FIRE DOOR PRODUCTS

Catalog

More than metal; a leader in fire door solutions.

Table of Contents

Custom-made f qqt" cuwtci cnu to suit many hardware configurations. 16 Ga. astragal lip standard

Custom mullion bars.

Qwt'110 Frame Exclusive#
One person installation saves time & money.

18 Ga. steel **33% more rigid than 20 Ga.**

UL Listed with NO glazing compound required.

Introducing our *first* Fixed Louver product line

2

Model 110- *Our best seller*
for standard 1 3/4" door & 1/4" glass and other applications

c(UL)us LISTED Meets UL10B requirements for NEUTRAL pressure and UL10C for POSITIVE pressure.

Important Installation Note:
For all applications we recommend 5 in. pounds of torque on screws to prevent glass breakage.

ORDER INFORMATION:

Order size = Inside dimension of frame, (W+H)

Cutout size = Order size + $1\,{}^1/2$"

Glass size = Order size + ${}^3/4$" (tolerance (+0/-1/16))

MATERIAL:

18 GA. CRS frame is standard.

- 33% thicker than 20 GA. frames.
- maintains flat appearance

FINISH:

Beige, gray or dark bronze polyester powder coating.
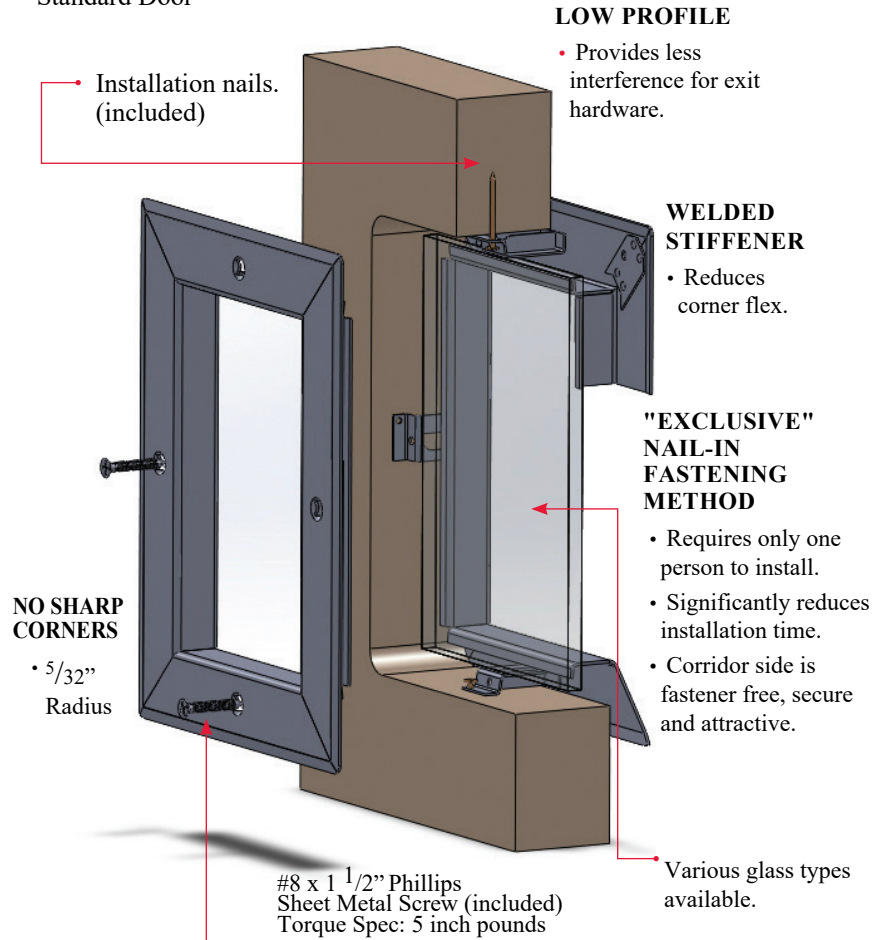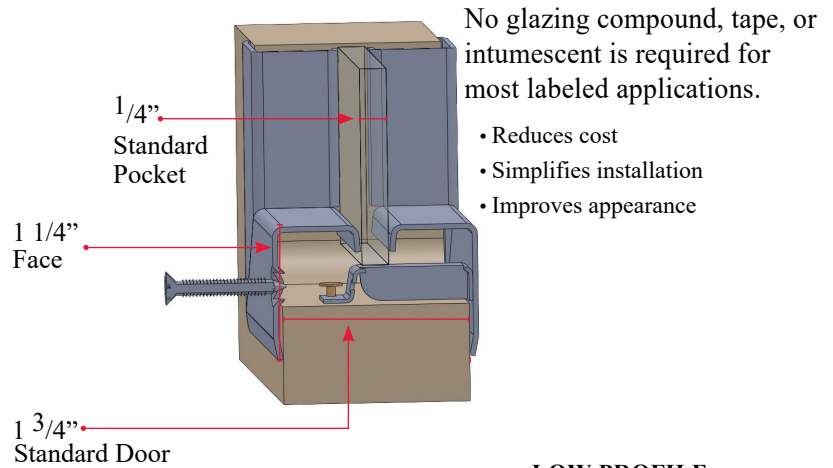- Extremely durable & visually appealing

NARROW FACE FRAME:

- Better proportioned & visually appealing
- Suitable for wood, metal or mineral core doors.

OPTIONS:

- 18 GA. galvanized, suitable for some exterior uses.
- 18 GA. stainless steel for hospital & food service.
- Custom colors.
- Wood veneer wrapped in various species to match door.
- Maximum glass pocket is ${}^5/8$" less than door thickness, up to $1\,{}^1/8$" deep
- Available for a variety of glass or door thicknesses

MOUNTING HOLES:

- Less than 12", one hole centered.
- 12" or more, three inches max from corners
  $11\,{}^5/16$" max centers.

1/4" Standard Pocket

1 1/4" Face

1 3/4" Standard Door

No glazing compound, tape, or intumescent is required for most labeled applications.
- Reduces cost
- Simplifies installation
- Improves appearance

LOW PROFILE
- Provides less interference for exit hardware.

Installation nails. (included)

WELDED STIFFENER
- Reduces corner flex.

"EXCLUSIVE" NAIL-IN FASTENING METHOD
- Requires only one person to install.
- Significantly reduces installation time.
- Corridor side is fastener free, secure and attractive.

NO SHARP CORNERS
- ${}^5/32$" Radius

#8 x $1\,{}^1/2$" Phillips Sheet Metal Screw (included) Torque Spec: 5 inch pounds

Various glass types available.

No glazing compound, tape or intumescent is required for most labeled applications. Refer to AMS Listing Specifications. Fire tested WITHOUT glazing compound, tape, or intumescent.
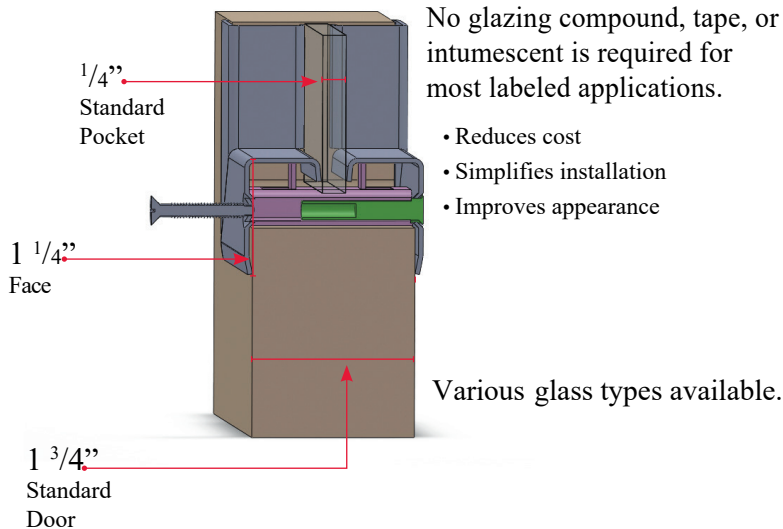
ALL METAL STAMPING, INC.

Meets UL10B requirements for NEUTRAL pressure and UL10C for POSITIVE pressure.

Important Installation Note:
For all applications we recommend 5 inch pounds of torque on the screws to prevent glass breakage.

$1/4$"
Standard
Pocket

No glazing compound, tape, or intumescent is required for most labeled applications.

• Reduces cost
• Simplifies installation
• Improves appearance

$1\ 1/4$"
Face

$1\ 3/4$"
Standard
Door

Various glass types available.

NO SHARP CORNERS
5/32" Radius

LOW PROFILE
• Provides less interference for exit hardware.

Vandal Proof Binder Post (included).

WELDED STIFFENER
• Reduces Corner Flex

Various glass types available.

#8-32 Phillips Flathead Machine Screws (included).
Torque spec: 5 inch pounds

FRAME & GLASS SUPPORTS (included) Must be used for proper installation. Two required.

ORDER INFORMATION:
Order size = Inside dimension of frame, (W+H)

Cutout size = Order size + 1 $1/2$"
Glass size = Order size + $3/4$" (tolerance (+0/-1/16))

MATERIAL:
18 GA. CRS frame is standard.
• 33% thicker than 20 GA. frames
• Maintains flat appearance

FINISH:
Beige, gray or dark bronze polyester powder coating.
• Extremely durable & visually appealing

NARROW FACE FRAME:
• Better proportioned & visually appealing
• Suitable for wood, metal or mineral core doors.

