



9 SUN solar
Roof Mounting Solution

Version.no.:Vol.6/2026.3



Customized Solar Bracket from Leading Factory!

2 GW Annual Production Capacity of Solar Mounting System ★

The Largest Manufacturer of Solar Mounting System in Fujian Prov ★

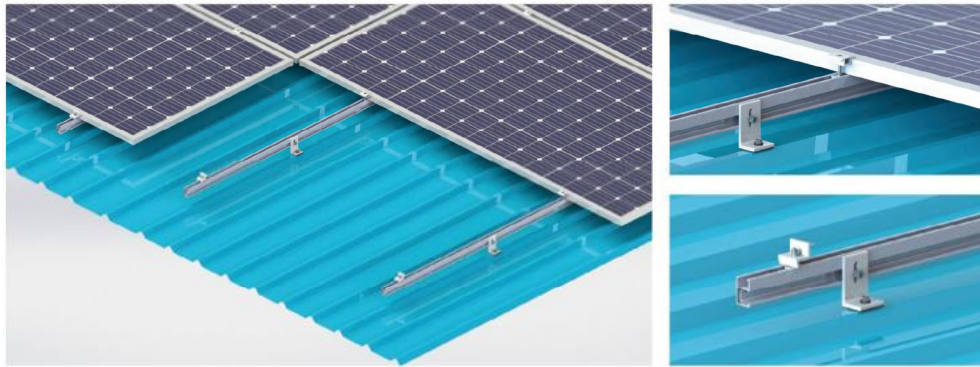


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XIAMEN 9SUN SOLAR TECHNOLOGY CO.,LTD

Rail + L-foot System



Description

Rail + L-foot Mounting System, engineered for superior performance, durability, and rapid installation on corrugated and trapezoidal metal sheet roofs.

Technical Parameters

System Type	Rail + L-foot System	Design Standard	GB/T 5237; JIS C 8955:2017; EN 1990, EN 1991; AS/NZS 1170; DIN EN 1991
Application Scenarios	Metal Roof (Tin roof)	Certification	CE
Tilt Angle	same as the roof	Material	Aluminium (AL6005-T5), Stainless Steel
Wind Load	≤80m/s	Surface Treatment	Anodized (Aluminium)
Snow Load	≤150cm	Color	Silver, Black, or Customized
Applicable Module	Framed PV Module	Warranty	10 Years

Key Features & Advantages

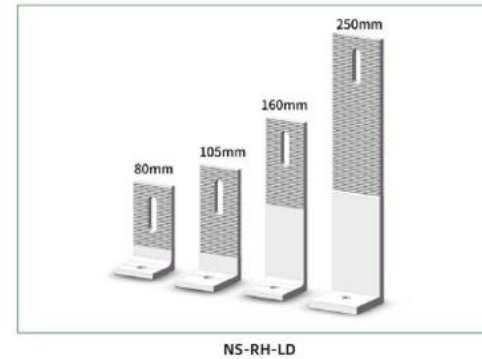
- (1) Strong & Simple Fixing: The L Feet are bolted directly onto the metal roof's main supports (purlins) through the roof sheets, it creates a very strong, direct, and simple connection.
- (2) Trusted Waterproofing: Each L Feet has a high-quality rubber seal at its base, reliably protecting your roof from leaks.
- (3) Proven Durability: Made from high-strength aluminum, it resists rust and corrosion for decades, matching the long life of your solar panels.
- (4) Cost-Effective Solution & Wide Compatibility: the design is simple and installation is quick, works on most common metal roof types. this system offers a very reliable and affordable way to mount solar panels on metal roofs.

Components

Rails & Rail Splice



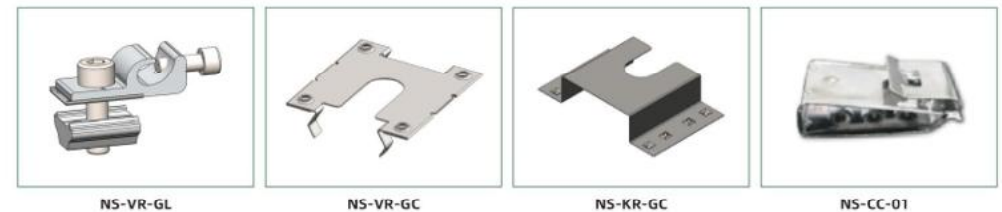
L-Feet



Panel Clamps



Other Accessories



Clamp+ Rail System _ Metal Roof



Description

It is widely used, versatile, and reliable solution for installing solar panels, eliminates the need for drilling into the metal sheets, preserving the roof's integrity and warranty, provides a perfect balance of strength, adaptability, and ease of installation.

Technical Parameters

System Type	Tile Roof System	Design Standard	GB/T 5237; JIS C 8955:2017; EN 1990, EN 1991; AS/NZS 1170; DIN EN 1991
Application Scenarios	Metal Roof	Certification	CE
Tilt Angle	0°	Material	Aluminium (AL6005-T5), Stainless Steel
Wind Load	≤80m/s	Surface Treatment	Anodized (Aluminium)
Snow Load	≤150cm	Color	Silver, Black, or Customized
Applicable Module	Framed PV Module	Warranty	10 Years

Key Features & Advantages

- (1) Perfect Fit Guarantee: provide the exact clamp designed for your roof's specific rib height and spacing.
- (2) Zero Penetration, 100% Waterproof: Our clamps mechanically grip the roof seams without drilling. This is the safest and most reliable method, completely eliminating the risk of leaks.
- (3) Unmatched Versatility: Whether it's a trapezoidal, corrugated, or standing seam roof, we have a clamp solution.
- (4) Fast, Simple Installation: The clamp-on design requires minimal tools and no specialized welding, drastically reducing installation time and labor costs.

