

## DIYdeals - Assembly Instructions for Raised Garden Decks

**Size: 4.0m (13'2") wide**

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### **Before commencing :**

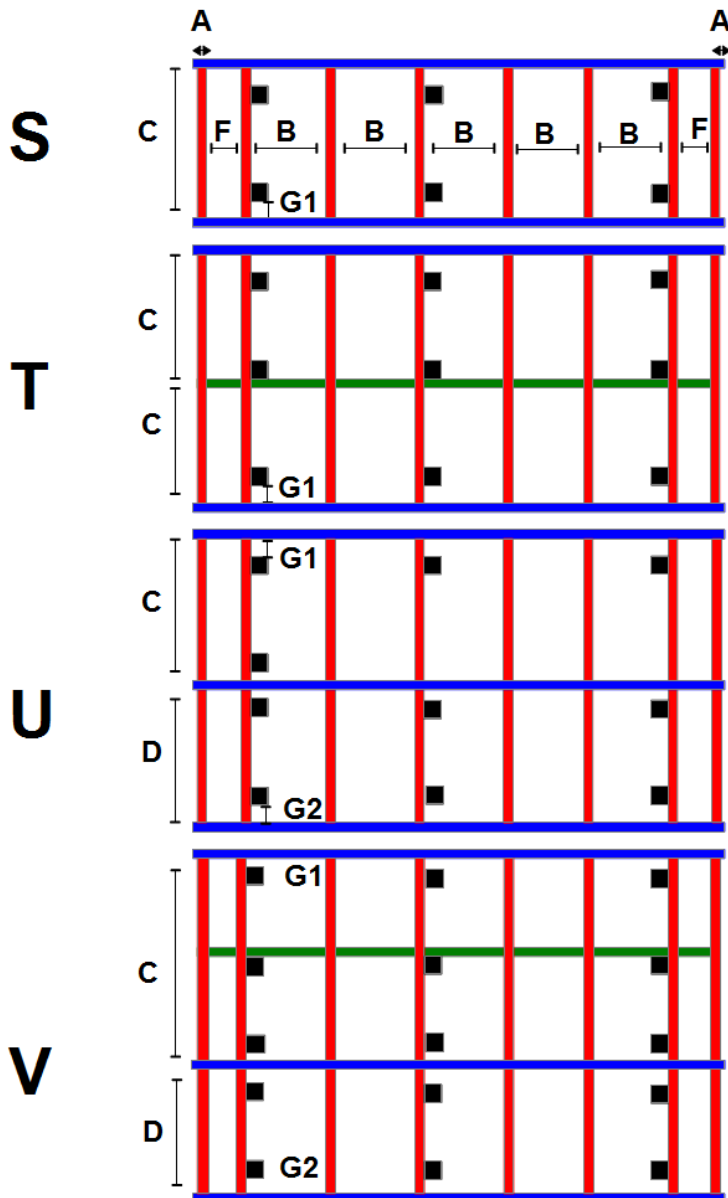
Check the size of deck you are building from the list below and if necessary cut the joists 'C or D ' to the correct length.

Then please follow the instructions which are listed beneath the sizes. Some decks have a deck board overhang of the front and back joists - it is best if you lay out the deck boards first over the joists to see if an overhang is required. *The drawings are not to scale.*

**NB the deck boards are designed to be used with the fine ribbed as the surface as it offers a better slip resistance, but you can use the grooved side if preferred.**

### **Choosing your site**

Choose a site where the front to the deck will have the lowest step-up. The site can slope downwards up to 600mm. Balustrade should be used on falls of over 300mm. Mark out the perimeter with pegs and line or use 4 joists. Check for squareness by measuring for equal diagonals. Clear any obstructions that may interfere with the deck or pergola - ground levelling is not required as the posts will be used to level the deck.



