nv Inc

EC 97911-296 FEATURES

#### **Features**

- 2500 UT SGT Unitwall<sup>®</sup> is a pre-glazed unitized curtain wall using 3M<sup>™</sup> VHB<sup>™</sup> structural glazing tape (SGT)
- 2-1/2" (63.5) sightline. System depths of:
  - 7-1/2" (190.5) captured and 6-1/2" (165.1) 4-side SGT with 1" (25.4) infill
  - 8-1/4" (209.6) captured and 7-1/4" (184.2) 4-sided SGT with 1-3/4" (44.5) infill
- No curing-wait time with SGT, unlike silicone. Units are ready to handle/ship immediately
- Patented polyamide thermal break
- Screw spline shop assembly
- Shop glazed infill options:
  - 1" (25.4) and 1-3/4" (44.5) insulating vision
  - 1" (25.4) and 1-3/4" (44.5) insulating spandrel
- Three system types available:
  - Captured
  - 4-sided SGT (all glass exterior look)
  - 2-sided Vertical SGT (Captured-Horizontal)
- · No exterior applied joint seals. Can be fully installed from inside, saving installation costs
- · Available spandrel back panning with enhanced pressure equalized venting/weeping options
- · Exterior re-glazing capability
- 90° and 135° inside and outside corners
- Top of slab fully adjustable anchoring ±1" in & out, up & down and left & right
- Comprehensively tested to North American Standards, including seismic, thermal, and acoustical standards
- Two color option
- Permanodic<sup>®</sup> anodized finishes option
- · Painted finishes in standard and custom choices
- Full Technical support from 3M<sup>™</sup> for glazing application of 3M<sup>™</sup> VHB<sup>™</sup> SGT (Structural Glazing Tape)

#### **Optional Features**

- Steel reinforcing available
- Accepts GLASSvent® UT windows with captured system type
- Profit\$Maker® Plus die sets available

#### **Product Applications**

- Suitable for new construction or remodel
- Ideal for mid-rise and high-rise applications

For specific product applications, consult your Kawneer representative.



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EC 97911-296

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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**INDEX** 

Architects - Most extrusions illustrated in this catalog are standard products for Kawneer. These concepts have been expanded and modified to afford you design freedom. Some miscellaneous details are non-standard and are intended to demonstrate how the system can be modified to expand design flexibility. Please contact your Kawneer representative for further assistance.

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2500 UT Unitwall® System - SGT

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

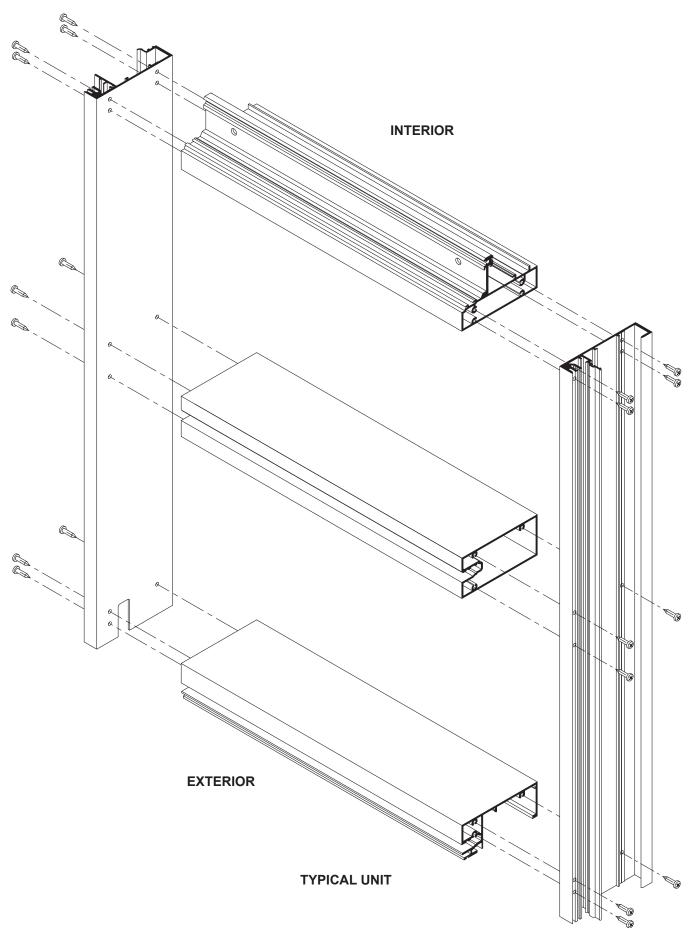
Pa - pascal

MPa - megapascal



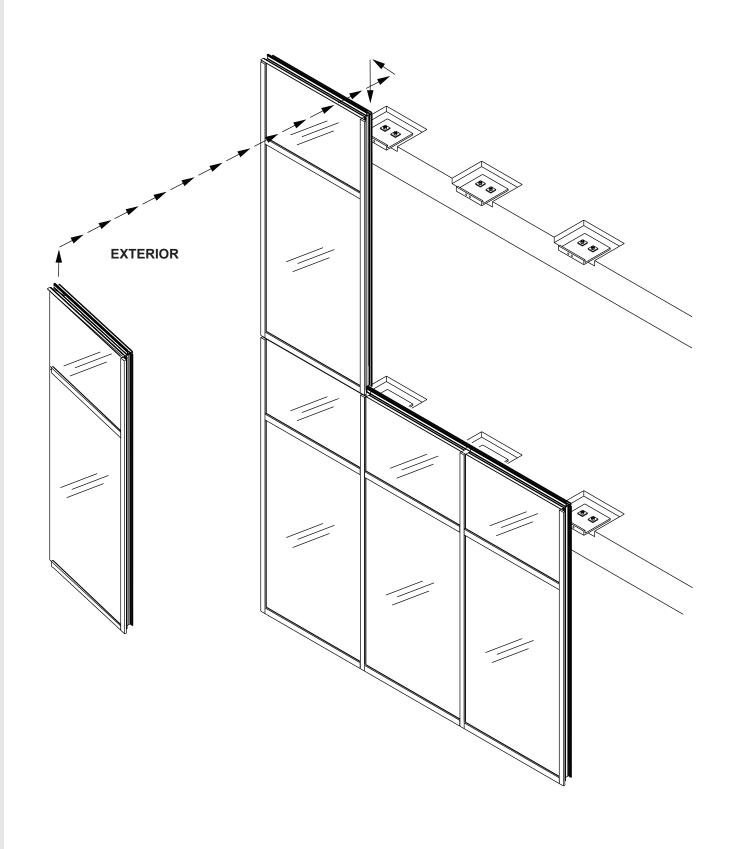
PICTORIAL VIEW

EC 97911-296



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PICTORIAL VIEW EC 97911-296

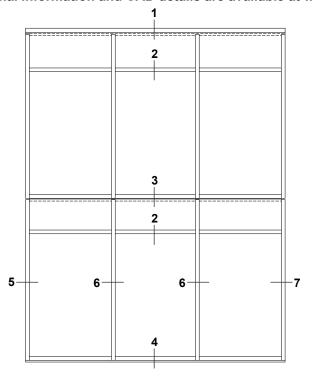


#### **CAPTURED SYSTEM SHOWN**

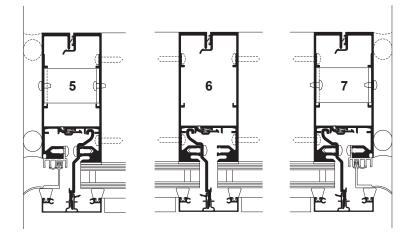


#### Additional information and CAD details are available at www.kawneer.com

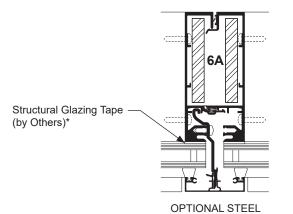
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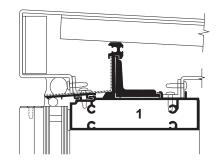


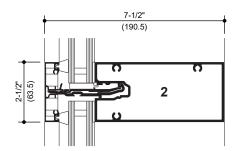
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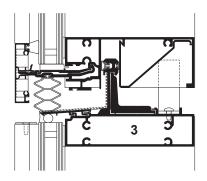


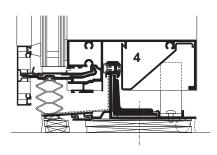
REINFORCING AS REQUIRED













\* INSTALLER NOTE: Installer is responsible for all required compatibility review and approvals with the Structural Glazing Tape Manufacturer and the Insulating Glass Unit Manufacturer.