Components

Clamps

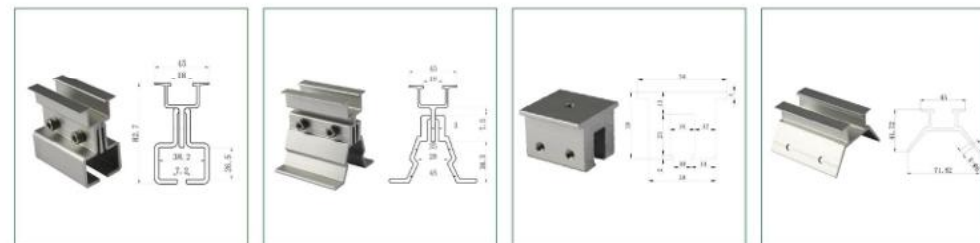


NS-RH-B01

NS-RH-C03

NS-RH-C06

NS-RH-C07

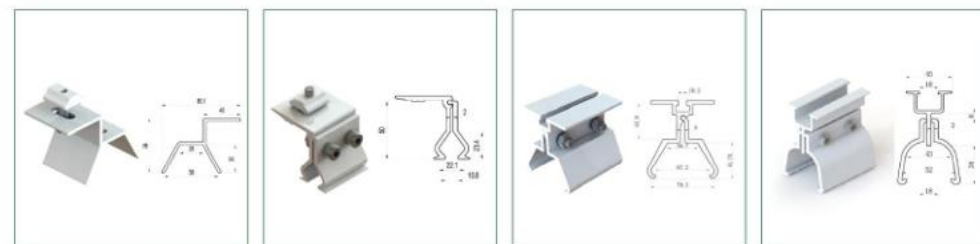


NS-RH-C08

NS-RH-C09

NS-RH-S5U

NS-RH-25T-01

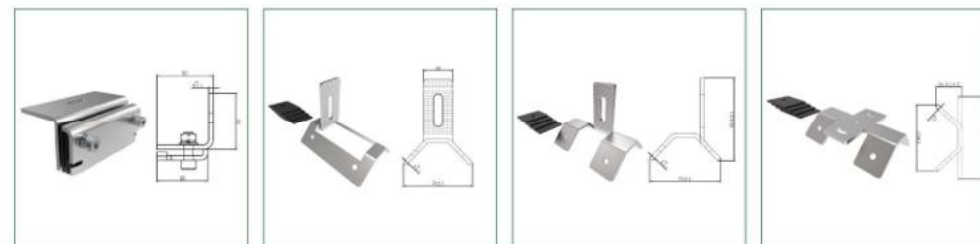


NS-RH-A03

NS-RH-B03A

NS-RH-C04-100

NS-RH-C10



NS-RHS-E01

NS-RHS-S02

NS-RHS-S01

NS-RHS-S03

Clamp+ Rail System



Technical Information

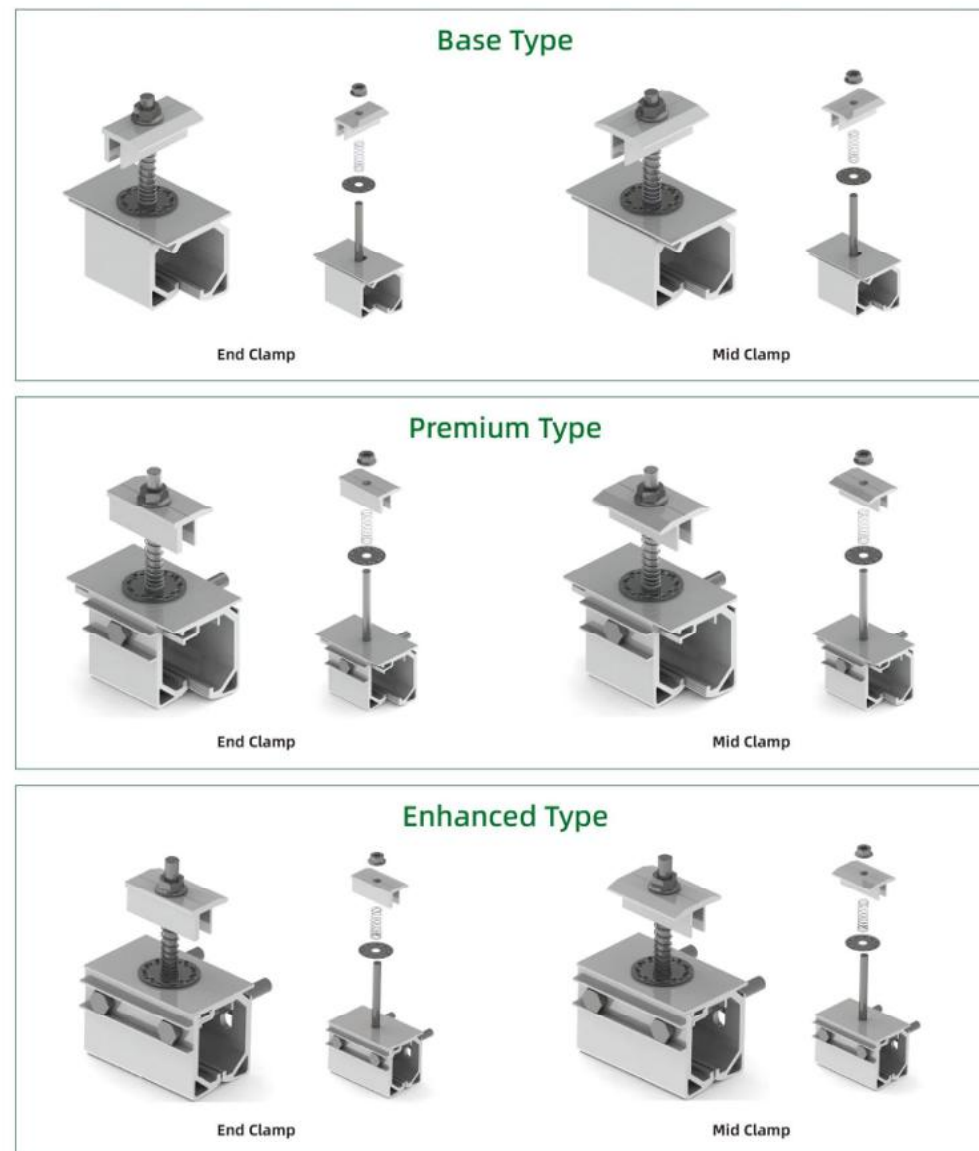
Application Scenarios	Dimensions of compatible corrugated roof		Coiled Goby Type
	Dimensions for Compatible Standing Seam Roof		
Material	Anodized aluminum alloy AL6005-T5		
Load-bearing capacity	Base Type Snow depth: ≤60cm Reference wind speed: $V_0=40\text{m/s}$	Premium Type Snow depth: ≤99cm Reference wind speed: $V_0=46\text{m/s}$	Enhanced Type Snow depth: ≤200cm Reference wind speed: $V_0=46\text{m/s}$
Installation Height	≤20m		
Module Mounting	Portrait		
Design Standards	JIS 8955:2017		
Color Options	Silver (custom colors such as black are available)		

