

CT-BW 2009

Burner Washer

Point-of-Use Abatement

Overview

Modular Chamber System for Highly Toxic Gases

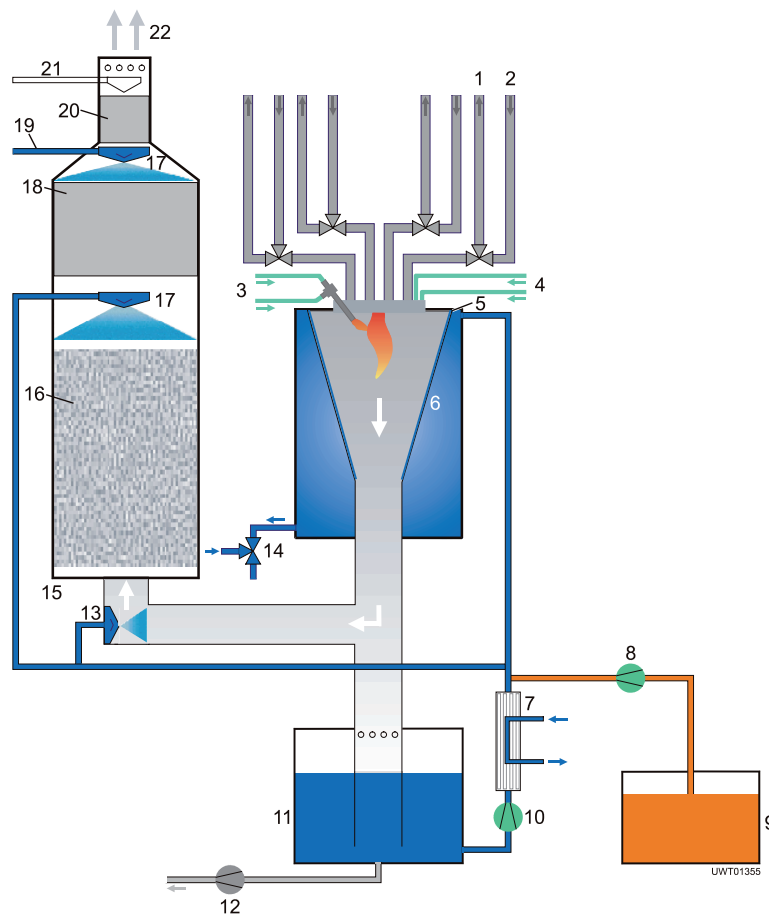
The CT-BW 2009 series point-of-use abatement systems are highly efficient systems used in CVD- and etching applications for photovoltaic, semiconductor and other related industries.

As new process tools and technologies with highly corrosive gases and increasing gas loads are introduced, further improvements in abatement technology are required. The CT-BW 2009 series meets these requirements. The CT-BW 2009 series enjoys all the advantages such as high cleaning efficiency for PVC's and other gases, reliable abatement of all waste gases from CVD and etching processes, selection of various fuel gases and is in compliance with all international safety standards. The system is designed for maximum corrosion resistance and to handle large amounts of solid reaction by-products.

Straight gas inlet and exhaust line arrangement with optional temperature management provide best possible flow. The separation of the functional units such as combustion chamber, wet scrubber, tank and cooling system minimizes the risk of blockages. These features guarantee a considerable extension of the maintenance intervals and maximize the uptime.



Schematic Flow Diagram



- 1 Bypass
- 2 Waste gas Inlet
- 3 Pilot burner gas supply
- 4 Main burner gas supply
- 5 Spill level of washing liquid
- 6 Reactor chamber
- 7 Heat exchanger
- 8 Sorption solution dosage pump
- 9 Sorption solution tank (external)
- 10 Washing liquid circulation, reactor unit
- 11 Washing liquid tank
- 12 Waste water depletion pump
- 13 Fresh water supply
- 14 Washing liquid circulation, scrubber
- 15 Washing liquid spray nozzle
- 16 Depletion reactor unit
- 17 Tow-stage scrubber column
- 18 Packed bed of filling material
- 19 Washing liquid spray nozzle
- 20 Fresh water supply
- 21 Aerosol filter
- 22 Cleaned gas outlet

Modularity

- One electrical cabinet for up to four CT-BW modules
- Cabinets are isolated from each other
- Each module has its own independent safety chain (sensors, probes, etc.)

Process Technology

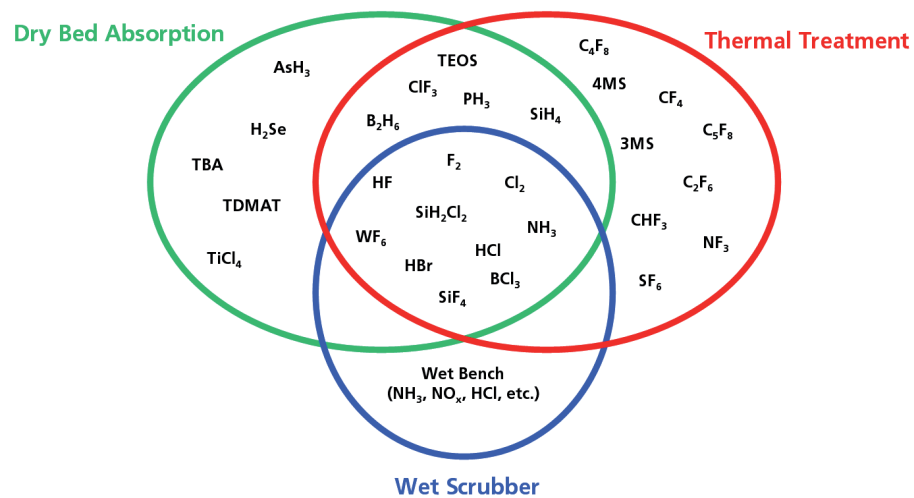
- Total waste gas flow of up to 1,500 slm per module
- Large amount of etch gas can be treated
- Increased dust particle separation
- Emergency bypass dilution up to 5,000 slm
- Doubled reactor volume for higher waste gas conversion

