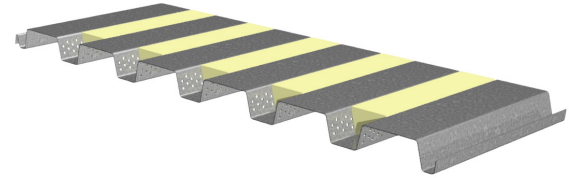


1.5BA-36/1.5BIA-36 ACOUSTICAL ROOF DECKS GRADE 50 STEEL

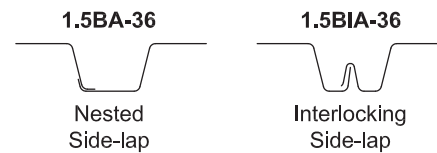
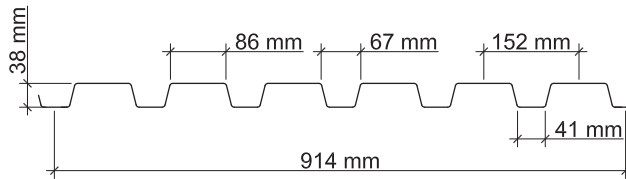
Metric
LSD

1.5B ACOUSTICAL ROOF DECKS

- 1.5BA-36 Deck used with Side-lap Screws
- 1.5BIA-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	7.32	0.75	345	202.1	230.8	8.66	9.14	2686	2834	38
20	9.27	0.91	345	255.4	281.3	11.45	11.72	3555	3635	45
18	12.20	1.20	345	359.2	376.9	15.59	16.24	4836	5036	59
16	15.62	1.52	345	472.5	475.2	20.11	20.54	6237	6373	74

*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	15.8	17.0	19.6	21.5	28.1	30.6	14.8	15.7	17.6	19.0	34.1	37.3
20	22.6	24.3	27.8	30.4	40.4	43.7	22.6	23.9	26.6	28.6	49.7	54.1
18	38.0	40.6	46.3	50.2	68.2	73.2	41.0	43.2	47.8	51.0	85.1	91.9
16	58.3	62.2	70.4	75.9	104.9	111.8	66.6	69.9	76.9	81.5	132.3	141.9

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
- 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

1.5BA-36/1.5BIA-36 ACOUSTICAL 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	15.0	11.0	8.4	6.6	5.4	4.5	3.7	3.2	2.7	2.4	2.1
		L/240	7.6	4.8	3.2	2.3	1.6	1.2	1.0	0.8	0.6	0.5	0.4
	Double	ϕW_n	15.1	11.2	8.6	6.9	5.6	4.6	3.9	3.3	2.9	2.5	2.2
		L/240	21.0	13.2	8.9	6.2	4.5	3.4	2.6	2.1	1.7	1.3	1.1
	Triple	ϕW_n	18.5	13.8	10.7	8.5	6.9	5.7	4.8	4.1	3.6	3.1	2.7
		L/240	16.5	10.4	6.9	4.9	3.6	2.7	2.1	1.6	1.3	1.1	0.9
20	Single	ϕW_n	19.8	14.5	11.1	8.8	7.1	5.9	4.9	4.2	3.6	3.2	2.8
		L/240	9.6	6.1	4.1	2.9	2.1	1.6	1.2	0.9	0.8	0.6	0.5
	Double	ϕW_n	19.2	14.3	11.0	8.8	7.1	5.9	5.0	4.3	3.7	3.2	2.8
		L/240	25.6	16.1	10.8	7.6	5.5	4.2	3.2	2.5	2.0	1.6	1.3
	Triple	ϕW_n	23.5	17.6	13.6	10.9	8.9	7.4	6.2	5.3	4.6	4.0	3.5
		L/240	20.1	12.6	8.5	5.9	4.3	3.3	2.5	2.0	1.6	1.3	1.1
18	Single	ϕW_n	26.9	19.8	15.2	12.0	9.7	8.0	6.7	5.7	4.9	4.3	3.8
		L/240	13.6	8.5	5.7	4.0	2.9	2.2	1.7	1.3	1.1	0.9	0.7
	Double	ϕW_n	26.4	19.7	15.2	12.1	9.9	8.2	6.9	5.9	5.1	4.4	3.9
		L/240	34.3	21.6	14.5	10.2	7.4	5.6	4.3	3.4	2.7	2.2	1.8
	Triple	ϕW_n	32.3	24.2	18.8	15.0	12.2	10.2	8.6	7.3	6.3	5.5	4.9
		L/240	26.9	16.9	11.3	8.0	5.8	4.4	3.4	2.6	2.1	1.7	1.4
16	Single	ϕW_n	34.7	25.5	19.5	15.4	12.5	10.3	8.7	7.4	6.4	5.6	4.9
		L/240	17.8	11.2	7.5	5.3	3.9	2.9	2.2	1.8	1.4	1.1	0.9
	Double	ϕW_n	33.4	24.9	19.3	15.3	12.5	10.4	8.7	7.5	6.4	5.6	4.9
		L/240	43.2	27.2	18.2	12.8	9.3	7.0	5.4	4.2	3.4	2.8	2.3
	Triple	ϕW_n	40.7	30.6	23.7	18.9	15.5	12.8	10.8	9.3	8.0	7.0	6.2
		L/240	33.9	21.3	14.3	10.0	7.3	5.5	4.2	3.3	2.7	2.2	1.8

