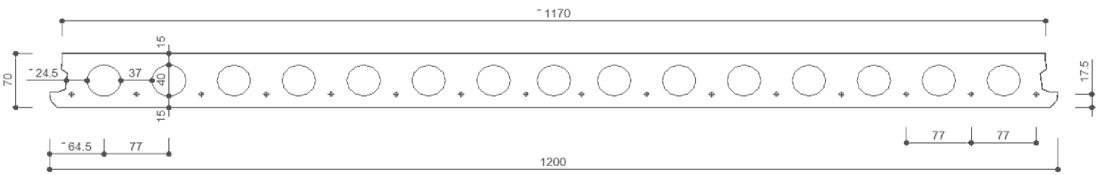
URBANAAC SLABS

70MM – 14+1 CORES

SLAB GEOMETRY AND STRAND POSITION



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

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	8φ5	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	10φ5	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	12φ5	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	14φ5	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	16φ5	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
Second moment of inertia	**3.073E+07**	mm⁴
Centroid from bottom of slab	**34.80**	mm
Section modulus. top part	**8.729E+05**	mm³
Section modulus. bottom part	**8.829E+05**	mm³
Total webs width	**485.84**	mm
Self weight of slab	**1.17**	kN/m²

Strength of concrete at 28 days	**40**	MPa
Strength of concrete at transfer	**30**	MPa
Concrete density	**2.450**	kg/m³
Ultimate strength of steel	**1.860**	MPa
Jacking stress of steel	**1.302**	MPa
Strand type	**low relax.**	
Grout required for shear key	**1.596E-03**	m³/m²

URBANAAC SLABS

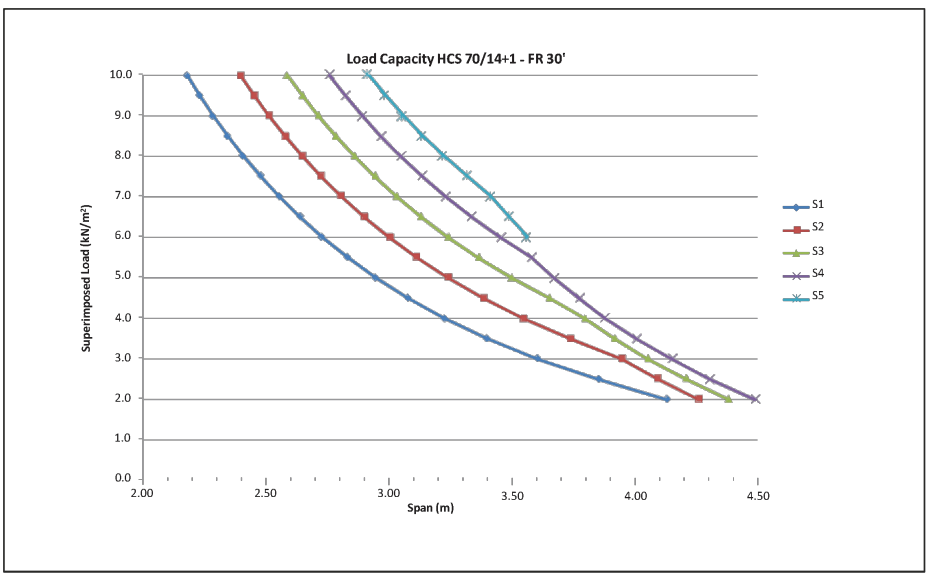
70MM – 14+1 CORES

RESISTANCE TO FIRE-BENDING MOVEMENT M_{RDF} (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

