

Engineering, Testing & Manufacturing Services

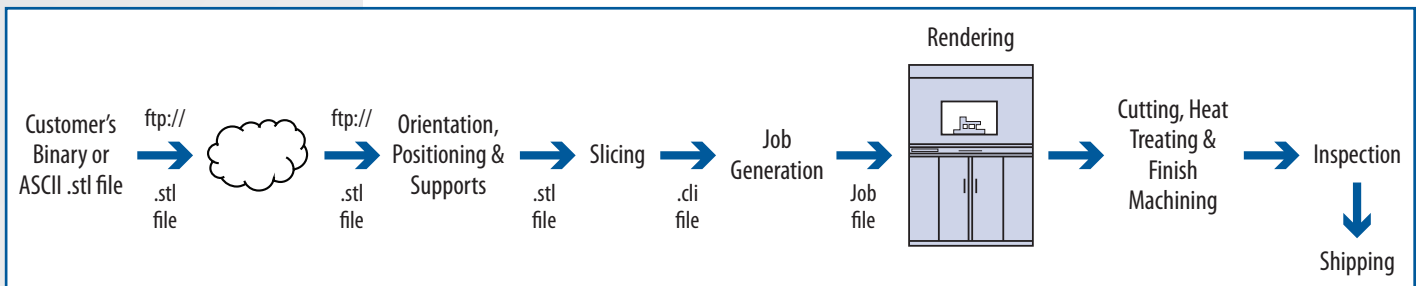
Metallic Rapid Prototype Facility

APS's DMLS (Direct Metal Laser Sintering) rapid prototyping workflow enables quick-turn additive manufacturing of metal components based on a customer's 3D CAD file. Parts up to 9.85 x 9.85 x 12.8 in. (250 x 250 x 325 mm) can be rendered from ultrafine powders into a variety of alloys including:

- > Stainless Steel GP1 (US 17-4; DIN 1.4542)
- > Inconel 718



Example Workflow



Capabilities

| EOSINT M 280 - 400W | |
|---------------------|---------------------------------------------------------------------|
| Fiber Optic Laser | 200W / 400W Yb |
| Inert Gasses | Argon and Nitrogen |
| Build Envelope | 9.85 x 9.85 x 12.8 in. (250 x 250 x 325 mm) |
| Focus Diameter | 0.004 - 0.020 in. (100 - 500 µm) |
| Layer Thickness | 20 µm (SS 17-4; DIN 1.4542) 40 µm (Inconel 718) |
| Feature Tolerances | ± 0.005 in. first inch; ± 0.002 in. after |
| Surface Finish | 250 - 500 Ra |
| Options | Shot Peening, Laser Power Monitoring (LPM) Gas Management System |

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