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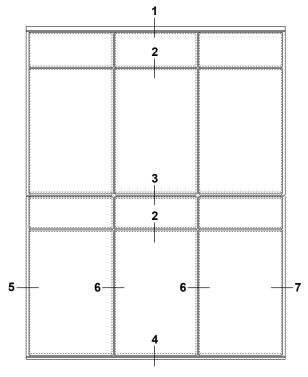
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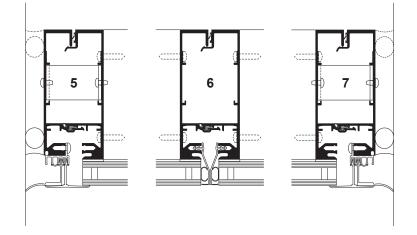
EC 97911-296

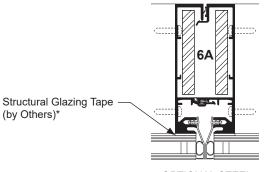
#### 1" INFILL DETAILS (4-SIDED SGT SYSTEM)

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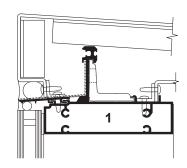


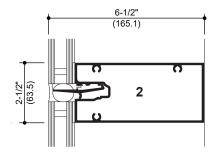
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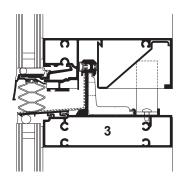


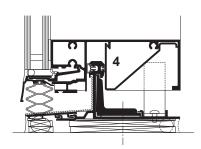


**OPTIONAL STEEL** REINFORCING AS REQUIRED





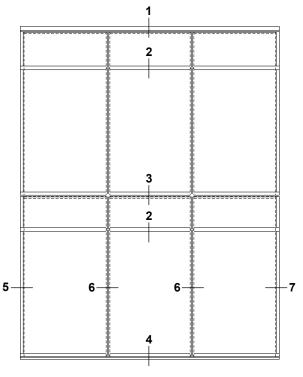




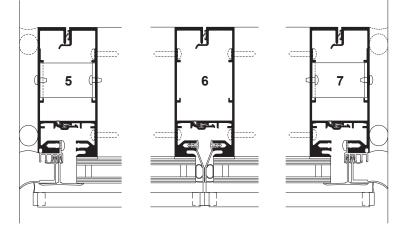
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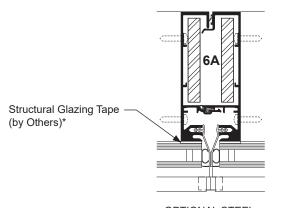


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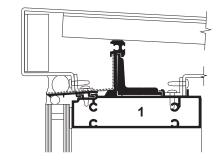


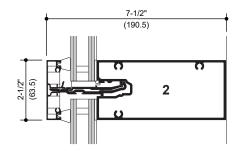
TYPICAL ELEVATION (VERTICAL SGT SYSTEM)

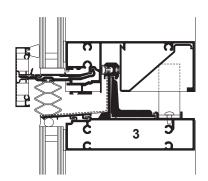


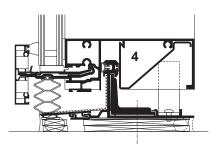


**OPTIONAL STEEL** REINFORCING AS REQUIRED









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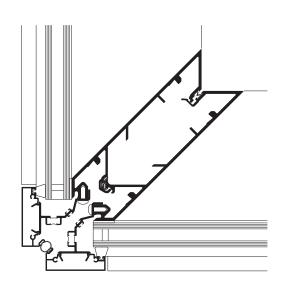
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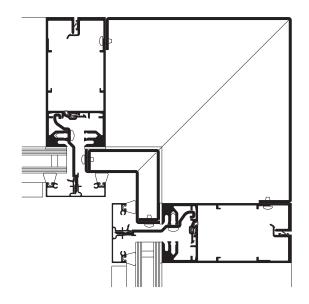
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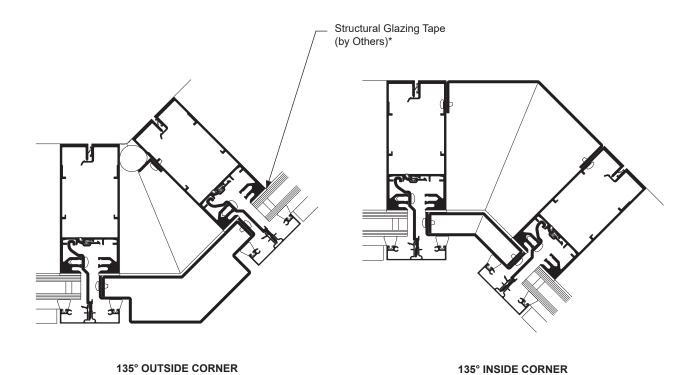
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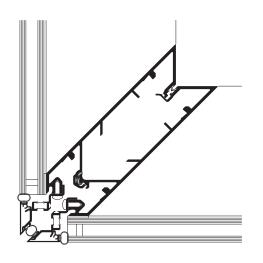
90° INSIDE CORNER

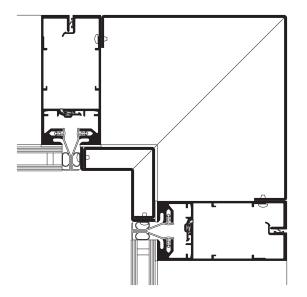


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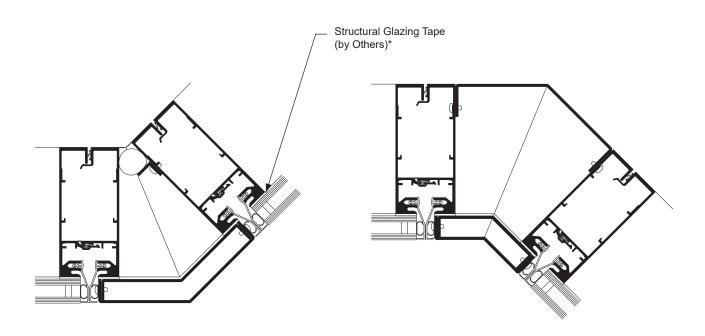
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90° SGT OUTSIDE CORNER

90° SGT INSIDE CORNER



135° SGT OUTSIDE CORNER

135° SGT INSIDE CORNER

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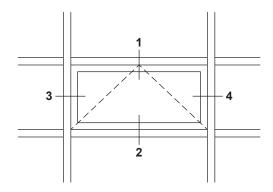
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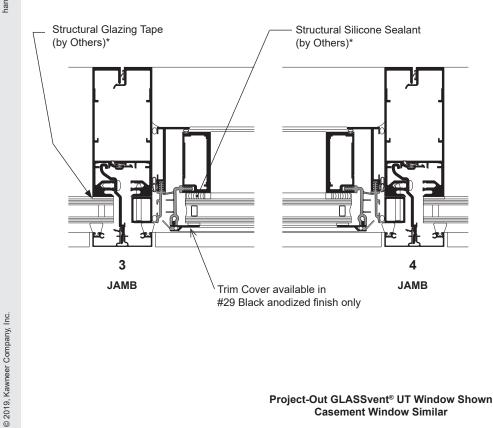
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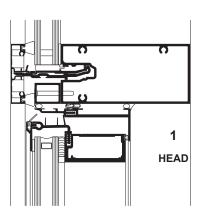
GLASSvent® UT WINDOWS (1" INFILL)

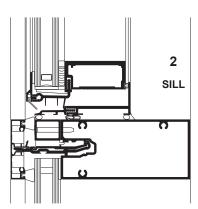
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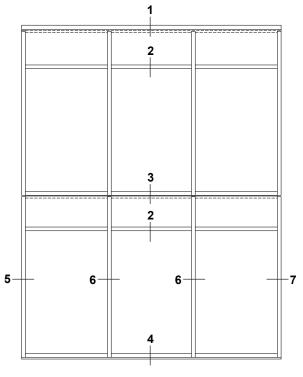


Project-Out GLASSvent® UT Window Shown **Casement Window Similar** 

(With Captured System Only)

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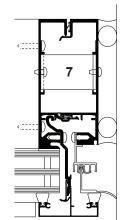
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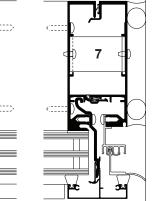


