



Stiles Stainless Steel... The Fusion of Art & Technology.

When stainless steel doors and frames are required, Stiles works closely with designers to produce entrances that are as functional as they are beautiful. Whether your project calls for aesthetics or high performance in corrosive or laboratory environments, we have the experience to turn your vision into reality.

- Commercial Entrance Systems
- Flush, Glass Lite and Solid Panel Configurations
- 304, 316, and 430 Alloys
- Custom designed to suit your requirements
- Sustainable materials and construction processes
- Abraded Finishes, Textures and Embossing

Multiple features including:

- Bullet Resistant
- Sound Control
- Fire Rated

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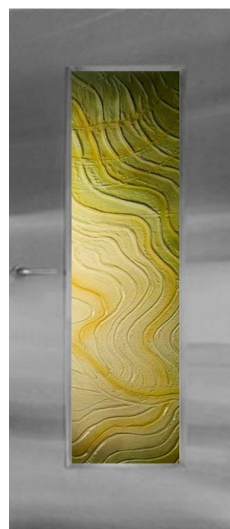
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Alloy 304

Characteristics:

Non-magnetic chromium nickel
(Most common alloy)

Applications:

Hospitals, health care, food processing plants, some chemical plants, swimming pool areas, most exterior applications

Exterior Doors

Face sheets, 16 GA 304 stainless steel. All door components shall be stainless steel. Core: vertical 22 GA stiffeners laminated to door skin. Vertical Edges: Hairline seam reinforced with continuous 16 GA stainless steel channel. Lock-seam type edge not acceptable. Top and bottom edges shall have continuous 16 GA channels, spot welded to both face sheets. Top edge shall be sealed watertight.

Interior Doors

Door skin, 16 GA 304 stainless steel. Core: Kraft honeycomb. Vertical Edges: Open seam. Top and bottom edges shall have continuous 16 GA channels, spot welded to both face sheets.

Alloy 316

Characteristics:

Higher percentage of chromium-nickel than type 304

Applications:

Exterior, high-humidity, salt air environments. Highly corrosive environments.

Exterior Doors

Salt Environment / Pharmaceutical Grade

Door skin, 16 GA 316 stainless steel. All door components shall be stainless steel. Core: vertical 22 GA stiffeners laminated to door skin with voids between stiffeners filled with polystyrene. Vertical Edges: Hairline seam reinforced with continuous 16 GA stainless steel channel. Lock-seam type edge not acceptable. Top and bottom edges shall have continuous 16 GA channels, spot welded to both face sheets. Top edge shall be sealed watertight.

Alloy 430

Characteristics:

Magnetic

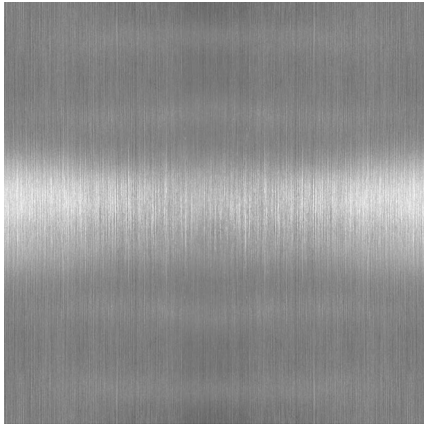
Applications:

Interior, non-corrosive environments; where alloy 304 will not meet fire rating requirements.

Interior Doors, Large Fire Rated Openings

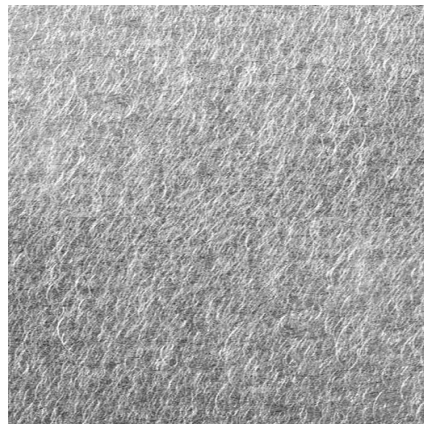
Door skin, 16 GA 430 stainless steel. Core: Kraft honeycomb. Vertical Edges: Open seam. Top and bottom edges shall have continuous 16 GA channels, spot welded to both face sheets.

Common Stainless Steel Abraded Finishes



No. 4 Finish

A lightly grained surface produced by single-directional abrading. The most common stainless finish for architectural products.



Non-Directional Finish

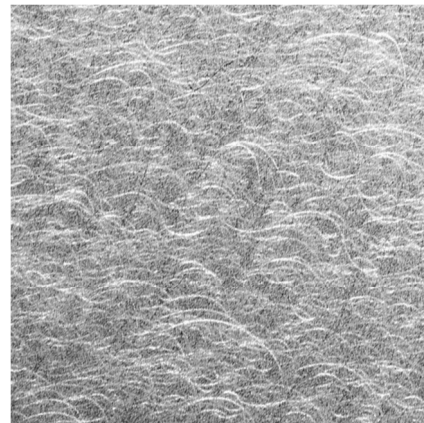
Produced by fine grit orbital sanding (non-directional) on No. 2B (mill finish) stainless steel.



No. 8 Finish

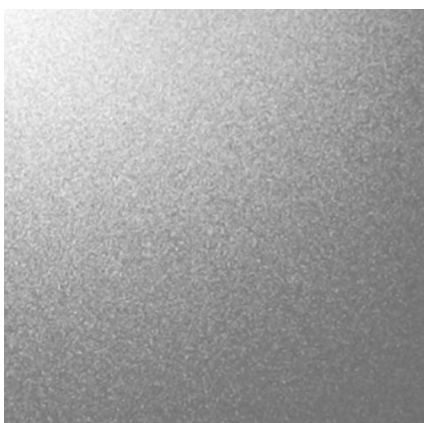
(Mirror Polished)

Obtained by polishing with successively finer abrasives, then buffing with a very fine compound.



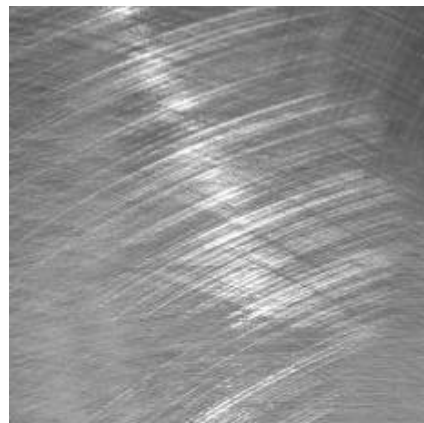
Angel Hair Finish

Produced by medium-fine grit orbital sanding, non-directional.



Bead Blasted Finish

Produced by bead-blasting No. 2B (mill) stainless steel. Surface has a matte finish with a dull to glossy sheen depending on the size of glass bead utilized.



Random Swirl Finish

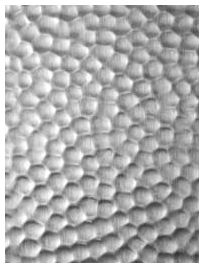
Grained surface produced by random multi-directional abrading.

Textured / embossed stainless steel can be utilized for a variety of applications, including panel material. By combining textures and finishes, i.e. a door in No. 4 finish with panels in a textured metal, the result is striking.

Textured Stainless



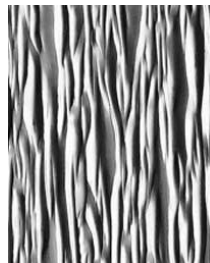
Diamond



Hammered



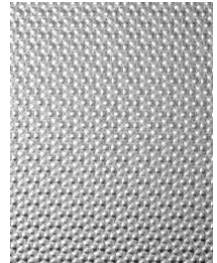
Fluted



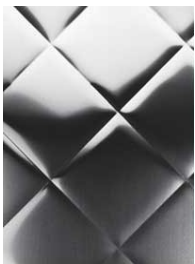
Bark



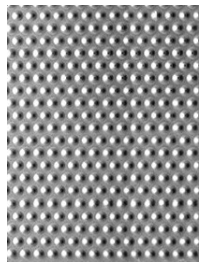
Leather



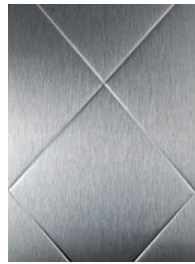
Pebble



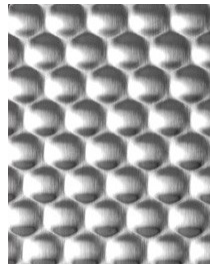
Quilt



Dot



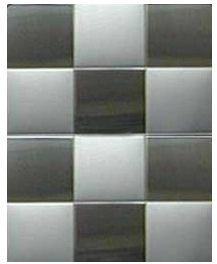
Diagonal



Matrix



Courderoy



Check

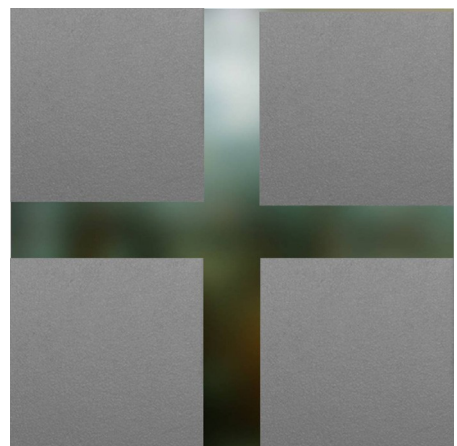
Embossing

Stiles produces embossed stainless door faces available in an unlimited number of design configurations, utilizing square or round dies in several different sizes.