Features and Benefits

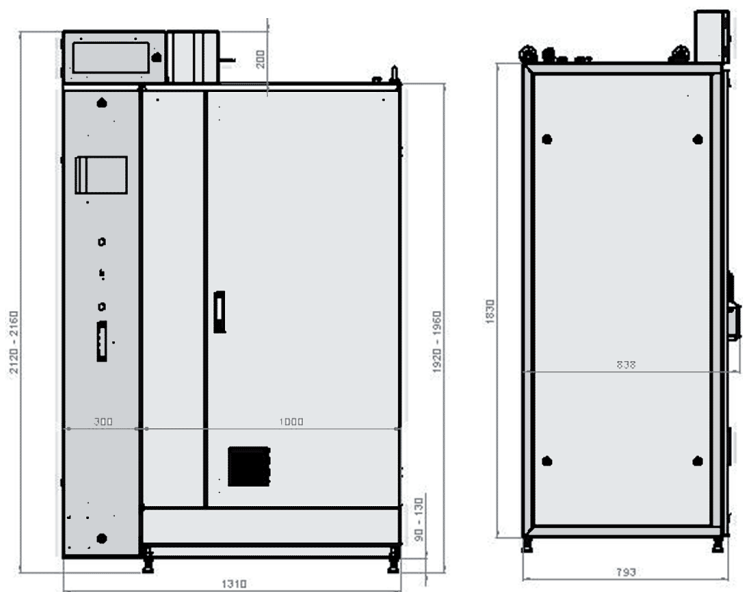
- Stand alone electronic cabinet
- Up to four independent CT-BW units
- Only one inlet point for all media like N₂, natural gas, H₂O, O₂, CDA, a.o.
- Mechanical filter station
- Easy and fast to maintain
- Coming features: Combination of CT-D, CT-W, CT-BW and CT-BW EPI in one cabinet
- Safety standards comply with international regulations: SEMI S2, S8, S14; NFPA79:2007; EN60204-1:2006; MD2006/EC/42-Annex I: 2006; Destructive Removal Efficiency (DRE) > 99.9X %
- High corrosion resistance based on new reactor top plate design
- New housing with reduced noise level
- Pilot burner resistant to pressure variations
- Touch panel with help text for easy operation and maintenance
- Individual adjustment of heating jacket temperature on every inlet to provide blocking
- Flow sensors for washing liquid flow at the touch panel indicate preventive maintenance

NEW !

Gas Overview



Dimensions



All mesures in mm

Technical Data

CT-BW 2009 Burner Washer

	Medium	Pressure	Typical Flow	Connection/ Material
Fuel gas	Methane	20 mbar – 1.2 bar [0.3 – 17.4 psi]	12 – 20 slm	1/2" Swagelok / ss
	Propane	0.25 – 1.2 bar [3.6 – 17.4 psi]	4.8 – 8 slm	1/2" Swagelok / ss
	Hydrogen	1.0 – 2.25 bar [14.5 – 32.6 psi]	48 – 80 slm	1/2" Swagelok / ss
Oxidation gas	Oxygen	3.0 – 5.0 bar [43.5 – 72.5 psi]	30 – 50 slm	1/2" Swagelok / ss
	Compressed air	5.0 – 6.0 bar [72.5 – 87.0 psi]	150 – 250 slm	1/2" Swagelok / ss
Nitrogen	Standard system	7.0 – 10.0 bar [101.5 – 145.0 psi]	21 – 81 slm	1/2" Swagelok / ss
w/o emergency dilution				
Compressed air	Standard system	6.0 – 8.0 bar [87.0 – 116.0 psi]	50 – 150 slm	1/2" Swagelok / ss
	incl. dust reduction kit		200 – 650 slm	1/2" Swagelok / ss
Water	Fresh water	3.0 – 7.0 bar [43.5 – 101.5 psi]	2 slm	1/2" Swagelok / ss
	Waste water	no back pressure, vented	2 slm	NPT tread (PVC-U) 1/2" female, 1" male
	Cooling water	4.0 – 6.0 bar [58.0 – 87.0 psi]	8.0 – 30.0 slm depending on process	3/4" Swagelok / ss
Exhaust	Clean gas	-5 – -7.5 mbar [-0.07 – -0.11 psi]	depending on process	DN 100 (pipe 104 x 2)
	Cabinet ventilation	-0.6 – -2.5 mbar [-8.7 – -0.04 psi]	>120 m³/h [>70.6 cfm]	DN 100 (pipe 104 x 2)
Neutralisation	Sorption medium	< 2.0 bar [< 29.0 psi]	depending on process	ferrule fitting PTFE
Weight	> 660 kg [1,455 lbs], 1 module 1 electrical cabinet			
Power supply	L1/L2/L3/N/PE~400 V 50/60 Hz [16A] 0.6 – 1 kW Harting plug			
Dimensions [W x D x H]	1,310 mm x 793 mm x 1,960 mm [51.6 inch x 31.2 inch x 77.2 inch]			

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