Metal Dek Group
a unit of CSI

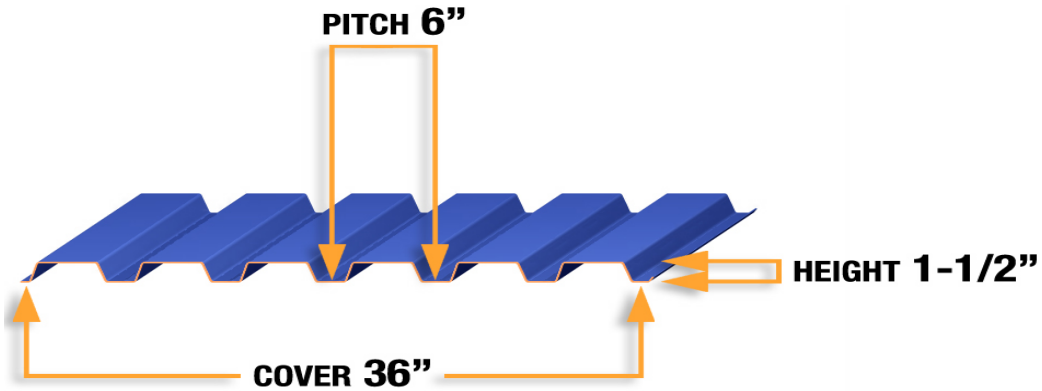
B-DEK

1-1/2" high x 6" pitch x 36" wide

SECTION PROPERTIES

fy = 33 ksi

GAGE	t (in)	Wd (psf)	Ip (in^4)	In (in^4)	Sp (in^3)	Sn (in^3)	Rbe (lb/ft)		Rbi (lb/ft)		Va (lb/ft)	
							LRFD	ASD	LRFD	ASD	LRFD	ASD
22	0.0295	1.66	0.173	0.186	0.191	0.200	712	487	1509	1014	2632	1732
20	0.0358	2.01	0.220	0.227	0.236	0.247	1042	713	2172	1460	3195	2102
18	0.0474	2.67	0.300	0.301	0.322	0.330	1787	1222	3667	2465	4230	2783
16	0.0598	3.36	0.379	0.379	0.414	0.417	2765	1891	5642	3793	5336	3511



MAXIMUM ALLOWABLE UNIFORM TOTAL LOADS, (psf) **

	SINGLE SPAN								DOUBLE SPAN								TRIPLE SPAN							
GAGE	22		20		18		16		22		20		18		16		22		20		18		16	
span	LRFD	ASD	LRFD	ASD	LRFD	ASD	LRFD	ASD	LRFD	ASD	LRFD	ASD	LRFD	ASD	LRFD	ASD	LRFD	ASD	LRFD	ASD	LRFD	ASD	LRFD	ASD
3'-0"	400	279	400	346	400	400	400	400	400	270	400	344	400	400	400	400	400	307	400	400	400	400	400	400
3'-6"	275	205	346	254	400	347	400	400	327	207	400	256	400	342	400	400	391	254	400	314	400	400	400	400
4'-0"	187	157	235	195	318	265	399	341	253	160	312	197	400	264	400	333	311	197	384	243	400	325	400	400
4'-6"	134	124	168	154	226	210	283	270	201	127	248	157	332	210	400	265	245	157	306	194	400	259	400	327
5'-0"	101	100	125	124	167	167	209	209	163	103	202	127	270	171	341	215	181	128	227	158	307	211	385	267
5'-6"	78	78	96	96	128	128	159	159	135	85	167	106	224	141	282	178	138	106	173	131	233	175	291	221
6'-0"	62	62	76	76	101	101	125	125	114	72	141	89	188	119	238	150	109	89	135	110	181	148	227	187
6'-6"	51	51	62	62	81	81	100	100	97	61	120	76	161	102	203	128	88	76	108	94	145	126	180	159
7'-0"	43	43	52	52	67	67	82	82	84	53	104	65	139	88	175	111	72	66	89	81	118	109	146	138
7'-6"	36	36	44	44	56	56	69	69	73	46	90	57	121	76	152	96	60	57	74	71	98	95	121	120
8'-0"	32	32	38	38	48	48	58	58	63	40	77	50	102	67	127	85	51	50	63	62	82	82	101	101
8'-6"			33	33	42	42	50	50	54	36	66	44	87	59	107	75	44	44	54	54	70	70	86	86
9'-0"					37	37	44	44	47	32	57	39	75	53	92	67	39	39	47	47	60	60	74	74
9'-6"					32	32	39	39	41	29	50	35	65	48	79	60	34	34	41	41	53	53	64	64
10'-0"							34	34	37	26	44	32	57	43	69	54	31	31	37	37	47	47	56	56
10'-6"							31	31	33	23	39	29	51	39	61	49			33	33	42	42	50	50
11'-0"									30	21	36	26	45	35	55	45			30	30	37	37	45	45

MAXIMUM CONSTRUCTION SPANS

span	5'-11"	6'-8"	7'-10"	8'-9"	7'-0"	7'-10"	9'-2"	10'-4"	7'-0"	7'-10"	9'-2"	10'-4"
cantilever	2'-0"	2'-4"	2'-8"	3'-0"	2'-0"	2'-4"	2'-8"	3'-0"	2'-0"	2'-4"	2'-8"	3'-0"
FM	6'-3"	7'-1"	8'-4"	9'-4"	6'-3"	7'-1"	8'-4"	9'-4"	6'-3"	7'-1"	8'-4"	9'-4"

LRFD	ASD	
3'-0"	400	279

LRFD ASD ← **design method**

400 279 ← **maximum allowable uniform total (dead+live) load ****

3'-0" ← **span (center-to-center of supports)**

- t Design thickness of deck
- Wd Weight of deck (uncoated)
- Ip Moment of inertia of deck for positive bending
- In Moment of inertia of deck for negative bending
- Sp Section modulus of deck for positive bending
- Sn Section modulus of deck for negative bending
- Rbe Allowable exterior web crippling value per foot of deck (based on 2" of end bearing)
- Rbi Allowable interior web crippling value per foot of deck (based on 4" of interior bearing)
- Va Allowable shear value per foot of deck
- span Maximum single or multiple span during construction
- cantilever Maximum cantilever during construction
- FM Maximum allowable span per Factory Mutual
- fy 33 ksi (for determining maximum loads)
- f span 26 ksi (for determining maximum spans)

Notes: 1. Loads in shaded areas are governed by live load deflection not in excess of L/240. An assumed 10 psf dead load is added to deflection.
2. Loads with double underline (_) are governed by the allowable flexural stress limit of 19.8 ksi.
3. All other loads are governed by end or intermediate reactions (web-crippling) or applied moment & shear.
4. Deck lengths over 45'-0" require inquiry and special accommodations. Please contact the Metal-Dek Group™ for further information.

The section properties table is based on AISI's North American Specification for the Design of Cold-Formed Steel Structural Members (2001 Edition) The loads and maximum construction spans are based on the SDI Design Manual for Composite Decks, Form Decks, Roof Decks and Cellular Deck Floor Systems with Electrical Distribution, Pub No. 30. Acoustical profile is also available.

REV: 08/14/2006