VECTORS
INFRA

FRP ROOFING & CLADDING SHEETS

FCI FIBRE CRAFT INDUSTRIES

VECTORS INFRA

SINCE 40 YEARS

INTRODUCTION

Vectors Infra is the registered trademark of Fibre Craft Industries, representing our infrastructure solutions. Vectors Infra's high-quality FRP (Fiberglass Reinforced Plastic) roofing and wall cladding sheets are manufactured on modern continuous lamination lines and engineered to meet the toughest performance requirements. Made from premium resins and fiberglass reinforcements, Vectors Infra FRP Sheets combine mechanical strength, durability, and corrosion resistance to deliver long-lasting performance across industrial, commercial, and residential projects.

What is FRP

Polyester Resin + Fiber Reinforcement

FRP (Fiberglass Reinforced Plastic) is a high-performance composite material made by combining fiberglass reinforcement with plastic matrix. By selecting different types of fiber glass and resins, FRP can be engineered to deliver specific strength, durability, and performance characteristics. Additives such as UV stabilizers or protective coatings enhance resistance to sunlight, chemicals, and wear. The result is a lightweight, durable, and versatile material that can outperform traditional options like wood, PVC, metal, or ceramics. FRP offers excellent strength, corrosion resistance, and cost effectiveness, making it ideal for

BENEFITS OF FRP

Durable

Mold Resistant

Light Weight

Moisture Resistant

Easy to Clean

Easy to Install

High Strength to Weight Ratio

Impact Resistant

VECTORS INFRA FRP SHEETS

Vectors Infra FRP sheets are advanced building products designed as a superior alternative to traditional roofing materials such as metal, PVC, fiber cement, and asbestos. They are a reliable solution where conventional products fail to meet project needs.

Vectors Infra's machine-made FRP sheets are lightweight, strong, and highly versatile making them an excellent choice for a wide range of applications. They are widely used in industrial and agricultural buildings for roofs, skylights, cladding, and curtain walls, as well as in farming structures such as livestock sheds, green houses, and crop tunnels. Their durability makes them suitable for infrastructure projects, covered walkways, projecting roofs, and even DIY applications like patios and small sheds.

Thanks to their exceptional corrosion resistance, Vectors Infra FRP sheets are ideal for demanding environments such as water treatment and purification plants, composting facilities, zinc works, tanneries, cooling towers, and chemical plants, where traditional materials often fail.

KEY ADVANTAGES

Corrosion Resistance: Naturally resistant to chemical environments and sea water. For enhanced performance, sheets can be supplied with protective film or gel coat on both sides.

Low Thermal Conductivity: Vectors Infra FRP Sheets reduce heat transfer, keeping interiors cooler. In double-skin applications, when combined with insulation (glass/ rock or PU foam), they provide excellent thermal regulation compared to metal sandwich panels.

Low Maintenance: Only periodic roof cleaning is required - no costly maintenance or treatments.

Biological Resistance: Highly resistant to microorganisms, algae, mildew, and fungus, ensuring long-lasting hygiene and aesthetics.

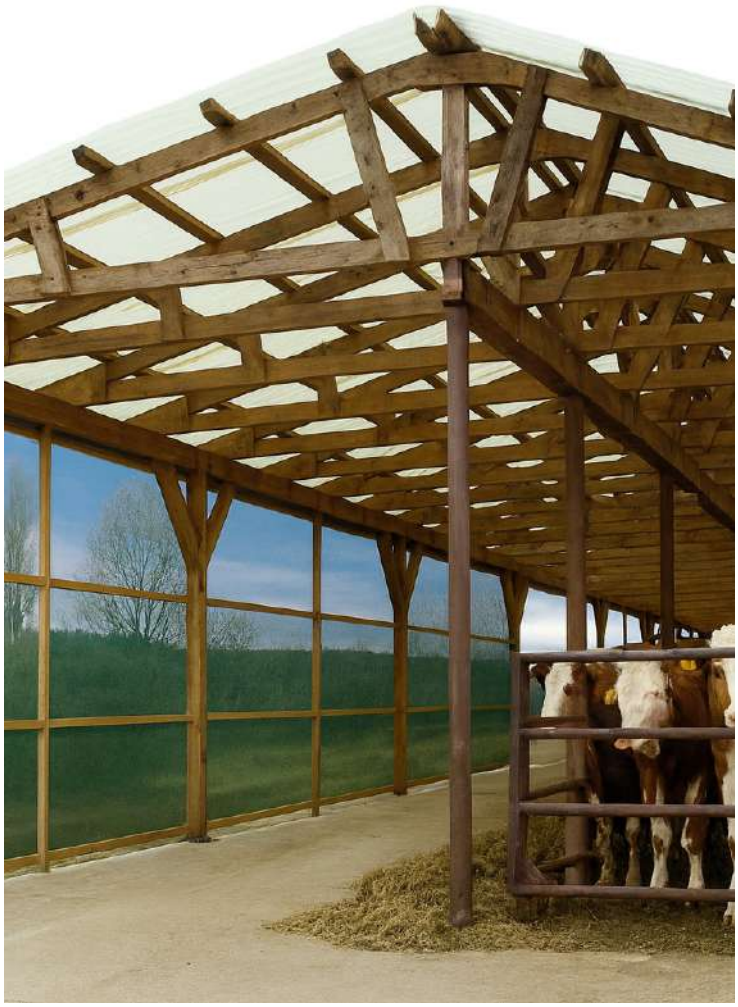
Lightweight yet Strong: Reduces the need for heavy supporting structures in new roofing projects, lowering construction costs. For over-roofing applications, Vectors Infra sheets can be produced with matching profiles to fit existing roofs without adding significant weight.

