

AQUABATE

Wet System

The well proven solution AQUABATE is a pure wet scrubber technology for flexible and customized abatement of water-soluble harmful substances from process waste gases at the point of use. Typical gases are hydrogen chloride, chlorosilane, ammonia and decomposition products from etching processes.

AQUABATE is a pure wet scrubber for efficient abatement of water-soluble harmful substances from process waste gases. The system is applied mainly in the semiconductor industry, as a Point-of-Use (POU) wet treatment system, to protect the fab exhaust gas system from contamination and corrosion. **AQUABATE** can be applied closely behind vacuum pumps or on atmospheric processes. Main-

tenance can be done quickly and easily with access for operation and maintenance on the front and back sides. Other advantages are the high disposal efficiency, a small footprint, low investment and operation costs. Operation costs can be optimized with a process-tool-interface.

Technical Data

	AQUABATE EPI	AQUABATE FLEX	AQUABATE COMBIBURN
Dimensions (W x D x H)	1020 mm x 930 mm x 1800 mm*	1165 mm x 820 mm x 1944 mm	1875 mm x 930 mm x 2070 mm
Max. Inert Gas Flow	30 m ³ /h	30-450 m ³ /h*	18 m ³ /h
Max. Gas Entry	3 x DN 40	4 x DN 40-DN 150*	3 x DN 40
Gas Outlet	DN 40	2 x DN 100 or 150*	DN 100

* Depending on configuration

Basic Features

- › Power Supply: 3 x 400 V/50 Hz or 3 x 208 V/60 Hz
- › Heated inlet lines and inlets
- › Lye supply system
- › Process-Tool-Interface
- › Signal Tower
- › Drip Pan
- › Earthquake Safety Kit
- › Ethernet Interface
- › SEMI S2 Certification



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Operation Principle

AQUABATE EPI was specifically designed to treat waste gases of epitaxy processes in the semiconductor industry. It meets the high safety standards that are necessary when using hydrogen as a process carrier gas. After the scrubbing process, the hydrogen can be safely diluted to its lower explosion limit (LEL). Up to 500 slm waste gases can be treated, induced through a maximum of up to three separate waste gas inlets, specifically designed to prevent clogging.

AQUABATE FLEX is a modular wet scrubber for efficient treatment of water-soluble components from waste gases of different applications. Up to 450 m³/h waste gases from a process tool or a prior waste gas abatement system can be treated. The gas inlets are specifically designed to prevent clogging. **AQUABATE FLEX** is available as one- or two-stage scrubber. Based on the compact and modular design the scrubber will be optimized to customer requirements.

AQUABATE COMBIBURN is a combination of **AQUABATE EPI** and **ESCAPE** technology as solution specifically developed to abate waste gases from epitaxy processes (Atmospheric and Reduced Pressure Epitaxy, AP/RP). With the system combination all process waste gases, including hydrogen, are abated completely.

Waste gas treatment takes place in three steps (sample process):

- › **AQUABATE EPI** scrubber absorbs SiCl₄ and HCl
- › SiH₄, GeH₄ and H₂ combust with **ESCAPE** burner apparatus
- › In **ESCAPE** subsequent scrubbing process SiO₂ and GeO₂ are absorbed

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