

DECKING FITTING INSTRUCTIONS

A step by step guide

First things first

Good looking decks require careful planning and design as well as good quality materials. It is important at all times to use safe construction techniques and common sense. If you are in any doubt contact your local planning or building control office, reputable building contractor, structural engineer and/or Richard Burbidge technical department.

There are a number of aspects you should take into consideration when planning your deck.

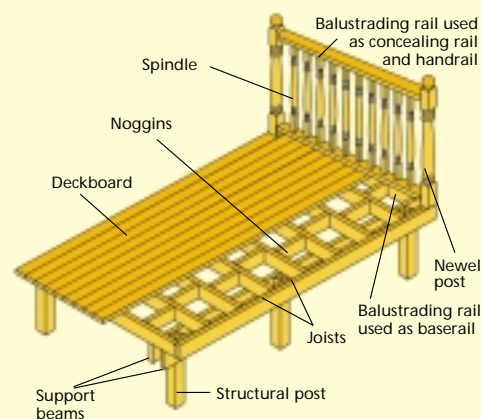
1. Will it be functional, decorative, or both?
2. As an alternative to a traditional paved patio, it needs to be large enough to allow comfortable use of seating, patio tables and chairs.
3. Will the deck be at ground level or elevated?
4. Check the depth and position of underground pipes, cables and services. Positions of inspection chambers and manhole covers should also be considered when designing and planning your deck.
5. Will the deck be used for privacy or as a focal point? Do you want to make the most of the sun or use the deck for shade? Plan the deck to take advantage of views, or combine with trellis, balustrading and/or foliage to screen unwanted ones.
6. Reflected heat off a south facing wall will turn a cool deck into a



warm one. Trees provide cool shade in summer and warmth in winter for south facing decks. A partial screen, foliage and/or balustrading can help diffuse wind without completely blocking it, allowing some cooling on warm days. How well you consider the climate of your area will have a great deal of bearing on how often you use your deck.

During installation all cut ends including deckboards, joists, posts and balustrading should be treated with Richard Burbidge end seal.

GETTING STARTED



As well as correct planning and construction, successful deck building requires careful site preparation.

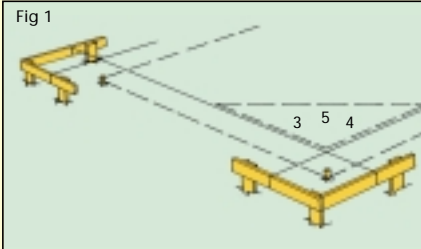
The area to be decked should be completely cleared of all weeds and vegetation.

Remove some of the top soil and then compact and level the ground, allowing for a slight fall/slope towards the outer edge of the deck, which will enable water to drain away from the underside of the completed deck.

Soak the area with a proprietary weed killer following the manufacturer's recommendations and cover with a black polythene sheet or membrane. To hold the sheet in place use a covering of 50mm of gravel as this will drain easily and discourage any regrowth.

If the deck is to be attached to the side of a house, the finished level of the deck should be at least two brick courses down from the damp course and this will contribute to how much ground is removed.

There are two types of basic deck construction, ground level and elevated, the latter being useful where the ground slopes away or when you want to create a deck on different levels.



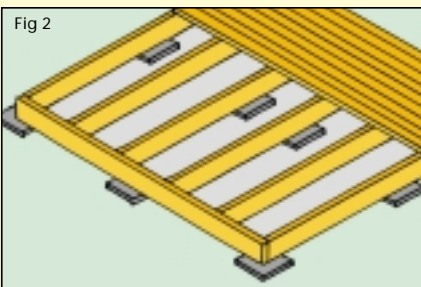
To help create a square deck and determine overall size, mark out the proposed area using a basic building technique, which involves using 'batter boards', pegs and string lines. To check that corners are 90° use a '3-4-5' triangle either constructed out of wood or marked onto the string lines (fig 1).

Deckboards are normally fixed at right angles to the joists, they can overshoot the edge of the joists at the ends or be trimmed flush with the joists and a fascia board added for a more decorative and neat finish.

