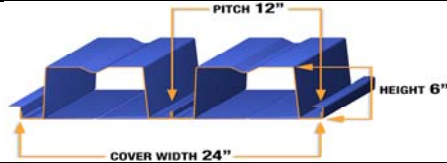


SECTION PROPERTIES  $f_y = 40 \text{ ksi}$

GAGE	Wd	$I_D$ (DEFLECTION)	Sp	Sn	Rbe			Rbi		Va
					4"	5"	6"	5"	6"	
20/20	4.82	8.491	1.629	2.192	552	600	642	1087	1156	1393
20/18	5.39	9.047	1.629	2.266	552	600	642	1087	1156	1393
18/20	5.81	11.049	2.530	2.849	940	1018	1087	1803	1913	3240
18/18	6.38	11.877	2.517	2.939	940	1018	1087	1803	1913	3240
18/16	6.99	12.524	2.510	3.021	940	1018	1087	1803	1913	3240



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)	69*	68*	120*	119*	118*	57*	56*	85*	85*	86*	65*	65*	99*	99*	99*
	D+L (Deflection)	69	68	120	119	118	57	56	85	85	86	65	65	99	99	99
	L (Deflection)	69	68	120	119	118	57	56	85	85	86	65	65	99	99	99
16'-0"	D+L (Strength)	64*	64*	112*	111*	111*	53*	52*	78*	79*	79*	61*	60*	91*	91*	92*
	D+L (Deflection)	64	64	112	111	111	53	52	78	79	79	61	60	91	91	92
	L (Deflection)	64	64	112	111	111	53	52	78	79	79	61	60	91	91	92
17'-0"	D+L (Strength)	60*	60*	105*	104*	104*	50*	49*	72*	73*	73*					
	D+L (Deflection)	60	60	105	104	104	50	49	72	73	73					
	L (Deflection)	60	60	98	104	104	50	49	72	73	73					
18'-0"	D+L (Strength)	57*	56*	99*	98*	98*	47*	46*	67*	67*	68*					
	D+L (Deflection)	57	56	99	98	98	47	46	67	67	68					
	L (Deflection)	57	56	83	89	94	47	46	67	67	68					
19'-0"	D+L (Strength)	53*	53*	93*	93*	93*	43*	43*	63*	63*	63*					
	D+L (Deflection)	53	53	93	93	93	43	43	63	63	63					
	L (Deflection)	53	53	71	76	80	43	43	63	63	63					
20'-0"	D+L (Strength)	50*	50*	88*	88*	88*	41*	40*	58*	59*	59*					
	D+L (Deflection)	50	50	85	88	88	41	40	58	59	59					
	L (Deflection)	46	49	60	65	69	41	40	58	59	59					
21'-0"	D+L (Strength)	48*	47*	84*	83*	83*	38*	38*	55*	55*	55*					
	D+L (Deflection)	48	47	69	74	78	38	38	55	55	55					
	L (Deflection)	40	43	52	56	59	38	38	55	55	55					
22'-0"	D+L (Strength)	45*	45*	78	77	77	36*	36*	51*	51*	52*					
	D+L (Deflection)	43	45	56	60	64	36	36	51	51	52					
	L (Deflection)	35	37	45	49	51	36	36	51	51	52					
23'-0"	D+L (Strength)	43*	43*	71	70	70	34*	33*	48*	48*	49*					
	D+L (Deflection)	35	37	46	49	52	34	33	48	48	49					
	L (Deflection)	31	33	40	43	45	34	33	48	48	49					
24'-0"	D+L (Strength)	40	40	64	64	63	32*	31*	45*	45*	46*					
	D+L (Deflection)	29	30	38	41	43	32	31	45	45	46					
	L (Deflection)	27	29	35	38	40	32	31	45	45	46					
25'-0"	D+L (Strength)	37	36	59	58	58										
	D+L (Deflection)	24	25	31	34	36										
	L (Deflection)	24	25	31	33	35										
26'-0"	D+L (Strength)	34	33	54	53	53										
	D+L (Deflection)	20	21	26	28	30										
	L (Deflection)	20	21	26	28	30										
27'-0"	D+L (Strength)	31	30	50	49	49										
	D+L (Deflection)	16	17	21	23	25										
	L (Deflection)	16	17	21	23	25										
28'-0"	D+L (Strength)	28	28	46	45	45										
	D+L (Deflection)	13	14	18	19	20										
	L (Deflection)	13	14	18	19	20										

15'-0"	D+L (Strength)	69*	← Max. superimposed ASD dead + live load (psf) (governed by strength limitation)
	D+L (Deflection)	69	← Max. superimposed ASD dead + live load (psf) (governed by deflection limitation)
	L (Deflection)	69	← Max. superimposed ASD live load (psf) (governed by deflection limitation)

Vertical load span (center to center spacing)