A= side recess 5/7cm 2/3", gap between joists B= approx 60/62cm 24/25" F = 39/41cm 15/16"  
 C & D = support joist P = number of posts, G1 & G2 =the gap between front and back joists  
 O/H is the approx. deck board overhang of the front and back joists

size 4m wide x	C =	D =	P =	G1 =	G2 =	O/H =
2.20m S	2.0m		6	15cm 6"		5cm 2"
2.70m S	2.5m		6	30cm 12"		5cm 2"
3.10m S	3.0m		6	30cm 12"		0
3.20m S	3.0m		6	30cm 12"		5cm 2"
3.70m T	3.55m		9	15cm 6"		3cm 1"
4.15m T	4.0m		9	30cm 12"		3cm 1"
5.20m T	5.0m		9	40cm 16"		5cm 2"
6.25m U	3.0m	3.0m	6+6	30cm 12"	30cm 12"	5cm 2"
7.15m V	5.0m	2.0m	9+6	40cm 16"	15cm 6"	0
8.20m V	5.0m	3.0m	9+6	40cm 16"	30cm 12"	5cm 2"

## Marking Out

Mark out where the Metal Post Anchors will be positioned, (see plan - small black squares) (please read the separate Pergola assembly instructions first if fitting a pergola over the raised deck- see note below) - when in place they will have their **bolts facing to the front or back** and their outside edges will be no more than approx. 2.1m apart - both ways and distances to outside should be equal. Check for squareness of the post anchors by measuring for equal diagonals

Cut a piece of post to use inside the Post Anchors when driving them into the ground. **With the Bolts facing the front or back so that they do not interfere with the joists** drive the Anchors into the ground continually checking and adjusting for uprightness and squareness.

Cut the post so that there will be short posts each coming in line with the top of the Support Joists from the base of the Post Anchor. Fix Posts into Post Anchors (where possible, ensure un-cut edge of the post is at the bottom into the post anchor). Make cuts at the top of the post with a slight fall from the support joist to assist clearing rainwater (this can be done after the support joists are fixed -see note 2). **Brush Preserver onto the cut surfaces of the Posts**

Posts may require easing to fit the Post Anchors - **Brush Preserver onto the cut surfaces** - Check verticals & tighten the bolts on the Post Anchors to ensure good grip. **It is advisable to concrete in the Post Anchors after fixing all the joists.**

## Fixing Support Joists to Posts

Select the strongest joists with the fewest and smallest knots for use as the 3 main Support Joists which are attached to the posts.

Ensure that the first Support Joist will be fixed to the Post which will be on the highest ground. (i.e. the one where the Support Joist will be nearest the ground and preferably the front entrance to the Deck). Place the first Support Joist on the outside of the Posts running from front to back - so that there is an equal projection from both Posts

Position the first Support Joists against first Post approx. 30 mm off the ground at the front - (resting on a deckboard) and level against the back post - if necessary use one of the 80mm screws to level & temporarily fix the joist onto the front and back post before drilling the front post and use a long 11mm HSS Drill Bit to make a hole all the way through the joist, the metal post anchor socket (if necessary) and the post. (200mm x 11mm drill bits can be bought from the price list as an optional extra) - drill the hole 40 mm from the bottom of the Support Joist and 10 mm offset from the centre of the post. Do not drill the second hole into the same post yet because it is necessary to create the levels with all the other Posts and Support Joists first.

Temporarily fix Joist to the Post with a Bolt.

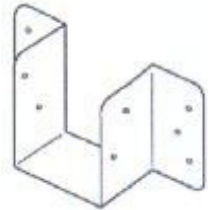
Checking that the level of the first Support Joist is correct, position it against the back Post and drill, as above. You may not be drilling through the metal of the Post Sockets if there is a slope. Using one of the other timbers as a straight edge align & level the next Support Joist with first Support Joists and position against the second front Post matching projections and drilling as above. Checking that the level of the 2<sup>nd</sup> Support Joist is correct, position it against the 2<sup>nd</sup> back Post and drill as above. Repeat as the 2<sup>nd</sup> Support Joist for the 3<sup>rd</sup> Support Joist. Check that the Joist attached to 1st 2 Posts are level with the one attached to 2nd 2 Posts and the 3<sup>rd</sup> 2 posts. Adjust if necessary. For decks over 3.6m deep there is a centre post which can be fixed into place after the support joists are in place.

## Drilling a second hole in each post, fixing the Washers and tightening the Bolts

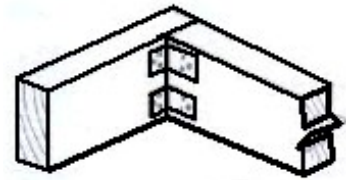
When all Support Joists are level - Drill a second hole 40 mm from the top of the Support Joists and 10 mm offset the other way from the centre of each post. Do this for all Posts. You may not be drilling through the metal of the Post Sockets for these upper holes - push all 8 Bolts through the Support Joist and the Post or Post Socket using a washer against the post at the back (or between the Post and Joist if the bottom bolt is against the post anchor and the top one is clear of the post anchor before tightening the nut - ensuring the washers have sunk a little into the joists. There is no need for a washer if the bolt is fastened against the post anchor - use the spare one to help fill the gap created by the post anchor.

