

4.5" Deep Rib Roof Deck		Sectional Properties (per foot of width)						
	Deck Type	Gauge	Wt/ Ft ²	I _p In. ⁴	S _p +In. ³	S _n ³ -In. ³	Allowable Reaction lbs.	
							End*	Int.*
	4 1/2"	20	3.15	3.000	1.124	1.212	521	1342
	4 1/2"	18	4.17	3.971	1.568	1.610	976	2163
	4 1/2"	16	5.26	5.010	2.014	2.021	1558	3180
4 1/2"	14	6.57	6.258	2.510	2.510	2414	4591	

*End Bearing = 4"

*Intermediate Bearing = 6"

Uniform Total Load (Dead and Live) in Pounds Per Square Foot – Span Length C./C. Support												
Gauge	Single Span				Double Span				Triple Span			
	20	18	16	14	20	18	16	14	20	18	16	14
Span												
10'-0"	104	195	266*	331*	107	173	254	322	122	197	289	397
11'-0"	95	171*	220*	274*	98	157	214	267	111	179	263	330
12'-0"	87	144*	185*	230*	89	142	181	225	102	164	223	279
13'-0"	80	122*	157*	196*	83	122	155	193	94	150	191	239
14'-0"	74	105	130	160	76	105	134	167	87	130	166	207
15'-0"	66*	87	107	132	67	92	117	145	81	114	145	180
16'-0"	58*	74	90	110	59	81	103	128	72	100	128	159
17'-0"	50	63	77	94	53	72	91	113				
18'-0"	44	55	66	80	47	64	81	101				
19'-0"	39	48	58	70	42	58	73	91				
20'-0"	35	43	51	61	38	52	66	82				
21'-0"	31	38	46	54	35	48	60	75				
22'-0"		34	41	49	32	43	55	68				
23'-0"		31	37	44		40	50	62				
24'-0"			34	40		37	46	57				
25'-0"			31	36								
26'-0"				33								
27'-0"				31								

- Notes: 1. Loads in shaded areas are governed by live load deflection not in excess of 1/240. As assumed 10 psf dead load is added to deflection.
2. Loads with asterisks (*) are governed by the allowable flexural stress limit of 20 ksi.
3. All other loads are governed by the end or intermediate reactions listed above.
4. For acoustical decks, reduce the uniform total loads by 5%.

All data taken from manufacturer's catalogs and is presented for estimating purposes only.

Section properties have been determined in accordance with the American Iron and Steel Institute's Specifications for the Design of Cold Formed Steel Structural Members.

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CARRON AND COMPANY