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Laws and building and safety codes governing the design and use of 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.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.
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LAWS AND BUILDING AND SAFETY CODES GOVERNING THE DESIGN AND USE OF 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.

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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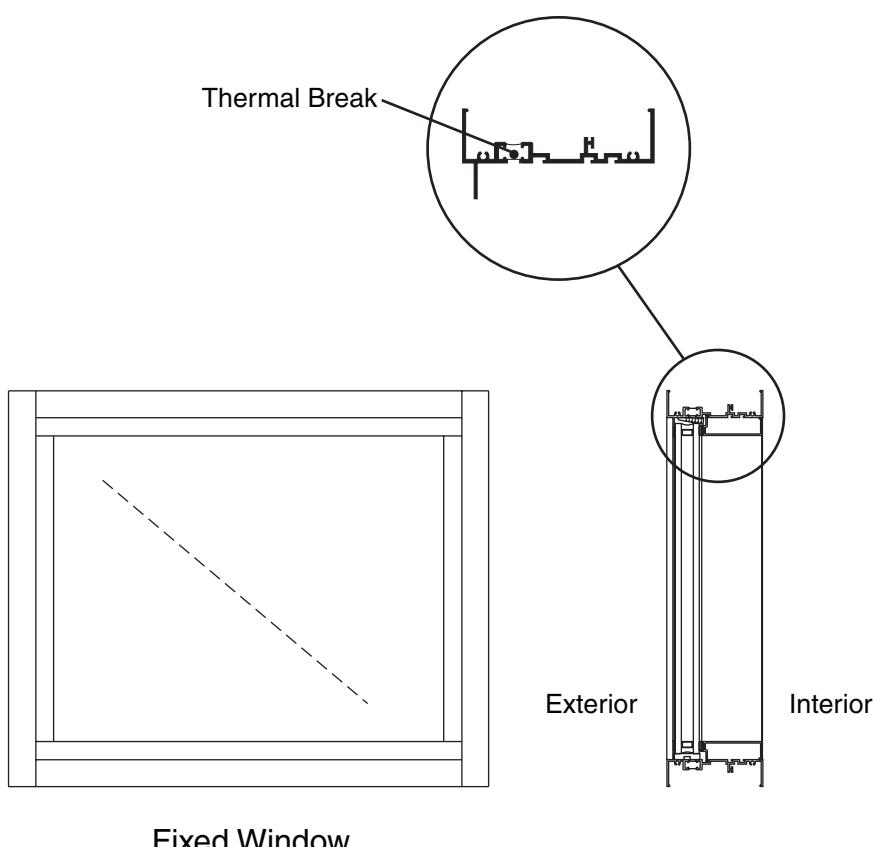
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Features

- 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

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Fixed Window

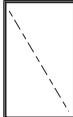
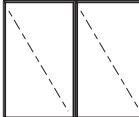
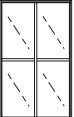
For specific product applications,
Consult your Kawneer representative.

8400TL Thermal Windows

8410TL FIXED

JANUARY, 2017

EC 97911-120

CLASS and GRADE	Architectural Grade Window F-HC100 / F-AW100 / AW-PG100-FW					
TESTING STANDARD	AAMA / WDMA / CSA 101 / I.S. 2 / A440 (NAFS)					
FRAME DEPTH	4" Overall Frame Depth					
TYPICAL WALL THICKNESS	.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", 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					
PERFORMANCE	Air Infiltration Cfm/ft ²	Water Resistance PSF	Design Load PSF	Thermal Transmittance "U" Value	Condensation Resistance CRF	Sound Transmittance STC
	.30 @ 6.24 psf	15	100	.60	58	n/a

Note: Thermal values are based upon 1" clear insulating glass.

Laws and building and safety codes governing the design and use of 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.

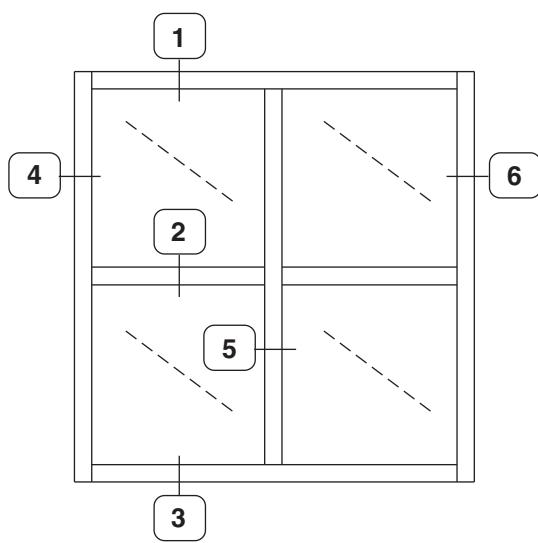
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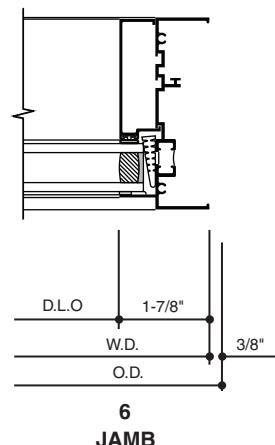
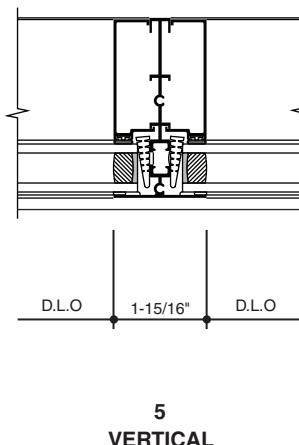
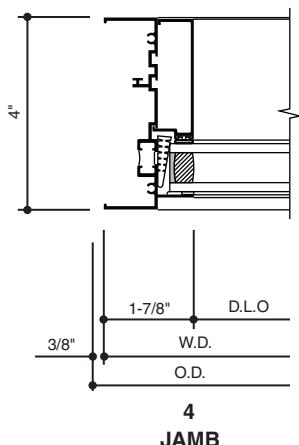
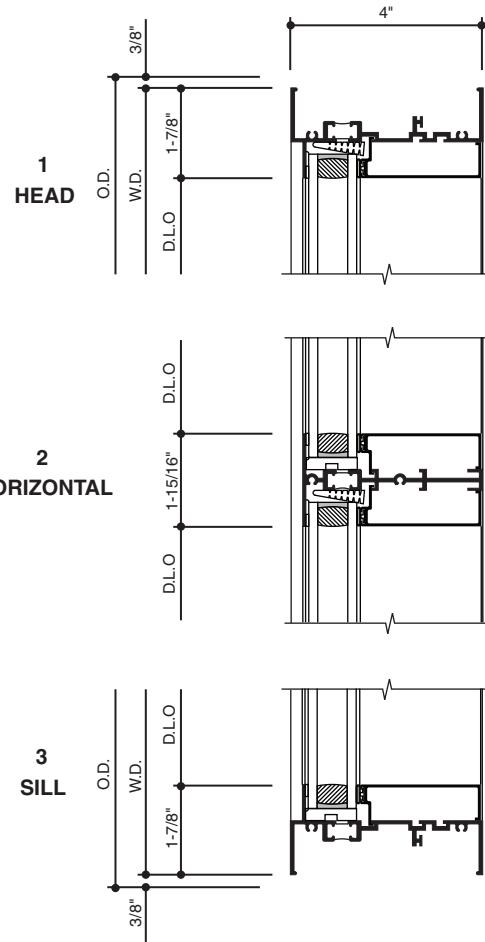
SCALE : 3" = 1'-0"

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8410TL FIXED WINDOW Standard Design



TYPICAL ELEVATION

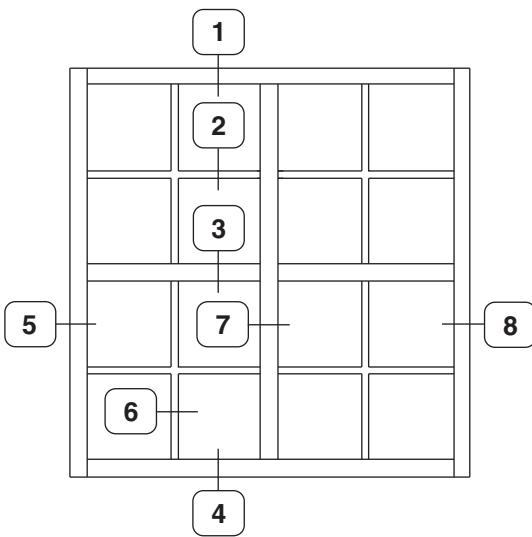
Log onto www.kawneer.com for other configurations

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

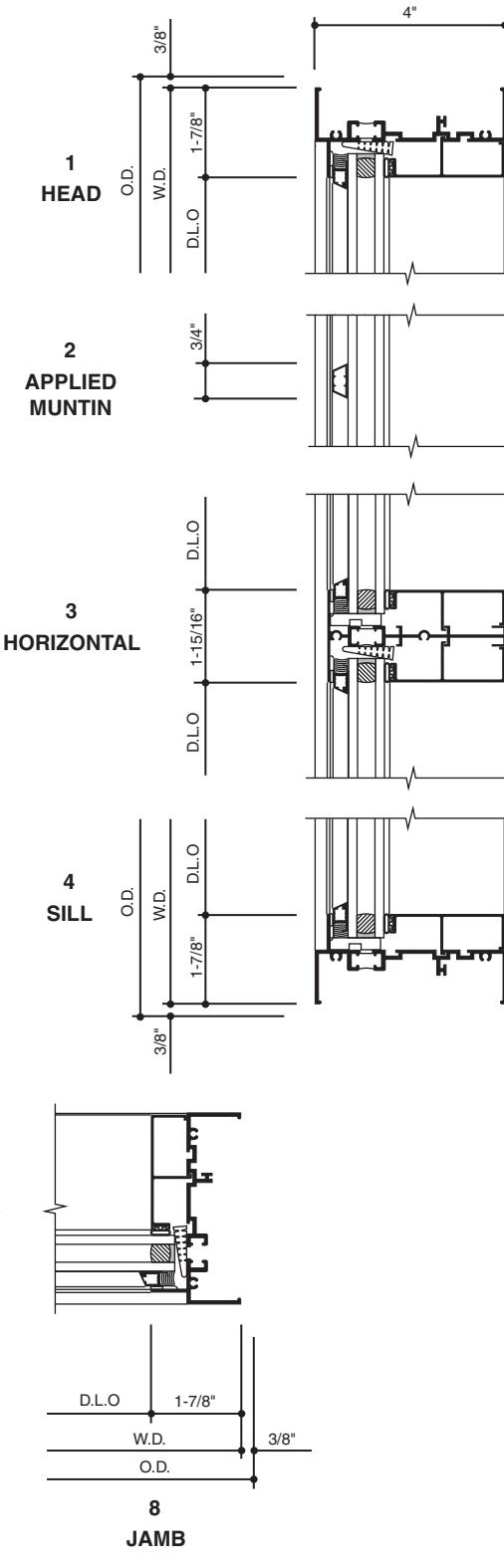
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SCALE : 3" = 1'-0"

8410TL FIXED WINDOW
with Glazed-in Muntin Grid



TYPICAL ELEVATION

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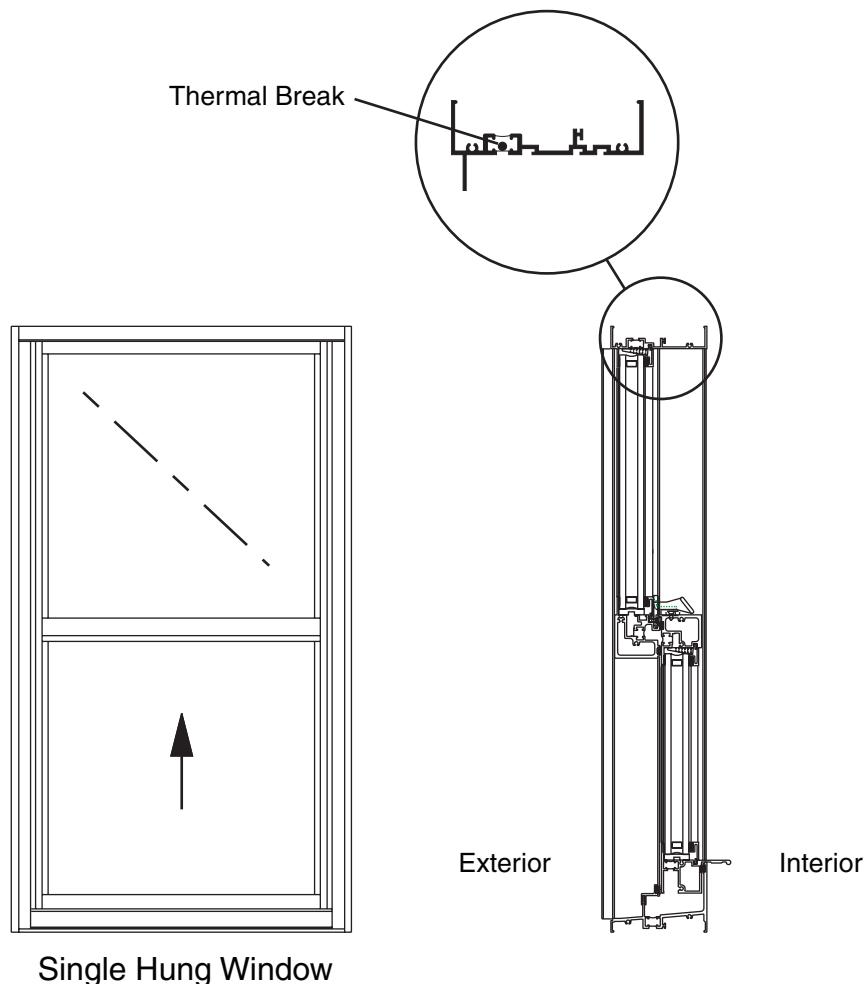
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Features

- Architectural Grade Window
- Series 8430TL 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

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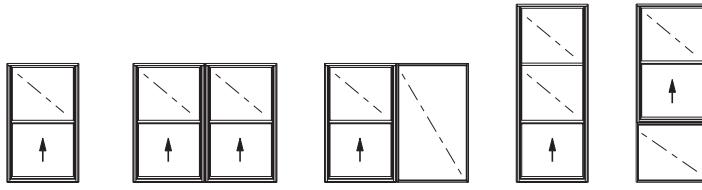
For specific product applications,
Consult your Kawneer representative.

