LEADERS GLOBAL

The GL-XPS

Extreme Clean Dry Air Purification System

for semiconductor manufacturers with an innovative solution for lower energy costs, lower cost of ownership and resource conservation

반도체 공정 장비용 초고순도 공기 정제기

The GL-XPS-N series is a state-of-the-art advancement in purification technology from Leaders and Global, providing for outlet purity in the ppt levels as removing gaseous contaminants such as volatile bases (NH_3), volatile acids (SO_2), condensable organics (Toluene), refractory compounds (HMDSO), moisture (H_2O) from CDA (air). The system delivers purified Extreme Clean Dry Air (XPS) gas not only to reticle and wafer stockers but also the latest scanner platforms, including ArF dry and immersion lithography equipment. It uses ambient temperature purification based on the in-situ regeneration technology, automatically self-regenerate and switch-over by using two columns as well as automatically purging and conditioning. As a result, this system improves safety and eliminates human error or environmental concerns.

System Features and Safety

Contaminant removal efficiency ensures extreme clean process in ppt levels and low pressure drop as well as low cost of ownership with use of ambient temperatures where heating kit is not required. By system reliability, power failure will not damage the XPS. Optimized in-situ operation technology provides customers with automatically self-regenerate, guaranteeing a continuous flow of clean air gas and reduces interruptions to process gas flows.
The system is designed for easy installation, field service and upgrades.

Features	Description
EMO (Remote EMO)	When activated, power is removed from the enclosure. The system shuts down and process gas flow is shut off (Remote EMO alerting the facility).
Audible alarm (Remote alarm) Visual alarm	Audible warning informs of alarm condition (Remote alarm alerting it). Visually warning information on the top of the system.
Over-temp. rise condition	Monitored high-temp. sensor. A high-temp. hardware interlock is installed on the systems as a secondary precautionary device.
Circuit breaker	Additional electrical protection to the system.
Color touch screen	Provides operating information and system status.
Main system switch	Powers the system on and off.
Start button	Begin system operations and to clear alarms.

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Applications

- Photolithography
- FOUP cleaning and purging
- Wafer and Reticle Stocker cleaning and purging
- For extreme clean air purge gas

General Specification of Equipment

Mode	GL-XPS-20N	GL-XPS-60N	GL-XPS-100N	GL-XPS-120N
Gases purified	CDA (air)			
Contaminants removed	Volatile bases (measured as NH_3) 10 ppt			
	Volatile acids (measured as SO_2) 1 ppt			
	Condensable organics (measured as Toluene) 1 ppt			
	Refractory compounds (measured HMDSO) 1 ppt			
	Moisture (H_2O) 100 ppt			
Operation pressure range	80~145 psig (5.5~9.5 barg)			
Pressure drop	〈15 psi at 100 psig and max rated flow			
Maximum flow rate	20N㎥/h (300slpm)	60N㎥/h (1000slpm)	100N㎥/h (1500slpm)	120N㎥/h (2000slpm)
Gas operating temperature	15℃~40℃(60℉~104℉)			
Outlet filtration	ISO Class 1 (〈10 particles per ㎥ at 0.1μm)			
Leak rate	1 x 10^{-9} atm cc/sec			
Gas in/outlet connection	1/2"VCR	3/4"VCR	1" tube stub	1" tube stub
Power requirement	200~240 VAC single phase			
Instrument air	CDA or N_2 at 80~100 psig, Connection 1/4" compression fitting			
Ventilation	4" duct, 50~100 CFM exhaust flow			
Regeneration	1/4" or 3/8" tube stub connection, adjustable Regen. Time for each bed			
Regen. Temperature	250℃~ 350℃			

Options

- Moisture (H_2O) indicator
- MFM with totalizer (process gas flow meter)
- Back up bed for emergency by automatically operating function
- Pressure transducers on the down and up stream line
- Automatic bypass valve
- External particle by pass filter