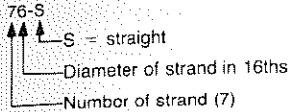


HOLLOW-CORE

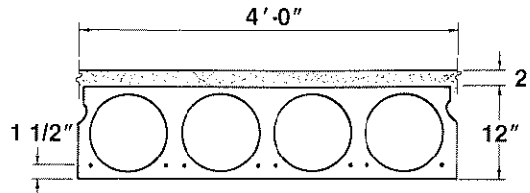
Strand Pattern Designation



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.

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

4'-0" x 12"
 Normal Weight Concrete



Section Properties

	Untopped	Topped
A =	262 in. ²	—
I =	4949 in. ⁴	7811 in. ⁴
Y _b =	6.00 in.	7.55 in.
Y _t =	6.00 in.	6.45 in.
Z _b =	825 in. ³	1035 in. ³
Z _t =	825 in. ³	1211 in. ³
b _w =	8.00 in.	8.00 in.
wt =	273 plf	373 plf
	68 psf	93 psf
V/S =	2.18 in.	

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

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

Low-relaxation strand

Key

- 125 — Safe superimposed service load, psf
- 0.3 — Estimated camber at erection, in.
- 0.3 — Estimated long-time camber, in.

4HC12

Table of safe superimposed service load (psf) and cambers

No Topping

Strand Designation Code	Span, ft.																							
	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	
76-S	125	113	102	92	83	75	67	60	54	48	43													
	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.0	-0.1													
58-S	173	158	144	131	120	109	100	91	83	76	69	63	57	52	47	42								
	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.0								
68-S	182	173	165	157	150	140	128	118	109	100	92	84	78	71	65	60	55	50	45					
	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.4	0.3	0.2	0.1					
78-S	188	179	171	163	156	149	145	139	133	123	114	105	98	90	83	77	71	66	61	56	51	47		
	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.8	0.7	0.6	0.5	0.4	0.2	0.1		
88-S	194	185	177	169	162	155	148	142	137	131	126	121	117	109	101	94	87	81	75	70	65	60	55	
	1.0	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.1	1.1	1.0	0.9	0.8	0.6	0.5	0.4	

4HC12 + 2

Table of safe superimposed service load (psf) and cambers

2" Normal Weight Topping

Strand Designation Code	Span, ft.																							
	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	
76-S	235	211	189	169	151	135	120	105	91	78	66	56	46											
	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1										
58-S	250	234	222	209	199	188	172	156	141	128	116	105	93	82	71	62	53							
	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.2							
68-S	262	249	234	224	211	200	189	183	173	164	150	137	125	114	104	95	86	78	71	64				
	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.5	0.5						
78-S	271	255	243	230	217	206	195	189	179	171	163	155	148	141	130	119	110	101	92	84	77	70		
	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.8	0.7			
88-S	280	264	249	236	223	212	201	195	185	177	169	161	154	147	141	135	129	122	112	104	95	88	81	
	0.8	0.8	0.9	0.9	1.0	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.1	1.1	1.0	

Strength based on strain compatibility; bottom tension limited to $6\sqrt{f'_c}$; see pages 2-3--2-5 for explanation