

## **Features**

- 1600 Wall System™2 is an outside glazed structurally silicone glazed curtain wall
- 1600 Wall System™2 has a 2-1/2" (63.5) sight line
- Standard 6" (152.4) or 7-1/2" (190.5) depth systems
- Standard infill options 1/4" (6.4) and 1" (25.4), other infills available
- Thermally Broken by means of a continuous 1/4" (6.4) low conductance spacer
- Concealed fastener joinery creates smooth, monolithic appearance
- Open-back horizontals and perimeters are available for cost savings
- Shear block fabrication method
- Corners and splayed mullions available
- Offers integrated entrance framing systems
- Silicon compatible glazing materials for long-lasting seals
- 1600 Wall System™2 has been small and large missile impact and cycle tested
- Two color option
- Permanodic™ anodized finishes in seven choices
- Painted finishes in standard and custom choices

## **Optional Features**

- Steel reinforcing available
- Rain screen and backpans
- Optional deep profile and bull-nose covers available
- Deep and heavy-weight mullions available
- Fiberglass pressure plates available
- Veneer system available
- Integrates with concealed GLASSvent™ for curtain wall
- Integrates with Versoleil™ SunShade Outrigger System and Horizontal Single Blade Systems
- Profit\$Maker™ plus die sets available
- Hurricane impact resistant framing option: 7-13/16" (198.4)

## **Product Applications**

- Ideal for low to mid-rise applications where high performance is desired
- It is also the right choice for high span applications

For specific product applications,  
Consult your Kawneer representative.

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

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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.

**PICTORIAL VIEW ..... 5**

**1" INFILL DETAILS..... 6**

**1/4" INFILL DETAILS..... 7**

**ENTRANCE DETAILS ..... 8,9**

**CORNERS..... 10**

**SPLAYED MULLION OPTIONS ..... 11**

**GLASSvent™ FOR CURTAIN WALL/WINDOWS ..... 12**

**BACKPAN AND MISCELLANEOUS DETAILS ..... 13**

**MISCELLANEOUS FRAMING..... 14**

**HURRICANE IMPACT RESISTANT DETAILS..... 15,16**

**ANCHORING ..... 17,18**

**WIND LOAD CHARTS ..... 19-30**

**DEADLOAD CHARTS ..... 31-33**

**THERMAL CHARTS ..... 34-42**

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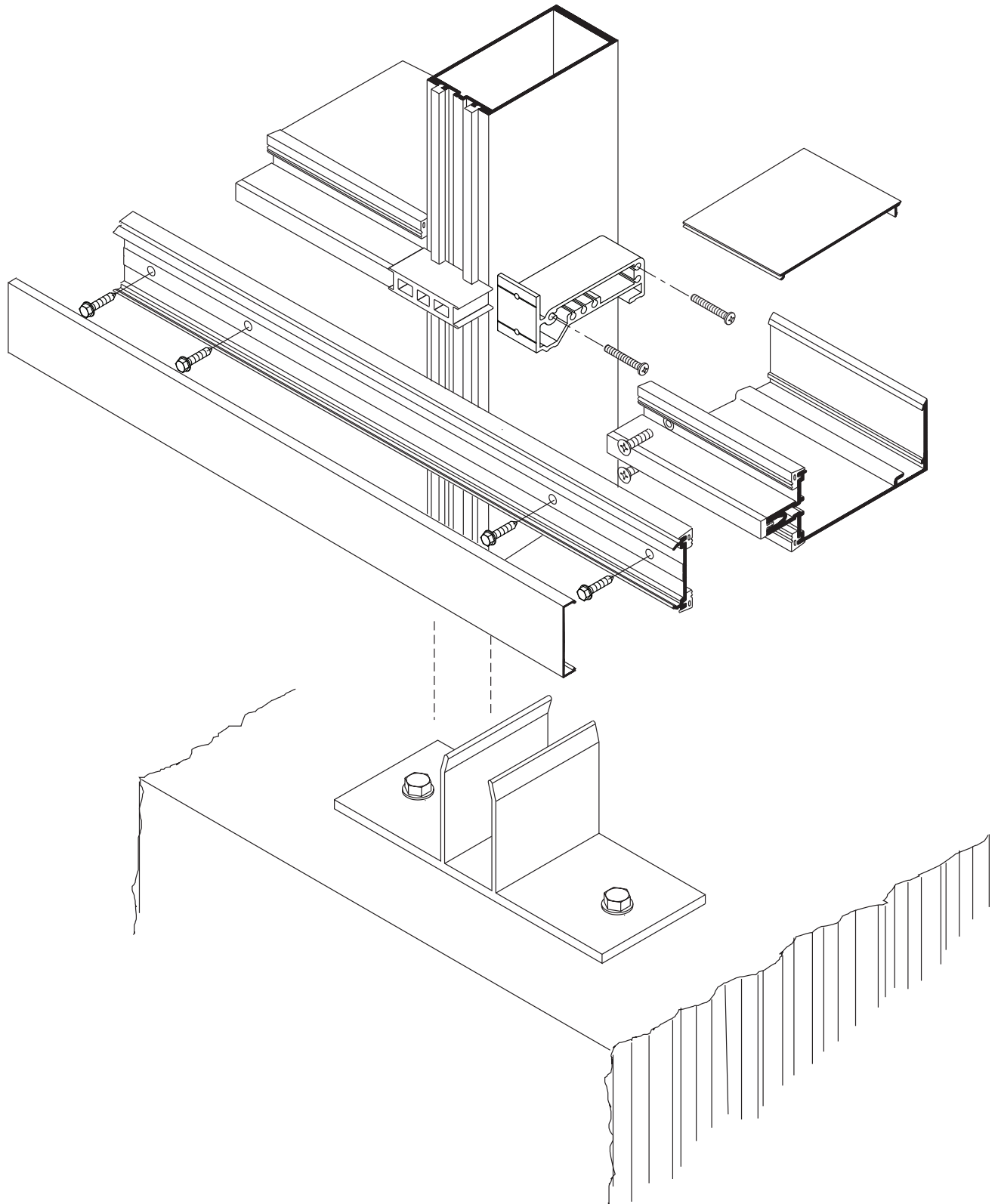
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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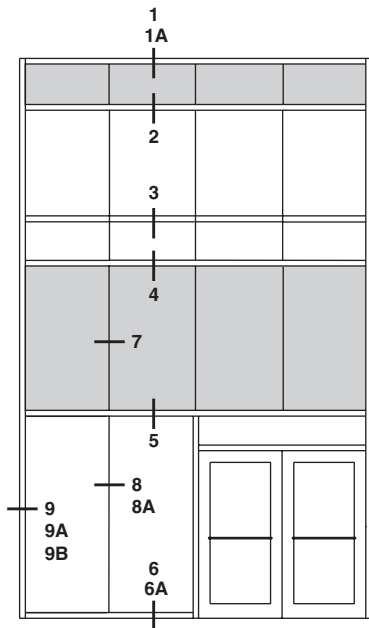
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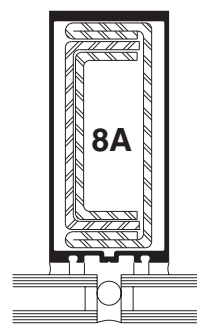
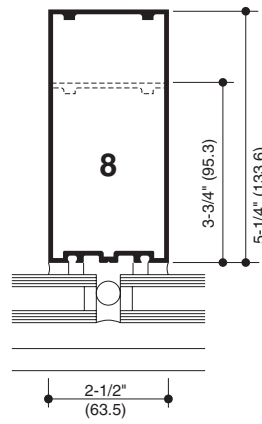
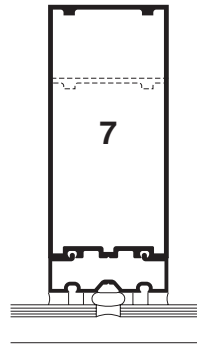
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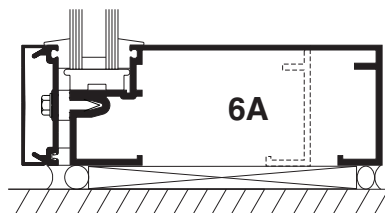
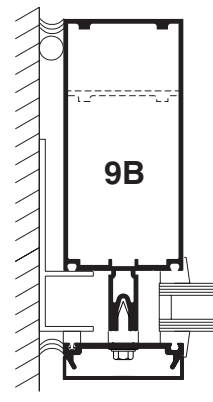
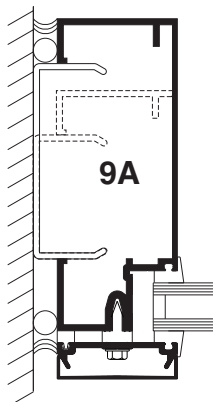
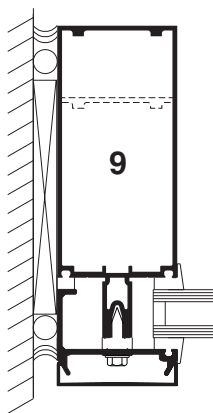
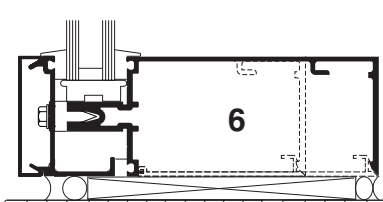
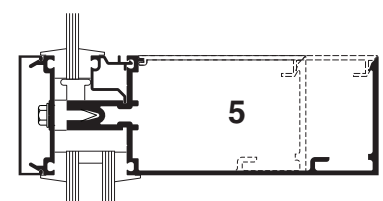
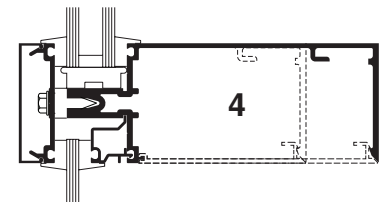
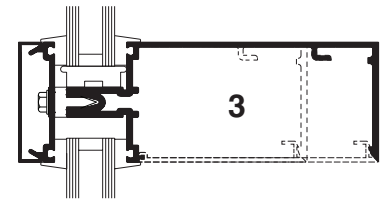
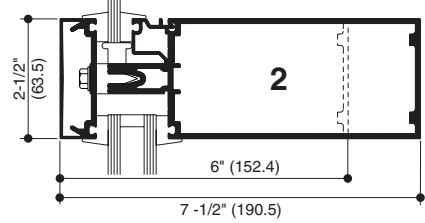
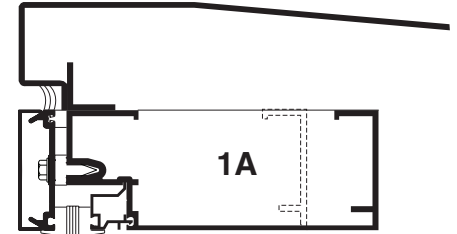
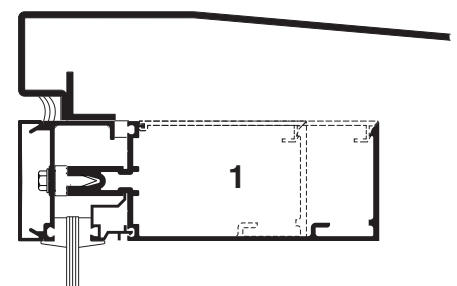
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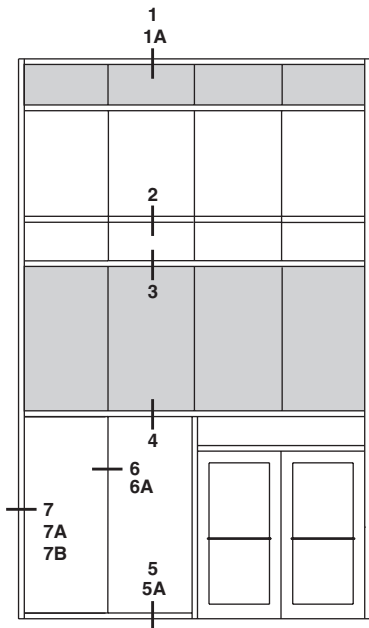
ELEVATION IS NUMBER KEYED TO DETAILS



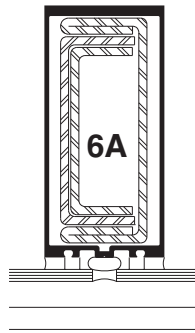
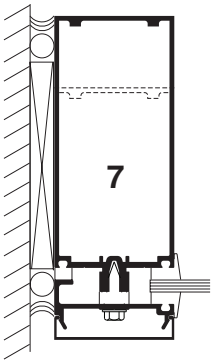
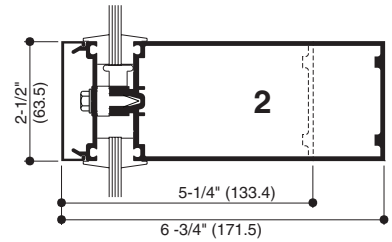
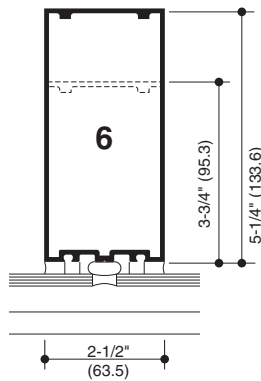
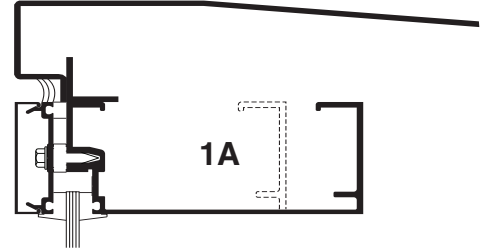
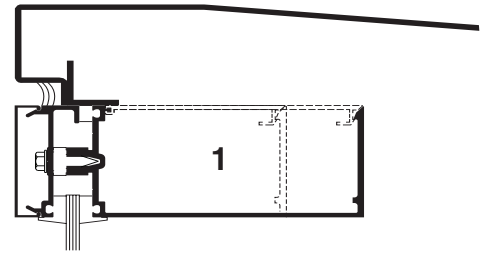
OPTIONAL STEEL REINFORCING AS REQUIRED



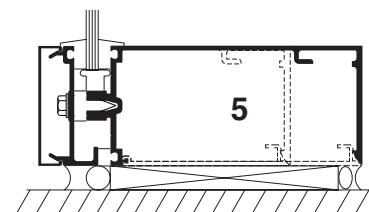
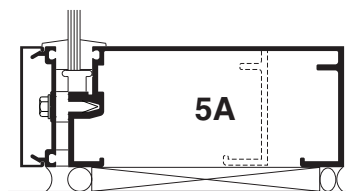
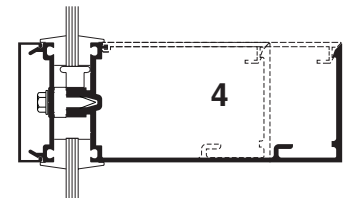
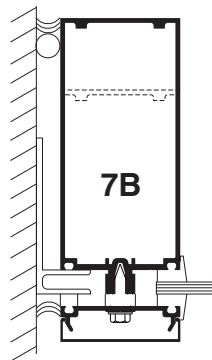
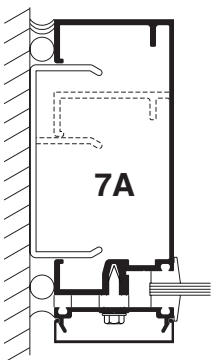
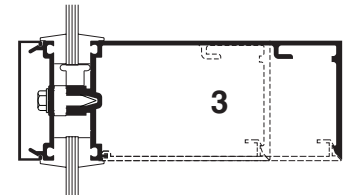
SCALE 3" = 1'-0"



ELEVATION IS NUMBER KEYED TO DETAILS



OPTIONAL STEEL REINFORCING AS REQUIRED

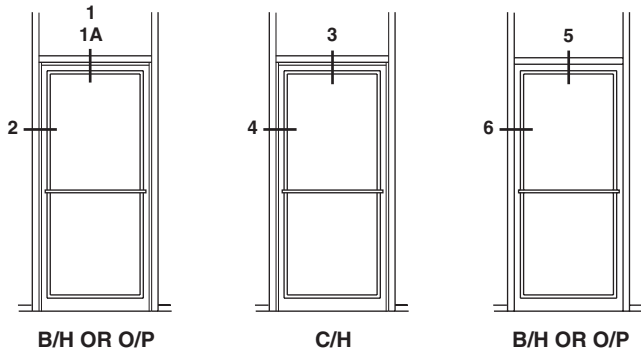


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SCALE 3" = 1'-0"

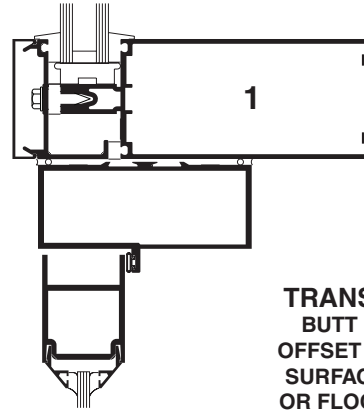


B/H OR O/P

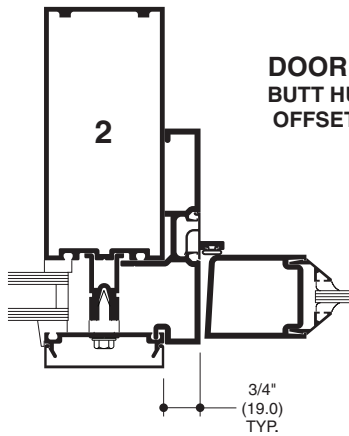
C/H

B/H OR O/P

ELEVATION IS NUMBER KEYED TO DETAILS

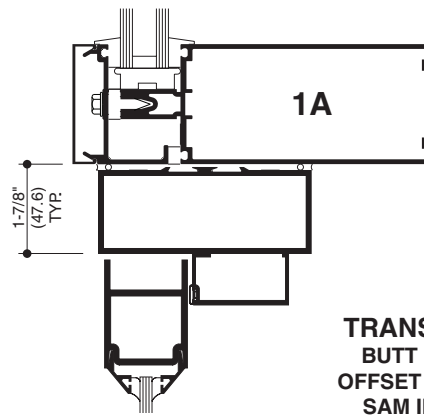


**TRANSOM BAR  
BUTT HUNG OR  
OFFSET PIVOT WITH  
SURFACE CLOSER  
OR FLOOR CLOSER**



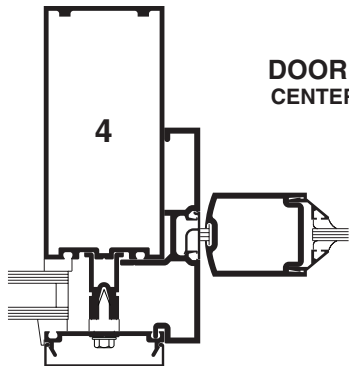
**DOOR JAMB  
BUTT HUNG OR  
OFFSET PIVOT**

3/4"  
(19.0)  
TYP.

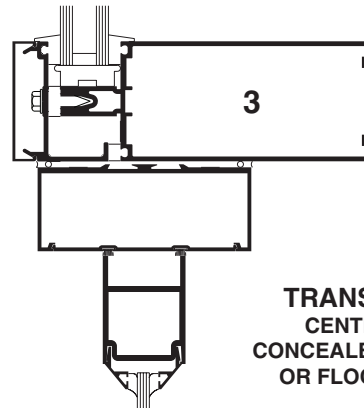


**TRANSOM BAR  
BUTT HUNG OR  
OFFSET PIVOT WITH  
SAM II CLOSER**

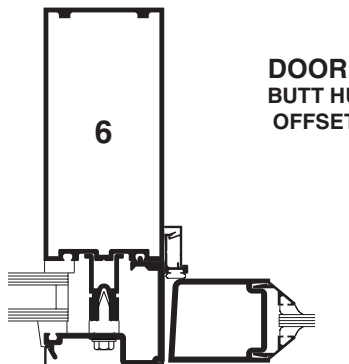
1-7/8"  
(47.6)  
TYP.



