

CHAPTER 2A

INTEGRITY WOOD-ULTREX INSERT CASEMENT

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ATTENTION:

- Specifications and technical data are subject to change without notice.
- Dimensions in parenthesis are in millimeters or square meters
- Allow 1/16" (2) tolerance on all measurements.
- Interior mullion trim are shipped loose for field installation.
- For answers to technical questions about Integrity products you may call our Integrity Support Line: 1-800-587-2712.
- Website: www.marvin.com

UNIT FEATURES

FRAME AND SASH:

The frame and sash exteriors are made of Ultrex[®], an advanced fiber reinforced material that is resistant to thermal conductance. Ultrex patented coating system meets all the requirements of AAMA 624-10. Exterior colors: Stone White, Pebble Gray, Bronze, Evergreen, Cashmere, or Ebony. The interior is non finger-jointed pine, kiln dried to a moisture content of 6–12% at time of fabrication. Water-repellant, preservative treated in accordance with WDMA I.S.4. Interior wood is available as Pine bare wood or factory-applied white, clear, and designer black interior finish.

Frame:

Composite frame thickness is 1 13/16" (46). Frame width of 3 1/4" (83). Ultrex is .080" (2) thick. Includes an exterior accessory kerf and snap-in wood sill liner.

Sash:

Composite sash thickness of 1 17/32" (39). Ultrex is .070" (2) thick. Sash can be replaced but cannot be re-glazed.

HARDWARE – CASEMENT:

Dual arm roto hardware factory installed on casement units. The roto gear hardware is an E-coated, high strength, low alloy steel. IO width less than or equal to 24 3/8" (619) require dyad operators. The hinge track is stainless steel, the hinge arm is E-coated high strength, low alloy steel and the hinge shoe is an injection molded with a stainless steel insert. Egress hinge is required on units with an I.O. from 26 1/2" (673) to 29 23/64" (746) to meet egress code. This hinge does not allow for cleaning of the exterior of sash from the inside. Folding handle with removable snap fit covers are available in Almond Frost, White, or Matte Black finishes. Optional Brass, Satin Nickel, and Oil Rubbed Bronze hardware available. Sequential locks are used on all heights, with removable escutcheon and handle. Optional coastal hardware is available. Optional factory applied Window Opening Control Device is available (min size: 17 27/32" (453) x 24" (610) - max size: 36" (914) x 71 1/8" (1807)). Available in almond frost, white, and Matte Black finishes.

HARDWARE – AWNING:

Scissors arm roto hardware factory installed on all awning units. The Roto hardware is an E-coated high strength, low alloy steel. The hinge track and hinge arms are E-coated high strength, low alloy steel, and injected molded with a stainless steel insert. Folding handle with removable snap fit covers are available in Almond Frost, White, or Matte Black finishes. Optional Brass, Satin Nickel, and Oil Rubbed Bronze hardware available. A single point lock on each jamb/stile, with a removable escutcheon handle. Optional coastal hardware is available. Optional factory installed or field applied stainless steel sash limiter is available

INSTALLATION:

Operator: Secure the jambs with minimum of two #8 x 3" pan head screws. Maximum spacing of jambs not to exceed 3/16". Secure the head jamb with two #8 x 3" pan head screws. Picture: Secure the jambs with minimum of one #8 x 3" pan head screws. Maximum spacing of jambs not to exceed 3/16". Secure the head jamb with minimum of one #8 x 3" pan head screws.

GLAZING:

Dual-pane units are manufactured with an 11/16" (17) IG with Low E2, E3, and E1 coatings including argon gas fill. Tempered glass and/or obscure, and California Fire glass (annealed exterior and tempered interior glazing configuration) glass are available as an option. All glass is of a select quality complying with ASTM C 1036. Insulating glass is manufactured and tested to pass level ASTM E 2190 and is IGCC certified. The glazing seal is a silicone bedding on both interior and exterior surfaces utilized in a sandwich style sash. STC/OITC values are available for 3.1 mm thickness glass. Optional 3.1/4.7 STC/OITC Upgrade glass is available. STC and OITC ratings are tested in accordance with ASTM E 90–09. See the Product Performance chapter for values.

WEATHER STRIP:

All weather strip is black in color. All units are dual (primary and secondary) weather strip. The primary weather strip is an extruded PVC foam filled bulb that attaches to all four sides of the frame by a kerf in the Ultrex. It provides a seal between the wood on the sash and the frame Ultrex. The secondary weather strip is an extruded PVC hollow bulb that attaches to a kerf in the sash and provides a seal between the sash Ultrex and frame Ultrex.

