# GUTMANN UCW65

## System Description

Stock lengths offer glazing contractors the flexibility of providing fabrication and pre-glazing under controlled conditions in their own shop.

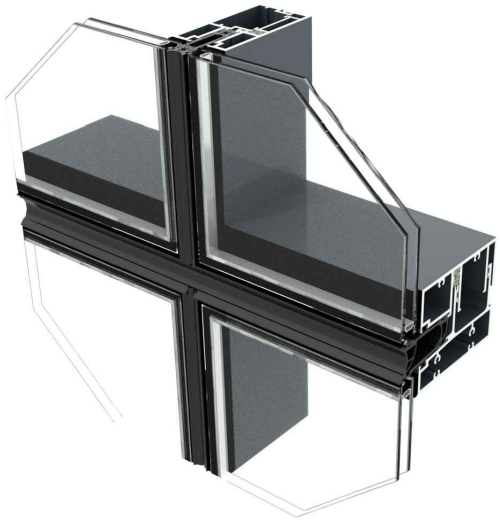
The ideal option to ease timeline pressures, pre-assembled and pre-glazed units ensure quality control and increase productivity for almost any size or configuration.

→ Unitized, preglazed and fabricated system
→ Unitized construction accelerates installation, reducing field labor costs
→ Standard infill option 1" [25.4mm], other infill's available
→ 2-1/2" x 4-7/8" [65mm x 125mm] profile, other profiles can be designed as per project requirements
→ 6063 alloy, T6 aluminum extrusions
→ Available systems include:
- Vertical SSG (Structural Silicone Glazed)
- Horizontal SSG
- Four sided SSG

→ Foam insertion inside the expansion joint for better thermal performance
→ Split mullion and expansion/stack horizontal
→ extruded EPDM or silicone air and weather seal gaskets
→ Structural extruded silicone glazing spacer is compatible with structural silicone sealants
→ It employs a continuous polyamide thermal break vertically and horizontally, providing ultra-thermal performance levels in a cost-effective unitized curtain wall system
→ options of any finish
→ Tested to as per ASTM and AAMA test standards
→ Average weighted system "U" value for the wall assembly shall not exceed 0.34 btu/hr/ft2-F°, This value may vary according to glass selection, framing configuration and spandrel to vision ratios
→ Steel reinforcing available
→ Captured system integrates with standard GUTMANN doors and windows
→ Captured system integrates with concealed S70V+ Windows

## System Properties of Classes

| | |
|---|---|
| Water tightness | **ASTM E331 720 Pa** |
| Air permeability | **ASTM E 283 300 Pa** |
| Wind load | **ASTM E 330 2-3 KPa** |



## Thermal Insulation

1.6

Uf

# System Performance

| TEST | CRITERIA | STANDARD |
|---|---|---|
| Test 1 | Air Infiltration Test<br>(300 Pa) | ASTM E 283-04 (2012) |
| Test 2 | Static Water Penetration Test<br>(720 Pa) | ASTM E 331-00 (2016) |
| Test 3 | Dynamic Water Penetration Test<br>(720 Pa) | AAMA 501.1-17 |
| Test 4 | Structural Performance Test<br>(2 kPa inward & 2 kPa outward) | ASTM E 330-14 |
| Test 5 | Static Water Penetration Test<br>(720 Pa) | ASTM E 331-00 (2016) |
| Test 6 | Seismic Test (Horizontal drift/Displacement)<br>10mm, 3 cycles | AAMA 501.7:2018 |
| Test 7 | Static Water Penetration Test<br>(720 Pa) | ASTM E 331-00 (2016) |
| Test 8 | Jacking Test (Vertical drift/Displacement)<br>15mm, 3 cycles | AAMA 501.7-17 |
| Test 9 | Static Water Penetration Test<br>(720 Pa) | ASTM E 331-00 (2016) |
| Test 10 | Static Water Penetration Test<br>(1 kPa) | ASTM E 331-00 (2016) |
| Test 11 | Structural Proof Load Test @ 150% design load<br>(3 kPa inward & 3 kPa outward) | ASTM E 330-14 |
| Test 12 | Thermal Cycle Test | AAMA 501.5 |
| Test 13 | Seismic Test (Horizontal drift/Displacement)<br>20mm, 3 cycles | AAMA 501.7:2018 |

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 used in allowable stress design.

