

# Infinity Double Hung

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## Unit Features

Infinity Double Hung: NDH

Infinity Double Hung Transom: NDHTR

Infinity Double Hung Picture: NDHP

### Ultrex® Pultruded Fiberglass Frame:

- Frame thickness: 31/32" (25) head jamb, 31/32" (25), side jamb, 25/32" (20) sill, flat bottom sill with 8 degree bevel
- Frame depth: 2 7/8" (73)
- Exterior colors: Stone White, Sierra, Cashmere, Pebble Gray, Bahama Brown, Bronze
- Interior colors: Stone White, Sierra, EverWood™

### Ultrex® Pultruded Fiberglass Sash:

- Sash thickness: 1 3/8" (35)
- Different sash option allows unequal sash heights, unique lite cuts for each sash or different glazing in each sash
- Operable sash tilts to interior for cleaning or removal
- Sash are replaceable but cannot be re-glazed
- Exterior colors: Stone White, Sierra, Cashmere, Pebble Gray, Bahama Brown, Bronze
- Interior colors: Stone White, Sierra, EverWood™

### Hardware:

- Lock and keeper:
  - Mounted at the center of the top check rail or 12" (305) on center from either end on dual lock unit
  - Zinc die-cast
- Sash lift:
  - Factory drilled for a bottom sash lift
  - Single lock units receive single lift; dual locks unit receive double lifts
  - Zinc die-cast
- Balance system:
  - Coil spring block and tackle with nylon cord and fiber filled nylon clutch
  - Allows the sash to raise or lower from desired position
- Bottom sash tilt latches:
  - Spring loaded tilt latches attached to upper corners of sash and operated with a button on the lock for easy tilting and sash removal
  - Tilt latches are mounted to the window stile and hidden under the check rail cover for a clean look
- Top sash tilt latches:
  - Spring loaded tilt latches attached to upper corners of sash
  - Injection molded nylon - white or beige
  - Hidden from view in the frame header when window is closed
- Top sash hanger (fixed upper sash only):
  - Attached to the frame securing the top sash making it stationary
  - Metal stamped
  - Color: white or beige
- Optional factory applied Window Opening Control Device
  - Available on all operable units
  - Color: white or beige
  - This device works in accordance to ASMT F2090-10 standard specification for window fall prevention devices with emergency escape

### Weather Strip:

- Frame:
  - Jamb: foam filled bulb with flexible TPE skin
    - Color: white or beige
  - Parting stop: PVC with flexible hinged wand seal
    - Color: white or beige
- Sash:
  - Bottom sash: beige, hollow foam bulb type
  - Check rail: beige, PVC with flexible hinged wand seal
- Stationary units:
  - Continuous, foam weather strip at perimeter of sash
  - Color: gray

## Unit Features

### Insect Screens:

- Full screen
- Optional half screen
- Extruded aluminum frame: 0.050" wall thickness
- Standard screen mesh material: charcoal fiberglass
- Optional screen mesh material: high transparency screen
- Corners are mitered and joined with an internal corner key, which are not visible
- Friction fit pins are integrated into the side of the screen
- Frame color: matches exterior frame color

### Glass:

- Glazing seal: silicone bedding on interior and exterior
- Standard glass is insulating Low E2 with Argon or air
- Optional glazing available: Low E1 with Argon or air, Low E3 with Argon or air, or Low E3/ERS with Argon or air, tempered, obscure
- Decorative glass options include Glue Chip, Rain, Reed, Narrow Reed, or Frost
- Decorative glass is not available with Low E1, Low E3/ERS, or STC/OITC
- Rain, Reed and Narrow Reed not available with SDL
- SDL available on Frost, annealed or tempered glass
- SDL available on Glue Chip, tempered glass required
- Insulating glass will be altitude adjusted with capillary tubes for higher elevations
- Argon gas is not available for elevations that require capillary tubes

### Simulated Divided Lites (SDL):

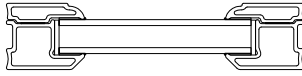
- 7/8" (22) or 1 1/8" (29) SDL bar (interior and exterior)
- 2 11/32" (30) simulated rail (interior and exterior) - picture unit only
- Exterior color: matched to unit exterior
- Interior color: matched to interior - ABS material
- Pattern: equal rectangular, cottage, prairie, check rail

### Gilles-Between-the-Glass (GBG):

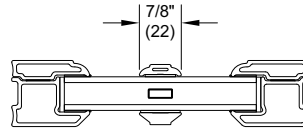
- 11/16" (18) or 1" (25) contoured aluminum bar
- Exterior: color matched to unit exterior
- The exterior GBG color is designed to best match the unit exterior color when used with Low E glass. The use of different types of glazing options may alter the exterior GBG color appearance
- Interior color: White, Satin Taupe, Sierra, Bronze
- Pattern: equal rectangular, cottage, prairie, check rail
- GBG's are not available with dual 4.7mm glass panes. Refer to OMS for availability.

