

CHAPTER 10

CLAD POLYGONS AND RECTANGLES

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NOTE:

Specifications and technical data are subject to change without notice.

Allow 1/16" (2) tolerance on all measurements.

Metric measurements are shown in parenthesis.

For accessories dimensions and applications see the Accessories section of this manual.

For technical assistance about Marvin products you may call our Architectural Hotline 1-800-346-3363 or visit our website: www.Marvin.com.

CLAD POLYGONS AND RECTANGLES

UNIT FEATURES

Frame:

- Interior: Pine wood interior standard. Optional white oak, cherry, mahogany, vertical grain Douglas fir
- Exterior: Extruded aluminum, .055" (1.3) thick
- Frame thickness: 1 3/32" (28 mm)
- Frame width: 4 9/16" (116)

Interior and exterior finish:

- Exterior finish: Two coat finish system using Kynar® or Hylar® resins, meets or exceeds AAMA 2605 requirements.
Standard Color: Stone White, Bahama Brown, Bronze, Pebble Gray, Evergreen. Select Color: Sierra White, Coconut Cream, French Vanilla, Cashmere, Desert Beige, Cumulus Gray, Cadet Gray, Ebony, Arctic White, Cascade Blue, Cobalt Blue, Hampton Sage, Sherwood Green and Wineberry. Contact your Marvin representative for details on custom colors.
- Interior finish: treated bare wood or white primed (pine only)

Jamb Extensions:

- Jamb extensions available for various wall thickness factory applied, finish to match interior

Removable Interior Grilles:

- Bar: Pine wood, 3/4" (19) or 1 1/8" (29) wide
- Pattern: Rectangular, custom lite layouts available, contact your Marvin representative

Interior / Exterior Simulated Divided Lite (SDL):

- Interior bar: 7/8" (22) or 1 1/8" (29) wide bars. Pine wood standard, optional white oak, cherry, mahogany or vertical grain Douglas fir. Finish to match interior
- Exterior bar: Extruded aluminum clad, 7/8" (22) or 1 1/8" (29) wide bars, finish to match exterior
- Pattern: Rectangular, custom lite layouts available, contact your Marvin representative
- Installation method: Factory applied with acrylic foam tape

Grilles-between-the-glass (GBG):

- 11/16" (17mm) white contoured aluminum bar. Optional flat aluminum spacer bar, contact your Marvin representative

Glass and Glazing:

- Glazing method: Insulated glass, hermetically sealed. Optional single glaze
- Glazing seal: Silicon glazed
- Glazing type: Clear glass, optional glass types: Low E II with argon, Laminated, Tempered, Obscure, Bronze tint, Gray tint, and Reflective Bronze
- Insulated glass will be altitude adjusted for higher elevations, argon gas not included

Accessories:

- Installation brackets: 6 3/8" (162), 9 3/8" (238), or 15 3/8" (390)
- Masonry brackets: 6" (152) or 10" (254)
- Nailing fin: Head jamb fin/drip cap, side jamb and sill fin. Head nailing fin with drip cap not designed to replace proper flashing
- Marvin SillGuard™
- Aluminum extrusions: Brick mould casing, Flat casing, Mullion cover, Frame expander, Mullion expander, Jamb extender

Note:

Values shown in parenthesis represent metric equivalents
For product specifications please refer to the CSI Product Specifications, contact your Marvin representative

CLAD POLYGONS AND RECTANGLES

DESIGN PRESSURE / NFRC VALUES / MINIMUM AND MAXIMUM MEASUREMENTS / SHAPES

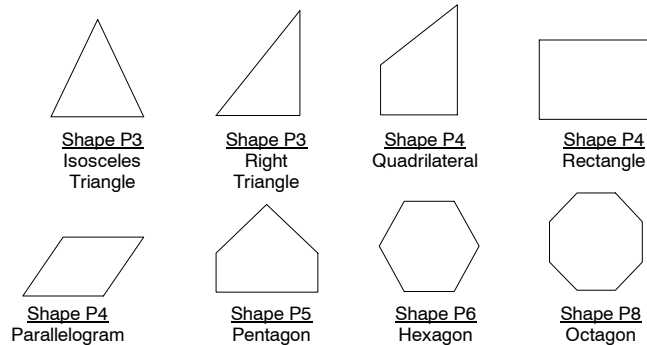
Design Pressure: Clad direct glaze meets a DP40 up to 120" x 72" (3048 x 1829)

NFRC Unit Values					
Glazing Type	U-Factor	R-Value	Solar Heat Gain Coefficient	Visible Light Transmittance	Energy Star
Direct Glaze					
Size Tested	47 x 59	47 x 59	47 x 59	47 x 59	
Single Glaze	1.04	0.96	0.73	0.76	-
Insulating glass	0.48	2.08	0.65	0.69	-
Insulating glass - SDL with spacer bars	0.49	2.04	0.59	0.62	-
Insulating Low E II glass	0.33	3.03	0.35	0.60	N, NC, SC, S
Insulating Low E II glass - SDL with spacer bars	0.34	2.94	0.32	0.54	N, NC, SC, S
Insulating Low E II glass - Argon	0.29	3.45	0.35	0.60	N, NC, SC, S
Insulating Low E II glass - Argon, SDL with spacer bars	0.31	3.23	0.32	0.54	N, NC, SC, S

NOTE:
Product Values are determined using the National Fenestration Rating Council (NFRC) Procedures for determining fenestration product values.
U-Value: (Btu/hr-sq ft-°F) Lower the U-Value, the greater the resistance to heat flow and better its insulating value.
R-Value: (1/U-Value) Higher the R-Value, the greater the resistance to heat flow and better its insulating value.
Visible Light Transmittance (VLT): Percentage of visible light transmitted through the unit.
Solar Heat Gain Coefficient (SHGC): The lower a window's SHGC, the less solar heat it transmits, and the greater its shading ability.
Capillary tubes are required for IG units at high elevations. Argon will not be furnished in units with capillary tubes. Contact the Architectural Department Hotline at (800-346-3363) for additional NFRC Unit Values.

