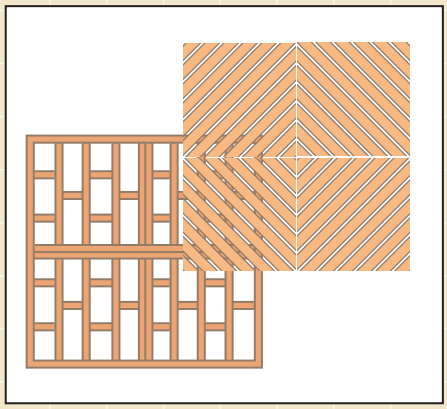
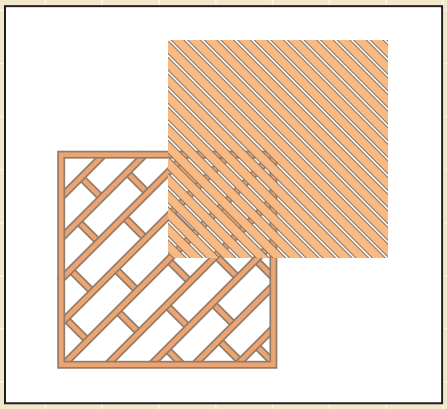
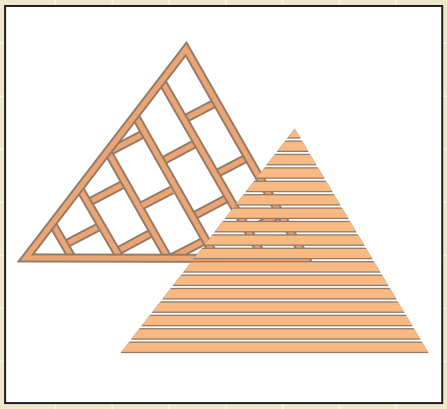
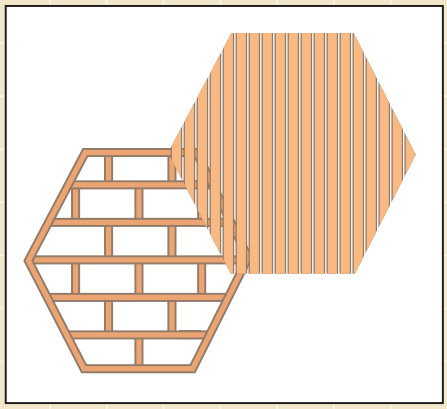
IDEAS FOR BUILDING A TIMBER DECK

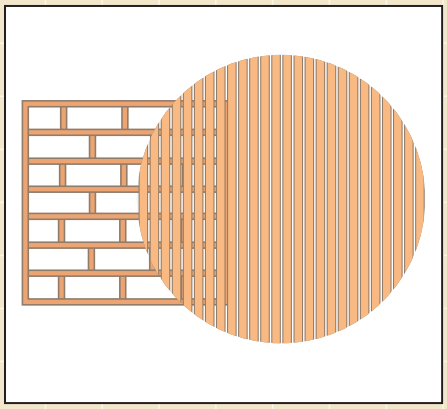
Depending upon the final shape of your deck and the final pattern of deckboards you want to create, the frame of your deck will need to be carefully planned so that the interior joists will support the deckboard design. Various deck design options are shown here and you will see that double joists may be required to accommodate some deckboard patterns. Also note the use of noggins between the interior joists that will strengthen the whole frame structure. Noggins can be made with short off cuts of the joist material.

