# TECHNICAL DATA

**DESCRIPTION:** 2-1/2" (63.5mm) WIDE, STRUCTURAL SILICONE GLAZED THERMALLY BROKEN WALL SYSTEM, WITH 3" (76.2mm), 4" (101.6mm), 5-1/4" (133.3mm), 6-5/8" (168.2mm), 8" (203.2mm) AND 10" (254mm) DEPTH

**COMPATIBILITY:** ADHESION TESTING OF SILICONE TO FINISHED SECTIONS IS RECOMMENDED BY THE SILICONE MANUFACTURERS.
DESIGNED TO SUIT ALL DOORS HARDWARE.

**FINISH:** PROFILES STOCKED IN MILL FINISH AND CLEAR ANODIZED, OTHER FINISHES ARE AVAILABLE. SAMPLES UPON REQUEST

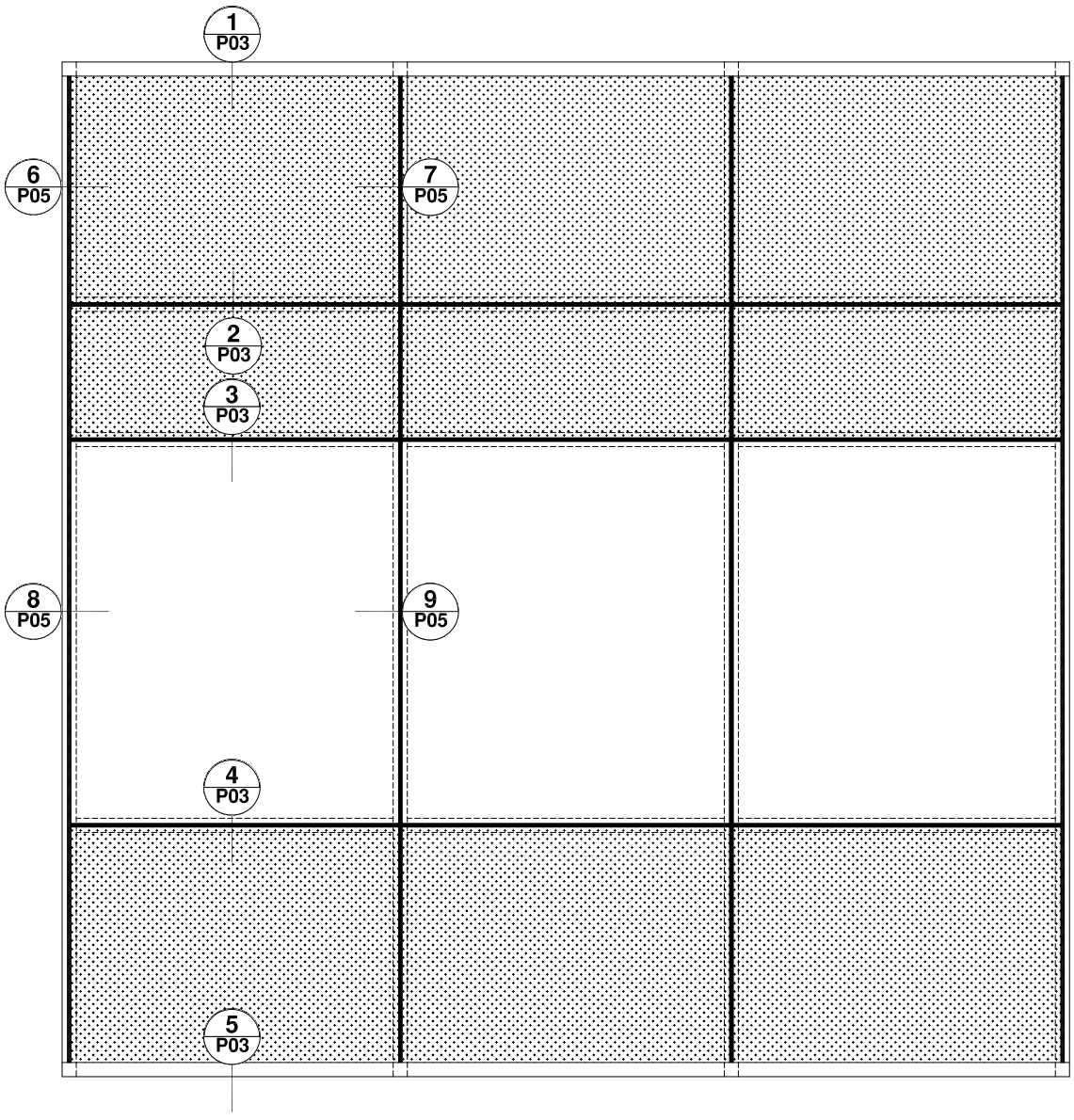
**STOCK LENGTH:** 24'-2" (7.37 METERS).

**ASSEMBLY:** DESIGNED FOR SHEAR BLOCK AND SCREW PORT ASSEMBLY

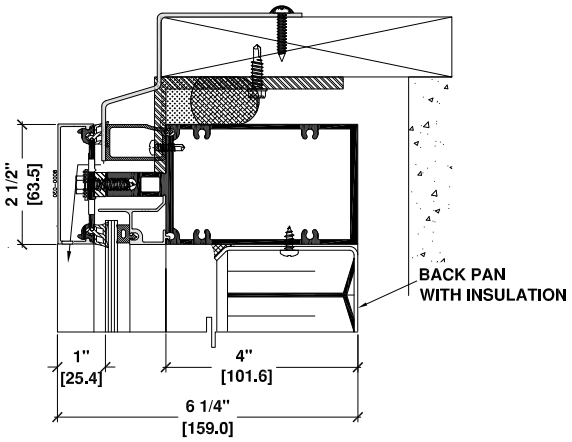
**STRENGTH:** **REFER TO WIND LOAD CHARTS FOR MAXIMUM ALLOWABLE SPAN, CONSULT STRUCTURAL ENGINEERING FOR FINAL DESIGN**

**ANCHORING:** REFER TO FABRICATION AND INSTALLATION MANUAL.

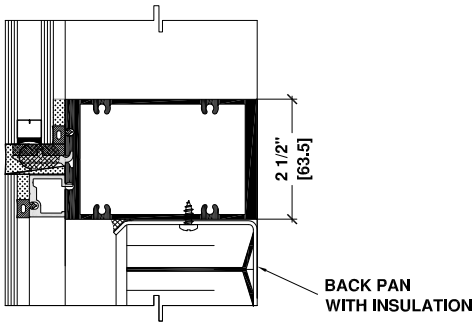
**GLAZING:** 8000 SERIES IS AN EXTERIOR GLAZED SYSTEM WHICH WILL ACCEPT 1/4" (6mm)SINGLE GLASS, 1/2" (12.7mm) AND 1" (25mm) SEALED UNIT



