

Wood Ultimate Insert Double Hung

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Wood Ultimate Insert Double Hung

Unit Features

Wood Ultimate Insert Double Hung: WINDH

Wood Ultimate Insert Double Hung Transom: WINDHT

Wood Ultimate Insert Double Hung Picture: WINDHP

NOTE: Wood Ultimate Insert Double Hung Transom and Wood Ultimate Insert Double Hung Picture are not available with CE mark.

Frame:

- Depth is 4 9/16" (116)
- 1 1/16" (17) thick at head and side jambs, 1" (25) at sill which has an 8° bevel
- Optional flat sill that is 1 7/16" (37)

Sash:

- Sash thickness for operable units and transom: 1 5/8" (41). Sash thickness for a picture unit is 1 5/8 (41) or 2" (51).
- Operating sash are removable for cleaning, service and finishing.
- Incorporates traditional wide bottom rail in bottom sash - 3 9/16" (90).
- Single Hung conversion kits available. Cottage and Oriel sash configuration available.

Hardware:

- Sash lock and keeper: Open style crescent cam lock with sash release lever, surface mounted. Color: Satin Taupe. Optional colors: Bronze, White, Brass, Antique Brass, Satin Chrome, Satin Nickel and Oil Rubbed Bronze.
- Balance system: block and tackle coil spring.
- The jamb track is a vinyl extrusion. Color: Beige. Optional color: White.

Weather Strip:

- Jamb weather strip is a foam type weather strip which seals against both the bottom sash and top sash stiles.
- Top sash has a weather strip on the check rail that seals to the bottom sash check rail when the sash lock is engaged.
- The top rail seals against a weather strip on the head jamb parting stop.
- The bottom sash has a weather strip on the bottom of the lower rail which seals against the sill.

Insect Screens:

- Aluminum screen: Full screen standard, half screen optional. Colors available: Pebble Gray, Bahama Brown, Evergreen, Bronze, Stone White, Ebony, Cobalt Blue, Wineberry, Coconut Cream, Hampton Sage, Cashmere, Arctic White, Cumulus Gray, Desert Beige, Sherwood Green, Sierra White, Cadet Gray, Cascade Blue, or French Vanilla.
- Screen mesh: Standard is Charcoal Fiberglass. Optional: Charcoal High Transparency Fiberglass Mesh, Charcoal Aluminum Wire, Black Aluminum Wire, Bright Aluminum Wire, or Bright Bronze Aluminum Wire.
- Screens have an aluminum crossbar on glass heights of 20" (508) and taller.
- Optional Double Hung Magnum Screen, extruded aluminum.

Glass:

- Glazing seal: Silicone glazed.
- Standard glass is insulating Low E2 Argon or Air.
- Insulating glass will be altitude adjusted with capillary tubes for higher elevations. Argon gas is not available for elevations that require capillary tubes.

Optional Glass

- Low E1 Argon or Air, Low E3 Argon or Air, Low E2/ERS Argon or air, Low E3/ERS Argon or air, Clear, Tempered, Laminated, Obscure, Bronze tint, Gray tint, Reflective Bronze, Decorative glass options or clear.
- ADL glazing options not available with Argon

Optional Glass- WINDP only

- Tripane Low E1 outer piece and Low E1 Argon inner piece
- Tripane Low E1 outer piece and Low E1 Krypton-Argon inner piece
- Tripane Low E2 outer piece and Low E2 Argon inner piece
- Tripane Low E2 outer piece and Low E2 Krypton-Argon inner piece
- Tripane Low E3 outer piece and Low E1 Argon inner piece
- Tripane Low E3 outer piece and Low E1 Krypton-Argon inner piece

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Unit Features

CE Optional Glazing:

- Glazing method: Insulating
- Glazing seal: Silicone glazed
- Standard glass is insulating Low E2 Argon or air
- Optional dual glazing available: Low E1 Argon or air, Low E3 Argon or air, Low E2/ERS argon or air, Low E3/ERS Argon or air, clear, laminated clear and tints, tempered, sandblasted
- Glass panes available in 3 and 4 mm thicknesses
- Laminated panes available in 7.0 and 7.8 mm thicknesses
- Glazing will be altitude adjusted for higher elevations, Argon, Argon-Krypton, and Krypton gas not included

Accessories:

- Installation Accessories
 - Factory installed vinyl sill fin (8 degree sill option only)
 - Two (2) 5/16" - #10 x 2 1/2" jamb jack screws
 - Four (4) #7 x 2" Phillips pan-head installation screws
 - Two (2) jamb liner check rail pads
 - Two (2) wood flat head plugs (interior).
- Sash Lifts
 - High pressure zinc die-cast.
 - Color: Satin Taupe. Optional colors: Bronze, White, Brass, Antique Brass, Satin Chrome, Satin Nickel and Oil Rubbed Bronze.