*NOTE: GBG may not be available or may require tempered glass if the glass size is greater than 16 square feet or if the short side dimension is greater than 48". Please contact your local Infinity Retailer or Infinity Support at 800-372-1072 to determine if GBG is available for glass sizes exceeding these dimensions.*

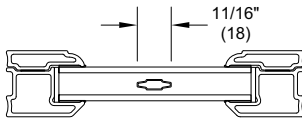
Lite Options



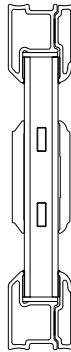
Insulating Glass



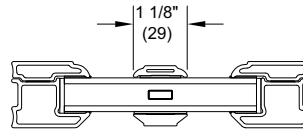
Insulating Glass  
7/8" SDL w/ spacer bar



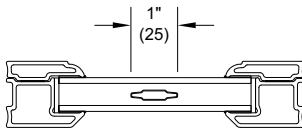
11/16" Insulating Glass  
GBG



Insulating Glass  
SDL Simulated Rail  
w/spacer bar



Insulating Glass  
1 1/8" SDL w/ spacer bar



1" Insulating Glass  
GBG

**Minimum and Maximum Guidelines**

Minimum and Maximum Frame Size Guidelines - Standard Size												
Unit Type		Minimum Frame Size				Maximum Frame Size				Maximum Glass		
		Width		Height		Width		Height				
		in	mm	in	mm	in	mm	in	mm	Sash Size	Sq. Feet	Sq. Meters
NDH	Equal Sash	14 3/8	(365)	25 5/8	(651)	48	(1219)	96	(2438)	regular	13 23/32	1.27
NDH	Cottage Style	14 3/8	(365)	30 1/8	(765)	48	(1219)	72	(1829)	small	8 1/16	0.75
										large	13 13/32	1.25
NDH	Oriel Style	14 3/8	(365)	30 1/8	(765)	48	(1219)	96	(2438)	small	10 31/32	1.02
										large	18 9/32	1.70
NDHP NDHTR	Picture Transom	18	(457)	16 3/8	(416)	72	(1829)	72	(1829)	regular	30	2.79

Minimum and Maximum Frame Size Guidelines - Expanded Size												
Unit Type		Minimum Frame Size				Maximum Frame Size				Maximum Glass		
		Width		Height		Width		Height				
		in	mm	in	mm	in	mm	in	mm	Sash Size	Sq. Feet	Sq. Meters
NDH	Equal Sash	48 1/32	(1220)	25 5/8	(651)	54	(1372)	85	(2159)	regular	13 11/16	1.27
NDH	Cottage Style	48 1/32	(1220)	30 1/8	(765)	54	(1372)	60	(1524)	small	7 1/2	0.70
										large	12 1/2	1.16
NDH	Oriel Style	48 1/32	(1220)	30 1/8	(765)	54	(1372)	85	(2159)	small	10 15/16	1.02
										large	18 1/4	1.70

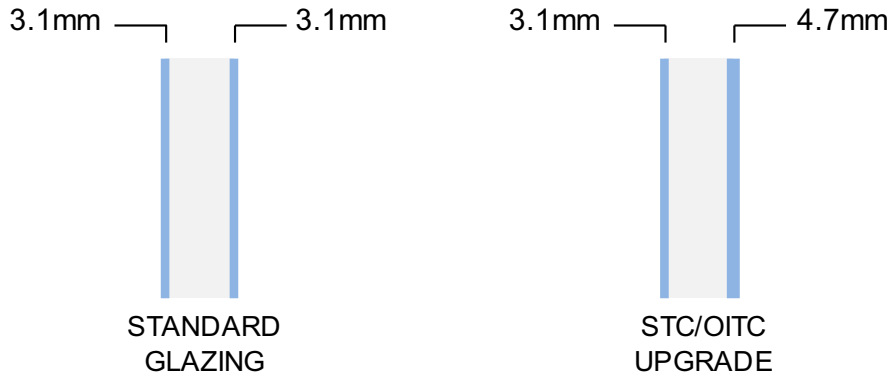
*NOTE: Fixed upper sash required on certain sizes. Contact Infinity Support for more information.  
 For Glue Chip, Frost, and Rain, maximum short frame side is 63 1/4".  
 For Reed and Narrow Reed, vertical pattern orientation maximum frame width size 63 1/4".  
 For Reed and Narrow Reed, horizontal pattern orientation maximum sash height 61 1/8" for operating unit, 63 1/4" for transom and picture units.  
 Tempered glass may be required if the glass size is greater than 23 square feet. Please contact your local Infinity Retailer or Infinity Support at 800-372-1072 to determine available glass options on units exceeding this size.*

**Certified Sizes and Ratings**

Product	Air Tested to psf	Water Tested to psf	Design Pressure (DP)	Certification Rating	Max Overall Width		Max Overall Height	
					in	mm	in	mm
Infinity Double Hung	1.57	3.76	25	LC-PG25-H	54	(1372)	85	(2159)
Infinity Double Hung	1.57	4.6	30	LC-PG30-H	48	(1219)	96	(2438)
Infinity Double Hung Picture	1.57	4.5	30	LC-PG30-FW	72	(1829)	72	(1829)

**STC/OITC Glass Values**

This glazing option incorporates 3.1mm/4.7mm variable thickness glass to increase STC/OITC performance and improve sound abatement. Infinity's STC/OITC upgrade includes third party ASTM ratings and reports. STC/OITC ratings for this option and for standard 3.1mm/3.1mm insulating glass are shown in the attached chart.



