

# SWAN PLANTER

**Tools Required to Make this Design:**  
Scrolling: Mk 2/2H or Mk 2/3 Former  
Punching: Practical or Master Punch/Shear (or XL5+ Power Bender fitted with 3mm punch block & pin - or use 5mm holes but 5mm rivets will be required\*)  
Riveting: Practical or Master RBR (or XL5+ Power Bender)  
Bending: Practical or Master RBR (or XL5+ Power Bender)  
Rolling: Practical or Master RBR (or XL5+ Power Bender)  
Cutting: Practical or Master Punch/Shear (or XL5+ Power Bender)

1

Bottom Scroll 650mm (x 2)

COMPONENT 1

It is recommended with all steel lengths, you first remove any excess oil, grease or scale with a cloth or abrasive paper.

Take two lengths of 920mm (3') 15 x 3mm steel, cut down to 650mm and trim all the corners then, using a fine tip marker or pencil, mark the two scroll points 'S1' 150mm from either end as shown in Component 1 overleaf. Also mark the centre point C1.

Start by placing one end of the steel in the Mk 2/2H Former (or Mk 2/3 Former) and form a small scroll up to such point that the mark 'S1' makes contact with the Scroll Former's segment. Repeat this at the other end of the steel (making sure you are creating a 'C' scroll). Repeat all this with the second length.

2

Inner Scrolls 600mm (x 2)

COMPONENT 2

Again, take two lengths of 920mm (3') 15 x 3mm steel, cut down to 600mm and trim all the corners then mark the two scroll points 'S2' again 150mm from either end as shown in Component 2 overleaf. Scroll into a 'C' scroll as described above.

Next, place the 'Inner Scroll' in the R/B/R tool ready for rolling (making sure it is in the right way round). Then, refering to the Diagram shown below, apply gradual pressure on the lever to achieve the correct curve. Note - stop when the overall length 'd' just fits inside the 'C' scroll of Component 1 .

3

Top Scroll 800mm (x 2)

COMPONENT 3

Again, take two lengths of 920mm (3') 15 x 3mm steel, cut down to 800mm and trim all the corners then mark the two scroll points 'S3' again 150mm from one end and 'S4' 300mm from other end as shown in Component 3. Scroll to the two marked points but, this time, to form an 'S' scroll as shown below. Now place in the R/B/R tool and roll, again using the scroll points as a guide when to stop. Roll until the 'S' scroll created touches the Components 1 & 2 at the places shown in Diagram 1 overleaf.

4

Feet Scrolls 450mm (x 2)

COMPONENT 4

Take one length of 920mm (3') 15 x 3mm steel, cut two lengths of 450mm and trim all the corners then mark the two scroll points 'S5' 150mm from either end as shown in Diagram 4. Also mark the centre point C2.

Then, exactly as with the 'Bottom Scroll', start by placing one end of the steel in the Mk 2/2H Former (or Mk 2/3 Former) and scroll up to the mark 'S5'. Repeat this at the other end (making sure you are creating a 'C' scroll). Repeat this with the second length.

5

Support Bars 220mm (x 4)

COMPONENT 5

Using offcuts from the 'Bottom Scrolls' (Component 1) and 'Inner Scrolls' (Component 2) , cut down four lengths to 220mm each. Take two lengths and mark in the centres 'H1', then, on all four lengths, mark at 'H3' 7mm from each end as shown on Component 5 and finally, punch all lengths where marked.

6

Swan's Neck 920mm (x 1)

COMPONENT 6

Take a 920mm length of 15 x 3mm steel, trim corners then mark at 'S3' and 'R1' both 250mm from either end as shown in Diagram 7 then mark 'R2' a further 150mm in from 'R1'. Also mark at punch point 'H5' 7mm in from the end and again at 'H4' a further 80mm in. Then, punch in the centre of the 15mm steel at both points using the Practical Punch/Shear tool.

Finally, using the Practical R/B/R tool, roll between 'R1' and 'R2' to achieve a curve as shown in Template No. 1 (making sure you are rolling the right way round as shown here).

7

Swan's Bill 250mm (x 1)

COMPONENT 7

Take a 920mm length and cut a piece to 250mm, trim corners and mark out the four bend points as shown in Diagram 8.