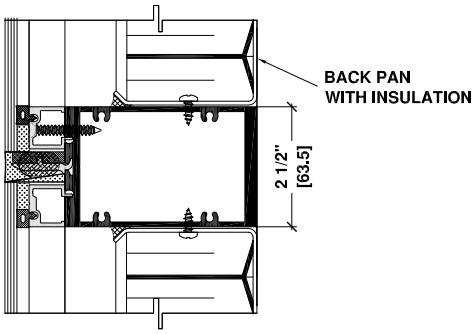

ELEVATION



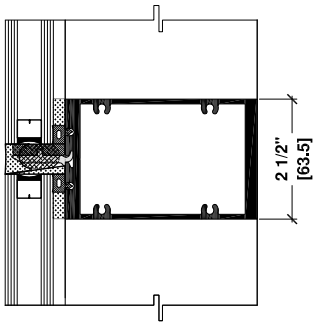

**1** 4" HORIZONTAL MULLION SPANDREL PARAPET WALL CONDITION



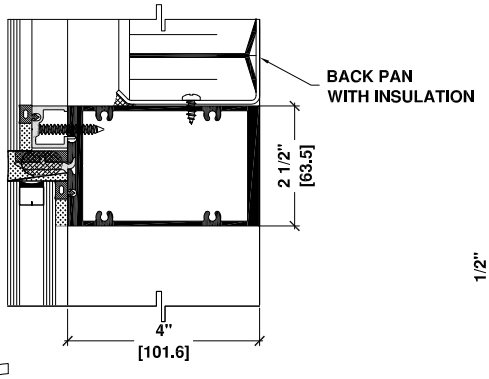

**4** 4" HORIZONTAL MULLION VISION/SPANDREL



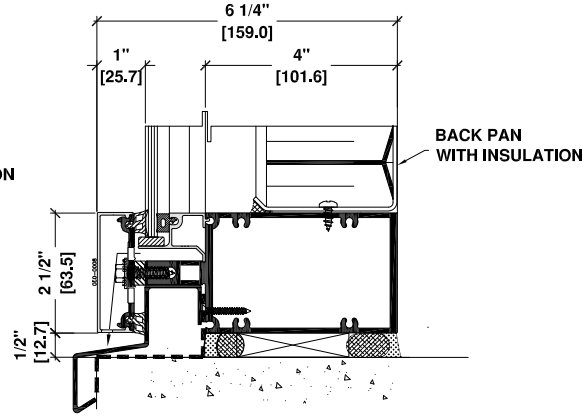

**2** 4" HORIZONTAL MULLION SPANDREL/SPANDREL



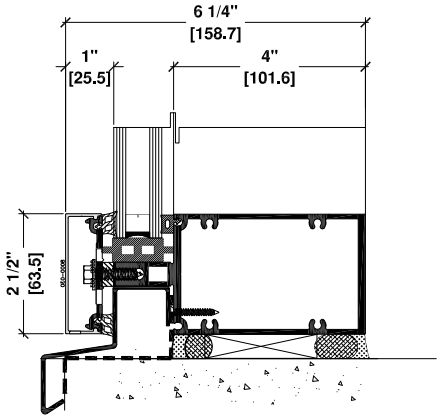

**4a** 4" HORIZONTAL MULLION VISION/VISION



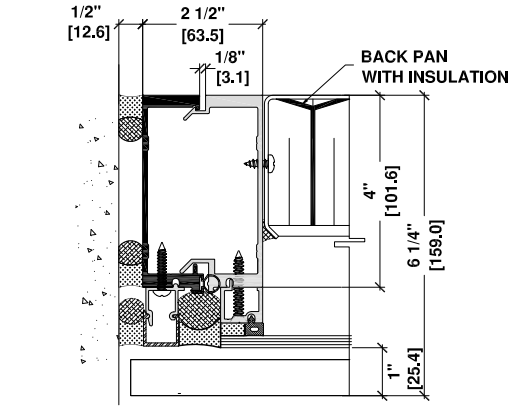

**3** 4" HORIZONTAL MULLION SPANDREL/VISION



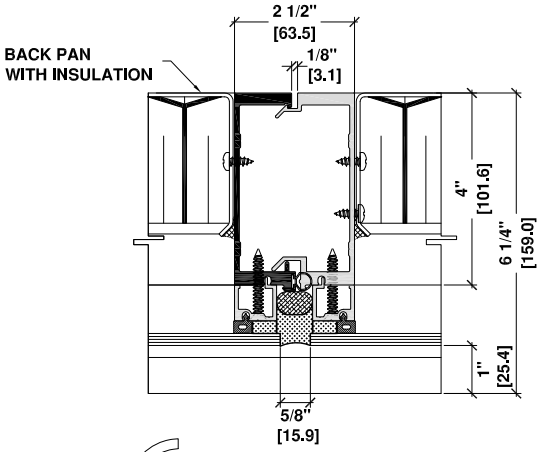

**5** 4" HORIZONTAL MULLION SPANDREL SILL CONDITION



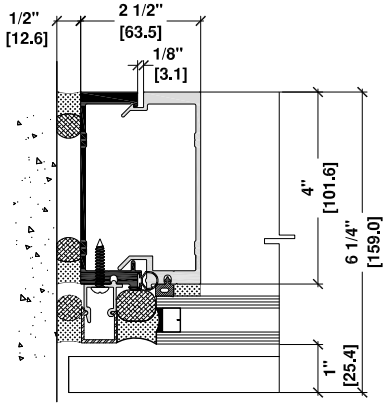

**5a** **4" HORIZONTAL MULLION VISION SILL CONDITION**



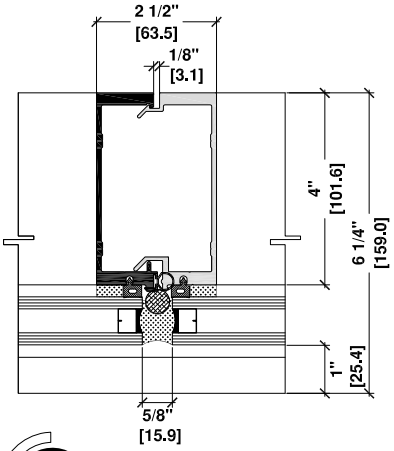

**6** **4" SPLIT MULLION SPANDREL JAMB CONDITION**




**7** **4" SPLIT MULLION SPANDREL/SPANDREL**

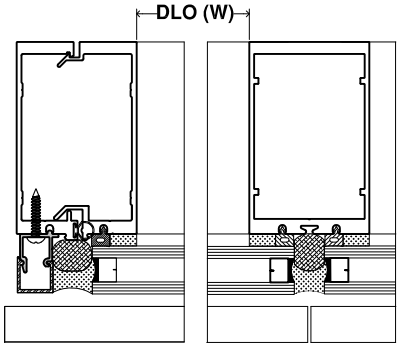



**8** **4" SPLIT MULLION VISION JAMB CONDITION**




**9** **4" SPLIT MULLION VISION-VISION**

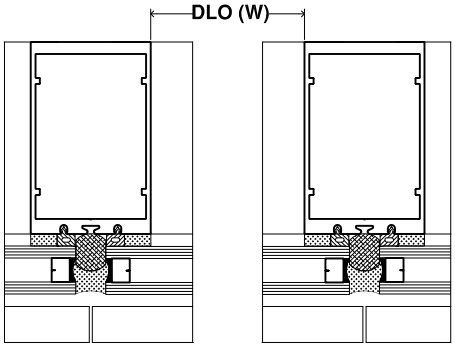
# GLASS CALCULATION




1/4" (6mm)
1/2" (12mm)
1" (25.4mm)

Glass (W)=DLO(W) + 1-$\frac{7}{8}$"(47.62mm)

Note: use the appropriate spline

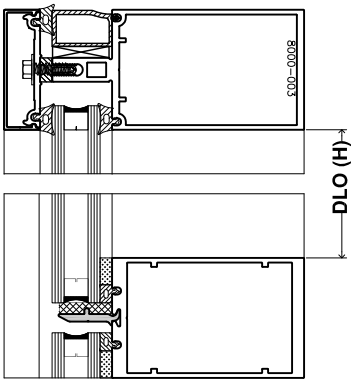



**MULLION**

1/4" (6mm)
