

## **Features**

- FG 623 is an inside glazed system
- 2-1/4" (57.2) sightline with standard 6" (152.4) system depth
- Optional IsoLock® lanced pour and debridged thermal break
- Screw spline and shear block fabrication and joinery
- Infill options of 1/4" (6.4) and 1" (25.4)
- Silicone compatible glazing materials for long lasting seals
- Corner members are available for 90° and 135° applications
- Incorporates expansion verticals as required
- FG 623 has been large missile impact and cycle tested
- FG 623 is for stock length sales
- Permanodic® anodized finishes option
- Painted finishes in standard and custom choices

## **Optional Features**

- Integrates with standard Kawneer windows

## **Product Applications**

- Ribbon windows
- Ideal for single and multi-lite punched openings

For specific product applications,  
consult your Kawneer representative.

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**Architects** – Most extrusion and window types 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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**THERMAL FRAMING DETAILS .....6**

**CORNER DETAILS .....7**

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**THERMAL CHARTS ..... 13-20**

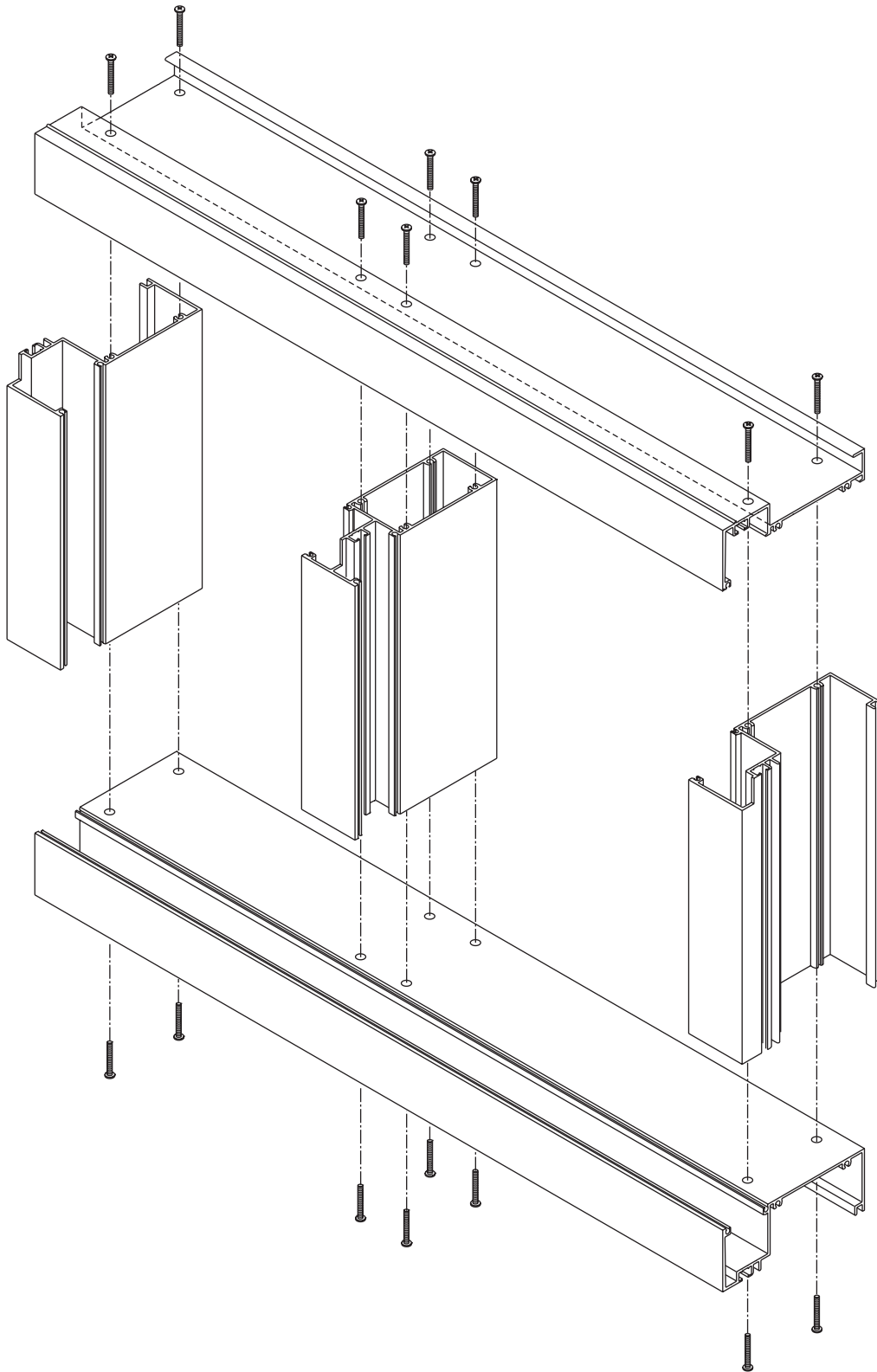
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Metric (SI) conversion figures are included throughout these details for reference. Numbers in parentheses ( ) are millimeters unless otherwise noted.

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

- m – meter
- cm – centimeter
- mm – millimeter
- s – second
- Pa – pascal
- MPa – megapascal

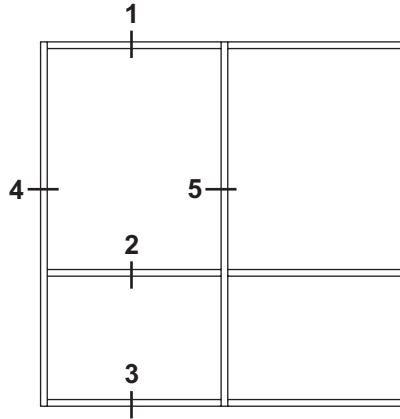


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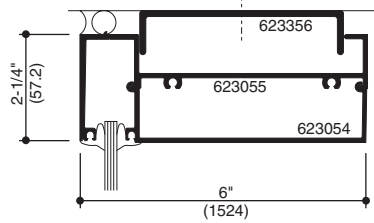


ELEVATION IS NUMBER KEYED TO DETAILS

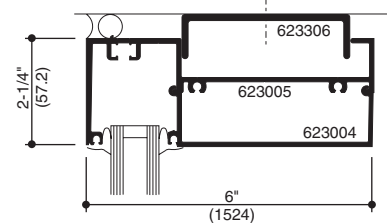
1/4" SYSTEM

1" SYSTEM

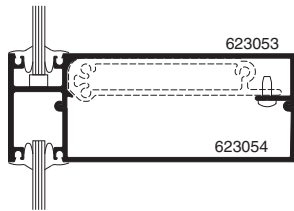
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HEAD



