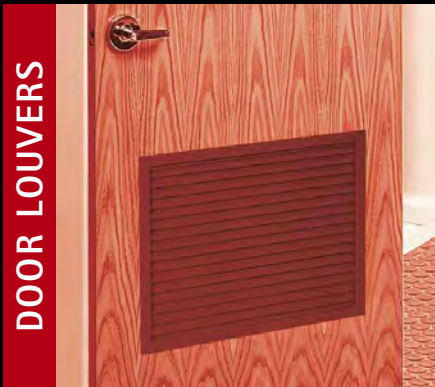


VISION FRAMES



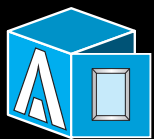
DOOR LOUVERS



GLAZING PRODUCTS



Anemostat
Door Products



WHY BUY ANEMOSTAT?

Sales Support

Service and Performance You Can Depend on



- "Can Do", Knowledgeable, and Refreshingly Helpful Customer Service Staff



- Timely Deliveries using Reliable Carriers



- Industry Leader (most recognized brand with widest product offering)



- We do Favors for Loyal Accounts (but remember: there's only four aces in the deck)



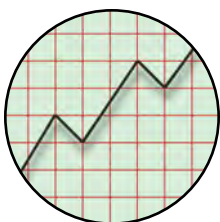
- Murphy Lives at our House too! But the measure of a Good Company is how the problem is resolved.



- Knowledgeable Independent Business People to act as our Sales Agents

Marketing

We Sell Knowledge of the Door Business



- Over 35 years in the business
- Over 20 years Selling Glazing Products



- Architectural and Specification Support
- Online Specs



- Useful Website
- Navigates easily
- Loaded with Useful Information



- Complete Product Catalog
- Detailed Product and Technical Information

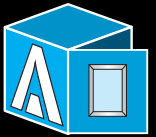


- Web Based Order Tracking



- PowerPoint Presentation to Educate and Train Customers and Architects

WHY BUY ANEMOSTAT?



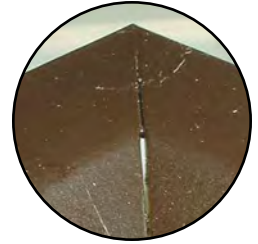
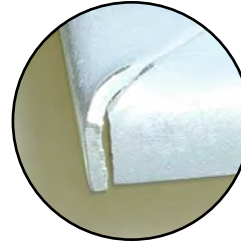
Manufacturing

The Product Quality that you Require

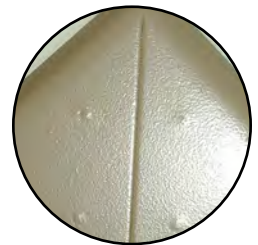
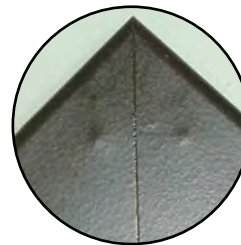


Anemostat

- Smooth, Tight Miters
- No Visible Weld Marks
- Roll Formed for Consistent Product Features



**The
Competition**



- Embossed fire rating label on all applicable products
- All fire rated products comply with UL 10C and NFPA-252 for Positive Pressure

Engineering

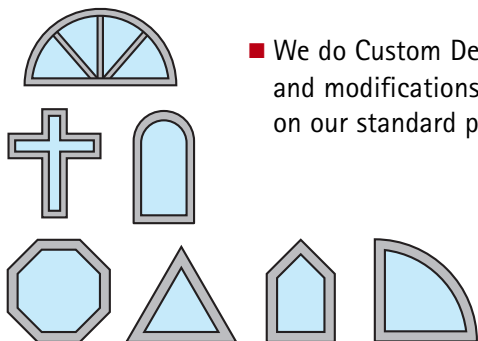
Product Designs that are Aesthetically Pleasing and User Friendly



- Consistent ease of installation
- Customers tell us our products install faster and more efficiently than our competitors without glass breakage issues



- Our engineering staff says "We can do anything given the right amount of time and money"



- We do Custom Designs and modifications based on our standard products



- Fire Tested to the most current building standards world wide



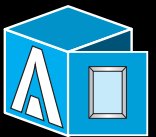
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SG-10-SP-SSD: High Security Metal Vision Frame with Security Sliding Door	
SG-12-LCP: Security Metal Vision Frame with Locking Cuff Port / Food Pass	
BR-7: Bullet and Impact Resistant Metal Vision Frame	
FGS-MS3-FR: Security / Impact Resistant Metal Vision Frame	
SL-IS: Metal Vision Frame with Security Grille for Standard / Special Door or Glass Thickness	
LoPro™-SC-GR: Metal Vision Frame with Security Grille and Operating Security Cover	
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Glazing Products

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SAFE-Wire™: 1/4" (6mm) with Surface Applied Safety Film - Category II Impact / Safety Rated	
Pyrodur™: 9/32" (7mm) Laminated, Clear - Category I Impact / Safety Rated	
Pyrostop®: 3/4" (19mm) - 2-3/8" (62mm) Clear - Category II Impact / Safety Rated - Heat Barrier	
FireLite® NT: 3/16" (5mm) Clear with Surface Applied 3M Safety Film - Category II Impact / Safety Rated	
FireLite® Plus: 5/16" (8mm) Clear - Category II Impact / Safety Rated	
FireLite® IGU: 1" (25mm) Insulated Unit - Category II Impact / Safety Rated	
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MP-750 Lexgard® Laminate: 3/4" (19mm) Bullet Resistant and Forced Entry Security Glazing	
SP-1250 Lexgard® Laminate: 1-5/16" (33mm) Bullet Resistant and Forced Entry Security Glazing	
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Teach me about Glazing
What does the Code say?
IBC Code Changes
What about Labels?
Hose Stream, Thermal Shock and Sprinklers

Glossary of Terms 38, 39

Door Louvers

Stock Sizes 28

Standard 30-32

AFDL: Non-Vision Inverted "Y" Louver
AFDL-T: For use in Transoms, Sidelites or Borrowed Lites
FDLS: Non-Vision Inverted Split "Y" Louver
FLDL-UL: Fire Rated Fusible Link Louver
ADL: Operating (Open/Close), "Z" Blade Louver
CHDL: Non-Vision Inverted "V" Louver, Core Only
CHDL-1F: Non-Vision Inverted "V" Louver, Louver Core with Frame One Side
CHDL-2F: Non-Vision Inverted "V" Louver, Louver Core with Frame Both Sides

Specialty 33

DRDL: Double Inverted "V" Darkroom Louver
SRDL: Storm Proof Louver
FPL-2: Fixed Position Thru Bolted "Z" Blade Louver

Security 34

PLSL: Louver with Security Grille, Non-Vision Inverted Split "Y"
FLDL-UL-SG1: Fusible Link Louver with Security Grille One Side
FLDL-UL-SG2: Fusible Link Louver with Security Grille Both Sides

Edges and Astragals

Standard 36

FMEA: Metal Edge and Astragal (set)
FME: Metal Edge (pair)
FMA: Metal Astragal (each)

Specialty 37

WV-FMEA: Wood Veneer over Metal Edge and Astragal (set)
WV-FME: Wood Veneer over Metal Edge (pair)
HEG / HEG-M: Hinge Edge Guard (each)

NOTES

ALL Metal Products: For Exterior use, High Humidity or Salt Air Application, product must be Galvanized or Stainless Steel.

ALL Glazing Products: Must be used in an appropriately tested door assembly.

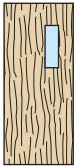
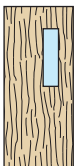
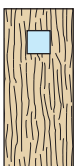
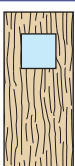
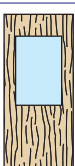
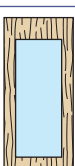
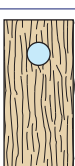
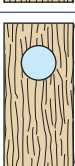

Positive Pressure: All Fire Rated Products meet test requirements of UBC 7.2-97 and UL 10C. For Most Current Info, Consult Factory or check our website: www.anemostat.com

IMPORTANT: Interpretation of building and fire codes may vary. Consult with the local authority having jurisdiction to determine appropriate standards in your area.

VISION FRAMES

Specify Stock Sizes

Save Time and Money

LoPro	Order Size and Door Cutout	Visible Lite	Square Inches Visible Lite	Glass Size
Small Narrow Lite				
	6 x 27 (152mm x 686mm)	4 x 25 (102mm x 635mm)	100	5 x 26 (127mm x 660mm)
	7 x 22 (178mm x 559mm)	5 x 20 (127mm x 508mm)	100	6 x 21 (152mm x 533mm)
	8 x 18 (203mm x 457mm)	6 x 16 (152mm x 406mm)	96	7 x 17 (178mm x 432mm)
Narrow Lite				
	5 x 35 (127mm x 889mm)	3 x 33 (76mm x 838mm)	99	4 x 34 (102mm x 864mm)
	6 x 30 (152mm x 762mm)	4 x 28 (102mm x 711mm)	112	5 x 29 (127mm x 737mm)
	8 x 30 (203mm x 762mm)	6 x 28 (152mm x 711mm)	112	7 x 29 (178mm x 737mm)
	8 x 32 (203mm x 813mm)	6 x 30 (152mm x 762mm)	120	7 x 31 (178mm x 787mm)
	8 x 36 (203mm x 914mm)	6 x 34 (152mm x 864mm)	204	7 x 35 (178mm x 889mm)
	8 x 38 (203mm x 965mm)	6 x 36 (152mm x 914mm)	216	7 x 37 (178mm x 940mm)
Small Square Lite				
	10 x 10 (254mm x 254mm)	8 x 8 (203mm x 203mm)	64	9 x 9 (229mm x 229mm)
	12 x 12 (305mm x 305mm)	10 x 10 (254mm x 254mm)	100	11 x 11 (279mm x 279mm)
Square Lite				
	18 x 18 (457mm x 457mm)	16 x 16 (406mm x 406mm)	256	17 x 17 (432mm x 432mm)
	24 x 24 (610mm x 610mm)	22 x 22 (559mm x 559mm)	484	23 x 23 (584mm x 584mm)
Half Glass Lite				
	18 x 30 (457mm x 762mm)	16 x 28 (406mm x 711mm)	448	17 x 29 (432mm x 737mm)
	18 x 32 (457mm x 813mm)	16 x 30 (406mm x 762mm)	480	17 x 31 (432mm x 787mm)
	24 x 30 (610mm x 762mm)	22 x 28 (559mm x 711mm)	616	23 x 29 (584mm x 737mm)
	24 x 32 (610mm x 813mm)	22 x 30 (559mm x 762mm)	660	23 x 31 (584mm x 787mm)
	24 x 36 (610mm x 914mm)	22 x 34 (559mm x 864mm)	748	23 x 35 (584mm x 889mm)
Full Glass lite				
	24 x 56 (610mm x 1422mm)	22 x 54 (559mm x 1372mm)	1188	23 x 55 (584mm x 1397mm)
	24 x 60 (610mm x 1524mm)	22 x 58 (559mm x 1473mm)	1276	23 x 59 (584mm x 1497mm)
	24 x 66 (610mm x 1676mm)	22 x 64 (559mm x 1626mm)	1408	23 x 65 (584mm x 1651mm)
Small Round Lite				
	12" diameter (305mm)	10" diameter (254mm)	79	11" diameter (279mm)
Medium Round Lite				
	18" diameter (457mm)	16" diameter (406mm)	201	17" diameter (432mm)
Large Round Lite				
	24" diameter (610mm)	22" diameter (559mm)	380	23" diameter (584mm)

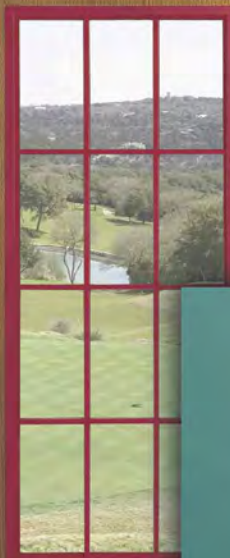
Custom Shapes



Standard



Specialty



Security



DEFINITION

Vision Frames:

May be identified as a lite, lite kit, window frame, door lite, vision panel, vision kit, vision lite, or window kit. All describe the same product, which is the metal or wood frame that holds the glass in place in the door.

Security Vision Frames:

Usually incorporates heavier gauges of steel and perforated lattice plates to fit over the glazing material to provide better protection against vandalism or heavy abuse.

Custom Shapes

LoPro™-CS

Lo-Profile Custom Shape Metal Vision Frame

Lo-FP

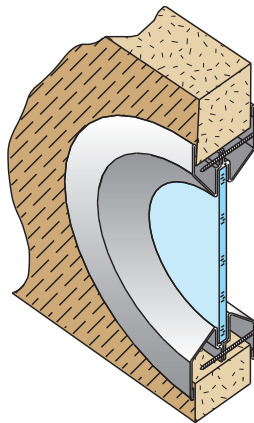
Lo-Profile Round Metal Vision Frame

FP

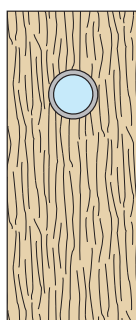
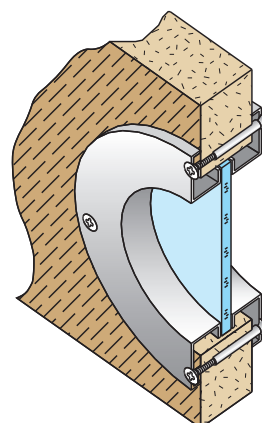
Thru-Bolted Round Metal Vision Frame

- **MATERIAL:** 20 GA (1mm) Cold Rolled Steel (LoPro Style)
18 GA (1.2mm) Cold Rolled Steel (FP)
- **FINISH:** Grey Primer, Beige or Bronze Baked Enamel
- **INSTALLATION:** Self attaching style. Uses sheet metal screws that pass through the door cutout, and fasten to the opposite side of the vision frame. FP installs with Thru-Bolts.
- **DOOR THICKNESS:** 1-3/4" (44mm) Wood or Metal Doors
- **GLAZING:** 1/4" (6mm), 3/16" (5mm) or 5/16" (8mm) Fire and Safety Rated Glass
- **AESTHETICS:** (LoPro style) Low profile and beveled glass stop provide a clean tapered look.
- **FIRE TESTED:** with U.L. and W.H.I mark
 - ▶ 20* minute: up to 3204 sq. in. visible lite
 - ▶ 45*/60* minute: up to 2772 sq. in. visible lite
 - ▶ 90* minute: up to 1296 sq. in. visible lite
 - ▶ 180* minute: up to 100 sq. in. visible lite
- *Must be used with FireLite Plus or NT and fire listed glazing tape, and be *used in an appropriately tested door assembly*
- ▶ Tested to: BS 476.22 and EN-1634
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Baked Enamel Paint Colors, Security Screws

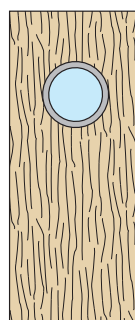
Lo-FP
(Self Attaching)



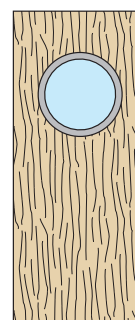
FP
(Thru-Bolted)