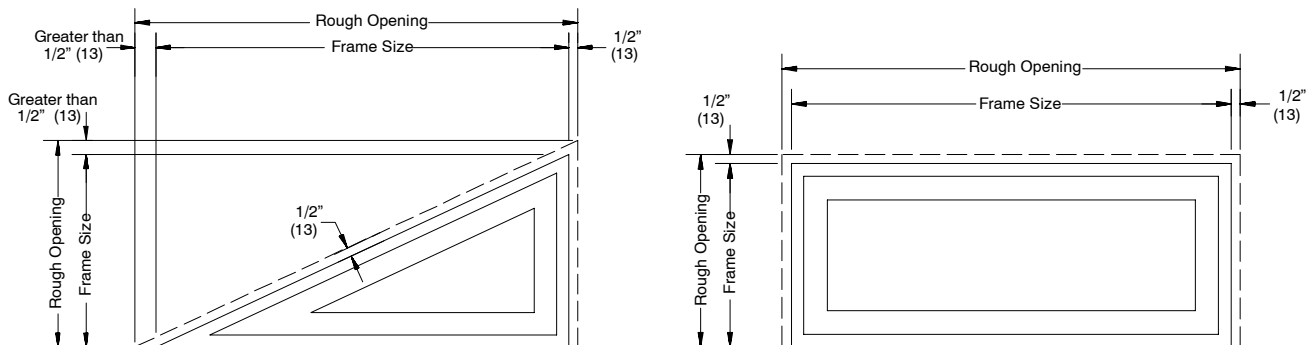
Shape Identification

Minimum and Maximum Measurements	
Glazing Type	Maximum Glass Size per Sash
Clad Polygon and Rectangles	
Insulating Glass 1" (25)	49 Sq. feet (4.55 Sq. Meters)
1 3/4" Sash	
Insulating Glass 3/4" (19)	25.0 Sq. feet (2.32 Sq. Meters)
Insulating Glass 1" (25)	49.0 Sq. feet (4.55 Sq. Meters)
Minimum short leg 6" of frame outside measurement	



NOTE:
Shapes shown above may be rotated to obtain variations.
Contact your Marvin representative for shape availability not shown.

Measurement Tolerances



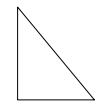
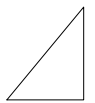
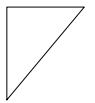
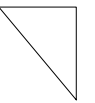
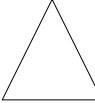
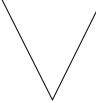
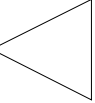
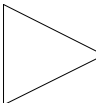




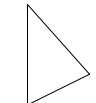
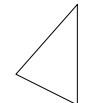
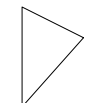
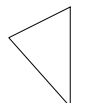


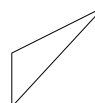
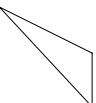
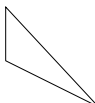
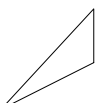














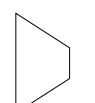
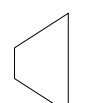
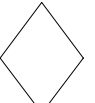


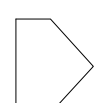
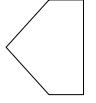
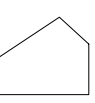
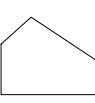
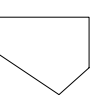
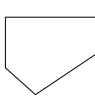
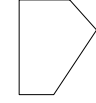
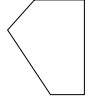
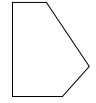
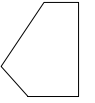
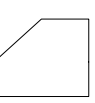
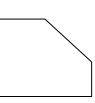
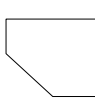
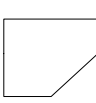
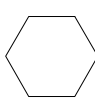
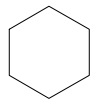
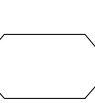
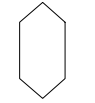
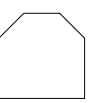
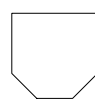
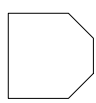
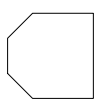
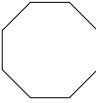
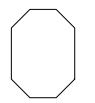
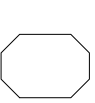
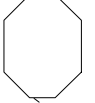
NOTE:
1/2" (13) Rough Opening tolerance is maintained perpendicular to the frame of polygon units.
1/4" (6) Masonry Opening tolerance is maintained perpendicular to the frame or casing of polygon units.
Measurement tolerances vary due to polygon angles. Specify either Frame Size or Rough Opening measurement, Marvin's will calculate the appropriate tolerances.
Elevations above are shown without casing.

CLAD POLYGONS AND RECTANGLES

POLYGON SHAPE REFERENCE

QUICK REFERENCE TO POLYGON SHAPES

NOTE: Please contact your Marvin representative for availability and more information.

 P3-1	 P3-2	 P3-3	 P3-4	 P3-5	 P3-6	 P3-7
 P3-8	 P3-9	 P3-10	 P3-11	 P3-12	 P3-13	 P3-14
 P3-15	 P3-16	 P3-17	 P3-18	 P3-19	 P3-20	 P3-21
 P3-22	 P4-1	 P4-2	 P4-3	 P4-4	 P4-5	 P4-6
 P4-7	 P4-8	 P4-9	 P4-10	 P4-11	 P4-12	 P4-13
 P4-14	 P4-15	 P4-16	 P4-17	 P5-1	 P5-2	 P5-3
 P5-4	 P5-5	 P5-6	 P5-7	 P5-8	 P5-9	 P5-10
 P5-11	 P5-12	 P5-13	 P5-14	 P5-15	 P5-16	 P6-1
 P6-2	 P6-3	 P6-4	 P6-5	 P6-6	 P6-7	 P6-8
 P8-1	 P8-2	 P8-3	 P8-4			

