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# SERIES 5700 SINGLE HUNG

## Features:

- Removable bottom sash
- Industry leading .01 cfm/ft. air infiltration performance
- 1 1/4" Nail-fin setback for brick veneer construction and select stucco applications
- Sweep lock helps provide a weather-tight seal and added security
- Versatile half screen\* installs easily from inside
- Sloped sill reduces air infiltration and accommodates easy water run-off
- Built-in accessory channels accommodate multiple installation options
- Block and Tackle Balance System for ease of operation
- Limited lifetime warranty provides reassuring peace of mind
- Pre-punched integral nail-fin targets proper nail location for quick, easy installation
- Modular sized so that rough opening widths for multiple units are easy to calculate:  
 5700 Single=35.5"  
 5700 Twin=71.5"  
 5700 Triple=107.5"
- DP Ratings:  
 R50 (window size tested 36" x 96")  
 R35 (window size tested 44" x 96")  
 R25 (window size tested 48" x 96")
- Jamb depth: 2.625"

## Custom Options:

- Low-E Glass.
- Low-E Glass with Argon Gas.
- Ultra Low-E Glass with Argon Gas.
- 5/8" or 3/4" flat, 5/8" or 1" contoured, 5/8" contoured valance grids available.
- Factory mulling of twins, triples and architectural shapes.
- Custom sizes available.
- Window Opening Control Device (WOCD) for fall prevention (field applied).
- Paintable or stainable wood jamb extensions (4 9/16" and 6 9/16").

## Materials:

- Frame and sash are maintenance free, color stabilized solid vinyl (PVC).
- The screen is comprised of rolled form aluminum frame and fiberglass mesh.
- Glazing method: Glazing tape.

## Structural Performance

| SERIES/MODEL  | TEST SIZE | AIR (cfm/ft <sup>2</sup> ) | DESIGN PRESSURE |
|---------------|-----------|----------------------------|-----------------|
| 5700 SH       | 36 X 96   | 0.1                        | H-LC50          |
| 5700 CHS SHTW | 84 X 84   | 0.02                       | H-LC35          |
| 5700 CHS SHTR | 108 X 84  | 0.17                       | H-LC40          |

## Thermal Performance

| GLASS/GRID                   | U-Value | SHGC |
|------------------------------|---------|------|
| SS Clear Glass No Grid       | 0.49    | 0.66 |
| DS Clear Glass No Grid       | 0.49    | 0.64 |
| SS Low-E Glass No Grid       | 0.34    | 0.31 |
| DS Low-E Glass No Grid       | 0.34    | 0.31 |
| SS Low-E/Argon Glass No Grid | 0.31    | 0.31 |
| DS Low-E/Argon Glass No Grid | 0.30    | 0.31 |
| SS Ultra Low-E No Grid       | 0.34    | 0.23 |
| DS Ultra Low-E No Grid       | 0.34    | 0.23 |
| SS Ultra Low-E/Argon No Grid | 0.30    | 0.23 |
| DS Ultra Low-E/Argon No Grid | 0.30    | 0.23 |

| GLASS/GRID                     | U-Value | SHGC |
|--------------------------------|---------|------|
| SS Clear Glass with Grid       | 0.49    | 0.59 |
| DS Clear Glass with Grid       | 0.49    | 0.58 |
| SS Low-E Glass with Grid       | 0.34    | 0.28 |
| DS Low-E Glass with Grid       | 0.34    | 0.28 |
| SS Low-E/Argon Glass with Grid | 0.31    | 0.28 |
| DS Low-E/Argon Glass with Grid | 0.30    | 0.28 |
| SS Ultra Low-E with Grid       | 0.34    | 0.21 |
| DS Ultra Low-E with Grid       | 0.34    | 0.21 |
| SS Ultra Low-E/Argon with Grid | 0.30    | 0.21 |
| DS Ultra Low-E/Argon with Grid | 0.30    | 0.21 |

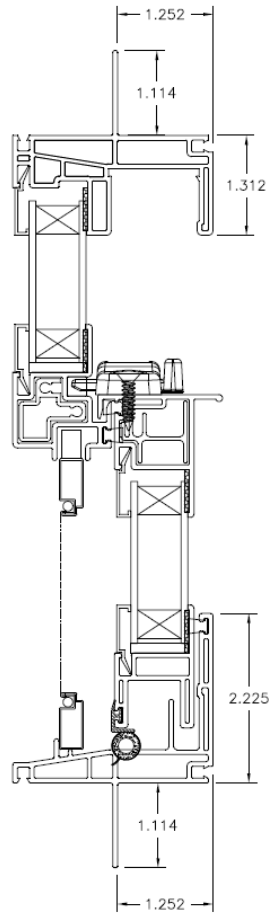
# SERIES 5700 SINGLE HUNG

| SERIES                           | 5700 SH                |
|----------------------------------|------------------------|
| VINYL WALL THICKNESS             | 0.062"                 |
| GLASS THICKNESS                  | 0.750"                 |
| JAMB THICKNESS                   | 2.625"                 |
| FRAME WIDTH                      | 1.3125"                |
| NAILING FIN LENGTH               | 1.125"                 |
| NAIL FIN SETBACK                 | 1.375"                 |
| EGRESS WIDTH                     | (WW) - 2.625"          |
| EGRESS HEIGHT (WITH SASH)        | (WH/2) - 4.75"         |
| SCREEN WIDTH                     | (WW) - 1.4375"         |
| SCREEN HEIGHT                    | (WH/2) - .4375"        |
| <b>OPTIONS GLASS:</b>            |                        |
| CLEAR (STANDARD)                 | •                      |
| LOW-E ARGON                      | •                      |
| ULTRA LOW-E WITH ARGON           | •                      |
| OBSCURE                          | •                      |
| TEMPERED                         | •                      |
| DOUBLE STRENGTH                  | •                      |
| TINTED (GRAY AND BRONZE)         | •                      |
| <b>OPTIONS GAS:</b>              |                        |
| ARGON                            | •                      |
| <b>AVAILABLE SPECIAL SHAPES:</b> |                        |
| FULL ROUNDS                      | QUARTER ROUNDS         |
| HALF ROUNDS                      | ELLIPTICALS            |
| OCTAGONS                         | PENTAGONS              |
| TRAPEZOIDS                       | TRIANGLES              |
| HALF EYEBROWS                    | EYEBROWS               |
| COLONIAL ARCHES                  | COLONIAL FLANKERS      |
| OVALS                            | COLONIAL ARCH FLANKERS |
| OPERABLE EYEBROWS                | OPERABLE HALF EYEBROWS |
| <b>COLOR:</b>                    |                        |
| WHITE                            | •                      |
| ALMOND                           | •                      |

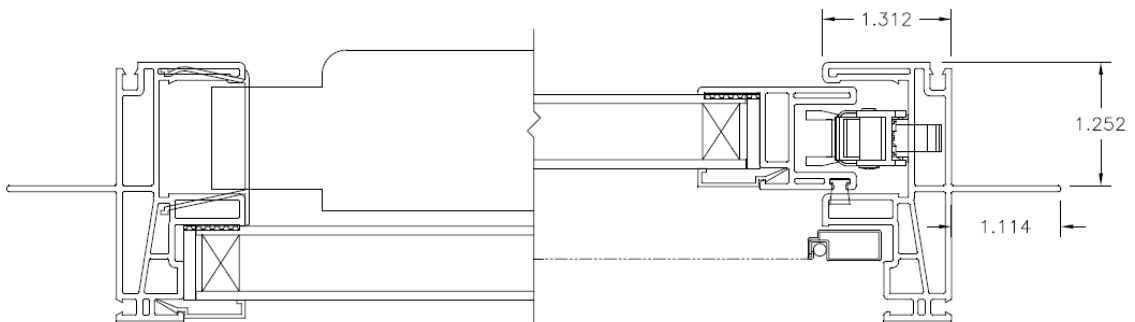
(WW) = WINDOW WIDTH

(WH) = WINDOW HEIGHT

## Series 5700 SH vertical diagram



## Series 5700 SH horizontal diagram

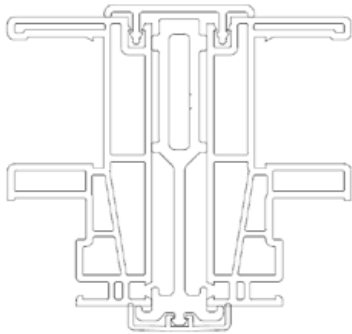


## Mulled Units:

Factory mulling of twins, triples and special shapes provides easier installation without extra labor or material costs.

Reinforcement is available for added strength in factory mulled units.

**Series 5700**



## Recommended Rough Opening:

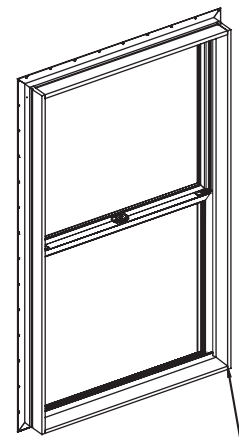
Width = Window Width (WW) + 1/2"

Height = Window Height (WH) + 1/2"

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## Wood-Jamb Extension:

The interior wood-jamb extension is available in pre primed or stainable version for your convenience and ease of installation for a frame thickness of either 4 9/16" or 6 9/16".



WOOD EXTENSION 3" X 5/8"  
OVERALL WALL THICKNESS = 4 9/16"

# SERIES 130 SINGLE HUNG

## Features:

- Bottom sash tilts in for easy cleaning from inside.
- Aluminum half screen comes standard.\*
- Block & tackle balance system for easy sash movement.
- Warm-Edge spacer system provides energy saving thermal performance.
- DP 50 rating (window size tested 53" x 77").
- Aluminum reinforcement standard in lock & meeting rails and sash stiles.
- Dual Sweep locks (standard at 27 1/4" and above) help provide a weather-tight seal and added security.
- Step sill design combines water run-off and aesthetic features of a sloped sill with the structural strength and internal drainage system of a pocket sill.
- Jamb depth: 3".
- Limited lifetime warranty.
- DP Rating R50 (window size tested 53" x 77")

## Select from four frame types:

- Front Flange Only
- Nail Fin Only (no J-Channel)
- J-Channel (nail fin & front flange)
- Box Frame (no nail fin & no front flange)

## Custom Options:

- Low-E Glass.
- Low-E Glass with Argon Gas.
- Ultra Low-E Glass with Argon Gas.
- 5/8" or 3/4" flat, 5/8" or 1" contoured and 1 1/8" Simulated Divide Lite (SDL) available
- Non-reflective Low-E Glass and Non-reflective Low-E Glass with Argon Gas.
- Double strength and obscure glass.
- Oriel style.
- Window Opening Control Device (WOCD) for fall prevention (factory applied).
- Factory mulling and Factory Prepared mulling.
- Commodity sizing available.
- Custom sizes available.
- Charcoal Aluminum half screen.

## Materials:

- Frame and sash are maintenance free, color stabilized solid vinyl (PVC).
- The screen is comprised of rolled form aluminum frame and fiberglass mesh.

## Structural Performance

| SERIES/MODEL          | TEST SIZE | AIR (cfm/ft <sup>2</sup> _) | DESIGN PRESSURE |
|-----------------------|-----------|-----------------------------|-----------------|
| 130 SH                | 53 X 77   | 0.13                        | H-LC50          |
| 130 SH WITH TRANSOM   | 48 X 109  | 0.17                        | H-LC50          |
| 130 SHTW WITH TRANSOM | 73 X 109  | 0.13                        | H-LC50          |
| 130 SHTR              | 109 X 77  | 0.19                        | H-LC50          |
| 130 SHTW              | 97 X 84   | 0.13                        | H-LC40          |

## Thermal Performance

| GLASS/GRID                         | U-Value | SHGC |
|------------------------------------|---------|------|
| SS Clear Glass No Grid             | 0.49    | 0.63 |
| DS Clear Glass No Grid             | 0.49    | 0.62 |
| SS Low-E Glass No Grid             | 0.36    | 0.30 |
| DS Low-E Glass No Grid             | 0.35    | 0.30 |
| SS Low-E/Argon Glass No Grid       | 0.32    | 0.30 |
| DS Low-E/Argon Glass No Grid       | 0.32    | 0.29 |
| SS Ultra Low-E/Argon No Grid       | 0.29    | 0.22 |
| DS Ultra Low-E/Argon No Grid       | 0.29    | 0.22 |
| SS Turtle Code Low-E No Grid       | 0.36    | 0.21 |
| DS Turtle Code Low-E No Grid       | 0.36    | 0.21 |
| SS Turtle Code Low-E/Argon No Grid | 0.33    | 0.20 |
| DS Turtle Code Low-E/Argon No Grid | 0.33    | 0.20 |
| SS Clear Glass with Grid           | 0.49    | 0.57 |
| DS Clear Glass with Grid           | 0.49    | 0.55 |
| SS Low-E Glass with Grid           | 0.36    | 0.27 |
| DS Low-E Glass with Grid           | 0.35    | 0.27 |

| GLASS/GRID                         | U-Value | SHGC |
|------------------------------------|---------|------|
| SS Low-E/Argon Glass with Grid     | 0.32    | 0.27 |
| SS Ultra Low-E/Argon with Grid     | 0.29    | 0.20 |
| DS Ultra Low-E/Argon with Grid     | 0.29    | 0.20 |
| DS Low-E/Argon Glass with Grid     | 0.36    | 0.19 |
| SS Turtle Code Low-E No Grid       | 0.36    | 0.19 |
| DS Turtle Code Low-E No Grid       | 0.33    | 0.19 |
| SS Turtle Code Low-E/Argon No Grid | 0.33    | 0.18 |
| DS Turtle Code Low-E/Argon No Grid | 0.49    | 0.50 |
| SS Clear Glass with SDL            | 0.49    | 0.49 |
| DS Clear Glass with SDL            | 0.36    | 0.24 |
| SS Low-E Glass with SDL            | 0.35    | 0.24 |
| DS Low-E Glass with SDL            | 0.32    | 0.24 |
| SS Low-E/Argon Glass with SDL      | 0.29    | 0.20 |
| SS Ultra Low-E/Argon with SDL      | 0.29    | 0.20 |
| DS Ultra Low-E/Argon with SDL      | 0.36    | 0.17 |
| DS Low-E/Argon Glass with SDL      | 0.36    | 0.17 |
| SS Turtle Code Low-E with SDL      | 0.33    | 0.17 |
| DS Turtle Code Low-E with SDL      | 0.33    | 0.17 |

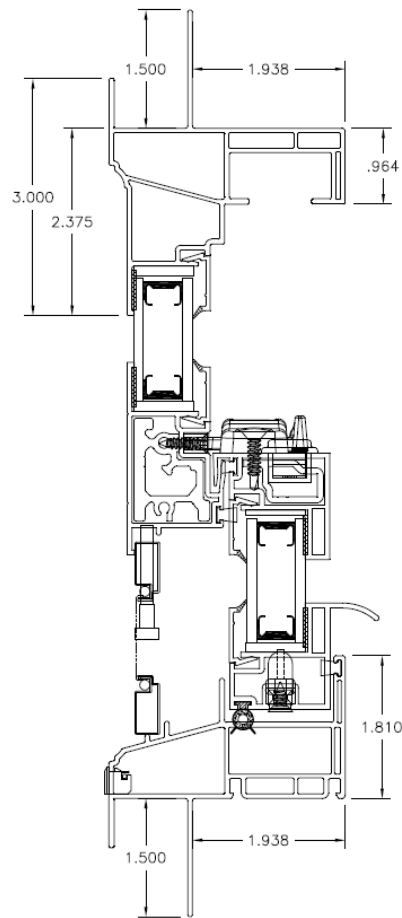
# SERIES 130 SINGLE HUNG

| SERIES  | 130 SH                       |
|---|------------------------------|
| VINYL WALL THICKNESS  | 0.060"                       |
| GLASS THICKNESS   | 0.750" (19.05MM)             |
| JAMB THICKNESS  | 3"                           |
| FRAME WIDTH   | 2.412"                       |
| NAILING FIN LENGTH  | 1.365"                       |
| NAIL FIN SETBACK  | 1.9375"                      |
| "J" CHANNEL DEPTH   | .625" (15.88MM) (N/A ON 160) |
| EGRESS WIDTH  | (WW) - 4.75"                 |
| EGRESS HEIGHT (WITH SASH)   | (WH/2) - 3"                  |
| SCREEN WIDTH  | (WW) - 3.6875"               |
| SCREEN HEIGHT   | (WH/2) - 1.8125"             |
| <b>OPTIONS GLASS:</b>   |                              |
| CLEAR (STANDARD)  | •                            |
| LOW-E ARGON   | •                            |
| ULTRA LOW-E WITH ARGON  | •                            |
| NON-REFLECTIVE LOW-E GLASS  | •                            |
| NON-REFLECTIVE LOW-E GLASS WITH ARGON GAS   | •                            |
| OBSCURE   | •                            |
| TEMPERED  | •                            |
| DOUBLE STRENGTH   | •                            |
| <b>OPTIONS GAS:</b>   |                              |
| ARGON   | •                            |
| <b>AVAILABLE SPECIAL SHAPES:</b>  |                              |
| FULL ROUNDS   | QUARTER ROUNDS               |
| HALF ROUNDS   | ELLIPTICALS                  |
| OCTAGONS  | PENTAGONS                    |
| TRAPEZOIDS  | TRIANGLES                    |
| HALF EYEBROWS   | EYEBROWS                     |
| COLONIAL ARCHES   | COLONIAL FLANKERS            |
|   | COLONIAL ARCH FLANKERS       |
| <b>COLOR:</b>   |                              |
| WHITE   | •                            |
| ALMOND  | •                            |
| CLAY  | •                            |
| 8 PAINTED EXTERIOR COLORS:<br>HUNTER GREEN, BRICK RED, DARK CHOCOLATE, GRAY,<br>TERRATONE, BRONZE, CLAY AND TAN | •                            |

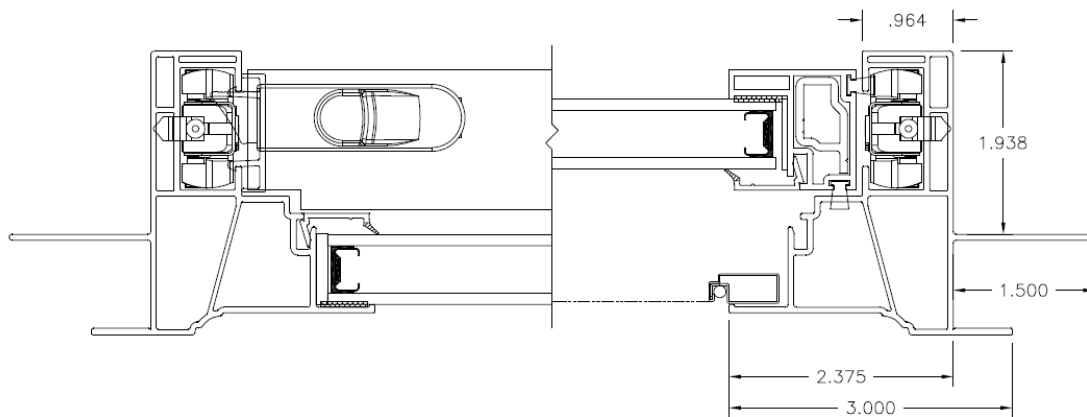
(WW) = WINDOW WIDTH  
(WH) = WINDOW HEIGHT

# SERIES 130 SINGLE HUNG

Series 130 SH vertical diagram



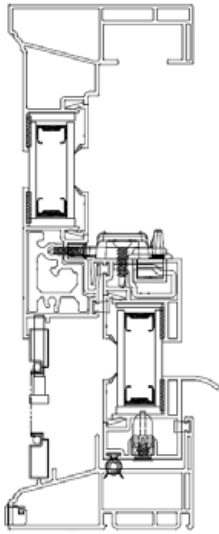
Series 130 SH horizontal diagram



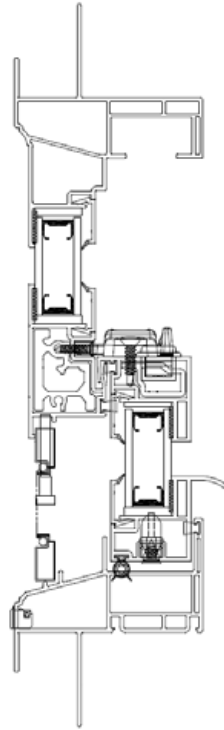


# SERIES 130 SINGLE HUNG

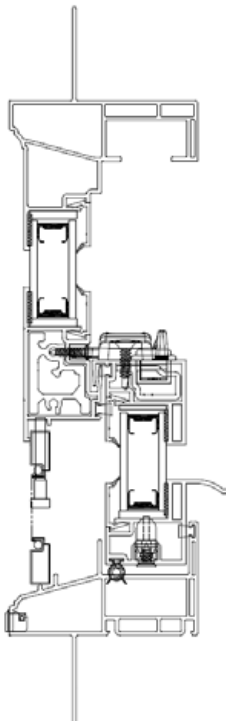
**Series 130 SH  
vertical diagram  
Box**



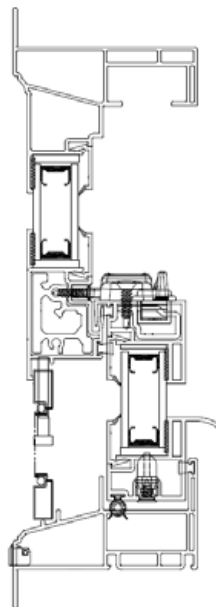
**Series 130 SH  
vertical diagram  
Fin & Flange**



**Series 130 SH  
vertical diagram  
Fin Only**



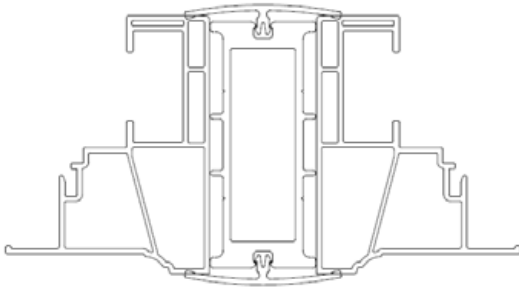
**Series 130 SH  
vertical diagram  
Flange Only**



## Mulled Units:

Factory mulling of twins, triples and special shapes provides easier installation without extra labor or material costs.

