CURTAIN WALLS

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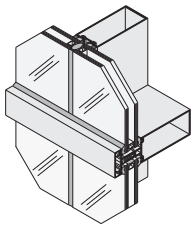
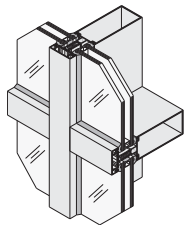


SERIES 2100
Structural Silicone Vertical Glazed Curtain Wall



SERIES 2200
Captured Vertical Glazed Curtain Wall

Thermally Improved
- **Series 2100**
- **Series 2200**

SECTION J1 **PAGE**

Project: Hewitt Associates Building; Lincolnshire, IL

Due to the diversity in state/provincial, local, and federal laws and codes that govern the design and application of architectural products, it is the responsibility of the individual architect, owner, and installer to ensure that products selected for use on projects comply with all applicable building codes and laws. U.S. Aluminum exercises no control over the use or application of its products, glazing materials, and operating hardware, and assumes no responsibility thereof.

The rapidly changing technology within the architectural aluminum products industry demands that U.S. Aluminum reserve the right to revise, discontinue or change any product line, specification or electronic media without prior written notice.

NOTE: Dimensions in parentheses ( ) are millimeters unless otherwise noted.
Other metric units shown in this publication are:

m - meter	Kg - kilogram
Pa - pascal	KPa - kilopascal
MPa - megapascal	

CURTAIN WALLS

Specifications

Thermally Improved
- Series 2100
- Series 2200

SECTION 08 44 13 ALUMINUM CURTAIN WALL SYSTEMS

SERIES	FACE WIDTH	BACK MEMBER DEPTH	OVERALL DEPTH	GLAZING INFILL	GLAZING METHOD
2100 2200	2" (50.8)	2-7/8" (73) 4" (101.6) 5" (127)	4-15/16" (125.4) 6-1/16" (154) 7-1/16" (179.4)	1" (25)	Exterior

I. GENERAL DESCRIPTION

Work Included: Furnish all necessary materials, labor, and equipment for the complete installation of aluminum framing as shown on the drawings and specified herein. (*Specifier Note: It is suggested that related items such as aluminum entrance doors, glass, and sealants be included whenever possible.*)

Work Not Included: Structural support of the framing system, interior closures, and trim. (*Specifier list other exclusions*).

Related Work Specified Elsewhere: (*Specifier list*).

QUALITY ASSURANCE

Drawings and specifications are based on Series 2100 or Series 2200 Curtain Wall Systems as manufactured by U.S. Aluminum. Whenever substitute products are to be considered, supporting technical literature, samples, drawings, and performance data must be submitted 10 days prior to bid in order to make a valid comparison of the products involved. Test reports certified by an independent test laboratory must be made available upon request.

PERFORMANCE REQUIREMENTS

Air Infiltration: shall not exceed 0.06 cfm/ft^2 (0.0003 m^3 /sm^2) when tested in accordance with ASTM E283 at a pressure differential of 6.24 psf (300 Pa.)

Water Infiltration: shall be tested in accordance with ASTM E331 with a pressure differential of 15.0 psf (700 Pa.)

Thermally, the grid members shall have a condensation resistance equal to or better than the area along the bottom of a 1" (25) sealed glass unit with standard metal spacer edge construction.

(*Note to Specifier: If system is a window application, add the following*): Windows shall conform to the following requirements of CSA standard CAN/CSA-A440 Windows.

Air Infiltration: shall meet the FIXED rating.

Water Infiltration: shall meet the (select up to B7) rating. Wind load resistance shall meet the (select up to C5) rating. Intermediate mullions and horizontals shall be designed to withstand loading in accordance with the National Building Code of Canada. Condensation resistance temperature index for the framing system shall be a minimum of 60.6.

Structural performance shall be based on CSA standard CAN3-S157 "Strength Design in Aluminum" and a maximum deflection of L/175 of the span.

Testing Procedures: ASTM 283, E 331, and E 330 - Laboratory performance testing. AAMA 503-08 - Newly installed curtain walls. AAMA 511-08 - Installed curtain walls after six months.

II. PRODUCTS MATERIALS

Extrusions shall be 6063-T5 alloy and temper (ASTM B221 alloy T5 temper).

Fasteners, where exposed, shall be aluminum, stainless steel or zinc plated steel in accordance with ASTM A 164.

Perimeter anchors shall be aluminum or steel, providing the steel is properly isolated from the aluminum. Glazing gaskets shall be E.P.D.M. elastomeric extrusions. System shall provide conventional glass support at horizontal, vertical, and perimeter members.

Series 2100 shall provide structural silicone support at intermediate verticals. Horizontal members and jamb configurations shall allow for pockets to receive E.P.D.M. elastomeric extruded glazing gaskets. Interior vertical glass spacers shall be extruded silicone compatible E.P.D.M.

All materials that come in contact with the silicone should be tested for compatibility. Samples of aluminum vertical mullions should be submitted to the silicone manufacturer for adhesion evaluation.

FINISH

All exposed framing surfaces shall be free of scratches and other serious blemishes. Aluminum extrusions shall be given a caustic etch followed by an anodic oxide treatment to obtain... (*Specify one of the following*):

_____#11 Clear anodic coating
_____#22 Dark Bronze anodic coating
_____#33 Black anodic coating

A Fluoropolymer paint coating conforming with the requirements of AAMA 2605. Color shall be (*Specify a U.S. Aluminum standard color*).

FABRICATION

All mullions and horizontals shall have flexible (PVC) thermal break material located on exterior side of glass plane. Exterior glazing seal gasket shall be secured by extruded aluminum pressure plates fastened to main grid members. Provisions shall be made at all sealed horizontals to weep moisture accumulation to the exterior. A cover shall be snapped over pressure plate to show only a sharp, uninterrupted exterior profile.

Series 2200 framing members shall provide for straight-in glazing on all sides, with clean sight lines and no projecting stops or face joints. Vertical and horizontal framing members shall have a nominal width of 2" (50.8). Overall depth of system shall be (*Specify*). System shall provide for horizontal framing so that all fasteners at intersection of horizontal and vertical members will be concealed. There shall be no exposed fasteners at perimeter sections. Series 2100 system shall accommodate 1" (25) glazing infill and framing system shall provide a flush glazing appearance with no intermediate verticals visible from the outside.

CURTAIN WALLS

Specifications

Thermally Improved
- Series 2100
- Series 2200

SECTION 08 44 13 ALUMINUM CURTAIN WALL SYSTEMS

III. EXECUTION INSTALLATION

All glass framing shall be set in correct locations as shown in the details and shall be level, square, plumb, and in alignment with other work in accordance with the manufacturer's installation instructions and approved shop drawings. All joints between framing and the building structure shall be sealed in order to secure a watertight installation.

Glass shall be set from outside. Structural silicone shall be applied from inside and silicone weatherseal from outside (after structural silicone has fully cured). Reusable twist-in temporary glass retainers shall be used during structural curing period. Structural silicone must be applied in strict accordance with the silicone manufacturer's instruction for surface preparation, priming, application, and curing time.

PROTECTION AND CLEANING

After installation the General Contractor shall adequately protect exposed portions of aluminum surfaces from damage by grinding and polishing compounds, plaster, lime, acid, cement or other contaminants. The General Contractor shall be responsible for final cleaning.

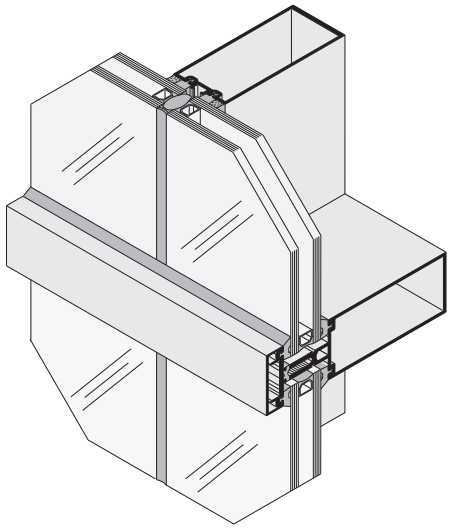
Project: Meydenbauer Convention Center; Bellevue, WA

CURTAIN WALLS

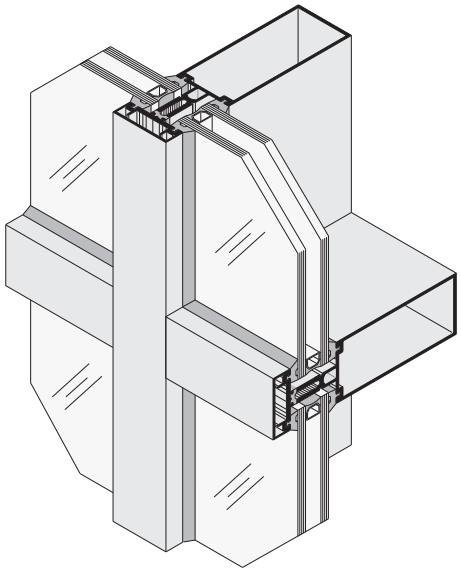
Technical Data

Thermally Improved
- Series 2100
- Series 2200

Based on the popular Series 3150/3250, Series 2100/2200 Curtain Wall Systems offer a reduced sightline for low to mid-rise applications where exterior glazing is desired. Complementing the efficiency of insulating glass, Series 2100/2200 Curtain Walls are thermally improved by a continuous thermal spacer interlocked with the horizontal and vertical pressure plates. Dual colors can be achieved by specifying different finishes for the exterior face covers and interior mullions. Extruded aluminum shear blocks with concealed mechanical attachment allows for a concealed horizontal to vertical joinery without exposed screws. These joint intersections also have concealed Injection Molded End Dams for controlling any infiltrated water. Series 2100/2200 Curtain Walls are designed for both Shear Block and Screw Spline installation. The Screw Spline System incorporates a unique split vertical mullion for straight-in installation of each bay, special perimeter members for easy anchorage to the structure, and the option to shop install and seal end dams. Three mullion depths are offered to accommodate various structural loads.



SERIES 2100
Structural Silicone Vertical Glazed Curtain Wall



SERIES 2200
Captured Vertical Glazed Curtain Wall

SERIES	WIDTH	DEPTH	GLAZING INFILL	APPLICATIONS
2100 2200	2" (50.8)	4-15/16" (125.4) 6-1/16" (154) 7-1/16" (179.3)	1" (25) and/or 1/4" (6)	Low-Rise to Mid-Rise Buildings Where Exterior Glazing is Desired

For custom size and profile extrusions please visit **usalum.com**

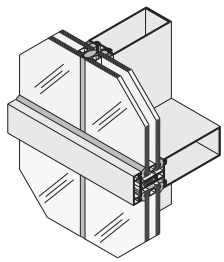
GLASS SIZES*	
For Series 2100 Glass Width	= Daylight Opening + 1-5/8" (41.2) at Intermediate = Daylight Opening + 1-5/16" (33.3) at Jambs
Glass Height	= Daylight Opening + 1" (25.4)
For Series 2200 Glass Width	= Daylight Opening + 1" (25.4)
Glass Height	= Daylight Opening + 1" (25.4)

*These formulae do not take into account glass tolerances. Consult glass manufacturer before ordering glass.

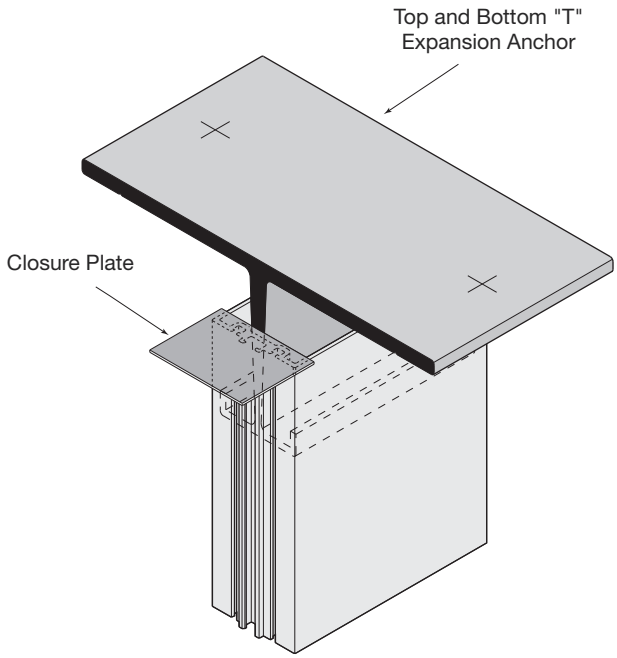
CURTAIN WALLS

Special Features

Thermally Improved • Series 2100

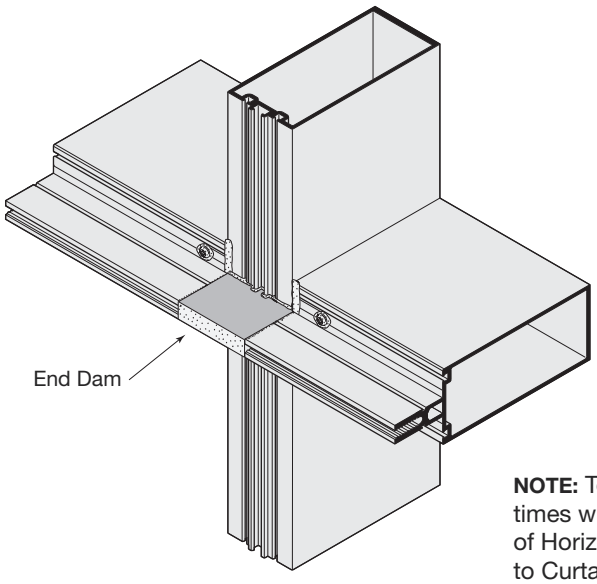


SERIES 2100
Structural Silicone Vertical Glazed Curtain Wall



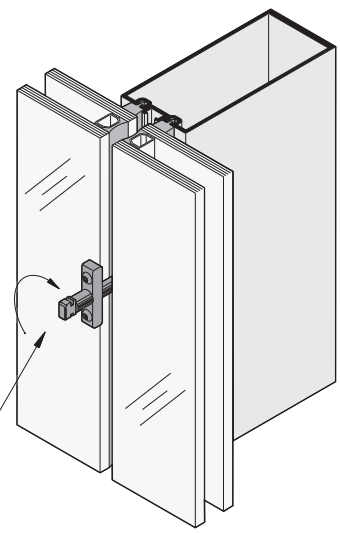
Injection Molded Closure Plates at top and bottom of verticals ensure a continuous perimeter seal. See page 29-J1 for additional information.

Top and Bottom "T" Anchors provide for expansion and positive attachment to surrounding conditions (Shear Block installation only). See pages 27-J1 and 28-J1 for additional information.



Injection Molded End Dams are sealed in place to control infiltrated water. See page 29-J1 for additional information.

NOTE: To accelerate installation times with pinpoint accuracy of Horizontal Shear Blocks to Curtain Wall Mullions see pages 56-P1 and 57-P1.

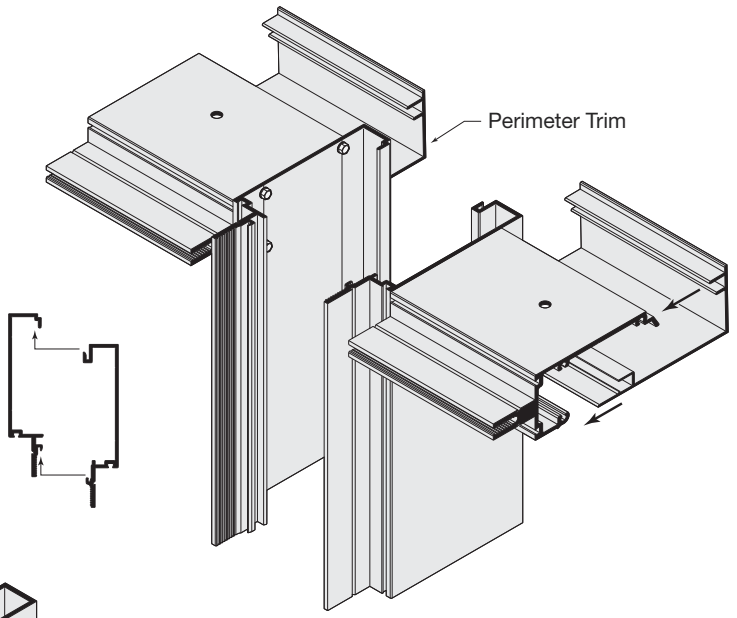


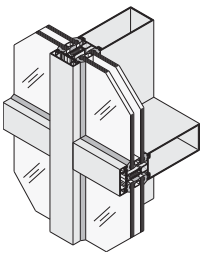
Reusable Twist-In Temporary Glass Retainers are used to support the glass until the structural silicone has fully cured in accordance with silicone manufacturer's recommendations. See page 28-J1 for additional information.