8400TL Thermal Windows

8430TL SINGLE HUNG

JANUARY, 2017

EC 97911-120

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	.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 Balances 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					
PERFORMANCE	Air Infiltration Cfm/ft ²	Water Resistance PSF	Design Load PSF	Thermal Transmittance "U" Value	Condensation Resistance CRF	Sound Transmittance STC
	.30 @ 6.24 psf	10 / 15	70	.70	49	34

Note: Thermal and STC values are based upon 1" clear insulating glass.

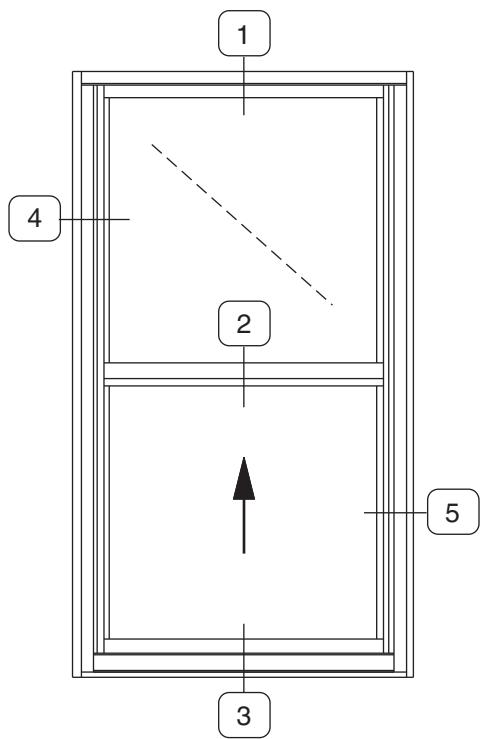
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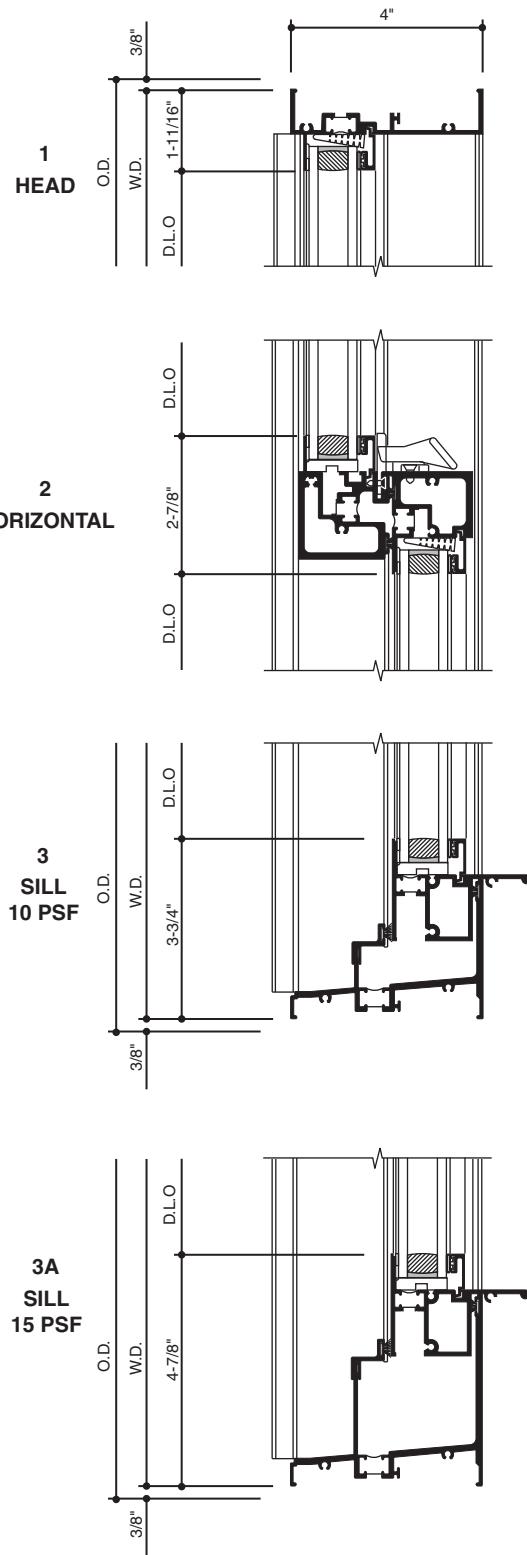
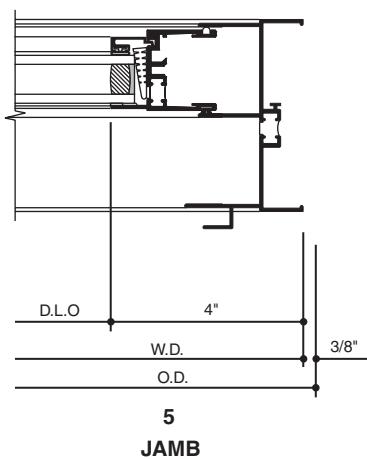
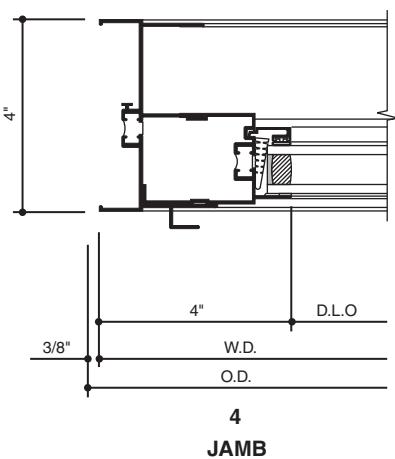
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SCALE : 3" = 1'-0"

8430TL SINGLE HUNG WINDOW
Standard Design

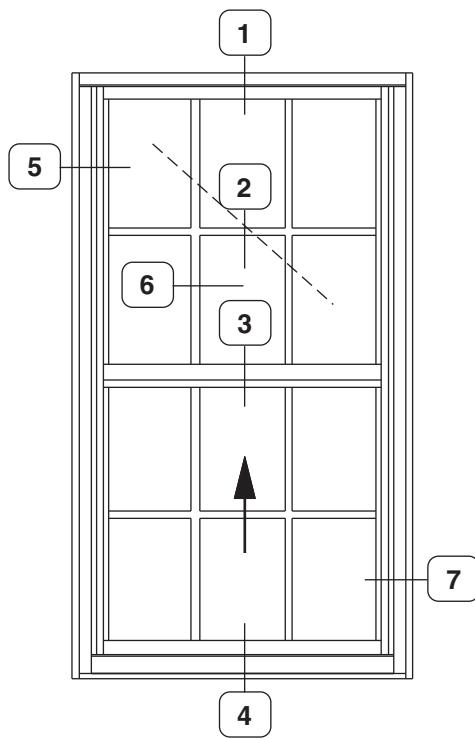


TYPICAL ELEVATION
Log onto www.kawneer.com for other configurations

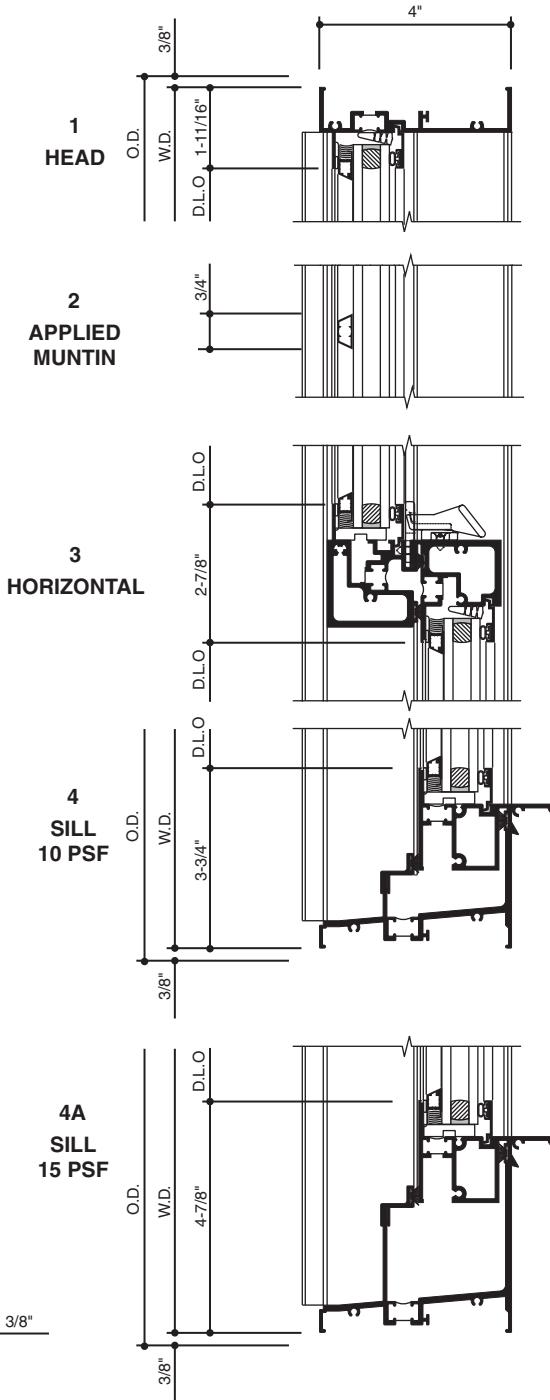


SCALE : 3" = 1'-0"

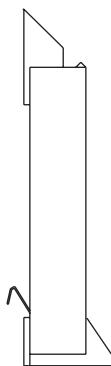
8430TL SINGLE HUNG WINDOW
with Glazed-in Muntin Grid



TYPICAL ELEVATION

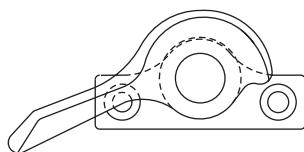
Log onto www.kawneer.com for other configurations

HEAVY DUTY BLOCK AND TACKLE BALANCES



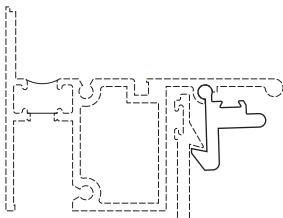
Heavy duty balances are concealed in the left and right jambs. Balances are sized according to sash dimensions and sash weight.

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.

Laws and building and safety codes governing the design and use of 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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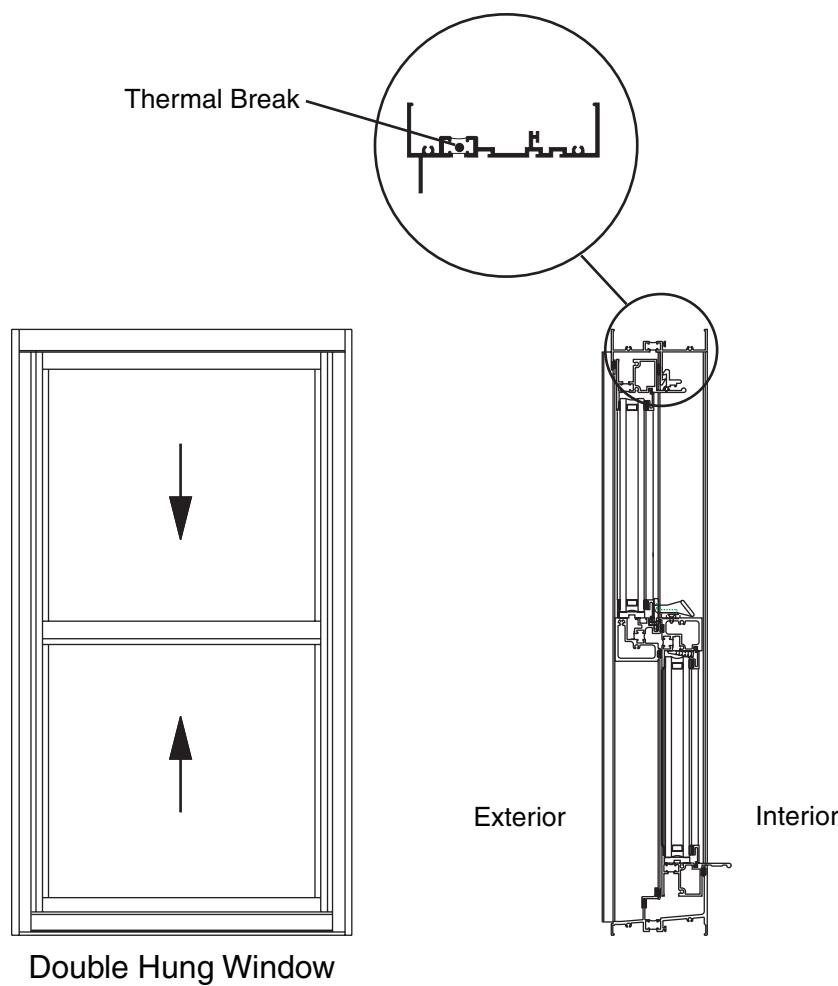
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Features

- 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
- Architectural Anodized Finishes and Applied Coatings
- Two Year Manufacturer's Warranty

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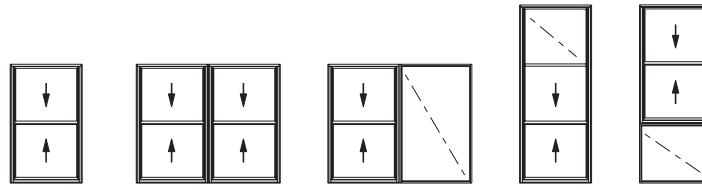
For specific product applications,
Consult your Kawneer representative.

8400TL Thermal Windows

8450TL DOUBLE HUNG

JANUARY, 2017

EC 97911-120

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	.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 Balances Cast White Bronze Sweep Locks Aluminum Auto Lock (Upper Sash Only)					
OPTIONAL HARDWARE	Aluminum Auto Lock at Sill					
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					
PERFORMANCE	Air Infiltration Cfm/ft ²	Water Resistance PSF	Design Load PSF	Thermal Transmittance "U" Value	Condensation Resistance CRF	Sound Transmittance STC
	.30 @ 6.24 psf	10 / 15	70	.74	50	33

Note: Thermal and STC values are based upon 1" clear insulating glass.

