PRL Aluminum
ARCHITECTURAL PRODUCTS
"We have the fastest leadtimes in the industry guaranteed!"

COMPANY PROFILE

PRL Corporation enthusiastically announces our Aluminum division,

PRL Aluminum Architectural Products

The creation of PRL Aluminum will complement our Architectural Tempered Glass Division. This new venture will allow us to service our customers with the demand of both Aluminum Products and Tempered Glass.

Our PRL team recognizes the demand and high expectations of becoming a major broad-minded player on the "convergent" architectural glass and aluminum industry.

The Aluminum division has emerged with the expertise, technology and extensive customer base inherited from PRL Glass. This advantage will make us a very strong competitive company and will allow us to unfold our true potential.

PRL Aluminum will be able to offer you,

- Aluminum Entrance Doors
- Nu Vision Entrance Doors (Herculite)
- Storefronts
- Curtainwall
- Aluminum Entrance Doors
- Sliding Doors
- IG Units
- Architectural Tempered Glass
- Brake Metal
- Custom Extruding
- Hardware

PRL Aluminum will continue to focus on our customer service satisfaction, we will stride to provide our customers with the fastest leadtimes, highest quality, most competitive pricing.

ph: (877) 775-2586
fx: (877) 274-8800

14760 Don Julian Rd.
Industry, CA 91746

www.prlaluminum.com
sales@prlaluminum.com

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USEFUL INFORMATION

FOR ORDERS OR QUOTES ON ALL DIVISION LINES

PLEASE CALL, (877) 775 2586

FAX OR E-MAIL BY DEPARTMENT,

DEPARTMENT	FAX	E-MAIL ADDRESS
● **STOREFRONT**	(877) 274 8800	faststorefronts@prlaluminum.com
● **EXTRUSION DIVISION**	(877) 274 8800	fastextrusions@prlaluminum.com
● **ENTRANCE DOORS/ ARCHITECTURAL METALS**	(877) 274 8800	fastdoors@prlaluminum.com
● **NEW ACCOUNTS**	(626) 330 5918	newaccounts@prlaluminum.com
● **ACCOUNTING A/R**	(626) 330 5918	fastpay@prlaluminum.com
● **SALES**	(626) 968 8629	salesmaster@prlaluminum.com
● **SHIPPING**	(626) 968 8629	fastshipping@prlaluminum.com

FOR IMMEDIATE ACCESS TO INFORMATION ON ALL OF OUR PRODUCT LINES

PLEASE VISIT OUR WEBSITE,

WWW. PRLALUMINUM.COM

PRL SPECIALIZES IN CUSTOM ARCHITECTURAL GLASS & METAL FABRICATION.

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TERMS OF SALE AND CONDITIONS

VOLUME PRICING: We will always welcome quotation requests for large quantities of aluminum framing, extrusions and doors. All price quotes are subject to large quantity discounts.

QUOTES: Quotes are good for 30 days, unless special arrangements have been made.

MINIMUM ORDERS:
$75.00 minimum order
$500.00 minimum order for free local delivery.
$1,000.00 minimum to ship to an address other than the billing/business address.
$1,500.00 minimum order for jobsite deliveries.

There is no delivery charge on an order, which meets the minimum charge and is within our standard delivery area and schedule.

BACK CHARGES, CLAIMS AND DEFECTIVE MATERIAL:
Back charges from the Buyer are not acceptable and will not be honored by the PRL Aluminum. All claims must be submitted to the PRL Aluminum within 5 days after receipt of shipment. PRL Aluminum shall have the exclusive right to select the final remedy for defective material, which will be expressly limited to the repair, replacement or the repayment of the original purchase price paid by the Buyer upon return of the material to the PRL Aluminum. Under no circumstances will any job site repairs, replacements made or labor charges for the same be accepted. There are no other warranties expressed or implied. PRL Aluminum shall not be liable for any penal, incidental or consequential damages.

CANCELLATIONS AND RETURNS:
Cancellation and return of custom orders will result in substantial cost to the Buyer. Return or cancellation of stock items may be made after PRL Aluminum has issued prior written authorization. Any standard stock material received in a resalable condition will be credited based on a 20% restocking charge of PRL Aluminum's sale price. All freight charges on returned goods must be paid by the customer.

PACKING/SHIPPING: All items are shipped F.O.B. PRL Aluminum's plant and the Buyer shall bear the risk of loss and shall in such circumstances be limited solely to an action against carriers or third parties other than PRL Aluminum. We will ship all orders via best available transportation facilities unless specified otherwise by the Buyer. Items omitted from the original shipment due to shortage of material, or other causes beyond the control of the company, will be shipped A.S.A.P.

Note: Wooden crates or cardboard wrap are available.

EXPEDITING CHARGES: all special leadtime requests are subject to a minimum 15% charge

ALL PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE

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TERMS OF SALE AND CONDITIONS

TERMS OF CREDIT:
Credit must be established prior to delivery of merchandise. Orders must be delivered C.O.D. until credit can be approved and an open account has been established. All orders are subject to credit approval and to the acceptance by PRL Aluminum.

TAXES:
All orders will be charged sales tax unless a resale certificate is on file in our office. Please send exemption card with initial order.

LIABILITY:
Custom or special orders require a 50% deposit at time of order and always considered non-cancellable nor will any portion of the deposit be returned or credited.

CREDIT EXTENSION:
No credit will be extended by the Seller unless the Buyer's credit has been approved and is satisfactory at the time of shipment.
The Seller reserves the right, at any time, to revoke credit extended to buyers because of Buyer's failure to pay for goods when due or for any other reason deemed sufficient by the Seller.

LATE PAYMENT:
Unless otherwise expressly provided, all payments are Net 30 Days after date of invoice. Seller may at any time require payment in advance or satisfactory security that invoices will be paid when due. 1 1/2% per month interest will be charged thereon from the due date until paid (18% annually).

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LIMITED WARRANTY AND REMEDY

PRL Aluminum Inc. warrants its product for a period of one (1) year from date of shipment against defective workmanship in manufacturing provided the product is installed in accordance with PRL Aluminum Inc. instructions and has not been damaged and/or altered prior to or during installation. PRL Aluminum Inc. will replace all products found to be so defective. The product supplied shall meet the standard door specifications as outlined in the PRL Aluminum Inc. catalog, which have been designed in accordance with prevailing engineering practices and procedures. Buyer remedies with respect to PRL Aluminum Inc failure to meet the foregoing warranties shall be limited to the sole remedy provided herein.

All items, including without limitation hardware and glass, manufactured by others and purchased by PRL Aluminum Inc for use in its products, carry such other manufacturers' warranties only. In replacing such defective items, PRL Aluminum Inc will not assume charges for freight and/or labor. All items furnished by or on behalf of buyer for incorporation of this order must be shipped to PRL Aluminum Inc plant before PRL Aluminum Inc is obligated to commence fabrication. PRL Aluminum Inc will not accept back charges for material and/or labor due to inaccuracies caused by the use of templates for cutouts and fabrication.

PRL Aluminum Inc makes no other representations, covenants, warranties or guarantees with respect to the product and performance ordered herein except as expressly set forth in this section. All implied warranties, including without limitations, merchantability, fitness for particular purpose, or arising from a course of dealing or usage of trade, are specifically excluded. Not withstanding any provision in this agreement to the contrary, PRL Aluminum Inc in no event shall be liable to buyer for any direct, indirect, special or consequential damages, however arising, including, by way of example, but not by way limitation, loss of profit, loss of use, business interruption, or caused by the sole negligence of PRL Aluminum Inc.

ANODIZING INFORMATION

Anodizing services for finishing aluminum alloys employ electrolytic oxidation of the aluminum surface to produce a protective oxide coating. The anodic coating consists of hydrated aluminum oxide. It is considered resistant to corrosion and abrasion. Conventional coatings are 0.1 to 1.0 mil thick and are mostly transparent, but may be colored. Anodizing services preserves the natural luster, and texture of the metal itself. An anodized coating is hard, durable, will never peel, and, under normal conditions, will never wear through. This category includes hard coat anodizing services.

Anodizing will protect the aluminum parts by making the surface much harder than natura1 aluminum. Aluminum oxide is grown out of the surface during anodizing and then becomes aluminum hydrate that is extremely hard. The porous nature of the anodized layer allows the product to be dyed any color that is required. Anodized will become slightly larger by about .0004 to .0009 Depend on Class.

Class I coating is a high performance anodic finish used primarily for exterior building products and other products that must withstand continuous outdoor exposure.

Class II coating is a commercial anodic finish recommended for interior applications or light exterior applications receiving regularly scheduled cleaning and maintenance such as storefronts.

Coating thickness can be measured by an "eddy current", a nondestructive test instrument, or by cutting a cross-section of the anodized aluminum, mounting it in a slide, polishing the edge, and reading the coating thickness directly with a microscope.

Class Class II coatings and I should not be confused with Type I, Type II, and Type III anodic coatings as described in the authoritative anodizing standard, MIL-A-8625. Type I anodize refers to chromic acid anodizing. Type II is normal "clear" sulfuric acid anodizing. Type III is "hard coat" using sulfuric acid or mixed chemistry electrolytes.

Coating Weight Specification:
Class I >+ 15.5 mg/in2
Class II >= 27.0 mg/in2

Coating Density:
Class I k II >= 38.0 mg/in3

Standard Anodizing
CL Clear (In Stock)
BR Bronze (In Stock)
BL Black (On Request)
GL Gold (On Request)

Note: All others different anodizing color will be consider as a Special and have a special price

We have three different type of anodizing
Class II (Standard)
Class I (Minimum charges may apply, and has different price)
Commercial

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201 SERIES

2” x 4 1/2”

SECTION

201 SERIES

2” x 4 1/2”

SECTION

ALUMINUM STOREFRONTS
PL-201 SERIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum storefronts.

1.2 REFERENCES

A. ASTM International (ASTM):
1. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
2. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.
3. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
4. ASTM E 331 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

1.3 SUBMITTALS

A. Submit under provisions of applicable Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

C. Shop Drawings: Configuration and details for installation, maintenance and operation.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
1. Finish areas designated by Architect.
2. Do not proceed with remaining work until workmanship is approved by Architect.
3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS

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A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email: request; Web:prlglass.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 ALUMINUM STOREFRONT

A. Product: Aluminum Storefront Series as manufactured by PRL Glass Systems, Inc.

B. Design:
1. Framing sections shall be extruded from 6063-T5 aluminum alloy.
2. Glazing beads shall be NS (non-stretch, high-shore) vinyl used on both sides of the glass. Vinyl shall incorporate a fiberglass cord bonded with the vinyl.
3. Sections shall conform to details and shall present clean, straight, sharply defined lines, and shall be free from defects impairing strength or durability.
4. Screws, nuts, bolts and fastening devices and internal components shall be of aluminum, stainless steel or other non-corrosive material.
5. Factory preparation from detail drawings shall be so fabricated that field assembly will be able to produce accurate, tightly fitted joints.

C. 201-Series (2 X 4-1/2 Offset Glaze For 1/4 Glazing):
1. Performance: (Test sample of 10 feet (3048 mm) wide by 10 feet (3048 mm) high - 3 lites wide by 2 lites high).
   a. Air infiltration: Limit air leakage through fixed glazing and frames to 0.045 cfm/ft^2/min when tested in accordance with ASTM E-283 at a cross pressure of 6.24 psf (0.30 kPa).
   b. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 6 psf (0.29 kPa) when tested in accordance with ASTM-E331-00.
   c. Uniform Load Structural per ASTM E 330: Limit deflection to L/175.

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1) Passed at Design Pressure of 20 psf (0.96 kPa).

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL

A. All joints between metal and masonry shall be fully caulked and field tested to resist water leakage with provisions taken to drain infiltrated water.

3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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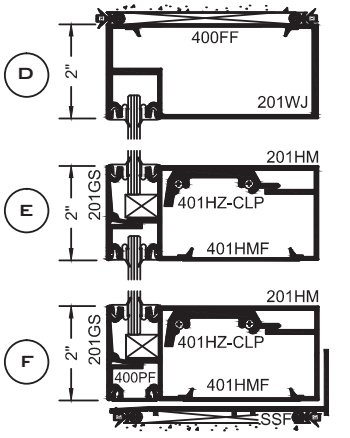
PL-201 SERIES
2" X 4-1/2"
1/4" OFFSET GLAZED

PRL ALUMINUM

SCREW RACE



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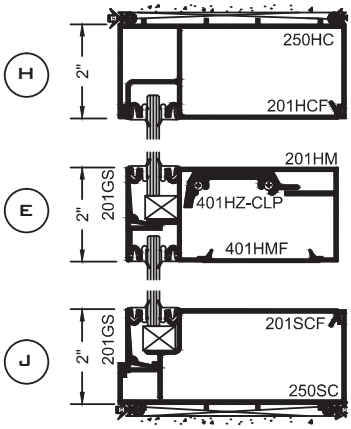
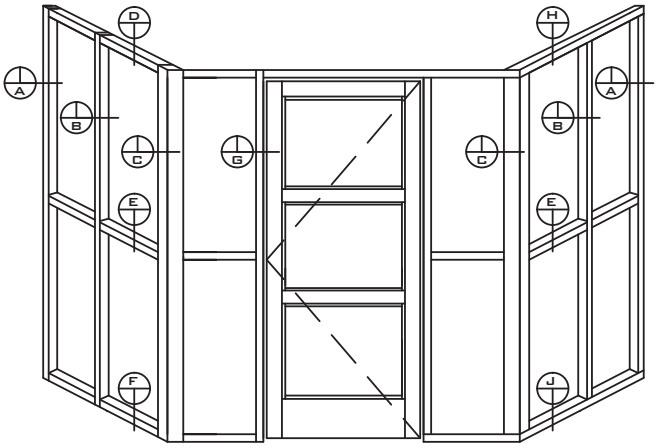
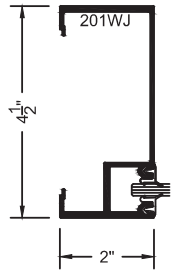


SCREW RACE

QUICK SET





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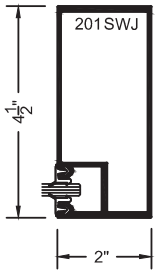

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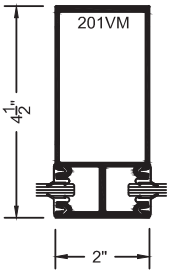

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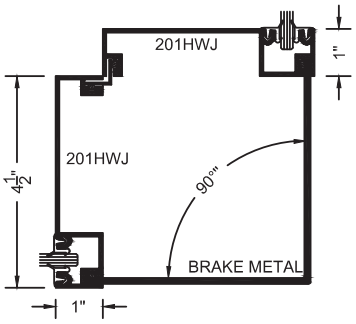

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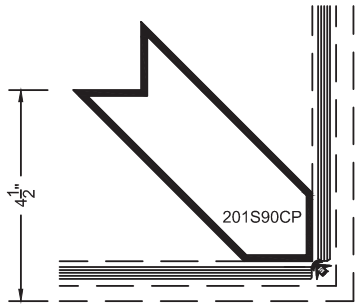

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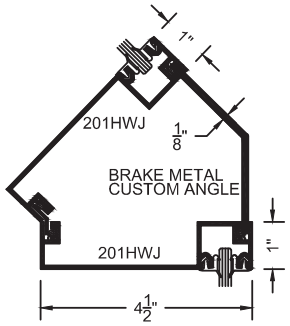

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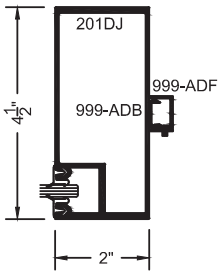

G-1

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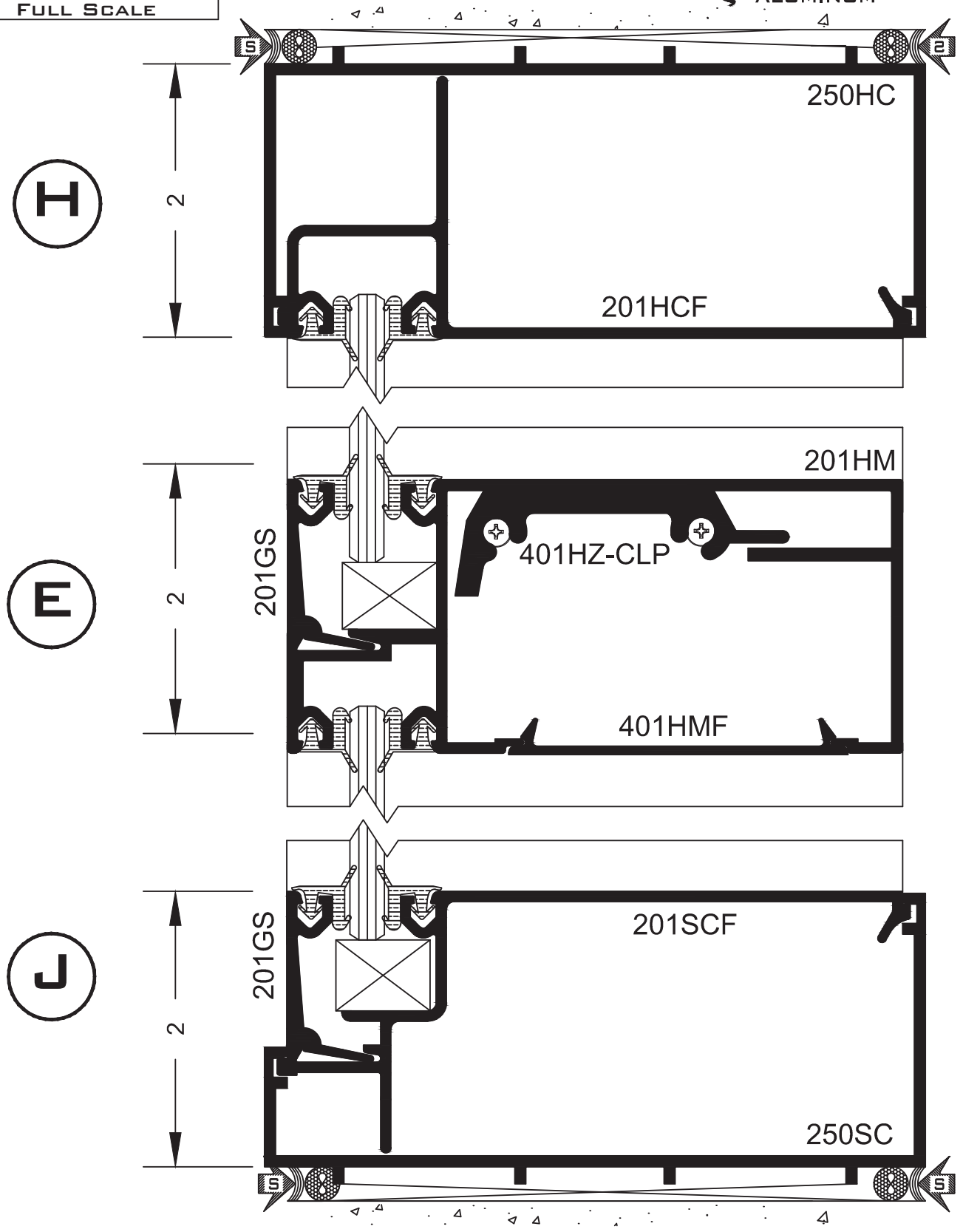
PL-201 SERIES
2" X 4-1/2"
FULL SCALE

QUICK SET

PRL ALUMINUM



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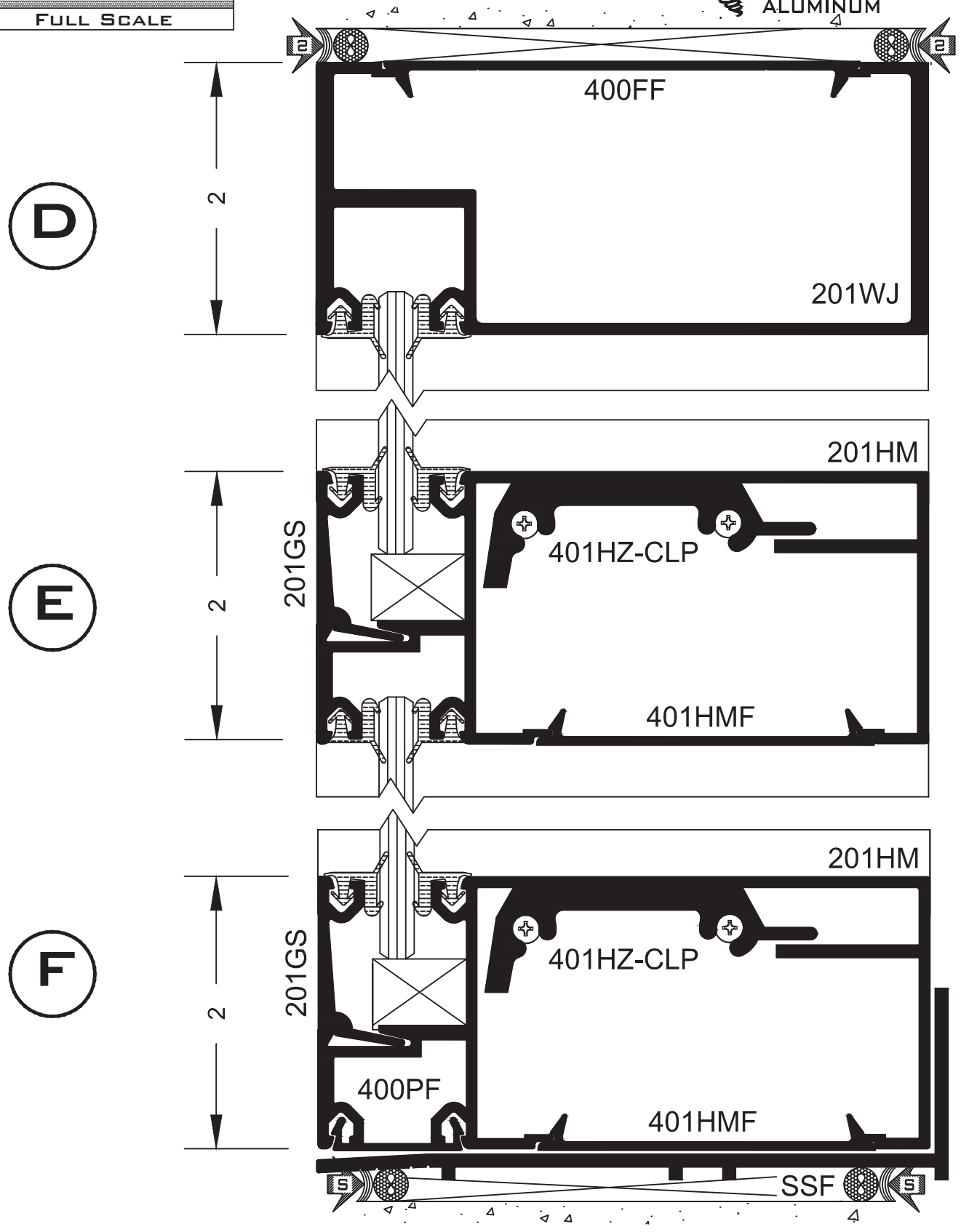
SCREW RACE

PRL ALUMINUM



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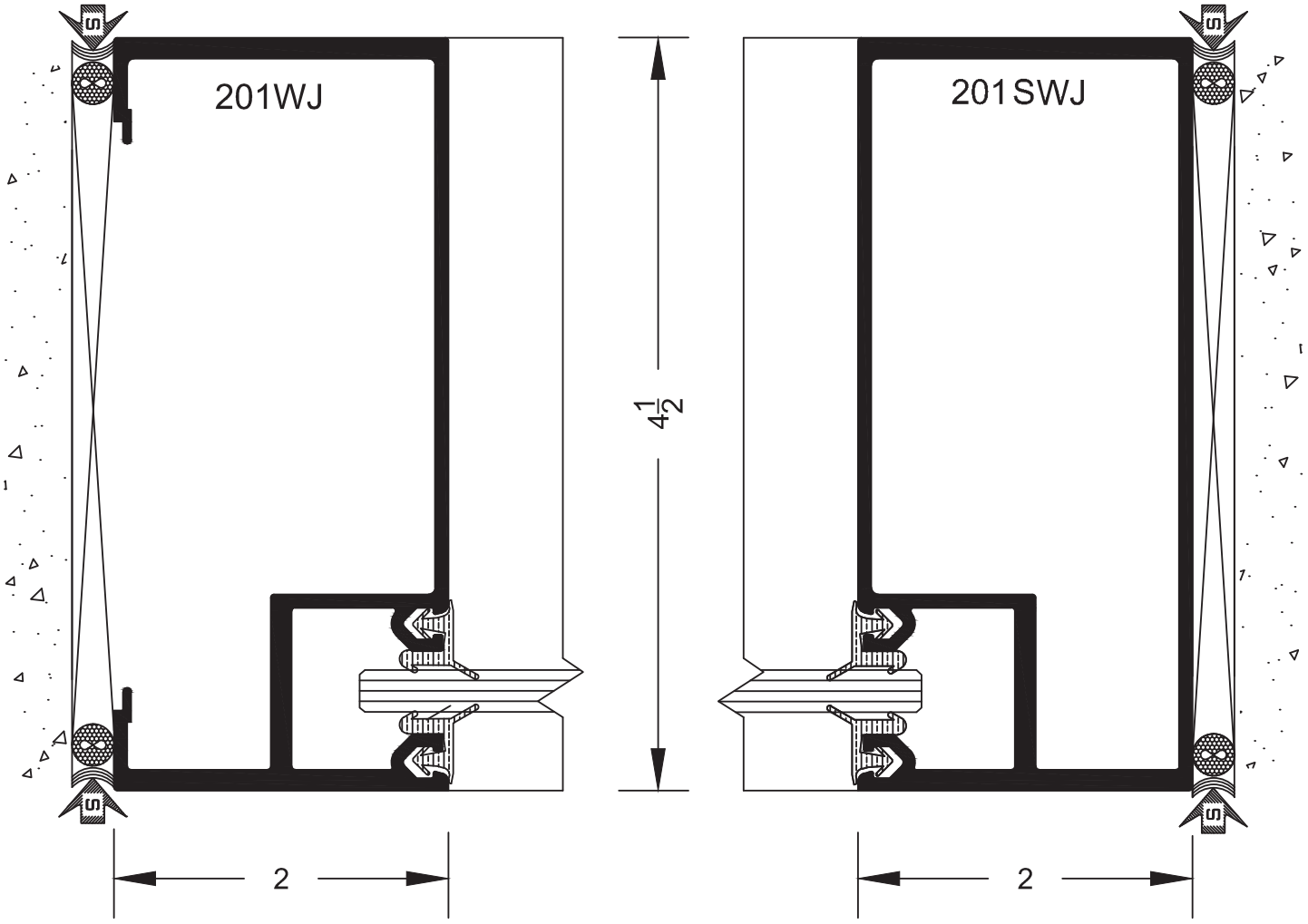

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A-2

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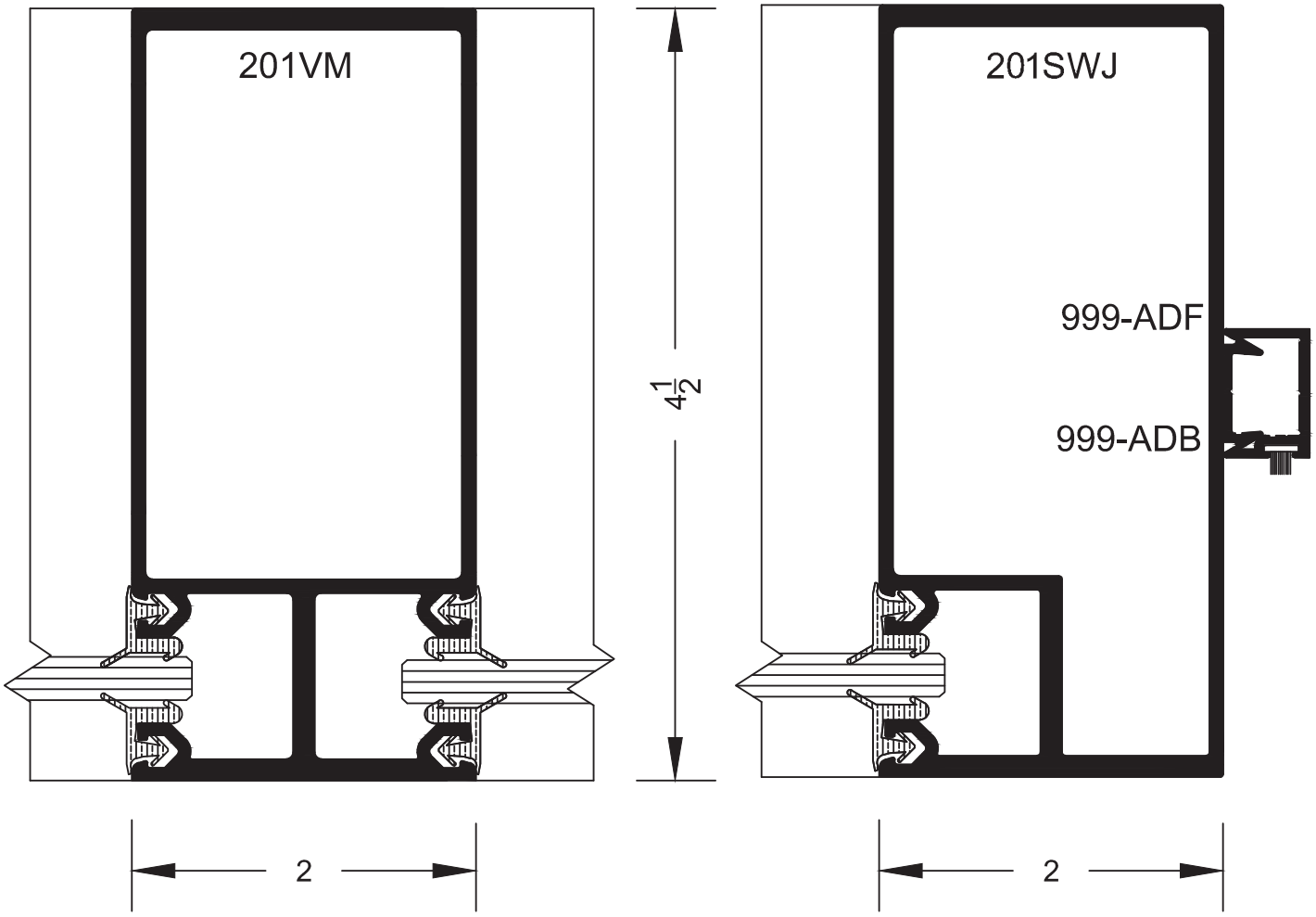

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G-1

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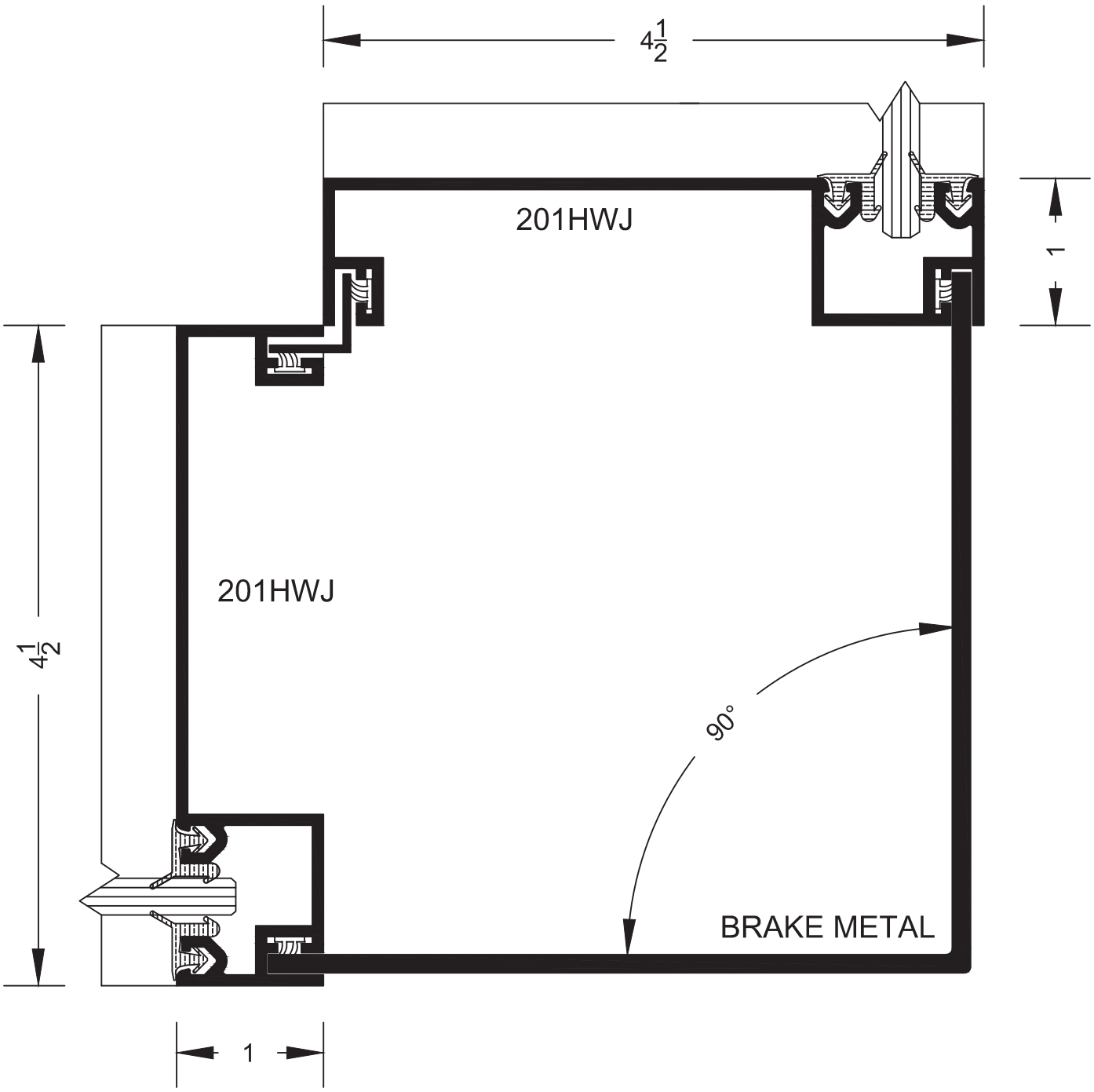

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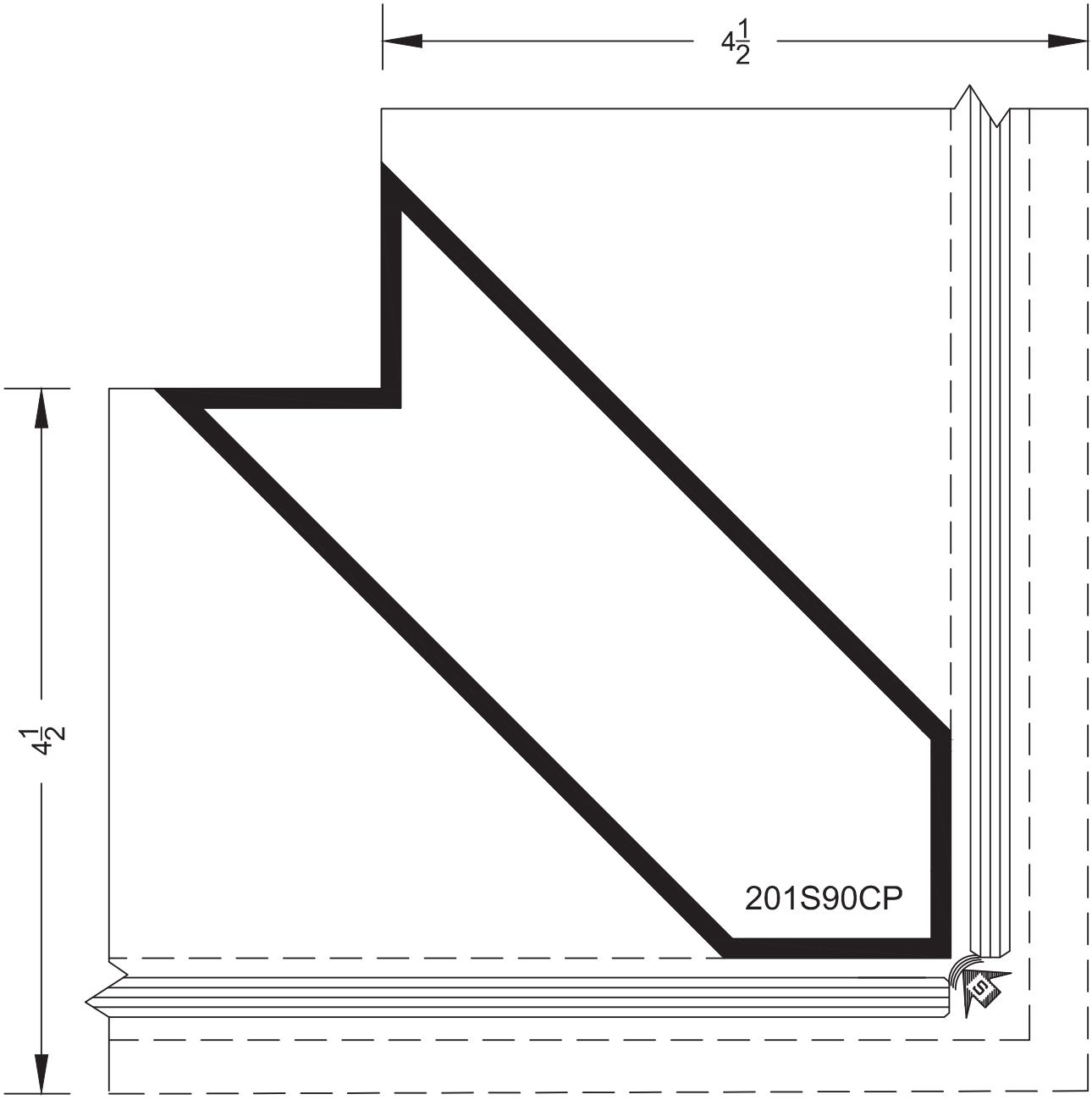

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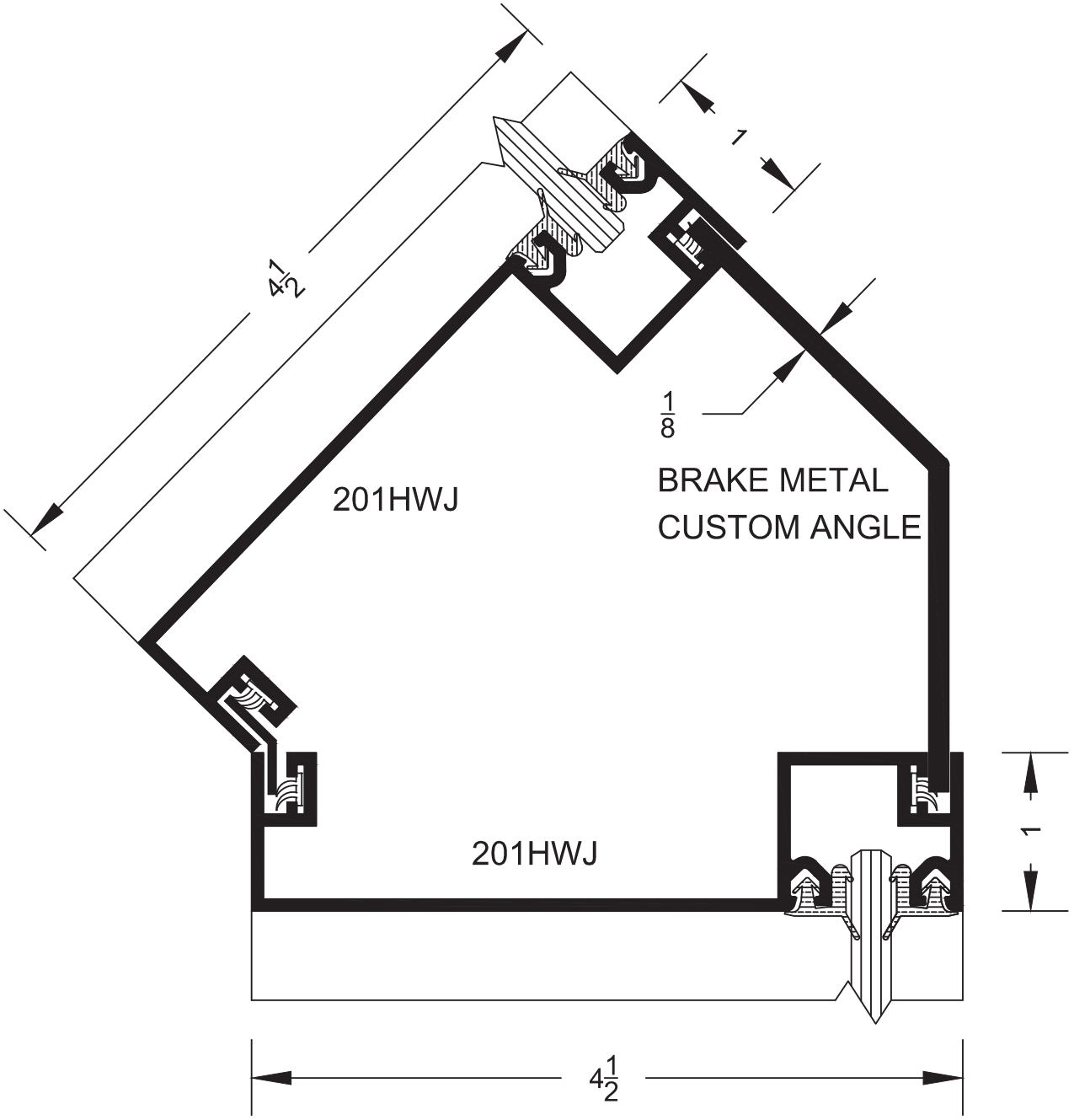

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PRL ALUMINUM

WIND LOAD DESIGN

GLAZING FRAMING SHALL BE DESIGNED NOT TO EXCEED L/175, RATIO CURVES SHALL REPRESENT LIMIT.

VALUES ARE BASED ON CRITERIA FOR SIMPLE BEAM UNIFORMLY LOADED.

ALLOWABLE STRESSES FOR 6063-T5 ALUMINUM ALLOY = 9500 P.S.I.
ALLOWABLE STRESSES FOR A-36 STRUCTURAL STEEL = 21600 P.S.I.

MAXIMUM DEFLECTION BETWEEN SUPPORTS FOR SINGLE SPAN:

$$\triangle = \frac{5WL^3}{384EI}$$

MAXIMUM BENDING MOMENT FOR SINGLE SPAN:

$$M = \frac{WL}{8}$$

NOTATIONS REPRESENT:
W = TOTAL UNIFORM LOAD
L = LENGTH OF MULLION BETWEEN SUPPORTS
E = 10×10^6 P.S.I.
I = MOMENT OF INERTIA OF MULLION
M = BENDING MOMENT

NOTE:
MULLIONS ARE ASSUMED TO HAVE EQUAL SIZE GLASS LIGHTS EACH SIDE

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PL-201 SERIES
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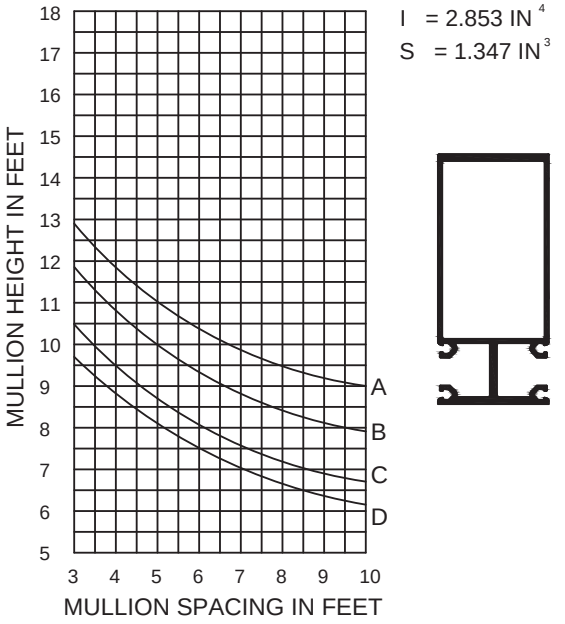
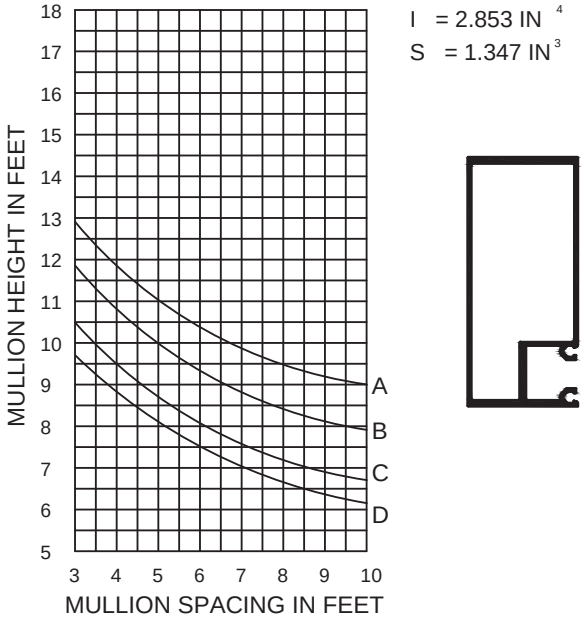
WIND LOAD

PRL ALUMINUM

201 VERTICAL MULLION

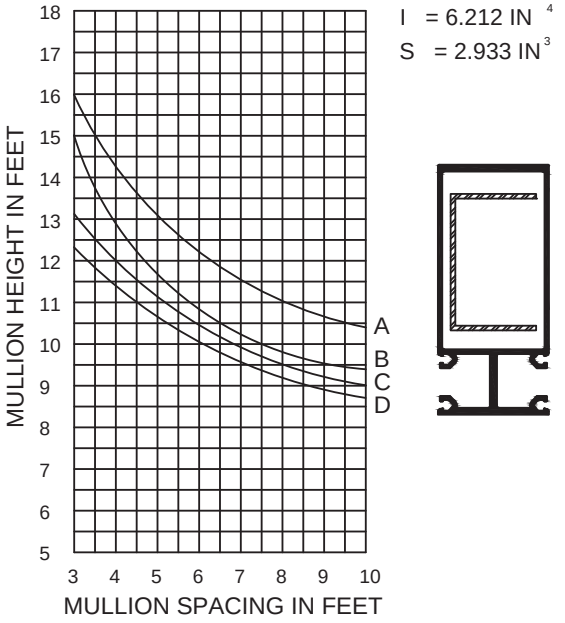


201 SOLID WALL JAMB

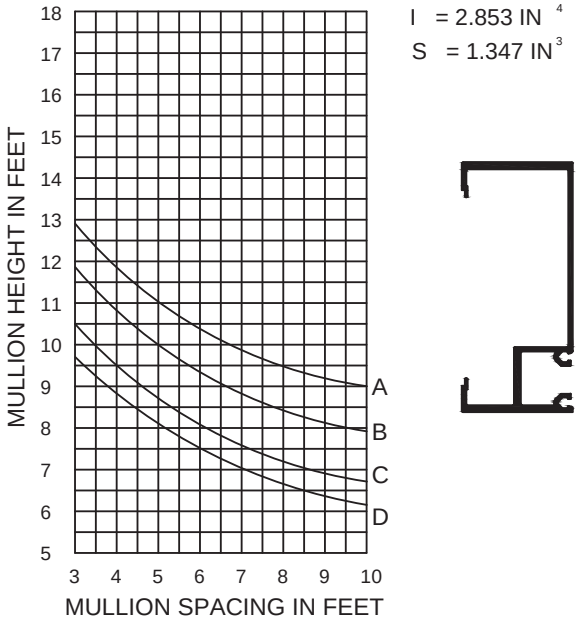


CURVE REPRESENTATION
A = 15 P.S.F. (75 M.P.H)
B = 20 P.S.F. (90 M.P.H)
C = 25 P.S.F. (100 M.P.H)
D = 30 P.S.F. (110 M.P.H)

201 VERTICAL MULLION
WITH STEEL REINFORCEMENT



201 VERTICAL WALL JAMB



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250 SERIES

2” x 4 1/2”

SECTION

250 SERIES

2” x 4 1/2”

SECTION

ALUMINUM STOREFRONTS
PL-250 SERIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum storefronts.

1.2 REFERENCES

A. ASTM International (ASTM):
1. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
2. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.
3. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
4. ASTM E 331 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

1.3 SUBMITTALS

A. Submit under provisions of applicable Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

C. Shop Drawings: Configuration and details for installation, maintenance and operation.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
1. Finish areas designated by Architect.
2. Do not proceed with remaining work until workmanship is approved by Architect.
3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS

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A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email: request; Web:prlglass.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 ALUMINUM STOREFRONT

A. Product: Aluminum Storefront Series as manufactured by PRL Glass Systems, Inc.

B. Design:
1. Framing sections shall be extruded from 6063-T5 aluminum alloy.
2. Glazing beads shall be NS (non-stretch, high-shore) vinyl used on both sides of the glass. Vinyl shall incorporate a fiberglass cord bonded with the vinyl.
3. Sections shall conform to details and shall present clean, straight, sharply defined lines, and shall be free from defects impairing strength or durability.
4. Screws, nuts, bolts and fastening devices and internal components shall be of aluminum, stainless steel or other non-corrosive material.
5. Factory preparation from detail drawings shall be so fabricated that field assembly will be able to produce accurate, tightly fitted joints.

C. 250-Series (2 X 4-1/2 Center Glaze For 1 Glazing):
1. Performance: (Test sample of 10 feet (3048 mm) wide by 10 feet (3048 mm) high - 3 lites wide by 2 lites high).
   a. Air infiltration: Limit air leakage through fixed glazing and frames to 0.039 cfm/ft^2/min when tested in accordance with ASTM E-283 at a cross pressure of 6.24 psf (0.30 kPa).
   b. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 6 psf (0.29 kPa) when tested in accordance with ASTM-E331-00.
   c. Uniform Load Structural per ASTM E 330: Limit deflection to L/175.

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1) Passed at Design Pressure of 20 psf (0.96 kPa).

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL

A. All joints between metal and masonry shall be fully caulked and field tested to resist water leakage with provisions taken to drain infiltrated water.

3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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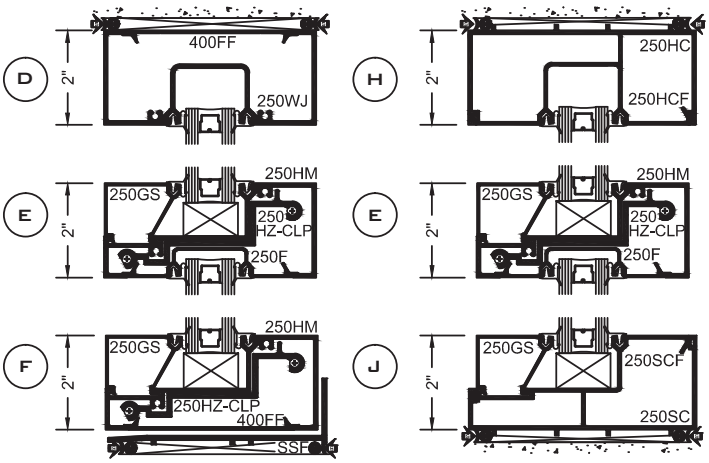
PL-250 SERIES
2" X 4-1/2"
1" CENTER GLAZED

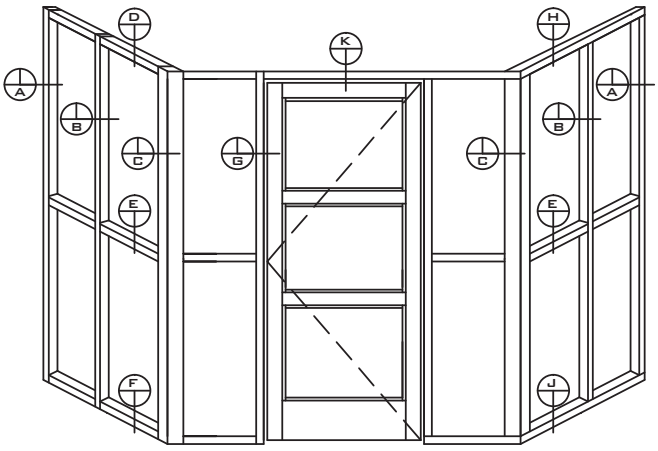
PL-250 SERIES
STOREFRONT MATERIAL

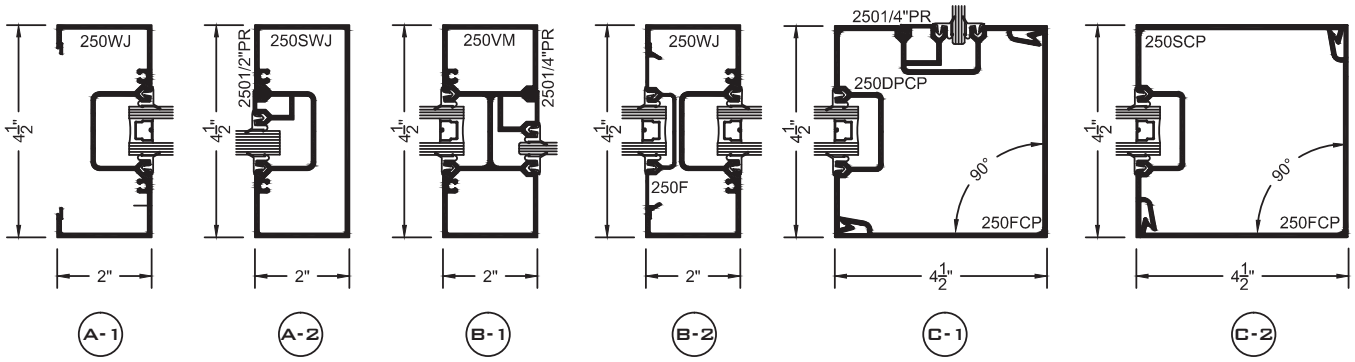
PRL ALUMINUM

SCREW RACE | QUICK SET

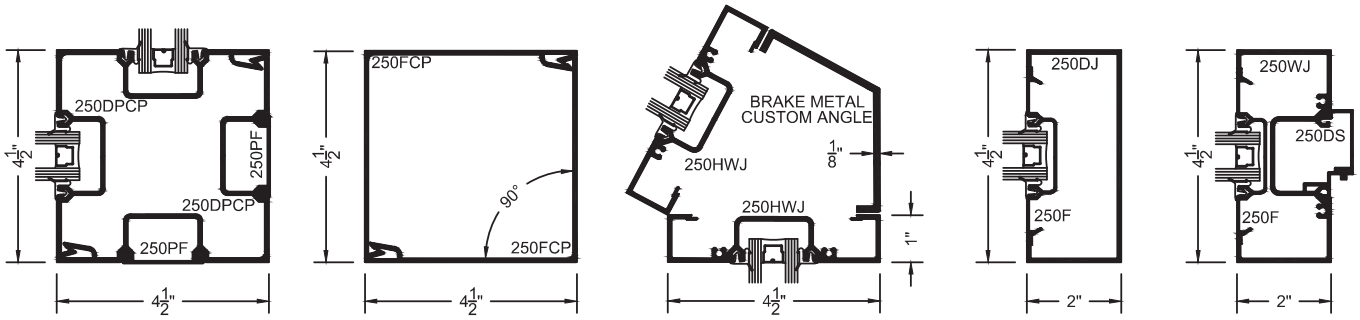


SCREW RACE | QUICK SET

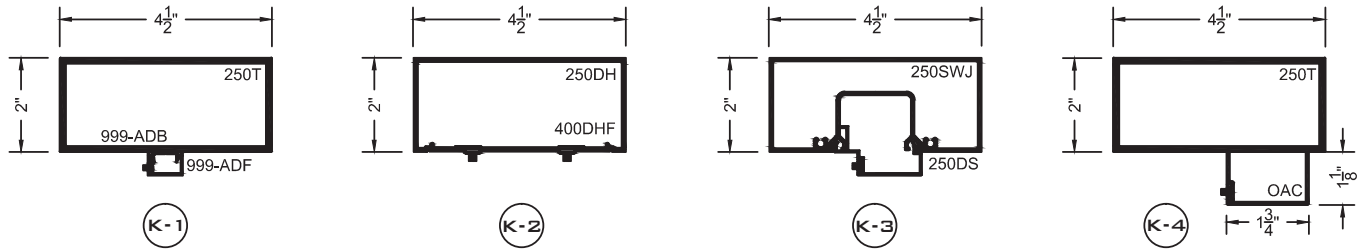




A-1 A-2 B-1 B-2 C-1 C-2



C-3 C-4 C-5 G-1 G-2



K-1 K-2 K-3 K-4

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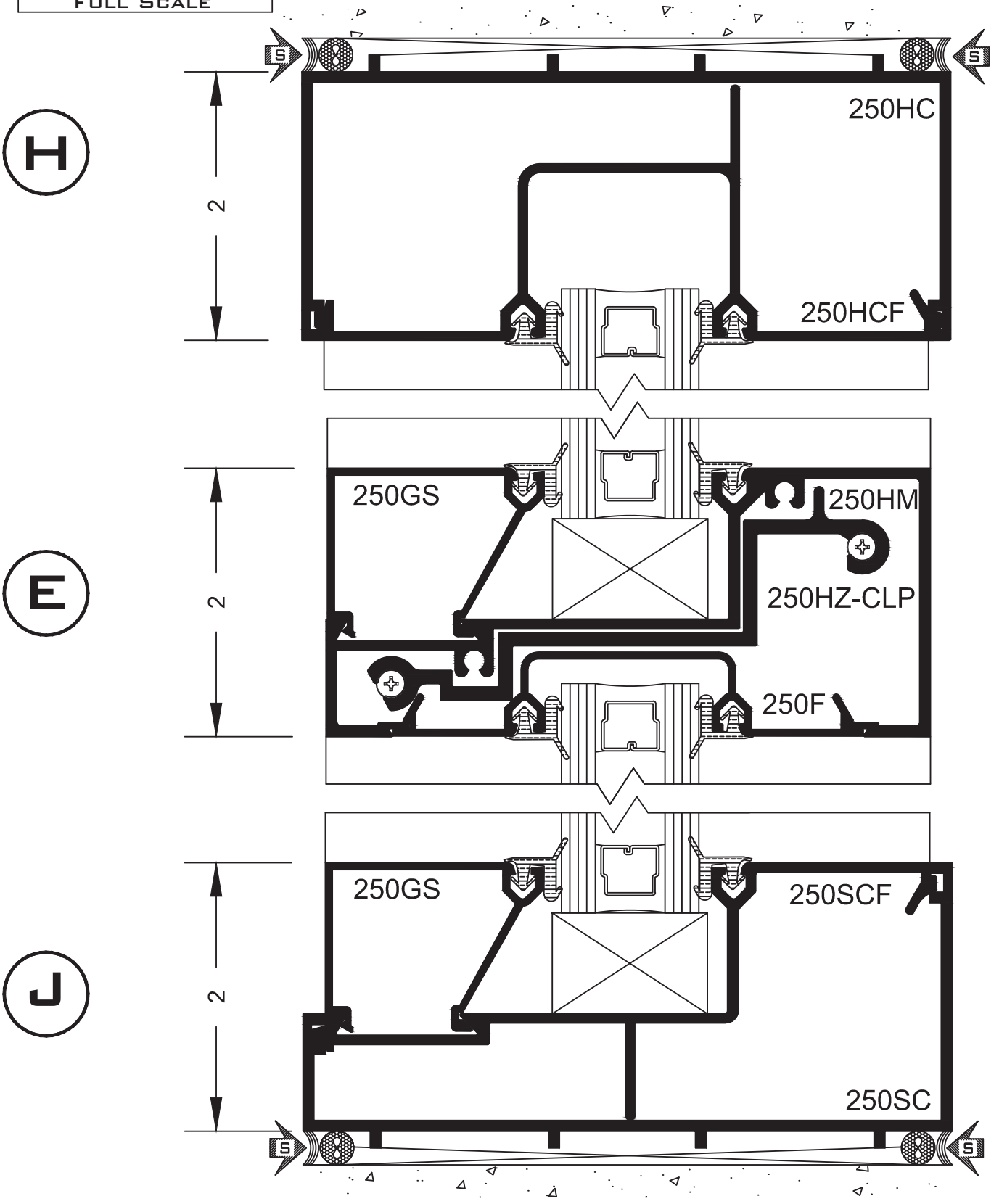
PL-250 SERIES
2" X 4-1/2"
FULL SCALE

QUICK SET

PRL ALUMINUM



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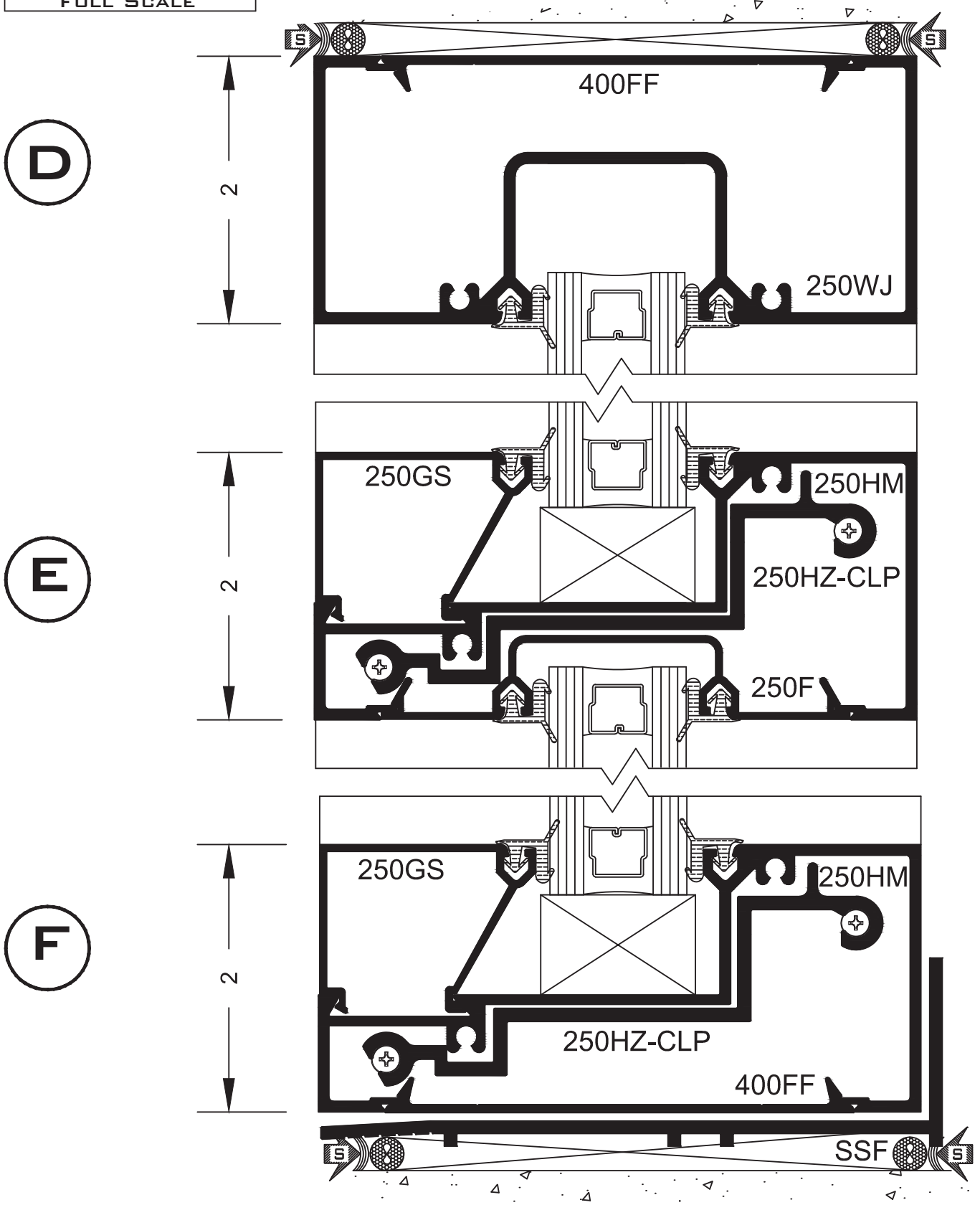
PL-250 SERIES
2" X 4-1/2"
FULL SCALE

SCREW RACE

PRL ALUMINUM



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PL-250 SERIES
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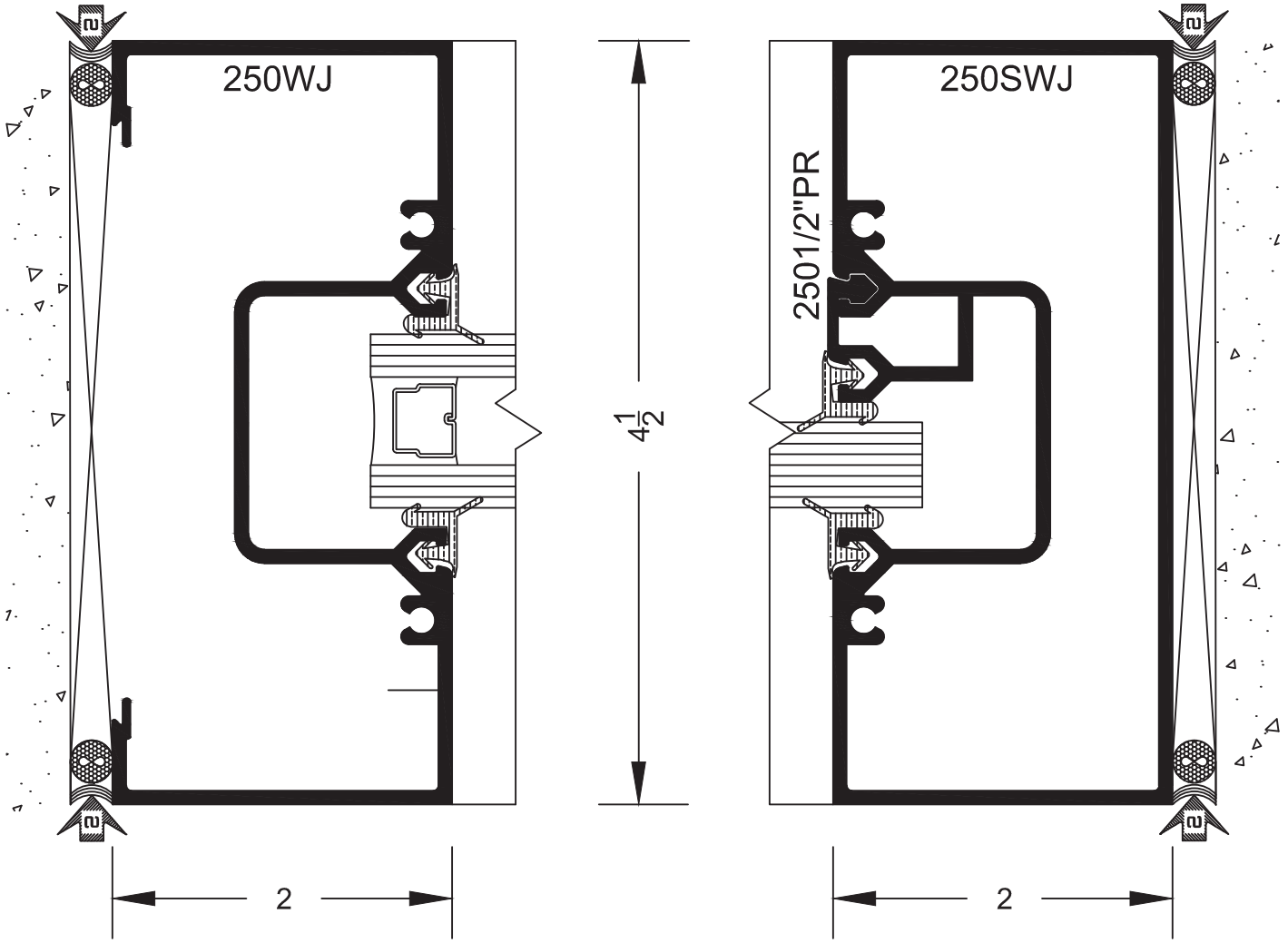
FULL SCALE

PRL ALUMINUM



A-1

A-2

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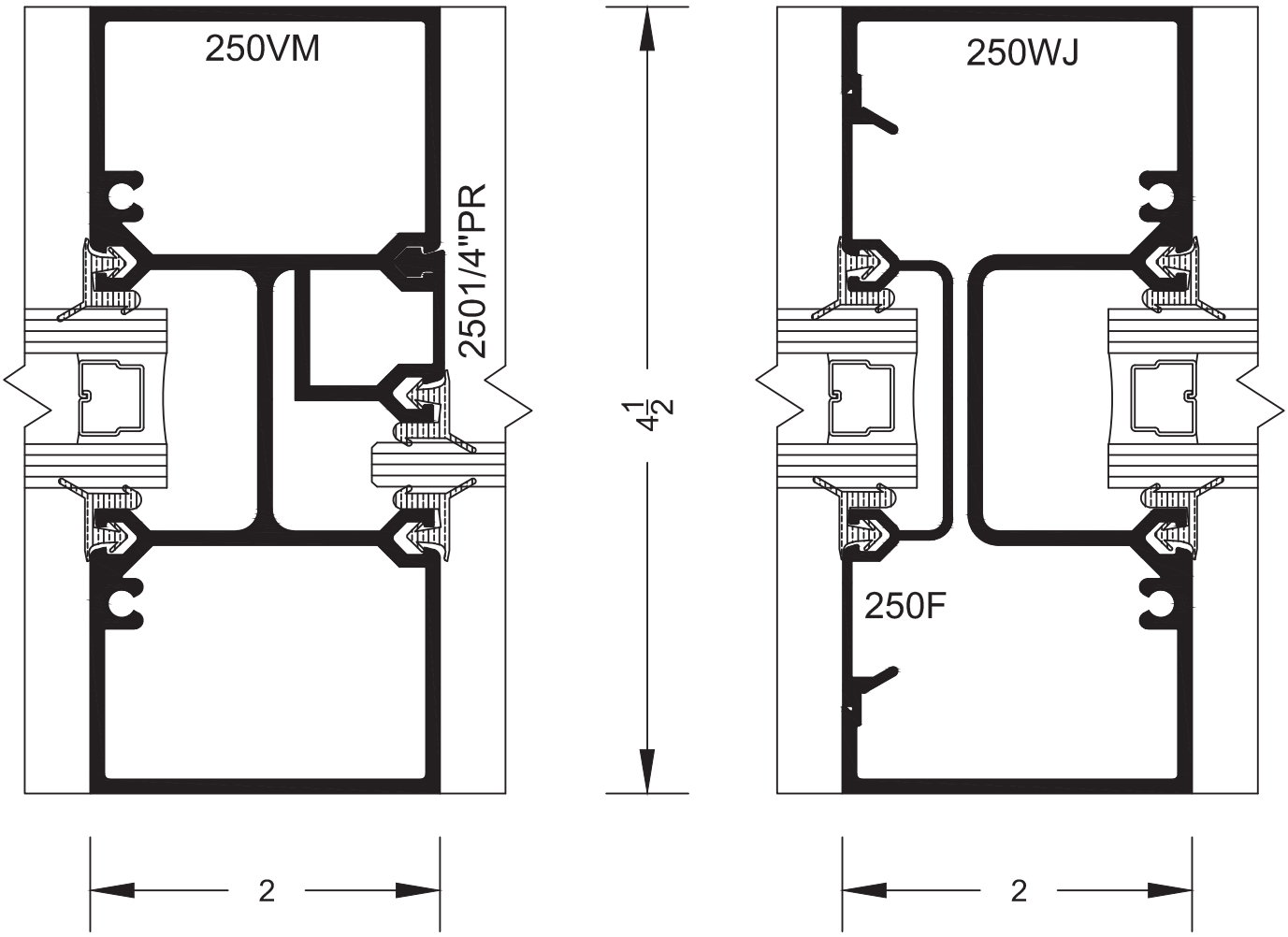
PL-250 SERIES
2" X 4-1/2"
FULL SCALE

PRL ALUMINUM



B-1

B-2

ph: (877) 775-2586
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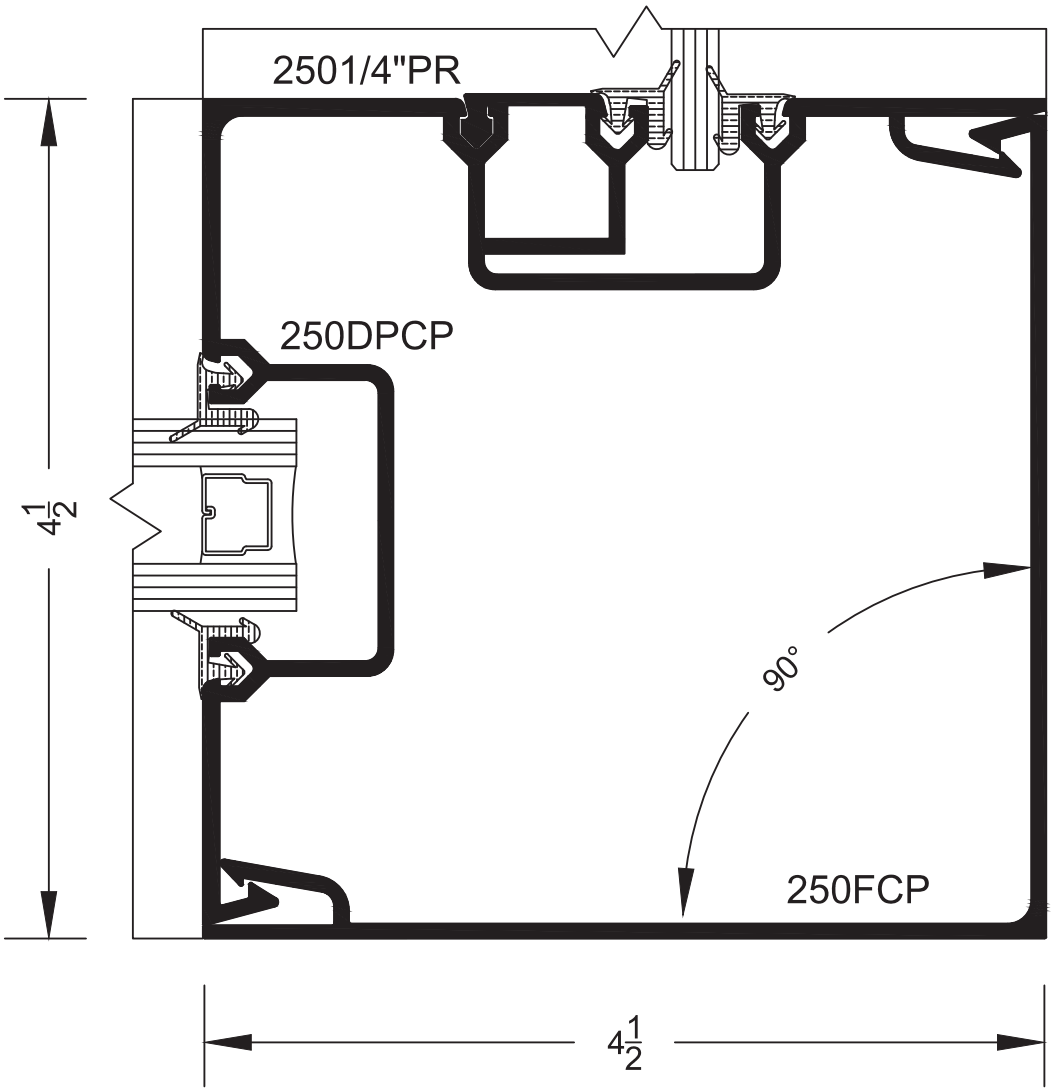
PL-250 SERIES
2" X 4-1/2"
FULL SCALE

