

Unit Features: Modern Direct Glaze Rectangle and Polygon1
Modern Direct Glaze Polygon Shape Reference2
Minimum and Maximum Guidelines: Modern Direct Glaze Polygon3
Certified Sizes and Ratings4
Measurement Conversions: Modern Direct Glaze Polygon5
Slope To Angle and Angle to Pitch Conversion - Modern Direct Glaze Polygon6
Section Details: Modern Direct Glaze - Rectangle (Dual-Pane)7
Section Details: Modern Direct Glaze - Rectangle (Triple-Pane)8
Section Details: Modern Direct Glaze - Polygon (Dual-Pane)9
Section Details: Modern Direct Glaze - Polygon (Triple-Pane)10
Section Details: Modern Direct Glaze - Simulated Frame Divider (Dual-Pane)11
Section Details: Modern Direct Glaze - Simulated Frame Divider (Triple-Pane)12
Section Details: Modern Direct Glaze - Mullions13

Modern Direct Glaze

Modern Direct Glaze

Unit Features: Modern Direct Glaze Rectangle and Polygon

Modern Direct Glaze Polygon: MNDGP

Modern Direct Glaze Rectangle/Square: MNDG-RS

Modern Direct Glaze Isosceles Triangle: MNDG-IT

Modern Direct Glaze Right Triangle Left: MNDG-RTL

Modern Direct Glaze Right Triangle Right: MNDG-RTR

Modern Direct Glaze Trapezoid Left: MNDG-TL

Modern Direct Glaze Trapezoid Right: MNDG-TR

Modern Direct Glaze Pentagon: MNDG-P

Frame:

- High-Density Fiberglass exterior with aluminum interior covers
- Jamb Depth: 4 1/2" (114)
- Frame thickness: 1 7/16" (37)
- Minimum frame angle 15°
- Vinyl Nailing Fin: 2" (51)
- Optional Frame Filler

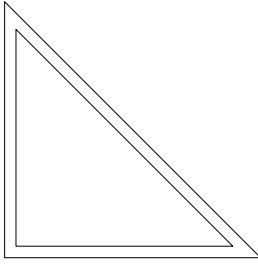
Glass and Glazing:

- All glass is of select quality complying with commercial industry standards.
- Glazing seal: Black silicone beading, exterior
- Dual-pane insulating glass thickness: 15/16" (23) or 1 1/4" (32).
- Triple-pane insulating glass thickness: 1 1/4" (32).
- Insulating Glass Coatings: Low E1, Low E2, Low E3, Low ERS, Low ELR
- Gas Fill: Air, Argon, Argon-Krypton
- Other Glass Types: Gray or Bronze Tint, Obscure, Frost
- Glass panes are based on overall unit size and may be 3.1, 3.9, 4.7, 5.7 and 8.0 mm thicknesses
- Low ELR units to 5.7mm sizes and below
- Tint limited to 5.7mm pane thickness.
- Frost is limited to 5.7mm and 3.9mm pane thicknesses
- Obscure (Pattern 62) glass is limited to 4.7mm pane thickness and below
- Black Spacer Bar
 - Black Stainless Steel Spacer on shapes with angles greater than 45 degrees
 - Black Aluminum spacer on shapes with angle less than 45 degrees

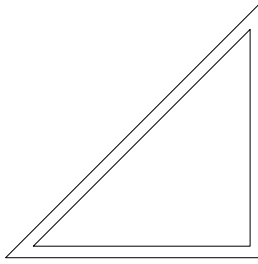
Mulling Options:

- For mull performance, refer to the [General Mulling chapter of the ADM](#).

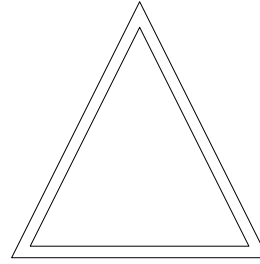
Modern Direct Glaze Polygon Shape Reference



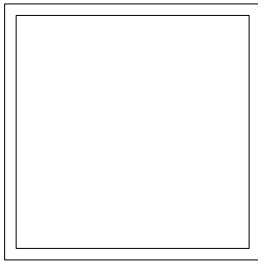
Right Triangle Right
P3-1



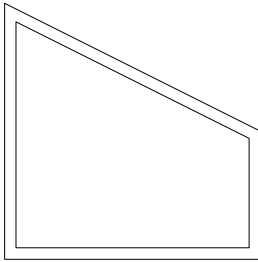
Right Triangle Left
P3-2



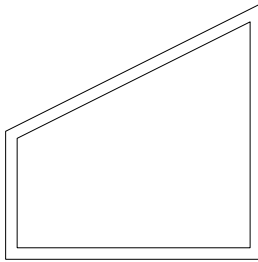
Isosceles Triangle
P3-5



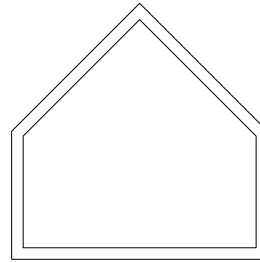
Rectangle / Square
P4-0



Trapezoid Right Hand
P4-6



Trapezoid Left Hand
P4-5



Pentagon
P5-1

Please contact your Marvin representative for availability and more information.

