

CHRISTMAS TREE

Tools Required To Make this Design:

Punching: Practical Punch/Shear (or Master Punch/Shear or XL5+ Power Bender fitted with 3mm Punch Block & Pins)
 Cutting: Practical Punch/Shear (or Master Punch/Shear or XL5+ Power Bender)
 Riveting: Practical RBR
 Bending: Practical RBR
 Rolling: Practical RBR
 Scrolling: Mk 1/2 Scroll Former, Mk 2/2H or Mk 2/3 Scroll Former

We recommend that before starting you wipe all steel bars down so that they are free of grease, scale or dirt. After cutting any component, we also recommend that you trim the corners for a neater finish, if preferred, unless these instructions tell you otherwise. Use a fine tip marker pen, pencil or scribe for marking hole, bend, scroll, roll points on the bars.

Component 1 Collars
 12mm x 2mm x 150mm (2)

From 2 lengths of 12 x 2 x 914mm steel strip, using the Practical Punch/Shear Tool (PPS), cut 2 strips each 150mm long. Set remainder of steel strips aside for Component 7. Mark all hole positions marked H1 and bend positions B1-B5. Using the Practical Riveting, Bending & Rolling Tool (PRBR), form bends B1-B5 making 2 hexagonal collars. Using the PPS punch all marked holes. See Component 1 on Template Sheet 1 for profile.

Component 2 Main Trunk
 12mm x 2mm x 600mm (6)

From 6 lengths of 12 x 2 x 914mm steel strip, using the PPS, cut 6 strips, each 600mm long. Set remainder of steel strips aside for Component 3. Chamfer all corners using the PPS. On each strip, mark hole positions H2-H8, bend position B6 and Scroll position S1. Using the **Mk 2/2H or Mk 2/3** Scroll Former, scroll each non punched end up to S1. Using the PBR, form bend at B6 to splay the scrolled end out. See Component 2 on Template Sheet 1 for profile.

Components 3 & 4 Bottom Branch
 12mm x 2mm x 300mm (6)
 10mm x 1.6mm x 180mm (12)

From left over steel for Component 2, cut 6 strips, each 300mm long to form Component 3. Chamfer all corners. Mark hole positions H9-H10, bend position B7 and scroll position S2. Scroll non punched end to S2 using the **Mk 1/2F** and bend at B7. Using the PBR roll strip between S2 and B7. Punch holes H9-H10.
 From 3 lengths of 10 x 1.6 x 914mm steel strip, cut 12 strips, each 200mm long to form Component 4. Chamfer all corners. Mark hole H11 and scroll position S3. Scroll non punched end to S3 and then roll to end of strip. Punch hole H11. See Components 3 and 4 on Template Sheet 1 for profiles.

Components 5 & 6 Lower Branch
 12mm x 2mm x 275mm (6)

From 2 lengths of 12 x 2 x 914mm steel strip, cut 6 strips, each 275mm long to form Component 5. Chamfer all corners. Mark hole positions H12-H13, bend position B8 and scroll position S4. Scroll non punched end to S4 using the **Mk 1/2F** and bend at B8. Roll strip between S4 and B8. Punch holes H12-H13.
 From 2 lengths of 10 x 1.6 x 914mm steel strip, cut 12 strips, each 150mm long to form Component 6. Mark hole position H14 and scroll position S5. Scroll non punched end to S5 and roll to end of strip. Punch hole H14. See Components 5 and 6 on Template Sheet 1 for profiles.

Components 7 & 8 Middle Branch
 12mm x 2mm x 250mm (6)
 10mm x 1.6mm x 125mm (12)

From left over steel for Component 1, cut 6 strips, each 250mm long to form Component 7. Chamfer all corners. Mark hole positions H15-H16, bend position B9 and scroll position S6. Scroll non punched end to S6 using the **Mk 1/2F** and bend at B9. Roll strip between S6 and B9. Punch holes H15-H16. Use template sheet for reference.
 From 2 lengths of 10 x 1.6 x 914mm steel strip, cut 12 strips, each 125mm long to form Component 8. Mark hole H17 and scroll position S7. Scroll non punched end to S7 and roll to end of strip. Punch hole H17. See Components 7 and 8 on Template Sheet 1 for profiles.

Component 9 Top Branch
 12mm x 2mm x 200mm (6)

From 2 lengths of 12 x 2 914mm steel strip, cut 6 strips, each 200mm long. Mark hole position H18, bend position B10 and scroll position S8. Scroll non punched end to S8 using the **Mk 1/2F** and bend at B10. Roll strip between S8 and B10. Punch hole H18. See Component 9 on Template Sheet 1 for profile.

