EC 97911-305 INDEX

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RECEPTORS AND SUB SILLS	44
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PANNINGS	46
WIND LOAD CHARTS	47-51
THERMAL CHARTS	52-70

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 97911-305

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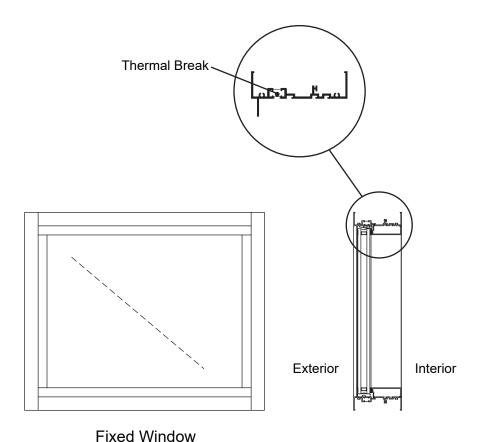
EC 97911-305 8410TL FIXED

Features

- · Architectural Grade Window
- Series 8410TL Standard Design
- IsoLock® Thermal Break
- Screw and Spline Frame Corner Joinery
- · Factory Silicone Glazed
- Interior Applied Glazing Bead with Bulb Gasket
- Architectural Anodized Finishes and Applied Coatings
- · Two Year Manufacturer's Warranty

Optional Features

- Bevel Face
- · Fixed Offset Hung Replica
- · Hurricane Tested



For specific product applications, consult your Kawneer representative.



8410TL FIXED

CLASS and GRADE	Architectural Grade Window F-HC100 / F-AW100 / AW-PG100-FW
TESTING STANDARD	AAMA / WDMA / CSA 101 / I.S. 2 / A440 (NAFS) ASTM E 1886/1996 TAS 201/202/203
FRAME DEPTH	4" Overall Frame Depth
TYPICAL WALL THICKNESS	0.070 Nominal
TYPICAL MAXIMUM SIZE	60" x 99"
TYPICAL MINIMUM SIZE	12" x 12"
TYPICAL CONFIGURATIONS	
STANDARD INFILL OPTIONS	1/4", 3/4" with Glazed-In Muntin Grid, 1", 1-1/8", and 1-1/2"
STANDARD HARDWARE	Not Applicable
OPTIONAL HARDWARE	Not Applicable
OTHER OPTIONS	Exterior Glazed-In Muntin Grids Exterior Glazing Offset Glazing Perimeters and Sills Exterior Pannings and Interior Trims True Intermediate Mullions Structural Mullions Vertically or Horizontally Stacked

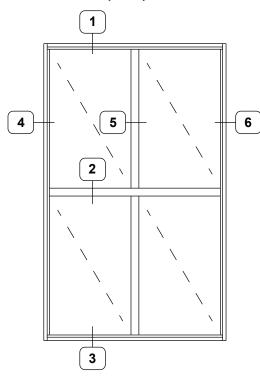


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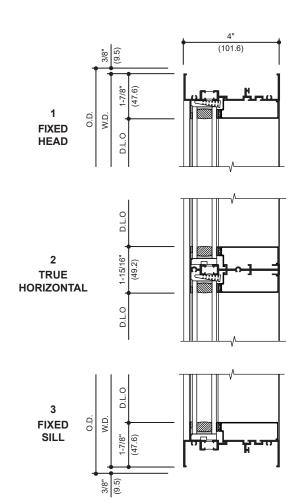
8410TL FIXED

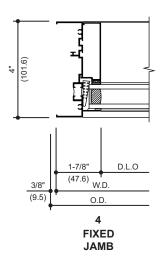
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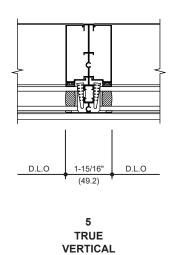
8410TL FIXED WINDOW True Horizontal and Vertical 1" (25.4) Infill

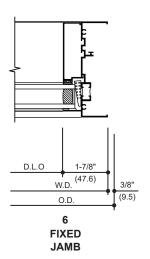


TYPICAL ELEVATION



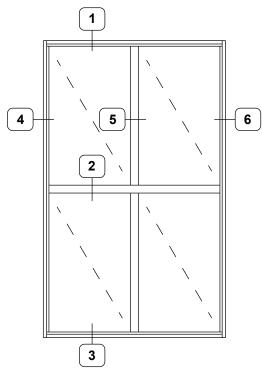




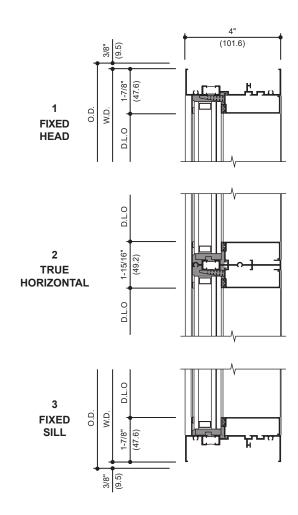


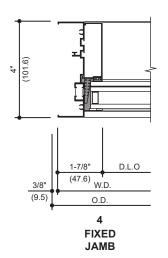
8410TL FIXED - HURRICANE IMPACT RESISTANT DETAILS

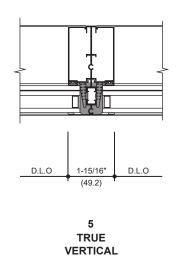
8410TL FIXED WINDOW True Horizontal and Vertical 1-1/8" (28.6) Infill

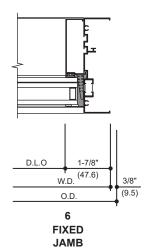


TYPICAL ELEVATION





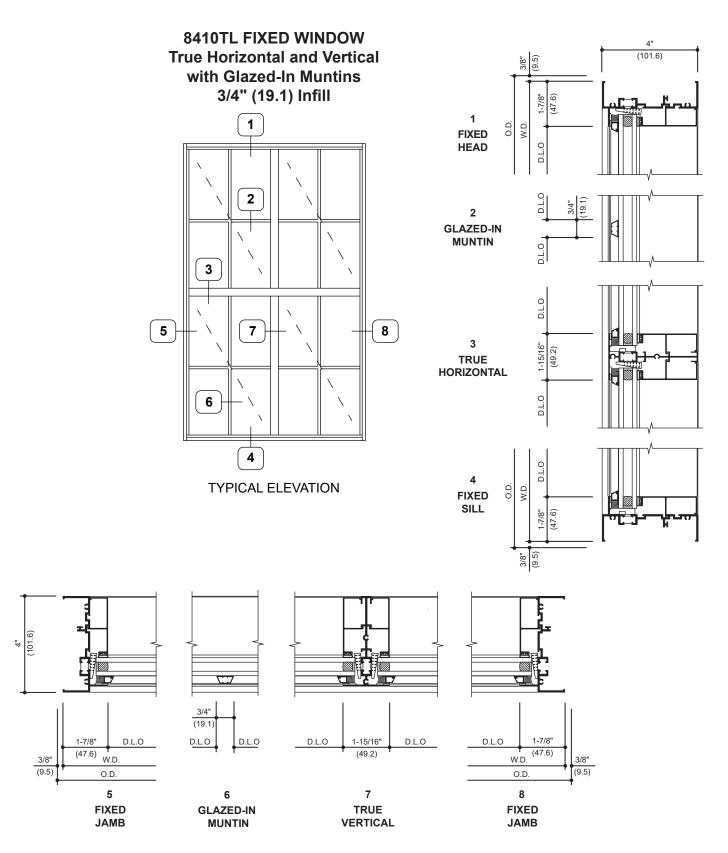




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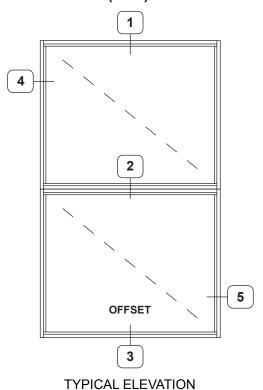


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8410TL FIXED OFFSET

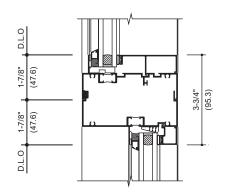
Additional information and CAD details are available at www.kawneer.com

8410TL FIXED WINDOW Stacked Over Offset Fixed 3/4" (19.1) Infill

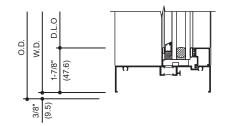


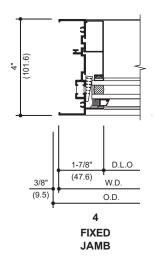
1 FIXED HEAD (9.5) (9.5) (101.6)

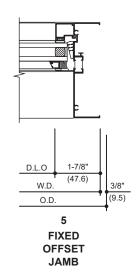
2 STACKED HORIZONTAL



3 FIXED OFFSET SILL



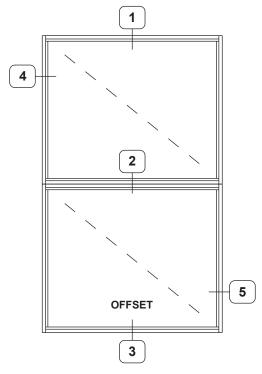




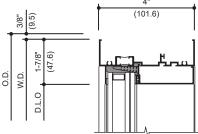
EC 97911-305 8410TL FIXED OFFSET HURRICANE IMPACT RESISTANT DETAILS

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

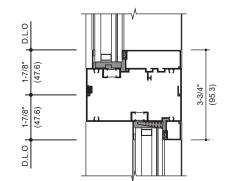
8410TL FIXED WINDOW **Stacked Over Offset Fixed** 1-1/8" (28.6) Infill



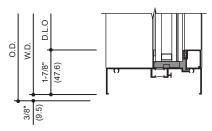
1 0.0 FIXED HEAD

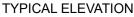


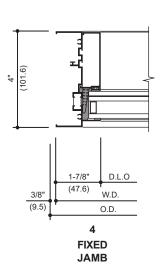
2 **STACKED HORIZONTAL**

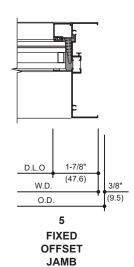


3 **FIXED** OFFSET SILL





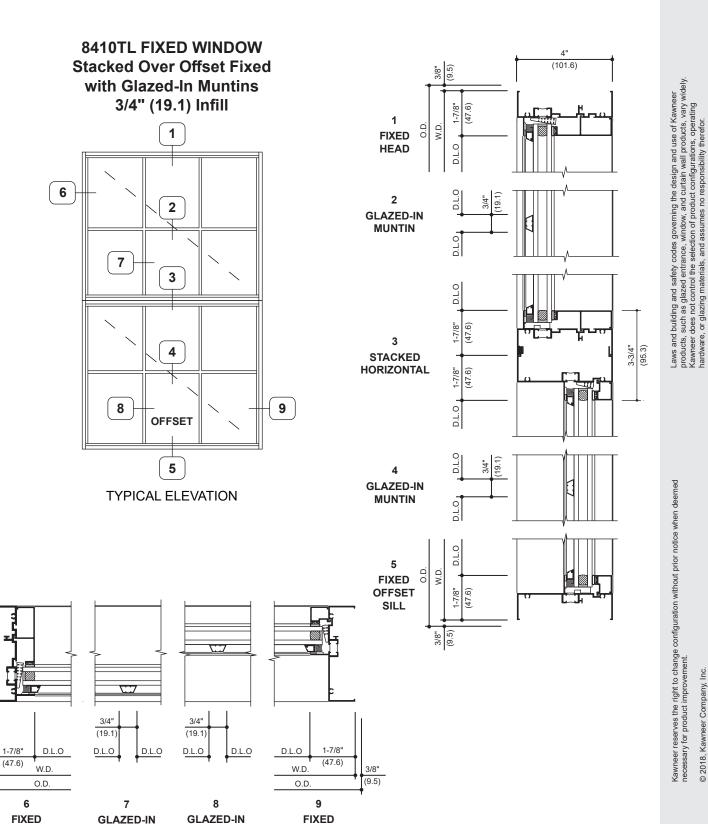




KAWNEER

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JAMB

MUNTIN

MUNTIN

(101.6)4

3/8"