Minimum and Maximum Guidelines: Modern Direct Glaze Polygon

Direct Glaze Minimum and Maximum Frame Size Glass size up to 92 x 140 with 8 mm pane thickness (WDMA and NFRC certified)														
Configuration		Unit Shape	Minimum Frame Size						Maximum Frame Size				Glass Limit	
			Width		Height		Min Short Length		Long Leg Max Overall		Short Leg Max Overall			
			in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
MNDG	Insulating Glass	Rectangle/Square (P4-Rect)	12	(305)	12	(305)			141 3/8	(3591)	93 3/8	(2372)	89.44	8.31
MNDG	Insulating Glass	Triangles (P3-1,2,5)	23	(584)	23 1/2	(597)			141 3/8	(3591)	93 3/8	(2372)	89.44	8.31
MNDG	Insulating Glass	Trapezoid (P4-5,6)	15	(381)	15 1/2	(394)	12	(305)	141 3/8	(3591)	93 3/8	(2372)	89.44	8.31
MNDG	Insulating Glass	Pentagon (P5-1)	15	(381)	15 1/2	(394)	12	(305)	141 3/8	(3591)	93 3/8	(2372)	89.44	8.31

Direct Glaze Minimum and Maximum Frame Size Tri-Pane Glass size up to 60 x 91 with 4.7 mm pane thickness (WDMA and NFRC certified)														
Configuration		Unit Shape	Minimum Frame Size						Maximum Frame Size				Glass Limit	
			Width		Height		Min Short Length		Long Leg Max Overall		Short Leg Max Overall			
			in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
MNDG	Insulating Glass	Rectangle/Square (P4-Rect)	14	(356)	14	(356)			60	(1524)	90	(2286)	31.00	2.88
MNDG	Insulating Glass	Triangles (P3-1,2,5)	14	(356)	14	(356)			60	(1524)	90	(2286)	31.00	2.88
MNDG	Insulating Glass	Trapezoid (P4-5,6)	14	(356)	14	(356)	14	(356)	60	(1524)	90	(2286)	31.00	2.88
MNDG	Insulating Glass	Pentagon (P5-1)	14	(356)	14	(356)	14	(356)	60	(1524)	90	(2286)	31.00	2.88

*NOTE: Angles less than 45 degrees are limited to 82.00" short leg max overall
Single glaze is not available*

Certified Sizes and Ratings

Commercial Rating									
Product	Air Tested to PSF	Water Tested to psf	Structural Tested psf	Performance Grade (PG)	Certification Rating	Max Overall Width		Max Overall Height	
						in	mm	in	mm
Direct Glaze Unit	6.24	12.1	60.0	40	CW-PG40-FW	145 3/8	(3693)	97 3/8	(2473)
Direct Glaze Unit	6.24	12.1	60.0	40	CW-PG40-FW	97 3/8	(2473)	145 3/8	(3693)
Direct Glaze Unit	6.24	12.1	90.0	60	CW-PG60-FW	145 3/8	(3693)	97 3/8	(2473)
Direct Glaze Unit	6.24	12.1	90.0	60	CW-PG60-FW	97 3/8	(2473)	145 3/8	(3693)
*Direct Glaze Assembly	1.57	7.5	60.0	40	CW-PG40-FW	168	(4267)	96	(2438)
*Direct Glaze Assembly	1.57	7.5	60.0	40	CW-PG40-FW	96	(2438)	168	(4267)
**Direct Glaze Unit	6.24	12.1	60.0	40	CW-PG40-FW	121 3/8	(3083)	62 9/16	(1589)
**Direct Glaze Unit	6.24	12.1	60.0	40	CW-PG40-FW	62 9/16	(1589)	121 3/8	(3083)
**Direct Glaze Unit	6.24	12.1	90.0	60	CW-PG60-FW	121 3/8	(3083)	62 9/16	(1589)
**Direct Glaze Unit	6.24	12.1	90.0	60	CW-PG60-FW	62 9/16	(1589)	121 3/8	(3083)