EnviroEtch™

Etched finishes are available in varying intensities, producing a striking contrast between finishes. Designs are limited only to your imagination and may include geometrics, free-forms, corporate logos, etc.



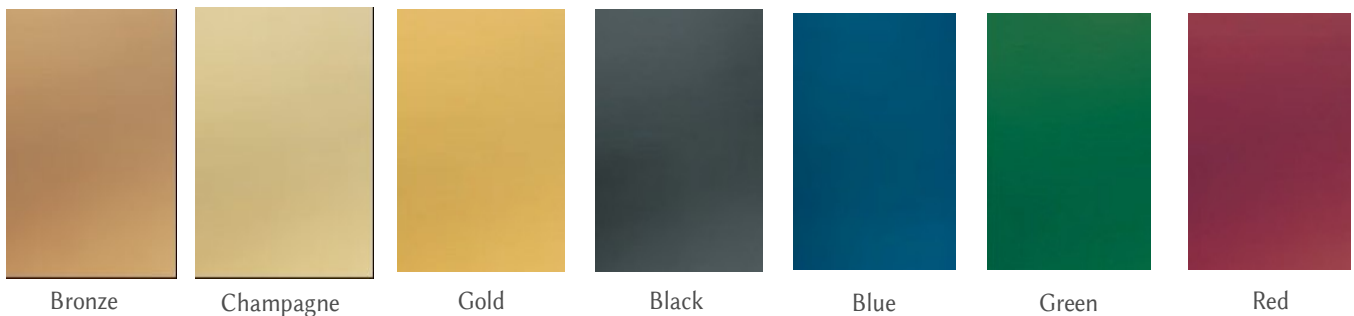
EnviroEtch™ in a geometric pattern on a #4 finish stainless steel door.

Colored Stainless Steel

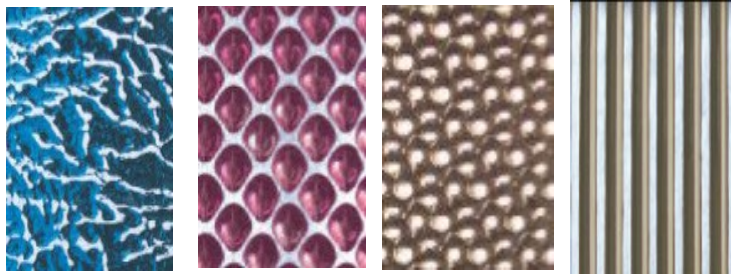
When stainless steel is specified, there is no reason to limit the color choice to silver. A rainbow of choices are available in both satin (grained) and translucent (mirror polished) colors providing considerable design flexibility for doors and frames. Contact factory for more information.



Mirror or Satin Finishes



Sampling of Colored Textures

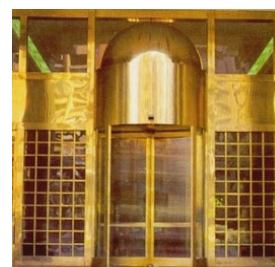


Pampas

Pearl

Paladin

Satin



Colored Stainless Steel

- Entrance Doors + Frames
- Elevator Door Faces
- Panels + Surrounds

Stainless Steel Stiffened Doors Fiberglass Insulation

Description	Stainless Steel Stiffened doors are built-to-order for both interior and exterior high frequency use locations.
NAAMM / HMMA	866 (Stainless Steel Hollow Metal)
Material	1. 304 Stainless Steel 2. 316 Stainless 3. 430 Stainless See Types of Stainless Steel
Faces	18, 16, 14 or 12 GA
Door Edges	1-3/4" thick, beveled, 1/8" in 2"
Vertical Edges	See SS Vertical Door Edges
Top / Bottom	16 GA SS Channels See Door Top & Bottoms
Reinforcements	Hinges: 7 GA SS, 1-1/2" X 10" Locks: 11 GA SS or equal # threads Closers: 14 or 12 GA SS
Service Temp	-65° to 200° (F)
Core	22 GA Stainless Steel Stiffened, 5-1/4" apart
Insulation	1. Fiberglass Batt, 1.5 lb. Density R Factor = 5.25 U-Value = .19 2. Optional Recycled Cotton Batt R Factor = 6.84 U-Value = .14
STC	Min. Sound Control Rating: STC 39 See Sound Control
Fire Rating	See Fire Rated
Bullet Resistant	See Bullet Resistant
Finishes	See Abraded Finishes

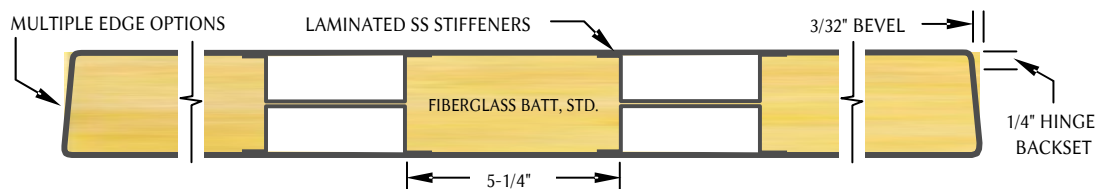
NOTE: Above door data varies depending on specific design criteria



Environmental Data

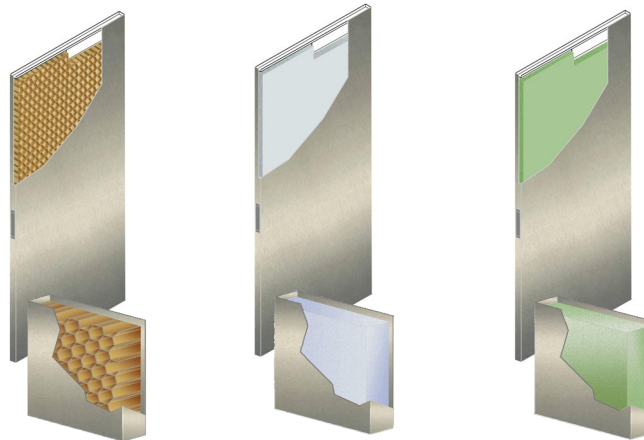
As encapsulated door core materials, neither Fiberglass or Recycled Cotton Batt insulation pose health hazards or produce toxic gas emissions. During fire, no toxic gasses are produced by either insulation material.

All resins and bonding agents utilized in fabrication are low VOC / environmentally friendly. The extremely long life cycle of the Stiles Stainless Steel Stiffened door makes it a truly sustainable product.



Door Construction Options

Door Thickness	1-3/4" (Special thicknesses available)
Face Skins	1) 18 Gauge 2) 16 Gauge 3) 14 Gauge 4) 12 Gauge
Material Options	1) 304 Stainless [Exterior] 2) 316 Stainless [Exterior, Salt Air] 3) 430 Stainless [Interior]
Door Edges	Beveled, 1/8" in 2"
Edge Construction Options	1) Continuous Welded, Seamless 2) Hairline Seam 3) Air-Tek™ 4) Hermetically Sealed See Vertical Door Edge Options, p. SS-4.2
Top and Bottom Channels	16 GA See Door Top + Bottom Details, p. SS-4.4
Hinge Reinforcements	7 GA Stainless Steel, 1-1/2" X 10"
Lock Reinforcements	11 GA Stainless Steel or equal # threads
Closer Reinforcements	1) 14 GA Stainless Steel 2) 12 GA Stainless Steel
Finish Options	See Stainless Steel Finish Options, p. SS-2.0
NAAMM / HMMA / SDI	See Individual Door Data Sheets

