





29 June 2015



Wilmaplex Pty Ltd.
57 Lathams Road,
Carrum Downs, Vic 3201
Mr Graham storey

RE/ Wilmaplex Post Supports Design Capacity

This is to confirm that Wilmaplex commissioned CEMQA Pty. Ltd. to undertake the task of computing the design capacity of five types of Post Supports as detailed below. The design capacities are given in Table 1.

Table 1 Limit states wind uplift design capacities for a of Wilmaplex post supports

Wilmaplex Post Supports	Fixing	Minimum Post size (mm)	Uplift Capacity for joint group JD4 (kN)
 Full post support	2 @ M10 bolts	Any	9.6
 Post anchor half	2 @ M10 bolts	Any	4.2
 Anchor centre fix	2 @ M10 bolts	90	9.6
 Post anchor centre pin	2 @ 75x10mm coach screws	90	4.3

	2 @ M10 bolts	90	9.6
Post support bolt down			
	2 @ M12 bolts	Any	19.8
Post support tornado			

Notes:

- Use 4.6 grade bolts conforming to AS1111, the driving of the bolts shall be in accordance with the requirements in AS1720.1.
- Use galvanised coach screws.
- The distance from the top of the concrete to the underside of the post anchor base must be less than 300mm.
- G300 Z275 is used with 4mm thickness.
- It is required that all post must bear on the pose anchor base, and a minimum post size of 90x90mmm shall be used.
- A structural engineer must check the capacities in the above Table in case of substantial wind loads and also to check the adequacy of concrete anchorage.
- A $k_1=1.14$ was used based on AS1170 to determine the wind uplift capacity.
- The support tornado downward loading is limited to 20kN at a height of 75mm from foundation.

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