Product Type	Exterior Glazing	Airspace	Interior Glazing	STC	OITC
Full Frame Double Hung	1/8" (3.1)	15/32" (11.5)	1/8" (3.1)	26	22
	1/8" (3.1)	13/32" (9.8)	3/16" (4.7)	30	26
Full Frame Double Hung Picture	1/8" (3.1)	15/32" (11.5)	1/8" (3.1)	28	23
	1/8" (3.1)	13/32" (9.8)	3/16" (4.7)	31	27

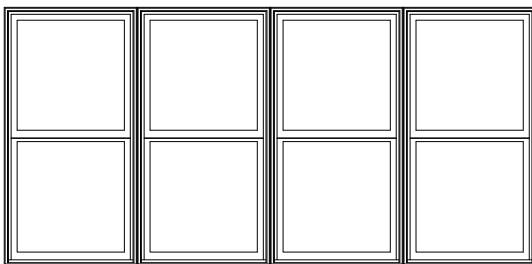
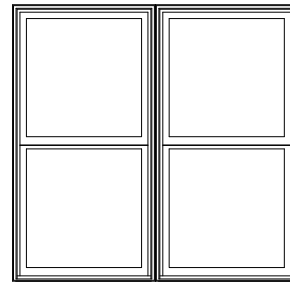
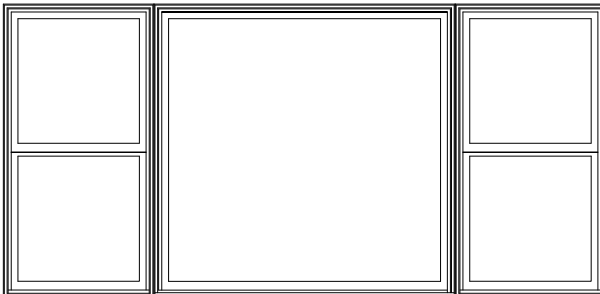


## Mulling Guidelines

### Factory Mullered Double Hung Assemblies

- Assemblies up to 4 units wide by 1 unit high
  - MAXIMUM ROUGH OPENING not to exceed 113" (2870) x 85 1/2" (2172)
- Assemblies up to 1 unit wide by 2 units high
  - MAXIMUM ROUGH OPENING not to exceed 73" (1854) x 96" (2438)

*NOTE: Field mulling beyond the above limitations is not recommended.*



### Rough Opening Assemblies

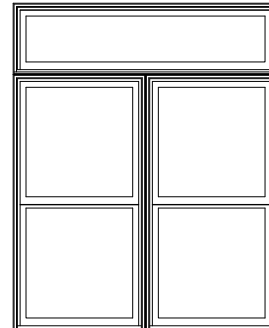
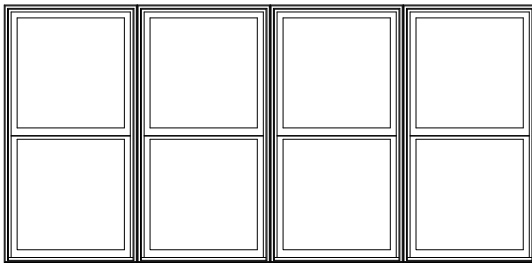
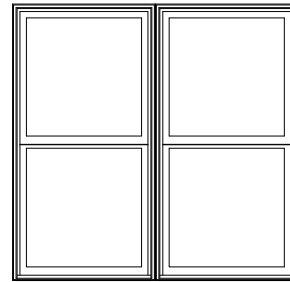
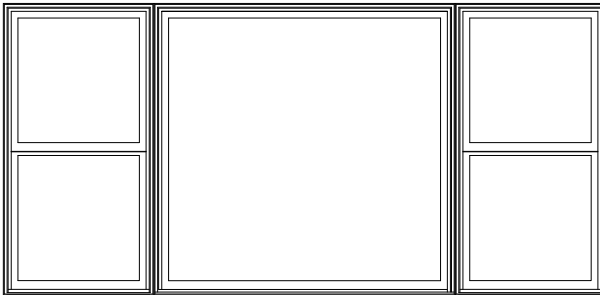
- WIDTH:
  - Frame Width = Single unit Rough Opening with MINUS 1"
  - Total Rough Opening Width = ADD all frame widths PLUS 1"
- Height:
  - Frame Height = Single unit Rough Opening height MINUS 1/2"
  - Total Rough Opening Height = ADD all frame heights PLUS 1/2"

## 1/2" Mullion Reinforcement Guidelines

### Factory Mullered 1/2" Mull Reinforcement Double Hung Assemblies

- Assemblies up to 4 units wide by 1 unit high
  - MAXIMUM ROUGH OPENING not to exceed 113" (2870) x 96 1/2" (2451)
- Assemblies up to 1 unit wide by 2 units high
  - MAXIMUM ROUGH OPENING not to exceed 73" (1854) x 96 1/2" (2451)
- Assemblies up to 2 units wide by 2 units high
  - MAXIMUM ROUGH OPENING not to exceed 97 1/2" (2477) x 96 1/2" (2451)
  - MAXIMUM ROUGH OPENING not to exceed 113" (2870) x 86 1/2" (2197)

