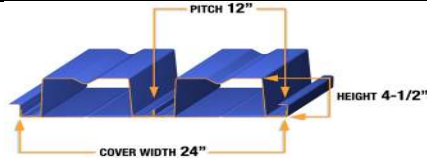


SECTION PROPERTIES $f_y = 40 \text{ ksi}$

GAGE	Wd	I _b (DEFLECTION)	S _p	S _n	Rbe			Rbi		V _a
					4"	5"	6"	5"	6"	
20/20	4.47	4.667	1.205	1.542	588	638	684	1095	1164	1873
20/18	5.04	4.974	1.206	1.593	588	638	684	1095	1164	1873
18/20	5.34	5.952	1.859	2.007	990	1071	1145	1815	1925	4230
18/18	5.91	6.412	1.860	2.069	990	1071	1145	1815	1925	4230
18/16	6.52	6.820	1.855	2.125	990	1071	1145	1815	1925	4230



ASD DESIGN		MAXIMUM SUPERIMPOSED UNIFORM ASD LOADS, psf														
Span	Load Combinations	SINGLE SPAN					DOUBLE SPAN					TRIPLE SPAN				
		GAGE														
		20/20	20/18	18/20	18/18	18/16	20/20	20/18	18/20	18/18	18/16	20/20	20/18	18/20	18/18	18/16
11'-0"	D+L (Strength)	102*	102*	175*	174*	173*	78*	78*	112*	113*	113*	90*	90*	130*	131*	131*
	D+L (Deflection)	102	102	175	174	173	78	78	112	113	113	90	90	130	131	131
	L (Deflection)	102	102	175	174	173	78	78	112	113	113	90	90	130	131	131
12'-0"	D+L (Strength)	94*	93*	160*	159*	159*	70*	70*	100*	101*	102*	81*	81*	117*	117*	118*
	D+L (Deflection)	94	93	160	159	159	70	70	100	101	102	81	81	117	117	118
	L (Deflection)	94	93	151	159	159	70	70	100	101	102	81	81	117	117	118
13'-0"	D+L (Strength)	86*	85*	147*	146*	146*	63*	63*	91*	91*	92*	73*	73*	105*	106*	107*
	D+L (Deflection)	86	85	147	146	146	63	63	91	91	92	73	73	105	106	107
	L (Deflection)	86	85	119	128	136	63	63	91	91	92	73	73	105	106	107
14'-0"	D+L (Strength)	80*	79*	136*	136*	136*	57*	58*	82*	83*	84*	67*	67*	96*	96*	97*
	D+L (Deflection)	80	79	136	136	136	57	58	82	83	84	67	67	96	96	97
	L (Deflection)	74	79	95	102	109	57	58	82	83	84	67	67	96	96	97
15'-0"	D+L (Strength)	74*	73*	127*	126*	126*	53*	53*	75*	75*	76*	61*	61*	88*	88*	89*
	D+L (Deflection)	74	73	110	119	126	53	53	75	75	76	61	61	88	88	89
	L (Deflection)	61	65	77	83	88	53	53	75	75	76	61	61	88	88	89
16'-0"	D+L (Strength)	69*	68*	111	110	110	48*	48*	69*	69*	70*	56*	57*	81*	81*	82*
	D+L (Deflection)	69	68	90	97	103	48	48	69	69	70	56	57	81	81	82
	L (Deflection)	50	53	64	69	73	48	48	69	69	70	56	57	81	81	82
17'-0"	D+L (Strength)	62	62	98	97	97	45*	45*	63*	64*	64*					
	D+L (Deflection)	58	61	74	80	85	45	45	63	64	64					
	L (Deflection)	42	44	53	57	61	45	45	63	64	64					
18'-0"	D+L (Strength)	55	55	86	86	86	41*	41*	58*	59*	59*					
	D+L (Deflection)	48	51	62	66	71	41	41	58	59	59					
	L (Deflection)	35	37	45	48	51	41	41	58	59	59					
19'-0"	D+L (Strength)	49	48	77	77	76	38*	38*	54*	54*	55*					
	D+L (Deflection)	40	43	52	55	59	38	38	54	54	55					
	L (Deflection)	30	32	38	41	44	38	38	54	54	55					
20'-0"	D+L (Strength)	44	43	69	68	68	36*	35*	50*	50*	51*					
	D+L (Deflection)	34	36	44	47	50	36	35	50	50	51					
	L (Deflection)	26	27	33	35	37	36	35	50	50	51					
21'-0"	D+L (Strength)	39	39	62	62	61	33*	33*	47*	47*	48*					
	D+L (Deflection)	27	29	35	37	40	33	33	47	47	48					
	L (Deflection)	22	24	28	30	32	33	33	47	47	48					
22'-0"	D+L (Strength)	35	35	56	56	55	31*	31*	44*	44*	44*					
	D+L (Deflection)	22	23	28	30	32	31	31	44	44	44					
	L (Deflection)	19	20	24	26	28	31	31	44	44	44					
23'-0"	D+L (Strength)	32	31	51	50	50	29*	29*	41*	41*	41*					
	D+L (Deflection)	17	18	23	24	26	29	29	41	41	41					
	L (Deflection)	17	18	21	23	25	29	29	41	41	41					
24'-0"	D+L (Strength)	29	28	46	46	46	27*	27*	38*	38*	39*					
	D+L (Deflection)	14	15	18	19	21	27	27	38	38	39					
	L (Deflection)	14	15	18	19	21	27	27	38	38	39					