Component 10 Star
 10mm x 1.6mm x 300mm (6)

From 2 lengths of 10 x 1.6 x 914mm steel strip, cut 6 strips, each 300mm long. Mark hole position H19, bend positions B11-B13 and scroll position S9. Scroll to S9 using the **Mk 1/2F**, bend at B11, B12, B13 and punch hole H19. See Component 10 on Template Sheet 1 for profile and directions of scroll and bends.

Assembly instructions

- 1) First start by riveting two of Component 4 to the top of Component 3 using holes H10 to H11 to form a single "Bottom Branch" See FIG 1 on Component Sheet 2. Repeat with Components 5&6 to form a single "Lower Branch" Repeat with Components 7&8 to form a single "Middle Branch".
- 2) Rivet the assembled Bottom Branch to the Main Trunk (Component 2) using holes H8 and H9. Rivet the assembled Lower Branch to the Main Trunk using holes H7 and H12. Rivet the assembled Middle Branch to the Main Trunk using holes H5 and H15.
- 3) Rivet the Top Branch (Component 9) to the Main Trunk using holes H3 and H18.



metalcraft™

Design Pack

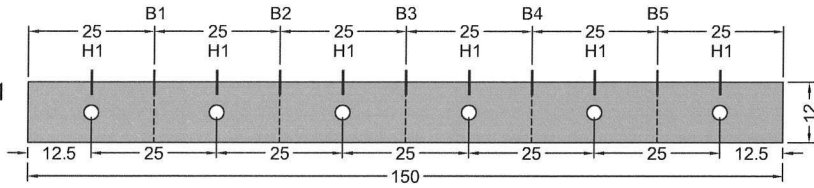
Christmas Tree

Difficulty Rating:	
Easy	
Straightforward	✓
More complex	

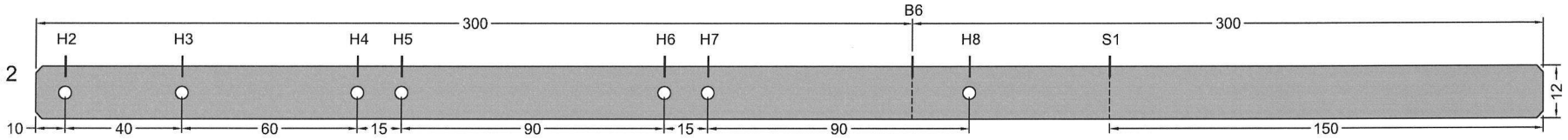
Assembly Instructions Continued

- 4) Rivet the Star segment (Component 10) to the Main Trunk using holes H2 and H19.
- 5) Repeat steps 1-4 another 5 times to create 6 trunk components with attached branches and star segment. See FIG 2 on Component Sheet 2.
- 6) Bolt each assembled trunk to both Collars (Component 1) using holes H1 on the Collars and H4 and H6 on the Trunk (Component 2).
- 7) If required, adjust individual components as necessary to achieve a uniform tree appearance.
- 8) Apply decorative finish of choice.

