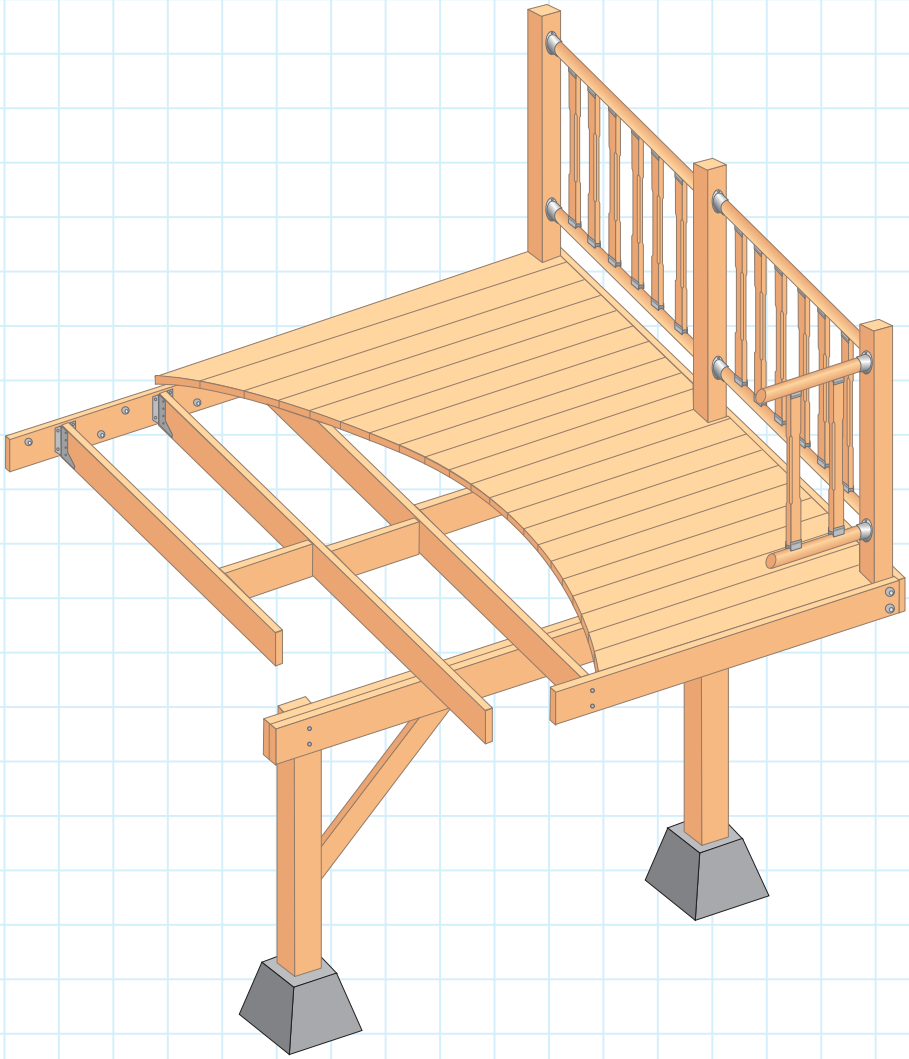
HOW TO BUILD YOUR TIMELESS TIMBER DECK

An easy step by step guide



TIMELESS TIMBER

www.timeless-timber.co.uk

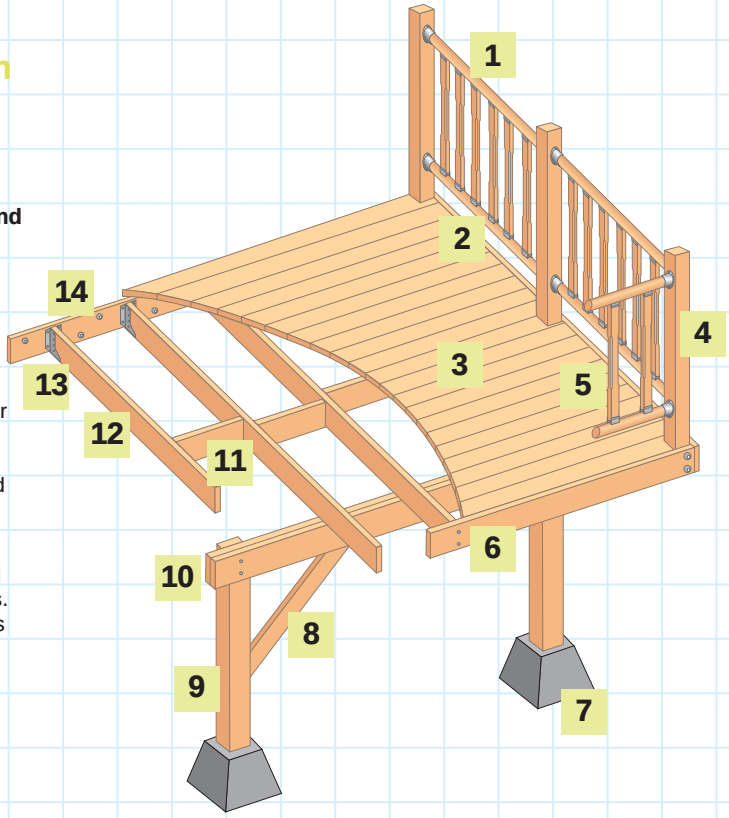
Ideas for building a timeless timber deck

The design capabilities of timber decking mean that you can live the high life in both style and safety.

Raised decks can add character and value to a property, and on sloping land, raised decks are a practical solution to providing external living space where a traditional patio or garden is not possible.

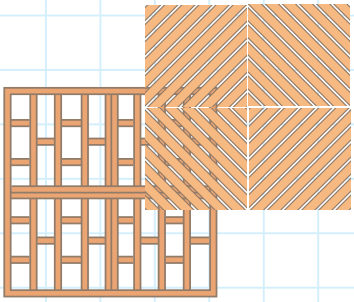
A timber deck is classed as being 'raised' when the deck platform is over 600mm high, and the Axxys Hi Level Decking Range from Timeless Timber meets guidelines set by the NHBC and the Timber Decking Association for raised decks.

The diagram below details the general arrangement required for raised decks. A full code of practise for raised decks is available to download from www.timeless-timber.co.uk

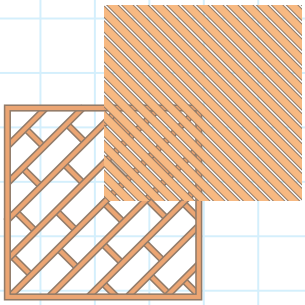


1 Hand rail
2 Base rail
3 Deckboards
4 Newel post
5 Balusters
6 Edge joint
7 Column shall be out of ground contact, mounted onto pre-cast concrete piers of saddlestones
8 Bracing
