# Infinity Insert Casement and Awning

## Unit Features

Infinity Insert Casement: NINCA

Infinity Insert Awning: NINAW

Infinity Insert Casement Picture: NINCP

### Ultrex® Pultruded Fiberglass Frame:

- Frame thickness: 1 5/16" (33)
- Frame depth: 3 1/4" (83)
- 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)
- Operating sash is removable for cleaning
- 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™

### Casement Hardware:

- Lock and keeper:
  - Multi-point locking mechanism that is actuated from a single point of operation. Lock mechanisms are concealed with only the actuator handle and escutcheon being visible to the interior. Keepers are mounted to the interior face of the sash and interlocks within concealed lock when actuated.
- Operator:
  - Concealed hinges with stainless steel tracks
  - Snubber: pulls the sash tight to the frame and provides positive engagement to secure the sash under structural load conditions
  - Dual arm roto-gear operator on units 24 3/8" (619) wide frame size and over
  - Split-arm roto-gear operator used on units less than 24 3/8" (619) wide
- Handle:
  - Die-cast folding crank handle
- Factory Installed Window Opening Control Device (WOCD):
  - Minimum Frame OSM 18 5/32" (461) x 17 3/8" (441)
  - Maximum Frame OSM 40" (1016) x 60" (1524) or 36" (914) x 86" (2184)
  - WOCD locking assembly:
    - Factory installed
    - Die-cast
    - Color: White, Satin Taupe, Sierra
  - WOCD tether assembly: factory installed; glass filled nylon
    - Color: E-Gard color match

### Awning Hardware:

- Lock and keeper:
  - Cam lock and stainless steel keeper system
- Operator:
  - Concealed hinges and steel tracks
  - Factory installed roto-gear operator
- Handle:
  - Die-cast folding crank handle
- Sash Limiter:
  - Factory installed or field applied

### Weather Strip:

- Frame:
  - Extruded foam bulb weather strip that runs around the perimeter of the frame sealing against the interior face of the sash
    - Color: black
- Sash:
  - Extruded thermoplastic bulb that attaches to a kerf around the top, bottom and sides of the sash; sealing against the inner perimeter of the frame
    - Color: beige or black
    - Black is for Bahama Brown and Bronze exterior units

## Unit Features

### Insect Screens:

- Full screen
- Roll formed aluminum frame
- Mitered corner key; injection molded, color matched to screen
- Color: Stone White, Satin Taupe, Sierra, EverWood™
- Standard screen mesh material: charcoal fiberglass
  - Optional screen mesh material: high transparency

### 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, 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
- 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)
- 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):

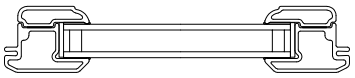
- 23/32" (18) or 1" (25) contoured aluminum bar
- Exterior: color matched to unit exterior
- The exterior GBG color is designed to best match the unit exterior color when used with Low E glass. The use of different types of glazing options may alter the exterior GBG color appearance.
- Interior color: White, Satin Taupe, Sierra, Bronze
- Pattern: equal rectangular, cottage, prairie, check rail

*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.*

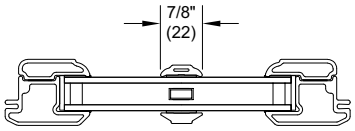
### Head/Seat Board:

- Use with bow and bay assemblies
- Factory installed interior head board; available in bare pine or oak
- Factory installed interior seat board; available in bare pine or oak
- Insulated seat board with white or beige exterior aluminum skin
- Bay cable support
- Bow and bay jamb available from 4 9/16" (116) - 8 9/16" (217)

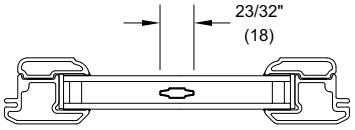
## Lite Options



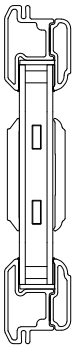
Insulating Glass



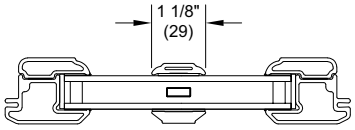

Insulating Glass
7/8" SDL w/ spacer bar



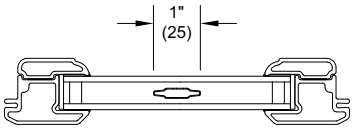

Insulating Glass
23/32" GBG



Insulating Glass
SDL Simulated Rail
w/ spacer bar




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




Insulating Glass
1" GBG

## Minimum and Maximum Guidelines

| Minimum and Maximum Guidelines | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Unit Type | Inside Opening | | | | | | | | Glass Limits | |
| | Min Width | | Min Height | | Max Width | | Max Height | | Max Glass | |
| | in | mm | in | mm | in | mm | in | mm | $ft^2$ | $m^2$ |
| NINCA | 16 5/8 | (422) | 17 5/8 | (448) | 40 3/8 | (1026) | 60 1/4 | (1530) | 13 29/32 | 1.292 |
| | 16 5/8 | (422) | 17 5/8 | (448) | 36 3/8 | (924) | 86 1/4 | (2191) | 18 3/32 | 1.681 |
| NINAWN | 17 7/8 | (454) | 17 5/8 | (448) | 60 3/8 | (1534) | 48 1/4 | (1226) | 17 | 1.579 |
| NINCP/ NINAP | 14 5/8 | (371) | 14 1/2 | (368) | 86 3/8 | (2194) | 86 1/4 | (2191) | 30 | 2.787 |

*NOTE: For Glue Chip, Frost, and Rain, maximum short frame side is 63 1/8".*

*For Reed and Narrow Reed, vertical pattern orientation maximum frame width size 63 1/8".*

*For Reed and Narrow Reed, horizontal pattern orientation maximum sash height 63 1/8".*

*If frame height exceeds 76" or if frame width exceeds 73 1/2", short side dimension of frame cannot exceed 52 1/8".*

*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 Casement | 1.57 | 6 | 40 | R-PG40-C | 36 | (914) | 86 | (2184) |
| Infinity Casement | 1.57 | 6 | 40 | LC-PG40-C | 31 | (787) | 86 | (2184) |
| Infinity Casement | 1.57 | 6 | 40 | LC-PG40-C | 40 | (1016) | 60 | (1524) |
| Infinity Casement | 1.57 | 6 | 40 | LC-PG40-C | 36 | (914) | 72 | (1829) |
| Infinity Casement | 1.57 | 6 | 40 | R-PG40-C | 24 23/64 | (619) | 86 | (2184) |
| Infinity Casement | 1.57 | 6 | 40 | LC-PG40-C | 21 3/8 | (543) | 86 | (2184) |
| Infinity Casement (clear view hinges) | 1.57 | 6 | 40 | LC-PG40-C | 30 23/64 | (771) | 57 | (1448) |
| Infinity Casement (clear view hinges) | 1.57 | 6 | 40 | R-PG40-C | 30 23/64 | (771) | 72 | (1829) |
| Infinity Awning | 1.57 | 6 | 40 | LC-PG40-AP | 60 | (1524) | 48 | (1219) |
| Infinity Casement Picture | 1.57 | 6 | 40 | LC-PG40-FW | 86 | (2184) | 86 | (2184) |

