Our Quality • Your Assurance

SWANDEK 920

ENTERPRISE 50
Celebrating Singapore's Enterprising Spirit 2024
30 years

SWAN SWEE
CONSTRUCTION PTE LTD

ABOUT SWAN SWEE

SWAN SWEE CONSTRUCTION PTE LTD WAS ESTABLISHED IN 1992

Since its establishment in 1992, Swan Swee Construction Pte Ltd has been a trusted name in the manufacture and supply of premium color-coated steel building products. Our comprehensive product portfolio includes painted steel roofing, wall cladding, galvanized high-tensile structural floor decking, galvanized high-tensile purlins, and a wide array of additional steel solutions such as crimp curved profiles, flashings, louvre panels, ventilators, and translucent sheeting.

These high-performance products are engineered to meet the diverse needs of commercial, industrial, residential, and urban developments, ensuring reliability and durability across applications.

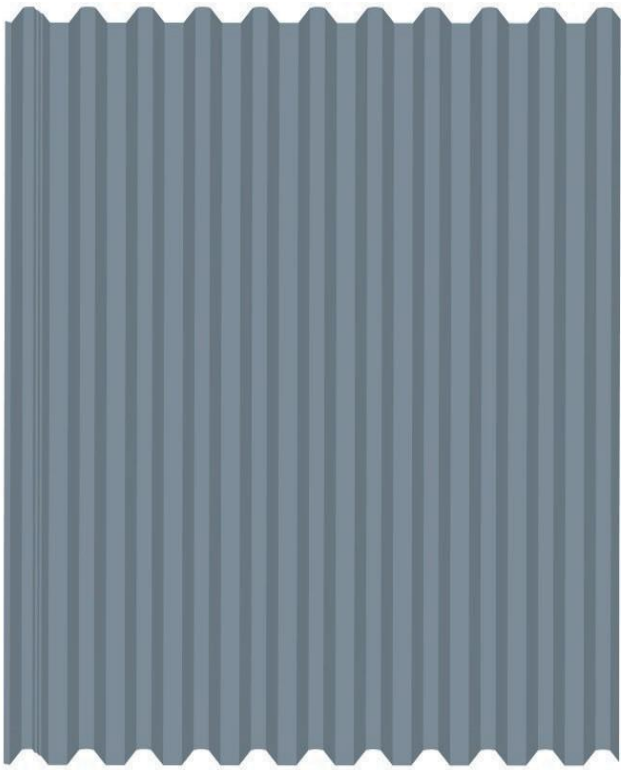
At Swan Swee, we take pride in delivering a seamless supply chain experience. With extensive stock levels and a well-established distribution network, we align our operations with our customers' construction schedules, ensuring materials are delivered on-site precisely when needed.

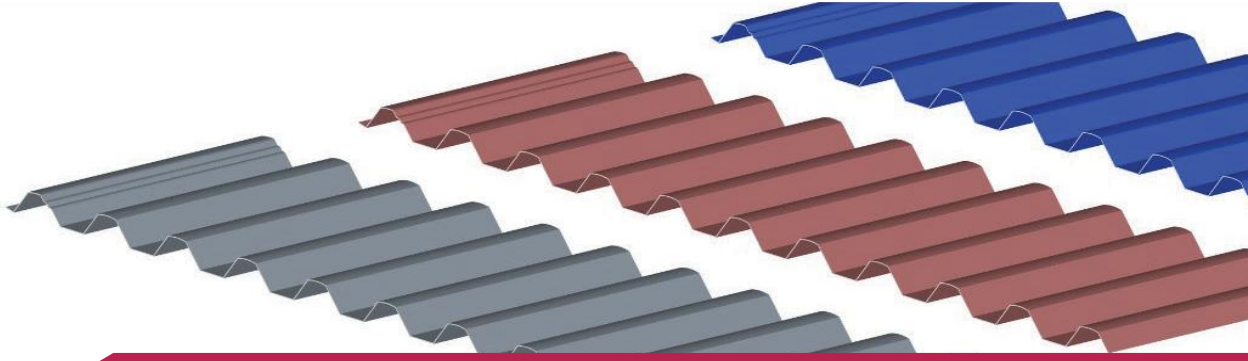
Our commitment to quality is underscored by a rigorous inspection and testing framework. We ensure every product complies with stringent regulatory requirements, technical standards, and codes of practice while exceeding customer expectations.

SWAN SWEE SWANDEK 920

The Ultimate Roofing Solution

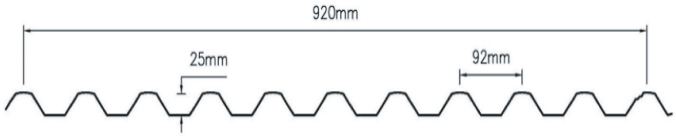
Swandek 920 profile combines contemporary aesthetics with structural performance, featuring trapezoidal rib efficiency, and cost-effectiveness. Engineered for roof pitches as low as 3 degrees, it supports extended spans with reduced fasteners, ensuring quick installation and minimal load. Its clean lines and dimensional form enhance architectural appeal across industrial, commercial, civil, and residential projects, while proper slope maintenance ensures effective drainage for spans up to 30 meters under heavy rainfall.





DESIGNED FOR ARCHITECTURAL EXCELLENCE

Swandek 920 features a contemporary trapezoidal profile, making it an excellent choice for applications that demand a robust, striking, and modern corrugated aesthetic. Initially developed as a durable and visually appealing roofing solution for industrial and commercial projects, Swandek 920 has since gained popularity across residential and public architecture highlighting its adaptability and visual appeal. Its design delivers an optimal balance of strength, lightweight performance, structural rigidity, and cost-efficiency.



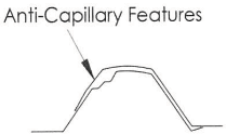
WHY CHOOSE SWANDEK 920

Design Flexibility & Installation Efficiency

- Engineered for seamless application across roofing and wall cladding systems.
- Supports horizontal, vertical, and inclined installations for maximum architectural versatility.
- Generous 920mm cover width enables faster installation and easier handling.
- Simple and secure fixing using conventional through-fastened screws ensures optimal performance and installation efficiency.
- Suitable for roof pitches a s low a s 3° enabling versatile design applications.

Structural Performance & Weather Protection

- Integrated anti-capilary flute at lap joint enhances watertightness and weather resistance



- Lightweight yet structurally robust, providing superior wind uplift resistance.
- Designed to perform reliably in demanding environmental conditions.