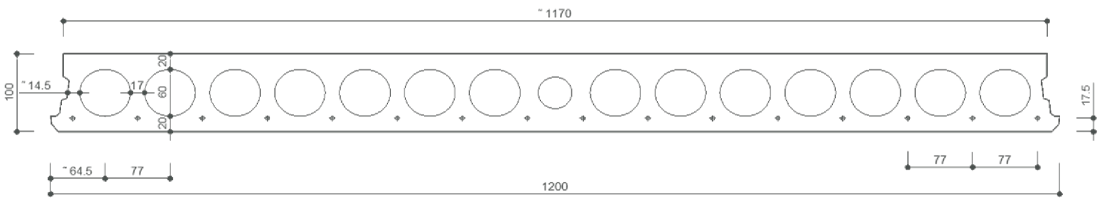
BEARING CAPACITY DIAGRAM



URBANAAC SLABS

100MM – 14+1 CORES

SLAB GEOMETRY AND STRAND POSITION



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

Code	Strand Pattern	Steel Area (mm^2)	M_{rd} (kNm/1.2m)	Service Load (kN/m^2)											
				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	8φ5	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	10φ5	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	12φ5	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	14φ5	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	16φ5	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**	mm^2
Second moment of inertia	**8.911E+07**	mm^4
Centroid from bottom of slab	**49.68**	mm
Section modulus. top part	**1.771E+06**	mm^3
Section modulus. bottom part	**1.794E+06**	mm^3
Total webs width	**276.93**	mm
Self-weight of slab	**1.53**	kN/m^2

Strength of concrete at 28 days	**45**	MPa
Strength of concrete at transfer	**30**	MPa
Concrete density	**2.450**	kg/m^3
Ultimate strength of steel	**1.860**	MPa
Jacking stress of steel	**1.302**	MPa
Strand type	**low relax.**	
Grout required for shear key	**2.372E-03**	m^3/m^2

URBANAAC SLABS

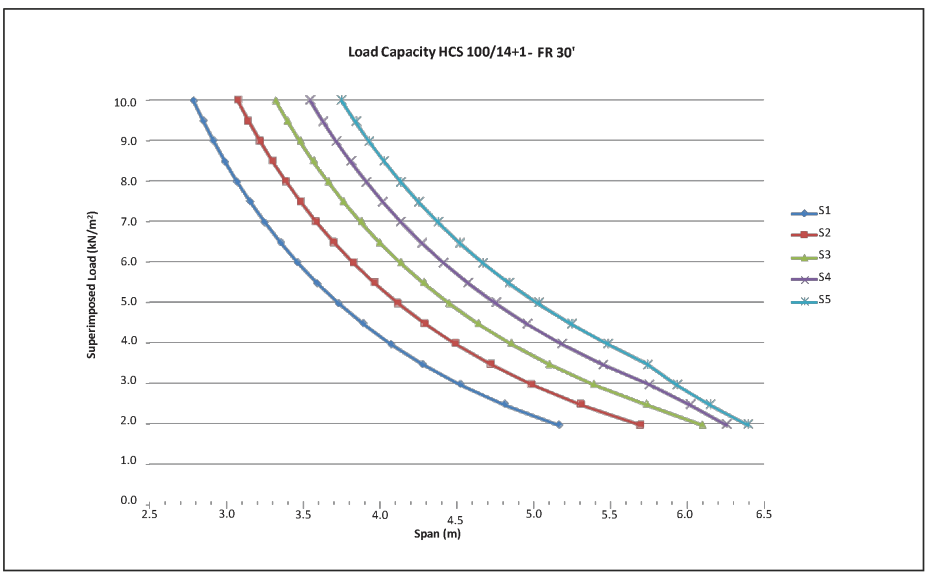
100MM – 14+1 CORES

RESISTANCE TO FIRE-BENDING MOVEMENT M_{RDF} (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

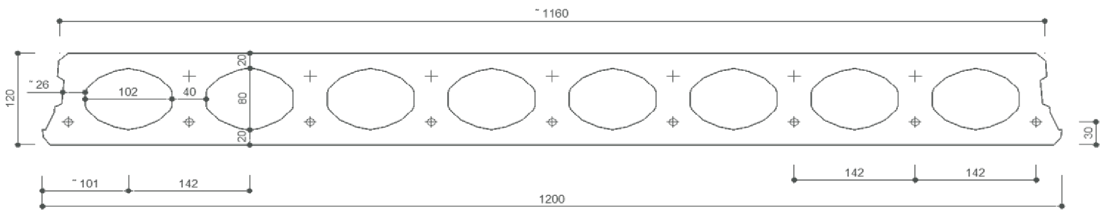
BEARING CAPACITY DIAGRAM



URBANAAC SLABS

120MM – 8 CORES

SLAB GEOMETRY AND STRAND POSITION



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

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
Second moment of inertia	**1.503E+08**	mm⁴
Centroid from bottom of slab	**59.38**	mm
Section modulus. top part	**2.479E+06**	mm³
Section modulus. bottom part	**2.531E+06**	mm³
Total webs width	**333.86**	mm
Self weight of slab	**1.77**	kN/m²

