EC 97911-206 INDEX

FIXED WINDOW	3-9
SINGLE HUNG WINDOW	10-19
DOUBLE HUNG WINDOW	20-30
HORIZONTAL SLIDING WINDOW	31-45
RECEPTORS	46
ANCHORS	47
PANNING	48
WIND LOAD / DEADLOAD CHARTS	49-55
THEDMAI CHADTS	56 131

Metric (SI) conversion figures are included throughout these details for reference. Numbers in parentheses () are millimeters unless otherwise noted.

The following metric (SI) units are found in these details:

m - meter

cm - centimeter

mm - millimeter

s - second

Pa – pascal

MPa - megapascal



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EC 97911-206

Laws and building and safety codes governing the design and use of Kawneer products, vary devide a transe, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

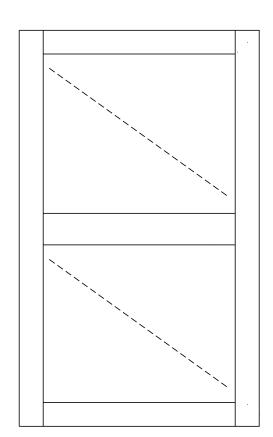
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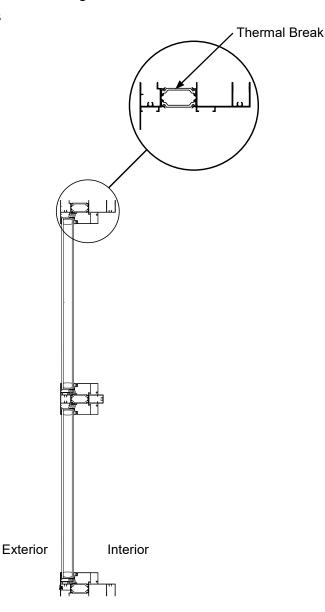


EC 97911-206 FIXED WINDOW

Standard Features

- · High Performance Architectural Grade Window
- Tested to U.S. and Canadian Standards
- Polyamide Thermal Break
- Screw and Spline Frame Corner Joinery
- Factory Silicone Glazed
- · Interior Applied Glazing Bead
- Architectural Anodized Finishes and Applied Coatings
- Interior and Exterior Dual Finish Options
- Two Year Manufacturer's Warranty
- Optional Bevel Face





Fixed Window

For specific product applications, consult your Kawneer representative.



FIXED WINDOW

EC	97	91	1-2	06
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CLASS and GRADE	CLASS AW-PG70-FW
TESTING METHOD	AAMA / WDMA / CSA / 101 / I.S.2 / A440 (NAFS)
FRAME DEPTH	4-5/8" Overall Frame Depth
TYPICAL WALL THICKNESS	.070" Nominal
TYPICAL MAXIMUM WINDOW SIZE	60" x 99"
TYPICAL MINIMUM WINDOW SIZE	17" x 17"
TYPICAL CONFIGURATIONS	
STANDARD INFILL OPTIONS	1" and 1-1/2"
STANDARD HARDWARE	Not Applicable
OPTIONAL HARDWARE	Not Applicable
OTHER OPTIONS	Between the Glass Muntins Historic Beveled Exterior Glazed-in Muntins (1-1/2" max. overall thickness) Exterior and Interior Tape Applied Muntins Perimeters and Sills Exterior Pannings and Interior Trims True Intermediate Muntin Structural Mullions H-Mullion for vertical stacking Strap Anchors Male/Female horizontally stacked

Laws and building and safety codes governing the design and use of Kawneer products, vary actors a glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

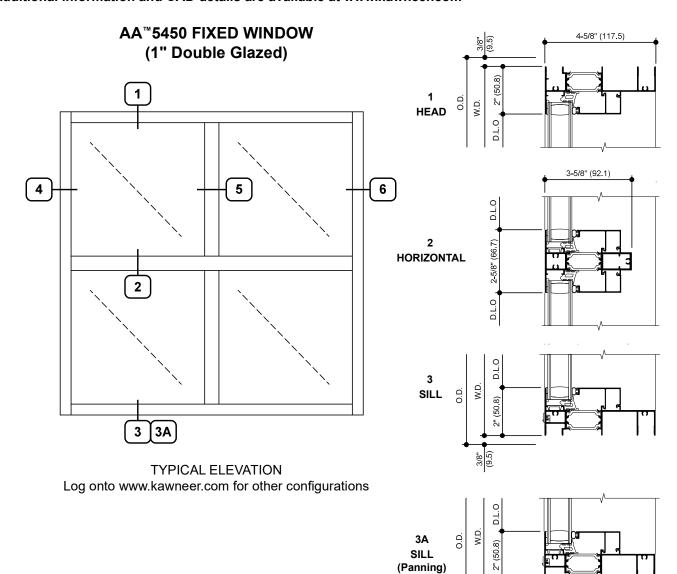
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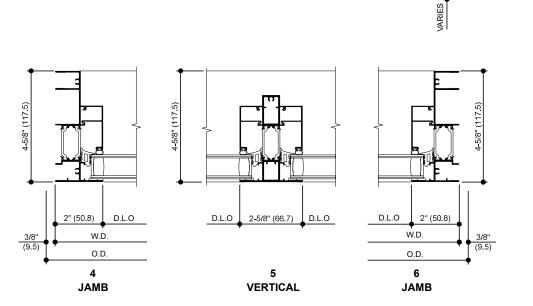


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FIXED WINDOW

Additional information and CAD details are available at www.kawneer.com

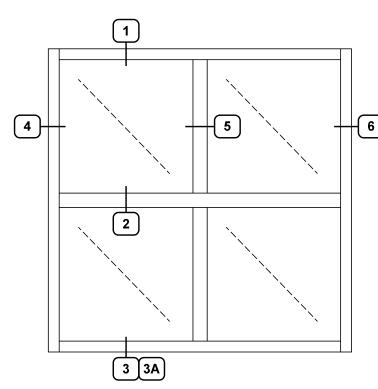




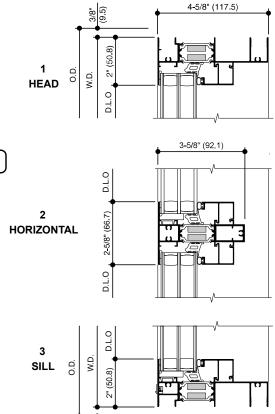


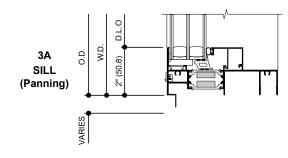
ADME120EN kawneer.com

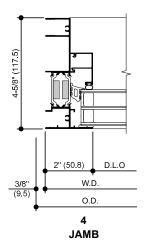
AA™5450 FIXED WINDOW (1-1/2" Triple Glazed)

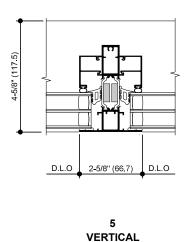


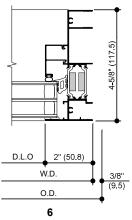
TYPICAL ELEVATION Log onto www.kawneer.com for other configurations











KAWNEER

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FIXED WINDOW - BEVEL FACE

AA™5450 Ultra Thermal Window

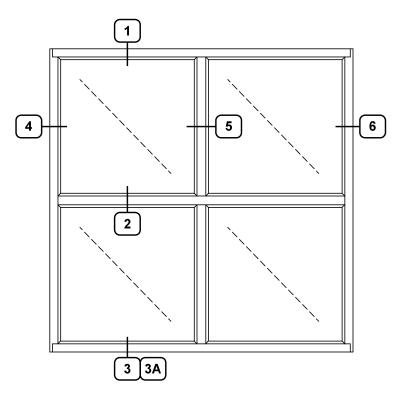
Laws and building and safety codes governing the design and use of Kawneer products, vary acided entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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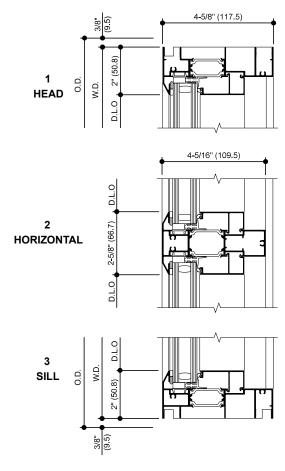
CLASS and GRADE	CLASS AW-PG70-FW
TESTING METHOD	AAMA / WDMA / CSA / 101 / I.S.2 / A440 (NAFS)
FRAME DEPTH	4-5/8" Overall Frame Depth
TYPICAL WALL THICKNESS	.070" Nominal
TYPICAL MAXIMUM WINDOW SIZE	60" x 99"
TYPICAL MINIMUM WINDOW SIZE	17" x 17"
TYPICAL CONFIGURATIONS	
STANDARD INFILL OPTIONS	1" and 1-1/2"
STANDARD HARDWARE	Not Applicable
OPTIONAL HARDWARE	Not Applicable
OTHER OPTIONS	Between the Glass Muntins Exterior and Interior Tape Applied Muntins Perimeters and Sills Exterior Pannings and Interior Trims True Intermediate Muntin Structural Mullions H-Mullion for vertical stacking Strap Anchors Male/Female horizontally stacked

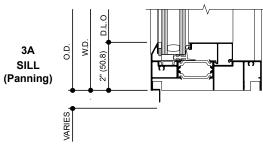


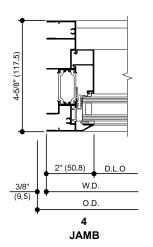
AA[™]5450 FIXED WINDOW (1" Double Glazed)

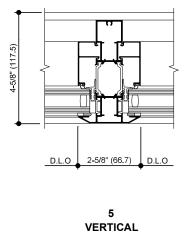


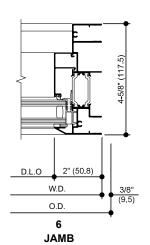
TYPICAL ELEVATION
Log onto www.kawneer.com for other configurations













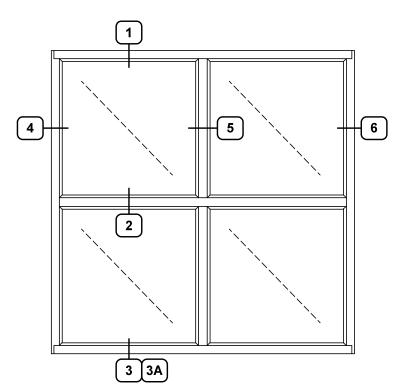
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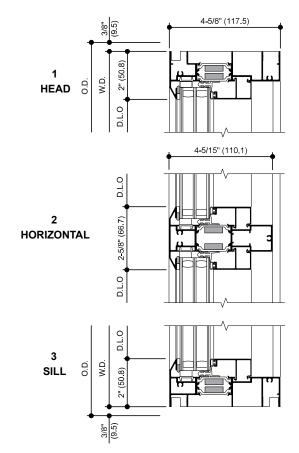
AA™5450 Ultra Thermal Window

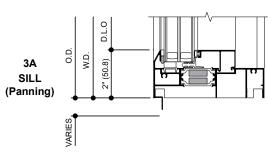
Additional information and CAD details are available at www.kawneer.com

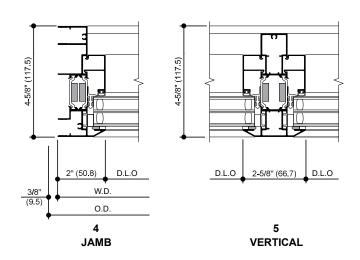
AA™5450 FIXED WINDOW (1-1/2" Triple Glazed)

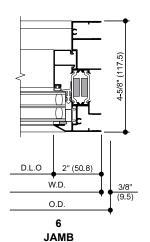


TYPICAL ELEVATION Log onto www.kawneer.com for other configurations





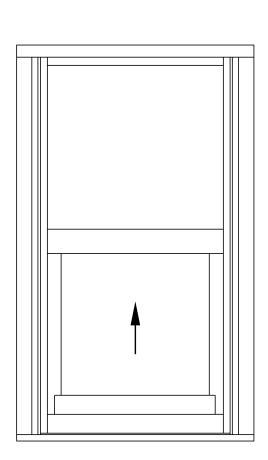


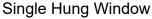


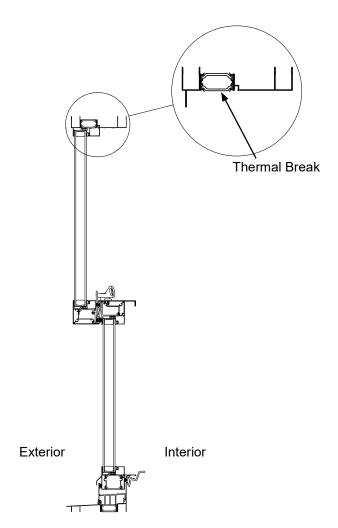


Standard Features

- · High Performance Architectural Grade Window
- Tested to U.S. and Canadian Standards
- Polyamide Thermal Break
- Screw and Spline Frame Corner Joinery
- Factory Silicone Glazed
- Interior Applied Glazing Bead
- · Architectural Anodized Finishes and Applied Coatings
- Interior and Exterior Dual Finish Options
- Two Year Manufacturer's Warranty
- Optional Bevel Face







For specific product applications, consult your Kawneer representative.



SINGLE HUNG WINDOW

AA™5450 Ultra Thermal Window

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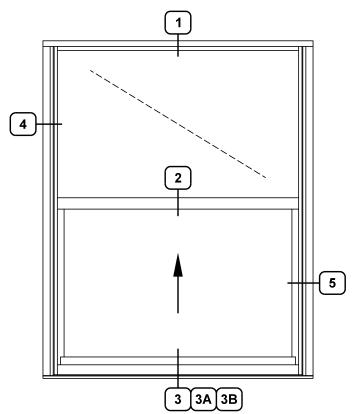
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	T
CLASS and GRADE	CLASS AW-PG65-H
TESTING METHOD	AAMA / WDMA / CSA / 101 / I.S.2 / A440 (NAFS)
FRAME DEPTH	4-5/8" Overall Frame Depth
TYPICAL WALL THICKNESS	.070" Nominal
TYPICAL MAXIMUM WINDOW SIZE	60" x 99"
TYPICAL MINIMUM WINDOW SIZE	24" x 36"
TYPICAL CONFIGURATIONS	
STANDARD INFILL OPTIONS	1" and 1-1/2"
STANDARD HARDWARE	Heavy Duty Balances White Bronze Sweep Locks Sash Stops
OPTIONAL HARDWARE	Sill Auto Locks
OTHER OPTIONS	Between the Glass Muntins Historic Beveled Exterior Glazed-in Muntins (1-1/2" max. overall thickness) Exterior and Interior Tape Applied Muntins Perimeters and Sills Exterior Pannings and Interior Trims True Intermediate Muntin Structural Mullions Male /Female horizontally stacked H-Mullion for vertical stacking Tri-lite Configuration Strap Anchors



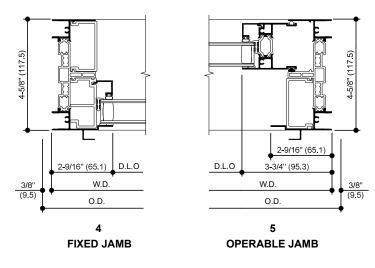
Additional information and CAD details are available at www.kawneer.com

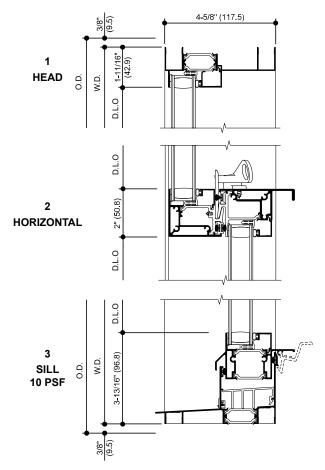
AA[™]5450 SINGLE HUNG WINDOW (1" Double Glazed)

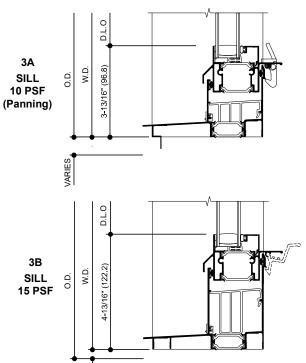


TYPICAL ELEVATION

Log onto www.kawneer.com for other configurations







Note: 15 PSF sill also available for use with panning.

3/8"

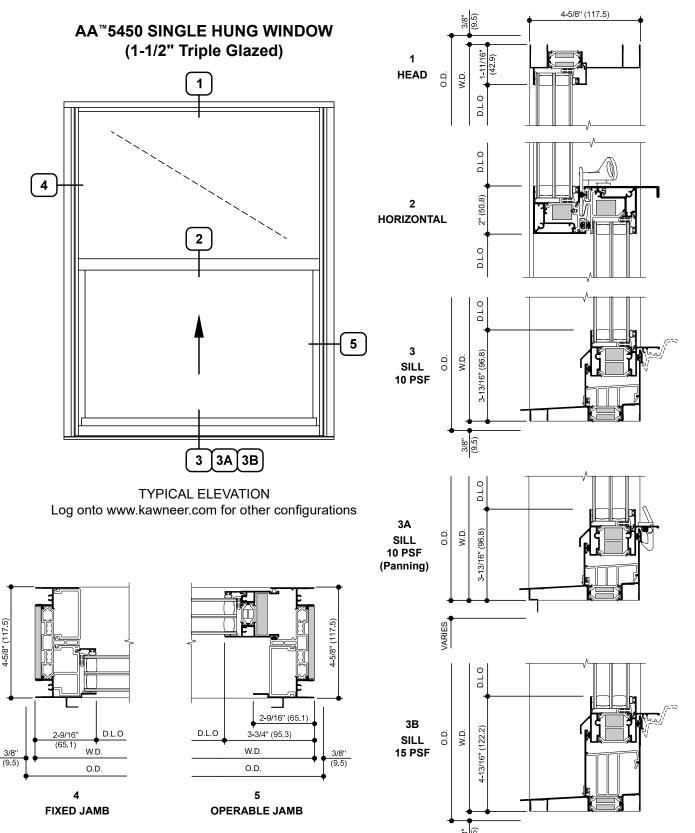
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AN ARCONIC COMPANY

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Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

SINGLE HUNG WINDOW

Additional information and CAD details are available at www.kawneer.com



Note: 15 PSF sill also available for use with panning.

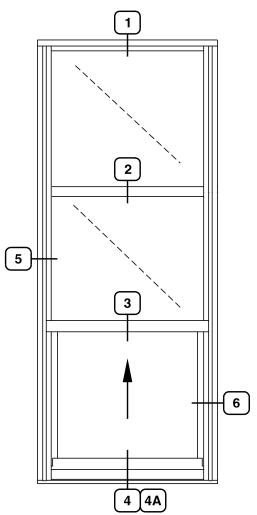


design and use of Kawneer products, products, vary widely. Kawneer does not

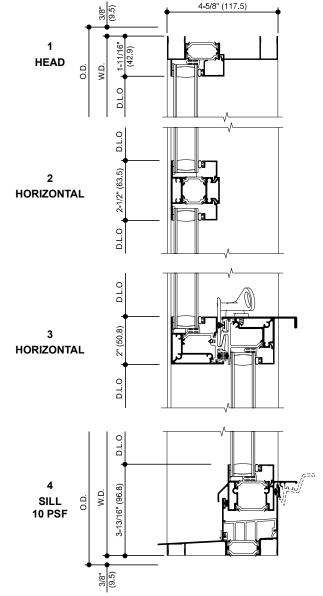
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Additional information and CAD details are available at www.kawneer.com

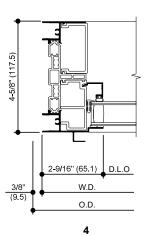
AA™5450 SINGLE HUNG WINDOW (Tri-Lite 1" Double Glazed)

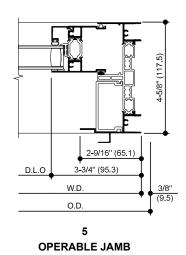


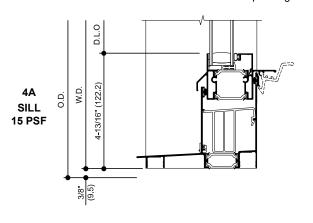
TYPICAL ELEVATION Log onto www.kawneer.com for other configurations



Note: 10 PSF sill also available for use with panning.







15 PSF sill also available for use with panning.

KAWNEER

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kawneer.com

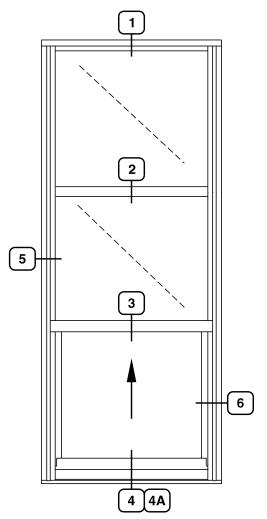
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EC 97911-206

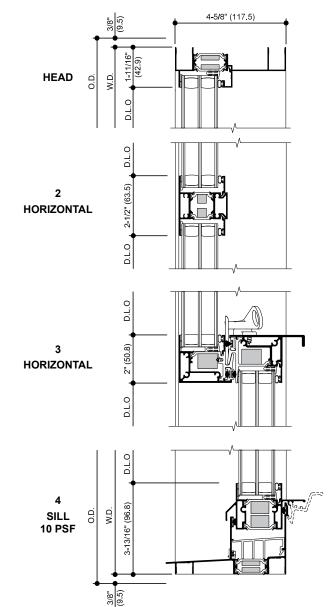
SINGLE HUNG WINDOW

Additional information and CAD details are available at www.kawneer.com

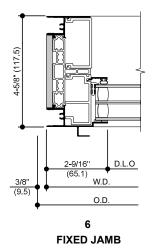
AA™5450 SINGLE HUNG WINDOW (Tri-Lite 1-1/2" Triple Glazed)

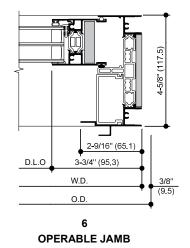


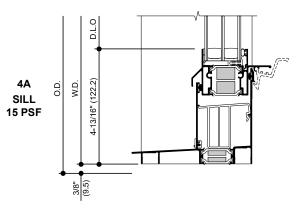
TYPICAL ELEVATION Log onto www.kawneer.com for other configurations



Note: 10 PSF sill also available for use with panning.







Note: 15 PSF sill also available for use with panning.

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ADME120EN kawneer.com

AA™5450 Ultra Thermal Window

SINGLE HUNG WINDOW - BEVEL FACE

EC 97911-206

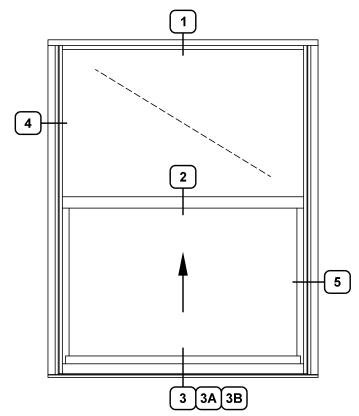
CLASS and GRADE	CLASS AW-PG65-H
TESTING METHOD	AAMA / WDMA / CSA / 101 / I.S.2 / A440 (NAFS)
FRAME DEPTH	4-5/8" Overall Frame Depth
TYPICAL WALL THICKNESS	.070" Nominal
TYPICAL MAXIMUM WINDOW SIZE	60" x 99"
TYPICAL MINIMUM WINDOW SIZE	24" x 36"
TYPICAL CONFIGURATIONS	
STANDARD INFILL OPTIONS	1" and 1-1/4"
STANDARD HARDWARE	Heavy Duty Balances White Bronze Sweep Locks Sash Stops
OPTIONAL HARDWARE	Sill Auto Locks
OTHER OPTIONS	Between the Glass Muntins Exterior and Interior Tape Applied Muntins Perimeters and Sills Exterior Pannings and Interior Trims True Intermediate Muntin Structural Mullions Male /Female horizontally stacked H-Mullion for vertical stacking Tri-lite Configuration Strap Anchors

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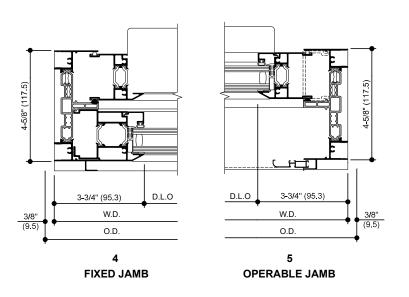
Additional information and CAD details are available at www.kawneer.com

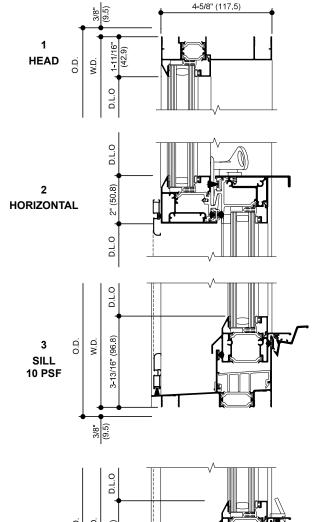
AA[™]5450 SINGLE HUNG WINDOW (1" Double Glazed)

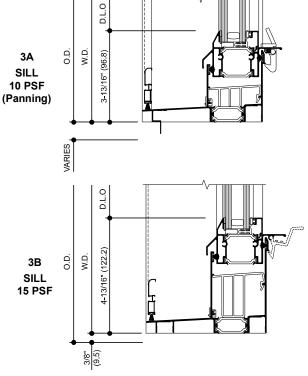


TYPICAL ELEVATION

Log onto www.kawneer.com for other configurations



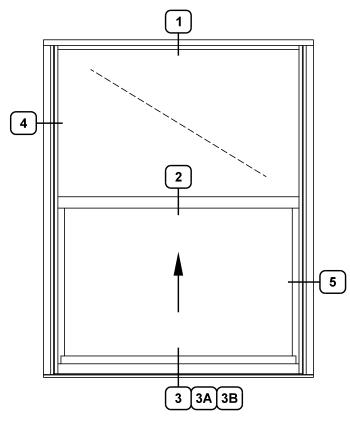




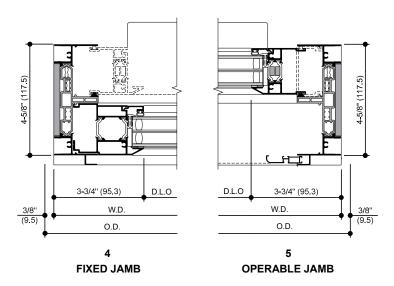
15 PSF sill also available for use with panning.