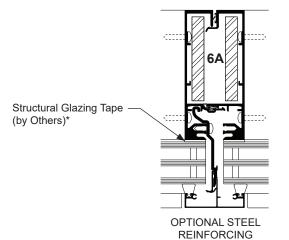
TYPICAL ELEVATION (CAPTURED SYSTEM)

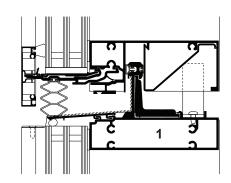
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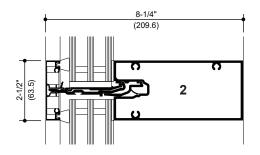
AS REQUIRED

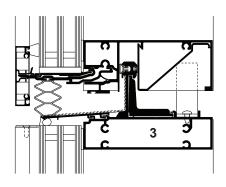


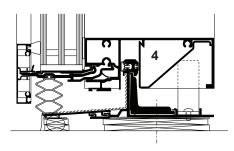














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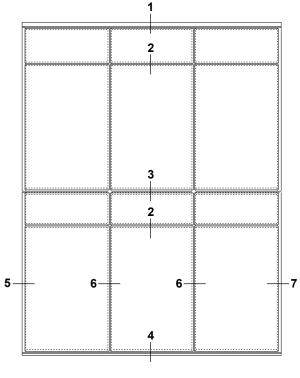
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1-3/4" INFILL DETAILS (4-SIDED SGT SYSTEM)

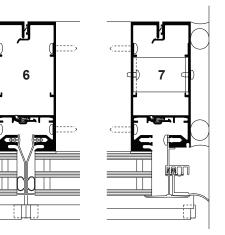
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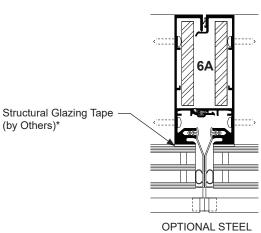
#### EC 97911-296

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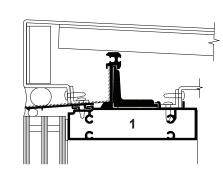


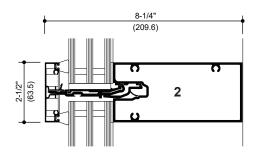
**TYPICAL ELEVATION** (4-SIDED SGT SYSTEM)

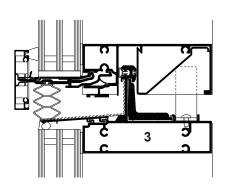


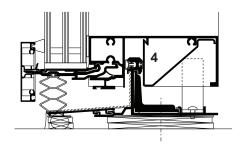


REINFORCING AS REQUIRED







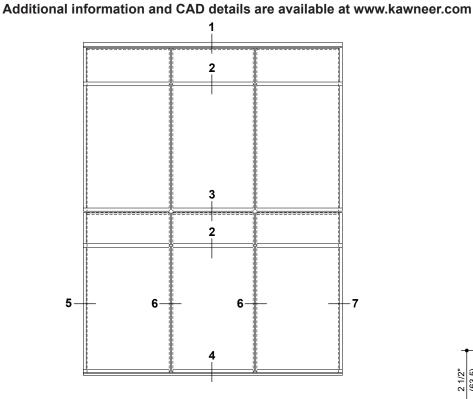


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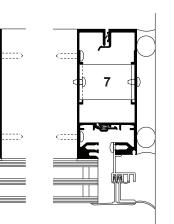
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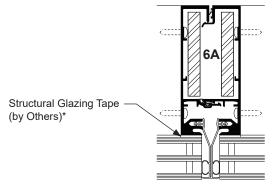
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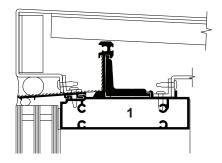
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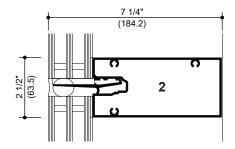
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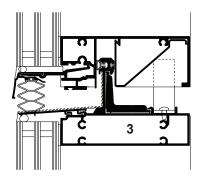


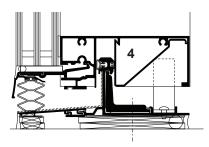


OPTIONAL STEEL REINFORCING AS REQUIRED









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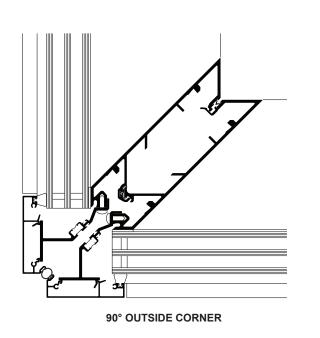
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1-3/4" INFILL CORNER DETAILS (CAPTURED SYSTEM)

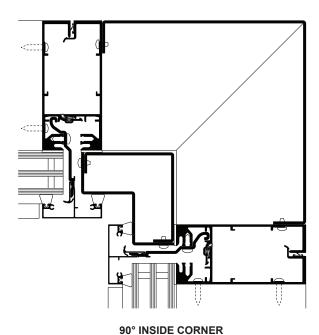
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135° OUTSIDE CORNER



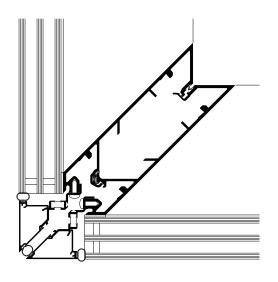
135° INSIDE CORNER

Structural Glazing Tape (by Others)\*

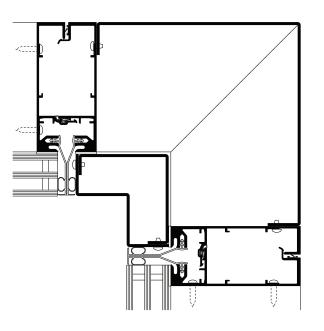
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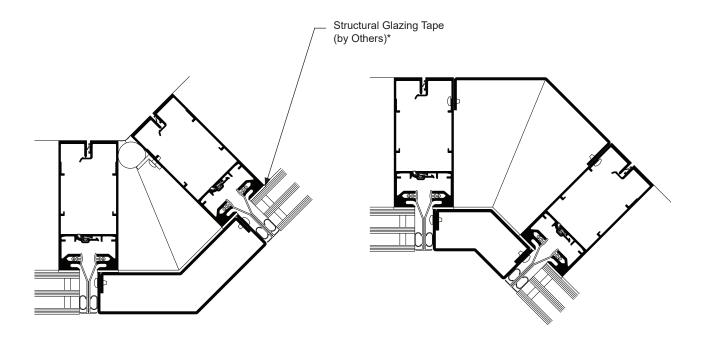
#### Additional information and CAD details are available at www.kawneer.com



90° SGT OUTSIDE CORNER



90° SGT INSIDE CORNER



135° SGT OUTSIDE CORNER

135° SGT INSIDE CORNER

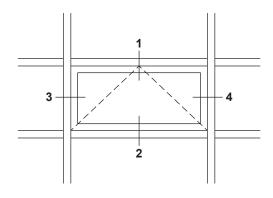
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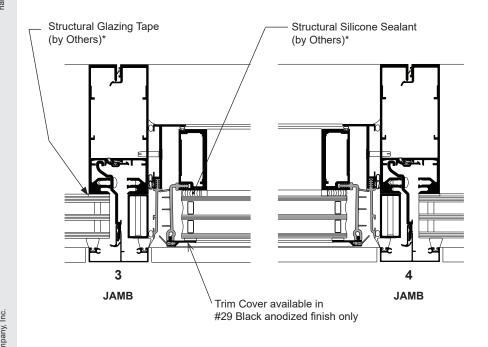


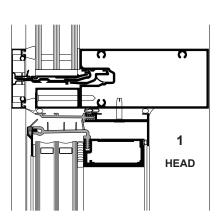
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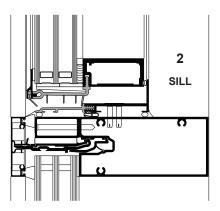
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Project-Out GLASSvent® UT Window Shown **Casement Window Similar** 

(With Captured System Only)

<sup>\*</sup> INSTALLER NOTE: Installer is responsible for all required compatibility review and approvals with the Structural Silicone, Structural Glazing Tape, and Insulating Glass Unit Manufacturers.

