

ELECTRIC PROPULSION SYSTEMS

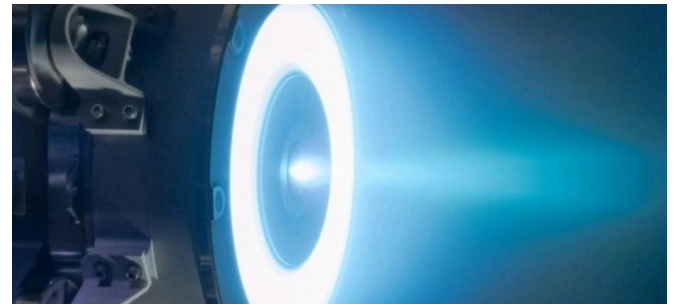
Mission-Critical Aerospace Capabilities

Successfully launched +1,000 components | Flying on 40+ spacecraft platforms | Decades of Spaceflight Heritage

For over 60 years, Mott has delivered filtration, flow control, and thermal management solutions proven in orbit and trusted in flight. Built in our AS9100-certified, USA-based facility, our components power propulsion, thermal control, and mission-critical systems across space, defense, and aviation.

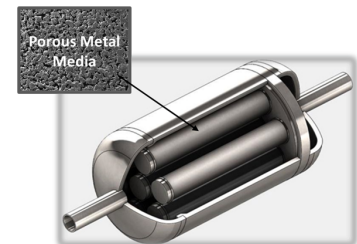
Key Benefits

- » High structural strength
- » Maximum contaminant-loading capacity
- » Uniform permeability
- » Superior fine-particle retention



Filters

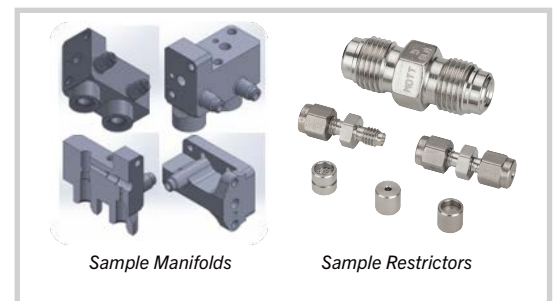
Mott offers both custom and off-the-shelf propulsion filters engineered specifically for electric-propulsion systems. Compatible with xenon, krypton, argon, and other propellants, these filters support flow rates from <1 to 40,000 SCCM. Modular design options enable tailored particle filtration, flow capacity, and form factors. Materials include stainless steel, titanium, Inconel, nickel, and specialty alloys such as niobium C103 and tungsten.



Sample Propellant Filter

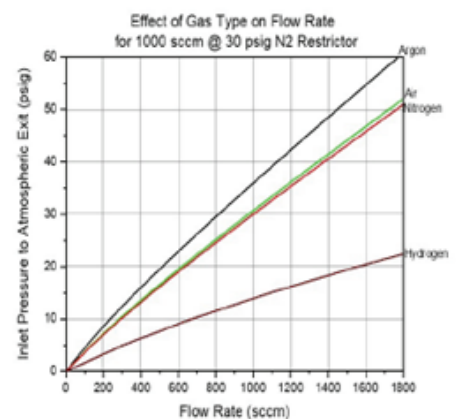
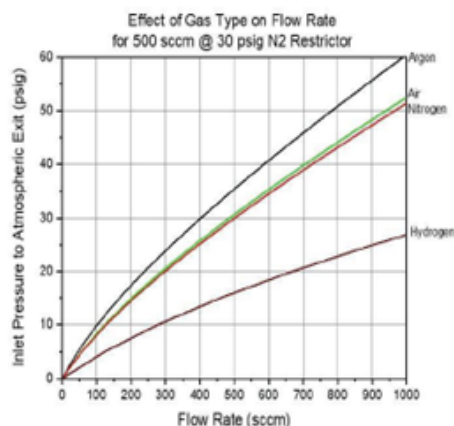
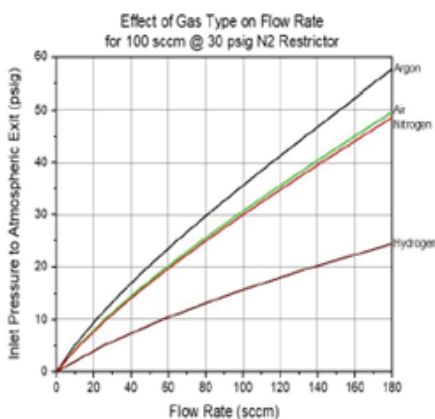
Manifolds & Restrictors

Mott engineers have integrated over 1,000,000 pieces of individually tuned sintered porous metal into hardware that requires no calibration and offers repeatable flow control over time. Mott flow restrictors accommodate virtually any flow requirement: pressure to pressure, pressure to vacuum, and other upstream/downstream configurations. Mott engineers integrate these restrictors into flow manifolds for both high- and low-pressure systems, with accurate flow splitting to the anode and cathode, reducing the risk of FOD clogging ultra-small orifices. Porous metal ensures gas flows uniformly across media for laminar flow avoiding resonance vibration caused by supersonic flow through orifices.



Sample Manifolds

Sample Restrictors



Mott Propulsion Filters Catalog

Porous Material	HW Material	Media Grade (µm)	Proof Pressure (psi)	Overall Length (in)	Largest OD (in)	End OD (in)
Nickel	Inconel	10	2,100	9.5	2.5	1
		25	225	6.5	1.5	0.375
		40	8,250	4.5	3	1.75

Stainless Steel	Stainless Steel	1	1,300	7	4	0.375			
		2	750	4	0.75	0.25			
				4.5					
		1,500	750	3.75	0.75	0.25			
				795			2	1.3	
		10	750	7.75	2.3	0.75			
				2,775			7	3	1.5
				4,500			4	2	1
				7,500			6.75	0.75	0.25
		25	2,000	7	2	0.5			
		40	150	12	5.25	2.85			
				17.75		2.75			
		100	4,300	4.75	2	1			

Titanium	Titanium	1	825	7	2	0.375
			1,300			
		2	600	4.75	1.25	0.25
		10	475	6		
600	8.5		2	0.25		