

The Richard Burbidge Outdoor Balustrade Stop Chamfered System is installed using the Decking Twist Bracket LD333 and Large Traditional LD245 handrails. The Stop Chamfered System is suitable for use with decks at ground and up to 600mm above ground level.

The Stop Chamfered Softwood System has been independently tested by FIRA and when installed in accordance with these instructions conforms with Building Regulations for balustrades at 900mm high and 0.36kN/m domestic loadings. FIRA structural test reports. TCMSF07868 Large Traditional Rail LD245 @ 2400mm maximum length.

Before commencing your installation please read all instructions carefully.

Facts sheets for planning and building your deck can be found in the library section of DECKPLANNER™ via our website www.richardburbidge.com

Should you have any enquiries regarding installing the Stop Chamfered System and Decking Twist Bracket or deck building please contact our technical department on 01691 678212.

Horizontal Balustrades

For horizontal balustrades establish where you would like the top of the Large Traditional handrail LD245 to be in relation to the Stop Chamfered Newel LD249. This can be done using a small off cut of rail. Using the top edge of the handrail draw a pencil line onto the face of the newel.

Measure down the face of the newel from the pencil line representing the top edge of the handrail 900mm and draw a pencil line on all 4 faces of the newel. This line represents the finished deckboard level.

Establish how many newels will be used for the installation ensuring that the maximum span between the centres of the newels does not exceed 2400mm. Lay all the newels together on a flat surface making sure that they are level and using the previously marked newel transfer the lines representing the top of the handrail and deckboard level onto all the newels (Fig.1).

If the newels are to be fixed to the outside face of the joists then they should now be half lapped or rebated for those newels used on corners.

Apart from the first newel, which can be permanently fixed, all other newels should be temporary fixed in their finished positions to the joists making sure they are plumb using Richard Burbidge landscape screws.

To establish the length of the Stop Chamfered Spindles LD248 required, place a small off cut of Large Traditional handrail with fillet inserted so that the top of the handrail is level with the pencil line previously marked to the top face of the newel. Mark a pencil line along the bottom edge of the fillet to the face of the newel (Fig.2).

Place a 50mm timber block/off cut onto the top of the deckboards and then place an off cut of the Large Traditional Baserail LD246 on top of this block. Mark a pencil line onto the face of the newel representing the top edge of the Baserail (Fig.3).

Now measure from the pencil line representing the bottom edge of the fillet to the pencil line representing the top edge of the Baserail to establish the length of spindle required.

Balustrades are installed in a series of units when using the Decking Twist bracket. Measure the distance between the first and second newels (Fig.4) to establish the lengths of handrail and baserail required. Cut the rails to the required length.

Place the Twist Brackets centrally into the groove on the underside of the handrail and to the underside of the baserail making sure the square shoulders of the brackets line up with the end cut of the rails. Fix the brackets to the rails using the No.8 x 19mm stainless steel screws supplied (Fig.5a & 5b).

Spindles are fixed to the Large Traditional Baserail and Large Traditional Handrail fillet before assembling the handrail and baserail to the newel posts. Stop Chamfered spindles should be spaced at 120mm centres giving a maximum gap between the spindles of approximately 98mm.

Cut the required number of Stop Chamfered spindles to length. Fix the spindles to the baserail using 75mm ceramic galvanised screws. Handrail fillets are supplied in 800mm lengths, if required cut the fillets to suit the length of the handrail span and fix the spindles to the fillets using 63mm ceramic galvanised screws (Fig.6).

The assembly of fillet, spindles and baserail should now be offered to the underside of the Large Traditional Handrail. Locate the fillet into the groove within the handrail and screw the fillet every 3rd or 4th spindle by drilling the fillet and screwing using 40mm ceramic galvanised screws (Fig.7).

Place 2 x 50mm timber blocks/off cuts on top of the deckboards and position the completed assembly of handrail, baserail and spindles on top of the blocks so that the Twist Brackets rest against the outside face of the newel posts (Fig.8).