*84" maximum tributary span

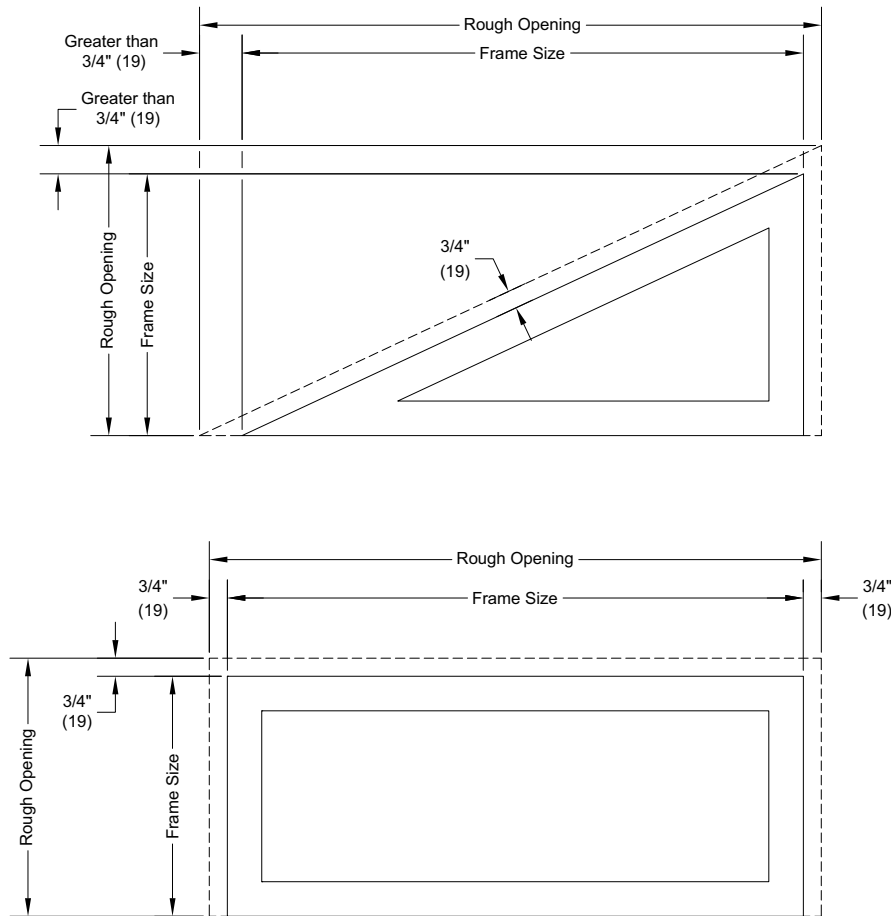
**Largest size with annealed glass

NOTE: Certification based upon AAMA/WDMA/CSA 101/I.S.2/A440-08

Measurement Conversions: Modern Direct Glaze Polygon

Unit Measurements		Width		Height	
From	To				
Rough Opening		in	mm	in	mm
Masonry Opening	Rough Opening	+ 1/2	(13)	+ 1/4	(6)
OM of Frame	Rough Opening	+ 1 1/2	(38)	+ 3/4	(19)
Daylight Opening	Rough Opening	+ 4 23/64	(111)	+ 3 39/64	(92)
Frame		in	mm	in	mm
Daylight Opening	OM of Frame	+ 2 55/64	(73)	+ 1 27/64	(36)
Glass		in	mm	in	mm
OM of Frame	Glass	-1 3/8	-(35)	-1 3/8	-(35)
Daylight Opening	Glass	+ 1 31/64	(38)	+ 1 31/64	(38)

NOTE: Minimum angle on any shape is 15 degrees.



NOTE: 3/4" (19) 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 will calculate the appropriate tolerances.

Slope To Angle and Angle to Pitch Conversion - Modern Direct Glaze Polygon

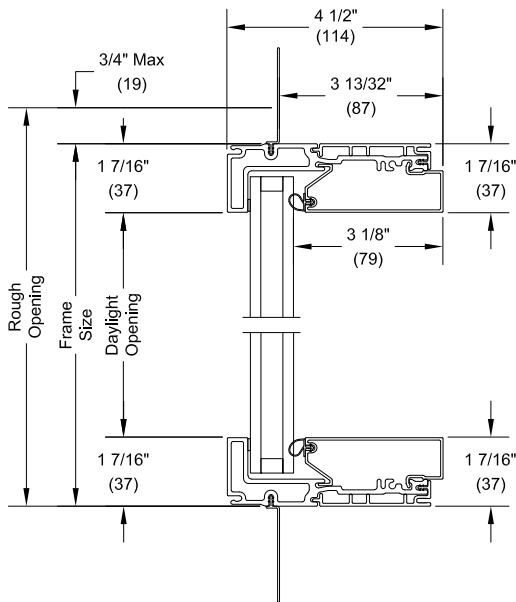
Slope to Angle /Degree Conversions		
Slope	Angle	Degree / Minutes
1/12	4.76	4 degree 46'
2/12	9.46	9 degree 28'
3/12	14.04	14 degree 2'
4/12	18.43	18 degree 26'
5/12	22.62	22 degree 37'
6/12	26.57	26 degree 34'
7/12	30.26	30 degree 15'
8/12	33.69	33 degree 41'
9/12	36.87	36 degree 52'
10/12	39.81	39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

