Our partner

EBARA CORPORATION

Precision machinery company

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Point of use abatement systems

Wet Scrubber Model G-WS

Catalyst / Absorption Model GT

Precision machinery company Overseas office

USA:
Ebara Technologies Inc
H Q: Sacramento(CA)
F S C: Sacramento(CA)
Hillsboro(OR)
S S: San Jose(CA)
Albany（NY）
Newburyport
Boise(ID)

EUROPE:
Ebara Precision Machinery Europe GmbH
H Q: Sauerlach, Germany
F S C: Livingston, UK
Dresden, Germany
S S: Graz, Austria

KOREA:
Ebara Precision Machinery Korea Inc
H Q: Pyeongtaek
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S S: Seongnam
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CHINA:
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H Q: Shanghai
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SINGAPORE:
Ebara Engineering Singapore Pte.Ltd
H Q: Tuas Link
F S C: Tuas Link

TAIWAN:
Ebara Precision Machinery Taiwan Inc
H Q: Taipei
F S C: Hukou
S S: Linkou
Hsinchu
Taichung
Tainan

Precision machinery company Japan office

HQ

Fujisawa(Kanagawa Pre.)

Factory

Fujisawa(Compornent product, Overhaul)
Chubu(Overhaul)
Suzuka(Overhaul)
Kumamoto(CMP,Plating,Bevel,Overhaul)

Sales and support office

Kitakami,Tohoku,Yamagata,
Fujisawa,Chubu,Osaka,
Hiroshima,Oita,Nagasaki,Kumamoto

Fujisawa(Compornent product, Overhaul)

●"Model ○○○" in this catalogue is our model code.

●The product(s) described herein fall under "the goods listed in row 16 of the appended table 1 of the Export Trade Control Order of Japan", so in cases of export of such product(s), you need to confirm "use" and "purchaser and/or end-user" and, as case may be, obtain the approval of the Minister of Economy, Trade and Industry. (Please confirm hese conditions on your own.) Furthermore, some of the product(s) fall under now 1-15 of the appended table 1 (listed items). In case of export of these listed items, you are required to obtain the export license from the Minister of Economy, Trade and industry. For more information, please contact our sales office located near you.
●All specifications are subject to change without notice.
●"Model ○○○" in this catalogue is our model code.

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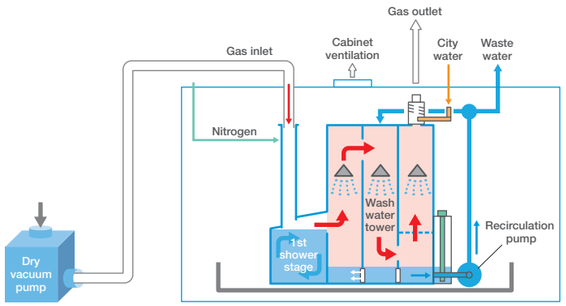
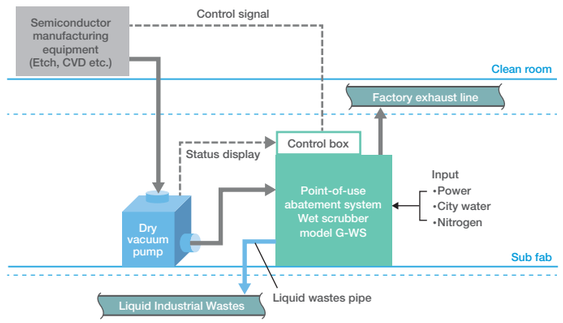
Wet scrubber model G-WS

Wet scrubber model designed for treating water-soluble and water-reactive gases.
Inlet port is designed to restrain by-product clogging, which inherit unique EBARA technology of combustion type model selling for over 20 years.
Simple structures achieves reduced footprint and easy maintenance.
EBARA wet scrubber model G-WS provides high DRE, delivering abatement performance for semiconductor manufacturing process especially epitaxy, atomic layer deposition, metal etch and nitride process.