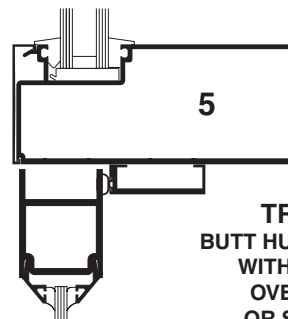
**DOOR JAMB  
CENTER HUNG**



**TRANSOM BAR  
CENTER HUNG  
CONCEALED OVERHEAD  
OR FLOOR CLOSER**



**DOOR JAMB  
BUTT HUNG OR  
OFFSET PIVOT**



**TRANSOM BAR  
BUTT HUNG OR OFFSET PIVOT  
WITH LCN CONCEALED  
OVER HEAD CLOSER  
OR SURFACE CLOSER**

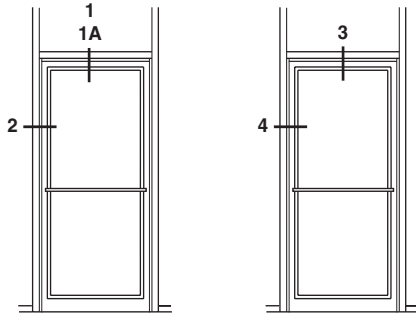
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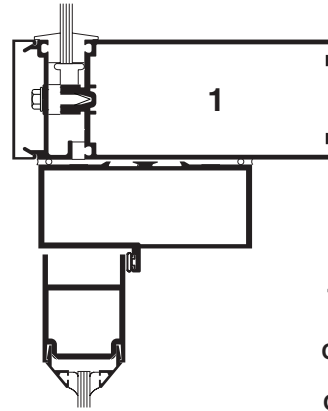
**SCALE 3" = 1'-0"**



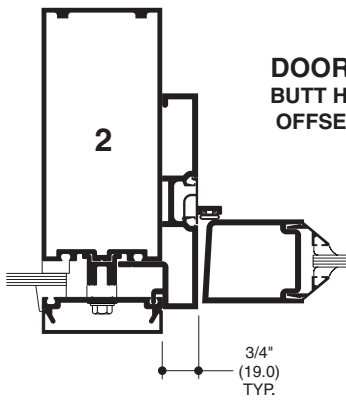
**B/H OR O/P**

**C/H**

**ELEVATION IS NUMBER KEYED TO DETAILS**

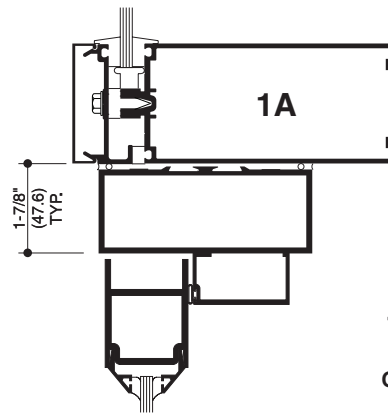


**TRANSOM BAR  
BUTT HUNG OR  
OFFSET PIVOT WITH  
SURFACE CLOSER  
OR FLOOR CLOSER**

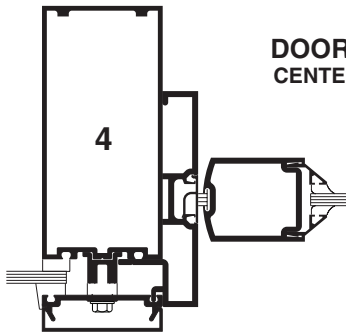


**DOOR JAMB  
BUTT HUNG OR  
OFFSET PIVOT**

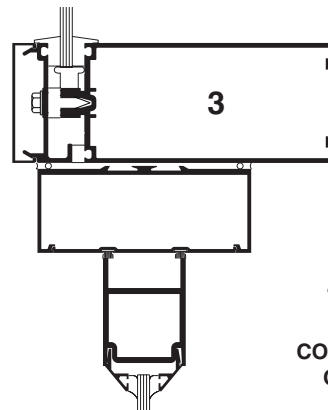
**3/4"  
(19.0)  
TYP.**



**TRANSOM BAR  
BUTT HUNG OR  
OFFSET PIVOT WITH  
SAM II CLOSER**



**DOOR JAMB  
CENTER HUNG**



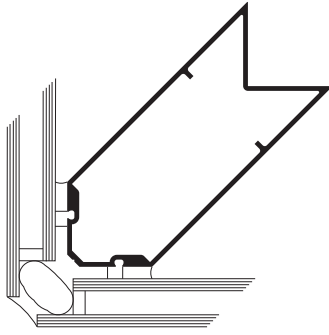
**TRANSOM BAR  
CENTER HUNG  
CONCEALED OVERHEAD  
OR FLOOR CLOSER**

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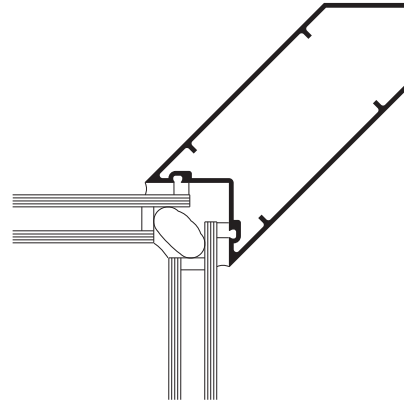
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**SCALE 3" = 1'-0"**

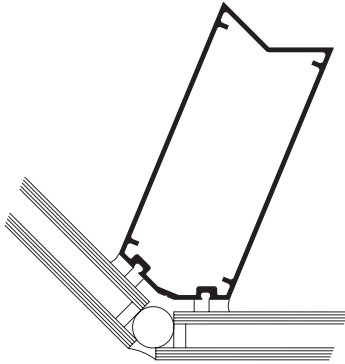
**NOTE: 1" SYSTEM SHOWN, 1/4" SYSTEM SIMILAR.**



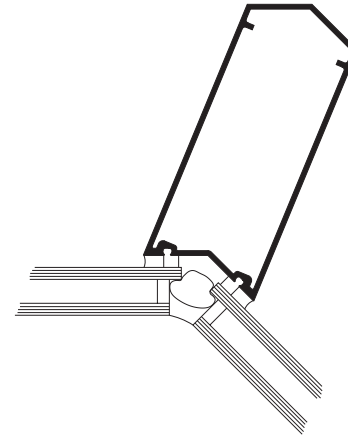
**90° OUTSIDE CORNER**



**90° INSIDE CORNER**



**135° OUTSIDE CORNER**



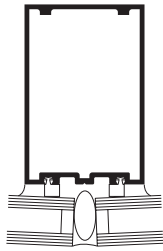
**135° INSIDE CORNER**

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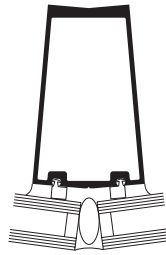
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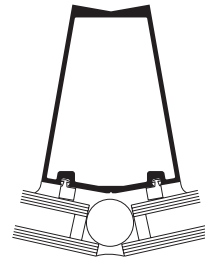
SCALE 3" = 1'-0"



0° TO 5°

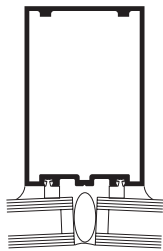


5° TO 15°

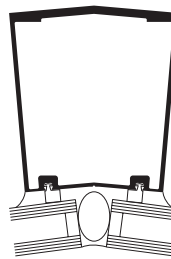


15° TO 25°

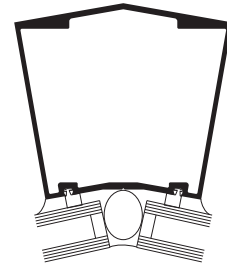
OUTSIDE SPLAYED MULLIONS



0° TO 5°



5° TO 15°



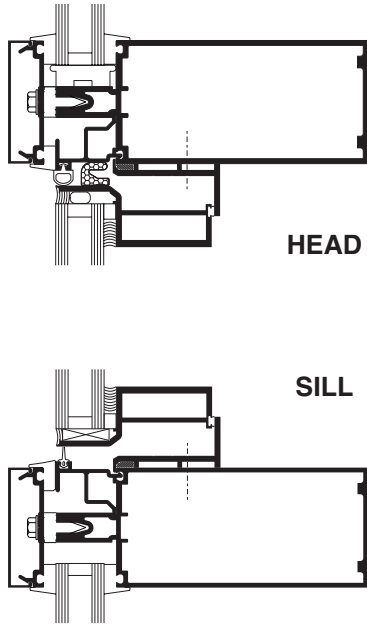
15° TO 25°

INSIDE SPLAYED MULLIONS

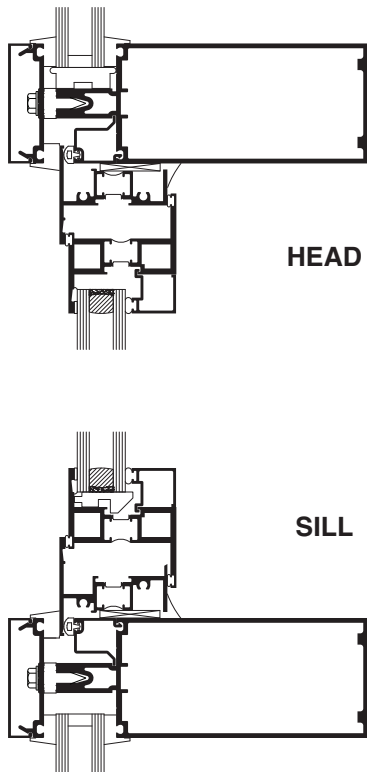
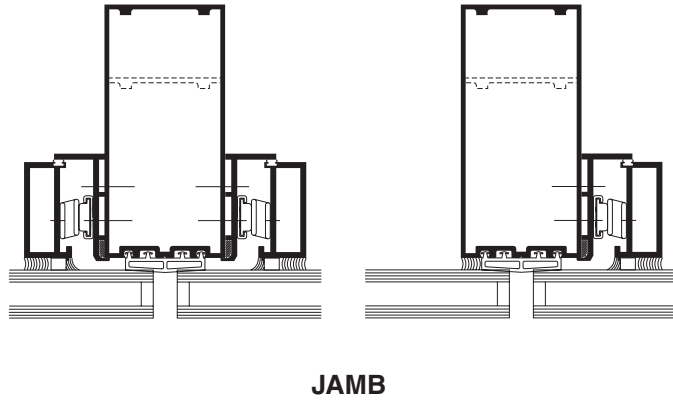
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SCALE 3" = 1'-0"

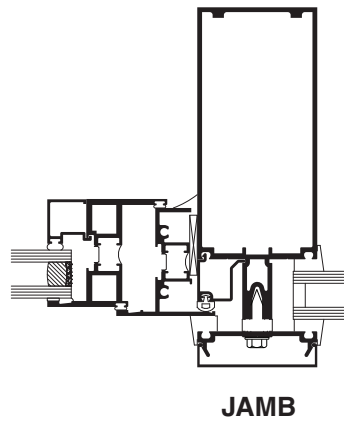


## GLASSvent™ FOR CURTAIN WALL



## 8225TL THERMAL WINDOWS

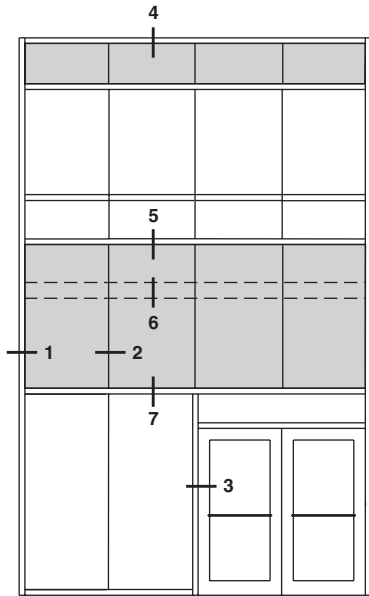
NOTE: Other vent types can be accommodated.  
Contact your Kawneer representative for other options.



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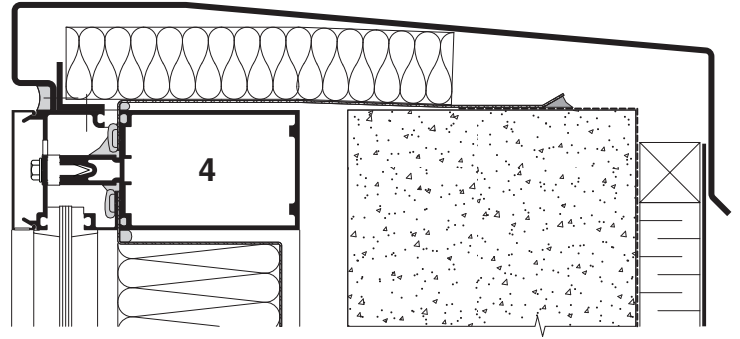
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SCALE 3" = 1'-0"

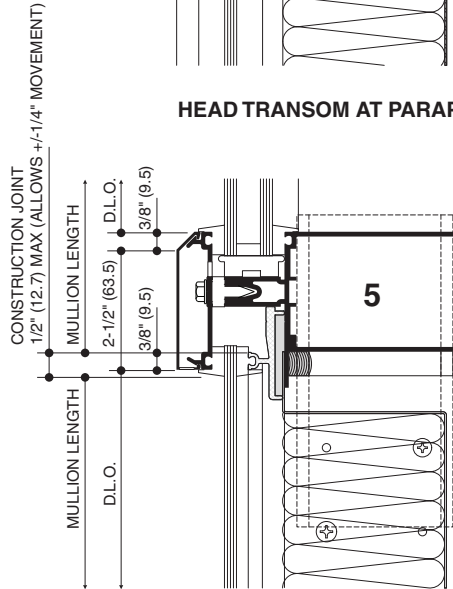


ELEVATION IS NUMBER KEYED TO DETAILS

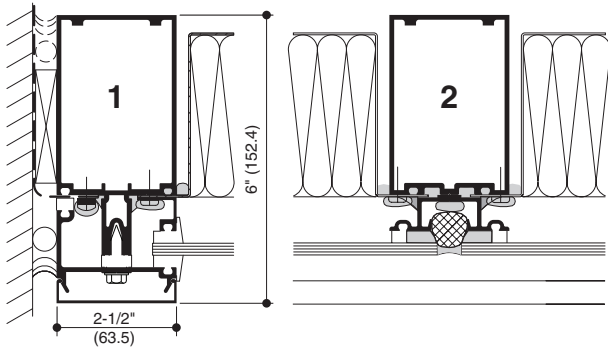
NOTE: 6" SYSTEM SHOWN, 7-1/2" SYSTEM SIMILAR



HEAD TRANSOM AT PARAPET FLASHING



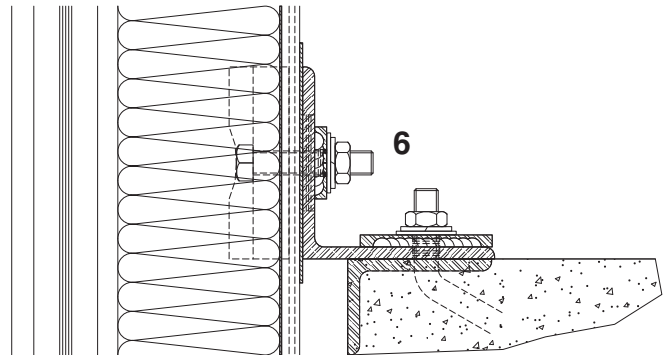
EXPANSION JOINT



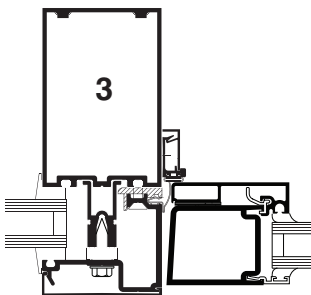
JAMB MULLION AT SPANDREL

(With vapor barrier tie-in)

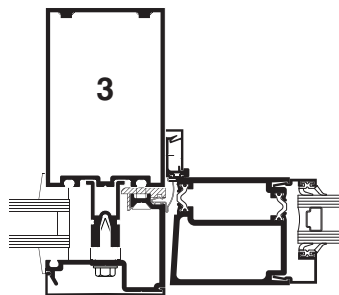
MULLION AT SPANDREL



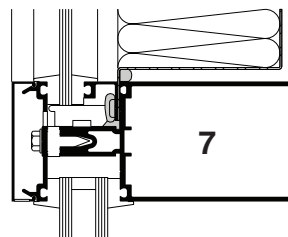
TYPICAL DEADLOAD ANCHOR



THERMALLY BROKEN DOOR ADAPTOR FOR INSULCLAD DOORS



AA™ 250 THERMAL ENTRANCE



TRANSOM - SPANDREL OVER VISION

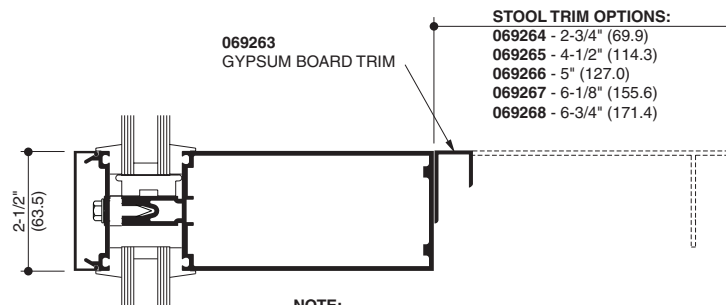
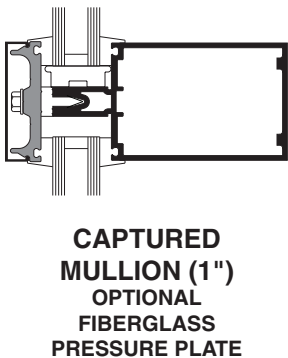
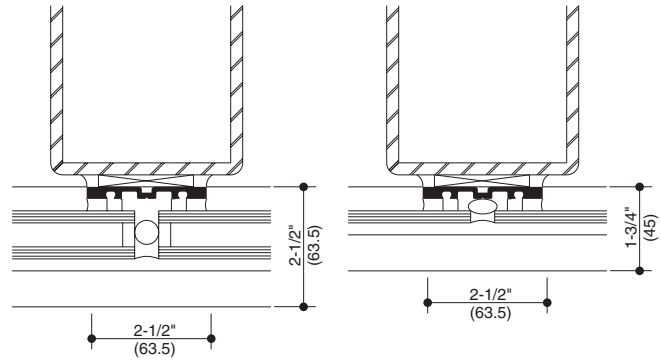
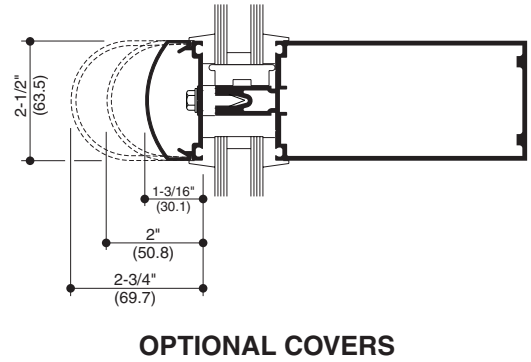
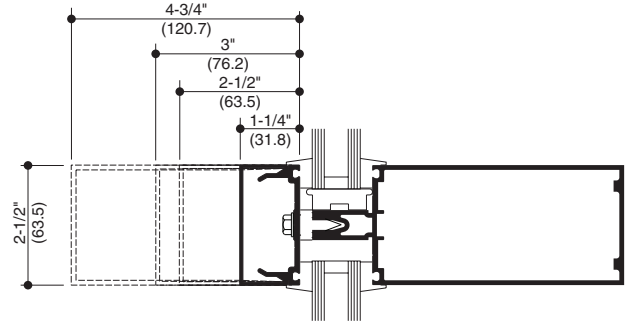
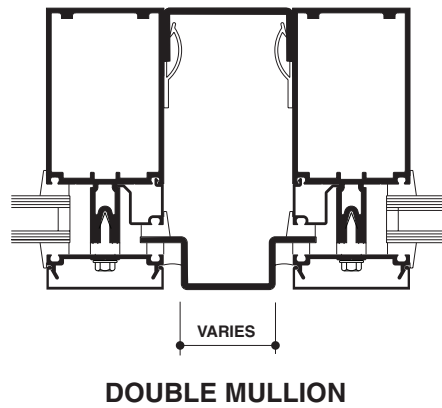
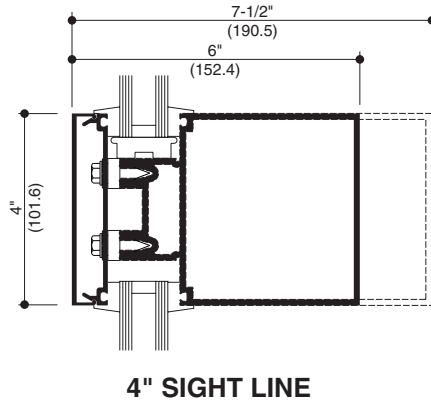
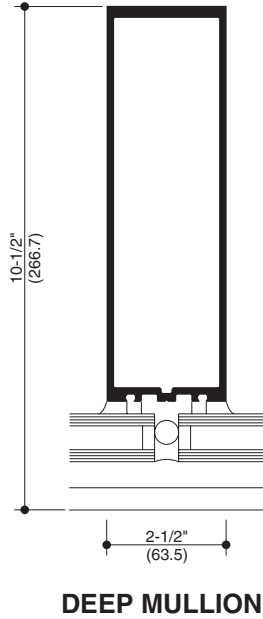
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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**SCALE 3" = 1'-0"**

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.



