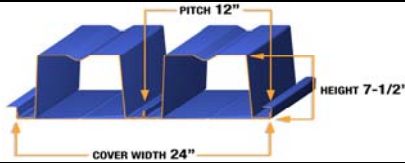


SECTION PROPERTIES $f_y = 40 \text{ ksi}$

GAGE	Wd	I _D (DEFLECTION)	S _p	S _n	R _{be}			R _{bi}		V _a
					4"	5"	6"	5"	6"	
20/20	5.16	13.550	2.057	2.900	521	565	606	1080	1148	1109
20/18	5.73	14.605	2.057	3.002	521	565	606	1080	1148	1109
18/20	6.27	17.776	3.190	3.763	896	970	1037	1793	1902	2578
18/18	6.84	18.940	3.178	3.886	896	970	1037	1793	1902	2578
18/16	7.45	19.976	3.170	3.999	896	970	1037	1793	1902	2578



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
15'-0"	D+L (Strength)	64*	64*	113*	113*	112*	56*	56*	92*	92*	92*	64*	64*	106*	107*	107*
	D+L (Deflection)	64	64	113	113	112	56	56	92	92	92	64	64	106	107	107
	L (Deflection)	64	64	113	113	112	56	56	92	92	92	64	64	106	107	107
16'-0"	D+L (Strength)	60*	59*	106*	105*	105*	52*	52*	85*	85*	86*	60*	60*	98*	99*	99*
	D+L (Deflection)	60	59	106	105	105	52	52	85	85	86	60	60	98	99	99
	L (Deflection)	60	59	106	105	105	52	52	85	85	86	60	60	98	99	99
17'-0"	D+L (Strength)	56*	56*	99*	99*	99*	49*	48*	79*	79*	80*					
	D+L (Deflection)	56	56	99	99	99	49	48	79	79	80					
	L (Deflection)	56	56	99	99	99	49	48	79	79	80					
18'-0"	D+L (Strength)	53*	52*	93*	93*	93*	46*	45*	74*	74*	74*					
	D+L (Deflection)	53	52	93	93	93	46	45	74	74	74					
	L (Deflection)	53	52	93	93	93	46	45	74	74	74					
19'-0"	D+L (Strength)	50*	49*	88*	88*	88*	43*	43*	69*	69*	70*					
	D+L (Deflection)	50	49	88	88	88	43	43	69	69	70					
	L (Deflection)	50	49	88	88	88	43	43	69	69	70					
20'-0"	D+L (Strength)	47*	46*	83*	83*	83*	41*	40*	64*	64*	65*					
	D+L (Deflection)	47	46	83	83	83	41	40	64	64	65					
	L (Deflection)	47	46	83	83	83	41	40	64	64	65					
21'-0"	D+L (Strength)	44*	44*	79*	79*	79*	39*	38*	60*	60*	61*					
	D+L (Deflection)	44	44	79	79	79	39	38	60	60	61					
	L (Deflection)	44	44	79	79	79	39	38	60	60	61					
22'-0"	D+L (Strength)	42*	42*	75*	75*	75*	37*	36*	57*	57*	57*					
	D+L (Deflection)	42	42	75	75	75	37	36	57	57	57					
	L (Deflection)	42	42	73	75	75	37	36	57	57	57					
23'-0"	D+L (Strength)	40*	40*	72*	71*	71*	35*	34*	53*	54*	54*					
	D+L (Deflection)	40	40	72	71	71	35	34	53	54	54					
	L (Deflection)	40	40	64	68	71	35	34	53	54	54					
24'-0"	D+L (Strength)	38*	38*	68*	68*	68*	33*	33*	50*	50*	51*					
	D+L (Deflection)	38	38	64	68	68	33	33	50	50	51					
	L (Deflection)	38	38	56	60	63	33	33	50	50	51					
25'-0"	D+L (Strength)	37*	36*	65*	65*	65*										
	D+L (Deflection)	37	36	53	57	60										
	L (Deflection)	37	36	50	53	56										
26'-0"	D+L (Strength)	35*	34*	63*	62*	62*										
	D+L (Deflection)	34	34	45	48	51										
	L (Deflection)	34	34	44	47	50										
27'-0"	D+L (Strength)	33*	33*	60*	60*	60*										
	D+L (Deflection)	28	30	38	40	43										
	L (Deflection)	28	30	38	40	43										
28'-0"	D+L (Strength)	32*	31*	58*	57*	57*										
	D+L (Deflection)	24	25	32	34	36										
	L (Deflection)	24	25	32	34	36										

15'-0"	D+L (Strength)	64*	← Max. superimposed ASD dead + live load (psf) (governed by strength limitation)
	D+L (Deflection)	64	← Max. superimposed ASD dead + live load (psf) (governed by deflection limitation)
	L (Deflection)	64	← Max. superimposed ASD live load (psf) (governed by deflection limitation)

Vertical load span (center to center spacing)

