Features

- Economical
- 2-1/4" sight line
- 1" infill system has 5" or 7-1/4" depth members
- 1/4" infill system has 4-1/4" or 6-1/2" depth members
- Outside glazed
- SSG option for vertical mullions
- Thermal break via polymer glazing clip
- Permanodic™ anodized finishes in seven choices
- Painted finishes in standard and custom choices

Optional Features

- Two color capability
- Project specific U-factors (See Thermal Charts)

Product Applications

- Low-rise curtain wall applications of four stories or less
- Punched opening or ribbon window applications
- Integrated entrance framing allowing Kawneer entrances or other specialty entrances to be included
- Intergrates with concealed GLASSvent™ for curtain wall

For specific product applications,
Consult your Kawneer representative.

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.

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

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

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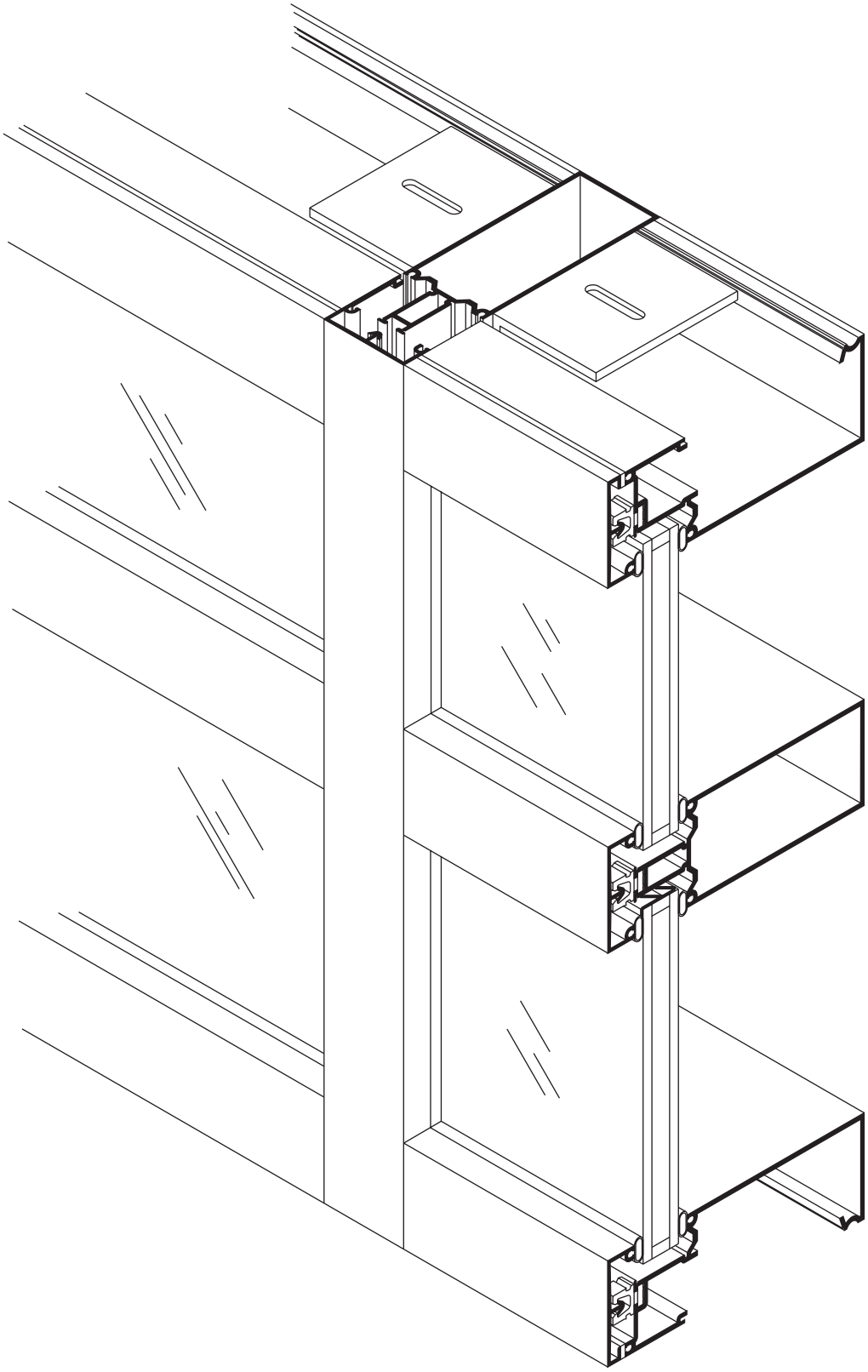
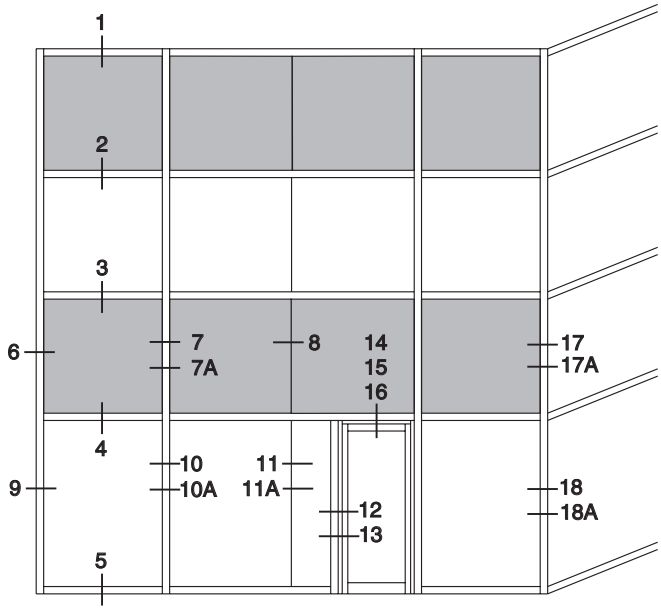
EC 97911-053

2250 LR WALL

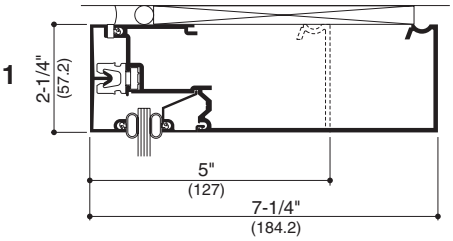
PICTORIAL VIEW

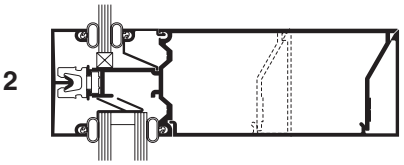


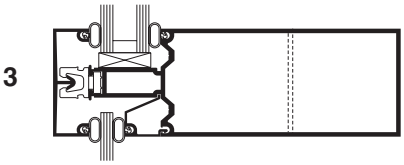
SCALE 3" = 1'-0"

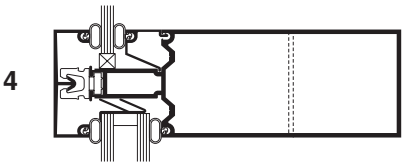


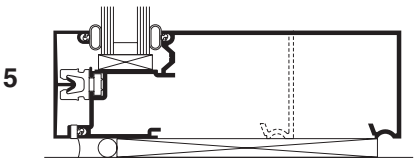
ELEVATION IS NUMBER KEYED TO DETAILS

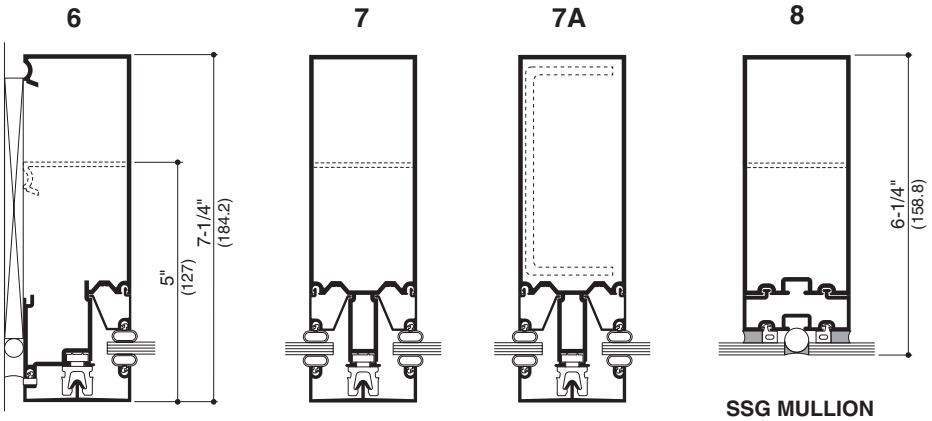




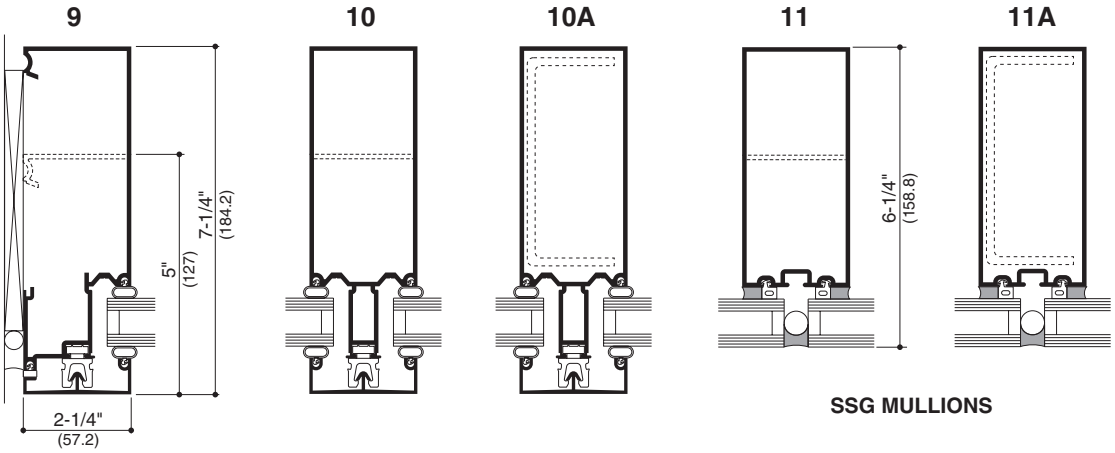








SSG MULLION

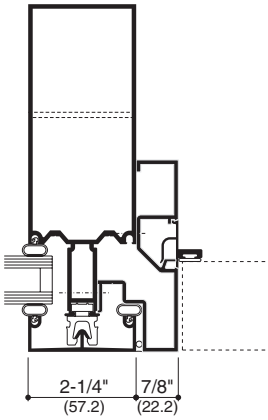


SSG MULLIONS

SCALE 3" = 1'-0"

SECTIONS ARE NUMBER KEYED TO ELEVATION ON PAGE 6.

