Know-How to build your own

Pergola

DO IT YOURSELF INSTRUCTION LEAFLET

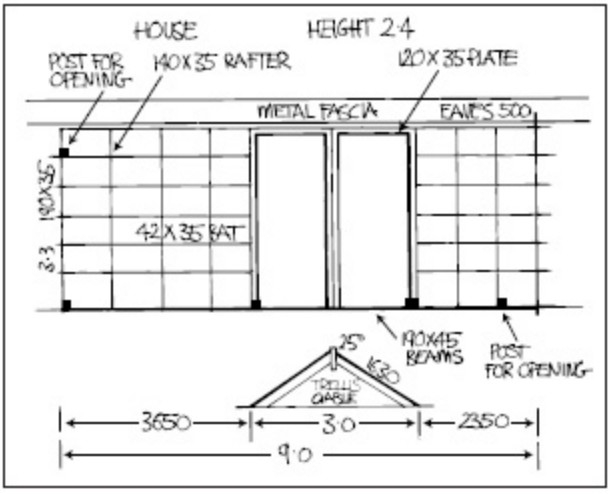
HOME
TIMBER AND HARDWARE

Building your own twin gable pergola should be simple if you follow a few basic rules: Make sure you fully understand your plan, check levels and measurements as you complete each step and refer to the Home Timber and Hardware 'How to Build a Pergola' video as you go.

STEP 1

Preparation

Draw a plan of your intended pergola on graph paper and check with your council to see if a building permit is required. Discuss your plan with an expert at Home then list and cost materials, fittings and tools you'll need. You might also like to hire the 'How to Build a Pergola' video to use in conjunction with this brochure. Also give the timber you'll be using a coat of paint or stain



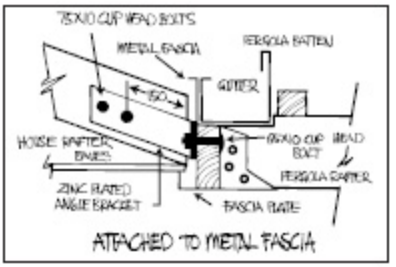
before you start. Mark and prepare your site with stakes and level string lines as per your floor plan, measuring along your string line to mark the location of your upright posts.
Double check all your measurements and ensure everything's square by measuring diagonally. Dig all post holes to specified size. Remember the string line is at the outer edge of all external posts.

STEP 2

Fitting Fascia Plate

Slide back the tiles and place the bracket against the rafter and inside of the fascia, then mark its position.
Drill both holes through the rafter and finally bolt the bracket into place.
Measure and cut the fascia plate to length, mark the centres of any connecting timbers while they are on the ground. Then lift

into position and drill through both the metal fascia and fascia plate. Bolt the fascia plate into position and repeat the procedure for the remainder of the brackets.



ATTACHED TO METAL FASCIA

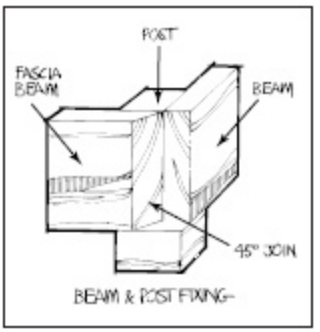
STEP 3

Posts

Use the level string line as a reference when calculating post lengths. You should also consider any fall the pergola may need for water run off if you intend to cover it. Measure, mark and cut posts to their appropriate lengths. Our first posts support both fascia beam and beam. Measure down to the height of the fascia beam and draw a line across the post. Then draw a line down the post 30mm in from the side.

Cut this section out first, using a chisel to remove the section and finish shaping. Now rotate the post 90 degrees to the side that will adjoin the beam and repeat the procedure.

Place the posts in the holes and brace them securely. At the pre-marked position, fit the beam-to-fascia plate support brackets. Then, using a lighter timber, place one end in the bracket and the other on the post and check for level and post height. You may need to adjust the height slightly. If this is the case do so by placing a brick under it.