11'-0"	D+L (Strength)	102*	← Max. superimposed ASD dead + live load (psf) (governed by strength limitation)
	D+L (Deflection)	102	← Max. superimposed ASD dead + live load (psf) (governed by deflection limitation)
	L (Deflection)	102	← Max. superimposed ASD live load (psf) (governed by deflection limitation)

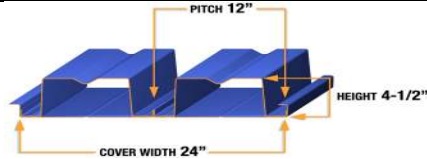
Vertical load span (center to center spacing)

- Wd** Weight of deck (uncoated), psf
- I_b** Moment of inertia for deflection per foot of deck width (in⁴)/ft
- S_p** Section modulus for positive bending per foot of deck width, (in³)/ft
- S_n** Section modulus for negative bending per foot of deck width, (in³)/ft
- V_a** Allowable shear value per foot of deck width, plf
- Rbe** Allowable exterior web crippling value per foot of deck, plf
- Rbi** Allowable interior web crippling value per foot of deck, plf
- D** Uniform dead load, psf
- L** Uniform live load, psf

- Notes:**
- Bending strength based on allowable flexural stress of 24 ksi.
 - Loads marked with asterisk (*) are governed by moment & shear, interior (6" bearing) and exterior (4" bearing) reactions (web crippling) or moment & reactions.
 - Deflection based on maximum dead + live load deflection of L/240 or 1 in. and on maximum live load deflection of L/360 or 1 in.
 - An upper limit of 400 psf has been applied to the loads.
 - Deck length over 45'-0" require inquiry and special accommodations. Please contact the Metal-Dek Group® for further information.
- The section properties table is based on 2001 AISI's North American Specification for the Design of Cold-Formed Steel Structural Members (2004 Supplement). Acoustical profile is also available.

SECTION PROPERTIES $f_y = 40 \text{ ksi}$

GAGE	Wd	I _b (DEFLECTION)	S _p	S _n	R _{be}			R _{bi}		V _a
					4"	5"	6"	5"	6"	
16/18	6.85	7.685	2.531	2.571	1518	1638	1747	2757	2917	6732
16/16	7.46	8.180	2.570	2.639	1518	1638	1747	2757	2917	6732
16/14	8.19	8.682	2.608	2.701	1518	1638	1747	2757	2917	6732
14/16	8.59	9.665	3.372	3.248	2279	2453	2610	4113	4341	9688
14/14	9.32	10.264	3.422	3.326	2279	2453	2610	4113	4341	9688