GROUND LEVEL DECK

The finished deck must be at least two brick courses below damp course level.

1. A ground level deck consists of a frame constructed of 150 x 47mm joist timbers which can be fixed using galvanised nails and, if required, one or a combination of metal angles, offcuts of 100 x 100mm timber and joist hangers.

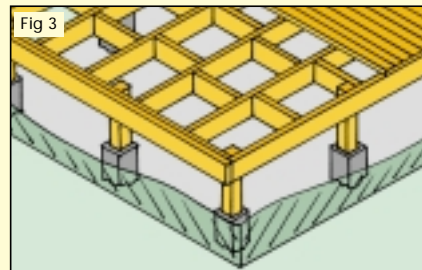


2. We recommend that joists are fixed at 400mm centres for maximum support (fig 2).
3. The area should be prepared as previously detailed.
4. Position concrete paving slabs (minimum 600 x 600 x 50mm) (fig 2) for added support and stability.

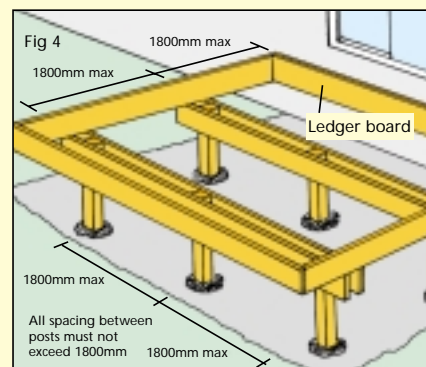
5. With detailed planning and extra cutting, more adventurous designs can be created.

RAISED/ELEVATED DECK

The finished deck must be at least two brick courses below damp course level.



1. Richard Burbidge structural 100 x 100 x 1200mm deck posts should be used for elevated decks.
2. We recommend that at least half the length of the post is sunk into the ground and fixed with concrete (fig 3). (For elevated decks higher than 600mm consult a builder.)
3. As with ground level decks, we recommend joists are spaced at maximum 400mm centres.
4. Structural posts should be positioned no more than 1800mm apart (fig 4).



5. Elevated decks can be free standing or have one or more sides attached to a wall/side of house.
6. Use a joist and spirit level to mark the joist/ledger height onto wall.
7. To give added structural stability and support, fix two joists together using

coach screws to form the joist ledger and fix to wall using wood to masonry fixings (fig 4).

8. When attaching a deck to the side of a building, the wall plate/ledger is fixed to the masonry to support the joists. Keep the wall plate/ledger off the wall approximately 10mm by packing the wall plate or using washers on the wall plate fixing so as to allow water running down the face of the brickwork to pass behind, rather than on top of the wall plate. Alternatively, if fixing the wall plate directly to masonry, use a metal flashing keyed into the mortar joint of the brickwork using 150mm lag/anchor bolts or frame fixings.

9. Mark the depth of a joist onto the structural post and fix joists/beams either side using 150mm landscape screws.
10. These beams accommodate the frame's joists. Fix the joists to the beams by skew-nailing or use seismic/hurricane ties. For additional strength, noggins (offcuts of joists) are then fixed at 90° to the structural joists.
11. To fix joists to the joist/ledger use joist hangers.

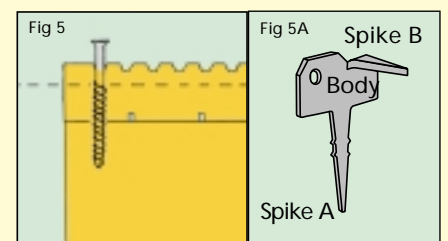
SECRET FIX

You can eliminate installation damage by using secret fixing, and because there are no nails or screws on the surface of the boards, there is no rust staining or danger of damage to bare feet. The smooth unbroken decking is also easier to maintain.

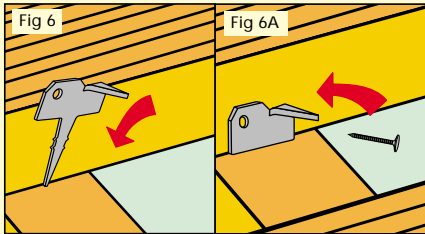
The first and last deckboards should be fastened to joists by screwing through the top of the board using 75mm galvanised screws (fig 5).