SCREEN:

Roll formed aluminum frame with corner key construction, available in an Almond Frost or White. Optional wood veneer screen available. Charcoal color fiberglass (non-corrosive) screen cloth. Spring loaded pins for installation.

REMOVABLE INTERIOR GRILLES:

Bar: Pine wood, 3/4" (19) Pattern: Standard rectangular pattern. Available in Pine bare wood or factory applied white, clear, or designer black finishes.

INTERIOR / EXTERIOR SIMULATED DIVIDED LITES (SDL/SDLS):

Interior bar: 7/8" (22) wide bars. Pine bare wood, or white, clear, or designer black interior finishes. Exterior bar: Ultrex, 7/8" (22) wide bars, finish to match exterior. Patterns available: rectangle, 6 or 9 lite Prairie cut or Cottage style cut. Simulated check rail option: 2 11/32" (60). Pattern available: simulated rail in standard center or customer specified location with 7/8" (22) pattern above, below or both in pattern of rectangular equal lite or prairie lite cut.

GRILLES-BETWEEN-THE-GLASS (GBG):

23/32" (18) contoured aluminum bar placed between two panes of glass. Pattern: Standard rectangular pattern, 6 or 9 lite Prairie cut, or Cottage style cut. Exterior colors: Stone White, Pebble Gray, Bronze, Evergreen, Cashmere, or Ebony. Interior Colors: White, Bronze, or Black.

MINIMUM AND MAXIMUM GUIDELINES

Minimum and Maximum IO Guidelines										
Unit Type	Min IO Width		Min IO Height		Max IO Width		Max IO Height		Glass Size	
	in	mm	in	mm	in	mm	in	mm	Sq. Feet	Sq. Meters
IICA	16 3/8	(416)	24 1/4	(616)	36 3/8	(924)	71 3/8	(1813)	14 25/32	1.374
IIAWN	24 3/8	(619)	19 3/8	(492)	48 3/8	(1229)	47 3/8	(1203)	13 1/16	1.214
IICATR	16 3/8	(416)	16	(406)	72 3/8	(1838)	19 3/8	(492)	7 1/32	0.654
IICAP	16 3/8	(416)	16	(406)	72 3/8	(1838)	59 3/8	(1508)	25 7/8	2.238
IICAP	16 3/8	(416)	16	(406)	56 3/8	(1432)	71 3/8	(1813)	24 3/32	2.404

WOOD-ULTREX INSERT CASEMENT COLLECTION:

Wood-Ultrex Insert Casement: IICA

Wood-Ultrex Insert Awning: IIAWN

Wood-Ultrex Insert Casement Transom: IICATR

Wood-Ultrex Insert Casement Picture: IICAP

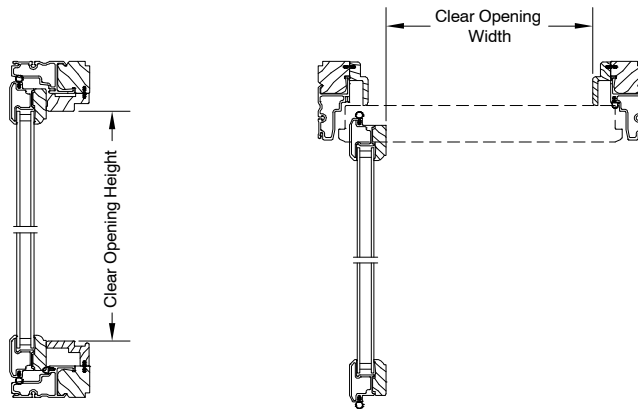
NOTE: Special sizes are available in 1/64" (.40) increments, not to exceed the frame size measurement maximum or minimum in the table above.