PRL ALUMINUM



C-1

ph: (877) 775-2586
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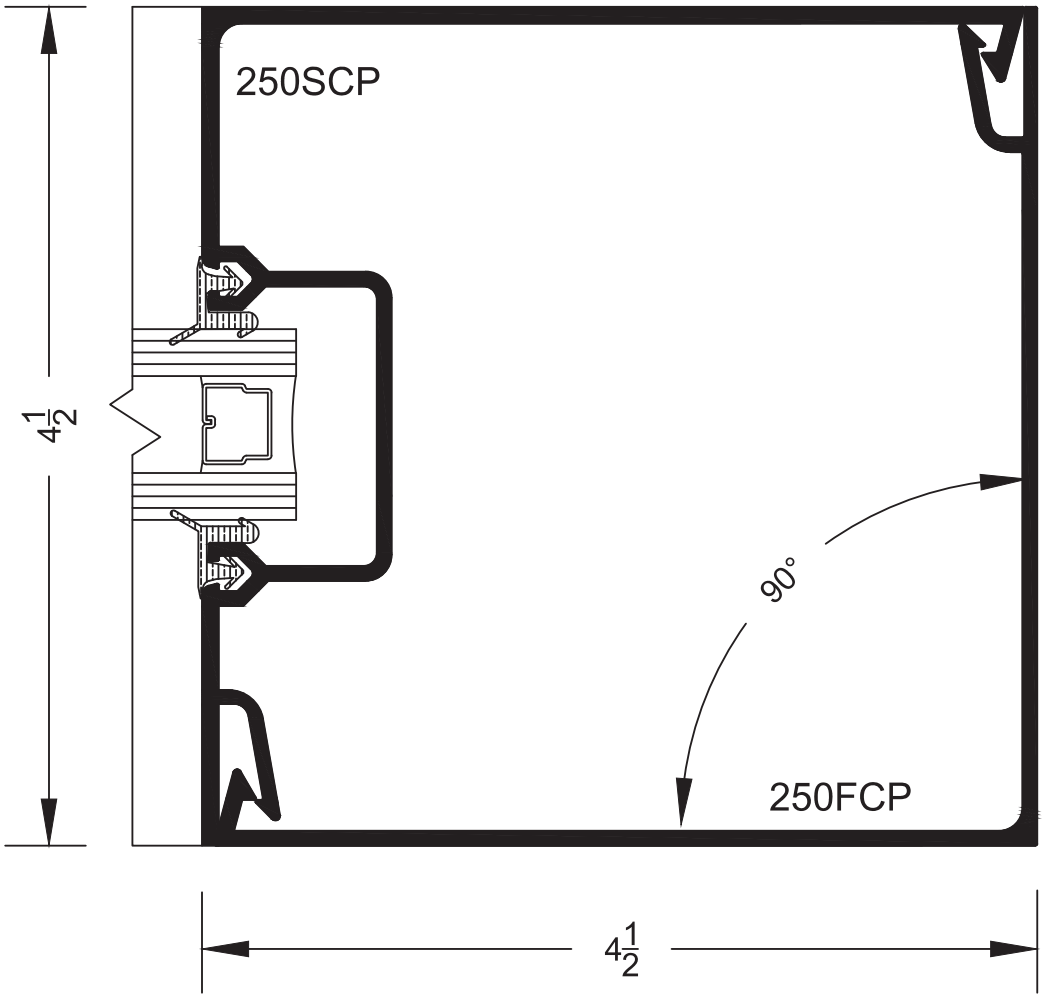
PL-250 SERIES
2" X 4-1/2"
FULL SCALE

PRL ALUMINUM



C-2

ph: (877) 775-2586
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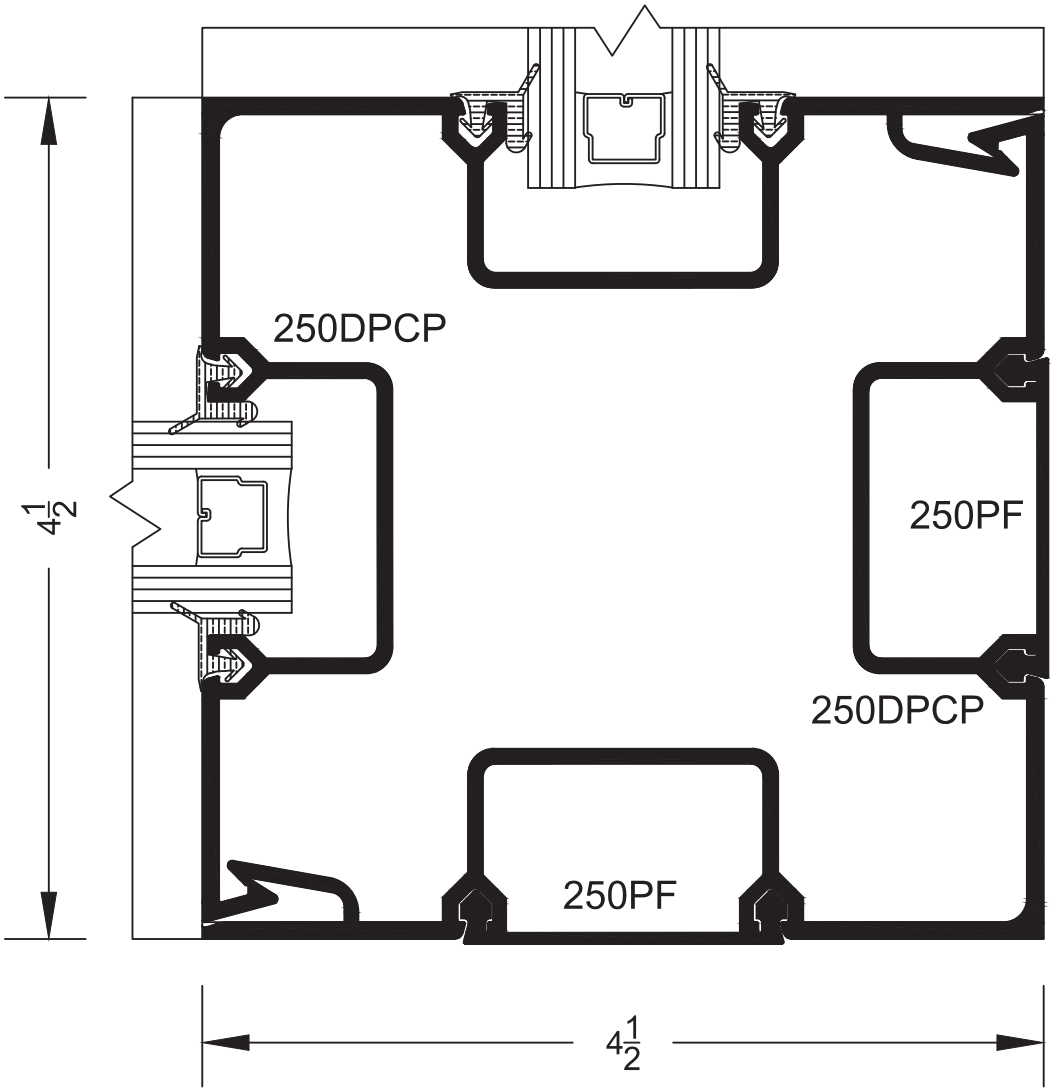
PL-250 SERIES
2" X 4-1/2"
FULL SCALE

PRL ALUMINUM



C-3

ph: (877) 775-2586
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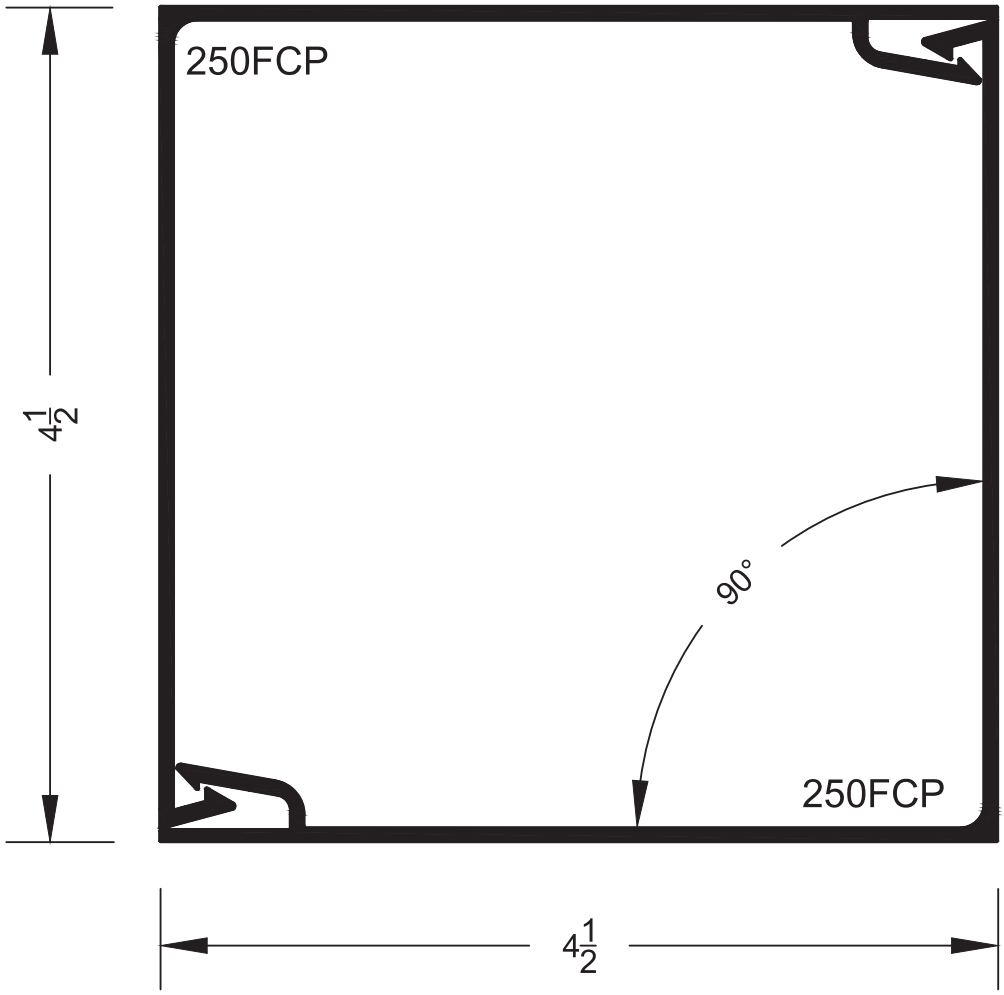
PL-250 SERIES
2" X 4-1/2"
FULL SCALE

PRL ALUMINUM



C-4

ph: (877) 775-2586
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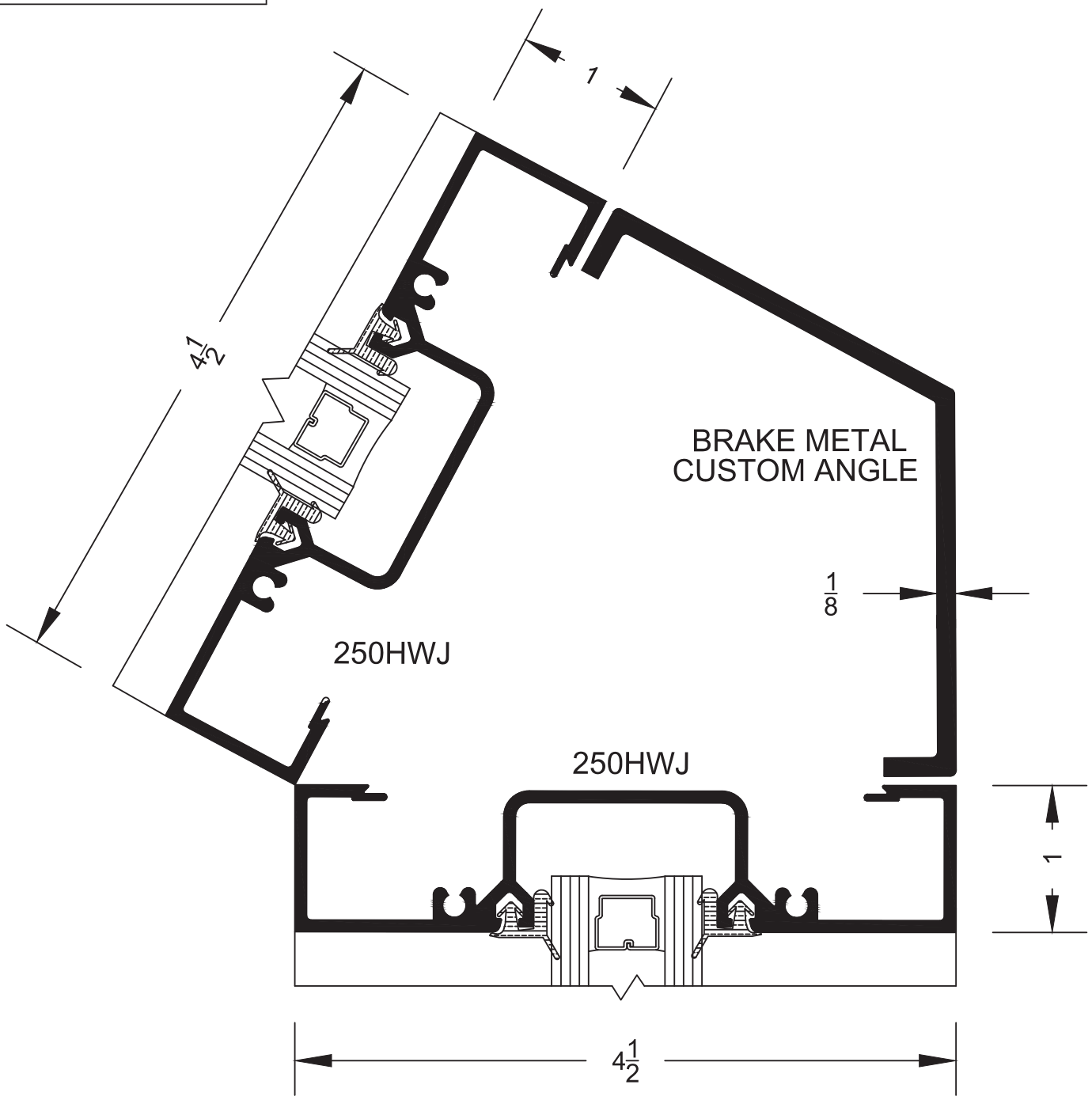
PL-250 SERIES
2" X 4-1/2"
FULL SCALE

PRL ALUMINUM



C-5

ph: (877) 775-2586
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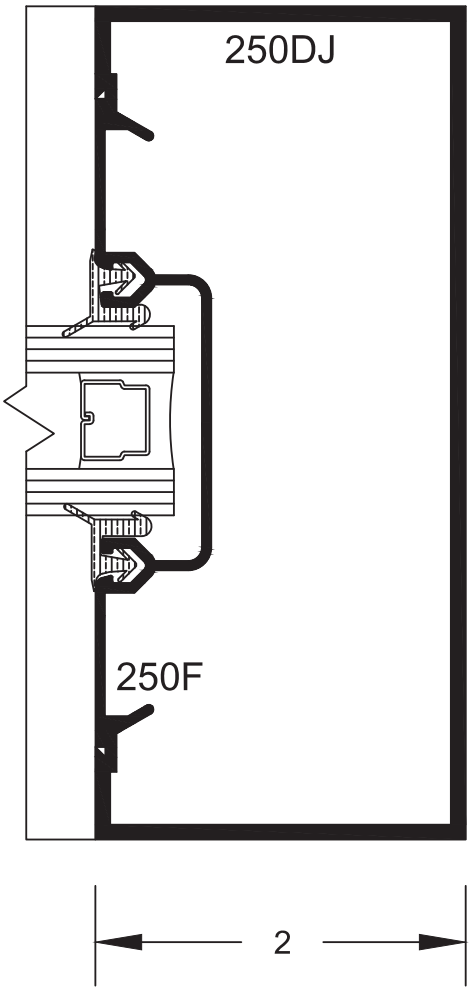
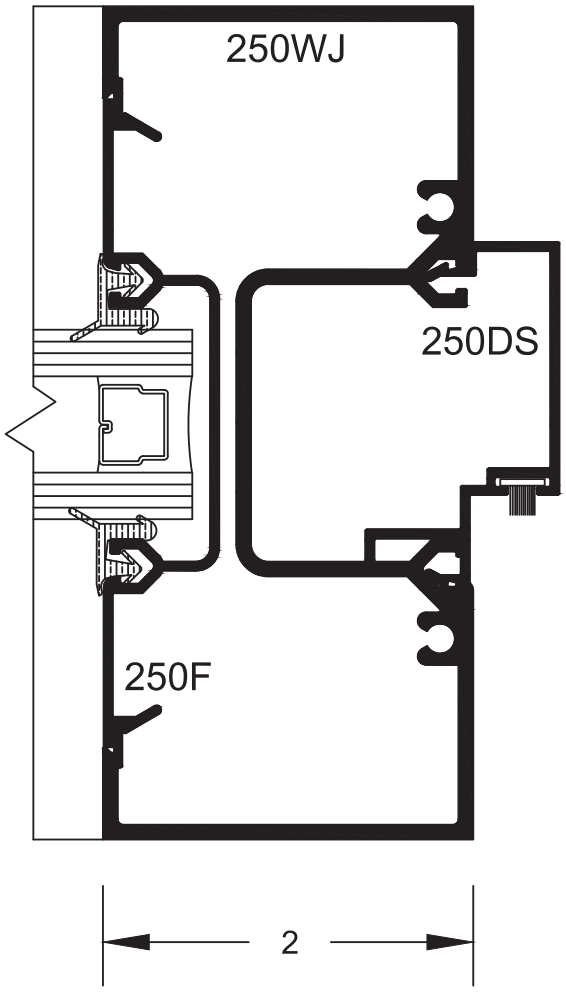
PL-250 SERIES
2" X 4-1/2"
FULL SCALE

PRL ALUMINUM





G-1

G-2

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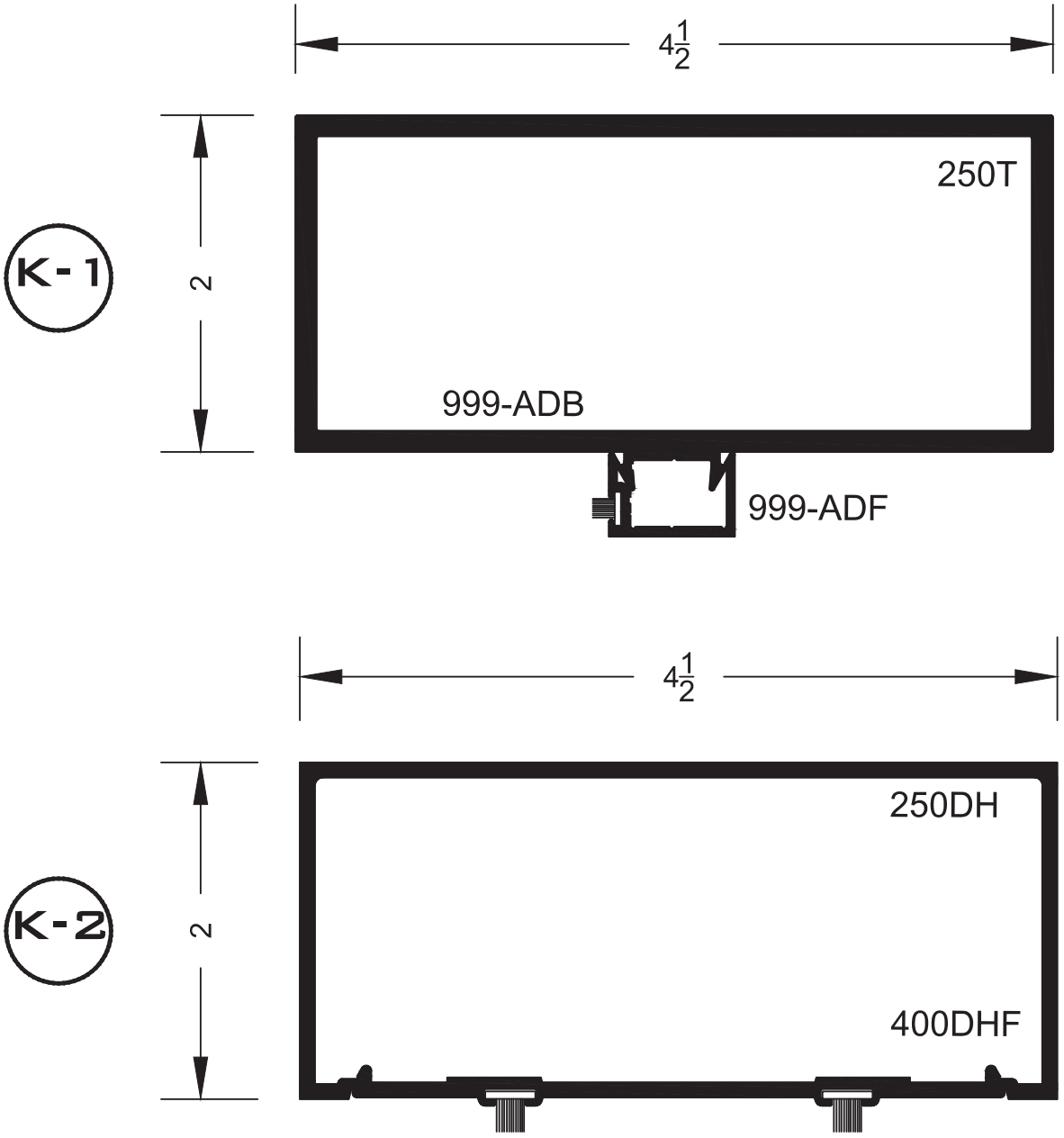
PL-250 SERIES
2" X 4-1/2"
FULL SCALE

PRL ALUMINUM



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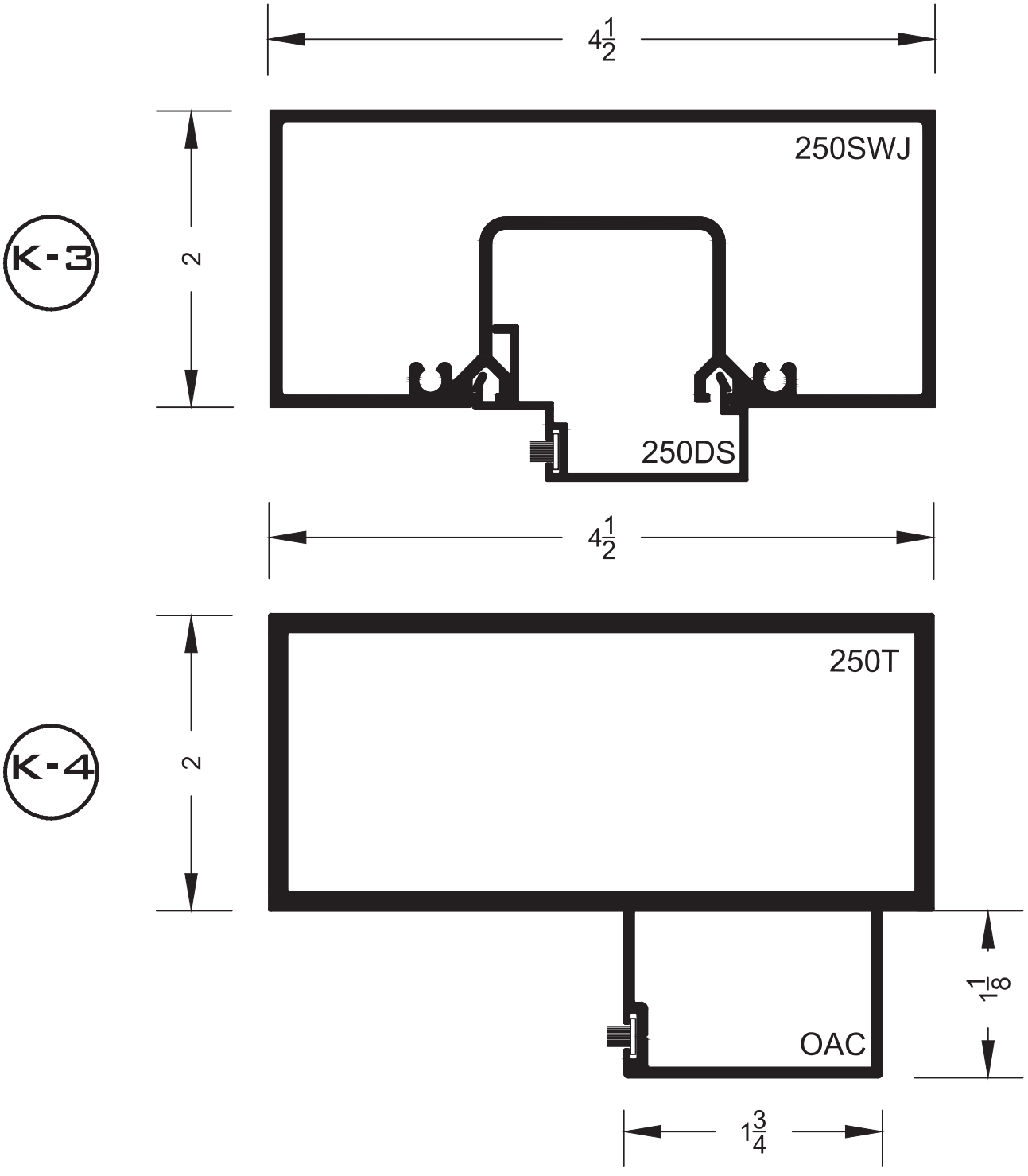
PL-250 SERIES
2" X 4-1/2"
FULL SCALE

PRL ALUMINUM



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PL-250 SERIES
2" X 4-1/2"
FULL SCALE

PRL ALUMINUM

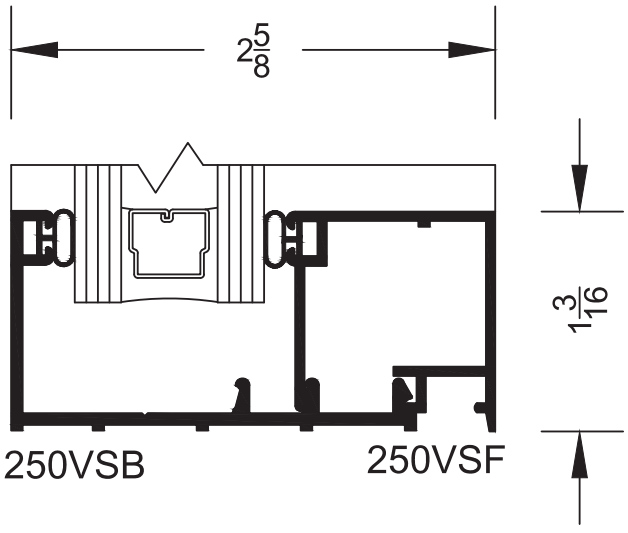
1/2" POCKET REDUCER

2501/2"PR

1/4" POCKET REDUCER

2501/4"PR

1" VINYL SASH



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PRL ALUMINUM

WIND LOAD DESIGN

GLAZING FRAMING SHALL BE DESIGNED NOT TO EXCEED L/175, RATIO CURVES SHALL REPRESENT LIMIT.

VALUES ARE BASED ON CRITERIA FOR SIMPLE BEAM UNIFORMLY LOADED

ALLOWABLE STRESSES FOR 6063-T5 ALUMINUM ALLOY = 9500 P.S.I.
ALLOWABLE STRESSES FOR A-36 STRUCTURAL STEEL = 21600 P.S.I.

MAXIMUM DEFLECTION BETWEEN SUPPORTS FOR SINGLE SPAN:

$$\triangle = \frac{5WL^3}{384EI}$$

MAXIMUM BENDING MOMENT FOR SINGLE SPAN:

$$M = \frac{WL}{8}$$

NOTATIONS REPRESENT:
W = TOTAL UNIFORM LOAD
L = LENGTH OF MULLION BETWEEN SUPPORTS
E = 10×10^6 P.S.I.
I = MOMENT OF INERTIA OF MULLION
M = BENDING MOMENT

NOTE:
MULLIONS ARE ASSUMED TO HAVE EQUAL SIZE GLASS LIGHTS EACH SIDE

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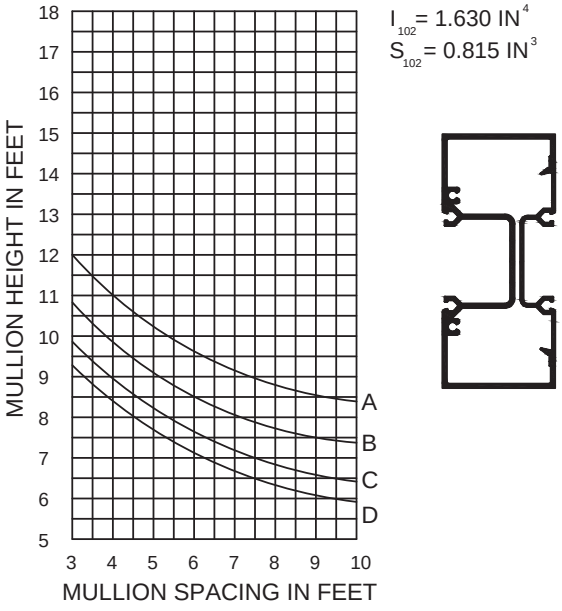
PL-250 SERIES
2" x 4-1/2"
WIND LOAD

PRL ALUMINUM

250 VERTICAL WALL JAMB WITH FILLER

I_{102} = 1.630 IN^4

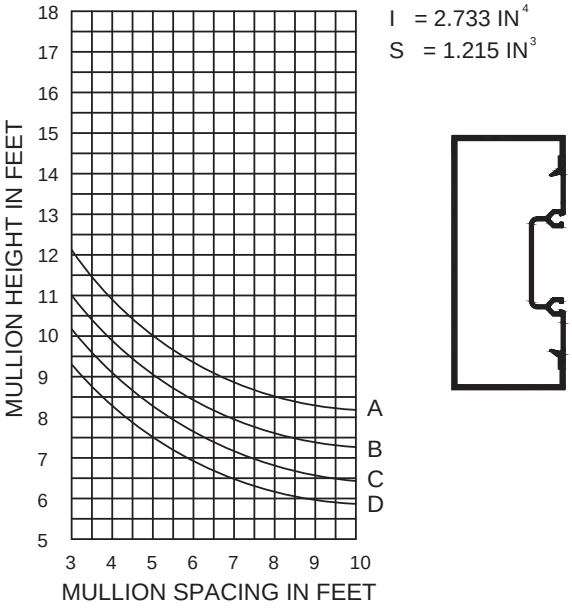
S_{102} = 0.815 IN^3



250 DOOR JAMB W/ FILLER

I = 2.733 IN^4

S = 1.215 IN^3



CURVE REPRESENTATION

A = 15 P.S.F. (75 M.P.H)

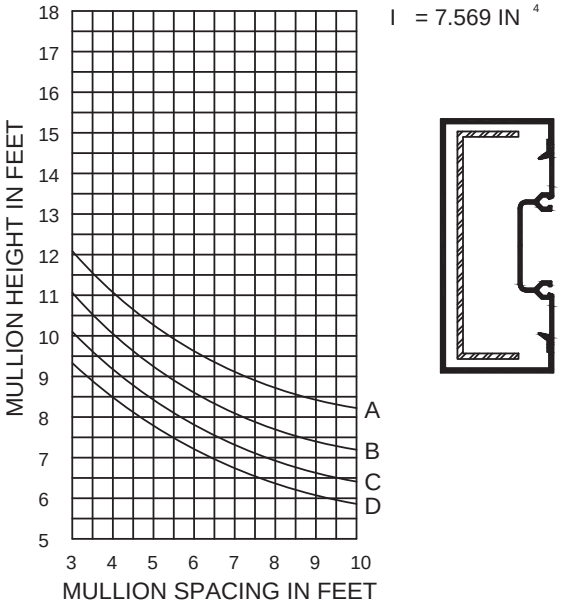
B = 20 P.S.F. (90 M.P.H)

C = 25 P.S.F. (100 M.P.H)

D = 30 P.S.F. (110 M.P.H)

250 DOOR JAMB W/ FILLER WITH STEEL REINFORCEMENT

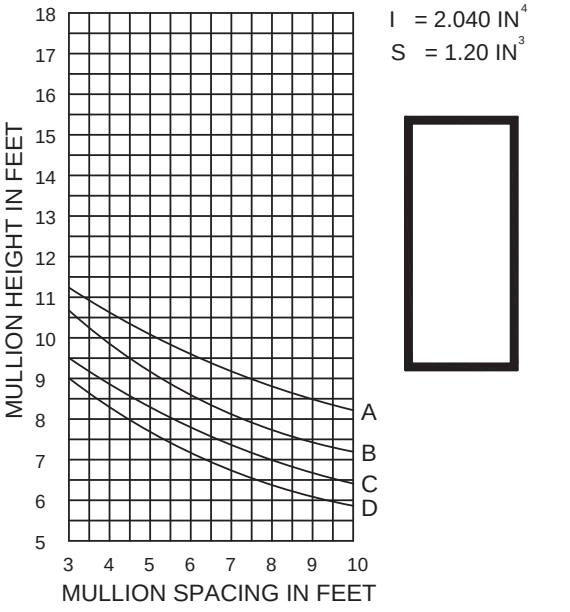
I = 7.569 IN^4



250 TUBE

I = 2.040 IN^4

S = 1.20 IN^3



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PRL ALUMINUM

DEAD LOAD DESIGN

GLAZING FRAMING SHALL BE DESIGNED NOT TO EXCEED L/360 OR 1/8" DEFLECTION WHICHEVER IS LES, RATIO CURVES SHALL REPRESENT LIMIT.

VALUES ARE BASED ON CRITERIA FOR SIMPLE BEAM UNIFORMLY LOADED.

ALLOWABLE STRESSES FOR 6063-T5 ALUMINUM ALLOY = 9500 P.S.I.
ALLOWABLE STRESSES FOR A-36 STRUCTURAL STEEL = 21600 P.S.I.

MAXIMUM DEFLECTION BETWEEN SUPPORTS FOR SINGLE SPAN:

$$\triangle = \frac{Pa}{24EI}(3L^2 - 4a^2)$$

MAXIMUM BENDING MOMENT FOR SINGLE SPAN:

$$M = Pa$$

NOTATIONS REPRESENT:
P = 1/2 GLASS LOAD
a = 1/4 OR 1/8 POINT OF SPAN (INCHES)
E = 10×10^6 P.S.I.
I = MOMENT OF INERTIA OF MULLION
L = LENGTH HORIZONTAL SPAN

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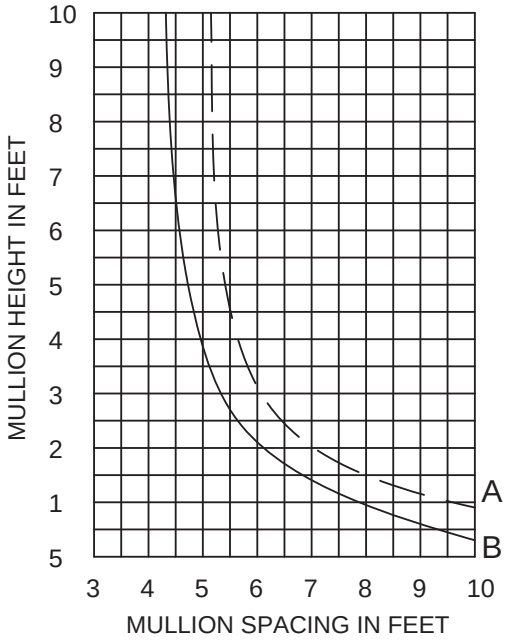
PL-250 SERIES
2" x 4-1/2"
DEAD LOAD CHART

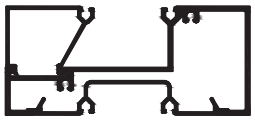
PRL ALUMINUM

250 HORZONTAL MULLION



$I = 0.330\ IN^4$
$S = 0.329\ IN^3$

MAX ALLOW DEFLECTION L/360
OR 1/8" WHICHEVER IS LESS



CURVE REPRESENTATION

(A) (— — — —) = 1/8 PTS. OR A MINIMUN OF 8" AWAY FROM THE EDGE OF GLASS

(B) (————) = 1/4 PTS. A MINIMUN OF 8" AWAY FROM THE EDGE OF GLASS

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14760 Don Julian Rd.
Industry, CA 91746
www.prlaluminum.com
sales@prlaluminum.com

251 SERIES

2” x 4 1/2”

SECTION

251 SERIES

2” x 4 1/2”

SECTION

ALUMINUM STOREFRONTS
PL-251 SERIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum storefronts.

1.2 REFERENCES

A. ASTM International (ASTM):
1. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
2. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.
3. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
4. ASTM E 331 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

1.3 SUBMITTALS

A. Submit under provisions of applicable Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

C. Shop Drawings: Configuration and details for installation, maintenance and operation.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
1. Finish areas designated by Architect.
2. Do not proceed with remaining work until workmanship is approved by Architect.
3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS

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A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email: request; Web:prlglass.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 ALUMINUM STOREFRONT

A. Product: Aluminum Storefront Series as manufactured by PRL Glass Systems, Inc.

B. Design:
1. Framing sections shall be extruded from 6063-T5 aluminum alloy.
2. Glazing beads shall be NS (non-stretch, high-shore) vinyl used on both sides of the glass. Vinyl shall incorporate a fiberglass cord bonded with the vinyl.
3. Sections shall conform to details and shall present clean, straight, sharply defined lines, and shall be free from defects impairing strength or durability.
4. Screws, nuts, bolts and fastening devices and internal components shall be of aluminum, stainless steel or other non-corrosive material.
5. Factory preparation from detail drawings shall be so fabricated that field assembly will be able to produce accurate, tightly fitted joints.

C. 251-Series (2 X 4-1/2 Offset Glaze for 1 Glazing) :
1. Performance: (Test sample of 10 feet (3048 mm) wide by 10 feet (3048 mm) high - 3 lites wide by 2 lites high).
   a. Air infiltration: Limit air leakage through fixed glazing and frames to 0.039 cfm/ft^2/min when tested in accordance with ASTM E-283 at a cross pressure of 6.24 psf (0.30 kPa).
   b. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 6 psf (0.29 kPa) when tested in accordance with ASTM-E331-00.
   c. Uniform Load Structural per ASTM E 330: Limit deflection to L/175.

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1) Passed at Design Pressure of 20 psf (0.96 kPa).

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL

A. All joints between metal and masonry shall be fully caulked and field tested to resist water leakage with provisions taken to drain infiltrated water.

3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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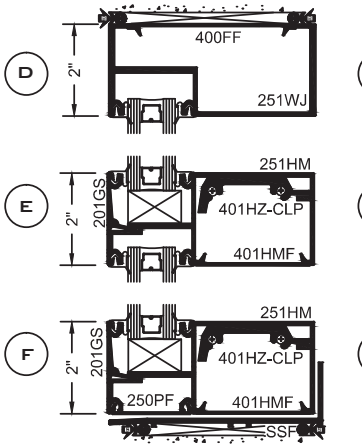
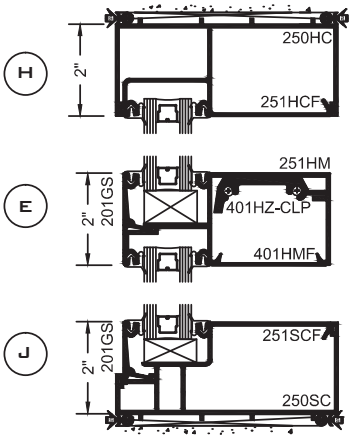
PL-251 SERIES
2" X 4-1/2"
FULL SCALE

PRL ALUMINUM

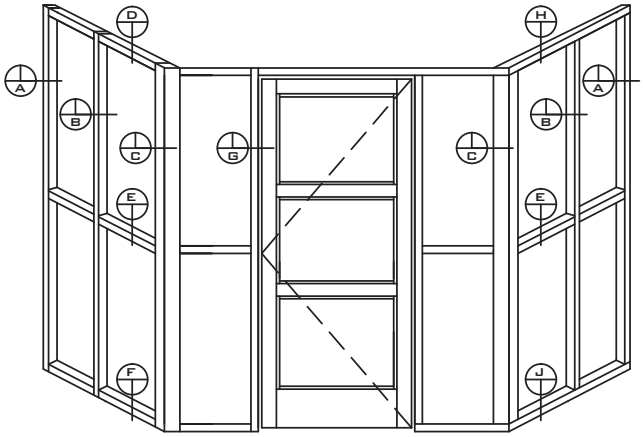
SCREW RACE

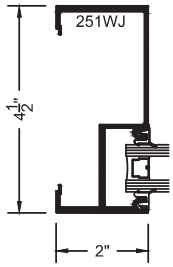


QUICK SET



SCREW RACE QUICK SET





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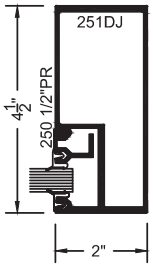
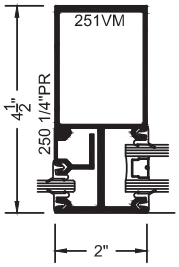
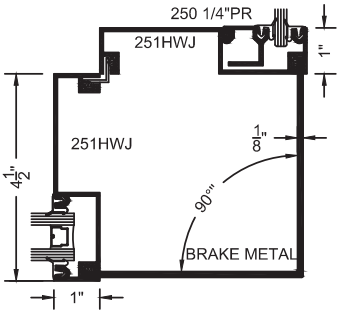


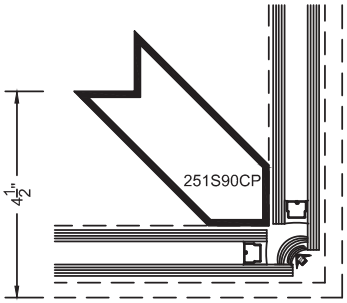
A-2



B-1



C-1



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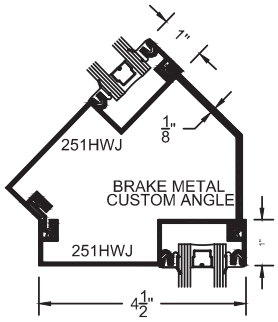

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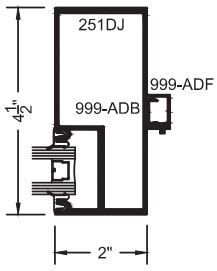

G-1

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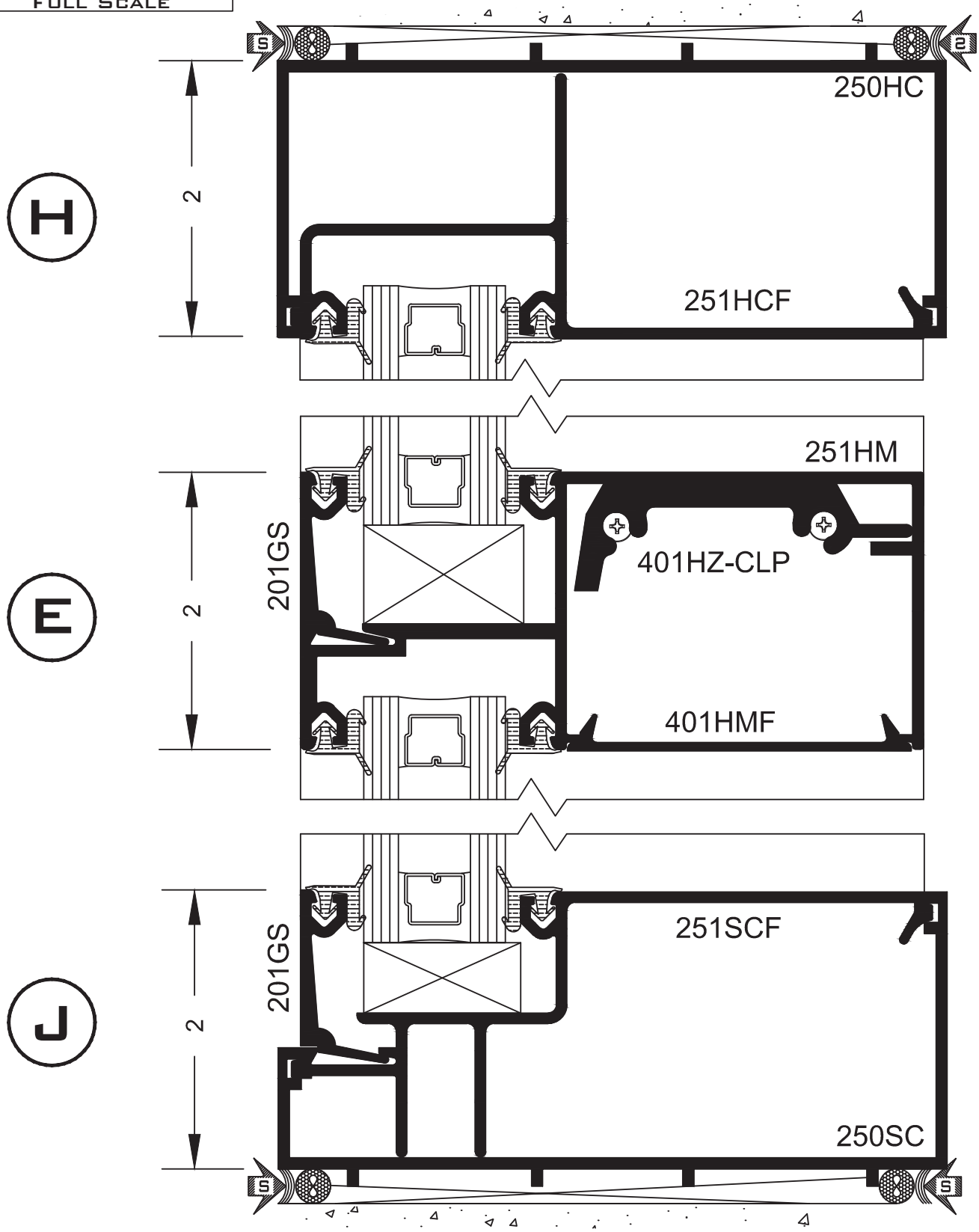
PL-251 SERIES
2" X 4-1/2"
FULL SCALE

QUICK SET

PRL ALUMINUM



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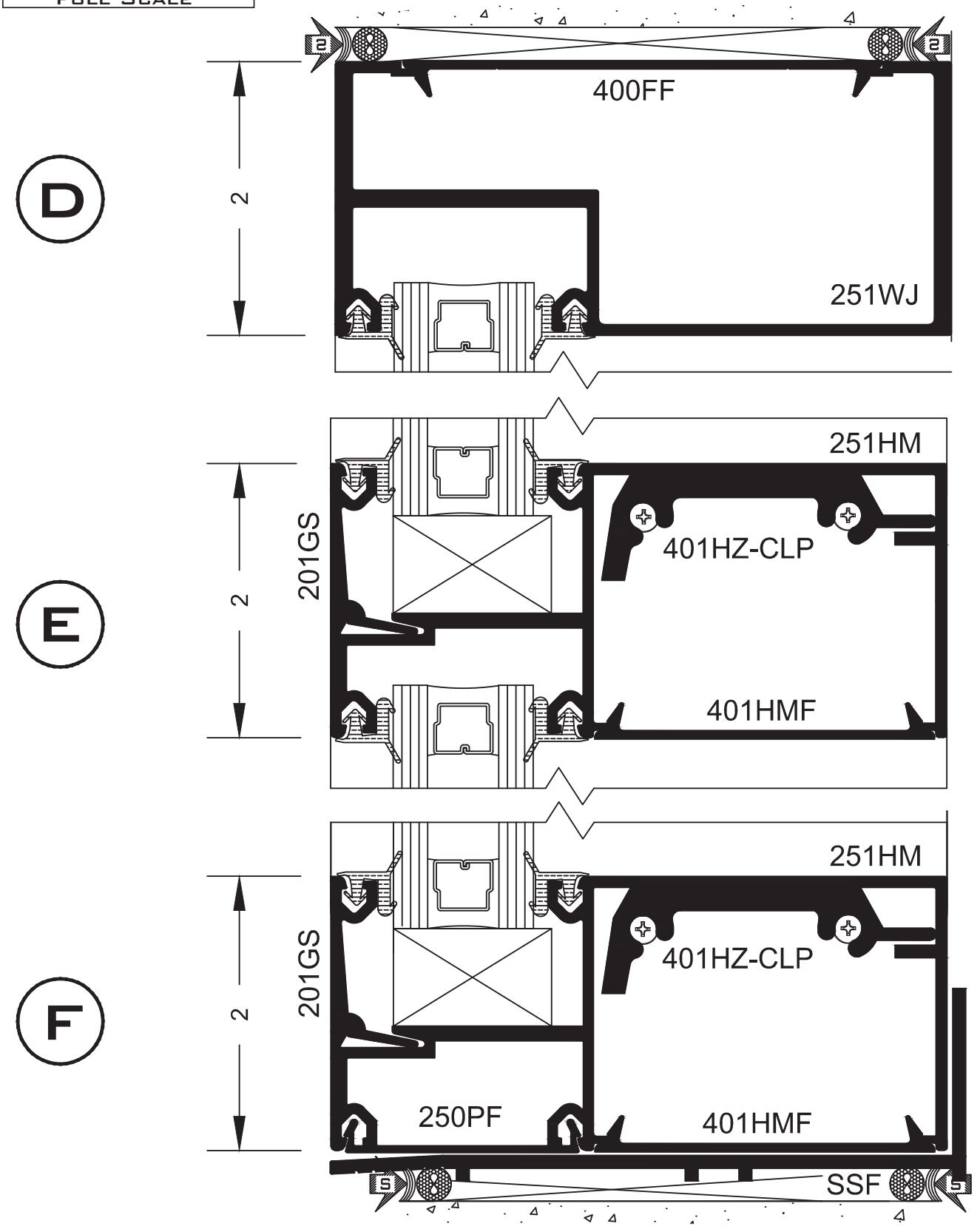
PL-251 SERIES
2" X 4-1/2"
FULL SCALE

SCREW RACE

PRL ALUMINUM



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PL-251 SERIES
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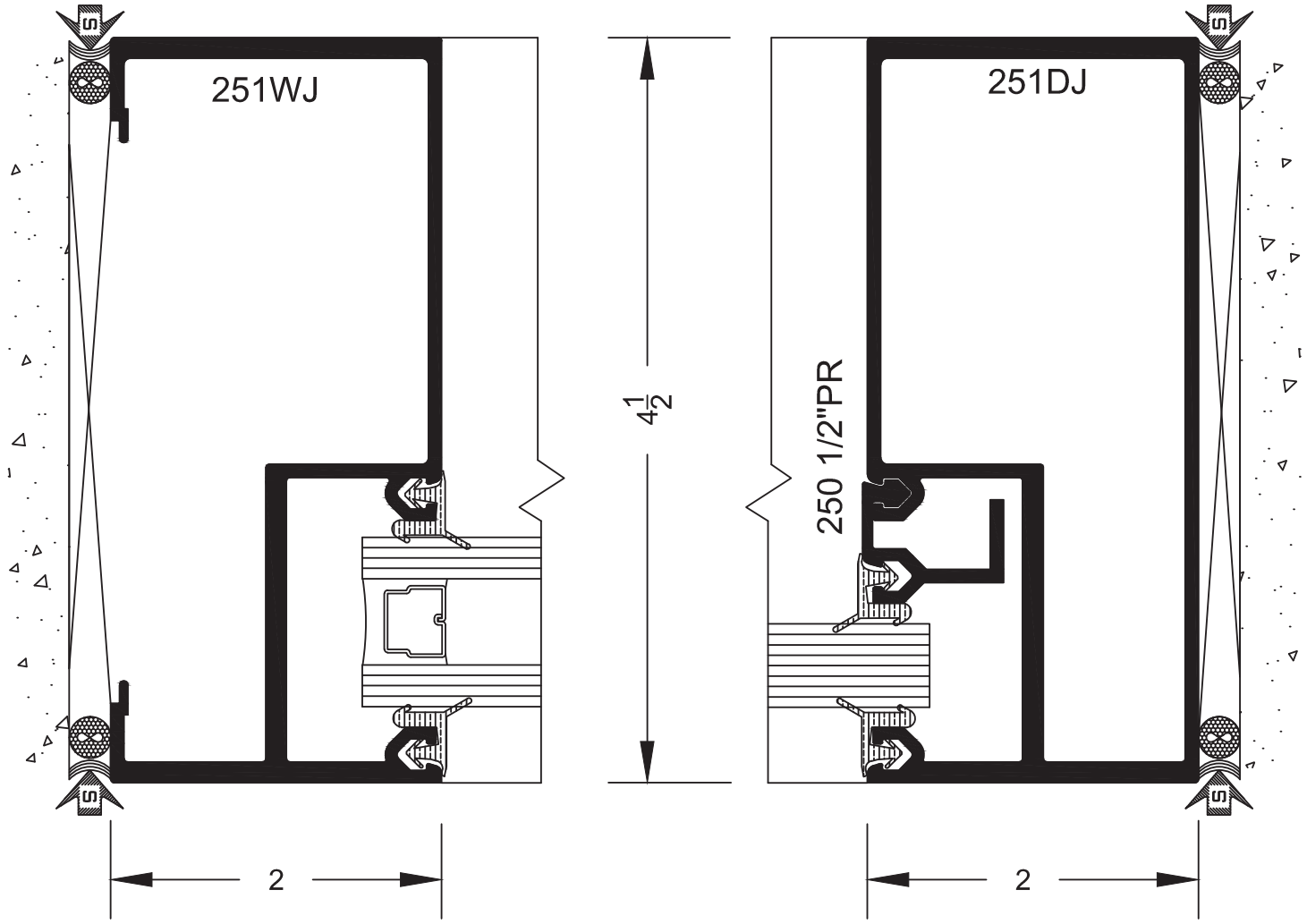
FULL SCALE

PRL ALUMINUM



A-1

A-2

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PL-251 SERIES
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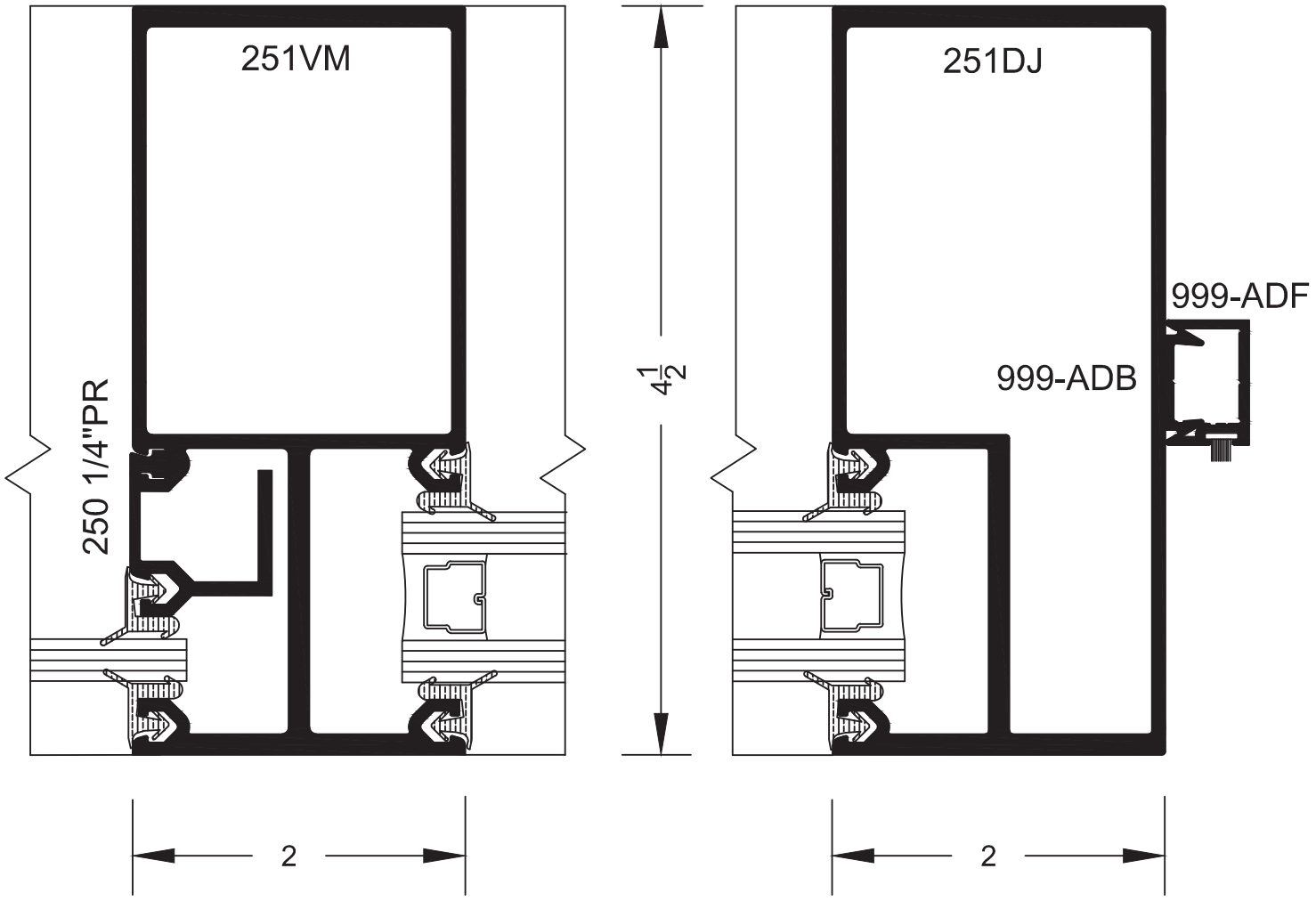
FULL SCALE

PRL ALUMINUM



B-1

G-1

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PL-251 SERIES
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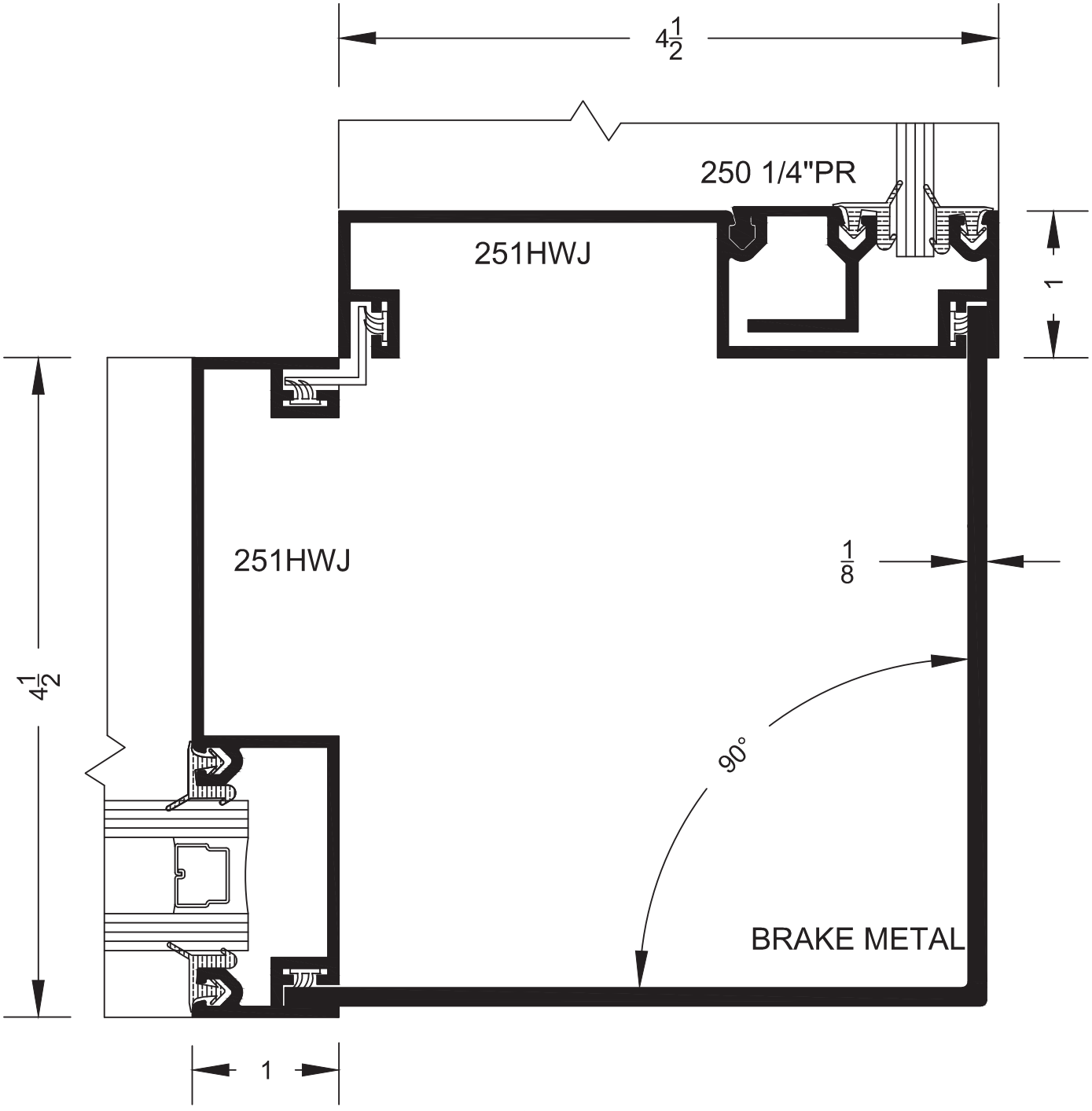
FULL SCALE

PRL ALUMINUM



C-1

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PL-251 SERIES
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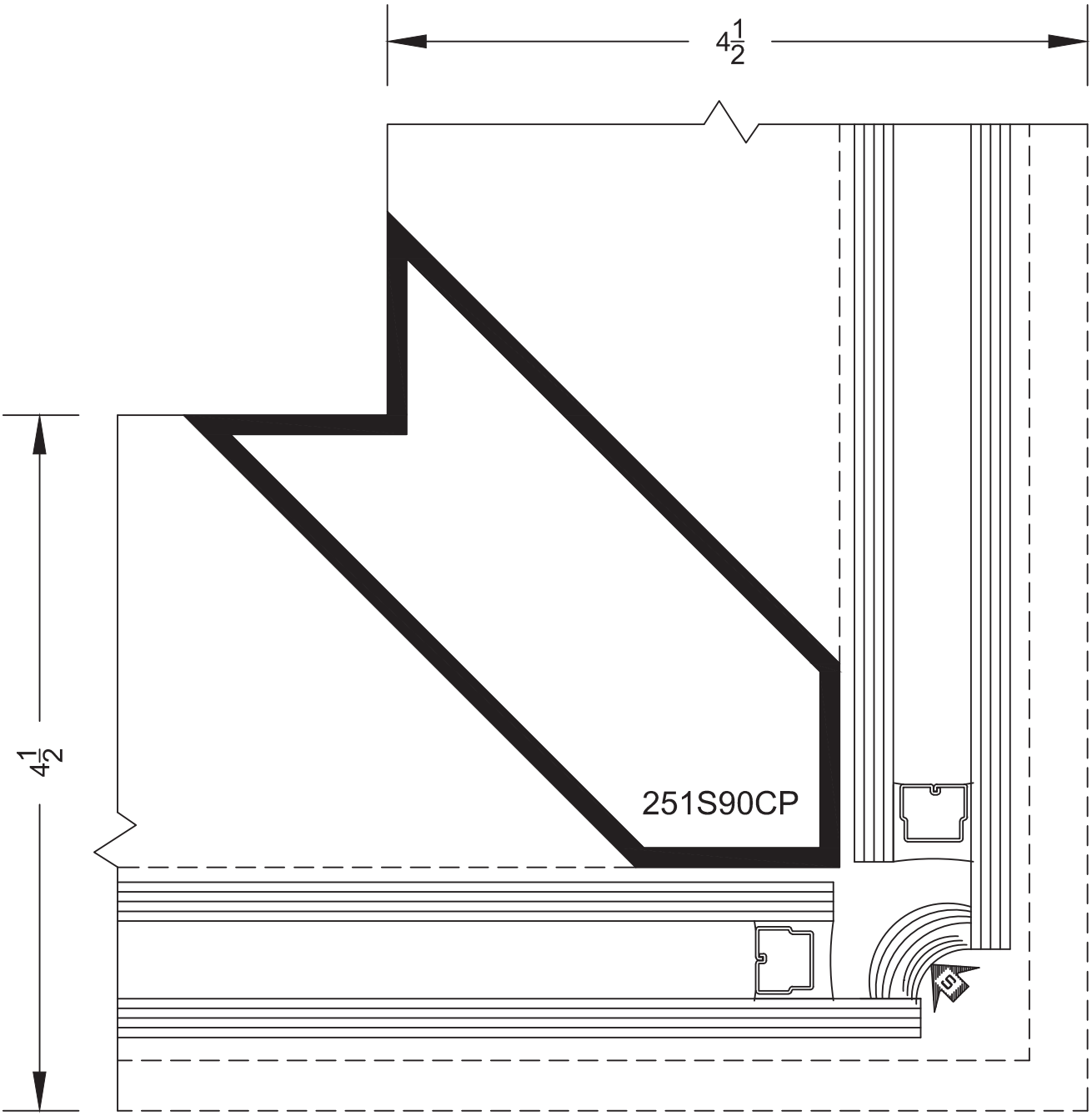
FULL SCALE

PRL ALUMINUM



C-2

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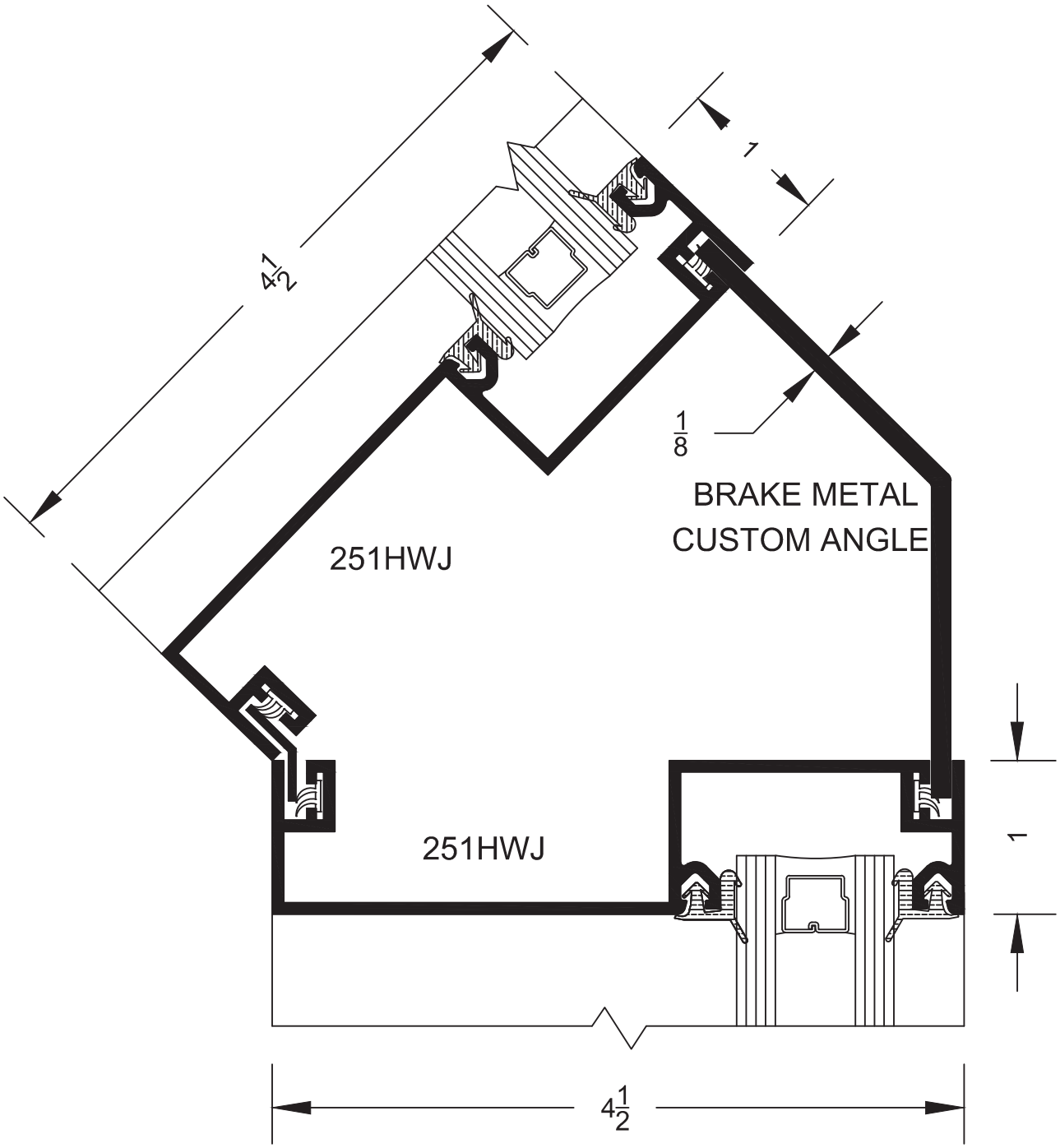
PL-251 SERIES
2" X 4-1/2"
FULL SCALE

PRL ALUMINUM



C-3

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PRL ALUMINUM

WIND LOAD DESIGN

GLAZING FRAMING SHALL BE DESIGNED NOT TO EXCEED L/175, RATIO CURVES SHALL REPRESENT LIMIT.

VALUES ARE BASED ON CRITERIA FOR SIMPLE BEAM UNIFORMLY LOADED.

ALLOWABLE STRESSES FOR 6063-T5 ALUMINUM ALLOY = 9500 P.S.I.
ALLOWABLE STRESSES FOR A-36 STRUCTURAL STEEL = 21600 P.S.I.

MAXIMUM DEFLECTION BETWEEN SUPPORTS FOR SINGLE SPAN:

$$\Delta = \frac{5WL^3}{384EI}$$

MAXIMUM BENDING MOMENT FOR SINGLE SPAN:

$$M = \frac{WL}{8}$$

NOTATIONS REPRESENT:
W = TOTAL UNIFORM LOAD
L = LENGTH OF MULLION BETWEEN SUPPORTS
E = 10×10^6 P.S.I.
I = MOMENT OF INERTIA OF MULLION
M = BENDING MOMENT

NOTE:
MULLIONS ARE ASSUMED TO HAVE EQUAL SIZE GLASS LIGHTS EACH SIDE

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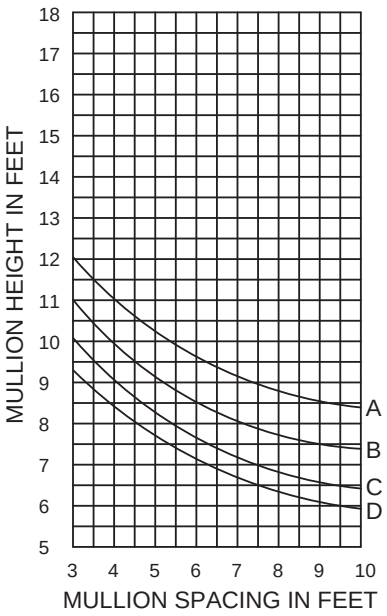
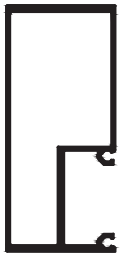
PL-251 SERIES
2" x 4-1/2"
WIND LOAD

PRL ALUMINUM

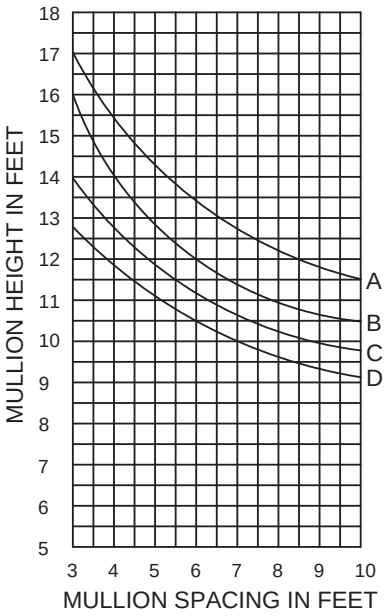
251 SOLID WALL JAMB



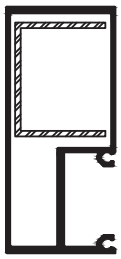
I = 2.671 IN^4
S = 1.229 IN^3



251 SOLID WALL JAMB
WITH STEEL REINFORCEMENT

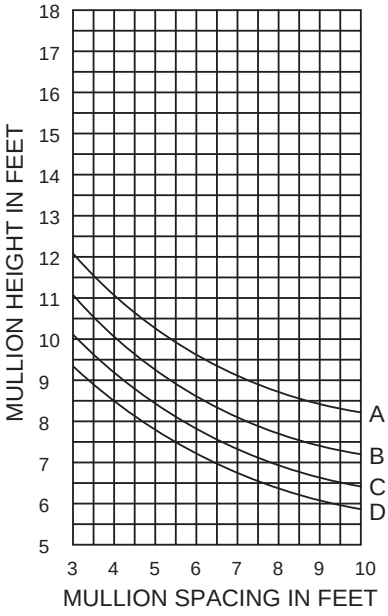


I = 5.941 IN^4
S = 2.617 IN^3

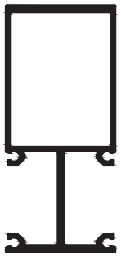


CURVE REPRESENTATION
A = 15 P.S.F. (75 M.P.H)
B = 20 P.S.F. (90 M.P.H)
C = 25 P.S.F. (100 M.P.H)
D = 30 P.S.F. (110 M.P.H)

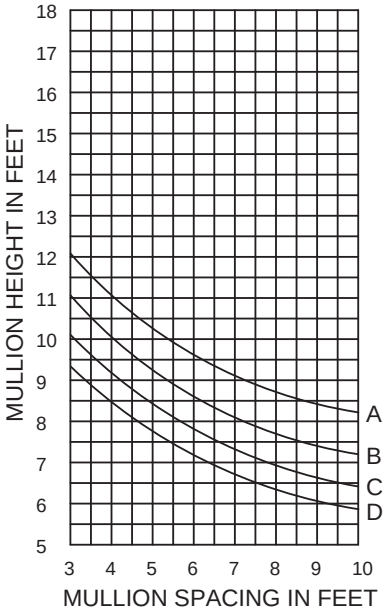
251 VERTICAL MULLION



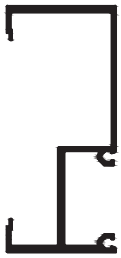
I = 2.671 IN^4
S = 1.229 IN^3



251 VERTICAL WALL JAMB



I = 2.671 IN^4
S = 1.229 IN^3



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www.prlaluminum.com
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400 SERIES

1 3/4” x 4”

SECTION

400 SERIES

1 3/4” x 4”

SECTION

ALUMINUM STOREFRONTS
PL-400 SERIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum storefronts.

