Features
• Clearwall® is a 4-sided Toggle Glazed (TG) curtain wall system
• Achieves an all-glass monolithic aesthetic in a field glazed; screw spline or shear block fabricated application
  • 5/8" (15.9) exterior vertical and horizontal weatherseal sightline
  • 2-1/2" (63.5) interior metal sightline
• Innovative toggle assembly captures glass, eliminating field application of structural silicone
• All three glazing options, use the toggle based glass retention system
  • Clearwall® SS (Screw Spline) or SB (Shear Block)
    • Toggles capture 1-1/8" (28.6) insulating glass unit, with a recessed spacer
    • Inside lite of insulating glass unit is directly engaged by toggles
    • No structural silicone required
  • Clearwall® SSI (Screw Spline Interface) or SBI (Shear Block Interface)
    • Toggles capture standard 1" (25.4) insulating glass unit attached with shop applied metal interface using structural silicone
    • Clearwall® SSIT (Screw Spline Interface Tape) or SBIT (Shear Block Interface Tape)
    • Toggles capture standard 1" (25.4) insulating glass unit attached with shop applied metal interface using 3M™ VHB™ SGT (Structural Glazing Tape)
• Screw spline joinery method allows shop assembly of ladder sections, reducing field labor
• Shear Block joinery and deeper mullions allow for higher free-spans (up to 26' with steel reinforcing)
• Clearwall® can be supplied fabricated and KD, or in stock lengths
• Silicone compatible EPDM glazing materials for long-lasting seals
• Offers integrated entrance framing systems
• Two color option
• Permanodic® anodized finishes in seven choices
• Painted finishes in standard and custom choices
• Comprehensively tested to latest high performance standards
• Full technical support from 3M™ for application of the 3M™ VHB™ SGT (Structural Glazing Tape) for Clearwall® SSIT and SBIT

Optional Features
• Air barrier and back pan applications available
• Profit$Maker® Plus die sets available
• Hurricane impact resistant for SSI and SSIT

Product Applications
• Ideal for low-rise applications of four floors or less requiring a sleek, uninterrupted all-glass facade
• Ideal for office buildings, and lobbies or accent walls of high profile buildings

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

PICTORIAL VIEW ................................................................. 5
TYPICAL 1/4 SIZE DETAILS ................................................ 6
   SCREW SPLINE (SS) ................................................................. 6
   SCREW SPLINE INTERFACE (SSI) ......................................... 7
   SCREW SPLINE INTERFACE TAPE (SSIT) ............................ 8
   SHEAR BLOCK (SB) ................................................................. 9
   SHEAR BLOCK INTERFACE (SBI) ......................................... 10
   SHEAR BLOCK INTERFACE TAPE (SBIT) ............................. 11
CORNERS ............................................................................ 12
90° OUTSIDE SINGLE MULLION CORNERS ..................... 13
HURRICANE IMPACT RESISTANT
   SCREW SPLINE INTERFACE (SSI) ......................................... 14
   SCREW SPLINE INTERFACE TAPE (SSIT) ............................ 15
ANCHORING ........................................................................ 16-17
WIND LOAD CHARTS ............................................................ 18-26
DEADLOAD CHARTS .............................................................. 27
THERMAL CHARTS ............................................................... 28-47

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

© 2013, Kawneer Company, Inc.
CLEARWALL® SS (Screw Spline) shown
Clearwall® Curtain Wall System

SCREW SPLINE (SS) DETAILS

MARCH, 2020

EC 97911-228

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

Note: 1-1/8" (28.6) insulating glass unit with recessed spacer by qualified Insulated Glass Unit (IGU) manufacturer.
Clearwall® Curtain Wall System
SCREW SPLINE INTERFACE (SSI) DETAILS

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

* INSTALLER NOTE: Installer is responsible for all required compatibility review and approvals with the Structural Silicone Manufacturer and the Insulating Glass Unit Manufacturer.
Clearwall® Curtain Wall System
SCREW SPLINE INTERFACE TAPE (SSIT) DETAILS

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

Note: Metal interface uses 3M™ VHB™ SGT (Structural Glazing Tape)
Additional information and CAD details are available at www.kawneer.com

Note: 1-1/8" (28.6) insulating glass unit with recessed spacer by qualified Insulated Glass Unit (IGU) manufacturer.
Additional information and CAD details are available at www.kawneer.com

ELEVATION IS NUMBER KEYED TO DETAILS

1. HEAD
2. HORIZONTAL
3. SILL

4. JAMB
5. VERTICAL INTERMEDIATE
6. DOOR JAMB BUTT HUNG OR OFFSET PIVOT
7. DOOR JAMB BUTT HUNG OR OFFSET PIVOT

*INSTALLER NOTE: Installer is responsible for all required compatibility review and approvals with the Structural Silicone Manufacturer and the Insulating Glass Unit Manufacturer.
Clearwall® Curtain Wall System

SHEAR BLOCK INTERFACE TAPE (SBIT) DETAILS

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

ELEVATION IS NUMBER KEYED TO DETAILS

Note: Metal interface uses 3M™ VHB™ SGT (Structural Glazing Tape)
Clearwall® Curtain Wall System

CORNER DETAILS

**Note:** Additional information and CAD details are available at www.kawneer.com

**90° INSIDE (SS) CORNER**

**90° OUTSIDE (SS) CORNER**

**Note:** 5-1/8" (130.2) System shown, 6-5/8" (168.3) System similar.

**90° INSIDE (SSI) CORNER**

**90° OUTSIDE (SSI) CORNER**

**Note:** 6" (152.4) System shown, 7-1/2" (190.5) System similar.

**90° INSIDE (SSIT) CORNER**

**90° OUTSIDE (SSIT) CORNER**

**Note:** 5-7/8" (149.2) System shown, 7-3/8" (187.3) System similar.

---

*INSTALLER NOTE:* Installer is responsible for all required compatibility review and approvals with the Structural Silicone Manufacturer and the Insulating Glass Unit Manufacturer.
Clearwall® Curtain Wall System

90° OUTSIDE SINGLE MULLION CORNER DETAILS

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

90° OUTSIDE (SS) CORNER
5-1/8" (130.2) System

90° OUTSIDE (SSI) CORNER
6" (152.4) System

90° OUTSIDE (SSIT) CORNER
5-7/8" (149.2) System

90° OUTSIDE (SS) CORNER
6-5/8" (168.3) System

90° OUTSIDE (SSI) CORNER
7-1/2" (190.5) System

90° OUTSIDE (SSIT) CORNER
7-3/8" (187.3) System

*INSTALLER NOTE:* Installer is responsible for all required compatibility review and approvals with the Structural Silicone Manufacturer and the Insulating Glass Unit Manufacturer.
Clearwall® Curtain Wall System