DEAD LOAD CHARTS

Horizontal or dead-load limitations are based upon the smaller of 0.11" (3mm) and L/500, maximum allowable deflection at the center of an intermediate horizontal member. The accompanying charts are calculated for 1 3/4"(44.45mm) thick insulating glass, 1" (25.4mm) thick insulating glass or 1/4" (6.4mm) thick glass supported on two setting blocks placed at the loading points shown.

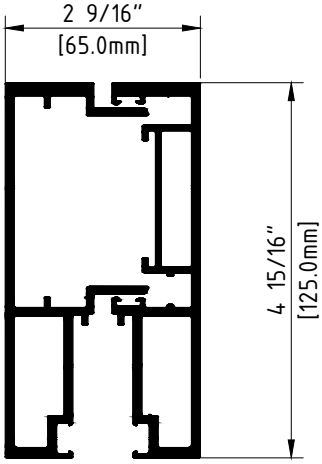
# Wind Load Charts

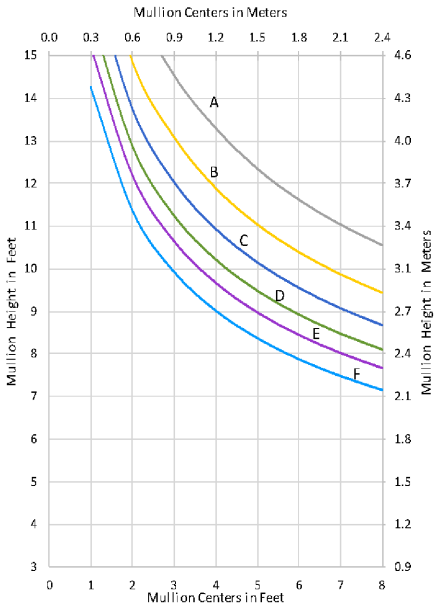
**Aluminum Alloy 6063 T6 - Fy170 =MPa**

| Unfactored Wind Load Values | | |
|---|---|---|
| | Load in **psf** | Load in **Pa** |
| A | 15 | 718 |
| B | 25 | 1197 |
| C | 35 | 1676 |
| D | 45 | 2155 |
| E | 55 | 2633 |
| F | 65 | 3112 |
| G | 80 | 3830 |
| H | 90 | 4309 |

Mullion Depth 4 $\frac{15}{16}$" [125mm]

- Total moment of inertia about x-axis:
  Ix= 7 $\frac{8}{5}$ in⁴ [317.44 cm⁴]
- Total section modulus about x-axis:
  Sxx= 3 $\frac{1}{16}$ in³ [50.24 cm³]

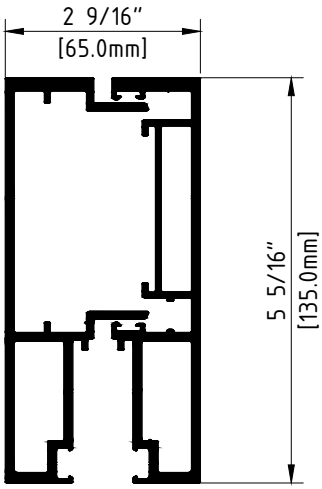


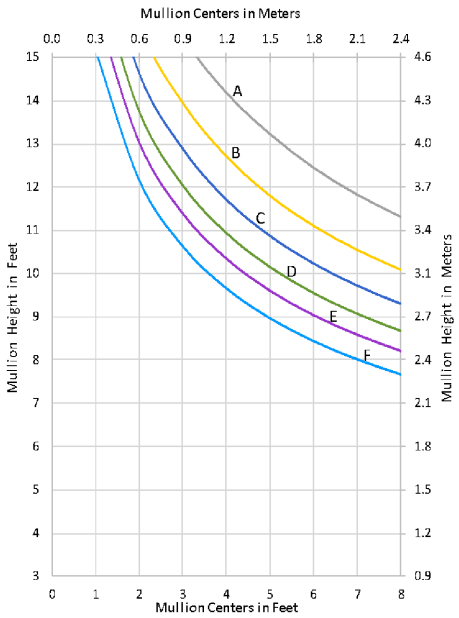

| Deflection Criterion: L/175 OR L/240+1/4" (6.35mm) |
|---|
| Aluminum Alloy 6063-T6 |

Mullion depth 5 $\frac{5}{16}$" [135mm]

- Total moment of inertia about x-axis:
  Ix= 9 $\frac{3}{8}$ in⁴ [389.71 cm⁴]
- Total section modulus about x-axis:
  Sxx= 3 $\frac{1}{2}$ in³ [57.03 cm³]




