

PERFORMANCE

The Series 1450 window is a thermally broken mainframe and sash that exceeds the performance specification criteria as required by ANSI/AAMA for AW (Architectural Grade) windows.

Fix	æd		Project Out - Awning			
AAMA Rating	AW	'-100	AAMA Rating	AW-100		
Air Infiltration	0.0 C	FM/ft ²	Air Infiltration	0.02 C	FM/ft ²	
Water	Over	12 psf	Water	Over	12 psf	
Structural	150	psf	Structural	150	psf	
CRF (AAMA 1503)	65		CRF (AAMA 1503)	60		
Center of Glass U-Value	Window l	J-Factor ³	Center of Glass U-Value	Window U-Factor ³		
BTU/Ft ² x F° x Hr	47" x 59" ²	60" x 99" ¹	BTU/Ft ² x F° x Hr	59" x 24" ²	60" x 36" ¹	
0.20	0.34	0.29	0.20	0.49	0.43	
0.24	0.37	0.33	0.24	0.52	0.45	
0.29	0.41	0.37	0.29	0.55	0.49	
0.34	0.45	0.41	0.34	0.58	0.52	
0.47	0.55	0.52	0.47	0.65	0.61	

			•			
Project In	ı - Hopper		Casement			
AAMA Rating	AW	'-100	AAMA Rating	AW	/ -100	
Air Infiltration	0.01 C	FM/ft ²	Air Infiltration	0.08 C	FM/ft ²	
Water	Over	12 psf	Water	Over	12 psf	
Structural	150	psf	Structural	150	psf	
CRF (AAMA 1503)	68		CRF (AAMA 1503)	60		
Center of Glass U-Value	Window l	J-Factor ³	Center of Glass U-Value	Window U-Factor ³		
BTU/Ft ² x F° x Hr	59" x 24" ²	60" x 36" ¹	BTU/Ft ² x F° x Hr	24" x 59" ²	36" x 60" ¹	
0.20	0.49	0.43	0.20	0.49	0.43	
0.24	0.52	0.45	0.24	0.52	0.45	
0.29	0.55	0.49	0.29	0.55	0.49	
0.34	0.58	0.52	0.34	0.58	0.52	
0.47	0.65	0.61	0.47	0.65	0.61	

This Information is based on current product design, sealed dual glazing, warm edge spacers and testing standards.

Please contact WINCO for project specific information

¹ AAMA 101 Test Size

² NFRC Gateway Test Size

³ Based on NFRC 100

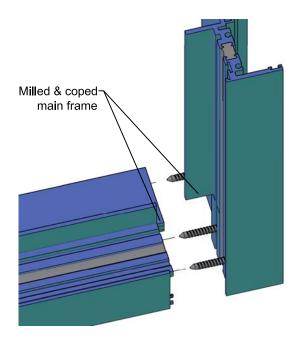
CONSTRUCTION

MATERIAL - The Series 1450 window is a 4" deep frame depth with a nominal wall thickness of 0.125 inch. All material is extruded from 6063-T6 alloy.

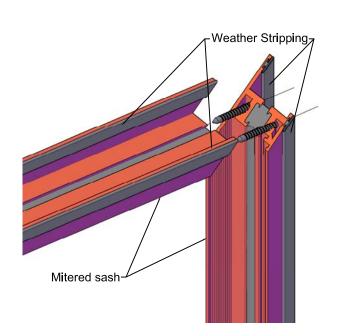
THERMAL BREAK - All framing members of the window system are thermally broken. Winco uses the Azon Azo Brader® process to mechanically condition the surface of the thermal cavity. The process runs the entire length of the extrusion and creates serrations that insure proper adhesion of the structural polymer. The structural urethane is a high density 2 part formula providing optimum thermal performance for the most demanding conditions. The combination of the conditioning of the aluminum surface along with the two part urethane allows Winco to provide a full 10 year warranty against thermal break creep and shrinkage in accordance with AAMA 505-98.

WEATHER-STRIP - All operating ventilators have a double Santoprene®, non-shrinking dual durometer, thermoplastic rubber weather-stripping around the perimeter. One interior and one exterior.

FABRICATION - The main frame corners are coped and mechanically joined using two stainless steel spline screws per corner (fig 1). The vent is a hollow tube shaped extrusion for superior strength and rigidity. Vent corners are fully mitered and mechanically joined using two stainless steel spline screws per corner, aligning the members to form a hairline joint (fig 2). All frame joints are back sealed with small joint seam sealer providing a water tight joinery.



(fig 1) Main Frame Construction



(fig 2) Vent Construction

1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Information



GLAZING

The windows can be interior or exterior glazed with .050 thick extruded aluminum glazing beads accommodating thicknesses from 1/8" up to 1 1/2". Dual or triple glazing is an option utilizing an interior panel sash that can either be hinged with 4-bar stainless steel hinges or a more economical take out sash. Venetian blinds are available with the dual or triple glazed window options. See the quick reference chart below for all glazing options. For actual details refer to the glazing section in the back of the 1450 section for optional glazing and blind details.

Glazing Th	nickness	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/4"	1-3/8"	1-1/2"
Monoli	ithic	Х	Х	Х	Χ	Х	Х	Х	-	-	-	-	-	-	-
Insula	ted	-	-	-	-	-	-	-	Χ	-	Χ	Χ	Х	Х	Х
Dual	Exterior	-	Х	Χ	-	-	-	-	Χ	-	-	-	-	-	-
Glazed	Interior	Χ	Χ	Χ	-	Χ	Χ	Х	-	-	ı	-	-	-	-
Triple	Exterior	-	-	-	-	•	-	-	Χ	-	ı	Χ	-	-	-
Glazed	Interior	Χ	Χ	Χ	-	Χ	Х	Х	-	-	-	-	-	-	-

Winco has different gaskets and glazing methods that can accommodate odd thicknesses of glass. If you do not see what you are looking for within this chart please contact your local representative for information regarding your specific project needs.

HARDWARE

All exposed locking hardware, strikes and keepers are solid white bronze alloy with US25D brushed finish. All four bar arms, casement arms, friction arms and key release limit arms are stainless steel conforming to AAMA 904.1. Five knuckle butt hinges are fabricated of 6063-T6 aluminum with nylon bushings and a stainless steel hinge pin.

Window Type	Butt Hinge	4-Bar Arms	Casement Arms	Friction Adjustable	Roto Operator	Cam Lock	Pole Ring Cam Lock	Access Control Lock	Lift Lock	Pole Ring Lift Lock	Pull Handle	Key Release Limit Arm	Fixed Limit Stop	Under Screen Push Bar
PO - Awning	-	Х	-	-	0	Х	0	0	0	0	0	0	0	O 5
PI - Hopper	-	Х	-	-	-	Х	0	0	0	0	-	0	0	-
Casement - Outswing w/ Butt Hinges	Х	-	0	Х	0	0	0 3	0	Х	0	Х	0	0	O 5
Casement - Inswing w/ Butt Hinges	Х	-	0	Х	-	0	0	0	Х	0	-	0	0	-
Casement - Outswing w/ concealed Hinges	-	-	Х	-	O ^{2, 4}	0	0 3	0	0	0	Х	0	0	O ^{2, 5}
Casement - Inswing w/ concealed Hinges	-	-	Х	-	-	0	0	0	Х	0	-	0	0	-

X = Standard Hardware

Note

- ¹ Not all hardware is compatible with each other, contact your local Winco representative for information
- $^{2}\,$ Size limitations exist on some hardware, contact your local Winco representative for information
- ³ A pole ring pull will be provided on a project out vent is optional pole ring cam locks are required and no screen is furnished
- ⁴ Minimum width requirement for optional roto operators on casement windows with concealed casement arm hinging
- ⁵ Under screen push bars are not recommended by Winco if optimum water performance is a requirement

O = Optional Hardware

SCREENS

FRAME - frames are fabricated from 6063-T6 extruded aluminum alloy and temper. All screen frames are miter cut and corner keyed. The corners are mechanically crimped together for durability. The screen frame is finished to match the window frame.

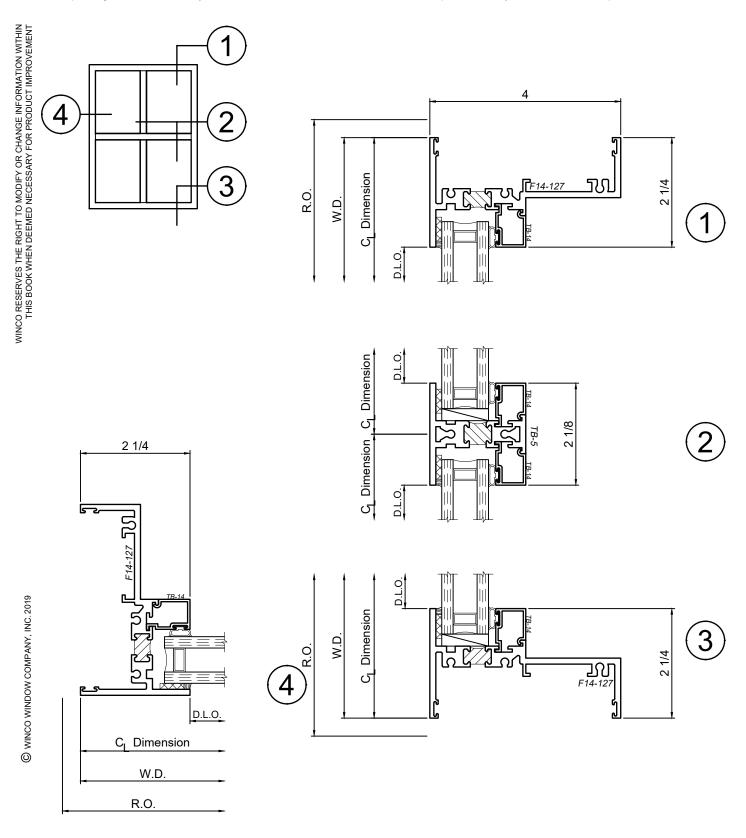
MESH - Standard .011 aluminum screen wire mesh is produced from 5154 alloy with 18x16 pattern in Charcoal or Aluminum color. All mesh is applied to the screen frame with a roller spline making for easy and quick replacements. Optional fiberglass or .009 stainless steel mesh is available as an option.

WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS BOOK WHEN DEEMED NECESSARY FOR PRODUCT IMPROVEMENT

1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Fixed - Picture Window

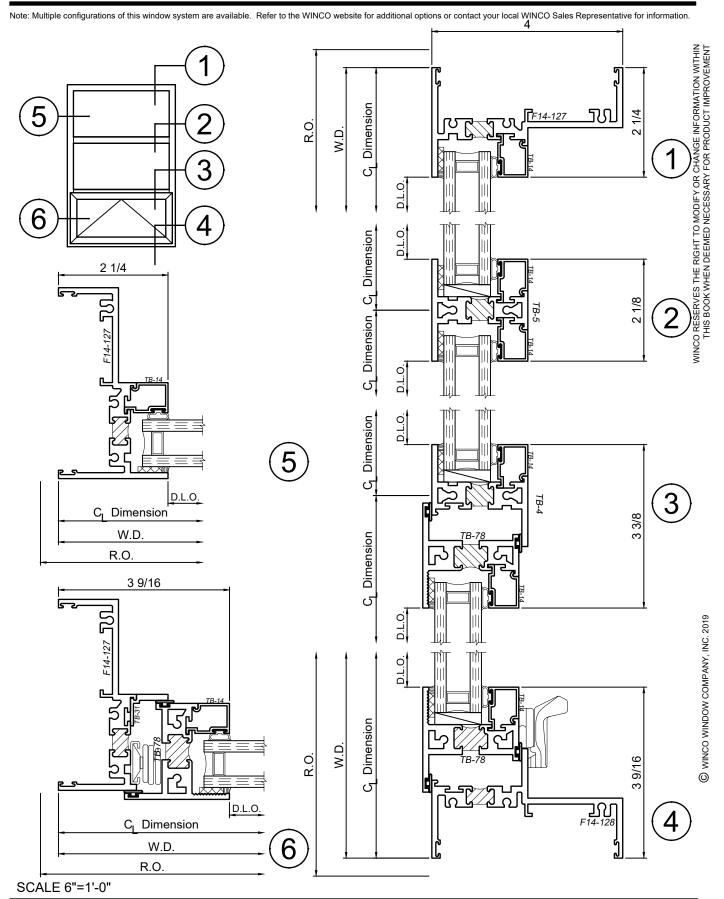


Note: Multiple configurations of this window system are available. Refer to the WINCO website for additional options or contact your local WINCO Sales Representative for information.



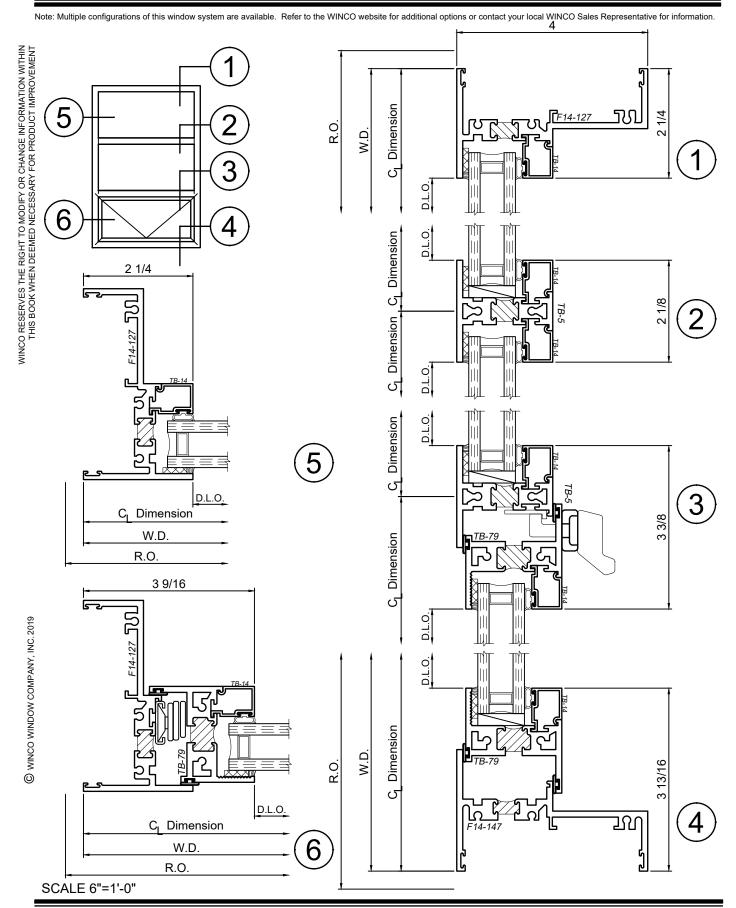
1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Project Out - Awning





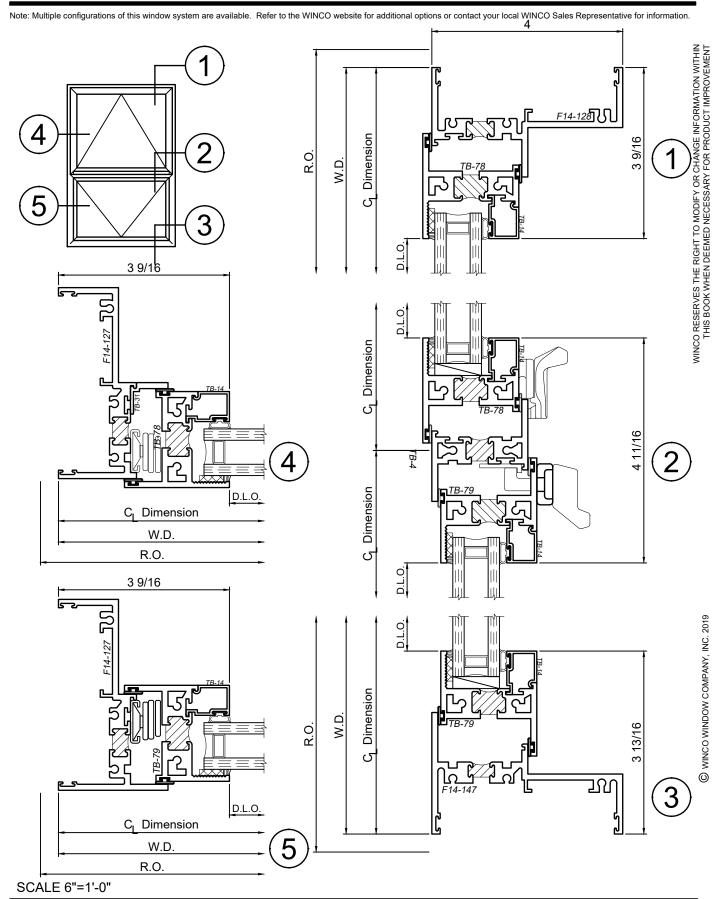
1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Project In - Hopper





1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - PO|PI - Awning|Hopper

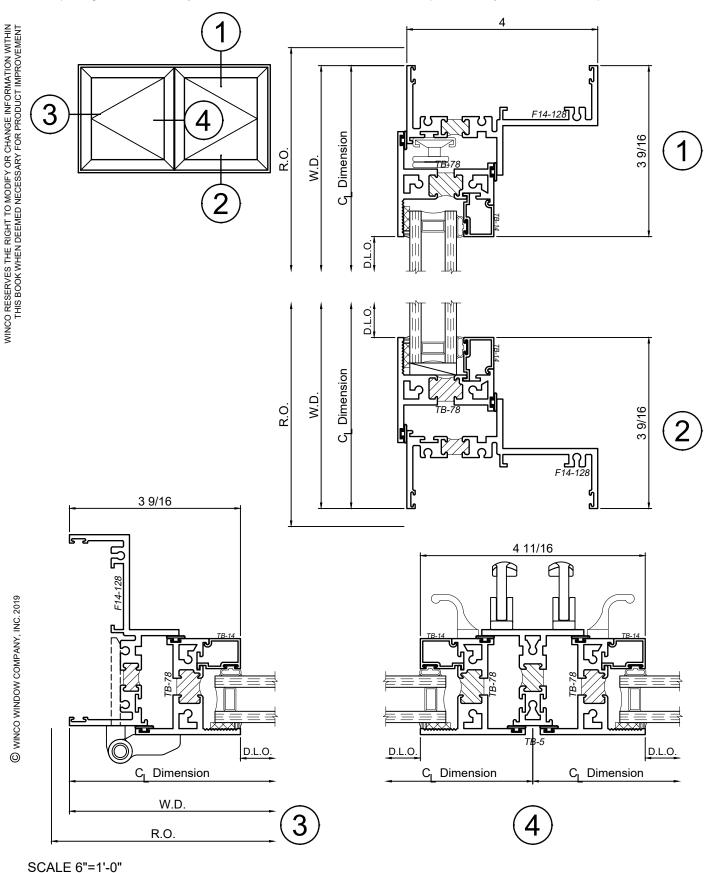




1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Butterfly Casement - Outswing

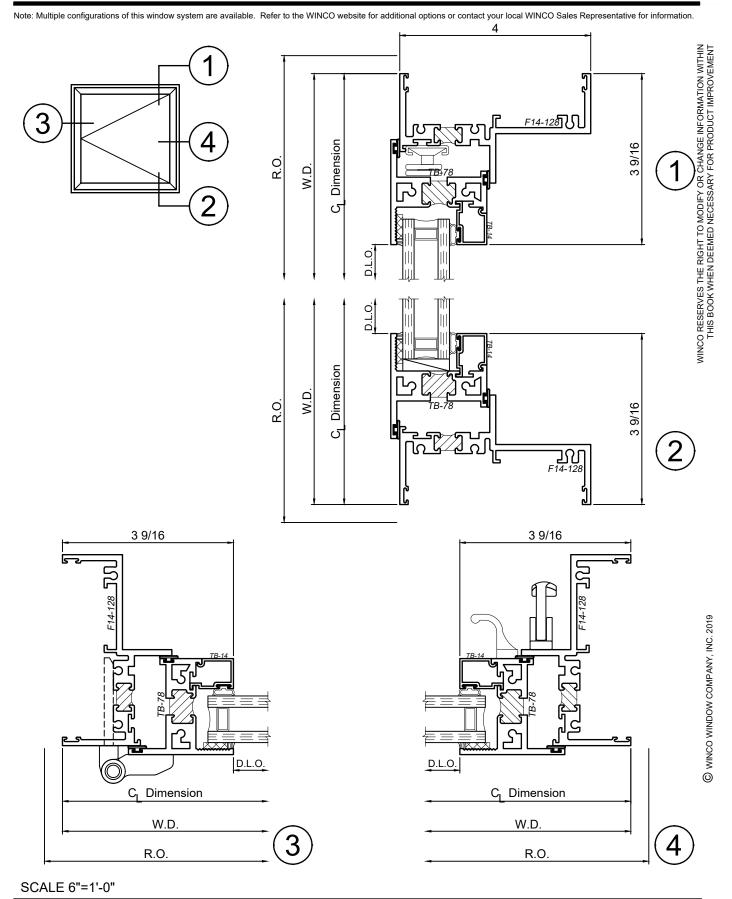


Note: Multiple configurations of this window system are available. Refer to the WINCO website for additional options or contact your local WINCO Sales Representative for information.