CURTAIN WALLS

Special Features

Thermally Improved
• Series 2200

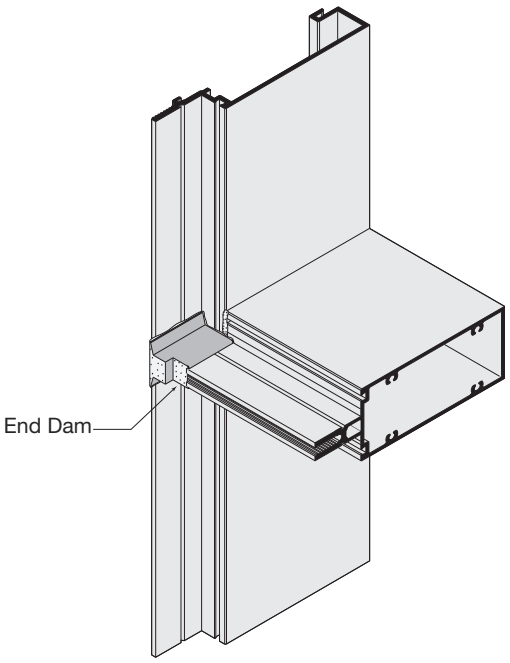




SERIES 2200
Captured Vertical
Glazed Curtain Wall

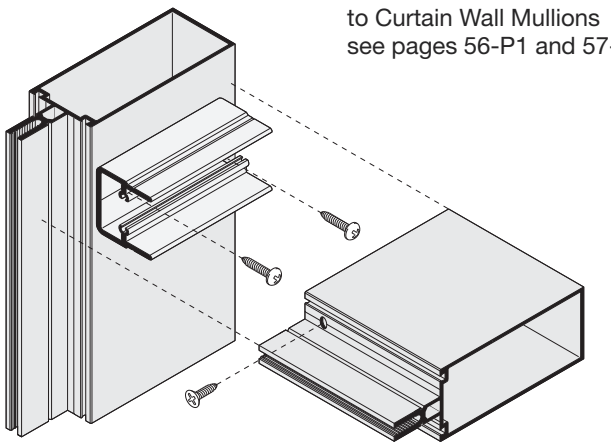
Two Piece Vertical Mullions offer Screw Spline attachment of horizontals, and allow for shop assembly of frame panels.

Unique perimeter members simplify anchorage to structure.



Injection Molded End Dams are sealed in place to control infiltrated water. See page 29-J1 for additional information.

NOTE: To accelerate installation times with pinpoint accuracy of Horizontal Shear Blocks to Curtain Wall Mullions see pages 56-P1 and 57-P1.



Extruded Aluminum Shear Blocks are furnished to ensure extra strong horizontal to vertical joinery. See page 29-J1 for additional information.

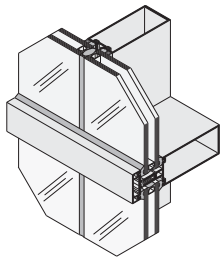
CURTAIN WALLS

Typical Details

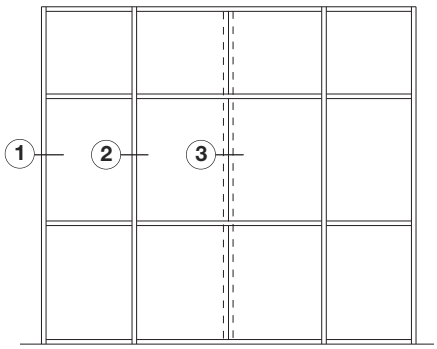
VERTICAL MULLIONS SHEAR BLOCK ASSEMBLY FOR 1" (25) GLAZING

Gaskets **NP430** for Exterior and **NP420** for Interior, Typical. **SP250** Spacer Used at All Butt Glazed Locations.

NOTE: Part numbers shown are available in 24' (7.3 m) stock lengths. Visit **usalum.com** for more information.



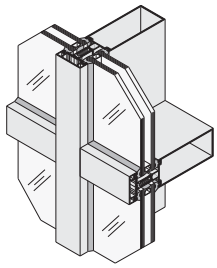
SERIES 2100
Structural Silicone Vertical Glazed Curtain Wall



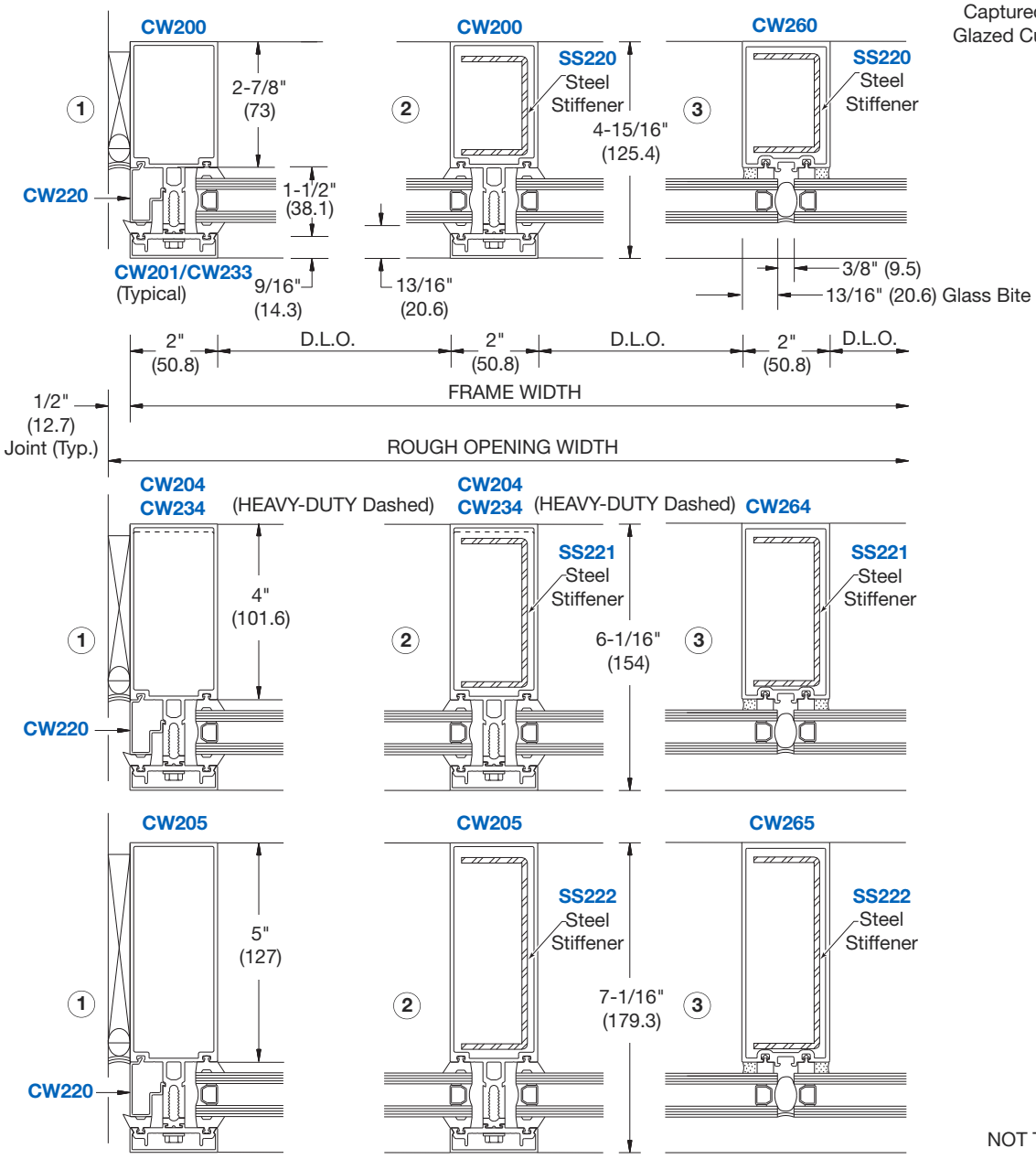
TYPICAL ELEVATION

Thermally Improved

- **Series 2100**
- **Series 2200**



SERIES 2200
Captured Vertical Glazed Curtain Wall



NOT TO SCALE

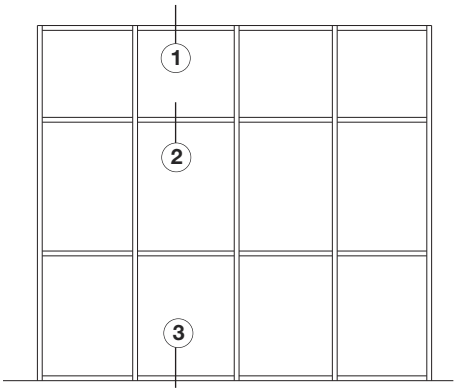
CURTAIN WALLS

Typical Details

HORIZONTAL MULLIONS SHEAR BLOCK ASSEMBLY FOR 1" (25) GLAZING

Gaskets **NP430** for Exterior and **NP420** for Interior, Typical.

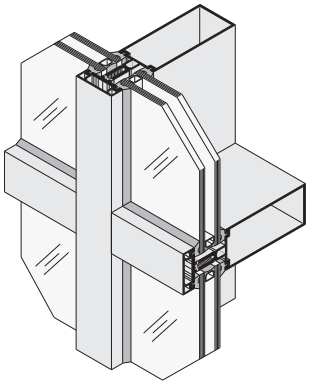
NOTE: Part numbers shown are available in 24' (7.3 m) stock lengths. Visit **usalum.com** for more information.



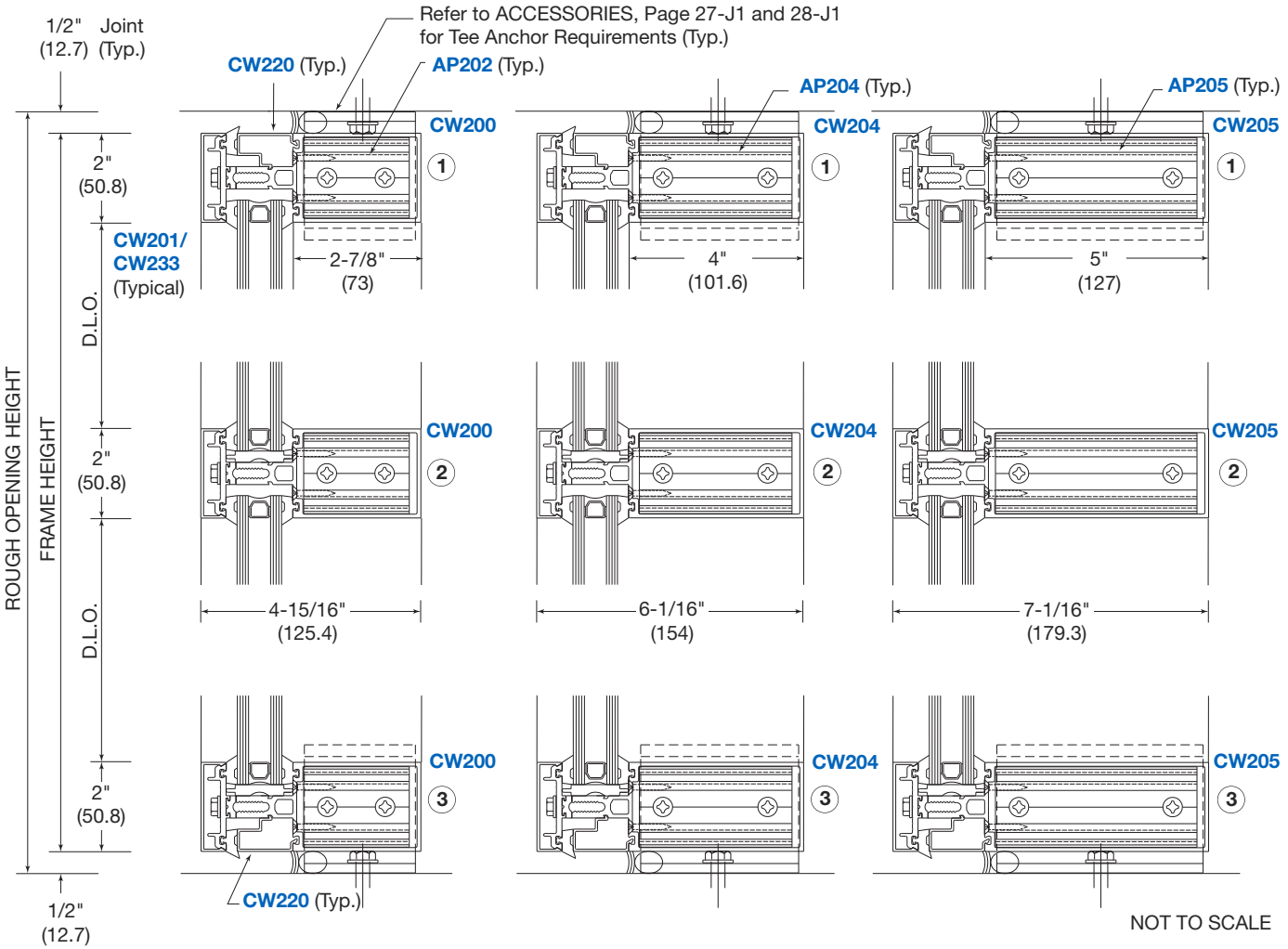
TYPICAL ELEVATION

Thermally Improved

- **Series 2100**
- **Series 2200**



SERIES 2200
Captured Vertical Glazed Curtain Wall



NOT TO SCALE

CURTAIN WALLS

Typical Details

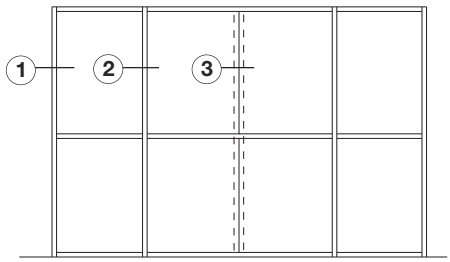
VERTICAL MULLIONS SCREW SPLINE ASSEMBLY FOR 1" (25) GLAZING

Gaskets **NP430** for Exterior and **NP420** for Interior, Typical. **SP250** Spacer Used at All Butt Glazed Locations.

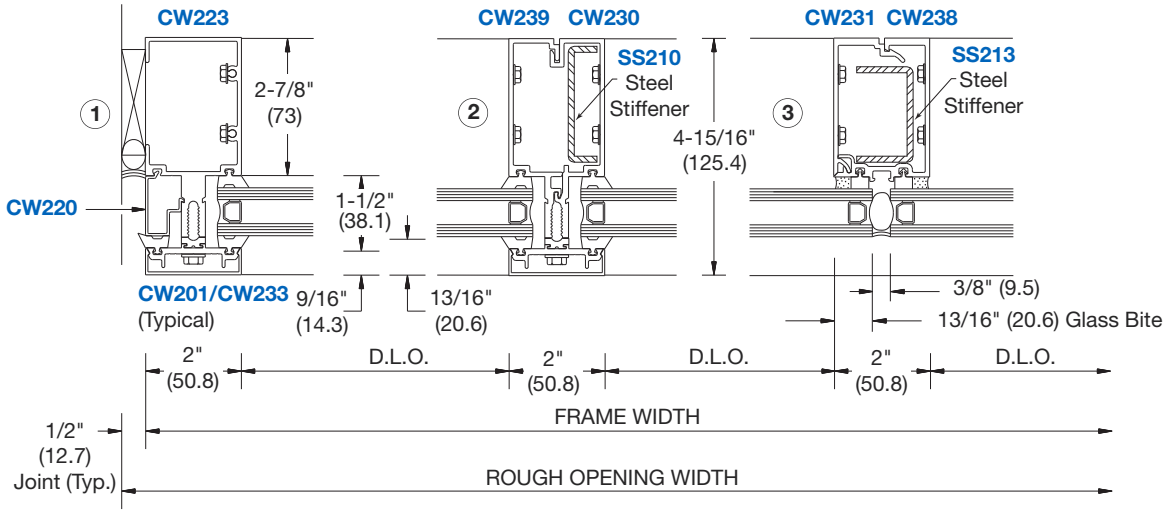
NOTE: Part numbers shown are available in 24' (7.3 m) stock lengths. Visit **usalum.com** for more information.

