

Insulated Panels
Standing Seam Systems

Protected by



RD 158/750

Structural Deck

Product Data Sheet



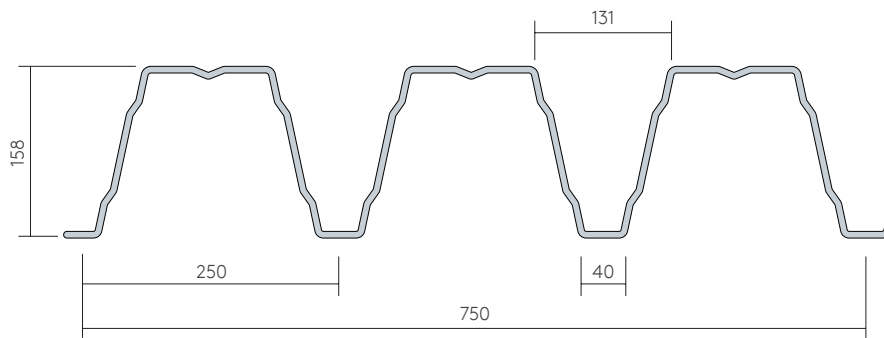
Structural Deck – 158/750

Technical Data

RD 158/750 structural deck offers greater spanning capabilities than traditional liner systems.

Using a decking system as the primary covering of the roof allows designers to span greater distances between fixing centres and carry greater roof loads.

The unique profile design affords simplistic installation in single, double or indeed multiple span applications.

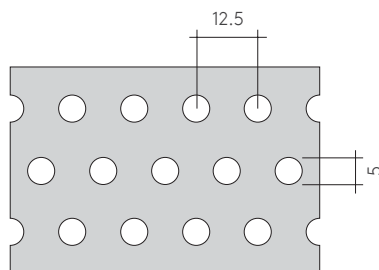


Product Specification

Materials:	Steel: S350GD with either a Z275 galvanised (ASTM A653) or AZ150 AluZinc (ASTM A792) coating. Aluminium: AA3105 alloy to ASTM B209
Coatings:	Kingspan Polyester, Colorcoat HPS 200 Ultra
Lengths:	1.5 m to 12 m
Thickness:	See table
Fire Performance:	Kingspan sheets in either steel and aluminium carries a spread of flame and smoke index rating of zero
Product Tolerances:	Length: +/-7 mm (0 – 3,500 mm) / 0.5 mm for each metre Width: +/-2 mm Edge squareness: +/-3 mm
Curving:	N/A
Perforation:	The below perforation option is available

Dimensions and Weight

Substrate Thickness (mm)	0.75	0.88	1.00	1.25	1.50
Weight (kg/m ²) – Steel	11.78	13.82	15.70	19.63	23.55



Load Span – Structural Deck RD 158/750

Steel at 350 MPa Yield Strength – Imposed Load (KN/m²)

