

ISD DECK

1-1/2" high x 6" pitch x 30" wide (26 and 24 gage)
x 36" wide (22 gage and thicker)

SECTION PROPERTIES

GAGE	t (in)	Wd (psf)	As (in ²)	I _p (in ⁴)	I _n (in ⁴)	Sp (in ³)	Sn (in ³)
26	0.0179	1.00	0.294	0.100	0.077	0.098	0.087
24	0.0238	1.33	0.391	0.141	0.111	0.141	0.128
22	0.0295	1.65	0.484	0.187	0.162	0.202	0.194
20	0.0358	2.00	0.588	0.227	0.209	0.250	0.240

MAXIMUM ALLOWABLE UNIFORM TOTAL LOADS, (psf)

GAGE	SINGLE SPAN								DOUBLE SPAN								TRIPLE SPAN							
	26		24		22		20		26		24		22		20		26		24		22		20	
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
4'-0"	234	147	335	212	264	167	326	206	206	130	305	192	253	160	314	198	258	163	381	241	316	200	392	248
L/240	103		145		192		233		248		349		462		561		194		273		361		439	
L/180	137		193		256		311		331		465		616		748		259		364		482		585	
4'-6"	185	117	265	167	209	132	258	163	163	103	241	152	200	126	248	157	203	129	301	190	250	158	310	196
L/240	72		102		135		164		174		245		324		394		136		192		254		308	
L/180	96		136		180		218		232		327		432		525		182		256		338		411	
5'-0"	149	94	215	135	169	107	209	132	132	83	195	123	162	102	201	127	165	104	244	154	202	128	251	158
L/240	53		74		98		119		127		179		236		287		99		140		185		225	
L/180	70		99		131		159		169		238		315		383		133		186		247		300	
5'-6"	124	78	177	112	140	88	172	109	109	69	161	102	134	85	166	105	136	86	201	127	167	106	207	131
L/240	40		56		74		90		95		134		178		216		75		105		139		169	
L/180	53		74		98		120		127		179		237		288		100		140		185		225	
6'-0"	104	66	149	94	117	74	145	91	92	58	135	86	112	71	139	88	114	72	169	107	141	89	174	110
L/240	31		43		57		69		74		103		137		166		58		81		107		130	
L/180	41		57		76		92		98		138		182		222		77		108		143		173	
6'-6"	88	56	127	80	100	63	123	78	78	49	115	73	96	61	119	75	98	62	144	91	120	76	148	94
L/240	24		34		45		54		58		81		108		131		45		64		84		102	
L/180	32		45		60		72		77		108		143		174		60		85		112		136	
7'-0"	76	48	109	69	86	54	106	67	67	42	99	63	83	52	102	65	84	53	124	79	103	65	128	81
L/240	19		27		36		43		46		65		86		105		36		51		67		82	
L/180	26		36		48		58		62		87		115		140		48		68		90		109	
7'-6"	66	42	95	60	75	47	93	59	59	37	87	55	72	45	89	56	73	46	108	68	90	57	112	70
L/240	16		22		29		35		38		53		70		85		29		41		55		67	
L/180	21		29		39		47		50		71		93		113		39		55		73		89	
8'-0"	58	37	84	53	66	42	81	51	52	33	76	48	63	40	78	50	64	41	95	60	79	50	98	62
L/240	13		18		24		29		31		44		58		70		24		34		45		55	
L/180	17		24		32		39		41		58		77		93		32		46		60		73	
8'-6"	52	33	74	47	58	37	72	46	46	29	67	43	56	35	69	44	57	36	84	53	70	44	87	55
L/240	11		15		20		24		26		36		48		58		20		28		38		46	
L/180	14		20		27		32		34		48		64		78		27		38		50		61	
9'-0"	46	29	66	42	52	33	64	41	41	26	60	38	50	32	62	39	51	32	75	48	62	39	77	49
L/240	9		13		17		20		22		31		41		49		17		24		32		39	
L/180	12		17		22		27		29		41		54		66		23		32		42		51	

MAXIMUM CONSTRUCTION SPANS (center-to-center of supports)

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

span	LRFD	ASD	design method
4'-0"	234	147	maximum allowable uniform TOTAL (dead-live) load based on stress
L/240	103		maximum allowable uniform LIVE load based L/240 roof deck deflection
L/180	137		maximum allowable uniform LIVE load based L/180 form deck deflection
			span (center-to-center of supports) and deflection restriction

