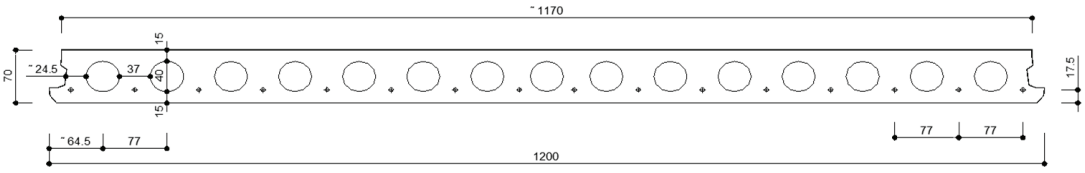
URBANAAC PRESTRESSED HOLLOW CORE SLAB
70MM – 14+1 CORES

SLAB GEOMETRY AND STRAND POSITION:



LOAD TABLE-MAXIMUM SPAN (M) (SEE BEARING CAPACITY DIAGRAM BELOW):

Strand Pattern Code	Strand Pattern	Steel Area (mm2)	M_{rd} (KNm / 1.2m)	Service Load (KN/m2)											
				2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0	8.0	9.0	10.0
S1	8 φ5	156.80	11.82	4.05	3.86	3.61	3.40	3.23	3.08	2.94	2.72	2.55	2.40	2.28	2.17
S2	10 φ5	196.00	14.30	4.18	4.02	3.88	3.74	3.55	3.38	3.24	3.00	2.80	2.64	2.50	2.39
S3	12 φ5	235.20	16.88	4.30	4.13	3.99	3.85	3.73	3.63	3.49	3.23	3.02	2.85	2.70	2.58
S4	14 φ5	274.40	18.96	4.30	4.23	4.08	3.94	3.82	3.71	3.61	3.44	3.22	3.03	2.88	2.74
S5	16 φ5	313.60	21.12	-	-	-	-	-	-	-	3.49	3.34	3.20	3.03	2.89

The values of load and span in the above table may be increased in the following cases:

- Cast in situ topping that creates a composite section
- Part or all of the hollow cores are filled with concrete according to needs
- Partially restrained or continuous floor
- The superimposed service load comprises a value of 1.00kN/m

INERTIAL PROPERTIES OF CROSS SECTION AND MATERIAL SPECIFICATIONS:

Cross section area	5.859E+04	mm2		Strength of concrete at 28 days	40	MPa
Second moment of inertia	3.073E+07	mm4		Strength of concrete at transfer	30	MPa
Centroid from bottom of slab	34.80	mm		Concrete density	2,450	kg/m3
Section modulus, top part	8.729E+05	mm3		Ultimate strength of steel	1,860	MPa
Section modulus, bottom part	8.829E+05	mm3		Jacking stress of steel	1,302	MPa
Total webs width	485.84	mm		Strand type	low relax.	
Self weight of slab	1.17	kN/m2		Grout required for shear key	1.596E-03	m 3/m2

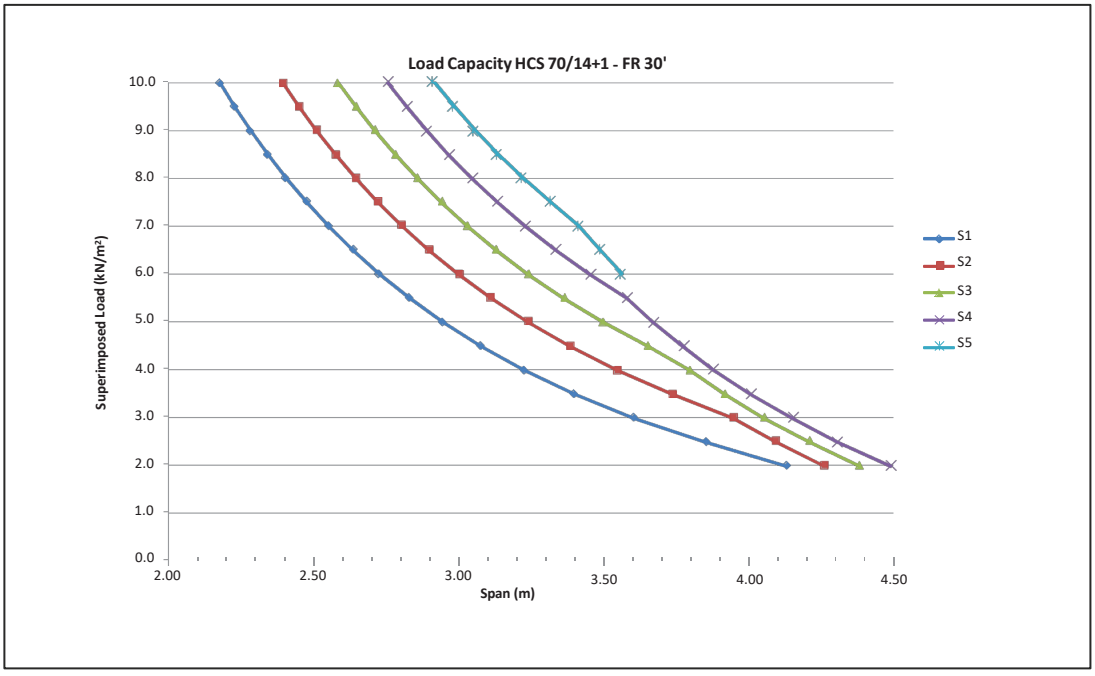
URBANAAC PRESTRESSED HOLLOW CORE SLAB
70MM - 14+1 CORES

RESISTANCE TO FIRE-BENDING MOVEMENT Mrdf (KNM/1.2M)

Strand position (mm)	Exposure duration	S1	S2	S3	S4	S5
17.5	30	7.91	9.8	11.66	13.49	15.29

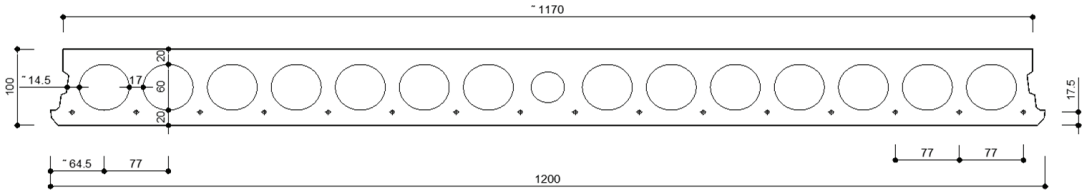
NOTE: THESE TABLES ARE INTENDED FOR GENERAL DESCRIPTIVE PURPOSE ONLY

BEARING CAPACITY DIAGRAM:



URBANAAC PRESTRESSED HOLLOW CORE SLAB
100MM – 14+1 CORES

SLAB GEOMETRY AND STRAND POSITION:



LOAD TABLE-MAXIMUM SPAN (M) (SEE BEARING CAPACITY DIAGRAM BELOW):

Strand Pattern Code	Strand Pattern	Steel Area (mm2)	M_{rd} (KNm / 1.2m)	Service Load (KN/m2)											
				2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0	8.0	9.0	10.0
S1	8 φ5	156.80	19.70	5.16	4.81	4.52	4.28	4.07	3.89	3.73	3.47	3.25	3.07	2.92	2.79
S2	10 φ5	196.00	23.99	5.70	5.31	4.99	4.72	4.49	4.29	4.12	3.83	3.59	3.39	3.22	3.07
S3	12 φ5	235.20	28.05	6.10	5.74	5.39	5.10	4.86	4.64	4.45	4.14	3.88	3.66	3.48	3.32
S4	14 φ5	274.40	32.00	6.26	6.02	5.76	5.45	5.19	4.96	4.76	4.42	4.14	3.91	3.72	3.55
S5	16 φ5	313.60	35.85	6.40	6.15	5.93	5.75	5.49	5.25	5.03	4.68	4.38	4.14	3.93	3.76

