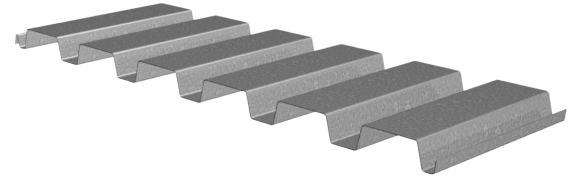


1.5B-36/1.5BI-36 ROOF DECKS GRADE 50 STEEL

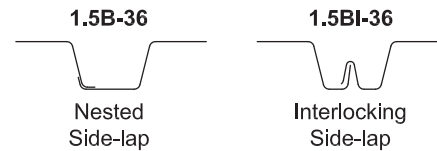
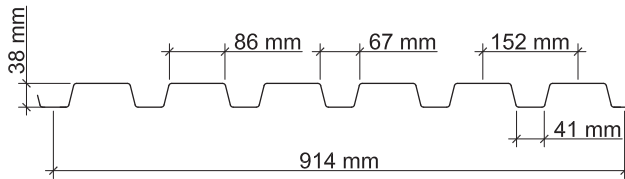
Metric
LSD

1.5B ROOF DECKS

- 1.5B-36 Deck used with Side-lap Screws
- 1.5BI-36 Deck used with TSWs or BPs



Nominal Dimensions



Section Properties

Deck Gage	Deck Weight w_{dd} (kg/m ²)	Base Metal Thickness t (mm)	Yield Strength F_y (MPa)	Effective Moment of Inertia at Service Load* $I_d = (2I_e + I_y)/3$		Effective Section Modulus* at $F_y = 345$ MPa		Factored* Moment		Vertical Web Shear* ϕV_n (kN)
				I_{d+} (mm ⁴ x10 ³)	I_{d-} (mm ⁴ x10 ³)	S_{e+} (mm ³ x10 ³)	S_{e-} (mm ³ x10 ³)	ϕM_{n+} (N-m)	ϕM_{n-} (N-m)	
22	7.81	0.75	345	211.7	243.1	9.09	9.62	2818	2987	50
20	9.76	0.91	345	269.0	296.3	12.04	12.31	3735	3819	60
18	12.69	1.20	345	378.3	396.0	16.45	17.10	5104	5305	79
16	16.10	1.52	345	497.1	501.2	21.13	21.61	6558	6706	98

*Physical Properties per meter (m) of width

Factored Reactions at Supports Based on Web Crippling, ϕR_n (kN/m)

Deck Gage	Bearing Length of Webs (mm)											
	One-Flange Loading						Two-Flange Loading					
	End Bearing				Interior Bearing		End Bearing				Interior Bearing	
	40	50	75	100	75	100	40	50	75	100	75	100
22	16.3	17.5	20.2	22.1	28.2	30.7	15.7	16.6	18.6	20.1	34.9	38.2
20	23.2	24.9	28.6	31.2	40.6	43.9	23.7	25.0	27.9	30.0	50.7	55.2
18	38.9	41.6	47.3	51.4	68.4	73.4	42.7	45.0	49.7	53.1	86.6	93.5
16	59.5	63.5	71.9	77.4	105.2	112.1	69.0	72.4	79.6	84.4	134.4	144.1

Standard Features

- ASTM A653/A653M SS GR50 Min., with Z275/G90 galvanized or ZF75/A25 galvanized
- Standard lengths – 1.83 m to 12.8 m
- UL and FM Listed
- Cold-formed steel deck conforms to CAN/CSA S136-16 and meets the guidelines of CSSBI 10M-2018.

Optional Features

- Inquire regarding cost and lead times for:
 - Short cuts < 1.83 m
 - Sheet Lengths > 12.8 m
 - Alternative metallic and painted finishes
- Web Perforated Acoustical Versions

1.5B-36/1.5BI-36 ROOF DECKS GRADE 50 STEEL

Metric
LSD

Inward Uniform Factored Loads, LSD (kPa)