9 Column
10 Beam to column connection
11 Blocking
12 Joists
13 Wall plate fasteners
14 Wall plate attached to property

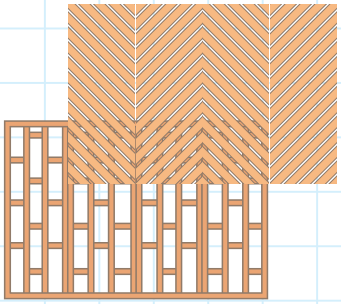
Depending upon the final shape of your deck and the final pattern of deckboards you want to create, the frame of your deck will need to be carefully planned so that the interior joists will support the deckboard design. Various deck design options are shown here and you will see that double joists may 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.



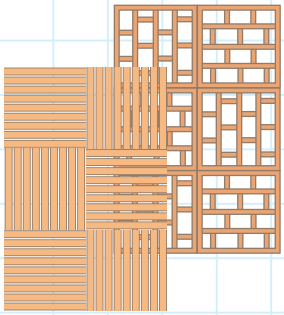
Timeless Diamond Deck



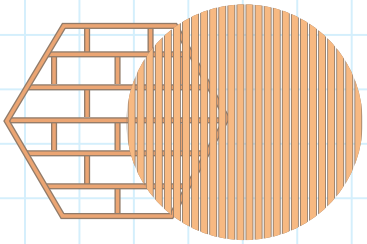
Timeless Angle Deck



Timeless Wave Deck



Timeless Patchwork Deck



Timeless Circular Deck

How to build your timeless timber deck

An easy step by step guide

Stage 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.
- Timeless Timber 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.
- Timber decks differ from conventional patios and terraces most significantly in their elevation and general height of construction.
- For all but the simplest, low-level garden deck, property owners should satisfy themselves that planning regulations do not apply to their proposed structure.