ANCHORING

EC 97911-296

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**ANCHOR AT JAMB** 

수 ±1" (25.4)

**ANCHOR AT MULLION** 

2500 UT Unitwall® System - SGT

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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 12,000 psi (82.74 MPa), STEEL 20,000 psi (137.90 MPa). Charted curves, in all cases are for the limiting value. Wind load charts contained herein are based upon nominal wind load utilized in allowable stress design. A conversion from Load Resistance Factor Design (LRFD) is provided. To convert ultimate wind loads to nominal loads, multiply ultimate wind loads by a factor of 0.6 per ASCE/SEI 7. A 4/3 increase in allowable stress has not been used to develop these curves. For special situations not covered by these curves, contact your Kawneer representative for additional information.

#### DEADLOAD CHARTS

Horizontal or deadload limitations are based upon 1/8" (3.2), maximum allowable deflection at the center of an intermediate horizontal member. The accompanying charts are calculated for 1" (25.4) thick insulating glass or 1-3/4" (44.5) thick glass supported on two setting blocks placed at the loading points shown.



WIND LOAD CHARTS

EC 97911-296

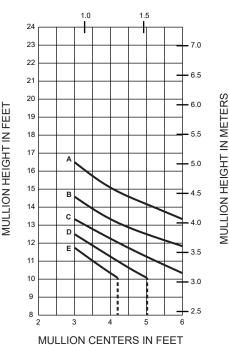
MULLION HEIGHT

When mullion is used in a SGT application, curves become straight due to structural glazing tape limits, represented by dashed lines on chart. \*Charts are for typical spans, not beginning or ending spans. C/L of stack horizontal to be at noted stool height above C/L of anchor.

----- SGT Structural Glazing Tape Limit - Tape joint contact is .875".

#### SINGLE SPAN

#### MULLION CENTERS IN METERS



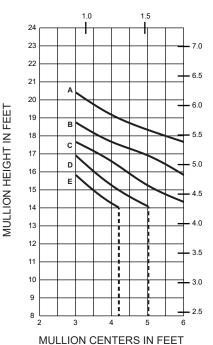
	Allowable Stress	LRFD Ultimate
	Design Load	Design Load
A =	20 PSF (960)	33 PSF (1580)
B =	30 PSF (1440)	50 PSF (2400)
C =	40 PSF (1920)	67 PSF (3200)
D =	50 PSF (2400)	83 PSF (4000)
E =	60 PSF (2880)	100 PSF (4790)

# 432001 432002

 $I = 10.648 (443.20 \times 10^4)$  $S = 3.411 (52.57 \times 10^3)$ 

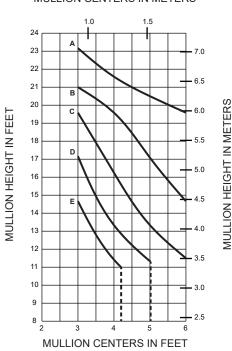
#### \*MULTI-SPAN 24" SPLICE LOCATION

MULLION CENTERS IN METERS



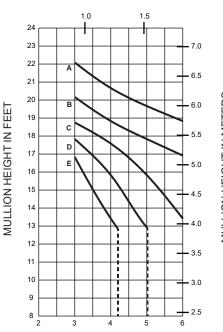
#### \*MULTI-SPAN **36" SPLICE LOCATION**

MULLION CENTERS IN METERS



#### \*MULTI-SPAN **30" SPLICE LOCATION**

MULLION CENTERS IN METERS



MULLION HEIGHT IN METERS MULLION CENTERS IN FEET

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to change configuration without prior notice when deemed necessary for product improvement.

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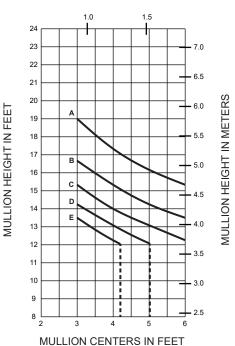
EC 97911-296 WIND LOAD CHARTS

When mullion is used in a SGT application, curves become straight due to structural glazing tape limits, represented by dashed lines on chart. \*Charts are for typical spans, not beginning or ending spans. C/L of stack horizontal to be at noted stool height above C/L of anchor.

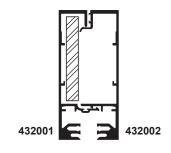
---- SGT Structural Glazing Tape Limit - Tape joint contact is .875".

### SINGLE SPAN with 1/2" x 3-1/2" Steel Bar

MULLION CENTERS IN METERS



	Allowable Stress	LRFD Ultimate
	Design Load	Design Load
A =	20 PSF (960)	33 PSF (1580)
B =	30 PSF (1440)	50 PSF (2400)
C =	40 PSF (1920)	67 PSF (3200)
D =	50 PSF (2400)	83 PSF (4000)
E =	60 PSF (2880)	100 PSF (4790)



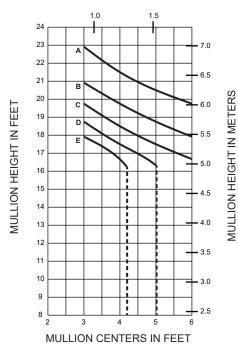
WITH 1/2" x 3-1/2" STEEL BAR

(Aluminum) I = 10.648 (443.20 x 10<sup>4</sup>) S = 3.411 (52.57 x 10<sup>3</sup>)

(Steel) I = 1.786 (74.34 x 10<sup>4</sup>) S = 1.021 (16.73 x 10<sup>3</sup>)

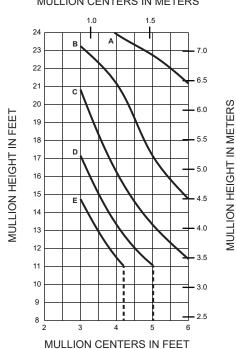
## \*MULTI-SPAN 24" SPLICE LOCATION with 1/2" x 3-1/2" Steel Bar

MULLION CENTERS IN METERS



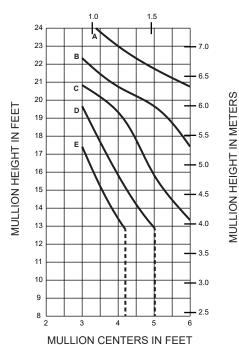
## \*MULTI-SPAN 36" SPLICE LOCATION with 1/2" x 3-1/2" Steel Bar

MULLION CENTERS IN METERS



## \*MULTI-SPAN 30" SPLICE LOCATION with 1/2" x 3-1/2" Steel Bar

MULLION CENTERS IN METERS



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When mullion is used in a SGT application, curves become straight due to structural glazing tape limits, represented

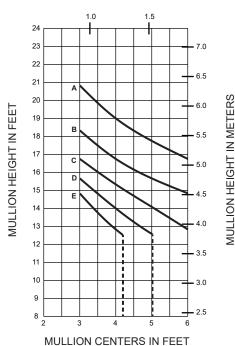
by dashed lines on chart. \*Charts are for typical spans, not beginning or ending spans. C/L of stack horizontal to be at noted stool height above C/L of anchor.

----- SGT Structural Glazing Tape Limit - Tape joint contact is .875".

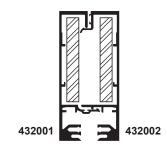
#### SINGLE SPAN with (2) 1/2" x 3-1/2" Steel Bars

WIND LOAD CHARTS

MULLION CENTERS IN METERS



	Allowable Stress	LRFD Ultimate
	Design Load	Design Load
A =	20 PSF (960)	33 PSF (1580)
B =	30 PSF (1440)	50 PSF (2400)
C =	40 PSF (1920)	67 PSF (3200)
D =	50 PSF (2400)	83 PSF (4000)
E=	60 PSF (2880)	100 PSF (4790)



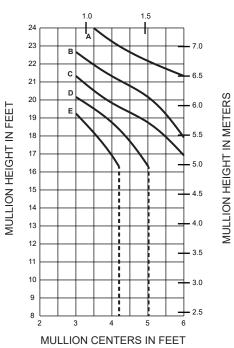
WITH (2) 1/2" x 3-1/2" STEEL BARS

(Aluminum)  $I = 10.648 (443.20 \times 10^4)$  $S = 3.411 (52.57 \times 10^3)$ 

 $I = 3.572 (148.67 \times 10^4)$  $S = 2.041 (33.44 \times 10^3)$ 

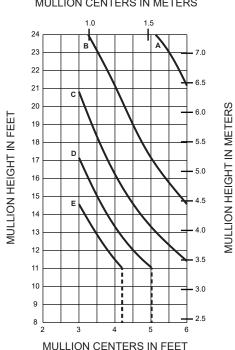
#### \*MULTI-SPAN 24" SPLICE LOCATION with (2) 1/2" x 3-1/2" Steel Bars

