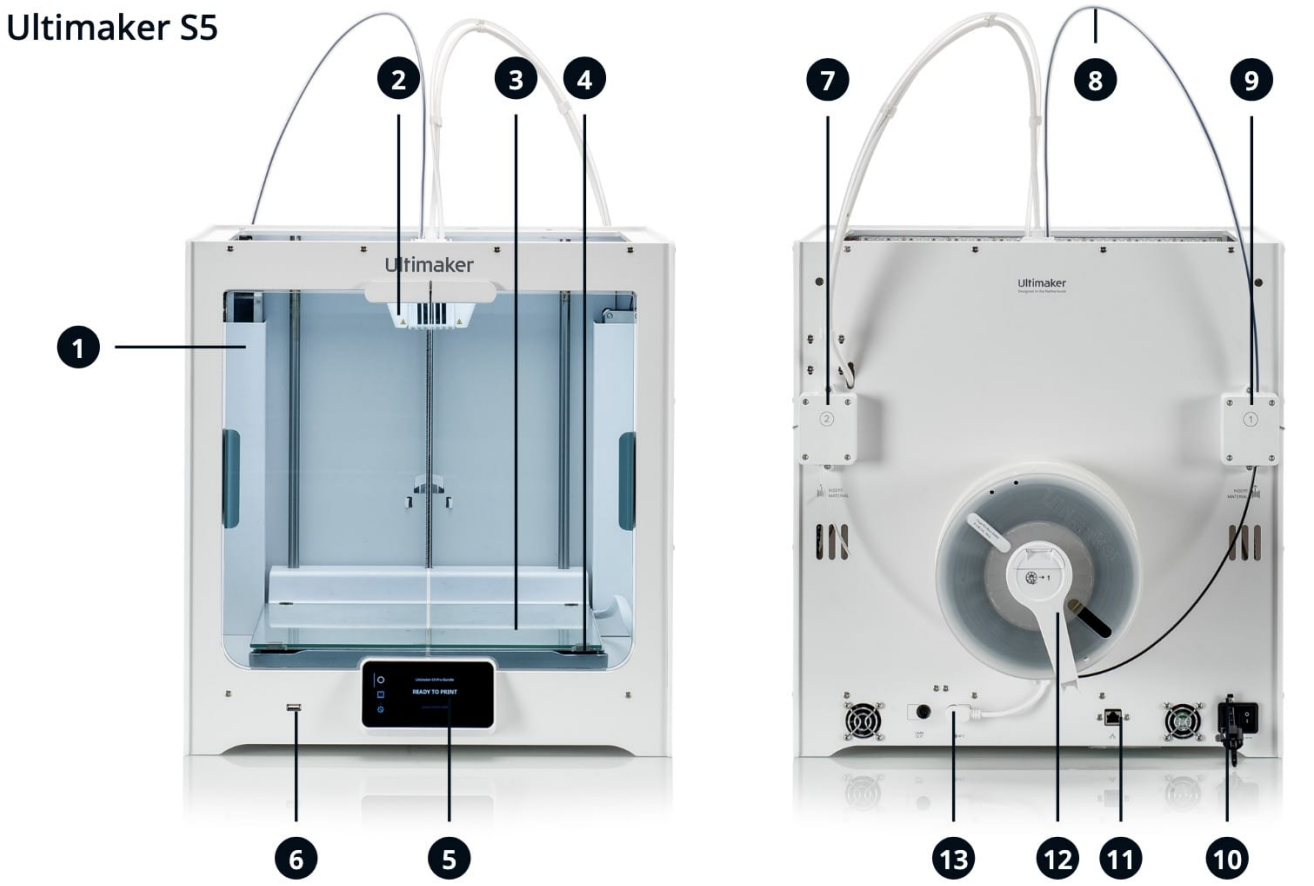
The Basics (from manual)

RC has two Ultimaker S5 FDM printers.



1. Glass door(s)
2. Print head
3. Build plate
4. Build plate clamps
5. Touchscreen
6. USB port
7. Feeder 2
8. Bowden tubes
9. Feeder 1
10. Power socket and switch
11. Ethernet port
12. Double spoolholder with NFC cable
13. NFC socket

S5s are dual extruder units, with a single print head. Depending on the "cores" (Ultimaker term, generic term: "hotend"), they can print in two colors of the same build material, hold extra build material on a 2nd spool to change supplies if one spool runs out, or print supports from alternate materials that separate more easily, or dissolve in water.

4.2 Materials

Material compatibility

The Ultimaker S3 / S5 comes with two AA print cores and one BB print core. The AA print cores can be used for printing build materials and Breakaway support material. The BB print core can be used for water-soluble support material (PVA).

The Ultimaker S3 / S5 support all Ultimaker materials that are currently available, of which most can be printed with the 0.25, 0.4 and 0.8 mm print core sizes. The print core CC Red 0.6 can be used for third party composite materials.

ⓘ For an overview of possible dual-extrusion material combinations, please refer to the Ultimaker website.

