

Hydra AMS - Universal Spool Adapter

humebeam

VIEW IN BROWSER

updated 5. 2. 2024 | published 5. 2. 2024

Summary

Hydra AMS - Universal Spool Adapter

3D Printers > Bambu Lab Parts & Upgrades

Tags: hydra silicagel silicagelcontainer bambu bambulabx1 bambulab bambulabx1carbonams bambulabx1carbon bambulabx1ams bambulabs bambulabp1p hydraams

Update February 5, 2024

Added a new set of spacers in Voronoi pattern. Available in 3, 6 and 12 mm widths. These are currently untested as all my printers are busy with a big project but they should work.

Update August 1, 2023

A few people have requested this so I've added more center rings.

There are now center rings available for spools with an inner diameter between 40 and 95 mm. The 40 mm is so slim you may need to lower the extrusion width or use a 0.2 mm nozzle.

If any other size is required just leave a comment. Cheers.

Update June 29, 2023

A funnel is available now. Download it **here**.

Also, the Voronoi and Solid spool types have been added to this page. The solid spool have embedded letters you can paint in a different filament color if you like (use the paint bucket tool in the slicer).

About

The Hydra AMS - Universal Spool Adapter is developed specifically for **Hydra AMS** but will also work well for the standard Bambu Lab AMS. If you use very narrow spools with this however, Hydra AMS will work a lot better as the feeders are tilted back a little compared to stock.

One of the main benefits of the Hydra AMS is that it allows a wide variety of spool diameters, both small and large diameter spools as well as wider spools with a spool width up to 75 mm.

But one issue remains - very narrow spools such as certain 250g sample spools and some 500g spools as well. Another issue is the more and more common cardboard spools, these are not ideal to be used in an AMS for a few reasons, cardboard debris, causing less grip on the front rollers and dirt inside the feeders and tubes. I usually recommend adding some electrical tape to the edge, it works well. But you can also use this new adapter I've developed. It's compatible with spools up to 69 mm wide with Hydra AMS as it adds 6 mm to the total spool width.

I ordered a bunch of odd sized spools just to develop this mod as it's often requested.

So what makes this different from other spool adapters?

Features

- It adds weight to the spool, reducing the chance of the spool jumping up and jamming.
- You can fill it with silica gel to keep the spool dry. One spool adapter holds around 20g of silica gel beads. It's more than sufficient, especially when paired with the front mounted **Hydra AMS - Silica Gel Boxes**.
- It's Universal, just print a couple of center rings matching the inner diameter of the spool you're using.
- It allows printing of narrow 250g sample spools and narrow 500g spools that would normally jam against the clear cover of the AMS feeder.
- You can use it with cardboard spools as a raised spool edge around it. As the spool diameter of this is 201 mm, it's a little larger than most

cardboard spools so it would run on the printed part in the AMS instead of the actual cardboard rim.

What to Print

Print the following parts in the direction I have set them, no supports are needed:

- hydra-ams-universal-spool-adapter-hex-bottom.3mf
- hydra-ams-universal-spool-adapter-hex-top.3mf
- hydra-ams-universal-spool-adapter-lid.3mf

(You can use the Voronoi or Solid spool types instead if you prefer)

Next, measure the inner diameter of the spool you are using and print a couple of the center rings matching that diameter, rounded down to the nearest millimeter.

For example, if your spool's inner diameter is 52.3 mm, print two of these:

- hydra-ams-52mm-center-ring.3mf

The center rings make sure the spool is perfectly centered and aligned on the Universal Spool Adapter. There are center rings for spools with a spool center diameter between 40 and 95 mm.

Also, if you have a very narrow spool (less than around 40 mm) you should use the spool spacers to widen the track so it does not hit the clear cover of the AMS front feeder. There is a 6 mm spacer available as well.