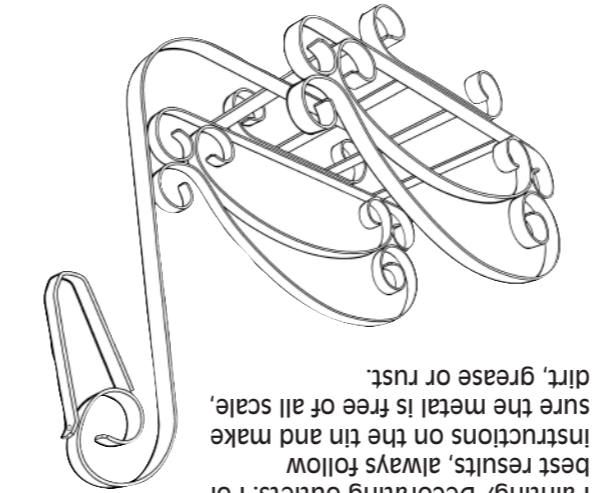
Place in Practical R/B/R, set for bending and bend at the four marked points to match Template No. 2. If you are using the Master RBR or XL5+ to make these bends, you might need to change the distance between B1-B2-B3 from 15mm to 20mm.

Next, offer up to the 'Swan's Neck' and, when you are happy with it's position, mark on both the 'Bill' and on the 'Neck' the punch points needed to join the two pieces together with an 8mm x 3mm rivet.



**Finishing**  
The finished item can now be painted in a wide variety of finishes (smooth, satin, hammer and metallic) either by aerosol or by brush application. Powder coating and plastic dip finishes can also be applied but these type of finishes are more for commercial/industrial scale finishing.

However, even with aerosol or paint finish you can make your finished item look professional. In this case we used paints from the Plasti-kote and Hammerite ranges - available from most DIY and Painting/ Decorating outlets. For best results, always follow instructions on the tin and make sure the metal is free of all scale, dirt, grease or rust.



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**8 Assembly** Lay out the three components (no.s 1, 2 & 3) that form the top part of the side of the Swan as shown in Diagram 1 overleaf.

Make sure all these scrolls touch in the places shown and if necessary manipulate the scrolls by hand to make any fine adjustments. Then with a marker pen mark the edges of the components at the "touching" points A and C in Diagram 1 and punch the holes on all components at these points. Use the Nuts & Bolts provided to temporarily hold all the components together. Repeat for the other side. Next, offer up Component 4 ( Feet C Scrolls) to the bottom of Component 1 so that the two marked centre lines on each line up. Then mark on Component 4 where the holes two H1 on Component 1 line up with and punch these holes on both Component 4's (ref point B on Diagram 1)

Next take the Swans Neck (Component 6) and the two Support Bars (Component 5) which have the central holes H3 punched in them. Then rivet, using 8mm x 3mm rivets, the first Support Bar at H3 to the Swans Neck at H4 and the second Support bar at H3 to the Swans Neck at H5, taking care to make sure the support bar goes on the underneath. To get the joint between the rivet posts, you will have to rivet the support bar at a angle to the Swan Neck and then twist it into position (at right angles) by hand afterwards. Now offer the Swans neck plus two support bars (component 5) up to one of the sides of the swan so that the ends of the two support bars with holes H2 line up with the holes H1 in Component 1 and the holes punched in component 4 earlier, making sure to sandwich these ends between Components 1 and 4 at points B. Join together with the Nuts and bolts provided and repeat on the other side to assemble the swan.

Next attach the remaining two Support Bars (component 5) without centre (holes) to each side with Hole 2 the holes on the side of the swan at C2 (Ref Diagram 1) using Nuts & Bolts.

When happy that all holes are correctly aligned, at each joint in turn undo a nut & bolt, replace with a 8x3mm (2 pieces of metal to be joined ) or 12 x 3mm rivet (3 pieces of metal to be joined) and rivet that joint using the RBR tool and then move onto the next joint and gradually work your way around the swan until all nuts and bolts have been replaced by a riveted joint. You might need the assistance of another person to hold the metalwork while you rivet each joint."