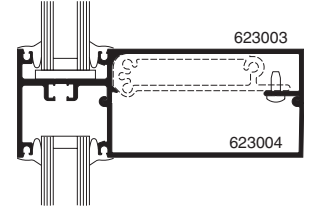
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HEAD



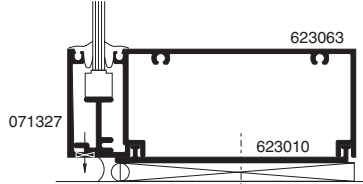
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INTERMEDIATE  
HORIZONTAL



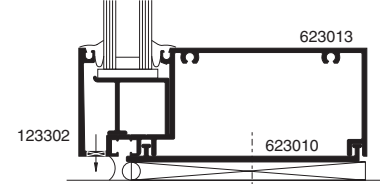
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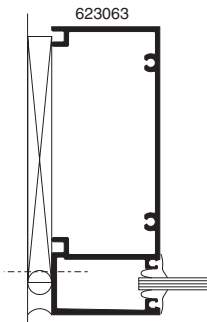
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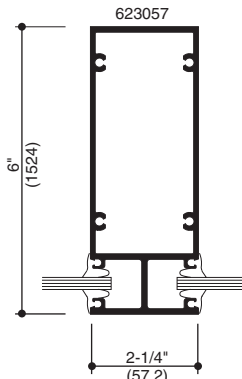
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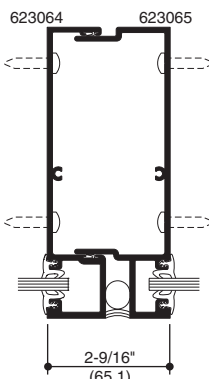
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JAMB



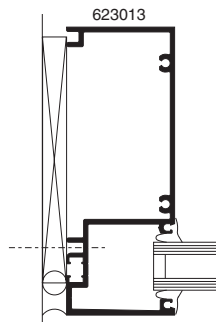
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MULLION



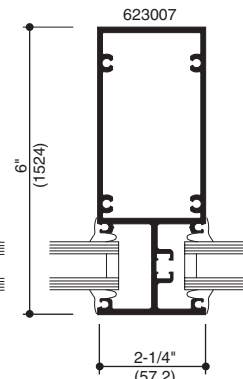
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EXPANSION  
MULLION



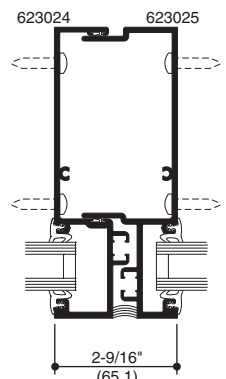
4  
JAMB



5  
MULLION



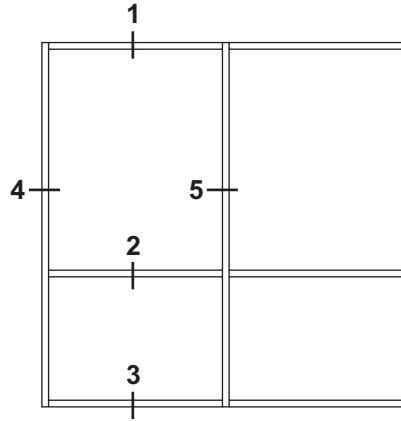
5A  
EXPANSION  
MULLION



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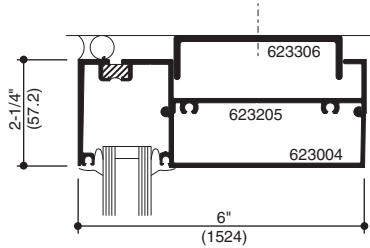
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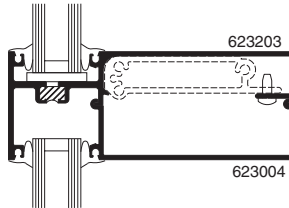
ELEVATION IS NUMBER KEYED TO DETAILS

**1" SYSTEM (THERMAL)**

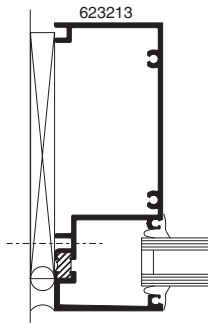
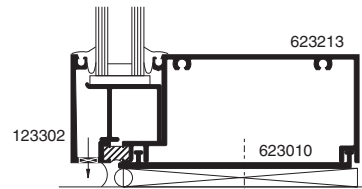
**1 HEAD**



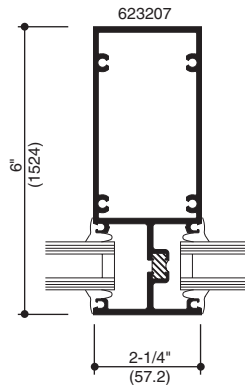
**2 INTERMEDIATE HORIZONTAL**



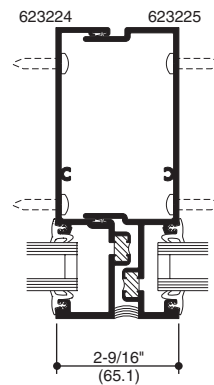
**3 SILL**



**4 JAMB**



**5 MULLION**



**5A EXPANSION MULLION**

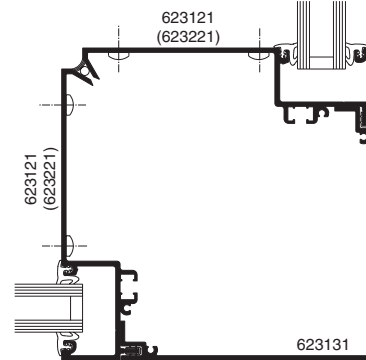
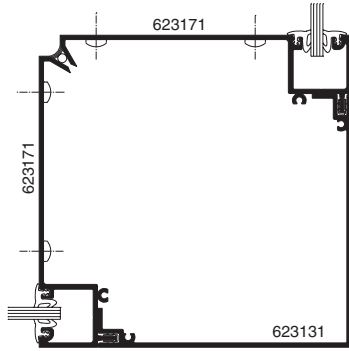
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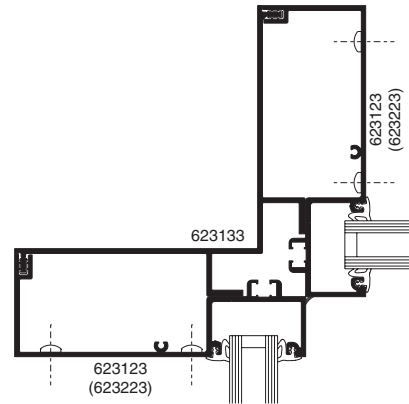
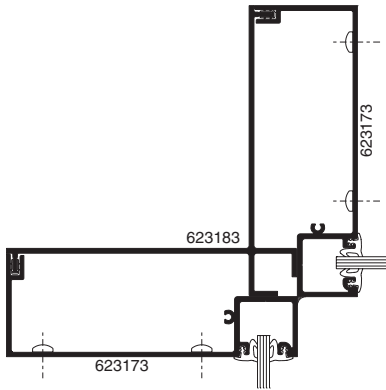
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1/4" SYSTEM