Features

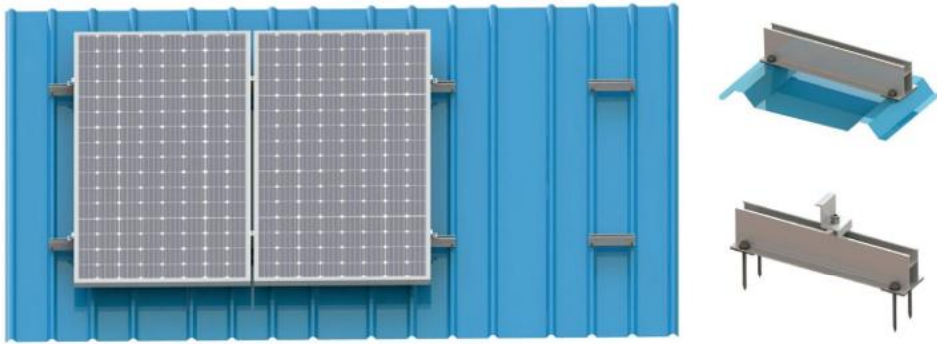
- **Durability** Made of aluminum with excellent corrosion resistance
- **Functionality** Includes an earth plate, eliminating the need for separate procurement
- **Workability** Shipped fully assembled, reducing the need for preparation work
- **Waterproofing** Clamp-on mounting that does not require drilling holes in the roof
- **Flexibility** Compatible with various roof shapes

Variations

We offer a wide range of sizes to suit your installation condition



MINI Rail System



Description

MINI Rail Metal Roof Mounting System, a streamlined and cost-effective solution designed for rapid installation on corrugated and trapezoidal metal roofs.

Technical Parameters

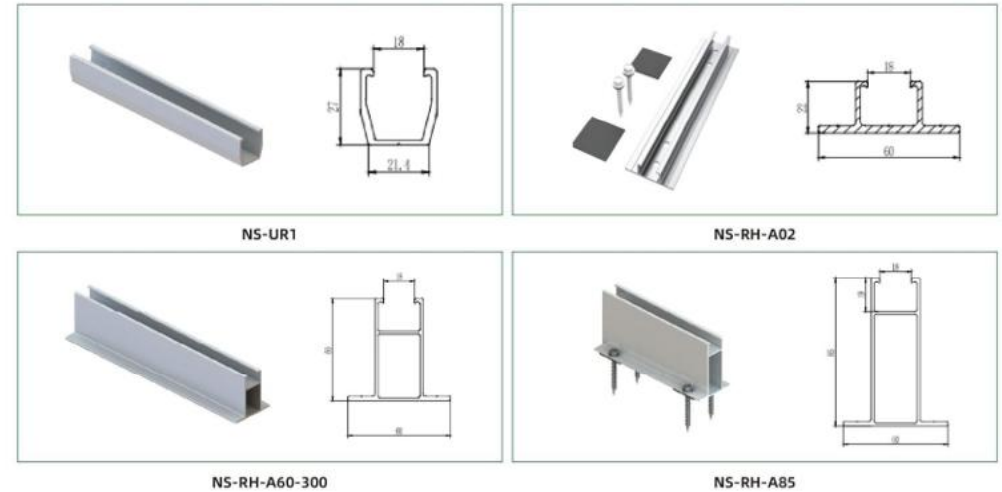
System Type	Mini Rail System	Design Standard	GB/T 5237; JIS C 8955:2017; EN 1990, EN 1991; AS/NZS 1170; DIN EN 1991
Application Scenarios	Metal Roof (Tin Roof)	Certification	CE
Tilt Angle	same as the roof	Material	Aluminium (AL6005-T5), Stainless Steel
Wind Load	≤80m/s	Surface Treatment	Anodized (Aluminium)
Snow Load	≤150cm	Color	Silver, black, or Customized
Applicable Module	Framed PV Module	Warranty	10 Years

Key Features & Advantages

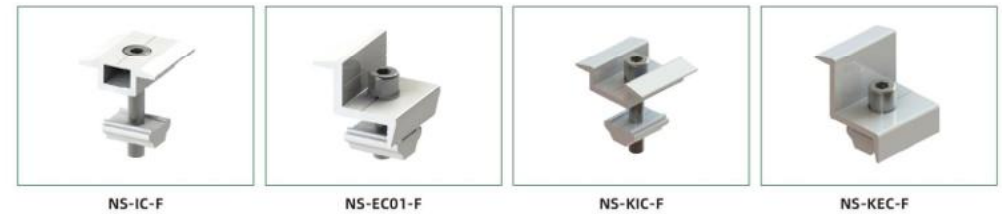
- (1) Lighter & Save Cost: The mini rails use less aluminum, making the entire system lighter in weight and more cost-effective without sacrificing performance.
- (2) Easier & Faster Installation: The smaller rails are much easier for a single installer to handle and maneuver on the roof. The simplified design, with fewer parts, significantly cuts down installation time, saving you on labor costs.
- (3) Low-Profile, Sleek Look: The compact rails sit closer to the roof, giving your solar array a clean, low-profile, and professional finish that blends seamlessly with the building.
- (4) Strong and Durable: Made from high-strength AL6005-T5 aluminum, the system is engineered to handle high wind and snow loads, ensuring a long service life.

Components

Rails



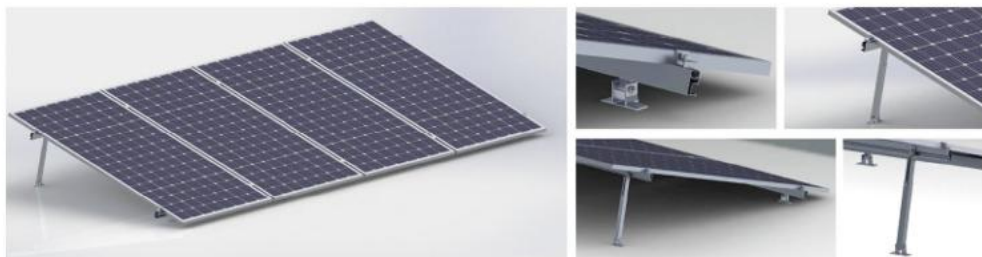
Clamps



Other Accessories



Adjustable Leg System



Description

The Solar Adjustable Leg Roof Mounting System is a versatile solution engineered for flat and low-slope roofs. It features adjustable front and rear legs, allowing the tilt angle of the solar panels to be precisely optimized for maximum energy production. This system is designed for strength, durability, and ease of installation on a variety of roof surfaces, including concrete and metal.

