

Safe Load Table

hi-stress flexicore 8" x 16" SECTION

TABULATED LOADS ARE BASED ON DEAD LOAD GREATER THAN LIVE LOAD AND
 $M_U = 1.8 (M_D + M_L)$ WITH NO TOPPING OR UNBONDED OR NON-STRUCTURAL TOPPING

See Instructions Below for Using this Table

UNIFORMLY DISTRIBUTED SUPERIMPOSED * LOAD IN LBS. PER SQ. FT.

Standard Designation	7-Wire P/S Strand Combination	P/S Strand Area Sq. In.	Ultimate Bending Moment, M_U in Kip. Ft. Per Unit	SIMPLE SPAN IN FEET - CENTER TO CENTER OF END BEARINGS																							TOP TENSILE CAGE BARS REQUIRED AT EA. END OF SLAB		
				20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	Span in Ft.	Bar Size	Min. Length of Bar						
PW44	4 - 7/16	0.436	49.4	359	320	288	259	233	211	191	174	158	144	131	119	109	99	90	82	75	20'	2 - #4	6' - 4"						
PW41	3 - 7/16 & 1 - 3/8	0.407	46.9	339	302	272	244	220	198	179	163	147	134	122	111	101	92	83	76	69	42'	2 - #4	3' - 9"						
PW38	2 - 7/16 & 2 - 3/8	0.378	44.3	318	283	253	227	204	184	166	150	136	123	112	102	92	84	76	69	62	20'	2 - #4	5' - 0"						
PW35	1 - 7/16 & 3 - 3/8	0.349	41.4	293	261	233	209	188	169	152	137	124	112	101	92	83	75	67	61	55	32'	2 - #4	4' - 0"						
PW33	3 - 7/16	0.327	39.2	275	244	218	195	175	157	141	127	115	103	93	84	76	68	61	55	49	20'	2 - #4	3' - 6"						
PW30	2 - 7/16 & 1 - 3/8	0.298	36.4	251	223	199	178	158	142	127	114	103	92	83	74	66	59	53	47	42	32'	2 - #4	2' - 9"						
PW27	1 - 7/16 & 2 - 3/8	0.269	33.5	227	201	179	159	142	127	113	101	90	81	72	64	57	51	45	39	34	20'	2 - #4	3' - 0"						
PW24	3 - 3/8	0.240	30.4	202	178	158	140	124	110	98	87	77	68	60	53	47	41	36	31		32'	2 - #3	2' - 6"						
PW22	2 - 7/16	0.218	27.6	178	156	138	122	108	95	84	74	65	57	50	44	38	32				20'	2 - #3	2' - 3"						
PW16	2 - 3/8	0.160	21.0	123	107	93	80	69	60	51	44	37	31	26							All	2 - #3	1' - 10"						

*INCLUDES THE LIVE LOAD PLUS ANY DEAD LOAD THAT IS ADDITIONAL TO THE WEIGHT OF THE BARE GROUTED SLABS IN PLACE.

SHADED AREA - CONSULT MANUFACTURE

NOTATION

w_s is the uniform safe load, superimposed on the Flexicore unit in lbs. per sq. ft.
 w_L is the uniform live load in lbs. per sq. ft.
 w_D is the total dead load including weight of Flexicore unit of 52 lbs. per sq. ft.
 w_{AD} is dead load other than the weight of the Flexicore unit in lbs. per sq. ft.
 M_U is ultimate bending moment in kip-ft. per unit. M_D is safe working dead load moment.
 L is span in ft. cc of end bearings. M_L is safe working live load moment.

INSTRUCTIONS FOR USING TABLE

- Below the solid stepped line, total dead load, w_D , will always exceed live load, w_L and the tabulated values may be used directly.
- Above the solid stepped line, check dead load, w_D , and live load, w_L , and proceed according to the following table:

$w_D > w_L$	$w_D < w_L$
a. $M_U = 1.8 (M_D + M_L)$ governs and tabulated loads may be used directly. b. To figure between tabulated spans, interpolate or use the formula: $w_s = \frac{3333 M_U}{L^2} - 52$	a. $M_U = 1.2 M_D + 2.4 M_L$ governs and the required M_U must be computed from the formula: $M_U = \frac{L^2}{2500} (w_L + \frac{w_{AD}}{2} + 26)$ Enter the table with required M_U to find the standard designation needed. b. To check designs use the formula $w_L = \frac{2500 M_U}{L^2} - \frac{w_{AD}}{2} - 26$

- If w_D equals w_L , then either criteria may be used and tabulated loads may be taken directly from the table.
- For concentrated loads, bending moments, M_D and M_L producing a maximum combined moment, must be calculated and the appropriate ultimate moment formula from section 2 must be applied. Enter the table with required M_U to find the standard designation needed. See also instructions on web reinforcement.

SHEAR AND WEB REINFORCEMENT

- Eight No. 9 wire stirrups are required at 3" spacing, beginning 1" from slab ends, for all uniform loadings except those above the dashed stepped line require 16 at 1 1/2" spacing.
- No additional web reinforcement is required for UNIFORM LOADINGS contemplated by this table.
- Concentrated loads producing shear in excess of 2280 lbs. per 16" width may require additional web reinforcement. Consult your local manufacturer.

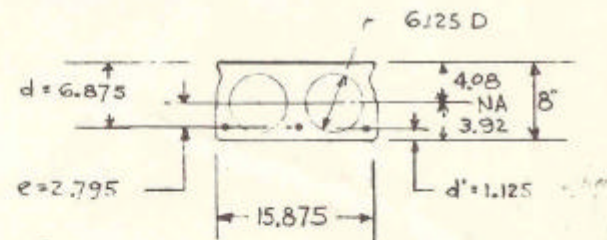
CAMBER AND DEFLECTION

- The above table indicates maximum allowable safe loads, however camber and deflection may limit the use of a prestress unit even though the load carrying capacity is satisfactory.
- Camber and deflection must always be investigated for the contemplated loading condition and span so that these factors are compatible with contiguous materials in the proposed building. Consult your local manufacturer.

END TOP - TENSILE - REINFORCEMENT

- Provides top cage steel as specified in right hand portion of table.
- Interpolate for spans not tabulated.

SPECIFICATIONS AND PHYSICAL PROPERTIES



$A = 65.6$ sq. in. $I = 527.4$ in.⁴ $b = 3.625$
 $f'_c = 5000$ psi $f'_{ci} = 3500$ psi
 $f'_s = 250,000$ psi $f_{si} = 175,000$ psi

Design is based on ACI - ASCE Joint Committee 323
 "Tentative Recommendations for Prestressed Concrete", 1958

Grouted weight of slabs is 52 lbs. per sq. ft.

NOTE: FOR LONGER SPANS, HEAVIER LOADS, OR SPECIAL CONDITIONS, CONSULT LOCAL MANUFACTURER.

MOLIN CONCRETE PRODUCTS COMPANY
 ST. PAUL, MINNESOTA

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