CE Mulling Options:

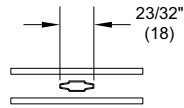
- Muller assemblies up to 70 3/4" (1797) x 80 3/8" (2042) as 1H x multi-width
- Muller assemblies with 1" (25) LVL or 3/8" (10) aluminum mull reinforcement up to 124 7/8" (3172) x 100 3/8" (2550) as a multi-wide or multi-high assembly

Wood Ultimate Insert Double Hung

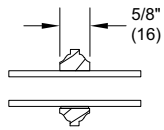
Standard Insulating Glass Divided Lite Options



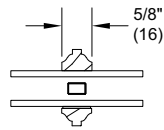
Insulating Glass



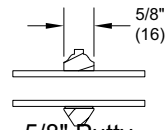
Aluminum 23/32"
Contour GBG



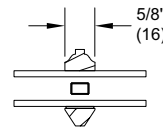
5/8" SDL



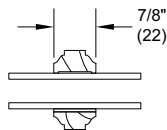
5/8" SDL
W/Spacer



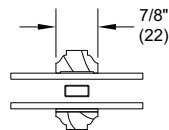
5/8" Putty
SDL



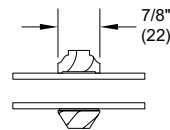
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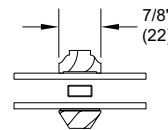
7/8" SDL



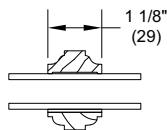
7/8" SDL
W/Spacer Bar



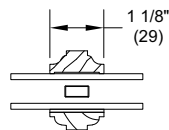
7/8" Putty SDL



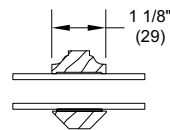
7/8" Putty SDL
W/Spacer Bar



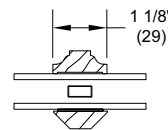
1 1/8" SDL



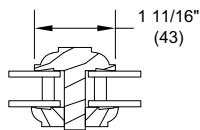
1 1/8" SDL
W/Spacer Bar



1 1/8" Putty SDL



1 1/8" Putty SDL
W/Spacer Bar

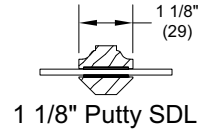
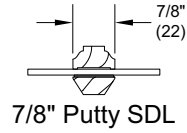
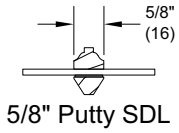
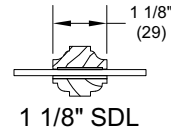
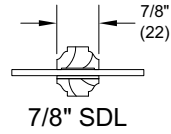
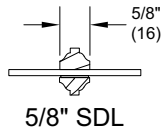
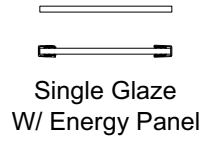


1 11/16" IG ADL

NOTE: ADL is not available with CE mark.

Wood Ultimate Insert Double Hung

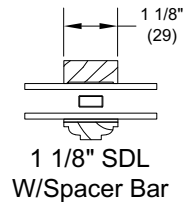
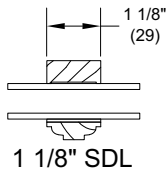
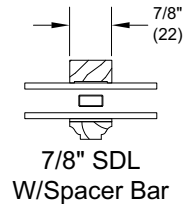
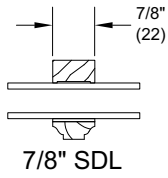
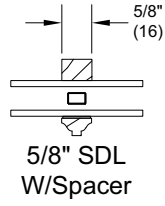
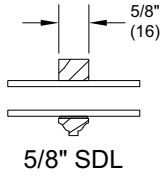
Standard Single Glaze Divided Lite Options



NOTE: Single Glaze and ADL are not available with CE mark.