1/2" (12mm)
1" (25.4mm)

Glass (W)= DLO(W) + 1-$\frac{7}{8}$"(47.62mm)

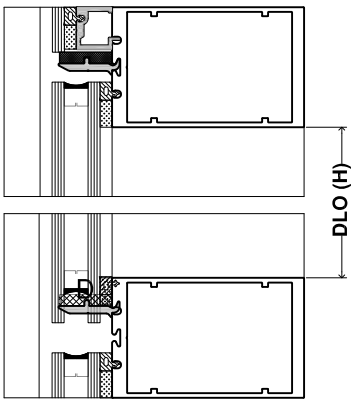
Note: use the appropriate spline




**HEADER**

1/4" (6mm)
1/2" (12mm)
1" (25.4mm)

Glass (W)=DLO(W) + 1-$\frac{7}{16}$"(36.51mm)




**HOR.**

1/4" (6mm)
1/2" (12mm)
1" (25.4mm)

Glass (H)= DLO(H) + 1-$\frac{7}{8}$"(47.62mm)

PART #: 8000-113
MALE SPLIT MULLION SSG
4" (101.6mm)
2 1/2" X 4"
(63.5mm) X (101.6mm)

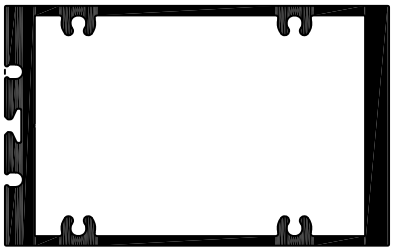
PART #: 8000-123
FEMALE SPLIT MULLION SSG
4" (101.6mm)
2 1/2" X 4"
(63.5mm) X (101.6mm)

PART #: 8000-114
MALE SPLIT MULLION SSG
5 1/4" (133.35mm)
2 1/2" X 5 1/4"
(63.5mm) X (133.35mm)

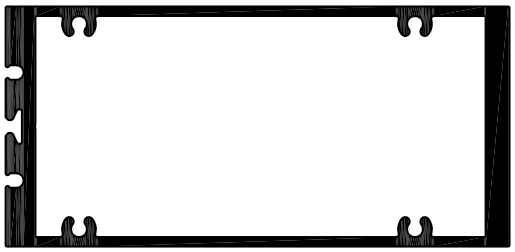
PART #: 8000-124
FEMALE SPLIT MULLION SSG
51/4" (133.35mm)
2 1/2" X 5 1/4"
(63.5mm) X (133.35mm)

PART #: 8000-115
MALE SPLIT MULLION SSG
6 5/8" (168.27mm)
2 1/2" X 6 5/8"
(63.5mm) X (168.27mm)

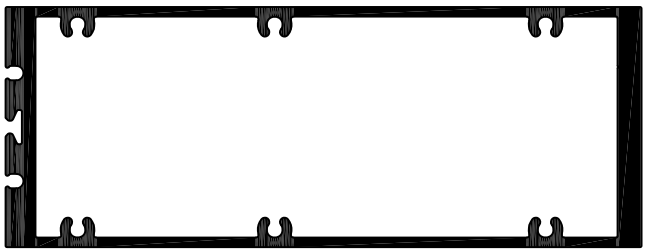
PART #: 8000-125
FEMALE SPLIT MULLION SSG
6 5/8" (168.27mm)
2 1/2" X 6 5/8"
(63.5mm) X (168.27mm)



PART #: 8000-153
HORIZONTAL MULLION
4" (101.6mm)
2 1/2" X 4"
(63.5mm) X (101.6mm)



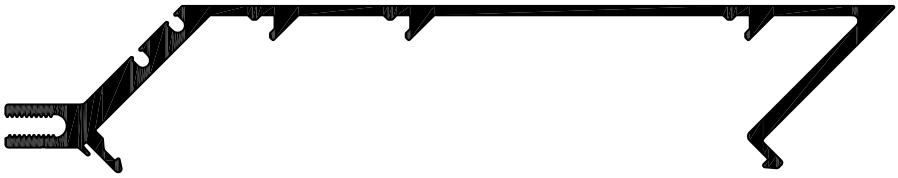
PART #: 8000-154
HORIZONTAL MULLION
5 1/4" (133.35mm)
2 1/2" X 5 1/4"
(63.5mm) X (133.35mm)