CLAD POLYGONS AND RECTANGLES

MEASUREMENT CONVERSIONS

Slope to Angle / Degree Conversions		
Slope	Angle	Degree / Minutes
1 /12	4.76	4 deg. 46'
2 /12	9.46	9 deg 28'
3 /12	14.04	14 deg. 2'
4 /12	18.43	18 deg. 26'
5 /12	22.62	22 deg. 37'
6 /12	26.57	26 deg. 34'
7 /12	30.26	30 deg. 15'
8 /12	33.69	33 deg. 41'
9 /12	36.87	36 deg. 52'
10 /12	39.81	39 deg. 48'
11 /12	42.51	42 deg. 31'
12 /12	45.00	45 deg. 0'
13 /12	47.29	47 deg. 17'
14 /12	49.40	49 deg. 24'
15 /12	51.34	51 deg. 20'
16 /12	53.13	53 deg. 8'
17 /12	54.78	54 deg. 47'
18 /12	56.31	56 deg. 19'
19 /12	57.72	57 deg. 43'
20 /12	59.04	59 deg. 2'
21 /12	60.26	60 deg. 15'
22 /12	61.39	61 deg. 23'
23 /12	62.45	62 deg. 27'
24 /12	63.43	63 deg. 26'

Angle to Pitch Conversions							
Angle	Pitch	Angle	Pitch	Angle	Pitch	Angle	Pitch
1	0.21 /12	25	5.60 /12	49	13.80 /12	73	39.25 /12
2	0.42 /12	26	5.85 /12	50	14.30 /12	74	41.85 /12
3	0.63 /12	27	6.11 /12	51	14.82 /12	75	44.78 /12
4	0.84 /12	28	6.38 /12	52	15.36 /12	76	48.13 /12
5	1.05 /12	29	6.65 /12	53	15.92 /12	77	51.98 /12
6	1.26 /12	30	6.93 /12	54	16.52 /12	78	56.46 /12
7	1.47 /12	31	7.21 /12	55	17.14 /12	79	61.73 /12
8	1.69 /12	32	7.50 /12	56	17.79 /12	80	68.06 /12
9	1.90 /12	33	7.79 /12	57	18.48 /12	81	75.77 /12
10	2.12 /12	34	8.09 /12	58	19.20 /12	82	85.38 /12
11	2.33 /12	35	8.40 /12	59	19.97 /12	83	97.73 /12
12	2.55 /12	36	8.72 /12	60	20.78 /12	84	114.17 /12
13	2.77 /12	37	9.04 /12	61	21.65 /12	85	137.16 /12
14	2.99 /12	38	9.38 /12	62	22.57 /12	86	171.61 /12
15	3.22 /12	39	9.72 /12	63	23.55 /12	87	228.97 /12
16	3.44 /12	40	10.07 /12	64	24.60 /12	88	343.64 /12
17	3.67 /12	41	10.43 /12	65	25.73 /12	89	687.48 /12
18	3.90 /12	42	10.80 /12	66	26.95 /12		
19	4.13 /12	43	11.19 /12	67	28.27 /12		
20	4.37 /12	44	11.59 /12	68	29.70 /12		
21	4.61 /12	45	12.00 /12	69	31.26 /12		
22	4.85 /12	46	12.43 /12	70	32.97 /12		
23	5.09 /12	47	12.87 /12	71	34.85 /12		
24	5.34 /12	48	13.33 /12	72	36.93 /12		

Measurement Conversions - Clad Polygons Rectangle														
Size Referenced	Daylight Opening		Glass Size		Frame Size		Rough Opening		Masonry Opening (Without Casing)		Masonry Opening (With Brick Mould Casing)		Masonry Opening (With Flat Casing)	
Daylight Opening	Dimension Needed													
	Width	+ 1 3/8" (35)	Width	+ 3 15/16" (100)	Width	+ 4 15/16" (125)	Width	+ 4 7/16" (113)	Width	+ 7 1/16" (179)	Width	+ 10 7/16" (265)	Height	+ 7 13/16" (198)
Glass Size	Width	- 1 3/8" (35)	Width	+ 2 9/16" (65)	Width	+ 3 9/16" (90)	Width	+ 3 1/16" (78)	Width	+ 5 11/16" (144)	Width	+ 9 1/16" (230)	Height	+ 6 1/8" (154)
	Height	- 1 3/8" (35)	Height	+ 2 9/16" (65)	Height	+ 3 1/16" (78)	Height	+ 2 13/16" (71)	Height	+ 4 3/4" (121)	Height	+ 6 7/16" (163)		
Frame Size	Width	- 3 15/16" (100)	Width	- 2 9/16" (65)	Width	+ 1" (25)	Width	+ 1/2" (13)	Width	+ 3 1/8" (79)	Width	+ 6 1/2" (165)	Height	+ 2 3/16" (56)
	Height	- 3 15/16" (100)	Height	- 2 9/16" (65)	Height	+ 1/2" (13)	Height	+ 1/4" (6)	Height	+ 2 3/16" (56)	Height	+ 3 7/8" (98)		
Rough Opening	Width	- 4 15/16" (125)	Width	- 3 9/16" (90)	Width	- 1" (25)	Width	- 1/2" (13)	Width	+ 2 1/8" (54)	Width	+ 5 1/2" (140)	Height	+ 3 3/8" (86)
	Height	- 4 7/16" (113)	Height	- 3 1/16" (78)	Height	- 1/2" (13)	Height	- 1/4" (6)	Height	+ 1 11/16" (43)	Height	+ 3 3/8" (86)		
Masonry Opening (Without Casing)	Width	- 4 7/16" (113)	Width	- 3 1/16" (78)	Width	- 1/2" (13)	Width	+ 1/2" (13)	Width	+ 2 5/8" (67)	Width	+ 6" (152)	Height	+ 3 5/8" (92)
	Height	- 4 3/16" (106)	Height	- 2 13/16" (71)	Height	- 1/4" (6)	Height	+ 1/4" (6)	Height	+ 1 15/16" (49)	Height	+ 3 5/8" (92)		
Masonry Opening (With Brick Mould Casing)	Width	- 7 1/16" (179)	Width	- 5 11/16" (144)	Width	- 3 1/8" (79)	Width	- 2 1/8" (54)	Width	- 2 5/8" (67)	Width	+ 3 3/8" (86)	Height	+ 1 11/16" (43)
	Height	- 6 1/8" (156)	Height	- 4 3/4" (121)	Height	- 2 3/16" (56)	Height	- 1 11/16" (43)	Height	- 1 15/16" (49)	Height	+ 1 11/16" (43)		
Masonry Opening (With Flat Casing)	Width	- 10 7/16" (265)	Width	- 9 1/16" (230)	Width	- 6 1/2" (165)	Width	- 5 1/2" (140)	Width	- 6" (152)	Width	- 3 3/8" (86)	Height	- 1 11/16" (43)
	Height	- 7 13/16" (198)	Height	- 6 7/16" (163)	Height	- 3 7/8" (98)	Height	- 3 3/8" (86)	Height	- 3 5/8" (92)	Height	- 1 11/16" (43)		