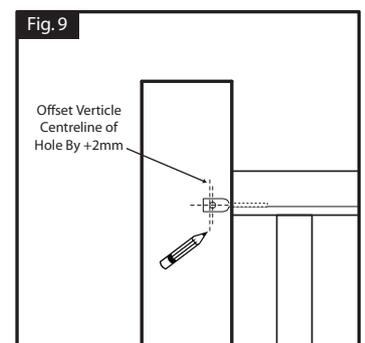
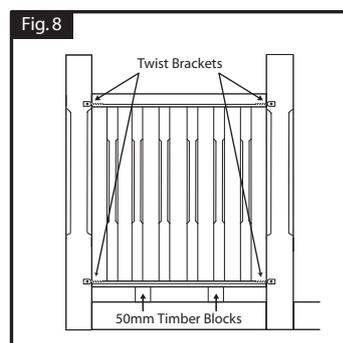
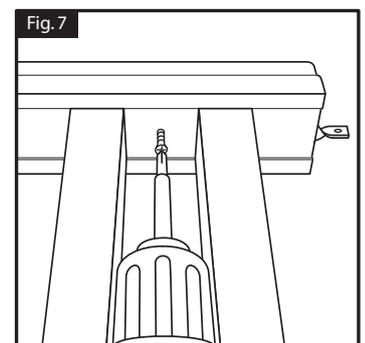
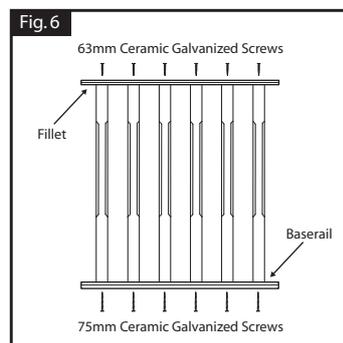
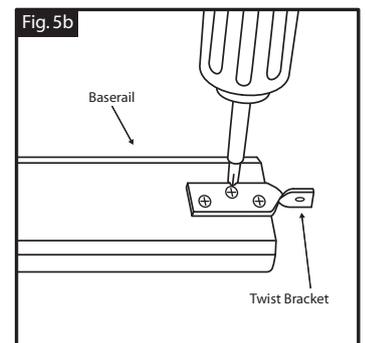
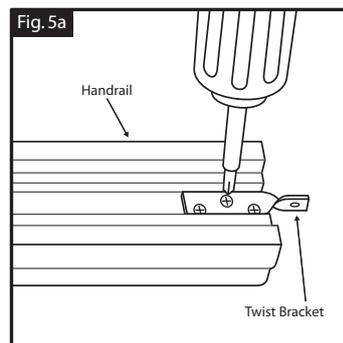
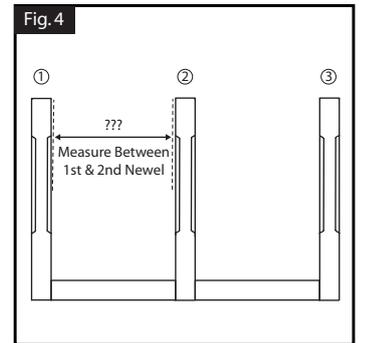
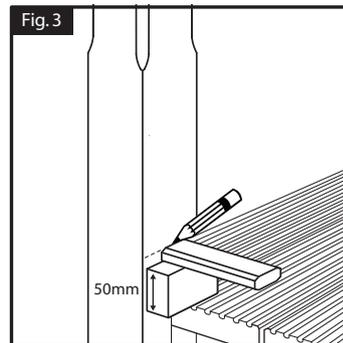
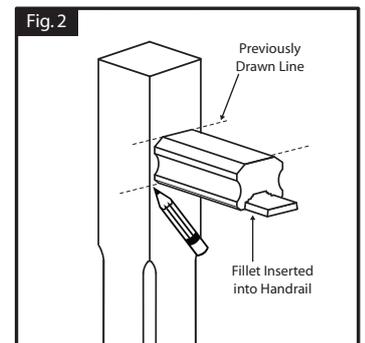
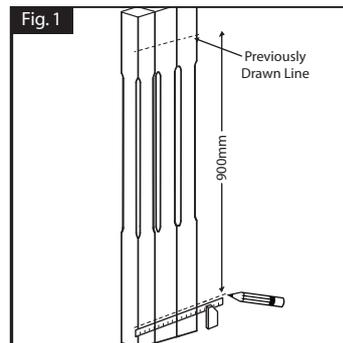
The newels should now be marked and drilled to accommodate the twist brackets and tapered screws. Mark the position of the centre of the 4 holes in the twist brackets to the faces of the top and bottom of newels 1 & 2 and off set these positions by +2mm (Fig.9).

Using a square, mark a line from the centre of the marked twist bracket holes onto the inside faces of the newels (Fig.10). Mark the centre of this line onto the newels (Fig.11).

Newels 1 & 2 can now be drilled. Use a 10.5mm diameter drill bit on the outside faces of the newels to a depth of 60mm to accommodate the tapered screw and a 16mm diameter drill bit to a depth of 40mm on the inside faces of newels to accommodate the ends of the twist bracket (Fig.12).