Profile Thickness (mm)	Span (m)	Single				Double				Multiple			
		L/150	L/200	L/250	L/300	L/150	L/200	L/250	L/300	L/150	L/200	L/250	L/300
0.75	6.00	2.13	1.59	1.28	1.06	2.08	2.08	2.08	2.08	2.19	2.19	2.19	2.04
	6.20	1.93	1.44	1.16	–	1.97	1.97	1.97	1.97	2.05	2.05	2.05	1.85
	6.40	1.75	1.31	1.05	–	1.86	1.86	1.86	1.86	1.93	1.93	1.93	1.68
	6.60	1.60	1.20	–	–	1.77	1.77	1.77	1.77	1.81	1.81	1.81	1.54
	6.80	1.46	1.09	–	–	1.68	1.68	1.68	1.68	1.71	1.71	1.68	1.40
	7.00	1.34	–	–	–	1.60	1.60	1.60	1.60	1.61	1.61	1.54	1.29
	7.20	1.23	–	–	–	1.52	1.52	1.52	1.50	1.52	1.52	1.42	1.18
	7.40	1.13	–	–	–	1.44	1.44	1.44	1.38	1.44	1.44	1.31	1.09
	7.60	1.05	–	–	–	1.37	1.37	1.37	1.28	1.37	1.37	1.21	1.01
	7.80	–	–	–	–	1.30	1.30	1.30	1.18	1.30	1.30	1.12	–
8.00	–	–	–	–	1.23	1.23	1.23	1.09	1.23	1.23	1.03	–	
0.88	6.00	2.59	1.94	1.55	1.29	2.73	2.73	2.73	2.73	2.76	2.76	2.76	2.49
	6.20	2.34	1.76	1.41	1.17	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.25
	6.40	2.13	1.60	1.28	1.07	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.05
	6.60	1.94	1.46	1.17	–	2.28	2.28	2.28	2.28	2.28	2.28	2.24	1.87
	6.80	1.78	1.33	1.07	–	2.15	2.15	2.15	2.15	2.15	2.15	2.05	1.71
	7.00	1.63	1.22	–	–	2.02	2.02	2.02	1.99	2.02	2.02	1.88	1.57
	7.20	1.50	1.12	–	–	1.91	1.91	1.91	1.82	1.91	1.91	1.73	1.44
	7.40	1.38	1.03	–	–	1.81	1.81	1.81	1.68	1.81	1.81	1.59	1.33
	7.60	1.27	–	–	–	1.72	1.72	1.72	1.55	1.72	1.72	1.47	1.22
	7.80	1.18	–	–	–	1.63	1.63	1.63	1.44	1.63	1.63	1.36	1.13
8.00	1.09	–	–	–	1.55	1.55	1.55	1.33	1.55	1.55	1.26	1.05	
1.00	6.00	3.00	2.25	1.80	1.50	3.29	3.29	3.29	3.29	3.29	3.29	3.29	2.89
	6.20	2.72	2.04	1.63	1.36	3.09	3.09	3.09	3.09	3.09	3.09	3.09	2.62
	6.40	2.47	1.85	1.48	1.24	2.90	2.90	2.90	2.90	2.90	2.90	2.85	2.38
	6.60	2.26	1.69	1.35	1.13	2.72	2.72	2.72	2.72	2.72	2.72	2.60	2.17
	6.80	2.06	1.55	1.24	1.03	2.57	2.57	2.57	2.51	2.57	2.57	2.38	1.98
	7.00	1.89	1.42	1.13	–	2.42	2.42	2.42	2.31	2.42	2.42	2.18	1.82
	7.20	1.74	1.30	1.04	–	2.29	2.29	2.29	2.12	2.29	2.29	2.00	1.67
	7.40	1.60	1.20	–	–	2.17	2.17	2.17	1.95	2.17	2.17	1.85	1.54
	7.60	1.48	1.11	–	–	2.05	2.05	2.05	1.80	2.06	2.06	1.70	1.42
	7.80	1.37	1.02	–	–	1.95	1.95	1.95	1.67	1.97	1.97	1.58	1.31
8.00	1.27	–	–	–	1.85	1.85	1.85	1.54	1.88	1.83	1.46	1.22	
1.25	6.00	3.78	2.84	2.27	1.89	4.41	4.41	4.41	4.41	4.41	4.41	4.36	3.64
	6.20	3.43	2.57	2.06	1.71	4.13	4.13	4.13	4.13	4.13	4.13	3.95	3.30
	6.40	3.12	2.34	1.87	1.56	3.88	3.88	3.88	3.80	3.91	3.91	3.59	3.00
	6.60	2.84	2.13	1.70	1.42	3.65	3.65	3.65	3.46	3.70	3.70	3.28	2.73
	6.80	2.60	1.95	1.56	1.30	3.43	3.43	3.43	3.17	3.52	3.52	3.00	2.50
	7.00	2.38	1.79	1.43	1.19	3.24	3.24	3.24	2.90	3.34	3.34	2.75	2.29
	7.20	2.19	1.64	1.31	1.09	3.06	3.06	3.06	2.67	3.18	3.16	2.52	2.10
	7.40	2.02	1.51	1.21	1.01	2.90	2.90	2.90	2.46	3.03	2.91	2.33	1.94
	7.60	1.86	1.40	1.12	–	2.75	2.75	2.72	2.27	2.90	2.68	2.15	1.79
	7.80	1.72	1.29	1.03	–	2.61	2.61	2.52	2.10	2.77	2.48	1.99	1.65
8.00	1.60	1.20	–	–	2.48	2.48	2.33	1.95	2.65	2.30	1.84	1.53	