**Series 130**



## Recommended Rough Opening for Wood Frame Openings:

Width = Window Width (WW) + 1/2"

Height = Window Height (WH) + 1/2"

# SERIES 130 SINGLE HUNG





































































## Series 130 Single Hung Size Chart

SERIES 130 SINGLE HUNG

\*Meets egress of: Clear operable area of  $\geq 5.7$  sq. ft.

Clear operable width of  $\geq 20"$

Clear operable height of  $\geq 24"$

| ROUGH OPENING | 24"   | 28"   | 30"   | 32"   | 36"   | 40"  | 42"   | 44"   | 48"   |
|---------------|---|---|---|---|---|--|---|---|---|
| EXACT SIZE    | 23.5"   | 27.5"   | 29.5"   | 31.5"   | 35.5"   | 39.5"  | 41.5"   | 43.5"   | 47.5"   |
| EGRESS WIDTH  | 18.75"  | 22.75"  | 24.75"  | 26.75"  | 30.75"  | 34.75"   | 36.75"  | 38.75"  | 42.75"  |
| 36"           |    |    |    |    |    |    |    |    |   |
| 44"           |    |    |    |    |    |    |    |    |   |
| 48"           |    |    |    |    |    |    |    |    |   |
| 52"           |    |    |    |    |    |    |    |    |   |
| 60"           |  |  |  |  |  |  |  |  |  |
| 62"           |  |  |  |  |  |  |  |  |  |
| 66"           |  |  |  |  |  |  |  |  |  |
| 72"           |  |  |  |  |  |  |  |  |  |

# SERIES 130 SINGLE HUNG
























## Series 130 Single Hung Commodity Size Charts

### SERIES 130 SINGLE HUNG

\*Meets egress of: Clear operable area of  $\geq 5.7$  sq. ft.

Clear operable width of  $\geq 20$ "

Clear operable height of  $\geq 24$ "

| MASONRY OPENING                                    | 19 7/8"   | 27 1/4"  | 37 3/4"   | 53 3/4"   |   |   |
|--|---|--|---|---|---|---|
| TIP TO TIP   | 19 3/8"   | 26 3/4"  | 37 1/4"   | 53 3/8"   |   |   |
| EXACT SIZE   | 18 1/8"   | 25 1/2"  | 36"   | 52 1/8"   |   |   |
| 26"<br>38 3/8"<br>50 5/8"<br>63"<br>72"<br>76 3/4" | 26" 1/4"<br>38 5/8"<br>50 7/8"<br>63 1/4"<br>72 1/4"<br>77" | 25"<br>37 3/8"<br>49 5/8"<br>62"<br>71"<br>75 3/4" | <br>12<br><br>13<br><br>14<br><br>15<br><br>16<br><br>1 X 76 3/4 | <br>1/32<br><br>1/33<br><br>1/34<br><br>1/35<br><br>1/36<br><br>1/3 X 76 3/4 | <br>22<br><br>23<br><br>24<br><br>25<br><br>26<br><br>2 X 76 3/4 | <br>32<br><br>33<br><br>34<br><br>35<br><br>36 |

### SERIES 130 SINGLE HUNG

| Commodity Size | Masonry Opening Size | Tip to Tip Size | Exact Size      |
|----------------|----------------------|-----------------|-----------------|
| 12             | 19 7/8 x 26          | 19 3/8 x 26 1/4 | 18 1/8 x 25     |
| 13             | 19 7/8 x 38 3/8      | 19 3/8 x 38 5/8 | 18 1/8 x 37 3/8 |
| 14             | 19 7/8 x 50 5/8      | 19 3/8 x 50 7/8 | 18 1/8 x 49 5/8 |
| 15             | 19 7/8 x 63          | 19 3/8 x 63 1/4 | 18 1/8 x 62     |
| 16             | 19 7/8 x 72          | 19 3/8 x 72 1/4 | 18 1/8 x 71     |
| 1 x 76 3/4     | 19 7/8 x 76 3/4      | 19 3/8 x 77     | 18 1/8 x 75 3/4 |
| 1/32           | 27 1/4 x 26          | 26 3/4 x 26 1/4 | 25 1/2 x 25     |
| 1/33           | 27 1/4 x 38 3/8      | 26 3/4 x 38 5/8 | 25 1/2 x 37 3/8 |
| 1/34           | 27 1/4 x 50 5/8      | 26 3/4 x 50 7/8 | 25 1/2 x 49 5/8 |
| 1/35           | 27 1/4 x 63          | 26 3/4 x 63 1/4 | 25 1/2 x 62     |
| 1/36           | 27 1/4 x 72          | 26 3/4 x 72 1/4 | 25 1/2 x 71     |
| 1/3 x 76 3/4   | 27 1/4 x 76 3/4      | 26 3/4 x 77     | 25 1/2 x 75 3/4 |

| Commodity Size | Masonry Opening Size | Tip to Tip Size | Exact Size      |
|----------------|----------------------|-----------------|-----------------|
| 22             | 37 3/4 x 26          | 37 1/4 x 26 1/4 | 36 x 25         |
| 23             | 37 3/4 x 38 3/8      | 37 1/4 x 38 5/8 | 36 x 37 3/8     |
| 24             | 37 3/4 x 50 5/8      | 37 1/4 x 50 7/8 | 36 x 49 5/8     |
| 25             | 37 3/4 x 63          | 37 1/4 x 63 1/4 | 36 x 62         |
| 26             | 37 3/4 x 72          | 37 1/4 x 72 1/4 | 36 x 71         |
| 2 x 76 3/4     | 37 3/4 x 76 3/4      | 37 1/4 x 77     | 36 x 75 3/4     |
| 32             | 53 3/4 x 26          | 53 3/8 x 26 1/4 | 52 1/8 x 25     |
| 33             | 53 3/4 x 38 3/8      | 53 3/8 x 38 5/8 | 52 1/8 x 37 3/8 |
| 34             | 53 3/4 x 50 5/8      | 53 3/8 x 50 7/8 | 52 1/8 x 49 5/8 |
| 35             | 53 3/4 x 63          | 53 3/8 x 63 1/4 | 52 1/8 x 62     |
| 36             | 53 3/4 x 72          | 53 3/8 x 72 1/4 | 52 1/8 x 71     |

# SERIES 130 SINGLE HUNG

## Series 130 Single Hung Egress Charts

### SERIES 130 SINGLE HUNG EGRESS SQUARE FOOTAGE

| NOM. SIZE | EGRESS TOTAL<br>SQUARE FEET (WITH SASH) |
|-----------|---|
| 2030      | 1.92                                    |
| 2038      | 2.44                                    |
| 2040      | 2.70                                    |
| 2044      | 2.96                                    |
| 2050      | 3.48                                    |
| 2052      | 3.61                                    |
| 2056      | 3.87                                    |
| 2060      | 4.26                                    |
| 2430      | 2.33                                    |
| 2438      | 2.96                                    |
| 2440      | 3.28                                    |
| 2444      | 3.59                                    |
| 2450      | 4.23                                    |
| 2452      | 4.38                                    |
| 2456      | 4.70                                    |
| 2460      | 5.17                                    |
| 2630      | 2.54                                    |
| 2638      | 3.22                                    |
| 2640      | 3.57                                    |
| 2644      | 3.91                                    |
| 2650      | 4.60                                    |
| 2652      | 4.77                                    |
| 2656      | 5.11                                    |
| 2660      | 5.63                                    |

| NOM. SIZE | EGRESS TOTAL<br>SQUARE FEET (WITH SASH) |
|-----------|---|
| 2830      | 2.74                                    |
| 2838      | 3.48                                    |
| 2840      | 3.85                                    |
| 2844      | 4.23                                    |
| 2850      | 4.97                                    |
| 2852      | 5.15                                    |
| 2856      | 5.53                                    |
| 2860      | 6.08                                    |
| 3030      | 3.15                                    |
| 3038      | 4.00                                    |
| 3040      | 4.43                                    |
| 3044      | 4.86                                    |
| 3050      | 5.71                                    |
| 3052      | 5.93                                    |
| 3056      | 6.35                                    |
| 3060      | 6.99                                    |
| 3430      | 3.56                                    |
| 3438      | 4.52                                    |
| 3440      | 5.01                                    |
| 3444      | 5.49                                    |
| 3450      | 6.46                                    |
| 3452      | 6.70                                    |
| 3456      | 7.18                                    |
| 3460      | 7.90                                    |

| NOM. SIZE | EGRESS TOTAL<br>SQUARE FEET (WITH SASH) |
|-----------|---|
| 3630      | 3.76                                    |
| 3638      | 4.79                                    |
| 3640      | 5.30                                    |
| 3644      | 5.81                                    |
| 3650      | 6.83                                    |
| 3652      | 7.08                                    |
| 3656      | 7.59                                    |
| 3660      | 8.36                                    |
| 3830      | 3.97                                    |
| 3838      | 5.05                                    |
| 3840      | 5.58                                    |
| 3844      | 6.12                                    |
| 3850      | 7.20                                    |
| 3852      | 7.47                                    |
| 3856      | 8.01                                    |
| 3860      | 8.81                                    |
| 4030      | 4.38                                    |
| 4038      | 5.57                                    |
| 4040      | 6.16                                    |
| 4044      | 6.75                                    |
| 4050      | 7.94                                    |
| 4052      | 8.24                                    |
| 4056      | 8.83                                    |
| 4060      | 9.72                                    |

## 130 Single Hung Commodity Egress Chart

| Commodity Size  | Tip to Tip Size | Exact Size      | With Sash       | Sq. Feet |
|-----------------|-----------------|-----------------|-----------------|----------|
| 12              | 19 1/4 x 26 1/4 | 18 1/8 x 25     | 13 3/8 x 9 4/8  | 0.88     |
| 13              | 19 1/4 x 38 5/8 | 18 1/8 x 37 3/8 | 13 3/8 x 15 6/8 | 1.46     |
| 14              | 19 1/4 x 50 7/8 | 18 1/8 x 49 5/8 | 13 3/8 x 21 7/8 | 2.03     |
| 15              | 19 1/4 x 63 1/4 | 18 1/8 x 62     | 13 3/8 x 28     | 2.60     |
| 16              | 19 1/4 x 72 1/4 | 18 1/8 x 71     | 13 3/8 x 32 4/8 | 3.02     |
| 1 x 76 3/4      | 19 1/4 x 77     | 18 1/8 x 75 3/4 | 13 3/8 x 34 7/8 | 3.24     |
|                 |                 |                 |                 |          |
| 1/32            | 26 3/4 x 26 1/4 | 25 1/2 x 25     | 20 3/4 x 9 4/8  | 1.37     |
| 1/33            | 26 3/4 x 38 5/8 | 25 1/2 x 37 3/8 | 20 3/4 x 15 6/8 | 2.26     |
| 1/34            | 26 3/4 x 50 7/8 | 25 1/2 x 49 5/8 | 20 3/4 x 21 7/8 | 3.14     |
| 1/35            | 26 3/4 x 63 1/4 | 25 1/2 x 62     | 20 3/4 x 28     | 4.03     |
| 1/36            | 26 3/4 x 72 1/4 | 25 1/2 x 71     | 20 3/4 x 32 4/8 | 4.68     |
| 1/3 x 76 3/4    | 26 3/4 x 77     | 25 1/2 x 75 3/4 | 20 3/4 x 34 7/8 | 5.03     |
|                 |                 |                 |                 |          |
| 22              | 37 1/4 x 26 1/4 | 36 x 25         | 31 1/4 x 9 4/8  | 2.06     |
| 23              | 37 1/4 x 38 5/8 | 36 x 37 3/8     | 31 1/4 x 15 6/8 | 3.40     |
| 24              | 37 1/4 x 50 7/8 | 36 x 49 5/8     | 31 1/4 x 21 7/8 | 4.73     |
| 39 3/8 x 58 1/8 | 39 3/8 x 58 1/8 | 38 1/8 x 56 7/8 | 33 3/8 x 25 4/8 | 5.90     |
| 25              | 37 1/4 x 63 1/4 | 36 x 62         | 31 1/4 x 28     | 6.08     |
| 26              | 37 1/4 x 72 1/4 | 36 x 71         | 31 1/4 x 32 4/8 | 7.05     |
| 2 x 76 3/4      | 37 1/4 x 77     | 36 x 75 3/4     | 31 1/4 x 34 7/8 | 7.57     |
|                 |                 |                 |                 |          |
| 32              | 53 3/8 x 26 1/4 | 52 1/8 x 25     | 47 3/8 x 9 4/8  | 3.13     |
| 33              | 53 3/8 x 38 5/8 | 52 1/8 x 37 3/8 | 47 3/8 x 15 6/8 | 5.16     |
| 34              | 53 3/8 x 50 7/8 | 52 1/8 x 49 5/8 | 47 3/8 x 21 7/8 | 7.18     |
| 35              | 53 3/8 x 63 1/4 | 52 1/8 x 62     | 47 3/8 x 28     | 9.21     |
| 36              | 53 3/8 x 72 1/4 | 52 1/8 x 71     | 47 3/8 x 32 4/8 | 10.69    |

# SERIES 150/160 SINGLE HUNG

## Features:

- Cam Locks are standard. Double Locks are featured on all windows measuring more than 27 1/4" in width.
- Block & tackle balances provide quiet, easy operation.
- Integrated tilt latches permit easy tilt in and cleaning.
- Sloped sill for easy water run-off.
- Pre-punched nailing fin allows for faster installation.
- Sashes are available in equal lite, Cottage and Oriel styles.
- Integrated J-channel assists in the installation of vinyl siding.
- White is standard.
- Series 160 available without J-channel.
- DP Ratings:  
 DP 50 (window size tested 36" x 74")  
 DP 35 (window size tested 36" x 96")  
 DP 25 (window size tested 48" x 96")

## Custom Options:

- Low-E Glass and Argon Gas
- Ultra Low-E Argon.
- 3/4" or 5/8" flat grid, 5/8" or 1" contoured and 1 1/8" Simulated Divided Lite (SDL) grids.
- Factory mulling of twins, triples and architectural shapes.
- Almond and clay are available.
- 8 Painted Exterior Colors (white interior only).
- Wood jamb extensions (pre-primed or stainable 4 9/16" and 6 9/16").
- Window Opening Control Device (WOCD) for fall prevention (field applied).
- Continuous Head and Sill.

## Materials:

- Frame and sash are maintenance free, color stabilized solid vinyl (PVC).
- Lift rail, lock rail, and the meeting rail contain aluminum rebar for added strength. Windows more than 60" in height also have rebar in the stiles.
- The screen is comprised of rolled form aluminum frame and fiberglass mesh.
- Glazing method: Glazing tape.

## Structural Performance

| SERIES/MODEL           | TEST SIZE | AIR (cfm/ft <sup>2</sup> ) | WATER (psf) | UNIFORM LOAD | DESIGN PRESSURE |
|------------------------|-----------|----------------------------|-------------|--------------|-----------------|
| 150/160 SH/DW          | 36 X 74   | 0.27                       | 7.50        | 75.00        | H-R50 36X74     |
| 150/160 SH/DW          | 48 X 78   | 0.27                       | 7.50        | 37.50        | H-R25 48X78     |
| 150/160 SHTW           | 72 X 72   | 0.15                       | 6.75        | 60.00        | H-R40 72X72     |
| 150/160 TRHP           | 108 X 74  | 0.15                       | 7.50        | 75.00        | H-R50 108X74    |
| 150/160 TR             | 108 X 74  | 0.15                       | 6.00        | 45.00        | H-R30 108X74    |
| 150/160 PW/HR/FR/OC/SS | 72 X 72   | 0.01                       | 7.50        | 75.00        | F-R50 72x72     |

## Thermal Performance

| GLASS/GRID                   | U-Value | SHGC |
|------------------------------|---------|------|
| SS Clear Glass No Grid       | 0.49    | 0.62 |
| DS Clear Glass No Grid       | 0.49    | 0.61 |
| SS Low-E Glass No Grid       | 0.35    | 0.29 |
| DS Low-E Glass No Grid       | 0.35    | 0.29 |
| SS Low-E/Argon Glass No Grid | 0.32    | 0.29 |
| DS Low-E/Argon Glass No Grid | 0.32    | 0.29 |
| SS Ultra Low-E/Argon No Grid | 0.30    | 0.22 |
| DS Ultra Low-E/Argon No Grid | 0.30    | 0.22 |
| SS Clear Glass with Grid     | 0.49    | 0.56 |
| DS Clear Glass with Grid     | 0.49    | 0.55 |
| SS Low-E Glass with Grid     | 0.35    | 0.27 |
| DS Low-E Glass with Grid     | 0.35    | 0.26 |

| GLASS/GRID                          | U-Value | SHGC |
|-------------------------------------|---------|------|
| SS Low-E/Argon Glass with Grid      | 0.32    | 0.26 |
| DS Low-E/Argon Glass with Grid      | 0.32    | 0.26 |
| SS Ultra Low-E/Argon with Grid      | 0.30    | 0.20 |
| DS Ultra Low-E/Argon with Grid      | 0.30    | 0.20 |
| SS Clear Glass with SDL             | 0.49    | 0.50 |
| DS Clear Glass with SDL             | 0.51    | 0.49 |
| SS Low-E Glass with SDL             | 0.36    | 0.27 |
| DS Low-E Glass with SDL             | 0.39    | 0.27 |
| SS Low-E/Argon Glass with SDL       | 0.32    | 0.26 |
| DS Low-E/Argon Glass with SDL       | 0.34    | 0.24 |
| SS Ultra Low-E/Argon Glass with SDL | 0.30    | 0.20 |
| DS Ultra Low-E/Argon Glass with SDL | 0.32    | 0.20 |

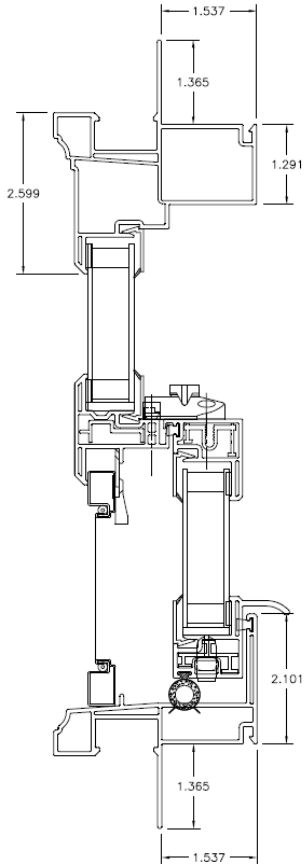
# SERIES 150/160 SINGLE HUNG

| SERIES                             | 150/160 SH             |
|------------------------------------|------------------------|
| VINYL WALL THICKNESS               | 0.065" (1.65MM)        |
| GLASS THICKNESS                    | 0.750" (19.05MM)       |
| JAMB THICKNESS                     | 3.277" (83.24MM)       |
| FRAME WIDTH                        | 2.412" (61.26MM)       |
| NAILING FIN LENGTH                 | 1.365" (34.67MM)       |
| NAIL FIN SETBACK                   | 1.537" (39.04MM)       |
| "J" CHANNEL DEPTH                  | .625" (15.88MM)        |
| EGRESS WIDTH                       | (WW) - 4 13/16"        |
| EGRESS HEIGHT (WITH SASH)          | (WH/2) - 3 15/16"      |
| EGRESS HEIGHT (WITHOUT SASH)       | (WH/2) - 3 1/8"        |
| TOP SASH DAYLIGHT OPENING WIDTH    | (WW) - 5 1/8"          |
| BOTTOM SASH DAYLIGHT OPENING WIDTH | (WW) - 5 1/2"          |
| DAYLIGHT OPENING HEIGHT            | (WH/2) - 3 7/16"       |
| SCREEN WIDTH                       | (WW) - 4 3/8"          |
| SCREEN HEIGHT                      | (WH/2) - 1 1/4"        |
| <b>OPTIONS GLASS:</b>              |                        |
| CLEAR (STANDARD)                   | •                      |
| LOW-E ARGON                        | •                      |
| ULTRA LOW-E WITH ARGON             | •                      |
| OBSCURE                            | •                      |
| TEMPERED                           | •                      |
| DOUBLE STRENGTH                    | •                      |
| <b>OPTIONS GAS:</b>                |                        |
| ARGON                              | •                      |
| <b>AVAILABLE SPECIAL SHAPES:</b>   |                        |
| FULL ROUNDS                        | QUARTER ROUNDS         |
| HALF ROUNDS                        | ELLIPTICALS            |
| OCTAGONS                           | PENTAGONS              |
| TRAPEZOIDS                         | TRIANGLES              |
| HALF EYEBROWS                      | EYEBROWS               |
| COLONIAL ARCHES                    | COLONIAL FLANKERS      |
| OVALS                              | COLONIAL ARCH FLANKERS |
| OPERABLE EYEBROWS                  | OPERABLE HALF EYEBROWS |
| <b>COLOR:</b>                      |                        |
| WHITE                              | •                      |
| ALMOND                             | •                      |
| CLAY                               | •                      |

