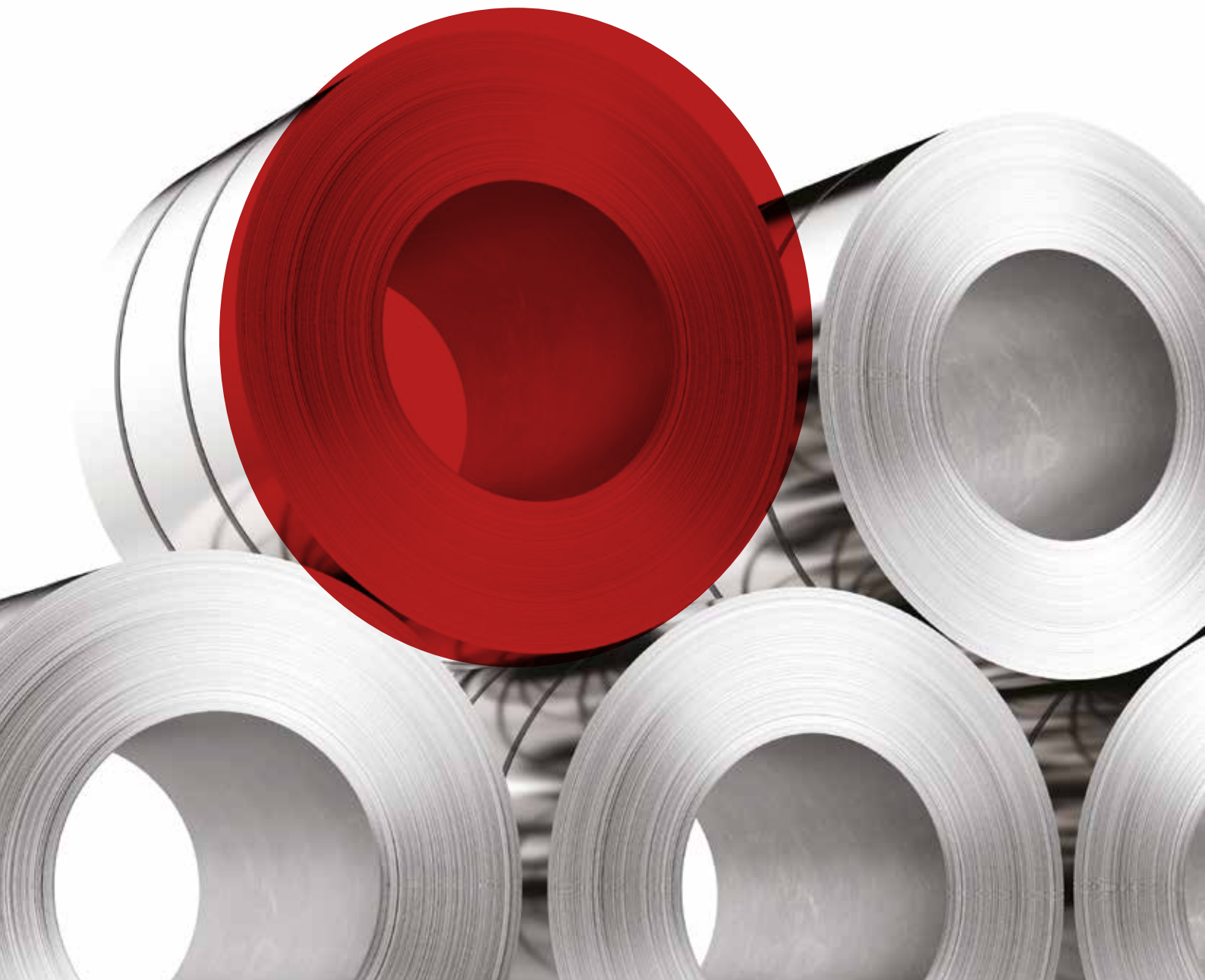


ELASTRON

STEEL SERVICE CENTERS

**Design tables for
steel-concrete composite
slabs made with SYMDECK 50
profiled steel sheeting**



UNIVERSITY OF PATRAS
DEPARTMENT OF CIVIL ENGINEERING
STRUCTURAL MATERIALS LABORATORY
PATRAS 26504 - GREECE

PROJECT TEAM

Thanasis Triantafillou	Professor of Civil Engineering, University of Patras, Greece email: ttriant@upatras.gr, tel: +30 2610996516, +30 6932751161
Leonidas Latsos	Civil Engineer, MSc in "Earthquake Engineering & Earthquake Resistant Structures"
Kyriakos Karlos	Mechanical Engineer, MSc in "Seismic Design of Structures" (involved in the experimental program)

PROPERTIES OF SYMDECK 50 PROFILED STEEL SHEETING

Thickness	t (mm)	0.75	1.00	1.25
Weight	G (kg/m)	7.12	9.49	11.86
Area	A (cm ²)	9.07	12.10	15.12
Moment of inertia	I _y (cm ⁴)	36.32	48.45	60.56
Section modulus	W _y (cm ³)	11.84	15.79	19.74

Table 1: Geometric and inertial properties of SYMDECK 50 profiled steel sheeting.

Thickness	t (mm)	0.75	1.00	1.25
Weight	G (kg/m)	7.12	9.49	11.86
Area	A (cm ²)	9.07	12.10	15.12
Moment of inertia	I _y (cm ⁴)	36.32	48.45	60.56
Section modulus	W _y (cm ³)	11.84	15.79	19.74

Table 2: Geometric and inertial properties of SYMDECK 50 profiled steel sheeting per unit width (1 m) of the cross section.

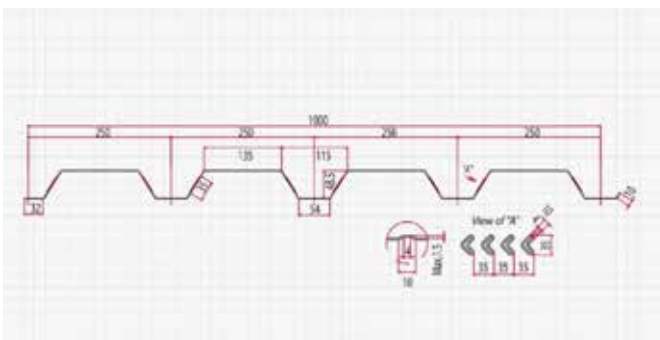


Figure 1: Geometry of SYMDECK 50 profiled steel sheeting.

DESIGN OF STEEL-CONCRETE COMPOSITE SLABS

According to Eurocode 4, steel-concrete composite slabs are designed for the “construction phase” and for the “operation phase”. During the construction phase, that is prior to hardening of concrete, the profiled steel sheeting is designed to carry its self-weight, the weight of wet concrete as well as other loads that are imposed during concreting. After hardening, the concrete develops full composite action with the sheeting and the composite slab carries the loads as an integrated system during the structure’s lifetime.

The design at the construction phase is verified for the ultimate and the serviceability limit states. The ultimate limit state is verified for bending moments, according to the rules of Eurocode 3 – Part 1.3 for cold formed members and sheeting. If the verification is not satisfied for a given thickness of the profiled steel sheeting, the structural system is modified through the use of temporary intermediate supports. Moreover, deflections are verified according to the limits provided in Eurocode 4.

Verifications for the operation phase are done for positive and negative bending moments, transverse shear and longitudinal shear, according to Eurocode 4. Deflections are checked against the limiting values.

The design resistance against longitudinal shear is determined by the m-k method, which requires the experimental determination of factors m and k through four-point bending testing. Such tests were performed in the Structural

Materials Laboratory of the Department of Civil Engineering at the University of Patras (Fig. 2) and yielded the following values: **m = 74.18 MPa** and **k = 0.0082 MPa**. It should be noted that these values apply under the following conditions:

1. Slab thickness not more than the one of the tested specimens ($h \leq 0.18$ m).
2. Thickness of profiled steel sheeting at least equal to that in the tested specimens ($t \geq 0.75$ mm).
3. Concrete class at least C20/25.
4. Yield stress of sheeting $f_y \geq 320$ MPa.

