AFT Ozone Supply System
AFS9000 Series

AFS900 Series *– Highest Ozone Concentration, Ultra-clean ozone and compact footprint for designed Advanced semiconductor application*

▪ *AFS9000 Series Stand-Along Ozone Supply System*

The AFS9000 series Ozone supply system supports multiple chambers or tools to provide ultraclean, high concentration ozone gas using the AFO9000 series Generator in Ozone supply system. The AFO9000 ozone supply system incorporates field-proven, high concentration, ultraclean ozone generation technology, an integrated ozone concentration monitor, flow control for both O2 and dopant gas species. Designed for maximum configuration flexibility, AFO9000 subsystems match ozone value to your process requirements in the smallest, most compete delivery system available. In addition, this system can configure AFO9000-W series which have same performance as the AFO10000 series.

The AFO9000 series system is configurable with up to four (4) independent channels to support multiple ALD tools or chambers concurrently. The AFS9000 series includes all subassemblies required for stand-alone operation, including power distribution, an ambient ozone safety monitor, status indicator panel,

and optional integrated ozone destructs for each channel. The AFS9000 series can operate with dopant gas and ***without dopant gas*** too.

▪ *Application*

AFS9000 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** – Ultraclean ozone at ultrahigh 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: AFS9000 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

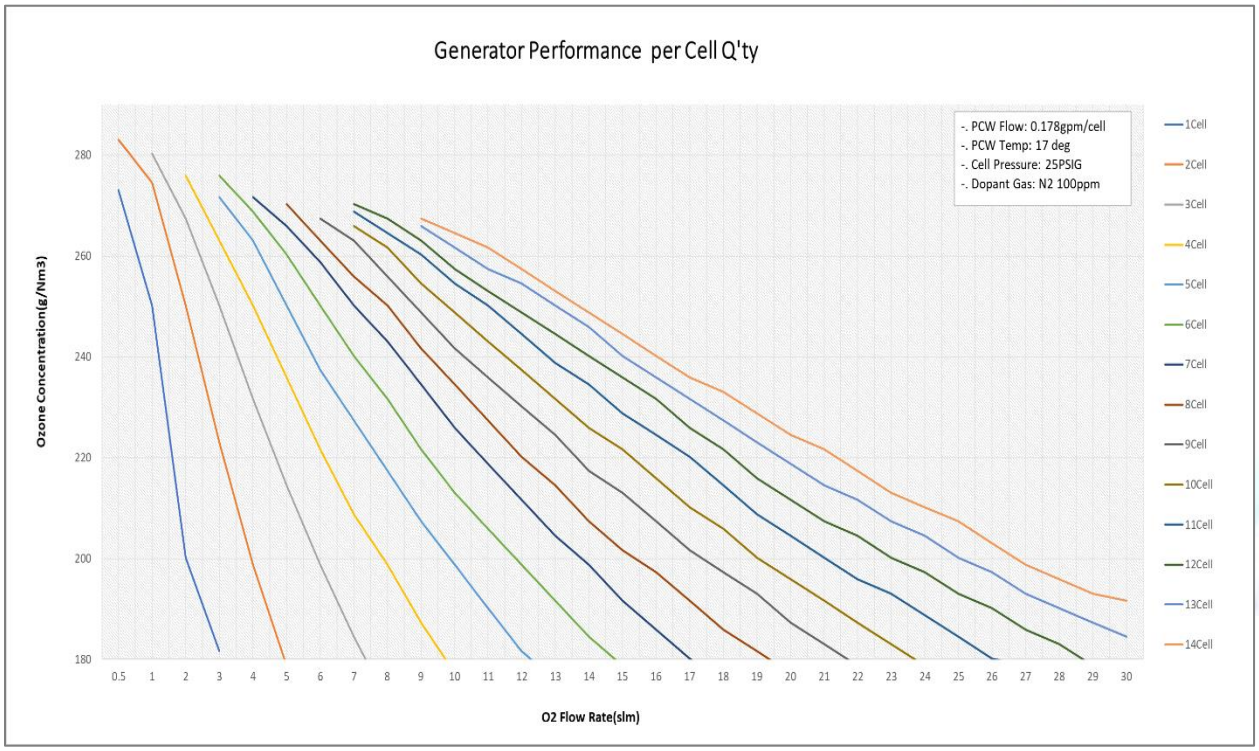
Dimensions(W x D x H) #1	610 X 1165 X 1622mm(shot rack)
Dimensions(W x D x H) #2	610 X 1165 X 1900mm(long rack)
Compliance	CE, SEMI S2