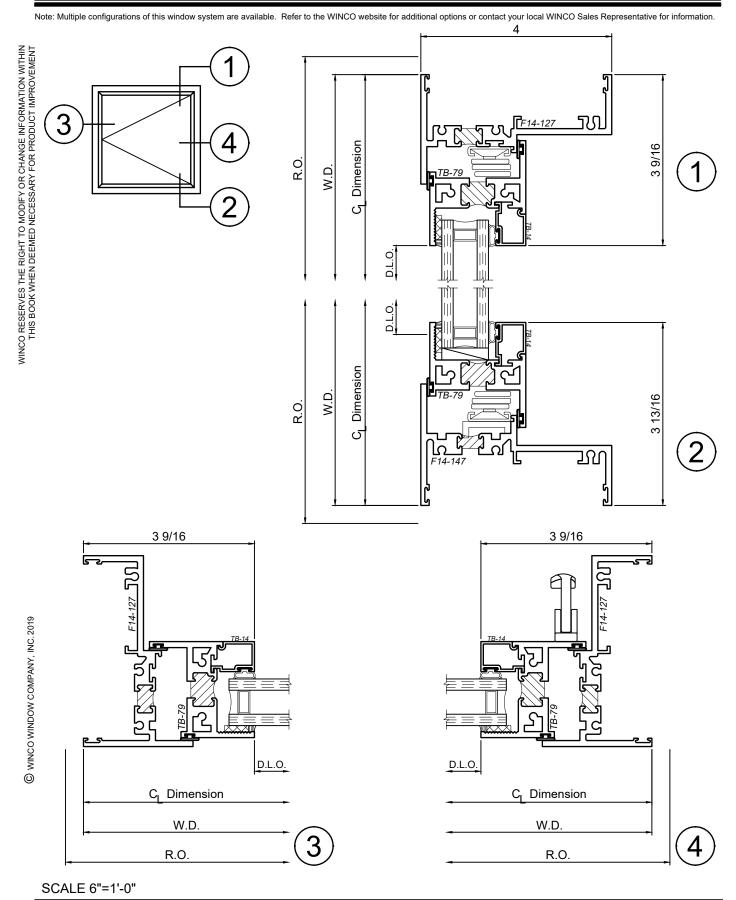
1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Outswing Casement





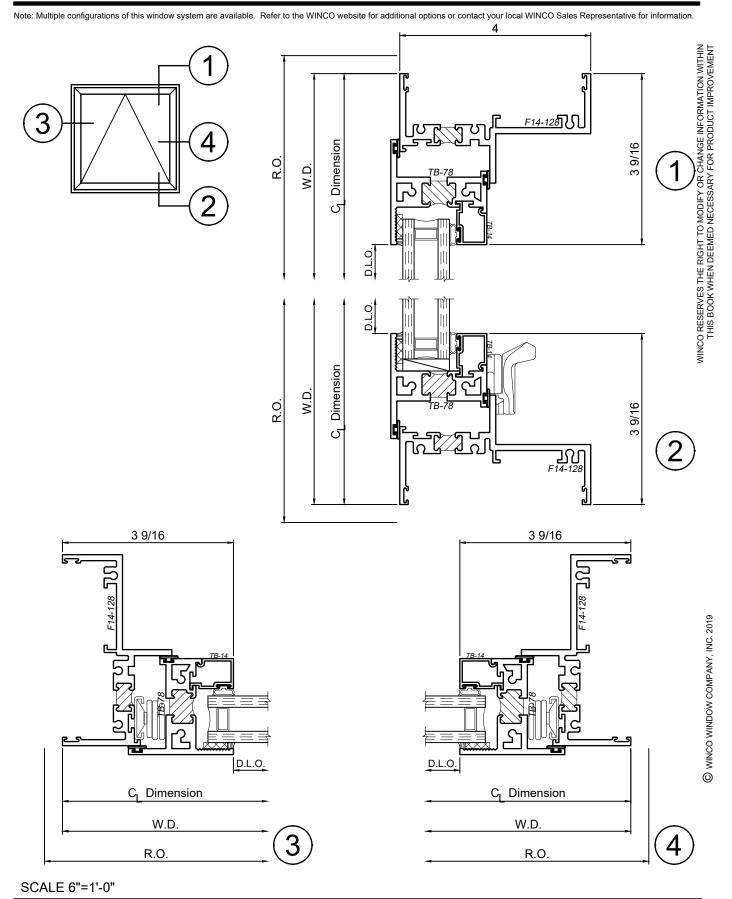
1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Inswing Casement





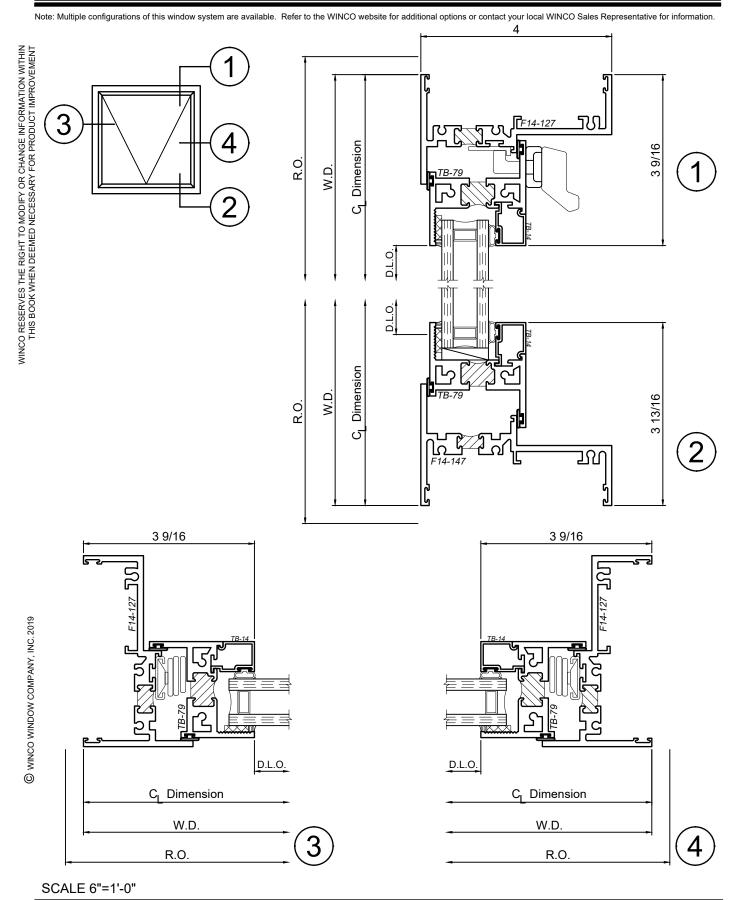
1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Project Out - Awning





1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Project In - Hopper







WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS ROOK WHEN DEFMED NECESSARY FOR PRODICT IMPROVEMEN

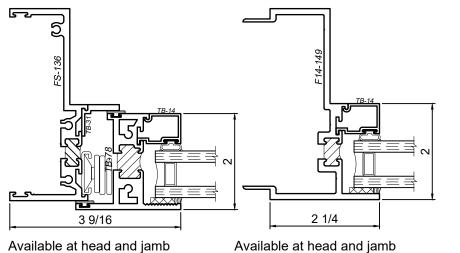
This page is purposely left blank

WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS BOOK WHEN DEEMED NECESSARY FOR PRODUCT IMPROVEMENT

1450 Series 4" Thermal Fixed, Casement & Projected Windows **Product Details - Frame Options**



Note: Multiple configurations of this window system are available. Refer to the WINCO website for additional options or contact your local WINCO Sales Representative for information.

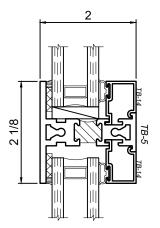


Available at head and jamb

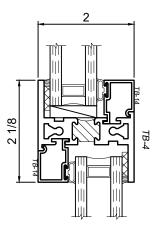
1 1/4

F14-148

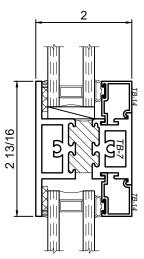
Note: Multiple configurations of this window system are available. Refer to the WINCO website for additional options or contact your local WINCO Sales Representative for information.



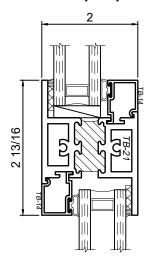
Standard 2 Inch T - Rail



Standard 2 Inch Z - Rail



Heavy Duty 2 Inch T - Rail

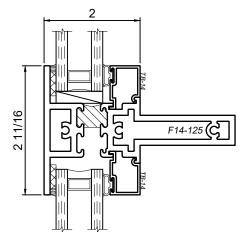


Heavy Duty 2 Inch Z - Rail

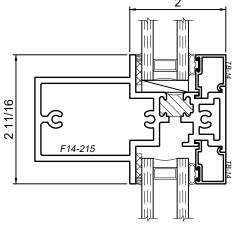
1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - 4 Inch Rail Options



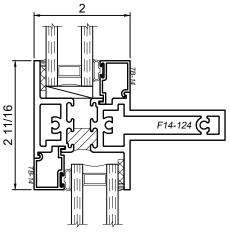
Note: Multiple configurations of this window system are available. Refer to the WINCO website for additional options or contact your local WINCO Sales Representative for information.