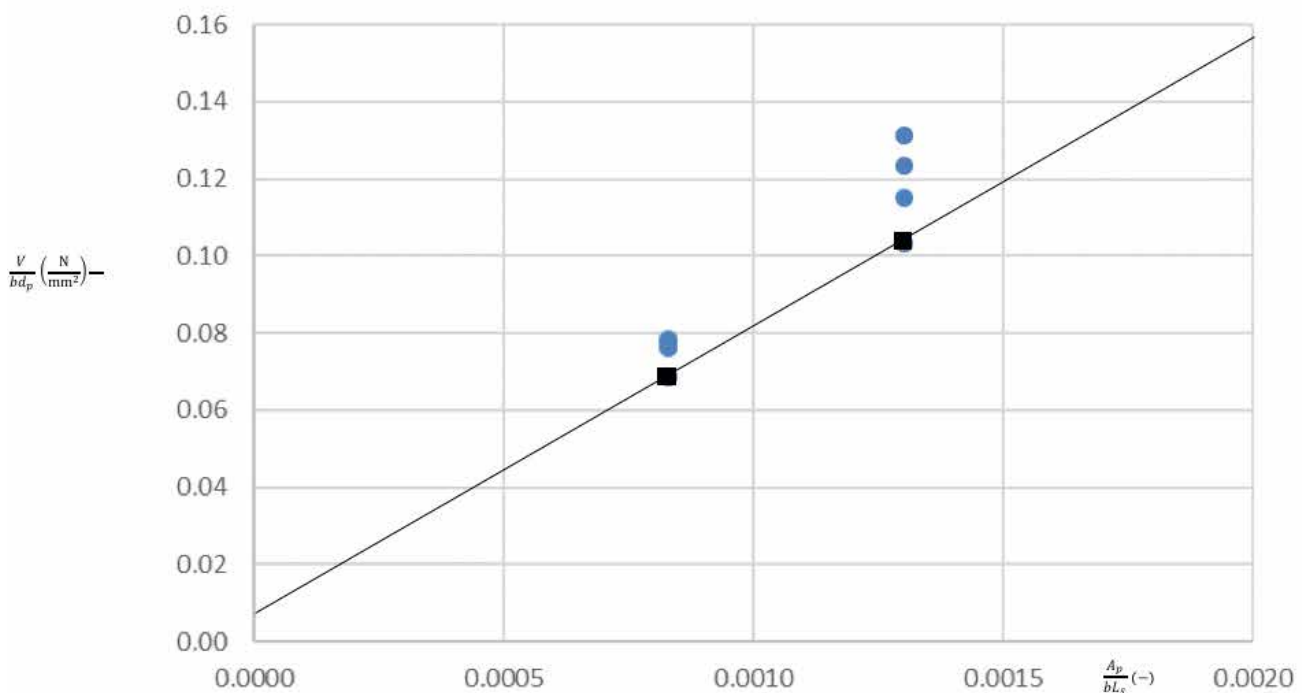


Figure 2: Calculation of m-k factors from test results on SYMDECK 50.

DESIGN TABLES

The following tables may be used to determine:

- The minimum required slab thickness for a given span length and given loading requirements.
- The span length for a given slab thickness and given loading requirements.
- The maximum load for a given slab thickness and a given span length.

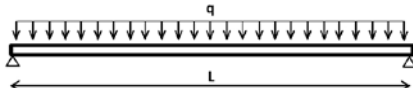
The tables include information on the possible need to provide temporary intermediate supports to the profiled steel sheeting during concreting as well as on the number of required supports. The tables are valid for concrete **C20/25** and steel **B500C** over the supports, at a distance equal to 30 mm from the top of the slab.

The moment resistance corresponding to the construction phase is calculated according to Part 1.3 of Eurocode 3, by taking into account the effective cross section area of the sheeting. Moreover, in line with Eurocode 4, the parts of cross sections with embossments are neglected. At the construction phase, the profiled steel sheeting carries its self-weight, the weight of wet concrete as well as other loads that are imposed during concreting. In such cases, if the acting moment exceeds the moment resistance, the structural system is modified through the use of temporary intermediate supports. The acting moments are calculated from the envelope curve of bending moment diagrams corresponding to the load cases described in Eurocode 4, namely: self-weight of profiled steel sheeting, self-weight of fresh concrete for concreting at different spans to cause maximum effects or for concreting of successive layers on all spans, and construction load (1.5 kN/m² uniformly distributed over an area of 3x3 m or over the full span, if this is smaller, and 0.75 kN/m² over the remaining area to cause maximum effects for maximum bending moments or for maximum shear force). The design verifications for the construction phase are done for: maximum positive and negative bending moments; local transverse shear force at end or intermediate supports; the combined effect of bending moment and shear; and deflections (serviceability).

The structural system during the operation phase is that after removal of the temporary intermediate supports. Loads on the composite slab comprise self-weight and live loads, acting over the full area of the slab.

The design verifications for the ultimate limit state are done for positive and negative bending moment, transverse shear and longitudinal shear. The serviceability limit state is verified by checking the maximum deflection at each span, assuming elastic behavior and a moment of inertia calculated as the mean value for the uncracked and cracked cross sections; this deflection is limited to $L/250$, where L = span length.

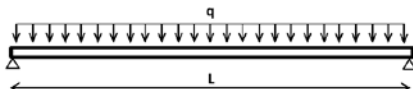
The ultimate limit state and serviceability limit state verifications provide the value of the maximum load carried by the composite slabs. This load (in kN/m²) is given in the following tables for three different structural systems (one, two or three spans) and a range of span lengths from 1.00 to 4.50 m.



Thickness of profiled steel sheeting **t=0.75mm**

Slab Thickness	Span Length L (m)														
	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50
h (m)	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50
0.13	26,62	16,46	10,78	7,33	5,09	3,55	2,44	1,62	0,99	0,50	0,11				
0.14	28,32	18,14	11,88	8,10	5,63	3,93	2,71	1,81	1,12	0,58	0,15				
0.15	29,96	19,82	12,99	8,86	6,17	4,31	2,98	1,99	1,24	0,65	0,18				
0.16	31,55	21,51	14,10	9,62	6,70	4,69	3,25	2,18	1,36	0,72	0,22				
0.17	33,09	23,19	15,21	10,38	7,24	5,07	3,52	2,37	1,49	0,80	0,25				
0.18	34,59	24,87	16,32	11,15	7,78	5,46	3,79	2,55	1,61	0,87	0,28				

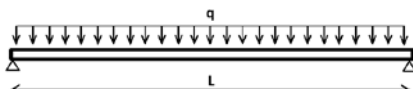
One intermediate support is needed



Thickness of profiled steel sheeting **t=1.00mm**

Slab Thickness	Span Length L (m)														
	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50
h (m)	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50
0.13	29,46	22,46	14,92	10,36	7,39	5,34	3,88	2,79	1,97	1,32	0,80	0,39			
0.14	31,36	24,53	16,45	11,43	8,16	5,92	4,30	3,11	2,20	1,48	0,92	0,46			
0.15	33,18	25,95	17,99	12,51	8,94	6,49	4,73	3,42	2,42	1,65	1,03	0,53			
0.16	34,95	27,32	19,52	13,58	9,71	7,06	5,15	3,73	2,65	1,81	1,14	0,60			
0.17	36,68	28,65	21,06	14,66	10,49	7,63	5,57	4,05	2,88	1,98	1,25	0,67			
0.18	38,35	29,95	22,59	15,73	11,27	8,20	5,99	4,36	3,11	2,14	1,37	0,74			

One intermediate support is needed



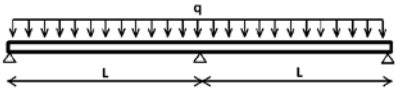
Thickness of profiled steel sheeting **t=1.25mm**

Slab Thickness	Span Length L (m)														
	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50
h (m)	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50
0.13	31,85	24,95	19,05	13,37	9,67	7,13	5,31	3,96	2,93	2,13	1,49	0,98	0,55	0,20	
0.14	33,91	26,55	21,01	14,75	10,69	7,89	5,89	4,40	3,27	2,39	1,68	1,12	0,65	0,26	
0.15	35,89	28,10	22,90	16,14	11,70	8,65	6,46	4,84	3,61	2,64	1,87	1,25	0,75	0,32	
0.16	37,82	29,59	24,11	17,53	12,72	9,41	7,04	5,28	3,94	2,90	2,06	1,39	0,84	0,38	
0.17	39,69	31,04	25,28	18,92	13,73	10,17	7,61	5,72	4,28	3,15	2,26	1,53	0,94	0,44	
0.18	41,51	32,46	26,42	20,30	14,75	10,93	8,19	6,16	4,61	3,41	2,45	1,67	1,03	0,50	

One intermediate support is needed

Reinforcement over the supports (negative moments)

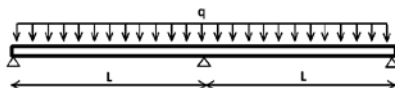
h (m)	0,13	0,14	0,15	0,16	0,17	0,18
Diameter (mm) / Spacing (mm)	Ø8/200	Ø8/200	Ø8/150	Ø8/150	Ø10/200	Ø10/200