▪ *Part number Matrix*

<Table 1, System part number Matrix>

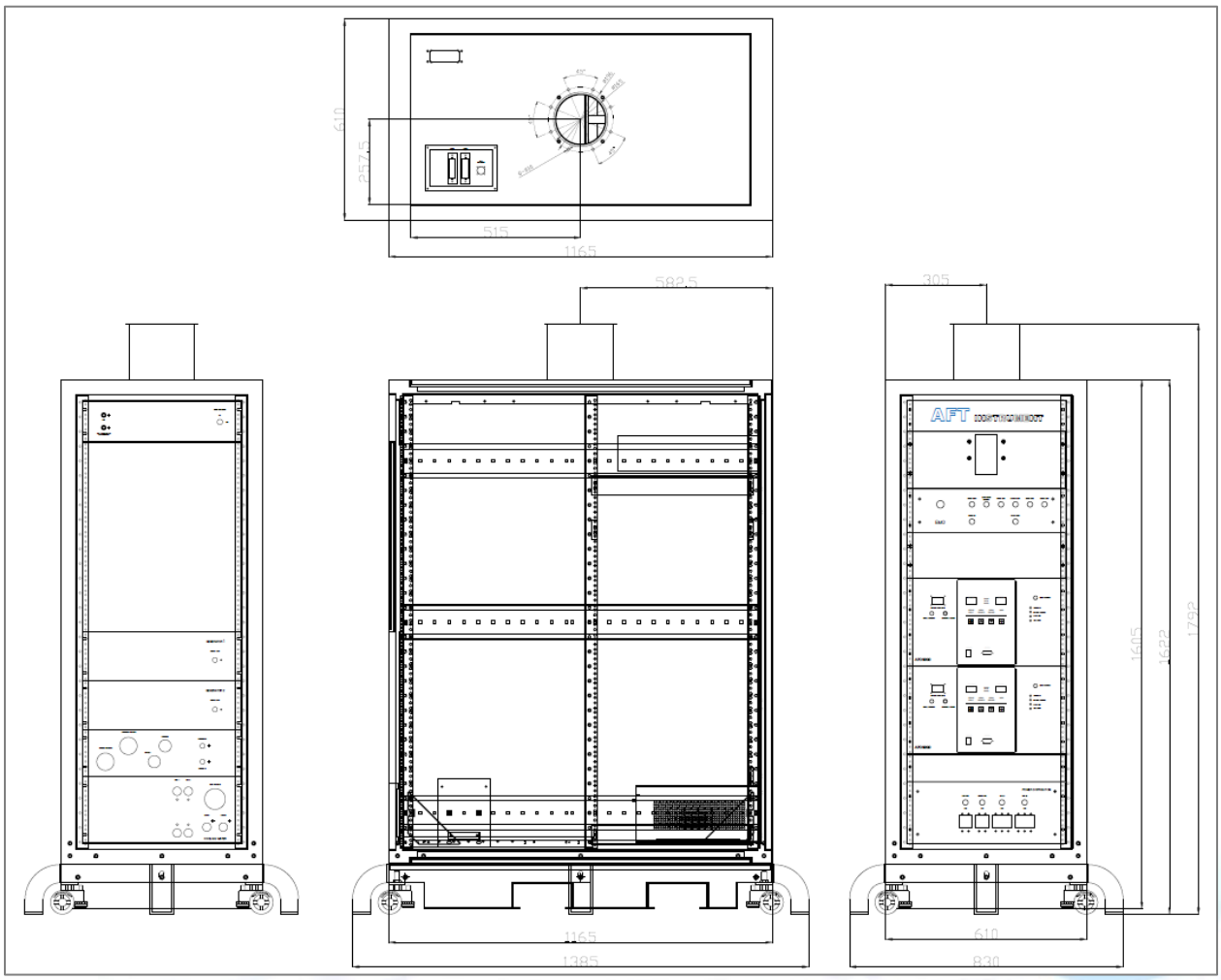
AFS	09	XX	XX	Channel Q'ty	-	X	-	XX	Special Code
O3 SYS	9000 Series	Cell Q'ty	O2 MFC full scale per Channel	Output Q'ty		W:Wide type GEN		NF: N2 Free	
						0: Standard		0: N2 Use	