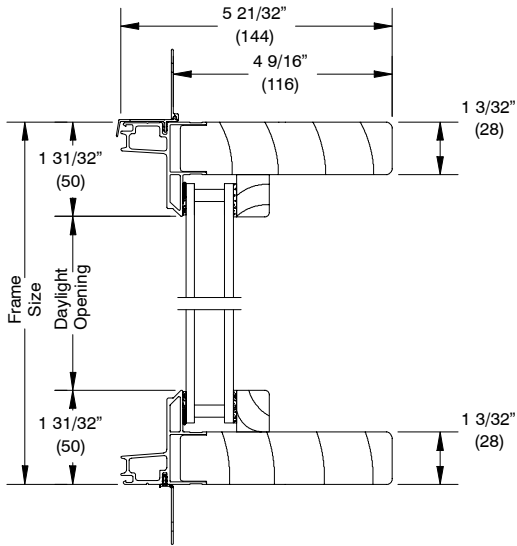
NOTE: Conversions represent units without dividers. Contact Marvin for additional conversions.

CLAD POLYGONS AND RECTANGLES

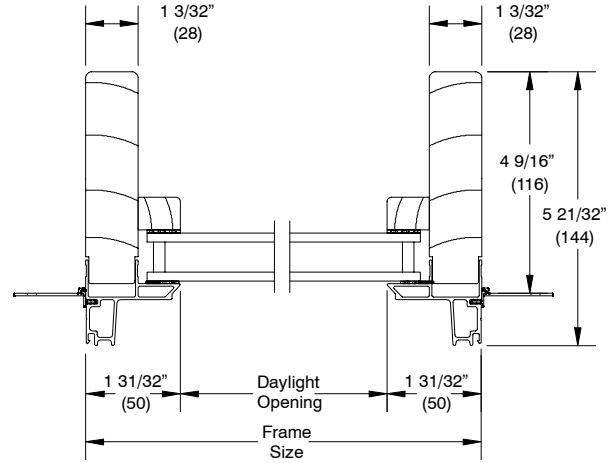
SECTION DETAILS: DIRECT GLAZE / IN-SASH

SCALE: 3" = 1' 0"

Direct Glaze Insulated Glass

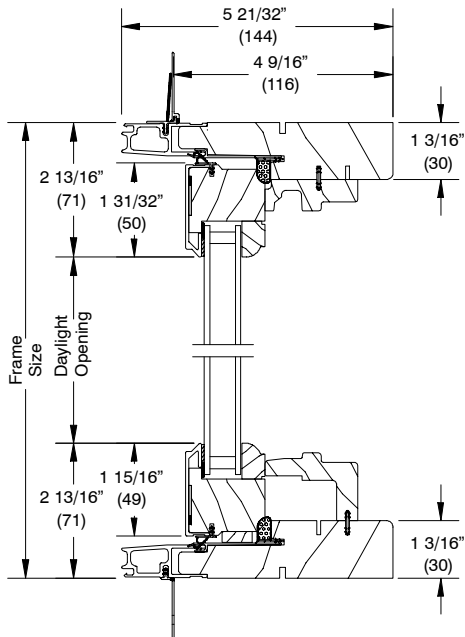


Head Jamb and Sill

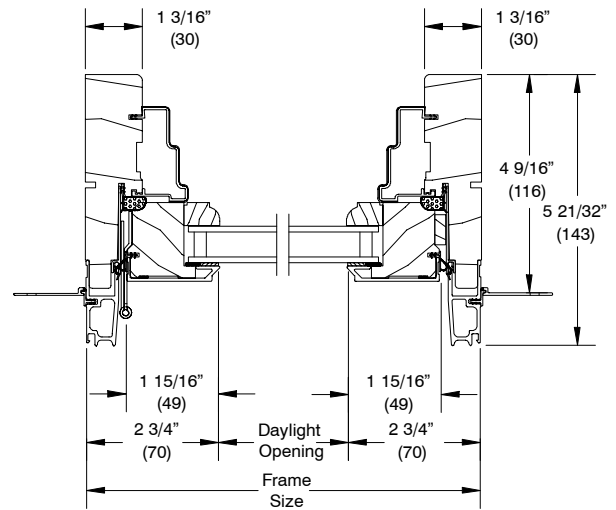


Jamb

In-Sash



Head Jamb and Sill



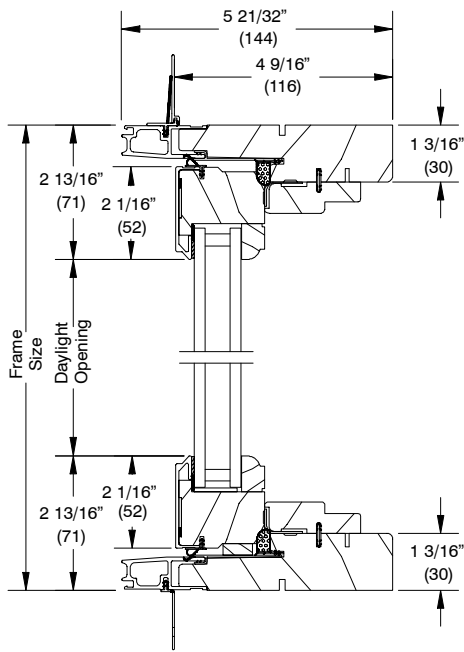
Jamb

CLAD POLYGONS AND RECTANGLES

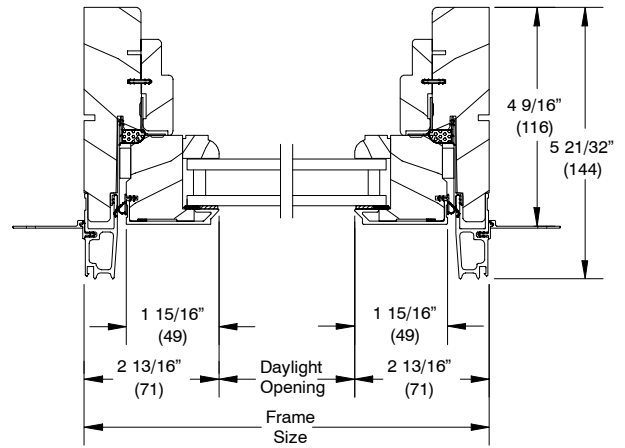
SECTION DETAILS: IN-SASH / CASING OPTIONS

