LEADERS GLOBAL

# Portable Purge System (PPS)

***for relocation, dismantling, replacement and repair of semiconductor and display manufacturing process equipment.***


## 공정 잔류가스 처리를 위한 이동형 퍼지 시스템

Portable Purge System (PPS) is the apparatus of safe and conveniently processing the residual gas.
It is a new device for fast and safe purging of dangerous process gas remaining inside the gas supply line when performing tasks such as relocation, dismantling, replacement and repair of semiconductor and display manufacturing process equipment.
In order to remove residual gas, gas is discharged through a gas treatment device installed at the rear end of existing equipment, clean gas is put in again, leakage inspection is carried out, and work is carried out. So, it takes a lot of time to remove, dismantle, replace, and repair the process equipment, and there was a lot of unnecessary waiting time, but PPS can solve all problems.
The device is the world's first invention designed to simultaneously perform gas purifier, gas cabinet, and gas scrubber.
Patent (특허) No.10-2236006

## System Features

The apparatus comprises: a leak check, a flow control, a cycle purge, and a safety device which are functions of a gas cabinet, a gas purifier having a purification function of 99.999999% (8Nine) or more, and a gas scrubber using a high-performance cartridge column for safely removing dangerous residual gas in a plumbing. It is the world's first invention with the ability to discharge processed gas using a blower.

specifications are subject to change without notice


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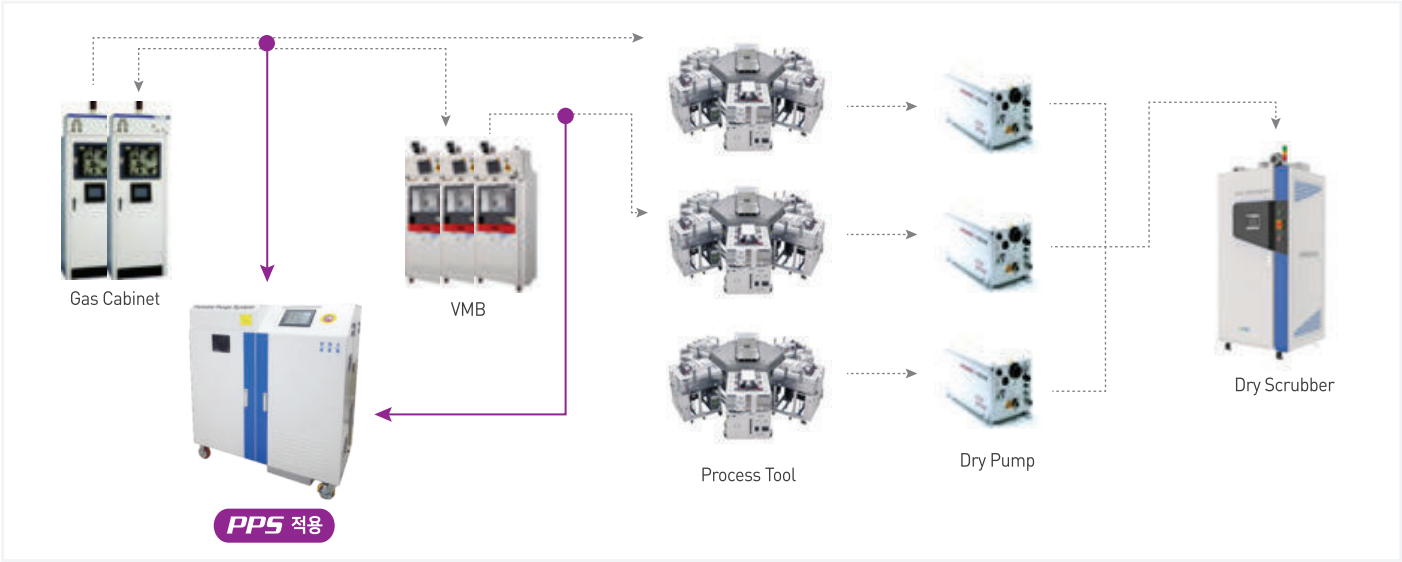
리더스 글로벌

## Specification

| | |
|---|---|
| Purge gas flow | Up to 330slpm (30slpm for the process, 300slpm for the dilution) |
| Process gas treatment capacity | Up to 1/2" pipe 50meter process gas treatment based on pressure of 5barg or less |
| Product size and weight | 1300(W) X 1374(D) X 800(H), approximately 360kg |
| Controller and Display | AC220V (20A), Touch Screen 5A, Blower and pump 15A |
| Utility | Process line 1/2" VCR, Spare Drain line 1/2" VCR, Purge N2 or Ar 1/2 VCR, Sample port 1/4" VCR, 1/4" Lok for Air, NW40 KF for exhaust pipe, 1/2" Lok for emergency exhaust |
| Option | Reservoir tank for gas capture in pre-purge phases when the amount processed gas is high |




## Specifications of Adsorbent Cartridge Column According to Gases

| Canister Model | Removal Gas | Method | Mechanism | Safety Option |
|---|---|---|---|---|
| LA-1 | HF, HCl, $Cl_2$, $BCl_3$, etc | Chemical Adsorption | $BCl_3 + 3MOH \rightarrow 3MCl + B(OH)_3$<br>$Cl_2 + 2MOH \rightarrow 2MCl + H_2O + 1/2O_2$<br>$2HCl + M(OH)_2 \rightarrow MCCl_2 + 2H_2O$<br>$2HF + M(OH)_2 \rightarrow MCl_2 + 2H_2O$ | Leak Detector |
| LX-2 | $NH_3$, TMA, DEX, etc | Chemical and Physical Adsorption | $4NH_3 + MSO_4 \rightarrow MC(NH_3)_4SO_4$<br>$xNH_3 + M_2 \rightarrow (M(NH_3))_{(x+2)}$ | High Temp Sprinkler, Leak Detector Z Purge |
| LT-3 | $SiH_4$, $AsH_3$ | Chemical Adsorption | $SiH_4 + 2MOH \rightarrow M_2Si + 2H_2O + H_2$<br>$2AsH_3 + 3MO \rightarrow M_2As + 3H_2O$ | Fire Detector High Temp, Sprinkler Leak Detector, Z Purge |
| LT-4 | $PH_3$, $H_2Se$, $H_2S$ | Chemical Adsorption | $2PH_3 + 3MO \rightarrow M_2P + 3H_2O$<br>$3H_2Se + M_2O_3 \rightarrow M_2Se_3 + 3H_2O$<br>$3H_2S + M_2O_3 \rightarrow M_2S_3 + 3H_2O$ | Fire Detector High Temp, Sprinkler Leak Detector, Z Purge |
| LC-5 | BTX, VOC | Chemical and Physical Adsorption | $VOC + AD \rightarrow AD(VOC)$ | High Temp Sprinkler, Leak Detector Z Purge |
| LT-6 | CO | Chemical Adsorption | $CO + MO_2 \rightarrow MO_2\text{–}CO$<br>$CO + M \rightarrow M\text{–}CO$<br>$2M\text{–}CO + 2MO \rightarrow 2M + 2CO_2$ | Fire Detector High Temp, Sprinkler Leak Detector, Z Purge |