## Fixing Outer & Centre Joists - Hanging Front & Rear Joist from Support Joists

Position Front Joist against front of all 3 main support joists and ensure equal projections from both outside Support Joists. Place 3 Joist Hangers so that they rest on top of the 3 Support Joists i.e. open end pointing downwards with the back against Front Joist and when correctly aligned - flush with the top of the Support Joists and with equal projections - mark the positions on Front Joist where the 8 screws in each Hanger will be fixed.



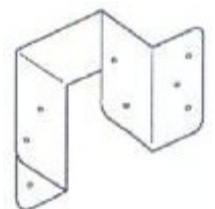
Remove and fix the hangers to Front Joist using the Small Screws. To give maximum strength the screws will be a tight fit and may need 'starting' with a tap from a hammer or by using an awl (bradawl). Place Front Joist over Support Joists so that it rests on the Hangers - secure to all Support Joists by screwing into the timber on one side. Repeat for rear joist.



## Fixing the Side Joists to Front & Rear Joists and Hanging the Centre Joists

Lay the Side Joists on the ground with the inside face pointing upwards. Position the longer side of the Corner Brackets on the Side Joists so that they are flush with the end and are 20 mm in from the top & bottom. Use 3 of the Screws to fix each Corner Bracket to the Side Joists. Ensure that the tops of all Joists are flush and fix the Side Joists, using Small Screws, into each end of the Front & Rear Joists - this can be flush (especially when joining two decks together) or, if a single deck, up to 60mm in from each end to provide an overhang for the deck boards.

Mark the Front & Rear Joists (see guide above for distances) for the remaining Centre Support Joist. Position the remaining Hangers at the bottom of the Front & Rear Joists centrally across each of the 2 marks with the open end pointing upwards, so that the Centre Joists will later rest on the Hangers. Fix the Hangers with 8 Small Screws onto the Front & Rear Joists. Drop the Centre Joist into place - and secure by screwing into the timber on both sides.



## **Fixing Noggins between Support Joists (only for C or D support joists over 3.6m)**

Cut the 4" planed timber noggins to fit between all joists in line with the centre posts (marked in green in the drawing above) and **brush preserver onto the cut surfaces**. Position them in line with the **bottom** of the Support Joists and fix with the 50mm screws screwing at an angle into the support joists.

**Noggins are used to prevent distortion on the Support Joists and should not be left out.**

**Before fixing Balustrade and/ or Deck Boards concrete around post sockets.** Dig out approx. 300 mm deep and 400 mm square around each post socket, **recheck they are upright & square** with plumb rule or level and fill with concrete to prevent movement

If using a pergola, please see separate pergola assembly instructions which are found on the DIYDeals assembly page at <http://www.diydeals.com/assembly.php>

**N.B. Always fix Pergola Posts, Supports, and Tops before fixing Deck boards**

If using balustrade, please see separate balustrade assembly instructions, also available from the DIYDeals assembly page at <http://www.diydeals.com/assembly.php>

**Please note that the newel posts must be fitted before the deck boards**

## **Fixing the Deck Boards**

Please check from the list above as to how many deckboards are used & the expected overhang.

**It is best practice to lay all deckboards out onto the joists to check positioning before screwing with equal spacings**

Position the first deck board, with the correct overhang, and ensure it is flush at the ends of the front joist. Screw in 2 decking screws in line with each joist, the front one going into the front joist.

Screw in 2 decking screws approx. 25mm from the front and back in line with each joists. The back board should overlap the back joists the recommended overhang (see list above). If the overlap is not required the gap between the deckboards can be reduced but should not be less than 3mm as this may cause buckling and pushing up of the deckboards in the winter as the deckboards swell.

## **Finishing & Maintenance**

As all timbers are pressure preserved further treatment is not necessary and the timber will fade to a natural grey colour. If preferred, the deck may be coated with **Decking Stain** to the colour of your choice. If there is any build of moss, after winter use a jet sprayer or an anti-fungicidal and hose down to remove. To restore the colour apply a further coat of **Decking Stain**.

ii. **Dispose of all waste timber in your dustbin - do not burn. Wash hands after handling timber - especially before eating. Always wear safety glasses when using power tools.**

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