

# Hylo™ Specifications

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# Hylo™

## Specifications



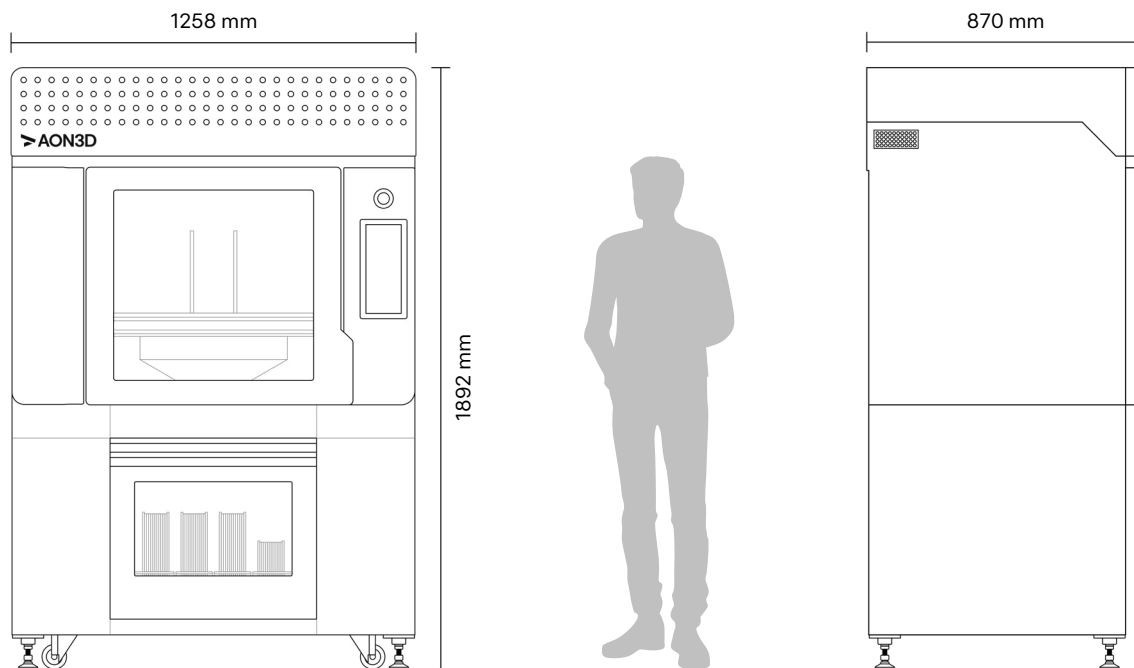
Designed to close the gap between conventional manufacturing and additive, Hylo delivers industry-leading part performance and throughput while a fully automated printing experience and sensor-driven architecture enable new levels of accuracy and repeatability. Print stronger, larger, and faster in any material, no upgrades or unlock fees required.

<b>Technology</b>	Material Extrusion (MEX)
<b>Build Volume</b>	650 x 450 x 450 mm (XYZ)    25.6 x 17.7 x 17.7 in (XYZ)
<b>Extruders</b>	Dual Independent (Composite-ready)
<b>Print Modes</b>	Single toolhead mode Duplication mode Multimaterial mode Support mode (Water soluble, detergent soluble, breakaway)
<b>Layer Height</b>	0.05 - 1.2 mm
<b>Chamber Heat Up Time</b>	< 60 min (Ambient to 250 °C)
<b>Chamber Temperature</b>	250°C
<b>Bed Temperature</b>	250°C
<b>Nozzle Temperature</b>	500°C
<b>Nozzle Sizes</b>	0.25, 0.4, 0.6 (Standard), 0.8, 1.0, 1.2 mm
<b>Build Platform</b>	Auto-leveling with vacuum chuck
<b>Print Surface Options</b>	CF PEEK, PEI, Garolite, and more. (Reusable sheets or plates)
<b>Max Print Speed</b>	500 mm/s
<b>Max Travel Speed</b>	600 mm/s
<b>Max Acceleration</b>	1 g
<b>Max Build Rate</b>	Up to 100 mm <sup>3</sup> /s or 385 cm <sup>3</sup> /hr (Polymer dependent)
<b>Material Format</b>	Open material system, 1.75 mm filament
<b>Compatible Materials</b>	ABS, ASA, Nylon (PA 6, 6/66, 12), PAEK, PC, PEBA, PEEK, PEI (ULTEM™ 9085, 1010), PI, PEKK, PETG, PLA, POM, PP, PPSU, PSU, PVDF, TPE, TPU, and many more.  Carbon fiber, glass fiber, Kevlar®, and ESD safe variants of the above. Various soluble and breakaway support materials.
<b>Material Storage Capacity</b>	Up to four 2.2 kg reels or two 5kg reels
<b>Material Loading/Changeover</b>	Fully automated
<b>Error Detection</b>	Filament feed error, jam detection, and runout detection
<b>Material Storage Dewpoint</b>	-25°C