Strength of concrete at 28 days	**45**	MPa
Strength of concrete at transfer	**30**	MPa
Concrete density	**2.400**	kg/m³
Ultimate strength of steel	**1.860**	MPa
Jacking stress of steel	**1.302**	MPa
Strand type	**low relax.**	
Grout required for shear key	**3.393E-03**	m³/m²

URBANAAC SLABS

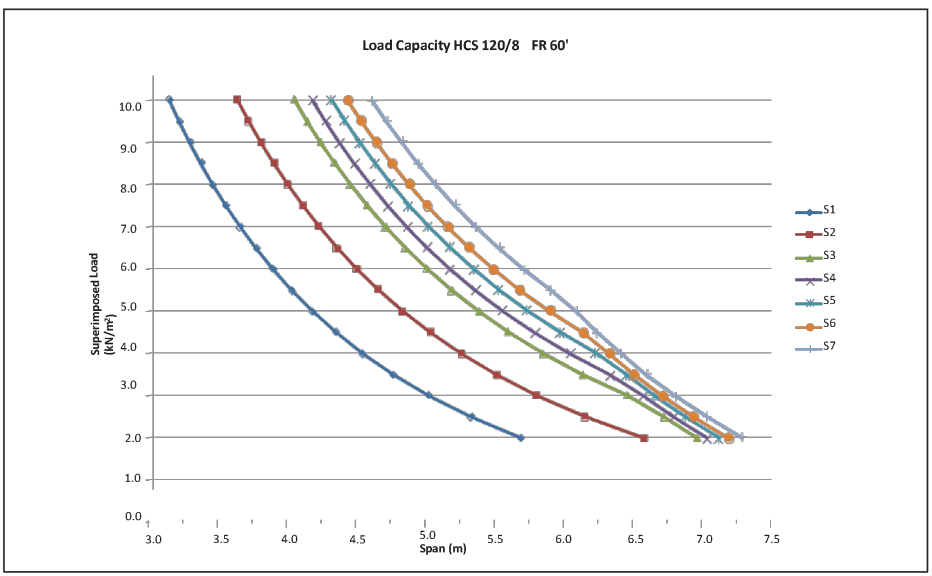
120MM – 8 CORES

RESISTANCE TO FIRE-BENDING MOVEMENT M_{RDF} (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

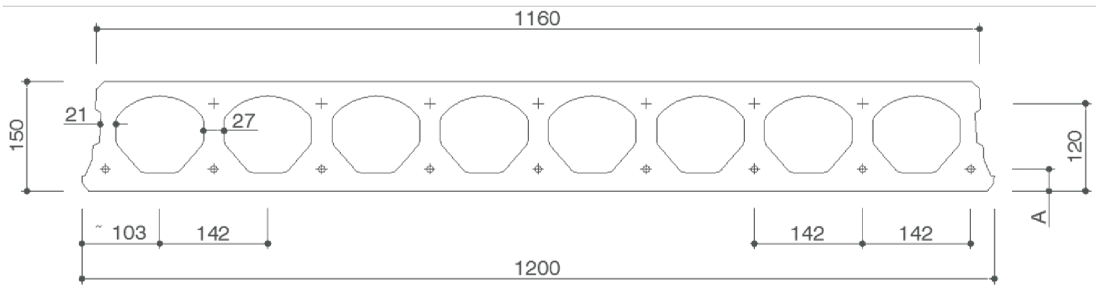
BEARING CAPACITY DIAGRAM



URBANAAC SLABS

150MM – 8 CORES

SLAB GEOMETRY AND STRAND POSITION



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

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
Second moment of inertia	**2.728E+08**	mm⁴
Centroid from bottom of slab	**71.65**	mm
Section modulus, top part	**3.482E+06**	mm³
Section modulus, bottom part	**3.808E+06**	mm³
Total webs width	**230.83**	mm
Self weight of slab	**1.91**	kN/m²