**NOTE:**  
STOOL TRIMS REQUIRE 069271 TRIM CLIP PACKAGE

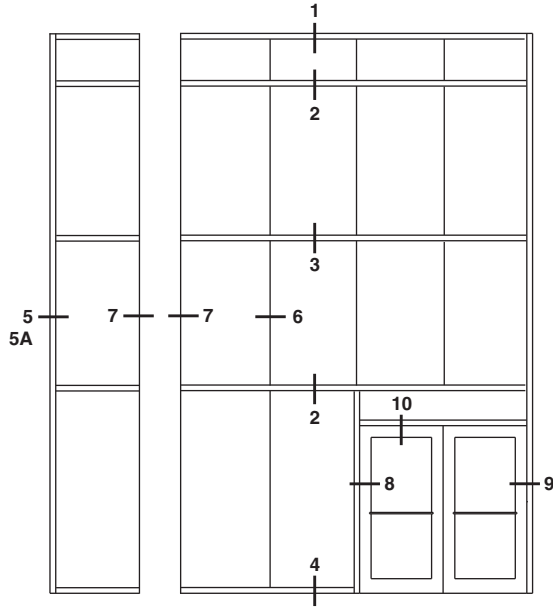
**INTERIOR STOOL TRIM**

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.

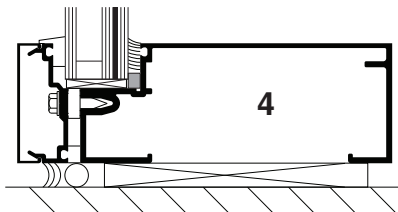
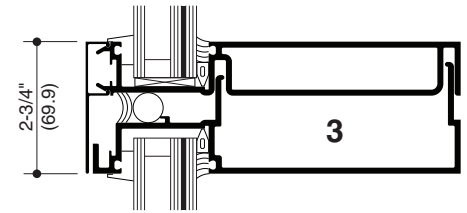
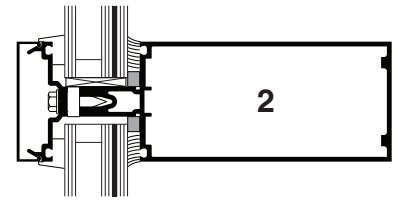
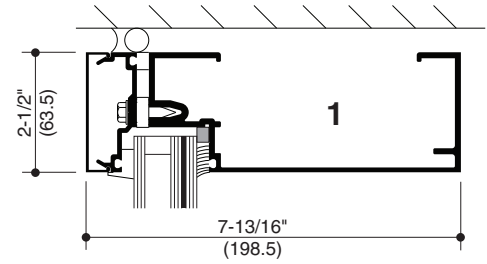
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**SCALE 3" = 1'-0"**

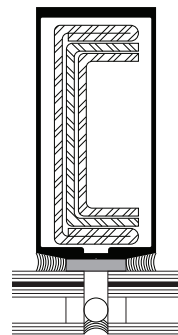
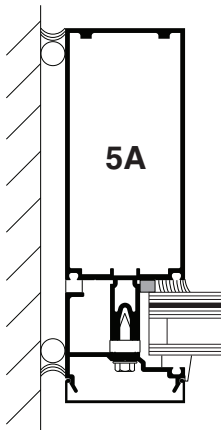
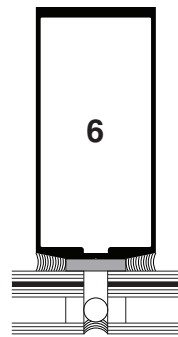
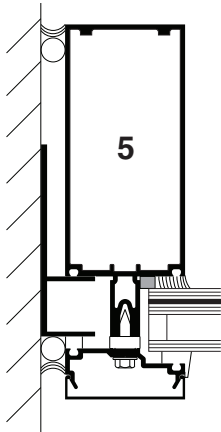
**NOTE:** DETAILS SHOWN WITH 1-5/16" INFILL AND ARE GLAZED FOR LARGE MISSILE IMPACT (LMI).  
SEE NEXT PAGE FOR OTHER GLAZING OPTIONS.



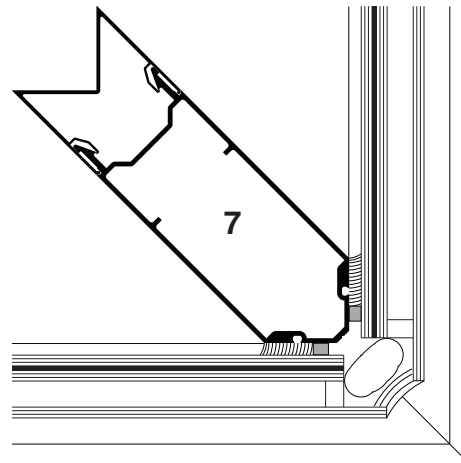
**ELEVATION IS NUMBER KEYED TO DETAILS**



**EXPANSION HORIZONTAL**



**OPTIONAL STEEL REINFORCING AS REQUIRED**



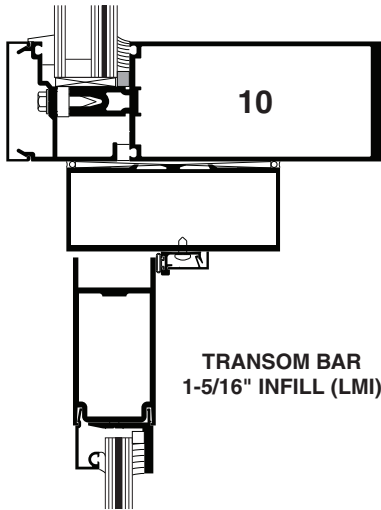
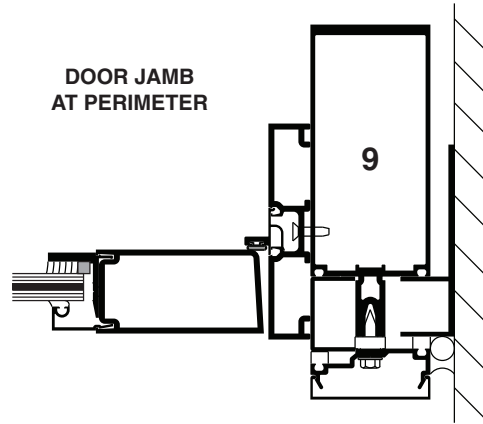
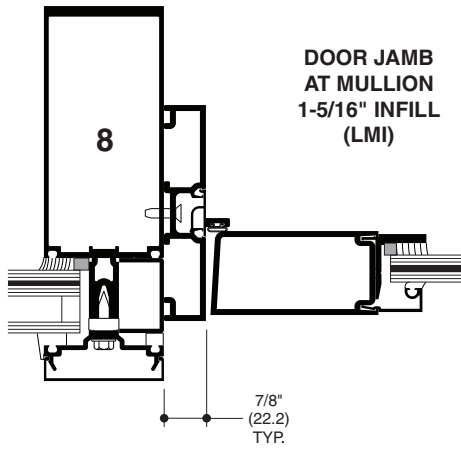
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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SCALE 3" = 1'-0"

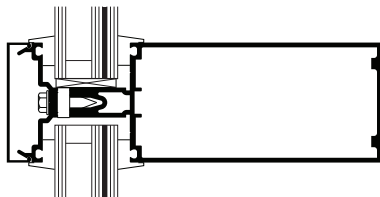
**NOTE:** 350 IR DOORS ARE USED WITH IMPACT FRAMING.  
DOORS ARE GLAZED WITH 9/16" INFILL.



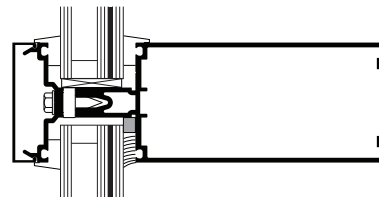
**OPTIONAL  
10" DEEP SYSTEM  
1-5/16" INFILL (LMI)**



### GLAZING OPTIONS



**1-5/16" INFILL (SMI)  
SMALL MISSILE  
IMPACT**



**1-5/16" INFILL  
SMALL MISSILE (SMI)  
OVER  
LARGE MISSILE (LMI)**

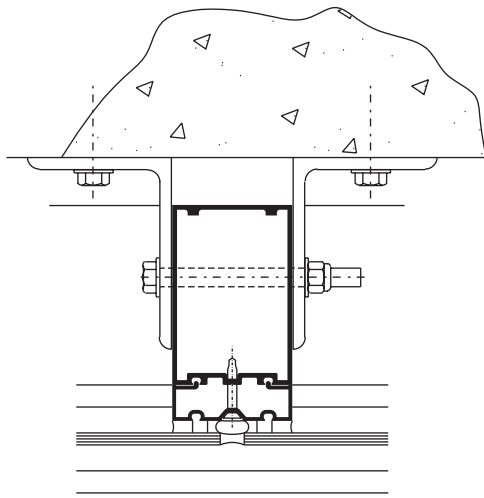
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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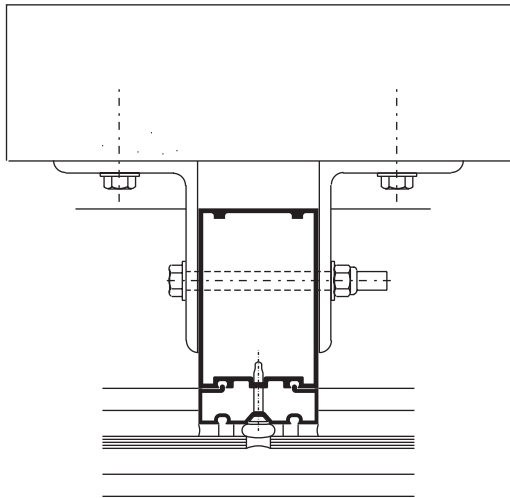
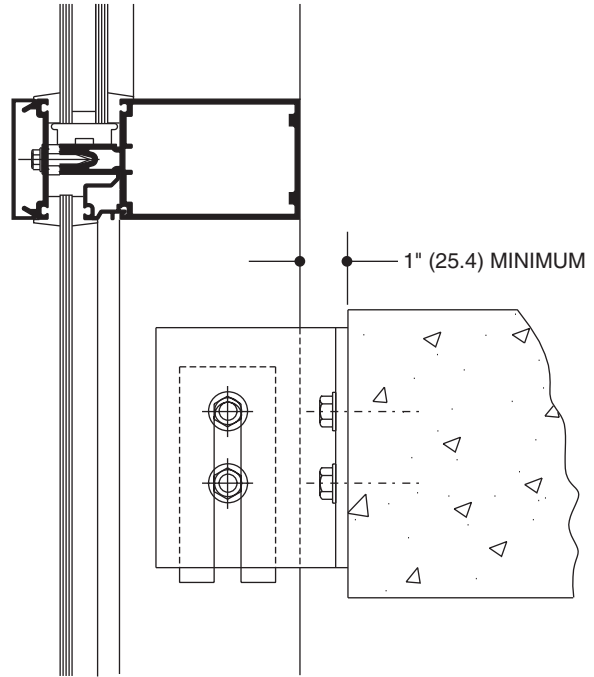
© Kawneer Company, Inc., 2014



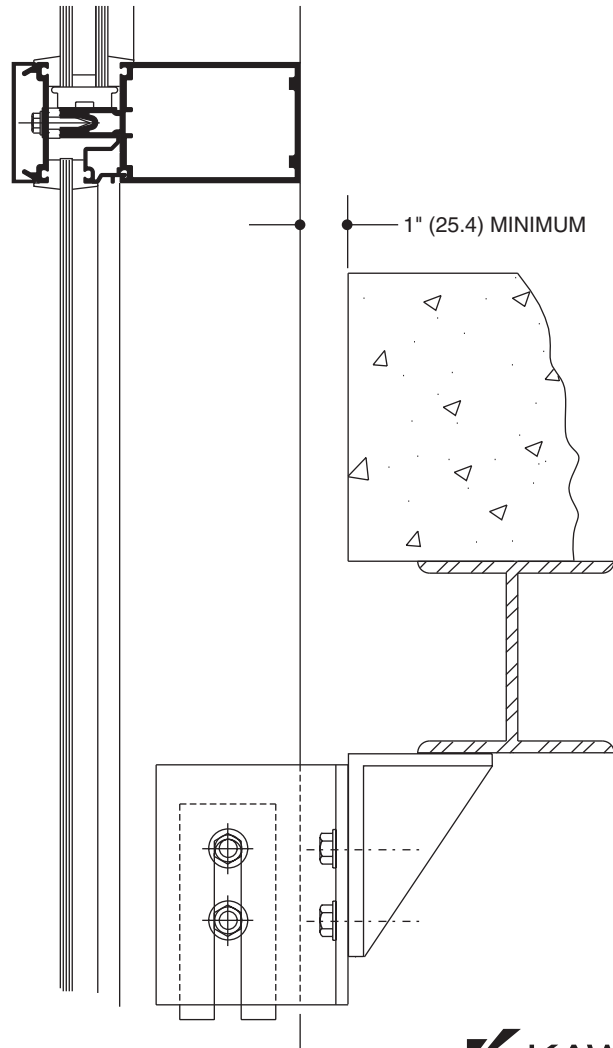
Actual project conditions will determine specific anchor design. Details on this page are for reference only.



**ANCHORING TO FLOOR SLAB**



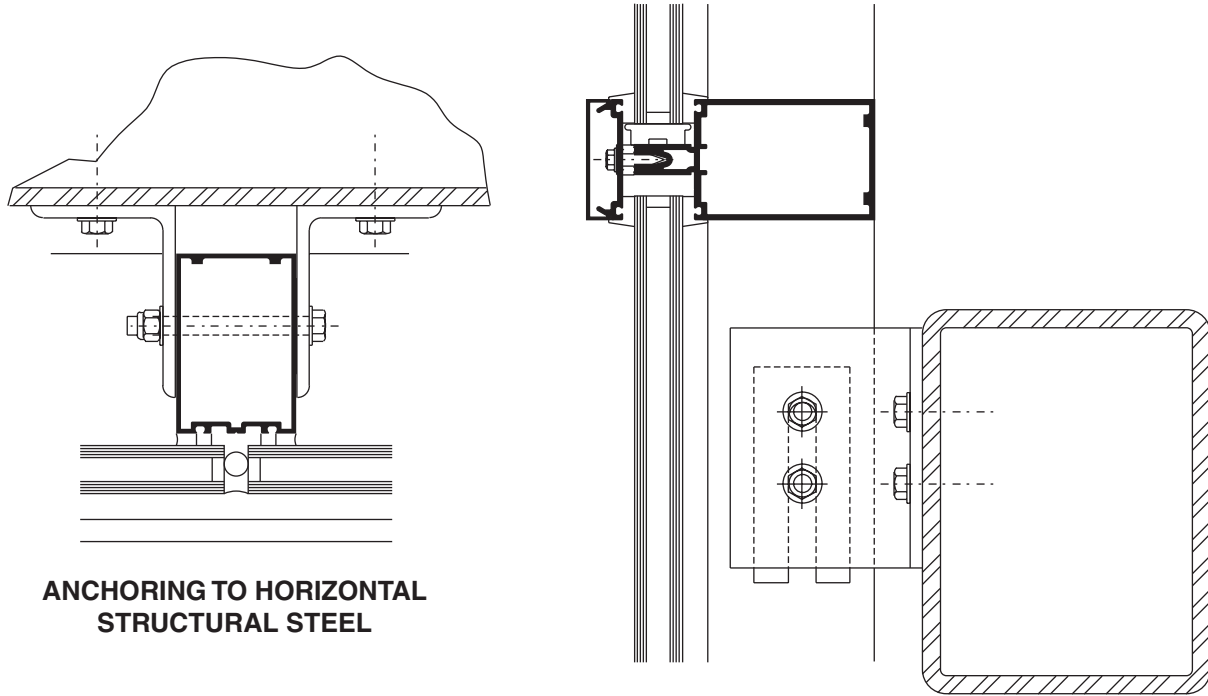
**ANCHORING TO SUPPORT STEEL**



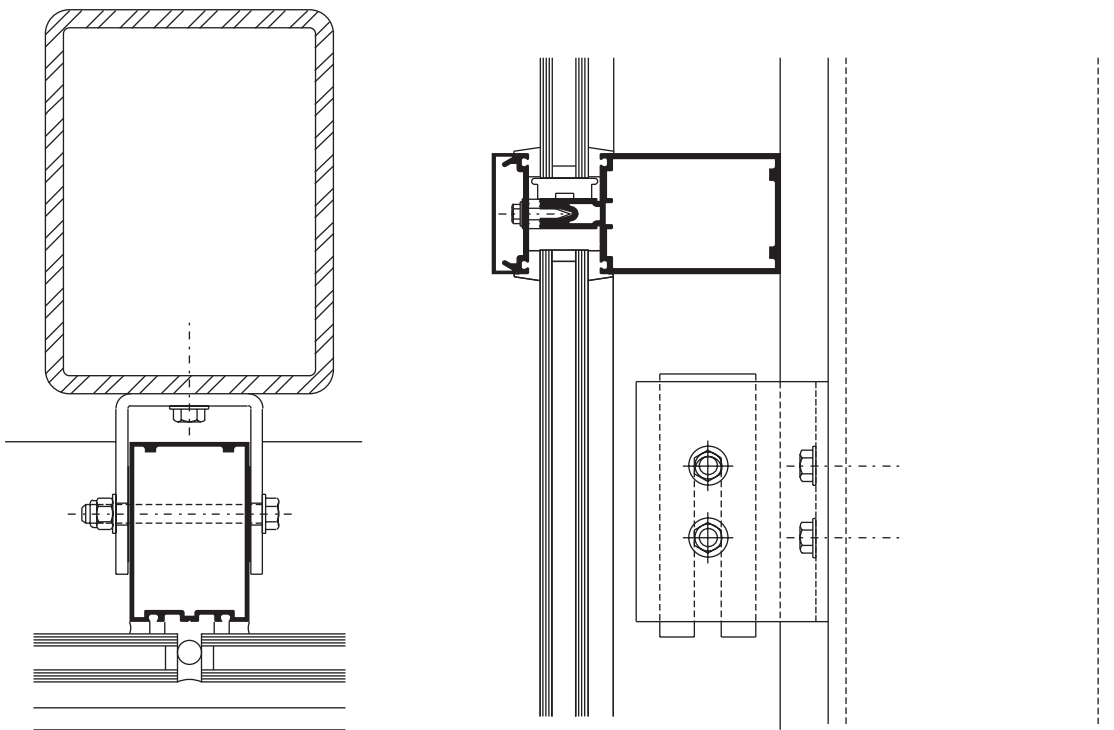
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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Actual project conditions will determine specific anchor design. Details on this page are for reference only.