- 12mm-spacer.3mf

Video Guide

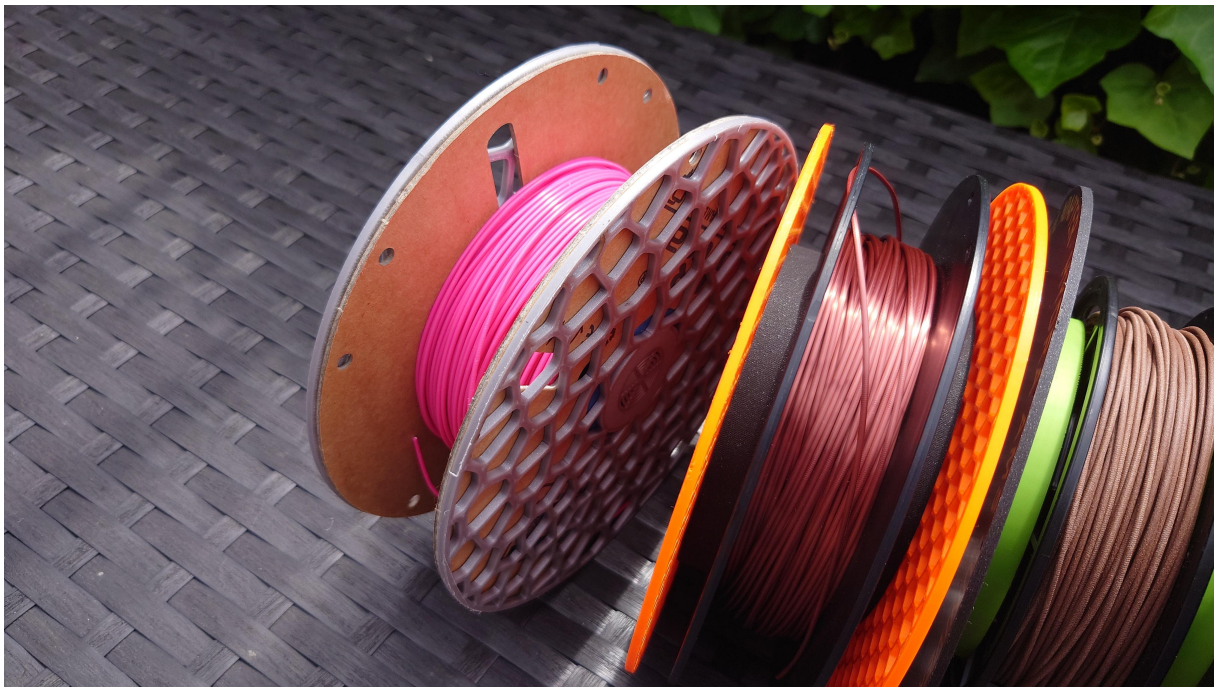
Assembly

If you just want to use it as a spool adapter and nothing else, for example when using a cardboard spool, simply screw the center rings on the top and bottom of the spool adapter then screw it together with the spool in between.




FORM FUTURA
3D PRINTER FILAMENT

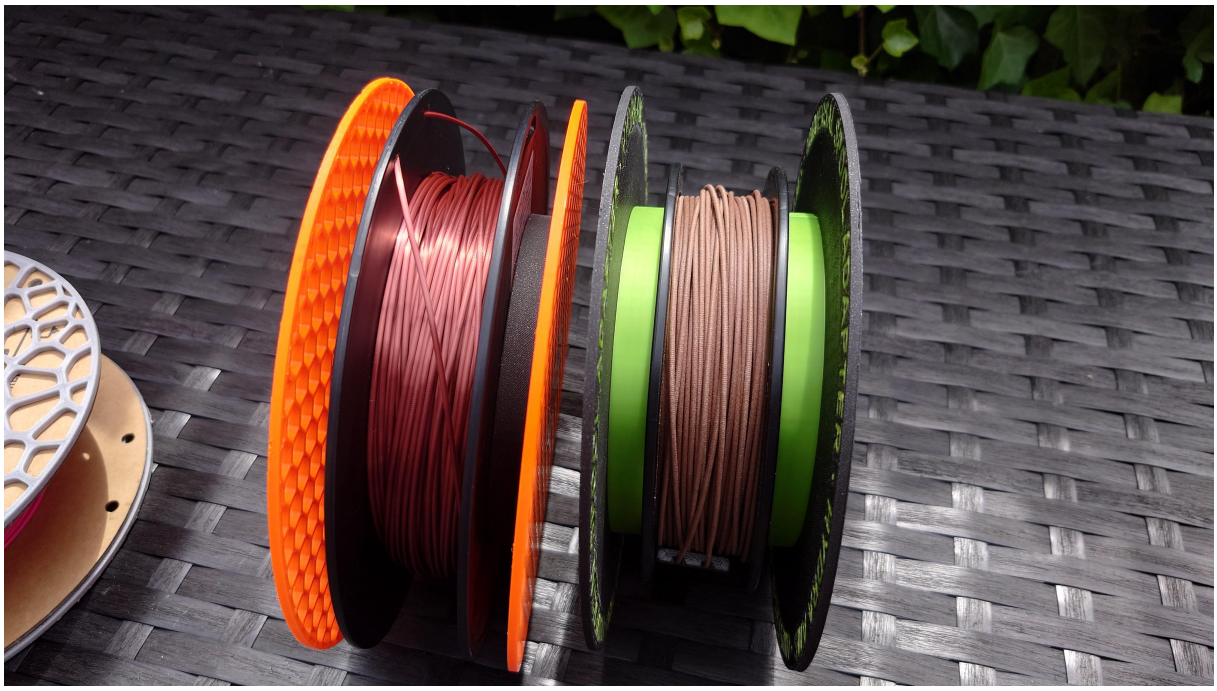




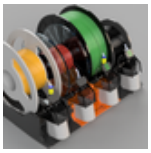
If you want to use it with a sample spool or another spool with a narrow footprint, first screw the spacers to the top and bottom of the spool adapter then screw on the center rings. Finally, screw it together with the spool in between.