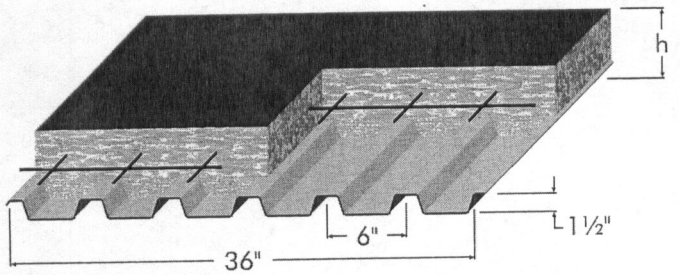
t Design thickness of deck
 Wd Weight of deck (uncoated)
 As Average area of steel of deck per foot width
 I_p Moment of inertia of deck for positive bending
 I_n Moment of inertia of deck for negative bending
 Sp Section modulus of deck for positive bending
 Sn Section modulus of deck for negative bending

span Maximum single or multiple span during construction
 cantilever Maximum cantilever during construction
 fy 80 ksi for 26 and 24 gages (30" cover width)
 33 ksi for 22 gage and thicker (36" cover width)

The section property table is based on AISI's Cold Formed Steel Design Manual, 1996 Edition. Venting is available up to 1-1/2% if specified. The loads and maximum construction spans are based on the Design Manual for Composite Decks, Form Decks, Roof Decks and Cellular Deck Floor Systems with Electrical Distribution, Pub No. 29. The above maximum spans are based on SDI roof deck loading criteria. Deck with light weight insulating fill will have significantly larger spans during construction. Contact CSI for additional information.

ISD DECK

1-1/2" high x 6" pitch



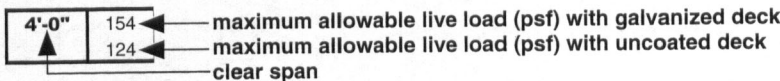
30" cover width for 26 and 24 gages, 36" for 22 gage and heavier

SECTION PROPERTIES $f_y = 80$ ksi (33 for > 24 gage)

GAGE	I_p (in ⁴)	I_n (in ⁴)	S_p (in ³)	S_n (in ³)
26	0.100	0.077	0.098	0.087
24	0.141	0.111	0.141	0.128
22	0.187	0.162	0.202	0.194
20	0.227	0.209	0.250	0.240
18	0.304	0.299	0.335	0.327
16	0.383	0.383	0.422	0.420