HURRICANE IMPACT RESISTANT SCREW SPLINE INTERFACE (SSI) DETAILS

EC 97911-228

MARCH, 2020

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

1. HEAD
2. HORIZONTAL
3. SILL
4. JAMB
5. VERTICAL INTERMEDIATE
6. DOOR JAMB BUTT HUNG OR OFFSET PIVOT
7. DOOR JAMB BUTT HUNG OR OFFSET PIVOT

*INSTALLER NOTE: Installer is responsible for all required compatibility review and approvals with the Structural Silicone Manufacturer and the Insulating Glass Unit Manufacturer.
Clearwall® Curtain Wall System
EC 97911-228  HURRICANE IMPACT RESISTANT SCREW SPLINE INTERFACE TAPE (SSIT) DETAILS

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

Note: Metal interface uses 3M™ VHB™ SGT (Structural Glazing Tape)
Actual project conditions will determine specific anchor design. Details on this page are for reference only.

**Note:** Clearwall 6-5/8" (168.3) Screw Spline (SS) system shown, other Clearwall systems are similar.
Actual project conditions will determine specific anchor design. Details on this page are for reference only. **Note:** Clearwall 6-5/8" (168.3) Screw Spline (SS) system shown, other Clearwall systems are similar.

ANCHORING TO HORIZONTAL STRUCTURAL STEEL

ANCHORING TO VERTICAL STRUCTURAL STEEL

© 2013, Kawneer Company, Inc.
WIND LOAD CHARTS

Mullions are designed for deflection limitations in accordance with AAMA TIR-A11 of L/175 up to 13'-6" and L/240 +1/4" above 13'-6". These curves are for mullions WITH HORIZONTALS and are based on engineering calculations for stress and deflection. Allowable wind load stress for ALUMINUM 15,152 psi (104 MPa), STEEL 30,000 psi (207 MPa). Charted curves, in all cases are for the limiting value. Wind load charts contained herein are based upon nominal wind load utilized in allowable stress design. A conversion from Load Resistance Factor Design (LRFD) is provided. To convert ultimate wind loads to nominal loads, multiply ultimate wind loads by a factor of 0.6 per ASCE/SEI 7. A 4/3 increase in allowable stress has not been used to develop these curves. For special situations not covered by these curves, contact your Kawneer representative for additional information.

DEADLOAD CHARTS

Horizontal or deadload limitations are based upon 1/16" (1.6), maximum allowable deflection at the center of an intermediate horizontal member. The accompanying charts are calculated for 1" (25.4) thick insulating glass or 1-1/8" (28.6) thick glass supported on two setting blocks placed at the loading points shown.
Clearwall® Curtain Wall System

WIND LOAD CHARTS (SCREW SPLINE / TOGGLES AT 6" O/C)

MARCH, 2020

EC 97911-228

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.© 2013, Kawneer Company, Inc.

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

Allowable Stress Design Load

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>20 PSF (960)</td>
<td>30 PSF (1440)</td>
<td>40 PSF (1920)</td>
<td>50 PSF (2400)</td>
<td>60 PSF (2880)</td>
</tr>
<tr>
<td>B</td>
<td>33 PSF (1580)</td>
<td>50 PSF (2400)</td>
<td>67 PSF (3200)</td>
<td>83 PSF (4000)</td>
<td>100 PSF (4790)</td>
</tr>
</tbody>
</table>

Note:
These curves are for 6" (152.4) on center toggles with 1-1/8" (28.6) glass.
Clearwall® Curtain Wall System

WIND LOAD CHARTS (SCREW SPLINE / TOGGLES AT 9" O/C)

SINGLE SPAN
MULLION CENTERS IN METERS

MULLION HEIGHT IN FEET

Combined  I = 3.494 (145.43 x 10^4)
Combined  S = 1.634 (26.78 x 10^3)

TWIN SPAN
MULLION CENTERS IN METERS

MULLION HEIGHT IN FEET

Combined  I = 7.871 (327.61 x 10^4)
Combined  S = 2.648 (43.39 x 10^3)

Note:
These curves are for 9" (228.6) on center toggles with 1-1/8" (28.6) glass.

Allowable Stress
Design Load
LRFD Ultimate
Design Load

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>20 PSF (960)</td>
</tr>
<tr>
<td>B</td>
<td>30 PSF (1440)</td>
</tr>
<tr>
<td>C</td>
<td>40 PSF (1920)</td>
</tr>
<tr>
<td>D</td>
<td>50 PSF (2400)</td>
</tr>
<tr>
<td>E</td>
<td>60 PSF (2880)</td>
</tr>
</tbody>
</table>

Clearwall® Curtain Wall System

EC 97911-228

MARCH, 2020
Clearwall® Curtain Wall System

WIND LOAD CHARTS (SCREW SPLINE INTERFACE / TOGGLES AT 9" O/C)

MARCH, 2020

EC 97911-228

SINGLE SPAN
MULLION CENTERS IN METERS

TWIN SPAN
MULLION CENTERS IN METERS

Allowable Stress Design Load

| A | 20 PSF (960) | 33 PSF (1580) |
| B | 30 PSF (1440) | 50 PSF (2400) |
| C | 40 PSF (1920) | 67 PSF (3200) |
| D | 50 PSF (2400) | 83 PSF (4000) |
| E | 60 PSF (2880) | 100 PSF (4790) |

LRFD Ultimate Design Load

Combined I = 3.494 (145.43 x 10^4)
Combined S = 1.634 (26.78 x 10^3)

Combined I = 7.871 (327.61 x 10^4)
Combined S = 2.648 (43.39 x 10^3)

Note:
These curves are for 9" (228.6) on center toggles with 1" (25.4) glass.
Clearwall® Curtain Wall System

WIND LOAD CHARTS (SCREW SPLINE INTERFACE TAPE / TOGGLES AT 9" O/C)

EC 97911-228

MARCH, 2020

SINGLE SPAN

MULLION CENTERS IN METERS

1.0

2.0

MULLION HEIGHT IN FEET

20

19

18

17

16

15

14

13

12

11

10

9

8

7

6

5

4

3

2

1

0

A

B

C

D

E

Allowable Stress
Design Load

LRFD Ultimate
Design Load

A = 20 PSF (960)

33 PSF (1580)

B = 30 PSF (1440)

50 PSF (2400)

C = 40 PSF (1920)

67 PSF (3200)

D = 50 PSF (2400)

83 PSF (4000)

E = 60 PSF (2880)

100 PSF (4790)

Combined I = 7.871 (327.61 x 10^4)

Combined S = 2.648 (43.39 x 10^3)

Note:

These curves are for 9" (228.6) on center toggles with 1" (25.4) glass.