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OFFSET JAMB

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8400TL Thermal Windows

8410TL FIXED - BEVEL FACE EC 97911-305

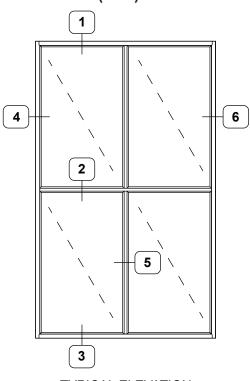
CLASS and GRADE	Architectural Grade Window F-HC100 / F-AW100 / AW-PG100-FW
TESTING STANDARD	AAMA / WDMA / CSA 101 / I.S. 2 / A440 (NAFS) ASTM E 1886/1996 TAS 201/202/203
FRAME DEPTH	4" Overall Frame Depth
TYPICAL WALL THICKNESS	0.070 Nominal
TYPICAL MAXIMUM SIZE	60" x 99"
TYPICAL MINIMUM SIZE	12" x 12"
TYPICAL CONFIGURATIONS	
STANDARD INFILL OPTIONS	1" and 1-1/8"
STANDARD HARDWARE	Not Applicable
OPTIONAL HARDWARE	Not Applicable
OTHER OPTIONS	Applied Muntin Grids Offset Glazing Perimeters and Sills Exterior Pannings and Interior Trims True Intermediate Mullions Structural Mullions Vertically or Horizontally Stacked



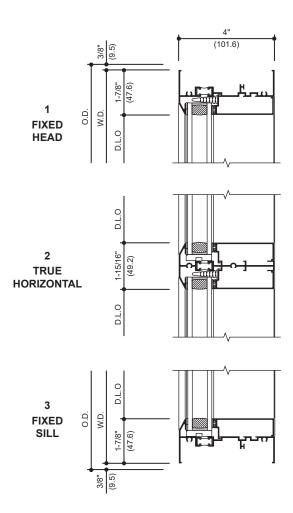
8410TL FIXED - BEVEL FACE

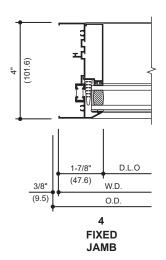
Additional information and CAD details are available at www.kawneer.com

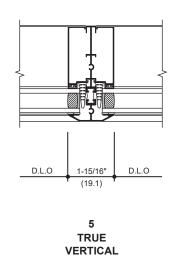
8410TL FIXED WINDOW **True Horizontal and Vertical** 1" (25.4) Infill

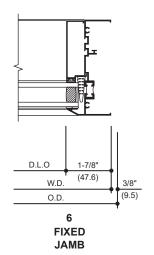


TYPICAL ELEVATION











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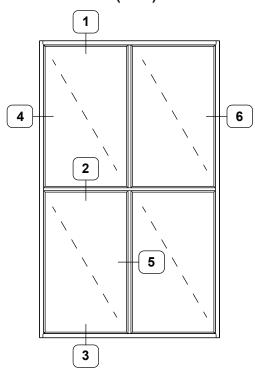
13

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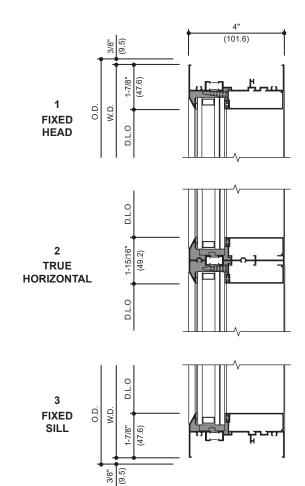
8410TL FIXED - BEVEL FACE HURRICANE IMPACT RESISTANT DETAILS

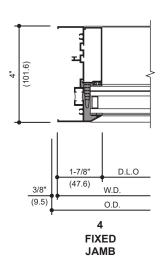
Additional information and CAD details are available at www.kawneer.com

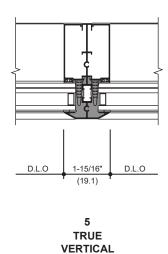
8410TL FIXED WINDOW **True Horizontal and Vertical** 1-1/8" (28.6) Infill

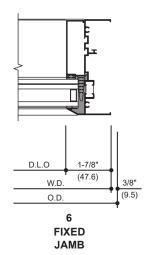


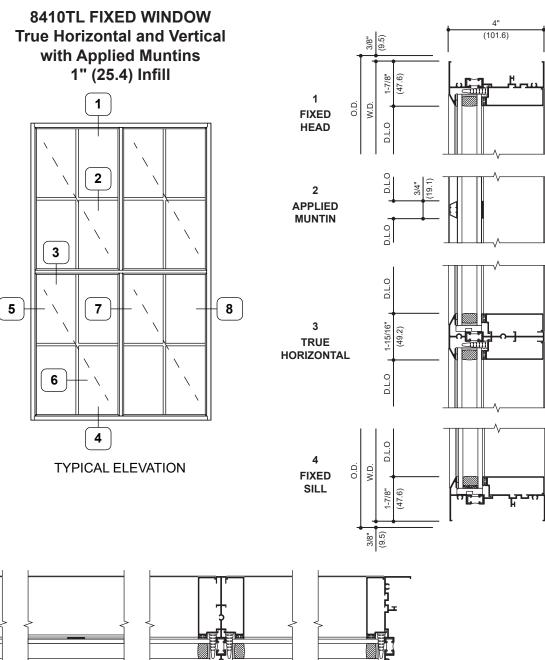
TYPICAL ELEVATION

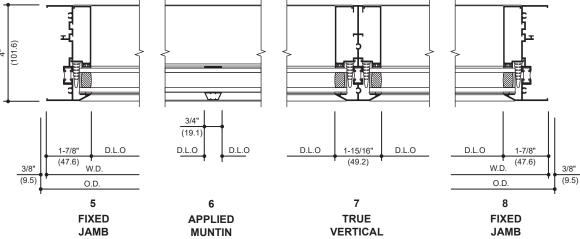












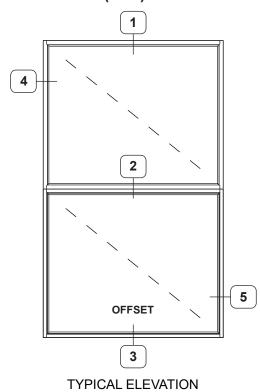


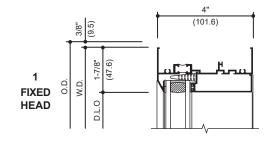
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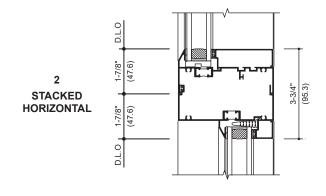
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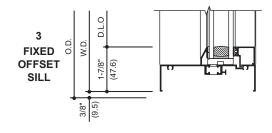
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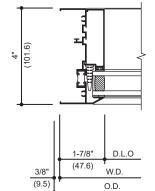
8410TL FIXED WINDOW **Stacked Over Offset Fixed** 1" (25.4) Infill







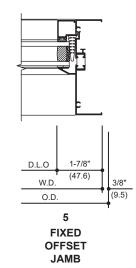




4

FIXED

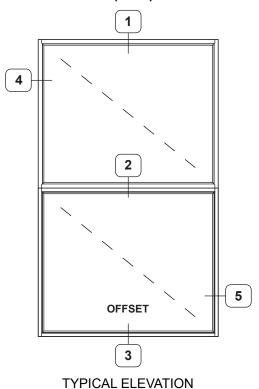
JAMB

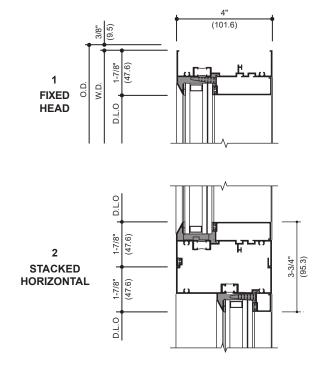


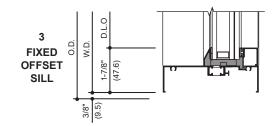
8410TL FIXED OFFSET - BEVEL FACE HURRICANE IMPACT RESISTANT DETAILS

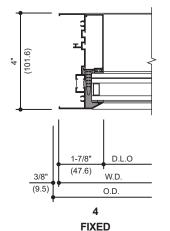
Additional information and CAD details are available at www.kawneer.com

8410TL FIXED WINDOW Stacked Over Offset Fixed 1-1/8" (28.6) Infill

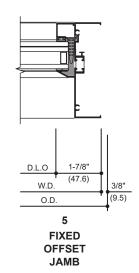








JAMB

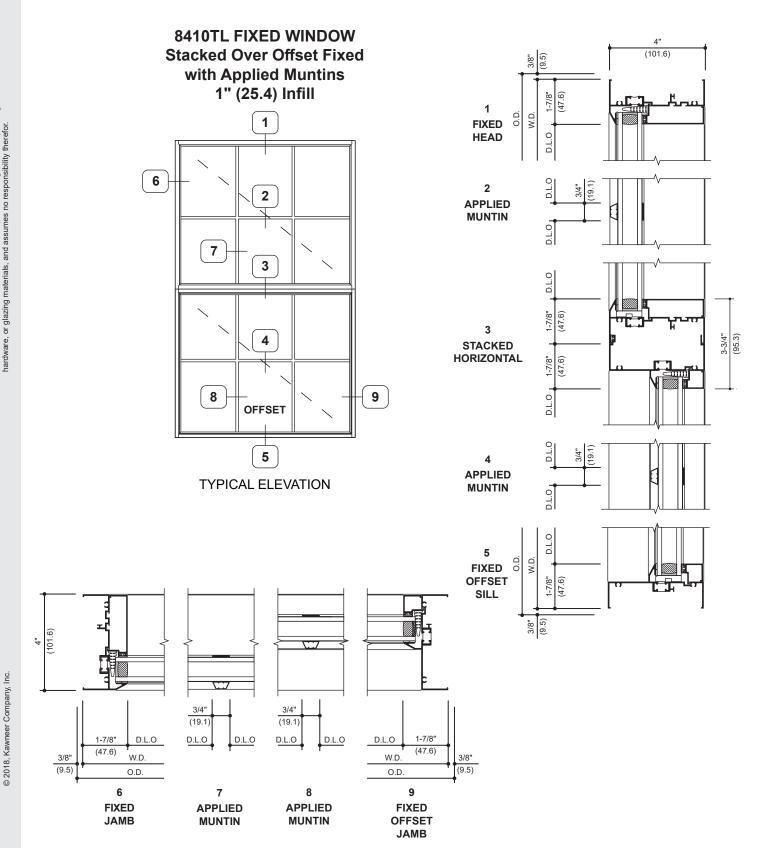


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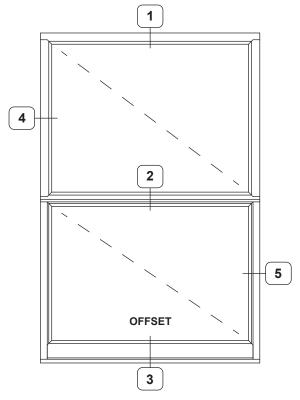




(101.6)

