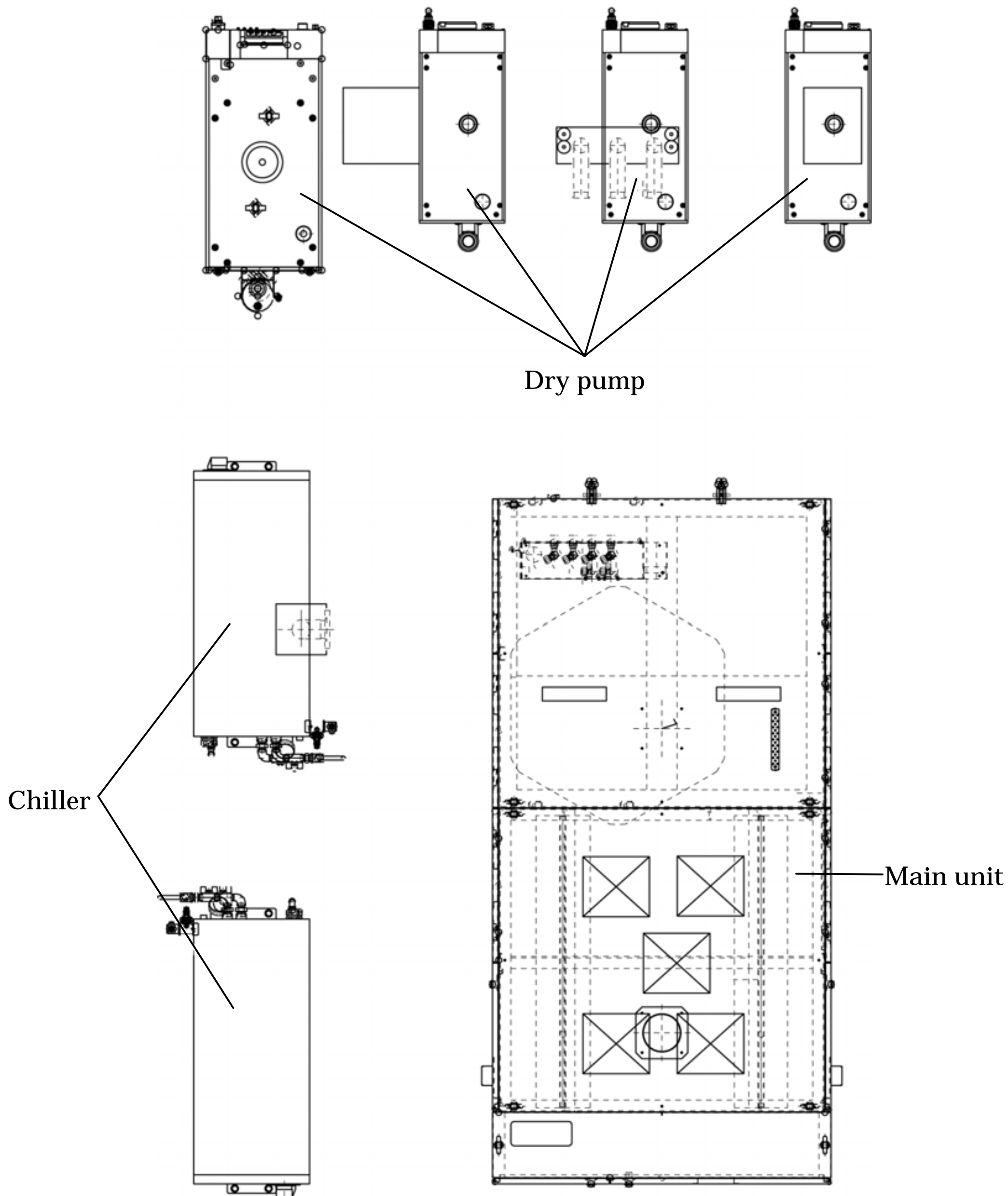
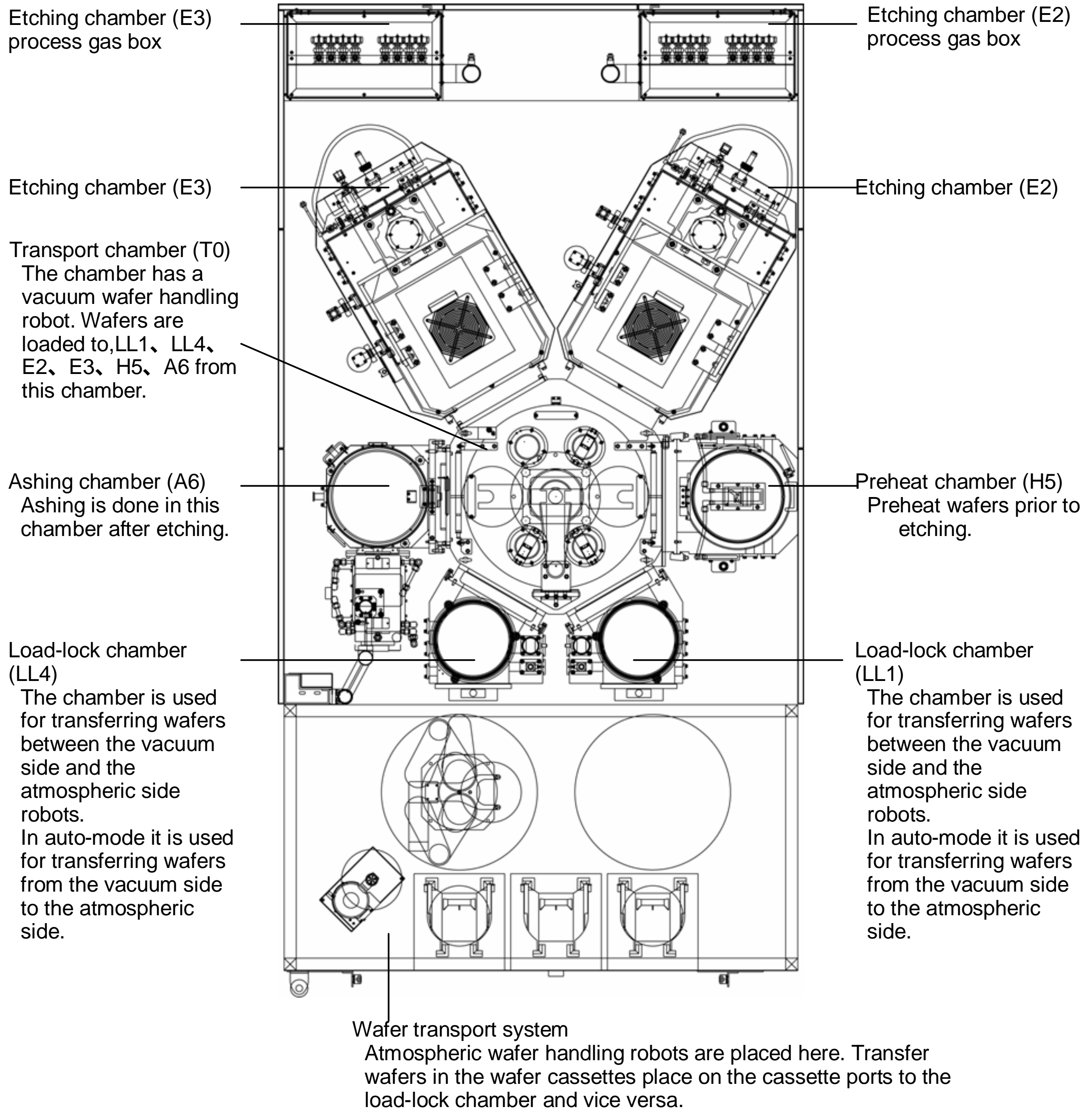
Chapter 2 General description of the system