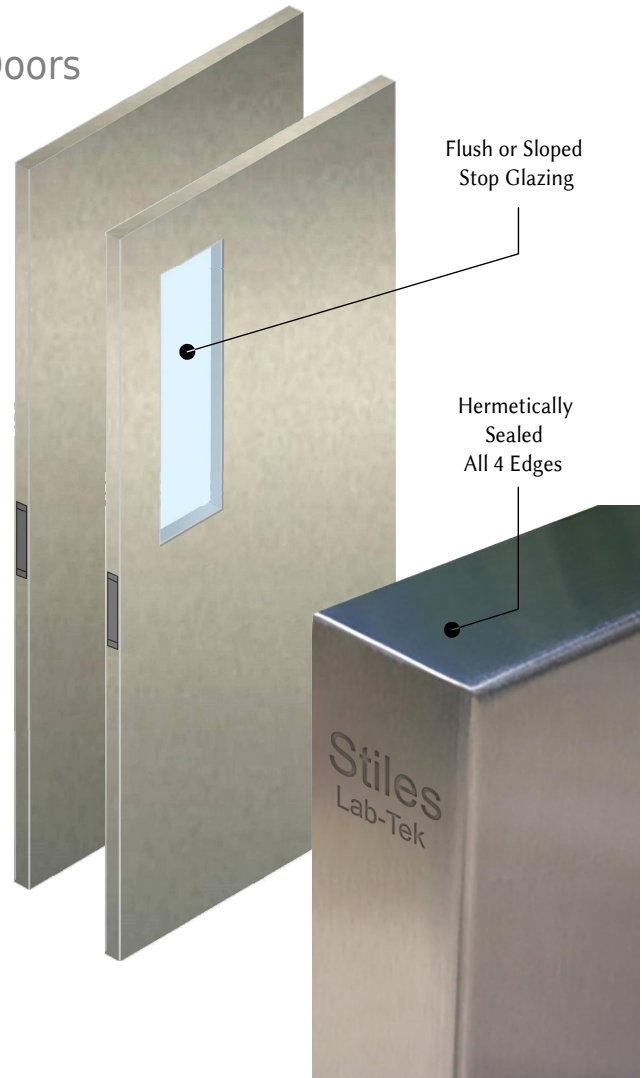


Door Data

Core Type	Honeycomb	Polyisocyanurate	Polystyrene
Core Density	N/A	2.0 pcf	1.5 pcf
Compression Strength	45 psi	28 psi	35 psi
R-Factor	2.44	2.37	2.37
U-Value	.40	.42	.42
Service Temperature (F)	32° to 90°	-100° to 250°	-50° to 130°
Min. Sound Control Rating	STC 32	STC 26	STC 23
Fire Rating	See Fire Rated Section		
Bullet Resistant	UL Levels 1-8 See Bullet Resistant Section		

Lab-Tek™ Stainless Steel Clean Room Doors Hermetically Sealed

Description	Lead-Tek Stainless Steel doors are built-to-order, suitable for both interior and exterior locations.
NAAMM / HMMMA	866 (Stainless Steel Hollow Metal)
Material	1. 304 Stainless Steel 2. 316 Stainless 3. 430 Stainless See Types of Stainless Steel
Faces	18, 16, 14, or 12 GA
Door Edges	1-3/4" thick, beveled, 1/8" in 2"
Vertical Edges	Continuous Welded all 4 edges Hermetically Sealed See Vertical Door Edges
Top / Bottom	16 GA, Sealed all 4 edges See Door Top & Bottoms
Reinforcements	Hinges: 7 GA SS, 1-1/2" X 10" Locks: 11 GA SS or equal # threads Closers: 14 or 12 GA SS
Service Temp	-20° to 150°
Core	Varies, depending on application
STC	Available (Contact factory)
Fire Rating	See Fire Rated
Bullet Resistant	See Bullet Resistant
Finishes	See Abraded Finishes



NOTE: Above door data varies depending on specific design criteria

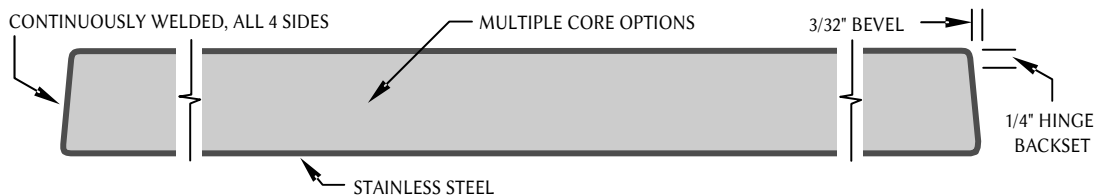
- Engineered for Pharmaceutical, Medical, Hi-Tech, and all other laboratory and clean room applications.
- Seamless - continuously welded on all 4 door edges.
- Available in a variety of configurations, sizes, and styles, with or without glass lites.
- Flush and sloped stop glazing options to repel bacteria and shed water during wash-down / cleaning operations.
- Designed for high frequency use without sacrificing appearance.
- Hybrid options available including bullet-resistant and fire rated.



Bacteria
Resistant



Vermine
Proof



Commercial Stainless Steel Entrance

Narrow, Medium & Wide Stile



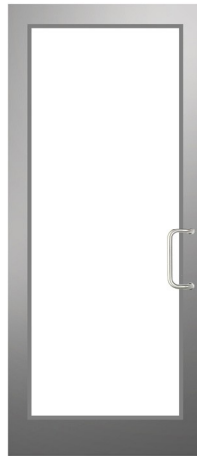
Series 200

2" Stiles + Top Rail
5" Bottom Rail



Series 300

3" Stiles + Top Rail
6" Bottom Rail



Series 400

4" Stiles + Top Rail
8" Bottom Rail



Series 600

6" Stiles + Top Rail
10" Bottom Rail

Options

Tough yet attractive, the clean lines of Stiles Commercial Stainless Steel Entrances are adaptable to numerous specialty features. Create a customized appearance with numerous elevations, materials options, moulding configurations, glass, hardware, and finishes.

Flexibility

Designed to complement new or remodel construction, contemporary or traditional architecture.

Performance

To resist torsion forces, all four Stiles Commercial Stainless Steel Entrance models feature the unparalleled structural integrity of our proprietary high-performance steel construction, far superior to bolt-together aluminum doors.

Configurations

- Swing, Fold, Slide
- Single or Double-Acting
- Multiple Moulding Options
- Glass from 1/4" - 1"
- Frame Options
- Elevation Options
- Air-Tek™ Options

Materials

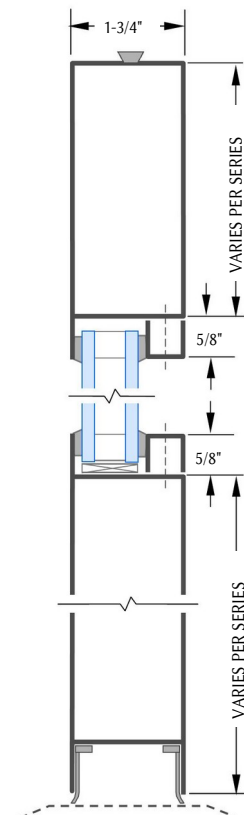
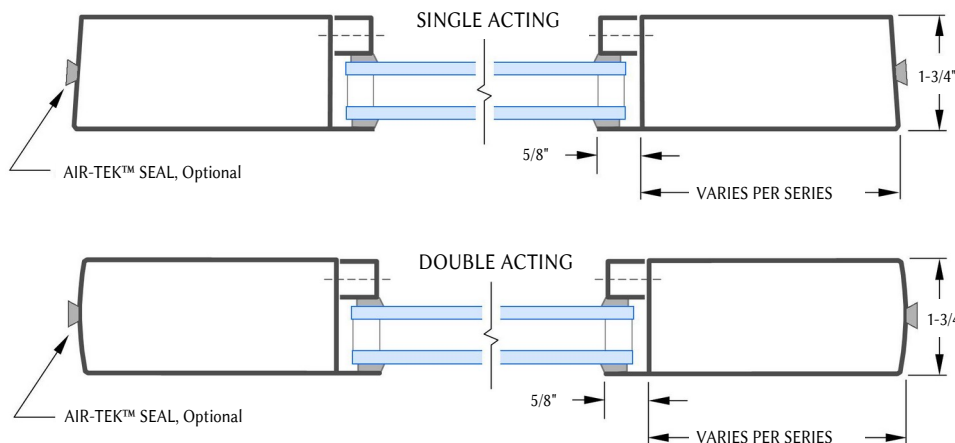
- 304, 316, or 430 Stainless
- 18, 16, 14, or 12 GA
- Also available in steel & bronze
- Factory Finishes and Surface Treatments
- Green Materials and Manufacturing Processes
- Extremely Long Life Cycle