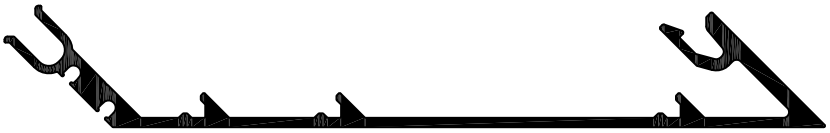
PART #: 8000-155
HORIZONTAL MULLION
6 5/8" (168.27mm)
2 1/2" X 6 5/8"
(63.5mm) X (168.27mm)

PART#: 8000-016
CORNER SPLIT MALE MULLION CAPPED FOR 4" BACK SECTION

PART#: 8000-026
CORNER SPLIT FEMALE MULLION CAPPED FOR 4" BACK SECTION

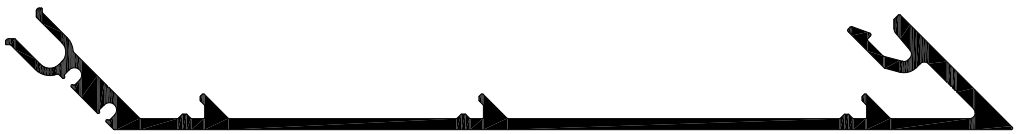


PART#: 8000-017
CORNER SPLIT MALE MULLION CAPPED FOR 5 1/4" BACK SECTION



PART#: 8000-027
CORNER SPLIT FEMALE MULLION CAPPED FOR 5 1/4" BACK SECTION

PART#: 8000-018
CORNER SPLIT MALE MULLION CAPPED FOR 6 5/8" BACK SECTION



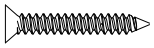
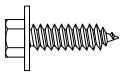
PART#: 8000-028
CORNER SPLIT FEMALE MULLION CAPPED FOR 6 5/8" BACK SECTION

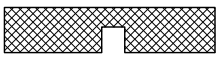
NOTE:
90° SPLIT CORNER IS NOT COMPATIBLE WITH HORIZONTAL EXPANSION.

PART#: 8000-920
4" HORIZONTAL
GLASS HOLDER

PART#: 8000-922
4" HORIZONTAL
GLASS HOLDER
FOR TRIPLE GLASS

PART# 8000-180
6mm GLASS SSG
ADAPTOR

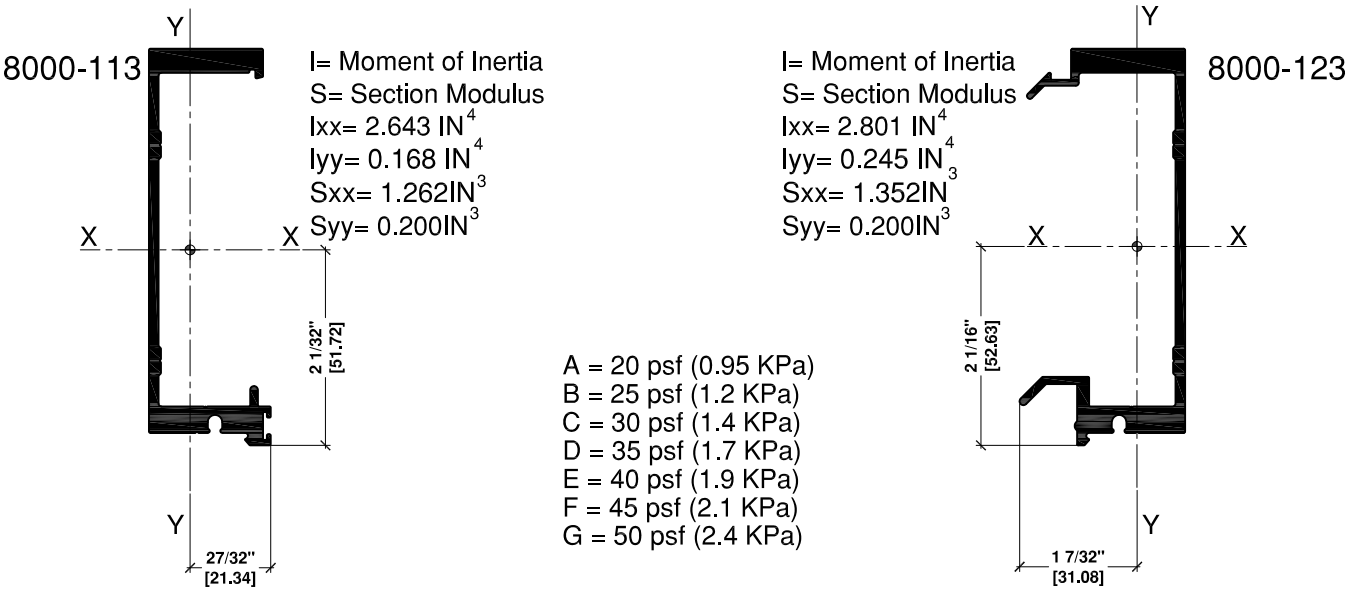
| DRAWING | DESCRIPTION | APPLICATION | QTY/ JOINT |
|---|---|---|---|
|  | PART #: 9902-514 # 10-1 1/2" FH SCREW | FASTEN SHEAR BLOCK AND HORIZONTAL MULLION | @ 6" C/C |
|  | PART #: 9902-400 # 10 X 1/2" RH SCREW | FASTEN MULLION AND BACKPAN | - |
|  | PART #: 9902-301 #8X5/8" R.H. TECK SCREW | FASTEN TO PARAPET DETAIL VIA MULLION | - |
|  | PART #: 9902-009 #1/4" -20 x 1" HEX WASHER TYPE CA MACHINE SCREW | PRESSURE PLATE FASTENED TO MULLION | @ 6" C/C |

| | | |
|---|---|---|
|  | PART #: 9903-137<br>BULB GASKET<br>GENERAL | PLACED TO MALE SPLIT MULLION |
|  | PART #: 9903-206<br>1/4" SETTING BLOCK<br>SSG | TO SUPPORT GLASS LOAD |
|  | PART #: 9903-103<br>1/4" GLAZING SPLINE<br>SSG | PLACED TO MULLION |
|  | PART #: 9903-213<br>AIR SEAL GASKET | AIR SEAL GASKET ON 90° CORNER SPLIT MULLION |
|  | PART #: 9903-143<br>BULB-SEAL FOR DOOR STOP | APPLY TO THE DOOR STOP |