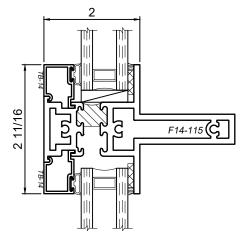
Standard 4 Inch T - Rail



Inverted Heavy 4 Inch T - Rail



Standard 4 Inch Z - Rail



Exterior Glazed 4 Inch T - Rail

1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details -



Note: Multiple configurations of this window system are available. Refer to the WINCO website for additional options or contact your local WINCO Sales Representative for information.

WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS BOOK WHEN DEEMED NECESSARY FOR PRODUCT IMPROVEMENT

This page is purposely left blank

1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Glazing Options

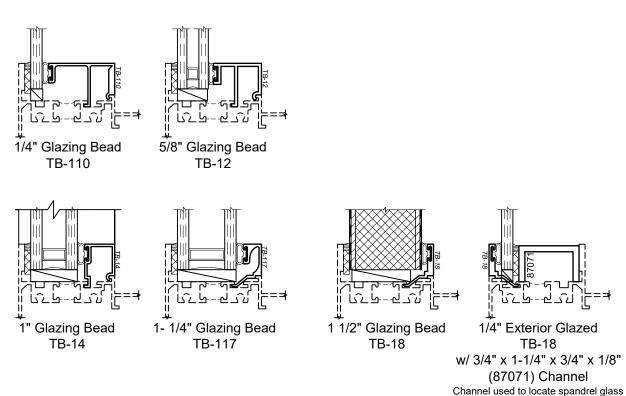


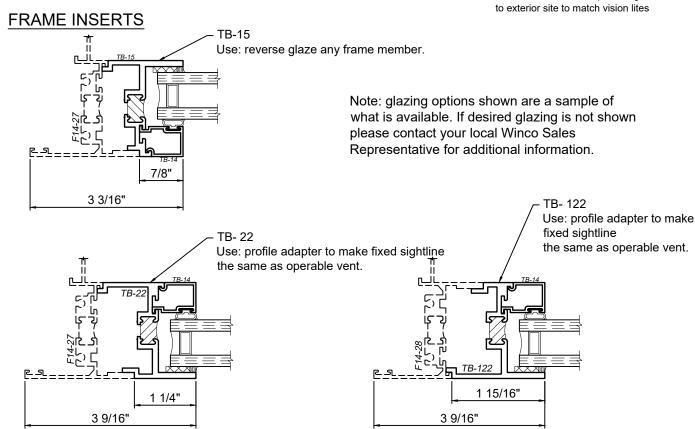
Note: Multiple configurations of this window system are available. Refer to the WINCO website for additional options or contact your local WINCO Sales Representative for information.



© WINCO WINDOW COMPANY, INC. 2019

SCALE 6"=1'-0"

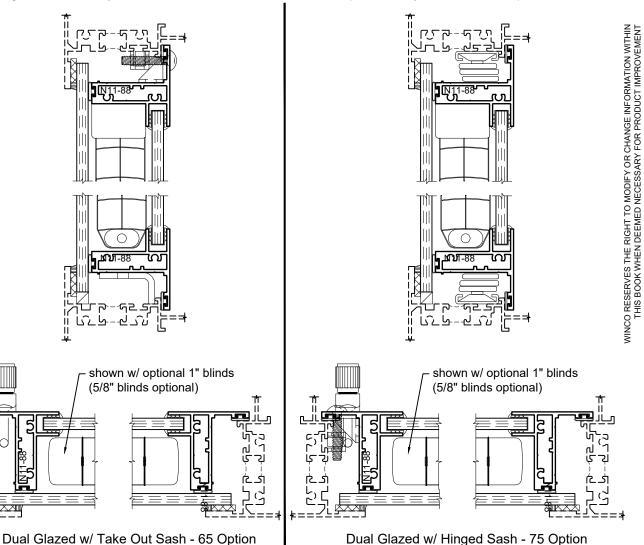




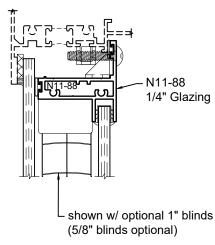
1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Dual Glazed w/ Interior Sash



Note: Multiple configurations of this window system are available. Refer to the WINCO website for additional options or contact your local WINCO Sales Representative for information.



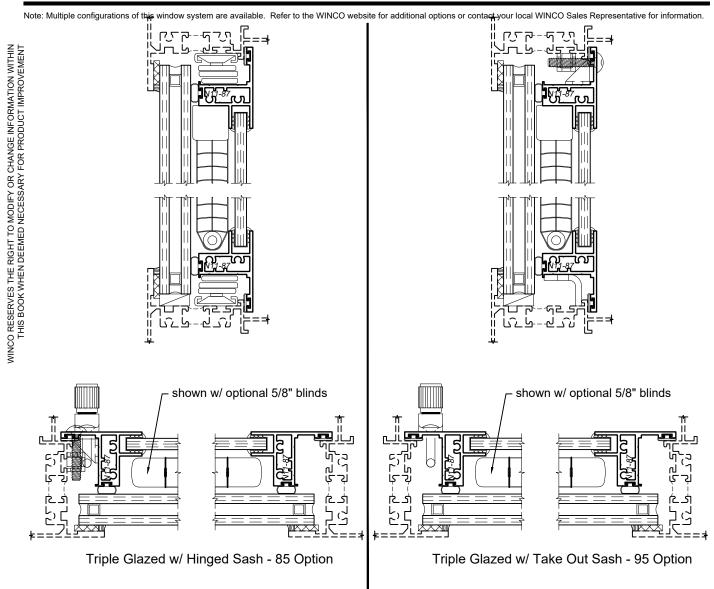
Dual Glazed Sash Options



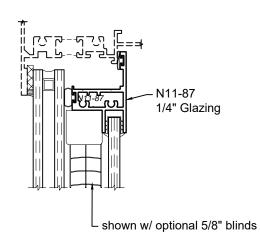
SCALE 6"=1'-0"

1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Tripple Glazed w/ Interior Sash





Triple Glazed Sash Options



SCALE 6"=1'-0"

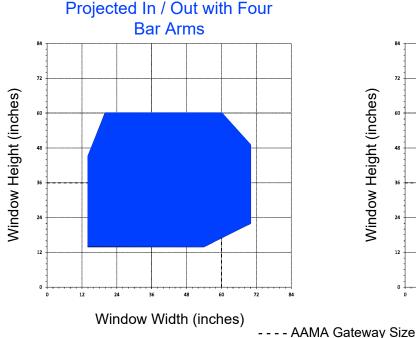


WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS ROOK WHEN DEEMED NECESSARY FOR PRODICT IMPROVEMENT

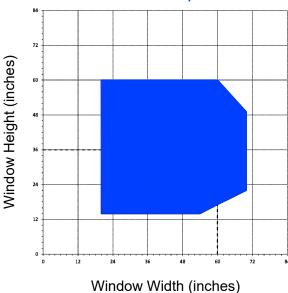
This page is purposely left blank







Projected In / Out with Pivot Shoe Roto-Operator

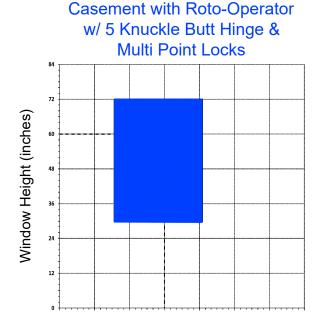


- Dashed line represents the gateway size window as tested by AAMA.
- All vent sizes are based upon 1" Insulated glass consisting of ¼" glass -½" air -½" glass.
- Any vent size outside of the AAMA Gateway tested size may have reduced performance.
- Chart assumes the window has been installed in a properly prepared opening by a qualified installer.
- Individual job criteria such as: other glazing materials, specified wind load, and specific operating hardware; may enhance or restrict the chart.
- Minimum vent size is 10" x 14-3/4" with standard cam locks and 4-bar hinges.
- The chart is a general guideline for projected vent sizing, anything on the edge or outside of the range will need to be reviewed by Winco Engineering.

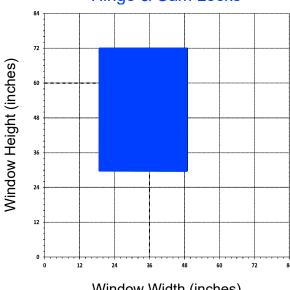
1450 Series 4" Thermal Fixed, Casement & Projected Windows Casement Vent Size Capabilities Charts



WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS BOOK WHEN DEEMED NECESSARY FOR PRODUCT IMPROVEMENT



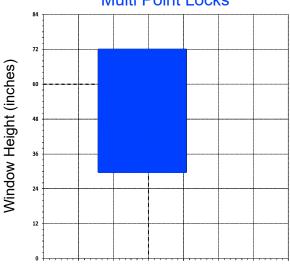




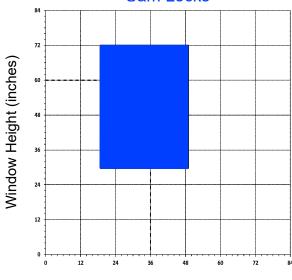
Window Width (inches)

Casement with Concealed Four Bar Casement Arm & Multi Point Locks

Window Width (inches)



Casement with Concealed Four Bar Casement Arm & Cam Locks



Window Width (inches)

Window Width (inches)

- Dashed line represents the gateway size window as tested by AAMA.
- All vent sizes are based upon 1" Insulated glass consisting of $\frac{1}{4}$ " glass - $\frac{1}{2}$ " air - $\frac{1}{4}$ " glass.
- Any vent size outside of the AAMA Gateway tested size may have reduced performance.
- Chart assumes the window has been installed in a properly prepared opening by a qualified installer.

