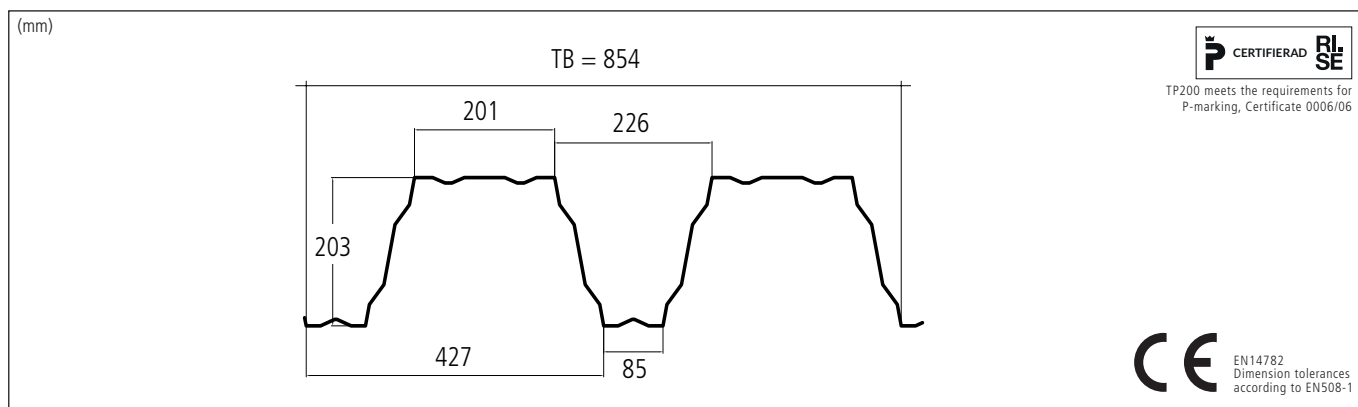




Cross sectional data - Areco TP200 - 15 - 350 MPa

Table 1

Sheet thickness, nominal	t_{nom}	mm	0,70	0,80	0,90	1,00	1,20	1,50
Sheet thickness, in calculation	t_{ber}	mm	0,665	0,760	0,866	0,955	1,144	1,42
Yield point	f_{ty}	N/mm ²	350	350	350	350	350	350
Mass	m	kg/m	8,40	9,60	10,80	12,00	14,40	18,00
Dead weight including side overlap	g	kN/m ²	0,098	0,112	0,126	0,141	0,169	0,211
Bearing narrow resistance $l_s=100$ mm	R_d	kN/m	13,00	17,50	23,20	28,50	41,10	62,80
Narrow flange under pressure	M_d	kNm/m	16,68	20,07	23,73	26,86	33,65	49,43
2:nd moment of area	I_{def}	mm ⁴ /mm	6589	7560	8614	9499	11379	14125
Bearing wide resistance $l_s=100$ mm	R_d	kN/m	13,00	17,20	22,00	26,60	37,70	58,40
Wide flange under pressure	M_d	kNm/m	13,08	16,28	20,04	22,83	29,89	39,55
2:nd moment of area	I_{def}	mm ⁴ /mm	6252	7194	8255	9155	11088	13954

Data for stressed skin calculations - Areco TP200 - 15 - 350 MPa

Table 2

Thickness	Shear buckling			End support		
	Flange	Web	Global	Framework bending effects	Reaction of purlins to stressed skin effect	Tensile force in fasteners
t_{nom}	V_f	V_w	$L^2 V_{gd}$	V_d	R_s/V	F_{c2}/V
mm	kN/m	kN/m	kN/m	kN/m		m
0,70	13,30	11,40	1508	2,50	1,35	287
0,80	19,10	16,40	1842	3,20	1,35	287
0,90	27,20	23,60	2240	4,00	1,35	287
1,00	35,50	30,90	2594	4,80	1,35	287
1,20	58,20	51,10	3402	6,60	1,35	287
1,50	105,50	93,60	4704	9,80	1,35	287

