## 3.6 Hollow-Core Load Tables (cont.)



### Strand Pattern Designation

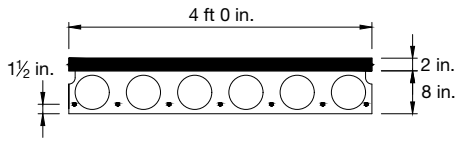
**7 6 – S**

- S = straight
- Diameter of strand in 16ths
- Number of strands (7)

*Load capacities shown include dead load of 10 lb/ft² for untopped members and 15 lb/ft² 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 ft 0 in. × 8 in. normalweight concrete**




$f'_c$ = 5000 psi
$f_{pu}$ = 270,000 psi

**Section Properties**

| | | No topping | | 2 in. topping ($f'_c$ = 3000 psi) | |
|---|---|---|---|---|---|
| $A$ | = | 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. |
| $S_b$ | = | 417 | in.³ | 581 | in.³ |
| $S_t$ | = | 417 | in.³ | 652 | in.³ |
| $wt$ | = | 224 | lb/ft | 324 | lb/ft |
| $DL$ | = | 56 | lb/ft² | 81 | lb/ft² |
| $V/S$ | = | 1.92 | in. | | |
| $b_w$ | | 12.0 | in. | | |

Key
385 – Superimposed service load capacity, lb/ft²
0.1 – Estimated camber at erection, in.
0.2 – Estimated long-time camber, in.

**4HC8**

**Table of superimposed service load capacity, lb/ft², and cambers, in.** — **No topping**

| Strand pattern | Span, ft | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 66-S | 385 | 345 | 313 | 283 | 260 | 240 | 223 | 204 | 179 | 158 | 140 | 124 | 110 | 98 | 87 | 77 | 69 | 61 | 54 | 48 | 43 | 38 | 33 | 29 | | | | | | |
| | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 | 0.0 | -0.1 | -0.2 | -0.3 | -0.5 | -0.6 | | | | | | |
| | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.1 | 0.0 | -0.1 | -0.2 | -0.3 | -0.5 | -0.7 | -0.9 | -1.1 | -1.4 | | | | | | |
| 76-S | 449 | 407 | 367 | 334 | 309 | 285 | 263 | 242 | 213 | 188 | 167 | 149 | 133 | 119 | 106 | 95 | 86 | 77 | 69 | 62 | 55 | 50 | 44 | 39 | 35 | 31 | 26 | | | |
| | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.1 | 0.0 | -0.1 | -0.2 | -0.4 | -0.5 | -0.7 | -0.7 | | | |
| | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 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 | -0.6 | -0.8 | -1.1 | -1.4 | -1.7 | -2.0 | | | |
| 58-S | 422 | 380 | 346 | 316 | 290 | 267 | 247 | 231 | 216 | 202 | 190 | 179 | 169 | 160 | 144 | 130 | 118 | 107 | 97 | 88 | 80 | 72 | 66 | 60 | 54 | 48 | 42 | 37 | 32 | 28 |
| | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | 0.4 | 0.3 | 0.2 | 0.1 | 0.0 | -0.4 | -0.3 | -0.5 | -0.7 | -0.9 |
| | 0.3 | 0.3 | 0.4 | 0.4 | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.6 | 0.6 | 0.5 | 0.4 | 0.3 | 0.2 | 0.0 | -0.5 | -0.4 | -0.6 | -0.9 | -1.2 | -1.6 | -2.0 | -2.4 |
| 68-S | 476 | 430 | 393 | 361 | 332 | 309 | 286 | 269 | 253 | 235 | 223 | 209 | 200 | 180 | 165 | 153 | 142 | 132 | 121 | 110 | 101 | 92 | 84 | 77 | 70 | 63 | 56 | 51 | 45 | 40 |
| | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.5 | 0.5 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 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 | 0.2 | 0.1 | -0.1 | -0.3 |
| | 0.3 | 0.4 | 0.5 | 0.5 | 0.6 | 0.6 | 0.7 | 0.7 | 0.8 | 0.8 | 0.9 | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | 0.9 | 0.9 | 0.9 | 0.8 | 0.7 | 0.6 | 0.4 | 0.2 | 0.0 | -0.2 | -0.5 | -0.8 | -1.1 | -1.5 |
| 78-S | 488 | 442 | 402 | 370 | 341 | 318 | 295 | 275 | 259 | 241 | 229 | 215 | 203 | 195 | 180 | 168 | 157 | 144 | 135 | 126 | 118 | 110 | 101 | 92 | 84 | 77 | 70 | 64 | 58 | 52 |
| | 0.3 | 0.3 | 0.4 | 0.5 | 0.5 | 0.6 | 0.6 | 0.7 | 0.7 | 0.8 | 0.9 | 0.9 | 1.0 | 1.0 | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.0 | 0.9 | 0.8 | 0.7 | 0.6 | 0.5 | 0.3 |
| | 0.4 | 0.5 | 0.5 | 0.6 | 0.7 | 0.8 | 0.8 | 0.9 | 1.0 | 1.0 | 1.1 | 1.2 | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.1 | 1.0 | 0.8 | 0.7 | 0.5 | 0.3 | 0.0 | -0.3 | -0.7 |