**ANCHORING TO HORIZONTAL STRUCTURAL STEEL**



**ANCHORING TO VERTICAL STRUCTURAL STEEL**

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## WIND LOAD CHARTS

Mullions are designed for deflection limitations in accordance with AAMA TIR-A11 of L/175 up to 13'-6" and L/240 +1/4" above 13'-6". These curves are for mullions WITH HORIZONTALS and are based on engineering calculations for stress and deflection. Allowable wind load stress for ALUMINUM 15,152 psi (104MPa), STEEL 30,000 psi (207MPa.). Charted curves, in all cases are for the limiting value. Wind load charts contained herein are based upon nominal wind load utilized in allowable stress design. 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

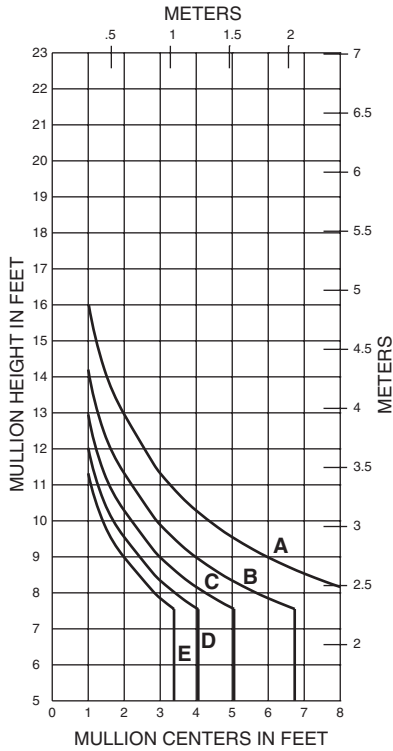
Horizontal or deadload limitations are based upon 1/8" (3.2), maximum allowable deflection at the center of an intermediate horizontal member. The accompanying charts are calculated for 1" (25.4) thick insulating glass or 1/4" (6.4) thick glass supported on two setting blocks placed at the loading points shown.

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.

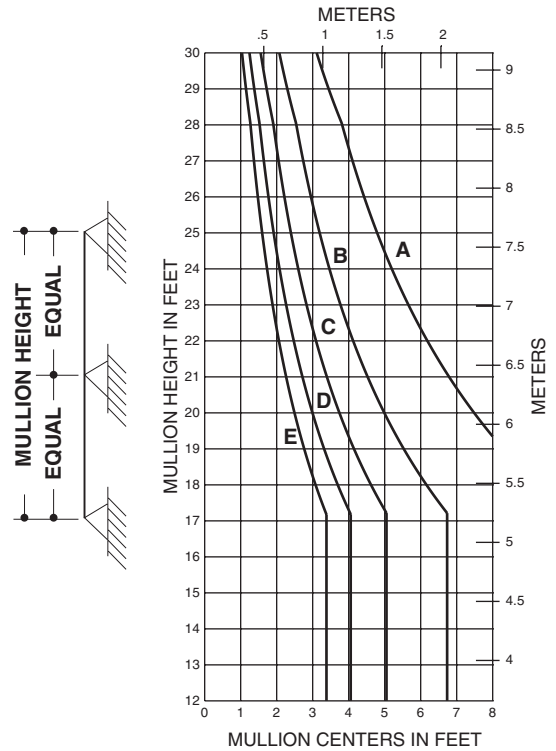
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**SINGLE SPAN**

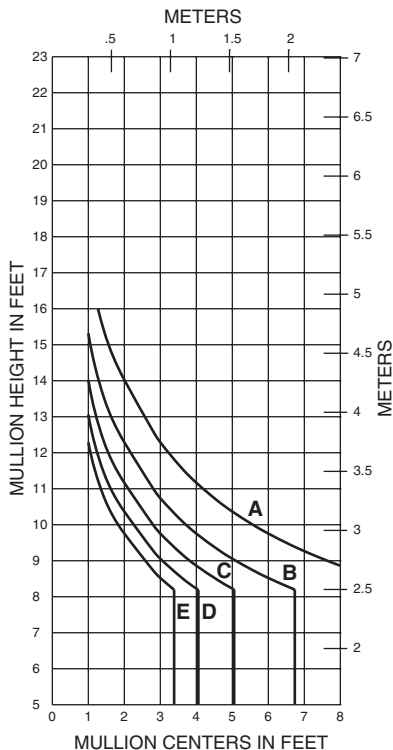
- A = 20 PSF (960)
- B = 30 PSF (1440)
- C = 40 PSF (1920)
- D = 50 PSF (2400)
- E = 60 PSF (2880)



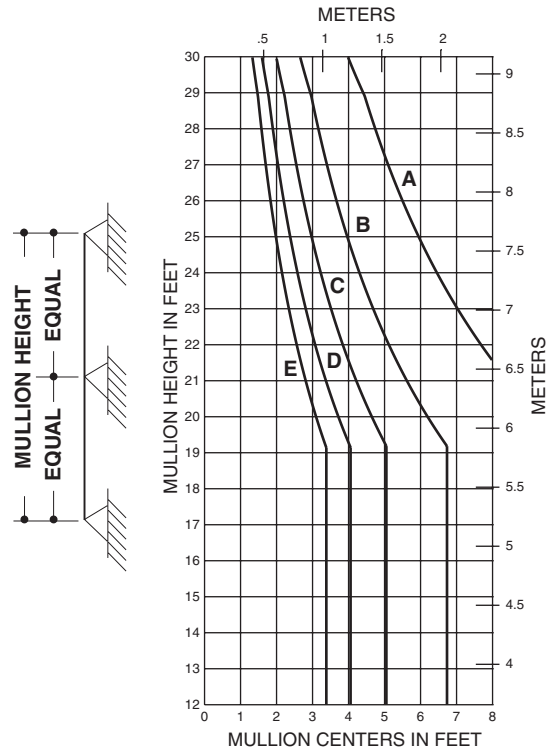
**TWIN SPAN**



**SINGLE SPAN**



**TWIN SPAN**



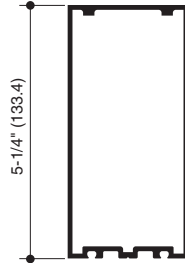
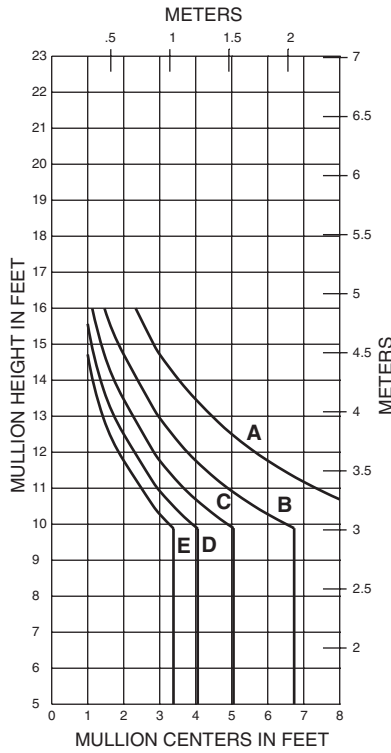
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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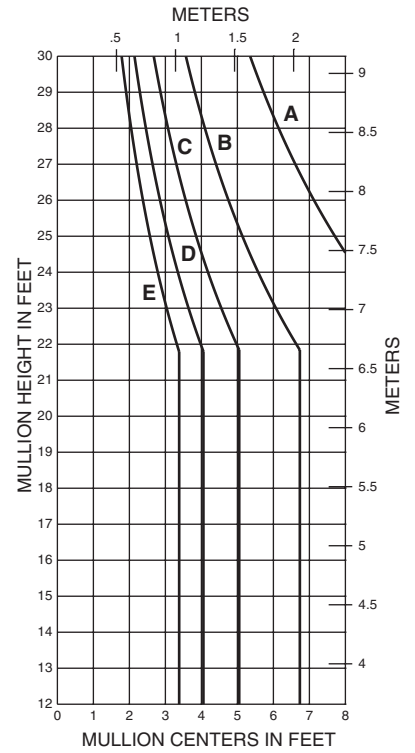
**SINGLE SPAN**

- A = 20 PSF (960)
- B = 30 PSF (1440)
- C = 40 PSF (1920)
- D = 50 PSF (2400)
- E = 60 PSF (2880)

**TWIN SPAN**

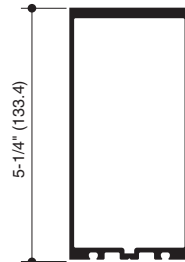
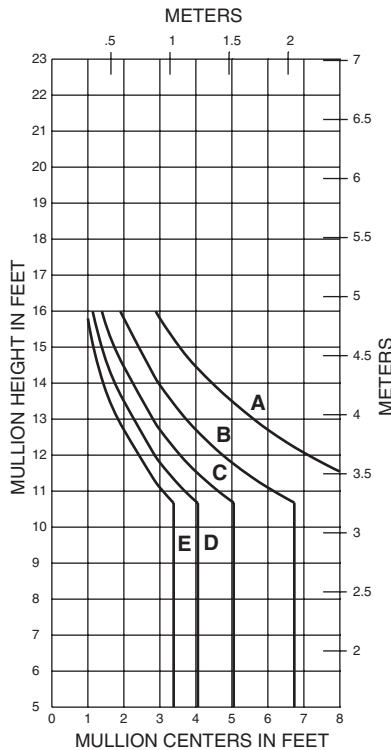


**162027**  
I = 6.424(267.38 x 10<sup>4</sup>)  
S = 2.385(39.08 x 10<sup>5</sup>)

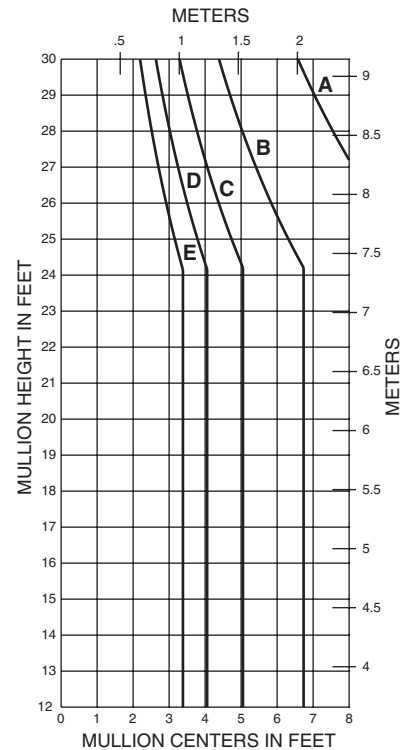


**SINGLE SPAN**

**TWIN SPAN**



**162028**  
I = 8.088(336.64 x 10<sup>4</sup>)  
S = 2.930(48.01 x 10<sup>5</sup>)

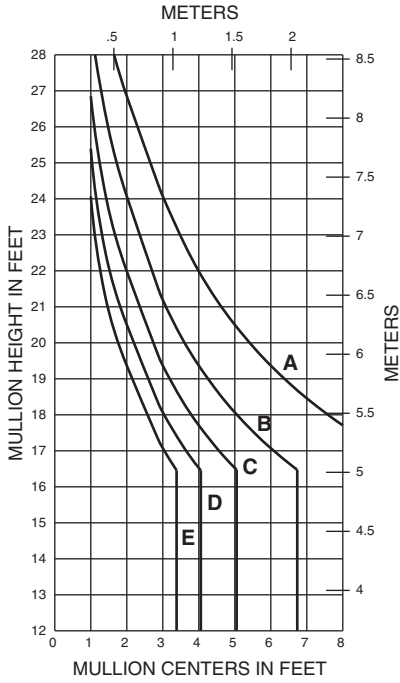


Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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**SINGLE SPAN**

- A = 20 PSF (960)
- B = 30 PSF (1440)
- C = 40 PSF (1920)
- D = 50 PSF (2400)
- E = 60 PSF (2880)



**162076**

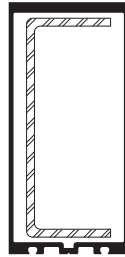
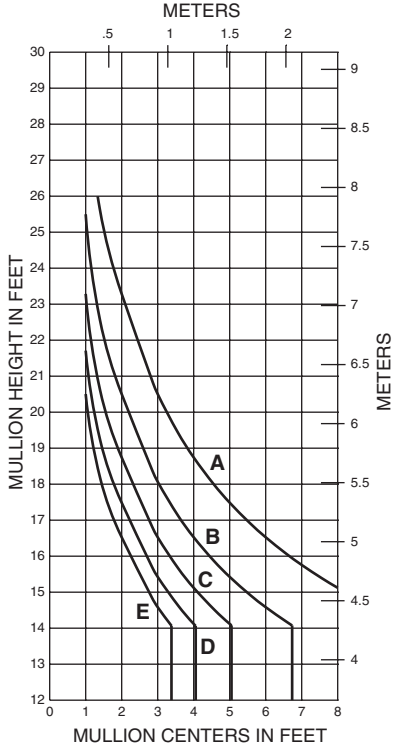
I = 31.174 (1297.56 x 10<sup>3</sup>)  
 S = 7.452 (122.12 x 10<sup>3</sup>)

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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**SINGLE SPAN**

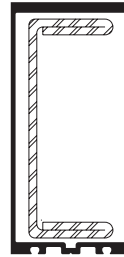
162028 W/162300



**162028 with 162300**

la = 8.088(336.64 x 10<sup>4</sup>)  
Sa = 2.930(48.01 x 10<sup>3</sup>)  
ls = 3.805(158.37 x 10<sup>4</sup>)  
Ss = 1.669(27.35 x 10<sup>3</sup>)

- A = 20 PSF (960)
- B = 30 PSF (1440)
- C = 40 PSF (1920)
- D = 50 PSF (2400)
- E = 60 PSF (2880)

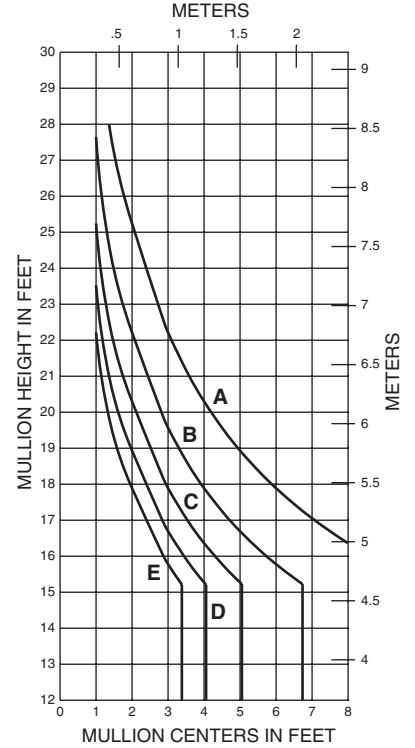


**162028 with 162301**

la = 8.088(336.64 x 10<sup>4</sup>)  
Sa = 2.930(48.01 x 10<sup>3</sup>)  
ls = 5.684(236.59 x 10<sup>4</sup>)  
Ss = 2.493(40.85 x 10<sup>3</sup>)

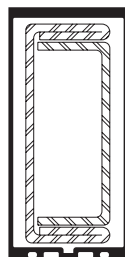
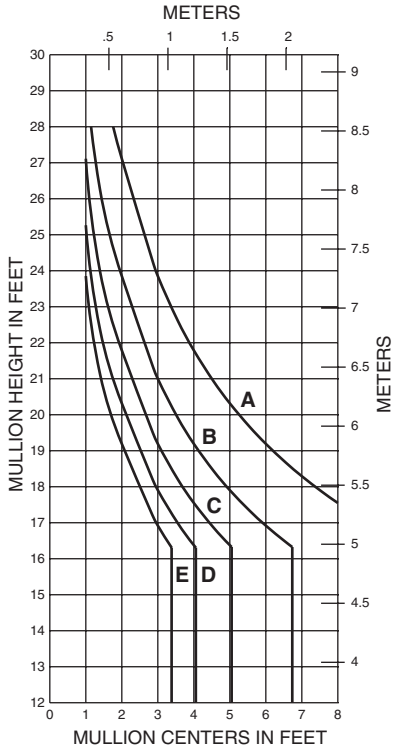
**SINGLE SPAN**

162028 W/162301



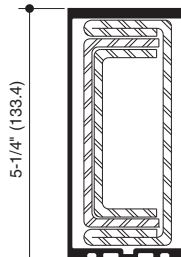
**SINGLE SPAN**

162028 W/162301/302



**162028 with 162301/302**

la = 8.088(336.64 x 10<sup>4</sup>)  
Sa = 2.930(48.01 x 10<sup>3</sup>)  
ls = 7.893(328.53 x 10<sup>4</sup>)  
Ss = 3.462(56.73 x 10<sup>3</sup>)

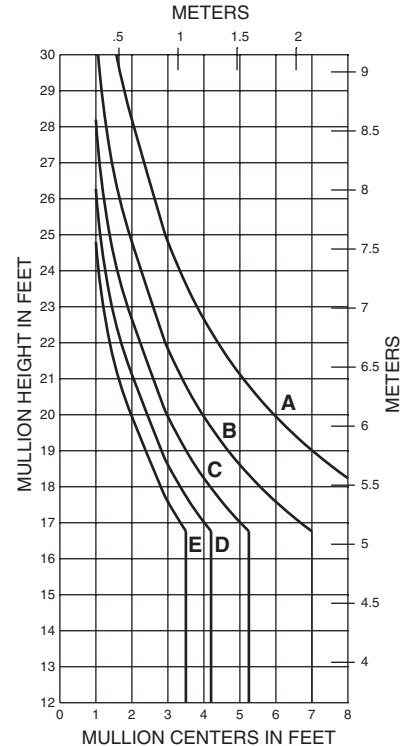


**162028 with 162301/302/303**

la = 8.088(336.64 x 10<sup>4</sup>)  
Sa = 2.930(48.01 x 10<sup>3</sup>)  
ls = 9.347(389.05 x 10<sup>4</sup>)  
Ss = 4.100(67.19 x 10<sup>3</sup>)

**SINGLE SPAN**

162028 W/162301/302/303



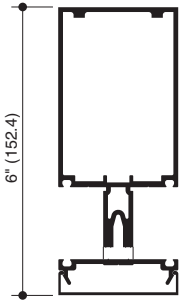
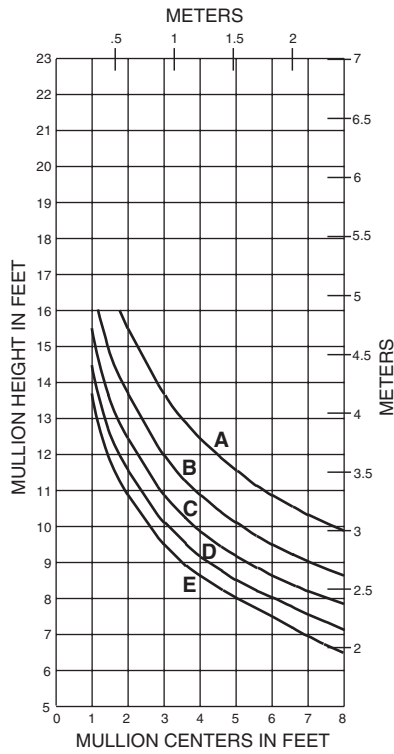
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## SINGLE SPAN

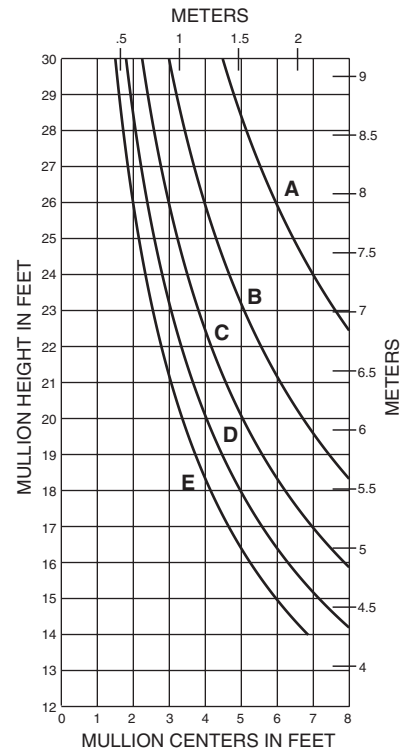
- A = 20 PSF (960)
- B = 30 PSF (1440)
- C = 40 PSF (1920)
- D = 50 PSF (2400)
- E = 60 PSF (2880)