Technical Parameters

System Type	Adjustable Roof System	Design Standard	GB/T 5237; JIS C 8955:2017; EN 1990, EN 1991; AS/NZS 1170; DIN EN 1991
Application Scenarios	Flat Concrete Roof, Low-Slope Metal Roof	Certification	CE
Tilt Angle	customized	Material	Aluminium (AL6005-T5), Stainless Steel
Wind Load	≤80m/s	Surface Treatment	Anodized (Aluminium)
Snow Load	≤150cm	Color	Silver, Black, or Customized
Applicable Module	Framed PV Module	Warranty	10 Years

Key Features & Advantages

- (1) Optimized for Maximum Energy Yield:** The fully adjustable legs allow the panel tilt angle to be customized. This enables precise orientation towards the sun, maximizing solar exposure and significantly boosting energy generation throughout the year.
- (2) Highly Adaptable & Versatile:** This system is suitable for a wide range of flat or slightly pitched roofs. Its adaptable design and various foundation options (expansion bolts for concrete, L-feet for metal roofs) ensure a secure fit on multiple surfaces.
- (3) Engineered for Extreme Durability:** Manufactured from high-strength, corrosion-resistant aluminum alloy and premium stainless-steel hardware. The robust triangular structure is engineered to withstand high wind and snow loads, ensuring complete safety and long-term reliability.
- (4) Pre-Assembled for Fast Installation:** Key components like the leg assemblies are pre-assembled before shipping. This simple, modular design greatly reduces on-site assembly time and complexity, leading to lower labor costs and faster project completion.

Components

Rails & Rail Splice



Adjustable Front & Rear Leg



Panel Clamps



Other Accessories



Tripod System



Description

The Solar Roof Tripod Mounting System is an ideal solution for fast and secure installations on flat or low-slope roofs without any drilling.

Technical Parameters

System Type	Roof Tripod System	Design Standard	GB/T 5237; JIS C 8955:2017; EN 1990, EN 1991; AS/NZS 1170; DIN EN 1991
Application Scenarios	Concrete Flat Roof; Metal Roof (Tin Roof)	Certification	CE
Tilt Angle	0~60°	Material	Aluminium (AL6005-T5), Stainless Steel
Wind Load	≤80m/s	Surface Treatment	Anodized (Aluminium)
Snow Load	≤150cm	Color	Silver, Black, or Customized
Applicable Module	Framed PV Module	Warranty	10 Years

Key Features & Advantages

- (1) 100% Waterproof Guarantee: The non-penetrating design completely eliminates the risk of roof leaks and protects your roof's warranty.
- (2) Fast Installation, Lower Cost: With no drilling required, installation is incredibly quick. This significantly reduces labor time and overall project cost.
- (3) Ultimate Flexibility: The system is not fixed permanently. You can easily reconfigure or expand the solar array in the future as your needs change.
- (4) Optimal Energy Output: Unlike flat lays, this system allows you to tilt the panels to the ideal angle, boosting energy generation significantly.

Components

Rails & Rail Splice



Tripod Kit



NS-GCK

Panel Clamps



NS-IC-F

NS-EC01-F

NS-KIC-F

NS-KEC-F

Other Accessories



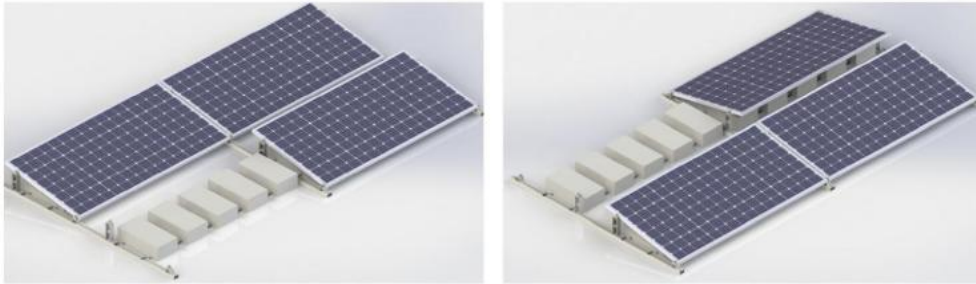
NS-VR-GL

NS-VR-GC

NS-KR-GC

NS-CC-01

Ballast System_Concrete Flat Roof



Description

The Solar Ballasted Roof Mounting System designed for simplicity and rapid installation, it is the ideal choice for commercial and industrial flat-roof projects where roof penetrations are not desirable.

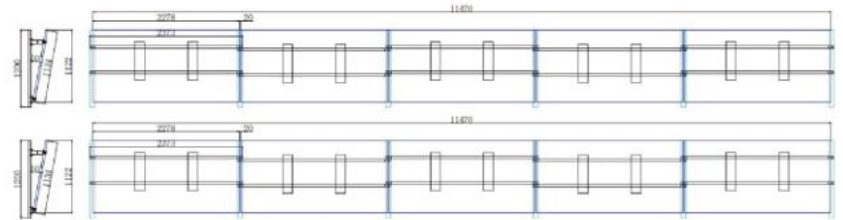
Technical Parameters

System Type	Ballasted Roof System	Design Standard	GB/T 5237; JIS C 8955:2017; EN 1990, EN 1991; AS/NZS 1170; DIN EN 1991
Application Scenarios	Flat Concrete Roofs	Certification	CE
Tilt Angle	5-15°	Material	Aluminium (AL6005-T5), Stainless Steel
Wind Load	≤80m/s	Surface Treatment	Anodized (Aluminium)
Snow Load	≤150cm	Color	Silver, Black, or Customized
Applicable Module	Framed PV Module	Warranty	10 Years