DECK TIES

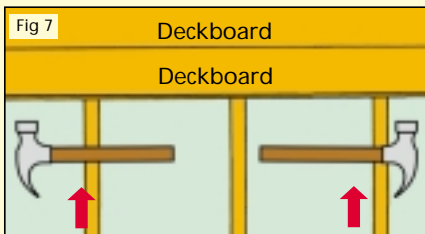
1. Once the first row of deckboards has been fixed, position a deck tie (fig 5A) in the centre of the joist and edge of



deckboard. You will find it easier to angle the deck tie to knock it into position (fig 6).



2. Knock the deck tie so that spike A is fully located into the joist. Tap the deck tie so it ends up flush to the side of the deckboard and fix using a 40mm Richard Burbidge galcron annular ring nail (fig 6A). Repeat this procedure at each joist.
3. Locate back edge of next board onto spike B. The preferred method for installing deck ties for both ease of installation and time is for the deckboards to be knocked into position by two people at the same time to prevent the board springing off the tie at either end (fig 7).
4. This procedure is repeated for each



deckboard until all boards have been fixed. Anchor the final board by screwing through the top edge. Countersink and fill the screw head to prevent rust and possible damage to bare feet.

Unless your deck design uses standard Richard Burbidge lengths, you will need to stagger the boards to cover the deck area.



For safety and to prevent movement, staggered boards must always meet over a joist.

Use additional sections of joist or deckboard to increase the area for screwing (fig 8).

TRADITIONAL FIX

1. Traditional fixing can be achieved by either nailing or screwing. We recommend a minimum length of 75mm annular ring nails and galvanised screws.
2. To minimise splitting, the deckboard should be predrilled prior to fix being driven through the board and the joist.
3. Remember to space the boards leaving a minimum 6mm to 9mm gap.

FITTING BALUSTRADING

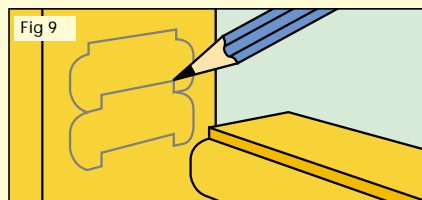
DECKING BALUSTRADING BOLT FIXING

Balustrading can add a decorative effect to ground level decks and **must** be used on elevated decks for safety. **Richard Burbidge decking balustrading should be assembled and fixed to joists before installing deckboards.**

To conform with Building Regulations, the maximum recommended length of balustrading between posts is 1800mm. For lengths in excess of this additional newel posts must be used.

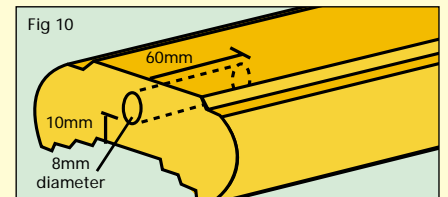
Balustrading is best assembled on a clear, flat surface such as a garage floor. Establish where you would like the top of the handrail to be in relation to the newel post. This can be done using a small offcut of handrail. Draw around the handrail profile onto the face of the newel (fig 9).

The treated and cedar balustrading rails (66mm width) are designed for use with a concealing rail, so when drawing onto the face of the newel for these handrails remember to draw two rails, one on top of the other. The lower rail will be the rail that is fixed to the newel posts.



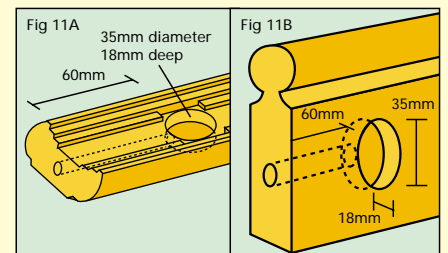
The large cedar and American rails do not require a concealing rail and are used for both handrail and baserail.

For the balustrading rails, drill the end section of the handrail using an 8mm diameter wood bit to a depth of 60mm at a distance of 10mm up from the groove in the rail (fig 10).



