FOUNDATION REQUIREMENTS AMPAIR 6000 X 5.5

Read in conjunction with notes below applying to all cases

MAST HEIGHT	**m**	**10**	**12**	**15**
CLASS I Wind Ve_{50} = 70 m/s V_{ref} = 50 m/s V_{av} = 10 m/s				
Design max overturning moment at base	kN.m	130	160	208
Foundation block square side x depth	m	2.7 x 2.7 x 0.6	2.8 x 2.8 x 0.7	3.0 x 3.0 x 0.7
Total concrete	t	10.1	12.6	14.5
Reinforcement designation to BS 4483		A353	A353	A353
Reinforcement mesh square x wire dia	mm	200 x 10	200 x 10	200 x 10
Total number of mesh layers		4	4	4
Approx total weight of reinforcement	kg	191	211	241
Required minimum soil bearing pressure	kPa	14	17	17
CLASS II Wind Ve_{50} = 60 m/s V_{ref} = 42.5 m/s V_{av} = 8.5 m/s				
Design max overturning moment at base	kN.m	100	124	163
Foundation block square side x depth	m	2.5 x 2.5 x 0.6	2.6 x 2.6 x 0.6	2.8 x 2.8 x 0.7
Total concrete	t	8.6	9.3	12.6
Reinforcement designation to BS 4483		A353	A353	A353
Reinforcement mesh square x wire dia	mm	200 x 10	200 x 10	200 x 10
Total number of mesh layers		4	4	4
Approx total weight of reinforcement	kg	163	177	211
Required minimum soil bearing pressure	kPa	14	14	17
CLASS III Wind Ve_{50} = 52 m/s V_{ref} = 37.5 m/s V_{av} = 7.5 m/s				
Design max overturning moment at base	kN.m	82	102	136
Foundation block square side x depth	m	2.4 x 2.4 x 0.6	2.5 x 2.5 x 0.6	2.7 x 2.7 x 0.6
Total concrete	t	7.9	8.6	10.1
Reinforcement designation to BS 4483		A252	A353	A353
Reinforcement mesh square x wire dia	mm	200 x 8	200 x 10	200 x 10
Total number of mesh layers		4	4	4
Approx total weight of reinforcement	kg	97	163	191
Required minimum soil bearing pressure	kPa	14	14	14
CLASS IV Wind Ve_{50} = 42 m/s V_{ref} = 30 m/s V_{av} = 6 m/s				
Design max overturning moment at base	kN.m	60	75	103
Foundation block square side x depth	m	2.2 x 2.2 x 0.5	2.3 x 2.3 x 0.6	2.5 x 2.5 x 0.6
Total concrete	t	5.6	7.3	8.6
Reinforcement designation to BS 4483		A252	A252	A353
Reinforcement mesh square x wire dia	mm	200 x 8	200 x 8	200 x 10
Total number of mesh layers		4	4	4
Approx total weight of reinforcement	kg	78	89	163
Required minimum soil bearing pressure	kPa	14	14	14

A. NOTES applying to all cases:

1. Details and reinforcement generally as AMP061. Reinforcement cover to be 75 min 100 max.
2. M30 nuts securing the base flange to the foundation block to be tightened to 530 Nm after concrete has cured
3. Concrete to be RC30 to BS EN 206-1 or equivalent.
4. Base of excavation should be undisturbed subsoil or well rammed hardcore.
5. Unless ground conditions warrant shuttering, concrete may be poured against soil.

B. NOTES re definitions for all cases:

1. The Vav windspeed definition per IEC 61400-2 (ed2, 2006) is for the annual average wind speed at hub height of the turbine.
2. The Vref windspeed definition per IEC 61400-2 (ed2, 2006) is for the design reference wind speed averaged over 10 minutes.
3. The Ve50 windspeed definition per IEC 61400-2 (ed2, 2006) is for the expected extreme wind speed averaged over 3 seconds with a recurrence interval of 50 years. This is equivalent to the Vref definition used in EN 40.