Durability & Long-Term Aesthetics

- Advanced protective coatings prevent corrosion, discoloration, and tropical dirt staining.
- Maintains long-term appearance with minimal maintenance requirements.
- Ideal for tropical and high-humidity environments.

Quality Assurance & Regulatory Compliance

- Fully certified to Singapore and international building standards, ensuring regulatory compliance and peace of mind.
- Manufactured under stringent quality and environmental protocols in compliance with ISO 9001 (Quality Management) and ISO 14001 (Environmental Management) systems.
- Backed by certified product documentation and warranty covertage, guaranteeing authenticity and reliable performance.

MATERIAL SPECIFICATION

BASE STEEL GRADE

The Swan Swee Swandek 920 is roll-formed from **G550 MPa steel** ensuring high strength and durability for reliable performance.

BASE STEEL COATING

Coating type	Definition
AZ200	The base steel is coated with a coating of 55% aluminum, 43.3% zinc and 1.6% silicon (approximately), meeting the coating class requirements set by Australian Standards AS1397:2021. This advanced coating provides exceptional corrosion resistance and enhances the steel's durability.
ZM310	The base steel is coated with a special metallic composition of 5% aluminum, 1% magnesium(approximately) and 94% zinc as determined by EN10346:2015. The inclusion of magnesium creates a self-healing effect, improving corrosion resistance in aggressive conditions like C4 zones. This makes ZM310 a compelling alternative particularly in demanding projects.

STEEL THICKNESS

	Standard	Non-Standard
Base Metal Thickness (BMT)	**0.42 mm**	**0.48 mm**
Total Coated Thickness (TCT)	**0.48 mm**	**0.54 mm**

WEIGHT

Paint Type	ColorLume® SMP		ColorLume® PVDF		ColorMax®	
	Weight (kg/m2)		Weight (kg/m2)		Weight (kg/m2)	
Total Coated Thickness (TCT)	**0.48**	**0.54**	**0.48**	**0.54**	**0.48**	**0.54**
AZ200	**4.72**	**5.34**	**4.72**	**5.35**		
ZM310					**4.86**	**5.48**

PAINT SYSTEMS

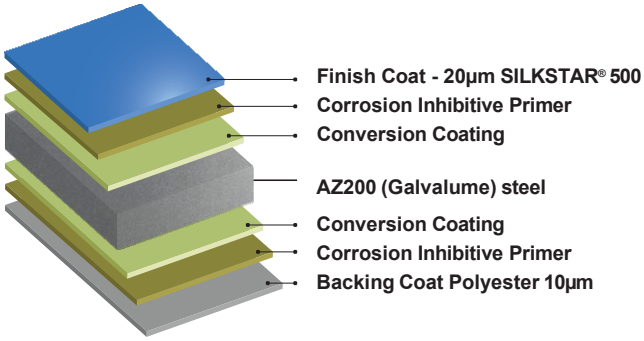
Swan Swee Swandek 920 offers three premium paint systems, each engineered to meet distinct project demands. Whether you require exceptional durability, striking aesthetics or specialized environmental protection, our coatings provide superior performance and a flawless finish, ensuring longevity and reliability.

ColorLume® SMP (Silicone Modified Polyester) (SILKSTAR®500)#

SILKSTAR® 500, one of the high durable series, is a standard coil coating system designed exclusively for the metal roofing industry suited for climatic conditions in Singapore.

Top Coat: AkzoNobel SMP (SILKSTAR® 500) – a trusted industry-standard coating recognized for its versatility, durability, and lasting aesthetic quality.

Base Steel Coating: AZ200 – a premium alloy coating offering superior corrosion resistance and long-term durability in demanding conditions



Applications: Well-suited for architectural, residential, commercial, and industrial projects.

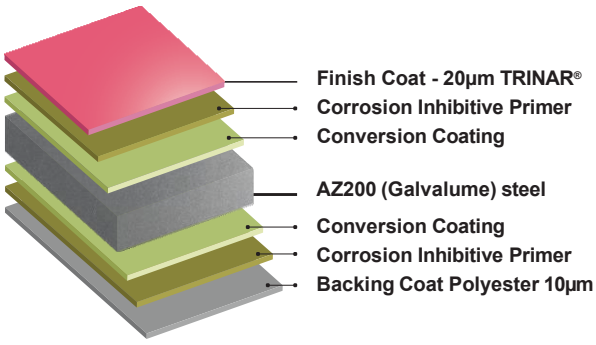
Benefits: A cost-effective yet high-performance solution that balances visual appeal with robust protection across diverse environments.

ColorLume® PVDF (TRINAR®5000)#

AkzoNobel TRINAR® 5000 brand is manufactured from raw materials which conform with 70/30 standard ratio (PVDF/ ACR) in market.

Top Coat: AkzoNobel PVDF (TRINAR®5000) (fluoropolymer coating with ≥70% PVDF).

Base Steel Coating: AZ200 – providing enhanced corrosion resistance for long-term durability.



Applications: Roofing systems requiring outstanding color retention, weather resistance, and long-term protection against fading and chalking.

Benefits: Maintains its aesthetic appeal even under intense UV exposure and extreme weather conditions, ensuring lasting vibrancy.

Key Considerations for Specifying PVDF Coatings
To ensure optimal performance: Choose a **70% PVDF coating system** that complies with **AAMA 621-02** for steel substrates. Testing confirms that PVDF coatings deliver peak durability at **70%** concentration - higher ratios do not offer additional benefits.

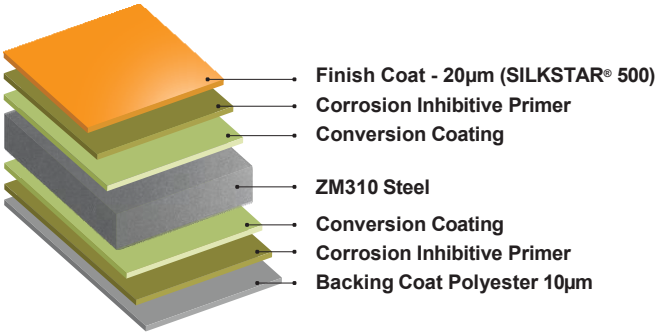
Beware of lower-quality formulations:
Some manufacturers offer 50% or even 30% PVDF coatings (which may contain Kynar or Hylar-branded PVDF), but these fail to meet AAMA 2605-13 standards and exhibit significantly reduced performance. (Source: AkzoNobel)

#ColorLume® SMP & PVDF - Trademark of Yieh Phui Taiwan

ColorMax® – High-Performance Coating for Harsh Environments#

Top Coat: AkzoNobel SMP (SILKSTAR® 500) – Delivers exceptional durability, weather resistance, and long-lasting color vibrancy.

