vicwest

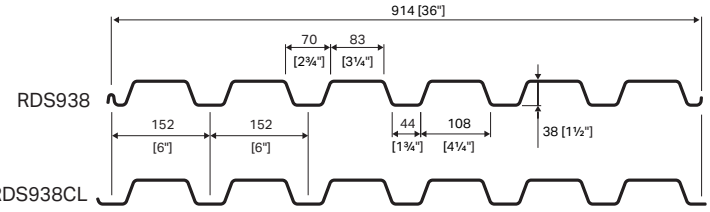
Load Table

ROOF DECK

RDS938 / RDS938CL

LSD - METRIC

230 MPa



PHYSICAL PROPERTIES

STEEL DECK (Per Metre Width)										
NOMINAL THICKNESS	THICKNESS WITH FINISH Z275	MASS WITH FINISH Z275	EFFECTIVE PROPERTIES				MAX. FACTORED RESISTANCE			
			SECTION MODULUS		MOMENT OF INERTIA		BENDING MOMENT		BEARING REACTION	
			MIDSPAN	SUPPORT	POSITIVE	NEGATIVE	MIDSPAN	SUPPORT	EXT.	INT
t	t	W_s	S_e^+	S_e^-	I_e^+	I_e^-	M_r^+	M_r^-	P_e	P_i
(mm)	(mm)	(kg/m²)	(mm³)	(mm³)	(mm⁴)	(mm⁴)	(kN·m)	(kN·m)	(kN)	(kN)
0.76	0.80	8.27	9,956	10,406	209,754	237,083	2.06	2.15	10.8	18.3
0.91	0.95	9.79	12,083	12,582	264,787	283,155	2.50	2.60	14.9	25.6
1.21	1.25	12.88	16,518	16,731	378,969	378,969	3.42	3.46	25.4	44.2
1.52	1.56	16.04	20,888	20,888	476,266	476,266	4.32	4.32	38.5	67.6

LOAD TABLES

Limit States Design - Canada

Span		Factored and Service Uniformly Distributed Loads (kPa)											
		Single Span				Double Span				Triple Span			
(mm)		0.76	0.91	1.21	1.52	0.76	0.91	1.21	1.52	0.76	0.91	1.21	1.52
1,200	F	11.2	13.6	18.5	23.4	11.5	13.9	18.5	23.1	[13.9]	17.1	22.7	28.4
	D	7.8	9.9	14.2	17.9	18.9	23.9	34.3	43.1	14.8	18.7	26.8	33.8
1,350	F	8.9	10.7	14.7	18.6	9.2	11.1	14.7	18.4	11.3	13.7	18.2	22.7
	D	5.5	6.9	10.0	12.5	13.3	16.8	24.1	30.2	10.4	13.1	18.8	23.7
1,500	F	7.2	8.7	11.9	15.1	7.4	9.0	12.0	15.0	9.2	11.1	14.8	18.5
	D	4.0	5.0	7.2	9.1	9.7	12.2	17.5	22.0	7.6	9.6	13.7	17.3
1,650	F	5.9	7.2	9.9	12.5	6.2	7.5	9.9	12.4	7.6	9.2	12.3	15.4
	D	3.0	3.8	5.4	6.8	7.3	9.2	13.2	16.5	5.7	7.2	10.3	13.0
1,800	F	5.0	6.1	8.3	10.5	5.2	6.3	8.4	10.5	6.4	7.8	10.4	13.0
	D	2.3	2.9	4.2	5.3	5.6	7.1	10.1	12.7	4.4	5.5	7.9	10.0
1,950	F		5.2	7.1	9.0	4.4	5.4	7.1	8.9	5.5	6.7	8.9	11.1
	D		2.3	3.3	4.1	4.4	5.5	7.9	10.0	3.4	4.3	6.2	7.8
2,100	F			6.1	7.7	3.8	4.6	6.2	7.7	4.8	5.8	7.7	9.6
	D			2.6	3.3	3.5	4.4	6.4	8.0	2.7	3.5	5.0	6.3
2,250	F			5.3	6.7	3.3	4.0	5.4	6.7	4.1	5.0	6.7	8.4
	D			2.1	2.7	2.8	3.6	5.2	6.5	2.2	2.8	4.0	5.1
2,400	F				5.9	2.9	3.5	4.7	5.9		4.4	5.9	7.4
	D				2.2	2.3	2.9	4.2	5.3		2.3	3.3	4.2
2,550	F					2.6	3.1	4.2	5.2		3.9	5.2	6.5
	D					1.9	2.4	3.5	4.4		1.9	2.8	3.5
2,700	F						2.8	3.7	4.7			4.6	5.8
	D						2.1	3.0	3.7			2.3	2.9
2,850	F							3.3	4.2			4.2	5.2
	D							2.5	3.2			2.0	2.5