Hybrid Systems

- Bullet / Blast Resistant,
- Fire Rated, Sound Control

Factory Finishes

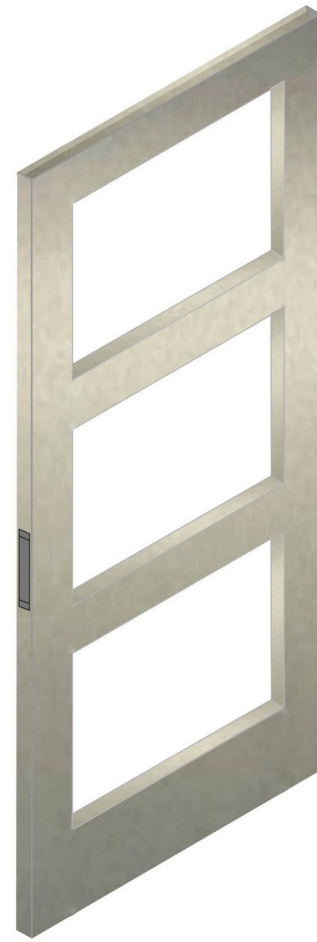
- Primer Painted



Stile & Rail Stainless Steel Doors

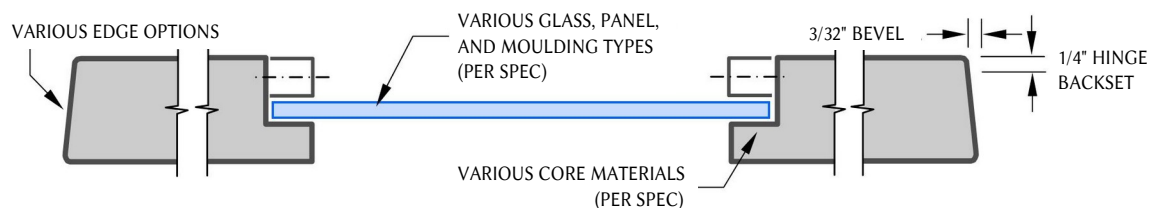
Description	True Stile & Rail stainless steel doors are built-to-order, suitable for both interior and exterior locations.
NAAMM / HMMA	866 (Stainless Steel Hollow Metal)
Material	1. 304 Stainless Steel 2. 316 Stainless 3. 430 Stainless See Types of Stainless Steel
Faces	18, 16, 14, or 12 GA
Door Edges	1-3/4" thick, beveled, 1/8" in 2"
Vertical Edges	See Vertical Door Edges
Top / Bottom	16 GA SS Channels See Door Top & Bottoms
Reinforcements	Hinges: 7 GA SS, 1-1/2" X 10" Locks: 11 GA SS or equal # threads Closers: 14 or 12 GA SS
Core Options	Fiberglass, Urethane, Honeycomb, Styrene
Fire Rating	See Fire Rated
Bullet Resistant	See Bullet Resistant
Finishes	See Abraded Finishes

NOTE: Above door data varies depending on specific design criteria



Construction

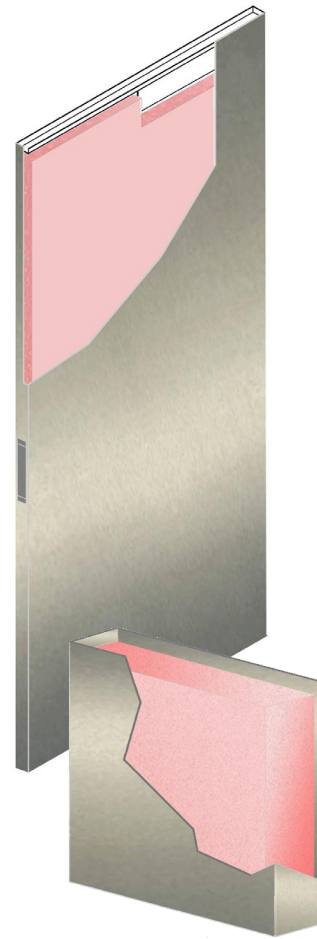
- Stile & Rail Construction
- Fully Welded - NO TIE RODS
- All Seams Continuously Welded and Finished Smooth



Endura™ Impact Resistant Stainless Steel Doors Impact Resistant Cores, Composite Construction

Description	Endura stainless steel doors are built-to-order, suitable for both interior and exterior locations.
NAAMM / HMMMA	866 (Stainless Steel Hollow Metal)
Material	1. 304 Stainless Steel 2. 316 Stainless 3. 430 Stainless See Types of Stainless Steel
Faces	18, 16, 14 or 12 GA
Door Edges	1-3/4" thick, beveled, 1/8" in 2"
Vertical Edges	See Vertical Door Edges
Top / Bottom	16 GA SS Channels See Door Top & Bottoms
Reinforcements	Hinges: 7 GA SS, 1-1/2" X 10" Locks: 11 GA SS or equal # threads Closers: 14 or 12 GA SS
Service Temp	-150° to 200°
Core	Proprietary Impact Resistant R Factor = 2.37 U-Value = .42
Core Density	6.0 pcf
STC	Min. Sound Control Rating: STC 33 See Sound Control
Fire Rating	See Fire Rated
Bullet Resistant	See Bullet Resistant
Finishes	See Abraded Finishes

NOTE: Above door data varies depending on specific design criteria

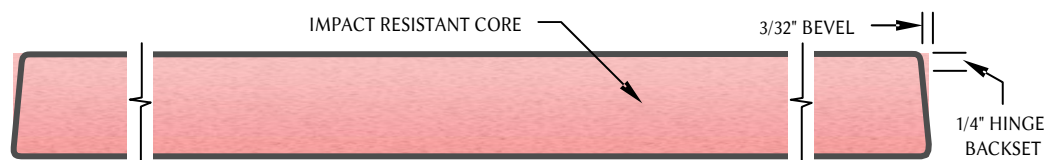


Environmental Data

The proprietary core material is made with recycled materials and has ZERO ozone depleting potential. It is HCFC free.

All resins and bonding agents utilized in the fabrication of Endura doors are low VOC / environmentally friendly. Stock sheet materials are ordered to make provision for minimal waste.

The long life cycle of the Endura door makes it a truly sustainable product.



Gamma™ Lead Lined Stainless Steel Doors Stainless Steel Stiffened with Lead-Lined Cores

Description	Stainless Steel Lead-Lined doors are built-to-order, suitable for both interior and exterior locations.
NAAMM / HMMA	866 (Stainless Steel Hollow Metal)
Material	1. 304 Stainless Steel 2. 316 Stainless 3. 430 Stainless See Types of Stainless Steel
Faces	18, 16, or 14 GA
Door Edges	1-3/4" thick, beveled, 1/8" in 2"
Vertical Edges	See Vertical Door Edges
Top / Bottom	16 GA SS Channels See Door Top & Bottoms
Reinforcements	Hinges: 7 GA SS, 1-1/2" X 10" Locks: 11 GA SS or equal # threads Closers: 14 or 12 GA SS
Service Temp	-20° to 150°
Core	22 GA Stainless Steel Stiffeners w/ Lead Between R Factor = N/A U-Value = N/A
Lead Thickness	Varies per Spec
STC	Available (Contact factory)
Fire Rating	See Fire Rated
Bullet Resistant	See Bullet Resistant
Finishes	See Abraded Finishes

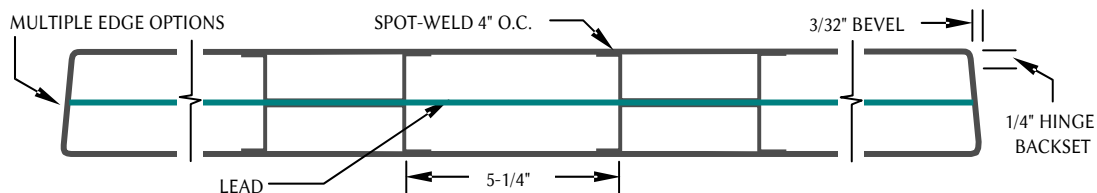
NOTE: Above door data varies depending on specific design criteria



Environmental Data

Recycled lead sheet is utilized for shielding. Lead is toxic when ingested; all precautions are taken during fabrication to prevent exposure. Lead shielding is encapsulated in the Gamma door core, eliminating any exposed lead surfaces.

The long life cycle of stainless steel makes the Gamma door a truly sustainable product.



