AFT Ozone Supply System
AFS10000 Series

AFS10000 Series *– High flow, High performance multi-Channel Ozone supply system for designed Advanced semiconductor application*

▪ *AFS10000 Series Multi-Channel Ozone Supply System*

The AFO10000 series stand-alone ozone gas delivery system is designed to provide high flow, high concentration, ultra-clean ozone generation and delivery. This system has the highest flexibility to meet the ever-changing needs of the semiconductor industry. The AFS10000 series Ozone supply system supports multi-channel or high flow provide ultraclean, high concentration ozone gas using the AFO10000 series Generator in Ozone supply system. The AFS10000 ozone supply system incorporates field-proven, high concentration, ultraclean ozone generation technology, an integrated ozone concentration monitor, flow control for O2 and dopant gas species. Designed for maximum configuration flexibility.

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The system can be configured as a multi-channel system delivering ozone for up to 4 channels supporting multiple chambers or multiple tools. The AFS10000 Series has the highest flexibility for ultra-high concentrations & high flow. Flow rates of up to 40slm and concentrations up to 320g/Nm3 can be achieved depending on the configuration of the system. The AFS10000 series can operate with dopant gas and ***without dopant gas*** *too*.

▪ *Application*

AFS10000 series is also a fully integrated, high output ozone gas delivery system specifically designed for advanced semiconductor process applications such as Atomic Layer Deposition (ALD). It is also using in processes such as TEOS/Ozone chemical vapor deposition (CVD), Ta_2O_5 CVD, photoresist strip, wafer cleaning, contaminant removal, surface conditioning, and oxide growth.

▪ *Features*

- **Modular design** – Each channel can be process matched to different concentration and flow
- **Destructor** - Optional integrated ozone destructor with bypass valve
- **O3 Control** - Close-loop concentration for tighter process control
- **High performance** – Provide High flow and High concentration
- **High redox potential**
- **Green chemical** - Easily converted back to oxygen Low Cost of Ownership
- **Low CoO** - No chemical disposal costs
- **Process flexibility** - O2 flow rate from 5slm to 40slm enables
- **Dopant gas free** - Can be operate with N2 and without N2
- **Footprint** – Compact footprint

▪ *Specification*

Model: AFS10000 Series

Max Cell loaded Q'ty: 14 Cell per Channel

Minimum Ozone output: see figure 1

Ozone Flow range: ~ 40slm

Feed Gas

Oxygen:	Grade 6 or better O2 / 60psig nominal
Nitrogen:	100ppm grade 5 or better N2 / 75psig nominal
Connection	1/4” VCR for N2, O3, 1/2” for O2
Pressure indicator	Inlet pressure gauge for each gas

Cooling Water

Temperature:	17deg +/-,1deg / 85psig maximum
Flow rate	2.5GPM(14CELL) per channel
Filtration	100 microns, Demineralized
Quality	Resistivity ≥ 50Kohm/cm
Connection	3/8” lock
Flow indicator	Flow meter per Channel
Pressure indicator	Inlet pressure gauge

AC Power

VAC(+,-10%)	208VAC
Phase	3 phase
Amps	85A(4 Generator Config)
Hz	50/60Hz

Exhaust

Flow rate	175 – 200 cfm
Connection	150mm duct

Environmental

Ambient air temp	5 - 40deg
Relative Humidity	30% - 90%(non-condensing)
Altitude	up to 1000m above mean sea level