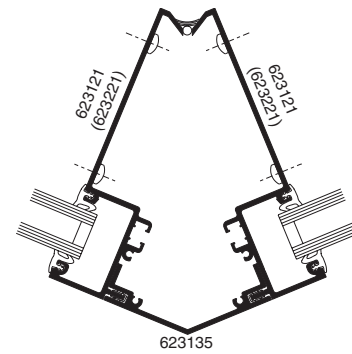
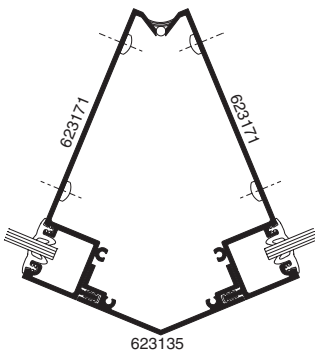
1" SYSTEM  
(THERMAL SIMILAR)



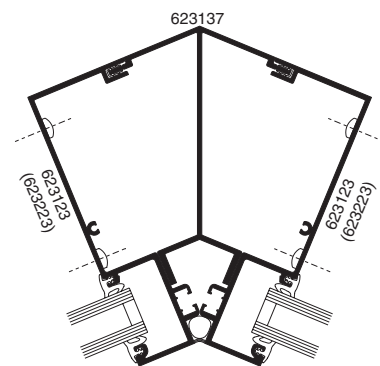
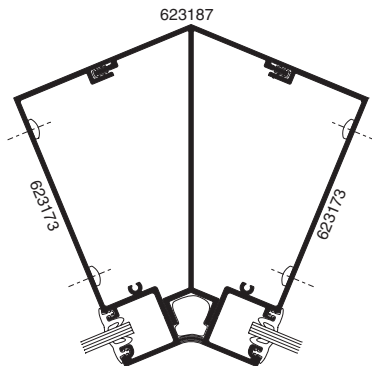
90° OUTSIDE CORNER



90° INSIDE CORNER



135° OUTSIDE CORNER



135° INSIDE CORNER

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## WIND LOAD CHARTS

Mullions are designed for deflection limitations in accordance with AAMA TIR-A11 of L/175 up to 13' 6" and L/240 +1/4" above 13' 6". These curves are for mullions WITH HORIZONTALS and are based on engineering calculations for stress and deflection. Allowable wind load stress for ALUMINUM 15,152 psi (104 MPa), STEEL 30,000 psi (207 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.

## DEAD LOAD 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 1/4" (6.4) thick glass supported on two setting blocks placed at the loading points shown.

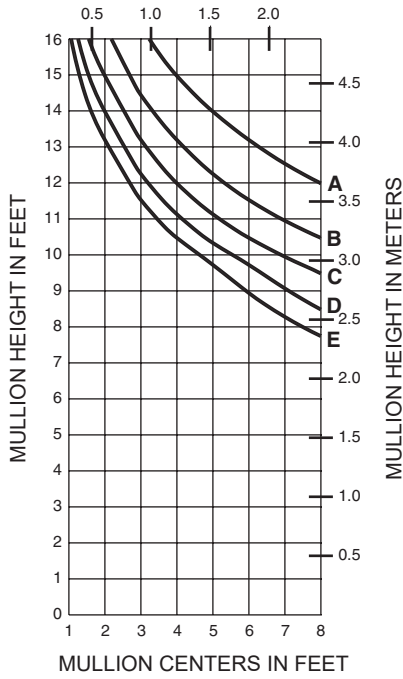
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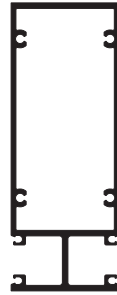


**WITH HORIZONTALS**

MULLION CENTERS IN METERS



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

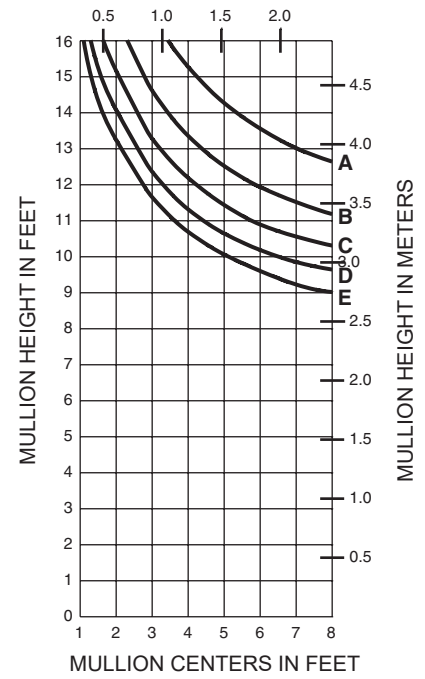


**623057**

I = 9.058 (377.02 x 10<sup>4</sup>)  
S = 2.849 (46.69 x 10<sup>3</sup>)

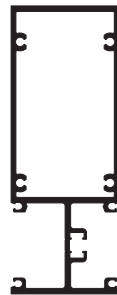
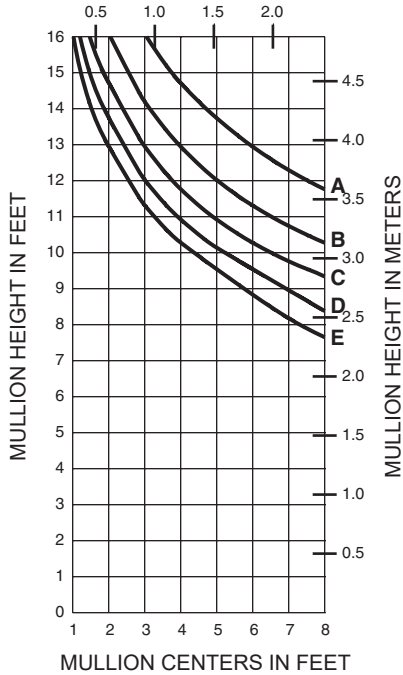
**WITHOUT HORIZONTALS**