OPTIONS:
• 18 GA. galvanized, suitable for some exterior uses.
• 18 GA. stainless steel for hospital & food service.
• Custom colors.
• Wood veneer wrapped in various species to match door.
• MAX glass pocket is $5/8$" less than door thickness, up to 1 $1/8$" deep
• Available for a variety of glass or door thicknesses

MOUNTING HOLES:
• Less than 12", one hole centered.
• 12" or more, three inches max from corners 11 $5/16$" max centers.
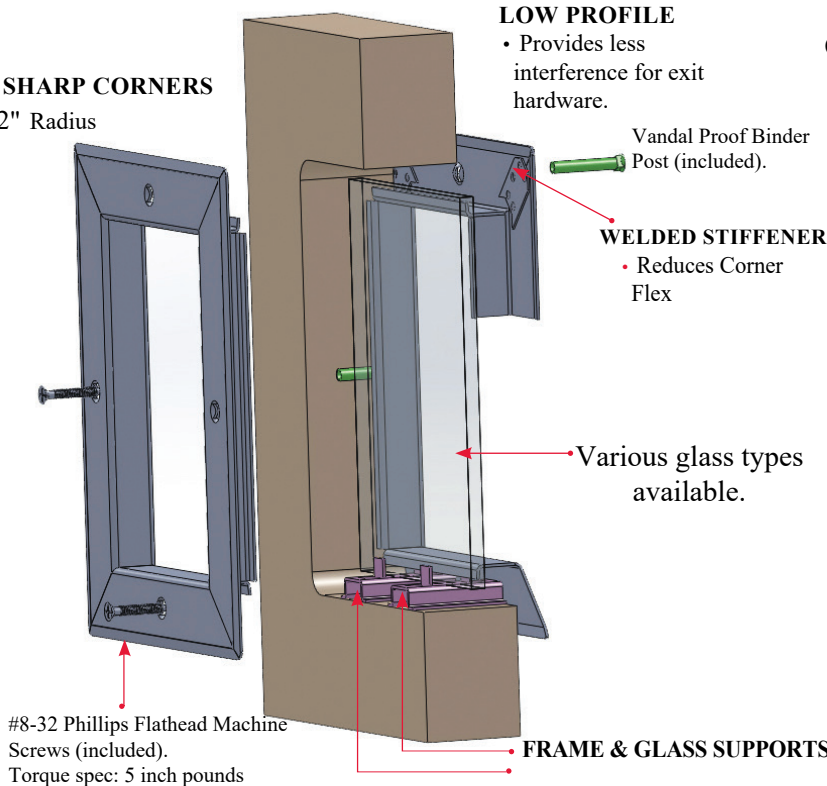
No glazing compound, tape or intumescent is required for most labeled applications. Refer to AMS Listing Specifications. Fire tested WITHOUT glazing compound, tape, or intumescent.

Stock Service must be requested and approved by Management. Once approved, orders can ship the next business day with NO upcharge.

Orders are accepted for Stock Service based on our production schedule. We cannot guarantee this service, but will do our best to satisfy the schedule of the customer.

Order Size (Width X Height)	Exposed Glass Sq. Inches	Cutout Size (Width X Height)
3 X 33	99	4-1/2 X 34-1/2
4 X 24	96	5-1/2 X 25-1/2
4 X 25	100	5-1/2 X 26-1/2
5 X 20	100	6-1/2 X 21-1/2
6 X 28	168	7-1/2 X 29-1/2
6 X 30	180	7-1/2 X 31-1/2
6 X 34	204	7-1/2 X 35-1/2
10 X 10	100	11-1/2 X 11-1/2
22 X 28	616	23-1/2 X 29-1/2
22 X 30	660	23-1/2 X 31-1/2
24 X 30	720	25-1/2 X 31-1/2

PROVISIONS:

1. All Stock Orders are pending approval of the General Manager based on current orders in process. This is NOT a guaranteed service.

2. Stock Orders must be placed before 1 P.M. CST/CDT to ship the NEXT BUSINESS DAY – available in Beige ONLY.

3. Stock Orders over 50 Units may require additional manufacturing time.

4. Please **DO NOT COMBINE** stock items and longer delivery items on the same Purchase Order. You must request Stock Service or we will assume your order can be processed under our Regular Service.

5. Stock Lite Kits are manufactured for 1-3/4" doors with 1/4" glazing pocket and painted Beige.

   NOTE ON QUANTITY- Stock Orders no longer need to be ordered in box quantity. Quantities can be 1 to 50 units per order. If larger quantities are required, please contact us and we will provide a Ship Date.

Standard Lead Time is 10 Business Days

For ODD Thickness Doors/Glass

Models 110 or 110B are available for 1" to 2-5/8" doors with a max pocket dimension of 5/8" less than door thickness. Door thickness & pocket dimension will determine whether Model 110 or 110B is used. If tape or compound is used you must make an allowance in the glass pocket when ordering (See below **Example for Glass Pocket Allowance**). Models 118MD and 118D are available for other applications.

Extra Thick Glass/Pocket (> than 1 1/8" pocket) or IGU's (Insulated Glass Units)

Galvanized for Standard or Odd Thickness Door/Pocket

Galvanized units offer much better corrosion resistance. Galvanized is **NOT** suitable for applications exposed to direct sunlight, direct precipitation, or salt air/salt water conditions; only stainless steel is suitable. Material is 18 GA. (.048 Galvanized Steel with Powder Paint. Model 110 uses zinc plated sheet metal screws and steel internal fasteners. All other models use zinc plated steel binder post sets. **To prevent water infiltration, the outer & inner perimeter of the unit must be caulked.** All Metal Stamping recommends glazing tape or glazing compound be used with all exterior or non-rated applications.

**Example for Glass Pocket Allowance: If 1/4" glass + 1/16" tape on both sides, the frame must be ordered for a 3/8" glass pocket.

Stainless Steel

Available in models 110/110B and 118MD/118D. Material is 18 GA. (.048 #304 stainless steel w/ #4 brushed finish. Screws for 110 are stainless steel sheet metal screws and SS internal fasterners. All other models use SS binder post sets.

All Metal Stamping recommends thru-bolted styles to eliminate the brush marks with internal weld nut styles. To prevent water infiltration, the outer & inner perimeter of the unit must be caulked. We recommend glazing tape or glazing compound be used on all exterior or non-rated applications.

Heavy Gauge Steel for Security Applications

Available in models 118MD and 118D.

Custom Shapes

Available in crosses, triangles, and more. Contact us for lead time and pricing.

Veneer Wrapped

Available in Models 110/110B and 118MD/118D. Standard species include White Birch FC, American Cherry FC, & Red Oak FC.

Non-Standard Colors

For colors other than standard Beige, Gray, or Dark Bronze, please contact us for availability. There is a 50-unit max without prior approvals. When using lacquer, we will attempt to color match previous orders, but we cannot guarantee a perfect match.

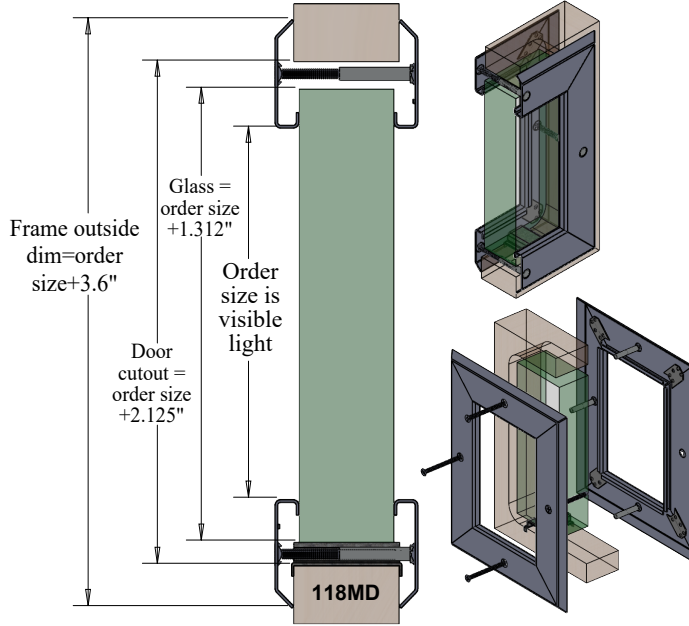*We use RAL Color - the most popular color standard in America.*

NOTE: Digital media may distort or misrepresent true qualities of colors. For more exact color matching, please request a color sample.

411 W Spruce St. Abbotsford, WI 54405 | www.allmetalstamping.com | 715.223.6324 | ams@allmetalstamping.com

Models for Thicker Glass

118MD

Frame outside dim=order size+3.6"

Glass = order size +1.312"

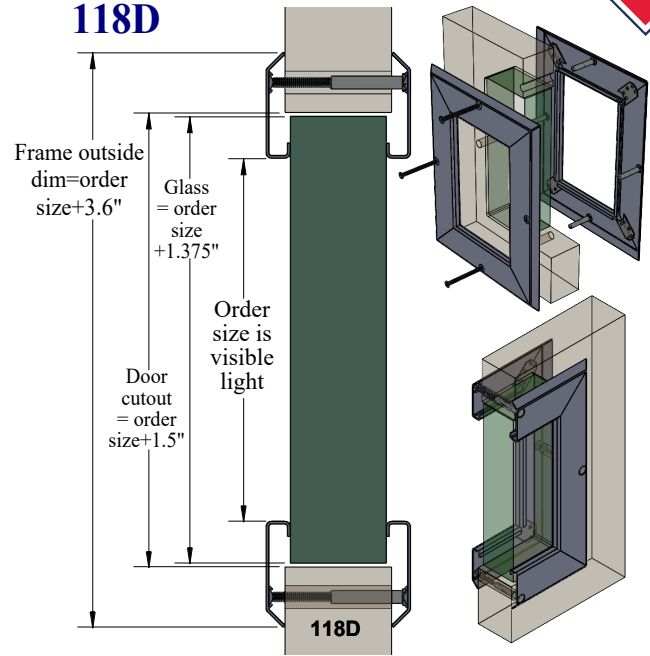Order size is visible light

Door cutout = order size +2.125"

118MD

ORDER INFORMATION:
Order size = Inside dimension of frame, (W+H)
Cutout size = Order size +2.125"
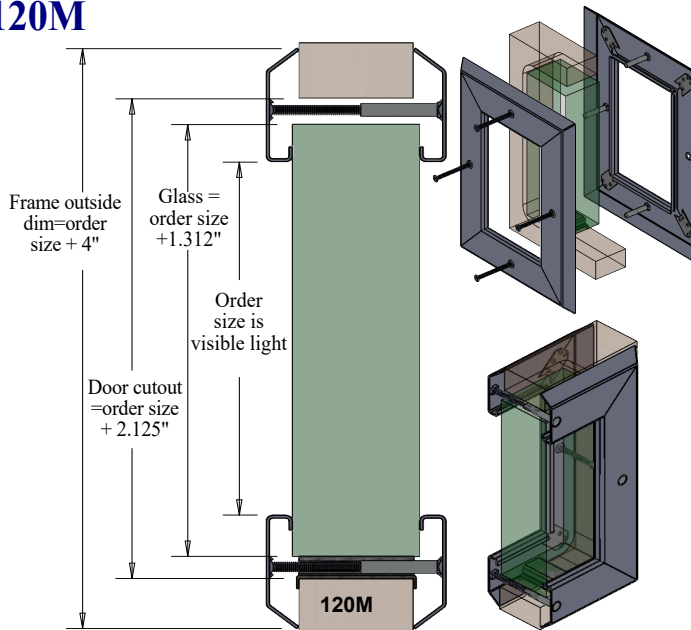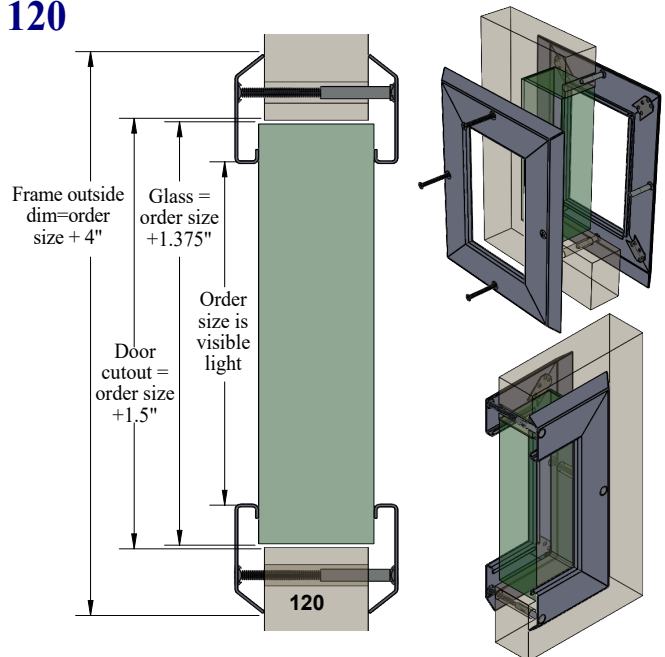Glass size = Order size + 1.312"

