



HALCO PRODUCTS COMPANY

100 N. Gordon Street - Elk Grove Village, IL 60007-1193

Tel: 847-956-1600 - Fax: 847-956-0595

E-Mail: Info@Halco-Products.com

Website: www.Halco-Products.com

HALCO
PRODUCT
INFORMATION

100.6000

AIRLOCK CLEAN ROOM SERIES 300 AIR WALL SYSTEM

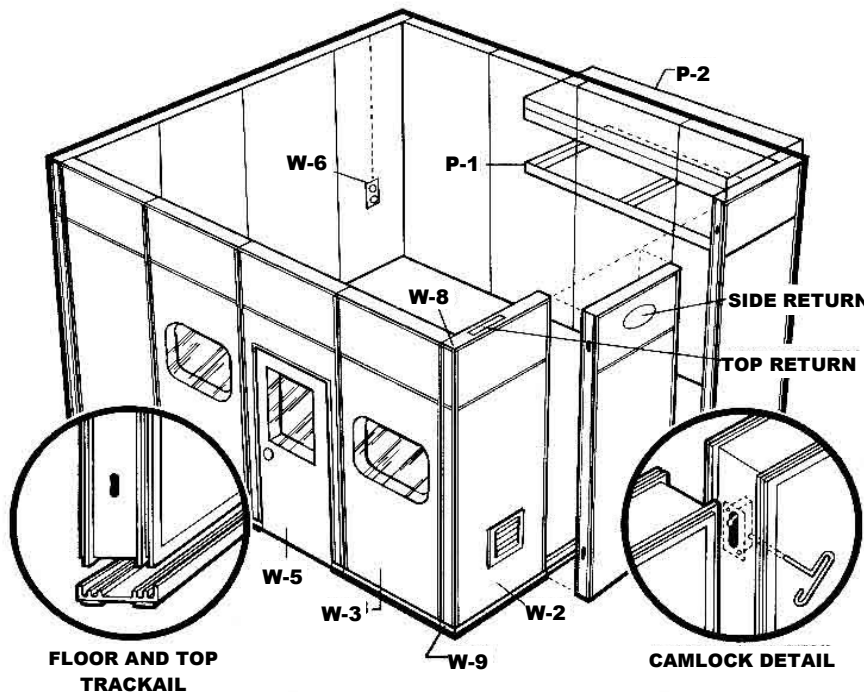
COMPARE THE AIRLOCK FEATURES AND BENEFITS

FACTORY Installed finished panels
FACTORY Installed double glaze
FACTORY Installed intake grilles
FACTORY Installed conduit & boxes
FACTORY Installed door frames
FACTORY Installed aluminum air chase

Self-trimming
Cam Lock Interlocking
Self-aligning expansion joints
Wall module interface sealing

WALL FINISHES

Wall finishes available are plastic laminate, standard FRP, finished aluminum and various other materials.



FLOOR AND TOP
TRACKAIL

CAMLOCK DETAIL

HALCO PRODUCTS COMPANY specializes in providing Clean or Sterile Modular Air Wall Systems. The AIRLOCK System has been designed to meet cleanliness levels of Class 100,000 to Class 100. We have engineered and designed this system to provide airtight interfacing while providing features unequalled in the construction industry. Features such as self-trimming module interface, self-aligning expansion joints and wall module interface sealing provides to the end user an air tight room or facility.

MODULAR DESIGN

The modular design of the AIRLOCK AIR WALL SYSTEM offers effective contamination control providing efficiency to the operation and installation of the room. Components such as doors, door frames, windows, air intake grilles, electrical conduit boxes are incorporated within the AIRLOCK wall module system at the factory.

SPECIALS

The AIRLOCK AIR WALL SYSTEM offers to the end user or contractor a complete range of engineered and designed wall module sections. Special wall modules can be fabricated to meet your precise needs to accommodate pass thrus, ovens, etc.

WINDOWS

The AIRLOCK air wall module design offers the finest in flush aerodynamic design and installation. The window wall modules are designed to handle air with the return air moving between two window sections. Window frames are anodized aluminum with .125 inch thick tempered glass. (Optional: Amber .125 inch thick UVA acrylic available).

FAST TRACK

The pre-fabricated wall module sections are delivered to construction site as complete components. The room or facility installation can be accomplished in a fraction of the time as compared to panel systems or conventional construction methods.