Wood Ultimate Insert Double Hung

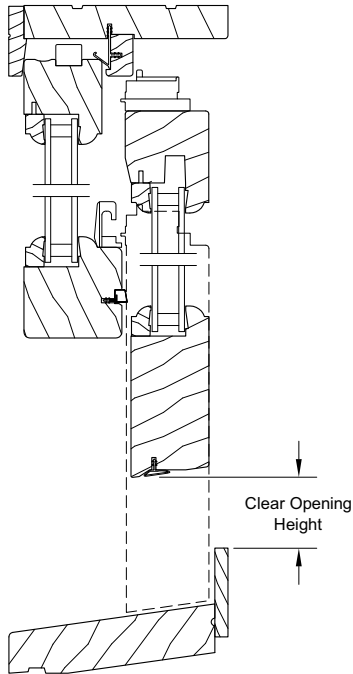
Optional Interior Square Simulated Divided Lite Options



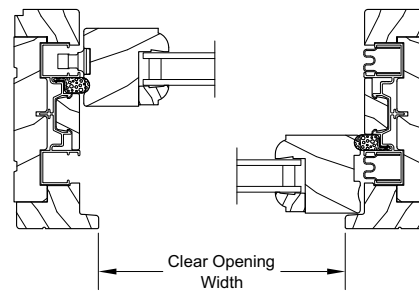
Egress and Vent Openings

Minimum Egress Requirements					
Inside Opening Width		Inside Opening Height Flat Sill		Inside Opening Height 8 degree	
in	mm	in	mm	in	mm
29 3/4	(756)	77 1/4	(1962)	76 53/64	(1951)
31 3/4	(806)	73 1/4	(1861)	72 53/64	(1850)
33 3/4	(857)	69 1/4	(1759)	68 53/64	(1748)
35 3/4	(908)	65 1/4	(1657)	64 53/64	(1647)
37 3/4	(959)	61 1/4	(1556)	60 53/64	(1545)
41 3/4	(1060)	61 1/4	(1556)	60 53/64	(1545)
45 3/4	(1162)	61 1/4	(1556)	60 53/64	(1545)

Egress Unit Minimum Opening and Conversion from Frame Size		
Desired Dimension	Formula	Minimum Value for Net Clear Opening
Egress Opening Width (inches)	= WINDH frame OSM width - 3.416	20 inches
Egress Opening Height (inches)	= (WINDH frame OSM height / 2) - 5.3282	24 inches
Egress Opening Area (sq. ft.)	= (Egress Width x Egress Height) / 144	5.7 sq. ft.



Head Jamb and Sill



Jambs

Minimum and Maximum Guidelines and Oversize Limits

Minimum and Maximum IO Opening Guidelines															
Unit Type	Sill Type	Min IO Width at Least		Min IO Height Must be at Least		Min IO Width at Least		Min IO Height Must be at Least		Max IO Width		Max IO Height		Max IO Area	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	Sq. Ft	Sq. Mtrs
WINDH	Flat	13 3/4	(349)	32 1/32	(814)	17 3/4	(451)	24 1/32	(610)	44	(1118)	77 39/64	(1971)	23 45/64	(602)
	8°	13 3/4	(349)	31 19/32	(803)	17 3/4	(451)	23 39/64	(600)						
WINDHP	Flat	13 3/4	(349)	18 23/32	(475)	17 3/4	(451)	14 23/32	(374)	68	(1727)	77 39/64	(1971)	36 21/32	(931)
	8°	13 3/4	(349)	18 9/32	(465)	17 3/4	(451)	14 9/32	(363)						
WINDHT	Flat	13 3/4	(349)	17 1/2	(445)	17 3/4	(451)	13 1/2	(343)	44	(1118)	23 3/64	(585)	7 3/64	(179)
	8°	13 3/4	(349)	17 1/16	(434)	17 3/4	(451)	13 1/16	(332)						

NOTE: Some restrictions may apply, contact your Marvin representative with questions.

Oversize Limits						
Unit Type	Maximum IO Width		Maximum IO Height		Maximum IO Area	
	in	mm	in	mm	Sq Feet	Sq Meters
WINDH	48	(1219)	85 39/64	(2174)	23 45/64	2.203
WINDHP	68	(1727)	85 39/64	(2174)	40 7/16	3.756
WINDHT	48	(1219)	23 3/64	(585)	7 11/16	0.713

NOTE: Oversized width and height max for WINDH is available in either width or height but not both.

Oversized units are not certified.