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## Design Pack SWAN PLANTER

DIFFICULTY RATING:

EASY

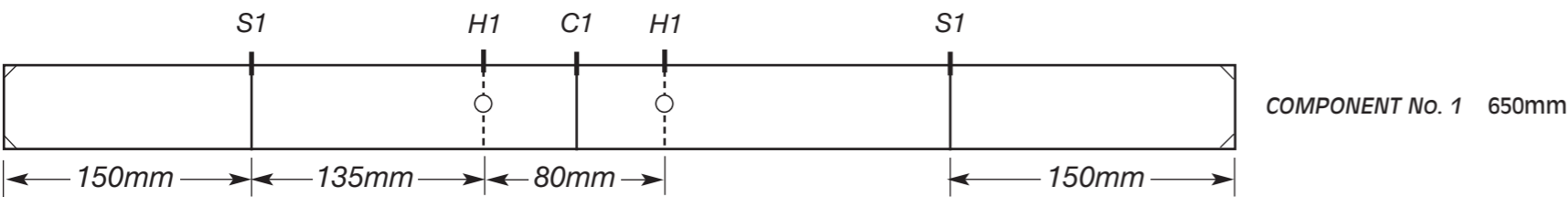
STRAIGHTFORWARD

MORE COMPLEX

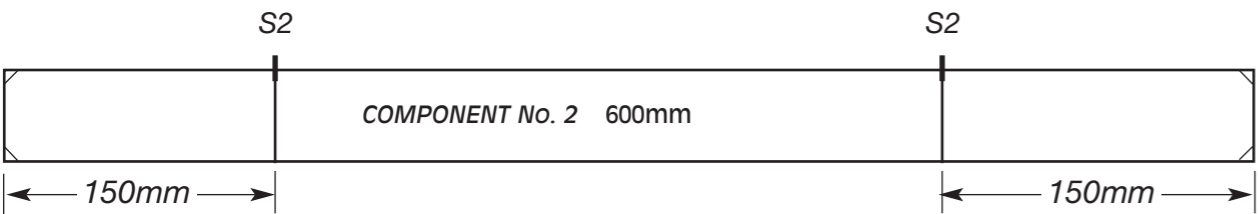


# Design Pack: s w a n   P L A N T E R - DESIGN SHEET 1 - DIAGRAMS

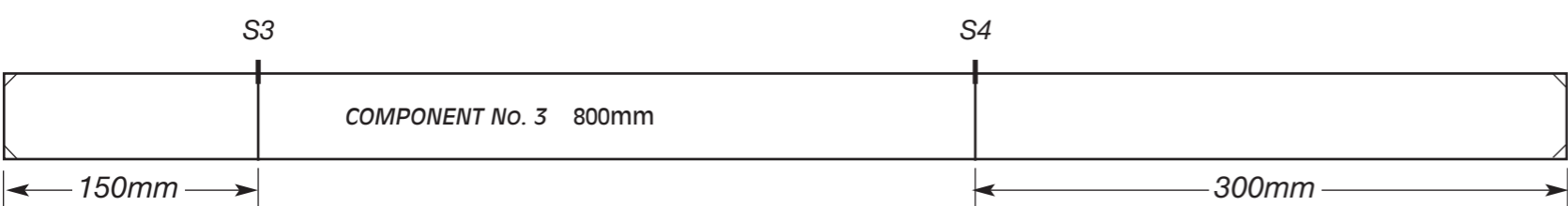