CERTIFIED SIZES

Product	Air Tested to psf	Water Tested to psf	Certification Rating	Design Pressure (DP)	Max Overall Width		Max Overall Height	
					in	mm	in	mm
IICA	1.56	7.52	LC-PG50-C	50.13	36	(914)	71 1/8	(1807)
IIAWN	1.56	7.52	LC-PG50-AP	50.13	48	(1219)	47 1/8	(1197)
IICAP / IICATR	1.56	7.52	LC-PG50-AP	50.13	72	(1829)	59 1/8	(1502)
IICAP / IICATR	1.56	7.52	LC-PG50-AP	50.13	56	(1422)	71 1/8	(1807)

EGRESS MEASUREMENT / EGRESS FORMULA

Integrity Insert Casement Egress Unit Minimum Opening Conversion From Frame Size		
Minimum Value for Net Clear Opening	Desired Dimension	Formula
20 Inches	Egress Opening Width, Standard Hinge (Inches)	= Frame OM Width – 8.758
20 Inches	Egress Opening Width, Egress Hinge (Inches)	= Frame OM Width – 6.125
24 Inches	Egress Opening Height (Inches)	= Frame OM Height – 4.400
5.7 Square Feet	Egress Opening Area (SQFT)	= (Egress Width x Egress Height) / 144



CONVERSIONS

Wood-Ultrex Insert Casement, Awning, Transom, and Picture					
Unit Measurements		Width		Height	
From	To				
Daylight Opening		in	mm	in	mm
Daylight Opening	Sash OM	+3 17/32	(90)	+3 17/32	(90)
Daylight Opening	Glass OM	+1 1/32	(26)	+1 1/32	(26)
Daylight Opening	Aluminum Screen OM	+1 5/8	(41)	+1 15/64	(31)
Daylight Opening	Wood Veneer Screen OM	+1 9/16	(40)	+1 3/16	(30)
Daylight Opening	Grille	Ordered by DLO		Ordered by DLO	
Inside Opening		in	mm	in	mm
Inside Opening	Sash OM	-2 1/16	(52)	-1 15/16	(49)
Inside Opening	Daylight Opening	-5 19/32	(142)	-5 15/32	(139)
Inside Opening	Glass OM	-4 9/16	(116)	-4 7/16	(113)
Inside Opening	Aluminum Screen OM	-3 31/32	(101)	-4 15/64	(108)
Inside Opening	Wood Veneer Screen OM	-4 1/64	(102)	-4 9/32	(109)
Inside Opening	Frame OM	-3/8	(10)	-1/4	(6)

MEASUREMENT CONVERSIONS – FIELD MEASUREMENT

Conversion from Field Measurement to Frame OM		
Width		
Condition	Formula	
If blind stop width is 1/2 inch or less	IICA frame OM width = inside opening width – 0.375 (10)	
Height		
Condition	Type of Sill	Formula
If old sill angle is less than 8 degree	0 degree bottom sill	IICA frame OM height = inside opening height – 0.250 (6)

MULLING GUIDELINES

Multiple assemblies can be factory mullled: up to 4 units wide by 1 unit high

MAXIMUM INSIDE OPENING not to exceed 112" (2845) X 71 1/8" (1742)

Multiple assemblies can be factory mullled: up to 1 unit wide by 2 units high

MAXIMUM INSIDE OPENING not to exceed 72" (1829) X 94 1/4" (2394)

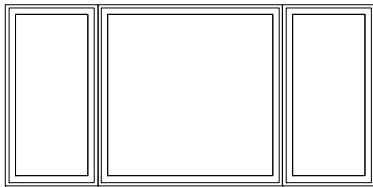
NOTE: Field mulling beyond the above limitations is not recommended

Calculating Total Inside Opening for Assemblies

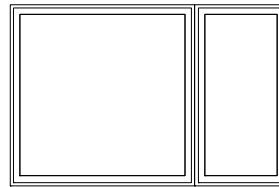
WIDTH: ADD Frame Widths + 3/8" (10)

HEIGHT: ADD Frame Heights + 1/4" (6)

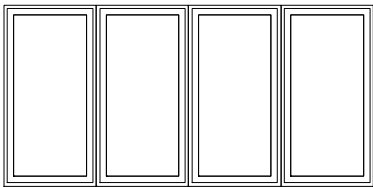
Tolerance = 3/16" (10) from frame to Inside Opening at left and right jamb.



