

## > Mott Porous Metal Micro Sparger Tips for Bench-Top Laboratory Bioreactors and Fermentors



### Specifications

Materials of Construction:	All 316L SS
Dimensions:	See Dimension Diagrams
Porous Media Grades:	2 $\mu\text{m}$ , 5 $\mu\text{m}$ , 10 $\mu\text{m}$ , and 15 $\mu\text{m}$
Connections:	M5 thread with O-ring grooves, 10-32 UNF threads, hose barb, NPT threads and butt weld ends available.

### Advantages of Mott Porous Metal Micro Spargers

Due to the low solubility of oxygen in many cell culture mediums, optimizing this critical nutrient can be difficult. Maximizing the surface area between the media and the aeration bubble can improve the mass transfer rates of oxygen or carbon dioxide significantly.

A widely accepted method of maximizing the surface area is using a Mott porous metal micro sparger. These micro spargers can greatly reduce the size of the aeration gas bubbles which will increase the amount of surface area for a given volume of gas. It is not unusual to effectively increase mass transfer rates by 100% to 400% over standard drilled pipe or single opening dip tubes.

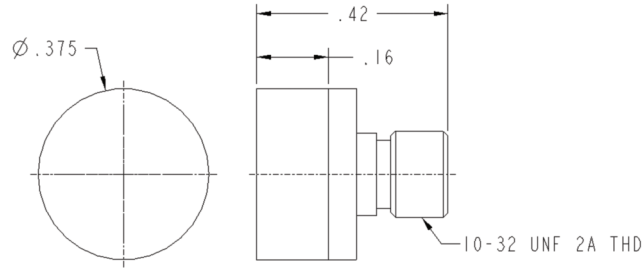
### Optimal Pore Sizes for Optimal Mass Transfer

Mott Corporation offers a wide variety of porous metal sparger tips for laboratory and pilot scale bioreactors and fermentors. With media grades ranging from 2  $\mu\text{m}$  to 15  $\mu\text{m}$ , Mott porous spargers offer the flexibility to generate bubble sizes which are optimal for your specific media, organism and mass transfer requirements. Whether your application calls for optimal oxygen mass transfer or oxygen or CO<sub>2</sub> stripping, there is a Mott micro sparger tip for your needs. Sparger tips come with a M5 thread, 10-32 UNF thread, or weld stubs.

### For Pilot Scale and Larger

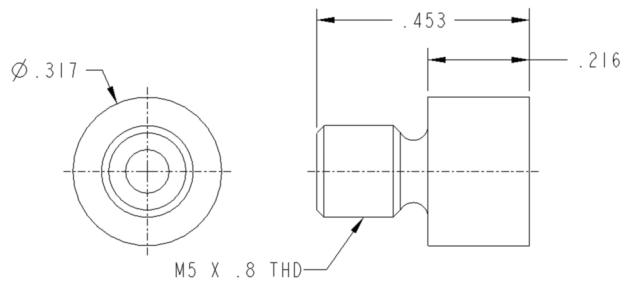
For larger bioreactors and fermentors, Mott's Quick Change Sparger tips allow for quick and easy removal and replacement of the sparger in pilot or production scale reactors. See the Mott Brochure HPBIOSPARG for Quick Change Sparger System for Bioreactors and Fermentors.

