

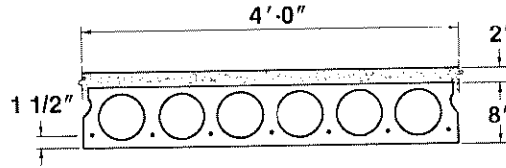
HOLLOW-CORE

4'-0" x 8"
Normal Weight Concrete

Strand Patterns

Producer may vary size and strength of strands. See "explanation of load tables"

Safe loads shown include dead load of 10 psf for untopped members and 15 psf for topped members. Remainder is live load. Long-time cambers include superimposed dead load but do not include live load.



Section Properties

	Untopped	Topped
A =	215 in. ²	—
I =	1666 in. ⁴	3071 in. ⁴
Y _b =	4.00 in.	5.29 in.
Y _t =	4.00 in.	4.71 in.
Z _b =	416 in. ³	580 in. ³
Z _t =	416 in. ³	652 in. ³
b _w =	12.00 in.	12.00 in.
wt =	224 plf	323 plf
	56 psf	81 psf
V/S =	1.92 in.	

Capacity of sections of other configurations are similar. For precise values, see local hollow-core manufacturer.

$$f'_c = 5000 \text{ psi}$$

$$f'_{ci} = 3500 \text{ psi}$$

Key

- 284 — Safe superimposed service load, psf
- 0.1 — Estimated camber at erection, in.
- 0.2 — Estimated long-time camber, in.

4HC8

Table of safe superimposed service load (psf) and cambers

No Topping

Strand Designation Code	Span, ft.																					
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33		
30-S	284	242	207	178	154	134	117	102	89	77	67	59	51									
	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0									
	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	-0.1	-0.1	-0.3								
40-S		285	247	216	189	166	147	130	115	102	90	80	71	63	56	49						
		0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.0	0.0						
		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.0	-0.1	-0.3	-0.4						
50-S			287	269	241	213	189	169	150	135	120	107	95	85	75	66	59	52	45			
			0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.1	0.0			
			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.2	0.1	0.0	-0.2	-0.4	-0.6			
60-S				296	275	260	244	224	205	183	163	146	131	117	105	94	84	76	67	60		
				0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.4			
				0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.5	0.4	0.3	0.1	0.0		
70-S					284	266	250	236	223	209	190	172	155	139	126	113	102	92	83	75		
					0.6	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8		
					0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.8	0.7	0.6	0.5		

4HC8 + 2

Table of safe superimposed service load (psf) and cambers

2" Normal Weight Topping

Strand Designation Code	Span, ft.																				
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33			
30-S	260	223	192	166	143	124	107	93	76	61	48										
	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0										
	0.1	0.1	0.1	0.1	0.0	0.0	-0.1	-0.2	-0.3	-0.4	-0.5										
40-S		269	235	206	181	158	135	115	97	82	67	55	43								
		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.0								
		0.2	0.2	0.2	0.1	0.1	0.0	0.0	-0.1	-0.3	-0.4	-0.6	-0.8								
50-S			299	264	234	205	178	154	133	115	98	83	70	58	47						
			0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.2						
			0.4	0.3	0.3	0.3	0.3	0.2	0.1	0.0	-0.1	-0.2	-0.4	-0.6	-0.8						
60-S				284	251	220	193	169	148	129	112	97	83	71	59	49					
				0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.4					
				0.5	0.5	0.5	0.4	0.4	0.3	0.2	0.1	0.0	-0.2	-0.4	-0.6	-0.9					
70-S					297	280	263	232	205	181	160	141	124	108	94	81	70				
					0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8				
					0.7	0.7	0.7	0.7	0.6	0.6	0.5	0.4	0.3	0.2	0.0	-0.2	-0.4				

Bold type — Capacity governed by stresses, others governed by flexural or shear strength