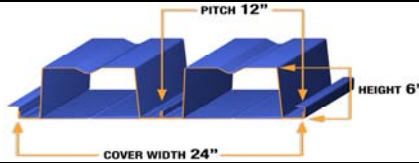
- Wd Weight of deck (uncoated), psf
- $I_D$  Moment of inertia for deflection per foot of deck width (in<sup>4</sup>/ft)
- Sp Section modulus for positive bending per foot of deck width, (in<sup>3</sup>/ft)
- Sn Section modulus for negative bending per foot of deck width, (in<sup>3</sup>/ft)
- Va Allowable shear value per foot of deck width, pif
- Rbe Allowable exterior web crippling value per foot of deck, pif
- Rbi 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  $f_y = 40 \text{ ksi}$

GAGE	Wd	$I_D$ (DEFLECTION)	Sp	Sn	Rbe			Rbi		Va
					4"	5"	6"	5"	6"	
16/18	7.44	14.244	3.621	3.648	1452	1567	1671	2741	2900	6519
16/16	8.05	15.165	3.616	3.746	1452	1567	1671	2741	2900	6519
16/14	8.78	16.108	3.594	3.839	1452	1567	1671	2741	2900	6519
14/16	9.32	17.894	4.797	4.607	2193	2360	2512	4092	4319	10505
14/14	10.05	19.007	4.874	4.723	2193	2360	2512	4092	4319	10505



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		
17'-0"	D+L (Strength)	163*	163*	162*	249*	248*	98*	98*	98*	129*	130*							
	D+L (Deflection)	163	163	162	230	244	98	98	98	129	130							
	L (Deflection)	127	135	144	159	169	98	98	98	129	130							
18'-0"	D+L (Strength)	154*	153*	153*	228	231	90*	91*	91*	119*	121*							
	D+L (Deflection)	153	153	153	192	205	90	91	91	119	121							
	L (Deflection)	107	114	121	134	143	90	91	91	119	121							
19'-0"	D+L (Strength)	145*	145*	144*	203	207	84*	84*	85*	111*	112*							
	D+L (Deflection)	129	137	144	162	173	84	84	85	111	112							
	L (Deflection)	91	97	103	114	121	84	84	85	111	112							
20'-0"	D+L (Strength)	137	137	135	183	186	78*	79*	79*	103*	104*							
	D+L (Deflection)	109	116	123	138	147	78	79	79	103	104							
	L (Deflection)	78	83	88	98	104	78	79	79	103	104							
21'-0"	D+L (Strength)	124	123	122	165	168	73*	73*	73*	96*	97*							
	D+L (Deflection)	89	94	100	112	119	73	73	73	96	97							
	L (Deflection)	67	72	76	85	90	73	73	73	96	97							
22'-0"	D+L (Strength)	112	111	110	149	152	68*	69*	69*	90*	91*							
	D+L (Deflection)	72	77	82	91	97	68	69	69	90	91							
	L (Deflection)	59	62	66	74	78	68	69	69	90	91							
23'-0"	D+L (Strength)	102	101	100	136	138	64*	64*	64*	84*	85*							
	D+L (Deflection)	59	63	67	75	80	64	64	64	84	85							
	L (Deflection)	51	55	58	64	68	64	64	64	84	85							
24'-0"	D+L (Strength)	93	92	91	124	126	60*	60*	60*	79*	80*							
	D+L (Deflection)	49	52	55	62	66	60	60	60	79	80							
	L (Deflection)	45	48	51	57	60	60	60	60	79	80							
25'-0"	D+L (Strength)	85	85	83	113	115												
	D+L (Deflection)	40	43	45	51	55												
	L (Deflection)	40	42	45	50	53												
26'-0"	D+L (Strength)	78	78	76	104	106												
	D+L (Deflection)	33	36	38	42	45												
	L (Deflection)	33	36	38	42	45												
27'-0"	D+L (Strength)	72	71	70	96	98												
	D+L (Deflection)	28	29	31	35	38												
	L (Deflection)	28	29	31	35	38												
28'-0"	D+L (Strength)	66	66	65	89	90												
	D+L (Deflection)	23	24	26	29	31												
	L (Deflection)	23	24	26	29	31												
29'-0"	D+L (Strength)	61	61	60	82	83												
	D+L (Deflection)	19	20	21	24	26												
	L (Deflection)	19	20	21	24	26												
30'-0"	D+L (Strength)	57	56	55	76	77												
	D+L (Deflection)	16	17	17	20	21												
	L (Deflection)	16	17	17	20	21												

17'-0"	D+L (Strength)	163*	← Max. superimposed ASD dead + live load (psf) (governed by strength limitation)
	D+L (Deflection)	163	← Max. superimposed ASD dead + live load (psf) (governed by deflection limitation)
	L (Deflection)	127	← 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 (in<sup>4</sup>)/ft
- Sp Section modulus for positive bending per foot of deck width, (in<sup>3</sup>)/ft
- Sn Section modulus for negative bending per foot of deck width, (in<sup>3</sup>)/ft
- Va 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.
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