SPOOL ADAPTER



This remix is based on



Hydra AMS - Enhanced Bambu Lab AMS
by humebeam

Model files

Center Rings 56 files



hydra-ams-40mm-center-ring.3mf



hydra-ams-41mm-center-ring.3mf



hydra-ams-42mm-center-ring.3mf



hydra-ams-43mm-center-ring.3mf



hydra-ams-44mm-center-ring.3mf



hydra-ams-46mm-center-ring.3mf



hydra-ams-47mm-center-ring.3mf



hydra-ams-45mm-center-ring.3mf



hydra-ams-48mm-center-ring.3mf



hydra-ams-49mm-center-ring.3mf



hydra-ams-50mm-center-ring.3mf



hydra-ams-51mm-center-ring.3mf



hydra-ams-52mm-center-ring.3mf



hydra-ams-53mm-center-ring.3mf



hydra-ams-54mm-center-ring.3mf



hydra-ams-55mm-center-ring.3mf



hydra-ams-56mm-center-ring.3mf



hydra-ams-57mm-center-ring.3mf



hydra-ams-58mm-center-ring.3mf



hydra-ams-59mm-center-ring.3mf



hydra-ams-60mm-center-ring.3mf



hydra-ams-61mm-center-ring.3mf



hydra-ams-62mm-center-ring.3mf



hydra-ams-63mm-center-ring.3mf



hydra-ams-64mm-center-ring.3mf



hydra-ams-65mm-center-ring.3mf



hydra-ams-66mm-center-ring.3mf



hydra-ams-67mm-center-ring.3mf



hydra-ams-68mm-center-ring.3mf



hydra-ams-69mm-center-ring.3mf



hydra-ams-70mm-center-ring.3mf



hydra-ams-71mm-center-ring.3mf



hydra-ams-72mm-center-ring.3mf



hydra-ams-73mm-center-ring.3mf



hydra-ams-74mm-center-ring.3mf



hydra-ams-75mm-center-ring.3mf



hydra-ams-76mm-center-ring.3mf



hydra-ams-77mm-center-ring.3mf



hydra-ams-78mm-center-ring.3mf



hydra-ams-79mm-center-ring.3mf



hydra-ams-80mm-center-ring.3mf



hydra-ams-81mm-center-ring.3mf



hydra-ams-82mm-center-ring.3mf



hydra-ams-83mm-center-ring.3mf



hydra-ams-84mm-center-ring.3mf



hydra-ams-85mm-center-ring.3mf



hydra-ams-86mm-center-ring.3mf



hydra-ams-87mm-center-ring.3mf



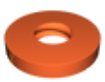
hydra-ams-88mm-center-ring.3mf



hydra-ams-89mm-center-ring.3mf



hydra-ams-90mm-center-ring.3mf



hydra-ams-91mm-center-ring.3mf



hydra-ams-92mm-center-ring.3mf



hydra-ams-93mm-center-ring.3mf



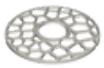
hydra-ams-94mm-center-ring.3mf



hydra-ams-95mm-center-ring.3mf



Spacers 5 files



3mm-voronoi-spacer-120.3mf



6mm-voronoi-spacer-120.3mf



12mm-voronoi-spacer-120.3mf



6mm-spacer.3mf



12mm-spacer.3mf



hydra-ams-universal-spool-adapter-lid.3mf



hydra-ams-universal-spool-adapter-hex-bottom.3mf



hydra-ams-universal-spool-adapter-solid-bottom.3mf



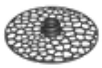
hydra-ams-universal-spool-adapter-voronoi-bottom.3mf



hydra-ams-universal-spool-adapter-hex-top-11.3mf



hydra-ams-universal-spool-adapter-solid-top-11.3mf



hydra-ams-universal-spool-adapter-voronoi-top-11.3mf

License

This work is licensed under a
Creative Commons (4.0 International License)

Attribution-NonCommercial

✖ | Sharing without ATTRIBUTION
✔ | Remix Culture allowed
✖ | Commercial Use
✖ | Free Cultural Works
✖ | Meets Open Definition