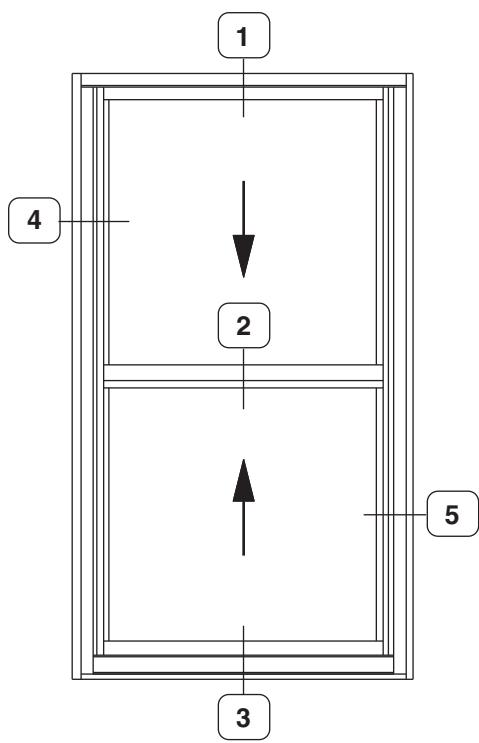
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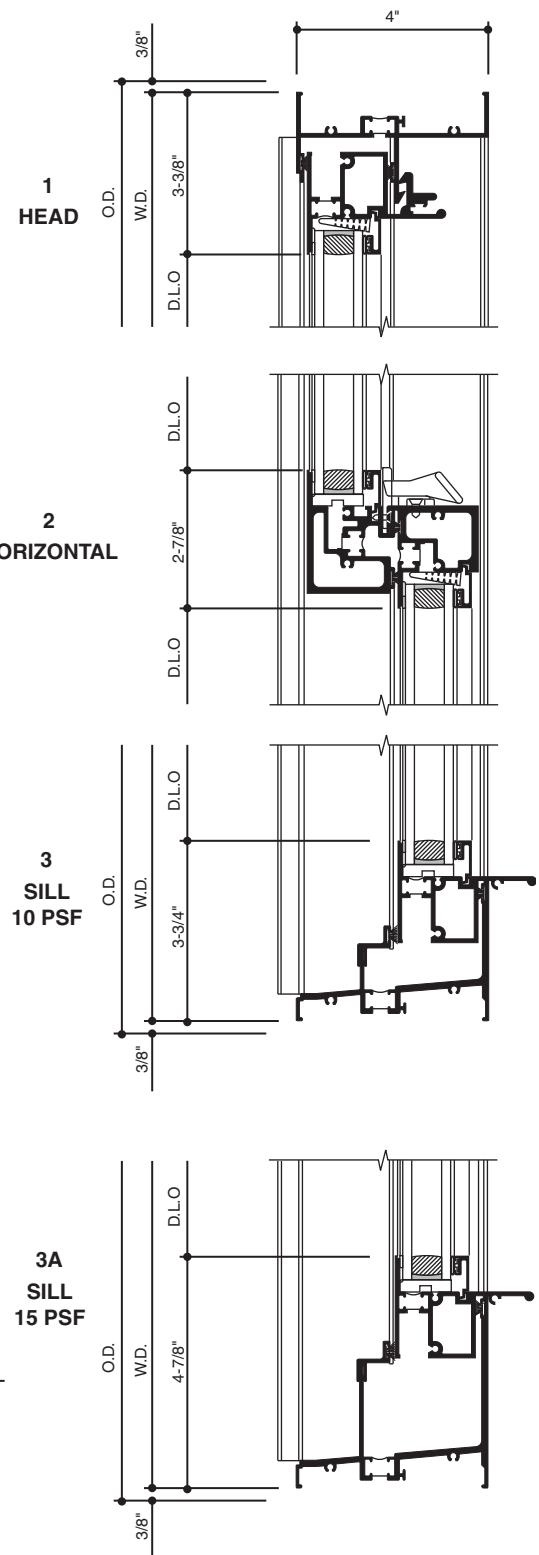
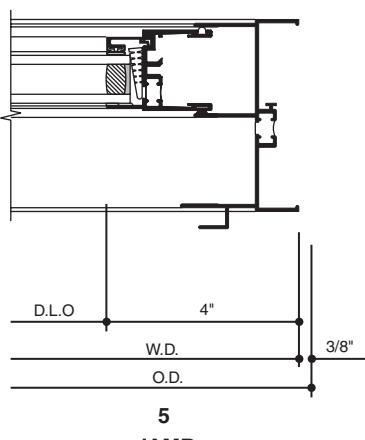
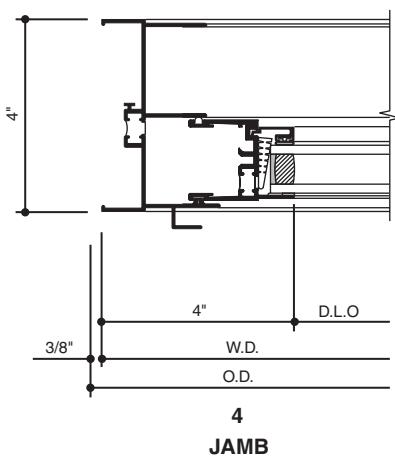
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SCALE : 3" = 1'-0"

8450TL DOUBLE HUNG WINDOW Standard Design



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

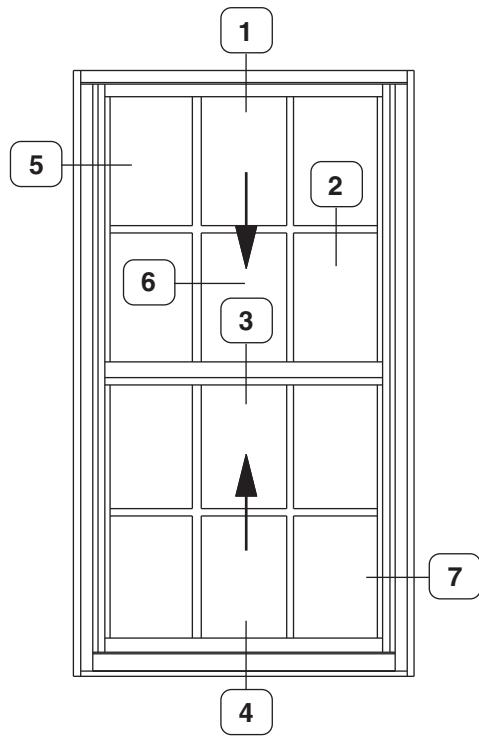


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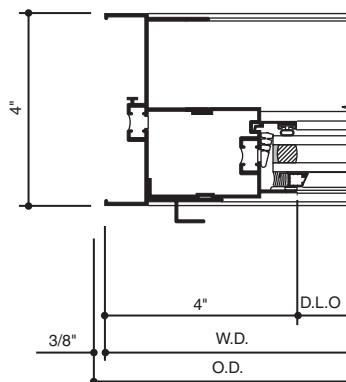
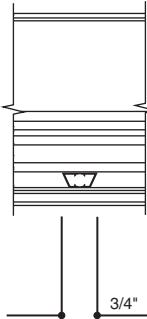
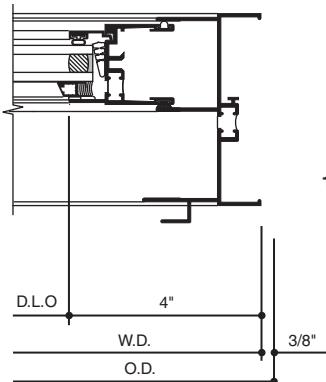
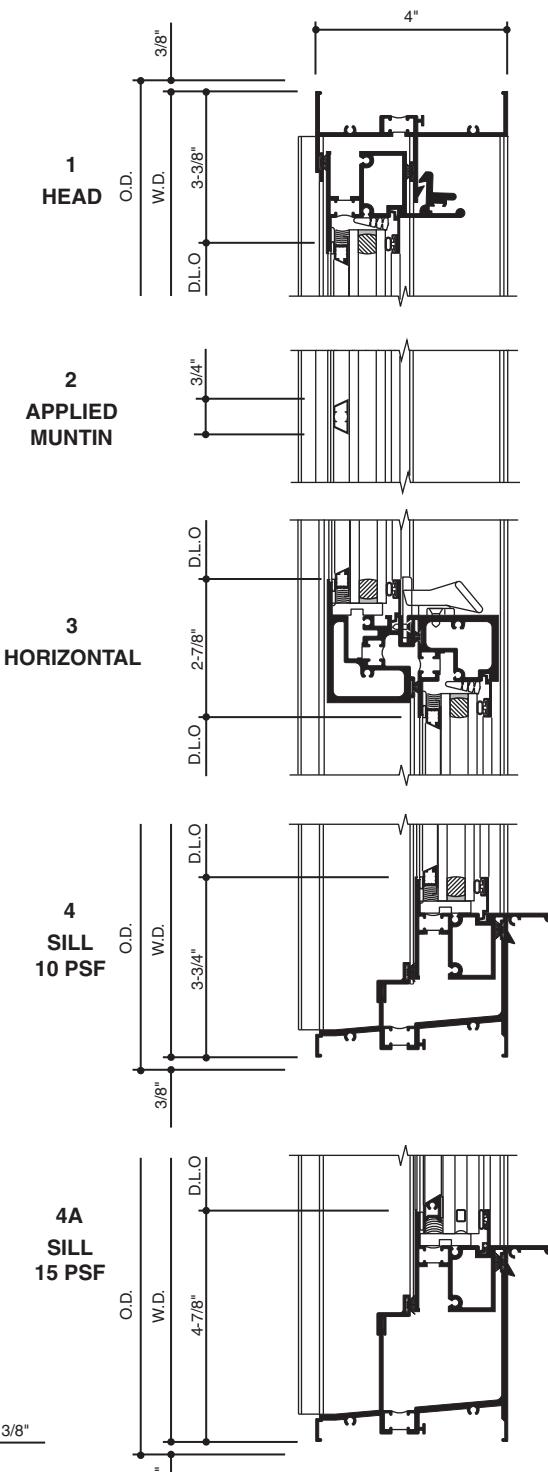
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SCALE : 3" = 1'-0"

8450TL DOUBLE HUNG WINDOW
with Glazed-in Muntin Grid



TYPICAL ELEVATION

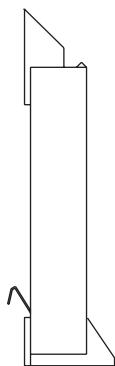
Log onto www.kawneer.com for other configurations5
JAMB6
APPLIED
MUNTIN7
JAMB

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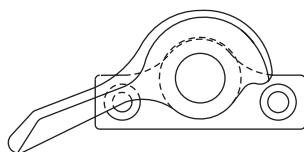
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HEAVY DUTY BLOCK AND TACKLE BALANCES



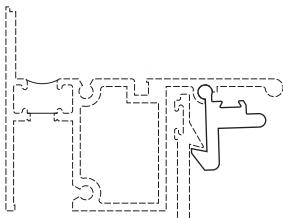
Heavy duty balances are concealed in the left and right jambs. Balances are sized according to sash dimensions and sash weight.

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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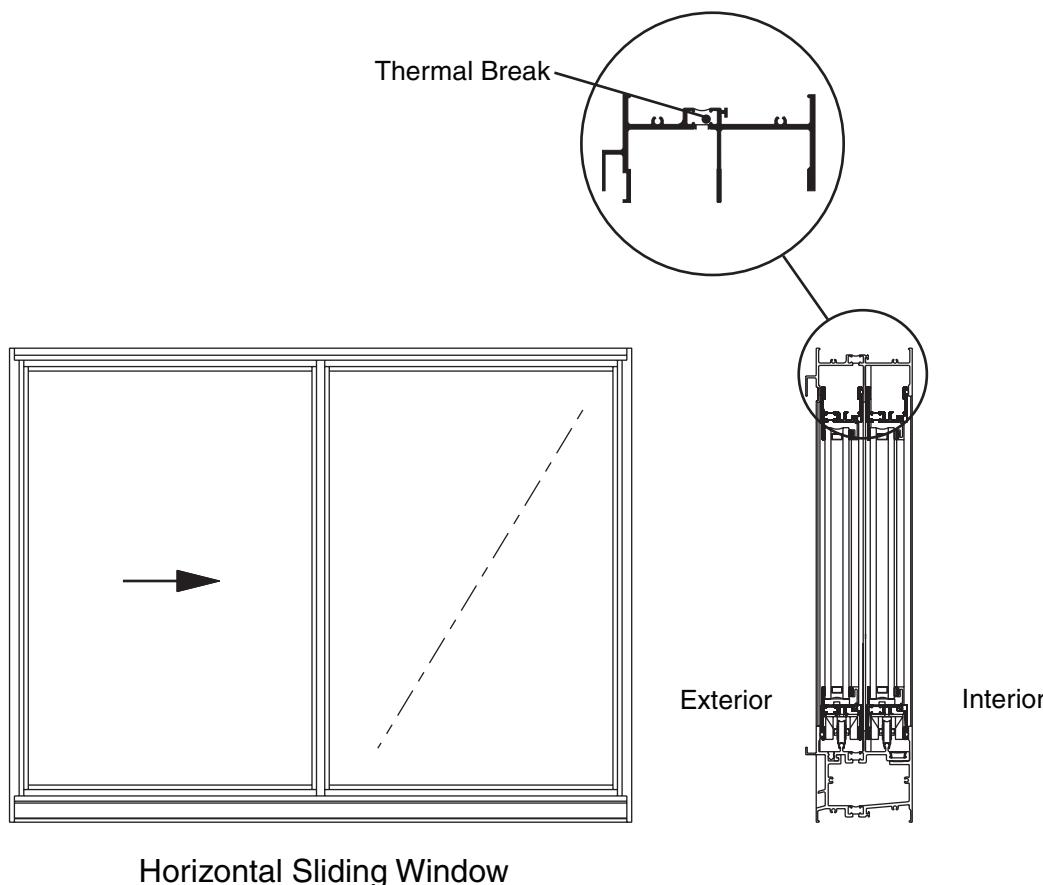
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Features

- 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

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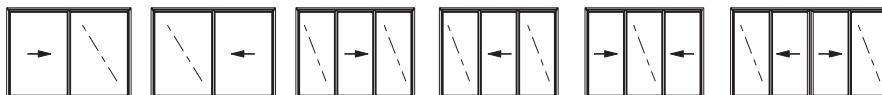
For specific product applications,
Consult your Kawneer representative.