MULLION CENTERS IN METERS



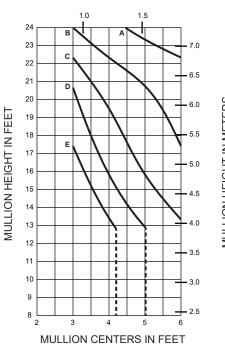
#### \*MULTI-SPAN 36" SPLICE LOCATION with (2) 1/2" x 3-1/2" Steel Bars

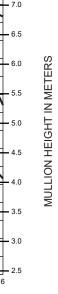
MULLION CENTERS IN METERS



#### \*MULTI-SPAN 30" SPLICE LOCATION with (2) 1/2" x 3-1/2" Steel Bars

MULLION CENTERS IN METERS





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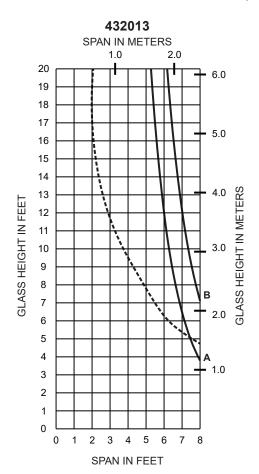
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Laws and building and safety codes governing the design and use of Kawneer products, such as glazade antrance, window, and outrain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or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

DEADLOAD CHARTS (1" INFILL)

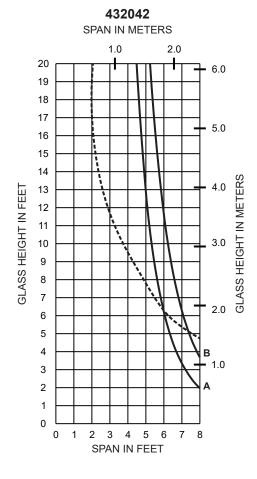
A = 1" GLASS (1/4 POINT LOADING) B = 1" GLASS (1/8 POINT LOADING)

Horizontal framing above the dashed curve requires glass chair and setting blocks to be doubled up, due to maximum 125 lb. Glass weight limit per glass chair.





 $I = 2.002 (83.33 \times 10^4)$  $S = 1.540 (25.24 \times 10^3)$ 



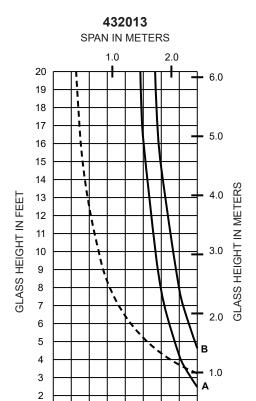


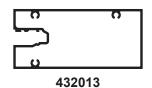
 $I = 1.037 (43.16 \times 10^4)$  $S = 0.745 (12.08 \times 10^3)$ 



2500 UT Unitwall® System - SGT

Horizontal framing above the dashed curve requires glass chair and setting blocks to be doubled up, due to maximum 125 lb. Glass weight limit per glass chair.



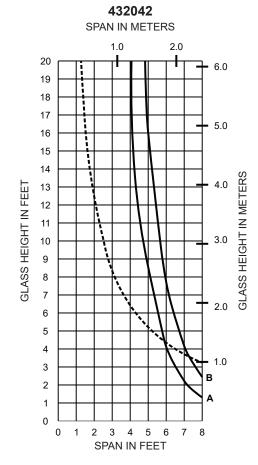


SPAN IN FEET

2 3 4 5 6

1 0

> I = 2.002 (83.33 x 104)  $S = 1.540 (25.24 \times 10^3)$





I = 1.037 (43.16 x 10<sup>4</sup>)  $S = 0.745 (12.08 \times 10^3)$ 

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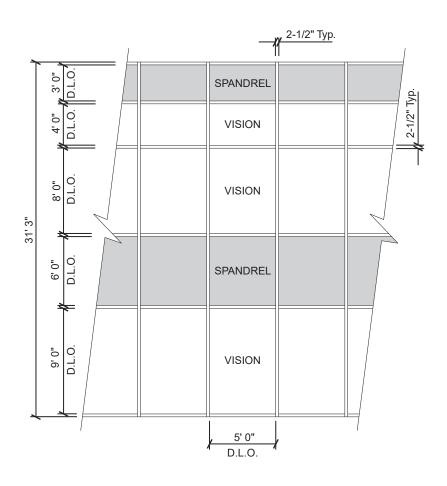
Laws and building and safety codes governing the design and use of Kawneer products, such as glazade antrannee, window, and ourfain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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

EC 97911-296 THERMAL CHARTS

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

(Based on single bay of Curtain Wall/Window Wall)



#### Vision Area

Example Glass U-factor =  $0.42 \text{ Btu/(ft}^2 \cdot \text{h} \cdot ^{\circ}\text{F})$ 

Vision Area =  $5(9 + 8 + 4) = 105.0 \text{ ft}^2$ 

Total Area (Vision) =  $5' 2-1/2" (9' 3-3/4" + 8' 2-1/2" + 4' 2-1/2") = 113.2 \text{ ft}^2$ 

Percentage of Vision Glass = (Vision Area ÷ Total Area)100 = (105.0 ÷ 113.2)100 = 93%

Spandrel Area

Example Spandrel R-value = 15 ( $ft^2 \cdot h \cdot {}^{\circ}F$ )/Btu

Spandrel Area =  $5(6 + 3) = 45.0 \text{ ft}^2$ 

Total Area (Spandrel) =  $5' 2-1/2" (6' 2-1/2" + 3' 3-3/4") = 49.6 \text{ ft}^2$ 

Percent of Spandrel = (Spandrel Area ÷ Total Area)100

 $= (45.0 \div 49.6)100 = 91\%$ 

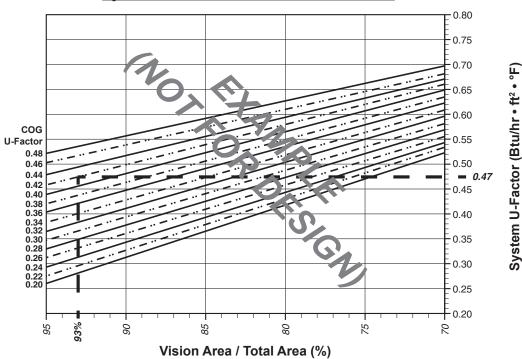


THERMAL CHARTS

EC 97911-296

#### **Vision Area Chart**

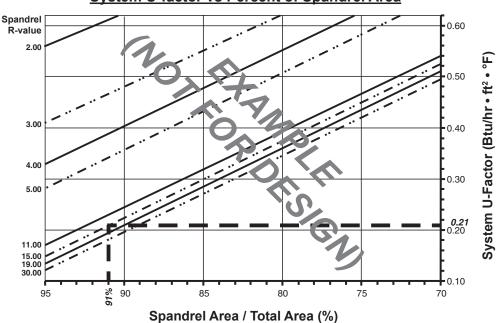
#### **System U-factor vs Percent of Vision Area**



Based on 93% glass and center of glass U-Factor of 0.42 System U-Factor is equal to 0.47 Btu/hr • ft² • °F

#### Spandrel Area Chart

#### System U-factor vs Percent of Spandrel Area



Based on 91% spandrel and center of spandrel R-value of 15, system U-factor is equal to 0.21 Btu/hr • ft² • °F

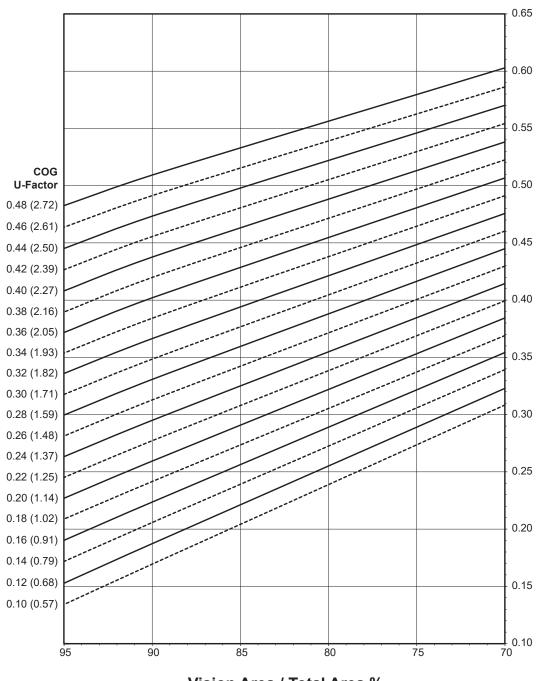


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EC 97911-296 THERMAL CHARTS

## CAPTURED SYSTEM 1" Double Glazed - Warm-Edge Glazing Spacer

#### **System U-Factor vs Percent of Glass Area**



#### Vision Area / Total 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.



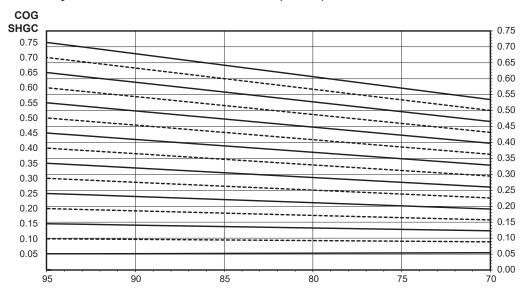
System U-Factor (Btu/hr • ft² • °F)

