

# Metal Solutions for Fused Filament Fabrication

## Easy and Cost-effective 3D Printing of Metal Parts

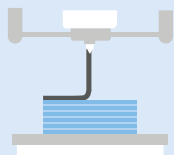
Our Metal Fused Filament Fabrication (MF<sup>3</sup>) experts can provide you with the opportunity to utilize high-quality metal parts and realize high output using this conventional 3D printing technique. Our metal filaments are cost-efficient, easy to process and meet the Metal Injection Molding (MIM) industry standard for catalytic debinding and sintering. Our industry-grade metal-polymer composites support a broad range of applications – including tooling, jigs and fixtures, small series production, functional parts, prototypes, and complex artistic parts like jewelry.

### Benefits at a Glance

- Complex geometries possible with FFF
- Even distribution reduces risk of defects
- Freedom of design
- Easy and affordable metal 3D printing

### Example Applications

- Jigs and fixtures
- Series production
- Functional parts and prototypes
- Tooling



### Our Approach in Metal for Fused Filament Fabrication

Metal Fused Filament Fabrication (FFF) is a form of Additive Manufacturing where filament is fused together to fabricate a solid part. In the past, FFF has been solely applied to conventional plastics – we changed that.



1.

#### Slicing

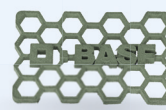
- Printing parameters influence mechanical properties
- Transformation into machine-readable format (g code)
- Slicer can be chosen freely – thus easy to integrate into current workflows



2.

#### Orientation and Print

- Supports should be minimized
- Largest area as bottom surface



3.

#### Green Part

- The printed part is called the 'green part'
- Behaves like and resembles a common plastics part before debinding processing



4.

#### Final Part

- Sintering in a 100% hydrogen atmosphere to ensure high material quality
- Material consolidated at high temperatures, maintaining its original shape
- Print now ready for additional post-processing