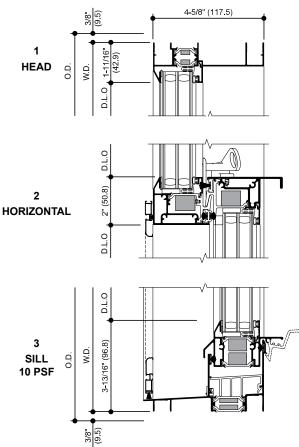


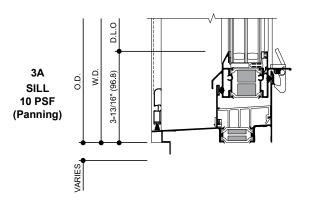
AA[™]5450 SINGLE HUNG WINDOW (1-1/4" Triple Glazed)

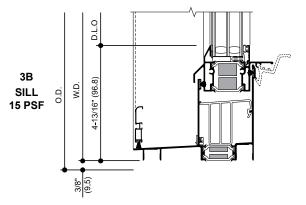


TYPICAL ELEVATION
Log onto www.kawneer.com for other configurations









Note:

15 PSF sill also available for use with panning.

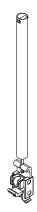
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SINGLE HUNG WINDOW

HEAVY DUTY BALANCES



A class 5 adjustable spiral balance with excellent operating forces capable of balancing heavier sash weights. The balance utilizes stainless steel components and is cycle tested for longevity.

Class 6 is optional.

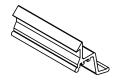
SWEEP LOCK AND KEEPER





White Bronze sweep locks and keepers with a durable brushed nickel finish and cycle tested for longevity.

AUTO LOCK



An optional spring operated auto lock conveniently located under the sash lift handle or an optional white bronze spring operated autolock located on the handle. The lock automatically engages the integral sill keeper upon closing the sash.

COVERED WEEPS



Weep with an integral hinged cover to allow maximum drainage of infiltrating water with a positive closing cover to block drafts and insects. The weep is available in black and white finishes.

SASH CAMS



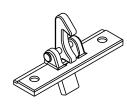
Adjustable glass filled nylon cams located left and right on the sash ensure proper alignment and smooth operation.

SASH STOPS



Black rigid vinyl sash stops are inserted into the vertical jambs without exposed fasteners to prevent excessive sash travel.

WHITE BRONZE SILL AUTO LOCK

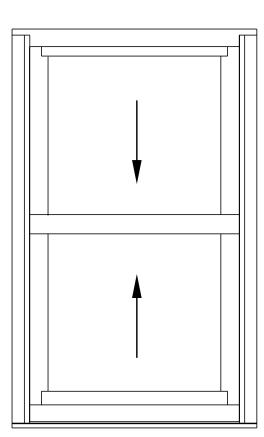


A White Bronze spring operated auto lock located on the lower sash. The lock automatically engages the integral keeper securing the lower sash in the closed position. The auto lock is an option for the lower sash.

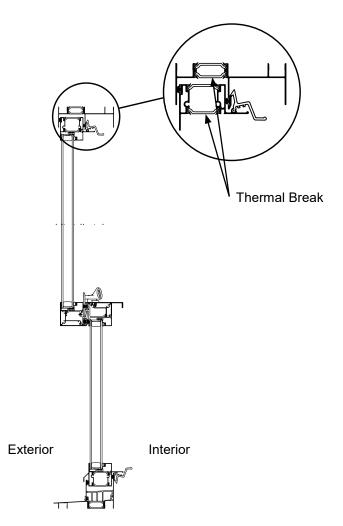


Standard Features

- · High Performance Architectural Grade Window
- Tested to U.S. and Canadian Standards
- Polyamide Thermal Break
- · Screw and Spline Frame Corner Joinery
- Factory Silicone Glazed
- Interior Applied Glazing Bead
- · Architectural Anodized Finishes and Applied Coatings
- Interior and Exterior Dual Finish Options
- Two Year Manufacturer's Warranty
- · Optional Bevel Face



Double Hung Window



For specific product applications, consult your Kawneer representative.



AA™5450 Ultra Thermal Window

EC 97911-206

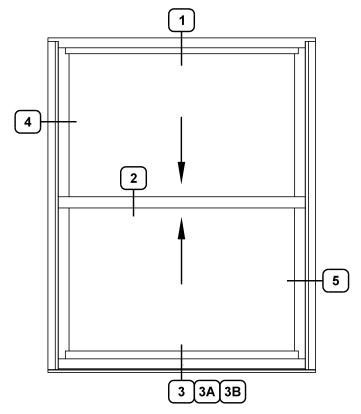
DOUBLE HUNG WINDOW

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CLASS and GRADE	CLASS AW-PG65-H
TESTING METHOD	AAMA / WDMA / CSA / 101 / I.S.2 / A440 (NAFS)
FRAME DEPTH	4-5/8" Overall Frame Depth
TYPICAL WALL THICKNESS	.070" Nominal
TYPICAL MAXIMUM WINDOW SIZE	60" x 99"
TYPICAL MINIMUM WINDOW SIZE	24" x 36"
TYPICAL CONFIGURATIONS	+ + + + + + + + + + + + + + + + + + + +
STANDARD INFILL OPTIONS	1" and 1-1/2"
STANDARD HARDWARE	Heavy Duty Balances Zinc Die Cast Sweep Locks Sash Stops Aluminum Upper Sash Auto Lock
OPTIONAL HARDWARE	Aluminum or White Bronze Sill Auto Locks
OTHER OPTIONS	Between the Glass Muntins Historic Beveled Exterior Glazed-in Muntins (1-1/2" max. overall thickness) Exterior and Interior Tape Applied Muntins Perimeters and Sills Exterior Pannings and Interior Trims True Intermediate Muntin Structural Mullions Male/Female horizontally stacked H-Mullion for vertical stacking Strap Anchors

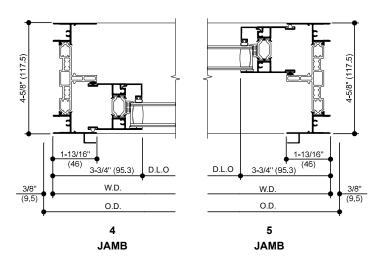


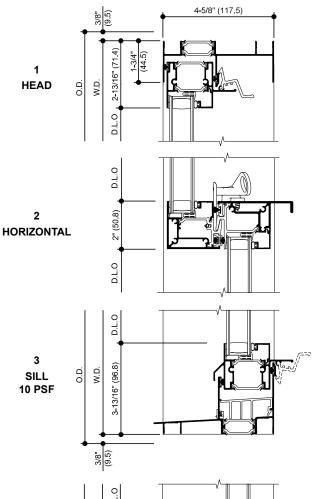
AA™5450 DOUBLE HUNG WINDOW (1" Double Glazed)

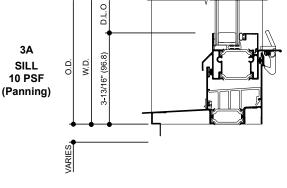


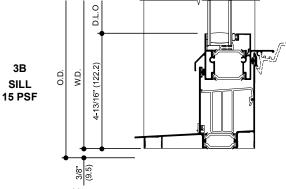
TYPICAL ELEVATION

Log onto www.kawneer.com for other configurations









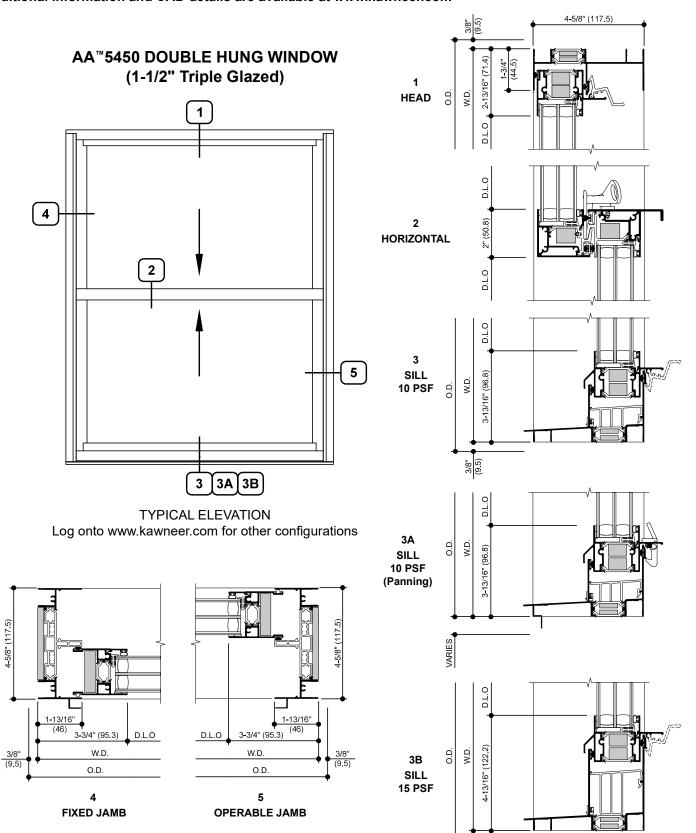
Note: 15 PSF sill also available for use with panning. Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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DOUBLE HUNG WINDOW

Additional information and CAD details are available at www.kawneer.com



15 PSF sill also available for use with panning.

3/8" Note:



4-5/8" (117.5)

О.D. W.D.

D.L.O

D.L.0

4-1/8" (104.8)

D.L.0

D.L.0

2" (50.8)

D.L.0

D.L.0

3-13/16" (96.8) W.D.

3/8" Note:

HEAD

HORIZONTAL

HORIZONTAL

SILL

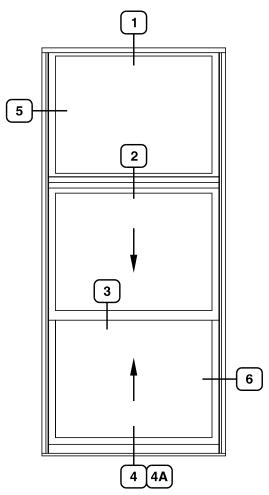
10 PSF

4A

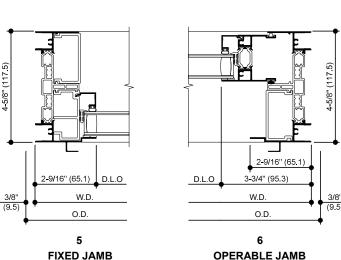
O.D.

Additional information and CAD details are available at www.kawneer.com

AA™5450 DOUBLE HUNG WINDOW (Tri-Lite 1" Double Glazed)



TYPICAL ELEVATION Log onto www.kawneer.com for other configurations



3/8"

4-13/16" (122.2) SILL O.D. **15 PSF** 3/8"

Note:

15 PSF sill also available for use with panning.

10 PSF sill also available for use with panning.

Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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KAWNEER

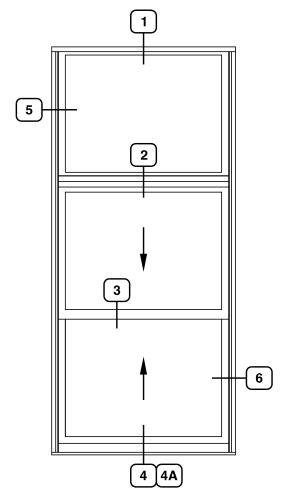
4-5/8" (117.5)

ADME120EN

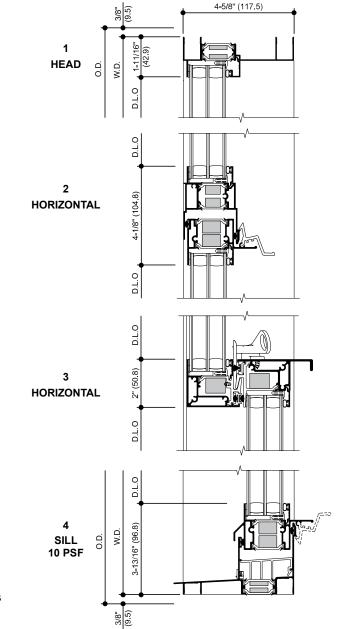
DOUBLE HUNG WINDOW

Additional information and CAD details are available at www.kawneer.com

AA™5450 DOUBLE HUNG WINDOW (Tri-Lite 1-1/2" Triple Glazed)

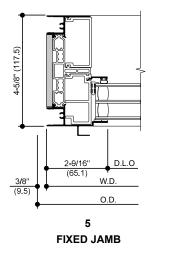


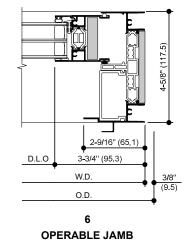
TYPICAL ELEVATION Log onto www.kawneer.com for other configurations

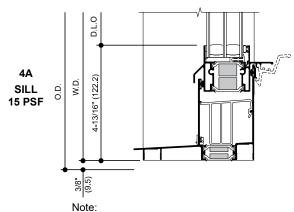


Note:

10 PSF sill also available for use with panning.







15 PSF sill also available for use with panning.



ADME120EN kawneer.com

AA™5450 Ultra Thermal Window

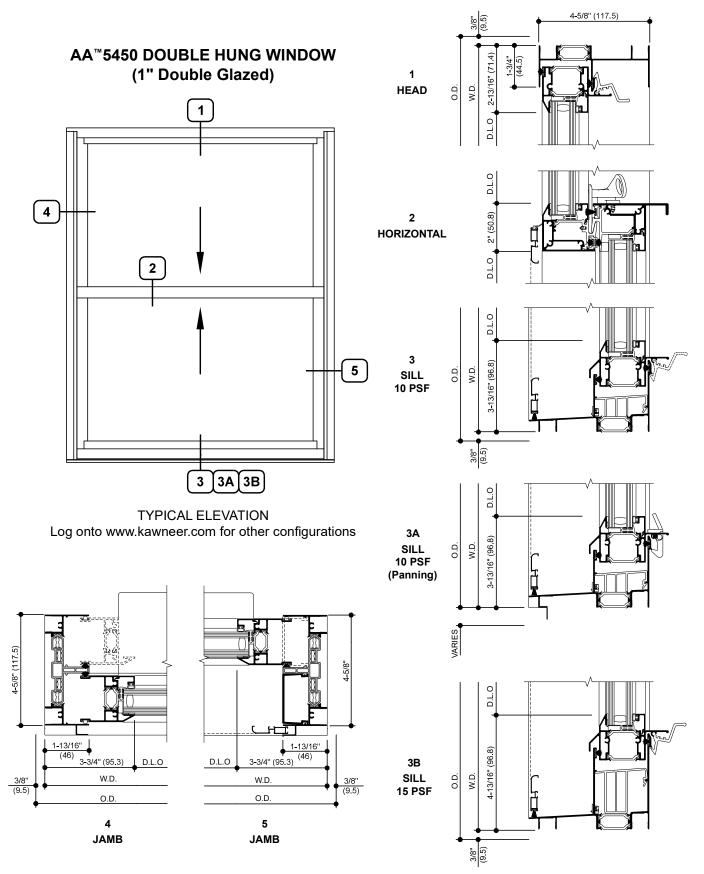
DOUBLE HUNG WINDOW - BEVEL FACE

EC 97911-206

CLASS and GRADE	CLASS AW-PG65-H
TESTING METHOD	AAMA / WDMA / CSA / 101 / I.S.2 / A440 (NAFS)
FRAME DEPTH	4-5/8" Overall Frame Depth
TYPICAL WALL THICKNESS	.070" Nominal
TYPICAL MAXIMUM WINDOW SIZE	60" x 99"
TYPICAL MINIMUM WINDOW SIZE	24" x 36"
TYPICAL CONFIGURATIONS	+ + + + + + + + +
STANDARD INFILL OPTIONS	1" and 1-1/4"
STANDARD HARDWARE	Heavy Duty Balances Zinc Die Cast Sweep Locks Sash Stops Aluminum Upper Sash Auto Lock
OPTIONAL HARDWARE	Aluminum or White Bronze Sill Auto Locks
OTHER OPTIONS	Between the Glass Muntins Exterior and Interior Tape Applied Muntins Perimeters and Sills Exterior Pannings and Interior Trims True Intermediate Muntin Structural Mullions Male/Female horizontally stacked H-Mullion for vertical stacking Strap Anchors

Laws and building and safety codes governing the design and use of Kawneer products, such as glazde entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

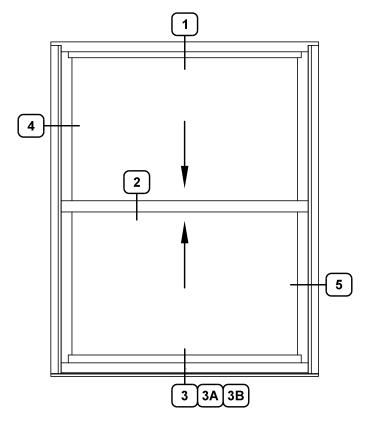




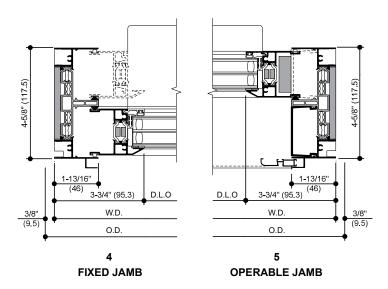
Note: 15 PSF sill also available for use with panning.

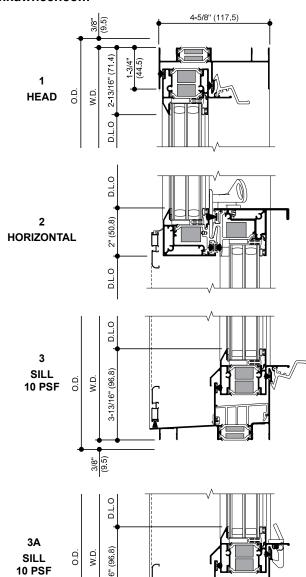


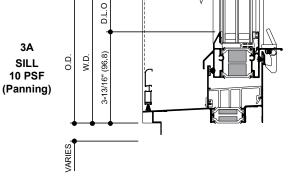
AA[™]5450 DOUBLE HUNG WINDOW (1-1/4" Triple Glazed)

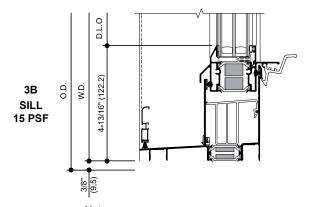


TYPICAL ELEVATION
Log onto www.kawneer.com for other configurations









Note:

15 PSF sill also available for use with panning.

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DOUBLE HUNG WINDOW

HEAVY DUTY BALANCES



A class 5 adjustable spiral balance with excellent operating forces capable of balancing heavier sash weights. The balance utilizes stainless steel components and is cycle tested for longevity.

Class 6 is optional.

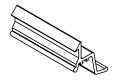
SWEEP LOCK AND KEEPER





White Bronze sweep locks and keepers with a durable brushed nickel finish and cycle tested for longevity.

AUTO LOCK AND KEEPER



An aluminum spring operated auto lock located on the upper sash. The lock automatically engages the integral keeper securing the sash in the closed position. The auto lock is an option for the lower sash, but is standard for the upper sash.

COVERED WEEPS



A weep with an integral hinged cover to allow maximum drainage of infiltrating water with a positive closing cover to block drafts and insects. The weep is available in black and white finishes.

SASH CAMS



Adjustable glass filled nylon cams located left and right on the sash ensure proper alignment and smooth operation.

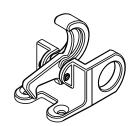
SASH STOPS



Black rigid vinyl sash stops are inserted into the vertical jambs without exposed fasteners to prevent excessive sash travel.

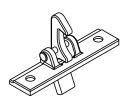


UPPER SASH SNAP LOCK



A White Bronze spring operated auto lock located on the upper sash. The lock automatically engages the integral keeper securing the upper sash in the closed position. The snap lock is an option for the upper sash.

WHITE BRONZE SILL AUTO LOCK



A White Bronze spring operated auto lock located on the lower sash. The lock automatically engages the integral keeper securing the lower sash in the closed position. The auto lock is an option for the lower sash.

Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

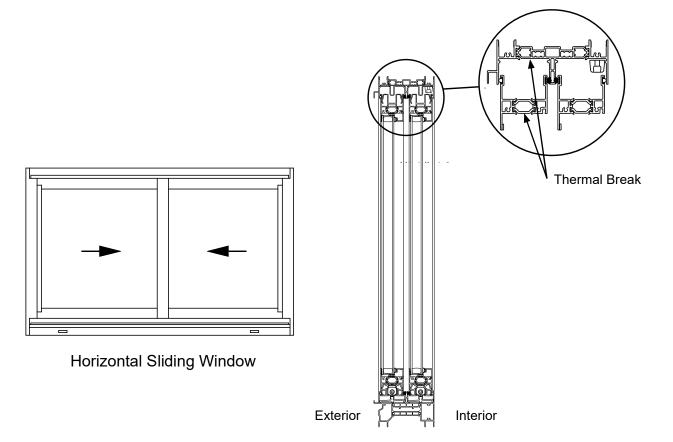
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HORIZONTAL SLIDING WINDOW

Standard Features

- · High Performance Architectural Grade Window
- Tested to U.S. and Canadian Standards
- Polyamide Thermal Break
- Screw and Spline Frame Corner Joinery
- Factory Silicone Glazed
- · Interior Applied Glazing Bead
- · Architectural Anodized Finishes and Applied Coatings
- Interior and Exterior Dual Finish Options
- Two Year Manufacturer's Warranty



For specific product applications, consult your Kawneer representative.



ws and building and safety codes governing the design and use of Kawneer products,	ch as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not	ntrol the selection of product configurations, operating hardware, or glazing materials,
ws and building and safety codes governin	ch as glazed entrance, window, and curtair	ntrol the selection of product configurations

Laws and building and safety codes governing the design and use of Kawneer products

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CLASS and GRADE	CLASS AW-PG40-HS (OX / XO / XOX), AW-PG50-HS (XX)
TESTING METHOD	AAMA / WDMA / CSA / 101 / I.S.2 / A440 (NAFS)
FRAME DEPTH	4-5/8" Overall Frame Depth
TYPICAL WALL THICKNESS	0.070" Nominal
TYPICAL MAXIMUM WINDOW SIZE	99" x 79" OX / XO / XX

HORIZONTAL SLIDING WINDOW

TYPICAL MINIMUM WINDOW SIZE 36" x 24"



STANDARD INFILL OPTIONS 1" and 1-1/2"

White Bronze Sweep Locks Sash Stops STANDARD HARDWARE

Aluminum Sash Auto Lock (At XX Inactive Sash)

OPTIONAL HARDWARE Aluminum Auto Locks

OTHER OPTIONS Between the Glass Muntins

Historic Beveled Exterior Glazed-in Muntins (1-1/2" max. overall

thickness)

120" x 79" XOX

Exterior and Interior Tape Applied Muntins

Perimeters and Sills

Exterior Pannings and Interior Trims

3 Piece Structural Mullions

Male/Female vertically or horizontally stacked

H-Mullion for vertical or horizontal stacking

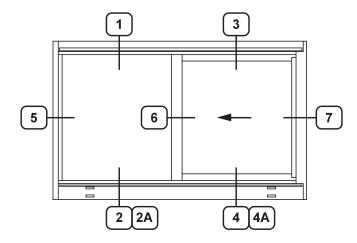
Strap Anchors



33

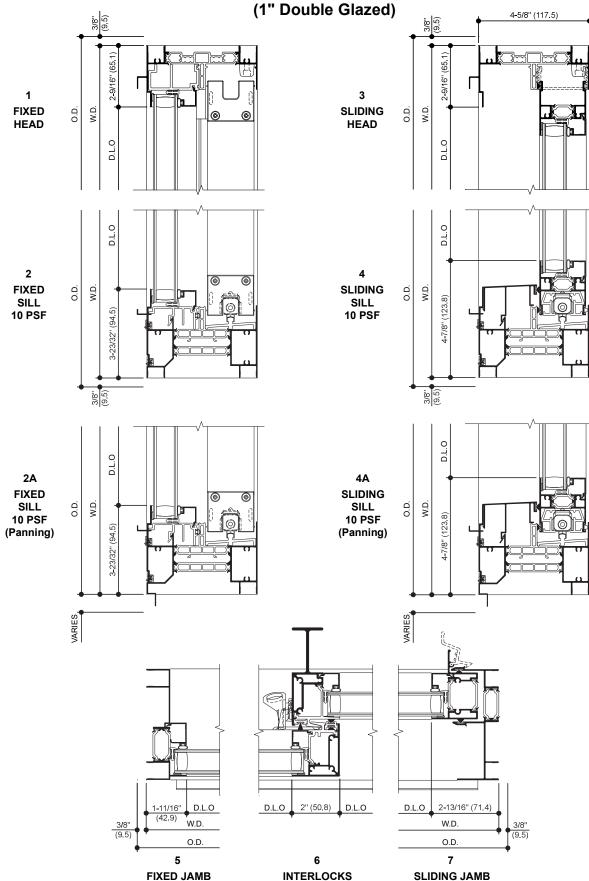
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OX HORIZONTAL SLIDING WINDOW (Keyed to details on pages 34 and 35)



TYPICAL ELEVATION

OX HORIZONTAL SLIDING WINDOW

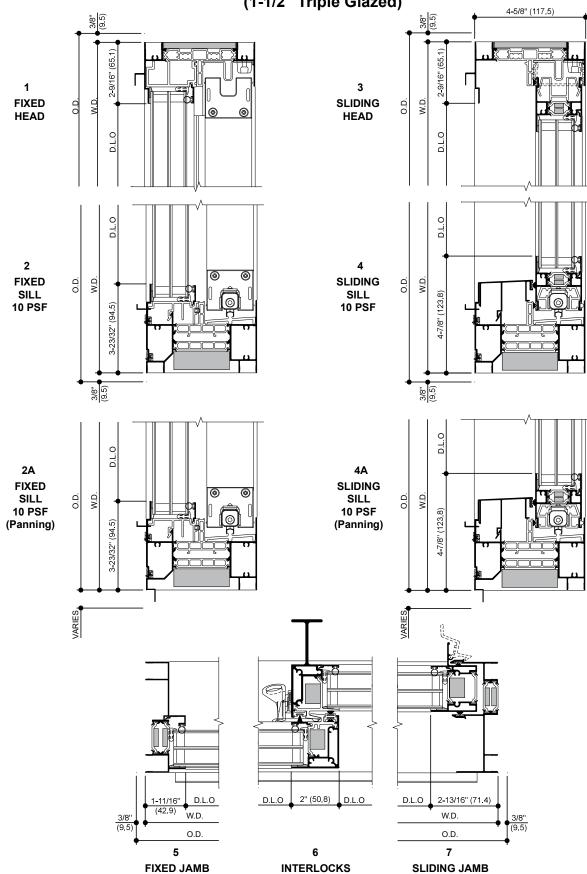




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OX HORIZONTAL SLIDING WINDOW (1-1/2" Triple Glazed)



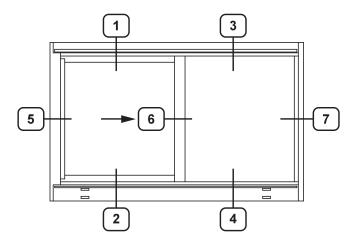
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kawneer.com

Laws and building and safety codes governing the design and use of Kawneer products, vary and safed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

ADME120EN

XO HORIZONTAL SLIDING WINDOW (Keyed to details on pages 37 and 38)



TYPICAL ELEVATION

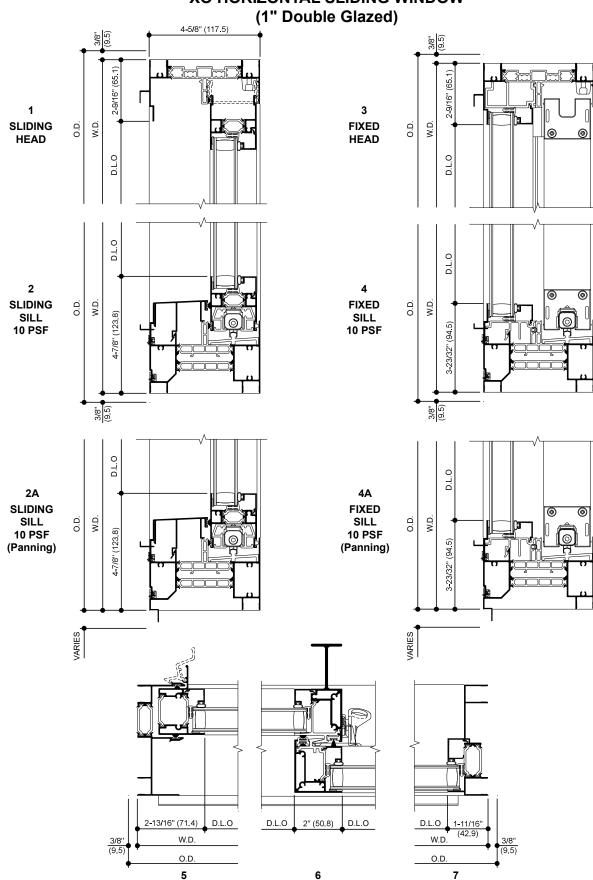
Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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XO HORIZONTAL SLIDING WINDOW



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KAWNEER

FIXED JAMB

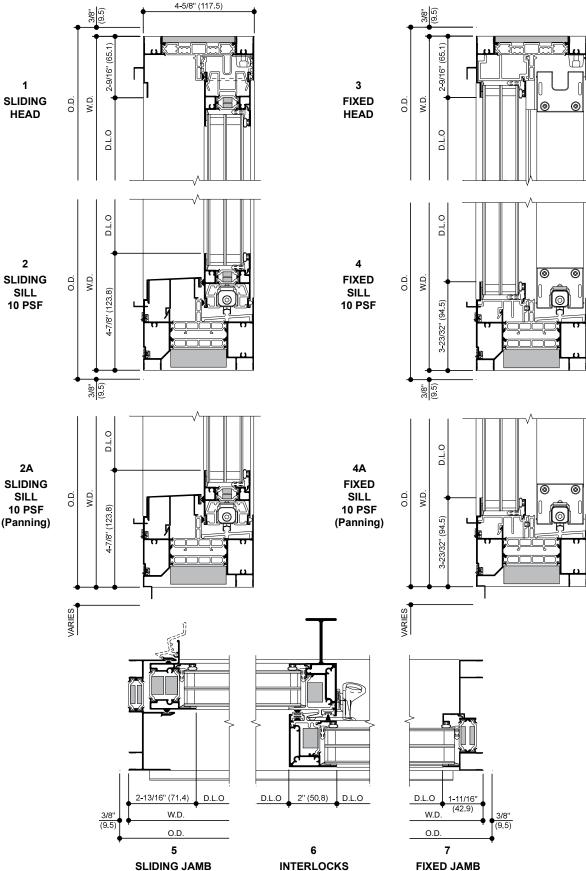
INTERLOCKS

SLIDING JAMB

HORIZONTAL SLIDING WINDOW

Additional information and CAD details are available at www.kawneer.com XO HORIZONTAL SLIDING WINDOW

(1-1/2" Triple Glazed)

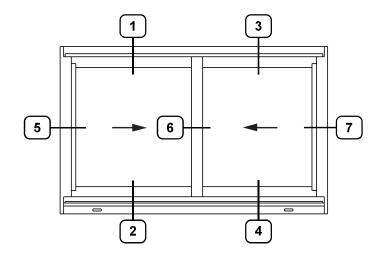


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HORIZONTAL SLIDING WINDOW

XX HORIZONTAL SLIDING WINDOW (Keyed to details on pages 40 and 41)

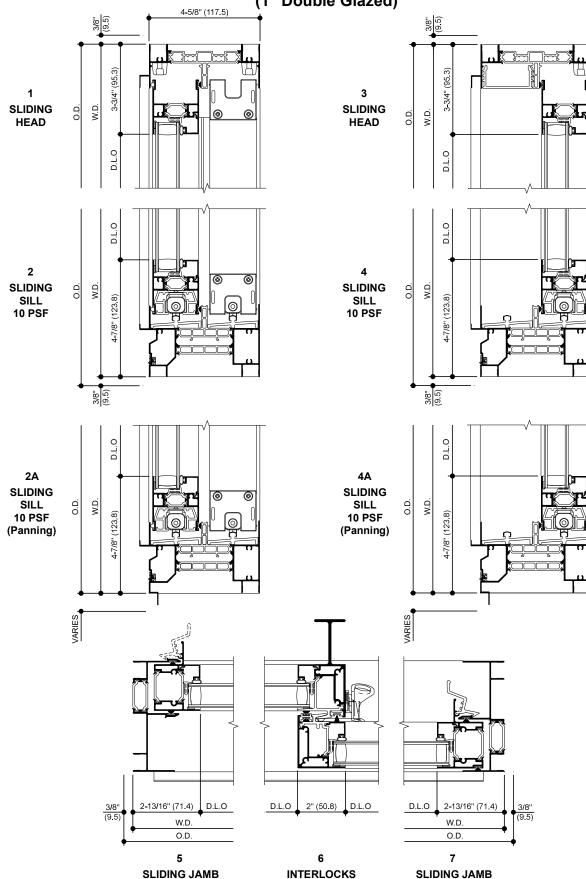


TYPICAL ELEVATION

Additional information and CAD details are available at www.kawneer.com

XX HORIZONTAL SLIDING WINDOW

(1" Double Glazed)





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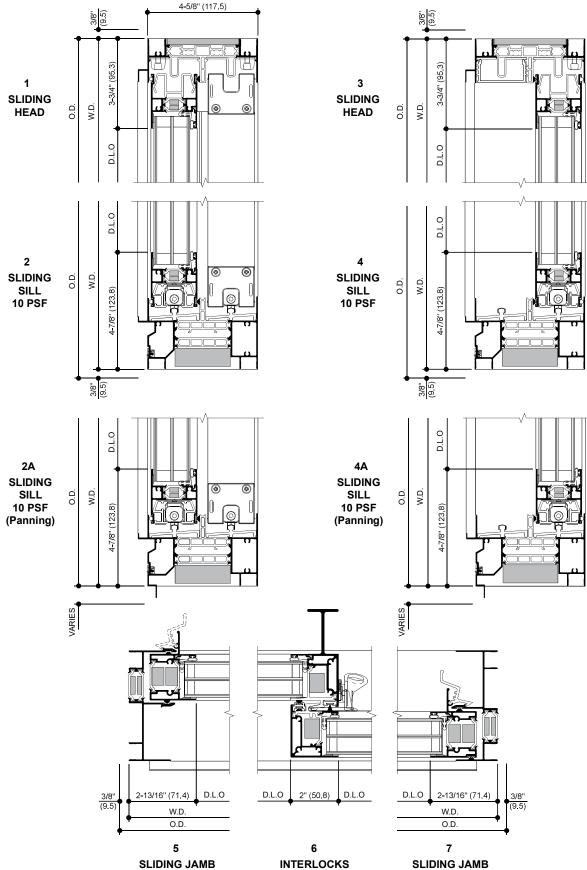
Laws and building and safety codes governing the design and use of Kawneer products, vary and safed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

EC 97911-206 HORIZONTAL SLIDING WINDOW

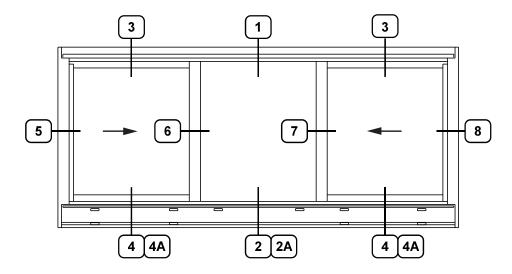
Additional information and CAD details are available at www.kawneer.com

XX HORIZONTAL SLIDING WINDOW

(1-1/2" Triple Glazed)



XOX HORIZONTAL SLIDING WINDOW (Keyed to details on pages 43 and 44)



TYPICAL ELEVATION

Laws and building and safety codes governing the design and use of Kawneer products, usuch as glaszde entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

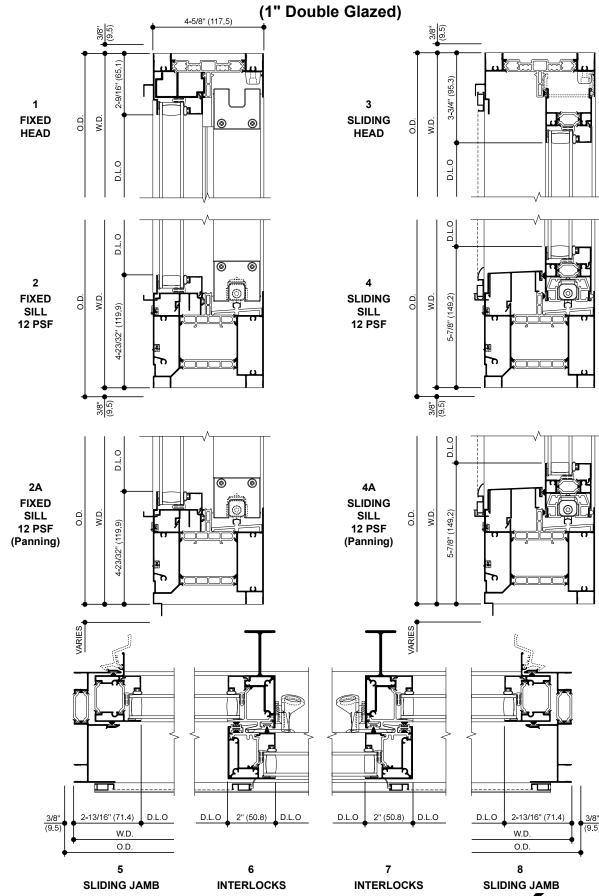
Laws and building and safety codes governing the design and use of Kawneer products, vary and safed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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HORIZONTAL SLIDING WINDOW

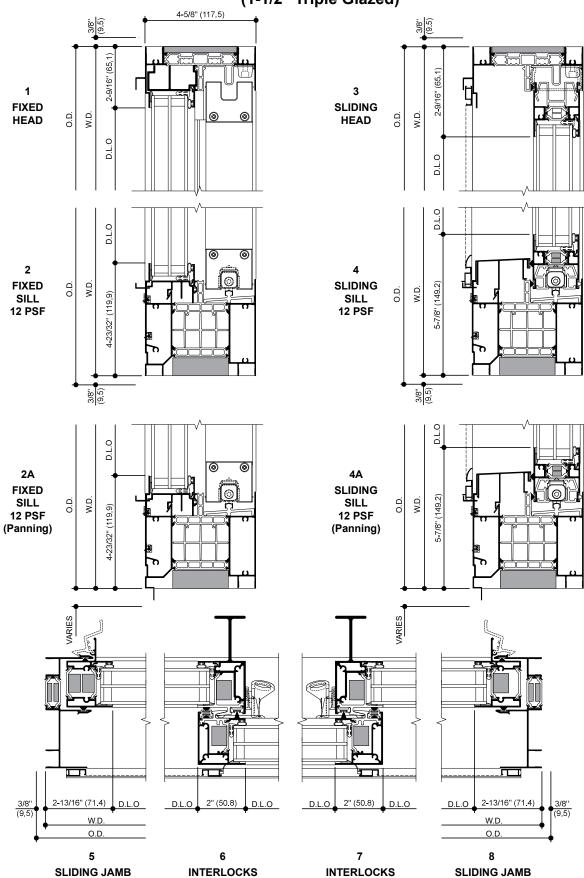
Additional information and CAD details are available at www.kawneer.com

XOX HORIZONTAL SLIDING WINDOW



XOX HORIZONTAL SLIDING WINDOW

(1-1/2" Triple Glazed)



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AA™5450 Ultra Thermal Window

EC 97911-206

HORIZONTAL SLIDING WINDOW

Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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Glass filled nylon housing, die cast zamak roller support, precision sealed ball bearing rollers with nylon tires.

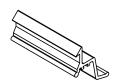
SWEEP LOCK AND KEEPER





White Bronze sweep locks and keepers with a durable brushed nickel finish and cycle tested for longevity.

AUTO LOCK AND KEEPER



An aluminum spring operated auto lock. The lock automatically engages the integral keeper securing the sash in the closed position. The auto lock is an option for the jamb sash.

COVERED WEEPS



A weep with an integral hinged cover to allow maximum drainage of infiltrating water with a positive closing cover to block drafts and insects. The weep is available in black and white finishes.

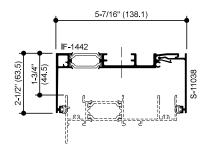


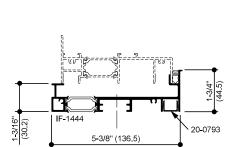
RECEPTORS

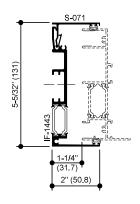
EC 97911-206

Additional information and CAD details are available at www.kawneer.com

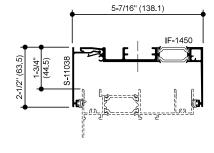
RECEPTOR DETAILS

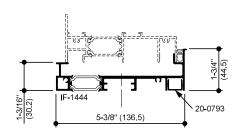


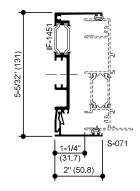




INTERIOR INSTALLED







EXTERIOR INSTALLED



Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entirance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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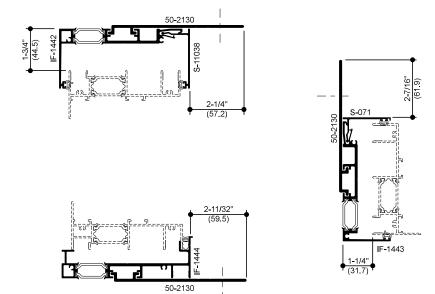
EC 97911-206 **ANCHORS**

Additional information and CAD details are available at www.kawneer.com

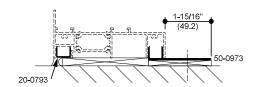
ANCHOR DETAILS

NOTE:

Interior glazed shown, exterior glazed similar.



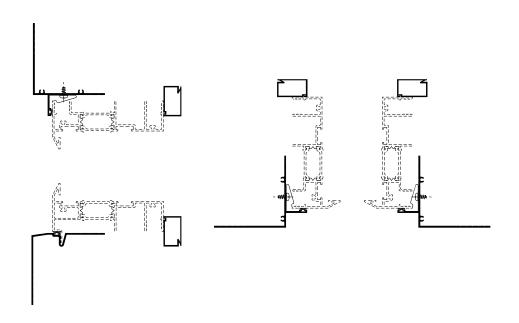
STRAP ANCHOR WITH RECEPTOR (INTERIOR INSTALLED)



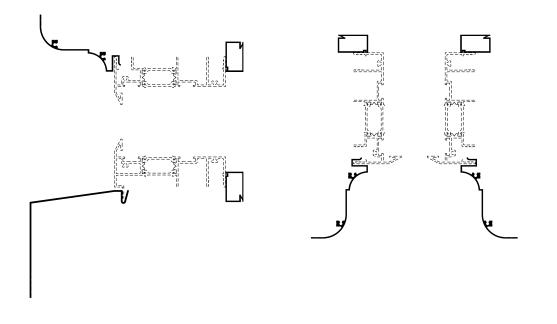
STRAP ANCHOR WITHOUT RECEPTOR

Additional information and CAD details are available at www.kawneer.com

PRE-SET PANNING



WRAP AROUND PANNING



Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials,

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WIND LOAD / DEADLOAD CHARTS

WIND LOAD CHARTS

Mullions are designed for deflection limitations in accordance with AAMA TIR-A11 of L/175 up to 13'-6" and L/240 +1/4" above 13'-6". These curves are for mullions WITH HORIZONTALS and are based on engineering calculations for stress and deflection. Allowable wind load stress for ALUMINUM 15,152 psi (104MPa), STEEL 30,000 psi (207MPa). Charted curves, in all cases are for the limiting value. Wind load charts contained herein are based upon nominal wind load utilized in allowable stress design. A conversion from Load Resistance Factor Design (LRFD) is provided. To convert ultimate wind loads to nominal loads, multiply ultimate wind loads by a factor of 0.6 per ASCE/SEI 7. A 4/3 increase in allowable stress has not been used to develop these curves. For special situations not covered by these curves, contact your Kawneer representative for additional information.

DEADLOAD CHARTS

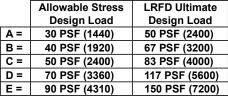
Horizontal or deadload limitations are based upon 1/16" (1.6) at operable vents or 1/8" (3.2) at fixed openings, maximum allowable deflection at the center of an intermediate horizontal member. The accompanying charts are calculated for 1" (25.4) thick insulating glass supported on two setting blocks placed at the loading points shown.