***Die to be produced on demand**




| Deflection Criterion: L/175 OR L/240+1/4" (6.35mm) |
|---|
| Aluminum Alloy 6063-T6 |

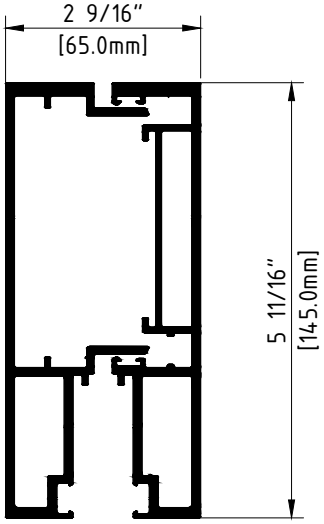
# Wind Load Charts

**Aluminum Alloy 6063 T6 - Fy170 =MPa**

| Unfactored Wind Load Values | | |
|---|---|---|
| | Load in **psf** | Load in **Pa** |
| A | 15 | 718 |
| B | 25 | 1197 |
| C | 35 | 1676 |
| D | 45 | 2155 |
| E | 55 | 2633 |
| F | 65 | 3112 |
| G | 80 | 3830 |
| H | 90 | 4309 |

Mullion Depth 5 $\frac{11}{16}$" [145mm]

- Total moment of inertia about x-axis:
  Ix= 11 $\frac{5}{16}$ in⁴ [471.72 cm⁴]
- Total section modulus about x-axis:
  Sxx= 3 $\frac{15}{16}$ in³ [64.15 cm³]

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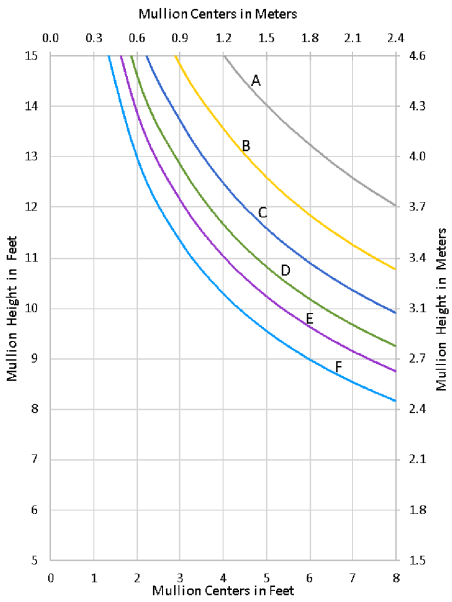
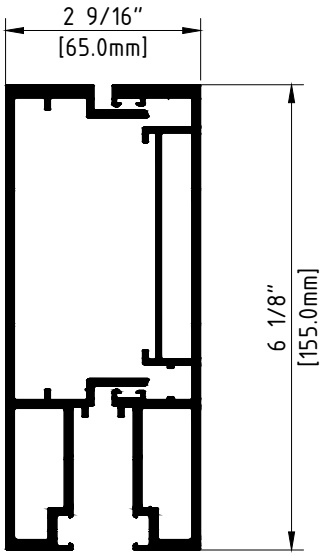



| Deflection Criterion: L/175 OR L/240+1/4" (6.35mm) |
|---|
| Aluminum Alloy 6063-T6 |

Mullion depth 6 $\frac{1}{8}$" [155mm]

- Total moment of inertia about x-axis:
  Ix= 16 $\frac{9}{16}$ in⁴ [563.82 cm⁴]
- Total section modulus about x-axis:
  Sxx= 4 $\frac{3}{8}$ in³ [71.62 cm³]

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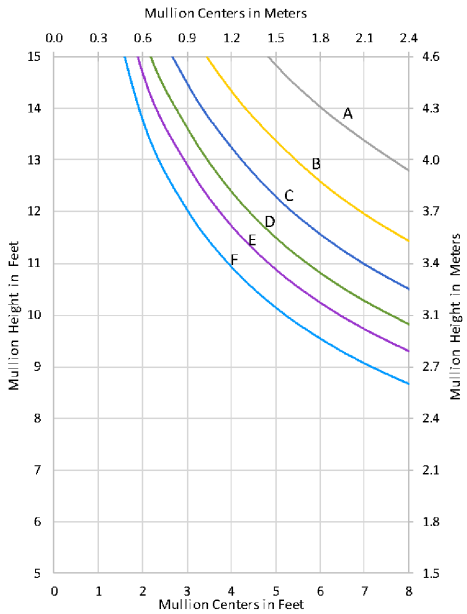



| Deflection Criterion: L/175 OR L/240+1/4" (6.35mm) |
|---|
| Aluminum Alloy 6063-T6 |

