Protype

Choosing a 3D Printer for PEEK and PEI: A Buyer's Checklist

Questions to ask any PEEK and PEI printer vendor, with Protype CD400HT details at the end.

CHECKLIST

1. **What is the chamber temperature at the part?**
   Claims often come from the machine's own sensor, so ask for temperature data measured directly at the part.

2. **What is the tensile strength in the Z direction?**
   Published PEEK data is usually for flat XY specimens; ask for vertical Z-axis test results between layers.

3. **What is the usable print area in each mode?**
   Ask the vendor to confirm usable dimensions and height for your part orientation in every print mode.

4. **How are supports printed and removed?**
   Single-nozzle machines print supports in the same PEEK for mechanical removal; ask if a separate support material is possible.

5. **What bed checks and adjustments does routine operation require?**
   Request the user manual to see the exact bed levelling steps for commissioning and regular use.

6. **Does in-printer annealing improve or degrade PEEK parts?**
   Request strength and warping data from a single specimen batch split three ways: unannealed, annealed in the printer, and annealed in an oven.

7. **How does filament choice affect the printer warranty?**
   Ask for the written warranty terms and check which filament-related failures are excluded.

Protype CD400HT

- Protype CD400HT has two independent IDEX heads for separate part and support materials.
- Nozzle heats up to 500 °C.
- Prints PEI with 145 °C chamber, 160 °C bed, and 340 °C nozzle.
- Prints PEEK, PEI 9085, PSU, PA-CF, and PC from any filament supplier.
- Uses Protype Slicer and remote diagnostics through ProtypeHub.
- Comes with a 12-month standard warranty.

TEST PRINT

Send us your STL or drawing and the grade of PEEK or PEI you use. We will print it on Protype CD400HT so you can judge the part, not the brochure.

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