118D

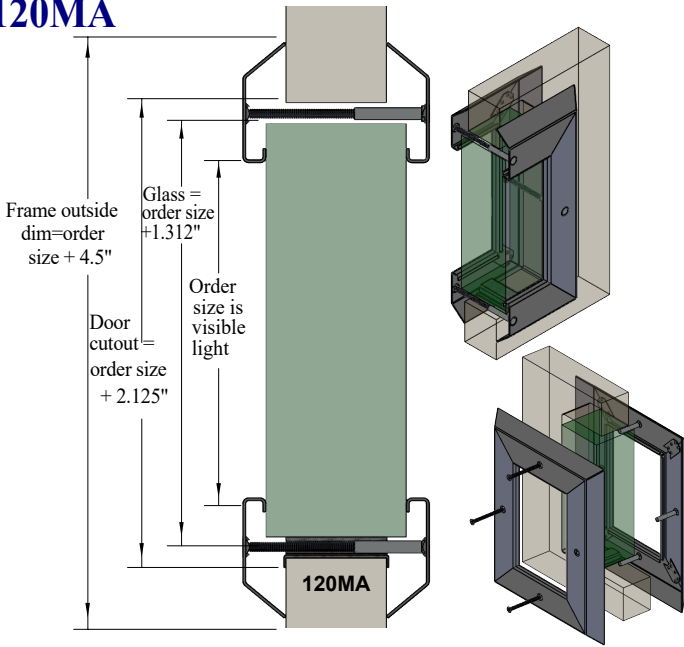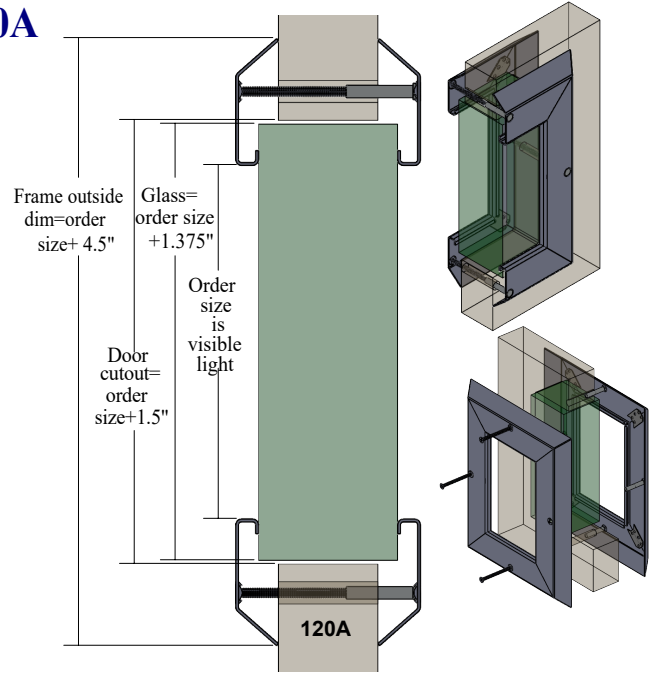Frame outside dim=order size+3.6"

Glass = order size +1.375"

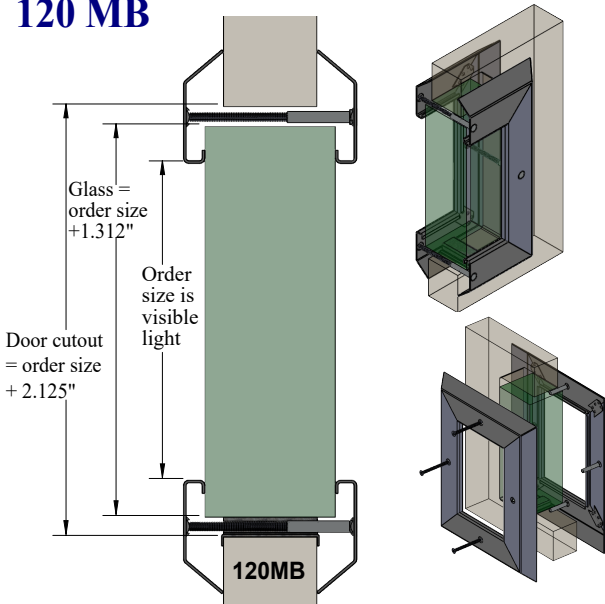Order size is visible light

Door cutout = order size+1.5"

118D

ORDER INFORMATION:
Order size = Inside dimension of frame, (W+H)
Cutout size = Order size + 1.5"
Glass size = Order size + 1.375"

When used in 1- 3/4" doors, MAX Glass Pocket <= 1.562"

120M

Frame outside dim=order size + 4"

Glass = order size +1.312"
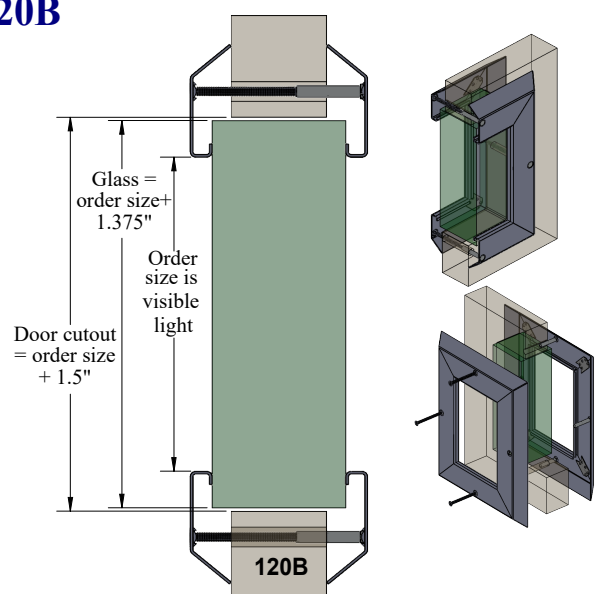
Order size is visible light

Door cutout =order size + 2.125"

120M

ORDER INFORMATION:
Order size = Inside dimension of frame, (W+H)
Cutout size = Order size + 2.125"
Glass size = Order size + 1.312"
UL Listed to 180 min.

120

Frame outside dim=order size + 4"

Glass = order size +1.375"

Order size is visible light

Door cutout = order size +1.5"

120

ORDER INFORMATION:
Order size = Inside dimension of frame, (W+H)
Cutout size = Order size + 1.5"
Glass size = Order size + 1.375"

When used in 1 3/4" doors, Glass Pocket = 1.625"- 2"

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120MA

ORDER INFORMATION:
Order size = Inside dimension of frame, (W+H)
Cutout size = Order size +2.125"
Glass size = Order size + 1.312"

120A

ORDER INFORMATION:
Order size = Inside dimension of frame, (W+H)
Cutout size = Order size +1.5"
Glass size = Order size + 1.375"
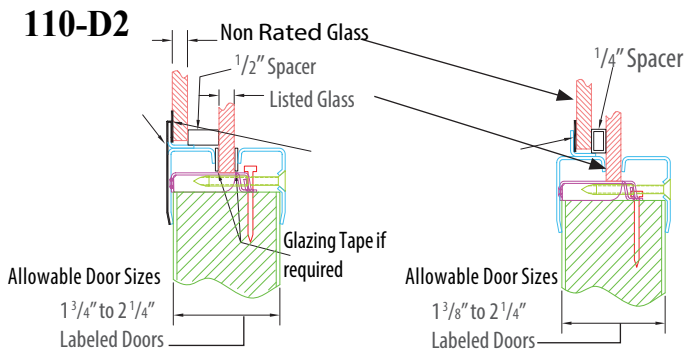
When used in 1 3/4" door, Glass Pocket > 2"- 2.5"

120 MB

ORDER INFORMATION:
Order size = Inside dimension of frame, (W+H)
Cutout size = Order size + 2.125"
Glass size = Order size + 1.312"

120B

ORDER INFORMATION:
Order size = Inside dimension of frame, (W+H)
Cutout size = Order size + 1.5"
Glass size = Order size + 1.375"

When used in 1- 3/4" doors, Glass Pocket >2.5"

Models for Multiple Panes

Cross Section Views *Additional frame configurations may be available. See NOTE at bottom of page. *

110-D2

Non Rated Glass
1/2" Spacer
Listed Glass
1/4" Spacer
Glazing Tape if required
Allowable Door Sizes
$1\,3/4$" to $2\,1/4$"
Labeled Doors
Allowable Door Sizes
$1\,3/8$" to $2\,1/4$"
Labeled Doors

110/110B-D2(PATENT NO. 8,156,699 B2) Double Glazed
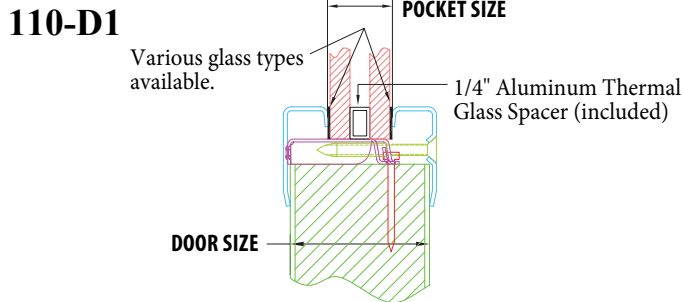**110/110B-T** (PATENT NO. 8,156,699 B2) Triple Glazed