3 Units Wide 1 Unit High



2 Units Wide 1 Unit High



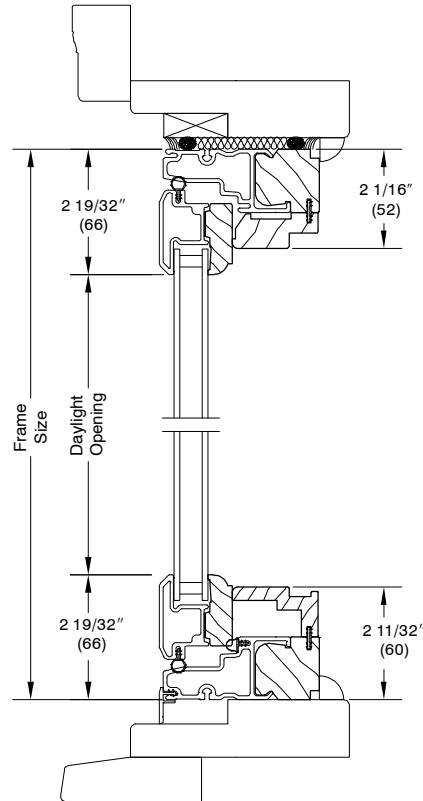
4 Units Wide 1 Unit High



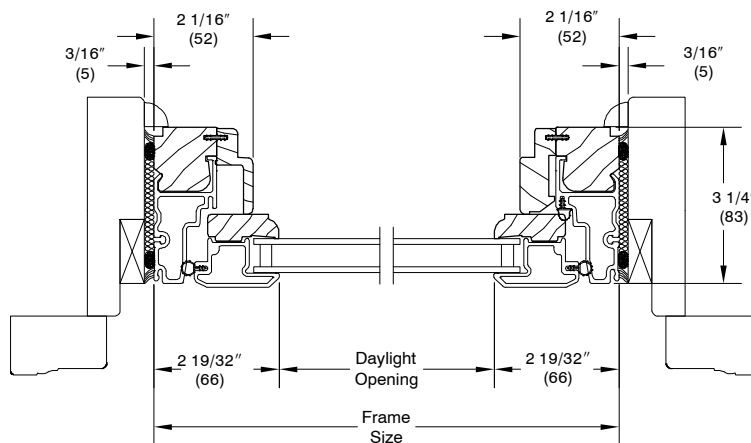
1 Unit Wide 2 Units High

SECTION DETAILS: INTERIOR INSTALL: CASEMENT

SCALE: 3" = 1'0"



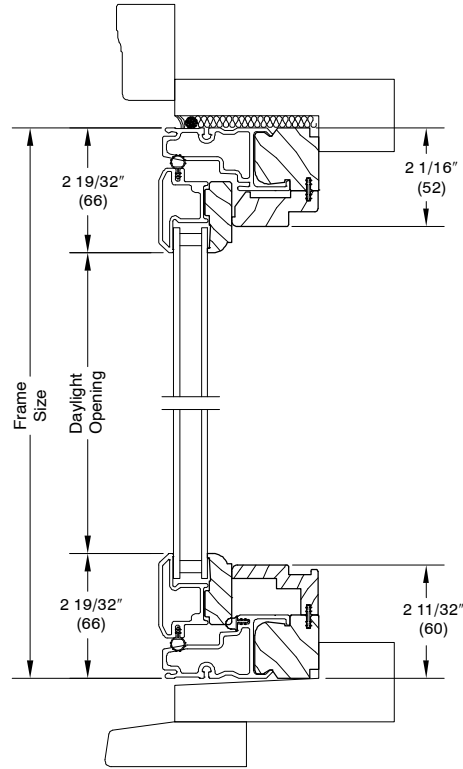
Head Jamb and Sill
Installed in Existing Frame
Interior Install



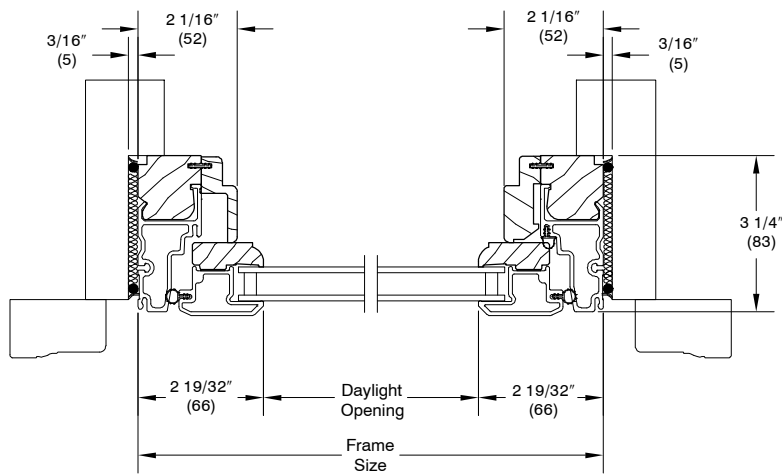
Jamb
Installed in Existing Frame
Interior Install