  In addition to contacting the Local Authority, we strongly recommend that you talk to all your neighbours about your plans. Neighbour objections are the most usual reason for planning refusal or enforcement notices after completion.

  Local Authorities can insist that structures are dismantled and removed where consent should have been obtained, but was not.

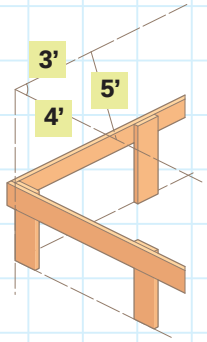
Situations Requiring Planning Permission

- Where the deck is situated within 20 metres of a highway.
- Where the deck platform is more than 300mm (1ft) from the ground (effective 1 October 2008).
- If the structure would affect the amenity value or privacy of neighbouring properties.
- If the deck is attached to a listed building or situated in a conservation area or National Park.

Stage 2

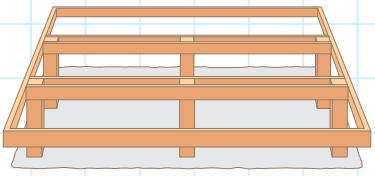
Building the subframe

- 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.

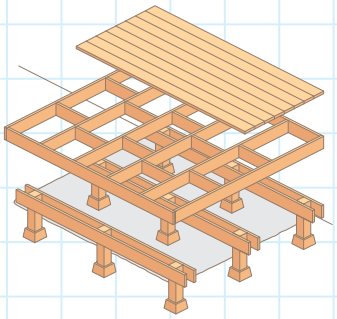


- Decks can be free standing or attached to the side of a house. When attached to a house the finished deck level must be at least two brick courses below the damp proof course. If this is not practical, a gap must be left between the house and the deck to aid drainage. A ledger board is bolted to the wall and used to carry and support the joists.

  This can be done by using a 47 x 150mm Timeless 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 Timeless 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 Timeless 150mm landscape screws and the joist frame is fixed to the beams by skew nailing or screwing.



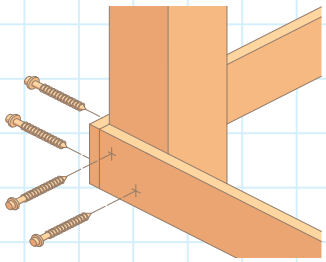
- The frame is constructed from Timeless 47 x 150mm joist timbers
- Joists should be fixed at 400mm centres for maximum support, using Timeless 100mm landscape screws, galvanised nails or joist hangers.
- Noggins (offcuts of joist) are used to prevent the joists from twisting or buckling. These are attached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

Stage 3

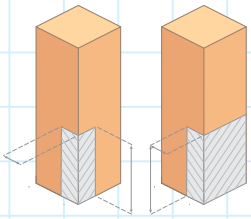
Installing your Timeless Timber Accessories

Points to remember

- Consult a structural engineer or builder for high level decks over 600mm. The Axxys Hi-Level Deck Range has been specifically designed for elevated decks of 600mm and more. It has been independently tested by TRADA and the TDA.
- 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 Timeless 100mm landscape screws and ensure that two faces of the post can be secured through two joists at 90° if possible.

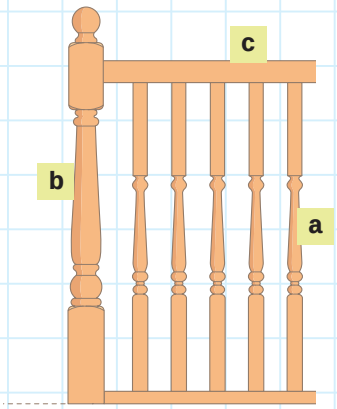


- Posts that are fixed to the side of the deck should be half lapped or rebated when on a corner.