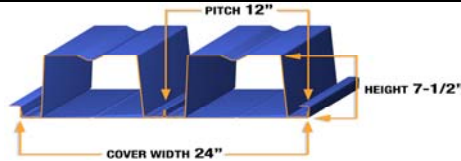
- Wd Weight of deck (uncoated), psf
- I_D Moment of inertia for deflection per foot of deck width (in⁴/ft)
- S_p Section modulus for positive bending per foot of deck width, (in³/ft)
- S_n Section modulus for negative bending per foot of deck width, (in³/ft)
- V_a Allowable shear value per foot of deck width, pif
- R_{be} Allowable exterior web crippling value per foot of deck, pif
- R_{bi} Allowable interior web crippling value per foot of deck, pif
- 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 $f_y = 40$ ksi

GAGE	Wd	I _D (DEFLECTION)	S _p	S _n	R _{be}			R _{bi}		V _a
					4"	5"	6"	5"	6"	
16/18	8.02	23.142	4.597	4.818	1394	1505	1605	2727	2886	5185
16/16	8.62	24.652	4.567	4.952	1394	1505	1605	2727	2886	5185
16/14	9.36	25.988	4.544	5.076	1394	1505	1605	2727	2886	5185
14/16	10.04	29.051	6.358	6.081	2117	2279	2425	4074	4300	10126
14/14	10.77	30.874	6.444	6.245	2117	2279	2425	4074	4300	10126



ASD DESIGN		MAXIMUM SUPERIMPOSED UNIFORM ASD LOADS, psf															
Span	Load Combinations	SINGLE SPAN					DOUBLE SPAN					TRIPLE SPAN					
		16/18	16/16	16/14	14/16	14/14	GAGE					16/18	16/16	16/14	14/16	14/14	
22'-0"	D+L (Strength)	119*	118*	117*	182*	182*	77*	77*	77*	102*	102*						
	D+L (Deflection)	119	118	117	153	162	77	77	77	102	102						
	L (Deflection)	95	101	107	119	127	77	77	77	102	102						
23'-0"	D+L (Strength)	113*	113*	112*	174*	174*	72*	72*	72*	96*	97*						
	D+L (Deflection)	101	107	112	126	135	72	72	72	96	97						
	L (Deflection)	83	89	93	105	111	72	72	72	96	97						
24'-0"	D+L (Strength)	108*	108*	107*	166*	166*	68*	68*	68*	90*	91*						
	D+L (Deflection)	84	89	94	105	112	68	68	68	90	91						
	L (Deflection)	73	78	82	92	98	68	68	68	90	91						
25'-0"	D+L (Strength)	104*	103*	102*	153	155											
	D+L (Deflection)	70	74	78	88	94											
	L (Deflection)	65	69	73	81	86											
26'-0"	D+L (Strength)	99*	99*	98*	140	142											
	D+L (Deflection)	58	62	65	73	79											
	L (Deflection)	58	61	65	72	77											
27'-0"	D+L (Strength)	93	92	90	130	131											
	D+L (Deflection)	49	52	55	62	66											
	L (Deflection)	49	52	55	62	66											
28'-0"	D+L (Strength)	86	85	83	120	121											
	D+L (Deflection)	41	44	46	52	56											
	L (Deflection)	41	44	46	52	56											
29'-0"	D+L (Strength)	79	78	77	111	113											
	D+L (Deflection)	35	37	39	44	47											
	L (Deflection)	35	37	39	44	47											
30'-0"	D+L (Strength)	74	73	71	103	105											
	D+L (Deflection)	30	31	33	37	40											
	L (Deflection)	30	31	33	37	40											
31'-0"	D+L (Strength)	69	67	66	96	97											
	D+L (Deflection)	25	26	28	31	34											
	L (Deflection)	25	26	28	31	34											
32'-0"	D+L (Strength)	64	63	62	89	91											
	D+L (Deflection)	21	22	23	26	29											
	L (Deflection)	21	22	23	26	29											
33'-0"	D+L (Strength)	60	58	57	83	85											
	D+L (Deflection)	18	19	19	22	24											
	L (Deflection)	18	19	19	22	24											
34'-0"	D+L (Strength)	56	55	54	78	79											
	D+L (Deflection)	15	16	16	19	20											
	L (Deflection)	15	16	16	19	20											
35'-0"	D+L (Strength)	52	51	50	73	74											
	D+L (Deflection)	12	13	13	15	17											
	L (Deflection)	12	13	13	15	17											

22'-0"	D+L (Strength)	119*	← Max. superimposed ASD dead + live load (psf) (governed by strength limitation)
	D+L (Deflection)	119	← Max. superimposed ASD dead + live load (psf) (governed by deflection limitation)
	L (Deflection)	95	← Max. superimposed ASD live load (psf) (governed by deflection limitation)

Vertical load span (center to center spacing)

- Wd Weight of deck (uncoated), psf
- I_D 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.
 - An upper limit of 400 psf has been applied to the loads.
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