BEAM & POST FIXING

STEP 4

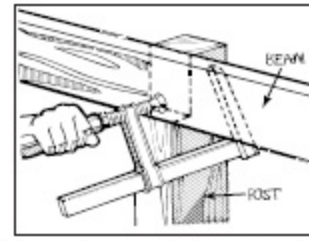
Beams

The next stage is to prepare the fascia beam. If there is to be more than one length of fascia beam, adjoining ends should be mitre cut at 45 degrees and the join must coincide with a post. If one end of the fascia beam adjoins the house it must be notched to accommodate the gutter. Temporarily clamp the fascia beam to the post and secure to the fascia plate.

Next fit the beams that run on each side of the pitched section. Cut the beams to length and notch them to accommodate the gutter. Pre-mark the rafter centres while the beam is on the ground.

Lift the beam into the support bracket, secure to the bracket and then post. Repeat the procedure for the other beam. If there is a second length of fascia beam, each end is mitred at 45 degrees.

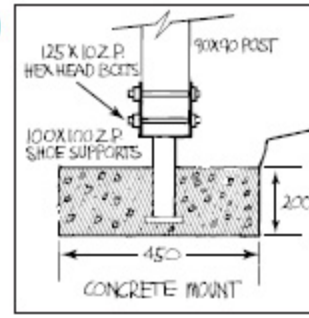
Temporarily secure to the corner post and overlap the first fascia beam. Drill through both fascia beams and post and bolt into position. Next cut the end fascia to length. The post end is mitred at 45 degrees to butt against the front fascia beam and produce a clean corner. The eaves end is again notched to accommodate the gutter. Lift into position and nail to the end of the fascia plate, then fit the internal fascia plate to beam brackets. Remove clamps and nail to the corner post. Now drill and bolt the front fascia beam to the corner post.



STEP 5

Square it up

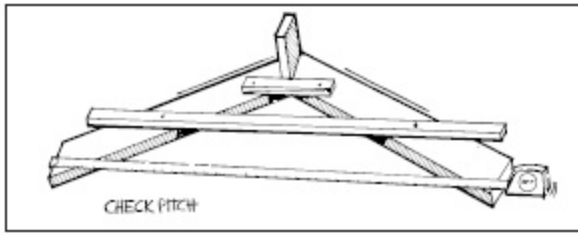
You should check to ensure the structure is plumb and level then concrete posts in position and allow to cure before proceeding to the next stage.



STEP 6

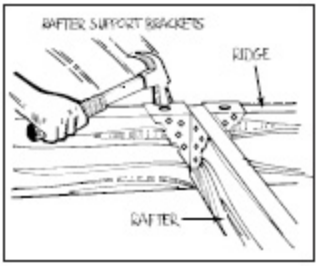
Truss Section

Start the truss section by measuring and marking the overall length of the rafters, then cut each end at required angle. Lay two rafters on the ground with a gap at the top that is equal to the width of the pitched section. Then fit a temporary brace across the top section down the height of the ridge as it will temporarily support the ridge. Mark the collar tie position then place a temporary brace across the rafters. While you are nailing, make sure that the top of the rafter is level with the top of the beam. To assist in fitting the ridge, note that the first truss is one in from the front, and the second, one in from the rear.



The ridge can now be cut to length. It is beneficial to again pre-mark the locations of the rafters. Place the ridge into position ensuring the top is level with the top of the rafters and nail

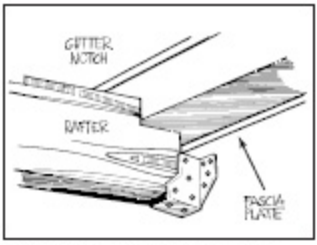
diagonally through the rafter.