The values of load and span in the above table may be increased in the following cases:

- Cast in situ topping that creates a composite section
- Part or all of the hollow cores are filled with concrete according to needs
- Partially restrained or continuous floor
- The superimposed service load comprises a value of 1.00kN/m as Dead Load

INERTIAL PROPERTIES OF CROSS SECTION AND MATERIAL SPECIFICATIONS:

Cross section area	7.650E+04	mm2		Strength of concrete at 28 days	45	MPa
Second moment of inertia	8.911E+07	mm4		Strength of concrete at transfer	30	MPa
Centroid from bottom of slab	49.68	mm		Concrete density	2,450	kg/m3
Section modulus, top part	1.771E+06	mm3		Ultimate strength of steel	1,860	MPa
Section modulus, bottom part	1.794E+06	mm3		Jacking stress of steel	1,302	MPa
Total webs width	276.93	mm		Strand type	low relax.	
Self-weight of slab	1.53	kN/m2		Grout required for shear key	2.372E-03	m 3/m2

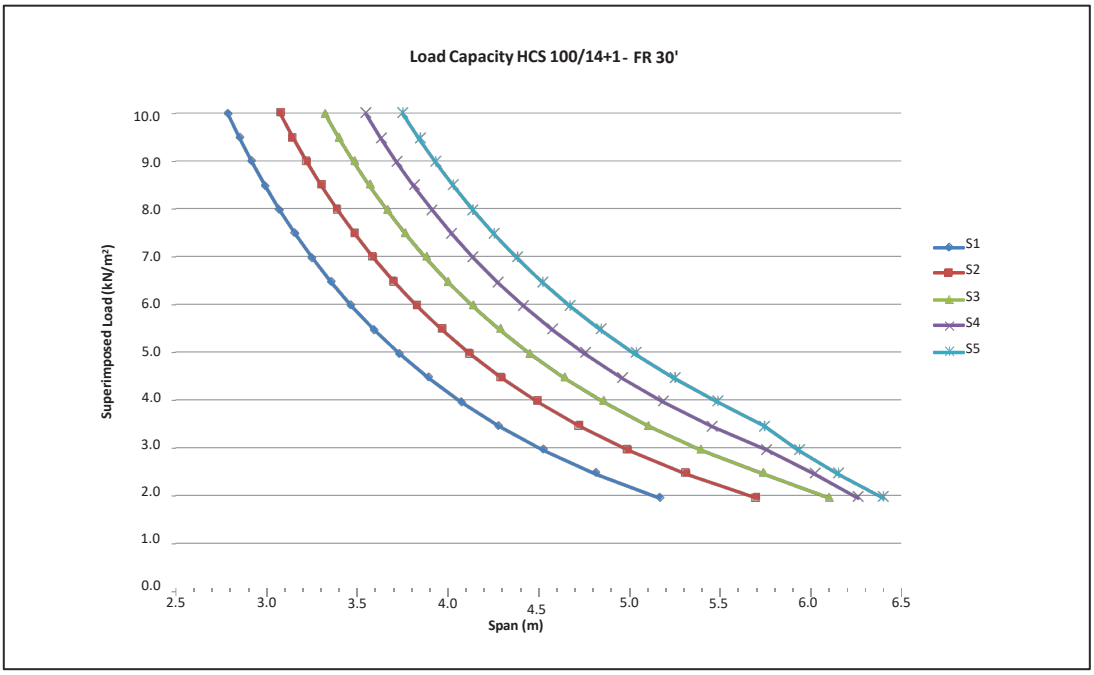
URBANAAC PRESTRESSED HOLLOW CORE SLAB
100MM - 14+1 CORES

RESISTANCE TO FIRE-BENDING MOVEMENT Mrdf (KNM/1.2M)

Strand position (mm)	Exposure duration	S1	S2	S3	S4	S5
17.5	30	12.59	15.67	18.73	21.75	24.74

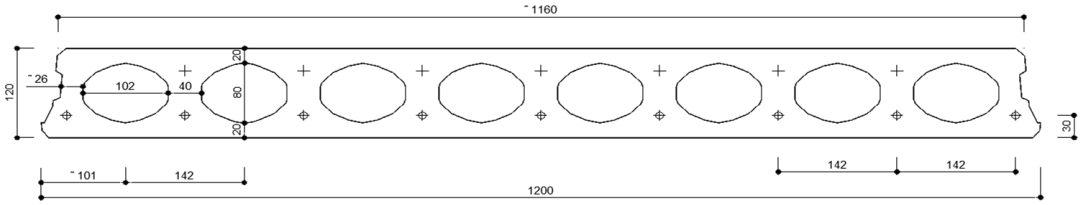
NOTE: THESE TABLES ARE INTENDED FOR GENERAL DESCRIPTIVE PURPOSE ONLY

BEARING CAPACITY DIAGRAM:



URBANAAC PRESTRESSED HOLLOW CORE SLAB
120MM -8 CORES

SLAB GEOMETRY AND STRAND POSITION:



LOAD TABLE-MAXIMUM SPAN (M) (SEE BEARING CAPACITY DIAGRAM BELOW):

Strand Pattern Code	Strand Pattern	Steel Area (mm2)	M_{rd} (KNm/1.2m)	Service Load (KN/m2)											
				2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	13.0	15.0
S1	4 3/8"	208.0	27.87	5.95	5.25	4.74	4.36	4.06	3.82	3.61	3.43	3.28	3.15	2.92	2.74
S2	5 3/8"	260.0	33.74	6.54	5.77	5.22	4.80	4.47	4.20	3.97	3.78	3.61	3.46	3.22	3.01
S3	6 3/8"	312.0	39.43	6.89	6.24	5.64	5.19	4.83	4.54	4.29	4.08	3.90	3.74	3.48	3.26
S4	7 3/8"	364.0	44.94	7.05	6.58	6.02	5.54	5.16	4.85	4.58	4.36	4.17	4.00	3.71	3.48
S5	8 3/8"	416.0	50.27	7.19	6.71	6.32	5.86	5.45	5.12	4.85	4.61	4.41	4.23	3.92	3.68
S6	9 3/8"	468.0	55.41	7.32	6.83	6.44	6.11	5.73	5.38	5.09	4.84	4.63	4.44	4.12	3.86

The values of load and span in the above table may be increased in the following cases:

- Cast in situ topping that creates a composite section
- Part or all of the hollow cores are filled with concrete according to needs
- Partially restrained or continuous floor
- The superimposed service load comprises a value of 1.00kN/m
- The destination of use considered for this type of slab is: **housing**

INERTIAL PROPERTIES OF CROSS SECTION AND MATERIAL SPECIFICATIONS:

Cross section area	9.033E+04	mm2		Strength of concrete at 28 days	45	MPa
Second moment of inertia	1.503E+08	mm4		Strength of concrete at transfer	30	MPa
Centroid from bottom of slab	59.38	mm		Concrete density	2,400	kg/m3
Section modulus, top part	2.479E+06	mm3		Ultimate strength of steel	1,860	MPa
Section modulus, bottom part	2.531E+06	mm3		Jacking stress of steel	1,302	MPa
Total webs width	333.86	mm		Strand type	low relax.	
Self weight of slab	1.77	kN/m2		Grout required for shear key	3.393E-03	m 3/m2

