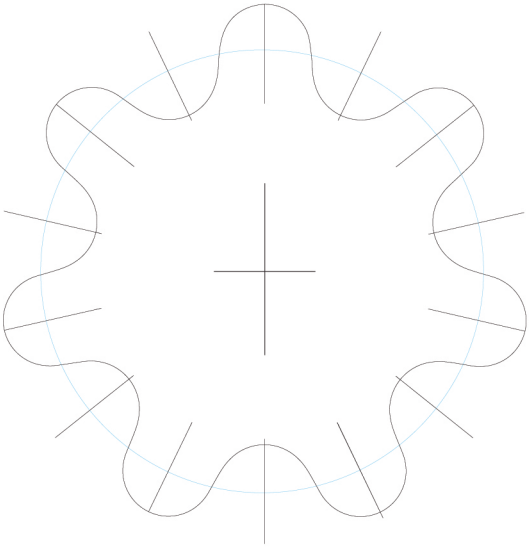
SUPPORT SPROCKET (IMPERIAL) TEMPLATE By VegOilGuy



Print Test

This line should be exactly 1 inch long

Support Sprocket Info

This is an optional sprocket for use instead of the support wheel. The diameter of each tooth is ½" The diameter of each gap is ½"

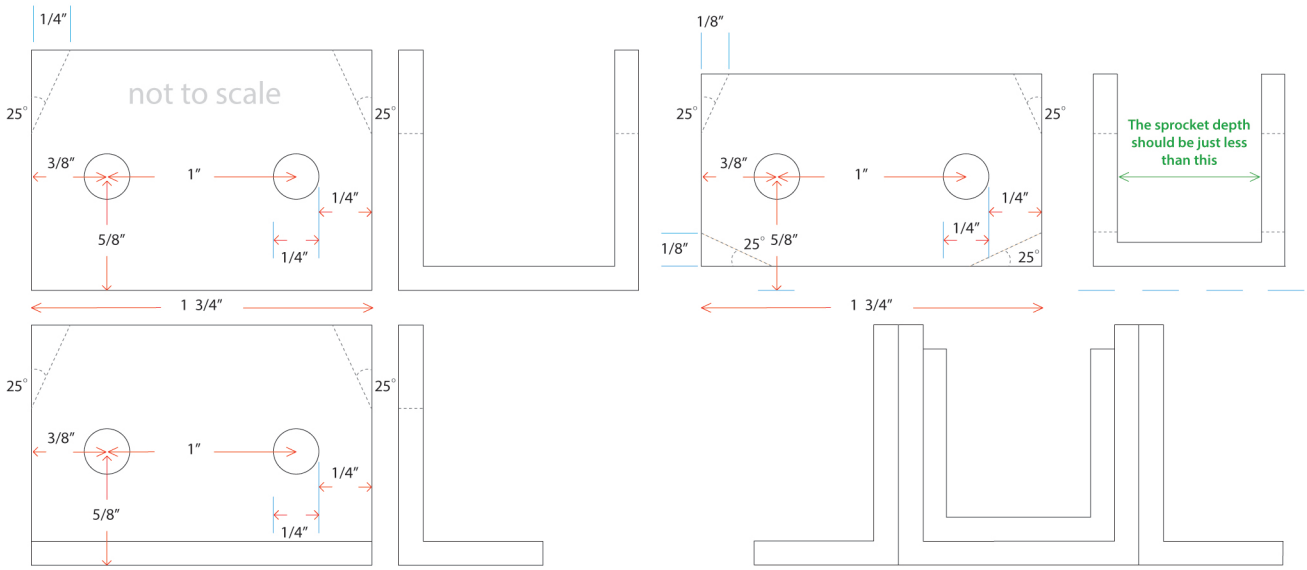
Materials Required

4 x sprockets
2 x support wheels (minimum)
U Channel large - 10 ft
U Channel small - 10 ft
L Channel - 20 ft
160 x 2" x ¼" bolts
160 x ¼" nylon (locking) nuts
2300 x ¼" washers approx (diameter should be ½"
- check and adjust if necessary - my washers were quite thick... you may need more)
Optional - 320 x ¼" small bolts

WARNING - this is a very frugal materials list for those that don't like waste. I would encourage some extra provision to allow for mistakes and inaccuracies. The choice is yours.

The Aluminium Profile

Despite metric being the norm in the UK, the profiles I purchased were sold in Imperial measurement, as happens in some industry products. I've recorded the sizes as such below.
U Channel large - 1 ¼ inch tall x 1 ¼ inch wide x ⅛ inch thick
U Channel small - 1 inch tall x 1 inch wide x ⅛ inch thick
L Channel - 1 ¼ inch tall x ¾ inch wide x ⅛ inch thick



I purchased my profiles from www.clickmetal.co.uk but I'm sure it's available elsewhere in the world. The goal is to select profiles that neatly fit together like those shown above.

Instructions

1. Print this page and check the Print Test line measurement for print accuracy (if it fails to measure correctly, see help below).
2. Use a compass and mark on the diameter of your axel at the centre of the sprocket
3. Roughly cut out the sprocket and secure this with tape to MDF or similar stable material and then make a template for lost foam casting. For assistance see my web page and video at www.vegoilguy.co.uk/wooden-sprockets.
4. Cut the profiles as shown on the video or visit www.vegoilguy.co.uk/tracks (measurements above)

Online help

- **For help with printing...** if the print test fails, I'm sorry, I tried my best. It worked in all my tests on several printers, but such is life. I recommend you visit Matthias' website and make use of his excellent program. That should work for you.
- **For help making a woodtemplate** from a paper print, visit www.vegoilguy.co.uk/wooden-sprockets
- **For help making a foam sprocket** from a wood template for lost foam casting visit www.vegoilguy.co.uk/lost-foam-casting
- **For my improved lost foam casting** techniques (making a sprocket) view https://youtu.be/HwzUutlb204

Important Note:

I drew this sprocket using Adobe Illustrator but originally I used Matthias Wandels' excellent gear program to aid my calculations. If you want to make a sprocket (or gears) with different dimension to mine, I strongly recommend you visit his website and examine this excellent bit of software. You'll also find interesting projects and videos as well. **www.woodgears.ca**