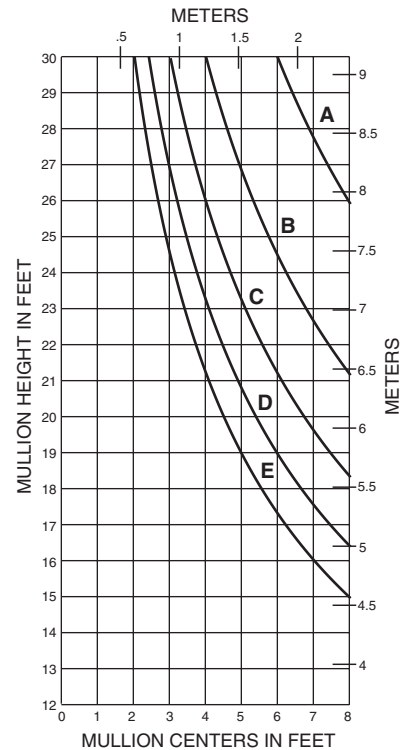
**162001**

I = 5.035(209.57 x 10<sup>4</sup>)  
S = 1.993(32.66 x 10<sup>3</sup>)

## TWIN SPAN



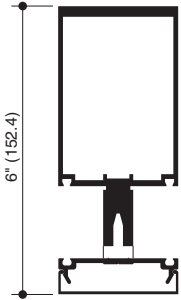
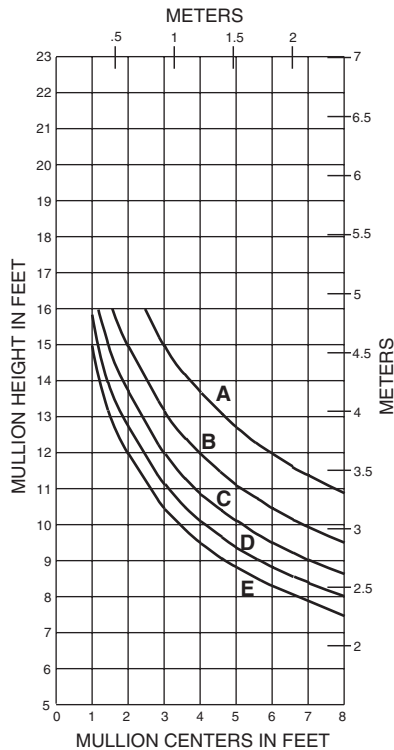
## TWIN SPAN



**162002**

I = 6.779(282.16 x 10<sup>4</sup>)  
S = 2.652(43.46 x 10<sup>3</sup>)

## SINGLE SPAN



**162002**

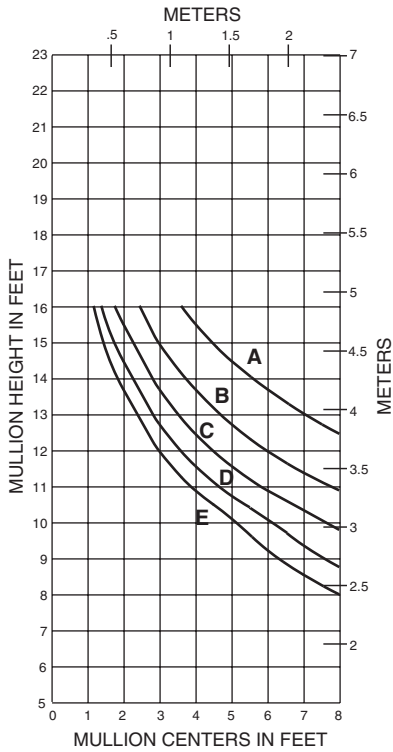
I = 6.779(282.16 x 10<sup>4</sup>)  
S = 2.652(43.46 x 10<sup>3</sup>)

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.

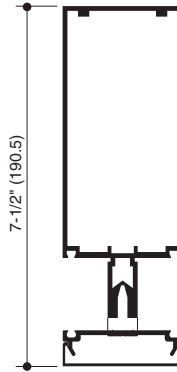
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**SINGLE SPAN**

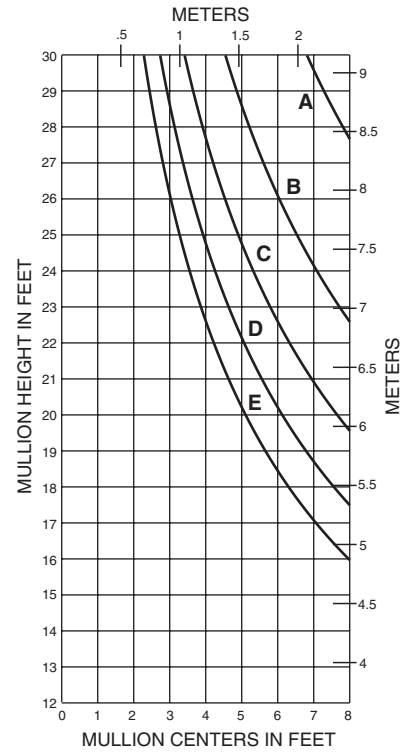


- A = 20 PSF (960)
- B = 30 PSF (1440)
- C = 40 PSF (1920)
- D = 50 PSF (2400)
- E = 60 PSF (2880)

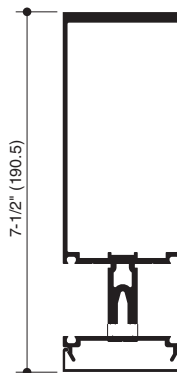
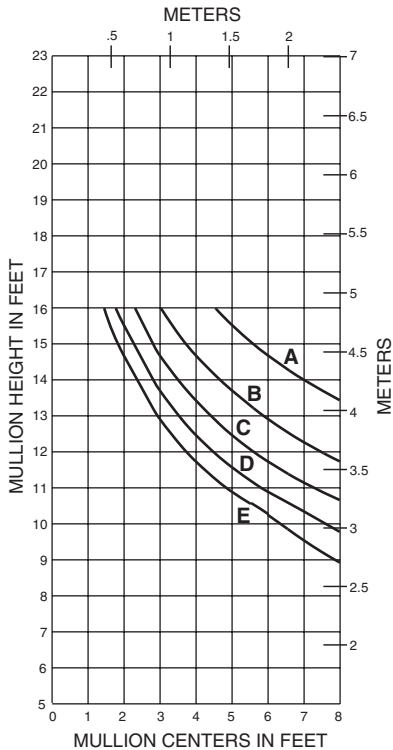


**162003**  
I = 10.135(421.85 x 10<sup>4</sup>)  
S = 3.027(49.60 x 10<sup>3</sup>)

**TWIN SPAN**

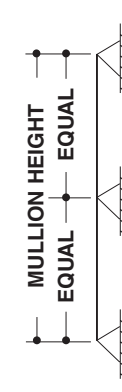
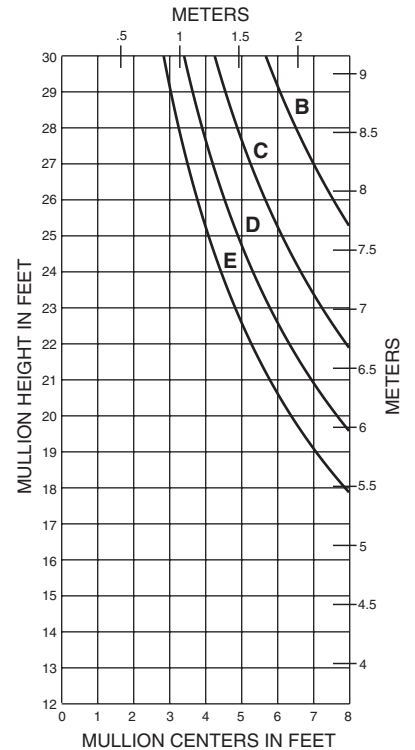


**SINGLE SPAN**



**162004**  
I = 12.736(530.11 x 10<sup>4</sup>)  
S = 3.791(62.12 x 10<sup>3</sup>)

**TWIN SPAN**

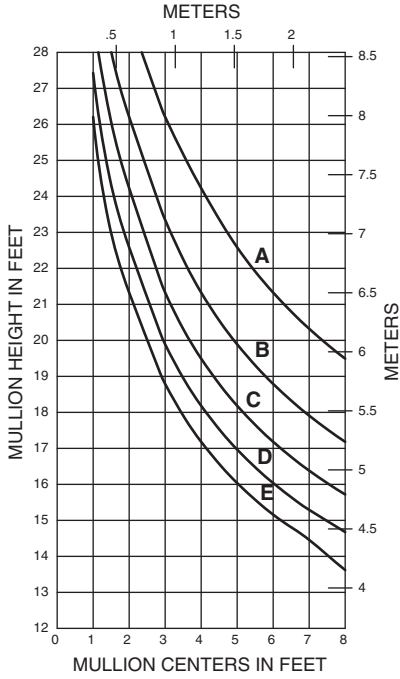


Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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

- A = 20 PSF (960)
- B = 30 PSF (1440)
- C = 40 PSF (1920)
- D = 50 PSF (2400)
- E = 60 PSF (2880)



**162064**

I = 42.441 (1766.52 x 10<sup>4</sup>)  
 S = 8.816 (144.47 x 10<sup>3</sup>)

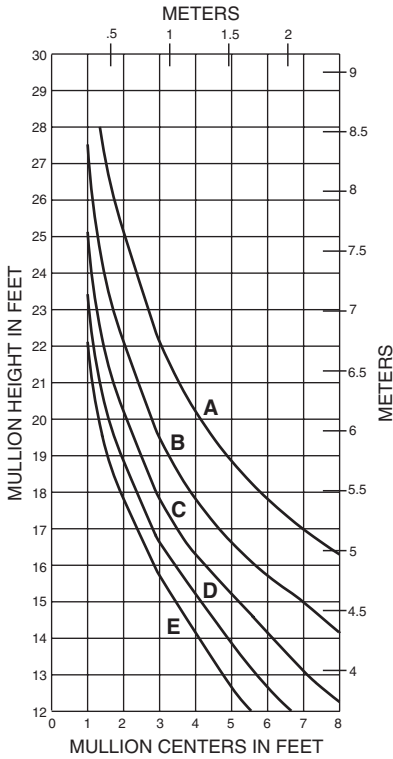
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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

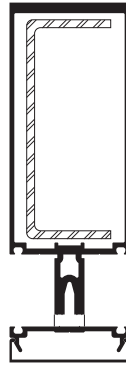
© Kawneer Company, Inc., 2014

**SINGLE SPAN**

162004 W/162300

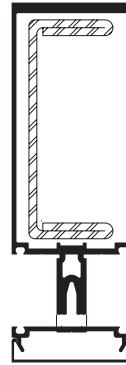


- A = 20 PSF (960)
- B = 30 PSF (1440)
- C = 40 PSF (1920)
- D = 50 PSF (2400)
- E = 60 PSF (2880)



**162004 with 162300**

$I_a = 12.736(530.11 \times 10^4)$   
 $S_a = 3.791(62.12 \times 10^3)$   
 $I_s = 3.805(158.37 \times 10^4)$   
 $S_s = 1.669(27.35 \times 10^3)$

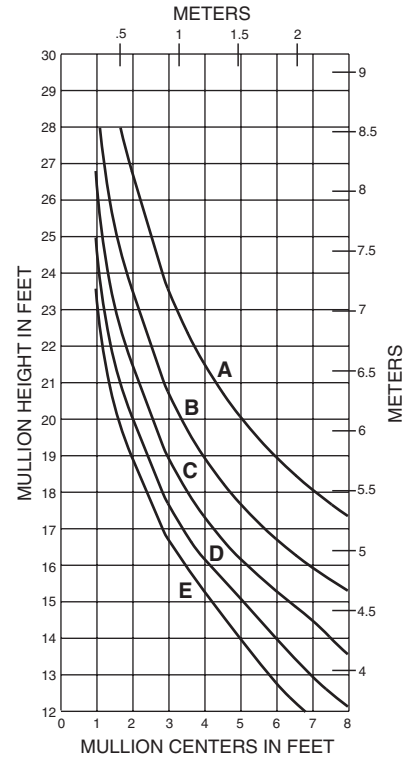


**162004 with 162301**

$I_a = 12.736(530.11 \times 10^4)$   
 $S_a = 3.791(62.12 \times 10^3)$   
 $I_s = 5.684(236.59 \times 10^4)$   
 $S_s = 2.493(40.85 \times 10^3)$

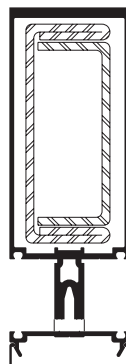
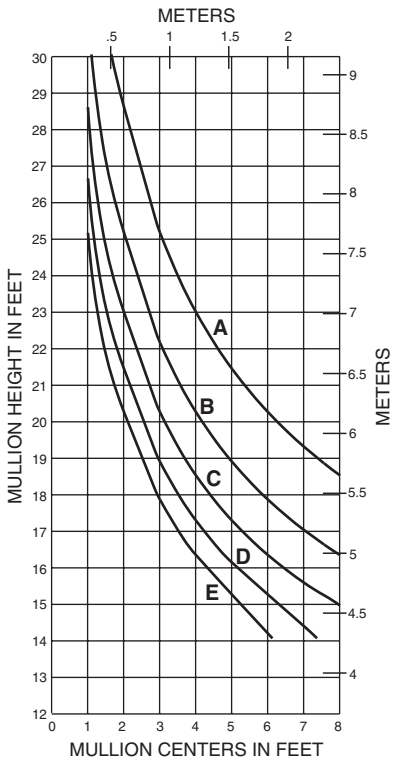
**SINGLE SPAN**

162004 W/162301



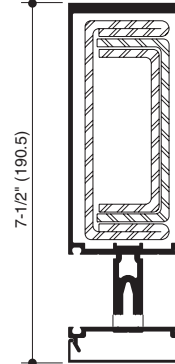
**SINGLE SPAN**

162004 W/162301/302



**162004 with 162301/302**

$I_a = 12.736(530.11 \times 10^4)$   
 $S_a = 3.791(62.12 \times 10^3)$   
 $I_s = 7.893(328.53 \times 10^4)$   
 $S_s = 3.462(56.73 \times 10^3)$

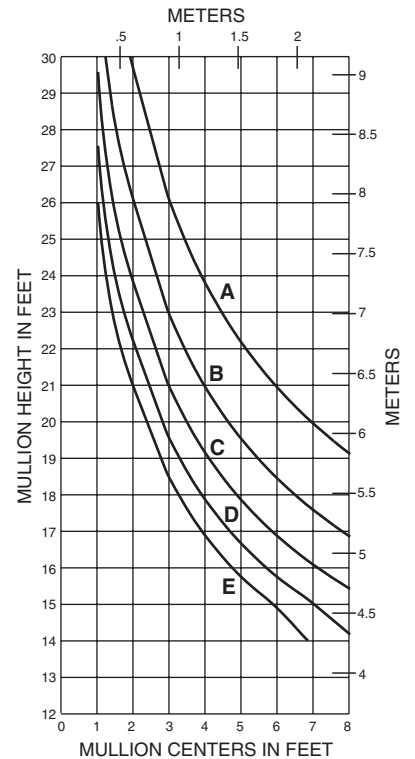


**162004 with 162301/302/303**

$I_a = 12.736(530.11 \times 10^4)$   
 $S_a = 3.791(62.12 \times 10^3)$   
 $I_s = 9.347(389.05 \times 10^4)$   
 $S_s = 4.100(67.19 \times 10^3)$

**SINGLE SPAN**

162004 W/162301/302/303



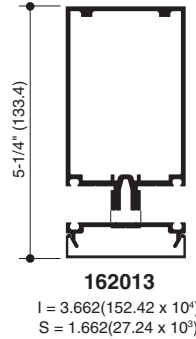
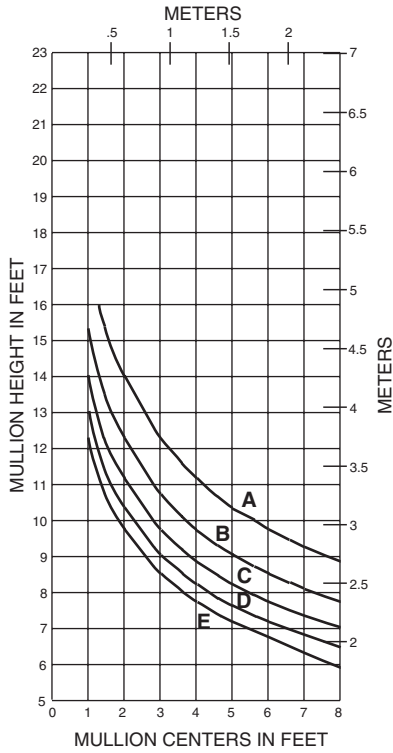
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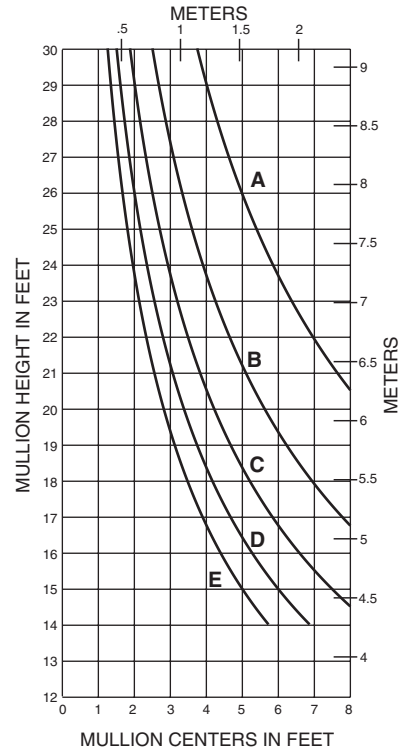
© Kawneer Company, Inc., 2014

## SINGLE SPAN

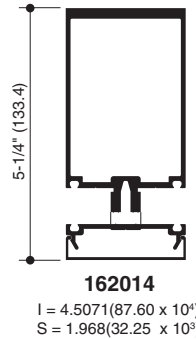
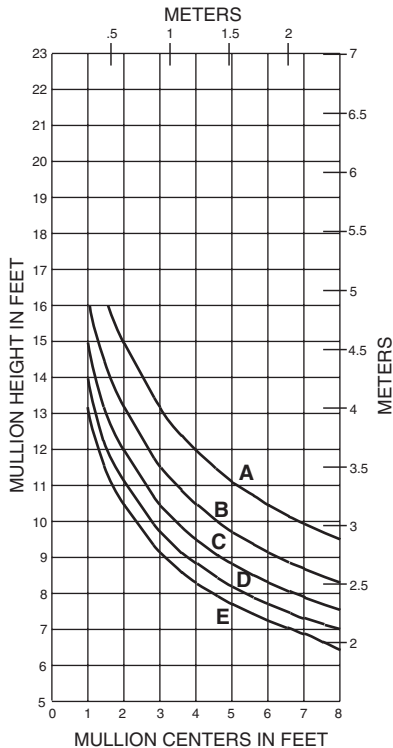
- A = 20 PSF (960)
- B = 30 PSF (1440)
- C = 40 PSF (1920)
- D = 50 PSF (2400)
- E = 60 PSF (2880)



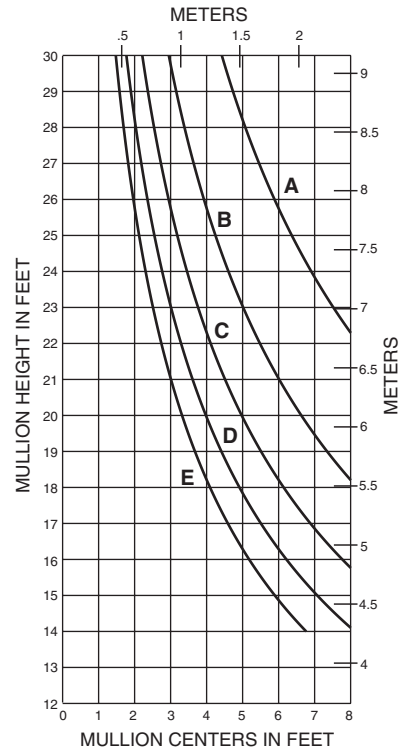
## TWIN SPAN



## SINGLE SPAN



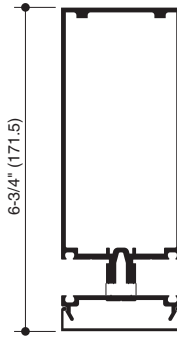
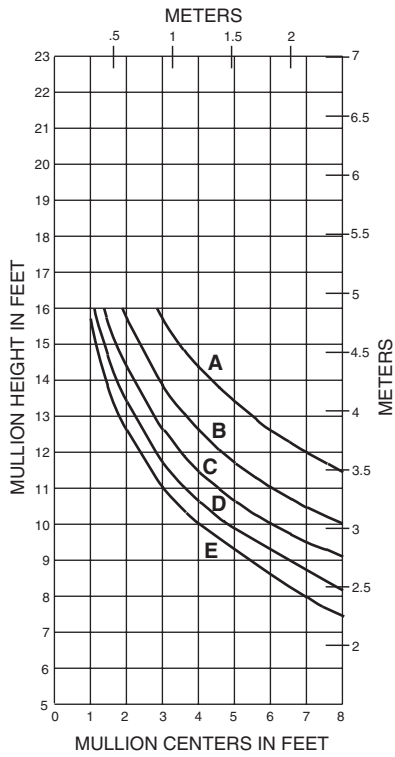
## TWIN SPAN