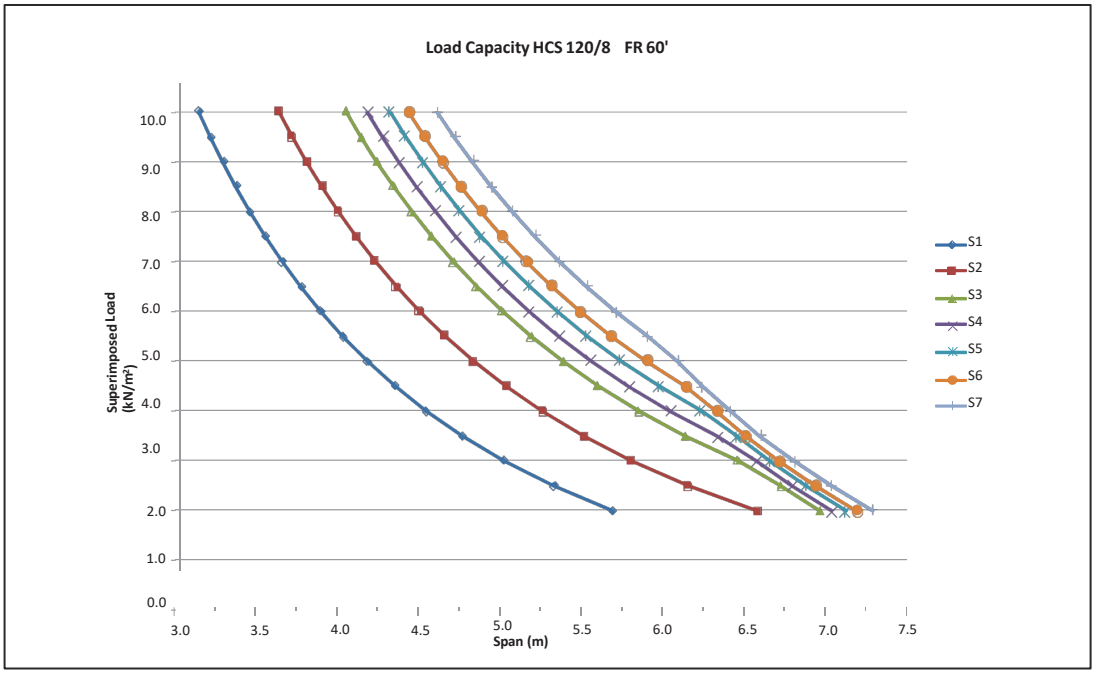
URBANAAC PRESTRESSED HOLLOW CORE SLAB
120MM - 8 CORES

RESISTANCE TO FIRE-BENDING MOVEMENT Mrdf (KNM/1.2M)

Strand position (mm)	Exposure duration	S1	S2	S3	S4	S5
30	60	17.14	21.32	25.44	29.52	33.56

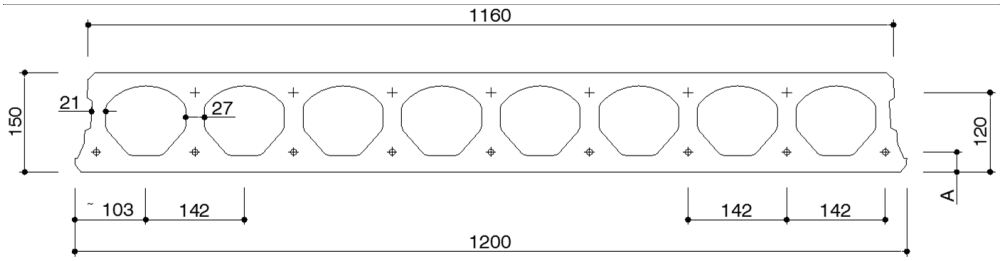
NOTE: THESE TABLES ARE INTENDED FOR GENERAL DESCRIPTIVE PURPOSE ONLY

BEARING CAPACITY DIAGRAM:



URBANAAC PRESTRESSED HOLLOW CORE SLAB
150MM -8 CORES

SLAB GEOMETRY AND STRAND POSITION:



LOAD TABLE-MAXIMUM SPAN (M) (SEE BEARING CAPACITY DIAGRAM BELOW):

Strand Pattern Code	Strand Pattern	Steel Area (mm2)	M_{rd} (KNm/1.2m)	Service Load (KN/m2)											
				2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	13.0	15.0
S1	5 3/8"	260.0	46.88	7.58	6.71	6.08	5.61	5.23	4.91	4.65	4.43	4.23	4.06	3.75	3.33
S2	7 3/8"	364.0	62.54	8.48	7.75	7.03	6.47	6.03	5.67	5.37	5.11	4.84	4.47	3.89	3.45
S3	9 3/8"	468.0	77.38	8.82	8.23	7.77	7.20	6.71	6.31	5.97	5.45	5.00	4.62	4.01	3.55
S4	7 3/8" + 2 1/2"	550.0	88.38	9.04	8.42	7.95	7.55	7.17	6.73	6.05	5.50	5.04	4.65	4.04	3.58
S5	5 3/8" + 4 1/2"	632.0	98.63	9.22	8.59	8.10	7.69	7.35	6.79	6.09	5.54	5.07	4.69	4.07	3.61
S6	2 3/8" + 9 1/2"	755.0	112.17	-	-	-	-	7.45	6.86	6.16	5.59	5.13	4.73	4.11	3.64

The values of load and span in the above table may be increased in the following cases:

- Cast in situ topping that creates a composite section
- Part or all of the hollow cores are filled with concrete according to needs
- Partially restrained or continuous floor
- The superimposed service load comprises a value of 1.00kN/m² as Dead Load
- The destination of use considered for this type of slab is: **housing**

INERTIAL PROPERTIES OF CROSS SECTION AND MATERIAL SPECIFICATIONS:

Cross section area	9.739E+04	mm2		Strength of concrete at 28 days	45	MPa
Second moment of inertia	2.728E+08	mm4		Strength of concrete at transfer	30	MPa
Centroid from bottom of slab	71.65	mm		Concrete density	2,400	kg/m3
Section modulus, top part	3.482E+06	mm3		Ultimate strength of steel	1,860	MPa
Section modulus, bottom part	3.808E+06	mm3		Jacking stress of steel	1,302	MPa
Total webs width	230.83	mm		Strand type	low relax.	
Self weight of slab	1.91	kN/m2		Grout required for shear key	4.263E-03	m 3/m2

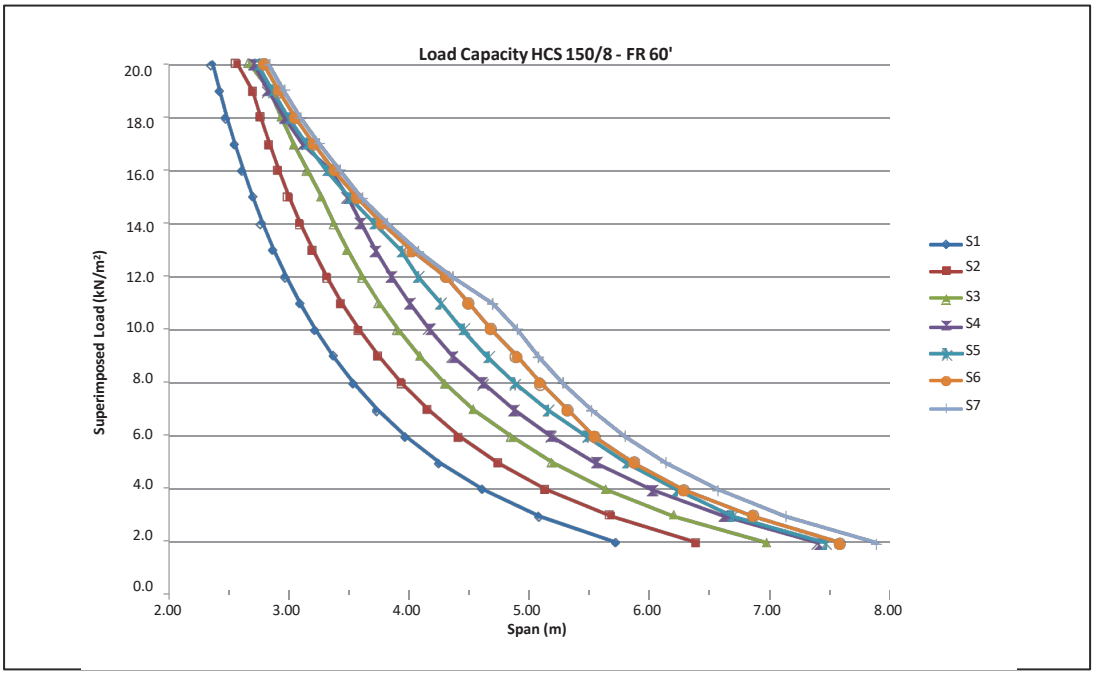
URBANAAC PRESTRESSED HOLLOW CORE SLAB
150MM -8 CORES