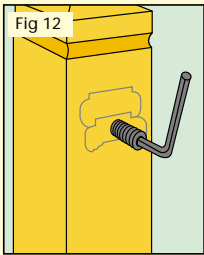
Turn the handrail over and in the groove of the balustrading rails at a distance of 60mm from the end of the handrail drill a 35mm diameter hole to a depth of 18mm using a hinge drill/forstner bit or similar to create an access hole for fitting the balustrading bolt (fig 11A). You will find drilling of the treated balustrading rail easier if you chisel a rebate in the smallest groove of this rail.

The American rail is drilled in the centre of the rail using an 8mm wood bit to a depth of 60mm and a 35mm access hole is drilled on the side face of the rail (fig 11B).



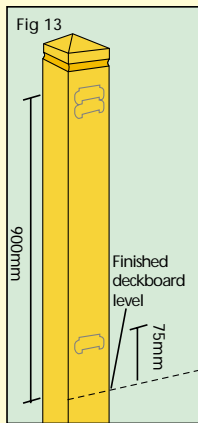
Drill the other end of the handrail in exactly the same way.

On the face of the previously marked newel post measure up from the groove of the lower pencil drawn handrail section a distance of 10mm. For the American rail measure up 60mm. Drill the newel post at this point using a 9.5mm diameter drill bit to a depth of 25mm. Screw the threaded insert part of the balustrading bolt into the newel post using a 6mm Allen key. Mark and drill the remaining newel posts in exactly the same way and fix inserts into position (fig 12).



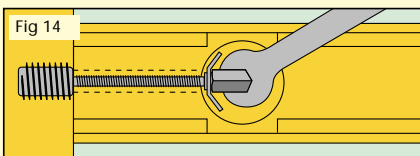
Balustrading and American rails are also used as baserails with the groove facing downwards on the balustrading rail. Measure down the face of the newel

from the top of the handrail a distance of 900mm and draw a line, which will represent the finished deckboard level. From this pencil line measure up 75mm and using the offset of handrail draw the profile of the rail onto the face of the newel, allowing for the bottom edge of the rail to be level with the line at 75mm above deckboard level (fig 13).



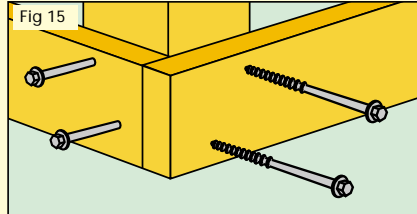
Mark and drill all newel post/s and rails as previously described.

Screw the threaded bars into the inserts in the newel posts and position rails onto threaded bars. Using the spanner supplied, tighten all rails to newel posts with the combined pressure plate and nut/s of the balustrading bolt (fig 14). For the American rail use a Richard Burbidge treated cover cap to hide the access hole. Secure using exterior grade wood glue or silicon. For the treated balustrading rail, ensure the access hole is treated using Richard Burbidge end coat.



NEWEL POSTS

Newel posts are fixed to joists using Richard Burbidge 100mm landscape screws, where possible fix newels so that two faces can be secured through two joists at 90° to each other (fig 15).



CEDAR POSTS

Cedar porch post and lamp post

Positions of posts should be established at the planning stage of your deck. Ideally posts should be fixed to the sides of joists and braced/boxed with off-cuts between joists. For structural stability and rigidity fix the posts to a joist depth of at least 300mm (2 x 150mm joists on top of each other). You will need to use 150mm landscape screws for fixing the porch post and lamp post to a joist, screw either side of the wiring space of the lamp post. Although not intended for ground contact, if the deck is low level it will be necessary to sink the posts into the ground. Apply a waterproof preservative to the part of the post that will be in contact with the ground and cap off the concrete so that ground water runs away from the post rather than onto it.

Cedar corner chamfered newel post

If desired, the cedar ball cap or patrice cap can be fitted to finish this post. Use the screw fixing on the ball cap to screw into the newel. Fit the patrice cap with a proprietary exterior quality wood glue.