Maximum Limits for CE Mark				
Unit Type	Maximum IO Width		Maximum IO Height	
	in	mm	in	mm
WINDH	(46)	(1168)	(80)	(2034)

Certified Sizes and Ratings

Product	Air Tested to psf	Water Tested to psf	Structural Tested to psf	Certification Rating	Design Pressure (DP)	Overall Width		Overall Height	
						in	mm	in	mm
Wood Insert Double Hung	1.57	6	60	LC-PG40-H	40	35 3/8	(899)	81	(2057)
Wood Insert Double Hung	1.57	6	60	LC-PG40-H	40	45 3/8	(1153)	61	(1549)
Wood Insert Double Hung	1.57	6	45	LC-PG40-H	40	45 3/8	(1153)	81	(2057)
Wood Insert Double Hung 1 5/8" Picture	1.57	6	60	LC-PG40-FW	40	61 3/8	(1559)	57	(1448)
Wood Insert Double Hung 2" Picture	1.57	6	60	LC-PG40-FW	40	69 3/8	(1762)	81	(2057)
Wood Insert Double Hung Transom	1.57	6	60	LC-PG40-TR	40	73 3/8	(1864)	26 1/2	(673)

NOTE: For CE ratings, please refer to CE Performance Section.

Wood Ultimate Insert Double Hung

Measurement Conversions: Operators

Wood Ultimate Insert Double Hung Operating Unit						
Unit Measurements		Width		Height		
From	To					
Daylight Opening		in	mm		in	mm
Daylight Opening	Bottom Sash OM	+ 3 17/32	(90)		+ 5 11/16	(144)
Daylight Opening	Top Sash OM	+ 3 17/32	(90)		+ 3 7/8	(98)
Daylight Opening	Glass OM	+ 1 1/16	(27)		+ 1 1/16	(27)
Daylight Opening	Screen OM	+ 4 13/32	(112)	(DLO x 2)	+ 9 9/32	(236)
Daylight Opening	Grille	order by DLO		order by DLO		

Wood Ultimate Insert Double Hung Operating Unit									
Unit Measurements		Width		Height					
From	To			Flat Bottom Sill			8 Degree Bottom Sill		
Inside Opening		in	mm	in	mm		in	mm	
Inside Opening	Bottom Sash OM	-3 9/32	(83)	-10 9/32	(261)	+ 2	-9 27/32	(250)	+ 2
				+ 5 11/16	(98)		+ 5 11/16	(98)	
Inside Opening	Top Sash OM	-3 9/32	(83)	-10 9/32	(261)	+ 2	-9 13/16	(249)	+ 2
				+ 3 7/8	(98)		+ 3 7/8	(98)	
Inside Opening	Daylight Opening	-6 13/16	(173)	-10 9/32	(261)	+ 2	-9 13/16	(249)	+ 2
Inside Opening	Glass OM	-5 3/4	(146)	-8 5/32	(207)	+ 2	-7 23/32	(196)	+ 2
Inside Opening	Screen OM	-1 27/32	(47)	-1	(25)		-9/16	(14)	
Inside Opening	Frame OM @ Interior	-3/8	(09)	-1/4	(06)		-1/4	(06)	
Inside Opening	Frame OM @ Exterior	-3/8	(09)	-1/4	(06)		+ 3/16	(05)	

Measurement Conversions: Transom and Picture

Wood Ultimate Insert Double Hung Transoms					
Unit Measurements		Width		Height (not affected by sill)	
From	To				
Daylight Opening		in	mm	in	mm
Daylight Opening	Sash OM	+ 3 17/32	(90)	+ 4 11/32	(110)
Daylight Opening	Glass OM	+ 1 1/16	(27)	+ 1 1/16	(27)
Daylight Opening	Grille	order by DLO		order by DLO	