1.2 REFERENCES

A. ASTM International (ASTM):
1. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
2. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.
3. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
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1.3 SUBMITTALS

A. Submit under provisions of applicable Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

C. Shop Drawings: Configuration and details for installation, maintenance and operation.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
1. Finish areas designated by Architect.
2. Do not proceed with remaining work until workmanship is approved by Architect.
3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS

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A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email: request; Web:prlglass.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 ALUMINUM STOREFRONT

A. Product: Aluminum Storefront Series as manufactured by PRL Glass Systems, Inc.

B. Design:
1. Framing sections shall be extruded from 6063-T5 aluminum alloy.
2. Glazing beads shall be NS (non-stretch, high-shore) vinyl used on both sides of the glass. Vinyl shall incorporate a fiberglass cord bonded with the vinyl.
3. Sections shall conform to details and shall present clean, straight, sharply defined lines, and shall be free from defects impairing strength or durability.
4. Screws, nuts, bolts and fastening devices and internal components shall be of aluminum, stainless steel or other non-corrosive material.
5. Factory preparation from detail drawings shall be so fabricated that field assembly will be able to produce accurate, tightly fitted joints.

C. 400-Series (1-3/4 X 4 Center Glaze For 1/4 Glazing):
1. Performance: (Test sample of 10 feet (3048 mm) wide by 10 feet (3048 mm) high - 3 lites wide by 2 lites high).
   a. Air infiltration: Limit air leakage through fixed glazing and frames to 0.041 cfm/ft^2/min when tested in accordance with ASTM E-283 at a cross pressure of 6.24 psf (0.30 kPa)
   b. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 6 psf (0.29 kPa) when tested in accordance with ASTM-E331-00.
   c. Uniform Load Structural per ASTM E 330: Limit deflection to L/175.

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1) Passed at Design Pressure of 20 psf (0.96 kPa).

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL

A. All joints between metal and masonry shall be fully caulked and field tested to resist water leakage with provisions taken to drain infiltrated water.

3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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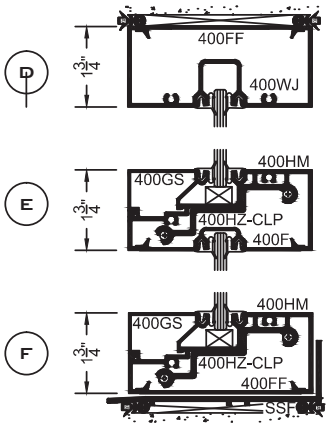
PL-400 SERIES
1-3/4" X 4"
1/4" CENTER GLAZED

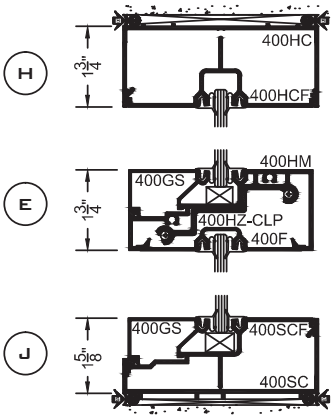
PL-400 SERIES
STOREFRONT MATERIAL

PRL ALUMINUM

SCREW RACE

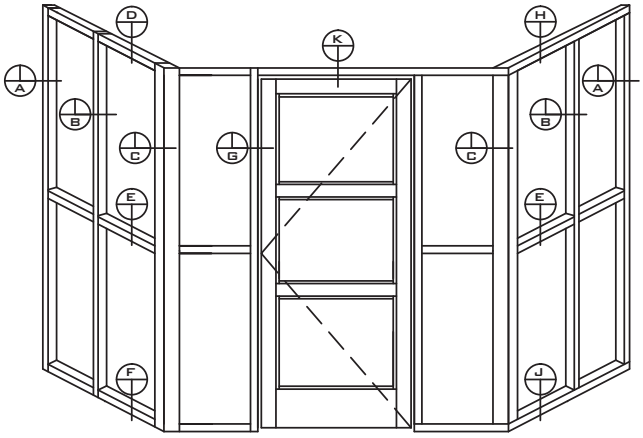


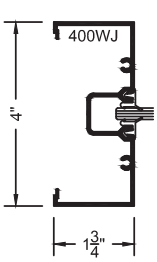
QUICK SET



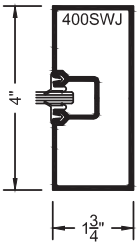
SCREW RACE

QUICK SET





A-1



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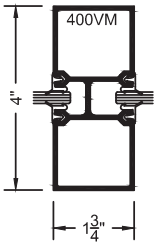

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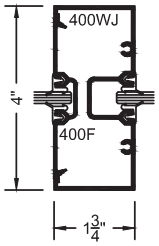

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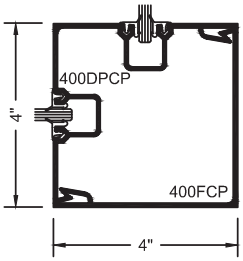

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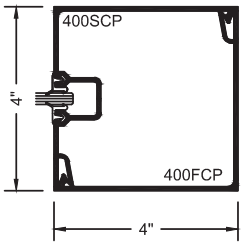

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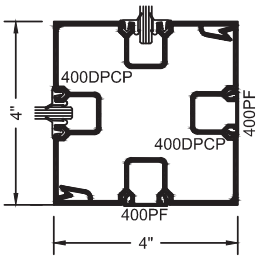

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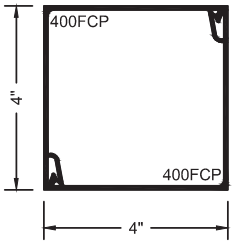

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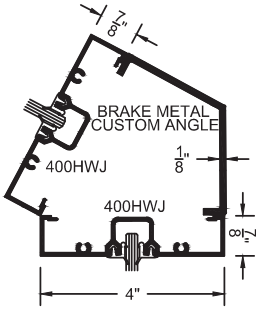

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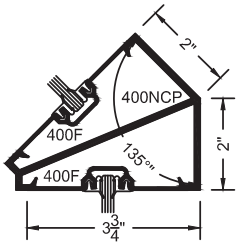

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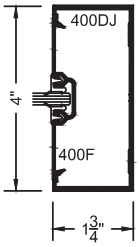

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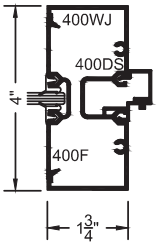

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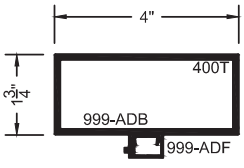
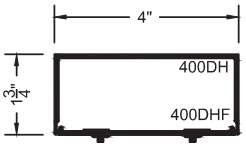


K-1



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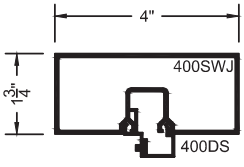

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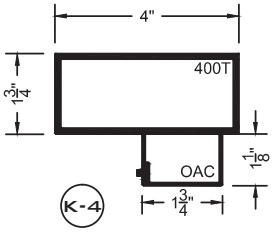

K-4

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PL-400 SERIES
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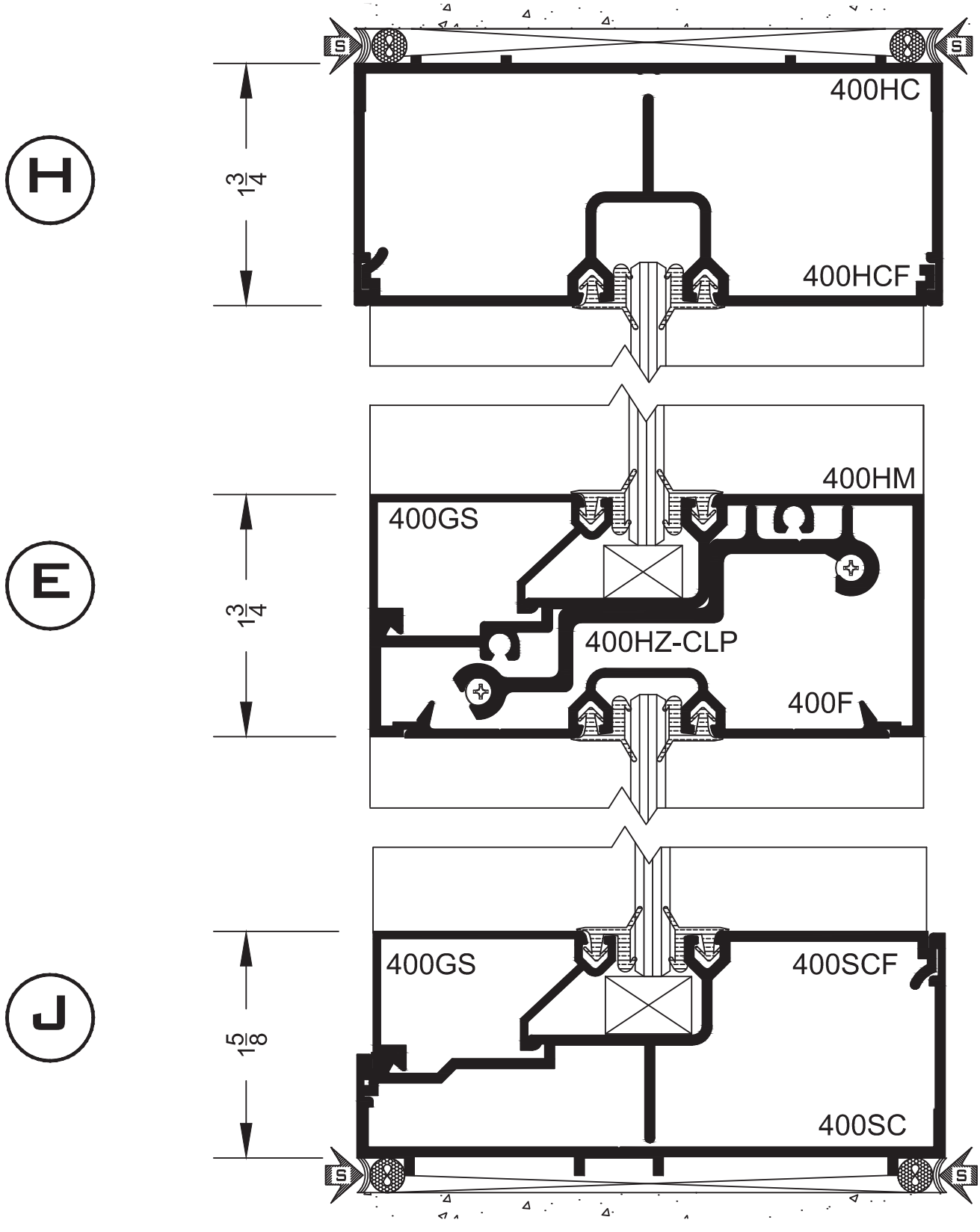
FULL SCALE

QUICK SET

PRL ALUMINUM



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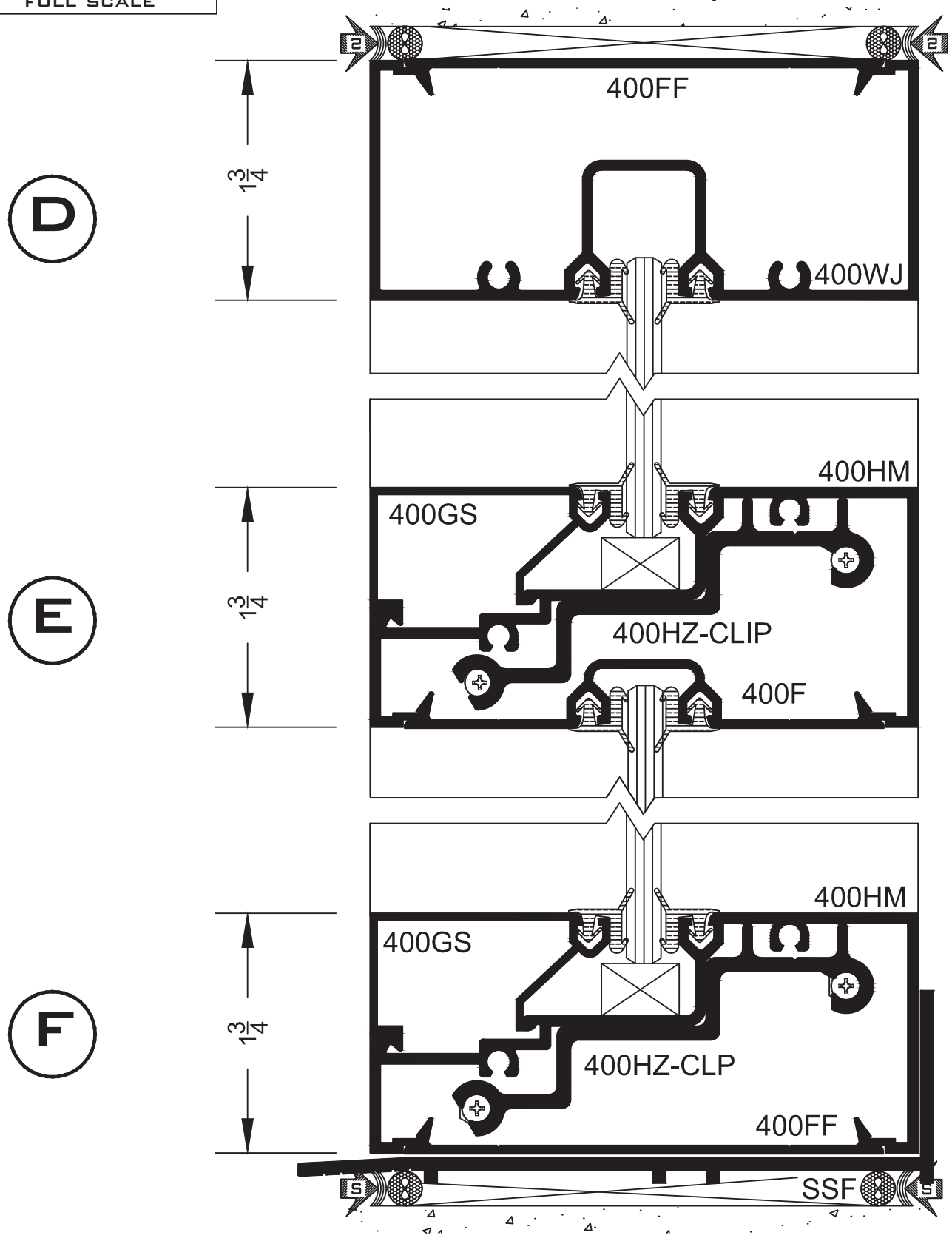
SCREW RACE

PRL ALUMINUM



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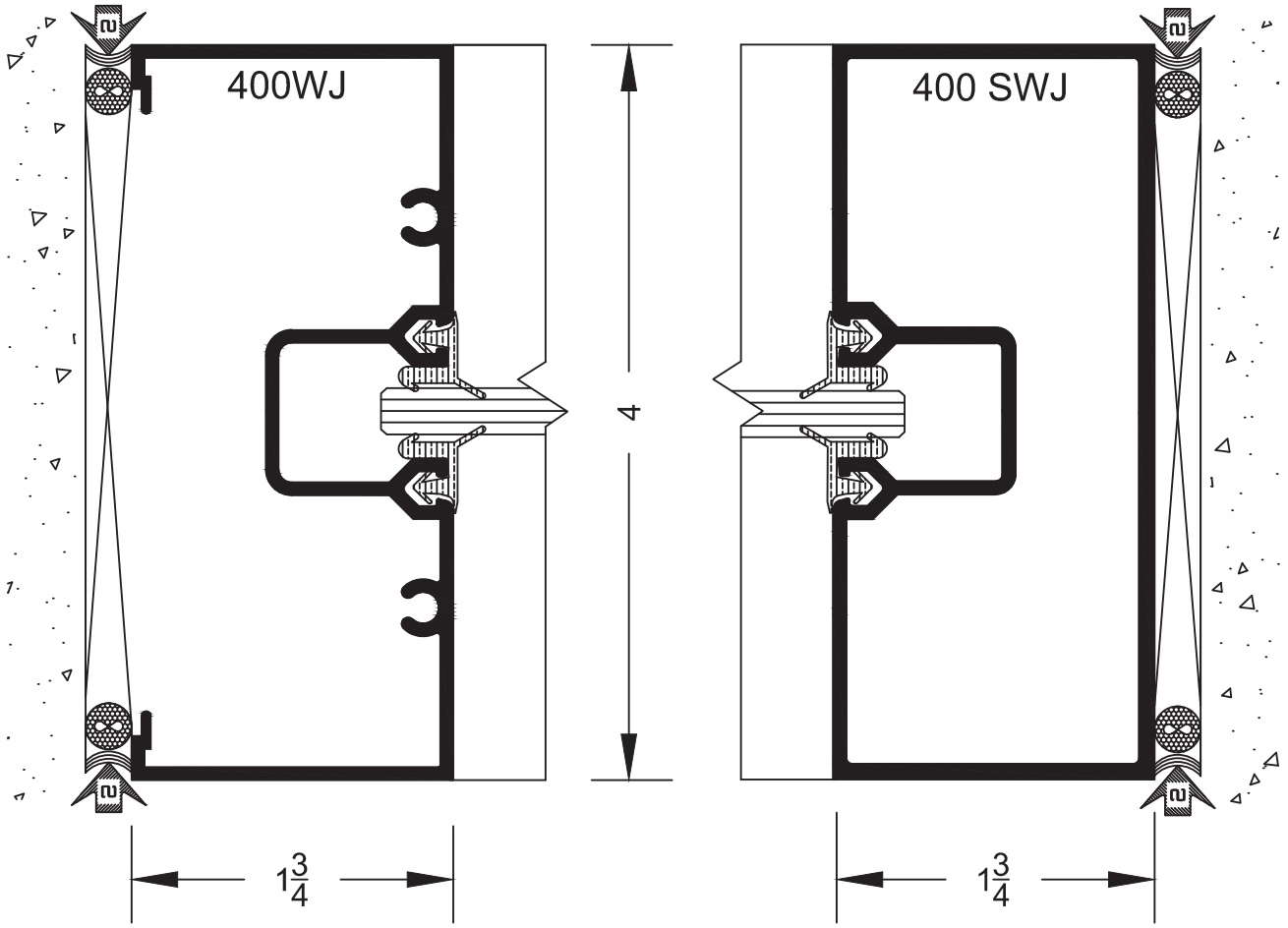

A-1

A-2

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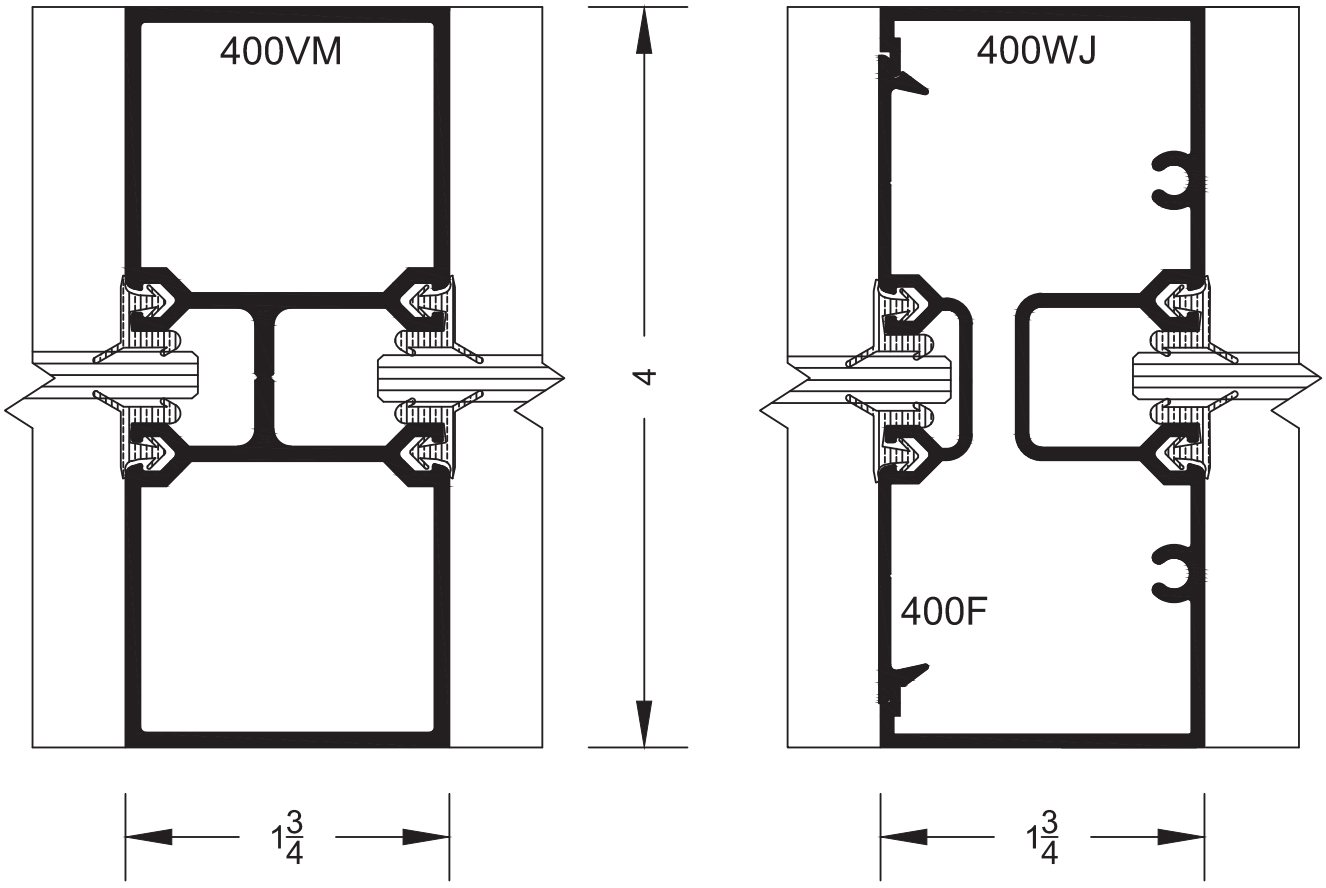

B-1

B-2

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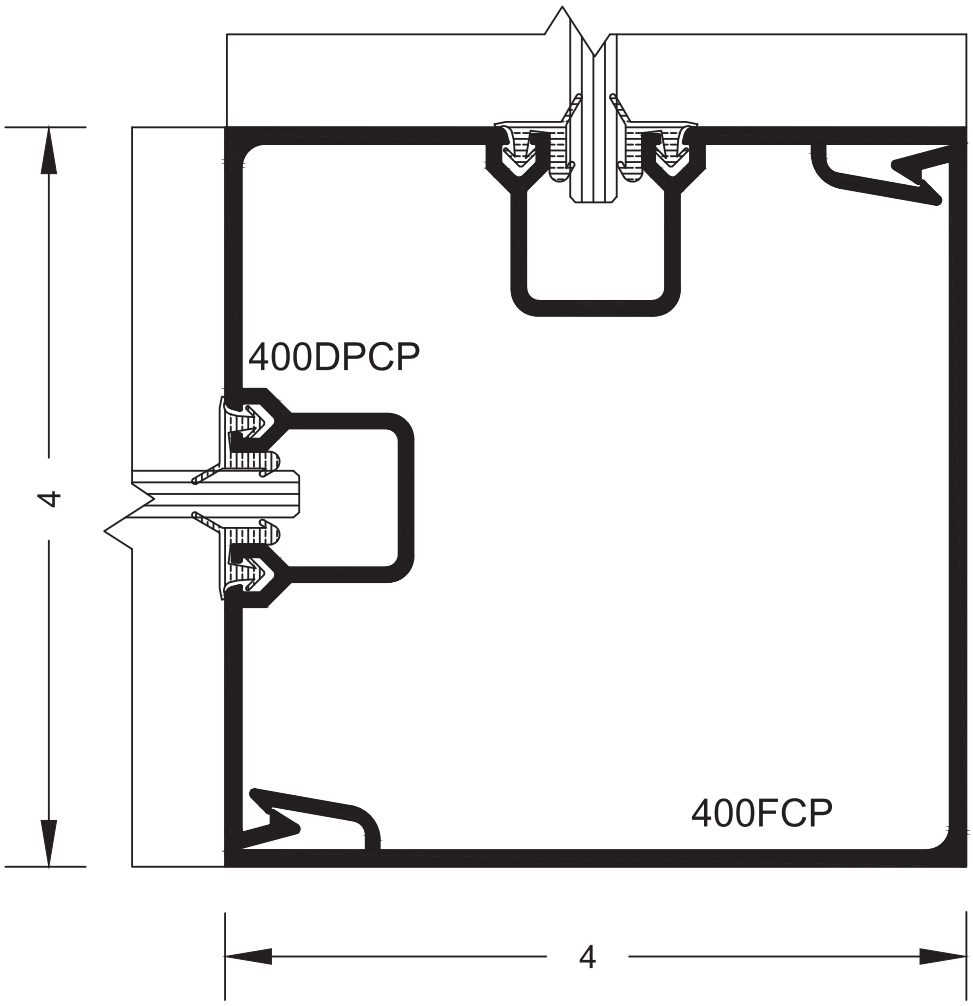

C-1

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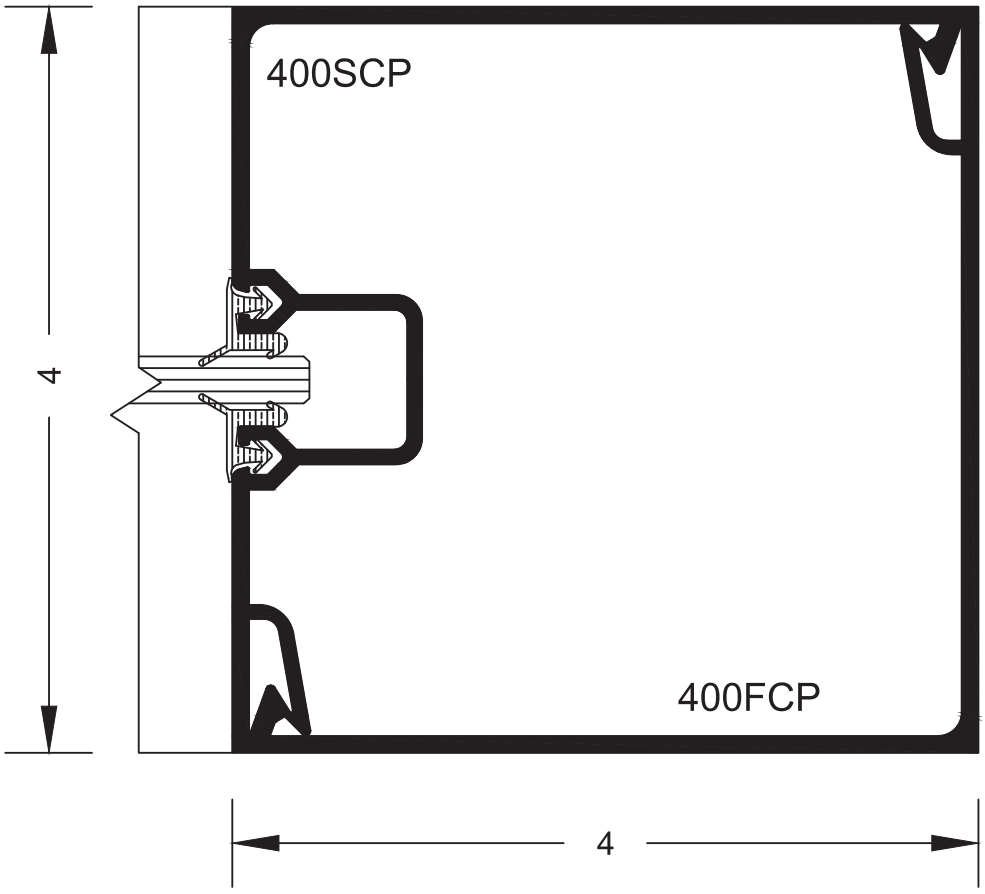
PRL ALUMINUM



C-2

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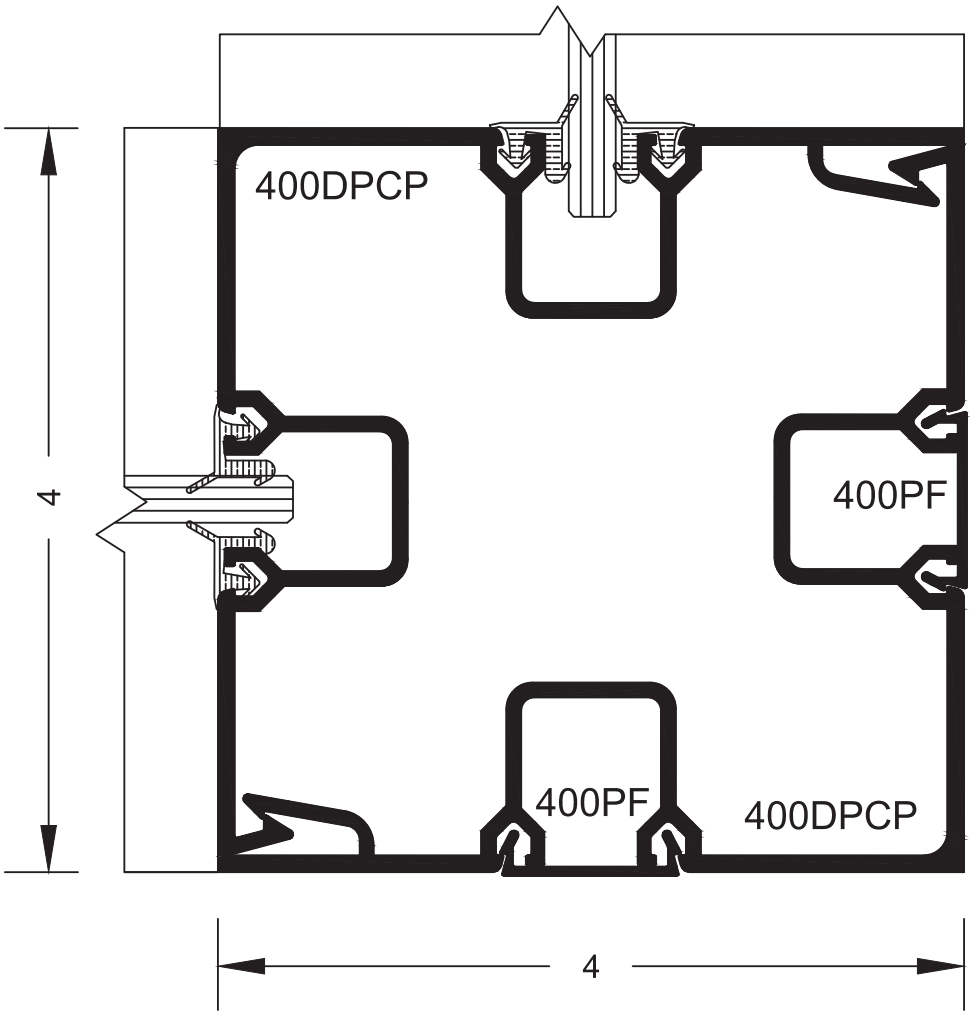
PRL ALUMINUM



C-3

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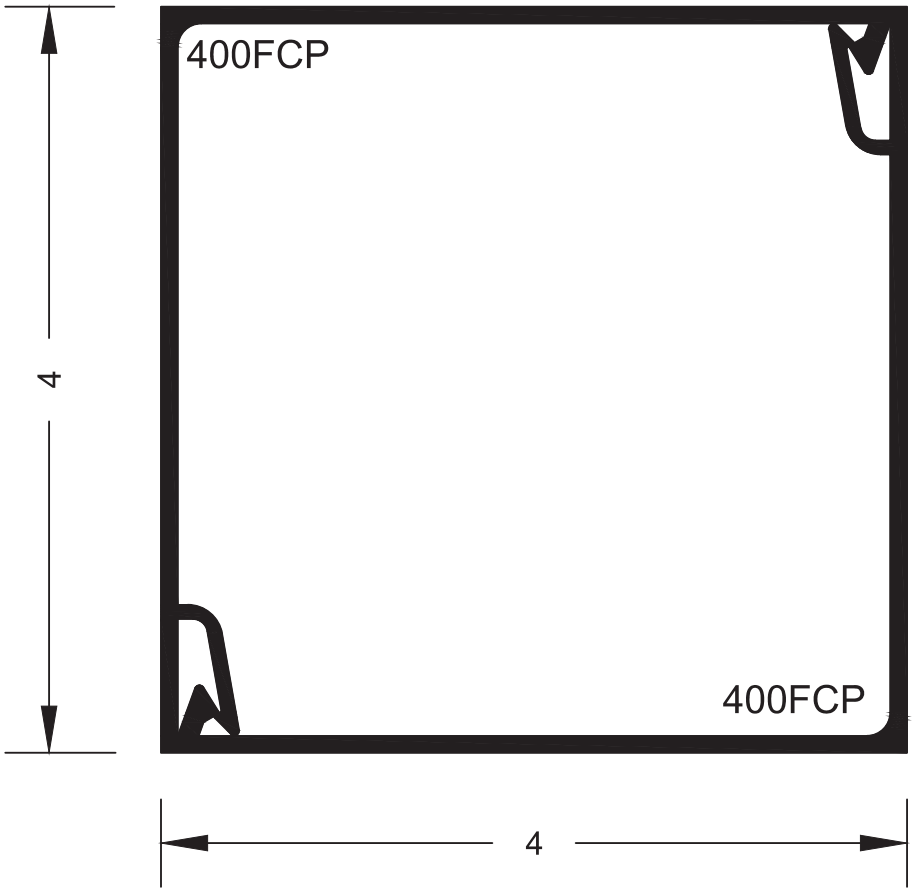
PRL ALUMINUM



C-4

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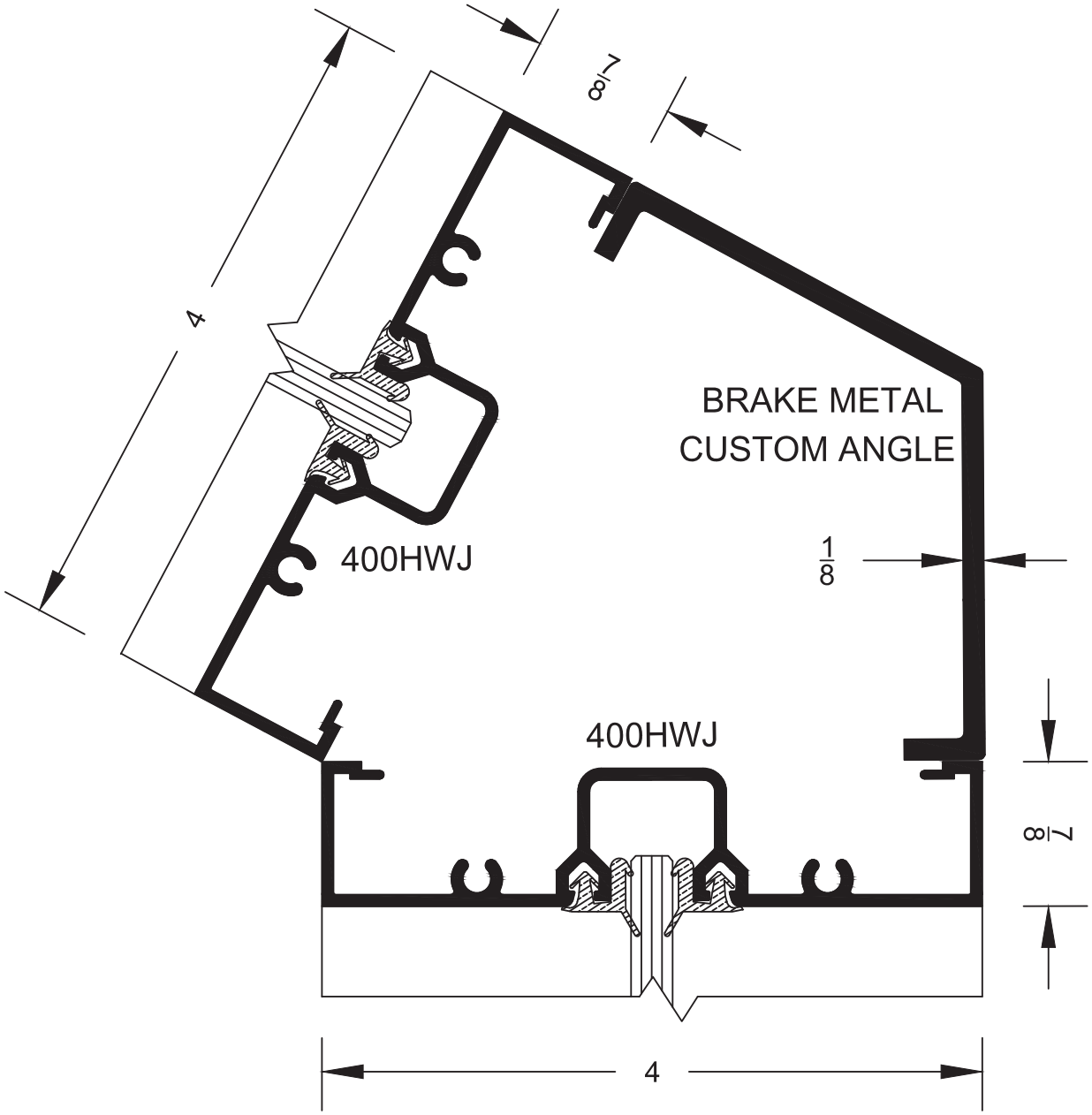

C-6

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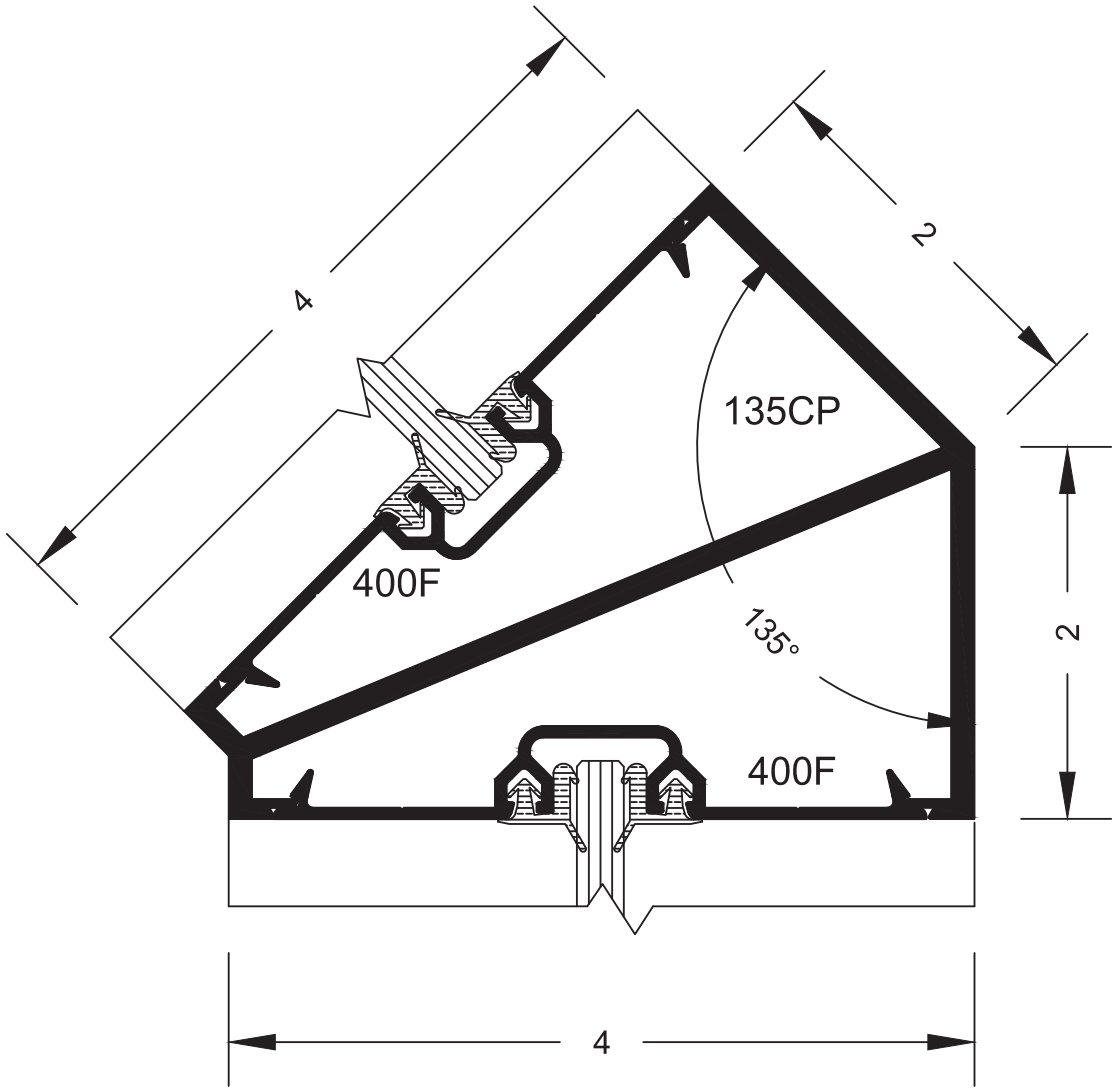
PRL ALUMINUM



C-5

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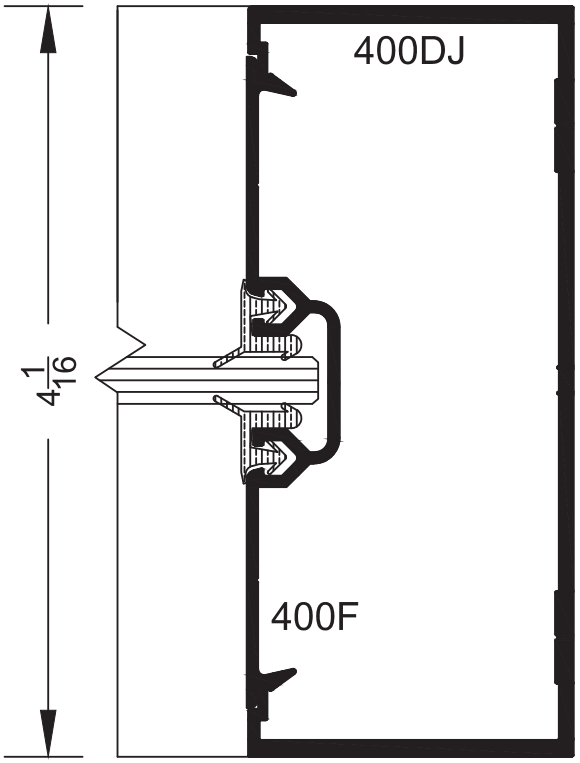
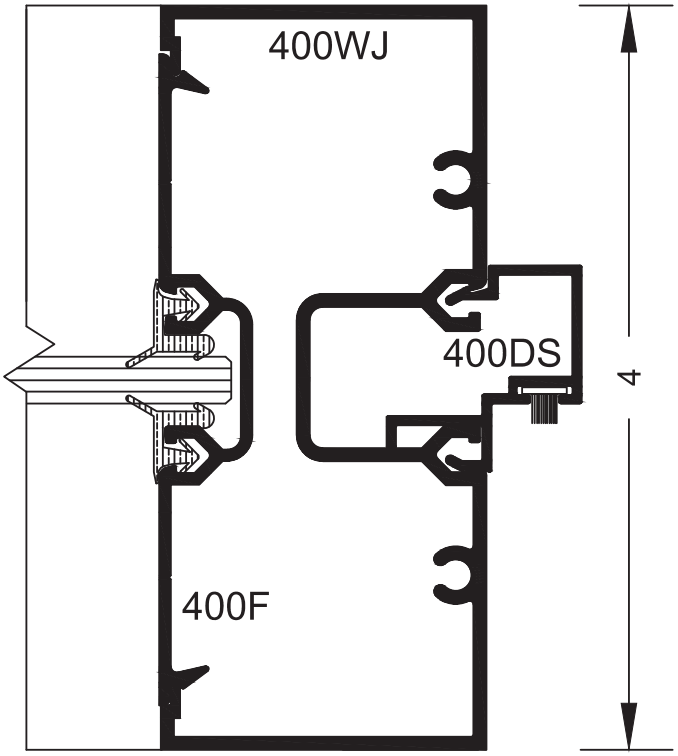
PRL ALUMINUM



G-1



G-2

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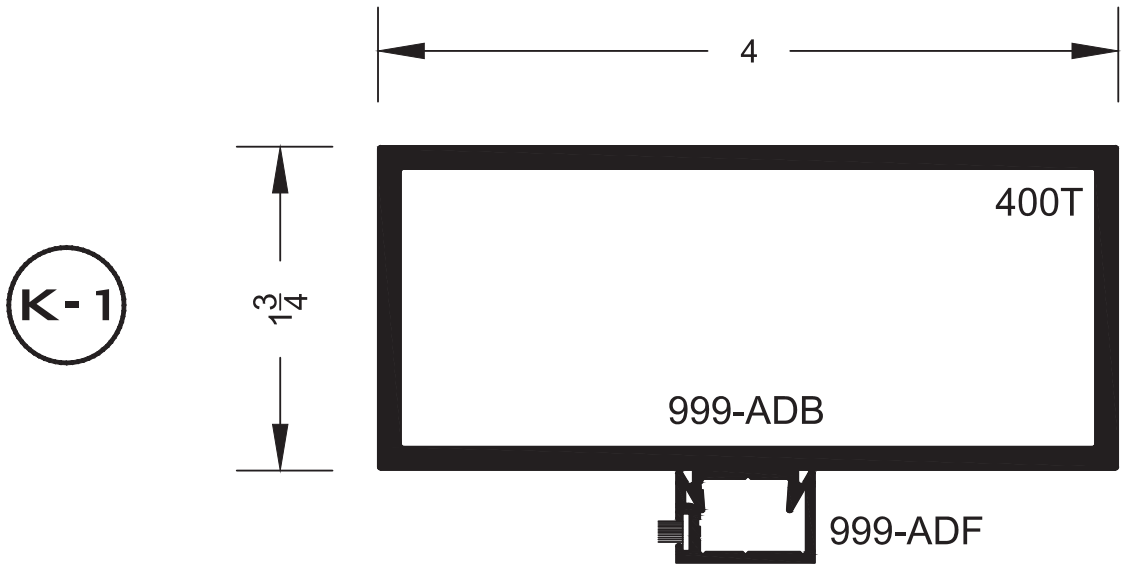
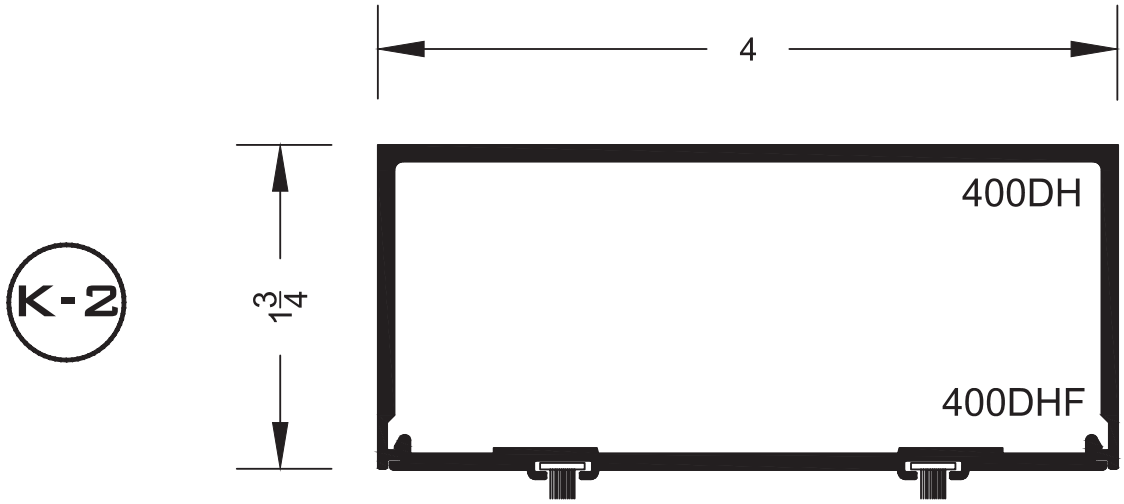


K-1



K-2

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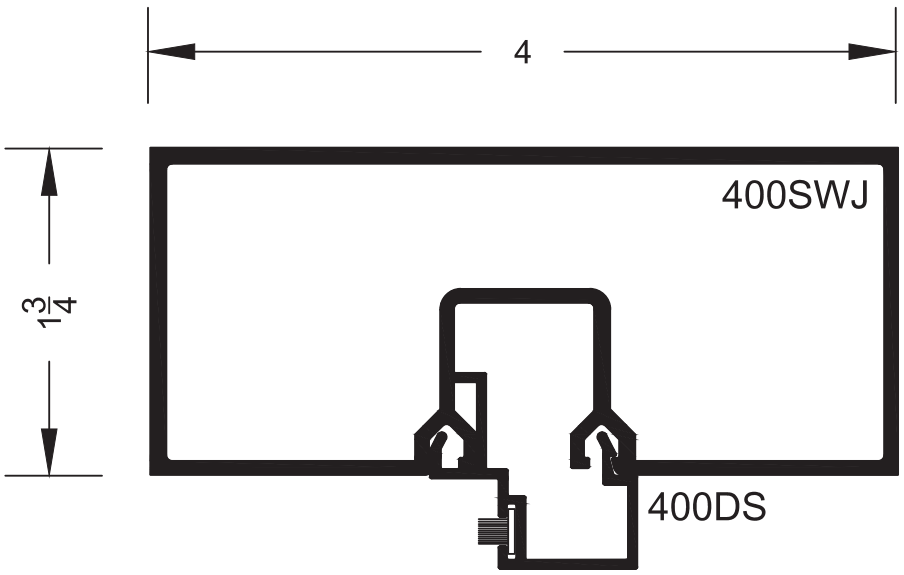
K-3



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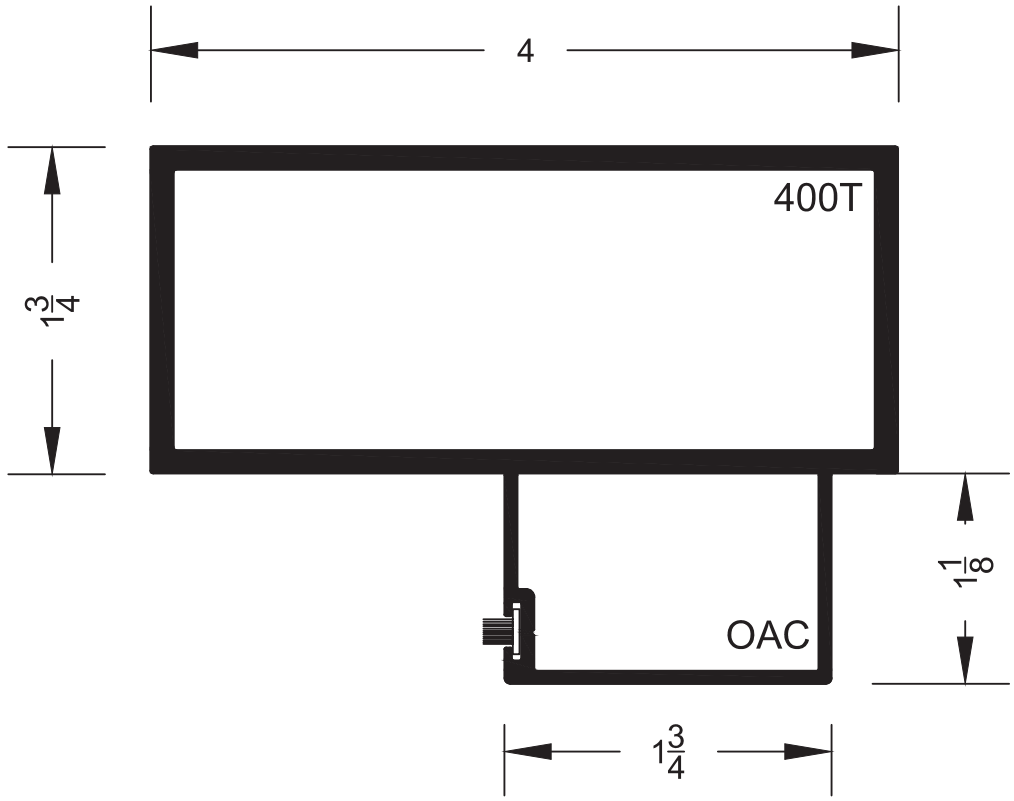

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PL-400 SERIES
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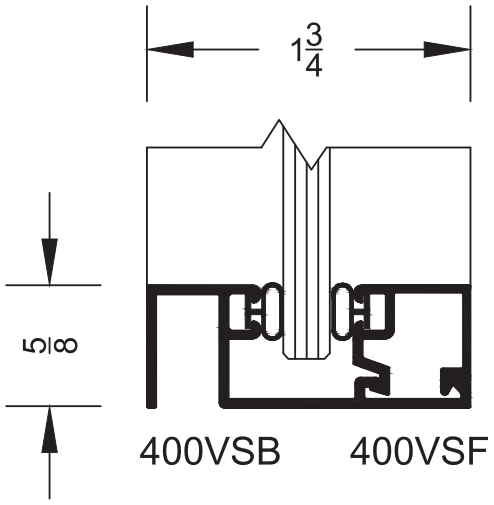
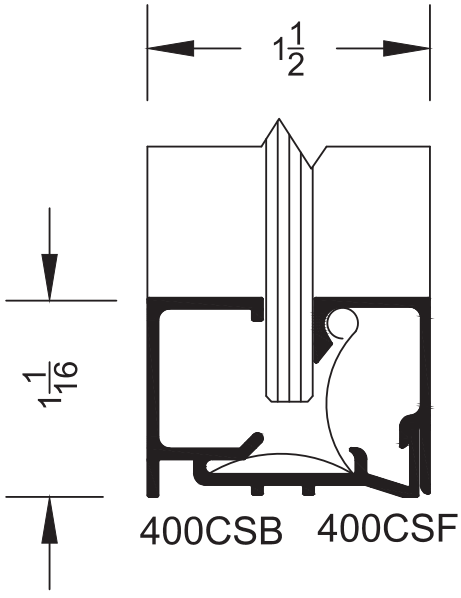
PRL ALUMINUM

VINYL SASH



CLIP SASH



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PRL ALUMINUM

WIND LOAD DESIGN

GLAZING FRAMING SHALL BE DESIGNED NOT TO EXCEED L/175, RATIO CURVES SHALL REPRESENT LIMIT.

VALUES ARE BASED ON CRITERIA FOR SIMPLE BEAM UNIFORMLY LOADED.

ALLOWABLE STRESSES FOR 6063-T5 ALUMINUM ALLOY = 9500 P.S.I.
ALLOWABLE STRESSES FOR A-36 STRUCTURAL STEEL = 21600 P.S.I.

MAXIMUM DEFLECTION BETWEEN SUPPORTS FOR SINGLE SPAN:

$$\Delta = \frac{5WL^3}{384EI}$$

MAXIMUM BENDING MOMENT FOR SINGLE SPAN:

$$M = \frac{WL}{8}$$

NOTATIONS REPRESENT:
W = TOTAL UNIFORM LOAD
L = LENGTH OF MULLION BETWEEN SUPPORTS
E = 10×10^6 P.S.I.
I = MOMENT OF INERTIA OF MULLION
M = BENDING MOMENT

NOTE:
MULLIONS ARE ASSUMED TO HAVE EQUAL SIZE GLASS LIGHTS EACH SIDE

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PL-400 SERIES
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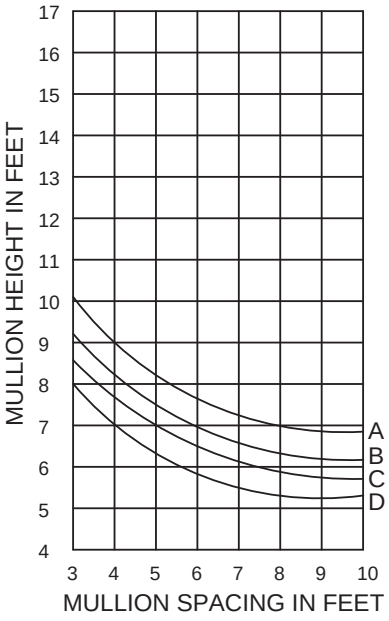
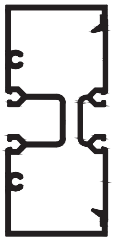
WIND LOAD

PRL ALUMINUM

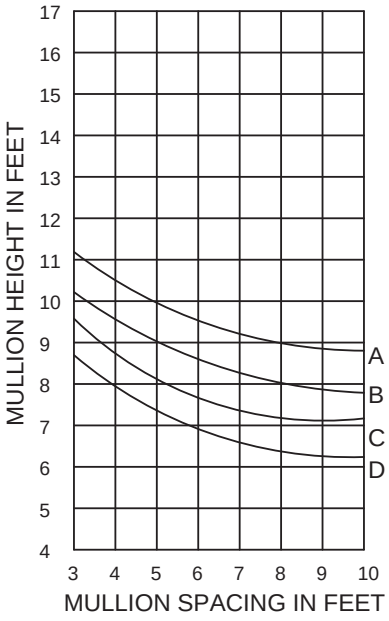
400 WALL JAMB WITH FILLER



I_{102} = 1.630 IN^4
S_{102} = 0.815 IN^3



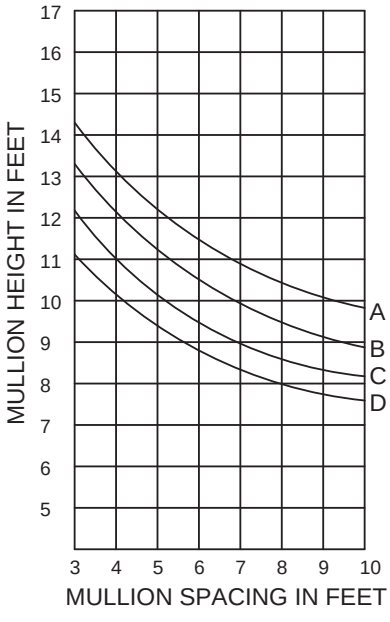
400 TUBE



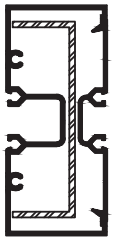
I = 2.040 IN^4
S = 1.20 IN^3

CURVE REPRESENTATION
A = 15 P.S.F. (75 M.P.H)
B = 20 P.S.F. (90 M.P.H)
C = 25 P.S.F. (100 M.P.H)
D = 30 P.S.F. (110 M.P.H)

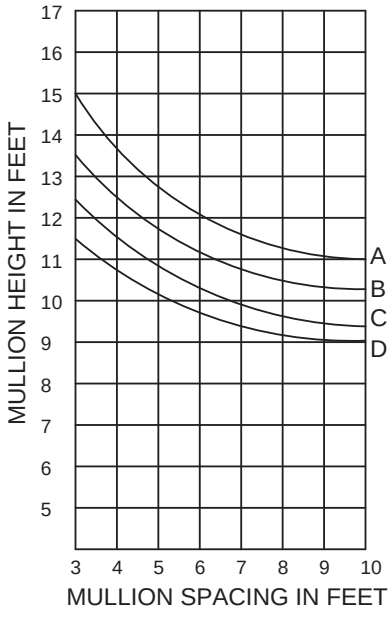
400 WALL JAMB & FILLER WITH STEEL REINFORCEMENT



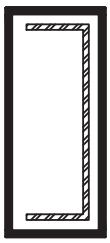
$I_{102/STL}$ = 4.642 IN^4
$S_{102/STL}$ = 1.672 IN^3



400 TUBE WITH STEEL REINFORCEMENT



I = 5.052 IN^4
S = 2.526 IN^3



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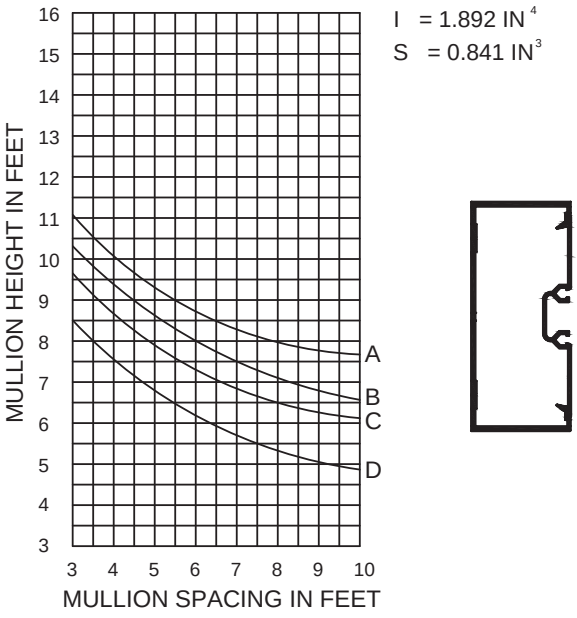
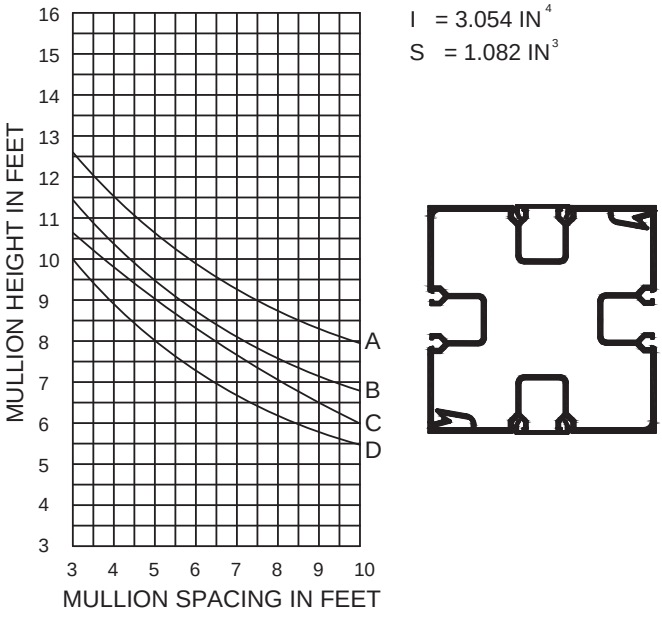
WIND LOAD

PRL ALUMINUM

400 DOOR JAMB WITH FILLER



400 DOUBLE POCKET WITH
400 DOUBLE POCKET



CURVE REPRESENTATION

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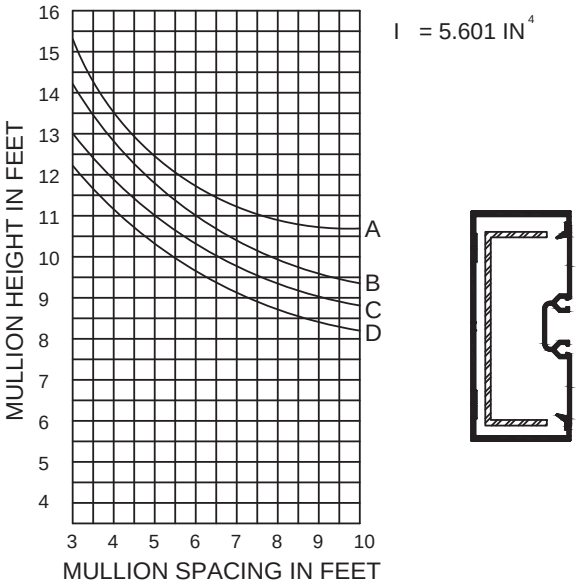
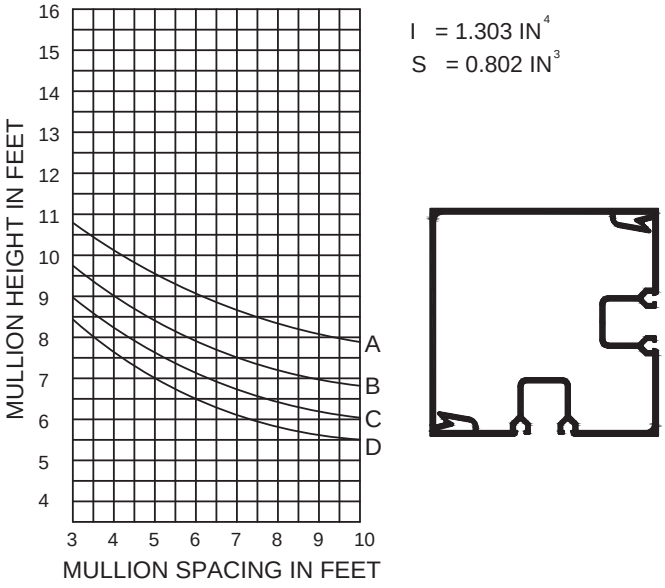
B = 20 P.S.F. (90 M.P.H)
C = 25 P.S.F. (100 M.P.H)
D = 30 P.S.F. (110 M.P.H)

400 DOOR JAMB & FILLER
WITH STEEL REINFORCEMENT



400 DOUBLE POCKET
WITH 400 CORNER POST



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PRL ALUMINUM

DEAD LOAD DESIGN

GLAZING FRAMING SHALL BE DESIGNED NOT TO EXCEED L/360 OR 1/8" DEFLECTION WHICHEVER IS LES, RATIO CURVES SHALL REPRESENT LIMIT.

VALUES ARE BASED ON CRITERIA FOR SIMPLE BEAM UNIFORMLY LOADED.

ALLOWABLE STRESSES FOR 6063-T5 ALUMINUM ALLOY = 9500 P.S.I.
ALLOWABLE STRESSES FOR A-36 STRUCTURAL STEEL = 21600 P.S.I.

MAXIMUM DEFLECTION BETWEEN SUPPORTS FOR SINGLE SPAN:

$$\triangle = \frac{Pa}{24EI}(3L^2 - 4a^2)$$

MAXIMUM BENDING MOMENT FOR SINGLE SPAN:

$$M = Pa$$

NOTATIONS REPRESENT:
P = 1/2 GLASS LOAD
a = 1/4 OR 1/8 POINT OF SPAN (INCHES)
E = 10×10^6 P.S.I.
I = MOMENT OF INERTIA OF MULLION
L = LENGTH HORIZONTAL SPAN

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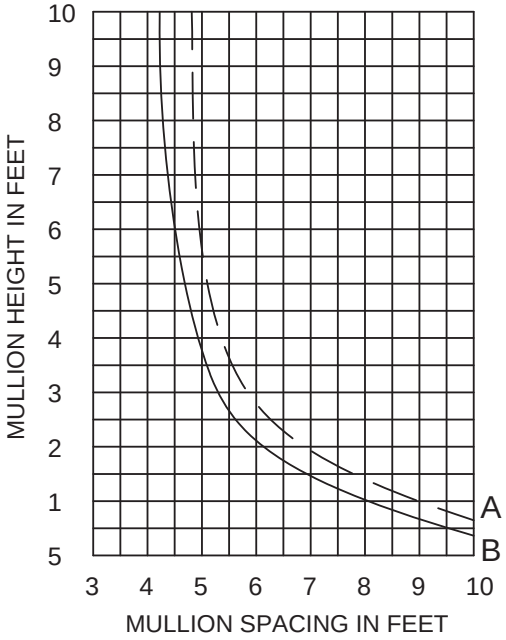
PL-400 SERIES
1-3/4" X 4"
DEAD LOAD

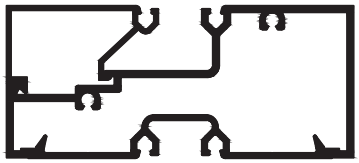
PRL ALUMINUM

400 HORZONTAL MULLION



$I = 0.201\ IN^4$
$S = 0.203\ IN^3$

MAX ALLOW DEFLECTION L/360
OR 1/8" WHICHEVER IS LESS



CURVE REPRESENTATION

(A) (— — — —) = 1/8 PTS. OR A MINIMUN OF 8" AWAY FROM THE EDGE OF GLASS

(B) (————) = 1/4 PTS. A MINIMUN OF 8" AWAY FROM THE EDGE OF GLASS

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401 SERIES

1 3/4” x 4”

SECTION

401 SERIES

1 3/4” x 4”

SECTION

ALUMINUM STOREFRONTS
PL-401 SERIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum storefronts.

1.2 REFERENCES

A. ASTM International (ASTM):
1. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
2. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.
3. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
4. ASTM E 331 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

1.3 SUBMITTALS

A. Submit under provisions of applicable Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

C. Shop Drawings: Configuration and details for installation, maintenance and operation.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
1. Finish areas designated by Architect.
2. Do not proceed with remaining work until workmanship is approved by Architect.
3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS

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A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email: request; Web:prlglass.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 ALUMINUM STOREFRONT

A. Product: Aluminum Storefront Series as manufactured by PRL Glass Systems, Inc.

B. Design:
1. Framing sections shall be extruded from 6063-T5 aluminum alloy.
2. Glazing beads shall be NS (non-stretch, high-shore) vinyl used on both sides of the glass. Vinyl shall incorporate a fiberglass cord bonded with the vinyl.
3. Sections shall conform to details and shall present clean, straight, sharply defined lines, and shall be free from defects impairing strength or durability.
4. Screws, nuts, bolts and fastening devices and internal components shall be of aluminum, stainless steel or other non-corrosive material.
5. Factory preparation from detail drawings shall be so fabricated that field assembly will be able to produce accurate, tightly fitted joints.

C. 401-Series (1-3/4 X 4 Offset Glaze for 1/4 Glazing):
1. Performance: (Test sample of 10 feet (3048 mm) wide by 10 feet (3048 mm) high - 3 lites wide by 2 lites high).
   a. Air infiltration: Limit air leakage through fixed glazing and frames to 0.037 cfm/ft^2/min when tested in accordance with ASTM E-283 at a cross pressure of 6.24 psf (0.30 kPa).
   b. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 6 psf (0.29 kPa) when tested in accordance with ASTM-E331-00.
   c. Uniform Load Structural per ASTM E 330: Limit deflection to L/175.

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1) Passed at Design Pressure of 20 psf (0.96 kPa).

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL

A. All joints between metal and masonry shall be fully caulked and field tested to resist water leakage with provisions taken to drain infiltrated water.

