



## Inert gas Circulation Purifying System for Glove Box, volume $2\text{m}^3 \sim 200\text{m}^3$

## 반도체, OLED용 자동순환정제기

**ICS-Series (Inert gas Circulation System)** are newly, automatically purifying and circulating pure atmosphere with oxygen and moisture levels below 1ppm through enclosure (volume  $2\text{m}^3$  up to  $200\text{m}^3$ ) of glove box in Semiconductor, LCD/OLED, Smart Window industry, and also designed auto-switchover, auto-leak check, auto-purge, auto-regeneration as our highest operational standard. In order to continually remove oxygen and moisture during gas circulation, special blower and two reactor columns are installed. Optionally, solvent removal. All process basic parameters like moisture, oxygen, pressure are not only monitored by safety sensors but also utilities like working gas, control gas, regeneration gas are controlled during processing.

### System Features

- Sub ppm level impurity removal ( $\text{O}_2 < 1\text{ppm}$ ,  $\text{H}_2\text{O} < 1\text{ppm}$ :ISO10648-2) with catalyst and adsorbent
- PLC based automatic controller with touch panel display
- Standard mode operation for energy saved quality control
- Single & Multiple reactor columns
- Optimum performance for attached enclosure volume ( $2 \sim 200\text{m}^3$  models, optional up to  $1,000\text{m}^3$ )
- Capacity to remove  $20 \sim 4,000$  liter of  $\text{O}_2$  and  $1,000 \sim 200,000\text{g}$  of  $\text{H}_2\text{O}$  (standard model)

specifications are subject to change without notice



## Specification

Max. Box volume (m <sup>3</sup> )	2 ~ 200 (Optional up to 1,000)
Blower capacity (m <sup>3</sup> /hr)	40 ~ 4,000
Purity O <sub>2</sub> (ppm)	< 1
Purity H <sub>2</sub> O (ppm)	< 1
Capacity O <sub>2</sub> (ℓ)	20 ~ 4,000
Capacity H <sub>2</sub> O (g)	1,000 ~ 200,000
Capacity LMF (g)	600 ~ 50,000 (Optional)
Gas analyzer & Sensor	O <sub>2</sub> ppm, O <sub>2</sub> %, H <sub>2</sub> O ppm, pressure sensor (ISO 10648-2 Class 1~4)
Solvent sensor	Optional
Automatic purge (ℓ/min)	100 ~ 10,000
Controller & Display	PLC with panelmeter or full color touchscreen
Dry vacuum pump	Oil-free dry scroll, pumping speed 3.6~13.0 cfm, ultimate vacuum(total pressure) 0.05torr
Others (Optional)	Quick purge, air purge, vacuum interlock, VCR fittings, in-line Hepa Filter(Class H14)
Utility (Gas, Water, Elect,)	Working gas : 2~6barg, Nitrogen or Argon Regeneration gas : 3~5% H <sub>2</sub> /N <sub>2</sub> or Ar mixing gas Nitrogen or Argon gas Cooling water : Inlet temp, 10~20°C, pressure 1.5~2.0kg/cm <sup>2</sup> ,G Electric : AC 200~380V, 50/60Hz, 1phase or 3phase Enclosure : All-welded construction, scratch- and corrosion-resistant epoxy part

## Order Information

**ICS - 010 - D - SR**

### Model Name

ICS : Inert gas Circulation System

### Performance

002 : 2m<sup>3</sup> max. enclosure volume  
005 : 5m<sup>3</sup>  
010 : 10m<sup>3</sup>  
020 : 20m<sup>3</sup>  
030 : 30m<sup>3</sup>  
050 : 50m<sup>3</sup>  
100 : 100m<sup>3</sup>  
200 : 200m<sup>3</sup>  
(Optional up to 1,000)

### Option

: None  
SR : Solvent removal  
FA : Full Auto  
SA : Semi Auto  
P : Special

### Reactor Type

S : Single Reactor  
D : Dual Reactor  
Q : Quadruple Reactor  
Z : Others (Multi)