



Marathon M91AU

PLASMA-WET ABATEMENT

M91AU is the first of its kind microwave and wet emission reduction system to consume as little as 12kW of power to break down highly stable materials, such as fluorine compounds, into smaller molecules.

Because the M91AU's microwave focuses energetic electrons on the target gas to break it down into smaller molecules, combustion decomposition can be achieved without the use of fuel or hydrogen.

The M91AU was developed and tested as a point-of-use abatement system to treat gases containing PFCs that are predominantly found in today's demanding semiconductor and flat panel display process chemistry industries.

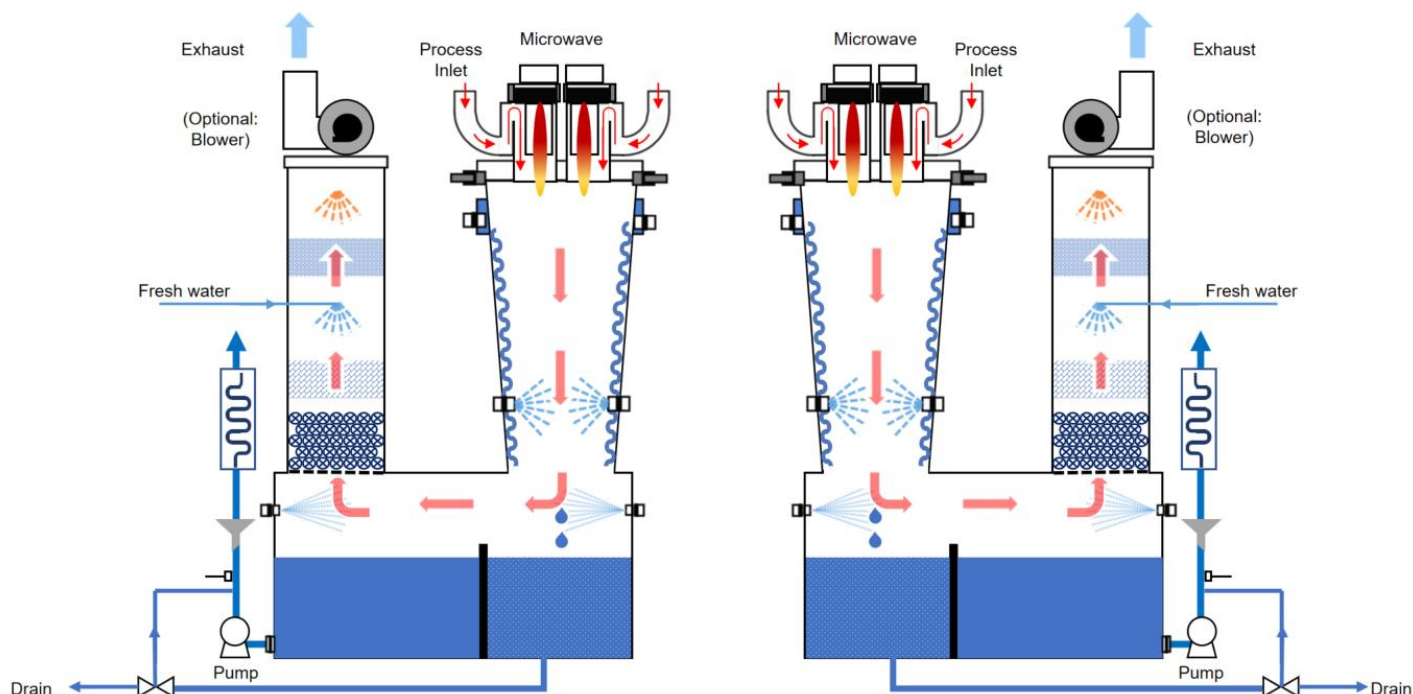
The M91AU meets industry standards for the controlled decomposition and oxidation of fluorinated greenhouse gases.