## Bow Minimum and Maximum Guidelines and Projection

| Casement Bow - min/max | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Unit Configuration | | Rough Opening | | | | | | | |
| | | Min Width | | Min Height | | Max Width | | Max Height | |
| | | in | mm | in | mm | in | mm | in | mm |
| 4-Wide | O-P-P-O | 69 5/8 | (1768) | 19 5/16 | (491) | 145 | (3683) | 73 15/16 | (1878) |
| 5-Wide | O-P-P-P-O | 85 1/4 | (2165) | 19 5/16 | (491) | 145 | (3683) | 73 15/16 | (1878) |
| 6-Wide | O-P-P-P-P-O | 100 1/8 | (2543) | 19 5/16 | (491) | 145 | (3683) | 73 15/16 | (1878) |

| Window Size and Projection Chart | | | | | |
|---|---|---|---|---|---|
| 4-Wide (O-P-P-O) | | | | | |
| RO Width | | Window | | Projection | |
| in | mm | in | mm | in | mm |
| 70 | (1778) | 16 11/16 | (424) | 7 5/16 | (186) |
| 75 | (1905) | 18 | (457) | 7 13/16 | (198) |
| 80 | (2032) | 19 1/4 | (489) | 8 3/8 | (213) |
| 85 | (2159) | 20 9/16 | (522) | 8 7/8 | (225) |
| 90 | (2286) | 21 7/8 | (556) | 9 7/16 | (240) |
| 95 | (2413) | 23 1/8 | (587) | 9 15/16 | (252) |
| 100 | (2540) | 24 7/16 | (621) | 10 1/2 | (267) |
| 105 | (2667) | 25 11/16 | (652) | 11 | (279) |
| 110 | (2794) | 27 | (686) | 11 9/16 | (294) |
| 115 | (2921) | 28 1/4 | (718) | 12 1/16 | (306) |
| 120 | (3048) | 29 9/16 | (751) | 12 5/8 | (321) |
| 125 | (3175) | 30 7/8 | (784) | 13 1/8 | (333) |
| 130 | (3302) | 32 1/8 | (816) | 13 11/16 | (348) |
| 135 | (3429) | 33 7/16 | (849) | 14 3/16 | (360) |
| 140 | (3556) | 34 11/16 | (881) | 14 3/4 | (375) |
| 144 | (3658) | 35 3/4 | (908) | 15 1/8 | (384) |

## Bow Minimum and Maximum Guidelines and Projection

| Window Size and Projection Chart | | | | | |
|---|---|---|---|---|---|
| 5-Wide (O-P-P-P-O) | | | | | |
| RO Width | | Window | | Projection | |
| in | mm | in | mm | in | mm |
| 90 | (65) | 17 5/8 | (448) | 11 3/8 | (279) |
| 95 | (70) | 18 5/8 | (473) | 12 | (294) |
| 100 | (75) | 19 11/16 | (500) | 12 5/8 | (309) |
| 105 | (80) | 20 3/4 | (527) | 13 1/4 | (325) |
| 110 | (85) | 21 3/4 | (552) | 13 15/16 | (341) |
| 115 | (90) | 22 13/16 | (579) | 14 9/16 | (357) |
| 120 | (95) | 23 7/8 | (606) | 15 13/16 | (387) |
| 125 | (100) | 24 15/16 | (633) | 15 7/8 | (389) |
| 130 | (105) | 25 15/16 | (659) | 16 1/2 | (404) |
| 135 | (110) | 27 | (686) | 17 1/8 | (420) |
| 140 | (115) | 28 1/16 | (713) | 17 3/4 | (435) |
| 144 | (119) | 28 7/8 | (733) | 18 5/16 | (449) |

| Window Size and Projection Chart | | | | | |
|---|---|---|---|---|---|
| 6-Wide (O-P-P-P-P-O) | | | | | |
| RO Width | | Window | | Projection | |
| in | mm | in | mm | in | mm |
| 100 | (2540) | 16 9/16 | (421) | 15 15/16 | (405) |
| 105 | (2667) | 17 1/2 | (445) | 16 3/4 | (425) |
| 110 | (2794) | 18 3/8 | (467) | 17 9/16 | (446) |
| 115 | (2921) | 19 1/4 | (489) | 18 3/8 | (467) |
| 120 | (3048) | 20 1/8 | (511) | 19 3/16 | (487) |
| 125 | (3175) | 21 1/16 | (535) | 20 | (508) |
| 130 | (3302) | 21 15/16 | (557) | 20 13/16 | (529) |
| 135 | (3429) | 22 13/16 | (579) | 21 5/8 | (549) |
| 140 | (3556) | 23 11/16 | (602) | 22 7/16 | (570) |
| 144 | (3658) | 24 7/16 | (621) | 23 1/8 | (587) |

## 30° Bay Minimum and Maximum Guidelines and Projection

| 30 degree Bays - min/max | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30 Degree Bay | | Rough Opening | | | | | | | |
| | | Min Width | | Min Height | | Max Width | | Max Height | |
| | | in | mm | in | mm | in | mm | in | mm |
| 1:2:1 Ratio | X-O-X | 66 7/8 | (1699) | 19 5/16 | (491) | 140 9/16 | (3570) | 73 15/16 | (1878) |
| | X-X-X | 66 7/8 | (1699) | 19 5/16 | (491) | 73 3/8 | (1864) | 73 15/16 | (1878) |
| 1:1:1 Ratio | X-O-X | 50 5/8 | (1286) | 19 5/16 | (491) | 104 9/16 | (2656) | 73 15/16 | (1878) |
| | X-X-X | 50 11/16 | (1287) | 19 5/16 | (491) | 104 9/16 | (2656) | 73 15/16 | (1878) |