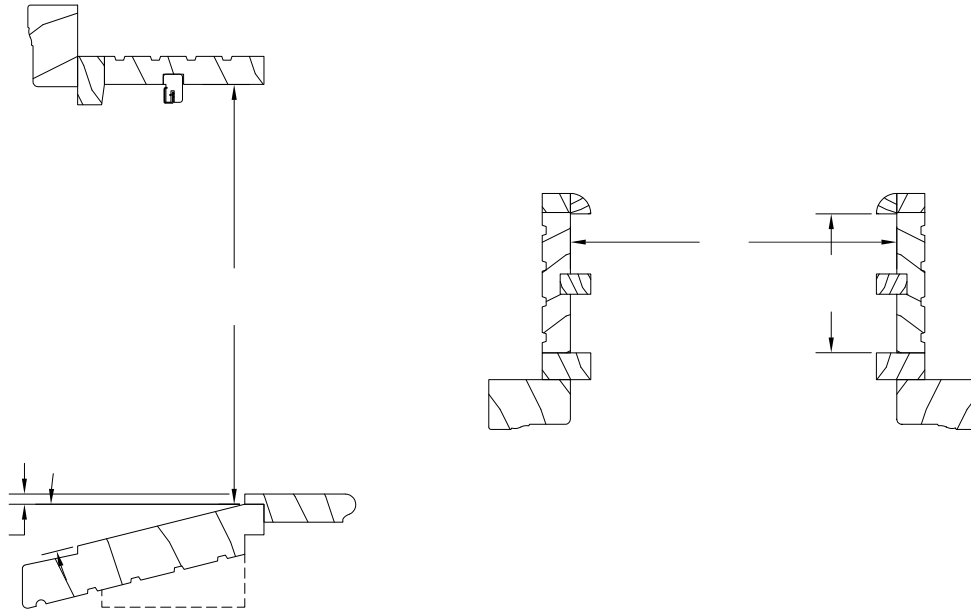
Unit Measurements		Width		Height			
From	To			Flat Sill Bottom		8 Degree Sill Bottom	
Inside Opening		in	mm	in	mm	in	mm
Inside Opening	Sash OM	-3 9/32	(83)	-2 11/32	(60)	-1 29/32	(48)
Inside Opening	Daylight Opening	-6 13/16	(173)	-6 11/16	(170)	-6 1/4	(159)
Inside Opening	Glass OM	-5 3/4	(146)	-5 5/8	(143)	-5 3/16	(132)
Inside Opening	Frame OM @ Interior	-3/8	(09)	-1/4	(06)	-1/4	(06)
Inside Opening	Frame OM @ Exterior	-3/8	(09)	-1/4	(06)	+ 3/16	(05)

Wood Ultimate Insert Double Hung Picture					
Unit Measurements		Width		Height (not affected by sill type)	
From	To				
Daylight Opening		in	mm	in	mm
Daylight Opening	Sash OM	+ 4 7/8	(124)	+ 5 21/32	(144)
Daylight Opening	Glass OM	+ 1 3/16	(30)	+ 1 3/16	(30)
Daylight Opening	Grille	order by DLO		order by DLO	

Unit Measurements		Width		Height			
From	To			Flat Sill Bottom		8 Degree Sill Bottom	
Inside Opening		in	mm	in	mm	in	mm
Inside Opening	OM of BMC	-1 15/16	(49)	-2 1/4	(57)	-1 13/16	(46)
Inside Opening	OM of Flat Casing	-6 13/16	(173)	-7 29/32	(201)	-7 15/32	(190)
Inside Opening	Daylight Opening	-5 5/8	(143)	-6 23/32	(171)	-6 9/32	(160)
Inside Opening	OM of Frame	-3/8	(09)	-1/4	(06)	-1/4	(06)
Inside Opening	Daylight Opening	-3/8	(09)	-1/4	(06)	+ 3/16	(05)

Measurement Conversions: Field Measurement

Conversion from Field Measurement to Frame OM		
Width		
Condition	Formula	
If blind stop width is 1/2 inch or less	WINDH frame OM width = inside opening width - 0.375	
Height		
Condition	Type of Sill	Formula
If old sill angle is less than 8 degrees	Flat bottom Sill	WINDH frame OM height = inside opening height - 0.250
If old sill angle is equal to or greater than 8 degrees	8 degree bottom sill	WINDH frame OM height = inside opening height + 0.180

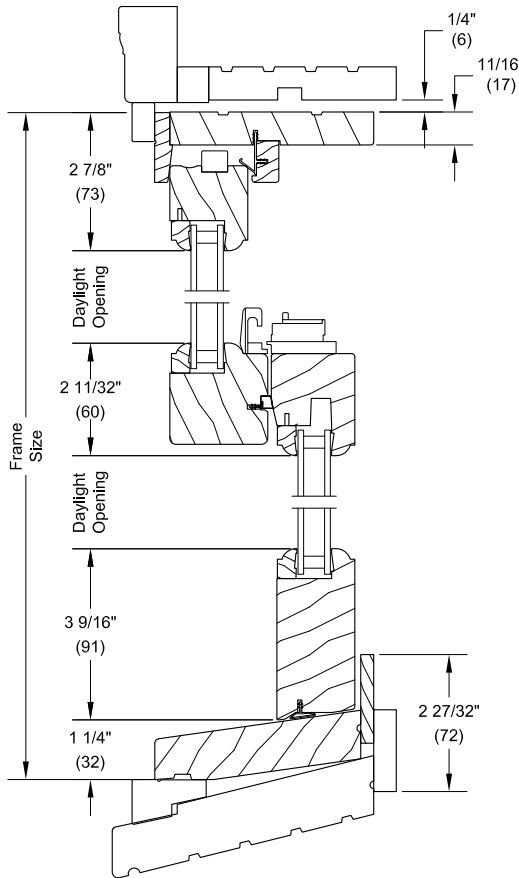


NOTE: For additional measuring instructions see Marvin Insert Window Measuring Instructions.