▪ *Performance*



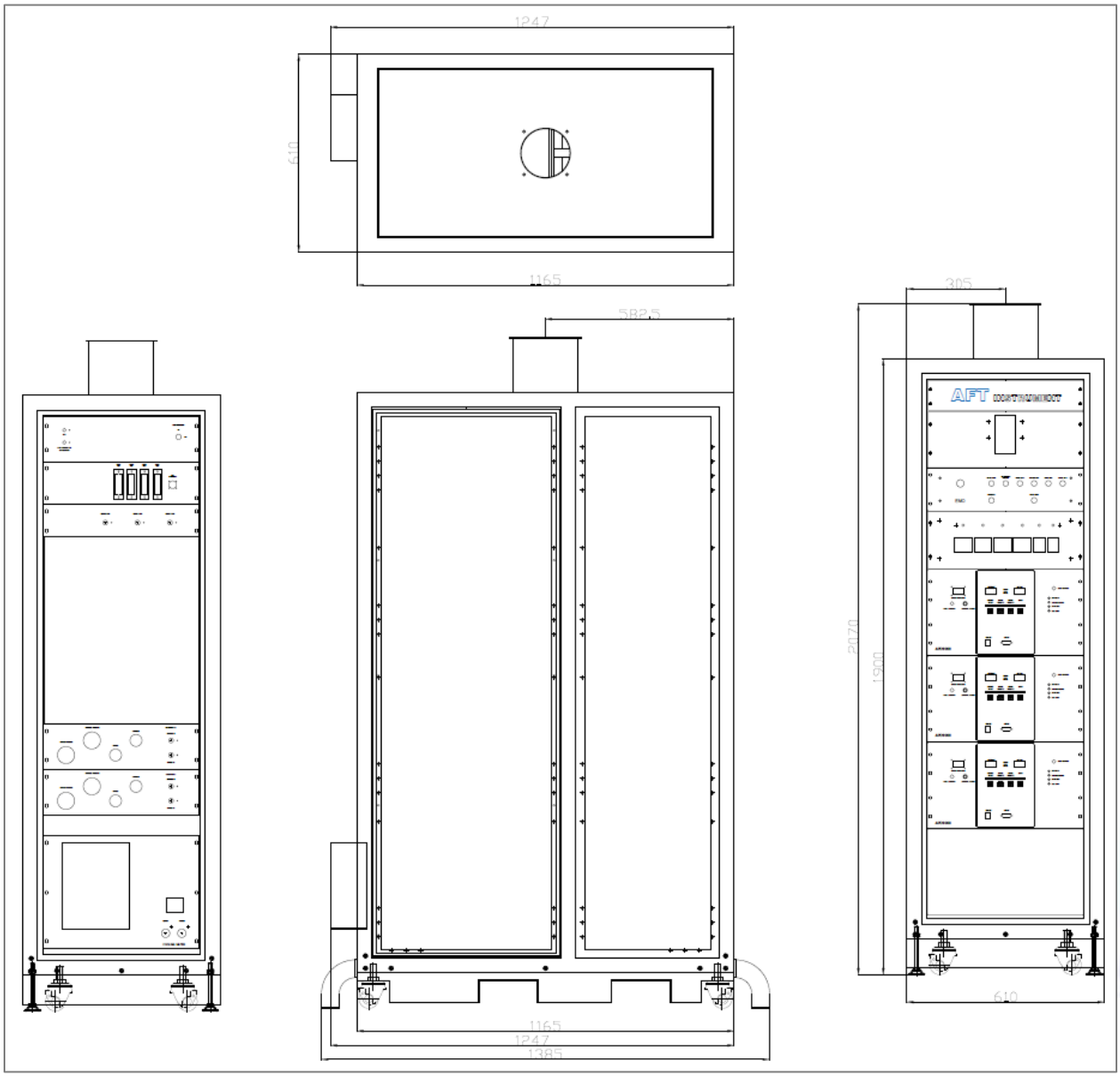
<Figure 1, Performance chart>

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



<Figure 2, Short Rack System>

- *Tall Rack*



<Figure 3, Tall Rack System>