All Ultimaker materials have been extensively tested and have optimized profiles in Ultimaker Cura to ensure the best print results. Therefore, it is advised to use one of the default profiles in Ultimaker Cura for the highest reliability. Using Ultimaker materials will also allow you to benefit from the NFC detection system. Ultimaker spools will automatically be recognized by the Ultimaker S3 / S5. This information can be directly transferred to Ultimaker Cura when connected to a network, allowing for a seamless connection between the printer and Ultimaker Cura software.

Print recommendations

Each material requires different settings for optimal results. If you use Ultimaker Cura to prepare your model, these settings are automatically set correctly if the correct print core(s) and material(s) are selected.

It is recommended to apply a thin layer of glue (using the glue stick from the accessory box) or an adhesion sheet to the glass build plate before starting a print. This will ensure that your print adheres reliably to the build plate, and also prevents the glass build plate from chipping when removing prints.

For detailed instructions on which settings and adhesion method to use per material, take a look at the material manuals on the Ultimaker website.

4.1 Touchscreen

You can control the Ultimaker S3 / S5 by using the touchscreen at the front of the printer.

When turned on for the first time, the Ultimaker S3 / S5 will run the welcome setup. After this, the main menu will be shown when the printer is turned on.

Interface

The main menu offers three options, represented by the following icons:

- **The status overview** is automatically shown next to the main menu. From here, you can start a print from USB, or view the progress of the print while printing
- **The configuration overview** shows the current configuration of the printer. Here you can see which print cores and materials are installed, as well as change the configuration
- **The preferences overview** consists of three sub-menus: settings, maintenance, and network. In the printer settings menu, you can change general settings, such as the language. In the maintenance menu, you can perform the most important maitenance and calibration procedures, in addition to saving logs for diagnostics. The network menu allows you to change network settings or to perform the Wi-Fi setup

More Detail

2.2 Specifications

Properties	Technology	Fused filament fabrication (FFF)	
	Print head	Dual-extrusion print head with a unique auto-nozzle lifting system and swappable print cores	
	Build volume (XYZ)	**Ultimaker S3** 230 x 192 x 200 mm (9 x 7.4 x 7.9 in)	**Ultimaker S5** 330 x 240 x 300 mm (13 x 9.4 x 11.8 in)
	Layer resolution	0.25 mm nozzle: 150 - 60 micron 0.4 mm nozzle: 200 - 20 micron 0.6 mm nozzle: 300 - 20 micron 0.8 mm nozzle: 600 - 20 micron	
	XYZ resolution	6.9, 6.9, 2.5 micron	
	Build speed	<24 mm^3/s	
	Build plate	Heated glass build plate (20 - 140 °C)	
	Nozzle diameter	0.4 mm (included) 0.25 mm, 0.6 mm, 0.8 mm (sold separately)	
	Operating sound	< 50 dBA	
	Connectivity	Wi-Fi, LAN, USB port	
Physical dimensions	Dimensions	**Ultimaker S3** 394 x 489 x 637 (15.5 x 19.3 x 25.1 in) (inc. Bowden tubes and spool holder)	**Ultimaker S5** 495 x 457 x 520 (19.5 x 18 x 20.5 in) 495 x 585 x 780 (19.5 x 23 x 30.7 in) (inc. Bowden tubes and spool holder)
	Net weight	**Ultimaker S3** 14.4 kg (31.7 lbs)	**Ultimaker S5** 20.6 kg (45.4 lbs)
Electrical requirements	Voltage	100 - 240 VAC	
	Frequency	50 - 60 Hz	
	Power	**Ultimaker S3** Max. 350 W	**Ultimaker S5** Max. 500 W
Software	Supplied software	Ultimaker Cura, our free print preparation software Ultimaker Connect, our free printer management solution Ultimaker Cloud, enables remote printing	
	Supported OS	MacOS, Windows and Linux	

Manuals

Link to manual on Ultimaker site: available in EN - English, FI - Finnish, KR - Korean, RU - Russian, CS - Czech, FR - French, NL - Dutch, SE - Swedish, DA - Danish, HU - Hungarian, NO - Norwegian, TR - Turkish, DE - German, IT - Italian, PL - Polish, ZH-S - Chinese (simplified), ES - Spanish, JA - Japanese, PT - Portuguese, ZH-T - Chinese (traditional).

English language manual direct link (PDF)

Print Adhesion

After some peeling/warping prints, I tried using a glue stick. It left marks on the print, as matte streaks (vs the glossy finish against clean glass).

From reddit:

PLA on glass shouldn't need adhesion help. It'll turn out to be one of four things:

- your glass isn't actually as clean as you thought
- your bed isn't as level as you thought
- your first layer height is a touch too high
- your temperatures need revisiting

Also, glass does best if allowed to heat soak a bit before you start printing - it's a reasonable insulator, so takes a while for the top surface to get up to temperature when heated from the bottom. Hot PLA on cold glass doesn't stick all that well.

This person says if you can feel the glue, it's too much, and needs to be buffed:

The Ultimaker S5 glass bed can apparently be changed to a more typical steel flex plate:
https://shop3duniverse.com/products/magnetic-flexible-pei-build-plate-for-ultimaker-s5