SCALE: 3" = 1' 0"

In-Sash

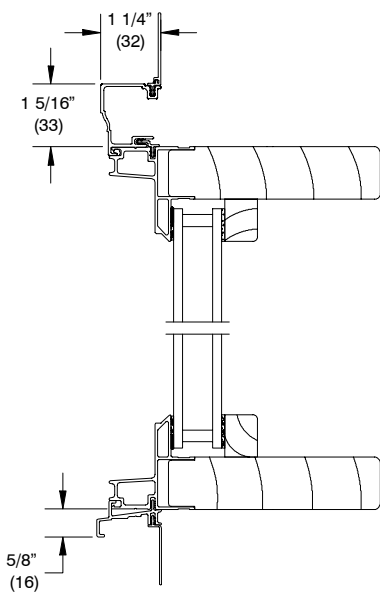


Head Jamb and Sill

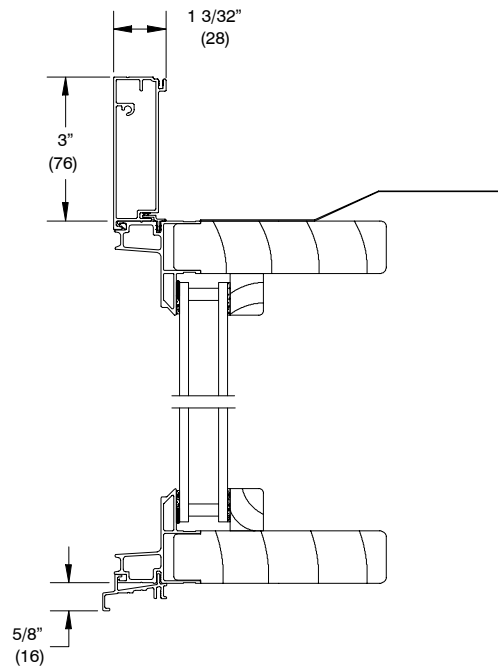


Jamb

Casing Options



Head Jamb and Sill
with Clad Brick Mould Casing



Head Jamb and Sill
with Clad Flat Casing

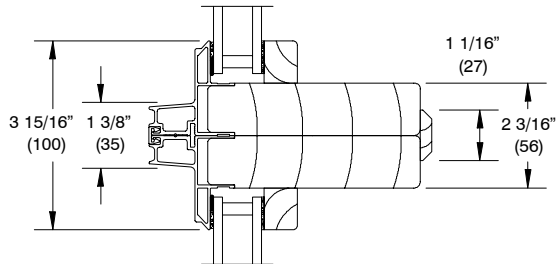
CLAD POLYGONS AND RECTANGLES

SECTION DETAILS: MULLIONS

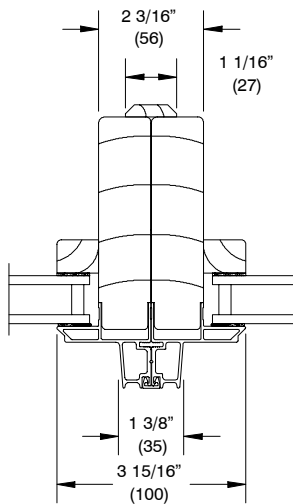
SCALE: 3" = 1' 0"