*NOTE: Field mulling beyond the above limitations is not recommended.*



### Rough Opening Assemblies

- WIDTH:
  - Frame Width = Single unit Rough Opening with MINUS 1"
  - Total Rough Opening Width = ADD all frame widths PLUS 1/2" for each vertical Mull Reinforcement PLUS 1"
- HEIGHT:
  - Frame Height = Single unit Rough Opening height MINUS 1/2"
  - Total Rough Opening Height: ADD all frame heights PLUS 1/2" for each horizontal Mull Reinforcement PLUS 1/2"

**Measurement Conversions: Operable Units**

Full Frame Double Hung Operating Unit						
Unit Measurements		Width		Height		
From	To					
<b>Rough Opening</b>		<b>in</b>	<b>mm</b>		<b>in</b>	<b>mm</b>
Masonry Opening	Rough Opening	+ 1/2	(13)		+ 1/4	(6)
Masonry Opening w/ BMC	Rough Opening	-2 1/4	(57)		-1 11/16	(43)
OM of Frame	Rough Opening	+ 1	(25)		+ 1/2	(13)
Daylight Opening	Rough Opening	+ 6 13/32	(163)		+ 8 1/4	(210)
<b>Frame</b>		<b>in</b>	<b>mm</b>		<b>in</b>	<b>mm</b>
OM of BMC	OM of Frame	-2 3/4	(70)		-2 1/16	(52)
Daylight Opening	OM of Frame	+ 5 13/32	(137)	x 2	+ 7 3/4	(197)
<b>Top Sash (Equal Sash)</b>		<b>in</b>	<b>mm</b>		<b>in</b>	<b>mm</b>
OM of Frame	OM of Top Sash	-2 5/32	(54)	+ 2	-19/32	(15)
Daylight Opening	OM of Top Sash	+ 3 1/4	(83)		+ 3 1/4	(83)
<b>Bottom Sash (Equal Sash)</b>		<b>in</b>	<b>mm</b>		<b>in</b>	<b>mm</b>
OM of Frame	OM of Bottom Sash	-2 5/32	(54)	+ 2	-3/16	(5)
Daylight Opening	OM of Bottom Sash	+ 3 1/4	(83)		+ 3 1/4	(83)
<b>Top Sash (Cottage Height)</b>		<b>in</b>	<b>mm</b>		<b>in</b>	<b>mm</b>
OM of Frame	OM of Top Sash	-2 5/32	(54)	x 0.4	-1/32	(1)
Daylight Opening	OM of Top Sash	+ 3 1/4	(83)		+ 3 1/4	(83)
<b>Bottom Sash (Cottage Height)</b>		<b>in</b>	<b>mm</b>		<b>in</b>	<b>mm</b>
OM of Frame	OM of Bottom Sash	-2 5/32	(54)	x 0.6	-3/4	(19)
Daylight Opening	OM of Bottom Sash	+ 3 1/4	(83)		+ 3 1/4	(83)
<b>Top Sash (Oriel Height)</b>		<b>in</b>	<b>mm</b>		<b>in</b>	<b>mm</b>
OM of Frame	OM of Top Sash	-2 5/32	(54)	x 0.6	-1 5/32	(30)
Daylight Opening	OM of Top Sash	+ 3 1/4	(83)		+ 3 1/4	(83)
<b>Bottom Sash (Oriel Height)</b>		<b>in</b>	<b>mm</b>		<b>in</b>	<b>mm</b>
OM of Frame	OM of Bottom Sash	-2 5/32	(54)	x 0.4	+ 3/8	(-9)
Daylight Opening	OM of Bottom Sash	+ 3 1/4	(83)		+ 3 1/4	(83)
<b>Glass</b>		<b>in</b>	<b>mm</b>		<b>in</b>	<b>mm</b>
Daylight Opening	Glass	+ 1 1/16	(27)		+ 1 1/16	(27)
<b>Full Screen</b>		<b>in</b>	<b>mm</b>		<b>in</b>	<b>mm</b>
OM of Frame	OM of Screen	-1 27/32	(47)		-1 17/32	(39)
Daylight Opening	OM of Screen	+ 3 9/16	(90)	x 2	+ 6 3/16	(157)
<b>Half Screen</b>		<b>in</b>	<b>mm</b>		<b>in</b>	<b>mm</b>
OM of Frame	OM of Screen	-1 27/32	(47)	+ 2	-7/32	(6)
Daylight Opening	OM of Screen	+ 3 9/16	(90)		+ 3 21/32	(92)
<b>CottageScreen</b>		<b>in</b>	<b>mm</b>		<b>in</b>	<b>mm</b>
OM of Frame	OM of Screen	-1 27/32	(47)		-1 17/32	(39)
Daylight Opening (S1)	OM of Screen	+ 3 9/16	(90)	+ 0.4	+ 6 23/32	(170)
<b>Oriel Screen</b>		<b>in</b>	<b>mm</b>		<b>in</b>	<b>mm</b>
OM of Frame	OM of Screen	-1 27/32	(47)		-1 17/32	(39)
Daylight Opening (S1)	OM of Screen	+ 3 9/16	(90)	+ 0.6	+ 5 13/16	(148)

