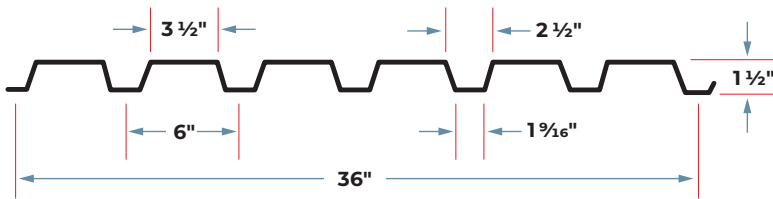


B-DECK

GRADE 50 STEEL



Options

- Vented
- Hanger Tabs

Section Properties

Gage	Design Thickness (inches)	Weight (psf)	F _y (ksi)	S _e + (inch ³) per foot	S _e - (inch ³) per foot	ASD (Ω = 1.67)		I _d + (inch ⁴) per ft.	I _d - (inch ⁴) per ft.
						M _p /Ω (inch-lbs per ft)	M _n /Ω (inch-lbs per foot)		
22	0.0295	1.6	50	0.170	0.179	5101	5358	0.144	0.167
20	0.0358	2.0	50	0.216	0.222	6457	6661	0.182	0.210
18	0.0474	2.6	50	0.294	0.310	8812	9291	0.257	0.290
16	0.0598	3.0	50	0.378	0.390	11327	11667	0.341	0.363

Note

All section properties and ASD flexural strengths are calculated in accordance with ANSI/SDI RD-2017, AISI S100-2012 and AISI S100-2016.

Shear and Web Crippling

Gage	V _n /Ω (lbs/ft)	Web Crippling (R _n /Ω), lbs/ft One Flange Loading End Bearing			Web Crippling (R _n /Ω), lbs/ft One Flange Loading Interior Bearing		
		1-1/2"	2"	3"	1-1/2"	2"	3"
22	2424	801	880	1013	1096	1189	1345
20	3803	1143	1253	1436	1605	1735	1953
18	5032	1914	2087	2377	2773	2983	3334
16	6219	2931	3183	3606	4345	4654	5172

Note

All section properties and ASD flexural strengths are calculated in accordance with ANSI/SDI RD-2017, AISI S100-2012 and AISI S100-2016.

Allowable Uniform Downward Loads, ASD (PSF)

Span	Gage	5'-0"	5"-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"
Single	22	136	112	94	80	69	60	53	47	42	38	34
	20	172	142	120	102	88	77	67	60	53	48	43
	18	235	194	163	139	120	104	92	81	73	65	59
	16	302	250	210	179	154	134	118	105	93	84	76
Double	22	143	118	99	85	73	64	56	49	44	40	36
	20	178	147	123	105	91	79	69	61	55	49	44
	18	248	205	172	147	126	110	97	86	76	69	62
	16	311	257	216	184	159	138	122	108	96	86	78
Triple	22	179	148	124	106	91	79	70	62	55	49	45
	20	222	183	154	131	113	99	87	77	69	62	56
	18	310	256	215	183	158	138	121	107	96	86	77
	16	389	321	270	230	198	173	152	135	120	108	97

Allowable Uniform Upward Loads, ASD (PSF)

Span	Gage	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"
Single	22	143	118	99	85	73	64	56	49	44	40	36
	20	178	147	123	105	91	79	69	61	55	49	44
	18	248	205	172	147	126	110	97	86	76	69	62
	16	311	257	216	184	159	138	122	108	96	86	78
Double	22	136	112	94	80	69	60	53	47	42	38	34
	20	172	142	120	102	88	77	67	60	53	48	43
	18	235	194	163	139	120	104	92	81	73	65	59
	16	302	250	210	179	154	134	118	105	93	84	76
Triple	22	170	141	118	101	87	76	66	59	52	47	43
	20	215	178	149	127	110	96	84	74	66	60	54
	18	294	243	204	174	150	131	115	102	91	81	73
	16	378	312	262	223	193	168	147	131	117	105	94

Notes

- All section properties and ASD ($\Omega = 1.67$) uniform loads are calculated in accordance with ANSI/SDI RD-2017, AISI S100-2012 and AISI S100-2016.
- Loads shown in tables are uniformly distributed superimposed loads in psf. Span length assumes center-to-center spacing of supports. Tabulated loads shall not be increased by assuming clear span dimensions.
- Bending Moment formulae used for flexural stress limitations are: Simple and Two Span $M = \frac{wL^2}{8}$ Three Span or More $M = \frac{wL^2}{10}$
- Web crippling and shear have not been accounted for in these tables. Required bearing should be determined based on specific span conditions.

Uniform Superimposed Service Load that Causes L/240 Deflection (PSF)

Span	Gage	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"
Single	22	76	57	44	35	28	22	19	15	13	11	9
	20	96	72	55	44	35	28	23	19	16	14	12
	18	135	101	78	61	49	40	33	27	23	20	17
	16	179	135	104	82	65	53	44	36	31	26	22
Double	22	183	137	106	83	67	54	45	37	31	27	23
	20	230	173	133	105	84	68	56	47	40	34	29
	18	325	244	188	148	118	96	79	66	56	47	41
	16	431	324	250	196	157	128	105	88	74	63	54
Triple	22	143	107	83	65	52	42	35	29	25	21	18
	20	180	135	104	82	66	53	44	37	31	26	23
	18	254	191	147	116	93	75	62	52	44	37	32
	16	338	254	195	154	123	100	82	69	58	49	42

Note

For loads that cause L/120 Deflection, multiply by 2.0. For loads that cause L/180 Deflection, multiply by 1.5. For loads that cause L/360 Deflection, multiply by 0.667.

Maximum Construction and Cantilever Spans

Span	Gage	ASD Span	ASD Cantilever Span
Single	22	8'-6"	2'-3"
	20	10'-9"	2'-9"
	18	14'-8"	3'-10"
	16	18'-11"	4'-9"
Double or Triple	22	10'-6"	
	20	13'-3"	
	18	18'-1"	
	16	23'-3"	

Notes

- All construction load spans are calculated using a 200 pound service load on a 1 foot width of deck, in accordance with ANSI/SDI RD-2017.
- All cantilever construction load spans are calculated using a 200 pound service load on a 1 foot width of deck and a 10 psf uniform distributed load, in accordance with ANSI/SDI RD-2017.