| Window Size and Projection Chart | | | | | | | |
|---|---|---|---|---|---|---|---|
| 30 Degree Bay - 1:2:1 Ratio | | | | | | | |
| RO Width | | Flanker Inside Opening | | Center Inside Opening | | Projection | |
| in | mm | in | mm | in | mm | in | mm |
| 70 | (1778) | 17 7/16 | (443) | 34 1/2 | (876) | 9 5/16 | (237) |
| 75 | (1905) | 18 3/4 | (476) | 37 3/16 | (945) | 10 | (254) |
| 80 | (2032) | 20 1/8 | (511) | 39 7/8 | (1013) | 10 5/8 | (270) |
| 85 | (2159) | 21 7/16 | (545) | 42 9/16 | (1081) | 11 5/16 | (287) |
| 90 | (2286) | 22 13/16 | (579) | 45 1/4 | (1149) | 12 | (305) |
| 95 | (2413) | 24 1/8 | (613) | 47 15/16 | (1218) | 12 5/8 | (321) |
| 100 | (2540) | 25 1/2 | (648) | 50 5/8 | (1286) | 13 5/16 | (338) |
| 105 | (2667) | 26 13/16 | (681) | 53 5/16 | (1354) | 14 | (356) |
| 110 | (2794) | 28 1/8 | (714) | 55 15/16 | (1421) | 14 11/16 | (373) |
| 115 | (2921) | 29 1/2 | (749) | 58 5/8 | (1489) | 15 5/16 | (389) |
| 120 | (3048) | 30 13/16 | (783) | 61 5/16 | (1557) | 16 | (406) |
| 125 | (3175) | 32 3/16 | (818) | 64 | (1626) | 16 11/16 | (424) |
| 130 | (3302) | 33 1/2 | (851) | 66 11/16 | (1694) | 17 3/8 | (441) |
| 135 | (3429) | 34 7/8 | (886) | 69 3/8 | (1762) | 18 | (457) |
| 140 | (3556) | 36 3/16 | (919) | 72 1/16 | (1830) | 18 11/16 | (475) |

## 30° Bay Minimum and Maximum Guidelines and Projection

| Window Size and Projection Chart | | | | | | | |
|---|---|---|---|---|---|---|---|
| 30 Degree Bay - 1:1:1 Ratio | | | | | | | |
| RO Width | | Flanker Inside Opening | | Center Inside Opening | | Projection | |
| in | mm | in | mm | in | mm | in | mm |
| 55 | (1397) | 18 3/16 | (462) | 18 3/16 | (462) | 9 11/16 | (246) |
| 60 | (1524) | 20 1/16 | (510) | 20 1/16 | (510) | 10 5/8 | (270) |
| 65 | (1651) | 21 7/8 | (556) | 21 7/8 | (556) | 11 1/2 | (292) |
| 70 | (1778) | 23 11/16 | (602) | 23 11/16 | (602) | 12 7/16 | (316) |
| 75 | (1905) | 25 1/2 | (648) | 25 1/2 | (648) | 13 3/8 | (340) |
| 80 | (2032) | 27 3/8 | (695) | 27 3/8 | (695) | 14 1/4 | (362) |
| 85 | (2159) | 29 3/16 | (741) | 29 3/16 | (741) | 15 3/16 | (386) |
| 90 | (2286) | 31 | (787) | 31 | (787) | 16 1/16 | (408) |
| 95 | (2413) | 32 13/16 | (833) | 32 13/16 | (833) | 17 | (432) |
| 100 | (2540) | 34 11/16 | (881) | 34 11/16 | (881) | 17 15/16 | (456) |
| 105 | (2667) | 36 1/2 | (927) | 36 1/2 | (927) | 18 13/16 | (478) |
| 110 | (2794) | 38 5/16 | (973) | 38 5/16 | (973) | 19 3/4 | (502) |
| 115 | (2921) | 40 3/16 | (1021) | 40 3/16 | (1021) | 20 11/16 | (525) |
| 120 | (3048) | 42 | (1067) | 42 | (1067) | 21 9/16 | (548) |
| 125 | (3175) | 43 13/16 | (1113) | 43 13/16 | (1113) | 22 1/2 | (572) |
| 130 | (3302) | 45 5/8 | (1159) | 45 5/8 | (1159) | 23 7/16 | (595) |
| 135 | (3429) | 47 1/2 | (1207) | 47 1/2 | (1207) | 24 5/16 | (618) |

## 45° Bay Minimum and Maximum Guidelines and Projection

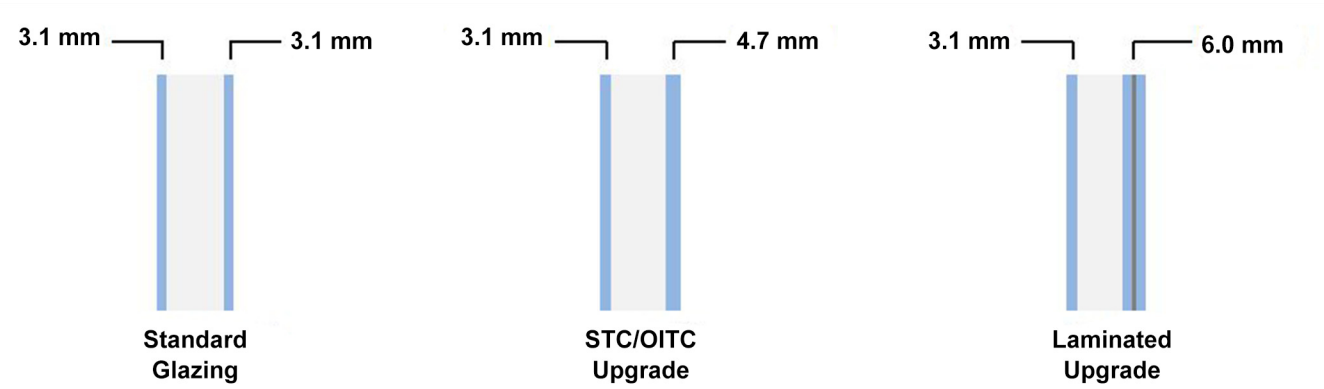
| 45 degree Bays - min/max | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 45 Degree Bay | | Rough Opening | | | | | | | |
| | | Min Width | | Min Height | | Max Width | | Max Height | |
| | | in | mm | in | mm | in | mm | in | mm |
| 1:2:1 Ratio | X-O-X | 62 5/8 | (1591) | 19 5/16 | (491) | 119 1/8 | (3026) | 87 15/16 | (2234) |
| | X-X-X | 62 5/8 | (1591) | 19 5/16 | (491) | 75 3/8 | (1915) | 87 15/16 | (2234) |
| 1:1:1 Ratio | X-O-X | 46 3/8 | (1178) | 19 5/16 | (491) | 86 5/16 | (2192) | 87 15/16 | (2234) |
| | X-X-X | 46 3/8 | (1178) | 19 5/16 | (491) | 86 5/16 | (2192) | 87 15/16 | (2234) |

