

Composite Design Safe Load Table



PRESTRESSED CONCRETE SLAB

See instructions on back side of sheet for using this table.

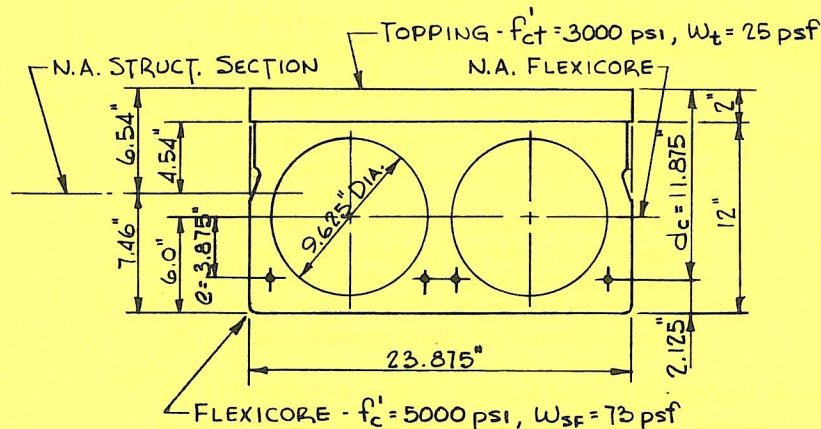
**12" x 24" SECTION PLUS
2" STRUCTURAL TOPPING**

UNIFORMLY DISTRIBUTED SUPERIMPOSED* LOAD IN PSF

Standard Designation	Strands No. & Size	Strand Area Sq. In.	M in Ft.-Kips per Unit	ϕM_n in Ft.-Kips per Unit	Span Length (l) in Ft.																				
					22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
T1224B-D58	4-1/2	0.576	76.23	111.24	303	286	271	256	243	231	220	210	200	189	173	157	140	125	112	99	88	77	67	58	49
T1224B-D50	2-1/2 & 2-7/16	0.504	69.10	99.14	293	277	262	248	235	224	213	196	178	162	146	130	116	102	90	78	68	58	49	41	
T1224B-D43	4-7/16	0.432	61.96	86.51	292	276	261	245	220	198	179	161	145	131	118	104	91	79	68	58	48	40			
T1224B-D38	2-7/16 & 2-3/8	0.376	56.42	76.32	283	258	231	206	185	165	148	132	118	106	94	84	72	61	51	41					
T1224B-D32	4-3/8	0.320	50.87	65.83	239	212	188	167	148	131	117	103	91	80	70	61	53	43							

*TABULATED LOADS ARE BASED ON $U = 1.4D + 1.7L$ AND WITH ALL LOAD SUPERIMPOSED ON THE STRUCTURAL SECTION CONSIDERED AS LIVE LOAD. (ALSO SEE NOTE 6)

PHYSICAL PROPERTIES OF STRUCTURAL SECTION AND SPECIFICATIONS



$$\begin{aligned}
 A &= 141.0 \text{ in.}^2 & I_g &= 2595.4 \text{ in.}^4 & f'_c &= 5000 \text{ psi} & f_{pu} &= 250 \text{ ksi} \\
 b_w &= 4.625 \text{ in.} & I_{gc} &= 4044.2 \text{ in.}^4 & f'_{ci} &= 3500 \text{ psi} & f_{si} &= 175 \text{ ksi}
 \end{aligned}$$

NOTES:

1. Grouted weight of structural unit is 98 psf or 196 plf based on concrete unit weight of 150 pcf.
2. Design is based on ACI Standard, "Building Code Requirements for Reinforced Concrete (ACI 318-83)."
3. For spans in shaded area consult your local manufacturer.
4. No shear reinforcement is required for the tabulated loads.
5. Tabulated loads to the left of solid stepped line are controlled by shear strength of the concrete. Shear reinforcement may be added to increase the safe loads.
6. Tabulated loads to the right of dashed stepped line are controlled by permissible flexural tension at service loads.
7. For longer spans and conditions not covered in the load table, consult your local manufacturer.

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