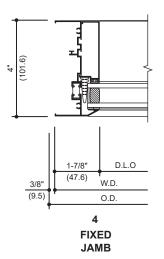
Additional information and CAD details are available at www.kawneer.com

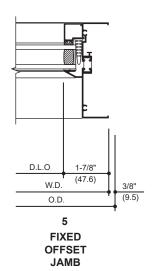
8410TL FIXED WINDOW Offset Horizontal / Replica Sill 1" (25.4) Infill



(47.6)W.D. O.D. 1 D.L.0 **FIXED HEAD** D.L.0 2 (60.3)**OFFSET HORIZONTAL** D.L.0 D.L.0 O.D. W.D. **FIXED REPLICA** (95.3)3-3/4" **HUNG SILL** 3/8"

TYPICAL ELEVATION





KAWNEER

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(101.6) 3/8" 8410TL FIXED WINDOW Offset Horizontal / Replica Sill (47.6)with Applied Muntins O.D. W.D. 1" (25.4) Infill 1 D.L.0 **FIXED HEAD** 1 D.L.O 2 D.L.O 6 7 3 3 2-3/8" (60.3)**OFFSET HORIZONTAL** D.L.0 4 3/4" **APPLIED** 8 9 **MUNTIN** D.L.O **OFFSET** D.L.0 5 **FIXED REPLICA** TYPICAL ELEVATION **HUNG SILL** 3-3/4" (95.3) O.D. W.D. (101.6)3/8" (9.5) 4 3/4" 3/4" (19.1) (19.1)D.L.O D.L.O D.L.O D.L.O 1-7/8" D.L.O D.L.O 1-7/8 (47.6) (47.6) W.D. W.D 3/8" (9.5) O.D. O.D 6 7 9 8 **FIXED APPLIED** APPLIED **FIXED JAMB MUNTIN** MUNTIN **OFFSET JAMB**

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20

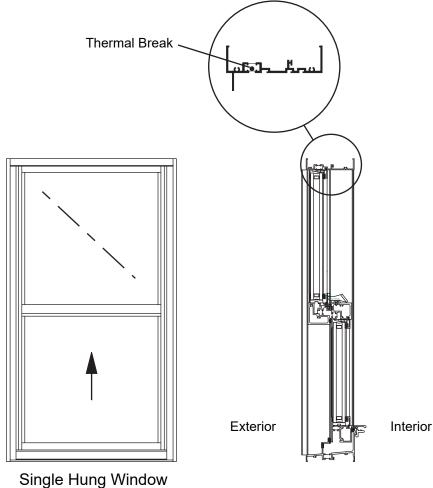
- · Architectural Grade Window
- Series 8430TL Standard Design

8430TL SINGLE HUNG

- IsoLock® Thermal Break
- Screw and Spline Frame and Sash Corner Joinery
- Factory Silicone Glazed
- Interior Applied Glazing Bead with Bulb Gasket
- Heavy Duty Block and Tackle Balance
- Architectural Anodized Finishes and Applied Coatings
- Two Year Manufacturer's Warranty

Optional Features

- Bevel Face
- Class 5 Spiral Balance



For specific product applications, consult your Kawneer representative.



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8430TL SINGLE HUNG

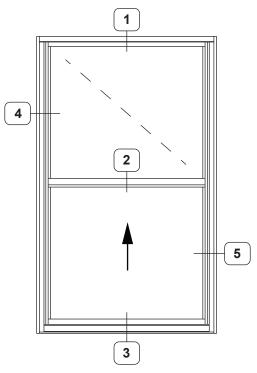
Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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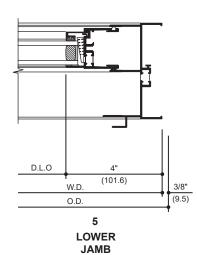
CLASS and GRADE	Architectural Grade Window H-HC70 / H-AW70 / AW-PG70-H
TESTING STANDARD	AAMA / WDMA / CSA 101 / I.S. 2 / A440 (NAFS)
FRAME DEPTH	4" Overall Frame Depth
TYPICAL WALL THICKNESS	0.070 Nominal
TYPICAL MAXIMUM SIZE	60" x 99"
TYPICAL MINIMUM SIZE	20" x 33"
TYPICAL CONFIGURATIONS	
STANDARD INFILL OPTIONS	1/4", 3/4" with Glazed-In Muntin Grid, and 1"
STANDARD HARDWARE	Aluminum Auto Lock Heavy Duty Block and Tackle Balance Cast White Bronze Sweep Locks
OPTIONAL HARDWARE	Class 5 Spiral Balance
OTHER OPTIONS	Exterior Glazed-In Muntin Grids Perimeters and Sills Exterior Pannings and Interior Trims True Intermediate Mullions Structural Mullions Vertically or Horizontally Stacked Sill for 10 PSF or 15 PSF Water Performance Insect Screens



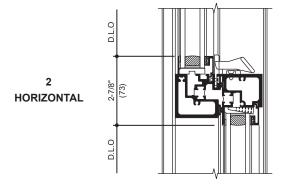
8430TL SINGLE HUNG WINDOW 1" (25.4) Infill

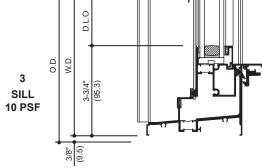


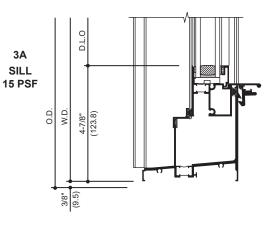
TYPICAL ELEVATION



1 HEAD (42.9) (9.5) (101.6)









4"

(101.6)

D.L.O

W.D.

O.D.

4 UPPER

JAMB

4" (101.6)

3/8"

(9.5)

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8430TL SINGLE HUNG WITH GLAZED-IN MUNTINS

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

8430TL SINGLE HUNG WINDOW with Glazed-In Muntins (101.6) 3/4" (19.1) Infill 1-11/16" (42.9)1 O.D. W.D. **HEAD** D.L.O 5 2 D.L.0 2 **GLAZED-IN MUNTIN** D.L.O ₁ 6 3 D.L.0 3 **HORIZONTAL** 7 D.L.O D.L.0 4 O.D. W.D. 3-3/4" TYPICAL ELEVATION SILL 10 PSF 3/8" D.L.0 (101.6)4A SILL **15 PSF** 0.D W.D 3/4" (19.1) D.L.O D.L.O (101.6) (101.4) W.D 3/8" 3/8" (9.5) (9.5)O.D. O.D. 7 5 6 **UPPER GLAZED-IN LOWER**

JAMB

ADME080EN

MUNTIN

JAMB

8430TL SINGLE HUNG - BEVEL FACE

CLASS and GRADE	Architectural Grade Window H-HC70 / H-AW70 / AW-PG70-H
TESTING STANDARD	AAMA / WDMA / CSA 101 / I.S. 2 / A440 (NAFS)
FRAME DEPTH	4" Overall Frame Depth
TYPICAL WALL THICKNESS	0.070 Nominal
TYPICAL MAXIMUM SIZE	60" x 99"
TYPICAL MINIMUM SIZE	20" x 33"
TYPICAL CONFIGURATIONS	
STANDARD INFILL OPTIONS	1"
STANDARD HARDWARE	Aluminum Auto Lock Heavy Duty Block and Tackle Balance Cast White Bronze Sweep Locks
OPTIONAL HARDWARE	Class 5 Spiral Balance
OTHER OPTIONS	Applied Muntin Grids Perimeters and Sills Exterior Pannings and Interior Trims True Intermediate Mullions Structural Mullions Vertically or Horizontally Stacked Sill for 10 PSF or 15 PSF Water Performance Insect Screens

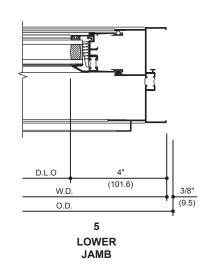


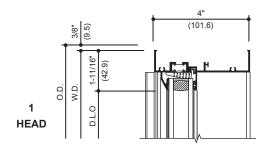
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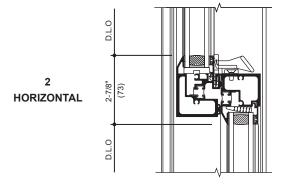
Additional information and CAD details are available at www.kawneer.com

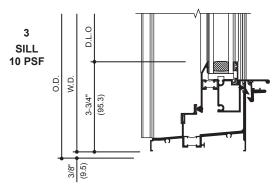
8430TL SINGLE HUNG WINDOW 1" (25.4) Infill 2 5

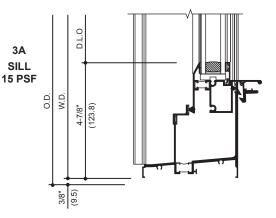
TYPICAL ELEVATION

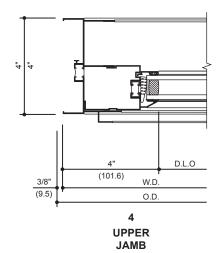




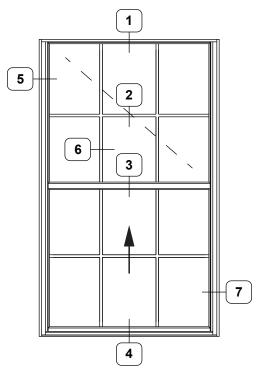




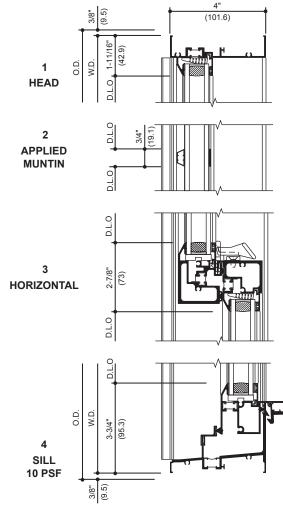


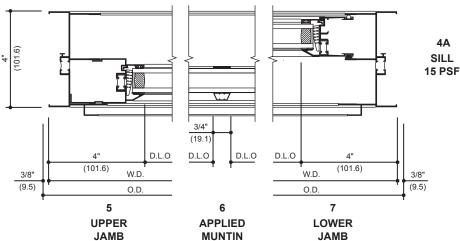


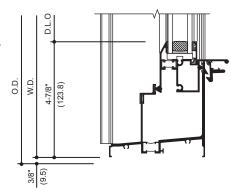
8430TL SINGLE HUNG WINDOW with Applied Muntins 1" (25.4) Infill



TYPICAL ELEVATION







4A

SILL

KAWNEER

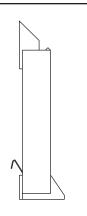
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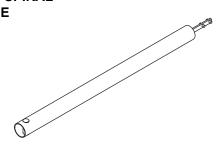
EC 97911-305 8430TL SINGLE HUNG

HEAVY DUTY BLOCK AND TACKLE BALANCES



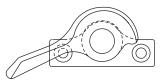
Heavy duty balances are concealed in the left and right jambs. Balances are sized according to sash dimensions and sash weight.

CLASS 5 SPIRAL BALANCE



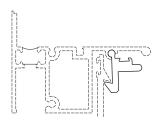
Spiral balances are visible in the upper portion of the left and right jambs. Quantity and sizing of balances are according to window height and sash weight.

STANDARD SWEEP LOCK



Cast white bronze sweep locks and keepers secure the operating sash at the center meeting rails.

ALUMINUM AUTO LOCK



Aluminum auto locks are integral to the sash lift rail and used in lieu of cast white bronze auto locks. These locks are used in conjunction with sweep locks for additional security.