Working load UDL (kN/m²).

The load shown is the ultimate load divided by 1.5.

Tests / calculations EN 1990, EN 1991 1-6, EN 1993 1-3, EN 1993 1-5 (calculations are to Eurocode, however additional checks such as fixings are required).

Deck self weight has not been allowed for, so has to be included in applied loads.

Structural Deck – 158/750

Technical Data

Load Span – Structural Deck RD 158/750

Steel at 350 MPa Yield Strength – Imposed Load (KN/m²)

Profile Thickness (mm)	Span (m)	Single				Double				Multiple			
		L/150	L/200	L/250	L/300	L/150	L/200	L/250	L/300	L/150	L/200	L/250	L/300
1.50	6.00	4.56	3.42	2.74	2.28	5.50	5.50	5.50	5.50	5.54	5.54	5.26	4.38
	6.20	4.13	3.10	2.48	2.07	5.15	5.15	5.15	5.04	5.23	5.23	4.77	3.97
	6.40	3.76	2.82	2.25	1.88	4.84	4.84	4.84	4.58	4.94	4.94	4.34	3.61
	6.60	3.43	2.57	2.06	1.71	4.55	4.55	4.55	4.18	4.68	4.68	3.95	3.29
	6.80	3.13	2.35	1.88	1.57	4.28	4.28	4.28	3.82	4.44	4.44	3.61	3.01
	7.00	2.87	2.15	1.72	1.44	4.04	4.04	4.04	3.50	4.22	4.14	3.31	2.76
	7.20	2.64	1.98	1.58	1.32	3.82	3.82	3.82	3.22	4.01	3.81	3.04	2.54
	7.40	2.43	1.82	1.46	1.22	3.62	3.62	3.56	2.96	3.82	3.51	2.80	2.34
	7.60	2.24	1.68	1.35	1.12	3.43	3.43	3.28	2.74	3.64	3.24	2.59	2.16
	7.80	2.08	1.56	1.25	1.04	3.26	3.26	3.04	2.53	3.48	2.99	2.39	2.00
8.00	1.92	1.44	1.15	-	3.10	3.10	2.82	2.35	3.32	2.77	2.22	1.85	

Working load UDL (kN/m²).

The load shown is the ultimate load divided by 1.5.

Tests / calculations EN 1990, EN 1991 1-6, EN 1993 1-3, EN 1993 1-5 (calculations are to Eurocode, however additional checks such as fixings are required).

Deck self weight has not been allowed for, so has to be included in applied loads.

Steel at 350 MPa Yield Strength – Wind Suction Load (KN/m²)