**4HC8 + 2**

**Table of superimposed service load capacity, lb/ft², and cambers, in.** — **2 in. normalweight topping**

| Strand pattern | Span, ft | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 66-S | 400 | 365 | 333 | 308 | 282 | 256 | 224 | 197 | 173 | 153 | 135 | 119 | 105 | 93 | 82 | 68 | 56 | 45 | 36 | 26 | | | | | | | | |
| | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 | –0.0 | –0.1 | –0.2 | –0.3 | | | | | | | | |
| | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.0 | –0.1 | –0.2 | –0.3 | 0.4 | –0.6 | –0.7 | –0.9 | –1.2 | –1.4 | | | | | | | | |
| 76-S | 474 | 435 | 396 | 366 | 340 | 304 | 267 | 235 | 208 | 184 | 164 | 146 | 130 | 116 | 103 | 88 | 74 | 62 | 51 | 41 | 31 | | | | | | | |
| | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.1 | –0.0 | –0.1 | –0.2 | | | | | | | |
| | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 | –0.1 | –0.2 | –0.4 | –0.5 | –0.7 | –0.9 | –1.2 | –1.4 | | | | | | | |
| 58-S | 445 | 405 | 374 | 342 | 318 | 298 | 275 | 260 | 243 | 228 | 217 | 196 | 177 | 159 | 143 | 126 | 110 | 95 | 82 | 70 | 59 | 49 | 40 | 32 | | | | |
| | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | 0.1 | 0.3 | 0.2 | 0.1 | 0.0 | –0.1 | | | | |
| | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.3 | 0.3 | 0.3 | 0.2 | 0.1 | –0.1 | –0.2 | –0.4 | –0.6 | –0.9 | –1.2 | –1.5 | –1.8 | | | | |
| 68-S | | 463 | 426 | 393 | 366 | 342 | 319 | 299 | 282 | 267 | 251 | 239 | 216 | 195 | 177 | 158 | 140 | 124 | 110 | 97 | 84 | 73 | 62 | 53 | 44 | 36 | 28 | |
| | | 0.4 | 0.4 | 0.5 | 0.5 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 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 | 0.2 | 0.1 | –0.1 | |
| | | 0.4 | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.6 | 0.6 | 0.6 | 0.5 | 0.4 | 0.3 | 0.2 | 0.0 | –0.2 | –0.4 | –0.6 | –0.9 | –1.2 | –1.6 | –2.0 | –2.4 | |
| 78-S | | 472 | 435 | 402 | 375 | 348 | 325 | 305 | 288 | 273 | 257 | 245 | 232 | 220 | 207 | 186 | 167 | 149 | 133 | 119 | 106 | 94 | 83 | 73 | 64 | 55 | 46 | 38 |
| | | 0.5 | 0.5 | 0.6 | 0.6 | 0.7 | 0.7 | 0.8 | 0.9 | 0.9 | 1.0 | 1.0 | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.0 | 0.9 | 0.9 | 0.7 | 0.6 | 0.5 | 0.3 |
| | | 0.5 | 0.6 | 0.6 | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 | 0.9 | 0.9 | 0.9 | 0.9 | 0.8 | 0.8 | 0.7 | 0.7 | 0.6 | 0.4 | 0.3 | 0.1 | –0.1 | –0.3 | –0.6 | –0.9 | –1.3 | –1.7 | –2.2 |

Strength is based on strain compatibility; bottom tension is limited to 7.5 $\sqrt{f'_c}$; see pages 3–8 through 3–11 for explanation.
See Section 3.3.2, Item 3, Note 4 for explanation of vertical line.