MULLION CENTERS IN METERS



**WITH HORIZONTALS**

MULLION CENTERS IN METERS

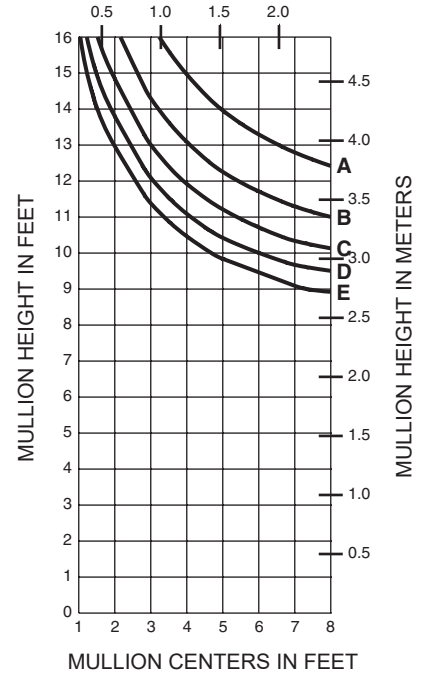


**623007**

I = 8.537 (355.34 x 10<sup>4</sup>)  
S = 2.775 (45.47 x 10<sup>3</sup>)

**WITHOUT HORIZONTALS**

MULLION CENTERS IN METERS



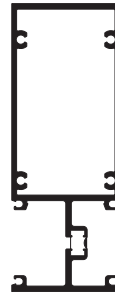
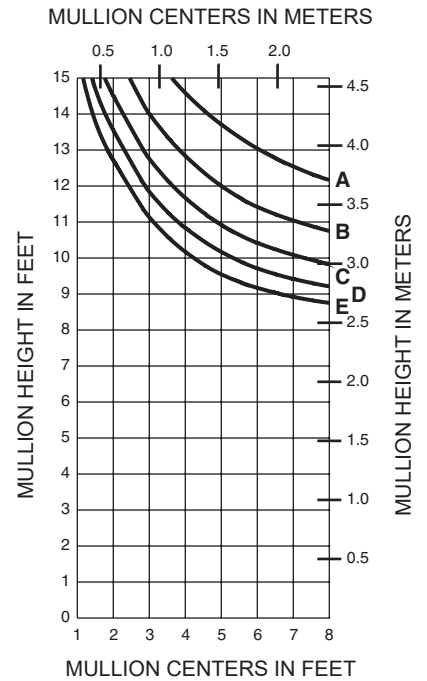
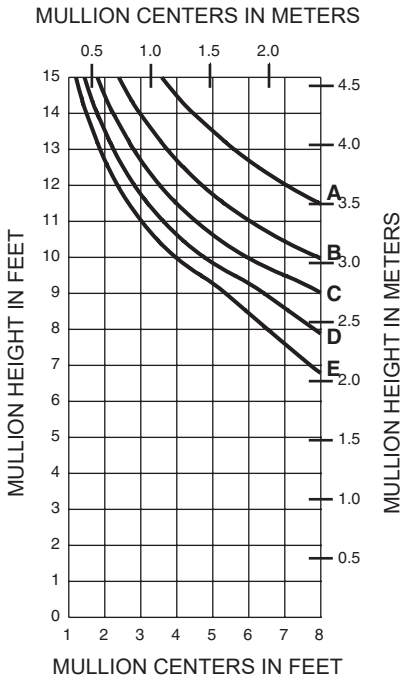
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WITH HORIZONTALS

	Allowable Stress Design Load	LRFD Ultimate 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)

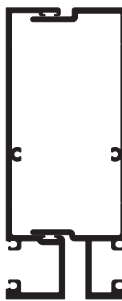
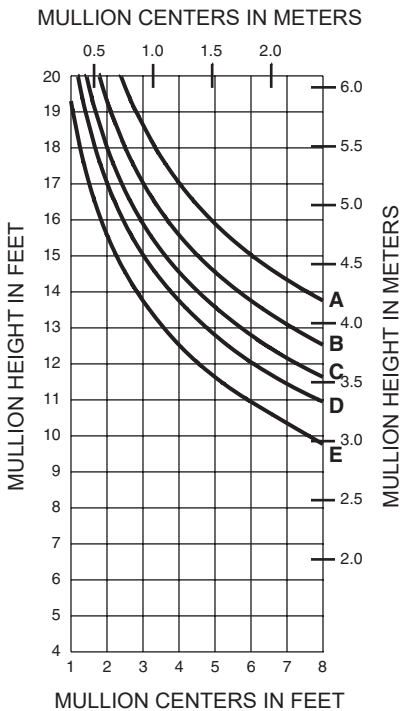
WITHOUT HORIZONTALS



623207

WIND LOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-A8 AND AAMA 505

WITH HORIZONTALS



623024 / 623025

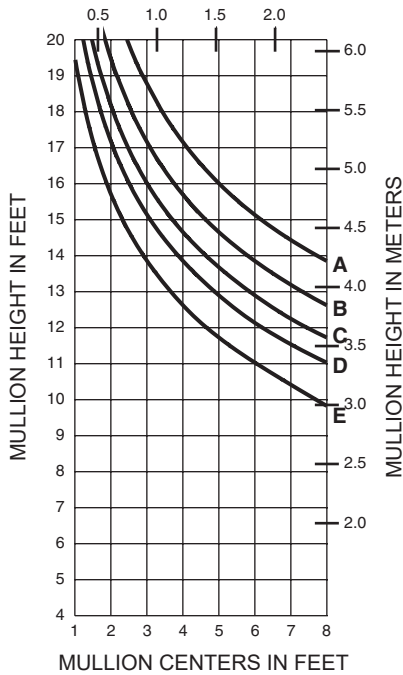
I = 10.292 (428.38 x 10<sup>4</sup>)  
S = 3.146 (51.55 x 10<sup>3</sup>)

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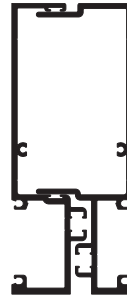
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**WITH HORIZONTALS**

MULLION CENTERS IN METERS



	Allowable Stress Design Load	LRFD Ultimate 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)

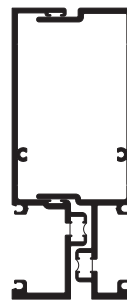
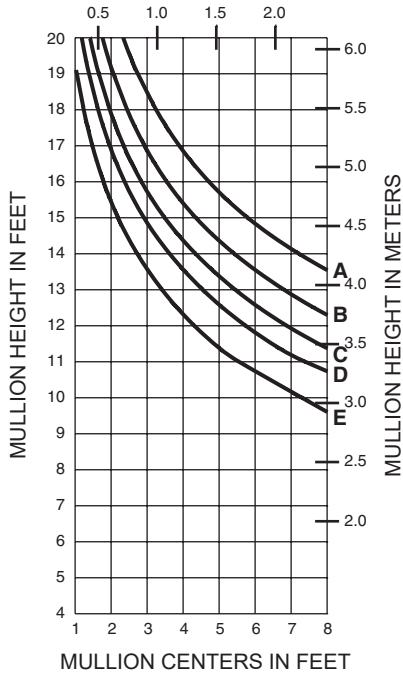