## NFRC TEST RESULTS

| ITEM | VALUE |
|---|---|
| Standardized U-Factor | 0.33 Btu/hr-ft$^2$-F |

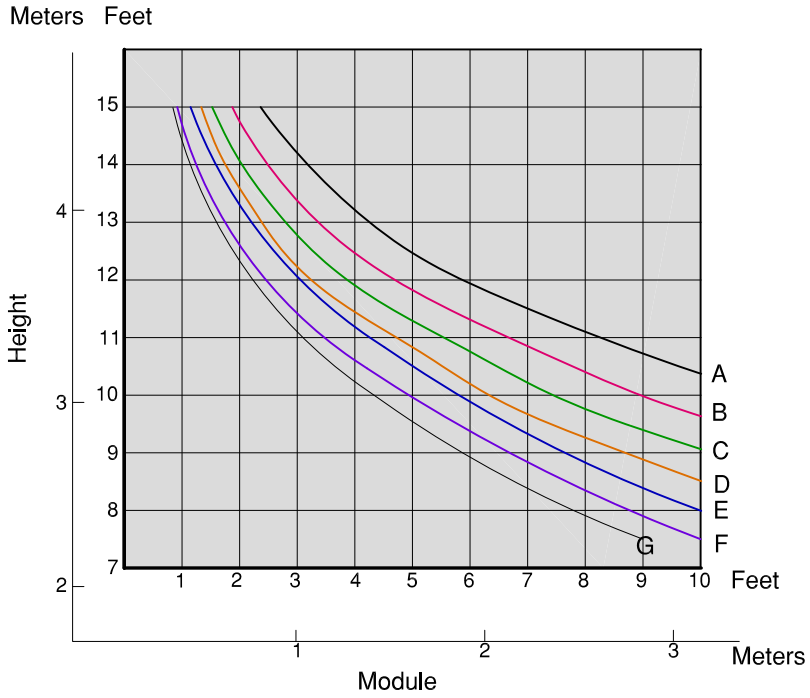
8000-113
8000-123
4" x 2 1/2" (101.45mm x 63.5mm)



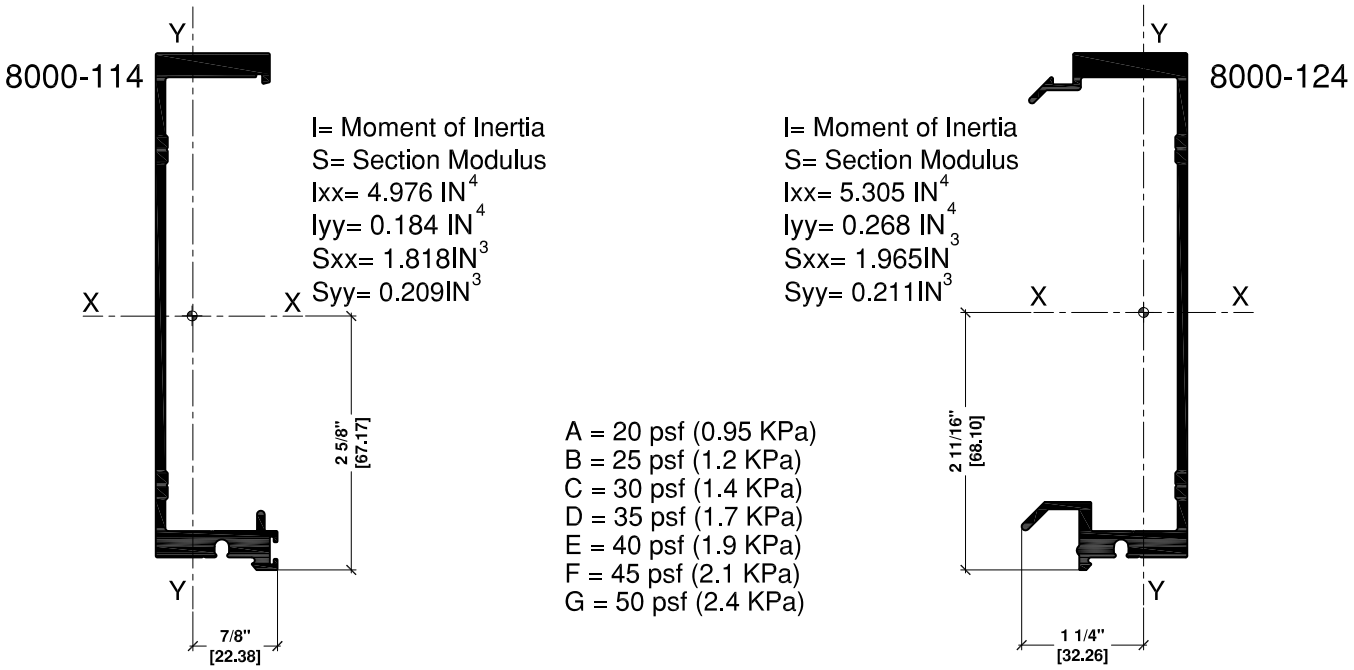

A = 20 psf (0.95 KPa)
B = 25 psf (1.2 KPa)
C = 30 psf (1.4 KPa)
D = 35 psf (1.7 KPa)
E = 40 psf (1.9 KPa)
F = 45 psf (2.1 KPa)
G = 50 psf (2.4 KPa)

" For information purposes only "
Not for design.