SECTION DETAILS: EXTERIOR INSTALL: CASEMENT

SCALE: 3" = 1'0"



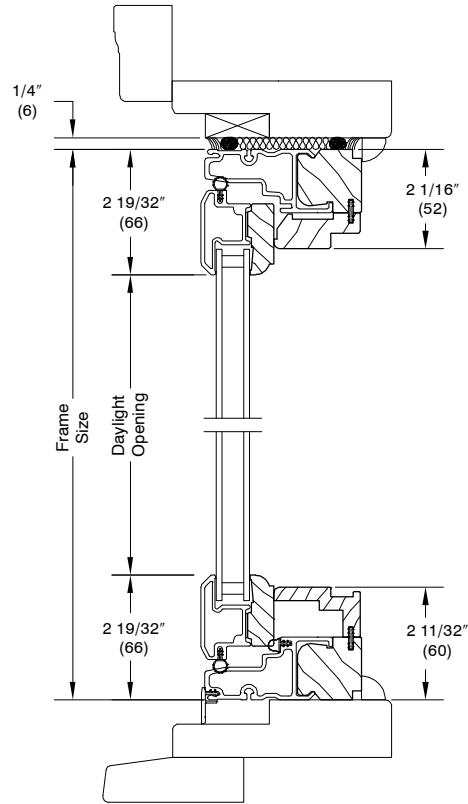
Head Jamb and Sill
Installed in Existing Frame
Exterior Install



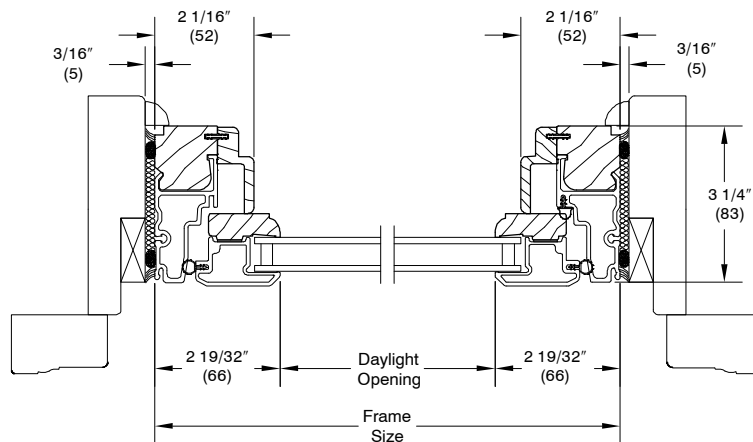
Jamb
Installed in Existing Frame
Exterior Install

SECTION DETAILS: INTERIOR INSTALL: AWNING

SCALE: 3" = 1'0"



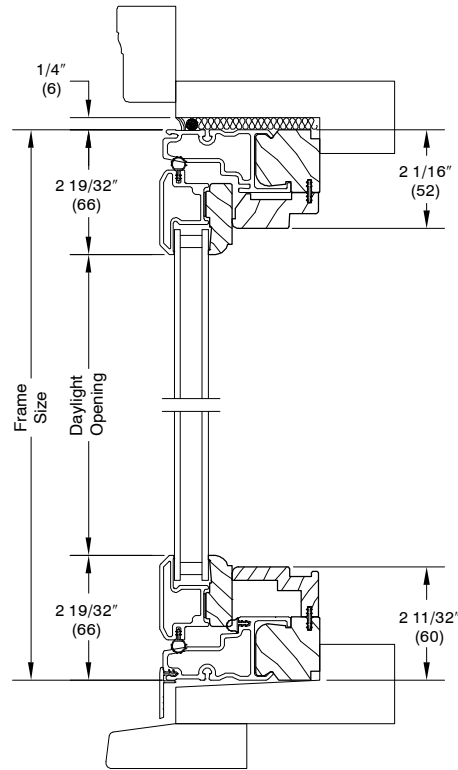
Head Jamb and Sill
Installed in Existing Frame
Interior Install