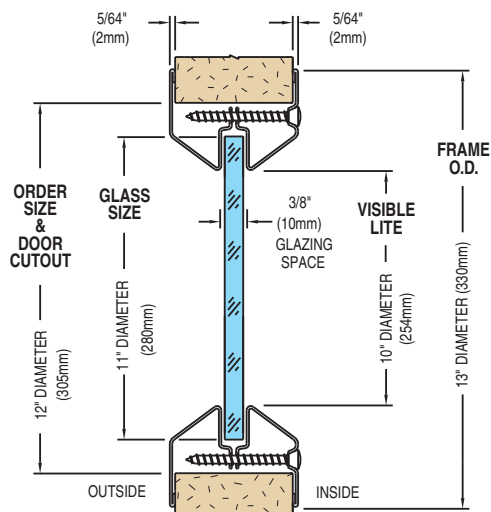
Lo-FP-12
FP-12



Lo-FP-18
FP-18



Lo-FP-24
FP-24



Lo-FP shown





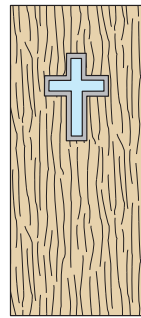
Custom Shapes

Examples of Custom Shapes

- Churches
- Restaurants
- Schools
- Businesses



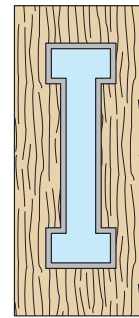
CHRISTIAN CROSS



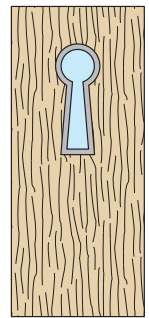
GREEK CROSS



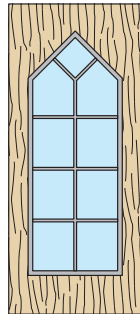
INDIANA



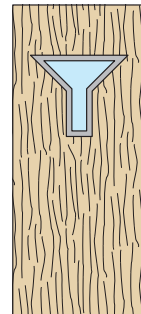
STAR OF DAVID



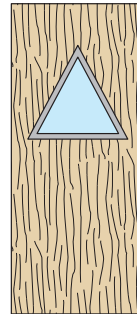
KEY HOLE



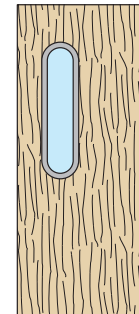
TRIANGULAR
G-9-A



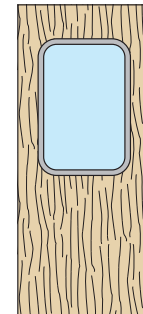
LoPro™-CS
CHAMPAGNE



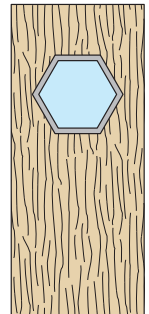
TRIANGLE



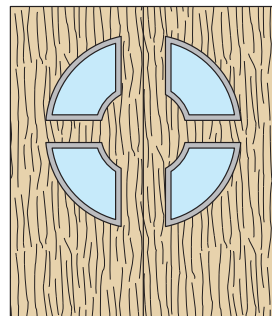
LoPro™-R
FGS-75-R
RACE TRACK



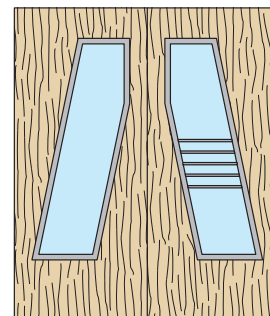
LoPro™-RC
FGS-75-RC
ROUNDED CORNER



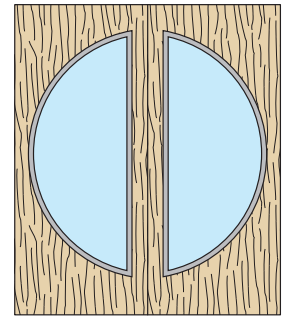
LoPro™-CS
FGS-75-CS
HEXAGON



QUARTER CIRCLE

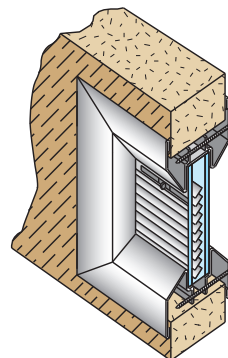


AMERICA



LoPro™-RD 24
LoPro™-RD 26
LoPro™-RD 30

- Hospitals and Conference Rooms



LoPro™-IS-MB

Metal Vision Frame with Internal White Mini-Blind
1" (25mm) Clear Tempered Insulated Glass Unit

- Category II Safety Rated
- NOT Fire Rated
- Consult factory for current sizes and availability

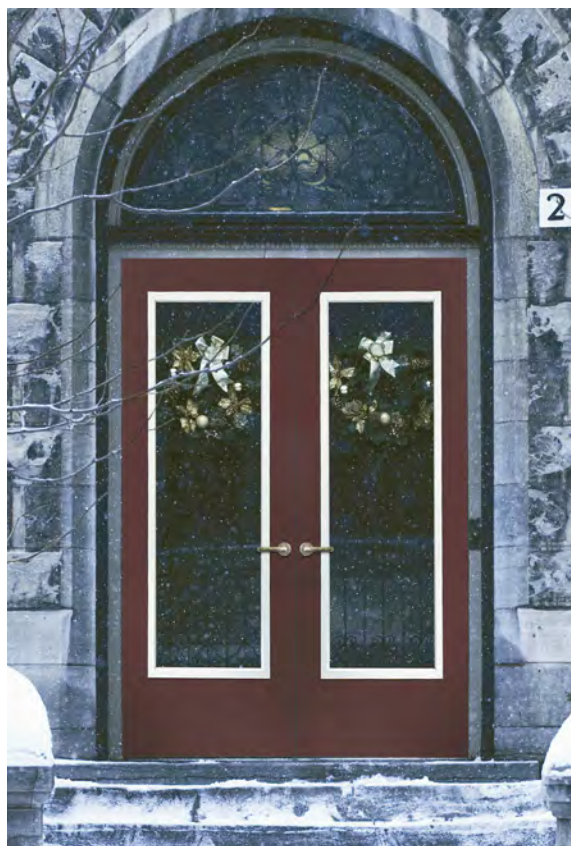
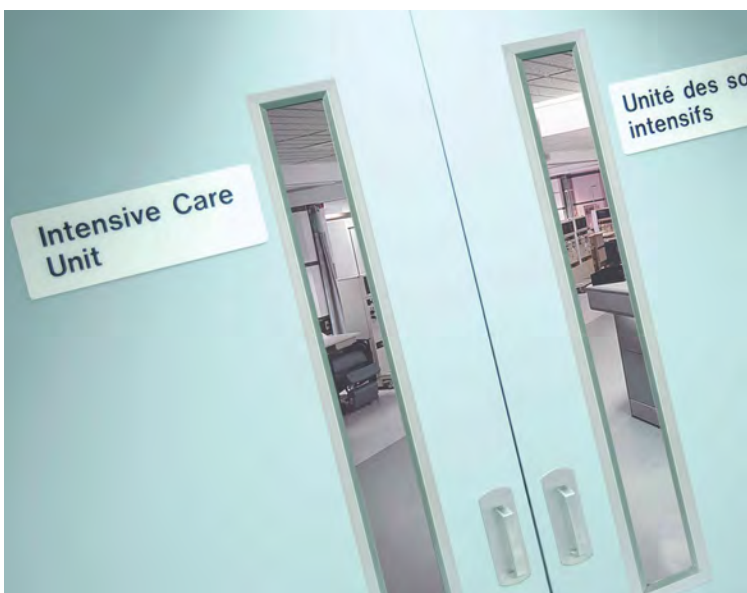
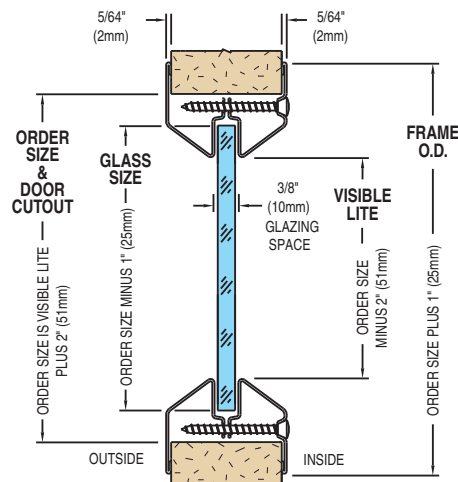
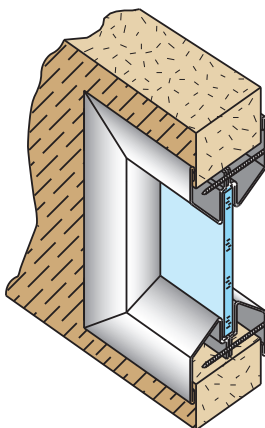
Standard

LoPro™

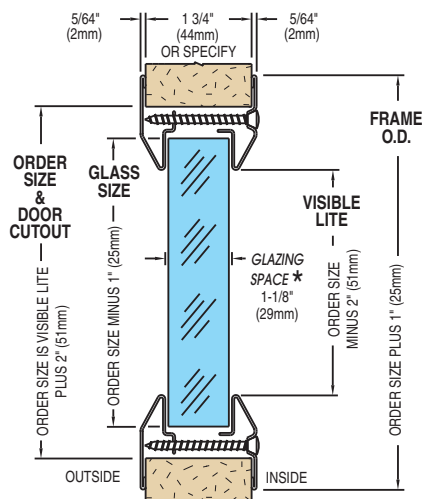
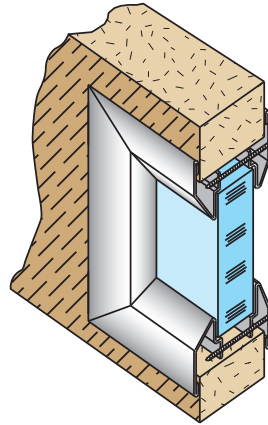
Lo-Profile Metal Vision Frame

- **MATERIAL:** 20 GA (1mm) Cold Rolled Steel
- **FINISH:** Grey Primer, Beige or Bronze Baked Enamel
- **INSTALLATION:** Self attaching style. Uses sheet metal screws that pass through the door cutout, and fasten to the opposite side of the vision frame
- **DOOR THICKNESS:** 1-3/4" (44mm) Wood or Metal Doors
- **GLAZING:** 1/4" (6mm), 3/16" (5mm) or 5/16" (8mm) Fire and Safety Rated Glass
- **AESTHETICS:** Low profile and beveled glass stop provide a clean tapered look, with tight mitered corners
- **FIRE TESTED:** with U.L. and W.H.I mark
 - ▶ 20* minute: up to 3204 sq. in. visible lite
 - ▶ 45*/60* minute: up to 2772 sq. in. visible lite
 - ▶ 90* minute: up to 1296 sq. in. visible lite
 - ▶ 180* minute: up to 100 sq. in. visible lite

*Must be used with FireLite Plus or NT and fire listed glazing tape, and be *used in an appropriately tested door assembly*
- ▶ Tested to: BS 476.22 and EN-1634
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Baked Enamel Paint Colors, Security Screws

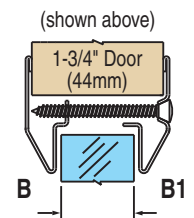
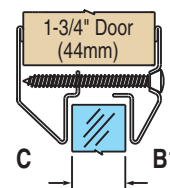
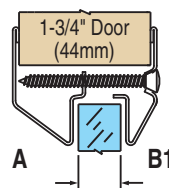
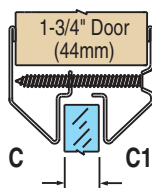
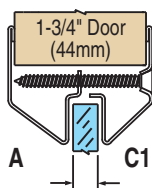
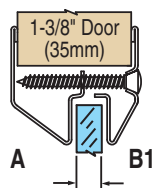


Lo-Profile Metal Vision Frame for Special Glass or Door Thickness



* Glazing Space comprises total of
Glazing Material Thickness and tape two sides

- **MATERIAL:** 20 GA (1mm) Cold Rolled Steel
 - **FINISH:** Grey Primer, Beige or Bronze Baked Enamel
 - **INSTALLATION:** Self attaching style. Uses sheet metal screws that pass through the door cutout, and fasten to the opposite side of the vision frame
 - **DOOR THICKNESS:** Specify if other than 1-3/4" (44mm) standard
 - **GLAZING:** Must be specified when ordering
 - **AESTHETICS:** Low profile and beveled glass stop provide a clean tapered look, with tight mitered corners
 - **FIRE TESTED:** with U.L. and W.H.I mark
 - ▶ **20* minute:** up to 3204 sq. in. visible lite
 - ▶ **45*/60* minute:** up to 2772 sq. in. visible lite
 - ▶ **90* minute:** up to 1296 sq. in. visible lite
 - ▶ **180* minute:** up to 100 sq. in. visible lite
- *Must be used with FireLite IGU, Cat II, and fire listed glazing tape, and be *used in an appropriately tested door assembly*
- ▶ **20/45/60/90 minute:** up to 1080 sq. in. visible lite with 7/8" or 1-1/16" Pyrostop
 - ▶ **Tested to:** BS 476.22 and EN-1634
 - **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Baked Enamel Paint Colors, Security Screws. Also available in G Series (see LoPro™-IS-G, page 12)



7/8" to 1-1/16"
(22mm to 27mm)

1-1/8"
(29mm)

11

Speciality

LoPro™-G

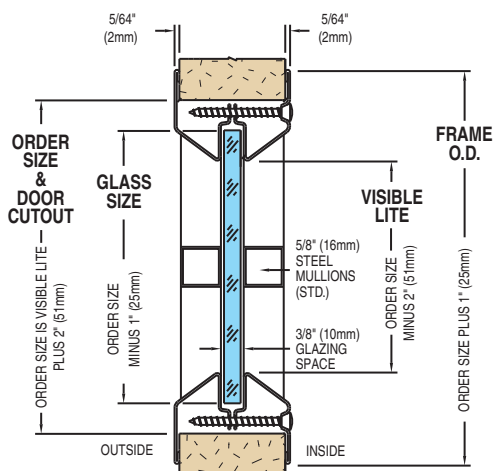
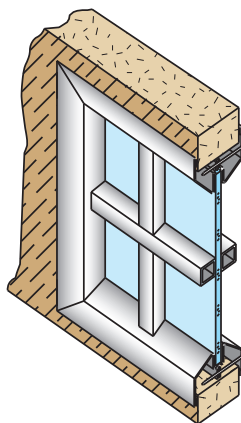
Lo-Profile Metal Vision Frame with French Door Grilles

LoPro™-IS-G

Lo-Profile Metal Vision Frame with French Door Grilles
for use with Special Glass or Door Thicknesses

- MATERIAL:** 20 GA (1mm) Cold Rolled Steel. Mullions are 5/8" x 5/8" (16mm x 16mm) steel tube material welded to the frame and all intersecting points of the mullion design, and ground smooth.
- FINISH:** Grey Primer, Beige or Bronze Baked Enamel
- INSTALLATION:** Self attaching style. Uses sheet metal screws that pass through the door cutout, and fasten to the opposite side of the vision frame.
- DOOR THICKNESS:** 1-3/4" (44mm) Wood or Metal Doors. Must specify Door Thickness for LoPro™-IS-G.
- GLAZING:** 1/4" (6mm), 3/16" (5mm) or 5/16" (8mm) Fire and Safety Rated Glass. Must specify Glazing Thickness for LoPro™-IS-G.
- AESTHETICS:** Low profile and beveled glass stop provide a clean tapered look, with tight mitered corners
- FIRE TESTED:** with U.L. and W.H.I mark
 - ▶ **20* minute:** up to 3204 sq. in. visible lite
 - ▶ **45*/60* minute:** up to 2772 sq. in. visible lite
 - ▶ **90* minute:** up to 1296 sq. in. visible lite
 - ▶ **180* minute:** up to 100 sq. in. visible lite

