



Note:
Fy = 33 ksi

Cellular Roof Deck Data Base

Product & Gage (T/B)	Wt (psf)	I _p (in ⁴)	I _n (in ⁴)	S _p (in ³)	S _n (in ³)	AS D			LRFD			Max. Single Span	Max. Multi Span	Max. Cant.	FM Span
						V (lbs)	R 2 (lbs)	R 4 (lbs)	V (lbs)	R 2 (lbs)	R 4 (lbs)				
Notes		1	1	1	1	6	2	4	6	2	4	7	8	9	10
BCS 20/20	3.5	0.38	0.30	0.30	0.31	1860	830	1350	2820	1270	2010	8'-9"	10'-4"	2'-2"	6'-6"
BCS 20/18	4.0	0.41	0.38	0.31	0.39	1860	830	1350	2820	1270	2010	9'-1"	10'-9"	2'-4"	6'-6"
BCS 18/20	4.5	0.52	0.38	0.45	0.40	2440	1390	2290	3710	2120	3410	10'-3"	12'-1"	2'-4"	7'-5"
BCS 18/18	5.0	0.56	0.45	0.46	0.47	2440	1390	2290	3710	2120	3410	10'-8"	12'-7"	2'-7"	7'-5"
BCS 18/16	5.5	0.60	0.65	0.47	0.55	2440	1390	2290	3710	2120	3410	11'-1"	13'-0"	3'-1"	7'-5"
BCS 16/18	5.5	0.71	0.54	0.64	0.56	3050	2120	3550	4640	3240	5270	12'-0"	14'-2"	2'-10"	9'-6"
BCS 16/16	6.0	0.77	0.70	0.65	0.68	3050	2120	3550	4640	3240	5270	12'-6"	14'-9"	3'-2"	9'-6"
NCS 20/20	4.5	1.45	1.28	0.60	0.71	3260	600	1200	4950	920	1780	16'-3"	17'-9"	4'-3"	12'-3"
NCS 20/18	5.0	1.58	1.51	0.60	0.86	3260	600	1200	4950	920	1780	16'-3"	19'-6"	4'-7"	12'-3"
NCS 18/20	5.0	1.97	1.62	0.88	0.88	4640	1020	2000	7050	1560	2980	19'-9"	19'-9"	4'-9"	14'-7"
NCS 18/18	5.5	2.13	1.87	0.90	1.04	4640	1020	2000	7050	1560	2980	20'-0"	21'-6"	5'-1"	14'-7"
NCS 18/16	6.0	2.28	2.30	0.91	1.28	4640	1020	2000	7050	1560	2980	20'-0"	23'-6"	5'-5"	14'-7"
NCS 16/18	6.5	2.74	2.23	1.24	1.22	5830	1560	3070	8850	2390	4560	22'-4"	23'-3"	5'-4"	16'-6"
NCS 16/16	7.0	2.94	2.63	1.26	1.46	5830	1560	3070	8850	2390	4560	22'-11"	25'-6"	5'-8"	16'-6"

Deep Cellular Roof Deck Data Base

Product & Gage (T/B)	Wt (psf)	I _p (in ⁴)	I _n (in ⁴)	S _p (in ³)	S _n (in ³)	AS D				LRFD				Max. Single Span	Max. Multi Span	Max. Cant.
						V (lbs)	R 3 (lbs)	R 5e (lbs)	R 5i (lbs)	V (lbs)	R 3 (lbs)	R 5e (lbs)	R 5i (lbs)			
Notes		1	1	1	1	6	3	5e	5i	6	3	5e	5i	7	8	9
JCS 20/20	4.0	3.86	3.12	1.02	1.14	2000	440	520	860	3040	670	800	1280	21'-3"	22'-3"	6'-4"
JCS 20/18	4.5	4.16	3.65	1.01	1.44	2000	440	520	860	3040	670	800	1280	21'-3"	25'-0"	6'-6"
JCS 18/20	5.0	4.95	3.92	1.51	1.38	3840	740	880	1440	5840	1130	1350	2140	26'-0"	24'-6"	6'-10"
JCS 18/18	5.5	5.41	4.50	1.54	1.69	3840	740	880	1440	5840	1130	1350	2140	26'-0"		7'-3"
JCS 18/16	6.0	5.81	5.18	1.54	2.07	3840	740	880	1440	5840	1130	1350	2140	26'-0"		7'-7"
JCS 16/18	6.0	6.74	5.41	2.07	1.96	6020	1140	1350	2190	9140	1740	2060	3260	30'-2"		7'-8"
JCS 16/16	6.5	7.27	6.13	2.10	2.35	6020	1140	1350	2190	9140	1740	2060	3260	30'-6"		7'-11"
HC6S 18/20	5.5	9.74	7.50	2.51	2.03	3400	700	840	1430	5170	1070	1280	2120	33'-6"		8'-11"
HC6S 18/18	6.5	10.77	8.53	2.48	2.45	3400	700	840	1430	5170	1070	1280	2120	33'-0"		9'-3"
HC6S 18/16	7.0	11.74	9.74	2.46	2.94	3400	700	840	1430	5170	1070	1280	2120	33'-0"		9'-8"
HC6S 16/18	7.5	13.20	10.27	3.47	2.85	6110	1080	1290	2180	9290	1660	1970	3240	34'-0"		9'-9"
HC6S 16/16	8.0	14.27	11.54	3.54	3.36	6110	1080	1290	2180	9290	1660	1970	3240	34'-0"		10'-1"
HC7.5S 18/20	5.5	16.27	12.63	3.15	2.59	2680	670	800	1420	4070	1020	1220	2110	34'-0"		10'-4"
HC7.5S 18/18	6.5	17.99	14.09	3.13	3.23	2680	670	800	1420	4070	1020	1220	2110	34'-0"		10'-8"
HC7.5S 18/16	7.0	18.95	15.95	3.11	3.90	2680	670	800	1420	4070	1020	1220	2110	34'-0"		11'-1"
HC7.5S 16/18	8.0	21.54	16.98	4.62	3.84	5390	1040	1240	2170	8190	1590	1890	3230	34'-0"		11'-3"
HC7.5S 16/16	8.0	23.34	18.95	4.65	4.48	5390	1040	1240	2170	8190	1590	1890	3230	34'-0"		11'-7"