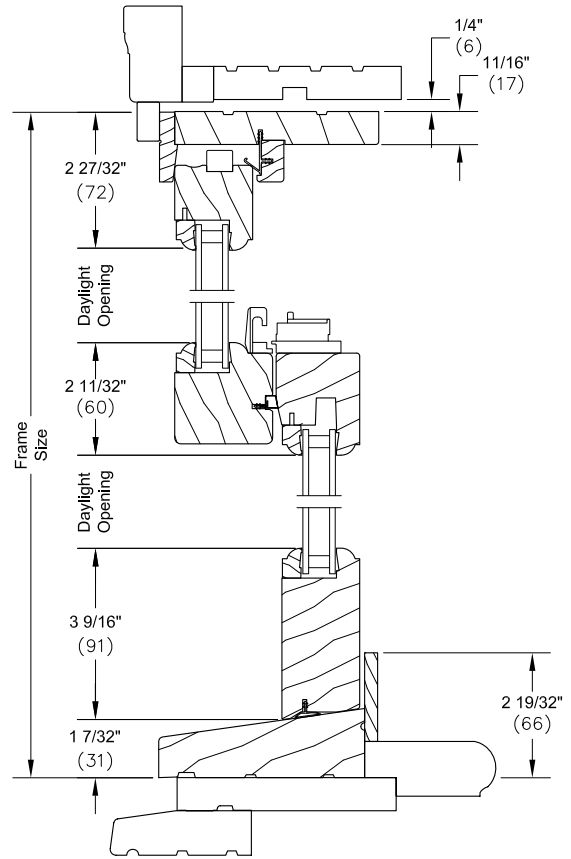
Wood Ultimate Insert Double Hung

Section Details: Operator

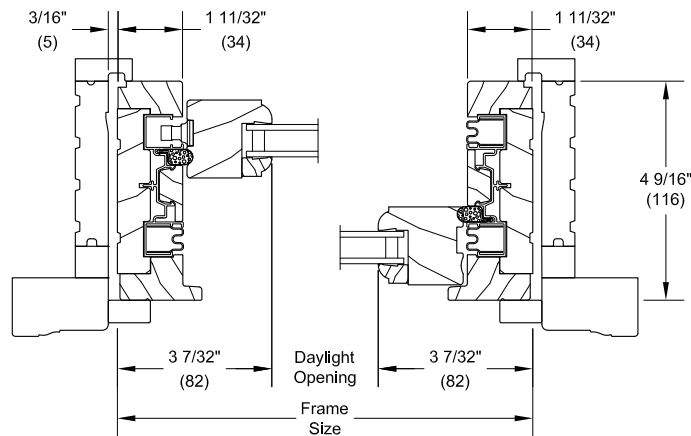
Scale: 3" = 1' 0"