12



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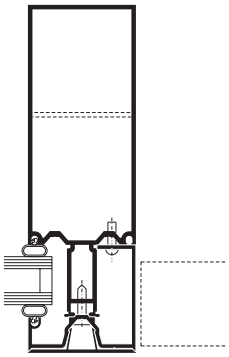

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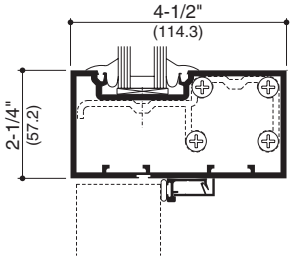

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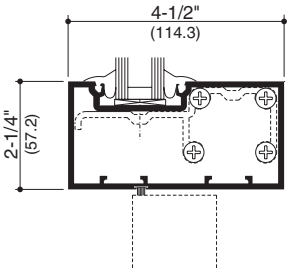

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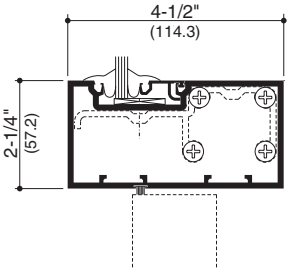

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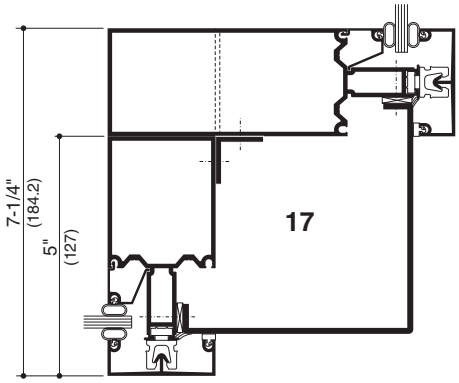

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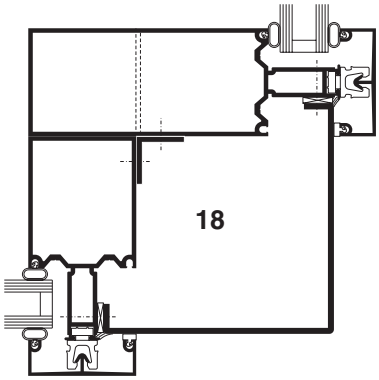

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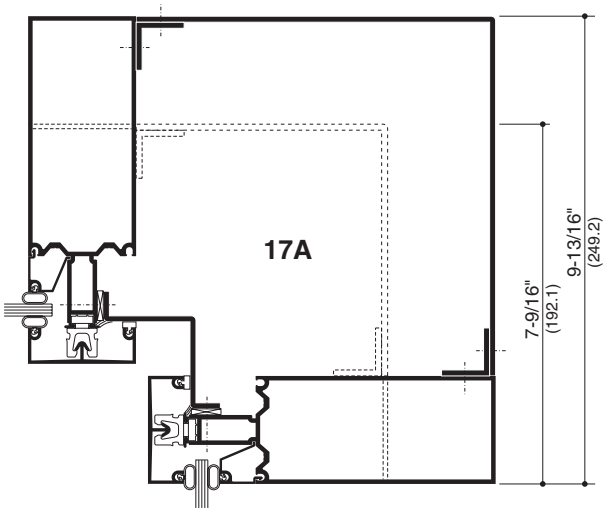

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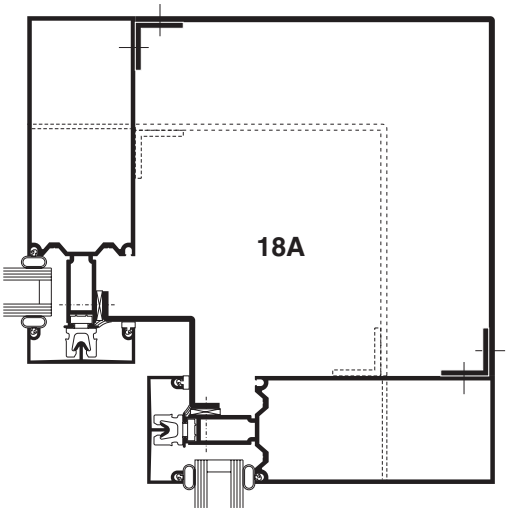
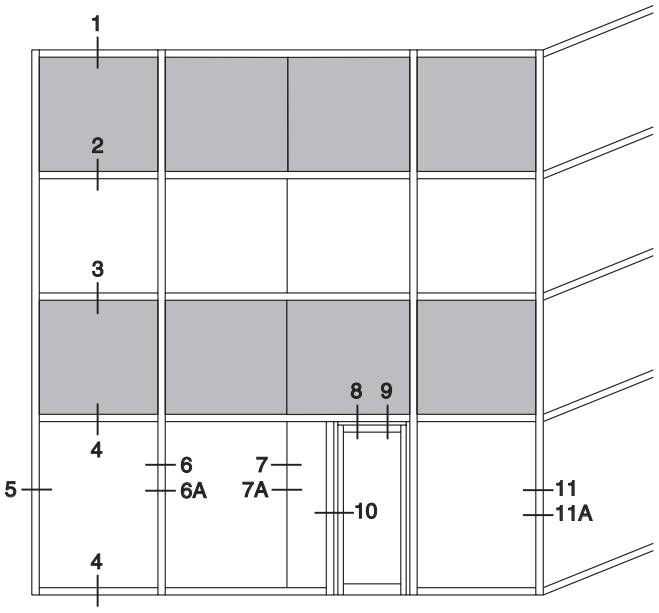
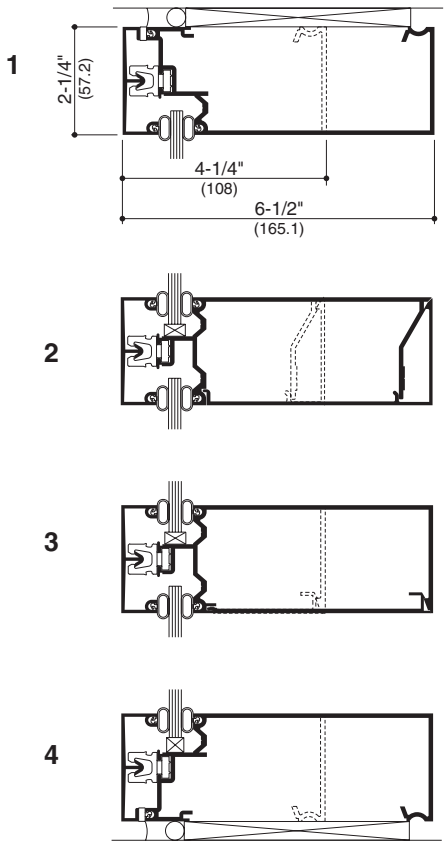
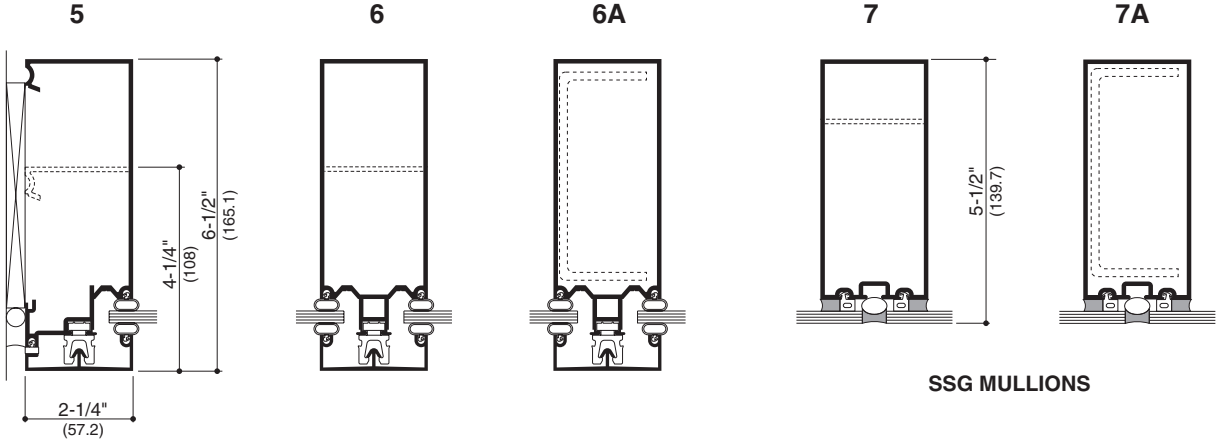


SCALE 3" = 1'-0"



