DURA**PANEL**™

A STEP-BY-STEP GUIDE TO INSTALLING YOUR FENCE

Boundaryline

INSTALL
GUIDE

Boundaryline

INTRODUCTION

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Thank you for choosing Boundaryline Dura**Panel**™ Fencing. This product will provide you with many years of trouble free protection if installed in accordance with the directions outlined in this document.

The recommendations detailed in this guide are formulated along the lines of good building practice. They are not intended to be an exhaustive statement of all the relevant data.

If you have any questions, please contact our Technical Team on 0800 003 006. We are always happy to help in any way we can.

BEFORE YOU START, READ THIS

- This guide does not apply to any fences over 1.8m in height. If your fence is greater that 1.8m, please seek further advice from Boundaryline.

- Describe your site details when ordering materials.

- Identify your soil type/ ground conditions. Refer to the table in Step 2. This will determine the concrete and footing details required.

- Make sure you are aware of underground services before you start digging! These could be gas, electricity, or water mains. Call your local council for more information.

- Check your local council regulations on boundary fencing.

- Check the delivered material for the correct number of components and general condition before beginning your installation.

TOOLS LIST

- Make sure you choose the right tools before start installing your fence.

TOOLS

☐ Tape Measure
☐ Spade
☐ Shovel
☐ Level
☐ String Line
☐ Concrete

OPTIONAL

☐ Powered Auger - 300mm diamenter
☐ Hacksaw or powered metal cutting saw
☐ Laser-level

SAFETY GEAR minimum required

☐ Safety Boots
☐ Gloves
☐ Helmet
☐ Eye Protection
☐ Hearing Protection
☐ Sun Protection

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IMPORTANT

It is recommended that the reader pays particular attention to those items identified as IMPORTANT in this manual to ensure satisfactory long-term performance.

A STEP-BY-STEP GUIDE **TO INSTALLATION**

STEP 1 – LAYOUT YOUR FENCE-LINE

a. Determine and mark any legal boundaries and/or underground services.

b. Measure out each fence-line and mark the post positions.
Determine post centres as follows:

Panel Length	+	Clearance	+	Post Size	=	POST CENTRE
e.g. 2250mm	+	5mm	+	50mm	=	2305mm

c. If the fenceline length does not work out as multiples of the standard panel length - adjust the length of the last section, or the last few sections, to suit and cut panels to fit.

d. Use a string line or laser-level to make sure any straight lines are aligned.

STEP 2 – DIG POST HOLES

Dig post holes using hand tools and/or a powered auger. See Tables A & B for required post-hole dimensions and depths

TABLE A - *Required Post-hole Dimensions*

Post Size	Suggested Hole Diameter
125 x 125	300mm
150 x 100	300mm
150 x 150	300mm
200 x 200	400mm

TABLE B - *Required Post-hole Depths*

	Post Length	Out-of-ground Height	Post-hole Depth
3-Rail	1.8	1.1 - 1.2	0.6 - 0.7
2-Rail	1.5	0.95 - 1.05	0.45 - 0.55
2-Rail High	1.8	1.1 - 1.2	0.6 - 0.7
1-Rail	1.2	0.65 - 0.7	0.5 - 0.55

Gate posts are usually 0.3m longer / 0.3 deeper in ground

MARKING OUT YOUR POST HOLES

Post centres will be subject to rail length supplied.
Eg, 1.8m rail will have approx 1.9m post centre.

Start post may be existing or temporary peg

Marker pegs

Mark out post centres = bottom rail length + 10mm (typical dimensions may be 2350 to 2365mm)

All holes should be straight (i.e. Sides parallel or wider at the bottom than the top

Diameter of all holes is **200mm** minimum.

