

Precursor Vapor Delivery Systems

SMR™ Self-Metering Reservoir

<https://www.cerestechnologies.com/en/our-products>

SMR™ is our patented “Self-Metering Reservoir” vapor generator. The SMR refills itself in real time to maintain a constant liquid level without the use of any liquid level control electronics. The SMR can be configured as a bubbler or flash evaporator, and can be integrated into process tools or purchased as part of a Ceres stand-alone vapor delivery system. The SMR requires pressurized liquid precursor to refill while delivering vapor. An SMR controller is also available to support its vapor generating functions.

Why choose SMR™ ?

- On-demand of vapor supply to multiple MFCs
- Configurable as bubbler or flash evaporator
- Supports long process runs that require continuous, steady state supply of vapor.
- Generates up to 250 gr/min SiCl₄ neat vapor
- Up to 20 slpm carrier gas bubbler vapor supply
- Proven, patented design over 25 years

Applications

SMR™ enables remote supply of vapor on demand to one or more MFCs, or process tools. SMR™ is an alternative to direct liquid injection where vapor stream temperature is <125C, and less than 20 slm vapor flow rate, whether bubbler or neat vapor generation, for precursors such as TCS and SiCl₄, among many others.



Features

- 3" diameter vessel with 2.5", self-metering refill inner float vessel.
- Ports for liquid fill, carrier gas downtube, vapor outlet, vapor pressure, immersion heater, Liquid RTD, heater core TC, overflow sensor.
- Inner vessel stem tip needle valve and priming magnet (used for chemical commissioning)
- Flanged head and base for SMR maintenance