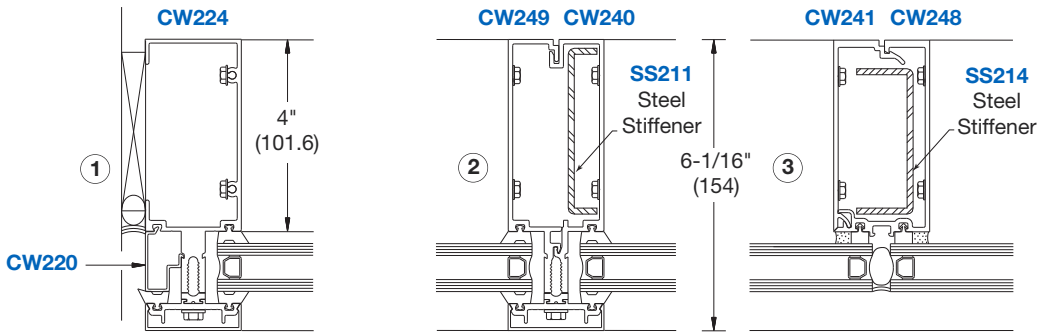
Thermally Improved

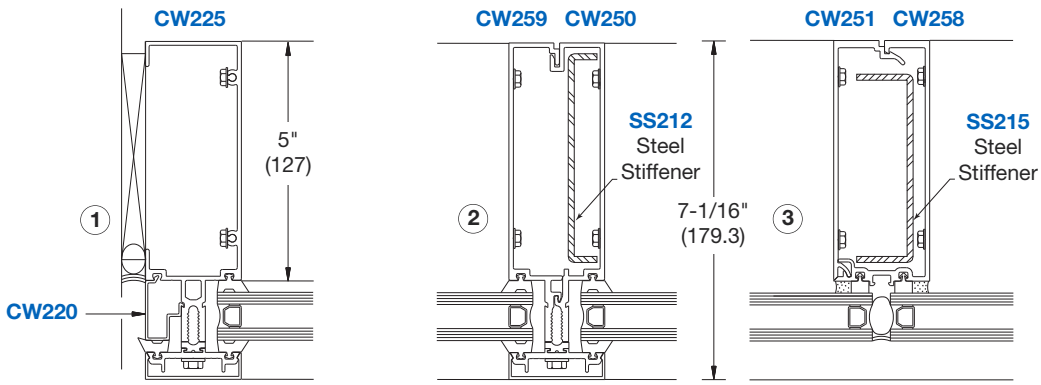
- Series 2100
- Series 2200



TYPICAL ELEVATION







NOT TO SCALE

CURTAIN WALLS

Typical Details

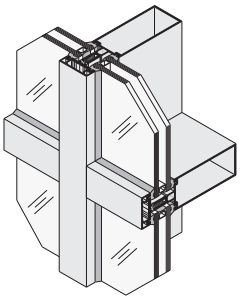
HORIZONTAL MULLIONS SCREW SPLINE ASSEMBLY FOR 1" (25) GLAZING

Gaskets **NP430** for Exterior and **NP420** for Interior, Typical.

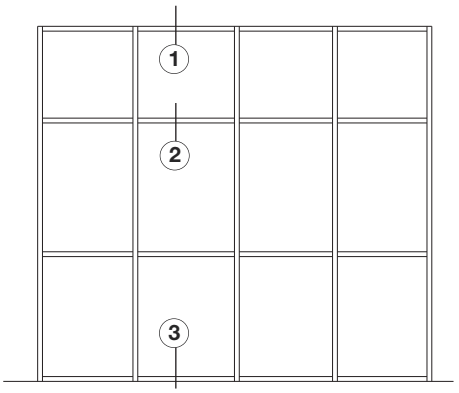
NOTE: Part numbers shown are available in 24' (7.3 m) stock lengths. Visit **usalum.com** for more information.

Thermally Improved

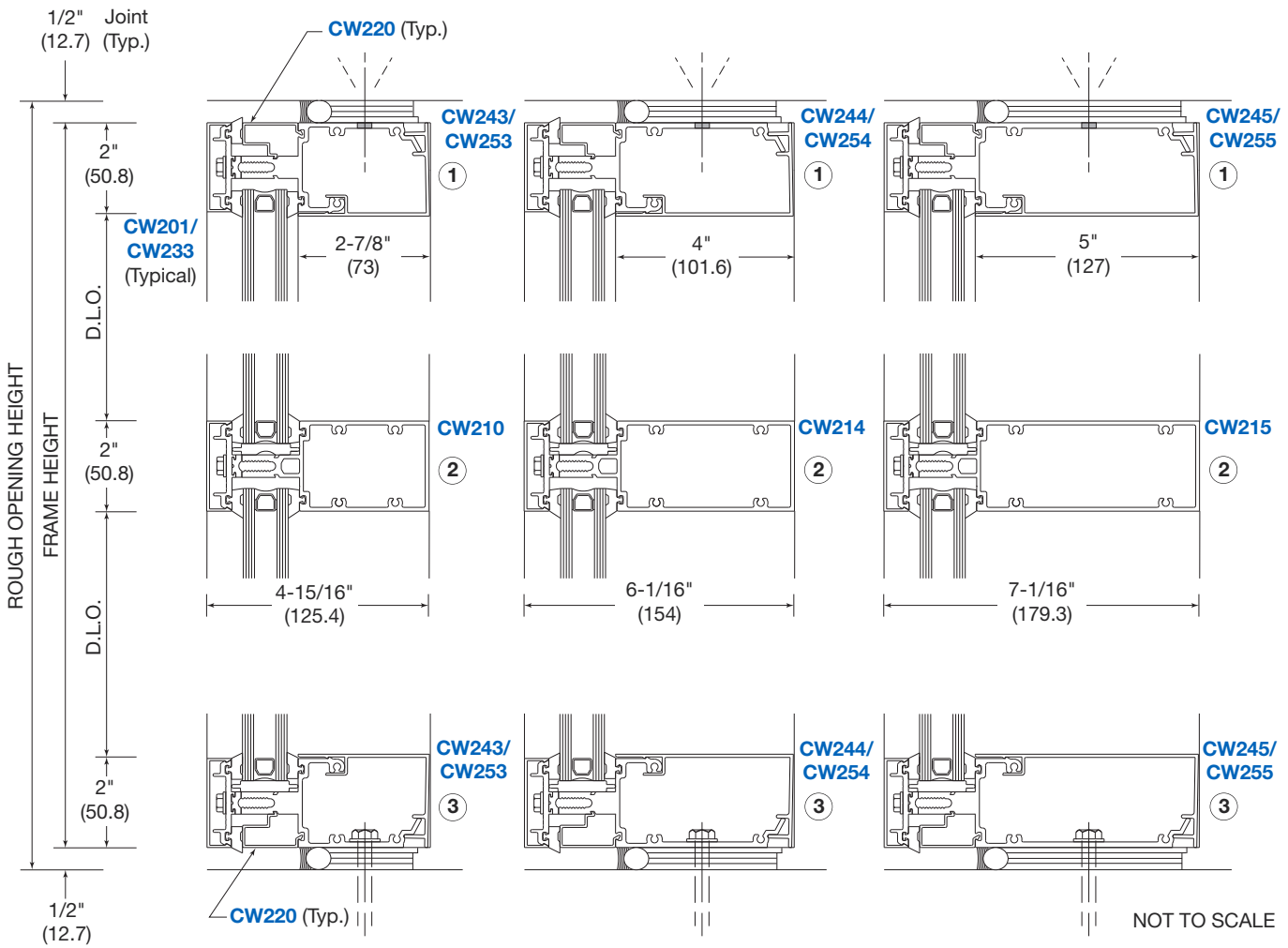
- Series 2100
- Series 2200



SERIES 2200
Captured Vertical Glazed Curtain Wall



TYPICAL ELEVATION



CURTAIN WALLS

Typical Details

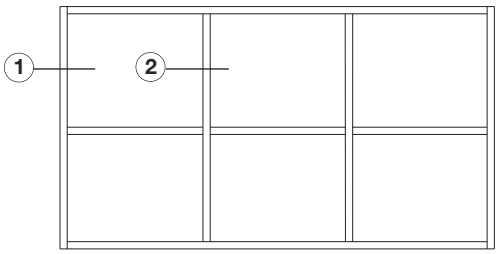
VERTICAL MULLIONS PREASSEMBLED MULTI-LIGHT UNITS FOR 1" (25) GLAZING

Gaskets **NP430** for Exterior and **NP420** for Interior, Typical.

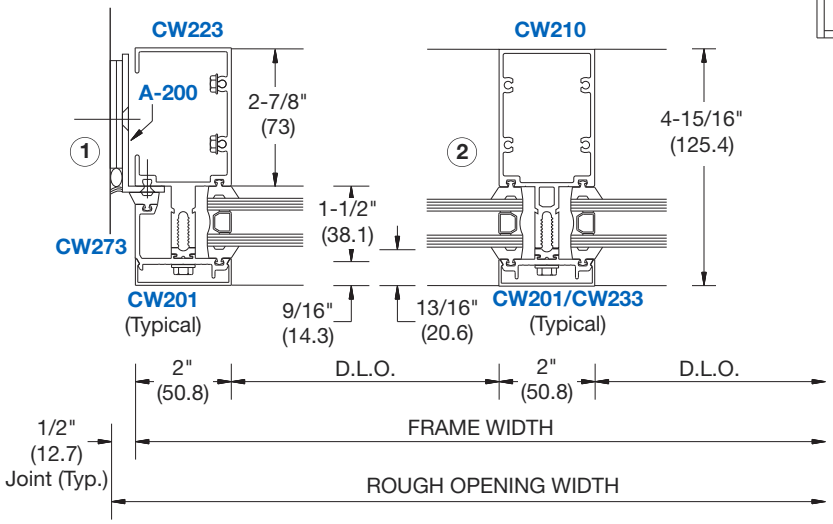
NOTE: Part numbers shown are available in 24' (7.3 m) stock lengths. Visit **usalum.com** for more information.

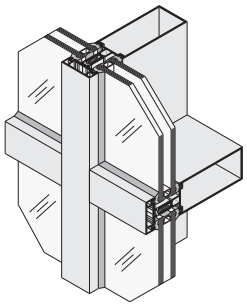
Thermally Improved

- Series 2100
- Series 2200

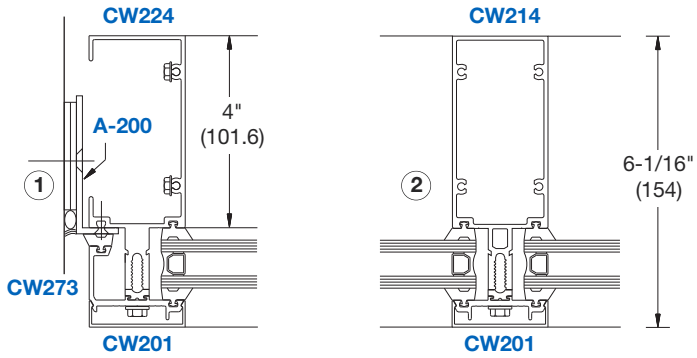


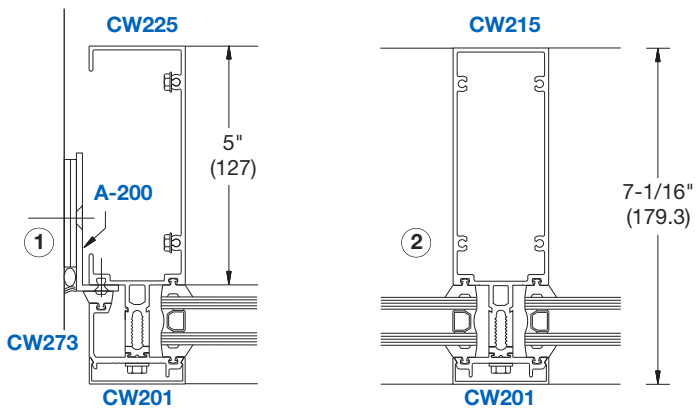
TYPICAL ELEVATION





SERIES 2200
Captured Vertical Glazed Curtain Wall





NOT TO SCALE

CURTAIN WALLS

Typical Details

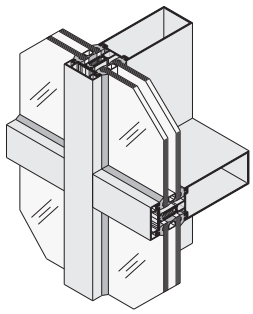
HORIZONTAL MULLIONS PREASSEMBLED MULTI-LIGHT UNITS FOR 1" (25) GLAZING

Gaskets **NP430** for Exterior and **NP420** for Interior, Typical.

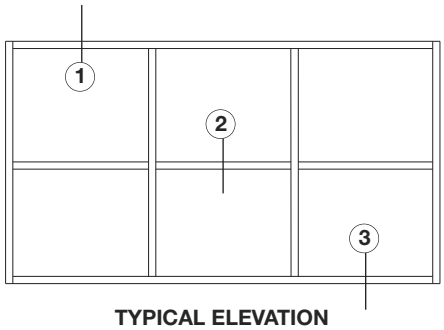
NOTE: Part numbers shown are available in 24' (7.3 m) stock lengths. Visit **usalum.com** for more information.

Thermally Improved

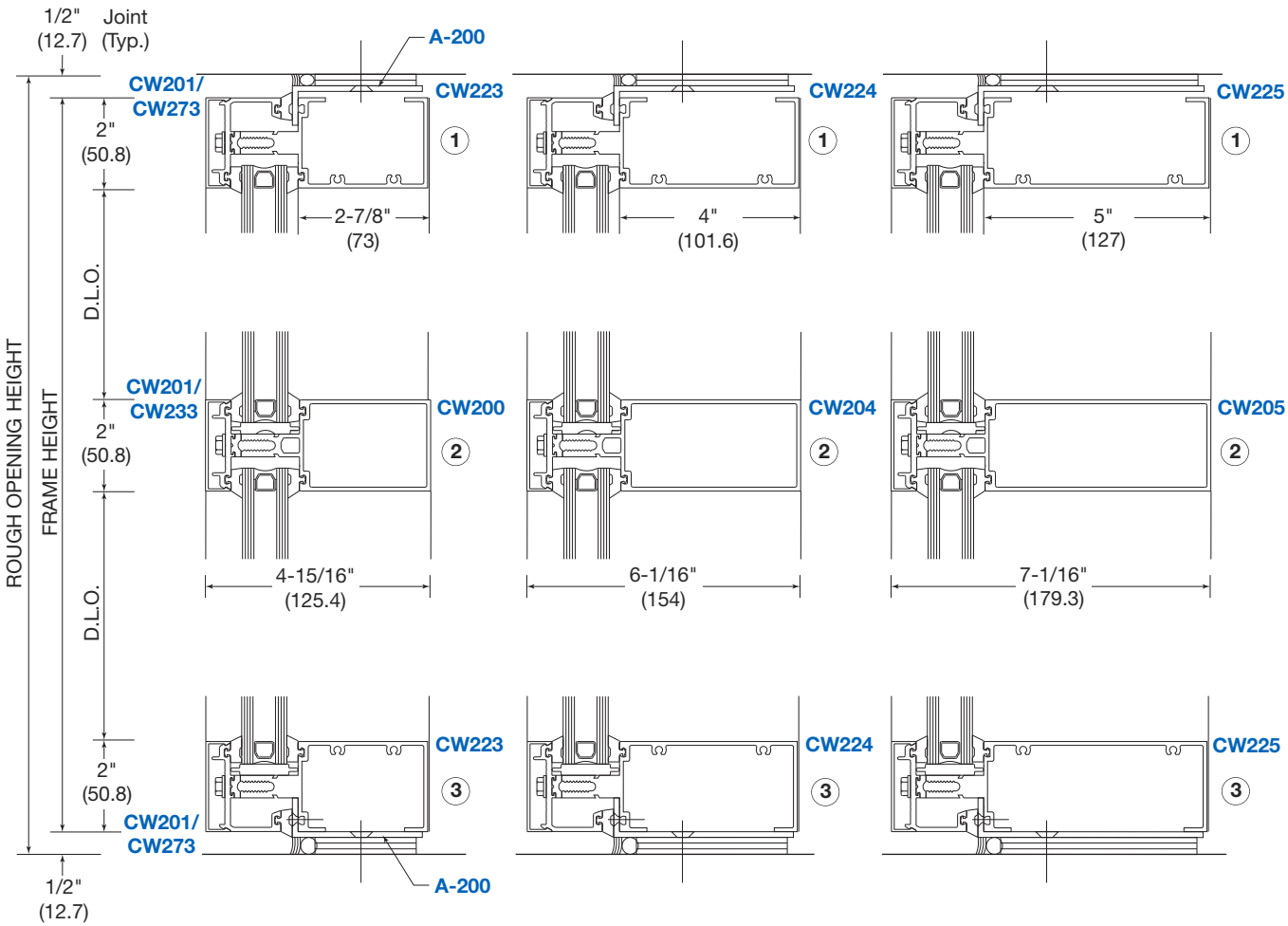
- Series 2100
- Series 2200



SERIES 2200
Captured Vertical Glazed Curtain Wall



TYPICAL ELEVATION



NOT TO SCALE

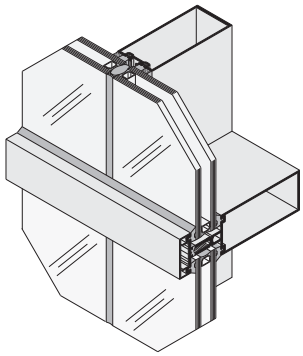
CURTAIN WALLS

Typical Details

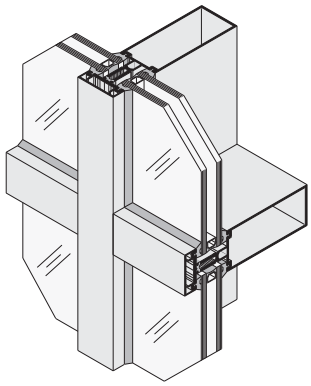
90 DEGREE INSIDE AND OUTSIDE CORNER CONDITION FOR 1" (25) GLAZING