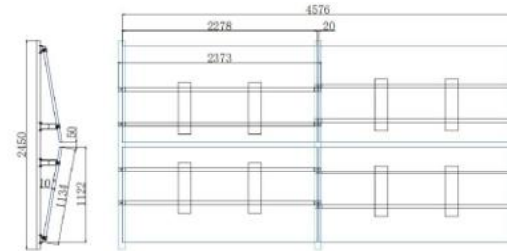
Key Features & Advantages

- (1) Drill-Free & Roof-Friendly: Our system uses weighted ballast blocks for anchorage, completely avoiding roof penetrations. This protects the roof membrane from damage and potential leaks, preserving the building's warranty.
- (2) Rapid & Cost-Effective Assembly: With a high degree of pre-assembly and a simple, intuitive component design, the system significantly reduces installation time and labor costs on site.
- (3) Durable & Safe by Design: Manufactured from high-strength aluminum alloy and stainless-steel hardware for excellent corrosion resistance. The structure is engineered to withstand high wind and snow loads, ensuring complete safety and long-term reliability.
- (4) Optimized Aerodynamics: The system can be equipped with wind deflectors that reduce wind uplift forces on the array. This aerodynamic design minimizes the required ballast weight, lowering the overall roof load and material costs.

Structure



Single Side Ballast System



Two-side Ballast System

Components

	Open Square Pillar Material: AL6005-T5		10° Front Leg Material: AL6005-T5
	NS Mid Clamp Material: AL6005-T5		10° Rear Leg Material: AL6005-T5
	NS End Clamp Material: AL6005-T5		

Tile Roof System



Description

Tile Roof System is specifically engineered for tile roofs—such as clay, concrete, or slate tiles—offering a secure, waterproof, and structurally sound solution without compromising the roof's integrity or beauty.

Technical Parameters

System Type	Tile Roof System	Design Standard	GB/T 5237; JIS C 8955:2017; EN 1990, EN 1991; AS/NZS 1170; DIN EN 1991
Application Scenarios	Tile Roof	Certification	CE
Tilt Angle	0°	Material	Aluminium (AL6005-T5), Stainless Steel
Wind Load	≤80m/s	Surface Treatment	Anodized (Aluminium)
Snow Load	≤150cm	Color	Silver, Black, or Customized
Applicable Module	Framed PV Module	Warranty	10 Years

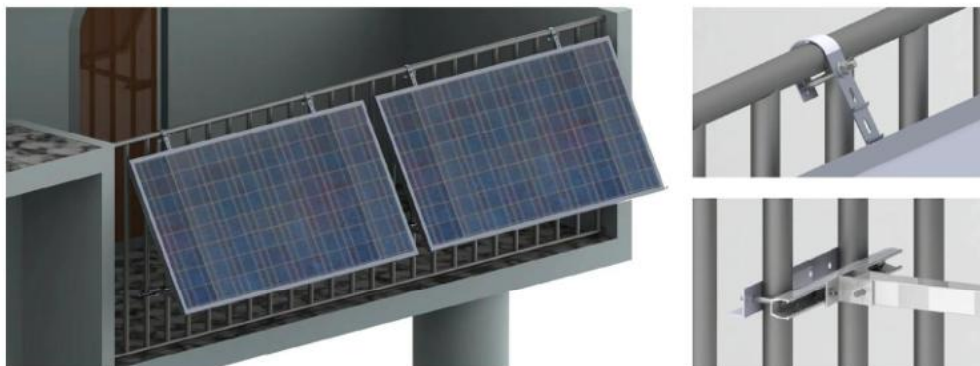
Key Features & Advantages

- (1)Preserves Roof Aesthetics: The low-profile rails and hidden hooks make the mounting system nearly invisible from the ground, maintaining the elegant look of your tile roof.
- (2)Zero Structural Damage: The installation process is designed to work with your existing roof, not against it. No drilling into the tiles themselves is required.
- (3)Superior Strength & Durability: Manufactured from AL6005-T5 aluminum and A2/A4 stainless-steel hardware, the entire system is corrosion-resistant and engineered to withstand the toughest wind and snow loads (e.g., Wind Load ≥ 150 km/h, Snow Load ≥ 1.5 kN/m²).
- (4)Universal Compatibility: We offer a range of hook designs to fit all major types of tile roof profiles (e.g., Roman, Flat, S-tiles), making it a versatile solution for most projects.

Hooks



Balcony System



Description

Solar Balcony Mounting System is a complete kit that allows individuals to easily mount 1-4 solar panels directly onto their balcony railings or walls. It's designed for simplicity, safety, and quick installation, often as a Do-It-Yourself (DIY) project.

Technical Parameters

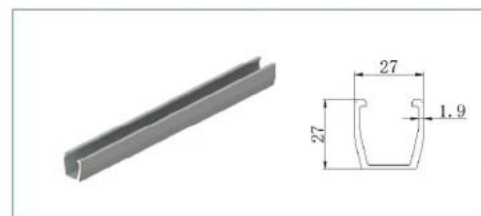
System Type	Balcony System	Design Standard	GB/T 5237; JIS C 8955:2017; EN 1990, EN 1991; AS/NZS 1170; DIN EN 1991
Application Scenarios	Balcony	Certification	CE
Tilt Angle	15-25°	Material	Aluminium (AL6005-T5), Stainless Steel
Wind Load	≤80m/s	Surface Treatment	Anodized (Aluminium)
Snow Load	≤150cm	Color	Silver, Black, or Customized
Applicable Module	Framed PV Module	Warranty	10 Years

Key Features & Advantages

- (1) No Drilling, No Damage (In most cases): our system use strong tension hooks that securely attach to the railing without the need for permanent drilling, making it ideal for renters.
- (2) Optimized for Space & Sun: The structure is fully adjustable for tilt. Users can easily angle their panels for maximum sun exposure throughout the year, significantly boosting energy generation.
- (3) Extremely Durable & Safe: Manufactured from lightweight but strong aluminum alloy and premium stainless-steel hardware. Engineered to withstand high wind loads and weather conditions, ensuring complete safety and long-term reliability.
- (4) Complete Kit Solution: We can supply everything needed: the mounting structure, all necessary hardware, and detailed installation instructions. We can provide a complete offer to you.