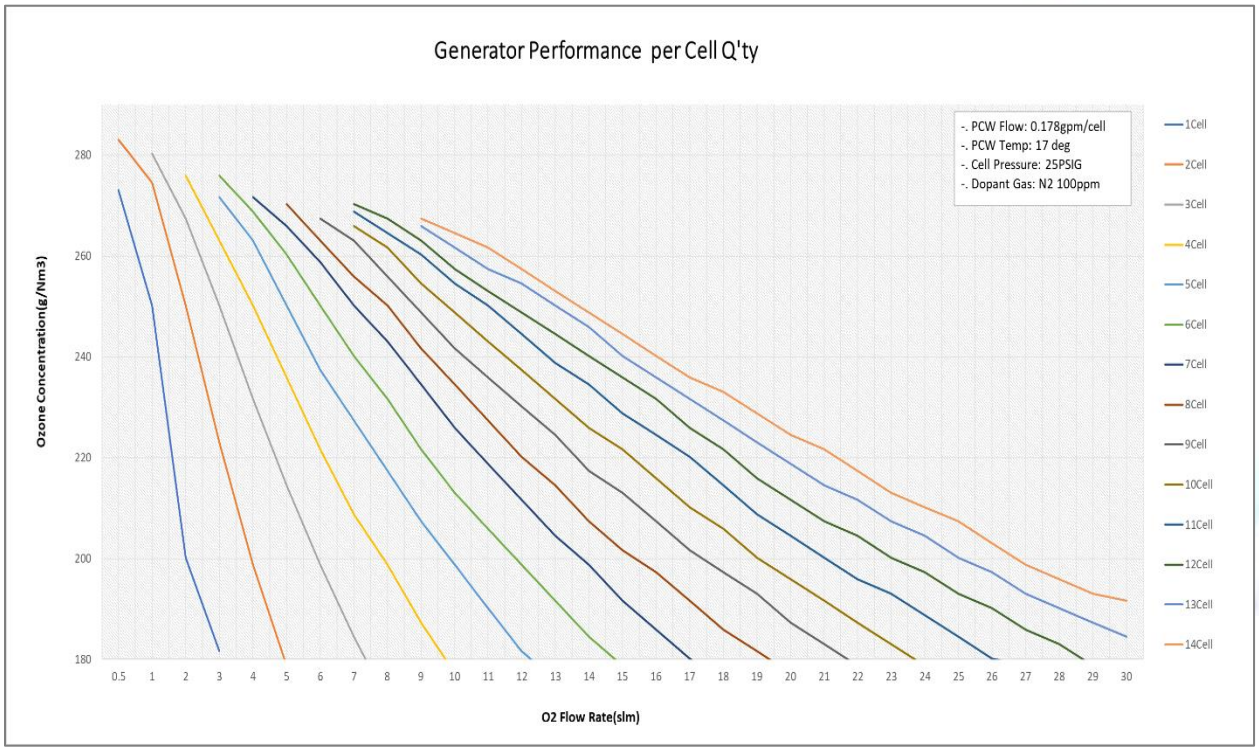
Dimensions(W x D x H) #1	610 X 1165 X 1622mm(shot rack)
Dimensions(W x D x H) #2	610 X 1165 X 1900mm(long rack)
Compliance	CE, SEMI S2

▪ *Part number Matrix*

<Table 1, System part number Matrix>

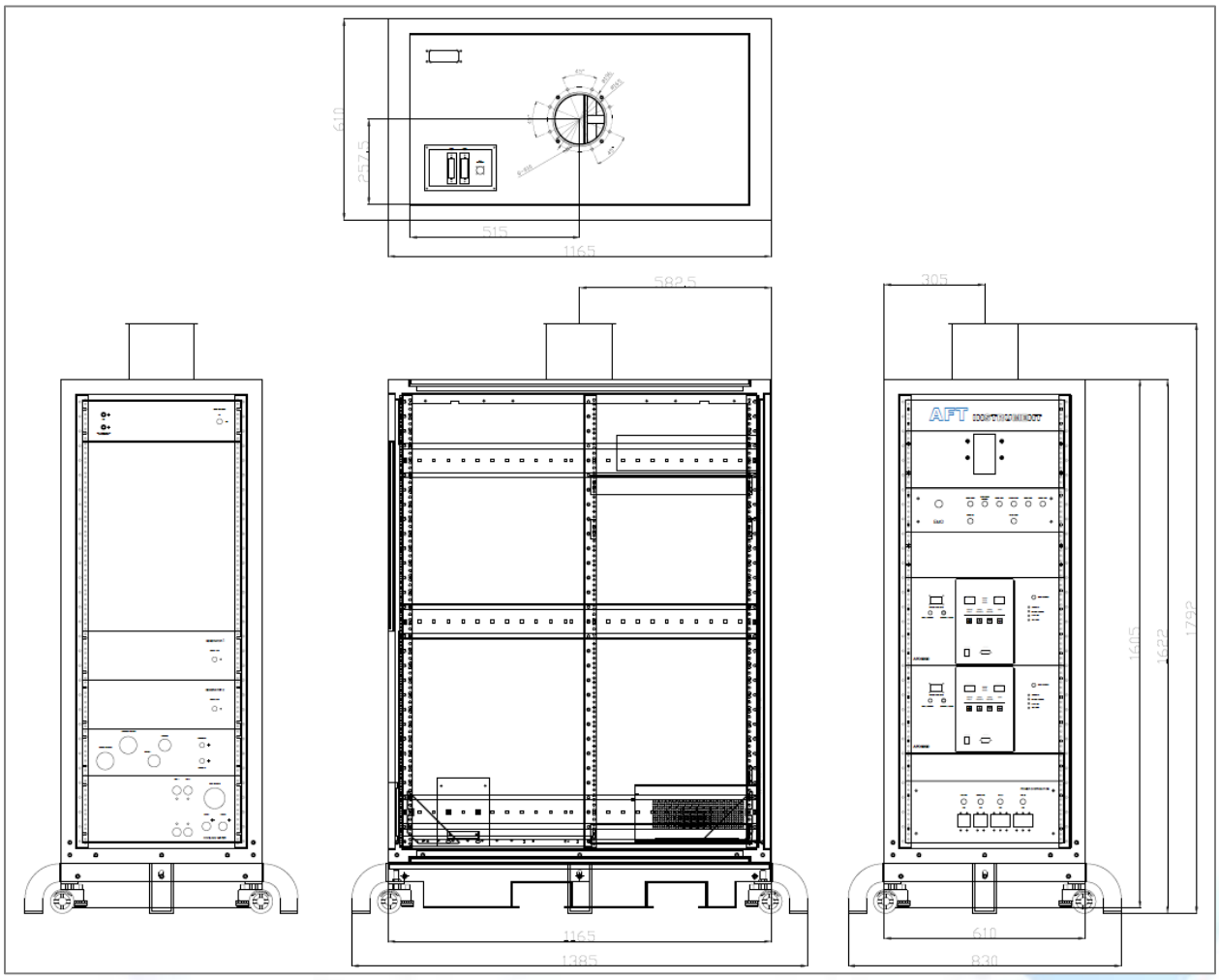
AFS	01	XX	XX	Channel Q'ty	-	0	-	XX	Special Code
O3 SYS	10000 Series	Cell Q'ty	O2 MFC full scale per Channel	Output Q'ty		0: Standard		NF: N2 Free	
								0: N2 Use	