*Must be used with FireLite Plus or NT and fire listed glazing tape, and be *used in an appropriately tested door assembly*
- ▶ **Tested to:** BS 476.22 and EN-1634
- OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Baked Enamel Paint Colors, Security Screws



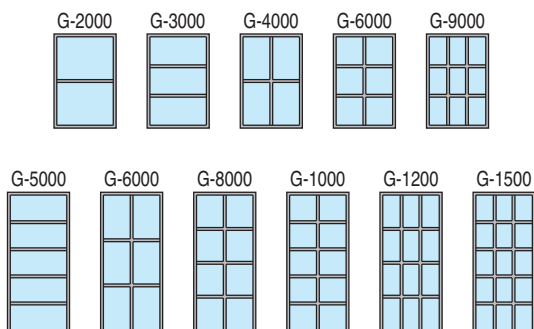
Mullions

18 GA (1.2mm) Steel Tubing

5/8" x 5/8" (16mm x 16mm)	3/4" x 3/4" (19mm x 19mm)	5/8" x 1/4" (16mm x 6mm)	1/2" x 1/2" (13mm x 13mm)	1" x 1/2" (25mm x 13mm)
LoPro - STD.	BFL - STD. FGS - STD.	LoPro-IS-G	OPTIONAL	OPTIONAL

Grille Designs

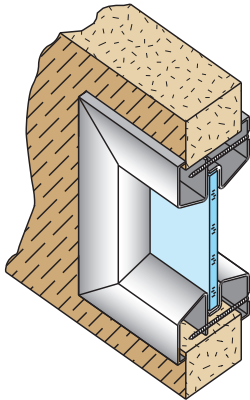
Custom Designs Available, Consult Factory



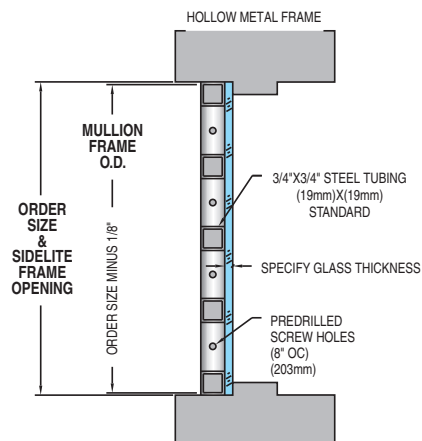
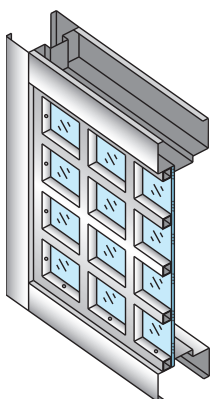
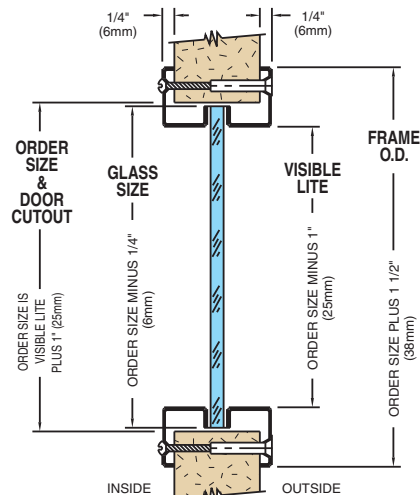
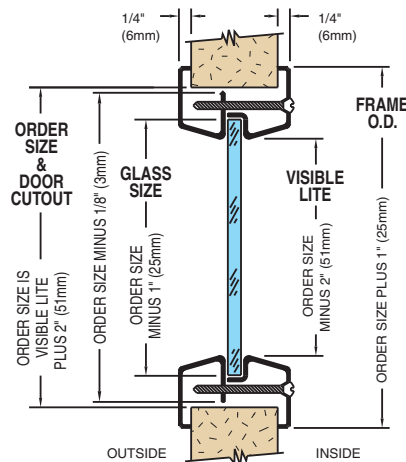
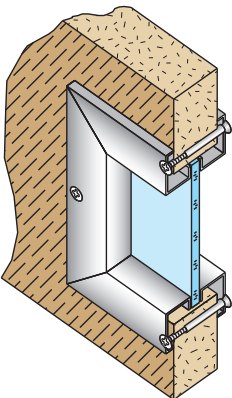


Speciality

BFL-123



FGS-75



BFL-123

Self Attaching Beveled Metal Vision Frame

FGS-75

Thru-Bolted Metal Vision Frame

- **MATERIAL:** 18 GA (1.2mm) Steel
- **FINISH:** Grey Primer, Beige or Bronze Baked Enamel
- **DOOR THICKNESS:** 1-3/4" (44mm) Wood or Metal Doors
- **GLAZING:** 1/4" (6mm) or 3/16" (5mm) Fire and Safety Rated Glass
- **FIRE TESTED:** with U.L. and W.H.I mark
 - ▶ **20* minute:** up to 3204 sq. in. visible lite
 - ▶ **45*/60* minute:** up to 2772 sq. in. visible lite
 - ▶ **90* minute:** up to 1296 sq. in. visible lite
 - ▶ **180* minute:** up to 100 sq. in. visible lite
- *Must be used with FireLite Plus or NT and fire listed glazing tape, and be *used in an appropriately tested door assembly*
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Baked Enamel Paint Colors, Security Screws. BFL-123 and FGS-75 available in G Series.

FM-G

Framed Mullion Grille for Sidelites and Borrowed Lites

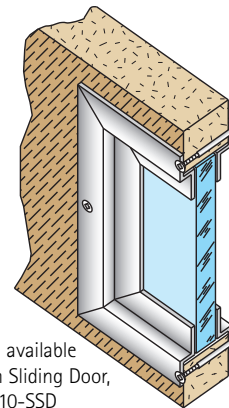
- **MATERIAL:** Mullions are 3/4" x 3/4" (19mm x 19mm) steel tube material
- **FINISH:** Grey Primer, Beige or Bronze Baked Enamel
- **GLAZING:** Can be any thickness that provides a 3/4" (19mm) spacing allowance for Framed Mullion assembly

Security

SG-10

High Security Metal Vision Frame for Special Glass or Door Thickness

- **MATERIAL:** 10 GA (3.4mm) or 12 GA (2.5mm) Cold Rolled Steel
- **FINISH:** Grey Primer, Beige or Bronze Baked Enamel
- **INSTALLATION:** #8-32 Thru-Bolts
- **DOOR THICKNESS:** Specify if other than 1-3/4" (44mm) standard
- **GLAZING:** 10 GA: 3/16" (5mm) to 1" (25mm), 12 GA: 1" (25mm) to 1-9/16" (40mm)
- **FIRE TESTED:** with U.L. and W.H.I mark
 - ▶ 20/45/60* minute: Approved listing at 1296 sq. in. visible lite
 - ▶ 60*/90* minute: Approved listing at 1080 sq. in. visible lite
- * Must be used with FireLite Plus or NT or Pyrostop for listing on sizes over 100 sq. in.
- **IMPACT TESTED:** In compliance with ASTM F-1450-97 (must specify 1/4" x 20 thru-bolt)
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Paint Colors, Security Screws

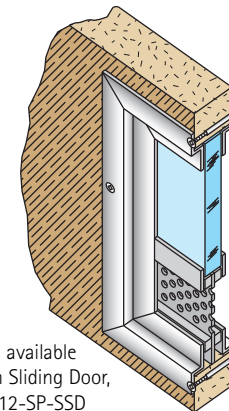


Also available
with Sliding Door,
SG-10-SSD

SG-12-SP

Medium Security Metal Vision Frame with Speak Port

- **MATERIAL:** Frame: 12 GA (2.5mm) Cold Rolled Steel
Speak Port: 12 GA (2.5mm) Cold Rolled Steel with perforated face, 1/4" (6mm) diameter holes on 3/8" (9.5mm) staggered centers
- **FINISH:** Grey Primer, Beige or Bronze Baked Enamel
- **INSTALLATION:** #8-32 Thru-Bolts
- **DOOR THICKNESS:** Specify if other than 1-3/4" (44mm) standard
- **GLAZING:** 10 GA: 3/16" (5mm) to 1" (25mm), 12 GA: 1" (25mm) to 1-9/16" (40mm)
- **FIRE TESTED:** NOT fire rated
- **IMPACT TESTED:** In compliance with ASTM F-1450-97 (must specify 1/4" x 20 thru-bolt)
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Paint Colors, Security Screws

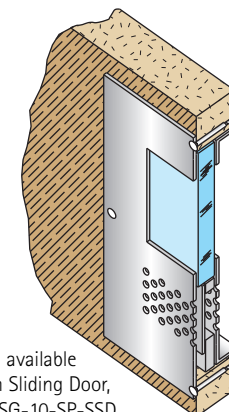


Also available
with Sliding Door,
SG-12-SP-SSD

SG-10-SP

High Security Metal Vision Frame with Double Speak Port (with baffle)

- **MATERIAL:** Inside Face Frame: 10 GA (3.4mm) Cold Rolled Steel
Outside Back Frame: 12 GA (2.5mm) Cold Rolled Steel
Speak Port: Two 10 GA (3.4mm) C.R.S. plates with perforated faces, 5/32" (4mm) diameter holes on 7/32" (5.5mm) staggered centers, with 20 GA (1mm) baffle
- **FINISH:** Grey Primer, Beige or Bronze Baked Enamel
- **INSTALLATION:** #8-32 Thru-Bolts
- **DOOR THICKNESS:** Specify if other than 1-3/4" (44mm) standard
- **GLAZING:** 10 GA: 3/16" (5mm) to 1" (25mm), 12 GA: 1" (25mm) to 1-9/16" (40mm)
- **FIRE TESTED:** NOT fire rated
- **IMPACT TESTED:** In compliance with ASTM F-1450-97 (must specify 1/4" x 20 thru-bolt)
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Paint Colors, Security Screws



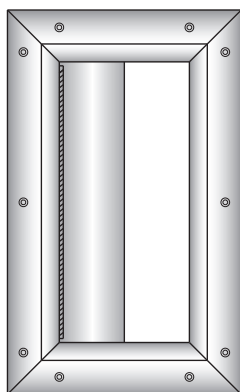
Also available
with Sliding Door,
see SG-10-SP-SSD



Security

SSD

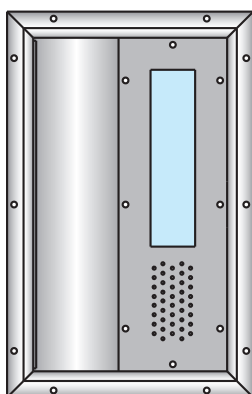
Security Sliding Door for Selective Vision into High Security Areas



- **MATERIAL:** 12 GA (2.5mm) Cold Rolled Steel, channel frame and sliding door
- **FINISH:** Grey Primer, Beige or Bronze Baked Enamel
- **INSTALLATION:** Screws directly into door over pre-existing vision lite
- **DOOR THICKNESS:** 3/4" (19mm) and greater
- **GLAZING:** Fits over vision lite frame and glazing
- **FIRE TESTED:** with U.L. and W.H.I mark
 - ▶ **20/45/60/90 minute:** Approved listing
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Paint Colors, Security Screws
- **FOR USE WITH:** SG-10, SG-10-SP, SG-12-SP or LoPro. Can be retrofitted with pre-existing vision frame (no more than 1/8" (3mm) off the face of the door).

SG-10-SP-SSD

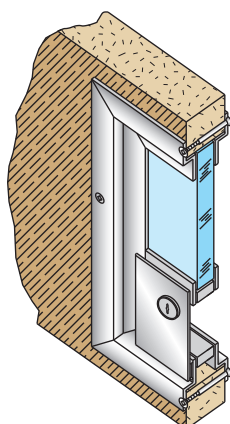
High Security Metal Vision Frame with Security Sliding Door Combination



- **MATERIAL:** SG-10: 10 GA (3.4mm) or 12 GA (2.5mm) Cold Rolled Steel
SSD: 12 GA (2.5mm) Cold Rolled Steel
Speak Port: 10 GA (3.4mm) Cold Rolled Steel
- **FINISH:** Grey Primer, Beige or Bronze Baked Enamel
- **INSTALLATION:** SG-10 Thru-Bolts, SSD fits over SG-10 screwing directly into the door
- **DOOR THICKNESS:** Specify if other than 1-3/4" (44mm) standard
- **GLAZING:** 10 GA: 3/16" (5mm) to 1" (25mm), 12 GA: 1" (25mm) to 1-9/16" (40mm)
- **FIRE TESTED:** NOT fire rated
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Paint Colors, Security Screws

SG-12-LCP

Security Metal Vision Frame with Locking Cuff Port / Food Pass



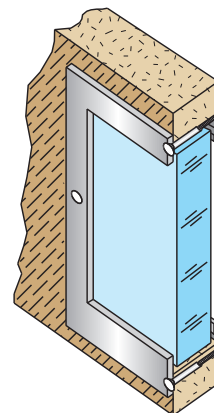
- **MATERIAL:** Frame: 12 GA (2.5mm) Cold Rolled Steel
Security Cover: 16 GA (1.5mm) Cold Rolled Steel, hinged with security keyed cam lock
- **FINISH:** Grey Primer, Beige or Bronze Baked Enamel
- **INSTALLATION:** Thru-Bolts
- **DOOR THICKNESS:** Specify if other than 1-3/4" (44mm) standard
- **GLAZING:** 3/16" (5mm) up to 1-9/16" (40mm)
- **FIRE TESTED:** NOT fire rated
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Paint Colors, Security Screws

Security

BR-7

Bullet and Impact Resistant Metal Vision Frame

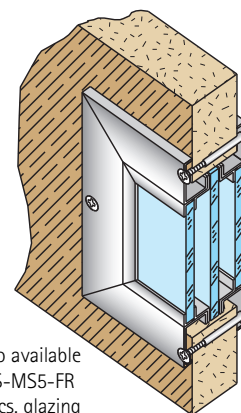
- **MATERIAL:** Face Plate: 7 GA (4.5mm) C.R.S., Back Frame: 12 GA (2.5mm) C.R.S.
- **FINISH:** Grey Primer, Beige or Bronze Baked Enamel
- **INSTALLATION:** #8-32 Thru-Bolts
- **DOOR THICKNESS:** Specify if other than 1-3/4" (44mm) standard
- **GLAZING:** up to 1-9/16" (40mm) based on bullet/impact resistance and/or fire rating
- **BULLET RESISTANCE:** .44 magnum and 12 gauge shotgun
- **FIRE TESTED:** with U.L. and W.H.I mark
 - ▶ 20/45/60* minute: Approved listing at 1296 sq. in. visible lite
 - ▶ 60*/90* minute: Approved listing at 1080 sq. in. visible lite
- *Must be used with FireLite Plus or NT or Pyrostop for listing on sizes over 100 sq. in.
- **IMPACT TESTED:** In compliance with ASTM F-1450-97 (must specify 1/4" x 20 thru-bolt)
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Paint Colors, Security Screws