ASD DESIGN		MAXIMUM SUPERIMPOSED UNIFORM ASD LOADS, psf														
Span	Load Combinations	SINGLE SPAN					DOUBLE SPAN					TRIPLE SPAN				
		GAGE														
		16/18	16/16	16/14	14/16	14/14	16/18	16/16	16/14	14/16	14/14	16/18	16/16	16/14	14/16	14/14
15'-0"	D+L (Strength)	173	175	177	231	234	100*	101*	101*	131*	132*	118*	118*	119*	155*	156*
	D+L (Deflection)	143	152	161	179	190	100	101	101	131	132	118	118	119	155	156
	L (Deflection)	100	106	113	125	133	100	101	101	131	132	118	118	119	155	156
16'-0"	D+L (Strength)	151	153	155	202	205	92*	92*	92*	120*	121*	108*	108*	109*	141*	143*
	D+L (Deflection)	116	124	131	146	156	92	92	92	120	121	108	108	109	141	143
	L (Deflection)	82	87	93	103	110	92	92	92	120	121	108	108	109	141	143
17'-0"	D+L (Strength)	133	135	136	178	181	84*	85*	85*	110*	111*					
	D+L (Deflection)	96	102	108	121	129	84	85	85	110	111					
	L (Deflection)	68	73	77	86	91	84	85	85	110	111					
18'-0"	D+L (Strength)	118	119	121	158	160	77*	78*	78*	101*	102*					
	D+L (Deflection)	80	85	90	100	107	77	78	78	101	102					
	L (Deflection)	58	61	65	73	77	77	78	78	101	102					
19'-0"	D+L (Strength)	105	106	107	141	143	72*	72*	72*	93*	94*					
	D+L (Deflection)	67	71	75	84	90	72	72	72	93	94					
	L (Deflection)	49	52	55	62	66	72	72	72	93	94					
20'-0"	D+L (Strength)	94	95	96	126	128	66*	67*	67*	86*	87*					
	D+L (Deflection)	56	60	63	71	76	66	67	67	86	87					
	L (Deflection)	42	45	48	53	56	66	67	67	86	87					
21'-0"	D+L (Strength)	85	86	86	114	116	62*	62*	62*	80*	81*					
	D+L (Deflection)	45	48	50	57	61	62	62	62	80	81					
	L (Deflection)	36	39	41	46	49	62	62	62	80	81					
22'-0"	D+L (Strength)	77	78	78	103	105	57*	58*	58*	74*	75*					
	D+L (Deflection)	36	38	40	46	49	57	58	58	74	75					
	L (Deflection)	32	34	36	40	42	57	58	58	74	75					
23'-0"	D+L (Strength)	70	70	71	93	95	54*	54*	54*	69*	70*					
	D+L (Deflection)	29	31	33	37	40	54	54	54	69	70					
	L (Deflection)	28	29	31	35	37	54	54	54	69	70					
24'-0"	D+L (Strength)	63	64	64	85	86	50*	50*	50*	65*	66*					
	D+L (Deflection)	24	25	26	30	32	50	50	50	65	66					
	L (Deflection)	24	25	26	30	32	50	50	50	65	66					
25'-0"	D+L (Strength)	58	58	59	78	79										
	D+L (Deflection)	19	20	21	24	26										
	L (Deflection)	19	20	21	24	26										
26'-0"	D+L (Strength)	53	53	54	71	72										
	D+L (Deflection)	15	16	17	19	21										
	L (Deflection)	15	16	17	19	21										
27'-0"	D+L (Strength)	49	49	49	65	67										
	D+L (Deflection)	12	13	13	15	17										
	L (Deflection)	12	13	13	15	17										
28'-0"	D+L (Strength)	45	45	45	60	61										
	D+L (Deflection)	10	10	10	12	13										
	L (Deflection)	10	10	10	12	13										

15'-0"	D+L (Strength)	173	← Max. superimposed ASD dead + live load (psf) (governed by strength limitation)
	D+L (Deflection)	143	← Max. superimposed ASD dead + live load (psf) (governed by deflection limitation)
	L (Deflection)	100	← Max. superimposed ASD live load (psf) (governed by deflection limitation)

Vertical load span (center to center spacing)

- Wd** Weight of deck (uncoated), psf
I_b Moment of inertia for deflection per foot of deck width (in⁴/ft)
S_p Section modulus for positive bending per foot of deck width, (in³/ft)
S_n Section modulus for negative bending per foot of deck width, (in³/ft)
V_a Allowable shear value per foot of deck width, plf
R_{be} Allowable exterior web crippling value per foot of deck, plf
R_{bi} Allowable interior web crippling value per foot of deck, plf
D Uniform dead load, psf
L Uniform live load, psf

- Notes:**
- Bending strength based on allowable flexural stress of 24 ksi.
 - Loads marked with asterisk (*) are governed by moment & shear, interior (6" bearing) and exterior (4" bearing) reactions (web crippling) or moment & reactions.
 - Deflection based on maximum dead + live load deflection of L/240 or 1 in. and on maximum live load deflection of L/360 or 1 in.
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