

Did you know...

> The benefits of high-efficiency spargers?

Efficient Injection of Gas into Liquids

Porous metal spargers are used in virtually every industry for an array of different applications. If you need to introduce gas into a liquid in any type of critical application, you need a Mott sparger. Controlled porosity of the porous metal allows uniform permeability and consistent/repeatable performance each and every time.



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> Gas/Liquid Contacting

High-efficiency gas/liquid contacting

With Mott porous metal spargers

Mott porous metal spargers provide highly efficient mass transfer of gas into liquid through the creation of millions of fine bubbles. Rather than the harsh and inefficient entrance of large bubbles from drilled pipe and other devices, porous metal provides a gentle and dramatically more efficient introduction of the gas through fine bubble propagation. This results in greater gas/liquid contact area, and measurably more efficient mass transfer which reduces the time and volume required to dissolve gas into the liquid (saving both time and money).



Typical applications

| Application | Description |
|---------------------------|--|
| Aeration | Air sparging to meet BOD (Biological Oxygen Demand) on waste stream |
| Agitation | Air injection for mixing liquids in a vessel |
| Bioremediation | Air sparging to stimulate growth of bacteria for hazardous waste treatment |
| Bulking | Nitrogen sparging for bulking salad dressings or mustard |
| Carbonation | CO ₂ sparging for carbonated beverages and beer |
| Chlorine bleaching | Chlorine sparging for bleaching pulp in the manufacture of paper |
| Column flotation | Air sparging for coal flotation, and other separations of solids |

| | |
|-----------------------------|--|
| Dewatering | Nitrogen sparging to remove entrained water from motor oil |
| Fermentation | Oxygen or air sparging to enhance cell growth in fermentation reactions |
| Gas/liquid reactions | Sparging air, oxygen, or other gases into reactors for improved performance |
| Hydrogenation | Hydrogen sparging for a broad spectrum of chemical hydrogenation reactions |
| Oil flotation | Air or natural gas sparging for oil removal from produced water from oil wells |
| Oxygen bleaching | Oxygen sparging for bleaching pulp in the manufacture of paper |
| Oxygen stripping | Nitrogen sparging to remove oxygen from edible oils, wine, and juices |
| Oxygenation | Oxygen sparging in fish farming for significant stimulation of fish growth |
| Ozonation | Ozone sparging to sanitize ultrapure water systems in pharmaceutical plants |
| pH control | CO ₂ or NH ₃ sparging to adjust pH in waste or process streams |
| Steam injection | Direct steam injection for efficient heating, and to eliminate "steam hammer" |
| Volatiles stripping | Air sparging for removal of VOC (Volatile Organic Compounds) from waste streams |

Mott spargers are designed for two specific types of processes, static and dynamic. Static applications involve batch processes, or where liquids are stored in tanks. Dynamic sparging is designed for continuous processes in pipelines or channels. Mott has many years of experience to accommodate both application designs.

Spargers made with Mott porous media are of rugged construction and provide reliability in service. Mechanical shock or thermal cycling has little effect on porous metal, whereas ceramic or fritted glass elements can fail due to brittleness. Porous metal can be fabricated in many different configurations and sizes to meet specific application requirements.



Industries using spargers

- Beverage
- Biotechnology
- Chemical Manufacture
- Food
- Industrial
- Mining
- Paper
- Petrochemical
- Pharmaceutical
- Power
- Refining
- Waste Treatment
- And Many Others

Configured for any application

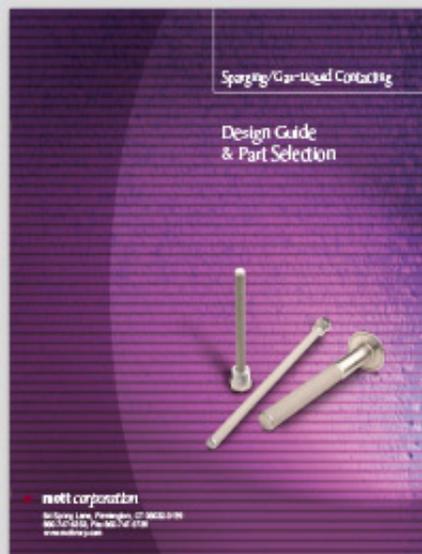
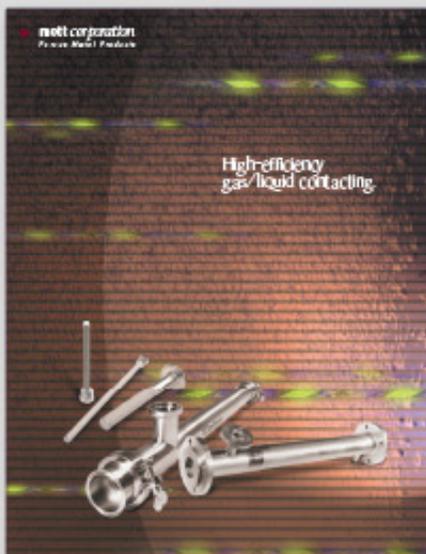
Mott sparging products can be configured into any number of shapes and sizes including cups, discs, and tubular elements manufactured through a sintered powdered metal process that strictly controls uniformity and distribution of pores. Mott also has the capability of incorporating hardware based on the specific application for a perfect fit, easy installation, and easy replacement. Passivation of the parts is also available upon request.

Mott offers a variety of porous metal alloys. Typically 316L stainless steel is used, but for high temperature or high corrosion applications, alloys such as Hastelloy® C-22 may be more appropriate. Specific properties and conditions are taken into account in the design and manufacture of spargers. Flow rate, process temperature, system pressure, and corrosive effects are just a few.

For more information

Click on the images below to download our [8-page sparger brochure](#) or our [11-page sparger design guide](#). You can also download our single-page [Sparging Application Data Sheet](#) for use in submitting your application details for consideration.

For more information, contact our sales department at Mott Corporation, 84 Spring Lane, Farmington, CT 06032, 1-860-747-6333 or Toll-Free 1-800-BUY-MOTT. E-mail: quest@mottcorp.com.



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