Temperature Rise Stainless Steel Doors Fire Rated Core, Composite Construction

Description	Stainless Steel Temperature Rise doors are built-to-order, suitable for both interior and exterior locations.
NAAMM / HMMA	866 (Stainless Steel Hollow Metal)
Rating	Temp Rise Rating: 250° F or 450° F
Material	1. 304 Stainless Steel 2. 316 Stainless 3. 430 Stainless See Types of Stainless Steel
Faces	18, 16, 14 or 12 GA
Door Edges	1-3/4" thick, beveled, 1/8" in 2"
Vertical Edges	See SS Vertical Door Edges
Top / Bottom	16 GA SS Channels See Door Top & Bottoms
Reinforcements	Hinges: 7 GA SS, 1-1/2" X 10" Locks: 11 GA SS or equal # threads Closers: 14 or 12 GA SS
Service Temp	(Fire Resistant)
Core	Fire Resistant Core
Core Density	32 pcf
Core Strength	Compression Strength: 100 psi
STC	Min. Sound Control Rating: STC 33 See Sound Control
Fire Rating	See Fire Rated
Bullet Resistant	See Bullet Resistant
Finishes	See Abraded Finishes

NOTE: Above door data varies depending on specific design criteria

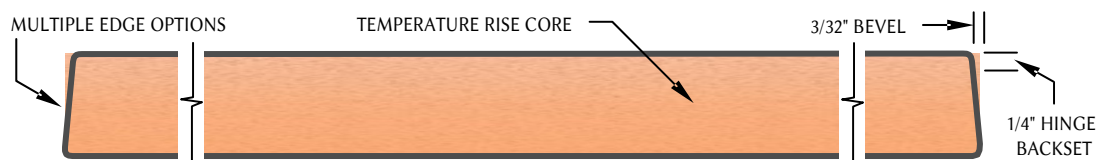


Environmental Data

Temperature Rise composite cores are made from natural mineral materials that pose no environmental threat to landfill.

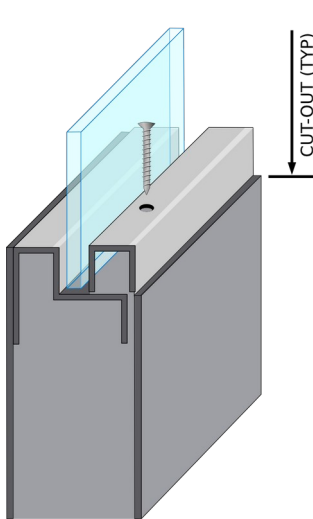
All resins and bonding agents utilized in fabrication are low VOC / environmentally friendly. Stock sheet materials are ordered in sizes that minimize waste.

The long life cycle of stainless steel makes the Temperature Rise door a truly sustainable product.



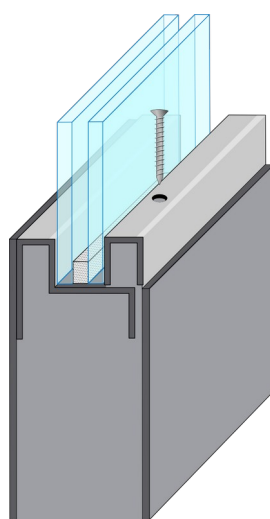
Stiles also offers moulding configurations not shown below. Contact factory for more information.

NOTE: Removable glass stops are typically installed to the interior of the building.



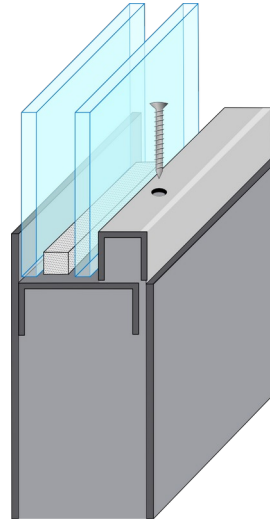
A

1-3/4" Door
5/8" X 5/8" Glass Stops
1/4" Glass
**Concealed Fasteners Available*



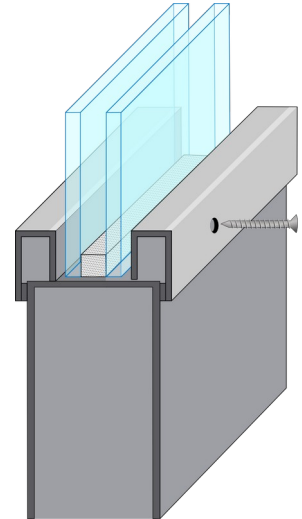
B

1-3/4" Door
3/8" X 5/8" Glass Stops
3/4" Insulated Glass



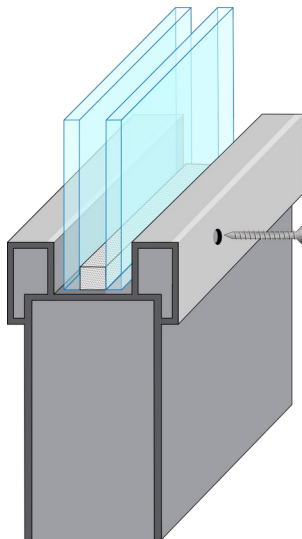
C

1-3/4" Door
5/8" X 5/8" Glass Stops
1" Insulated Glass
**Concealed Fasteners Available*



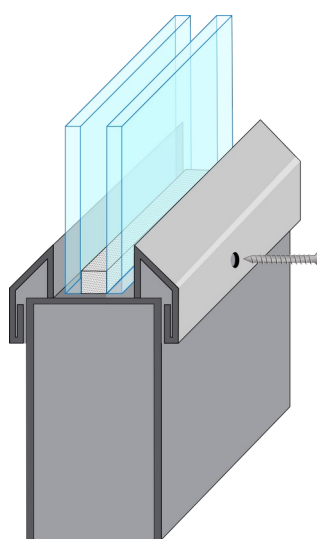
D

1-3/4" Door
7/16" X 1-1/4" Glass Stops
1" Insulated Glass



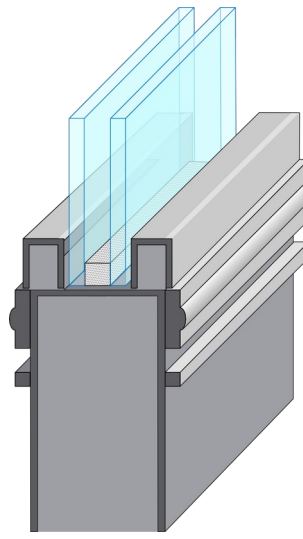
E

1-3/4" Door
9/16" X 1-1/4" Glass Stops
1" Insulated Glass



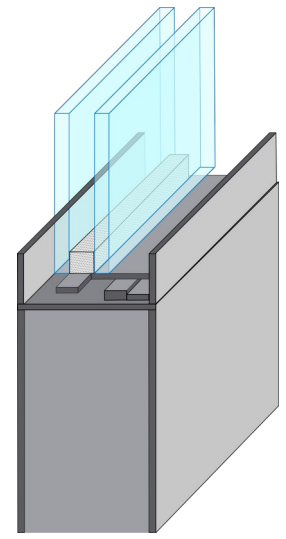
F

1-3/4" Door
7/16" X 1-1/4" Glass Stops
1" Insulated Glass



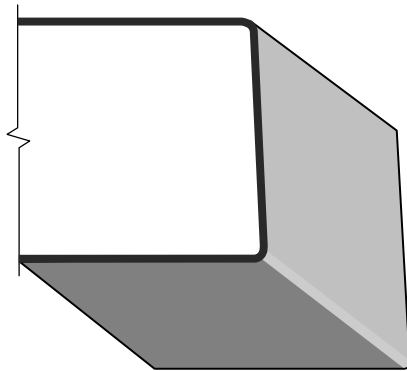
G (Special)

1-3/4" Door
1/2" X 1/2" Glass Stops
(no exposed fasteners)
Solid Stock Moulding Accents
1" Insulated Glass