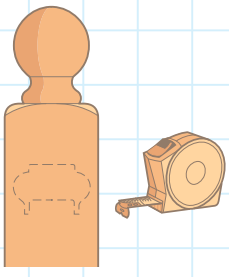


Timeless Turned / Timeless Square / Timeless Stop Chamfered Range

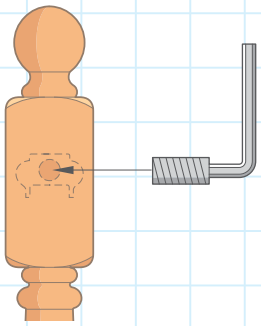
Timeless Turned Spindles (a), Timeless Square Spindles (not shown), Timeless Stop Chamfered Spindles (not shown), Timeless Turned Newel (b) Timeless Universal Rail (c) and Timeless Deck Rail Bolt (not shown).



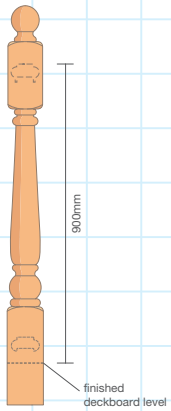
- The versatile Timeless Universal Rail can be utilised as both a top rail and bottom rail.
- Determine the height of the Timeless Universal Rail in relation to the Timeless Turned Newel post.



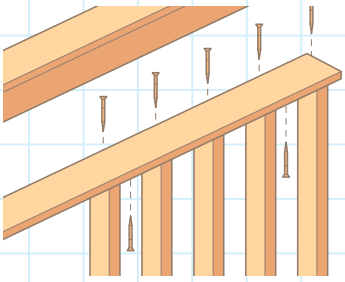
- To make this job easier, use a small portion of rail and mark out the profile onto the newel post using a pencil.
- You now need to prepare the newel for the Timeless Deck Rail Bolt. Using the template you have drawn mark the drilling position onto the post using a bradawl or similar sharp point.



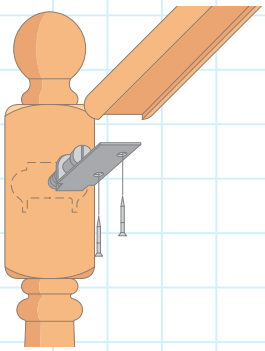
- Using a 22mm flat bit, drill the post to a depth of 10mm.
- Using a 10mm drill bit, drill down the centre of the 22mm hole to a total depth of 30mm. Using an 8mm hexagonal key, screw the metal insert into the 10mm hole. Bolt the metal angle bracket to the insert with the bolt provided ensuring the countersink side is lowermost for the handrail and uppermost for the base rail.
- 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.
- When using the Timeless Universal Rail, spindles are attached to the bottom rail and fillet before attaching the handrail and bottom rail to the newel posts.

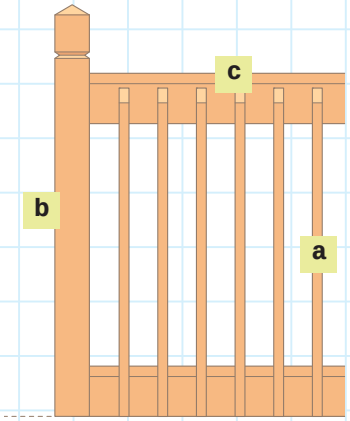


- To determine the length of spindle needed, use a small section of fillet, insert into the top rail and place against the stencilled profile on the newel post. From the fillet measure down to the bottom stencilled profile and this will give you the length of spindle required. Once you have cut the spindle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

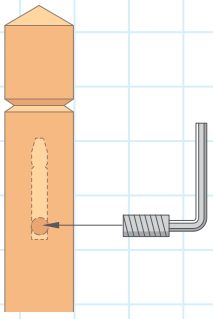


Timeless Chamfered Range

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



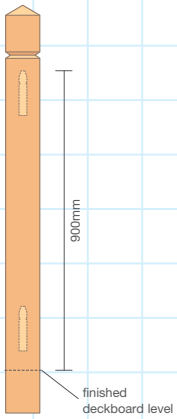
- Determine the height of the Timeless Rail in relation to the Timeless Patrice Newel.
- To make this job easier, use a small portion of rail and mark out the profile onto the newel post using a pencil.



