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Filabot Spooler

Operator's Manual

This manual applies to the Filabot Spooler from Triex® LLC.

Safety

- Be sure to thoroughly read the Operator's Manual and familiarize yourself with the machine before you begin spooling.
- There are some pinch points to be aware of on the Filabot Spooler. The main pinch points are around the drive wheels. There is no guard covering them so be mindful of that when working around the Spooler.
- Do not wear loose clothing or long hair around the machine.
- The Filabot Spooler is designed for indoor use only. Do not operate the unit outdoors or in wet or damp environments.
- Do not use the Spooler if any parts are missing or damaged. If you notice any damage to the unit, unplug the device immediately and contact Filabot for assistance.
- Use the device only with the specified input power of your purchase (ex. 110V/220V). The electrical components inside are machine specific for the power option you chose. Using the device with the wrong input power is likely to damage the electrical and/or electronic components of the device.
- Do not modify or alter this device without prior specific authorization from Triex® LLC. Unauthorized modifications may impact the safety or normal operation characteristics of the device, and will void the warranty.

Contact Filabot with any questions or concerns before installing, using, adjusting, or maintaining the device.

General Specifications and Application

The Filabot Spooler is a desktop filament spooling system which takes extruded filament from extruders such as the Filabot Original™ and EX2™ and spools them for use with 3D printers.

The Filabot Spooler can spool filament in any diameter (1.75mm, 2.85mm, and 3mm) but is not limited to these sizes.

Extruded filament loads onto 1lb spools (2 are supplied with purchase, more can be purchased through filabot.com)

Electrical requirements: 110/115/120 VAC, 60-cycle, single-phase power with supplied power cord; or 220/230 VAC, 50-cycle single-phase power with supplied power cord, and country specific adaptor.

Power usage: The Filabot Spooler will use about ~50 watts, depending on speed settings.

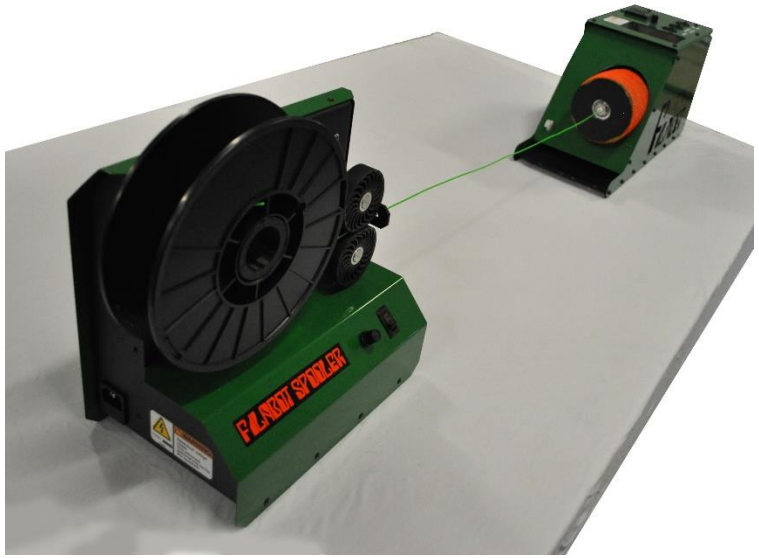
Dimensions: 11in x 7in x 11in (28cm x 18cm x 28cm)

Weight: ~16 pounds (7.5kg)

Setup

Place the Filabot Spooler on a secure, stable supporting surface at least as large as its base. Additional space will be useful to easily access any tools or supplies. The support should be at a convenient height for operator use, and level with the extruder. The support must be located no further away from an electrical outlet than the length of its power cord.

Do not place anything against the Filabot Spooler. It requires unrestricted airflow for cooling, proper operation, and to keep the electronic components from overheating.



(ex.)

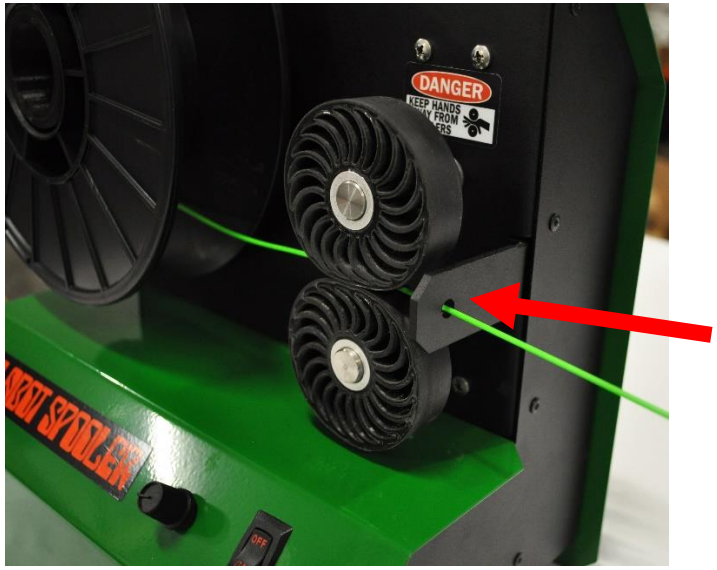
Operation - Filament Production

Step 1: Set your extruder and spooler level with each other and approx. 12-36 in. (25-100 cm.) apart depending on the plastic being run, preferably with a gap between them (like between tables or surfaces).