Minimum Installation Waste: Produced to custom lengths, ensuring efficient installation with minimal scrap.

Noise Reduction: Significantly reduces rain impact noise compared to metal roofing.

APPLICATIONS

- Industrial Sheds
- Industrial buildings
- Green houses
- Dairy Farms
- Skylights
- DIY
- Cooling towers
- Lamellar filters for water treatment
- Agricultural



PHYSICAL PROPERTIES

PROPERTY	SPECIFICATION
Colour	As per choice
Surface Finish	Standard Protective Film, Embossed, or UV-Resistant Gelcoat
Thickness	1.5 mm to 5
Length	Customized as required (max. 40ft due to transportation limits)
Width	Upto 1500 mm
Resin	G.P / Isophthalic / Vinylester / Epoxy / Phenolic
Unit Weight	Depends on type

TECHNICAL PROPERTIES

PROPERTY	SPECIFICATION
Temperatue Resistance	−40 °C to +120 °C
Hardness	> 40 Barcol
Tensile Strength	> 50 Mpa (ASTM D
Flexural Strength	> 100 Mpa (ASTM D 790)
Modulus of Elasticity	> 4,500 Mpa (ASTM D
Water Absorption	≤ 0.2 %
Density	1.50 – 1.65 g/cm³
Light trasmission	Clear translucent 82%, light opal 56%, milky white 35% (1.5 mm
Heat Transmission Coeff	5 W/m²·K

Dimensional Tolerances

Unit Weight: ±5%

Average Thickness: ±5%

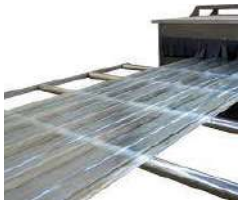
Width: ±1%

Length: Up to 2.5 m: 0 mm +20 mm,

> 2.5 m: 0 + % 0.8

FRP – 'A SUPERIOR MATERIAL'

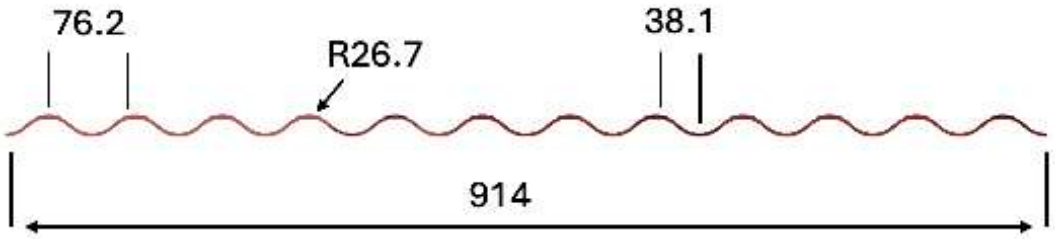
Parameter	FRP Sheets	PVC Sheets	Metal Sheets
Corrosion Resistance	Excellent: unaffected by moisture, salts and chemicals	Limited: yellows, cracks, become brittle	Prone to rust, dents, paint peeling
Weight	Light weight yet strong	Lightweight but weaker	Heavy, needs stronger structure
Heat Resistance	Withstand -40°C to +120°C	Warps under high heat	High thermal conductivi-ty, gets very hot
Noice During Resistance	Noise dampening	Noisy	Very noisy
Maintenance	Very low, only cleaning needed	Needs replacement faster	Regular repainting and maintenance
Design Option	Any length, profile, color	Limited options	Limited options
Lifespan	20+ years	Shorter life span	Shorter life span