Strength of concrete at 28 days	**45**	MPa
Strength of concrete at transfer	**30**	MPa
Concrete density	**2.400**	kg/m³
Ultimate strength of steel	**1.860**	MPa
Jacking stress of steel	**1.302**	MPa
Strand type	**low relax.**	
Grout required for shear key	**4.263E-03**	m³/m²

URBANAAC SLABS

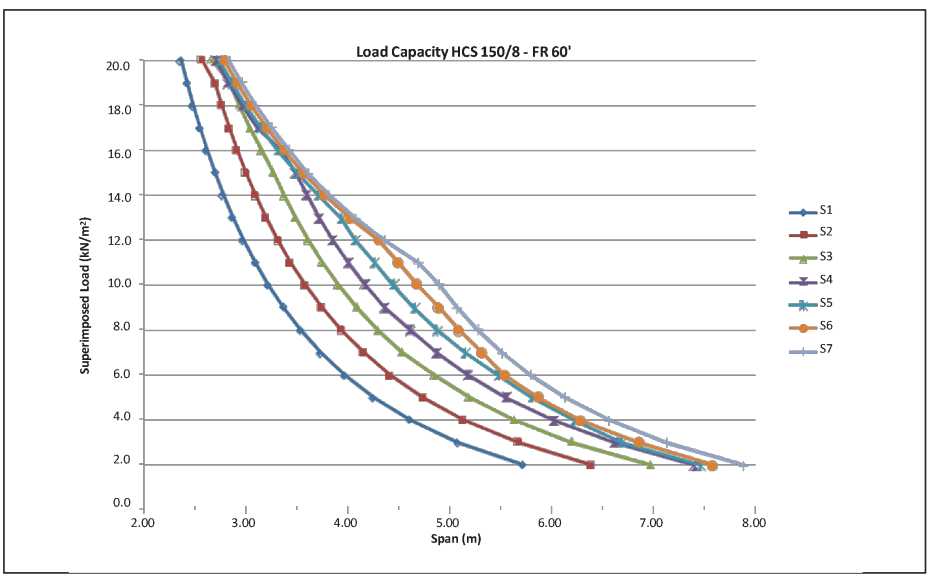
150MM – 8 CORES

RESISTANCE TO FIRE-BENDING MOVEMENT M_{RDF} (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

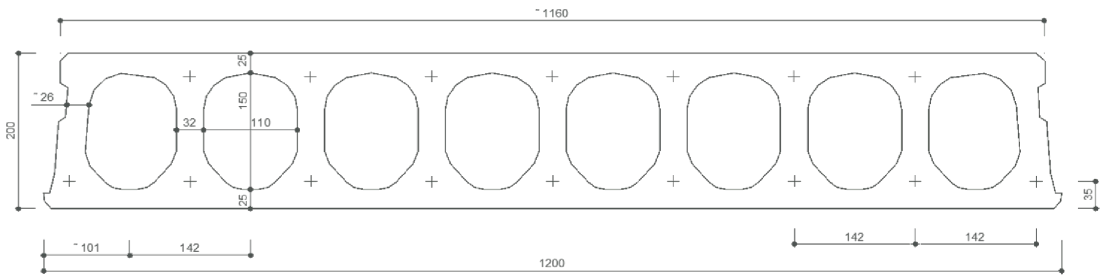
BEARING CAPACITY DIAGRAM



URBANAAC SLABS

200MM – 8 CORES

SLAB GEOMETRY AND STRAND POSITION



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

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	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
Second moment of inertia	**6.120E+08**	mm⁴
Centroid from bottom of slab	**97.87**	mm
Section modulus, top part	**5.992E+06**	mm³
Section modulus, bottom part	**6.253E+06**	mm³
Total webs width	**294.11**	mm
Self weight of slab	**2.39**	KN/m²

Strength of concrete at 28 days	**45**	MPa
Strength of concrete at transfer	**30**	MPa
Concrete density	**2.400**	kg/m³
Ultimate strength of steel	**1.860**	MPa
Jacking stress of steel	**1.302**	MPa
Strand type	**low relax.**	
Grout required for shear key	**5.921E-03**	m³/m²