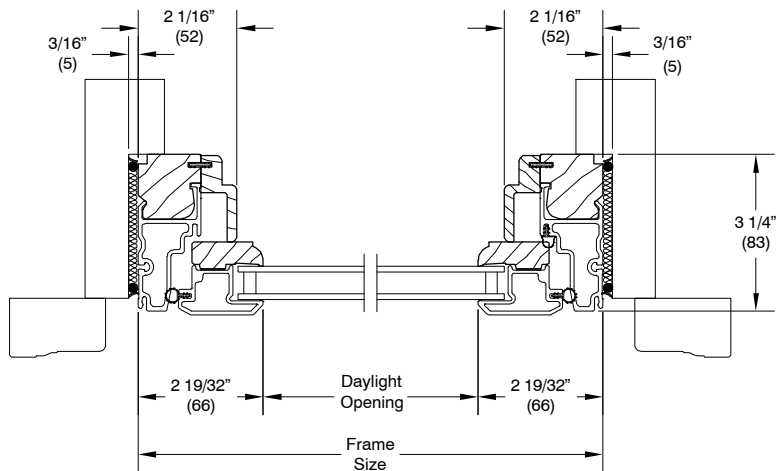
Jamb
Installed in Existing Frame
Interior Install

SECTION DETAILS: EXTERIOR INSTALL: AWNING

SCALE: 3" = 1'0"



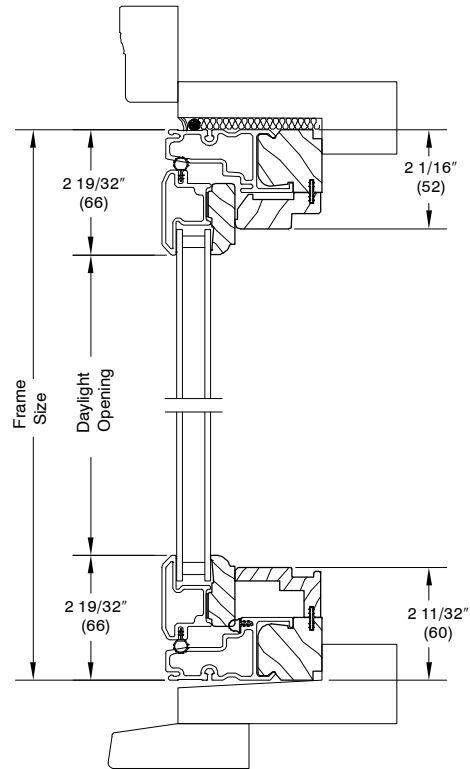
Head Jamb and Sill
Installed in Existing Frame
Exterior Install



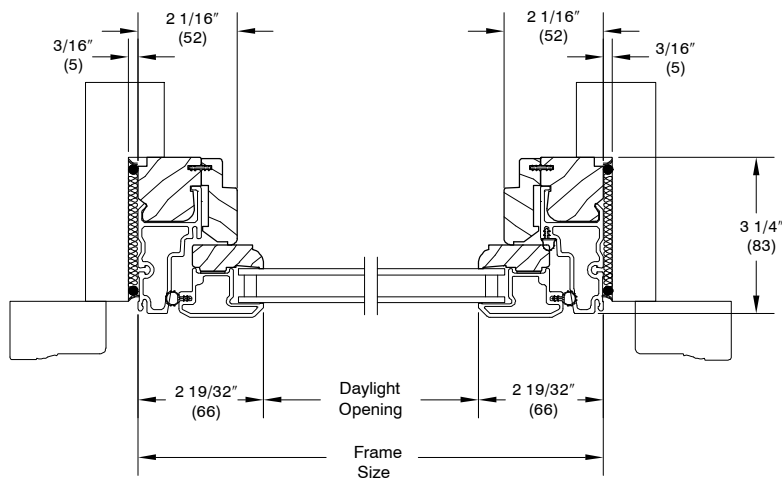
Jamb
Installed in Existing Frame
Exterior Install

SECTION DETAILS: INTERIOR INSTALL: PICTURE/TRANSOM

SCALE: 3" = 1'0"



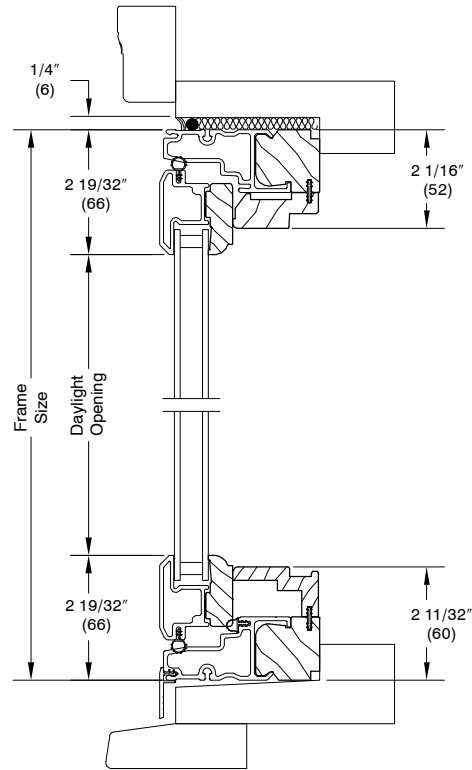
Head Jamb and Sill
Installed in Existing Frame
Exterior Install