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<b>Connectivity</b>	Wi-Fi (Removable), Ethernet, USB port (File upload only)
<b>Control Interface</b>	12.3 in. LCD touch screen, cloud management
<b>Installed Dimensions</b>	1258 x 870 x 1892 mm (XYZ)
<b>Weight</b>	650 kg
<b>Compressed Air Requirement</b>	75-135 psig, minimum flow 1 CFM, <50C (122F)
<b>Supply Voltage</b>	208-240VAC, 50 A, Single Phase
<b>Sensors and Accessible Data</b>	<ul style="list-style-type: none"> <li>Microstep logging (As-executed motion)</li> <li>X/Y/Z linear encoders</li> <li>Nozzle, chamber, and bed thermals</li> <li>Nozzle force</li> <li>Optical nozzle inspection camera &amp; automatic XY offset calibration</li> <li>Filament feed rate</li> <li>Filament diameter</li> <li>Filament feed tension/compression</li> <li>Material storage temperature, humidity, and pressure</li> <li>Ambient temperature, humidity, and pressure</li> <li>Dual 4K chamber camera (Removable)</li> </ul>

## Dimensions



# Hylo™

## Smart Hardware

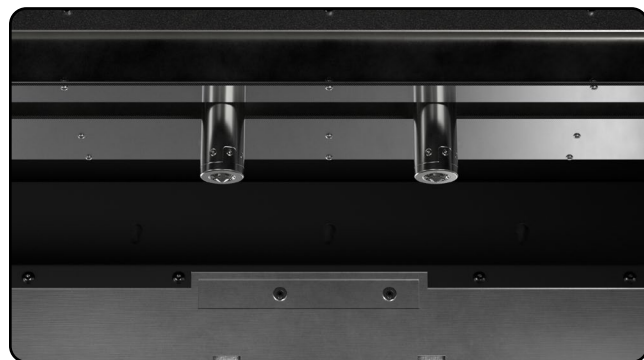


A sensor-driven, software enhanced industrial 3D printer for manufacturing high performance parts with **PEEK**, **ULTEM™**, and **open market materials** – larger, stronger, faster, and easier than ever.



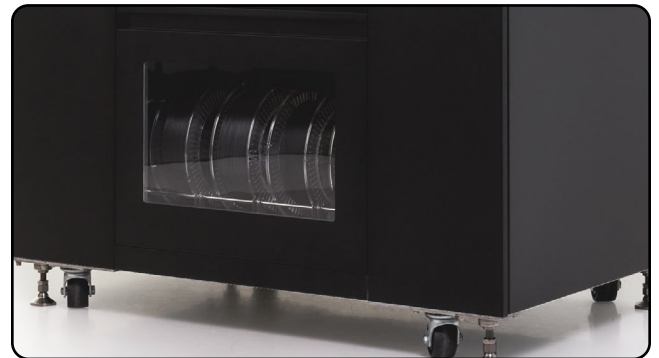
### End-to-End Automation

From XYZ calibration to nozzle offsets, optical nozzle inspection, and automatic material loading, Hylo delivers a seamless 3D printing experience, allowing engineers to focus on parts, not printers.



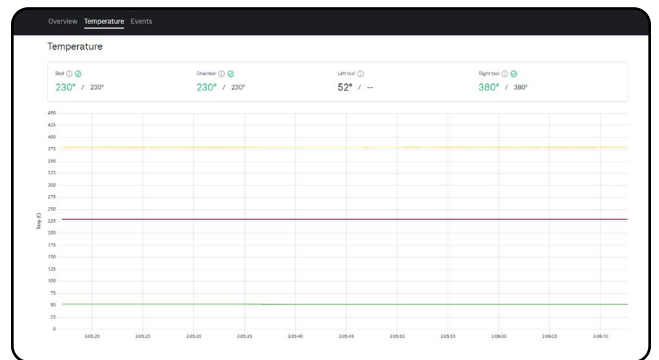
### Advanced Extruders

Independent active-leveling extruders ensure perfect first layers and high speed duplication mode printing while 360° coil heaters enable industry-leading build rates. Onboard sensors capture process data and detect part warping or print failures.