See Production Limits.

CELLULAR DECK DATABASE NOTES:

1. I_p, I_n, S_p and S_n are the section properties per foot of width. These values were calculated using the AISI Specifications. The subscripts denote positive or negative bending.
2. Allowable end reaction per foot of deck width with 2" bearing for ASD and the factored nominal reaction for LRFD.
3. Allowable end reaction per foot of deck width with 3" bearing for ASD and the factored nominal reaction for LRFD.
4. Allowable interior reaction per foot of deck width with 4" bearing for ASD and the factored nominal reaction for LRFD.
- 5e. Allowable end reaction per foot of deck width with 5" bearing for ASD and the factored nominal reaction for LRFD.
- 5i. Allowable interior reaction per foot of deck width with 5" bearing for ASD and the factored nominal reaction for LRFD.
6. Allowable vertical shear per foot of width for ASD and the factored nominal shear for LRFD. Do not confuse this with horizontal diaphragm shear strength.
7. Maximum recommended single span for roofs based on SDI and OSHA criteria and production limits.
8. Maximum recommended multi span for roofs based on SDI and OSHA criteria and production limits. The maximum production limit for JC deck is 45' and for HC6 & HC7.5 it is 34'. Unequal multi span conditions are possible.
9. Maximum recommended cantilever span based on SDI criteria. Values are sensitive to adjacent spans as they are controlled by deflection. For this table, adjacent spans are assumed to be at least 1.5 times greater than the cantilever span for long span deck and 2 times greater than the cantilever span for 1.5" and 3" cellular deck. Call if you need a more precise calculation.
10. Maximum spans for Factory Mutual Class 1 construction. Refer to the FM Approval Guide and FM 1-29 for fastening requirements and span restrictions at perimeter. Note that the same FM spans are also applicable to acoustic cellular decks (BCAS & NCAS).

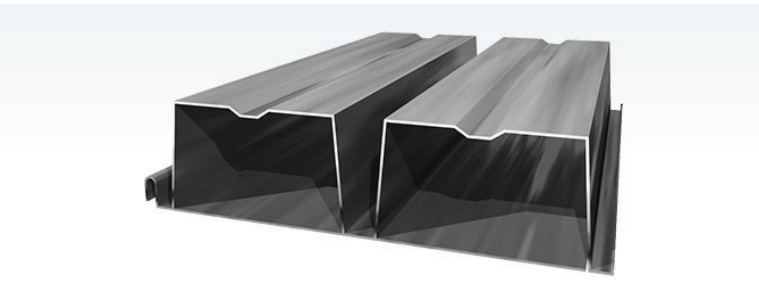
GENERAL NOTES:

- A. Cellular deck has flat side lap that allow screws or welds. Better side lap connections are obtained by screwing or welding through the flat side laps and this is the recommended type. Cosmetic concerns often required button punches. Fire ratings do not address cellular roof deck. Cellular products often are approved in floors.
- B. Stiffened liner panels are aesthetically pleasing and improve bottom side appearance by accenting lines and reducing visibility of spot welds. Designers should expect visible spot welds. Flat panel (stiffened rib not rolled in) is available on special request.
- C. Light gage cellular deck subjected to high concentrated loads may require additional spot welds to resist shear forces in the deck.
- D. Information not provided on this chart may be obtained from Canam Engineering offices.