FGS-MS3-FR

Security / Impact Resistant Metal Vision Frame

- **MATERIAL:** 18 GA (1.2mm) Cold Rolled Steel
- **FINISH:** Grey Primer, Beige or Bronze Baked Enamel
- **INSTALLATION:** Thru-Bolts
- **DOOR THICKNESS:** For 1-3/4" (44mm) Doors
- **GLAZING:** Uses 3/16" (5mm) or 1/4" (6mm) Fire Rated glazing on the inside, with 1/4" (6mm) Tempered Safety Glass on one or both outside portions of the security installation. Only sold as a complete system.
- **FIRE TESTED:** with U.L. and W.H.I mark
 - ▶ 20/45/60*/90* minute: Approved listing at 1296 sq. in. visible lite
- *Must be used with FireLite Plus or NT for sizes over 100 sq. in. visible lite
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Paint Colors, Security Screws

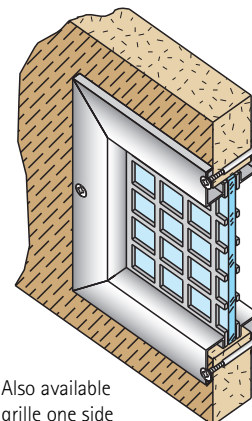


Also available
FGS-MS5-FR
2 pcs. glazing

SL-IS

Metal Vision Frame with Security Grille for Standard / Special Door or Glass Thickness

- **MATERIAL:** Frame: 18 GA (1.2mm) Cold Rolled Steel
Security Grille: 12 GA (2.5mm) Cold Rolled Steel two sides
- **FINISH:** Grey Primer, Beige or Bronze Baked Enamel
- **INSTALLATION:** Thru-Bolts
- **DOOR THICKNESS:** Specify if other than 1-3/4" (44mm) standard
- **GLAZING:** 3/16" (5mm) up to 1-9/16" (40mm)
- **FIRE TESTED:** with U.L. and W.H.I mark
 - ▶ 20/45/60* minute: Approved listing at 1296 sq. in. visible lite
 - ▶ 60*/90* minute: Approved listing at 1080 sq. in. visible lite
- *Must be used with FireLite Plus or NT or Pyrostop for listing on sizes over 100 sq. in.
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Paint Colors, Security Screws



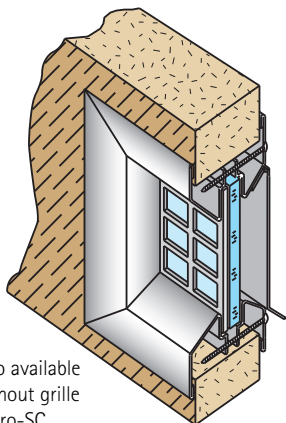
Also available
grille one side



Security

LoPro™-SC-GR

Metal Vision Frame with Security Grille and Operating Security Cover

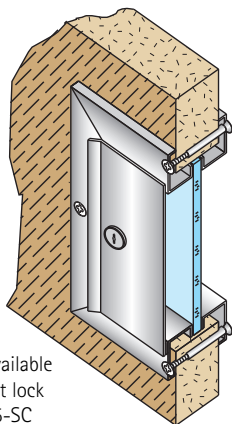


Also available
without grille
LoPro-SC

- **MATERIAL:** Frame: 20 GA (1mm) Cold Rolled Steel
Security Grille: 16 GA (1.5mm) Cold Rolled Steel one side
- **FINISH:** Grey Primer, Beige or Bronze Baked Enamel
- **INSTALLATION:** Self Attaching Style
- **DOOR THICKNESS:** Specify if other than 1-3/4" (44mm) standard
- **GLAZING:** 3/16" (5mm) to 1/4" (6mm) thickness based on 1-3/4" (44mm) Door Thickness
- **FIRE TESTED:** with U.L. and W.H.I mark
 - ▶ 20/45/60*/90* minute: Approved listing at 1296 sq. in. visible lite
 - ▶ 3 hour: Approved listing at 100 sq. in. visible lite with FireLite NT
- *Must be used with FireLite NT for sizes over 100 sq. in. visible lite
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Paint Colors, Security Screws

FGS-75-LSC

Metal Vision Frame with Locking Security Cover

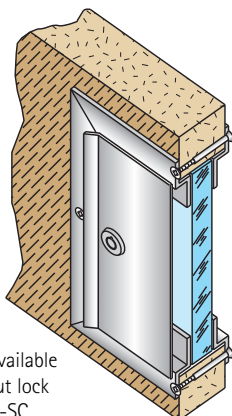


Also available
without lock
FGS-75-SC

- **MATERIAL:** Frame and Security Cover: 18 GA (1.2mm) Cold Rolled Steel with key operated security lock
- **FINISH:** Grey Primer, Beige or Bronze Baked Enamel
- **INSTALLATION:** Thru-Bolts
- **DOOR THICKNESS:** For 1-3/4" (44mm) Wood or Metal Doors
- **GLAZING:** 3/16" (5mm) or 1/4" (6mm) thickness
- **FIRE TESTED:** with U.L. and W.H.I mark
 - ▶ 20/45/60*/90* minute: Approved listing at 1296 sq. in. visible lite
- *Must be used with FireLite NT for sizes over 100 sq. in. visible lite
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Paint Colors, Security Screws

SG-12-LSC

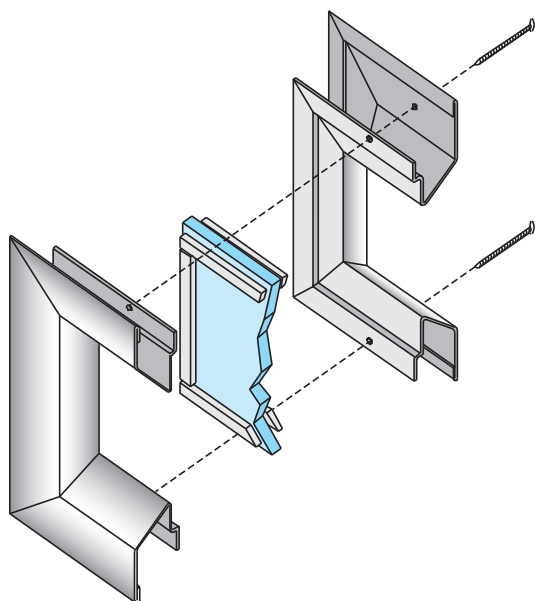
High Security Metal Vision Frame with Locking Security Cover



Also available
without lock
SG-12-SC

- **MATERIAL:** Frame and Security Cover: 12 GA (2.5mm) C.R.S. w/key operated security lock
- **FINISH:** Grey Primer, Beige or Bronze Baked Enamel
- **INSTALLATION:** #8-32 Thru-Bolts
- **DOOR THICKNESS:** Specify if other than 1-3/4" (44mm) standard
- **GLAZING:** 3/16" (5mm) up to 1-9/16" (40mm) thickness
- **FIRE TESTED:** with U.L. and W.H.I mark
 - ▶ 20/45/60* minute: Approved listing at 1296 sq. in. visible lite
 - ▶ 60*/90* minute: Approved listing at 1080 sq. in. visible lite
- *Must be used with FireLite Plus or NT or Pyrostop for listing on sizes over 100 sq. in.
- **IMPACT TESTED:** In compliance with ASTM F-1450-97 (must specify 1/4" x 20 thru-bolt)
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Paint Colors, Security Screws

Vision Frame with Glass and Glazing Tape



LoPro™ Complete

INCLUDES: Vision Frame, *CHOICE OF GLASS* with Glazing Tape applied (both sides), ready to install

- LoPro Complete with 1/4" (6mm) SAFE-Wire™ Glass is stocked in certain sizes (Category II Impact / Safety Rated)
- Provides correct vision frame, glass and glazing tape per your job requirements
- Ready to install, saving time and money
- Makes shipments to jobsites easy to coordinate and distribute to each door opening
- No messy silicone or caulking to hassle with or worry about
- Great for will call or retail business
- Adds value to your sale

Types of Glass available for LoPro Complete

- Specify when ordering
- Contact Factory for other glass options

Wire Glass

- Fire Rated 20-90 minute
- 1/4" (6mm)
- NOT Safety Rated

Pyrodur™

- Fire Rated 20 minute
- 9/32" (7mm) Laminated, Clear
- Category I Impact / Safety Rated

FireLite® NT

- Fire Rated 20-180 minute
- 3/16" (5mm) Clear with 3M Film
- Category II Impact / Safety Rated

FireLite® Plus

- Fire Rated 20-180 minute
- 5/16" (8mm) Clear
- Category II Impact / Safety Rated














Tempered

- NOT Fire Rated
- 1/4" (6mm)
- Category II Impact / Safety Rated

LEXAN® MR-10 Sheet

- NOT Fire Rated
- 1/8" (3mm), 1/4" (6mm), 3/8" (9.5mm), 1/2" (12.7mm) Polycarbonate
- Category II Impact / Safety Rated

Fasteners for Vision Frames

Standard	Fasteners for Vision Frames						
	Phillips Head Machine Screw	Screw with Thru Bolt		Self Tapping Tek Screw			
							
	#8 x 1 3/4" #8 x 2"	#8-32 x 1-1/4" OPTIONAL - MUST SPECIFY - 1/4" x 20		#8 x 1-1/2" FM-G			
Optional Security*	One Way Vandal Proof	Snake Eye Spanner	Notched Spanner	Pinned Flat Head	Torx Flat Head	Torx-Plus Flat Head	Robertson Oval Head
							

*Screwdrivers and insert bits for security fasteners are available. Consult factory for price and availability.



— R A T E D —



— R A T E D —

DEFINITION

Glazing Products:

May be identified as glass, glazing, polycarbonate, lami glass, glazing tape, ceramics, annealed, tempered, decorative, single pane or double pane, Low E, or wire.

All describe a family of products using transparent or translucent material, used in door assemblies and windows. May be fire rated, safety/impact rated or both.

Can be sound rated, insulated, temperature rise or rated as a barrier to radiant heat. Many are used in combination with one another to satisfy a particular application.



— R A T E D —

Fire and Safety Rated

SAFE-Wire®

1/4" (6mm) with Surface Applied Safety Film - Category II Impact / Safety Rated

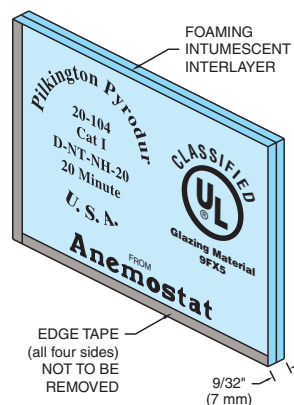
- **MATERIAL:** 1/4" (6mm) polished wire glass (diamond pattern) with surface applied safety film
- **VISION FRAME MODEL:** LoPro
- **INSTALLATION:** with GT-18, 1/8" (3.2mm) fire rated glazing tape (supplied loose) to both sides of glass
- **CLASSIFICATION MARKINGS:** Permanently etched with U.L. mark in compliance with NFPA-80 revised
- **FIRE TESTED:**
 - ▶ **20 minute:** Approved listing at 2994 sq. in. visible lite
 - ▶ **45 minute:** Approved listing at 1296 sq. in. visible lite
 - ▶ **60/90 minute:** Approved listing at 100 sq. in. visible lite



Pyrodur™

9/32" (7mm) Laminated, Clear - Category I Impact / Safety Rated

- **MATERIAL:** 9/32" (7mm) laminated glass with a special interlayer
- **VISION FRAME MODEL:** LoPro
- **INSTALLATION:** with GT-116, 1/16" (1.6mm) fire rated glazing tape (supplied loose) to both sides of glass. Interior use only.
- **CLASSIFICATION MARKINGS:** Permanently etched with U.L. mark in compliance with NFPA-80 revised
- **FIRE TESTED:**
 - ▶ **20 minute:** Approved listing at 1296 sq. in. visible lite (WITHOUT HOSE STREAM)



Pyrostop®

3/4" (19mm) - 2-3/8" (62mm) Clear - Category II Impact / Safety Rated

- **MATERIAL:** Available in thicknesses 3/4" (19mm) to 2-3/8" (62mm) based on fire rating and interior or exterior application. Uses multiple layers of float glass laminated with transparent intumescent interlayers
- **VISION FRAME MODEL:** LoPro-IS or FGS-IS (over 1" (25mm) thickness)
- **INSTALLATION:** with GT-116, 1/16" (1.6mm) fire rated glazing tape to both sides of glass. Glaze with setting blocks to support the glass (by others).
- **CLASSIFICATION MARKINGS:** Permanently etched with U.L. mark in compliance with NFPA-80 revised
- **FIRE TESTED:** Barrier to Radiant Heat
 - ▶ **45/60/90/120 minute:** Approved listing at 3724 sq. in. visible lite
- **STC RATED:** 40 dB (3/4") to 46 dB (1-9/16" for interior use)
- **BULLET RATED:** Level 1 (1-1/16") to Level 3 (2-3/8")



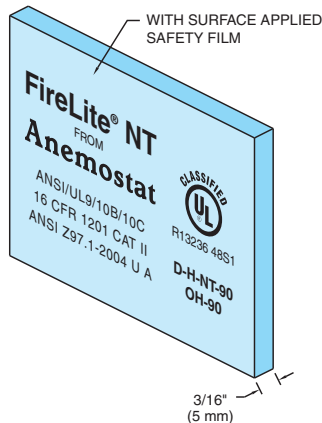
NOTE: On visible lite sizes larger than 1296 sq. in. on 20/45 min. and 100 sq. in. on 60/90/180 min., please consult with your Door / Frame Manufacturer's procedures, for their maximum glass size tested. Consult factory for Temperature Rise Glazing



Fire and Safety Rated

FireLite® NT

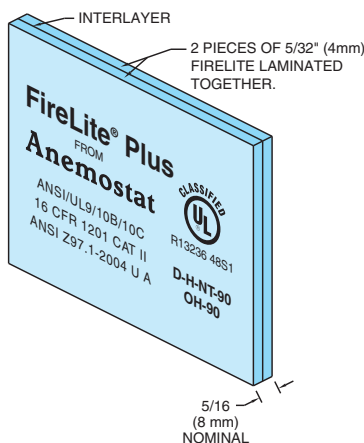
3/16" (5mm) Clear with 3M Safety Film - Category II Impact / Safety Rated



- **MATERIAL:** 3/16" (5mm) clear ceramic with surface applied safety film. STANDARD (non-polished) with a slight distortion or PREMIUM (polished) with maximum clarity.
- **VISION FRAME MODEL:** LoPro
- **INSTALLATION:** with GT-18, 1/8" (3.2mm) fire rated glazing tape (supplied loose) to both sides of glass
- **CLASSIFICATION MARKINGS:** Permanently etched with U.L. mark in compliance with NFPA-80 revised
- **FIRE TESTED:**
 - ▶ 20/45/60 minute: Approved listing at 3204 sq. in. visible lite
 - ▶ 90 minute: Approved listing at 2034 sq. in. visible lite
 - ▶ 180 minute: Approved listing at 100 sq. in. visible lite