2500 UT Unitwall<sup>®</sup> System - SGT

THERMAL CHARTS EC 97911-296

## CAPTURED SYSTEM 1" Double Glazed - Warm-Edge Glazing Spacer

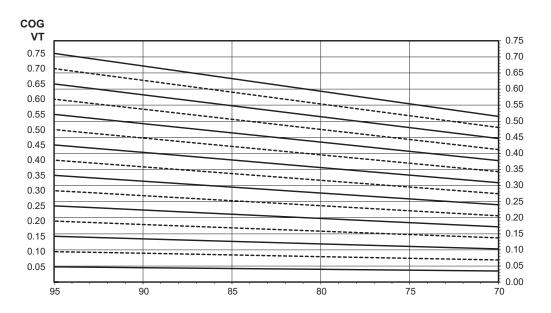
#### System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



Vision Area / Total Area %
(Total Daylight Opening / Projected Area)

Charts are generated per AAMA 507

#### Visible Transmittance (VT) vs Percent of Vision Area



Vision Area / Total Area %
(Total Daylight Opening / Projected Area)

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

Glass U-Factor <sup>3</sup>	Overall U-Factor 4
0.48	0.51
0.46	0.49
0.44	0.48
0.42	0.46
0.40	0.44
0.38	0.42
0.36	0.41
0.34	0.39
0.32	0.37
0.30	0.35
0.28	0.33
0.26	0.32
0.24	0.30
0.22	0.28
0.20	0.26
0.18	0.25
0.16	0.23
0.14	0.21
0.12	0.19
0.10	0.17

# CAPTURED SYSTEM 1" Double Glazed 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.
- 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 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

#### SHGC Matrix <sup>2</sup>

Glass SHGC <sup>3</sup>	Overall SHGC 4
0.75	0.67
0.70	0.63
0.65	0.59
0.60	0.54
0.55	0.50
0.50	0.45
0.45	0.41
0.40	0.36
0.35	0.32
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 <sup>2</sup>

Glass VT <sup>3</sup>	Overall VT 4
0.75	0.67
0.70	0.62
0.65	0.58
0.60	0.53
0.55	0.49
0.50	0.44
0.45	0.40
0.40	0.36
0.35	0.31
0.30	0.27
0.25	0.22
0.20	0.18
0.15	0.13
0.10	0.09
0.05	0.04

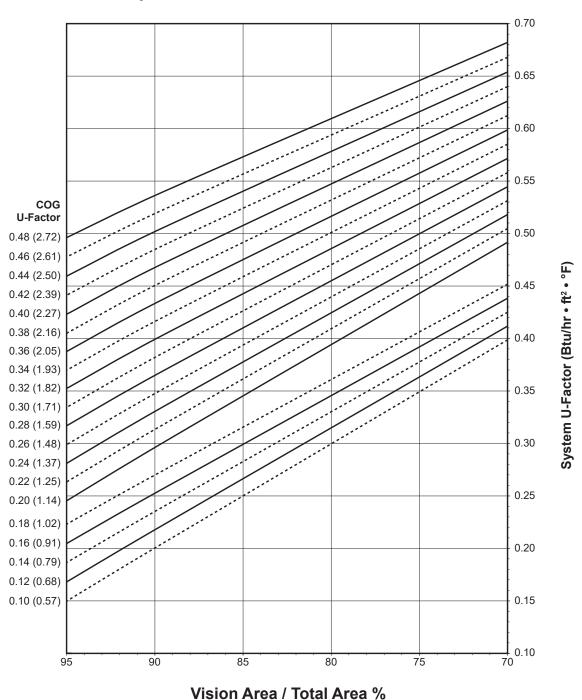


THERMAL CHARTS

EC 97911-296

## <u>CAPTURED SYSTEM</u> 1" Double Glazed - Aluminum Glazing Spacer

#### **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.



System SHGC

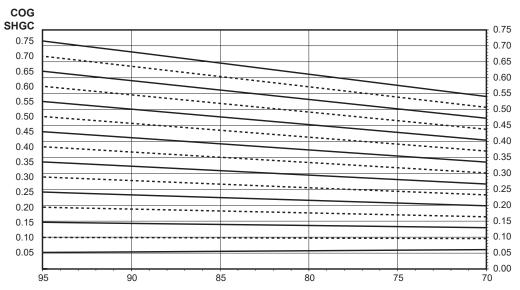
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THERMAL CHARTS EC 97911-296

#### **CAPTURED SYSTEM** 1" Double Glazed - Aluminum Glazing Spacer

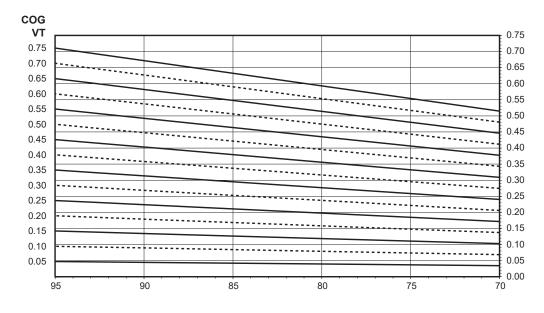
#### System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



Vision Area / Total Area % (Total Daylight Opening / Projected Area)

Charts are generated per AAMA 507

#### Visible Transmittance (VT) vs Percent of Vision Area



Vision Area / Total Area % (Total Daylight Opening / Projected Area)



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

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THEITHAL HAIISIIIILLA	(BIO/III TIL T F)
Glass U-Factor <sup>3</sup>	Overall U-Factor 4
0.48	0.54
0.46	0.52
0.44	0.51
0.42	0.49
0.40	0.47
0.38	0.46
0.36	0.44
0.34	0.42
0.32	0.40
0.30	0.39
0.28	0.37
0.26	0.35
0.24	0.34
0.22	0.32
0.20	0.30
0.18	0.27
0.16	0.26
0.14	0.24
0.12	0.22
0.10	0.21

# CAPTURED SYSTEM 1" Double Glazed 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 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

#### SHGC Matrix<sup>2</sup>

Glass SHGC <sup>3</sup>	Overall SHGC <sup>4</sup>
0.75	0.68
0.70	0.63
0.65	0.59
0.60	0.54
0.55	0.50
0.50	0.45
0.45	0.41
0.40	0.37
0.35	0.32
0.30	0.28
0.25	0.23
0.20	0.19
0.15	0.14
0.10	0.10
0.05	0.05

#### Visible Transmittance <sup>2</sup>

Glass VT <sup>3</sup>	Overall VT 4
0.75	0.67
0.70	0.62
0.65	0.58
0.60	0.53
0.55	0.49
0.50	0.44
0.45	0.40
0.40	0.36
0.35	0.31
0.30	0.27
0.25	0.22
0.20	0.18
0.15	0.13
0.10	0.09
0.05	0.04