Remove the landscape screws in newel 2 (Fig.4) and move the newel to one side.

Offer up the assembled unit of handrail, baserail and spindles and position the ends of the twist bracket on the handrail and baserail into the 16mm diameter holes on the inside faces of newel 1 (this is easier done by 2 people). If a 1 person installation then temporary support the free standing end of the unit using the 50mm timber



blocks/off cuts (Fig.13).

Insert the tapered screw into the 10.5 diameter holes in newel 1 and tighten using a 6mm hexagonal drive/allen key until the shoulders of both the handrail and baserail are flush against the newel faces (Fig.14).

Reposition newel 2 so that the twist brackets on the end of the rail assembly are inserted into the 16mm diameter holes and insert and tighten the tapered screws into the 10.5mm diameter holes so that the ends of the handrail and baserail are flush against the newel.

Permanently fix newel 2 to the joists using landscape screws (Fig.15).

Repeat this installation procedure for all other units in the installation i.e. newel 2 now becomes the permanently fixed newel and newel 3 is removed (Fig.4).

To finish, fix the decorative cover caps supplied over the 10.5mm tapered screw holes using a small bead of PVA exterior wood glue.

Raking Balustrades

For those decks up to 600mm above ground level it may be necessary to install a short length of raking/stair balustrade. All horizontal balustrades should be installed prior to the installation of raking/stair balustrades.

Newels that accommodate both horizontal and raking balustrades should be positioned so that the strings are flush against the inside faces of the newels at the top of the stair i.e. the first newels accommodating the horizontal balustrade (Fig.16).

To establish the position of the stair handrail to the head of the newel post at the top of the stairs you will need to scribe a pitch line (this is the same line as the bottom edge of the baserail in it's final fixed position resting on the edge of all stair treads) through the inside face of the newel.

Using an overlong straight edge i.e. deckboard, resting on the edge of the steps and the inside face of newel scribe a pencil line to the underside of the straight edge and onto the face of the newel (Fig.17).

Bisect the Stop Chamfered newel at 2 points towards the top and bottom of the newel and drop a vertical line to intersect the previously drawn pitch line.

Where these 2 lines intersect measure up a minimum of 900mm for the handrail height (Fig.17). Using an adjustable bevel scribe a pencil line onto the face of the newel, this line represents the top of the handrail.

The pitch lines and handrail height lines should now be squared off onto the front face of the newel at the top of the stairs.

Transfer all pencil lines on the top newel to the bottom newel and offer the bottom newel to the side face of the stairs adjusting the newel by moving forwards/backwards or by cutting its length down so that the drawn pitch line on the newel lines up with the pitch line of the stairs (Fig. 17).

Lay the overlong baserail on the edges of the steps and resting against the inside faces of the newels. Mark and cut the baserail to length. Repeat for the handrail.

Place the Twist Brackets centrally into the groove to the underside of the handrail and to the underside of the baserail making sure the square shoulders of the brackets line up with the end cut of the rails. Fix the brackets to the rails using the No.8 x 19mm stainless steel screws supplied (Fig.5a & 5b). Adjust the twist bracket ends so they are 90° to the cut face of the rails by gently tapping the brackets with a hammer (Fig.18).

Offer the baserail with the twist brackets attached to the side face of the bottom and top newels and drill the posts as previously described in the horizontal balustrade section. Repeat for the handrail.

The spindles for rake/stair installations should be spaced so that a 100mm sphere cannot pass through. Once you have calculated how many spindles you will use they need to be cut to the correct length and angle.

Position the baserail and handrail into the bottom newel and to the side of the stair string and locate the Twist Fixing brackets into the top newel. Place a length of fillet into the groove in the underside of the handrail and then offer a spindle to the sides of the rails to establish the length and angle of cut. Cut the spindle accordingly and check for fit between the handrail and baserail before using as a template to mark and cut remaining spindles.

Remove the temporary assembly of baserail, handrail and bottom newel and fix the spindles as described in the horizontal balustrade section.

Fix the assembly of spindles, baserail, handrail and fillet to the bottom newel using the twist bracket and tapered screw as described in the horizontal balustrade section.

Offer up the assembled unit and position the ends of the twist bracket on the handrail and baserail into the 16mm diameter holes on the front faces of the top newel.