Dig holes according to depth chart below
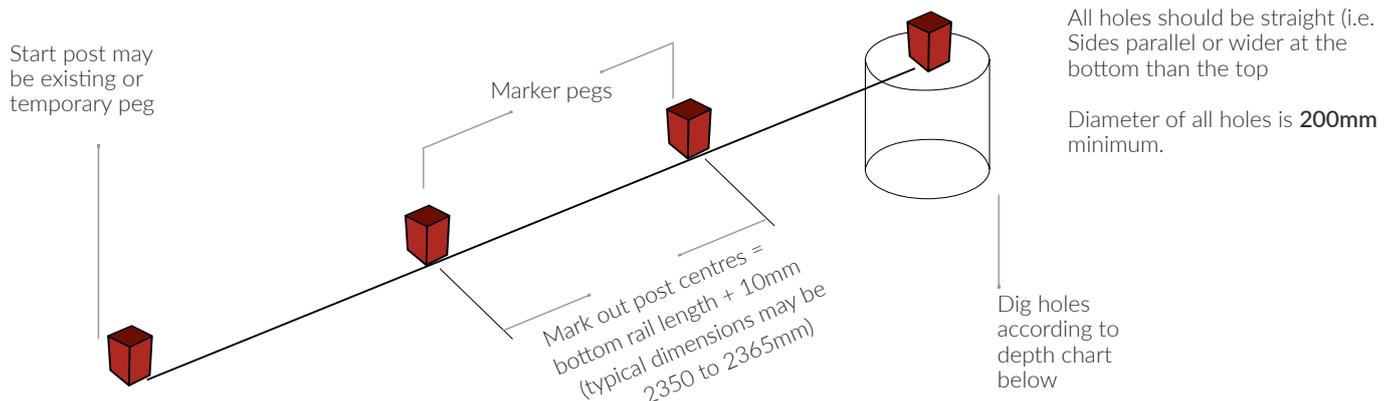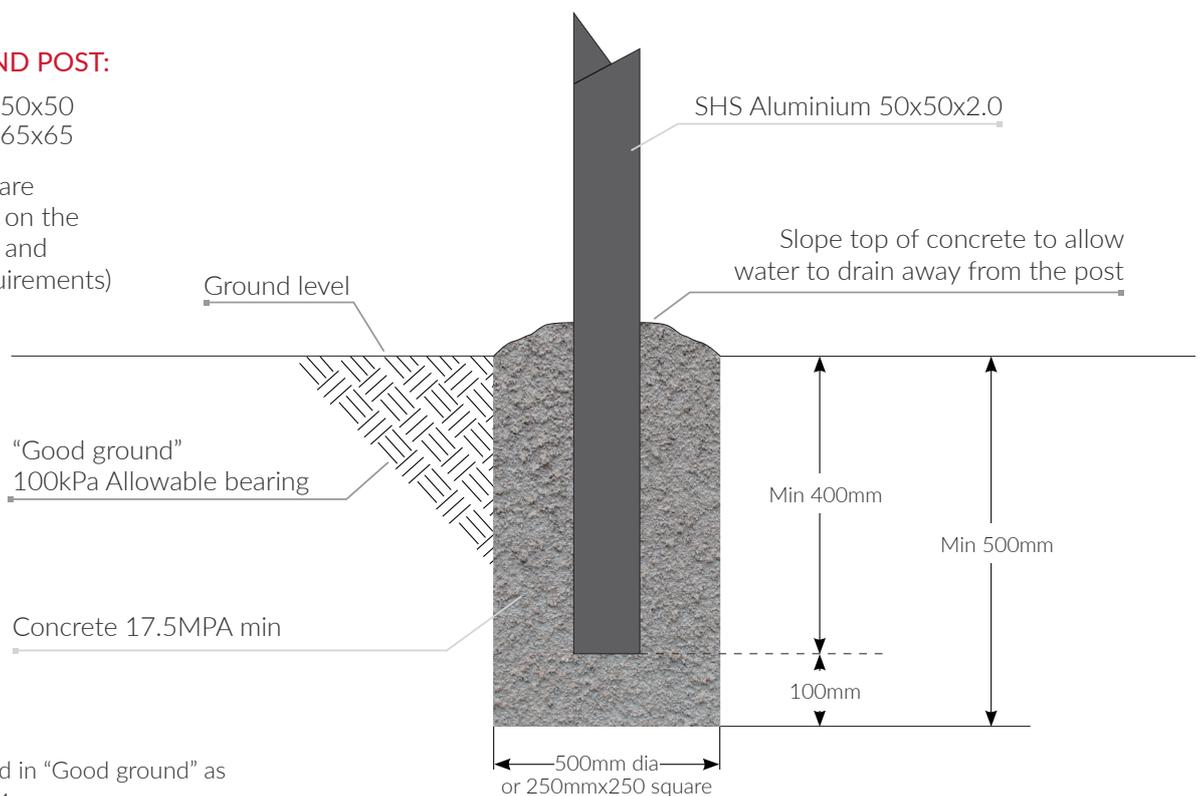
STEP 3 – INSTALLING THE POSTS, IN GROUND

