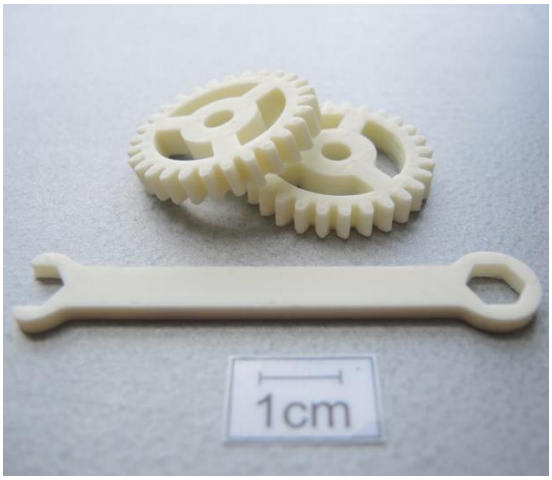
TIWARI
SCIENTIFIC INSTRUMENTS

esa business incubation centre
Hessen & Baden Württemberg

RAPTOR

Additive Manufacturing of Metals and Ceramics



RAPTOR is an Additive Manufacturing (AM) solution for the production of complex geometries made out of metals and ceramics. With the RAPTOR, TIWARI Instruments utilizes the Fused Filament Fabrication (FFF) technique to produce ceramic and metallic parts with a 3D-printer working with special filaments. The 3D- printed parts are then eliminated of any non-metallic or non-ceramic component (binder) with the help of heat treatment at high temperatures, yielding pure and resistant parts suitable for all engineering applications in a matter of days. This cost-effective technique is suitable for a number of metals and ceramics, including metal-ceramic or ceramic-ceramic composites, and is capable of producing parts with over 98% relative density.

RAPTOR-X 3D-Printer:

- **Print Volume:** 25 (W) x 25 (D) x 25 (H) cm
- **Number of Printing head:** 1
- **Max. Nozzle temperature:** 300°C
- **Max Bed Temperature:** 120°C
- **Filament diameter:** 1.75 & 2.85 mm (quick swap)
- **Motorised filament spool for high print quality**
- **Monitoring of available filament length/mass**
- **Auto-detection of filament blockage**
- **Monitoring & Control Software over LAN**
- **Remote-access to printer**
- **Compatible with Slic3r/Simplify 3D**
- **Weight: 10 kg**
- **Suitable for all**:
  - Metal filaments
  - Ceramics filaments
  - Polymer-based filaments
- **We offer custom 3D-printers as well as services for part manufacturing with the following materials:**
  - Stainless Steel
  - Zirconia
  - Alumina
  - Tungsten Carbide
  - Silicon Carbide
  - Silicon Nitride

Want to know more about RAPTOR?
Get in touch with us:
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About TIWARI Scientific Instruments:

We are a hardware-oriented company incubated by the European Space Agency's Business Incubation Centre in Darmstadt and specialize in Technology Transfer. We identify promising technologies developed for space missions for their benefit on Earth (Spin-off) and adopt emerging terrestrial technologies for the space missions of the future (Spin-in).