Base Steel Coating: ZM310 – Provides superior corrosion protection, ensuring structural resilience in extreme environments.



Applications: ColorMax® is a specialized coil and substrate coating engineered to endure aggressive conditions, including C4 corrosion zones as classified by ISO 12944 - Atmospheric Environment Categories.

Benefits: Guaranteed Performance Warranty: 20-year warranty ensuring lasting film integrity 15-year coverage against fading and chalking

#ColorMax® - Trademark of Yieh Phui Taiwan

THE FUNCTION OF SUBSTRATE COATING IN AN INTEGRATED PAINTING SYSTEM

Substrate Coating System: 2C2B (Two-Coat, Two-Bake) Process

A two-sided 2C2B coating system (two coats, two bakes) offers superior durability and protection for steel substrates. This advanced process optimizes both finish quality and longevity through precise layering and curing.

Key Features:
Two-sided application for complete protection • Double-coating and double-baking process for enhanced durability
High-quality finish with extended service life

Optimized Pre-Treatment for Superior Paint Adhesion
To maximize adhesion, the paint film undergoes specialized pre-treatment tailored to the production equipment used:

Bonderite® (Chemical SA, France) or
Surfcoat® (Nippon Paint, Japan)

These advanced treatments clean, coat, and protect the steel substrate, ensuring a strong foundation for paint adhesion and long-term durability.

Top Primer: Polyurethane (PU) Anti-Corrosion Layer

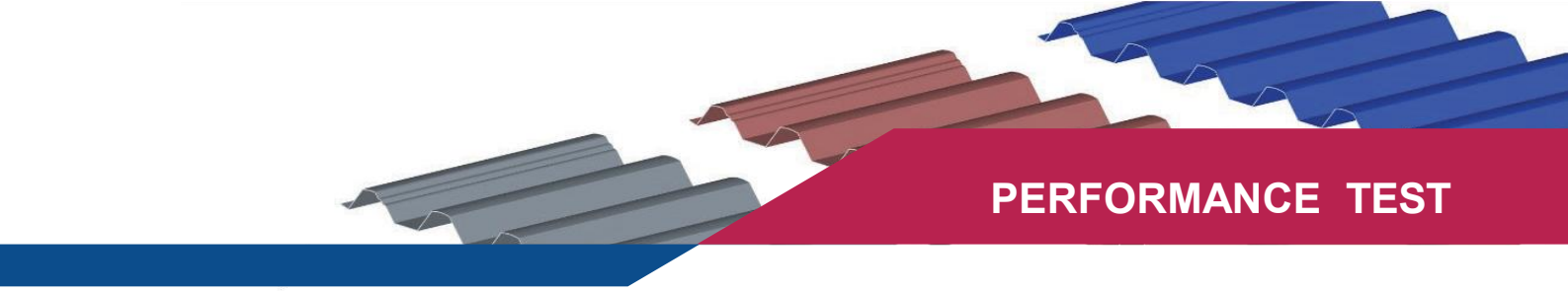
Type: High-performance polyurethane primer
Dry Film Thickness: 5 microns (nominal)

Key Benefits:
- Superior anti-corrosion protection Strengthens adhesion for topcoats
- Extends overall system lifespan
- Preserves surface integrity in harsh conditions

Back Primer & Back Coat
A PU back primer with strong anti-corrosion properties is applied, followed by **a polyester backing layer** that offers: **10-micron nominal dry film thickness**

Key Benefits:
- Excellent anti-corrosion performance
- Added durability for the reverse surface
- Extended product lifespan

Important Note: While effective for protection, this back coat is not designed for direct sunlight exposure, as it primarily serves a functional role rather than aesthetic enhancement.



PERFORMANCE TEST

The significance of Performance Testing in Roofing Coatings.

Conducting performance tests on roofing coatings is essential to ensure durability, weather resistance and overall effectiveness. These evaluations asses the coating's ability to withstand environment factors such as UV exposure, moisture, temperature fluctuations and mechanical stress. By rigorously testing coatings, manufacturers and industry professionals can validate compliance with international standards, enhance material longevity, and optimise protective properties.

Performance Test Results

The following tests evaluate the **adhesion, durability, corrosion resistance, and overall performance** of the coating system:

Adhesion Tests

Reverse Impact (ASTM D2794):
A 500g hammer impacts the surface, followed by a tape peel test.

The film remains intact with no flaking.

T-Bend (ASTM D4145):
The material is bent **180°** to a 3T diameter, then subjected to a **tape peel test.**

The film adheres well, without flaking.

Erichsen Test (ASTM 643):
A **7mm deep shape** is formed at **12±6 mm/min velocity,** followed by a **3M #600 tape peel test.**

No flaking occurs.

Durability & Corrosion Resistance

Salt Spray Test (ASTM B117/SS 5 Part G10):
1,000 hours exposure.

No red rust, blisters (better than 6F), or corrosion in the unscraped area.

Weathering Test (QUV ASTM G154/SS 5 Part G9):
1,000 hours exposure.

No visible color change or chalking.

Resistance to Chalking (QUV 2,000 hours):
Chalk rating ≤ **4.**

Demonstrating excellent durability.

Solvent & Chemical Resistance

Solvent Resistance (ASTM D5402):
100 wipes using **M.E.K. solvent** under **1kg pressure.**

The painted steel substrate remains unaffected.

Chemical Resistance (Spot Test ASTM D1308):
Exposure to **5% H_2SO_4 and 5% NaOH** for **24 hours**

Shows no visible changes.

Gloss Level & Fire Classification

Gloss Level
(ASTM D523/SS 5 Part E1/BS-2003/EN 13523-2):

Nominal gloss level of 25 GU at 60° reflection angle.

Fire Classification (EN 13501):
Class A1 compliant.

Non-combustibility and no harmful smoke emissions.

