

Chemical Control Panel and Precursor Temperature Controller Extremely stable temperature control

INTRO

Many modern reaction constituents for semiconductor and PV processes are available only in liquid phase. Suitable delivery systems have been adopted to make them usable for technology. One of the method is based on liquid vapor pick up by flowing gaseous media through the liquid.

Flow of such carrier gas is controled by MFCs and is introduced to liquid container through a dip

tube while a carrier vapor mixture leaves the container through separate top outlet. In order to maintain the same pick up rate during the whole process and from process to process, liquid media temperature has to be precisely controlled. A proprietary powerful combined heating/cooling engine for dry bath environment has been developed for this purpose.

FEATURES

The system can furnish all popular and widely used chemical containers from various suppliers. Even adjustments for occasional rare versions are possible. Tailor made, engineered, top insulation covers contribute significantly to extremely stable temperature control. The system provides both visual and eletronic information on current liquid level and temperature.

Specialised all-plastic gas and vapor handling delivery panels were developed for safe and clean fluid handling, as a manifold interface between process reactor and media source. Important function of the panel is monitoring the pressure inside the container, and automatic vent in case of overpressure.

For utmost convenience, point-of-use vessels are refilled from economic bulk chemical sources. Such bulk liquid delivery systems provide safe, automatic, continuous chemical media availability without the need of dealing with numerous low volume containers.







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TECHNICAL DATA

Technical Parameters

Dimensions (width x height x depth)	320 x 240 x 320 mm
Diameter of the liquid container	145-155 mm
Weight	15 kg
Max. power consumption	150 W
Max. heating, relative to ambient	+50 °C
Max. cooling, relative to ambient	-20 °C
Temperature control stability	+/-0.1 °C
Cooling power	30 W