### Material Management

Start prints from your desk with automated material loading, changeover and feed error detection. In addition, a humidity controlled material bay with filament diameter detection and flow compensation ensure consistent, high-quality results.



### Integrated Sensors

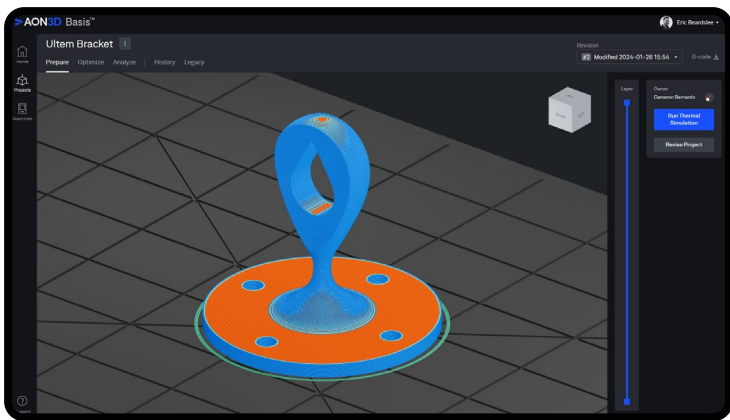
Hylo features over 25 onboard sensors for in-situ process monitoring and logging. Use the data and sensors to monitor prints, enable non destructive testing, identify and remedy print defects/failures, and achieve new levels of repeatability.

# Basis™

## Smart Software

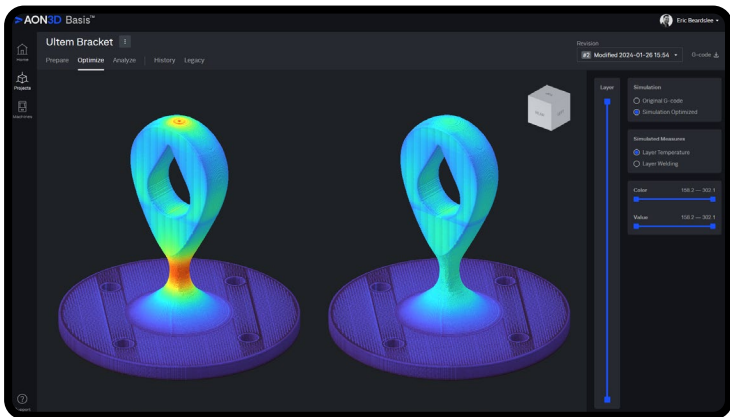


AON3D Basis closes the loop in additive manufacturing. Manage your projects and printers, achieve new levels of repeatability and part performance with machine learning optimization, and access process logs to aid in part qualification and quality assurance, all from a central platform.



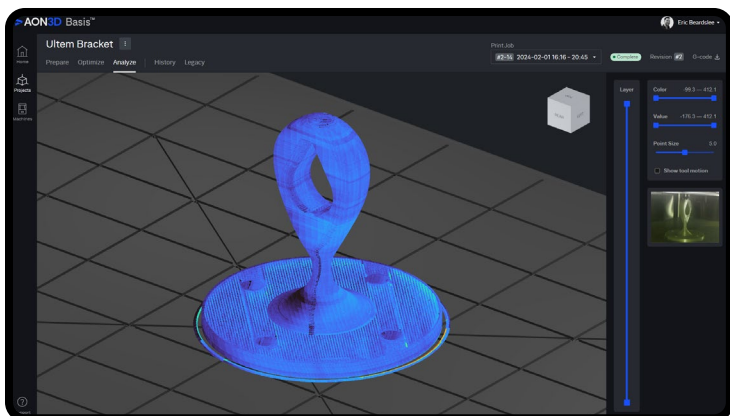
## Prepare

Streamline production from the comfort of your desk. AON3D's secure cloud platform centralizes management of projects, printers, material inventory, maintenance schedules, users, and more.



## Optimize

Identify and correct print issues before ever pushing print. AON3D's ultra-fast process simulation software utilizes machine learning to create dynamic process parameters based on part geometry and material, reducing print failures/defects and maximizing final part properties.



## Analyze

Understand what's going on inside your parts by leveraging Hylo's sensor suite. View data-rich point clouds to identify internal defects, reduce QC burdens, assist in part qualification, and aid in troubleshooting.



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