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8450TL DOUBLE HUNG

Features

- · Architectural Grade Window
- Series 8450TL Standard Design
- IsoLock® Thermal Break
- Screw and Spline Frame and Sash Corner Joinery
- · Factory Silicone Glazed
- Interior Applied Glazing Bead with Bulb Gasket
- Heavy Duty Block and Tackle Balance
- Architectural Anodized Finishes and Applied Coatings
- Two Year Manufacturer's Warranty

Optional Features

- Bevel Face
- Class 5 Spiral Balance

 Thermal Break

 Exterior

 Interior

Double Hung Window

For specific product applications, consult your Kawneer representative.



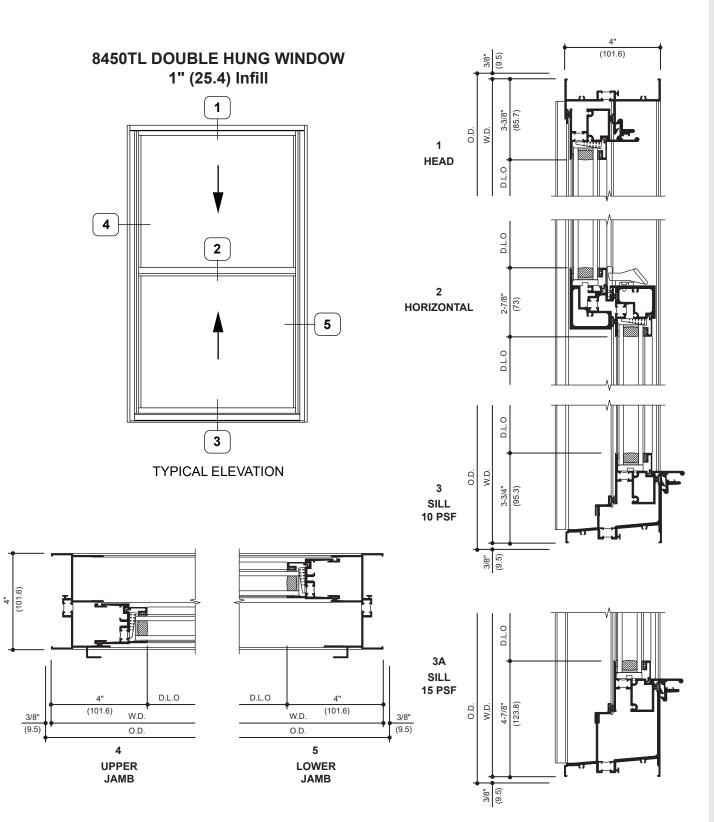
Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

EC 97911-305 8450TL DOUBLE HUNG

8400TL Thermal Windows

CLASS and GRADE	Architectural Grade Window H-HC70 / H-AW70 / AW-PG70-H
TESTING STANDARD	AAMA / WDMA / CSA 101 / I.S. 2 / A440 (NAFS)
FRAME DEPTH	4" Overall Frame Depth
TYPICAL WALL THICKNESS	0.070 Nominal
TYPICAL MAXIMUM SIZE	60" x 99"
TYPICAL MINIMUM SIZE	20" x 33"
TYPICAL CONFIGURATIONS	
STANDARD INFILL OPTIONS	1/4", 3/4" with Glazed-In Muntin Grid, and 1"
STANDARD HARDWARE	Heavy Duty Block and Tackle Balance Cast White Bronze Sweep Locks Aluminum Auto Lock
OPTIONAL HARDWARE	Class 5 Spiral Balance Aluminum Pole Operated Auto Lock at Head Only
OTHER OPTIONS	Exterior Glazed-In Muntin Grids Perimeters and Sills Exterior Pannings and Interior Trims True Intermediate Mullions Structural Mullions Vertically or Horizontally Stacked Sill for 10 PSF or 15 PSF Water Performance Insect Screens



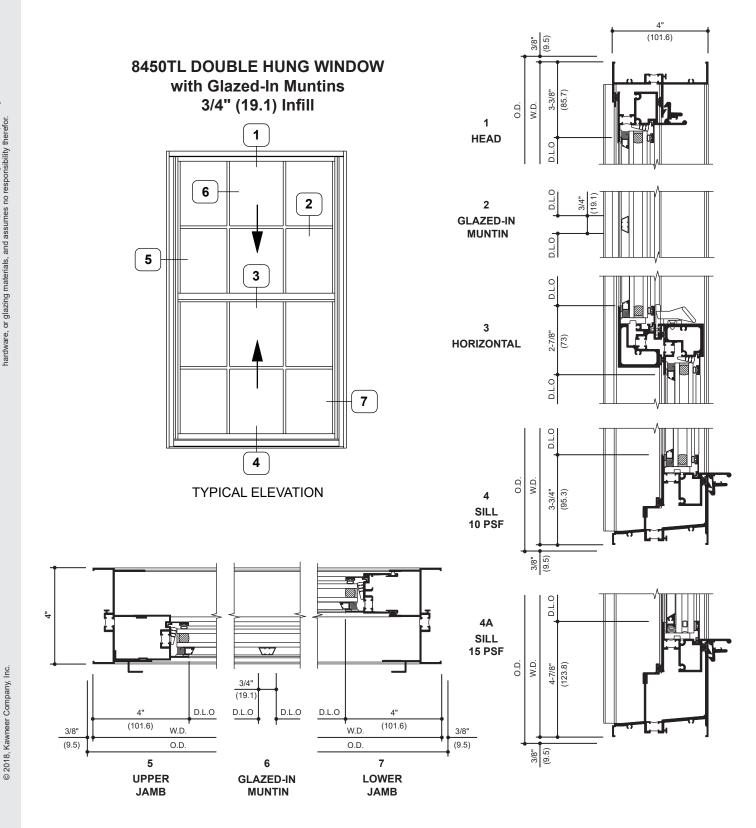




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8450TL DOUBLE HUNG - BEVEL FACE

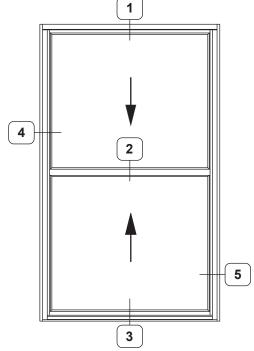
CLASS and GRADE	Architectural Grade Window H-HC70 / H-AW70 / AW-PG70-H
TESTING STANDARD	AAMA / WDMA / CSA 101 / I.S. 2 / A440 (NAFS)
FRAME DEPTH	4" Overall Frame Depth
TYPICAL WALL THICKNESS	0.070 Nominal
TYPICAL MAXIMUM SIZE	60" x 99"
TYPICAL MINIMUM SIZE	20" x 33"
TYPICAL CONFIGURATIONS	+ + +
STANDARD INFILL OPTIONS	1"
STANDARD HARDWARE	Heavy Duty Block and Tackle Balance Cast White Bronze Sweep Locks Aluminum Auto Lock
OPTIONAL HARDWARE	Class 5 Spiral Balance Aluminum Pole Operated Auto Lock at Head Only
OTHER OPTIONS	Applied Muntin Grids Perimeters and Sills Exterior Pannings and Interior Trims True Intermediate Mullions Structural Mullions Vertically or Horizontally Stacked Sill for 10 PSF or 15 PSF Water Performance Insect Screens



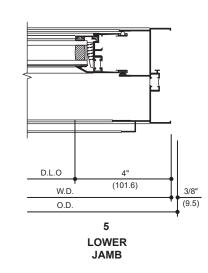
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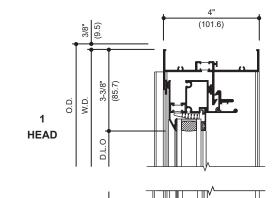
8450TL DOUBLE HUNG WINDOW 1" (25.4) Infill

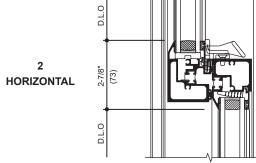


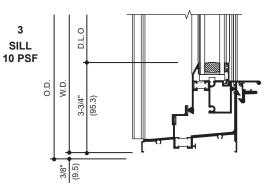
TYPICAL ELEVATION

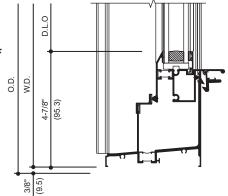


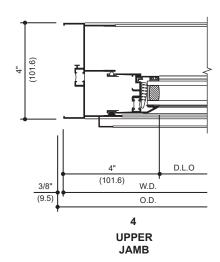
3A SILL

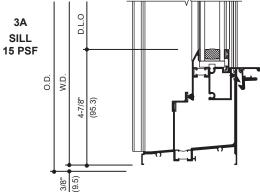














D.L.O

D.L.O

6

APPLIED

MUNTIN

D.L.O

W.D.

O.D.

D.L.O

W.D.

O.D.

(101.6)

5

UPPER

JAMB

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

(101.6) 3/8" (9.5) 8450TL DOUBLE HUNG WINDOW with Applied Muntins (85.7) 1" (25.4) Infill W.D. O.D. **HEAD** 6 3/4" 19. 2 2 **APPLIED MUNTIN** D.L.O 1 5 3 D.L.O 3 2-7/8" (73) **HORIZONTAL** D.L.0 7 4 W.D. O.D. TYPICAL ELEVATION (95.3)SILL **10 PSF** 3/8" 4A SILL **15 PSF** 0.D W.D. 4-7/8" (123.8) 3/4" (19.1)

4" (101.6)

3/8"

(9.5)

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(101.6)

7

LOWER

JAMB

3/8"

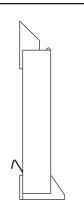
(9.5)

3/8" (9.5)

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8450TL DOUBLE HUNG

HEAVY DUTY BLOCK AND TACKLE BALANCES

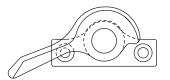


Heavy duty balances are concealed in the left and right jambs. Balances are sized according to sash dimensions and sash weight.

CLASS 5 SPIRAL BALANCE

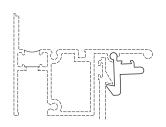
Spiral balances are visible in the upper portion of the left and right jambs. Quantity and sizing of balances are according to window height and sash weight.

STANDARD SWEEP LOCK



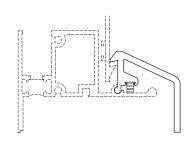
Cast white bronze sweep locks and keepers secure the operating sash at the center meeting rails.

ALUMINUM AUTO LOCK



Aluminum auto locks are applied to the integral handle rail and used in lieu of cast white bronze auto locks at head or sill locations. These locks are used in conjunction with sweep locks for additional security.

ALUMINUM AUTO LOCK



Aluminum pole operated auto locks are applied to the integral sash handle rail at the upper sash only. These must be used in conjunction with either the aluminum auto lock at the sill or the sweep locks at the meeting rail or both.



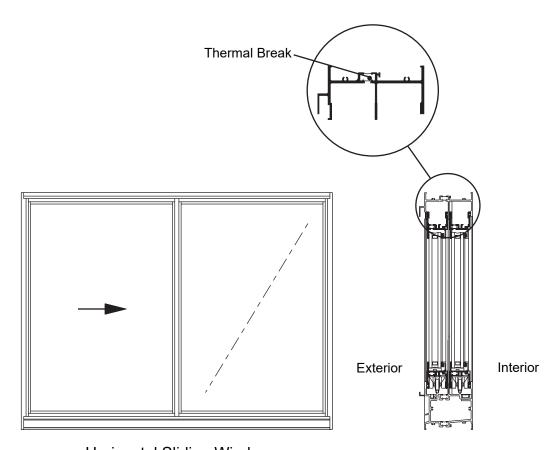
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Features

- · Architectural Grade Window
- Series 8470TL Standard Design
- IsoLock® Thermal Break
- Screw and Spline Frame and Sash Corner Joinery
- Factory Silicone Glazed
- Interior Applied Glazing Bead with Bulb Gasket
- Architectural Anodized Finishes and Applied Coatings
- Two Year Manufacturer's Warranty

Optional Features

Bevel Face



Horizontal Sliding Window

For specific product applications, consult your Kawneer representative.