Mullions

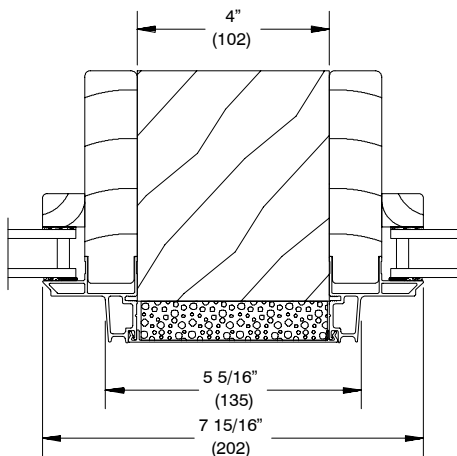
Direct Glaze



**Insulating Glass
Horizontal Mullion**

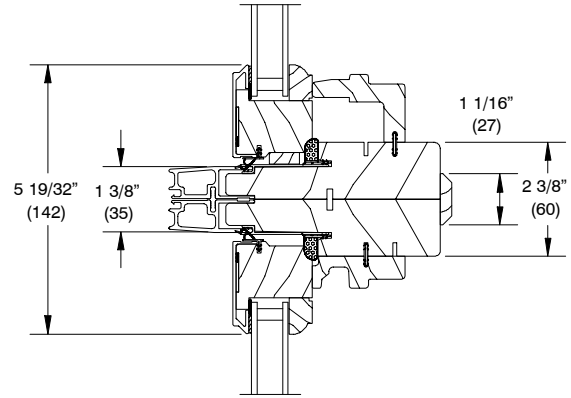


**Insulating Glass
Vertical Mullion**

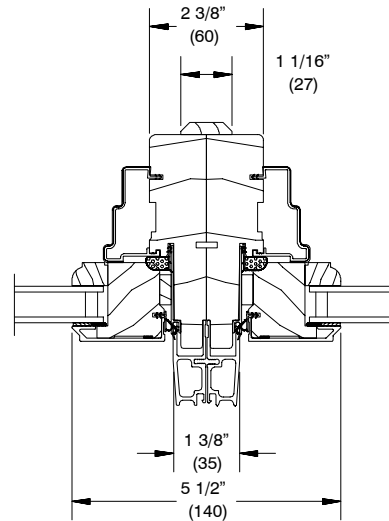


4" Space Mullion

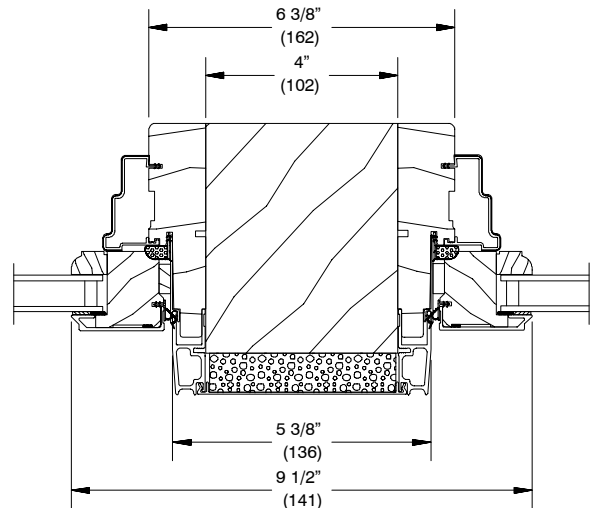
In-Sash



Horizontal Mullion



Vertical Mullion



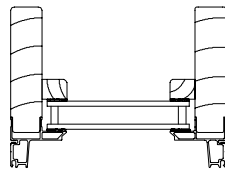
4" Space Mullion

CLAD POLYGONS AND RECTANGLES

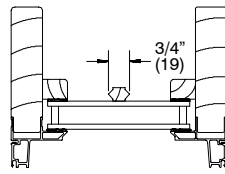
SECTION DETAILS: DIVIDED LITE OPTIONS

SCALE: 3" = 1' 0"

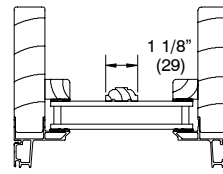
Insulating Glass



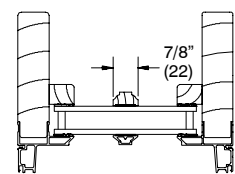
Insulating Glass



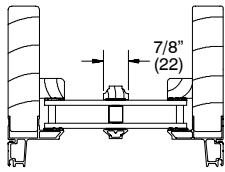
3/4" Grille



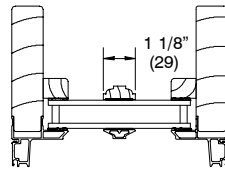
1 1/8" Grille



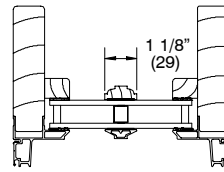
7/8" SDL
without Spacer Bar



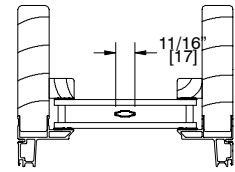
7/8" SDL
with Spacer Bar



1 1/8" SDL
without Spacer Bar

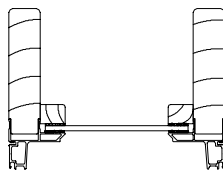


1 1/8" SDL
with Spacer Bar

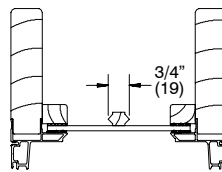


Aluminum
Grille Between Glass

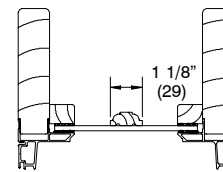
Single Glaze



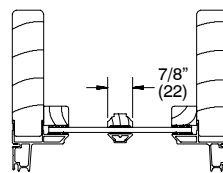
Single Glaze



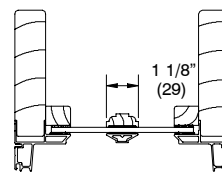
3/4" Grille



1 1/8" Grille



7/8" SDL



1 1/8" SDL

NOTE:

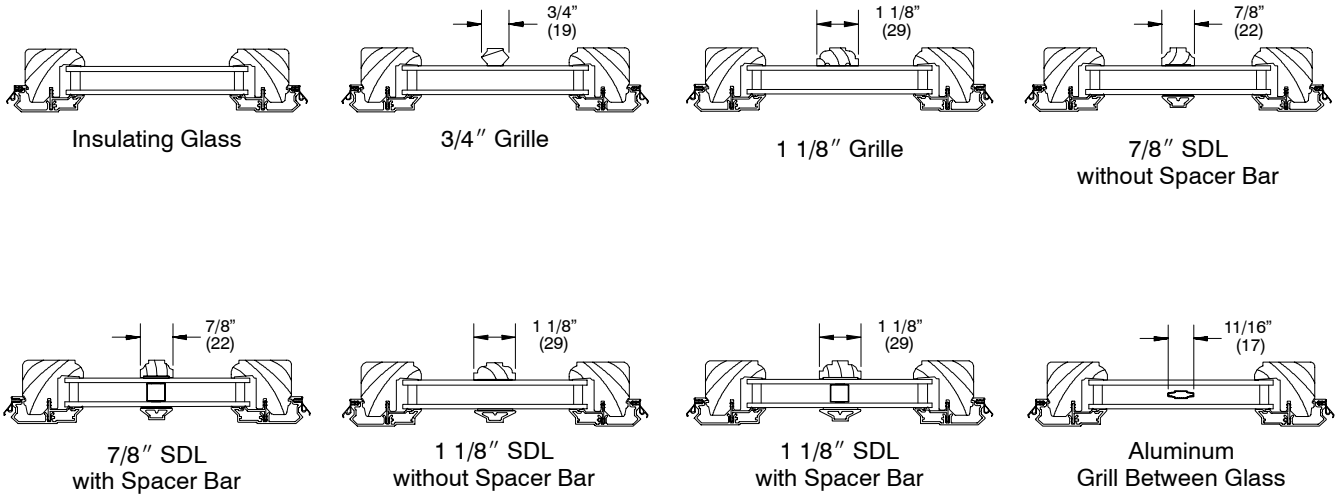
Grille = Removable interior divider
SDL = Simulated divided lite