8400TL Thermal Windows

8470TL HORIZONTAL SLIDER

JANUARY, 2017

EC 97911-120

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	.070 to .125 Nominal					
TYPICAL MAXIMUM SIZE	99" x 79" (OX,XO,XX) 148" x 79" (OXO,XOX) 198" x 79" (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					
PERFORMANCE	Air Infiltration Cfm/ft ²	Water Resistance PSF	Design Load PSF	Thermal Transmittance "U" Value	Condensation Resistance CRF	Sound Transmittance STC
	.30 @ 6.24 psf	10 / 15	70	.74	51	34

Note: Thermal and STC values are based upon 1" clear insulating glass.

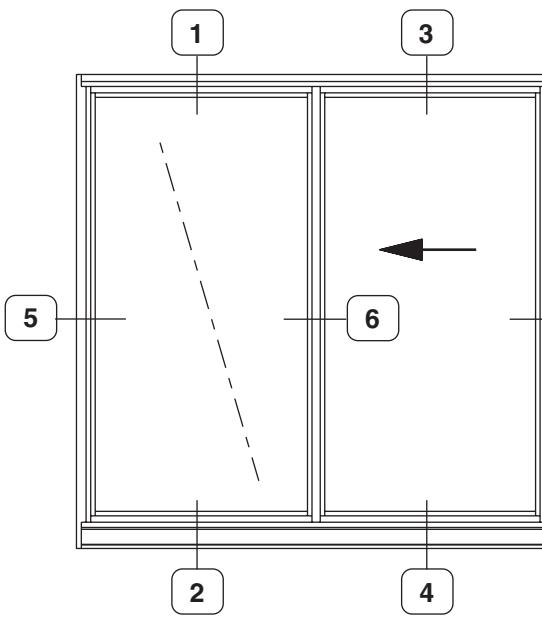
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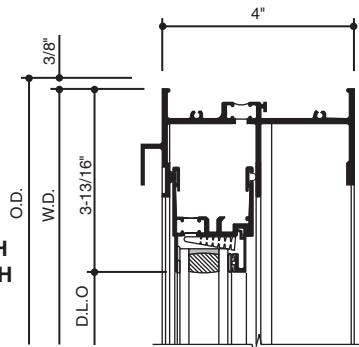
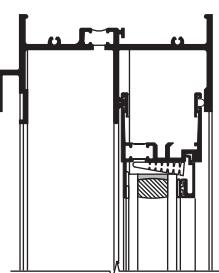
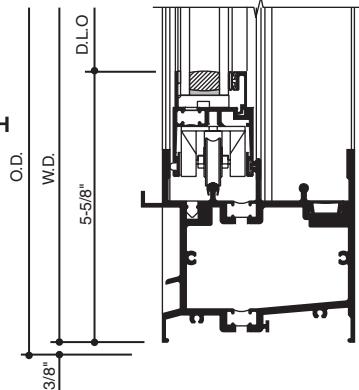
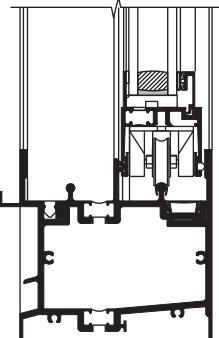
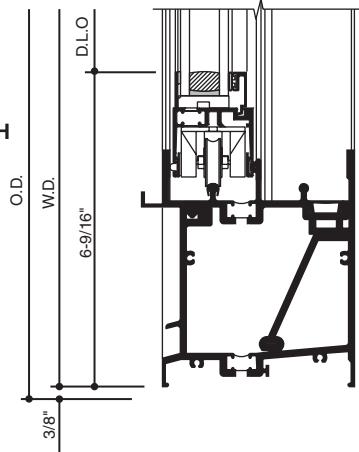
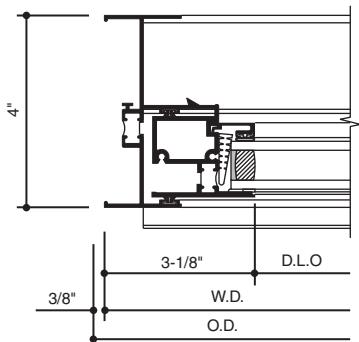
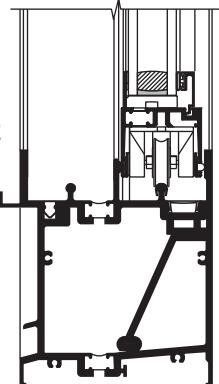
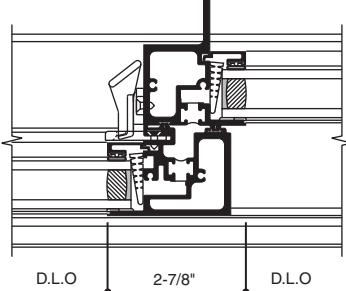
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SCALE : 3" = 1'-0"

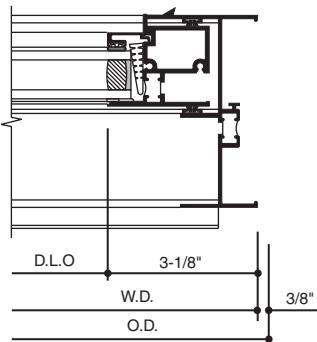
8470TL HORIZONTAL SLIDER

8470TL HORIZONTAL SLIDER
Standard Design

TYPICAL ELEVATION

Log onto www.kawneer.com for other configurations1 HEAD WITH
FIXED SASH3 HEAD WITH
OPERABLE SASH2 SILL WITH
FIXED SASH
(10 PSF)4 SILL WITH
OPERABLE
SASH
(10 PSF)2A SILL WITH
FIXED SASH
(15 PSF)4A SILL WITH
OPERABLE
SASH
(15 PSF)5 FIXED SASH
JAMB

6 INTERLOCK

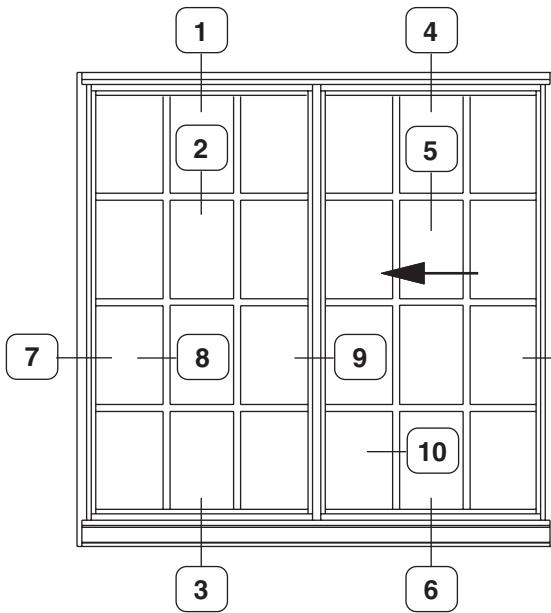
7 OPERABLE SASH
JAMB

Laws and building and safety codes governing the design and use of 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.

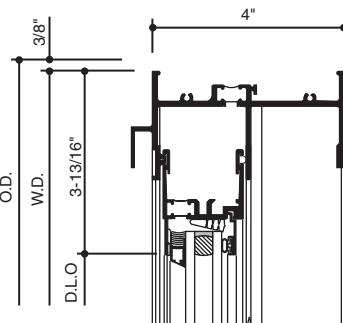
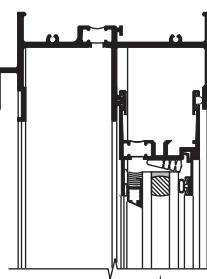
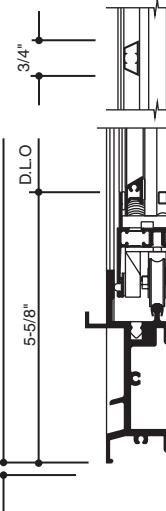
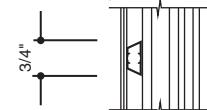
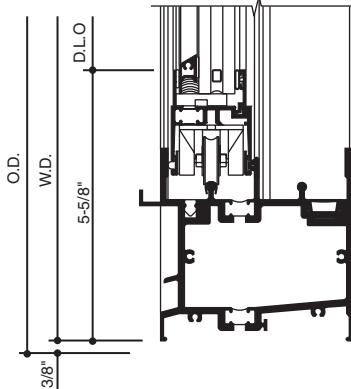
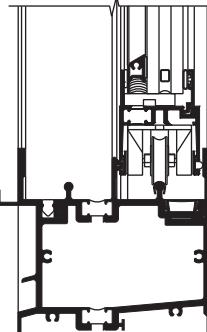
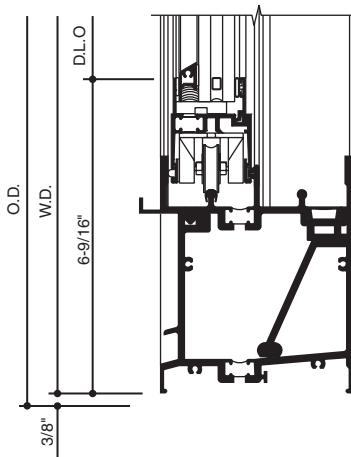
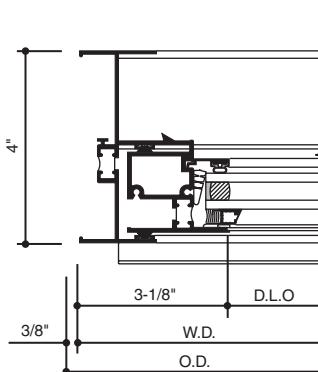
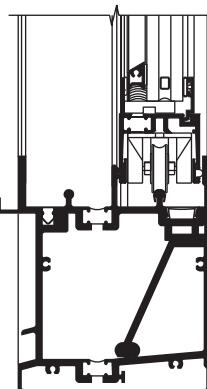
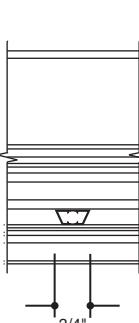
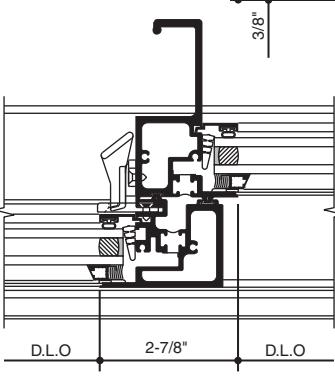
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SCALE : 3" = 1'-0"

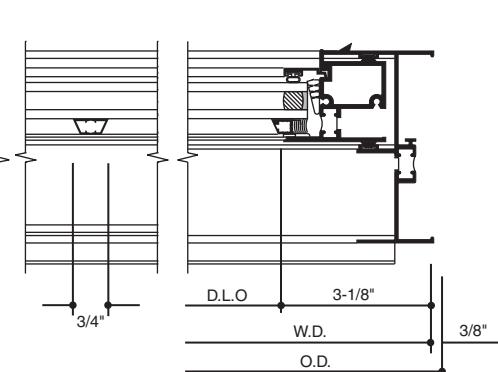
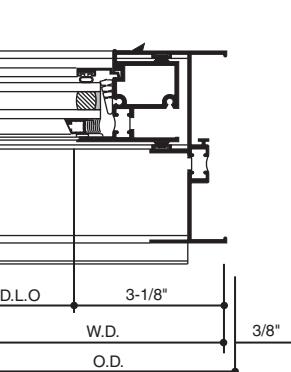
8470TL HORIZONTAL SLIDER
with Glazed-in Muntin Grid



TYPICAL ELEVATION

Log onto www.kawneer.com for other configurations1 HEAD WITH
FIXED SASH4 HEAD WITH
OPERABLE SASH2 APPLIED
MUNTIN5 APPLIED
MUNTIN3 SILL WITH
FIXED SASH
(10 PSF)6 SILL WITH
OPERABLE SASH
(10 PSF)3A SILL WITH
FIXED SASH
(15 PSF)6A SILL WITH
OPERABLE SASH
(15 PSF)7 FIXED SASH
JAMB8 APPLIED
MUNTIN

9 INTERLOCK

10 APPLIED
MUNTIN11 OPERABLE SASH
JAMB

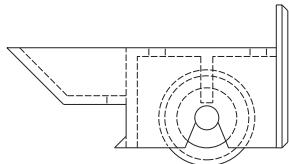
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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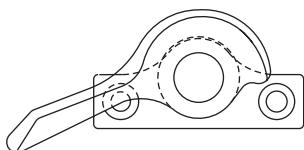
STEEL ROLLER ASSEMBLY

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



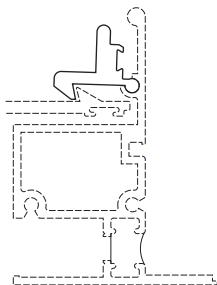
STANDARD SWEEP LOCK

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.



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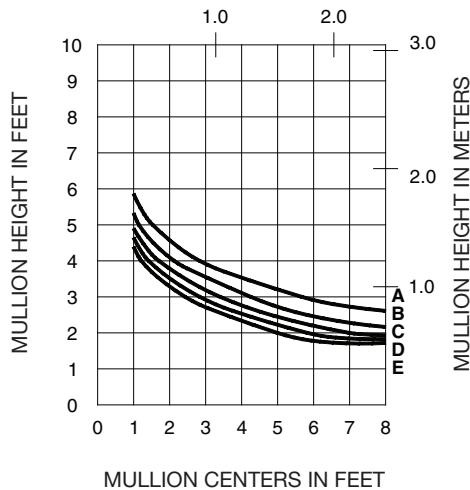
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WIND LOAD CHARTS:

THESE CHARTS ARE BASED ON A MAXIMUM DEFLECTION OF L\175 AND\OR A MAXIMUM STRESS OF 15,152 PSI (104 MPa).