ORDER INFORMATION:

Order size = Visible Dimensions of Center Pane, (W+H)

Glass sizes = Center Pane Order size + $3/4$"

Outer Pane(s) Order size - $1/4$"

Cutout size = Order size + $1\,1/2$"

UL Listed 20, 45, and 60 min when seated pane is listed glazing material. The outer pane can be listed or non-listed glazing material. **Glazing tape recommended FG3000S45 or FG3000S90.**

110-D1

POCKET SIZE
Various glass types available.
1/4" Aluminum Thermal Glass Spacer (included)
DOOR SIZE

110-D1 DOUBLE GLAZED SHOWN (PATENT NO. 8,156,699 B2)
ORDER INFORMATION:

Order size = Visible Dimensions of Center Pane, (W+H)
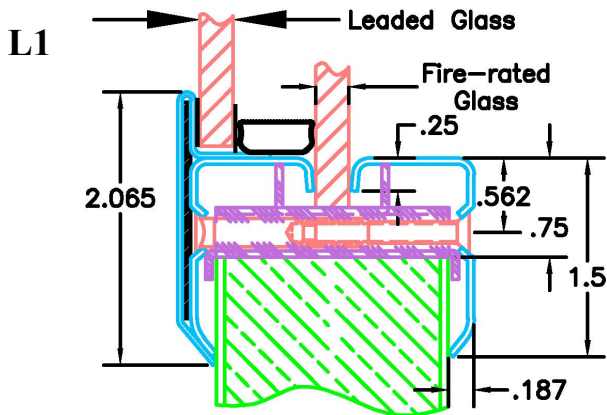
Cutout size = Order size + 1- 1/2"
Glass size = Order size + 3/4"

NO Fire Rating | Glazing Tape Recommended | See tape options p. 12

Glass Note:
See non-Rated Glazing Recommendations p. 11

Models for Leaded Doors

L1

Leaded Glass
Fire-rated Glass
.25
2.065
.562
.75
1.5
.187

115-L1 (PATENT NO. 4,550,542)

ORDER INFORMATION:
Order size = Visible Dimensions of Center Pane, (W+H)
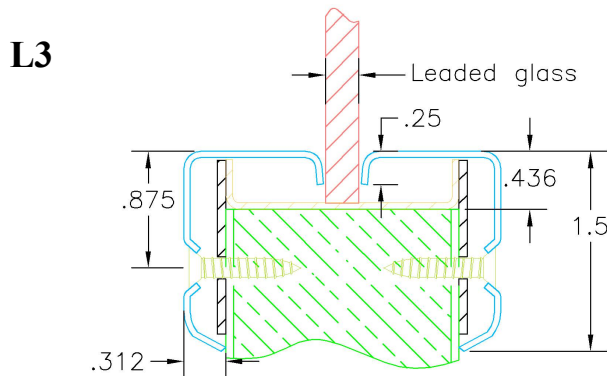MIN WIDTH=2.5" MAX WIDTH or HEIGHT= 33"
Glass size=Center Pane Order size + 3/4"
Outer Pane(s) Order size - 3/16"
Cutout Size = Order size + 1 5/8"
UL Listed 20, 45, & 60 mins when seated pane is listed glazing material & outer pane is leaded glass.

Glazing tape recommended. Use additional tape to eliminate looseness or rattling. See tape options on page 12.

L3

Leaded glass
.25
.436
.875
1.5
.312

115-L3 (PATENT NO. 4,550,542)
ORDER INFORMATION:
Order size = Visible Dimensions of Center Pane, (W+H)
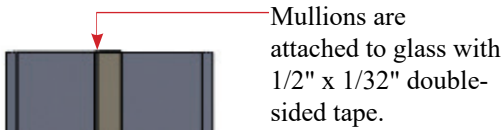Cutout size = Order size + 7/8"
Glass size = Order size + 3/4"
Glazing Tape Recommended, see p. 12

*NOTE- Additional frame configurations may be available. If you require a kit not pictured here, please contact us with specific requirements so we can determine the best option.

Before choosing a mullion, please carefully consider the following-

Frames w/ aluminum or steel mullions carry the same **UL Fire Rating** as our Standard Frames when installed w/ a single pane of Listed glass | Aluminum mullions can be veneer wrapped but carry **NO** Fire Rating | Steel mullions cannot be veneer wrapped | Mullions are priced on a multiplier basis depending on size & complexity of the grid.
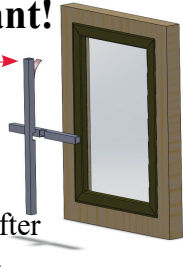

3/4" Painted Aluminum Tape On Mullions

Mullions are attached to glass with 1/2" x 1/32" double-sided tape.

Description

3/4" Square Extruded Aluminum Tubing | Milled flush intersections | Shipped knocked down to install when frames are installed | Installed securely to glass w/ double-sided tape | No gaps | High quality, low cost | Veneer Available*

*When mullions are veneer wrapped, they carry NO fire rating.*

Important!

DO NOT peel backing from tape until ready for final placement.

Mullions cannot be adjusted after tape makes contact with glass.

Limitations

Minimum door thickness is 1-3/4". All Models ¼" max glass pocket for a 1-3/4" door. For 2-¼" doors, max glass pocket is 3/4".

Order Information (110 in standard 1 3/4" doors)

Order Size = Frame inside dimension
Door Cutout Size = Order size + 1 1/2"
Glass Size = Order size + 3/4"
One-way mullion - glass max 3/8" | Cross mullions - glass max 1/4"
Glass must be a single pane of Listed glass to maintain fire rating.

5/8" Painted Steel Welded Mullions
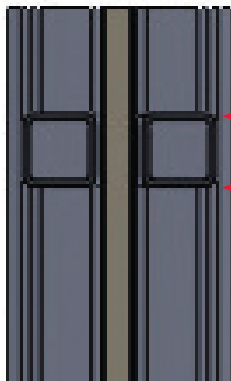
All joints are MIG welded and ground.

Description

18 Ga. (.045) x 5/8" Square Steel Tubing | Frame with welded mullions creates a divided light effect | Available welded into a 3/4" tube surround.

Limitations

Cross mullions have 1/16" offset to conceal tube edge radii.
Model 110/110B in 2-1/4" doors, Cross mullions have 3/4" max glass pocket, & One-Way mullions have 7/8" max glass pocket.

Order Information (110 in standard 1 3/4" doors)

Order Size = Frame inside dimension
Door Cutout Size = Order size + 1-1/2"
Glass Size = Order size + 3/4"
One-way mullion - glass max 3/8" | Cross mullions - glass max 1/4"
Glass must be a single pane of Listed glass to maintain fire rating.

1" to 3" Steel Formed Mullions
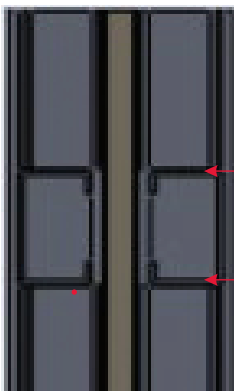
All joints are MIG welded and ground.

Description

Available in 18 Ga. only | Frame with a face dimension of 1"-3" creates a divided light effect | Wire-welded to frame from inside mullions for a clean appearance | Painted Cold Rolled Steel, Painted Galvanized, or Stainless Steel

Limitations

Model 110/110B in 1-3/4" doors have 3/4" max glass pocket.
For other models max glass pocket is 1".
Welded mullions cannot be veneer wrapped.

Top Coating for Fire Door Hardware

We offer 3 standard finishes in Gray, Beige, or Dark Bronze polyester powder coating. These coatings are tough, corrosion resistant, & provide an exceptionally durable surface. Special colors are lacquer, industrial enamel, or powder coatings dependent on color.

Gray

Dark Bronze

Beige
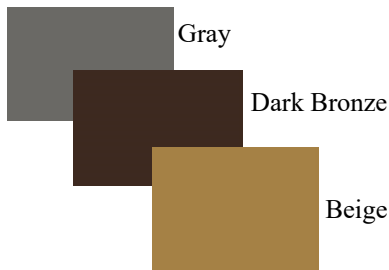
We use RAL Color, the most popular color standard in America.

NOTE Digital or printed media may distort or misrepresent true properties of colors. For more exact color matching, please request a color sample.

Important Guidelines:

1. Many top coats have good compatibility with powder coatings. Exceptions are some enamels and many latex- or water-based paints.
2. It is necessary that the surface be thoroughly sanded prior to the application of **any** top coat. Make sure the surface is clean and dry.
3. To ensure compatibility, always **test the surface** by **painting a small area** on a non-visible portion of the product and check for proper adhesion **before** proceeding.
4. Final finish of the product is the responsibility of the purchaser. We do not warrant the suitability of the product for any particular application.

Non-rated Glazing Recommendations

Please refer to glazing tape options in chart below. We recommend glazing tape be used with all non-rated installations. Add allowance for glazing tape to the glass thickness to determine proper glass pocket.
Example: 1/16" glazing tape both sides + ¼" glass = 3/8" glass pocket.

Always evenly tighten screws around the perimeter of the frame to prevent glass breakage.

SEALED INSULATED GLASS: Insulated glass sometimes has a seal up to ½" wide. Use our 118D or 118MD to ensure this sealer is hidden from view upon installation.

Pemko Tape	Description	Norton PVC Tape	Description
1173-008	FG3000S45-8'	1531-008	1/16" X 3/8" X 8' V982BL
1173-016	FG3000S45-16'	1531-016	1/16" X 3/8" X 16' V982BL
1174-008	FG3000S90-8'	1532-008	1/8" X 3/8" X 8" V984BL
1174-016	FG3000S90-16'	1532-016	1/8" X 3/8" X 16' V984BL
		1530-008	1/32" X 3/8" X 8' V981BL
		1530-016	1/32" X 3/8" X 16' V981BL

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Glass & Glazing Tape

Glass can be ordered separately or in a lite kit complete with appropriate frame & tape.

