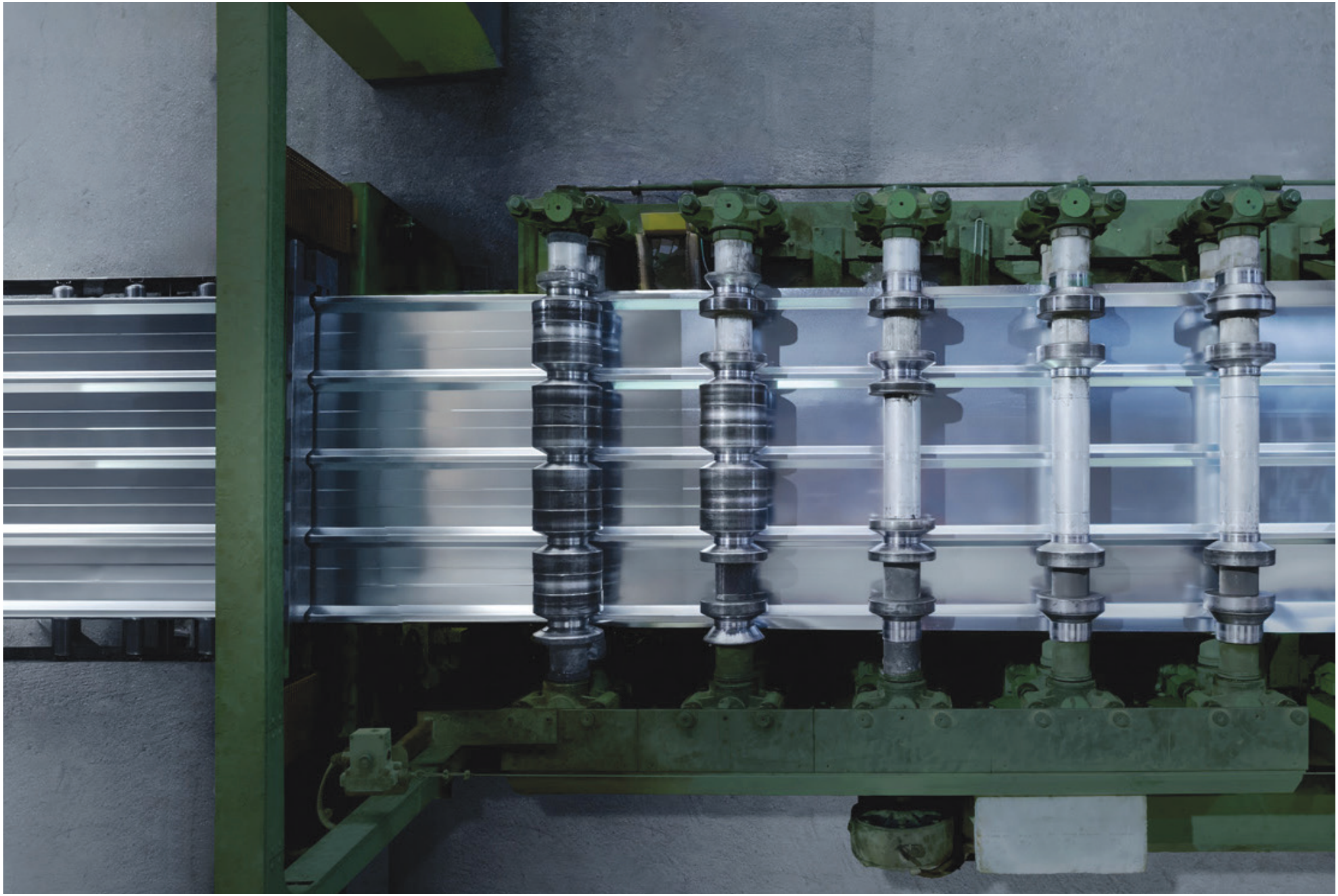
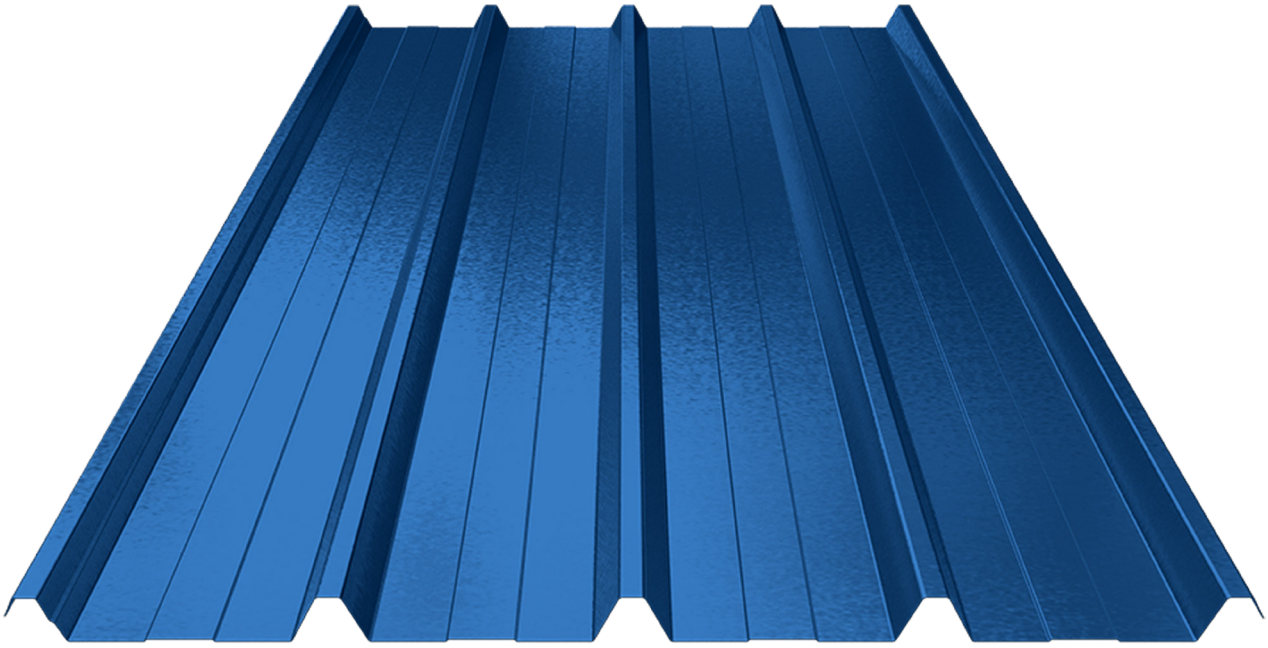