ELEVATION IS NUMBER KEYED TO DETAILS

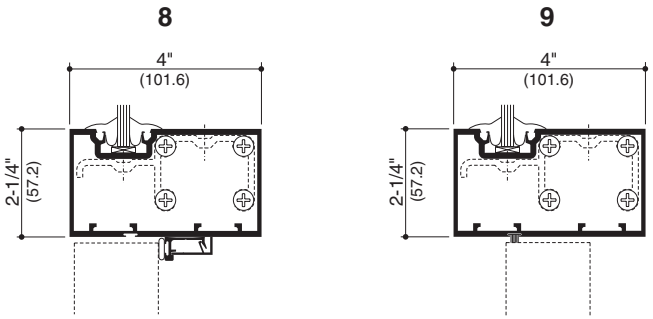


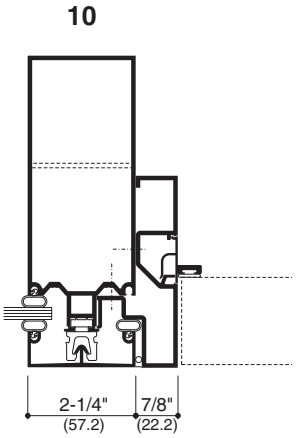


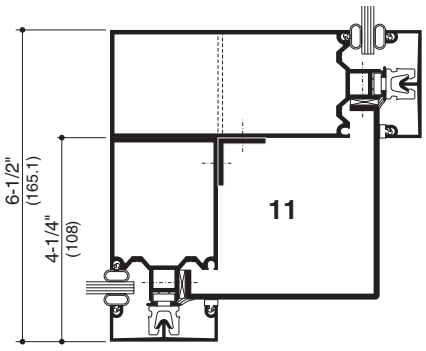
SSG MULLIONS

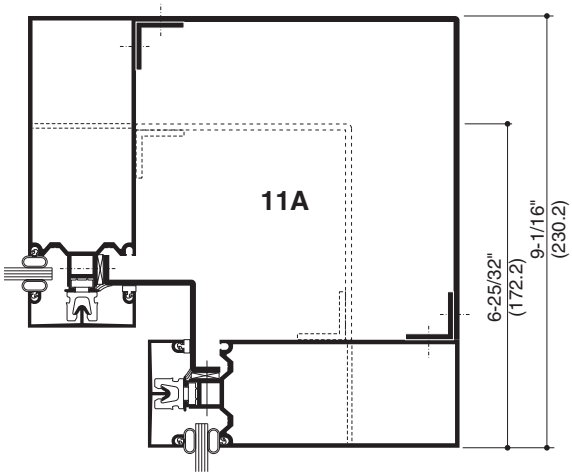
SCALE 3" = 1'-0"

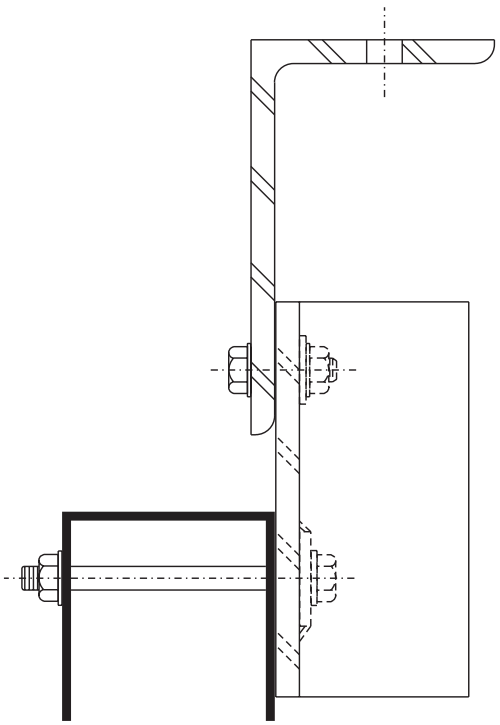
SECTIONS ARE NUMBER KEYED TO ELEVATION ON PAGE 8.

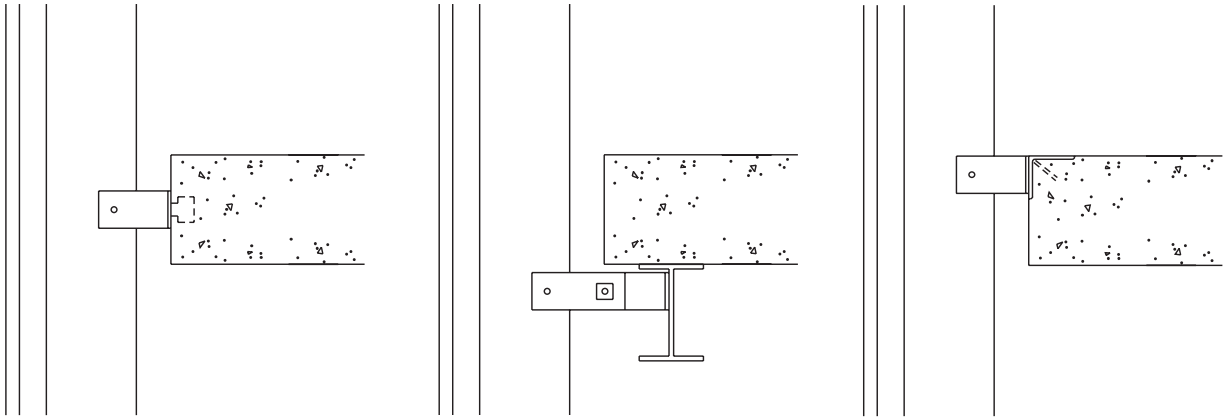


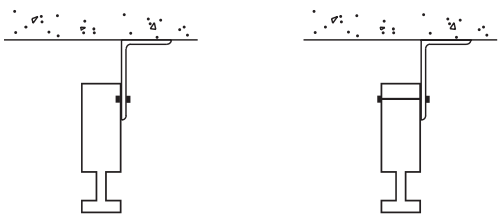








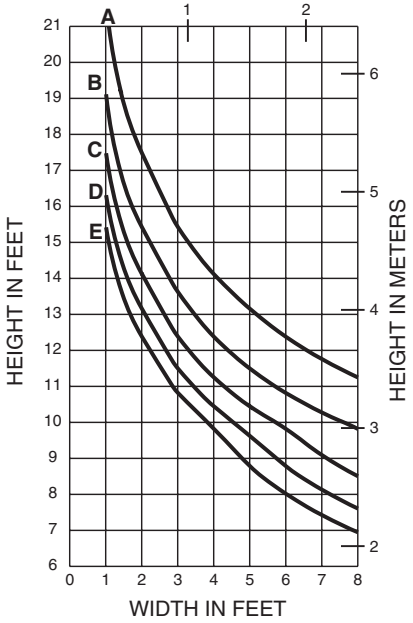




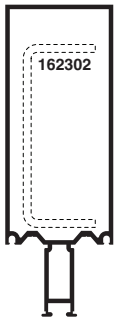
Mullions are designed for deflection limitations in accordance with AAMA TIR-A11 of L/175 up to 13'-6" and L/240 +1/4" above 13'-6". These curves are for mullions WITH HORIZONTALS and are based on engineering calculations for stress and deflection. Allowable wind load stress for ALUMINUM 15,152 psi (104MPa), STEEL 30,000 psi (207MPa.). Charted curves, in all cases are for the limiting value. If the design wind load is determined through the analytical procedures of ASCE/SEI 7-10 or earlier editions, the load shall be based on the nominal loads used in allowable stress design. 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.

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

WITH HORIZONTALS



250001 Mullion



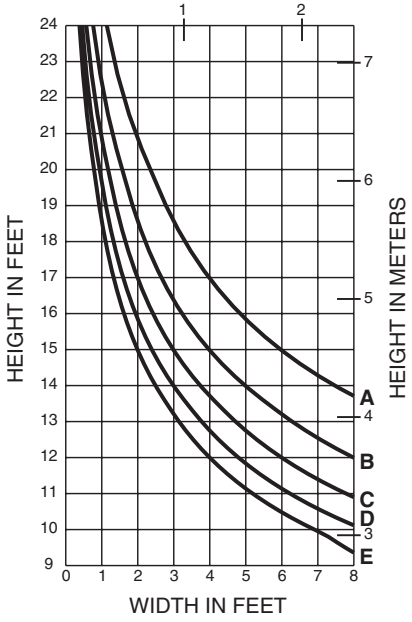
250001

I = 7.471 (310.9 x 10^4)
S = 2.287 (37.4 x 10^3)

162302 Steel

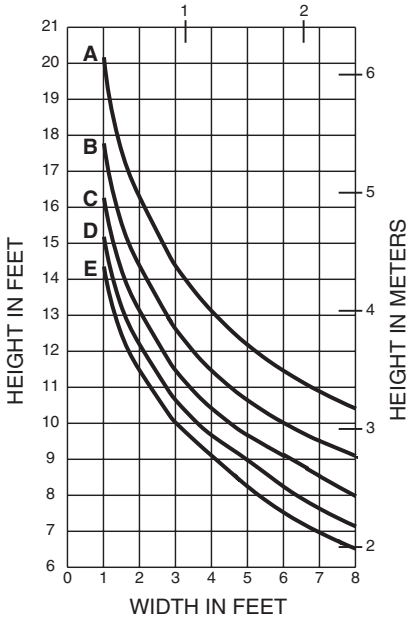
I = 2.111 (87.9 x 10^4)
S = 1.108 (18.2 x 10^3)

WITH HORIZONTALS

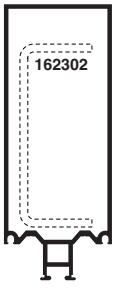


250001 Mullion with 162302 Steel

WITH HORIZONTALS



250004 Mullion



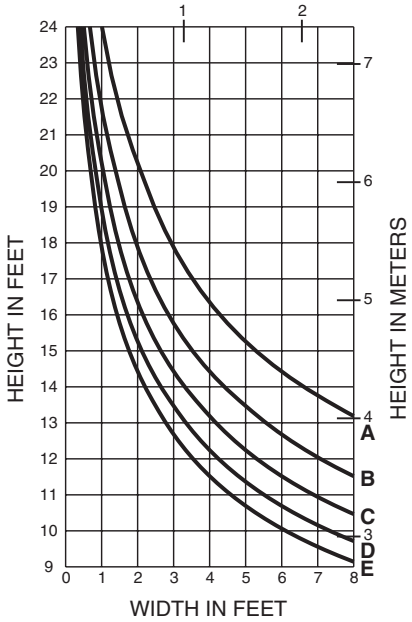
250004

I = 4.5071(87.60 x 10^4)
S = 1.968(32.25 x 10^3)

162302 Steel

I = 2.111 (87.9 x 10^4)
S = 1.108 (18.2 x 10^3)