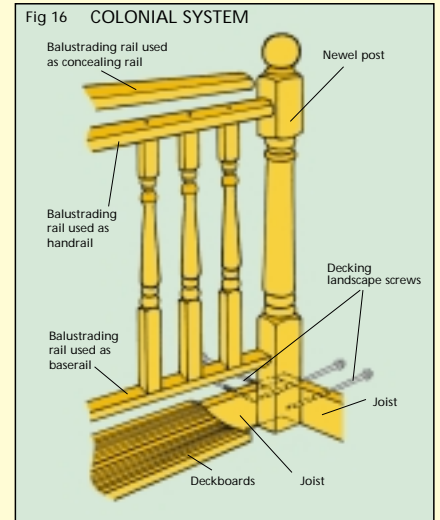
36mm CEDAR SPINDLES

36mm cedar spindles are fixed in the same way as detailed below except spindle centres should be set at 116mm.

COLONIAL SPINDLES

The Colonial System uses one style of balustrading rail for handrail, baserail and concealing rail.

1. Fix spindles to rails using No. 8 63mm galvanised screws.
2. When using rail as a baserail, ensure the groove faces downwards.
3. Spindles should be spaced at approximately 120mm centres, giving a maximum gap between spindles of 100mm.



4. Offer up complete unit including posts, allowing for the bottom rail to be approximately 75mm above deck levels.
5. To hide visible screw fixings through the top fixing rail, place an additional concealing rail on top and fix through the underside of lower rail using No. 8 40mm galvanised screws (figs 16 and 18).

CEDAR 57mm OPTION

The 57mm balustrading rail is used as a handrail and baserail but does not cap itself. Newels should be set and fixed as previously detailed. When using the rail as a baserail ensure the groove faces downward, fix to the newel as previously detailed.

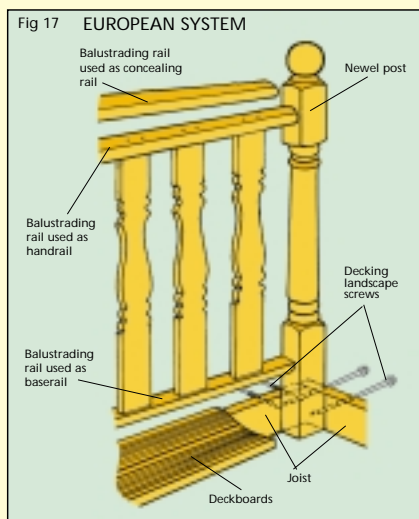
Spindles should be spaced at approximately 137mm centres, giving a maximum gap between spindles of 100mm, fix using one of two methods.

1. Fix through the top of the rail into the spindle using 63mm galvanised screw (visible fix) or alternatively counter bore and use a plug cutter to hide the head of the screws with cedar flush pellets (invisible fix).
2. The spindles can also be fixed from the underside of the handrail using No. 8 63mm galvanised screws. Pilot drill the spindle at 45° approximately 25mm from the ends of the spindle and screw through the spindle into the handrail/baserail.

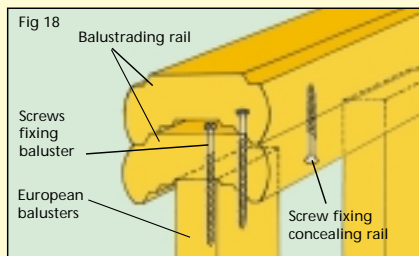
EUROPEAN BALUSTERS

The European System uses one style of rail which is used as handrail, baserail and concealing rail. These balusters can also be used with the American balustrading system.

1. Cut balusters to the required length to suit your particular balustrading height.
2. The balusters are set in place at 150mm centres (fig 17).



