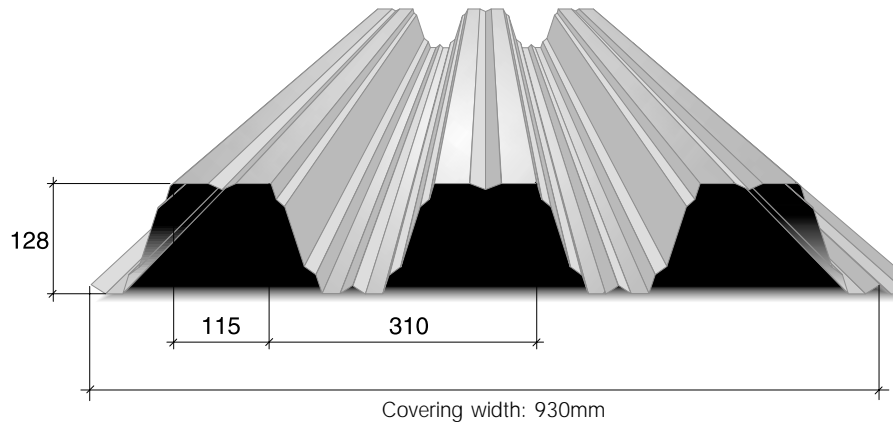


## Borga TR 128



**Borga TR 128** is a durable, high profile steel sheeting. It is a self-carrying profile, for big spans. Connected directly to the frames.

### Colours:

galvanized, white- all thicknesses,  
black- thickness of 0,7mm, 0,9 mm, 1,0 mm.

### Material:

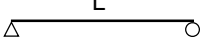
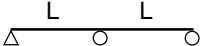

Borga TR 128 is made from high quality steel with plasticity of 350 Mpa, covered on both sides by zink layer equal to 275 g/m<sup>2</sup>. Available thicknesses: 0,7; 0,80; 0,90; 1,00; 1,20 mm. Additionally the visible side can be painted white and for some thicknesses also in black.

### TR 128-roof cladding- strength parameters

$t_{nom}$	mm	0,70	0,80	0,90	1,00	1,20
t	mm	0,655	0,750	0,855	0,940	1,13
$f_{yb}$	Mpa	350	350	350	350	350
m	kg/m	8,40	9,60	10,80	12,00	14,40
$I_s=100 \text{ mm } R_d$	kN/m	21,99	28,59	36,68	43,86	61,78
$I_s=200 \text{ mm } R_d$	kN/m	29,07	37,66	48,11	57,36	80,37
$M_{d1}$ narrow	kNm/m	11,88	14,26	16,66	18,46	22,19
$I_{el d1}$	mm <sup>4</sup> /mm	2549	2919	3328	3659	4398
$M_{d2}$ wide	kNm/m	9,19	11,46	14,03	16,02	21,30
$I_{el d2}$	mm <sup>4</sup> /mm	2550	2920	3328	3659	4399

Parameters according to actual Swedish norms.