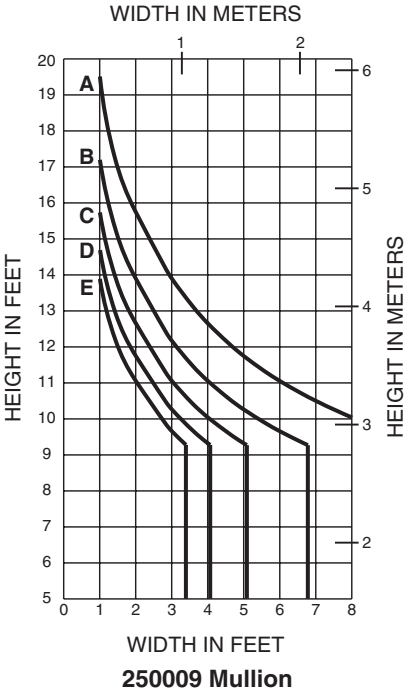
WITH HORIZONTALS



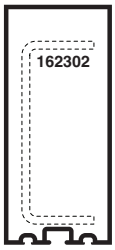
250004 Mullion with 162302 Steel

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

WITH HORIZONTALS



250009 Mullion



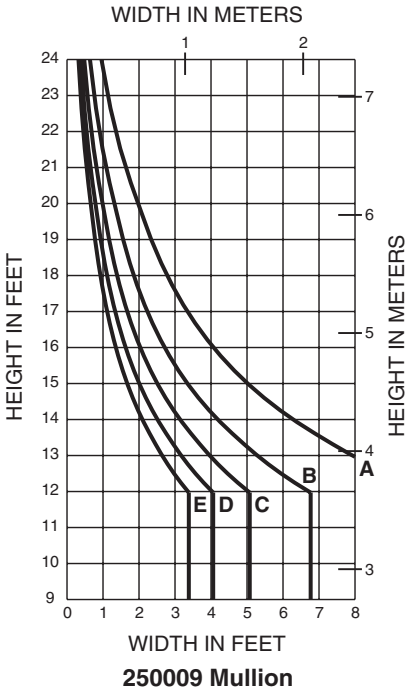
250009

I = 5.310 (221.0 x 10^4)
S = 2.044 (33.5 x 10^3)

162302 Steel

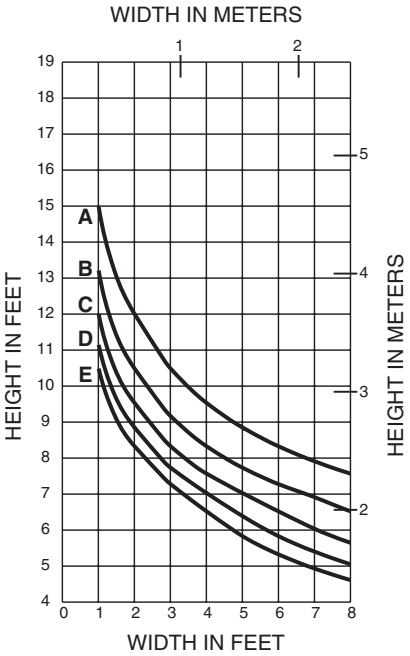
I = 2.111 (87.9 x 10^4)
S = 1.108 (18.2 x 10^3)

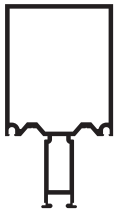
WITH HORIZONTALS



250009 Mullion with 162302 Steel

WITH HORIZONTALS

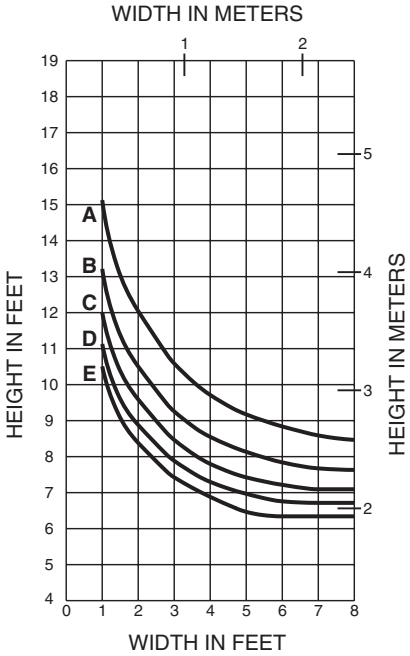




250011

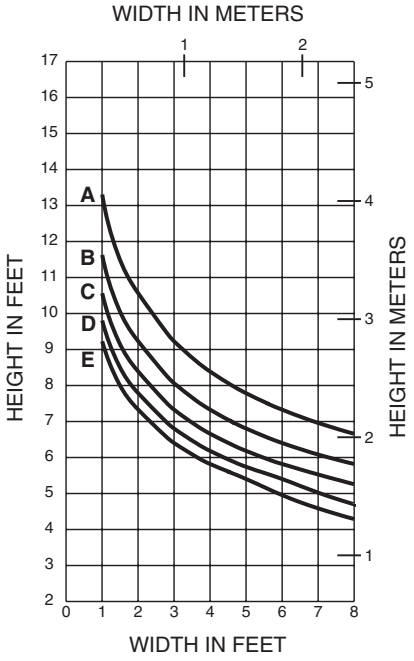
I = 2.271 (94.5 x 10^4)
S = 1.007 (16.5 x 10^3)

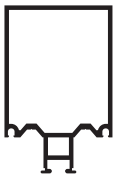
WITHOUT HORIZONTALS



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

WITH HORIZONTALS

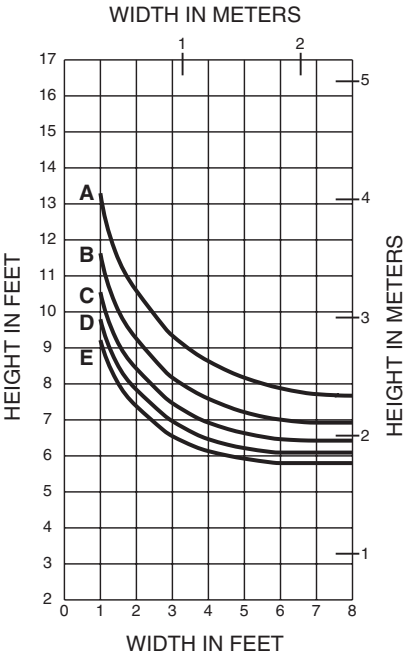




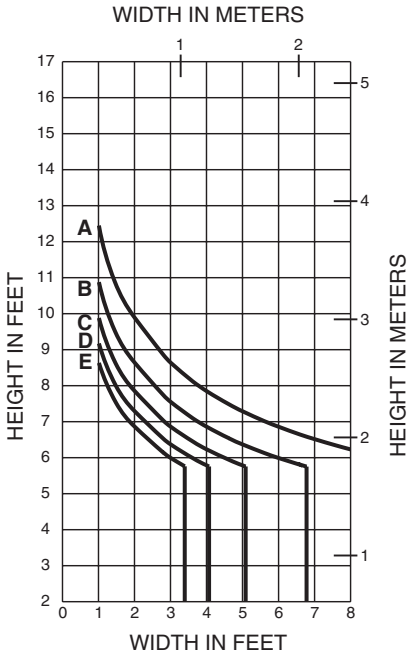
250014

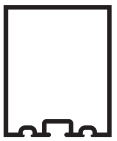
I = 1.547 (64.3 x 10^4)
S = 0.872 (14.2 x 10^3)

WITHOUT HORIZONTALS



WITH HORIZONTALS

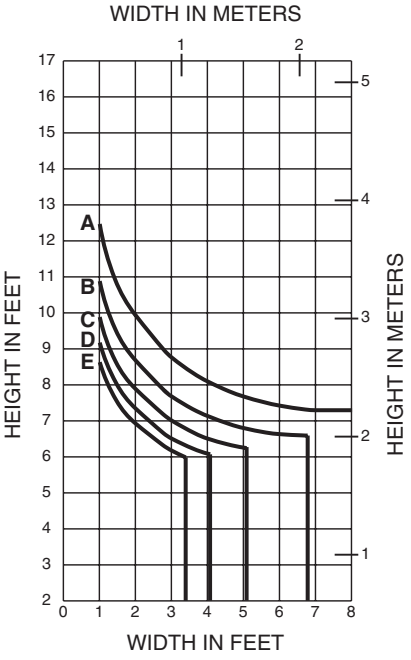




250019

I = 1.266 (52.7 x 10^4)
S = 0.882 (14.5 x 10^3)

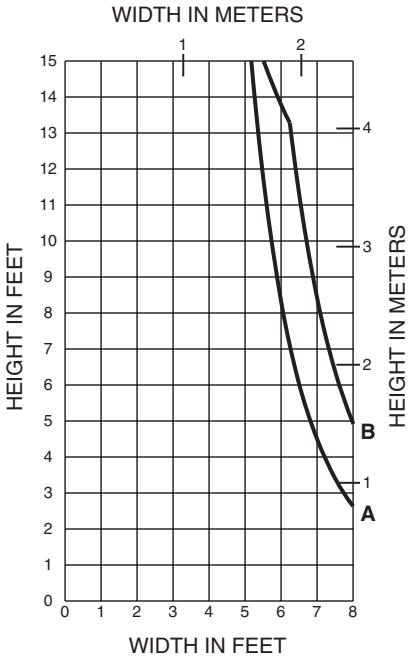
WITHOUT HORIZONTALS



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

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

1" GLASS



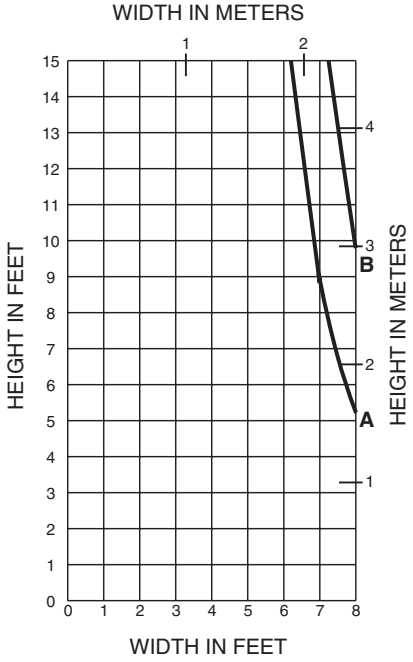
250001

I = 1.282 (53.3 x 10^4)
S = 1.140 (18.6 x 10^3)

