

QUALITY ASSURANCE:

A. Structural Requirements: Design all materials to withstand wind (and snow) loads as required by the applicable building code. Maximum allowable deflection for the louver structural members to be $l/180$ or 19.0 mm, whichever is less. Maximum allowable deflection for the louver blades to be $l/120$ or 12.5 mm across the weak axis, whichever is less.

B. Professional Engineer Requirements: Drawings and structural calculations to be endorsed by a professional engineer.

C. Warranty: Provide written warranty to the owner that all products will be free of defective materials or workmanship for a period of ONE year from date of supply.

DELIVERY, STORAGE AND HANDLING:

A. Delivery: At the time of delivery all materials shall be visually inspected for damage. Any damaged boxes, crates, louver sections, etc. shall be noted on the receiving documents and immediately reported to the delivery company and the material manufacturer.

B. Storage:

1. Material may be stored on end or on its side.
2. Material may be stored either indoors or outdoors.
3. If stored outdoors the material must be raised sufficiently off the ground to prevent it being exposed to standing water.
4. If stored outdoors, material must be covered with weatherproof flame-resistant sheeting or tarpaulin at all times.

C. Handling:

1. Material shall be handled in accordance with sound material handling practices and in such a way as to minimize racking.
2. Louver sections may be hoisted by attaching straps to the jambs and lifting the section while in a vertical orientation.

Louver sections should only be lifted and carried by the jambs. Heads, sills and blades are not to be used for lifting or hoisting louver sections.

PRODUCT:

A) Manufacturers

A. The louvers and related materials herein specified and indicated on the drawings shall be as manufactured by:

PINNACLE SOLUTIONS.

B) Materials

All louver blades, heads, sills, jambs, mullions, clips and braces

A. Aluminum Extrusions: ASTM B211, Alloy 6063-T5, 6063-T6 or 6061-T6.

C) Fabrication, General

A. Provide PINNACLE louver models, bird screens, blank-off panels and accessories as specified and/or shown on the drawings and detailed in this specification. Materials, sizes, depths, arrangements and material thickness to be as indicated or as required for optimal performance with respect to strength; durability; and uniform appearance.

B. Louvers to be mechanically assembled using stainless steel grade 300 fasteners only. The use of aluminum or steel fasteners of any type shall not be permitted.

D) Louver Models

A. PINNACLE Storm Resistant Fixed Horizontal Louver Model PD 8200

1. Material: The louver parts like Heads, sills, jambs and mullions to be made of one-piece structural aluminum members with sealing gasket slots. The two piece sight proof storm resistant louvers are designed to give straight architectural line/ without mullion visibility and also designed to collect and drain the rain water to sill/exterior by means of gutters and channels as an integral system. Louvers to be spaced at 60 mm. Total system depth shall not exceed 100 mm. Louver panels supplied in modular form with clip on front louver blades and to be installed in accordance with the manufacturer’s recommended procedures to ensure complete water integrity performance.

Minimum blade extrusion thickness 0.7 mm. Minimum framing extrusion thickness 1.6 mm.

2. Performance: A test panel of core dimension 1.0 m x 1.0 m shall conform to the following:

Airflow

Free Area 0.492 m² (49.2%)

Co-efficient of discharge: 0.287 (Class 3)

Co-efficient of entry: 0.287 (Class 3)

The louver test to be performed on a 1.0 m x 1.0 m core area panel. Unit test conditions shall be at a rainfall rate of 75 mm/hour and with a wind directed to the face of the louver at a velocity of 13 m/s. The corresponding test data shall show the water penetration effectiveness rating at each corresponding ventilation rate and shall be equal or better than:

: Ventilation Rate (m3/s)	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5
Rating Achieved	A	A	A	B	C	C	D	D

Where:

Rating Achieved	Effectiveness at Eliminating Rainwater Entry %
A	99 to 100%
B	95 to 98.9%
C	80 to 94.9%
D	< 80%

ACCESSORIES:

Bird Screens

Unless otherwise indicated, all louvers to be furnished with mill finish bird screens. Screens to be 12.5 mm aluminium expanded mesh, assembled complete with extruded aluminum frames.

