

1. Product Overview

1.1 Product Identifier

Product Name: Ballesta® 84R System Strip Panel

Product Code: [Customizable, e.g., 84R-84×Custom×0.7]

Description: The Ballesta 84R is an 84mm-wide round-edge strip ceiling system featuring roll-formed rounded panel edges. The soft, sculpted profile creates a warm and inviting ceiling aesthetic for hospitality, retail, and reception environments. The open joint design with rounded edges produces delicate shadow lines between panels, adding depth and subtle texture to the ceiling plane. The system uses a concealed carrier grid for a clean monolithic appearance, available in finishes including PVDF, powder coating, anodized, wood grain, and UV printing.

2. Technical Specifications

Item	Specification	Test Standard
Aluminum Substrate Material	Indoor: AA 3003 (H24 Temper) Outdoor: AA 3003/5005 (H24 Temper)	YS/T429.1, GB/T3190-2020
Panel Width	84mm Error: Width±0.5mm, Length±2mm	YS/T429.2, ISO 128
Panel Thickness	0.6 - 0.8mm (Substrate) Thickness Error: ±0.03mm	YS/T429.2, ASTM B209 (thickness)
Surface Treatment	PVDF (Fluorocarbon) / Powder Coating / Anodized / UV Printing / Wood Grain Default: PVDF for exterior, Powder coating for interior	PVDF: AAMA 2605 Powder Coating: AAMA 2604 Anodized: AAMA 611, GB/T 5237.2

		Gloss: ISO 2813
Coating Thickness	PVDF: $\geq 25\mu\text{m}$ Powder Coating: $\geq 60\mu\text{m}$ Anodized: $\geq 15\mu\text{m}$ (AA15, architectural grade)	ASTM D7091
Joint Type	Open joint with roll-formed round edges Round-edge profile with consistent radius Concealed carrier grid installation	JG/T 450 (Metal Ceilings), GB/T 23444
Color Performance	Full RAL/Pantone color range available Monochrome color difference: $\Delta E^*_{ab} \leq 1.5$ Custom color matching	ISO 7724-1, ASTM D2244
Adhesion Strength	High adhesion (no peeling/delamination under standard cross-cut test)	ASTM D3359 Method B (Cross-cut), GB/T 9286
Pencil Hardness	$\geq \text{HB}$ (coated surface, scratch resistance per ASTM D3363)	ASTM D3363
Fire Resistance Rating	Grade A combustion performance (Non-combustible) GB 8624 Class A ASTM E84: Flame Spread Index ≤ 25 , Smoke Developed Index ≤ 50 BS 476: Class 1	GB 8624, ASTM E84, BS 476
Flatness	$\leq 1.5\text{mm/m}$ (No wavy deformation/uneven defects)	YS/T429.1, YS/T429.2

Acoustic Performance	Up to 0.75 NRC with acoustic backing	ISO 354, ASTM C423
Corrosion Resistance	High temperature resistance: ≤70°C High humidity resistance: RH≥95% Salt spray resistance: 5% NaCl, ≥1000h (no blistering/pitting)	ASTM B117, GB/T 10125
Tensile Strength	3003 series: 145-180MPa 5005 series: 145-185MPa	GB/T 3880, ASTM B209 (tensile per ASTM E8/E8M)
Length	Custom up to 6000mm Standard lengths: 3000mm, 6000mm	YS/T429.1
Density	2.70 g/cm ³	ASTM D792

3. Manufacturing Process

3.1 Aluminum Substrate Cutting:

Precision cutting of 3003/5005 series aluminum sheet into 84mm width strips, standard length up to 6000mm, ensuring dimensional tolerance (Length±2mm, Width±0.5mm, Thickness±0.03mm).

3.2 Surface Pretreatment:

Degreasing, cleaning and chemical conversion treatment on aluminum strip surface to enhance coating adhesion and improve overall corrosion resistance.

3.3 UV Printing

Application of PVDF (fluorocarbon), powder coating, anodized finish, wood grain, or UV printing to the pretreated strip surface. PVDF provides premium weather resistance with 30-year durability. Powder coating offers economical wide color range. Anodized delivers natural metallic appearance with scratch resistance. All finishes meet standard thickness and adhesion requirements.

3.4 Forming & Splicing Processing

Precision roll-forming of the aluminum strip into the round-edge profile shape. Consistent rounded edges are formed on both sides of each panel with tight radius control. The open joint design with roll-formed edges creates shadow lines between panels.

3.5 Post-Processing:

Edge trimming, deburring and flatness calibration of finished strips. Multi-point testing of surface finish, color consistency and dimensional accuracy to ensure all indicators meet standards.

3.6 Installation Accessory Matching:

Configure concealed carrier grid system including main tees, cross tees, perimeter wall angles, hangers and suspension components suitable for the concealed 84R strip ceiling installation.

4. Application Scope

This round-edge strip ceiling system is widely used in architectural applications requiring refined aesthetics, including but not limited to:

- Hotel lobbies, restaurants and reception areas
- Boutique retail stores and showrooms
- Premium office receptions and conference rooms
- Shopping malls and commercial public spaces
- Hospitality and leisure venues requiring warm inviting ceiling design

5. Compliance Standards

- **GB/T 23444: Metal and Metal-Composite Ceilings**
- **JG/T 450: Metal Ceilings**
- **GB 8624: Classification for Burning Behavior of Building Materials**
- **YS/T429.1: Aluminum Curtain Wall Panels - Part 1: Panel**
- **YS/T429.2: Aluminum Curtain Wall Panels - Part 2: Testing**
- **AAMA 2605: Voluntary Specification for High Performance Organic Coatings (PVDF)**
- **AAMA 611: Voluntary Specification for Anodized Architectural Aluminum**
- **ASTM B117: Standard Practice for Operating Salt Spray (Fog) Apparatus**

6. Packaging & Storage

Packaging: Each panel is covered with PE film to prevent scratches, then packed in wooden crates with foam padding to avoid collision and deformation during transportation. The folding edge and splicing part are protected by special anti-collision accessories.

Storage: · Store in a dry, ventilated and rainproof warehouse, avoid direct sunlight, high temperature ($>70^{\circ}\text{C}$) and high humidity ($\text{RH}>95\%$) environment.

· Avoid contact with sharp objects, chemicals and corrosive substances to prevent surface damage and substrate corrosion.

· Stacking height shall not exceed 3 layers to prevent flatness damage caused by excessive pressure.

· The storage site shall be far away from fire sources to meet the fire safety requirements of Grade A fire-resistant materials.

7. Quality Assurance

All panels undergo strict multi-item quality inspection before delivery, including

dimensional tolerance, thickness error, surface gloss, color difference, flatness, coating adhesion, wear resistance and fire resistance test.

All panels undergo strict multi-item quality inspection before delivery, including dimensional tolerance, profile accuracy, surface finish, color difference, flatness, coating adhesion, fire resistance and corrosion resistance tests per applicable standards.

We provide a warranty period of not less than 15 years for the product (under normal use conditions and compliance with installation and storage requirements). Within the warranty period, the surface coating shall have no obvious fading, peeling or cracking; the aluminum substrate shall have no corrosion or deformation; and the panel profile shall remain dimensionally stable.
