

# Roof & Wall CLADDINGS

Roof and Wall Claddings were developed to provide an attractive appearance, good structural performance and ease of installation.

The main features can be summarised as follows:

1. Available in any transportable length.
2. Suitable for double skin site construction.
3. Profiles can be arranged vertically or horizontally.
4. Manufactured from prepainted galvanised steel - available in a variety of colours and finishes.



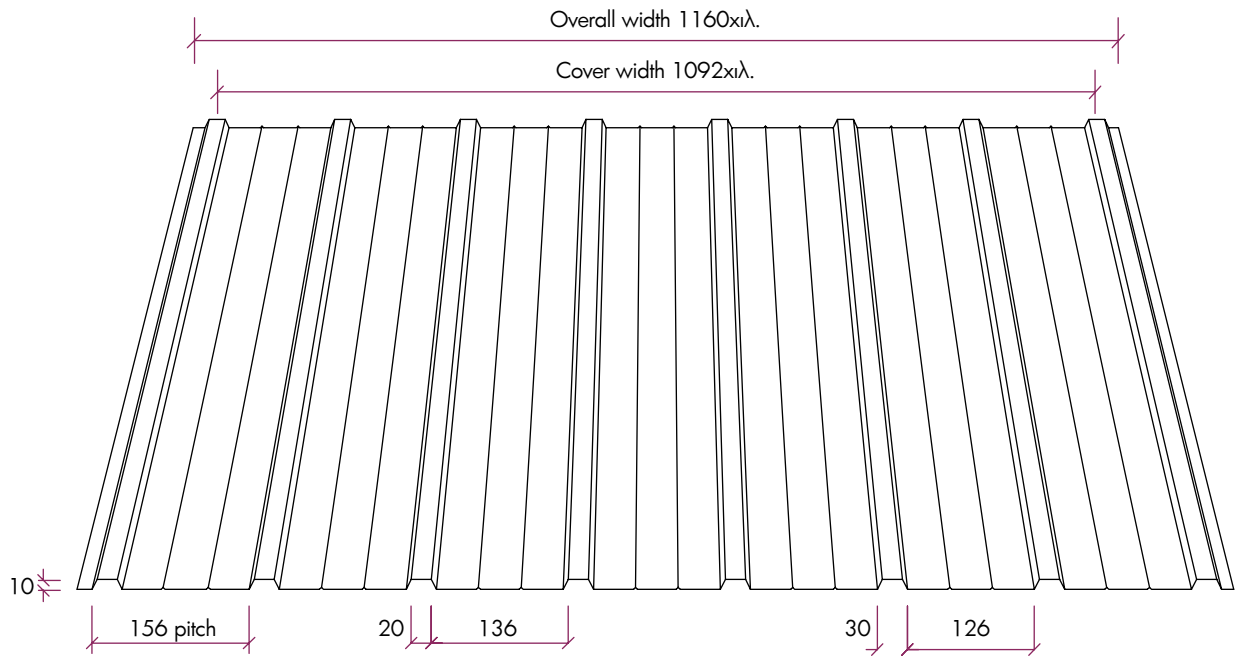
**NICOLAIDES & KOUNTOURIS  
METAL COMPANY LTD**