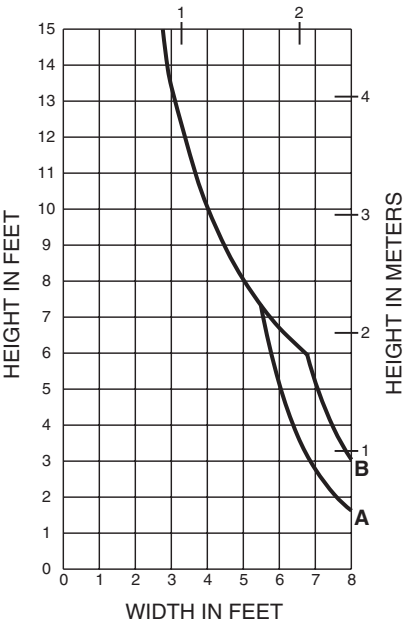
250004

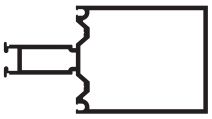
I = 1.274 (53.0 x 10^4)
S = 1.132 (18.5 x 10^3)

1/4" GLASS



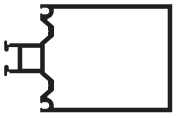
1" GLASS





250011

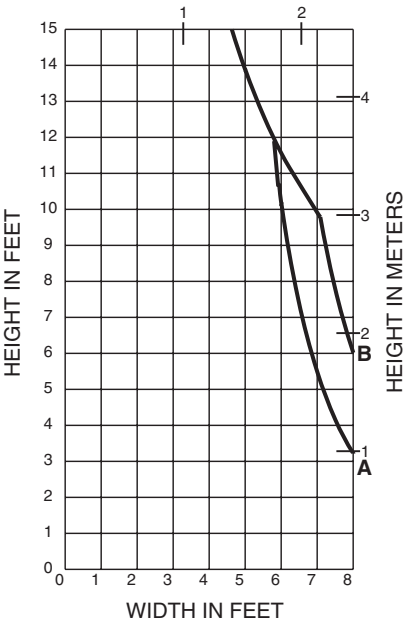
I = 0.791 (32.9 x 10^4)
S = 0.703 (11.5 x 10^3)



250014

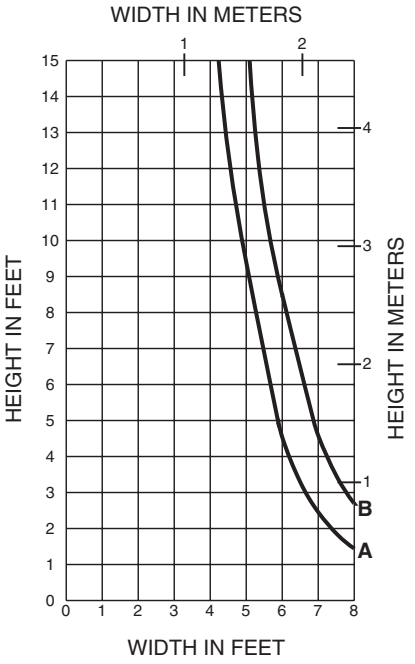
I = 0.781 (20.9 x 10^4)
S = 0.694 (11.4 x 10^3)

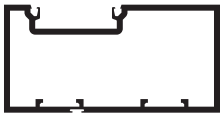
1/4" GLASS



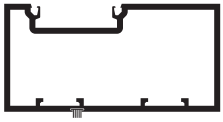
A = 1/4 POINT LOADING
B = 1/8 POINT LOADING

1" GLASS



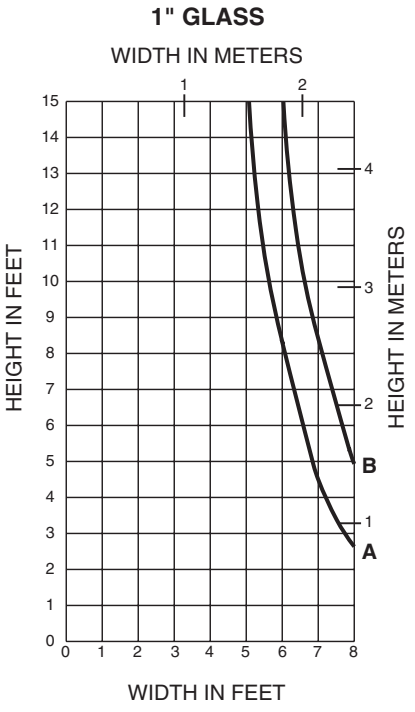


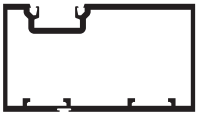
250037



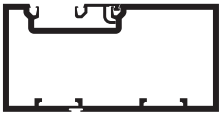
250510

1" GLASS

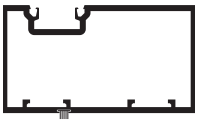




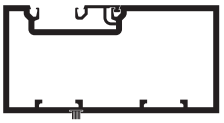
250041



250037 with 250029 ADAPTER



250511



250510 with 250029 ADAPTER

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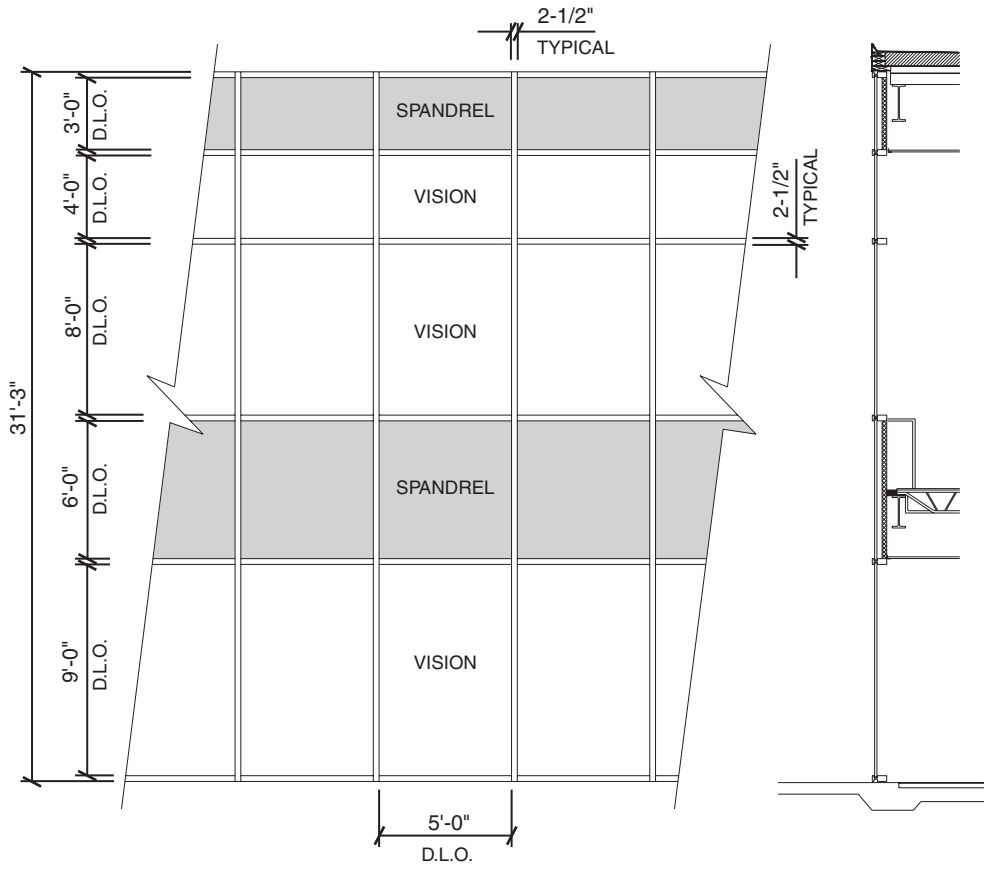
EC 97911-053

Project Specific U-Factor
Example Calculation
(Based on single bay of Curtain Wall/Window Wall)



Vision Area

Example Glass U-Factor = 0.48 Btu/(ft² x h x °F)

Vision Area = 5(9 + 8 + 4) = 105.0 ft

Total Area (Vision) = 5' 2-1/2"(9' 3-3/4" + 8' 2-1/2" + 4' 2-1/2") = 113.2 ft

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

Spandrel Area

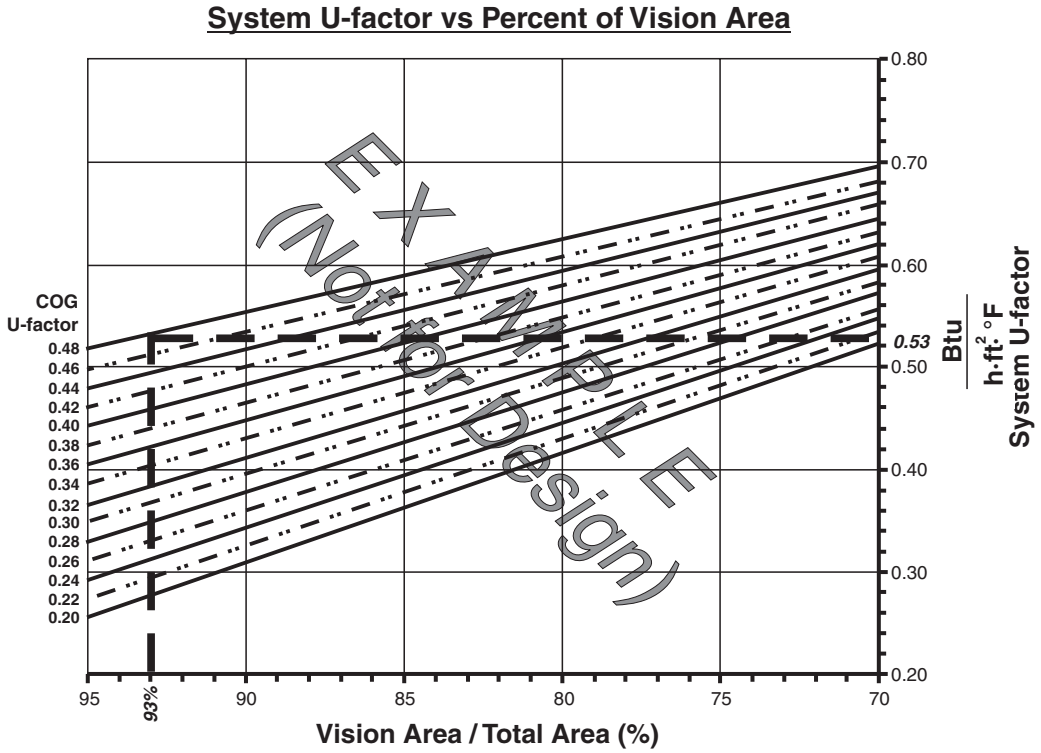
Example Spandrel R-value = 15(ft² x h x °F)/Btu