AAMA Gateway Size

- Individual job criteria such as: other glazing materials, specified wind load, and specific operating hardware; may enhance or restrict the chart.
- Minimum vent size is 18-3/4" x 29-3/8" with standard cam locks and 4-bar hinges.
- The chart is a general guideline for projected vent sizing, anything on the edge or outside of the range will need to be reviewed by Winco Engineering.

1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Vertical Stack - F14-127 / F14-149

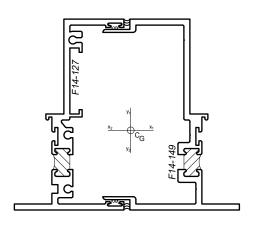


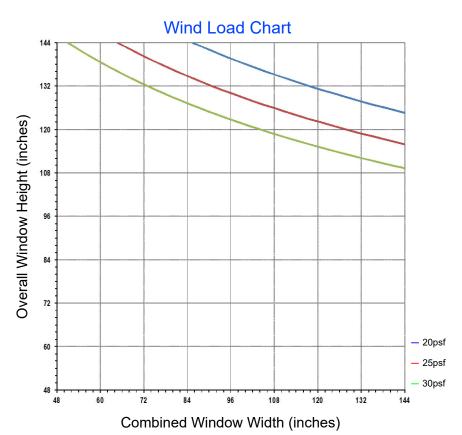
Note: Multiple configurations of this window system are available. Refer to the WINCO website for additional options or contact your local WINCO Sales Representative for information.

Combined Properties

	X-X	Y-Y
Ι	4.2887 in ⁴	0.5646 in ⁴
S	1.8534 in ³	0.3894 in ³

Maximum area = 40 ft² Maximum Total Unit Weight must not exceed 500 lbs.





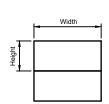
This chart can be used as a guideline for the preliminary structural evaluation of the mullion/stack shown. The chart is based on conservative engineering practices and the minimum result from either L/175 Deflection, $\frac{3}{4}$ " deflection, or 15 ksi outer fiber stress. The chart reflects the structural strength of 2 continuous window jambs running the full height of the opening. WINCO highly recommends consulting an engineer for any of the following circumstances:

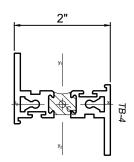
- The window under consideration falls close to or on the design pressure line.
- Any rail exceeds 48" with a large (>16ft²) light of glass above.
- Any vent width exceeds 60".
- Window exceeds the maximum size shown.
- Window has multiple rails (>3).

1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - TB-4 Rail



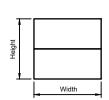
Note: Multiple configurations of this window system are available. Refer to the WINCO website for additional options or contact your local WINCO Sales Representative for information.

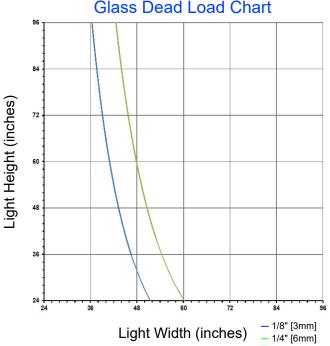


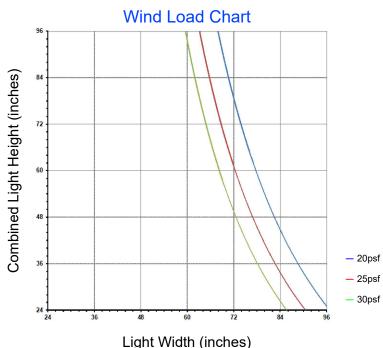


Section Properties

	X-X	Y-Y
Ι	0.4543 in ⁴	0.1191in ⁴
S	0.4543 in ³	0.1121 in ³







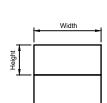
This chart can be used as a guideline for the preliminary structural evaluation of the Rail shown. The Dead Load chart is based on $\frac{1}{4}$ " - $\frac{1}{2}$ " - $\frac{1}{4}$ " I.G. and 0.090" deflection at $\frac{1}{4}$ and $\frac{1}{6}$ point blocking. The Wind Load Chart is based upon the minimum result from either L/175 deflection, $\frac{3}{4}$ " deflection, or 15 ksi outer fiber stress. The charts reflect the structural strength of only the Rail. WINCO highly recommends consulting an engineer for any of the following circumstances:

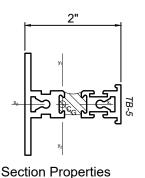
- The window under consideration falls close too or on the design pressure line.
- Any rail exceeds 48" with a large (>16ft²) light of glass above.
- I.G. make-up varies from the default.
- I.G. has additional blocking.

WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS BOOK WHEN DEEMED NECESSARY FOR PRODUCT IMPROVEMENT

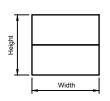
Note: Multiple configurations of this window system are available. Refer to the WINCO website for additional options or contact your local WINCO Sales Representative for information

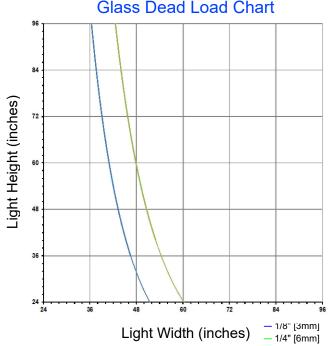
WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS BOOK WHEN DEEMED NECESSARY FOR PRODUCT IMPROVEMENT

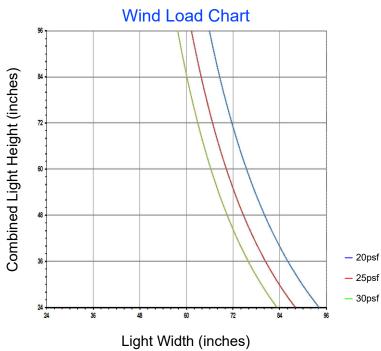




		F
	X-X	Y-Y
I	0.4142in ⁴	0.1191in ⁴
S	0.3394 in ³	0.1121 in ³







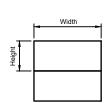
This chart can be used as a guideline for the preliminary structural evaluation of the Rail shown. The Dead Load chart is based on $\frac{1}{4}$ " - $\frac{1}{2}$ " - $\frac{1}{4}$ " I.G. and 0.090" deflection at $\frac{1}{4}$ and $\frac{1}{6}$ point blocking. The Wind Load Chart is based upon the minimum result from either L/175 deflection, $\frac{3}{4}$ " deflection, or 15 ksi outer fiber stress. The charts reflect the structural strength of only the Rail. WINCO highly recommends consulting an engineer for any of the following circumstances:

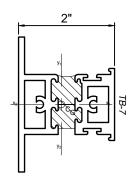
- The window under consideration falls close too or on the design pressure line.
- Any rail exceeds 48" with a large (>16ft²) light of glass above.
- I.G. make-up varies from the default.
- I.G. has additional blocking.

1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - TB-7 Rail



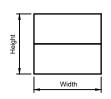
Note: Multiple configurations of this window system are available. Refer to the WINCO website for additional options or contact your local WINCO Sales Representative for information.

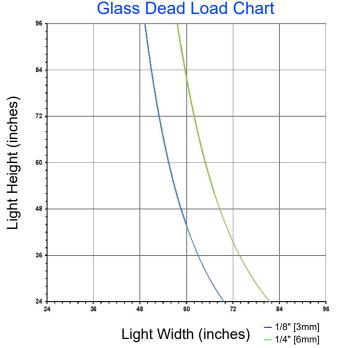


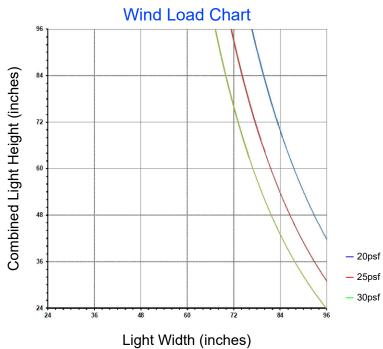


Section Properties

	X-X	Y-Y
Τ	0.6605 in ⁴	0.4007 in ⁴
S	0.6053 in ³	0.2831 in ³







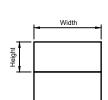
This chart can be used as a guideline for the preliminary structural evaluation of the Rail shown. The Dead Load chart is based on $\frac{1}{4}$ " - $\frac{1}{2}$ " - $\frac{1}{4}$ " I.G. and 0.090" deflection at $\frac{1}{4}$ and $\frac{1}{6}$ point blocking. The Wind Load Chart is based upon the minimum result from either L/175 deflection, $\frac{3}{4}$ " deflection, or 15 ksi outer fiber stress. The charts reflect the structural strength of only the Rail. WINCO highly recommends consulting an engineer for any of the following circumstances:

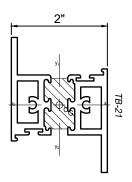
- The window under consideration falls close too or on the design pressure line.
- Any rail exceeds 48" with a large (>16ft²) light of glass above.
- I.G. make-up varies from the default.
- I.G. has additional blocking.

WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS BOOK WHEN DEEMED NECESSARY FOR PRODUCT IMPROVEMENT

Note: Multiple configurations of this window system are available. Refer to the WINCO website for additional options or contact your local WINCO Sales Representative for information.

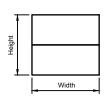
WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS BOOK WHEN DEEMED NECESSARY FOR PRODUCT IMPROVEMENT



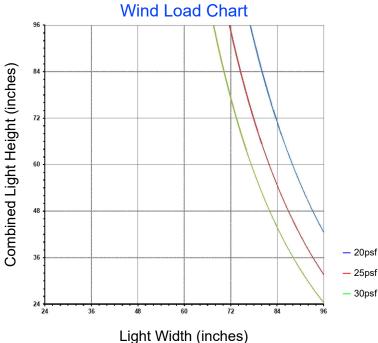


Section Properties

	X-X	Y-Y
Ι	0.6700 in ⁴	0.3956in ⁴
S	0.6700 in ³	0.2812 in ³







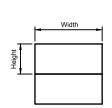
This chart can be used as a guideline for the preliminary structural evaluation of the Rail shown. The Dead Load chart is based on $\frac{1}{4}$ " - $\frac{1}{2}$ " - $\frac{1}{4}$ " I.G. and 0.090" deflection at $\frac{1}{4}$ and $\frac{1}{6}$ point blocking. The Wind Load Chart is based upon the minimum result from either L/175 deflection, $\frac{3}{4}$ " deflection, or 15 ksi outer fiber stress. The charts reflect the structural strength of only the Rail. WINCO highly recommends consulting an engineer for any of the following circumstances:

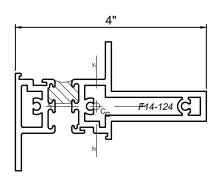
- The window under consideration falls close too or on the design pressure line.
- Any rail exceeds 48" with a large (>16ft²) light of glass above.
- I.G. make-up varies from the default.
- I.G. has additional blocking.