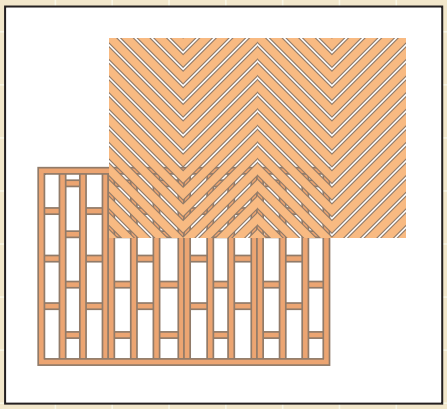


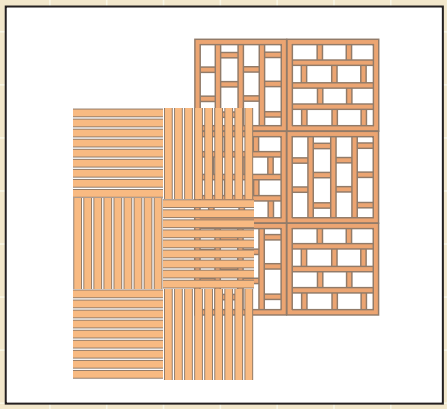


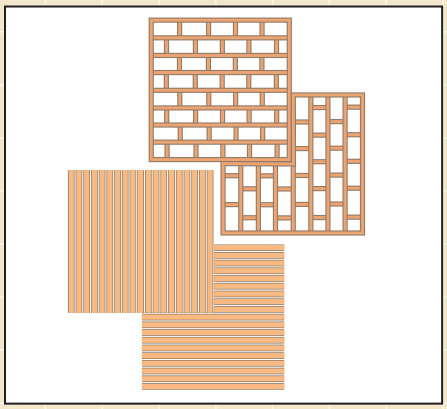












HOW TO BUILD YOUR TIMBER DECK

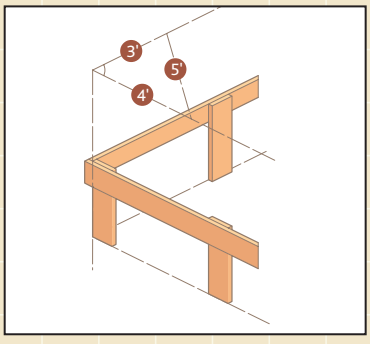
An easy step by step guide

STEP 1 BEFORE YOU GET STARTED

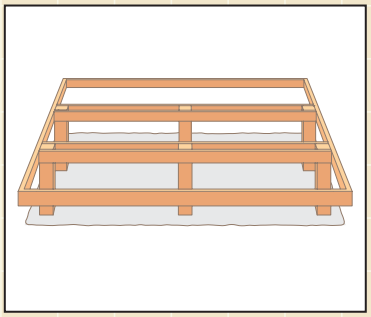
- Check the depth and position of any underground pipes, cables or services under the proposed deck and allow access to any manhole covers or inspection chambers.
- Consider the size and use of the deck. If it is to be used for dining, there needs to be plenty of room for tables and chairs.
- Decking products are designed to be used on decks up to 600mm high. An elevated deck needs to be designed so that it is capable of taking the expected loading. If in doubt, seek professional advice.
- Consult a structural engineer or builder for high level decks over 600mm.
- Check with your local Planning Office as to whether planning permission is required for your proposed deck. In most cases planning permission is not required for domestic decks unless the deck is within 20 metres of a road or exceeds 3 metres in height above ground level. If for non-domestic use, such as a hotel or pub, it is advisable to check with your local Planning Office.

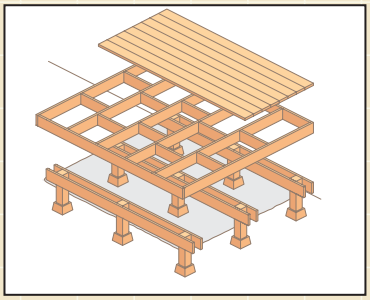
STEP 2 BUILDING THE SUBFRAME

- Check there are no drainage problems in the area where you plan to build your deck.The deck design must maximise airflow through and around the construction to ensure good ventilation.
- Mark out the site accurately and ensure it is square following the diagram below.



- Decks can be free standing or attached to the side of a house. When attached to a house the finished deck level must be at least two brick courses below the damp proof course. If this is not practical, a gap must be left between the house and the deck to aid drainage. A ledger board is bolted to the wall and used to carry and support the joists. This can be done by using a 47 x 150mm Timber joist. The ledger board must be 10mm from the wall to ensure sufficient drainage.
- Do not lay ground level decks directly onto grass. Remove all turf and cover the ground with permeable membrane or polythene (with holes pierced) and then gravel to prevent any weeds growing. Lay the framing on concrete paving slabs bedded into position or on an existing level concrete area.
- For elevated decks 100 x 100 x 1200mm Timber structural posts should be used, positioned no more than 1800mm apart. At least half the length of the post should be sunk into the ground and fixed with concrete.



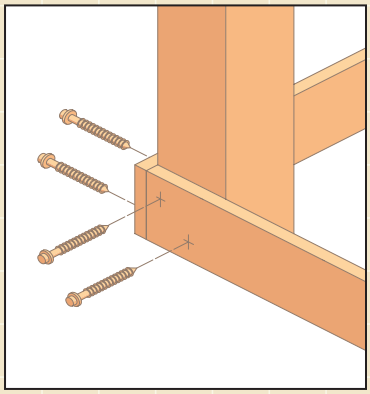


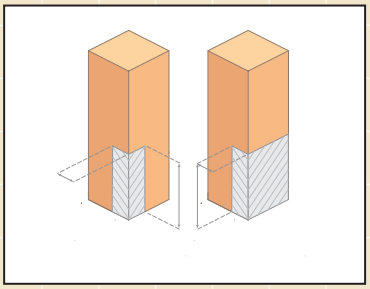
- Beams are attached to the posts using 150mm landscape screws and the joist frame is fixed to the beams by skew nailing or screwing.
- The frame is constructed from 47 x 150mm joist timbers.
- Joists should be fixed at 400mm centres for maximum support, using 100mm landscape screws, galvanised nails or joist hangers.
- Noggins (offcuts of joist) are used to prevent the joists from twisting or buckling. These are attached at 90° to the joist in a staggered manner at 1200mm centres.

STEP 3 INSTALLING YOUR TIMBER ACCESSORIES

Points to remember

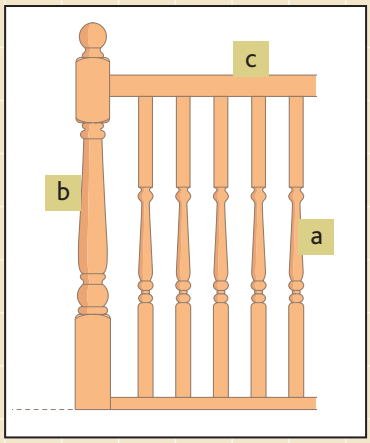
- The maximum recommended length of rails between posts is 2400mm.
- The space between spindles must not allow a 100mm ball to pass through.
- Newel posts can be fixed to either the inside or outside of the frame. When fitting to the inside, use 100mm landscape screws and ensure that two faces of the post can be secured through two joists at 90° if possible.
- Posts that are fixed to the side of the deck should be half lapped or rebated when on a corner.



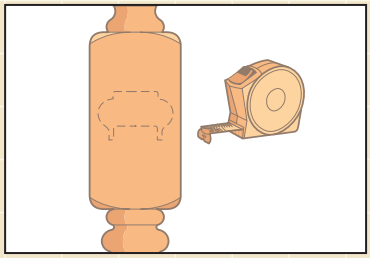


Turned/Elliptical/Square/Stop Chamfered Range

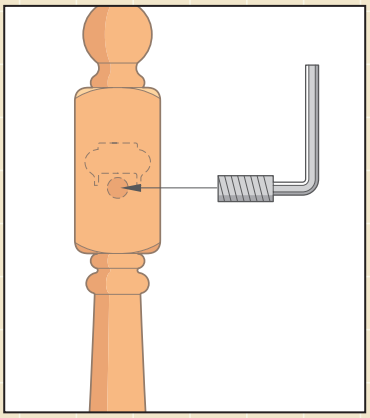
Turned Spindles (a), Elliptical Spindles (not shown), Square Spindles (not shown), Stop Chamfered Spindles (not shown), Turned Newel (b) Universal Rail (c) and Deck Rail Bolt (not shown).



