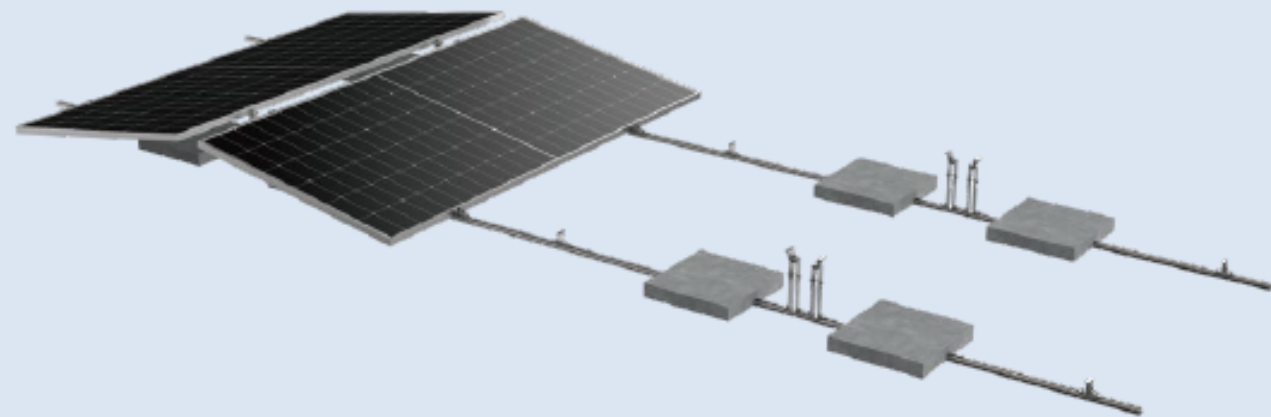


APEX CUSTOMER TECHNICAL DATASHEET | REV E

ApexRoof Ballast-EW Flat Roof System

Low-penetration and ballast roof mounting package for commercial rooftops with clear engineering review outputs.

APPLICATION Flat roof PV arrays for commercial and industrial buildings	INTERFACE Concrete roof, membrane roof or ballast interface by project
TILT 5-30 deg project range	WIND Up to 44 m/s



Advantages

Apex Advantage

Any Scale, Any Solution. Apex provides project-ready mounting structures, optimized BOM support, engineering documentation and dependable material control for global PV projects.

Reliable Structures. Faster Project Review. Global PV Support.

CUSTOMER TECHNICAL DATASHEET | REV E 2026

ApexRoof Ballast-EW Flat Roof System

Low-penetration and ballast roof mounting package for commercial rooftops with clear engineering review outputs.

WIND Up to 44 m/s	SNOW Up to 1.6 kN/m2
TILT 5-30 deg project range	WARRANTY 12-year product warranty

Design Envelope

Parameter	Min	Max	Condition
Tilt	0 deg	45 deg	Flush/tilt system by roof type
Rail span	Project	By calculation	Purlin, hook or ballast spacing
Wind uplift	Project	60 m/s basis	Roof zone and edge distance
Interface	Clamp/hook	Ballast/fixing	Roof profile verification

Core Specification

Item	Specification
Application	Flat roof PV arrays for commercial and industrial buildings
Interface	Concrete roof, membrane roof or ballast interface by project
Tilt	5-30 deg project range
Wind	Up to 44 m/s; ballast weight and edge zone by project

Materials / Compliance / Warranty

Item	Specification
Material	AL6005-T5 aluminium, SUS304 fasteners and ballast package
Design Basis	ASCE 7-16 / 7-22; IBC 2021 / 2024; EN 1991 / EN 1993 / EN 1999; AS/NZS 1170; JIS C8955 / GB 50009 by project
Warranty Profile	Mechanical structure: 12-year limited; corrosion protection and design life target by exposure class and order scope.

Apex engineering support: layout drawing, structural calculation basis, optimized BOM, packing list and material documentation.

PROJECT DESIGN INPUT SHEET

Project Design Input Sheet

Site wind profile

Snow zoning

Module datasheet

Corrosion class C3/C4/C5

Roof profile

Purlin/rafter layout

Roof zone

Waterproofing condition

Engineering Output Definition

Item	Specification
Design load envelope	Wind, snow and seismic basis defined for project review.
MTO / BOM	Material take-off and component list prepared by layout.
Drawing pack	Layout, section/detail drawings and installation reference by order scope.
Fixing schedule	Roof zone, clamp/hook spacing and waterproofing interface reviewed.

Roof Model Focus

Uplift load path, roof interface, rail span, purlin/rafter spacing and waterproofing detail control final fixing schedule.

Engineering calculation entry

Submit design inputs to define load envelope, model assumptions, MTO and drawing pack.

Request Apex EPC review for load envelope, structural assumptions, MTO and drawing pack.

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Engineering Technical Controls

Item	Specification
Wind	Up to 44 m/s; ballast weight and edge zone by project
Snow	Up to 1.6 kN/m2; final by roof capacity and array layout
Tilt	5-30 deg project range
Material	AL6005-T5 aluminium, SUS304 fasteners and ballast package
Design Basis	ASCE 7-16 / 7-22; IBC 2021 / 2024; EN 1991 / EN 1993 / EN 1999; AS/NZS 1170; JIS C8955 / GB 50009 by project
Warranty Profile	Mechanical structure: 12-year limited; corrosion protection and design life target by exposure class and order scope.

Structure



Component Details

GM Rail
Specification : L850 L2700
Material : AL6005-T5(Anodized)

Front Support Plate(Nut)
Specification : L50
Material : AL6005-T5(Anodized)

Rear Support Plate(Upper)(10°)
Specification : L50
Material : AL6005-T5(Anodized)

Rear Support Plate(Down)(10°)
Specification : L50
Material : AL6005-T5(Anodized)

C Clamp Kit
Components : C Clamp
Cross Module
Spring Washer M8
Hex Socket Head Bolt

End Clamp Kit
Components : End Clamp
Spring Washer M8
Hexagon Socket Bolt

Installation Guide

Put the GM Rail

Install the support plate.

Put the cement pier.

Install the module

Complete installation