1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - F14-124 Rail



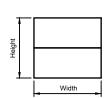
Note: Multiple configurations of this window system are available. Refer to the WINCO website for additional options or contact your local WINCO Sales Representative for information.

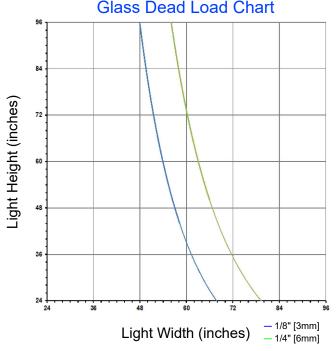


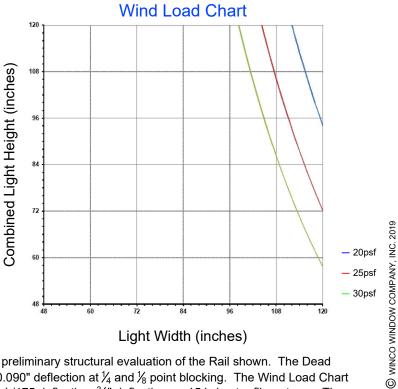


Section Properties

	X-X	Y-Y
Ι	2.6160 in ⁴	0.3581 in ⁴
S	1.1418 in ³	0.2665 in ³







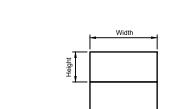
This chart can be used as a guideline for the preliminary structural evaluation of the Rail shown. The Dead Load chart is based on ¼" - ½" - ½" I.G. and 0.090" deflection at ¼ and ½ point blocking. The Wind Load Chart is based upon the minimum result from either L/175 deflection, ¾" deflection, or 15 ksi outer fiber stress. The charts reflect the structural strength of only the Rail. WINCO highly recommends consulting an engineer for any of the following circumstances:

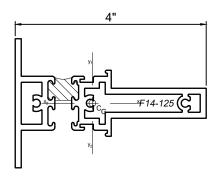
- The window under consideration falls close too or on the design pressure line.
- Any rail exceeds 48" with a large (>16ft2) light of glass above.
- I.G. make-up varies from the default.
- I.G. has additional blocking.

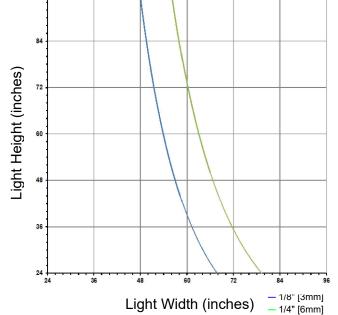
WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS BOOK WHEN DEEMED NECESSARY FOR PRODUCT IMPROVEMENT

Note: Multiple configurations of this window system are available. Refer to the WINCO website for additional options or contact your local WINCO Sales Representative for information.

WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS BOOK WHEN DEEMED NECESSARY FOR PRODUCT IMPROVEMENT



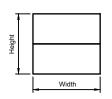


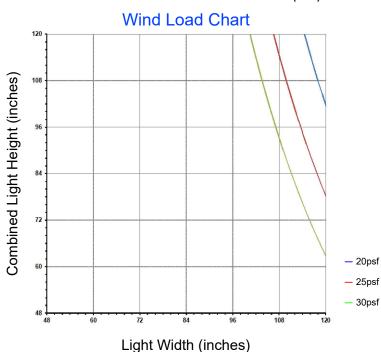


Glass Dead Load Chart

Section Properties

	X-X	Y-Y
I	2.7984 in ⁴	0.3579in ⁴
S	1.1803 in ³	0.2663 in ³





This chart can be used as a guideline for the preliminary structural evaluation of the Rail shown. The Dead Load chart is based on $\frac{1}{4}$ " - $\frac{1}{4}$ " I.G. and 0.090" deflection at $\frac{1}{4}$ and $\frac{1}{8}$ point blocking. The Wind Load Chart is based upon the minimum result from either L/175 deflection, $\frac{3}{4}$ " deflection, or 15 ksi outer fiber stress. The charts reflect the structural strength of only the Rail. WINCO highly recommends consulting an engineer for any of the following circumstances:

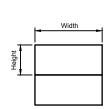
- The window under consideration falls close too or on the design pressure line.
- Any rail exceeds 48" with a large (>16ft²) light of glass above.
- I.G. make-up varies from the default.
- I.G. has additional blocking.

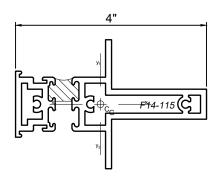
1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - F14-115 Rail



WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS BOOK WHEN DEEMED NECESSARY FOR PRODUCT IMPROVEMENT

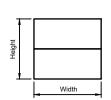
Note: Multiple configurations of this window system are available. Refer to the WINCO website for additional options or contact your local WINCO Sales Representative for information.

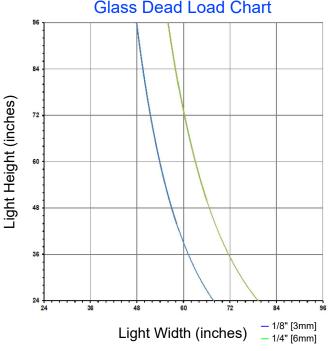


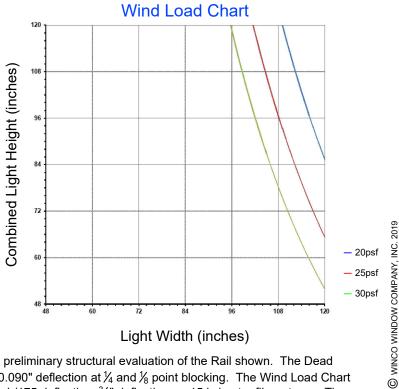


Section Properties

	X-X	Y-Y
Ι	2.4078in ⁴	0.3578in ⁴
S	1.0893 in ³	0.2663 in ³







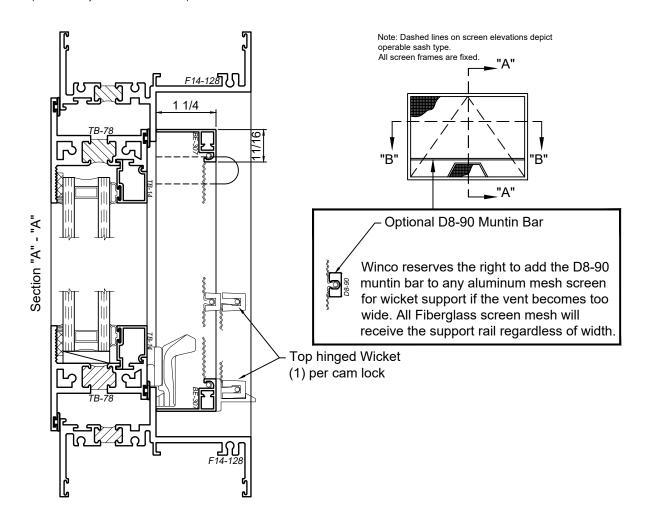
This chart can be used as a guideline for the preliminary structural evaluation of the Rail shown. The Dead Load chart is based on $\frac{1}{4}$ " - $\frac{1}{4}$ " I.G. and 0.090" deflection at $\frac{1}{4}$ and $\frac{1}{8}$ point blocking. The Wind Load Chart is based upon the minimum result from either L/175 deflection, $\frac{3}{4}$ " deflection, or 15 ksi outer fiber stress. The charts reflect the structural strength of only the Rail. WINCO highly recommends consulting an engineer for any of the following circumstances:

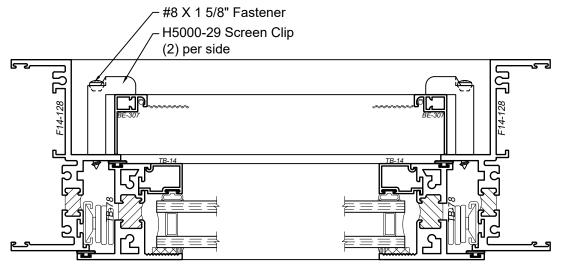
- The window under consideration falls close too or on the design pressure line.
- Any rail exceeds 48" with a large (>16ft²) light of glass above.
- I.G. make-up varies from the default.
- I.G. has additional blocking.

1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Screen Options - PO - Awning



Note: Typical vent screen details shown. Winco reserves the right to alter the screen attachment detail due to job specific sizing and hardware. If you have specific screen applications you would like to see please contact your local Winco Sales Representative for more information.