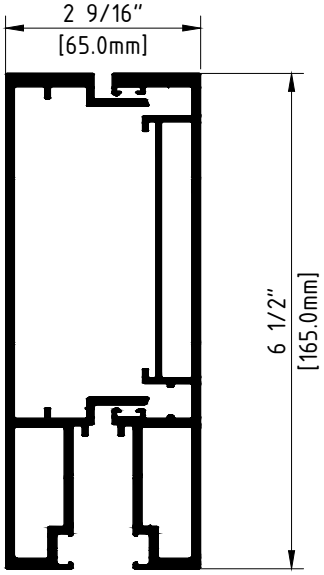
# Wind Load Charts

**Aluminum Alloy 6063 T6 - Fy170 =MPa**

| Unfactored Wind Load Values | | |
|---|---|---|
| | Load in **psf** | Load in **Pa** |
| A | 15 | 718 |
| B | 25 | 1197 |
| C | 35 | 1676 |
| D | 45 | 2155 |
| E | 55 | 2633 |
| F | 65 | 3112 |
| G | 80 | 3830 |
| H | 90 | 4309 |

Mullion Depth 6 $\frac{1}{2}$" [165mm]

- Total moment of inertia about x-axis:
  Ix= 16 in⁴ [666.50 cm⁴]
- Total section modulus about x-axis:
  Sxx= 4 $\frac{13}{16}$ in³ [79.17 cm³]

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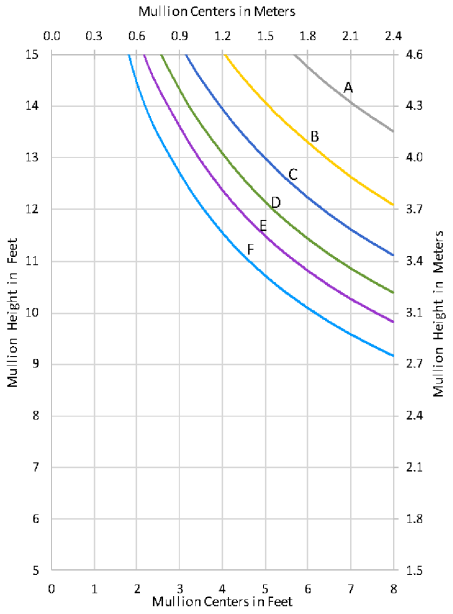
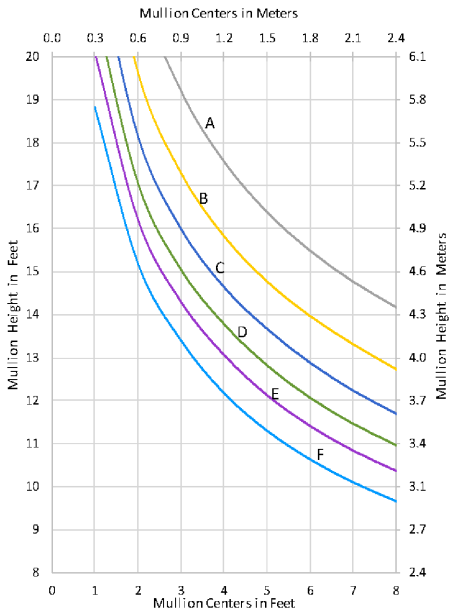



| Deflection Criterion: L/175 OR L/240+1/4" (6.35mm) |
|---|
| Aluminum Alloy 6063-T6 |

Mullion depth 6 $\frac{7}{8}$" [175mm]

- Total moment of inertia about x-axis:
  Ix= 18 $\frac{3}{4}$ in⁴ [780.14 cm⁴]
- Total section modulus about x-axis:
  Sxx= 5 $\frac{5}{16}$ in³ [86.99 cm³]


***Die to be produced on demand**




| Deflection Criterion: L/175 OR L/240+1/4" (6.35mm) |
|---|
| Aluminum Alloy 6063-T6 |