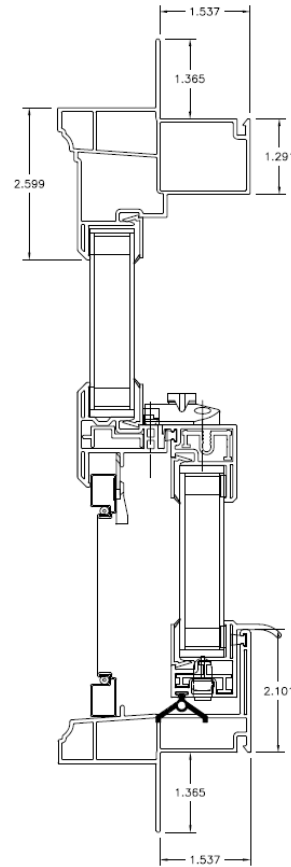
(WW) = WINDOW WIDTH  
(WH) = WINDOW HEIGHT

# SERIES 150/160 SINGLE HUNG

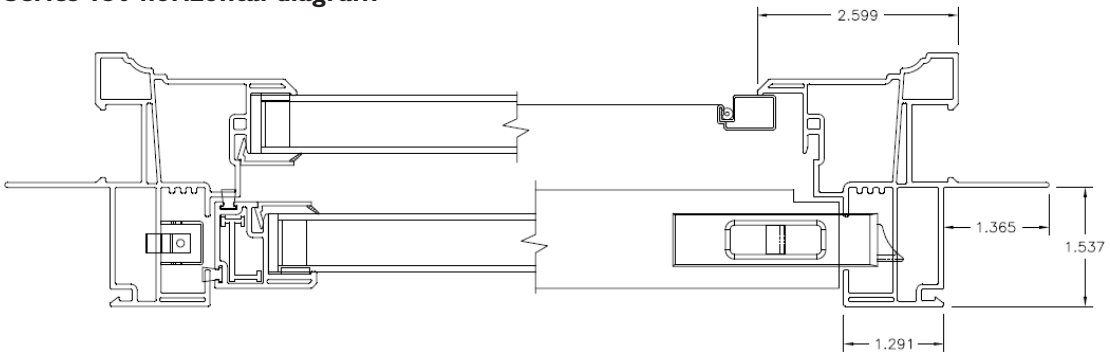
**Series 150 vertical diagram**



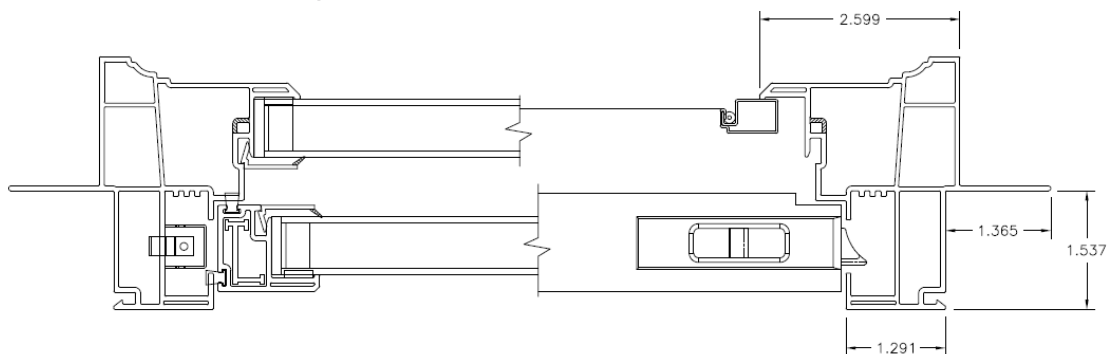
**Series 160 vertical diagram**



**Series 150 horizontal diagram**



**Series 160 horizontal diagram**

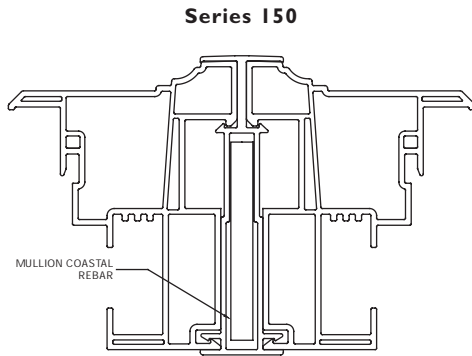




## Mulled Units:

Factory mulling of twins, triples and special shapes provides easier installation without extra labor or material costs.

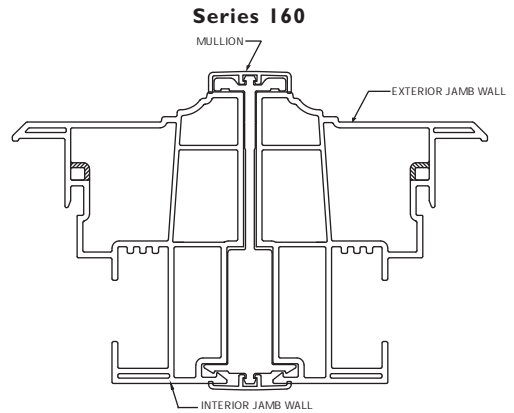
Reinforcement is available for added strength in factory mulled units.



### Recommended Rough Opening:

$$\text{Width} = \text{Window Width (WW)} + 1/2''$$

$$\text{Height} = \text{Window Height (WH)} + 1/2''$$



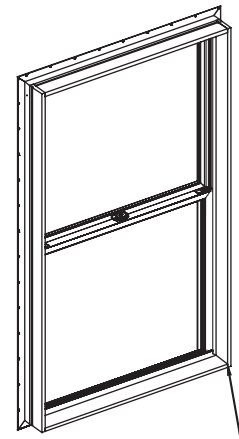
### Recommended Rough Opening:

$$\text{Width} = \text{Window Width (WW)} + 1/2''$$

$$\text{Height} = \text{Window Height (WH)} + 1/2''$$

## Wood-Jamb Extension:

The interior wood-jamb extension is available in pre primed or stainable version for your convenience and ease of installation for a frame thickness of either 4 9/16" or 6 9/16".



WOOD EXTENSION 3" X 5/8"  
OVERALL WALL THICKNESS = 4 9/16"

# SERIES 150/160 SINGLE HUNG





































































































































## Series 150/160 Single Hung Size Chart

SERIES 150/160 SINGLE HUNG

\*Meets egress of: Clear operable area of  $\geq 5.7$  sq. ft.

Clear operable width of  $\geq 20"$

Clear operable height of  $\geq 24"$

| ROUGH OPENING | 20"  | 24"  | 28"   | 30"   | 32"   | 36"   | 38"   | 40"   | 44"   | 48"   |
|---------------|--|--|---|---|---|---|---|---|---|---|
| EXACT SIZE    | 19.5"  | 23.5"  | 27.5"   | 29.5"   | 31.5"   | 35.5"   | 37.5"   | 39.5"   | 43.5"   | 47.5"   |
| EGRESS WIDTH  | 14.6875"   | 18.6875"   | 22.6875"  | 24.6875"  | 26.6875"  | 30.6875"  | 32.6875"  | 34.6875"  | 38.6875"  | 42.6875"  |
| HEIGHT        |  |  |   |   |   |   |   |   |   |   |
| 36"           |  1830   |  2030   |  2430    |  2630    |  2830    |  3030    |  3230    |  3430    |  3830    |   |
| 38"           |  1832   |  2032   |  2432    |  2632    |  2832    |  3032    |  3232    |  3432    |  3832    |   |
| 44"           |  1838   |  2038   |  2438    |  2638    |  2838    |  3038    |  3238    |  3438    |  3838    |   |
| 46"           |  18310  |  20310  |  24310   |  26310   |  28310   |  30310   |  32310   |  34310   |  38310   |   |
| 48"           |  1840   |  2040   |  2440    |  2640    |  2840    |  3040    |  3240    |  3440    |  3840    |   |
| 50"           |  1842  |  2042  |  2442   |  2642   |  2842   |  3042   |  3242   |  3442   |  3842   |   |
| 52"           |  1844 |  2044 |  2444  |  2644  |  2844  |  3044  |  3244  |  3444  |  3844  |   |
| 54"           |  1846 |  2046 |  2446  |  2646  |  2846  |  3046  |  3246  |  3446  |  3846  |   |
| 60"           |  1850 |  2050 |  2450  |  2650  |  2850  |  3050  |  3250* |  3450* |  3850* |  4050* |
| 62"           |  1852 |  2052 |  2452  |  2652  |  2852  |  3052* |  3252* |  3452* |  3852* |  4052* |
| 66"           |  1856 |  2056 |  2456  |  2656  |  2856  |  3056* |  3256* |  3456* |  3856* |  4056* |
| 72"           |  1860 |  2060 |  2460  |  2660  |  2860* |  3060* |  3260* |  3460* |  3860* |  4060* |
| 74"           |  1862 |  2062 |  2462  |  2662  |  2862* |  3062* |  3262* |  3462* |  3862* |  4062* |
| 84"           |  1870 |  2070 |  2470* |  2670* |  2870* |  3070* |  3270* |  3470* |  3870  |  4070  |

# SERIES 150/160 SINGLE HUNG

## Series 150/160 Single Hung Egress Chart

### SERIES 150/160 SINGLE HUNG DAYLIGHT OPENING AND EGRESS SQUARE FOOTAGE

| NOM. SIZE | WINDOW TOTAL DAYLIGHT<br>OPENING SQUARE FEET | EGRESS TOTAL<br>SQUARE FEET (WITH SASH) | NOM. SIZE | WINDOW TOTAL DAYLIGHT<br>OPENING SQUARE FEET | EGRESS TOTAL<br>SQUARE FEET (WITH SASH) |
|-----------|--|---|-----------|--|---|
| 1830      | 2.82   | 1.4                                     | 3030      | 6.00   | 2.9                                     |
| 1832      | 3.02   | 1.5                                     | 3032      | 6.42   | 3.2                                     |
| 1838      | 3.61   | 1.8                                     | 3038      | 7.68   | 3.8                                     |
| 18310     | 3.81   | 1.9                                     | 30310     | 8.10   | 4.0                                     |
| 1840      | 4.00   | 2.0                                     | 3040      | 8.52   | 4.2                                     |
| 1842      | 4.20   | 2.1                                     | 3042      | 8.94   | 4.4                                     |
| 1844      | 4.40   | 2.2                                     | 3044      | 9.35   | 4.7                                     |
| 1846      | 4.59   | 2.3                                     | 3046      | 9.77   | 4.9                                     |
| 1850      | 5.18   | 2.6                                     | 3050      | 11.03  | 5.5                                     |
| 1852      | 5.38   | 2.7                                     | 3052      | 11.45  | 5.7                                     |
| 1856      | 5.78   | 2.9                                     | 3056      | 12.29  | 6.1                                     |
| 1860      | 6.37   | 3.2                                     | 3060      | 13.55  | 6.8                                     |
| 1862      | 6.56   | 3.4                                     | 3062      | 13.97  | 7.0                                     |
| 1870      | 7.55   | 3.9                                     | 3070      | 16.06  | 8.0                                     |
| 2030      | 3.62   | 1.8                                     | 3230      | 6.40   | 2.9                                     |
| 2032      | 3.87   | 1.9                                     | 3232      | 6.85   | 3.2                                     |
| 2038      | 4.63   | 2.3                                     | 3238      | 8.19   | 3.8                                     |
| 20310     | 4.88   | 2.4                                     | 32310     | 8.63   | 4.0                                     |
| 2040      | 5.13   | 2.6                                     | 3240      | 9.08   | 4.2                                     |
| 2042      | 5.38   | 2.7                                     | 3242      | 9.53   | 4.4                                     |
| 2044      | 5.64   | 2.8                                     | 3244      | 9.97   | 5.0                                     |
| 2046      | 5.89   | 3.0                                     | 3246      | 10.42  | 5.2                                     |
| 2050      | 6.65   | 3.4                                     | 3250      | 11.76  | 5.9                                     |
| 2052      | 6.90   | 3.5                                     | 3252      | 12.21  | 6.0                                     |
| 2056      | 7.40   | 3.7                                     | 3256      | 13.10  | 6.5                                     |
| 2060      | 8.16   | 4.1                                     | 3260      | 14.45  | 7.2                                     |
| 2062      | 8.41   | 4.3                                     | 3262      | 14.89  | 7.5                                     |
| 2070      | 9.68   | 4.9                                     | 3270      | 17.13  | 8.6                                     |
| 2430      | 4.41   | 2.2                                     | 3430      | 6.80   | 3.3                                     |
| 2432      | 4.72   | 2.3                                     | 3432      | 7.27   | 3.6                                     |
| 2438      | 5.64   | 2.8                                     | 3438      | 8.70   | 4.3                                     |
| 24310     | 5.95   | 3.0                                     | 34310     | 9.17   | 4.5                                     |
| 2440      | 6.26   | 3.1                                     | 3440      | 9.64   | 4.8                                     |
| 2442      | 6.57   | 3.3                                     | 3442      | 10.12  | 5.0                                     |
| 2444      | 6.88   | 3.4                                     | 3444      | 10.59  | 5.3                                     |
| 2446      | 7.18   | 3.6                                     | 3446      | 11.07  | 5.5                                     |
| 2450      | 8.11   | 4.0                                     | 3450      | 12.49  | 6.2                                     |
| 2452      | 8.42   | 4.2                                     | 3452      | 12.97  | 6.5                                     |
| 2456      | 9.03   | 4.5                                     | 3456      | 13.92  | 6.9                                     |
| 2460      | 9.96   | 5.0                                     | 3460      | 15.34  | 7.7                                     |
| 2462      | 10.27  | 5.2                                     | 3462      | 15.82  | 7.9                                     |
| 2470      | 11.81  | 6.0                                     | 3470      | 18.19  | 9.1                                     |
| 2630      | 4.81   | 2.4                                     | 3830      | 7.59   | 3.7                                     |
| 2632      | 5.14   | 2.5                                     | 3832      | 8.12   | 4.0                                     |
| 2638      | 6.15   | 3.1                                     | 3838      | 9.71   | 4.8                                     |
| 26310     | 6.49   | 3.2                                     | 38310     | 10.24  | 5.0                                     |
| 2640      | 6.82   | 3.4                                     | 3840      | 10.77  | 5.3                                     |
| 2642      | 7.16   | 3.6                                     | 3842      | 11.30  | 5.6                                     |
| 2644      | 7.50   | 3.7                                     | 3844      | 11.83  | 5.9                                     |
| 2646      | 7.83   | 3.9                                     | 3846      | 12.36  | 6.1                                     |
| 2650      | 8.84   | 4.4                                     | 3850      | 13.96  | 6.9                                     |
| 2652      | 9.18   | 4.6                                     | 3852      | 14.49  | 7.2                                     |
| 2656      | 9.85   | 4.9                                     | 3856      | 15.55  | 7.7                                     |
| 2660      | 10.85  | 5.5                                     | 3860      | 17.14  | 8.6                                     |
| 2662      | 11.19  | 5.6                                     | 3862      | 17.67  | 8.8                                     |
| 2670      | 12.87  | 6.5                                     | 3870      | 20.32  | 10.2                                    |
| 2830      | 5.21   | 2.6                                     | 4050      | 15.42  | 7.7                                     |
| 2832      | 5.57   | 2.8                                     | 4052      | 16.00  | 8.0                                     |
| 2838      | 6.66   | 3.3                                     | 4056      | 17.18  | 8.5                                     |
| 28310     | 7.02   | 3.5                                     | 4060      | 18.93  | 9.4                                     |
| 2840      | 7.39   | 3.7                                     | 4062      | 19.52  | 9.7                                     |
| 2842      | 7.75   | 3.9                                     | 4070      | 22.45  | 11.2                                    |
| 2844      | 8.12   | 4.0                                     |           |  |   |
| 2846      | 8.48   | 4.2                                     |           |  |   |
| 2850      | 9.57   | 4.8                                     |           |  |   |
| 2852      | 9.93   | 5.0                                     |           |  |   |
| 2856      | 10.66  | 5.3                                     |           |  |   |
| 2860      | 11.75  | 5.9                                     |           |  |   |
| 2862      | 12.12  | 6.1                                     |           |  |   |
| 2870      | 13.93  | 7.0                                     |           |  |   |

# SERIES 450/460 DOUBLE HUNG

## Features:

- Brick mould exterior.
- Maintenance-free, premium vinyl construction.
- Fusion-welded frame and sash.
- Integrated J-channel and prepunched nailing fin.
- 3/4" insulated glass.
- Sloped sill for easy water run-off.
- Double sash locks standard at 27 1/4" and wider.
- Continuous head and sill for twins and triples.
- Block & tackle balance system.
- Extruded Half screen standard.
- White is standard.
- Series 460 available without "J" channel.
- DP Ratings:  
R50 (window size tested 36" x 74")  
R30 (window size tested 48" x 78")

## Custom Options:

- Low-E Glass and Argon Gas
- Ultra Low-E Argon.
- 5/8" or 1" contoured, 5/8" or 3/4" flat grid or 1 1/8" Simulated Divided Lite.
- Factory mulling of twins, triples and architectural shapes.
- Wood jamb extensions (pre-primed or stainable 4 9/16" and 6 9/16").
- Custom sizes available.
- Almond and Clay are available.
- 8 Painted Exterior Colors (white interior only).
- 3 1/4" Flat Casing with Bull Nose.
- Window Opening Control Device (WOCD) for fall prevention (factory applied).
- Extruded Full Screen.
- Extruded Half Screen.

## Materials:

- Frame and sash are maintenance free, color stabilized solid vinyl (PVC).
- Keeper rail, lock rail and bottom lift rail contain an aluminum rebar for added strength.
- The screen is comprised of a roll form aluminum frame and fiberglass mesh.
- Glazing method: Glazing tape.