ESTABLISHED 1977

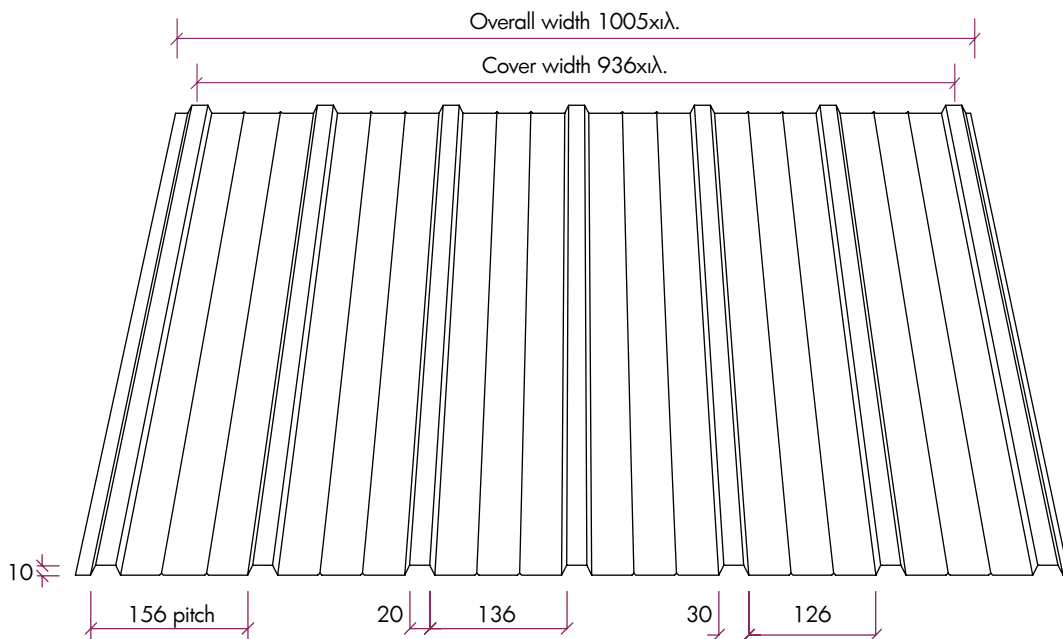
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# Wall Profile N&K 10

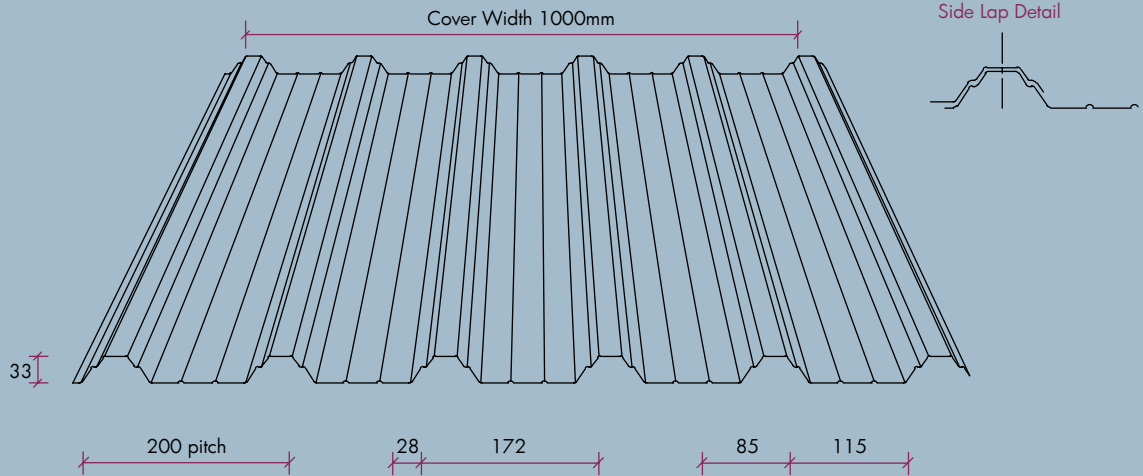
Type: N&K 10/1092



Type: N&K 10/936



# Roof Profile N&K 33



## Load Tables

The load tables are calculated in accordance with the European Recommendations for Steel Construction-ECCS TC7 and also with regard to 8.5.5950 requirements. The loads shown in the Tables have been produced by dividing the Ultimate load, by a Safety Factor of 1.5.

Material Yield Strength used in the Design Calculations is Z2 210N/mm<sup>2</sup>

## Material and Section Properties

Material Thickness m.m.	Weight per metre kgs.	Small Flange in Compression		Large Flange in Compression	
		I <sub>xx</sub> cm <sup>4</sup>	Z <sub>xx</sub> cm <sup>3</sup>	I <sub>xx</sub> cm <sup>4</sup>	Z <sub>xx</sub> cm <sup>3</sup>
0.50	4.907	9.050	4.062	5.499	3.163
0.60	5.888	11.399	5.155	7.232	4.278
0.70	6.869	13.609	6.160	9.101	5.529
0.80	7.850	15.748	7.117	11.092	6.914
0.90	8.832	17.861	8.055	13.198	8.433
1.00	9.813	19.962	8.984	15.412	10.089