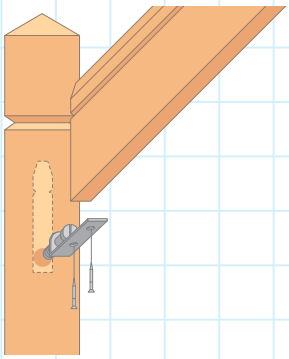
- To determine the finished deckboard level, measure 900mm from the top of the stencilled higher handrail, and mark a line on all four faces of the post.
- In order to mark the position on the bottom rail, measure up 75mm from the deckboard level. Again, a small piece of rail should be utilised to mark out the profile onto the newel post.

Timeless Chamfered Range Continued

- All other Timeless Patrice Newels and rails should be marked in the same way.
- You now need to prepare the newel for the Timeless Deck Rail Bolt. Place the metal angle bracket of the deck rail bolt against the template of the rail you have drawn. Mark with a pencil. This is where the bolt will be drilled.

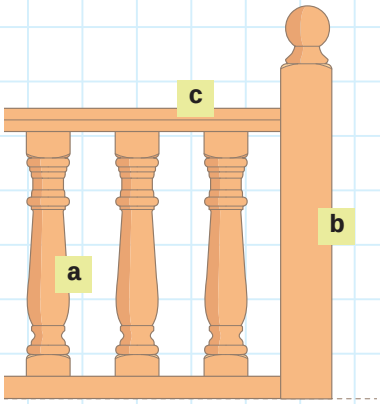


- Using a 22mm flat bit, drill the post to a depth of 10mm.
- Using a 10mm drill bit, drill down the centre of the 22mm hole to a total depth of 30mm. Using an 8mm hexagonal key, screw the metal insert into the 10mm hole. Bolt the metal angle bracket to the insert with the bolt provided ensuring the countersink side is lowermost for the handrail and uppermost for the base rail.
- Mark and drill all remaining Timeless Patrice Newels in exactly the same way and fix inserts into position.
- The Timeless Chamfered Spindles can now be cut to length and attached to the Timeless Rail using Timeless 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 Timeless 100mm landscape screws. Ideally, fix the newels so that two faces of the post can be secured through two joists at 90°.

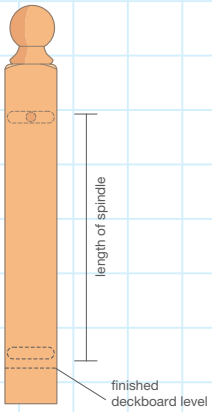


Timeless Roman Range

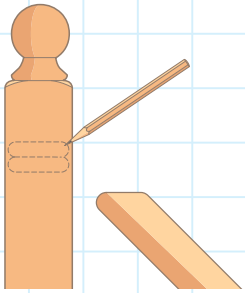
Timeless Roman Column (a), Timeless Roman Newel (b) and Timeless Roman Rail (c).



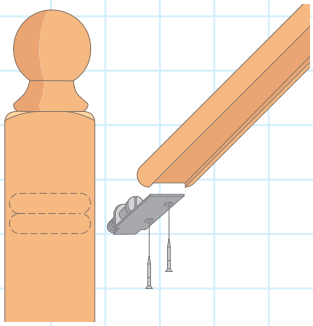
- Determine the height of the Timeless Roman Rail in relation to the Timeless Roman Newel post.
- To make this job easier, use a small portion of rail and mark out the profile onto the newel post using a pencil.
- Three rails are used when building the Timeless Roman Column Range. The first as a bottom 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.