Thermally Improved
- **Series 2100**
- **Series 2200**

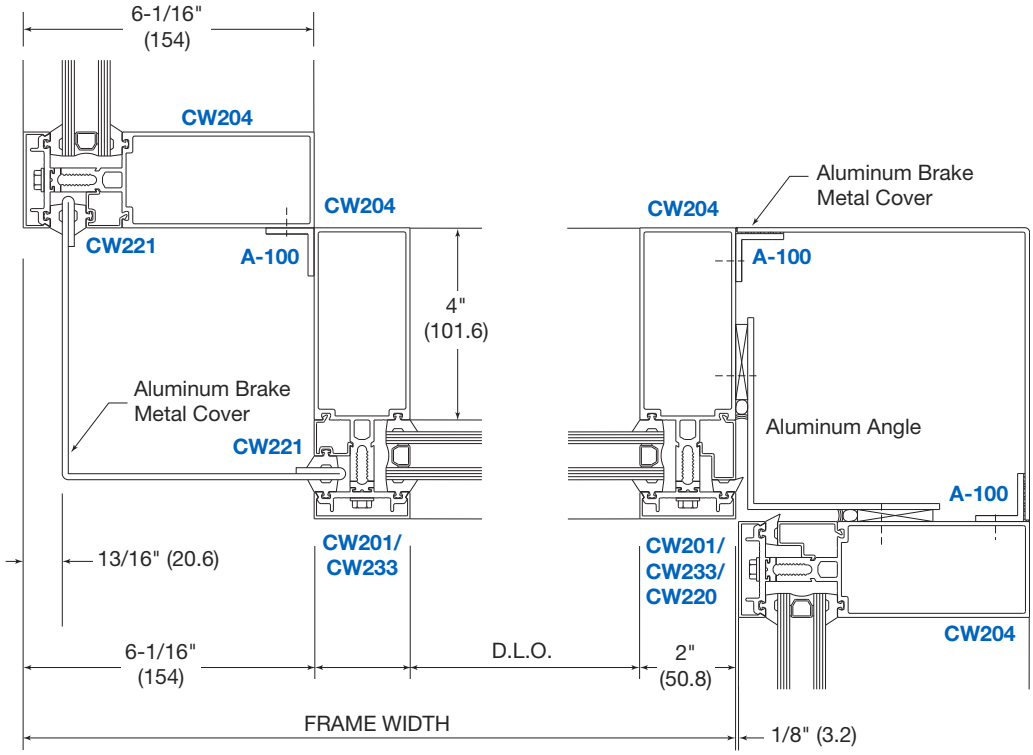
NOTE: Part numbers shown are available in 24' (7.3 m) stock lengths. Visit **usalum.com** for more information.



SERIES 2100
Structural Silicone Vertical Glazed Curtain Wall



SERIES 2200
Captured Vertical Glazed Curtain Wall



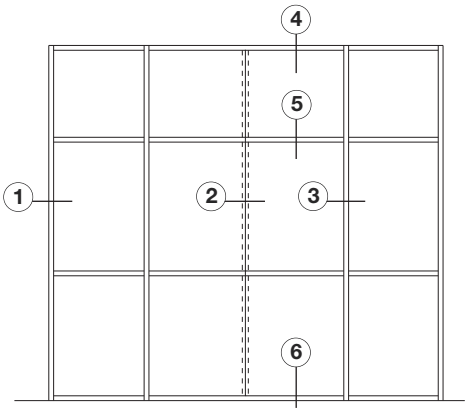
NOT TO SCALE

CURTAIN WALLS

Typical Details

1/4" (6) TRANSITION GLAZING

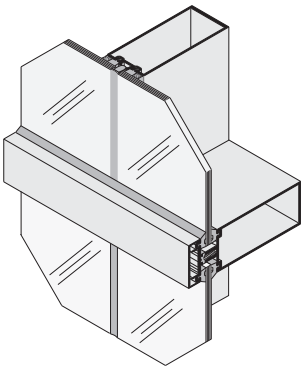
NOTE: Part numbers shown are available in 24' (7.3 m) stock lengths. Visit **usalum.com** for more information.



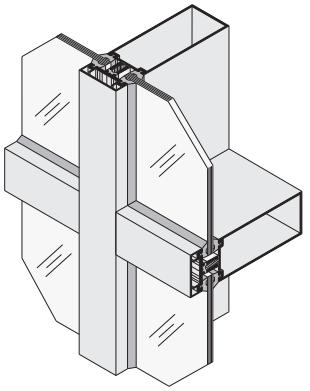
TYPICAL ELEVATION

Thermally Improved

- Series 2100
- Series 2200

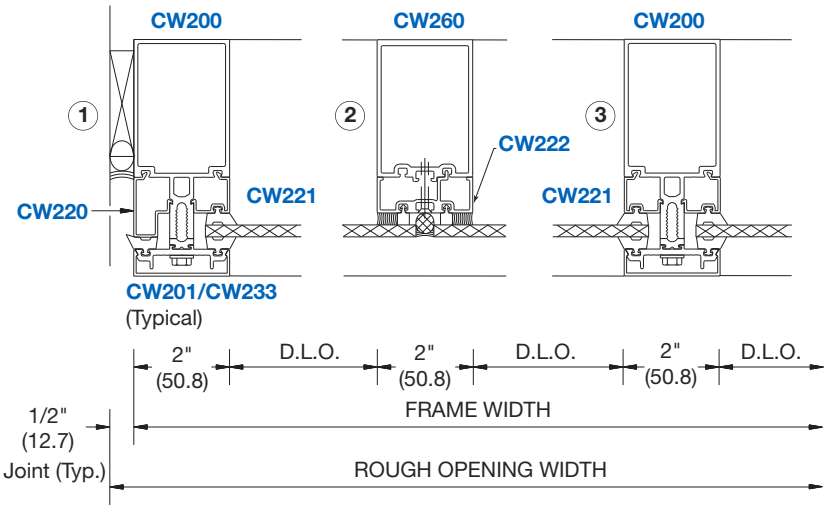


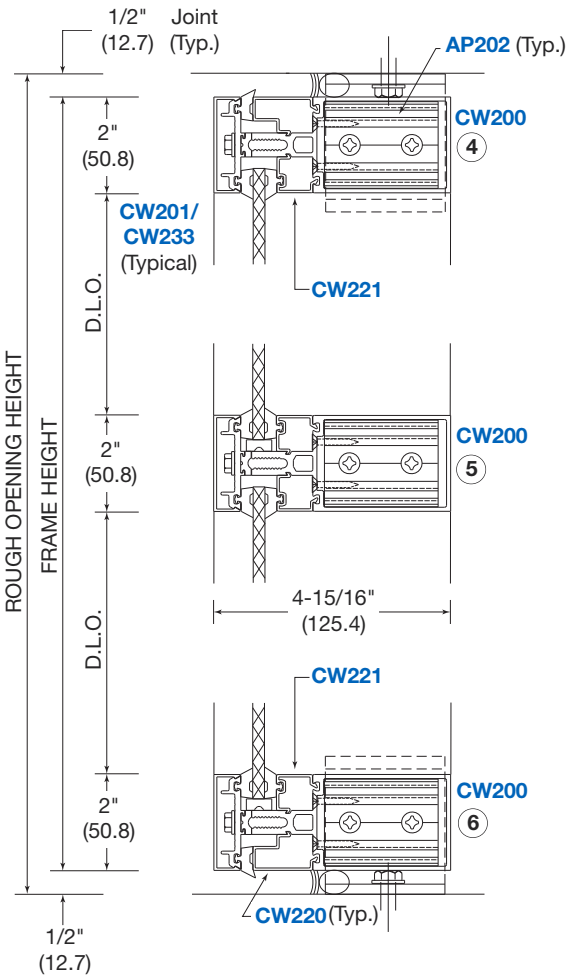
SERIES 2100
Structural Silicone Vertical Glazed Curtain Wall



SERIES 2200
Captured Vertical Glazed Curtain Wall

NOTE: 2-7/8" (73) Back Member Shown; 4" (101.6) and 5" (127) Member Similar





NOT TO SCALE

CURTAIN WALLS

Typical Details

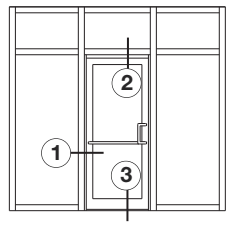
Thermally Improved
- Series 2100
- Series 2200

DOOR FRAMING

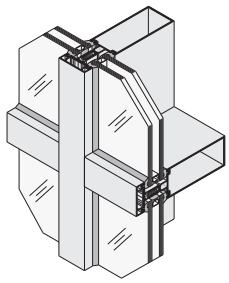
Gaskets **NP430** for Exterior
and **NP420** for Interior, Typical.

NOTE: Doors are available in stock to accommodate 36" x 84" (914 x 2134) and 72" x 84" (1829 x 2134) door openings. Visit **usalum.com** for more information.

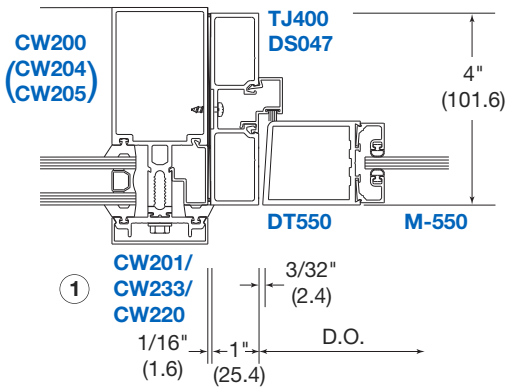
NOTE: 2-7/8" (73) Back Member Shown; 4" (101.6) and 5" (127) Members Shown in Parentheses

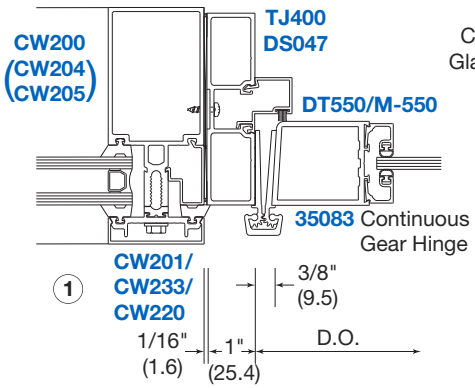


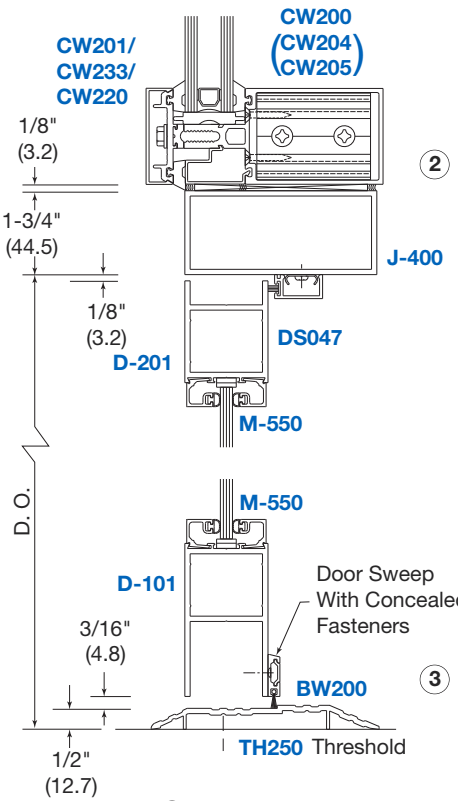
OFFSET HUNG DOOR

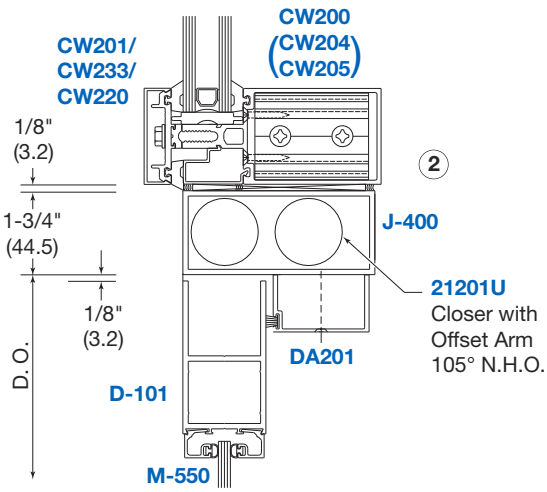


SERIES 2200
Captured Vertical
Glazed Curtain Wall









NOT TO SCALE

CURTAIN WALLS

Typical Details

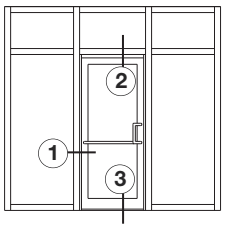
Thermally Improved • Series 2200

DOOR FRAMING WITH FLUSH DOOR ADAPTOR

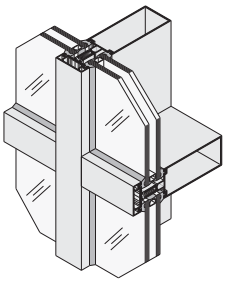
(For Series 2200 Only)

NOTE: 2-7/8" (73) Back Member Shown; 4" (101.6) and 5" (127) Members Shown in Parentheses

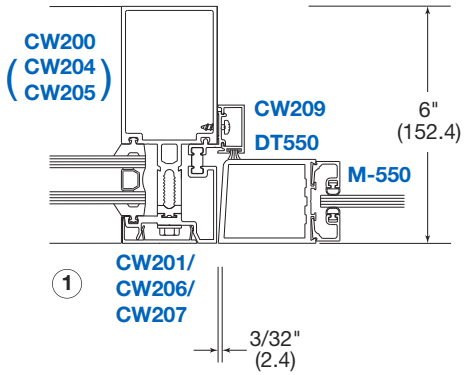
NOTE: Doors are available in stock to accommodate 36" x 84" (914 x 2134) and 72" x 84" (1829 x 2134) door openings. Visit **usalum.com** for more information.

