

1. Product Overview

1.1 Product Identifier

S-Shape Linear Baffle Ceiling

SSB-200

Ballesta S-Shape Baffle Ceiling is a snap-fit single-blade aluminum linear baffle system. Each S-shaped blade clips directly onto the dedicated steel keel from below – no thread-through, no tools, no additional clips required. The S-shape profile provides a distinctive aerodynamic appearance with enhanced lateral stability. Blade heights of 100mm, 150mm, and 200mm are available in standard lengths up to 4000mm. The system delivers an open area ratio of 50–70% making it ideal for large open-plan commercial spaces, retail environments, and transportation hubs where fast installation and cost-effectiveness are priorities.

2. Technical Specifications

Product Name	S-Shape Linear Baffle Ceiling	Ballesta® SSB Series
Product Type	Snap-fit single-blade aluminum baffle	S-shaped profile
Blade Heights	100mm, 150mm, 200mm	Standard heights
Standard Length	≤4000mm	Custom lengths available
Panel Thickness	0.6–0.7mm	AA3000 series aluminum
Spacing Between Blades	Adjustable (typically equal to blade height)	Per design specification
Open Area Ratio	50–70%	Dependent on spacing
Weight	2–5 kg/m ² approximately	Varies by blade size
Mounting System	Dedicated steel snap-fit baffle keel	Blade clips from below

Suspension Type	Hanger rods + dedicated steel baffle keel	No main tees required
Surface Finish	Powder coating / Wood grain transfer	All RAL colours
Fire Classification	Class A1 – non-combustible	EN 13501-1 / ASTM E84
Acoustic Performance	Acoustic infill or perforated options available	Optional enhancement
Installation	Snap-fit: blade clips directly onto keel from below	No tools, no clips required
Maintenance	Individual blades removable for plenum access	Easy demounting
Applications	Retail, offices, airports, transport hubs, parking garages, large halls	Open-plan spaces
Certification	ISO 9001:2015 / ISO 14001:2015	SISA certified

3. Manufacturing Process

3.1 Aluminum Substrate Cutting:

Precision cutting of 3003/5005 series aluminum sheet into 300mm×3750mm size with 0.7mm thickness, ensuring dimensional tolerance (Length±2mm, Width±1mm, Thickness±0.03mm).

3.2 Surface Pretreatment:

Degreasing and dust removal treatment on aluminum substrate surface to enhance the adhesion between UV ink and substrate, and improve the overall corrosion resistance of the panel.

3.3 UV Printing

Coating environmentally friendly UV ink on the pretreated substrate, precisely controlling ink dosage, printing speed and curing time. The ink is cured by UV technology to form a uniform and firm coating (≥60µm), and the matte surface gloss is adjusted to 15-25°. Custom texture (wood grain/stone grain) can be printed according to customer requirements with high restoration degree.

3.4 Forming & Splicing Processing

Edge folding treatment of the panel with precise control of fold angle ($90^{\circ}\pm 1^{\circ}$) and consistent fold width, no visible cracks/distortions at the folds. Seamless splicing design is adopted, and the joint is reinforced by intermittent welding or structural adhesive to ensure structural stability.

3.5 Post-Processing:

Edge trimming, deburring and flatness calibration of the panel. Multi-point testing of surface gloss, color difference and thickness by professional equipment to ensure all indicators meet the standard.

3.6 Installation Accessory Matching:

Configure special hangers for ceiling installation; steel support frames or counter supports are equipped for hangers longer than 1.5m to enhance the stability of the suspension system.

4. Application Scope

This aluminum panel is widely used in architectural decoration fields, including but not limited to:

- Indoor ceilings, interior walls, column cladding and ground decoration (special anti-slip customization)
- Exterior facades of commercial buildings, office buildings and residential buildings
- Decoration of public places such as shopping malls, hotels, airports and subway stations
- Customized decoration projects requiring Grade A fire resistance, seamless splicing and matte effect
- Decoration in harsh environments such as high temperature ($\leq 70^{\circ}\text{C}$), high humidity ($\text{RH}\geq 95\%$) and 5% salt spray concentration

5. Compliance Standards

- **YS/T429.1:** Aluminum Curtain Wall Panels - Part 1
- **YS/T429.2:** Aluminum Curtain Wall Panels - Part 2
- **GB/T3190-2020:** Chemical Composition of Wrought Aluminum and Aluminum Alloys
- **GB/T3880:** Aluminium and Aluminium Alloy Plates and Sheets for General Industrial Use
- **National Fire Resistance Standard for Building Materials** (Grade A combustion performance)
- **ASTM D1186:** Standard Test Method for Thickness of Organic Coatings
- **ASTM D3359:** Standard Test Methods for Measuring Adhesion by Tape Test
- **AAMA 501.6:** Standard Practice for Installation of Exterior Wall Cladding Panels

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.

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 UV printing coating shall have no obvious fading, peeling, cracking and color loss; the aluminum substrate shall have no corrosion, deformation and other defects, and the splicing part shall remain stable and firm.