CLAD POLYGONS AND RECTANGLES

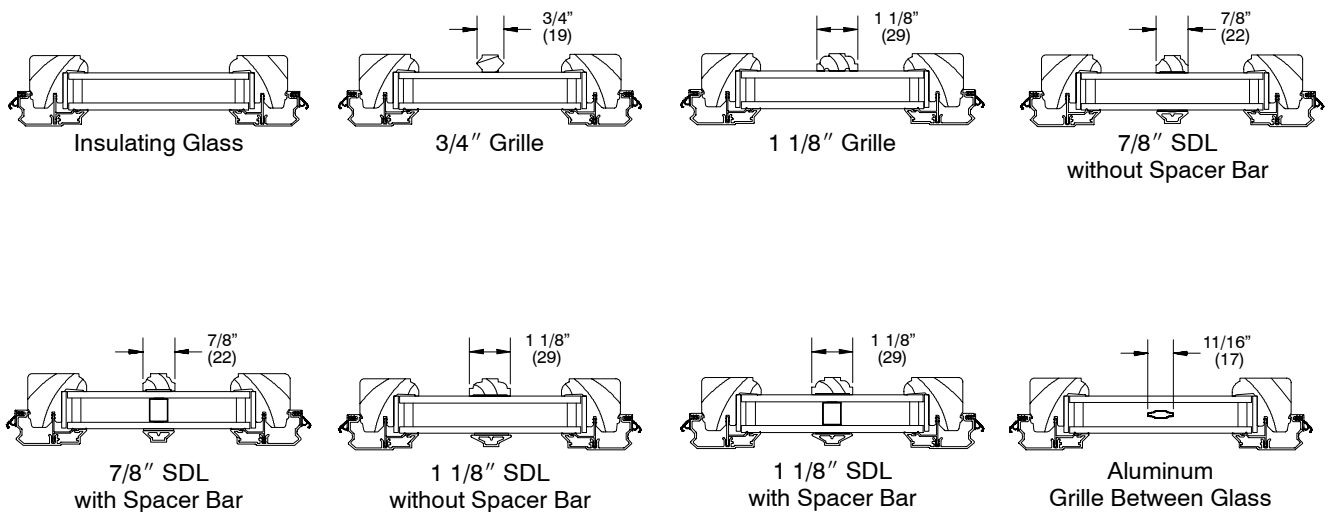
SECTION DETAILS: DIVIDED LITE OPTIONS

SCALE: 3" = 1' 0"

Operator 3/4" Insulating Glass



Picture 1" Insulating Glass

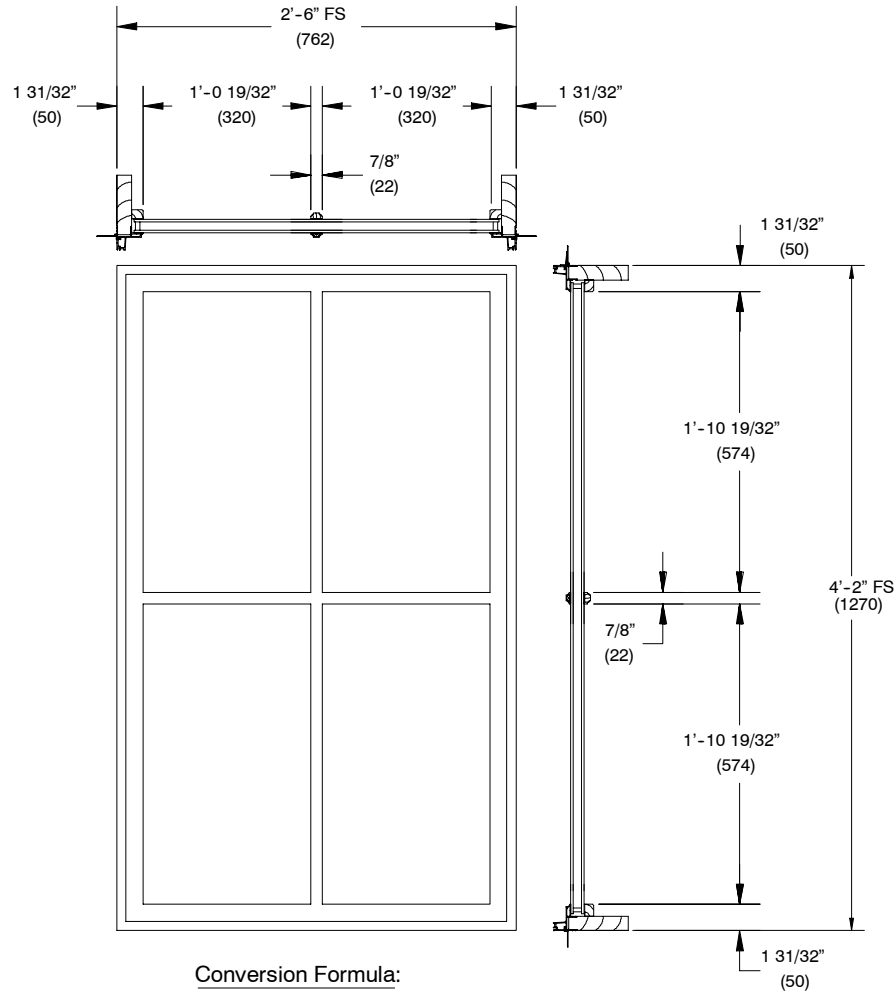


NOTE:

Grille = Removable interior divider
SDL = Simulated divided lite

CLAD POLYGONS AND RECTANGLES

RECTANGULAR DAYLIGHT OPENING CONVERSIONS: DIRECT GLAZE NOT TO SCALE

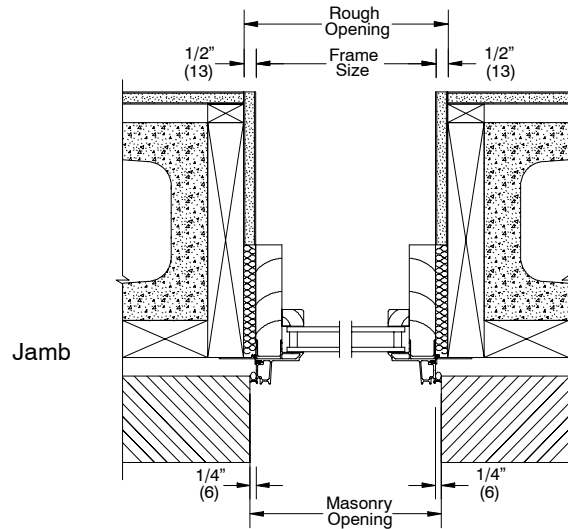
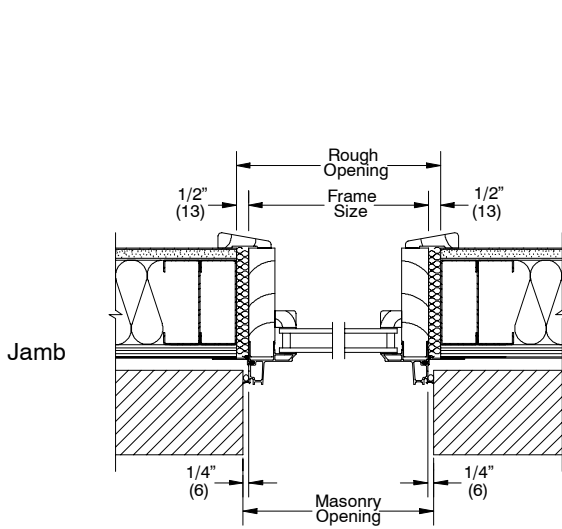
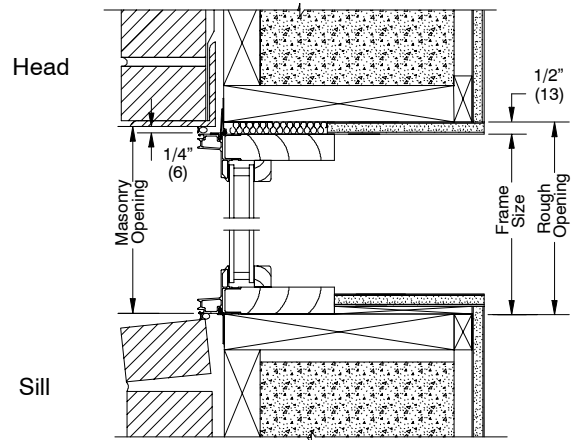
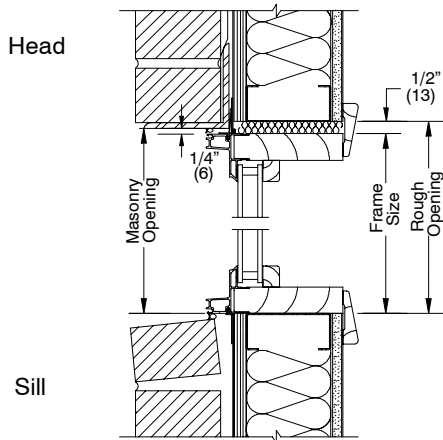


NOTE:
For additional information on individual daylight openings please contact your Marvin representative.

CLAD POLYGONS AND RECTANGLES

SECTION DETAILS: CONSTRUCTION

NOT TO SCALE



Brick Veneer with Steel Stud Construction

Brick Veneer with Concrete Block Construction

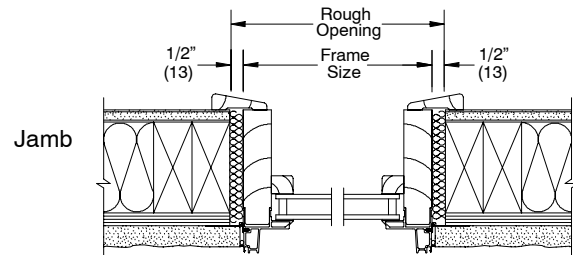
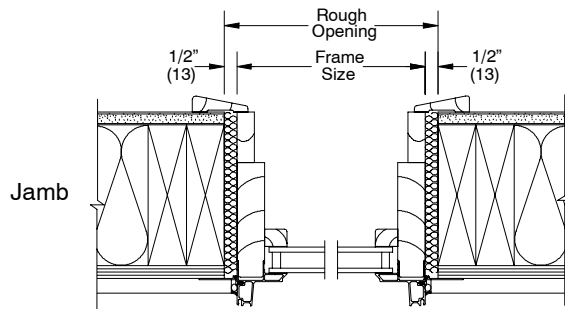
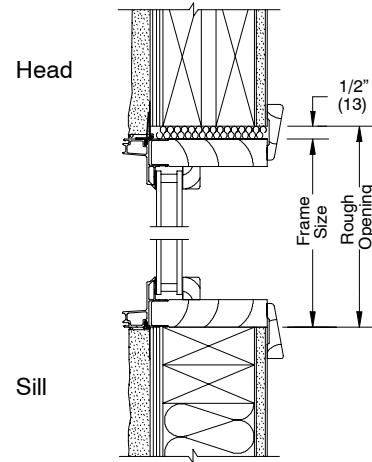
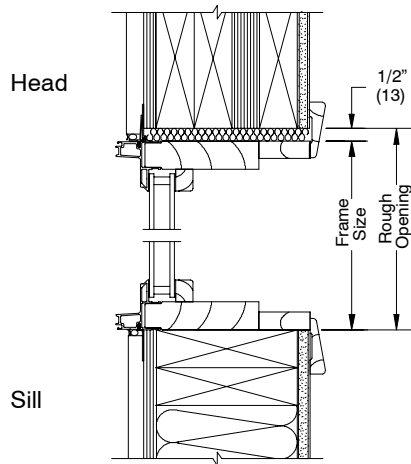
NOTE:

The above wall sections represent typical wall conditions, these details are not intended as installation instructions. Please refer to the installation instructions provided with the purchased units.

CLAD POLYGONS AND RECTANGLES

SECTION DETAILS: CONSTRUCTION

NOT TO SCALE



Wood Siding with 2x6
Frame Construction

Stucco with 2x4
Frame Construction

NOTE:

The above wall sections represent typical wall conditions, these details are not intended as installation instructions. Please refer to the installation instructions provided with the purchased units.