**Measurement Conversions: Transom and Picture**

Full Frame Double Hung Transoms					
Unit Measurements		Width		Height	
From	To				
<b>Rough Opening</b>		<b>in</b>	<b>mm</b>	<b>in</b>	<b>mm</b>
OM of Frame	Rough Opening	+ 1	(25)	+ 1/2	(13)
Masonry Opening	Rough Opening	+ 1/2	(13)	+ 1/4	(6)
Masonry Opening w/ BMC	Rough Opening	-2 1/4	(57)	-1 11/16	(43)
Daylight Opening	Rough Opening	+ 6 13/32	(163)	+ 5 7/8	(149)
<b>Frame</b>		<b>in</b>	<b>mm</b>	<b>in</b>	<b>mm</b>
OM of BMC	OM of Frame	-2 3/4	(70)	-2 1/16	(52)
Daylight Opening	OM of Frame	+ 5 13/32	(137)	+ 5 11/32	(136)
<b>Sash</b>		<b>in</b>	<b>mm</b>	<b>in</b>	<b>mm</b>
OM of Frame	OM of Sash	-2 5/32	(54)	-2 3/32	(53)
Daylight Opening	OM of Sash	+ 3 1/4	(83)	+ 3 1/4	(83)
<b>Glass</b>		<b>in</b>	<b>mm</b>	<b>in</b>	<b>mm</b>
Daylight Opening	Glass	+ 1 1/16	(27)	+ 1 1/16	(27)

Full Frame Double Hung Picture					
Unit Measurements		Width		Height	
From	To				
<b>Rough Opening</b>		<b>in</b>	<b>mm</b>	<b>in</b>	<b>mm</b>
OM of Frame	Rough Opening	+ 1	(25)	+ 1/2	(13)
Masonry Opening	Rough Opening	+ 1/2	(13)	+ 1/4	(6)
Masonry Opening w/ BMC	Rough Opening	-2 1/4	(57)	-1 11/16	(43)
Daylight Opening	Rough Opening	+ 6 13/32	(163)	+ 5 7/8	(149)
<b>Frame</b>		<b>in</b>	<b>mm</b>	<b>in</b>	<b>mm</b>
OM of BMC	OM of Frame	-2 3/4	(70)	-2 1/16	(52)
Daylight Opening	OM of Frame	+ 5 13/32	(137)	+ 5 11/32	(136)
<b>Sash</b>		<b>in</b>	<b>mm</b>	<b>in</b>	<b>mm</b>
OM of Frame	OM of Sash	-2 5/32	(54)	-2 3/32	(53)
Daylight Opening	OM of Sash	+ 3 1/4	(83)	+ 3 1/4	(83)
<b>Glass</b>		<b>in</b>	<b>mm</b>	<b>in</b>	<b>mm</b>
Daylight Opening	Glass	+ 1 1/16	(27)	+ 1 1/16	(27)

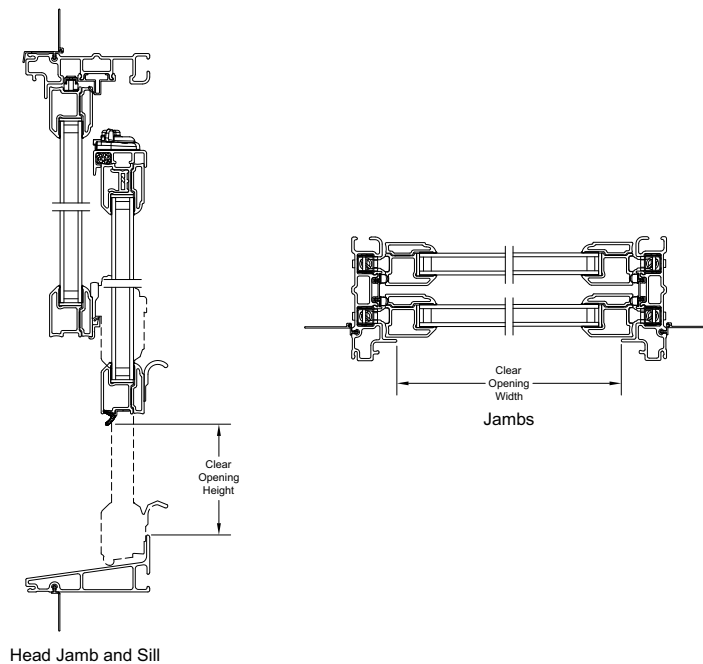
**Measurement Conversions: Egress**

Egress Conversions		
Equal Sash Egress Minimum Opening and Conversions from Frame Size		
Minimum Value for Net Clear Opening	Desired Dimension	Formula
20 in	Egress opening width, in	= NDH frame OM width - 2.894
24 in	Egress opening height, in	= (NDH frame OM height /2) - 5.791
5.7 ft2	Egress opening area, ft2	= ((Egress opening width, in) x (Egress opening height, in)) / 144