Place the post into the hole and set the height carefully using a tape measure, or preferably a laser level.

a. CAUTION: Ensure you allow enough height on the post to allow for: panel height + ground clearance (suggest 50-100mm) + additional 25mm for bracket and cap clearance.

b. Fill the hole with concrete around the post taking care not to keep the post in the correct position.

c. Check with a spirit-level regularly to ensure the post is plumb.

d. Ensure the post remains square to the fenceline and does not turn as you lace concrete around it.

e. Repeat Steps **a.** to **d.** for all posts.

f. Set the spacing of the posts at the length of the panel, plus approx 5mm clearance (as per STEP 1).

TIP: cut a spacer-stick out of timber at the correct length between posts. The panel brackets are 30mm deep – so this allows for some adjustment if required (except where a PS1 is required).

IN-GROUND POST:

DuraPanel 50x50
DuraPanel 65x65

(Post sizes are dependent on the application and design requirements)

SHS Aluminium 50x50x2.0

Slope top of concrete to allow water to drain away from the post

Ground level

"Good ground" 100kPa Allowable bearing

Concrete 17.5MPA min

Min 400mm

Min 500mm

100mm

500mm dia or 250mmx250 square

*Posts to be installed in "Good ground" as defined by NZS3604

NOTES:

- For standard 50x50 aluminium posts, a fairly dry concrete mix can be used which will hold the post in place without any bracing while the concrete dries. However, the site must be re-visited before concrete sets firm to recheck post alignment and correct if required.

- Any heavier posts (e.g. gate posts) should be concreted in place and braced until the concrete is dry.

- If the fenceline follows any contours in the land or the fenceline is curved, regularly check the height of the posts as you work down the line to ensure a good visual line along the top of the fence.

STEP 4 – INSTALLING POSTS, BOLT-DOWN OPTION

a. Ensure the surface you are bolting the post to is firm, level, and clean. (See Figure below)

b. Fix the posts in place with four fixings of the correct type for the situation.

Dura**Panel** Post DFP5013 or DFP 5016

Bolt-down post:

DuraPanel 50x50
DuraPanel 65x65

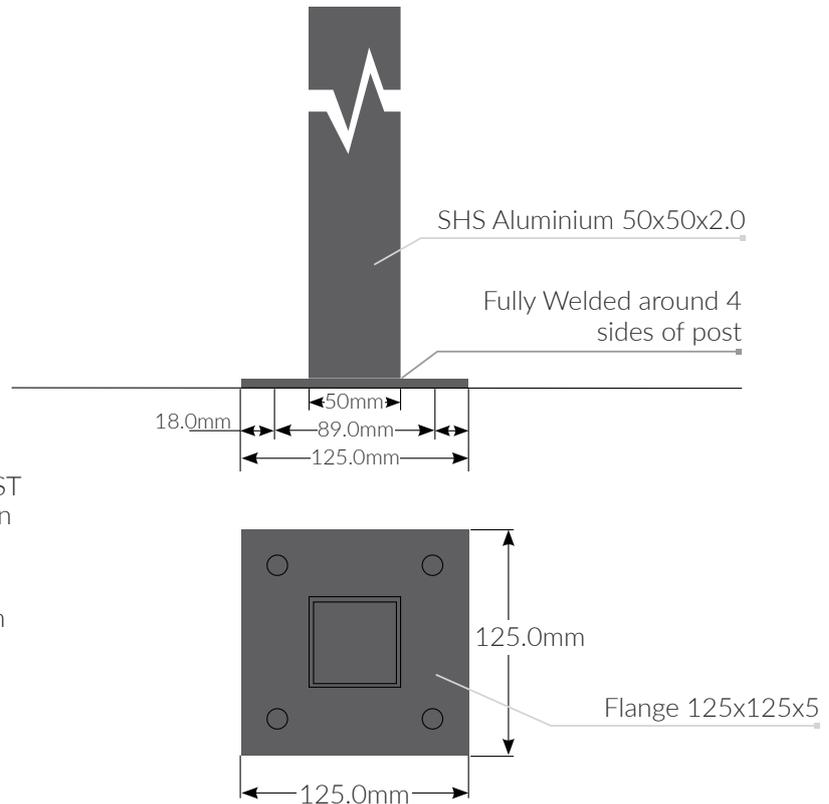(Post sizes and fixings are dependent on the application and design requirements)

