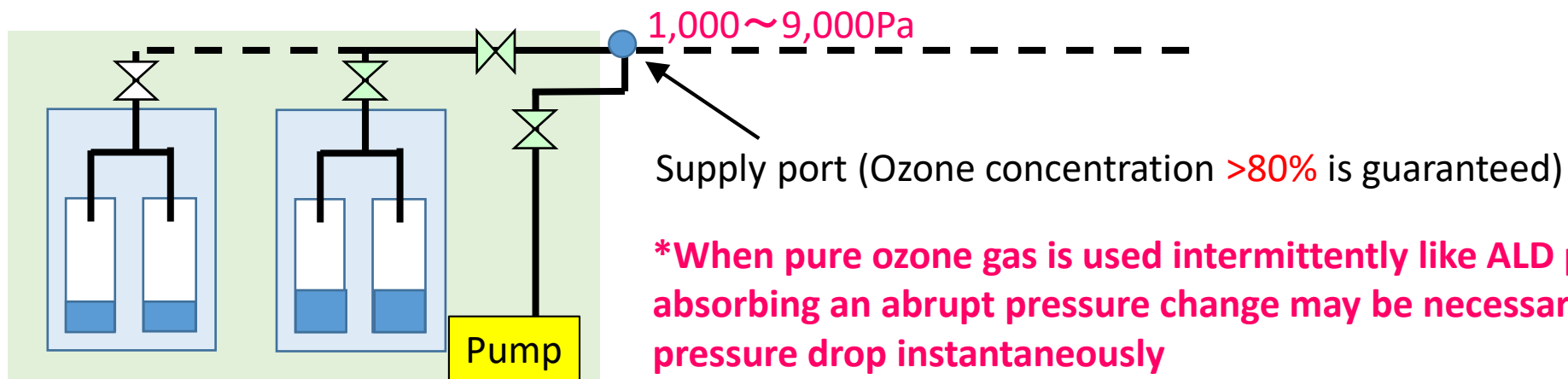


Specifications (Provisional)

	2 Chamber Type
Size and Weight	1100W, 1,000D, 1800H (Ex. protruded port) 530kg(not included compressor)
Maximum Ozone storage	32,000cc (in standard state gas phase) (44cc in liquid phase at 90K)
Ozone flow rate and its stability	Maximum 300sccm $\pm 5\%$ (by a pump with a constant pumping speed) *Depend on the amount of ozone used, continuous supply may not be possible.
Pressure control range and stability at supply port	1,000Pa – 9,000Pa $\pm 5\%$ *
Ozone concentration	Higher than 80% at supply port (@ozone flow rate: 100sccm)
Downtime (during 24/7 operation)	Every weekend for 5 hours (for impurity gas exhaust inside liquid O ₃ storage vessel)



Built-in safety measures

**SEMI-S2
Certificated!**

Basic concept

- 1) Keep a liquid O₃ vessel at low temperature (90K) and low pressure (<0.1atm) when liquid O₃ is stored
- 2) Prevent metal/organic particle, transient gas, energy & light inflow into the vessel

Mechanical

- Sensing and protection against large-scale vibration such as earthquake
- Inline fine-pore size ceramic filter
- Housing exhaust
- Pressure-proof enclosure design for explosive decomposition of liquid O₃

Chemical

- Catalytic ozone decomposer installed
- Ozone gas leakage detection in the housing (0.06-0.7ppm)

Electrical

- Safe & built-in programmed exhaust of liquid O₃ in case of power failure
- Early abnormal detection by a combination of sensors
- Compliant to SEMI-S2
- Maximum storable liquid O₃ limited