8470TL HORIZONTAL SLIDER

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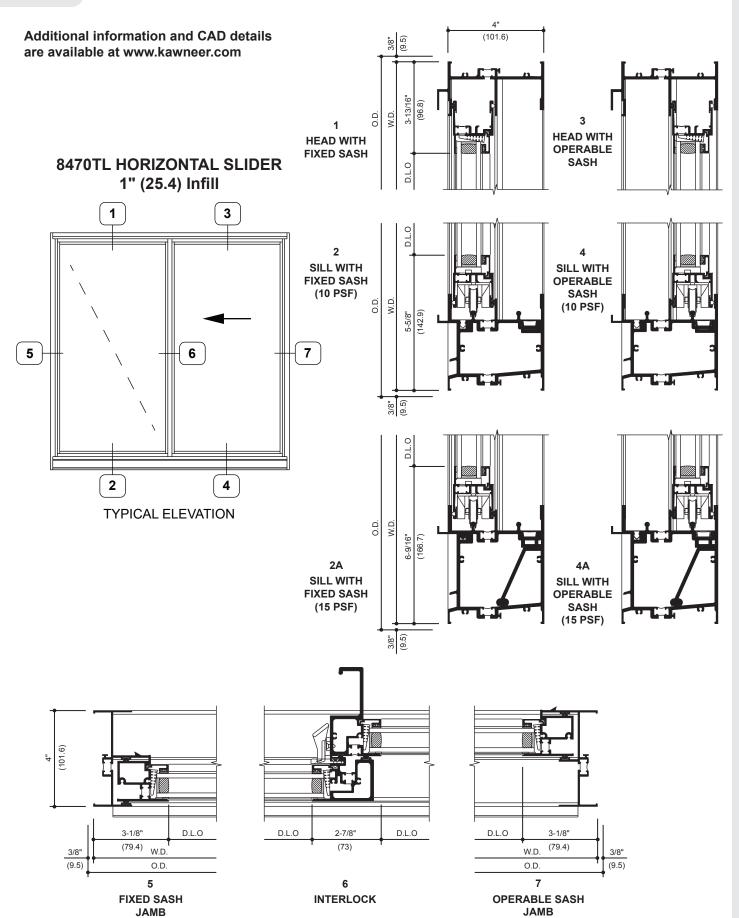
Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

CLASS and GRADE	Architectural Grade Window HS-HC70 / HS-AW70 / AW-PG70-HS
TESTING STANDARD	AAMA / WDMA / CSA 101 / I.S. 2 / A440 (NAFS)
FRAME DEPTH	4" Overall Frame Depth
TYPICAL WALL THICKNESS	0.070 to 0.125 Nominal
TYPICAL MAXIMUM SIZE	99" x 79" (OX,XO,XX) 120" x 79" (OXO,XOX, OXXO)
TYPICAL MINIMUM SIZE	32" x 20" (OX,XO,XX) 48" x 20" (OXO,XOX) 64" x 20" (OXXO)
TYPICAL CONFIGURATIONS	- \ \ \ - \ \ \ - \ \ \ - \ \ \ - \ \ \ - \ \ \ - \ \ \ - \ \ \ - \ \ \ - \ \ \ - \ \ \ - \ \ \ - \ \ \ - \ \ \ - \ \ \ - \ \ \ - \ \ \ - \ \ \ - \ \ \ \ - \ \ \ - \ \ \ \ - \ \ \ \ - \ \ \ \ - \ \ \ \ - \ \ \ \ - \ \ \ \ - \ \ \ \ - \ \ \ \ - \ \ \ \ \ - \ \ \ \ \ - \ \ \ \ \ - \ \ \ \ \ - \ \ \ \ \ \ - \ \ \ \ \ \ - \ \ \ \ \ \ - \ \ \ \ \ \ \ - \
STANDARD INFILL OPTIONS	1/4", 3/4" with Glazed-In Muntin Grid, and 1"
STANDARD HARDWARE	Steel Roller Assembly Cast White Bronze Sweep Locks
OPTIONAL HARDWARE	Aluminum Auto Lock
OTHER OPTIONS	Exterior Glazed-In Muntin Grids Perimeters and Sills Exterior Pannings and Interior Trims True Intermediate Mullions Structural Mullions Vertically or Horizontally Stacked Sill for 10 PSF or 15 PSF Water Performance Insect Screens Standard and Heavy Duty Interlock



8470TL HORIZONTAL SLIDER

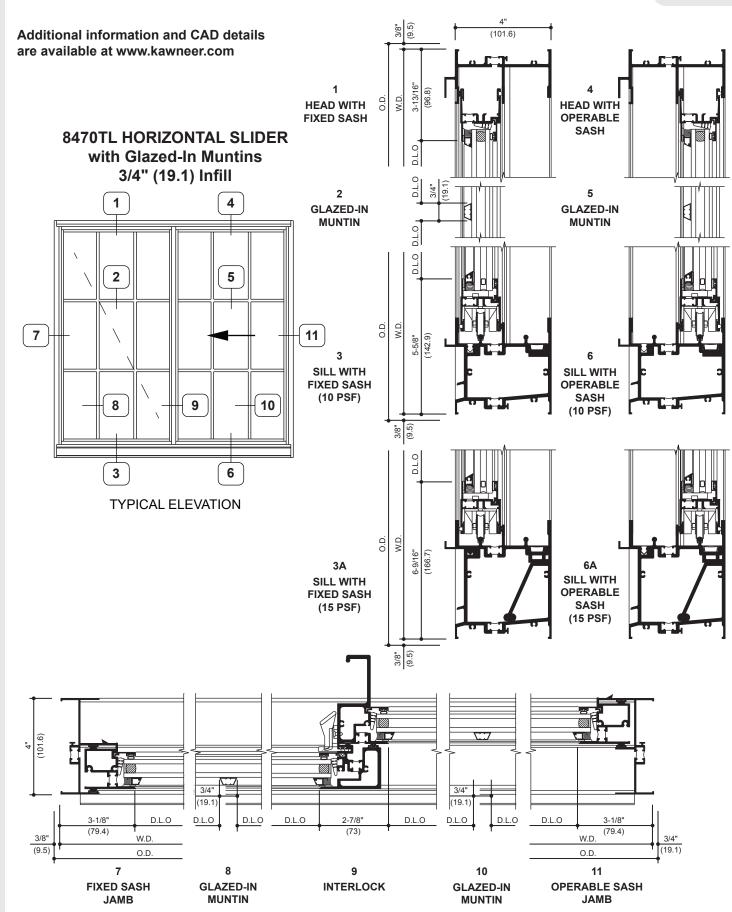
EC 97911-305



KAWNEER

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Laws and building and safety codes governing the design and use of Kawneer	products, such as glazed entrance, window, and currain wail products, vary widery. Kawneer does not control the selection of product configurations, operating
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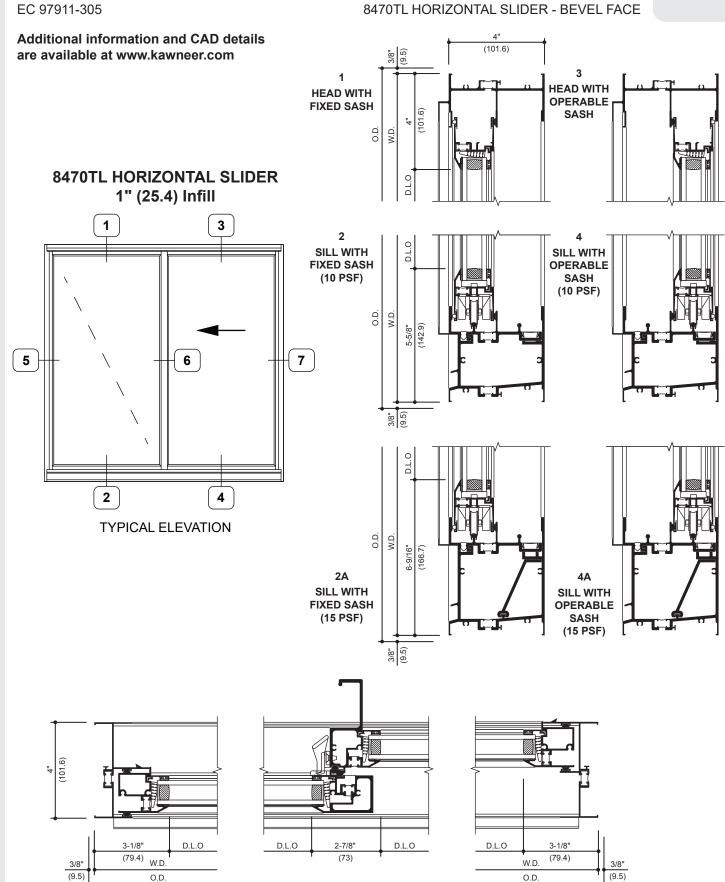
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CLASS and GRADE	Architectural Grade Window HS-HC70 / HS-AW70 / AW-PG70-HS
TESTING STANDARD	AAMA / WDMA / CSA 101 / I.S. 2 / A440 (NAFS)
FRAME DEPTH	4" Overall Frame Depth
TYPICAL WALL THICKNESS	0.070 to 0.125 Nominal
TYPICAL MAXIMUM SIZE	99" x 79" (OX, XO, XX) 120" x 79" (OXO, XOX, OXXO)
TYPICAL MINIMUM SIZE	32" x 20" (OX, XO, XX) 48" x 20" (OXO, XOX) 64" x 20" (OXXO)
TYPICAL CONFIGURATIONS	
STANDARD INFILL OPTIONS	1"
STANDARD HARDWARE	Steel Roller Assembly Cast White Bronze Sweep Locks
OPTIONAL HARDWARE	Aluminum Auto Lock
OTHER OPTIONS	Applied Muntin Grids Perimeters and Sills Exterior Pannings and Interior Trims True Intermediate Mullions Structural Mullions Vertically or Horizontally Stacked Sill for 10 PSF or 15 PSF Water Performance Insect Screens Standard and Heavy Duty Interlock



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7

OPERABLE SASH JAMB

5

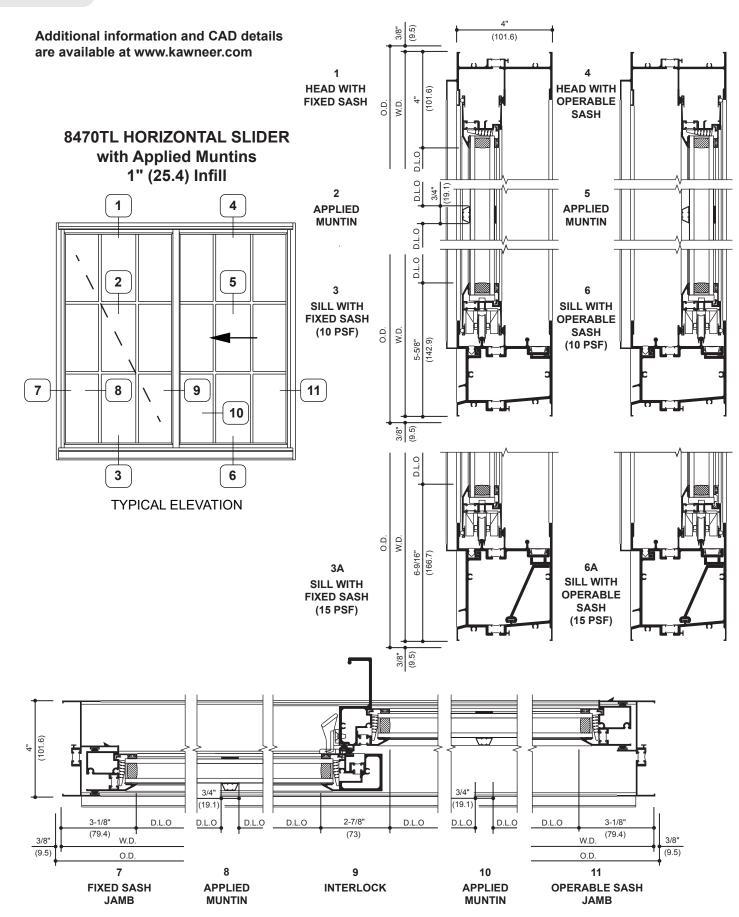
FIXED SASH

JAMB

6

INTERLOCK

EC 97911-305



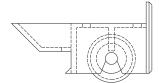
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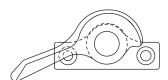
8470TL HORIZONTAL SLIDER

STEEL ROLLER ASSEMBLY



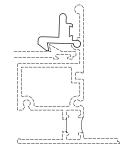
Steel ball bearing roller and glass filled nylon housing provide smooth and lasting operation.