Note:

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

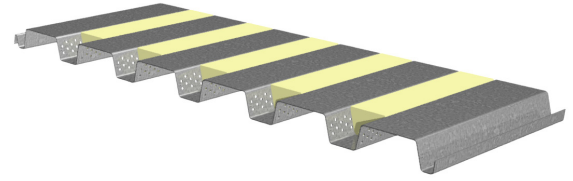
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1.5BA-36/1.5BIA-36 ACOUSTICAL ROOF DECKS GRADE 50 STEEL

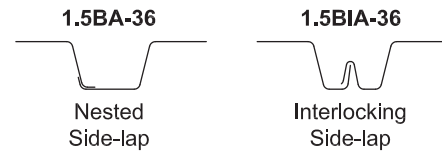
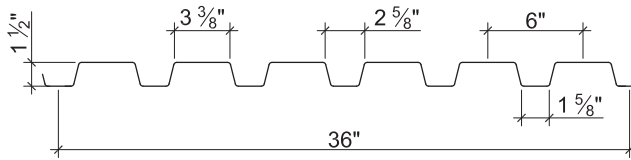
Imperial
LSD

1.5B ACOUSTICAL ROOF DECKS

- 1.5BA-36 Deck used with Side-lap Screws
- 1.5BIA-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	1.5	0.0295	50	0.148	0.169	0.161	0.170	604	637	2570
20	1.9	0.0358	50	0.187	0.206	0.213	0.218	799	817	3098
18	2.5	0.0474	50	0.263	0.276	0.290	0.302	1087	1132	4052
16	3.2	0.0598	50	0.346	0.348	0.374	0.382	1402	1433	5045

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	1066	1171	1348	1472	1937	2094	1005	1083	1213	1304	2353	2558
20	1526	1672	1917	2084	2782	2994	1530	1643	1831	1960	3423	3705
18	2567	2799	3188	3440	4692	5012	2780	2970	3288	3494	5862	6298
16	3943	4282	4851	5198	7220	7662	4518	4806	5289	5584	9110	9721

Standard Features

- ASTM A653/A653M SS GR50 Min., with Z275/G90 galvanized or ZF75/A25 galvanized
- 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

1.5BA-36/1.5BIA-36 ACOUSTICAL ROOF DECKS GRADE 50 STEEL

Imperial
LSD

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	1208	537	302	193	134	99	75	60	48	40	34
		L/240	1213	359	152	78	45	28	19	13	10	7	6
	Double	ϕW_n	1083	523	304	198	139	102	79	62	51	42	35
		L/240	3336	988	417	213	124	78	52	37	27	20	15
	Triple	ϕW_n	1278	634	373	244	172	127	98	78	63	52	44
		L/240	2615	775	327	167	97	61	41	29	21	16	12
20	Single	ϕW_n	1598	710	400	256	178	130	100	79	64	53	44
		L/240	1532	454	192	98	57	36	24	17	12	9	7
	Double	ϕW_n	1364	665	388	253	177	131	101	80	65	54	45
		L/240	4066	1205	508	260	151	95	64	45	33	24	19
	Triple	ϕW_n	1602	803	475	312	219	163	125	99	81	67	56
		L/240	3187	944	398	204	118	74	50	35	25	19	15
18	Single	ϕW_n	2174	966	544	348	242	178	136	107	87	72	60
		L/240	2155	639	269	138	80	50	34	24	17	13	10
	Double	ϕW_n	1856	912	534	349	245	181	139	110	90	74	62
		L/240	5448	1614	681	349	202	127	85	60	44	33	25
	Triple	ϕW_n	2169	1098	653	429	303	225	173	137	112	93	78
		L/240	4270	1265	534	273	158	100	67	47	34	26	20
16	Single	ϕW_n	2804	1246	701	449	312	229	175	138	112	93	78
		L/240	2835	840	354	181	105	66	44	31	23	17	13
	Double	ϕW_n	2337	1151	675	441	310	229	176	140	113	94	79
		L/240	6869	2035	859	440	254	160	107	75	55	41	32
	Triple	ϕW_n	2727	1384	824	542	383	284	219	174	141	117	99
		L/240	5384	1595	673	345	199	126	84	59	43	32	25

Note:

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

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