| Window Size and Projection Chart | | | | | | | |
|---|---|---|---|---|---|---|---|
| 45 Degree Bay - 1:2:1 Ratio | | | | | | | |
| RO Width | | Flanker Inside Opening | | Center Inside Opening | | Projection | |
| in | mm | in | mm | in | mm | in | mm |
| 65 | (1651) | 17 5/16 | (440) | 34 1/4 | (870) | 13 1/4 | (337) |
| 70 | (1778) | 18 3/4 | (476) | 37 3/16 | (945) | 14 5/16 | (364) |
| 75 | (1905) | 20 1/4 | (514) | 40 1/8 | (1019) | 15 15/16 | (405) |
| 80 | (2032) | 21 11/16 | (551) | 43 1/16 | (1094) | 16 3/8 | (416) |
| 85 | (2159) | 23 3/16 | (589) | 45 15/16 | (1167) | 17 3/8 | (441) |
| 90 | (2286) | 24 5/8 | (625) | 48 7/8 | (1241) | 18 7/16 | (468) |
| 95 | (2413) | 26 1/16 | (662) | 51 13/16 | (1316) | 19 1/2 | (495) |
| 100 | (2540) | 27 9/16 | (700) | 54 3/4 | (1391) | 20 1/2 | (521) |
| 105 | (2667) | 29 | (737) | 57 11/16 | (1465) | 21 9/16 | (548) |
| 110 | (2794) | 30 1/2 | (775) | 60 5/8 | (1540) | 22 9/16 | (573) |
| 115 | (2921) | 31 15/16 | (811) | 63 9/16 | (1614) | 23 5/8 | (600) |

| Window Size and Projection Chart | | | | | | | |
|---|---|---|---|---|---|---|---|
| 45 Degree Bay - 1:1:1 Ratio | | | | | | | |
| RO Width | | Flanker Inside Opening | | Center Inside Opening | | Projection | |
| in | mm | in | mm | in | mm | in | mm |
| 50 | (1270) | 18 1/8 | (460) | 18 1/8 | (460) | 13 13/16 | (351) |
| 55 | (1397) | 20 3/16 | (513) | 20 3/16 | (513) | 15 5/16 | (389) |
| 60 | (1524) | 22 1/4 | (565) | 22 1/4 | (565) | 16 3/4 | (425) |
| 65 | (1651) | 24 5/16 | (618) | 24 5/16 | (618) | 18 1/4 | (464) |
| 70 | (1778) | 26 3/8 | (670) | 26 3/8 | (670) | 19 11/16 | (500) |
| 75 | (1905) | 27 7/16 | (697) | 28 7/16 | (722) | 21 1/8 | (537) |
| 80 | (2032) | 30 9/16 | (776) | 30 9/16 | (776) | 22 5/8 | (575) |
| 85 | (2159) | 32 5/8 | (829) | 32 5/8 | (829) | 24 1/16 | (611) |

## STC/OITC Glass Values

STC/OITC ratings are shown in the chart below. Infinity's STC/OITC values are provided by third party ASTM testing and reports. The STC/OITC Upgrade option incorporates variable glass thickness or laminate (L) to increase STC/OITC performance and improve sound abatement.