Bottom 'C' Scrolls x 2



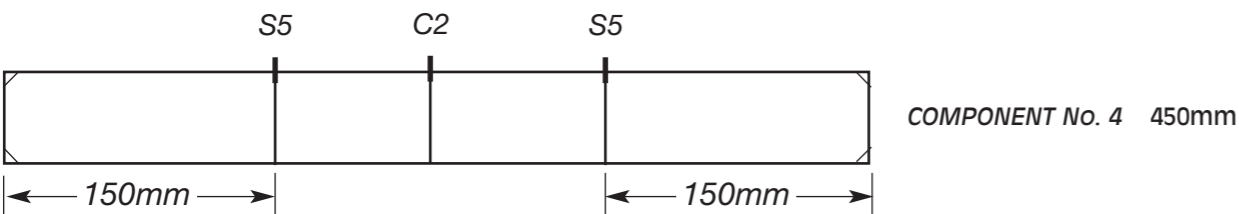
Inner 'C' Scrolls x 2



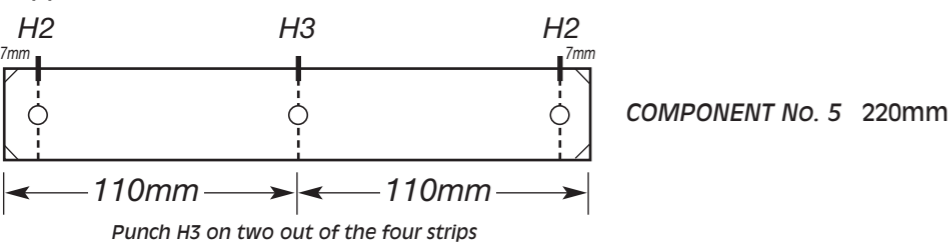
Top 'S' Scrolls x 2



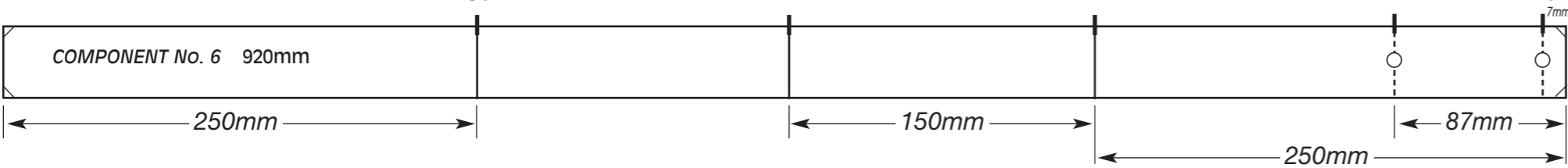
Feet 'C' Scrolls x 2



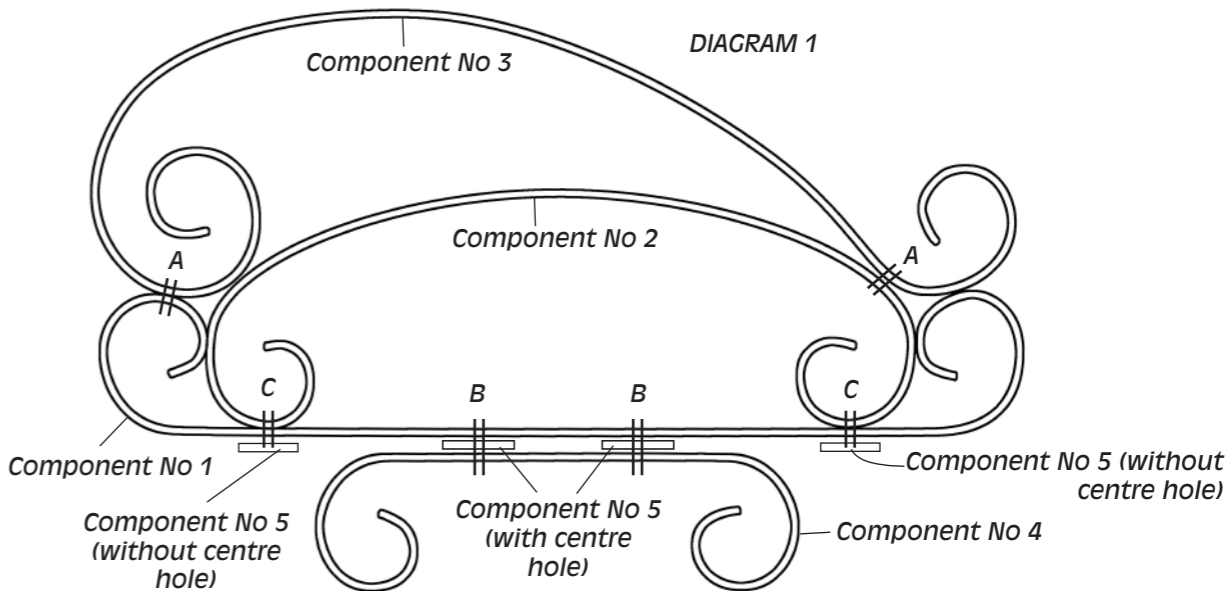
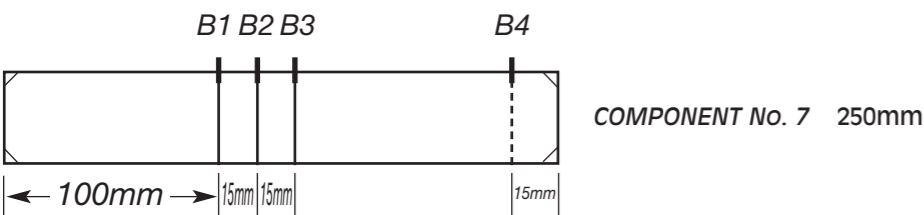
Support Bars x 4