Thickness of profiled steel sheeting **t=0.75mm**

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13		13,91	10,64	8,45	6,89	5,73	4,82	3,55	2,54	1,77	1,17	0,69				
0,14		15,27	11,68	9,28	7,57	6,29	5,29	3,93	2,82	1,97	1,31	0,78				
0,15		16,93	12,96	10,32	8,43	7,01	5,91	4,31	3,10	2,17	1,45	0,87				
0,16		18,37	14,07	11,20	9,15	7,62	6,42	4,69	3,38	2,37	1,59	0,96				
0,17		19,73	15,11	12,03	9,83	8,19	6,90	5,07	3,66	2,57	1,73	1,05				
0,18		21,18	16,23	12,92	10,57	8,80	7,42	5,46	3,93	2,77	1,87	1,15				

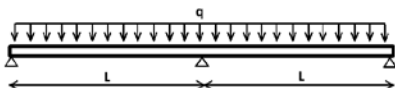
☐ One intermediate support is needed



Thickness of profiled steel sheeting **t=1.00mm**

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13		13,83	10,55	8,37	6,81	5,64	4,73	4,00	3,35	2,43	1,72	1,15	0,69	0,31		
0,14		15,18	11,59	9,20	7,49	6,21	5,21	4,41	3,72	2,71	1,92	1,30	0,79	0,37		
0,15		16,84	12,88	10,23	8,34	6,92	5,82	4,94	4,09	2,99	2,13	1,44	0,89	0,44		
0,16		18,28	13,98	11,11	9,07	7,53	6,34	5,38	4,46	3,26	2,33	1,59	0,99	0,50		
0,17		19,65	15,03	11,95	9,75	8,10	6,82	5,79	4,83	3,54	2,54	1,74	1,09	0,56		
0,18		21,09	16,14	12,84	10,48	8,71	7,34	6,24	5,20	3,82	2,74	1,89	1,19	0,62		

☐ One intermediate support is needed



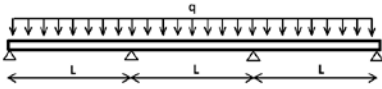
Thickness of profiled steel sheeting **t=1.25mm**

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13		13,74	10,47	8,28	6,72	5,55	4,65	3,92	3,32	2,66	1,88	1,26	0,76	0,35	0,01	
0,14		15,09	11,50	9,11	7,40	6,12	5,12	4,32	3,67	3,08	2,20	1,51	0,94	0,48	0,10	
0,15		16,76	12,79	10,15	8,26	6,84	5,74	4,86	4,13	3,53	3,02	2,39	1,70	1,14	0,67	
0,16		18,19	13,89	11,03	8,98	7,44	6,25	5,29	4,51	3,86	3,31	2,63	1,88	1,27	0,76	
0,17		19,56	14,94	11,86	9,66	8,02	6,73	5,71	4,87	4,17	3,57	2,86	2,06	1,40	0,85	
0,18		21,01	16,06	12,75	10,39	8,63	7,25	6,15	5,25	4,50	3,86	3,09	2,23	1,53	0,94	

☐ One intermediate support is needed

Reinforcement over the supports (negative moments)

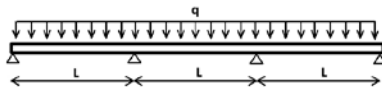
h (m)	0,13	0,14	0,15	0,16	0,17	0,18
Diameter (mm) / Spacing (mm)	Ø8/200	Ø8/200	Ø8/150	Ø8/150	Ø10/200	Ø10/200



Thickness of profiled steel sheeting **t=0.75mm**

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	14,59	11,18	8,91	7,28	6,07	4,91	3,55	2,54	1,77	1,17	0,69					
0,14	16,01	12,27	9,78	8,00	6,66	5,43	3,93	2,82	1,97	1,31	0,78					
0,15	17,58	13,48	10,75	8,80	7,33	5,95	4,31	3,10	2,17	1,45	0,87					
0,16	19,09	14,65	11,68	9,57	7,98	6,47	4,69	3,38	2,37	1,59	0,96					
0,17	20,69	15,88	12,67	10,38	8,67	6,99	5,07	3,66	2,57	1,73	1,05					
0,18	22,21	17,05	13,61	11,15	9,31	7,50	5,46	3,93	2,77	1,87	1,15					

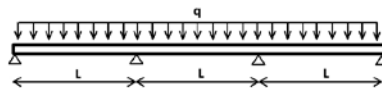
☐ One intermediate support is needed



Thickness of profiled steel sheeting **t=1.00mm**

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	14,51	11,10	8,82	7,20	5,98	5,03	4,28	3,35	2,43	1,72	1,15	0,69	0,31			
0,14	15,93	12,19	9,69	7,91	6,58	5,54	4,71	3,72	2,71	1,92	1,30	0,79	0,37			
0,15	17,49	13,40	10,66	8,71	7,25	6,11	5,20	4,09	2,99	2,13	1,44	0,89	0,44			
0,16	19,01	14,56	11,60	9,48	7,89	6,66	5,67	4,46	3,26	2,33	1,59	0,99	0,50			
0,17	20,61	15,80	12,59	10,30	8,58	7,24	6,18	4,83	3,54	2,54	1,74	1,09	0,56			
0,18	22,12	16,96	13,53	11,07	9,23	7,79	6,65	5,20	3,82	2,74	1,89	1,19	0,62			

☐ One intermediate support is needed



Thickness of profiled steel sheeting **t=1.25mm**

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	14,42	11,01	8,74	7,11	5,90	4,95	4,19	3,57	3,05	2,62	1,92	1,35	0,88	0,49		
0,14	15,84	12,10	9,61	7,83	6,49	5,45	4,62	3,94	3,38	2,90	2,16	1,53	1,01	0,58		
0,15	17,59	13,45	10,70	8,73	7,25	6,10	5,19	4,43	3,81	3,24	2,39	1,70	1,14	0,67		
0,16	19,09	14,61	11,62	9,49	7,89	6,65	5,65	4,84	4,16	3,55	2,63	1,88	1,27	0,76		
0,17	20,52	15,71	12,50	10,21	8,50	7,16	6,09	5,22	4,49	3,85	2,86	2,06	1,40	0,85		
0,18	22,04	16,88	13,44	10,98	9,14	7,71	6,56	5,62	4,84	4,16	3,09	2,23	1,53	0,94		

☐ One intermediate support is needed

DESIGN TABLES FOR FIRE RESISTANCE

The mechanical resistance of steel-concrete composite slabs in the case of fire is verified for the loading combination $G+\psi 2Q$. The calculations for the positive and negative moment resistance are made for the ISO fire curve and temperature increase rates in the range 2 to 50 °K/min, according to Eurocode 4 – Part 1.2.

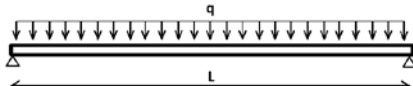
The maximum load Q in the above equation is obtained on the basis of the verifications at normal temperature (for the ultimate and serviceability limit states) as well as in the fire situation (criteria I and R for thermal insulation and mechanical resistance, respectively).

The maximum load Q shall not exceed the permissible load carried by the slab at normal temperature. If, in the fire situation, the slab cannot carry the design load corresponding to normal temperature, the following tables provide the diameter of an additional tension reinforcement bar to be placed in each of the ribs. The calculations have been made on the assumptions that the distance of the centroid of the steel rebars from the bottom face of the slab is 30 mm and that the steel is of class B500C. As in the tables for the case of normal temperature, the concrete class is C20/25.

In case the slab design satisfies criterion R (mechanical resistance) but not criterion I (thermal insulation), the maximum load in the table is provided with a diagonal line.

The value of the maximum load Q is provided in the following tables for three different structural systems (one, two or three spans), a range of span lengths from 1.00 to 4.50 m, $\psi 2=0.60$ and four different cases of fire resistance classes (R30, R60, R90 and R120).