RESISTANCE TO FIRE-BENDING MOVEMENT Mrdf (KNM/1.2M)

Strand position (mm)	Exposure duration	S1	S2	S3	S4	S5
30	60	28.60	39.74	50.68	59.18	67.57
35	90	21.35	29.71	37.95	44.37	50.72

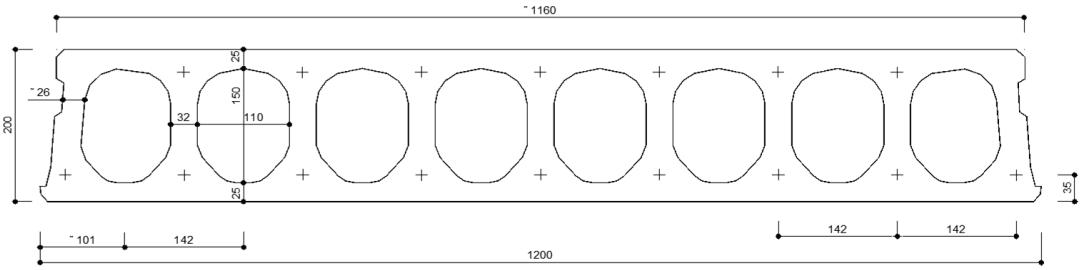
NOTE: THESE TABLES ARE INTENDED FOR GENERAL DESCRIPTIVE PURPOSE ONLY

BEARING CAPACITY DIAGRAM:



URBANAAC PRESTRESSED HOLLOW CORE SLAB
200MM -8 CORES

SLAB GEOMETRY AND STRAND POSITION:



LOAD TABLE-MAXIMUM SPAN (M) (SEE BEARING CAPACITY DIAGRAM BELOW):

Strand Pattern Code	Strand Pattern	Steel Area (mm2)	M_{sd} (KNm/1.2m)	Service Load (KN/m2)											
				2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	13.0	15.0
S1	5 3/8"	260.0	67.87	8.57	7.72	7.06	6.54	6.12	5.77	5.48	5.22	5.00	4.81	4.48	4.21
S2	7 3/8"	364.0	93.13	10.10	9.05	8.27	7.66	7.17	6.76	6.41	6.12	5.86	5.63	5.24	4.93
S3	9 3/8"	468.0	115.49	11.19	10.07	9.20	8.52	7.98	7.53	7.14	6.81	6.52	6.27	5.84	5.48
S4	7 3/8" + 2 1/2"	550.0	132.48	11.50	10.78	9.85	9.13	8.54	8.06	7.65	7.29	6.99	6.71	6.25	5.68
S5	5 3/8" + 4 1/2"	632.0	148.79	11.76	11.03	10.44	9.67	9.05	8.54	8.10	7.73	7.40	7.11	6.46	5.73
S6	2 3/8" + 9 1/2"	755.0	171.80	12.00	11.34	10.72	10.21	9.72	9.17	8.71	8.30	7.95	7.50	6.53	5.79

The values of load and span in the above table may be increased in the following cases:

- Cast in situ topping that creates a composite section
- Part or all of the hollow cores are filled with concrete according to needs
- Partially restrained or continuous floor
- The superimposed service load comprises a value of 1.00kN/m²
- The destination of use considered for this type of slab is: **housing**

INERTIAL PROPERTIES OF CROSS SECTION AND MATERIAL SPECIFICATIONS:

Cross section area	1.216E+05	mm2	Strength of concrete at 28 days	45	MPa
Second moment of inertia	6.120E+08	mm4	Strength of concrete at transfer	30	MPa
Centroid from bottom of slab	97.87	mm	Concrete density	2,400	kg/m3
Section modulus, top part	5.992E+06	mm3	Ultimate strength of steel	1,860	MPa
Section modulus, bottom part	6.253E+06	mm3	Jacking stress of steel	1,302	MPa
Total webs width	294.11	mm	Strand type	low relax.	
Self weight of slab	2.39	KN/m2	Grout required for shear key	5.921E-03	m 3/m2

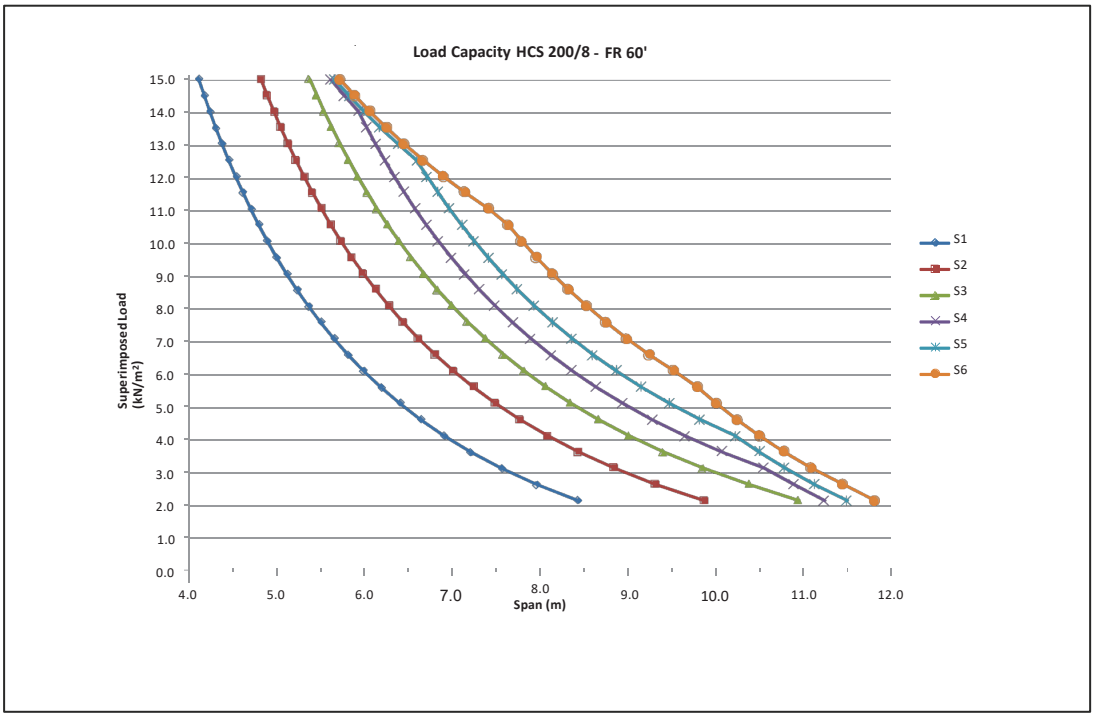
URBANAAC PRESTRESSED HOLLOW CORE SLAB
200MM -8 CORES

RESISTANCE TO FIRE-BENDING MOVEMENT Mrdf (KNM/1.2M)

Strand position (mm)	Exposure duration	S1	S2	S3	S4	S5
30	60	40.73	56.74	72.57	84.91	97.13
35	90	30.76	42.89	54.92	64.33	73.66