TWIN SPAN

MULLION CENTERS IN METERS

1.0

2.0

MULLION HEIGHT IN FEET

30

29

28

27

26

25

24

23

22

21

20

19

18

17

16

15

14

13

12

11

10

9

8

7

6

5

4

3

2

1

0

A

B

C

D

E

(SIT) 172001

(SIT) 172002

Combined I = 3.494 (145.43 x 10^4)

Combined S = 1.634 (26.78 x 10^3)

(SIT) 172003

(SIT) 172004

Combined I = 3.494 (145.43 x 10^4)

Combined S = 1.634 (26.78 x 10^3)
Clearwall® Curtain Wall System

WIND LOAD CHARTS (SHEAR BLOCK / TOGGLES AT 6" O/C)

SINGLE SPAN
MULLION CENTERS IN METERS

<table>
<thead>
<tr>
<th>Mullion Centers in Feet</th>
<th>Mullion Height in Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>28</td>
</tr>
<tr>
<td>2.0</td>
<td>28</td>
</tr>
</tbody>
</table>

Note: These curves are for 6" (152.4) on center toggles with 1-1/8" (28.6) glass.

Allowable Stress Design Load

<table>
<thead>
<tr>
<th>Design Load</th>
<th>LRFD Ultimate Design Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>A = 20 PSF (960)</td>
<td>33 PSF (1580)</td>
</tr>
<tr>
<td>B = 30 PSF (1440)</td>
<td>50 PSF (2400)</td>
</tr>
<tr>
<td>C = 40 PSF (1920)</td>
<td>67 PSF (3200)</td>
</tr>
<tr>
<td>D = 50 PSF (2400)</td>
<td>83 PSF (4000)</td>
</tr>
<tr>
<td>E = 60 PSF (2880)</td>
<td>100 PSF (4790)</td>
</tr>
</tbody>
</table>

I = 37.690 (1568.77 x 10^4)
S = 8.525 (139.70 x 10^3)

Combined I = 32.432 (1349.92 x 10^4)
Combined S = 8.721 (142.91 x 10^3)

Combined I = 26.033 (1083.57 x 10^4)
Combined S = 7.000 (114.71 x 10^3)

Combined I = 28.033 (1083.57 x 10^4)
Combined S = 8.721 (142.91 x 10^3)
Clearwall® Curtain Wall System

WIND LOAD CHARTS (SHEAR BLOCK / TOGGLES AT 9" O/C)

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

© 2013, Kawneer Company, Inc.

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

SINGLE SPAN

MULLION CENTERS IN METERS

MULLION HEIGHT IN FEET

SINGLE SPAN

MULLION CENTERS IN METERS

MULLION HEIG IN FEET

SINGLE SPAN

MULLION CENTERS IN METERS

MULLION HEIG IN FEET

SINGLE SPAN

MULLION CENTERS IN METERS

MULLION HEIG IN FEET

Note:
These curves are for 9" (228.6) on center toggles with 1-1/8" (28.6) glass.

Allowable Stress
Design Load
LRFD Ultimate
Design Load

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

Combined Is = 26.033 (1083.57 x 10^4)
Combined Ss = 7.000 (114.71 x 10^3)

Combined Is = 32.432 (1349.92 x 10^4)
Combined Ss = 8.721 (142.91 x 10^3)
Clearwall® Curtain Wall System

Wind Load Charts (Shear Block Interface / Toggles at 9" O/C)

SINGLE SPAN
MULLION CENTERS IN METERS

<table>
<thead>
<tr>
<th>MULLION HEIGHT IN FEET</th>
<th>1.0</th>
<th>2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>8.5</td>
<td>8</td>
</tr>
<tr>
<td>27</td>
<td>8</td>
<td>7.5</td>
</tr>
<tr>
<td>26</td>
<td>7.5</td>
<td>7</td>
</tr>
<tr>
<td>25</td>
<td>7</td>
<td>6.5</td>
</tr>
<tr>
<td>24</td>
<td>6.5</td>
<td>6</td>
</tr>
<tr>
<td>23</td>
<td>6</td>
<td>5.5</td>
</tr>
<tr>
<td>22</td>
<td>5.5</td>
<td>5</td>
</tr>
<tr>
<td>21</td>
<td>5</td>
<td>4.5</td>
</tr>
<tr>
<td>20</td>
<td>4.5</td>
<td>4</td>
</tr>
<tr>
<td>19</td>
<td>4</td>
<td>3.5</td>
</tr>
<tr>
<td>18</td>
<td>3.5</td>
<td>3</td>
</tr>
<tr>
<td>17</td>
<td>3</td>
<td>2.5</td>
</tr>
<tr>
<td>16</td>
<td>2.5</td>
<td>2</td>
</tr>
<tr>
<td>15</td>
<td>2</td>
<td>1.5</td>
</tr>
<tr>
<td>14</td>
<td>1.5</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note:
These curves are for 9" (228.6) on center toggles with 1" (25.4) glass.

Allowable Stress
Design Load

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 PSF</td>
<td>30 PSF</td>
<td>40 PSF</td>
<td>50 PSF</td>
<td>60 PSF</td>
</tr>
<tr>
<td>(960)</td>
<td>(1440)</td>
<td>(1920)</td>
<td>(2400)</td>
<td>(2880)</td>
</tr>
</tbody>
</table>

LRFD Ultimate Design Load

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>33 PSF</td>
<td>50 PSF</td>
<td>67 PSF</td>
<td>83 PSF</td>
<td>100 PSF</td>
</tr>
<tr>
<td>(1580)</td>
<td>(2400)</td>
<td>(3200)</td>
<td>(4000)</td>
<td>(4790)</td>
</tr>
</tbody>
</table>

MARCH, 2020

WIND LOAD CHARTS (SHEAR BLOCK INTERFACE / TOGGLES AT 9" O/C)
Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

© 2013, Kawneer Company, Inc.

