

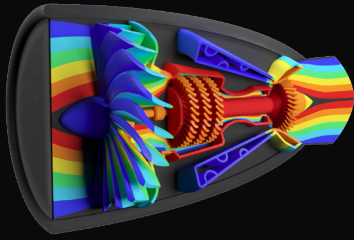
# ELEMENT

## Product Sheet

High quality, multi-material,  
industrial grade 3D printing.

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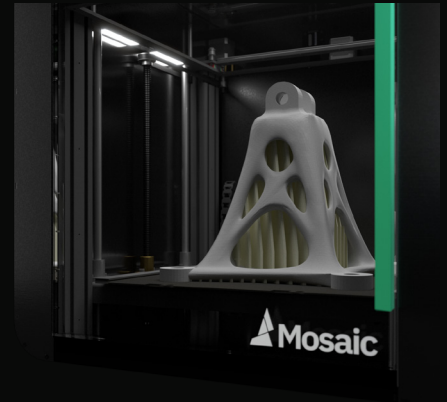
## Key Features



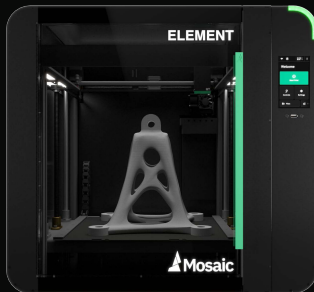
Large volume prints in up to 8 different materials



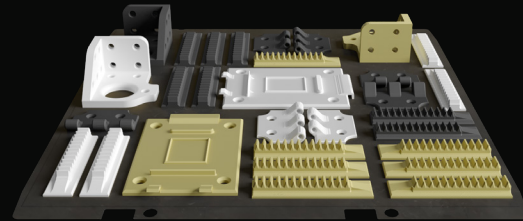
Modular printhead & hardened steel nozzle for precision printing



Support for industrial print materials like PEEK, PEKK and Ultem



Heated built plate & chamber for advanced thermal plastics<sub>1</sub>



Element HT can print high-strength parts with tight tolerances.

- ✓ Starting at **\$6,999 USD (LT) or \$9,999 USD (HT)**
- ✓ **Controlled remotely** to monitor and start prints from anywhere
- ✓ Removable build plate speeds up and simplifies bed changes
- ✓ **Automated** calibration with onboard sensors further increases ease of use
- ✓ **Automated** filament changeover to maximize printer uptime
- ✓ Cloud based print management with **Canvas** software integration<sub>2</sub>
- ✓ All metal construction and on-board UI to maximize usability

1. Mosaic Materials are specially made to work in Element HT and are strongly recommended when printing materials like PEEK, PEKK and Ultem .  
2. Standard single user license included with both Element and Element HT.

# ELEMENT

## Specification Sheet

|                                     |  |
|-------------------------------------|--|
| <b>Technologies</b>                 | Fused Filament Fabrication (FFF) enhanced with Mosaic's patented Series Enabled Multi-Material Extrusion (SEME)      |
| <b>Build Envelope</b>               | 355mm x 355mm x 355mm (14" x 14" x 14")  |
| <b>Construction</b>                 | Durable all-metal motion systems   |
| <b>Layer Resolution</b>             | 20-320 microns   |
| <b>XYZ Resolution</b>               | 12.5 $\mu$ m, 12.5 $\mu$ m, 0.4 $\mu$ m (X, Y, Z)  |
| <b>Max Speed (Travel)</b>           | 200mm/s  |
| <b>Build Speed</b>                  | 100mm/s  |
| <b>Build Plate</b>                  | Various coatings on spring steel removable build plate for easy rapid build plate changes                            |
| <b>Heated Bed</b>                   | Max 120°C  |
| <b>Thermal Chamber</b>              | Heated, 0-80°C <sub>1</sub>  |
| <b>Air Filtration</b>               | HEPA filter to remove up to 99.7% of UFP's, or a BOFA filter   |
| <b>External Fume Extraction</b>     | Integrated 50mm (2 in) inlet and outlet for optional external fume extraction hook up (purchased separately)         |
| <b>Operating Sound</b>              | < 60 dBA   |
| <b>User Interface</b>               | 5" Color touch screen or remote access from Canvas   |
| <b>Monitoring</b>                   | Live camera inside chamber   |
| <b>Status Indication</b>            | RGB stack light  |
| <b>Connectivity / File Transfer</b> | WiFi, LAN, USB port  |
| <b>Compatible Models</b>            | Print Head 0.4, Print Head 0.4 HT <sub>1</sub>   |
| <b>Nozzle</b>                       | 0.4mm hardened steel nozzle (LT), 0.4mm tungsten carbide (HT)  |
| <b>Max Nozzle Temperature</b>       | 300-500°C <sub>1</sub>   |
| <b>Serviceability</b>               | Modular extruder, tool-less removable in < 60 seconds  |
| <b>Sensors</b>                      | filament homing, filament motion, T <sub>environment</sub> , T <sub>hotend</sub> , T <sub>coldend</sub> <sup>d</sup> |