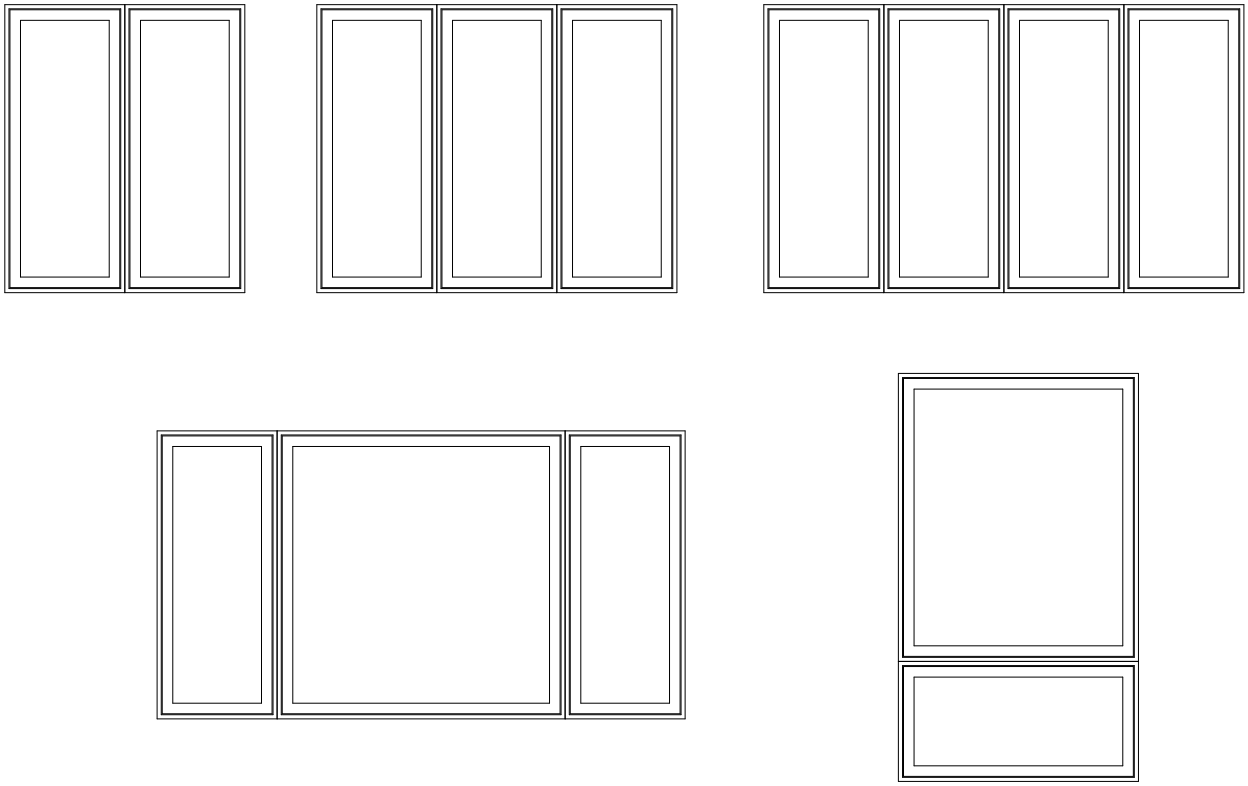

| Product Type | Exterior Glazing | Airspace | Interior Glazing | STC | OITC |
|---|---|---|---|---|---|
| Insert Casement | 1/8" (3.1) | 15/32" (11.5) | 1/8" (3.1) | 27 | 24 |
| | 1/8" (3.1) | 15/32" (11.5) | 3/16" (4.7) | 33 | 28 |
| | 1/8" (3.1) | 5/16" (8.0) | 1/4" (6.0L) | 32 | 26 |
| Insert Casement Picture | 1/8" (3.1) | 15/32" (11.5) | 1/8" (3.1) | 27 | 23 |
| | 1/8" (3.1) | 15/32" (11.5) | 3/16" (4.7) | 32 | 28 |
| | 1/8" (3.1) | 5/16" (8.0) | 1/4" (6.0L) | 33 | 28 |
| Insert Awning | 1/8" (3.1) | 15/32" (11.5) | 1/8" (3.1) | 29 | 25 |
| | 1/8" (3.1) | 15/32" (11.5) | 3/16" (4.7) | 34 | 28 |
| | 1/8" (3.1) | 5/16" (8.0) | 1/4" (6.0L) | 33 | 29 |

## Mulling Guidelines

### Factory Mulled Insert Casement/Awning Assemblies

- Assemblies up to 4 units wide by 1 unit high
  - MAXIMUM INSIDE OPENING not to exceed 112 3/8" (2854) x 85 1/4” (2191)
- Assemblies up to 1 unit wide by 2 units high
  - MAXIMUM INSIDE OPENING not to exceed 72 3/8" (1838) x 95 3/4” (2508)

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



### Inside Opening Assemblies

- WIDTH:
  - Frame Width = Unit Inside Opening width MINUS 3/8"
  - Total Inside Opening Width = ADD all frame widths PLUS 3/8" PLUS (1/16" x number of mulls)
- HEIGHT:
  - Frame Height = Single unit Inside Opening height MINUS 1/4"
  - Total Inside Opening Height = ADD all frame heights PLUS 1/4" PLUS (1/16" x number of mulls)

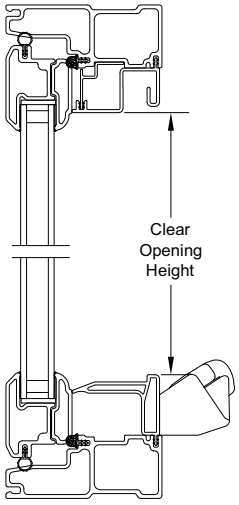
## Measurement Conversions: Operable/Stationary Units and Pictures/Transoms

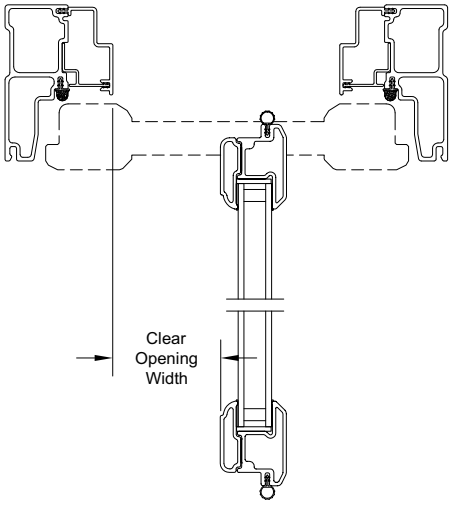
| Unit Measurement - Operable Casement and Awnings | | Width | | Height | |
|---|---|---|---|---|---|
| **From** | **To** | | | | |
| **Rough Opening** | | **in** | **mm** | **in** | **mm** |
| OM of Frame | Inside Opening | + 3/8 | (10) | + 1/4 | (6) |
| **Frame** | | **in** | **mm** | **in** | **mm** |
| Daylight Opening | OM of Frame | + 5 7/32 | (132) | + 5 7/32 | (132) |
| **Sash** | | **in** | **mm** | **in** | **mm** |
| OM of Frame | OM of Sash | -1 11/16 | (43) | -1 11/16 | (43) |
| Daylight Opening | OM of Sash | + 3 17/32 | (90) | + 3 17/32 | (90) |
| **Glass** | | **in** | **mm** | **in** | **mm** |
| Daylight Opening | Glass | + 1 1/16 | (27) | + 1 1/16 | (27) |
| **Screen** | | **in** | **mm** | **in** | **mm** |
| OM of Frame | OM of Screen, Non-EverWood | -3 7/8 | (98) | -4 5/16 | (109) |
| OM of Frame | OM of Screen, EverWood | -3 29/32 | (99) | -4 5/16 | (109) |
| Daylight Opening | OM of Screen, Non-EverWood | + 1 11/32 | (34) | + 29/32 | (23) |
| Daylight Opening | OM of Screen, EverWood | + 1 5/16 | (33) | + 29/32 | (23) |

| Unit Measurement - Transom and Pictures | | Width | | Height | |
|---|---|---|---|---|---|
| **From** | **To** | | | | |
| **Inside Opening** | | **in** | **mm** | **in** | **mm** |
| OM of Frame | Inside Opening | + 3/8 | (10) | + 1/4 | (6) |
| **Frame** | | **in** | **mm** | **in** | **mm** |
| Daylight Opening | OM of Frame | + 5 7/32 | (132) | + 5 7/32 | (132) |
| **Sash** | | **in** | **mm** | **in** | **mm** |
| OM of Frame | OM of Sash | -1 11/16 | (43) | -1 11/16 | (43) |
| Daylight Opening | OM of Sash | + 3 17/32 | (90) | + 3 17/32 | (90) |
| **Glass** | | **in** | **mm** | **in** | **mm** |
| Daylight Opening | Glass | + 1 1/16 | (27) | + 1 1/16 | (27) |

## Measurement Conversions: Egress - Easy Wash™

| Egress Conversions | | |
|---|---|---|
| **Easy Wash™ Egress Minimum Opening and Conversions from Frame Size** | | |
| **Minimum Value for Net Clear Opening** | **Desired Dimension** | **Formula** |
| 20 in | Egress opening width, in | = NINCA frame OM width - 10.352 |
| 24 in | Egress opening height, in | = NINCA frame OM height - 4.816 |
| 5.7 ft2 | Egress opening area, ft2 | = ((Egress opening width, in) x (Egress opening height, in)) / 144 |