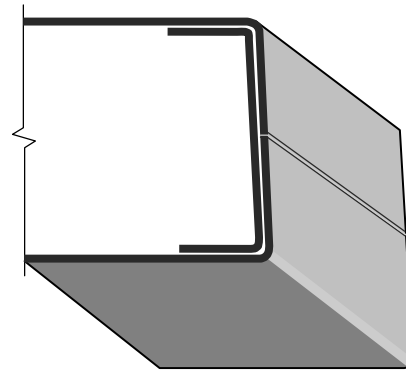
H

1-3/4" Door
3/4" Flush Clip Stops
(no exposed fasteners)
1" Insulated Glass



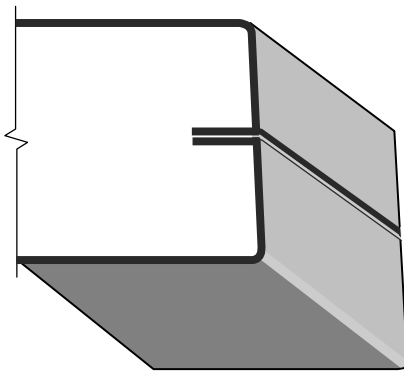
A
**Continuous Welded
Seamless Edge**

Continuous vertical weld, finished
smooth



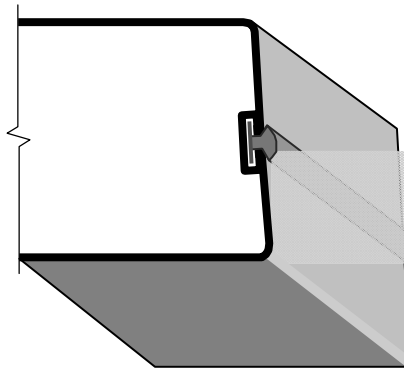
B
Hairline Seam Edge

Center of door edge face



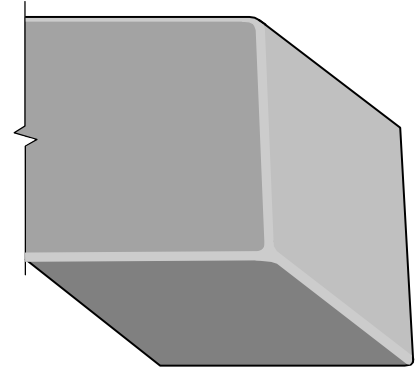
C
Open Seam Edge

Center of door edge face



D
Air-Tek™ Edge Seal

Integral weather seal at door edge



E
Hermetically Sealed

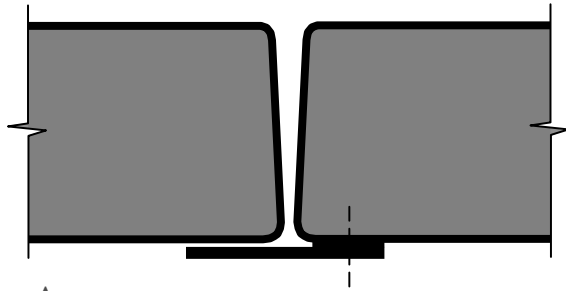
Lab-Tek™ continuously welded
all 4 edges, including door top
and bottom



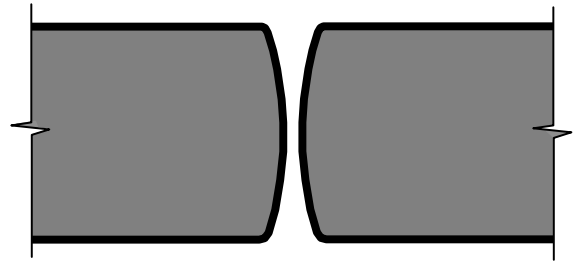
Bacteria
Resistant



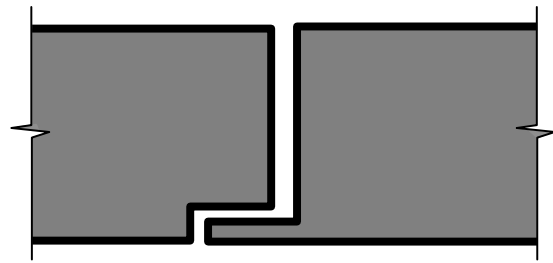
Vermin
Proof



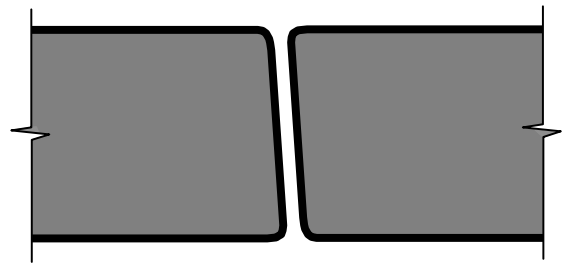
A
V-Bevel with Flat Astragal
With Applied Flat Astragal



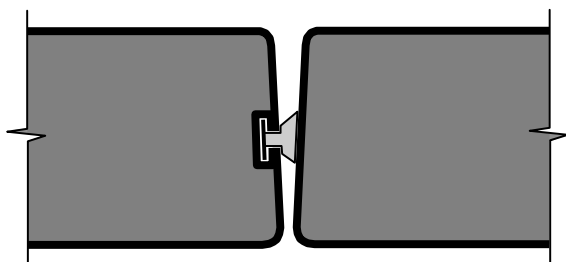
B
Bullnose
Used on Double-Acting and Center Pivoted Doors



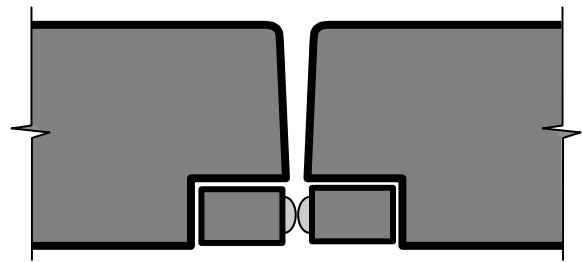
C
Rabbeted
May be used on Double-Egress Doors



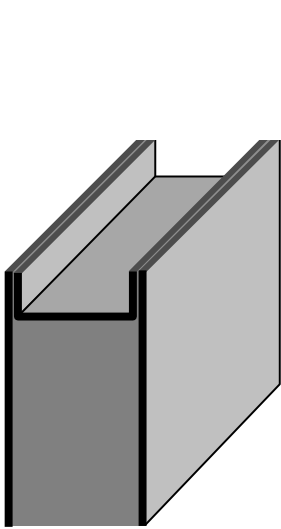
D
Parallel Bevel



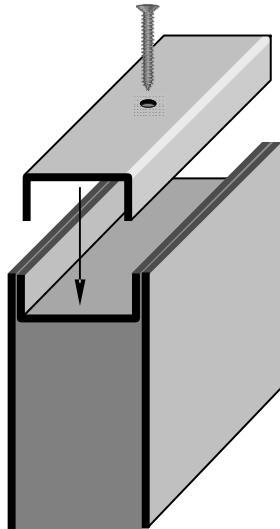
E
Integral Pile Seal
Stiles Proprietary Air-Tek™ Seal System for
Single Doors or Pairs



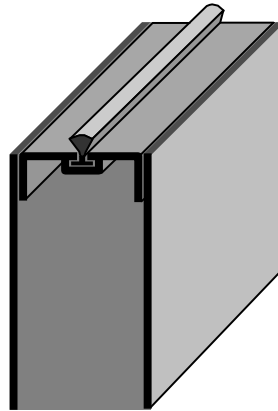
F
Recessed Adjustable Astragal
Surface-Mounted Type Also Available



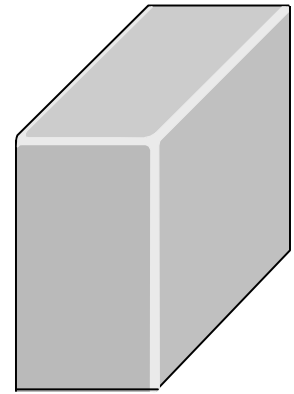
A
Standard
Inverted
U-Channel



B
U-Channel Cap
**May be wet sealed to
eliminate water*



C
Air-Tek™
Integral cut pile weather
strip in door top and
active vertical door edge



D
Hermetically Sealed
Lab-Tek™ continuously welded
all 4 edges, including door top
and bottom
See [Lab-Tek Door p. D-1.4](#)



Waterproof

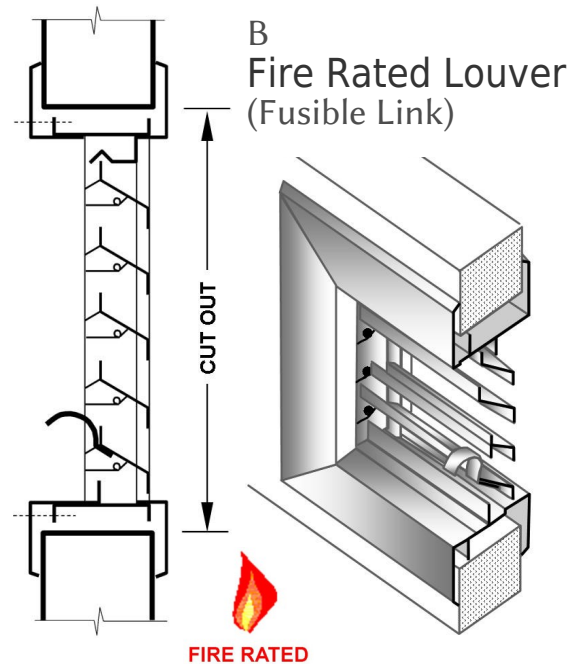
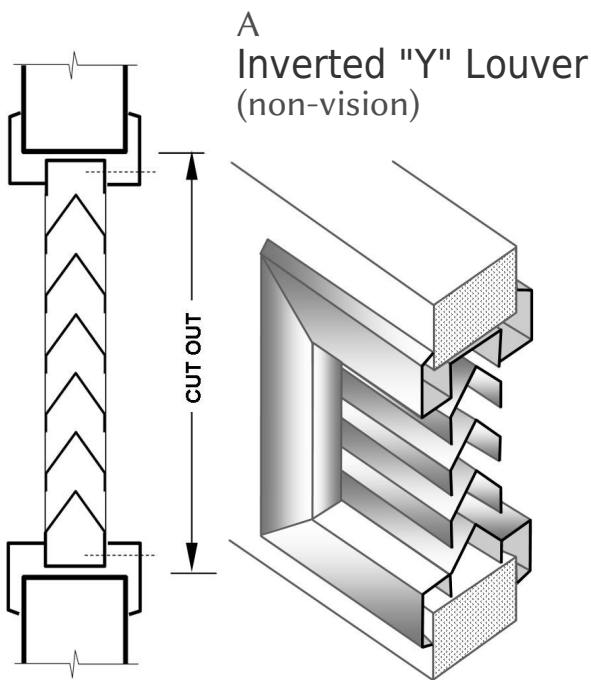