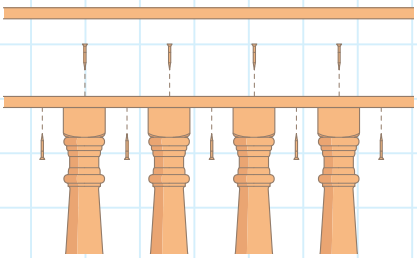


- The Timeless Deck Rail Bolt is used to fix the lower of the top two rails to the Timeless Roman Newel.
- To determine the finished deckboard level, measure the length of the Column from the top of the stencilled higher handrail, and mark a line on all four faces of the post.
- In order to mark the 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 Timeless Roman Newel posts and rails should be marked in the same way.



- You now need to prepare the newel for the Timeless 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.

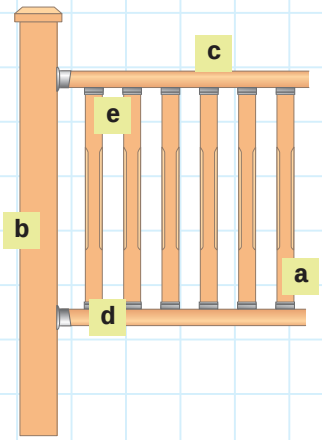




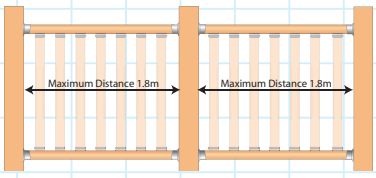
- Using a 10mm drill bit, drill down the centre of the 22mm hole to a total depth of 30mm. Using an 8mm hexagonal key, screw the metal insert into the 10mm hole.
- All other Timeless Roman Newel posts and rails should be marked in the same way.
- The spindles can now be fitted to the handrails. Make sure you leave enough room for the metal angle bracket at each end.
- Use Timeless 63mm screws to fix the Timeless Roman Columns to the Timeless 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 Timeless 40mm screws.
- You should now have a complete panel of posts, rails and balustrading that can be attached to the joist framework using Timeless 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 Timeless Roman Newels, set the panel 75mm above the finished deckboard level. Installation of the deckboards can now commence.

The Axxys Hi-Level Decking Range

Axxys Dek Stop Chamfered Spindle (a), Axxys Dek Square Newel (b), Axxys Dek Universal Rail (c), Axxys Dek Handrail Connectors Satin Aluminium (d), Axxys Dek Spindle Bracket (e).

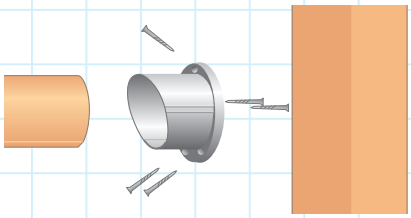


- The Axxys Dek Square Newel can be left with a flat top or finished with a Timeless Patrice Cap.
- The Axxys Hi-Level Decking Range provides a versatile balustrading option for both ground level, and raised decks. The range has been tested by BM TRADA and the Timber Decking Association, and meets the additional strength requirements for balustrades on raised decks over 600mm above ground level, where a handrail height of 1100mm is required.
- As timber is a natural product, some swelling may occur if the products are exposed to moisture. It is advisable to store the product in dry conditions until you are ready to install your deck to avoid problems when attempting to install the metal parts.
- If swelling has occurred, gently sanding, or shaving the timber can still achieve a close fit with the connector. It is important to only sand or shave the area that will be hidden by the metal connector.

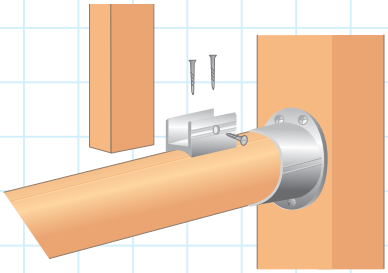


The Axxys Hi-Level Decking Range Continued

- Make sure that your Axxys Dek Square Newels are set no more than 1800mm apart and are at the right levels for the minimum handrail heights of 900 or 1100mm.
- The space between the Axxys Dek Stop Chamfered Spindles must be no more than 100mm apart.
- The Axxys Dek Square Newels are attached to the joist framework using Timeless 100mm landscape screws. Ideally, fix the newels so that two faces of the post can be secured through two joists at 90°. You must ensure that the top of the newel post is 1200mm above the deckboard level.
- Measure the distance between the newel posts and cut the universal rails to length, allowing 34mm for the brackets.
- Slide the connector onto the end of the rail and fix with the two screws provided.



