

# 酸還王

San Kan Oh<sup>®</sup>

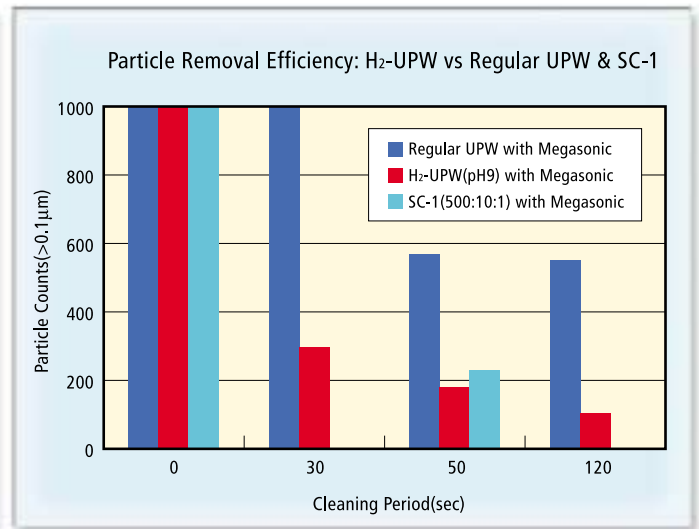
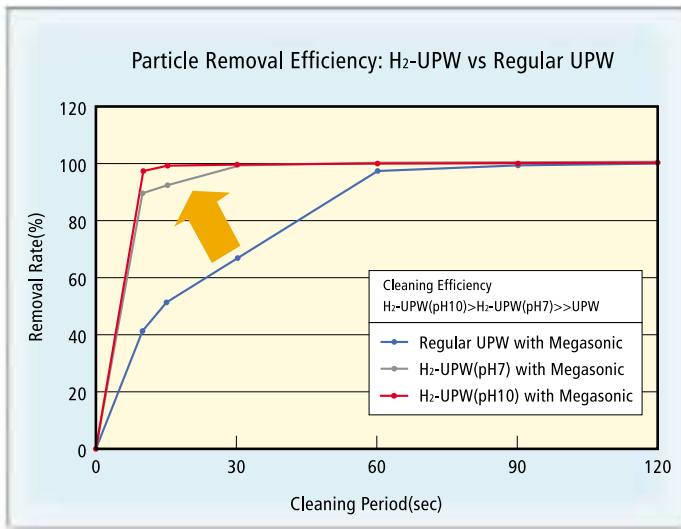
Model H-300  
Functional Water System



- ▶ Ultra-efficient cleaning of electronic components
- ▶ Drastically reduced chemical consumption
- ▶ Room Temperature cleaning
- ▶ Reduced water consumption

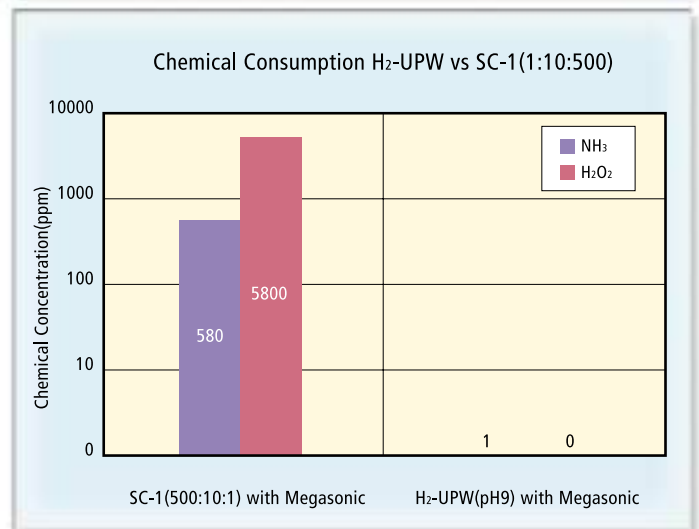
San Kan Oh® systems dissolve pure hydrogen and / or ozone into ultrapure water to produce "functional" water, which is used for cleaning and final rinsing of a wide range of electronic components to give highly efficient removal of particles or metallic species at room temperature without the need to use high concentrations of chemicals, as used in the standard SC-1 and SC-2 cleaning sequences. Not only is this a far more environmentally friendly option, but at the same time it eliminates the associated treatment of waste chemicals, as well as reducing the cost of producing and heating ultrapure water and high ventilation costs.

The following graphs show test results comparing the use of hydrogen (reducing) Functional Water with standard cleaning methods:



## Examples of Applications

- ▶ Semiconductors
- ▶ Optical lenses
- ▶ Masks
- ▶ Magnetic heads
- ▶ Hard Disk Drives
- ▶ LCDs



## Advantages of using Functional Water

- ▶ Highly Efficient component cleaning reduces reject rate
- ▶ Cleaning at room temperature reduces energy costs (instead of 60°C for SC-1)
- ▶ Drastic reduction in chemicals consumption
- ▶ Associated reduction in wastewater treatment costs
- ▶ Reduced ultrapure water consumption reduces water supply costs
- ▶ Reduction in ventilation & heating costs
- ▶ Overall significantly reduced environmental impact

## Hydrogen (Reducing) Functional Water

The H-series of San Kan Oh<sup>®</sup> units produce Hydrogen (reducing) Functional water, which is used for particle removal instead of the standard SC-1 sequence.

Not only does hydrogen functional water remove particles highly efficiently, but it does so in a short process time, allowing production output to be maximised.

Graphs 1 & 2 clearly show the cleaning improvements achievable using Functional Water. Graph 1 also shows further improvements in cleaning efficiency at pH 10 with 10mg/l ammonia added to the Functional Water. Graph 2 shows results at pH 9, with 1mg/l ammonia added. (Please note that in Graph 2, the results for SC-1 cleaning have not been measured at 30 or 120 sec).

The model H-300 San Kan Oh<sup>®</sup> is the smallest unit in a wide range of sizes, and produces 300l/h of hydrogen (reducing) Functional Water. The largest standardised units produce 3,600l/h of Functional Water. For larger applications, we supply custom-designed units as well as centralised functional water production systems for large applications.

We also supply de-gassing and gas dissolution systems that are used in conjunction with San Kan Oh<sup>®</sup> units



H-300 Unit in "Generating" Mode

## Features of H-300 San Kan Oh<sup>®</sup>

- ◆ Fully automatic control system
- ◆ Accepts external stop / start signal
- ◆ Adjustable dissolved hydrogen gas concentration
- ◆ Small unit size (300mm x 380mm x 430mm)
- ◆ CE and SEMI S-2 compliant & certified

## Outline Specification for H-300

Maximum Hydrogen water flow rate:	5l/min, 300l/h
Hydrogen gas purity:	99.99% (excluding moisture)
Dissolved hydrogen concentration:	Adjustable up to approximately 2mg/l
Power supply:	Single phase 200 ~ 240 V AC, 50/60 Hz, 600 VA
Weight:	Approximately 18 kg
External dimensions:	300 wide × 430 high × 380mm deep (nett)
Operating ambient temperature:	5~40°C
Operating ambient humidity:	80% or under
Installation location:	Indoors
UPW supply:	≥300l/h at 0.2MPa or less
Compressed air supply:	0.4 ~ 0.5 MPa
External Input Signals:	Generating, alarm reset, pressure setting
External Outputs:	Normal operation, critical failure alarm and failure alarm



If you would like to receive further information on the H-300 San Kan Oh® or other models in our range of Functional Water Systems, Please contact us.



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