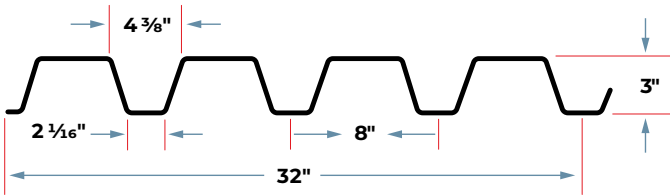


N-DECK

GRADE 80 STEEL



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	1.8	60	0.343	0.358	12312	12871	0.641	0.696
20	0.0358	2.2	60	0.442	0.661	15894	23737	0.796	0.879
18	0.0474	2.9	60	0.645	0.688	23187	24723	1.090	1.198
16	0.0598	3.7	60	0.885	0.908	31810	32618	1.416	1.536

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	2324	655	720	829	1063
20	4082	944	1035	1186	1539	1664	1873
18	7480	1599	1743	1986	2623	2821	3154
16	11169	2467	2679	3035	4073	4363	4849

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	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	17'-0"	18'-0"	19'-0"	20'-0"
Single	22	82	68	57	49	42	36	32	28	25	23	21
	20	106	88	74	63	54	47	41	37	33	29	26
	18	155	128	107	91	79	69	60	53	48	43	39
	16	212	175	147	125	108	94	83	73	65	59	53
Double	22	86	71	60	51	44	38	34	30	26	24	21
	20	158	131	110	94	81	70	62	55	49	44	40
	18	165	136	114	98	84	73	64	57	51	46	41
	16	217	180	151	129	111	97	85	75	67	60	54
Triple	22	107	89	74	63	55	48	42	37	33	30	27
	20	198	163	137	117	101	88	77	68	61	55	49
	18	206	170	143	122	105	92	80	71	64	57	52
	16	272	225	189	161	139	121	106	94	84	75	68

Allowable Uniform Upward Loads, ASD (PSF)

Span	Gage	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	17'-0"	18'-0"	19'-0"	20'-0"
Single	22	86	71	60	51	44	38	34	30	26	24	21
	20	158	131	110	94	81	70	62	55	49	44	40
	18	165	136	114	98	84	73	64	57	51	46	41
	16	217	180	151	129	111	97	85	75	67	60	54
Double	22	82	68	57	49	42	36	32	28	25	23	21
	20	106	88	74	63	54	47	41	37	33	29	26
	18	155	128	107	91	79	69	60	53	48	43	39
	16	212	175	147	125	108	94	83	73	65	59	53
Triple	22	103	85	71	61	52	46	40	36	32	28	26
	20	132	109	92	78	68	59	52	46	41	37	33
	18	193	160	134	114	99	86	75	67	60	54	48
	16	265	219	184	157	135	118	104	92	82	73	66

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	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	17'-0"	18'-0"	19'-0"	20'-0"
Single	22	42	32	24	19	15	12	10	9	7	6	5
	20	52	39	30	24	19	15	13	11	9	8	7
	18	72	54	41	33	26	21	17	15	12	10	9
	16	93	70	54	42	34	28	23	19	16	14	12
Double	22	101	76	59	46	37	30	25	21	17	15	13
	20	126	95	73	57	46	37	31	26	22	18	16
	18	172	129	100	78	63	51	42	35	30	25	22
	16	224	168	130	102	82	66	55	46	38	33	28
Triple	22	79	60	46	36	29	24	19	16	14	12	10
	20	99	74	57	45	36	29	24	20	17	14	12
	18	135	101	78	61	49	40	33	27	23	20	17
	16	175	132	101	80	64	52	43	36	30	26	22

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	20'-6"	5'-3"
	20	26'-6"	9'-6"
	18	38'-8"	9'-11"
	16	53'-0"	12'-11"
Double or Triple	22	25'-3"	
	20	32'-7"	
	18	47'-7"	
	16	65'-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.