URBANAAC SLABS

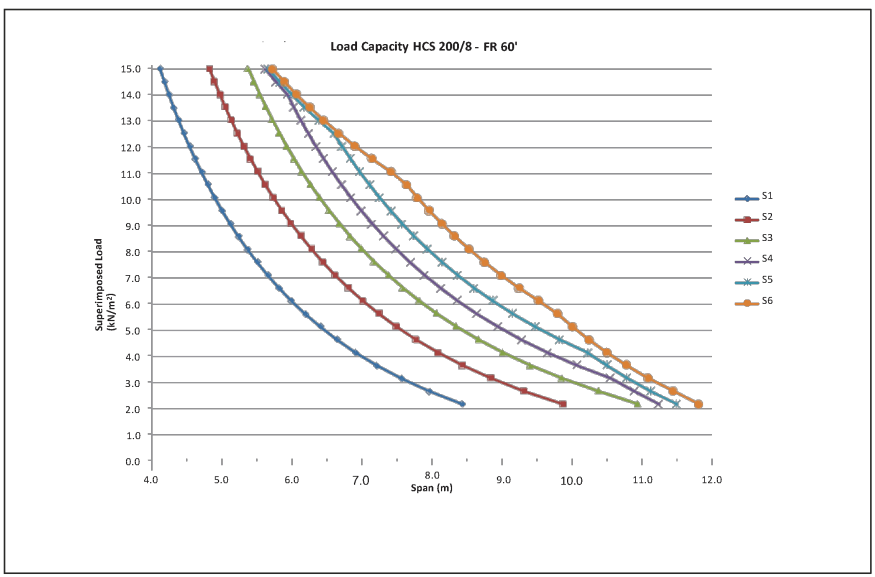
200MM – 8 CORES

RESISTANCE TO FIRE-BENDING MOVEMENT M_{RDF} (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

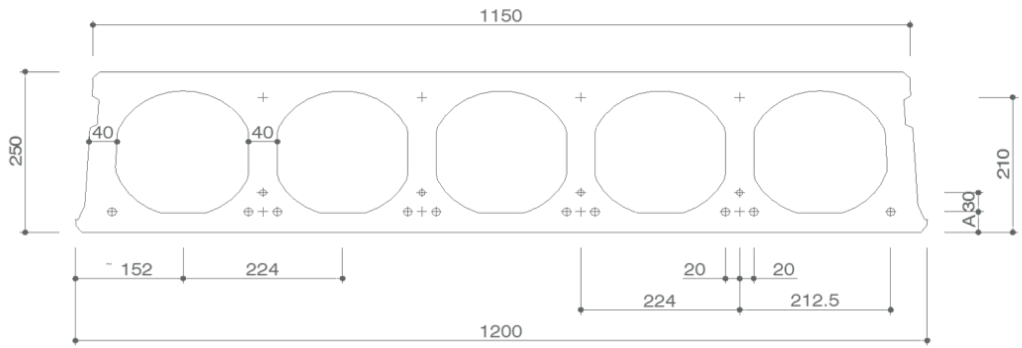
BEARING CAPACITY DIAGRAM



URBANAAC SLABS

250MM – 5 CORES

SLAB GEOMETRY AND STRAND POSITION



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

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
Second moment of inertia	**1.164E+09**	mm⁴
Centroid from bottom of slab	**125.10**	mm
Section modulus, top part	**9.319E+06**	mm³
Section modulus, bottom part	**9.304E+06**	mm³
Total webs width	**236.27**	mm
Self weight of slab	**2.80**	KN/m²

Strength of concrete at 28 days	**45**	MPa
Strength of concrete at transfer	**30**	MPa
Concrete density	**2.400**	kg/m³
Ultimate strength of steel	**1.860**	MPa
Jacking stress of steel	**1.302**	MPa
Strand type	**low relax.**	
Grout required for shear key	**8.313E-03**	m³/m²

