

# HOLLOW-CORE

4'-0" x 10"  
Normal Weight Concrete

## Section Properties

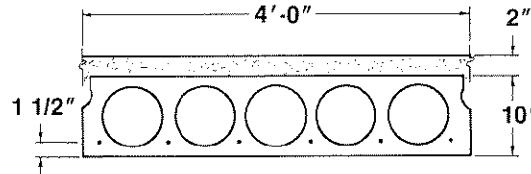
Untopped Topped

A =	259 in. <sup>2</sup>	—
I =	3223 in. <sup>4</sup>	5328 in. <sup>4</sup>
Y <sub>b</sub> =	5.00 in.	6.34 in.
Y <sub>t</sub> =	5.00 in.	5.66 in.
Z <sub>b</sub> =	645 in. <sup>3</sup>	840 in. <sup>3</sup>
Z <sub>t</sub> =	645 in. <sup>3</sup>	941 in. <sup>3</sup>
b <sub>w</sub> =	10.50 in.	10.50 in.
wt =	270 plf	370 plf
	68 psf	93 psf
V/S =	2.23 in.	

## 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.



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

- 227 — Safe superimposed service load, psf
- 0.2 — Estimated camber at erection, in.
- 0.3 — 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			
<b>40-S</b>	227	201	178	158	141	126	112	100	89	80	71	63	56	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0
	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.0	-0.1	-0.2	-0.3												
<b>50-S</b>	274	254	232	207	186	167	150	136	122	110	100	90	81	73	66	59	52	0.3	0.2	0.2	0.1	0.1	0.0			
	0.4	0.4	0.4	0.4	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								
<b>60-S</b>	280	263	249	233	222	207	187	170	154	140	127	116	105	95	85	77	69	61	55	49	0.4	0.5	0.5	0.5	0.0	
	0.5	0.6	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	-0.1	-0.3	-0.4	-0.7						
<b>70-S</b>	289	269	255	242	228	217	205	194	181	168	153	139	126	115	104	94	85	77	70	63	56	50	45	0.5		
	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.6	0.5	0.3	0.2	0.0	-0.1	-0.4	-0.6	-0.9	0.0		
<b>80-S</b>	295	278	261	248	234	223	211	203	193	183	168	156	147	135	123	112	102	93	85	77	70	63	57	0.6		
	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	0.9	0.8	0.7	0.5	0.4	0.2	0.0	-0.3	0.0		

**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														
<b>40-S</b>	266	234	207	183	162	144	127	113	100	85	72	60	49	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0										
	0.2	0.2	0.2	0.1	0.1	0.0	0.0	-0.1	-0.2	-0.3	-0.4	-0.5	-0.7																						
<b>50-S</b>		270	241	215	192	172	154	137	119	103	89	76	65	54	44	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1								
		0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.0	-0.1	-0.2	-0.4	-0.5	-0.7	-0.9																				
<b>60-S</b>		297	280	263	239	215	194	173	153	135	119	104	91	78	67	57	47	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5								
		0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.1	0.0	-0.2	-0.3	-0.5	-0.7	-0.9																		
<b>70-S</b>		286	272	256	244	230	209	187	167	148	132	117	103	90	79	68	58	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.5	0.5			
		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																		
<b>80-S</b>		295	278	265	250	236	226	215	198	178	160	143	128	114	101	89	78	68	59	0.8	0.8	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.7
		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.5	0.4	0.2	0.1	-0.1	-0.3	-0.5	-0.8																

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