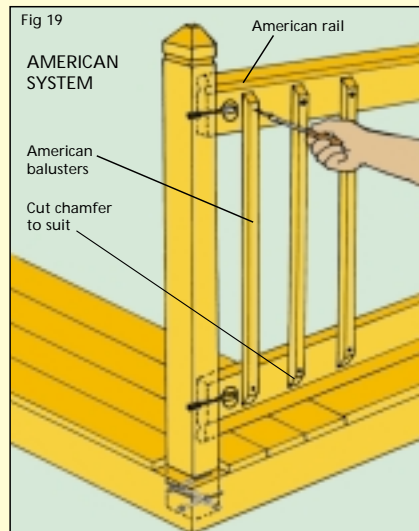
3. Using exterior grade PVA glue, locate the end of the baluster into the groove in the handrail and screw into position, 25mm in from each edge in both the handrail and baserail using 63mm galvanised screws (figs 17 and 18). To disguise the screw heads add a concealing rail fixed in position by screwing from below (fig 18).
4. European balusters can be used with the American rail. To fix, position the balusters to the outside face of the rail



and secure with the minimum of 2 x 40mm No. 8 galvanised screws at top and bottom. To fix balusters see American system point 2.

AMERICAN BALUSTERS

1. American balusters can be left square or cut at an angle to match the top surface.
2. Space American balusters at 125mm centres, drill, countersink and fix to the side of the top and bottom rails using 40mm No. 8 galvanised screws (fig 19). European balusters can be used instead of American balustrading if preferred.



DECORATIVE INFILL TREATED PANELS

Treated panels should be used with treated balustrading rail and set with a maximum gap of 100mm between the newel and beginning of the panel.

1. Fix the panel into the rail using No. 8 63mm galvanised screws.
2. When using the rail as a baserail, ensure the groove faces downward.
3. Fix the handrails to newel posts using the decking balustrading bolt as previously described.
4. To hide visible screw fixings through the top fixing rail, place an additional rail on top and fix through the underside of the lower rail using No. 8 40mm galvanised screws (fig 20).



FITTING STEPS

The height and positioning of your deck will also influence the style and height of your steps. You may also require a handrail to comply with local authority guidelines.

The Richard Burbidge Decking System includes two sizes of cut string for step building: 3 steps/570mm rise and 5 steps/950mm rise.

1. The number of steps required will be determined by the height of the deck and the space in front of it.
2. The strings should be positioned at right angles to the deck joist (fig 21). The base of the string may need to be cut at an appropriate angle to allow it to sit firmly on the ground, preferably on a solid area, ie flagstones/concrete etc.
3. The strings should be set at a maximum distance of 400mm centres.
4. Once fixed using suitable galvanised brackets/joist hangers, we recommend the treads are traditionally fixed through the top face of the deckboard using 75mm No. 8 galvanised screws.
5. Treads are created by cutting deckboards to length, allowing 30mm to overhang each string.



DECKING FITTING INSTRUCTIONS

Care & maintenance

Always use galvanised brackets, screws and fixings. Follow good building practices at all times, if in doubt stop and check or ring the Richard Burbidge helpline.



Richard Burbidge treated decking materials have CCA water repellent penetrating deeply into the wood protecting the surfaces to minimise shrinkage and swelling and provide long term water repellency and weather protection. The CCA treatment is safe to use around

people, plants and animals and also helps prevent decay and insect attack – altogether offering a safe, long lasting timber product with which to build your deck.

1. Wear gloves to avoid splinters when building.
2. Avoid prolonged inhalation of sawdust.
3. Wear safety goggles when using power tools.
4. Dispose of decking offcuts as ordinary household waste. **DO NOT BURN ON OPEN FIRES, BARBECUES OR STOVES.**
5. Always wash your hands before eating or smoking after handling the timbers.



FINISHING & MAINTENANCE

You can stain your deck using a suitable exterior product following the manufacturer's instructions.

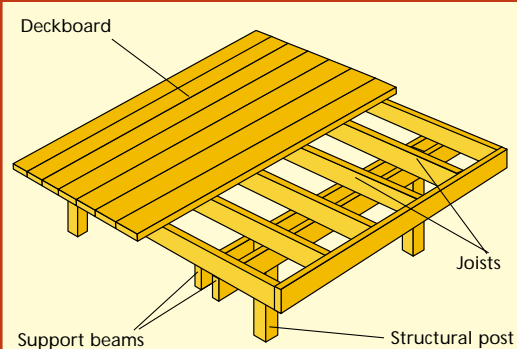
Your treated deckboards will last up to 15 years, however, we recommend that your deck is coated with water repellent once a year.