Step 2: With your nozzle for the diameter filament you desire to make selected, heat up your extruder and begin to extrude your filament.

Step 3: Guide the filament in a string down to the floor (or at least long enough to span the gap between the extruder and Spooler. Then proceed to clip the end of the filament so that there is a smooth line to run into the drive wheels.

Step 4: Power up your Spooler and get the wheels spinning by adjusting the speed control knob. Feed the beginning of the filament through the eyelet in front of the drive wheels, then into the drive wheels.



Step 5: With filament now running between your extruder and spooler, you will now need to fine tune the spooler to achieve your desired diameter. There are adjustments that can be done on both your extruder and your spooler that can help tune it in. The primary adjustment is performed with the adjustment knob on the Spooler. Additional fine tuning can be performed by adjusting the temperature you are extruding at. (See troubleshooting section for specifics). Make your adjustment, wait ~30sec, and check your diameter either with a good dial caliper or a micrometer. Make further adjustments if needed, and re-check your diameter frequently.

Step 6: Once your diameter is dialed in you can now begin to spool your filament. Cut the excess filament off, grab that end, run it underneath the spool and begin to coil it up over the back of the spool. *The spool will be moving at this time so this is best performed as one fluid motion.* With the end of this filament in hand, wait for the square hole on inner part of the hub of the spool to come around on its rotation. It is at this time you will want to feed the end of the filament into that hole so that it protrudes to the inside about 1-2 in. (3-5cm). From there it should grip and begin to self-spool the filament.

Operation Continued:

Step 7: You will want to watch as it begins to make its first several rotations. Make sure that it is spooling tightly around the center of the hub. If it is not you will need to make an adjustment to the slip-clutch.

Step 8: Adjusting the slip-clutch is done by using an 11/16 socket and ratchet. Loosening the nut will make it spool loser and vise versa for tightening.

Step 9: Keep an eye on your diameter as you spool so as to not get out of spec. Make adjustments as needed.

Step 10: Once your spool is full, grab the filament after the drive wheels, clip it off, and you can typically slide the filament through an eyelet on the outer edge of the spool to hold it as you set it aside and load another spool onto the machine. Repeat the previous process to begin another spool. If you are only making 1 lb. of filament, simply just shut the machine off and everything will be stationary for you to work on.

Care and Maintenance

The Filabot Spooler requires very minimal maintenance. Check for any signs of visible damage, wear, or deterioration on moving parts before each use. If there are any signs of wear, overheating, or deterioration, contact Filabot for guidance on how to proceed.

Troubleshooting

There are some common issues and questions we receive from customers about the Filabot Spooler. Most of the time the fixes can be done by the user and is not a problem with the actual machine. Here are the most common issues and solutions to them:

Problem	Possible Issue	Solution
Filament isn't getting pulled by the wheels	-Wheels aren't broken in yet -Wheels are too worn	-It takes 1-2lbs of filament to be run for the wheels to break in fully -Replace Wheels
Filament is being flattened by the wheels	-Too high of an extrusion temp. -Spooler is too close to the end of extruder	-Lower extrusion temp. -Move Spooler further from the end of the extruder
Filament Diameter: -Too small -Too big	-Filament drive wheels too fast -Filament drive wheels too slow ***Extrusion temp. also plays a role***	-Slow the speed of the filament drive wheels to + diameter -Speed up to – diameter -Check dia. As you change speed ***Extrusion temp. also plays a role***
Filament is too loose/tight wrapping on spool	-Slip-Clutch is out of adjustment	-Tighten slip-clutch for tighter, loosen for looser.

Parts, Supplies, and Accessories

Filabot provides replacement parts, supplies, and accessories. If you have any questions or need any special parts please let us know. The following is a list of the general items that we have available.

- Spools
- Replacement Drive Wheels
- Belts
- Electronics
- Motors
- 3-D Printed Parts (Spool hub & Belt Drive Wheels)

Ask about anything you don't see here.

Warranty Information

The Filabot Spooler has a one year warranty. This includes replacement of any part that fails. Warranty is void if system is opened up. Only Triex® LLC technicians are authorized to service internal parts. For more information visit us at Filabot.com

filabot.com