Angle to Pitch Conversions					
Angle	Pitch	Angle	Pitch	Angle	Pitch
1	0.21/12	31	7.21/12	61	21.65/12
2	0.42/12	32	7.50/12	62	22.57/12
3	0.63/12	33	7.79/12	63	23.55/12
4	0.84/12	34	8.09/12	64	24.60/12
5	1.05/12	35	8.40/12	65	25.73/12
6	1.26/12	36	8.72/12	66	26.95/12
7	1.47/12	37	9.04/12	67	28.27/12
8	1.69/12	38	9.38/12	68	29.70/12
9	1.90/12	39	9.72/12	69	31.26/12
10	2.12/12	40	10.07/12	70	32.97/12
11	2.33/12	41	10.43/12	71	34.85/12
12	2.55/12	42	10.80/12	72	36.93/12
13	2.77/12	43	11.19/12	73	39.25/12
14	2.99/12	44	11.59/12	74	41.85/12
15	3.22/12	45	12.00/12	75	44.78/12
16	3.44/12	46	12.43/12	76	48.13/12
17	3.67/12	47	12.87/12	77	51.98/12
18	3.90/12	48	13.33/12	78	56.56/12
19	4.13/12	49	13.80/12	79	61.73/12
20	4.37/12	50	14.30/12	80	68.06/12
21	4.61/12	51	14.82/12	81	75.77/12
22	4.85/12	52	15.36/12	82	85.38/12
23	5.09/12	53	15.92/12	83	97.73/12
24	5.34/12	54	16.52/12	84	114.17/12
25	5.60/12	55	17.14/12	85	137.16/12
26	5.85*12	56	17.79/12	86	171.61/12
27	6.11/12	57	18.48/12	87	228.97/12
28	6.38/12	58	19.20/12	88	343.64/12
29	6.65/12	59	19.97/12	89	687.48/12
30	6.93/12	60	20.78/12		

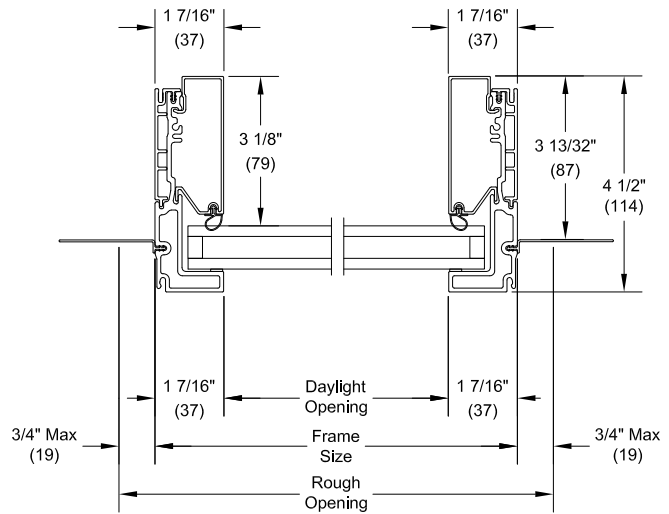
Modern Direct Glaze

Section Details: Modern Direct Glaze - Rectangle (Dual-Pane)

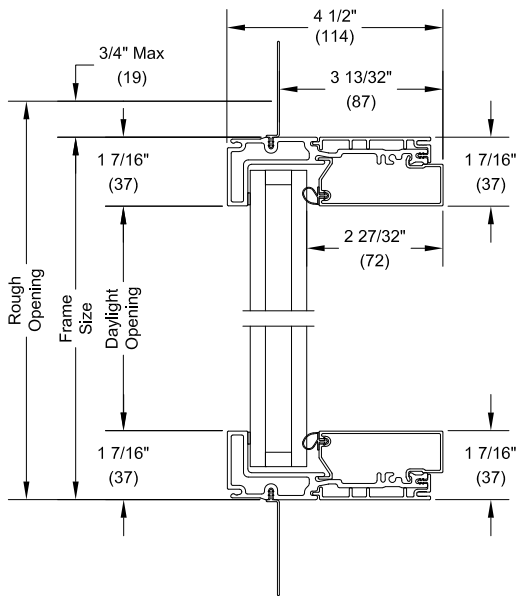
Scale: 3' = 1' 0"