Please note – it is a natural occurrence for boards to swell when wet and shrink when dry. Some variations in the gaps between the deckboards is therefore inevitable. These gaps will vary in size from season to season.

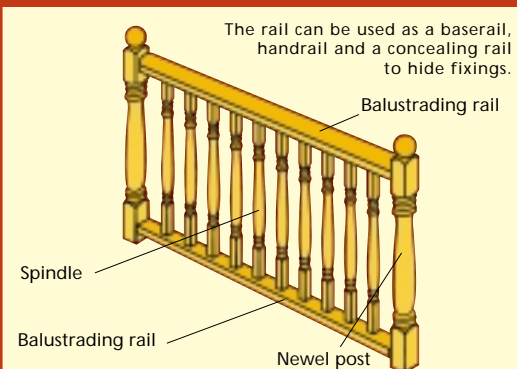
THE PARTS REQUIRED TO CONSTRUCT YOUR DECK

2.4m² FREE STANDING ELEVATED DECK



DESCRIPTION	QUANTITY
Deckboard	20
Joist	11
Post	4
Deck ties	8 boxes

1.8m² OF DECK BALUSTRADING



DESCRIPTION	QUANTITY
Balustrading rail	3
Newel post	2
Colonial spindle	15
Decking balustrading bolts	1 pack
Landscape screws	1 pack
Screws	1 pack

All quantities are approximate and it is advisable to check before laying the deck that there is sufficient product. Quantities depend on styles using different patterns.

DECKING FITTING INSTRUCTIONS

HARDWARE ITEMS USED IN DECK CONSTRUCTION

We recommend the use of galvanised/stainless steel or specially coated fixings to prolong the deck's life and stop rusting.

- Richard Burbidge deck ties
- 40mm Richard Burbidge galcron annular ring nails to fix deck ties
- 63mm No. 8 galvanised screws for fixing through rails to spindles
- 75mm Richard Burbidge galcron annular ring nails or 75mm No. 8 galvanised screws for traditional fixing deckboards
- Richard Burbidge balustrading bolt to fix rails to newels
- 100mm Richard Burbidge landscape screws for fixing newels to the deck structure
- 150mm Richard Burbidge landscape screws to fix joists to posts
- 100mm Richard Burbidge galcron annular ring nails or 100mm landscape screws to fix joists together
- Joist hangers (optional)
- 40mm No. 8 screws for fixing American and European balusters to front face of rails
- 125-150mm No. 12 frame fixings

MISCELLANEOUS

- Richard Burbidge Deck Bright for cleaning deck
- Watering can and weed killer
- Richard Burbidge Green End Coat to treat cut ends
- Paint brush
- Strong gloves
- Polythene or DPC
- String and pegs
- Pencil
- PVA glue suitable for exterior use to fix European balusters to handrails and cover cap to American rail

TO SET DECK STRUCTURE

- Either 600 x 600 x 50mm paving slabs, sand and small bag of cement to set or concrete mix to set posts into

TOOLS

- Plumb line
- Variable speed drill
- Tape measure
- Pick and spade for preparing the ground
- Rake
- Good hand saw, jigsaw or circular saw
- Hammer
- Electric screwdriver
- Drill (wood bits and masonry if fixing ledger to house)
- Rubber mallet (if setting flags)
- Trowel
- 35mm diameter hinge/forstner bit
- Allen keys

Decking system video



This step-by-step video shows you how to lay your own unique deck. Fitting techniques, hints and tips are all captured on film for you to watch as often as you wish – and the tape is



reuseable, too. Richard Burbidge will refund the cost of the tape when you buy just £100 of decking – simply complete the voucher on the video sleeve and we'll do the rest.

Complete the coupon below and post or fax it with your details.

PLEASE USE BLOCK CAPITALS:

Please send me _____ decking video(s)
@ £5.99 each (including £1 P&P).

Cheque payable to Richard Burbidge Limited

Credit card  

Card number

Expiry date

Name _____

Address _____

Postcode _____ Tel _____

Signed _____ Date _____