Part #	Fire Rated Glass	Recommended Model
600-204	Keralite FR-F (Filmed 3/16")	110/110B
601-203	Keralite FR-L (Laminated 5/16")	110/110B
633-206	Keralite Safeguard (Laminated 5/16")	110/110B
603-205	Pyran Platinum Filmed (3/16")	110/110B
607-506	¼" PyroSwiss	110/110B
608-211	¼" Nu-Wire Safety Glass	110/110B
	Leaded Glass	
651-160	5/16" Leaded Glass (1/16" lead equiv.)	115/105M
651-180	9/16" Leaded glass (1/8" lead equiv.)	115/105M
	Non-Rated Glass	
604-406	¼" Clear Tempered	110/110B
605-410	⅜" Clear Tempered	110/110B
606-412	½" Clear Tempered	110/110B
617-420	¼" Tempered – Acid Etched	110/110B
629-427	¼" Grey Tempered	110/110B
630-459	¼" Grey Mirrorpane Tempered	110/110B
631-470	¼" Tempered Reeded Glass	110/110B
632-471	3/16" Tempered Rain Glass	110/110B
615-275	¼" Arctic White Laminated	110/110B
616-276	⅜" Arctic Snow White Laminated	110/110B
622-256	¼" Clear Laminated .030 AS1	110/110B
623-257	⅜" Clear Laminated .030 AS1	110/110B
624-258	½" Clear Laminated .030 AS1	110/110B
625-259	½" Clear Laminated .060 Interlayer	110/110B
626-263	5/8" Clear Laminated .060 Interlayer	110/110B
627-277	¼" Polar White Laminated .030	110/110B
628-150	¼" Mirror (One Sided)	110/110B
609-1000	½" Dual Sealed Unit – No Argon	118MD/118D
610-1000	5/8" Dual Sealed Unit – No Argon	118MD/118D
611-1000	1" Dual Sealed Unit – No Argon	118MD/118D
613-1000	5/8" Dual Sealed Unit – with Argon	118MD/118D
614-1000	1" Dual Sealed Unit – with Argon	118MD/118D
618-550	¼" Polycarbonate	110/110B
619-552	⅜" Polycarbonate	110/110B
620-555	½" Polycarbonate	110/110B
621-554	.236 Abrasion Resistant Polycarbonate	110/110B

Glass is generally ready for shipment 10-14 work days from date the order is received. Please contact us for current lead times, price quotes, & estimated shipping costs.

By ordering frames and glass together in 1 lite kit, we mitigate the risk of mismatching glass to frame, which can jeopardize an entire application's compliance with building & fire codes.

Pemko Tape	Description	Norton PVC Tape	Description
1173-008	FG3000S45-8'	1531-008	1/16" X 3/8" X 8' V982BL
1173-016	FG3000S45-16'	1531-016	1/16" X 3/8" X 16' V982BL
1174-008	FG3000S90-8'	1532-008	1/8" X 3/8" X 8' V984BL
1174-016	FG3000S90-16'	1532-016	1/8" X 3/8" X 16' V984BL
		1530-008	1/32" X 3/8" X 8' V981BL
		1530-016	1/32" X 3/8" X 16' V981BL

WHY CHOOSE KERALITE Laminated?

Keralite Laminated is the best fire- and impact-protective glass ceramic of its class, with the lowest haze value and highest color-rendering index of any fire-rated glass ceramic on the market.

Fire-Protective
This glass product can withstand fire exposure to the non-fire side and protects from flames, smoke and hot gases.

Impact safety
Impact safety rated to meet the highest human impact safety ratings.

Hose stream tested
This product has passed the hose stream test.

TECHNICAL SPECIFICATIONS

Fire rating	20-90, 180 Minutes
Listings/Approvals	UL 9, 10B, 10C; NFPA 80, 252, 257; CAN/ULC-S104, S106
Building code markings	D-H-20/45/60/90/180; OH-20/45/60/90
Impact Safety Rating	CPSC 16CFR 1201; CAN/CGSB 12.1-M90; ANSI Z97.1
Application Conditions	Interior

Product	Keralite Laminated
Nominal thickness	0.345 in. (8.8 mm)
Thickness tolerance	-0.031 in. to +0.031 in. (-0.8 mm to +0.8 mm)
Length tolerance	+0.156 in. to -0.064 in. (+4 mm to -1.6 mm)
Edge Cover	0.5 in. to 0.625 in. (12.7 mm to 15.9 mm)
Window/Transom/Sidelite: width x height, area*	**20-90:** 95.563 in. x 95.375 in., 4,500 sq. in. (2.4 m x 2.4 m, 2.9 sq. m) **180:** N/A
Door, Non-Temp Rise: width x height, area*	**20-90:** 46.5 in. x 78 in., 3,627 sq. in. (1.2 m x 2 m, 2.3 sq. m) **180:** N/A
Door, Temp Rise width x height, area*	**20-45:** N/A **60-180:** 33 in. x 10 in., 100 sq. in. (0.8 m x 0.3 m, 0.1 sq. m)
Weight (lbs/sqft.; kg/sqm.)	4.3 lbs./sq. ft. (20.8 kg/sq. m)
STC/OITC Rating	34/31
Visible Light Transmission	85.6%
Light reflection pL ext./int.	7.8%
U value BTU/(hr*sqft*degF)	0.87 Summer; 0.99 Winter
Solar Heat Gain Coefficient	0.83
Shading Coefficient	0.1
Energy Transmission tE	79.3

*Height multiplied by width cannot exceed maximum exposed area.

Keralite Laminated is available in products from:

OMNI OEM GLASS FABRICATION

ALL METAL STAMPING, INC.

2444 Industrial Drive
Neenah, WI
54956
(920) 233-3333

411 West Spruce St.
Abbotsford, WI
54405
(715) 223-6324

SAINT-GOBAIN

WHY CHOOSE KERALITE Filmed?

Keralite Filmed is the best fire- and impact-protective glass ceramic of its class, with the lowest haze value and highest color-rendering index of any fire-rated glass ceramic on the market.

Fire-Protective
This glass product can withstand fire exposure to the non-fire side and protects from flames, smoke and hot gases.

Impact safety
Impact safety rated to meet the highest human impact safety ratings.

Hose stream tested
This product has passed the hose stream test.

TECHNICAL SPECIFICATIONS

Fire rating	20-90, 180 Minutes
Listings/Approvals	UL 9, 10B, 10C; NFPA 80, 252, 257; CAN/ULC-S104, S106
Building code markings	D-H-20/45/60/90/180; OH-20/45/60/90
Impact Safety Rating	CPSC 16CFR 1201; CAN/CGSB 12.1-M90; ANSI Z97.1
Application Conditions	Interior

Product	Keralite Filmed
Nominal thickness	0.197 in. (5 mm)
Thickness tolerance	-0.016 in. to +0.016 in. (-0.4 mm to +0.4 mm)
Length tolerance	+0.063 in. to -0.063 in. (+1.6 mm to -1.6 mm)
Edge Cover	0.5 in. to 0.625 in. (12.7 mm to 15.9 mm)
Window/Transom/Sidelite: width x height, area*	**20-90:** 95.563 in. x 95.375 in., 4,500 sq. in. (2.4 m x 2.4 m, 2.9 sq. m) **180:** N/A
Door, Non-Temp Rise: width x height, area*	**20-90:** 46.5 in. x 78 in., 3,627 sq. in. (1.2 m x 2 m, 2.3 sq. m) **180:** N/A
Door, Temp Rise width x height, area*	**20-45:** N/A **60-180:** 33 in. x 10 in., 100 sq. in. (0.8 m x 0.3 m, 0.1 sq. m)
Weight (lbs/sqft.; kg/sqm.)	2.5 lbs./sq. ft. (12.5 kg/sq. m)
STC/OITC Rating	31/27
Visible Light Transmission	88%
Light reflection pL ext./int.	8%
U value BTU/(hr*sqft*degF)	0.93 Summer; 1.03 Winter
Solar Heat Gain Coefficient	0.88
Shading Coefficient	1.01
Energy Transmission tE	86.3

*Height multiplied by width cannot exceed maximum exposed area.

Keralite Filmed is available in products from:

OMNI OEM GLASS FABRICATION

ALL METAL STAMPING, INC.

2444 Industrial Drive
Neenah, WI
54956
(920) 233-3333

411 West Spruce St.
Abbotsford, WI
54405
(715) 223-6324

WHY CHOOSE PYROSWISS?

Pyroswiss is a highly tempered safety glass with special edge treatment and specially high tempering to withstand high thermal stress. Free from UV-sensitive interlayers or embedded wires, it provides very high transparency and light transmission, offering freedom of design in interior and exterior applications.

Fire-Protective
This glass product can withstand fire exposure to the non-fire side and protects from flames, smoke and hot gases.

Impact safety
Impact safety rated to meet the highest human impact safety ratings.

Pyroswiss is available in products from:

2444 Industrial Drive
Neenah, WI
54956
(920) 233-3333

411 West Spruce St.
Abbotsford, WI
54405
(715) 223-6324

TECHNICAL SPECIFICATIONS

Fire rating	20 Minutes
Listings/Approvals	UL 9, 10B, 10C; NFPA 80, 252, 257; CAN/ULC-S104, S106
Building code markings	D-20, OH-20 (no hose stream)
Impact Safety Rating	CPSC 16CFR 1201; CAN/CGSB 12.1-M90; ANSI Z97.1
Application Conditions	Interior/Exterior

Product	Pyroswiss 20
Nominal thickness	0.236 in. (6 mm)
Thickness tolerance	+0.008 in. to -0.017 in. (+0.20 mm to -0.44 mm)
Length tolerance	+0.078 in. to -0.078 in. (+2 mm to -2 mm)
Edge Cover	0.5 in. to 0.63 in. (12. 7 mm to 15.9 mm)
Window/Transom/Sidelite: max exposed width x height, area*	95.5 in. x 95.5 in., 4,626 sq. in. (2.426m x 2.426m, 2.984 sq. m.)
Swinging Doors: max exposed width x height, area*	47.5 in. x 95.5 in., 3,419 sq. in. (1.207m x 2.426m, 2.206 sq. m.)
Weight	2.9 lbs./sq. ft. (14.4 kg/sq. m)
STC/OITC rating	32/28
Visible transmittance	87.8%
Light reflection pL ext./int.	8.4% / 8.5%
U value BTU/(hr*sqft*degF)	0.93 Summer; 1.03 Winter
Solar heat gain coefficient	0.82
Shading coefficient	0.94
Energy transmission	77.2%

*Height multiplied by width cannot exceed maximum exposed area.

SAINT-GOBAIN

WHY CHOOSE KERALITE SAFEGUARD?

Keralite SafeGuard is a laminated and filmed fire-rated glass ceramic product that offers combined fire, impact and intrusion protection. Buildings with SafeGuard installed provide a safe zone for occupants, protecting against the deadly effects of active shooters, intruders and terrorists.

Fire-Protective
This glass product can withstand fire exposure to the non-fire side and protects from flames, smoke and hot gases.

Impact safety
Impact safety rated to meet the highest human impact safety ratings.

Hose stream tested
This product has passed the hose stream test.