▪ *Performance*



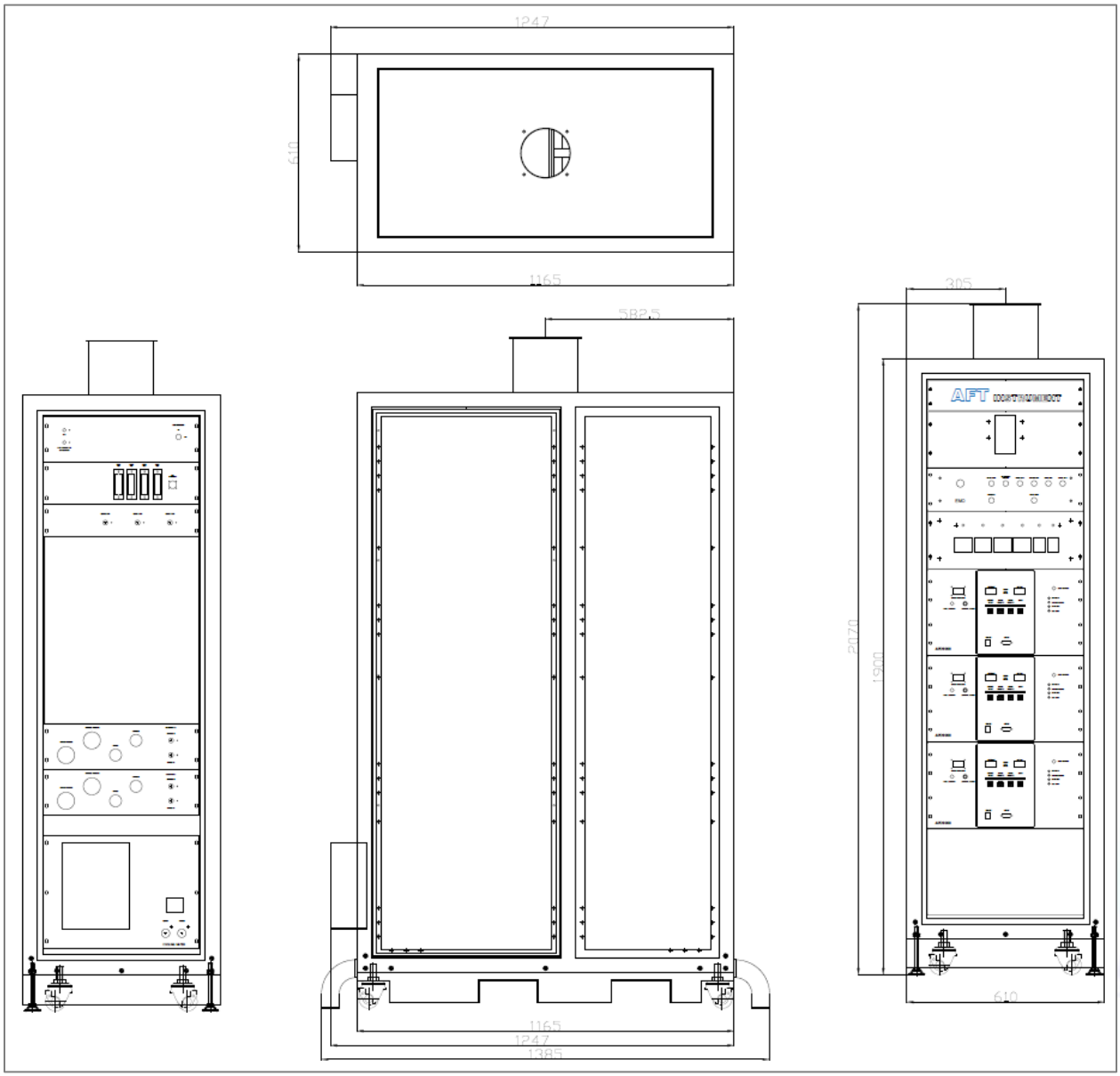
<Figure 1, Performance chart>

- ***Dimension***
  - ***Short Rack***



<Figure 2, Short Rack System>

- *Tall Rack*



<Figure 3, Tall Rack System>