## WIND LOAD



8000-114
8000-124
5-1/4" x 2 1/2" (133.35mm x 63.5mm)

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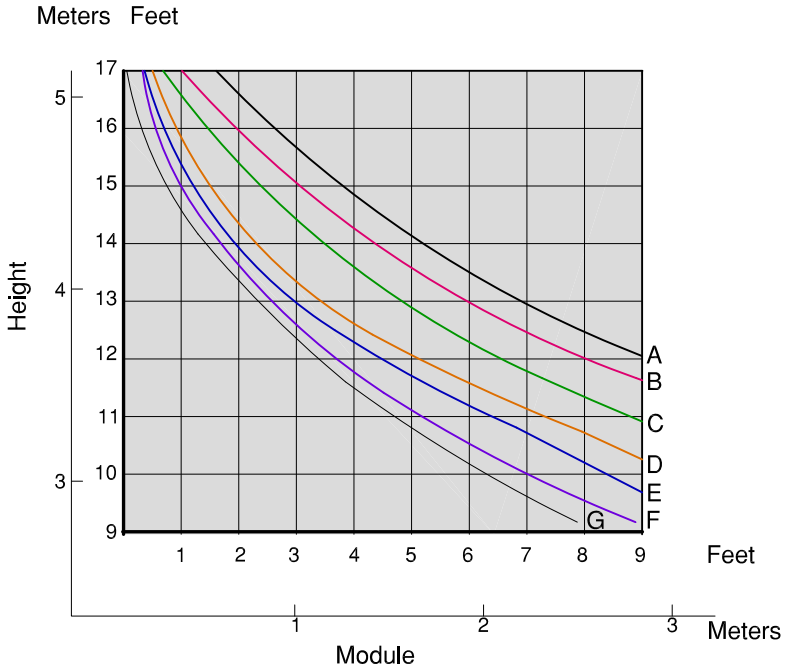
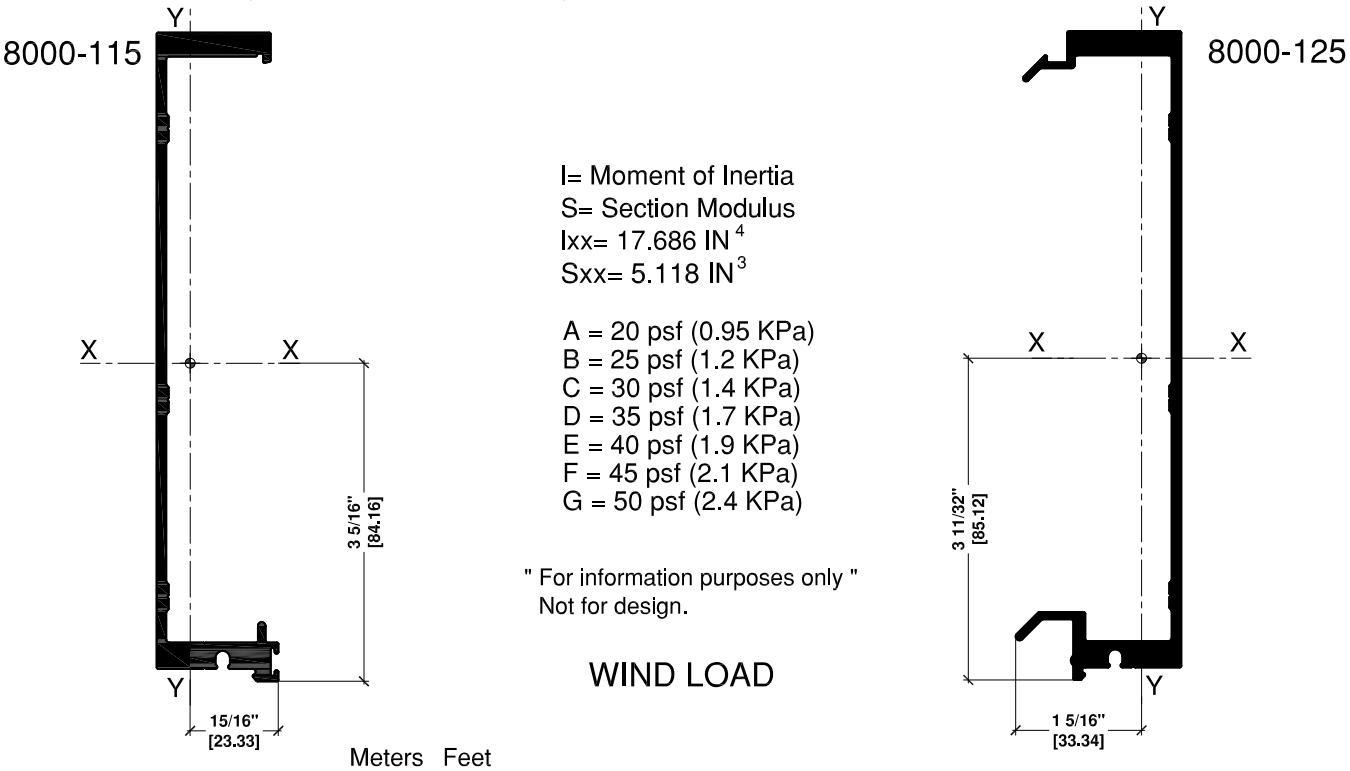
Not for design.

A = 20 psf (0.95 KPa)
B = 25 psf (1.2 KPa)
C = 30 psf (1.4 KPa)
D = 35 psf (1.7 KPa)
E = 40 psf (1.9 KPa)
F = 45 psf (2.1 KPa)
G = 50 psf (2.4 KPa)

## WIND LOAD



8000-115
8000-125
6-5/8" x 2 1/2" (168.27mm x 63.5mm)




I= Moment of Inertia
S= Section Modulus
Ixx= 17.686 $IN^4$
Sxx= 5.118 $IN^3$

A = 20 psf (0.95 KPa)
B = 25 psf (1.2 KPa)
C = 30 psf (1.4 KPa)
D = 35 psf (1.7 KPa)
E = 40 psf (1.9 KPa)
F = 45 psf (2.1 KPa)
G = 50 psf (2.4 KPa)