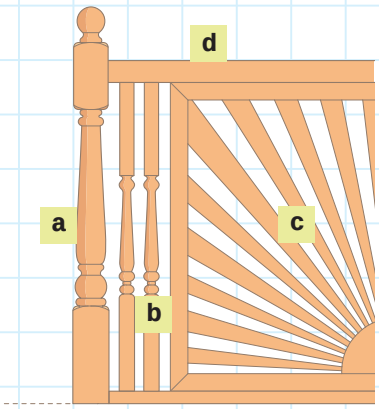
- Fix one connector to either end of the universal handrails and baserails making sure that they are pushed all the way onto the rail.
- The bottom rail should be fitted first ensuring that it is 95mm above the deckboard level.
- The top rail can then be fitted leaving a gap between the bottom rail and top rail of 897mm to fit the Axxys Dek Stop Chamfered Spindle and Timber Spindle Connectors.



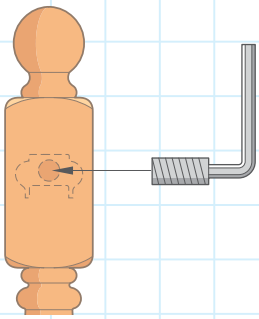
- To calculate how many spindles are needed, divide the distance between the newels by 150mm e.g. 1800mm / 150mm = 12. Ensure they are spaced equally.
- The timber spindle brackets fit into the moulded profile of the rail and are secured with the two screws provided. Attach to the handrail and baserail ensuring that they are parallel.
- Once the pair of brackets are fixed the spindle can be slid into position from the side and securely fixed with the screw provided.

Timeless Panels

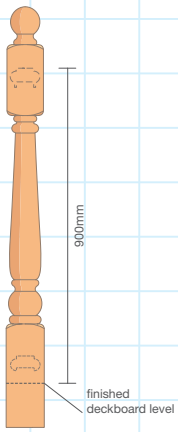
Timeless Turned Newel (a), Timeless Turned Spindle (b), Timeless Sunrise Panel (c), Timeless Universal Rail (d), (Timeless Crossed Panel not shown)



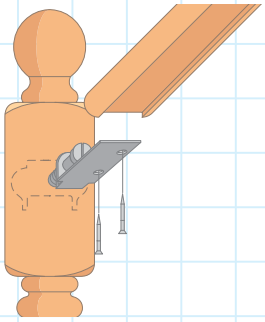
- All panels and spindles are fixed using the Timeless Universal Rail and can be used with any of the posts or newels. The panels can also be used in combination with spindles or by themselves.
- Remember that the gap between the panels, posts and spindles should not allow the passage of a 100mm sphere. 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 Timeless Universal Rail can be utilised as both a top rail and bottom rail.
- Determine the height of the Timeless Universal Rail in relation to the Timeless 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 Timeless Deck Rail Bolt. Place the metal angle bracket of the deck rail bolt against the template of the rail you have drawn. Mark with a pencil. This is where the bolt will be drilled.
- Using a 22mm flat bit, drill the post to a depth of 10mm.



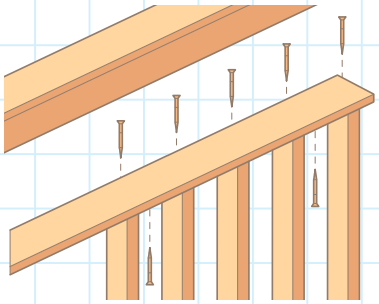
- Using a 10mm drill bit, drill down the centre of the 22mm hole to a total depth of 30mm. Using an 8mm hexagonal key, screw the metal insert into the 10mm hole. Bolt the metal angle bracket to the insert with the bolt provided ensuring the countersink side is lowermost for the handrail and uppermost for the base rail.
- 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 Timeless 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.