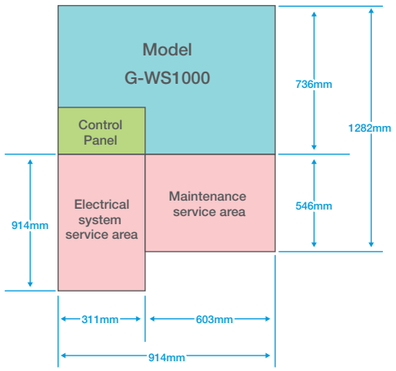
Model G-WS image flow



Installation image



Maintenance area



Specifications

Model		G-WS1000
Maximum process flow rate (L/min)		1,000
Number of inlet ports		Max. 4
Dimensions (mm)		W914×D736×H1,727
Utilities	**Water flow rate** (L/min)	1 - 10
	Drainage flow rate (L/min)	1 - 10
	Nitrogen (L/min)	15-50
	Power supply	1.8-3.5kW, AC 200V, 50/60Hz,3 phases
	Cabinet ventilation (m3/min)	0.5
Main treatable gas	**Epi**	HCl, DCS
	CVD	WF_6, NH_3, $TiCl_4$, BCl_3, ClF_3, SiF_4, Cl_2*1, F_2*1
	Etching	BCl_3, HCl, HF, HBr, SiF_4, Br_2*1, Cl_2*1, F_2*1
	Asher	NH_3
Gases that cannot be Treated		H_2, SiH_4, PH_3, GeH_4, CH_4, PFCs (CF_4, SF_6, NF_3) etc.

*1 Please contact us for details about gases conditions

Catalyst/Absorption Model GT

EBARA catalyst/absorption model GT enables the effective treatment of harmful and greenhouse gases chemically or physically without using carbon based fuels
PFCs gases that cannot be treated with ordinary dry bed abatement can be treated by EBARA fluorine-absorption type abatement.

Treatment technology

- Chemical reaction: Removed by chemical reactions of chemical agent
  Ex. ($SiH_4 + 2MeO \rightarrow SiO_2 + 2H_2 + 2Me$)
- Physical absorption：Removed by physical absorptions of chemical agent
  Ex. (Br_2, NH_3 absorb directly to dry bed)
- Ion exchange：Removed by ion exchange resin
  $Cl_2 + R\text{-}N(CH_3)_2 \rightarrow R\text{-}CH_2\text{-}(CH_3)2Cl\text{-}$

High performance chemicals(Major category)

- Metallic oxide
- Crystalline aluminosilicates (Zeolite)
- Ion exchange resin
- Alkaline agent

Based on our vast accumulated knowledge over the past 20 years, EBARA offer the chemicals above according to shape, composition, and adsorption.

Optimized to abate particular chemical substances, by offering appropriate chemical solutions in accordance with process gases.

Various Line up

No need for any water supply or drain equipment

Specifications

Model			GTE, GTC, GTI
Maximum process flow rate (L/min)			100
Canister size (L)			85
Canister I.D. (mm)			Φ 350
Dimensions (mm)	**Single canister**		W600 × D600 × H2,000
	Dual canister		W900 × D600 × H2,000
Utilities	**Nitrogen** (L/min)		0 (Required for pneumatic valve action and purging the residual gas during canister exchange.)
	Power supply		0.3～1.0kW, AC100/200V, 50/60Hz, 3 phases
	Cabinet ventilation (m3/min)		0.6
Main treatable gas	**GTE**	**Etching**	Acid gas : BCl_3, Cl_2, HCl, HBr, Br_2, F_2, HF, SiF_4, etc. PFCs gas : C_4F_6, C_5F_8 Others : CO, NF_3, H_2 (Require heating)
	GTC	**CVD**	Flammable gas : SiH_4, PH_3, AsH_3, B_2H_6, SiH_2Cl_2, NH_3, TEOS, etc. Others : N_2O (Require heating)
	GTI	**Ion implanting**	Implanting gas : AsH_3, PH_3, BF_3, etc.
Gases that cannot be Treated			PFCs gas :CF_4, C_4F_8, C_3F_8, C_2F_6, CHF_3, CH_3F

fluorine-absorption model FDS

- Dry fixation of F* gas after PFCs gas decomposition does not require wastewater treatment.
- Removal efficiency greater than 99% at maximum inflow gas volume at 250 slm
- 250 slm dual-cylinder type: Serial flow design of the canister greatly improves equipment uptime
- 100 slm single cylinder type: Easy to replace the existing dry bed type abatement

Specifications

Model	Dimensions (mm)	Canister (本)	Maximum flow rate (ℓ/min)
FDS100S	W600 × D600 × H2,000	1	100
FDS250*2	W1,520 × D1,000 × H2,150	2	250

*2【Products subject to list control】
This product falls under “goods listed in the Export Trade Control Order”. An export license from the Minister of Economy, Trade and Industry is required for export.

*Please contact us for details about service conditions.
*If you are considering other than semiconductor manufacturing process, please contact us.