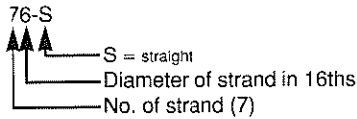


Strand Pattern Designation

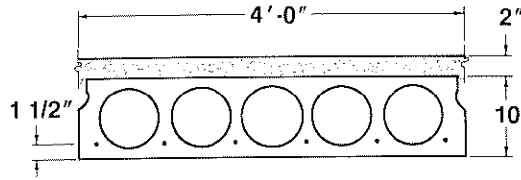


Safe loads shown include dead load of 10 psf for untopped members and 15 psf for topped members. Remainder is live load. Long-time cambers include superimposed dead load but do not include live load.

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

HOLLOW-CORE

4'-0" x 10"
Normal Weight Concrete



$f'_c = 5,000$ psi
 $f'_ci = 3,500$ psi

Section Properties

	Untopped	Topped
A	= 259 in. ²	—
I	= 3,223 in. ⁴	5,328 in. ⁴
y _b	= 5.00 in.	6.34 in.
y _t	= 5.00 in.	5.66 in.
Z _b	= 645 in. ³	840 in. ³
Z _t	= 645 in. ³	941 in. ³
b _w	= 10.50 in.	10.50 in.
wt	= 270 plf	370 plf
	68 psf	93 psf
V/S	= 2.23 in.	

Key

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

4HC10

Table of safe superimposed service load (psf) and cambers

No Topping

Strand Designation Code	Span, ft.																						
	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
48-S	239	212	188	168	150	134	120	107	96	86	76	68	61	54	48	42							
	0.3	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	0.0	-0.1						
	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.0	-0.1	-0.2	-0.3	-0.5							
58-S	280	263	245	219	197	177	160	144	130	118	107	96	87	79	71	64	58	52	46	41			
	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.2	0.2	0.1	0.0	-0.1				
	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.3	0.2	0.1	0.0	-0.1	-0.3	-0.5	-0.7			
68-S	289	272	255	242	231	217	199	180	164	149	136	124	113	103	94	86	78	71	64	58	53	48	43
	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.4	0.3	0.2	0.1	-0.1
	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.6	0.5	0.4	0.2	0.1	-0.1	-0.3	-0.6	-0.8
78-S	298	278	264	248	237	223	214	203	193	179	164	150	138	126	116	106	98	90	82	75	69	63	57
	0.6	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.7	0.6	0.5	0.4
	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.1	1.1	1.0	1.0	0.9	0.8	0.6	0.5	0.3	0.1	-0.1
88-S	287	270	257	243	229	220	209	199	189	183	174	162	149	137	126	117	107	99	91	84	78	71	
	0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.0	0.9	
	1.0	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.4	1.4	1.3	1.3	1.2	1.1	0.9	0.8	0.6

4HC10 + 2

Table of safe superimposed service load (psf) and cambers

2" Normal Weight Topping

Strand Designation Code	Span, ft.																						
	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
48-S	293	258	229	203	181	161	143	127	113	101	89	79	69	60	50								
	0.3	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	0.0							
	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.0	-0.1	-0.2	-0.3	-0.4	-0.6	-0.8								
58-S		297	268	241	216	194	175	157	142	128	115	103	92	79	68	58	48						
		0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.2	0.2	0.1						
		0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.1	0.0	-0.1	-0.2	-0.4	-0.5	-0.7	-0.9						
68-S		286	272	259	244	221	200	182	165	150	136	123	109	96	84	73	63	54					
		0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.4	0.3					
		0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.2	0.0	-0.1	-0.3	-0.5	-0.7	-0.9				
78-S		295	278	265	250	239	226	218	201	184	168	154	138	124	111	98	87	77	67	58	49		
		0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.7	0.6	0.5	0.4	0.3	0.2
		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.5	0.4	0.3	0.2	0.0	-0.2	-0.4	-0.6	-0.9	-1.2
88-S		287	271	259	245	232	224	213	202	193	179	163	148	134	121	110	99	88	78	69			
		0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.0	0.9		
		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	0.3	0.1	-0.1	-0.3	-0.6		

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