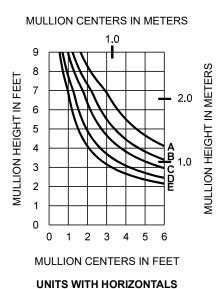


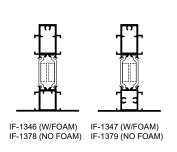
50

EC 97911-206

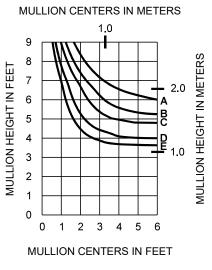
Design Load Design Load A = 30 PSF (1440) 50 PSF (2400) B = 40 PSF (1920) 67 PSF (3200) C = 50 PSF (2400) 83 PSF (4000) D= 70 PSF (3360) 117 PSF (5600) E =





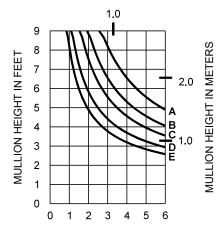


WIND LOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505



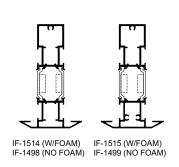
UNITS WITHOUT HORIZONTALS

MULLION CENTERS IN METERS



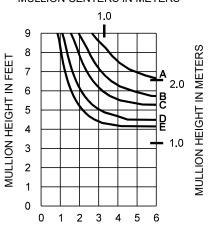
MULLION CENTERS IN FEET

UNITS WITH HORIZONTALS



WIND LOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

MULLION CENTERS IN METERS



MULLION CENTERS IN FEET

UNITS WITHOUT HORIZONTALS

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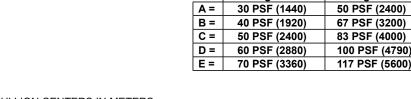
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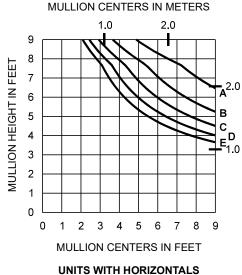
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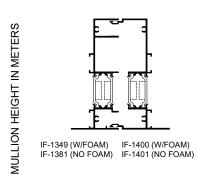
EC 97911-206

WIND LOAD CHARTS

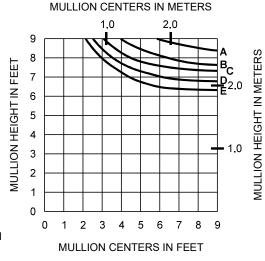
		Allowable Stress	LRFD Ultimate
		Design Load	Design Load
Α:	=	30 PSF (1440)	50 PSF (2400)
B:	=	40 PSF (1920)	67 PSF (3200)
C	=	50 PSF (2400)	83 PSF (4000)
D:	=	60 PSF (2880)	100 PSF (4790)
E	=	70 PSF (3360)	117 PSF (5600)



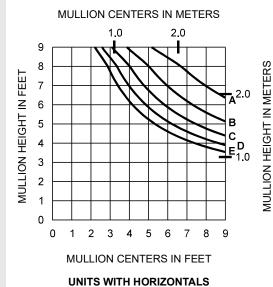


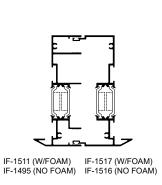


WIND LOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

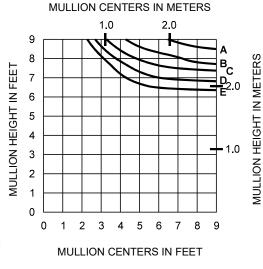


UNITS WITHOUT HORIZONTALS





WIND LOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505



UNITS WITHOUT HORIZONTALS

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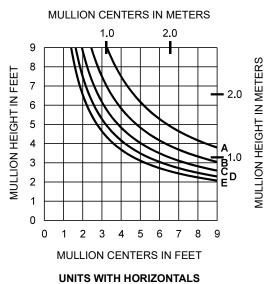
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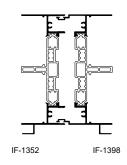
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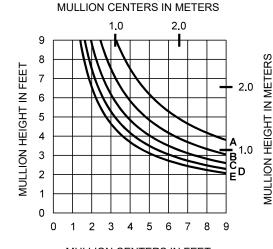
WIND LOAD CHARTS EC 97911-206

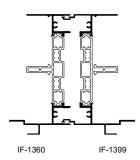
	Allowable Stress	LRFD Ultimate
	Design Load	Design Load
A =	30 PSF (1440)	50 PSF (2400)
B =	40 PSF (1920)	67 PSF (3200)
C =	50 PSF (2400)	83 PSF (4000)
D =	60 PSF (2880)	100 PSF (4790)
E =	70 PSF (3360)	117 PSF (5600)





WIND LOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505





MULLION CENTERS IN FEET

UNITS WITH HORIZONTALS

WIND LOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

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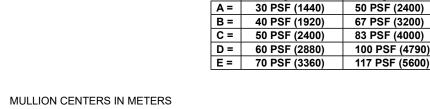
WIND LOAD CHARTS

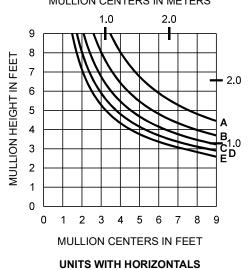
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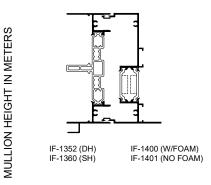
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	Allowable Stress	LRFD Ultimate
	Design Load	Design Load
A =	30 PSF (1440)	50 PSF (2400)
B =	40 PSF (1920)	67 PSF (3200)
C =	50 PSF (2400)	83 PSF (4000)
D =	60 PSF (2880)	100 PSF (4790)
E=	70 PSF (3360)	117 PSF (5600)



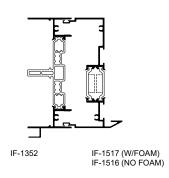




WIND LOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

MULLION CENTERS IN METERS 2.0 9 8 **MULLION HEIGHT IN FEET** 7 6 5 4 3 2 1 0 1 2 3 4 5 6 MULLION CENTERS IN FEET

UNITS WITH HORIZONTALS



WIND LOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

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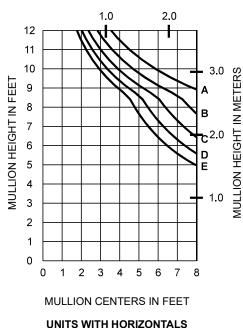
MULLION HEIGHT IN METERS

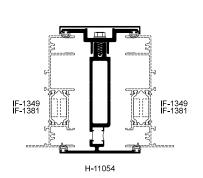
WIND LOAD CHARTS

	Allowable Stress	LRFD Ultimate
	Design Load	Design Load
A =	15 PSF (720)	25 PSF (1200)
B =	20 PSF (960)	33 PSF (1580)
C =	25 PSF (1200)	42 PSF (2000)
D =	30 PSF (1440)	50 PSF (2400)
E =	35 PSF (1680)	58 PSF (2780)

MULLION CENTERS IN METERS

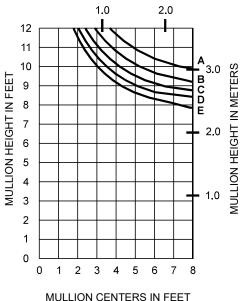
54





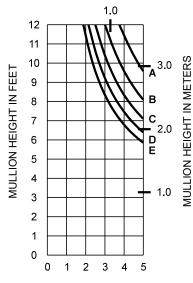
WIND LOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

MULLION CENTERS IN METERS



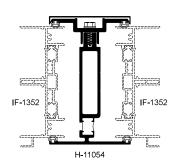
UNITS WITHOUT HORIZONTALS

MULLION CENTERS IN METERS



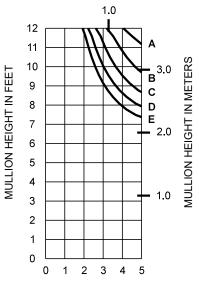
MULLION CENTERS IN FEET

UNITS WITH HORIZONTALS



WIND LOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

MULLION CENTERS IN METERS



MULLION CENTERS IN FEET

UNITS WITHOUT HORIZONTALS

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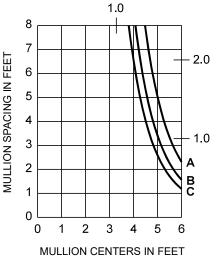
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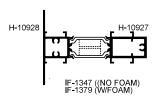
DEADLOAD CHARTS

EC 97911-206

MULLION CENTERS IN METERS

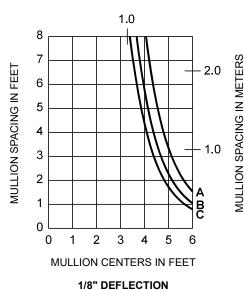


A = 1/8 POINT LOADING
B = 3/16 POINT LOADING
C = 1/4 POINT LOADING



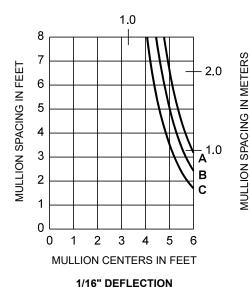
MULLION SPACING IN METERS

MULLION CENTERS IN METERS

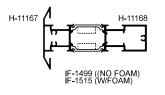


MULLION CENTERS IN METERS

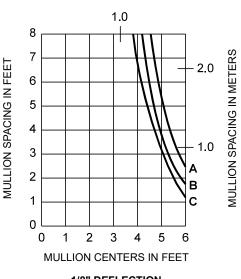
1/16" DEFLECTION



A = 1/8 POINT LOADING B = 3/16 POINT LOADING C = 1/4 POINT LOADING



MULLION CENTERS IN METERS



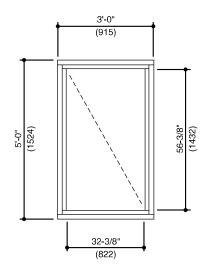
1/8" DEFLECTION



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FIXED WINDOW THERMAL CHARTS

Generic Project Specific U-factor Example Calculation (Percent of glass will vary on specific products depending on sitelines)



56

Example Glass U-Factor = 0.42 Btu/hr • ft² • °F

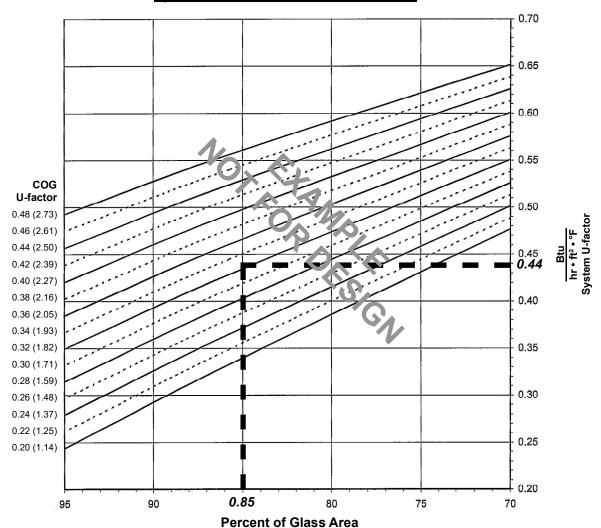
Total Daylight Opening = 32-3/8" • 56-3/8" = 12.67ft²

Total Projected Area = 3'-0" • 5'-0" = 15 ft^2

Percent of Glass = (Total Daylight Opening ÷ Total Projected Area)100

 $= (12.67 \div 15)100 = 85\%$

System U-factor vs Percent of Glass Area



Based on 85% glass and center of glass (COG) U-factor of 0.42 System U-factor is equal to 0.44 Btu/hr • ft² • °F



FIXED WINDOW THERMAL CHARTS

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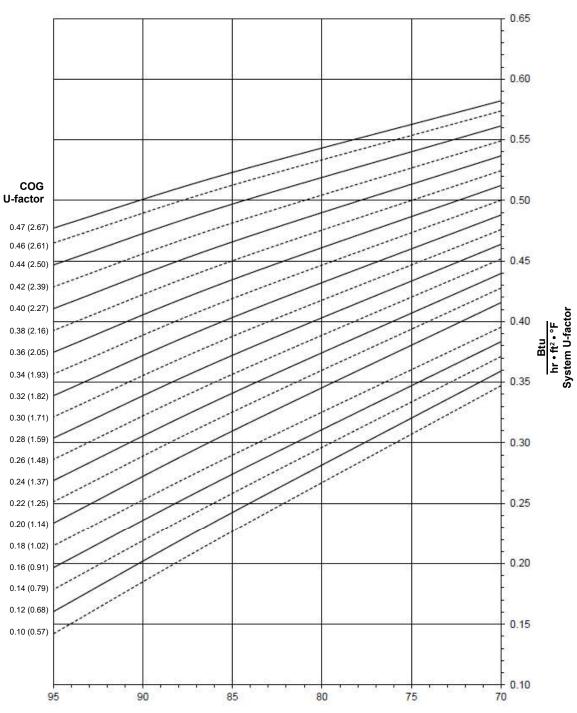
EC 97911-206

AA™5450 FIXED WINDOW (1" Double Glazed)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area **Daylight Opening / Projected Area**

Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

Glass properties are based on center of glass values and are obtained from your glass supplier.

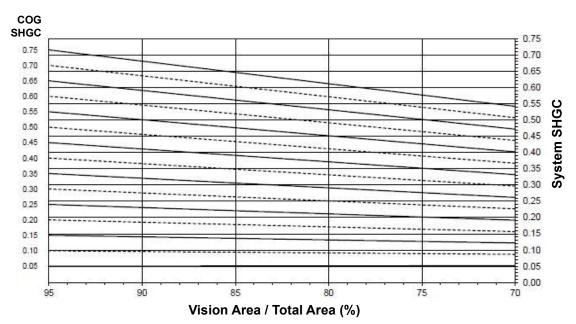


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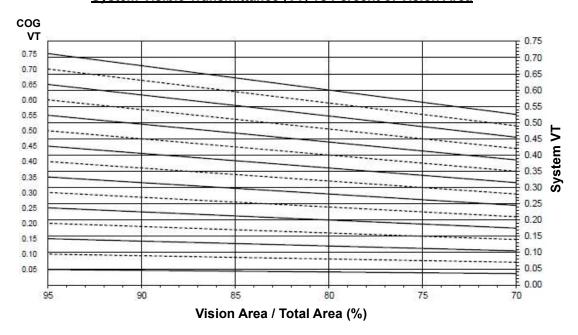
AA™5450 Ultra Thermal Window

AA™5450 FIXED WINDOW (1" Double Glazed)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



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Thermal Transmittance 1 (BTU/hr • ft 2 • °F)

Glass U-Factor ³	Overall U-Factor ⁴
0.48	0.52
0.46	0.51
0.44	0.50
0.42	0.48
0.40	0.46
0.38	0.45
0.36	0.43
0.34	0.42
0.32	0.40
0.30	0.39
0.28	0.37
0.26	0.35
0.24	0.34
0.22	0.32
0.20	0.31
0.18	0.29
0.16	0.27
0.14	0.26
0.12	0.24
0.10	0.22

NOTE: For glass values that are not listed, linear interpolation is permitted.

1. U-Factors are determined in accordance with NFRC 100.

AA™5450 FIXED WINDOW (1" Double Glazed)

- 2. SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,200 mm wide by 1,500 mm high (47-1/4" by 59-1/16").

SHGC Matrix ²

Overall SHGC ⁴
0.65
0.61
0.56
0.52
0.48
0.43
0.39
0.35
0.31
0.26
0.22
0.18
0.14
0.09
0.05

Visible Transmittance ²

Glass VT ³	Overall VT ⁴
0.75	0.64
0.70	0.60
0.65	0.55
0.60	0.51
0.55	0.47
0.50	0.43
0.45	0.38
0.40	0.34
0.35	0.30
0.30	0.26
0.25	0.21
0.20	0.17
0.15	0.13
0.10	0.09
0.05	0.04



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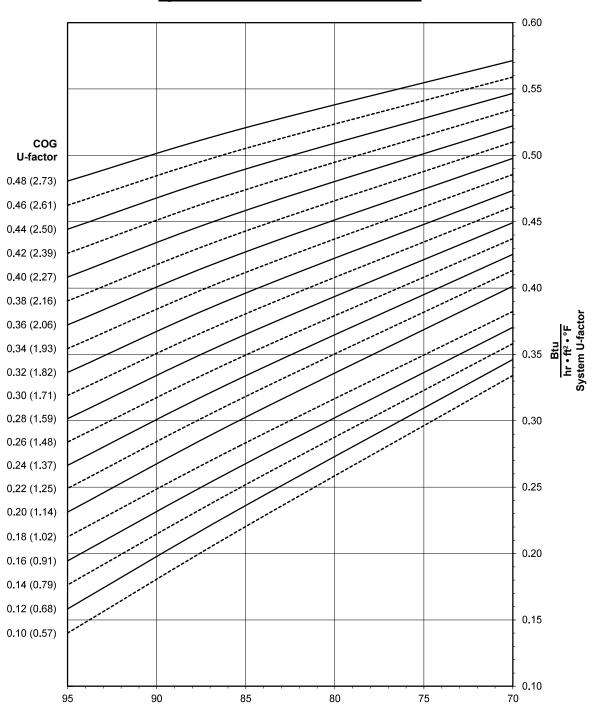
FIXED WINDOW THERMAL CHARTS

AA™5450 FIXED WINDOW - BEVEL FACE (1" Double Glazed)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area **Daylight Opening / Projected Area**

Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

Glass properties are based on center of glass values and are obtained from your glass supplier.

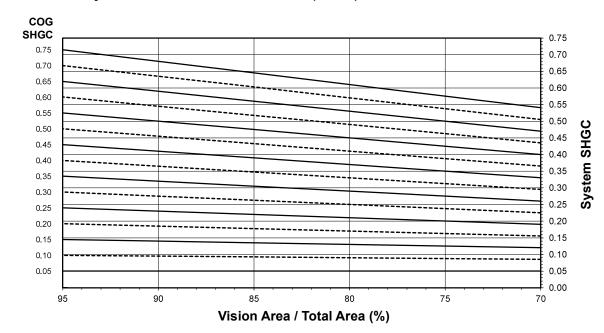


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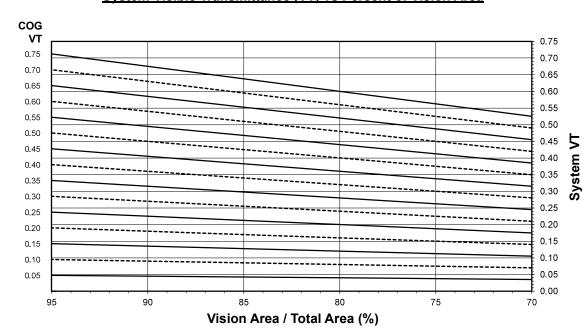
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AA™5450 FIXED WINDOW - BEVEL FACE (1" Double Glazed)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area





THERMAL PERFORMANCE MATRIX (NFRC SIZE)

Thermal Transmittance ¹ (BTU/hr • ft ² • °F)

Thermal mansimiliance (BTO/III • F)		
Glass U-Factor ³	Overall U-Factor 4	
0.48	0.52	
0.46	0.50	
0.44	0.49	
0.42	0.47	
0.40	0.46	
0.38	0.44	
0.36	0.43	
0.34	0.41	
0.32	0.39	
0.30	0.38	
0.28	0.36	
0.26	0.36	
0.24	0.33	
0.22	0.32	
0.20	0.30	
0.18	0.28	
0.16	0.27	
0.14	0.25	
0.12	0.23	
0.10	0.22	

AA™5450 FIXED WINDOW - BEVEL FACE (1" Double Glazed)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- 2. SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,200 mm wide by 1,500 mm high (47-1/4" by 59-1/16").

SHGC Matrix ²

Glass SHGC ³	Overall SHGC ⁴
0.75	0.65
0.70	0.60
0.65	0.56
0.60	0.52
0.55	0.48
0.50	0.43
0.45	0.39
0.40	0.35
0.35	0.31
0.30	0.26
0.25	0.22
0.20	0.18
0.15	0.14
0.10	0.09
0.05	0.05

Visible Transmittance ²

Glass VT ³	Overall VT 4
0.75	0.64
0.70	0.60
0.65	0.55
0.60	0.51
0.55	0.47
0.50	0.43
0.45	0.38
0.40	0.34
0.35	0.30
0.30	0.26
0.25	0.21
0.20	0.17
0.15	0.13
0.10	0.09
0.05	0.04

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FIXED WINDOW THERMAL CHARTS

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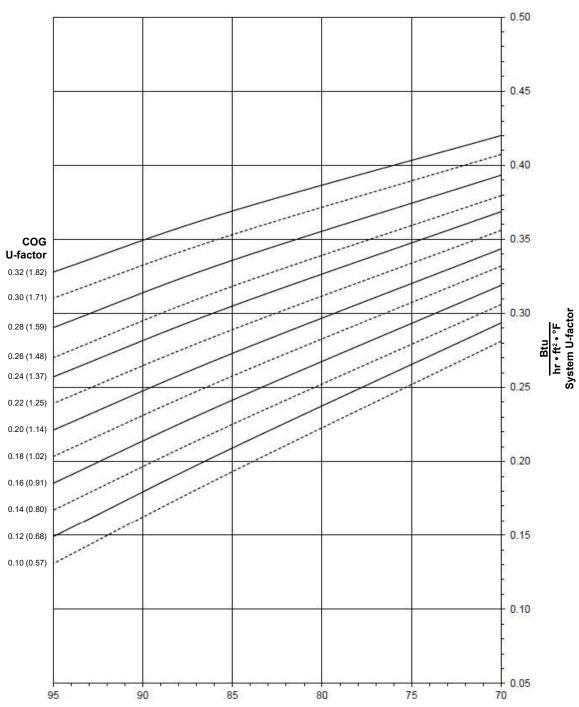
EC 97911-206

AA™5450 FIXED WINDOW (1-1/2" Triple Glazed)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area **Daylight Opening / Projected Area**

Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

Glass properties are based on center of glass values and are obtained from your glass supplier.



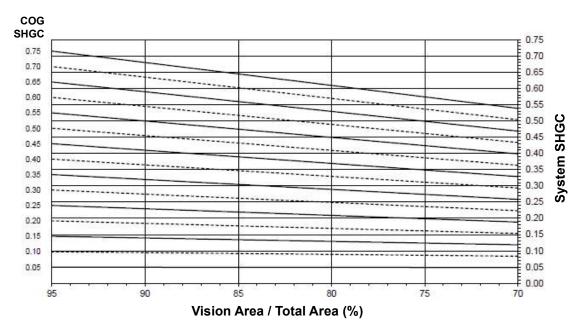
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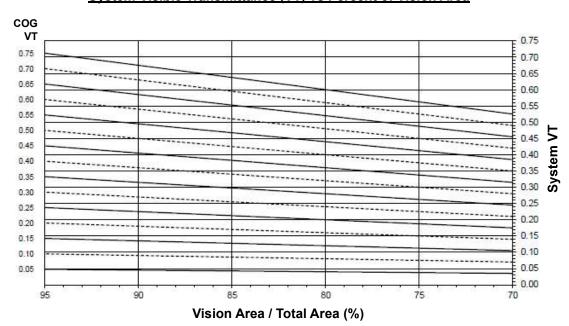
FIXED WINDOW THERMAL CHARTS

AA™5450 FIXED WINDOW (1-1/2" Triple Glazed)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



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FIXED WINDOW THERMAL PERFORMANCE MATRIX (NFRC SIZE)

Thermal Transmittance¹ (BTU/hr • ft ² • °F)

Glass U-Factor ³	Overall U-Factor 4
0.32	0.37
0.30	0.35
0.28	0.33
0.26	0.32
0.24	0.30
0.22	0.29
0.20	0.27
0.18	0.26
0.16	0.24
0.14	0.22
0.12	0.21
0.10	0.19

AA[™]5450 FIXED WINDOW (1-1/2" Triple Glazed)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,200 mm wide by 1,500 mm high (47-1/4" by 59-1/16").

SHGC Matrix ²

Glass SHGC ³	Overall Glass U-Factor ⁴
0.75	0.65
0.70	0.60
0.65	0.56
0.60	0.52
0.55	0.48
0.50	0.43
0.45	0.39
0.40	0.35
0.35	0.31
0.30	0.26
0.25	0.22
0.20	0.18
0.15	0.13
0.10	0.09
0.05	0.05

Visible Transmittance ²

Glass VT ³	Overall VT ⁴
0.75	0.64
0.70	0.60
0.65	0.55
0.60	0.51
0.55	0.47
0.50	0.43
0.45	0.38
0.40	0.34
0.35	0.30
0.30	0.26
0.25	0.21
0.20	0.17
0.15	0.13
0.10	0.09
0.05	0.04



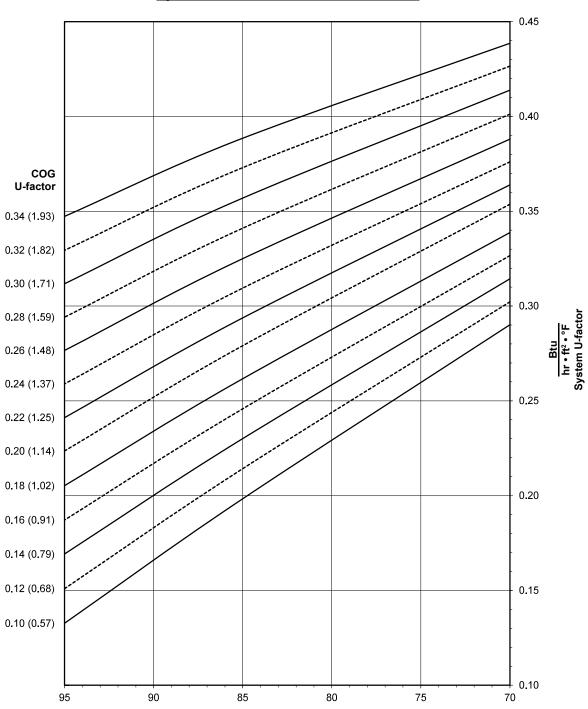
EC 97911-206

AA[™]5450 FIXED WINDOW - BEVEL FACE (1-1/2" Triple Glazed)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area
Daylight Opening / Projected Area

Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

Glass properties are based on center of glass values and are obtained from your glass supplier.