Feature	Vectors Infra Machine-Made FRP Sheets	Hand Layup FRP Sheets
Production Process	Made on continuous lamination machines, excellent uniform	Manual process, inconsistent quality
Surface Finish	Smooth, glossy, with UV-protected film/gelcoat	Rough, uneven, prone to surface defects
Strength	High mechanical strength due to consistent resin–glass ratio	Weak points from uneven resin distribution resistance,
Thickness Tolerance	Precise and uniform	Irregular, varies across sheet
Durability	20+ years, resistant to UV, corrosion and chemicals	Shorter life, prone to cracks and discoloration
Customization	Produced to required length, color, and profile.	Limited customization, less consistency
Waste & Efficiency	Minimal waste during installation	More off-cuts and material loss lifespan

CURROGATED PROFILES

VI01



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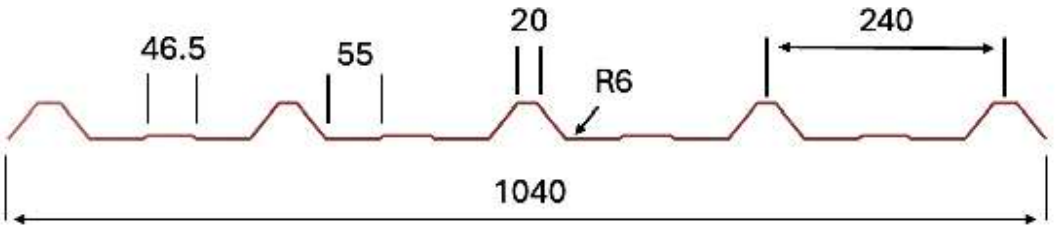

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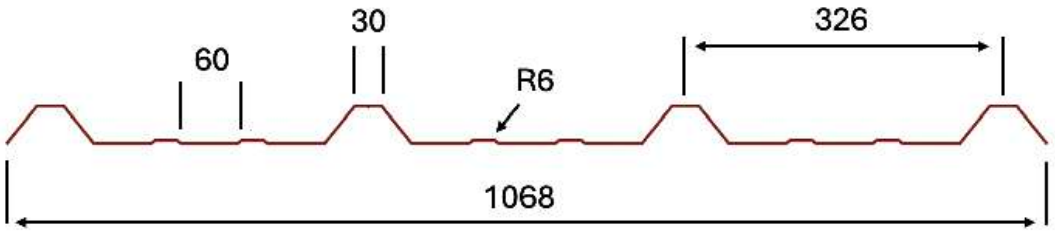

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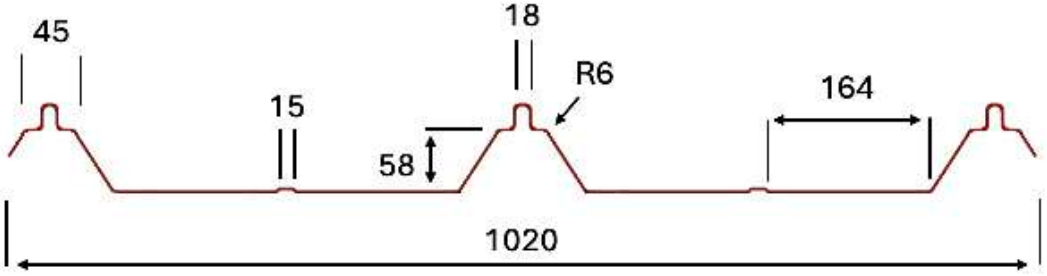


Customized profiles can be made.

All dimensions in mm.

