



YOUIMAGINE

MasterSpool for 3D printing Filament (V4)

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Located at: <http://www.youmagine.com/designs/masterspool-for-3d-printing-filament-v4>

Short description:

This is a proposed idea for filament manufacturers to supply just filament on simple coils - held with paper/card and zip-ties - then users load onto the 'MasterSpool' for use in 3D printers.

Description:

This is a 'MasterSpool' For 3D Printing filament - MasterSpool Version 4 upgrades / changes and improvements 14th Feb 2018 @RichRap3D Improvements from user feedback. Now three positions for 1.75mm and a really nice 2.85mm end slot that's easy to load and has just enough friction to hold the end well. Really easy to use tie-wrap system - for 2.4mm to 6mm+ tie wraps - zip-ties, reusable tie-wraps and 'velcro' straps. The model files are designed for both small & bigger nozzles. Ideal for chunky layers (0.25 or 0.3mm layers) It is a quicker print time for both sides A and B Edges are now 5.6mm wide and are also flat/smooth (not rounded) they roll really well on bearing type filament spool mounts. Lighter, stronger locking of both sides together - you may need to give them a really good first twist to align up the holes - after that it should always be a nice tight fit. I have also added a PDF document of the key dimensions of the spool and also the refill coils - this was the most asked question from people who had not yet downloaded the model file. Hopefully V4 is the 'final' version - you can always make any desired changes for your own requirements yourself. FreeCad files of the spools are also included in the download files. Older information below - Ignore unless you are interested - Update Feb 6th 2018 - Version 3 is now uploaded - do let me know if you have any problems or have feedback about the design - Version 2.1 has been tested with a coil of filament from Das Filament - it printed this Version 3 for further testing and quality of life improvements. V3 has a slightly smaller diameter - 198mm so it can be printed on many more 3D printers Used less material to print Has integrated zip-tie / tie-wrap grooves all around the spool - you need to slightly twist the parts to align up the zip-tie sections - that's intentional to allow easy unload and some resistance on the coil when in use. End of filament management - on the side for 1.75mm and a loop for both 1.75 and 2.85mm Older updates below - Ignore unless you are interested - Update Feb 6th 2018 - Version 3 is now uploaded - do let me know if you have any problems or have feedback about the design - Version 2.1 has been tested with a coil of filament from Das Filament - it printed this Version 3 for further testing and quality of life improvements. V3 has a slightly smaller diameter - 198mm so it can be printed on many more 3D printers Used less material to print Has integrated zip-tie / tie-wrap grooves all around the spool - you need to slightly twist the parts to align up the zip-tie sections - that's intentional to allow easy unload and some resistance on the coil when in use. End of filament management - on the side for 1.75mm and a loop for both 1.75 and 2.85mm See new Video about the V3 and first test of a real filament coil here - <https://www.youtube.com/watch?v=AqnFil3thjQ&feature=youtu.be> Update Jan 28th 2018 - Updated Jan 28th 2018 - The Original STL files for MasterSpool had a few problems for some people - the final export was a little messed up, sorry about that. I have now simplified the design and added the new V2 files up on YouImagine and Thingiverse V2R1 is also uploaded - that just adds slots for three Tie-Wraps around the main PART A cylinder - Ref : @FishyFilaments Quite a few people asked about the critical dimensions for MasterSpool (750g version) - so here they are - Outer spool diameter is 202mm The inner ring diameter for the filament coil is 102mm The mounting hole size is 52.5mm For the 750g Spool the width of the filament coil is 46.7mm For a 1Kg or 500g filament coil the width (46.7mm) is the dimension you would change to make a different, but compatible MasterSpool for other weights (that will not stay true for very heavy filaments like copper, bronze etc.) Blog post about MasterSpool over here - <https://richrap.blogspot.co.uk/2018/01/masterspool-proposed-standard-for-3d.html> The idea is to only ship coils of filament from manufacturers - then use a 'MasterSpool' to use them on your 3D printer. Lower shipping costs, less packaging. No plastic spools to recycle (they are usually ~300g) More details and an overview Video on my Blog post here - The original 2-piece Filament Spool by Dingoboy71 can be found over on Thingiverse - <https://www.thingiverse.com/thing:1738730>

If you can, please use the online documentation found at <http://www.youmagine.com/designs/masterspool-for-3d-printing-filament-v4> because those may have been updated. Also, there you can interact and provide praise and/or feedback.