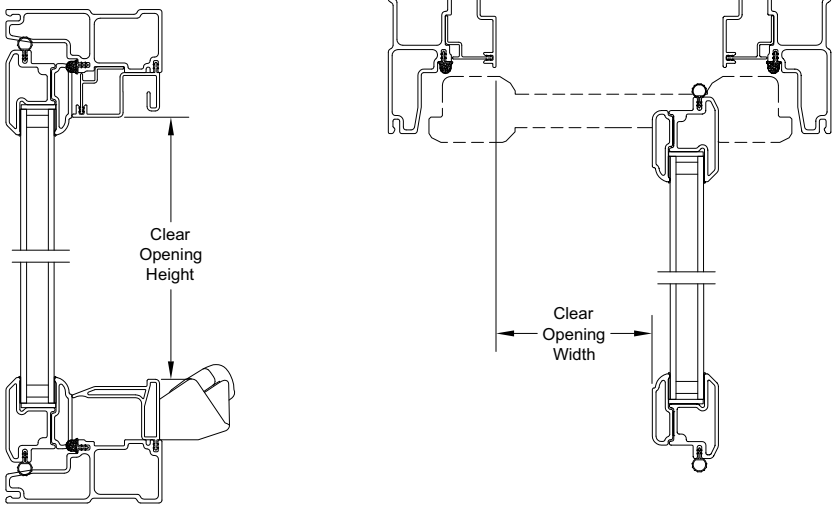



Easy Wash™ Hinge

## Measurement Conversions: Egress - Clear View™

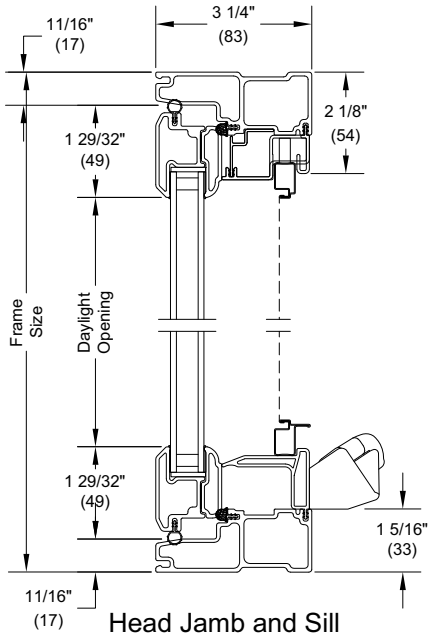
| Egress Conversions | | |
|---|---|---|
| **Clear View™ Egress Minimum Opening and Conversions from Frame Size** | | |
| **Minimum Value for Net Clear Opening** | **Desired Dimension** | **Formula** |
| 20 in | Egress opening width, in | = NINCA frame OM width - 5.967 |
| 24 in | Egress opening height, in | = NINCA frame OM height - 4.816 |
| 5.7 ft2 | Egress opening area, ft2 | = ((Egress opening width, in) x (Egress opening height, in)) / 144 |



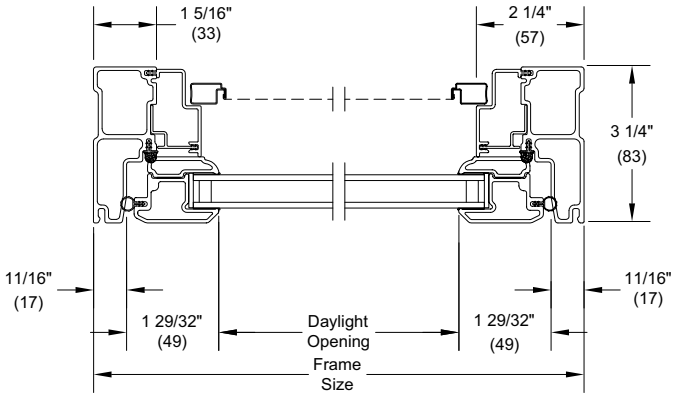

Clear View™ Hinge

## Section Details: Operating

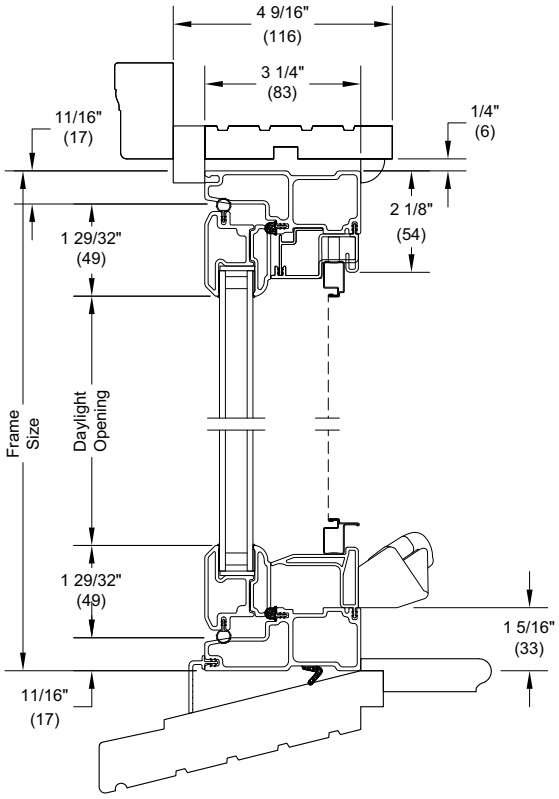
Scale: 3" = 1' 0"