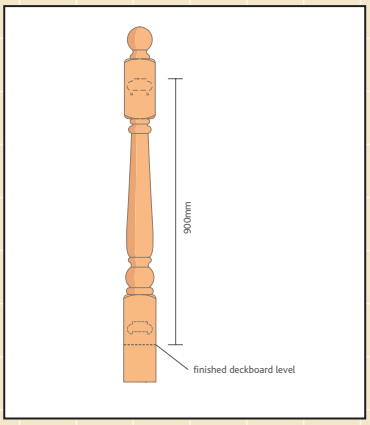
- The versatile Universal Rail can be utilised as both a top rail and bottom rail.
- Determine the height of the Universal Rail in relation to the Turned Newel post.
- To make this job easier, use a small portion of rail and mark out the profile onto the newel post using a pencil.
- You now need to prepare the newel for the Deck Rail Bolt. Using the template you have drawn on the post, measure down 12mm from the bottom of the lower rail template.



- Using a 22mm flat bit, drill the post to a depth of 10mm.
- Using a 10mm drill bit, drill down the centre of the 22mm hole to a total depth of 30mm. Using an 8mm hexagonal key, screw the metal insert into the 10mm hole.

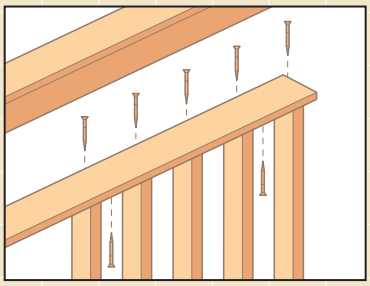


- Mark and drill all remaining posts in exactly the same way and fix inserts into position.
- To determine the finished deckboard level, measure 900mm from the top of the stencilled higher handrail, and mark a line on all four faces of the post.
- In order to mark the position on the bottom rail, measure up 75mm from the deckboard level. Again, a small piece of rail should be utilised to mark out the profile onto the newel post.
- The spindles can now be fitted to the handrails. Make sure you leave enough room for the metal angle bracket of the deck rail bolt at each end.

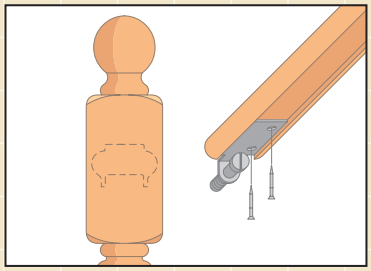


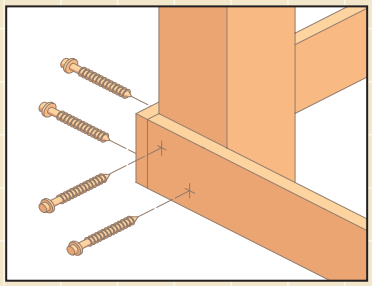
STEP 3 INSTALLING YOUR TIMBER ACCESSORIES

- When using the Universal Rail, spindles are attached to the bottom rail and fillet before attaching the handrail and bottom rail to the newel posts.



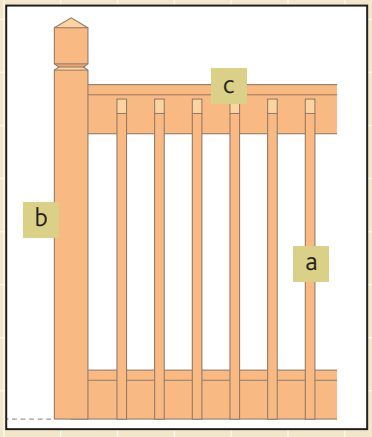
- To determine the length of spindle needed, use a small section of fillet, insert into the top rail and place against the stencilled profile on the newel post. From the fillet measure down to the bottom stencilled profile and this will give you the length of spindle required. Once you have cut the spindle to the required length, attach them to the bottom rail by using 75mm screws.
- The spindles are attached to the fillet by using a 50mm screw and screwing down through the fillet into the end of the spindle.
- Spindles should be spaced appropriately giving a maximum gap between spindles of 100mm.
- Bolt the metal angle bracket of the deck rail bolt to the insert.
- You should now be able to fix the spindles and Universal bottom rail to the Universal top rail. Then attach the handrails onto the newel posts by using the Deck Rail Bolt.
- In order to attach the fillet to the handrail securely, you should fix it every 3rd or 4th spindle with 40mm screws.
- You should now have a complete panel of posts, rails and balustrading that can be attached to the joist framework using 100mm landscape screws. Ideally, fix the newels so that two faces of the post can be secured through two joists at 90°.



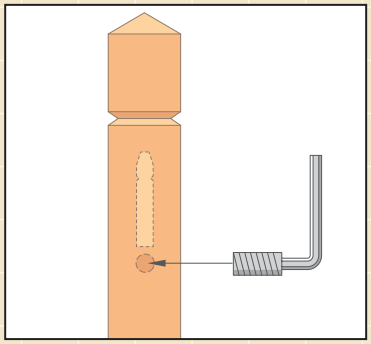


Chamfered Range
Chamfered Spindles (a), Patrice Newel (b), Rail (c) and Deck Rail Bolt (not shown).

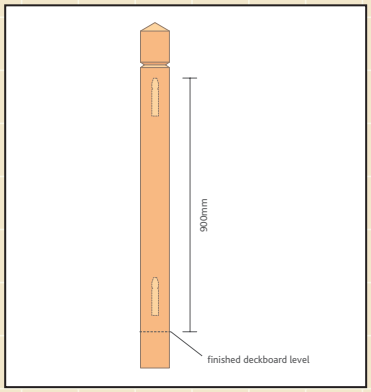
- Determine the height of the Rail in relation to the Patrice Newel.
- To make this job easier, use a small portion of rail and mark out the profile onto the newel post using a pencil.



- To determine the finished deckboard level, measure 900mm from the top of the stencilled higher handrail, and mark a line on all four faces of the post.