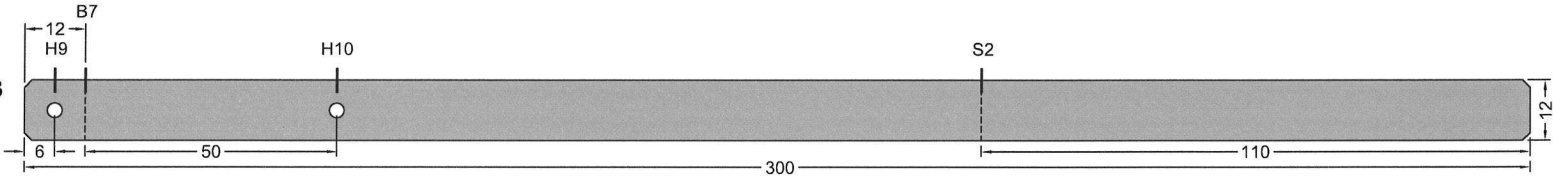
Component 1
150 x 12 x 2mm x 2



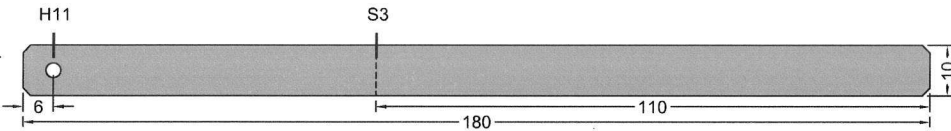
Component 2
600 x 12 x 2mm x 6



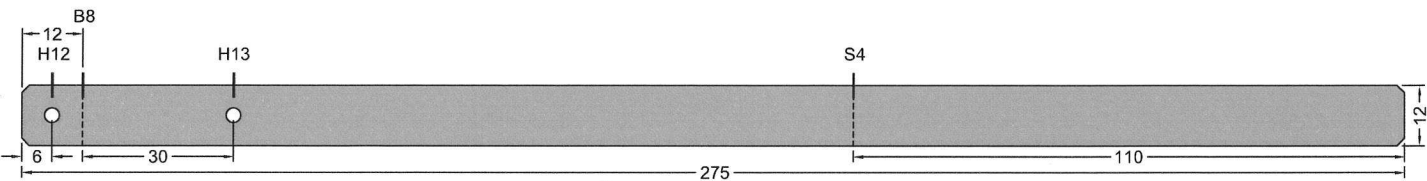
Component 3
300 x 12 x 2mm x 6



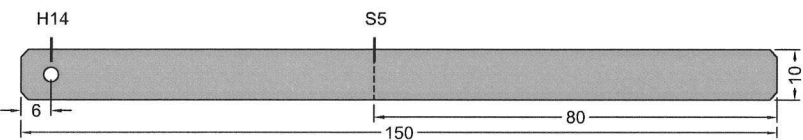
Component 4
200 x 10 x 1.6mm x 12



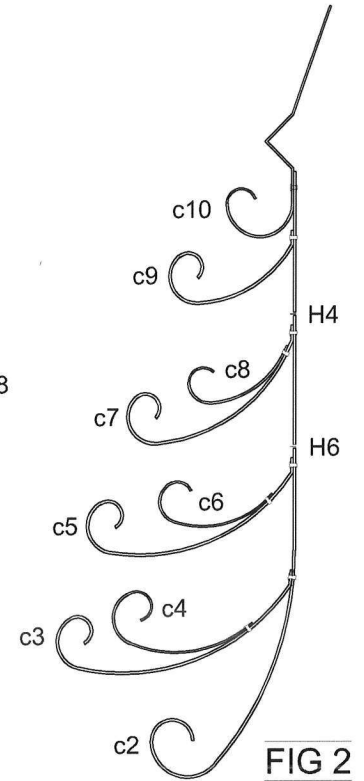
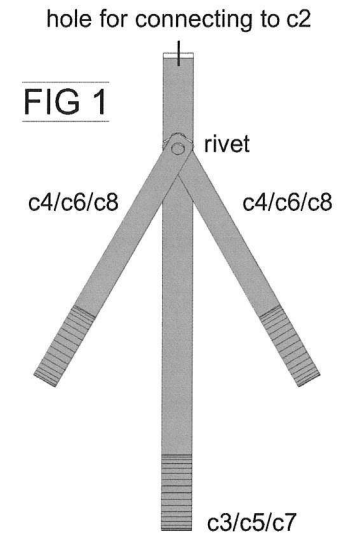
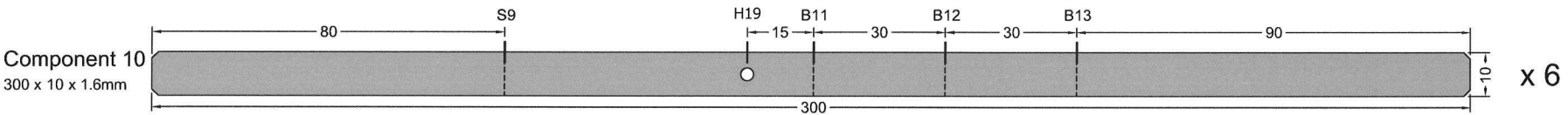
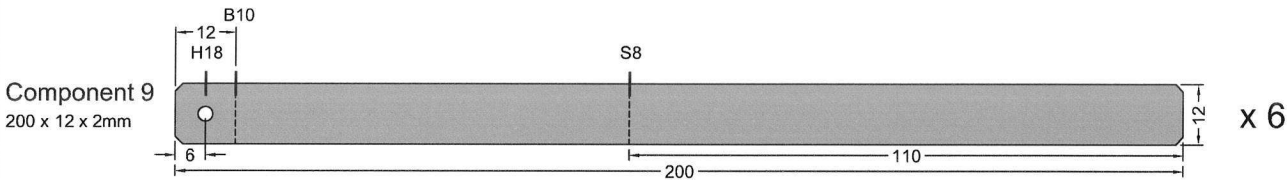
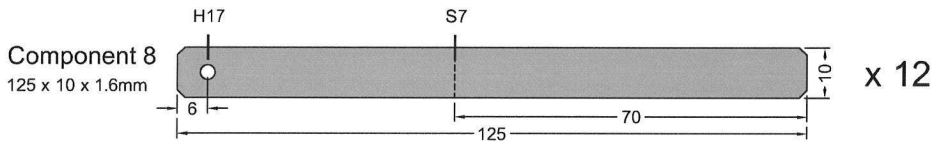
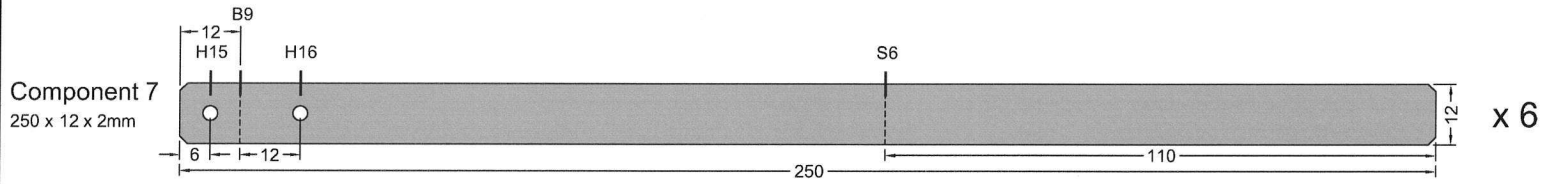
Component 5
275 x 12 x 2mm x 6