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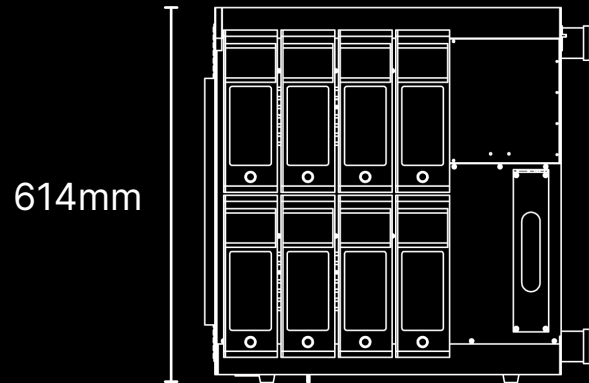
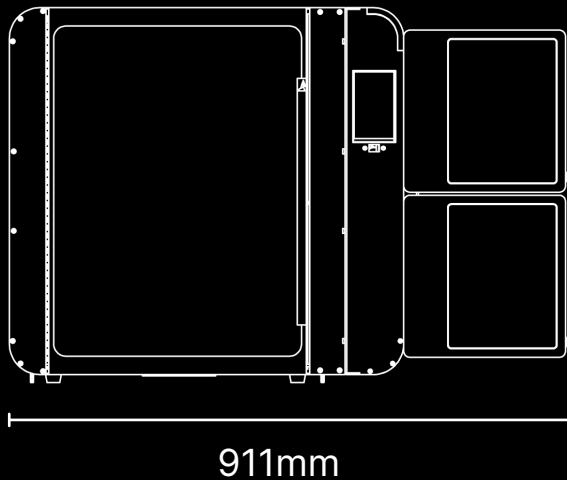
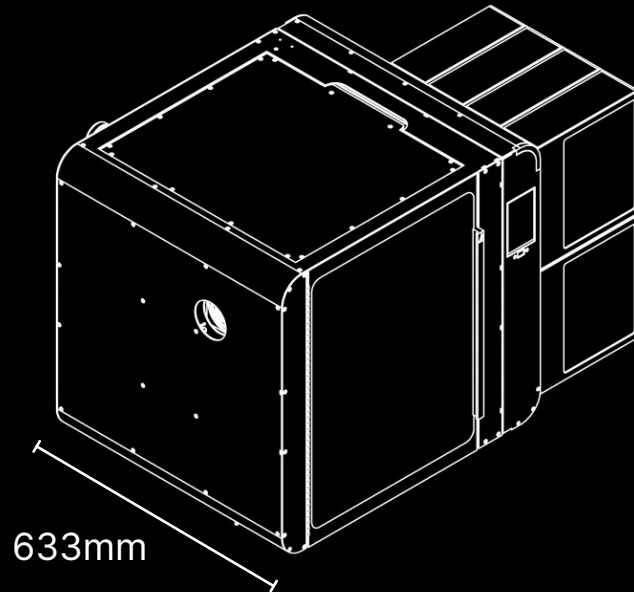
## Specification Sheet

|  |  |
|--|--|
| <b>Filament Cartridges</b>                       | Mosaic Material Pod V1   |
| <b>Filament Containment</b>                      | Mosaic Material Pods are reusable, environmentally sealed dry boxes (1 two-pack of Material Pods included with base Element HT configuration)  |
| <b>Filament Bays</b>                             | 8 receivers for Mosaic Material Pods   |
| <b>Filament Loading</b>                          | Automated filament load, filament retraction   |
| <b>Filament Sensors</b>                          | Filament homing, filament consumption meter, filament relative humidity, filament temperature  |
| <b>Filament Changover Model</b>                  | Palette X - Automated Material Server Module including filament drives, a material cutter, filament homing, and filament measurement systems   |
| <b>Nozzle Cleaning</b>                           | Integrated nozzle wiping pad for materials up to 300°C, wire nozzle wiping brush and integrated high temp wiping pad for materials up to 500°C   |
| <b>Transition Container</b>                      | Removable container with 38mm x 264mm x 253mm (X x Y x Z) of storage   |
| <b>Currently Supported Materials<sub>3</sub></b> | Mosaic PLA, Mosaic PETG, Mosaic ABS, Mosaic Flex, Mosaic Aero, Mosaic Matrix, Mosaic Nylon 6, Mosaic FR-PC, Mosaic PP, Mosaic HIPS, Mosaic ESD PETG, Mosaic PEEK, Mosaic PEKK, Mosaic PEI 9085 |
| <b>3rd Party Filament Support</b>                | The system is open to support 3rd party materials, and any materials that fit in Mosaic's Material Pod will be able to access material automation and multi-material 3D printing               |
| <b>Dimensions</b>                                | 911mm x 613mm x 633mm (X x Y x Z) (with 8 Material Pods attached)  |
| <b>Net Weight</b>                                | 43 kg (95 lbs) (Printer, no material pods attached)  |
| <b>Gross Weight</b>                              | 68kg (150 lbs) (With Packaging, 2 Material pods in-box)  |
| <b>Supplied Software</b>                         | Canvas. Free print preparation software with optional paid functionality   |
| <b>Supported OS</b>                              | MacOS, Windows, and Linux  |
| <b>Electrical Requirements</b>                   | 100-240V AC, 50/60Hz. Maximum current: 12.0A (115V), 4.5A (230V)   |
| <b>Certifications</b>                            | CE, RoHS. TUV Field Certification (USA) / SPE-1000 (Canada)  |
| <b>Warranty</b>                                  | 24 months for Element HT <sub>5</sub>  |

1. The heated chamber, Print Head 0.4 HT and high temperature nozzle are only available on Element HT.  
2. A wire nozzle wiping brush and integrated high temp wiping pad are included with the Element HT configuration.  
3. Limitations on print size apply, please contact [sales@mosaicmfg.com](mailto:sales@mosaicmfg.com) to learn more  
4. TPE (Thermoplastic Elastimer) as well as many TPU (thermoplastic eurothane) materials are not supported for printing in Element. Mosaic Flex is recommended.  
5. See individual product warranty for full details.

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## Product Diagrams



**Note:** All diagrams and technical specifications are approximate and subject to change.

5. High temperature beds, chambers and nozzles are only available on the Element HT configuration.

6. Industrial materials like Mosaic Peek, PEKK, Ultem 9085 and ESD are only available for print on the Element HT configurations.

7. See product warranty for full details.



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