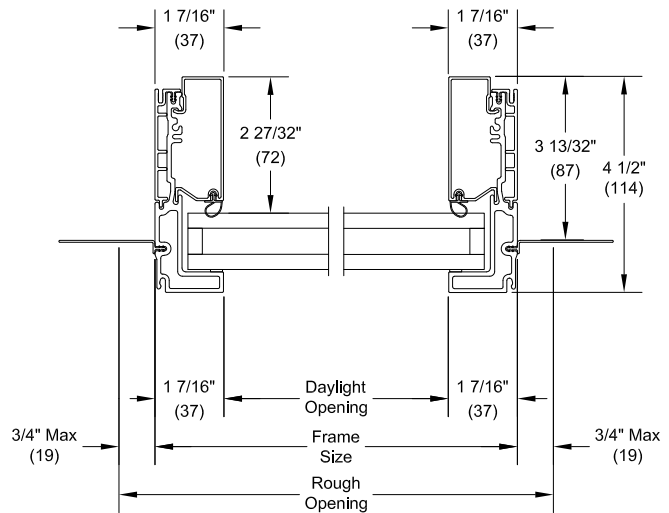
Direct Glaze Rectangle
Head Jamb and Sill with 15/16" Dual-Pane



Direct Glaze Rectangle
Jambs with 15/16" Dual-Pane



Direct Glaze Rectangle
Head Jamb and Sill with 1 1/4" Dual-Pane

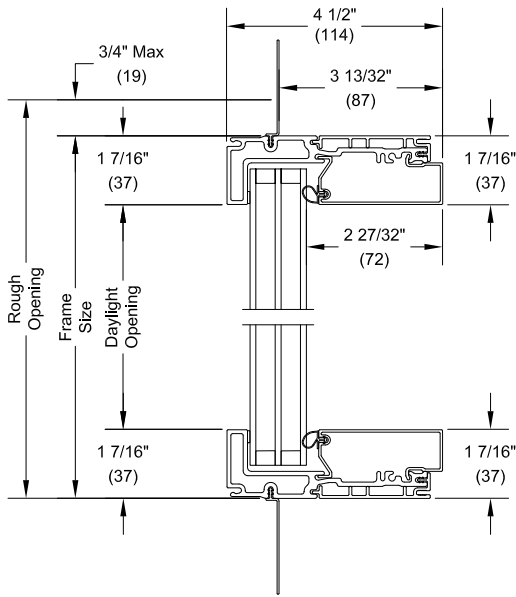


Direct Glaze Rectangle
Jambs with 1 1/4" Dual-Pane

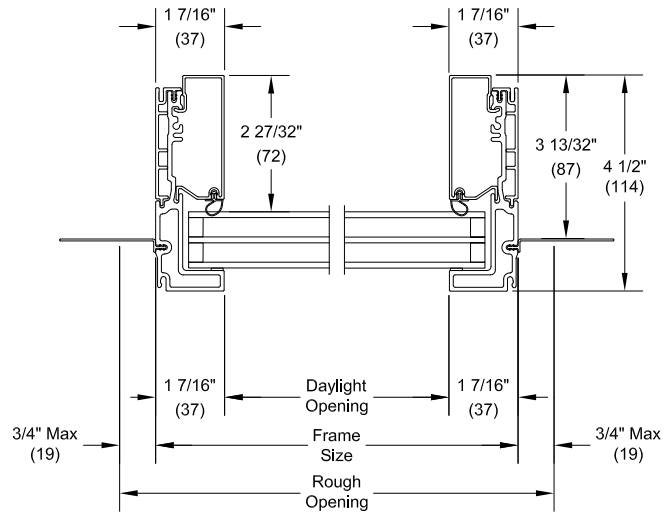
Modern Direct Glaze

Section Details: Modern Direct Glaze - Rectangle (Triple-Pane)

Scale: 3' = 1' 0"



