

Markforged Mark Two: Changing the Fiber Reinforcement Filament

Learn how to change the fiber reinforcement filament on the Markforged Mark Two.

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Introduction

This guide will explain how to change the fiber reinforcement filament for the Markforged Mark 2 printers.

Sources:

- Markforged Guide: Unload Fiber Desktop
- <u>Markforged Guide: Load Fiber Desktop</u>

Pictures by: Ashley Recklein, Nico Lagendyk



- Side Cutter (1)
- Tweezers (1)
- Scale (1)
- Tape (1)

Step 1 — Unloading Fiber

			Menu	×	<	Materials	
onyx 141 cc	Carbon Fiber 109 cc 30°C	Bed Level	Materials	Storage	Load Plastic	Unload Plastic	Reset Plast
25		>	>	>		-	Meter
		Utilities	Print Queue	Settings	N* O N	•	•
🥏 Ready to Print		>	•	>	Load Fiber	Unload Fiber	Reset Fibe Meter
					C K FG HG	•	•

- Select the **Menu** from the dashboard of the printer
- Select Materials
- Select Unload Fiber
- Click **Next** to continue

Step 2 — Unloading Fiber II



Unload Fiber	Cancel
Carefully rotate your curre spool to respool your exti When done, be sure to tape to the spool to keep it fro	ra fiber onto it. e the end of fiber
Next	7

- Carefully wind the remaining **fiber** back onto the **spool**
- Tape the end of the **fiber filament** to keep it from unspooling
- Place the spool in the small bronze colored bag with the same fiber name
- Click Next

A Be cautious with spools of reinforcement as careless handling can result in fiber splinters

Step 3 — Set up Fiber for Loading



- Remove the **spool** from the bag
- If it is a *partial* **spool** weigh it in grams and make a note of it for later
- Carefully unwind two and a half feet of material from the **spool**
- Re-apply the tape to keep the rest of the material from unspooling
- Feed the cut end of the material through the fiber feed tube until it reaches the fiber extruder

Step 4 — Load Fiber

	≈ =		Menu	
	Carbon Fiber 109 cc	Bed Level	Materials	Storage
9 °C	30°c	>	>	>
Ready to Print		Utilities	Print Queue	Settings
ay to Print		>	•	>

<	Materials	×	
Load Plastic	Unload Plastic	Reset Plastic Meter	
N* O N	•	٠	
Load Fiber	Unload Fiber	Reset Fiber Meter	
	•	•	

- Select the **menu** icon from the dashboard
- Select Materials
- Select Load Fiber

Step 5 — Load Fiber II

Load Fiber Cancel	Load Fiber Cancel	Load Fiber Cancel
First, make sure the bowden tube from the fiber spool holder all the way to the printhead is clear of any fiber. If stray fiber is left in the bowden tube, unscrew the tube from the printhead, puil all fiber out of the tube, and screw the tube back in. Then, press Next. Quick Load	What type of fiber are you loading? Carbon Kevlar Fiberglass HSHT Glass	What spool size are you using? 50cc Full 150cc Full Back 50cc Partial 150cc Partial Skip

- Select Meter Load on the printer's touchscreen
- Select the fiber you are loading into your printer
- Select the type of spool you are loading

(i) This information is on the spool's label as well as its bag label

Step 6 — Load Fiber III



- For partial spool's enter in the weight measured before
- Feed the **Fiber** into the feed tube until the extruder catches it
- Place the **fiber** on the **spindle** and attach the magnetic **cap**
- Once under *tension*, remove the **tape**

Releasing the tape before the fiber is in tension will unspool the fiber and could waste material or hurt you

Step 7 — Load Fiber IV

Load Fiber	Cancel	Load Fiber	Cance
Push fiber into the fiber feed tube unti extruder is loaded. Then, wait for fiber to through the tube. When fiber starts co out of the nozzle, press Cut. Carbon Fiber	o feed	Fiber loading complete. Re from nozzle ar Carbon F	nd tube.
Retry Cut		Retry	Done

- Once the fiber is extruding, press Cut
 Pressing Cut too soon will likely result in a fiber jam
- Use tweezers to remove the extruded material from the nozzle
- If the routine times out, restart the fiber loading procedure by pressing Retry
- Press **Done** on the touchscreen to finish the utility