APPLICATION

- Semiconductor
- Flat panel display

ADVANTAGES

- Low power consumption
- Excellent PFCs abatement
- Dual Reactor
- Limited NOx and COx emission
- High flow capacity
- Low cost of ownership
- Ease of installation and services
- Ethernet ready



OPERATING PARAMETERS

Process Gas Capacity	600-1,000 slm
Cooling Water Consumption	20-40 lpm (Process Dependent)
Fresh Water Consumption	2 – 4 slm (Process Dependent)
Clean Dry Air (CDA) Consumption	120 slm (Process Dependent)
N2 (System) Consumption	100 slm (Process Dependent)
N2 (Dilution) Consumption (optional)	2500 slm (Process Dependent)
Process Exhaust Static Pressure	-5 to -2.5 " w.c.
Cabinet Exhaust Static Pressure	-0.40" w.c.
Power Consumption	13,930 Watt (Process Dependent)

FACILITIES REQUIREMENTS

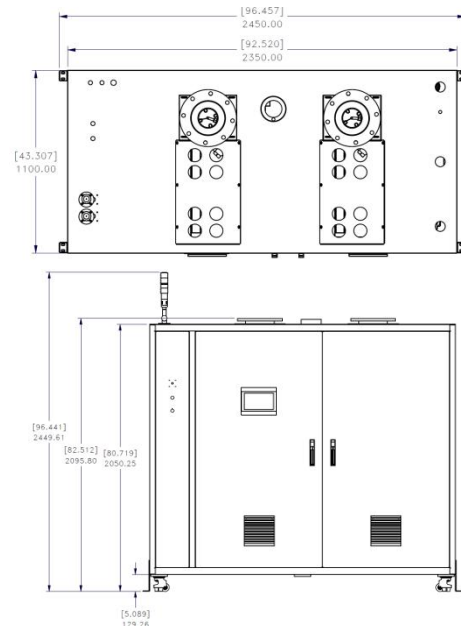
Process Connections	4+4 Inlet Process Ports KF40
Clean Dry Air (CDA)	90±10 psi 1/2" compression fitting
N2 (System)	90±10 psi 1/2" compression fitting
N2(Dilution) (optional)	90±10 psi 1/2" compression fitting
Fresh Water	40 – 60 psi 1/2" compression fitting
Process Cooling Water	55 – 75 psi 1" FNPT
Drain	1" FNPT
Process Exhaust	-5.0" to -2.5" w.c 8" ANSI PVC FLANGE
Cabinet Exhaust	-0.40" w.c. 6" (152mm) metal duct
Electrical Supply	380 VAC, 50/60 Hz, 25A, 3 Phase, 5 Wires (Standard) 220VAC, 50/60 Hz, 43A, 3 Phase, 5 Wires (Optional Transformer)
Overall Dimensions (HxWxD)	76" H x 92" W x 43" D (1,921 x 2,350 x 1,100 mm) *Height varies by configuration.
Clearance	Front– 35.43" (900 mm) Left, Right– 23.62" (600 mm) (Optional) Rare – 23.62" (600 mm) (Optional)

COMMUNICATION AND INTERLOCKS

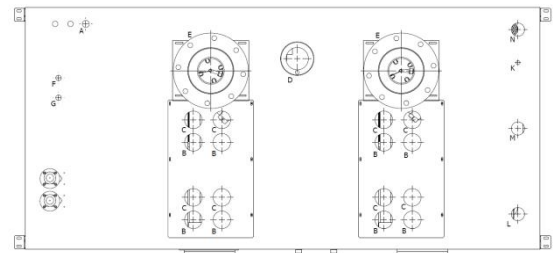
- Multiple dry contacts to meet customer-defined requirements
- Ethernet Ready
- Supports Central Monitoring System (CMS)

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Product Dimensions



Facilities Connection



	DESCRIPTION	CONFIGURATION	CONNECTION
A	Power Required	380 VAC, 25A, 3 Phase, 5 Wires 220VAC, 43A, 3 Phase, 5 Wires	50/60 Hz
B	Process Bypass	4+4 Bypass Ports	KF40
C	Process Inlet	4+4 Inlets Ports	KF40
D	Cabinet Exhaust	6" (152 mm) SST or FRP	6" (152 mm) Metal Duct
E	Process Exhaust	8"ANSI PVC FLANGE	8"ANSI PVC FLANGE
F	Clean Dry Air (CDA)	90±10 psi	1/2" Compression Fitting
G	Nitrogen (System)	90±10 psi	1/2" Compression Fitting
K	Fresh Water	40-60 psi	1/2" Compression Fitting
L	Process Cooling Water Supply	55-75 psi	1" FNPT
M	Process Cooling Water Out	--	1" FNPT
N	Drain	--	1" FNPT
P	Nitrogen (Dilution) (option)	90±10 psi	1/2" Compression Fitting