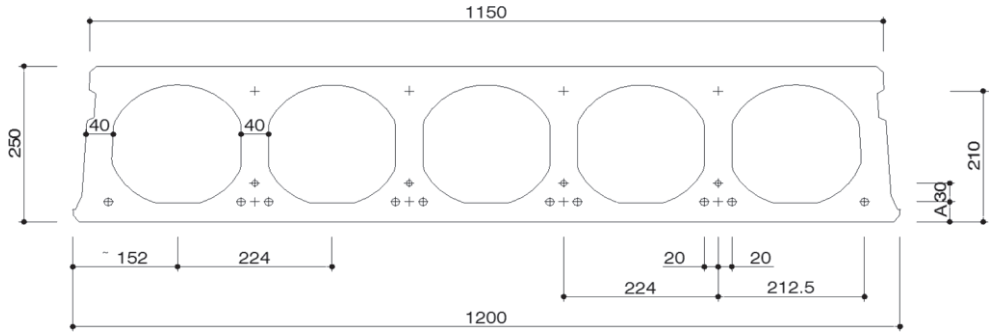
NOTE: THESE TABLES ARE INTENDED FOR GENERAL DESCRIPTIVE PURPOSE ONLY

BEARING CAPACITY DIAGRAM:



URBANAAC PRESTRESSED HOLLOW CORE SLAB
250MM - 5 CORES

SLAB GEOMETRY AND STRAND POSITION:



LOAD TABLE-MAXIMUM SPAN (M) (SEE BEARING CAPACITY DIAGRAM BELOW):

Strand Pattern Code	Strand Pattern	Steel Area (mm2)	M_{rd} (KNm/1.2m)	Service Load (KN/m2)											
				3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	13.0	15.0	18.0	20.0
S1	6 3/8"	312	104.70	9.34	8.57	7.97	7.47	7.06	6.71	6.41	6.14	5.51	5.18	4.78	4.42
S2	2 3/8" + 4 1/2"	476	155.70	11.39	10.45	9.71	9.11	8.61	8.18	7.81	7.49	6.44	5.73	4.93	4.51
S3	2 3/8" + 6 1/2"	662	206.30	12.72	12.03	11.18	10.48	9.91	9.42	8.98	8.27	6.69	5.95	5.11	4.68
S4	10 1/2"+ 2 3/8"(top)	1034	271.20	13.06	12.45	11.94	11.49	11.11	10.54	9.62	8.85	7.16	6.37	5.47	5.00
S5	10 1/2" + 2 3/8"+ 4 3/8"(top)	1242	287.40	12.83	12.24	11.74	11.31	10.93	10.60	10.08	9.28	7.51	6.67	5.73	5.24
S6	10 1/2" + 4 3/8"+ 4 3/8"(top)	1346	303.90	12.90	12.30	11.79	11.36	10.98	10.64	10.29	9.47	7.65	6.80	5.84	5.34

The values of load and span in the above table may be increased in the following cases:

- Cast in situ topping that creates a composite section
- Part or all of the hollow cores are filled with concrete according to needs
- Partially restrained or continuous floor
- The superimposed service load comprises a value of 2.00kN/m² as Dead Load
- The destination of use considered for this type of slab is: **commercial**

INERTIAL PROPERTIES OF CROSS SECTION AND MATERIAL SPECIFICATIONS:

Cross section area	1.426E+05	mm2		Strength of concrete at 28 days	45	MPa
Second moment of inertia	1.164E+09	mm4		Strength of concrete at transfer	30	MPa
Centroid from bottom of slab	125.10	mm		Concrete density	2,400	kg/m3
Section modulus, top part	9.319E+06	mm3		Ultimate strength of steel	1,860	MPa
Section modulus, bottom part	9.304E+06	mm3		Jacking stress of steel	1,302	MPa
Total webs width	236.27	mm		Strand type	low relax.	
Self weight of slab	2.80	KN/m2		Grout required for shear key	8,313E-03	m 3/m2

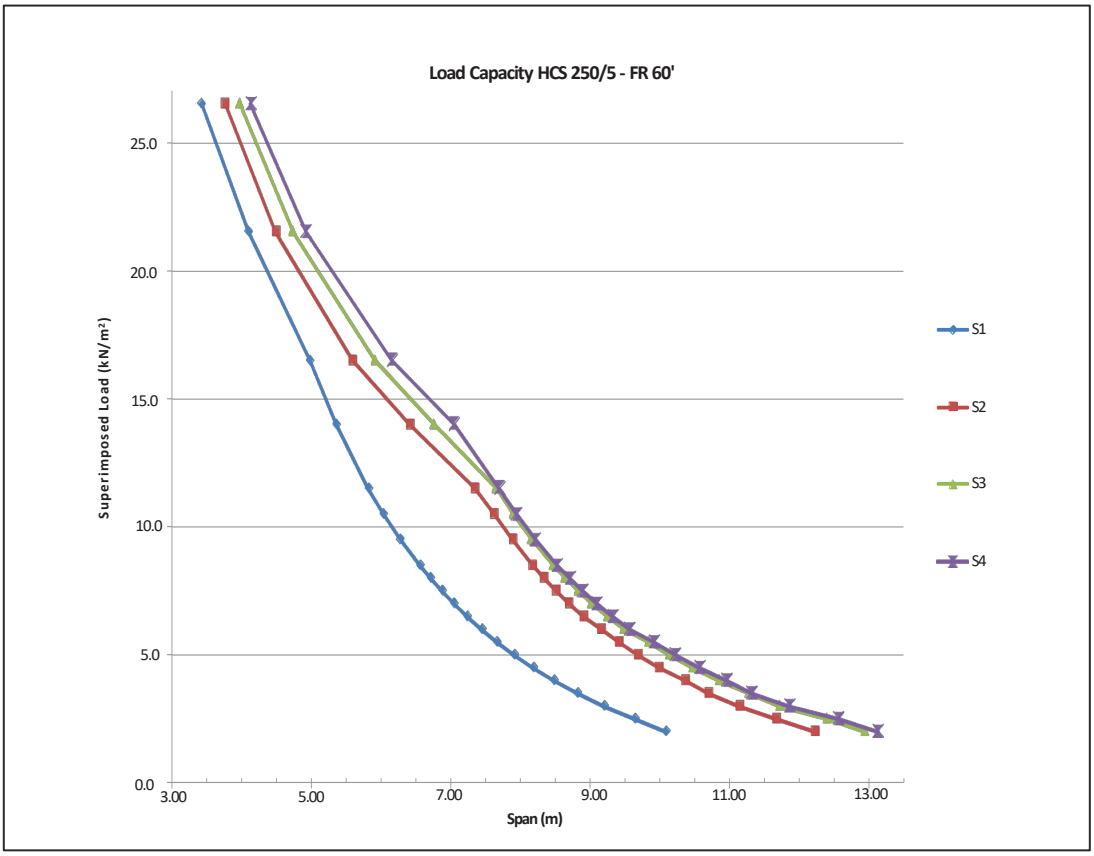
URBANAAC PRESTRESSED HOLLOW CORE SLAB
250MM - 5 CORES

RESISTANCE TO FIRE-BENDING MOVEMENT Mrdf (KNM/1.2M)

Strand position (mm)	Exposure duration	S1	S2	S3	S4	S5
32	60	69.1	104.6	144.3	202.9	228.1
37	90	52.8	80.1	110.7	157.9	179.5
42	120	45.3	68.7	95.1	136.8	154.5

