
Stone Curtain Wall Dry-Hanging System

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Intended readers: façade consultants / contractors

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Scope and Referenced Standards

This guide covers material selection, fabrication, installation and acceptance of natural-stone curtain-wall dry-hanging systems for building façades. Key references: EN 1469 (cladding slabs), EN 12059 (dimensional stonework), ASTM C503 / C615, GB/T 18601, GB/T 19766, plus the product standards of under-cut anchor and kerf-hook systems.

Stone Varieties and Mechanical Requirements

Choose dense, uniform varieties without pronounced bedding planes or colour-band defects; limestones require verified freeze-thaw resistance.

Flexural strength: under-cut anchor systems generally require a mean ≥ 8 MPa (single value ≥ 5 MPa), re-checked against project wind load and panel size.

Water absorption $\leq 0.5\%$; cold regions require passing freeze-thaw cycling tests.

Panel thickness: normally ≥ 25 mm (under-cut anchor) or ≥ 30 mm (kerf-hook large panels); super-high-rise and wide-module grids need separate calculation.

Anchoring System Selection

Under-cut (dot-fixed) anchors: lower stress concentration and open-joint capability — suited to premium façades and veining requirements.

Short/continuous kerf hooks: high installation efficiency for large standardised grids.

Open vs closed joints: open joints require a rainscreen and ventilated cavity design; closed joints require weather-resistant sealant with verified compatibility.

Fabrication and Installation Control Points

Kerf / anchor-hole machining tolerance ± 0.5 mm — HSST guarantees consistency with five-axis CNC and digital slotting.

Aluminium anchors and stainless-steel adapters require material certificates; isolation gaskets prevent galvanic corrosion.

Perform on-site pull-out tests before installation; verify veining numbering against the layout drawings to prevent mixed batches.

Acceptance and Maintenance

Sample-check flatness per grid (2 m straightedge ≤ 2 mm), joint uniformity and sealant appearance; after handover, an annual visual survey and a sealant-specific inspection every 3–5 years are recommended. HSST provides end-to-end service from shop-drawing layout and fabrication to installation supervision.