Bacteria
Resistant

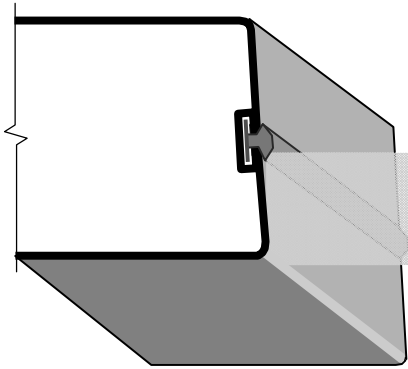


Vermin
Proof

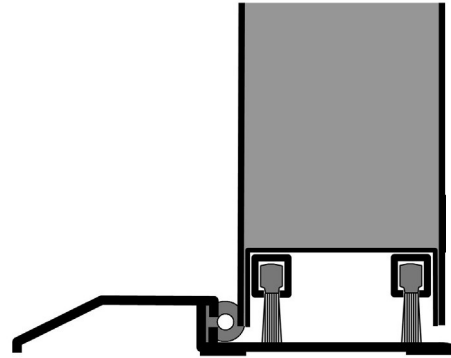
Louvers



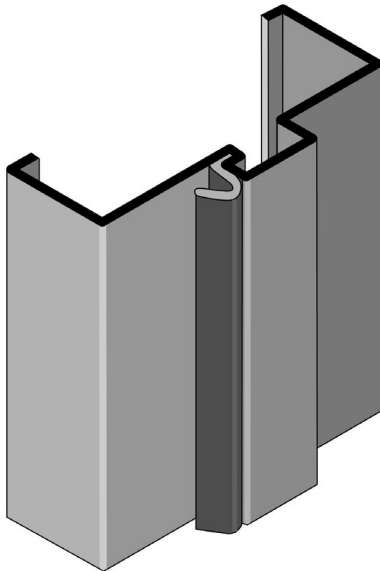
Stiles offers numerous options for weatherization designed to satisfy your specific project requirements, including:



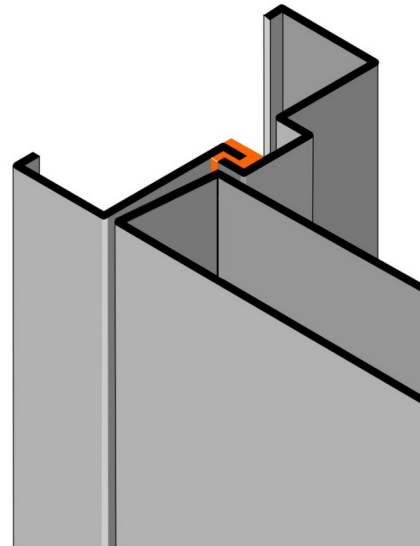
A
Air-Tek™ Door Edge Seals
Stiles proprietary Air-Tek™ cut pile replaceable edge seals, available for both single doors and pairs, function as a primary dust and air barrier for active door edges and door tops.



B
Threshold Assemblies
ADA compliant thresholds in all sizes, materials, functions and profiles, with replaceable seals. Dual door bottom sweeps in both brush and vinyl blade configurations, in addition to automatic door bottom seals.



C
Seal-Tek™ Weather Seal System
Stiles proprietary Seal-Tek™ frames are available with replaceable kerf weather seals that are UL10C listed and available in bronze, white, black, gray, and beige. *Seal is installed on the job after finish paint.



D
Thermal Breaks
Thermal breaks are available for both doors and frames for use in extreme environments, greatly reducing heat and cold transfer.

STAINLESS STEEL DOORS AND FRAMES

Section 08 1130

PART I GENERAL

1.01 SUMMARY

- A. Description: This section includes interior and exterior Stainless Steel Doors, Frames, and related Sidelites, Transoms, and Windows where applicable.
- B. Related work not included in this section:
 - 1. Finish hardware, including lock cylinders and thresholds.
 - 2. Glass and glazing.
 - 3. Caulking between frames and masonry.
 - 4. Structural members.

1.02 QUALITY ASSURANCE

- A. Applicable standards of the following as referenced herein:
 - 1. AAMA, American Architectural Manufacturers Association
 - 2. ASTM, American Society for Testing and Materials
 - 3. ADA, Americans with Disabilities Act
 - 4. NAAMM / HMMA, National Association of Architectural Metals Manufacturers
- B. Quality is based on the products manufactured by Stiles Custom Metal, Inc. www.stilesdoors.com
- C. Manufacturer shall have been regularly engaged in manufacturing stainless steel doors and frames for a period of ten years. Doors and frames shall be fabricated by a single manufacturer. The manufacturer must have an effective quality control system in place.
- D. Allowable Tolerances as stated in NAAMM / HMMA Technical Manual.

1.03 SUBMITTALS

- A. Shop drawings: Indicate in elevation with sections and details to scale. Include glass and metal thicknesses, joining details, field connections, anchorage, concealed and exposed fastening methods, door and framing reinforcement, and metal finishes. Indicate compliance with specified design criteria.
- B. Finish samples: Submit two (minimum 5" x 7") samples indicating texture to be expected of finished work.
- C. Maintenance data: Give instructions for general maintenance and repair of surfaces and finishes.

1.04 WARRANTY: Warrant Stainless Steel Doors, Frames, and Window assemblies against defects in materials and workmanship for (3) years from date of shipment when handled, stored, and installed in accordance with manufactures instructions and NAAMM / HMMA Technical Manual. Adjustments made necessary due to shifting or settling of building structure shall not be covered by warranty.

PART II PRODUCTS

2.01 DOORS:

- A. Acceptable Products: Stainless Steel Doors and Frames manufactured by Stiles Custom Metal, Inc.
- B. Stainless Steel Materials: (choose one) AISI Type [304], [316] or [430]
 - 1. Frames: (choose one) [0.060" 16 gauge] or [0.072" 14 gauge]
 - 2. Doors: (choose one) [0.060" 16 gauge] or [0.072" 14 gauge]
- C. Abraded Finish: (choose one) [#4 Satin], [#8 Polished], [Non-directional], [Angel-Hair], [Bead Blasted], [Random Swirl] *Consult factory for other finishes and embossing also available.
- D. Design of stile and rail profiles: As indicated on drawings. Door thickness: (choose one) [1-3/4"] or [2"]
Code may stipulate bottom rail height.
- E. Door Construction: Doors shall be unitized construction with continuous forms reinforcement stiffening channels welded into door body. Hardware reinforcement: Seven gauge at hinges, eleven gauge at lock/latch preparations welded into door body.
 - 1. Stile and rail doors shall be blanked-out from one sheet of metal. No welding shall be performed on door faces. Exposed seams on door faces or edges are not acceptable. Fabrication with bolt, screw or tie rod connections are not acceptable.
 - 2. Door edge construction: (choose one) [Stiles replaceable Air-Tek™ integral weather-strip], [Hairline seam], [Continuous Welded Seamless] Adhesive or screw-applied weather-strip shall not be accepted.
 - 3. Stainless Steel cladding over aluminum, steel or wood constructed shall not be accepted.

STAINLESS STEEL DOORS AND FRAMES (continued)

F. Glass Lite Kits: (choose one)

[Molding type lite kit with mitered corners welded, finished smooth and re-grained to match. Exterior side of door to be concealed welded. Interior side to include #8 oval head sheet metal screws].

[Internal channel type, flush glass moldings, securely welded to the inside face of the door skin. Removable glass channel stops shall be butted at corner joints, secured to the door with concealed, #8, sheet metal screws. Exposed fasteners shall not be accepted].

2.02 FRAMES

A. Construction:

1. Stainless Steel Materials: (choose one) AISI Type [304], [316] or [430]
2. Stainless Steel thickness: (choose one) [0.060" 16 gauge] or [0.072" 14 gauge]
3. Frames shall be welded units of the sizes and types shown on approved shop drawings. Knocked-down frames shall not be accepted. Jamb, header, mullion, and sill profiles shall be in accordance with the frame schedule and as shown on the approved submittal drawings. All welds shall be finished smooth and regained to match.
4. Windows shall be provided with fixed and removable stops. Loose stops shall be channel type with butted corners and attached with countersunk, oval head, stainless steel sheet metal screws.

