

Rolling circles with the Metalcraft RBR tools.

First work out the size of circle you'd like to make. Then we need to know the circumference for that circle –that is what length of steel needed to make that circle. If you know your desired diameter, the formula is

$$\pi \times \text{diameter} = \text{circumference} (\pi = 3.14125)$$

Also, the thickness of the steel being used must be allowed for. Example: for a circle of 200mm inside diameter using 3mm thick steel, to find the length of metal needed, the calculation would be:

$$3.14125 \times 203 = 638\text{mm}$$

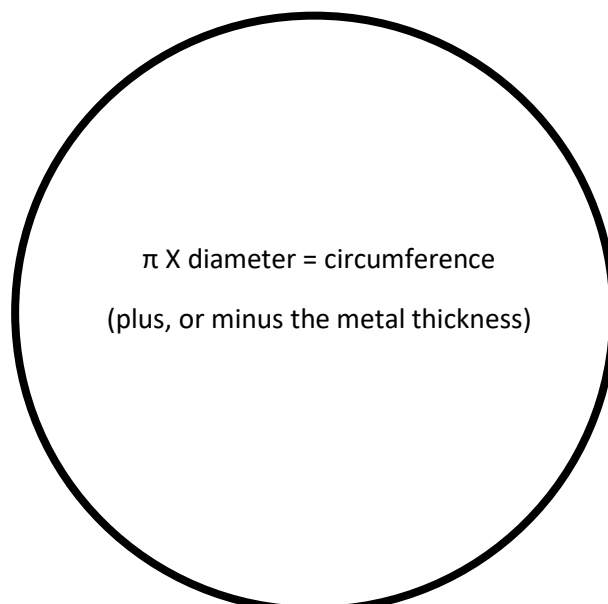
If it is the outside diameter you want to be 200mm, subtract the 3mm:

$$3.14125 \times 197 = 619\text{mm}$$

The other issue to address is the flat ends that become more apparent when making smaller circles.

To eliminate the flat spots, Hammer the first 20-40mm (depending on the tool and the size of circle) at each end into a curve of the metal before rolling the circle.

The curve you create needs to match the curve for the size of circle being made. To find this curve required, draw a radius for that circle size with a compass. This will give a sample of the curve to match before rolling the circle.



For this example, we want to make a circle of 100mm diameter out of 3mm thick metal.

For 100mm inside diameter, we add the metal thickness: -

The calculation would be $\pi (3.14125) \times 103\text{mm} (100\text{mm} + 3\text{mm}) = 324\text{mm}$

This is the length of metal we need to make this circle.

For a 100mm outside diameter, we subtract the metal thickness: -

This gives us $\pi \times 97\text{mm} = 305\text{mm}$

Cut the metal to the length required.

Before rolling the circle, draw a circle the same size with compass or scribes.

Create curve at each end of the metal with a hammer on the anvil.

This needs to match as close as possible to the curve on the circle. (Usually 30-40mm from each end)

Now roll the circle on the Master Riveting/Bending/Rolling tool.

If the ends are curved correctly, you should have a circle.

Hammer in this direction



For this example, both ends of your metal should look like this before you roll the circle on the Master R/B/R