TECHNICAL SPECIFICATIONS

Fire rating	20-90, 180 Minutes
Listings/Approvals	UL 9, 10B, 10C; NFPA 80, 252, 257; CAN/ULC-S104, S106
Building code markings	D-H-20/45/60/90/180; OH-20/45/60/90
Impact Safety Rating	CPSC 16CFR 1201, CAN/CGSB-12.1-M90, ANSI Z97.1
Applications	Interior/Exterior

Product	Keralite Safeguard
Nominal thickness	0.345 in. (8.8 mm)
Thickness tolerance	-0.031 in. to +0.031 in. (-0.8 mm to +0.8 mm)
Length tolerance	+0.156 in. to -0.0625 in. (+4 mm to -1.6 mm)
Edge cover	0.5 in. to 0.63 in. (12. 7 mm to 15.9 mm)
Window/Transom/Sidelite: max exposed width x height, area*	**20-90:** 95.563 in. x 95.375 in., 4,500 sq. in. (2.43 m x 2.4 m, 2.9 sq. m) **180:** N/A
Door, Non-Temp Rise: max exposed width x height, area*	**20-90:** 46.5 in. x 78 in., 3,627 sq. in. (1.18 m x 1.98 m, 2.34 sq. m) **180:** N/A
Door, Temp Rise: max exposed width x height, area*	**20-45:** N/A **60-180:** 33 in. x 10 in., 100 sq. in. (0.84 m x 0.25 m, 0.06 sq. m)
Weight	4.3 lbs./sq. ft. (20.8 kg/sq. m)
STC/OITC rating	34/31
Visible transmittance	85.6%
Light reflection pL ext./int.	7.8%
U value BTU/(hr*sqft*degF)	0.87 Summer; 0.99 Winter
Solar heat gain coefficient	0.83
Shading coefficient	0.1
Energy transmission	79.3

Maximum sheet size for this product is 44" x 96".
*Height multiplied by width cannot exceed maximum exposed area.

Keralite SafeGuard is available in products from:

2444 Industrial Drive
Neenah, WI
54956
(920) 233-3333

411 West Spruce St.
Abbotsford, WI
54405
(715) 223-6324

vetrotech.com
Vetrotech North America
2018 B St. NW #110 Auburn, WA 98001
(888) 803-9533

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SAINT-GOBAIN

These units are NOT fire rated.

| Order Size (Width X Height)	Cutout Size (Width X Height)
12 X 12	13-1/2 X 13-1/2
18 X 12	19-1/2 X 13-1/2
18 X 18	19-1/2 X 19-1/2
24 X 12	25-1/2 X 13-1/2
24 X 18	25-1/2 X 19-1/2
24 X 24	25-1/2 X 25-1/2

Product Details

1. all louver orders are pending approval of the General Manager based on current orders in process.
2. available in CRS (Cold Rolled Steel) or Galvanized material. Request pricing for Galvanized material. NO Stainless Steel at this time.
3. available in all 3 Standard Colors: beige, gray, or dark bronze.
4. special colors available with the appropriate painting up-charge.
   a. for powder paint add 20%.
   b. for lacquer add 20% + $50 Setup per Color/Order.
5. no veneer wrapping.
6. Model 180 is available for doors 1-3/4" to 2-1/4". Model 180 uses 110/110B frame to hold the louver core. 40% Pricing up-charge for doors greater than 1- 3/4".
7. Model 185 is available for 1-3/8" doors. Model 185 uses 117M frame to hold the louver core.

We use RAL Color, the most popular color standard in America.

Standard Powder Paint Colors

Gray

Dark Bronze

Beige
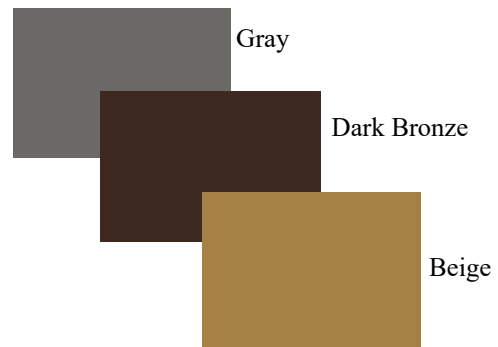
NOTE: Digital media may distort or misrepresent true qualities of the colors. For more exact color matching, please request a color sample.

EA sets are Listed to 90 Minutes
Double Edge Sets are Listed to 90 Minutes
Listed under both Neutral & Positive Pressure Standards

UL Listed in Steel & Stainless Steel.
UL Listed with Veneer Wrapping under both Neutral & Positive Pressure.

Astragal — Edge

RH ACTIVE
#205 LH INACTIVE **#206**
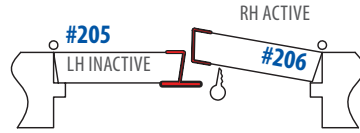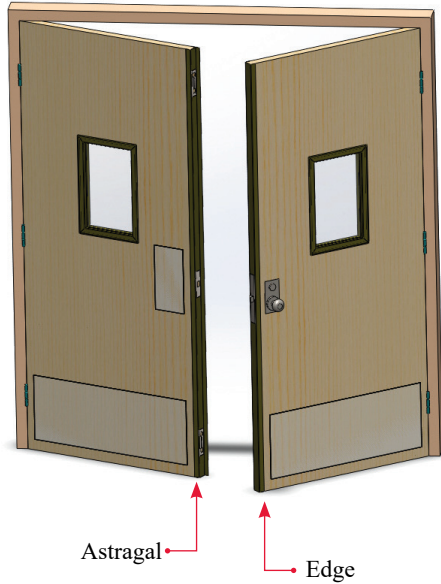
207 Standard Bevel Set - Astragal & Edge

RH ACTIVE
#204 LH INACTIVE **#216**
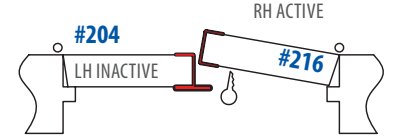
217 Square Astragal & Square Edge Set

RH ACTIVE
#206 LH INACTIVE **#206**
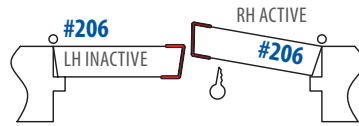
208 Double Edge Set - Beveled (shown)
223 Double Edge Set - Square (216 + 216)
224 1 Square/1 Beveled (216 + 206)
225 Edge Set - Parallel Beveled (227 + 206)
225 for Double Egress Doors

#216 RHR INACTIVE
#210 LHR ACTIVE
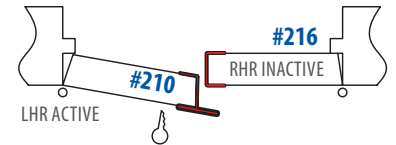
218 Reverse Bevel Astragal w/ Square Edge Set

RH ACTIVE
#210 LH INACTIVE **#206**

209 Parallel Bevel Set - Astragal & Edge for Double Egress Doors

RH ACTIVE
#205 LH INACTIVE **#216**
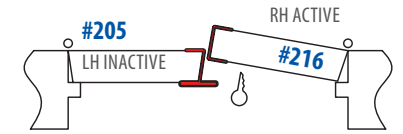
219 Beveled Astragal with Square Edge Set

#206 RHR INACTIVE
#210 LHR ACTIVE
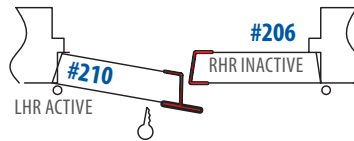
211 Reverse Bevel Set - Astragal & Edge

#206 RHR INACTIVE
#204 LHR ACTIVE
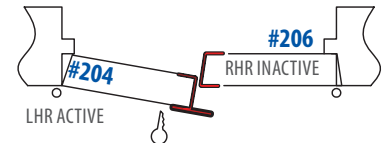
226 Square Astragal w/ Reverse Beveled Edge

RH ACTIVE
#204 LH INACTIVE **#206**
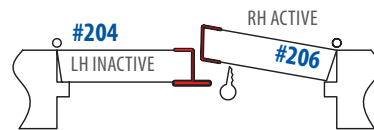
212 Square Astragal w/ Beveled Edge

OTHER ITEMS

- Lead Lined Astragals
- Dutch Door & Transom Channels - 222
- T, Z, and Flat Astragals
- Hinge Edge & Lock Edge Protectors
- Aluminum Door Flashings
- Standard Finish is Beige, Gray, or Dark Bronze Powder Paint
- All bevels are 1/8" in 2"
- Punched & coined for #8 x 3/4 Phillips Flat Head Screws (included)
- Hole Centers 12" or less, 3.5" MAX from ends and machined openings
- AMS Machining Templates must be completed for each Machined item (available on our website)
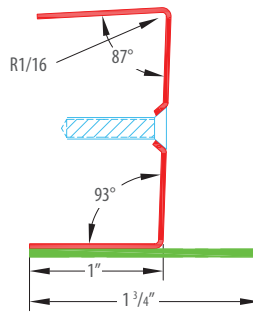- All items available in stainless steel
- Veneer Wrapping available

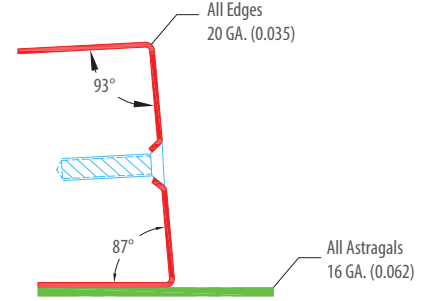**Standard Edges are 20 GA. (.035) CRS and Astragal Flanges are 16 GA. (.062) CRS**
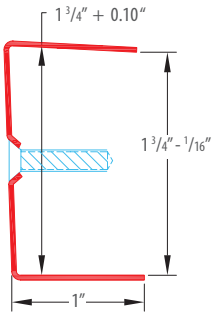
206   Beveled Edge (shown)
216   Square Edge (no bevel)
227   Beveled Edge Machined w/Strike open to low
side of bevel
231   "L" Shaped Lock Edge Protector - Beveled
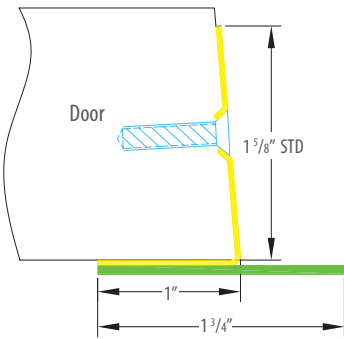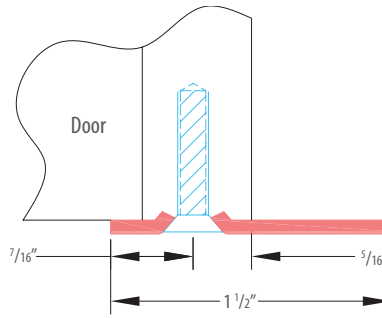233   "L" Shaped Lock Edge Protector - Square

205 Standard Beveled Astragal

210   Reverse Beveled Astragal
204   Square Astragal (No Bevel)
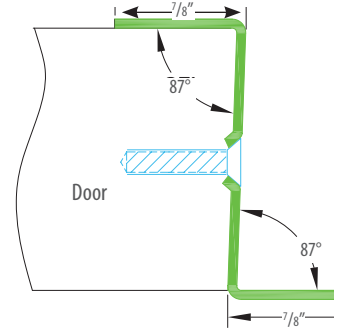
"T" (18 Ga.), "Z" (16 Ga.) and Flat Astragals (14 Ga.)