FRP SHEET STRUCTURE

Product Structure

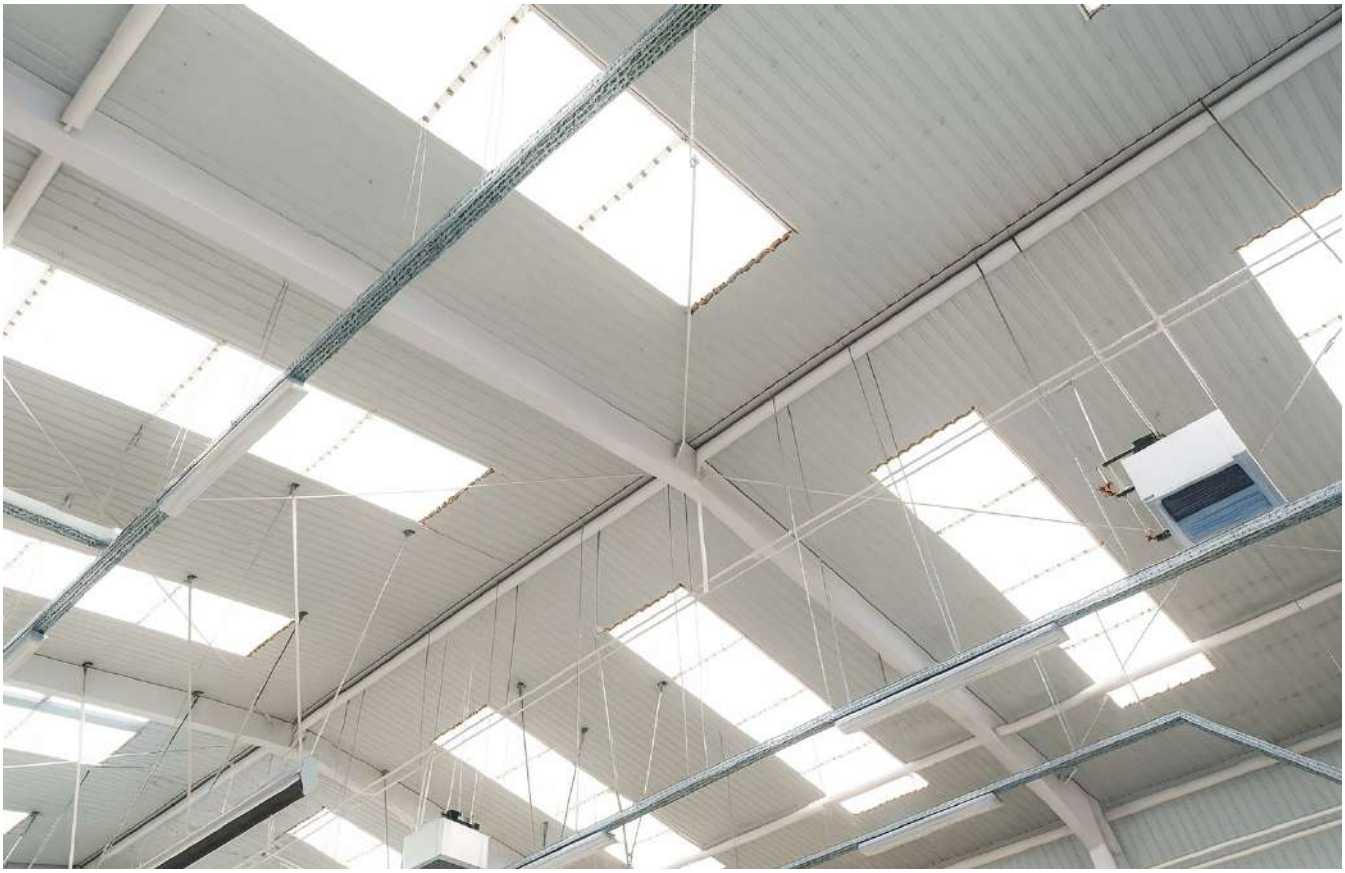
- Top and Bottom UV protected Polyester film
- Core made of fiberglass and resin reinforcement for strength
- Gelcoat layer on outside for improved UV Resistance

Layer Structure of Vectors Infra FRP Sheet

Vectors Infra FRP Sheets are engineered with a multi-layered structure designed for long term durability and performance in demanding environments. The top surface is protected with a high-grade UV-stabilized polyester film or gelcoat, which provides excellent resistance against sunlight, weathering, and color fading.

The core of the sheet consists of a reinforcement layer made from continuous fiberglass chopped roving, embedded in a high-quality thermoset polyester resin matrix. This combination gives the sheet its exceptional mechanical strength, impact resistance, and dimensional stability. The bottom layer is finished with a protective UV-resistant polyester film or surface veil, which shields the underside from moisture and abrasion.