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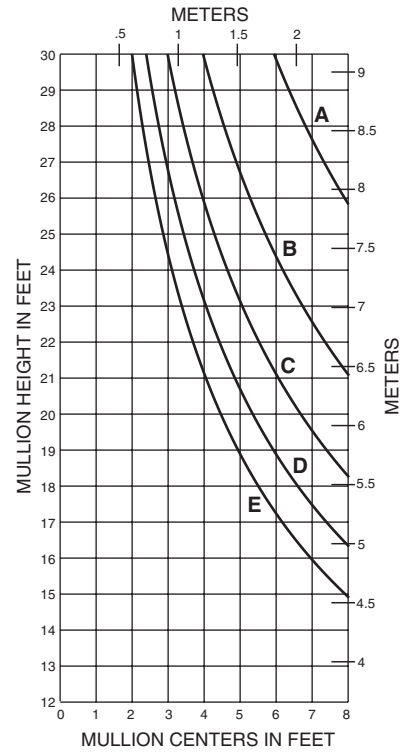
**SINGLE SPAN**



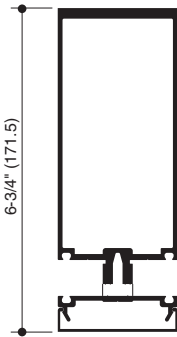
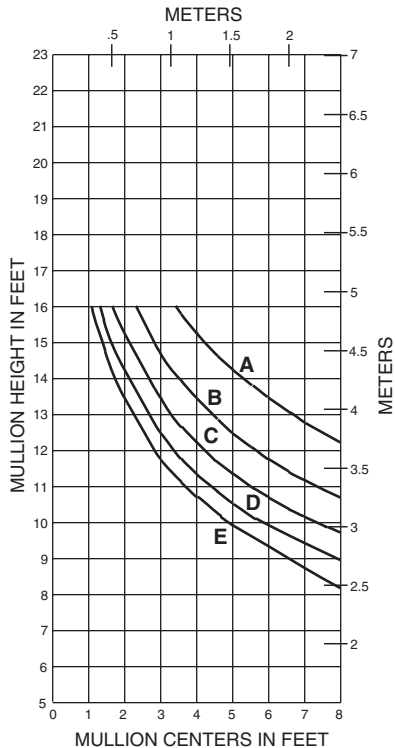
**162015**  
 $I = 7.915(329.45 \times 10^4)$   
 $S = 2.635(43.18 \times 10^3)$



**TWIN SPAN**



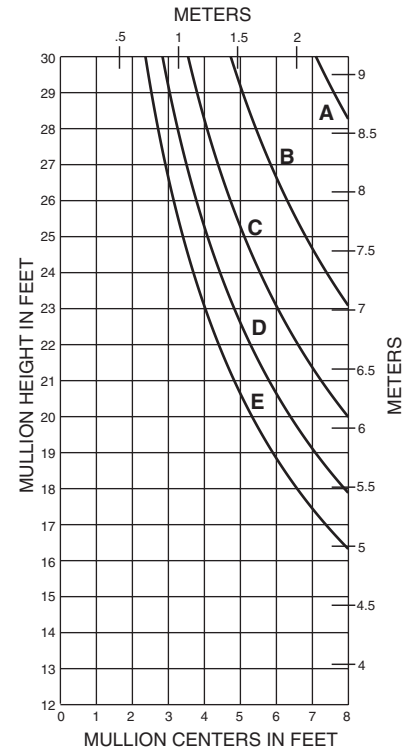
**SINGLE SPAN**



**162016**  
 $I = 9.594(399.33 \times 10^4)$   
 $S = 3.163(51.83 \times 10^3)$



**TWIN SPAN**

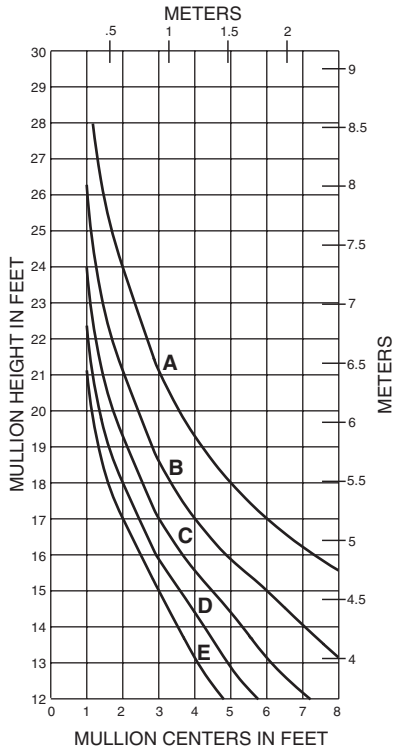


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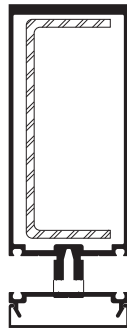
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**SINGLE SPAN**

162016 W/162300

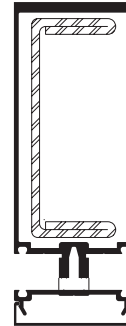


- A = 20 PSF (960)
- B = 30 PSF (1440)
- C = 40 PSF (1920)
- D = 50 PSF (2400)
- E = 60 PSF (2880)



**162016 with 162300**

$I_a = 9.594(399.33 \times 10^4)$   
 $S_a = 3.163(51.83 \times 10^3)$   
 $I_s = 3.805(158.37 \times 10^4)$   
 $S_s = 1.669(27.35 \times 10^3)$

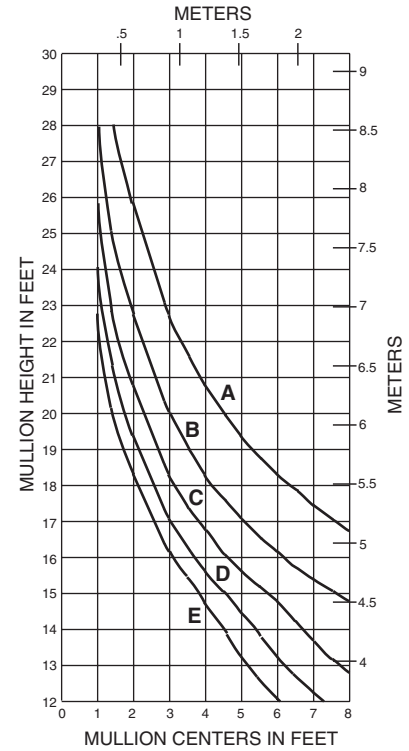


**162016 with 162301**

$I_a = 9.594(399.33 \times 10^4)$   
 $S_a = 3.163(51.83 \times 10^3)$   
 $I_s = 5.684(236.59 \times 10^4)$   
 $S_s = 2.493(40.85 \times 10^3)$

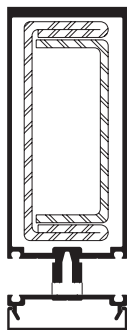
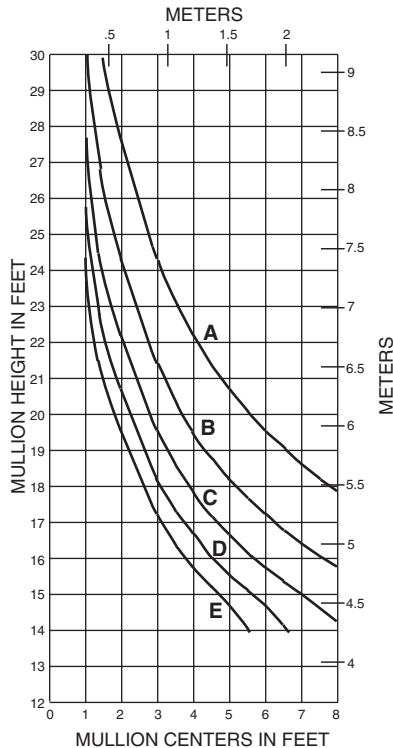
**SINGLE SPAN**

162016 W/162301



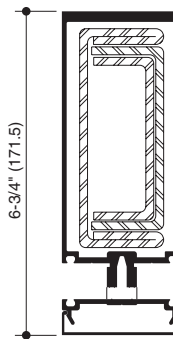
**SINGLE SPAN**

162016 W/162301/302



**162016 with 162301/302**

$I_a = 9.594(399.33 \times 10^4)$   
 $S_a = 3.163(51.83 \times 10^3)$   
 $I_s = 7.893(328.53 \times 10^4)$   
 $S_s = 3.462(56.73 \times 10^3)$

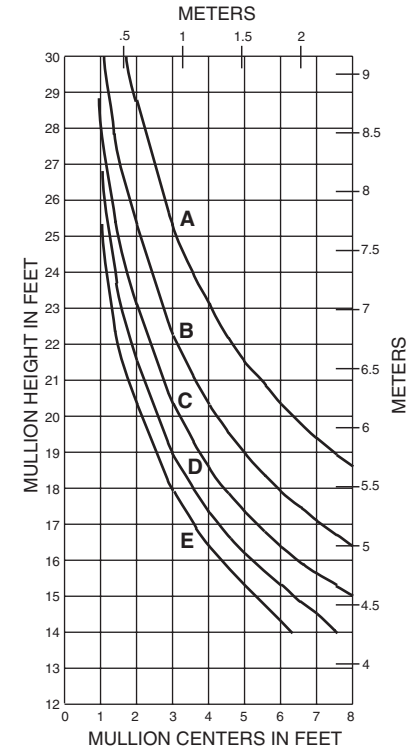


**162016 with 162301/302/303**

$I_a = 9.594(399.33 \times 10^4)$   
 $S_a = 3.163(51.83 \times 10^3)$   
 $I_s = 9.347(389.05 \times 10^4)$   
 $S_s = 4.100(67.19 \times 10^3)$

**SINGLE SPAN**

162016 W/162301/302/303

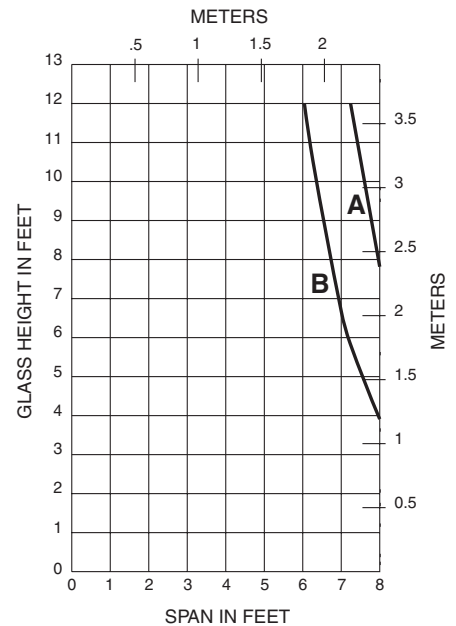
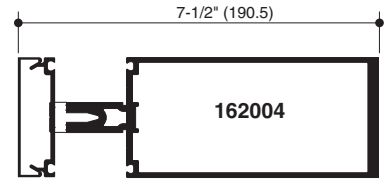
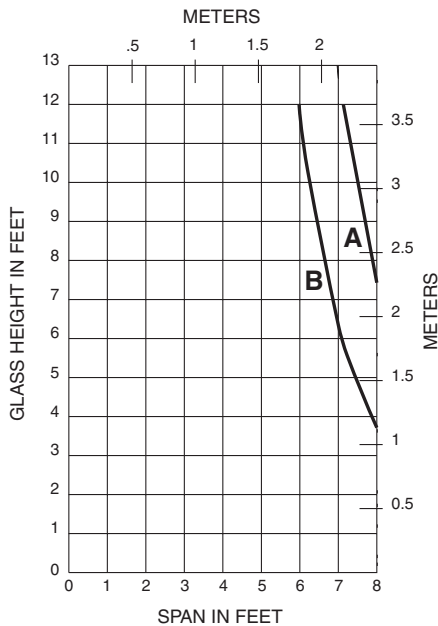
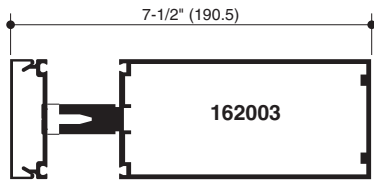
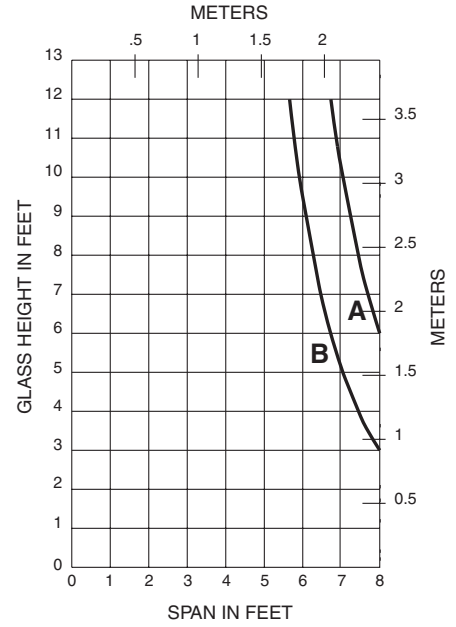
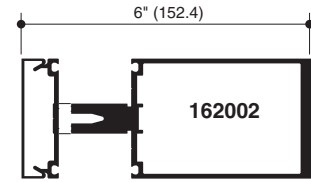
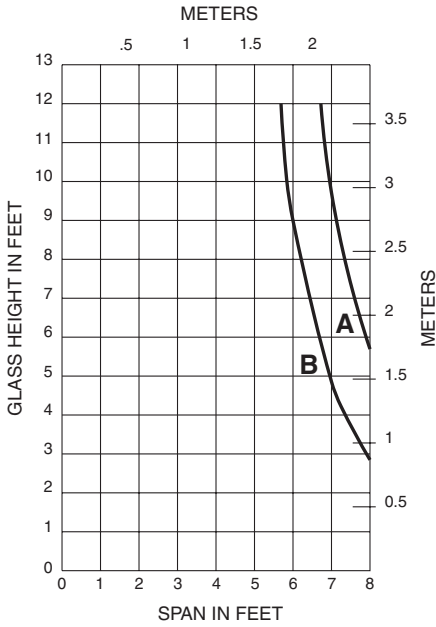
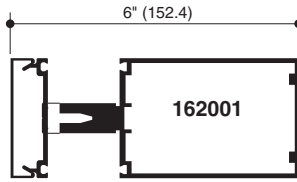


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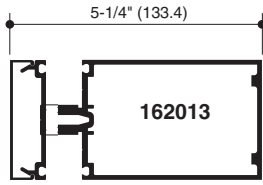
A - 1/4" GLASS (1/4 POINT LOADING)  
B - 1" GLASS (1/4 POINT LOADING)



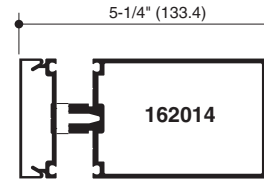
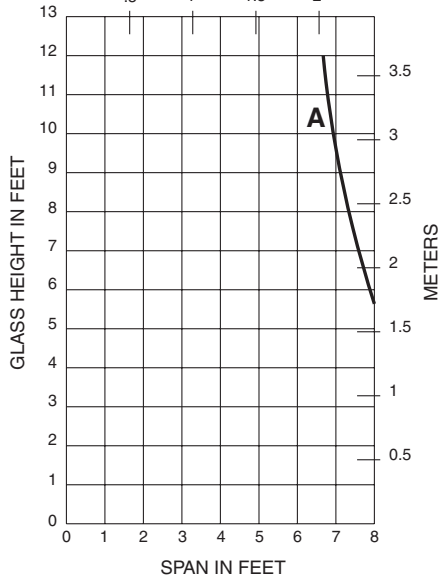
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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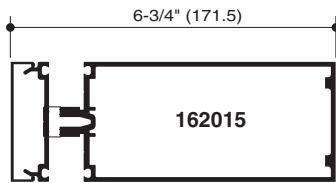
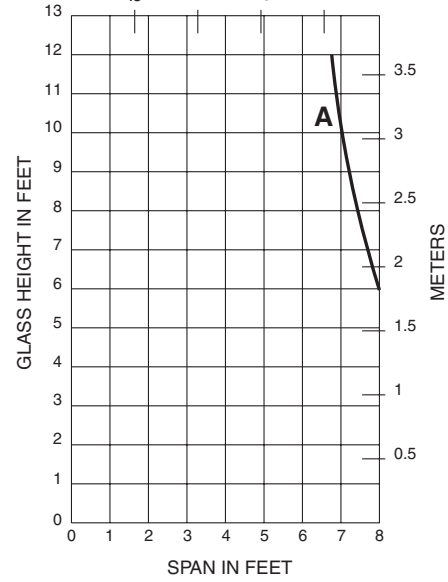
A - 1/4" GLASS (1/4 POINT LOADING)



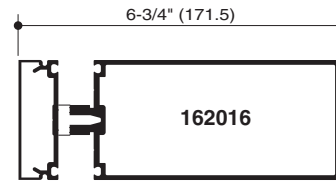
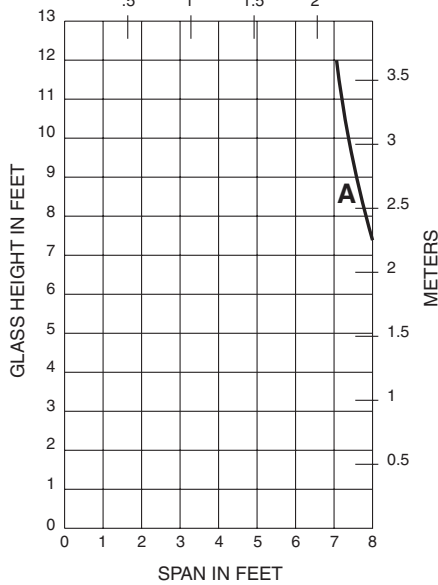
METERS