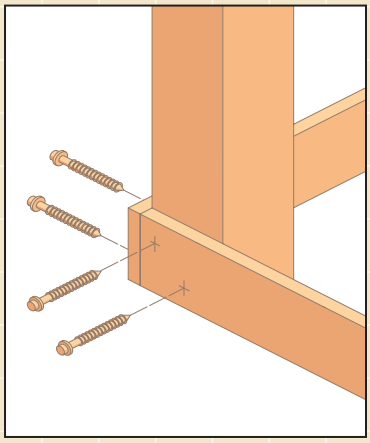


- In order to mark the position on the bottom rail, measure up 75mm from the deckboard level. Again, a small piece of rail should be utilised to mark out the profile onto the newel post.
- All other Patrice Newels and rails should be marked in the same way.
- You now need to prepare the newel for the Deck Rail Bolt. Place the metal angle bracket of the deck rail bolt underneath the template of the rail you have drawn. Mark with a pencil. This is where the bolt will be drilled.

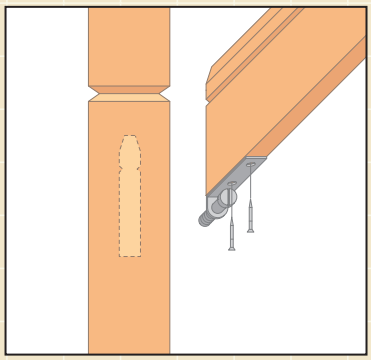


STEP 3 INSTALLING YOUR TIMBER ACCESSORIES

- Using a 22mm flat bit, drill the post to a depth of 10mm.
- Using a 10mm drill bit, drill down the centre of the 22mm hole to a total depth of 30mm. Using an 8mm hexagonal key, screw the metal insert into the 10mm hole.
- Mark and drill all remaining Patrice Newels in exactly the same way and fix inserts into position.
- The Chamfered Spindles can now be cut to length and attached to the Rail using 40mm screws
- Balusters should be spaced at approximately 125mm centres giving a maximum gap between spindles of 100mm.

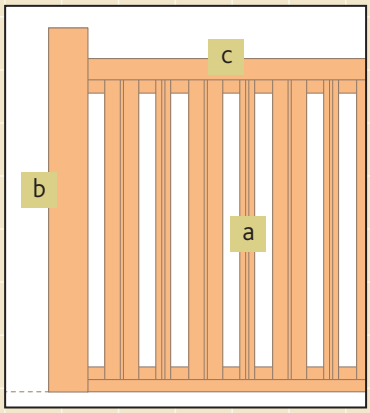


- You should now have a complete panel of posts, rails and balustrading that can be attached to the joist framework using 100mm landscape screws. Ideally, fix the newels so that two faces of the post can be secured through two joists at 90°.
- Using the stencil lines you have already marked on the bottom of the Patrice Newels, set the panel 75mm above the finished deckboard level.
- Bolt the metal angle bracket to the post with the bolt provided.

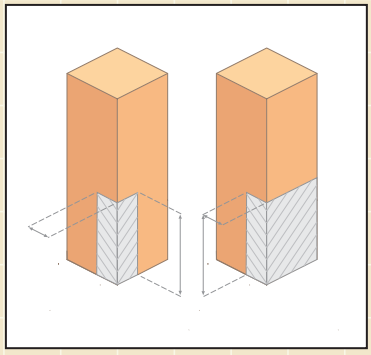


- Installation of the deckboards can now commence.

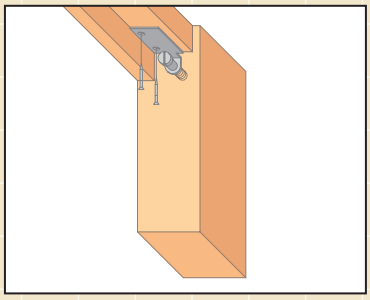
Grooved Range
Small or Large Grooved Spindles or a combination of both (a), Square Newel (b), L-Shaped Rail (c) and Capping Rail (not shown).



- Square Newels should be set no greater than 2300mm apart and to accommodate a minimum capping handrail height of 900mm.



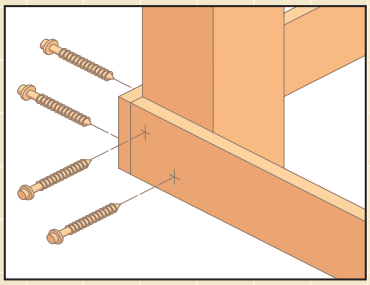
- Square Newels are attached to the joist framework using 100mm landscape screws. Ideally, fix the newels so that two faces of the post can be secured through two joists at 90°.
- The Grooved Range allows installation of deckboards before balustrading. Deckboards should be installed at this stage.
- Take the L-Shaped Rail and cut it to your desired length.
  It can then be fixed to the top of the deckboards by using 63mm screws.
- You can now fix the L-Shaped Rail using the Deck Rail Bolt.
- The L-Shaped Rail should sit flush with the top of the post. Mark out the outline with a pencil and then place the metal angle bracket against the outline. Mark where the bolt hole is and using a 22mm flat bit, drill the post to a depth of 10mm.

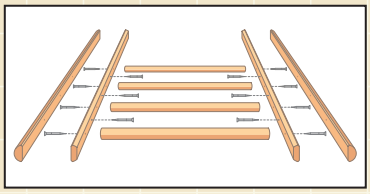


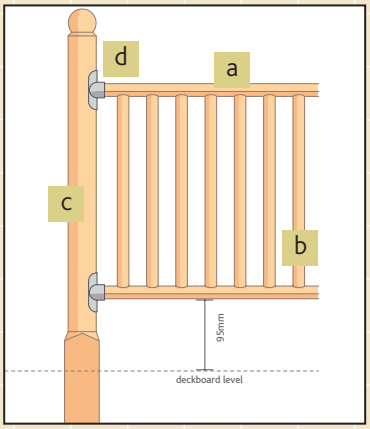
- Using a 10mm drill bit, drill down the centre of the 22mm hole to a total depth of 30mm. Using an 8mm hexagonal key, screw the metal insert into the 10mm hole.
- Bolt the metal angle bracket to the post with the bolt provided.
- Place the rails in position and fix with screws provided.