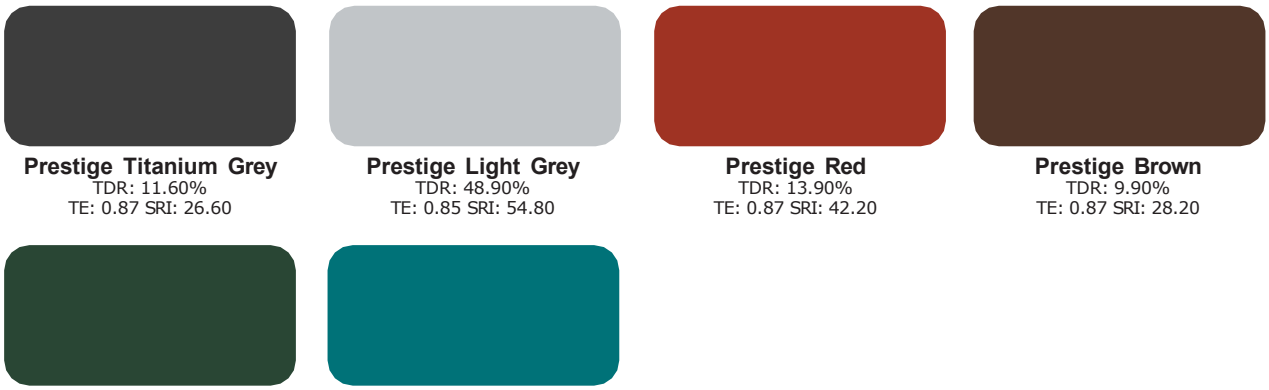
These results confirm the high-performance capabilities of the coating system, offering long-term durability, adhesion strength, and environmental resistance.

Inspired Colour for Your Roof

At Swan Swee, we believe your roof is more than just a cover—it is a statement. With ColorLume® SMP; ColorLume® PVDF and ColorMax®, we bring a full spectrum of vibrant and durable color options to complement your architectural vision.

No matter the hue you imagine, we provide a refined selection of colours designed to enhance both aesthetic appeal and long-term performance, ensuring your project stands out while enduring the elements.

(SMP / PVDF / ColorMax®)



Prestige Titanium Grey
TDR: 11.60%
TE: 0.87 SRI: 26.60

Prestige Light Grey
TDR: 48.90%
TE: 0.85 SRI: 54.80

Prestige Red
TDR: 13.90%
TE: 0.87 SRI: 42.20

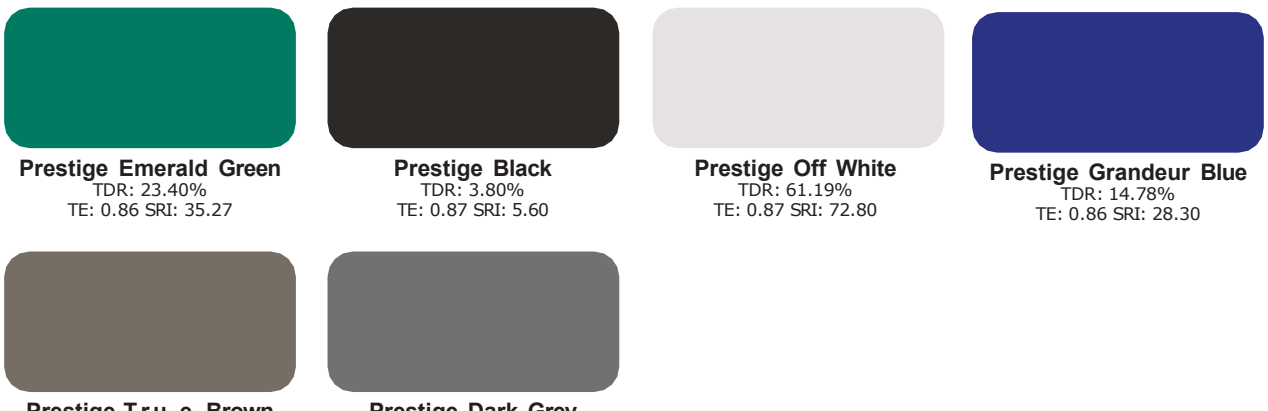
Prestige Brown
TDR: 9.90%
TE: 0.87 SRI: 28.20

Prestige Green
TDR: 9.20%
TE: 0.86 SRI: 10.40

Prestige Blue
TDR: 13.10%
TE: 0.87 SRI: 9.60

*To ensure accurate colour representation, we recommend requesting physical samples for verification.

Non Standard Colours



Prestige Emerald Green
TDR: 23.40%
TE: 0.86 SRI: 35.27

Prestige Black
TDR: 3.80%
TE: 0.87 SRI: 5.60

Prestige Off White
TDR: 61.19%
TE: 0.87 SRI: 72.80

Prestige Grandeur Blue
TDR: 14.78%
TE: 0.86 SRI: 28.30

Prestige Tru e Brown
TDR: 19.42%
TE: 0.86 SRI: 36.35

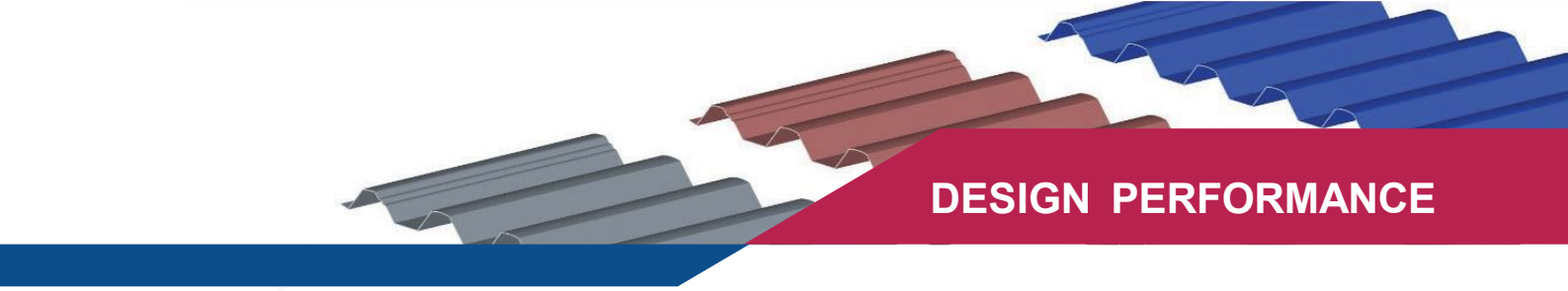
Prestige Dark Grey
TDR: 18.14%
TE: 0.87 SRI: 10.70

*To ensure accurate colour representation, we recommend requesting physical samples for verification.