## UNF Threaded Sparger Tips



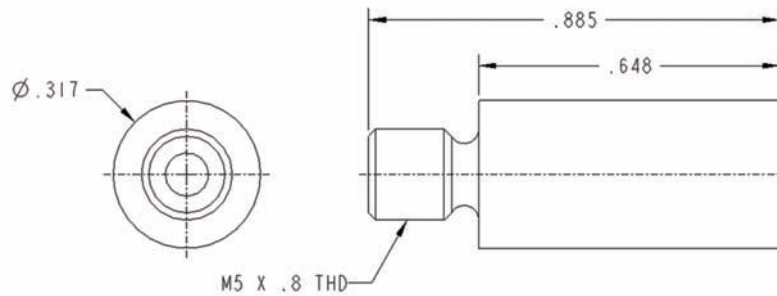
Part Number	Media Grade	Overall Length (Inches/mm)	Active Porous Length (Inches/mm)	Diameter (Inches/mm)	Connection Thread
4000401-020-H	2 $\mu\text{m}$	0.420/10.66	0.16/4.1	0.375/9.52	10-32-UNF 2A Thread
4000401-050-H	5 $\mu\text{m}$	0.420/10.66	0.16/4.1	0.375/9.52	10-32-UNF 2A Thread
4000401-100-H	10 $\mu\text{m}$	0.420/10.66	0.16/4.1	0.375/9.52	10-32-UNF 2A Thread
4000401-150-H	15 $\mu\text{m}$	0.420/10.66	0.16/4.1	0.375/9.52	10-32-UNF 2A Thread

## M5 Threaded Sparger Tips with 568-007 Size O-Ring Grooves



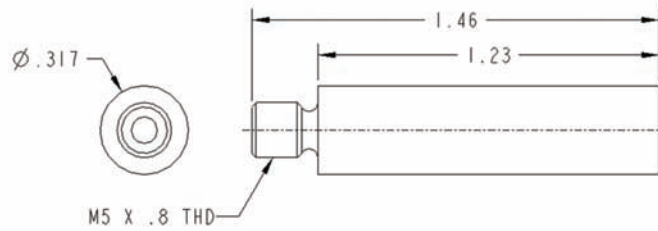
Part Number	Media Grade	Overall Length (Inches/mm)	Active Porous Length (Inches/mm)	Diameter (Inches/mm)	O-Ring Size	Connection Thread
1242439-01-020-H	2 $\mu\text{m}$	0.453/11.5	0.216/5.5	0.317/8.05	568-007	M5 x .8
1242439-01-050-H	5 $\mu\text{m}$	0.453/11.5	0.216/5.5	0.317/8.05	568-007	M5 x .8
1242439-01-100-H	10 $\mu\text{m}$	0.453/11.5	0.216/5.5	0.317/8.05	568-007	M5 x .8
1242439-01-150-H	15 $\mu\text{m}$	0.453/11.5	0.216/5.5	0.317/8.05	568-007	M5 x .8

## M5 Threaded Sparger Tips with 568-007 Size O-Ring Grooves



Part Number	Media Grade	Overall Length (Inches/mm)	Active Porous Length (Inches/mm)	Diameter (Inches/mm)	O-Ring Size	Connection Thread
1242443-01-020-H	2 $\mu\text{m}$	0.885/22.5	0.648/16.4	0.317/8.05	568-007	M5 x .8
1242443-01-050-H	5 $\mu\text{m}$	0.885/22.5	0.648/16.4	0.317/8.05	568-007	M5 x .8
1242443-01-100-H	10 $\mu\text{m}$	0.885/22.5	0.648/16.4	0.317/8.05	568-007	M5 x .8
1242443-01-150-H	15 $\mu\text{m}$	0.885/22.5	0.648/16.4	0.317/8.05	568-007	M5 x .8

## M5 Threaded Sparger Tips with 568-007 Size O-Ring Grooves



Part Number	Media Grade	Overall Length (Inches/mm)	Active Porous Length (Inches/mm)	Diameter (Inches/mm)	O-Ring Size	Connection Thread
1242451-01-020-H	2 $\mu\text{m}$	1.46/37.1	1.23/31.2	0.317/8.05	568-007	M5 x .8
1242451-01-050-H	5 $\mu\text{m}$	1.46/37.1	1.23/31.2	0.317/8.05	568-007	M5 x .8
1242451-01-100-H	10 $\mu\text{m}$	1.46/37.1	1.23/31.2	0.317/8.05	568-007	M5 x .8
1242451-01-150-H	15 $\mu\text{m}$	1.46/37.1	1.23/31.2	0.317/8.05	568-007	M5 x .8

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