URBANAAC SLABS

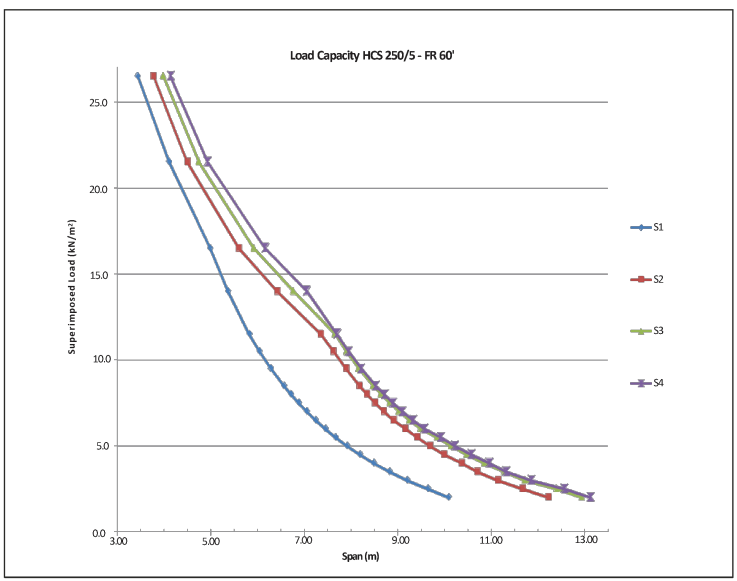
250MM – 5 CORES

RESISTANCE TO FIRE-BENDING MOVEMENT M_{RDF} (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

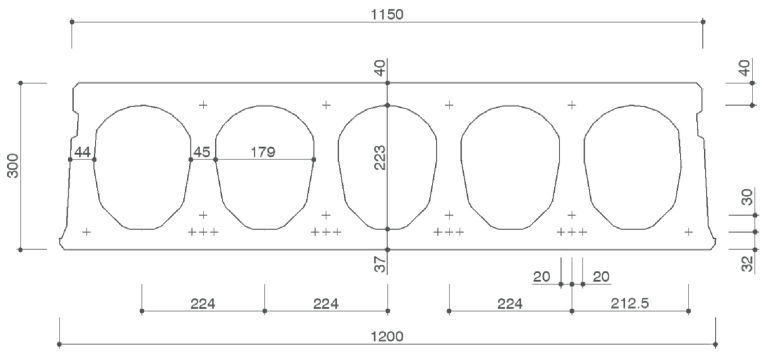
BEARING CAPACITY DIAGRAM



URBANAAC SLABS

300MM – 5 HOLES

SLAB GEOMETRY AND STRAND POSITION



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

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	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 filled with
- Partially restrained or continuous floor
- The superimposed service load comprises

INERTIAL PROPERTIES OF CROSS SECTION AND MATERIAL SPECIFICATIONS

Cross section area	**1.858E+05**	mm²
Second moment of inertia	**2.074E+09**	mm⁴
Centroid from bottom of slab	**143.11**	mm
Section modulus. top part	**1.322E+07**	mm³
Section modulus. bottom part	**1.449E+07**	mm³
Total webs width	**305.05**	mm
Self weight of slab	**3.65**	kN/m²

Strenght of concrete at 28 days	**45**	MPa
Strenght of concrete at transfer	**30**	MPa
Concrete density	**2.400**	kg/m³
Ultimate strength of steel	**1.860**	MPa
Jacking stress of steel	**1.302**	MPa
Strand type	**low relax.**	
Grout required for shear key	**1.015E-02**	m³/m²

URBANAAC SLABS

300MM – 5 HOLES

RESISTANCE TO FIRE - BENDING MOMENT M_{RDF} (KNM/1.2M)