This system is a high density plasma etching system having a C to C load-lock system and an ISM (Inductive Super Magnetron) plasma source.
The system consists of a ϕ200mm Si wafer autoloader (with an aligner), a transport chamber, a pre-heat chamber, reactors, a power supply cabinet, a control unit cabinet, dry pumps, and chillers for cooling reactor electrodes. The system incorporates each system unit such as a controller.

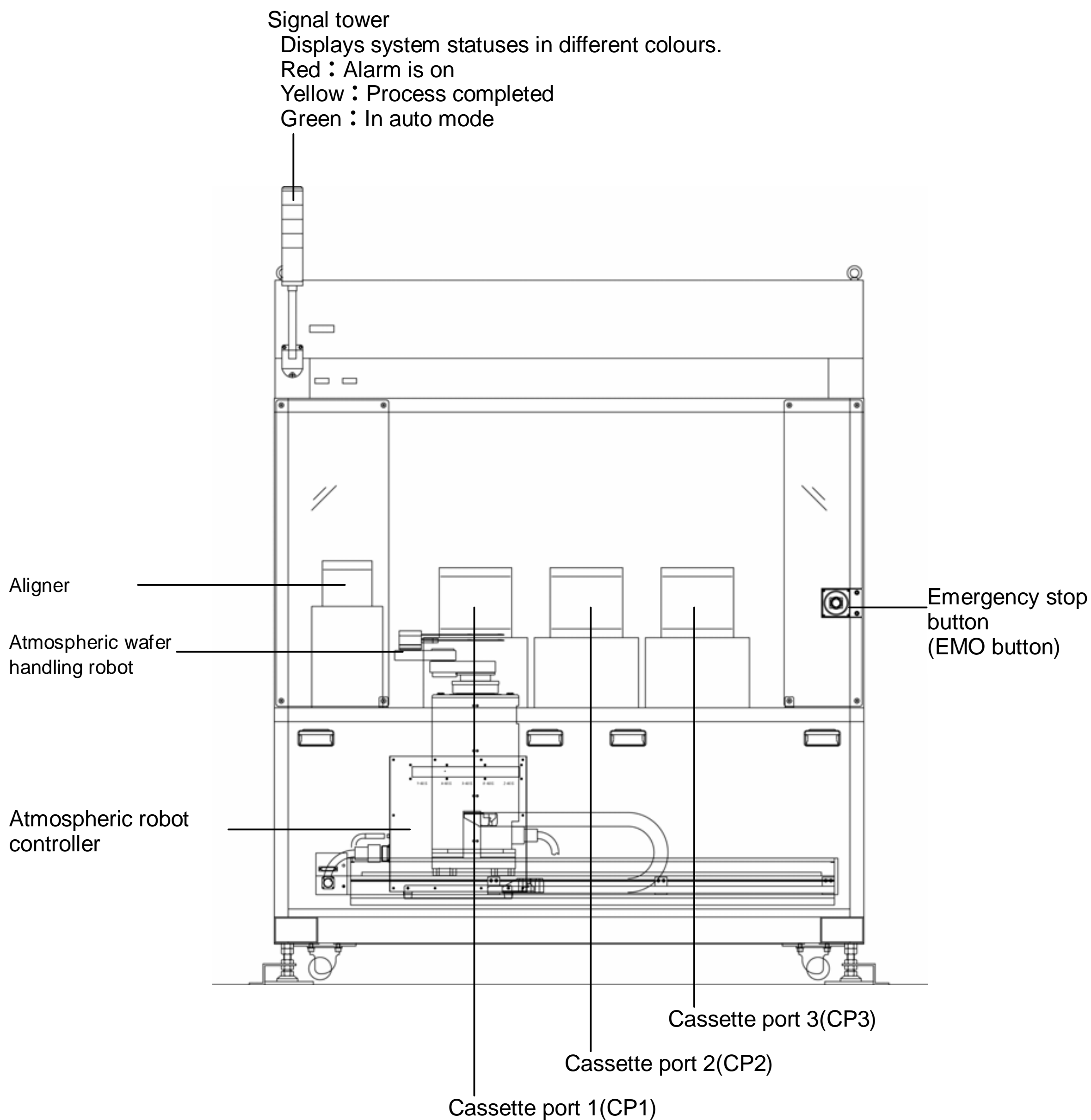
2-1. System components



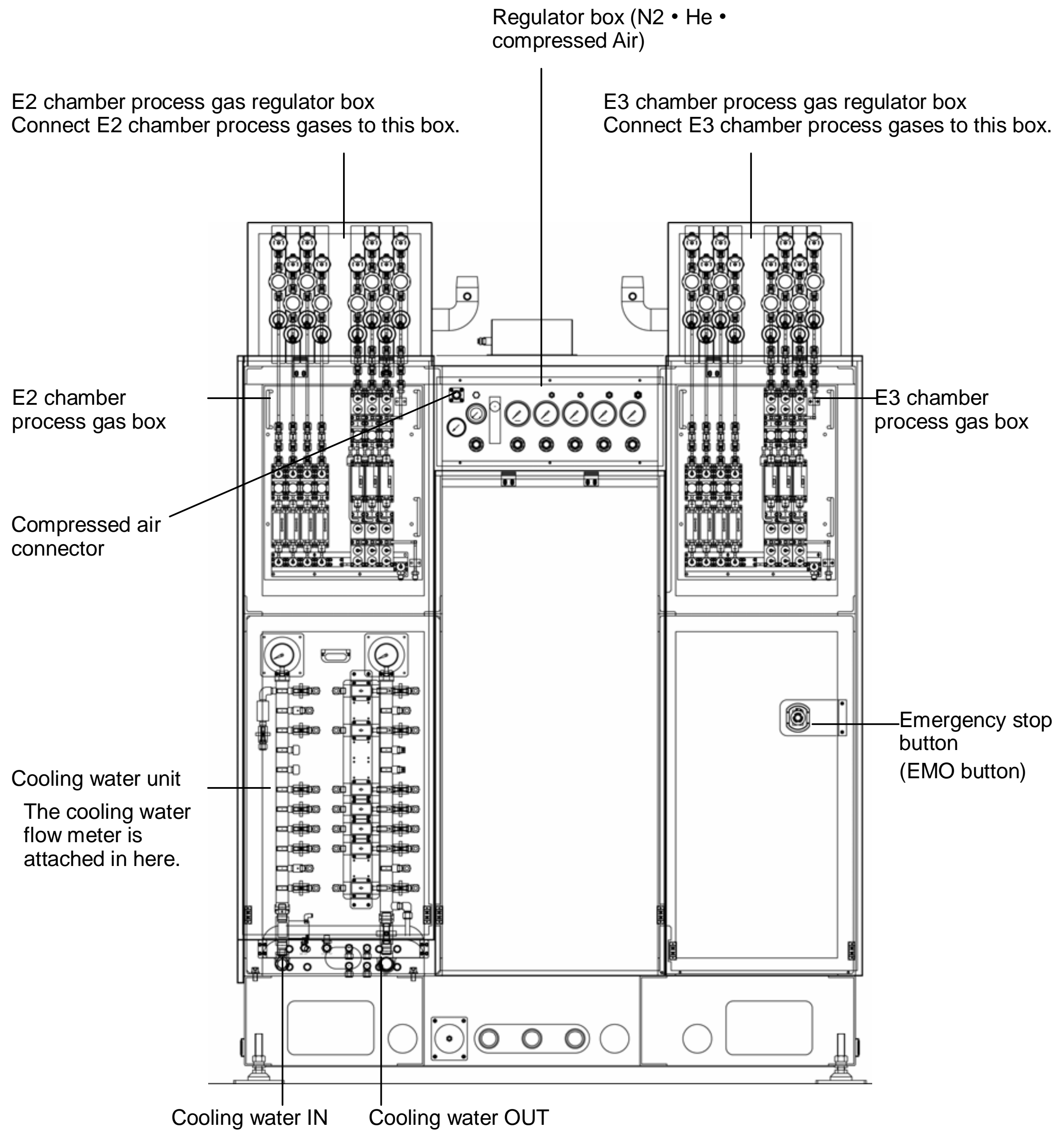
2-2. System top view