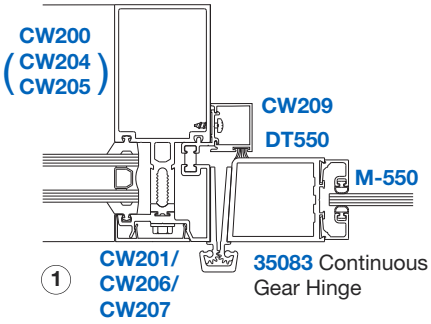


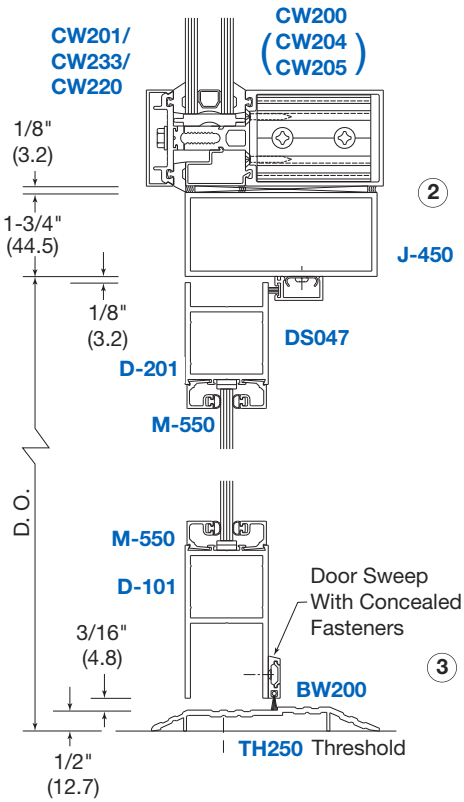
OFFSET HUNG DOOR

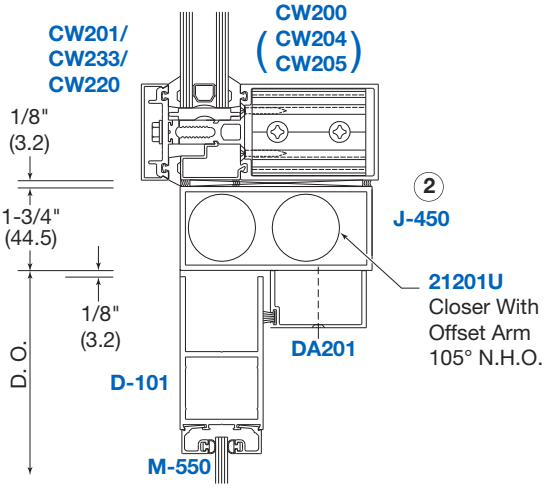


SERIES 2200
Captured Vertical Glazed Curtain Wall









NOT TO SCALE

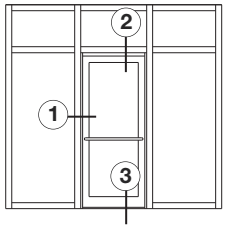
CURTAIN WALLS

Typical Details

DOOR FRAMING

NOTE: 2-7/8" (73) Back Member Shown; 4" (101.6) and 5" (127) Members Shown in Parentheses

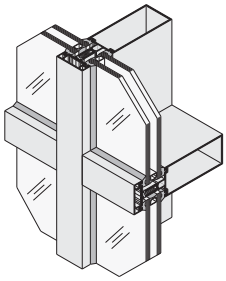
NOTE: Doors are available in stock to accommodate 36" x 84" (914 x 2134) and 72" x 84" (1829 x 2134) door openings. Visit **usalum.com** for more information.



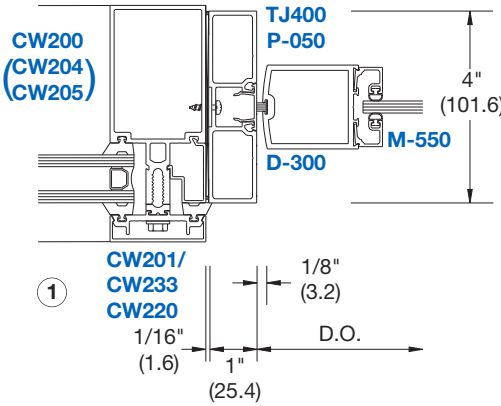
CENTER HUNG DOOR

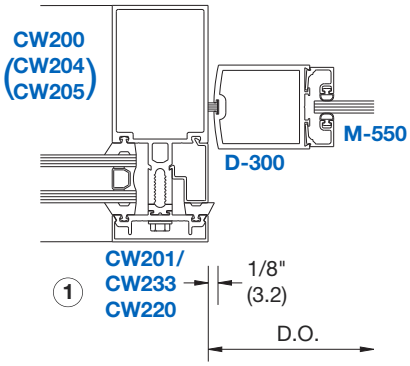
Thermally Improved

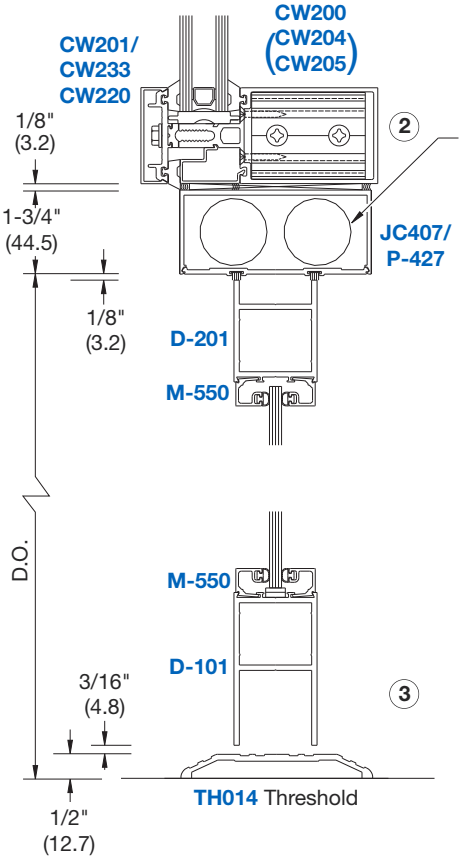
- **Series 2100**
- **Series 2200**

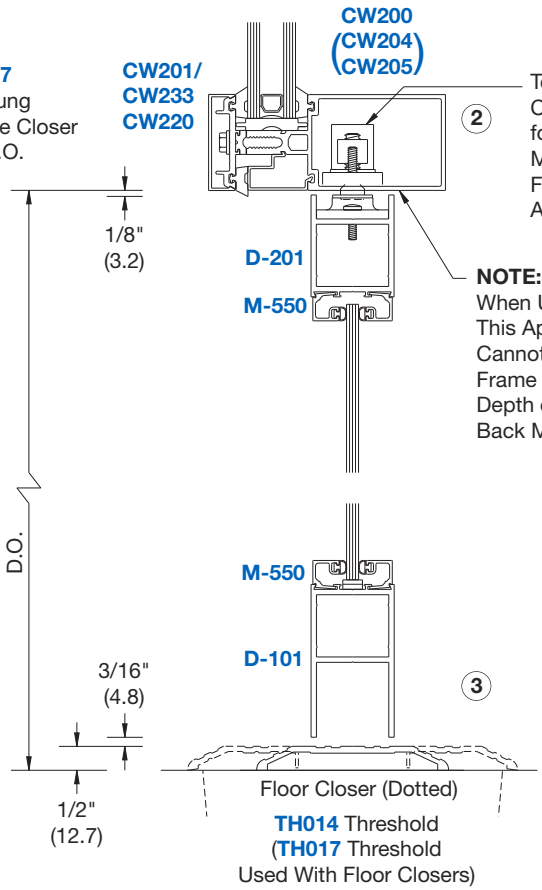


SERIES 2200
Captured Vertical Glazed Curtain Wall









NOT TO SCALE

CURTAIN WALLS

Windload Charts

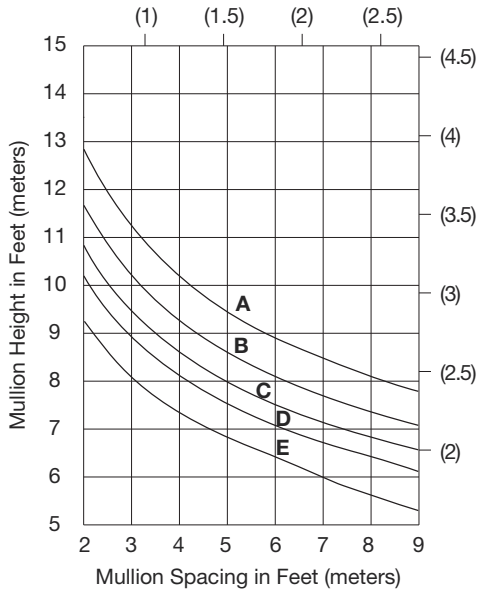
CAPTURED VERTICAL MULLIONS FOR 1" (25) GLAZING SHEAR BLOCK ASSEMBLY

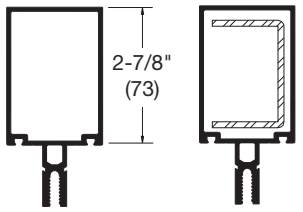
Thermally Improved
- **Series 2100**
- **Series 2200**

J

Deflection criteria to be in accordance with AAMA TIR-A11 - L/175 or L/240 + 1/4" (6.4 mm) for spans greater than 13'-6" (4.1 m) but less than 40'-0" (12.2 m). Codes and specifications may vary. No single lite of glass shall deflect more than 3/4" (19 mm). Glass is not considered as contributing to resistance of deflection. Aluminum alloy 6063-T6 allowable stress for windload is 15,200 psi. (89 MPa), and steel reinforcing allowable stress for windload is 21,600 psi. (183 MPa).

These charts include unbraced length analysis and are based on at least one horizontal being placed at the midpoint of the span. For other applications, please contact U.S. Aluminum Technical Sales at (800) 262-5151, or visit our web site at **usalum.com**.

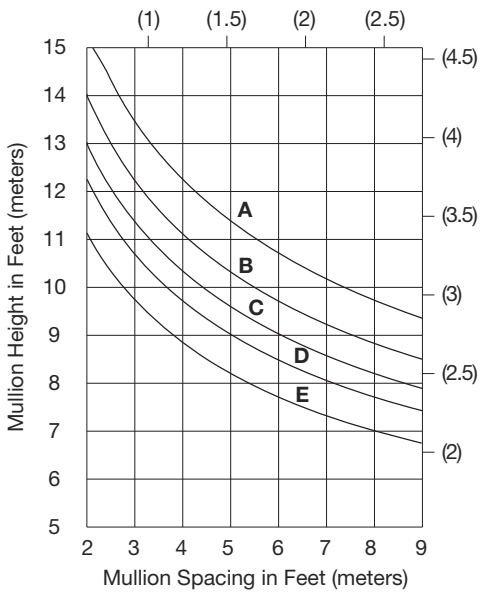




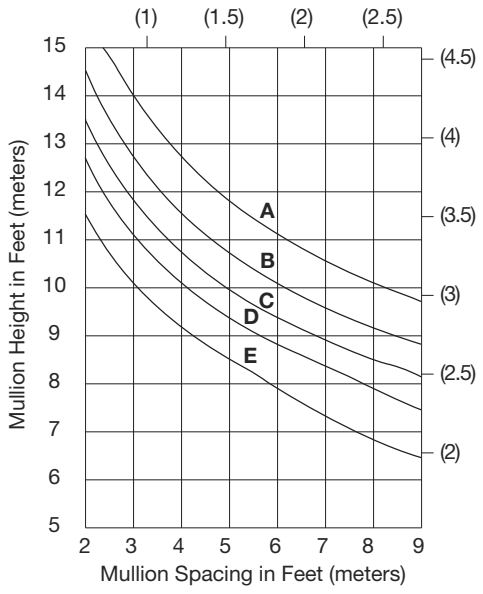
CW200

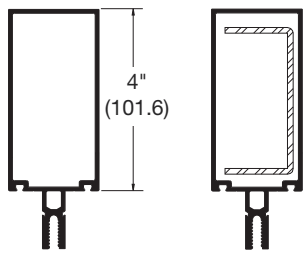
CW200 with **SS220**

I = 2.090 (86.99 x 10^4)
S = 0.994 (16.29 x 10^3)
Steel Stiffener
I = 0.530 (22.060 x 10^4)
S = 0.471 (7.718 x 10^3)
I_{AL+STL} = 3.627 (150.96 x 10^4)



Limitation of vertical mullions for:
CURVES **A** = 15 PSF (718 Pa)
CURVES **B** = 20 PSF (957 Pa)
CURVES **C** = 25 PSF (1197 Pa)
CURVES **D** = 30 PSF (1436 Pa)
CURVES **E** = 40 PSF (1915 Pa)

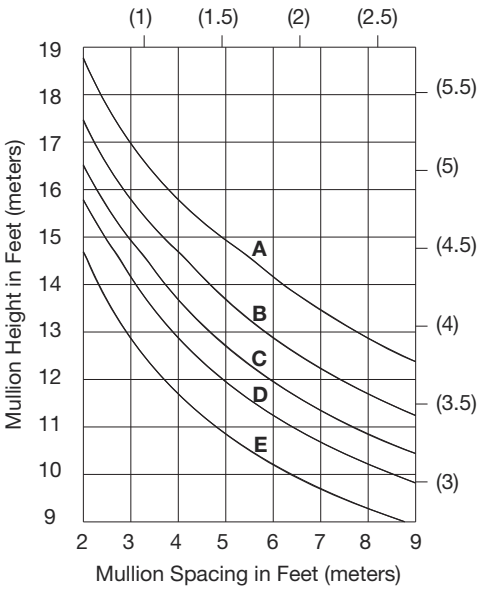




CW204

CW204 with **SS221**

I = 4.052 (168.65 x 10^4)
S = 1.482 (24.286 x 10^3)
Steel Stiffener
I = 1.498 (62.351 x 10^4)
S = 0.856 (14.027 x 10^3)
I_{AL+STL} = 8.396 (349.48 x 10^4)



CURTAIN WALLS

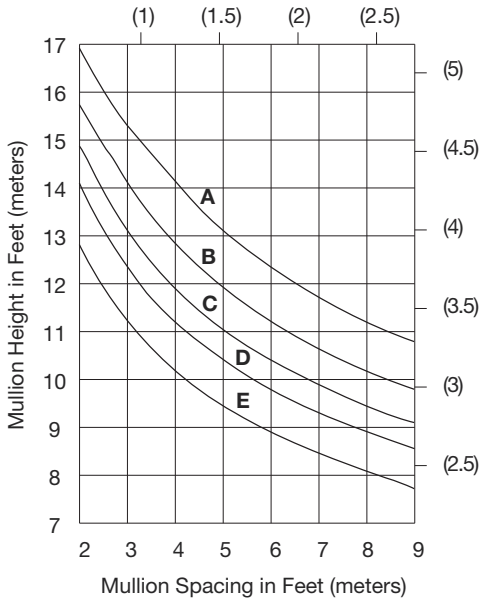
Windload Charts

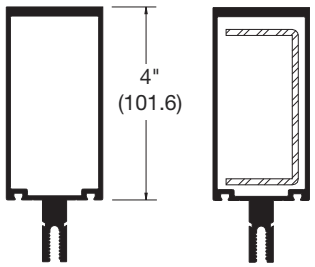
CAPTURED VERTICAL MULLIONS
FOR 1" (25) GLAZING SHEAR BLOCK ASSEMBLY

Thermally Improved
- **Series 2100**
- **Series 2200**

Deflection criteria to be in accordance with AAMA TIR-A11 - L/175 or L/240 + 1/4" (6.4 mm) for spans greater than 13'-6" (4.1 m) but less than 40'-0" (12.2 m). Codes and specifications may vary. No single lite of glass shall deflect more than 3/4" (19 mm). Glass is not considered as contributing to resistance of deflection. Aluminum alloy 6063-T6 allowable stress for windload is 15,200 psi. (89 MPa), and steel reinforcing allowable stress for windload is 21,600 psi. (183 MPa).

These charts include unbraced length analysis and are based on at least one horizontal being placed at the midpoint of the span. For other applications, please contact U.S. Aluminum Technical Sales at (800) 262-5151, or visit our web site at **usalum.com**.