623064 / 623065

I = 10.537 (438.58 x 10<sup>4</sup>)  
S = 3.195 (52.36 x 10<sup>3</sup>)

**WITH HORIZONTALS**

MULLION CENTERS IN METERS

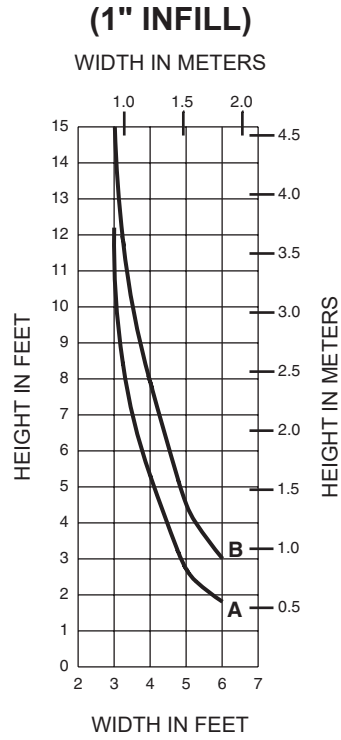


623224 / 623225

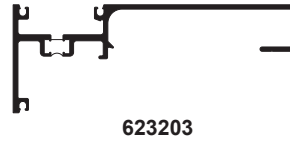
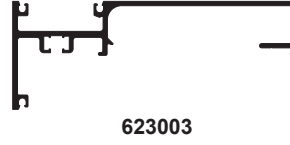
WIND LOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-A8 AND AAMA 505

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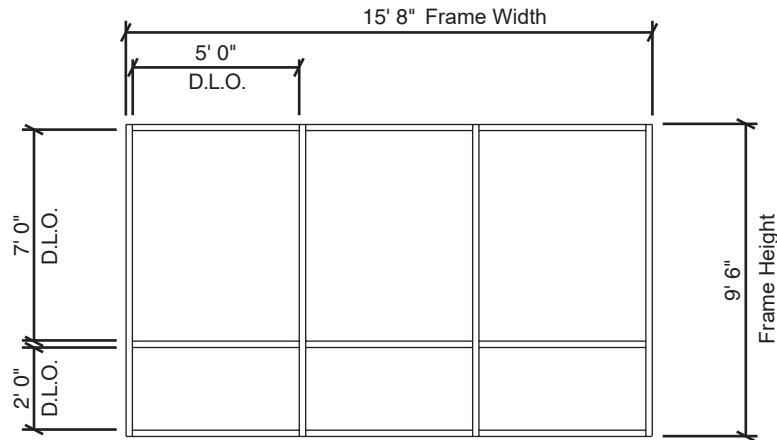
**A = 1/4 POINT LOADING**  
**B = 1/8 POINT LOADING**



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**Project Specific U-Factor  
Example Calculation**



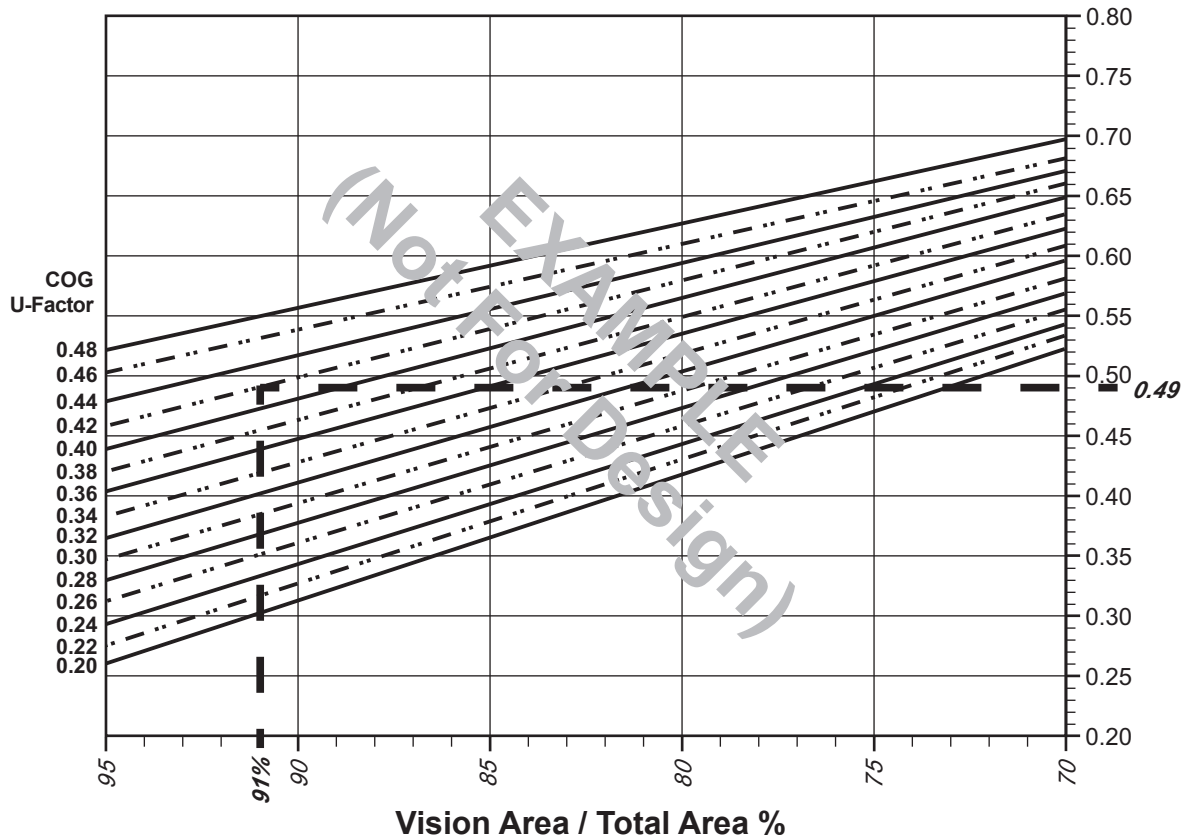
Example Glass U-Factor = 0.42 Btu/hr x ft<sup>2</sup> x °F

Total Daylight Opening = 3(5' x 7') + 3(5' x 2') = 135 ft<sup>2</sup>

Total Projected Area = (Total Daylight Opening + Total Area of Framing System)  
= 15' 8" x 9' 6" = 148.83 ft<sup>2</sup>