Fit the remainder of the rafters, aligning each rafter with the pre-marked locations on both beams and ridge. The front rafters are cut shorter to accommodate the posts. Place a line on the post at the same angle as the pitch section and align the bottom of the front rafters with it when securing. Cut the collar tie to length and place it across the rafters at each mark. Draw a line at the protruding edge and trim the collar tie. Fit the collar tie to the rafters completing the truss. Next fit the rafter support brackets by placing the brackets over the ridge and nailing to each rafter. Pre-mark the purlin locations on the top of the rafters. Place a nail at what will be the bottom edge of each purlin on each rafter, then cut the purlins to length and place them above the nails. Secure the purlin by nailing diagonally through it into the rafter. Then remove the support nail and place a second nail diagonally through the purlin into the rafters.

STEP 7

Flat Section



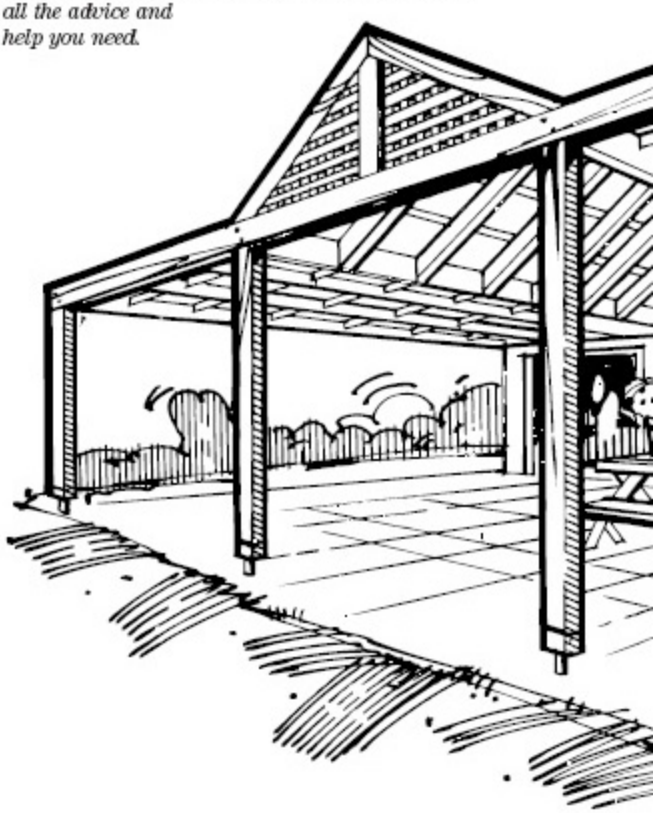
Fit any remaining rafters to the flat sections of the pergola by square cutting at both ends, then notching for the gutter. Mark the purlin centres on the top of the rafters. Cut the purlins to length and secure by nailing to the top of the rafters and into the fascia or fascia beam. Mark and cut the front and rear in-fills to shape, cut out to accommodate the protruding ridge and secure to the end rafters. Angle cut the top of the front fascia and temporarily secure by nailing into the end of the purlins. Using a spirit level, mark the angle at the bottom. Remove the fascia and cut accordingly before finally fitting into position. Repeat the procedure for the opposite side. To conceal the remaining end of the ridge, fit the centre trim.