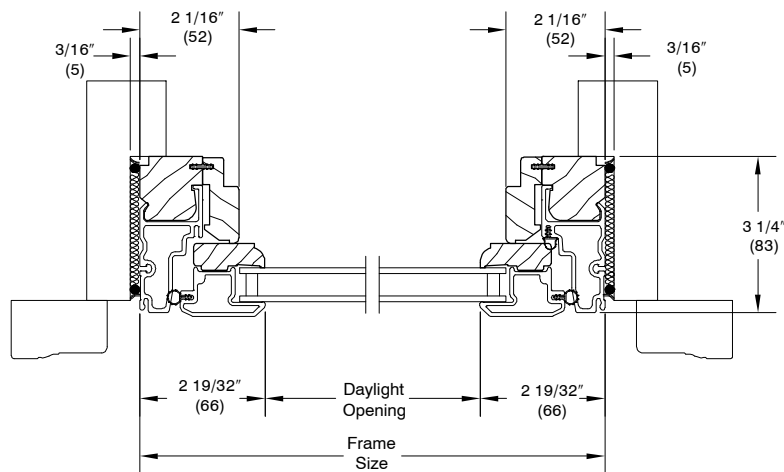
Jamb
Installed in Existing Frame
Exterior Install

SECTION DETAILS: EXTERIOR INSTALL: PICTURE/TRANSOM

SCALE: 3" = 1'0"

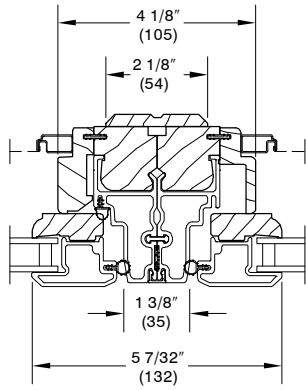


Head Jamb and Sill
Installed in Existing Frame
Exterior Install

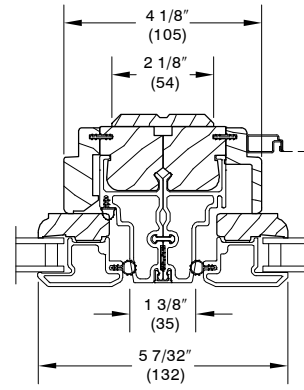


Jamb
Installed in Existing Frame
Exterior Install

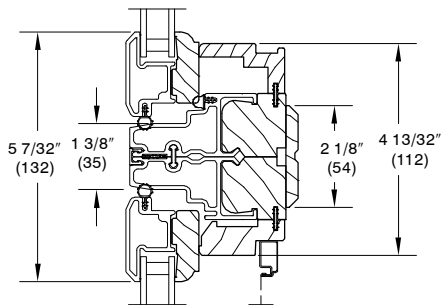
SECTION DETAILS – MULLION DETAIL SCALE: 3" = 1'0"



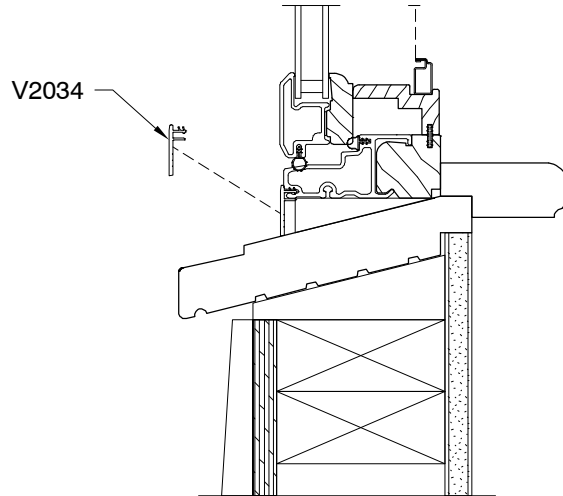
Operator/Operator
Wood Ultrex Insert Casement