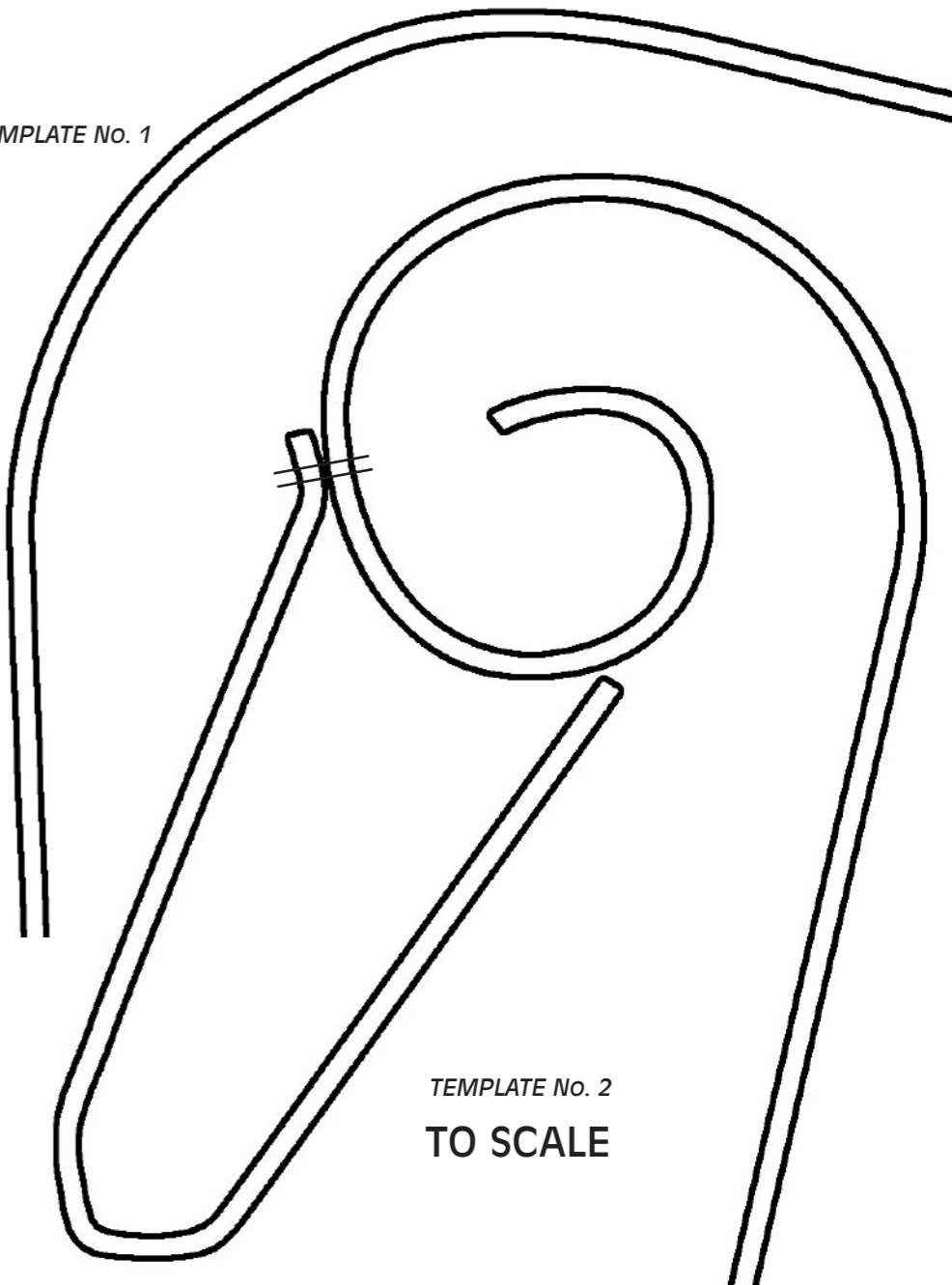
Swan's Neck x 1



Swan's Bill x 1



TEMPLATE No. 1



## List of Materials Required:

- 9 x 920mm (3ft) Lengths of 15mm x 3mm Steel Strip [Re-Order Ref: MC037I]
- 12 x 3mm Rivets [Re-Order Ref: MC053L]
- 8 x 3mm Rivets [Re-Order Ref: MC051L]
- 12 x 3mm Nuts & Bolts [Re-Order Ref: MC054L]