Material : ASTM A653M, Galvanized Z275, Grade 230 MPa.

Reference standards:
CAN/CSA-S136-16 North American Specification for the Design of Cold-Formed Steel Structural Members
ANSI/AISI S100-16 North American Specification for the Design of Cold-Formed Steel Structural Members
CSSBI 10M-2018 Standard for Steel Roof Deck

1. Effective properties are based on a unit width of 1 000 mm.
2. Loads in row "F" are the maximum factored loads controlled by the strength capacity, and loads in row "D" are the uniform service loads that produce a deflection of L/240.
3. For loads based on alternate deflection limits, multiply loads shown as follows: L/180 = L/240 ×1.333, L/240 = L/240 ×1.000, L/300 = L/240 ×0.800, L/360 = L/240 ×0.667.
4. The maximum factored uniformly distributed load in the table must be greater than the sum of factored uniformly distributed loads applied on top of roof deck.
5. Load in brackets are controlled by web crippling. Maximum reactions are calculated for uniformly distributed loading with the end bearing length equal to 38 mm and the interior bearing length equal to 76 mm.
6. For other bearing conditions refer to Web Crippling tables or contact Vicwest engineering.
7. For maximum factored loads due to wind uplift use load tables for inverted deck orientation.
8. For acoustic deck, reduce capacity by five percent (5%).
9. Deck is not designed to carry concentrated hanging loads.

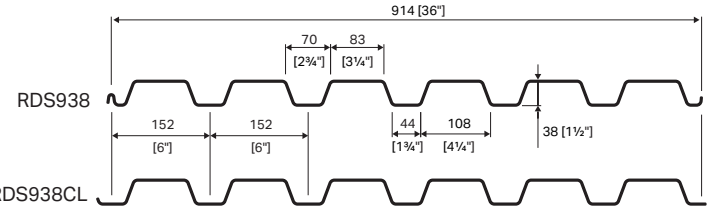
PLANET PASSIONATE

ROOF DECK

RDS938 / RDS938CL

LSD - IMPERIAL

33 ksi



PHYSICAL PROPERTIES

STEEL DECK (Per Foot Width)										
NOMINAL THICKNESS	THICKNESS WITH FINISH G90	MASS WITH FINISH G90	EFFECTIVE PROPERTIES				MAX. FACTORED RESISTANCE			
			SECTION MODULUS		MOMENT OF INERTIA		BENDING MOMENT		BEARING REACTION	
			MIDSPAN	SUPPORT	POSITIVE	NEGATIVE	MIDSPAN	SUPPORT	EXT.	INT
t	t	W_s	S_e^+	S_e^-	I_e^+	I_e^-	M_r^+	M_r^-	P_e	P_i
(in)	(in)	(lb/ft²)	(in³)	(in³)	(in⁴)	(in⁴)	(kip·in/ft)	(kip·in/ft)	(kip)	(kip)
0.030	0.0315	1.695	0.185	0.194	0.154	0.174	5.50	5.75	0.729	1.242
0.036	0.0373	2.006	0.225	0.234	0.194	0.207	6.68	6.95	1.010	1.736
0.048	0.0493	2.639	0.307	0.311	0.278	0.278	9.12	9.24	1.721	2.998
0.060	0.0614	3.284	0.389	0.389	0.349	0.349	11.54	11.54	2.610	4.583