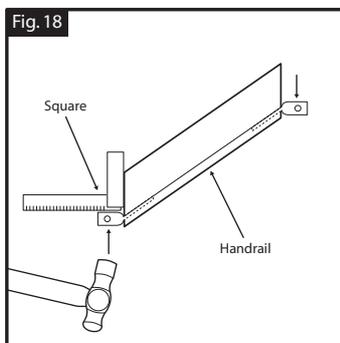
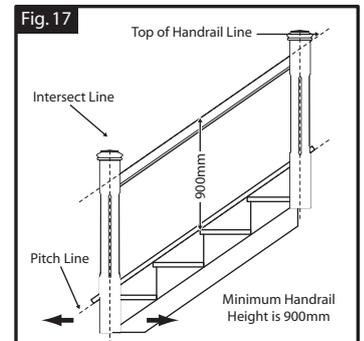
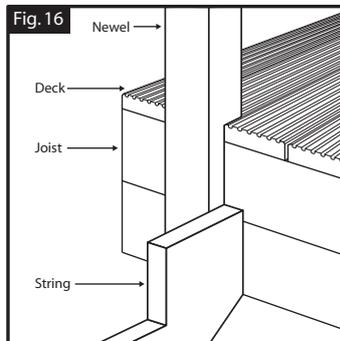
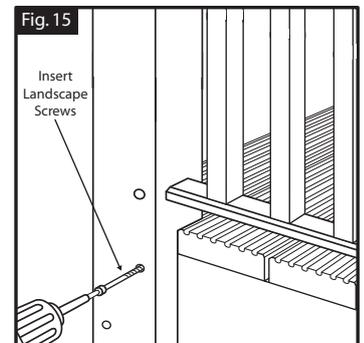
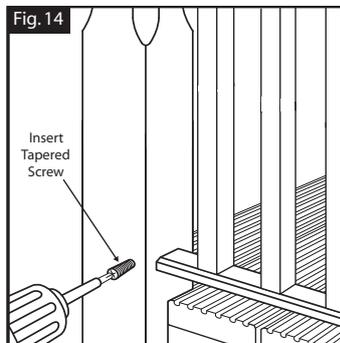
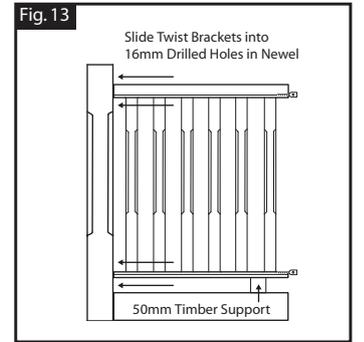
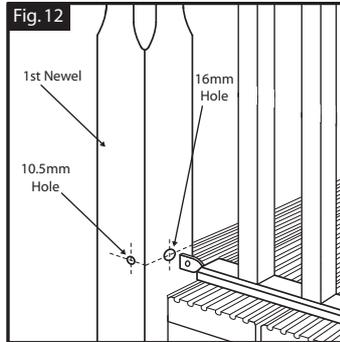
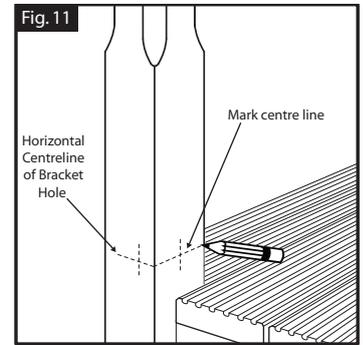
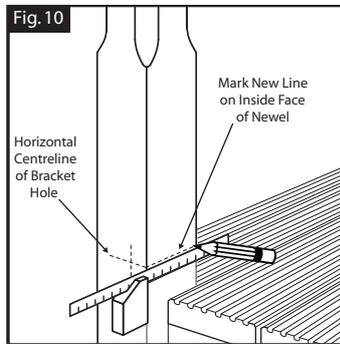
Insert the tapered screws into the 10.5mm diameter holes and tighten using a 6mm hex/allen key until the shoulders of both handrail and baserail are flush against the newel faces (Fig.14).

To finish, fix the bottom newel to the stair string using landscape screws and fix the decorative cover caps supplied over the 10.5mm tapered screw holes using a small bead of PVA exterior wood glue.

The Patrice Cap LD204 should be fixed to the top of all Stop Chamfered Newels LD249 using a combination of PVA exterior grade wood glue and either nails punched below the surface and filled or screws counter bored and flush pailed (Fig.17).

Maintenance

The Richard Burbidge Stop Chamfered balustrade components are treated with Osmose Naturewood. Any treated timber exposed to the elements should be protected from the weather. To enhance the Stop Chamfered balustrades apply either a proprietary clear water repellent or transparent stain. For further information please refer to the maintenance and finishing fact sheet in our DECKPLANNER™ library section via our website www.richardburbidge.com



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