- A = 30 PSF (1436)
 B = 40 PSF (1915)
 C = 50 PSF (2394)
 D = 60 PSF (2874)
 E = 70 PSF (3352)

MULLION CENTERS IN METERS

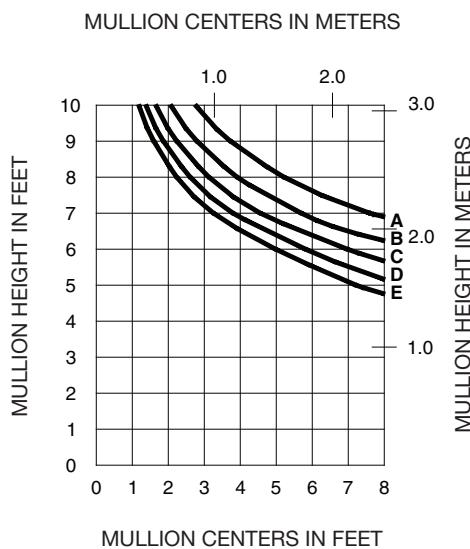
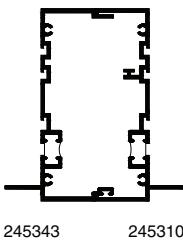


VERTICAL MULLION



MULLION CENTERS IN FEET

WITH HORIZONTALS

8410
FIXED WINDOW

WITH HORIZONTALS

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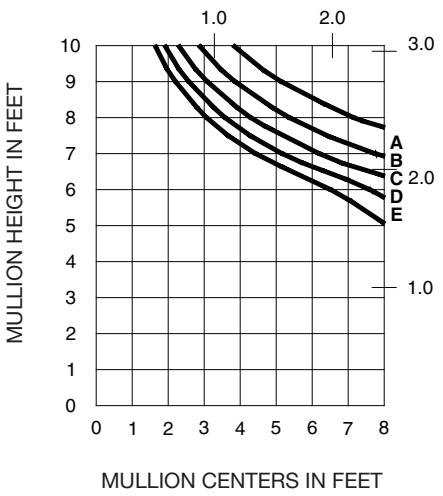
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WIND LOAD CHARTS:

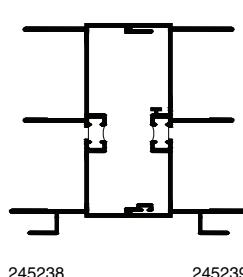
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MULLION CENTERS IN METERS

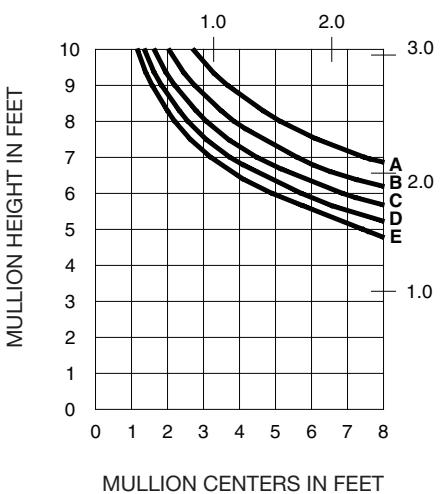


8430 SINGLE HUNG
8450 DOUBLE HUNG

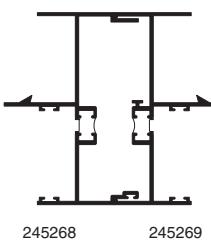


WITH HORIZONTALS

MULLION CENTERS IN METERS



8470
HORIZONTAL SLIDER



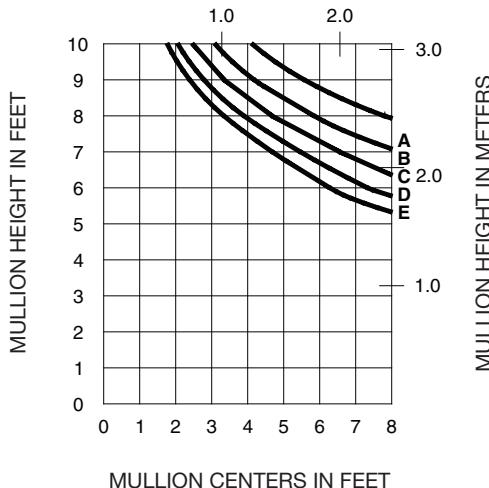
WITH HORIZONTALS

WIND LOAD CHARTS:

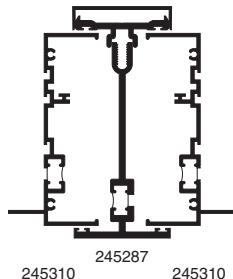
THESE CHARTS ARE BASED ON A MAXIMUM DEFLECTION OF L\175 AND\OR A MAXIMUM STRESS OF 15,152 PSI (104 MPa).

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MULLION CENTERS IN METERS

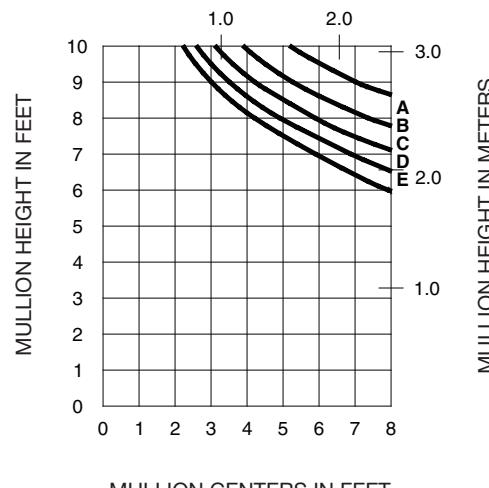
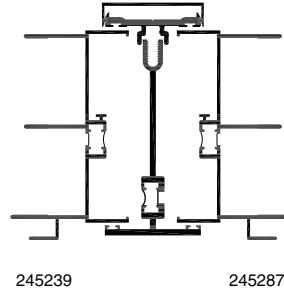


8410 FIXED WINDOW



WITH HORIZONTALS

MULLION CENTERS IN METERS

8430 SINGLE HUNG
8450 DOUBLE HUNG

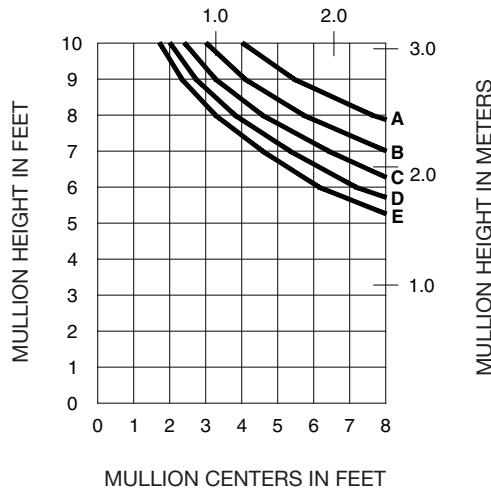
WITH HORIZONTALS

WIND LOAD CHARTS:

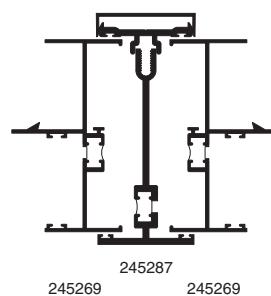
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MULLION CENTERS IN METERS



8470
HORIZONTAL SLIDER

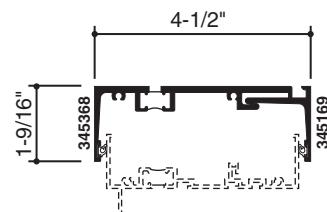
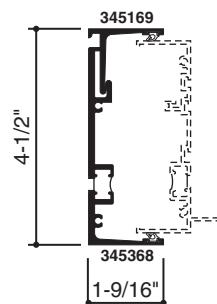
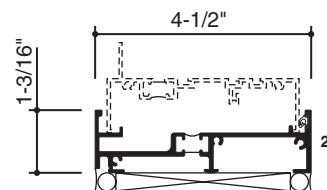
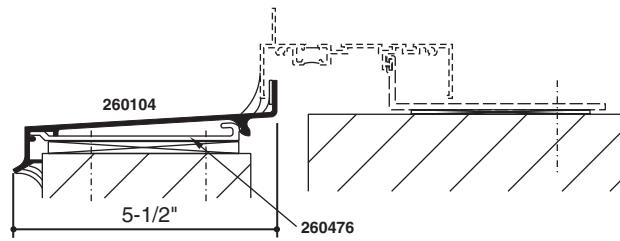
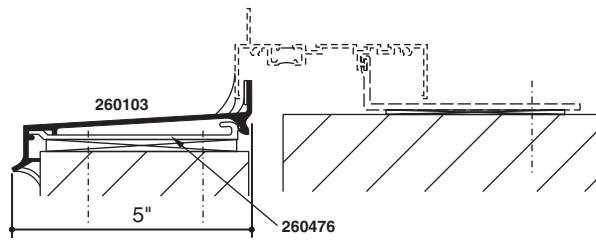
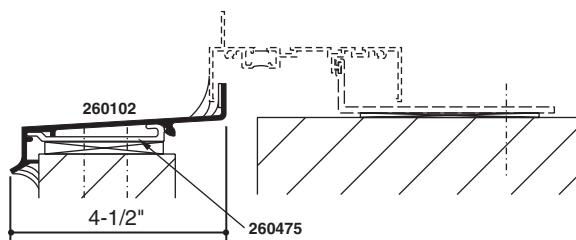
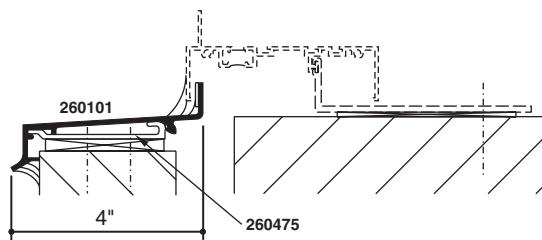
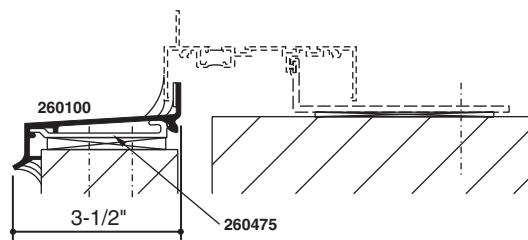


WITH HORIZONTALS

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SCALE : 3" = 1'-0"

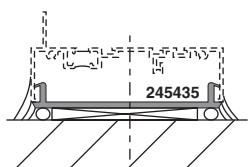
HEAD
RECEPTORJAMB
RECEPTORFULL DEPTH
SILL**SUB SILLS**

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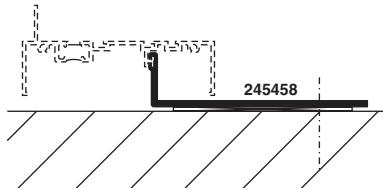
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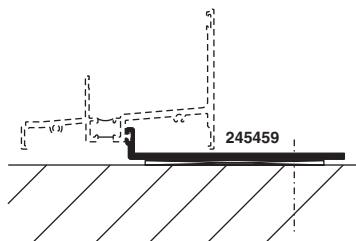
SCALE : 3" = 1'-0"



PVC PERIMETER
(Head and Jamb Similar)



**STRAP ANCHOR
WITH FIXED WINDOW**

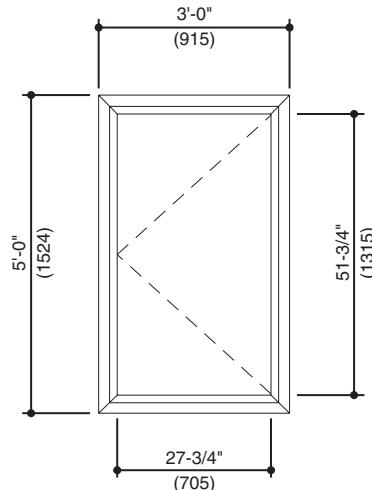


**STRAP ANCHOR
WITH HUNG WINDOW**

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



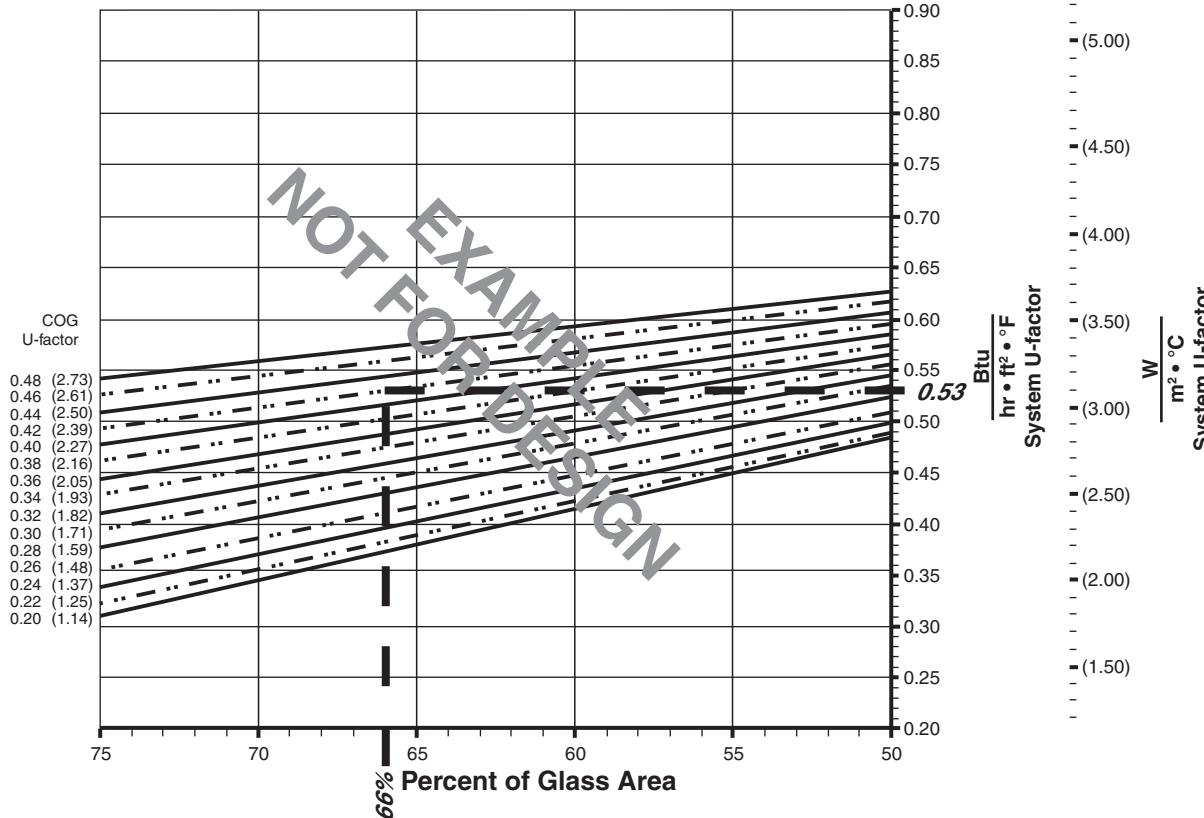
Example Glass U-Factor = 0.42 Btu/hr • ft² • °F

