



Engineered Porous Metal Solutions for Filtration, Flow Control & Thermal Management

Supporting mission-critical programs across defense, aerospace & space applications

Why Mott



Prevent clogging & instability in propulsion & fluid systems



Simplify fluid architectures through integrated porous structures



Reduce part count, weight & assembly complexity

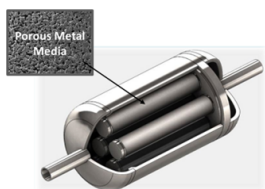


Improve thermal regulation & heat rejection

Propellant/Actuation Filters

Protect propulsion systems from clogging & flow instability

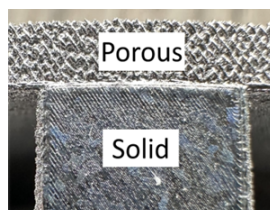
- Sub-micron particle capture
- Sintered metal and mesh media
- Withstands high pressure and vibration
- Protects valves, injectors, and thrusters



Controlled Porosity Additive Manufacturing

Integrated porous & structural functionality in a single part

- Dual-density solid and porous geometries
- Tunable porosity for flow and thermal management
- Reduced weight, part count, and assembly complexity



PMDs and Surface Tension Elements (STE)

Reliable propellant control in varying flight, acceleration & vibratory conditions

- Conventional and AM designs with customizable porosity and pressure drop
- Improved propellant utilization and mission duration



Thermal Protection System (TPS) Components

Thermal protection for high-heat & harsh environments

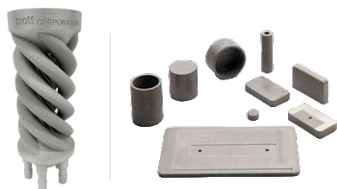
- Leak-proof, high-pressure metal designs
- Integrated structural and thermal functionality



Heat Pipes, Wicks & Phase Separators

Advanced fluid transport & phase management solutions for thermal control

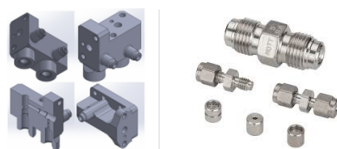
- Gradient porosity for two-phase separation
- Engineered capillary structures for fluid transport and heat transfer



Restrictors, Filter Manifolds & Flow Splitting

Filtration, flow control & restriction in a compact assembly

- Integrated filters, restrictors, and machined flow paths
- Multi-pore elements minimize low-flow clogging
- Tested for leaks, pressure, flow, and cleanliness



Ground Filling Filtration & Gas Purification

Clean propellants & gases during storage, handling & transfer

- Removes particulates and contaminants down to ppb / 0.1 μ levels
- Custom purification skids and modular system designs



Ceramic Componentry

Porous & dense solutions for insulation & sensor protection in extreme temperature

- Alumina, Zirconia, Titania, and Silicate ceramics
- Dielectric insulation, heaters, and thermal shield
- Tight-tolerance components for critical applications