Picture/Operator
Wood Ultrex Insert Casement

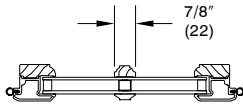


Transom/Operator
Wood Ultrex Insert Casement

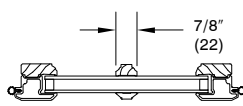


Sill Frame Expander

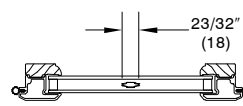
DIVIDED LITE OPTIONS



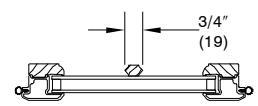
Wood Simulated Divided Lite w/Spacer Bar



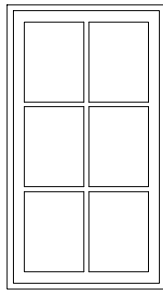
Wood Simulated Divided Lite



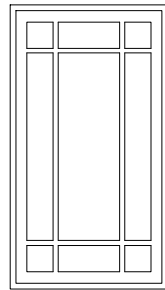
Aluminum Grille Between Glass



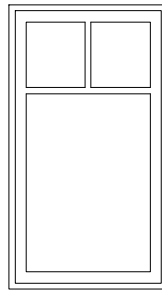
Wood Removable Grille



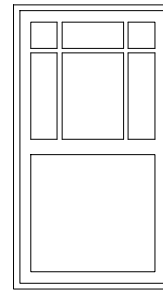
RECTANGLE GBG or SDL



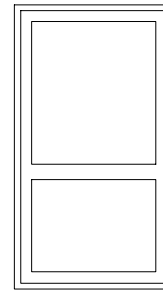
PRAIRIE GBG or SDL



COTTAGE GBG or SDL



PRAIRIE SDL WITH SIMULATED CHECK RAIL



CUSTOM SIMULATED RAIL

Conversion Formula:

$$\frac{\text{Total DLO} - \text{Total bar width}}{\text{Number of lites}} = \text{Individual DLO}$$

NOTES

- Wood Grilles for special size units will default to the next smaller standard size lite pattern. Wood Grilles are not available in lite patterns other than the Wood Grille patterns.
- Rectangle GBGs for special size units will default to the next smaller standard size lite pattern. Also available will be Prairie pattern and customer specified equal rectangular lite patterns.
- Rectangular SDL for special size units will default to the next smaller standard size lite pattern. Also available will be Prairie patterns, Cottage patterns, and customer specified equal rectangular lite patterns.
- Prairie GBGs and SDL are not available in lite patterns other than the Prairie patterns listed in the following pages.
- Cottage SDL for special sizes will default to the next smaller standard size lite pattern. Cottage SDL is not available in lite patterns other than the Cottage patterns listed in the following pages.
- Maximum number of lites wide and high for equal lite SDL is 11 lites.
- Minimum DLO measurement for equal lite GBG and SDL option is 3" (76) and will be validated by OMS.
- Standard DLO measurement for Prairie GBG and SDL option is 4" (102) Special DLO corners are n/a.
- Standard DLO height measurement for Cottage SDL option is 10" (254). Special DLO heights are n/a.
- Simulated Rail: Rectangular, Prairie 6-Lite and 9-Lite SDL patterns are available with Simulated Rail.
- Simulated Rail: custom ratio and specified DLO are available with Simulated Rail and will be validated by OMS.

AVAILABLE DIVIDED LITE PATTERNS

Insert Casement SDL, GBG, Grille Equal Lite Cut						
Product	Width			Height		
	Frame Width		Lite Cut Pattern	Frame Height		Lite Cut Pattern
	in	mm		in	mm	
IICA	16	(406)	2W	24	(610)	2H
	28	(711)	3W	39 1/8	(994)	3H
	36	(914)	3W	55 1/8	(1400)	4H
	NA	NA	NA	63 1/8	(1603)	5H
	NA	NA	NA	71 1/8	(1807)	5H
IIAWN	24	(610)	2W	19 1/8	(486)	2H
	28	(711)	3W	39 1/8	(994)	3H
	48	(1219)	4W	47 1/8	(1197)	3H
IICAP / IICATR	16	(406)	2W / 1W	15 3/4	(400)	1H
	20	(508)	2W	19 1/8	(486)	2H
	28	(711)	3W	39 1/8	(994)	3H
	40	(1016)	4W	55 1/8	(1400)	4H
	56	(1422)	5W	63 1/8	(1603)	5H
	72	(1829)	7W	71 1/8	(1807)	5H

NOTE: When frame width or height are between two sizes, refer to the smaller size shown for the default lite cut pattern.