

# Timber—Naturally Better



For independent advice and inspiration

## Installing Timber Decking to Steel Sub-floor Sections.

### Introduction

At the Timber Advisory Service, we are receiving an increasing number of home owners, architects, designers and builders designing both domestic and commercial deck areas utilising either RHS and/or C section galvanised steel sections for bearers and joists under solid timber decking. The questions usually deal with the method of fixing to the steel joists and other things to be aware of.

Designers should note that the joist spacing for steel joists **must be the same** as for timber joists ie: 450mm centres for 19mm decking and 600mm for 30-32mm decking timber, irrespective of the decking board width.

### Fixings

For domestic deck installations, the recommended screws are Type 17 – 14 10g x 50mm for 19mm timber thickness and 14g x 75mm for 30-32mm thickness decking. These screws should be hot dipped galvanised or stainless steel with a self-embedding countersunk head and 5.0mm hex drive socket. Special 5.0mm hexagon drive bits are available to fit standard power tools. These screws are also a self-drilling type but in hardwood timber and steel a pilot hole of the appropriate diameter is necessary.

Screws should be placed no more than 20-25mm in from each edge when installing the wider decking like 130-135mm and no more than 15-20mm in from each edge with the narrower boards like 85-90mm.

### Installation

Both the timber and the steel RHS/C section joists **must be predrilled** with a drill size that is the same as the screw shank diameter, NOT the actual overall screw thread diameter. For example, for a 14g screw, the drill size should be 4.0mm dia. and for a 10g screw the drill size should be 3.0mm dia. The power drill used should have sufficient power/torque to drive the screw head into the timber surface, as the screw head incorporates small ribs which do the countersinking process into the timber.

These Type 17 screws will self drive easily into the steel.



100mmx14g

75mmx14g

5mm hex  
drive bit

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**Free Timber Advisory Service Tel: 03—9875 5010**

Supported by



*Experts in Timber*

**Email: [advisory@timber.asn.au](mailto:advisory@timber.asn.au)**

**Provided by the Timber Advisory & Display Centre**

**180 Whitehorse Road, Blackburn Vic 3130**

**Opening Hours: Monday—Friday 9.00am-5.00pm**

**Saturday—9.00am—4.00pm Closed Sunday**