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

Clearwall® Curtain Wall System

WIND LOAD CHARTS (SHEAR BLOCK INTERFACE TAPE / TOGGLES AT 9" O/C)

EC 97911-228

MARCH, 2020

SINGLE SPAN

MULLION CENTERS IN METERS

MULLION HEIGHT IN FEET

MULLION CENTERS IN FEET

MULLION HEIGHT IN METERS

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

Note:
These curves are for 9" (228.6) on center toggles with 1" (25.4) glass.

(SBIT) 172023

I = 37.690 (1568.77 x 10⁴)
S = 8.525 (139.70 x 10³)

(SBIT) 172023 W/162363

Ia = 37.690 (1568.77 x 10⁴)
Sa = 8.525 (139.70 x 10³)
Is = 17.600 (732.56 x 10⁴)
Ss = 4.732 (77.54 x 10³)

Combined

Is = 32.432 (1349.92 x 10⁴)
Ss = 8.721 (142.91 x 10³)

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

Combined

Is = 26.033 (1083.57 x 10⁴)
Ss = 7.000 (114.71 x 10³)

Combined

Is = 32.432 (1349.92 x 10⁴)
Ss = 8.721 (142.91 x 10³)
Clearwall® Curtain Wall System

THERMAL CHARTS

MARCH, 2020

EC 97911-228

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 · h · °F)
- Vision Area: 5(9 + 8 + 4) = 105.0 ft²
- Total Area (Vision): 5' 2-1/2" (9' 3-3/4" + 8' 2-1/2" + 4' 2-1/2") = 113.2 ft²
- Percentage of Vision Glass: (Vision Area ÷ Total Area)100
  = (105.0 ÷ 113.2)100 = 93%

Spandrel Area

- Example Spandrel R-value: 15 (ft² · h · °F)/Btu
- Spandrel Area: 5(6 + 3) = 45.0 ft²
- Total Area (Spandrel): 5' 2-1/2" (6' 2-1/2" + 3' 3-3/4") = 49.6 ft²
- Percent of Spandrel: (Spandrel Area + Total Area)100
  = (49.0 ÷ 49.6)100 = 91%
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·ft²·°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·ft²·°F)
Clearwall® Curtain Wall System
THERMAL CHARTS - SS

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

System U-Factor for Vision Glass

<table>
<thead>
<tr>
<th>Vision Area / Total Area (%)</th>
<th>System U-Factor (Btu/h·ft²·°F)</th>
<th>System U-Factor (W/m²·°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>95</td>
<td>0.70</td>
<td>4.00</td>
</tr>
<tr>
<td>90</td>
<td>0.65</td>
<td>3.50</td>
</tr>
<tr>
<td>85</td>
<td>0.60</td>
<td>3.00</td>
</tr>
<tr>
<td>80</td>
<td>0.55</td>
<td>2.50</td>
</tr>
<tr>
<td>75</td>
<td>0.50</td>
<td>2.00</td>
</tr>
<tr>
<td>70</td>
<td>0.45</td>
<td>1.50</td>
</tr>
<tr>
<td>65</td>
<td>0.40</td>
<td>1.00</td>
</tr>
<tr>
<td>60</td>
<td>0.35</td>
<td>0.50</td>
</tr>
<tr>
<td>55</td>
<td>0.30</td>
<td>0.00</td>
</tr>
<tr>
<td>50</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>0.20</td>
<td></td>
</tr>
</tbody>
</table>

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.
Clearwall® Curtain Wall System

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

System Visible Transmittance (VT) vs Percent of Vision Area

Charts are generated per AAMA 507.
## Thermal Transmittance

<table>
<thead>
<tr>
<th>Glass U-Factor $^3$</th>
<th>Overall U-Factor $^4$</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.48</td>
<td>0.54</td>
</tr>
<tr>
<td>0.46</td>
<td>0.53</td>
</tr>
<tr>
<td>0.44</td>
<td>0.51</td>
</tr>
<tr>
<td>0.42</td>
<td>0.50</td>
</tr>
<tr>
<td>0.40</td>
<td>0.48</td>
</tr>
<tr>
<td>0.38</td>
<td>0.46</td>
</tr>
<tr>
<td>0.36</td>
<td>0.45</td>
</tr>
<tr>
<td>0.34</td>
<td>0.43</td>
</tr>
<tr>
<td>0.32</td>
<td>0.41</td>
</tr>
<tr>
<td>0.30</td>
<td>0.40</td>
</tr>
<tr>
<td>0.28</td>
<td>0.38</td>
</tr>
<tr>
<td>0.26</td>
<td>0.37</td>
</tr>
<tr>
<td>0.24</td>
<td>0.35</td>
</tr>
<tr>
<td>0.22</td>
<td>0.33</td>
</tr>
<tr>
<td>0.20</td>
<td>0.32</td>
</tr>
</tbody>
</table>

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

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matrices are based on the standard NFRC specimen size of 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

## Visible Transmittance

<table>
<thead>
<tr>
<th>Glass VT $^3$</th>
<th>Overall VT $^4$</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75</td>
<td>0.67</td>
</tr>
<tr>
<td>0.70</td>
<td>0.62</td>
</tr>
<tr>
<td>0.65</td>
<td>0.58</td>
</tr>
<tr>
<td>0.60</td>
<td>0.53</td>
</tr>
<tr>
<td>0.55</td>
<td>0.49</td>
</tr>
<tr>
<td>0.50</td>
<td>0.44</td>
</tr>
<tr>
<td>0.45</td>
<td>0.40</td>
</tr>
<tr>
<td>0.40</td>
<td>0.35</td>
</tr>
<tr>
<td>0.35</td>
<td>0.31</td>
</tr>
<tr>
<td>0.30</td>
<td>0.27</td>
</tr>
<tr>
<td>0.25</td>
<td>0.22</td>
</tr>
<tr>
<td>0.20</td>
<td>0.18</td>
</tr>
<tr>
<td>0.15</td>
<td>0.13</td>
</tr>
<tr>
<td>0.10</td>
<td>0.09</td>
</tr>
<tr>
<td>0.05</td>
<td>0.04</td>
</tr>
</tbody>
</table>

## SHGC Matrix

<table>
<thead>
<tr>
<th>Glass SHGC $^3$</th>
<th>Overall SHGC $^4$</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75</td>
<td>0.74</td>
</tr>
<tr>
<td>0.70</td>
<td>0.70</td>
</tr>
<tr>
<td>0.65</td>
<td>0.66</td>
</tr>
<tr>
<td>0.60</td>
<td>0.61</td>
</tr>
<tr>
<td>0.55</td>
<td>0.57</td>
</tr>
<tr>
<td>0.50</td>
<td>0.52</td>
</tr>
<tr>
<td>0.45</td>
<td>0.48</td>
</tr>
<tr>
<td>0.40</td>
<td>0.43</td>
</tr>
<tr>
<td>0.35</td>
<td>0.39</td>
</tr>
<tr>
<td>0.30</td>
<td>0.35</td>
</tr>
<tr>
<td>0.25</td>
<td>0.30</td>
</tr>
<tr>
<td>0.20</td>
<td>0.26</td>
</tr>
<tr>
<td>0.15</td>
<td>0.21</td>
</tr>
<tr>
<td>0.10</td>
<td>0.17</td>
</tr>
<tr>
<td>0.05</td>
<td>0.12</td>
</tr>
</tbody>
</table>
Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

© 2013, Kawneer Company, Inc.