## Applied Loads in KN/m<sup>2</sup>

DEFLECTION L/200 Self weight has been taken into account	Purlin Spacing mm											
	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	
Downward Loads												
Wind Uplift												

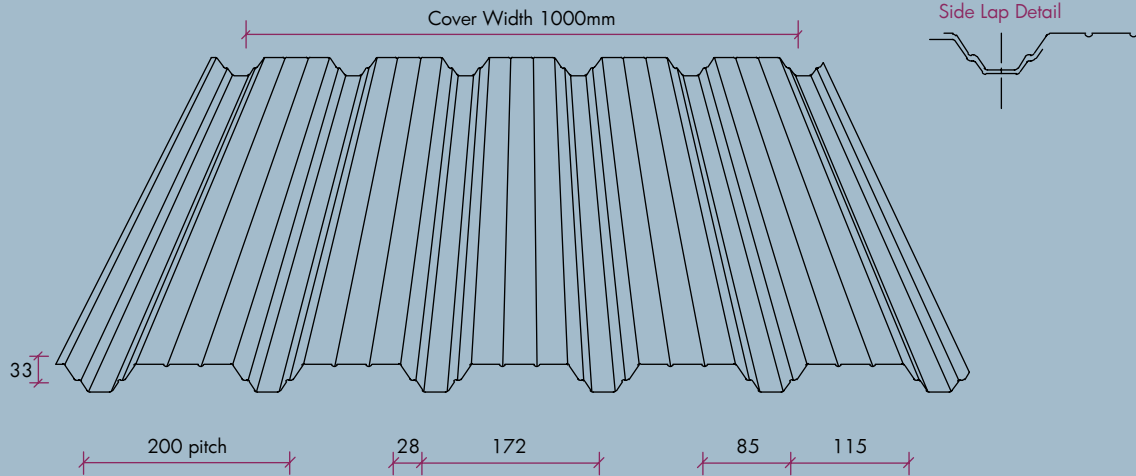
## Single Span

0.50	Dead+Super Uplift	4.50 3.59	3.12 2.50	2.29 1.60	1.72 1.08	1.21 0.76	0.88 0.55	0.66 0.42	0.51 0.32	0.40 0.25	0.32 0.20	0.26 0.17
0.60	Dead+Super Uplift	5.72 4.85	3.96 3.34	2.90 2.10	2.17 1.41	1.52 0.99	1.11 0.73	0.83 0.55	0.64 0.42	0.50 0.33	0.40 0.27	0.33 0.22
0.70	Dead+Super Uplift	6.83 6.26	4.73 4.19	3.47 2.65	2.59 1.78	1.82 1.25	1.32 0.91	0.99 0.69	0.76 0.53	0.60 0.42	0.48 0.34	0.39 0.27
0.80	Dead+Super Uplift	7.89 7.82	5.47 5.11	4.01 3.22	3.00 2.16	2.10 1.52	1.53 1.11	1.15 0.84	0.88 0.65	0.69 0.51	0.56 0.41	0.45 0.33
0.90	Dead+Super Uplift	8.94 9.53	6.19 6.07	4.54 3.83	3.40 2.57	2.39 1.81	1.74 1.32	1.30 0.99	1.00 0.77	0.79 0.60	0.63 0.48	0.51 0.39
1.00	Dead+Super Uplift	9.97 11.40	6.91 7.09	5.07 4.47	3.80 3.00	2.67 2.11	1.94 1.54	1.46 1.16	1.12 0.89	0.88 0.70	0.70 0.57	0.57 0.46