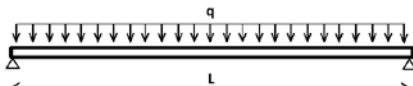
FIRE RESISTANCE: 30 Minutes



Thickness of profiled steel sheeting **t=0.75mm**

Slab Thickness	Span Length L (m)														
	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	26,62	16,46	10,78	7,33	5,09	3,55	2,44	1,62	0,99	0,50	0,11				
0,14	28,32	18,14	11,88	8,10	5,63	3,93	2,71	1,81	1,12	0,58	0,15				
0,15	29,96	19,82	12,99	8,86	6,17	4,31	2,98	1,99	1,24	0,65	0,18				
0,16	31,55	21,51	14,10	9,62	6,70	4,69	3,25	2,18	1,36	0,72	0,22				
0,17	33,09	23,19	15,21	10,38	7,24	5,07	3,52	2,37	1,49	0,80	0,25				
0,18	34,59	24,87	16,32	11,15	7,78	5,46	3,79	2,55	1,61	0,87	0,28				

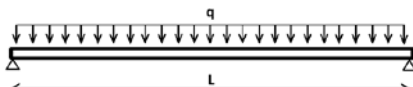
No additional reinforcement 1ø6 1ø8 1ø10 1ø12 1ø14



Thickness of profiled steel sheeting **t=1.00mm**

Slab Thickness	Span Length L (m)														
	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	29,46	22,46	14,92	10,36	7,39	5,34	3,88	2,79	1,97	1,32	0,80	0,39			
0,14	31,36	24,53	16,45	11,43	8,16	5,92	4,30	3,11	2,20	1,48	0,92	0,46			
0,15	33,18	25,95	17,99	12,51	8,94	6,49	4,73	3,42	2,42	1,65	1,03	0,53			
0,16	34,95	27,32	19,52	13,58	9,71	7,06	5,15	3,73	2,65	1,81	1,14	0,60			
0,17	36,68	28,65	21,06	14,66	10,49	7,63	5,57	4,05	2,88	1,98	1,25	0,67			
0,18	38,35	29,95	22,59	15,73	11,27	8,20	5,99	4,36	3,11	2,14	1,37	0,74			

No additional reinforcement 1ø6 1ø8 1ø10 1ø12 1ø14

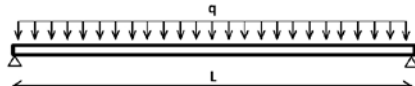


Thickness of profiled steel sheeting **t=1.25mm**

Slab Thickness	Span Length L (m)														
	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	31,85	24,95	19,05	13,37	9,67	7,13	5,31	3,96	2,93	2,13	1,49	0,98	0,55	0,20	
0,14	33,91	26,55	21,01	14,75	10,69	7,89	5,89	4,40	3,27	2,39	1,68	1,12	0,65	0,26	
0,15	35,89	28,10	22,90	16,14	11,70	8,65	6,46	4,84	3,61	2,64	1,87	1,25	0,75	0,32	
0,16	37,82	29,59	24,11	17,53	12,72	9,41	7,04	5,28	3,94	2,90	2,06	1,39	0,84	0,38	
0,17	39,69	31,04	25,28	18,92	13,73	10,17	7,61	5,72	4,28	3,15	2,26	1,53	0,94	0,44	
0,18	41,51	32,46	26,42	20,30	14,75	10,93	8,19	6,16	4,61	3,41	2,45	1,67	1,03	0,50	

No additional reinforcement 1ø6 1ø8 1ø10 1ø12 1ø14

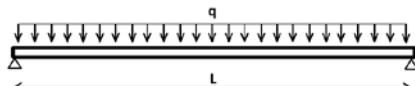
FIRE RESISTANCE: 60 Minutes



Thickness of profiled steel sheeting **t=0.75mm**

Slab Thickness	Span Length L (m)														
	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	26,62	16,46	10,78	7,33	5,09	3,55	2,44	1,62	0,99	0,50	0,11				
0,14	28,32	18,14	11,88	8,10	5,63	3,93	2,71	1,81	1,12	0,58	0,15				
0,15	29,96	19,82	12,99	8,86	6,17	4,31	2,98	1,99	1,24	0,65	0,18				
0,16	31,55	21,51	14,10	9,62	6,70	4,69	3,25	2,18	1,36	0,72	0,22				
0,17	33,09	23,19	15,21	10,38	7,24	5,07	3,52	2,37	1,49	0,80	0,25				
0,18	34,59	24,87	16,32	11,15	7,78	5,46	3,79	2,55	1,61	0,87	0,28				

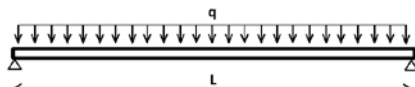
No additional reinforcement 1ø6 1ø8 1ø10 1ø12 1ø14



Thickness of profiled steel sheeting **t=1.00mm**

Slab Thickness	Span Length L (m)														
	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	29,46	22,46	14,92	10,36	7,39	5,34	3,88	2,79	1,97	1,32	0,80	0,39			
0,14	31,36	24,53	16,45	11,43	8,16	5,92	4,30	3,11	2,20	1,48	0,92	0,46			
0,15	33,18	25,95	17,99	12,51	8,94	6,49	4,73	3,42	2,42	1,65	1,03	0,53			
0,16	34,95	27,32	19,52	13,58	9,71	7,06	5,15	3,73	2,65	1,81	1,14	0,60			
0,17	36,68	28,65	21,06	14,66	10,49	7,63	5,57	4,05	2,88	1,98	1,25	0,67			
0,18	38,35	29,95	22,59	15,73	11,27	8,20	5,99	4,36	3,11	2,14	1,37	0,74			

No additional reinforcement 1ø6 1ø8 1ø10 1ø12 1ø14

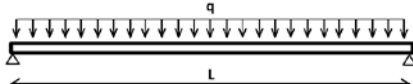


Thickness of profiled steel sheeting **t=1.25mm**

Slab Thickness	Span Length L (m)														
	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	31,85	24,95	19,05	13,37	9,67	7,13	5,31	3,96	2,93	2,13	1,49	0,98	0,55	0,20	
0,14	33,91	26,55	21,01	14,75	10,69	7,89	5,89	4,40	3,27	2,39	1,68	1,12	0,65	0,26	
0,15	35,89	28,10	22,90	16,14	11,70	8,65	6,46	4,84	3,61	2,64	1,87	1,25	0,75	0,32	
0,16	37,82	29,59	24,11	17,53	12,72	9,41	7,04	5,28	3,94	2,90	2,06	1,39	0,84	0,38	
0,17	39,69	31,04	25,28	18,92	13,73	10,17	7,61	5,72	4,28	3,15	2,26	1,53	0,94	0,44	
0,18	41,51	32,46	26,42	20,30	14,75	10,93	8,19	6,16	4,61	3,41	2,45	1,67	1,03	0,50	

No additional reinforcement 1ø6 1ø8 1ø10 1ø12 1ø14

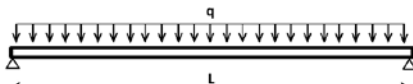
FIRE RESISTANCE: 90 Minutes



Thickness of profiled steel sheeting $t=0.75\text{mm}$

Slab Thickness	Span Length L (m)														
	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	26,62	16,46	10,78	7,33	5,09	3,55	2,44	1,62	0,99	0,50	0,11				
0,14	28,32	18,14	11,88	8,10	5,63	3,93	2,71	1,81	1,12	0,58	0,15				
0,15	29,96	19,82	12,99	8,86	6,17	4,31	2,98	1,99	1,24	0,65	0,18				
0,16	31,55	21,51	14,10	9,62	6,70	4,69	3,25	2,18	1,36	0,72	0,22				
0,17	33,09	23,19	15,21	10,38	7,24	5,07	3,52	2,37	1,49	0,80	0,25				
0,18	34,59	24,87	16,32	11,15	7,78	5,46	3,79	2,55	1,61	0,87	0,28				

No additional reinforcement 1ø6 1ø8 1ø10 1ø12 1ø14



Thickness of profiled steel sheeting $t=1.00\text{mm}$

Slab Thickness	Span Length L (m)														
	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	29,46	22,46	14,92	10,36	7,39	5,34	3,88	2,79	1,97	1,32	0,80	0,39			
0,14	31,36	24,53	16,45	11,43	8,16	5,92	4,30	3,11	2,20	1,48	0,92	0,46			
0,15	33,18	25,95	17,99	12,51	8,94	6,49	4,73	3,42	2,42	1,65	1,03	0,53			
0,16	34,95	27,32	19,52	13,58	9,71	7,06	5,15	3,73	2,65	1,81	1,14	0,60			
0,17	36,68	28,65	21,06	14,66	10,49	7,63	5,57	4,05	2,88	1,98	1,25	0,67			
0,18	38,35	29,95	22,59	15,73	11,27	8,20	5,99	4,36	3,11	2,14	1,37	0,74			