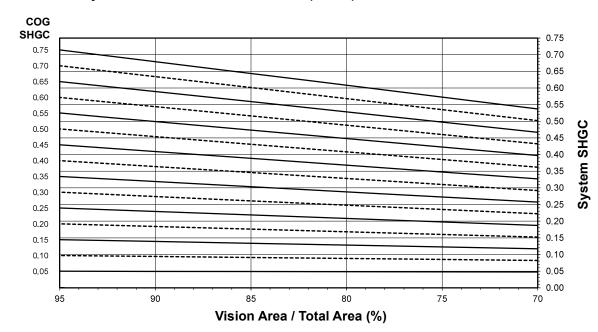
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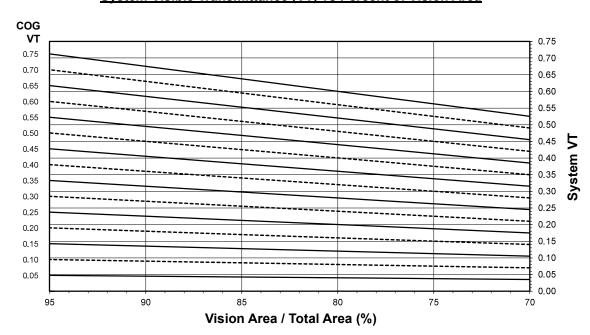
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AA[™]5450 FIXED WINDOW - BEVEL FACE (1-1/2" Triple Glazed)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area





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Thermal Transmittance 1 (BTU/hr • ft 2 • °F)

Thermal transmittance (DTO/III * It * T)	
Glass U-Factor ³	Overall U-Factor 4
0.34	0.39
0.32	0.37
0.30	0.36
0.28	0.34
0.26	0.32
0.24	0.31
0.22	0.29
0.20	0.28
0.18	0.26
0.16	0.24
0.14	0.23
0.12	0.21
0.10	0.20
	-

AA™5450 FIXED WINDOW - BEVEL FACE (1-1/2" Triple Glazed)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- 2. SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,200 mm wide by 1,500 mm high (47-1/4" by 59-1/16").

SHGC Matrix ²

Glass SHGC ³	Overall SHGC ⁴
0.75	0.65
0.70	0.60
0.65	0.56
0.60	0.52
0.55	0.48
0.50	0.43
0.45	0.39
0.40	0.35
0.35	0.30
0.30	0.26
0.25	0.22
0.20	0.18
0.15	0.13
0.10	0.09
0.05	0.05

Visible Transmittance ²

Visible Hallstille	
Glass VT ³	Overall VT ⁴
0.75	0.64
0.70	0.60
0.65	0.55
0.60	0.51
0.55	0.47
0.50	0.43
0.45	0.38
0.40	0.34
0.35	0.30
0.30	0.26
0.25	0.21
0.20	0.17
0.15	0.13
0.10	0.09
0.05	0.04
	•

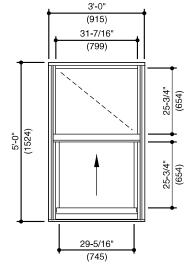


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SINGLE HUNG WINDOW THERMAL CHARTS

Generic Project Specific U-factor Example Calculation (Percent of glass will vary on specific products depending on sitelines)



Example Glass U-Factor = 0.42 Btu/hr • ft² • °F

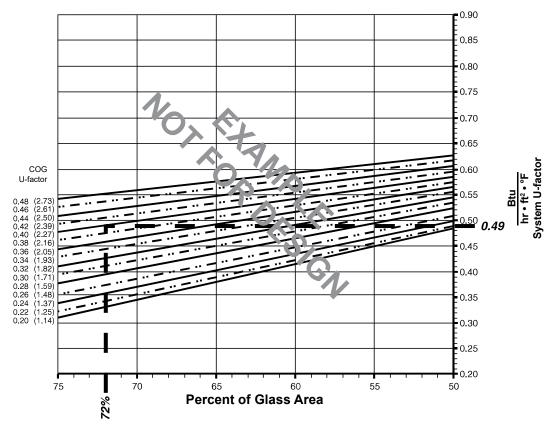
Total Daylight Opening $= (31-7/16" \cdot 25-3/4") + (29-5/16" \cdot 25-3/4") = 10.86 \text{ ft}^2$

Total Projected Area $= 3'-0" \cdot 5'-0" = 15 \text{ ft}^2$

Percent of Glass = (Total Daylight Opening ÷ Total Projected Area)100

 $= (10.86 \div 15)100 = 72\%$

System U-factor vs Percent of Glass Area



Based on 72% glass and center of glass (COG) U-factor of 0.42 System U-factor is equal to 0.49 Btu/hr • ft2 • °F



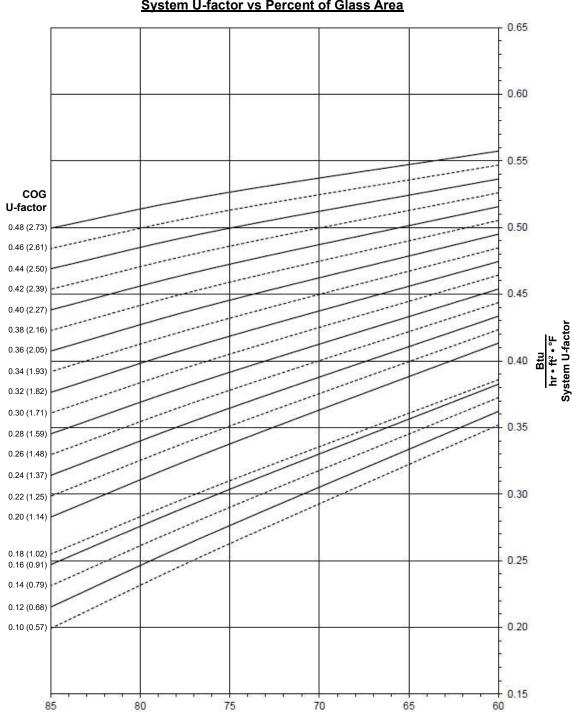
SINGLE HUNG THERMAL CHARTS

AA™5450 SINGLE HUNG WINDOW (1" Double Glazed - 10lb. Sill)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area **Daylight Opening / Projected Area**

Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

Glass properties are based on center of glass values and are obtained from your glass supplier.



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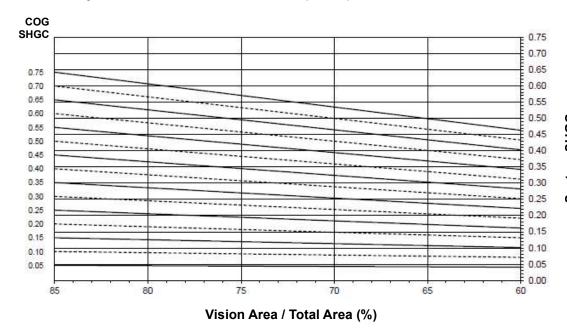
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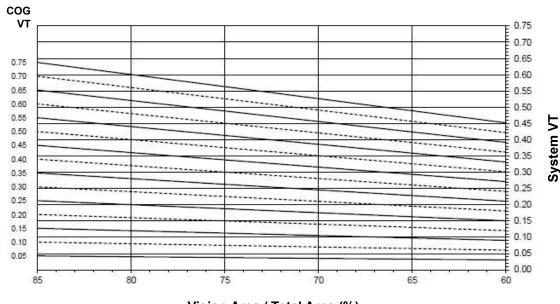
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AA[™]5450 SINGLE HUNG WINDOW (1" Double Glazed - 10lb Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



Vision Area / Total Area (%)

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SINGLE HUNG THERMAL PERFORMANCE MATRIX (NFRC SIZE)

Thermal Transmittance ¹ (BTU/hr • ft ² • °F)

Glass U-Factor ³	Overall U-Factor 4
0.48	0.53
0.46	0.51
0.44	0.50
0.42	0.48
0.40	0.47
0.38	0.46
0.36	0.44
0.34	0.43
0.32	0.42
0.30	0.40
0.28	0.39
0.26	0.38
0.24	0.36
0.22	0.35
0.20	0.33
0.18	0.31
0.16	0.30
0.14	0.29
0.12	0.27
0.10	0.26

AA™5450 SINGLE HUNG WINDOW (1" Double Glazed - 10lb. Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- 2. SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,200 mm wide by 1,500 mm high (47-1/4" by 59-1/16").

SHGC Matrix ²

Glass SHGC ³	Overall SHGC ⁴
0.75	0.57
0.70	0.54
0.65	0.50
0.60	0.46
0.55	0.42
0.50	0.39
0.45	0.35
0.40	0.31
0.35	0.27
0.30	0.23
0.25	0.20
0.20	0.16
0.15	0.12
0.10	0.08
0.05	0.04

Visible Transmittance ²

Visible Transmittance	
Glass VT ³	Overall VT ⁴
0.75	0.57
0.70	0.53
0.65	0.49
0.60	0.45
0.55	0.42
0.50	0.38
0.45	0.34
0.40	0.30
0.35	0.27
0.30	0.23
0.25	0.19
0.20	0.15
0.15	0.11
0.10	0.08
0.05	0.04
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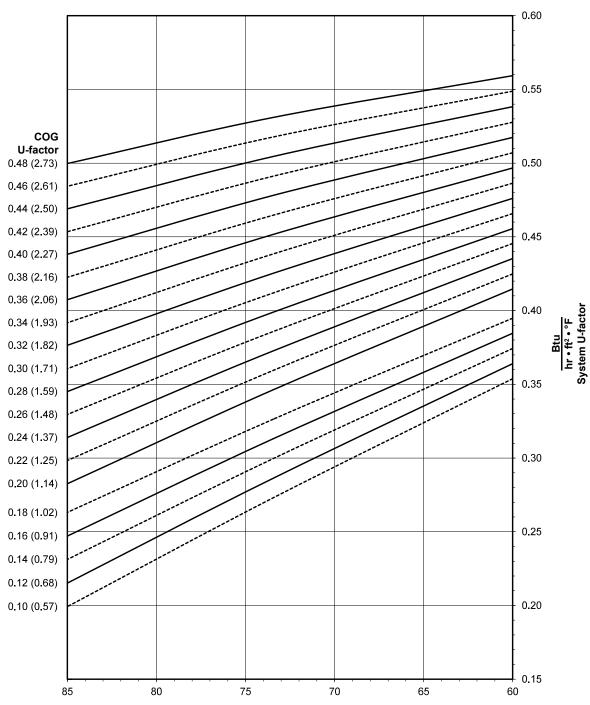
SINGLE HUNG THERMAL CHARTS

AA™5450 SINGLE HUNG WINDOW - BEVEL FACE (1" Double Glazed - 10lb. Sill)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area **Daylight Opening / Projected Area**

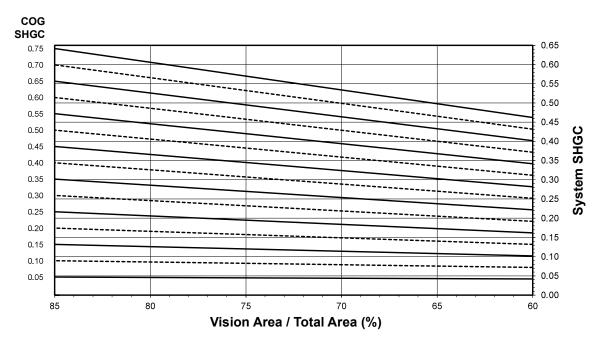
Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted. Glass properties are based on center of glass values and are obtained from your glass supplier.

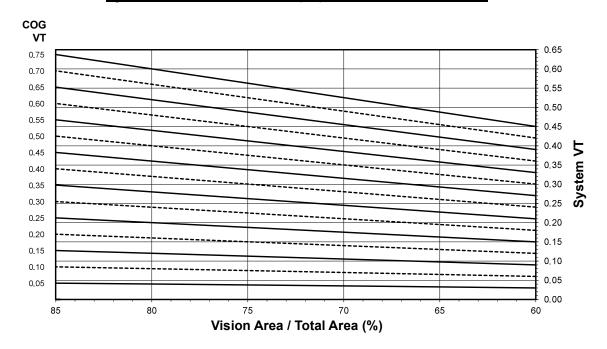


AA™5450 SINGLE HUNG WINDOW - BEVEL FACE (1" Double Glazed - 10lb Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



SINGLE HUNG THERMAL PERFORMANCE MATRIX (NFRC SIZE)

EC 97911-206

Thermal Transmittance 1 (BTU/hr • ft 2 • °F)

Glass U-Factor ³	Overall U-Factor 4
0.48	0.53
0.46	0.52
0.44	0.50
0.42	0.49
0.40	0.48
0.38	0.46
0.36	0.45
0.34	0.44
0.32	0.43
0.30	0.41
0.28	0.40
0.26	0.39
0.24	0.37
0.22	0.36
0.20	0.35
0.18	0.33
0.16	0.31
0.14	0.30
0.12	0.29
0.10	0.27

AA™5450 SINGLE HUNG WINDOW - BEVEL FACE (1" Double Glazed - 10lb Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- 2. SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,200 mm wide by 1,500 mm high (47-1/4" by 59-1/16").

SHGC Matrix ²

Glass SHGC ³	Overall SHGC ⁴
0.75	0.56
0.70	0.52
0.65	0.49
0.60	0.45
0.55	0.41
0.50	0.38
0.45	0.34
0.40	0.30
0.35	0.26
0.30	0.23
0.25	0.19
0.20	0.15
0.15	0.12
0.10	0.08
0.05	0.04

Visible Transmittance 2

Glass VT ³	Overall VT ⁴
0.75	0.55
0.70	0.51
0.65	0.48
0.60	0.44
0.55	0.40
0.50	0.37
0.45	0.33
0.40	0.29
0.35	0.26
0.30	0.22
0.25	0.18
0.20	0.15
0.15	0.11
0.10	0.07
0.05	0.04

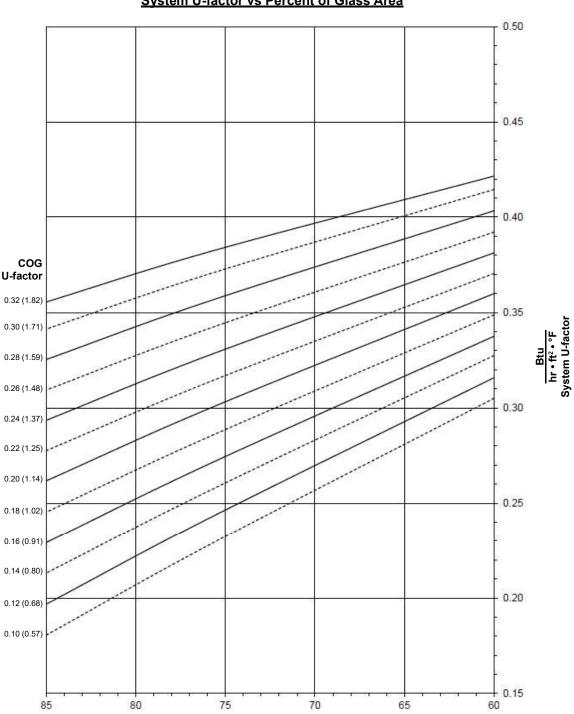


Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

AA™5450 SINGLE HUNG WINDOW (1-1/2" Triple Glazed - 10lb. Sill)

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area **Daylight Opening / Projected Area**

Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted. Glass properties are based on center of glass values and are obtained from your glass supplier.



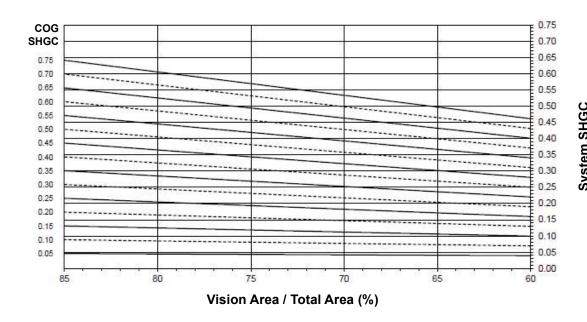
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SINGLE HUNG THERMAL CHARTS

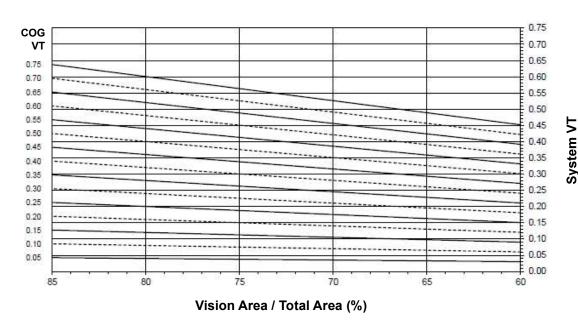
EC 97911-206

AA™5450 SINGLE HUNG WINDOW (1-1/2" Triple Glazed - 10lb Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area





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SINGLE HUNG THERMAL PERFORMANCE MATRIX (NFRC SIZE)

Thermal Transmittance¹ (BTU/hr • ft ² • °F)

Glass U-Factor ³	Overall U-Factor 4
0.32	0.38
0.30	0.37
0.28	0.36
0.26	0.34
0.24	0.33
0.22	0.31
0.20	0.30
0.18	0.29
0.16	0.27
0.14	0.26
0.12	0.24
0.10	0.23

AA™5450 SINGLE HUNG WINDOW (1-1/2" Triple Glazed - 10lb. Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- 2. SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,200 mm wide by 1,500 mm high (47-1/4" by 59-1/16").

SHGC Matrix ²

O1100 Matrix	
Glass SHGC ³	Overall Glass U-Factor ⁴
0.75	0.65
0.70	0.60
0.65	0.56
0.60	0.52
0.55	0.48
0.50	0.43
0.45	0.39
0.40	0.35
0.35	0.31
0.30	0.26
0.25	0.22
0.20	0.18
0.15	0.13
0.10	0.09
0.05	0.05

Visible Transmittance ²

Violoic Transmittanec	
Glass VT ³	Overall VT ⁴
0.75	0.64
0.70	0.60
0.65	0.55
0.60	0.51
0.55	0.47
0.50	0.43
0.45	0.38
0.40	0.34
0.35	0.30
0.30	0.26
0.25	0.21
0.20	0.17
0.15	0.13
0.10	0.09
0.05	0.04



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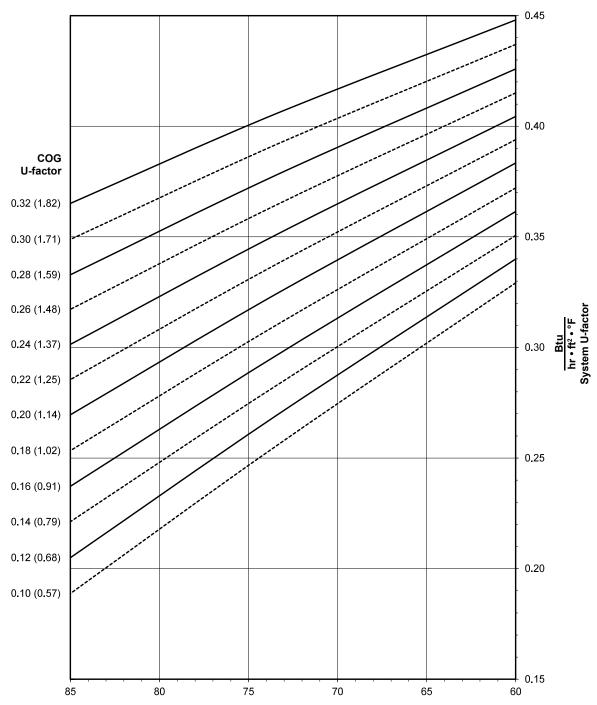
ADME120EN kawneer.com EC 97911-206 SINGLE HUNG THERMAL CHARTS

AA™5450 SINGLE HUNG WINDOW - BEVEL FACE (1-1/2" Triple Glazed - 10lb. Sill)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area **Daylight Opening / Projected Area**

Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

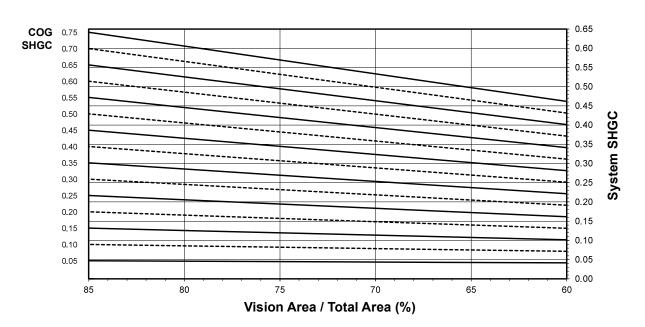




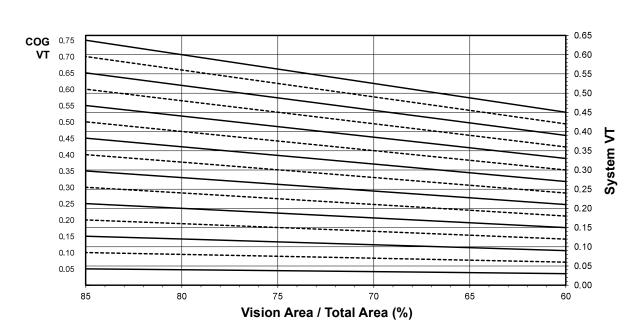
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AA™5450 SINGLE HUNG WINDOW - BEVEL FACE (1-1/2" Triple Glazed - 10lb. Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



SINGLE HUNG THERMAL PERFORMANCE MATRIX (NFRC SIZE)

Thermal Transmittance ¹ (BTU/hr • ft ² • °F)

Glass U-Factor ³	Overall U-Factor 4
0.32	0.41
0.30	0.39
0.28	0.38
0.26	0.36
0.24	0.35
0.22	0.34
0.20	0.32
0.18	0.31
0.16	0.30
0.14	0.28
0.12	0.27
0.10	0.26

AA[™]5450 SINGLE HUNG WINDOW - BEVEL FACE (1-1/2" Triple Glazed - 10lb. Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,200 mm wide by 1,500 mm high (47-1/4" by 59-1/16").

SHGC Matrix ²

Glass SHGC ³	Overall SHGC ⁴
0.75	0.56
0.70	0.52
0.65	0.48
0.60	0.45
0.55	0.41
0.50	0.37
0.45	0.34
0.40	0.30
0.35	0.26
0.30	0.23
0.25	0.19
0.20	0.15
0.15	0.12
0.10	0.08
0.05	0.04

Visible Transmittance 2

Glass VT ³	Overall VT ⁴
0.75	0.55
0.70	0.51
0.65	0.48
0.60	0.44
0.55	0.40
0.50	0.37
0.45	0.33
0.40	0.29
0.35	0.26
0.30	0.22
0.25	0.18
0.20	0.15
0.15	0.11
0.10	0.07
0.05	0.04



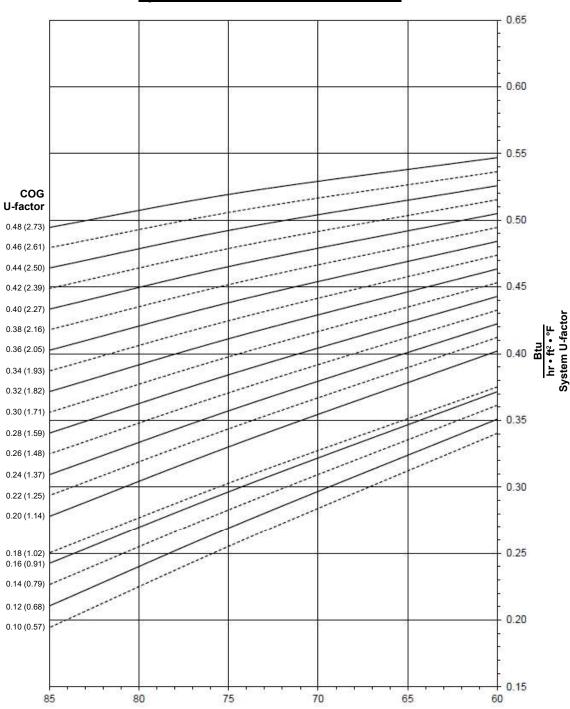
SINGLE HUNG THERMAL CHARTS

AA™5450 SINGLE HUNG WINDOW (1" Double Glazed - 15lb. Sill)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area **Daylight Opening / Projected Area**

Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

Glass properties are based on center of glass values and are obtained from your glass supplier.



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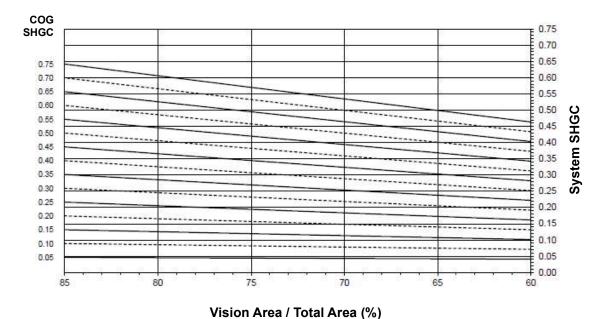
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SINGLE HUNG THERMAL CHARTS

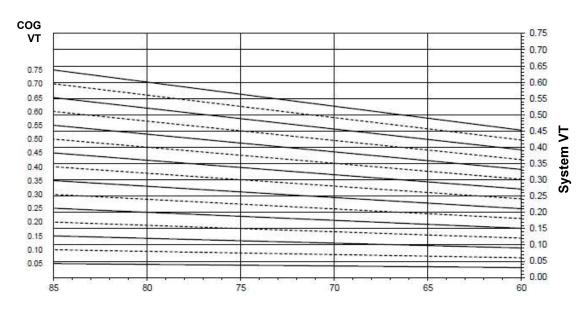
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AA™5450 SINGLE HUNG WINDOW (1" Double Glazed - 15lb Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



Vision Area / Total Area (%)



SINGLE HUNG THERMAL PERFORMANCE MATRIX (NFRC SIZE)

Thermal Transmittance 1 (BTU/hr • ft 2 • °F)

<u> </u>	
Glass U-Factor ³	Overall U-Factor 4
0.48	0.52
0.46	0.51
0.44	0.49
0.42	0.48
0.40	0.47
0.38	0.45
0.36	0.44
0.34	0.43
0.32	0.41
0.30	0.40
0.28	0.39
0.26	0.37
0.24	0.36
0.22	0.35
0.20	0.33
0.18	0.31
0.16	0.30
0.14	0.29
0.12	0.27
0.10	0.26

AA™5450 SINGLE HUNG WINDOW (1" Double Glazed - 15lb Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- 2. SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,200 mm wide by 1,500 mm high (47-1/4" by 59-1/16").