Head Jamb, Checkrail, with Beveled Sill installed in existing frame



Head Jamb, Checkrail, with Flat Sill Option installed in existing frame

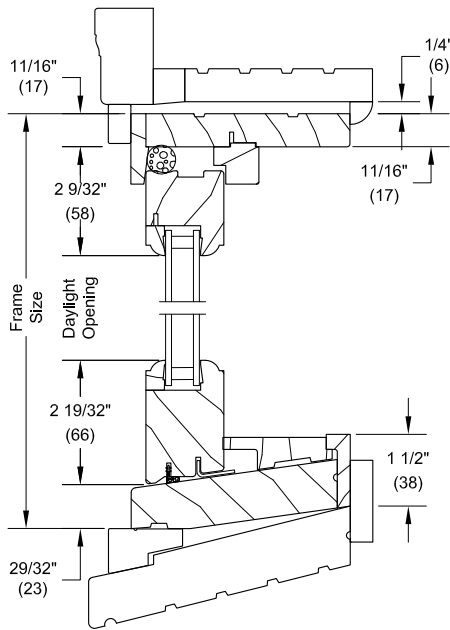


Jambs installed in existing frame

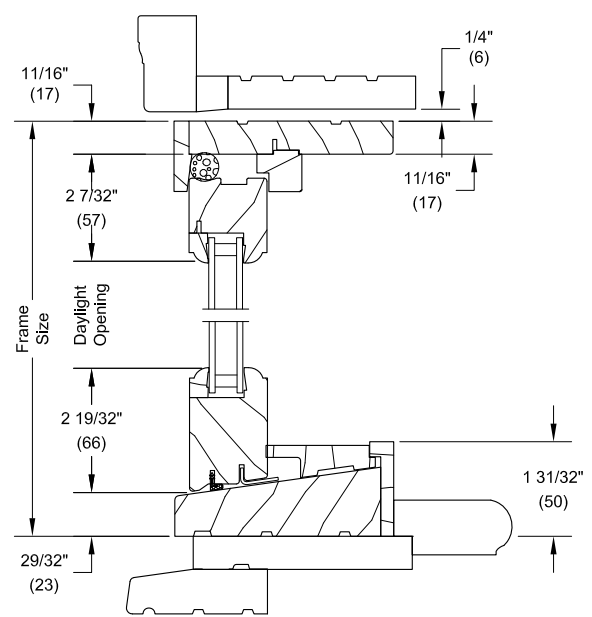
Wood Ultimate Insert Double Hung

Section Details: Transom

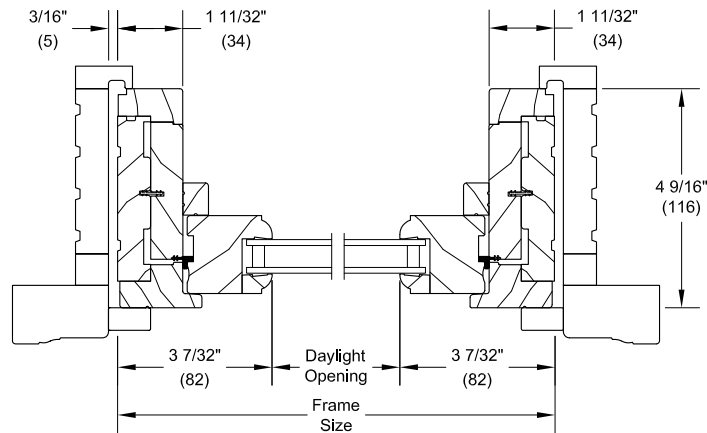
Scale: 3" = 1' 0"