STEP 3 INSTALLING YOUR TIMBER ACCESSORIES

- It's now time to cut the Grooved Spindles to your required length. The spindles can be used on their own or try a combination of large and small to create a modern look. 40mm screws should be used to attach the spindles, with one screw for the Small Grooved Spindles, and two for the Large.
- The Capping Rail is used to hide the screw heads. You attach the rail to the newel post by using 75mm screws, and then secure the L-Shaped Rail by screwing up into the Capping Rail using 50mm screws.

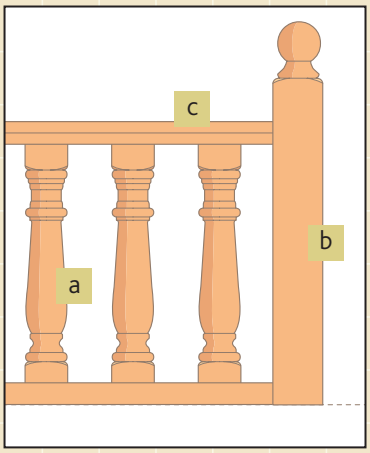






Roman Range
Roman Column (a),
Roman Newel (b) and Roman Rail (c).

- Determine the height of the Roman Rail in relation to the Roman Newel post.
- To make this job easier, use a small portion of rail and mark out the profile onto the newel post using a pencil.



TANALISED® E

PRESSURE TREATED TIMBER

THE BEST PROTECTION FOR YOUR DECKING TIMBERS

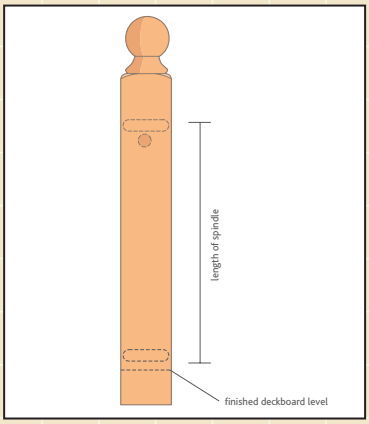
All our decking timbers are pressure treated within our own treatment facilities with Tanalith E – the latest generation wood preservative. The resulting Tanalised E treated components are fully protected against all forms of wood decay and insect attack, helping to ensure a long and low maintenance service life.

The treated timber is initially pale green in colour, weathering to a honey brown and eventually to a silver grey. Tanalised E pressure treated timber does not need to be painted or stained to maintain this preservative protection, although a decorative coating can be added, if desired.

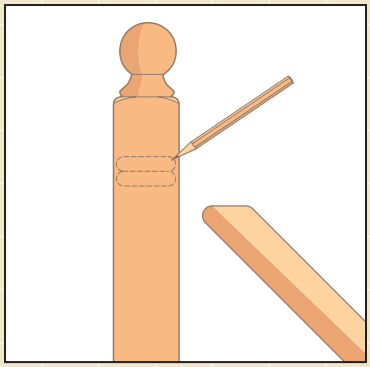
Any timber surface exposed by cross cutting, drilling, notching or boring must be brushed with ENSELE® end-grain preservative to maintain the integrity of the treatment.

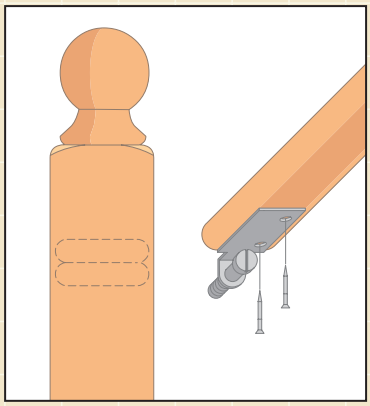
STEP 3 INSTALLING YOUR TIMBER ACCESSORIES

- Three rails are used when building the Roman Column Range. The first as a bottom rail, the second as a top rail, and the third is used to conceal screw heads. When marking out the rail profile onto the newel post, stencil two rails on top of each other.

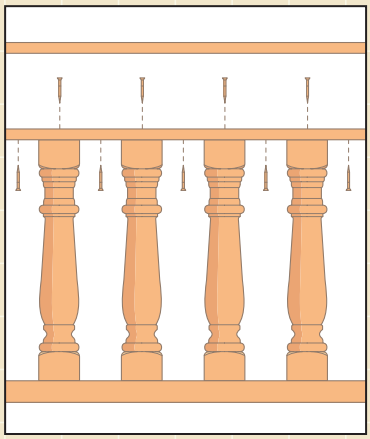


- The Deck Rail Bolt is used to fix the lower of the top two rails to the Roman Newel.
- To determine the finished deckboard level, measure the length of the Column from the top of the stencilled higher handrail, and mark a line on all four faces of the post.
- In order to mark the position on the bottom rail, measure up 75mm from the deckboard level. Again, a small piece of rail should be utilised to mark out the profile onto the newel post.
- All other Roman Newel posts and rails should be marked in the same way.



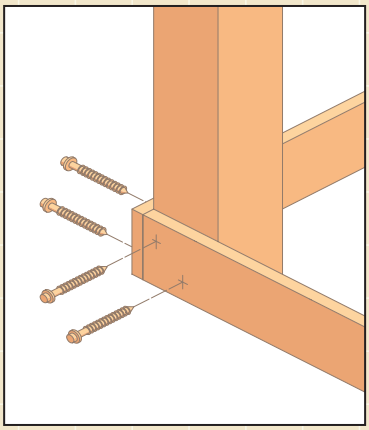


- You now need to prepare the newel for the Deck Rail Bolt. Using the template you have drawn on the post, measure down 12mm from the bottom of the lower rail template. Using a 22mm flat bit, drill the post to a depth of 10mm.
- Using a 10mm drill bit, drill down the centre of the 22mm hole to a total depth of 30mm. Using an 8mm hexagonal key, screw the metal insert into the 10mm hole.
- All other Roman Newel posts and rails should be marked in the same way.



- The spindles can now be fitted to the handrails. Make sure you leave enough room for the metal angle bracket at each end.
- Use 63mm screws to fix the Roman Columns to the Roman Rail.