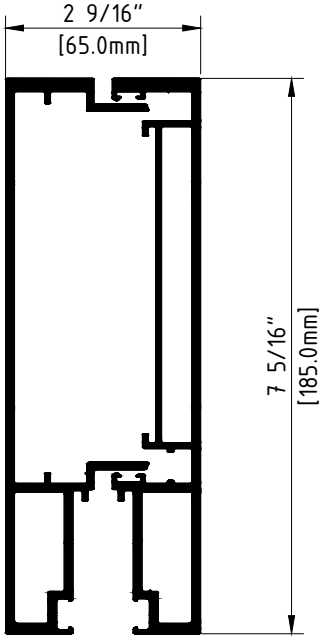
# Wind Load Charts

**Aluminum Alloy 6063 T6 - Fy170 =MPa**

| Unfactored Wind Load Values | | |
|---|---|---|
| | Load in **psf** | Load in **Pa** |
| A | 15 | 718 |
| B | 25 | 1197 |
| C | 35 | 1676 |
| D | 45 | 2155 |
| E | 55 | 2633 |
| F | 65 | 3112 |
| G | 80 | 3830 |
| H | 90 | 4309 |

Mullion Depth 7 $\frac{5}{16}$" [185mm]

- Total moment of inertia about x-axis:
  Ix= 21 $\frac{3}{4}$ in⁴ [905.15 cm⁴]
- Total section modulus about x-axis:
  Sxx= 5 $\frac{13}{16}$ in³ [95.14 cm³]

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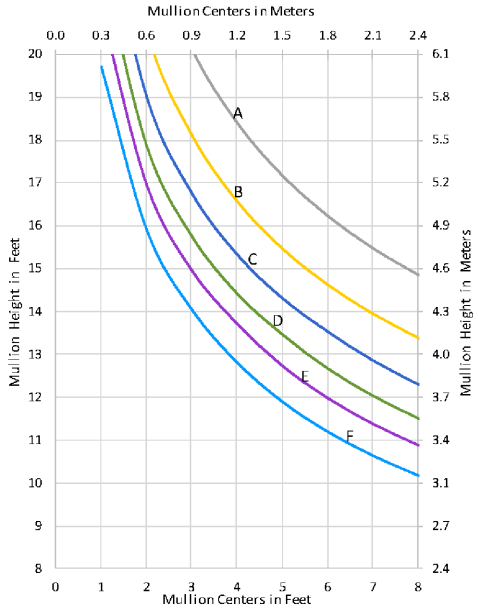
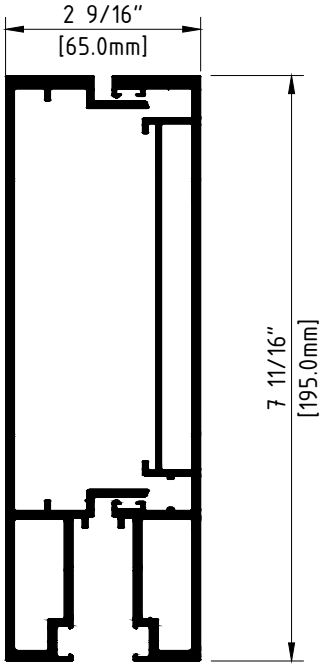



| Deflection Criterion: L/175 OR L/240+1/4" (6.35mm) |
|---|
| Aluminum Alloy 6063-T6 |

Mullion depth 7 $\frac{11}{16}$" [195mm]

- Total moment of inertia about x-axis:
  Ix= 25 in⁴ [1041.95 cm⁴]
- Total section modulus about x-axis:
  Sxx= 6 $\frac{5}{16}$ in³ [103.60 cm³]

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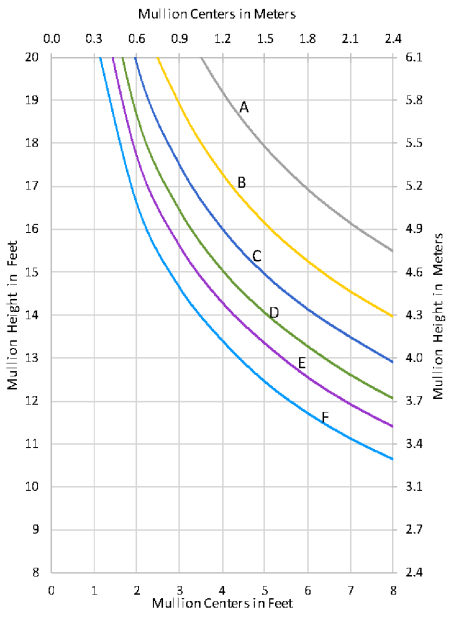


| Deflection Criterion: L/175 OR L/240+1/4" (6.35mm) |
|---|
| Aluminum Alloy 6063-T6 |