## Multi Span

0.50	Dead+Super Uplift	4.38 5.73	3.04 3.99	2.22 2.65	1.70 1.78	1.34 1.25	1.08 0.91	0.89 0.69	0.75 0.53	0.64 0.42	0.53 0.33	0.43 0.27
0.60	Dead+Super Uplift	5.93 7.27	4.11 5.06	3.01 3.49	2.30 2.34	1.82 1.65	1.47 1.20	1.21 0.90	1.02 0.70	0.84 0.55	0.67 0.44	0.55 0.36
0.70	Dead+Super Uplift	7.67 8.69	5.32 6.05	3.90 4.39	2.98 2.94	2.35 2.07	1.90 1.51	1.57 1.14	1.28 0.88	1.01 0.69	0.81 0.55	0.65 0.45
0.80	Dead+Super Uplift	9.60 10.04	6.66 6.98	4.88 5.14	3.73 3.58	2.94 2.52	2.38 1.84	1.93 1.38	1.48 1.07	1.16 0.84	0.93 0.67	0.76 0.55
0.90	Dead+Super Uplift	11.72 11.36	8.13 7.90	5.96 5.82	4.56 4.26	3.60 3.00	2.91 2.19	2.18 1.64	1.68 1.27	1.32 1.00	1.06 0.80	0.86 0.65
1.00	Dead+Super Uplift	14.03 12.67	9.73 8.81	7.14 6.49	5.46 4.97	4.31 3.50	3.25 2.55	2.44 1.92	1.88 1.48	1.48 1.17	1.18 0.93	0.96 0.76

# Wall Profile N&K 33



## Load Tables

The load tables are calculated in accordance with the European Recommendations for Steel Construction-ECCS TC7 and also with regard to 8.5.5950 requirements. The loads shown in the Tables have been produced by dividing the Ultimate load, by a Safety Factor of 1.5.

Material Yield Strength used in the Design Calculations is  $Z2\ 210N/mm^2$

## Material and Section Properties

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		$I_{xx}$ $cm^4$	$Z_{xx}$ $cm^3$	$I_{xx}$ $cm^4$	$Z_{xx}$ $cm^3$
0.50	4.907	9.050	4.062	5.499	3.163
0.60	5.888	11.399	5.155	7.232	4.278
0.70	6.869	13.609	6.160	9.101	5.529
0.80	7.850	15.748	7.117	11.092	6.914
0.90	8.832	17.861	8.055	13.198	8.433
1.00	9.813	19.962	8.984	15.412	10.089

## Applied Loads in KN/m<sup>2</sup>

DEFLECTION L/150 Self weight has been taken into account	Purlin Spacing mm											
	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	
Side Pressure												
Side Suction												