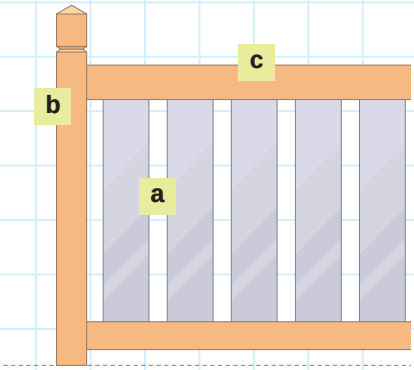
- To determine the length of spindle needed, use a small section of fillet, insert into the top rail and place against the stencilled profile on the newel post. From the fillet measure down to the bottom stencilled profile and this will give you the length of spindle required. Once you have cut the spindle to the required length, attach them to the bottom rail by using Timeless 75mm screws.
- The panels and spindles are attached to the fillet by using a Timeless 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.
- 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 Timeless Deck Rail Bolt.
- In order to attach the fillet to the handrail securely, you should fix it every 3rd or 4th spindle with Timeless 40mm screws.
- You should now have a complete panel of posts, rails and balustrading that can be attached to the joist framework using Timeless 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.

Timeless Clear Range

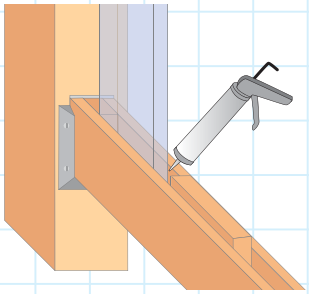
Timeless Clear Spindles (a), Timeless Patrice Newel (b), Timeless Clear Rail (c)



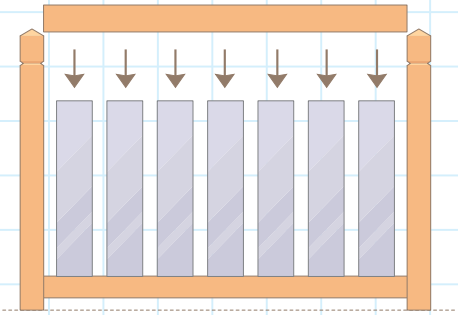
- Timeless Timber Clear Spindles are fixed using Timeless Clear Rails and can be used with Patrice, or Square Newels.
- Determine the height of the Timeless Clear Rail in relation to the newel post. To make this job easier, use a small portion of rail and mark out the profile onto the newel post at both the top and the bottom using a pencil.

Timeless Clear Range Continued

- You now need to prepare the newel for the Clear Rail bracket. Place the bracket against the template of the rail you have drawn. Mark with a pencil.
- Attach the Clear Rail bracket with the screws provided.
- Place the bottom rail in position by slotting it into the bracket.



- It's now time to insert the Timeless Clear Spindles. Place your spindle into the rebated channel, cut the fillet to the desired length you require between each spindle, add silicone to the position where the cut fillet/clear spindle will sit to hold this in position. Wipe away any excess.
- Once all the spindles are in position the top rail can be fixed.



Stage 4

Deckboard installation

Deckboard Installation

- Boards can be fixed with Timeless 75mm ceramic galvanised screws.
- It will often be necessary to join boards along their length. This must always be done over a joist. Use additional sections of joist to increase the area for fixing.
- Screw heads should always be countersunk below the surface of the deck to avoid injury to feet. Check these once or twice a season.
- Always treat cut ends and drill holes with a suitable end seal preservative.

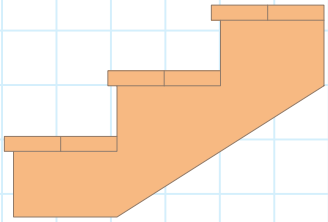
Timeless Screws

- Timeless 75mm screws allow you to take up a board if necessary, without causing damage.
- Deckboards should be pre-drilled before screwing to avoid splitting.
- Deckboards should be fixed along their length to every supporting joist using 2 fixings per joist.
- Make sure you leave at least 25mm from the ends and edges of the boards when installing the fixings.
- Leave a 6 – 9mm gap between each board when installing as it is natural for the deckboards to swell when wet and shrink when dry.

Stage 5

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 Timeless 75mm screws.

Stage 6

Maintaining your Timeless 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.