SHGC Matrix ²

Glass SHGC ³	Overall SHGC ⁴
0.75	0.56
0.70	0.53
0.65	0.49
0.60	0.45
0.55	0.42
0.50	0.38
0.45	0.34
0.40	0.30
0.35	0.27
0.30	0.23
0.25	0.19
0.20	0.16
0.15	0.12
0.10	0.08
0.05	0.04

Visible Transmittance ²

Glass VT ³	Overall VT ⁴
0.75	0.56
0.70	0.52
0.65	0.48
0.60	0.45
0.55	0.41
0.50	0.37
0.45	0.33
0.40	0.30
0.35	0.26
0.30	0.22
0.25	0.19
0.20	0.15
0.15	0.11
0.10	0.07
0.05	0.04
	-



Laws and building and safety codes governing the design and use of Kawneer products, or so safed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

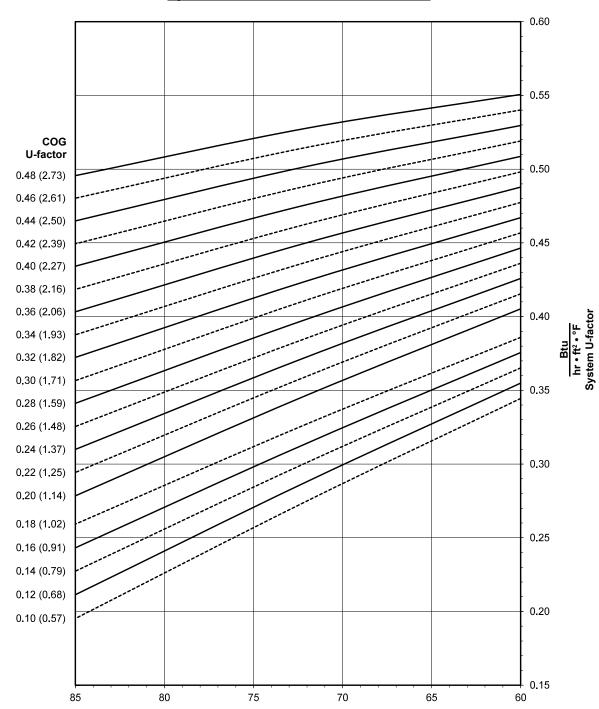
ADME120EN kawneer.com

AA™5450 SINGLE HUNG WINDOW - BEVEL FACE (1" Double Glazed - 15lb Sill)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area **Daylight Opening / Projected Area**

Notes for System U-factor, SHGC and VT charts:

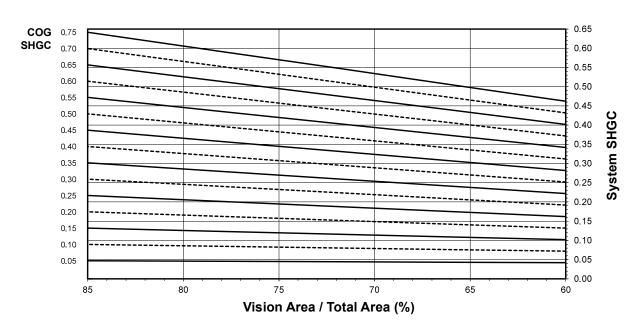
For glass values that are not listed, linear interpolation is permitted.

Glass properties are based on center of glass values and are obtained from your glass supplier.

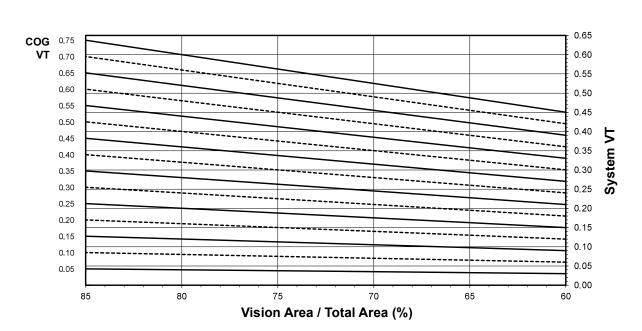


AA™5450 SINGLE HUNG WINDOW - BEVEL FACE (1" Double Glazed - 15lb Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



Laws and building and safety codes governing the design and use of Kawneer pro such as glazed entrance, window, and curtain wall products, vary widely. Kawneer control the selection of product configurations, operating hardware, or glazing mat

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SINGLE HUNG THERMAL PERFORMANCE MATRIX (NFRC SIZE)

EC 97911-206

Thermal Transmittance 1 (BTU/hr • ft 2 • °F)

Glass U-Factor ³	Overall U-Factor 4
0.48	0.53
0.46	0.51
0.44	0.50
0.42	0.49
0.40	0.48
0.38	0.46
0.36	0.45
0.34	0.44
0.32	0.42
0.30	0.41
0.28	0.40
0.26	0.39
0.24	0.37
0.22	0.36
0.20	0.35
0.18	0.33
0.16	0.31
0.14	0.30
0.12	0.29
0.10	0.27

AA™5450 SINGLE HUNG WINDOW - BEVEL FACE (1" Double Glazed - 15lb Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- 2. SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,200 mm wide by 1,500 mm high (47-1/4" by 59-1/16").

SHGC Matrix ²

Glass SHGC ³	Overall SHGC ⁴
0.75	0.55
0.70	0.51
0.65	0.48
0.60	0.44
0.55	0.40
0.50	0.37
0.45	0.33
0.40	0.30
0.35	0.26
0.30	0.22
0.25	0.19
0.20	0.15
0.15	0.12
0.10	0.08
0.05	0.04

Visible Transmittance 2

Glass VT ³	Overall VT ⁴
0.75	0.54
0.70	0.50
0.65	0.47
0.60	0.43
0.55	0.40
0.50	0.36
0.45	0.32
0.40	0.29
0.35	0.25
0.30	0.22
0.25	0.18
0.20	0.14
0.15	0.11
0.10	0.07
0.05	0.04



SINGLE HUNG THERMAL CHARTS

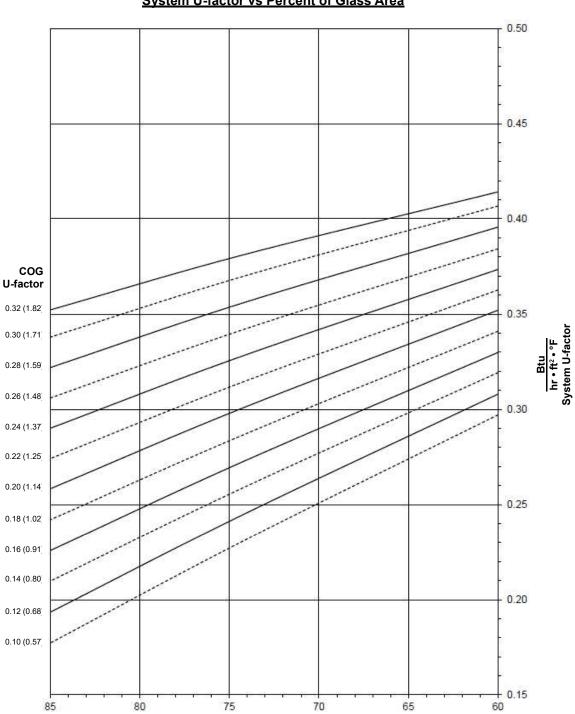
EC 97911-206

AA[™]5450 SINGLE HUNG WINDOW (1-1/2" Triple Glazed - 15lb. Sill)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area
Daylight Opening / Projected Area

Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

Glass properties are based on center of glass values and are obtained from your glass supplier.



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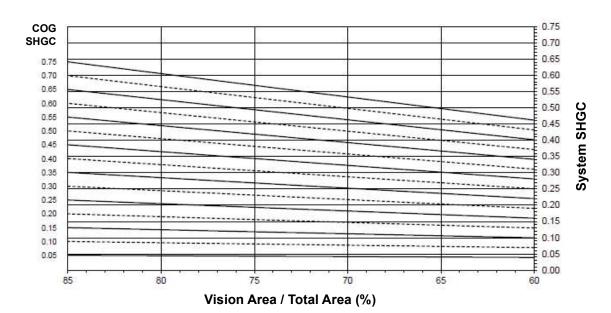
SINGLE HUNG THERMAL CHARTS

EC 97911-206

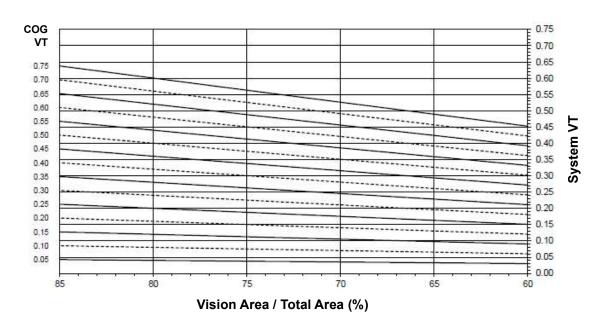
AA™5450 SINGLE HUNG WINDOW

(1-1/2" Triple Glazed - 15lb Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



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90

SINGLE HUNG THERMAL PERFORMANCE MATRIX (NFRC SIZE)

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

Thermal Transmittance¹ (BTU/hr • ft ² • °F)

Glass U-Factor ³	Overall U-Factor 4
0.32	0.38
0.30	0.37
0.28	0.36
0.26	0.34
0.24	0.33
0.22	0.31
0.20	0.30
0.18	0.29
0.16	0.27
0.14	0.26
0.12	0.24
0.10	0.23

AA™5450 SINGLE HUNG WINDOW (1-1/2" Triple Glazed - 15lb. Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- 2. SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,200 mm wide by 1,500 mm high (47-1/4" by 59-1/16").

SHGC Matrix ²

Glass SHGC ³	Overall Glass U-Factor ⁴
0.75	0.56
0.70	0.53
0.65	0.49
0.60	0.45
0.55	0.41
0.50	0.38
0.45	0.34
0.40	0.30
0.35	0.27
0.30	0.23
0.25	0.19
0.20	0.15
0.15	0.12
0.10	0.08
0.05	0.04

Visible Transmittance ²

Glass VT ³	Overall VT ⁴
0.75	0.59
0.70	0.52
0.65	0.48
0.60	0.45
0.55	0.41
0.50	0.37
0.45	0.33
0.40	0.30
0.35	0.26
0.30	0.22
0.25	0.19
0.20	0.15
0.15	0.11
0.10	0.07
0.05	0.04

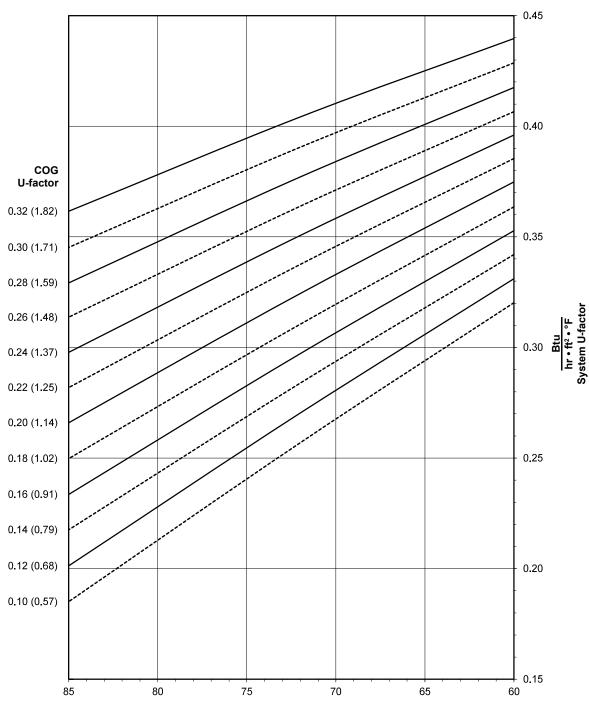
ADME120EN

AA™5450 SINGLE HUNG WINDOW - BEVEL FACE (1-1/2" Triple Glazed - 15lb. Sill)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area **Daylight Opening / Projected Area**

Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted. Glass properties are based on center of glass values and are obtained from your glass supplier.

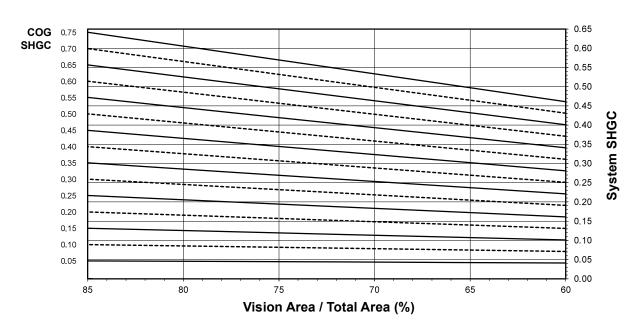


EC 97911-206

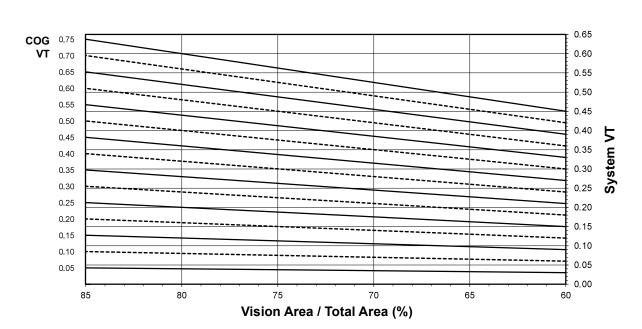
SINGLE HUNG THERMAL CHARTS

AA[™]5450 SINGLE HUNG WINDOW - BEVEL FACE (1-1/2" Triple Glazed - 15lb. Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



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Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

SINGLE HUNG THERMAL PERFORMANCE MATRIX (NFRC SIZE)

Thermal Transmittance ¹ (BTU/hr • ft ² • °F)

Glass U-Factor ³	Overall U-Factor 4
0.32	0.40
0.30	0.39
0.28	0.38
0.26	0.36
0.24	0.35
0.22	0.34
0.20	0.32
0.18	0.31
0.16	0.30
0.14	0.28
0.12	0.27
0.10	0.26

AA™5450 SINGLE HUNG WINDOW - BEVEL FACE (1-1/2" Triple Glazed - 15lb. Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- 2. SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,200 mm wide by 1,500 mm high (47-1/4" by 59-1/16").

SHGC Matrix ²

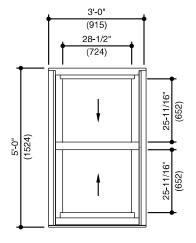
Glass SHGC ³	Overall SHGC ⁴
0.75	0.55
0.70	0.51
0.65	0.48
0.60	0.44
0.55	0.40
0.50	0.37
0.45	0.33
0.40	0.30
0.35	0.26
0.30	0.22
0.25	0.19
0.20	0.15
0.15	0.12
0.10	0.08
0.05	0.04

Visible Transmittance 2

Glass VT ³	Overall VT ⁴
0.75	0.54
0.70	0.50
0.65	0.47
0.60	0.43
0.55	0.40
0.50	0.36
0.45	0.32
0.40	0.29
0.35	0.25
0.30	0.22
0.25	0.18
0.20	0.14
0.15	0.11
0.10	0.07
0.05	0.04



Generic Project Specific U-factor Example Calculation (Percent of glass will vary on specific products depending on sitelines)



Example Glass U-Factor = 0.42 Btu/hr • ft2 • °F

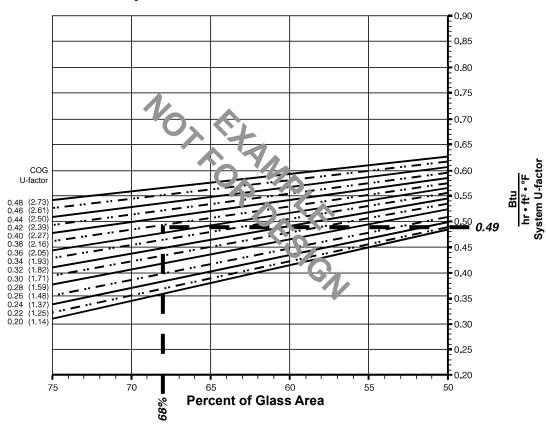
Total Daylight Opening = $(28-1/2" \cdot 25-11/16") + (28-1/2" \cdot 25-11/16") = 10.17 \text{ ft}^2$

Total Projected Area = 3'-0" • 5'-0" = 15 ft^2

Percent of Glass = (Total Daylight Opening ÷ Total Projected Area)100

 $= (10.17 \div 15)100 = 68\%$

System U-factor vs Percent of Glass Area



Based on 68% glass and center of glass (COG) U-factor of 0.42 System U-factor is equal to 0.49 Btu/hr • ft² • °F



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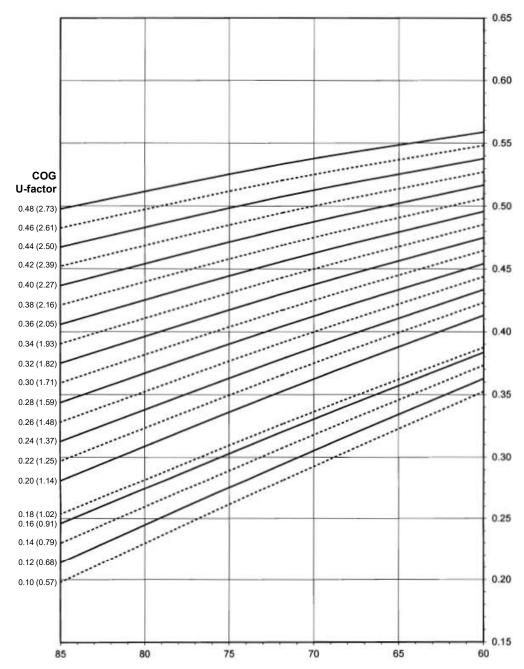
DOUBLE HUNG THERMAL CHARTS

AA™5450 DOUBLE HUNG WINDOW (1" Double Glazed - 10lb. Sill)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area **Daylight Opening / Projected Area**

Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted. Glass properties are based on center of glass values and are obtained from your glass supplier.



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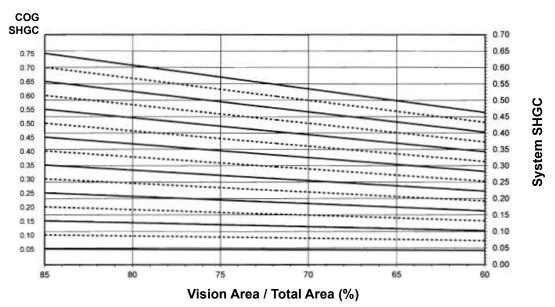
design and use of Kawneer products, products, vary widely. Kawneer does not rating hardware, or glazing materials,

AA™5450 Ultra Thermal Window

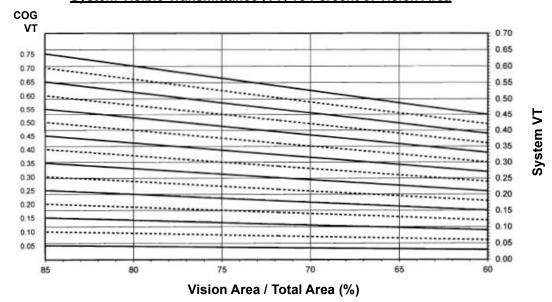
EC 97911-206

AA[™]5450 DOUBLE HUNG WINDOW (1" Double Glazed - 10lb. Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area





Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

EC 97911-206

DOUBLE HUNG THERMAL PERFORMANCE MATRIX (NFRC SIZE)

Thermal Transmittance 1 (BTU/hr • ft 2 • °F)

Glass U-Factor ³	Overall U-Factor ⁴
0.48	0.53
0.46	0.52
0.44	0.52
0.42	0.49
0.40	0.48
0.38	0.47
0.36	0.46
0.34	0.44
0.32	0.43
0.30	0.42
0.28	0.40
0.26	0.39
0.24	0.38
0.22	0.37
0.20	0.35
0.18	0.33
0.16	0.32
0.14	0.31
0.12	0.29
0.10	0.28

AA™5450 DOUBLE HUNG WINDOW (1" Double Glazed - 10lb. Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- 2. SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 960 mm wide by 2,090 mm high (37-3/4" by 82-3/8").

SHGC Matrix ²

Overall SHGC ⁴
0.55
0.51
0.48
0.44
0.40
0.37
0.33
0.30
0.26
0.22
0.19
0.15
0.12
0.08
0.04

Visible Transmittance ²

Glass VT ³	Overall VT ⁴
0.75	0.54
0.70	0.50
0.65	0.47
0.60	0.43
0.55	0.40
0.50	0.36
0.45	0.32
0.40	0.29
0.35	0.25
0.30	0.22
0.25	0.18
0.20	0.14
0.15	0.11
0.10	0.07
0.05	0.04



EC 97911-206

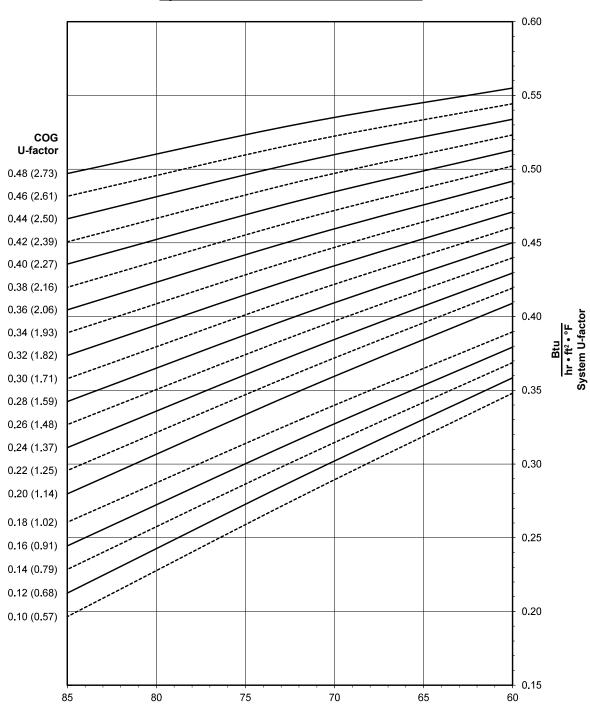
DOUBLE HUNG THERMAL CHARTS

AA™5450 DOUBLE HUNG WINDOW - BEVEL FACE (1" Double Glazed - 10lb. Sill)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area
Daylight Opening / Projected Area

Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

Glass properties are based on center of glass values and are obtained from your glass supplier.



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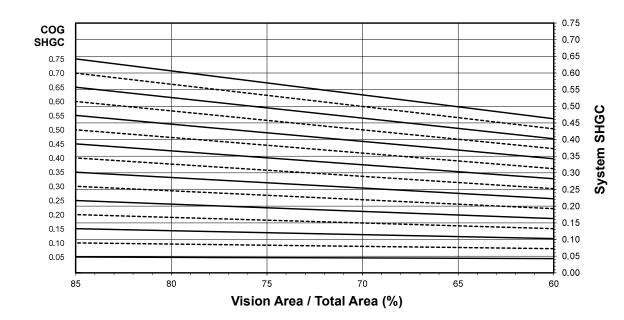
DOUBLE HUNG THERMAL CHARTS

the design and use of Kawneer products, wall products, vary widely. Kawneer does not operating hardware, or glazing materials,

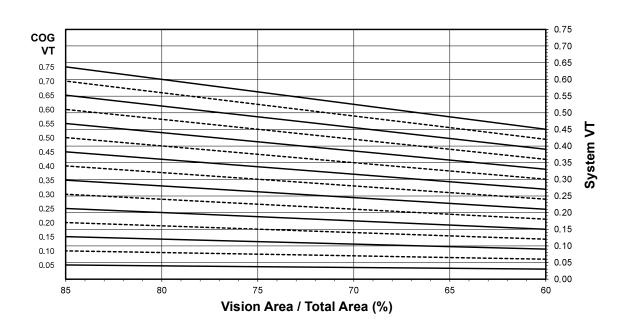
EC 97911-206

AA™5450 DOUBLE HUNG WINDOW - BEVEL FACE (1" Double Glazed - 10lb. Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area





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DOUBLE HUNG THERMAL PERFORMANCE MATRIX (NFRC SIZE)

Thermal Transmittance ¹ (BTU/hr • ft ² • °F)

Thermal transmittance (DTO/III • It • F)	
Glass U-Factor ³	Overall U-Factor 4
0.48	0.53
0.46	0.52
0.44	0.51
0.42	0.49
0.40	0.48
0.38	0.47
0.36	0.45
0.34	0.44
0.32	0.43
0.30	0.41
0.28	0.40
0.26	0.39
0.24	0.38
0.22	0.36
0.20	0.35
0.18	0.33
0.16	0.32
0.14	0.30
0.12	0.29
0.10	0.28
_	_

AA™5450 DOUBLE HUNG WINDOW - BEVEL FACE (1" Double Glazed - 10lb. Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- 2. SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,200 mm wide by 1,500 mm high (47-1/4" by 59-1/16").