Profile Thickness (mm)	Span (m)	Single				Double				Multiple			
		L/150	L/200	L/250	L/300	L/150	L/200	L/250	L/300	L/150	L/200	L/250	L/300
0.75	6.00	1.84	1.63	1.30	1.09	2.19	2.19	2.19	2.19	2.74	2.74	2.51	2.09
	6.20	1.72	1.48	1.18	-	2.05	2.05	2.05	2.05	2.57	2.57	2.27	1.89
	6.40	1.62	1.34	1.07	-	1.93	1.93	1.93	1.93	2.41	2.41	2.07	1.72
	6.60	1.52	1.22	-	-	1.81	1.81	1.81	1.81	2.27	2.27	1.88	1.57
	6.80	1.43	1.12	-	-	1.71	1.71	1.71	1.71	2.13	2.13	1.72	1.44
	7.00	1.35	1.03	-	-	1.61	1.61	1.61	1.61	2.01	1.97	1.58	1.32
	7.20	1.26	-	-	-	1.52	1.52	1.52	1.52	1.90	1.81	1.45	1.21
	7.40	1.16	-	-	-	1.44	1.44	1.44	1.41	1.80	1.67	1.34	1.11
	7.60	1.07	-	-	-	1.37	1.37	1.37	1.30	1.71	1.54	1.23	1.03
	7.80	-	-	-	-	1.30	1.30	1.30	1.21	1.62	1.43	1.14	-
8.00	-	-	-	-	1.23	1.23	1.23	1.12	1.54	1.32	1.06	-	
0.88	6.00	2.35	1.97	1.58	1.31	2.76	2.76	2.76	2.76	3.44	3.44	3.03	2.53
	6.20	2.20	1.79	1.43	1.19	2.58	2.58	2.58	2.58	3.23	3.23	2.75	2.29
	6.40	2.07	1.62	1.30	1.08	2.42	2.42	2.42	2.42	3.03	3.03	2.50	2.08
	6.60	1.95	1.48	1.18	-	2.28	2.28	2.28	2.28	2.85	2.85	2.28	1.90
	6.80	1.80	1.35	1.08	-	2.15	2.15	2.15	2.15	2.68	2.60	2.08	1.74
	7.00	1.65	1.24	-	-	2.02	2.02	2.02	2.02	2.53	2.39	1.91	1.59
	7.20	1.52	1.14	-	-	1.91	1.91	1.91	1.85	2.39	2.19	1.75	1.46
	7.40	1.40	1.05	-	-	1.81	1.81	1.81	1.71	2.26	2.02	1.62	1.35
	7.60	1.29	-	-	-	1.72	1.72	1.72	1.58	2.15	1.86	1.49	1.24
	7.80	1.20	-	-	-	1.63	1.63	1.63	1.46	2.04	1.72	1.38	1.15
8.00	1.11	-	-	-	1.55	1.55	1.55	1.35	1.94	1.60	1.28	1.07	

Working load UDL (kN/m²).

The load shown is the ultimate load divided by 1.5.

Tests / calculations EN 1990, EN 1991 1-6, EN 1993 1-3, EN 1993 1-5 (calculations are to Eurocode, however additional checks such as fixings are required).

Deck self weight has not been allowed for, so has to be included in applied loads.

Load Span – Structural Deck RD 158/750

Steel at 350 MPa Yield Strength – Wind Suction Load (KN/m²)