Components

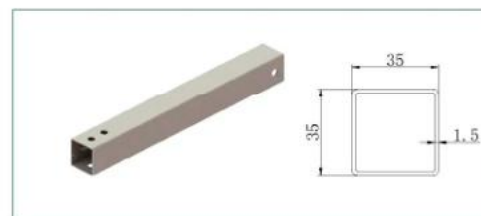
Rails



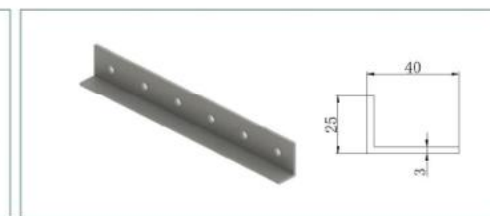
UR1 Rail (400mm)



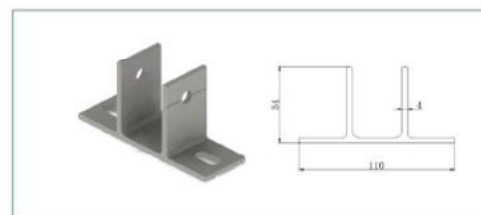
31x31x2 Inner Sleeve



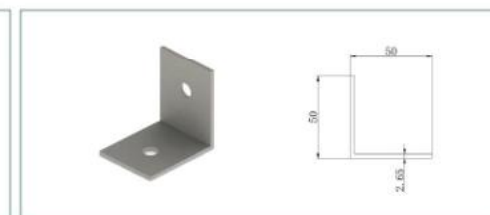
35x35 Square Tube



40/3 Angle Aluminum L-400



35 Square Tube Base



L-type Connector 40



Roof Hooks 200

CABLE TRAY

WHAT IS CABLE TRAY?

Cable trays are structured devices specifically designed for supporting, protecting, and laying cables in building, industrial, and municipal projects. Simply put, they are the 'dedicated channels' for cables, neatly storing scattered cables while isolating them from external environmental influences, ensuring the safe and stable operation of the cables.

MATERIALS & FINISHES

The application scenarios and characteristics of various materials.

Materials & Finishes		Appearance	Environmental Demand
Carbon Steel	Pre - galvanized	Very good	Indoor and Dry
	Hot Dip Galvanized	Good	Inside/Outside, Low and Medium Corrosion
Stainless Steel	SS304	Very good	Inside/Outside, Medium Corrosion
	SS316	Very good	Inside/Outside, Medium and High Corrosion
	SS316L	Very good	Inside/Outside, High Corrosion
Aluminum	Optional	Very good	Indoor and Dry

Pre-galvanized cable tray is a kind of cable tray with "steel" as the base material and its surface treated by galvanization. its coating is relatively thin (usually 30g/m²-275g/m²), and the appearance is smooth. It has the advantages of high strength, strong load-bearing capacity, good durability, excellent fire resistance, moderate cost, and convenient installation, and is suitable for indoor environments.

Powder coated cable tray uses steel as the base material, and the plastic powder is evenly spray on the surface of the base material through electrostatic adsorption. The rich colors of the plastic layer meet the needs of color management in modern cable wiring systems, and it has excellent corrosion resistance, aesthetics, and durability, its environmental protection and insulation performance also make it an ideal choice for the laying of power and communication cables.

Hot-dip galvanized, is to immerse the steel cable tray after derusting into molten zinc liquid at around 500°C, so that zinc reacts with the surface of the steel material to form a zinc-iron alloy layer. Then, the galvanized cable tray is taken out and cooled to form a uniform zinc layer, thus achieving the purpose of anti-corrosion. It has the characteristics of excellent corrosion resistance, high strength, good durability, etc.

Stainless steel cable tray are made of four types of stainless steel: 201,304, 316 and 316L. Stainless steel contains a high proportion of chromium (usually at least 11%) and due to the naturally formed chromium-rich oxide film on its surface, it endows stainless steel with excellent corrosion resistance. It features excellent corrosion resistance, high strength, and good aesthetics!

Aluminum alloy cable tray has extraordinary corrosion resistance, including weather resistance, which is attributed to the self-healing and protective aluminum oxide film on its surface. In addition, aluminum alloy cable trays also have the advantages of light weight and maintenance-free. Moreover, since aluminum alloy cable trays are non-magnetic, they can minimize electrical loss.

TYPES OF CABLE TRAYS

Comparison between cable trays

	Solid Bottom Cable Tray	Perforated Cable Tray	Ladder Cable Tray
Material	Pre-galvanized, powder coated, hot dip galvanized Stainless Steel SS304, Aluminum		
Application scenarios	laying computer cables, communication cables, and other control cables	petroleum, chemical engineering, power, television and telecommunications	cables with generally larger diameters, and the laying of high and low voltage power cables
advantage	Resistant to interference from control cable shielding and resistant to severely corrosive environments	large load capacity, beautiful appearance, simple structure, convenient installation, good heat dissipation	light weight, low cost, unique design, and excellent ventilation and heat dissipation performance

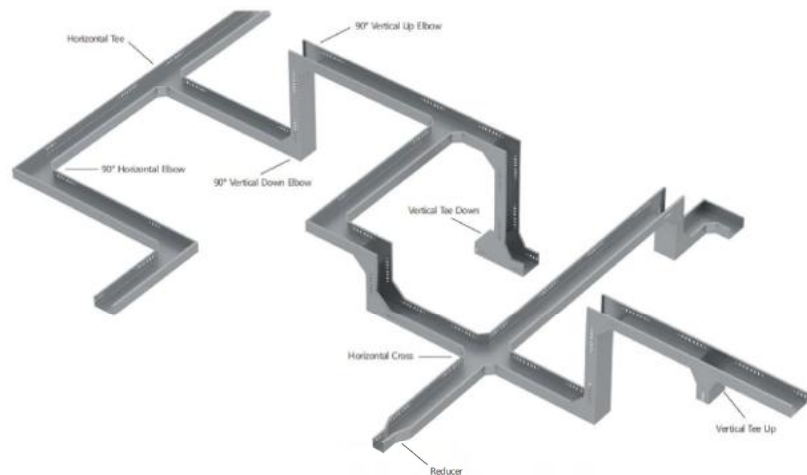
PERFORMANCE SPECIFICATION

Common Sizes

宽度W(mm)	高度H(mm)							
	25	40	50	60	80	100	150	200
50	▲							
60	▲	▲						
80		▲	▲					
100			▲	▲				
150			▲	▲	▲	▲		
200			▲	▲	▲	▲	▲	
250			▲	▲	▲	▲	▲	
300			▲	▲	▲	▲	▲	▲
400			▲	▲	▲	▲	▲	▲
500				▲	▲	▲	▲	▲
600					▲	▲	▲	▲
800						▲	▲	▲
1000							▲	▲