Egress Conversions		
Cottage Style Egress Minimum Opening and Conversions from Frame Size		
Minimum Value for Net Clear Opening	Desired Dimension	Formula
20 in	Egress opening width, in	= NDH frame OM width - 2.894
24 in	Egress opening height, in	= (NDH frame OM height x SR) - 5.231
5.7 ft2	Egress opening area, ft2	= ((Egress opening width, in) x (Egress opening height, in)) / 144

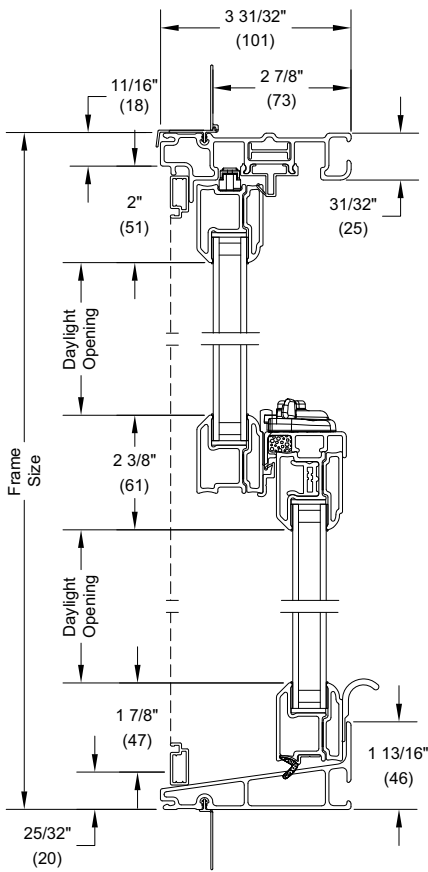
Egress Conversions		
Oriel Style Egress Minimum Opening and Conversions from Frame Size		
Minimum Value for Net Clear Opening	Desired Dimension	Formula
20 in	Egress opening width, in	= NDH frame OM width - 2.894
24 in	Egress opening height, in	= (NDH frame OM height x SR) - 5.425
5.7 ft2	Egress opening area, ft2	= ((Egress opening width, in) x (Egress opening height, in)) / 144

NOTE: SR is the sash ratio of the smallest sash to the glass height (2/5 or 1/3)  
Must meet/exceed all three minimum values to meet egress. Limited travel may affect egress opening height.

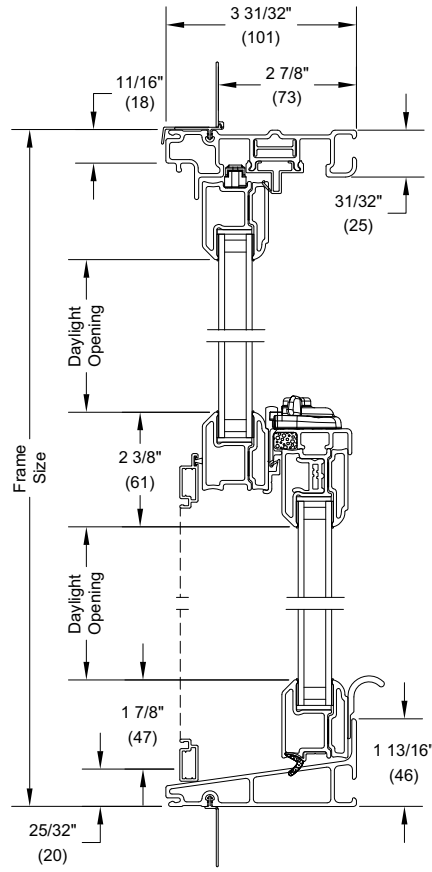


Section Details: Operator

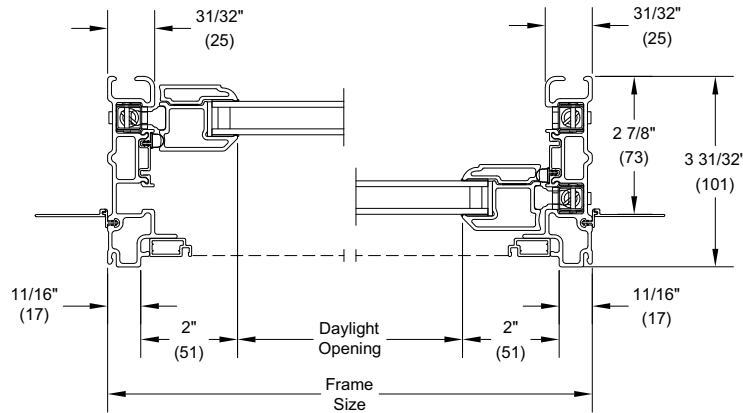
Scale: 3" = 1' 0"