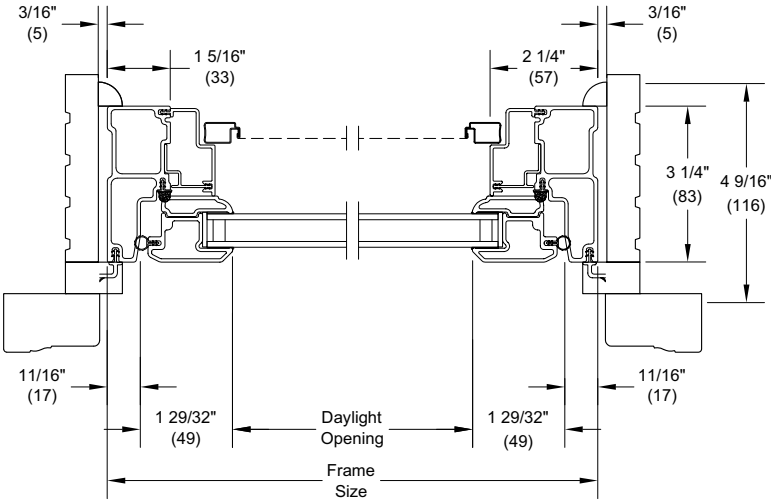

Head Jamb and Sill




Jambs



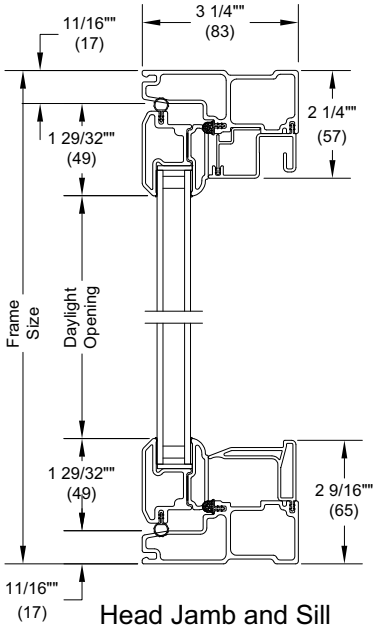

Head Jamb and Sill



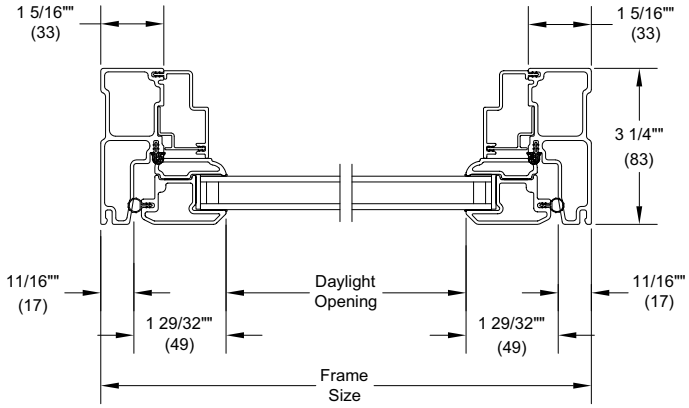

Jambs

## Section Details: Transom/Picture

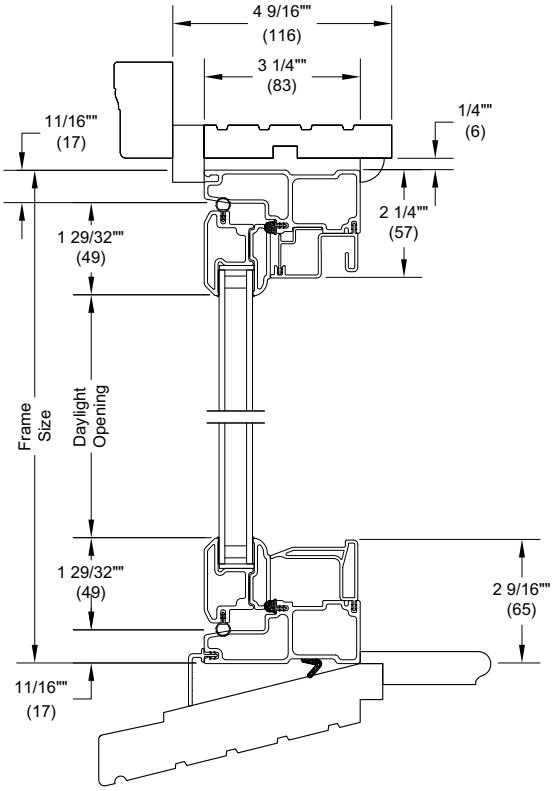
Scale: 3" = 1' 0"



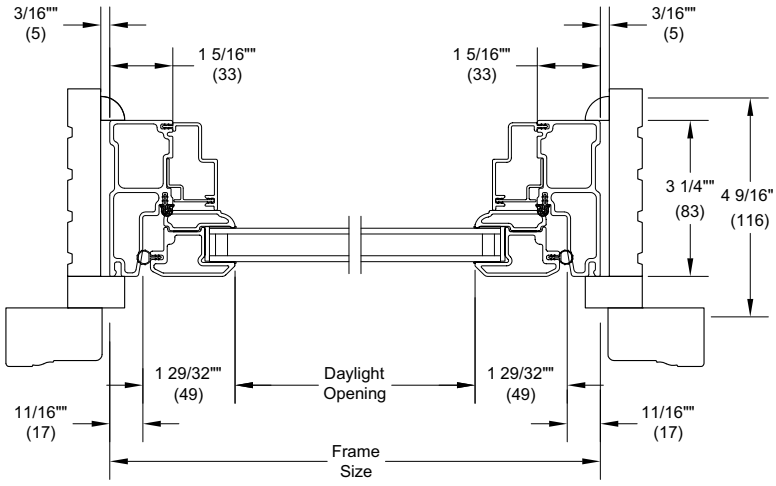

Head Jamb and Sill




Jambs



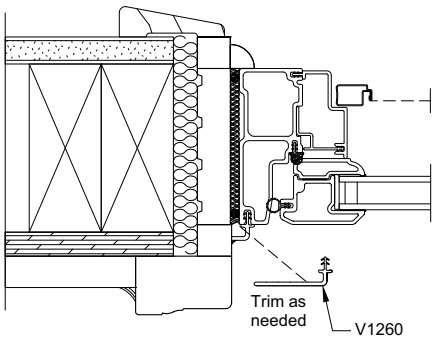

Head Jamb and Sill



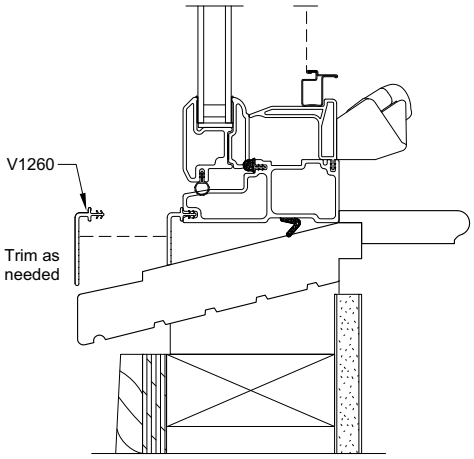

Jambs

## Section Details: Frame Expander and Panning Application

Scale: 3" = 1' 0"