Percent of Glass = (Total Daylight Opening ÷ Total Projected Area)  
= (135 ÷ 148.83)100 = 91%

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



Based on 91% glass and center of glass U-Factor of 0.42  
System U-Factor is equal to 0.49 Btu/hr x ft<sup>2</sup> x °F

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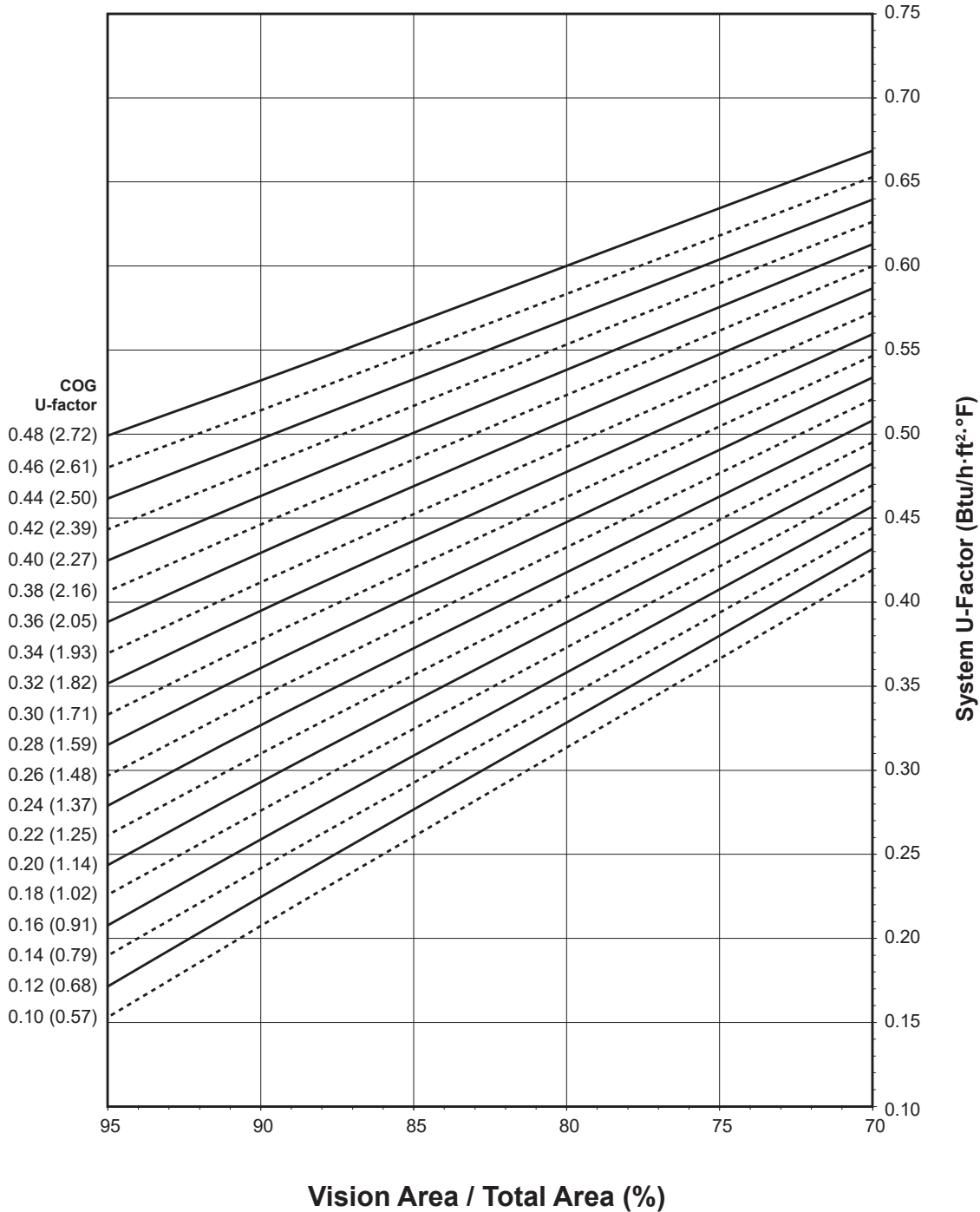
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**FG 623 Window Wall**  
**1" Double Glazed - Warm-Edge Glazing Spacer**

**Note:**

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

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



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

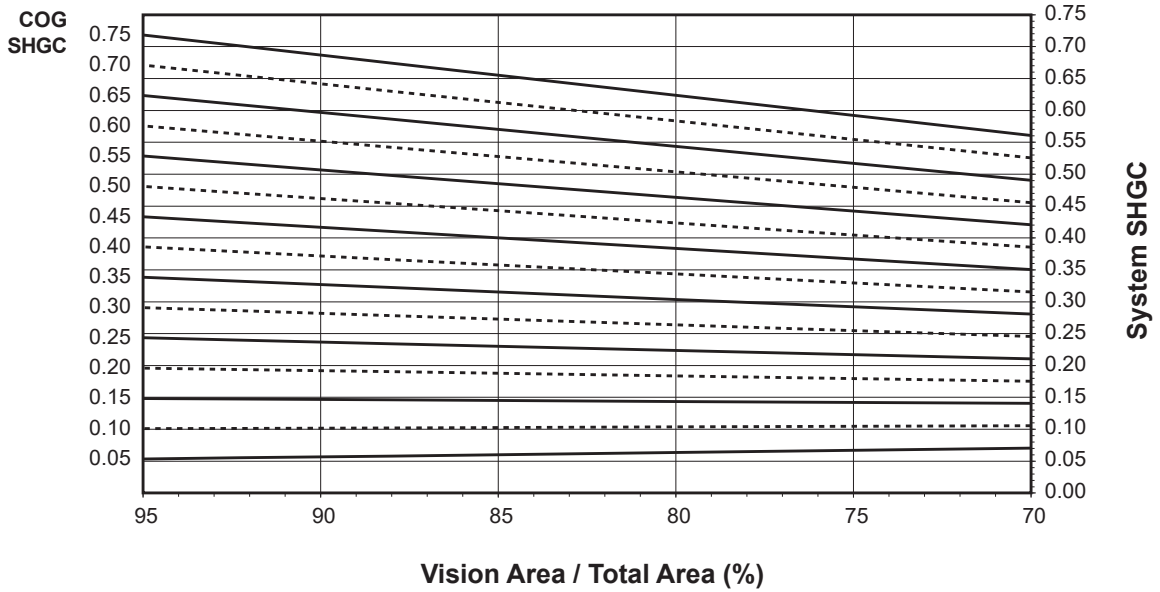
For glass values that are not listed, linear interpolation is permitted.  
 Glass properties are based on center of glass values and are obtained from your glass supplier.