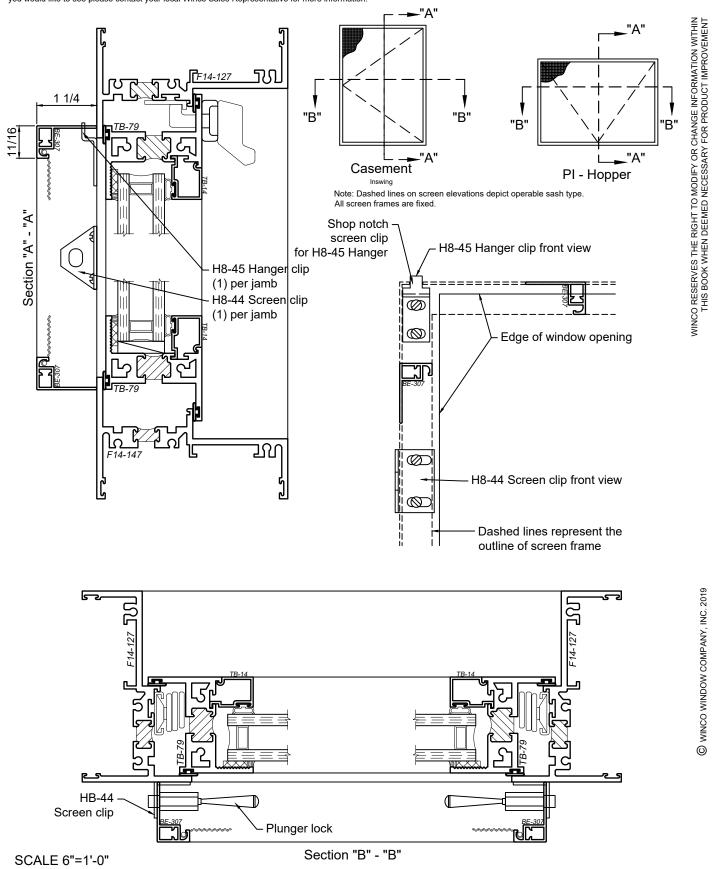


Section "B" - "B"

1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Screen Options - PI Hopper



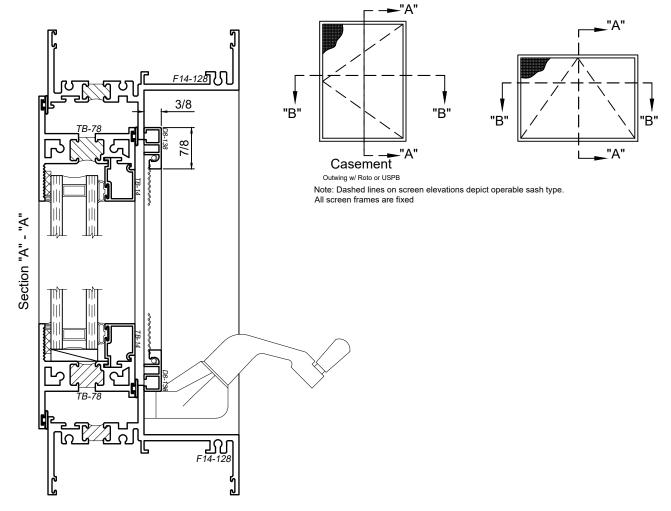
Note: Typical vent screen details shown. Winco reserves the right to alter the screen attachment detail due to job specific sizing and hardware. If you have specific screen applications you would like to see please contact your local Winco Sales Representative for more information.



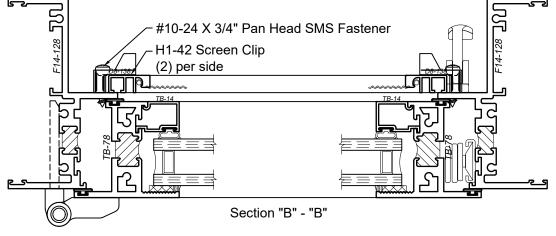
1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Screen Options - PO - Awning w/ Roto Operator



Note: Typical vent screen details shown. Winco reserves the right to alter the screen attachment detail due to job specific sizing and hardware. If you have specific screen applications you would like to see please contact your local Winco Sales Representative for more information.



WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS BOOK WHEN DEEMED NECESSARY FOR PRODUCT IMPROVEMENT

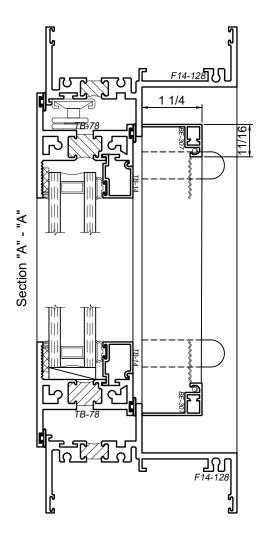


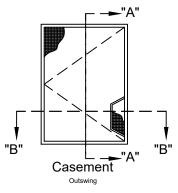
SCALE 6"=1'-0"

1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Screen Options - Outswing Casement



Note: Typical vent screen details shown. Winco reserves the right to alter the screen attachment detail due to job specific sizing and hardware. If you have specific screen applications you would like to see please contact your local Winco Sales Representative for more information.

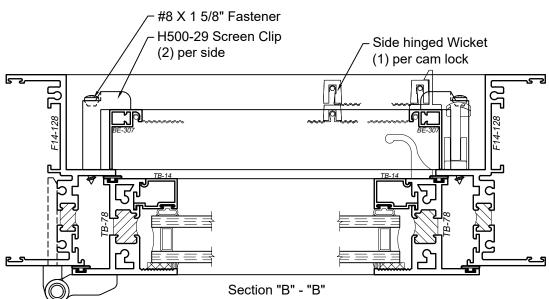




Note: Dashed lines on screen elevations depict operable sash type. All screen frames are fixed

WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS BOOK WHEN DEEMED NECESSARY FOR PRODUCT IMPROVEMENT

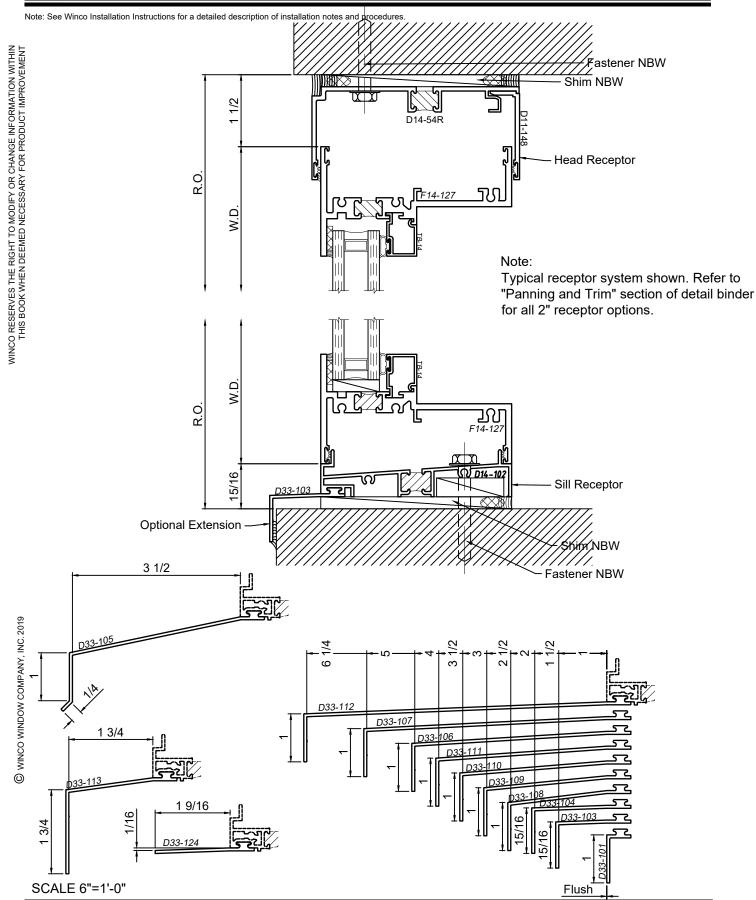
© WINCO WINDOW COMPANY, INC. 2019



SCALE 6"=1'-0"

1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Trim - Receptor Installation

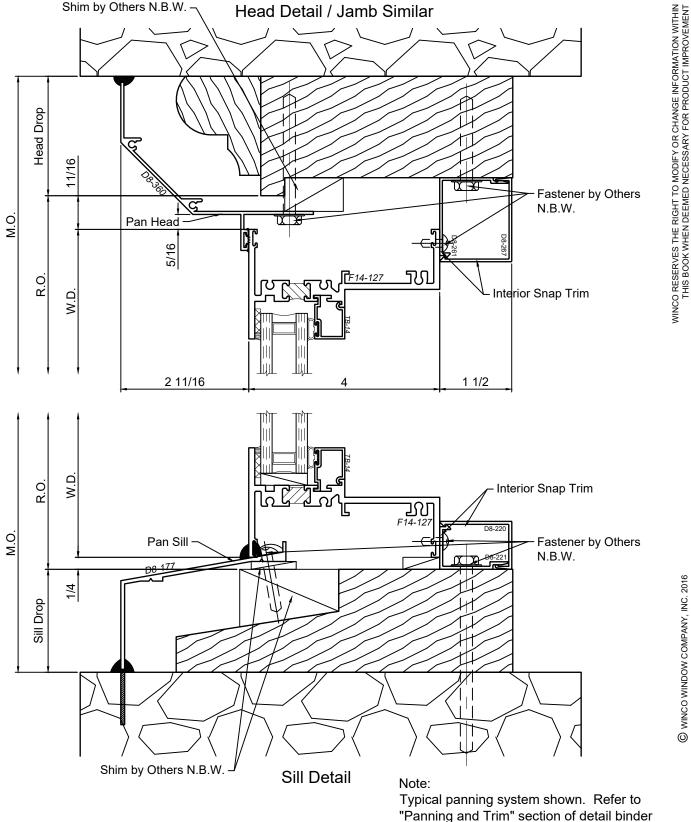




1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Trim - Panning Installation



Note: See Winco Installation Instructions for a detailed description of installation notes and procedures