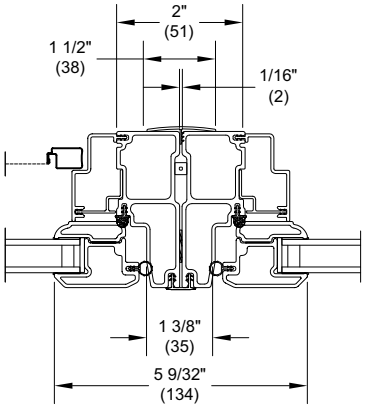

Jamb-Frame Expander
V1260



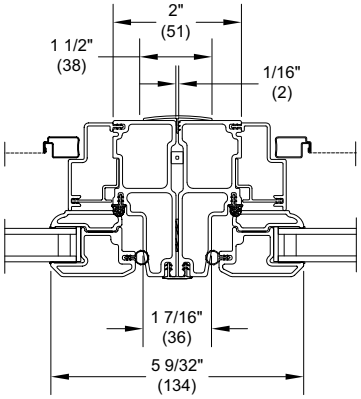

Sill-Frame Expander
V1260

## Section Details: Mullions

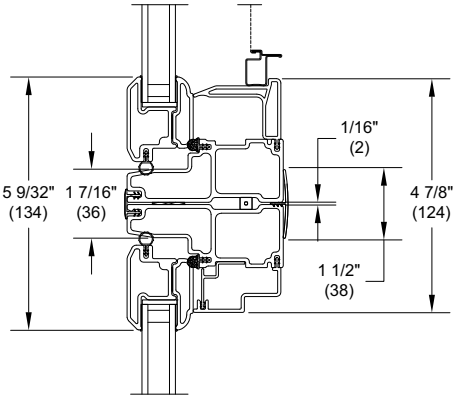
Scale: 3" = 1' 0"




Vertical Mullion-Operator/Picture



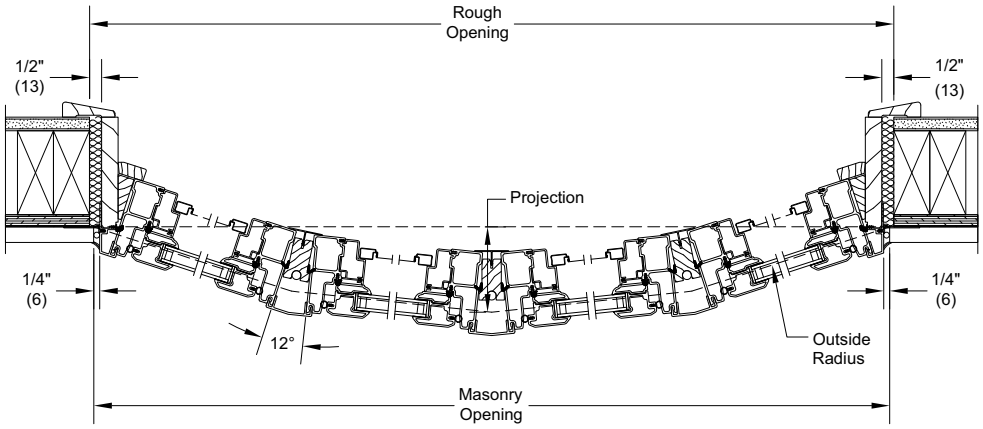

Vertical Mullion-Operator/Operator




Horizontal Mullion-Operator/Picture

## Section Details: Bow

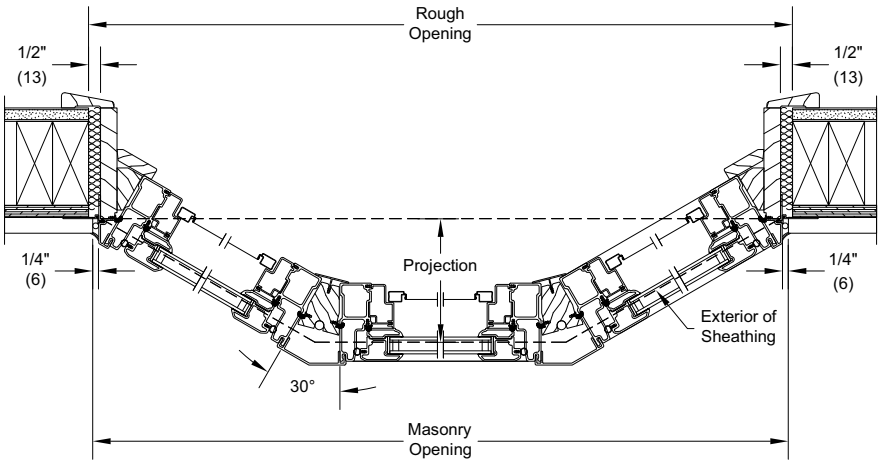
Scale: 3" = 1' 0"



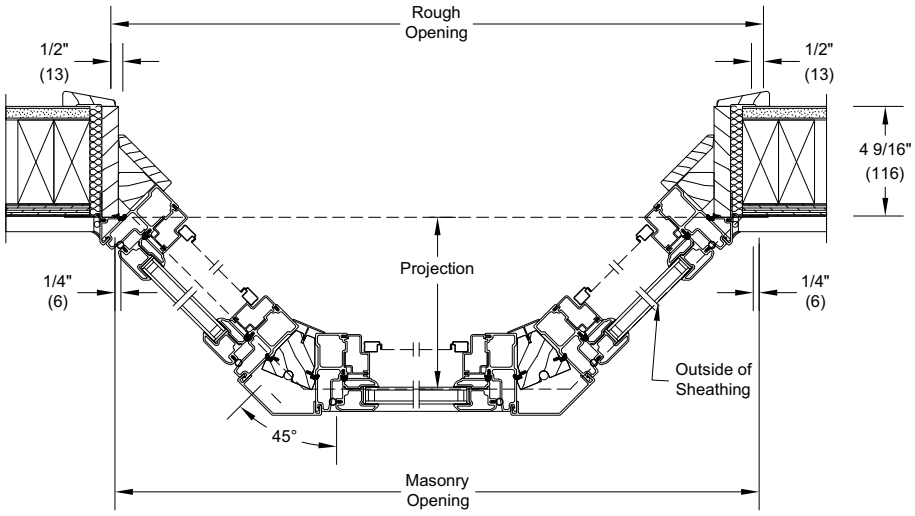
## Section Details: 30° and 45° Bay Unit/Projection

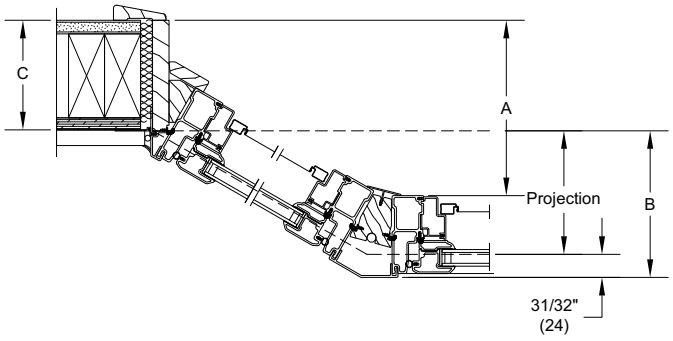
Scale: 3" = 1' 0"

**30° Bay**




**45° Bay**




NINCA Bay
A= Projection 2 7/16 + Jamb Depth

## Section Details: Vertical Bay

Scale: 3" = 1' 0"