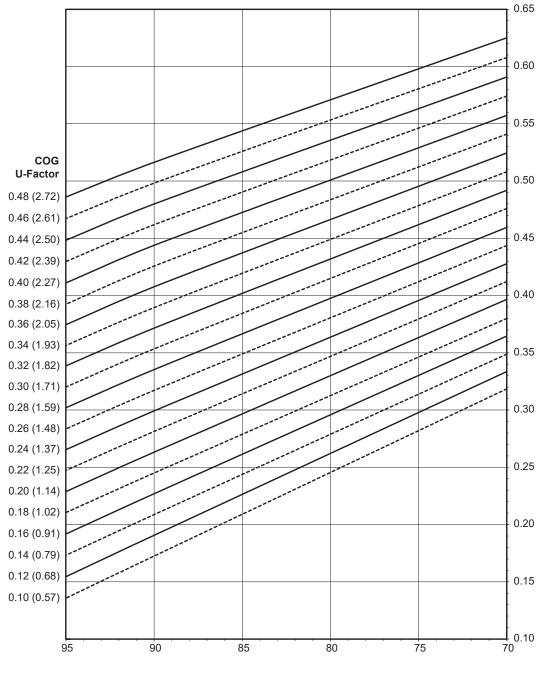


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EC 97911-296 THERMAL CHARTS

## 4-SIDED SGT SYSTEM 1" Double Glazed - Warm-Edge Glazing Spacer

#### **System U-Factor vs Percent of Glass Area**



#### Vision Area / Total 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.



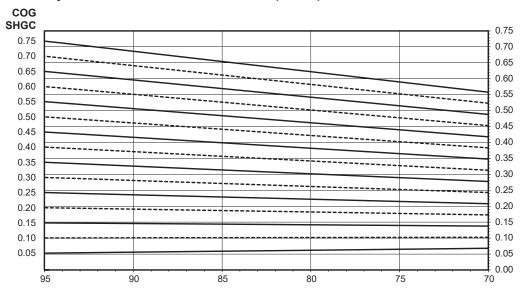
System U-Factor (Btu/hr • ft² • °F)

THERMAL CHARTS

EC 97911-296

## 4-SIDED SGT SYSTEM 1" Double Glazed - Warm-Edge Glazing Spacer

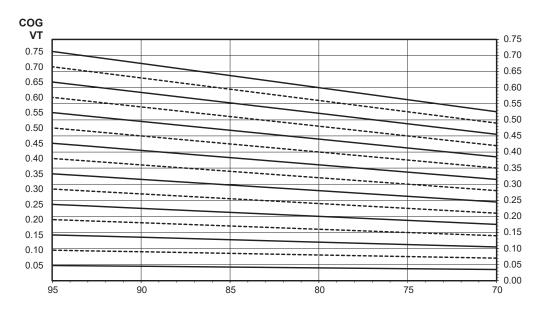
#### System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



Vision Area / Total Area %
(Total Daylight Opening / Projected Area)

Charts are generated per AAMA 507

#### Visible Transmittance (VT) vs Percent of Vision Area



Vision Area / Total Area % (Total Daylight Opening / Projected Area)

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

Glass U-Factor <sup>3</sup>	Overall U-Factor 4
0.48	0.52
0.46	0.50
0.44	0.48
0.42	0.48
0.40	0.45
0.38	0.43
0.36	0.41
0.34	0.39
0.32	0.37
0.30	0.36
0.28	0.34
0.26	0.32
0.24	0.30
0.22	0.28
0.20	0.27
0.18	0.25
0.16	0.23
0.14	0.21
0.12	0.19
0.10	0.18

# 4-SIDED SGT SYSTEM 1" Double Glazed 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.
- 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 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

#### SHGC Matrix <sup>2</sup>

Glass SHGC <sup>3</sup>	Overall SHGC <sup>4</sup>
0.75	0.68
0.70	0.64
0.65	0.59
0.60	0.55
0.55	0.50
0.50	0.46
0.45	0.41
0.40	0.37
0.35	0.32
0.30	0.28
0.25	0.24
0.20	0.19
0.15	0.15
0.10	0.10
0.05	0.06

#### Visible Transmittance <sup>2</sup>

Glass VT <sup>3</sup>	Overall VT 4	
0.75	0.67	
0.70	0.63	
0.65	0.58	
0.60	0.54	
0.55	0.49	
0.50	0.45	
0.45	0.40	
0.40	0.36	
0.35	0.31	
0.30	0.27	
0.25	0.22	
0.20	0.18	
0.15	0.13	
0.10	0.09	
0.05	0.04	

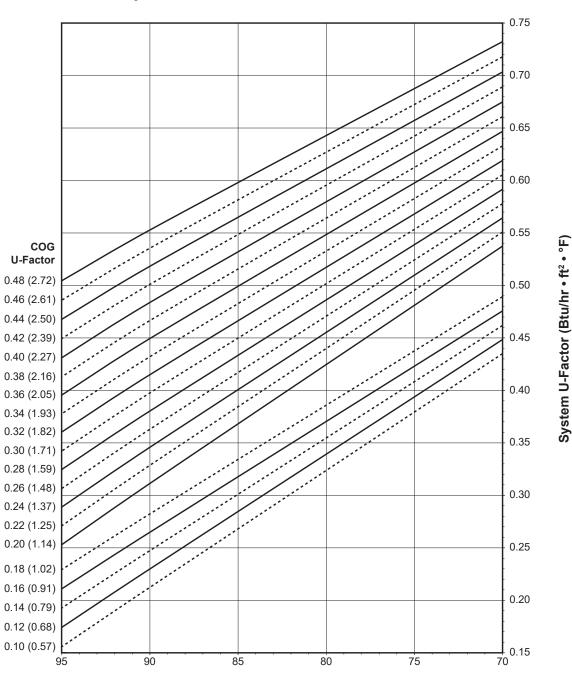


THERMAL CHARTS

EC 97911-296

## 4-SIDED SGT SYSTEM 1" Double Glazed - Aluminum Glazing Spacer

#### **System U-Factor vs Percent of Glass Area**



#### Vision Area / Total 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.

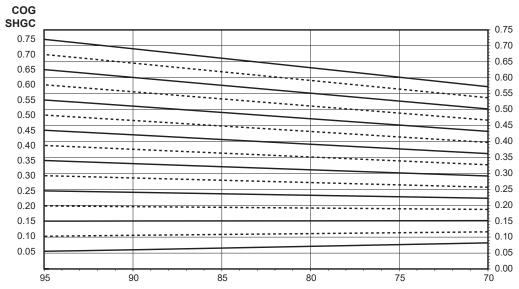


System SHGC

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#### **4-SIDED SGT SYSTEM** 1" Double Glazed - Aluminum Glazing Spacer

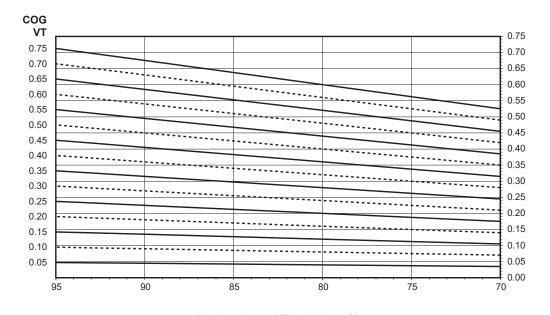
#### System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



Vision Area / Total Area % (Total Daylight Opening / Projected Area)

Charts are generated per AAMA 507

#### Visible Transmittance (VT) vs Percent of Vision Area



Vision Area / Total Area % (Total Daylight Opening / Projected Area)



THERMAL PERFORMANCE MATRIX (NFRC SIZE)

Thermal Hallshittanee (B10/III It 1)		
Glass U-Factor <sup>3</sup> Overall U-Factor		
0.48	0.56	
0.46	0.54	
0.44	0.52	
0.42	0.51	
0.40	0.49	
0.38	0.47	
0.36	0.45	
0.34	0.44	
0.32	0.42	
0.30	0.40	
0.28	0.39	
0.26	0.37	
0.24	0.35	
0.22	0.33	
0.20	0.32	
0.18	0.29	
0.16	0.27	
0.14	0.25	
0.12	0.24	
0.10	0.22	

# 4-SIDED SGT SYSTEM 1" Double Glazed 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 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

#### SHGC Matrix <sup>2</sup>

Glass SHGC <sup>3</sup>	Overall SHGC <sup>4</sup>		
0.75	0.69		
0.70	0.64		
0.65	0.60		
0.60	0.55		
0.55	0.51		
0.50	0.46		
0.45	0.42		
0.40	0.37		
0.35	0.33		
0.30	0.28		
0.25	0.24		
0.20	0.20		
0.15	0.15		
0.10	0.11		
0.05	0.06		

#### **Visible Transmittance** <sup>2</sup>

VISIDIE ITALISIIIILLALICE			
Glass VT <sup>3</sup> Overall VT <sup>4</sup>			
0.75	0.67		
0.70	0.63		
0.65	0.58		
0.60	0.54		
0.55	0.49		
0.50	0.45		
0.45	0.40		
0.40	0.36		
0.35	0.31		
0.30	0.27		
0.25	0.22		
0.20	0.18		
0.15	0.13		
0.10	0.09		
0.05	0.04		