No additional reinforcement 1ø6 1ø8 1ø10 1ø12 1ø14

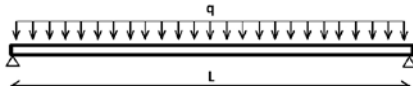


Thickness of profiled steel sheeting $t=1.25\text{mm}$

Slab Thickness	Span Length L (m)														
	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	31,85	24,95	19,05	13,37	9,67	7,13	5,31	3,96	2,93	2,13	1,49	0,98	0,55	0,20	
0,14	33,91	26,55	21,01	14,75	10,69	7,89	5,89	4,40	3,27	2,39	1,68	1,12	0,65	0,26	
0,15	35,89	28,10	22,90	16,14	11,70	8,65	6,46	4,84	3,61	2,64	1,87	1,25	0,75	0,32	
0,16	37,82	29,59	24,11	17,53	12,72	9,41	7,04	5,28	3,94	2,90	2,06	1,39	0,84	0,38	
0,17	39,69	31,04	25,28	18,92	13,73	10,17	7,61	5,72	4,28	3,15	2,26	1,53	0,94	0,44	
0,18	41,51	32,46	26,42	20,30	14,75	10,93	8,19	6,16	4,61	3,41	2,45	1,67	1,03	0,50	

No additional reinforcement 1ø6 1ø8 1ø10 1ø12 1ø14

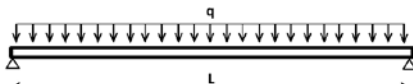
FIRE RESISTANCE: 120 Minutes



Thickness of profiled steel sheeting $t=0.75\text{mm}$

Slab Thickness	Span Length L (m)														
	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	26,62	16,46	10,78	7,33	5,09	3,55	2,44	1,62	0,99	0,50	0,11				
0,14	28,32	18,14	11,88	8,10	5,63	3,93	2,71	1,81	1,12	0,58	0,15				
0,15	29,96	19,82	12,99	8,86	6,17	4,31	2,98	1,99	1,24	0,65	0,18				
0,16	31,55	21,51	14,10	9,62	6,70	4,69	3,25	2,18	1,36	0,72	0,22				
0,17	33,09	23,19	15,21	10,38	7,24	5,07	3,52	2,37	1,49	0,80	0,25				
0,18	34,59	24,87	16,32	11,15	7,78	5,46	3,79	2,55	1,61	0,87	0,28				

No additional reinforcement 1ø6 1ø8 1ø10 1ø12 1ø14



Thickness of profiled steel sheeting $t=1.00\text{mm}$

Slab Thickness	Span Length L (m)														
	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	29,46	22,46	14,92	10,36	7,39	5,34	3,88	2,79	1,97	1,32	0,80	0,39			
0,14	31,36	24,53	16,45	11,43	8,16	5,92	4,30	3,11	2,20	1,48	0,92	0,46			
0,15	33,18	25,95	17,99	12,51	8,94	6,49	4,73	3,42	2,42	1,65	1,03	0,53			
0,16	34,95	27,32	19,52	13,58	9,71	7,06	5,15	3,73	2,65	1,81	1,14	0,60			
0,17	36,68	28,65	21,06	14,66	10,49	7,63	5,57	4,05	2,88	1,98	1,25	0,67			
0,18	38,35	29,95	22,59	15,73	11,27	8,20	5,99	4,36	3,11	2,14	1,37	0,74			

No additional reinforcement 1ø6 1ø8 1ø10 1ø12 1ø14



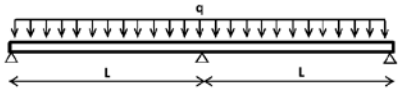
Thickness of profiled steel sheeting $t=1.25\text{mm}$

Slab Thickness	Span Length L (m)														
	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	31,85	24,95	19,05	13,37	9,67	7,13	5,31	3,96	2,93	2,13	1,49	0,98	0,55	0,20	
0,14	33,91	26,55	21,01	14,75	10,69	7,89	5,89	4,40	3,27	2,39	1,68	1,12	0,65	0,26	
0,15	35,89	28,10	22,90	16,14	11,70	8,65	6,46	4,84	3,61	2,64	1,87	1,25	0,75	0,32	
0,16	37,82	29,59	24,11	17,53	12,72	9,41	7,04	5,28	3,94	2,90	2,06	1,39	0,84	0,38	
0,17	39,69	31,04	25,28	18,92	13,73	10,17	7,61	5,72	4,28	3,15	2,26	1,53	0,94	0,44	
0,18	41,51	32,46	26,42	20,30	14,75	10,93	8,19	6,16	4,61	3,41	2,45	1,67	1,03	0,50	

No additional reinforcement 1ø6 1ø8 1ø10 1ø12 1ø14

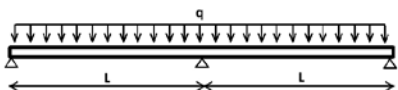
FIRE RESISTANCE: 30 Minutes

Reinforcement over the supports (negative moments)						
h (m)	0,13	0,14	0,15	0,16	0,17	0,18
Diameter (mm) / Spacing (mm)	Ø8/200	Ø8/200	Ø8/150	Ø8/150	Ø10/200	Ø10/200



Thickness of profiled steel sheeting **t=0.75mm**

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13		13,91	10,64	8,45	6,89	5,73	4,82	3,55	2,54	1,77	1,17	0,69				
0,14		15,27	11,68	9,28	7,57	6,29	5,29	3,93	2,82	1,97	1,31	0,78				
0,15		16,93	12,96	10,32	8,43	7,01	5,91	4,31	3,10	2,17	1,45	0,87				
0,16		18,37	14,07	11,20	9,15	7,62	6,42	4,69	3,38	2,37	1,59	0,96				
0,17		19,73	15,11	12,03	9,83	8,19	6,90	5,07	3,66	2,57	1,73	1,05				
0,18		21,18	16,23	12,92	10,57	8,80	7,42	5,46	3,93	2,77	1,87	1,15				

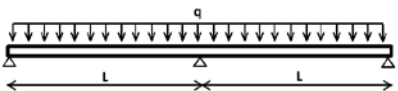


Thickness of profiled steel sheeting **t=1.00mm**

No additional reinforcement 1ø6 1ø8 1ø10 1ø12 1ø14

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13		13,83	10,55	8,37	6,81	5,64	4,73	4,00	3,35	2,43	1,72	1,15	0,69	0,31		
0,14		15,18	11,59	9,20	7,49	6,21	5,21	4,41	3,72	2,71	1,92	1,30	0,79	0,37		
0,15		16,84	12,88	10,23	8,34	6,92	5,82	4,94	4,09	2,99	2,13	1,44	0,89	0,44		
0,16		18,28	13,98	11,11	9,07	7,53	6,34	5,38	4,46	3,26	2,33	1,59	0,99	0,50		
0,17		19,65	15,03	11,95	9,75	8,10	6,82	5,79	4,83	3,54	2,54	1,74	1,09	0,56		
0,18		21,09	16,14	12,84	10,48	8,71	7,34	6,24	5,20	3,82	2,74	1,89	1,19	0,62		

No additional reinforcement 1ø6 1ø8 1ø10 1ø12 1ø14



Thickness of profiled steel sheeting **t=1.25mm**

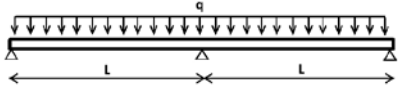
Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13		13,74	10,47	8,28	6,72	5,55	4,65	3,92	3,32	2,66	1,88	1,26	0,76	0,35	0,01	
0,14		15,09	11,50	9,11	7,40	6,12	5,12	4,32	3,67	3,08	2,20	1,51	0,94	0,48	0,10	
0,15		16,76	12,79	10,15	8,26	6,84	5,74	4,86	4,13	3,53	3,02	2,39	1,70	1,14	0,67	
0,16		18,19	13,89	11,03	8,98	7,44	6,25	5,29	4,51	3,86	3,31	2,63	1,88	1,27	0,76	
0,17		19,56	14,94	11,86	9,66	8,02	6,73	5,71	4,87	4,17	3,57	2,86	2,06	1,40	0,85	
0,18		21,01	16,06	12,75	10,39	8,63	7,25	6,15	5,25	4,50	3,86	3,09	2,23	1,53	0,94	

No additional reinforcement 1ø6 1ø8 1ø10 1ø12 1ø14

FIRE RESISTANCE: 60 Minutes

Reinforcement over the supports (negative moments)

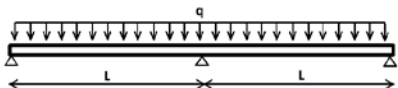
h (m)	0,13	0,14	0,15	0,16	0,17	0,18
Diameter (mm) / Spacing (mm)	Ø8/200	Ø8/200	Ø8/150	Ø8/150	Ø10/200	Ø10/200



