



**WORK
RIGHT**

EXPANDA Fence Installation Manual

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1.0 Introduction

The intention of this document is to provide the reader with a basic understanding of the construction methods, features and associated safety procedures to be adopted.

This document is intended as a working document and as a result will be subject to amendment where products, materials or methods change to improve the quality of our product and safety on work sites. It is recommended that Safe Work Method Statements to be carried out to all of the activities mentioned in this document.

2.0 Delivery of *EXPANDA* Fence

2.1 Packing and Transport

Product components example: Stirrups, horizontal rails and kickboards shall be stacked onto custom built stillages and secured using metal strapping (refer figure 1). Shrink-wrap may be used on some of the components to secure them, example: kickboards.

All stillages will be clearly identified with the following information;

- A. Content of stillage
- B. Working Load Limit of stillage
- C. Maximum number of components in stillage



Figure 1

2.2 Site Handling of Components

2.2 Site handling of components

Stillages can be lifted directly from the truck by the use of electric or gas operated forklift and be transported to a pre-determined location for storage.

All components have been designed to wheel into a standard site hoist with the aid of a 1.8m long pallet jack (minimum 2 persons). Components than can be transported to required levels on the building.

Stillages can alternatively be lifted from truck by the site crane using chains or soft slings around the base of stillage (this is to be carried out by ticketed dogman).

Stillages shall then be lifted onto pre-installed loading platforms and using pallet jack wheel onto floor slabs.

3.0 Installation of Stirrups

3.1 Features of stirrup

The stirrup is the vertical component used to support the horizontal rails (commonly called posts). Its patented design has features which include;

- Lead stands and light stand adaptation
- Strength
- Harness anchor points (1 person only)
- Provision to provide exclusion zones (see figure 2 & 3)



Figure 2



Figure 3

3.0 Installation of Stirrups continued

3.2 Installing stirrup

The stirrup is located at the edge of slab at 90° (see diagram 1). Using a 10mm Diameter Masonry drill bit and rotary drill proceed in drilling holes at the depth of no less than 75mm. The location of the hole is indicated on base plate (see figure 4). Once holes are drilled using a hand or electric blower, clear holes free of concrete dust prior to installing anchors.



Figure 4

Note: Holes must be thoroughly free of concrete dust to ensure correct embedment of anchors (see diagram 2).