Head Jamb and Sill  
NDH w/ Full Screen



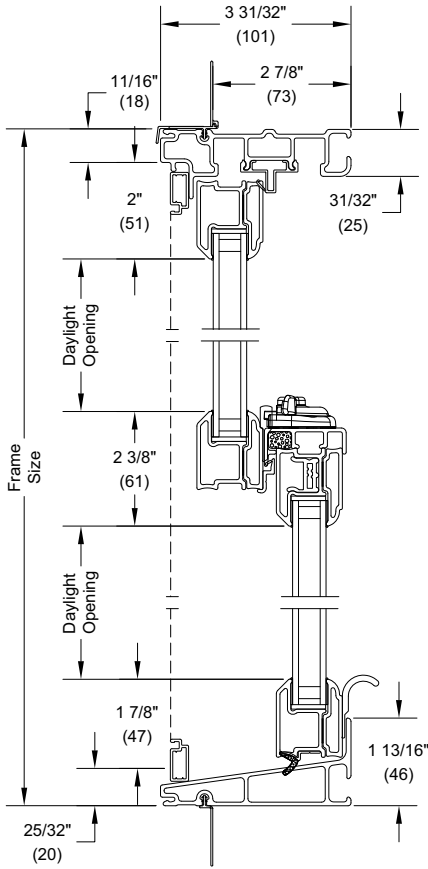
Head Jamb and Sill  
NDH w/ Half Screen



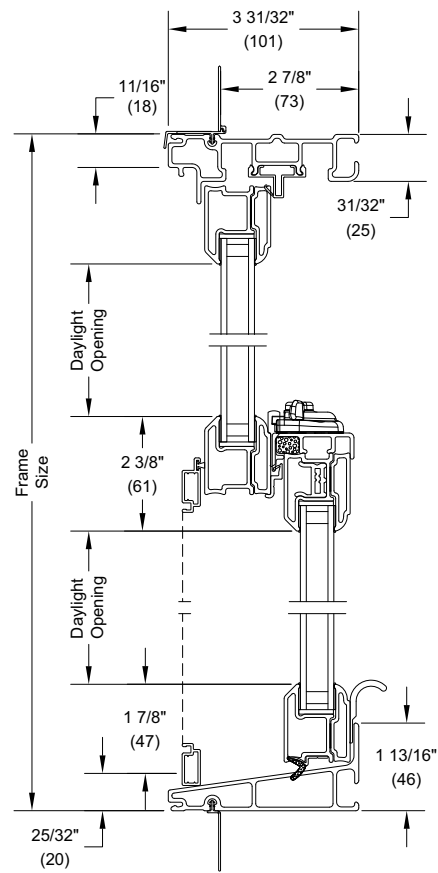
Jamb

Section Details: Fixed Upper Sash

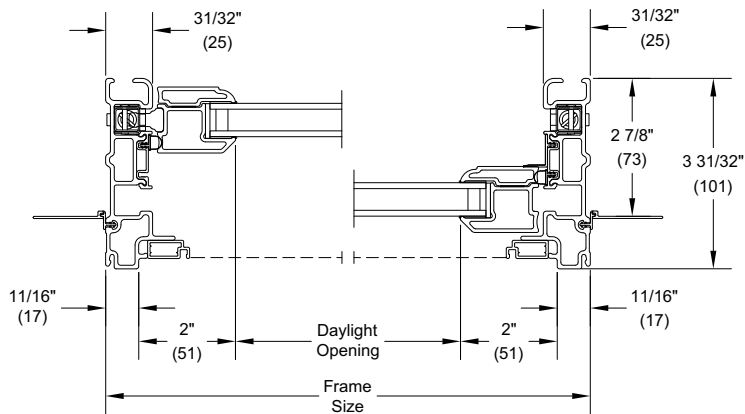
Scale: 3" = 1' 0"



Head Jamb and Sill  
NDH w/ Full Screen



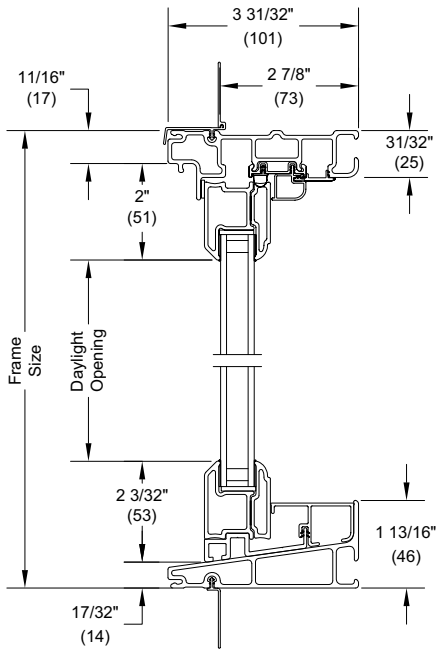
Head Jamb and Sill  
NDH w/ Half Screen



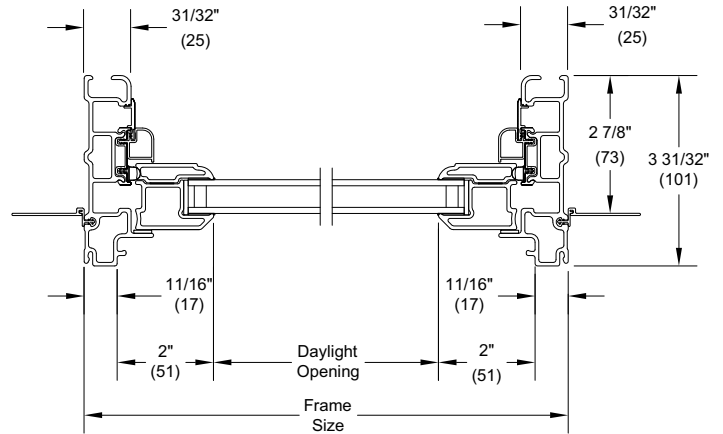
Jambs

Section Details: Picture/Transom

Scale: 3" = 1' 0"