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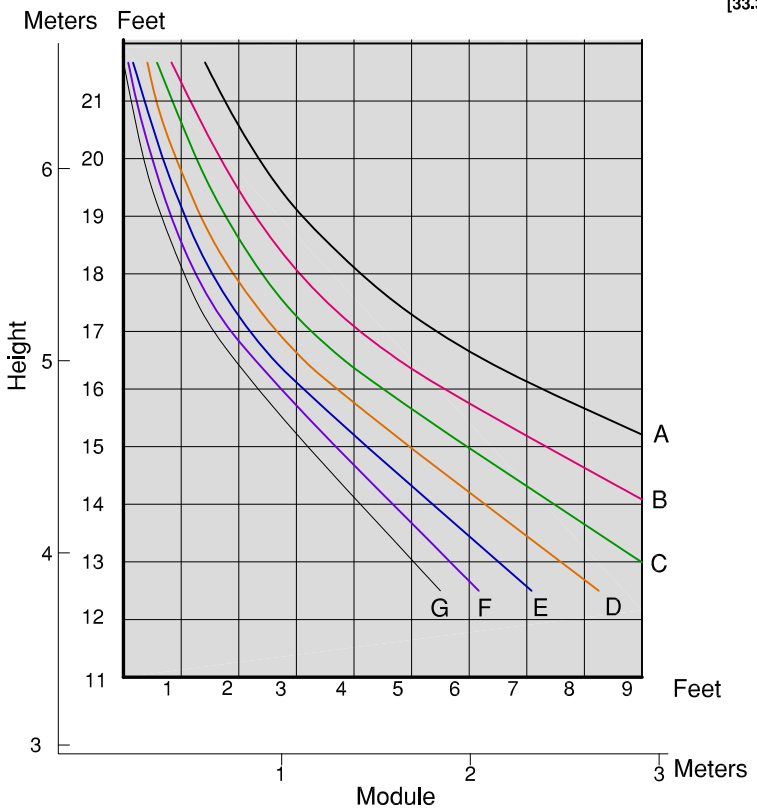
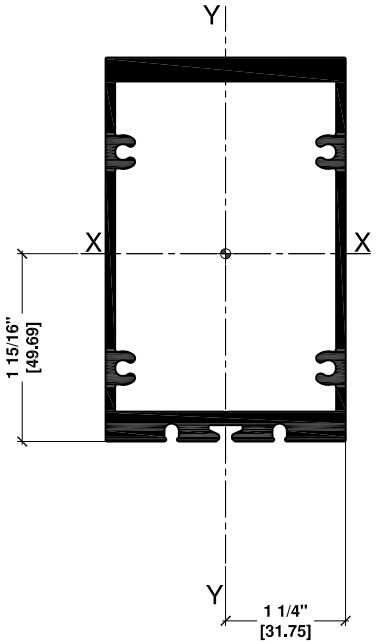
Not for design.

## WIND LOAD



8000 -153
4" x 2 1/2" (101.6mm x 63.5mm)




" For information purposes only "
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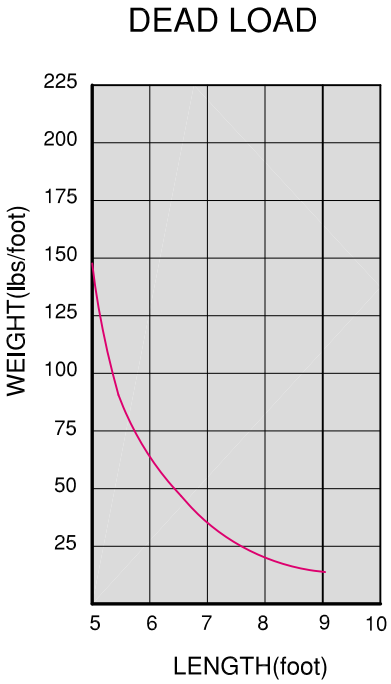
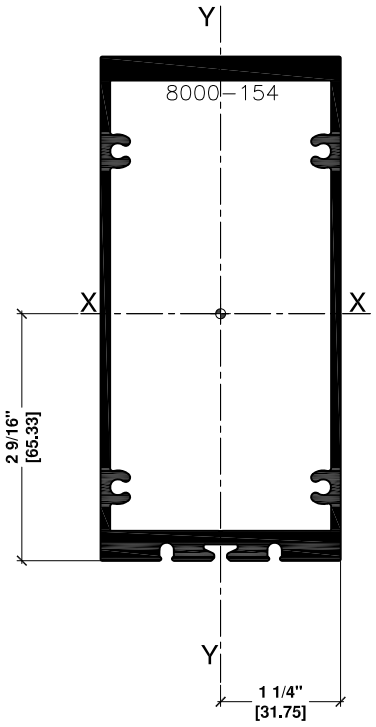


8000-154
5-1/4" x 2 1/2" (133.35mm x 63.5mm)

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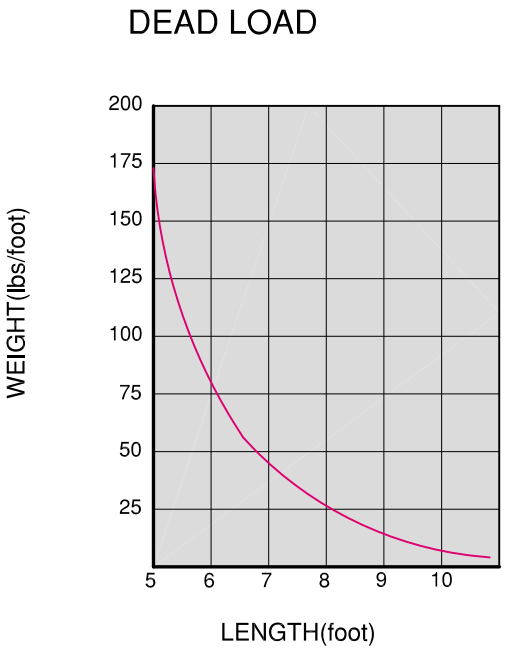
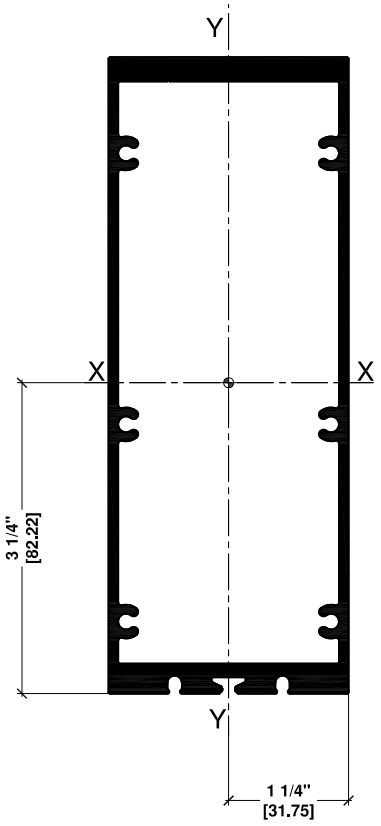
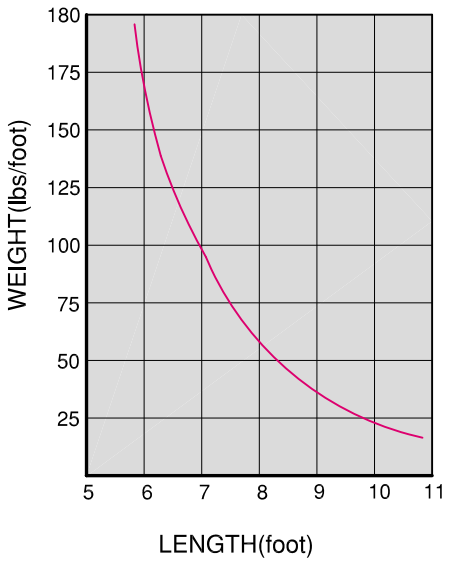


8000-155
6-5/8" x 2 1/2" (168.27mm x 63.5mm)




DEAD LOAD




" For information purposes only "
Not for design.