18 Ga. (.048) CRS Edge / 16 Ga. (.062) Astragal
229   "T" Astragal - Reversed Bevel (shown)
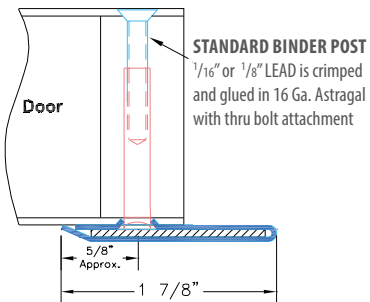213   "T" Astragal - Beveled
214   "T" Astragal - Square
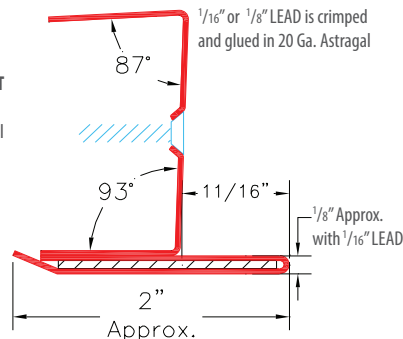
14 GA. (.074) CRS
215 Flat Astragal

16 GA. (.062) CRS Standard
238   "Z" Astragal - Beveled (shown)
239   "Z" Astragal - Reverse Bevel
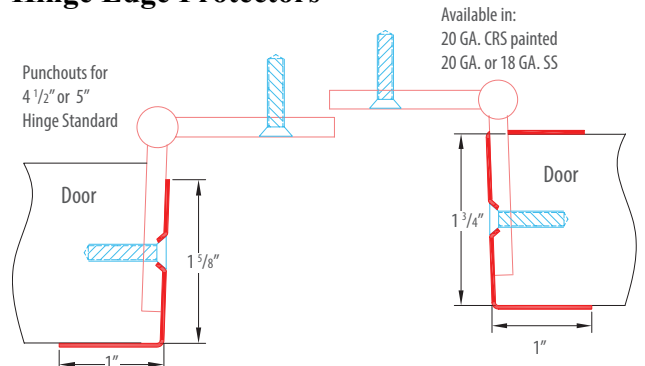237   "Z" Astragal - Square

Lead Lined Astragals

18 Ga. (.048) CRS Edge Standard
236   Lead Lined Flat Astragal
(no fire ratings)
UL Listed for Steel Doors ONLY

205L Lead Lined Astragal Standard
Bevel (shown)
204L Lead Lined Astragal Square (no
bevel)
210L Lead Lined Astragal Reverse
Bevel
UL Listed to 90 minutes

Hinge Edge Protectors

232   "L" Shaped - Beveled
235   "L" Shaped - Square

230   "U" Shaped - Beveled
234   "U" Shaped - Square

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Edges & Astragals on pages 18 & 19 are approved for Wood or Plastic faced doors rated up to 90 min, & Hollow Metal, Steel covered composite doors rated up to 3 hours.*

***Exceptions:** 236 Lead Lined Flat Astragals for Steel Doors up to 3 hours.

Material: 20, 18, or 16 GA. Steel, Galvanized Steel, or Stainless Steel.*
*****Exceptions**:

1. 215 Flat Astragal 14 GA. Standard.
2. 236 Lead lined Flat Astragal 18 GA. ONLY
3. 237, 238, and 239 "Z" astragals 16 GA. Standard
4. 213, 214, and 229 "T" astragals 18 GA. Standard

Astragal Overlap Lengths: ½" to 3½" max. **Leg Lengths:** Can vary between 1/2" to 3 1/2" *

*Exceptions:
231, 232, 233, 235, 213, 214, 229, 237, 238, 239 - ½" to 2" max.

Door Thicknesses: 1 3/8" to 2 1/4" thick & up to 120" in length. **Lead Lined:** Lead thickness can vary from 1/16" to 3/8".

Veneer Wrapped: All models approved to be veneer wrapped up to 90 minutes Neutral & Positive Pressure.

Veneer Wrapped Products

UL Listed with the same parameters as our standard products.

Disclaimer-

Wood veneer owes its inherent beauty to variations in grain, color, texture & pattern occurring as a result of nature. Veneers from different regions of the country or world can have different variations in grain, color, texture & pattern.

All Metal Stamping, Inc., does not guarantee the grain, color, texture or pattern of any veneer products sold. Please contact us if you require a close match to your doors. A sample veneer will be required so we can compare to our stock or send to our supplier. Please be aware this will add considerable time to our ability to deliver product & may affect price if a special order is required.

Standard Species: Red Oak, White Birch, Maple, & Cherry
Other Species: Available upon request. Price & lead time dependent on species, length, & cut. Please request a quote.
Finish: Ready to stain and seal.
Lead Time: 7-10 business days from the date the order is received. Subject to availability.

Note: Product for interior use ONLY.

Our veneer supplier offers these tips to ensure your product is correctly finished-
- Always test finish your product for compatibility.
- This veneer is pre-sanded - a clean sanding is all that is needed.
- Apply sealer and allow to dry.
- Use finishes with a high percent of solids.
- Do not rush the finishing.
- Lacquer, varnish, epoxy, urethane, and polyesters have all been used successfully.

MATERIAL: 20 GA. Galvanized Steel Powder
Painted Beige, Gray, or Dark Bronze

SPECIALS: 20 GA. SS w/#4
Brushed Finish Veneer Wrapped

For Wood Doors

AMS PART NO.	DEVICE MANUFACTURER	SERIES
251	Von Duprin Series	9847/9947
251A	Von Duprin CVC Series	9849/9949
251B	Von Duprin CVC Series	9850/9950
252	Von Duprin Series	5547
253	Von Duprin Series	3347/3547
254	DORMA Device	4100/6100
255	Sargent Device	8600
256	Adams Rite Device	3900/8900
257	Yale Device	7100
258	Monarch/Falcon Device	(F) 17-24-18-25-XX-C
260	Arrow Device	F3600
261	Corbin Russwin Device	5800
262	Precision Device	FL 1700/1700
263	Sargent Device	PP8600 & PR8600
264	DORMA Device	9100
264A	DORMA Device	9600
265	Precision Device	FL 2700/2700
266	DORMA Device	5100
267	Von Duprin Series	3347A/3547A
267A	Von Duprin CVC Series	3350A/3550A
268	Assa Abloy Vertical Lock Devices	WD 7000/MP9800
269	Monarch/Falcon Centerslide Devices	(F) 17-24-18-25-XX-C
270	Stanley Series (Black & Decker)	QED 100
271	Hager CVR Series	4500
272	Detex CVR Series	7000
273	Cal-Royal Series	W77CVR/W98CVR
274	Lawrence Series	LH8850/8650
275	Schlage Series	LM9200
276	PDQ Series	6200CV(F)
277.5	Corbin Russwin Series	FE6800 MPL

An AMS Template must be completed & accompany your order.
Templates are available on our website
www.allmetalstamping.com

20 GA. (.035)

20 GA. GALVANIZED CHANNEL (.035)
Adds an additional $1/32$" to the edge of the door.
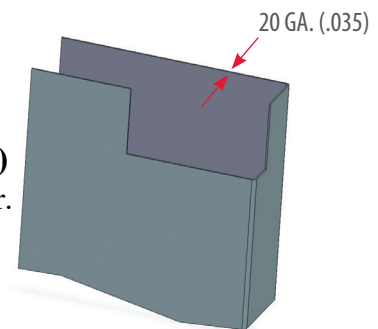
Stock Sizes ship the next business day w/ NO up-charge & are subject to management approval. Please specify ship date on each order. Orders are accepted for Quick Ship Service based on Production Schedule & regular business hours. Quick Ship is **NOT** a guaranteed service.

Model 110/110B

In 1- 3/4" doors with 1/4" - 1/2" glass pocket in Beige, Gray, or Dark Bronze polyester powder coating.

Standard Service

Orders will ship 7-10 business days after the date the order is received with NO up-charge. Veneer product is available on 7-10 day service subject to our Production Schedule and availability of the veneer. Contact us for a quote and available veneer species.

5 Day Service

Orders received before 1 P.M. CST/CDT will ship 5 business days following that date with a 5% up-charge per Standard Item. Orders can include fractional and sizes from 3" to 72".

3 Day Service

Orders received before 1 P.M. CST/CDT will ship 3 business days following that date with a 10% up-charge per Standard Item. Orders can include fractional and sizes from 3" to 60".

Special Service

Frame models manufactured for ODD thickness applications are available at an additional charge dependent on our Production Schedule. Orders accepted for 5 DAY QUICK SHIP have a 15% up-charge per item. Orders accepted for 3 DAY QUICK SHIP have a 20% up-charge per item.

Edge & Astragal Sets

In 1-3/4" & 1-13/16" doors w/ standard leg dimensions & standard material requirements.

Machining is as shown on AMS machining templates. A Machining Template must be completed for all machined items & are available on our website https://allmetalstamping.com/downloads

Standard Service

Orders will ship 7-10 business days after the date your order is received with NO up-charges.

Veneer product is available on 7-10 day service subject to Production Schedule and availability of veneer.

5 Day Service

Orders received before 1 P.M. CST/CDT will ship 5 business days following that date with a 5% up-charge per item. Machined and Non-Machined – includes Channels & Sets on p. 18& 19. Any length to 120".

3 Day Service

Orders received before 1 P.M. CST/CDT will ship 3 business days following that date with a 15% up-charge for Machined items and 10% up-charge for Non-Machined items. Includes Channels & Sets on p. 18 & 19. Any length to 120".

Special Service

Available for special machining, non-standard dimensions and "T", "Z", and Flat Astragals. Also includes "L" channels and Hinge Edge & Lock Edge Protectors. Availability of Special Service is dependent on Production Schedule. Orders accepted for 5 DAY QUICK SHIP have a 15% up-charge per Item. Orders accepted for 3 DAY QUICK SHIP have a 20% up-charge per Item.

Channels with Electric Strikes will require 12 business days to manufacture and are not available for Quick Ship Service.