3.0 Installation of Stirrups continued

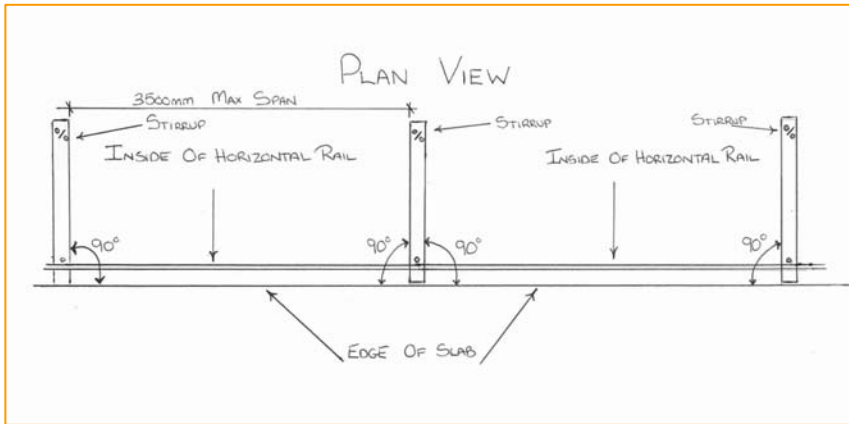


Diagram 1

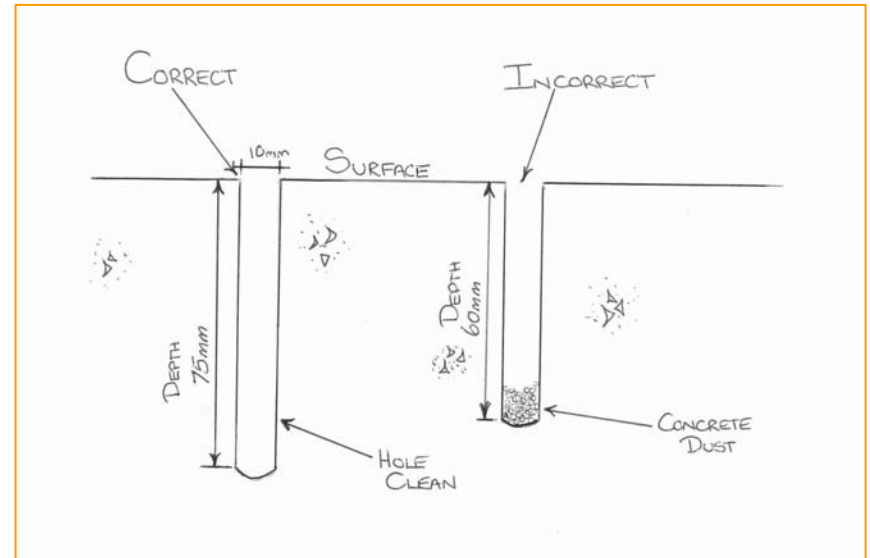


Diagram 2

3.0 Installation of Stirrups continued

Once holes are prepared using an electric impact driver, proceed in screwing down through base plate of stirrup ensuring anchor has firmly clamped down base plate of stirrup to floor slab.

Note: Anchors shall be engineered load rated M12 under cutting concrete screw anchors. Check with manufacturer for correct anchors prior to use.

Stirrups shall not exceed spans of 3.5m between stirrups. (Based on typical horizontal rails) Repeat installation mentioned around the perimeter of the building (see section 4.3 for spans).

Note: All works to be carried out behind installed screens by builder to ensure safety of workers.

4.0 Installation of Horizontal Rails

4.1 Horizontal Rail Features

The horizontal rails locate into pre-installed stirrups. Its patent design allows rails to increase or decrease spans allowing product to follow any building footprint there may be through construction stages (see figure 6).



Figure 6

4.0 Installation of Horizontal Rails continued

4.2 Method of Installation

The horizontal rail shall pass through gate of stirrup and rest on height locating foot fitted to the stirrup, in a clockwise direction. A foot is pre-fitted to horizontal rails which folds down allowing product to stand unsupported (see figure 7). Retract outer rail 200mm to allow clamping of horizontal rail to stirrup by winding crank handle in a clockwise direction (see figure 7.1). Repeat procedure mentioned above with additional horizontal rails. Once you have installed a minimum of 2 horizontal rails you are able to retract outer panel locating into next stirrup gate, allowing you to clamp off both rails simultaneously (minimum overlap 100mm).

Note: 2 persons to install horizontal rails behind pre-installed screens by builder.



Figure 7



Figure 7.1

4.0 Installation of Horizontal Rails Continued

4.3 Span Formula

Spans of horizontal rail shall vary due to site conditions.

Formula – smallest retractable length x 2 = answer -500mm = maximum span

Example 1: $2\text{m} \times 2 = 4\text{m} - 500\text{mm} = 3.5\text{m}$

Example 2: $1\text{m} \times 2 = 2\text{m} - 500\text{mm} = 1.5\text{m}$

4.4 Hinges

The horizontal rails can be installed to suit any floor template and retain its structural integrity at all times, even if the floor is curved. Patent designed hinges have been developed so that once fitted can turn at any angle. Hinges mount to the top and bottom of the horizontal rails by a nut and bolt connection. Attach 2 horizontal rails together creating a gate like situation (see figure 8).



Figure 8

5.0 Installation of Kickboards & Rubber Flaps

The kickboards are located through the foot of the horizontal rails and stirrups. Its patent design allows rubber flaps to be fitted to close off penetrations on edge of the slab.

5.1 Installation of kickboard

Kickboards are generally 250mm in height and 2.2m long. They are installed by passing through the foot of the horizontal rail and stirrup (see figure 9). Kickboards have horizontal grooves on one face and shall always be fitted facing internal part of the building. The kickboards shall lap a minimum of 200mm. Once located the horizontal rail foot has a pre-installed clamping bolt and will be tightened by hand. This will secure kickboard from moving sideways.



Figure 9

5.0 Installation of Kickboards & Rubber Flaps continued

5.2 Installation of rubber flap

Once kickboards are fitted, rubber flaps shall be fitted if required to the back of kickboards by clipping into groove to cover up any penetrations on slab edge generally caused by façade brackets. To gain access to slab bracket simply lift rubber and clip to top groove (see figure 10 & 11).



Figure 10



Figure 11

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The logo for WorkRight features the words "WORK" and "RIGHT" stacked vertically in a bold, black, sans-serif font. The text is centered within a tilted orange parallelogram shape that points towards the bottom right.