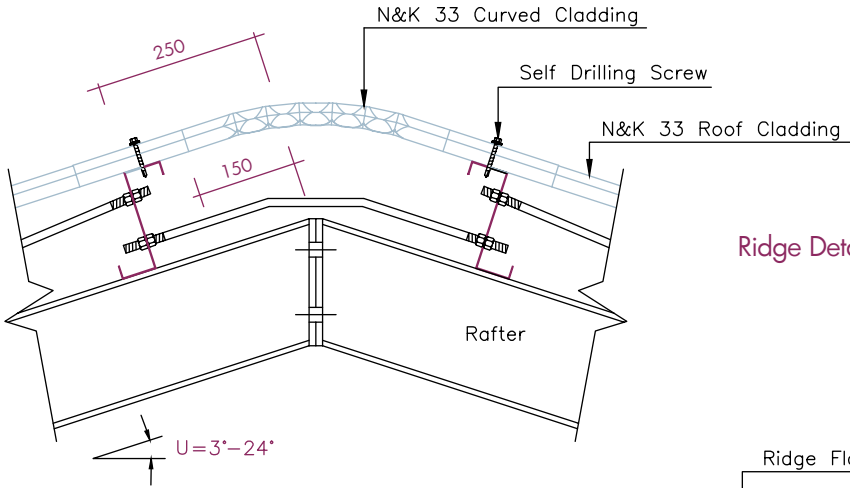
## Single Span

0.50	Pressure	3.54	2.46	1.81	1.38	0.99	0.72	0.54	0.42	0.33	0.26	0.21
	Suction	4.55	3.16	2.32	1.78	1.40	1.14	0.89	0.69	0.54	0.43	0.35
0.60	Pressure	4.79	3.33	2.44	1.85	1.30	0.95	0.71	0.55	0.43	0.35	0.28
	Suction	5.77	4.01	2.95	2.26	1.78	1.44	1.12	0.87	0.68	0.55	0.44
0.70	Pressure	6.19	4.30	3.16	2.33	1.64	1.19	0.90	0.69	0.54	0.44	0.35
	Suction	6.90	4.79	3.52	2.70	2.13	1.72	1.34	1.03	0.81	0.65	0.53
0.80	Pressure	7.74	5.38	3.95	2.84	2.00	1.46	1.09	0.84	0.66	0.53	0.43
	Suction	7.97	5.54	4.07	3.11	2.46	1.99	1.55	1.20	0.94	0.75	0.61
0.90	Pressure	9.44	6.56	4.82	3.38	2.38	1.73	1.30	1.00	0.79	0.63	0.51
	Suction	9.02	6.27	4.60	3.52	2.78	2.26	1.76	1.36	1.07	0.85	0.69
1.00	Pressure	11.30	7.85	5.77	3.95	2.77	2.02	1.52	1.17	0.92	0.74	0.60
	Suction	10.06	6.99	5.13	3.93	3.11	2.52	1.97	1.52	1.19	0.95	0.78

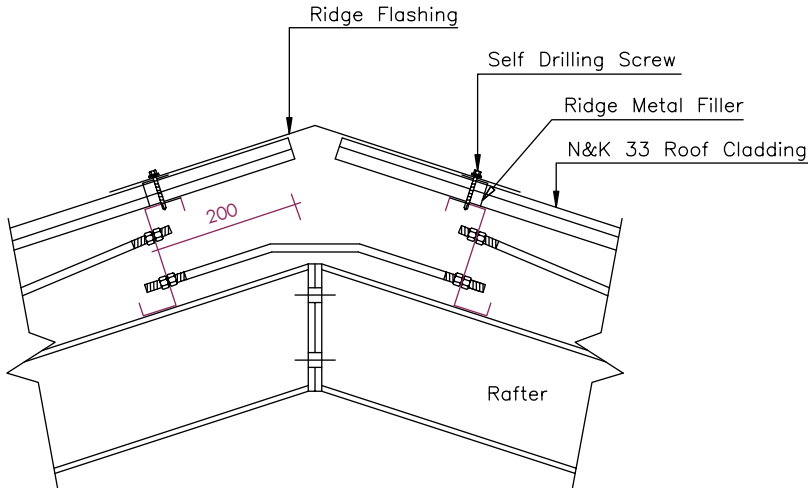
## Multi Span

0.50	Pressure	5.69	3.95	2.90	2.22	1.65	1.20	0.90	0.70	0.55	0.44	0.36
	Suction	4.43	3.08	2.26	1.73	1.37	1.11	0.91	0.77	0.66	0.56	0.49
0.60	Pressure	7.22	5.01	3.68	2.82	2.17	1.58	1.19	0.92	0.72	0.58	0.47
	Suction	5.99	4.16	3.06	2.34	1.85	1.50	1.24	1.04	0.89	0.76	0.67
0.70	Pressure	8.62	5.99	4.40	3.37	2.66	1.99	1.50	1.15	0.91	0.73	0.59
	Suction	7.74	5.38	3.95	3.02	2.39	1.94	1.60	1.34	1.15	0.99	0.86
0.80	Pressure	9.96	6.92	5.08	3.89	3.08	2.43	1.82	1.40	1.10	0.88	0.72
	Suction	9.68	6.72	4.94	3.78	2.99	2.42	2.00	1.68	1.43	1.23	1.02
0.90	Pressure	11.28	7.83	5.75	4.41	3.48	2.82	2.17	1.67	1.31	1.05	0.86
	Suction	11.81	8.20	6.02	4.61	3.34	2.95	2.44	2.05	1.75	1.42	1.16
1.00	Pressure	12.58	8.73	6.42	4.91	3.88	3.14	2.53	1.95	1.53	1.23	1.00
	Suction	14.12	9.81	7.21	5.52	4.36	3.53	2.92	2.45	1.99	1.59	1.29