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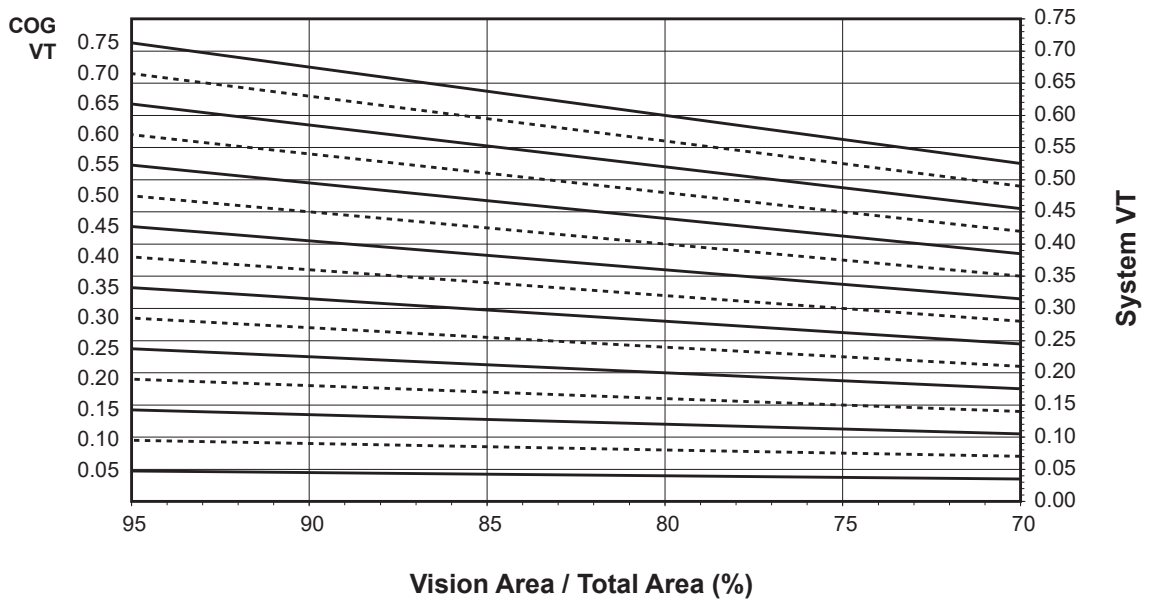
### FG 623 Window Wall 1" Double Glazed - Warm-Edge Glazing Spacer

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



Charts are generated per AAMA 507

**System Visible Transmittance (VT) vs Percent of Vision Area**



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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**Thermal Transmittance**<sup>1</sup> (BTU/hr • ft<sup>2</sup> • °F)

Glass U-Factor <sup>3</sup>	Overall U-Factor <sup>4</sup>
0.48	0.55
0.46	0.53
0.44	0.51
0.42	0.49
0.40	0.48
0.38	0.46
0.36	0.45
0.34	0.43
0.32	0.41
0.30	0.40
0.28	0.38
0.26	0.36
0.24	0.35
0.22	0.33
0.20	0.31
0.18	0.30
0.16	0.28
0.14	0.26
0.12	0.25
0.10	0.23

**FG 623 Window Wall (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.
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>

Glass SHGC <sup>3</sup>	Overall SHGC <sup>4</sup>
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	0.37
0.35	0.32
0.30	0.28
0.25	0.23
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 <sup>4</sup>
0.75	0.66
0.70	0.62
0.65	0.57
0.60	0.53
0.55	0.48
0.50	0.44
0.45	0.40
0.40	0.35
0.35	0.31
0.30	0.26
0.25	0.22
0.20	0.18
0.15	0.13
0.10	0.09
0.05	0.04

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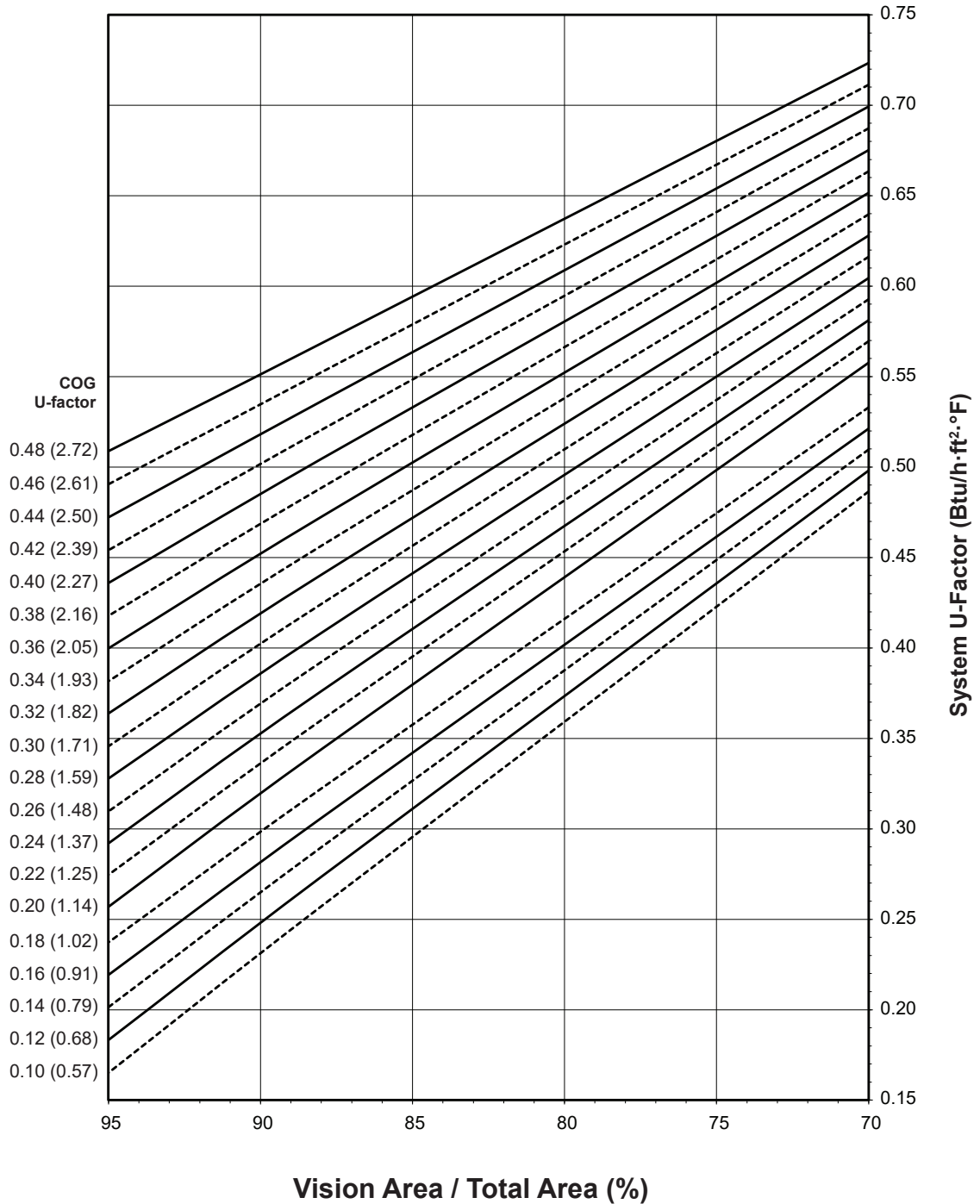