FireLite® Plus

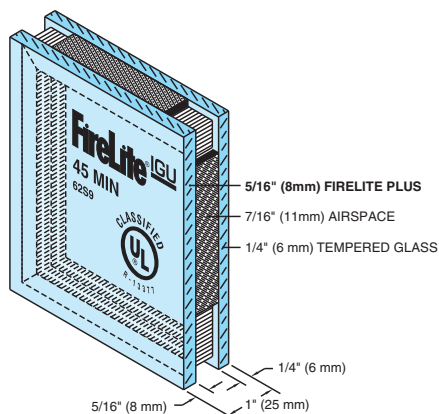
5/16" Nominal (8mm) Laminated Clear - Category II Impact / Safety Rated



- **MATERIAL:** 5/16" nominal (8mm) clear ceramic laminated with 2 pieces of PREMIUM FireLite and a proprietary interlayer
- **VISION FRAME MODEL:** LoPro
- **INSTALLATION:** with GT-132, 1/32" (.793mm) fire rated glazing tape (supplied loose) to both sides of glass
- **CLASSIFICATION MARKINGS:** Permanently etched with U.L. mark in compliance with NFPA-80 revised
- **FIRE TESTED:**
 - ▶ 20/45/60 minute: Approved listing at 3204 sq. in. visible lite
 - ▶ 90 minute: Approved listing at 2034 sq. in. visible lite
 - ▶ 180 minute: Approved listing at 100 sq. in. visible lite
- **STC RATED:** Approximately 35 dB

FireLite® IGU

1" (25mm) Insulated Unit - Category II Impact / Safety Rated



- **MATERIAL:** 1" (25mm) insulated unit, incorporates 5/16" (8mm) FireLite Plus with 1/4" (6mm) Tempered Glass. Other types available (see Technical Data Sheet).
- **VISION FRAME MODEL:** LoPro-IS
- **INSTALLATION:** with GT-132, 1/32" (.793mm) fire rated glazing tape (supplied loose) to both sides of glass
- **CLASSIFICATION MARKINGS:** Permanently etched with U.L. mark in compliance with NFPA-80 revised
- **FIRE TESTED:**
 - ▶ 20/45/60 minute: Approved listing at 3204 sq. in. visible lite
 - ▶ 90 minute: Approved listing at 2034 sq. in. visible lite
 - ▶ 180 minute: Approved listing at 100 sq. in. visible lite
- **STC RATED:** Approximately 39 dB

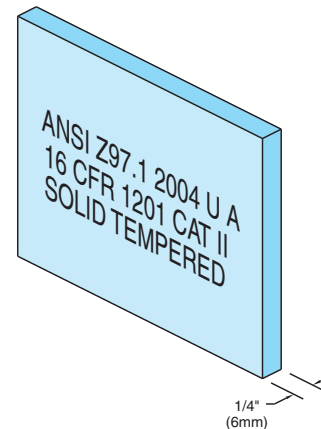
NOTE: On visible lite sizes larger than 1296 sq. in. on 20/45 min. and 100 sq. in. on 60/90/180 min., please consult with your Door / Frame Manufacturer's procedures, for their maximum glass size tested. Consult factory for Temperature Rise Glazing

Safety Rated

Tempered

1/4" (6mm) - Category II Impact / Safety Rated

- **MATERIAL:** 1/4" (6mm) clear heat strengthened glass. Also available in bronze, gray or graylite.
- **VISION FRAME MODEL:** LoPro
- **INSTALLATION:** with GT-18, 1/8" (3.2mm) fire rated glazing tape to both sides of glass
- **FIRE TESTED:** NOT fire rated
- **FEATURES:**
 - ▶ Heat strengthened glass, cannot be cut after manufacturing
 - ▶ Breaks into small particles, not sharp pieces when broken

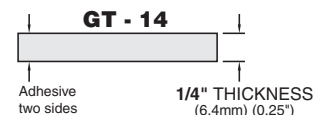
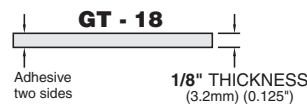
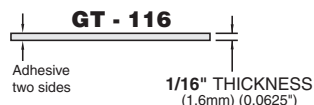
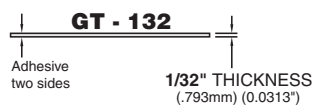
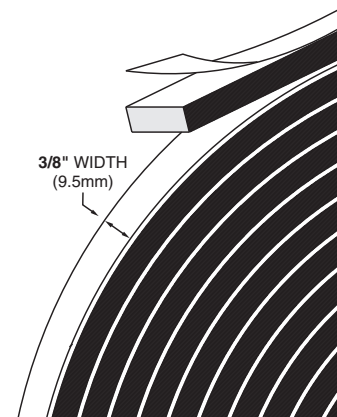


Fire Rated Glazing Tape

Glazing Tape

1/32" (.793mm), 1/16" (1.6mm), 1/8" (3.2mm), 1/4" (6.4mm) Closed Cell Foam Sealant

- **MATERIAL:** 1/4" (6.4mm), 1/8" (3.2mm), 1/16" (1.6mm), 1/32" (.793mm) closed cell polyvinyl chloride foam tape with pressure sensitive adhesive two sides, protected with a paper or polyethylene liner. Black in color, 3/8" (9.5mm) wide.
- **VISION FRAME MODEL:** All models. Tape thickness will vary based on model, and glass thickness used
- **FIRE TESTED:**
 - ▶ **20/45/60/90/180 minute:** Approved listing when used in a fire rated door component assembly
- **LISTINGS:** U.L., WHI, BS 476.22 and EN-1634



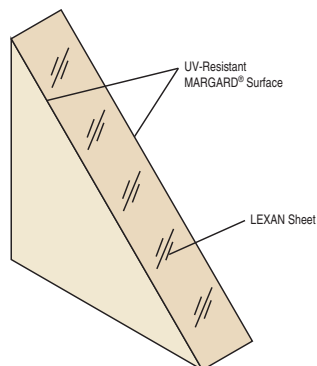
SIZES ARE NOT TO SCALE



Security - Impact Rated

LEXAN® MR-10 Sheet

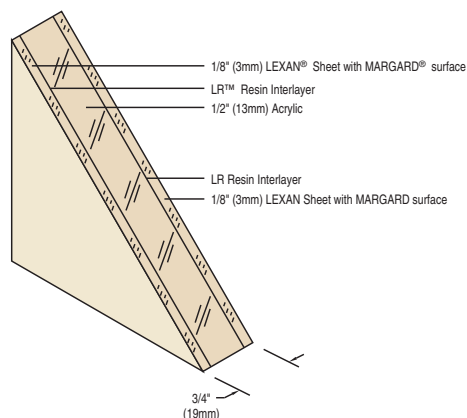
1/8" (3mm), 1/4" (6mm), 3/8" (9.5mm), 1/2" (12.7mm) Polycarbonate- Category I and II Impact / Safety Rated



- **MATERIAL:** Combines the impact strength of LEXAN Polycarbonate Sheet with a proprietary abrasion and UV resistant Margard® II coating on both sides
- **VISION FRAME MODEL:** Various models based on impact, or security application, and glazing thickness required
- **FEATURES:**
 - ▶ Virtually unbreakable
 - ▶ High light transmission value
 - ▶ Defies graffiti to stick
 - ▶ Available in clear, gray, graylite and bronze
 - ▶ Silicone hard coat surface
 - ▶ Warranted against yellowing, breakage, coating failure and loss of light transmission
- **FIRE TESTED:** NOT fire rated

MP-750 LEXGARD®

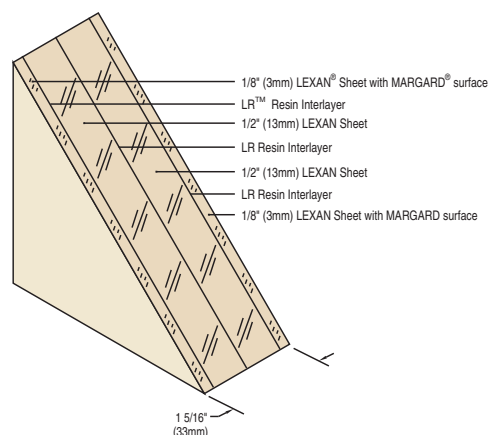
3/4" (19mm) Bullet Resistant and Forced Entry Security Glazing



- **MATERIAL:** 3/4" (19mm) clear, 3-ply LEXAN Polycarbonate with acrylic sheet and bonding interlayer
- **VISION FRAME MODEL:** BR-7 or SG-10
- **FEATURES:**
 - ▶ Warranted against abrasion, yellowing, coating failure and structural delamination
 - ▶ Multi-shot capability - stops closely grouped shots
 - ▶ High impact, stress-free lamination will not spider crack on impact, maintaining visualization after impact
 - ▶ Abrasion-resistant surface
 - ▶ Virtually unbreakable
- **FIRE TESTED:** NOT fire rated
- **BULLET RATED:** .38 super - ASTM F1233-93, U.L. 752 Level 1 (9mm)
HPW-TP-0.500.00 Level B (9mm)

SP-1250 LEXGARD®

1-5/16" (33mm) Bullet Resistant and Forced Entry Security Glazing



- **MATERIAL:** 1-5/16" (33mm) clear, 4-ply LEXAN Polycarbonate with bonding interlayers
- **VISION FRAME MODEL:** BR-7
- **FEATURES:**
 - ▶ Warranted against abrasion, yellowing, coating failure and structural delamination
 - ▶ Multi-shot capability - stops closely grouped shots
 - ▶ High impact, stress-free lamination will not spider crack on impact
 - ▶ Virtually unbreakable, abrasion resistant surface
- **FIRE TESTED:** NOT fire rated
- **BULLET RATED:** .44 magnum - ASTM-F1233-93, U.L. 752 Level 3,
HPW-TP-0500.00 Level C
- **BOMB BLAST:** *Approx. 4300 lbs. TNT/115 ft., over pressure/57 psi, duration/15 msec.
*Blast resistance threat levels are based on many variables. Consult factory or www.anemostat.com for the most current information on SP-1250

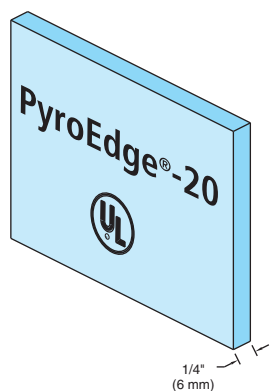
©LEXAN, LEXGARD and MARGARD are registered of General Electric Company

NOTE: Must be used in an appropriately tested door assembly.

Anemostat®.com

OTHER GLAZING PRODUCTS

Fire and Safety Rated



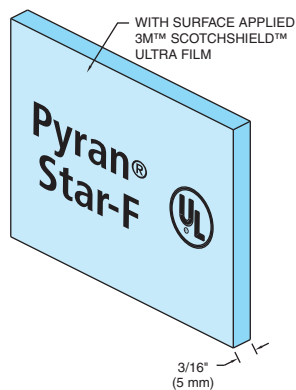
PyroEdge-20

- 1/4" Specially Tempered Clear
- 20 minute Fire Rated without Hose Stream
- Impact / Safety Rated Category II
- "Xtra-Clear" for additional light transmission



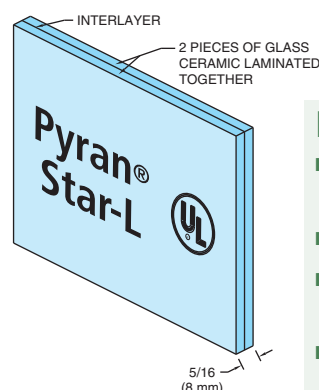
FireGlass 20®

- 1/4" Specially Tempered Clear
- 20 minute Fire Rated without Hose Stream
- Impact / Safety Rated Category II



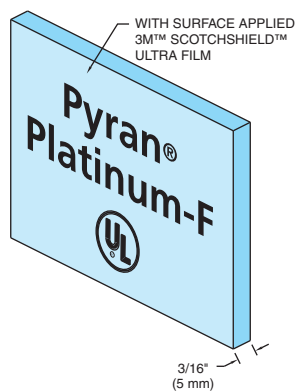
Pyran® Star-F

- 3/16" Clear with Surface Applied 3M Film
- Fire Rated up to 90 minutes
- Impact / Safety Rated Category II
- Standard (slight distortion) with a slight texture



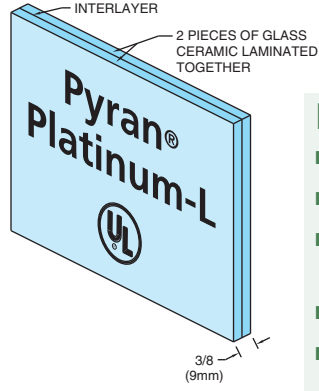
Pyran® Star-L

- 5/16" Clear Laminated Ceramic
- Fire Rated up to 90 minutes
- Impact / Safety Rated Category II
- Standard (slight distortion) with a smooth surface



Pyran® Platinum-F

- 3/16" Clear with Surface Applied 3M Film
- Fire Rated up to 180 minutes
- Impact / Safety Rated Category II
- True Color rendition
- Superior Clarity and virtually no distortion



Pyran® Platinum-L

- 3/8" Clear Laminated Ceramic
- Fire Rated up to 180 minutes
- Impact / Safety Rated Category II
- True Color rendition
- Superior Clarity and virtually no distortion
- STC Rating is approx. 36 dB

For all items on this page, contact factory for availability.

© Pyran is a registered trademark of Schott AG (Mainz, Germany)

© PyroEdge is a registered trademark of Intertek Technologies

Frequently Asked Questions about Glazing

Teach me about Glazing:

Glazing can be categorized into three major groupings:

- Fire-Rated Only (walls, transoms, borrowed lights)
- Safety/Impact Rated Only (non-fire rated doors and other hazardous or security applications)
- Fire and Safety Rated (fire rated doors or any application deemed a hazardous location)

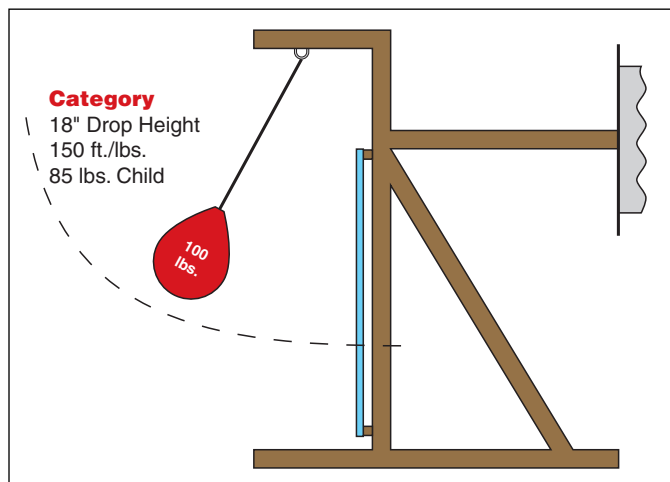
What does the Code say?

Does the fire rated glazing used in doors also have to be safety rated?

Yes, according to N.F.P.A – 80 section 1-7.1, "Only labeled fire resistance-rated glazing material meeting applicable safety standards shall be used in fire door assemblies (ie Category I and Category II Impact/Safety Rating)". The International Building Code of 2006 also requires a fire and safety rated glazing for use in doors.