Thickness of profiled steel sheeting **t=0.75mm**

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	13,91	10,64	8,45	6,89	5,73	4,82	3,55	2,54	1,77	1,17	0,69					
0,14	15,27	11,68	9,28	7,57	6,29	5,29	3,93	2,82	1,97	1,31	0,78					
0,15	16,93	12,96	10,32	8,43	7,01	5,91	4,31	3,10	2,17	1,45	0,87					
0,16	18,37	14,07	11,20	9,15	7,62	6,42	4,69	3,38	2,37	1,59	0,96					
0,17	19,73	15,11	12,03	9,83	8,19	6,90	5,07	3,66	2,57	1,73	1,05					
0,18	21,18	16,23	12,92	10,57	8,80	7,42	5,46	3,93	2,77	1,87	1,15					

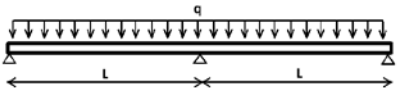
No additional reinforcement 1Ø6 1Ø8 1Ø10 1Ø12 1Ø14



Thickness of profiled steel sheeting **t=1.00mm**

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	13,83	10,55	8,37	6,81	5,64	4,73	4,00	3,35	2,43	1,72	1,15	0,69	0,31			
0,14	15,18	11,59	9,20	7,49	6,21	5,21	4,41	3,72	2,71	1,92	1,30	0,79	0,37			
0,15	16,84	12,88	10,23	8,34	6,92	5,82	4,94	4,09	2,99	2,13	1,44	0,89	0,44			
0,16	18,28	13,98	11,11	9,07	7,53	6,34	5,38	4,46	3,26	2,33	1,59	0,99	0,50			
0,17	19,65	15,03	11,95	9,75	8,10	6,82	5,79	4,83	3,54	2,54	1,74	1,09	0,56			
0,18	21,09	16,14	12,84	10,48	8,71	7,34	6,24	5,20	3,82	2,74	1,89	1,19	0,62			

No additional reinforcement 1Ø6 1Ø8 1Ø10 1Ø12 1Ø14



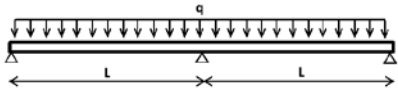
Thickness of profiled steel sheeting **t=1.25mm**

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	13,74	10,47	8,28	6,72	5,55	4,65	3,92	3,32	2,66	1,88	1,26	0,76	0,35	0,01		
0,14	15,09	11,50	9,11	7,40	6,12	5,12	4,32	3,67	3,08	2,20	1,51	0,94	0,48	0,10		
0,15	16,76	12,79	10,15	8,26	6,84	5,74	4,86	4,13	3,53	3,02	2,39	1,70	1,14	0,67		
0,16	18,19	13,89	11,03	8,98	7,44	6,25	5,29	4,51	3,86	3,31	2,63	1,88	1,27	0,76		
0,17	19,56	14,94	11,86	9,66	8,02	6,73	5,71	4,87	4,17	3,57	2,86	2,06	1,40	0,85		
0,18	21,01	16,06	12,75	10,39	8,63	7,25	6,15	5,25	4,50	3,86	3,09	2,23	1,53	0,94		

No additional reinforcement 1Ø6 1Ø8 1Ø10 1Ø12 1Ø14

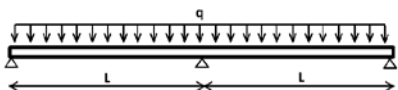
FIRE RESISTANCE: 90 Minutes

Reinforcement over the supports (negative moments)						
h (m)	0,13	0,14	0,15	0,16	0,17	0,18
Diameter (mm) / Spacing (mm)	Ø8/200	Ø8/200	Ø8/150	Ø8/150	Ø10/200	Ø10/200



Thickness of profiled steel sheeting **t=0.75mm**

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13		13,91	10,64	8,45	6,89	5,73	4,82	3,55	2,54	1,77	1,17	0,69				
0,14		15,27	11,68	9,28	7,57	6,29	5,29	3,93	2,82	1,97	1,31	0,78				
0,15		16,93	12,96	10,32	8,43	7,01	5,91	4,31	3,10	2,17	1,45	0,87				
0,16		18,37	14,07	11,20	9,15	7,62	6,42	4,69	3,38	2,37	1,59	0,96				
0,17		19,73	15,11	12,03	9,83	8,19	6,90	5,07	3,66	2,57	1,73	1,05				
0,18		21,18	16,23	12,92	10,57	8,80	7,42	5,46	3,93	2,77	1,87	1,15				

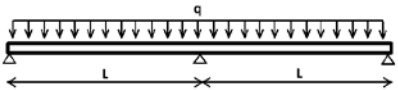


Thickness of profiled steel sheeting **t=1.00mm**

No additional reinforcement 1Ø6 1Ø8 1Ø10 1Ø12 1Ø14

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13		13,83	10,55	8,37	6,81	5,64	4,73	4,00	3,35	2,43	1,72	1,15	0,69	0,31		
0,14		15,18	11,59	9,20	7,49	6,21	5,21	4,41	3,72	2,71	1,92	1,30	0,79	0,37		
0,15		16,84	12,88	10,23	8,34	6,92	5,82	4,94	4,09	2,99	2,13	1,44	0,89	0,44		
0,16		18,28	13,98	11,11	9,07	7,53	6,34	5,38	4,46	3,26	2,33	1,59	0,99	0,50		
0,17		19,65	15,03	11,95	9,75	8,10	6,82	5,79	4,83	3,54	2,54	1,74	1,09	0,56		
0,18		21,09	16,14	12,84	10,48	8,71	7,34	6,24	5,20	3,82	2,74	1,89	1,19	0,62		

No additional reinforcement 1Ø6 1Ø8 1Ø10 1Ø12 1Ø14



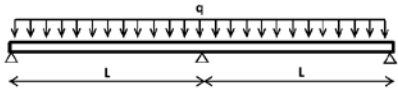
Thickness of profiled steel sheeting **t=1.25mm**

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13		13,74	10,47	8,28	6,72	5,55	4,65	3,92	3,32	2,66	1,88	1,26	0,76	0,35	0,01	
0,14		15,09	11,50	9,11	7,40	6,12	5,12	4,32	3,67	3,08	2,20	1,51	0,94	0,48	0,10	
0,15		16,76	12,79	10,15	8,26	6,84	5,74	4,86	4,13	3,53	3,02	2,39	1,70	1,14	0,67	
0,16		18,19	13,89	11,03	8,98	7,44	6,25	5,29	4,51	3,86	3,31	2,63	1,88	1,27	0,76	
0,17		19,56	14,94	11,86	9,66	8,02	6,73	5,71	4,87	4,17	3,57	2,86	2,06	1,40	0,85	
0,18		21,01	16,06	12,75	10,39	8,63	7,25	6,15	5,25	4,50	3,86	3,09	2,23	1,53	0,94	

No additional reinforcement 1Ø6 1Ø8 1Ø10 1Ø12 1Ø14

FIRE RESISTANCE: 120 Minutes

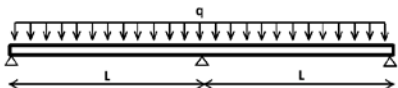
Reinforcement over the supports (negative moments)						
h (m)	0,13	0,14	0,15	0,16	0,17	0,18
Diameter (mm) / Spacing (mm)	Ø8/200	Ø8/200	Ø8/150	Ø8/150	Ø10/200	Ø10/200



Thickness of profiled steel sheeting **t=0.75mm**

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13		13,91	10,64	8,45	6,89	5,73	4,82	3,55	2,54	1,77	1,17	0,69				
0,14		15,27	11,68	9,28	7,57	6,29	5,29	3,93	2,82	1,97	1,31	0,78				
0,15		16,93	12,96	10,32	8,43	7,01	5,91	4,31	3,10	2,17	1,45	0,87				
0,16		18,37	14,07	11,20	9,15	7,62	6,42	4,69	3,38	2,37	1,59	0,96				
0,17		19,73	15,11	12,03	9,83	8,19	6,90	5,07	3,66	2,57	1,73	1,05				
0,18		21,18	16,23	12,92	10,57	8,80	7,42	5,46	3,93	2,77	1,87	1,15				

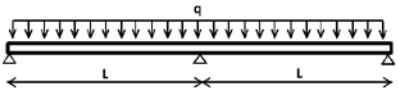
No additional reinforcement 1Ø6 1Ø8 1Ø10 1Ø12 1Ø14