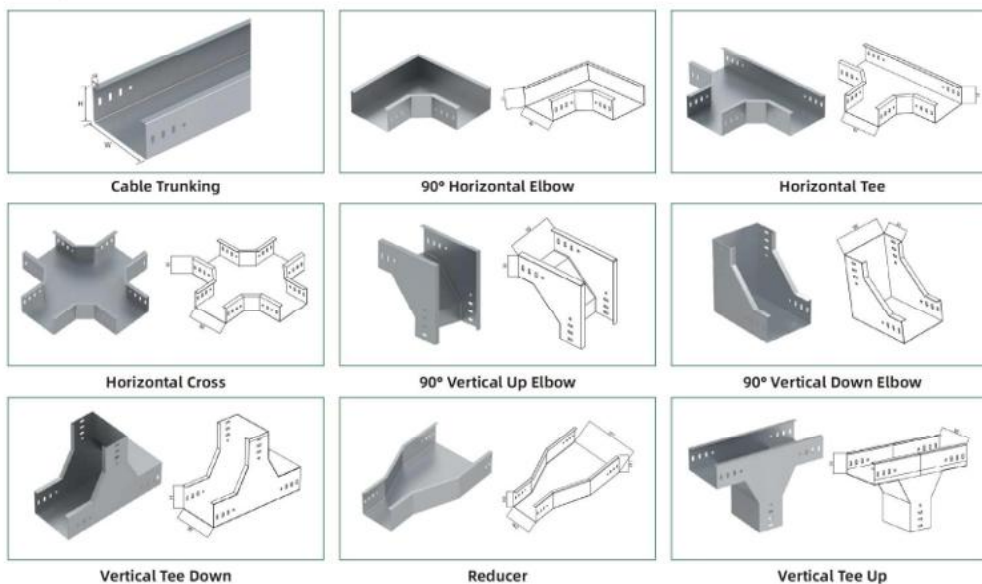
Note: ▲ The marked parts are the commonly used specifications of the cable tray.

Solid Bottom Cable Tray

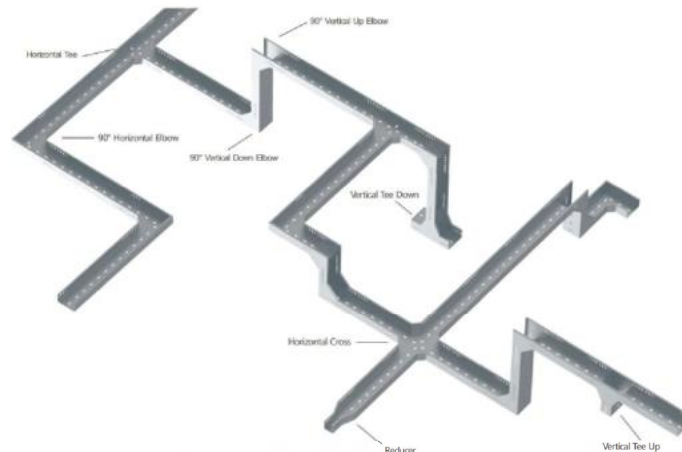


The channel cable support system is a fully enclosed type of cable tray. It is suitable for laying computer cables, communication cables, thermocouple cables, and other control cables of high-sensitivity systems. It works well in resisting interference of control cable shield and protecting the cables in seriously corrosive environment.

Component

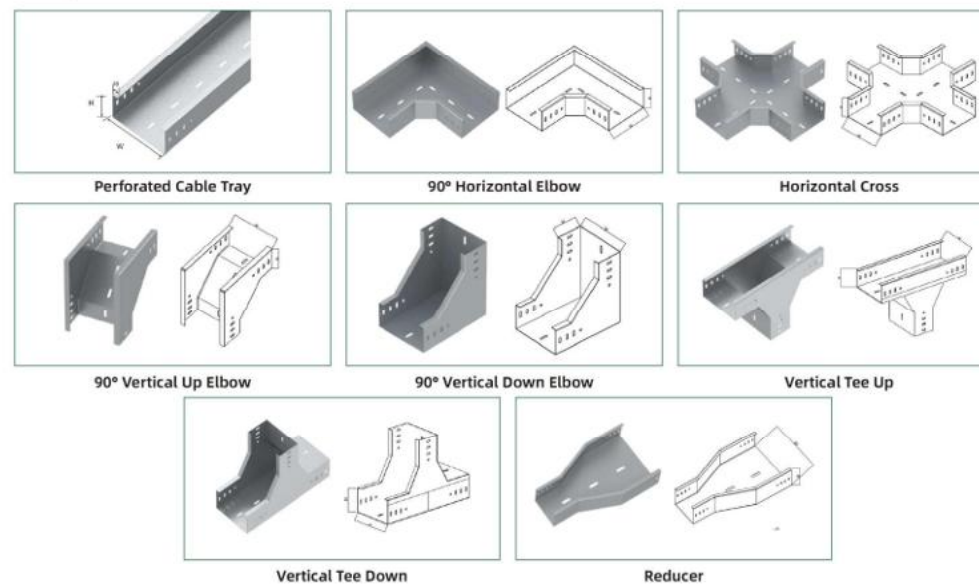


Perforated Cable Tray



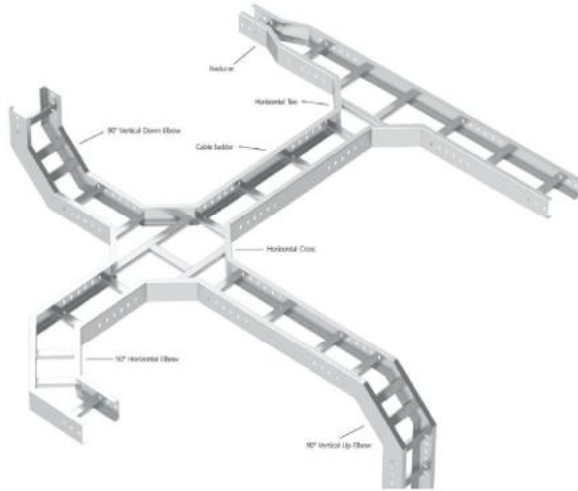
Cable tray support systems is an ideal laying device that is widely used in industries such as petroleum, chemical engineering, power, television and telecommunications. It has the advantages of light weight, large load capacity, beautiful appearance, simple structure, convenient installation, good heat dissipation and ventilation performance. It is suitable for both the installation of power cables and the laying of control cables.