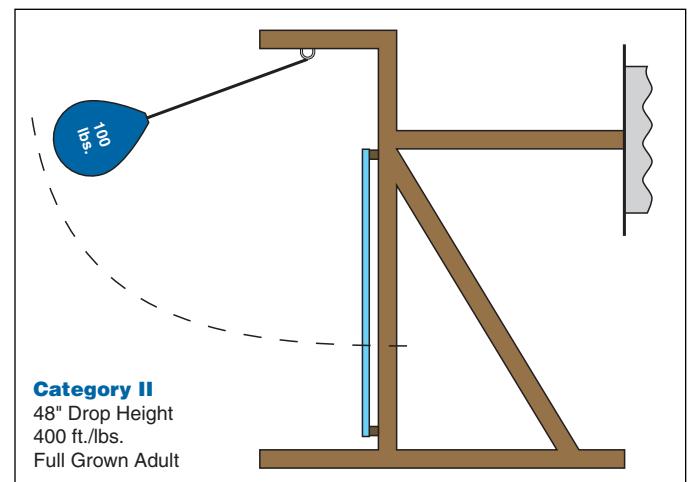
What is all the talk I'm hearing about Fire AND Safety Rated Glazing?

- Until recently there have been 3 recognized levels of safety glazing in North America
 - ANSI Z97.1 C = 100 ft/lbs - lesser standard (no longer recognized under IBC 2006)
 - CPSC Cat I = 150 ft/lbs - per CPSC section 2406
 - CPSC Cat II = 400 ft/lbs - per CPSC section 2406



CATEGORY I: Impact safety level designated by "code of federal regulations" part 16. (16 CFR). "Category I" glazing materials are subjected to impact of 100 lb. bag swung from 18" drop height (approx. 150 ft/lb impact), with no single piece of glazing material greater than 9 square feet in surface area. Cat I resembles an 85 lb. child running into the glazing material.

ANSI Z97.1 C: "Class C" impact test is a voluntary safety and performance specification and test method with a 12" drop height. Applicable only to fire-resistant glazing, specifically wire glass.



CATEGORY II: Impact safety level designated by "code of federal regulations" part 16. (16 CFR). "Category II" glazing materials are subjected to impact of 100 lb. bag swung from 48" drop height (approx. 400 ft/lb impact), with any piece of glazing material greater than 9 square feet in surface area. Cat II resembles a full-grown adult running into the glazing material.

Frequently Asked Questions about Glazing

IBC Code Changes

Consumer Product
Safety Commission (CPSC)

SECTION 2406 SAFETY GLAZING

CATEGORY I - under 9 sq. ft. (0.836 m²) glazing area

CATEGORY II - up to and over 9 sq. ft. (0.836 m²) glazing area

IBC 2000 and Prior Codes

Wire Glass - was 100% exempt from applicable Safety Standards in Fire Doors.

IBC 2003

Wire Glass - a portion of exemption was withdrawn for areas in schools, day care, etc. where children are present.

IBC 2006

Wire Glass - 100% of exemption is withdrawn from code.

What does it mean?

For over 25 years CPSC granted Wire Glass an exemption from complying with higher standards (Category I and II) of impact / safety in hazardous locations. Why, because Wire Glass was the primary, low cost, and readily available product that would comply with fire rated door requirements. It will not however pass Category I or II Safety testing, per section 2406. It will only pass ANSI Z97.1, therefore it was given an exemption from safety compliance for use in fire doors only.

Lawsuits involving injured children caused IBC to withdraw a percentage of the exemption. IBC 2003 says basically, if children are predominantly present, (i.e. school, day care etc.) glazing in fire doors must be fire AND safety rated per section 2406. Exemption for Wire Glass in these areas only was withdrawn.

Now, other more expensive fire rated glazing products are available that also comply with category I and/or II safety requirements.

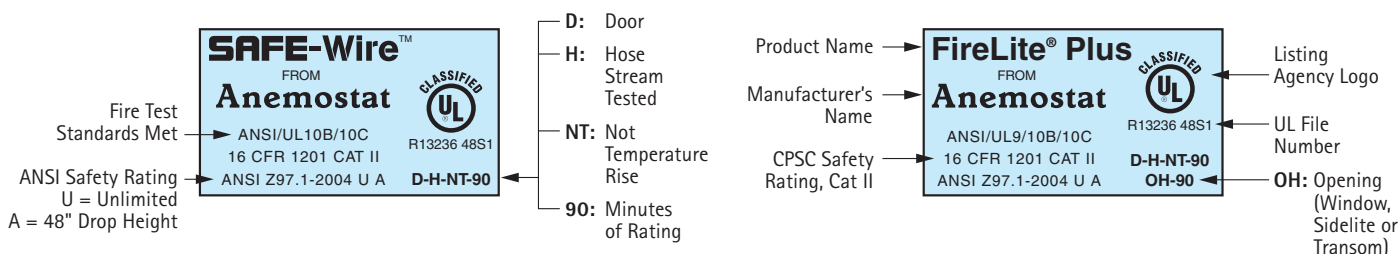
Plenty of Fire and Safety rated glazing products are now available. Wire Glass exemption is completely withdrawn. Now, all glazing in fire doors must also be safety rated per section 2406 in hazardous locations, as originally intended per Category I and II.

What about Labels?

My area of the country is now requiring fire-rated glazing materials to have a permanent label. That seems like a bother. Is it important?

Yes, according to the, N.F.P.A - 80, section 1-7.5 (fire doors), section 13-2.3 and (fire windows) "Each individual glazing unit shall be visible after installation." And section 13-2.1 says, "Only labeled fire protection-rated glazing material shall be used in fire windows."

Glass Etching (Permanent, per NFPA 80)



Frequently Asked Questions about Glazing

Hose Stream, Thermal Shock and Sprinklers

Why is the "fire hose stream" (thermal shock) test so important?

- Proves the durability and integrity if nearby sprinklers activate after fire has started
- Products listed at 45 minutes or more are required to pass the fire hose stream test in the United States

Is fire-rated glass really necessary if I use sprinklers? Can't I just use tempered or heat strengthened glass with a water "deluge" system?

- Sprinkler System must be working properly
- Must bathe every inch of exposed glass
- Drapes, blinds, shutters etc., are not allowed in front of the glass
- Relies on the perfect operation of the sprinkler system and water source

When it comes to fire protection and life safety, too much is at stake to rely exclusively on a single method of sprinklers only.

- The best way to provide the proper fire protection is to use sprinklers in conjunction with listed fire-rated glazing materials that have passed the hose stream test.

Are there size restrictions for fire rated glass products per NFPA-80?

- Yes, size limitations (in Visible Lite Sizes) depend on the product and the application. They will also be dictated by the total assembly (ie door, vision frame, glass and glazing tape).

			LoPro™ COMPLETE and Sidelite/Transoms									
Glazing Products	Impact Safety Rating	Vision Frame Model	20 Minute		45 Minute		60 Minute		90 Minute		3 Hour	
			w/LoPro Complete	w/Side Lite	w/LoPro Complete	w/Side Lite	w/LoPro Complete	w/Side Lite	w/LoPro Complete	w/Side Lite	w/LoPro Complete	w/Side Lite
SAFE-Wire™	Cat II	LoPro™	2994 sq. in.	2994 sq. in.	1296 sq. in.	1296 sq. in.	100 sq. in.	100 sq. in.	100 sq. in.	100 sq. in.	N/A	N/A
Pyrodur™	Cat I	LoPro™	1296 sq. in.	1296 sq. in.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FireGlass™ 20	Cat II	LoPro™	3024 sq. in.	6396 sq. in.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FireLite® NT	Cat II	LoPro™	3204 sq. in.	3325 sq. in.	2772 sq. in.	3325 sq. in.	2772 sq. in.	3325 sq. in.	1296 sq. in.	2627 sq. in.	100 sq. in.	N/A
FireLite® Plus	Cat II	LoPro™	3204 sq. in.	3325 sq. in.	2772 sq. in.	3325 sq. in.	2772 sq. in.	3325 sq. in.	1296 sq. in.	2627 sq. in.	100 sq. in.	N/A
FireLite® IGU	Cat II	LoPro™-IS	3204 sq. in.	3325 sq. in.	2772 sq. in.	3325 sq. in.	2772 sq. in.	3325 sq. in.	1296 sq. in.	2627 sq. in.	100 sq. in.	N/A
Pyrostop	Cat II	LoPro™-IS	1080 sq. in.	4500 sq. in.	1080 sq. in.	4500 sq. in.	1080 sq. in.	5605 sq. in.	1080 sq. in.	3724 sq. in.	N/A	N/A
Wire Glass*	None	LoPro™	2994 sq. in.	2994 sq. in.	1296 sq. in.	1296 sq. in.	100 sq. in.	100 sq. in.	100 sq. in.	100 sq. in.	N/A	N/A
FireLite®* Standard	None	LoPro™	3325 sq. in.	3325 sq. in.	3325 sq. in.	3325 sq. in.	3325 sq. in.	3325 sq. in.	2627 sq. in.	2627 sq. in.	N/A	N/A
FireLite®* Premium	None	LoPro™	3325 sq. in.	3325 sq. in.	3325 sq. in.	3325 sq. in.	3325 sq. in.	3325 sq. in.	2627 sq. in.	2627 sq. in.	N/A	N/A
Tempered Safety	Cat II	LoPro™	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

All square inch numbers shown are approved listings in visible lite

*NOT Impact/Safety Rated

NOT Fire Rated

NOTE: On visible lite sizes larger than 1296 sq. in. on 20/45 min. and 100 sq. in. on 60/90/180 min., Please Consult with your Door / Frame Manufacturer's Procedures, for their maximum glass size tested.

IMPORTANT: Interpretation of building and fire codes may vary. Consult with the local authority having jurisdiction to determine appropriate standards in your area.

FIRE RATINGS: Reflect most current tested size information at time of printing.
For most current test information check www.anemostat.com.

DOOR LOUVERS

Specify Stock Sizes

Save Time and Money

AFDL	Order Size and Door Cutout
Small	12 x 8 (305mm x 203mm)
	12 x 12 * (305mm x 305mm)
Medium Rectangle	16 x 12 (406mm x 305mm)
	18 x 12 * (457mm x 305mm)
Large Rectangle	24 x 12 * (610mm x 305mm)
	24 x 18 * (610mm x 457mm)

AFDL	Order Size and Door Cutout
Square	18 x 18 * (457mm x 457mm)
	24 x 24 * (610mm x 610mm)
Full Door	18 x 66 (457mm x 1676mm)
	24 x 60 (610mm x 1524mm)
	24 x 66 (610mm x 1676mm)

* Also stocked in FDLS and FLDL-UL models

Some models stocked in Galvanized for Exterior Use. Consult factory for more information.

DOOR LOUVERS



Standard



Specialty



Security

DEFINITION

Door Louvers

May be identified as a louver, grille, door grille or louver grille.

Usually square or rectangular.

Usually incorporates a perimeter frame on both sides of horizontal blades (core) that allows free air passage through the door louver.

Security Door Louvers

Usually incorporates heavier gauges of steel and protective grilles or perforated lattice plates to fit over the louver blades to provide better protection against vandalism or heavy abuse.

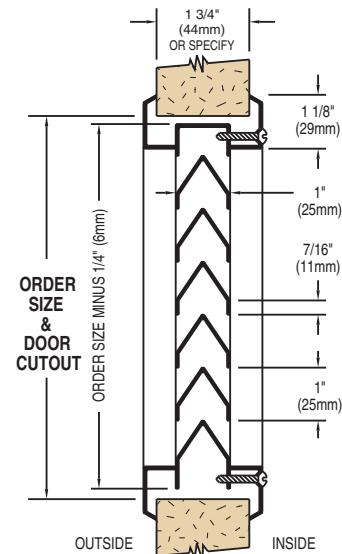
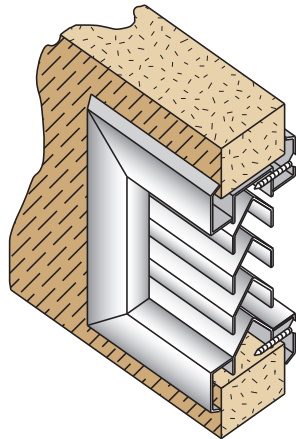
DOOR LOUVERS

Standard

AFDL

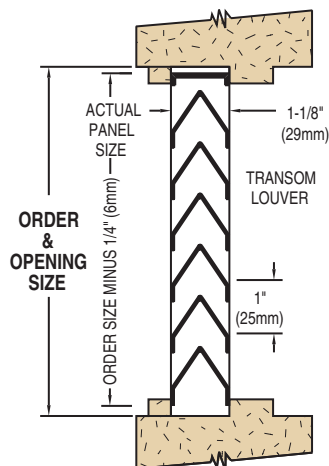
Non-Vision Inverted "Y" Louver

- **MATERIAL:** Frame: 18 GA (1.2mm) Cold Rolled Steel
Blades: 22 GA (.75mm) Cold Rolled Steel
- **FINISH:** Grey Primer, Beige or Bronze Enamel
- **INSTALLATION:** Our top seller fastens the auxiliary frame to the louver core thru the door cutout, eliminating the need to drill holes in the door.
- **DOOR THICKNESS:** 1-3/4" (44mm) is standard. 1-3/8" (35mm), 2" (51mm) and 2-1/8" (54mm) are available. Louver core may be offset.
- **AESTHETICS:** Tight mitered corners, no visible welds, and countersunk mounting holes.
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Baked Enamel Paint Colors, Insect or Bird Screen, Security Screws



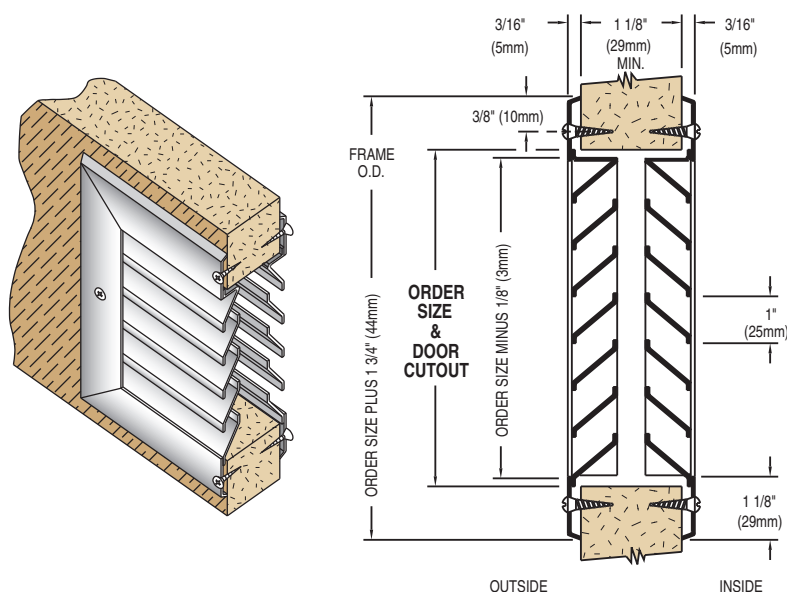
AFDL-T

For use in Transoms, Sidelites or Borrowed Lites



FDLS

Non-Vision Inverted Split "Y" Louver

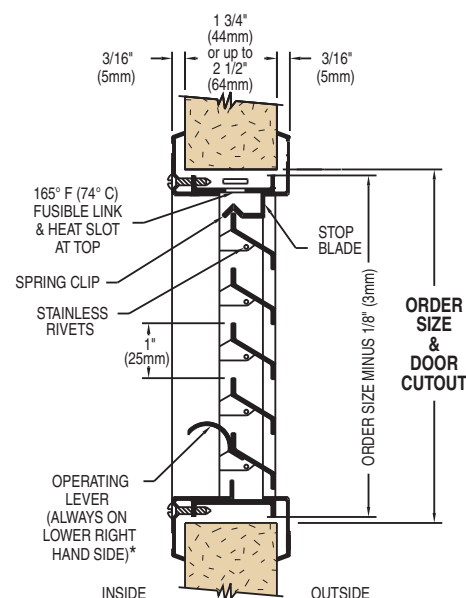
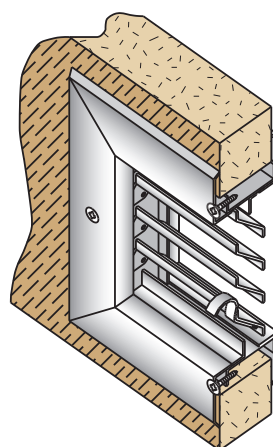


