

BIMESPRO BRS automatic bubbler refill system

Bimes pro d.o.o., Podsmreka 3d, 1356 Dobrova

Introduction & Application



Safe and straightforward refilling of bubblers and vaporizers in repeatable and high quality optical fiber preform fabrication processes. Automatic refilling systems are used in MCVD, PCVD and other plasma deposition equipment. Bubbler and vaporizer refilling should be safe for personnel and equipment in preform production area.

Description

Bubbler refill cabinet for MCVD refilling system is a specially constructed cabinet with capability to fill one liquid precursor at a time. This cabinet permits automatic, semi-automatic and manual refilling of bubblers and vaporizers inside MCVD gas cabinets or plasma deposition systems through connection piping and a piping panel. Cabinet can accept small size containers (up to 150 liters) from different suppliers in Europe, Americas, and Asia. Cabinet is equipped with a spill tray under the container mesh shelf, with 120% spill volume capacity.

BRS refill system is operated by OptiFACT control system and software from MCVD or plasma deposition equipment, as option a local OptiFACT or PLC controller can be provided. BRS can be configured to make refill to a maximum of 4 deposition systems, each with up to 3 bubblers/vaporizers for automatic/semi-automatic operation.

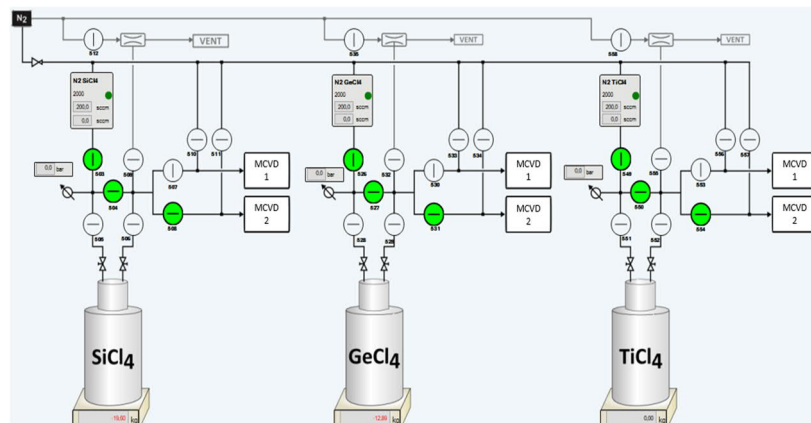
Specifications

Precursors:	SiCl ₄ , GeCl ₄ , POCl ₃ , TiCl ₄ , TEOS and other organometallic liquids (not for BBr ₃)
Material:	steel plate, dust painted, 120 x 60 (70) x 200 (220) cm (for large sizes)
Doors:	open more than 90°, sealed by synthetic rubber seals, panel lock with key,
Door window:	reinforced glass, panel handle, synthetic sealing
No. of refill lines:	1, 2 or 3 – third one with reduce container volume and size
Serves:	up to 4 MCVD/plasma deposition systems, adapted to customer piping
Cylinder sizes:	up to approx. 50L
Ventilation:	DN100 air inlet on top, with extension of the tube to cabinet bottom
Exhaust:	DN63 to scrubber
Refill flow/rate	MFC controlled, 2 or 5 slm UHP N ₂ used to pressurize containers
Level sensing:	by scale, provided as option, depending on container size and weight
Gas panels:	SS316L orbitally welded, He-leak tested, optional vacuum generators etc.
Panel purge:	by UHP N ₂ , supplied by customer from outside (top cabinet connection)
Electrical:	electrical cabinet with control components, 230V 50 Hz
Line heating:	on request
Control:	from a control cabinet/MCVD with OptiFACT software or by local PLC
Safety:	spill tank, exhaust to scrubber, leak tight cabinet, emergency stop, leak sensors as option, safe control mode



Options include:

- line and panel heating for special precursors,
- openable front panel window for access to the panel
- gauntlet for access to container valves without opening cabinet door (separate ports)
- gas leak detection by standard gas leak sensors according to customer's preference,
- connection and control of customer's centralized or local refill system (on request, custom design)
- refill programs/recipes included in control software



For more information and quotes please write to sales@bimespro.com or info@bimespro.com