AIRLOCK CLEAN ROOM SERIES 300 AIR WALL SYSTEM

ITEM #	DESCRIPTION OF WALL SECTIONS	DIMENSIONS:	
W-1	Standard Wall Module. Laminated both sides.	Exterior Depth	4.75 Inches
W-2	Air Handling Module. Laminated both sides with 20" x 36" anodized aluminum intake grille.	Interior Plenum Depth	3.0 Inches
W-3	Window Module. Laminated both sides with 36" x 30" flush windows both sides.	Intake Grille Size	36.00 Inches by 20.00 inches available with pre-filter, damper or standard grille
W-4	Window/Air Handling Module. Laminated both sides and 36" x 30" flush windows both sides and anodized aluminum 20" x 36" intake filter grille.	Wall Module Width	Up to 48.00 Inches
W-5/1A*	36" x 80" anodized aluminum door module with closure, hinges, double lever latch and clear half-glass panel.	Wall Module Height	96.00 Inches thru 144.00 Inches
W-5/2A*	Two (2) 36" x 80" anodized aluminum doors with closures, hinges, double lever latch and clear half-glass panel.	MATERIALS:	
W-5/3A*	30" x 80" anodized aluminum doors with closures, hinges, double lever latch and clear half-glass panel.	Framing System	Extruded Anodized Aluminum
W-5/4A*	Two (2) 30" x 80" anodized aluminum doors with closures, hinges, double lever latch and clear half-glass panel.	Horz/Vert Track	Extruded Anodized Aluminum
W-6/1	Duplex electric outlet 115/60/1Ø box and conduit.	Intake Grilles	Anodized Aluminum
W-6/2	Duplex electric outlet 220/60/Ø box and conduit.	Window Size	36.00 Inches by 30.00 Inches
W-6/3	Electrical box and conduit/Emergency lights	Window Glass	Clear .125 Tempered (Amber .125 UVA Acrylic is optional)
W-6/4	Electrical box and conduit/Exit signs.	Door Frames	Anodized Aluminum
W-6/5	Electrical box and conduit/ Thermostat.	Doors	Anodized Aluminum
W-7	Switch, electrical box and conduit.	Panel Core	Mineral Fiber Substrate, meets Class A surface burning characteristics per ASTM E 84 Flame Spread 10 Smoke Developed 30
W-8	Corner Receiver Track.	Panel Finish	Selection Electives: Plastic Laminate Standard FRP Anodized Aluminum Painted Aluminum Stainless Steel
W-9	End Trim.	Weight	Avg. 4.25 lbs per sq. ft.

"F" in lieu of "A" designates & indicates fiberglass door.

AIRTIGHT INTERLOCKING

The AIRLOCK modules incorporate our unique designed framework forming the vertical air chases and providing features such as self-aligning expansion joints, sealing interconnection and self-trimming interfacing of each wall module section. The airtight interlocking eliminates the need for over design of the mechanical air system due to air losses.

MAXIMIZES AIR HANDLING EFFICIENCY

The interior of the AIRLOCK air wall modules are laminated with aluminum, eliminating in wall duct work and reducing air flow resistance through the wall plenum, maximizing room air handling efficiency.

LOW PARTICULATE GENERATION

In as much as all wall modules are fabricated at our factory, particulates associated with panel systems and conventional construction methods have been eliminated from the job site

AIRLOCK CLEAN ROOM SERIES 300 CEILING SELECTIONS

ITEM#	DESCRIPTION
P-1	Internal Ceiling Grid. Extruded, anodized aluminum, pre-gasketed with mounting hardware.
P-2	Upper Ceiling Plenum Deck. 3" foam, Standard FRP both sides.
P-3	Perforated Floor Module System with 2'x2' floor modules with leg supports and levelers.
P-4	Magnehelic mounted.
P-5	Communicator.
P-6	Medintech Flooring.
P-7	2'x4' Ceiling Pads, Micor, Standard FRP one side, aluminum one side, edges taped.
P-8	2'x4' Ceiling Pads, particle board. Melatex both sides, edges taped.
P-9	Pre-wired electrical panel box(es) to receive power cord connect from lights, duplex, switch and HEPA blower units.
AC-1	Heating and air conditioning unit. See specifications.
H-1*	Halco FT-24-3M-LO HEPA module (low profile) 99.97% eff. 800 CFM, 240 watt 115/60/10.
H-2	Upper Ceiling Plenum HEPA Blower Module with Lights
L-1	Halco CR-244 Sealed Troffer Light Fixture, 2'x4'.

*Note: Class #100 Use 100% Room Coverage
 Class #1,000 Use 50% Room Coverage
 Class #10,000 Use 25% Room Coverage

FLOOR PANEL

All-steel floor panel design is adapted for both the steel clad and formed steel panels. The unique design of the perforated panel provides the high-structural strength needed for any type room where air is supplied through the plenum. Perforated panels have 25% open area. Optional damper is controlled from the top of the panel

BLOWER MODULES

Ceiling Modules fit all standard 2' x 4' T-Bar systems. All units are factory sealed and certified, ready for installation. Modules are supplied with a full 6" thick HEPA filter. Optional 3" 'separatorless' filter is also available for compact installation applications.

CEILING GRID

Extruded aluminum for corrosive resistance, structural integrity, and good looks.

Used to control the air leaks which occur between the clean room and plenum in a normal suspended ceiling. The gasket seals the horizontal surface of air filters and panels where they rest on the grid. The compression causes gaps to fill horizontally between system members (i.e. main tees to cross tees and wall angle).

Finished to match ceiling surfaces in clear satin anodized or painted finish.

Available pre-gasketed to seal plenum and eliminate air leaks. Several types of gasket are available: adhesive on one or both sides polyvinyl, neoprene and polyethylene anti-bacterial and flame retardant various thicknesses available.