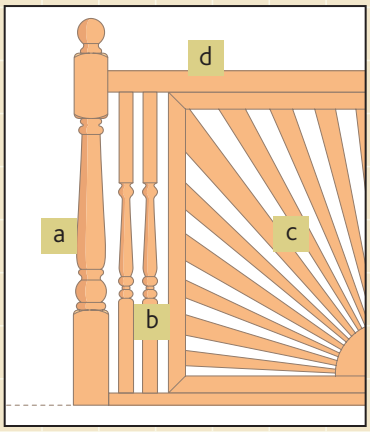
- Columns should be spaced at approximately 185mm centres giving a maximum gap between spindles of 100mm.
- Bolt the metal angle bracket to the insert with the bolt provided.
- Place the rails in position and fix with screws provided.
- The concealing, third handrail can now be fixed from underneath to the top handrail by using 40mm screws.
- You should now have a complete panel of posts, rails and balustrading that can be attached to the joist framework using 100mm landscape screws. Ideally, fix the newels so that two faces of the post can be secured through two joists at 90°.



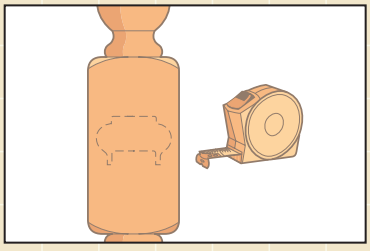
- Using the stencil lines you have already marked on the bottom of the Roman Newels, set the panel 75mm above the finished deckboard level. Installation of the deckboards can now commence.

STEP 3 INSTALLING YOUR TIMBER ACCESSORIES

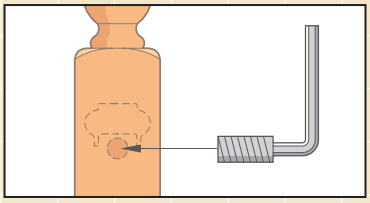
Panels
Turned Newel (a), Turned Spindle (b), Sunrise Panel (c), Universal Rail (d), (Crossed Panel not shown)



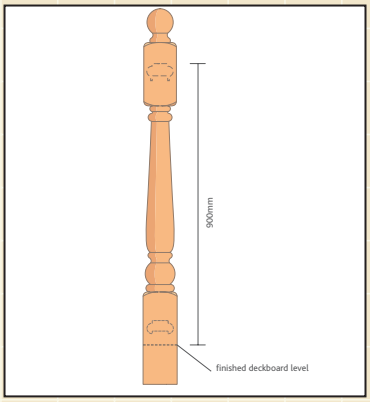
- All panels and spindles are fixed using the Universal Rail and can be used with any of the posts or newels. The panels can also be used in combination with spindles or by themselves.
- Remember that the gap between the panels, posts, spindles and balusters should not allow the passage of a 100mm sphere. Panels should be assembled to rails and posts on a clean flat surface such as a garage floor and fixed to joists as a complete unit.
- The versatile Universal Rail can be utilised as both a top rail and bottom rail.



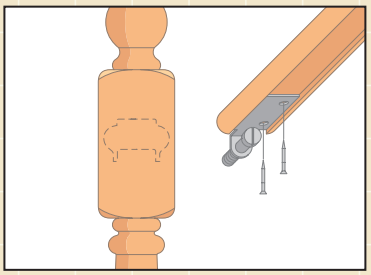
- Determine the height of the Universal Rail in relation to the Turned Newel post.
- To make this job easier, use a small portion of rail and mark out the profile onto the newel post using a pencil.
- You now need to prepare the newel for the Deck Rail Bolt. Using the template you have drawn on the post, measure down 12mm from the bottom of the lower rail template.
- Using a 22mm flat bit, drill the post to a depth of 10mm.



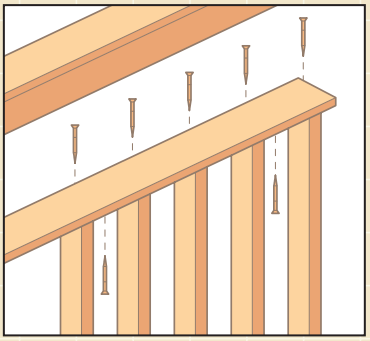
- Using a 10mm drill bit, drill down the centre of the 22mm hole to a total depth of 30mm. Using an 8mm hexagonal key, screw the metal insert into the 10mm hole.
- Mark and drill all remaining posts in exactly the same way and fix inserts into position.
- To determine the finished deckboard level, measure 900mm from the top of the stencilled higher handrail, and mark a line on all four faces of the post.
- In order to mark the position on the bottom rail, measure up 75mm from the deckboard level. Again, a small piece of rail should be utilised to mark out the profile onto the newel post.



- The panels and spindles can now be fitted to the handrails. Make sure you leave enough room for the metal angle bracket at each end.



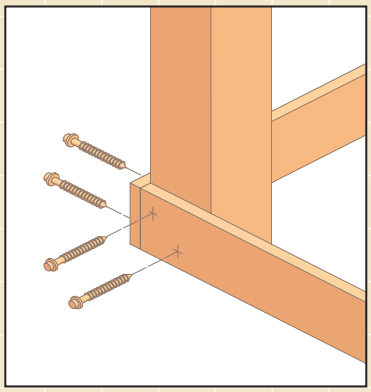
- When using the Universal Rail, the panels and spindles are attached to the bottom rail and fillet before attaching the handrail and bottom rail to the newel posts.
- To determine the length of spindle needed, use a small section of fillet, insert into the top rail and place against the stencilled profile on the newel post. From the fillet measure down to the bottom stencilled profile and this will give you the length of spindle required. Once you have cut the spindle to the required length, attach them to the bottom rail by using 75mm screws.
- The panels spindles are attached to the fillet by using a 50mm screw and screwing down through the fillet into the end of the panel/spindle.



- Bolt the metal angle bracket to the insert with the bolt provided.