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

Total Projected Area = 3'-0" • 5'-0" = 15 ft²

Percent of Glass = (Total Daylight Opening ÷ Total Projected Area)100
= (9.97 ÷ 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

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FIXED WINDOW WITH 1" GLAZING

Note:

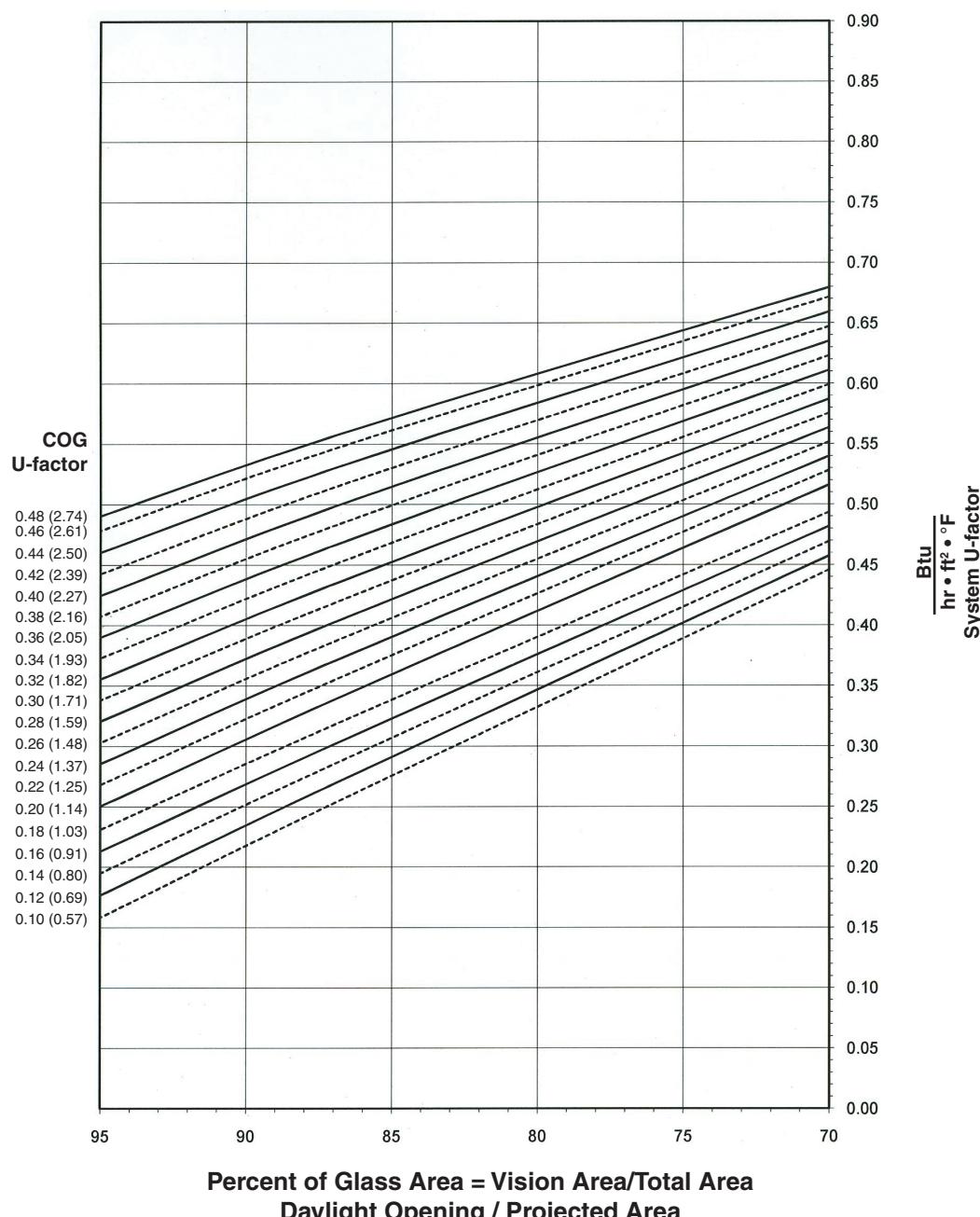
Values in parentheses are metric.

COG = Center of Glass.

Charts are generated per AMMA 507

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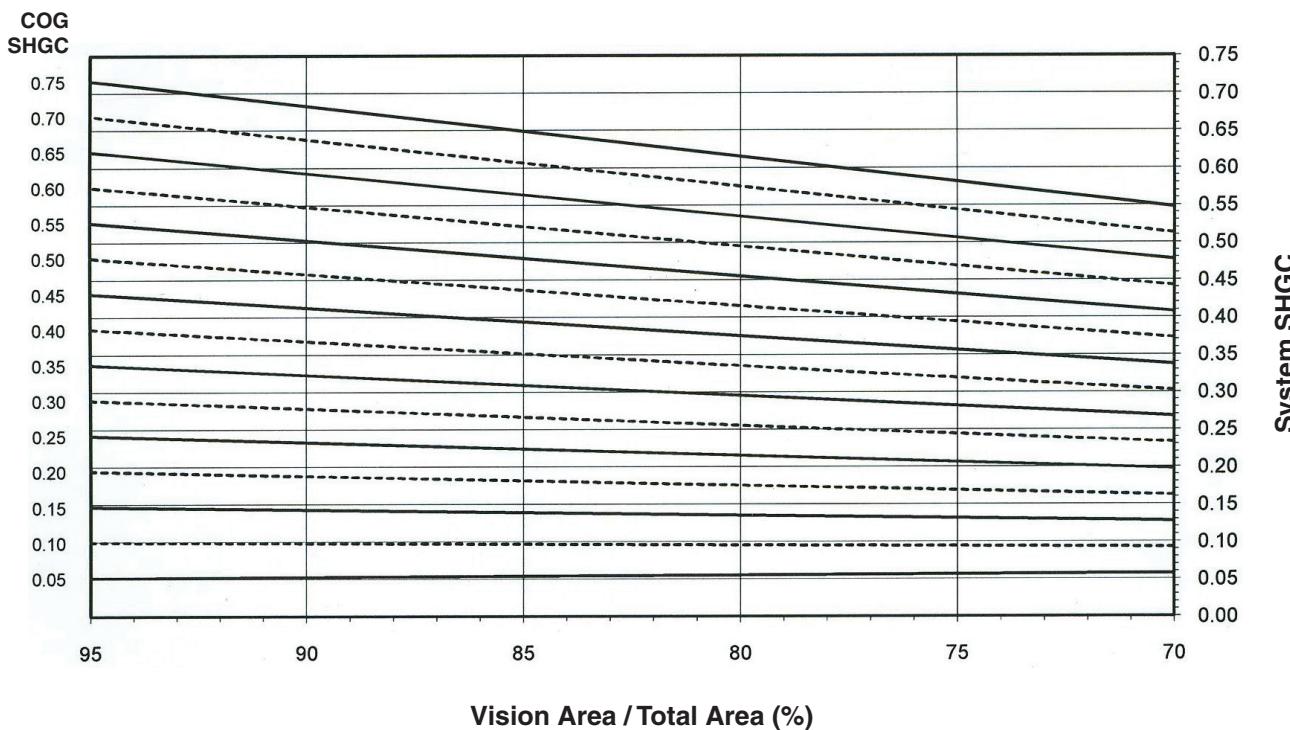


Notes for System U-factor, SHGC and VT charts:

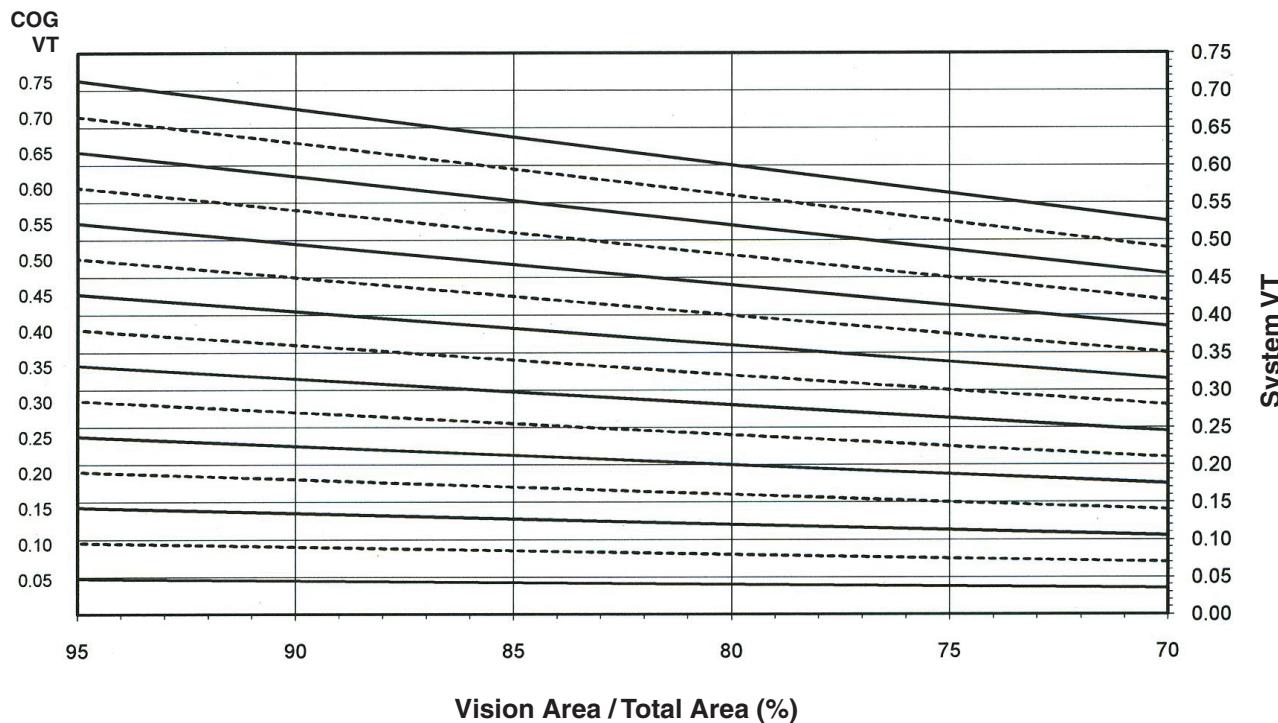
For glass values that are not listed, linear interpolation is permitted.

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

FIXED WINDOW WITH 1" GLAZING

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

Laws and building and safety codes governing the design and use of 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.

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.

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Thermal Transmittance¹ (BTU/hr • ft² • °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

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 Matrices 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 Transmittance²

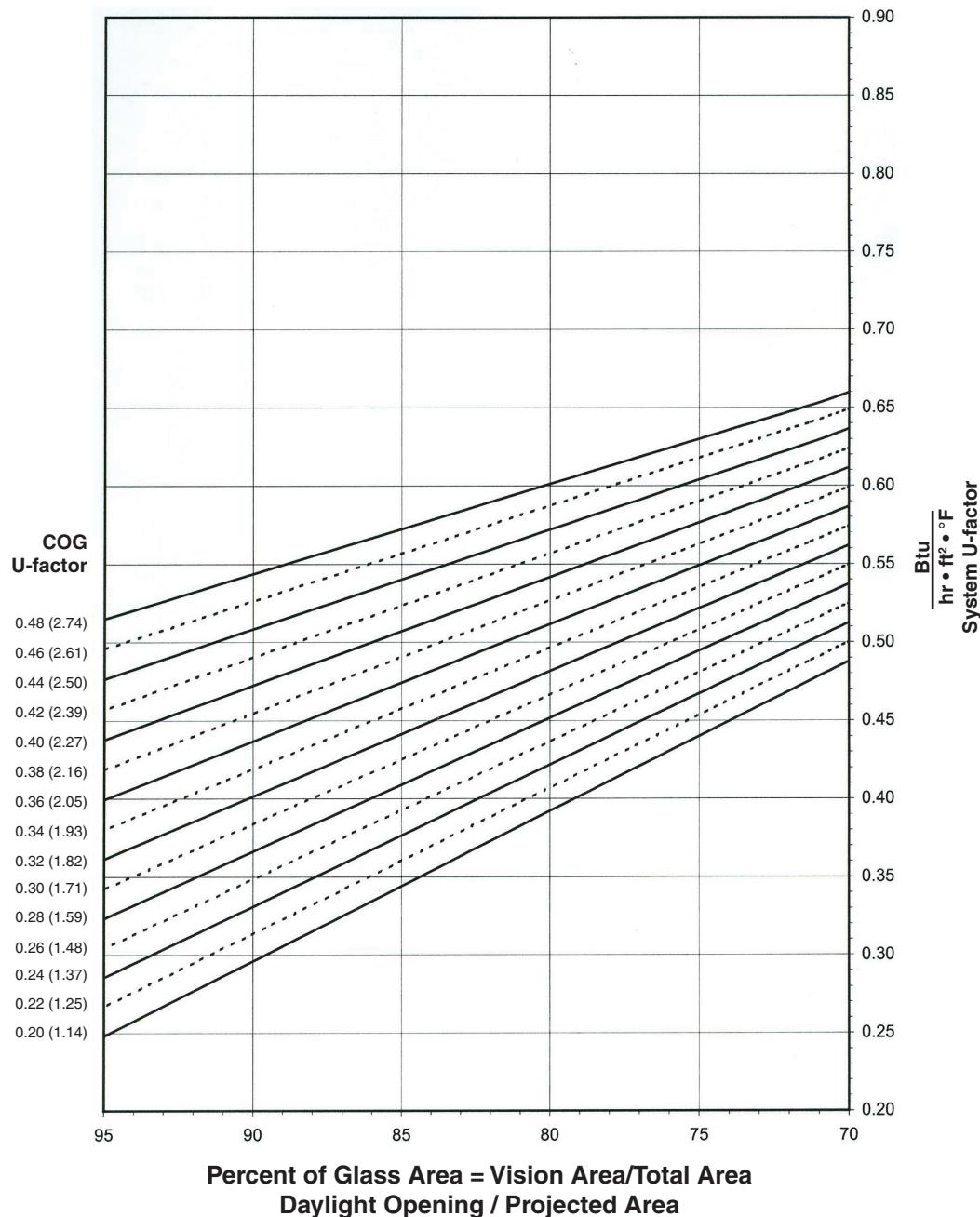
Glass VT ³	Overall VT ⁴
0.75	0.65
0.70	0.60
0.65	0.56
0.60	0.52
0.55	0.47
0.50	0.43
0.45	0.39
0.40	0.34
0.35	0.30
0.30	0.26
0.25	0.22
0.20	0.17
0.15	0.13
0.10	0.09
0.05	0.04

SINGLE HUNG VERTICAL SLIDER WITH 1" GLAZING**Note:**

Values in parentheses are metric.