Deck Gage	Spans	Criteria	Span (mm)										
			1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200
22	Single	ϕW_n	15.7	11.5	8.8	7.0	5.7	4.7	3.9	3.3	2.9	2.5	2.2
		L/240	8.0	5.0	3.4	2.4	1.7	1.3	1.0	0.8	0.6	0.5	0.4
	Double	ϕW_n	16.1	11.9	9.2	7.3	5.9	4.9	4.1	3.5	3.0	2.6	2.3
		L/240	22.1	13.9	9.3	6.6	4.8	3.6	2.8	2.2	1.7	1.4	1.2
	Triple	ϕW_n	19.9	14.8	11.4	9.1	7.4	6.1	5.1	4.4	3.8	3.3	2.9
		L/240	17.3	10.9	7.3	5.1	3.7	2.8	2.2	1.7	1.4	1.1	0.9
20	Single	ϕW_n	20.8	15.3	11.7	9.2	7.5	6.2	5.2	4.4	3.8	3.3	2.9
		L/240	10.2	6.4	4.3	3.0	2.2	1.6	1.3	1.0	0.8	0.7	0.5
	Double	ϕW_n	20.6	15.2	11.7	9.3	7.6	6.3	5.3	4.5	3.9	3.4	3.0
		L/240	27.0	17.0	11.4	8.0	5.8	4.4	3.4	2.6	2.1	1.7	1.4
	Triple	ϕW_n	25.3	18.8	14.5	11.6	9.4	7.8	6.6	5.6	4.8	4.2	3.7
		L/240	21.1	13.3	8.9	6.3	4.6	3.4	2.6	2.1	1.7	1.4	1.1
18	Single	ϕW_n	28.4	20.9	16.0	12.6	10.2	8.5	7.1	6.1	5.2	4.5	4.0
		L/240	14.3	9.0	6.0	4.2	3.1	2.3	1.8	1.4	1.1	0.9	0.8
	Double	ϕW_n	28.4	21.1	16.3	12.9	10.5	8.7	7.3	6.2	5.4	4.7	4.1
		L/240	36.0	22.7	15.2	10.7	7.8	5.8	4.5	3.5	2.8	2.3	1.9
	Triple	ϕW_n	35.0	26.1	20.1	16.0	13.0	10.8	9.1	7.8	6.7	5.9	5.2
		L/240	28.2	17.8	11.9	8.4	6.1	4.6	3.5	2.8	2.2	1.8	1.5
16	Single	ϕW_n	36.5	26.8	20.5	16.2	13.1	10.9	9.1	7.8	6.7	5.8	5.1
		L/240	18.8	11.8	7.9	5.6	4.1	3.0	2.3	1.8	1.5	1.2	1.0
	Double	ϕW_n	35.9	26.7	20.5	16.3	13.3	11.0	9.2	7.9	6.8	5.9	5.2
		L/240	45.6	28.7	19.2	13.5	9.8	7.4	5.7	4.5	3.6	2.9	2.4
	Triple	ϕW_n	44.2	32.9	25.4	20.2	16.5	13.7	11.5	9.8	8.5	7.4	6.5
		L/240	35.7	22.5	15.1	10.6	7.7	5.8	4.5	3.5	2.8	2.3	1.9

Note:

1. Table does not account for web crippling. Required bearing should be determined based on specific span conditions.

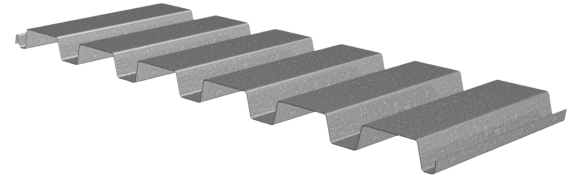
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1.5B-36/1.5BI-36 ROOF DECKS GRADE 50 STEEL

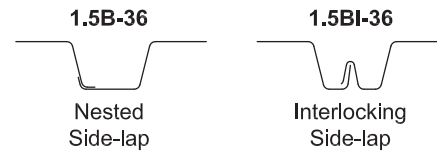
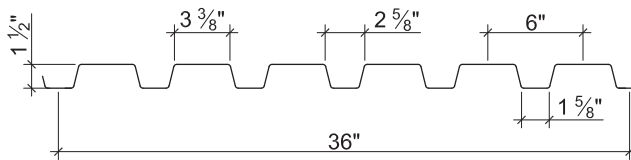
Imperial
LSD