SHS Aluminium 50x50x2.0

Fully Welded around 4 sides of post

50mm

18.0mm   89.0mm

125.0mm

Fixings:
(indicative)

In concrete: 4 x M12 HILTI HST stud anchos or similar with min 70mm embedment.

In timber: 4 x 12mm coachscrews with min 120mm embedment.

125.0mm

Flange 125x125x5

125.0mm

STEP 5 – INSTALLING THE PANELS

a. For straight and level fencelines, all the posts can be installed and carefully lined up, and then the panels can be installed once the concrete has set. This is the quickest and easiest method.

b. For undulating or curved fencelines – panels may need to be installed along with each post and braced until the concrete has set.

c. The panels are held in place with the DuraPanel brackets:

1. Slide a bracket onto each rail.

2. Ensure the tab of the bracket is positioned under the top rail.(can be either way up on the bottom rail)

3. Fit the panel in place and check for level

4. Screw the brackets into the posts with the tek-screws supplied.

PANEL TO POST
Fixing with DuraPanel
external bracket
DSB4040
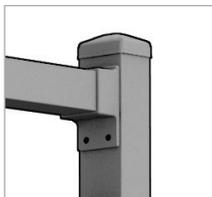
NOTES:

- When cutting panels or posts to length, use a hacksaw, or a power saw with a sharp diamond-tip blade (or tungsten-tip on aluminium). Do not use a grinder or abrasive cut-off wheel as this will burn the powder-coated finish. Do not leave swarf on the fence as it can rust.

! **IMPORTANT** **When cutting steel posts or panels to length, the cut ends must be painted with zinc-rich paint to prevent corrosion.**

- Be careful not to allow the chuck of battery drill to rub on the bracket, this can damage the powder-coated finish.

- Take care when handling all components to avoid damage to the powder-coated finish.

STEP 6 – HANGING THE GATES

a. Gate hinges and latches vary depending on the gate size and/or security requirements. Refer to the instructions with the gate/hinges for the correct clearances.

b. Ensure the gate-posts are set in the correct position allowing clearance for the hinges and latches and clearance between double gates.

**!** **IMPORTANT** **Post lengths required will increase accordingly to cater for these ground conditions.**

Soil Type	Minimum Hole Depth	Approximate Concrete Required
Rock	300mm	1 bag per hole (20Kg bag)
Clay/Firm Earth	600mm	2 bag per hole (20Kg bags)
Sand/Loose Fill	900mm	3 bag per hole (20Kg bags)

CONTACT BOUNDARYLINE FENCING

BOUNDARYLINE'S TECHNICAL SUPPORT: 0800 003 006

To learn more visit: www.boundaryline.co.nz

This document is only intended to be a general guide, as every property and situation is different. Any installation work, including the use of power equipment is completely the responsibility of the person(s) installing. All persons using power equipment must be trained and certified to use the equipment and must wear all applicable personal protection gear. Terranota Ltd cannot accept any responsibility for any faulty installation or damage or injury arising from installation work.
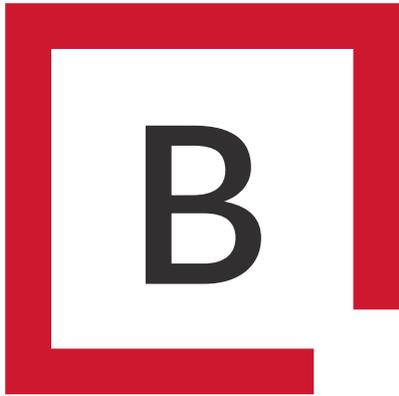
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