Thickness of profiled steel sheeting **t=1.00mm**

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13		13,83	10,55	8,37	6,81	5,64	4,73	4,00	3,35	2,43	1,72	1,15	0,69	0,31		
0,14		15,18	11,59	9,20	7,49	6,21	5,21	4,41	3,72	2,71	1,92	1,30	0,79	0,37		
0,15		16,84	12,88	10,23	8,34	6,92	5,82	4,94	4,09	2,99	2,13	1,44	0,89	0,44		
0,16		18,28	13,98	11,11	9,07	7,53	6,34	5,38	4,46	3,26	2,33	1,59	0,99	0,50		
0,17		19,65	15,03	11,95	9,75	8,10	6,82	5,79	4,83	3,54	2,54	1,74	1,09	0,56		
0,18		21,09	16,14	12,84	10,48	8,71	7,34	6,24	5,20	3,82	2,74	1,89	1,19	0,62		

No additional reinforcement 1Ø6 1Ø8 1Ø10 1Ø12 1Ø14



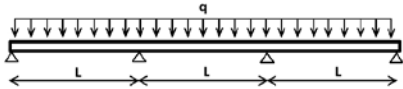
Thickness of profiled steel sheeting **t=1.25mm**

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13		13,74	10,47	8,28	6,72	5,55	4,65	3,92	3,32	2,66	1,88	1,26	0,76	0,35	0,01	
0,14		15,09	11,50	9,11	7,40	6,12	5,12	4,32	3,67	3,08	2,20	1,51	0,94	0,48	0,10	
0,15		16,76	12,79	10,15	8,26	6,84	5,74	4,86	4,13	3,53	3,02	2,39	1,70	1,14	0,67	
0,16		18,19	13,89	11,03	8,98	7,44	6,25	5,29	4,51	3,86	3,31	2,63	1,88	1,27	0,76	
0,17		19,56	14,94	11,86	9,66	8,02	6,73	5,71	4,87	4,17	3,57	2,86	2,06	1,40	0,85	
0,18		21,01	16,06	12,75	10,39	8,63	7,25	6,15	5,25	4,50	3,86	3,09	2,23	1,53	0,94	

No additional reinforcement 1Ø6 1Ø8 1Ø10 1Ø12 1Ø14

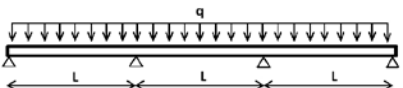
FIRE RESISTANCE: 30 Minutes

Reinforcement over the supports (negative moments)						
h (m)	0,13	0,14	0,15	0,16	0,17	0,18
Diameter (mm) / Spacing (mm)	Ø8/200	Ø8/200	Ø8/150	Ø8/150	Ø10/200	Ø10/200



Thickness of profiled steel sheeting **t=0.75mm**

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	14,59	11,18	8,91	7,28	6,07	4,91	3,55	2,54	1,77	1,17	0,69					
0,14	16,01	12,27	9,78	8,00	6,66	5,43	3,93	2,82	1,97	1,31	0,78					
0,15	17,58	13,48	10,75	8,80	7,33	5,95	4,31	3,10	2,17	1,45	0,87					
0,16	19,09	14,65	11,68	9,57	7,98	6,47	4,69	3,38	2,37	1,59	0,96					
0,17	20,69	15,88	12,67	10,38	8,67	6,99	5,07	3,66	2,57	1,73	1,05					
0,18	22,21	17,05	13,61	11,15	9,31	7,50	5,46	3,93	2,77	1,87	1,15					

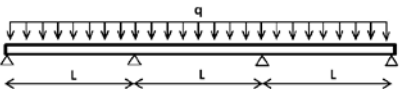


Thickness of profiled steel sheeting **t=1.00mm**

No additional reinforcement 1ø6 1ø8 1ø10 1ø12 1ø14

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	14,51	11,10	8,82	7,20	5,98	5,03	4,28	3,35	2,43	1,72	1,15	0,69	0,31			
0,14	15,93	12,19	9,69	7,91	6,58	5,54	4,71	3,72	2,71	1,92	1,30	0,79	0,37			
0,15	17,49	13,40	10,66	8,71	7,25	6,11	5,20	4,09	2,99	2,13	1,44	0,89	0,44			
0,16	19,01	14,56	11,60	9,48	7,89	6,66	5,67	4,46	3,26	2,33	1,59	0,99	0,50			
0,17	20,61	15,80	12,59	10,30	8,58	7,24	6,18	4,83	3,54	2,54	1,74	1,09	0,56			
0,18	22,12	16,96	13,53	11,07	9,23	7,79	6,65	5,20	3,82	2,74	1,89	1,19	0,62			

No additional reinforcement 1ø6 1ø8 1ø10 1ø12 1ø14



Thickness of profiled steel sheeting **t=1.25mm**

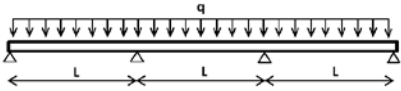
Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	14,42	11,01	8,74	7,11	5,90	4,95	4,19	3,57	3,05	2,62	1,92	1,35	0,88	0,49		
0,14	15,84	12,10	9,61	7,83	6,49	5,45	4,62	3,94	3,38	2,90	2,16	1,53	1,01	0,58		
0,15	17,59	13,45	10,70	8,73	7,25	6,10	5,19	4,43	3,81	3,24	2,39	1,70	1,14	0,67		
0,16	19,09	14,61	11,62	9,49	7,89	6,65	5,65	4,84	4,16	3,55	2,63	1,88	1,27	0,76		
0,17	20,52	15,71	12,50	10,21	8,50	7,16	6,09	5,22	4,49	3,85	2,86	2,06	1,40	0,85		
0,18	22,04	16,88	13,44	10,98	9,14	7,71	6,56	5,62	4,84	4,16	3,09	2,23	1,53	0,94		

No additional reinforcement 1ø6 1ø8 1ø10 1ø12 1ø14

FIRE RESISTANCE: 60 Minutes

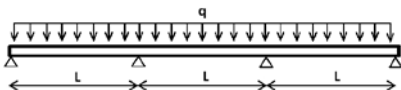
Reinforcement over the supports (negative moments)

h (m)	0,13	0,14	0,15	0,16	0,17	0,18
Diameter (mm) / Spacing (mm)	Ø8/200	Ø8/200	Ø8/150	Ø8/150	Ø10/200	Ø10/200



Thickness of profiled steel sheeting **t=0.75mm**

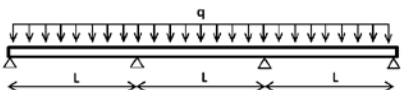
Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	14,59	11,18	8,91	7,28	6,07	4,91	3,55	2,54	1,77	1,17	0,69					
0,14	16,01	12,27	9,78	8,00	6,66	5,43	3,93	2,82	1,97	1,31	0,78					
0,15	17,58	13,48	10,75	8,80	7,33	5,95	4,31	3,10	2,17	1,45	0,87					
0,16	19,09	14,65	11,68	9,57	7,98	6,47	4,69	3,38	2,37	1,59	0,96					
0,17	20,69	15,88	12,67	10,38	8,67	6,99	5,07	3,66	2,57	1,73	1,05					
0,18	22,21	17,05	13,61	11,15	9,31	7,50	5,46	3,93	2,77	1,87	1,15					



Thickness of profiled steel sheeting **t=1.00mm**

No additional reinforcement 1Ø6 1Ø8 1Ø10 1Ø12 1Ø14

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	14,51	11,10	8,82	7,20	5,98	5,03	4,28	3,35	2,43	1,72	1,15	0,69	0,31			
0,14	15,93	12,19	9,69	7,91	6,58	5,54	4,71	3,72	2,71	1,92	1,30	0,79	0,37			
0,15	17,49	13,40	10,66	8,71	7,25	6,11	5,20	4,09	2,99	2,13	1,44	0,89	0,44			
0,16	19,01	14,56	11,60	9,48	7,89	6,66	5,67	4,46	3,26	2,33	1,59	0,99	0,50			
0,17	20,61	15,80	12,59	10,30	8,58	7,24	6,18	4,83	3,54	2,54	1,74	1,09	0,56			
0,18	22,12	16,96	13,53	11,07	9,23	7,79	6,65	5,20	3,82	2,74	1,89	1,19	0,62			



Thickness of profiled steel sheeting **t=1.25mm**

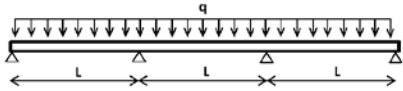
No additional reinforcement 1Ø6 1Ø8 1Ø10 1Ø12 1Ø14