Direct Glaze Rectangle
Head Jamb and Sill with 1 1/4" Triple-Pane

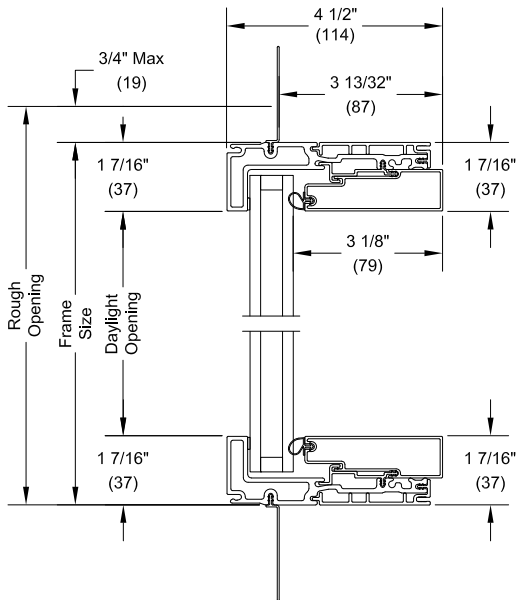


Direct Glaze Rectangle
Jambs with 1 1/4" Triple-Pane

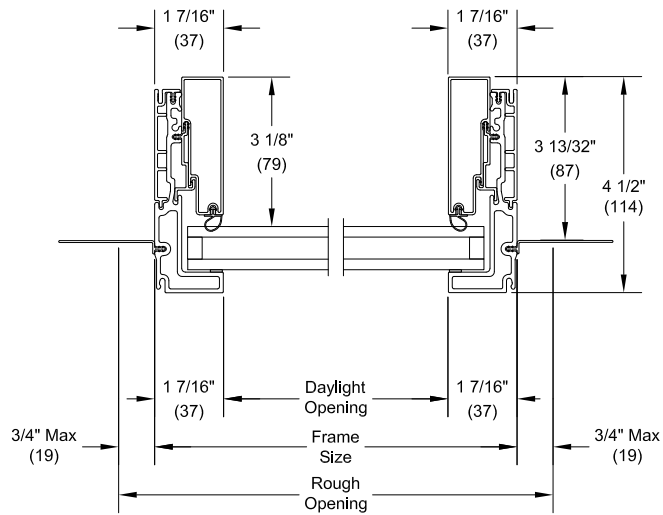
Modern Direct Glaze

Section Details: Modern Direct Glaze - Polygon (Dual-Pane)

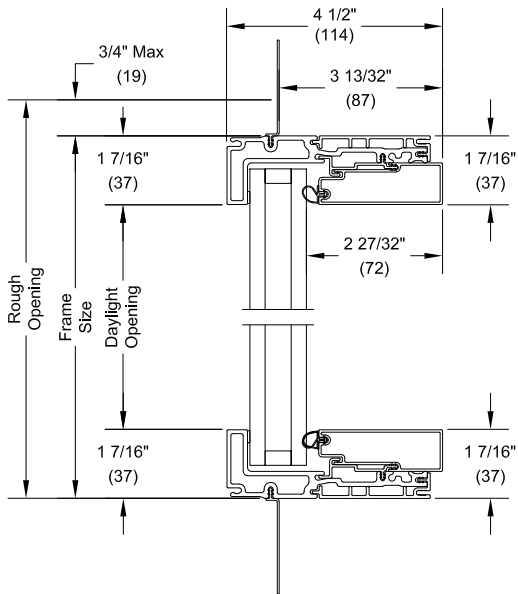
Scale: 3' = 1' 0"



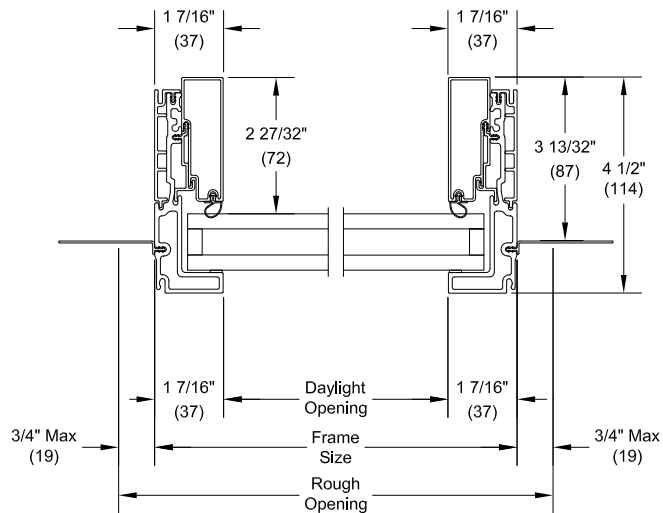
Direct Glaze Polygon
Head Jamb and Sill With 15/16" Dual-Pane