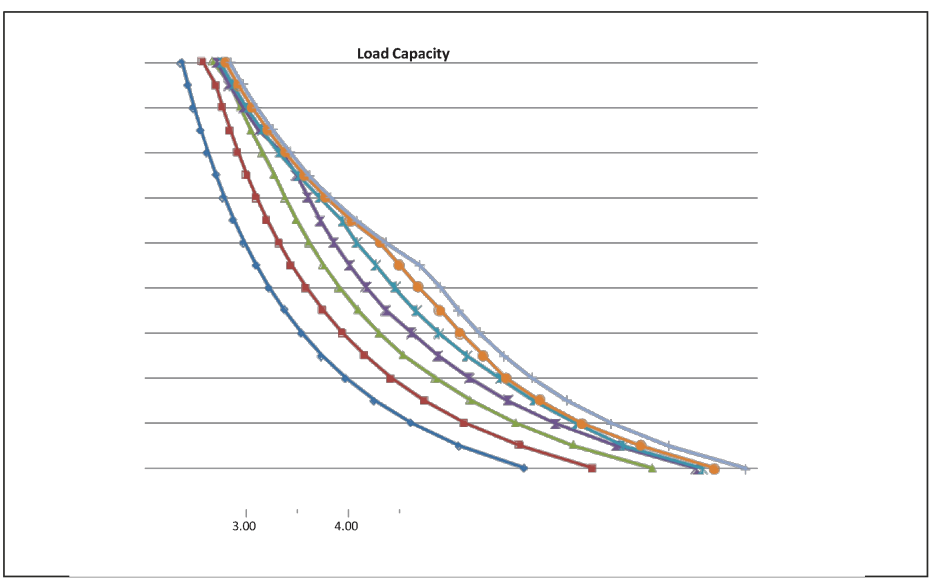
Strand position (mm)	Exposure duration	S1	S2	S3	S4	S5	S6
35	60	95.1	144.2	199.1	276.4	355.4	414.6
45	90	88.8	134.7	185.9	258.1	331.2	386.0
55	120	88.1	133.5	184.1	255.4	318.9	366.4
55	180	59.9	90.9	125.8	175.3	230.5	271.9

RESISTANCE TO FIRE-BENDING MOVEMENT M_{RDF} (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

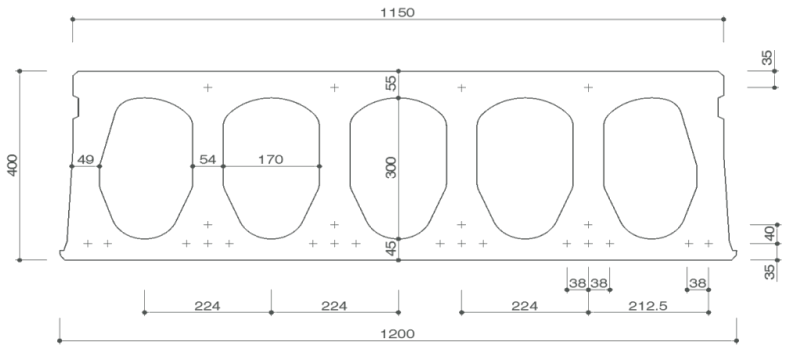
BEARING CAPACITY DIAGRAM



URBANAAC SLABS

400MM – 5 HOLES

SLAB GEOMETRY AND STRAND POSITION



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

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
Second moment of inertia	**4.931E+09**	mm⁴
Centroid from bottom of slab	**197.13**	mm
Section modulus, top part	**2.431E+07**	mm³
Section modulus, bottom part	**2.501E+07**	mm³
Total webs width	**313.99**	mm
Self weight of slab	**4.96**	KN/m²

Strength of concrete at 28 days	**45**	MPa
Strength of concrete at transfer	**30**	MPa
Concrete density	**2.400**	kg/m³
Ultimate strength of steel	**1.860**	MPa
Jacking stress of steel	**1.302**	MPa
Strand type	**low relax.**	
Grout required for shear key	**1.462E-02**	m³/m²