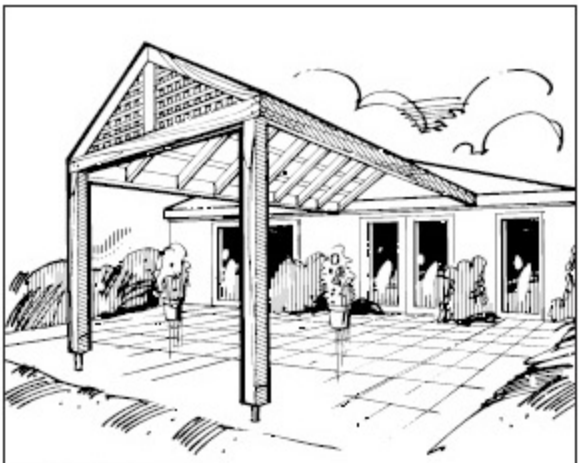
STEP 8

Finishing

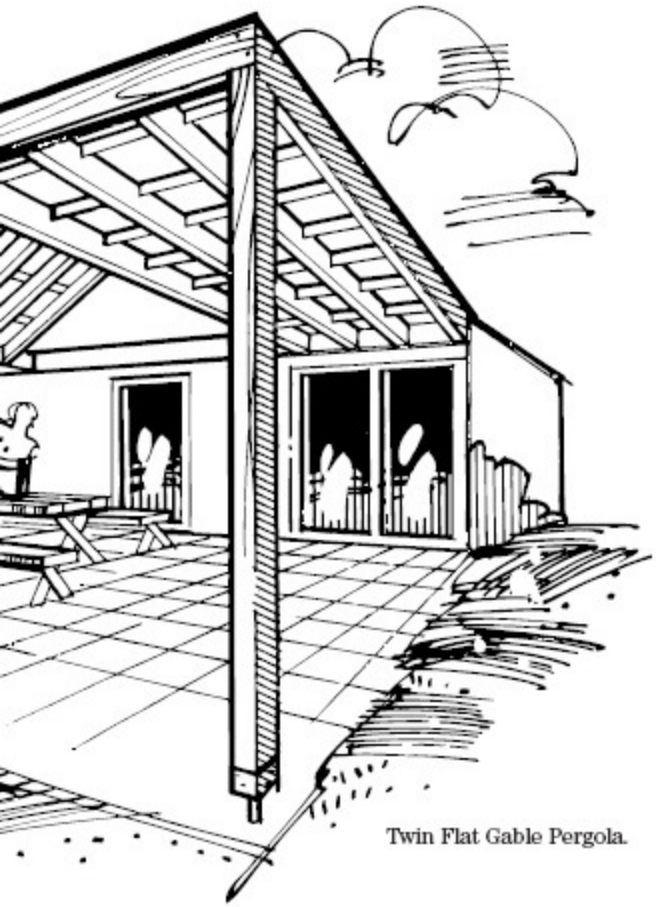
Finally add any finishing touches such as a finial. Paint any unpainted exposed ends and touch up over nails and bolts. If necessary give the complete structure a second coat.

Whatever type of pergola you want to build, your Home Timber and Hardware store can give you all the advice and help you need.

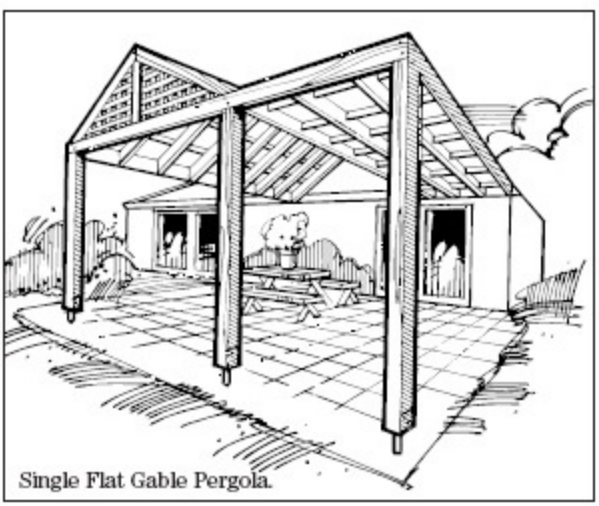




Gable Roof Pergola.



Twin Flat Gable Pergola.



Single Flat Gable Pergola.

Tips to save time and trouble.

- Read all the instructions, rent the 'How to Build a Pergola' video and talk to a Home Timber and Hardware expert, before you start.
- Don't fit upright posts flush into galvanised fixing brackets. Leave a 4 millimetre gap to allow for drainage.
- Get a pair of helping hands with a spirit level to hold posts upright in the exact vertical while you drill the holes and bolt them to the galvanised fixing brackets.
- Protect yourself! When using power saws and drills, wear protective goggles and ear muffs.
- Pre-drill nail holes with a drill bit of lesser diameter than nails. This prevents softer timber splitting and nails bending in harder timber.

Get the Know-How at your local Home Store:

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