# *8000 Series-Curtain Wall System*

## *Specifications*

PART 1 - GENERAL

**1.1 Work Included**
Furnish labour, materials and services for the complete fabrication, assembly and installation of Series 8000 Framing system manufactured by Commdoor Aluminum. Work to include all necessary accessories, anchors and sealants as required based on the purchase agreement.

**1.2 Work Excluded**
Structural steel, wood blocking or framing, interior trims, concrete masonry, final cleaning, protection, related work specified elsewhere, convector covers and trims and ceiling trims.

**1.3 Design**
The 8000 Series Curtain Wall System to be designed based on the "Open Rain Screen" and "Pressure Equalization" principles

**1.4 Performance**
Performance levels of 8000 Series Curtain Wall System:

1. Air Infiltration: tested in accordance with ASTM E 283. Air infiltration rate not exceeds 0.01 cfm/ft2 (0.05 l/s · m2) at a static air pressure differential of 6.24 psf (300 Pa).
2. Water Resistance, (static): tested in accordance with ASTM E 331. No leakage at a static air pressure differential at 20 psf (960 Pa) and 30 psf (1436 Pa)
3. Uniform Load: applied in the positive and negative direction in accordance with ASTM E 330.

a. Deflection

i. At 102-1/2" span for split mullion
   1. 4" mullion 4SSG 35 psf
   2. 4" mullion captured 50 psf

ii. At 144" span for stick system
   1. 4" mullion 35 psf 4SSG 25 psf
   2. 4" mullion captured 30 psf

iii. At 162-1/2" span for stick
   1. 5-1/4" mullion captured 40 psf

iv. At 162-1/2" span for split mullion system
   1. 5-1/4" mullion SSG35 psf

b. Structural

i. At structural test load equal to 1.5 times the specified design load, no glass breakage occured nor permanent deflection of the framing members exceeded of 0.1% of their clear spans.

4. Thermal Transmittance (U-factor)
When tested to AAMA Specification 1503, (or NFRC 100) the thermal transmittance (U-factor) and Condensation Resistance (CRF), when tested to AAMA Specification 1503, (or NFRC 500) are as follow:

a. 1/4 "clr, 13 mm air, 1/4 " clr, alum spacer
   i. U- value: 0.65 BTU/hr/ft.sq /°F
   ii. CRF: 39

b. 1/4 "TiAC 23, 13 mm arg, 1/4 " clr, warm edge
   i. U- value: 0.32 BTU/hr/ft.sq /°F
   ii. CRF: 64

5. Sound Transmission Loss: When tested to ASTM E90 and ASTM E1425, the Sound Transmission Class (STC) and Outdoor/Indoor Transmission Class (OITC) shall not be less than:

a. STC 33 or OITC 27 when tested with base 1" insulating glass (1/4", 1/2" AS, 1/4").

**1.5 Quality Assurance**
The 8000 Series 2-1/2" Curtain Wall System supplied under this specification should comply to the performance requirements of the project specifications, local building codes and industry standards.
A copy of the test report from an independent testing laboratory certifying compliance may be furnished upon request by the owner/architect.

**1.6 Shop Drawings**
All work of this section shall be executed in strict accordance with approved shop drawings.

**1.7 Warranty**
The work of this section shall be guaranteed against defects of materials and workmanship for a period of one year (or otherwise specified) from date of certificate of substantial completion.

PART 2 - PRODUCTS
**2.1 Material**
**2.1.1 Aluminum Extrusion**
A) All extruded aluminum sections to be 6063-T6 alloy or equivalent.
B) Frame members (back section) size will be based on published wind load charts to meet specified wind load.
Available back section sizes 3" (76.2mm), 4" (101.6mm), 5-1/4" (133.4mm), 6-5/8" (168.3mm), 8" (203.2mm), 10" (254mm).

**2.1.2 Thermal Break**
If applicable, extruded virgin polyvinyl chloride (P.V.C).

**2.1.3 Glazing Material**
Exterior Glazing
Extruded EPDM flexible gasket.

Interior Glazing
Extruded EPDM flexible gasket

**2.1.4 Fasteners**
Fasteners shall be zinc plated or Stainless Steel.

**2.2 Fabrication**
Fabrication will be carried out according to the approved shop drawings. All joints will be assembled tight and watertight sealed at moistur barrier using manufacturer provided assembly brackets and sealants to maintain the integrity of the joinery.

**2.3 Finish**

**2.3.1 Anodizing**
Anodic Oxide Treatments are to be processed in accordance with AAMA designations.
M12C22A31 class II designation is for #17 Clear anodized finish (0.0004).
M12C22A41 class I designation is for #14 Clear Anodized finish (0.0007) and colour finishes such as #26 light bronze, #40 bronze and #29 black.

**2.3.2 Paint**
Thermosetting Acrylic Enamel coating are to be applied in accordance with AAMA 603.8. Specify colour and type from PPG. Standard charts.

**2.3.3 Fluoropolymer paint Coating**
Based on Kynar 500 Resins are to be applied in accordance AAMA 605.2. Specify colour from Valspar current chart.

PART 3 - EXECUTION

**3.1 Protection**

Aluminum shall be isolated from concrete, mortar, plaster and dissimilar materials with a coating of Bituminous paint.

Exposed aluminum surface shall be protected from long term contamination of mortar, concrete, paint, mud, etc.

Doors and door frames shall be protected from impact damage by wood sheathing and plastic wraps.

**3.2 Installation**

Commdoor products to be installed according to manufacturers instructions and in conjunction with approved shop drawings.

The work shall be performed by qualified skilled personnel using proper equipment in order to expedite the project in an efficient professional manner.

**3.3 Cleaning**

Interim and final cleaning shall be performed in accordance with the general conditions listing methods outlined in AAMA 609 & 610-02 (2002).