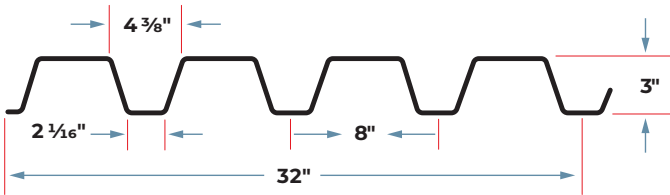


N-DECK

GRADE 33 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	33	0.413	0.410	8169	8100	0.669	0.736
20	0.0358	2.2	33	0.494	0.527	9758	10411	0.831	0.914
18	0.0474	2.9	33	0.714	0.745	14116	14724	1.145	1.240
16	0.0598	3.7	33	0.915	0.936	18088	18496	1.496	1.556

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	2162	360	396	456	585
20	3164	519	569	652	846	915	1030
18	4899	879	959	1092	1443	1552	1735
16	6143	1357	1474	1669	2240	2400	2667

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	54	45	38	32	28	24	21	19	17	15	14
	20	65	54	45	38	33	29	25	23	20	18	16
	18	94	78	65	56	48	42	37	33	29	26	24
	16	121	100	84	71	62	54	47	42	37	33	30
Double	22	54	45	38	32	28	24	21	19	17	15	14
	20	69	57	48	41	35	31	27	24	21	19	17
	18	98	81	68	58	50	44	38	34	30	27	25
	16	123	102	86	73	63	55	48	43	38	34	31
Triple	22	68	56	47	40	34	30	26	23	21	19	17
	20	87	72	60	51	44	39	34	30	27	24	22
	18	123	101	85	73	63	55	48	42	38	34	31
	16	154	127	107	91	79	69	60	53	48	43	39

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	54	45	38	32	28	24	21	19	17	15	14
	20	69	57	48	41	35	31	27	24	21	19	17
	18	98	81	68	58	50	44	38	34	30	27	25
	16	123	102	86	73	63	55	48	43	38	34	31
Double	22	54	45	38	32	28	24	21	19	17	15	14
	20	65	54	45	38	33	29	25	23	20	18	16
	18	94	78	65	56	48	42	37	33	29	26	24
	16	121	100	84	71	62	54	47	42	37	33	30
Triple	22	68	56	47	40	35	30	27	24	21	19	17
	20	81	67	56	48	41	36	32	28	25	23	20
	18	118	97	82	70	60	52	46	41	36	33	29
	16	151	125	105	89	77	67	59	52	47	42	38

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	44	33	25	20	16	13	11	9	8	6	5
	20	55	41	32	25	20	16	13	11	9	8	7
	18	75	56	44	34	27	22	18	15	13	11	9
	16	98	74	57	45	36	29	24	20	17	14	12
Double	22	106	79	61	48	39	31	26	22	18	15	13
	20	131	99	76	60	48	39	32	27	23	19	16
	18	181	136	105	82	66	54	44	37	31	26	23
	16	237	178	137	108	86	70	58	48	41	34	30
Triple	22	83	62	48	38	30	25	20	17	14	12	10
	20	103	77	60	47	37	30	25	21	18	15	13
	18	142	106	82	64	52	42	35	29	24	21	18
	16	185	139	107	84	67	55	45	38	32	27	23

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	13'-7"	3'-4"
	20	16'-3"	4'-3"
	18	23'-6"	6'-0"
	16	30'-2"	7'-6"
Double or Triple	22	16'-9"	
	20	20'-0"	
	18	28'-11"	
	16	37'-1"	

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.