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

---

### System U-Factor for Vision Glass

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

<table>
<thead>
<tr>
<th>COG U-factor</th>
<th>System U-Factor (Btu/h·ft²·°F)</th>
<th>System U-Factor (W/m²·°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.48 (2.73)</td>
<td>0.70</td>
<td>(4.00)</td>
</tr>
<tr>
<td>0.46 (2.61)</td>
<td>-</td>
<td>(3.50)</td>
</tr>
<tr>
<td>0.44 (2.50)</td>
<td>-</td>
<td>(3.00)</td>
</tr>
<tr>
<td>0.42 (2.39)</td>
<td>-</td>
<td>(2.50)</td>
</tr>
<tr>
<td>0.40 (2.27)</td>
<td>-</td>
<td>(2.00)</td>
</tr>
<tr>
<td>0.38 (2.16)</td>
<td>-</td>
<td>(1.50)</td>
</tr>
<tr>
<td>0.36 (2.05)</td>
<td>-</td>
<td>(1.00)</td>
</tr>
<tr>
<td>0.34 (1.93)</td>
<td>-</td>
<td>(0.50)</td>
</tr>
<tr>
<td>0.32 (1.82)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0.30 (1.71)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0.28 (1.59)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0.26 (1.48)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0.24 (1.37)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0.22 (1.25)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0.20 (1.14)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Vision Area / Total Area (%)**

**Notes for System U-Factor, SHGC and VT charts:**
For glass values that are not listed, linear interpolation is permitted.
Glass properties are based on center of glass values (winter conditions) and are obtained from your glass supplier.
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.
### Thermal Transmittance \(^1\) (BTU/hr \cdot ft ^2 \cdot °F)

<table>
<thead>
<tr>
<th>Glass U-Factor (^3)</th>
<th>Overall U-Factor (^4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.48</td>
<td>0.53</td>
</tr>
<tr>
<td>0.46</td>
<td>0.51</td>
</tr>
<tr>
<td>0.44</td>
<td>0.49</td>
</tr>
<tr>
<td>0.42</td>
<td>0.47</td>
</tr>
<tr>
<td>0.40</td>
<td>0.46</td>
</tr>
<tr>
<td>0.38</td>
<td>0.44</td>
</tr>
<tr>
<td>0.36</td>
<td>0.42</td>
</tr>
<tr>
<td>0.34</td>
<td>0.41</td>
</tr>
<tr>
<td>0.32</td>
<td>0.39</td>
</tr>
<tr>
<td>0.30</td>
<td>0.37</td>
</tr>
<tr>
<td>0.28</td>
<td>0.35</td>
</tr>
<tr>
<td>0.26</td>
<td>0.34</td>
</tr>
<tr>
<td>0.24</td>
<td>0.32</td>
</tr>
<tr>
<td>0.22</td>
<td>0.30</td>
</tr>
<tr>
<td>0.20</td>
<td>0.29</td>
</tr>
</tbody>
</table>

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

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matrices are based on the standard NFRC specimen size of 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

#### SHGC Matrix \(^2\)

<table>
<thead>
<tr>
<th>Glass SHGC (^3)</th>
<th>Overall SHGC (^4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75</td>
<td>0.73</td>
</tr>
<tr>
<td>0.70</td>
<td>0.69</td>
</tr>
<tr>
<td>0.65</td>
<td>0.64</td>
</tr>
<tr>
<td>0.60</td>
<td>0.60</td>
</tr>
<tr>
<td>0.55</td>
<td>0.55</td>
</tr>
<tr>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>0.45</td>
<td>0.46</td>
</tr>
<tr>
<td>0.40</td>
<td>0.41</td>
</tr>
<tr>
<td>0.35</td>
<td>0.37</td>
</tr>
<tr>
<td>0.30</td>
<td>0.32</td>
</tr>
<tr>
<td>0.25</td>
<td>0.28</td>
</tr>
<tr>
<td>0.20</td>
<td>0.23</td>
</tr>
<tr>
<td>0.15</td>
<td>0.19</td>
</tr>
<tr>
<td>0.10</td>
<td>0.14</td>
</tr>
<tr>
<td>0.05</td>
<td>0.10</td>
</tr>
</tbody>
</table>

#### Visible Transmittance \(^2\)

<table>
<thead>
<tr>
<th>Glass VT (^3)</th>
<th>Overall VT (^4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75</td>
<td>0.68</td>
</tr>
<tr>
<td>0.70</td>
<td>0.63</td>
</tr>
<tr>
<td>0.65</td>
<td>0.59</td>
</tr>
<tr>
<td>0.60</td>
<td>0.54</td>
</tr>
<tr>
<td>0.55</td>
<td>0.50</td>
</tr>
<tr>
<td>0.50</td>
<td>0.45</td>
</tr>
<tr>
<td>0.45</td>
<td>0.41</td>
</tr>
<tr>
<td>0.40</td>
<td>0.36</td>
</tr>
<tr>
<td>0.35</td>
<td>0.32</td>
</tr>
<tr>
<td>0.30</td>
<td>0.27</td>
</tr>
<tr>
<td>0.25</td>
<td>0.23</td>
</tr>
<tr>
<td>0.20</td>
<td>0.18</td>
</tr>
<tr>
<td>0.15</td>
<td>0.14</td>
</tr>
<tr>
<td>0.10</td>
<td>0.09</td>
</tr>
<tr>
<td>0.05</td>
<td>0.05</td>
</tr>
</tbody>
</table>
Clearwall® Curtain Wall System