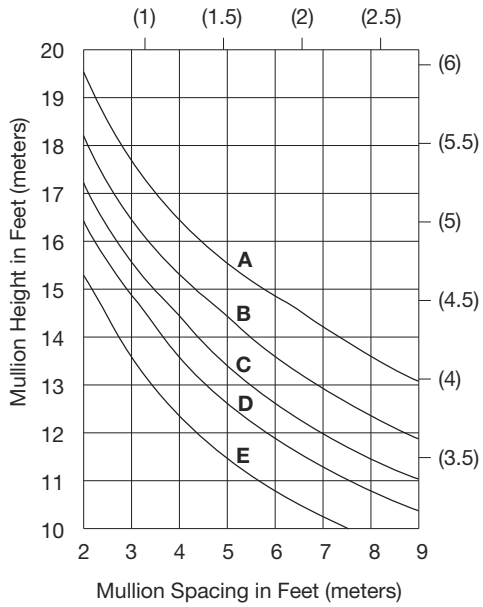


CW234

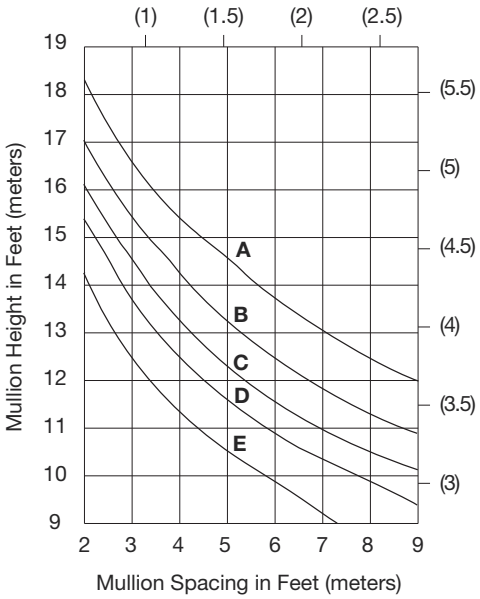
CW234 with **SS221**

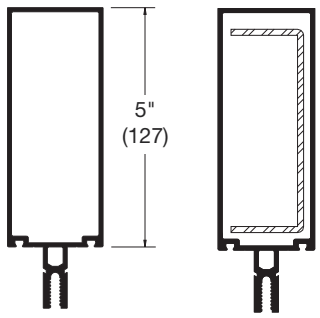
HEAVY WALL MULLIONS

I = 5.543 (230.72 x 10^4)
S = 2.168 (35.53 x 10^3)
Steel Stiffener
I = 1.498 (62.351 x 10^4)
S = 0.856 (14.027 x 10^3)
I_{AL+STL} = 9.887 (411.54 x 10^4)



Limitation of vertical mullions for:
CURVES **A** = 15 PSF (718 Pa)
CURVES **B** = 20 PSF (957 Pa)
CURVES **C** = 25 PSF (1197 Pa)
CURVES **D** = 30 PSF (1436 Pa)
CURVES **E** = 40 PSF (1915 Pa)

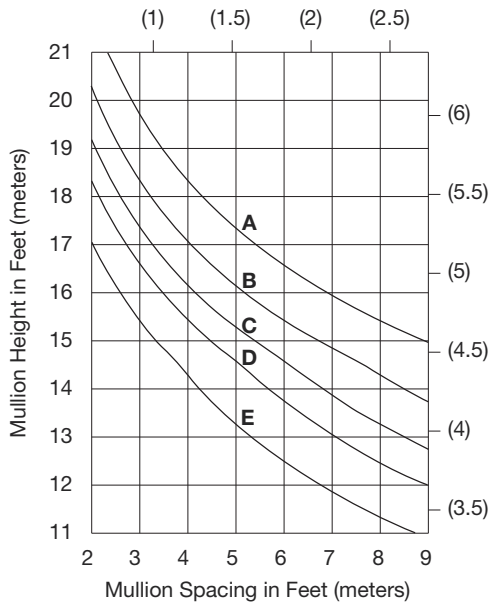




CW205

CW205 with **SS222**

I = 7.626 (317.42 x 10^4)
S = 2.397 (39.28 x 10^3)
Steel Stiffener
I = 2.643 (110.01 x 10^4)
S = 1.191 (19.517 x 10^3)
I_{AL+STL} = 15.291 (636.44 x 10^4)



CURTAIN WALLS

Windload Charts

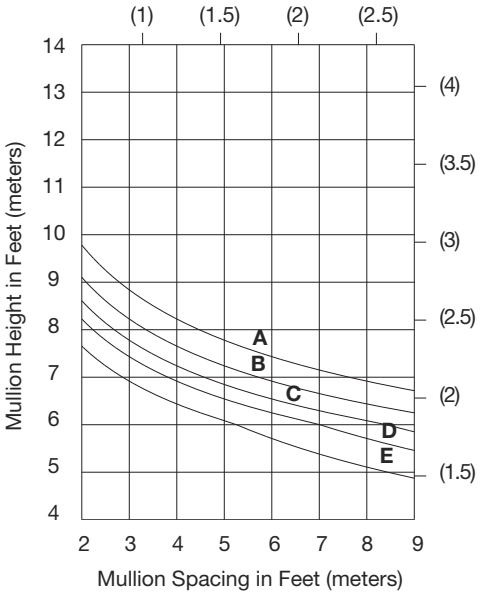
CAPTURED VERTICAL MULLIONS SCREW SPLINE ASSEMBLY FOR 1" (25) GLAZING

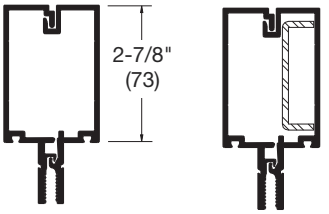
Thermally Improved
- **Series 2100**
- **Series 2200**

J

Deflection criteria to be in accordance with AAMA TIR-A11 - L/175 or L/240 + 1/4" (6.4 mm) for spans greater than 13'-6" (4.1 m) but less than 40'-0" (12.2 m). Codes and specifications may vary. No single lite of glass shall deflect more than 3/4" (19 mm). Glass is not considered as contributing to resistance of deflection. Aluminum alloy 6063-T6 allowable stress for windload is 15,200 psi. (89 MPa), and steel reinforcing allowable stress for windload is 21,600 psi. (183 MPa).

These charts include unbraced length analysis and are based on at least one horizontal being placed at the midpoint of the span. For other applications, please contact U.S. Aluminum Technical Sales at (800) 262-5151, or visit our web site at **usalum.com**.

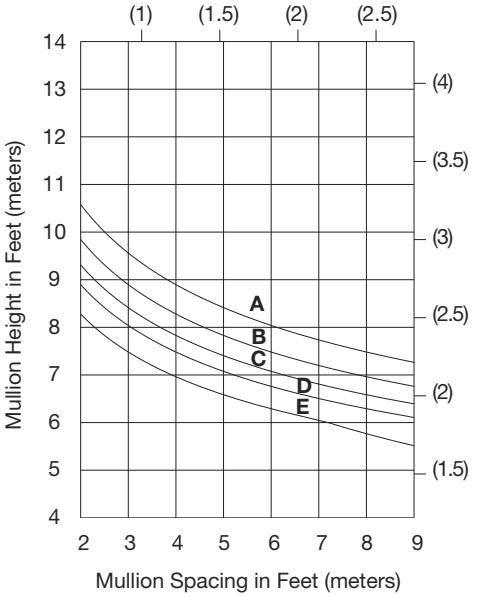




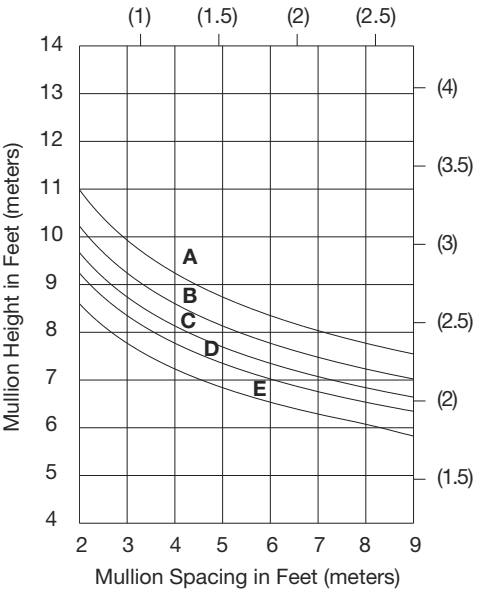
CW230/ CW239

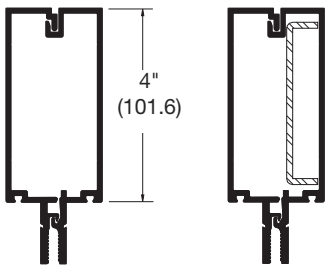
CW230/ CW239 with **SS210**

I = 2.580 (107.39 x 10^4)
S = 1.150 (18.85 x 10^3)
Steel Stiffener
I = 0.328 (13.652 x 10^4)
S = 0.191 (3.129 x 10^3)
I_{AL+STL} = 3.531 (146.98 x 10^4)



Limitation of vertical mullions for:
CURVES **A** = 15 PSF (718 Pa)
CURVES **B** = 20 PSF (957 Pa)
CURVES **C** = 25 PSF (1197 Pa)
CURVES **D** = 30 PSF (1436 Pa)
CURVES **E** = 40 PSF (1915 Pa)

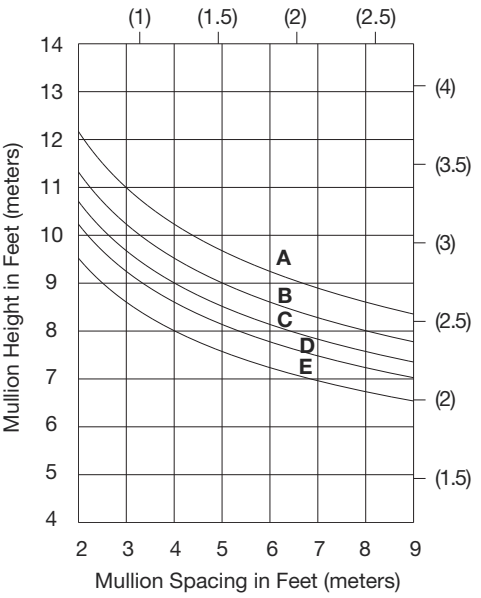




CW240/ CW249

CW240/ CW249 with **SS211**

I = 5.023 (209.07 x 10^4)
S = 1.813 (29.68 x 10^3)
Steel Stiffener
I = 0.873 (36.337 x 10^4)
S = 0.490 (8.029 x 10^3)
I_{AL+STL} = 7.555 (314.45 x 10^4)



CURTAIN WALLS

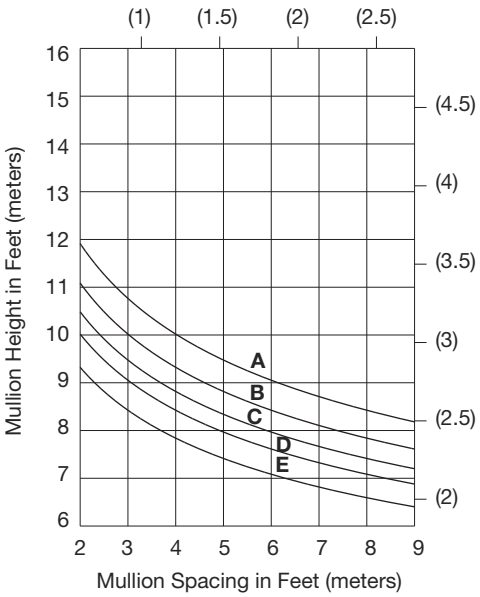
Windload Charts

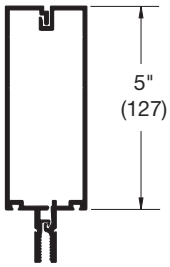
CAPTURED VERTICAL MULLIONS
SCREW SPLINE ASSEMBLY
FOR 1" (25) GLAZING

Thermally Improved
- Series 2100
- Series 2200

Deflection criteria to be in accordance with AAMA TIR-A11 - L/175 or L/240 + 1/4" (6.4 mm) for spans greater than 13'-6" (4.1 m) but less than 40'-0" (12.2 m). Codes and specifications may vary. No single lite of glass shall deflect more than 3/4" (19 mm). Glass is not considered as contributing to resistance of deflection. Aluminum alloy 6063-T6 allowable stress for windload is 15,200 psi. (89 MPa), and steel reinforcing allowable stress for windload is 21,600 psi. (183 MPa).

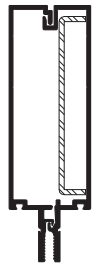
These charts include unbraced length analysis and are based on at least one horizontal being placed at the midpoint of the span. For other applications, please contact U.S. Aluminum Technical Sales at (800) 262-5151, or visit our web site at **usalum.com**.





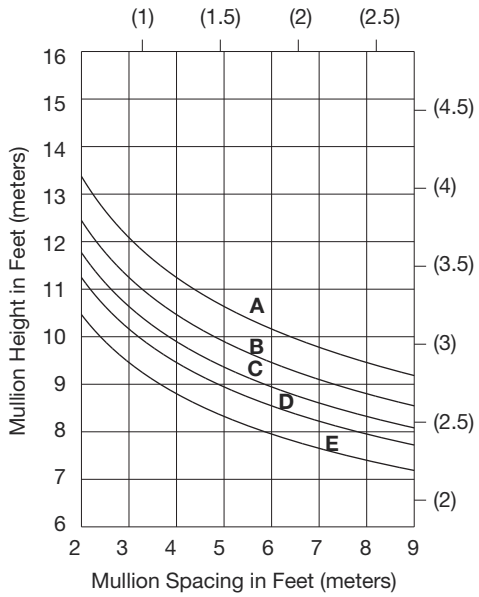
CW250/ CW259

I = 8.262 (343.89 x 10^4)
S = 2.544 (41.69 x 10^3)
Steel Stiffener
I = 1.676 (69.76 x 10^4)
S = 0.735 (12.044 x 10^3)
I_{AL+STL} = 13.122 (546.20 x 10^4)

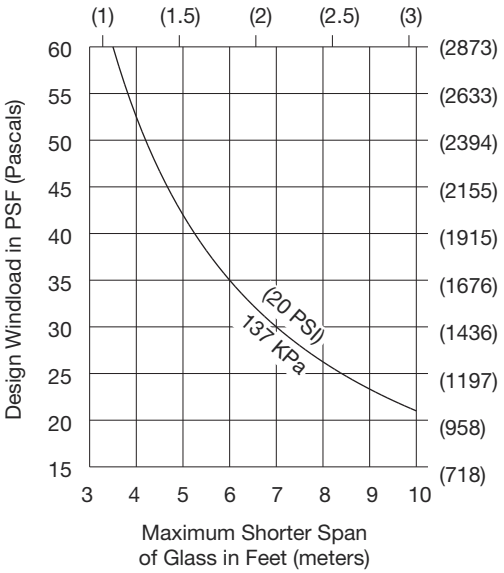


CW250/ CW259 with SS212

Limitation of vertical mullions for:
CURVES **A** = 15 PSF (718 Pa)
CURVES **B** = 20 PSF (957 Pa)
CURVES **C** = 25 PSF (1197 Pa)
CURVES **D** = 30 PSF (1436 Pa)
CURVES **E** = 40 PSF (1915 Pa)



Structural Silicone Chart

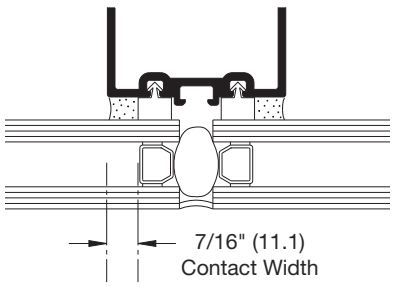


Stress on structural silicone should not exceed 20 PSI (137 KPa) for a 6:1 safety factor.

Series 2100 offers a contact width of 7/16" (11.1).

NOTE: The maximum shorter span of glass may be the width or the height dimension
E.G. for 5' x 7' (1.52 m x 2.13 m) check 5' (1.52 m)
for 7' x 5' (2.13 m x 1.52 m) check 5' (1.52 m)

THESE LIMITATIONS ARE RELATED ONLY TO THE SILICONE JOINT CAPABILITY. ALUMINUM MEMBERS SHOULD ALSO BE CHECKED FOR WINDLOAD AND DEADLOAD.



CURTAIN WALLS

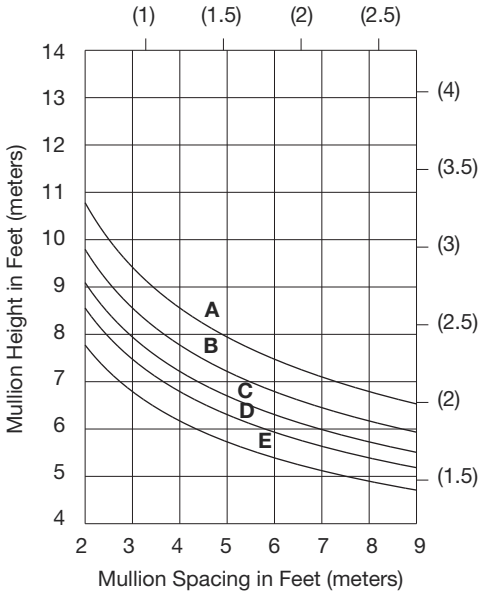
Windload Charts

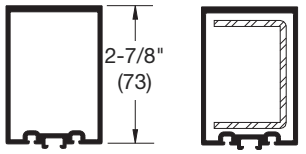
Thermally Improved
- **Series 2100**
- **Series 2200**

STRUCTURAL SILICONE GLAZED VERTICAL MULLIONS SHEAR BLOCK ASSEMBLY FOR 1" (25) GLAZING

Deflection criteria to be in accordance with AAMA TIR-A11 - L/175 or L/240 + 1/4" (6.4 mm) for spans greater than 13'-6" (4.1 m) but less than 40'-0" (12.2 m). Codes and specifications may vary. No single lite of glass shall deflect more than 3/4" (19 mm). Glass is not considered as contributing to resistance of deflection. Aluminum alloy 6063-T6 allowable stress for windload is 15,200 psi. (89 MPa), and steel reinforcing allowable stress for windload is 21,600 psi. (183 MPa).

