



Inspect Aluminum Composite Panel Support Rails & Brackets

Inspect aluminum composite panel support rails and brackets with an interactive checklist. Commentable steps, attach evidence, and export as PDF/Excel for compliant, traceable sign-off.

Project:

Date:

Filled by:

Pre-Installation Verification

1	Confirm the latest approved subframe information is available on site.
2	Verify approved shop drawings, bracket schedules, and method statements match site conditions; acceptance: latest revision stamped approved; evidence: photo of approval stamp and revision index.
3	Survey substrate with laser level; acceptance: as-built tolerances recorded and any deviation has a mitigation plan; evidence: level readings and marked elevation sketch.
4	Inspect delivered rails, brackets, anchors, and isolators; acceptance: materials match specifications and manufacturer; evidence: delivery notes, batch numbers, and product datasheets photographed.
5	Check finishes and protection: no deep scratches, burrs, or coating damage; acceptance: intact finish, no bare metal; evidence: close-up photos and damage log if any.
6	Confirm calibrated tools available (torque wrench, pull tester, laser); acceptance: valid calibration within 6 months; evidence: certificates uploaded to checklist.

Setting Out and Bracket Installation

7	Transfer grid and face line with total station/laser; acceptance: datum within ± 3 mm across elevation; evidence: screenshots/prints and site photos.
8	Mark bracket positions per layout; acceptance: spacing within ± 10 mm and aligned to grid; evidence: tape measure photo and marked substrate.
9	Confirm specified stand-off range achievable; acceptance: bracket adjustment falls within manufacturer limits; evidence: measurement photo and note of required shims.
10	Install isolation/thermal break pads behind brackets where required; acceptance: full contact, correct thickness and material; evidence: close-up photos and product label.
11	Drill anchor holes to specified diameter/depth with dust removal (blow-brush-blow); acceptance: depth $+0/-5$ mm; evidence: depth gauge photo and cleaned hole.
12	Install mechanical/chemical anchors per manufacturer; adhere to curing times; acceptance: torque to specified N·m, no spin; evidence: torque log and batch/expiry for resin.
13	Conduct sample pull-out tests (per lot/elevation) before proceeding; acceptance: meets/exceeds manufacturer/engineer minimum capacity; evidence: test gauge readings with location tags.

Rails Alignment and Fixings	
14	Mount vertical rails onto brackets with compatible fixings; acceptance: correct screw/bolt type, washers fitted, threads fully engaged; evidence: close-up photos.
15	Plumb and straighten rails using 2 m level/laser; acceptance: verticality ± 2 mm per 2 m, line offset ≤ 3 mm; evidence: level photos and laser report.
16	Set rail face to design line; acceptance: face position within ± 5 mm of design; evidence: calibrated gauge or laser reading with reference.
17	Provide expansion gaps at rail splices; acceptance: 6–10 mm or per manufacturer; evidence: feeler gauge/tape photo at splice.
18	Install splice/connectors with correct edge distances; acceptance: per manufacturer hole/edge spacing, no burrs; evidence: measurement photo and connector label.
19	Set and mark bracket locking screws/bolts after final alignment; acceptance: torque verified, paint-marked for movement detection; evidence: torque record and paint marks.

Thermal, Isolation and Corrosion Control	
20	Separate dissimilar metals (aluminum–steel) with isolators/tapes; acceptance: no metal-to-metal contact; evidence: detail close-ups.
21	Maintain ventilated cavity and drainage paths; acceptance: unobstructed ≥ 20 mm behind rails; evidence: ruler photo along cavity.
22	Coordinate fire barrier interfaces; acceptance: rails free to move with 10–15 mm allowance, no obstruction; evidence: photo with dimension and reference detail.

Structural Testing and Records	
23	Tag brackets/rails with location IDs; acceptance: IDs match grid/elevation drawings; evidence: marked elevation and register.
24	Capture as-built rail coordinates/face line; acceptance: within ± 5 mm of design; evidence: total station/laser exports attached.
25	Compile batch numbers, certificates, and calibration docs; acceptance: documents complete and legible; evidence: uploaded PDFs/photos.

Final Review and Handover	
26	Verify earthing/bonding of metal subframe if specified; acceptance: continuity $< 1 \Omega$ where required; evidence: multimeter reading and approval note.
27	Remove temporary films/tapes that could trap moisture/heat; acceptance: rails clean, no residues; evidence: photos and waste record.
28	Issue QA sign-off confirming readiness for panel installation per approved project specifications and authority requirements; acceptance: digital signatures completed; evidence: signed checklist.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
Inspect aluminum composite panel support rails and brackets with this focused, field-ready checklist designed for rainscreen subframes. It targets ACP rails, adjustable façade brackets, and anchorage into concrete or masonry substrates, ensuring alignment, durability, and structural reliability. The scope limits activities to subframe verification—no panel hanging or sealant work—so teams can zero in on bracket positioning, rail plumb, thermal breaks, and compatible fixings. By addressing key risks like anchor failure, galvanic corrosion, blocked ventilation cavities, and rail movement restraint, this checklist helps prevent costly rework and water ingress, while safeguarding long-term performance. Acceptance cues emphasize tolerances, manufacturer torque values, and approvals per approved project specifications and authority requirements. Practical outcomes include precise grid layout, verified fixings, evidenced pull-out tests, and clean documentation for sign-off. Use the interactive features to tick steps, add comments, attach photos and readings, then export to PDF/Excel with a secure QR code for traceable handover.	1. Preparation: gather approved shop drawings, bracket/rail schedules, manufacturer datasheets, and method statements. Bring calibrated laser, 2 m level, torque wrench, pull tester, drill, PPE, and cleaning kit. 2. Open the checklist on a tablet or phone. Start a new elevation/zone record and prefill project, grid references, and team roles. 3. Using the Interactive Checklist: tick items as completed, add comments for deviations, and attach photos, torque logs, and test readings at each step. 4. Use comment threads to request approvals from supervisors. Tag locations on elevation sketches and link bracket/rail IDs for traceability. 5. Review completeness: filter for unticked or commented items. Resolve nonconformities, reattach evidence, and mark items ready for reinspection. 6. Export to PDF/Excel with embedded photos and logs. Enable QR code verification and share with stakeholders and the design team. 7. Sign-Off: capture digital signatures from installer, QA, and supervisor. Archive records per approved project specifications and authority requirements.