The tables on pages 14, 15, and 16 show the uniform loads for roof applications. If the deck is to be used with the flat side up, such as may be used on a mezzanine floor, ask for tables based on floor loading for the deck inverted; the side lap is modified for inverted applications.

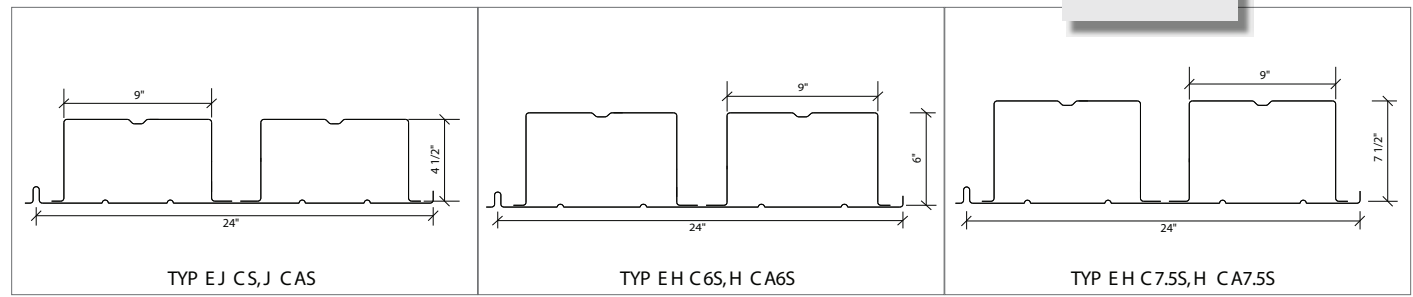
CELLULAR DATA BASE





Note:
Fy = 33 ksi

Type JCS, HC6S and HC7.5S



ASD	JCS, J CAS DECK	Span Type	Gage	(Total Load, psf / Load Producing L/240 or 1", psf)															
				Span															
				8'0"	9'0"	10'0"	11'0"	12'0"	13'0"	14'0"	15'0"	16'0"	17'0"	18'0"	19'0"	20'0"	21'0"	22'0"	23'0"
20/20	110/495	98/348	88/253	80/190	73/147	68/115	63/92	59/75	53/62	47/52	42/43	38/37	34/32	31/26	28/22	26/18	24/15		
20/18	110/533	98/375	88/273	80/205	73/158	68/124	63/100	59/81	53/67	47/56	42/47	37/40	34/34	31/28	28/23	25/20	23/16		
18/20	185/635	164/446	148/325	135/244	123/188	114/148	103/118	89/96	79/79	70/66	62/56	56/47	50/41	46/33	42/28	38/23	35/20		
18/18	185/694	164/487	148/355	135/267	123/206	114/162	105/129	91/105	80/87	71/72	63/61	57/52	51/44	47/37	42/30	39/25	36/21		
18/16	185/745	164/523	148/381	135/287	123/221	114/174	105/139	91/113	80/93	71/78	63/65	57/56	51/48	47/39	42/33	39/27	36/23		
16/18	285/864	253/607	228/443	207/332	190/256	163/201	141/161	123/131	108/108	96/90	85/76	76/65	69/55	63/46	57/38	52/32	48/27		
16/16	285/932	253/655	228/477	207/359	190/276	166/217	143/174	124/141	109/117	97/97	86/82	78/70	70/60	63/49	58/41	53/34	49/29		

LRFD	JCS, J CAS DECK	Span Type	Gage	(Total Load, psf / Load Producing L/240 or 1", psf)															
				Span															
				8'0"	9'0"	10'0"	11'0"	12'0"	13'0"	14'0"	15'0"	16'0"	17'0"	18'0"	19'0"	20'0"	21'0"	22'0"	23'0"
20/20	168/495	149/348	134/253	122/190	112/147	103/115	96/92	89/75	83/62	74/52	66/43	59/37	53/32	48/26	44/22	40/18	37/15		
20/18	168/533	149/375	134/273	122/205	112/158	103/124	96/100	89/81	82/67	73/56	65/47	58/40	53/34	48/28	44/23	40/20	37/16		
18/20	283/635	251/446	226/325	205/244	188/188	174/148	161/118	140/96	123/79	109/66	97/56	87/47	79/41	72/33	65/28	60/23	55/20		
18/18	283/694	251/487	226/355	205/267	188/206	174/162	161/129	143/105	126/87	111/72	99/61	89/52	80/44	73/37	67/30	61/25	56/21		
18/16	283/745	251/523	226/381	205/287	188/221	174/174	161/139	143/113	126/93	111/78	99/65	89/56	80/48	73/39	67/33	61/27	56/23		
16/18	435/864	387/607	348/443	316/332	290/256	256/201	221/161	192/131	169/108	150/90	134/76	120/65	108/55	98/46	89/38	82/32	75/27		
16/16	435/932	387/655	348/477	316/359	290/276	260/217	224/174	195/141	171/117	152/97	135/82	122/70	110/60	100/49	91/41	83/34	76/29		

