# CFR

The **CFR** panel is an insulated metal standing seam roof panel, combining durable interior and exterior faces with a polyurethane foam core.

CFR roof panels have a wide coverage area between side joint connections and a mechanically-closed standing seam that is 2" high. Between the seams is a Mesa pattern with stucco embossing for added strength and superior appearance.

The CFR roof panel's diaphragm strength can be integrated into many steel-framed building bracing designs by attaching panels with the exclusive Clinch Clip®. Adjacent roof panels are interlocked without fastener penetrations that may compromise weathertightness or necessitate costly below-roof installation.

FEATURES AND BENEFITS:

- Provides a standing seam exterior face for weathertight performance.
- CFR roof panels are installed completely from the top side with concealed clips and fasteners placed in the side joint.
- Factory-cut panel ends, factory notching and factory-swaged ends eliminate critical and extensive field reworking.
- Factory-installed backer plates at the endlaps eliminate pre-drilling for special fasteners and tools.
- Recommended for the exterior of cold storage buildings.

30", 36" & 40"

2"

2", 2-½", 3", 4", 5" 6"
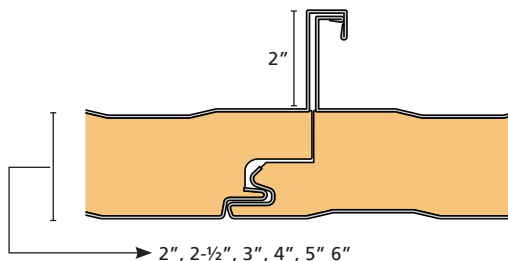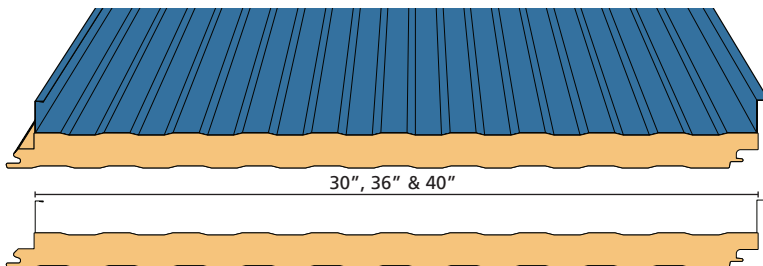
USES AND APPLICATIONS

In new and retrofit construction, CFR roof panels are suitable for all types of architectural, cold storage, commercial and industrial applications including re-roofing.

They are ideally suited for:

ARCHITECTURAL

- Airport Terminal Buildings
- Arenas
- Convention Centers
- Hospitals
- Low and Mid-Rise Offices
- Performing Arts Centers
- Schools & Universities
- Worship Facilities

COMMERCIAL & INDUSTRIAL

- Distribution Centers
- Equipment Maintenance Buildings
- Hangars
- Manufacturing Facilities
- Retail Buildings
- Self-Storage Complexes
- Utility Buildings
- Warehouses

COLD STORAGE

- Cooler Buildings
- Freezers
- Food Processing Buildings
- Dry Goods Warehouses
- All Controlled Environment Buildings where temperature control and insulation values are critical

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MATERIAL SPECIFICATIONS

EXTERIOR PROFILE	2″ high standing seam with a Mesa Wave pattern, nominal 1/8″ deep, between the seams. Exterior profile can be smooth on roof slopes less than 3:12.
INTERIOR PROFILE	Mesa wave pattern, nominal 1/8″ deep. Light Mesa wave pattern, nominal 1/16″ deep.
FOAM CORE	Foamed-in-place, Non-CFC & zero ODP polyurethane, Factory Mutual Class 1 approval.

THERMAL VALUE

R VALUE WITH AIR FILM		75° Mean	40° Mean
	2″ PANEL	15.14	17.03
	2-1/2″ PANEL	18.71	21.29
	3″ PANEL	22.27	25.55
	4″ PANEL	29.42	34.06
	5″ PANEL	36.56	42.58
	6″ PANEL	43.71	51.09

1. R-Values include the air films on each side of the panel.
2. 75° Mean based on ASTM C518 Thermal Testing. 40° Mean based on ASTM C1363 Thermal Testing (Values for C1363 based on 4″ panel testing). All values for other thicknesses extrapolated.

MODULE WIDTH	30″, 36″ & 42″
PANEL THICKNESS	2″, 2-½″, 3″, 4″, 5″ & 6″
PANEL LENGTHS	Standard 9′-6″ to 53′-0″.
EXTERIOR FACINGS	Stucco embossed, G-90 galvanized and/or AZ-50 aluminum-zinc coated steel in 24 Ga. and 22 Ga.
INTERIOR FACINGS	Stucco embossed, G-90 galvanized and/or AZ-50 aluminum-zinc coated steel in 26 Ga., 24 Ga. and 22 Ga.
EXTERIOR FINISHES & COLORS	Siliconized Polyester, Fluropon® Full-Strength 70% PVDF Fluoropolymer Coating. Note: 1. Dark colors are not recommended for exterior color on cooler and freezer buildings. 2. Prices may vary by color, gauge and quantity of metal.
INTERIOR FINISHES & COLORS	USDA-compliant Polyester, Igloo White. USDA-compliant PVC Plastisol White.
PANEL JOINT	Mechanically closed single lock standing seam at the exterior side joint. The interior side joint is a single tongue-and-groove interlock.
FASTENING	Two-piece clip with fasteners concealed in the side joint. Cold Storage applications may require alternate methods of attachment. Contact Robertson.
UPLIFT PERFORMANCE	UL 90 rated, Factory Mutual 4471 approvals and Florida Building Code approved. Dade County NOA No. 03-0707.03.
FM Approved Class 1 with no height restrictions.	

TESTS AND CERTIFICATIONS

		Standard	Standard / Test Description
US Certifications	Fire Performance	FM Approval Standard 4880	Class 1 Fire Rating of Insulated Wall, Ceiling and Roof Panels
		NFPA 259	Test Method for Potential Heat of Building Materials
		NFPA 286	Fire Tests for Evaluating Contribution of Wall and Ceiling Finish to Roof Fire Growth
		ASTM E84	Surface Burning Characteristics of Building Material
	Structural Performance	ASTM E72	Strength Tests of Panels for Building Construction
		ASTM E1592	Structural Performance of Metal Roof and Siding Systems by Uniform Static Air Pressure Differences
		FM Approval Standard 4471	Class 1 Exterior Roof Structural Performance
		UL 580	Uplift Resistance of Roof Assemblies
		UL 1897	Uplift Tests for Roof Covering Systems
	Vapor Barrier Performance	ASTM E1646	Water Penetration of Exterior Metal Roof Panel Systems by Static Air Pressure Differences
		ASTM E1680	Rate of Air Leakage Through Exterior Metal Roof Panel Systems
	Thermal Performance	ASTM C518	Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
		ASTM C1363	Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus
	Special Approvals	City of Los Angeles	Product Approval for City/County of Los Angeles
		Miami-Dade Wall	Miami-Dade County Product Control Approved NOA No. 13-0327.01, Expiration Date 04/22/2015
Canadian Certifications	Fire Performance	CAN/ULC S102	Surface Burning Characteristics of Building Materials and Assemblies
		CAN/ULC S126	Fire Spread Under Roof-Deck Assemblies
		CAN/ULC S138	Fire Growth of Insulated Building Panels in a Full-Scale Room Configuration

Load span tables and notes are available at RobertsonBuildings.com

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