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

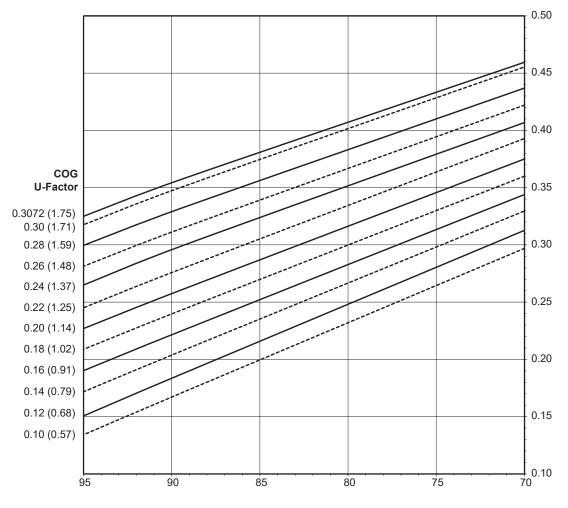
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EC 97911-296 THERMAL CHARTS

## CAPTURED SYSTEM 1-3/4" Triple Glazed - Warm-Edge Glazing Spacer

#### **System U-Factor vs Percent of Glass Area**



Vision Area / Total 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/hr • ft² • °F)

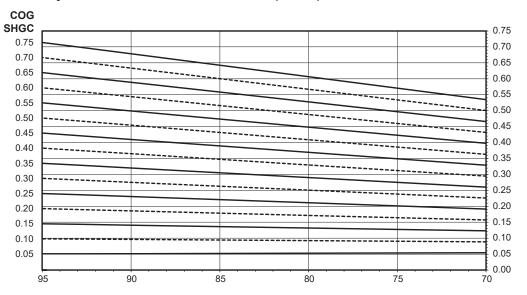
System SHGC

THERMAL CHARTS EC 97911-296

#### **CAPTURED SYSTEM** 1-3/4" Triple Glazed - Warm-Edge Glazing Spacer

2500 UT Unitwall® System - SGT

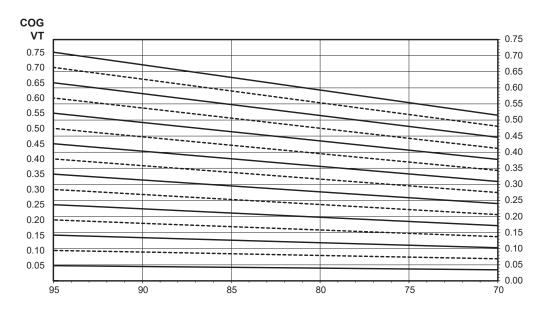
#### System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



Vision Area / Total Area % (Total Daylight Opening / Projected Area)

Charts are generated per AAMA 507

#### Visible Transmittance (VT) vs Percent of Vision Area



Vision Area / Total Area % (Total Daylight Opening / Projected Area) Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

e design and use of Kawneer surtain wall products, vary widely. configurations, operating esponsibility therefor.



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

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

Glass U-Factor <sup>3</sup>	Overall U-Factor 4	
0.31	0.36	
0.30	0.35	
0.28	0.33	
0.26	0.31	
0.24	0.30	
0.22	0.28	
0.20	0.26	
0.18	0.24	
0.16	0.22	
0.14	0.21	
0.12	0.19	
0.10	0.17	

#### **CAPTURED SYSTEM** 1-3/4 Triple Glazed 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 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

#### SHGC Matrix <sup>2</sup>

0.67 0.63 0.58
0.58
0.54
0.50
0.45
0.41
0.36
0.32
0.27
0.23
0.18
0.14
0.10
0.05

#### Visible Transmittance 2

Glass VT <sup>3</sup>	Overall VT 4	
0.75	0.67	
0.70	0.62	
0.65	0.58	
0.60	0.53	
0.55	0.49	
0.50	0.44	
0.45	0.40	
0.40	0.36	
0.35	0.31	
0.30	0.27	
0.25	0.22	
0.20	0.18	
0.15	0.13	
0.10	0.09	
0.05	0.04	

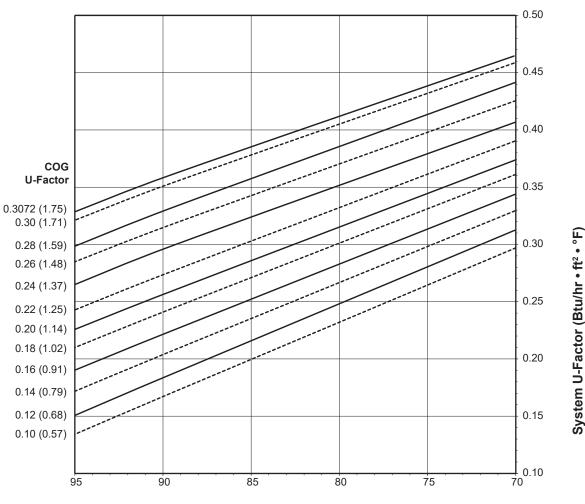


THERMAL CHARTS

EC 97911-296

## 4-SIDED SGT SYSTEM 1-3/4" Triple Glazed - Warm-Edge Glazing Spacer

#### **System U-Factor vs Percent of Glass Area**



#### Vision Area / Total 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.

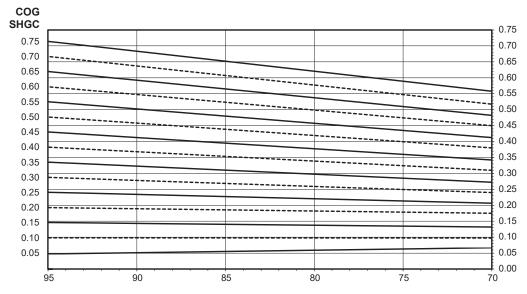


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THERMAL CHARTS

#### **4-SIDED SGT SYSTEM** 1-3/4" Triple Glazed - Warm-Edge Glazing Spacer

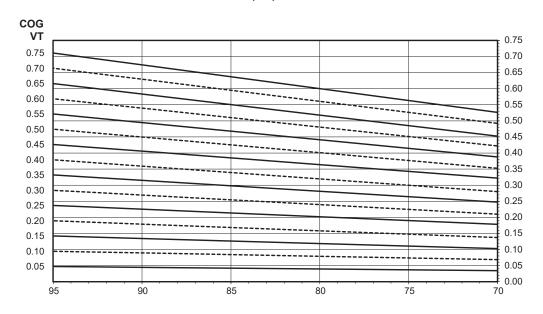
#### System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



Vision Area / Total Area % (Total Daylight Opening / Projected Area)

Charts are generated per AAMA 507

#### Visible Transmittance (VT) vs Percent of Vision Area



Vision Area / Total Area % (Total Daylight Opening / Projected Area)

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THERMAL PERFORMANCE MATRIX (NFRC SIZE)

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

Glass U-Factor <sup>3</sup> Overall U-Factor <sup>4</sup>			
0.31	0.36		
0.30	0.35		
0.28	0.33		
0.26	0.31		
0.24	0.30		
0.22	0.28		
0.20	0.26		
0.18	0.24		
0.16	0.22		
0.14	0.21		
0.12	0.19		
0.10	0.17		

# 4-SIDED SGT SYSTEM 1-3/4" Triple Glazed 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.
- 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 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

#### SHGC Matrix<sup>2</sup>

Glass SHGC <sup>3</sup>	Overall SHGC <sup>4</sup>	
0.75	0.68	
0.70	0.64	
0.65	0.59	
0.60	0.55	
0.55	0.50	
0.50	0.46	
0.45	0.41	
0.40	0.37	
0.35	0.32	
0.30	0.28	
0.25	0.23	
0.20	0.19	
0.15	0.14	
0.10	0.10	
0.05	0.06	

#### **Visible Transmittance** <sup>2</sup>

Glass VT <sup>3</sup> Overall VT <sup>4</sup>			
0.75	0.67		
0.70	0.63		
0.65	0.58		
0.60	0.54		
0.55	0.49		
0.50	0.45		
0.45	0.40		
0.40	0.36		
0.35	0.31		
0.30	0.27		
0.25	0.22		
0.20	0.18		
0.15	0.13		
0.10	0.09		
0.05	0.04		



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THERMAL CHARTS

#### **CONDENSATION RESISTANCE**

Glazing Infill	Condensation Resistance Factor (CRF) AAMA 1503		Temperature Index (TI) CSA A440-0	
	Frame	Glass	Frame	Glass
1" Double Captured	80	72	69	65
1" Double 4-Sided SGT	80	71	75	65
1-3/4" Triple Captured	81	72	65	65
1-3/4" Triple 4-Sided SGT	85	77	79	72

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