MetaLite COV Ridg 42/250

Self-supporting metal sheets with a 42/250 trapezoidal profile, suitable for roofing applications on all types of buildings

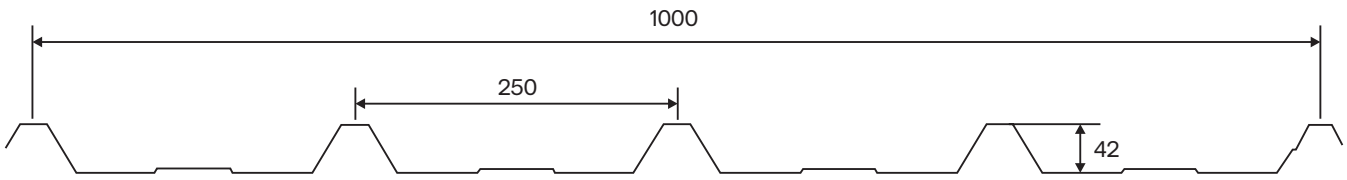


Available in

Effective cover width 1,000 mm

Length up to 12 m, depending on project requirements

The 42/250 trapezoidal profile offers the ideal strength-to-weight ratio.
Its side joint ensures excellent watertightness.



Alternatively, it can also be produced with a longitudinal curve as an architectural profile, with a radius of R > 700 mm, in order to eliminate corners.

Technical Specifications

Effective cover width [mm]	Developed width [mm]	Steel weight [kg/m]	Aluminium weight / width [kg/m]
1000	1250	4,91	1,72

The weight per linear metre was calculated based on:

- Sheet thickness 0.50 mm
- Steel density 7850 kg/m³
- Aluminium density 2750 kg/m³

Dimensional Tolerances

(Standards EN 14782 and EN 508)

Sheet thickness	t	Steel Standard: EN 10143 Aluminum Standard: EN 485-4
Profile depth	h	± 1,0 mm, h ≤ 50 mm ± 1,5 mm, 50 < h ≤ 100 mm ± 2,0 mm, h > 100 mm
Step of the profile	p	± 2,0 mm, h ≤ 50 mm ± 3,0 mm, 50 < h ≤ 100 mm ± 4,0 mm, h > 100 mm
Width of peaks and valleys	b	-1,0 mm ~ +4,0 mm
Effective cover width	w1,2,3	± 5,0 mm, h ≤ 50 mm ± 0,1*h ≤ 15 mm, h > 50 mm
Inner radius	r	± 2,0 mm
Deviation from straightness	δ	≤ 2,0 mm/m & ≤ 10 mm
Deviation from orthogonality	S	No requirement
Leaf length	l	-5 mm ~ +10 mm, L ≤ 3000 mm -5 mm ~ +20 mm, L > 3000 mm
Side overlap deviation	D	± 2.0 mm, l < 500 mm
Rib depth	hr vs	-1,0 mm ~ +3,0 mm -0,15*v ~ +2,0 mm
Rib position	ha,b,k	± 3,0 mm
Longitudinal acne female	s	-2,0 mm ~ +5,0 mm & s ≥ 10,0 mm
Male longitudinal acne	buf	bu/2 + 5,0 ≤ buf ≤ bu-5, bu ≤ 30,0 mm 20,0 ≤ buf ≤ bu-5, bu > 30,0 mm
Peak curvature	he	± 3.0 mm
Hole diameter	dn	± 0,2 mm, Ø ≤ 5,0 mm -0,2 mm ~ +0,4 mm, Ø > 5,0 mm
Step holes	ux	- 1,0 mm ~ +2,0 mm
Line spacing	v	± 2.0 mm
Column spacing	uy	± 2.0 mm
Number of lines	-	± 3.0 %, full perforation
Number of columns	-	± 3.0 %, full perforation