Ordering Guidelines

To ensure accuracy in manufacturing and supply, please specify the required paint system when placing your order. This helps prevent any misalignment between your specifications and the final product.

For example: • Prestige Blue (SMP) • Prestige Blue (PVDF) • Prestige Blue (Color Max)



DESIGN PERFORMANCE

SWANDEK 920

TCT (mm)	BMT (mm)	Permissible Wind Pressure (kN/m²) for Specified Span Below									
0.48	0.42	Max Span	600mm	900mm	1200mm	1500mm	1800mm	2100mm	2400mm	2700mm	3000mm
Considering Strength		Single Span	14.79	9.85	7.38	5.52	3.82	2.80	2.13	1.68	1.35
		Double Spans	11.02	6.50	4.37	3.16	2.40	1.89	1.53	1.26	1.06
		Three Spans	12.82	7.63	5.16	3.76	2.87	2.27	1.84	1.52	1.28

TCT (mm)	BMT (mm)	Permissible Wind Pressure (kN/m²) for Specified Span Below									
0.48	0.42	Max Span	600mm	900mm	1200mm	1500mm	1800mm	2100mm	2400mm	2700mm	3000mm
Deflection limits but not exceeding strength		Single Span	17.42	5.16	2.18	1.12	0.65	0.41	0.27	0.19	0.14
		Double Spans	41.97	12.44	5.25	2.69	1.55	0.98	0.66	0.46	0.34
		Three Spans	32.88	9.74	4.11	2.10	1.22	0.77	0.51	0.36	0.26

Notes: Deflection limited considered: (a) Continuous beams and single span beams: L/200 (b) Cantilever beams: L/180. No imposed loads have been considered. Only the permissible wind pressures which can be acted together with self-weight of the sheeting has been calculated.

TCT (mm)	BMT (mm)	Permissible Wind Pressure (kN/m²) for Specified Span Below									
0.54	0.48	Max Span	600mm	900mm	1200mm	1500mm	1800mm	2100mm	2400mm	2700mm	3000mm
Considering Strength		Single Span	17.74	11.81	8.85	6.31	4.37	3.20	2.44	1.92	1.55
		Double Spans	13.05	7.67	5.14	3.71	2.81	2.21	1.78	1.47	1.23
		Three Spans	15.20	9.01	6.07	4.41	3.36	2.66	2.15	1.78	1.50

TCT (mm)	BMT (mm)	Permissible Wind Pressure (kN/m²) for Specified Span Below									
0.54	0.48	Max Span	600mm	900mm	1200mm	1500mm	1800mm	2100mm	2400mm	2700mm	3000mm
Deflection limits but not exceeding strength		Single Span	20.11	5.96	2.51	1.29	0.74	0.47	0.31	0.22	0.16
		Double Spans	48.45	14.36	6.06	3.10	1.79	1.13	0.76	0.53	0.39
		Three Spans	37.95	11.25	4.74	2.43	1.41	0.89	0.59	0.42	0.30

TCT (mm)	BMT (mm)		Maximum Span (mm)
0.48	0.42	Single Span	1620
		Double Spans (equal)	2170
		Three or more Spans (equal)	2000
0.54	0.48	Single Span	1710
		Double Spans (equal)	2280
		Three or more Spans (equal)	2110
Based on average wind suction - 0.92 kN/m² ; maximum local wind suction - 1.97 kN/m²			

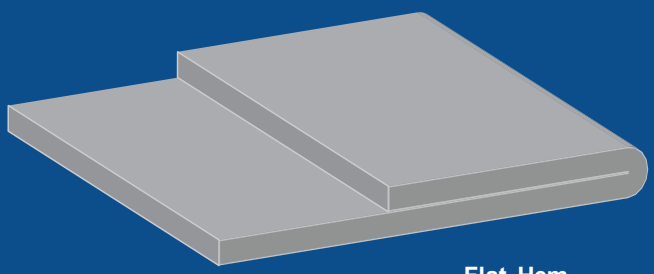
Notes: Deflection limited considered: (a) Continuous beams and single span beams: L/200 (b) Cantilever beams: L/180. The following parameters are assumed in the calculation of wind load. (i) Length & width of building 50m x 20m (ii) Height of building: 10m (iii) Type of roof: mono-pitch roof (iv) slope of the roof: 15 degrees (v) terrain category.

Ends spans and internal spans are assumed to subject to average wind suction and the cantilever spans are to be subjected to maximum local wind suction.

Protection for Roofing and Wall Cladding

Flashing is a crucial component of any roofing system, ensuring durability and protection against the elements. At Swan Swee, we take meticulous care in manufacturing our flashing to hight-quality standards.

If needed, we can integrate a flat hem into the flashing design to accommodate specific project specifications. For further assistance, please reach out to our Sales Team.



Flat Hem

Benefits of hemming:

- **Enhanced strength:** reinforces the sheet metal edge for increased durability.
- **Improved aesthetics:** provides a cleaner, more refined surface finish.
- **Defect concealment:** covers rough edges and burrs, ensuring a polished appearance.

Properly detailed Swan Swee roof and wall flashings enhance wet weather performance for both roofing and cladding systems.

Beyond functionality, precise flashing and detailing contribute to a refined and professional finish, improving the overall aesthetics of the installation.

Swan Swee provides a selection of standard flashing options and can also customize flashings to meet specific project requirements.

For complex or specialized flashing details, please contact our Sales Team for tailored solutions.

FIXING GUIDELINES FOR SWANDEK 920

All sheets are custom-cut to your specified dimensions with the following precision tolerances:

Dimension Tolerance

Dimension	Positive Tolerance	Negative Tolerance
Length	+5mm	-5mm
Width	+3mm	-3mm

Minimum Roof Pitch (Ensuring Effective Water Drainage)

Configuration	Pitch Requirement
Without end lap	2° (Approx. 1:30)
With end lap	3° (Approx. 1:20)

These guidelines help maintain performance and reliability in various installation conditions.