## Structural Performance

| SERIES/MODEL                       | TEST SIZE | AIR (cfm/ft <sup>2</sup> ) | WATER (psf) | UNIFORM LOAD | DESIGN PRESSURE |
|------------------------------------|-----------|----------------------------|-------------|--------------|-----------------|
| 450/460 DH                         | 36 x 74   | 0.26                       | 5.43        | 52.63        | H-R35 36x74     |
| 450/460 DH                         | 48 x 78   | 0.26                       | 5.43        | 30.08        | H-R20 48x78     |
| 450/460 DHTR (cont. head & sill)   | 108 x 74  | 0.16                       | 7.52        | 52.67        | H-R25 108x74    |
| 455/465 DH HP                      | 36 x 74   | 0.26                       | 7.52        | 75.19        | H-R50 36x74     |
| 455/465 DHTRCHS                    | 108 x 74  | 0.16                       | 7.52        | 75.19        | H-R50 108x74    |
| 450/460 and 455/465 PW/HR/FR/OC/SS | 50 x 86   | 0.01                       | 7.52        | 75.24        | F-R50 50x86     |

## Thermal Performance

| GLASS/GRID                   | U-Value | SHGC |
|------------------------------|---------|------|
| SS Clear Glass No Grid       | 0.47    | 0.58 |
| DS Clear Glass No Grid       | 0.47    | 0.57 |
| SS Low-E Glass No Grid       | 0.35    | 0.28 |
| DS Low-E Glass No Grid       | 0.35    | 0.28 |
| SS Low-E/Argon Glass No Grid | 0.32    | 0.27 |
| DS Low-E/Argon Glass No Grid | 0.32    | 0.27 |
| SS Ultra Low-E/Argon No Grid | 0.30    | 0.20 |
| DS Ultra Low-E/Argon No Grid | 0.30    | 0.20 |
| SS Clear Glass with Grid     | 0.47    | 0.52 |
| DS Clear Glass with Grid     | 0.47    | 0.51 |
| SS Low-E Glass with Grid     | 0.35    | 0.25 |
| DS Low-E Glass with Grid     | 0.35    | 0.25 |

| GLASS/GRID                          | U-Value | SHGC |
|-------------------------------------|---------|------|
| SS Low-E/Argon Glass with Grid      | 0.32    | 0.25 |
| DS Low-E/Argon Glass with Grid      | 0.32    | 0.25 |
| SS Ultra Low-E/Argon with Grid      | 0.30    | 0.18 |
| DS Ultra Low-E/Argon with Grid      | 0.30    | 0.19 |
| SS Clear Glass with SDL             | 0.48    | 0.46 |
| DS Clear Glass with SDL             | 0.49    | 0.45 |
| SS Low-E Glass with SDL             | 0.35    | 0.25 |
| DS Low-E Glass with SDL             | 0.36    | 0.25 |
| SS Low-E/Argon Glass with SDL       | 0.31    | 0.25 |
| DS Low-E/Argon Glass with SDL       | 0.32    | 0.25 |
| SS Ultra Low-E/Argon Glass with SDL | 0.30    | 0.18 |
| DS Ultra Low-E/Argon Glass with SDL | 0.30    | 0.19 |

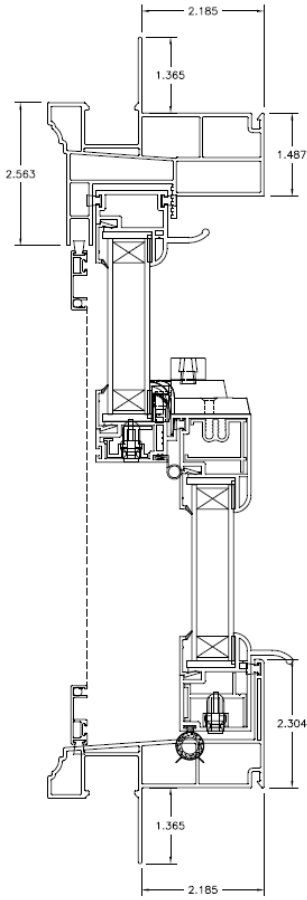
# SERIES 450/460 DOUBLE HUNG

| SERIES                           | 450/460 DH  |
|----------------------------------|---|
| VINYL WALL THICKNESS: FRAME/SASH | SASH = 0.070" (1.78MM)<br>FRAME = 0.065" (1.65MM) |
| GLASS THICKNESS                  | 0.750" (19.05MM)                                  |
| JAMB THICKNESS                   | 3.868" (98.25MM)                                  |
| FRAME WIDTH                      | 2.563" (65.10MM)                                  |
| NAILING FIN LENGTH               | 1.365" (34.67MM)                                  |
| NAIL FIN SETBACK                 | 2.185" (55.50MM)                                  |
| "J" CHANNEL DEPTH                | .750" (19.05MM)                                   |
| EGRESS WIDTH                     | (WW) - 4 3/4"                                     |
| EGRESS HEIGHT (WITH SASH)        | (WH/2) - 5 9/16"                                  |
| EGRESS HEIGHT (WITHOUT SASH)     | (WH/2) - 2 1/2"                                   |
| SASH DAYLIGHT OPENING WIDTH      | (WW) - 6 3/4"                                     |
| DAYLIGHT OPENING HEIGHT          | (WH/2) - 4 1/8"                                   |
| SCREEN WIDTH                     | (WW) - 4 7/16"                                    |
| SCREEN HEIGHT (HALF)             | (WH/2)  |
| SCREEN HEIGHT (FULL)             | (WH) - 3 5/16"                                    |
| <b>OPTIONS GLASS:</b>            |   |
| CLEAR (STANDARD)                 | •   |
| LOW-E WITH ARGON                 | •   |
| ULTRA LOW-E WITH ARGON           | •   |
| OBSCURE                          | •   |
| TEMPERED                         | •   |
| DOUBLE STRENGTH                  | •   |
| <b>OPTIONS GAS:</b>              |   |
| ARGON                            | •   |
| <b>AVAILABLE SPECIAL SHAPES:</b> |   |
| FULL ROUNDS                      | QUARTER ROUNDS                                    |
| HALF ROUNDS                      | ELLIPTICALS                                       |
| OCTAGONS                         | PENTAGONS   |
| TRAPEZOIDS                       | TRIANGLES   |
| HALF EYEBROWS                    | EYEBROWS  |
| COLONIAL ARCHES                  | COLONIAL FLANKERS                                 |
|                                  | COLONIAL ARCH FLANKERS                            |
| <b>COLOR:</b>                    |   |
| WHITE                            | •   |
| ALMOND                           | •   |
| CLAY                             | •   |

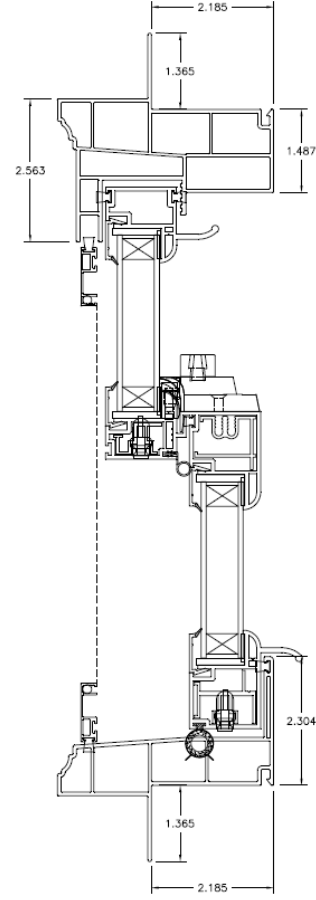
(WW) = WINDOW WIDTH  
(WH) = WINDOW HEIGHT

# SERIES 450/460 DOUBLE HUNG

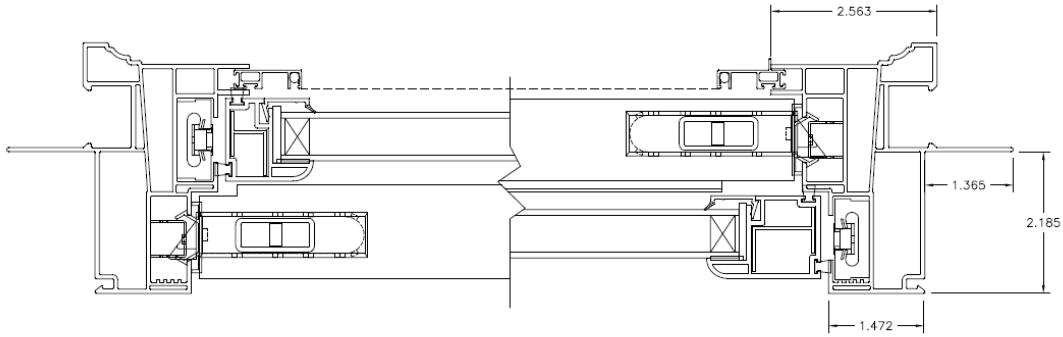
**Series 450 vertical diagram**



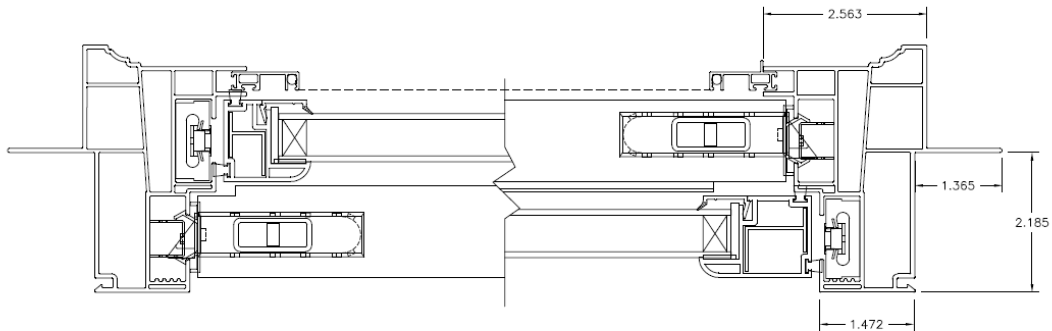
**Series 460 vertical diagram**



**Series 450 horizontal diagram**



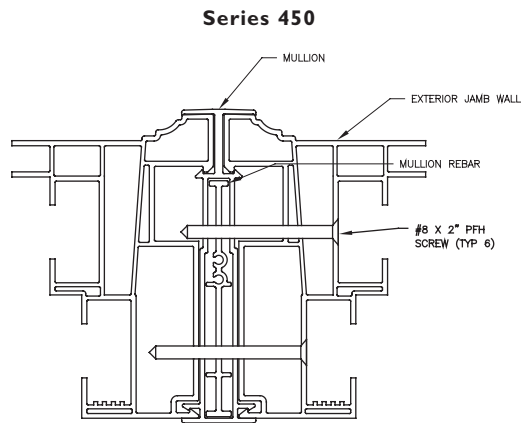
**Series 460 horizontal diagram**



## Mulled Units:

Factory mulling of twins, triples and special shapes provides easier installation without extra labor or material costs.

Steel reinforcement is offered as an option to meet higher wind load requirements.



## Recommended Rough Opening:

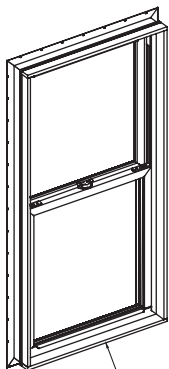
Width = Window Width (WW) + 1/2"

Height = Window Height (WH) + 1/2"

## Wood-Jamb Extension:

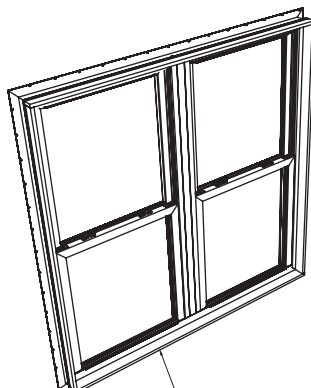
The interior wood-jamb extension is available in pre primed or stainable version for your convenience and ease of installation for a frame thickness of either 4 9/16" or 6 9/16".

**Series 450/460**



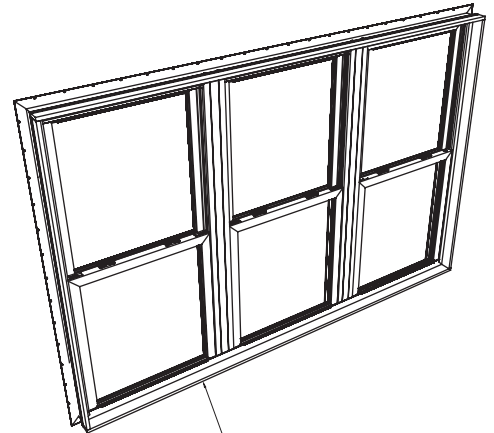
WOOD EXTENSION 2 3/8" X 5/8"  
OVERALL WALL THICKNESS = 4 9/16"

**Series 450/460 Twin**



WOOD EXTENSION 2 3/8" X 5/8"  
OVERALL WALL THICKNESS = 4 9/16"

**Series 450/460 Triple**



WOOD EXTENSION 2 3/8" X 5/8"  
OVERALL WALL THICKNESS = 4 9/16"

# SERIES 450/460 DOUBLE HUNG







































































































## Series 450/460 Double Hung Size Chart

SERIES 450/460 DOUBLE HUNG

\*Meets egress of: Clear operable area of  $\geq 5.7$  sq. ft.

Clear operable width of  $\geq 20$ "

Clear operable height of  $\geq 24$ "

| ROUGH OPENING | 20"  | 24"  | 28"  | 30"  | 32"   | 36"   | 38"   | 40"   | 44"   | 48"   |
|---------------|--|--|--|--|---|---|---|---|---|---|
| EXACT SIZE    | 19.5"  | 23.5"  | 27.5"  | 29.5"  | 31.5"   | 35.5"   | 37.5"   | 39.5"   | 43.5"   | 47.5"   |
| EGRESS WIDTH  | 14.75"   | 18.75"   | 22.75"   | 24.75"   | 26.75"  | 30.75"  | 32.75"  | 34.75"  | 38.75"  | 42.75"  |
| HEIGHT        |  |  |  |  |   |   |   |   |   |   |
| 36"           |  1830   |  2030   |  2430   |  2630   |  2830    |  3030    |   |   |   |   |
| 38"           |  1832   |  2032   |  2432   |  2632   |  2832    |  3032    |   |   |   |   |
| 44"           |  1838   |  2038   |  2438   |  2638   |  2838    |  3038    |   |   |   |   |
| 46"           |  18310  |  20310  |  24310  |  26310  |  28310   |  30310   |   |   |   |   |
| 48"           |  1840   |  2040   |  2440   |  2640   |  2840    |  3040    |  3240    |   |   |   |
| 50"           |  1842  |  2042  |  2442  |  2642  |  2842   |  3042   |  3242   |   |   |   |
| 52"           |  1844 |  2044 |  2444 |  2644 |  2844  |  3044  |  3244  |   |   |   |
| 54"           |  1846 |  2046 |  2446 |  2646 |  2846  |  3046  |  3246  |   |   |   |
| 60"           |  1850 |  2050 |  2450 |  2650 |  2850  |  3050  |  3250  |  3450* |  3850* |  4050* |
| 62"           |  1852 |  2052 |  2452 |  2652 |  2852  |  3052  |  3252* |  3452* |  3852* |  4052* |
| 66"           |  1856 |  2056 |  2456 |  2656 |  2856  |  3056* |  3256* |  3456* |  3856* |  4056* |
| 72"           |  1860 |  2060 |  2460 |  2660 |  2860  |  3060* |  3260* |  3460* |  3860* |  4060* |
| 74"           |  1862 |  2062 |  2462 |  2662 |  2862* |  3062* |  3262* |  3462* |  3862* |  4062* |



# SERIES 450/460 DOUBLE HUNG

## Series 450/460 Double Hung Egress Chart

### SERIES 450/460 DOUBLE HUNG DAYLIGHT OPENING SIZE CHART

| NOM. SIZE | WINDOW TOTAL DAYLIGHT<br>OPENING SQUARE FEET | EGRESS TOTAL<br>SQUARE FEET (WITH SASH) | NOM. SIZE | WINDOW TOTAL DAYLIGHT<br>OPENING SQUARE FEET | EGRESS TOTAL<br>SQUARE FEET (WITH SASH) |
|-----------|--|---|-----------|--|---|
| 1830      | 2.41   | 1.3                                     | 2830      | 4.68   | 2.3                                     |
| 1832      | 2.59   | 1.4                                     | 2832      | 5.03   | 2.5                                     |
| 1838      | 3.12   | 1.7                                     | 2838      | 6.06   | 3.0                                     |
| 18310     | 3.30   | 1.8                                     | 28310     | 6.40   | 3.2                                     |
| 1840      | 3.48   | 1.9                                     | 2840      | 6.75   | 3.4                                     |
| 1842      | 3.65   | 2.0                                     | 2842      | 7.09   | 3.6                                     |
| 1844      | 3.83   | 2.1                                     | 2844      | 7.43   | 3.8                                     |
| 1846      | 4.01   | 2.2                                     | 2846      | 7.78   | 3.9                                     |
| 1850      | 4.54   | 2.5                                     | 2850      | 8.81   | 4.5                                     |
| 1852      | 4.71   | 2.6                                     | 2852      | 9.15   | 4.7                                     |
| 1856      | 5.07   | 2.8                                     | 2856      | 9.84   | 5.1                                     |
| 1860      | 5.60   | 3.1                                     | 2860      | 10.87  | 5.6                                     |
| 1862      | 5.78   | 3.2                                     | 2862      | 11.21  | 5.8                                     |
| 2030      | 3.17   | 1.6                                     | 3030      | 5.44   | 2.6                                     |
| 2032      | 3.40   | 1.7                                     | 3032      | 5.84   | 2.8                                     |
| 2038      | 4.10   | 2.1                                     | 3038      | 7.04   | 3.5                                     |
| 20310     | 4.33   | 2.2                                     | 30310     | 7.44   | 3.7                                     |
| 2040      | 4.57   | 2.4                                     | 3040      | 7.84   | 3.9                                     |
| 2042      | 4.80   | 2.5                                     | 3042      | 8.24   | 4.1                                     |
| 2044      | 5.03   | 2.6                                     | 3044      | 8.63   | 4.3                                     |
| 2046      | 5.26   | 2.8                                     | 3046      | 9.03   | 4.5                                     |
| 2050      | 5.96   | 3.2                                     | 3050      | 10.23  | 5.2                                     |
| 2052      | 6.19   | 3.3                                     | 3052      | 10.63  | 5.4                                     |
| 2056      | 6.66   | 3.5                                     | 3056      | 11.43  | 5.8                                     |
| 2060      | 7.36   | 3.9                                     | 3060      | 12.63  | 6.5                                     |
| 2062      | 7.59   | 4.1                                     | 3062      | 13.03  | 6.7                                     |
| 2430      | 3.93   | 1.9                                     | 3240      | 8.38   | 4.1                                     |
| 2432      | 4.21   | 2.1                                     | 3242      | 8.81   | 4.4                                     |
| 2438      | 5.08   | 2.6                                     | 3244      | 9.24   | 4.6                                     |
| 24310     | 5.37   | 2.7                                     | 3246      | 9.66   | 4.8                                     |
| 2440      | 5.66   | 2.9                                     | 3250      | 10.94  | 5.5                                     |
| 2442      | 5.94   | 3.0                                     | 3252      | 11.37  | 5.7                                     |
| 2444      | 6.23   | 3.2                                     | 3256      | 12.23  | 6.2                                     |
| 2446      | 6.52   | 3.4                                     | 3260      | 13.51  | 6.9                                     |
| 2450      | 7.38   | 3.8                                     | 3262      | 13.93  | 7.1                                     |
| 2452      | 7.67   | 4.0                                     | 3450      | 11.66  | 5.8                                     |
| 2456      | 8.25   | 4.3                                     | 3452      | 12.11  | 6.1                                     |
| 2460      | 9.11   | 4.8                                     | 3456      | 13.02  | 6.6                                     |
| 2462      | 9.40   | 4.9                                     | 3460      | 14.38  | 7.3                                     |
| 2630      | 4.31   | 2.1                                     | 3462      | 14.84  | 7.5                                     |
| 2632      | 4.62   | 2.3                                     | 3850      | 13.08  | 6.5                                     |
| 2638      | 5.57   | 2.8                                     | 3852      | 13.59  | 6.8                                     |
| 26310     | 5.88   | 3.0                                     | 3856      | 14.61  | 7.3                                     |
| 2640      | 6.20   | 3.1                                     | 3860      | 16.14  | 8.1                                     |
| 2642      | 6.52   | 3.3                                     | 3862      | 16.65  | 8.4                                     |
| 2644      | 6.83   | 3.5                                     | 4050      | 14.17  | 7.2                                     |
| 2646      | 7.15   | 3.6                                     | 4052      | 14.72  | 7.5                                     |
| 2650      | 8.10   | 4.2                                     | 4056      | 15.83  | 8.1                                     |
| 2652      | 8.41   | 4.3                                     | 4060      | 17.49  | 9.0                                     |
| 2656      | 9.04   | 4.7                                     | 4062      | 18.46  | 9.3                                     |
| 2660      | 9.99   | 5.2                                     |           |  |   |
| 2662      | 10.31  | 5.4                                     |           |  |   |

# HORIZONTAL SLIDERS

| SERIES                           | 5700 2SL/3SL  | 130 2SL/3SL   | 151/161 2SL       | 451/461 2SL/3SL   |
|----------------------------------|---|---|-------------------|---|
| VINYL WALL THICKNESS             | 0.062"  | 0.060"  | 0.065"            | 0.065"  |
| GLASS THICKNESS                  | 0.750"  | 0.750"  | 0.750"            | 0.750"  |
| JAMB THICKNESS                   | 2.625"  | 3"  | 3.277"            | 3.868"  |
| FRAME WIDTH                      | 1.312"  | 2.485"  | 2.416"            | 2.865"  |
| NAILING FIN LENGTH               | 1.114"  | 1.500"  | 1.365"            | 1.365"  |
| NAIL FIN SETBACK                 | 1.375"  | 1.9375"   | 1.537"            | 2.185"  |
| "J" CHANNEL DEPTH                | N/A   | N/A   | .625"             | .75"  |
| SCREEN WIDTH                     | (WW/2) - .5625"<br>(WW/3) - .6825"<br>(1/3, 1/3, 1/3)<br>(WW/4) - .6875"<br>(1/4, 1/2, 1/4) | (WW/2) - 3.00"<br>(WW/3) - 2.5625"<br>(1/3, 1/3, 1/3)<br>(WW/4) - 3.125"<br>(1/4, 1/2, 1/4) | (WW/2) - 2 11/16" | (WW/2) - 2 1/8"<br>(1/3, 1/3, 1/3)<br>(WW*.3333) - 1 1/2"<br>(1/4, 1/2, 1/4)<br>(WW/4) - 1 3/8" |
| SCREEN HEIGHT                    | (WH) - 1.4375"  | (WH) - 3.875"   | (WH) - 3 7/8"     | (WH) - 4 1/4"   |
| <b>OPTIONS GLASS:</b>            |   |   |                   |   |
| CLEAR (STANDARD)                 | •   | •   | •                 | •   |
| LOW-E                            | •   | •   | •                 | •   |
| DOUBLE STRENGTH                  | •   | •   | •                 | •   |
| LOW-E WITH ARGON                 | •   | •   | •                 | •   |
| ULTRA LOW-E WITH ARGON           | •   | •   | •                 | •   |
| TEMPERED                         | •   | •   | •                 | •   |
| OBSCURE                          | •   | •   | •                 | •   |
| <b>OPTIONS GAS:</b>              |   |   |                   |   |
| ARGON                            | •   | •   | •                 | •   |
| <b>AVAILABLE SPECIAL SHAPES:</b> |   |   |                   |   |
| FULL ROUNDS                      | QUARTER ROUNDS  |   |                   |   |
| HALF ROUNDS                      | ELLIPTICALS   |   |                   |   |
| OCTAGONS                         | PENTAGONS   |   |                   |   |
| TRAPEZOIDS                       | TRIANGLES   |   |                   |   |
| HALF EYEBROWS                    | EYEBROWS  |   |                   |   |
| COLONIAL ARCHES                  | COLONIAL FLANKERS   |   |                   |   |
| OVALS                            | COLONIAL ARCH FLANKERS  |   |                   |   |
| <b>COLOR:</b>                    |   |   |                   |   |
| WHITE                            | •   | •   | •                 | •   |
| ALMOND                           | •   | •   | •                 | •   |
| CLAY                             | •   | •   | •                 | •   |