Operational

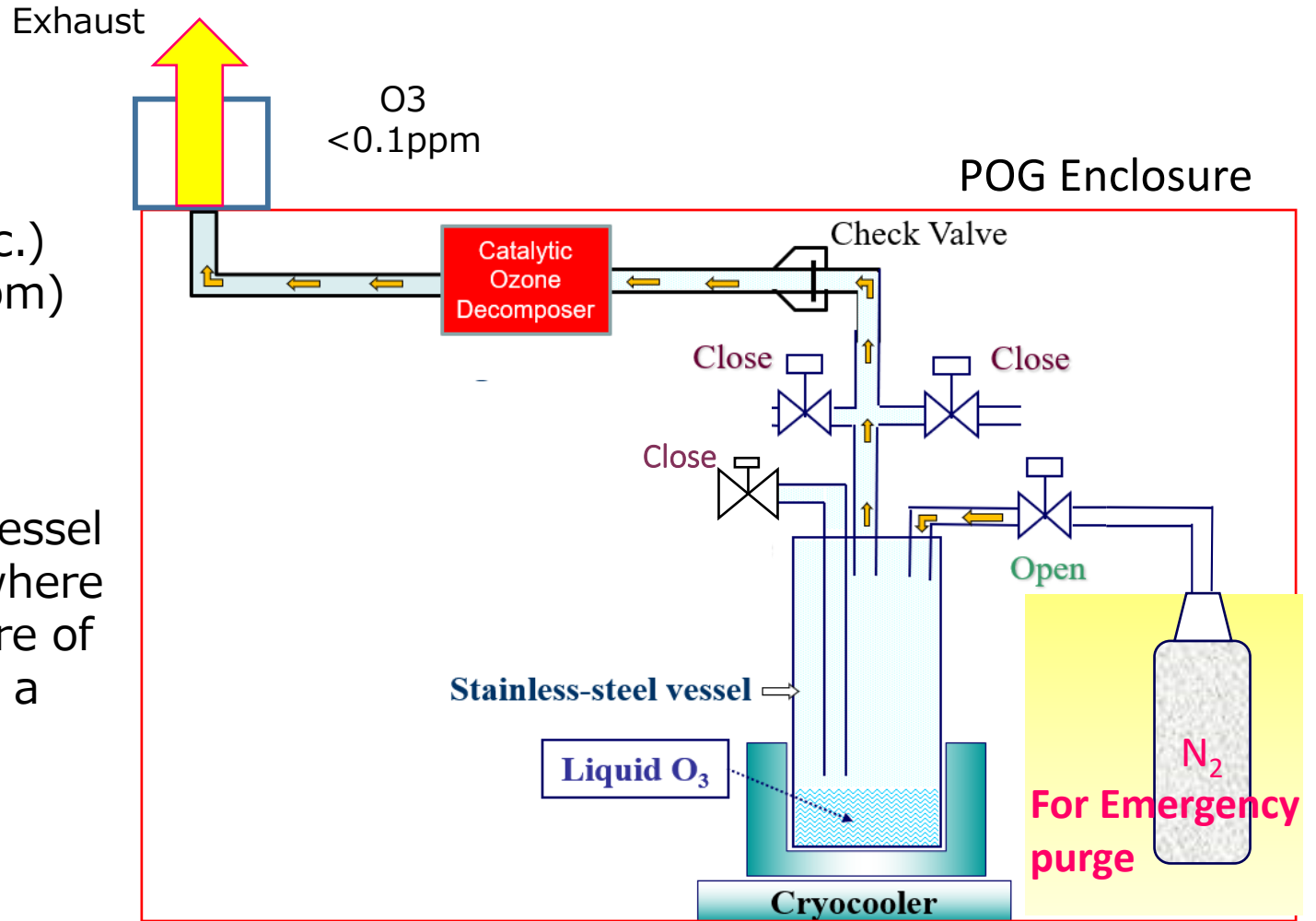
- Fully automated operation
- Safety Interlocks arranged
- Selectable from multiple operational modes for adjusting to user experience & request