# Borga TR 128 – Roof cladding- Permissible loading

	Thickne- ss	Cond.	Span [m]											
			4,2	4,5	4,8	5,1	5,4	5,7	6,0	6,3	6,6	6,9	7,2	7,5
	0,70	moment	4,17	3,63	3,19	2,83	2,52	2,26	2,04	1,85	1,69	1,54	1,42	1,31
		deflection	3,84	3,11	2,56	2,13	1,79	1,52	1,30	1,12	0,98	0,85	0,75	0,66
		negative load	5,39	4,69	4,13	3,65	3,26	2,93	2,64	2,39	2,18	2,00	1,83	1,69
	0,80	moment	5,20	4,53	3,98	3,52	3,14	2,82	2,55	2,31	2,10	1,93	1,77	1,63
		deflection	4,39	3,56	2,93	2,44	2,05	1,74	1,49	1,29	1,12	0,98	0,86	0,76
negative load		6,47	5,63	4,95	4,39	3,91	3,51	3,17	2,87	2,62	2,40	2,20	2,03	
0,90	moment	6,36	5,54	4,87	4,32	3,85	3,45	3,12	2,83	2,58	2,36	2,17	2,00	
	deflection	5,01	4,06	3,34	2,78	2,34	1,98	1,70	1,47	1,27	1,11	0,98	0,87	
	negative load	7,56	6,58	5,78	5,12	4,57	4,10	3,70	3,36	3,06	2,80	2,57	2,37	
1,00	moment	7,35	6,40	5,63	4,98	4,44	3,99	3,60	3,27	2,98	2,72	2,50	2,30	
	deflection	5,50	4,46	3,67	3,05	2,57	2,18	1,87	1,61	1,40	1,22	1,08	0,95	
	negative load	8,37	7,29	6,41	5,68	5,06	4,55	4,10	3,72	3,39	3,10	2,85	2,63	
1,20	moment	9,66	8,41	7,40	6,55	5,84	5,24	4,73	4,29	3,91	3,58	3,29	3,03	
	deflection	6,62	5,37	4,41	3,67	3,09	2,62	2,25	1,94	1,68	1,47	1,29	1,14	
	negative load	10,06	8,77	7,70	6,83	6,09	5,46	4,93	4,47	4,08	3,73	3,42	3,16	
	0,70	support 100	3,54	3,18	2,87	2,60	2,37	2,17	2,00	1,84	1,70	1,58	1,47	1,37
		support 200	4,16	3,70	3,32	3,00	2,72	2,48	2,26	2,08	1,92	1,77	1,64	1,53
		deflection negative load	4,17	3,63	3,19	2,83	2,52	2,26	2,04	1,85	1,69	1,54	1,42	1,31
	0,80	support 100	4,41	3,95	3,56	3,23	2,94	2,69	2,47	2,27	2,10	1,95	1,81	1,69
		support 200	5,15	4,58	4,10	3,69	3,35	3,05	2,78	2,55	2,35	2,17	2,01	1,87
deflection negative load		5,20	4,53	3,98	3,52	3,14	2,82	2,55	2,31	2,10	1,93	1,77	1,63	
0,90	support 100	5,37	4,80	4,32	3,91	3,55	3,25	2,98	2,74	2,53	2,35	2,18	2,03	
	support 200	6,22	5,53	4,94	4,45	4,02	3,66	3,34	3,06	2,82	2,60	2,41	2,24	
	deflection negative load	6,36	5,54	4,87	4,32	3,85	3,45	3,12	2,83	2,58	2,36	2,17	2,00	
1,00	support 100	6,14	5,48	4,93	4,45	4,05	3,69	3,38	3,11	2,87	2,66	2,47	2,30	
	support 200	7,08	6,28	5,61	5,04	4,56	4,14	3,78	3,46	3,18	2,94	2,72	2,52	
	deflection negative load	7,35	6,40	5,63	4,98	4,44	3,99	3,60	3,27	2,98	2,72	2,50	2,30	
1,20	support 100	7,85	6,99	6,27	5,65	5,12	4,66	4,27	3,92	3,61	3,34	3,09	2,88	
	support 200	8,97	7,93	7,07	6,34	5,72	5,19	4,72	4,32	3,97	3,65	3,38	3,13	
	deflection negative load	9,66	8,41	7,40	6,55	5,84	5,24	4,73	4,29	3,91	3,58	3,29	3,03	
	0,70	support 100	4,25	3,81	3,44	3,13	2,86	2,62	2,41	2,23	2,06	1,92	1,78	1,67
		support 200	5,03	4,49	4,03	3,64	3,30	3,01	2,76	2,54	2,34	2,16	2,01	1,87
		deflection negative load	5,21	4,54	3,99	3,53	3,15	2,83	2,55	2,32	2,11	1,93	1,77	1,63
	0,80	support 100	5,30	4,75	4,29	3,89	3,55	3,25	2,98	2,75	2,55	2,37	2,20	2,05
		support 200	6,24	5,56	4,98	4,50	4,08	3,71	3,40	3,12	2,88	2,66	2,47	2,29
deflection negative load		6,50	5,66	4,97	4,41	3,93	3,53	3,13	2,89	2,63	2,41	2,21	2,04	
0,90	support 100	6,49	5,79	5,21	4,72	4,30	3,93	3,61	3,33	3,07	2,85	2,65	2,47	
	support 200	7,56	6,72	6,02	5,42	4,91	4,47	4,08	3,75	3,45	3,19	2,95	2,75	
	deflection negative load	7,95	6,93	6,09	5,39	4,81	4,32	3,90	3,53	3,22	2,95	2,71	2,49	
1,00	support 100	7,41	6,62	5,96	5,39	4,90	4,48	4,11	3,78	3,49	3,24	3,01	2,80	
	support 200	8,62	7,66	6,85	6,16	5,57	5,07	4,63	4,24	3,90	3,60	3,34	3,10	
	deflection negative load	9,18	8,00	7,03	6,23	5,56	4,99	4,50	4,08	3,72	3,40	3,13	2,88	
1,20	support 100	9,50	8,47	7,60	6,86	6,23	5,68	5,20	4,78	4,41	4,08	3,78	3,52	
	support 200	10,96	9,71	8,66	7,77	7,02	6,37	5,80	5,31	4,88	4,50	4,16	3,86	
	deflection negative load	12,07	10,52	9,24	8,19	7,30	6,56	5,92	5,37	4,89	4,47	4,11	3,79	

Parameters according to actual Swedish norms.

### Legend:

moment- dimensioning for span moment from snow load  
 deflection- dimensioning for deflection limit L/150 from snow load  
 negative load- dimensioning for wind load  
 support- dimensioning for support moment (support width = 10mm)