3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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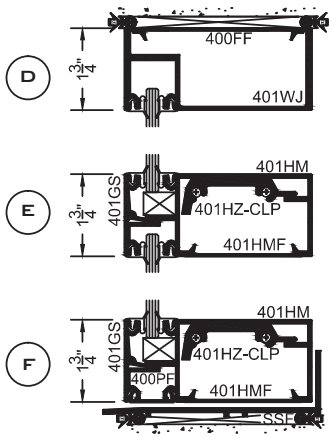
PL-401 SERIES
1-3/4" X 4"
1/4" OFFSET GLAZED

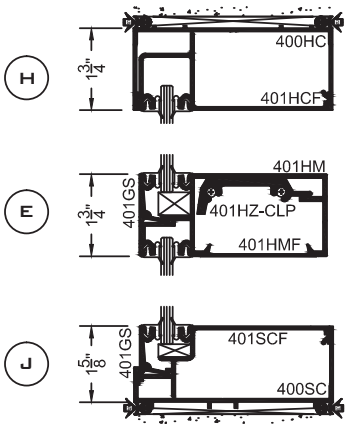
PL-401 SERIES
STOREFRONT MATERIAL

PRL ALUMINUM

SCREW RACE

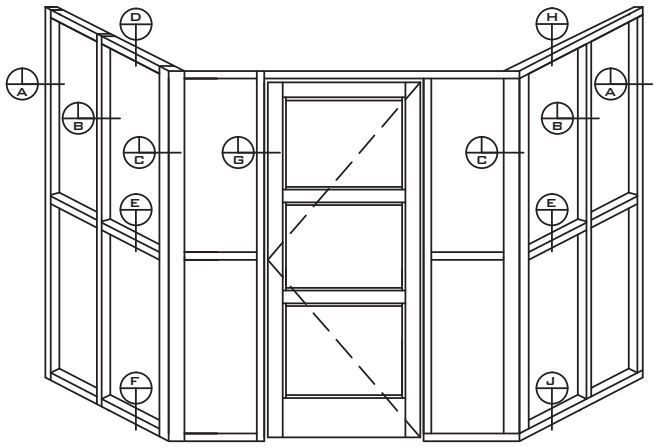


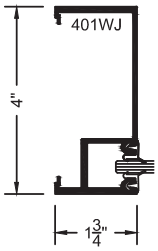
QUICK SET



SCREW RACE

QUICK SET





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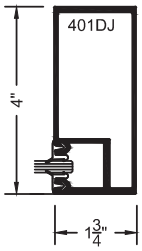

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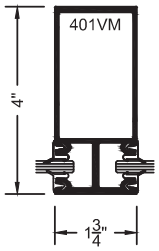
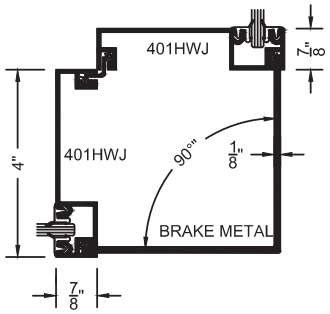


B-1



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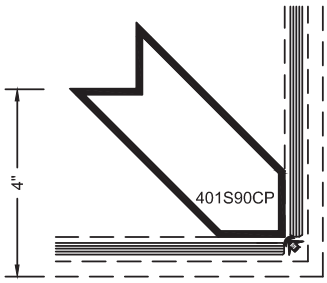

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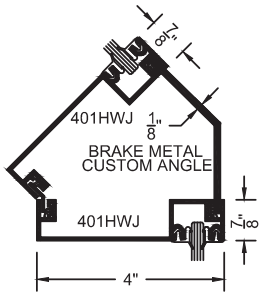

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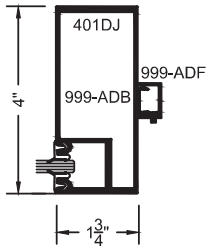

G-1

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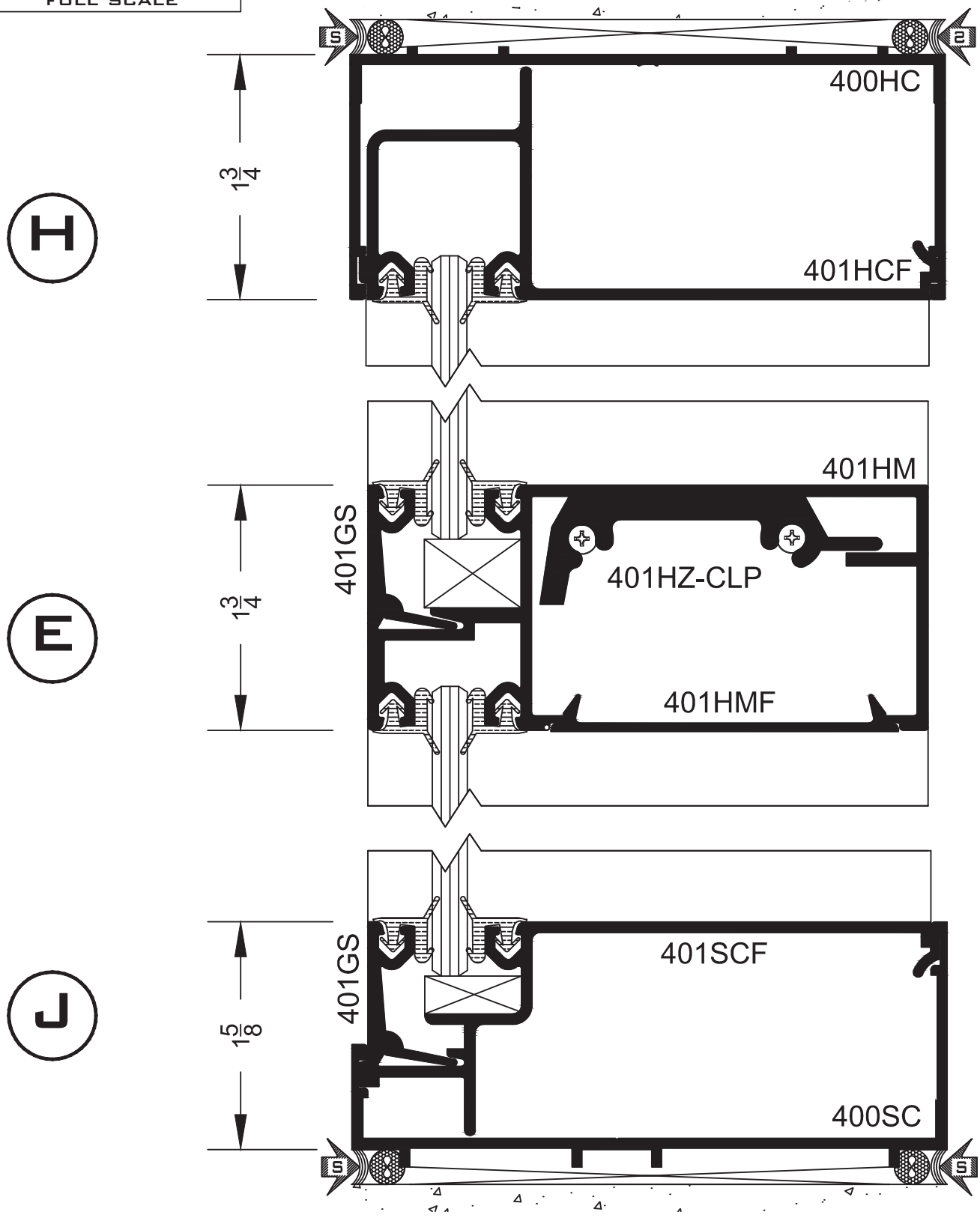
PL-401 SERIES
1-3/4" X 4"
FULL SCALE

QUICK SET

PRL ALUMINUM



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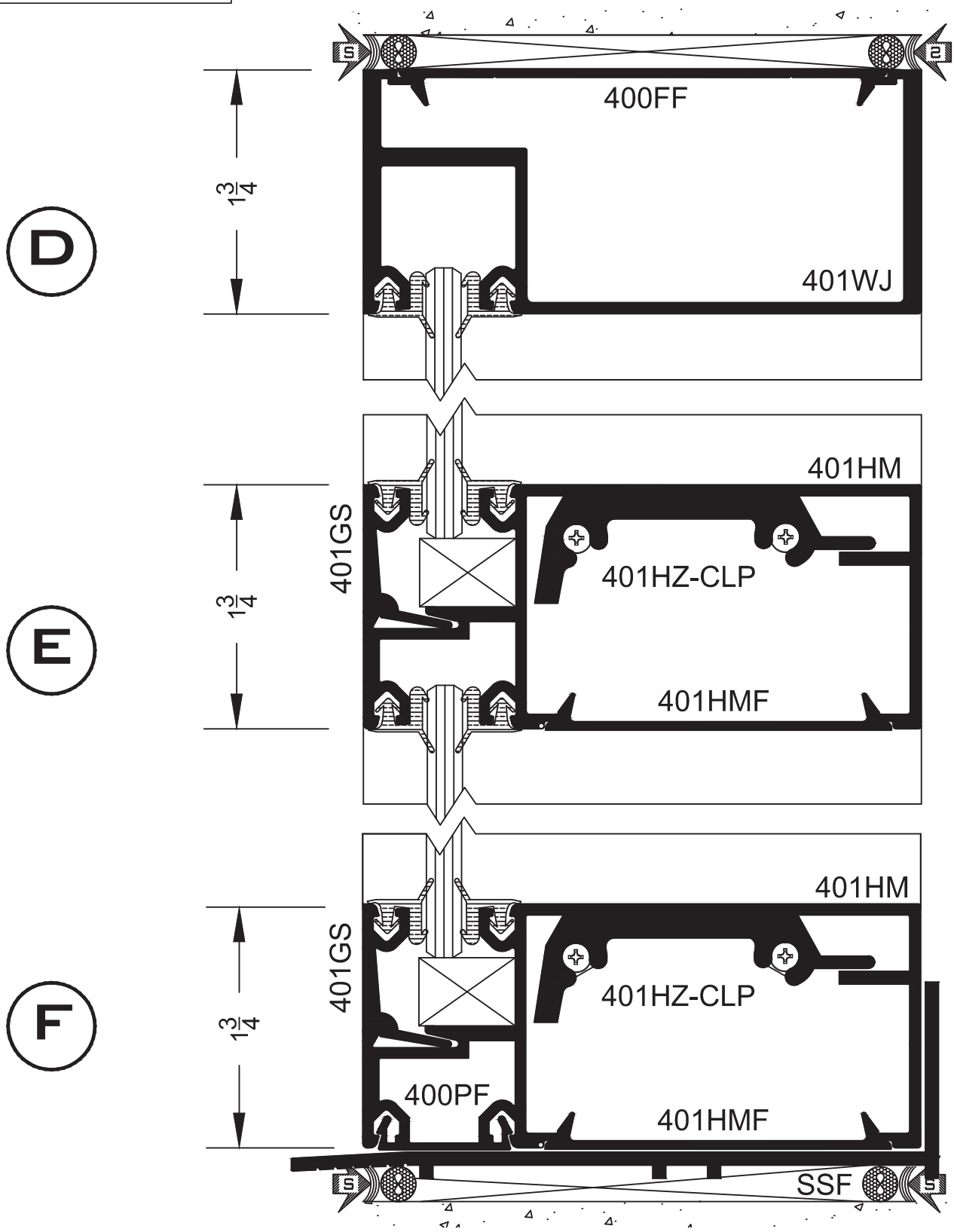
PL-401 SERIES
1-3/4" X 4"
FULL SCALE

SCREW RACE

PRL ALUMINUM



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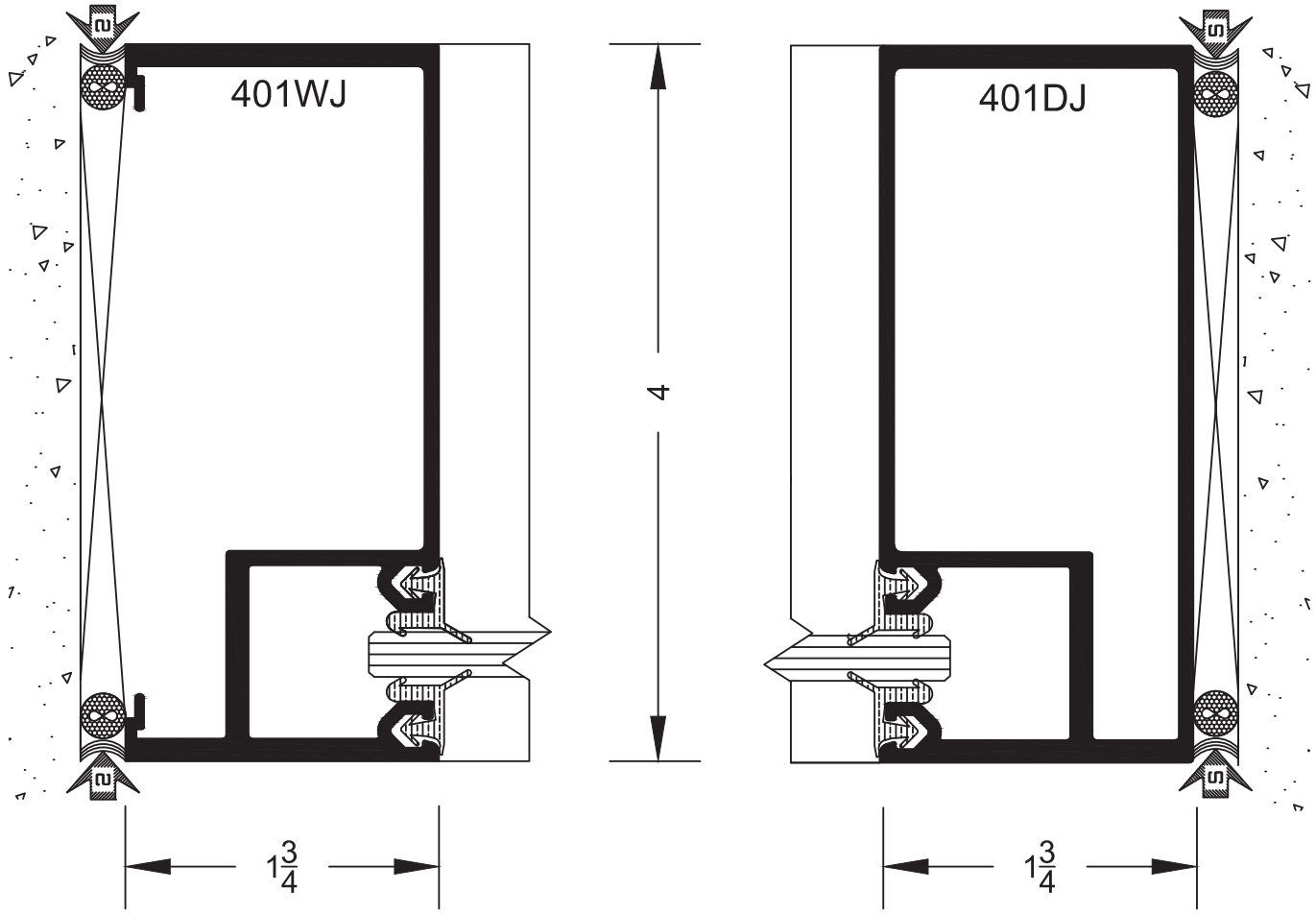
PL-401 SERIES
1-3/4" X 4"
FULL SCALE

PRL ALUMINUM



A-1

A-2

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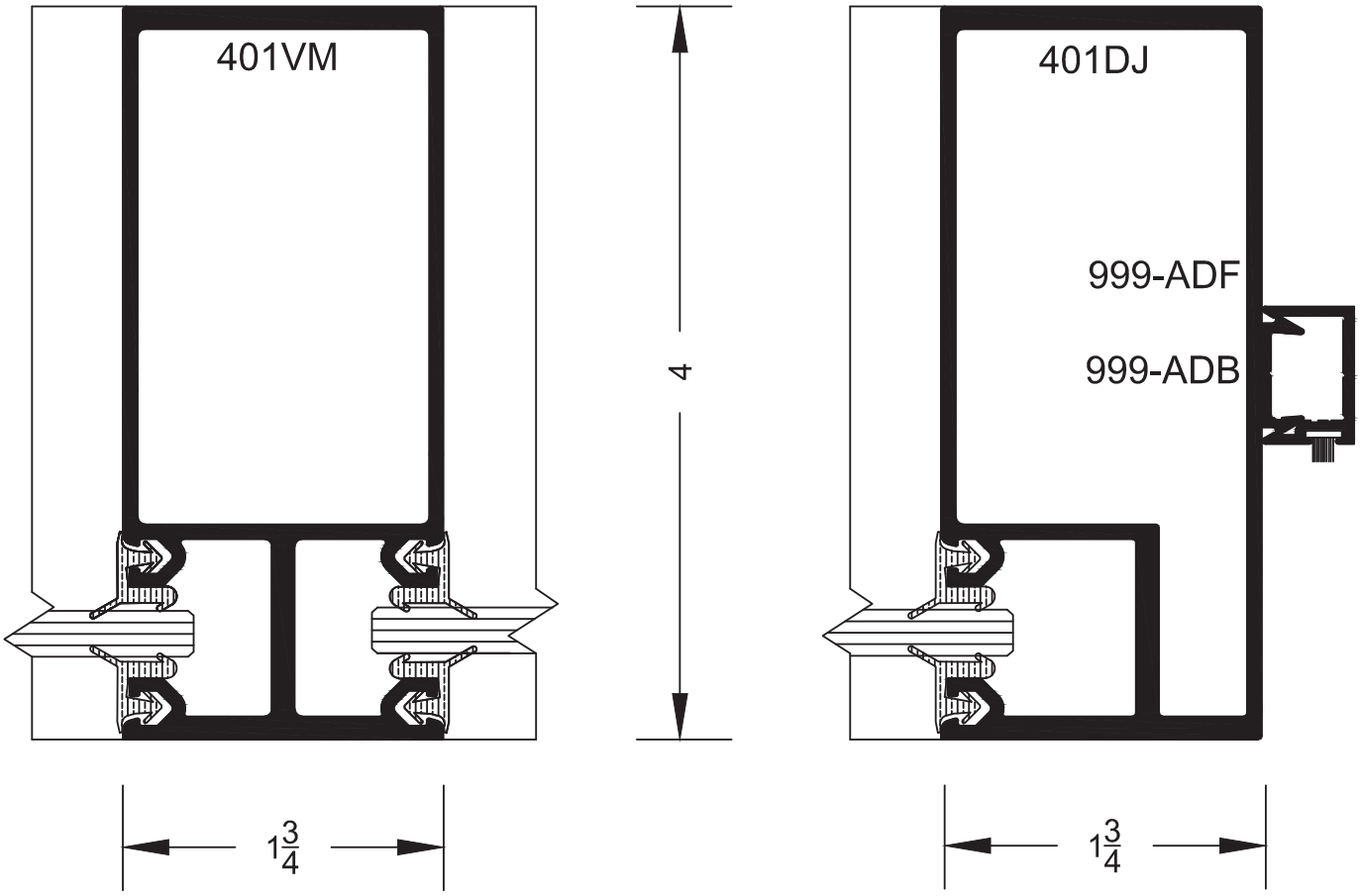
PL-401 SERIES
1-3/4" X 4"
FULL SCALE

PRL ALUMINUM



B-1

G-1

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PL-401 SERIES
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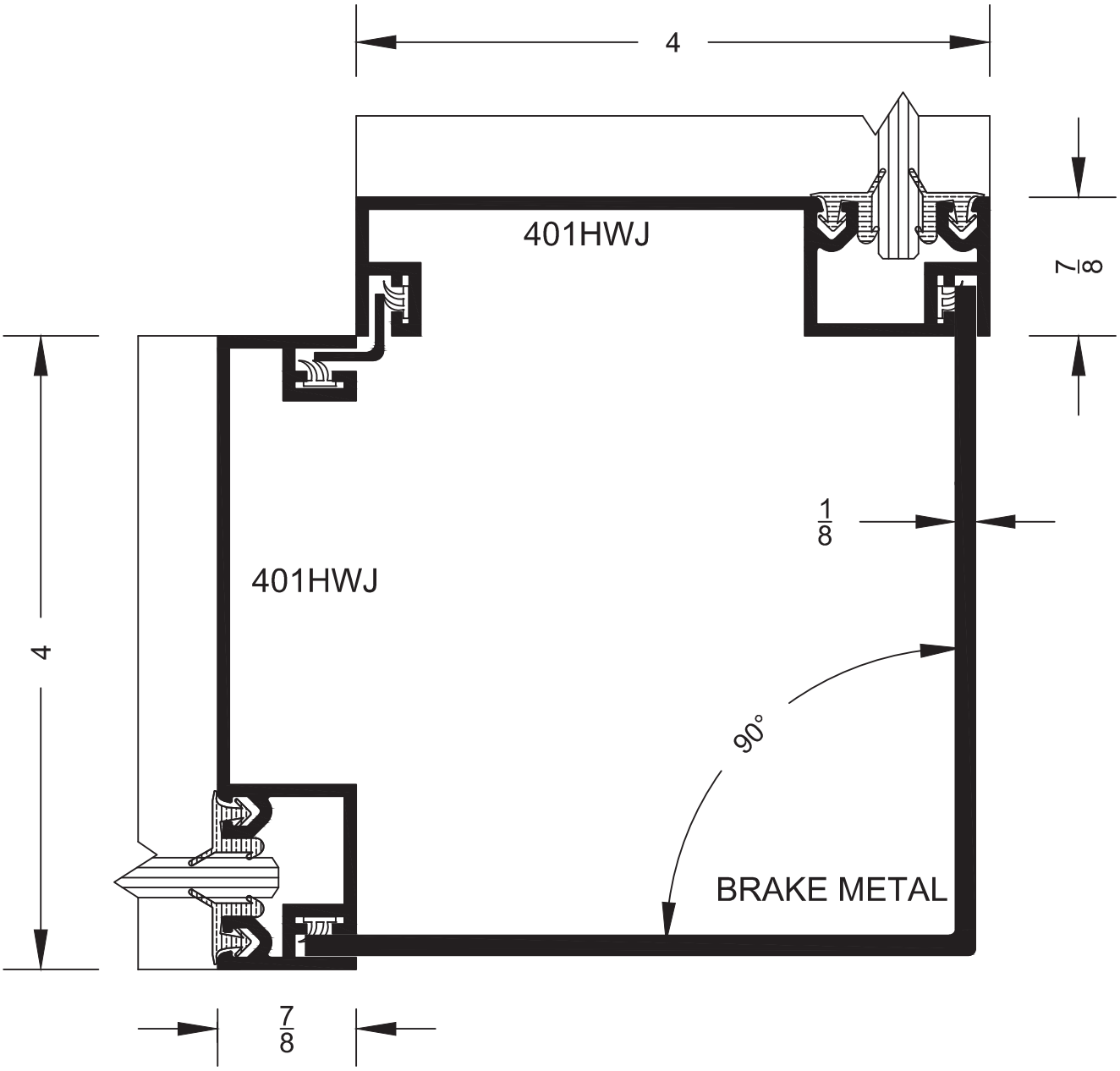
FULL SCALE

PRL ALUMINUM



C-1

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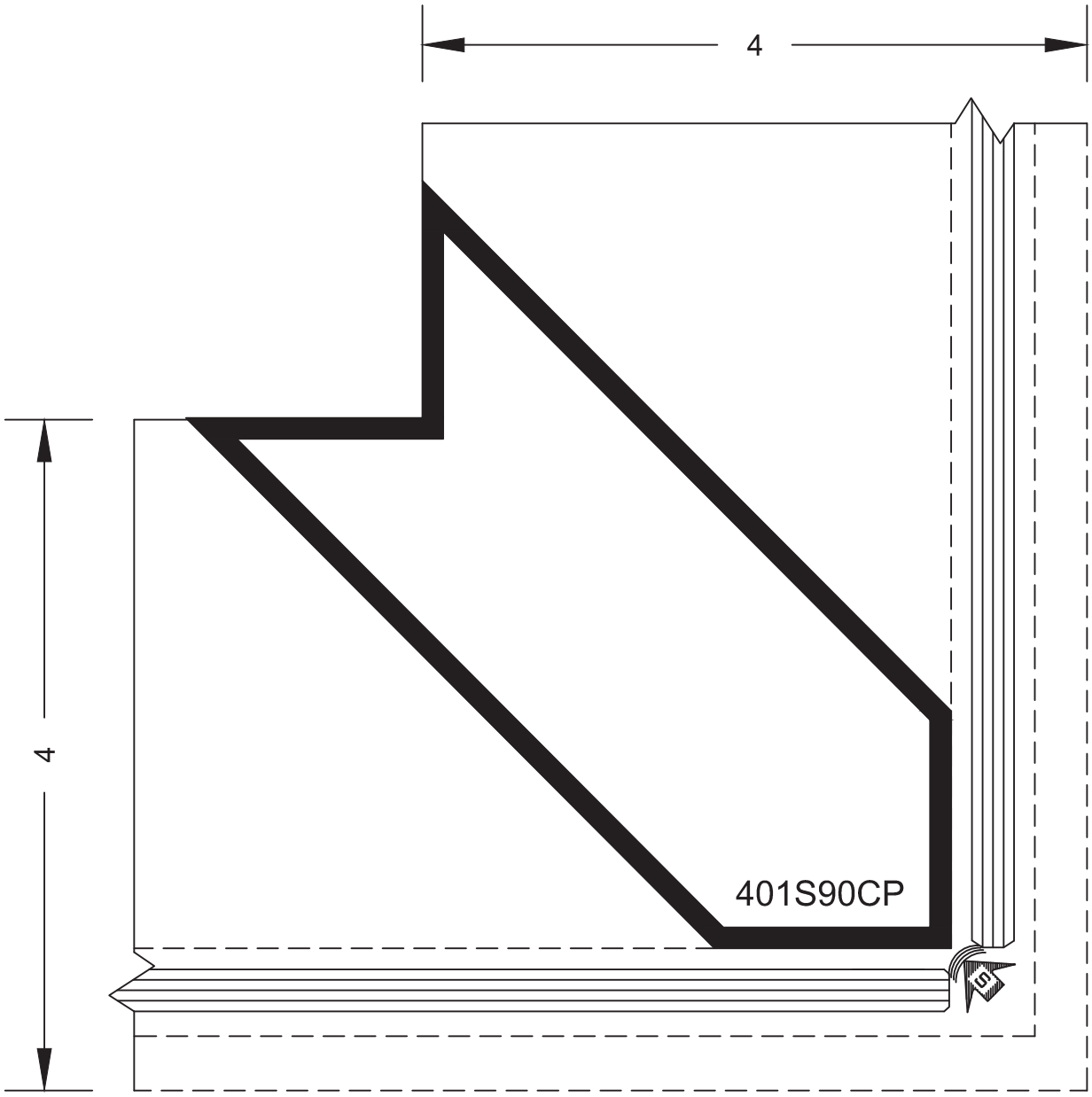
PL-401 SERIES
1-3/4" X 4"
FULL SCALE

PRL ALUMINUM



C-2

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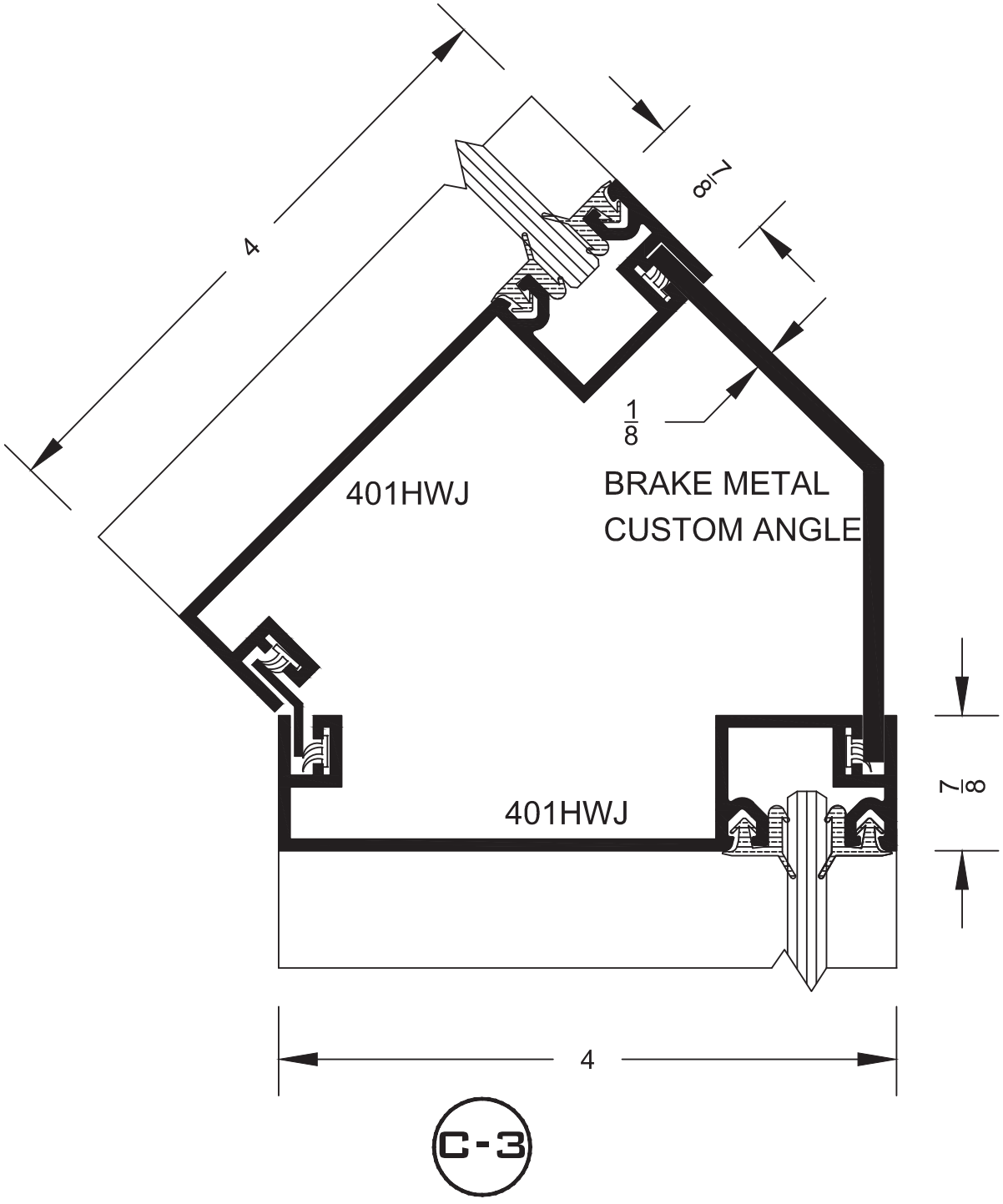
PL-401 SERIES
1-3/4" X 4"
FULL SCALE

PRL ALUMINUM



C-3

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PRL ALUMINUM

WIND LOAD DESIGN

GLAZING FRAMING SHALL BE DESIGNED NOT TO EXCEED L/175, RATIO CURVES SHALL REPRESENT LIMIT.

VALUES ARE BASED ON CRITERIA FOR SIMPLE BEAM UNIFORMLY LOADED.

ALLOWABLE STRESSES FOR 6063-T5 ALUMINUM ALLOY = 9500 P.S.I.
ALLOWABLE STRESSES FOR A-36 STRUCTURAL STEEL = 21600 P.S.I.

MAXIMUM DEFLECTION BETWEEN SUPPORTS FOR SINGLE SPAN:

$$\triangle = \frac{5WL^3}{384EI}$$

MAXIMUM BENDING MOMENT FOR SINGLE SPAN:

$$M = \frac{WL}{8}$$

NOTATIONS REPRESENT:
W = TOTAL UNIFORM LOAD
L = LENGTH OF MULLION BETWEEN SUPPORTS
E = 10×10^6 P.S.I.
I = MOMENT OF INERTIA OF MULLION
M = BENDING MOMENT

NOTE:
MULLIONS ARE ASSUMED TO HAVE EQUAL SIZE GLASS LIGHTS EACH SIDE

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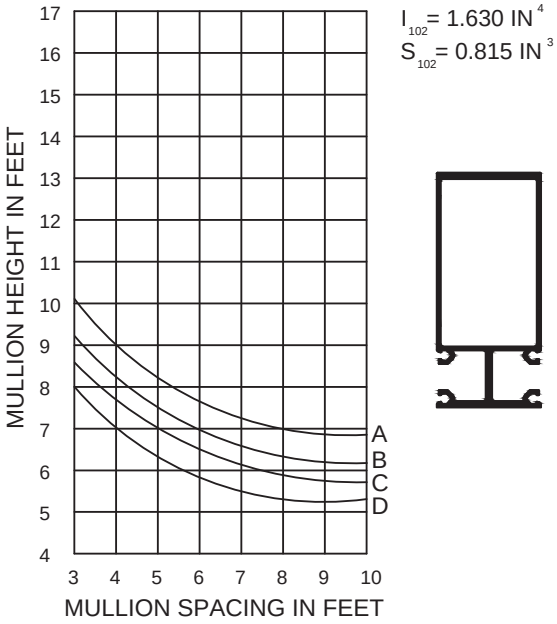
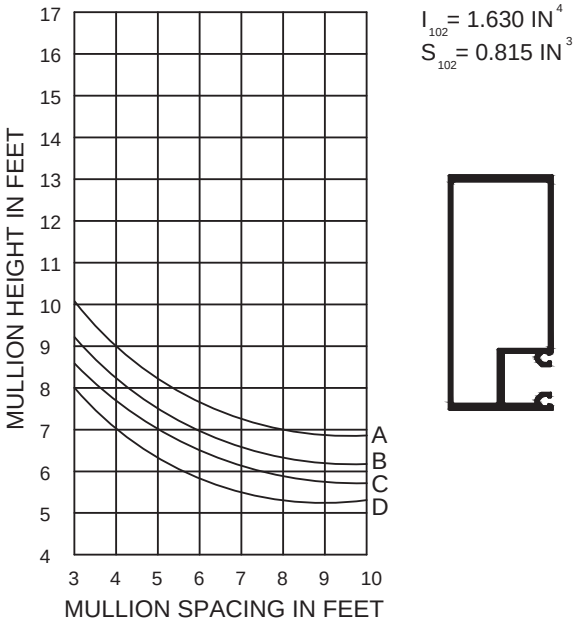
PL-401 SERIES
1-3/4" X 4"
WIND LOAD

PRL ALUMINUM

401 VERTICAL MULLION



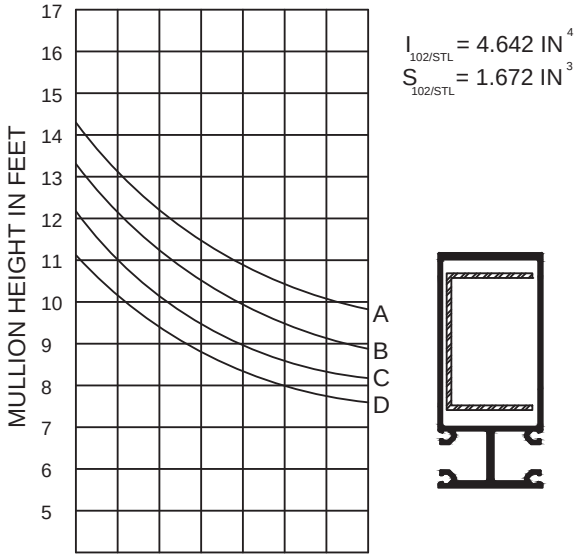
401 DOOR JAMB



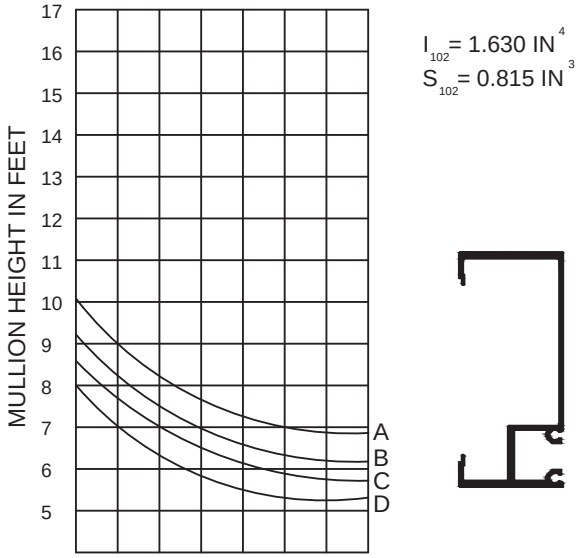
CURVE REPRESENTATION

A = 15 P.S.F. (75 M.P.H)
B = 20 P.S.F. (90 M.P.H)
C = 25 P.S.F. (100 M.P.H)
D = 30 P.S.F. (110 M.P.H)

401 VERTICAL WALL JAMB
WITH STEEL REINFORCEMENT



401 VERTICAL WALL JAMB



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450 SERIES

1 3/4” x 4 1/2”

SECTION

450 SERIES

1 3/4” x 4 1/2”

SECTION

ALUMINUM STOREFRONTS
PL-450 SERIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum storefronts.

1.2 REFERENCES

A. ASTM International (ASTM):
1. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
2. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.
3. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
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1.3 SUBMITTALS

A. Submit under provisions of applicable Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

C. Shop Drawings: Configuration and details for installation, maintenance and operation.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
1. Finish areas designated by Architect.
2. Do not proceed with remaining work until workmanship is approved by Architect.
3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS

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A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email: request; Web:prlglass.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 ALUMINUM STOREFRONT

A. Product: Aluminum Storefront Series as manufactured by PRL Glass Systems, Inc.

B. Design:
1. Framing sections shall be extruded from 6063-T5 aluminum alloy.
2. Glazing beads shall be NS (non-stretch, high-shore) vinyl used on both sides of the glass. Vinyl shall incorporate a fiberglass cord bonded with the vinyl.
3. Sections shall conform to details and shall present clean, straight, sharply defined lines, and shall be free from defects impairing strength or durability.
4. Screws, nuts, bolts and fastening devices and internal components shall be of aluminum, stainless steel or other non-corrosive material.
5. Factory preparation from detail drawings shall be so fabricated that field assembly will be able to produce accurate, tightly fitted joints.

C. 450-Series (1-3/4 X 4-1/2 Center Glaze for 1/4 Glazing):
1. Performance: (Test sample of 10 feet (3048 mm) wide by 10 feet (3048 mm) high - 3 lites wide by 2 lites high).
   a. Air infiltration: Limit air leakage through fixed glazing and frames to 0.042 cfm/ft^2/min when tested in accordance with ASTM E-283 at a cross pressure of 6.24 psf (0.30 kPa).
   b. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 6 psf (0.29 kPa) when tested in accordance with ASTM-E331-00.
   c. Uniform Load Structural per ASTM E 330: Limit deflection to L/175.

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1) Passed at Design Pressure of 20 psf (0.96 kPa).

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL

A. All joints between metal and masonry shall be fully caulked and field tested to resist water leakage with provisions taken to drain infiltrated water.

3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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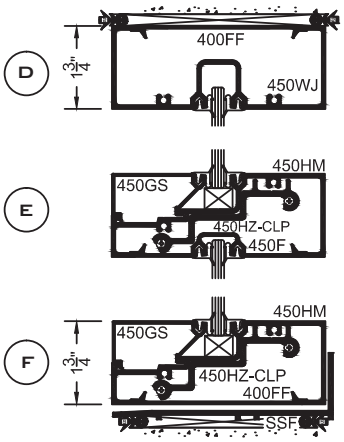
PL-450 SERIES
1-3/4 X 4-1/2
1/4" CENTER GLAZED

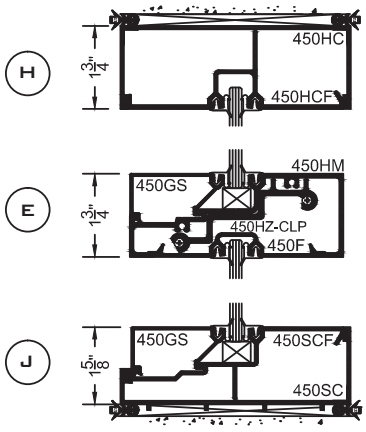
PL-450 SERIES
STOREFRONT MATERIAL

PRL ALUMINUM

SCREW RACE

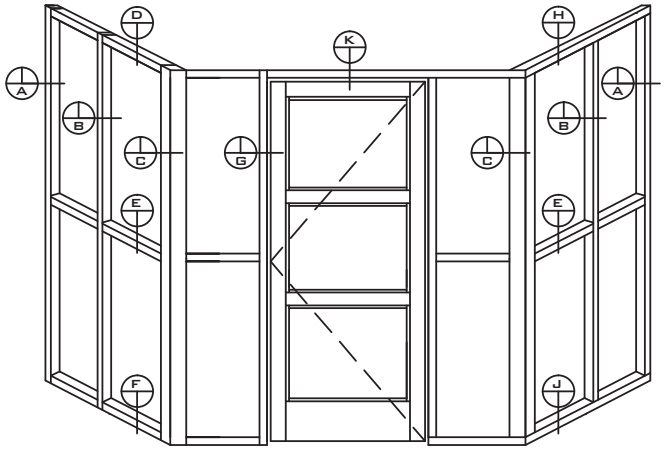


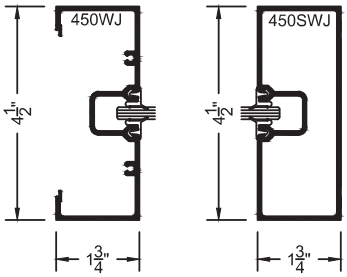
QUICK SET

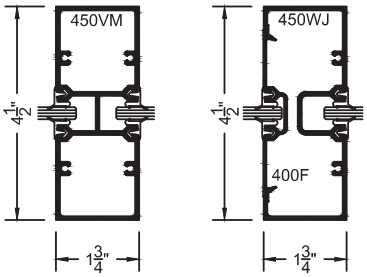


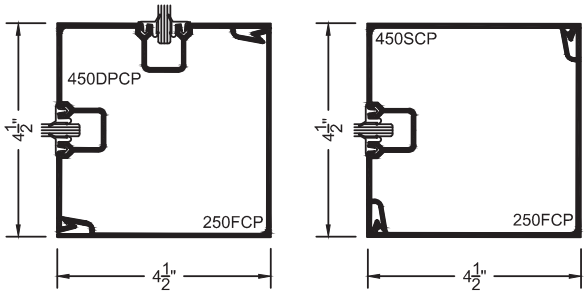
SCREW RACE

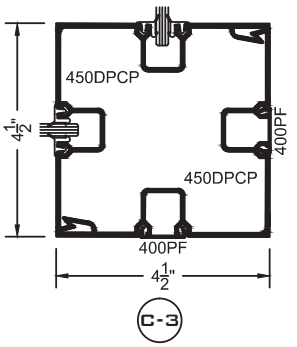
QUICK SET

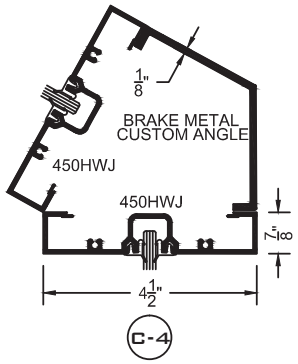


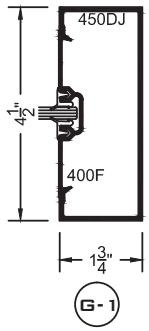


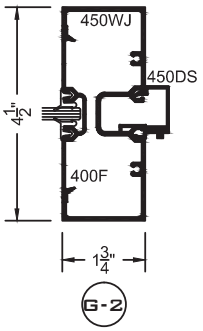


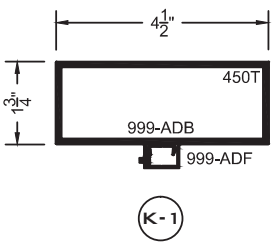


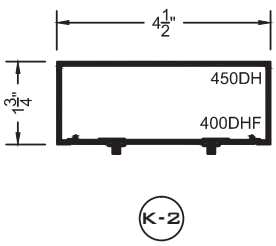


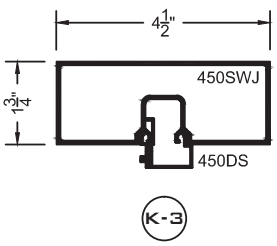


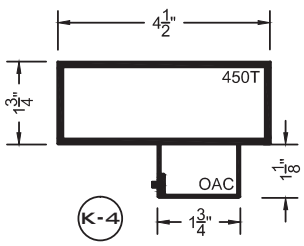












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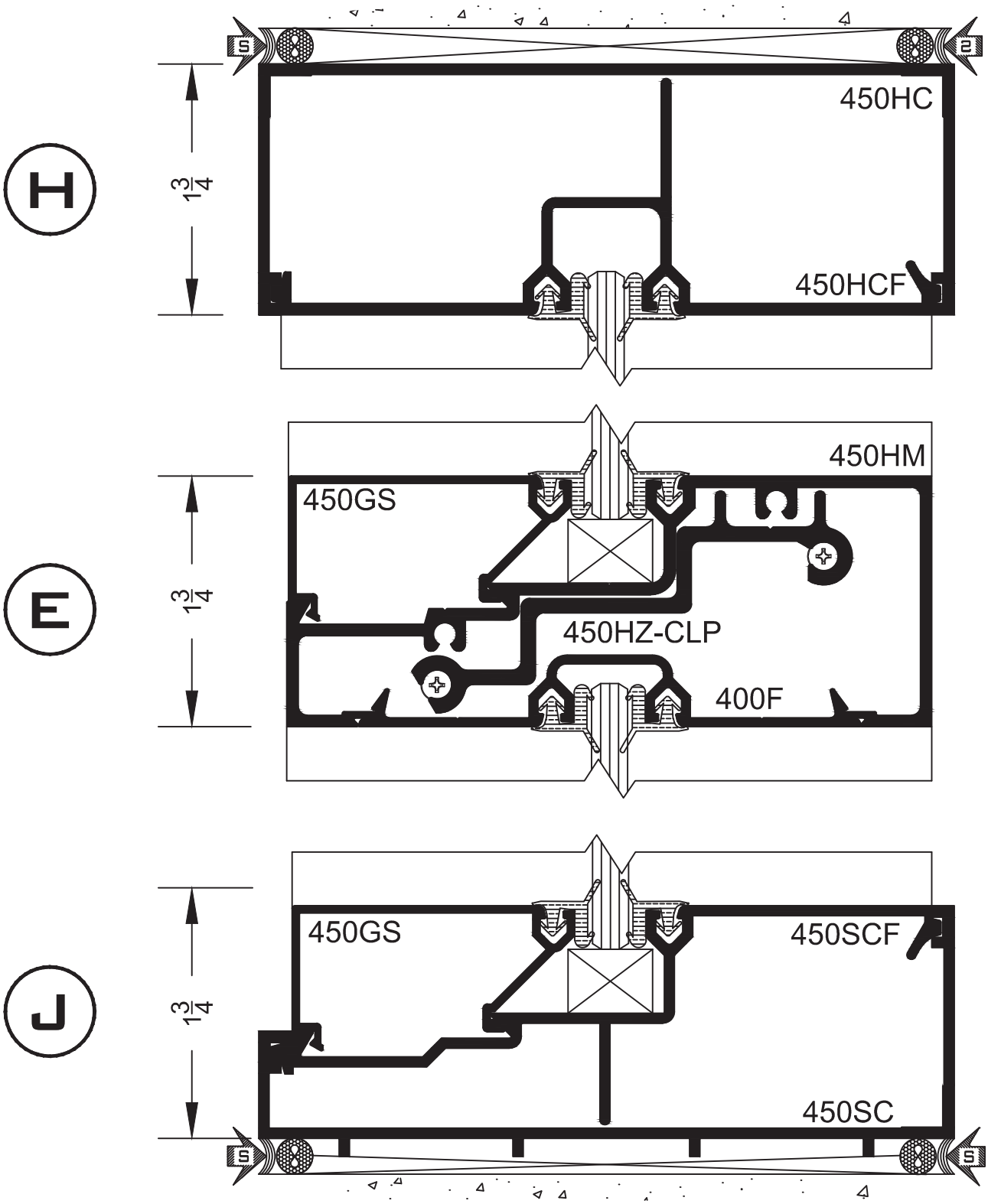
PL-450 SERIES
1-3/4 X 4-1/2
FULL SCALE

QUICK SET

PRL ALUMINUM



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PL-450 SERIES
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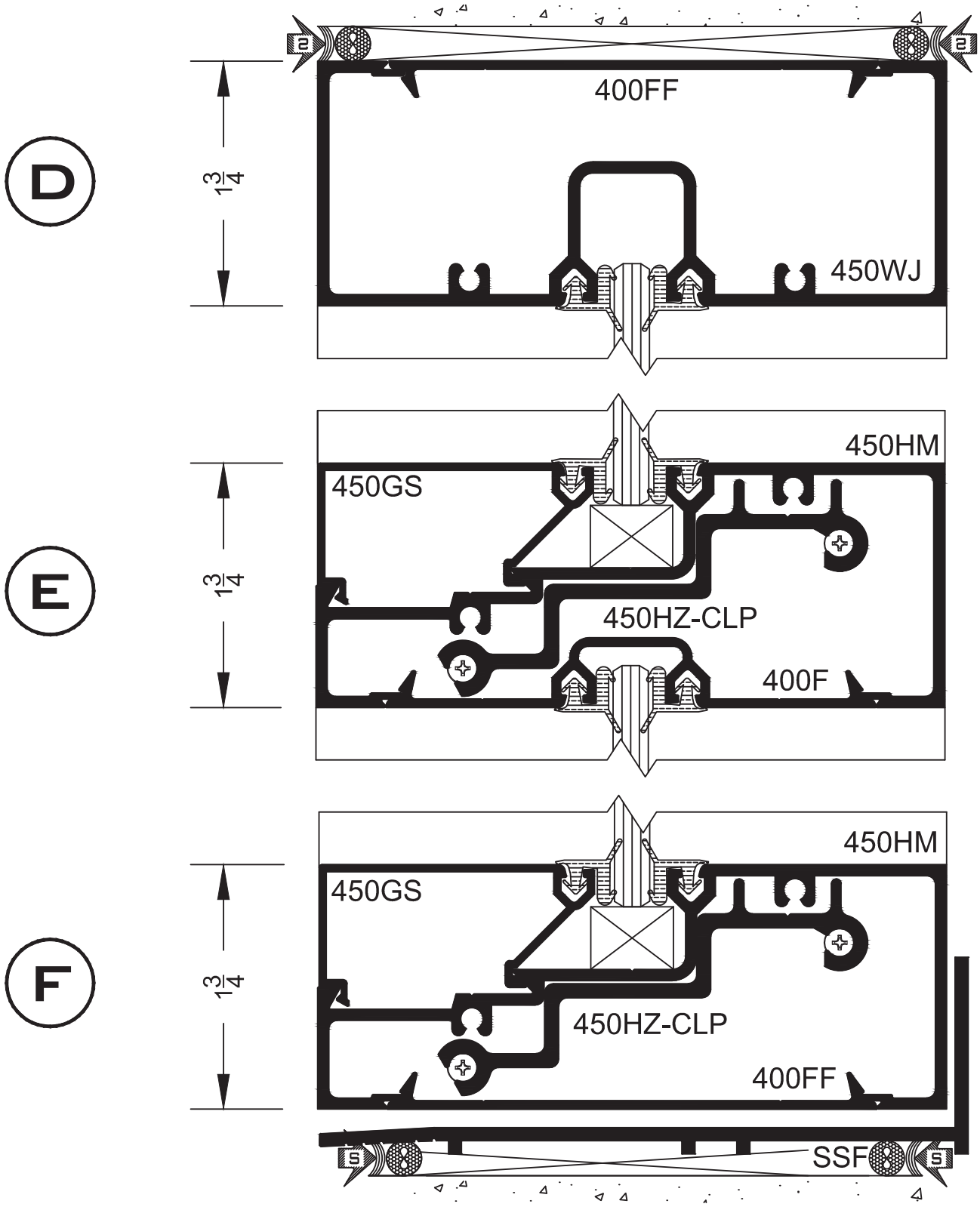
SCREW RACE

PRL ALUMINUM



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PL-450 SERIES
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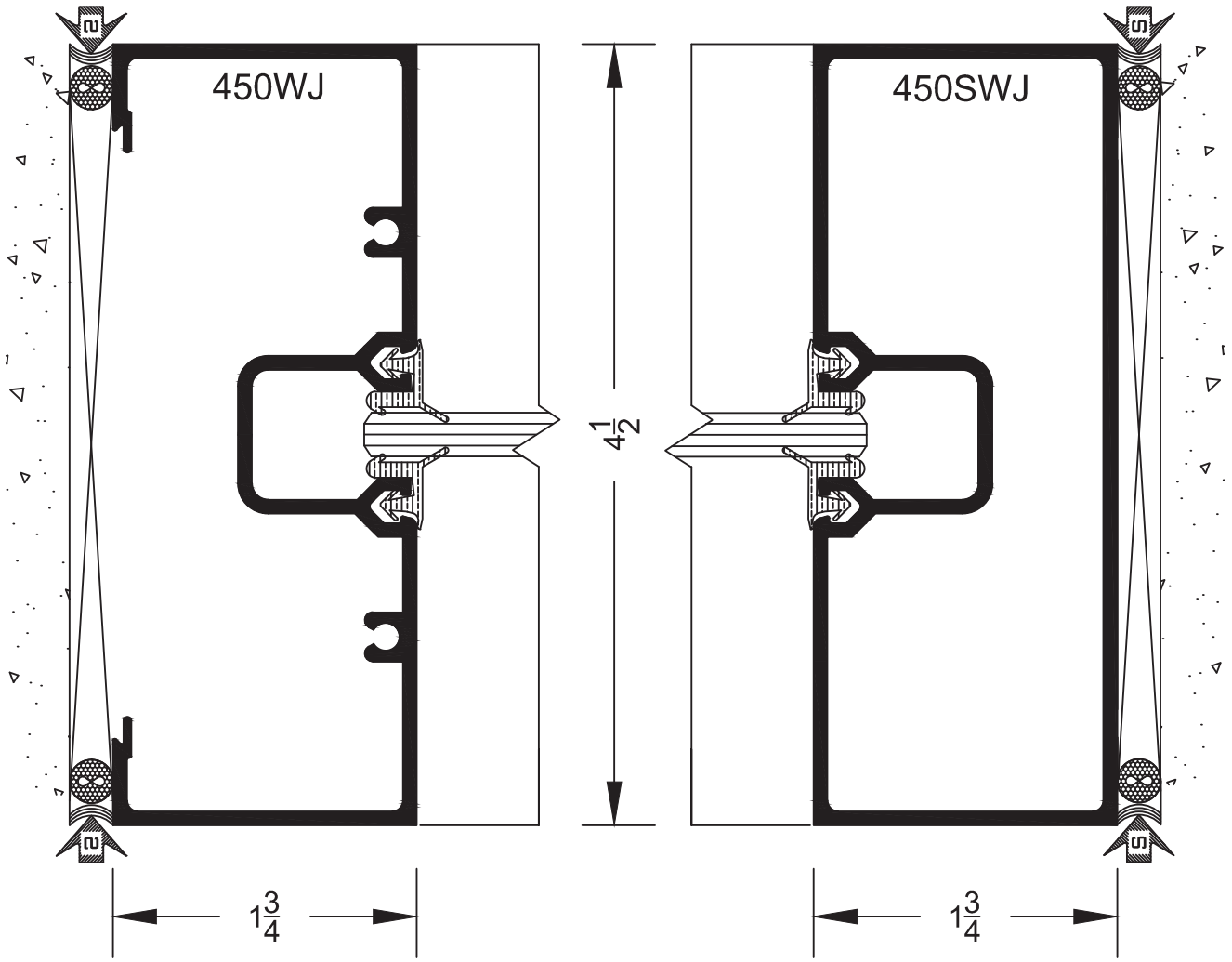
PRL ALUMINUM



A-1

A-2

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PL-450 SERIES
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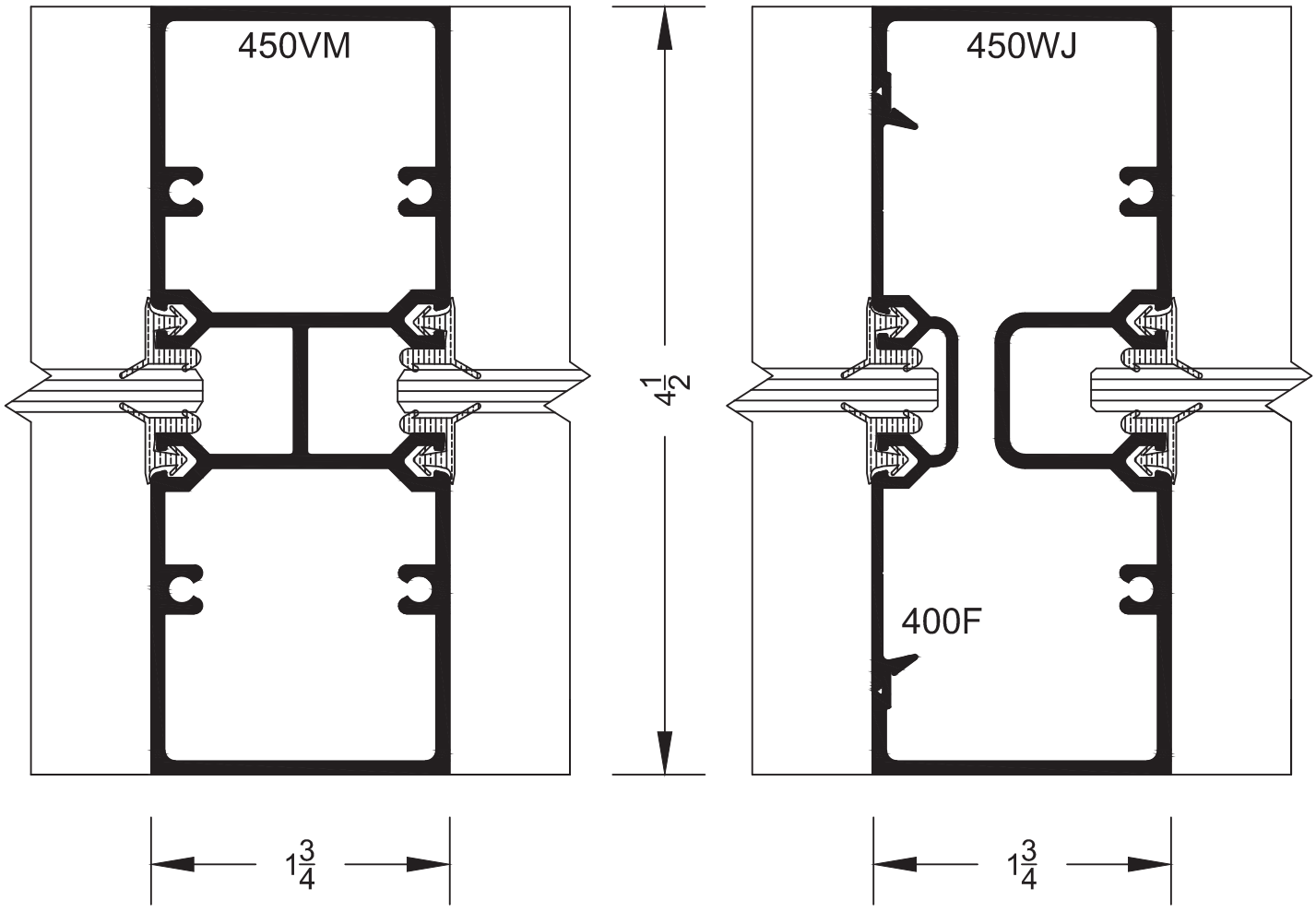
PRL ALUMINUM



B-1

B-2

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PL-450 SERIES
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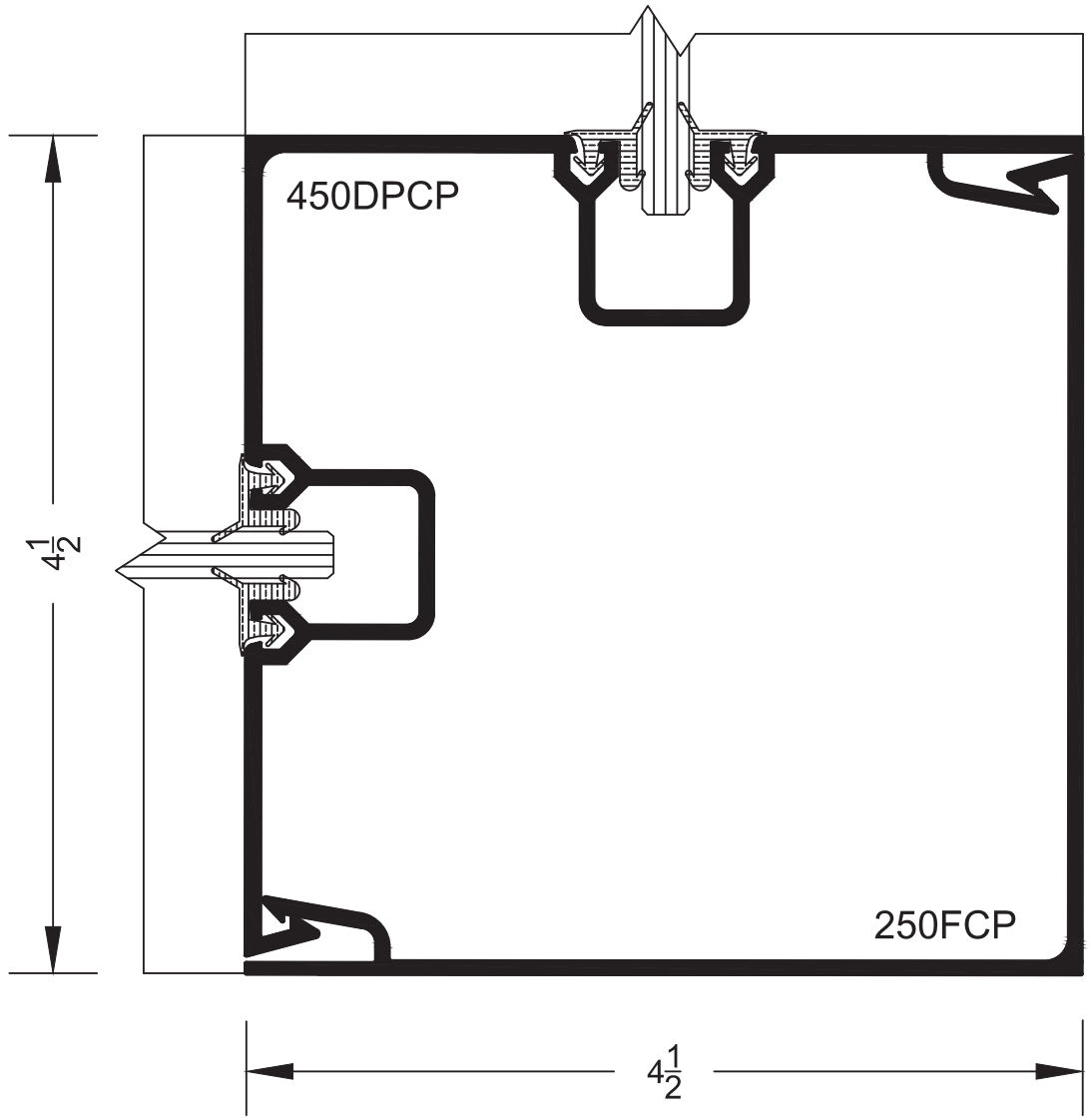
PRL ALUMINUM



C-1

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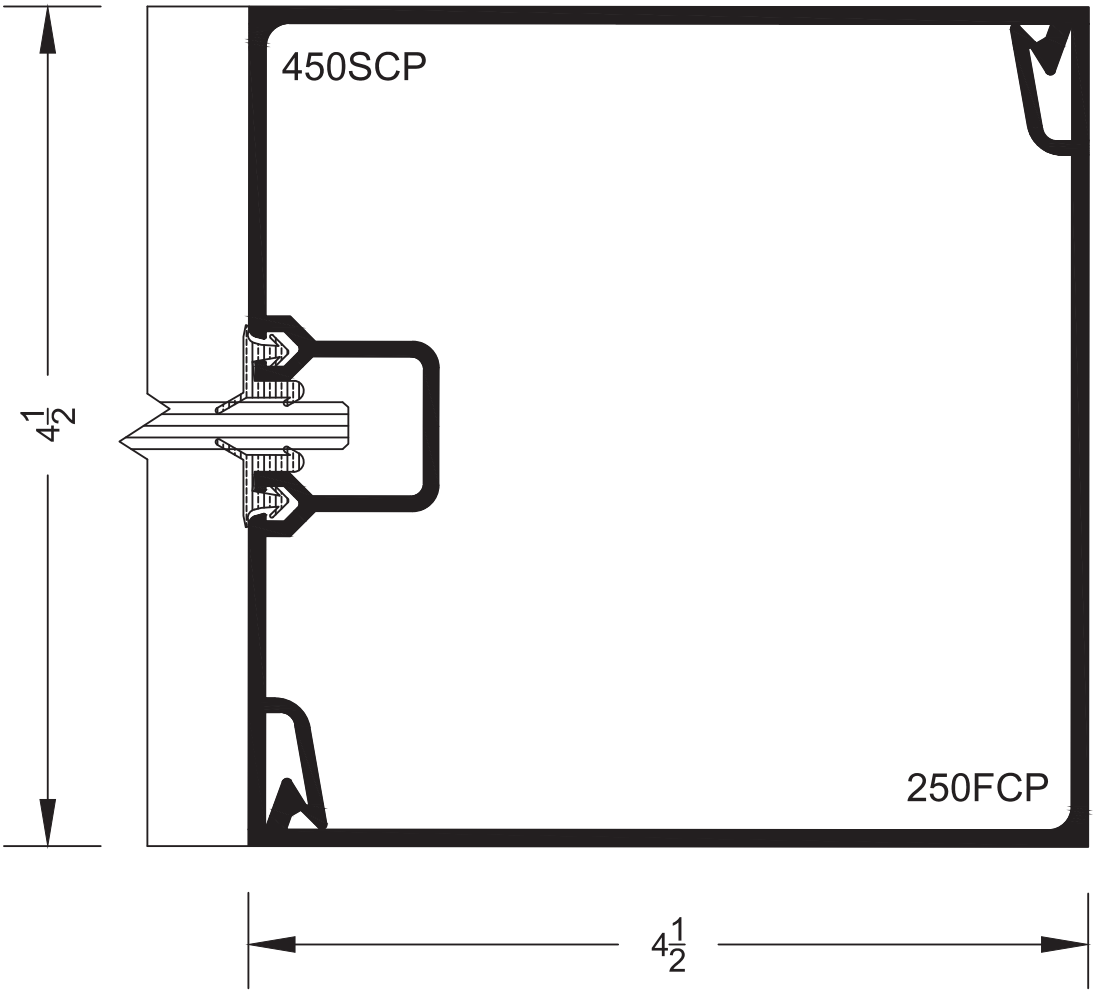
PL-450 SERIES
1-3/4 X 4-1/2
FULL SCALE

PRL ALUMINUM



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PL-450 SERIES
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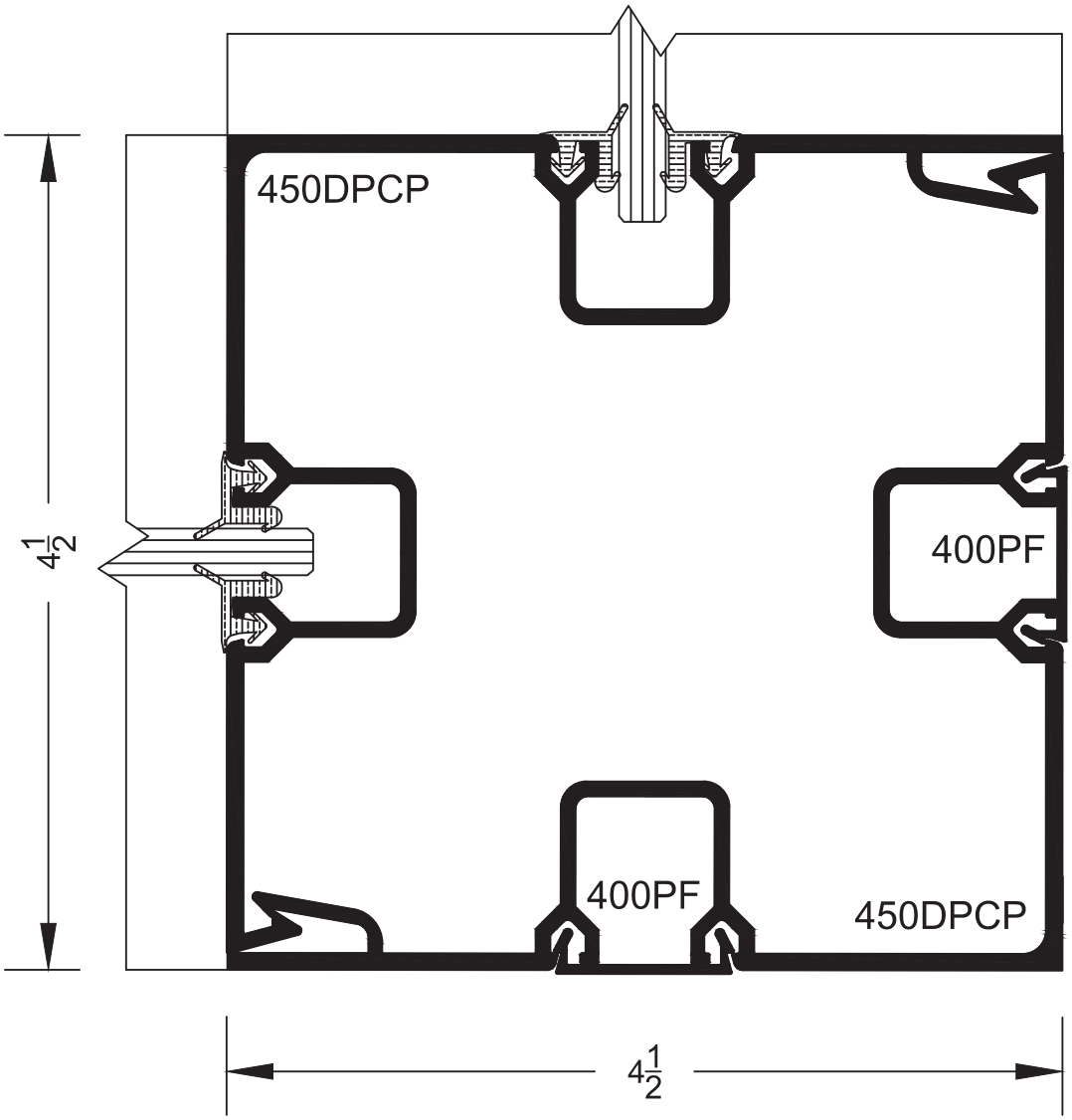
FULL SCALE

PRL ALUMINUM



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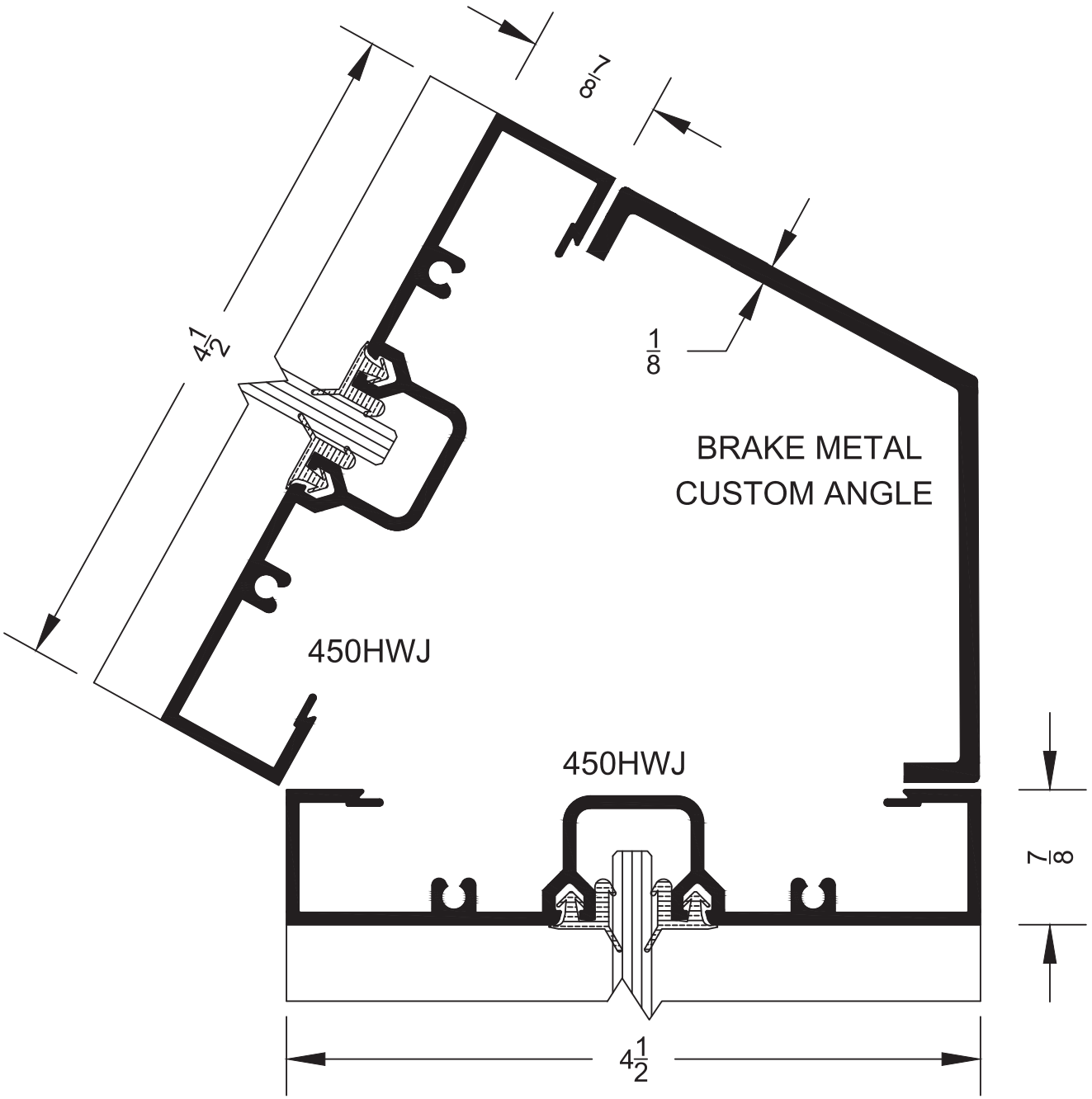
PL-450 SERIES
1-3/4 X 4-1/2
FULL SCALE

PRL ALUMINUM



C-4

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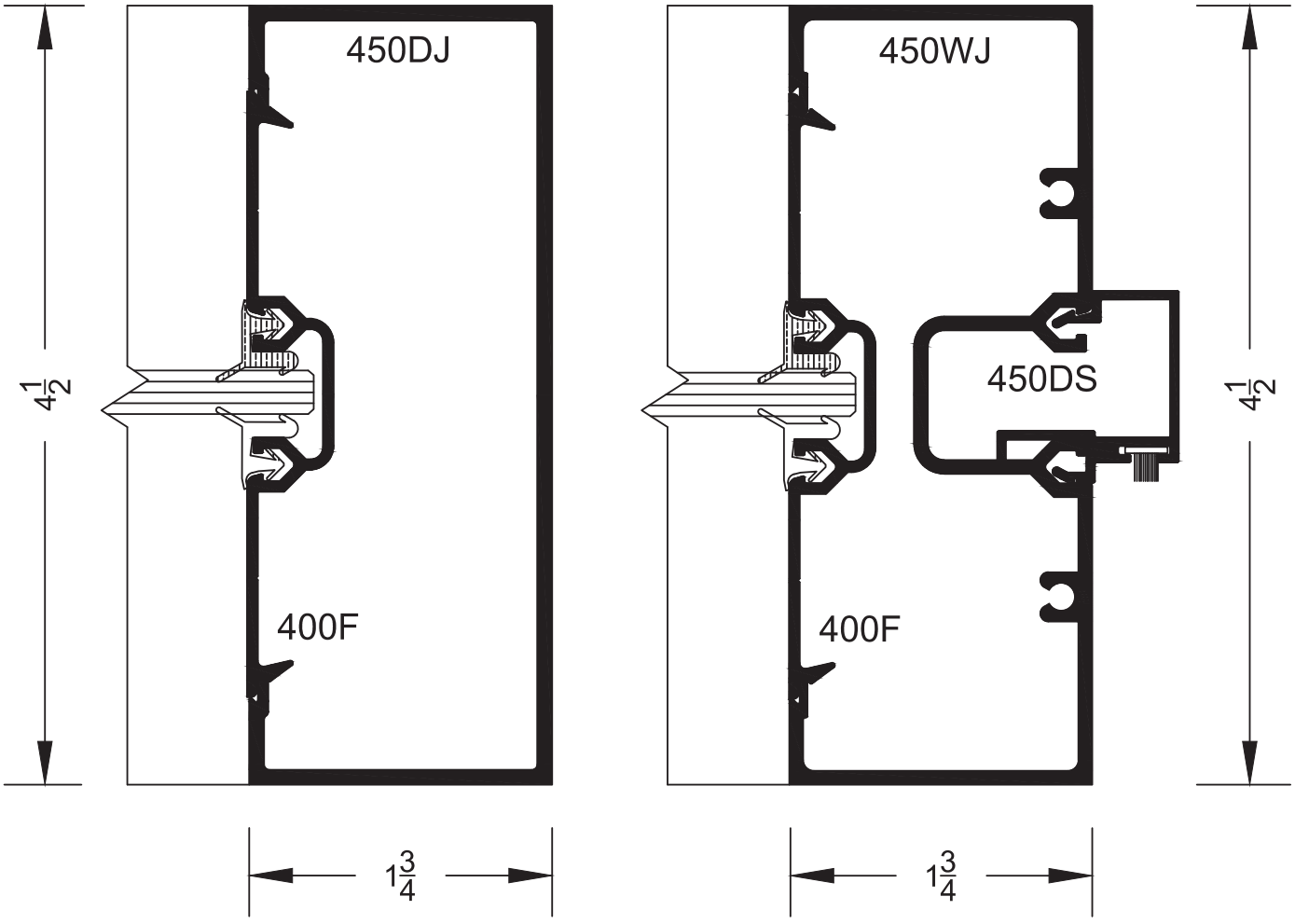
PL-450 SERIES
1-3/4 X 4-1/2
FULL SCALE

PRL ALUMINUM



G-1

G-2

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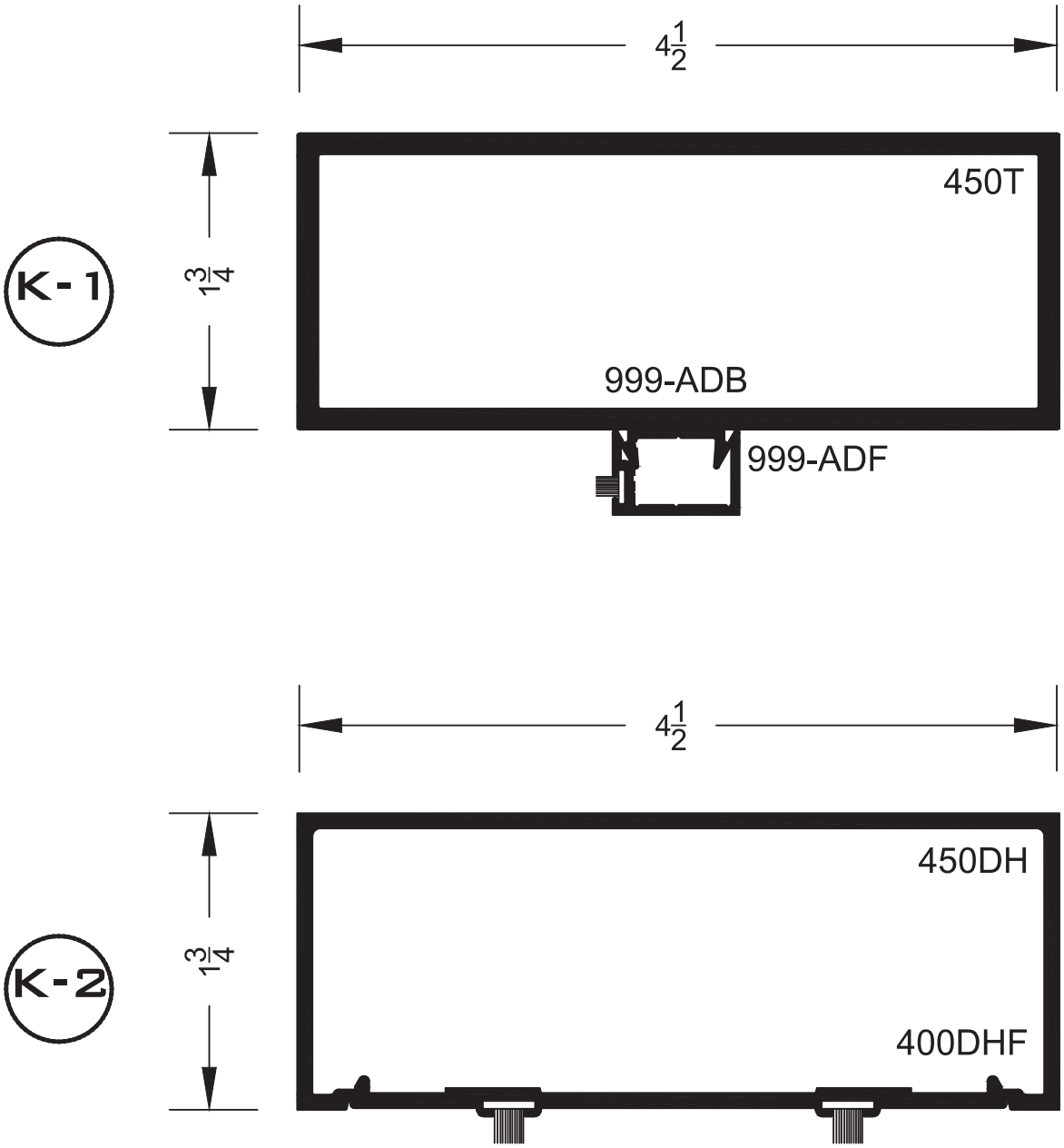
PL-450 SERIES
1-3/4 X 4-1/2
FULL SCALE

PRL ALUMINUM



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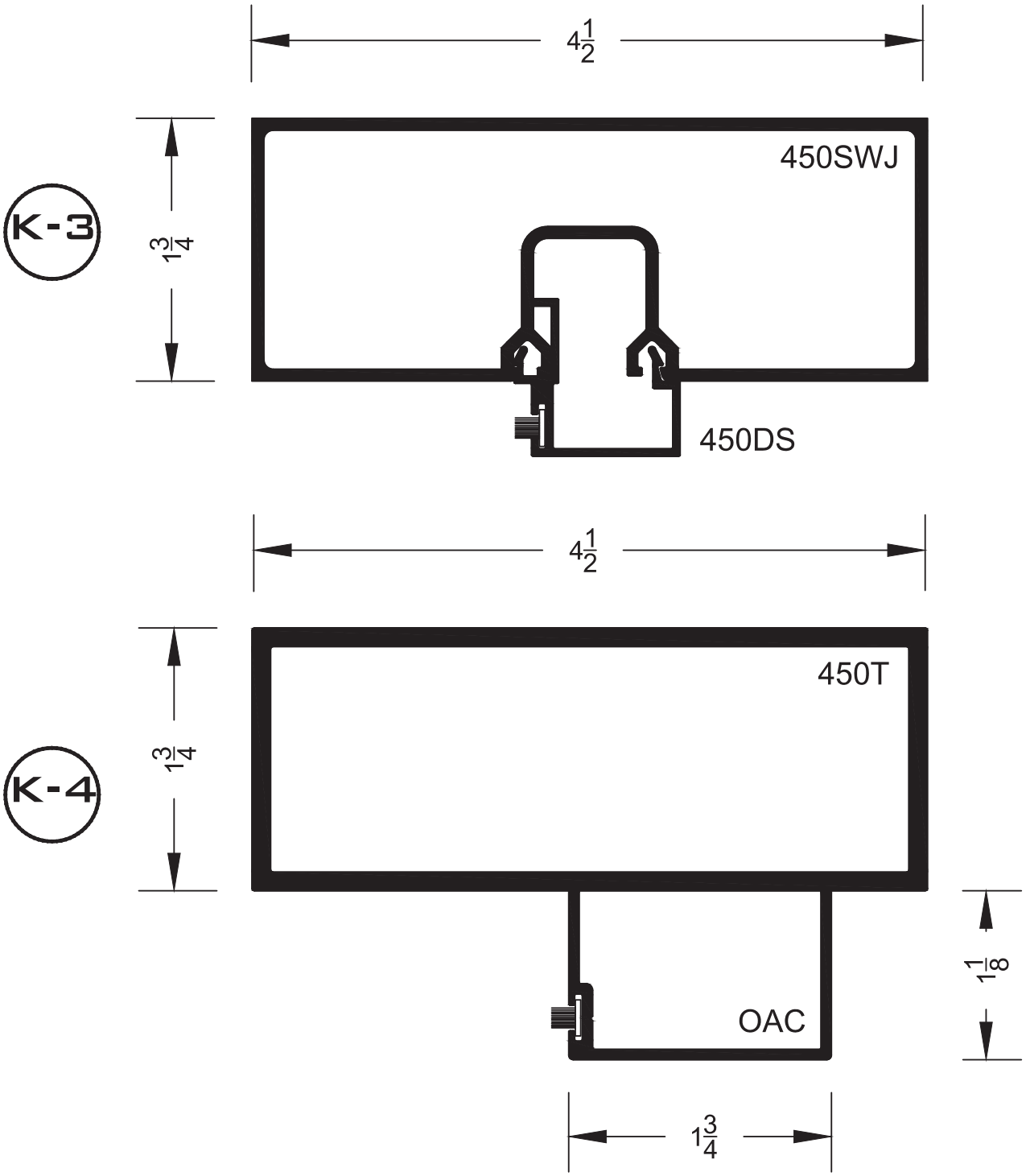
PL-450 SERIES
1-3/4 X 4-1/2
FULL SCALE

PRL ALUMINUM



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PRL ALUMINUM

WIND LOAD DESIGN

GLAZING FRAMING SHALL BE DESIGNED NOT TO EXCEED L/175, RATIO CURVES SHALL REPRESENT LIMIT.