Component 6
150 x 10 x 1.6mm x 12



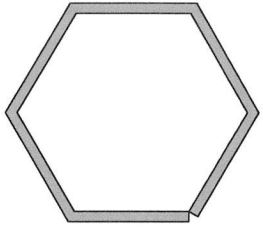
NOT TO SCALE



List of Materials Required:

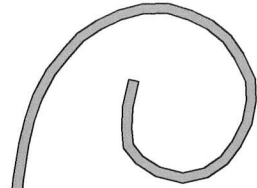
- 12 x 914mm (3ft) Lengths of 12mm x 2mm Steel Strip (Re-Order Ref: MC034)
- 9 x 914mm (3ft) Lengths of 10mm x 1.6mm Steel strip (Re-Order Ref: MC031)
- 12 x 8mm x 3mm Nuts & Bolts (Re-Order Ref: MC059L)
- 30 x 6mm x 3mm Rivets (Re-Order Ref: MC050L)
- 18 x 8mm x 3mm Rivets (Re-Order Ref: MC051L)

NOT TO SCALE



Component 1

Component 3

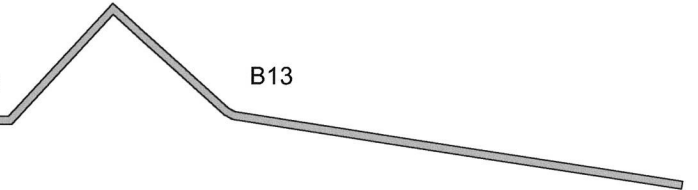


Component 10

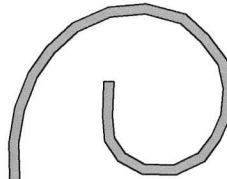
B12

B11

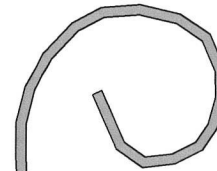
B13



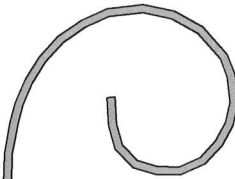
Component 5



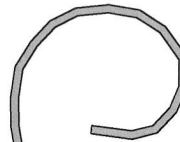
Component 7



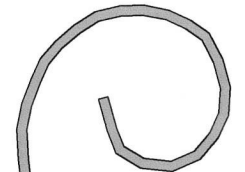
Component 4



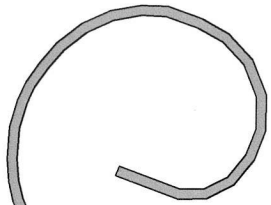
Component 6



Component 9



Component 8



Component 2
(in part)

B7



B8



B9



B10



B6