Transom Head Jamb with Beveled Sill installed in existing frame



Transom Head Jamb with Flat Sill Option installed in existing frame

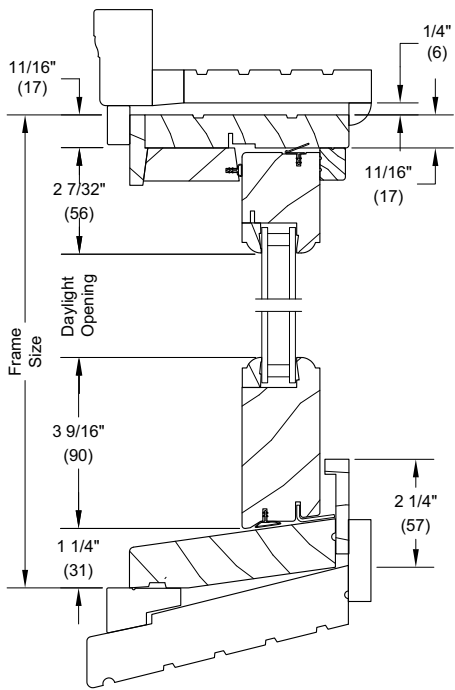


Transom Jamba installed in existing frame

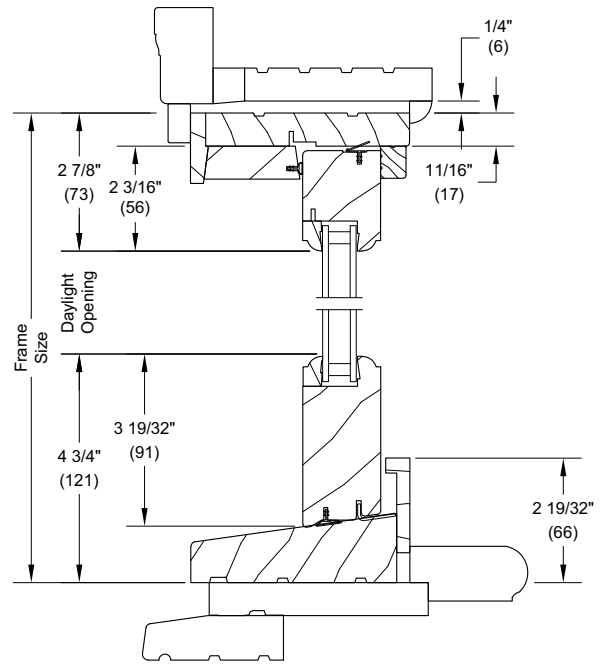
Wood Ultimate Insert Double Hung

Section Details: Picture

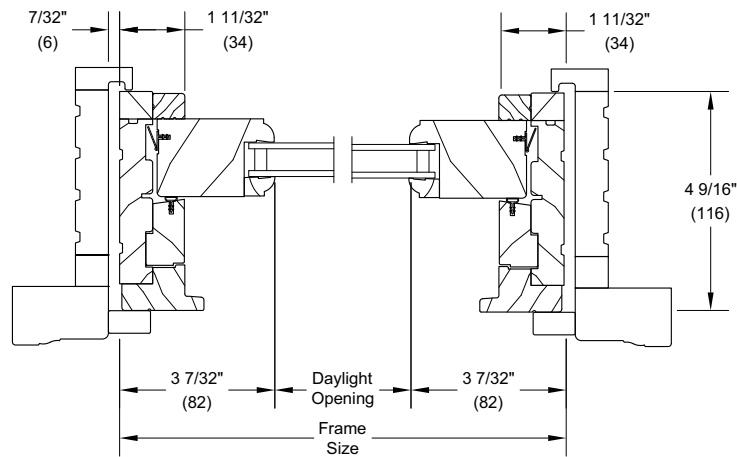
Scale: 3" = 1' 0"



Picture Head Jamb with Beveled Sill installed in existing frame



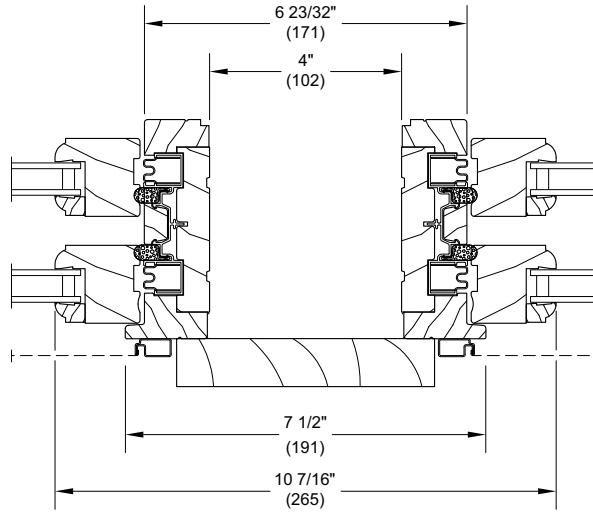
Picture Head Jamb with Flat Sill Option installed in existing frame



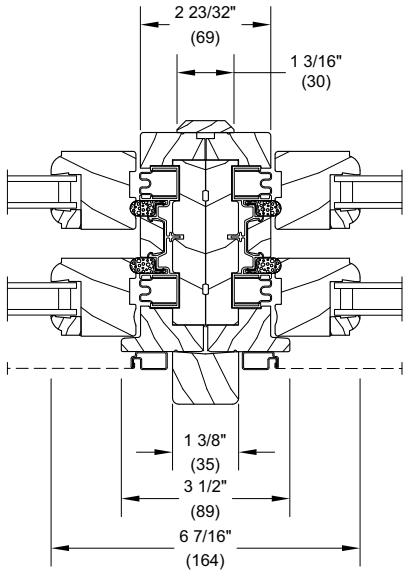
Jambs

Section Details: Mullions

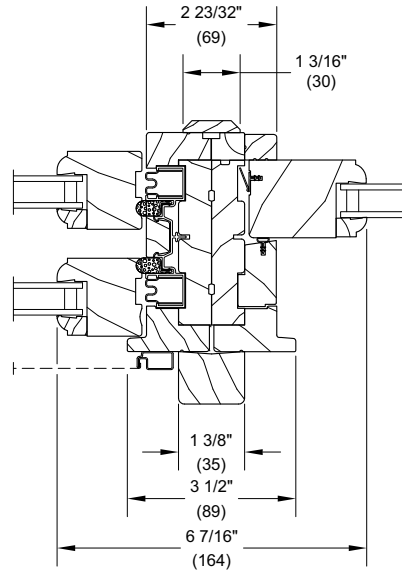
Scale: 3" - 1' 0"



Vertical Mullion - with 4" Space Mull Operator/Operator



Vertical Mullion Operator/Operator/Direct Mull



Vertical Mullion Operator/Picture/Direct Mull