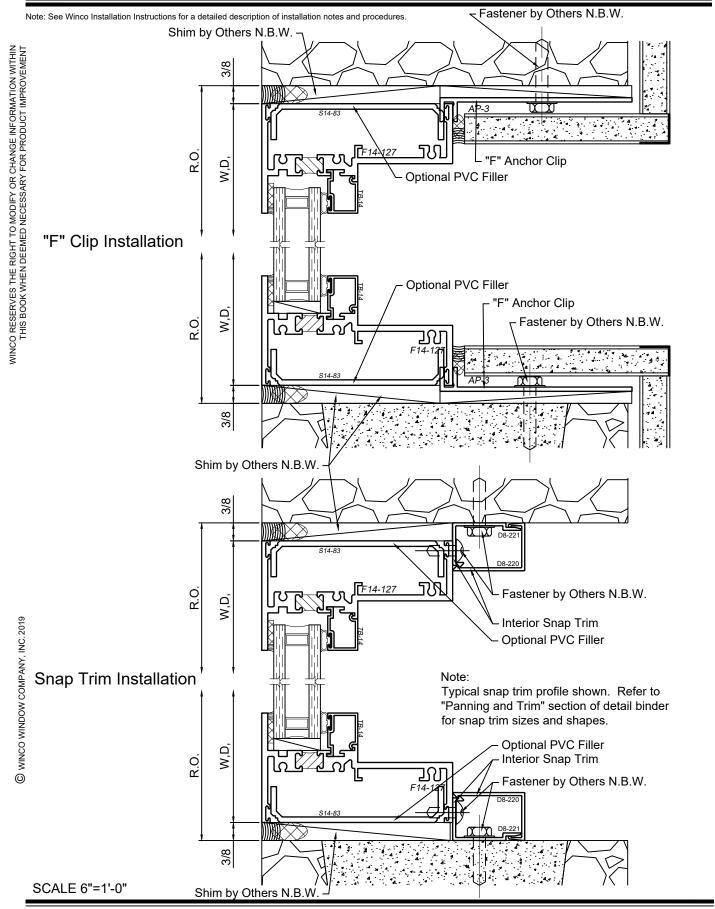


SCALE 6"=1'-0"

for all panning and interior snap trim options

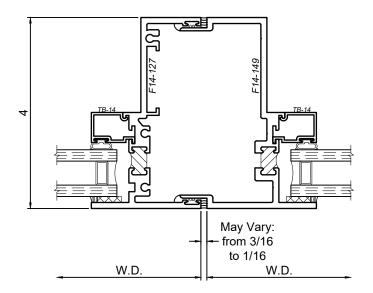
1450 Series 4" Thermal Fixed, Casement & Projected Windows Product Details - Trim - F-Anchor and Snap Trim Installation





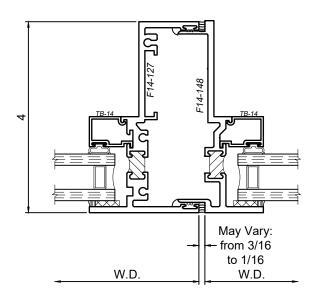


Typical Side Stack Framing



WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS BOOK WHEN DEEMED NECESSARY FOR PRODUCT IMPROVEMENT

Narrow Sightline Side Stack Framing

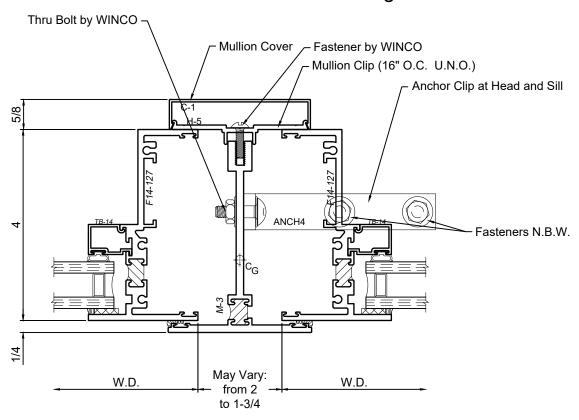




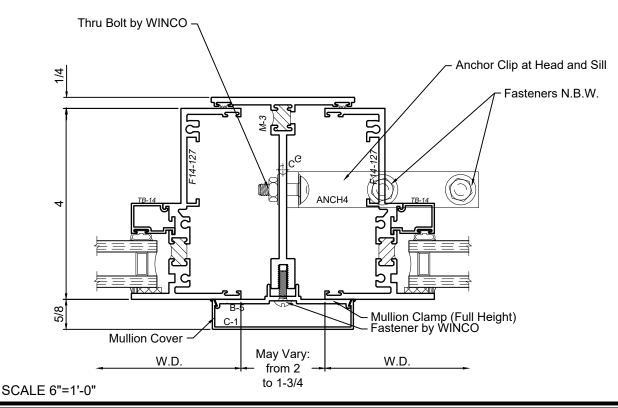
WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS BOOK WHEN DEEMED NECESSARY FOR PRODUCT IMPROVEMENT

© WINCO WINDOW COMPANY, INC. 2019

M-3 Mullion set from Building Interior



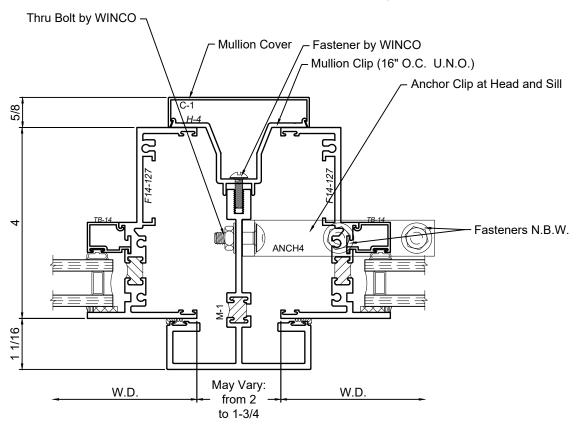
M-3 Mullion set from Building Exterior



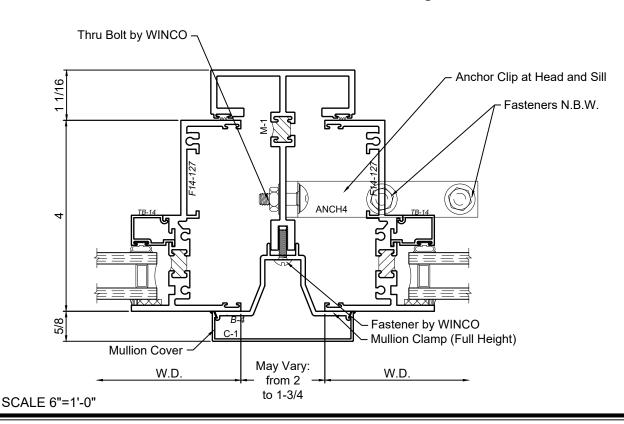


WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS BOOK WHEN DEEMED NECESSARY FOR PRODUCT IMPROVEMENT

M-1 Mullion set from Building Interior

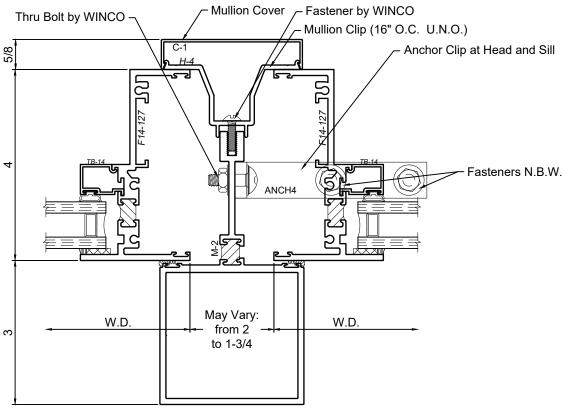


M-1 Mullion set from Building Exterior

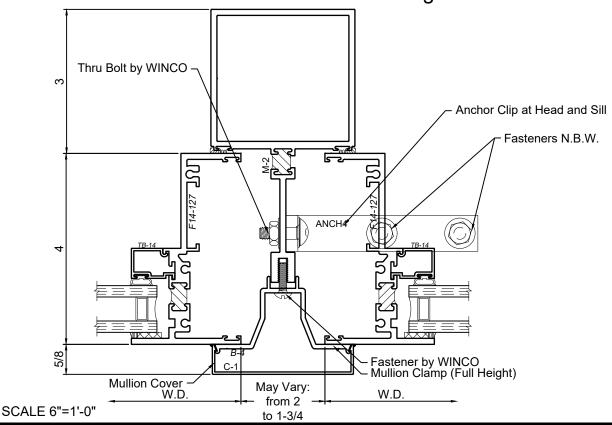




M-2 Mullion set from Building Interior

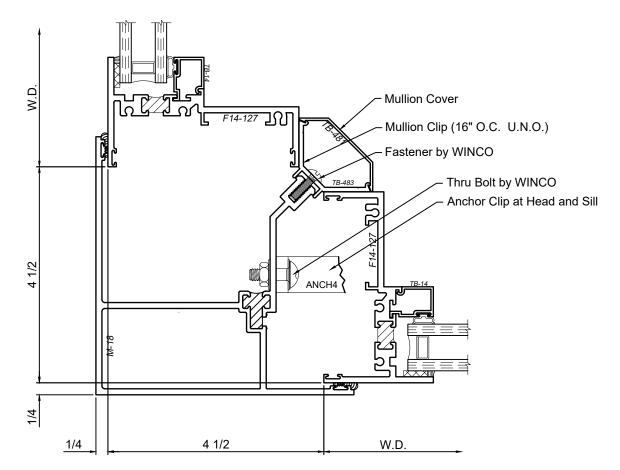


M-2 Mullion set from Building Exterior





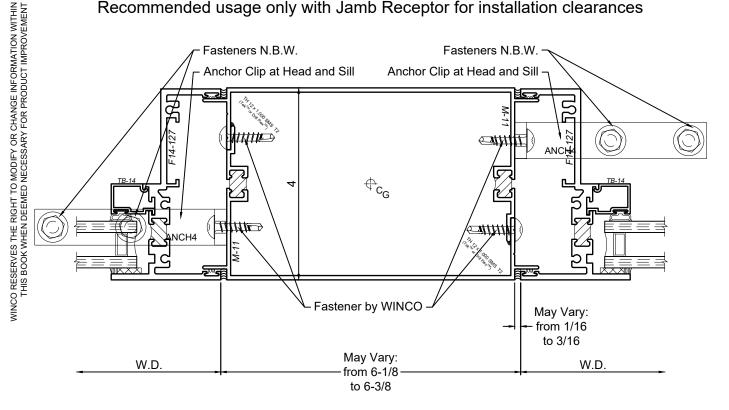
INCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS BOOK WHEN DEEMED NECESSABY FOR DEPONICT IMPROVEMENT





M-11 Mullion

Recommended usage only with Jamb Receptor for installation clearances





WINCO RESERVES THE RIGHT TO MODIFY OR CHANGE INFORMATION WITHIN THIS BOOK WHEN DEFINED NECESSARY FOR PRODICT IMPROVEMENT

This page is purposely left blank