

BIMESPRO SGS special gas cylinder cabinets

Introduction & Application

Safe gas cylinder connection and delivery of special gases to MCVD process is extremely important in optical fiber preform fabrication process, both for gas purity, as well as safety of equipment and personnel. Some gases used in preform fabrication processes are very aggressive or even toxic, therefore proper handling during cylinder connection and exchange is crucial for successful and safe operation. SGS cabinets can be used with Bimes MCVD equipment or as stand-alone systems in any applications using special gas supply or as an option, by using a local PLC-controlled touch screen.

Description

Cabinets are designed in accordance with international standards and norms. They are made of standard cabinet steel materials, and dust painted (RAL 7035) to provide protection against corrosion. Cabinets are equipped with exhaust port and ventilation air port on top. No access from the back is required, so they can be positioned against the wall. Standard delivery includes ramp for loading the gas cylinder with straps to fix it safely, gas panel with purge functions, gas cylinder pigtail, pneumatically controlled valves and control system.

Specifications



Gases:	N ₂ , He, SF ₆ , SiF ₄ , BCl ₃ , Cl ₂ , C ₂ F ₆ , CF ₄ and others
Material:	steel plate, dust painted, 60 x 60 x 200/220 (single), 100 x 60 x 200/220 (double)
Doors:	open more than 90°, sealed by synthetic rubber seals, panel lock with key,
Door window:	reinforced glass, panel handle, synthetic sealing
Ramp	foldable diamond pattern Al-plate ramp
Holders:	aluminum body, synthetic woven belts and buckles
No. of cylinders:	one or two with automatic switchover
Serves:	up to 4 MCVD systems or connection points
Cylinder sizes:	adaptable to 50, 20, 10, 5 and 2 L cylinders, by movable shelf and holders/straps
Ventilation:	DN100 air inlet on top, with possible extension of the tube to cabinet bottom
Exhaust:	DN100 exhaust port to exhaust
Scale:	cylinder scales as option the delivery project, depending on bottle sizes
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, 220V 50 Hz
Panel/line heating:	provided for BCl ₃ gas or similar
Control:	from a control cabinet/MCVD with OptiFACT software or by local PLC with touchscreen



Options include:

- line and panel heating for BCl₃ gas or similar precursors,
- accessories for installation of cylinders from 2 to 50L volume,
- cylinder connection pigtails with CGA or DIN 477 connection (others on request),
- openable front panel window for access to the panel without cabinet door
- gauntlet for access to gas cylinder valve without opening cabinet door (separate port),
- scale for detecting gas consumption and cylinder empty condition,
- automatic switchover for dual cylinder cabinets,
- separate nitrogen gas cylinder for purging (if required) in dual cabinets,
- gas leak detection by standard gas leak sensors according to customer's preference,