1.5B ROOF DECKS

- 1.5B-36 Deck used with Side-lap Screws
- 1.5BI-36 Deck used with TSWs or BPs



Nominal Dimensions



Section Properties

Deck Gage	Deck Weight w_{dd} (psf)	Base Metal Thickness t (in.)	Yield Strength F_y (ksi)	Effective Moment of Inertia at Service Load $I_d = (2I_e + I_g)/3$		Effective Section Modulus at $F_y = 50$ ksi		Factored Moment		Vertical Web Shear ϕV_n (lb/ft)
				I_{d+} (in ⁴ /ft)	I_{d-} (in ⁴ /ft)	S_{e+} (in ³ /ft)	S_{e-} (in ³ /ft)	ϕM_{n+} (lb-ft/ft)	ϕM_{n-} (lb-ft/ft)	
22	1.6	0.0295	50	0.155	0.178	0.169	0.179	634	671	3398
20	2.0	0.0358	50	0.197	0.217	0.224	0.229	840	859	4105
18	2.6	0.0474	50	0.277	0.290	0.306	0.318	1148	1193	5388
16	3.3	0.0598	50	0.364	0.367	0.393	0.402	1474	1508	6734

Factored Reactions at Supports Based on Web Crippling, ϕR_n (lb/ft)

Deck Gage	Bearing Length of Webs											
	One-Flange Loading						Two-Flange Loading					
	End Bearing				Interior Bearing		End Bearing				Interior Bearing	
	1 1/2"	2"	3"	4"	3"	4"	1 1/2"	2"	3"	4"	3"	4"
22	1098	1207	1389	1517	1945	2103	1061	1143	1281	1377	2407	2617
20	1567	1717	1969	2140	2792	3005	1605	1723	1921	2057	3494	3782
18	2626	2863	3261	3519	4707	5029	2894	3092	3423	3637	5966	6410
16	4023	4369	4949	5304	7241	7685	4679	4977	5477	5783	9253	9874

Standard Features

- ASTM A653/A653M SS GR50 Min., with Z275/G90 galvanized or ZF75/A25 galvanized
- UL and FM Listed
- Standard lengths – 6'-0" to 42'-0"
- Cold-formed steel deck conforms to CAN/CSA S136-16 and meets the guidelines of CSSBI 10M-2018.

Optional Features

- Inquire regarding cost and lead times for:
 - Short cuts < 6'-0"
 - Sheet Lengths > 42'-0"
 - Alternative metallic and painted finishes
- Web Perforated Acoustical Versions

1.5B-36/1.5BI-36 ROOF DECKS GRADE 50 STEEL

Inward Uniform Factored Loads, LSD (psf)

Deck Gage	Spans	Criteria	Span (ft-in.)										
			2'-0"	3'-0"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
22	Single	ϕW_n	1267	563	317	203	141	103	79	63	51	42	35
		L/240	1270	376	159	81	47	30	20	14	10	8	6
	Double	ϕW_n	1204	567	326	211	147	109	83	66	53	44	37
		L/240	3514	1041	439	225	130	82	55	39	28	21	16
	Triple	ϕW_n	1444	694	402	261	183	135	104	82	67	55	46
		L/240	2754	816	344	176	102	64	43	30	22	17	13
20	Single	ϕW_n	1679	746	420	269	187	137	105	83	67	56	47
		L/240	1614	478	202	103	60	38	25	18	13	10	7
	Double	ϕW_n	1522	721	415	269	188	139	106	84	68	57	48
		L/240	4283	1269	535	274	159	100	67	47	34	26	20
	Triple	ϕW_n	1818	880	512	333	233	172	133	105	85	71	59
		L/240	3357	995	420	215	124	78	52	37	27	20	16
18	Single	ϕW_n	2295	1020	574	367	255	187	143	113	92	76	64
		L/240	2270	673	284	145	84	53	35	25	18	14	11
	Double	ϕW_n	2087	994	575	373	261	192	148	117	95	78	66
		L/240	5724	1696	716	366	212	134	89	63	46	34	27
	Triple	ϕW_n	2484	1212	707	461	323	239	184	146	118	98	82
		L/240	4487	1329	561	287	166	105	70	49	36	27	21
16	Single	ϕW_n	2948	1310	737	472	328	241	184	146	118	97	82
		L/240	2983	884	373	191	110	70	47	33	24	18	14
	Double	ϕW_n	2631	1255	726	471	329	243	187	148	120	99	83
		L/240	7244	2146	906	464	268	169	113	79	58	44	34
	Triple	ϕW_n	3129	1529	893	582	409	302	232	184	149	124	104
		L/240	5678	1682	710	363	210	132	89	62	45	34	26

Note:

1. Table does not account for web crippling. Required bearing should be determined based on specific span conditions.

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