

1. Product Overview

1.1 Product Identifier

Product Name: Ballesta® 80B System Strip Panel

Product Code: [Customizable, e.g., 80B-30×Custom×0.7]

Description: The Ballesta 80B open joint strip ceiling is a versatile product family offering panel widths of 30mm, 80mm, 135mm, 185mm and more. Manufactured from high-quality AA3003/AA5005 series aluminum alloy, it features an open joint design with square capped panel edges. All panel widths share a single B-type keel system, enabling designers to create custom rhythmic patterns and unique combinations without added cost. Ideal for spaces where airflow, easy access, and visual rhythm are priorities.

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 Options	30mm, 80mm, 135mm, 185mm (custom widths available) 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,	PVDF: AAMA 2605 Powder Coating: AAMA 2604 Anodized: AAMA 611, GB/T

	Powder coating for interior	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 (B-type keel system) Joint gap: 15-20mm Edge detail: Square capped	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 per customer sample	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 / BS 476-6: Class 0	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 0.70 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 per ASTM B117)	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 roll forming of 3003/5005 series aluminum coil into strip profiles with panel widths ranging from 30mm to 185mm (custom widths available). Standard thickness 0.6-0.8mm, custom 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 the overall corrosion resistance of the panel.

3.3 UV Printing

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

3.4 Forming & Splicing Processing

Precision roll-forming of the aluminum strip into the required profile shape with square capped panel edges. The open joint design creates consistent gaps between panels

(approximately 15-20mm), enabling natural air circulation. Each panel profile is formed to exact dimensional tolerances for uniform appearance.

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 the standard.

3.6 Installation Accessory Matching:

Configure complete B-type keel system including B-type main keels, C Channel, hangers for B-type keel, hangers for C Channel, keel connectors, rods and suspension components. All panel widths share the same B-type keel system, simplifying material management and installation.

4. Application Scope

This open joint strip ceiling system is widely used in architectural applications requiring ventilation and easy access, including but not limited to:

- Airport terminals, metro stations and railway stations
- Parking garages, canopies and semi-exterior walkways
- Shopping malls, office buildings and hotel lobbies
- Transport infrastructure requiring passive ventilation and smoke evacuation
- Commercial and public spaces requiring clean linear appearance with natural airflow

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.