(WW) = WINDOW WIDTH  
(WH) = WINDOW HEIGHT

## Structural Performance

| SERIES/MODEL | TEST SIZE | AIR (cfm/ft <sub>2</sub> ) | WATER (psf) | UNIFORM LOAD | DESIGN PRESSURE |
|--------------|-----------|----------------------------|-------------|--------------|-----------------|
| 5700 2SL     | 72 x 72   | 0.17                       | 3.76        |              | HS-R20 72x72    |
| 130 2SL      | 74 x 63   | 0.10                       | 7.52        |              | HS-LC40 74x63   |
| 151/161 2SL  | 74 X 48   | 0.09                       | 4.50        | 45.00        | HS-R30 72x48    |
| 451/461 2SL  | 70 X 49   | 0.14                       | 3.75        | 37.50        | HS-R25 70x49    |
| 5700 3SL     | 96 x 60   | 0.06                       | 2.92        |              | HS-R20 96X60    |
| 130 3SL      | 108 X 63  | 0.08                       | 7.52        |              | HS-R30 108X63   |
| 151/161 3SL  | 108 X 60  | 0.09                       | 3.00        | 30.00        | HS-R25 108x48   |

# SERIES 5700 SLIDERS

## Features:

- 1 1/4" Nail-fin setback for brick veneer construction and select stucco applications
- Sweep lock helps provide a weather-tight seal and added security
- Versatile half screen\* installs easily from inside
- Multi-chambered vinyl lineals improve thermal performance and enhance sound absorbency
- Fusion-welded frame and sash minimizes water and air infiltration and enhances overall durability
- Metal reinforced meeting rail and sash rail provide added durability and enhanced security
- Limited lifetime warranty provides reassuring peace of mind
- Pre-punched integral nail-fin targets proper nail location for quick, easy installation
- Tandem wheel and axle roller assemblies ensure smooth, easy operation on even the largest sizes
- Multi-cavity vinyl lineals improve thermal performance and enhance sound absorbency
- DP Ratings:
  - R25 (window size tested 72" x 48")
  - R20 (window size tested 72" x 72")
  - R20 (window size tested 96" x 60") (XOX)
- Jamb depth: 2.625"

## Custom Options:

- Low-E Glass.
- Low-E Glass with Argon Gas.
- Ultra Low-E Glass with Argon Gas.
- 5/8" or 3/4" flat, 5/8" or 1" contoured, 5/8" contoured valance grids available.
- Custom sizes available.
- Paintable or stainable wood jamb extensions (4 9/16" and 6 9/16").

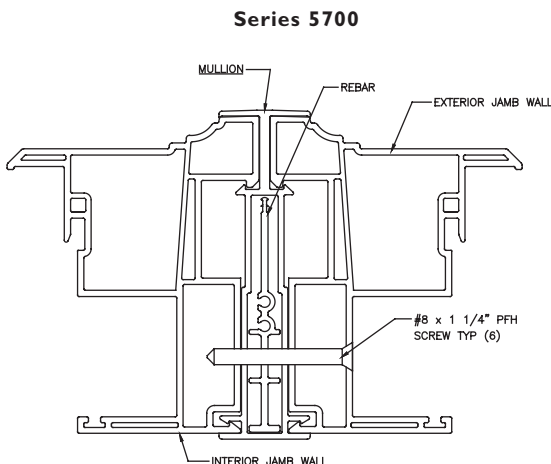
## Materials:

- Frame is maintenance free, color stabilized solid vinyl (PVC).
- The screen is comprised of roll formed aluminum frame and fiberglass mesh.
- Glazing method: Glazing tape.

## Mulled Units:

Factory mulling over a slider provides easier installation without extra labor or material costs.

Aluminum reinforcement is standard in factory mulled units.



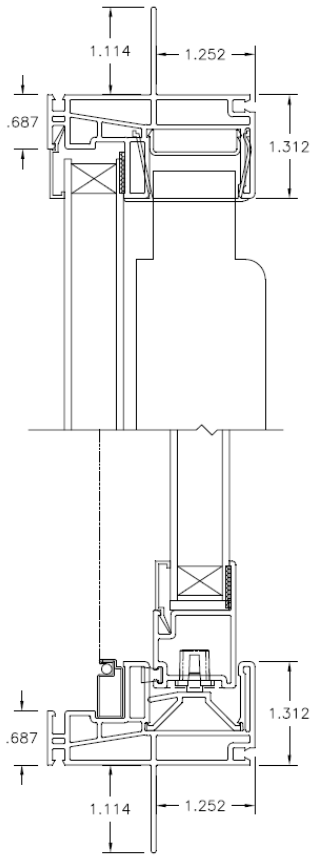
## Recommended Rough Opening:

Width = Window Width (WW) + 1/2"

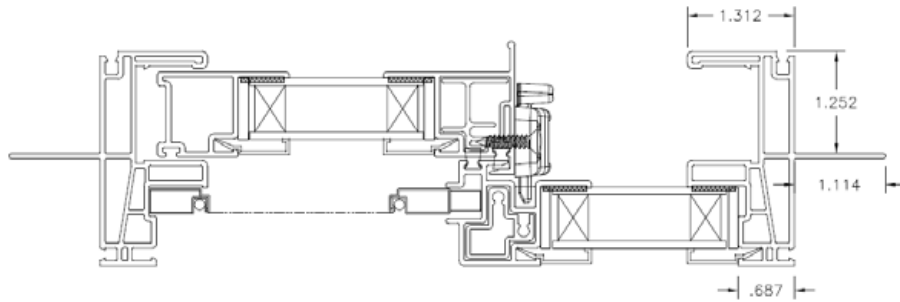
Height = Window Height (WH) + 1/2"

# SERIES 5700 SLIDERS

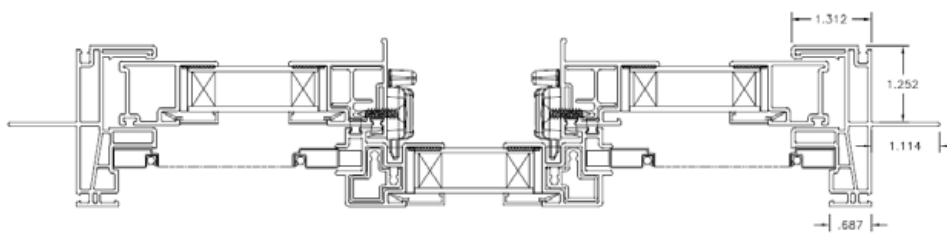
**Series 5700 HS vertical diagram**



**Series 5700 2-Lite horizontal diagram**



**Series 5700 3-Lite horizontal diagram**



## Features:

- DP 50 RATING (window size tested 74" x 50" for 2-Lite and 108" x 50" for 3-Lite).
- DP 40 Rating (window size tested 74" x 63" 2-Lite).
- DP 30 Rating (window size tested 108" x 63" 3-Lite).
- Step sill design combines water run-off and aesthetic features of a sloped sill with the structural strength and internal drainage system of a pocket sill.
- Tandem rollers ride easily along friction free channel.
- Aluminum half screen comes standard.\*
- Integrated glide rail for easy sash opening and closing.
- Warm-Edge spacer system provides energy saving thermal performance.
- Aluminum reinforcement standard in lock & meeting rails.
- Dual Sweep locks (standard at 27 1/4" and above) help provide a weather-tight seal and added security.
- Dual weather-stripping helps block air and water infiltration, keeping harsh elements outside and energy-saving comfort inside.
- Jamb depth: 3".
- Limited lifetime warranty.
- DP Ratings:  
R50 (window size tested 74" x 50")  
R40 (window size tested 74" x 63")  
R30 (window size tested 108" x 63") (XOX)

## Select from four frame types:

- Front Flange Only
- Nail Fin Only (no J-Channel)
- J-Channel (nail fin & front flange)
- Box Frame (no nail fin & no front flange)

## Custom Options:

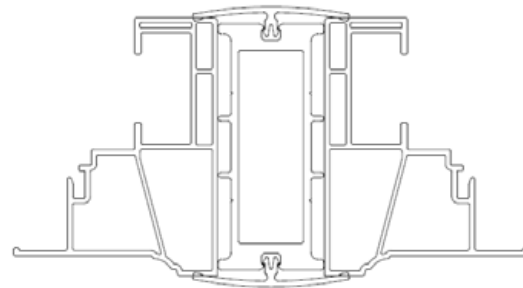
- Low-E Glass.
- Low-E Glass with Argon Gas.
- Ultra Low-E Glass with Argon Gas.
- 5/8" or 3/4" flat, 5/8" or 1" contoured and 1 1/8" Simulated Divide Lite (SDL) available
- Non-reflective Low-E Glass and Non-reflective Low-E Glass with Argon Gas.
- Double strength and obscure glass.
- Commodity sizing available.
- Custom sizes available.
- Charcoal Aluminum half screen.

## Materials:

- Frame is maintenance free, color stabilized solid vinyl (PVC).
- The screen is comprised of rolled form aluminum frame and fiberglass mesh.

## Mulled Units:

Series 130



## Recommended Rough Opening for Wood Frame Openings:

Width = Window Width (WW) + 1/2"

Height = Window Height (WH) + 1/2"

# SERIES 130 SLIDERS

## 130 2-Lite Sliders Egress Charts

SERIES 130 2-LITE SLIDER EGRESS CHART

| ROUGH OPENING | 24"   | 36"   | 40"   | 48"   | 60"   | 72"   |  |
|---------------|-------|-------|-------|-------|-------|-------|--|
| EXACT SIZE    | 23.5" | 35.5" | 39.5" | 47.5" | 59.5" | 71.5" |  |
| EGRESS WIDTH  | 8"    | 14"   | 16"   | 20"   | 26"   | 32"   |  |
| HEIGHT        | 24"   |       |       |       |       |       |  |
|               | 36"   |       |       |       |       |       |  |
|               | 48"   |       |       |       |       |       |  |
|               | 60"   |       |       |       |       |       |  |

SERIES 130 2-LITE SLIDER EGRESS CHART

| NOM. SIZE | EGRESS WITH SASH |
|-----------|------------------|
| 2020      | 1.03             |
| 2030      | 1.67             |
| 2040      | 2.36             |
| 3020      | 3.03             |
| 3030      | 1.80             |
| 3040      | 2.97             |
| 3050      | 4.13             |
| 3420      | 2.06             |
| 3430      | 3.39             |
| 3440      | 4.72             |
| 3450      | 6.06             |
| 4020      | 2.57             |
| 4030      | 4.24             |
| 4040      | 5.90             |
| 4050      | 7.57             |
| 5020      | 3.34             |
| 5030      | 5.51             |
| 5040      | 7.67             |
| 5050      | 9.89             |
| 6020      | 4.11             |
| 6030      | 6.78             |
| 6040      | 9.44             |
| 6050      | 12.11            |













SERIES 130 2-LITE SLIDER COMMODITY EGRESS CHART











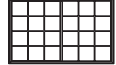

| Commodity Size | Tip to Tip Size | Exact Size      | With Sash       | Sq. Feet |
|----------------|-----------------|-----------------|-----------------|----------|
| 22             | 37 1/4 x 26 1/4 | 36 x 25         | 14 1/4 x 20     | 1.98     |
| 23             | 37 1/4 x 38 5/8 | 36 x 37 3/8     | 14 1/4 x 32 3/8 | 3.20     |
| 24             | 37 1/4 x 50 7/8 | 36 x 49 5/8     | 14 1/4 x 44 5/8 | 4.42     |
| DB22           | 74 1/4 x 26 1/4 | 73 x 25         | 32 3/4 x 20     | 4.55     |
| DB23           | 74 1/4 x 38 5/8 | 73 x 37 3/8     | 32 3/4 x 32 3/8 | 7.36     |
| DB24           | 74 1/4 x 50 7/8 | 73 x 49 5/8     | 32 3/4 x 44 5/8 | 10.15    |
| 32             | 53 3/8 x 26 1/4 | 52 1/8 x 25     | 22 1/3 x 20     | 3.10     |
| 33             | 53 3/8 x 38 5/8 | 52 1/8 x 37 3/8 | 22 1/3 x 32 3/8 | 5.02     |
| 34             | 53 3/8 x 50 7/8 | 52 1/8 x 49 5/8 | 22 1/3 x 44 5/8 | 6.91     |
| 1/32           | 26 3/4 x 26 1/4 | 25 1/2 x 25     | 9 x 20          | 1.25     |
| 1/33           | 26 3/4 x 38 5/8 | 25 1/2 x 37 3/8 | 9 x 32 3/8      | 2.02     |
| 1/34           | 26 3/4 x 50 7/8 | 25 1/2 x 49 5/8 | 9 x 44 5/8      | 2.79     |
| 3121           | 37 1/4 x 25 1/4 | 36 x 24         | 14 1/4 x 19     | 1.88     |
| 3131           | 37 1/4 x 37 1/4 | 36 x 36         | 14 1/4 x 31     | 3.07     |
| 3141           | 37 1/4 x 49 1/4 | 36 x 48         | 14 1/4 x 43     | 4.26     |
| 4121           | 49 1/4 x 25 1/4 | 48 x 24         | 20 1/4 x 19     | 2.67     |
| 4131           | 49 1/4 x 37 1/4 | 48 x 36         | 20 1/4 x 31     | 4.36     |
| 4141           | 49 1/4 x 49 1/4 | 48 x 48         | 20 1/4 x 43     | 6.05     |
| 5121           | 61 1/4 x 25 1/4 | 60 x 24         | 26 1/4 x 19     | 3.46     |
| 5131           | 61 1/4 x 37 1/4 | 60 x 36         | 26 1/4 x 31     | 5.65     |
| 5141           | 61 1/4 x 49 1/4 | 60 x 48         | 26 1/4 x 43     | 7.84     |
| 6121           | 73 1/4 x 25 1/4 | 72 x 24         | 32 1/4 x 19     | 4.26     |
| 6131           | 73 1/4 x 37 1/4 | 72 x 36         | 32 1/4 x 31     | 6.94     |
| 6141           | 73 1/4 x 49 1/4 | 72 x 48         | 32 1/4 x 43     | 9.63     |

# SERIES 130 SLIDERS

## 130 2-Lite Sliders Commodity Sizes Charts

### SERIES 130 2-LITE SLIDER

| MASONRY OPENING               | 37 3/4"   | 74 3/4"   | 53 7/8"   | 27 1/4"   |
|-------------------------------|---|---|---|---|
| TIP TO TIP                    | 37 1/4"   | 74 1/4"   | 53 3/8"   | 26 3/4"   |
| EXACT SIZE                    | 36"   | 73"   | 52 1/8"   | 25 1/2"   |
| 26"<br>26" 1/4"<br>25"        | <br>22 | <br>DB22 | <br>32 | <br>1/32 |
| 38 3/8"<br>38 5/8"<br>37 3/8" | <br>23 | <br>DB23 | <br>33 | <br>1/33 |
| 50 5/8"<br>50 7/8"<br>49 5/8" | <br>24 | <br>DB24 | <br>34 | <br>1/34 |

| MASONRY OPENING        | 37 3/4"  | 49 3/4"   | 61 3/4"   | 73 3/4"   |
|------------------------|--|---|---|---|
| TIP TO TIP             | 37 1/4"  | 49 1/4"   | 61 1/4"   | 73 1/4"   |
| EXACT SIZE             | 36"  | 48"   | 60"   | 72"   |
| 25"<br>25" 1/4"<br>24" | <br>3121 | <br>4121 | <br>5121 | <br>6121 |
| 37"<br>37 1/4"<br>36"  | <br>3131 | <br>4131 | <br>5131 | <br>6131 |
| 49"<br>49 1/4"<br>48"  | <br>3141 | <br>4141 | <br>5141 | <br>6141 |

### SERIES 130 2-LITE SLIDER

















| Commodity Size | Masonry Opening Size | Tip to Tip Size | Exact Size      |
|----------------|----------------------|-----------------|-----------------|
| 22             | 37 3/4 x 26          | 37 1/4 x 26 1/4 | 36 x 25         |
| 23             | 37 3/4 x 38 3/8      | 37 1/4 x 38 5/8 | 36 x 37 3/8     |
| 24             | 37 3/4 x 50 5/8      | 37 1/4 x 50 7/8 | 36 x 49 5/8     |
| DB22           | 74 3/4 x 26          | 74 1/4 x 26 1/4 | 73 x 25         |
| DB23           | 74 3/4 x 38 3/8      | 74 1/4 x 38 5/8 | 73 x 37 3/8     |
| DB24           | 74 3/4 x 50 5/8      | 74 1/4 x 50 7/8 | 73 x 49 5/8     |
| 32             | 53 7/8 x 26          | 53 3/8 x 26 1/4 | 52 1/8 x 25     |
| 33             | 53 7/8 x 38 3/8      | 53 3/8 x 38 5/8 | 52 1/8 x 37 3/8 |
| 34             | 53 7/8 x 50 5/8      | 53 3/8 x 50 7/8 | 52 1/8 x 49 5/8 |
| 1/32           | 27 1/4 x 26          | 26 3/4 x 26 1/4 | 25 1/2 x 25     |
| 1/33           | 27 1/4 x 38 3/8      | 26 3/4 x 38 5/8 | 25 1/2 x 37 3/8 |
| 1/34           | 27 1/4 x 50 5/8      | 26 3/4 x 50 7/8 | 25 1/2 x 49 5/8 |

| Commodity Size | Masonry Opening Size | Tip to Tip Size | Exact Size |
|----------------|----------------------|-----------------|------------|
| 3121           | 37 3/4 x 25          | 37 1/4 x 25 1/4 | 36 x 24    |
| 3131           | 37 3/4 x 37          | 37 1/4 x 37 1/4 | 36 x 36    |
| 3141           | 37 3/4 x 49          | 37 1/4 x 49 1/4 | 36 x 48    |
| 4121           | 49 3/4 x 25          | 49 1/4 x 25 1/4 | 48 x 24    |
| 4131           | 49 3/4 x 37          | 49 1/4 x 37 1/4 | 48 x 36    |
| 4141           | 49 3/4 x 49          | 49 1/4 x 49 1/4 | 48 x 48    |
| 5121           | 61 3/4 x 25          | 61 1/4 x 25 1/4 | 60 x 24    |
| 5131           | 61 3/4 x 37          | 61 1/4 x 37 1/4 | 60 x 36    |
| 5141           | 61 3/4 x 49          | 61 1/4 x 49 1/4 | 60 x 48    |
| 6121           | 73 3/4 x 25          | 73 1/4 x 25 1/4 | 72 x 24    |
| 6131           | 73 3/4 x 37          | 73 1/4 x 37 1/4 | 72 x 36    |
| 6141           | 73 3/4 x 49          | 73 1/4 x 49 1/4 | 72 x 48    |

# SERIES 130 SLIDERS

## 130 3-Lite Sliders Egress Charts

SERIES 130 3-LITE SLIDER EGRESS CHART

| ROUGH OPENING |   | 72"   | 84"   | 96"   | 108"  |
|---------------|---|---|---|---|---|
| EXACT SIZE    |   | 71.5"   | 83.5"   | 95.5"   | 107.5"  |
| EGRESS WIDTH  |   | 20.5"   | 24.5"   | 28.5"   | 32.5"   |
| HEIGHT        | 2.4"  |  |  |    |  |
|               | 3.6"  | 6020  | 7020  | 8020  | 9020  |
|               | 4.8"  |  |  |    |  |
|               | 6.0"  | 6030  | 7030  | 8030  | 9030  |
| 3.6"          |  |  |  |  |   |
| 4.8"          | 6040  | 7040  | 8040  | 9040  |   |
| 6.0"          |  |  |  |  |   |
| 7.2"          | 6050  | 7050  | 8050  | 9050  |   |

