



MakerBot METHOD Print Guide

Introduction

This guide is designed to illustrate the features, competitive advantages, and benefits of the MakerBot METHOD. There is a wide range of 3D printing technology and hardware available today. While each has their own strengths and weaknesses, the key to successfully implementing 3D printing is understanding your part requirements and your equipment capabilities. By the end of this guide, you will understand the strengths of METHOD and how to maximize its impact on your 3D prints.

METHOD Features

Your METHOD 3D Printer contains features only available on industrial FDM machines. This guide will illustrate the benefits of the following features:

- Circulating 110C heated chamber as opposed to a heated build plate, enabling increased part strength and guaranteed dimensional accuracy across the build volume
- Dual Extruders with a long liquifier, integrated gearbox, jam detection sensing, filament presence sensing, and probing functionality. This allows for increased flow rate, torque, auto print pause for jams or out of filament, nozzle to nozzle and nozzle to build plate auto calibration.
- Industrial SR-30 supports from Stratasys for complex geometries and superior surface finish.
- Dry sealed material bays with humidity sensors that keep filament from absorbing moisture which would otherwise adversely affect print quality and part strength
- Rigid CNC machined metal frame that increases rigidity and ensures perpendicularity between the XY and Z axes, resulting in superior layer alignment and surface finish.

Getting Started

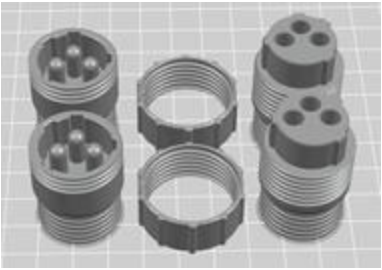
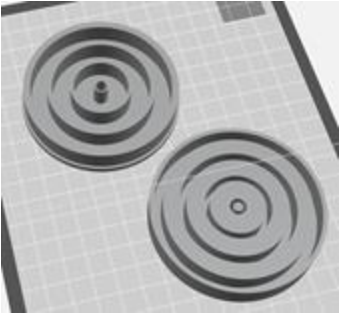
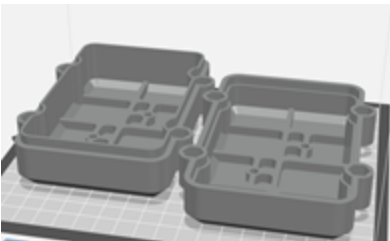
Before you begin printing with your METHOD, confirm that you have completed the Guided Setup. Your setup will end in a test print. Inspect your test print based on the guide that can be found [here](#).

Now that your METHOD has the latest Firmware and has been calibrated, you are ready to start printing. The following series of prints highlights the benefits of these feature and the differences between METHOD and competitive 3D printers. Along with each print you will find:

- A .makerbot file to print on your METHOD
- A .STL file to try out on a competitive 3D printer in the same material
- A brief description of the impact METHOD's features have on print success

If you have any problems successfully printing your test print or any of the following prints [Contact Support](#) for assistance.

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Print	METHOD Advantage
2 XLR Connectors Material: ABS Print Mode: Balanced Est. Print Time: 4 hours Link 	METHOD X The 2 interchangeable XLR connectors have a designed 0.007 inch clearance on all mating features. The circulating heated chamber allows the METHOD X to reliably hold this spec while the rigid frame ensures tight cylindricity control. The dimensional accuracy and strength of Real ABS create a rigid connection between the two halves of the connector. Competitive Desktop Printers Without being able to control all of the factors in the build environment, desktop printers will print connectors with brittle pins that will not fit together to form a rigid connection. Some desktop printers will also yield assemblies that do not physically fit together due to poor dimensional control.
Cylindricity Test Material: ABS, Balanced Print Mode: Balanced Est. Print Time: 4 hours Link 	METHOD X The rigid metal frame makes METHOD capable of printing 4 concentric mating circular features. As the part cools, the heated chamber ensures that it will cool evenly and maintain the concentricity needed for the two halves to mate and rotate freely. Competitive Desktop Printers Most desktop 3D printers lack a truly rigid frame. When printing the cylindricity test, frame flex will result in ovals instead of true circles. As the print cools, this problem will only get worse without being able to control the cooling.
Electronics Housing Material: ABS Print Mode: Balanced Est. Print Time: 14.5 hrs Link 	METHOD X This tight fit assembly requires Stratasys SR-30 soluble supports to achieve overhangs with fastener capturing features. Real ABS creates properties that are extremely similar to injection molded parts, making it a fit for low volume production. Competitive Desktop Printers Without SR-30, most desktop printers will utilize breakaway supports or an alternative dissolvable support. These materials do not bond to ABS or dissolve leaving as clean of a surface as SR-30. The modified desktop ABS will be too brittle and inconsistent to use in low volume production. Finally, as your model size increases, the likelihood of curling also increases compared to utilizing a heated chamber.