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13	14,42	11,01	8,74	7,11	5,90	4,95	4,19	3,57	3,05	2,62	1,92	1,35	0,88	0,49		
0,14	15,84	12,10	9,61	7,83	6,49	5,45	4,62	3,94	3,38	2,90	2,16	1,53	1,01	0,58		
0,15	17,59	13,45	10,70	8,73	7,25	6,10	5,19	4,43	3,81	3,24	2,39	1,70	1,14	0,67		
0,16	19,09	14,61	11,62	9,49	7,89	6,65	5,65	4,84	4,16	3,55	2,63	1,88	1,27	0,76		
0,17	20,52	15,71	12,50	10,21	8,50	7,16	6,09	5,22	4,49	3,85	2,86	2,06	1,40	0,85		
0,18	22,04	16,88	13,44	10,98	9,14	7,71	6,56	5,62	4,84	4,16	3,09	2,23	1,53	0,94		

No additional reinforcement 1Ø6 1Ø8 1Ø10 1Ø12 1Ø14

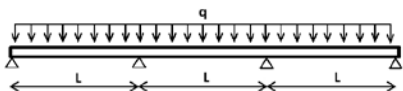
FIRE RESISTANCE: 90 Minutes

Reinforcement over the supports (negative moments)						
h (m)	0,13	0,14	0,15	0,16	0,17	0,18
Diameter (mm) / Spacing (mm)	Ø8/200	Ø8/200	Ø8/150	Ø8/150	Ø10/200	Ø10/200



Thickness of profiled steel sheeting **t=0.75mm**

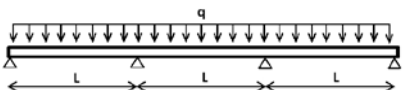
Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13		14,59	11,18	8,91	7,28	6,07	4,91	3,55	2,54	1,77	1,17	0,69				
0,14		16,01	12,27	9,78	8,00	6,66	5,43	3,93	2,82	1,97	1,31	0,78				
0,15		17,58	13,48	10,75	8,80	7,33	5,95	4,31	3,10	2,17	1,45	0,87				
0,16		19,09	14,65	11,68	9,57	7,98	6,47	4,69	3,38	2,37	1,59	0,96				
0,17		20,69	15,88	12,67	10,38	8,67	6,99	5,07	3,66	2,57	1,73	1,05				
0,18		22,21	17,05	13,61	11,15	9,31	7,50	5,46	3,93	2,77	1,87	1,15				



Thickness of profiled steel sheeting **t=1.00mm**

No additional reinforcement 1Ø6 1Ø8 1Ø10 1Ø12 1Ø14

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13		14,51	11,10	8,82	7,20	5,98	5,03	4,28	3,35	2,43	1,72	1,15	0,69	0,31		
0,14		15,93	12,19	9,69	7,91	6,58	5,54	4,71	3,72	2,71	1,92	1,30	0,79	0,37		
0,15		17,49	13,40	10,66	8,71	7,25	6,11	5,20	4,09	2,99	2,13	1,44	0,89	0,44		
0,16		19,01	14,56	11,60	9,48	7,89	6,66	5,67	4,46	3,26	2,33	1,59	0,99	0,50		
0,17		20,61	15,80	12,59	10,30	8,58	7,24	6,18	4,83	3,54	2,54	1,74	1,09	0,56		
0,18		22,12	16,96	13,53	11,07	9,23	7,79	6,65	5,20	3,82	2,74	1,89	1,19	0,62		



Thickness of profiled steel sheeting **t=1.25mm**

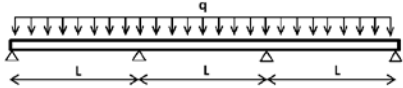
No additional reinforcement 1Ø6 1Ø8 1Ø10 1Ø12 1Ø14

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13		14,42	11,01	8,74	7,11	5,90	4,95	4,19	3,57	3,05	2,62	1,92	1,35	0,88	0,49	
0,14		15,84	12,10	9,61	7,83	6,49	5,45	4,62	3,94	3,38	2,90	2,16	1,53	1,01	0,58	
0,15		17,59	13,45	10,70	8,73	7,25	6,10	5,19	4,43	3,81	3,24	2,39	1,70	1,14	0,67	
0,16		19,09	14,61	11,62	9,49	7,89	6,65	5,65	4,84	4,16	3,55	2,63	1,88	1,27	0,76	
0,17		20,52	15,71	12,50	10,21	8,50	7,16	6,09	5,22	4,49	3,85	2,86	2,06	1,40	0,85	
0,18		22,04	16,88	13,44	10,98	9,14	7,71	6,56	5,62	4,84	4,16	3,09	2,23	1,53	0,94	

No additional reinforcement 1Ø6 1Ø8 1Ø10 1Ø12 1Ø14

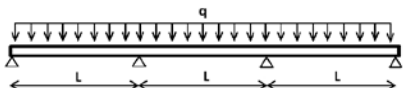
FIRE RESISTANCE: 120 Minutes

Reinforcement over the supports (negative moments)						
h (m)	0,13	0,14	0,15	0,16	0,17	0,18
Diameter (mm) / Spacing (mm)	Ø8/200	Ø8/200	Ø8/150	Ø8/150	Ø10/200	Ø10/200



Thickness of profiled steel sheeting **t=0.75mm**

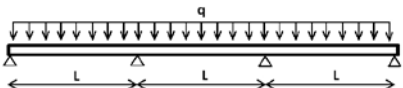
Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13		14,59	11,18	8,91	7,28	6,07	4,91	3,55	2,54	1,77	1,17	0,69				
0,14		16,01	12,27	9,78	8,00	6,66	5,43	3,93	2,82	1,97	1,31	0,78				
0,15		17,58	13,48	10,75	8,80	7,33	5,95	4,31	3,10	2,17	1,45	0,87				
0,16		19,09	14,65	11,68	9,57	7,98	6,47	4,69	3,38	2,37	1,59	0,96				
0,17		20,69	15,88	12,67	10,38	8,67	6,99	5,07	3,66	2,57	1,73	1,05				
0,18		22,21	17,05	13,61	11,15	9,31	7,50	5,46	3,93	2,77	1,87	1,15				



Thickness of profiled steel sheeting **t=1.00mm**

No additional reinforcement 1Ø6 1Ø8 1Ø10 1Ø12 1Ø14

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13		14,51	11,10	8,82	7,20	5,98	5,03	4,28	3,35	2,43	1,72	1,15	0,69	0,31		
0,14		15,93	12,19	9,69	7,91	6,58	5,54	4,71	3,72	2,71	1,92	1,30	0,79	0,37		
0,15		17,49	13,40	10,66	8,71	7,25	6,11	5,20	4,09	2,99	2,13	1,44	0,89	0,44		
0,16		19,01	14,56	11,60	9,48	7,89	6,66	5,67	4,46	3,26	2,33	1,59	0,99	0,50		
0,17		20,61	15,80	12,59	10,30	8,58	7,24	6,18	4,83	3,54	2,54	1,74	1,09	0,56		
0,18		22,12	16,96	13,53	11,07	9,23	7,79	6,65	5,20	3,82	2,74	1,89	1,19	0,62		



Thickness of profiled steel sheeting **t=1.25mm**

No additional reinforcement 1Ø6 1Ø8 1Ø10 1Ø12 1Ø14

Slab Thickness	Span Length L (m)															
	h (m)	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50
0,13		14,42	11,01	8,74	7,11	5,90	4,95	4,19	3,57	3,05	2,62	1,92	1,35	0,88	0,49	
0,14		15,84	12,10	9,61	7,83	6,49	5,45	4,62	3,94	3,38	2,90	2,16	1,53	1,01	0,58	
0,15		17,59	13,45	10,70	8,73	7,25	6,10	5,19	4,43	3,81	3,24	2,39	1,70	1,14	0,67	
0,16		19,09	14,61	11,62	9,49	7,89	6,65	5,65	4,84	4,16	3,55	2,63	1,88	1,27	0,76	
0,17		20,52	15,71	12,50	10,21	8,50	7,16	6,09	5,22	4,49	3,85	2,86	2,06	1,40	0,85	
0,18		22,04	16,88	13,44	10,98	9,14	7,71	6,56	5,62	4,84	4,16	3,09	2,23	1,53	0,94	

No additional reinforcement 1Ø6 1Ø8 1Ø10 1Ø12 1Ø14





All the information included in this publication is true and accurate.
ELASTRON S.A. reserves the right to make changes in the design, materials, technical characteristics as well as the specifications concerning the produced products,
while aiming to improve them, or to even remove them from the market, whenever it deems necessary, without forewarning.



ELASTRON S.A.

Agios Ioannis Street, Agios Ioannis, 193 00 Aspropyrgos, Greece

T. +30 210 5515000 | F. +30 210 5515015

elastron@elastron.gr | www.elastron.gr