SHGC Matrix ²

Glass SHGC ³	Overall SHGC ⁴
0.75	0.55
0.70	0.51
0.65	0.48
0.60	0.44
0.55	0.40
0.50	0.37
0.45	0.33
0.40	0.30
0.35	0.26
0.30	0.22
0.25	0.19
0.20	0.15
0.15	0.12
0.10	0.08
0.05	0.04

Visible Transmittance ²

Glass VT ³ Overall VT ⁴	
Overall VT ⁴	
0.54	
0.50	
0.47	
0.43	
0.40	
0.36	
0.32	
0.29	
0.25	
0.22	
0.18	
0.14	
0.11	
0.07	
0.04	

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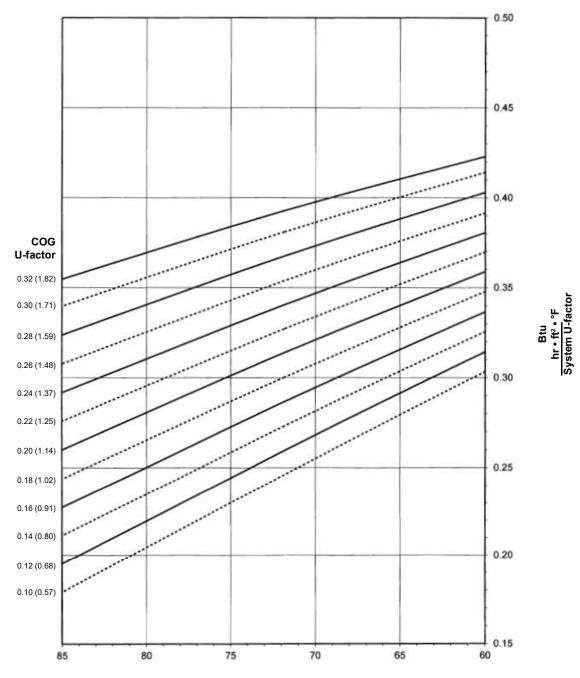
EC 97911-206

AA™5450 DOUBLE HUNG WINDOW (1-1/2" Triple Glazed - 10lb. Sill)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area
Daylight Opening / Projected Area

Notes for System U-factor, SHGC and VT charts:

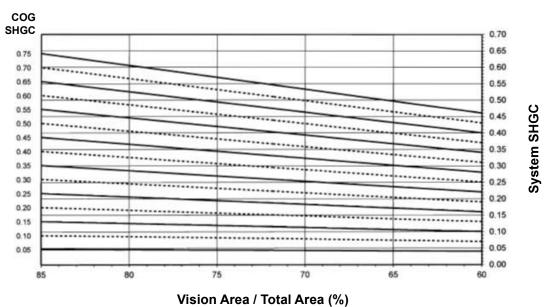
For glass values that are not listed, linear interpolation is permitted. Glass properties are based on center of glass values and are obtained from your glass supplier.



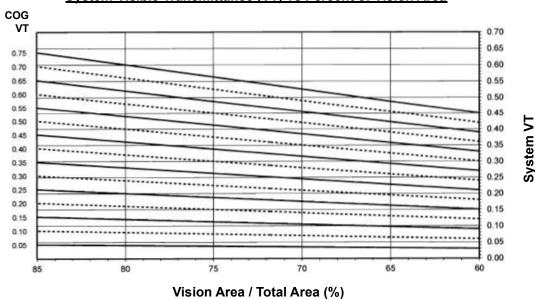
AA™5450 Ultra Thermal Window

AA™5450 DOUBLE HUNG WINDOW (1-1/2" Triple Glazed - 10lb Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



AA™5450 Ultra Thermal Window

Thermal Transmittance¹ (BTU/hr • ft ² • °F)

Glass U-Factor ³	Overall U-Factor 4
0.32	0.39
0.30	0.38
0.28	0.37
0.26	0.35
0.24	0.34
0.22	0.33
0.20	0.31
0.18	0.30
0.16	0.29
0.14	0.27
0.12	0.26
0.10	0.25

AA[™]5450 DOUBLE HUNG WINDOW (1-1/2" Triple Glazed - 10lb. Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 960 mm wide by 2,090 mm high (37-3/4" by 82-3/8").

SHGC Matrix ²

Glass SHGC ³	Overall Glass U-Factor ⁴
0.75	0.55
0.70	0.51
0.65	0.47
0.60	0.44
0.55	0.40
0.50	0.37
0.45	0.33
0.40	0.29
0.35	0.26
0.30	0.22
0.25	0.19
0.20	0.15
0.15	0.12
0.10	0.08
0.05	0.04

Visible Transmittance ²

Glass VT ³	Overall VT ⁴
0.75	0.54
0.70	0.50
0.65	0.47
0.60	0.43
0.55	0.40
0.50	0.36
0.45	0.32
0.40	0.29
0.35	0.25
0.30	0.22
0.25	0.18
0.20	0.14
0.15	0.11
0.10	0.07
0.05	0.04



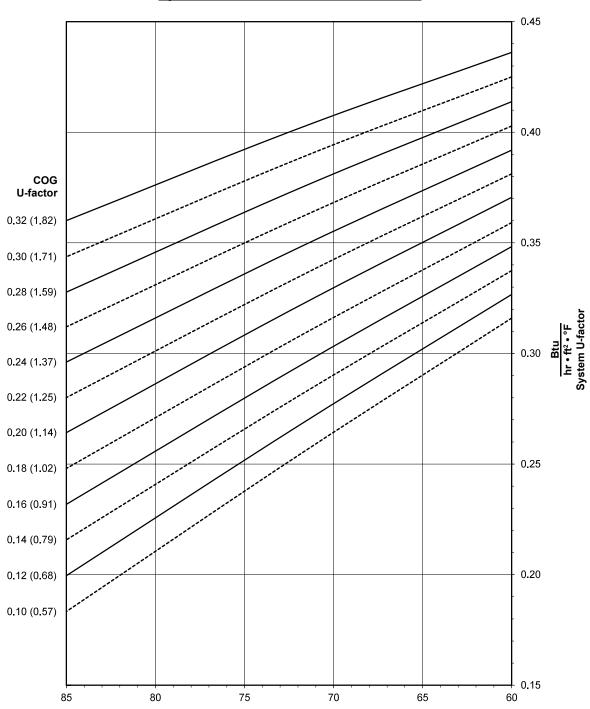
DOUBLE HUNG THERMAL CHARTS

AA™5450 DOUBLE HUNG WINDOW - BEVEL FACE (1-1/2" Triple Glazed - 10lb. Sill)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area **Daylight Opening / Projected Area**

Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

Glass properties are based on center of glass values and are obtained from your glass supplier.



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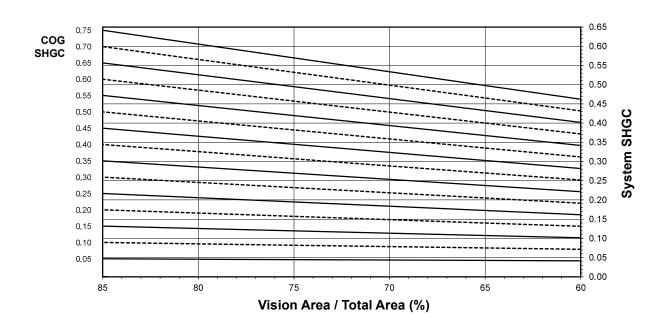
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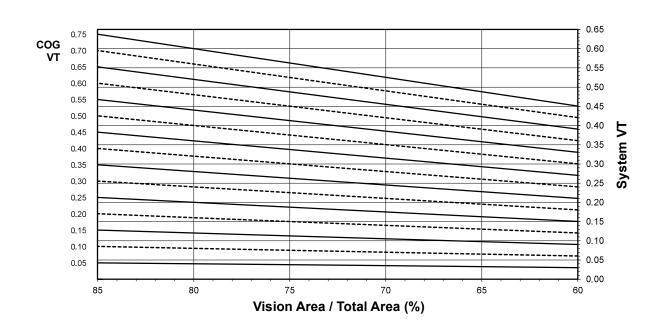
DOUBLE HUNG THERMAL CHARTS

AA™5450 DOUBLE HUNG WINDOW - BEVEL FACE (1-1/2" Triple Glazed - 10lb. Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area





DOUBLE HUNG THERMAL PERFORMANCE MATRIX (NFRC SIZE)

Thermal Transmittance 1 (BTU/hr • ft 2 • °F)

Overall U-Factor 4
Overall O 1 deter
0.40
0.39
0.38
0.36
0.35
0.34
0.32
0.31
0.30
0.28
0.27
0.25

AA™5450 DOUBLE HUNG WINDOW - BEVEL FACE (1-1/2" Triple Glazed - 10lb. Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- 2. SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,200 mm wide by 1,500 mm high (47-1/4" by 59-1/16").

SHGC Matrix ²

Glass SHGC ³	Overall SHGC ⁴
0.75	0.55
0.70	0.51
0.65	0.47
0.60	0.44
0.55	0.40
0.50	0.37
0.45	0.33
0.40	0.30
0.35	0.26
0.30	0.22
0.25	0.19
0.20	0.15
0.15	0.12
0.10	0.08
0.05	0.04

Visible Transmittance ²

VISIBIC ITALISHIILLANCE	
Glass VT ³	Overall VT 4
0.75	0.54
0.70	0.50
0.65	0.47
0.60	0.43
0.55	0.40
0.50	0.36
0.45	0.32
0.40	0.29
0.35	0.25
0.30	0.22
0.25	0.18
0.20	0.14
0.15	0.11
0.10	0.07
0.05	0.04

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DOUBLE HUNG THERMAL CHARTS

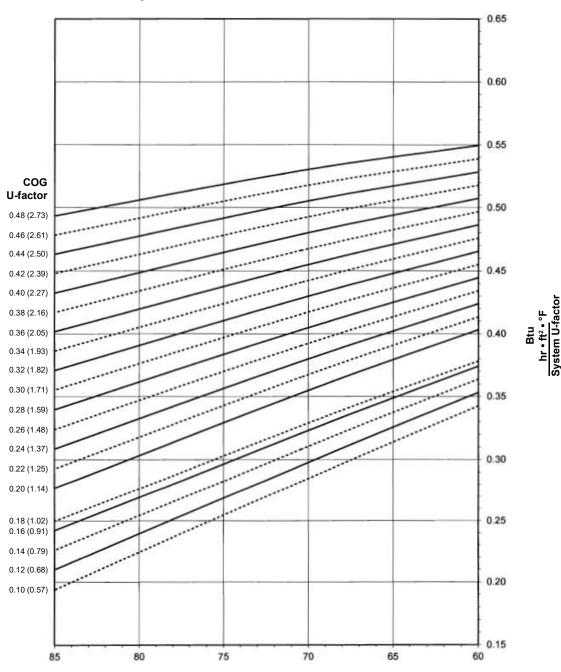
AA™5450 Ultra Thermal Window

AA[™]5450 DOUBLE HUNG WINDOW (1" Double Glazed - 15lb. Sill)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area
Daylight Opening / Projected Area

Notes for System U-factor, SHGC and VT charts:

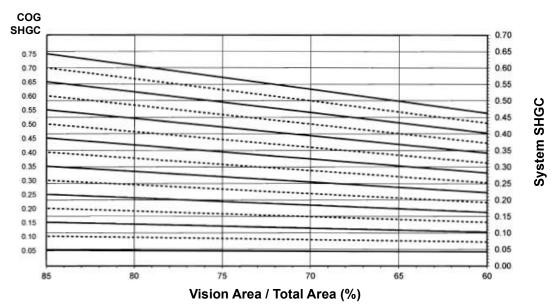
For glass values that are not listed, linear interpolation is permitted. Glass properties are based on center of glass values and are obtained from your glass supplier.



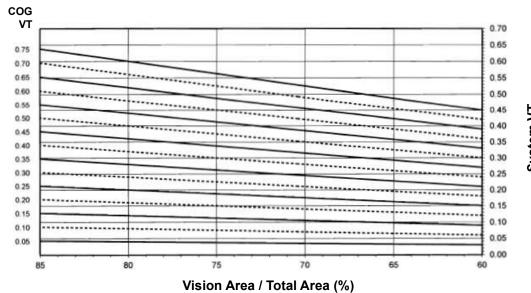
EC 97911-

AA[™]5450 DOUBLE HUNG WINDOW (1" Double Glazed - 15lb. Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area





EC 97911-206 DOUBLE HUNG THERMAL PERFORMANCE MATRIX (NFRC SIZE)

Thermal Transmittance 1 (BTU/hr • ft 2 • °F)

Glass U-Factor ³	Overall U-Factor 4
0.48	0.53
0.46	0.52
0.44	0.50
0.42	0.49
0.40	0.48
0.38	0.47
0.36	0.45
0.34	0.44
0.32	0.43
0.30	0.42
0.28	0.40
0.26	0.39
0.24	0.38
0.22	0.37
0.20	0.35
0.18	0.33
0.16	0.32
0.14	0.31
0.12	0.30
0.10	0.28

AA™5450 DOUBLE HUNG WINDOW (1" Double Glazed - 15lb. Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

AA™5450 Ultra Thermal Window

- 1. U-Factors are determined in accordance with NFRC 100.
- 2. SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 960 mm wide by 2,090 mm high (37-3/4" by 82-3/8").

SHGC Matrix ²

Glass SHGC ³	Overall SHGC ⁴
0.75	0.54
0.70	0.50
0.65	0.47
0.60	0.43
0.55	0.40
0.50	0.36
0.45	0.33
0.40	0.29
0.35	0.26
0.30	0.22
0.25	0.19
0.20	0.15
0.15	0.11
0.10	0.08
0.05	0.04

Visible Transmittance 2

Glass VT ³	Overall VT ⁴
0.75	0.53
0.70	0.49
0.65	0.46
0.60	0.42
0.55	0.39
0.50	0.35
0.45	0.32
0.40	0.28
0.35	0.25
0.30	0.21
0.25	0.18
0.20	0.14
0.15	0.11
0.10	0.07
0.05	0.04

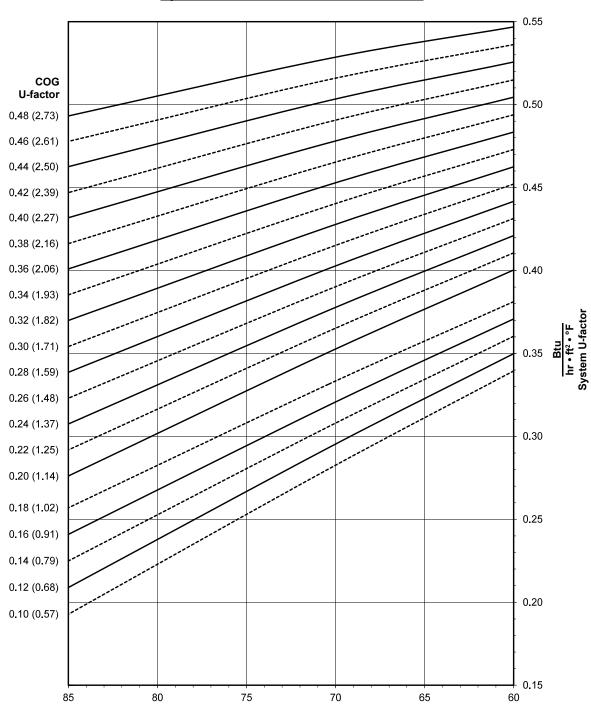


AA[™]5450 DOUBLE HUNG WINDOW - BEVEL FACE (1" Double Glazed - 15lb. Sill)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area
Daylight Opening / Projected Area

Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

Glass properties are based on center of glass values and are obtained from your glass supplier.



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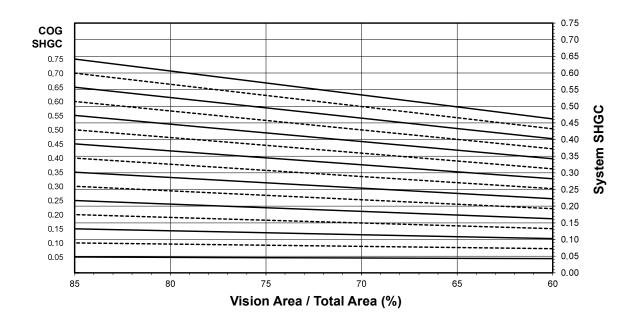
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the design and use of Kawneer products, wall products, vary widely. Kawneer does not operating hardware, or glazing materials,

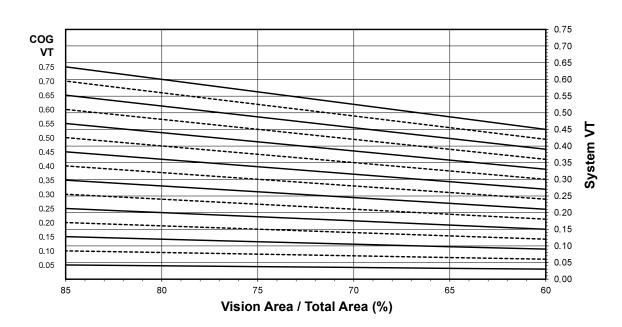
DOUBLE HUNG THERMAL CHARTS

AA[™]5450 DOUBLE HUNG WINDOW - BEVEL FACE (1" Double Glazed - 15lb. Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area





Thermal Transmittance ¹ (BTU/hr • ft ² • °F)

Thermal transmittance (BTO/III • It • F)	
Glass U-Factor ³	Overall U-Factor 4
0.48	0.53
0.46	0.51
0.44	0.50
0.42	0.49
0.40	0.48
0.38	0.46
0.36	0.45
0.34	0.44
0.32	0.43
0.30	0.41
0.28	0.40
0.26	0.39
0.24	0.39
0.22	0.36
0.20	0.35
0.18	0.33
0.16	0.32
0.14	0.31
0.12	0.29
0.10	0.28
·	

AA™5450 DOUBLE HUNG WINDOW - BEVEL FACE (1" Double Glazed - 15lb. Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- 2. SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,200 mm wide by 1,500 mm high (47-1/4" by 59-1/16").

SHGC Matrix ²

Glass SHGC ³	Overall SHGC ⁴
0.75	0.54
0.70	0.50
0.65	0.47
0.60	0.43
0.55	0.40
0.50	0.36
0.45	0.33
0.40	0.29
0.35	0.26
0.30	0.22
0.25	0.19
0.20	0.15
0.15	0.11
0.10	0.08
0.05	0.04

Visible Transmittance ²

Glass VT ³	Overall VT 4
0.75	0.53
0.70	0.49
0.65	0.46
0.60	0.42
0.55	0.39
0.50	0.35
0.45	0.32
0.40	0.28
0.35	0.25
0.30	0.21
0.25	0.18
0.20	0.14
0.15	0.11
0.10	0.07
0.05	0.04



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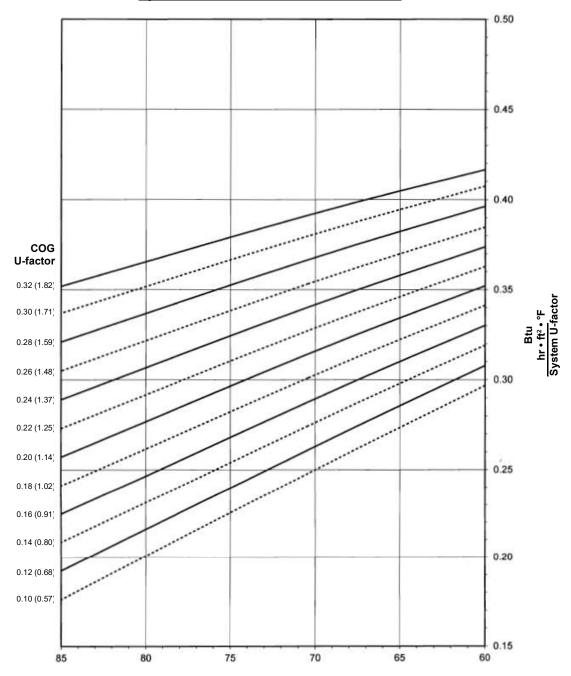
DOUBLE HUNG THERMAL CHARTS

AA™5450 DOUBLE HUNG WINDOW (1-1/2" Triple Glazed - 15lb. Sill)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area **Daylight Opening / Projected Area**

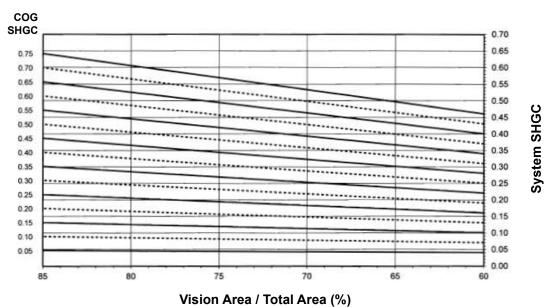
Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted. Glass properties are based on center of glass values and are obtained from your glass supplier.

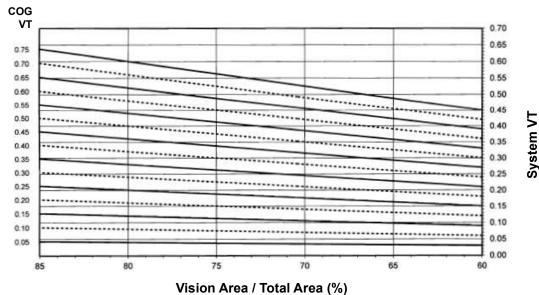


AA[™]5450 DOUBLE HUNG WINDOW (1-1/2" Triple Glazed - 15lb Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area





EC 97911-206

AA™5450 Ultra Thermal Window

Thermal Transmittance¹ (BTU/hr • ft ² • °F)

Glass U-Factor ³	Overall U-Factor 4
0.32	0.39
0.30	0.38
0.28	0.37
0.26	0.35
0.24	0.34
0.22	0.33
0.20	0.31
0.18	0.30
0.16	0.29
0.14	0.27
0.12	0.26
0.10	0.25

AA[™]5450 DOUBLE HUNG WINDOW (1-1/2" Triple Glazed - 15lb. Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 960 mm wide by 2,090 mm high (37-3/4" by 82-3/8").

SHGC Matrix ²

0.54
0.50
0.47
0.43
0.39
0.36
0.32
0.29
0.25
0.22
0.18
0.15
0.11
0.08
0.04

Visible Transmittance ²

Glass VT ³	Overall VT ⁴
0.75	0.53
0.70	0.49
0.65	0.46
0.60	0.42
0.55	0.39
0.50	0.35
0.45	0.32
0.40	0.28
0.35	0.25
0.30	0.21
0.25	0.18
0.20	0.14
0.15	0.11
0.10	0.07
0.05	0.04



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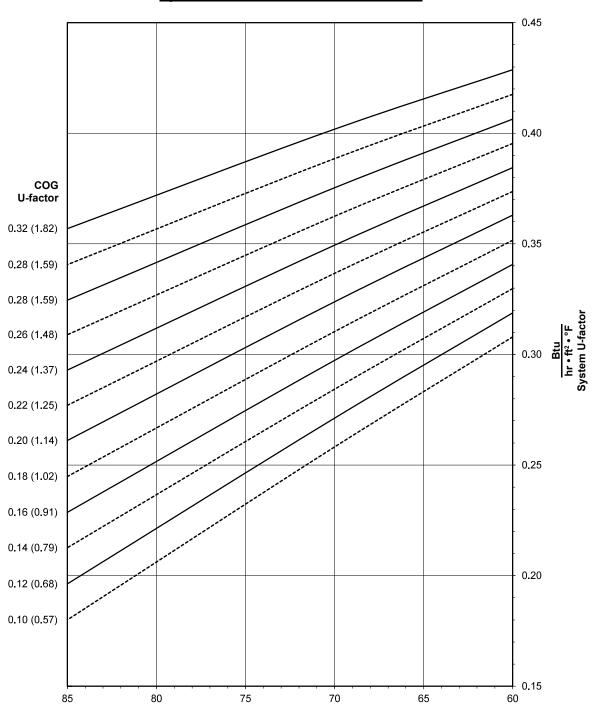
DOUBLE HUNG THERMAL CHARTS

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area

AA™5450 DOUBLE HUNG WINDOW - BEVEL FACE (1-1/2" Triple Glazed - 15lb Sill)



Percent of Glass Area = Vision Area/Total Area
Daylight Opening / Projected Area

Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

Glass properties are based on center of glass values and are obtained from your glass supplier.