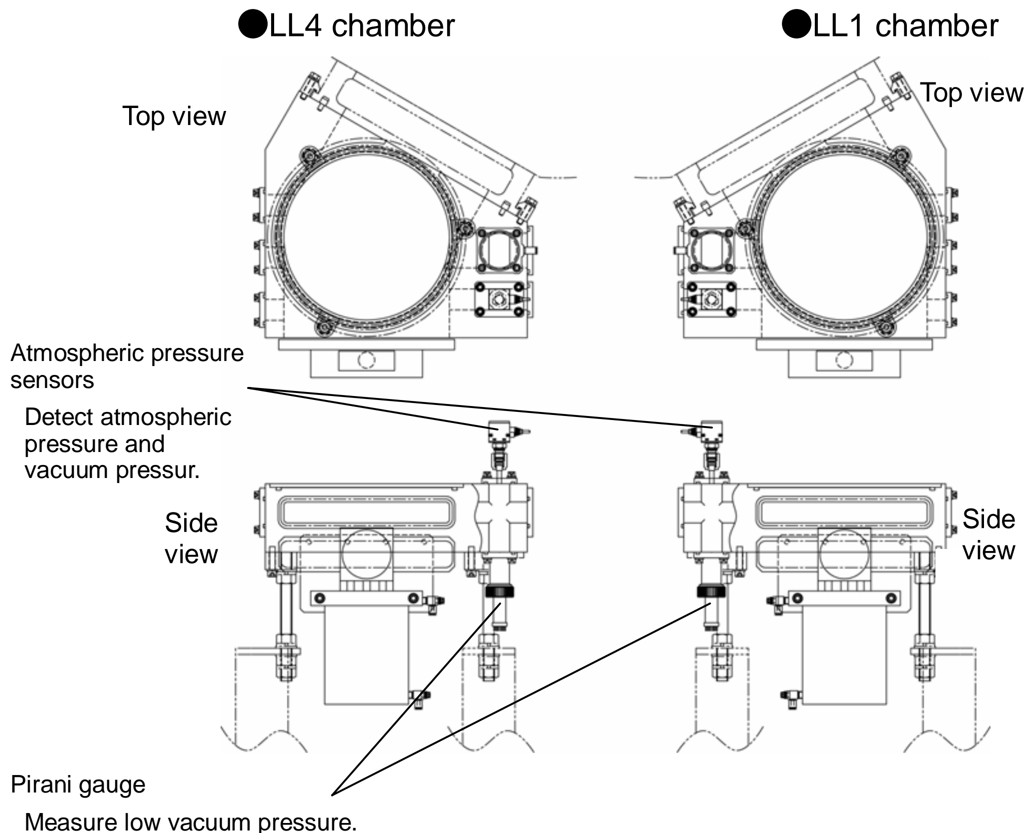
2-3. System front elevational view



2-4. Rear elevational view

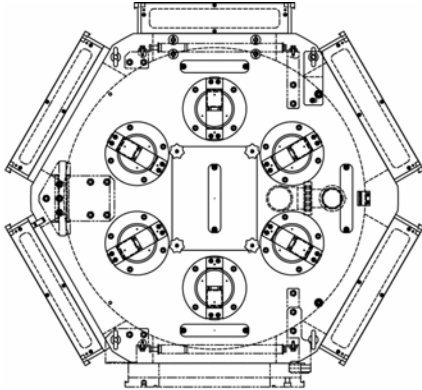


2-5. Load-lock chamber

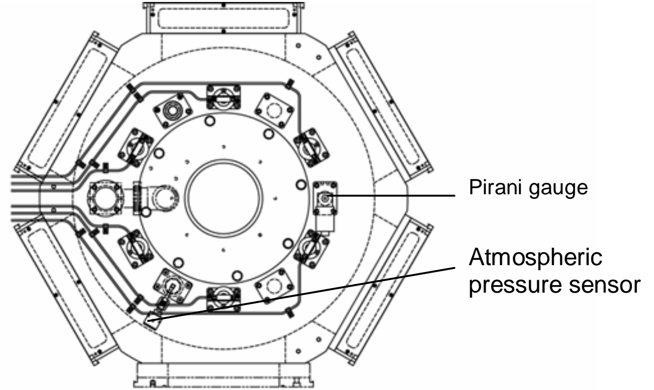


2-6. Transport chamber

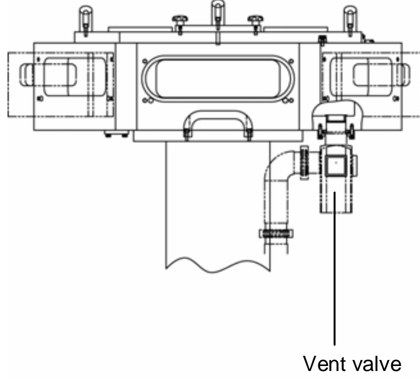
Top view