LOAD TABLES

Limit States Design - Canada

Span		Factored and Service Uniformly Distributed Loads (psf)											
		Single Span				Double Span				Triple Span			
		0.030	0.036	0.048	0.060	0.030	0.036	0.048	0.060	0.030	0.036	0.048	0.060
4' - 0"	F	224	272	371	469	231	279	371	464	[283]	343	456	570
	D	157	198	284	357	378	478	684	860	297	374	536	674
4' - 6"	F	178	216	295	373	184	222	295	369	227	274	364	455
	D	110	139	199	250	266	336	480	604	208	263	376	473
5' - 0"	F	144	175	239	303	150	181	240	300	185	224	297	371
	D	80	101	145	182	194	244	350	440	152	191	274	345
5' - 6"	F	119	145	198	251	124	150	199	249	154	186	247	308
	D	60	76	109	137	145	184	263	331	114	144	206	259
6' - 0"	F	100	122	167	211	104	126	168	210	130	157	208	260
	D	46	58	84	105	112	141	202	254	88	111	159	199
6' - 6"	F		104	142	180	89	108	143	179	111	134	178	222
	D		46	66	83	88	111	159	200	69	87	125	157
7' - 0"	F			123	155	77	93	124	155	96	116	154	192
	D			53	66	70	89	127	160	55	69	100	125
7' - 6"	F			107	135	67	81	108	135	83	101	134	168
	D			43	54	57	72	103	130	45	56	81	102
8' - 0"	F				119	59	71	95	119		89	118	148
	D				44	47	59	85	107		46	67	84
8' - 6"	F						63	84	105			105	131
	D						49	71	89			55	70
9' - 0"	F						56	75	94			94	117
	D						42	60	75			47	59
9' - 6"	F							67	84			84	105
	D							51	64			40	50

Material : ASTM A653, Galvanized G90, Grade 33 ksi.

Reference standards:
CAN/CSA-S136-16 North American Specification for the Design of Cold-Formed Steel Structural Members
ANSI/AISI S100-16 North American Specification for the Design of Cold-Formed Steel Structural Members
CSSBI 10M-2018 Standard for Steel Roof Deck

1. Effectives properties are based on a unit width of 12"
2. Loads in row "F" are the maximum factored loads controlled by the strength capacity, and loads in row "D" are the uniform service loads that produce a deflection of L/240.
3. For loads based on alternate deflection limits, multiply loads shown as follows: L/180 = L/240 ×1.333, L/240 = L/240 ×1.000, L/300 = L/240 ×0.800, L/360 = L/240 ×0.667.
4. The maximum factored uniformly distributed load in the table must be greater than the sum of factored uniformly distributed loads applied on top of roof deck.
5. Load in brackets are controlled by web crippling. Maximum reactions are calculated for uniformly distributed loading with the end bearing length equal to 1 1/2" and the interior bearing length equal to 3".
6. For other bearing conditions refer to Web Crippling tables or contact Vicwest engineering.
7. For maximum factored loads due to wind uplift use load tables for inverted deck orientation.
8. For acoustic deck, reduce capacity by five percent (5%).
9. Deck is not designed to carry concentrated hanging loads.

To ensure you are viewing the most recent and accurate product information, please scan the QR code. Click here to visit the product page on our website.
Vicwest Inc. reserves the right to amend product specifications without prior notice. Product specifications shown in this document should not be taken as being available in all regions. Recommendations for the uses described herein should be verified for suitability and compliance with actual requirements of any local building codes, applicable laws and regulations.
vicwest-roof-deck-rds938-rds938cl-load-table-lsd-en-ca
ENG-LT-3106-EN-V2

Vicwest.com

Learn more about our Planet Passionate strategy. Visit vicwest.com/ca/en/planet-passionate

PLANET PASSIONATE