Head Jamb and Sill

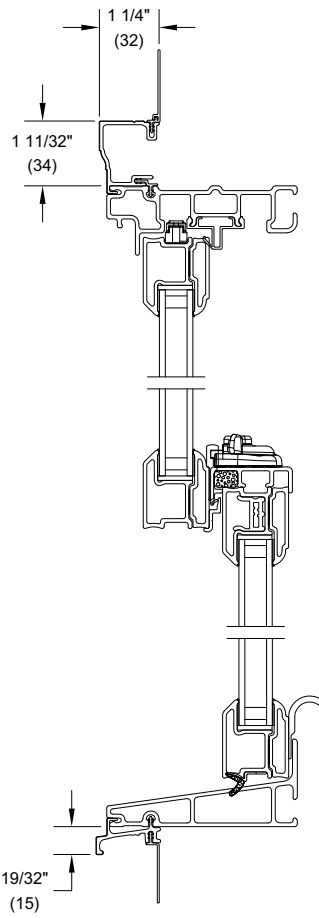


Jamb



Section Details: Casing Options

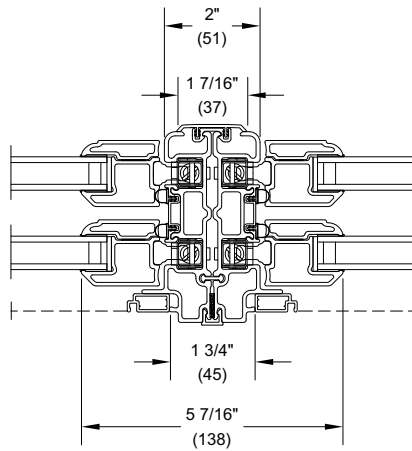
Scale: 3" = 1' 0"



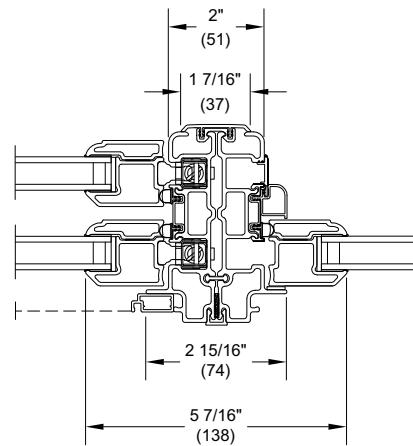
Brick Mould Casing

Section Details: Mullions

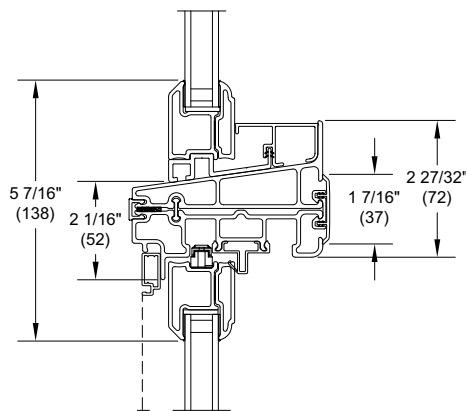
Scale: 3" = 1' 0"



Vertical  
Mullion-Operator/Operator



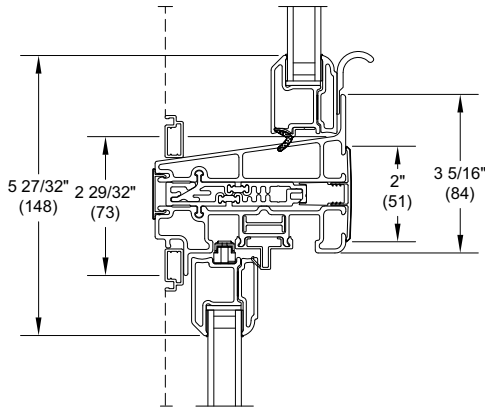
Vertical Mullion-Operator  
/Picture



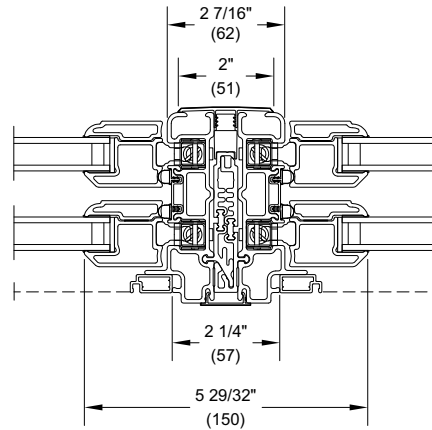
Transom mullion over  
Infinity Double Hung

Section Details: 1/2" Mull Reinforcement

Scale: 3" = 1' 0"



1/2" Mull Reinforcement  
Operator/Operator  
NDH



1/2" Mull Reinforcement  
Operator/Operator  
NDH

Interior Frame Accessories

Scale: 3" = 1' 0"

