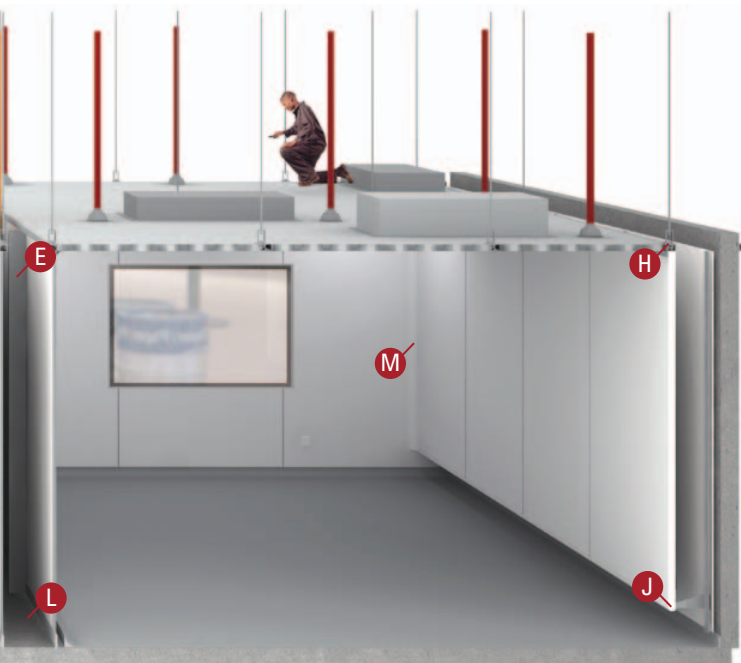
Plascore Pharma liner wall panels have rolled-edge top and bottom steel or aluminum skins bonded to an aluminum honeycomb core for a total thickness of 0.5" (13mm). Panels snap into clips mounted on existing gypsum or block walls and are nonprogressive. Panel dimensions are limited to 4' (1.2m) in width and 12' (3.65m) in length. Wall heights can be as high as desired by stacking multiple panels.

## Studless Wall System

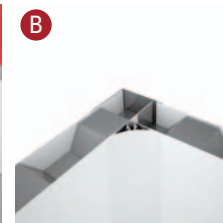
Studless walls are 2" (51mm) thick and typically serve as perimeter, interior and air return walls with requirements for utility raceways and conduits. Studless wall panels are typically installed below the ceiling system.

Plascore Pharma studless wall panels consist of rolled-edge top and bottom steel or aluminum skins bonded to an aluminum honeycomb core for a total thickness of 2" (51mm). An aluminum perimeter frame is bonded between the skins to provide additional support, as well as space for small vertical utility runs such as light switches and electrical outlets. Progressive studless wall panel edges are tightly engaged to adjoining panels with a fixed plastic spline, while nonprogressive studless wall panels utilize a rotary spline, which can be disengaged, allowing panel removal at a later time.

Studless wall panels are typically interior non load-bearing partitions, 4' (1.2m) wide and are installed between the floor and ceiling. Although studless wall panels are available up to 12' (3.65m) in length, they can be stacked to achieve wall heights of up to 20' (6.1m) with intermediate support from adjoining walls or ceilings.



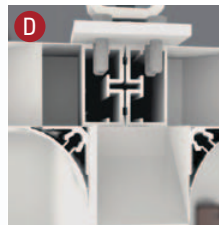
Ceiling Hanger Assembly



Coved Corner



Adjustable Floortrack



Wall/Ceiling/Cove Connection



Framed Wall



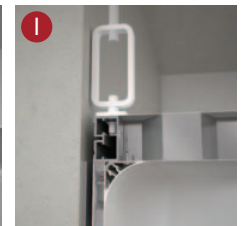
Panel Raceway



Liner Wall



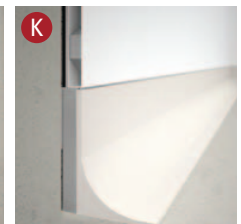
Ceiling Perimeter (Studless)



Ceiling Perimeter (Liner)



Raised Air Return Wall



Floor at Liner



Floor at Framed Wall



Wall Start/T-Intersection

## Utility Wall System

Utility walls are between 4" and 6" (102mm and 152mm) thick, with a 2.5" to 4.5" (63.5mm to 114mm) hollow cavity for vertical and horizontal utility runs.

This superior load bearing system is ideal for taller rooms or walls with extensive utility provisions. Available in virtually any configuration, the modular framed design easily adapts to windows, pass thrus and doors. Plascore Pharma utility walls consist of internal vertical and horizontal structural framing to which panels are attached on either one or both sides. Utility walls in room interiors will be clad on both sides. Perimeter utility walls may only be clad on the room interior side. Panel orientation may be vertical or horizontal to match the intended utility access scheme. Panel dimensions are available up to 4' (1.2m) in width and 12' (12.5m) in length. Utility walls can be designed to be load-bearing with wall heights as high as desired, by adjusting the structural framing and stacking multiple panels.

Panels have rolled-edge top and bottom steel or aluminum skins bonded to an aluminum honeycomb core for a total thickness of .5" (12.5mm). Panels snap into clips mounted on the framing and are nonprogressive, which is necessary for ready access to utility connections.

