
SPECIFICATION FOR 2.4m HIGH STANDARD TYPE CONCRETE PALISADE FENCE

1.1. WORKMANSHIP AND FINISH IN GENERAL:

All concrete elements shall be manufactured from sound concrete, free of structural defects, complying with any sample if previously submitted. All elements shall have off-shutter finish on three sides, with the fourth side having a wood floated finish.

1.2. SHAPE & DIMENSION:

All elements shall retain the required shape and be true to the respective and specified dimensions as indicated in 2.1, 3.1 and 4.1.

1.3. PERFORMANCE REQUIREMENTS (STRENGTH):

The required concrete compressive strength in all prefabricated prestressed elements shall be a minimum of 40 Mpa at 28 days, determined in accordance with SABS method 863.

1.4. CURING:

All concrete elements shall be cured in accordance with the recommendations given in SABS method 863

1.5. REINFORCEMENT:

All steel used for reinforcements in prefabricated elements shall be high yield steel with a minimum characteristic strength of 410 Mpa, and shall be free of rust, loose scale, flux, grease or oil substances and shall in general comply with SABS 920 and BS 4482.

1.6. PRESTRESSING STEEL:

All wires shall be of the crimped variety and shall be free of rust, loose scale, flux, grease or oil substances and shall in general comply with BS 5896.

2. POST:

2.1. The post shall be 3.0m long and slotted, as per drawing, to take the horizontal load bearing rails. The front edge shall be curved. The back section shall be 100mm wide tapering to the front to 60mm. The thickness of the post shall be 160mm. Posts shall be spaced at 2.0m centre.

2.2. The posts shall be pre-stressed with 4 x 4mm wire graded 1550 / 1700 Mpa, stressed to 75% of the U.T.S. (Ultimate Tensile Strength). Prestressed wires shall be cut at the surface level and sealed. The top of the post shall be angled at 45°.

3. PALES:

- 3.1.** The pales shall be 2.4m long with two 10mm holes to take 8mm carriage type bolts.
The front edges shall be curved.
The back section shall be 70mm wide tapering to the front to 60mm.
The thickness of the pales shall be 55mm.
Pales are spaced at +/- 165mm centres.
- 3.2.** The pales shall be reinforced with four 4mm hard-drawn wires graded 550 / 650 MPA (SAE 1008 Carbon Rated).
Wires shall be cut to a length of 2.2 metres and centred across the length of the element with a minimum concrete cover of 15mm.
The top and bottom of the pales shall be angled at 45°.

4. RAILS

- 4.1.** The rails shall be 1.98m long with eleven x 10mm holes to take 8mm carriage type bolts.
The rails shall be 125mm wide and 60mm deep.
All rails are to be grouted into posts.
- 4.2.** The rails shall be pre-stressed with four 4mm wires graded 1550 / 1700 Mpa, stressed to 75% of the U.T.S. (Ultimate Tensile Strength).
Prestressed wire shall be cut at surface level.

5. BOLTS:

- 5.1.** All nuts, bolts and washers used for the erection of the fence shall be electro-galvanised (zinc and chrome passivated).
- 5.2.** All bolt holes will be grouted at the rear with cement mortar.

6. PVC WASHERS:

- 6.1.** Optional 8mm large and small PVC washers can be used. The large washer (50mm outside diameter) is placed between the rail and the pale and the small washer (20mm outside diameter) at the back of the rail replacing a standard steel washer.

7. ERECTION:

- 7.1.** Each post shall be embedded to full depth in concrete in a foundation hole of at least 460mm x 460mm and a depth of 600mm.
- 7.2.** The sizes specified in par. 6.1 are for firm soils and it may be necessary to increase these sizes for softer yielding soils
- 7.3.** Foundation shall be a minimum of 15 Mpa at 28 days.