



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

Upplagsfall	Thickness(mm)	Limitations	Span L (m)												Bearing		
			5,20	5,60	6,00	6,40	6,80	7,20	7,60	8,00	8,40	8,80	9,20	9,60			
SINGLE SECTION	0,70	Moment (N. flange)	3,518	3,034	2,643	2,323	2,058	1,835	1,647	1,487	1,348	1,229	1,124	1,032	SHEET LOADED ON TWO SUPPORT (Mult i-ple section)		
		Deflection	3,264	2,614	2,124	1,751	1,46	1,229	1,046	0,896	0,774	0,673	0,59	0,519			
		Moment (W. 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			
	0,80	Moment (N. flange)	4,377	3,774	3,288	2,89	2,56	2,283	2,049	1,849	1,677	1,528	1,398	1,284			
		Deflection	3,756	3,001	2,444	2,015	1,679	1,415	1,203	1,031	0,891	0,775	0,678	0,597			
		Moment (W. 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			
	0,90	Moment (N. flange)	5,391	4,648	4,049	3,559	3,152	2,812	2,524	2,277	2,066	1,882	1,722	1,582			
		Deflection	4,31	3,451	2,806	2,311	1,927	1,623	1,38	1,184	1,023	0,889	0,778	0,685			
		Moment (W. 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			
	1,00	Moment (N. flange)	6,142	5,296	4,614	4,055	3,592	3,204	2,875	2,595	2,354	2,145	1,962	1,802			
		Deflection	4,78	3,827	3,111	2,563	2,134	1,801	1,531	1,312	1,134	0,986	0,863	0,759			
		Moment (W. 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			
	1,20	Moment (N. flange)	8,04	6,933	6,039	5,308	4,702	4,194	3,764	3,397	3,081	2,807	2,569	2,359			
		Deflection	5,789	4,635	3,768	3,105	2,589	2,18	1,855	1,59	1,373	1,194	1,046	0,92			
		Moment (W. 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			
	1,50	Moment (N. flange)	10,64	9,175	7,993	7,025	6,223	5,551	4,982	4,496	4,078	3,716	3,4	3,122			
		Deflection	7,285	5,832	4,472	3,908	3,258	2,745	2,333	2,001	1,728	1,503	1,316	1,158			
		Moment (W. 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			
	MULTIPLE SECTION	0,70	Bearer 200 (N. flange)	2,243	2,028	1,844	1,685	1,547	1,427	1,32	1,225	1,141	1,065	0,997		0,936	SHEET LOADED ON THREE SUPPORT (Mult i-ple section)
			Deflection	8,922	7,144	5,808	4,786	3,99	3,361	2,858	2,45	2,117	1,841	1,611		1,418	
			Bearer 200 (W. 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	
0,80		Bearer 200 (N. flange)	2,92	2,635	2,392	2,183	2,001	1,843	1,703	1,579	1,468	1,369	1,28	1,20			
		Deflection	10,24	8,202	6,669	5,495	4,581	3,859	3,281	2,813	2,43	2,114	1,85	1,628			
		Bearer 200 (W. 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			
0,90		Bearer 200 (N. flange)	3,712	3,343	3,03	2,76	2,526	2,322	2,142	1,983	1,842	1,716	1,603	1,50			
		Deflection	11,72	9,384	7,629	6,286	5,241	4,415	3,754	3,219	2,78	2,418	2,116	1,863			
		Bearer 200 (W. 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			
1,00		Bearer 200 (N. flange)	4,416	3,972	3,594	3,27	2,99	2,745	2,53	2,34	2,171	2,02	1,885	1,763			
		Deflection	12,95	10,37	8,428	6,944	5,79	4,877	4,147	3,556	3,071	2,671	2,338	2,058			
		Bearer 200 (W. 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			
1,20		Bearer 200 (N. flange)	6,015	5,396	4,872	4,422	4,034	3,696	3,40	3,139	2,908	2,702	2,517	2,351			
		Deflection	15,56	12,46	10,13	8,347	6,959	5,863	4,985	4,274	3,692	3,211	2,81	2,473			
		Bearer 200 (W. 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			
1,50		Bearer 200 (N. flange)	8,668	7,757	6,987	6,328	5,761	5,269	4,838	4,46	4,12	3,826	3,56	3,321			
		Deflection	19,40	15,54	12,63	10,41	8,677	7,309	6,215	5,329	4,603	4,003	3,504	3,084			
		Bearer 200 (W. 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			

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
- Intermediate, End overlap: 1 screw in the bottom of each profile
- Side overlap: Maximum c/c 500 mm

Support width:

- ≥ 100mm(end support)
- ≥ 200mm (intermediate support)



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

