

Brooks Vaporizer Systems

Pure, Gentle Vaporization



Only a Brooks Vaporization System can provide these benefits:

- Customized to your process specifications
- System start-up assistance and tuning
- Complete, 100% vaporization
- The ONLY system robust enough for low vapor pressure fluids AND high vapor flows



BROOKS[®]
INSTRUMENT

Looking for pure, gentle vaporization? You'll ♥ the Brooks Solutions.

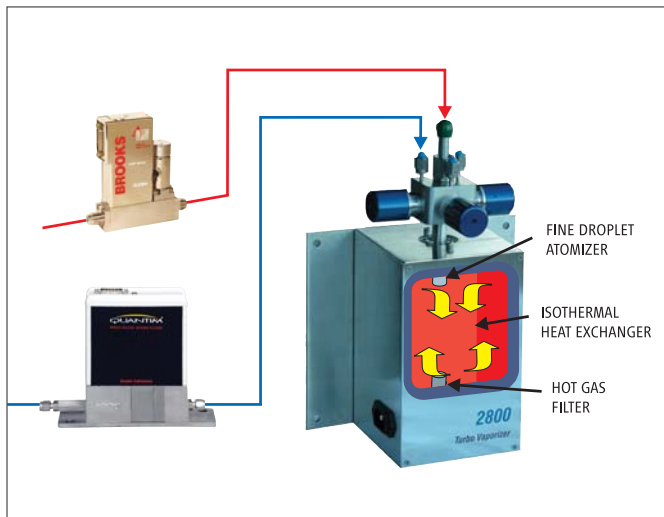
The Brooks vaporizer system provides 100% vaporization and repeatable, uniform, particle-free films. It can mix up to three fluid streams and is the only system robust enough to handle low vapor pressure and thermally sensitive fluids. With a dynamic flow range of less than 10 grams/hr to greater than 10 kg/hr and Coriolis-based mass flow control, this system is truly unique.

The secret to our solutions

The Brooks Quantim mass flow controller is coupled with a proprietary gentle vaporization technology developed by MSP Corporation. Utilizing Quantim's Coriolis based mass flow control we can achieve true mass measurement with exceptional accuracy independent of fluid and fluid properties. This allows users to change process conditions or fluids without recalibrating.

Brooks Vaporizer Systems utilizing MSP vaporizer technology are unique because the vaporization is accomplished in a heated, recirculating gas chamber, producing chemically pure vapors, instead of "flashing" the liquid to vapor on a hot surface.

An evaporative cooling effect allows fluid vaporization to take place with droplet temperatures below the decomposition temperature, critical for low vapor pressure fluids like siloxane, TEMA Hf, and TEMA Zr.



Proven in many applications

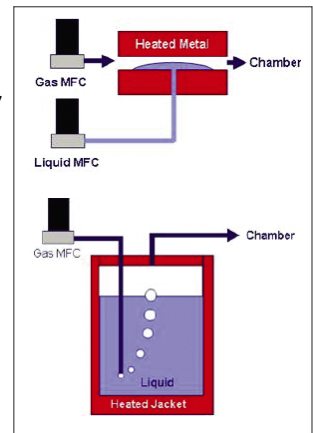
Brooks Vaporizer Systems have a proven track record in a variety of applications with hundreds installed around the world. Some examples include:

- Advanced material deposition in the semiconductor industry
- Vaporizing monomers for vacuum polymer film deposition
- Creating thin films for enhanced thermal, optical, or hardness characteristics (e.g. Diamond-like coatings)
- Generating calibration vapor for continuous emission monitoring systems

Replacing inefficient bubblers and flash vaporizers

Our reliable, modern vaporization solutions are superior to flash vaporizers and bubbler (vapor draw) systems. These inefficient systems have:

- Incomplete vaporization causing chamber pressure variation
- Decomposition, condensation, or polymerization
- Long process start and stop times
- Variations in source temperature and pressure causing variations in film thickness
- Safety concerns with large bubbler tanks
- Unknown vapor flow rates



Brooks, your ideal vaporization systems partner

If you have a challenging fluid vaporization application, choose Brooks as your vaporization solution. Our systems have been proven by many customers to:

- Improve yield by reducing contamination and improving film uniformity
- Reduce fluid/precursor waste with more efficient deposition
- Minimize maintenance by eliminating fluid/precursor decomposition, and more!

Let Brooks help you estimate the economic benefits of replacing an inefficient bubbler or flash vaporizer system. The results will be compelling.

Contact your local representative for more information or visit BrooksInstrument.com/Vaporizer.

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