VALUES ARE BASED ON CRITERIA FOR SIMPLE BEAM UNIFORMLY LOADED.

ALLOWABLE STRESSES FOR 6063-T5 ALUMINUM ALLOY = 9500 P.S.I.
ALLOWABLE STRESSES FOR A-36 STRUCTURAL STEEL = 21600 P.S.I.

MAXIMUM DEFLECTION BETWEEN SUPPORTS FOR SINGLE SPAN:

$$\triangle = \frac{5WL^3}{384EI}$$

MAXIMUM BENDING MOMENT FOR SINGLE SPAN:

$$M = \frac{WL}{8}$$

NOTATIONS REPRESENT:
W = TOTAL UNIFORM LOAD
L = LENGTH OF MULLION BETWEEN SUPPORTS
E = 10×10^6 P.S.I.
I = MOMENT OF INERTIA OF MULLION
M = BENDING MOMENT

NOTE:
MULLIONS ARE ASSUMED TO HAVE EQUAL SIZE GLASS LIGHTS EACH SIDE

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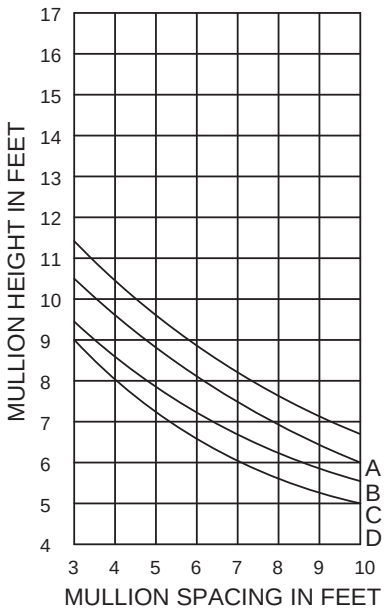
PL-450 SERIES

1-3/4 X 4-1/2

WIND LOAD

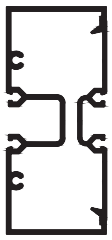
PRL ALUMINUM

450 WALL JAMB WITH FILLER

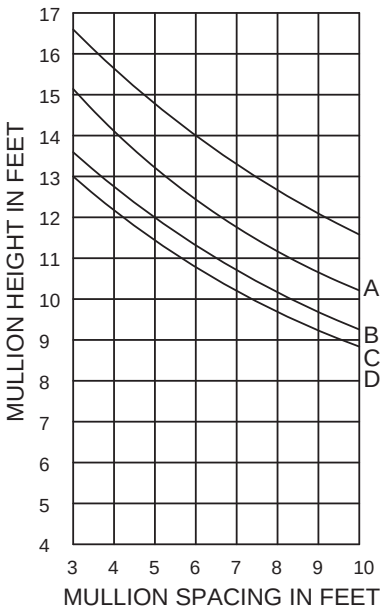


$I_{102} = 1.630\ IN^4$

$S_{102} = 0.815\ IN^3$

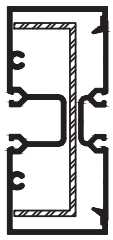


450 WALL JAMB
WITH STEEL REINFORCEMENT



$I_{102/STL} = 4.642\ IN^4$

$S_{102/STL} = 1.672\ IN^3$



CURVE REPRESENTATION

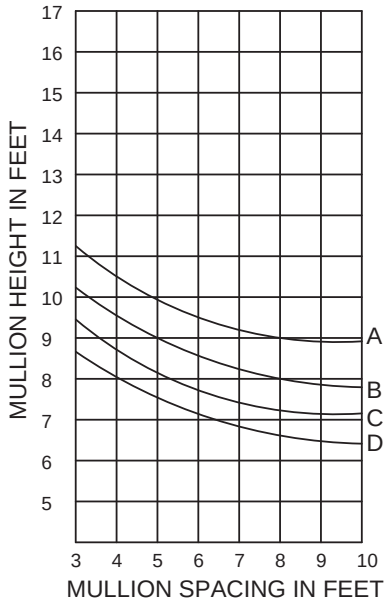
A = 15 P.S.F. (75 M.P.H)

B = 20 P.S.F. (90 M.P.H)

C = 25 P.S.F. (100 M.P.H)

D = 30 P.S.F. (110 M.P.H)

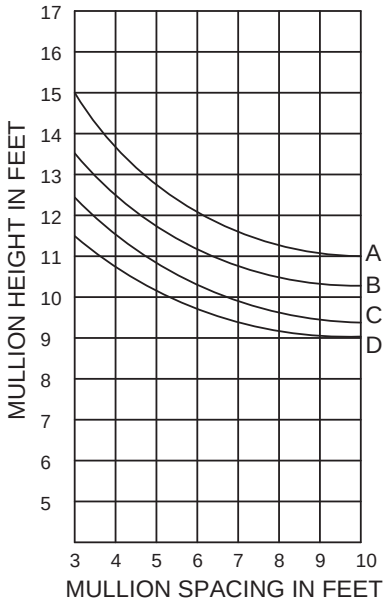
450 TUBE



$I = 2.040\ IN^4$

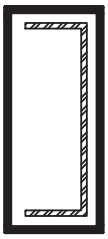
$S = 1.20\ IN^3$

450 TUBE
WITH STEEL REINFORCEMENT



$I = 5.052\ IN^4$

$S = 2.526\ IN^3$



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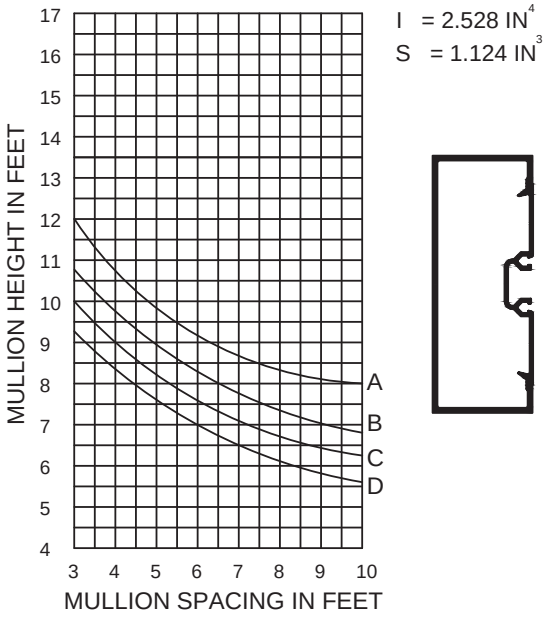
PL-450 SERIES
1-3/4 X 4-1/2
WIND LOAD

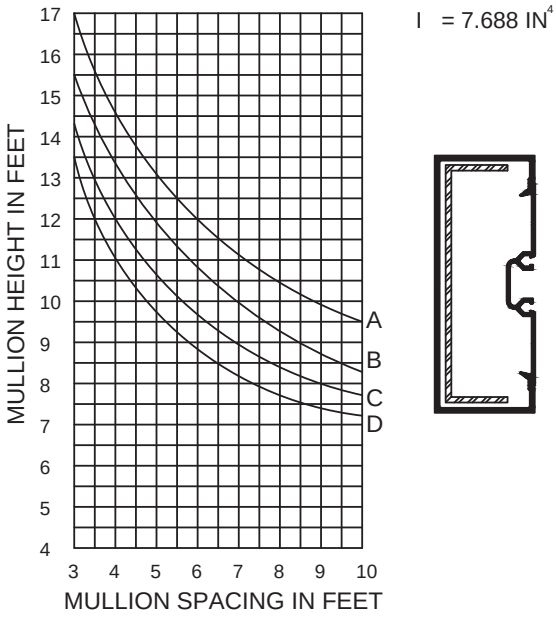
PRL ALUMINUM

450 WALL JAMB WITH FILLER



CURVE REPRESENTATION
A = 15 P.S.F. (75 M.P.H)
B = 20 P.S.F. (90 M.P.H)
C = 25 P.S.F. (100 M.P.H)
D = 30 P.S.F. (110 M.P.H)

450 WALL JAMB WITH FILLER
WITH STEEL REINFORCEMENT



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PRL ALUMINUM

DEAD LOAD DESIGN

GLAZING FRAMING SHALL BE DESIGNED NOT TO EXCEED L/360 OR 1/8" DEFLECTION WHICHEVER IS LES, RATIO CURVES SHALL REPRESENT LIMIT.

VALUES ARE BASED ON CRITERIA FOR SIMPLE BEAM UNIFORMLY LOADED.

ALLOWABLE STRESSES FOR 6063-T5 ALUMINUM ALLOY = 9500 P.S.I.
ALLOWABLE STRESSES FOR A-36 STRUCTURAL STEEL = 21600 P.S.I.

MAXIMUM DEFLECTION BETWEEN SUPPORTS FOR SINGLE SPAN:

$$\triangle = \frac{Pa}{24EI}(3L^2 - 4a^2)$$

MAXIMUM BENDING MOMENT FOR SINGLE SPAN:

$$M = Pa$$

NOTATIONS REPRESENT:
P = 1/2 GLASS LOAD
a = 1/4 OR 1/8 POINT OF SPAN (INCHES)
E = 10×10^6 P.S.I.
I = MOMENT OF INERTIA OF MULLION
L = LENGTH HORIZONTAL SPAN

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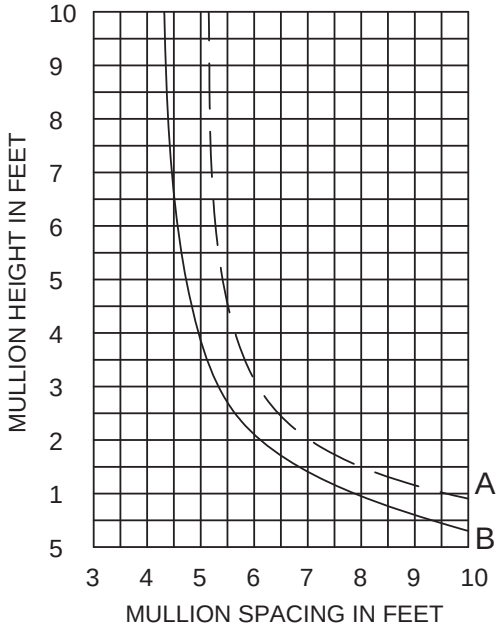
PL-450 SERIES
1-3/4 X 4-1/2
DEAD LOAD

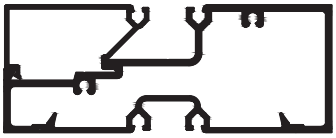
PRL ALUMINUM

450 HORZONTAL MULLION



$I = 0.241\ IN^4$
$S = 0.250\ IN^3$

MAX ALLOW DEFLECTION L/360
OR 1/8" WHICHEVER IS LESS



CURVE REPRESENTATION

(A) (— — — —) = 1/8 PTS. OR A MINIMUN OF 8" AWAY FROM THE EDGE OF GLASS

(B) (————) = 1/4 PTS. A MINIMUN OF 8" AWAY FROM THE EDGE OF GLASS

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PLCW-600 SERIES

2 1/2” x 6”

SECTION

PLCW-600 SERIES

2 1/2” x 6”

SECTION

ALUMINUM CURTAIN WALLS
PLCW-600 SERIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum curtain walls.

1.2 REFERENCES

A. American Architectural Manufacturers Association (AAMA):
1. AAMA/NWWDA 101/I.S. 2-97 - Voluntary Specification, Performance Requirements and Test Procedures for Air Leakage Resistance, Water Penetration Resistance, Structural Loading, Forced Entry Resistance.
2. AAMA-501.1 - Standard Test Method for Water Penetration of Windows, Curtain Walls and Doors Using Dynamic Pressure
3. AAMA 501.4 - Recommended Static Test Method for Evaluating Curtain Wall and Storefront Systems Subjected to Seismic and Wind Induced Interstory Drifts.
4. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.

B. ASTM International (ASTM):
1. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
2. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.
3. ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
4. ASTM E 331 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
5. ASTM E 1886 - Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.
6. ASTM E 1996 - Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes.

C. National Fenestration Rating Council (NFRC):
1. NFRC-100 - Procedure for Determining Fenestration Product U-factors.
2. NFRC-200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence.

1.3 SUBMITTALS

A. Submit under provisions of applicable Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.

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3. Installation methods.

C. Shop Drawings:
   1. Provide drawings showing each configuration.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish areas designated by Architect.
   2. Do not proceed with remaining work until workmanship is approved by Architect.
   3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS

A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email:request info (info@prlglass.com); Web:prlglass.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 CURTAIN WALLS

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A. Frame : 2-1/2 inches (64 mm) face width:
   1. Glazing: Structural glaze verticals.
   2. Glazing: Structural glaze horizontals.

B. 6 Inches (152 mm) Depth:
   1. Product: PLCW-600 as manufactured by PRL Glass Systems, Inc.
   2. Performance:
      a. Air infiltration: Limit air leakage through fixed glazing and frames to 0.026 cfm/ft^2/min (0.01 L/s/m^2) when tested in accordance with ASTM E-283-04 at a cross pressure of 6.24 psf (0.30 kPa).
      b. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 15 psf (103 kPa) when tested in accordance with ASTM-E331-00.
      c. Water Penetration under Dynamic Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 15 psf (103 kPa) when tested in accordance with AAMA-501.1-05.
      d. Design Wind Load: Limit mullion deflection to L/175 up to 13 feet-6 inches (4115 mm) and L/240+1/4 inch (6 mm) for spans above 13 feet-6 inches (4115 mm) when measured in accordance with ASTM E330-02 at a cross pressure of 40 psf (276 kPa).
      e. Seismic Racking: Compliance that system can accommodate a lateral movement of 3/4 inch (19 mm) when tested to AAMA 501.4-00.
      f. Thermal Conductance: Whole product rating shall be determined in accordance with NFRC-100. Show that specified product can achieve U-factor of no greater than 0.37 (Values based on structural glaze verticals, and insulated glass comprising exterior light of 1/4 inch (6 mm) bronze, 1/2 inch (13 mm) space with argon fill and an interior light of 1/4 inch (6 mm) SunGuard SNX 62/27).
      g. Solar Heat Gain: Whole product rating shall be determined in accordance with NFRC-200. Show that the specified product can achieve a SHGC of no greater than 0.36. (Values based on structural glaze verticals, and insulated glass comprising exterior light of 1/4 inch (6 mm) bronze, 1/2 inch (13 mm) space with argon fill and an interior light of 1/4 inch (6 mm) SunGuard SNX 62/27).
      h. Large Missile Impact: Design and fabrication shall meet the performance requirements in the referenced test procedures for a +1676/-2873 Pa (+35/-60 psf) design pressure with missile impacts corresponding to Missile Level D and Wind Zone 3 for a Basic Protection Rating. (Laminated I.G. 1-1/8 inches (29 mm) I.G. Marine glazed into a rubber glazing gasket.

2.3 MATERIALS

A. Material: Frames, assembly clips, trims and miscellaneous extrusions shall be extruded from Aluminum 6063-T6 alloy.

B. Glazing Gaskets:
   1. Compression type gaskets. Extruded EPDM (Ethylene Propylene Diene Monomer) push in place gasket. Dense 60 Durometer Shore "A" - ASTM C864 Option II
   2. Structural silicone compatible gasket: true silicone gasket -70 Durometer Shore "A", complying with ASTM C1115, Type C.

C. Thermal isolators: extruded rigid Geon complying with AAMA-303 and ASTM-D-1784-9.

D. End Dams: Pre-molded end dams made from closed cell EPDM (Ethylene Propylene Diene Monomer) sponge to ASTM C509.

2.4 SUN CONTROL:

A. Vertical Sunshade:

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B. Horizontal Sunshade:

C. Light Shelf Adaptable:

2.5 FINISH

A. Class II clear anodized aluminum shall conform to AA-M12-C22-A31.

B. Class I clear anodized aluminum shall conform to AA-M12-C22-A41.

C. Class II color anodized aluminum shall conform to AA-M12-C22-A34.
1. Color: Champagne.
2. Color: Light Bronze.
3. Color: Medium Bronze.
4. Color: Dark Bronze.
5. Color: Black.

D. Class I color anodized aluminum shall conform to AA-M12-C22-A44.
1. Color: Champagne.
2. Color: Light Bronze.
3. Color: Medium Bronze.
4. Color: Dark Bronze.
5. Color: Black.

E. Fluorocarbon finish complying with AAMA 2605.
1. Resin: 70% PVDF resin shall be Kynar using Kynar500/Hylar5000.
2. Cleaned and pretreated with chromium phosphate
3. Coat extrusions with approved primers to minimum dry film thickness of 0.20 mil (.0051 mm).
4. Color coat shall be a minimum dry film thickness of 1.0 mil (.025 mm).
5. Approved Coating Manufactures:
   a. PPG Industries
   b. Valspar Corporation

EXECUTION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL

A. Owner will engage an independent AAMA approved testing agency.

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B. Conduct test under the supervision of and in the presence of the Owner, Architect, and Construction Manager.

C. Test wall in accordance with AAMA 501.2-94.

3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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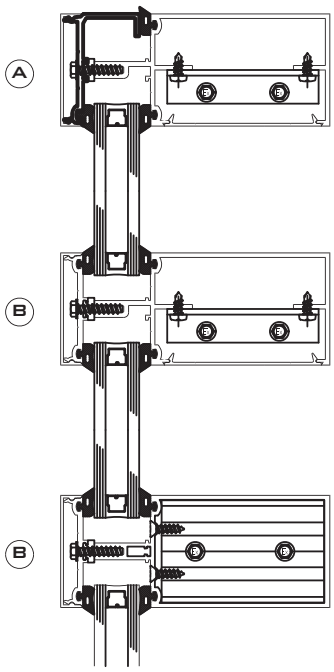
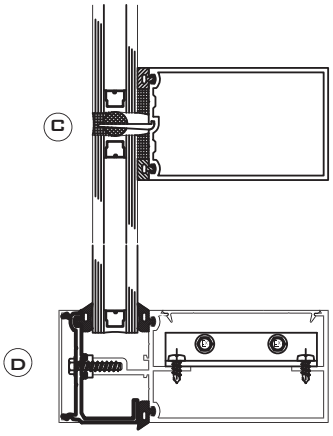
PLCW-600 SERIES

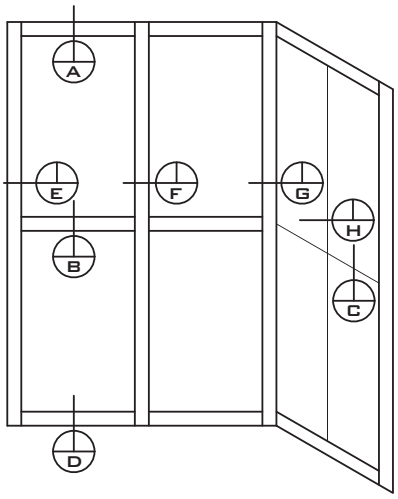
2 1/2" x 6"

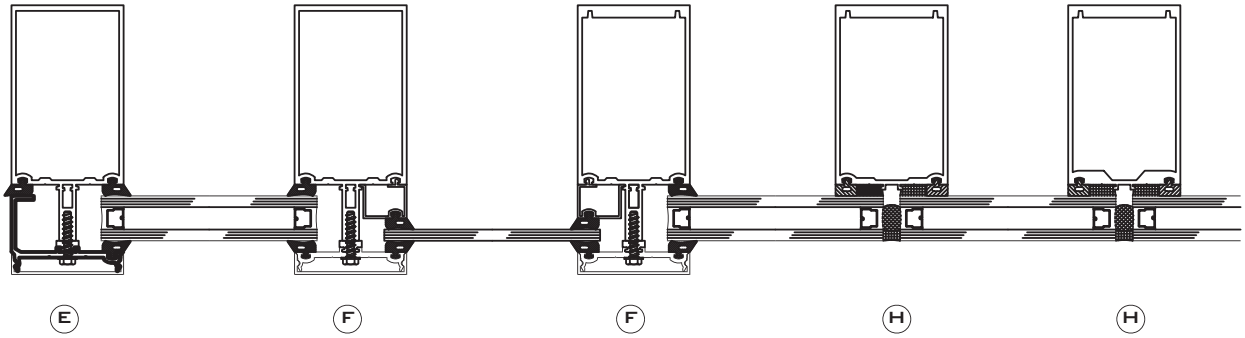
1/4 SCALE

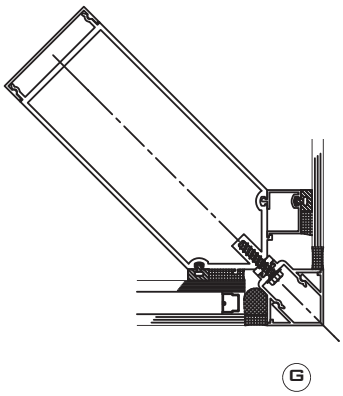
PRL ALUMINUM

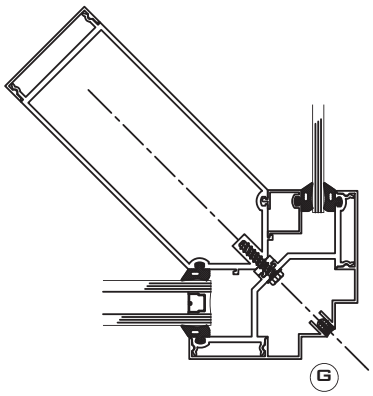


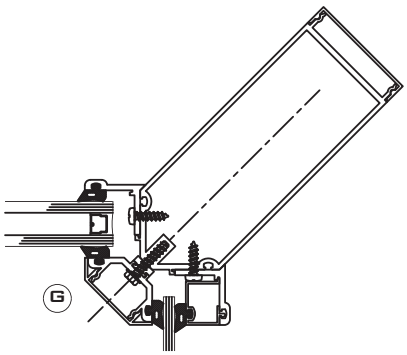












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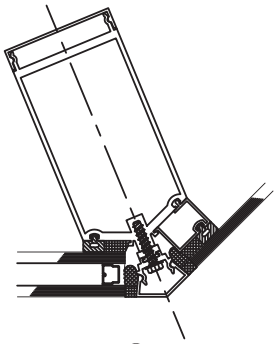
PLCW-600 SERIES
2 1/2" x 6"
1/4 SCALE

PRL ALUMINUM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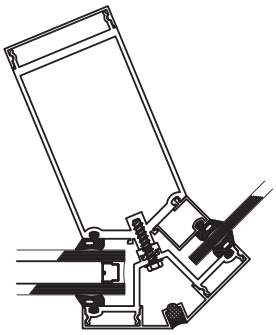
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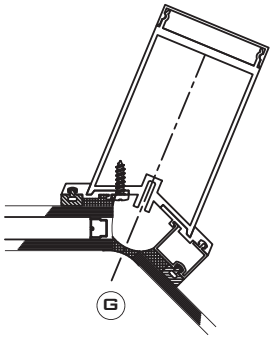
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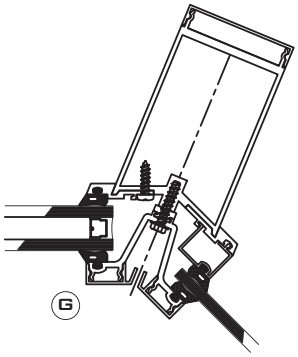
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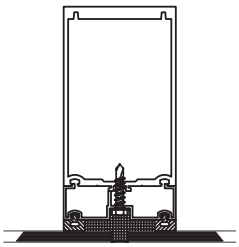
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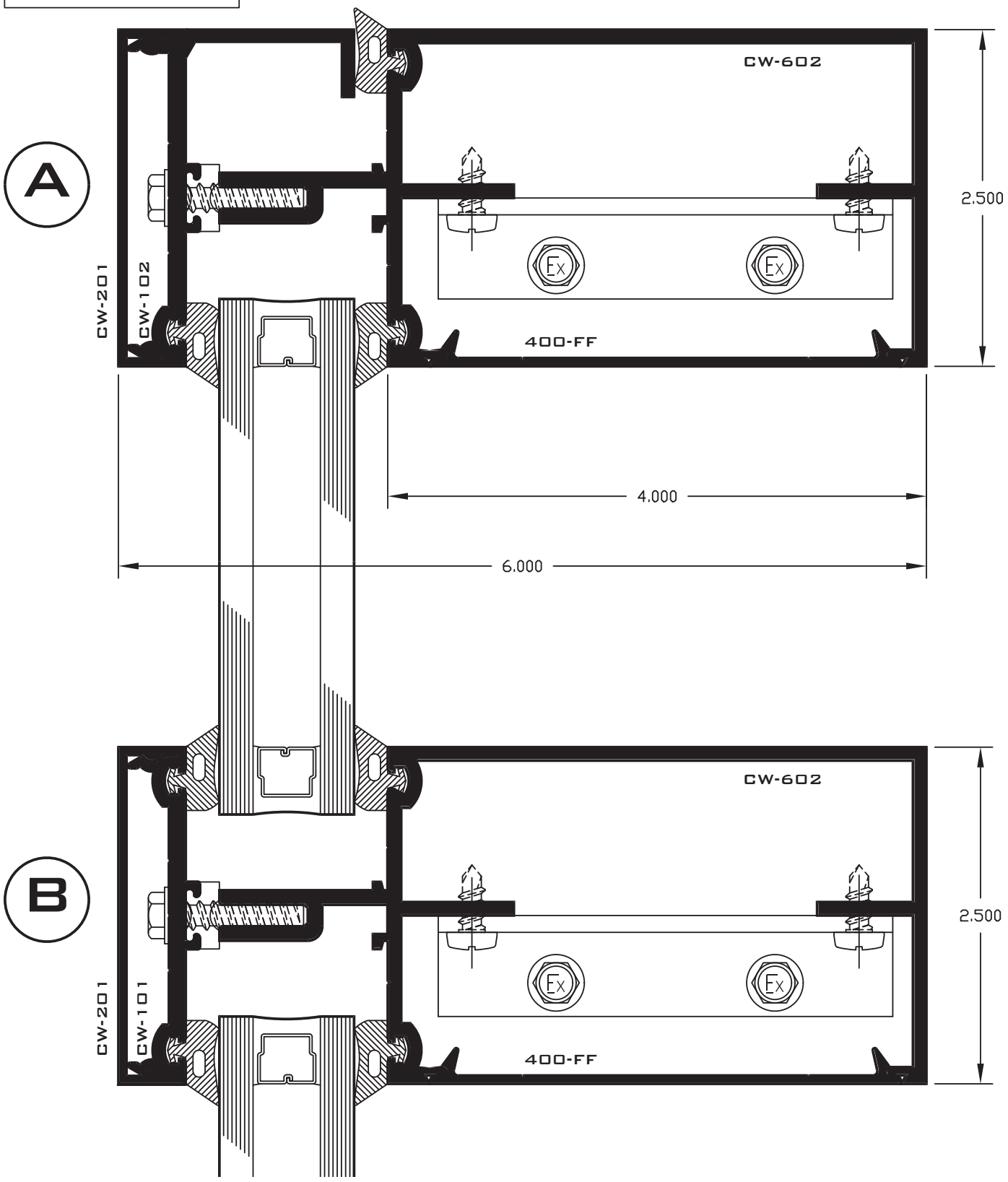

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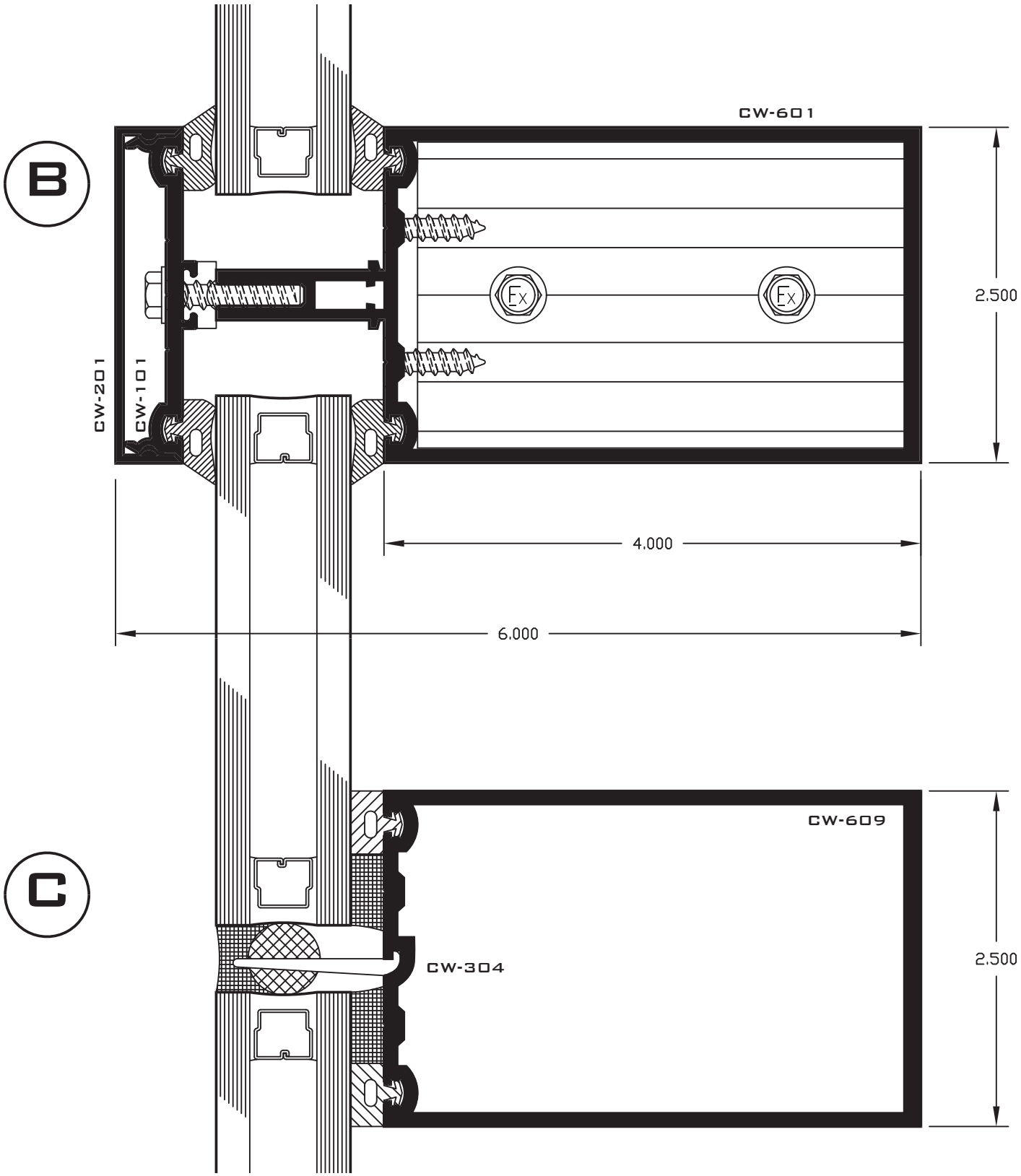

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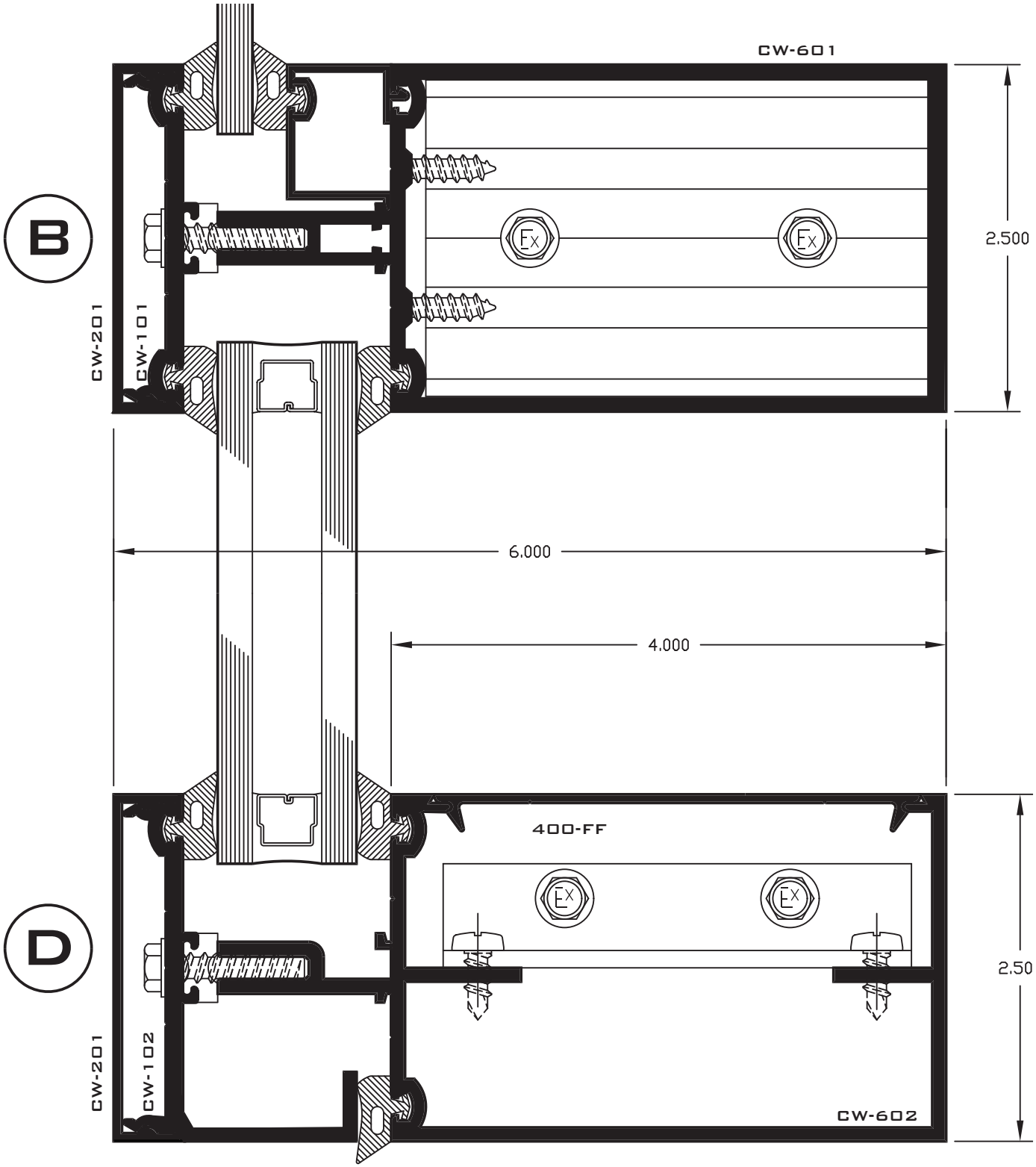
DETAIL AT SPANDREL



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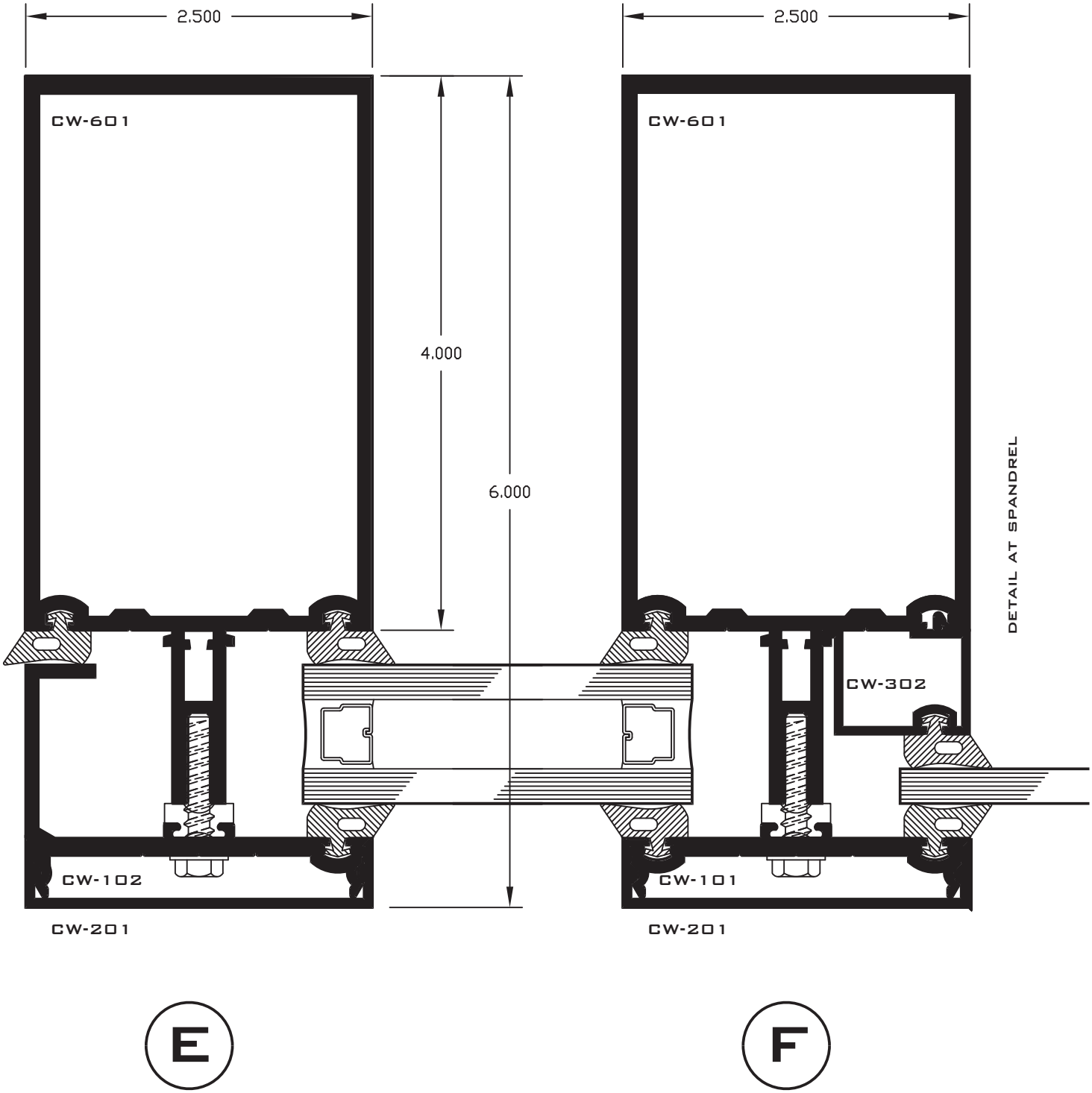

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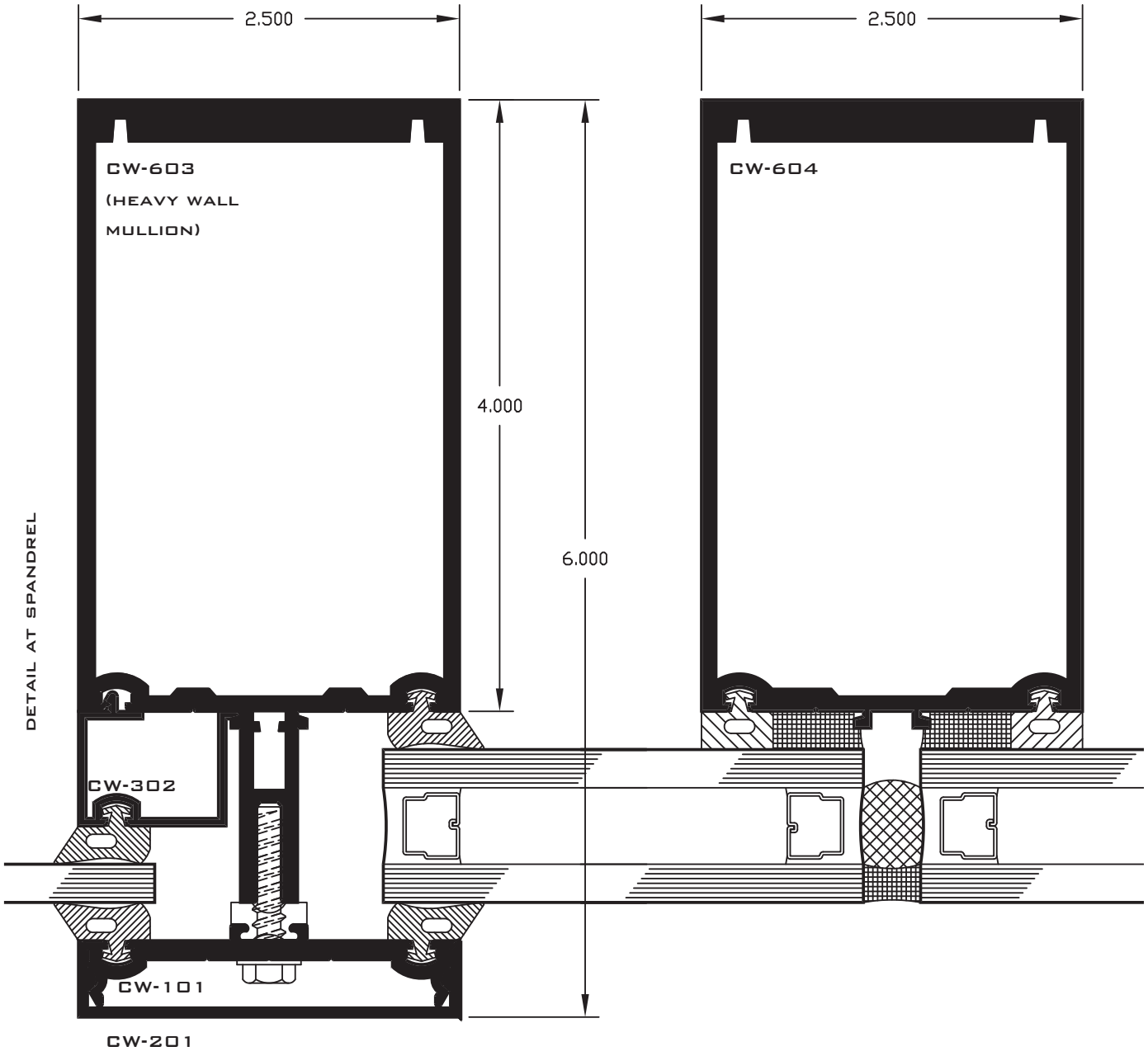

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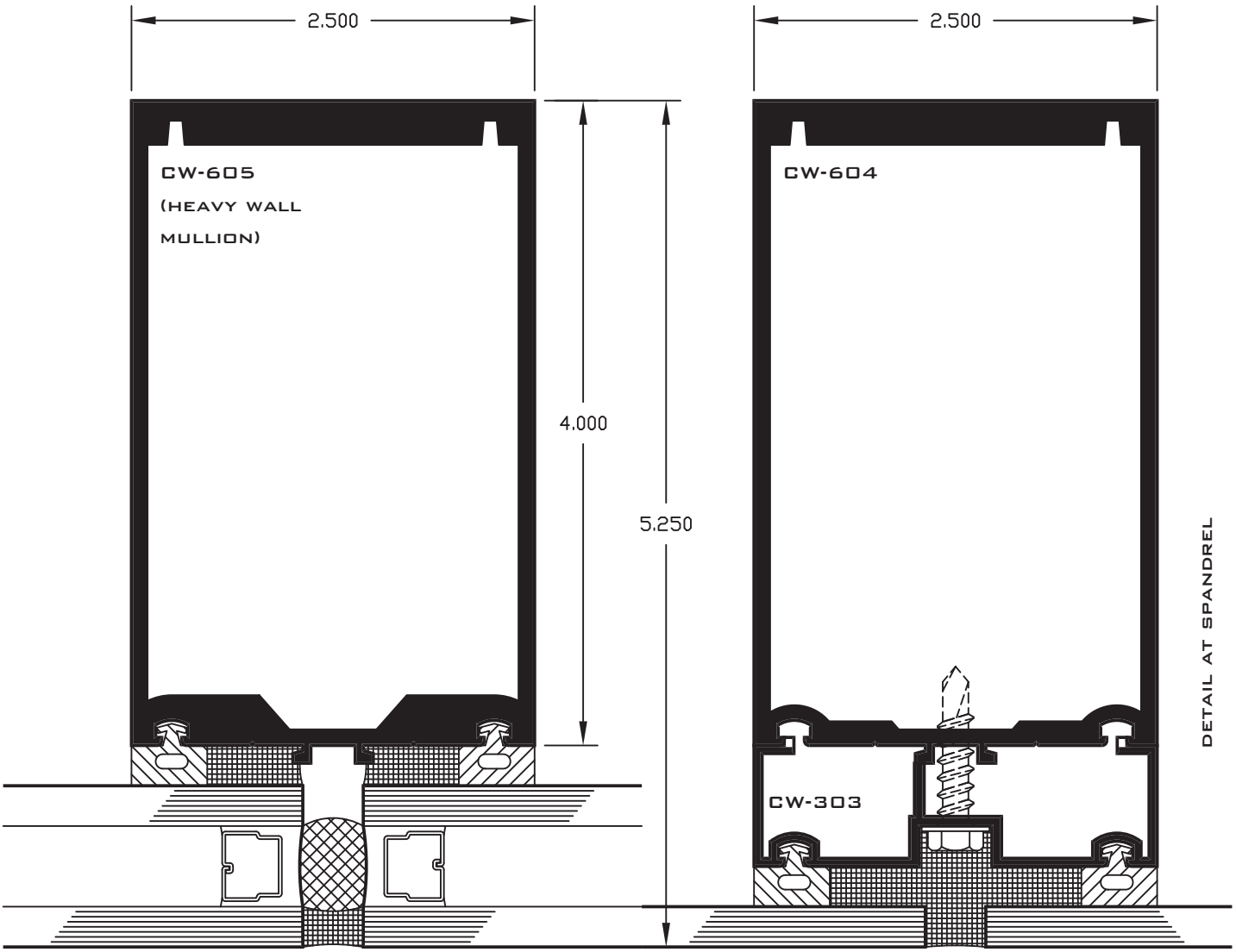

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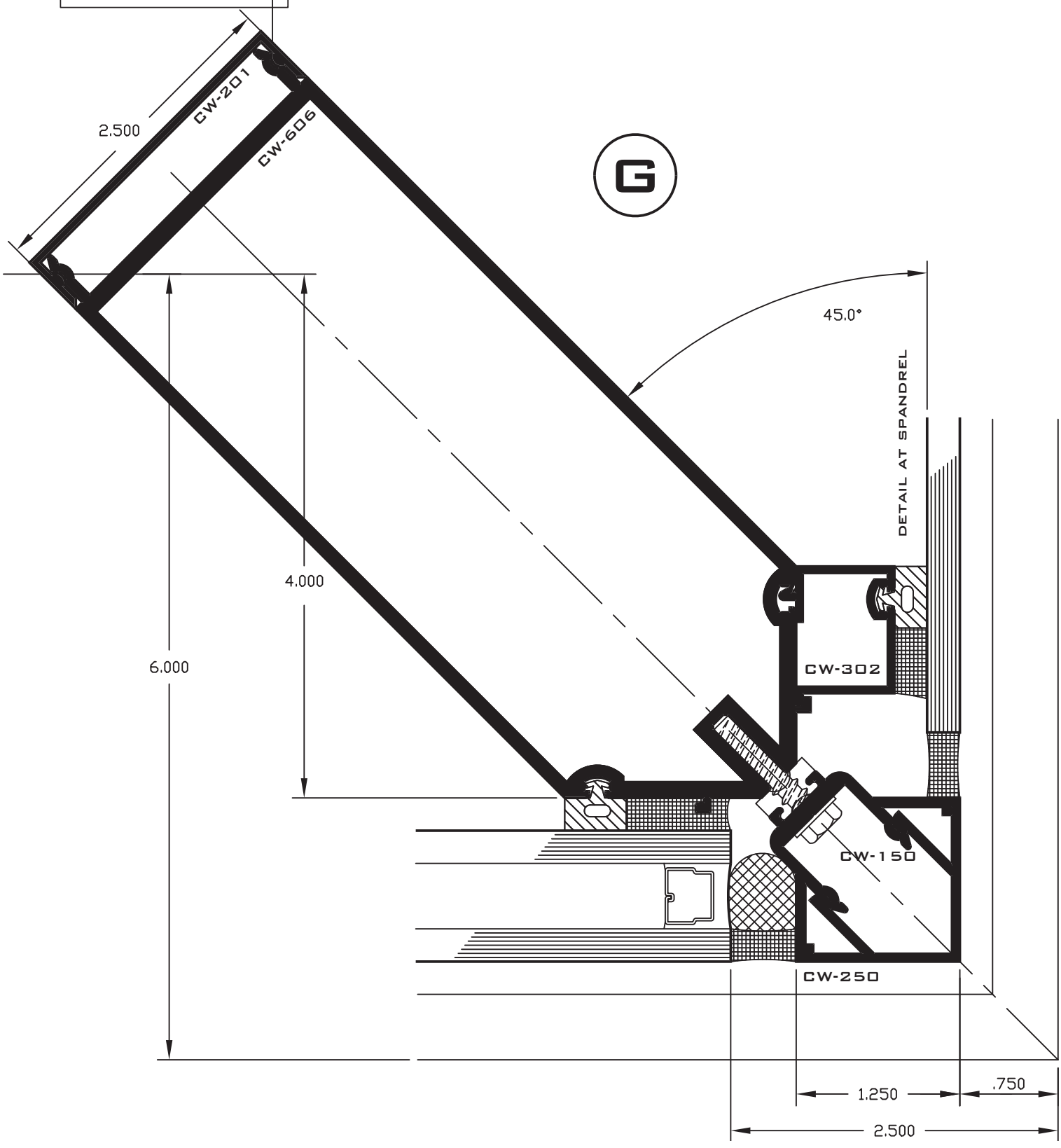

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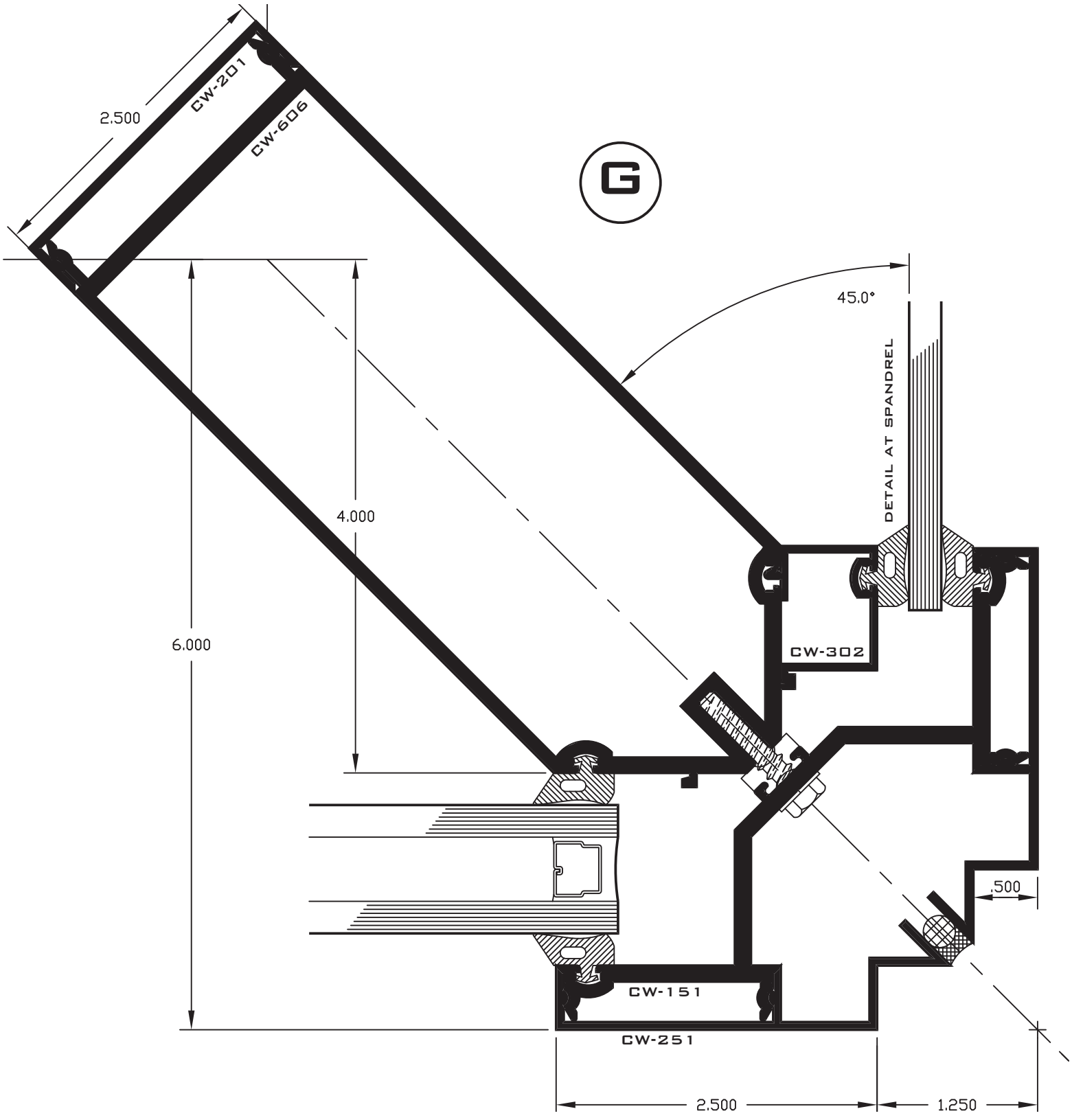

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PLCW-600 SERIES

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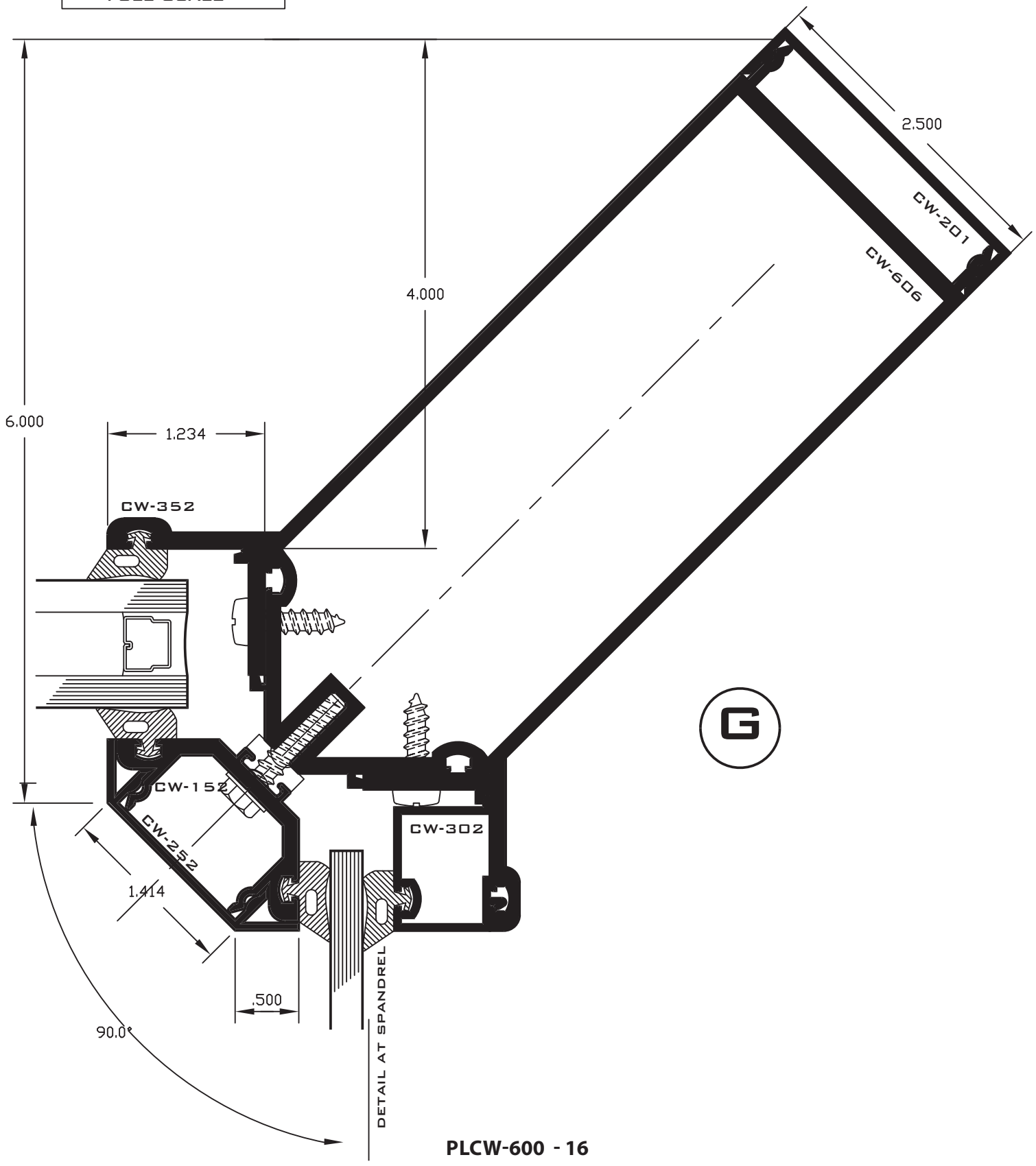

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PLCW-600 SERIES

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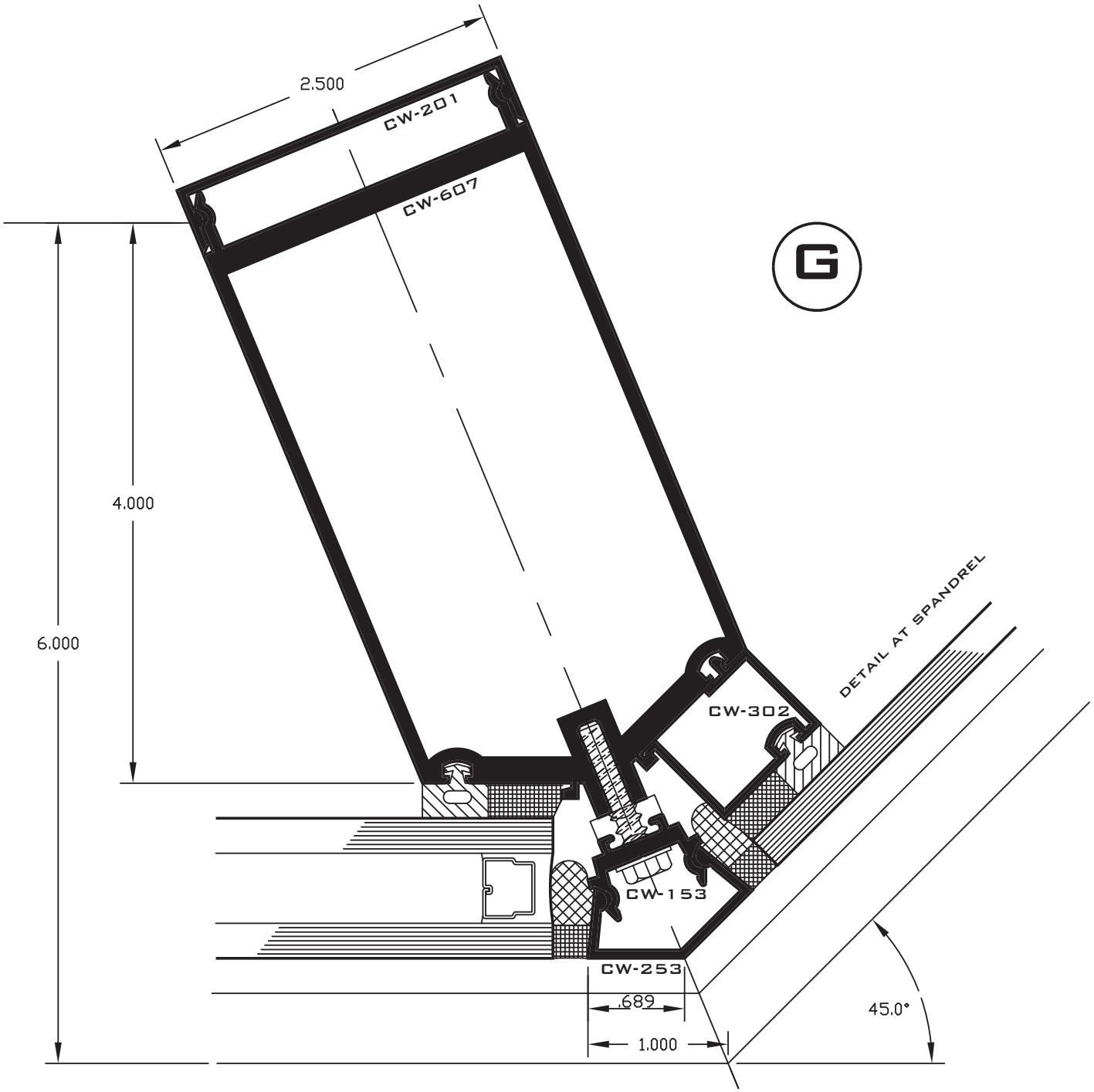

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PLCW-600 SERIES
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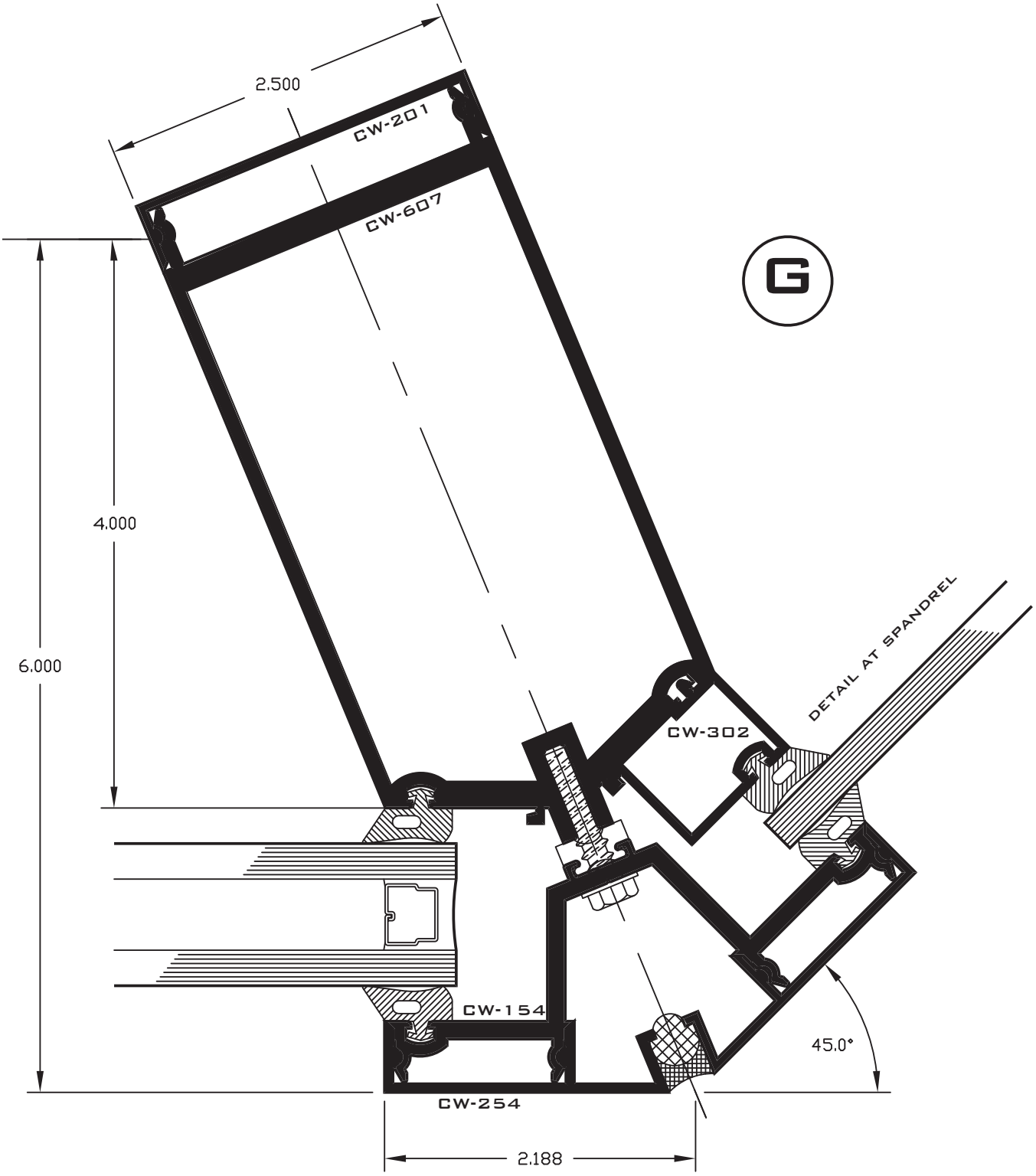