SERIES 130 3-LITE SLIDER EGRESS CHART

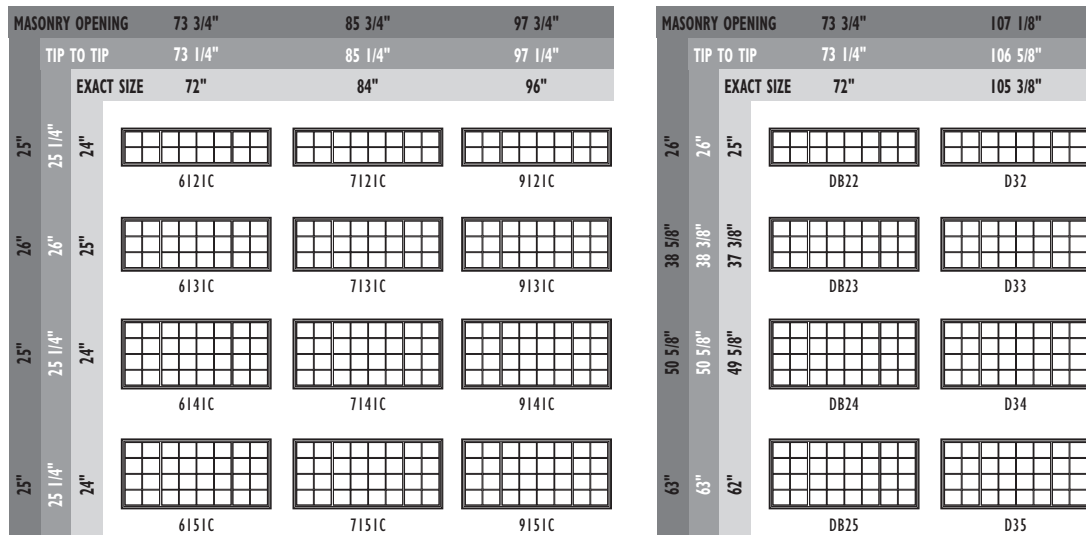
| NOM. SIZE | EGRESS WITH SASH | NOM. SIZE | EGRESS WITH SASH |
|-----------|------------------|-----------|------------------|
| 6020      | 2.64             | 8020      | 3.66             |
| 6030      | 4.22             | 8030      | 6.04             |
| 6040      | 6.06             | 8040      | 8.42             |
| 6050      | 7.77             | 8050      | 10.79            |
| 7020      | 3.15             | 9020      | 4.18             |
| 7030      | 5.19             | 9030      | 6.89             |
| 7040      | 7.24             | 9040      | 9.60             |
| 7050      | 9.28             | 9050      | 12.31            |



# SERIES 130 SLIDERS

## 130 3-Lite Sliders Commodity Size Charts

### SERIES 130 3-LITE SLIDER



### SERIES 130 3-LITE SLIDER

| Commodity Size | Masonry Opening Size | Tip to Tip Size | Exact Size  |
|----------------|----------------------|-----------------|-------------|
| 6121C          | 73 3/4 x 25          | 73 1/4 x 25 1/4 | 72 x 24     |
| 6131C          | 73 3/4 x 37          | 73 1/4 x 37 1/4 | 72 x 36     |
| 6141C          | 73 3/4 x 49          | 73 1/4 x 49 1/4 | 72 x 48     |
| 6151C          | 73 3/4 x 61          | 73 1/4 x 61 1/4 | 72 x 60     |
| DB22           | 74 3/4 x 26          | 74 1/4 x 26     | 73 x 25     |
| DB23           | 74 3/4 x 38 3/8      | 74 1/4 x 38 3/8 | 73 x 37 3/8 |
| DB24           | 74 3/4 x 50 5/8      | 74 1/4 x 50 5/8 | 73 x 49 5/8 |
| DB25           | 74 3/4 x 63          | 74 1/4 x 63     | 73 x 62     |
| 7121C          | 85 3/4 x 25          | 85 1/4 x 25 1/4 | 84 x 24     |
| 7131C          | 85 3/4 x 37          | 85 1/4 x 37 1/4 | 84 x 36     |
| 7141C          | 85 3/4 x 49          | 85 1/4 x 49 1/4 | 84 x 48     |
| 7151C          | 85 3/4 x 61          | 85 1/4 x 61 1/4 | 84 x 60     |

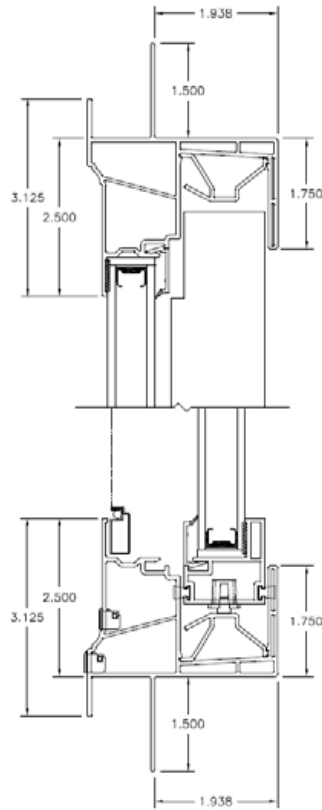
| Commodity Size | Masonry Opening Size | Tip to Tip Size  | Exact Size       |
|----------------|----------------------|------------------|------------------|
| 8121C          | 97 3/4 x 25          | 97 1/4 x 25 1/4  | 96 x 24          |
| 8131C          | 97 3/4 x 37          | 97 1/4 x 37 1/4  | 96 x 36          |
| 8141C          | 97 3/4 x 49          | 97 1/4 x 49 1/4  | 96 x 48          |
| 8151C          | 97 3/4 x 61          | 97 1/4 x 61 1/4  | 96 x 60          |
| D32            | 107 1/8 x 26         | 106 5/8 x 26     | 105 3/8 x 25     |
| D33            | 107 1/8 x 38 3/8     | 106 5/8 x 38 3/8 | 105 3/8 x 37 3/8 |
| D34            | 107 1/8 x 50 5/8     | 106 5/8 x 50 5/8 | 105 3/8 x 49 5/8 |
| D35            | 107 1/8 x 63         | 106 4/8 x 63     | 163 3/8 x 62     |
| 9121C          | 108 3/4 x 25         | 108 1/4 x 25 1/4 | 107 x 24         |
| 9131C          | 108 3/4 x 37         | 108 1/4 x 37 1/4 | 107 x 36         |
| 9141C          | 108 3/4 x 49         | 108 1/4 x 49 1/4 | 107 x 48         |
| 9151C          | 108 3/4 x 61         | 108 1/4 x 61 1/4 | 107 x 60         |

### SERIES 130 3-LITE SLIDER COMMODITY EGRESS CHART

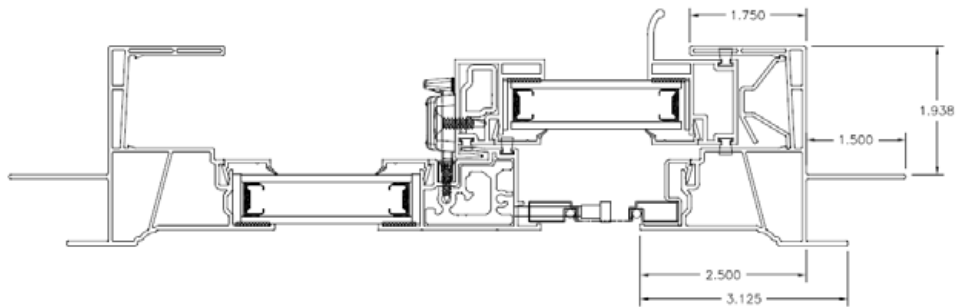
| Commodity Size | Tip to Tip Size  | Exact Size | 1/4, 1/2, 1/4 | Sq. Feet | 1/3, 1/3, 1/3 | Sq. Feet |
|----------------|------------------|------------|---------------|----------|---------------|----------|
| 6121C          | 73 1/4 x 25 1/4  | 72 x 24    | 14 2/16 x 19  | 1.86     | 20 6/8 x 19   | 2.73     |
| 6131C          | 73 1/4 x 37 1/4  | 72 x 36    | 14 2/16 x 31  | 3.04     | 20 6/8 x 31   | 4.45     |
| 6141C          | 73 1/4 x 49 1/4  | 72 x 48    | 14 2/16 x 43  | 4.22     | 20 6/8 x 43   | 6.18     |
| 6151C          | 73 1/4 x 61 1/4  | 72 x 60    | 14 2/16 x 55  | 5.39     | 20 6/8 x 55   | 7.90     |
| 7121C          | 85 1/4 x 25 1/4  | 84 x 24    | 17 2/16 x 19  | 2.26     | 24 6/8 x 19   | 3.26     |
| 7131C          | 85 1/4 x 37 1/4  | 84 x 36    | 17 2/16 x 31  | 3.69     | 24 6/8 x 31   | 5.31     |
| 7141C          | 85 1/4 x 49 1/4  | 84 x 48    | 17 2/16 x 43  | 5.11     | 24 6/8 x 43   | 7.37     |
| 7151C          | 85 1/4 x 61 1/4  | 84 x 60    | 17 2/16 x 55  | 6.54     | 24 6/8 x 55   | 9.43     |
| 8121C          | 97 1/4 x 25 1/4  | 96 x 24    | 20 2/16 x 19  | 2.66     | 28 6/8 x 19   | 3.79     |
| 8131C          | 97 1/4 x 37 1/4  | 96 x 36    | 20 2/16 x 31  | 4.33     | 28 6/8 x 31   | 6.18     |
| 8141C          | 97 1/4 x 49 1/4  | 96 x 48    | 20 2/16 x 43  | 6.01     | 28 6/8 x 43   | 8.57     |
| 8151C          | 97 1/4 x 61 1/4  | 96 x 60    | 20 2/16 x 55  | 7.69     | 28 6/8 x 55   | 10.96    |
| 9121C          | 108 1/4 x 25 1/4 | 107 x 24   | 22 14/16 x 19 | 3.02     | 32 1/4 x 19   | 4.27     |
| 9131C          | 108 1/4 x 37 1/4 | 107 x 36   | 22 14/16 x 31 | 4.92     | 32 1/4 x 31   | 6.97     |
| 9141C          | 108 1/4 x 49 1/4 | 107 x 48   | 22 14/16 x 43 | 6.83     | 32 1/4 x 43   | 9.66     |
| 9151C          | 108 1/4 x 61 1/4 | 107 x 60   | 22 14/16 x 55 | 8.74     | 32 1/4 x 55   | 12.36    |

# SERIES 130 SLIDERS

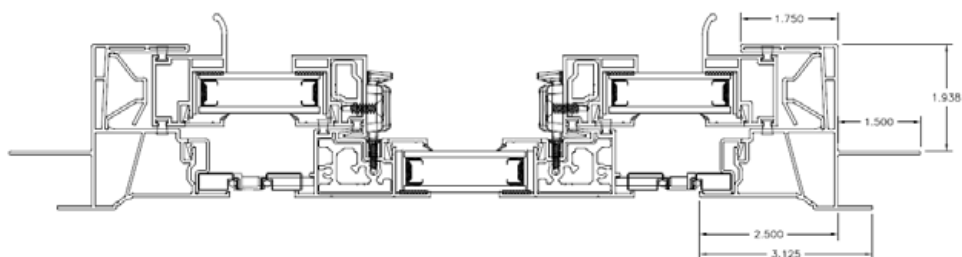
Series 130 HS vertical diagram



Series 130 horizontal diagram (OX)

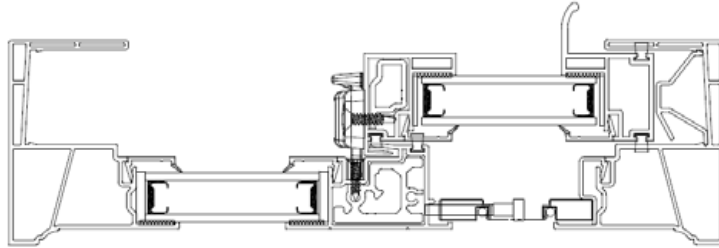


Series 130 horizontal diagram (XOX)

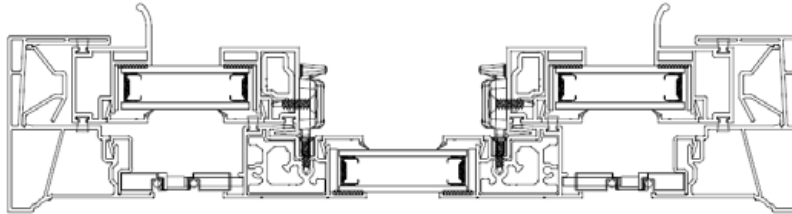


# SERIES 130 SLIDERS

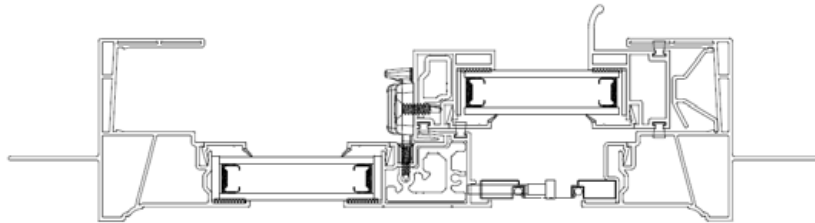
**Series 130 HS horizontal diagram (OX) Box**



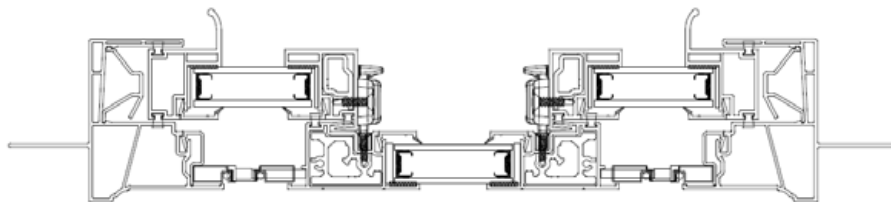
**Series 130 HS horizontal diagram (XOX) Box**



**Series 130 HS horizontal diagram (OX) Fin Only**



**Series 130 HS horizontal diagram (XOX) Fin Only**



## Features:

- Cam locks are standard.
- Double locks are featured on all windows measuring more than 27 1/4" in height.
- Integrated J-channel assists in the installation of vinyl siding for the Series 151. The Series 161 does not have a J-channel.
- Pre Punched nailing fin allows for faster installation.
- Half screen is standard.
- DP Ratings:  
R30 (window size tested 72" x 48")  
R25 (window size tested 108" x 60") (XOX)

## Custom Options:

- Low-E Glass and Argon Gas
- Ultra Low-E Argon.
- 5/8" or 1" contoured, 5/8" or 3/4" flat, 1 1/8" Simulated Divided Lite (SDL) grids.
- Factory mulling of twins, triples and architectural shapes.
- Wood jamb extensions (pre-primed or stainable 4 9/16" and 6 9/16").

## Materials:

- Frame is maintenance free, color stabilized solid vinyl (PVC).
- The screen is comprised of roll formed aluminum frame and fiberglass mesh.
- Glazing method: Glazing tape.

## Mulled Units:

Factory mulling over a slider provides easier installation without extra labor or material costs.

Aluminum reinforcement is standard in factory mulled units.

## Window Construction:

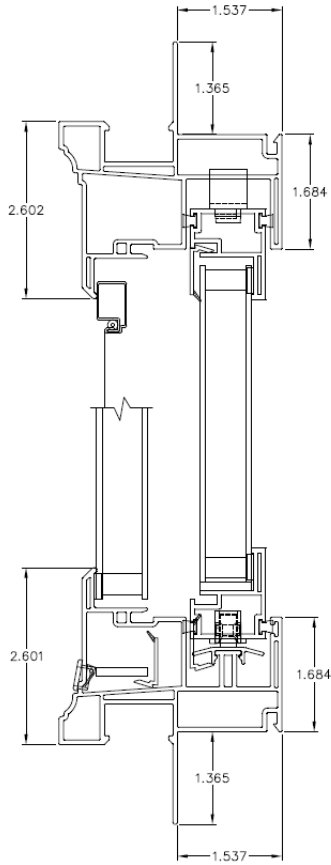
Frame and sashes are fusion welded to protect against air and water infiltration. Fusion adds strength and squareness to the window.

## Wood-Jamb Extension:

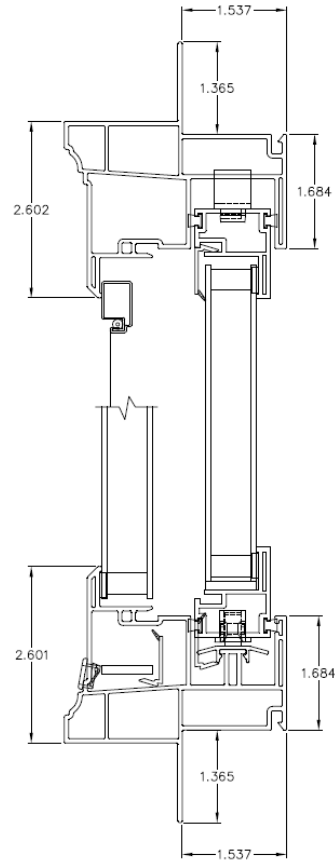
The interior wood-jamb extension is available in pre primed or stainable version for your convenience and ease of installation for a frame thickness of either 4 9/16" or 6 9/16".

# SERIES 151/161 SLIDERS

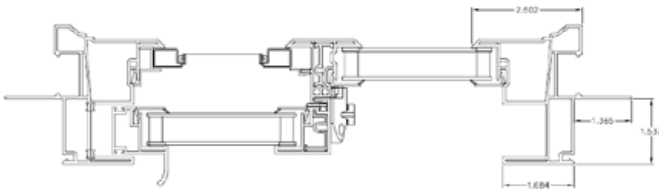
**Series 151 2-Lite and 3-Lite  
vertical diagram**



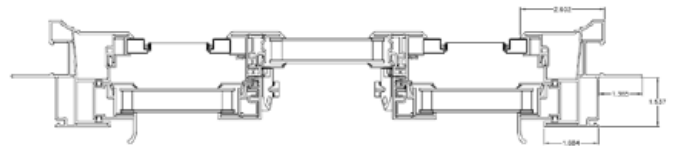
**Series 161 2-Lite and 3-Lite  
vertical diagram**



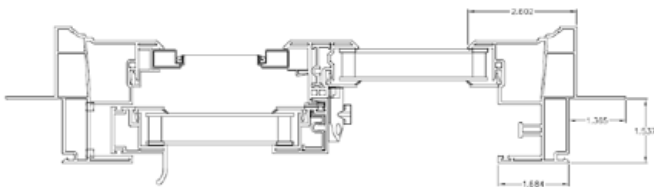
**Series 151 2-Lite  
horizontal diagram**



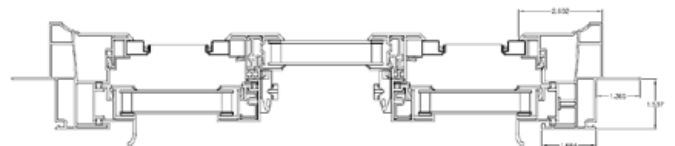
**Series 151 3-Lite  
horizontal diagram**



**Series 161 2-Lite  
horizontal diagram**
































**Series 161 3-Lite  
horizontal diagram**



# SERIES 151/161 SLIDERS

## Series 151/161 2-Lite Sliders Egress Charts

SERIES 151/161 2-LITE SLIDER EGRESS CHART

| ROUGH OPENING |       | 24"     | 36"  | 48"   | 60"   | 72"  |   |
|---------------|-------|---------|--|---|---|--|---|
| EXACT SIZE    |       | 23.5"   | 35.5"  | 47.5"   | 59.5"   | 71.5"  |   |
| EGRESS WIDTH  |       | 7.75"   | 13.75"   | 19.75"  | 25.75"  | 31.75"   |   |
| HEIGHT        |       |         |  |   |   |  |   |
| 24"           | 23.5" | 18.625" |   |    |    |    |    |
|               |       |         | 2020   | 3020  | 4020  | 5020   | 6020  |
| 36"           | 35.5" | 30.625" |   |    |    |    |    |
|               |       |         | 2030   | 3030  | 4030  | 5030   | 6030  |
| 40"           | 39.5" | 34.625" |   |    |    |    |    |
|               |       |         | 2034   | 3034  | 4034  | 5034   | 6034  |
| 42"           | 41.5" | 36.625" |   |    |    |    |    |
|               |       |         | 2036   | 3036  | 4036  | 5036   | 6036  |
| 48"           | 47.5" | 42.625" |  |   |   |   |   |
|               |       |         | 2040   | 3040  | 4040  | 5040   | 6040  |
| 60"           | 59.5" | 57.625" |  |  |  |  |  |
|               |       |         |  | 3050  | 4050  | 5050   | 6050  |

SERIES 151/161 2-LITE SLIDER EGRESS CHART

| NOM. SIZE | EGRESS WITH SASH | NOM. SIZE | EGRESS WITH SASH |
|-----------|------------------|-----------|------------------|
| 2020      | 1.0              | 5020      | 3.4              |
| 2030      | 1.7              | 5030      | 5.5              |
| 2034      | 1.9              | 5034      | 6.3              |
| 2036      | 2.0              | 5036      | 6.6              |
| 2040      | 2.4              | 5040      | 7.7              |
| 3020      | 1.8              | 5050      | 9.9              |
| 3030      | 3.0              | 6020      | 4.1              |
| 3034      | 3.4              | 6030      | 6.8              |
| 3036      | 3.6              | 6034      | 7.7              |
| 3040      | 4.1              | 6036      | 8.1              |
| 3050      | 5.3              | 6040      | 9.5              |
| 4020      | 2.6              | 6050      | 12.1             |
| 4030      | 4.3              |           |                  |
| 4034      | 4.8              |           |                  |
| 4036      | 5.1              |           |                  |
| 4040      | 5.9              |           |                  |
| 4050      | 7.6              |           |                  |

# SERIES 151/161 SLIDERS

## Series 151/161 3-Lite Sliders Egress Charts

SERIES 151/161 3-LITE SLIDER EGRESS CHART

| ROUGH OPENING |       | 72"    | 84"    | 96"    | 108"   |
|---------------|-------|--------|--------|--------|--------|
| EXACT SIZE    |       | 71.5"  | 83.5"  | 95.5"  | 107.5" |
| EGRESS WIDTH  |       | 15.63" | 18.63" | 21.63" | 24.63" |
| HEIGHT        | 36"   |        |        |        |        |
|               | 35.5" | 6030   | 7030   | 8030   | 9030   |
|               | 40"   |        |        |        |        |
|               | 39.5" | 6034   | 7034   | 8034   | 9034   |
|               | 42"   |        |        |        |        |
| 41.5"         | 6036  | 7036   | 8036   | 9036   |        |
| 48"           |       |        |        |        |        |
| 47.5"         | 6040  | 7040   | 8040   | 9040   |        |
| 60"           |       |        |        |        |        |
| 59.5"         | 6050  | 7050   | 8050   |        |        |
| 54.63"        |       |        |        |        |        |

SERIES 151/161 3-LITE SLIDER EGRESS CHART

| NOM. SIZE | EGRESS WITH SASH | NOM. SIZE | EGRESS WITH SASH |
|-----------|------------------|-----------|------------------|
| 6030      | 4.22             | 8030      | 5.92             |
| 6034      | 4.77             | 8034      | 6.69             |
| 6036      | 5.04             | 8036      | 7.08             |
| 6040      | 5.87             | 8040      | 8.24             |
| 6050      | 7.52             | 8050      | 10.56            |
| 7030      | 5.07             | 9030      | 6.77             |
| 7034      | 5.73             | 9034      | 7.65             |
| 7036      | 6.06             | 9036      | 8.10             |
| 7040      | 7.05             | 9040      | 9.42             |
| 7050      | 9.04             |           |                  |

## Features:

- Double locks are featured on all windows measuring more than 27 1/4" in height.
- There are heavy duty lift rails on each sash.
- Half screen is standard. Full screens are options.
- Integrated J-channel assists in installation of vinyl siding for the Series 451. The Series 461 does not have a J-channel.
- DP Ratings:  
R25 (window size tested 70" x 49")  
R25 (window size tested 96" x 48") (XOX)

## Custom Options:

- Low-E Glass and Argon Gas
- Ultra Low-E Argon.
- 5/8" or 1" contoured, 5/8" or 3/4" flat grid or 1 1/8" Simulated Divided Lite.
- Factory mulling of twins, triples and architectural shapes.
- Wood jamb extensions (pre-primed or stainable 4 9/16" and 6 9/16").
- 3 1/4" Flat Casing with Bull Nose.