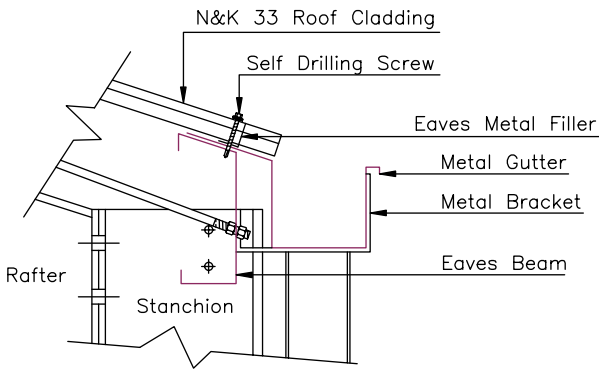
# Ridge & Eaves Details



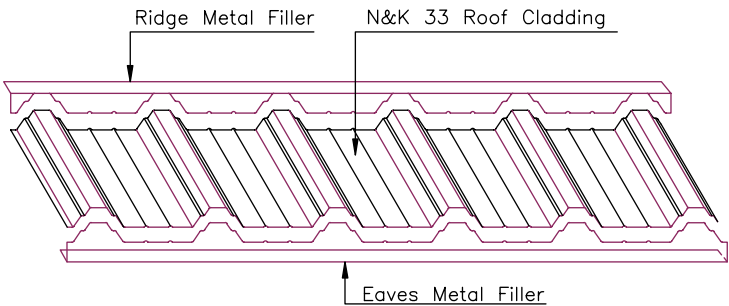
Ridge Details (Case No.1)



Ridge Details (Case No.2)



Eaves Details



Ridge & Eaves Metal Filler

# Fixing

For typical installations the following methods would be adopted:

## Roof

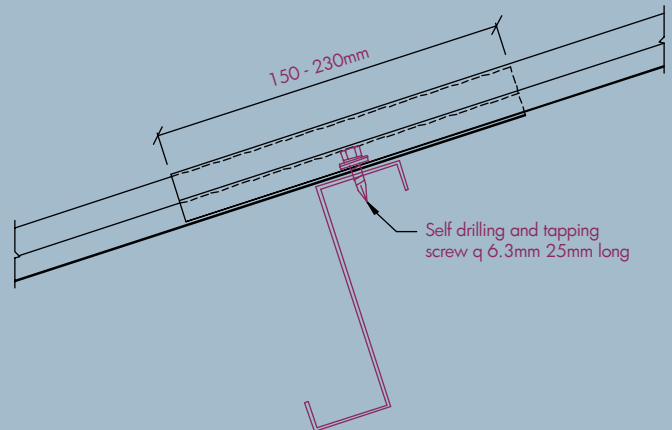
Pitches under  $10^\circ$  - end lap of min. 230mm.  
Pitches over  $10^\circ$  - end lap of min. 150mm.

End laps should occur over purlins.  
The bottom of the sheet should project a minimum 60mm over the purlin.  
A minimum of 3 fixings per sheet per purlin should be used, except at the ends of sheets where there could be a fixing every valley.

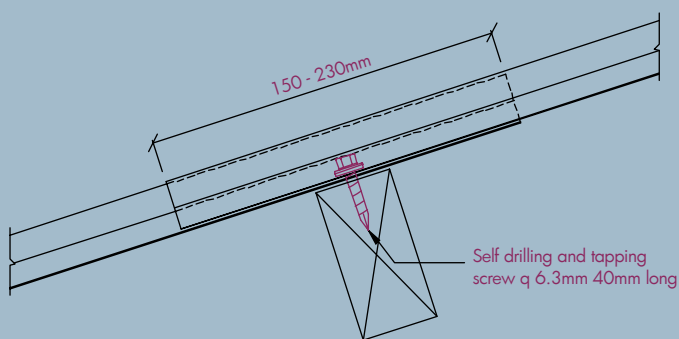
Side lap fixing should begin approximately 150mm from the end of the sheet and be spaced at intervals of about 450mm.

## Wall

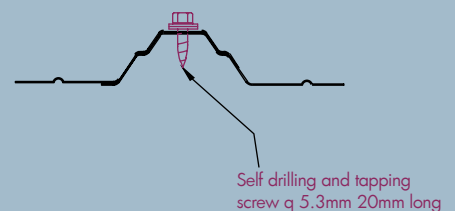
End laps should be at least 100mm.  
Side lap fixings should begin approximately 150mm from the end of the sheet and be spaced at intervals of about 500mm.



Fixing to steel Supports



Fixing to timber Supports



Side lap



Fixing position for N&K 33