URBANAAC SLABS

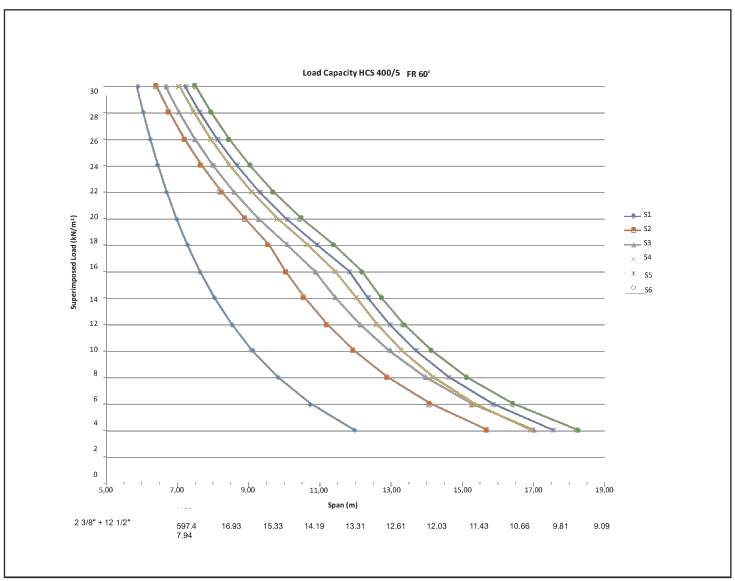
400MM – 5 HOLES

RESISTANCE TO FIRE-BENDING MOVEMENT M_{RDF} (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

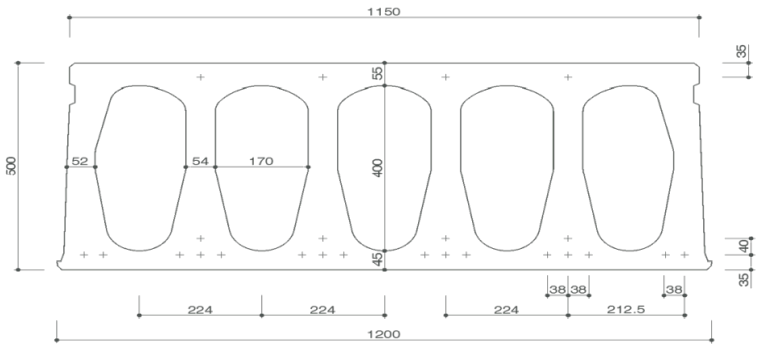
BEARING CAPACITY DIAGRAM



URBANAAC SLABS

500MM – 5 HOLES

SLAB GEOMETRY AND STRAND POSITION



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

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
Second moment of inertia	**8.933E+07**	mm⁴
Centroid from bottom of slab	**242.87**	mm
Section modulus, top part	**3.474E+05**	mm³
Section modulus, bottom part	**3.678E+05**	mm³
Total webs width	**318.26**	mm
Self weight of slab	**5.82**	KN/m²

Strength of concrete at 28 days	**45**	MPa
Strength of concrete at transfer	**30**	MPa
Concrete density	**2.400**	kg/m³
Ultimate strength of steel	**1.860**	MPa
Jacking stress of steel	**1.302**	MPa
Strand type	**low relax.**	
Grout required for shear key	**1.733E-02**	m³/m²

URBANAAC SLABS

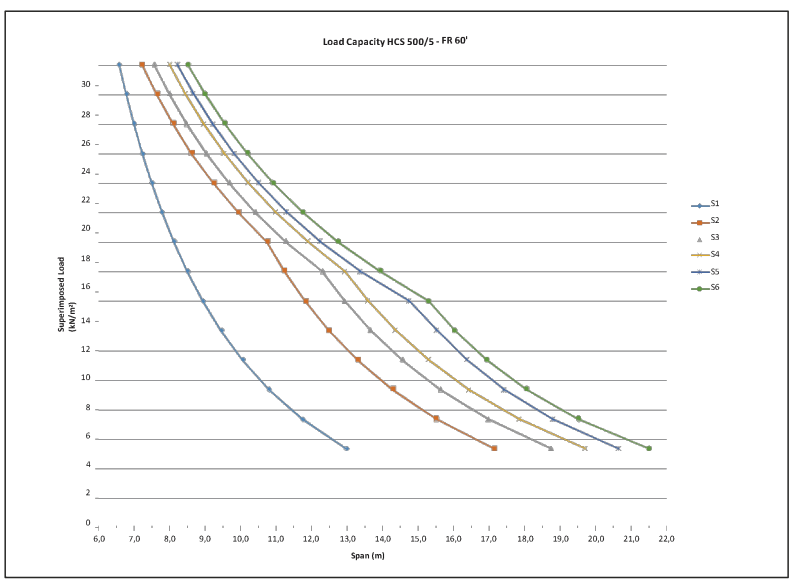
500MM – 5 HOLES

RESISTANCE TO FIRE-BENDING MOVEMENT M_{RDF} (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 ispossible to use them as walls thanks to themale/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);