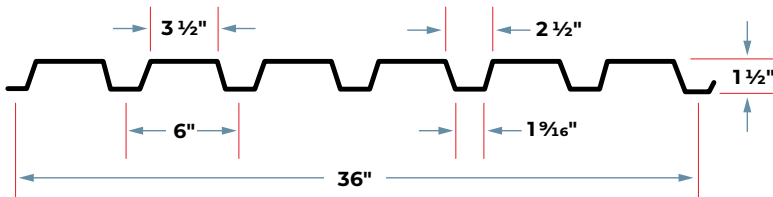


B-DECK

GRADE 40 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	40	0.173	0.184	4135	4415	0.147	0.171
20	0.0358	2.0	40	0.219	0.231	5246	5533	0.187	0.216
18	0.0474	2.6	40	0.299	0.312	7154	7473	0.263	0.290
16	0.0598	3.0	40	0.383	0.390	9166	9333	0.350	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	1939	640	704	810	877	951	1076
20	3042	915	1002	1149	1284	1388	1563
18	4025	1531	1670	1902	2218	2386	2667
16	4975	2345	2547	2885	3476	3723	4138

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	110	91	77	65	56	49	43	38	34	31	28
	20	140	116	97	83	71	62	55	48	43	39	35
	18	191	158	132	113	97	85	75	66	59	53	48
	16	244	202	170	145	125	109	95	85	75	68	61
Double	22	118	97	82	70	60	52	46	41	36	33	29
	20	148	122	102	87	75	66	58	51	46	41	37
	18	199	165	138	118	102	89	78	69	62	55	50
	16	249	206	173	147	127	111	97	86	77	69	62
Triple	22	147	122	102	87	75	65	57	51	45	41	37
	20	184	152	128	109	94	82	72	64	57	51	46
	18	249	206	173	147	127	111	97	86	77	69	62
	16	311	257	216	184	159	138	122	108	96	86	78

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	118	97	82	70	60	52	46	41	36	33	29
	20	148	122	102	87	75	66	58	51	46	41	37
	18	199	165	138	118	102	89	78	69	62	55	50
	16	249	206	173	147	127	111	97	86	77	69	62
Double	22	110	91	77	65	56	49	43	38	34	31	28
	20	140	116	97	83	71	62	55	48	43	39	35
	18	191	158	132	113	97	85	75	66	59	53	48
	16	244	202	170	145	125	109	95	85	75	68	61
Triple	22	138	114	96	82	70	61	54	48	43	38	34
	20	175	145	121	103	89	78	68	61	54	48	44
	18	238	197	166	141	122	106	93	83	74	66	60
	16	306	252	212	181	156	136	119	106	94	85	76

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	77	58	45	35	28	23	19	16	13	11	10
	20	98	74	57	45	36	29	24	20	17	14	12
	18	138	104	80	63	50	41	34	28	24	20	17
	16	184	138	106	84	67	54	45	37	32	27	23
Double	22	185	139	107	84	68	55	45	38	32	27	23
	20	236	177	137	107	86	70	58	48	40	34	30
	18	333	250	193	152	121	99	81	68	57	49	42
	16	443	333	256	201	161	131	108	90	76	65	55
Triple	22	145	109	84	66	53	43	35	30	25	21	18
	20	185	139	107	84	67	55	45	38	32	27	23
	18	261	196	151	119	95	77	64	53	45	38	33
	16	346	260	200	158	126	103	85	71	59	51	43

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	6'-11"	1'-10"
	20	8'-9"	2'-3"
	18	11'-11"	3'-1"
	16	15'-3"	3'-10"
Double or Triple	22	8'-6"	
	20	10'-9"	
	18	14'-8"	
	16	18'-10"	

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.