B. Fasteners shall be stainless steel. Exposed fasteners shall be countersunk and shall match framing.

C. Exterior door frames shall have Seal-Tek™ integral weather-strip at vertical jambs and head.

*See www.stilesdoors.com for details

2.03 FINISH HARDWARE: Doors and frames shall be mortised, reinforced, drilled, and tapped at the factory for completely templated mortised hardware only, in accordance with the final approved hardware schedule and templates provided by the hardware supplier. Where surface-mounted, anchor hinges, or non-template mortised hardware is to be applied, doors shall be reinforced, with all drilling and tapping done by others in the field. Reinforcement steel shall comply with NAAMM / HMMA 830 and 861.

PART III EXECUTION

3.01 CLEARANCES AND TOLERANCES shall be in compliance with NAAMM / HMMA standards.

3.02 SITE STORAGE AND PROTECTION OF MATERIALS

- A. Deliver and store materials to prevent damaging and marring of finishes.
- B. Protection: Protect metal surfaces from contact with lime, mortar, cement, acids, and other harmful substances / surfaces and from careless handling, storage or machining.

3.03 INSTALLATION

- A. Framing systems shall be installed per Stiles instructions and NAAMM / HMMA 840. Install frames without use of exposed fasteners, except where indicated on shop drawings.
- B. Door Installation: Install doors and hardware in accordance with manufacturer's product data. Adjust hardware for proper operation. Adjust door closers for smooth operation throughout swing.

3.04 CLEANING: Clean doors and frames in accordance with manufacturer's special instructions.

3.05 MAINTENANCE: Instruct the Owner's Maintenance Personnel regarding the operation and maintenance of these doors.

End of Section

STAINLESS STEEL DOORS AND FRAMES

Section 08 1130

PART I GENERAL

SUMMARY:

- A. Description: This section includes interior and exterior Stainless Steel Doors, Frames, and related Sidelites, Transoms, and Windows designed for pharmaceutical, medical, hi-tech and other laboratory applications.
- B. Related work not included in this section:
 - 1. Finish hardware, including lock cylinders and thresholds.
 - 2. Glass and glazing.
 - 3. Caulking between frames and masonry.
 - 4. Structural members.

1.02 QUALITY ASSURANCE

- A. Applicable standards of the following as referenced herein:
 - 1. AAMA, American Architectural Manufacturers Association
 - 2. ASTM, American Society for Testing and Materials
 - 3. ADA, Americans with Disabilities Act
 - 4. NAAMM / HMMA, National Association of Architectural Metals Manufacturers
- B. Quality is based on the products manufactured by Stiles Custom Metal, Inc. www.stilesdoors.com
- C. Manufacturer shall have been regularly engaged in manufacturing stainless steel doors and frames for a period of ten years. Doors and frames shall be fabricated by a single manufacturer. The manufacturer must have an effective quality control system in place.
- D. Allowable Tolerances as stated in NAAMM / HMMA Technical Manual.

1.03 SUBMITTALS

- A. Shop drawings: Indicate in elevation with sections and details to scale. Include glass and metal thicknesses, joining details, field connections, anchorage, concealed and exposed fastening methods, door and framing reinforcement, and metal finishes. Indicate compliance with specified design criteria.
- B. Finish samples: Submit two (minimum 5" x 7") samples indicating texture to be expected of finished work.
- C. Maintenance data: Give instructions for general maintenance and repair of surfaces and finishes.

- 1.04 WARRANTY:** Warrant Stainless Steel Lab-Tek TM Doors, Frames, and Window assemblies against defects in materials and workmanship for (3) years from date of shipment when handled, stored, and installed in accordance with manufactures instructions and NAAMM / HMMA Technical Manual. Adjustments made necessary due to shifting or settling of building structure shall not be covered by warranty.

PART II PRODUCTS

2.01 DOORS

- A. The Stainless Steel Doors are based on Stiles Custom Metal, Inc. Model: Lab-Tek TM www.stilesdoors.com
- B. Stainless Steel Materials:
 - 1. Face sheets shall be 0.053 in. (16 gage) min. thickness Stainless Steel: (choose one) AISI Type [304], [316] or [430]
 - 2. All components shall be manufactured from the same alloy stainless steel as door skins.
 - 3. Abraded Finish: (choose one) [#4 Satin], [Non-directional], [Bead Blasted], *Consult factory for other finishes and embossing also available.
- C. Door Construction:
 - 1. Vertical Edges and Top and Bottom Edges: Door shall be built from two unitized face sheets with all four edges of the door folded and joined at center of vertical edges and top and bottom edges. Continuous reinforcing channels shall be welded inside all door edges. All seams shall be continuously welded with no visible seams on any surface of the door creating a completely smooth hermitically sealed door skin. Welds shall be finished smooth. Door thickness shall be 1-3/4".
 - 2. Door Core Options: (choose one) [Vertical steel stiffened] [Polyurethane] [Endura TM Impact Resistant] [Polystyrene]. Core and inside of door skins shall be completely covered with contact adhesive achieving 100% bond.
 - 3. Integral Astragal: Where required astragals shall be formed as an integral part of the doors skin with corresponding recessed area formed into adjacent door. Surface mounted flat plate or "Z" shaped astragals shall not be accepted.
 - 4. Hardware reinforcement: Hinges seven gauge, Lock/latch eleven gauge, welded into door body.

SS STEEL DOORS AND FRAMES (continued)

5. Glass Lite Kits: (choose one)

[Structural Glazed]: Internal channel shall be formed with a recess permitting the glass to be structurally glazed completely flush with the face of the door using bacteria resistant structural silicon. There shall be no exposed fasteners.

[Flush Channel Glazed]: Door skin on clean room side shall be cut out to permit glass to be butted up to the end side surface. Glass shall be held in place on the side opposite clean room with removable glass channels or angle stops at the top and sides. Removable stop at the sill shall be either angle shaped or sloped channel. Removable stops shall be secured to the door with #8 stainless steel sheet metal screws. Glass shall be wet glazed using bacteria resistant structural silicon.

6. Door opening tag number shall be permanently engraved into the center hinge reinforcement using a programmable engraver. The engraving shall be deep enough to be read after the hinge reinforcement bar is painted. The use of paper stickers only is not acceptable.
7. Finish: After fabrication, all tool marks and surface imperfections shall be removed, and exposed faces of all welded joints shall be dressed smooth.

2.02 STEEL PANELS: Steel panels shall be made of the same material and construction and finished in the same way as specified for doors.

2.03 FRAMES

A. Construction:

1. Stainless Steel Materials: (choose one) AISI Type [304], [316] or [430]
2. Stainless Steel thickness: (choose one) [0.060" 16 gauge] or [0.072" 14 gauge]
3. Frames shall be continuous welded units of the sizes and types shown on approved shop drawings. Knocked-down frames shall not be accepted. Jamb, header, mullion, and sill profiles shall be in accordance with the frame schedule and as shown on the approved submittal drawings. All welds shall be finished smooth and regained to match.
4. Windows shall be provided with fixed and removable stops. Loose stops shall be channel type with butted corners and attached with countersunk, oval head, stainless steel sheet metal screws.

B. Fasteners shall be stainless steel. Exposed fasteners shall be countersunk and shall match framing.

C. Exterior door frames shall have Seal-Tek™ integral weather-strip at vertical jambs and head.

2.04 FINISH HARDWARE: Doors and frames shall be mortised, reinforced, drilled, and tapped at the factory for completely templated mortised hardware only, in accordance with the final approved hardware schedule and templates provided by the hardware supplier. Where surface-mounted, anchor hinges, or non-template mortised hardware is to be applied, doors shall be reinforced, with all drilling and tapping done by others in the field. Reinforcement steel shall comply with NAAMM / HMMA 830 and 861.

PART III EXECUTION

3.01 CLEARANCES AND TOLERANCES shall be in compliance with NAAMM / HMMA standards.

3.02 SITE STORAGE AND PROTECTION OF MATERIALS

- A. Deliver and store materials to prevent damaging and marring of finishes.
- B. Protection: Protect metal surfaces from contact with lime, mortar, cement, acids, and other harmful substances / surfaces and from careless handling, storage or machining.

3.03 INSTALLATION

- A. Framing systems shall be installed per Stiles instructions and NAAMM / HMMA 840. Install frames without use of exposed fasteners, except where indicated on shop drawings.
- B. Door Installation: Install doors and hardware in accordance with manufacturer's product data. Adjust hardware for proper operation. Adjust door closers for smooth operation throughout swing.

3.04 CLEANING: Clean doors and frames in accordance with manufacturer's special instructions.

3.05 MAINTENANCE: Instruct the Owner's Maintenance Personnel regarding the operation and maintenance of these doors.

End of Section