FASTENER SPECIFICATIONS

(Pierce Fixing Technique)

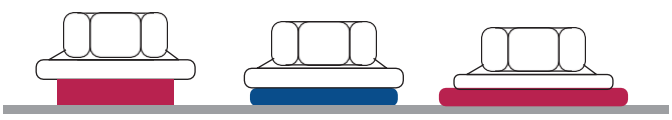
- Crest Fixing (Roofing) : Fasteners are drives through the raised rib (Crest) of the profile. This method is mandatory for Swandek 920 roofing to ensure structural intefrity and prevent water ingress.
- Valley Fixing (Wall Cladding) : Fasteners may be placed in the Valley or crest, depending on design requirements.

Utilize Class 3 or 4 fasteners in accordance with AS3566 - 2002 for enchanced durability and corrosion resistence.

	Direct to Support	With Insulation Blanket
Steel Support		
Thickness Up to 4.5mm	N0 12-14 x 55mm Hex head self-drilling and tapping screw with bonded washer	N0 12-14-65mm long screw
Exceed 4.5mm	Teks 5 N0 12-24 x 68mm Hex head self-drilling and tapping screw with bonded washer	Teks 5 N0 12-24 x 68mm Hex head self-drilling and tapping screw with bonded washer
Side lap /Stitching screw	Self -drilling screws : 8 x 12mm hex head "S" point screw with neoprene washers	
Timber Support		
Hard wood	N0 12-11 x 65mm Hex head type 17 self-drilling screw with bonded washer	N0 14-10 x 76mm Hex Head Type 17 self-drilling screw and with bonded washer
Softwood	N0 14-10 x 75mm Hex Head Type 17 self-drilling screw with bonded washer	No change
Side lap/Stitching screw	Self -drilling screws : 8 x 12mm hex head "S" point screw with neoprene washers	

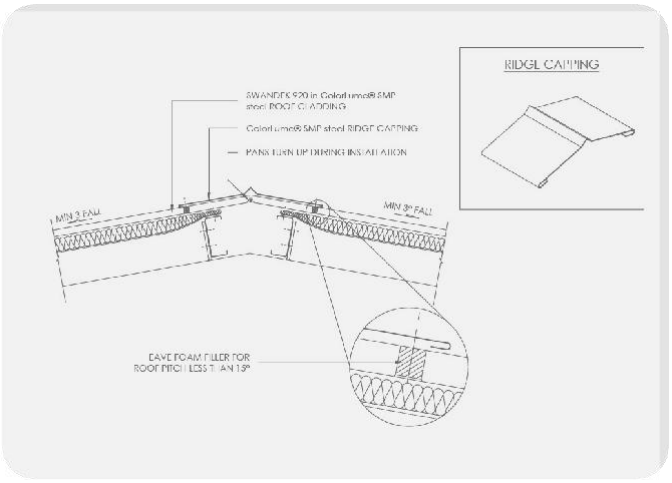
Setting of Screws

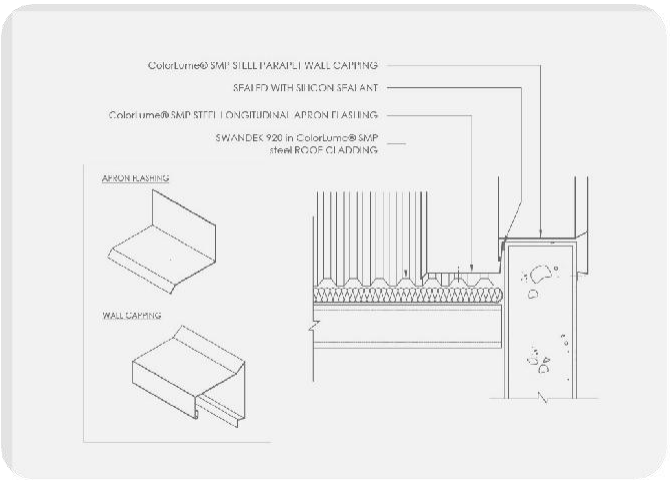
Sealant washer fasteners should be tightened just enough to ensure a secure, weather-tight seal. Over-tightening must be avoided, as excessive force can damage the sealing washer or deform the sheet, potentially compromising water resistance and leading to leakage.

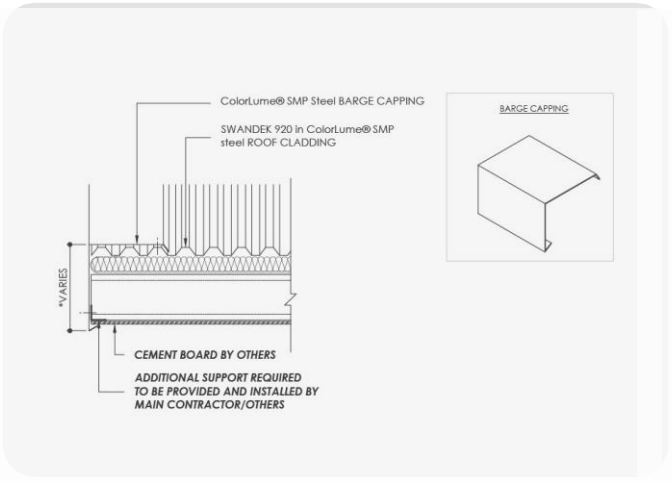


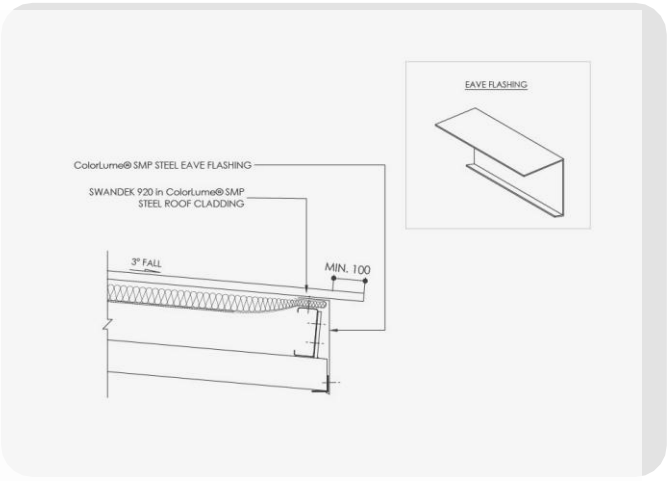
Underdriven Correctly driven Overdriven

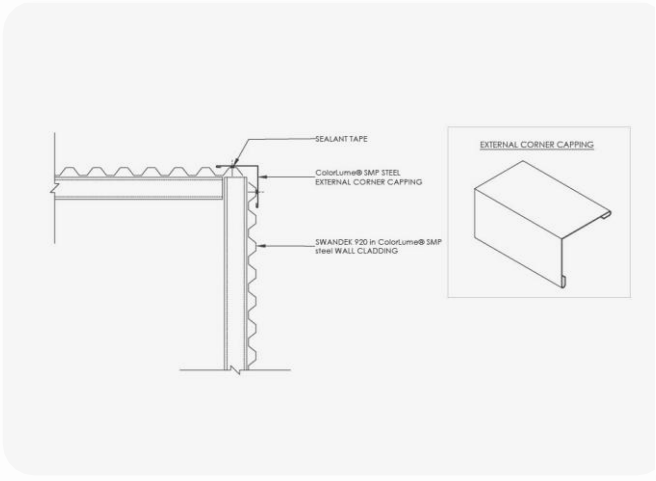
TYPES OF FLASHING AND THEIR APPLICATIONS