Designed and manufactured to meet the exacting standards of the clean room industry. Applications also include the food service and hospital industries.

Available in standard modules of 2'x2', 2'x4', 4'x4', or custom modules.

UPPER CEILING PLENUM HEPA BLOWER MODULE WITH LIGHTS

This ceiling plenum module is a compromise between an individual downflow HEPA blower module and a prefabricated laminar downflow clean room. The ceiling module can be hung or suspended from any existing ceiling using standard threaded support rods. This method allows for the elimination of having to install, set and erect a piece-meal ceiling system.

The unit is entirely self-contained and delivered ready for operation. Motor, blowers and HEPA filters are mounted for easy access. Fluorescent lighting is designed into each unit to allow ample supply of illumination within the work area. Optional accessories: Ion grid, 20-mil curtains

SEALED TROFFER LIGHT FIXTURE

Sealed housing will not allow contaminants to enter room. Extruded aluminum door frame with mitered corners. Easily installed in 1-1/2" T-bar ceiling. Door hinges easily insertable at either side of housing. Finger actuated spring steel latches control door action. Available: 2'x2' 2'x4' 1'x4' sizes, 120 or 277 Volt with energy savings ballast standard.

DECK CONSTRUCTION

Each panel shall consist of an interior and exterior Standard FRP with a frame retainer around the perimeter. These pans shall be separated by rigid, self-extinguishing insulation which adheres to the interior of the surfaces providing increased structural strength. Panels shall have butt joints with alignment pins to insure flush erection. Each joint shall have 'vinyl gaskets to provide maximum sealing efficiency

SAMPLE SPECIFICATIONS

DESIGN - - - The Halco Series 300 AIRLOCK Wall System shall be engineered and designed to meet design options including standard wall or air handling modules. The materials selected shall provide quality wall module construction and best meet the application process. The Halco Series 300 shall be an architecturally complete modular wall system. All materials shall be of the highest quality with the design directed to assure rapid installation of the system.

WALL FRAMING - - - The Halco Series 300 AIRLOCK Framing System shall be constructed of heavy duty extruded, clear anodized aluminum which provides self-trimming and self-aligning/sealing expansion joints. Keyed camlocks shall be mechanically fastened within framework which will provide positive interlocking of each wall module section. The load bearing characteristics of the Halco Series 300 System under test (test performed on 4 ft. by 10 ft. module, Model 300-48120) shall exceed 14,000 lbs. loading across the 4 ft. dimension,

PANELS - - - The standard panel core shall be .500 inch Micor meeting Class A, surface burning as per ASTM E 84. Flame spread 10, smoke development 30. The substrate shall be inorganic for reduced expansion and warp due to moisture. All panels shall be sealed within the framework to assure an airtight seal. Panel interface shall utilize gasketing or silicone to assure airtight interface and also provide expansion joint interface. The Series 300 Wall System shall be free of trim throughout the construction due to its self-trimming design. All return grilles shall be constructed of extruded, clear anodized aluminum components. Grilles permit the frame to be opened and securely closed without the need for any tools.

FINISHES - - - The substrate shall be faced with smooth, white, standard FRP, which will provide excellent resistance to disinfectants and chemicals to the wall surface. The substrate shall be surfaced with finished aluminum on the interior of the wall which forms the air return plenum. Other finishes available upon request.

WINDOWS - - - The Halco Series 300 Window Wall Modules shall be 36.00 by 30.00 inch viewing area on both panel surfaces. The window design shall be flush aerodynamic design. Window frames shall be extruded, clear anodized aluminum with .125 thick tempered glass. All window wall modules shall be designed for air handling capability.

DOORS - - - Heavy duty 1-3/4" aluminum doors shall be provided with or without vision lights. Doors shall be supplied with hardware such as passage sets and hinges and closures.

DOOR FRAMES - - - Door frames shall be heavy duty, measuring 1-3/4" by 4-1/2" and are mechanically fastened within the door module. Frames shall be designed for continuous duty and heavy traffic areas. Frames shall be virtually flush to the wall framing system. Special designed door modules can be provided with removable headers to allow for equipment in or out of clean room area(s).

ELECTRICAL - - - Wall modules shall be pre-plumbed with non-metallic conduit and boxes, for duplex outlets, switches, Halco Communicator, emergency lights, exit signs, thermostat, etc.

- * **COMPLETE DESIGN OF SYSTEM**
*AS PER FEDERAL STANDARD 209E/ISO AND
U.S. AIR FORCE #T.O.-00-25-203*
- * **TOTAL DESIGN RESPONSIBILITY**
- * **PRELIMINARY BUDGET**

Halco Products Company guarantees this product against defect in material and workmanship for a period of one year from the date of purchase. If found defective within that period and returned with the shipping charges prepaid to the factory, it will be repaired or replaced, at the manufacturer's option, free of charge. This guarantee is void on any product which has been improperly installed, abused or altered in any manner. Other than the preceding obligations, the manufacturer assumes no liability in regard to the sale or use of this product. This warranty is in lieu of any other, either expressed or implied by Halco Products Company, its distributors or any associated sales outlet.



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