Direct Glaze Polygon
Jamb With 15/16" Dual-Pane



Direct Glaze Polygon
Head Jamb and Sill With 1 1/4" Dual-Pane

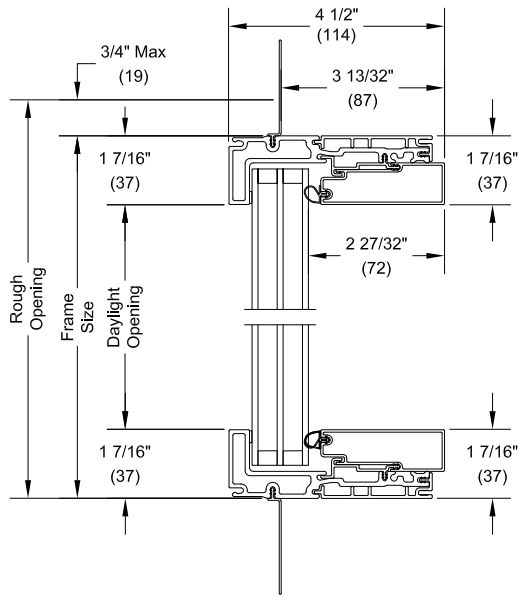


Direct Glaze Polygon
Jamb With 1 1/4" Dual-Pane

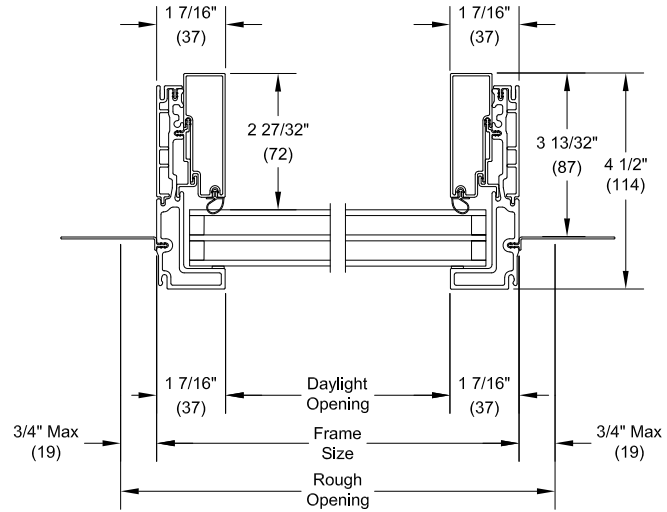
Modern Direct Glaze

Section Details: Modern Direct Glaze - Polygon (Triple-Pane)

Scale: 3' = 1' 0"



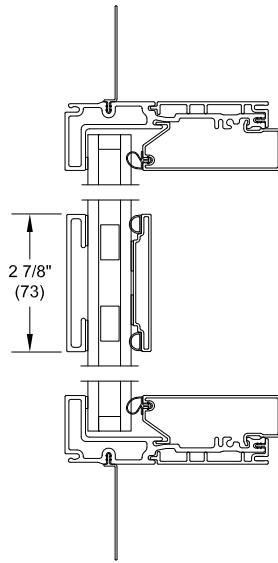
Direct Glaze Polygon
Head Jamb and Sill With 1 1/4" Triple-Pane



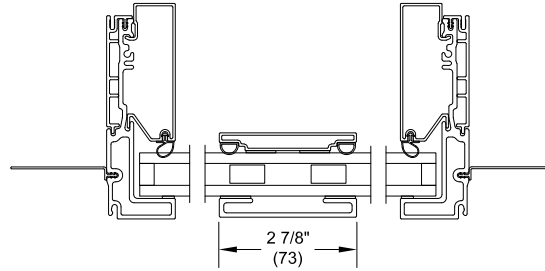
Direct Glaze Polygon
Jambs With 1 1/4" Triple-Pane

Modern Direct Glaze

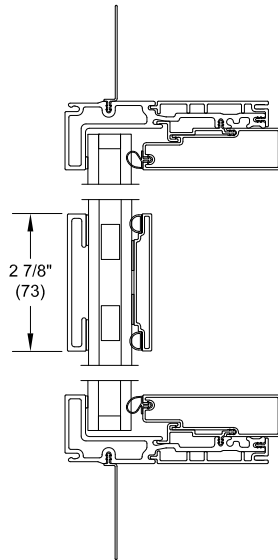
Section Details: Modern Direct Glaze - Simulated Frame Divider (Dual-Pane)



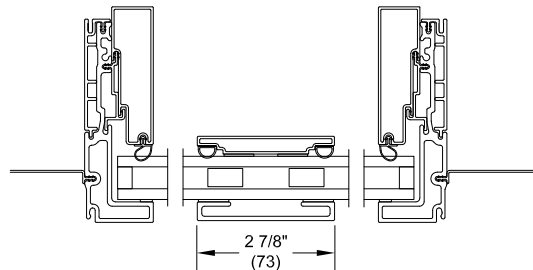
Direct Glaze - Rectangle
Head Jamb and Sill
Dual-Pane Glass
Simulated Frame - 2 7/8"



