MAYAN
- TORRES METÁLICAS -

FOUNDATIONS ACCORDING TO TYPE OF TERRAIN AND HEIGHT. TDA-12 AND TDA-20 TOWERS

BOLTED LIGHTING TOWERS			TDA-12			TDA-20		
TOTAL HEIGHT "H	WIDTH "W" (m)	Soil "K" (daN/cm3)	8	12	16	8	12	16
12 m	1,25	Depth "h" (m)	1,89	1,70	1,58	2,05	1,84	1,72
		Excavation volume (m3)	2,95	2,66	2,48	3,20	2,88	2,68
		Clear height "HL" (m)	10,96	10,45	10,57	10,10	10,31	10,43
14m	1,25	Depth "h" (m)	1,98	1,79	1,66	2,14	1,93	1,80
		Excavation volume (m3)	3,10	2,79	2,60	3,35	3,02	2,81
		Clear height "HL" (m)	12,17	12,36	12,49	12,01	12,22	12,35
16m	1,25	Depth "h" (m)	2,07	1,87	1,74	2,23	2,01	1,87
		Excavation volume (m3)	3,23	2,92	2,71	3,49	3,15	2,93
		Clear height "HL" (m)	14,08	14,28	14,41	13,92	14,14	14,28
18m	1,25	Depth "h" (m)	2,15	1,94	1,80	2,32	2,09	1,94
		Excavation volume (m3)	3,35	3,03	2,82	3,62	3,27	3,04
		Clear height "HL" (m)	16,00	16,21	16,35	15,83	16,06	16,21
20m	1,25	Depth "h" (m)	2,22	2,01	1,87	2,39	2,16	2,01
		Excavation volume (m3)	3,47	3,13	2,92	3,74	3,38	3,14
		Clear height "HL" (m)	17,93	18,14	18,28	17,76	17,99	18,14
22m	1,25	Depth "h" (m)	2,29	2,07	1,93	2,47	2,23	2,07
		Excavation volume (m3)	3,58	3,23	3,01	3,86	3,48	3,24
		Clear height "HL" (m)	19,86	20,08	20,22	19,68	19,92	20,08
24m	1,25	Depth "h" (m)	2,36	2,13	1,98	2,54	2,29	2,13
		Excavation volume (m3)	3,69	3,33	3,10	3,96	3,58	3,33
		Clear height "HL" (m)	21,79	22,02	22,17	21,61	21,86	22,02
26m	1,25	Depth "h" (m)	2,43	2,19	2,04	2,60	2,35	2,19
		Excavation volume (m3)	3,79	3,42	3,18	4,07	3,67	3,42
		Clear height "HL" (m)	23,72	23,96	24,11	23,55	23,80	23,96
28m	1,25	Depth "h" (m)	2,49	2,25	2,09	2,67	2,41	2,24
		Excavation volume (m3)	3,89	3,51	3,27	4,17	3,77	3,50
		Clear height "HL" (m)	25,66	25,90	26,06	25,48	25,74	25,91
30m	1,25	Depth "h" (m)	2,55	2,30	2,14	2,73	2,47	2,30
		Excavation volume (m3)	3,98	3,60	3,35	4,27	3,86	3,59
		Clear height "HL" (m)	27,60	27,85	28,01	27,42	27,68	27,85
32m	1,25	Depth "h" (m)	2,61	2,36	2,19	2,79	2,52	2,35
		Excavation volume (m3)	4,08	3,68	3,43	4,37	3,94	3,67
		Clear height "HL" (m)	29,54	29,79	29,96	29,36	29,63	29,80
34m	1,25	Depth "h" (m)	2,67	2,41	2,24	2,85	2,58	2,40
		Excavation volume (m3)	4,17	3,76	3,50	4,46	4,03	3,75
		Clear height "HL" (m)	31,48	31,74	31,91	31,30	31,57	31,75
36m	1,25	Depth "h" (m)	2,72	2,46	2,29	2,91	2,63	2,45
		Excavation volume (m3)	4,26	3,84	3,58	4,55	4,11	3,82
		Clear height "HL" (m)	33,43	33,69	33,86	33,24	33,52	33,70
38m	1,25	Depth "h" (m)	2,78	2,51	2,34	2,97	2,68	2,49
		Excavation volume (m3)	4,34	3,92	3,65	4,64	4,19	3,90
		Clear height "HL" (m)	35,37	35,64	35,81	35,18	35,47	35,66

Note: As a guideline, the following table includes data on monoblock type dimensions required for these metallic supports, depending on the height (H) and the average compressibility coefficient of the ground at a depth of two meters (K).

However, the adoption of one or the other value must be determined for each case and in view of the actual ground conditions and the expected stress for the tower.

To determine the values of the foundation dimensions for each type of **soil**, the Sultzberger equation has been used for soils with a coefficient of compressibility of K=8 kg/ cm2 , K=12 kg/ cm2 and K= 16 kg/ cm2.

These dimensions are given for information purposes, being the responsibility of the site management the calculation and the correct execution of foundations.