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PLCW-600 SERIES

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FULL SCALE

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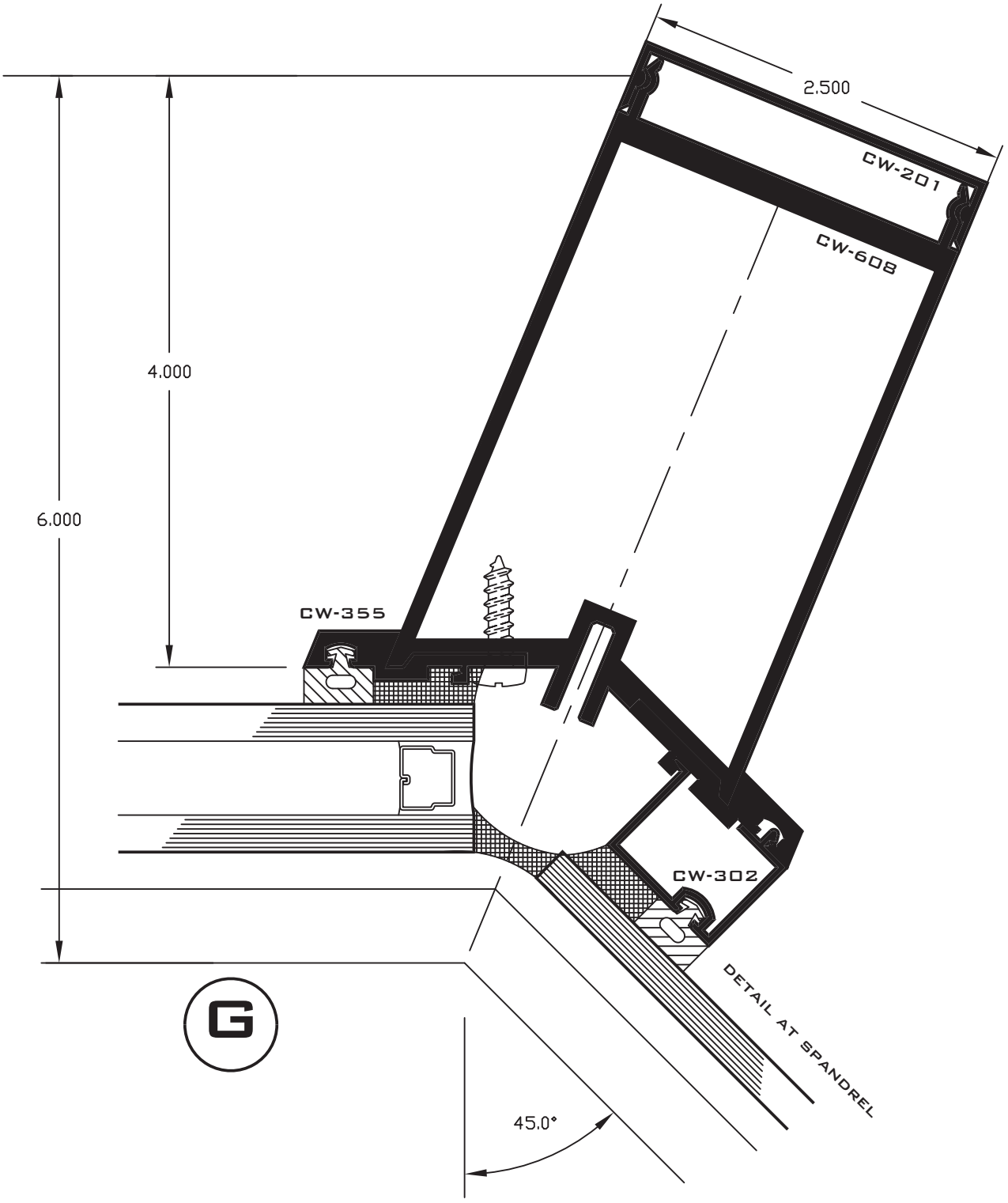

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PLCW-600 SERIES

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FULL SCALE

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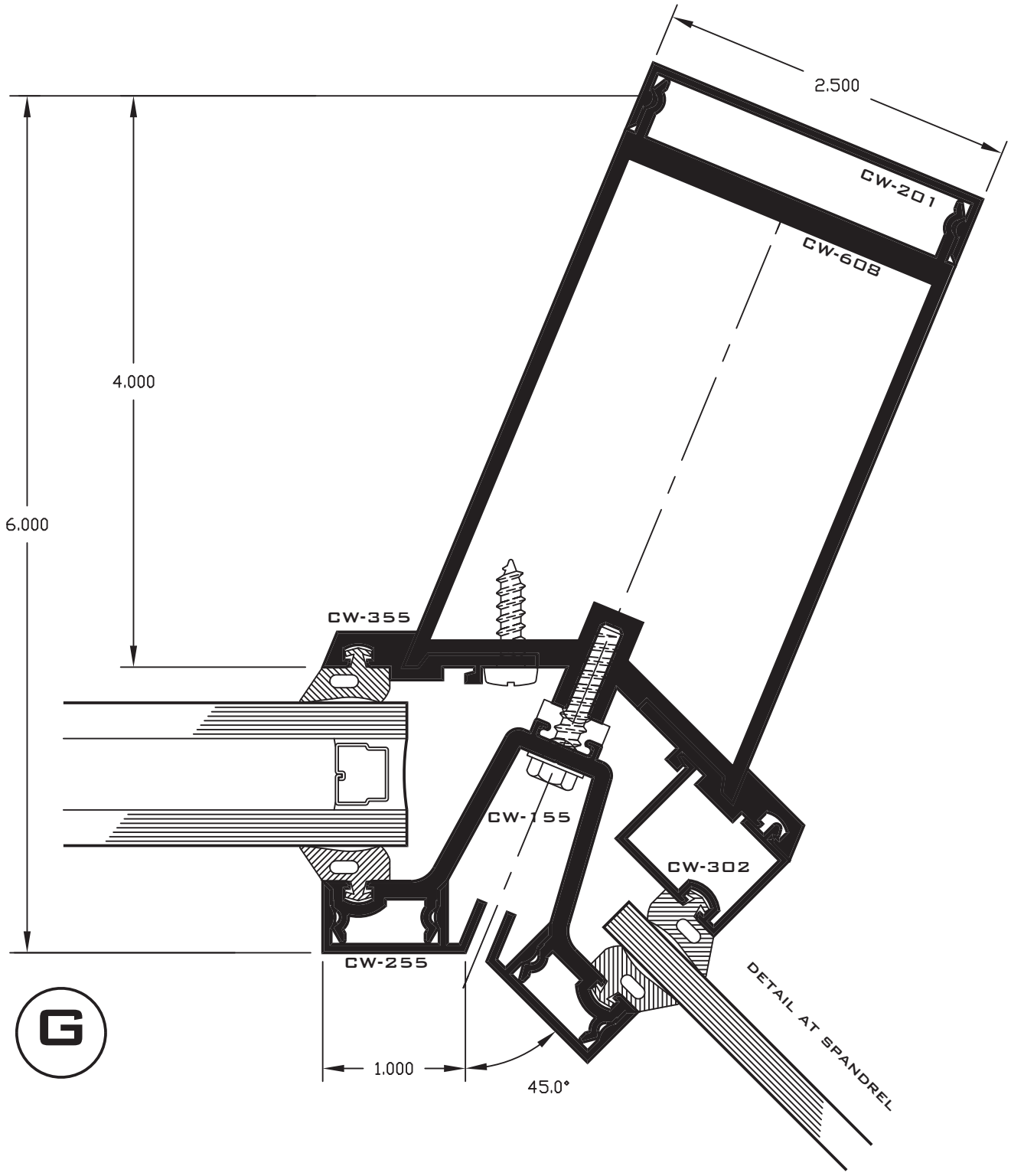

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PRL ALUMINUM

wind load design

Mullion deflection is limited per AAMA TIR-A11-04
deflection is limited to L/175 for spans up to 13'-6"
and L/240 for spans beyond 13'-6"

allowable stress for 6063-T6 aluminum alloy = 15000 p.s.i.
allowable stress for A-36 steel = 21600 p.s.i.

maximum deflection was based on the following equation:

$$\triangle = \frac{5WL^3}{384EI}$$

maximum bending moment was based on the following equation:

$$M = \frac{WL}{8}$$

assumptions:
W = total uniform load
L = length of mullion between anchors
E = 10×10^6 p.s.i.
I = moment of inertia of the mullion
M = maximum bending moment

* mullions are assumed to have equal size glass lights each side

check with local code requirements for acceptance of AAMA TIR-A11

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PLCW-600 SERIES

2 1/2" x 6"

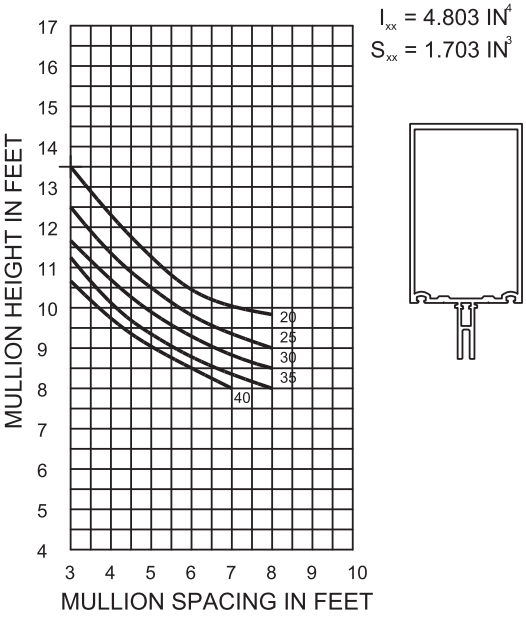
WIND LOAD

PRL ALUMINUM

CW-601

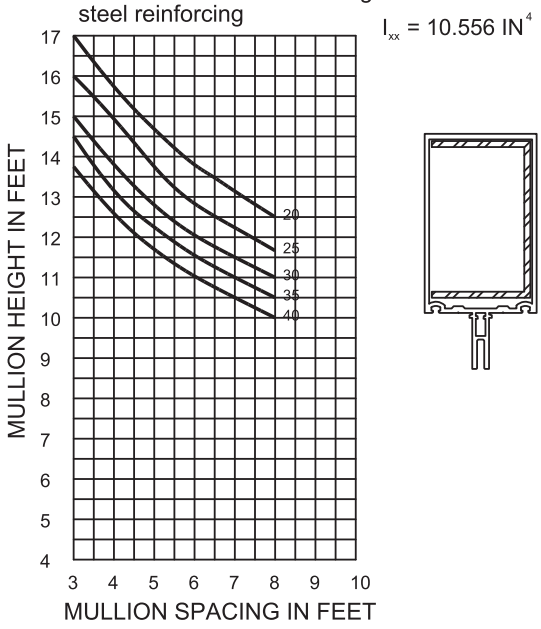
I_{xx} = 4.803 IN^4

S_{xx} = 1.703 IN^3



CW-601 with 2.2 x 3.5 x 10g steel reinforcing

I_{xx} = 10.556 IN^4



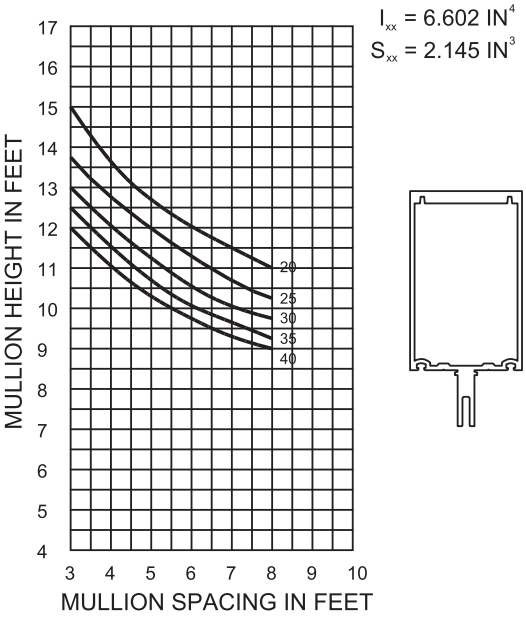
CURVE REPRESENTATION

A = 20 P.S.F.
B = 25 P.S.F.
C = 30 P.S.F.
D = 35 P.S.F.
E = 40 P.S.F.

CW-603
heavy wall mullion

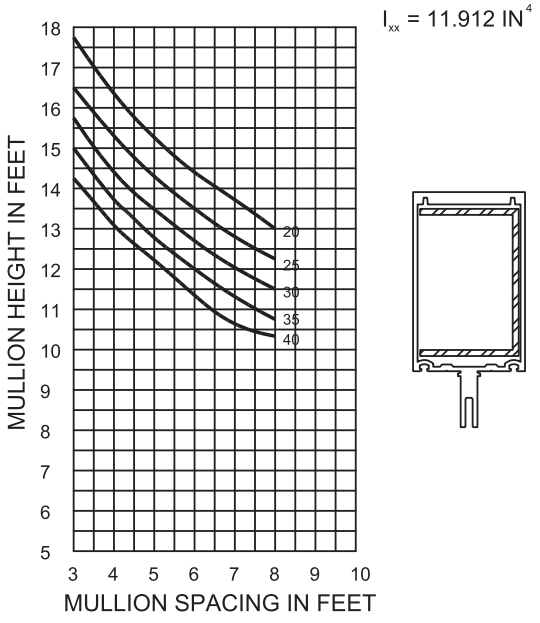
I_{xx} = 6.602 IN^4

S_{xx} = 2.145 IN^3



CW-603 with 2.2 x 3.375 x 10g steel reinforcing

I_{xx} = 11.912 IN^4



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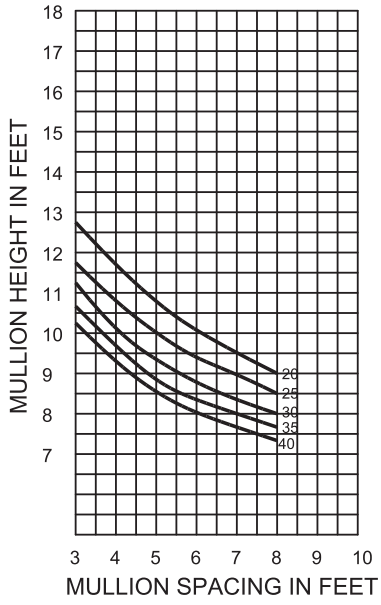
PLCW-600 SERIES

2 1/2" x 6"

WIND LOAD

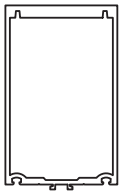
PRL ALUMINUM

CW-604

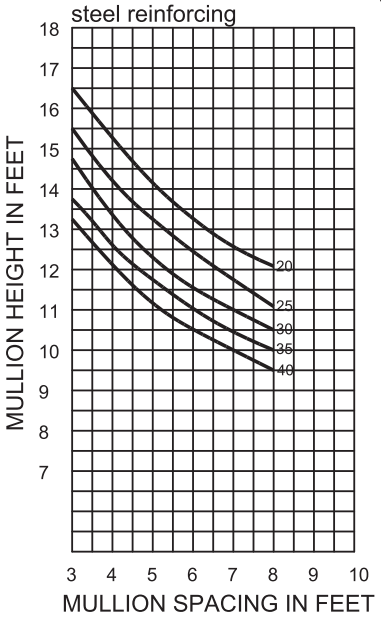


I_{xx} = 4.153 IN^4

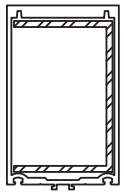
S_{xx} = 1.794 IN^3



CW-604 with 2.2 x 3.375 x 10g steel reinforcing

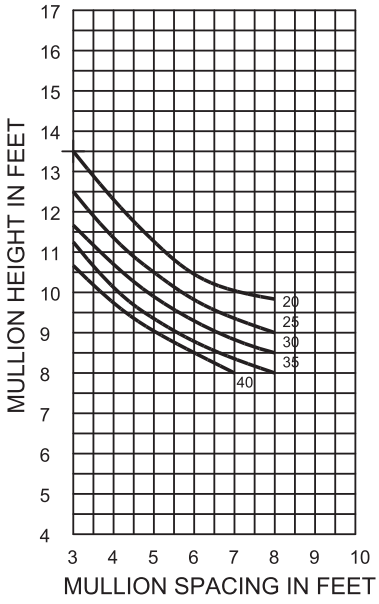


I_{xx} = 9.463 IN^4



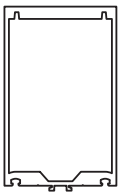
CURVE REPRESENTATION
A = 20 P.S.F.
B = 25 P.S.F.
C = 30 P.S.F.
D = 35 P.S.F.
E = 40 P.S.F.

CW-605
heavy wall mullion

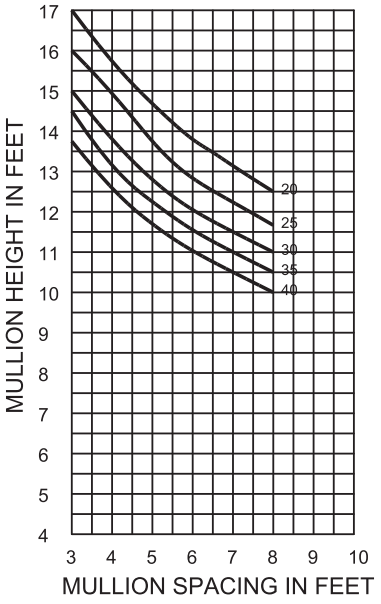


I_{xx} = 4.918 IN^4

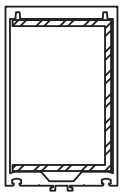
S_{xx} = 2.342 IN^3



CW-605 with 2.2 x 3.375 x 10g steel reinforcing



I_{xx} = 10.228 IN^4



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PLCW-600 SERIES
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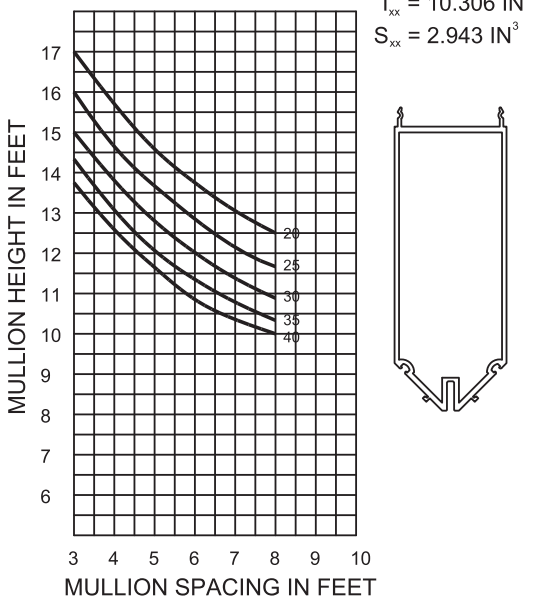
WIND LOAD

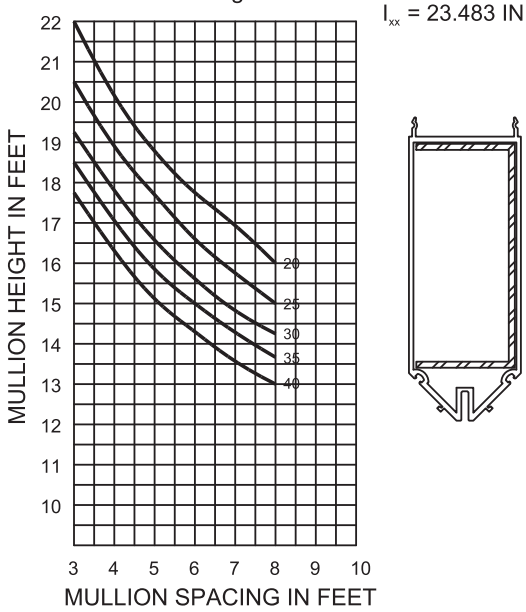
CW-606
90° inside/outside corner

I_{xx} = 10.306 IN^4
S_{xx} = 2.943 IN^3



CW-606 with 2.2 x 5.0 x 10g
steel reinforcing

I_{xx} = 23.483 IN^4

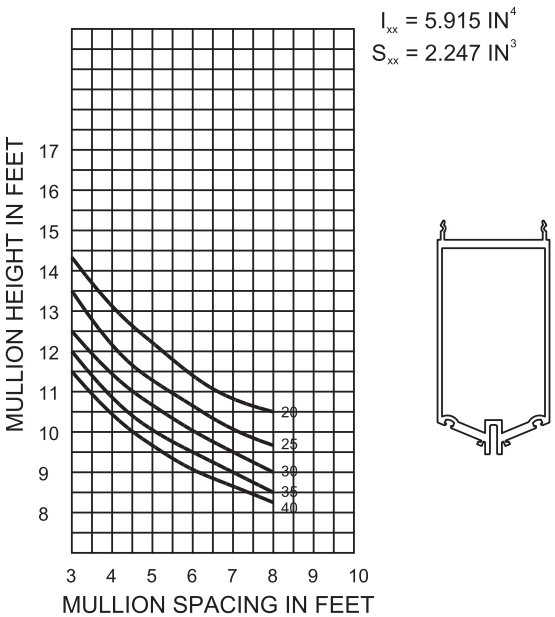


CURVE REPRESENTATION

A = 20 P.S.F.
B = 25 P.S.F.
C = 30 P.S.F.
D = 35 P.S.F.
E = 40 P.S.F.

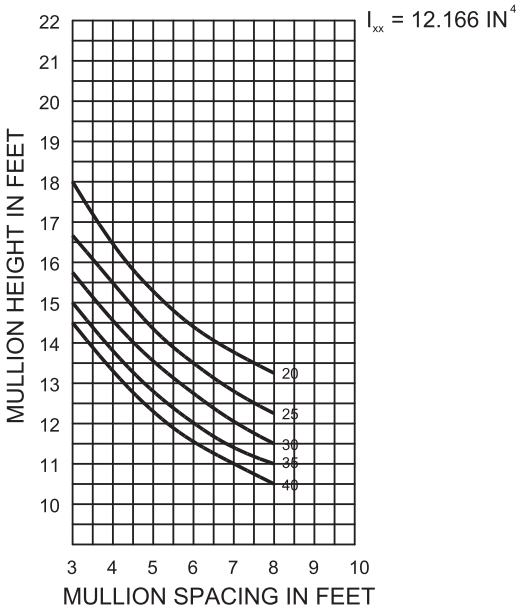
CW-607
135° outside corner mullion

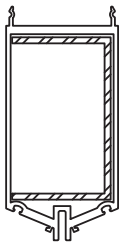
I_{xx} = 5.915 IN^4
S_{xx} = 2.247 IN^3



CW-607 with 2.2 x 3.625 x 10g
steel reinforcing

I_{xx} = 12.166 IN^4





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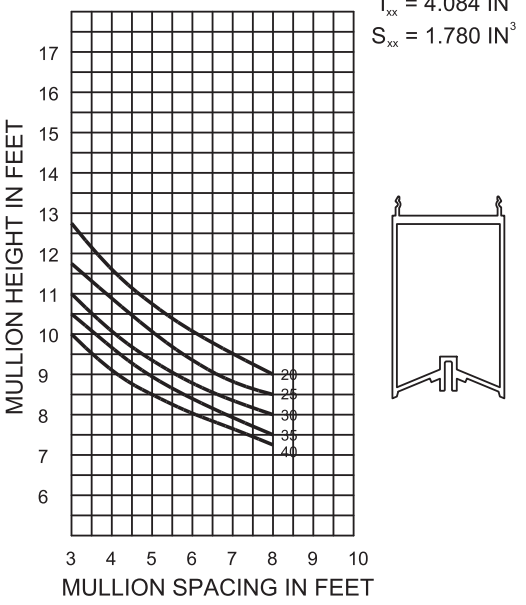
PLCW-600 SERIES
2 1/2" x 6"
WIND LOAD

PRL ALUMINUM

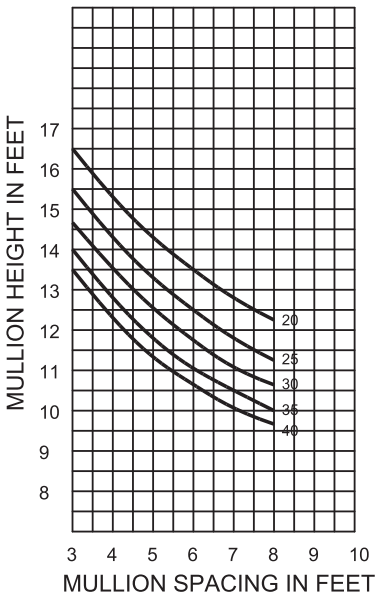
CW-608
135° inside corner mullion

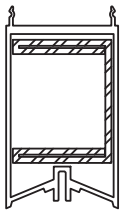
I_{xx} = 4.084 IN^4
S_{xx} = 1.780 IN^3



CW-608 with 2.2 x 2.75 x 10g (hemed)
steel reinforcing

I_{xx} = 9.559 IN^4





CURVE REPRESENTATION
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B = 25 P.S.F.
C = 30 P.S.F.
D = 35 P.S.F.
E = 40 P.S.F.

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PRL ALUMINUM

dead load design

horizontal mullion deflection is limited to L/360 or 1/8" (whichever is less)
curves represent limitations based on 2 point loads, equal in magnitude
both located at 1/8 or 1/4 point of the horizontal mullions length

allowable stress for 6063-T6 aluminum alloy = 15000 p.s.i.
allowable stress for A-36 steel = 21600 p.s.i.

maximum deflection was based on the following equation:

$$\triangle = \frac{Pa}{24EI}(3L^2 - 4a^2)$$

maximum bending moment was based on the following equation:

$$M = Pa$$

assumptions:
P = 1/2 glass weight
a = 1/4 or 1/8 point of span (in inches)
E = 10×10^6 p.s.i.
I = moment of inertia of the mullion
L = length of horizontal mullion

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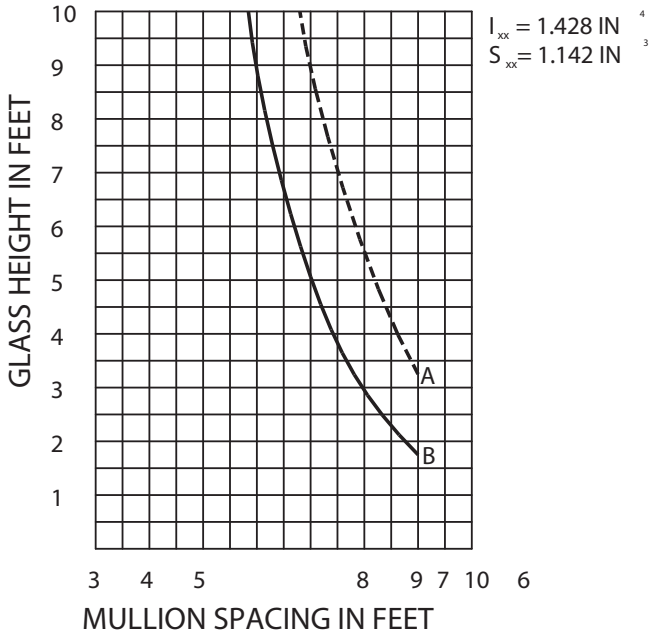
PLCW-600 SERIES

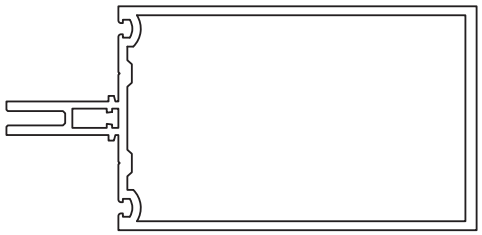
2 1/2" x 6"

DEAD LOAD



I_{xx} = 1.428 IN^4

S_{xx} = 1.142 IN^3

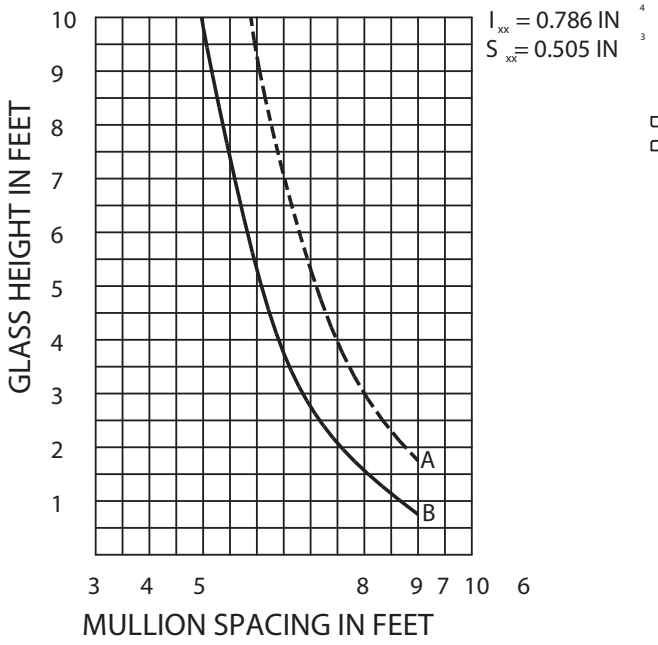


CW-601

CURVE REPRESENTATION

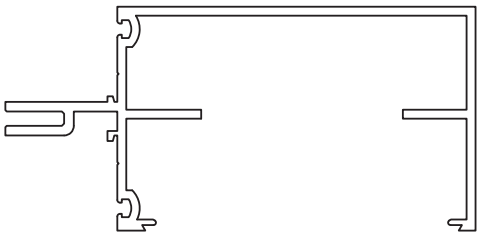
A (----------) = 1/8 PTS.

B (————) = 1/4 PTS.



I_{xx} = 0.786 IN^4

S_{xx} = 0.505 IN^3



CW-602

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PLCW-700 SERIES

2 1/2” x 7”

SECTION

PLCW-700 SERIES

2 1/2” x 7”

SECTION

ALUMINUM CURTAIN WALLS
PLCW-700 SERIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum curtain walls.

1.2 REFERENCES

A. American Architectural Manufacturers Association (AAMA):
1. AAMA/NWWDA 101/I.S. 2-97 - Voluntary Specification, Performance Requirements and Test Procedures for Air Leakage Resistance, Water Penetration Resistance, Structural Loading, Forced Entry Resistance.
2. AAMA-501.1 - Standard Test Method for Water Penetration of Windows, Curtain Walls and Doors Using Dynamic Pressure
3. AAMA 501.4 - Recommended Static Test Method for Evaluating Curtain Wall and Storefront Systems Subjected to Seismic and Wind Induced Interstory Drifts.
4. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.

B. ASTM International (ASTM):
1. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
2. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.
3. ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
4. ASTM E 331 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
5. ASTM E 1886 - Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.
6. ASTM E 1996 - Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes.

C. National Fenestration Rating Council (NFRC):
1. NFRC-100 - Procedure for Determining Fenestration Product U-factors.
2. NFRC-200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence.

1.3 SUBMITTALS

A. Submit under provisions of applicable Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.

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3. Installation methods.

C. Shop Drawings:
   1. Provide drawings showing each configuration.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish areas designated by Architect.
   2. Do not proceed with remaining work until workmanship is approved by Architect.
   3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS

A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email:request info (info@prlglass.com); Web:prlglass.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 CURTAIN WALLS

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A. Frame : 2-1/2 inches (64 mm) face width:
   1. Glazing: Structural glaze verticals.
   2. Glazing: Structural glaze horizontals.

A. 7 Inches (178 mm) Depth:
   1. **Product: PLCW-700 as manufactured by PRL Glass Systems, Inc**.
   2.
      a. Air infiltration: Limit air leakage through fixed glazing and frames to 0.026 cfm/ft^2/min (0.01 L/s/m^2) when tested in accordance with ASTM E-283-04 at a cross pressure of 6.24 psf (0.30 kPa).
      b. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 15 psf (103 kPa) when tested in accordance with ASTM-E331-00.
      c. Water Penetration under Dynamic Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 15 psf (103 kPa) when tested in accordance with AAMA-501.1-05.
      d. Design Wind Load: Limit mullion deflection to L/175 up to 13 feet-6 inches (4115 mm) and L/240+1/4 inch (6 mm) for spans above 13 feet-6 inches (4115 mm) when measured in accordance with ASTM E330-02 at a cross pressure of 40 psf (276 kPa).
      e. Seismic Racking: Compliance that system can accommodate a lateral movement of 3/4 inch (19 mm) when tested to AAMA 501.4-00.
      f. Thermal Conductance: Whole product rating shall be determined in accordance with NFRC-100. Show that specified product can achieve U-factor of no greater than 0.37 (Values based on structural glaze verticals, and insulated glass comprising exterior light of 1/4 inch (6 mm) bronze, 1/2 inch (13 mm) space with argon fill and an interior light of 1/4 inch (6 mm) SunGuard SNX 62/27).
      g. Solar Heat Gain: Whole product rating shall be determined in accordance with NFRC-200. Show that the specified product can achieve a SHGC of no greater than 0.36. (Values based on structural glaze verticals, and insulated glass comprising exterior light of 1/4 inch (6 mm) bronze, 1/2 inch (13 mm) space with argon fill and an interior light of 1/4 inch (6 mm) SunGuard SNX 62/27).

2.3 MATERIALS

A. Material: Frames, assembly clips, trims and miscellaneous extrusions shall be extruded from Aluminum 6063-T6 alloy.

B. Glazing Gaskets:
   1. Compression type gaskets. Extruded EPDM (Ethylene Propylene Diene Monomer) push in place gasket. Dense 60 Durometer Shore "A" - ASTM C864 Option II
   2. Structural silicone compatible gasket: true silicone gasket -70 Durometer Shore "A", complying with ASTM C1115, Type C.

C. Thermal isolators: extruded rigid Geon complying with AAMA-303 and ASTM-D-1784-9.

D. End Dams: Pre-molded end dams made from closed cell EPDM (Ethylene Propylene Diene Monomer) sponge to ASTM C509.

2.4 SUN CONTROL:

A. Vertical Sunshade:

B. Horizontal Sunshade:

C. Light Shelf Adaptable:

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2.5 FINISH

A. Class II clear anodized aluminum shall conform to AA-M12-C22-A31.

B. Class I clear anodized aluminum shall conform to AA-M12-C22-A41.

C. Class II color anodized aluminum shall conform to AA-M12-C22-A34.
   1. Color: Champagne.
   2. Color: Light Bronze.
   3. Color: Medium Bronze.
   4. Color: Dark Bronze.
   5. Color: Black.

D. Class I color anodized aluminum shall conform to AA-M12-C22-A44.
   1. Color: Champagne.
   2. Color: Light Bronze.
   3. Color: Medium Bronze.
   4. Color: Dark Bronze.
   5. Color: Black.

E. Fluorocarbon finish complying with AAMA 2605.
   1. Resin: 70% PVDF resin shall be Kynar using Kynar500/Hylar5000.
   2. Cleaned and pretreated with chromium phosphate
   3. Coat extrusions with approved primers to minimum dry film thickness of 0.20 mil (.0051 mm).
   4. Color coat shall be a minimum dry film thickness of 1.0 mil (.025 mm).
   5. Approved Coating Manufactures:
      a. PPG Industries
      b. Valspar Corporation

EXECUTION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL

A. Owner will engage an independent AAMA approved testing agency.

B. Conduct test under the supervision of and in the presence of the Owner, Architect, and Construction Manager.

C. Test wall in accordance with AAMA 501.2-94.

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3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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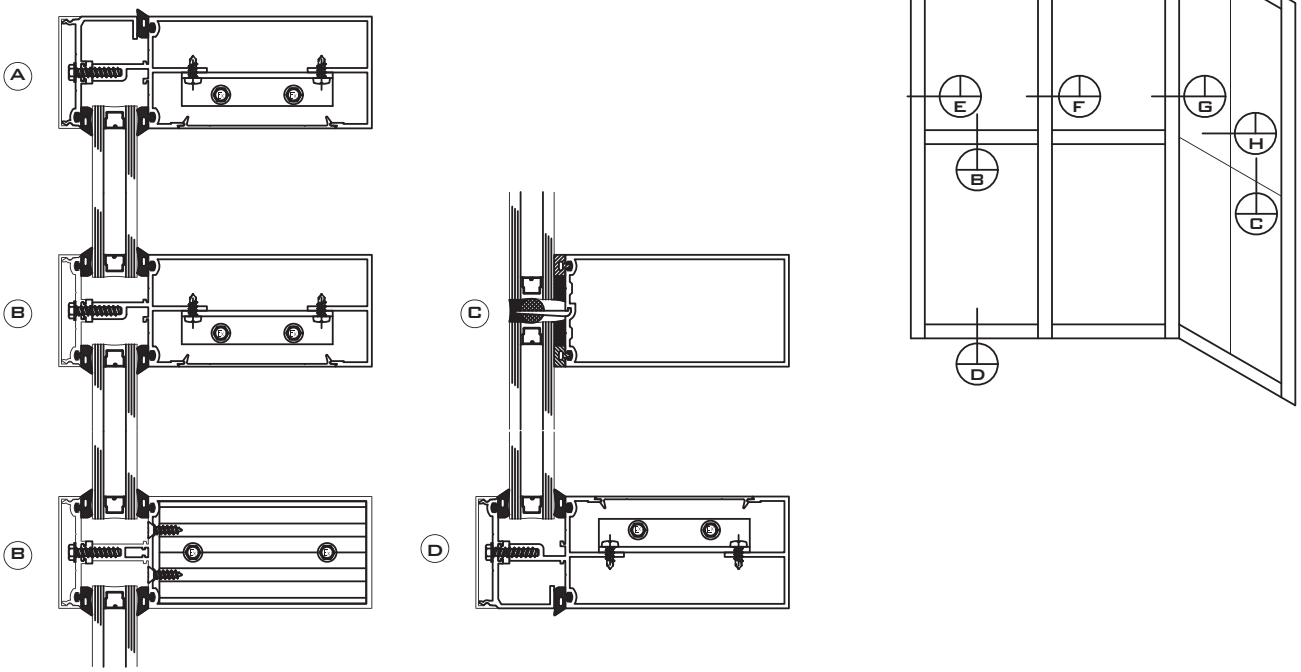
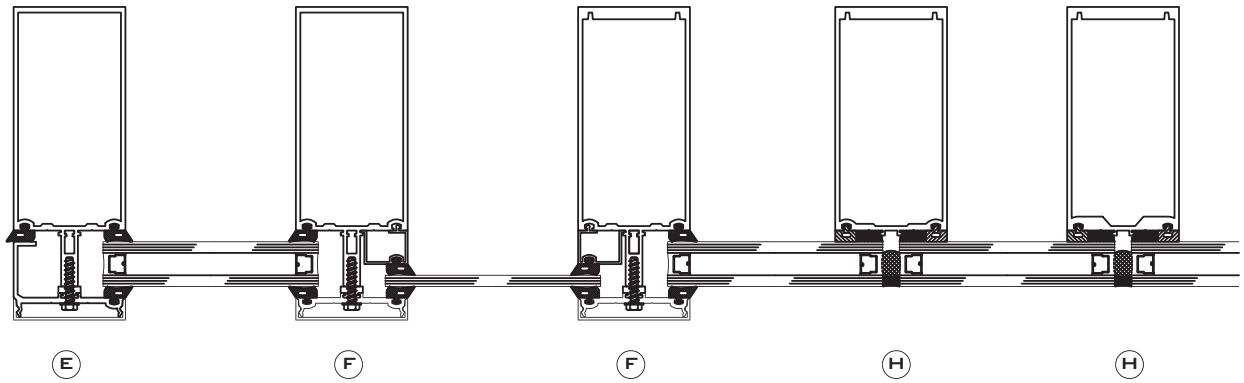
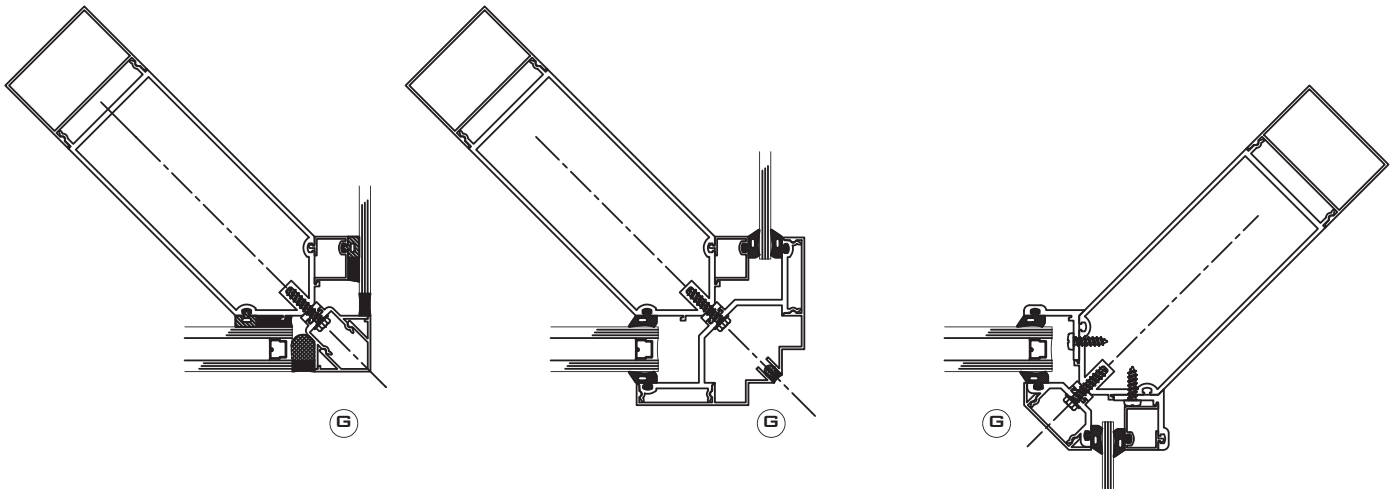
PRL ALUMINUM

PLCW-700 SERIES
2 1/2" x 7"
1/4 SCALE







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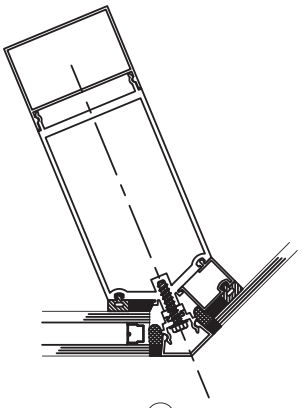
PLCW-700 SERIES

2 1/2" x 7"

1/4 SCALE

PRL ALUMINUM



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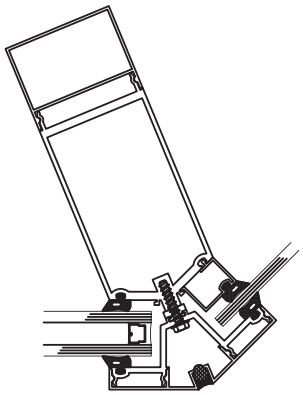

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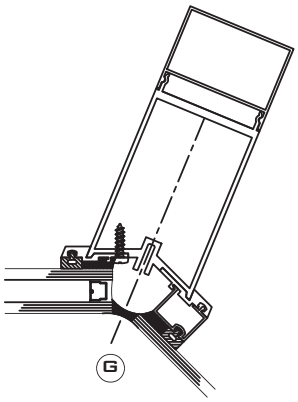

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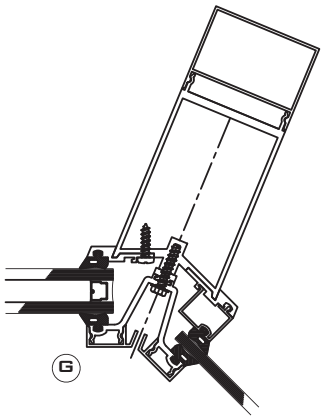

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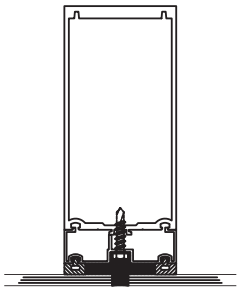

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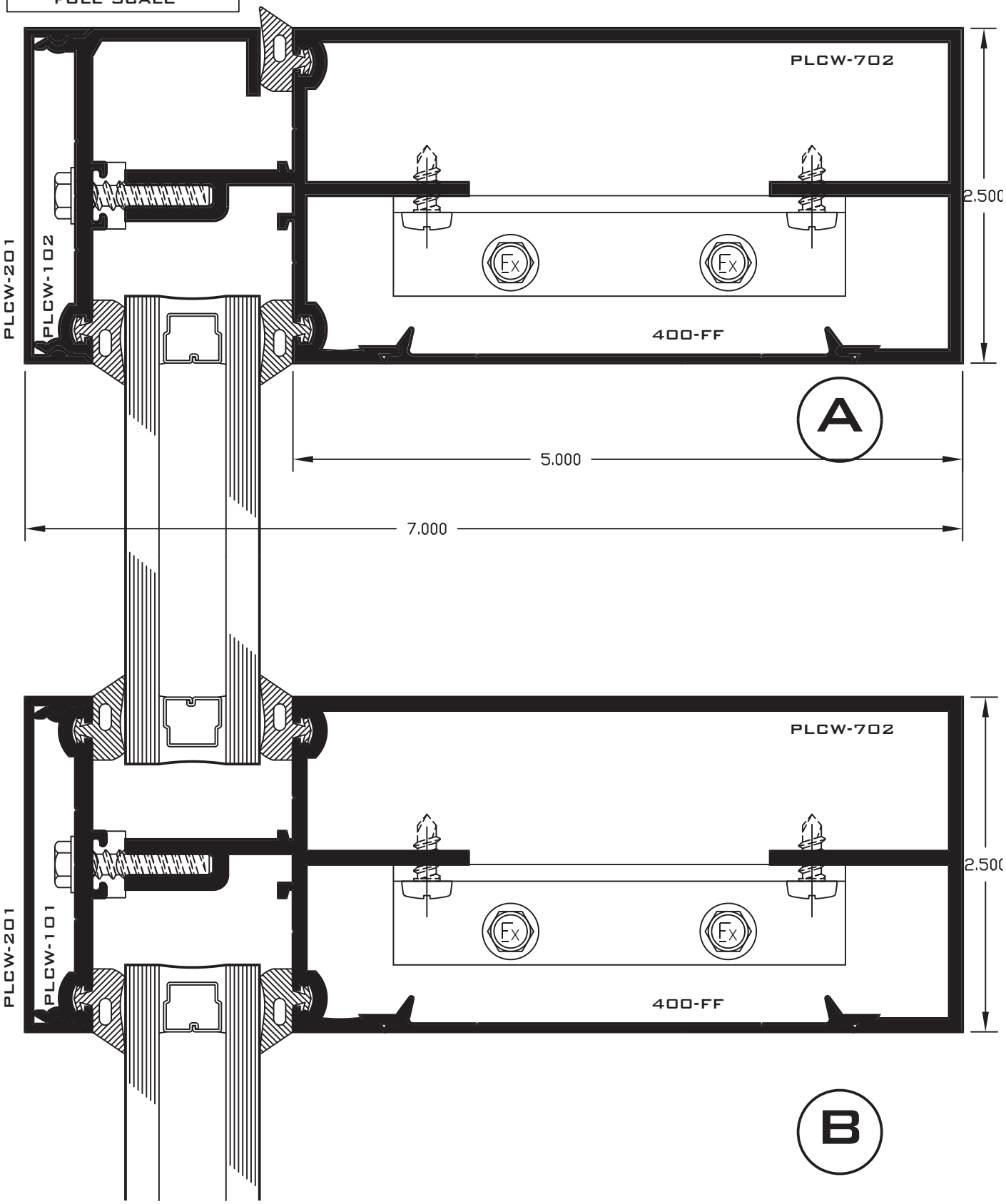
PLCW-700 SERIES

2 1/2" x 7"

FULL SCALE

PRL ALUMINUM



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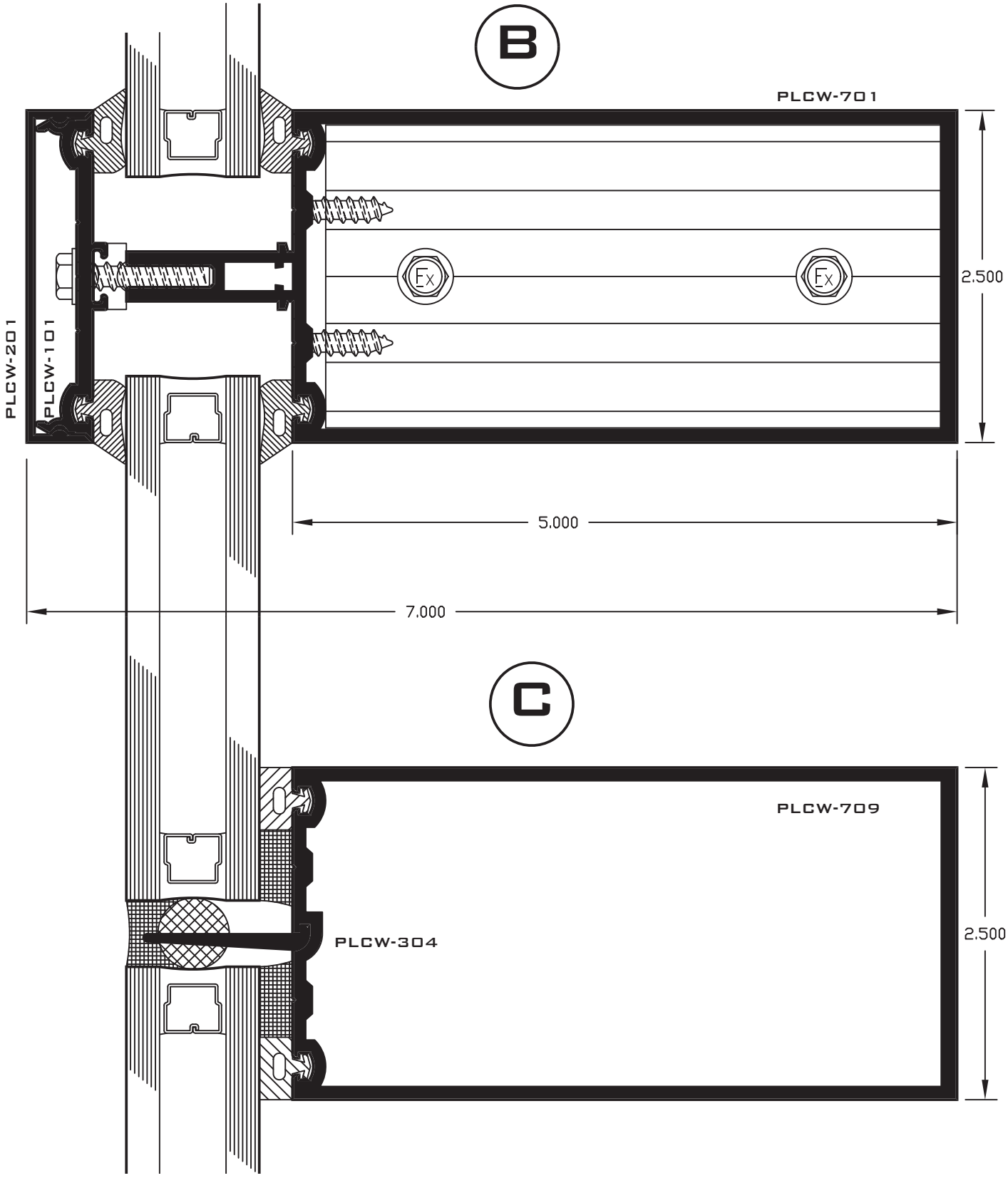
PLCW-700 SERIES

2 1/2" x 7"

FULL SCALE

PRL ALUMINUM



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PLCW-700 SERIES
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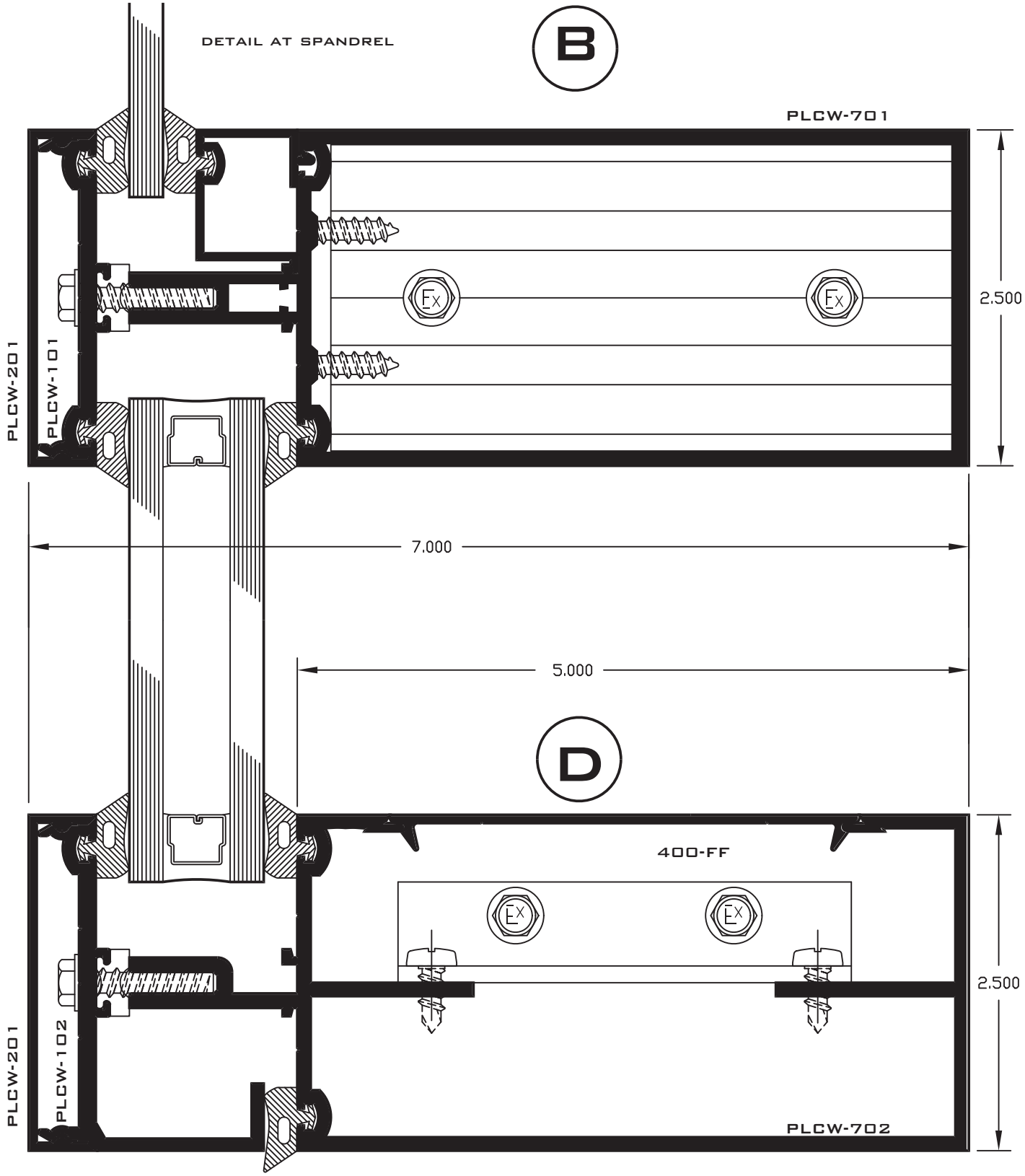
FULL SCALE

PRL ALUMINUM

DETAIL AT SPANDREL



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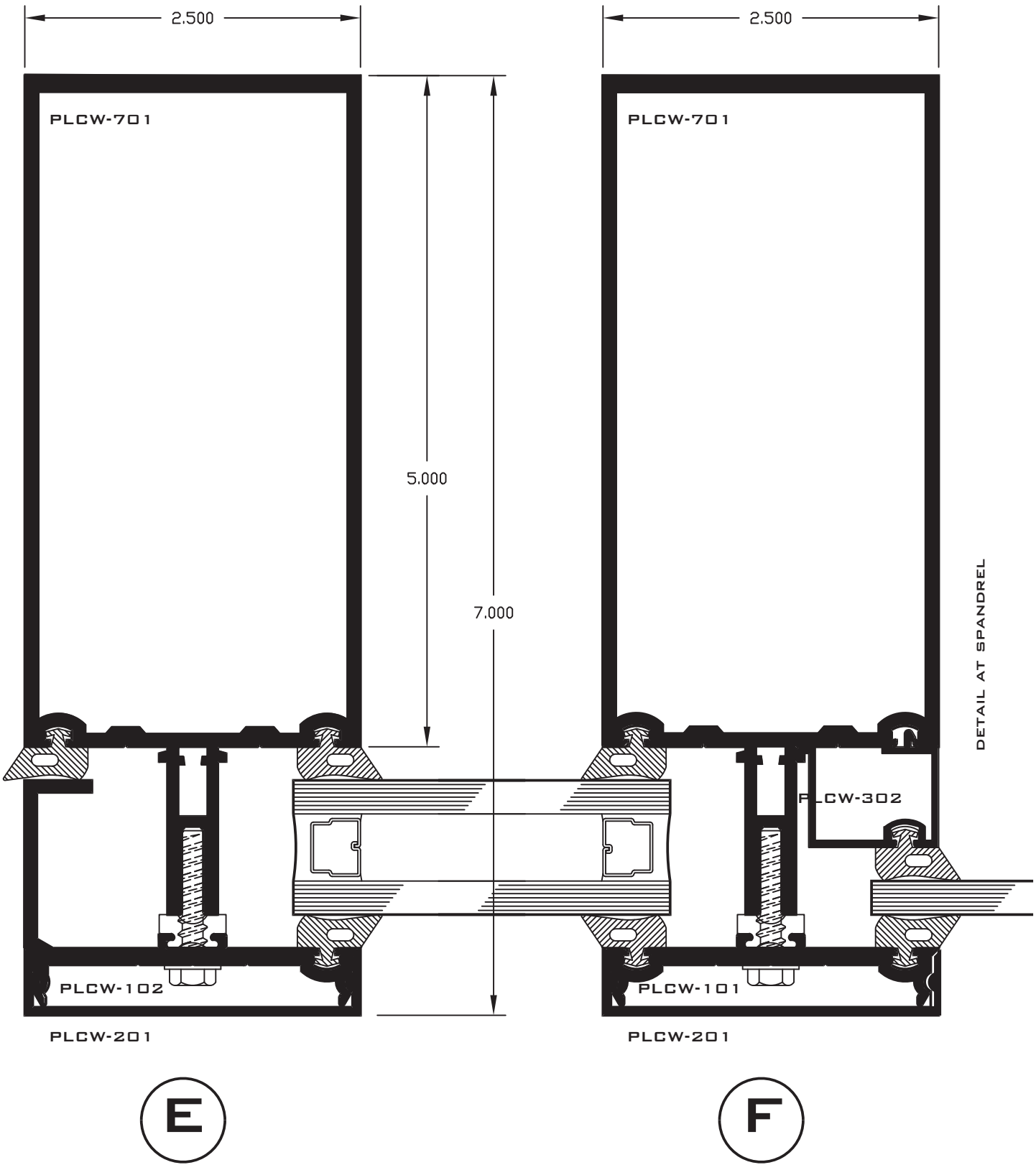
PLCW-700 SERIES

2 1/2" x 7"

FULL SCALE

PRL ALUMINUM



E

F

PLCW-700 - 11

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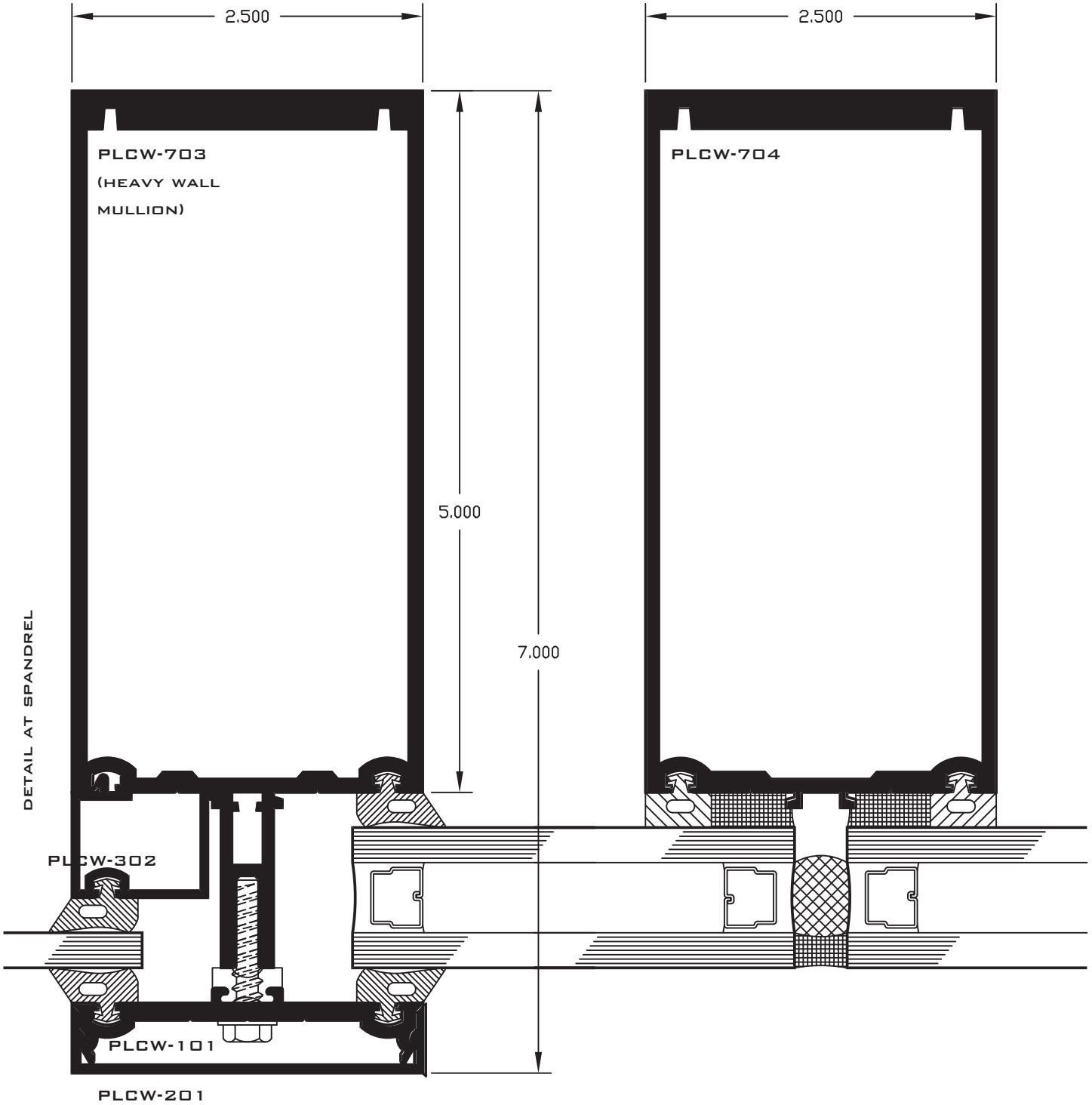
PLCW-700 SERIES

2 1/2" x 7"

FULL SCALE

PRL ALUMINUM



F

H

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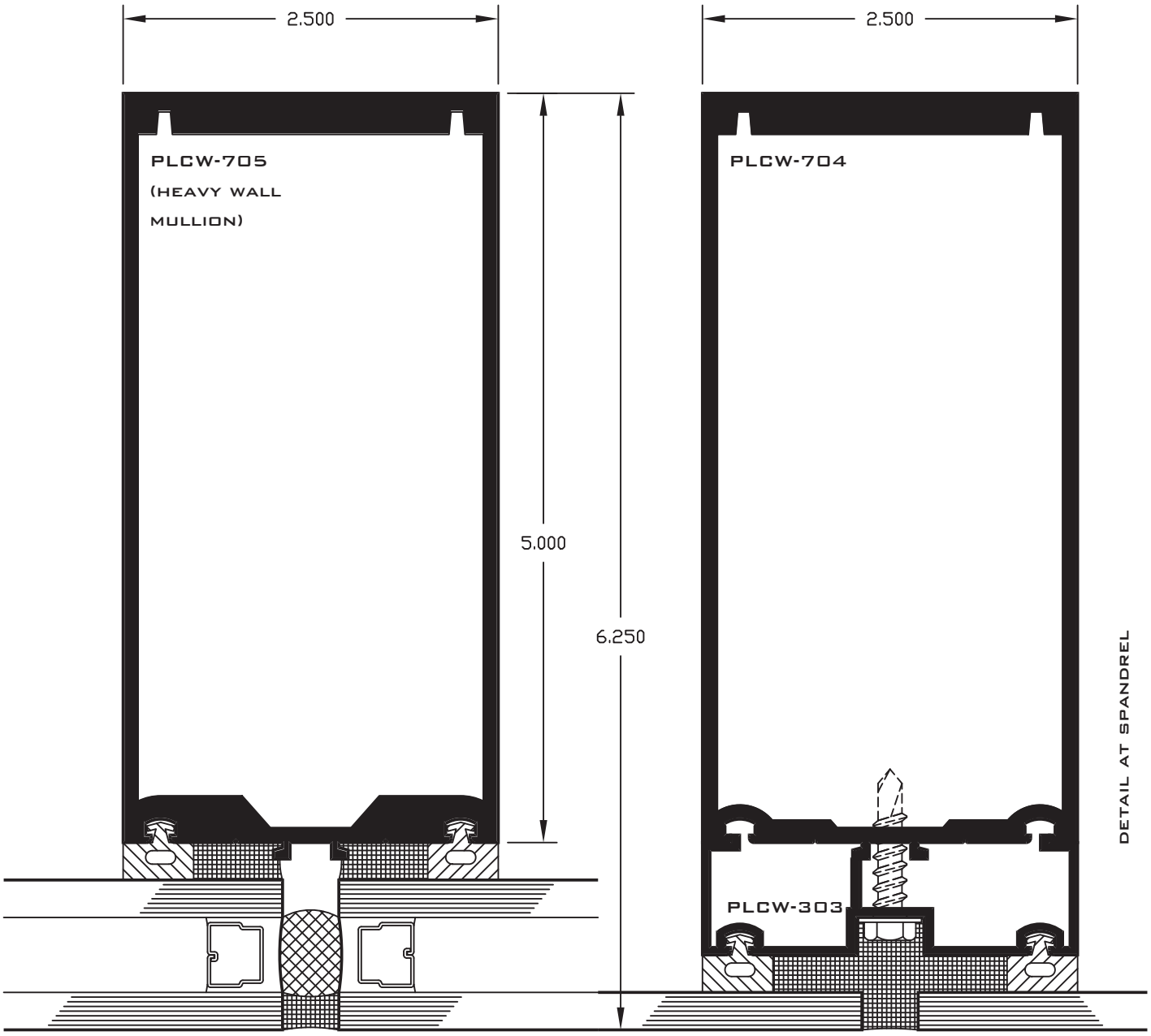
PLCW-700 SERIES
2 1/2" x 7"
FULL SCALE

PRL ALUMINUM



H

H

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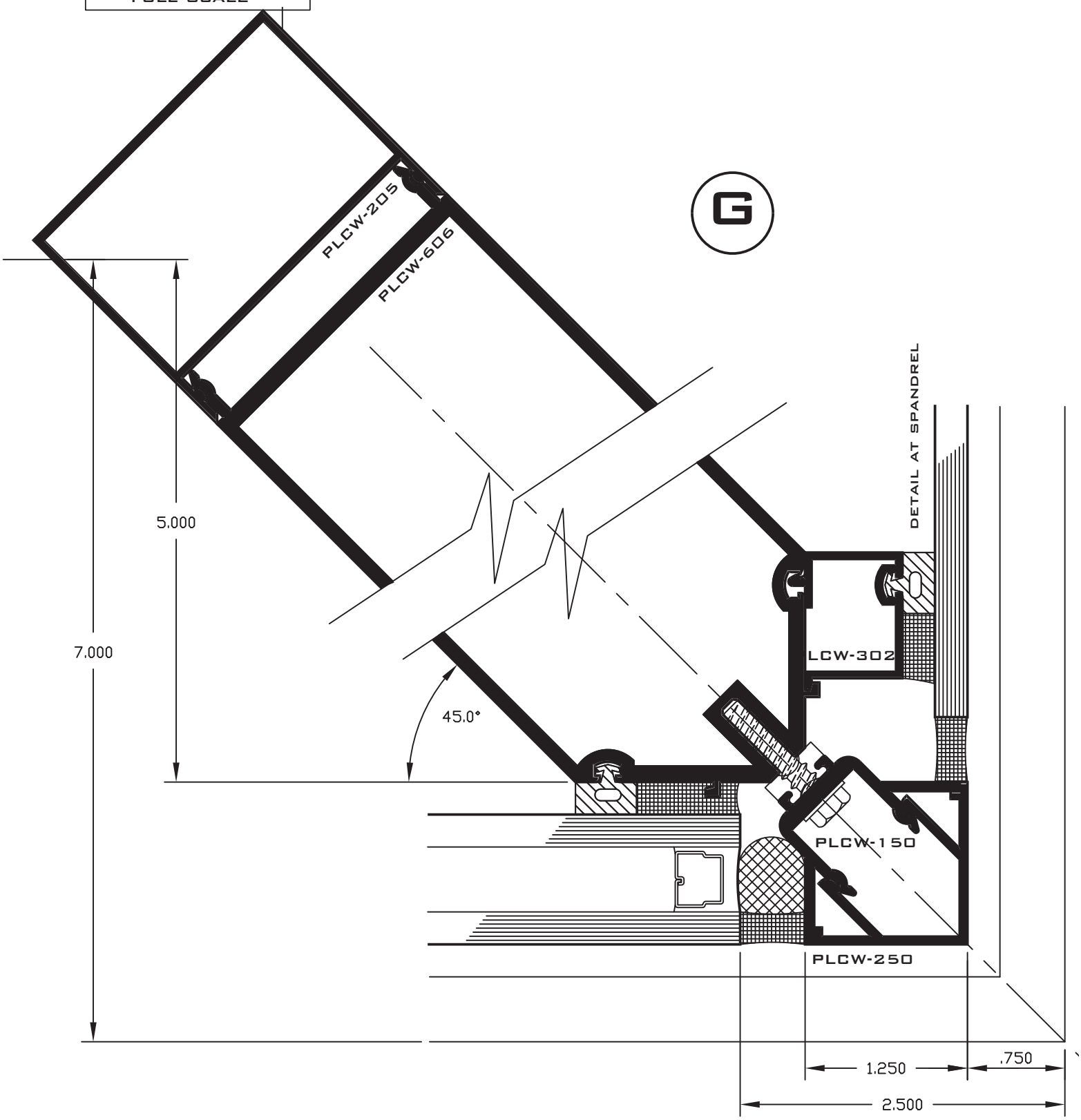
PLCW-700 SERIES

2 1/2" x 7"

FULL SCALE

PRL ALUMINUM



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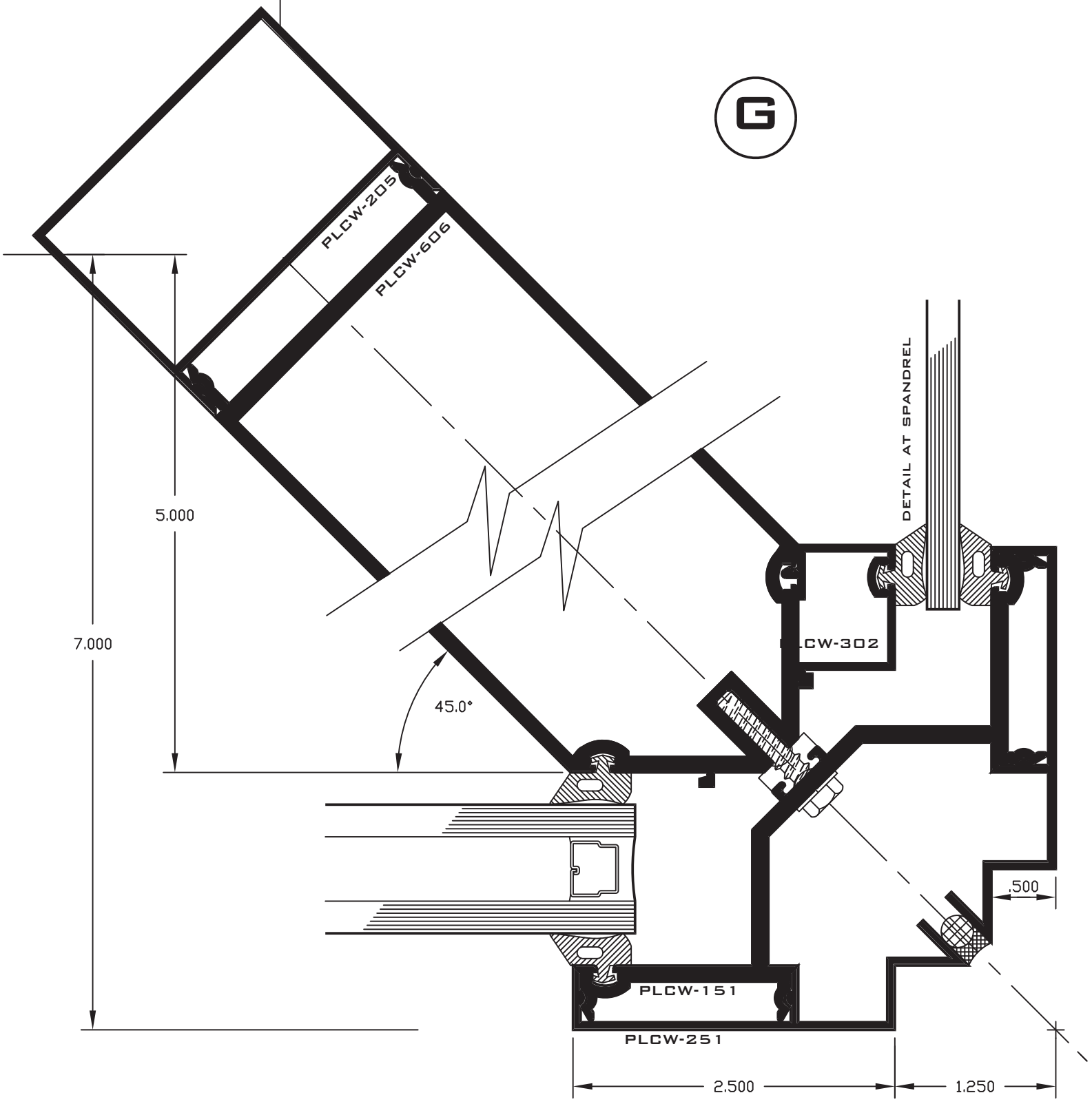
PLCW-700 SERIES