Spandrel Area = 5(6 + 3) = 45.0 ft

Total Area Spandrel = 5' 2-1/2"(6' 2-1/2" + 3' 3-3/4") = 49.6 ft

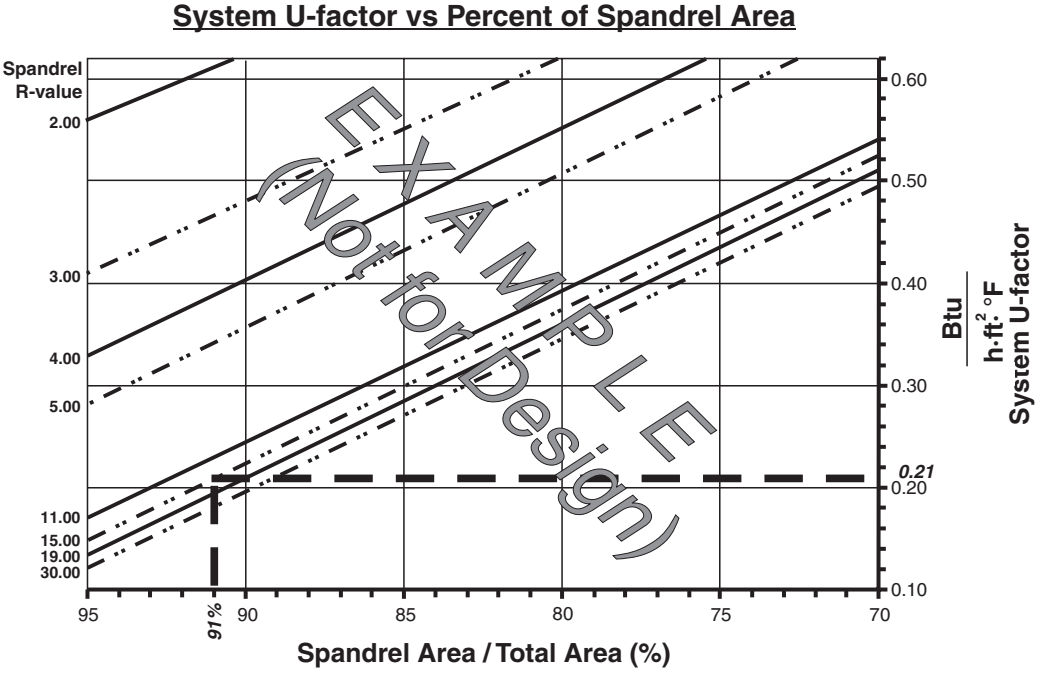
Percent of Spandrel = (Spandrel Area ÷ Total Area)100
= (45.0 ÷ 49.6)100 = 91%

Vision Area Chart



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^2·°F)

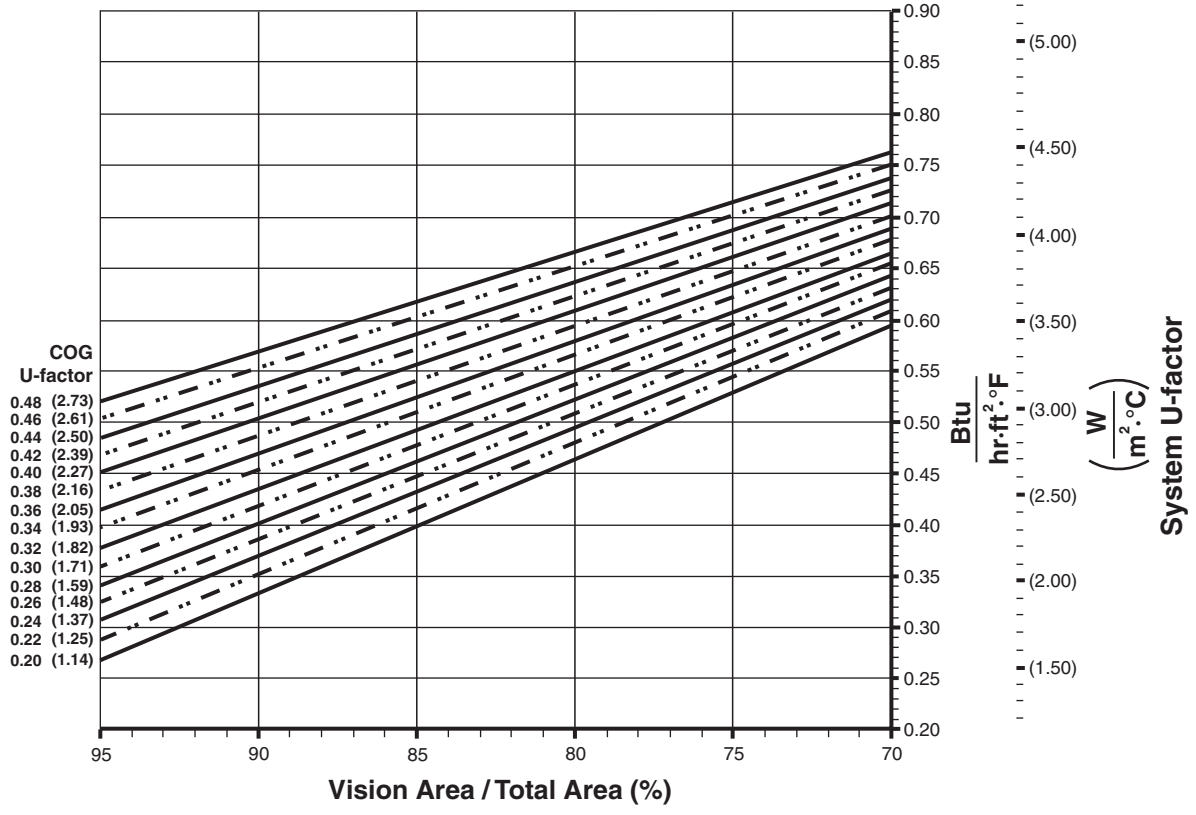
Spandrel Area Chart



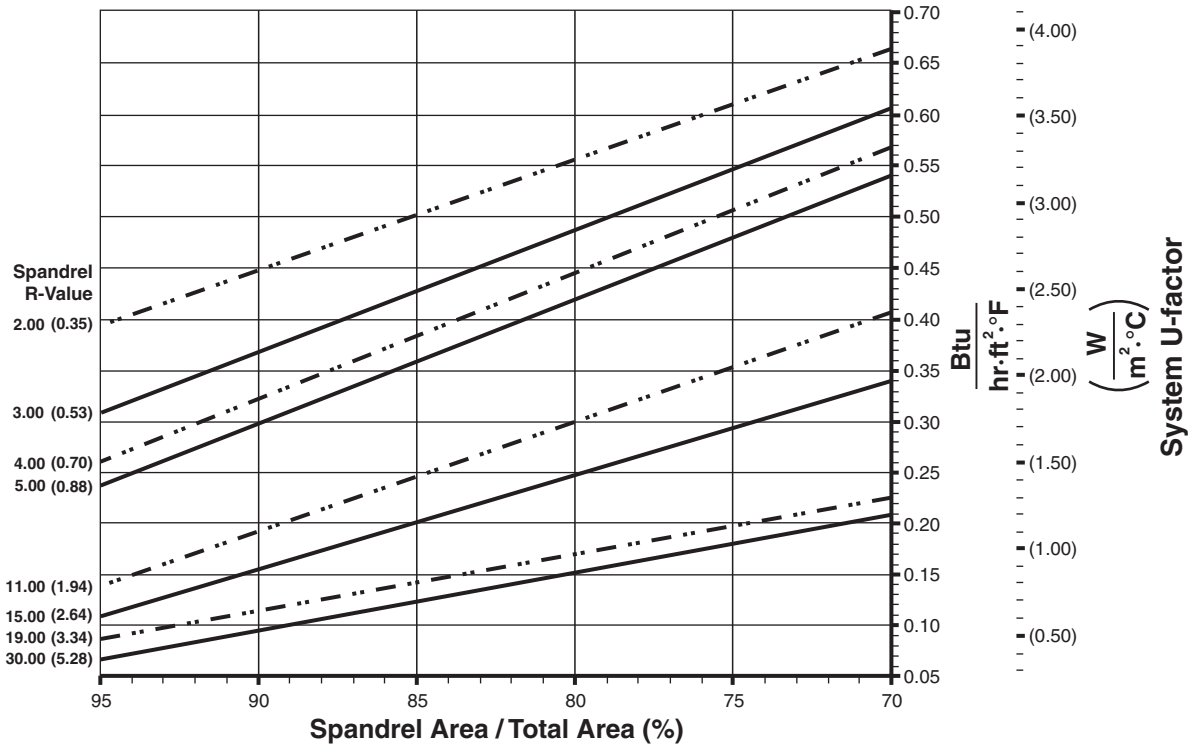
Based on a single curtain wall bay of 91% spandrel and center of spandrel R-value of 15, system U-factor is equal to 0.21 Btu/(h·ft^2·°F)