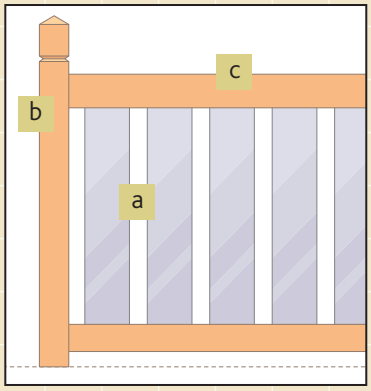
STEP 3 INSTALLING YOUR TIMBER ACCESSORIES

- You should now be able to fix the spindles and Universal bottom rail to the Universal top rail. Then attach the handrails onto the newel posts by using the Deck Rail Bolt.

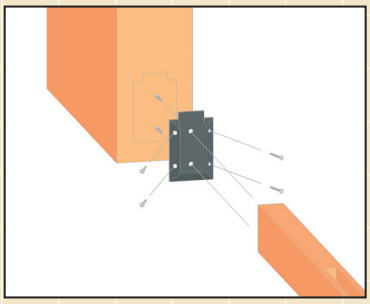


- In order to attach the fillet to the handrail securely, you should fix it every 3rd or 4th spindle with 40mm screws.
- You should now have a complete panel of posts, rails and balustrading that can be attached to the joist framework using 100mm landscape screws. Ideally, fix the newels so that two faces of the post can be secured through two joists at 90°.
- Note – When using a combination of spindles with timber panels always set and mark out the posts to the pre-set length of the timber panel first and then cut the spindles to suit.

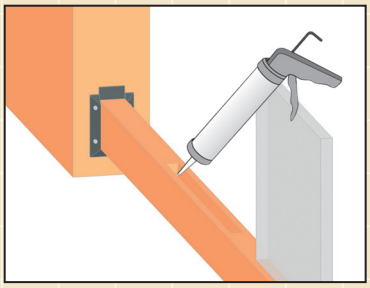
Clear View Range
Clear Spindles (a), Patrice Newel (b), Clear View Rail (c)



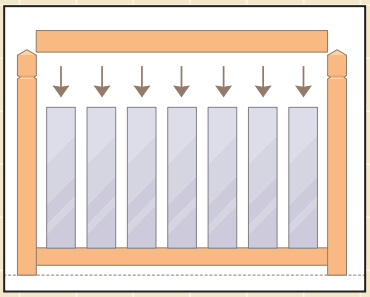
- Clear balusters are fixed using Clear View Rails and can be used with Patrice, or Square Newels.
- Determine the height of the clear view rail in relation to the newel post. To make the job easier, use the clear view bracket and mark out the height onto the newel post at both the top and the bottom using a pencil.



- The Clear View Glass Rail is fixed to the newel post using the Clear View Bracket firstly cut the rail to the determined length, screw a bracket to either end of the rail, using the screws provided, place the rail at the determine height and screw to the newel. Fix the bottom rail first.

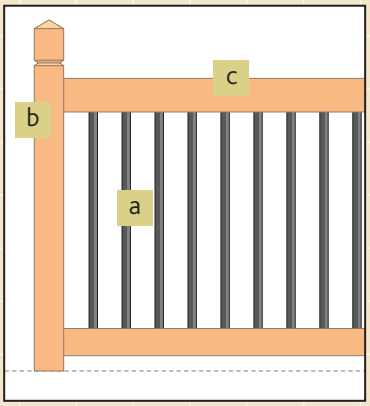


- It's now time to insert the Glass Spindles. The Clear View Rail is pre-slotted to ease installation. Before placing the spindles into the rail it is recommended that you squeeze a small amount of silicone into the slots to secure the baluster position. Place the baluster into the slots and silicone around the edge to prevent rainwater from getting into the slot. Wipe away excess.
- Once all the baluster are in position the top rail can be fixed.

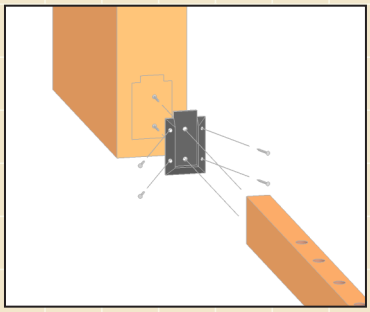


Metal Range
Metal baluster (a), Patrice Newel (b), Metal Rail (c)

- Timber Metal baluster are fixed using Metal L Rails and can be used with Patrice, or Square Newels.
- Determine the height of the clearview metal rail in relation to the newel post. To make the job easier, use the clearview bracket and mark out the height onto the newel post at both the top and the bottom using a pencil.

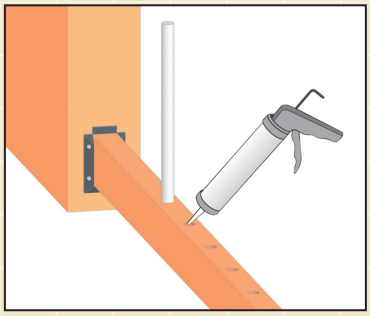


STEP 3 INSTALLING YOUR TIMBER ACCESSORIES



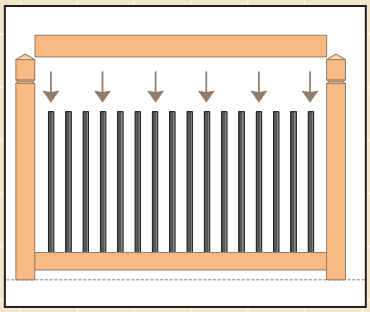
- The clearview metal rail is fixed to the newel post using the clearview bracket. Firstly cut the rail to the determined length, screw a clearview bracket to either end of the rail using the screws provided. Place the rail at the determined height and fix to the newel. Fix the bottom clearview rail first.
- Place the bottom rail in position and fix with screws provided.