Emergency Purge

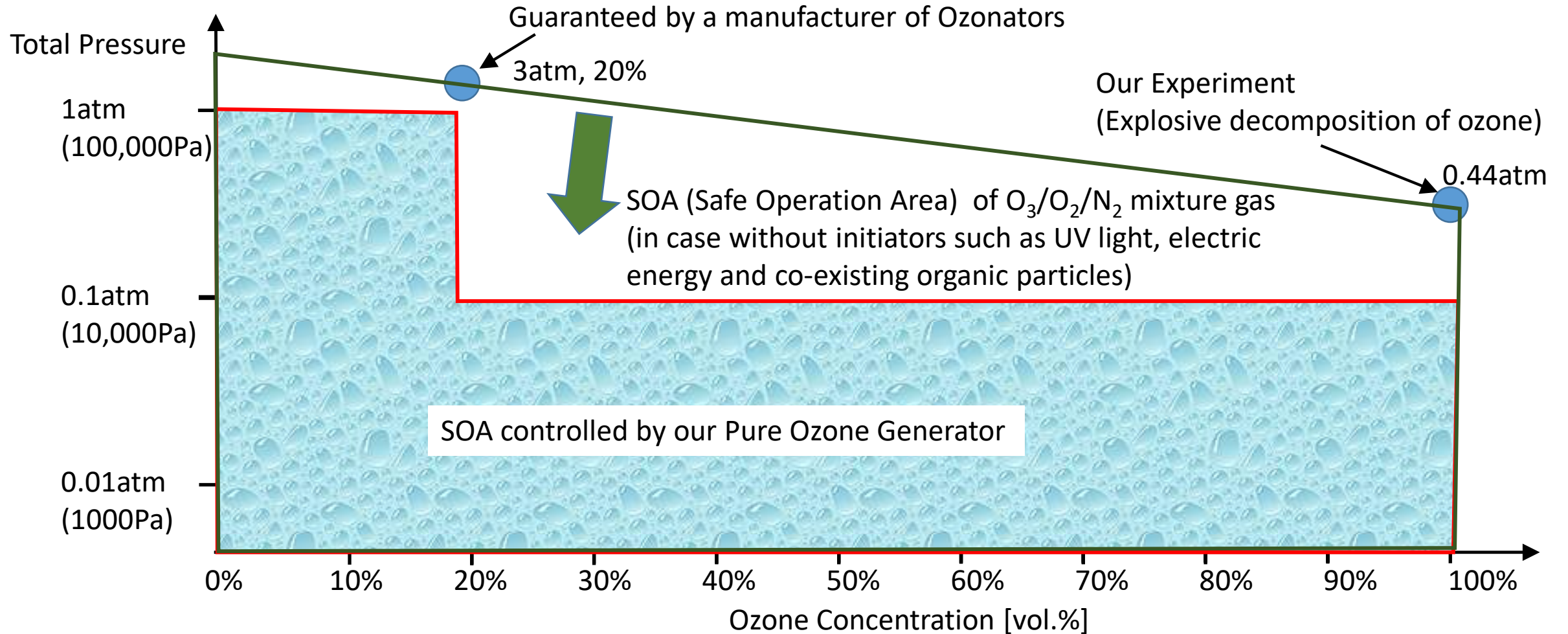
If an abnormality is detected while POG is in operation or the EMO (emergency stop) button is on in case of emergency, the ozone gas in the POG is discharged safely by an emergency purge system.

All hardware specifications and parameters (heat capacity of vessel, N₂ flow rate at emergency purge, exhaust conductance, etc.) were set in order to exhaust ozone (<0.1ppm) after being operated within SOA region and decomposed safely.

※During the emergency purge mode, the vessel temperature is allowed to rise up to 160K where vapor pressure is 1 atm, but partial pressure of O₃ is controlled below 20% (within SOA) by a sufficient amount of N₂ gas dilution.



Safe Operation Area of Ozone gas



Throughout the operation time, ozone gas concentration and pressure are monitored and controlled so as to keep them inside the red area above! (No need to care for users)