- **MATERIAL:** 18 GA (1.2mm) Cold Rolled Steel
- **FINISH:** Grey Primer, Beige or Bronze Enamel
- **INSTALLATION:** Screws directly into each side of the door thru countersunk mounting holes.
- **DOOR THICKNESS:** Any door thickness over 1-1/8" (29mm)
- **AESTHETICS:** Tight mitered corners, no visible welds, and countersunk mounting holes.
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Baked Enamel Paint Colors, Insect or Bird Screen, Security Screws

FLDL-UL

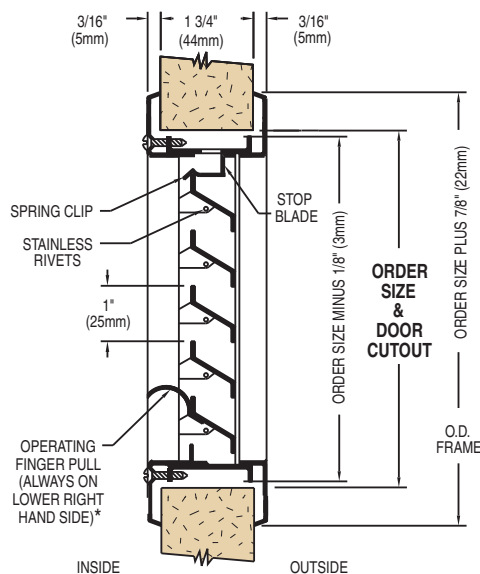
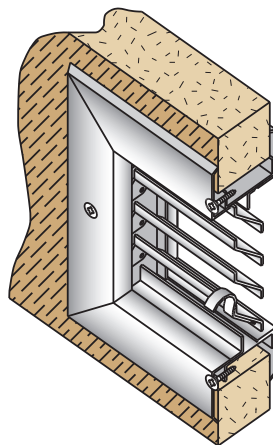
Fire Rated Fusible Link Louver

- **MATERIAL:** 18 GA (1.2mm) Cold Rolled Steel
- **FINISH:** Grey Primer, Beige or Bronze Enamel
- **INSTALLATION:** Self attaching product fastens the auxiliary frame to the louver core, thru the door cutout, eliminating the need to drill holes in the door
- **DOOR THICKNESS:** 1-3/4" (44mm) is standard. Also available up to 2-1/2" (64mm) door (to maintain fire rating).
- **AESTHETICS:** Tight mitered corners, no visible welds, and countersunk mounting holes.
- **FIRE TESTED:** with U.L. mark
 - ▶ **20/45/60/90 minute:** Approved Listing max width 24", max height 24" min width 12", min height 6"
 - ▶ **Tested to:** BS 476.22, Steel Doors - 120 min
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Baked Enamel Paint Colors, Insect or Bird Screen, Security Screws

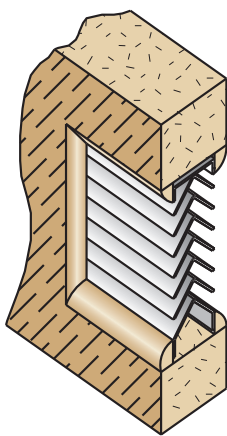


ADL

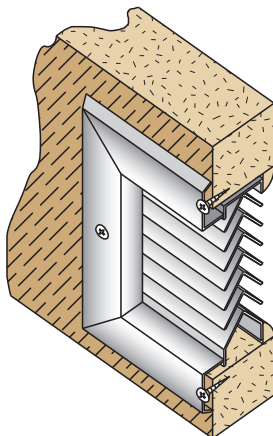
- **MATERIAL:** 18 GA (1.2mm) Cold Rolled Steel
- **FINISH:** Grey Primer, Beige or Bronze Enamel
- **INSTALLATION:** Self attaching product fastens the auxiliary frame to the louver core, thru the door cutout, eliminating the need to drill holes in the door
- **DOOR THICKNESS:** 1-3/4" (44mm) is standard. Also available up to 2-1/2" (64mm) door.
- **AESTHETICS:** Tight mitered corners, no visible welds, and countersunk mounting holes.
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Baked Enamel Paint Colors, Insect or Bird Screen, Security Screws



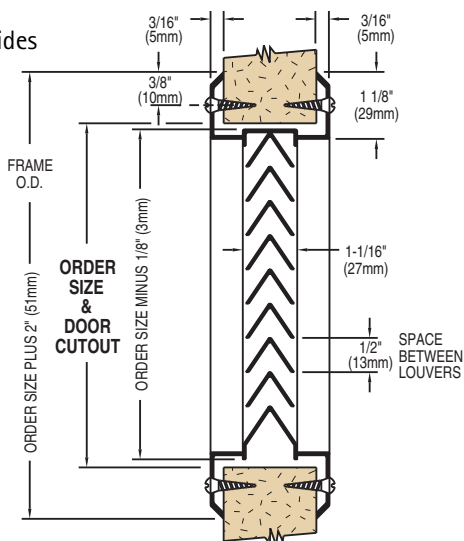
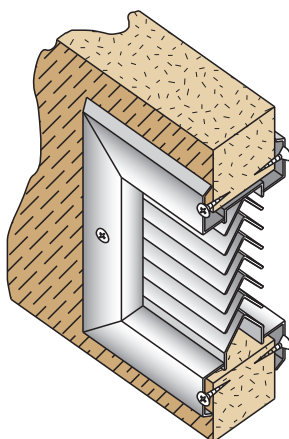
Core Only



Louver Core with Frame One Side



Louver Core with Frame Both Sides

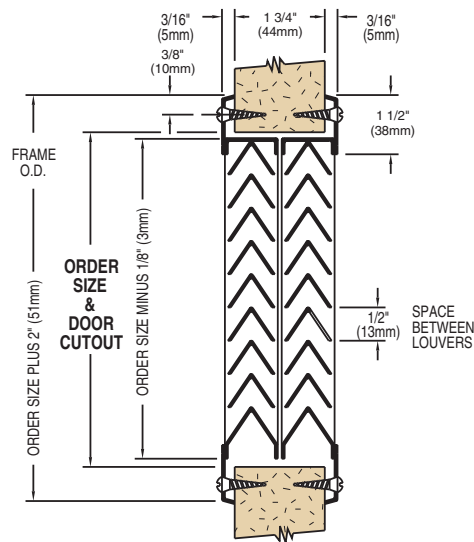
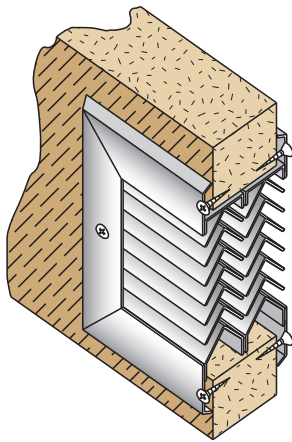


Non-Vision Inverted "V" Louver

- **MATERIAL:** Frame: 18 GA (1.2mm) Cold Rolled Steel
Blades: 22 GA (.75mm) Cold Rolled Steel
- **FINISH:** Grey Primer, Beige or Bronze Enamel
- **INSTALLATION:**
 - CHDL:** Installs into door or sidelite using wood or metal stops (by others) on one or both sides of the louver core.
 - CHDL-1F:** Frame side installs into the face of the door using screws and the core side with wood or metal stops (by others).
 - CHDL-2F:** Each frame side fastens to the door using wood or metal screws.
- **DOOR/FRAME THICKNESS:**
 - CHDL:** 1-1/16" (27mm) core thickness plus width of stops used on both sides of the core
 - CHDL-1F:** Minimum frame and core dimension is 1-9/16" (40mm)
 - CHDL-2F:** 1-3/4" (44mm) is standard. 1-3/8" (35mm) thickness is available.
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Baked Enamel Paint Colors, Insect or Bird Screen, Security Screws

DRDL

Double Inverted "V" Darkroom Louver

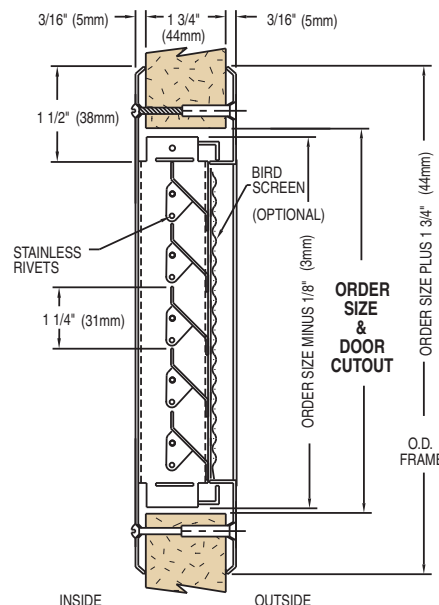
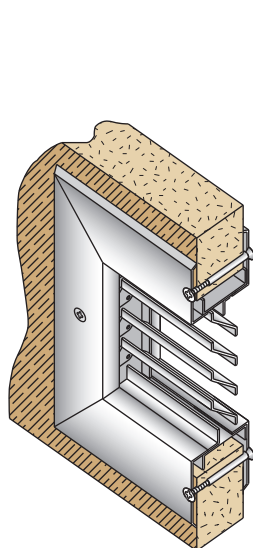
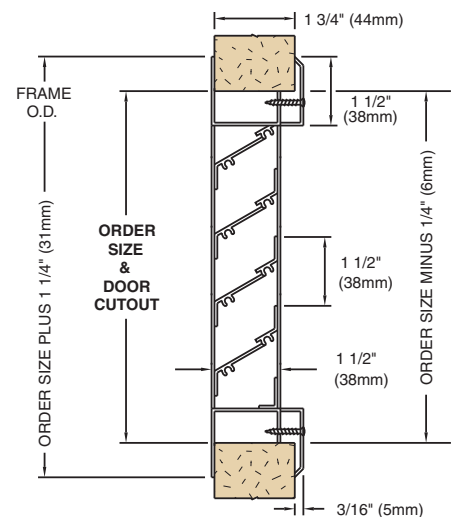
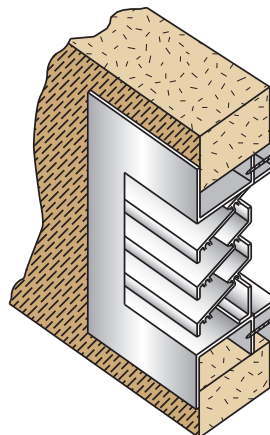


- **MATERIAL:** Frame: 18 GA (1.2mm) Cold Rolled Steel
Blades: 22 GA (.75mm) Cold Rolled Steel
- **FINISH:** Flat Black Enamel unless specified
Grey Primer, Beige or Bronze Enamel
- **INSTALLATION:** Each frame side fastens to the door using wood or metal screws.
- **DOOR/FRAME THICKNESS:** 1-3/4" (44mm) is standard. 1-3/8" (35mm) thickness is available.
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Baked Enamel Paint Colors, Insect or Bird Screen, Security Screws

SRDL

Storm Proof Louver

- **MATERIAL:** Extruded Aluminum .063" (1.6mm) thick
- **FINISH:** Mill Finish
- **INSTALLATION:** Self attaching product fastens the auxiliary frame to the louver core, thru the door cutout, eliminating the need to drill holes in the door
- **DOOR/FRAME THICKNESS:** 1-3/4" (44mm) is standard
- **OPTIONAL FEATURES:** Custom Baked Enamel Paint Colors, Insect or Bird Screen



FPL-2

Fixed Position Thru Bolted "Z" Blade Louver

- **MATERIAL:** 18 GA (1.3mm) Galvanized Steel
- **FINISH:** Grey Primer, Beige or Bronze Enamel
- **INSTALLATION:** By drilling 1/4" (6mm) holes thru the door, around the perimeter of the cutout, installing with thru bolts having a blank head on one side for a flush appearance.
- **DOOR THICKNESS:** 1-3/4" (44mm) is standard. 1-3/8" (35mm) thickness is available.
- **AESTHETICS:** Tight mitered corners, no visible welds, and countersunk mounting holes.
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Baked Enamel Paint Colors, Insect or Bird Screen, Security Screws

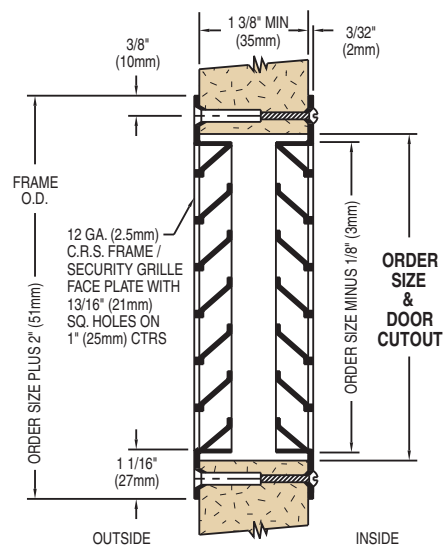
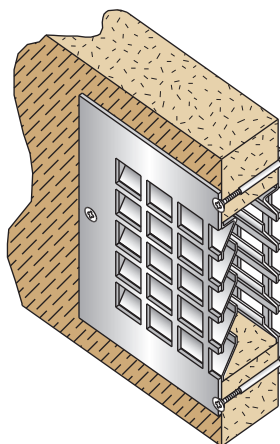
DOOR LOUVERS

Security

PLSL

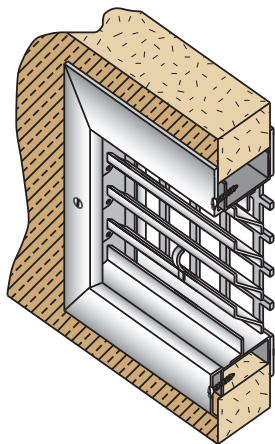
Louver with Security Grille, Non-Vision Inverted Split "Y"

- **MATERIAL:** Frame: 12 GA (2.5mm) C.R.S.
Security Grille: 12 GA (2.5mm) C.R.S.
Blades: 20 GA (1.2mm) C.R.S.
- **FINISH:** Grey Primer, Beige or Bronze Enamel
- **INSTALLATION:** By drilling 1/4" (6mm) holes thru the door, around the perimeter of the cutout, installing with thru bolts having a blank head on one side for a flush appearance.
- **DOOR THICKNESS:** 1-3/4" (44mm) is standard.
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Baked Enamel Paint Colors, Insect or Bird Screen, Security Screws
- **HURRICANE / WINDSTORM APPROVAL:** w/ U.L. mark



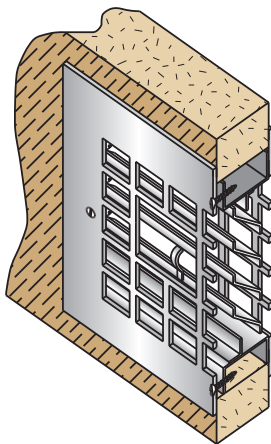
FLDL-UL-SG1

Security Grille One Side



FLDL-UL-SG2

Security Grille Both Sides















FLDL-UL-SG

Fusible Link Louver with Security Grille

- **MATERIAL:** Frame: 12 GA (2.5mm) C.R.S.
Security Grille: 12 GA (2.5mm) C.R.S.
Blades: 18 GA (1.2mm) C.R.S.
- **FINISH:** Grey Primer, Beige or Bronze Enamel
- **INSTALLATION:** By drilling 1/4" (6mm) holes thru the door, around the perimeter of the cutout, installing with thru bolts having a blank head on one side for a flush appearance.
- **DOOR THICKNESS:** 1-3/4" (44mm) is standard.
- **FIRE TESTED:** with U.L. mark
► 20/45/60/90 minute: Approved Listing
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Baked Enamel Paint Colors, Security Screws
- **HURRICANE / WINDSTORM APPROVAL:** w/ U.L. mark

Fasteners for Door Louvers

Standard	Fasteners for Door Louvers						
	Phillips Head Machine Screw	Screw with Thru Bolt		Self Tapping Tek Screw			
	 #8 x 3/4" #8 x 1"	 #8-32 x 1-1/4"	 PLSL, FPL-2 OPTIONAL - MUST SPECIFY 1/4" x 20 Meets ASTM F-1450-97 (must specify per model)	 #8 x 1/2"	 Attached Screen		
Optional Security*	One Way Vandal Proof	Snake Eye Spanner	Notched Spanner	Pinned Flat Head	Torx Flat Head	Torx-Plus Flat Head	Robertson Oval Head
							

*Screwdrivers and insert bits for security fasteners are available. Consult factory for price and availability.