- It's now time to insert the Metal Spindles. The Metal Rail is pre-drilled to ease installation. Before placing the spindles into the rail it is recommended that you squeeze a small amount of silicone into the



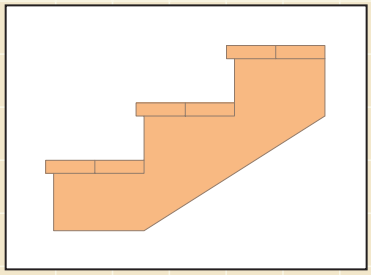
drill holes to secure the spindles position. Place the spindles into the drill holes and silicone around the edge to prevent rainwater from getting into the drill holes. Wipe away excess.

- Once all the spindles are in position the top rail can be fixed.



STEP 4 THREE AND FIVE STEP INSTALLATION

- Ensure that you measure the height and space in front of your deck as this will influence the quantity of steps and risers you will need.
- In order to attach your stair strings securely position them at right angles to the deck, and at centres of no more than 400mm.



- Galvanised brackets or joist hangers can be used to fix the steps to the joists.
- Make use of deckboard off cuts by using them as step treads, with an overhang of 30mm on each step.
- The step treads are fixed to the strings by using 75mm screws.

STEP 5 MAINTAINING YOUR TIMBER DECK

- All fixings should be checked and tightened where necessary.
- Decks should be cleaned on a regular basis, either by simply brushing the deck using a long bristled brush and ensuring that the gaps between components are also cleaned, or by using a power washer for a more thorough cleaning. NB, Power washing should not be carried out until all joints and connections have been checked and tightened. Avoid excessive pressure and keep water volumes to a minimum.
- Specialist deck cleaning solutions are available and can be useful on heavily stained or weathered decks but should not be necessary if the deck has been maintained regularly.
- If the underside of the deck is accessible, remove any debris and check the position and integrity of weed control arrangements.
- Your deck will benefit from an annual treatment of water repellent to protect it.
- Colour stains can be applied to your deck. A suitable exterior, solvent based product should be used.

Reference Guide

Timber Decking Accessories

CHESHIRE mouldings

DECKING ACCESSORIES

REF NO	PRODUCT	SIZE	CODE
1	CM TURNED NEWEL	82X82X1300	DEP12CAP
2	CM UNIVERSAL RAIL 2.4M	68X44X2400	DHU24
2	CM UNIVERSAL RAIL 1.8M	68X44X1800	DHU18
3	CM TURNED SPINDLE	41X41X895	DED90
36	CM REEDED SPINDLE	41X41X895	DECREED
4	CM CHAMFERED & BEADED NEWEL	82X82X1300	DEP12CB
4	CM CHAMFERED & BEADED NEWEL	82X82X2400	DEP24CB
5	CM AMERICAN SPINDLE	27X27X895	DECAM
6	CM AMERICAN RAIL	120X27X1800	DHUAM
7	CM SQUARE SPINDLE	41X41X895	41PBTR
29	CM SQUARE NEWEL	82X82X1300	DEP12BLANK
9	CM SMALL GROOVED SPINDLE	21X45X895	DEGRS
10	CM LARGE GROOVED SPINDLE	21X89X895	DEGRL
11	CM L RAIL	58X68X2400	DELRAIL
12	CM ROMAN NEWEL	91X91X875	DEPRC
13	CM ROMAN RAIL	21X90X1800	DERCR
14	CM ROMAN COLUMN	83X83X457	DECROM
15	CM ELLIPTICAL SPINDLE	41X63X895	DECELLI
16	CM SUNRISE PANEL	41X760X1135	DESUN
17	CM CROSS HATCH PANEL	32X760X1135	DEHATCH
18	CM ROUND NEWEL	90X90X1375	DEPRND
19	CM TWO PART ROUND RAIL	55X2200	DETPR
20	CM ROUND SPINDLE	35X895	DECDO
21	CM STOP CHAMFERED SPINDLE	41X41X895	DEDST9041P
22	CM CLEARVIEW GLASS RAIL (holds 7 panels)	85X36X1800	DCLRAIL
24	CM CLEARVIEW TUBE BALUSTER RAIL	36X85X1800	DTRAIL
24	CM CLEARVIEW TUBE BALUSTER RAIL	36X85X2340	DTRAIL2.4
37	CM CLEARVIEW RAIL CAPPING	26X80X1800	DCAP18
37	CM CLEARVIEW RAIL CAPPING	26X80X2337	DCAP23
23	CM CLEARVIEW GLASS PANELS	8X152X820 PACK OF 7	DCLPAN
25	CM BLACK TUBE BALUSTER (16 required per 1.8m rail)	19x900	DBTUBE
25	CM BLACK TUBE BALUSTER (16 required per 1.8m rail)	19x900 PACK OF 10	DBTUBEB
26	CM CHROME TUBE BALUSTER (16 required per 1.8m rail)	19x900	DCTUBE
26	CM CHROME TUBE BALUSTER (16 required per 1.8m rail)	19x900 PACK OF 10	DCTUBEB
27	CM BALL CAP	75X75X95	DEB
39	CM ACORN CAP	75X75X95	DEAC
28	CM PATRICE CAP	115X115	DEPTC
31	CM 3 STEP STRING	872X48X250	DS3
31	CM 5 STEP STRING	1455X48X250	DS5
30	CM TRADITIONAL DECKING RAIL 1.8M	38X75X1.8M	DHNEW1.8
30	CM TRADITIONAL DECKING RAIL 2.4M	38X75X2.4M	DHNEW2.4
30	CM TRADITIONAL DECKING RAIL 3.6M	38X75X3.6M	DHNEW3.6
	PRODUCT	PIECES IN PACK	CODE
32	CM 100MM LANDSCAPE SCREW	50	DSCREW100
32	CM 150MM LANDSCAPE SCREW	50	DSCREW150
33	CM 63MM SCREW	200	DSCREW63
33	CM 40MM SCREW	150	DSCREW40
33	CM 50MM SCREW	200	DSCREW50
33	CM 75MM SCREW	200	DSCREW75
34	CM DECK RAIL BOLT	1 PAIR	DECKIT
35	CM ROUND RAIL BRACKET	2	DEBKT
38	CM BLACK CLEARVIEW RAIL FIXING BRACKETS	1 PAIR	DCVRB