

What is a Bowden tube connector?

The Bowden tube connector is typically a small piece that looks similar to a valve. It allows filament to feed directly into the extruder motor, which pushes filament through the heated nozzle. It is also common to refer to this part to as a Bowden Coupler or Pneumatic Push Connector, as well as other names.



- Most connectors have a circular tab on the top of the piece, which is what keeps the PTFE tube inserted into place. Press down on this circular tab to either remove or insert the PTFE tube. Once the PTFE tube is in place, release the circular tab to secure it in place.
- Always press down on the circular tab before attempting to remove the PTFE tube to prevent damage to the Bowden connector.

What types of filament should I use?

While you can use any type of filament you want, we suggest that beginners should start with PLA or PLA+ filament. This allows you to become acquainted with your new printer and get a better understanding of how it works. You can find a QR code link to our video about the different types of filament on the back of this card. The table below lists the most common types of filament with use case scenarios and suggested temperatures.



	NOZZLE TEMP	BED TEMP	USAGE
PLA/PLA+	180°-200°C	40°-50°C	Models, low wear toys, prototyping
ABS	210°-230°C	50°-60°C	Phone cases, average-wear toys, tool handles
TPU/TPE/TPC	210°-230°C	30°-50°C	Flexible objects, wearables, PPE components
PETG	220°-240°C	50°-60°C	Mechanical parts, PPE components, High-wear pieces

How do I maintain my printer?

As with most mechanical objects, your 3D Printer needs periodic maintenance to keep it operating at peak performance. Following are a few tips and tricks to keep in mind.

- Always remove filament completely when you have finished printing for the day. Allowing the filament to cool in the nozzle can cause clogging and further complications.
- To clear a clog, preheat the nozzle 220°C, then manually push the inserted filament with slightly more force than the printer's extruder motor is capable of exerting.
- Always double check the level of your print bed. Printers with Auto-Leveling may need the offset adjusted. This will be a unique value for every printer. The space between the nozzle and the print bed should be 0.1mm, which is the thickness of a sheet of standard printer paper. A QR link to a video explaining this can be found on the back of this card.

Food Safety and 3D Printing

Many people want to create objects for use with food or drink with their 3D Printers, such as decorative plating, molds, or cookie cutters. While this is indeed possible, there are several things to keep in mind.

- Always ensure that the filament you intend to use is food safe. This should be indicated on the product page or on the packaging. Some brands have specific types of filament that are FDA approved.
- FFF printing is the process of melting and extruding thermoplastics into thin layers to build an form. Printing at the lowest layer height may help prevent these ridges. Truly food safe objects should have a perfectly smooth surface.
- Most standard thermoplastics will react to the high temperatures used with standard dish washing. It is best to use lukewarm water and an anti-bacterial soap. This reduces the risk of damaging the print and removes any surface bacteria.
- Brass nozzles are a standard part for many 3D printers. However, these may contain trace amounts of lead. Using a stainless steel nozzle to print objects for use with food or drink will eliminate any risk of lead contamination.



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