Profile Thickness (mm)	Span (m)	Single				Double				Multiple			
		L/150	L/200	L/250	L/300	L/150	L/200	L/250	L/300	L/150	L/200	L/250	L/300
1.00	6.00	2.90	2.25	1.80	1.50	3.29	3.29	3.29	3.29	4.12	4.12	3.46	2.89
	6.20	2.71	2.04	1.63	1.36	3.09	3.09	3.09	3.09	3.86	3.86	3.14	2.62
	6.40	2.47	1.85	1.48	1.24	2.90	2.90	2.90	2.90	3.62	3.57	2.85	2.38
	6.60	2.26	1.69	1.35	1.13	2.72	2.72	2.72	2.72	3.40	3.25	2.60	2.17
	6.80	2.06	1.55	1.24	1.03	2.57	2.57	2.57	2.51	3.21	2.97	2.38	1.98
	7.00	1.89	1.42	1.13	-	2.42	2.42	2.42	2.31	3.03	2.73	2.18	1.82
	7.20	1.74	1.30	1.04	-	2.29	2.29	2.29	2.12	2.86	2.51	2.00	1.97
	7.40	1.60	1.20	-	-	2.17	2.17	2.17	1.95	2.71	2.31	1.85	1.54
	7.60	1.48	1.11	-	-	2.05	2.05	2.05	1.80	2.57	2.13	1.70	1.42
	7.80	1.37	1.02	-	-	1.95	1.95	1.95	1.67	2.44	1.97	1.58	1.31
8.00	1.27	-	-	-	1.85	1.85	1.85	1.54	2.32	1.83	1.46	1.22	
1.25	6.00	3.78	2.84	2.27	1.89	4.41	4.41	4.41	4.41	5.51	5.45	4.36	3.64
	6.20	3.43	2.57	2.06	1.71	4.13	4.13	4.13	4.13	5.16	4.94	3.95	3.30
	6.40	3.12	2.34	1.87	1.56	3.88	3.88	3.88	3.80	4.85	4.49	3.59	3.00
	6.60	2.84	2.13	1.70	1.42	3.65	3.65	3.65	3.46	4.56	4.10	3.28	2.73
	6.80	2.60	1.95	1.56	1.30	3.43	3.43	3.43	3.17	4.29	3.75	3.00	2.50
	7.00	2.38	1.79	1.43	1.19	3.24	3.24	3.24	2.90	4.05	3.43	2.75	2.29
	7.20	2.19	1.64	1.31	1.09	3.06	3.06	3.06	2.67	3.83	3.16	2.52	2.10
	7.40	2.02	1.51	1.21	1.01	2.90	2.90	2.90	2.46	3.63	2.91	2.33	1.94
	7.60	1.86	1.40	1.12	-	2.75	2.75	2.72	2.27	3.44	2.68	2.15	1.79
	7.80	1.72	1.29	1.03	-	2.61	2.61	2.52	2.10	3.26	2.48	1.99	1.65
8.00	1.60	1.20	-	-	2.48	2.48	2.33	1.95	3.07	2.30	1.84	1.53	
1.50	6.00	4.56	3.42	2.74	2.28	5.50	5.50	5.50	5.50	6.88	6.58	5.26	4.38
	6.20	4.13	3.10	2.48	2.07	5.15	5.15	5.15	5.04	6.44	5.96	4.77	3.97
	6.40	3.76	2.82	2.25	1.88	4.84	4.84	4.84	4.58	6.05	5.42	4.34	3.61
	6.60	3.43	2.57	2.06	1.71	4.55	4.55	4.55	4.18	5.68	4.94	3.95	3.29
	6.80	3.13	2.35	1.88	1.57	4.28	4.28	4.28	3.82	5.36	4.52	3.61	3.01
	7.00	2.87	2.15	1.72	1.44	4.04	4.04	4.04	3.50	5.05	4.14	3.31	2.76
	7.20	2.64	1.98	1.58	1.32	3.82	3.82	3.82	3.22	4.78	3.81	3.04	2.54
	7.40	2.43	1.82	1.46	1.22	3.62	3.62	3.56	2.96	4.52	3.51	2.80	2.34
	7.60	2.24	1.68	1.35	1.12	3.43	3.43	3.28	2.74	4.29	3.24	2.59	2.16
	7.80	2.08	1.56	1.25	1.04	3.26	3.26	3.07	2.53	3.99	2.99	2.39	2.00
8.00	1.92	1.44	1.15	-	3.10	3.10	2.82	2.35	3.70	2.77	2.22	1.85	

Working load UDL (kN/m²).

The load shown is the ultimate load divided by 1.5.

Tests / calculations EN 1990, EN 1991 1-6, EN 1993 1-3, EN 1993 1-5 (calculations are to Eurocode, however additional checks such as fixings are required).

Deck self weight has not been allowed for, so has to be included in applied loads.

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