THERMAL CHARTS - SSIT

MARCH, 2020
EC 97911-228

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

System U-Factor for Vision Glass

<table>
<thead>
<tr>
<th>Vision Area / Total Area (%)</th>
<th>COG U-factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>95</td>
<td>0.48 (2.73)</td>
</tr>
<tr>
<td>90</td>
<td>0.46 (2.61)</td>
</tr>
<tr>
<td>85</td>
<td>0.44 (2.50)</td>
</tr>
<tr>
<td>80</td>
<td>0.42 (2.39)</td>
</tr>
<tr>
<td>75</td>
<td>0.40 (2.27)</td>
</tr>
<tr>
<td>70</td>
<td>0.38 (2.16)</td>
</tr>
<tr>
<td>65</td>
<td>0.36 (2.05)</td>
</tr>
<tr>
<td>60</td>
<td>0.34 (1.93)</td>
</tr>
<tr>
<td>55</td>
<td>0.32 (1.82)</td>
</tr>
<tr>
<td>50</td>
<td>0.30 (1.71)</td>
</tr>
<tr>
<td>45</td>
<td>0.28 (1.59)</td>
</tr>
<tr>
<td>40</td>
<td>0.26 (1.48)</td>
</tr>
<tr>
<td>35</td>
<td>0.24 (1.37)</td>
</tr>
<tr>
<td>30</td>
<td>0.22 (1.25)</td>
</tr>
<tr>
<td>25</td>
<td>0.20 (1.14)</td>
</tr>
</tbody>
</table>

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

System Visible Transmittance (VT) vs Percent of Vision Area

Charts are generated per AAMA 507.
### Thermal Transmittance ¹ (BTU/hr • ft² • °F)

<table>
<thead>
<tr>
<th>Glass U-Factor ³</th>
<th>Overall U-Factor ⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.48</td>
<td>0.50</td>
</tr>
<tr>
<td>0.46</td>
<td>0.48</td>
</tr>
<tr>
<td>0.44</td>
<td>0.46</td>
</tr>
<tr>
<td>0.42</td>
<td>0.45</td>
</tr>
<tr>
<td>0.40</td>
<td>0.43</td>
</tr>
<tr>
<td>0.38</td>
<td>0.41</td>
</tr>
<tr>
<td>0.36</td>
<td>0.40</td>
</tr>
<tr>
<td>0.34</td>
<td>0.38</td>
</tr>
<tr>
<td>0.32</td>
<td>0.36</td>
</tr>
<tr>
<td>0.30</td>
<td>0.35</td>
</tr>
<tr>
<td>0.28</td>
<td>0.33</td>
</tr>
<tr>
<td>0.26</td>
<td>0.31</td>
</tr>
<tr>
<td>0.24</td>
<td>0.30</td>
</tr>
<tr>
<td>0.22</td>
<td>0.28</td>
</tr>
<tr>
<td>0.20</td>
<td>0.26</td>
</tr>
</tbody>
</table>

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

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matrices are based on the standard NFRC specimen size of 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

### SHGC Matrix ²

<table>
<thead>
<tr>
<th>Glass SHGC ³</th>
<th>Overall SHGC ⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75</td>
<td>0.71</td>
</tr>
<tr>
<td>0.70</td>
<td>0.67</td>
</tr>
<tr>
<td>0.65</td>
<td>0.62</td>
</tr>
<tr>
<td>0.60</td>
<td>0.58</td>
</tr>
<tr>
<td>0.55</td>
<td>0.53</td>
</tr>
<tr>
<td>0.50</td>
<td>0.49</td>
</tr>
<tr>
<td>0.45</td>
<td>0.44</td>
</tr>
<tr>
<td>0.40</td>
<td>0.40</td>
</tr>
<tr>
<td>0.35</td>
<td>0.35</td>
</tr>
<tr>
<td>0.30</td>
<td>0.31</td>
</tr>
<tr>
<td>0.25</td>
<td>0.26</td>
</tr>
<tr>
<td>0.20</td>
<td>0.22</td>
</tr>
<tr>
<td>0.15</td>
<td>0.17</td>
</tr>
<tr>
<td>0.10</td>
<td>0.12</td>
</tr>
<tr>
<td>0.05</td>
<td>0.08</td>
</tr>
</tbody>
</table>

### Visible Transmittance ²

<table>
<thead>
<tr>
<th>Glass VT ³</th>
<th>Overall VT ⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75</td>
<td>0.68</td>
</tr>
<tr>
<td>0.70</td>
<td>0.63</td>
</tr>
<tr>
<td>0.65</td>
<td>0.59</td>
</tr>
<tr>
<td>0.60</td>
<td>0.54</td>
</tr>
<tr>
<td>0.55</td>
<td>0.50</td>
</tr>
<tr>
<td>0.50</td>
<td>0.45</td>
</tr>
<tr>
<td>0.45</td>
<td>0.41</td>
</tr>
<tr>
<td>0.40</td>
<td>0.36</td>
</tr>
<tr>
<td>0.35</td>
<td>0.32</td>
</tr>
<tr>
<td>0.30</td>
<td>0.27</td>
</tr>
<tr>
<td>0.25</td>
<td>0.23</td>
</tr>
<tr>
<td>0.20</td>
<td>0.18</td>
</tr>
<tr>
<td>0.15</td>
<td>0.14</td>
</tr>
<tr>
<td>0.10</td>
<td>0.09</td>
</tr>
<tr>
<td>0.05</td>
<td>0.05</td>
</tr>
</tbody>
</table>
Clearwall® Curtain Wall System

System U-Factor for Vision Glass

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

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.
Clearwall® Curtain Wall System

THERMAL CHARTS - SB

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

© 2013, Kawneer Company, Inc.

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

kawneer.com

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

System Visible Transmittance (VT) vs Percent of Vision Area

Charts are generated per AAMA 507.
**Clearwall® Curtain Wall System**

**EC 97911-228**

**THERMAL PERFORMANCE MATRIX (NFRC SIZE) - SB**

**MARCH, 2020**

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

© 2013, Kawneer Company, Inc.