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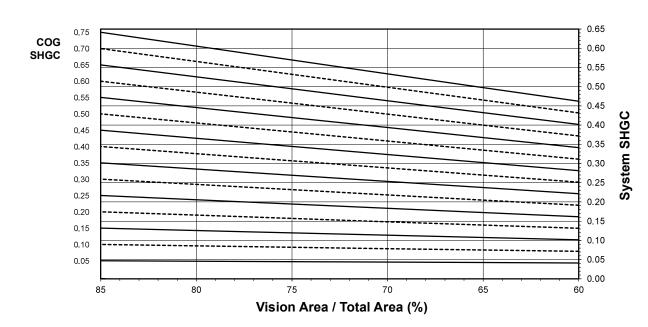
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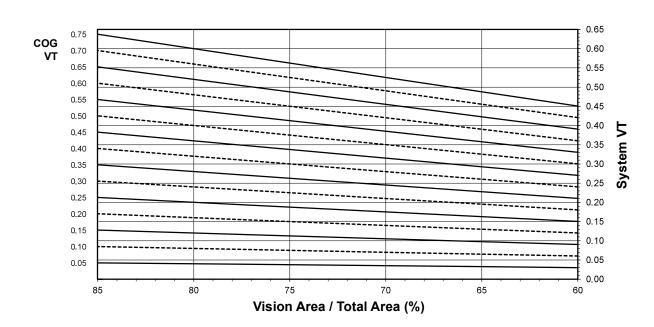
DOUBLE HUNG THERMAL CHARTS

AA[™]5450 DOUBLE HUNG WINDOW - BEVEL FACE (1-1/2" Triple Glazed - 15lb Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



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reserves the right to change comiguration without for product improvement.

Thermal Transmittance 1 (BTU/hr • ft 2 • °F)

Glass U-Factor ³	Overall U-Factor 4
0.32	0.40
0.30	0.39
0.28	0.37
0.26	0.36
0.24	0.35
0.22	0.34
0.20	0.32
0.18	0.31
0.16	0.30
0.14	0.28
0.12	0.27
0.10	0.26

AA™5450 BEVELED DOUBLE HUNG WINDOW - BEVEL FACE

(1-1/2" Triple Glazed - 15lb Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,200 mm wide by 1,500 mm high (47-1/4" by 59-1/16").

SHGC Matrix ²

Glass SHGC ³	Overall SHGC ⁴
0.75	0.54
0.70	0.50
0.65	0.47
0.60	0.43
0.55	0.40
0.50	0.36
0.45	0.33
0.40	0.29
0.35	0.25
0.30	0.22
0.25	0.18
0.20	0.15
0.15	0.11
0.10	0.08
0.05	0.04

Visible Transmittance ²

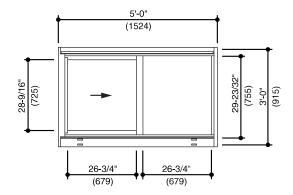
Glass VT ³	Overall VT ⁴
0.75	0.53
0.70	0.49
0.65	0.46
0.60	0.42
0.55	0.39
0.50	0.35
0.45	0.32
0.40	0.28
0.35	0.25
0.30	0.21
0.25	0.18
0.20	0.14
0.15	0.11
0.10	0.07
0.05	0.04

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HORIZONTAL SIDING WINDOW THERMAL CHARTS

Generic Project Specific U-factor Example Calculation (Percent of glass will vary on specific products depending on sitelines)



Example Glass U-Factor = 0.42 Btu/hr • ft² • °F

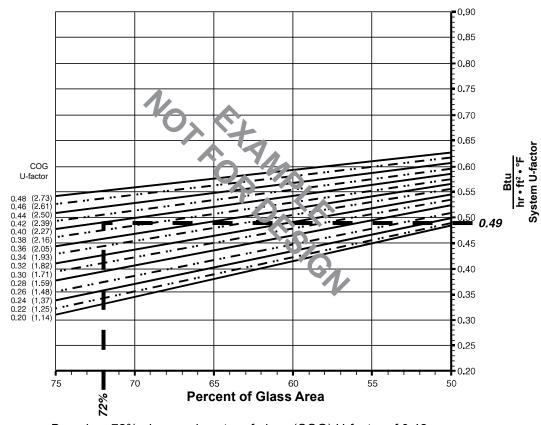
Total Daylight Opening = $(28-9/16" \cdot 26-3/4") + (29-23/32" \cdot 26-3/4") = 10.83 \text{ ft}^2$

Total Projected Area $= 3'-0" \cdot 5'-0" = 15 \text{ ft}^2$

Percent of Glass = (Total Daylight Opening ÷ Total Projected Area)100

 $= (10.83 \div 15)100 = 72\%$

System U-factor vs Percent of Glass Area



Based on 72% glass and center of glass (COG) U-factor of 0.42 System U-factor is equal to 0.49 Btu/hr • ft2 • °F



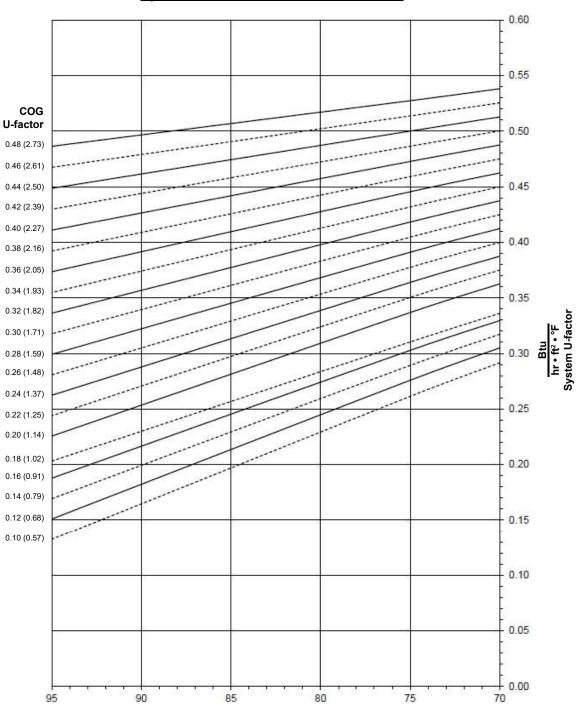
HORIZONTAL SLIDER THERMAL CHARTS

AA™5450 OX / XO HORIZONTAL SLIDING WINDOW (1" Double Glazed - 10lb. Sill)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area **Daylight Opening / Projected Area**

Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

Glass properties are based on center of glass values and are obtained from your glass supplier.



HORIZONTAL SLIDER THERMAL CHARTS

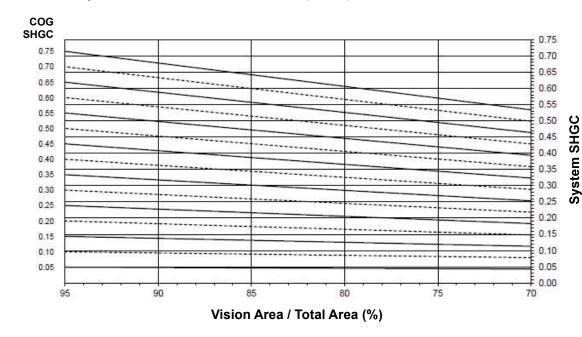
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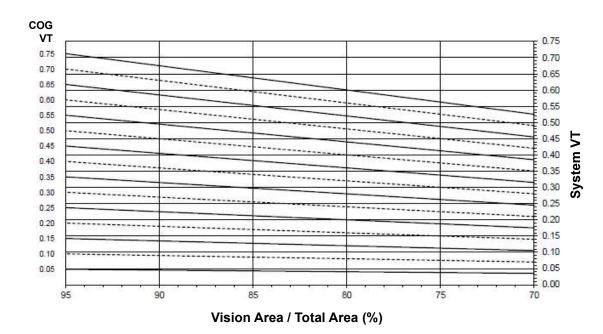
EC 97911-206

AA[™]5450 OX / XO HORIZONTAL SLIDING WINDOW (1" Double Glazed - 10lb Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area





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HORIZONTAL SLIDER THERMAL PERFORMANCE MATRIX (NFRC SIZE)

Thermal Transmittance 1 (BTU/hr • ft 2 • °F)

· · · · · · · · · · · · · · · · · · ·	
Glass U-Factor ³	Overall U-Factor 4
0.48	0.53
0.46	0.51
0.44	0.50
0.42	0.49
0.40	0.47
0.38	0.46
0.36	0.45
0.34	0.43
0.32	0.42
0.30	0.40
0.28	0.39
0.26	0.38
0.24	0.36
0.22	0.35
0.20	0.34
0.18	0.31
0.16	0.30
0.14	0.29
0.12	0.28
0.10	0.26

AA™5450 OX / XO HORIZONTAL SLIDING WINDOW (1" Double Glazed - 10lb Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,500 mm wide by 1,200 mm high (59-1/16" by 47-1/4").

SHGC Matrix²

OHOO Matrix	
Glass SHGC ³	Overall SHGC ⁴
0.75	0.57
0.70	0.53
0.65	0.49
0.60	0.46
0.55	0.42
0.50	0.38
0.45	0.34
0.40	0.31
0.35	0.27
0.30	0.23
0.25	0.19
0.20	0.16
0.15	0.12
0.10	0.08
0.05	0.04

Visible Transmittance ²

VISIBIC ITALISHIILLANIOC	
Glass VT ³	Overall VT ⁴
0.75	0.56
0.70	0.53
0.65	0.49
0.60	0.45
0.55	0.41
0.50	0.38
0.45	0.34
0.40	0.30
0.35	0.26
0.30	0.23
0.25	0.19
0.20	0.15
0.15	0.11
0.10	0.08
0.05	0.04



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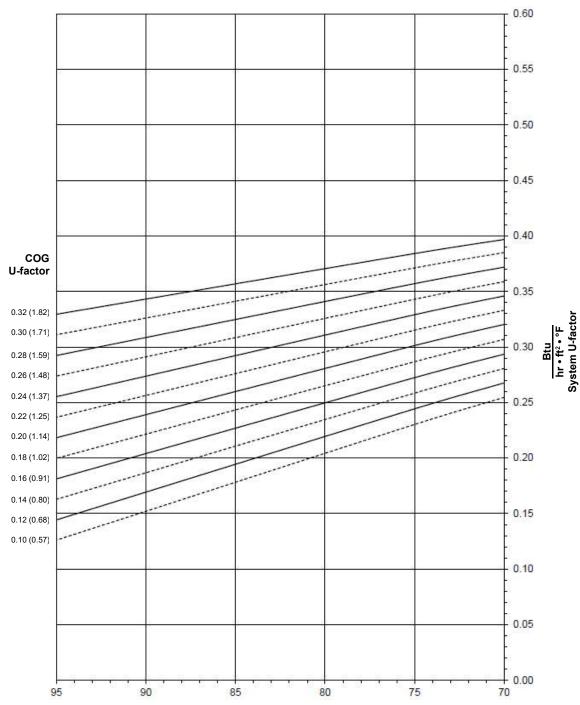
EC 97911-206

AA™5450 OX / XO HORIZONTAL SLIDING WINDOW (1-1/2" Triple Glazed - 10lb. Sill)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area **Daylight Opening / Projected Area**

Notes for System U-factor, SHGC and VT charts:

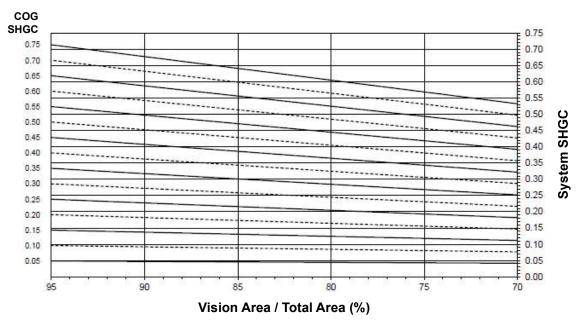
For glass values that are not listed, linear interpolation is permitted. Glass properties are based on center of glass values and are obtained from your glass supplier.



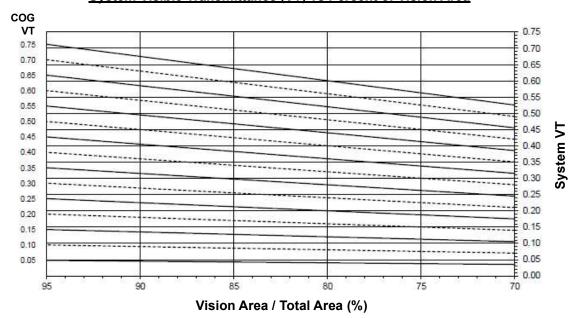
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AA™5450 OX / XO HORIZONTAL SLIDING WINDOW (1-1/2" Triple Glazed - 10lb Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



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HORIZONTAL SLIDER THERMAL PERFORMANCE MATRIX (NFRC SIZE)

Thermal Transmittance¹ (BTU/hr • ft ² • °F)

Glass U-Factor ³	Overall U-Factor ⁴
0.32	0.38
0.30	0.37
0.28	0.36
0.26	0.34
0.24	0.33
0.22	0.31
0.20	0.30
0.18	0.29
0.16	0.27
0.14	0.26
0.12	0.24
0.10	0.23

AA[™]5450 OX / XO HORIZONTAL SLIDING WINDOW (1-1/2" Triple Glazed - 10lb. Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,500 mm wide by 1,200 mm high (59-1/16" by 47-1/4").

SHGC Matrix ²

Glass SHGC ³	Overall Glass U-Factor ⁴
0.75	0.57
0.70	0.53
0.65	0.49
0.60	0.46
0.55	0.42
0.50	0.38
0.45	0.34
0.40	0.31
0.35	0.27
0.30	0.23
0.25	0.19
0.20	0.16
0.15	0.12
0.10	0.08
0.05	0.04

Visible Transmittance ²

Glass VT ³	Overall VT ⁴
0.75	0.56
0.70	0.53
0.65	0.49
0.60	0.45
0.55	0.41
0.50	0.38
0.45	0.34
0.40	0.30
0.35	0.26
0.30	0.23
0.25	0.19
0.20	0.15
0.15	0.11
0.10	0.08
0.05	0.04

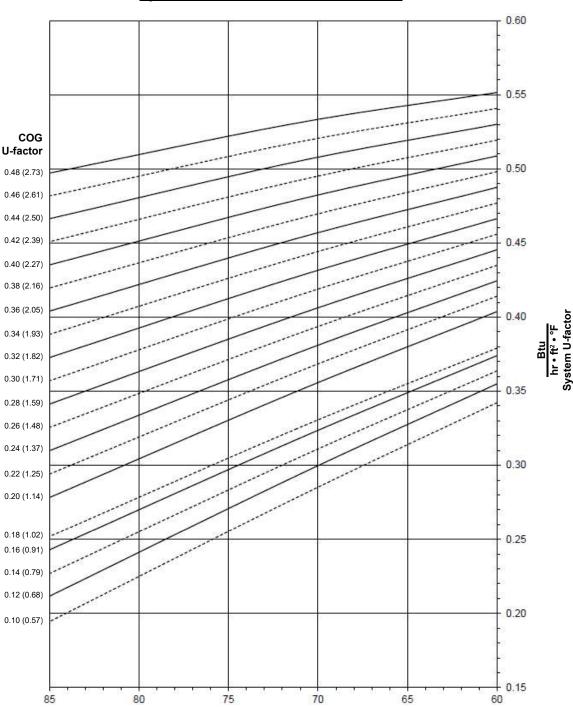


AA™5450 XX HORIZONTAL SLIDING WINDOW (1" Double Glazed - 10lb. Sill)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area **Daylight Opening / Projected Area**

Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted.

Glass properties are based on center of glass values and are obtained from your glass supplier.



the design and use of Kawneer products, wall products, vary widely. Kawneer does not operating hardware, or glazing materials,

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HORIZONTAL SLIDER THERMAL CHARTS

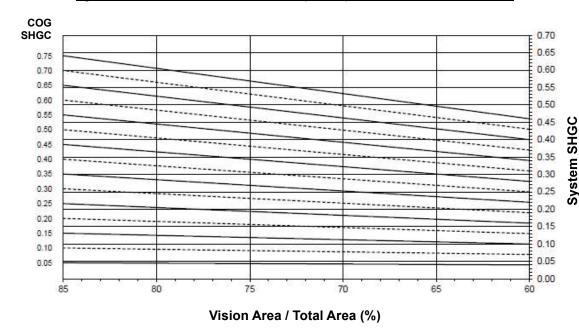
g the design and use of Kawneer products, wall products, vary widely. Kawneer does not operating hardware, or glazing materials,

Laws and building and safety codes governing such as glazed entrance, window, and curtain voontrol the selection of product configurations, and assumes no responsibility therefor.

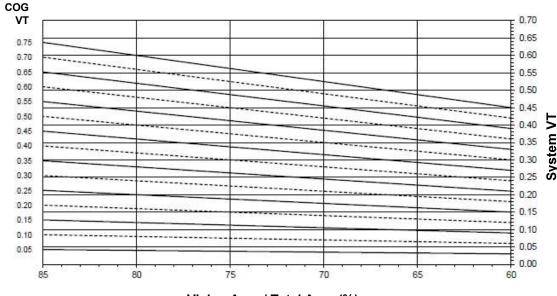
EC 97911-206

AA™5450 XX HORIZONTAL SLIDING WINDOW (1" Double Glazed - 10lb Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



Vision Area / Total Area (%)



Thermal Transmittance 1 (BTU/hr • ft 2 • $^\circ$ F)

Glass U-Factor ³	Overall U-Factor 4
0.48	0.53
0.46	0.52
0.44	0.50
0.42	0.49
0.40	0.48
0.38	0.47
0.36	0.45
0.34	0.44
0.32	0.43
0.30	0.41
0.28	0.40
0.26	0.39
0.24	0.38
0.22	0.36
0.20	0.35
0.18	0.32
0.16	0.32
0.14	0.30
0.12	0.29
0.10	0.28

AA™5450 XX HORIZONTAL SLIDING WINDOW (1" Double Glazed - 10lb Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- 4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,500 mm wide by 1,200 mm high (59-1/16" by 47-1/4").

SHGC Matrix ²

Glass SHGC ³	Overall SHGC ⁴
0.75	0.54
0.70	0.51
0.65	0.47
0.60	0.43
0.55	0.40
0.50	0.36
0.45	0.33
0.40	0.29
0.35	0.26
0.30	0.22
0.25	0.19
0.20	0.15
0.15	0.11
0.10	0.08
0.05	0.04

Visible Transmittance ²

Glass VT ³	Overall VT ⁴
0.75	0.53
0.70	0.50
0.65	0.46
0.60	0.43
0.55	0.39
0.50	0.36
0.45	0.32
0.40	0.28
0.35	0.25
0.30	0.21
0.25	0.18
0.20	0.14
0.15	0.11
0.10	0.07
0.05	0.04



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Laws and building and safety codes governing the design and use of Kawneer products, vary widely. Kawneer products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

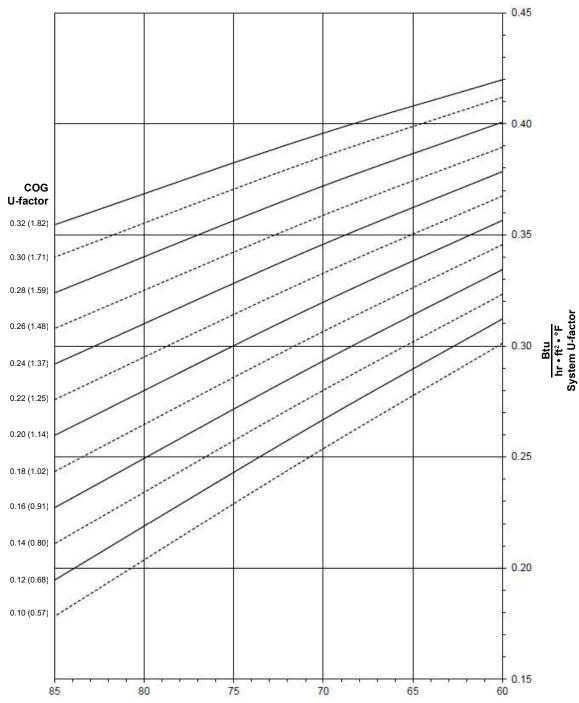
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AA™5450 XX HORIZONTAL SLIDING WINDOW (1-1/2" Triple Glazed - 10lb. Sill)

Note:

Values in parentheses are metric. COG = Center of Glass. Charts are generated per AAMA 507

System U-factor vs Percent of Glass Area



Percent of Glass Area = Vision Area/Total Area **Daylight Opening / Projected Area**

Notes for System U-factor, SHGC and VT charts:

For glass values that are not listed, linear interpolation is permitted. Glass properties are based on center of glass values and are obtained from your glass supplier.

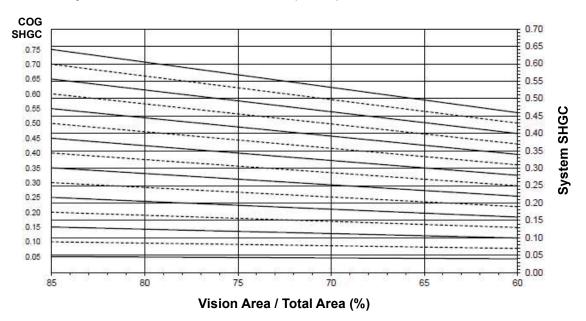


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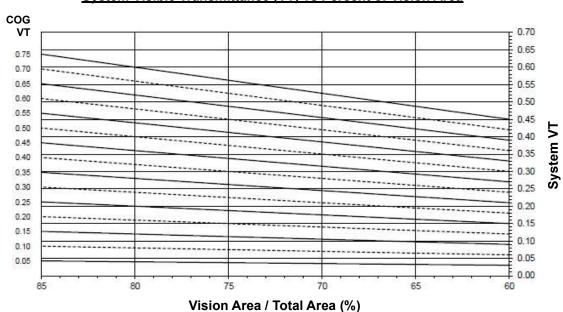
AA™5450 Ultra Thermal Window

AA™5450 XX HORIZONTAL SLIDING WINDOW (1-1/2" Triple Glazed - 10lb Sill)

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



System Visible Transmittance (VT) vs Percent of Vision Area



Thermal Transmittance¹ (BTU/hr • ft ² • °F)

Glass U-Factor ³	Overall U-Factor ⁴
0.32	0.39
0.30	0.38
0.28	0.37
0.26	0.35
0.24	0.34
0.22	0.33
0.20	0.32
0.18	0.30
0.16	0.29
0.14	0.27
0.12	0.26
0.10	0.25

AA[™]5450 XX HORIZONTAL SLIDING WINDOW (1-1/2" Triple Glazed - 10lb. Sill)

NOTE: For glass values that are not listed, linear interpolation is permitted.

- 1. U-Factors are determined in accordance with NFRC 100.
- SHGC and VT values are determined in accordance with NFRC 200.
- 3. Glass properties are based on center of glass values and are obtained from your glass supplier.
- Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 1,500 mm wide by 1,200 mm high (59-1/16" by 47-1/4").

SHGC Matrix ²

Glass SHGC ³	Overall Glass U-Factor ⁴
0.75	0.54
0.70	0.51
0.65	0.47
0.60	0.43
0.55	0.40
0.50	0.36
0.45	0.33
0.40	0.29
0.35	0.26
0.30	0.22
0.25	0.18
0.20	0.15
0.15	0.11
0.10	0.08
0.05	0.04

Visible Transmittance ²

Glass VT ³	Overall VT ⁴
0.75	0.53
0.70	0.50
0.65	0.46
0.60	0.43
0.55	0.39
0.50	0.36
0.45	0.32
0.40	0.28
0.35	0.25
0.30	0.21
0.25	0.18
0.20	0.14
0.15	0.11
0.10	0.07
0.05	0.04



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