Labeling Policy

All Metal Stamping, Inc. labels frames which meet our UL Listings and Approvals. It is the End User's responsibility to ensure all components used in the openings meet or exceed the fire ratings required.

Use of glass for which All Metal Stamping, Inc. does not have approval, or improper installation, voids our Fire Rating. All Lite Kit Frames and glass combinations must be used in appropriately approved door assemblies.

Interpretation of Building Codes may vary. Consult with the local Authority Having Jurisdiction (AHJ) to determine appropriate standards for your area. The International Building Codes (IBC) no longer allows non-safety rated glass to be used in doors. It is the Purchaser's responsibility to make sure the glass being used is approved in the jurisdiction in which it will be installed.

Installation Notes:

1. Any unit used in an exterior application must be sealed around the outer perimeter of the frame as well as around the glass to protect from water infiltration. Follow Glass Manufacturer's Installation Instructions. All Metal Stamping, Inc. will only stand behind frames used in exterior applications:

    a. If the product is NOT directly exposed to sunlight, corrosive environments, or direct precipitation. The product can be manufactured from Galvanized material.

    b. If the product is exposed to sunlight, precipitation, or coastal environments the product must be manufactured from Stainless Steel.

    c. Our frames are NOT approved for corrosive environments.

2. Listed glass that maintains a temperature rise no more than 250⁰ F above ambient are acceptable for Temperature Rise Doors. Use of these glasses in sizes exceeding 100 in.^{2} in 60 or 90 Minute Fire Rated Openings require prior approval of the Authority Having Jurisdiction (AHJ). Ensure glass is approved before installing.

Limited Warranty

ALL METAL STAMPING, INC. WARRANTS ALL DOOR HARDWARE TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP.

Purchaser assumes responsibility to verify and determine that color, finish, and quality of materials will meet required specifications. No claim shall be allowed unless the Purchaser gives notice to manufacturer within 30 days from the date materials are received.

If color match, finish quality, or glass and cutout fit are not satisfactory, DO NOT INSTALL. UPON INSTALLATION THIS WARRANTY ENDS. Manufacturer's only obligation shall be replacement, refinishing, or refund of the original purchase price, at our option. THESE ARE THE EXCLUSIVE REMEDIES PROVIDED, AND ALL METAL STAMPING, INC. SHALL NOT BE LIABLE FOR ANY OTHER DAMAGES, INCLUDING ANY DIRECT, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.

This warranty does not apply to door hardware which has been abused, altered, improperly installed, used with incompatible or inappropriate components.(EX. Oversized Glass), exposed to corrosive environments, or environments for which the product is not intended. No material shall be returned without prior authorization. This warranty extends only to the original Purchaser who is buying the hardware from All Metal Stamping, Inc. for purposes of resale or use in the ordinary course of their business.
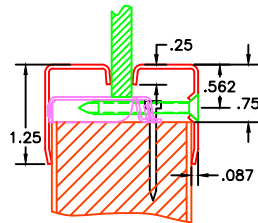
Conditions of Sale

Prices   Subject to change without notice.

Terms of Sale   1% 10 Net 30 days with credit. All other shipments will be Credit Card, C.O.D., or Prepaid. Interest of 1-1/2% per month will be charged on all past due balances.

Receipt of Purchase Orders   Orders can be placed 24/7. We are not responsible for purchase orders lost in transit & cannot guarantee we received faxed purchase orders.
EMAILED orders receive an Order Confirmation as soon as the order is entered and checked. FAXED or MAILED orders must request an Order Confirmation. Daily cutoff time is 1 P.M. CST/CDT for all Orders.

Business Days & Hours   Normal production days and hours are Monday-Thursday, 7:00 AM to 3:30 PM excluding holidays or periods of shut down for routine maintenance or upgrades. We normally do not have production or shipping on Fridays. The office is open Monday-Thursday, 7:00 AM to 4:30 PM. Fridays 7:00 AM to 12:00 PM. Quick Ship and Standard lead times are based on Production Days.

Shipping   All shipping charges incurred will be the responsibility of the Customer. We do **not** ship Freight Free. Parcel shipments are shipped prepaid with freight charges added to the invoice amount. Truck shipments will be freight collect unless prior arrangements are made. We attempt to honor shipping instructions but reserve the right to use our best judgment to determine method of shipment. Seller assumes no liability for loss or damage of product in transit. Costs of special packaging such as crates, boxes reinforced with OSB Board, regular skids, or custom built skids are added to shipping charges on all Invoices. Processing charges are added to the Invoices for customers using their own UPS account numbers.

Cancellations & Changes   Orders for special-made or non-stock size products are NOT subject to cancellation by the customer once production has started. Changes to orders that have been entered into the system will receive a $10.00 Order Change Charge. Changes to orders in process but before production has begun will receive a $20.00 Order Change Charge. If the Order is cancelled once production has begun the Customer will be charged for the prorated amount of work completed.

Returned Merchandise   No merchandise may be returned without prior permission. Machined Edges & Astragals, 5" Metal Channels, and non-standard Lite Kits cannot be returned. On items which are accepted for return, a charge will be assessed to cover the cost of handling and any rework that may be required. The restocking charge will be based on the condition of the material and its purchase price. **All returns must be shipped to us PREPAID.** No credit is guaranteed.

Surcharges   Due to market forces we have charged a Stainless Steel Material Surcharge since March 15, 2010. The Surcharge percentages are updated monthly based on the surcharges reported on the Allegheny-Ludlum website. All Metal Stamping, Inc. reserves the right to add additional material surcharges when warranted.

Limitation of Liability   Manufacturer's liability for damages shall not exceed the purchase price of the material claimed to be defective. Buyer assumes responsibility to verify and determine that color, finish, & quality of materials meet specifications of the order. No claim shall be allowed unless the original purchaser gives notice to manufacturer within 30 days from date materials are received. If color match, finish quality, or glass & cutout fit are not satisfactory, **DO NOT INSTALL. UPON INSTALLATION OUR LIABILITY ENDS. Manufacturer's only obligation shall be replacement, refinishing, or refund of the original purchase price, at our option**. This warranty does not apply to door hardware which has been abused, altered, improperly installed, used with incompatible or inappropriate components (ex. oversized glass), exposed to corrosive environments or environments for which the product is not intended. No material shall be returned without prior authorization. This warranty extends only to the original purchaser who is buying the hardware from All Metal Stamping, Inc. for purposes of resale or use in the ordinary course of their business.

All models included in this guide are Fire-Rated & UL listed. MAX pocket based on 1.75" door.
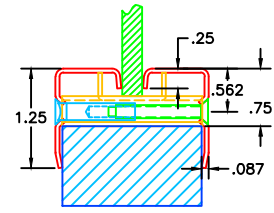
Best selling model, easy installation.

110
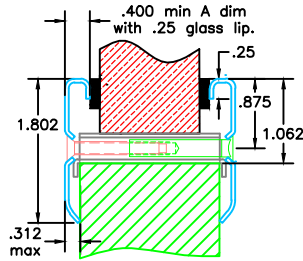Cutout=Order+1.5"
Glass=Order+.75"
Max pocket 1.125

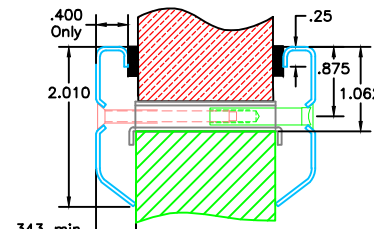*Through bolt design allows for custom applications.*

110B
Cutout=Order+1.5"
Glass=Order+.75"
Max pocket 1.125

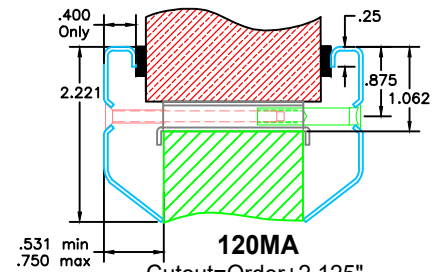Best options for progressively thicker glass.

118MD
Cutout=Order+2.125"
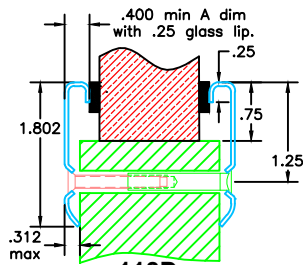Glass=Order+1.312"
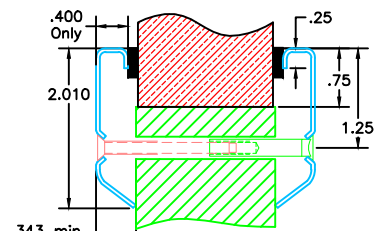Max pocket 1.575

120M
Cutout=Order+2.125"
Glass=Order+1.312"
Min 1.625 Max 1.95 pocket

120MA
Cutout=Order+2.125"
Glass=Order+1.312"
Min 2.0 Max 2.45 pocket

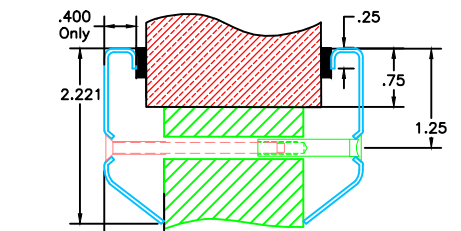These models can be lined with lead. Provide min .312 standoff.

118D
Cutout=Order+1.5"
Glass=Order+1.375"
Max pocket 1.575
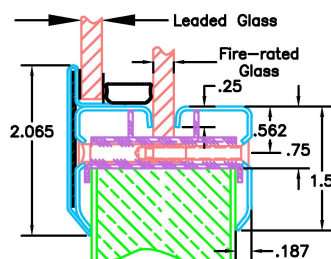Use .312 standoff with lead.

120
Cutout=Order+1.5"
Glass=Order+1.375"
Min 1.625 Max 1.95 pocket

120A
Cutout=Order+1.5"
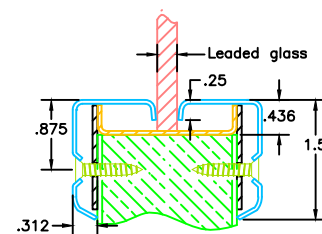Glass=Order+1.375"
Min 2.0 Max 2.45 pocket

Best choice for fire-rated glass in leaded, X-ray doors.

115-L1
Cutout=Order+1.625"
Center Glass=Order+.75"
Leaded glass=Order-.187"

Best value for single pane glass in leaded, X-ray doors.

115-L3
Cutout=Order+.875"
Glass=Order+.75"
Staggered screw holes.
Lead blank is 1.125
Max pocket with support 1.4375

25