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

Kawneer.com

---

**Thermal Transmittance** \( ^1 \)  \& \( ^{(\text{BTU/hr} \cdot \text{ft}^2 \cdot \circ\text{F})} \)

<table>
<thead>
<tr>
<th>Glass U-Factor (^3)</th>
<th>Overall U-Factor (^4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.47</td>
<td>0.55</td>
</tr>
<tr>
<td>0.46</td>
<td>0.54</td>
</tr>
<tr>
<td>0.44</td>
<td>0.52</td>
</tr>
<tr>
<td>0.42</td>
<td>0.51</td>
</tr>
<tr>
<td>0.40</td>
<td>0.49</td>
</tr>
<tr>
<td>0.38</td>
<td>0.47</td>
</tr>
<tr>
<td>0.36</td>
<td>0.46</td>
</tr>
<tr>
<td>0.34</td>
<td>0.44</td>
</tr>
<tr>
<td>0.32</td>
<td>0.42</td>
</tr>
<tr>
<td>0.30</td>
<td>0.41</td>
</tr>
<tr>
<td>0.28</td>
<td>0.39</td>
</tr>
<tr>
<td>0.26</td>
<td>0.38</td>
</tr>
<tr>
<td>0.24</td>
<td>0.36</td>
</tr>
<tr>
<td>0.22</td>
<td>0.34</td>
</tr>
<tr>
<td>0.20</td>
<td>0.32</td>
</tr>
<tr>
<td>0.18</td>
<td>0.31</td>
</tr>
<tr>
<td>0.16</td>
<td>0.29</td>
</tr>
<tr>
<td>0.14</td>
<td>0.28</td>
</tr>
<tr>
<td>0.12</td>
<td>0.26</td>
</tr>
<tr>
<td>0.10</td>
<td>0.25</td>
</tr>
</tbody>
</table>

**SHGC Matrix** \(^2\)

<table>
<thead>
<tr>
<th>Glass SHGC (^3)</th>
<th>Overall SHGC (^4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75</td>
<td>0.75</td>
</tr>
<tr>
<td>0.70</td>
<td>0.71</td>
</tr>
<tr>
<td>0.65</td>
<td>0.66</td>
</tr>
<tr>
<td>0.60</td>
<td>0.62</td>
</tr>
<tr>
<td>0.55</td>
<td>0.57</td>
</tr>
<tr>
<td>0.50</td>
<td>0.53</td>
</tr>
<tr>
<td>0.45</td>
<td>0.49</td>
</tr>
<tr>
<td>0.40</td>
<td>0.44</td>
</tr>
<tr>
<td>0.35</td>
<td>0.40</td>
</tr>
<tr>
<td>0.30</td>
<td>0.35</td>
</tr>
<tr>
<td>0.25</td>
<td>0.31</td>
</tr>
<tr>
<td>0.20</td>
<td>0.26</td>
</tr>
<tr>
<td>0.15</td>
<td>0.22</td>
</tr>
<tr>
<td>0.10</td>
<td>0.17</td>
</tr>
<tr>
<td>0.05</td>
<td>0.13</td>
</tr>
</tbody>
</table>

**Visible Transmittance** \(^2\)

<table>
<thead>
<tr>
<th>Glass VT (^3)</th>
<th>Overall VT (^4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75</td>
<td>0.67</td>
</tr>
<tr>
<td>0.70</td>
<td>0.62</td>
</tr>
<tr>
<td>0.65</td>
<td>0.58</td>
</tr>
<tr>
<td>0.60</td>
<td>0.53</td>
</tr>
<tr>
<td>0.55</td>
<td>0.49</td>
</tr>
<tr>
<td>0.50</td>
<td>0.44</td>
</tr>
<tr>
<td>0.45</td>
<td>0.40</td>
</tr>
<tr>
<td>0.40</td>
<td>0.36</td>
</tr>
<tr>
<td>0.35</td>
<td>0.31</td>
</tr>
<tr>
<td>0.30</td>
<td>0.27</td>
</tr>
<tr>
<td>0.25</td>
<td>0.22</td>
</tr>
<tr>
<td>0.20</td>
<td>0.18</td>
</tr>
<tr>
<td>0.15</td>
<td>0.13</td>
</tr>
<tr>
<td>0.10</td>
<td>0.09</td>
</tr>
<tr>
<td>0.05</td>
<td>0.04</td>
</tr>
</tbody>
</table>

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

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matrices are based on the standard NFRC specimen size of 2,000 mm wide by 2,000 mm high (78-3/4” by 78-3/4”).

---

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

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matrices are based on the standard NFRC specimen size of 2,000 mm wide by 2,000 mm 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-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.
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.
### Thermal Transmittance ¹ (BTU/hr • ft² • °F)

<table>
<thead>
<tr>
<th>Glass U-Factor ³</th>
<th>Overall U-Factor ⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.47</td>
<td>0.52</td>
</tr>
<tr>
<td>0.46</td>
<td>0.51</td>
</tr>
<tr>
<td>0.44</td>
<td>0.49</td>
</tr>
<tr>
<td>0.42</td>
<td>0.48</td>
</tr>
<tr>
<td>0.40</td>
<td>0.46</td>
</tr>
<tr>
<td>0.38</td>
<td>0.44</td>
</tr>
<tr>
<td>0.36</td>
<td>0.43</td>
</tr>
<tr>
<td>0.34</td>
<td>0.41</td>
</tr>
<tr>
<td>0.32</td>
<td>0.39</td>
</tr>
<tr>
<td>0.30</td>
<td>0.37</td>
</tr>
<tr>
<td>0.28</td>
<td>0.36</td>
</tr>
<tr>
<td>0.26</td>
<td>0.34</td>
</tr>
<tr>
<td>0.24</td>
<td>0.32</td>
</tr>
<tr>
<td>0.22</td>
<td>0.31</td>
</tr>
<tr>
<td>0.20</td>
<td>0.29</td>
</tr>
<tr>
<td>0.18</td>
<td>0.27</td>
</tr>
<tr>
<td>0.16</td>
<td>0.26</td>
</tr>
<tr>
<td>0.14</td>
<td>0.24</td>
</tr>
<tr>
<td>0.12</td>
<td>0.22</td>
</tr>
<tr>
<td>0.10</td>
<td>0.20</td>
</tr>
</tbody>
</table>

### SHGC Matrix ²

<table>
<thead>
<tr>
<th>Glass SHGC ³</th>
<th>Overall SHGC ⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75</td>
<td>0.73</td>
</tr>
<tr>
<td>0.70</td>
<td>0.69</td>
</tr>
<tr>
<td>0.65</td>
<td>0.64</td>
</tr>
<tr>
<td>0.60</td>
<td>0.60</td>
</tr>
<tr>
<td>0.55</td>
<td>0.55</td>
</tr>
<tr>
<td>0.50</td>
<td>0.51</td>
</tr>
<tr>
<td>0.45</td>
<td>0.46</td>
</tr>
<tr>
<td>0.40</td>
<td>0.41</td>
</tr>
<tr>
<td>0.35</td>
<td>0.37</td>
</tr>
<tr>
<td>0.30</td>
<td>0.32</td>
</tr>
<tr>
<td>0.25</td>
<td>0.28</td>
</tr>
<tr>
<td>0.20</td>
<td>0.23</td>
</tr>
<tr>
<td>0.15</td>
<td>0.19</td>
</tr>
<tr>
<td>0.10</td>
<td>0.14</td>
</tr>
<tr>
<td>0.05</td>
<td>0.10</td>
</tr>
</tbody>
</table>

