

TECHNICAL DATA

TR45/250 INSULATED ROOF PANEL

Steel Skin - Grade 400 Mpa, 0.50Mm Bmt Top & 0.60Mm Bmt Bottom
Limit State Factored Uniform Load Capacity (kN/m²):

THICKNESS	NO OF SPANS	LOAD	LENGTH (L) IN METERS															
			1.20	1.50	1.80	2.10	2.40	2.70	3.00	3.30	3.60	3.90	4.20	4.50	4.80	5.10	5.40	
PIR (mm)																		
50	1	Down	6.88	4.40	3.06	1.99	1.33	0.94	0.68	0.51	-	-	-	-	-	-	-	-
		Up	9.58	5.46	3.16	1.99	1.33	0.94	0.68	0.51	-	-	-	-	-	-	-	-
	2	Down	9.58	6.13	4.26	3.13	2.40	1.89	1.53	1.24	0.95	0.75	0.60	-	-	-	-	-
		Up	6.88	4.40	3.06	2.25	1.72	1.36	1.10	0.91	0.76	0.65	0.56	-	-	-	-	-
	3	Down	8.86	6.88	4.78	3.51	2.52	1.77	1.29	0.97	0.75	0.59	-	-	-	-	-	-
		Up	8.60	5.50	3.82	2.81	2.15	1.70	1.29	0.97	0.75	0.59	-	-	-	-	-	-
60	1	Down	7.97	5.10	3.54	2.44	1.63	1.15	0.84	0.63	-	-	-	-	-	-	-	-
		Up	11.11	6.70	3.87	2.44	1.63	1.15	0.84	0.63	-	-	-	-	-	-	-	-
	2	Down	9.75	7.11	4.94	3.63	2.78	2.19	1.78	1.47	1.17	0.92	0.74	0.60	-	-	-	-
		Up	7.97	5.10	3.54	2.60	1.99	1.57	1.28	1.05	0.89	0.75	0.65	0.57	-	-	-	-
	3	Down	8.86	7.09	5.54	4.07	3.08	2.17	1.58	1.19	0.91	0.72	0.58	-	-	-	-	-
		Up	8.86	6.38	4.43	3.25	2.49	1.97	1.58	1.19	0.91	0.72	0.58	-	-	-	-	-
100	1	Down	12.34	7.90	5.48	4.03	3.08	2.31	1.68	1.26	0.97	0.77	0.61	-	-	-	-	-
		Up	17.23	11.03	7.66	4.90	3.28	2.31	1.68	1.26	0.97	0.77	0.61	-	-	-	-	-
	2	Down	9.75	7.80	6.50	5.57	4.31	3.40	2.76	2.28	1.91	1.63	1.41	1.20	0.99	0.83	0.70	-
		Up	9.75	7.80	5.48	4.03	3.08	2.44	1.97	1.63	1.37	1.17	1.01	0.88	0.77	0.68	0.61	-
	3	Down	8.86	7.09	5.91	5.06	4.43	3.81	3.08	2.38	1.84	1.44	1.16	0.94	0.77	0.65	0.54	-
		Up	8.86	7.09	5.91	5.04	3.86	3.05	2.47	2.04	1.71	1.44	1.16	0.94	0.77	0.65	0.54	-
150	1	Down	17.80	11.39	7.91	5.81	4.45	3.52	2.85	2.35	1.88	1.48	1.18	0.96	0.79	0.66	0.56	-
		Up	19.50	15.60	11.08	8.14	6.23	4.45	3.25	2.44	1.88	1.48	1.18	0.96	0.79	0.66	0.56	-
	2	Down	9.75	7.80	6.50	5.57	4.88	4.33	3.90	3.30	2.77	2.36	2.03	1.77	1.56	1.38	1.23	-
		Up	9.75	7.80	6.50	5.57	4.45	3.52	2.85	2.35	1.98	1.69	1.45	1.27	1.11	0.99	0.88	-
	3	Down	8.86	7.09	5.91	5.06	4.43	3.94	3.55	3.22	2.95	2.63	2.23	1.82	1.50	1.25	1.05	-
		Up	8.86	7.09	5.91	5.06	4.43	3.94	3.55	2.94	2.47	2.11	1.82	1.58	1.39	1.23	1.05	-
200	1	Down	19.50	14.89	10.34	7.59	5.81	4.59	3.72	3.08	2.58	2.20	1.90	1.59	1.31	1.10	0.92	-
		Up	19.50	15.60	13.00	10.66	8.16	6.45	5.22	4.04	3.11	2.45	1.96	1.59	1.31	1.10	0.92	-
	2	Down	9.75	7.80	6.50	5.57	4.88	4.33	3.90	3.55	3.25	3.00	2.67	2.32	2.04	1.81	1.61	-
		Up	9.75	7.80	6.50	5.57	4.88	4.33	3.72	3.08	2.58	2.20	1.90	1.65	1.45	1.29	1.15	-
	3	Down	8.86	7.09	5.91	5.06	4.43	3.94	3.55	3.22	2.95	2.73	2.53	2.36	2.22	2.01	1.74	-
		Up	8.86	7.09	5.91	5.06	4.43	3.94	3.55	3.22	2.95	2.73	2.37	2.07	1.82	1.61	1.44	-

NOTATION

- Down - Ultimate Limit state uniform pressure resulting to top steel skin at midspan to be in compression
- Up - Ultimate Limit state uniform pressure resulting to bottom steel skin at midspan to be in compression
- 1 span - Denotes single span
- 2 spans - Denotes two continuous span with the same length
- 3 spans - Denotes three continuous span with the same length

DESIGN CRITERIA

- Capacity Table calculation is based on AS4600
- The panel has been checked for serviceability criteria - maximum deflection of span /180
- This table applies only for Non-Cyclonic Regions (Region A to Region B)
- Roof density is 42 kg/m³, selfweight has not been included in calculation of the load capacity table and should be considered in panel
- This table is based on the condition that the steel skin is fully bonded to insulation bond which ensures there are no lateral sliding of sheet
- Support bearing width: minimum 50mm. Panel shall be fixed to support as per Tiger Modular Cold Room Joining Methods and Seals
- The supporting member shall be designed by a certifying Structural Engineer