These charts include unbraced length analysis and are based on at least one horizontal being placed at the midpoint of the span. For other applications, please contact U.S. Aluminum Technical Sales at (800) 262-5151, or visit our web site at **usalum.com**.

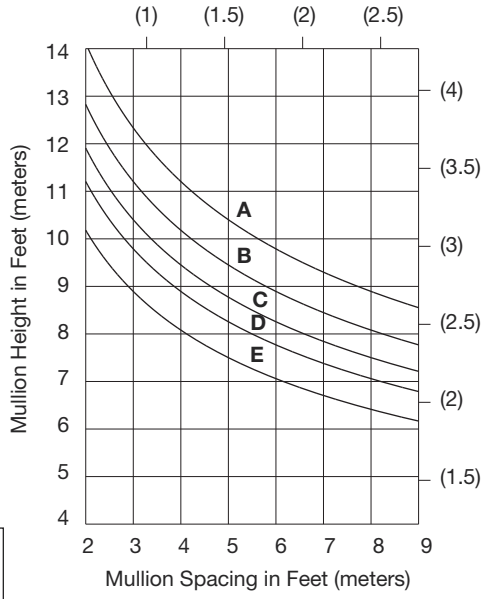




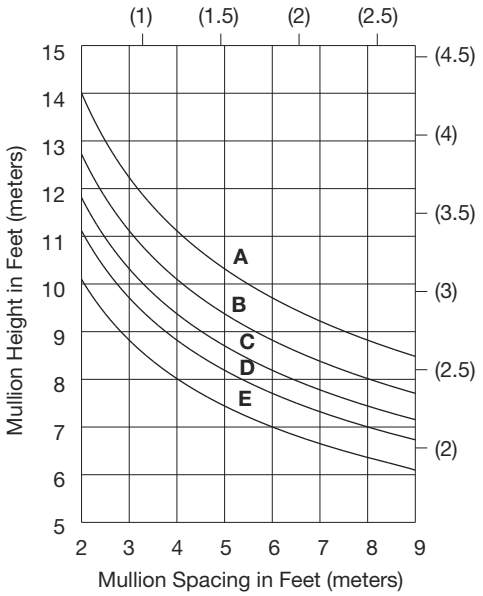
CW260

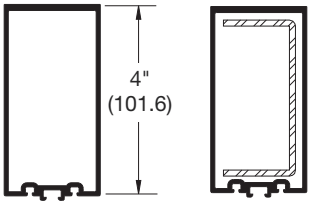
CW260 with **SS220**

I = 1.233 (51.32 x 10^4)
S = 0.824 (13.50 x 10^3)
Steel Stiffener
I = 0.530 (22.060 x 10^4)
S = 0.471 (7.718 x 10^3)
I_{AL+STL} = 2.770 (115.30 x 10^4)



Limitation of vertical mullions for:
CURVES **A** = 15 PSF (718 Pa)
CURVES **B** = 20 PSF (957 Pa)
CURVES **C** = 25 PSF (1197 Pa)
CURVES **D** = 30 PSF (1436 Pa)
CURVES **E** = 40 PSF (1915 Pa)

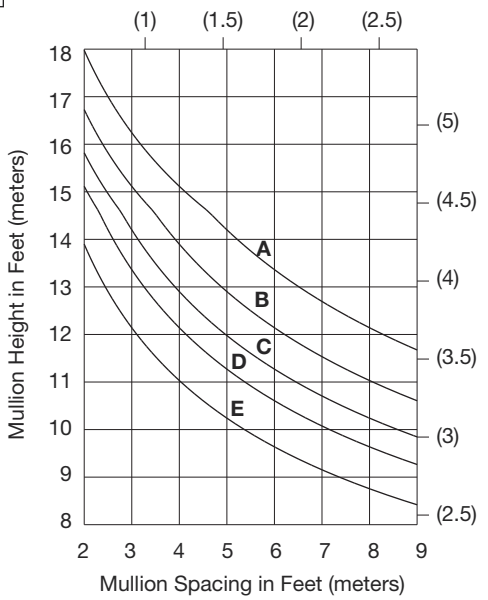




CW264

CW264 with **SS221**

I = 2.703 (112.51 x 10^4)
S = 1.319 (21.62 x 10^3)
Steel Stiffener
I = 1.498 (62.351 x 10^4)
S = 0.856 (14.027 x 10^3)
I_{AL+STL} = 7.047 (293.33 x 10^4)



CURTAIN WALLS

Windload Charts

Thermally Improved
- Series 2100
- Series 2200

STRUCTURAL SILICONE GLAZED VERTICAL MULLIONS SHEAR BLOCK ASSEMBLY FOR 1" (25) GLAZING

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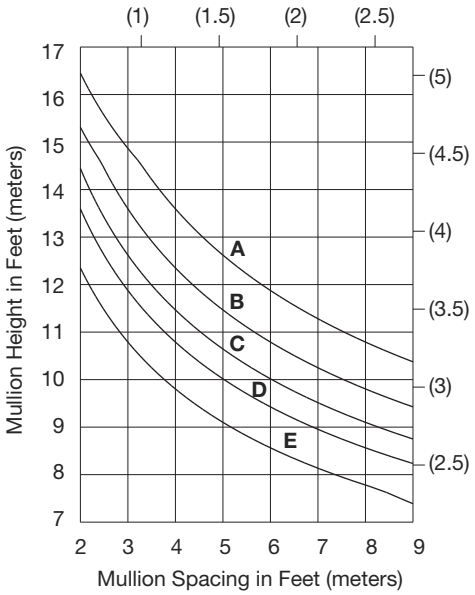
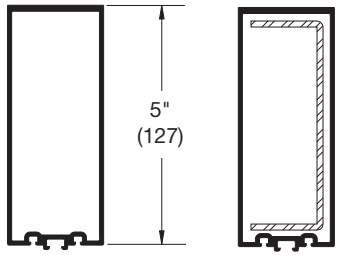
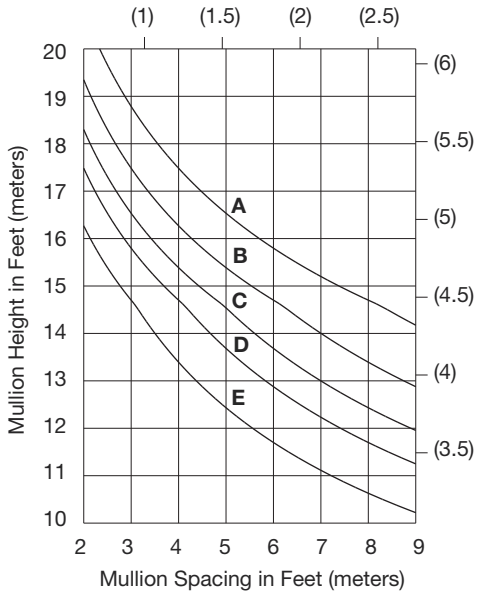




CW265

CW265 with **SS222**

I = 4.946 (205.87 x 10^4)
S = 1.939 (31.78 x 10^3)
Steel Stiffener
I = 2.643 (110.01 x 10^4)
S = 1.191 (19.517 x 10^3)
I_{AL+STL} = 12.611 (524.90 x 10^4)



Limitation of vertical mullions for:
CURVES **A** = 15 PSF (718 Pa)
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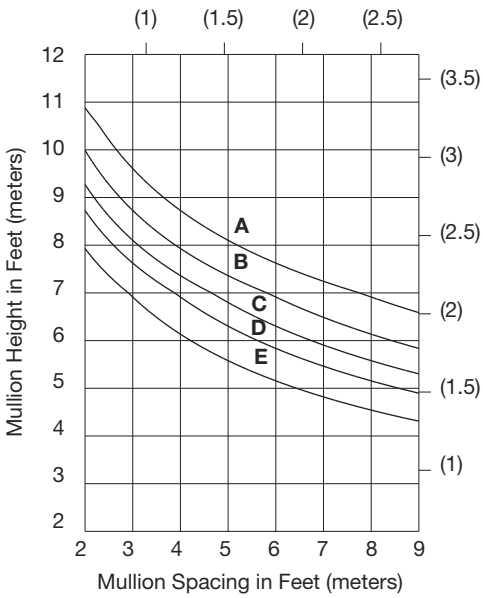
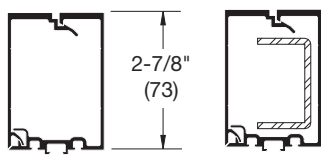
CURVES **C** = 25 PSF (1197 Pa)
CURVES **D** = 30 PSF (1436 Pa)
CURVES **E** = 40 PSF (1915 Pa)

SCREW SPLINE ASSEMBLY

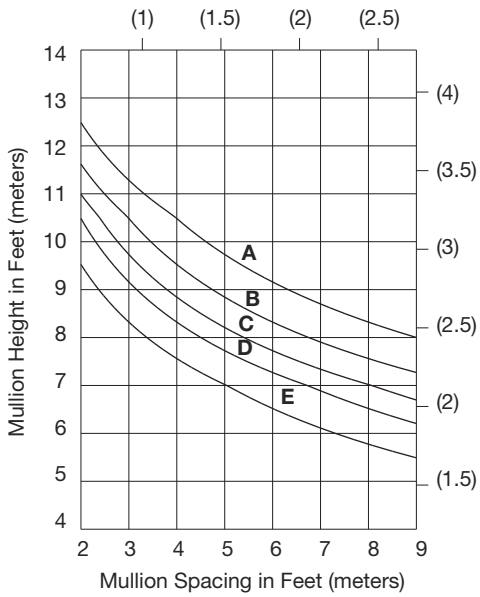




CW231/ CW238

CW231/ CW238 with **SS213**

I = 1.309 (54.48 x 10^4)
S = 0.742 (12.16 x 10^3)
Steel Stiffener
I = 0.331 (13.777 x 10^4)
S = 0.331 (5.424 x 10^3)
I_{AL+STL} = 2.269 (94.44 x 10^4)



CURTAIN WALLS

Windload Charts

Thermally Improved
- **Series 2100**
- **Series 2200**

STRUCTURAL SILICONE GLAZED VERTICAL MULLIONS SCREW SPLINE ASSEMBLY FOR 1" (25) GLAZING

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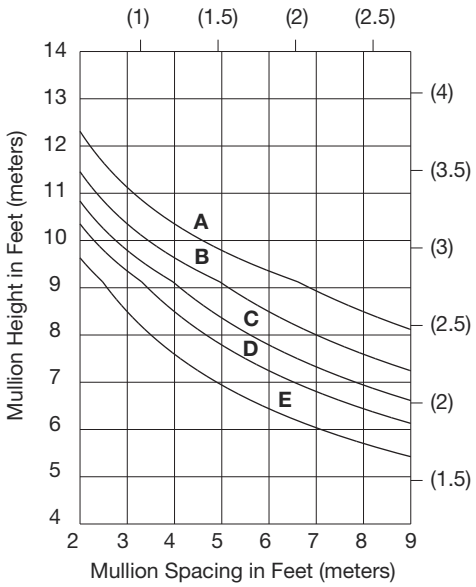

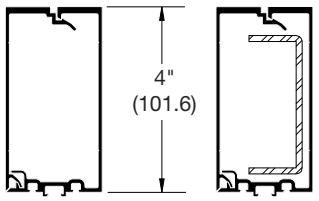

CW241/ CW248

CW241/ CW248 with **SS214**

I = 3.031 (125.41 x 10^4)
S = 1.258 (20.62 x 10^3)
Steel Stiffener
I = 0.872 (36.295 x 10^4)
S = 0.581 (9.521 x 10^3)
I_{AL+STL} = 5.542 (230.67 x 10^4)

Limitation of vertical mullions for:
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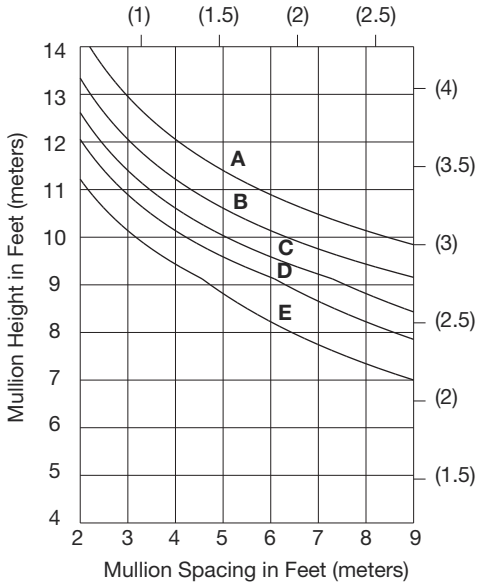
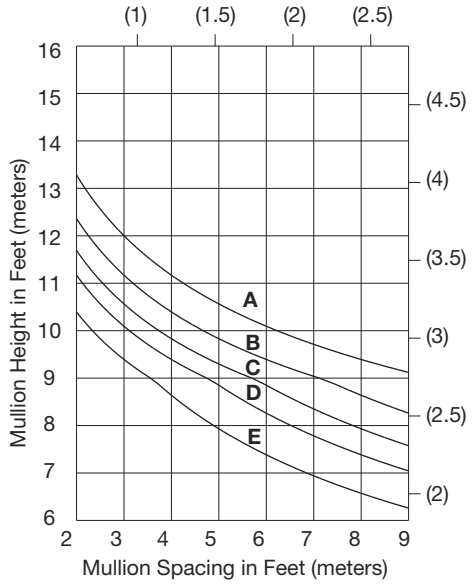
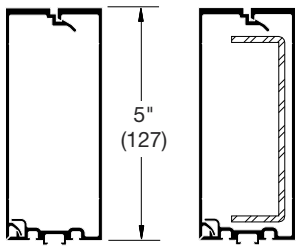
CURVES **C** = 25 PSF (1197 Pa)
CURVES **D** = 30 PSF (1436 Pa)
CURVES **E** = 40 PSF (1915 Pa)



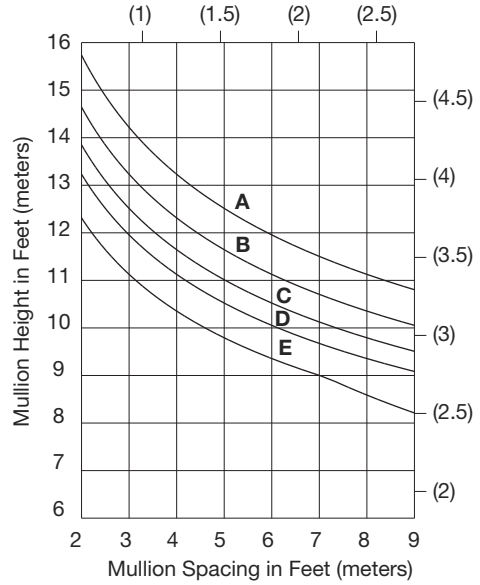




CW251/ CW258

CW251/ CW258 with **SS215**

I = 5.248 (218.44 x 10^4)
S = 1.778 (29.14 x 10^3)
Steel Stiffener
I = 1.754 (73.007 x 10^4)
S = 0.877 (14.371 x 10^3)
I_{AL+STL} = 10.335 (430.16 x 10^4)

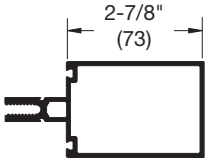


CURTAIN WALLS

Deadload Charts

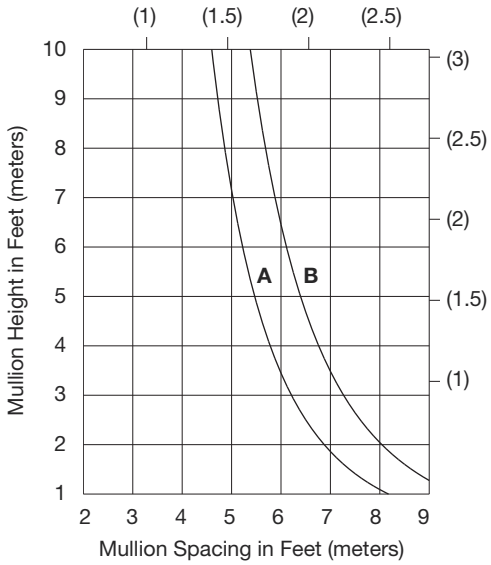
HORIZONTAL MULLIONS SHEAR BLOCK ASSEMBLY FOR 1" (25) GLAZING

Thermally Improved
- Series 2100
- Series 2200



CW200

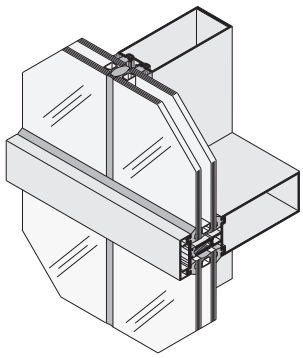
I_{yy} = .575 (23.93 x 10^4)



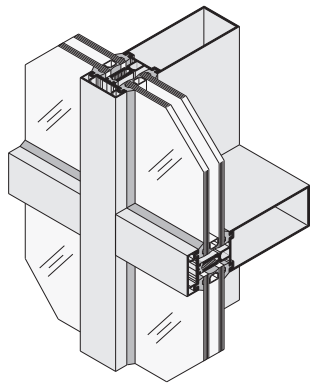
Deadload charts are based on 1/8" (3.2) maximum deflection at the center point of the horizontal member and on a glass weight of 6.5 psf (31.74 Kg/m^2).
Glass shall rest on two setting blocks located at:

CURVES **A:** 1/4 points

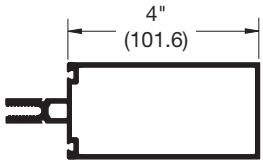
CURVES **B:** 1/8 points or 8" (203.2) from corners, whichever is larger.