### Visible Transmittance ²

<table>
<thead>
<tr>
<th>Glass VT ³</th>
<th>Overall VT ⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75</td>
<td>0.68</td>
</tr>
<tr>
<td>0.70</td>
<td>0.63</td>
</tr>
<tr>
<td>0.65</td>
<td>0.59</td>
</tr>
<tr>
<td>0.60</td>
<td>0.54</td>
</tr>
<tr>
<td>0.55</td>
<td>0.50</td>
</tr>
<tr>
<td>0.50</td>
<td>0.45</td>
</tr>
<tr>
<td>0.45</td>
<td>0.41</td>
</tr>
<tr>
<td>0.40</td>
<td>0.36</td>
</tr>
<tr>
<td>0.35</td>
<td>0.32</td>
</tr>
<tr>
<td>0.30</td>
<td>0.27</td>
</tr>
<tr>
<td>0.25</td>
<td>0.23</td>
</tr>
<tr>
<td>0.20</td>
<td>0.18</td>
</tr>
<tr>
<td>0.15</td>
<td>0.14</td>
</tr>
<tr>
<td>0.10</td>
<td>0.09</td>
</tr>
<tr>
<td>0.05</td>
<td>0.05</td>
</tr>
</tbody>
</table>

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

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matrices are based on the standard NFRC specimen size of 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").
Clearwall® Curtain Wall System

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

© 2013, Kawneer Company, Inc.

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

kawneer.com

System U-Factor for Vision Glass

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

System U-Factor (Btu/h·ft²·°F) vs. COG U-factor

System U-Factor (W/m²·°C) vs. COG U-factor

Vision Area / Total Area (%) vs. System U-Factor

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.
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.
### Thermal Transmittance ¹ (BTU/hr • ft² • °F)

<table>
<thead>
<tr>
<th>Glass U-Factor ³</th>
<th>Overall U-Factor ⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.47</td>
<td>0.49</td>
</tr>
<tr>
<td>0.46</td>
<td>0.48</td>
</tr>
<tr>
<td>0.44</td>
<td>0.46</td>
</tr>
<tr>
<td>0.42</td>
<td>0.45</td>
</tr>
<tr>
<td>0.40</td>
<td>0.43</td>
</tr>
<tr>
<td>0.38</td>
<td>0.41</td>
</tr>
<tr>
<td>0.36</td>
<td>0.40</td>
</tr>
<tr>
<td>0.34</td>
<td>0.38</td>
</tr>
<tr>
<td>0.32</td>
<td>0.36</td>
</tr>
<tr>
<td>0.30</td>
<td>0.35</td>
</tr>
<tr>
<td>0.28</td>
<td>0.33</td>
</tr>
<tr>
<td>0.26</td>
<td>0.31</td>
</tr>
<tr>
<td>0.24</td>
<td>0.29</td>
</tr>
<tr>
<td>0.22</td>
<td>0.28</td>
</tr>
<tr>
<td>0.20</td>
<td>0.26</td>
</tr>
<tr>
<td>0.18</td>
<td>0.25</td>
</tr>
<tr>
<td>0.16</td>
<td>0.23</td>
</tr>
<tr>
<td>0.14</td>
<td>0.21</td>
</tr>
<tr>
<td>0.12</td>
<td>0.19</td>
</tr>
<tr>
<td>0.10</td>
<td>0.18</td>
</tr>
</tbody>
</table>

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

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matrices are based on the standard NFRC specimen size of 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

### SHGC Matrix ²

<table>
<thead>
<tr>
<th>Glass SHGC ³</th>
<th>Overall SHGC ⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75</td>
<td>0.71</td>
</tr>
<tr>
<td>0.70</td>
<td>0.67</td>
</tr>
<tr>
<td>0.65</td>
<td>0.62</td>
</tr>
<tr>
<td>0.60</td>
<td>0.58</td>
</tr>
<tr>
<td>0.55</td>
<td>0.53</td>
</tr>
<tr>
<td>0.50</td>
<td>0.49</td>
</tr>
<tr>
<td>0.45</td>
<td>0.44</td>
</tr>
<tr>
<td>0.40</td>
<td>0.40</td>
</tr>
<tr>
<td>0.35</td>
<td>0.35</td>
</tr>
<tr>
<td>0.30</td>
<td>0.31</td>
</tr>
<tr>
<td>0.25</td>
<td>0.26</td>
</tr>
<tr>
<td>0.20</td>
<td>0.22</td>
</tr>
<tr>
<td>0.15</td>
<td>0.17</td>
</tr>
<tr>
<td>0.10</td>
<td>0.12</td>
</tr>
<tr>
<td>0.05</td>
<td>0.08</td>
</tr>
</tbody>
</table>

### Visible Transmittance ²

<table>
<thead>
<tr>
<th>Glass VT ³</th>
<th>Overall VT ⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75</td>
<td>0.68</td>
</tr>
<tr>
<td>0.70</td>
<td>0.63</td>
</tr>
<tr>
<td>0.65</td>
<td>0.59</td>
</tr>
<tr>
<td>0.60</td>
<td>0.54</td>
</tr>
<tr>
<td>0.55</td>
<td>0.50</td>
</tr>
<tr>
<td>0.50</td>
<td>0.45</td>
</tr>
<tr>
<td>0.45</td>
<td>0.41</td>
</tr>
<tr>
<td>0.40</td>
<td>0.36</td>
</tr>
<tr>
<td>0.35</td>
<td>0.32</td>
</tr>
<tr>
<td>0.30</td>
<td>0.27</td>
</tr>
<tr>
<td>0.25</td>
<td>0.23</td>
</tr>
<tr>
<td>0.20</td>
<td>0.18</td>
</tr>
<tr>
<td>0.15</td>
<td>0.14</td>
</tr>
<tr>
<td>0.10</td>
<td>0.09</td>
</tr>
<tr>
<td>0.05</td>
<td>0.05</td>
</tr>
</tbody>
</table>
Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.