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

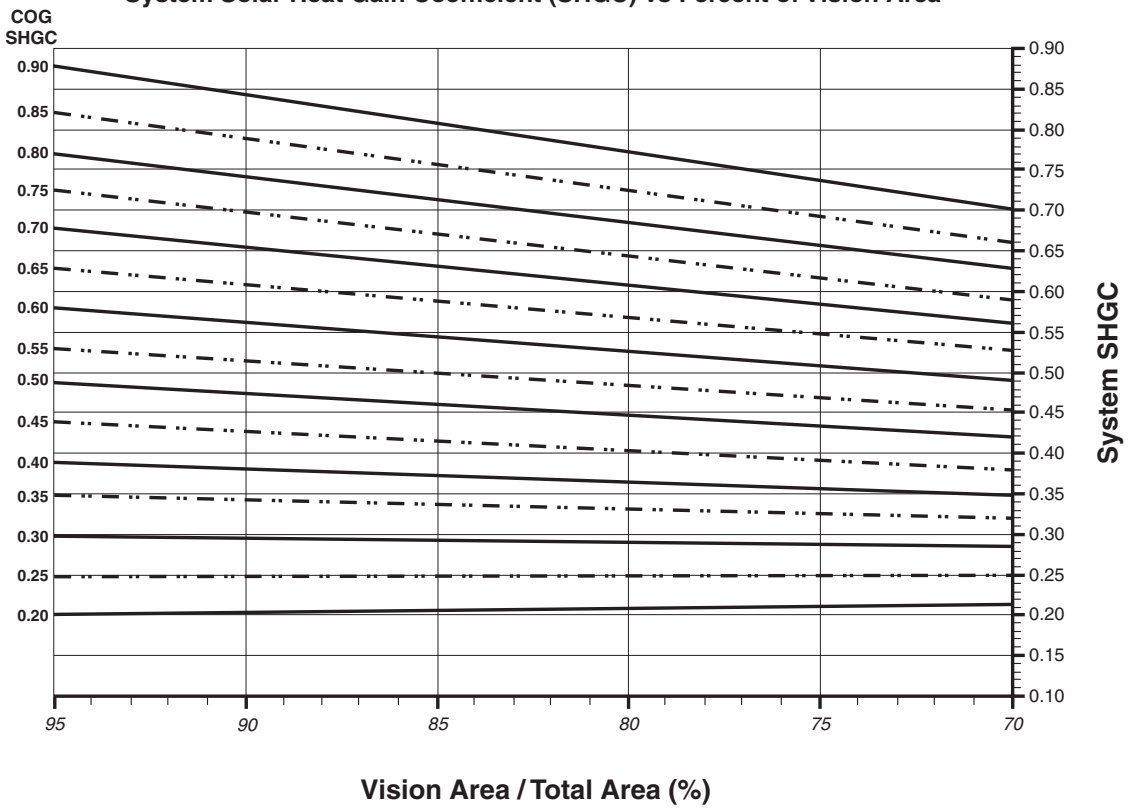
System U-Factors for Vision Glass



System U-Factors for Spandrel Glass

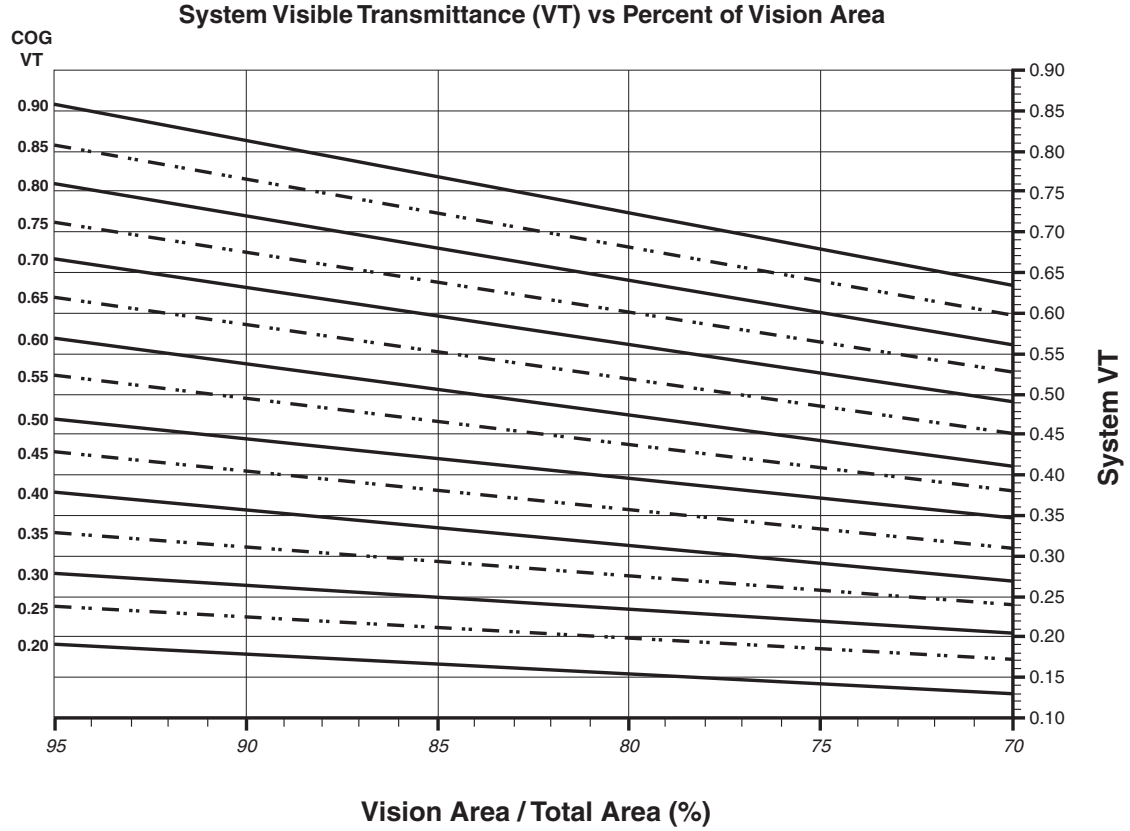


System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



Charts are generated per AAMA 507.

System Visible Transmittance (VT) vs Percent of Vision Area



Charts are generated per AAMA 507.

FACTORS FOR CAPTURED MULLIONS

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

Glass U-Factor [3]	Overall U-Factor [4]
0.48	0.57
0.46	0.55
0.44	0.53
0.42	0.51
0.40	0.50
0.38	0.48
0.36	0.46
0.34	0.44
0.32	0.43
0.30	0.41
0.28	0.39
0.26	0.38
0.24	0.36
0.22	0.34
0.20	0.32

SHGC Matrix [2]

Glass SHGC [3]	Overall SHGC [4]
0.75	0.70
0.70	0.66
0.65	0.61
0.60	0.57
0.55	0.52
0.50	0.48
0.45	0.43
0.40	0.38
0.35	0.34
0.30	0.29
0.25	0.25
0.20	0.20
0.15	0.16
0.10	0.11
0.05	0.07

Visible Transmittance [2]

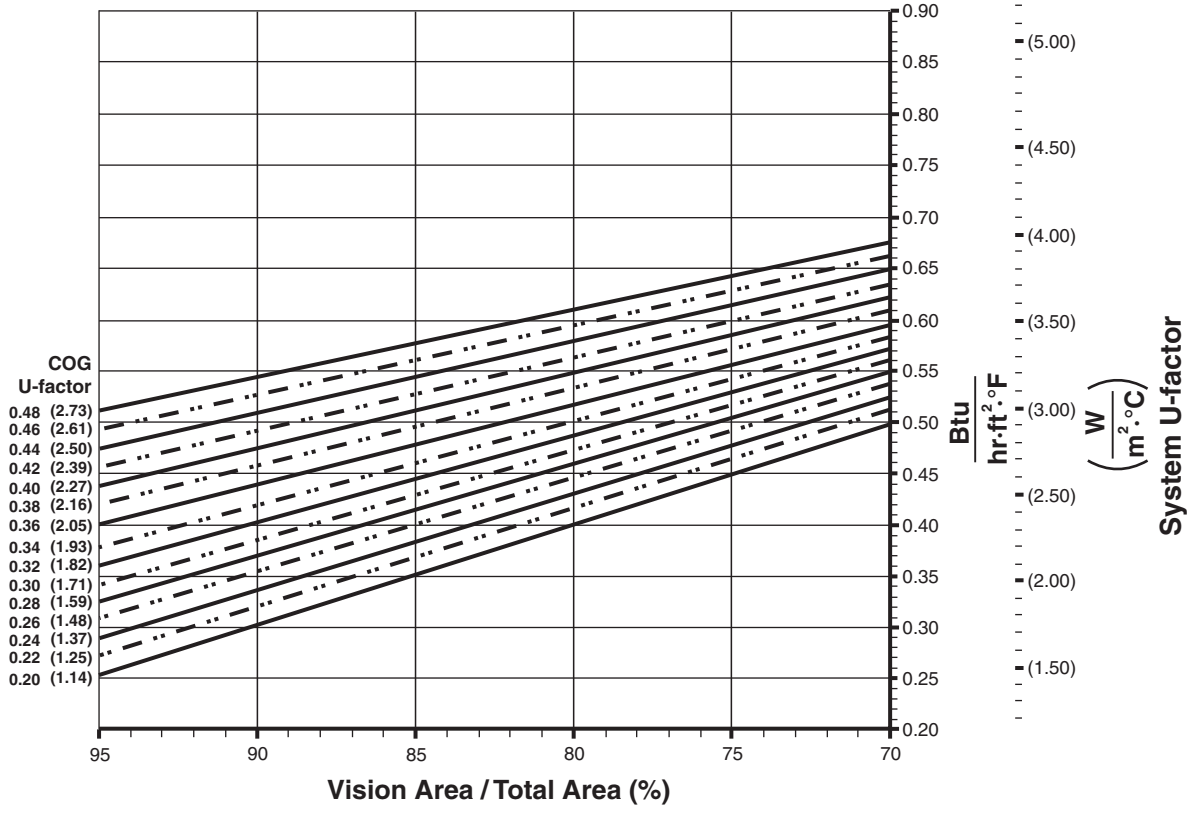
Glass VT [3]	Overall VT [4]
0.90	0.82
0.85	0.77
0.80	0.73
0.75	0.68
0.70	0.64
0.65	0.59
0.60	0.55
0.55	0.50
0.50	0.45
0.45	0.41
0.40	0.36
0.35	0.32
0.30	0.27
0.25	0.23
0.20	0.18