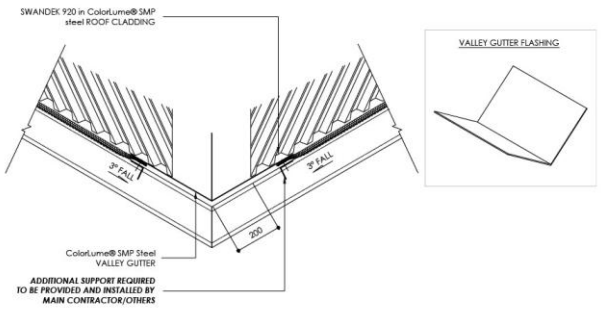












Ordering of Flashings

Dimensions
Measure dimensions precisely, including angles and bends for proper fitting.

Colour Side
Indicate which side of the sheet should display the colour, ensuring it aligns with the building's aesthetics.

Lengths and Quantity
Specify the number of flashings required and their respective lengths.

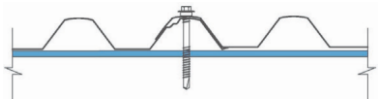
Installation Guidelines

For all roof slopes, it is essential to form a turn-up at the upper end of each sheet to prevent water ingress.

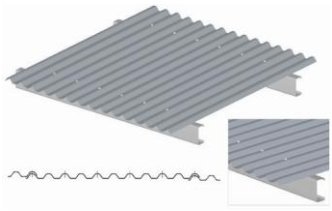
To maximize protection against weather intrusion, sheets should be installed with the exposed edge of overlaps positioned away from the prevailing wind direction.

1. Fastening Sheet to Structural Supports

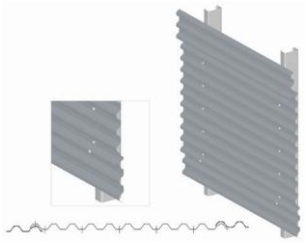
- Swandek 920 is pierce-fixed to timber or steel supports, meaning fastener screws penetrate directly through the sheeting.
- **Roof Applications:** Screws can be positioned either on the crests or in the valleys of the profile. To ensure maximum roof watertightness, fastening through the crests is always recommended.



Crest Fastener Location (Roof)

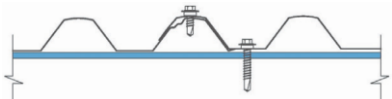


Crest Fastener Location (Roof)



Valley Fastener Location (Walls)

- **Wall Applications:** Fastening may be done via either crest or valley, depending on the design and aesthetic considerations. Fasteners should be driven perpendicular to the sheeting and aligned at the centre of each corrugation or rib. Avoid placing fasteners closer than 25mm from the sheet ends.



Valley Fastener Location (Walls)

2. Side-Lap Detailing

- The Swandek 920 edge with the anti-capillary groove acts as the underlap.
- While side-lap fastening i s recommended, i t is generally not required when cladding i s supported per Maximum Support Spacings.

3. End Lapping

- End-laps are generally unnecessary due t o the availability of long sheet lengths. If end-laps are required, refer to the Installation Manual for comprehensive guidiance on laying sequence, lap length end treatment, fastening, sealing, and other relevant details.

4. Ends of Sheets

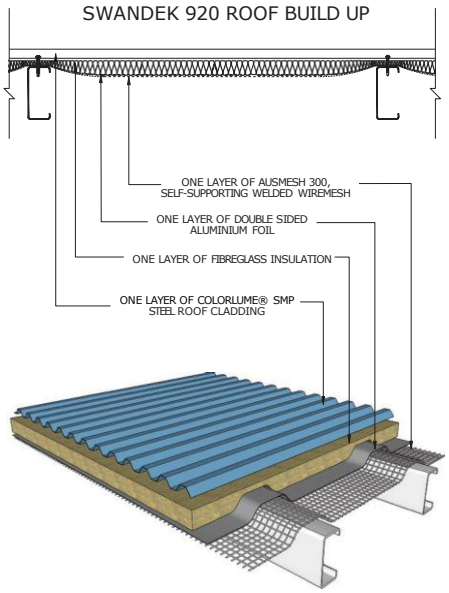
- Sheet overhang beyond the top and bottom supports must comply with specified limits. It is standard practice to allow an appropriate overhang into gutters. Depending on roof slope, sheet ends may require specific treatments such as turn-up, turn-down, or other tailored edge finishes.

Rain Noise Attenuation in Metal Roofing

To reduce rain noise on metal roofs, install a mineral wool insulation blanket between two layers of metal cladding. For optimal performance, the insulation should be firmly pressed against the underside of the outer sheet to dampen vibration at the point of impact.

If the insulation is loosely placed, noise reduction will rely mainly on sound transmission loss through the mineral wool. resulting in less effective attenuation.

Note: Ensure full moisture protection for mineral wool to maintain it's thermal and acoustic properties over time.



Recommended Sealants

Neutral-cure silicone sealant has been successfully applied to various steel finishes used in roofing, walling, flashing, and cappings made from the same materials as the cladding.

Neutral-cure silicone sealants:

- Exhibit strong adhesion to clean surfaces of all roofing and walling materials.
- Are water-resistant and non-corrosive.
- Maintain flexibility under extreme temperature variations.
- Offer high resistance to ultraviolet (UV) radiation (sunlight).
- Have a long service life.

It is essential to use only neutral-cure silicone with sheet steel. Other types of silicone sealants, which often emit vinegar or ammonia odors, release aggressive by-products during curing that can degrade sheet steel.