STANDARD SWEEP LOCK



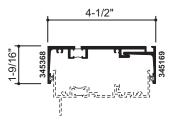
Cast white bronze sweep locks and keepers secure the operating sash at the center meeting rails.

ALUMINUM AUTO LOCK



Aluminum auto locks are integral to the handle rail. These locks are used in conjunction with sweep locks for additional security.

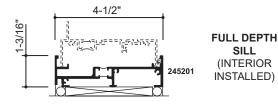


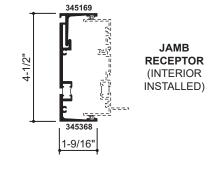


RECEPTORS AND SUB SILLS

HEAD RECEPTOR (INTERIOR INSTALLED)

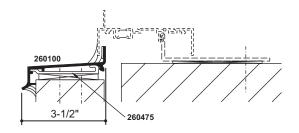
SILL

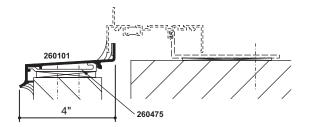


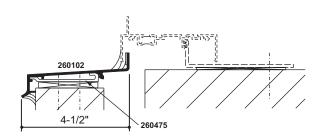


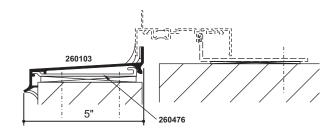
Note: Receptors are also used with hurricane impact glazing.

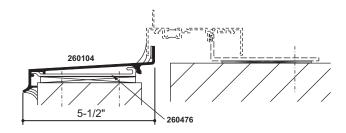
SUB SILLS











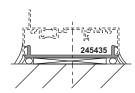
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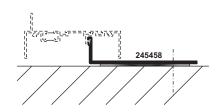
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ANCHORING

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



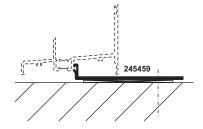
PERIMETER FILLER (Head and Jamb Similar)



STRAP ANCHOR WITH FIXED WINDOW

Note: Fixed window strap anchor is also used with hurricane impact glazing.

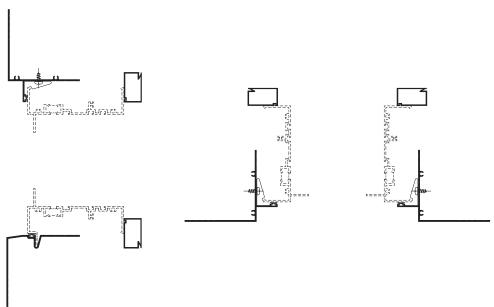
ADME080EN



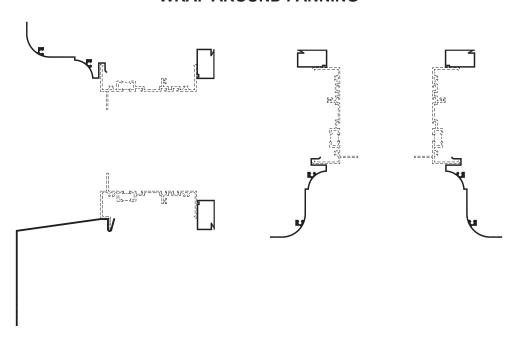
STRAP ANCHOR WITH HUNG WINDOW



PRE-SET PANNING



WRAP AROUND PANNING





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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.

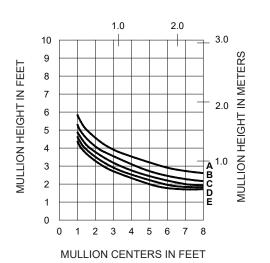


WIND LOAD CHARTS

EC 97911-305

	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)

MULLION CENTERS IN METERS

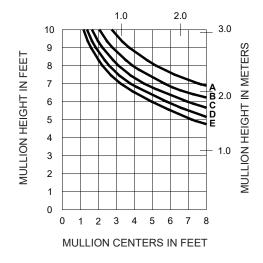


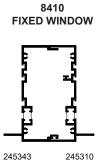
VERTICAL MULLION



WITH HORIZONTALS

MULLION CENTERS IN METERS





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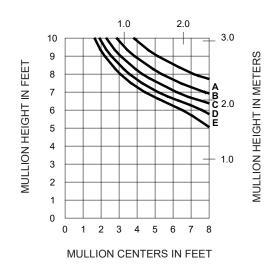
Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entranee, window, and cutrain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

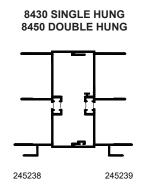
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EC 97911-305 WIND LOAD CHARTS

	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)

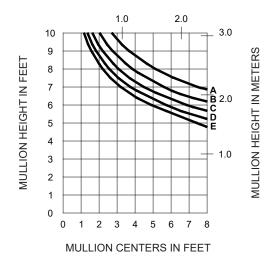
MULLION CENTERS IN METERS

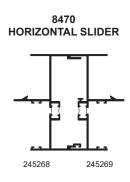




WITH HORIZONTALS

MULLION CENTERS IN METERS





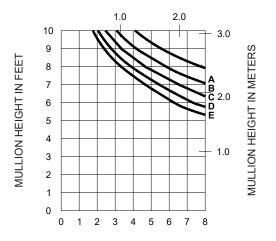
WITH HORIZONTALS

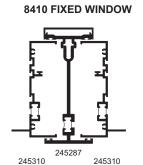
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	Allowable Stress	LRFD Ultimate
	Design Load	Design Load
A =	30 PSF (1440)	50 PSF (2400)
B =	40 PSF (1920)	67 PSF (3200)
C =	50 PSF (2400)	83 PSF (4000)
D =	60 PSF (2880)	100 PSF (4790)
E =	70 PSF (3360)	117 PSF (5600)

MULLION CENTERS IN METERS

8400TL Thermal Windows

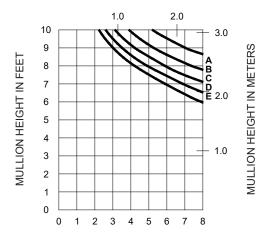




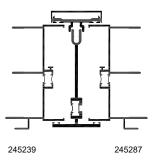
MULLION CENTERS IN FEET

WITH HORIZONTALS

MULLION CENTERS IN METERS







MULLION CENTERS IN FEET

WITH HORIZONTALS

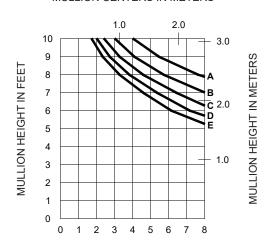
© 2018, Kawneer Company, Inc.

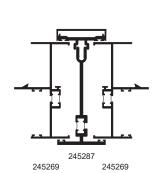
Laws and building and safety codes governing the design and use of Kawneer products, such as glazade afratneroe, window, and ourtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

WIND LOAD CHARTS

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

MULLION CENTERS IN METERS





8470

HORIZONTAL SLIDER

MULLION CENTERS IN FEET

WITH HORIZONTALS

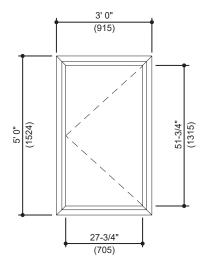
8400TL Thermal Windows

g and safety codes governing the design and use of Kawneer s glazed entrance, window, and curtain wall products, vary widely. As control the selection of product configurations, operating

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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

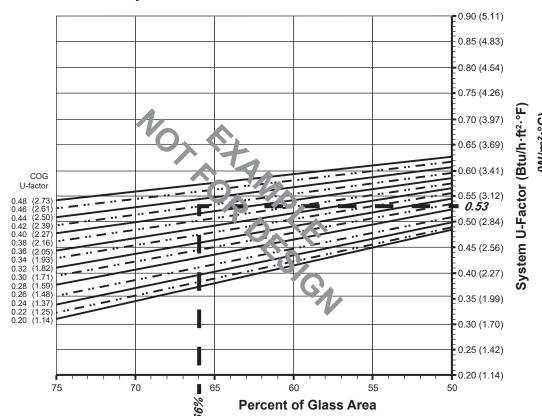
Total Daylight Opening = 27-3/4" • 51-3/4" = 9.97ft²

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

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

 $= (9.97 \div 15)100 = 66\%$

System U-factor vs Percent of Glass Area



Based on 66% glass and center of glass (COG) U-factor of 0.42 System U-factor is equal to 0.53 Btu/hr • ft² • °F



(W/m2•°C)

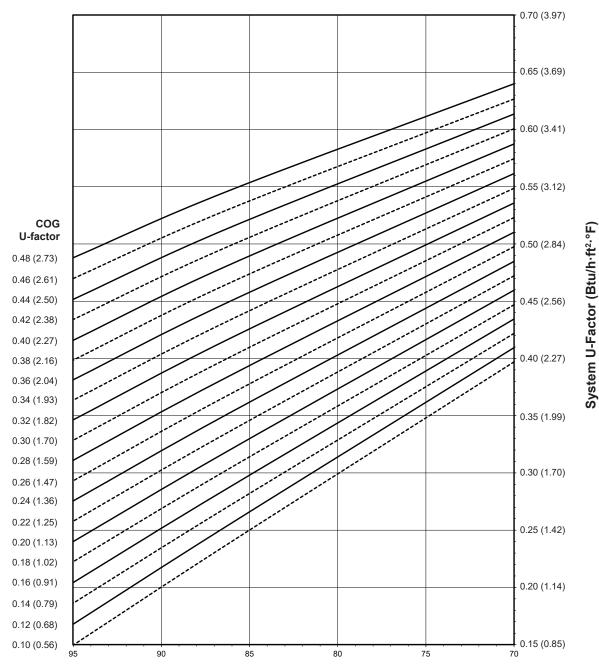
EC 97911-305HERMAL CHARTS

FIXED WINDOW WITH 1" GLAZING Warm-Edge Glazing Spacer

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.

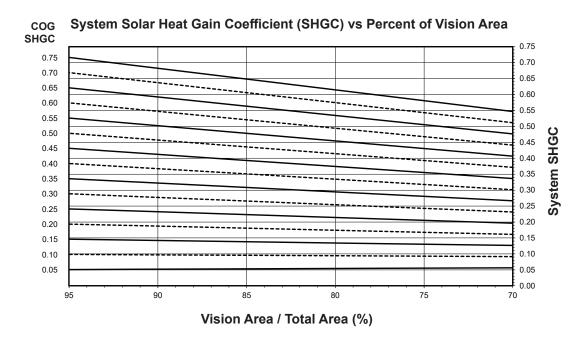
Glass properties are based on center of glass values and are obtained from your glass supplier.

