# Technical Data HT500

## Hardware revision v1.4.x

### General / Dimensions / Weights

| | |
|---|---|
| Housing | aluminum-profile framework<br>acrylic glass<br>integrated LED lighting |
| Positioning system | extruder head mounted on belt driven H-frame (X/Y-axis)<br>screw driven print table (Z-axis)<br>semi-automatic three-point print bed leveling |
| 3D printing technology | Fused Filament Fabrication (FFF) |
| Length | 800mm |
| Width | 600mm |
| Height | 800mm |
| Weight | 49kg (empty) |
| Connection cable | 1.000mm w. Schuko plug and IEC connector |
| Network | Ethernet 10/100, RJ45 |

### Temperatures

| | |
|---|---|
| Extrusion temperature | max. +500°C |
| Print bed temperature | max. +130°C |
| Print chamber temperature | max. +70°C |

### Hot ends

| | Bore diameter [mm] | Recommended layer height First layer / following |
|---|---|---|
| Screwable M6 brass nozzles A/F8 (included in delivery) | 2×0.25 | 0.25 / 0.10 - 0.20 |
| | 2×0.35[1] | 0.35 / 0.10 - 0.28 |
| | 1×0.50[2] | 0.50 / 0.20 - 0.40 |
| | 1×0.75 | 0.60 / 0.25 - 0.60 |

[1] Installed on the left hot end at delivery and preset in the Slic3r profiles available at the GitHub repository for single and dual extruder prints.
[2] Installed on the right hot end at delivery and preset in the Slic3r profiles available at the GitHub repository for support material in dual extruder prints.

### Print

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|---|---|
| Print volume | 200x185x280mm (10.4 liter) |
| Extruder head | dual extruder with two separate extruder nozzles for multi-colored and/or multi-material printing |
| Print bed | exchangeable 210x210mm PEI/glass fabric/carbon composite sheet |
| Minimum layer resolution | 0.1mm |
| Positioning accuracy | ±0.1mm |

| | |
|---|---|
| Approx. Tolerance | ±0.2mm |

**Material**

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|---|---|
| Printable materials | ABS, PLA, HIPS, PVA, PC, PA12, PET |
| Filament diameter | 2.85±0.1mm |
| Available filament qty. | 0.75kg spool (200x55mm)<br>2.30kg spool (296x100mm) |

**Power and Electronics**

| | |
|---|---|
| Power consumption (total) | approx. 800W |
| Power supply unit | 1050W, 100 ... 240V(AC) input<br>with power plug and main switch<br>13-6.5A<br>50/60Hz<br>12V(DC) connector panel |
| Drives | 3x 1.2A stepper motor (XYZ positioning drives) |
| | 2x 1.2A planetary gear drive stepper motor (extruder drives) |
| Positioning step-width axes | X=0.028mm<br>Y=0.019mm<br>Z=0.003mm |
| Hot ends | 12V, 40W integrated heating element per hot end |
| Print bed heating | 170W wired silicone heating pad |
| Chamber heating | 4x 170W heating resistor (two per heating element) |
| Chamber lighting | 2x 4W LED array, 6.500K |
| Stand-alone operating module | integrated capacitive 10” touchscreen controller |
| Integrated computer | UDOO Quad Single Board Computer (Quad core 1GHz CPU) |
| Machine control | RADDS v1.5 3D Printer Driver Shield |
| Load switching | 3x High Current Solid State Relais |
| Fans | 3x 119x119x25mm, 12V, 140m³/h axial fan<br>(heat chamber circulation and cooling system) |
| | 1x 80x80x25, 12V, 33m³/h axial fan (air filter) |

**Sensors**

| | |
|---|---|
| Limit switch<br>H-frame (X/Y) and print table (Z) | magnetic hall endstops |
| Filament end recognition | mechanic limit switch |
| Temperature sensors<br>hot ends | 800°C thermocouple |
| Temperature sensors<br>print table, print chamber | 300°C thermistors |

**Closed loop water cooling system**

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|---|---|
| Pump | 12V(DC) circulation pump with integrated compensation reservoir |
| Throughput | approx. 210l/h |
| Radiator | 120mm full copper radiator |
| Fan | see electronics |

| | |
|---|---|
| Hose diameter | G1/4” |
| Coolant | Innovatek Protect IP ready-to-use |
| Coolant qty. | approx. 250ml |

**Air filter**

| | |
|---|---|
| Air filter | fan duct with exchangeable activated charcoal container |
| Fan | see electronics |
| Filling | 10g, Ø4mm activated charcoal granules |

**Ambient conditions**

| | |
|---|---|
| Operating temperature | +18°C ... +27°C |
| Storage temperature | +5°C ... +35°C |
| Rel. air humidity | max. 70% |
| Setup site | no excessive formation of dust (e.g. near woodworks, CNC machining centers) |