# Connecting Floor, Wall and Ceiling



## Studless Wall Adjustable Floor Track

The adjustable studless wall floor track consists of a two-part aluminum extrusion assembly. The lower part is attached to the floor and accepts the upper part, which is raised and leveled to the desired height. The adjustment range is 3.5"-5.5" (89mm-140mm). The floor track width facilitates a floor cove installation flush with the wall panel, with either vinyl or trowelled floors.

## Studless Wall Head Track

The studless wall head track consists of a U-shaped track, which is attached to the underside of the ceiling panel system or customer's existing ceiling. Sliding the top panel edge up into the head track and dropping it down onto the floor track secures the panel in position.

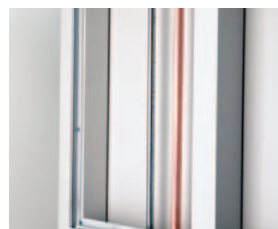
## Radius Coves

All wall systems are supplied with a 2" (50mm) radius coving for all ceiling/wall and wall/wall intersections, assuring a virtually seamless transition. Plascore offers an integrated injected molded inside and outside cove for seamless transitions. It's one more reason Plascore Pharma helps you meet cGMP standards for pharmaceutical and biomedical environments.

## Superior Panel Finishes: Anti-Microbial uPVC, Powder Coated Epoxy, Stainless Steel

Plascore Pharma wall and ceiling panels are available with standard snow white uPVC film, brushed or polished stainless steel or custom color epoxy powder coat. Our color analysis service and custom finishing capabilities assure accurate color matching and harmony across all surfaces for greater aesthetic appearance, as well as panel matching in future additions, replacements and expansion, maintaining the visual integrity of the wall system.

Plascore Pharma surfaces perform well against typical cleaning solutions and sanitizing washes. Our uPVC panel surface has excellent antimicrobial properties against gram negative and gram positive bacteria. Tightly abutting uPVC panel joints are chemically cold-welded with a uPVC paste, creating a contiguous uPVC finish on ceiling and wall surfaces. Alternately, stainless steel and powder coated panel joints are spaced 3/16" (4.76mm) and filled with a silicone caulk. Coved uPVC corners eliminate entrapment and are more effective in wash down, sanitation and fumigation.



Load bearing framed walls have ample room for utilities.



Non-progressive panels feature rotating splines for easy room modifications.

# Cleanroom Doors



## To Suit Your Needs

Plascore Pharma offers two lines of single and double cleanroom door types designed specifically for pharmaceutical environments.

### Aluminum Profile Doors

Crafted in custom aluminum extrusions with double perimeter seals and optional door bottom drop seal, this Plascore Pharma door design features a flush jamb and leaf assembly. Available with upper and optional lower flush glazing and finished with an epoxy powder coat for maximum durability and chemical resistance, this door style is the most economical solution for less stringent classification areas. Installation into any of Plascore Pharma wall systems, with at least one side of the door frame and door leaf being flush with the adjoining wall surfaces, is readily accomplished utilizing one of Plascore's proprietary fastening methods.

### Stainless Steel/Powder Coated Metal Doors

Door frames and leaves are clad in stainless sheet metal; for the most damage- and chemical-resistant performance. Door faces are laminated to a honeycomb core for structural stiffness, providing the most monolithic design without seams and ledges, flush with at least one surface of adjoining walls. Windows can be sized up to 50% of the door surface, flush with both leaf surfaces. This leaf design is well suited to allow air passage around its perimeter. This style is also available with a powder coated aluminum skin.

### Door Hardware

Plascore Pharma doors can be delivered with most standard mortised or surface mounted hardware to meet customer requirements. Surface mounted hardware is preferred for easy access, adjustment and cleaning. Cleanroom door hardware can be provided to meet your specific needs and functions:

- Stainless steel push/pull bars
- Mortised door locksets and strikes, with door handles or magnetic interlock
- Surface mounted door closers
- Surface mounted electric door operators
- Internal double door extension bolts

### Flush Double Glazed Cleanroom Windows

Plascore Pharma window units for doors and studless walls consist of two panes of 1/4" (6.4mm) tempered glass, bonded and sealed to an aluminum frame filled with desiccant to reduce moisture. Windows have the same thickness as the door/wall, providing a flush installation. Window units are replaceable in nonprogressive systems, can be adjusted with leveling bolts and are sealed with a silicone caulk. Windows for utility and liner walls are typically single pane on an aluminum frame, installed flush with a silicone caulk seam.



## Competencies

Plascore, Inc. is ISO-9001 registered, and employs Lean Manufacturing principles throughout design, manufacturing and administration, to reduce lead time while assuring optimum quality and on-time delivery. In addition to our proprietary honeycomb manufacturing process, our value-added capabilities include adhesive development, CNC machining, powder coating, welding, thermoset and thermoplastic laminating and assembly. This extensive capability allows us to maintain rigid quality standards on all cleanroom components, control project scheduling and deliver cleanroom systems in the manner best suited to the client's specific needs.

## Design Engineering/Installation Support

Plascore design engineers and sales service staff work closely with architects, engineers and contractors to ensure Plascore Pharma cleanrooms are installed to your complete satisfaction. Our expertise in cleanroom design and manufacturing, together with our commitment to customer support, is critical to successful installation throughout the world.



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