Areco TP200

ROOF Insulated L/200

Maximum loads in kN/m² - 350 MPa

Table 3

Uplagsfall	Thickness(mm)	Limitations	Span L (m)												Bearing
SINGLE SECTION	0,70	Moment (N. flange)	5,20	5,60	6,00	6,40	6,80	7,20	7,60	8,00	8,40	8,80	9,20	9,60	SHEET LOADED ON TWO SUPPORT (Mult i ple section)
		Deflection	3,518	3,034	2,643	2,323	2,058	1,835	1,647	1,487	1,348	1,229	1,124	1,032	
		Moment (W. flange)	3,264	2,614	2,124	1,751	1,46	1,229	1,046	0,896	0,774	0,673	0,59	0,519	
	0,80	Moment (N. flange)	4,488	3,869	3,371	2,963	2,624	2,341	2,101	1,896	1,72	1,567	1,434	1,317	
		Deflection	4,377	3,774	3,288	2,89	2,56	2,283	2,049	1,849	1,677	1,528	1,398	1,284	
		Moment (W. flange)	3,756	3,001	2,444	2,015	1,679	1,415	1,203	1,031	0,891	0,775	0,678	0,597	
	0,90	Moment (N. flange)	5,40	4,656	4,056	3,565	3,158	2,817	2,528	2,281	2,069	1,885	1,725	1,584	
		Deflection	5,391	4,648	4,049	3,559	3,152	2,812	2,524	2,277	2,066	1,882	1,722	1,582	
		Moment (W. flange)	4,31	3,451	2,806	2,311	1,927	1,623	1,38	1,184	1,023	0,889	0,778	0,685	
	1,00	Moment (N. flange)	6,386	5,506	4,797	4,216	3,734	3,331	2,99	2,698	2,447	2,23	2,04	1,874	
		Deflection	6,142	5,296	4,614	4,055	3,592	3,204	2,875	2,595	2,354	2,145	1,962	1,802	
		Moment (W. flange)	4,78	3,827	3,111	2,563	2,134	1,801	1,531	1,312	1,134	0,986	0,863	0,759	
	1,20	Moment (N. flange)	7,228	6,233	5,429	4,772	4,227	3,77	3,384	3,054	2,77	2,524	2,309	2,121	
		Deflection	8,04	6,933	6,039	5,308	4,702	4,194	3,764	3,397	3,081	2,807	2,569	2,359	
		Moment (W. flange)	5,789	4,635	3,768	3,105	2,589	2,18	1,855	1,59	1,373	1,194	1,046	0,92	
	1,50	Moment (N. flange)	9,053	7,806	6,80	5,977	5,294	4,722	4,238	3,825	3,469	3,161	2,892	2,656	
		Deflection	10,64	9,175	7,993	7,025	6,223	5,551	4,982	4,496	4,078	3,716	3,4	3,122	
		Moment (W. flange)	7,285	5,832	4,472	3,908	3,258	2,745	2,333	2,001	1,728	1,503	1,316	1,158	
	1,50	Moment (N. flange)	13,30	11,47	9,988	8,779	7,776	6,936	6,225	5,618	5,096	4,643	4,248	3,902	
		Deflection	10,64	9,175	7,993	7,025	6,223	5,551	4,982	4,496	4,078	3,716	3,4	3,122	
		Moment (W. flange)	7,285	5,832	4,472	3,908	3,258	2,745	2,333	2,001	1,728	1,503	1,316	1,158	
MULTIPLE SECTION	0,70	Bearer 200 (N. flange)	5,20	5,60	6,00	6,40	6,80	7,20	7,60	8,00	8,40	8,80	9,20	9,60	SHEET LOADED ON THREE SUPPORT (Mult i ple section)
		Deflection	2,243	2,028	1,844	1,685	1,547	1,427	1,32	1,225	1,141	1,065	0,997	0,936	
		Bearer 200 (W. flange)	8,922	7,144	5,808	4,786	3,99	3,361	2,858	2,45	2,117	1,841	1,611	1,418	
	0,80	Bearer 200 (N. flange)	2,061	1,855	1,679	1,528	1,398	1,284	1,184	1,095	1,017	0,946	0,883	0,827	
		Deflection	2,92	2,635	2,392	2,183	2,001	1,843	1,703	1,579	1,468	1,369	1,28	1,20	
		Bearer 200 (W. flange)	10,24	8,202	6,669	5,495	4,581	3,859	3,281	2,813	2,43	2,114	1,85	1,628	
	0,90	Bearer 200 (N. flange)	2,659	2,39	2,162	1,966	1,796	1,648	1,518	1,404	1,302	1,211	1,13	1,056	
		Deflection	3,712	3,343	3,03	2,76	2,526	2,322	2,142	1,983	1,842	1,716	1,603	1,50	
		Bearer 200 (W. flange)	11,72	9,384	7,629	6,286	5,241	4,415	3,754	3,219	2,78	2,418	2,116	1,863	
	1,00	Bearer 200 (N. flange)	3,347	3,007	2,718	2,47	2,256	2,069	1,905	1,761	1,632	1,518	1,415	1,323	
		Deflection	4,416	3,972	3,594	3,27	2,99	2,745	2,53	2,34	2,171	2,02	1,885	1,763	
		Bearer 200 (W. flange)	12,95	10,37	8,428	6,944	5,79	4,877	4,147	3,556	3,071	2,671	2,338	2,058	
	1,20	Bearer 200 (N. flange)	3,943	3,539	3,196	2,902	2,648	2,427	2,233	2,062	1,911	1,776	1,655	1,546	
		Deflection	6,015	5,396	4,872	4,422	4,034	3,696	3,40	3,139	2,908	2,702	2,517	2,351	
		Bearer 200 (W. flange)	15,56	12,46	10,13	8,347	6,959	5,863	4,985	4,274	3,692	3,211	2,81	2,473	
	1,50	Bearer 200 (N. flange)	5,332	4,775	4,304	3,901	3,554	3,252	2,988	2,755	2,549	2,366	2,202	2,055	
		Deflection	8,668	7,757	6,987	6,328	5,761	5,269	4,838	4,46	4,12	3,826	3,56	3,321	
		Bearer 200 (W. flange)	19,40	15,54	12,63	10,41	8,677	7,309	6,215	5,329	4,603	4,003	3,504	3,084	
	1,50	Bearer 200 (N. flange)	7,832	7,00	6,297	5,697	5,181	4,733	4,343	3,999	3,695	3,426	3,185	2,969	
		Deflection	8,668	7,757	6,987	6,328	5,761	5,269	4,838	4,46	4,12	3,826	3,56	3,321	
		Bearer 200 (W. flange)	19,40	15,54	12,63	10,41	8,677	7,309	6,215	5,329	4,603	4,003	3,504	3,084	

Explanations:

Moment (N. flange)	Bearing capacity in field at narrow flange against purlin
Deflection	Deflection L/200 (insulated)
Moment (W. flange)	Bearing capacity in field at wide flange against purlin
Bearer 200 (N. flange)	Bearing capacity for intermediate bearer at narrow flange against purlin
Bearer 200 (W. flange)	Bearing capacity for intermediate bearer at wide flange against purlin

Minimum fastening:

End support: 2 screw in the bottom of each profile	Support width:
Intermediate, End overlap: 1 screw in the bottom of each profile	≥ 100mm(end support)
Side overlap: Maximum c/c 500 mm	≥ 200mm (intermediate support)

With multiple section we recomend simple section mounting with continuous joint (simple overlap joint) according to this picture