COG = Center of Glass.

Charts are generated per AMMA 507

System U-factor vs Percent of Glass 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.

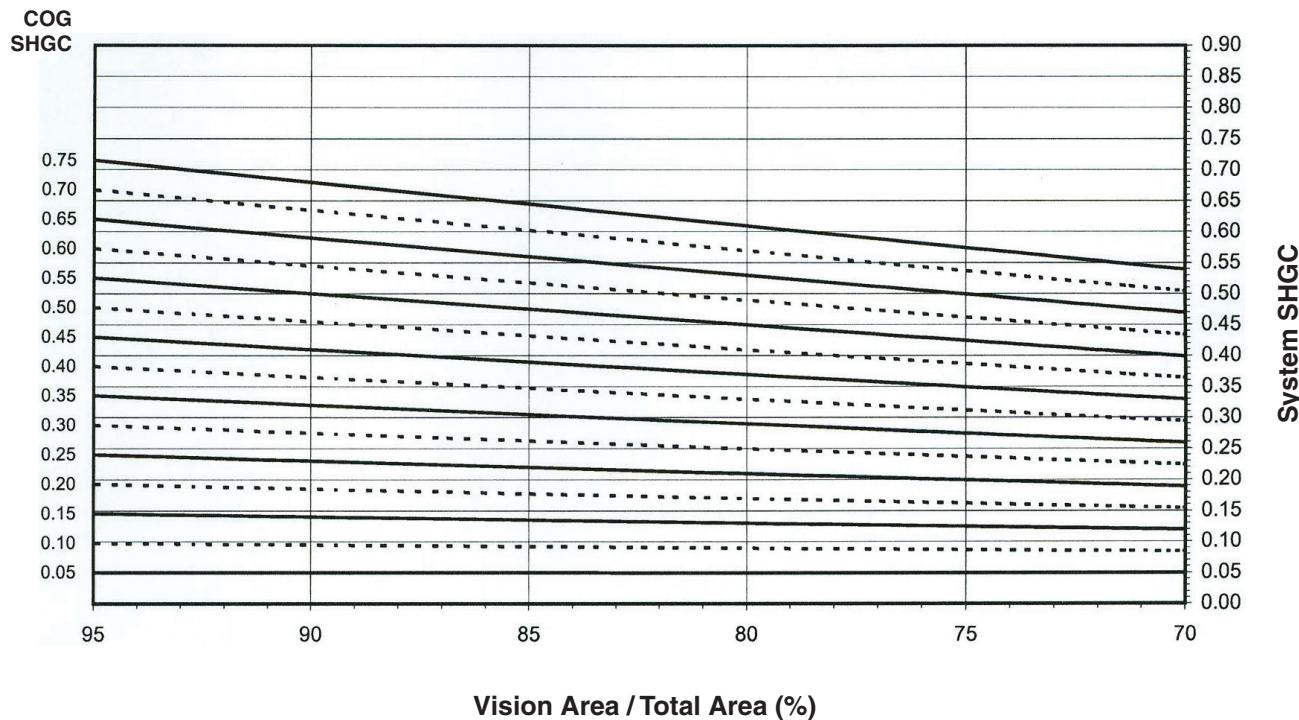
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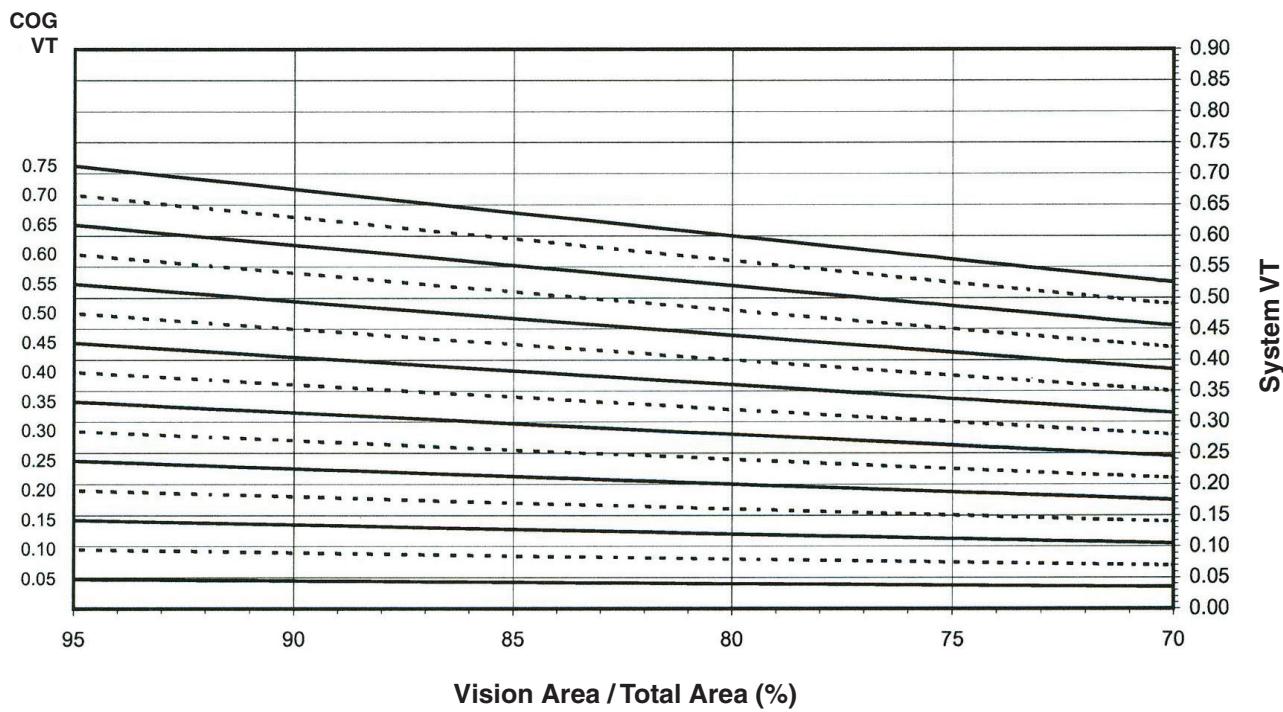
© Kawneer Company, Inc., 2011

SINGLE HUNG VERTICAL SLIDER WITH 1" GLAZING

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 Transmittance¹ (BTU/hr • ft² • °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**

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 Matrices 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 Transmittance²

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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DOUBLE HUNG VERTICAL SLIDER WITH 1" GLAZING

Note:

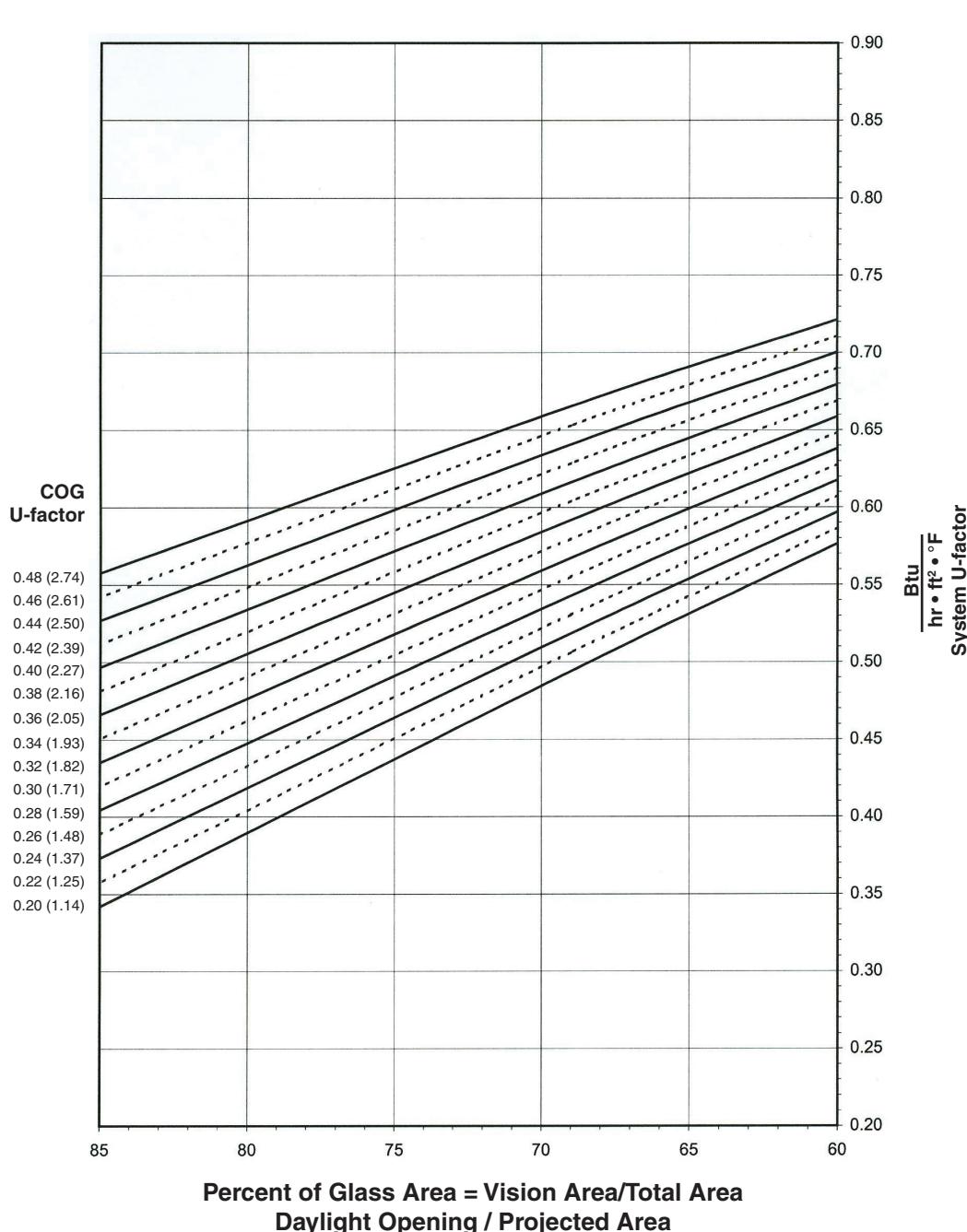
Values in parentheses are metric.

COG = Center of Glass.

Charts are generated per AMMA 507

Laws and building and safety codes governing the design and use of 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.

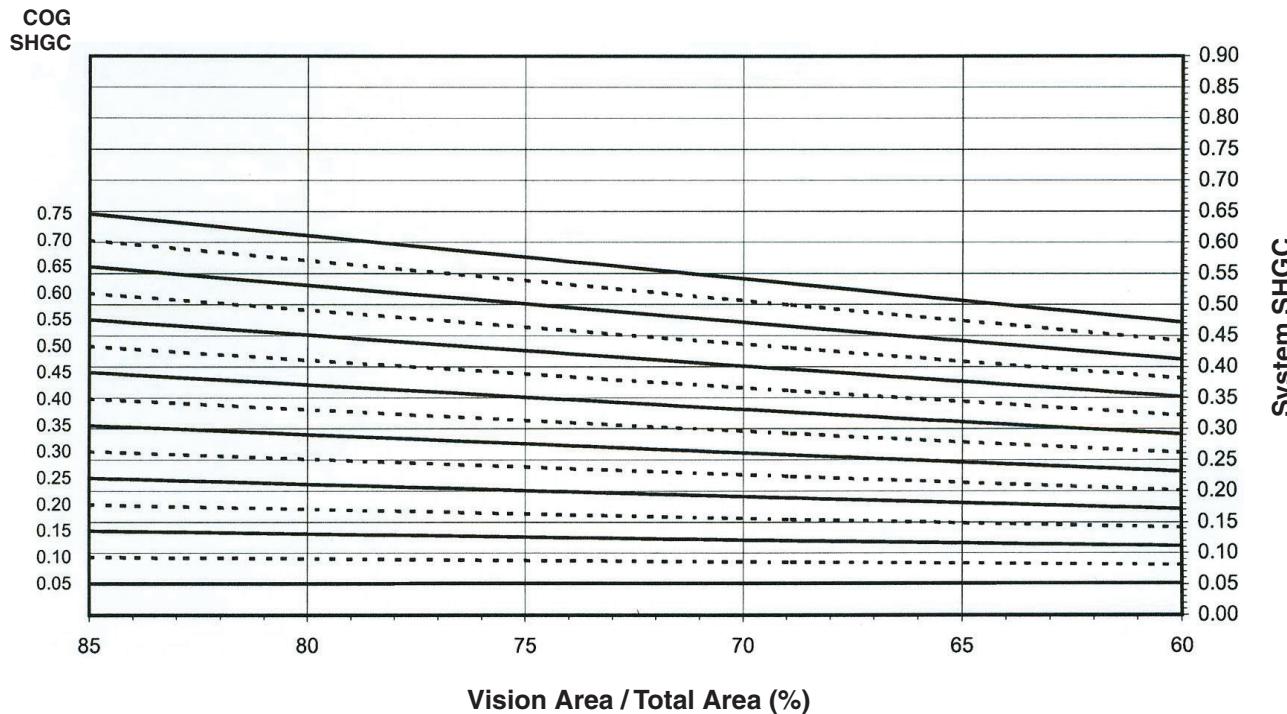
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Notes for System U-factor, SHGC and VT charts:

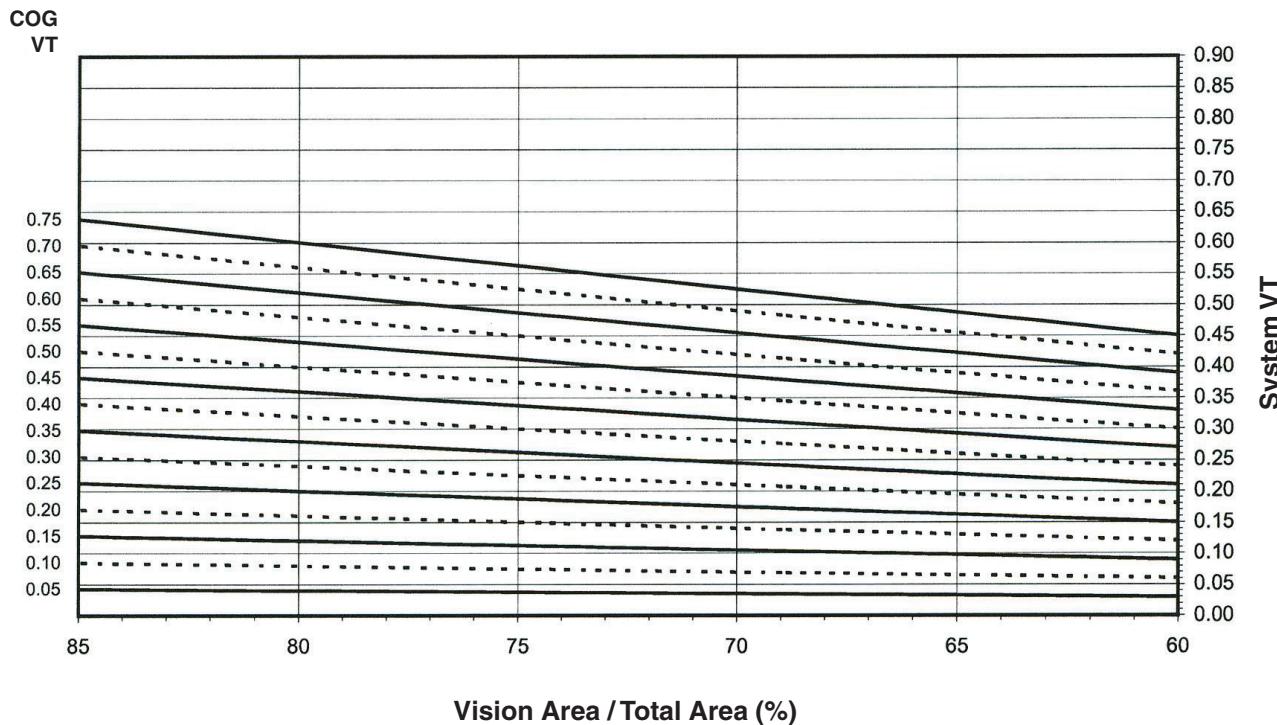
For glass values that are not listed, linear interpolation is permitted.

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

DOUBLE HUNG VERTICAL SLIDER WITH 1" GLAZING**System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area**

Laws and building and safety codes governing the design and use of 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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System Visible Transmittance (VT) vs Percent of Vision Area

Thermal Transmittance¹ (BTU/hr • ft² • °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**

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 Matrices 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	0.53
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 Transmittance²

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

Laws and building and safety codes governing the design and use of 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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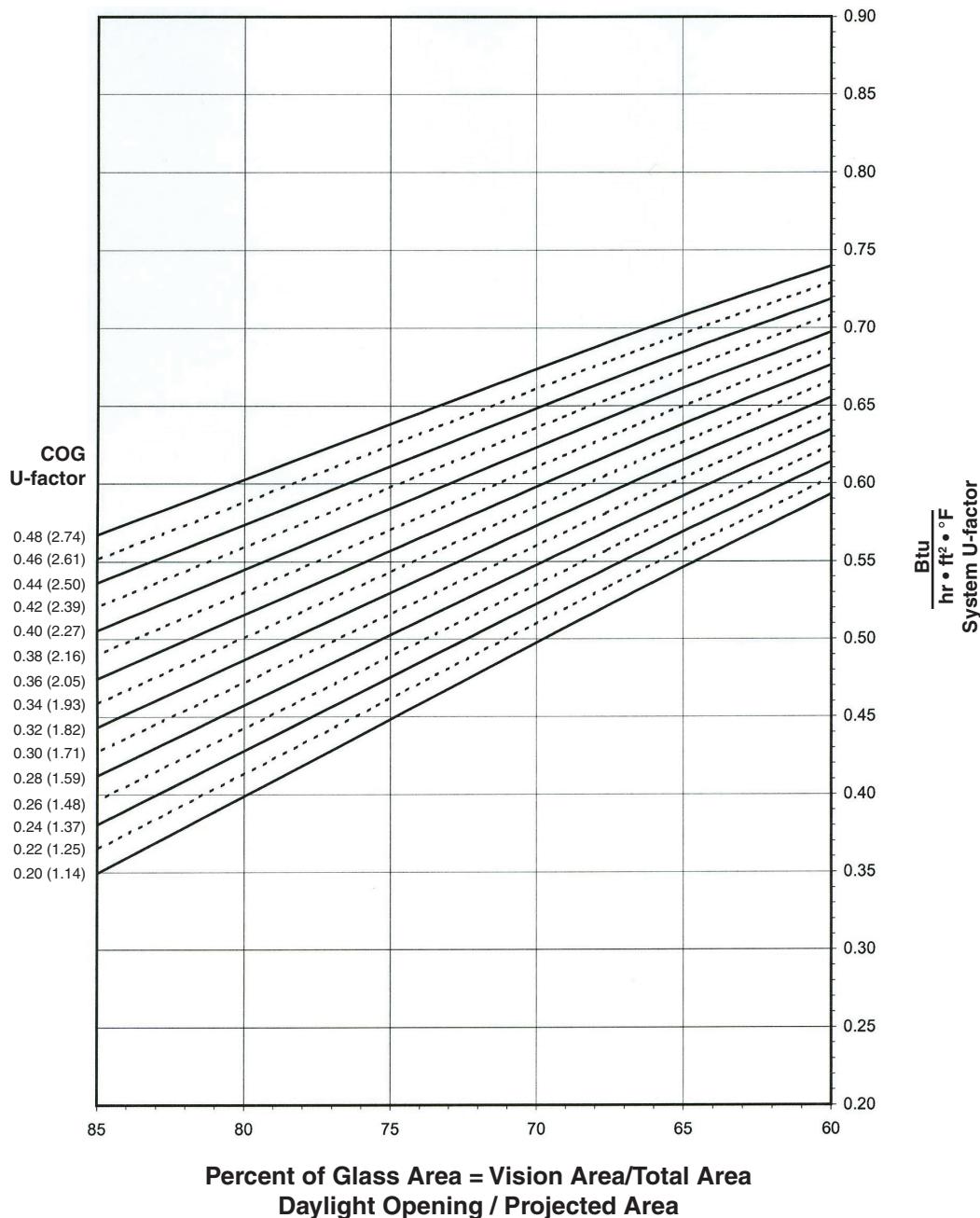
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HORIZONTAL SLIDER WITH 1" GLAZING**Note:**

Values in parentheses are metric.

COG = Center of Glass.

Charts are generated per AMMA 507

System U-factor vs Percent of Glass 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.

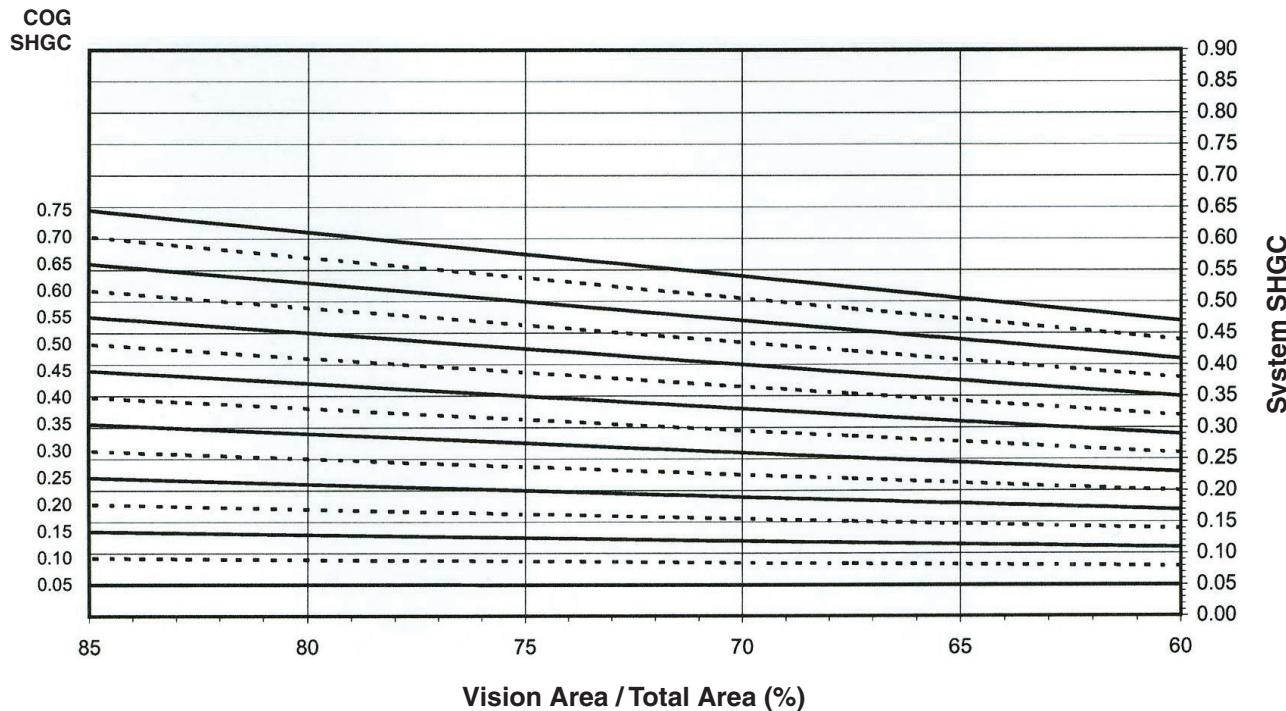
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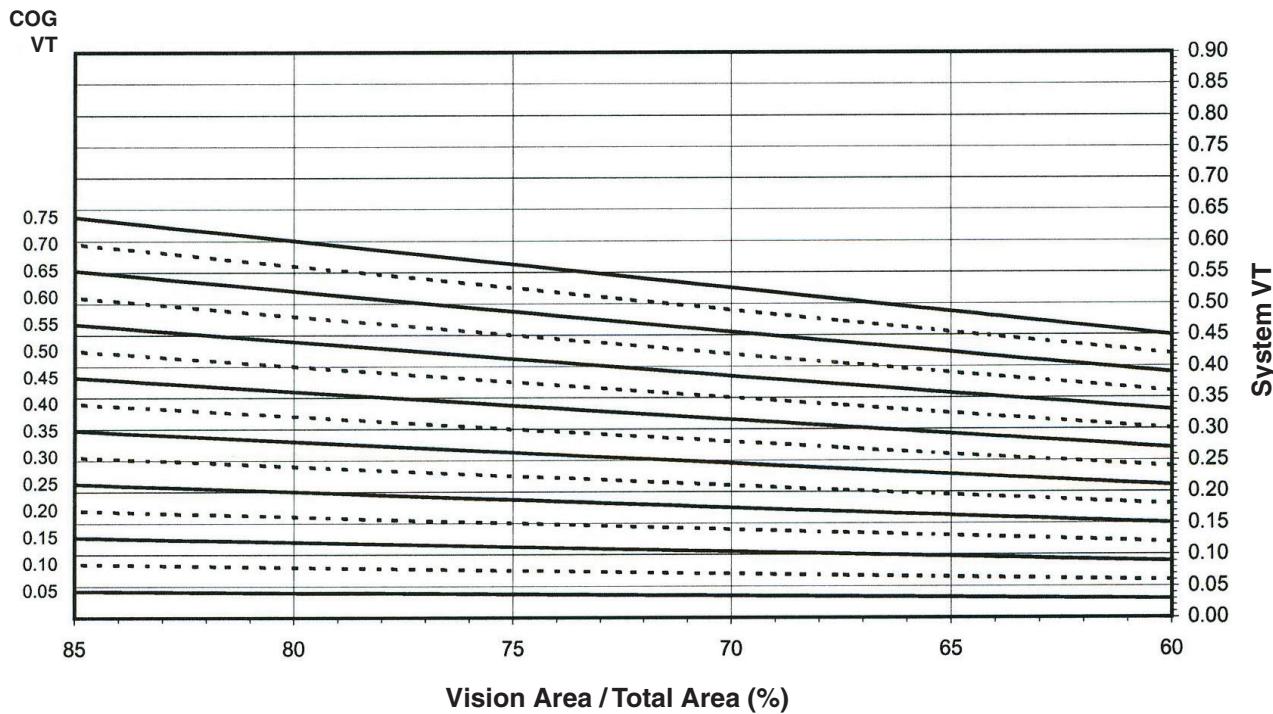
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HORIZONTAL SLIDER WITH 1" GLAZING

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 Transmittance¹ (BTU/hr • ft² • °F)

Glass U-Factor ³	Overall U-Factor ⁴
0.48	0.69
0.46	0.68
0.44	0.67
0.42	0.65
0.40	0.64
0.38	0.63
0.36	0.62
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**

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 Matrices 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

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 Transmittance²

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

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