Roofing Sheets, Skylights, Wall Cladding Sheets



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Roofing Sheets, Skylights, Wall Cladding Sheets

SANDWICH PANELS

Vectors Infra sandwich panels are engineered as a three-layer composite for maximum strength and insulation:

•TOP LAYER

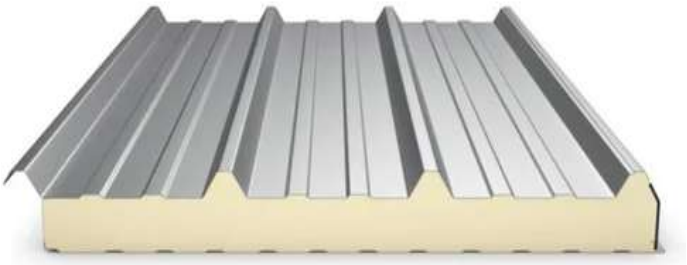
High-performance FRP sheet with optional UV-resistant gelcoat or protective film. Provides superior weather resistance, mechanical strength, and durability against external loads.

•CORE MATERIAL

PU/PIR foam forms the lightweight insulation core. It ensures excellent thermal efficiency, dimensional stability, and rigidity without adding unnecessary weight.

•BOTTOM LAYER

Reinforced FRP sheet (smooth or textured finish) protects the core from internal impact, moisture, and chemical exposure, ensuring long-lasting performance.



Main Applications

- Cold storage & Refrigerations
- Modular Structures
- Industrial and Livestock Facilities
- Truck and Trailer bodies
- Architectural Applications

Key Advantages

- High strength-to-weight ratio
- Superior thermal insulation
- Excellent corrosion & weather resistance
- Light-weight for easy handling and installa-
- tion

Embossed and Plain Panels

High gloss and high strength panels with performance + style

Main Applications

- Wall Panels
- Ceiling Panels
- Door Skins
- Daylighting Panels
- Liners for Truck bodies
- Architectural Applications

Embossed and Plain Sheets

A range of embossed and plain sheets are available depending on customer preference.

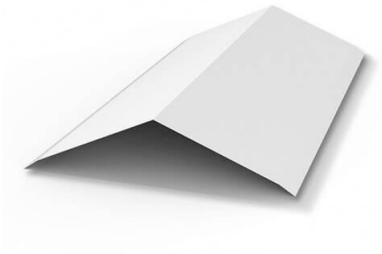
Vectors Infra embossed and plain FRP sheets are versatile, durable, and hygienic solutions widely used across industrial, commercial, and architectural applications. Designed for strength and long-term performance, these sheets resist moisture, chemicals, mold, mildew, and bacterial growth, while offering a clean, sanitary finish that's easy to maintain.

Available in both embossed and plain finishes, Vectors Infra FRP Sheets

ACCESSORIES

Corner Pieces

Gutters



Ridge Caps

Walkways

Cable Trays

Self Drilling Screws

INSTALLATION GUIDELINES

1) Handling and Storage

- Store sheets on a flat, dry surface in a shaded area.
- Avoid stacking heavy loads on top of sheets.
- Lift carefully to prevent edge cracks or scratches.

2) Cutting

- Sheets can be cut using power or hand saws.
- Use fine-toothed carbide blades or safety fabric reinforced abrasive discs.
- Always wear appropriate safety equipment (face shield, gloves, goggles).

3) Drilling

- All sheets must be pre-drilled at least 40 mm from the sheet end.
- Drill holes at least 1.6 mm larger than the fastener diameter to allow expansion.

4) Laying of sheets

- Start laying sheets from the bottom upwards, moving perpendicular to the gutter line.
- Always lay sheets opposite to the main wind direction for better sealing.

5) Fastening

- Use self-tapping screws with sealing washers.
- Install fasteners at the high point of corrugations.
- Recommended spacing:
- 15–20 cm on center at sheet ends
- 30–40 cm on center for intermediate purlins and siding applications
- Do not overtighten; allow natural expansion/contrac-

6) Installation Safety

- Never allow sheets to support undistributed loads.
- Install FRP Walkways if personnel need to walk on the roof.
- Use roof ladders or crawling boards to distribute weight during installation.
- Remove all cutting debris and waste after installation to maintain sheet performance.

Important Notice

Necessary care has been taken to provide accurate information in this brochure. However, we reserve the right to make changes or improvements to product specifications and installation guidelines without prior notice.

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FIBRE CRAFT INDUSTRIES

Canal Bank, Hanif Park, Harbanspura Lahore - 54850 Pakistan.
Ph: (+92-42) 36545346 - 36545346-36544813 - 36544840

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