2 1/2" x 7"

FULL SCALE

PRL ALUMINUM



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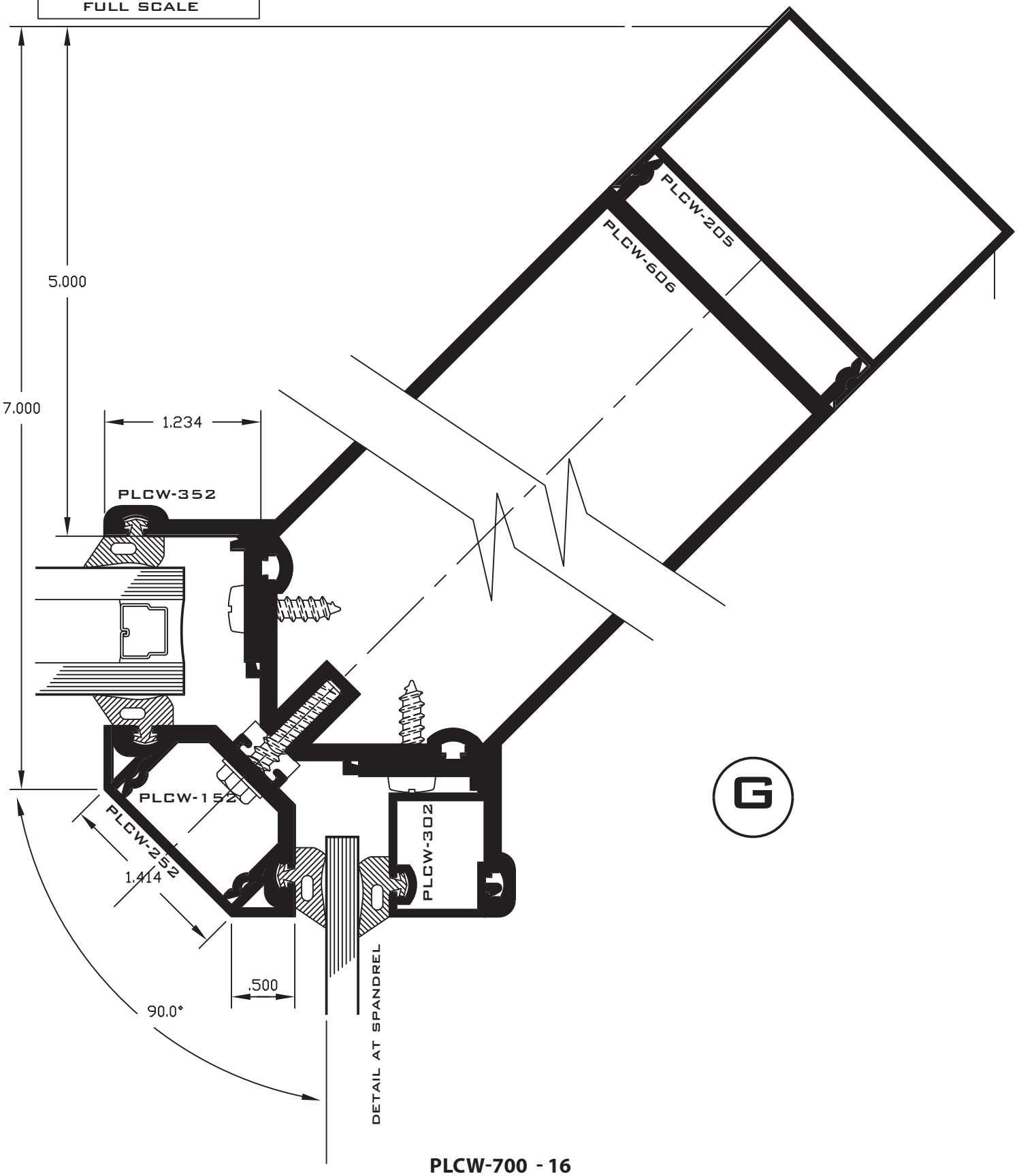
PLCW-700 SERIES

2 1/2" x 7"

FULL SCALE

PRL ALUMINUM



PLCW-700 - 16

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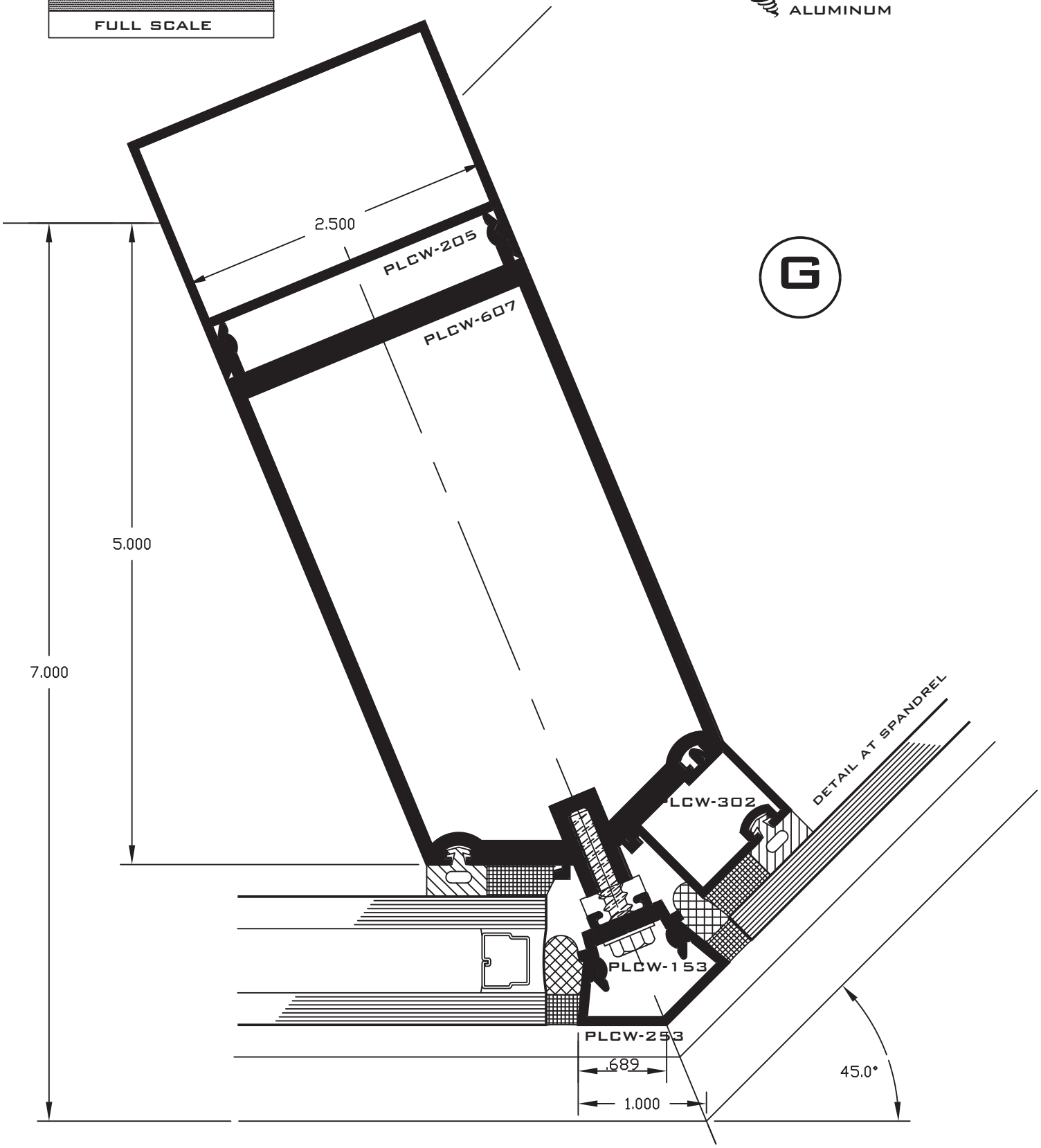
PLCW-700 SERIES

2 1/2" x 7"

FULL SCALE

PRL ALUMINUM



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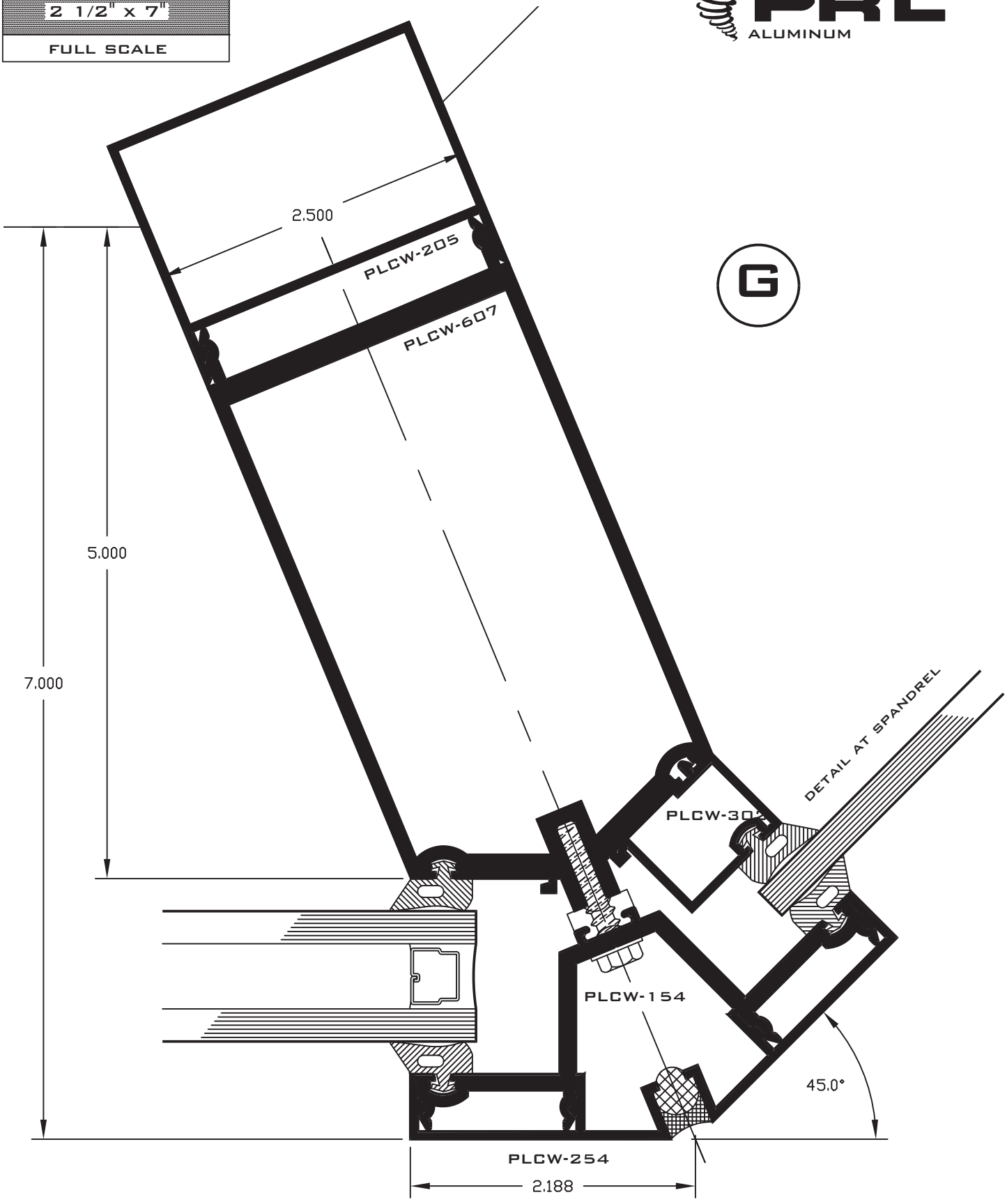
PLCW-700 SERIES

2 1/2" x 7"

FULL SCALE

PRL ALUMINUM



PLCW-700 - 18

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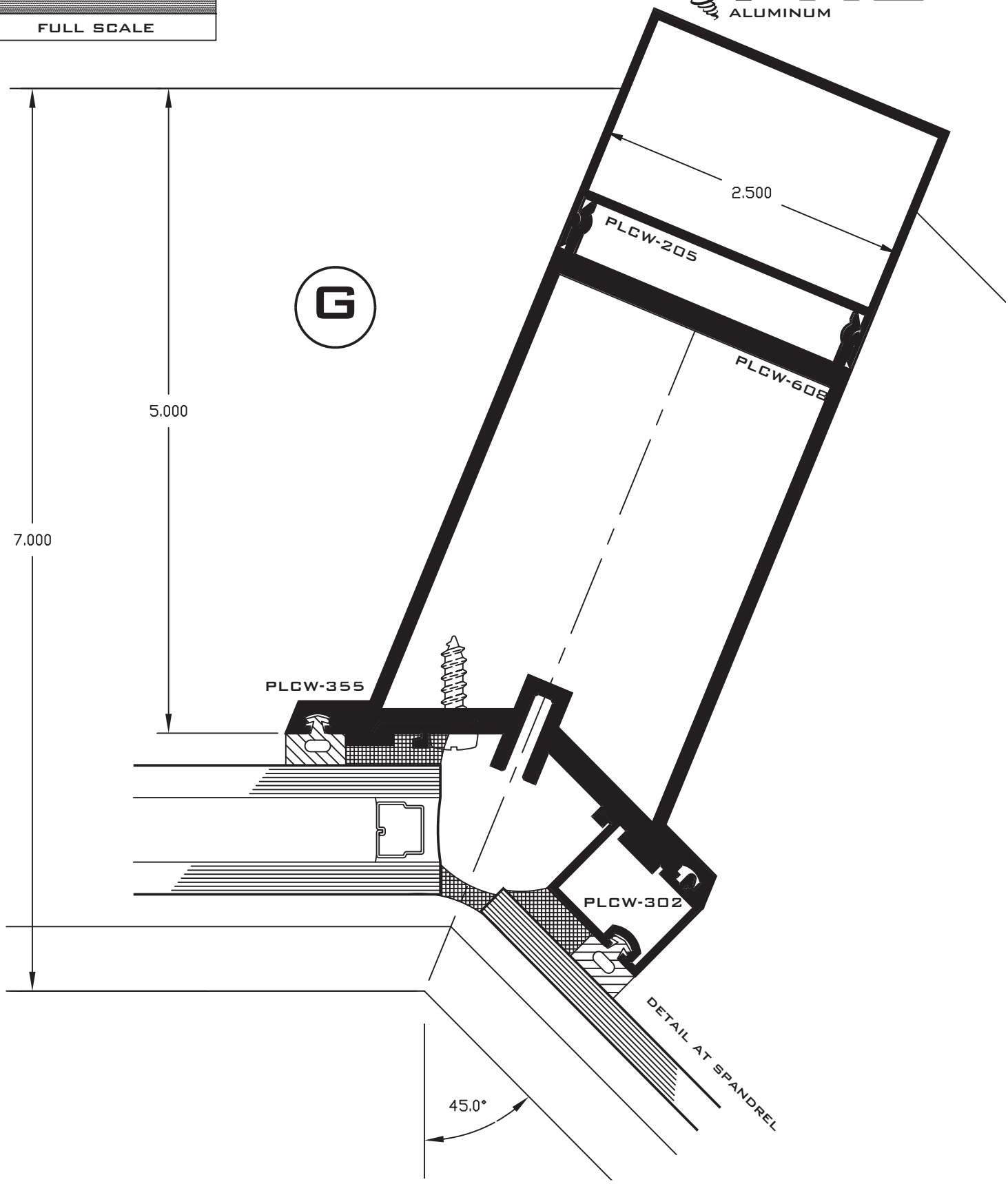
PLCW-700 SERIES

2 1/2" x 7"

FULL SCALE

PRL ALUMINUM



PLCW-700 - 19

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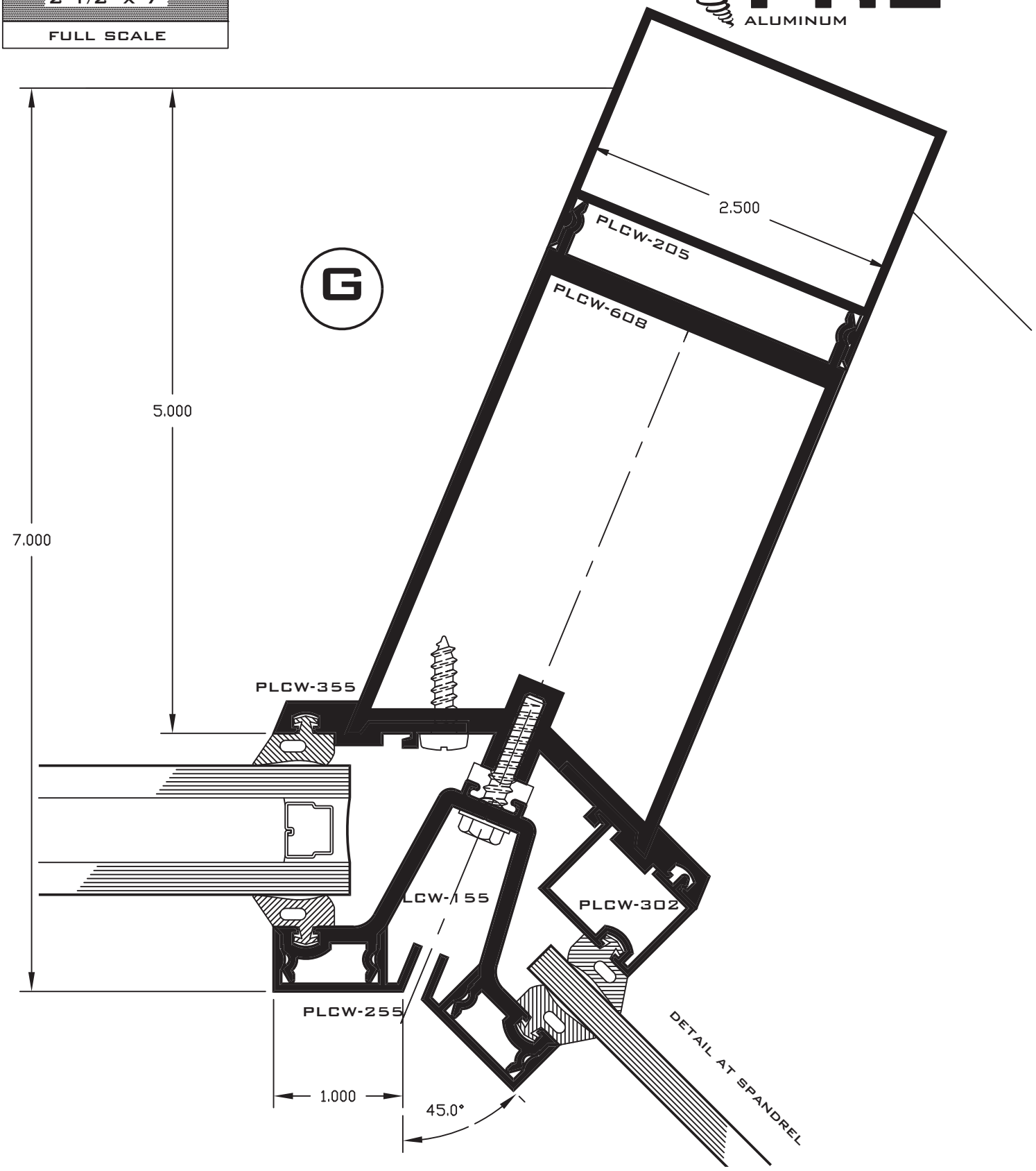
PLCW-700 SERIES

2 1/2" x 7"

FULL SCALE

PRL ALUMINUM



PLCW-700 - 20

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PRL ALUMINUM

wind load design

Mullion deflection is limited per AAMA TIR-A11-04
deflection is limited to L/175 for spans up to 13'-6"
and L/240 for spans beyond 13'-6"

allowable stress for 6063-T6 aluminum alloy = 15000 p.s.i.
allowable stress for A-36 steel = 21600 p.s.i.

maximum deflection was based on the following equation:

$$\triangle = \frac{5WL^3}{384EI}$$

maximum bending moment was based on the following equation:

$$M = \frac{WL}{8}$$

assumptions:
W = total uniform load
L = length of mullion between anchors
E = 10×10^6 p.s.i.
I = moment of inertia of the mullion
M = maximum bending moment

* mullions are assumed to have equal size glass lights each side

check with local code requirements for acceptance of AAMA TIR-A11

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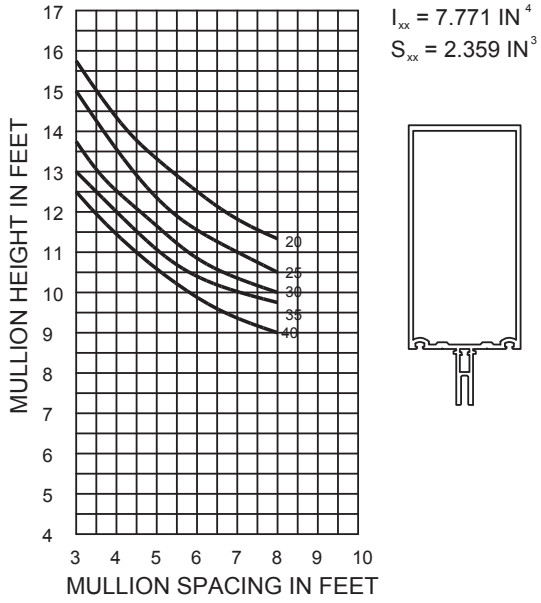
PLCW-700 SERIES
2 1/2" x 7"
WIND LOAD

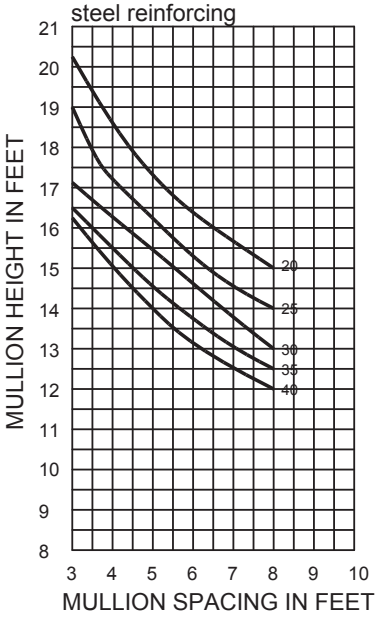
PRL ALUMINUM

PLCW-701

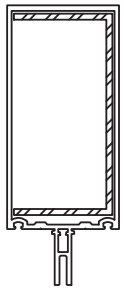


I_{xx} = 7.771 IN^4
S_{xx} = 2.359 IN^3

PLCW-701 with 2.2 x 4.5 x 10g steel reinforcing



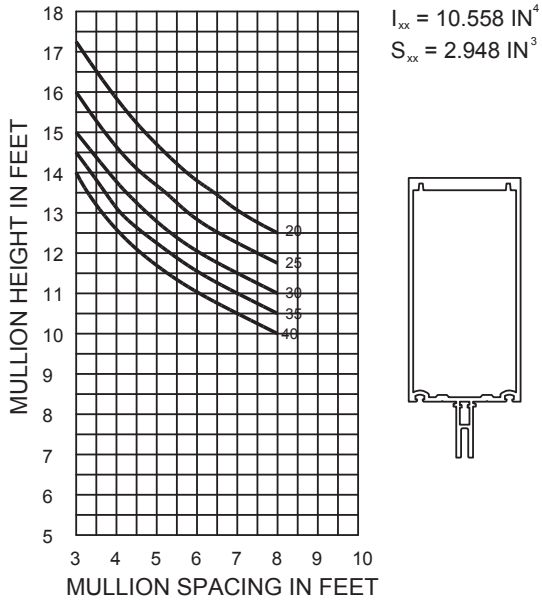
I_{xx} = 18.044 IN^4



CURVE REPRESENTATION

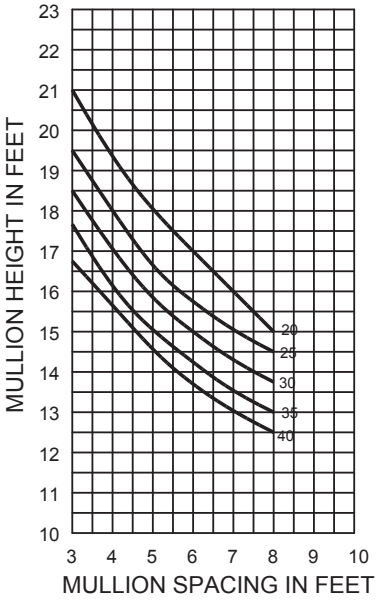
A = 20 P.S.F.
B = 25 P.S.F.
C = 30 P.S.F.
D = 35 P.S.F.
E = 40 P.S.F.

PLCW-703
heavy wall mullion

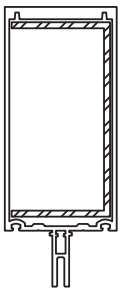


I_{xx} = 10.558 IN^4
S_{xx} = 2.948 IN^3

PLCW-703 with 2.2 x 4.375 x 10g steel reinforcing



I_{xx} = 20.214 IN^4



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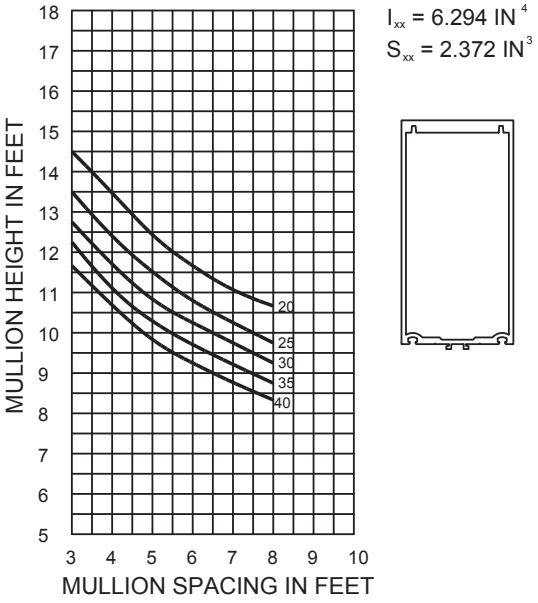
PLCW-700 SERIES
2 1/2" x 7"
WIND LOAD

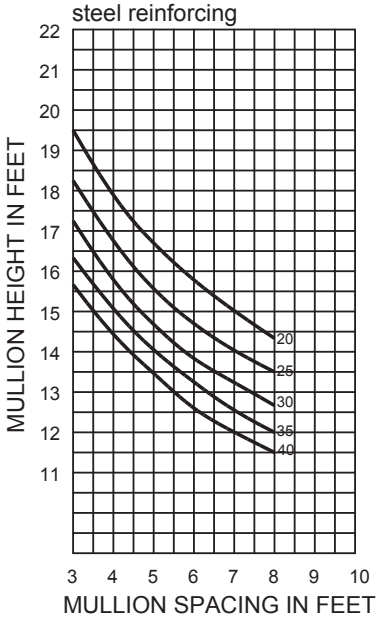
PRL ALUMINUM

PLCW-704

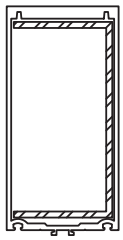


I_{xx} = 6.294 IN^4
S_{xx} = 2.372 IN^3

PLCW-704 with 2.2 x 4.375 x 10g steel reinforcing



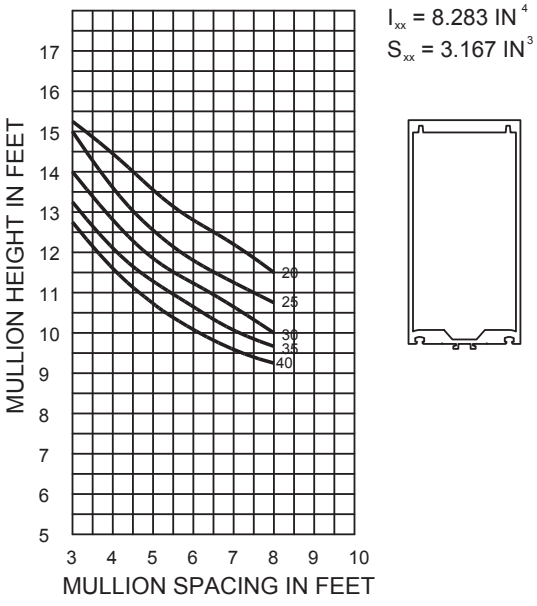
I_{xx} = 15.950 IN^4



CURVE REPRESENTATION

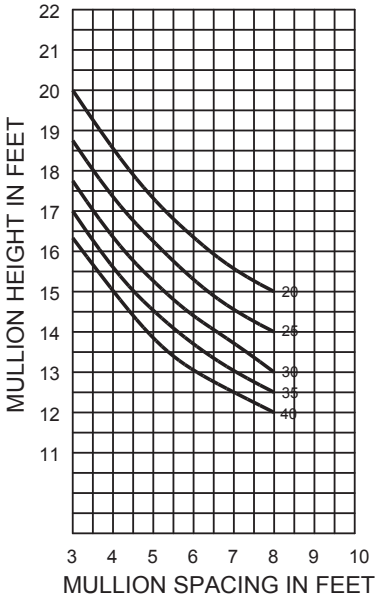
A = 20 P.S.F.
B = 25 P.S.F.
C = 30 P.S.F.
D = 35 P.S.F.
E = 40 P.S.F.

PLCW-705
heavy wall mullion

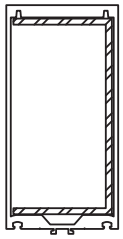


I_{xx} = 8.283 IN^4
S_{xx} = 3.167 IN^3

PLCW-705 with 2.2 x 4.375 x 10g steel reinforcing



I_{xx} = 17.939 IN^4



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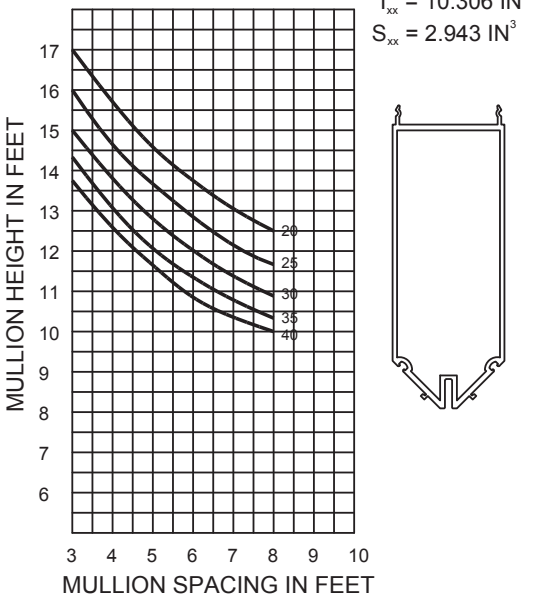
PLCW-700 SERIES
2 1/2" x 7"
WIND LOAD

PRL ALUMINUM

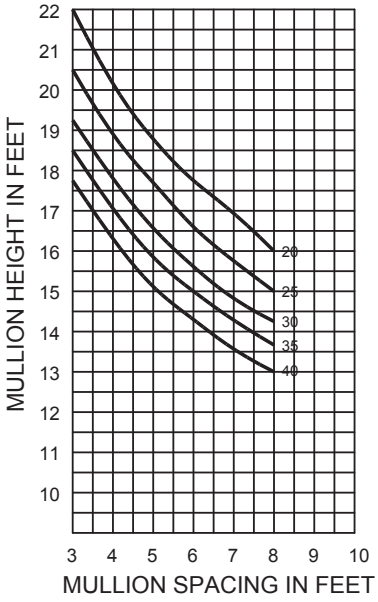
PLCW-606
90° inside/outside corner

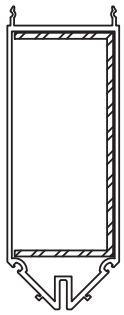
I_{xx} = 10.306 IN^4
S_{xx} = 2.943 IN^3



PLCW-606 with 2.2 x 5.0 x 10g
steel reinforcing

I_{xx} = 23.483 IN^4

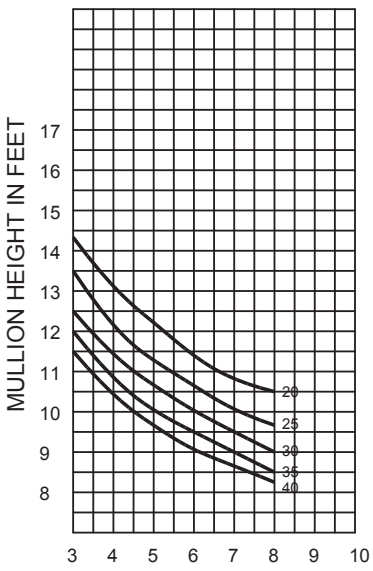


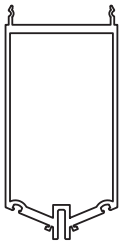


CURVE REPRESENTATION
A = 20 P.S.F.
B = 25 P.S.F.
C = 30 P.S.F.
D = 35 P.S.F.
E = 40 P.S.F.

PLCW-607
135° outside corner mullion

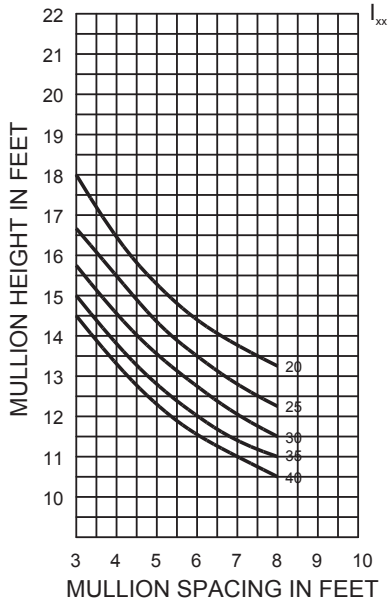
I_{xx} = 5.915 IN^4
S_{xx} = 2.247 IN^3

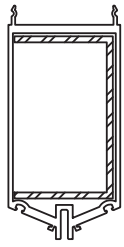




PLCW-607 with 2.2 x 3.625 x 10g
steel reinforcing

I_{xx} = 12.166 IN^4





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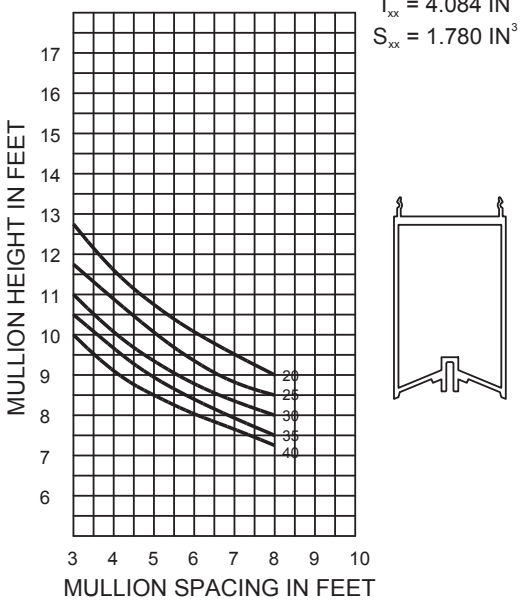
PLCW-700 SERIES
2 1/2" x 7"
WIND LOAD

PRL ALUMINUM

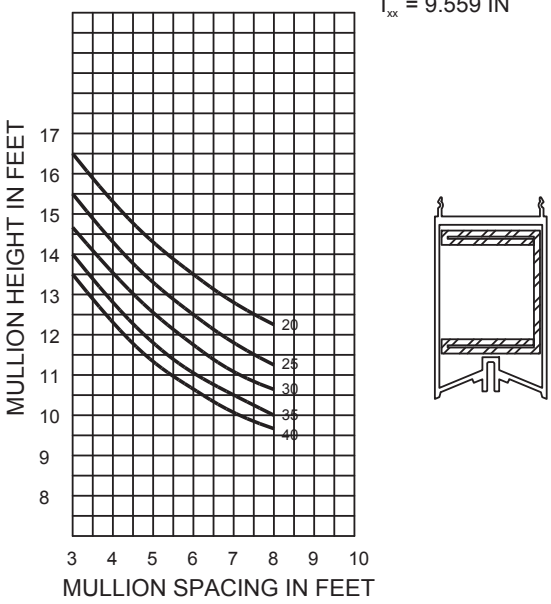
PLCW-608
135° inside corner mullion

I_{xx} = 4.084 IN^4
S_{xx} = 1.780 IN^3



PLCW-608 with 2.2 x 2.75 x 10g (hemed)
steel reinforcing

I_{xx} = 9.559 IN^4



CURVE REPRESENTATION
A = 20 P.S.F.
B = 25 P.S.F.
C = 30 P.S.F.
D = 35 P.S.F.
E = 40 P.S.F.

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PRL ALUMINUM

dead load design

horizontal mullion deflection is limited to L/360 or 1/8" (whichever is less)
curves represent limitations based on 2 point loads, equal in magnitude
both located at 1/8 or 1/4 point of the horizontal mullions length

allowable stress for 6063-T6 aluminum alloy = 15000 p.s.i.
allowable stress for A-36 steel = 21600 p.s.i.

maximum deflection was based on the following equation:

$$\triangle = \frac{Pa}{24EI}(3L^2 - 4a^2)$$

maximum bending moment was based on the following equation:

$$M = Pa$$

assumptions:
P = 1/2 glass weight
a = 1/4 or 1/8 point of span (in inches)
E = 10×10^6 p.s.i.
I = moment of inertia of the mullion
L = length of horizontal mullion

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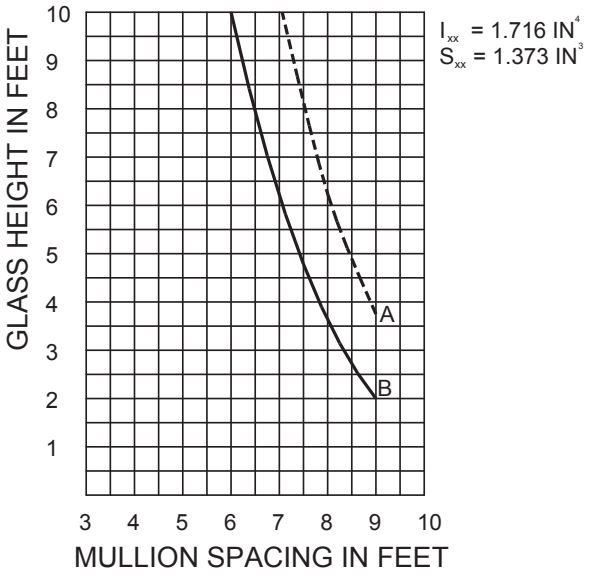
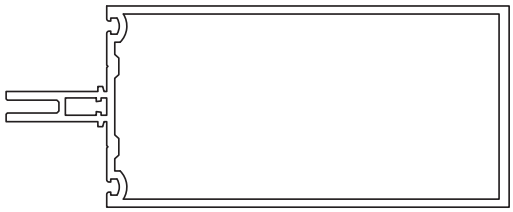
PLCW-700 SERIES

2 1/2" x 7"

DEAD LOAD



I_{xx} = 1.716 IN^4
S_{xx} = 1.373 IN^3

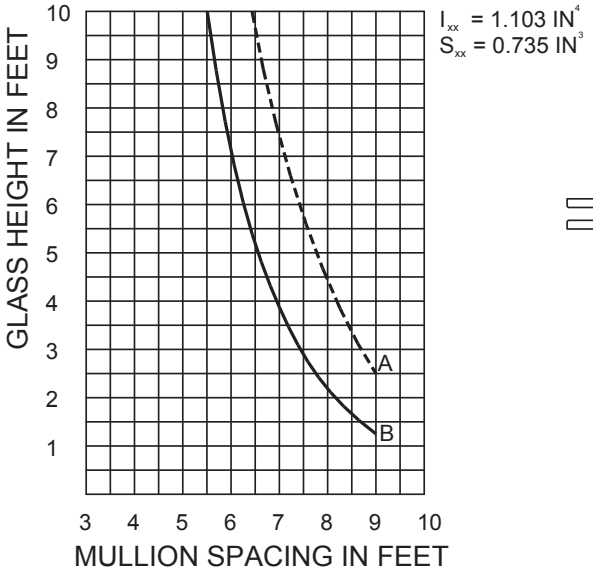


PLCW-701

CURVE REPRESENTATION

A (----------) = 1/8 PTS.

B (————) = 1/4 PTS.



I_{xx} = 1.103 IN^4
S_{xx} = 0.735 IN^3

PLCW-702

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ALUMINUM ENTRANCE DOORS
SECTION

ALUMINUM ENTRANCE DOORS
SECTION

ALUMINUM DOORS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum doors.

1.2 REFERENCES

A. ASTM International (ASTM):
   1. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
   2. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.
   3. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
   4. ASTM E 331 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Shop Drawings: Configuration and details for installation, maintenance and operation.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish areas designated by Architect.
   2. Do not proceed with remaining work until workmanship is approved by Architect.
   3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS

ph: (877) 775-2586
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A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email: request; Web:prlglass.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 DOORS

A. Narrow Stile:
1. 2 inches (51 mm) stile and rail.
2. Strong reinforced corner construction permits use in heavy traffic areas of commercial applications.
3. Narrow stile Center pivot single acting.
4. Offset pivot single acting.
5. Butt hinge single acting.

B. Medium Stile:
1. 3-1/2 inches stile with 3-1/4 inches rail.
2. Medium stile Center pivot double acting
3. Offset pivot single acting
4. Butt hinge single acting.
5. A top performance door with a medium stile that accommodates standard and custom hardware and panic devices for commercial and institutional applications.
6. Strong reinforced corner construction increases size limitation to a 4'-0" door width 9'0" maximum door height.

C. Wide Stile:
1. 5 inches (127 mm) stile with 5-1/8 inches (130 mm) rail.
2. Wide stile Center pivot double acting
3. Offset pivot single acting
4. Butt hinge single acting.

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5. A monumental type door with strength and stability for heavy use. The wide stiles will accommodate most all standard and unusual hardware designs and operation requirements. Size limitations are 4'-0" door width and 9'0" maximum door height.

D. Custom Door:
1. Offer style and performance with unlimited adaptability to specific design requirements with combinations of stiles, top/bottom rails and intermediate vertical/horizontal muntins, will receive most standard pivot/hinges, lock and security hardware. Strong reinforced corner construction permits its use on a wide variety of applications. Some limitations apply please consult PRL Aluminum for details.

E. Accessories:
1. ADA Bottom Rail: 10-1/2 inches (267 mm) high.
2. Threshold: 4 inches (102 mm) extruded aluminum
   a. Finish: Mill.
   b. Finish: Clear anodized.
   c. Finish: Bronze.
3. Threshold: 5 inches (127 mm) extruded aluminum
   a. Finish: Mill.
   b. Finish: Clear anodized.
   c. Finish: Bronze.
4. Threshold: 5 inches (127 mm) extruded aluminum with bulb seal.
   a. Finish: Mill.
   b. Finish: Clear anodized.
   c. Finish: Bronze.
5. Threshold: 7 inches (178 mm) extruded aluminum.
   a. Finish: Mill.
   b. Finish: Clear anodized.
   c. Finish: Bronze.

F. Hardware:
1. Refer to Section 08 71 53 - Security Door Hardware.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL

A. All joints between metal and masonry shall be fully caulked and field tested to resist water leakage with provisions taken to drain infiltrated water.

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3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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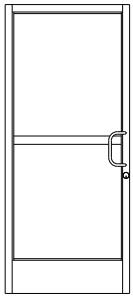
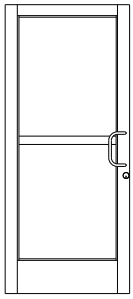
PRL ALUMINUM

All Entrance Doors are available in single acting offset pivot, butt hinge or center pivot operation. High bottom rails may be adapted to all sizes and to meet local codes. All doors are produced to specific size requirements in widths and heights within limits of each specific door.



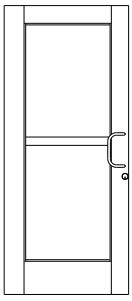
Narrow stile

Narrow stile Center pivot single acting, Offset pivot single acting, Butt hinge single acting. An industry standard in style and performance. Narrow stiles and rails provide narrow sight lines yet receives most standard hardware designs. Strong reinforced corner construction permits use in heavy traffic areas of commercial applications.



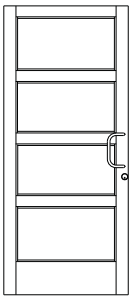
Medium stile

Medium stile Center pivot double acting, Offset pivot single acting, Butt hinge single acting. A top performance door with a medium stile that accommodates standard and custom hardware and panic devices for commercial and institutional applications. Strong reinforced corner construction increases size limitation to a 4'-0" door width 9'0" maximum door height.



Wide stile

Wide stile Center pivot double acting, Offset pivot single acting, Butt hinge single acting. A monumental type door with strength and stability for heavy use. The wide stiles will accommodate most all standard and unusual hardware designs and operation requirements. Size limitations are 4'-0" door width and 9'0" maximum door height.



Custom Doors

Offer style and performance with unlimited adaptability to specific design requirements with combinations of stiles,top/bottom rails and intermediate vertical/horizontal muntins, will receive most standard pivot/hinges, lock and security hardware. Strong reinforced corner construction permits its use on a wide variety of applications. Some limitations apply please consult PRL Aluminum for details.

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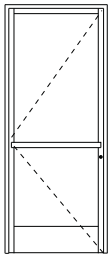
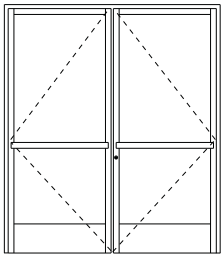
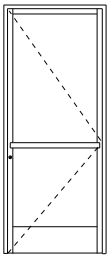
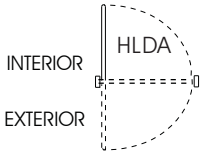
PRL ALUMINUM

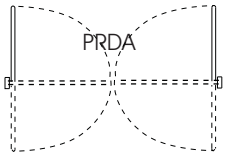
CENTER HUNG

Standard doors hardware includes std lock/cylinder on single doors and pairs active leaf, header/ threshold bolt for pairs inactive leaf with push bars BTB.

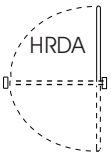
All doors are prepared to receive side load arm for concealed closers (pivots are not icluded).

HINGED LEFT
DOUBLE ACTING

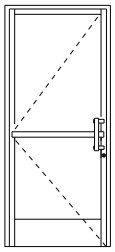
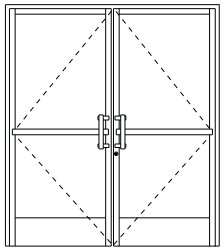
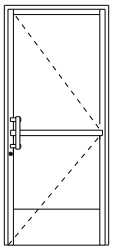
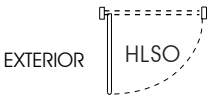


PAIR OF DOUBLE ACTING

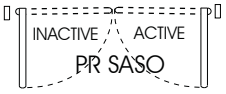


HINGED RIGHT
DOUBLE ACTING

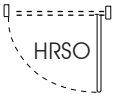
OFFSET HUNG

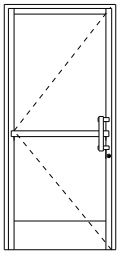
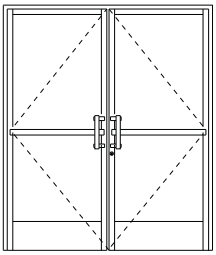
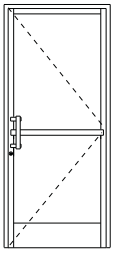
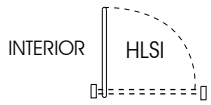
HINGED LEFT
SWING OUT



PAIR OF SINGLE ACTING
SWING IN

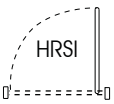


HINGED RIGHT
SWING OUT

HINGED LEFT
SWING IN

PAIR OF SINGLE ACTING
SWING OUT



HINGED RIGHT
SWING IN

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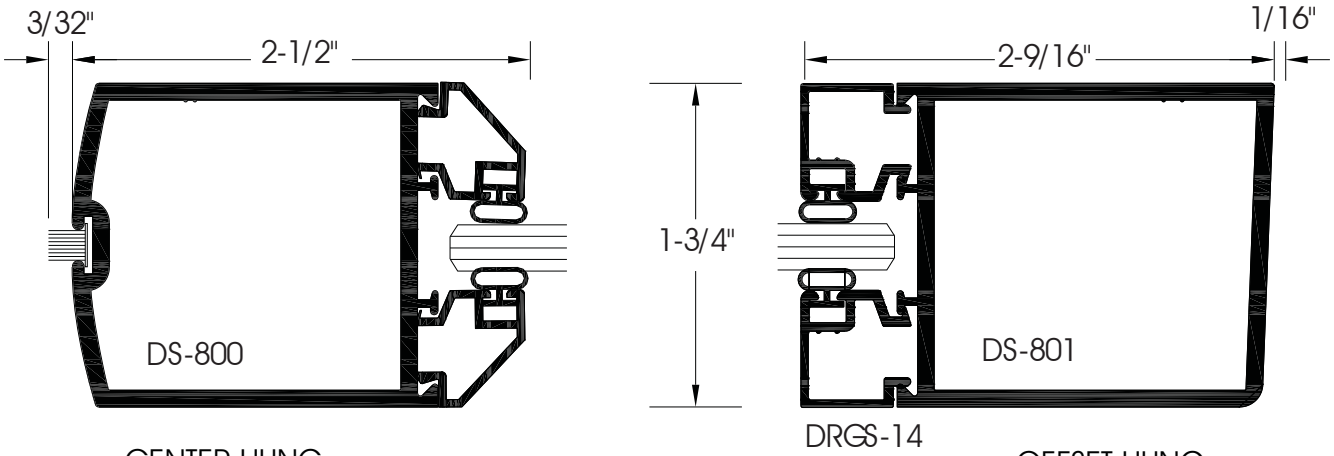
ENTRANCE DOORS
1/2"-1" GLASS STOP
FULL SCALE

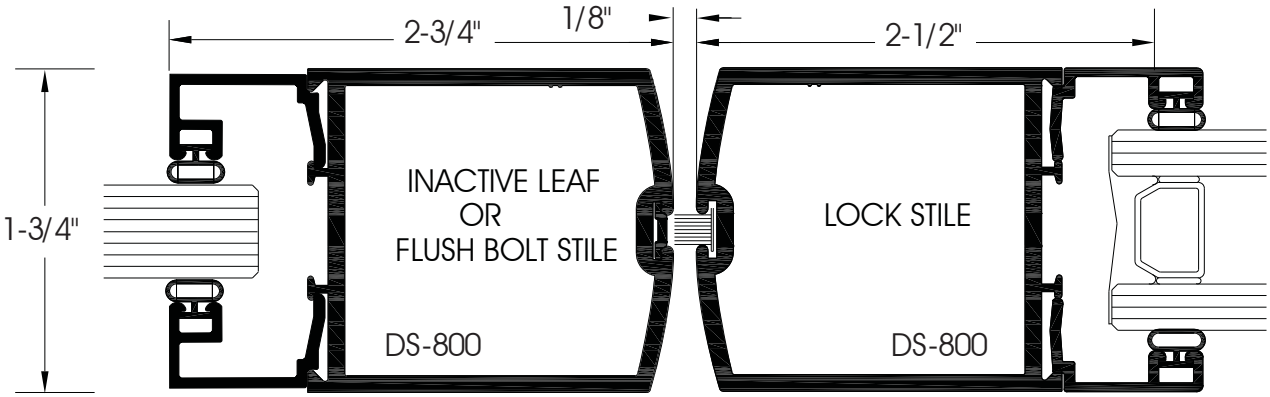
PRL ALUMINUM

NARROW STYLE
2" VERTICAL STILE



CENTER HUNG DOOR
1/4" BEVEL GLASS STOP

OFFSET HUNG DOOR
1/4" SQUARE GLASS STOP



CENTER HUNG DOORS
1/2" GLASS STOP

CENTER HUNG DOORS
1" GLASS STOP

MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details

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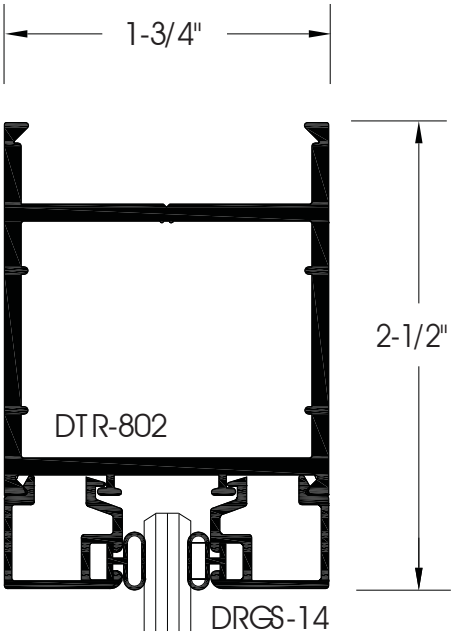
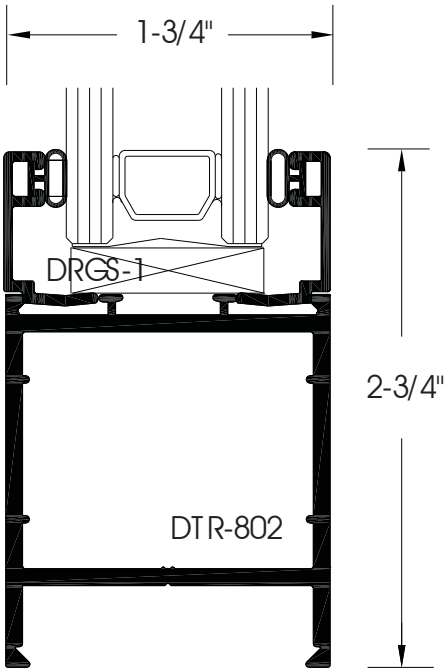
ENTRANCE DOORS
1/4"-1" GLASS STOP
FULL SCALE

PRL ALUMINUM

NARROW STYLE
2" RAIL



TOP/BOTTOM
DOOR RAIL
1/4" GLASS STOP



TOP/BOTTOM
DOOR RAIL
1" GLASS STOP

FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details

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ENTRANCE DOORS

1/2"-1" GLASS STOP

FULL SCALE

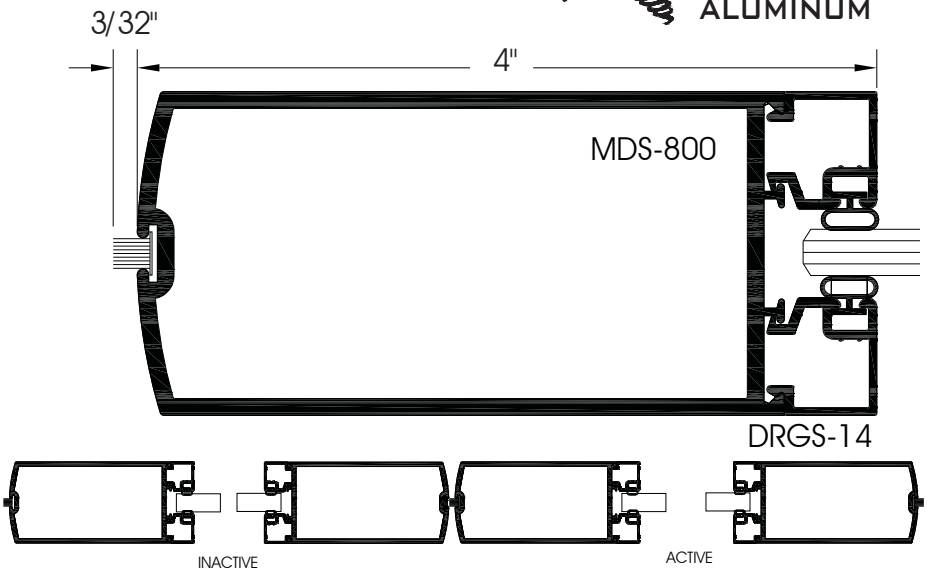
PRL ALUMINUM

MEDIUM STYLE

3 1/2" VERTICAL STILE

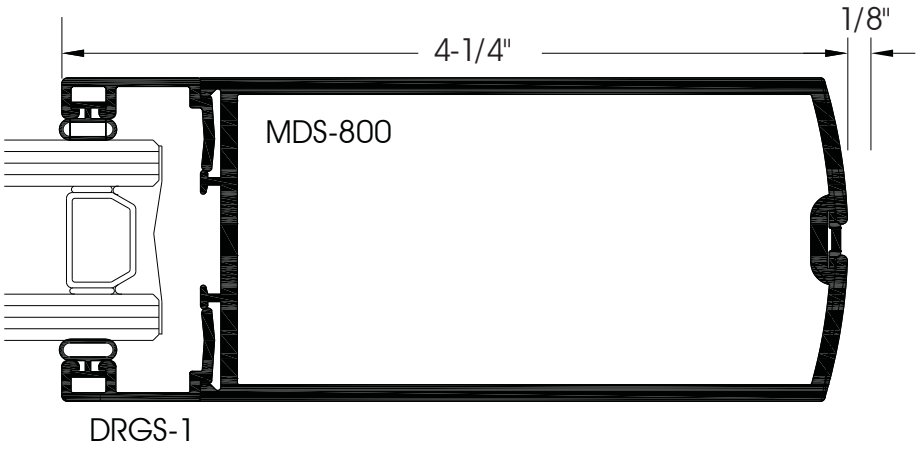
CENTER HUNG DOOR STILE

1/4" GLASS STOP



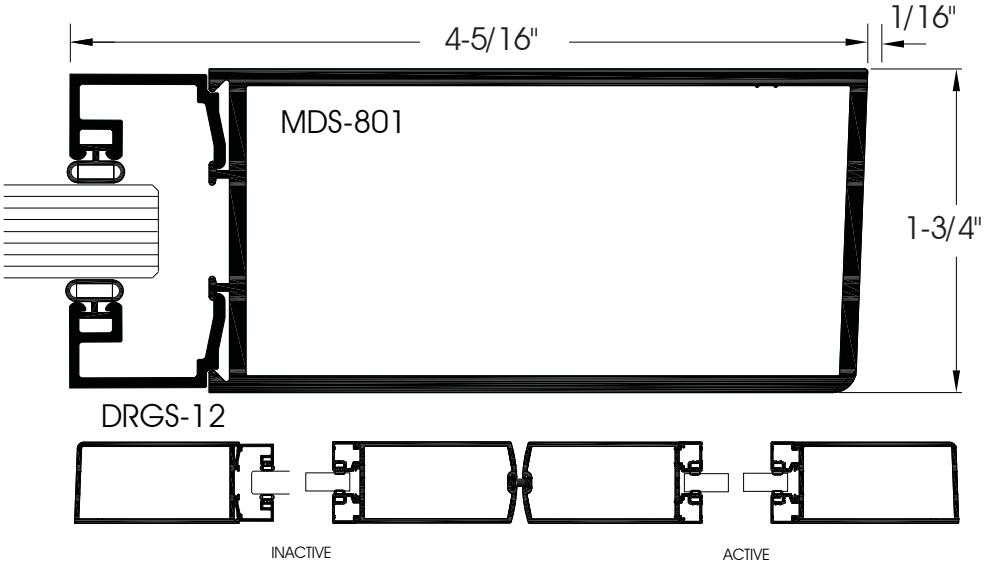
INACTIVE LEAF DOOR STILE

1" GLASS STOP



OFFSET HUNG DOOR STILE

1/4" GLASS STOP



MATERIAL: 6063-T5 aluminum alloy.

FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.

NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details

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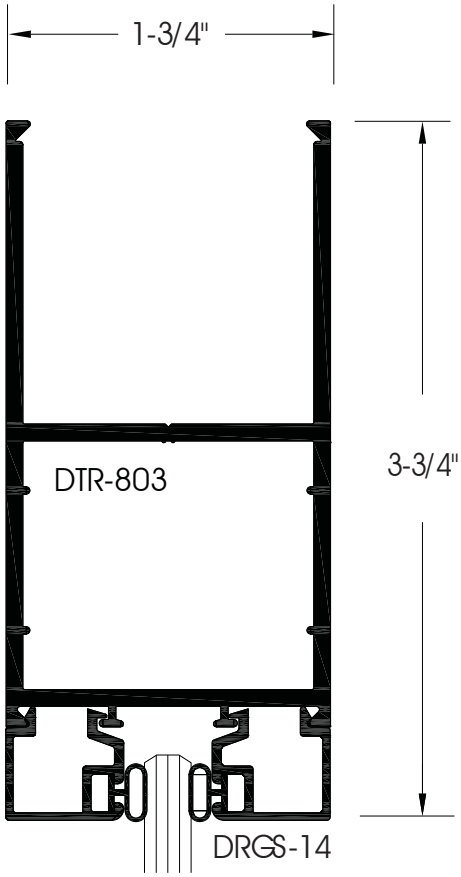
ENTRANCE DOORS
1/4"-1" GLASS STOP
FULL SCALE

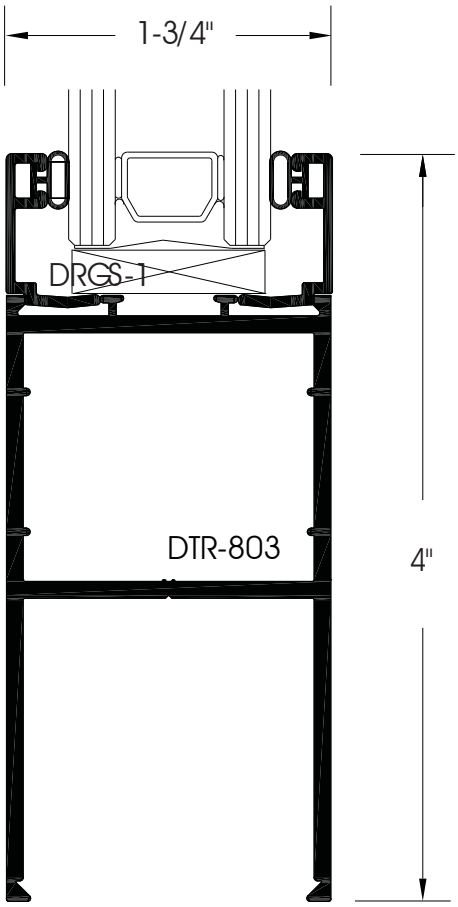
PRL ALUMINUM

MEDIUM STYLE s

3 1/4" RAIL



TOP/BOTTOM
DOOR RAIL
1/4" GLASS STOP



TOP/BOTTOM
DOOR RAIL
1" GLASS STOP

MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details

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ENTRANCE DOORS

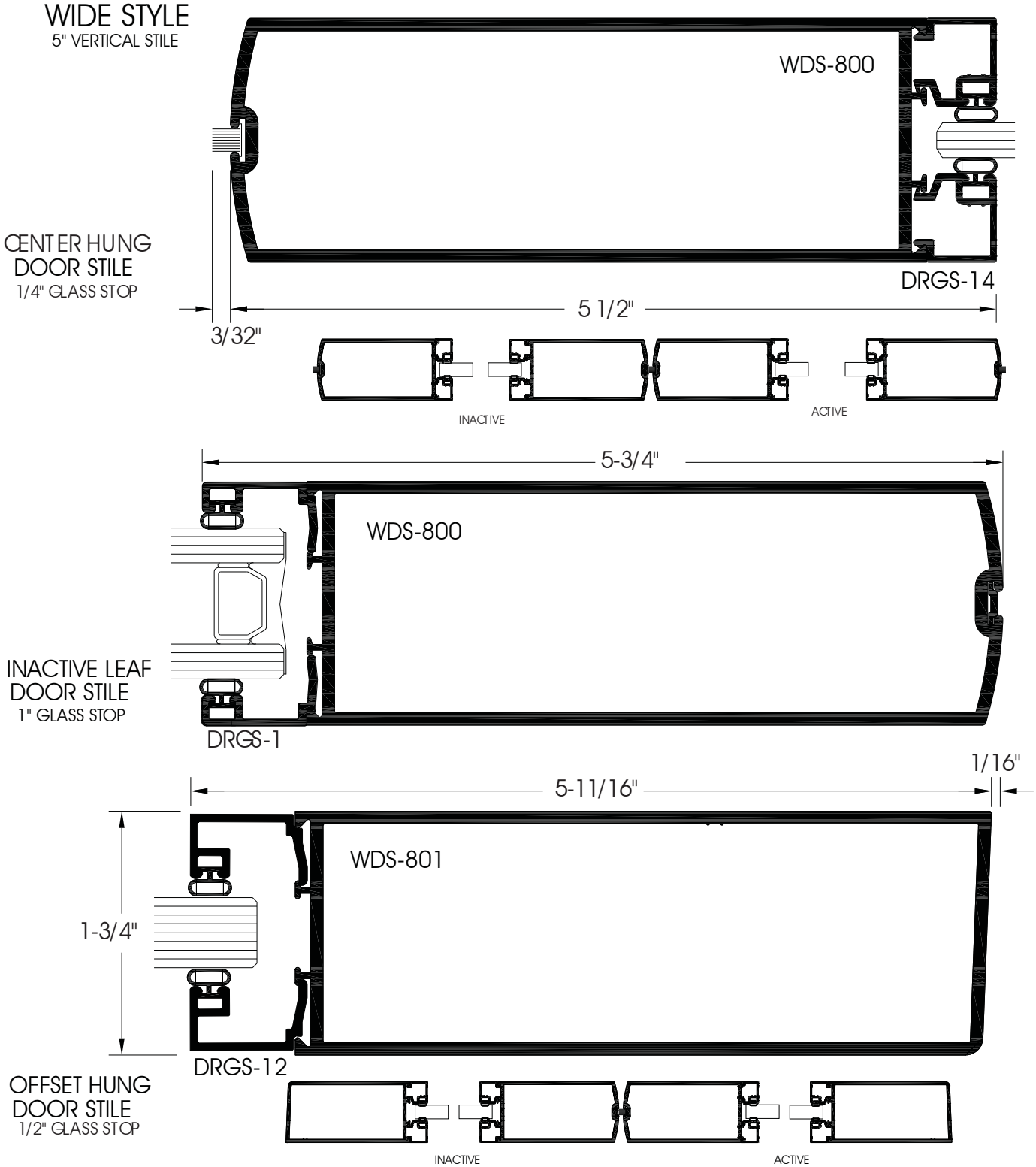
1/2"-1" GLASS STOP

FULL SCALE

PRL ALUMINUM

WIDE STYLE

5" VERTICAL STILE



CENTER HUNG DOOR STILE

1/4" GLASS STOP

INACTIVE LEAF DOOR STILE

1" GLASS STOP

OFFSET HUNG DOOR STILE

1/2" GLASS STOP

MATERIAL: 6063-T5 aluminum alloy.

FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.

NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details

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ENTRANCE DOORS

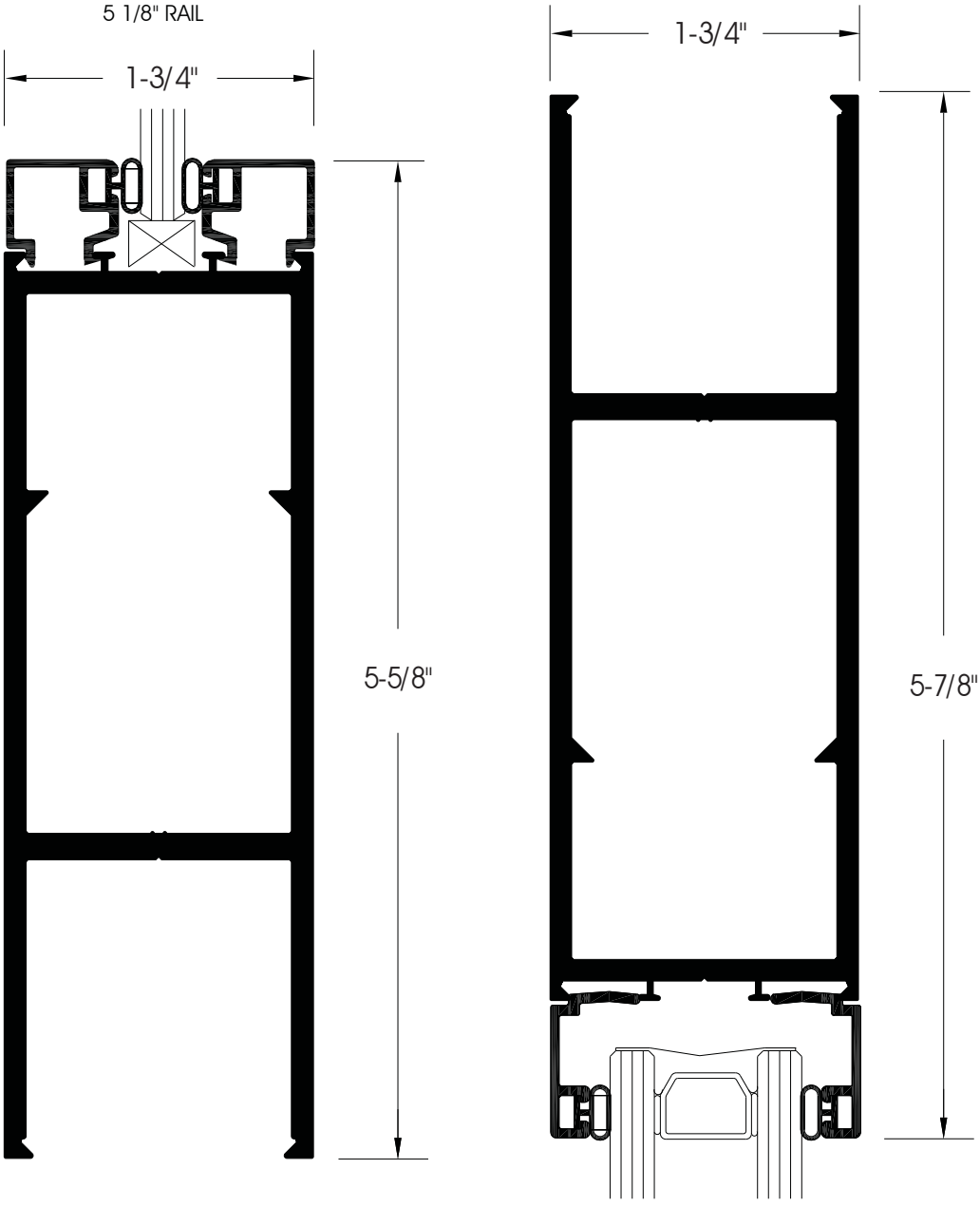
1/4"-1" GLASS STOP

FULL SCALE

PRL ALUMINUM

WIDE STYLE

5 1/8" RAIL



TOP/BOTTOM
DOOR RAIL
1/4" GLASS STOP

TOP/BOTTOM
DOOR RAIL
1" GLASS STOP

MATERIAL: 6063-T5 aluminum alloy.

FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.

NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details

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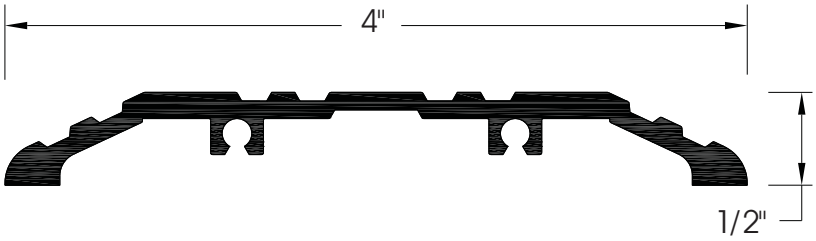
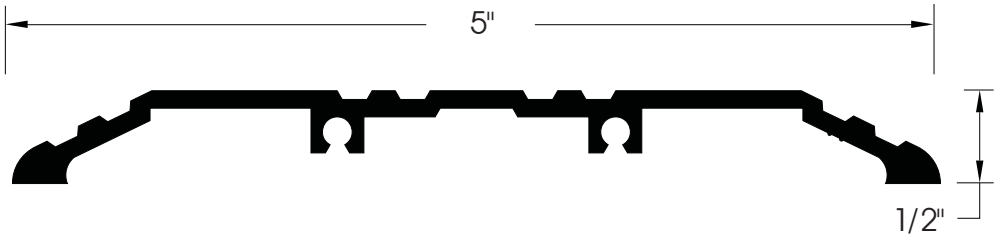
PRL ALUMINUM

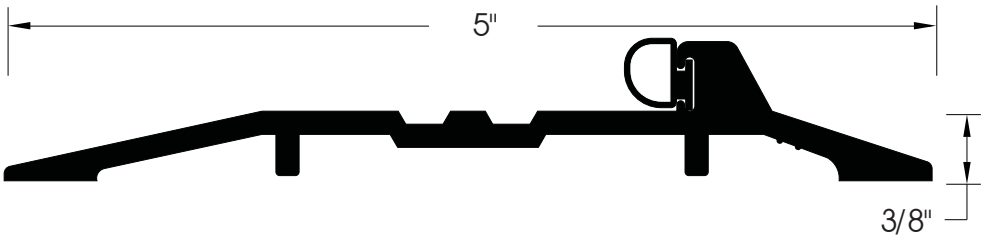
4" THRESHOLD

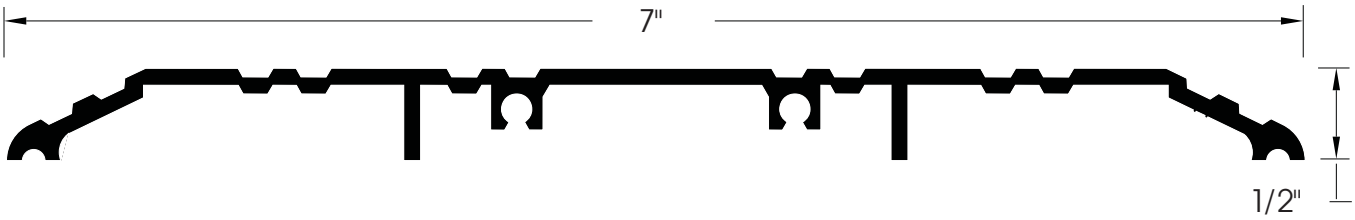


5" THRESHOLD



5" THRESHOLD





7" THRESHOLD

MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details

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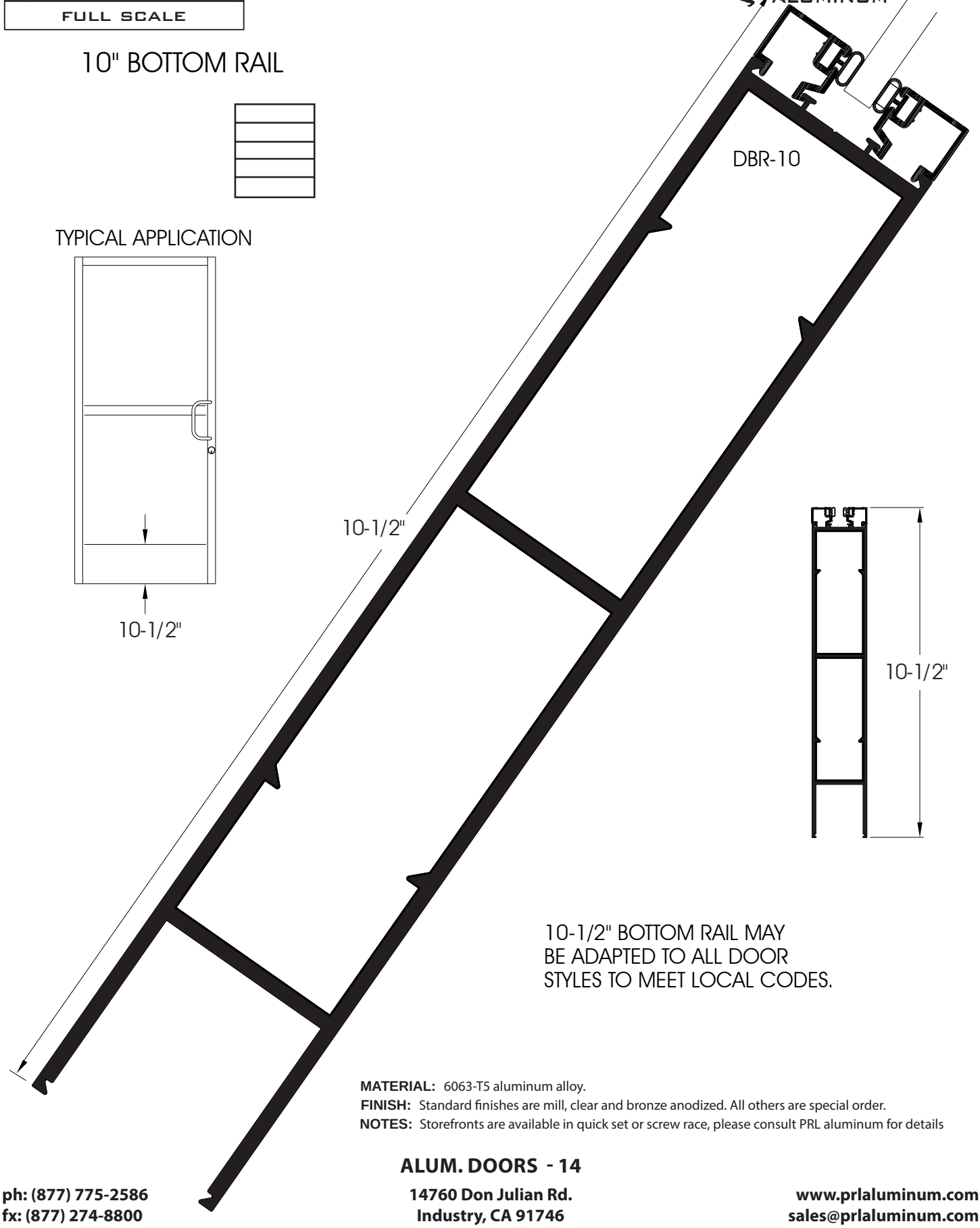
ENTRANCE DOORS
1/4"-1" GLASS STOP
FULL SCALE

PRL ALUMINUM

10" BOTTOM RAIL

DBR-10

TYPICAL APPLICATION



10-1/2" BOTTOM RAIL MAY
BE ADAPTED TO ALL DOOR
STYLES TO MEET LOCAL CODES.

MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
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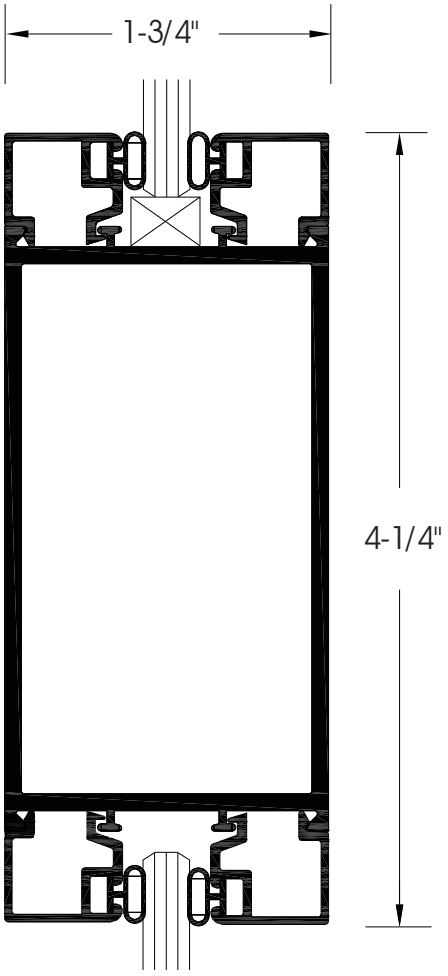
ENTRANCE DOORS
1/2"-1" GLASS STOP
FULL SCALE

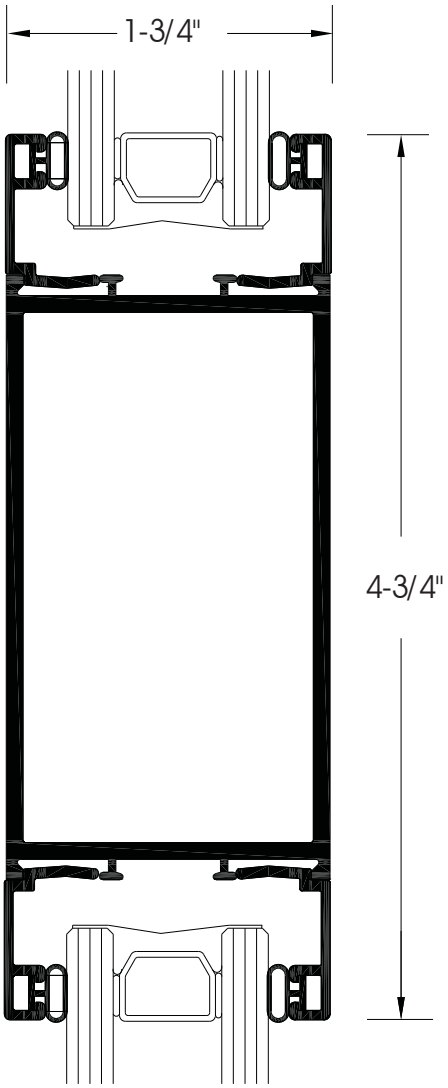
PRL ALUMINUM

HORIZONTAL MUNTIN

3 1/4" MUNTIN



HORIZONTAL
DOOR MUNTIN
1/4" GLASS STOP



HORIZONTAL
DOOR MUNTIN
1" GLASS STOP

MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details

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ENTRANCE DOORS

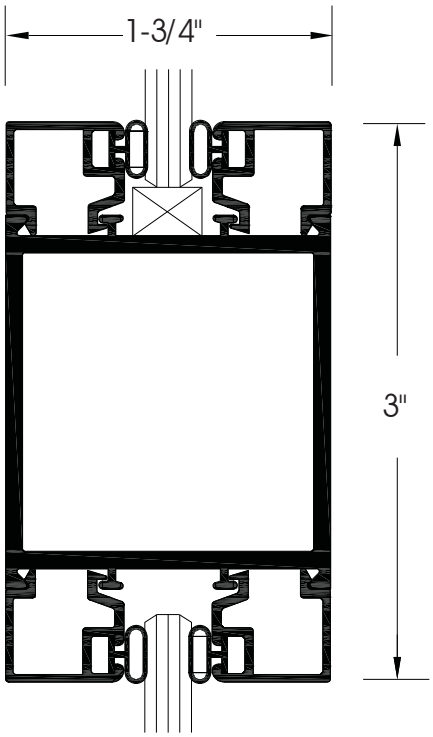
1/4”-1” GLASS STOP

FULL SCALE

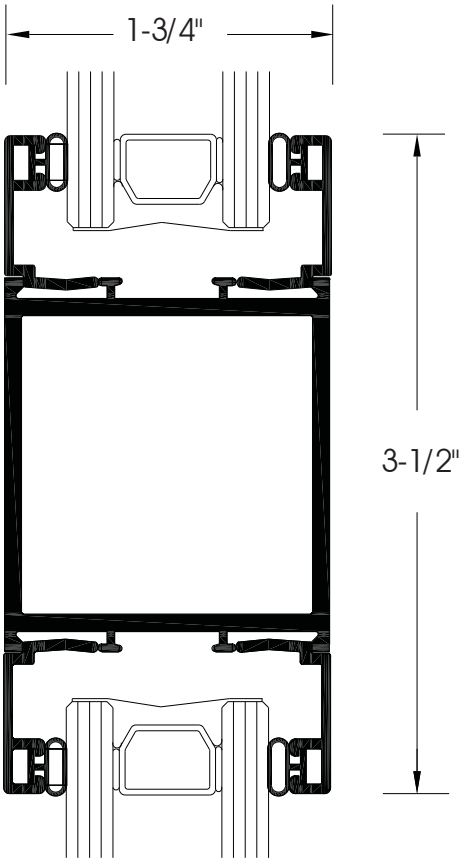
PRL ALUMINUM

HORIZONTAL MUNTIN

2" MUNTIN



HORIZONTAL
DOOR MUNTIN
1/4" GLASS STOP



HORIZONTAL
DOOR MUNTIN
1" GLASS STOP

MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details

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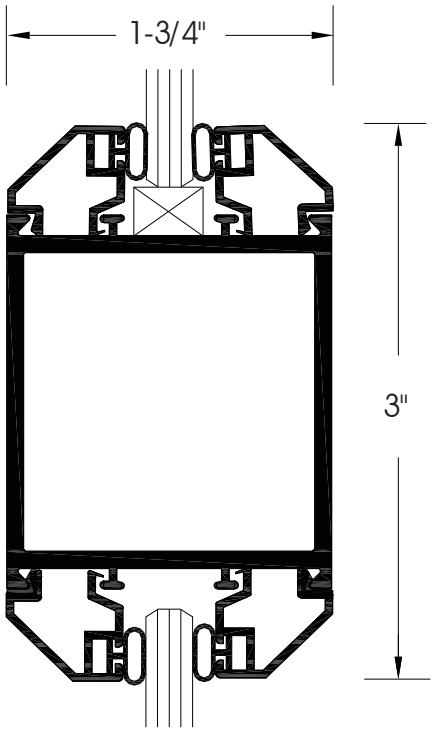
ENTRANCE DOORS

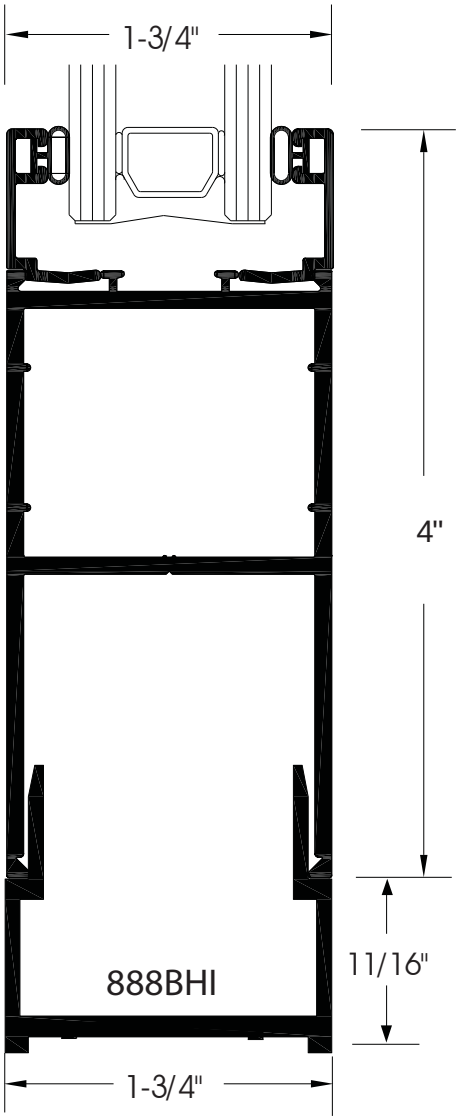
1/2"-1" GLASS STOP

FULL SCALE

PRL ALUMINUM



HORIZONTAL
DOOR MUNTIN
+1/4" BEVEL GLASS STOP



DOOR RAIL
+BULK HEAD INSERT

MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details

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SLIDING DOORS
SECTION

SLIDING DOORS
SECTION

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ARCHITECTURAL PRODUCTS
"We have the fastest leadtimes in the industry guaranteed!"

ALUMINUM SLIDING GLASS DOORS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum sliding glass doors - top hung.

B. Aluminum sliding glass doors - bottom roller supported.

1.2 REFERENCES

A. American Architectural Manufactures Association (AAMA):
   1. AAMA/NWWDA 101/I.S. 2-97 - Voluntary Specification, Performance Requirements and Test Procedures for Air Leakage Resistance, Water Penetration Resistance, Structural Loading, Forced Entry Resistance.

B. ASTM International (ASTM):
   1. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.
   2. ASTM E 331 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
   3. ASTM E 1886 - Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.
   4. ASTM E 1996 - Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes.

1.3 SUBMITTALS

A. Submit under provisions of applicable Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Provide AAMA test report in its entirety complete with drawing pages that show sill configuration tested.
   2. Storage and handling requirements and recommendations.
   3. Provide installation instructions, preparation instructions and recommendations.

C. Shop Drawings:
   1. Provide drawings showing each configuration.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
   1. Provide color samples of available finishes.
      a. Provide hardware samples.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.
   1. Provide color samples of specified finish.
      a. Provide hardware samples.

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1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish areas designated by Architect.
   2. Do not proceed with remaining work until workmanship is approved by Architect.
   3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS

A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: PRL Glass Systems, Inc., which is located at: 13644 Nelson Ave.; City of Industry, CA 91746; Toll Free Tel: 800-433-7044; Fax: 626-968-9256; Email:request info (info@prlglass.com); Web:prlglass.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 ALUMINUM SLIDING GLASS DOORS - TOP HUNG

A. Product: Max Slider - Cabo Series as manufactured by PRL Glass Systems, Inc.

B. Hardware:
   1. Locks shall be stainless steel.
   2. Pull handles shall be stainless steel, aluminum or brass/bronze.
   3. Trolley Wheels:

C. Performance:
   1. Rating: Provide Sliding Aluminum doors for exterior use that have a minimum AAMA - 101 rating of R-PG15-SD when the sill height is less than 5/8 inch (16 mm). Gateway

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Size: 87 inches by 84 inches (2210 mm by 2134 mm).

2. Air Infiltration: Limit air leakage through fixed glazing and frames to 0.28 cfm/ft^2/min (1.50 L/s/m^2) when tested in accordance with ASTM E-283-04 at a cross pressure of 1.57 psf (75 Pa).
3. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 2.92 psf (180 Pa) when tested in accordance with ASTM-E331-00.

2.3 ALUMINUM SLIDING GLASS DOORS - BOTTOM ROLLER SUPPORTED

A. Product: Max Slider - Cancun Series as manufactured by PRL Glass Systems, Inc.

B. Hardware:
1. Locks shall be stainless steel.
2. Pull handles shall be stainless steel, aluminum or brass/bronze.
3. Sliding wheels shall be a minimum diameter of 3 inches (76 mm) and be 100% stainless steel. No exceptions.

C. Performance:
1. Rating: Provide Sliding Aluminum doors for exterior use that have a minimum AAMA - 101 rating of R-PG15-SD when the sill height is less than 5/8 inch (16 mm).
2. Rating: Provide Sliding Aluminum doors for exterior use that have a minimum AAMA - 101 rating of CW-PG35-SD when the sill height is greater than 5/8 inch (16 mm).
3. Air Infiltration: Limit air leakage through fixed glazing and frames to 0.30 cfm/ft^2/min (1.50 L/s/m^2) when tested in accordance with ASTM E-283-04 at a cross pressure of 1.57 psf (75 Pa).
4. Water Penetration under Static Pressure: System shall not evidence uncontrolled water penetration at a cross pressure of 2.92 psf (180 Pa) when tested in accordance with ASTM-E331-00.
5. Large Missile Impact: Design and fabrication shall meet the performance requirements in the referenced test procedures for a +1676/-2873 Pa (+35/-60 psf) design pressure with missile impacts corresponding to Missile Level D and Wind Zone 3 for a Basic Protection Rating. (Laminated I.G. 1-1/8 inches (29 mm) I.G. Marine glazed into a rubber glazing gasket.

2.4 MATERIALS

A. Extrusions: Frames, assembly clips, trims and miscellaneous extrusions shall be extruded from 6063-T6 aluminum alloy.

B. Glazing Gaskets: Marine type glazing gaskets shall meet the requirements of ASTM D-2287.

2.5 FABRICATION

A. Comply with the applicable provisions of the AAMA windows and sliding glass doors manual for materials, fabrication and installation of doors and components.

2.6 FINISH

A. Class II clear anodized aluminum shall conform to AA-M12-C22-A31.

B. Class I clear anodized aluminum shall conform to AA-M12-C22-A41.

C. Class II color anodized aluminum shall conform to AA-M12-C22-A34.
1. Color: Champagne.
2. Color: Light Bronze.
3. Color: Medium Bronze.
4. Color: Dark Bronze.

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5. Color: Black.

D. Class I color anodized aluminum shall conform to AA-M12-C22-A44.
1. Color: Champagne.
2. Color: Light Bronze.
3. Color: Medium Bronze.
4. Color: Dark Bronze.
5. Color: Black.

E. Fluorocarbon finish complying with AAMA 2605.
1. Resin: 70% PVDF resin shall be Kynar using Kynar500/Hylar5000.
2. Cleaned and pretreated with chromium phosphate
3. Coat extrusions with approved primers to minimum dry film thickness of 0.20 mil (.0051 mm).
4. Color coat shall be a minimum dry film thickness of 1.0 mil (.025 mm).
5. Approved Coating Manufacturers: PPG Industries or Valspar Corp.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL

A. Owner will engage an independent AAMA approved testing agency.

B. Conduct test under the supervision of and in the presence of the Owner, Architect, and Construction Manager.

C. Test wall in accordance with AAMA 501.2-94.

3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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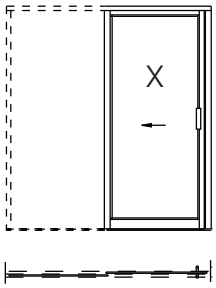
SLIDING DOORS
1/4"-1" GLASS STOP

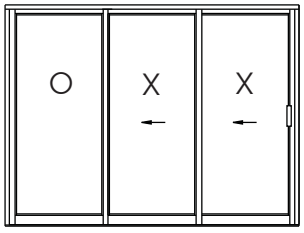
PRL ALUMINUM

PRL SL Series is a sliding door system designed as a versatile framed stacking system with a head/sill track, vertical jambs that allows unlimited adaptability with basic single pocket to multi slider configurations for areas where valuable space is critical.



Pocket System

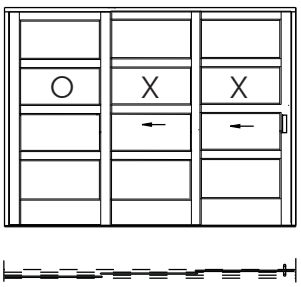
Pocket system is the SL-series basic configuration. as a one way slider, requires design professionals to consider wall space requirements on pocket applications or the use of an optional custom offset surface mount bracket system for interior applications.



Wall System

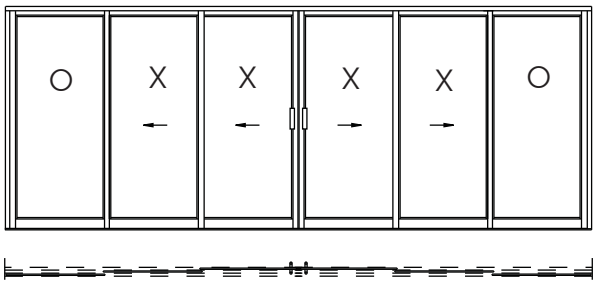
This is the intermediate one way inset surface mount frame configuration that maximizes space on light duty traffic areas .

In addition to the standard SL features it offers a one piece vertical single weather stripped interlock system that reduces slide open efforts on multiple panels at one time.



Custom System

Custom doors will add unlimited design advantages on metal, glass and hardware options. Other optional choices range from custom glass to exotic metal finishes. Stronger reinforced construction permits increasing door heights.
Please be advised there is some limitations, please consult PRL Aluminum for details



Multi_Track System

Multi-Track maximizes the features of the stacking SL concept as two way, multiple track/panel system with unlimited applications.

Offers both standard and special features from basic configurations.

Features/Hardware

Bottom adjustable tandem rollers system will ease the open/close sliding efforts. Combination of weather stripped vertical stiles/head track and sill track minimizes the weather effects on exterior applications.

SL series standard hardware are flush handles, hooklock and cylinders. Other types of hardware are offered as options such as flush lockset or custom pulls.

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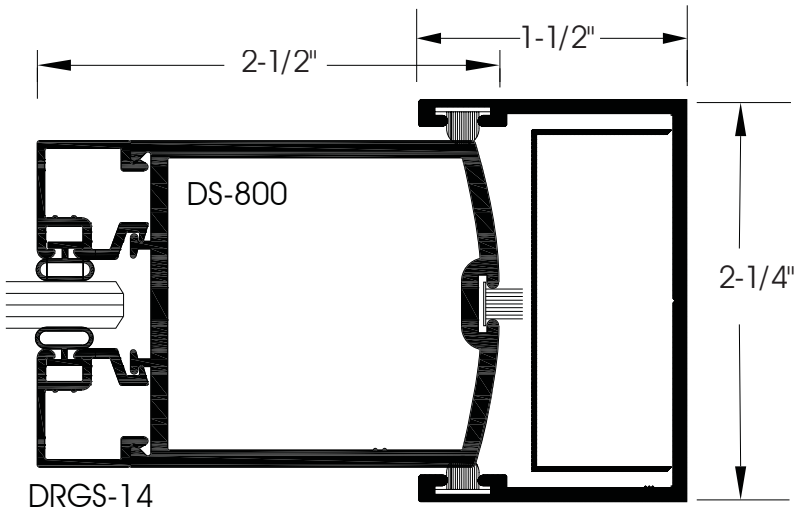
SLIDING DOORS
1/4”-1” GLASS STOP
FULL SCALE

PRL ALUMINUM

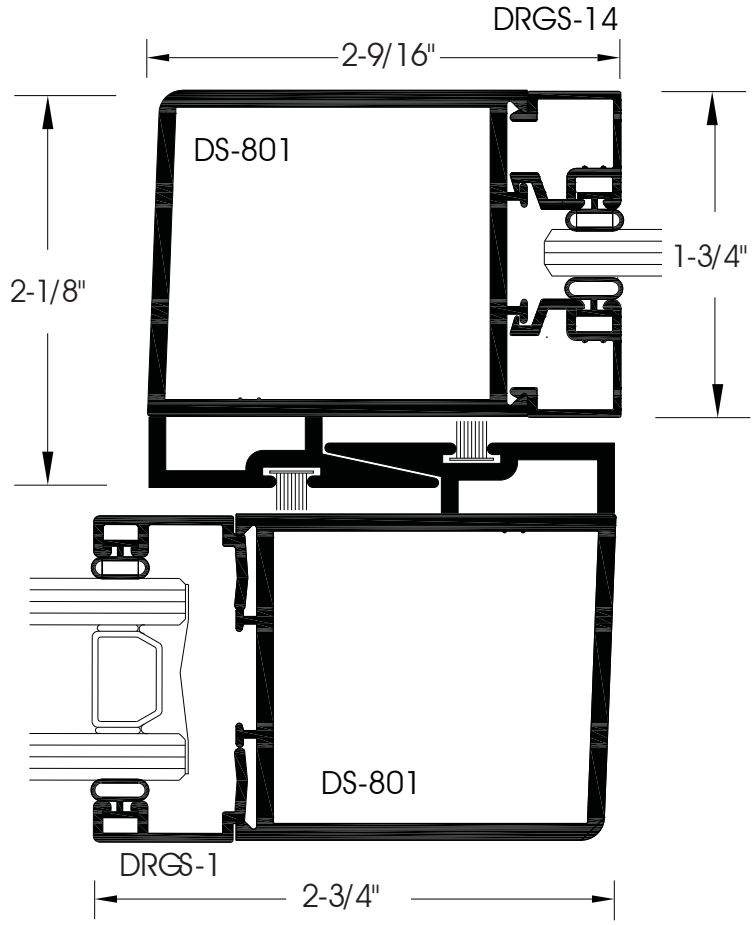
SL-NARROW STYLE
2" VERTICAL STILE

SL-RADIUS STYLE
1/4" GLASS STOP



SL-OFFSET STYLE
1/4" GLASS STOP

SL-OFFSET STYLE
1" GLASS STOP



MATERIAL: 6063-T5 aluminum alloy.
FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.
NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details

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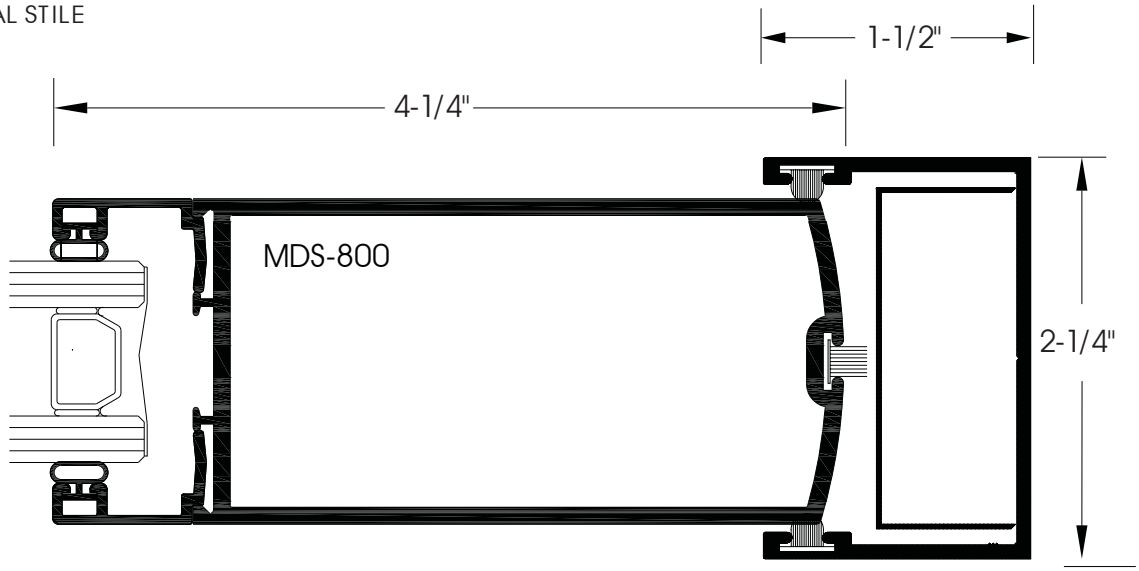
SLIDING DOORS
1/4"-1" GLASS STOP
FULL SCALE

PRL ALUMINUM

SL-MEDIUM STYLE

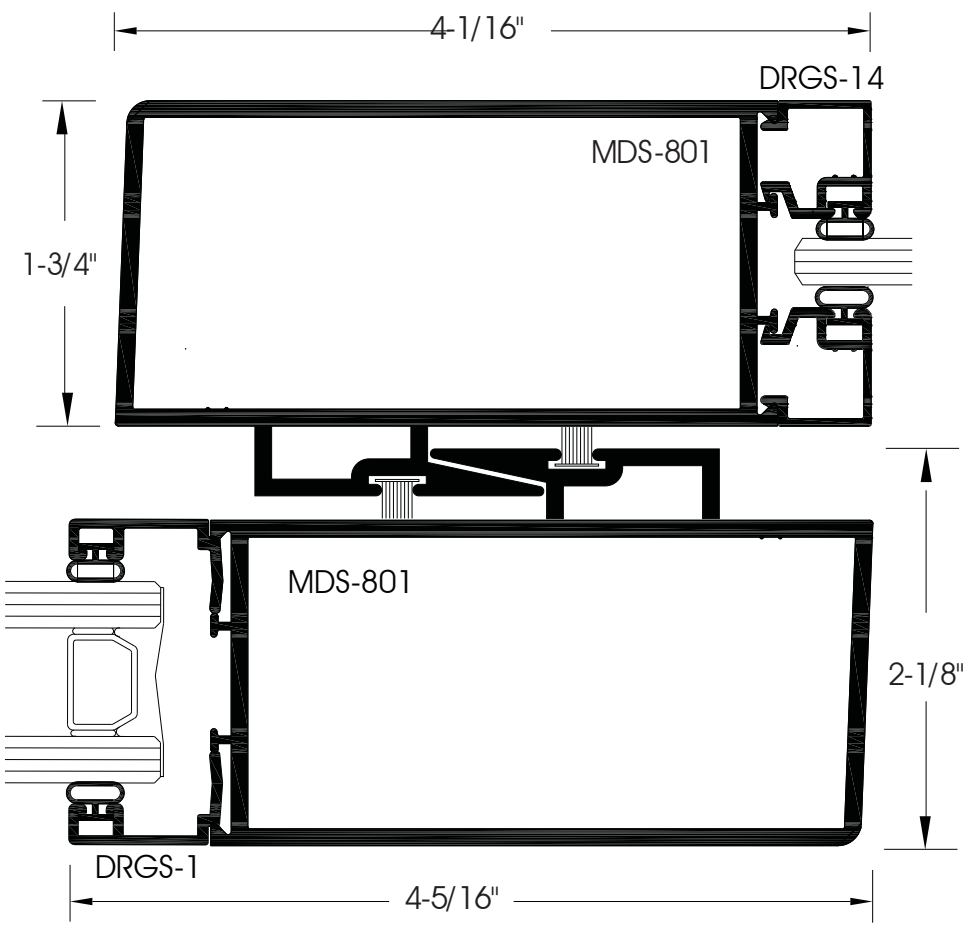
3 1/2" VERTICAL STILE

SL-RADIUS STYLES
1" GLASS STOP



SL-OFFSET STYLE
1/4" GLASS STOP

SL-OFFSET STYLE
1" GLASS STOP



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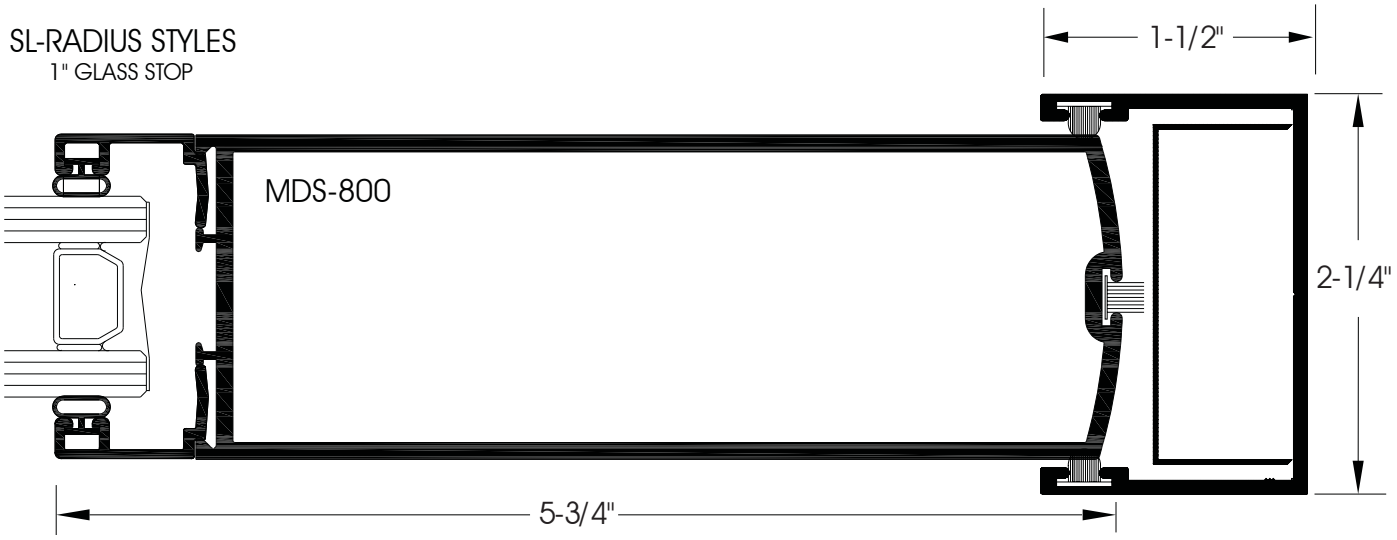
SLIDING DOORS
1/4"-1" GLASS STOP
FULL SCALE

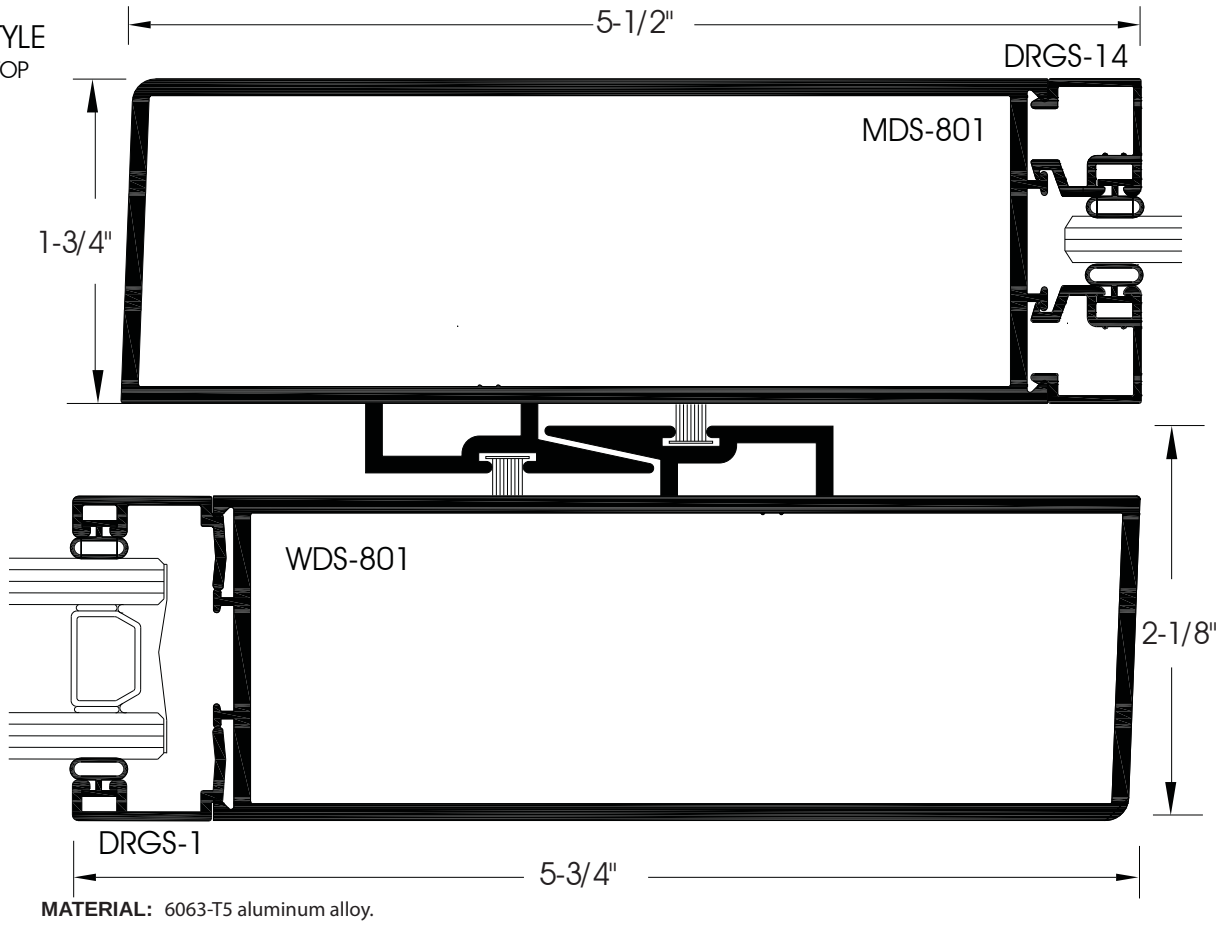
PRL ALUMINUM

SL-WIDE STYLE
3 1/2" VERTICAL STILE

SL-RADIUS STYLES
1" GLASS STOP



SL-OFFSET STYLE
1/4" GLASS STOP



MATERIAL: 6063-T5 aluminum alloy.
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SLIDING DOORS

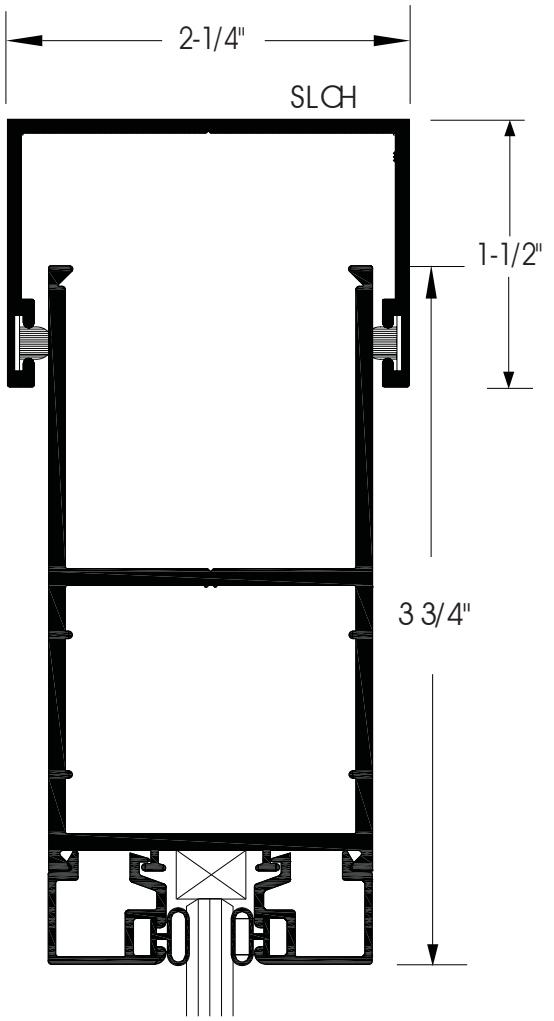
1/4"-1" GLASS STOP

FULL SCALE

PRL ALUMINUM

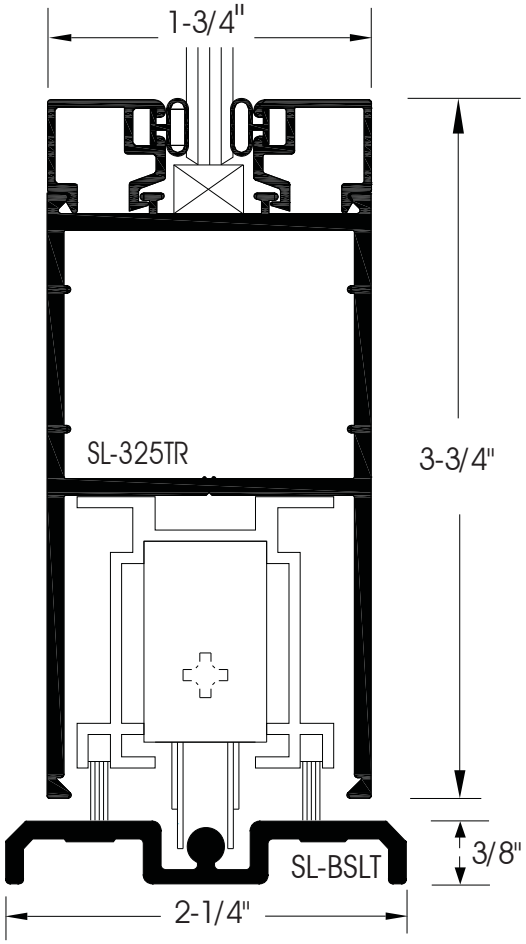
SL- STYLE

3 1/4" RAIL



SL-TOP RAIL

1/4" GLASS STOP



SL-BOTTOM RAIL

1/4" GLASS STOP

MATERIAL: 6063-T5 aluminum alloy.

FINISH: Standard finishes are mill, clear and bronze anodized. All others are special order.

NOTES: Storefronts are available in quick set or screw race, please consult PRL aluminum for details

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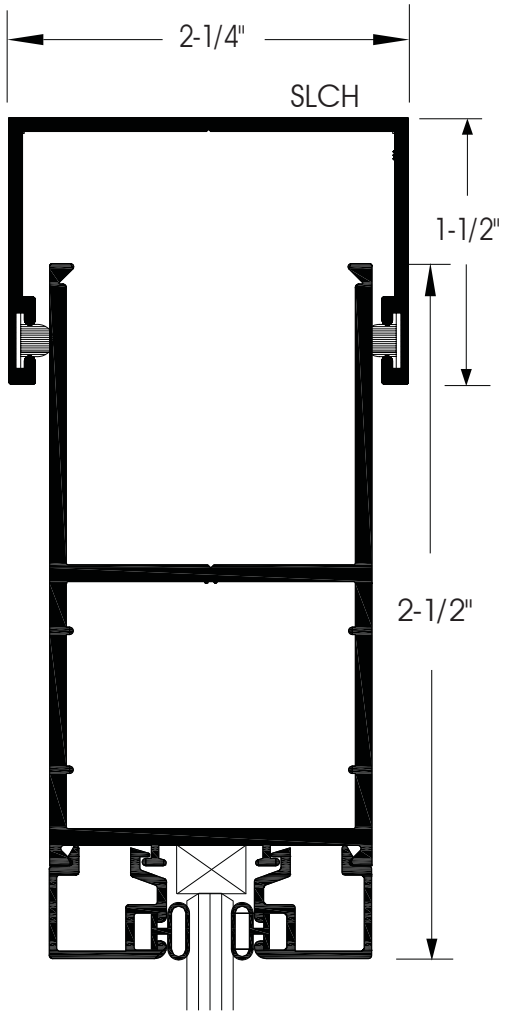
SLIDING DOORS
1/4"-1" GLASS STOP
FULL SCALE

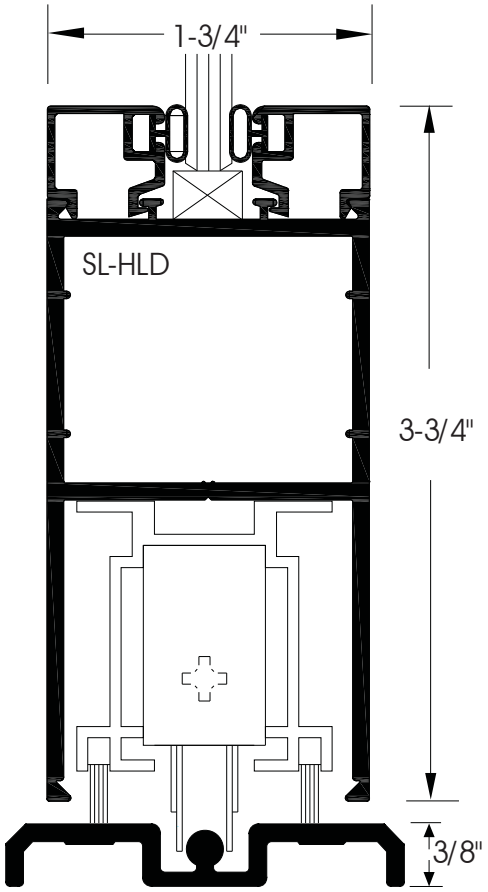
PRL ALUMINUM

SL- STYLE

3 1/4" RAIL



SL-TOP
RAIL
1/4" GLASS STOP



SL-BOTTOM
RAIL
1/4" GLASS STOP

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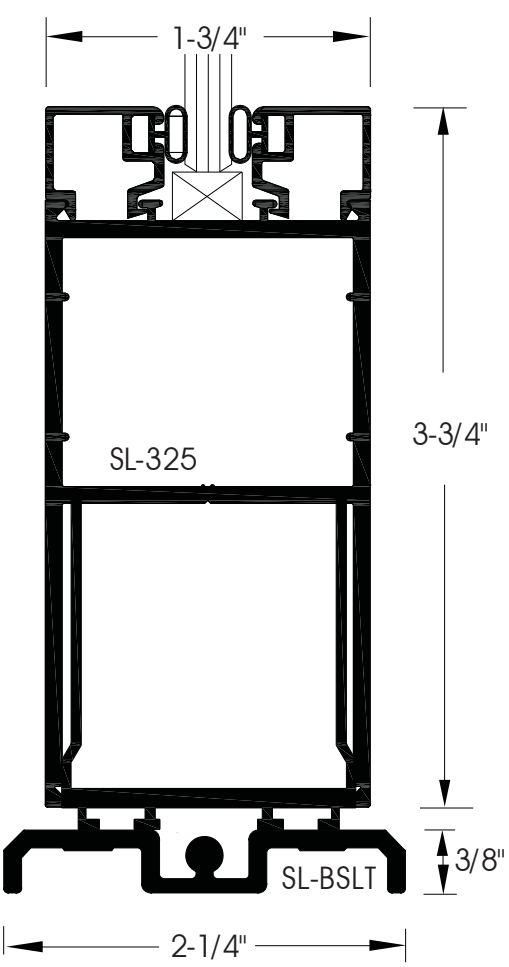
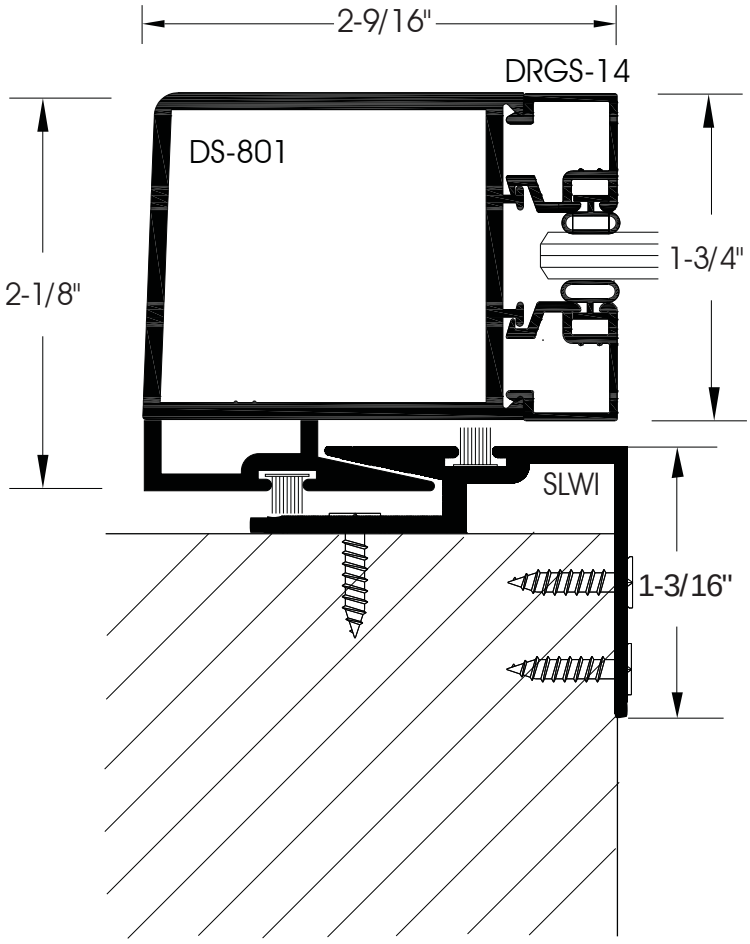
SLIDING DOORS
1/4"-1" GLASS STOP
FULL SCALE

PRL ALUMINUM

SL- STYLE
3 1/4" RAIL



SL-BOTTOM RAIL
+BULK HEAD
1/4" GLASS STOP



SL-STILE
1" GLASS STOP

MATERIAL: 6063-T5 aluminum alloy.
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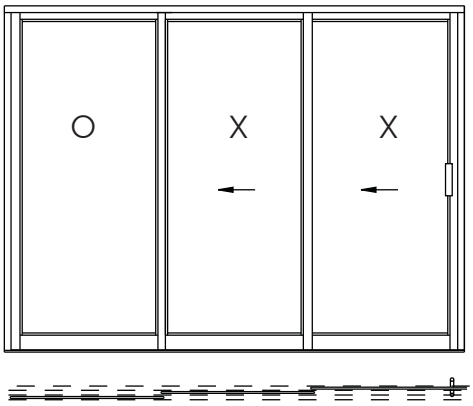
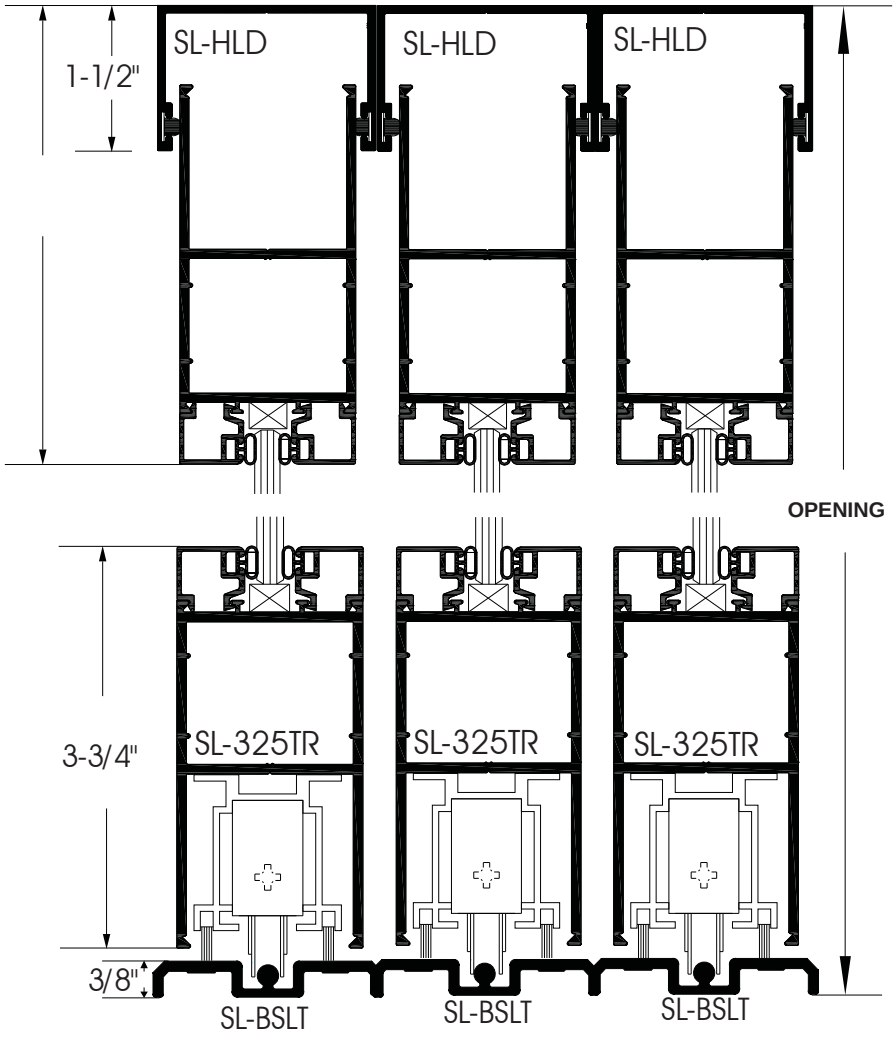
SLIDING DOORS
1/4"-1" GLASS STOP
FULL SCALE

WALL SYSTEM DETAILS



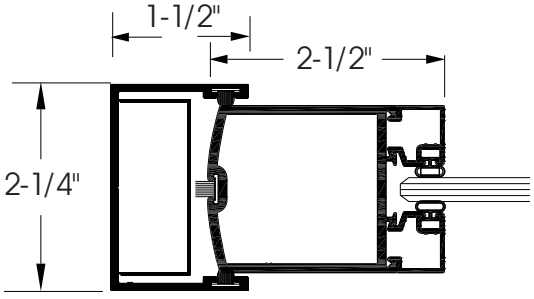
INTERLOCKED WALL SYSTEM HEAT ELEVATION

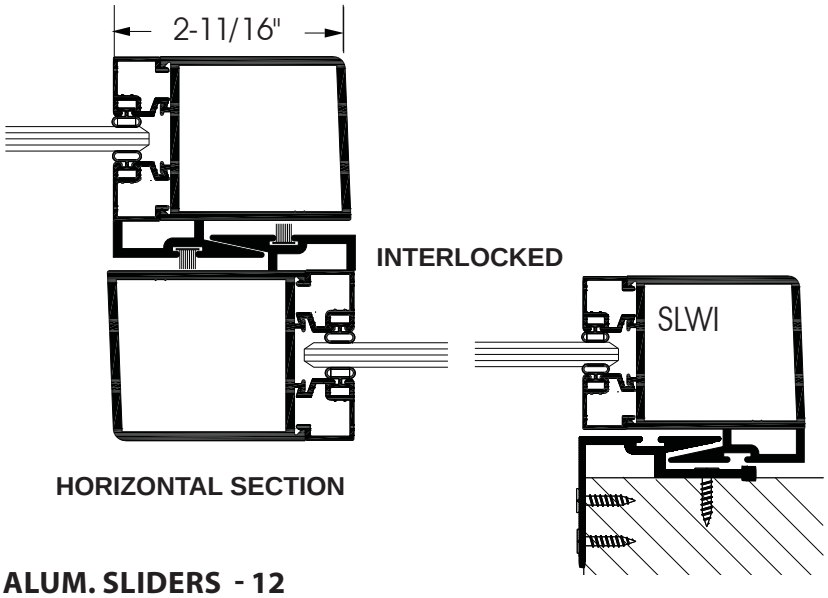
SL-TOP RAIL



VERTICAL SECTION

SL-JAMB





HORIZONTAL SECTION

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SLIDING DOORS

1/4"-1" GLASS STOP

FULL SCALE

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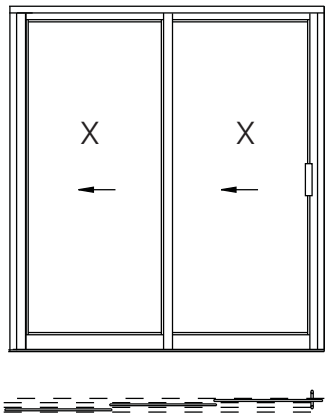
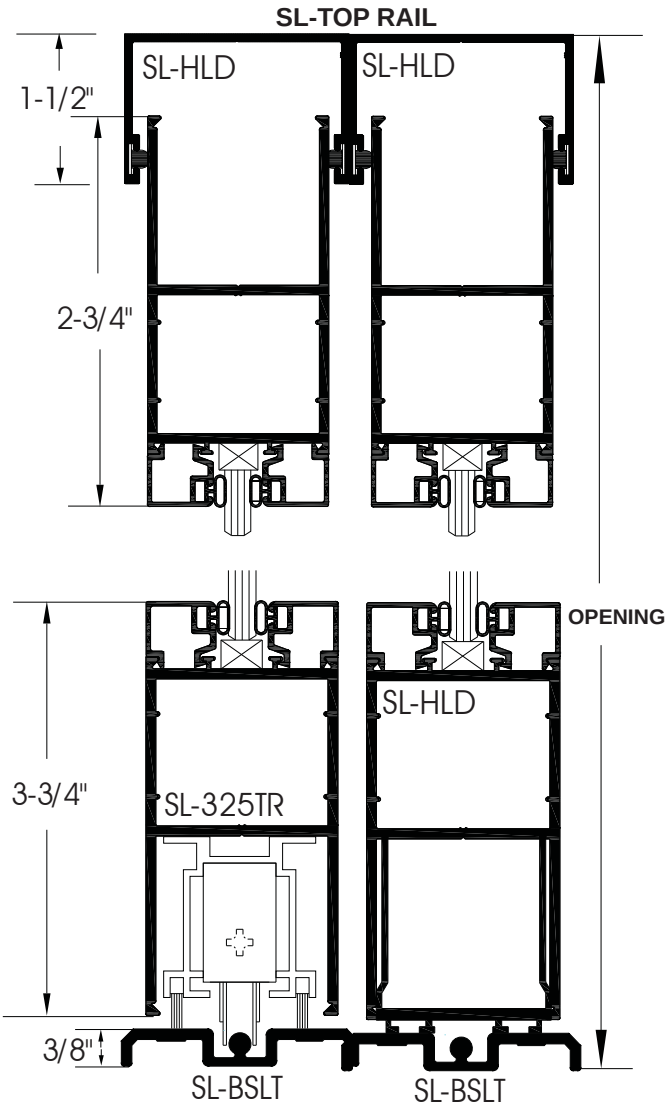
WALL SYSTEM DETAILS

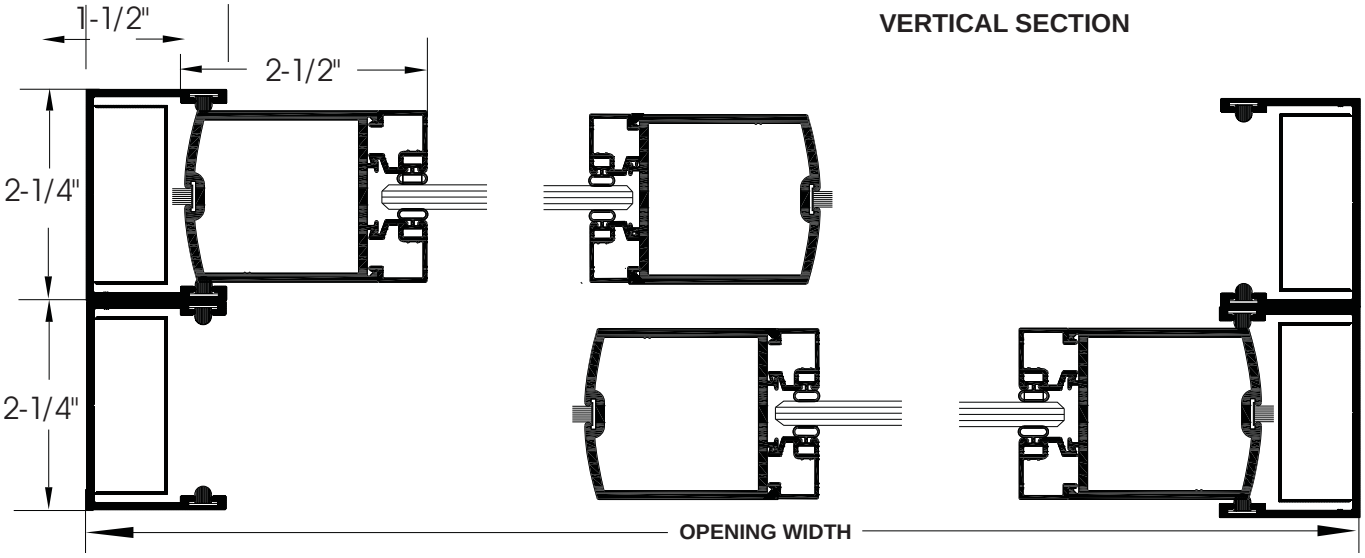


SLIDER WALL SYSTEM ELEVATION



VERTICAL SECTION

HORIZONTAL SECTION



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BREAKMETAL

BRAKE SHAPES

BRAKE SHAPES

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(ALL 48" IN WIDTH)

INVENTORY SHEET LIST

THICKNESS		THICKNESS		THICKNESS	
.040	MILL FINISH	.040	DARK BRONZE ANO.	.050	#4 BRUSHED MUNTZ
.050	MILL FINISH	.050	DARK BRONZE ANO.	12 GA	#8 MIRROR S/S
.063	MILL FINISH	.063	DARK BRONZE ANO.	14 GA	#8 MIRROR S/S
.090	MILL FINISH	.125	DARK BRONZE ANO.	16 GA	#8 MIRROR S/S
.125	MILL FINISH	.040	BLACK ANO.	18 GA	#8 MIRROR S/S
.040	CLEAR ANO.	.040	POLAR WHITE	20 GA	#8 MIRROR S/S
.050	CLEAR ANO.	.050	POLAR WHITE	14 GA	#4 BRUSHED S/S
.063	CLEAR ANO.	.063	POLAR WHITE	16 GA	#4 BRUSHED S/S
.125	CLEAR ANO.	.045	#8 MIRROR NAVAL BRASS	18 GA	#4 BRUSHED S/S
.040	BRIGHT CLEAR ANO.	.045	#4 BRUSHED NAVAL BRASS	20 GA	#4 BRUSHED S/S
.040	BRIGHT GOLD ANO.	.050	#8 MIRROR MUNTZ		

(14' LENGTHS ARE SUBJECT TO AVAILABILITY, PLEASE CALL TO VERIFY STOCK)

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- HEAD/SILL FLASHING
- ANGLES
- HAT
- J-Z SHAPES
- OPEN/CLOSED CORNER
- CHANNEL

HANDRAIL
- TOP CAP
- MITER RETURN/CORNERS
- CONNECTORS

CUSTOM WELDING
- TACK WELDING

METAL FINISHING
- MIRROR POLISHING
- DIRECTIONAL SATIN BRUSH

CLAD
- FULL FRAME DOORS
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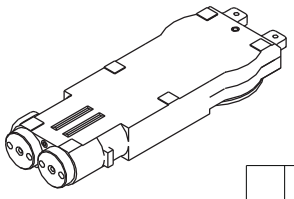
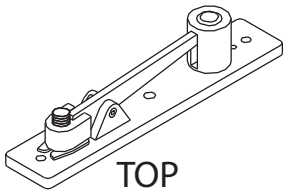
ADAPTABILITY
TO DESIGN CONCEPTS

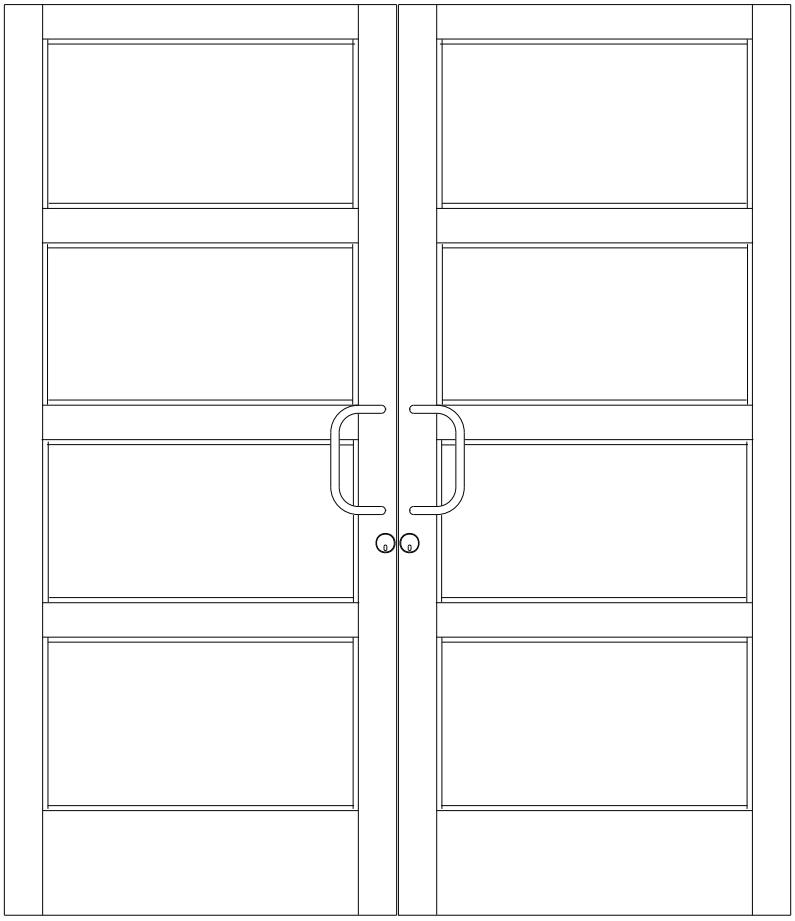
CUSTOM DOORS
WE OFFER AN EXTENSIVE
LINE OF HARDWARE THAT
FACILITATE A SAFE AND
EASY DOOR OPERATION.

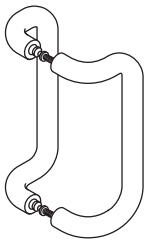


CLOSERS

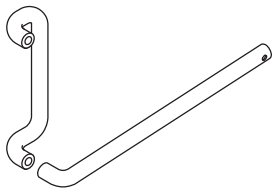


TOP
PIVOTS

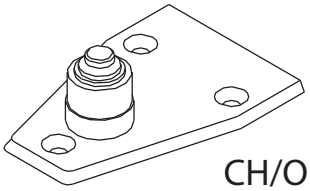




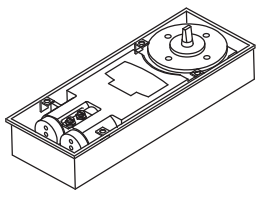
PULLS



SB-PUSH/PULLS



CH/OFFSET



FLOOR CLOSERS

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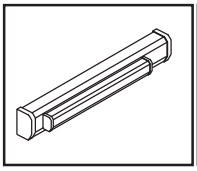

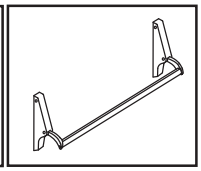

NAME	CONTEMPO	CROSS BAR
PART NUMBER	CPN	CBPN
UNIT	PC/EA	PC/EA

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ADAMS RITE devices and other mfr's are also available upon request!
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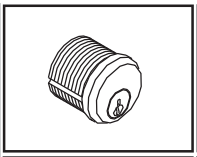
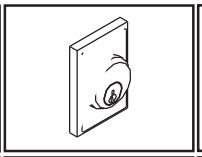
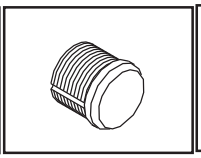
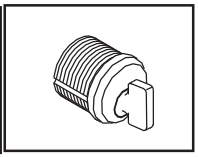
CYLINDERS

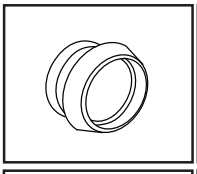


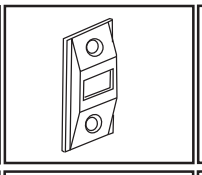


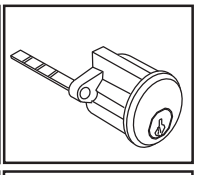




NAME	KEY	MT-PAD	DUMMY	T-TURN
PRT NUMBER	KC	MP	DC	TT
UNIT	PC/EA	PC/EA	PC/EA	PC/EA







NAME	CYL GUARD	LOCK INDICATOR	RIM CYLINDER
PART NUMBER	CG	LI	RC
UNIT	PC/EA	PC/EA	PC/EA

ORDER a complete system! GLASS & ALUMINUM from US
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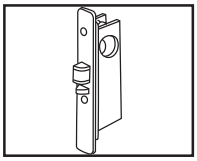
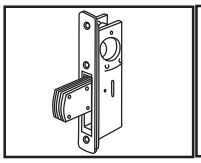
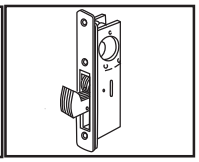
LOCKS







NAME	DEADLATCH	LONG THROW	HOOK THROW
PART NUMBER	DL	LT	HT
UNIT	PC/EA	PC/EA	PC/EA

T-HOLD & HEADER BOLTS are also in stock!
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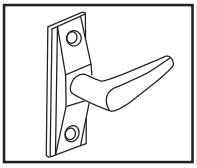
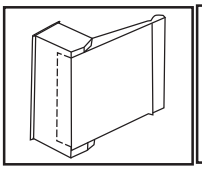
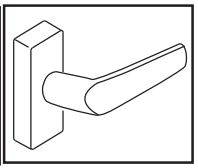
HANDLES



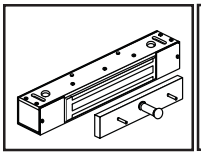


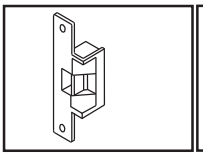


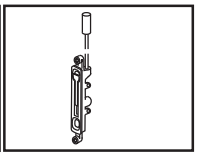
NAME	LEVER	PADDLE	EURO LEVER
PART NUMBER	LH	PH	ELH
UNIT	PC/EA	PC/EA	PC/EA

Please call us for specific lever/handle MFR/models

ACCESORIES







NAME	MAGNETIC LOCK	ELECTRIC STRIKE	FLUSH BOLT
PART NUMBER	ML	ES	FB
UNIT	PC/EA	PC/EA	PC/EA

INTERNATIONAL and other access controls are also available upon request!
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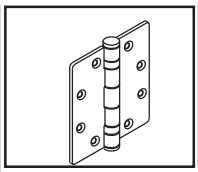
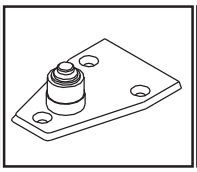
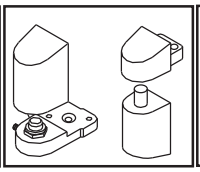
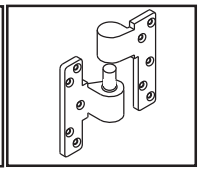
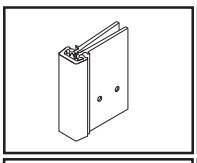
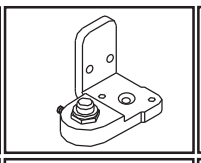
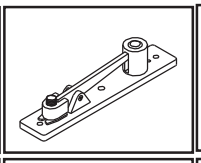
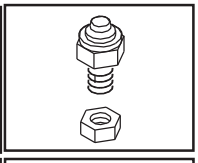
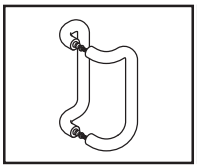
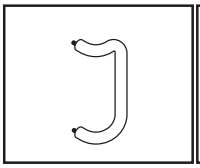
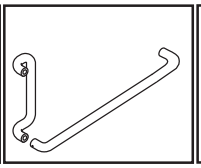
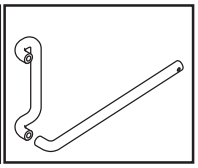
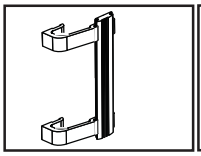
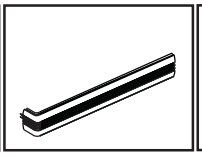
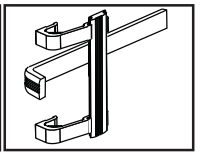
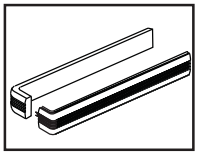
				
NAME	BUTT HINGE	CHB PIVOT	OFFSET PIVOT	INT PIVOT
PART NUMBER	BH	CHBP	OP	IPV
UNIT	PC/EA	PC/EA	SET	PC/EA

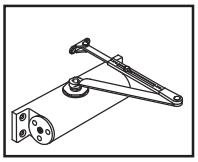
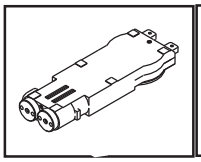
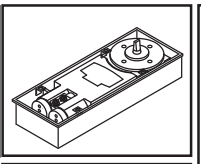
				
NAME	GEAR HINGE	OB PIVOT	WB TOP PIVOT	T-HOLD MOUNT
PART NUMBER	GH	OBP	WBTP	THMP
UNIT	PC/EA	PC/EA	PC/EA	PC/EA

PULLS

				
NAME	B/B OFFSET	SINGLE OFFSET	DB-PUSH/PULL	SB-PUSH/PULL
PART NUMBER	BBOP	SSOP	DBPP	SBPP
UNIT	PC/EA	PC/EA	PC/EA	PC/EA

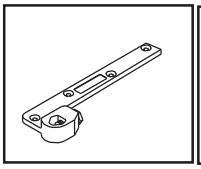
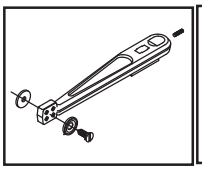
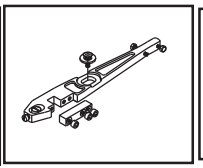
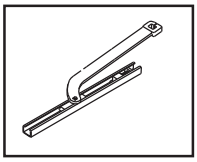
				
NAME	STD S OFFSET	STD PUSH BAR	STD-PUSH/PULL	STD-D PUSH/BAR
PART NUMBER	SSOP	SPB	SPPB	SDPB
UNIT	PC/EA	PC/EA	PC/EA	PC/EA

CLOSERS

				FREE LOCAL DELIVERY! ON ORDERS ABOVE $500.00
NAME	SURFACE MOUNT	OVERHEAD	FLOOR MOUNT	
PART NUMBER	SMC	OHCC	FC	
UNIT	PC/EA*	PC/EA	PC/EA	

*MOUNTING BRACKET SOLD SEPARATELY

ARMS

				
NAME	FC OFFSET ARM	FC ARM	OH ARM	OH OFFSET ARM
PART NUMBER	FCOA	FCA	OHA	OHOA
UNIT	PC/EA	PC/EA	PC/EA	PC/EA

NOTE: PLEASE CALL PRL ALUMINUM FOR DETAILS ON FINISHES

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