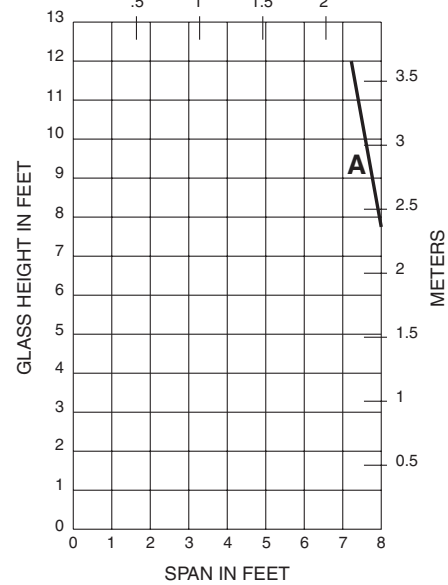
METERS



METERS



METERS



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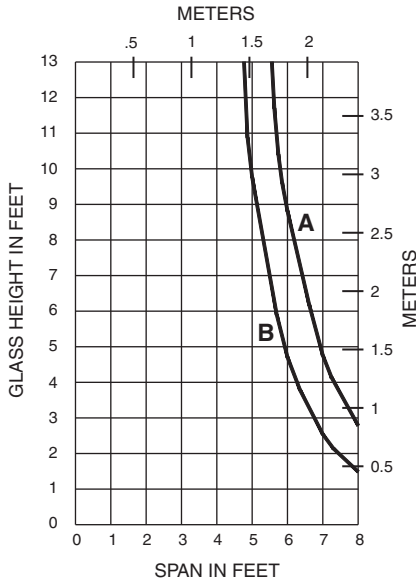
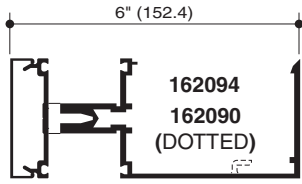
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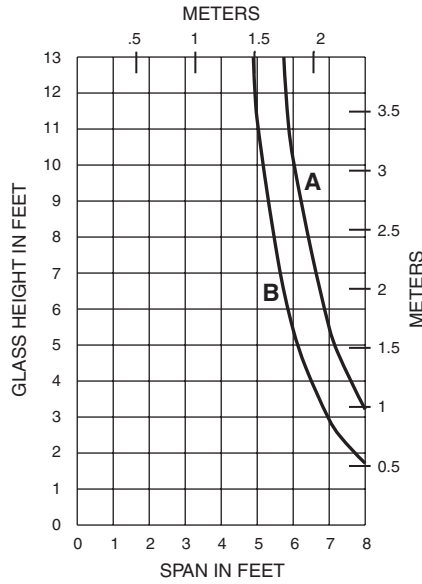
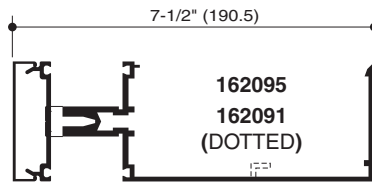
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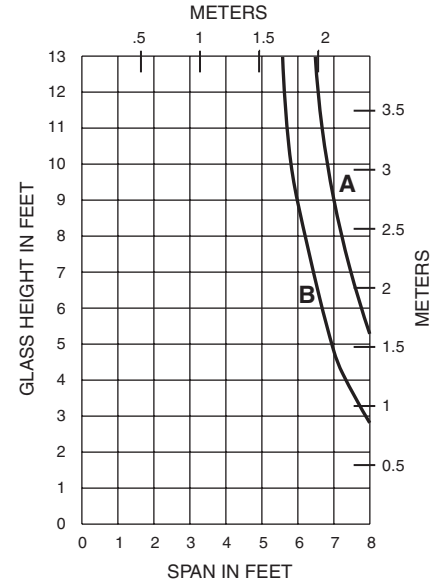
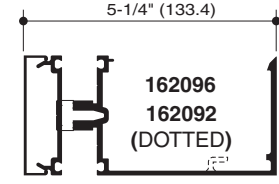
**A - 1" GLASS (1/8 POINT LOADING)**  
**B - 1" GLASS (1/4 POINT LOADING)**



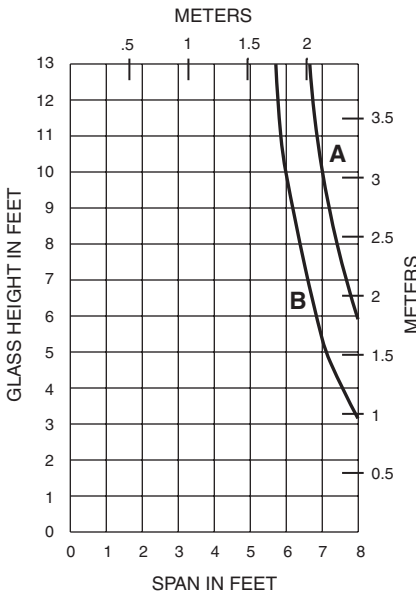
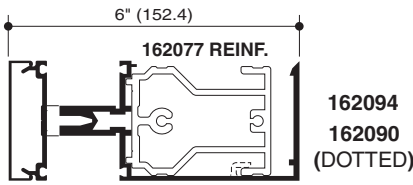
**A - 1" GLASS (1/8 POINT LOADING)**  
**B - 1" GLASS (1/4 POINT LOADING)**



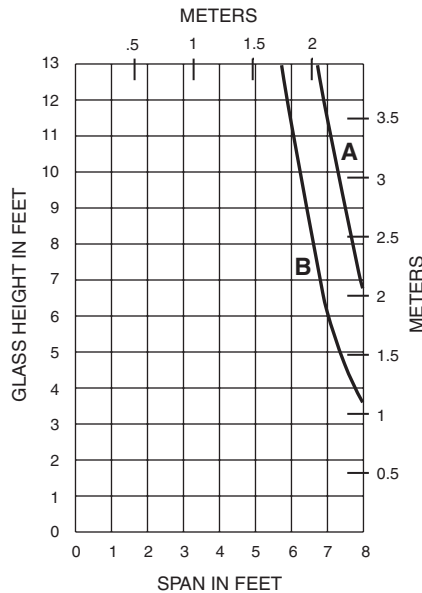
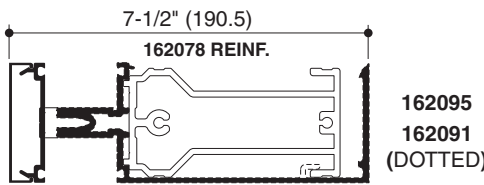
**A - 1/4" GLASS (1/8 POINT LOADING)**  
**B - 1/4" GLASS (1/4 POINT LOADING)**



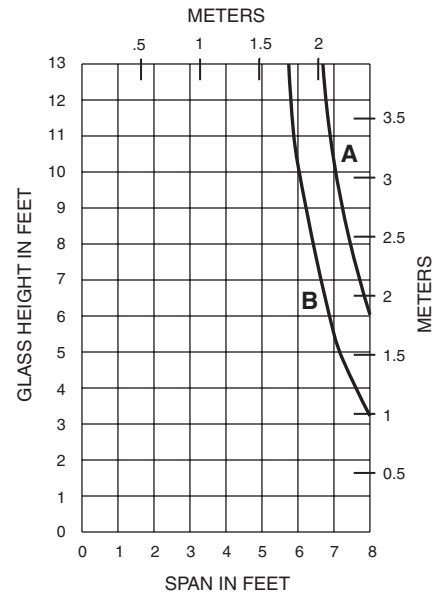
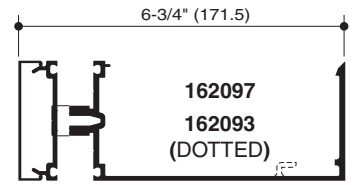
**A - 1" GLASS (1/8 POINT LOADING)**  
**B - 1" GLASS (1/4 POINT LOADING)**



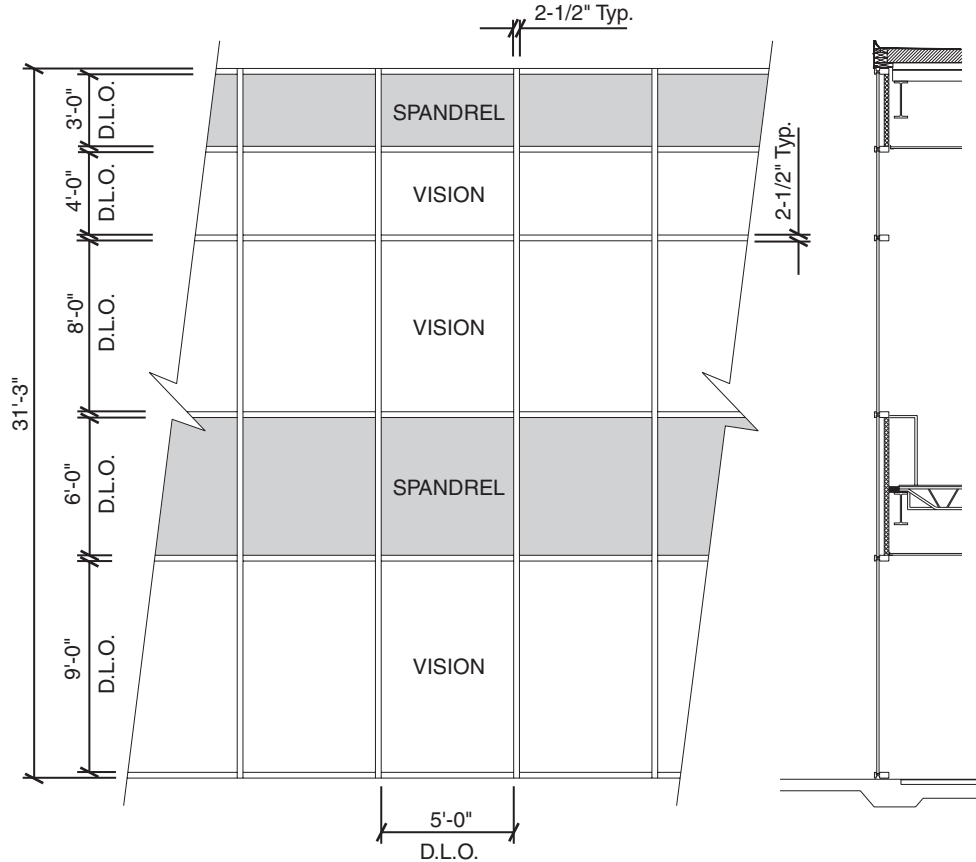
**A - 1" GLASS (1/8 POINT LOADING)**  
**B - 1" GLASS (1/4 POINT LOADING)**



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



**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	= 0.48 Btu/(ft <sup>2</sup> · h · °F)
Vision Area	= 5(9 + 8 + 4) = 105.0 ft <sup>2</sup>
Total Area (Vision)	= 5' 2-1/2" (9' 3-3/4" + 8' 2-1/2" + 4' 2-1/2") = 113.2 ft <sup>2</sup>
Percentage of Vision Glass	= (Vision Area ÷ Total Area)100 = (105.0 ÷ 113.2)100 = 93%

### Spandrel Area

Example Spandrel R-value	= 15 (ft <sup>2</sup> · h · °F)/Btu
Spandrel Area	= 5(6 + 3) = 45.0 ft <sup>2</sup>
Total Area (Spandrel)	= 5' 2-1/2" (6' 2-1/2" + 3' 3-3/4") = 49.6 ft <sup>2</sup>
Percent of Spandrel	= (Spandrel Area ÷ Total Area)100 = (49.0 ÷ 49.6)100 = 91%

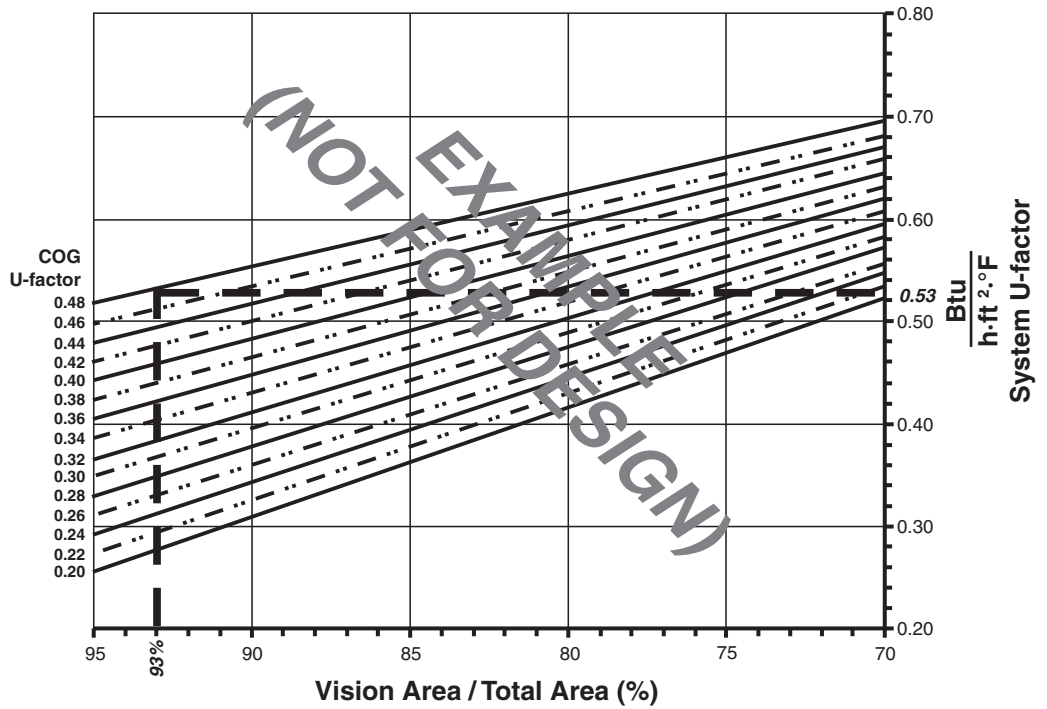
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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Vision Area Chart

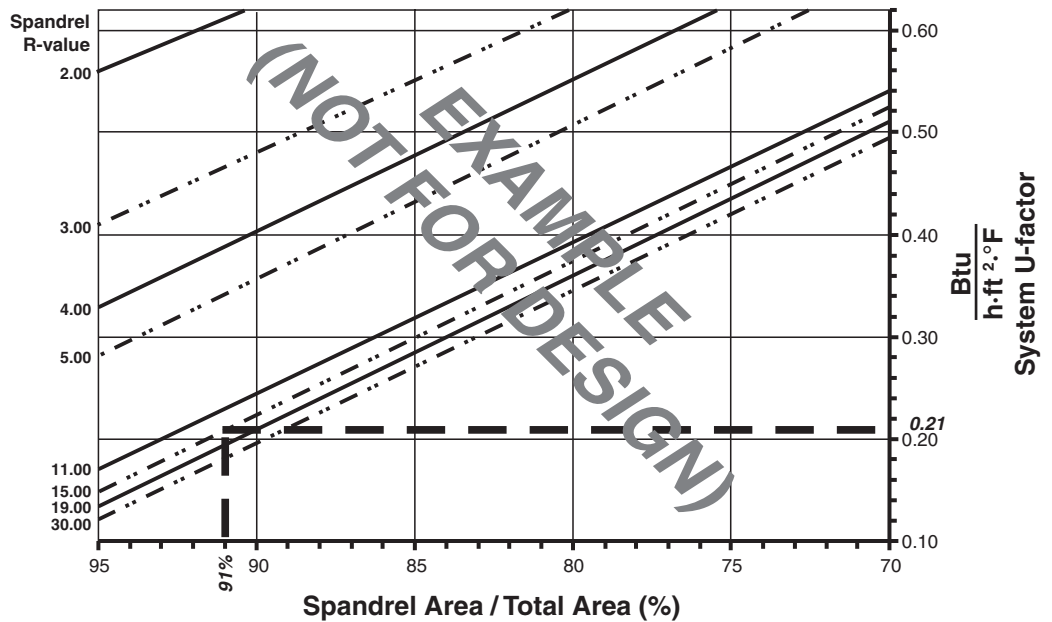
System U-factor vs Percent of Vision Area



Based on a single curtain wall bay of 93% vision glass and center of glass U-factor of 0.48, System U-factor is equal to 0.53 Btu/(h·ft<sup>2</sup>·°F)

Spandrel Area Chart

System U-factor vs Percent of Spandrel Area



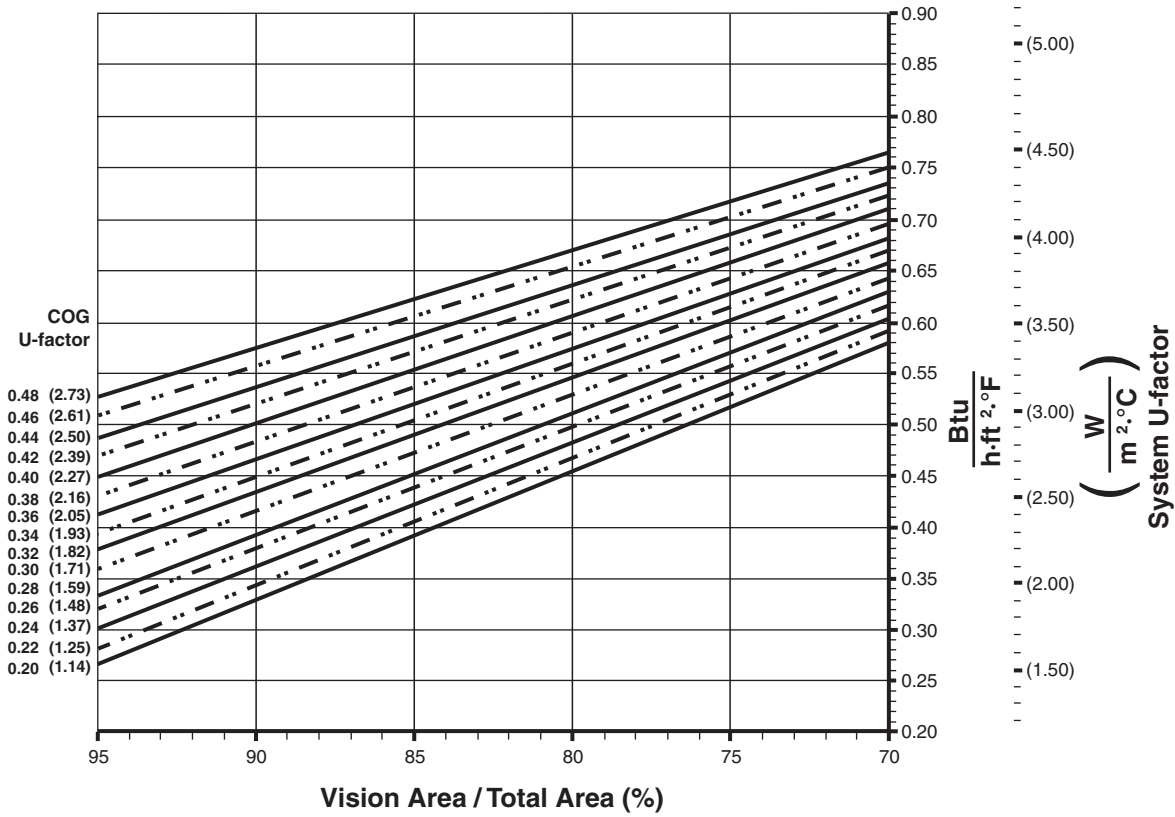
Based on a single curtain wall bay of 91% spandrel and center of spandrel R-value of 15, system U-factor is equal to 0.21 Btu/(h·ft<sup>2</sup>·°F)

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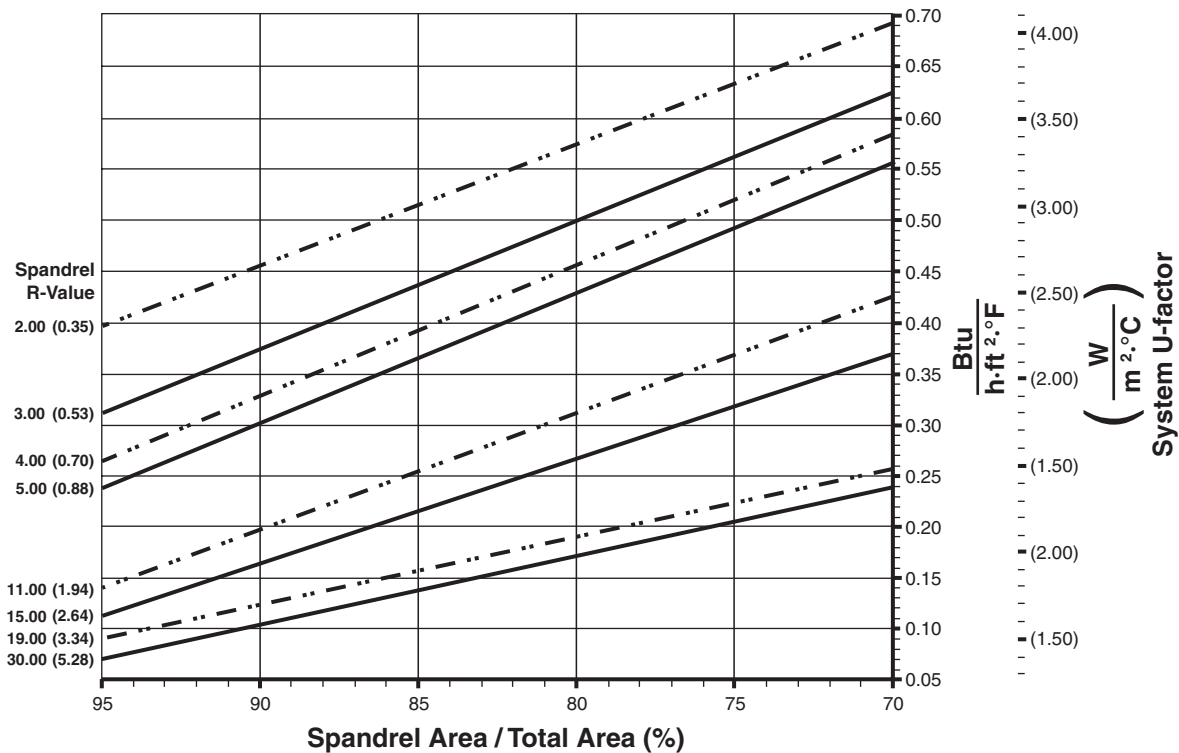
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Note:  
 Values in parentheses are metric.  
 COG=Center of Glass.  
 Charts are generated per AAMA 507.