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h	3.5"			4"			4.5"			5"			5.5"			6"								
Wc	36.3			42.3			48.3			54.4			60.4			66.5								
Ac	36.0			42.0			48.0			54.0			60.0			66.0								
WWF	6 x 6 * w2.1w2.1	6 x 6 * w2.9w2.9	4 x 4 w2.9w2.9	6 x 6 * w2.1w2.1	6 x 6 * w2.9w2.9	4 x 4 w2.9w2.9	6 x 6 * w2.1w2.1	6 x 6 * w2.9w2.9	4 x 4 w2.9w2.9	6 x 6 * w2.9w2.9	4 x 4 * w2.9w2.9	4 x 4 w4.0w4.0	6 x 6 * w2.9w2.9	4 x 4 * w2.9w2.9	4 x 4 w4.0w4.0	6 x 6 * w2.9w2.9	4 x 4 * w2.9w2.9	4 x 4 w4.0w4.0						
Awwf	0.042	0.058	0.087	0.042	0.058	0.087	0.042	0.058	0.087	0.058	0.087	0.12	0.058	0.087	0.12	0.058	0.087	0.12						
Dwwf	0.162	0.192	0.192	0.162	0.192	0.192	0.162	0.192	0.192	0.192	0.192	0.225	0.192	0.192	0.225	0.192	0.192	0.225						
L	MAXIMUM ALLOWABLE UNIFORM LIVE LOADS, (psf)																							
4'-0"	154	205	300	196	262	386	238	320	400	378	400	400	400	400	400	400	400	400						
	124	175	270	161	228	351	198	280	400	333	400	400	385	400	400	400	400	400						
4'-6"	122	162	237	155	207	305	188	253	373	298	400	400	344	400	400	389	400	400						
	92	132	207	120	173	270	148	213	333	254	397	400	294	400	400	335	400	400						
5'-0"	99	131	192	125	168	247	152	205	302	242	358	400	279	400	400	315	400	400						
	69	101	162	91	133	212	112	165	263	197	313	400	229	363	400	261	400	400						
5'-6"	82	108	159	104	139	204	126	169	250	200	296	395	230	341	400	261	387	400						
	52	79	129	69	104	169	86	129	210	155	251	350	180	291	400	206	332	400						
6'-0"	69	91	133	87	117	172	106	142	210	168	248	332	193	287	385	219	325	400						
	39	61	103	52	82	137	66	102	170	123	204	287	144	237	335	164	270	383						
6'-6"	58	78	114	74	99	146	90	121	179	143	212	283	165	244	328	187	277	373						
	29	48	84	39	65	111	50	81	139	98	167	238	115	195	278	132	222	318						
7'-0"				64	86	126	78	105	154	123	182	244	142	211	283	161	239	322						
				29	51	91	38	65	114	79	138	199	92	161	233	106	184	267						
7'-6"							68	91	134	107	159	212	124	184	246	140	208	280						
							28	51	95	63	114	168	74	134	197	85	153	225						
8'-0"										94	140	187	109	161	217	123	183	246						
										50	95	142	59	112	167	68	128	192						
8'-6"													96	143	192	109	162	218						
													47	93	142	54	107	163						
9'-0"																97	144	195						
																43	90	140						
	MAXIMUM UNSHORED CONSTRUCTION CLEAR SPANS																							
GAGE	26	24	22	20	26	24	22	20	26	24	22	20	26	24	22	20	26	24	22	20				
1span	4'-4"	5'-6"	4'-8"	5'-5"	4'-1"	5'-3"	4'-6"	5'-1"	3'-11"	5'-0"	4'-3"	4'-11"	3'-9"	4'-10"	4'-1"	4'-8"	3'-8"	4'-7"	3'-11"	4'-6"	3'-7"	4'-6"	3'-10"	4'-5"
2span	5'-9"	7'-3"	6'-3"	7'-2"	5'-6"	6'-11"	5'-11"	6'-10"	5'-3"	6'-7"	5'-8"	6'-7"	5'-1"	6'-4"	5'-6"	6'-4"	4'-11"	6'-1"	5'-4"	6'-1"	4'-9"	5'-10"	5'-2"	5'-11"
3span	5'-10"	7'-5"	6'-4"	7'-3"	5'-7"	7'-1"	6'-0"	6'-11"	5'-4"	6'-10"	5'-9"	6'-8"	5'-2"	6'-6"	5'-7"	6'-5"	5'-0"	6'-3"	5'-4"	6'-2"	4'-10"	6'-1"	5'-2"	6'-0"
cantilever	1'-5"	2'-0"	1'-8"	2'-1"	1'-5"	1'-11"	1'-8"	2'-0"	1'-4"	1'-11"	1'-8"	1'-11"	1'-4"	1'-10"	1'-7"	1'-11"	1'-4"	1'-10"	1'-7"	1'-10"	1'-4"	1'-9"	1'-6"	1'-10"
cy/100sf	0.93			1.08			1.23			1.39			1.54			1.70								



- I_p** Moment of inertia of deck for positive bending
- I_n** Moment of inertia of deck for negative bending
- S_p** Section modulus of deck for positive bending
- S_n** Section modulus of deck for negative bending
- f_y** 80 ksi for 26 and 24 gages (30" cover width)
33 ksi for 22 gage and thicker (36" cover width)

- h** Total height of concrete slab
- Wc** Weight of concrete (neglecting deflection)
- Ac** Gross area of concrete available to resist shear
- WWF** Spacing and size of Weld Wire Fabric
- *** Does not meet ACI requirements (.0018Ac min.)
- Awwf** Nominal area of Weld Wire Fabric
- Dwwf** Nominal diameter of Weld Wire Fabric
- L** Span length; clear distance of deck between supports
- f_c** 3000 psi

The section property table is based on AISI's Cold Formed Steel Design Manual, 1996 Edition. Venting is available up to 1 1/2% if specified. The live loads and unshored clear spans are based on SDI's Composite Deck Design Handbook, March 1997, the Design Manual for Composite Decks, Form Decks, Roof Decks and Cellular Deck Floor Systems with Electrical Distribution, Pub No. 29, and ACI 318-95

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