SERIES 2100
Structural Silicone Vertical Glazed Curtain Wall

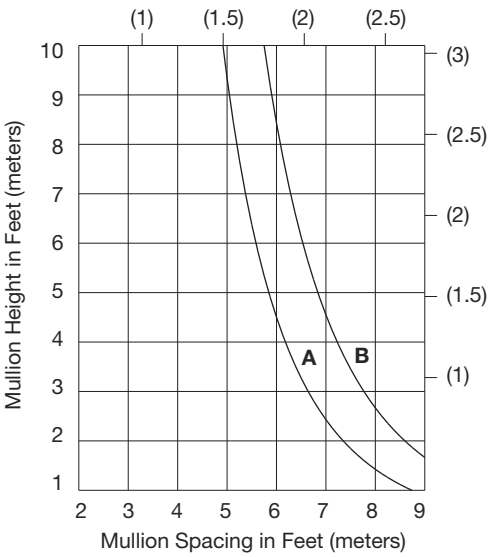


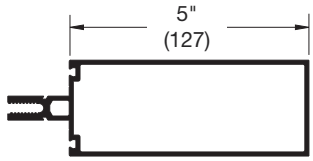
SERIES 2200
Captured Vertical Glazed Curtain Wall



CW204

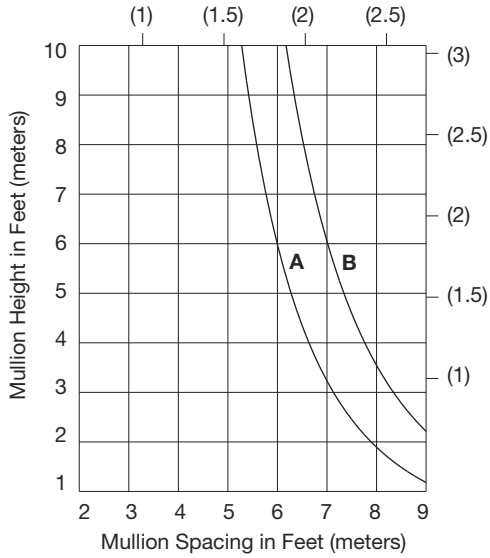
I_{yy} = .751 (31.26 x 10^4)





CW205

I_{yy} = .998 (41.54 x 10^4)

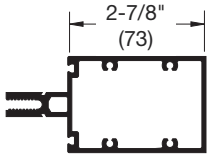


CURTAIN WALLS

Deadload Charts

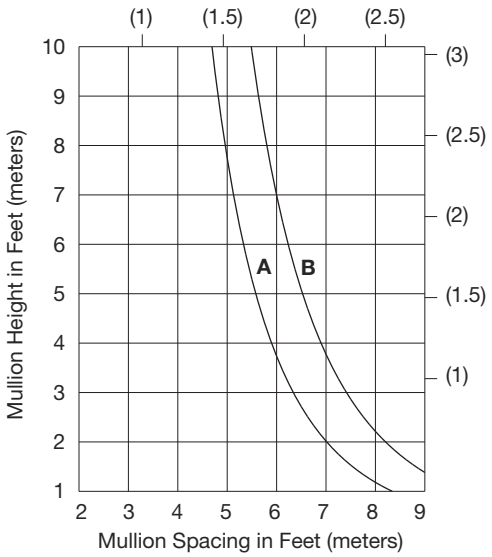
HORIZONTAL MULLIONS SCREW SPLINE ASSEMBLY FOR 1" (25) GLAZING

Thermally Improved
- **Series 2100**
- **Series 2200**



CW210

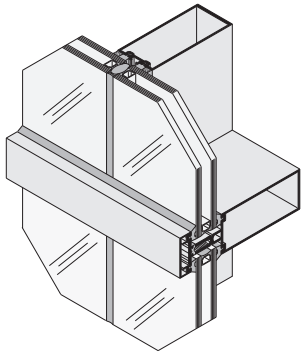
I_{yy} = .623 (25.93 x 10^4)



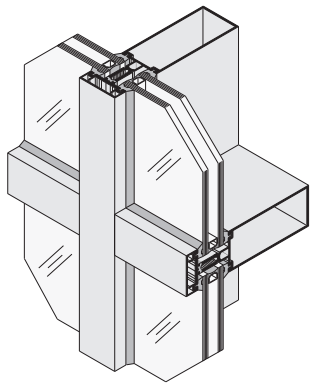
Deadload charts are based on 1/8" (3.2) maximum deflection at the center point of the horizontal member and on a glass weight of 6.5 psf (31.74 Kg/m^2).
Glass shall rest on two setting blocks located at:

CURVES **A:** 1/4 points

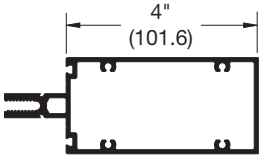
CURVES **B:** 1/8 points or 8" (203.2) from corners, whichever is larger.



SERIES 2100
Structural Silicone Vertical Glazed Curtain Wall

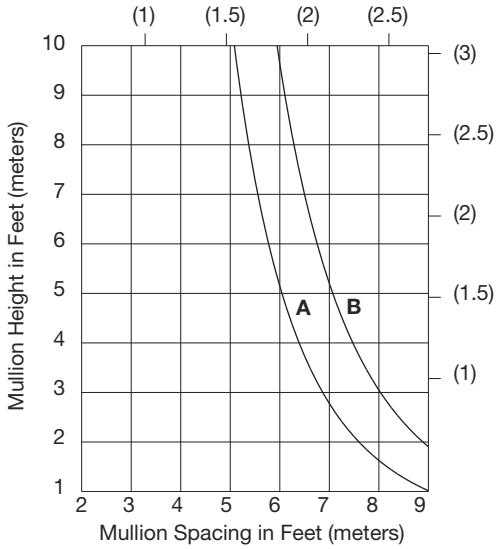


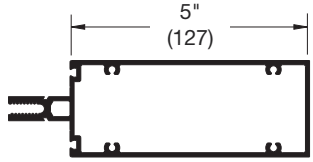
SERIES 2200
Captured Vertical Glazed Curtain Wall



CW214

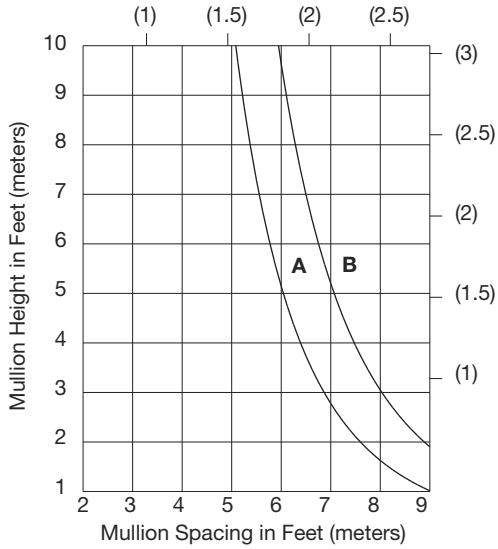
I_{yy} = .858 (35.71 x 10^4)





CW215

I_{yy} = 1.077 (44.83 x 10^4)



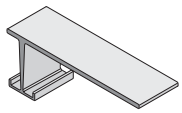
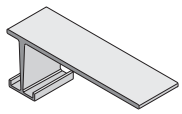
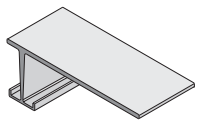
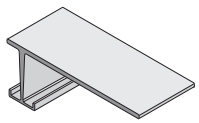
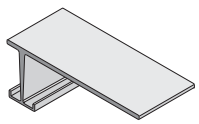
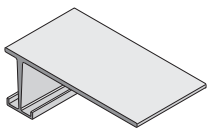
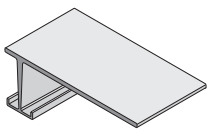
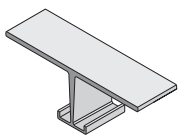
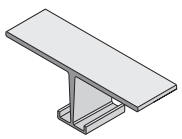
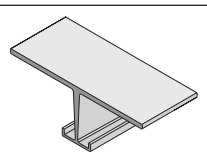
CRL U.S. ALUMINUM

CURTAIN WALLS

Accessories

FOR 1/4" (6) AND 1" (25) GLAZING

Thermally Improved
- Series 2100
- Series 2200

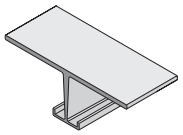
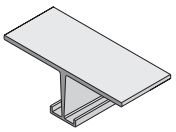
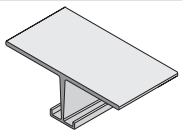
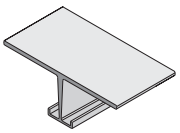
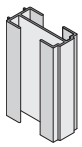
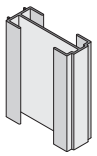
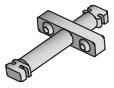
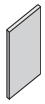
PART NO.	DETAIL	DESCRIPTION	PKG. QTY.	FOR MULLION DEPTHS		
				2-7/8" (73)	4" (101.6)	5" (127)
AP311		Wall Jamb Anchor at Head and Sill for CW200	6	●		
AP315		Wall Jamb Anchor at Head and Sill for CW260	6	●		
AP312		Wall Jamb Anchor at Head and Sill for CW204	6		●	
AP314		Wall Jamb Anchor at Head and Sill for CW234	6		●	
AP316		Wall Jamb Anchor at Head and Sill for CW264	6		●	
AP313		Wall Jamb Anchor at Head and Sill for CW205	6			●
AP317		Wall Jamb Anchor at Head and Sill for CW265	6			●
AP240		Intermediate Vertical Anchor at Head and Sill for CW200	12	●		
AP260		Intermediate Vertical Anchor at Head and Sill for CW260	12	●		
AP244		Intermediate Vertical Anchor at Head and Sill for CW204	12		●	

CURTAIN WALLS

Accessories

FOR 1/4" (6) AND 1" (25) GLAZING

Thermally Improved
- Series 2100
- Series 2200

PART NO.	DETAIL	DESCRIPTION	PKG. QTY.	FOR MULLION DEPTHS		
				2-7/8" (73)	4" (101.6)	5" (127)
AP255		Intermediate Vertical Anchor at Head and Sill for CW234	12		●	
AP264		Intermediate Vertical Anchor at Head and Sill for CW264	12		●	
AP245		Intermediate Vertical Anchor at Head and Sill for CW205	12			●
AP265		Intermediate Vertical Anchor at Head and Sill for CW265	12			●
SL284		Mullion Splice Sleeve for 4" (101.6) Mullions	12		●	
SL285		Mullion Splice Sleeve for 5" (127) Mullions	12			●
NP430		Exterior Gasket	250' Roll	●	●	●
NP420		Interior Gasket	250' Roll	●	●	●
SP250		Spacer Gasket for Butt Glaze	250' Roll	●	●	●
RG635		Temporary Glass Retainer for Butt Glaze. Patent No. D295,952	50	●	●	●
SB240		Edge Block 1-1/4" x 4" (31.8 x 101.6)	100	●	●	●

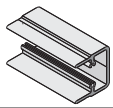
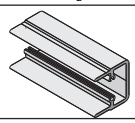
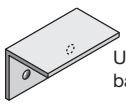
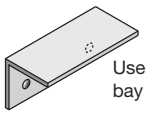
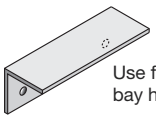
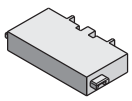
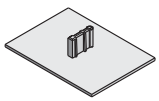
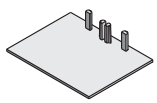
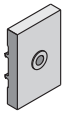
CRL U.S. ALUMINUM

CURTAIN WALLS

Accessories

FOR 1/4" (6) AND 1" (25) GLAZING

Thermally Improved
- Series 2100
- Series 2200

PART NO.	DETAIL	DESCRIPTION	PKG. QTY.	FOR MULLION DEPTHS		
				2-7/8" (73)	4" (101.6)	5" (127)
AP202		Shear Block for 2-7/8" (73) Mullions (Includes screws)	20	●		
AP204		Shear Block for 4" (101.6) Mullions (Includes screws)	20		●	
AP205		Shear Block for 5" (127) Mullions (Includes screws)	20			●
AP287	 Use for last bay horizontals	Shear Clip for 2-7/8" (73) Mullions (Includes Screws)	20	●		
AP404	 Use for last bay horizontals	Shear Clip for 4" (101.6) Mullions (Includes Screws)	20		●	
AP517	 Use for last bay horizontals	Shear Clip for 5" (127) Mullions (Includes Screws)	20			●
HD475		End Dam for Captured Mullions	50	●	●	●
WD220		End Dam for Butt Glaze Mullions	50	●	●	●
CP220		Closure Plate for Captured Mullions	20	●	●	●
CP271		Closure Plate for Butt Glaze Mullions	20	●	●	●
CW368		Temporary Glass Retainer for Captured Mullions	50	●	●	●
MS222		Screw for Pressure Bar 1/4"-20 x 1" (25) HWHCS with SRG5	200	●	●	●
ST251		Screw for Screw Spline Assembly #10 x 1" (25) HWH SMS	200	●	●	●

CURTAIN WALLS

Accessories

FOR 1/4" (6) AND 1" (25) GLAZING

Thermally Improved
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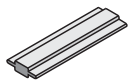
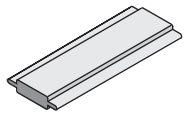
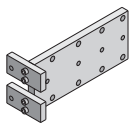
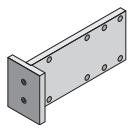
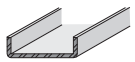
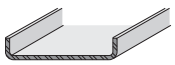
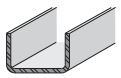
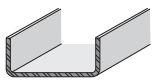
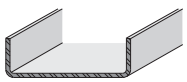
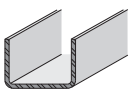
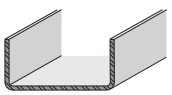
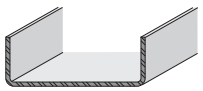
- Series 2200

PART NO.	DETAIL	DESCRIPTION	PKG. QTY.	FOR MULLION DEPTHS		
				2-7/8" (73)	4" (101.6)	5" (127)
SB220		Setting Block for 1/4" (6) Glass; 4" (101.6) Long	100	●	●	●
SB221		Setting Block for 1" (25) Glass; 4" (101.6) Long	100	●	●	●
DJ020		Drill Jig for Captured Vertical Mullions	1	●	●	●
DJ021		Drill Jig for Structural Glaze Vertical Mullions	1	●	●	●
SS210		Steel Stiffener Fits in: CW230, CW239	16' (4.88 m) Stock Length	●		
SS211		Steel Stiffener Fits in: CW240, CW249	16' (4.88 m) Stock Length		●	
SS212		Steel Stiffener Fits in: CW250, CW259	16' (4.88 m) Stock Length			●
SS213		Steel Stiffener Fits in: CW231, CW238	16' (4.88 m) Stock Length	●		
SS214		Steel Stiffener Fits in: CW241, CW248	16' (4.88 m) Stock Length		●	
SS215		Steel Stiffener Fits in: CW251, CW258	16' (4.88 m) Stock Length			●
SS220		Steel Stiffener Fits in: CW200, CW260	16' (4.88 m) Stock Length	●		
SS221		Steel Stiffener Fits in: CW204, CW234, and CW264	16' (4.88 m) Stock Length		●	
SS222		Steel Stiffener Fits in: CW205, CW265	16' (4.88 m) Stock Length			●