### System U-Factor for Vision Glass



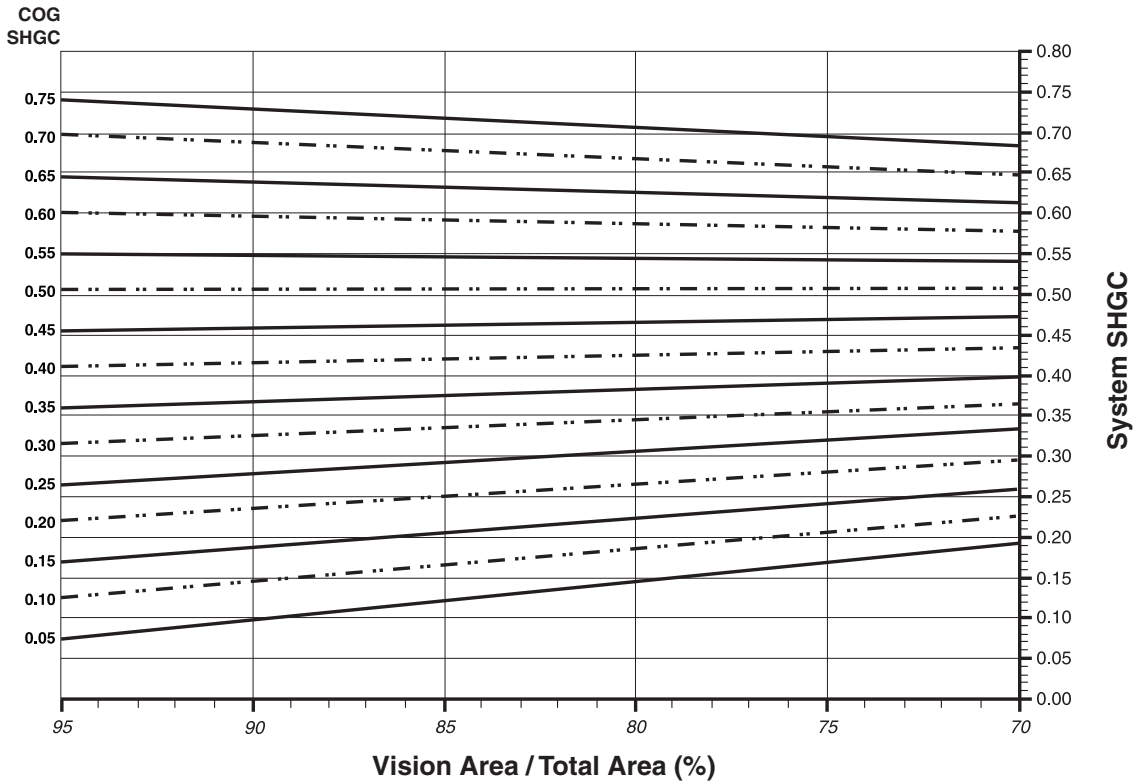
### System U-Factors for Spandrel Glass



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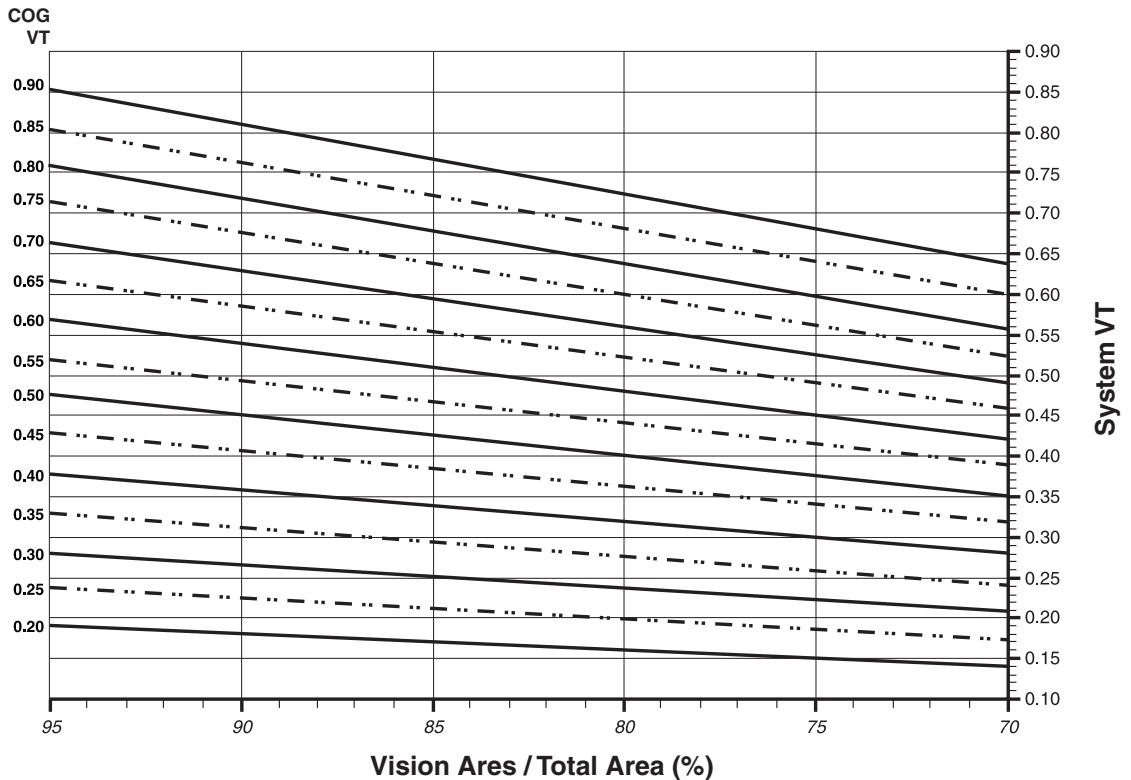
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System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



Charts are generated per AAMA 507.

System Visible Transmittance (VT) vs Percent of Vision Area



Charts are generated per AAMA 507.

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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	0.56
0.46	0.54
0.44	0.53
0.42	0.51
0.40	0.49
0.38	0.48
0.36	0.46
0.34	0.44
0.32	0.42
0.30	0.41
0.28	0.39
0.26	0.37
0.24	0.36
0.22	0.34
0.20	0.32

**1" GLAZING WITH  
ALUMINUM PRESSURE PLATE**

**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 2000mm wide by 2000mm 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	0.73
0.70	0.68
0.65	0.64
0.60	0.59
0.55	0.55
0.50	0.50
0.45	0.46
0.40	0.41
0.35	0.37
0.30	0.32
0.25	0.28
0.20	0.23
0.15	0.19
0.10	0.14
0.05	0.10

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

Glass VT <sup>3</sup>	Overall VT <sup>4</sup>
0.90	0.81
0.85	0.77
0.80	0.72
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	0.36
0.35	0.32
0.30	0.27
0.25	0.23
0.20	0.18

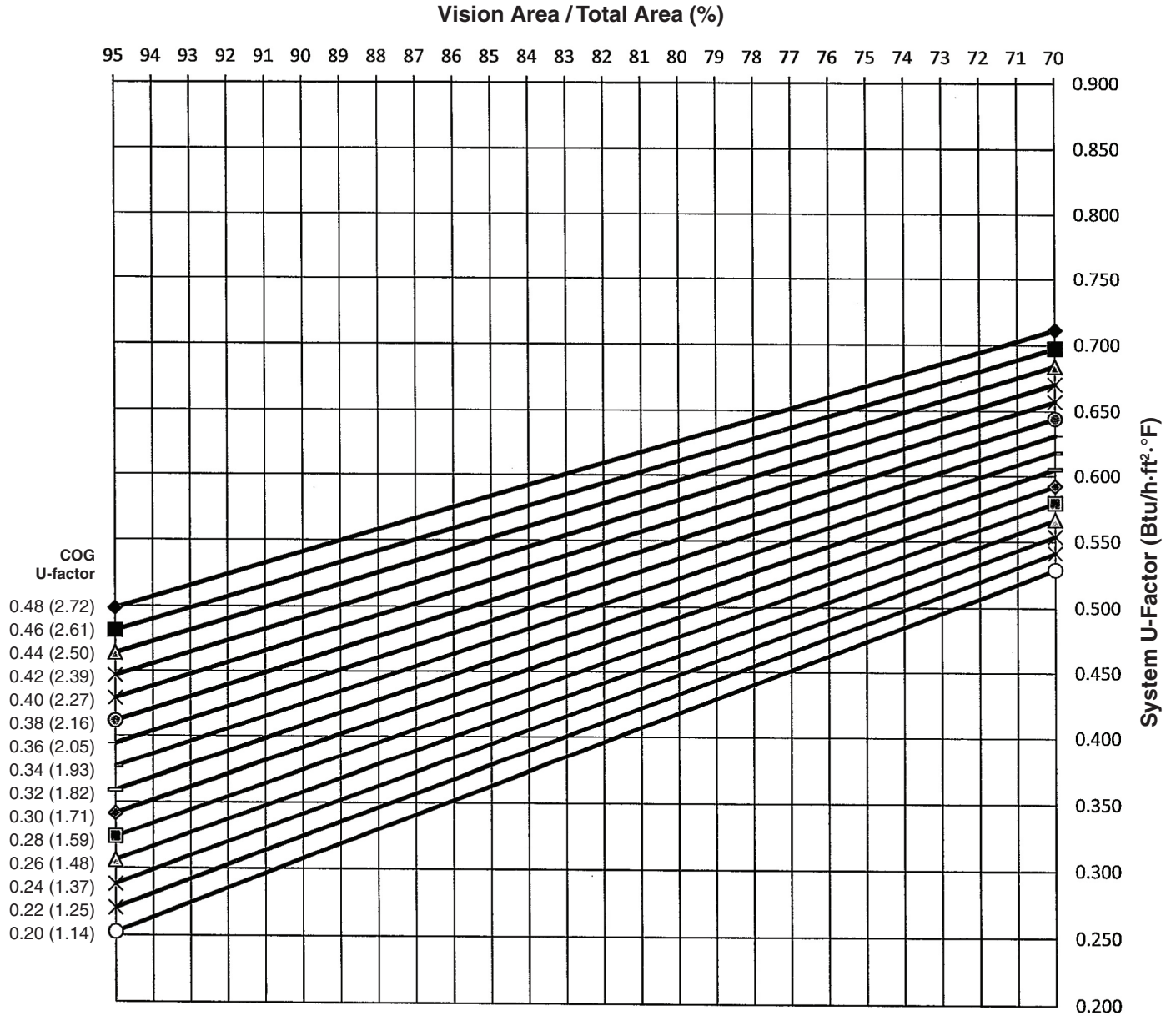
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 Charts are generated per AAMA 507.

**1" GLAZING WITH FIBERGLASS PRESSURE PLATE**

**System U-Factor for Vision Glass**



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

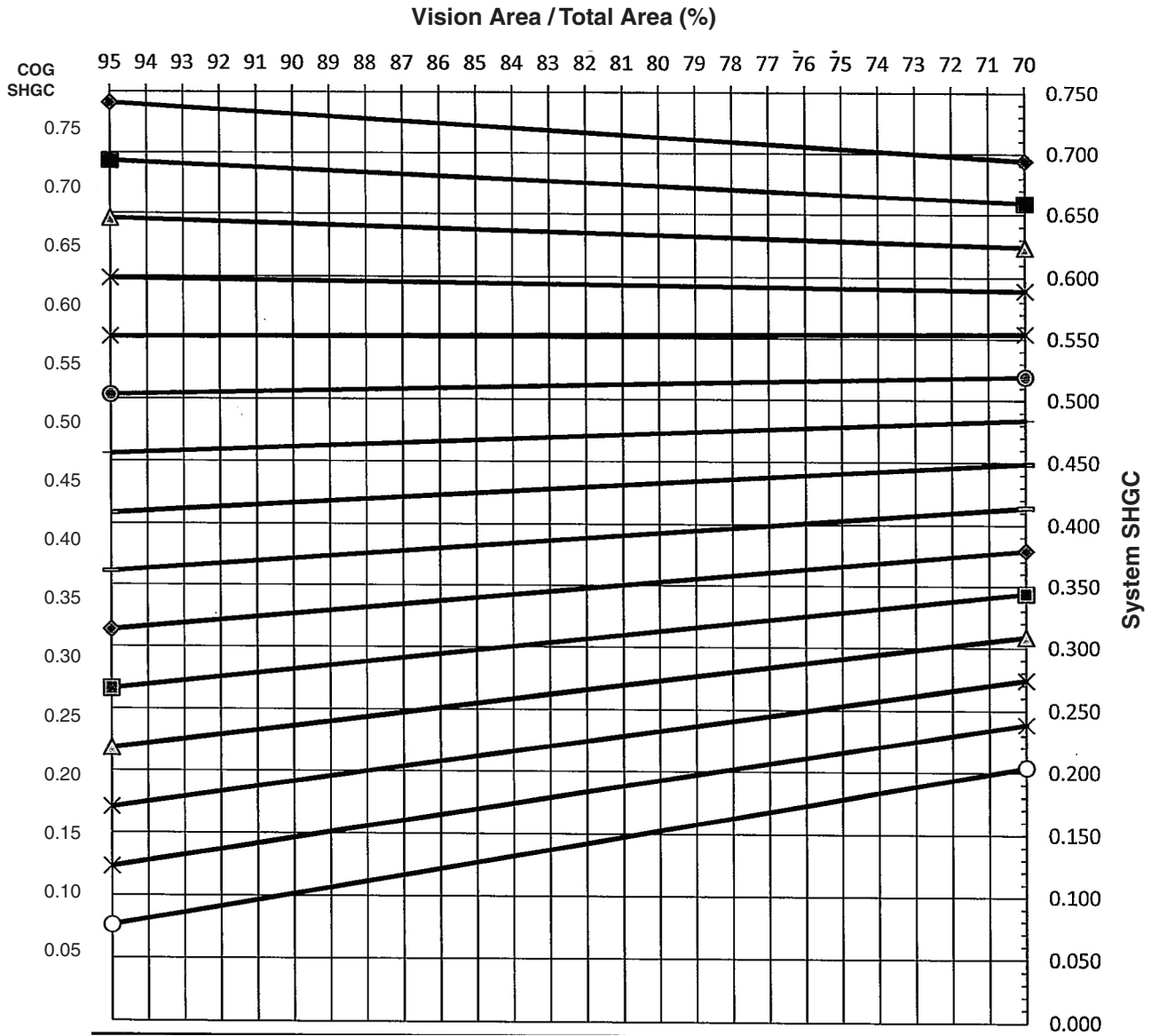
For glass values that are not listed, linear interpolation is permitted.  
 Glass properties are based on center of glass values (winter conditions) and are obtained from your glass supplier.

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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**1" GLAZING WITH FIBERGLASS PRESSURE PLATE**

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



Charts are generated per AAMA 507.

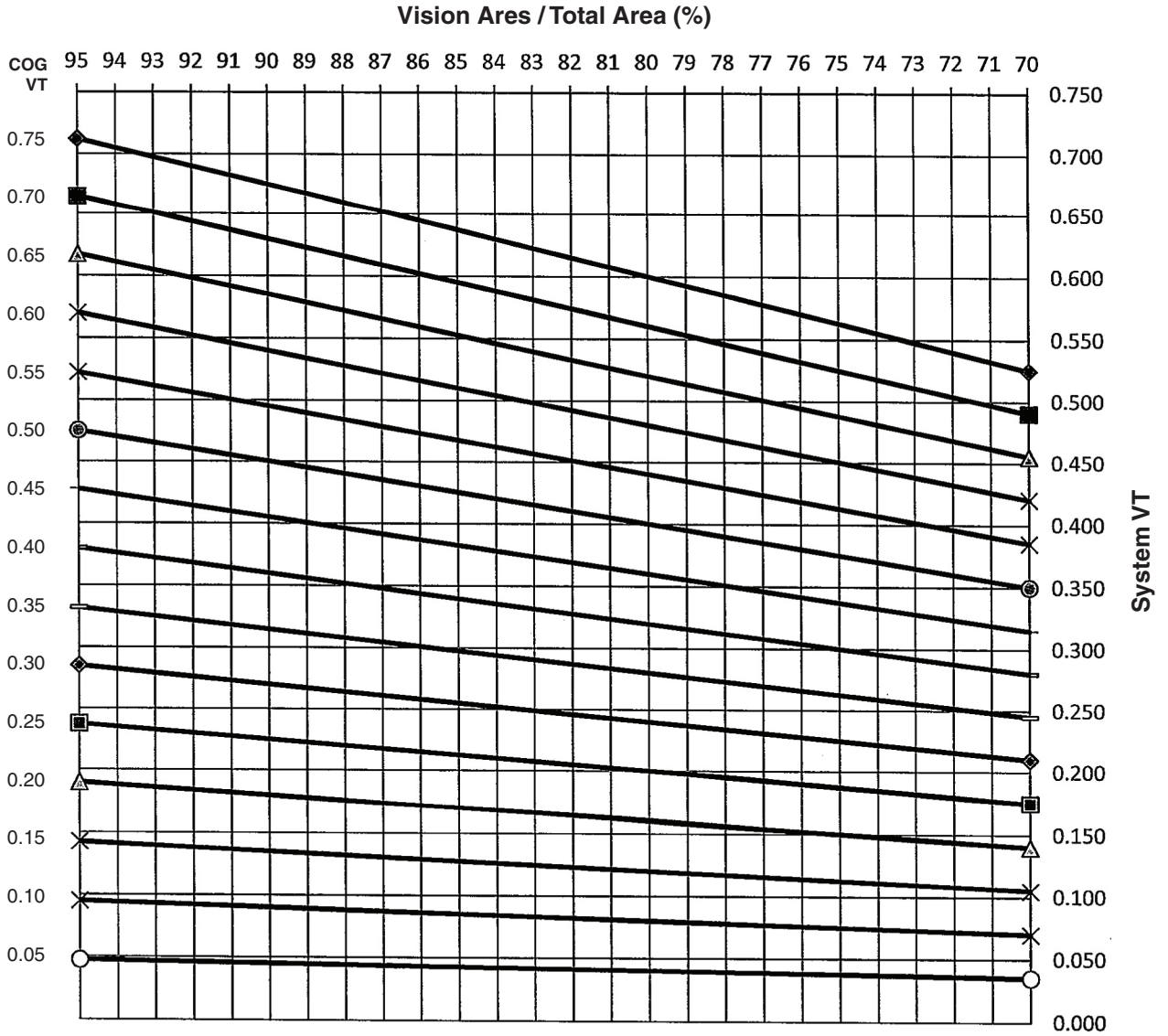
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**1" GLAZING WITH FIBERGLASS PRESSURE PLATE**

System Visible Transmittance (VT) vs Percent of Vision Area



Charts are generated per AAMA 507.

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0.36	0.44
0.34	0.42
0.32	0.41
0.30	0.39
0.28	0.37
0.26	0.36
0.24	0.34
0.22	0.32
0.20	0.31

**1" GLAZING WITH  
FIBERGLASS PRESSURE PLATE**

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Glass VT <sup>3</sup>	Overall VT <sup>4</sup>
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0.70	0.63
0.65	0.59
0.60	0.54
0.55	0.50
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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	0.09
0.05	0.05

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