**FG 623 Window Wall  
1" Double Glazed - Aluminum Glazing Spacer**

**Note:**

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

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



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

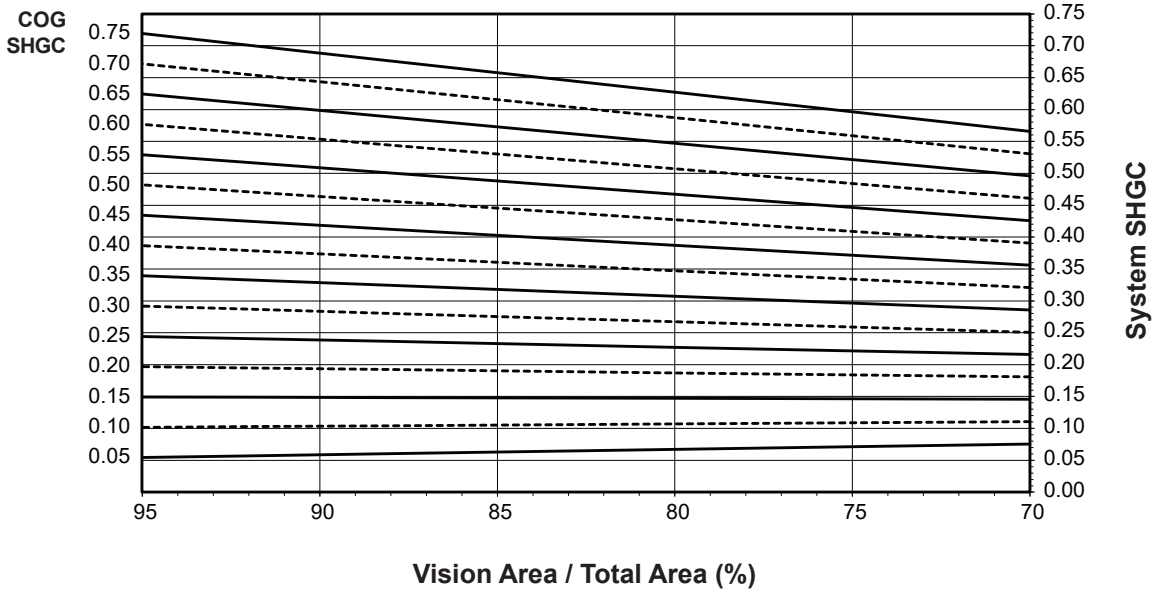
For glass values that are not listed, linear interpolation is permitted.  
Glass properties are based on center of glass values and are obtained from your glass supplier.

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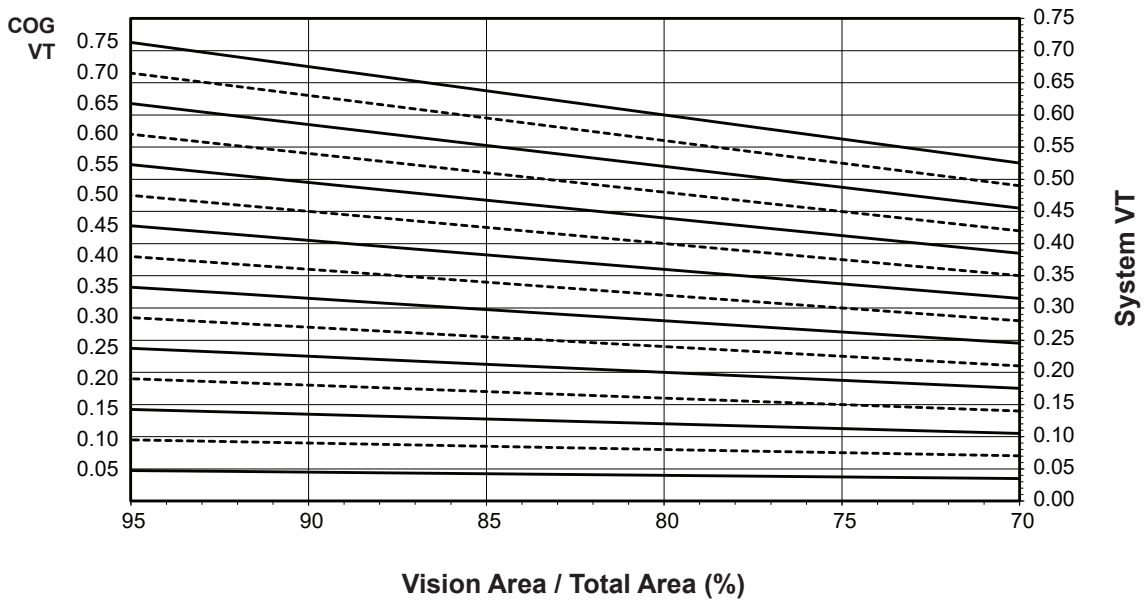
## FG 623 Window Wall 1" Double Glazed - Aluminum Glazing Spacer

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



Charts are generated per AAMA 507

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



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**Thermal Transmittance <sup>1</sup> (BTU/hr • ft <sup>2</sup> • °F)**

Glass U-Factor <sup>3</sup>	Overall U-Factor <sup>4</sup>
0.48	0.57
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	0.42
0.28	0.41
0.26	0.39
0.24	0.38
0.22	0.36
0.20	0.34
0.18	0.32
0.16	0.31
0.14	0.29
0.12	0.27
0.10	0.26

**FG 623 Window Wall (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.
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>**

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	0.46
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 <sup>4</sup>
0.75	0.66
0.70	0.62
0.65	0.57
0.60	0.53
0.55	0.48
0.50	0.44
0.45	0.40
0.40	0.35
0.35	0.31
0.30	0.26
0.25	0.22
0.20	0.18
0.15	0.13
0.10	0.09
0.05	0.04

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## CONDENSATION RESISTANCE

Glazing Infill	Condensation Resistance Factor (CRF) AAMA 1503		Temperature Index (TI) CSA A440-0	
	Frame	Glass	Frame	Glass
1" Double	70	59	60	52

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