The nFD™ device is driven by a high-precision computer controlled system that allows the user to precisely place materials in a specified XYZ location. The size of the nFD™ was also designed with the approach that size matters and therefore this device has an intentionally narrow profile to allow multiple devices to be utilized on a single hardware platform. The nFD™ was designed to print thermoplastics utilizing a flexible approach that allows the user to choose pen tip shapes and sizes. The interchangeable nozzles, nTips™, allow users to print parts more accurately than any other 3D printing system. With a wide operating temperature range, the nFD™ is capable of printing a variety of materials including but not limited to ABS, PLA, and ULTEM. The nFD™ also features two thermocouple slots, one for the temperature control loop and a second for a safety limiter. A heater control system and heated bed are required.

**Size:**

H 180 x W 25 x D 64.8 MM  
(H 7.09 x W 0.98 x D 2.55 in)

**Weight:**

0.41kg (0.9 LB)

**Material Needed:**

1.75mm Filament  
(+/- 0.1MM)

**Temperature Range:**

Up to 400° C  
(Up to 752° F)

**Parts Included:**

nFD™ Pump with dovetail  
K-Type Thermocouple (2)  
Nozzle heater  
Heat Break  
Heating Element  
Ceramic nTip

**Features**

- Light weight and small form factor
- Interchangeable nozzles
- Reduced resolution
- Broad material compatibility
- Adjustable material feed system

**Standard Ceramic nTip Size Chart**

(Contact us for custom sizes)

<table>
<thead>
<tr>
<th>nTip Part #</th>
<th>I.D. (µm)</th>
<th>O.D. (µm)</th>
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<tbody>
<tr>
<td>900-4000-001</td>
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