Frames to have mitered corners and corner locks.

OR

B. Screens to be Stainless Steel interscrimped wire mesh assembled complete with extruded aluminum frames.

C. Frames to have mitered corners and corner locks.

OR

Blank Off Panels

Furnish where indicated on the drawings blank-off panels fabricated by the louver manufacturer.

Blank-off panels to be a minimum of 2.0 mm thick aluminum sheet. Panels to be finished in the same finish as the louver system. Color to be selected by the architect.

Organic Coatings on Architectural Extrusions and Panels'. Apply finishes in factory. Protect finishes on exposed surfaces prior to shipment. Remove scratches and blemishes from exposed surfaces that will be visible after completing finishing process. Provide color as indicated or, if not otherwise indicated, as selected by architect.

FINISHES:
A. Fluorocarbon (PVDF) Coating

1. Louvers to be finished with an inhibitive thermo-cured primer, with a dry film thickness average of 5 to 7 microns. Followed by a thermo-cured fluorocarbon coating with a minimum dry film thickness of 25 microns.
2. All aluminum shall be thoroughly cleaned, etched and given a chromated conversion pretreatment before application of the Fluorocarbon (PVDF) coating. The coating shall receive a bake cycle in accordance with the paint manufactures specification. All finishing procedures shall be one continuous operation in the approved plant of the manufacturer's applicator.
- 3.
4. Manufacturer to furnish limited warranty for a period of five (5) years for the Fluorocarbon (PVDF) coating. This limited warranty shall begin on the date of material shipment.

OR

B. Polyester Powder finish

5. Louvers to be finished with a single coat to a minimum dry film thickness average of 40 microns.
6. All aluminum shall be thoroughly cleaned, degreased and etched pretreatment prior to application of coating. The coating shall receive a bake cycle in accordance with the paint manufactures specification. All finishing procedures shall be one continuous operation in the approved plant of the manufacturer's applicator.
7. Manufacturer to furnish limited warranty for a period of five (5) years for the Polyester Powder coating. This limited warranty shall begin on the date of material shipment.

OR

B. Clear Anodize finish

1. Louvers to be given an Architectural Class I anodic coating of no less than 15 microns (NA15) thickness (Aluminum Association designation AA-C22A41).
2. The thickness of the coating shall be tested in accordance with ASTM B244-68.
3. The coating shall be sealed to pass the ASTM B136-77 Modified Dye Stain Test.

EXECUTION:

3.01 Examination: Examine openings to receive the work. Do not proceed until any unsatisfactory conditions have been corrected.

3.02 Installation

A. Comply with manufacturer's instructions and recommendations for installation of the work.

B. Verify dimensions of supporting structure at the site by accurate field measurements so that the louver panels will be accurately designed, fabricated and fitted to the structure.

C. Anchor louvers to the building substructure as indicated on architectural drawings.

D. Correction: Do not cut or trim louver system on site.

G. Set units level, plumb and true to line, with uniform joints.

3.03 Protection

A. Protect installed materials to prevent damage by other trades. Use materials that may be easily removed without leaving residue or permanent stains.

3.04 Adjusting and cleaning

A. Immediately clean exposed surfaces of the louvers to remove fingerprints and dirt accumulation during the installation process. Do not let soiling remain until the final cleaning.

B. Before final inspection, clean exposed surfaces with water and a mild soap or detergent not harmful to the material finishes. Thoroughly rinse surfaces and dry.

C. Restore louvers and accessory components damaged during installation and construction so no evidence remains of corrective work. If results of restoration are unsuccessful, as determined by the Architect, remove damaged materials and replace with new materials.

D. Touch up minor abrasions in finishes with a compatible air-dried coating that matches the color and gloss of the factory applied coating.