EDGES AND ASTRAGALS



DEFINITION

Edges and Astragals

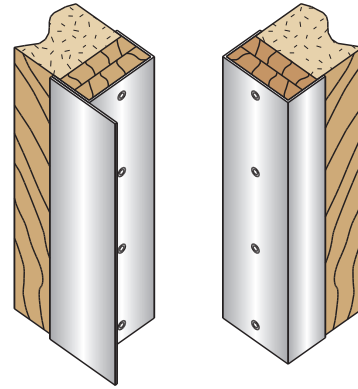
A horizontal or vertical overlapping or wrap-around molding(s) attached to the meeting edge of one or both leaves of a pair of doors to protect against weather conditions, to minimize the passage of light between the doors, or to retard the passage of smoke, flame, or gases during a fire, and in the case of a Dutch door, also to ensure that the lower leaf of the door closes in conjunction with the upper leaf.

Standard

FMEA

Metal Edge and Astragal (set)

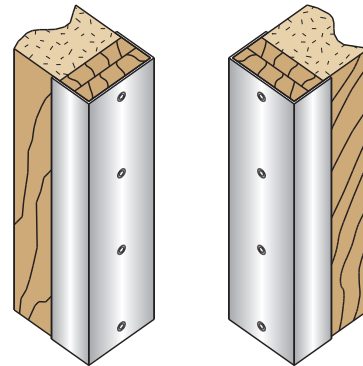
- **MATERIAL:** Edges: 20 GA (1mm) Cold Rolled Steel
Astragal: 18 GA (1.2mm) Cold Rolled Steel
- **FINISH:** Grey Primer, Beige or Bronze Enamel
- **INSTALLATION:** Screws directly into door edge with sheet metal screws
- **DOOR THICKNESS:** Specify if other than 1-3/4" (44mm) standard
- **FIRE TESTED:** with U.L. and W.H.I mark
 - ▶ 20/45/60/90 minute: Approved listing
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Baked Enamel Paint Colors, Plated Finishes, Lead Lined, Security Screws, Special Hardware Preps



FME

Metal Edge (pair)

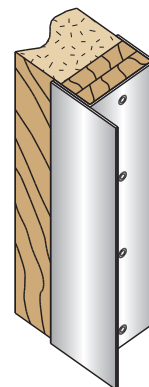
- **MATERIAL:** Edges: 20 GA (1mm) Cold Rolled Steel
- **FINISH:** Grey Primer, Beige or Bronze Enamel
- **INSTALLATION:** Screws directly into door edge with sheet metal screws
- **DOOR THICKNESS:** Specify if other than 1-3/4" (44mm) standard
- **FIRE TESTED:** with U.L. and W.H.I mark
 - ▶ 20/45/60/90 minute: Approved listing
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Baked Enamel Paint Colors, Plated Finishes, Security Screws, Special Hardware Preps



FMA

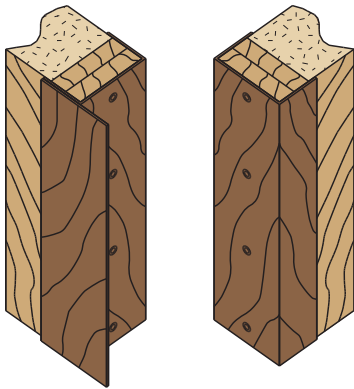
Metal Astragal (each)

- **MATERIAL:** Edges: 20 GA (1mm) Cold Rolled Steel
Astragal: 18 GA (1.2mm) Cold Rolled Steel
- **FINISH:** Grey Primer, Beige or Bronze Enamel
- **INSTALLATION:** Screws directly into door edge with sheet metal screws
- **DOOR THICKNESS:** Specify if other than 1-3/4" (44mm) standard
- **FIRE TESTED:** with U.L. and W.H.I mark
 - ▶ 20/45/60/90 minute: Approved listing
- **OPTIONAL FEATURES:** Galvanized, Stainless Steel, Custom Baked Enamel Paint Colors, Plated Finishes, Lead Lined, Security Screws, Special Hardware Preps



WV-FMEA

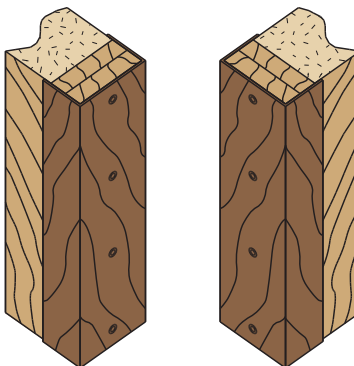
Wood Veneer over Metal Edge and Astragal (set)



- **MATERIAL:** Edges: Real Wood Veneer over 20 GA (1mm) C.R.S.
Astragal: Real Wood Veneer over 18 GA (1.2mm) C.R.S.
 - **SPECIES:** Unfinished Red Oak, Natural Birch and Mahogany
 - **INSTALLATION:** Screws directly into door edge with sheet metal screws
 - **DOOR THICKNESS:** Specify if other than 1-3/4" (44mm) standard
 - **FIRE TESTED:** with W.H.I mark
 - ▶ 20/45/60/90 minute: Approved listing
 - **OPTIONAL FEATURES:** Other Common Wood Species, Security Screws, Special Hardware Preps
- NOTE:** Product is designed for Interior use.

WV-FME

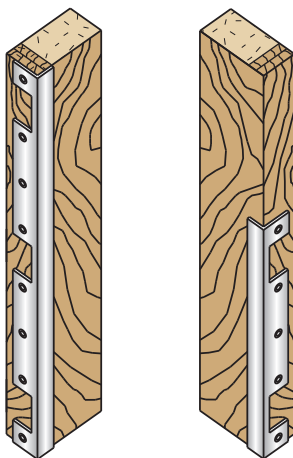
Wood Veneer over Metal Edge (pair)



- **MATERIAL:** Edges: Real Wood Veneer over 20 GA (1mm) Cold Rolled Steel
 - **SPECIES:** Unfinished Red Oak, Natural Birch and Mahogany
 - **INSTALLATION:** Screws directly into door edge with sheet metal screws
 - **DOOR THICKNESS:** Specify if other than 1-3/4" (44mm) standard
 - **FIRE TESTED:** with W.H.I mark
 - ▶ 20/45/60/90 minute: Approved listing
 - **OPTIONAL FEATURES:** Other Common Wood Species, Security Screws, Special Hardware Preps
- NOTE:** Product is designed for Interior use.

HEG / HEG-M

Hinge Edge Guard (each)



HEG

HEG-M

- **MATERIAL:** Edges: 18 GA (1.2mm) #304 stainless steel
- **FINISH:** #4 finish (satin)
- **INSTALLATION:** Fits over hinge edge of door using sheet metal screws
- **HINGE CUTOUTS:** 4" (102mm), 4-1/2" (114mm) and 5" (127mm) are std
- **DOOR THICKNESS:** 1-3/4" (44mm) Doors with 1/4" (6mm) hinge back set
- **FIRE TESTED:** with U.L. and W.H.I mark
 - ▶ 20/45/60/90 minute: Approved listing
- **OPTIONAL FEATURES:** #316 Stainless Steel, Cold Rolled Steel, Galvanized, Custom Baked Enamel Paint Colors, Plated Finish, Special Hinge Preps

Glossary of Terms

ANSI – American National Standards Institute (ANSI Z97.1) for health and safety standards.

Annealed Glass – The controlled process for making glass stronger and less brittle in which the glass is heated and then cooled.

Authority Having Jurisdiction (AHJ) – The organization, office, or individual responsible for approving equipment, an installation, or a procedure.

Barrier to Radiant Heat – A barrier to radiant heat is a fire resistive glazing product that blocks heat transfer from one side of the glazing to the other. Typical applications of this type of glazing would be transparent fire rated wall units, or oversized (over 100 square inch) vision frames, with the appropriate glazing, in temperature rise doors. Must be tested to ASTM E-119 in order to be a qualified "Barrier to Radiant Heat".

Bullet-Resistant Glass – Glass/Glazing that consists of multiple layers of laminated glass or polycarbonates. It is designed to resist penetration from medium to super-power small arms and high-power rifles.

Butyl – A caulk used in earlier models for glass retention. It is a petroleum product that requires no curing or hardening. Butyl is available in rolls of approximately 25 feet. It is available in various thicknesses and shapes. It is NOT fire rated.

CPSC – Consumer Products Safety Commission (CPSC 16CFR 1201).

Category I – Impact safety level designated by "code of federal regulations" part 16. (16 CFR). "Category I" glazing materials are subjected to impact of 100 lb. bag swung from 18" drop height (approx. 150 ft/lb impact), with no single piece of glazing material greater than 9 square feet in surface area. Cat I resembles an 85 lb. child running into the glazing material. (see page 25 for more information)

Category II – Impact safety level designated by "code of federal regulations" part 16. (16 CFR). "Category II" glazing materials are subjected to impact of 100 lb. bag swung from 48" drop height (approx. 400 ft/lb impact), with any piece of glazing material greater than 9 square feet in surface area. Cat II resembles a full-grown adult running into the glazing material. (see page 25 for more information)

Ceramic – Material known for its outstanding heat resistance. Used in certain fire-rated glazing materials, such as the FireLite family of products.

Classified – Products or materials of a specific group category that are constructed, inspected, tested, and subsequently reinspected in accordance with an established set of requirements. The classification process is performed by an organization acceptable to the authority having jurisdiction.

Fire Door Assembly – Any combination of a fire door, a frame, hardware, and other accessories that together provide a specific degree of fire protection to the opening.

Fire Protection Rating – The designation indicating the duration of the fire test exposure to which a fire door assembly or fire window assembly was exposed and for which it successfully met all acceptance criteria as determined in accordance with NFPA 252 / NFPA 257 / UL 9 / UL 10C / ASTM E-163 / ASTM E-152 / UBC 7-2.

Fire Resistance Rating – The time, in minutes or hours, that materials or assemblies have withstood a fire exposure as established in accordance with the test procedures of NFPA 215 / ASTM E-119 / UL 263. (Wall Assemblies)

Fire-Rated – A label given to a material after it has passed specific fire testing.

Fusible Link – Two pieces of metal held together by low-melting-point solder.

Heat Transfer (ASTM E-119 / UL 263) – The degree to which an assembly (usually a door or wall) will transfer heat from one side to another.

Hose Stream Test – One component of the testing process for fire-rated glazing and framing in North America. Glass that has been heated in a test furnace is subjected to water from a fire hose to gauge the ability of the complete assembly being tested to withstand thermal and pressure shock.

Glossary of Terms

Impact/Safety Rating - Measures the ability of an assembly (ie. glass) to withstand impact. Ratings are given in levels based on the amount of force the members can resist. Impact safety ratings are often required where glass is regularly exposed to contact by people or objects.

Insulating Glass Unit (IGU) - Two or more lites of glass separated by a spacer bar and hermetically sealed to form a single unit with an air space between each lite.

Labeled - Equipment or materials that have been tested by an authorized agency (UL, WHI, etc.) must be labeled to show the acceptable level of use to the authority having jurisdiction. The label may be a permanently affixed tag, etched logo, or embossed stamp.

Laminated Glass - Two or more lites of glass permanently bonded together with one or more interlayers. Product can be cut to size with standard cutting tool, in most cases. Lami, is another name for Lained Glass.

Listed - An assembly or materials included in a list published by an organization (ie UL or WHI) acceptable to the Authority Having Jurisdiction and concerned with product evaluation. The listing states either that the assembly or material meets appropriate standards or has been tested and found suitable for use in a specified manner. Maintaining periodic inspection of listed products during manufacturing and or assembly process is required by said organization.

Low E Glass - Low emissivity glass; a type of ultraviolet reflective glass that is popular in residential and office applications.

Model Building Code - A resource of codes that have been written and adopted as the law or standard in a geographical area.

NFPA - National Fire Protection Association.

Obscure Glass - Mainly used for decoration, diffusion, or privacy. The design is pressed into the glass during the rolling process. There are many patterns available.

Safety Glass - A general term used for either laminated or tempered glass. Only glass which has been laminated, however, can specifically be called laminated safety glass.

Setting Block - A small piece of neoprene or other suitable material that positions the glass in the frame or opening. A part on which the glass rests in place. Must be fire resistant when used with fire rated glazing.

Sound Transmission Class (STC) - A single number rating derived from individual transmission losses at specified test frequencies. It is used for interior walls, ceilings, and floors and in the past was also used for preliminary comparison of the performance of various glazing materials. The higher the STC number, the greater the sound transmission loss, or sound dampening.

Temperature Rise - The ability of a door assembly to limit the temperature rise on the unexposed side of fire doors to 450 degrees F' during the first 30 minutes of the standard fire test. Door type frequently used for protection of exit stairwells, assuming a higher temperature would provide enough radiant heat to discourage, if not prevent, occupants from passing by the door during an emergency. Maximum visible light of 100 square inches.

Tempered Glass - Flat or bent glass that has been heat-treated to a high surface and or/edge compression. Fully tempered glass, if broken, will fracture into many small pieces (dice) which are more or less cubical. Fully tempered glass is approx. four times stronger than annealed glass of the same thickness. Cannot be cut after it's manufactured. (Outside of North America sometimes called "toughened glass").

Transom - An opening in a fire door frame above the door opening that is filled by a solid panel or with glazing material.

Wind Load - Force exerted by winds on building panels and complete structures; may be inward (positive) or outward (negative).



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