## Materials:

- Frame and sash is maintenance free, color stabilized solid vinyl (PVC).
- All lock rails contain aluminum rebar for additional strength.
- The screen is comprised of an extruded aluminum frame and fiberglass mesh.
- Glazing method: Glazing tape.

## Mulled Units:

Factory mulling over a slider provides easier installation without extra labor or material costs.

## Window Construction:

Frame and sashes are fusion welded to protect against air and water infiltration. Fusion adds strength and squareness to the window.

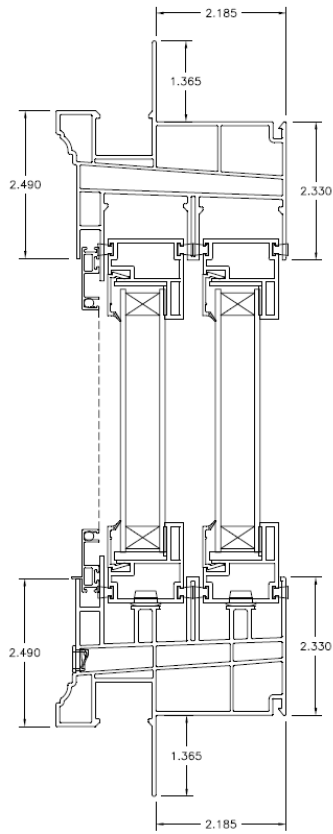
## Wood-Jamb Extension:

The interior wood-jamb extension is available in pre primed or stainable version for your convenience and ease of installation for a frame thickness of either 4 9/16" or 6 9/16".

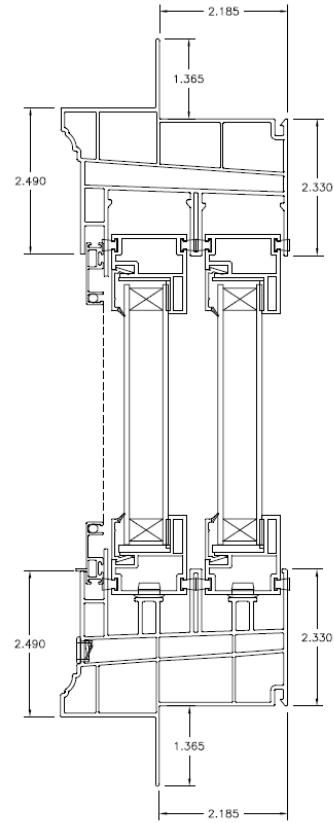


# SERIES 451/461 SLIDERS

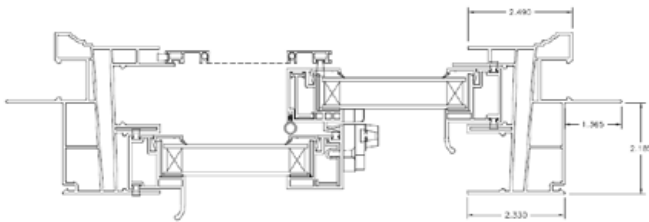
**Series 45I 2SL 2-Lite and 3SL 3-Lite  
vertical diagram**



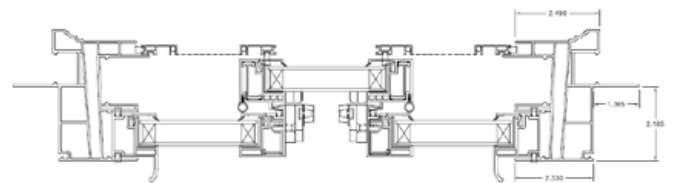
**Series 46I 2SL 2-Lite and 3SL 3-Lite  
vertical diagram**



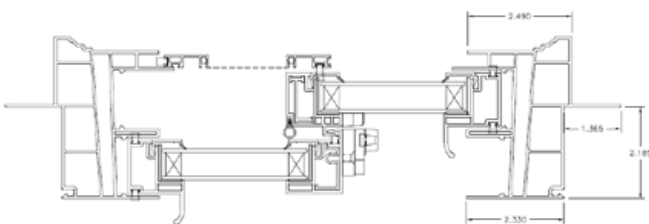
**Series 45I 2-Lite horizontal diagram**



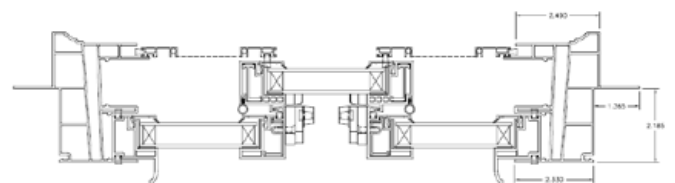
**Series 45I 3-Lite horizontal diagram**



**Series 46I 2-Lite horizontal diagram**


































**Series 46I 3-Lite horizontal diagram**



# SERIES 451/461 SLIDERS

## Series 451/461 2-Lite Slider Egress Charts

SERIES 451/461 2-LITE SLIDER EGRESS CHART

| ROUGH OPENING |       | 24"  | 36"  | 48"  | 60"  |
|---------------|-------|--|--|--|--|
| EXACT SIZE    |       | 23.5"  | 35.5"  | 47.5"  | 59.5"  |
| EGRESS WIDTH  |       | 6.1875"  | 12.1875"   | 18.1875"   | 24.1875"   |
| HEIGHT        |       |  |  |  |  |
| 32"           | 31.5" |  2028   |  3028   |  4028   |  5028   |
| 38"           | 37.5" |  2032   |  3032   |  4032   |  5032   |
| 40"           | 39.5" |  2034   |  3034   |  4034   |  5034   |
| 42"           | 41.5" |  2036   |  3036   |  4036   |  5036   |
| 46"           | 45.5" |  20310  |  30310  |  40310  |  50310  |
| 50"           | 49.5" |  2042 |  3042 |  4042 |  5042 |
| 54"           | 53.5" |  2046 |  3046 |  4046 |  5046 |
| 62"           | 61.5" |  |  3052 |  4052 |  5052 |

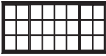




















SERIES 451/461 2-LITE SLIDER EGRESS CHART

| NOM. SIZE | EGRESS WITH SASH | NOM. SIZE | EGRESS WITH SASH |
|-----------|------------------|-----------|------------------|
| 2028      | 1.1              | 4028      | 3.3              |
| 2032      | 1.4              | 4032      | 4.1              |
| 2034      | 1.5              | 4034      | 4.3              |
| 2036      | 1.6              | 4036      | 4.6              |
| 20310     | 1.7              | 40310     | 5.1              |
| 2042      | 1.9              | 4042      | 5.6              |
| 2046      | 2.1              | 4046      | 6.1              |
| 3028      | 2.2              | 4052      | 7.1              |
| 3032      | 2.7              | 5028      | 4.4              |
| 3034      | 2.9              | 5032      | 5.4              |
| 3036      | 3.1              | 5034      | 5.7              |
| 30310     | 3.4              | 5036      | 6.1              |
| 3042      | 3.7              | 50310     | 6.7              |
| 3046      | 4.1              | 5042      | 7.4              |
| 3052      | 4.8              | 5046      | 8.1              |
|           |                  | 5052      | 9.4              |

# SERIES 451/461 SLIDERS

## Series 451/461 3-Lite Slider Egress Charts

SERIES 451/461 3-LITE SLIDER EGRESS CHART

| ROUGH OPENING |         | 72"   | 84"   | 96"  | 108"  |
|---------------|---------|---|---|--|---|
| EXACT SIZE    |         | 71.5"   | 83.5"   | 95.5"  | 107.5"  |
| EGRESS WIDTH  |         | 15.625"   | 18.625"   | 21.625"  | 24.625"   |
| HEIGHT        |         |   |   |  |   |
| 32"           | 31.5"   | <br>6028   | <br>7028   |  |   |
| 38"           | 37.5"   | <br>6032   | <br>7032   |  |   |
| 40"           | 39.5"   | <br>6034   | <br>7034   |  |   |
| 42"           | 41.5"   | <br>6036   | <br>7036   |  |   |
| 46"           | 45.5"   | <br>60310  | <br>70310  |  |   |
| 50"           | 49.5"   | <br>6042 | <br>7042 | <br>8042 | <br>9042 |
| 54"           | 53.5"   | <br>6046 | <br>7046 | <br>8046 |   |
| 62"           | 61.5"   | <br>6052 | <br>7052 | <br>8052 |   |
| 74"           | 68.125" | <br>6062 |   |  |   |

SERIES 451/461 3-LITE SLIDER EGRESS CHART

| NOM. SIZE | EGRESS WITH SASH | NOM. SIZE | EGRESS WITH SASH |
|-----------|------------------|-----------|------------------|
| 6028      | 2.8              | 7028      | 3.3              |
| 6032      | 3.4              | 7032      | 4.1              |
| 6034      | 3.6              | 7034      | 4.3              |
| 6036      | 3.8              | 7036      | 4.6              |
| 60310     | 4.3              | 70310     | 5.1              |
| 6042      | 4.7              | 7042      | 5.6              |
| 6046      | 5.1              | 7046      | 6.1              |
| 6052      | 6.0              | 7052      | 7.1              |
| 6062      | 7.2              | 8042      | 6.6              |
|           |                  | 8046      | 7.1              |
|           |                  | 8052      | 8.3              |
|           |                  | 9042      | 7.5              |

## Features:

- Brick mould exterior frame design.
- Collapsible handle folds into assembly cover.
- Superb design and engineering help prevent air and water infiltration.
- Fusion-welded frame and sash ensure weathertight performance.
- Full-perimeter double weather stripping adds extra tightness.
- Narrow profile permits expanded viewing area.
- Concealed hinges and hardware let you open window 90 degrees, for better ventilation and easier cleaning.
- Full screens come standard; mount on interior; remove for easy cleaning.
- Tandem locks come standard on all casements over 32" in height.
- Right or left hinges are available (looking from outside to inside).
- Integrated nailing fin permits easy installation.
- White is standard.
- DP Rating 55  
(window size tested 36" x 72")

## Custom Options:

- Low-E Glass and Argon Gas
- Ultra Low-E Argon.
- 5/8" or 1" contoured, 5/8" or 3/4" flat, 5/8" contoured valance and 1 1/8" Simulated Divided Lite (SDL) grids.
- Almond or Clay colors are an option.
- 8 Painted Exterior Colors (white interior only).
- Special shapes are available.
- Factory mulling available for your convenience and ease of installation.
- Egress Hinge to allow larger area of egress.
- Wood jamb extensions (pre-primed or stainable 4 9/16" and 6 9/16").
- 2" Simulated Meeting Rail.

## Materials:

- Frame and sash are maintenance free, color stabilized solid vinyl (PVC).
- The screen is comprised of an extruded aluminum frame and fiber glass mesh.
- Glazing method: Silicone caulk.

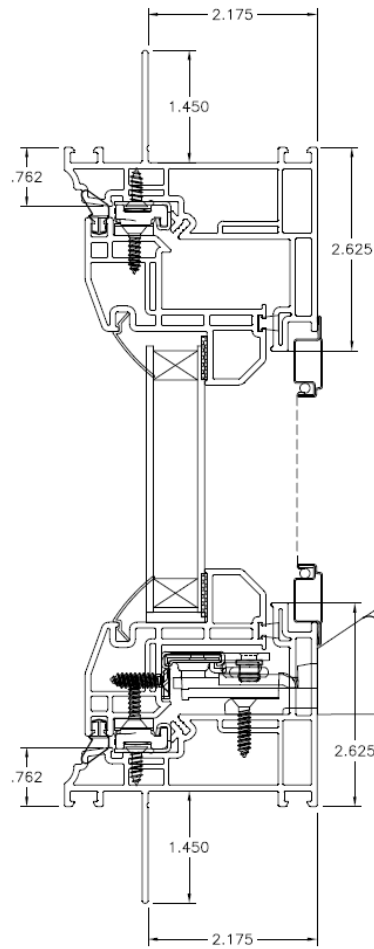
# CASEMENT WINDOWS

| SERIES                           | 750 ILT Single         |
|----------------------------------|------------------------|
| VINYL WALL THICKNESS             | 0.075" (1.91MM)        |
| GLASS THICKNESS                  | 0.750" (19.05MM)       |
| JAMB THICKNESS                   | 3.250" (82.55MM)       |
| FRAME WIDTH (INTERIOR)           | 2.625" (66.68MM)       |
| FRAME WIDTH (EXTERIOR)           | 0.762" (19.35MM)       |
| NAILING FIN SETBACK              | 2.175" (55.25MM)       |
| NAILING FIN LENGTH               | 1.25" (31.75MM)        |
| EGRESS WIDTH (REGULAR HINGE)     | (WW) - 11 3/4"         |
| EGRESS WIDTH (EGRESS HINGE)      | (WW) - 7 1/4"          |
| EGRESS HEIGHT                    | (WH) - 5 3/16"         |
| DAYLIGHT OPENING WIDTH           | (WW) - 6 1/8"          |
| DAYLIGHT OPENING HEIGHT          | (WH) - 6 1/8"          |
| SCREEN WIDTH                     | (WW) - 4 1/4"          |
| SCREEN HEIGHT                    | (WH) - 4 1/4"          |
| <b>OPTIONS GLASS:</b>            |                        |
| CLEAR (STANDARD)                 | •                      |
| LOW-E WITH ARGON                 | •                      |
| ULTRA LOW-E WITH ARGON           | •                      |
| OBSCURE                          | •                      |
| TEMPERED                         | •                      |
| DOUBLE STRENGTH                  | •                      |
| <b>OPTIONS GAS:</b>              |                        |
| ARGON                            | •                      |
| <b>AVAILABLE SPECIAL SHAPES:</b> |                        |
| FULL ROUNDS                      | QUARTER ROUNDS         |
| HALF ROUNDS                      | ELLIPTICALS            |
| OCTAGONS                         | PENTAGONS              |
| TRAPEZOIDS                       | TRIANGLES              |
| HALF EYEBROWS                    | EYEBROWS               |
| COLONIAL ARCHES                  | COLONIAL FLANKERS      |
|                                  | COLONIAL ARCH FLANKERS |
| <b>COLOR:</b>                    |                        |
| WHITE                            | •                      |
| ALMOND                           | •                      |
| CLAY                             | •                      |

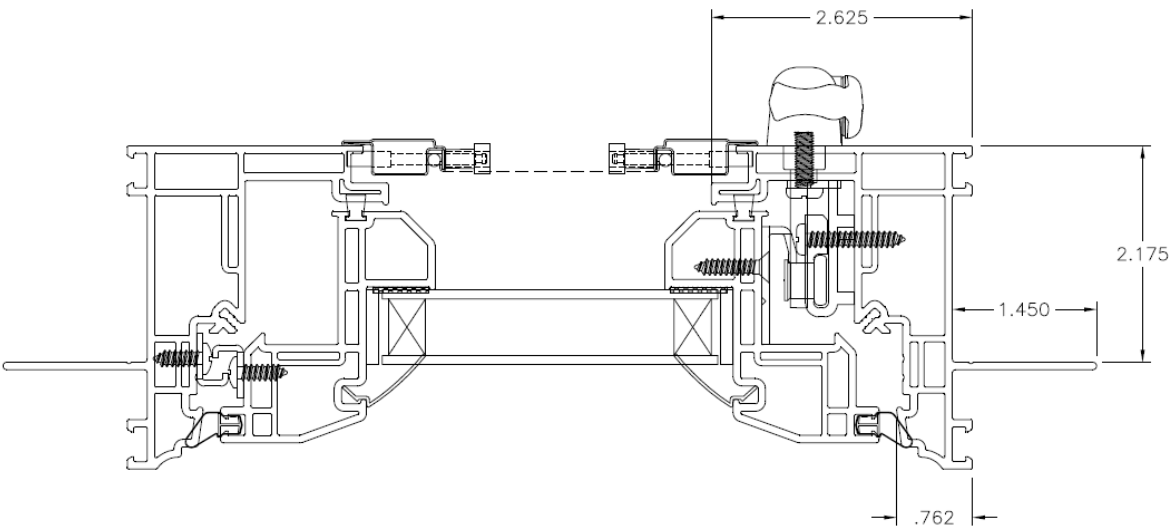
(WW) = WINDOW WIDTH  
(WH) = WINDOW HEIGHT

# CASEMENT WINDOWS

Series 750 vertical diagram



Series 750 horizontal diagram



# CASEMENT WINDOWS

## 750 I-Lite Single Casement Size Chart

### SERIES 750 I-LITE SINGLE CASEMENT GRID CHART

| ROUGH OPENING | 18"   | 20"   | 24"   | 28"   | 30"   | 32"   | 36"   |
|---------------|-------|-------|-------|-------|-------|-------|-------|
| EXACT SIZE    | 17.5" | 19.5" | 23.5" | 27.5" | 29.5" | 31.5" | 35.5" |
| 24"           | 1620  | 1820  | 2020  | 2420  |       | 2820  | 3020  |
| 36"           | 1630  | 1830  | 2030  | 2430  |       | 2830  | 3030  |
| 42"           | 1636  | 1836  | 2036  | 2436  |       | 2836  | 3036  |
| 48"           | 1640  | 1840  | 2040  | 2440  | 2640  | 2840  | 3040  |
| 54"           | 1646  | 1846  | 2046  | 2446  | 2646  | 2846  | 3046  |
| 60"           | 1650  | 1850  | 2050  | 2450  | 2650  | 2850  | 3050  |
| 66"           | 1656  | 1856  | 2056  | 2456  | 2656  | 2856  | 3056  |
| 68"           | 1658  | 1858  | 2058  | 2458  |       |       |       |

## 750 I-Lite Single Casement Egress Chart

### SERIES 750 I-LITE SINGLE CASEMENT EGRESS CHART (WITH STANDARD HARDWARE)






































Egress hardware available.