Direct Glaze - Rectangle
Jambs
Dual-Pane Glass
Simulated Frame - 2 7/8"



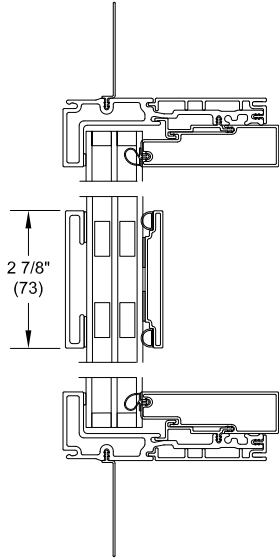
Direct Glaze - Polygon Head
Jamb and Sill
Dual-Pane Glass
Simulated Frame - 2 7/8"



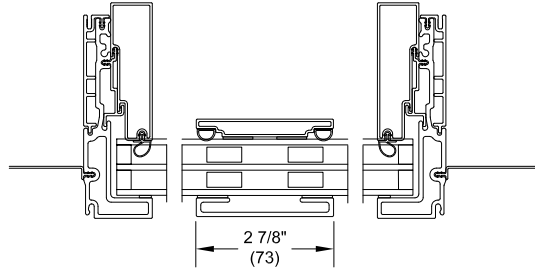
Direct Glaze - Polygon
Jambs
Dual-Pane Glass
Simulated Frame - 2 7/8"

Modern Direct Glaze

Section Details: Modern Direct Glaze - Simulated Frame Divider (Triple-Pane)



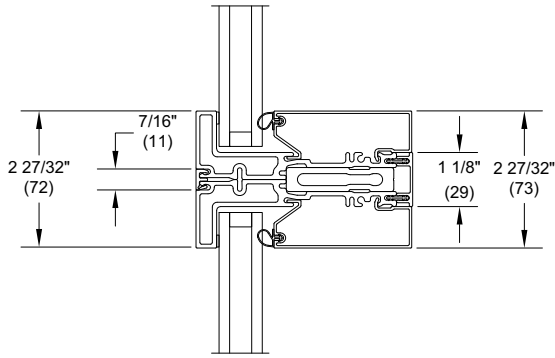
Direct Glaze - Polygon Head
Jamb and Sill
1 1/4" Triple-Pane Glass
Simulated Frame - 2 7/8"



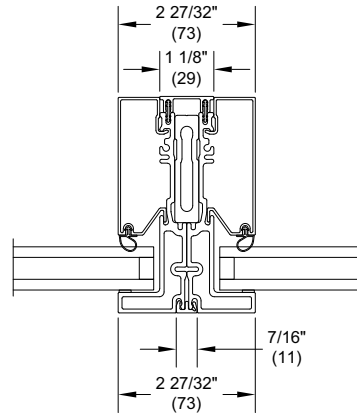
Direct Glaze - Polygon
Jambs
1 1/4" Triple-Pane Glass
Simulated Frame - 2 7/8"

Modern Direct Glaze

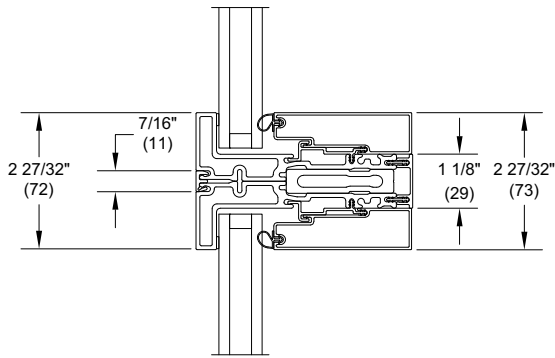
Section Details: Modern Direct Glaze - Mullions



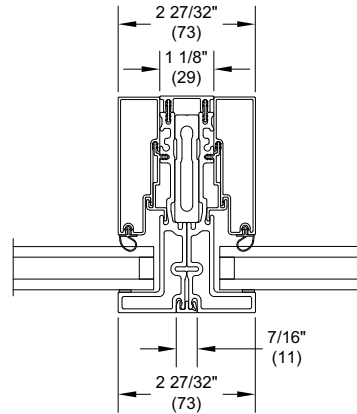
Direct Glaze Rectangle
Head Jamb and Sill
With 15/16" Glass



Direct Glaze - Rectangle
Jambs
With 15/16" Glass



Direct Glaze - Polygon
Head Jamb and Sill
With 15/16" Glass



Direct Glaze - Polygon
Jambs
With 15/16" Glass