Component

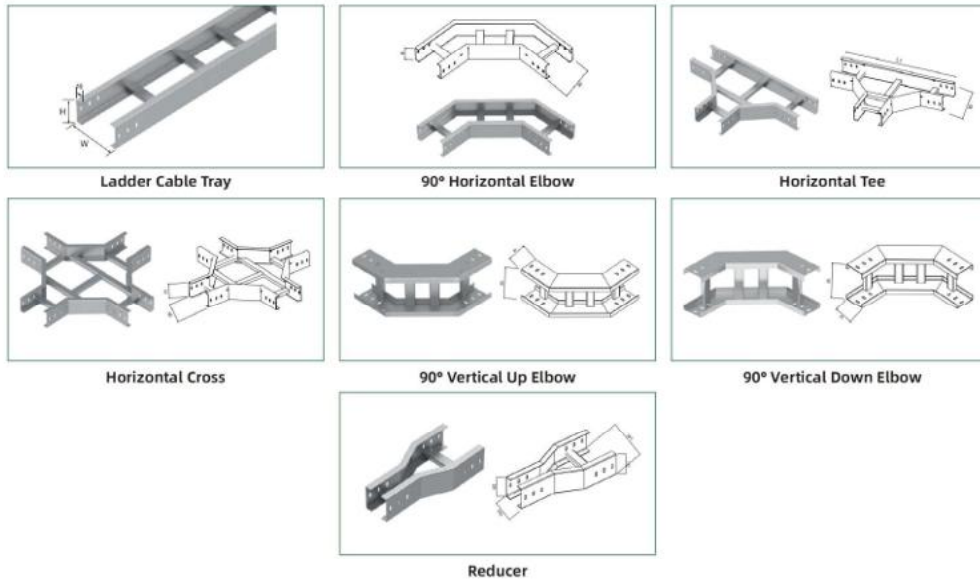


Ladder Cable Tray

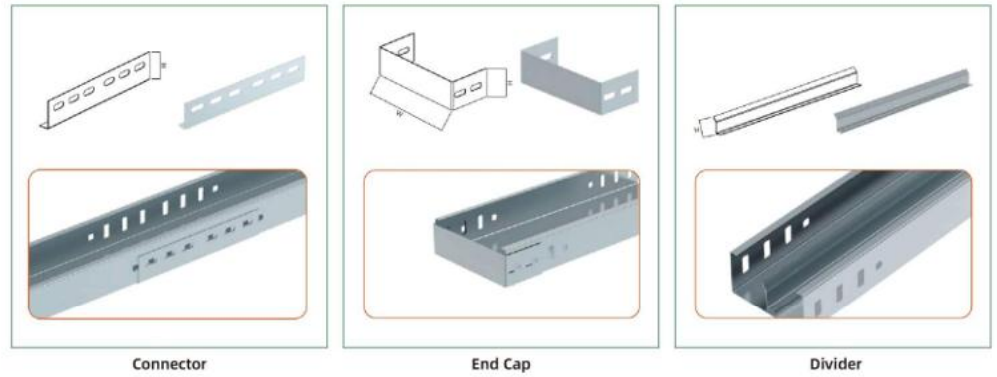
Ladder cable support systems features light weight, low cost, unique design, and excellent ventilation and heat dissipation performance. It is suitable for the laying of cables with generally larger diameters, and is particularly suitable for the laying of high and low voltage power cables.



Component



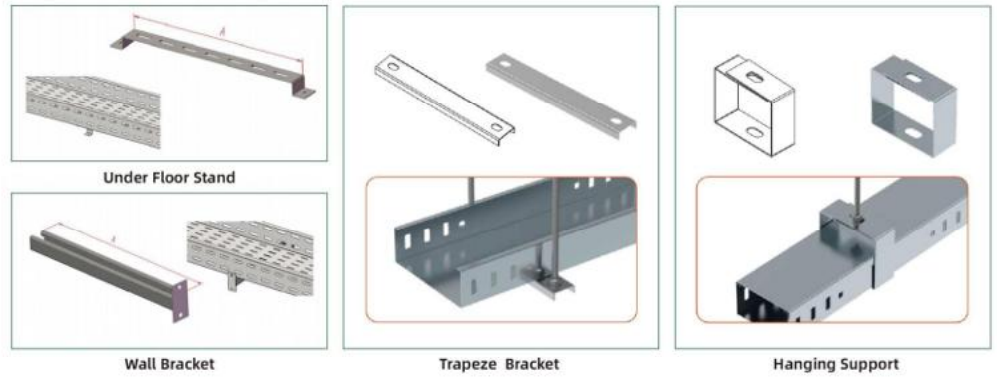
Accessories



Cover Clamp



Support



Roof Walkway System



The Solar Roof Walkway System provides a dedicated, slip-resistant pathway across your roof, protecting both the workers and the solar array.

Description

It is an elevated or flush-mounted walkway system installed directly onto the roof surface or integrated with the solar mounting structure. It creates a clear, safe route for installers, maintenance crews, and inspectors to move around the solar panels without stepping on fragile roof materials or the panels themselves.

Technical Parameters

System Type	Roof Walkway	Standard & Certification	CE
Application Scenarios	Rooftop	Material	Aluminum 6063-T6 / Hot-dip galvanized steel; Stainless steel fasteners
Tilt Angle	0°	Surface Treatment	Anti-slip perforated or grated tread
Wind Load	≤80m/s	Color	Natural color of the material
Snow Load	≤150cm	Warranty	Depends on the usage scenario, up to 20 years

Key Features & Advantages

- (1)Enhanced Worker Safety: The slip-resistant surface and stable structure dramatically reduce the risk of falls, which is the leading cause of injury on rooftop solar sites.
- (2)Protection of Roof & Panels: By providing a designated walkway, it prevents accidental foot traffic on the roof membrane or solar panels, avoiding costly damage and maintaining warranties.
- (3)Easy Maintenance Access: Creates convenient pathways to inverters, junction boxes, cleaning zones, and other service points, making routine inspections and repairs safer and more efficient.
- (4)Corrosion-Resistant Materials: Manufactured from aluminum (AL6005-T5) and stainless-steel hardware, ensuring long-term durability in all weather conditions.

Case