Steel sheet with galvanized protection, thickness > 0,6 mm.
Aluminum sheet, thickness > 0,7mm.
Stainless steel sheet, thickness 0,7mm.

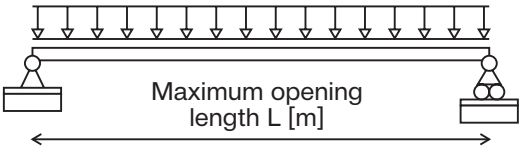
Nominal thickness	mm	0,45	0,50	0,60	0,80	0,90	1,00
Cross-section weight	Kg/m²	4,91	5,89	7,85	9,81	12,27	10,95
Moment of inertia Ix	cm⁴ /m	12,72	15,27	20,36	25,44	31,80	29,98
Lower leakage limit	N/mm²	275			EN 10346:2013		

(concerns usable width 896mm)

Max load in span Load bearing capacity (kg/m²)

- Single-span structural system
- Maximum service load Q in kN/m² for positive bending moment, negative bending moment, and vertical shear
- Steel grade DX51D+Z
- Maximum span length L [m]
- Width of simply supported bearing 50mm

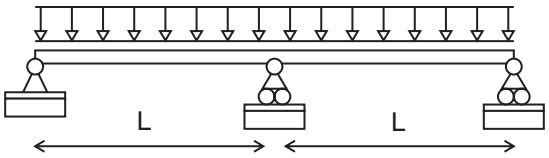
Single Span Load Table



PANEL THICKNESS	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00
0,50	4,38	2,79	1,92	1,40	0,98	0,68	0,50	0,38	0,29
0,60	5,82	3,70	2,55	1,77	1,18	0,83	0,61	0,45	0,35
0,80	8,26	5,26	3,63	2,36	1,59	1,11	0,81	0,61	0,47
1,00	10,2	6,54	4,51	2,95	1,97	1,38	1,01	0,76	0,58
1,25	11,7	7,50	5,17	3,68	2,47	1,74	1,26	0,95	0,73

- Single-span structural system
- Maximum service load Q in kN/m² for positive bending moment, negative bending moment, and vertical shear
- Steel grade DX51D+Z
- Maximum span length L [m]
- Width of simply supported bearing 50mm

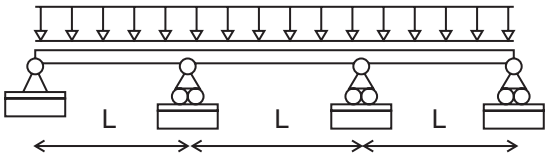
Multi Span Load Table



PANEL THICKNESS	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00
0,50	4,59	2,92	2,01	1,47	1,11	0,87	0,70	0,57	0,47
0,60	5,60	3,57	2,46	1,79	1,36	1,06	0,85	0,69	0,57
0,80	7,66	4,88	3,37	2,45	1,86	1,46	1,17	0,95	0,79
1,00	9,73	6,19	4,27	3,12	2,37	1,85	1,48	1,21	1,00
1,25	12,3	7,85	5,42	3,95	3,00	2,35	1,88	1,53	1,27

- Single-span structural system
- Maximum service load Q in kN/m² for positive bending moment, negative bending moment, and vertical shear
- Steel grade DX51D+Z
- Maximum span length L [m]
- Width of simply supported bearing 50mm

Threes & Openings Table



PANEL THICKNESS	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00
0,50	5,74	3,66	2,53	1,85	1,40	1,10	0,88	0,70	0,55
0,60	7,03	4,48	3,09	2,26	1,72	1,35	1,08	0,86	0,66
0,80	9,60	6,12	4,23	3,09	2,35	1,84	1,48	1,15	0,88
1,00	12,1	7,76	5,36	3,92	2,98	2,33	1,87	1,44	1,11
1,25	15,4	9,84	6,80	4,96	3,78	2,96	2,38	1,79	1,38

Ultimate limit state in accordance with Eurocode 3 (EN 1993-1-3 and EN 1993-1-5).
For the serviceability limit state, a safety factor of 1.00 is applied to G (permanent loads) + Q (variable loads).
The allowable deflection for each span is defined as less than L/200 for G + Q and L/250 for Q only, where L is the span length.
For the ultimate limit state, a safety factor of S = 1.1 is applied for a load combination of 1.35 G + 1.50 Q.