ASD	HC6S DECK	Span Type	Gage	(Total Load, psf / Load Producing L/240 or 1", psf)															
				Span															
				18'0"	19'0"	20'0"	21'0"	22'0"	23'0"	24'0"	25'0"	26'0"	27'0"	28'0"	29'0"	30'0"	31'0"	32'0"	33'0"
18/20	78/110	74/93	70/80	67/66	64/55	61/46	58/39	54/33	50/28	46/24	43/21	40/18	37/16	35/14	33/12	31/11	29/10		
18/18	78/121	74/103	70/88	67/73	64/60	61/51	57/43	53/36	49/31	45/27	42/23	39/20	37/17	34/15	32/13	30/12	29/11		
18/16	78/132	74/112	70/96	67/79	64/66	61/55	57/46	52/39	49/34	45/29	42/25	39/22	36/19	34/17	32/15	30/13	28/12		
16/18	120/149	114/126	108/108	103/89	96/74	87/62	80/52	74/44	68/38	63/33	59/28	55/25	51/21	48/19	45/17	42/15	40/13		
16/16	120/161	114/137	108/117	103/96	98/80	89/67	82/56	76/48	70/41	65/35	60/30	56/26	52/23	49/20	46/18	43/16	41/14		
18/20	119/110	113/93	107/80	102/66	97/55	93/46	89/39	84/33	78/28	72/24	67/21	62/18	58/16	55/14	51/12	48/11	45/10		
18/18	119/121	113/103	107/88	102/73	97/60	93/51	89/43	83/36	77/31	71/27	66/23	62/20	58/17	54/15	51/13	48/12	45/11		
18/16	119/132	113/112	107/96	102/79	97/66	93/55	89/46	82/39	76/34	71/29	66/25	61/22	57/19	54/17	50/15	47/13	44/12		
16/18	184/149	175/126	166/108	158/89	150/74	137/62	126/52	116/44	107/38	99/33	93/28	86/25	81/21	75/19	71/17	67/15	63/13		
16/16	184/161	175/137	166/117	158/96	151/80	140/67	128/56	118/48	109/41	101/35	94/30	88/26	82/23	77/20	72/18	68/16	64/14		
18/20	74/183	71/156	67/134	64/110	61/91	58/76	56/64	54/55	52/47	50/40	48/35	46/30	45/26	43/23	41/20	39/18	36/16		
18/18	74/203	71/172	67/148	64/121	61/101	58/84	56/71	54/60	52/52	50/44	48/38	46/33	45/29	43/26	41/23	38/20	36/18		
18/16	74/213	71/181	67/156	64/128	61/106	58/89	56/75	54/64	52/54	50/47	48/40	46/35	45/31	43/27	40/24	38/21	36/19		
16/18	116/243	109/206	104/177	99/145	95/121	90/101	87/85	83/72	80/62	77/53	74/46	72/40	68/35	64/31	60/27	57/24	53/21		
16/16	116/263	109/223	104/192	99/158	95/131	90/110	87/92	83/78	80/67	77/58	74/50	72/43	69/38	65/33	61/29	57/26	54/23		
18/20	113/183	107/156	102/134	97/110	93/91	89/76	85/64	82/55	78/47	76/40	73/35	70/30	68/26	66/23	64/20	60/18	57/16		
18/18	113/203	107/172	102/148	97/121	93/101	89/84	85/71	82/60	78/52	76/44	73/38	70/33	68/29	66/26	64/23	60/20	57/18		
18/16	113/213	107/181	102/156	97/128	93/106	89/89	85/75	82/64	78/54	76/47	73/40	70/35	68/31	66/27	63/24	60/21	56/19		
16/18	177/243	167/206	159/177	151/145	145/121	138/101	133/85	127/72	122/62	118/53	114/46	110/40	106/35	100/31	94/27	89/24	84/21		
16/16	177/263	167/223	159/192	151/158	145/131	138/110	133/92	127/78	122/67	118/58	114/50	110/43	106/38	101/33	95/29	89/26	84/23		

Note: HCA6S and HCA7.5S are available and the same load tables apply.

Yellow indicates areas where web crippling controls.

CELLULAR LOAD TABLES