If uncertain, check the sealant packaging for a statement such as: "Suitable for use with galvanized and Galvalume steel products."

Surface Preparation

For optimal bonding, all surfaces must be clean, dry, and free from contaminants such as old sealant and oil.

Cleaning agents: Mineral turpentine is effective for cleaning surfaces, but all residual solvent must be completely removed using a clean, dry cloth. White spirits can also be used as an alternative.

Application timing: Sealant should be applied on the same day the surface is cleaned to ensure proper adhesion.

Sealant Cleanup

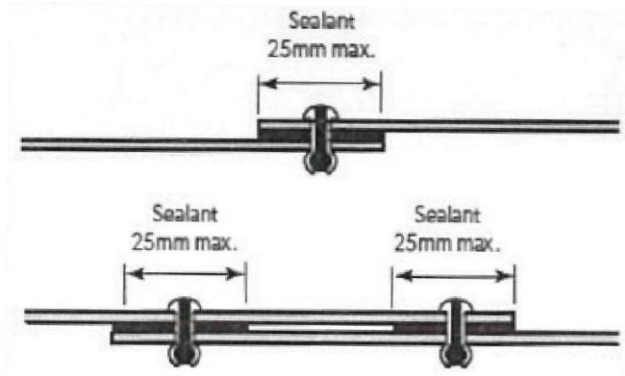
With experience, you will be able to gauge the appropriate bead size, minimizing excess sealant and reducing cleanup efforts.

Uncured sealant: Can be removed using a clean, dry rag. Any remaining residue can be wiped off with a cloth lightly dampened with mineral turpentine or white spirits.

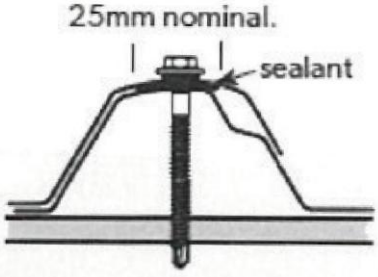
Cured sealant: Should be carefully removed using a plastic spatula to prevent damage to the metal's surface finish.

Painting considerations

Avoid smearing silicone on surfaces intended for painting, as it can interfere with paint adhesion. If smearing occurs, lightly abrade the affected area using a non-metallic scouring medium.



Typical joints with sealant:-



Typical crest with sealant:-

Safe Roof Walking Practices

To minimize the risk of damage and ensure safety when walking on roofs:

Always step on the pan and directly over structural supports for stability.

Wear smooth-soled shoes to prevent ribbed soles from collecting debris such as small stones, swarf, or other particles that could scratch or damage the roofing sheets.

Taking these precautions helps maintain both the integrity of the roofing system and personal safety.

Cutting Roof Sheets – Best Practices

When cutting roof sheets:

Always cut on the ground, away from other materials, to prevent accidental damage.

Use a circular saw with a metal-cutting blade for safer and cleaner cuts. This method minimizes the production of damaging hot metal particles and reduces burr compared to using a carborundum disc.

Following these guidelines ensures a more precise cut and protects both the roofing sheets and surrounding areas.

Removal of Metal Filings – Preventing Surface Damage

During installation, always remove metal debris resulting from sawing, drilling, or other construction activities by brushing or blowing it off from pre-painted roofing sheets.

If left unattended, metal filings will rust rapidly, causing staining or discoloration that affects the appearance and integrity of the roof's surface. Regular cleaning ensures a clean finish and prolongs the roof's aesthetic appeal and durability.

Storage and Handling Guidelines

Ensure the product is kept dry and elevated off the ground to minimize the risk of damage.

Avoid dragging roof sheets to prevent scratches or harm to the painted surface.

Protect the material from debris and contaminants to maintain its quality and appearance during storage and handling.

Length and Transportation Guidelines

Custom Lengths: Swandek 920 and wall cladding are supplied pre-cut to the required dimensions.

Standard Length Limitation: For standard deliveries, the material length should not exceed **12 meters.**

Special Transportation for Extended Lengths: Lengths greater than 12 meters necessitate specialized transportation and appropriate on-site handling facilities. **Additional transport charges may be imposed.**

Regulatory Compliance: Always confirm to the **transportation limits set by LTA** (Land Transport Authority) to ensure adherence to regulations for long products. Proper planning ensures safe, efficient delivery and handling of the materials.

This thoughtful design makes it an excellent choice for projects requiring both functionality and durability in roofing applications.

Key Considerations for Installing Solar Panels on Your Home or Factory

When planning a solar panel installation, consider the following factors to ensure optimal performance and durability:

Roof Pitch: A suitable roof pitch is essential for proper rainwater runoff and efficient solar panel operation.

Solar Panel Tilt Angle: Adjust panels to the optimal tilt angle to maximize energy output based on your location.

Air Ventilation: Provide adequate ventilation around the panels to prevent overheating and maintain efficiency.

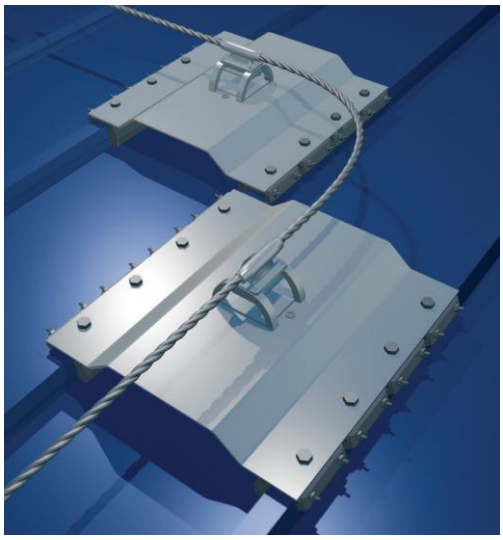
Easy Maintenance Access: Design the layout to allow convenient access for regular cleaning and maintenance, ensuring uninterrupted performance.

In **Singapore**, the average peak sun hours fall between 10:00 a.m. and 3:00 p.m., making this timeframe critical for maximizing solar energy generation. Proper planning can help you harness the region's abundant sunlight effectively.

Lifeline Installation on Swandek 920

The lifeline system can be securely mounted by clamping onto the Swandek 920 profile ridge, ensuring a stable and reliable attachment.

To meet industry safety standards, the lifeline system must be designed and manufactured in compliance with EN795:2012 - Type C, guaranteeing performance, durability, and adherence to required safety regulations.



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