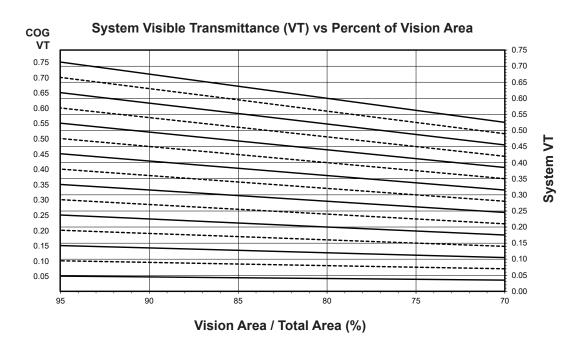


EC 97911-305

THERMAL CHARTS

FIXED WINDOW WITH 1" GLAZING Warm-Edge Glazing Spacer





Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary wide Kawneer does not control the selection of product configurations, operating handware or charge materials and secured in process configurations.

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EC 97911-305 THERMAL PERFORMANCE MATRIX (NFRC SIZE)

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

Glass U-Factor ³	Overall U-Factor 4
0.48	0.55
0.46	0.53
0.44	0.51
0.42	0.50
0.40	0.48
0.38	0.47
0.36	0.45
0.34	0.43
0.32	0.42
0.30	0.40
0.28	0.38
0.26	0.37
0.24	0.35
0.22	0.34
0.20	0.32
0.18	0.30
0.16	0.29
0.14	0.27
0.12	0.25
0.10	0.24

FIXED WINDOW WITH 1" GLAZING Warm-Edge Glazing Spacer

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	0.66
0.70	0.61
0.65	0.57
0.60	0.53
0.55	0.48
0.50	0.44
0.45	0.40
0.40	0.35
0.35	0.31
0.30	0.27
0.25	0.23
0.20	0.18
0.15	0.14
0.10	0.10
0.05	0.05

Visible Transmittance ²

Glass VT ³	Overall VT ⁴
0.75	0.65
0.70	0.60
0.65	0.56
0.60	0.52
0.55	0.47
0.50	0.43
0.45	0.39
0.40	0.34
0.35	0.30
0.30	0.26
0.25	0.22
0.20	0.17
0.15	0.13
0.10	0.09
0.05	0.04



Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entriance, 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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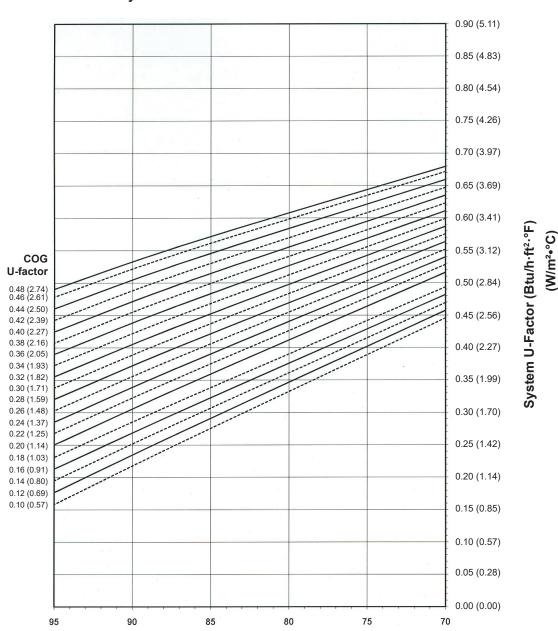
8400TL Thermal Windows

FIXED WINDOW WITH 1" GLAZING **Aluminum Glazing Spacer**

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.

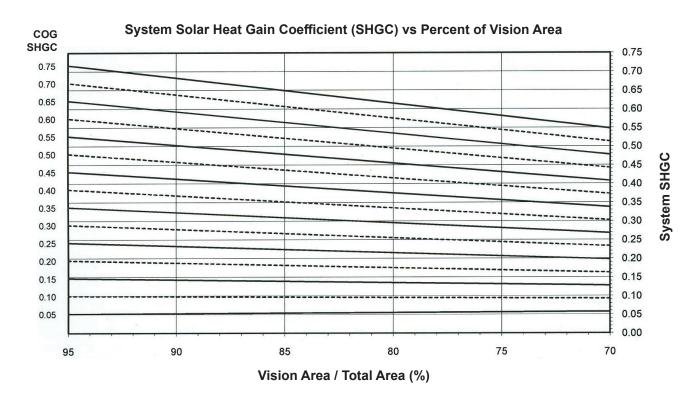


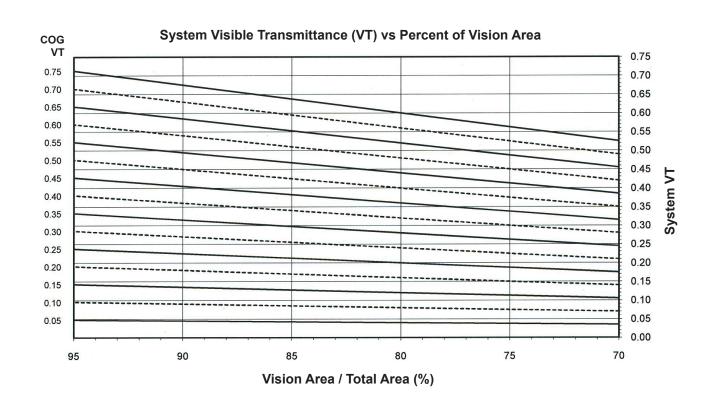
THERMAL CHARTS

EC 97911-305

FIXED WINDOW WITH 1" GLAZING

Aluminum Glazing Spacer







THERMAL PERFORMANCE MATRIX (NFRC SIZE)

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

Glass U-Factor ³	Overall U-Factor ⁴
0.48	0.56
0.46	0.55
0.44	0.54
0.42	0.52
0.40	0.50
0.38	0.49
0.36	0.47
0.34	0.46
0.32	0.44
0.30	0.43
0.28	0.41
0.26	0.39
0.24	0.38
0.22	0.36
0.20	0.35
0.18	0.33
0.16	0.31
0.14	0.29
0.12	0.28
0.10	0.26

FIXED WINDOW WITH 1" GLAZING Aluminum Glazing Spacer

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 Matrix²

Glass SHGC ³	Overall SHGC ⁴
0.75	0.66
0.70	0.61
0.65	0.57
0.60	0.53
0.55	0.48
0.50	0.44
0.45	0.40
0.40	0.36
0.35	0.31
0.30	0.27
0.25	0.23
0.20	0.18
0.15	0.14
0.10	0.10
0.05	0.05

Visible Transmittance 2

VISIDIE ITALISIIIILLATICE	
Glass VT ³	Overall VT ⁴
0.75	0.65
0.70	0.60
0.65	0.56
0.60	0.52
0.55	0.47
0.50	0.43
0.45	0.39
0.40	0.34
0.35	0.30
0.30	0.26
0.25	0.22
0.20	0.17
0.15	0.13
0.10	0.09
0.05	0.04



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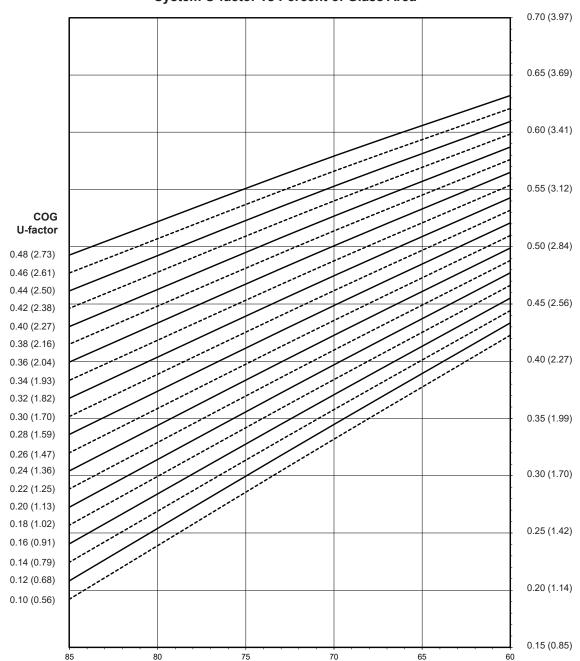
EC 97911-305 THERMAL CHARTS

SINGLE HUNG VERTICAL SLIDER WITH 1" GLAZING Warm-Edge Glazing Spacer

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:

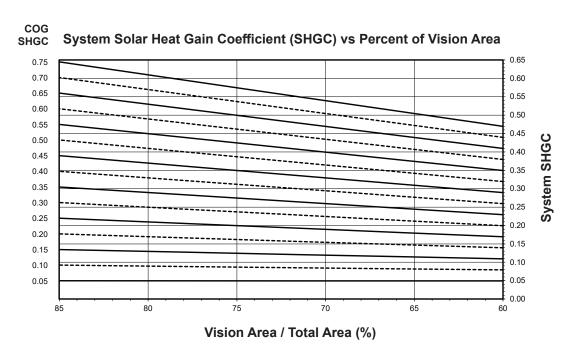
For glass values that are not listed, linear interpolation is permitted. Glass properties are based on center of glass values and are obtained from your glass supplier.

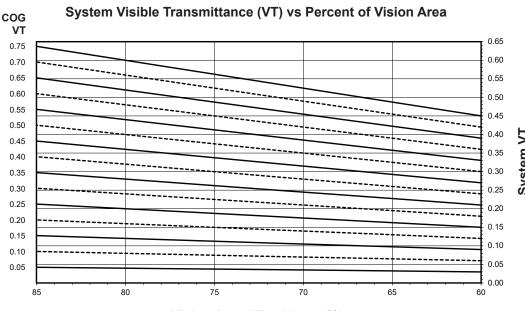


System U-Factor (Btu/h·ft²-°F)

THERMAL CHARTS

SINGLE HUNG VERTICAL SLIDER WITH 1" GLAZING Warm-Edge Glazing Spacer





© 2018, Kawneer Company, Inc. Vision Area / Total Area (%)



THERMAL PERFORMANCE MATRIX (NFRC SIZE)

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Thermal Transmittance 1 (BTU/hr • ft 2 • °F) Overall U-Factor 4 Glass U-Factor ³ 0.48 0.62 0.46 0.61 0.44 0.59 0.42 0.58 0.40 0.57 0.38 0.55 0.36 0.54 0.34 0.53 0.32 0.52 0.30 0.50 0.28 0.49 0.26 0.48 0.24 0.46 0.22 0.45 0.20 0.44 0.18 0.42 0.16 0.41 0.14 0.40 0.12 0.38 0.10 0.37

SINGLE HUNG VERTICAL SLIDER WITH 1" GLAZING

Warm-Edge Glazing Spacer

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	0.41
0.50	0.37
0.45	0.33
0.40	0.30
0.35	0.26
0.30	0.23
0.25	0.19
0.20	0.16
0.15	0.12
0.10	0.09
0.05	0.05

Visible Transmittance ²

Glass VT ³	Overall VT 4
0.75	0.54
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	0.29
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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SINGLE HUNG VERTICAL SLIDER WITH 1" GLAZING

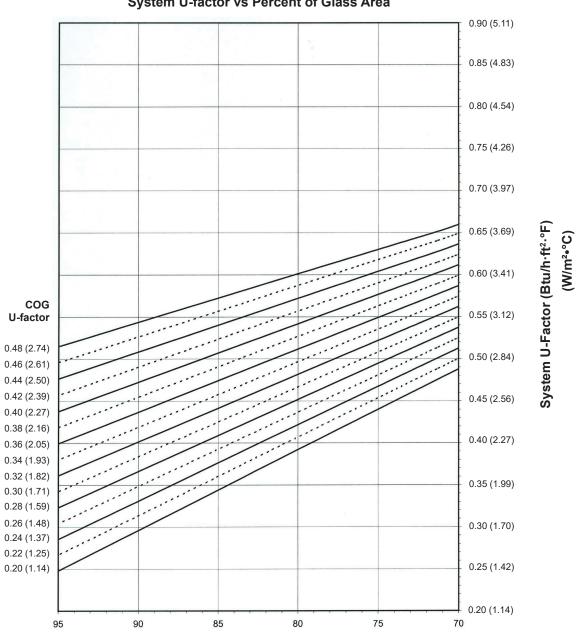
Aluminum Glazing Spacer

Note:

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

THERMAL CHARTS

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.