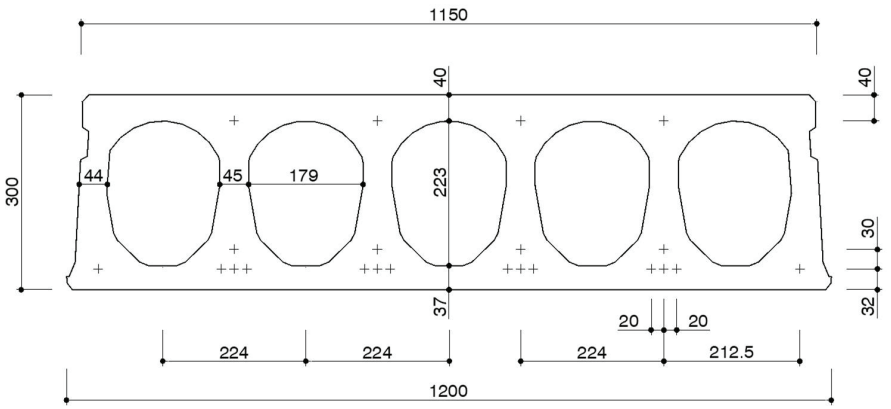
NOTE: THESE TABLES ARE INTENDED FOR GENERAL DESCRIPTIVE PURPOSE ONLY

BEARING CAPACITY DIAGRAM:



URBANAAC PRESTRESSED HOLLOW CORE SLAB
300MM - 5 HOLES

SLAB GEOMETRY AND STRAND POSITION:



LOAD TABLE MAXIMUM SPAN (M) (SEE BEARING CAPACITY DIAGRAM ON NEXT PAGE):

Strand Pattern Code	Strand Pattern Descrip.	Steel Area (mm^2)	M_{rd} (kNm/1,2m)	Service Load (kN/m^2)											
				4,0	6,0	8,0	10,0	12,0	14,0	16,0	18,0	20,0	22,0	26,0	30,0
S1	6 3/8"	312	135,6	9,09	8,05	7,30	6,73	6,28	5,90	5,59	5,32	5,09	4,88	4,46	3,95
S2	2 3/8" + 4 1/2"	476	204,2	11,15	9,88	8,96	8,26	7,70	7,24	6,75	6,15	5,64	5,22	4,55	4,04
S3	2 3/8" + 6 1/2"	662	276,7	12,99	11,50	10,44	9,62	8,82	7,83	7,04	6,41	5,88	5,44	4,74	4,21
S4	10 1/2" + 2 3/8"(top)	1034	369,1	15,00	13,29	12,05	10,61	9,24	8,20	7,37	6,70	6,15	5,69	4,95	4,39
S5	10 1/2" +4 3/8" + 2 3/8"(top)	1242	422,7	15,12	14,02	12,90	11,47	9,99	8,85	7,96	7,23	6,64	6,13	5,34	4,73
S6	10 1/2" +4 1/2" + 4 3/8"(top)	1510	459,6	15,09	13,98	13,14	11,88	10,35	9,17	8,25	7,50	6,88	6,35	5,53	4,90

The values of load and span in the above table may be increased in the following cases:

- Cast in situ topping that creates a composite
- Part or all of the hollow cores are filledwith
- Partiallyrestrained or continuous floor
- The superimposed service load comprises

NOTE: the destination of use considered for this type of slab is:

INERTIAL PROPERTIES OF CROSS SECTION AND MATERIAL SPECIFICATIONS:

Cross section area	1,858E+05	mm^2		Strenght of concrete at 28 days	45	MPa
Second moment of inertia	2,074E+09	mm^4		Strenght of concrete at transfer	30	MPa
Centroid from bottom of slab	143,11	mm		Concrete density	2.400	kg/m^3
Section modulus, top part	1,322E+07	mm^3		Ultimate strength of steel	1.860	MPa
Section modulus, bottom part	1,449E+07	mm^3		Jacking stress of steel	1.302	MPa
Total webs width	305,05	mm		Strand type	low relax.	
Self weight of slab	3,65	kN/m^2		Grout required for shear key	1,015E -02	m^3/m^2

URBANAAC PRESTRESSED HOLLOW CORE SLAB
300MM - 5 HOLES

RESISTANCE TO FIRE - BENDING MOMENT M_{rdf} (kNm/1.2m)

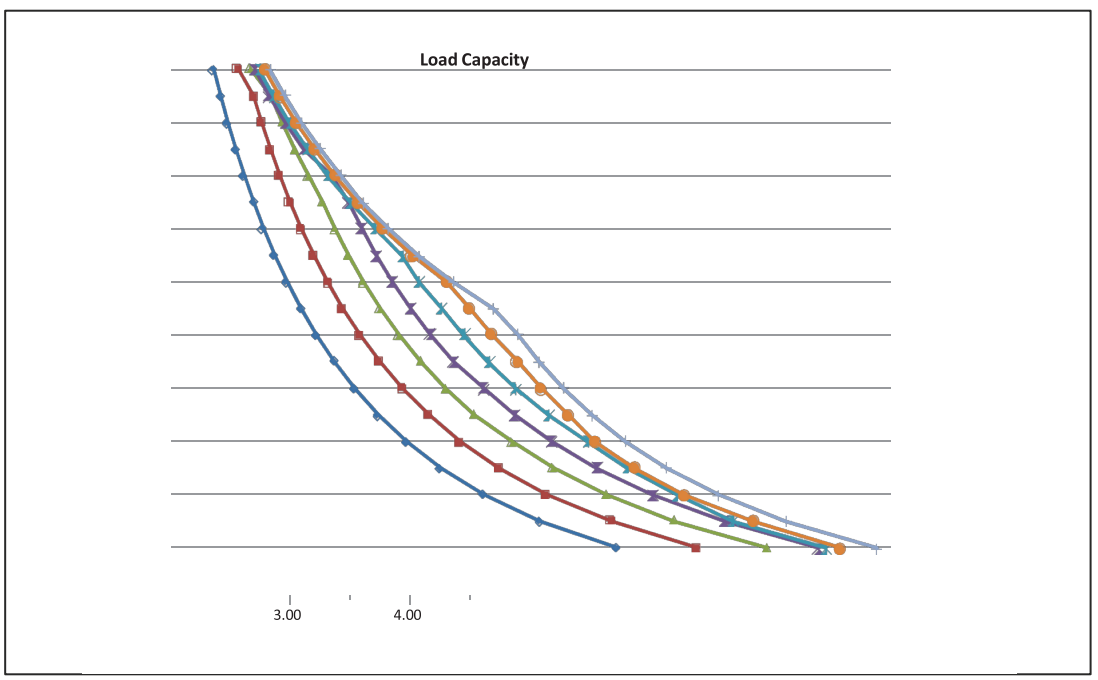
Strand position (mm)	Exposure duration	S1	S2	S3	S4	S5	S6
35	60	95,1	144,2	199,1	276,4	355,4	414,6
45	90	88,8	134,7	185,9	258,1	331,2	386,0
55	120	88,1	133,5	184,1	255,4	318,9	366,4
55	180	59,9	90,9	125,8	175,3	230,5	271,9

RESISTANCE TO FIRE-BENDING MOVEMENT Mrdf (KNM/1.2M)

Strand position (mm)	Exposure duration		S2	S3	S4	S5
30	60	28.60	39.74	50.68	59.18	67.57
35	90	21.35	29.71	37.95	44.37	50.72

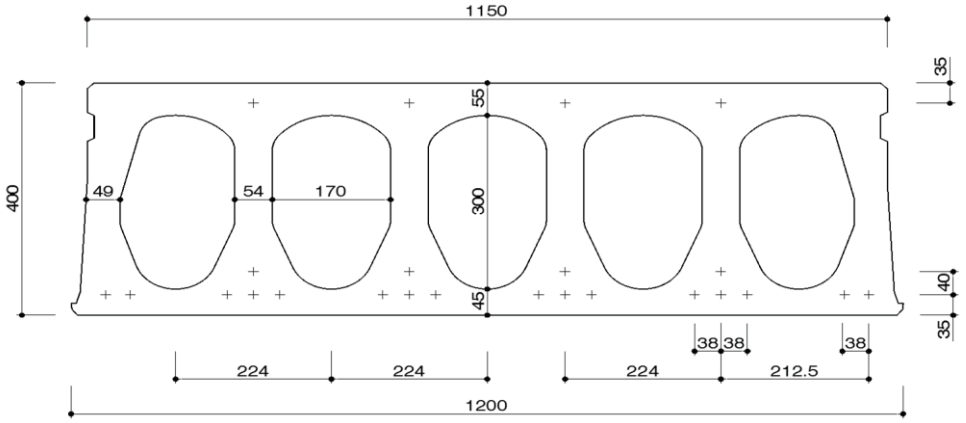
NOTE: THESE TABLES ARE INTENDED FOR GENERAL DESCRIPTIVE PURPOSE ONLY

BEARING CAPACITY DIAGRAM:



URBANAAC PRESTRESSED HOLLOW CORE SLAB
400MM - 5 HOLES

SLAB GEOMETRY AND STRAND POSITION:



LOAD TABLE-MAXIMUM SPAN (M) (SEE BEARING CAPACITY DIAGRAM BELOW):

Strand Pattern Code	Strand Pattern	Steel Area (mm2)	M_{rd} (KNm/1.2m)	Service Load (KN/m2)											
				4	6	8	10	12	14	16	18	20	22	26	30
S1	2 3/8"+4 1/2"	476	268.2	12.00	10.77	9.85	9.14	8.56	8.07	7.67	7.31	7.01	6.73	6.27	5.90
S2	2 3/8"+8 1/2"	848	460.4	15.71	14.10	12.90	11.97	11.21	10.58	10.04	9.58	8.89	8.24	7.21	6.41
S3	6 3/8"+8 1/2"	1056	542.0	17.04	15.29	13.99	12.98	12.16	11.47	10.89	10.11	9.30	8.62	7.53	6.70
S4	2 3/8" + 12 1/2" + 4 3/8" (top)	1428	597.4	16.93	15.33	14.19	13.31	12.61	12.03	11.43	10.66	9.81	9.0	7.9	7.06
S5	16 1/2"+2 3/8"(top)	1696	708.6	17.58	15.88	14.66	13.73	12.99	12.38	11.87	10.96	10.08	9.3	8.1	7.25
S6	20 1/2" + 4 3/8"(top)	2068	846.1	18.25	16.42	15.13	14.15	13.37	12.73	12.19	11.40	10.49	9.7	8.4	7.52

The values of load and span in the above table may be increased in the following cases:

- Cast in situ topping that creates a composite section
- Part or all of the hollow cores are filled with concrete according to needs
- Partially restrained or continuous floor
- The superimposed service load comprises a value of 2.00kN/m² as Dead Load
- The destination of use considered for this type of slab is: **commercial**

INERTIAL PROPERTIES OF CROSS SECTION AND MATERIAL SPECIFICATIONS:

Cross section area	2.527E+05	mm2		Strength of concrete at 28 days	45	MPa
Second moment of inertia	4.931E+09	mm4		Strength of concrete at transfer	30	MPa
Centroid from bottom of slab	197.13	mm		Concrete density	2,400	kg/m3
Section modulus, top part	2.431E+07	mm3		Ultimate strength of steel	1,860	MPa
Section modulus, bottom part	2.501E+07	mm3		Jacking stress of steel	1,302	MPa
Total webs width	313.99	mm		Strand type	low relax.	
Self weight of slab	4.96	KN/m2		Grout required for shear key	1.462E-02	m 3/m2

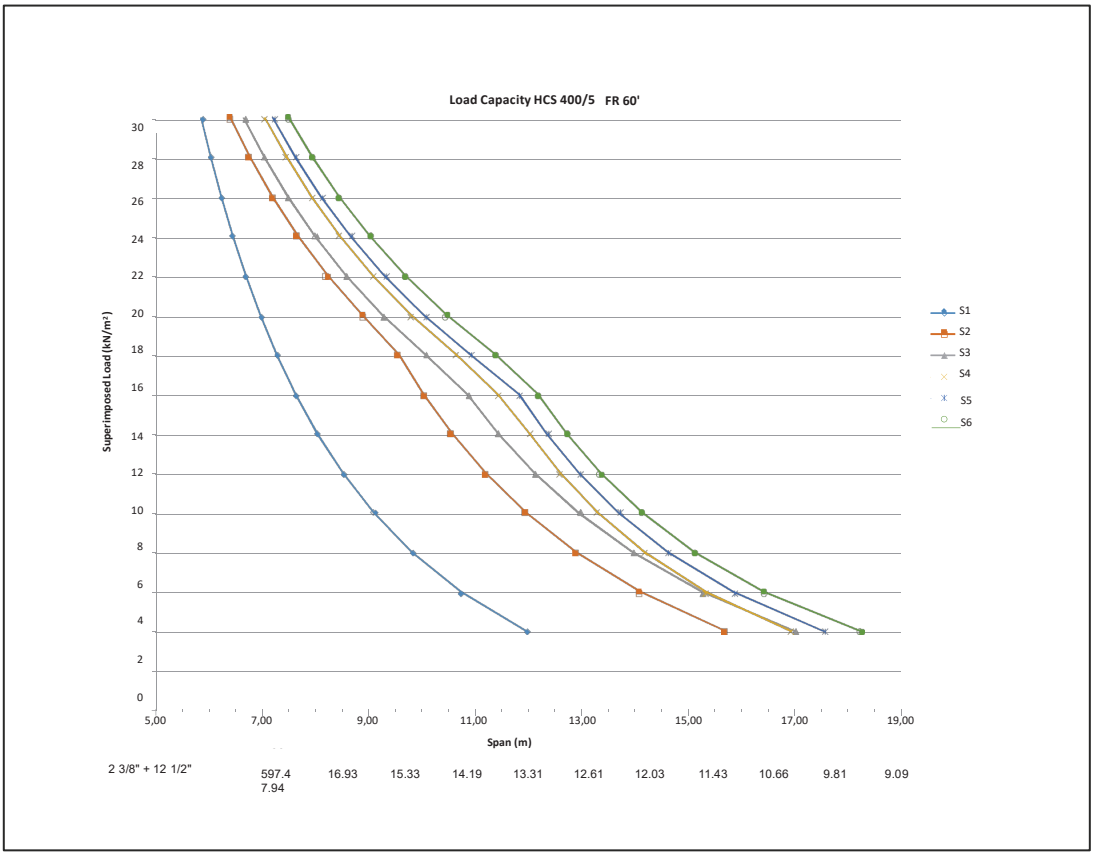
URBANAAC PRESTRESSED HOLLOW CORE SLAB
400MM - 5 HOLES

RESISTANCE TO FIRE-BENDING MOVEMENT Mrdf (KNM/1.2M)

Strand position (mm)	Exposure duration	S1	S2	S3	S4	S5	S6
35	60	199.4	351.5	455.9	537.0	639.5	779.0
45	120	135.8	240.2	335.5	411.0	481.7	578.6
55	180	114.6	202.9	287.4	355.3	415.2	497.4

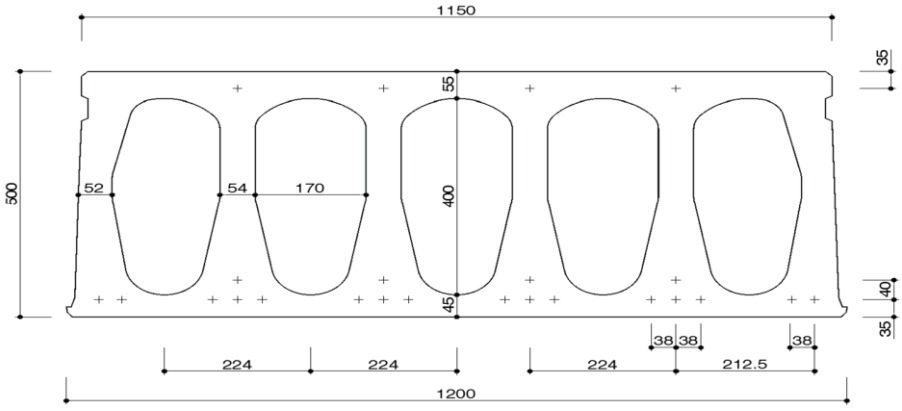
NOTE: THESE TABLES ARE INTENDED FOR GENERAL DESCRIPTIVE PURPOSE ONLY

BEARING CAPACITY DIAGRAM:



URBANAAC PRESTRESSED HOLLOW CORE SLAB
500MM – 5 HOLES

SLAB GEOMETRY AND STRAND POSITION:



LOAD TABLE-MAXIMUM SPAN (M) (SEE BEARING CAPACITY DIAGRAM BELOW):

Strand Pattern Code	Strand Pattern	Steel Area (mm2)	M_{rd} (KNm /1.2m)	Service Load (KN/m2)											
				4,0	6,0	8,0	10,0	12,0	14,0	16,0	18,0	20,0	22,0	26,0	30,0
S1	2 3/8" + 4 1/2"	476	343.8	12.99	11.75	10.82	10.07	9.46	8.95	8.52	8.14	7.81	7.51	7.01	6.60
S2	2 3/8" + 8 1/2"	848	601.3	17.16	15.54	14.30	13.32	12.51	11.84	11.26	10.76	9.96	9.25	8.12	7.25
S3	6 3/8" + 8 1/2"	1056	718.6	18.76	16.98	15.63	14.55	13.67	12.94	12.31	11.28	10.41	9.68	8.49	7.58
S4	2 3/8" + 12 1/2" + 4 3/8" (top)	1428	794.2	19.71	17.84	16.42	15.29	14.37	13.60	12.94	11.90	10.99	10.21	8.96	7.99
S5	16 1/2"+ 2 3/8"(top)	1696	941.6	20.63	18.78	17.42	16.38	15.53	14.75	13.38	12.25	11.30	10.50	9.20	8.21
S6	20 1/2"+ 4 3/8"(top)	2068	1127.6	21.51	19.52	18.07	16.95	16.05	15.31	13.95	12.76	11.77	10.93	9.57	8.53

The values of load and span in the above table may be increased in the following cases:

- Cast in situ topping that creates a composite section
- Part or all of the hollow cores are filled with concrete according to needs
- Partially restrained or continuous floor
- The superimposed service load comprises a value of 2.00kN/m² as Dead Load
- The destination of use considered for this type of slab is: **congregation area**

INERTIAL PROPERTIES OF CROSS SECTION AND MATERIAL SPECIFICATIONS:

Cross section area	2.967E+05	mm2		Strength of concrete at 28 days	45	MPa
Second moment of inertia	8.933E+07	mm4		Strength of concrete at transfer	30	MPa
Centroid from bottom of slab	242.87	mm		Concrete density	2,400	kg/m3
Section modulus, top part	3.474E+05	mm3		Ultimate strength of steel	1,860	MPa
Section modulus, bottom part	3.678E+05	mm3		Jacking stress of steel	1,302	MPa
Total webs width	318.26	mm		Strand type	low relax.	
Self weight of slab	5.82	KN/m2		Grout required for shear key	1.733E-02	m 3/m2

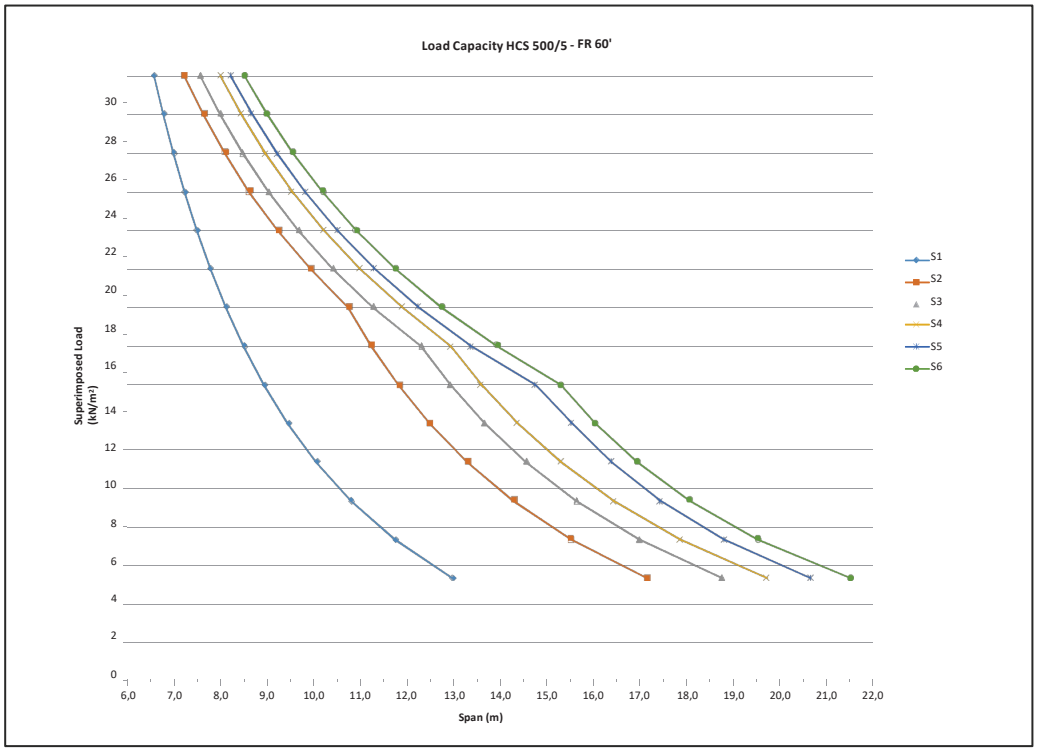
URBANAAC PRESTRESSED HOLLOW CORE SLAB
500MM - 5 HOLES

RESISTANCE TO FIRE-BENDING MOVEMENT Mrdf (KNM/1.2M)

Strand position (mm)	Exposure duration	S1	S2	S3	S4	S5	S6
35	60	254.7	450.2	589.3	697.6	831.3	1014.1
45	120	174.4	309.1	436.2	537.0	629.5	756.6
55	180	148.1	262.6	378.5	471.4	550.2	658.6

NOTE: THESE TABLES ARE INTENDED FOR GENERAL DESCRIPTIVE PURPOSE ONLY

BEARING CAPACITY DIAGRAM:



Advantages

- Broad range of application in commercial, industrial and residential buildings
- Large spans can be covered with slender elements able to withstand high overloads.
- Low water/cement ratio in the concrete used grants the elements a high rigidity also with high slenderness (up to 1/42) and thus reduces deformations to the minimum even with simply supported structural scheme;
- Possibility to use the elements with different supporting structures such as concrete block walls, steel beams, insitu cast beams, precast beams, etc.;
- It is possible to have a continuous reinforcement link between elements against negative moments allowing therefore optimal static conditions even in seismic areas;
- Self supporting capacity at construction phase: this allows to avoid the use of props during erection. It is possible to load the floors immediately upon laying even without structural cast in situ topping;
- Reduced amount of concrete for shear keys between slabs;
- In case of thin elements it is possible to use them as walls thanks to the male/female notch, these elements also can have exposed aggregate surface finishing of different colors;
- It is possible to produce slabs with increased thickness of the bottom which allows higher resistance to fire;
- Simple and fast erection (3-4 workers can install up to 500/600 m2 of floor per day);
- Maximum durability against carbonation obtained by means of the production technology which grants a homogeneous compacting of the concrete and therefore maximum impermeability and high mechanical strength;
- Large daily quantities produced with constant and controlled quality;
- High quality finishing of the elements and particularly the soffit which, most of times, only requires coating or painting.