| NOM. SIZE | OPENING SQUARE FEET | NOM. SIZE | OPENING SQUARE FEET | NOM. SIZE | OPENING SQUARE FEET |
|-----------|---------------------|-----------|---------------------|-----------|---------------------|
| 1620      | N/A                 | 2046      | N/A                 | 2846      | 6.6                 |
| 1630      | N/A                 | 2050      | N/A                 | 2850      | 7.5                 |
| 1636      | N/A                 | 2056      | N/A                 | 2856      | 8.3                 |
| 1640      | N/A                 | 2058      | N/A                 | 3020      | 3.0                 |
| 1646      | N/A                 | 2420      | 2.0                 | 3030      | 5.0                 |
| 1650      | N/A                 | 2430      | 3.3                 | 3036      | 6.0                 |
| 1656      | N/A                 | 2436      | 4.0                 | 3040      | 7.0                 |
| 1658      | N/A                 | 2440      | 4.6                 | 3046      | 8.0                 |
| 1820      | N/A                 | 2446      | 5.3                 | 3050      | 9.0                 |
| 1830      | N/A                 | 2450      | 6.0                 | 3056      | 11.0                |
| 1836      | N/A                 | 2456      | 6.6                 |           |                     |
| 1840      | N/A                 | 2458      | 6.8                 |           |                     |
| 1846      | N/A                 | 2640      | 5.2                 |           |                     |
| 1850      | N/A                 | 2646      | 6.0                 |           |                     |
| 1856      | N/A                 | 2650      | 6.7                 |           |                     |
| 1858      | N/A                 | 2656      | 7.4                 |           |                     |
| 2020      | N/A                 | 2820      | 2.5                 |           |                     |
| 2030      | N/A                 | 2830      | 4.2                 |           |                     |
| 2036      | N/A                 | 2836      | 5.0                 |           |                     |
| 2040      | N/A                 | 2840      | 5.8                 |           |                     |

# CASEMENT WINDOWS

## 750 2-Lite Twin Casement Size Chart

### SERIES 750 2-LITE TWIN CASEMENT GRID CHART

| ROUGH OPENING  |  | 36"   | 42"   | 48"   | 56"  | 60"   |
|--|--|---|---|---|--|---|
| EXACT SIZE   |  | 35.5"   | 41.5"   | 47.5"   | 55.5"  | 59.5"   |
| 24"<br>23.5"<br>36"<br>35.5"<br>42"<br>41.5"<br>48"<br>47.5"<br>54"<br>53.5"<br>60"<br>59.5"<br>66"<br>65.5"<br>68"<br>67.5" |  | <br>3020   | <br>3620   | <br>4020   |  | <br>5020   |
|  |  | <br>3030   | <br>3630   | <br>4030   |  | <br>5030   |
|  |  | <br>3036   | <br>3636   | <br>4036   |  | <br>5036   |
|  |  | <br>3040   | <br>3640   | <br>4040   | <br>4840   | <br>5040   |
|  |  | <br>3046   | <br>3646   | <br>4046   | <br>4846   | <br>5046   |
|  |  | <br>3050   | <br>3650   | <br>4050   | <br>4850   | <br>5050   |
|  |  | <br>3056 | <br>3656 | <br>4056 | <br>4856 | <br>5056 |
|  |  | <br>3058 | <br>3658 | <br>4058 | <br>4858 | <br>5058 |



## Features:

- Brick mould exterior frame design.
- Collapsible handle folds into assembly cover.
- Fine-tuned, proven design ensures weathertight performance.
- Fusion-welded frame and sash further reduce air and water infiltration.
- Full-perimeter double weather stripping surrounds 3/4" insulated glass – to provide maximum energy efficiency.
- Interior-mounted full screen and double locks come standard.
- Double locks standard on all awnings.
- Integrated nailing on new construction applications.
- Concealed hinges and operation hardware provide a clean unobstructed view.
- Frames and sashes are fusion welded for a clean look and added strength.
- White is standard.

## Custom Options:

- Low-E Glass and Argon Gas
- Ultra Low-E Argon.
- 5/8" or 1" contoured, 5/8" or 3/4" flat, 5/8" contoured valance and 1 1/8" Simulated Divided Lite (SDL) grids.
- Almond or Clay colors are an option.
- Special shapes are available.
- Factory mulling available for your convenience and ease of installation.
- Wood jamb extensions (pre-primed or stainable 4 9/16" and 6 9/16").

## Materials:

- Frame and sash are maintenance free, color stabilized solid vinyl (PVC).
- Screen is an extruded aluminum frame with fiber glass mesh.
- Glazing method: Silicone caulk.

# AWNING

## Single Vent Awning

## 2 LTH 2-Wide Awning

|                            | 19"–27 1/4" | 27 3/8"–47 1/8" | 47 1/4"–48" | 40"–54 1/2" | 54 5/8"–86 5/8" | 86 3/4"–96" |
|----------------------------|-------------|-----------------|-------------|-------------|-----------------|-------------|
| 27 3/8"–36" 14"–27 1/4"    | 1 Vertical  | 2 Verticals     | 3 Verticals | 1 Vertical  | 2 Verticals     | 3 Verticals |
| 2 Horizontals 1 Horizontal |             |                 |             |             |                 |             |
| 2 Horizontals              |             |                 |             |             |                 |             |

## 2 LTV Stacked Awning

## 3 LTV Stacked Awning

|               | 19 – 27 1/4"  | 27 3/8" – 47 1/8" | 47 1/4" – 48" |
|---------------|---------------|-------------------|---------------|
| 33" – 54 1/2" | 1 Vertical    | 2 Verticals       | 3 Verticals   |
| 0 Horizontals |               |                   |               |
| 54 5/8" – 91" | 2 Horizontals | 2 Horizontals     | 2 Horizontals |
| 2 Horizontals |               |                   |               |

|               | 19 – 27 1/4"  | 27 3/8" – 47 1/8" | 47 1/4" – 48" |
|---------------|---------------|-------------------|---------------|
| 45" – 81 3/4" | 1 Vertical    | 2 Verticals       | 3 Verticals   |
| 1 Horizontal  |               |                   |               |
| 81 7/8" – 91" | 2 Horizontals | 2 Horizontals     | 2 Horizontals |
| 2 Horizontals |               |                   |               |

## 3 LTH 3-Wide Awning

|                            | 60"–81 3/4" | 81 7/8"–129 7/8" | 130"–144"   |
|----------------------------|-------------|------------------|-------------|
| 27 3/8"–36" 14"–27 1/4"    | 1 Vertical  | 2 Verticals      | 3 Verticals |
| 2 Horizontals 1 Horizontal |             |                  |             |
| 2 Horizontals              |             |                  |             |

## Dead Lite Over Awning (Equal Lite)

## Dead Lite Over Awning (Cottage & Oriel)

|               | 19 – 27 1/4"  | 27 3/8" – 47 1/8" | 47 1/4" – 48" |
|---------------|---------------|-------------------|---------------|
| 30" – 54 1/2" | 1 Vertical    | 2 Verticals       | 3 Verticals   |
| 1 Horizontal  |               |                   |               |
| 54 5/8" – 91" | 2 Horizontals | 2 Horizontals     | 2 Horizontals |
| 2 Horizontals |               |                   |               |

|                         | 19 – 27 1/4" | 27 3/8"–43 1/8" | 43 1/4"–48" |
|-------------------------|--------------|-----------------|-------------|
| 33" – 91"               | 1 Vertical   | 2 Verticals     | 3 Verticals |
| 3 Hor. / 2 Hor. Oriel   |              |                 |             |
| 1 Hor. / 3 Hor. Cottage |              |                 |             |

# SLIDING PATIO DOORS

## Features:

- Pre-assembled for easy installation with reversible moving panel.
- Pre-punched nail fin for easy new construction applications simply removes for replacement projects.
- 7/8" tempered glass panels for energy efficiency and safety.
- Limited lifetime warranty.
- White enamel handle with lock is standard for the 311.
- Color matched handle with keyed lock is standard for the 312 and 332.
- The 311 is available in 5', 6', and 6'4" widths, while the 312 and 332 models are available in 5', 6', 6'4", 8', 9', and 12' widths.
- The 332 has a 8'0" height available in 5', 6', and 6'4" widths.
- The 311 comes in white only, while it is standard for the 312 and 332.
- A factory installed screen is optional for the 311 and is standard with the 312 and 332.
- 332 jamb depth 5.5625"; 311 and 312 jamb depth 4.5625".
- The 332 has a DP 50 rating for the 5068, 5080, 6068, 6080 and 8068 models.
- The 332 has a multi-point lock mechanism.
- White is standard.

## Custom Options:

- Low-E Glass and Argon Gas.
- Ultra Low-E Argon.
- Non-reflective Glass.
- 5/8" or 1" contoured, or 5/8" or 3/4" flat grid between the panes for easy glass cleaning; 1 1/8" simulated divided lite (for 312 & 322).
- 4 9/16" pre-primed and 6 9/16" extender kits are available for the 311 and 312 while 6 9/16" extender kits are available for the 332.
- The 312 and 332 are available with an interior wood finish (on white exterior only).
- The 312 and 332 are available with Bronze exterior (on white interior only).
- Exclusive options for the 332 include foot bolt lock, and field applied flat or brick mould J-channel.
- Custom sizes are available (for 312 & 332).
- Almond and Clay colors available (for 312 & 332).
- 8 painted exterior colors (white interior only) (for 312 & 332).
- Blinds Between The Glass (for 312 & 332).
- Polished Brass and Brushed Nickel Handle.

## Materials:

- Frame and sash are maintenance free, color stabilized solid vinyl (PVC).
- The sash and fixed meeting rail contain steel rebar for added strength.
- Glazing method: Glazing tape.

## Structural Performance

| MODEL      | TEST SIZE         | AIR  | WATER | LOAD  | DESIGN PRESSURE             |
|------------|-------------------|------|-------|-------|-----------------------------|
| 311/312    | 70 3/4" X 79 1/2" | 0.12 | 6.75  | 52.50 | SGD-R35 71 X 80             |
| 312        | 94 3/4" X 79 1/2" | 0.12 | 4.50  | 37.50 | SGD-R25 95 X 80             |
| 332        | 72" X 96"         | 0.16 | 7.50  | 75.00 | SGD-R50 72 X 96             |
| 312 Custom | 70 3/4" X 81 1/2" | 0.12 | 6.75  | 52.50 | SGD-DP35<br>70 3/4 X 81 1/2 |
| 332 Custom | 70 3/4" X 81 1/2" | 0.16 | 7.50  | 75.00 | SGD-DP50<br>70 3/4 X 81 1/2 |

# SLIDING PATIO DOORS

| SERIES                     | 311  | 312  | 332  |
|----------------------------|--|--|--|
| VINYL WALL THICKNESS FRAME | 0.070" (1.78MM)  | 0.070" (1.78MM)  | 0.090" (2.29MM)  |
| VINYL WALL THICKNESS SASH  | 0.080" (2.03MM)  | 0.080" (2.03MM)  | 0.080" (2.03MM)  |
| GLASS THICKNESS            | 0.813" (20.65MM)   | 0.813" (20.65MM)   | 0.813" (20.65MM)   |
| JAMB THICKNESS             | 4.563" (115.90MM)  | 4.563" (115.90MM)  | 5.633" (143.08MM)  |
| FRAME WIDTH EXTERIOR       | 1.00" (25.40MM)  | 1.00" (25.40MM)  | 1.132" (28.70MM)   |
| FRAME WIDTH INTERIOR       | 1.718" (43.64MM)   | 1.718" (43.64MM)   | 2.00" (50.80MM)  |
| NAILING FIN LENGTH         | 1.0" (25.40MM)   | 1.0" (25.40MM)   | 1.671" (42.44MM)   |
| NAIL FIN SETBACK           | 3.368" (85.55MM)   | 3.368" (85.55MM)   | 4.563" (115.90MM)  |
| EGRESS WIDTH               | 5' = 22 1/2"<br>6' = 28 1/2"<br>6'4" = 32"   | 5' = 22 1/2"<br>6' = 28 1/2"<br>6'4" = 32"<br>8' = 40 1/2"                                       | 5' = 22 3/4"<br>6' = 28 3/4"<br>6'4" = 32 3/8"<br>8' = 40 3/4"   |
| EGRESS HEIGHT              | 76"  | 76"  | 6'8" = 75 1/2"<br>8' = 95 1/2"   |
| SCREEN SIZE                | 5068 = 30" x 77 1/16"<br>6068 = 36" x 77 1/16"<br>6468 = 38" x 77 1/16"<br>8068 = 48" x 77 1/16" | 5068 = 30" x 77 1/16"<br>6068 = 36" x 77 1/16"<br>6468 = 38" x 77 1/16"<br>8068 = 48" x 77 1/16" | 5068 = 30 1/2" x 77 1/2"<br>6068 = 36 1/2" x 77 1/2"<br>6468 = 38 1/2" x 77 1/2"<br>8068 = 48 1/2" x 77 1/2"<br>5080 = 30 1/2" x 93 1/2"<br>6080 = 36 1/2" x 93 1/2"<br>6480 = 38 1/2" x 93 1/2" |
| OPTIONS GLASS:             |  |  |  |
| CLEAR (STANDARD)           | •  | •  | •  |
| LOW-E WITH ARGON           | •  | •  | •  |
| ULTRA LOW-E WITH ARGON     | •  | •  | •  |
| OPTIONS GAS:               |  |  |  |
| ARGON                      | •  | •  | •  |
| COLOR:                     |  |  |  |
| WHITE                      | •  | •  | •  |
| ALMOND                     |  | •  | •  |
| CLAY                       |  | •  | •  |
| NATURAL OAK INTERIOR       |  | •  | •  |
| HILLSIDE OAK INTERIOR      |  | •  | •  |
| BRONZE EXTERIOR            |  | •  |  |

## Thermal Performance

| GLASS/GRID                          | 312 STANDARD SIZE |      | 312 CUSTOM SIZE |      | 332 STANDARD SIZE |      | 332 CUSTOM SIZE |      |
|-------------------------------------|-------------------|------|-----------------|------|-------------------|------|-----------------|------|
|                                     | U-Value           | SHGC | U-Value         | SHGC | U-Value           | SHGC | U-Value         | SHGC |
| DS Clear Glass No Grid              | 0.48              | 0.64 | 0.48            | 0.64 | 0.47              | 0.63 | 0.47            | 0.63 |
| DS Low-E Glass No Grid              | 0.33              | 0.31 | 0.33            | 0.31 | 0.33              | 0.30 | 0.33            | 0.30 |
| DS Low-E/Argon Glass No Grid        | 0.30              | 0.30 | 0.30            | 0.30 | 0.30              | 0.30 | 0.30            | 0.30 |
| DS Ultra Low-E/Argon No Grid        | 0.30              | 0.23 | 0.30            | 0.23 | 0.30              | 0.22 | 0.29            | 0.22 |
| DS Clear Glass with Grid            | 0.48              | 0.56 | 0.48            | 0.56 | 0.47              | 0.55 | 0.47            | 0.55 |
| DS Low-E Glass with Grid            | 0.33              | 0.27 | 0.33            | 0.27 | 0.33              | 0.27 | 0.33            | 0.27 |
| DS Low-E/Argon Glass with Grid      | 0.30              | 0.27 | 0.30            | 0.27 | 0.30              | 0.27 | 0.30            | 0.27 |
| DS Ultra Low-E/Argon with Grid      | 0.30              | 0.20 | 0.30            | 0.20 | 0.30              | 0.20 | 0.29            | 0.20 |
| DS Clear Glass with SDL             | 0.48              | 0.45 | 0.48            | 0.49 | 0.47              | 0.49 | 0.47            | 0.49 |
| DS Low-E Glass with SDL             | 0.33              | 0.27 | 0.33            | 0.27 | 0.33              | 0.27 | 0.33            | 0.27 |
| DS Low-E/Argon Glass with SDL       | 0.30              | 0.27 | 0.30            | 0.27 | 0.30              | 0.27 | 0.30            | 0.27 |
| DS Ultra Low-E/Argon Glass with SDL | 0.29              | 0.20 | 0.29            | 0.20 | 0.29              | 0.20 | 0.29            | 0.20 |

# SLIDING PATIO DOORS

## 311, 312, and 332 Sliding Patio Doors Size Chart

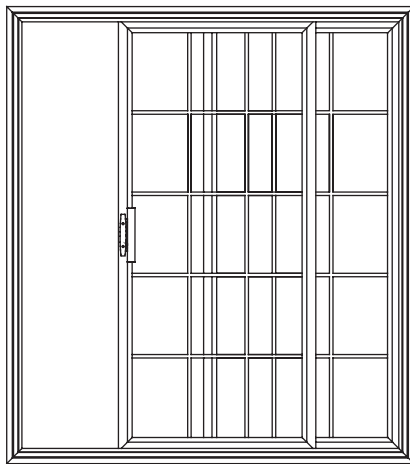
| ROUGH OPENING          | 60"   | 72"    | 76"    | 96"   | 108"    | 144"    | 140"     |
|------------------------|-------|--------|--------|-------|---------|---------|----------|
| EXACT SIZE WITHOUT FIN | 58.75 | 70.75" | 74.75" | 94.75 | 107.5"  | 143.5"  | 139.875" |
| OPENING WIDTH          | 59.5" | 71.5"  | 75.5"  | 95.5" | 108.25" | 144.25" | 140.625" |
| HEIGHT                 |       |        |        |       |         |         |          |
|                        | 80"   | 79.5"  | 80.0"  |       |         |         |          |
|                        | 96"   | 95.5"  | 96.0"  |       |         |         |          |

Notes: 1. 311 only available in 5068, 6068 and 6468 sizes.  
 2. 5080, 6080 and 6480 only available in 332.

### Wood-Jamb Extension Kits:

The interior wood-jamb extension kit is available in pre primed pine or stainable for your convenience and ease of installation. The extension creates an overall frame thickness of 4 9/16" or 6 9/16". Note: Model #332 has a 4 9/16" jamb as standard.



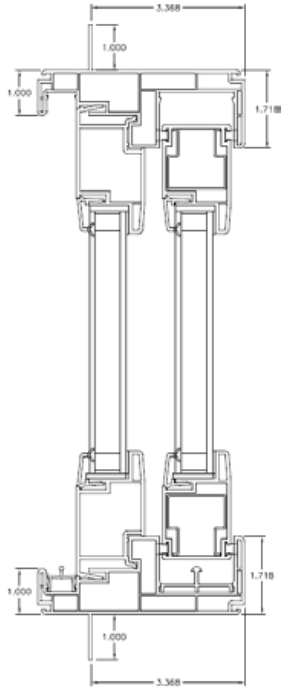
INTERIOR VIEW OF DOOR WITH COLONIAL GRID PARTIALLY OPEN

### Recommended Rough Opening:

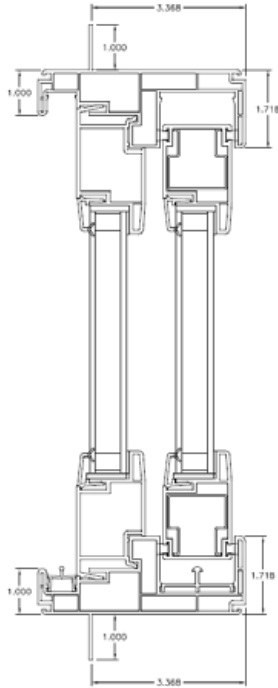
Width = Door Width (DW) + 3/4"  
 Height = Door Height (DO) + 1/2"

# SLIDING PATIO DOORS

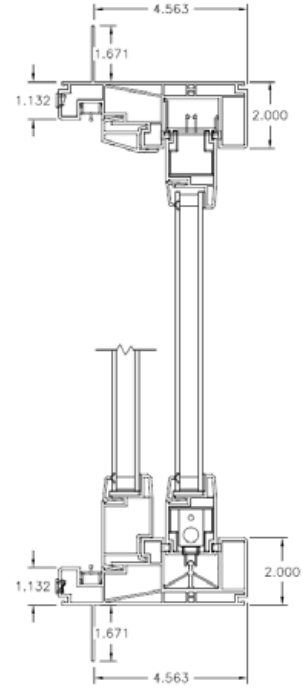
**Model 311 vertical diagram**



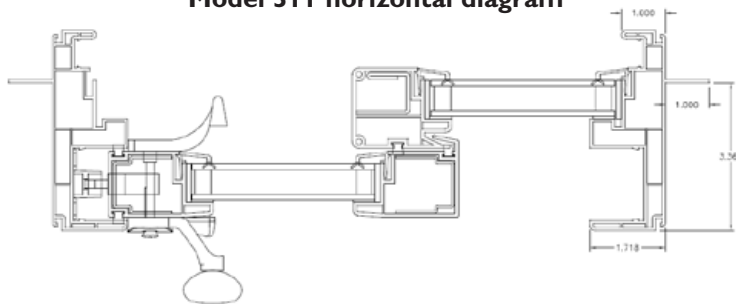
**Model 312 vertical diagram**



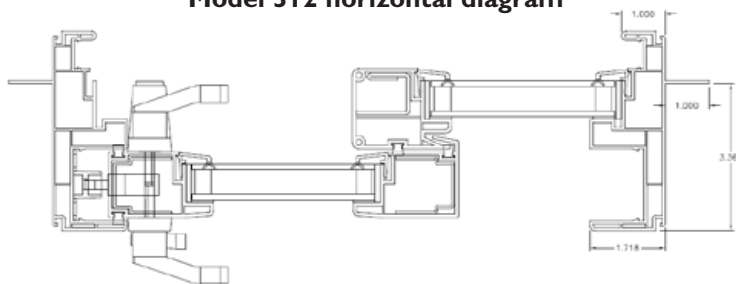
**Model 332 vertical diagram**



**Model 311 horizontal diagram**



**Model 312 horizontal diagram**



**Model 332 horizontal diagram**