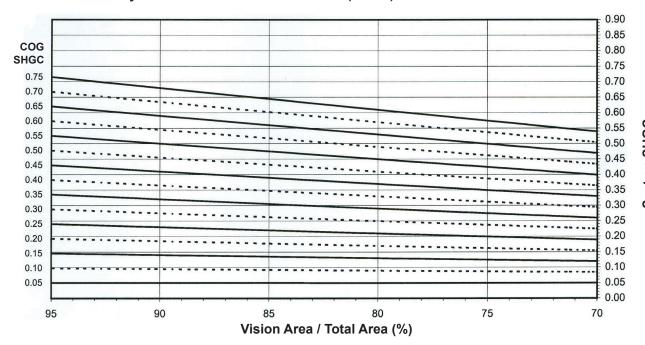


SINGLE HUNG VERTICAL SLIDER WITH 1" GLAZING **Aluminum Glazing Spacer**

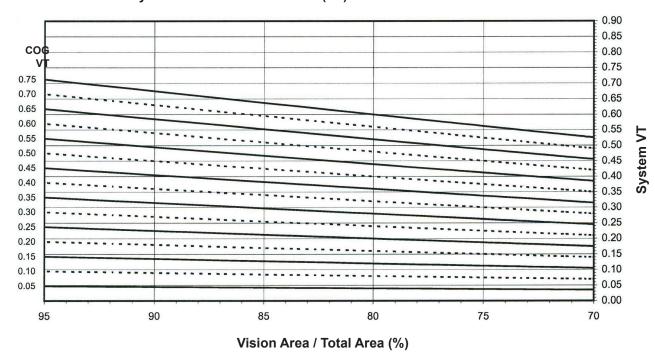
System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area

8400TL Thermal Windows

THERMAL CHARTS



System Visible Transmittance (VT) vs Percent of Vision Area



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THERMAL PERFORMANCE MATRIX (NFRC SIZE)

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

Glass U-Factor ³	Overall U-Factor 4
0.48	0.65
0.46	0.64
0.44	0.63
0.42	0.61
0.40	0.60
0.38	0.59
0.36	0.58
0.34	0.56
0.32	0.55
0.30	0.54
0.28	0.53
0.26	0.51
0.24	0.50
0.22	0.49
0.20	0.47

SINGLE HUNG VERTICAL SLIDER WITH 1" GLAZING

Aluminum Glazing Spacer

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 Matrix²

Glass SHGC ³	Overall SHGC ⁴
0.75	0.55
0.70	0.51
0.65	0.48
0.60	0.44
0.55	0.41
0.50	0.37
0.45	0.33
0.40	0.30
0.35	0.26
0.30	0.23
0.25	0.19
0.20	0.16
0.15	0.12
0.10	0.08
0.05	0.05

Visible Transmittance ²

Glass VT ³	Overall VT ⁴
0.75	0.54
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	0.29
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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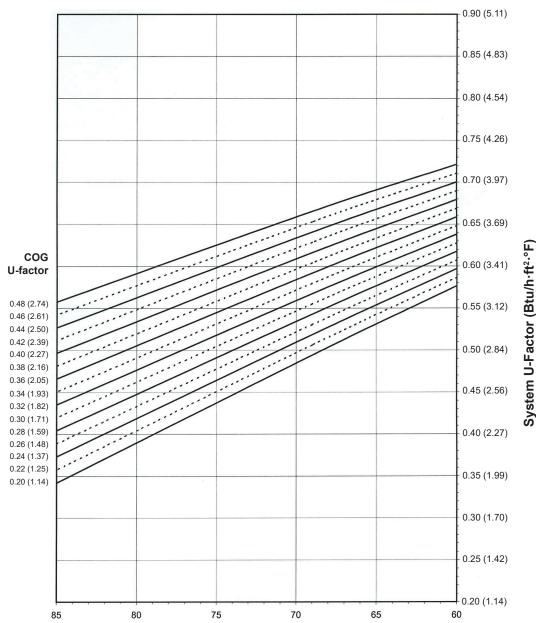
THERMAL CHARTS

DOUBLE HUNG VERTICAL SLIDER WITH 1" GLAZING Aluminum Glazing Spacer

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.

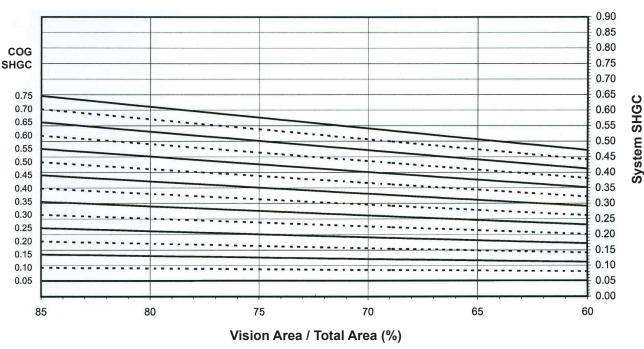


8400TL Thermal Windows

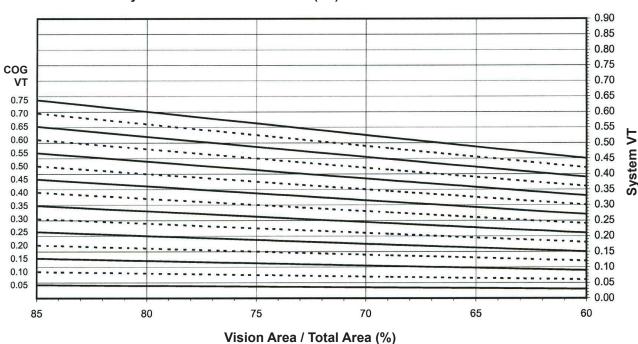
EC 97911-305

DOUBLE HUNG VERTICAL SLIDER WITH 1" GLAZING Aluminum Glazing Spacer

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



System Visible Transmittance (VT) vs Percent of Vision Area





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

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

Glass U-Factor ³	Overall U-Factor 4
0.48	0.67
0.46	0.65
0.44	0.64
0.42	0.63
0.40	0.62
0.38	0.60
0.36	0.59
0.34	0.58
0.32	0.57
0.30	0.56
0.28	0.54
0.26	0.53
0.24	0.52
0.22	0.51
0.20	0.49

DOUBLE HUNG VERTICAL SLIDER WITH 1" GLAZING

Aluminum Glazing Spacer

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	0.53
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	0.12
0.10	0.09
0.05	0.05

Visible Transmittance ²

Glass VT ³	Overall VT 4
0.75	0.52
0.70	0.48
0.65	0.45
0.60	0.41
0.55	0.38
0.50	0.35
0.45	0.31
0.40	0.28
0.35	0.24
0.30	0.21
0.25	0.17
0.20	0.14
0.15	0.10
0.10	0.07
0.05	0.03



8400TL Thermal Windows

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THERMAL CHARTS

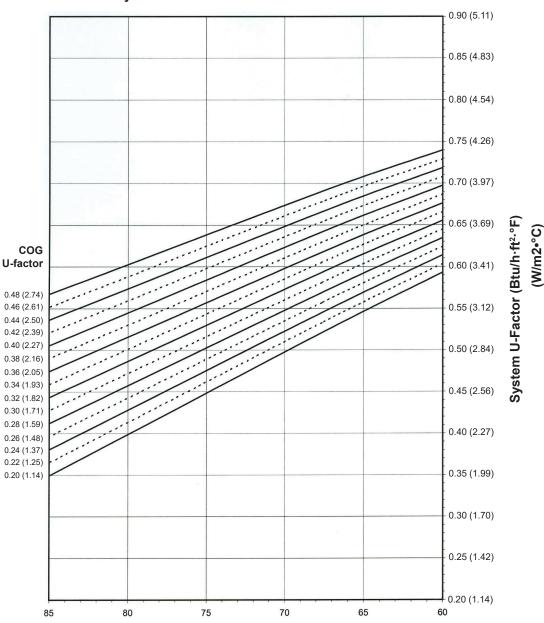
HORIZONTAL SLIDER WITH 1" GLAZING

Aluminum Glazing Spacer

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.



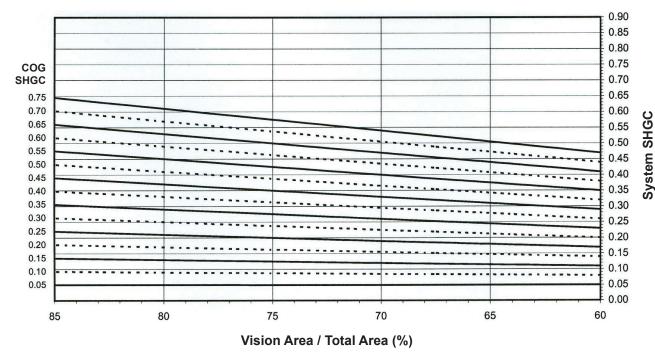
Laws and building and safety coc products, such as glazed entranc Kawneer does not control the sel hardware, or glazing materials, a

THERMAL CHARTS

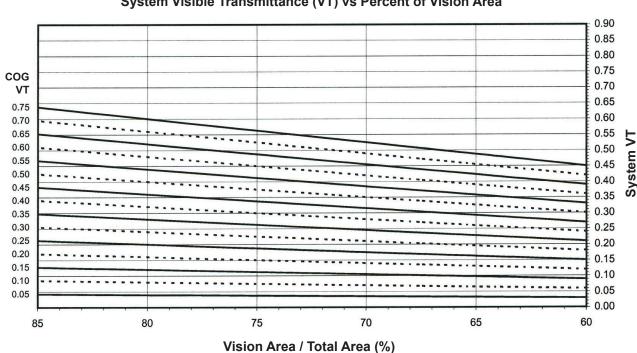
HORIZONTAL SLIDER WITH 1" GLAZING

Aluminum Glazing Spacer

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)

Overall U-Factor 4 Glass U-Factor ³ 0.48 0.69 0.46 0.68 0.44 0.67 0.42 0.65 0.40 0.64 0.38 0.63 0.62 0.36 0.34 0.61 0.32 0.59 0.30 0.58 0.28 0.57 0.26 0.56 0.24 0.54 0.22 0.53 0.20 0.52

HORIZONTAL SLIDER WITH 1" GLAZING **Aluminum Glazing Spacer**

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 1,500 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	0.52
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	0.29
0.35	0.25
0.30	0.22
0.25	0.18
0.20	0.15
0.15	0.12
0.10	0.08
0.05	0.05

Visible Transmittance ²

Glass VT ³	Overall VT ⁴
0.75	0.51
0.70	0.47
0.65	0.44
0.60	0.41
0.55	0.37
0.50	0.34
0.45	0.30
0.40	0.27
0.35	0.24
0.30	0.20
0.25	0.17
0.20	0.14
0.15	0.10
0.10	0.07
0.05	0.03



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

Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and cutrain 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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