Aluminium Standing Seam Roof

OMEGA STEEL CO.
Istanbul · Dilovası plant

Aluminium standing seam is the concealed-fix metal roof for architecture: long panels with raised, interlocking seams — snap-lock 25 mm or mechanically double-seamed 65 mm on a halter clip, the Kalzip / Bemo system type — rolled from EN AW-3004 or 3005 H44 roofing alloy in 0.70–1.20 mm, with no penetrations, unlimited thermal movement on sliding clips, curvature in both directions and a 40-year life without paint or maintenance. It roofs airports, stadiums, mosques, terminals, halls and villas from the Gulf to the Balkans in stucco-embossed mill finish or PVDF colour, at low pitches down to 1.5°, in panel lengths up to 30 m rolled in our plant or on site with our mobile roll-former. Panels, clips, ridge and eave systems, rooflights and fall-arrest points are supplied as one kit, with design support.

EN AW-3004 / 3005 H44 | 0.70–1.20 mm | Snap 25 · double-lock 65 | Pitch from 1.5° | Panels to 30 m · curved

A standing-seam roof is the one metal roof an architect draws without an apology: no visible screws, no rib pattern, a plane of matt aluminium that follows the curve of the building. We roll the two seam systems — snap 25 and double-lock 65 — on our lines and on site.

PANEL SYSTEMS AND DIMENSIONS

System	Seam	Panel widths	Thickness	Min. pitch	Max. length	Curving	Typical use
Snap-lock 25	25 mm, snap on clip	430 / 500 mm	0.70–0.80 mm	7° (5° with sealant)	12 m plant / 20 m site	convex R ≥ 15 m (site spring)	villas, houses, façades, small halls
Double-lock 65 — 305	65 mm, seamed 360°	305 mm	0.90–1.00 mm	1.5°	30 m (site)	convex R ≥ 6 m, concave R ≥ 25 m, tapered	curved and freeform roofs, high wind
Double-lock 65 — 400	65 mm, seamed 360°	400 mm	0.90–1.20 mm	1.5°	30 m (site)	convex R ≥ 8 m, concave R ≥ 40 m	the standard architectural roof
Double-lock 65 — 500	65 mm, seamed 360°	500 mm	1.00–1.20 mm	1.5°	30 m (site)	convex R ≥ 12 m	large flat-pitch halls, economical cover
Façade / soffit 25	25 mm, snap	300 / 430 mm	0.70–0.80 mm	vertical	8 m	—	walls, soffits, fascias

Clip spacing 0.8–1.5 m by wind zone and panel width; clips are polyamide-thermal-break halters (65) or stainless / aluminium sliding clips (25). Panels longer than 12 m are rolled on site with our mobile roll-former from coil delivered to the project.

ALLOY, TEMPER AND FINISH

Item	Standard roofing	Coastal / marine	Coloured
Alloy	EN AW-3004 / 3005 H44	EN AW-3004 H44 or 5754 H24	EN AW-3005 H44 coil-coated
Yield Rp0.2	≥ 190 / 165 MPa	≥ 190 / 130 MPa	≥ 165 MPa
Thickness	0.90–1.00 mm (65), 0.70–0.80 (25)	1.00–1.20 mm	0.80–1.00 mm
Surface	stucco-embossed mill finish	stucco mill finish	PVDF 25–35 µm any RAL, metallic, matt
Life to first maintenance	40+ years	40+ years (C5-M)	25–30 years colour, roof 40+
Underside	mill or protective lacquer	protective lacquer	polyester backing coat

Stucco is standard because a smooth 400 mm panel shows every reflection of the substructure (oil-canning); smooth mill and PVDF panels are rolled from tension-levelled coil and specified with 1.00 mm minimum for flatness.

SPAN, CLIPS AND WIND UPLIFT

Thickness	Normal zone (≤ 1.0 kN/m²)	Coastal / edge zone (1.5 kN/m²)	Corner / high-wind (2.5 kN/m²)
0.90 mm	1.5 m	1.2 m	0.8 m
1.00 mm	1.7 m	1.4 m	1.0 m
1.20 mm	2.0 m	1.6 m	1.2 m

Snap-lock 25/430 at 0.80 mm: 1.2 / 0.9 / 0.6 m. Uplift values from system tests; the roof engineer designs to EN 1999-1-4 or FM 4471 with the project's wind loads. Over insulation on a steel deck the clips sit on a thermal-break spacer rail.

ALUMINIUM VS STEEL STANDING SEAM VS TRAPEZOIDAL

	Aluminium double-lock 65	Aluminium snap-lock 25	Steel standing seam (PPGI / aluzinc)	Aluminium trapezoidal 38/151
Fixing	concealed halter, seamed	concealed clip, snapped	concealed clip	exposed screws
Min. pitch	1.5°	7°	3–5°	5°
Panel length	30 m (site)	12–20 m	12 m	12 m
Curving	convex / concave / tapered	convex only	limited	no
Thermal movement	free (sliding halter)	free (sliding clip)	limited	at fixings

	Aluminium double-lock 65	Aluminium snap-lock 25	Steel standing seam (PPGI / aluzinc)	Aluminium trapezoidal 38/151
Life, coastal	40+ yr unpainted	40+ yr	15–20 yr	40+ yr
Weight	≈ 2.9 kg/m² (1.0 mm)	≈ 2.3 kg/m²	≈ 5 kg/m²	≈ 2.4 kg/m²
Price index / m² (installed)	1.0	0.7	0.6	0.35
Choose for	architecture, low pitch, curves, 40-yr roofs	houses, villas, façades	budget seam roof inland	industrial roofs, budget

The steel standing-seam page is [here](/products/roofing/standing-seam/); the aluminium trapezoidal profiles are [here](/products/roofing/aluminium-trapezoidal-sheet/).

STANDARDS

EN 485 / EN 573-3 — aluminium sheet properties and alloys (EN AW-3004, 3005, 3105) · EN 1396 — coil-coated aluminium · EN 14782 — self-supporting metal roofing (CE) · EN 1999-1-4 (Eurocode 9) — aluminium sheeting design · EN 14783 — fully supported metal sheet (where used on decking) · FM 4471 / UL 580 — wind-uplift classification of standing seam (project spec)