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

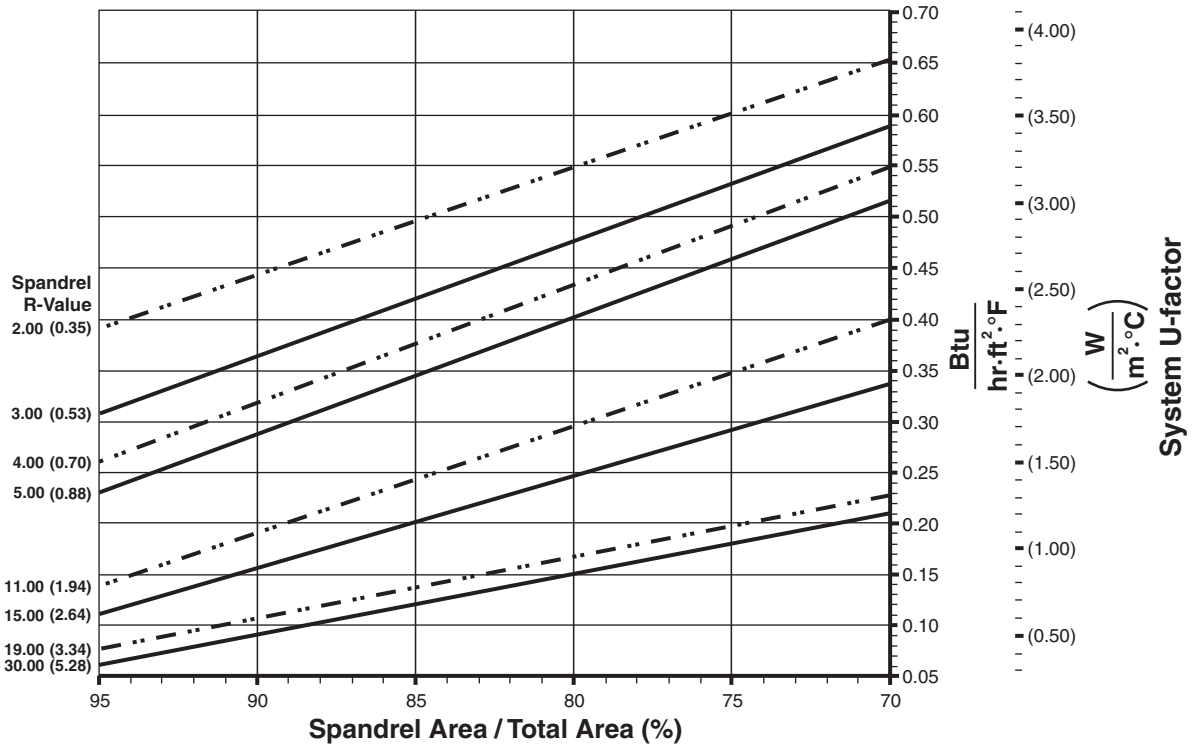
1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 2000mm wide by 2000mm high (78-3/4" by 78-3/4").

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

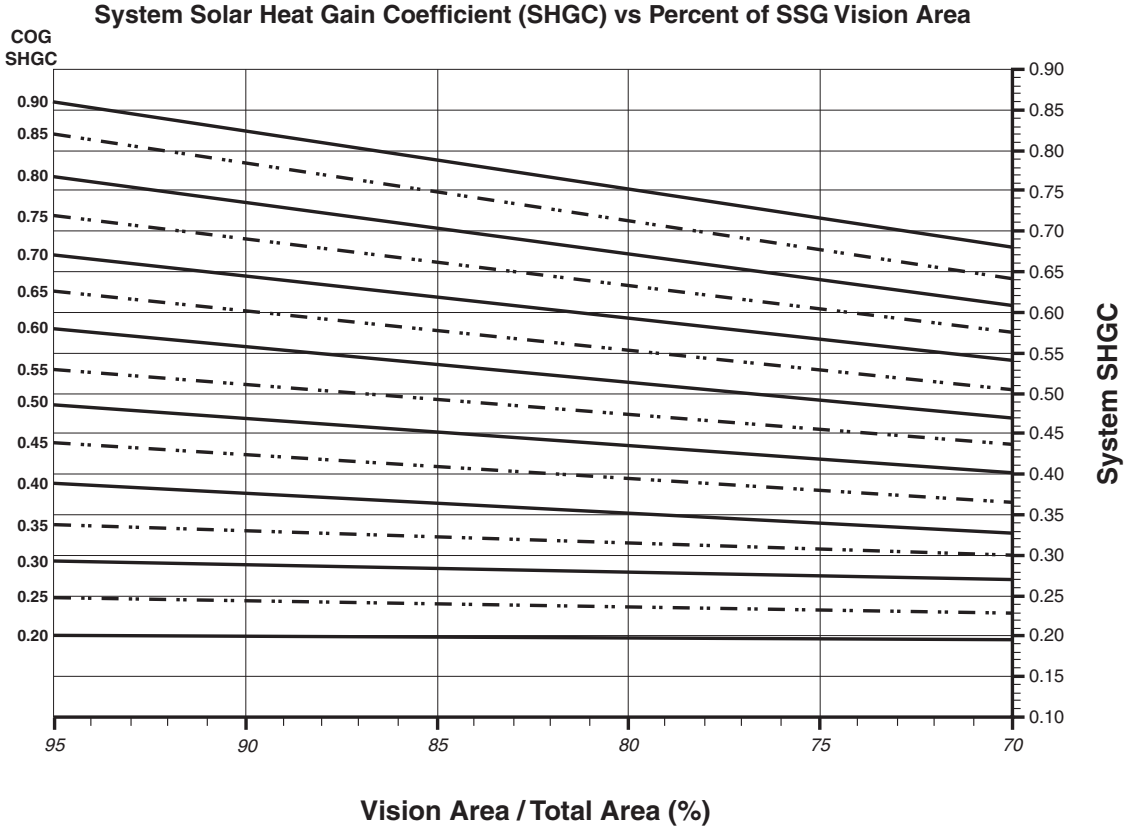
System U-Factors for SSG Vision Glass



System U-Factors for SSG Spandrel Glass

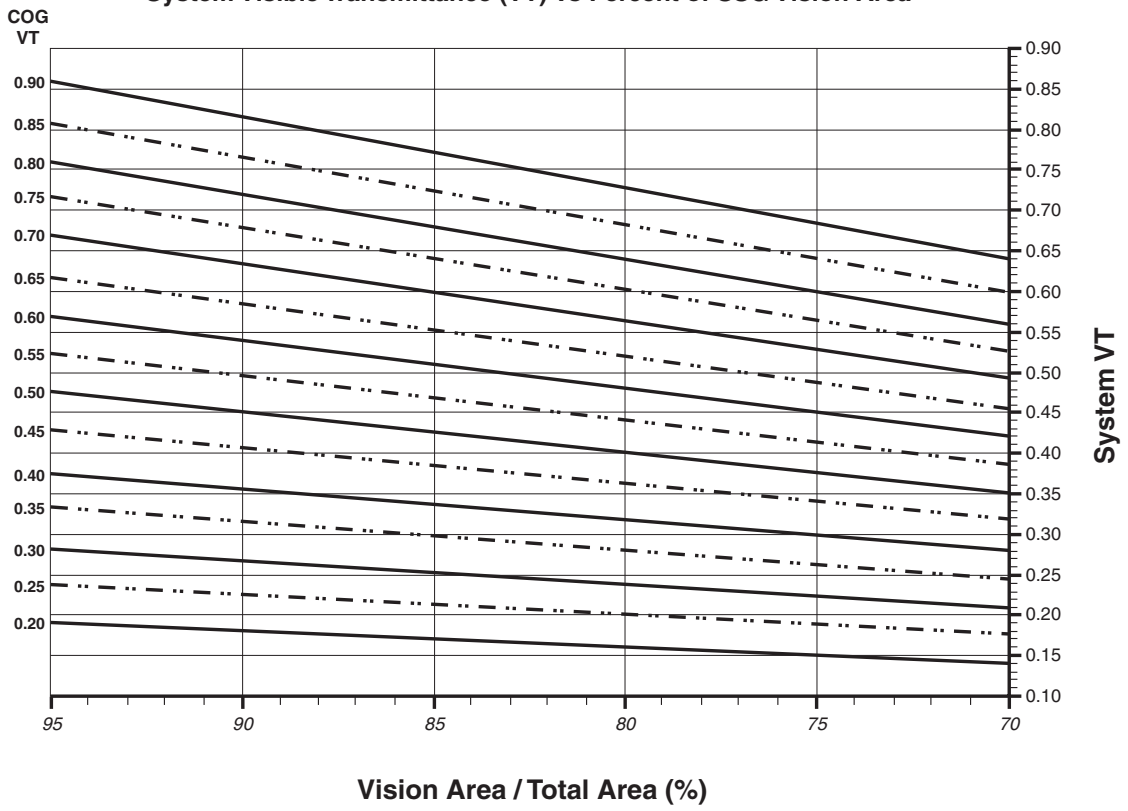


System Solar Heat Gain Coefficient (SHGC) vs Percent of SSG Vision Area



Charts are generated per AAMA 507.

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



Charts are generated per AAMA 507.

FACTORS FOR SSG MULLIONS

Thermal Transmittance[1] (BTU/hr • ft ^{2} • °F)

Glass U-Factor [3]	Overall U-Factor [4]
0.48	0.54
0.46	0.52
0.44	0.50
0.42	0.48
0.40	0.46
0.38	0.45
0.36	0.43
0.34	0.41
0.32	0.39
0.30	0.38
0.28	0.36
0.26	0.34
0.24	0.32
0.22	0.30
0.20	0.29

SHGC Matrix [2]

Glass SHGC [3]	Overall SHGC [4]
0.75	0.70
0.70	0.65
0.65	0.61
0.60	0.56
0.55	0.52
0.50	0.47
0.45	0.43
0.40	0.38
0.35	0.33
0.30	0.29
0.25	0.24
0.20	0.20
0.15	0.15
0.10	0.11
0.05	0.06

Visible Transmittance [2]

Glass VT [3]	Overall VT [4]
0.90	0.82
0.85	0.78
0.80	0.73
0.75	0.69
0.70	0.64
0.65	0.59
0.60	0.55
0.55	0.50
0.50	0.46
0.45	0.41
0.40	0.37
0.35	0.32
0.30	0.27
0.25	0.23
0.20	0.18

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").