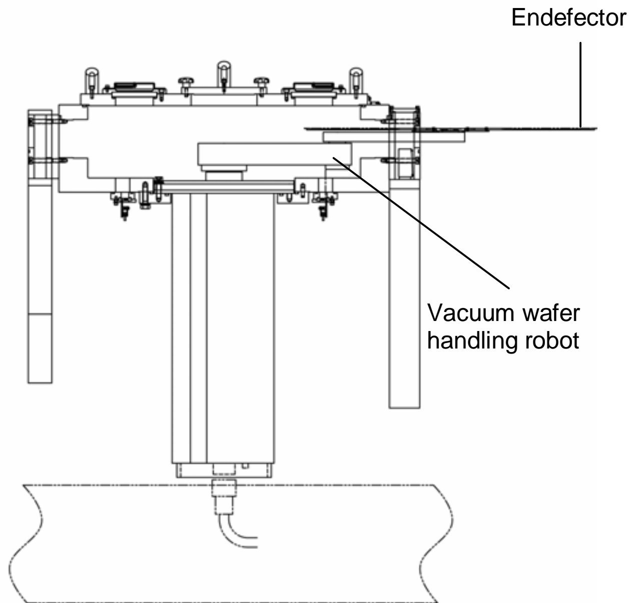


Bottom view



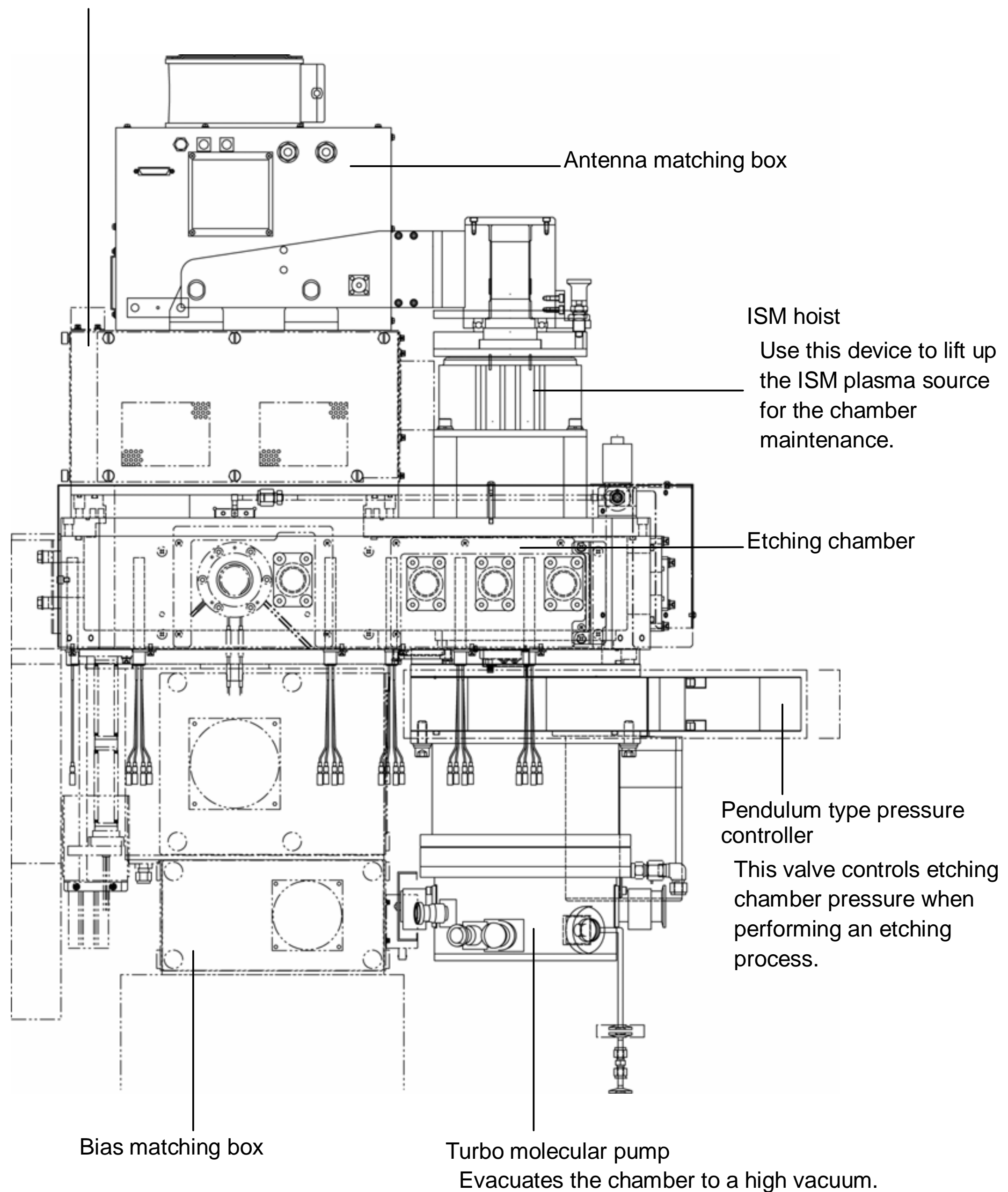
Side view

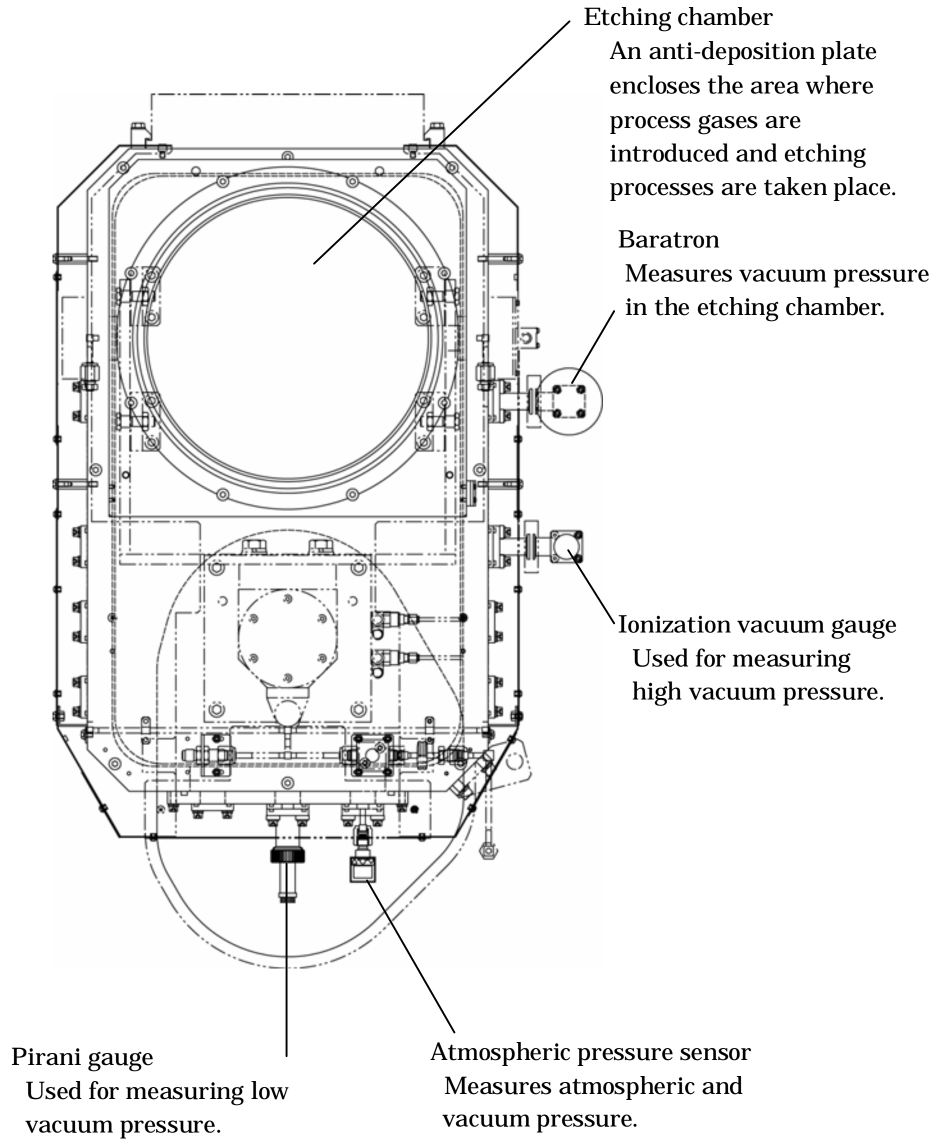




2-7. Etching chamber

2-7-1. Etching chamber 2




Etching chamber
An anti-deposition plate encloses the area where process gases are introduced and etching processes are taken place.
Baratron
Measures vacuum pressure in the etching chamber.
Ionization vacuum gauge
Used for measuring high vacuum pressure.
Pirani gauge
Used for measuring low vacuum pressure.
Atmospheric pressure sensor
Measures atmospheric and vacuum pressure.

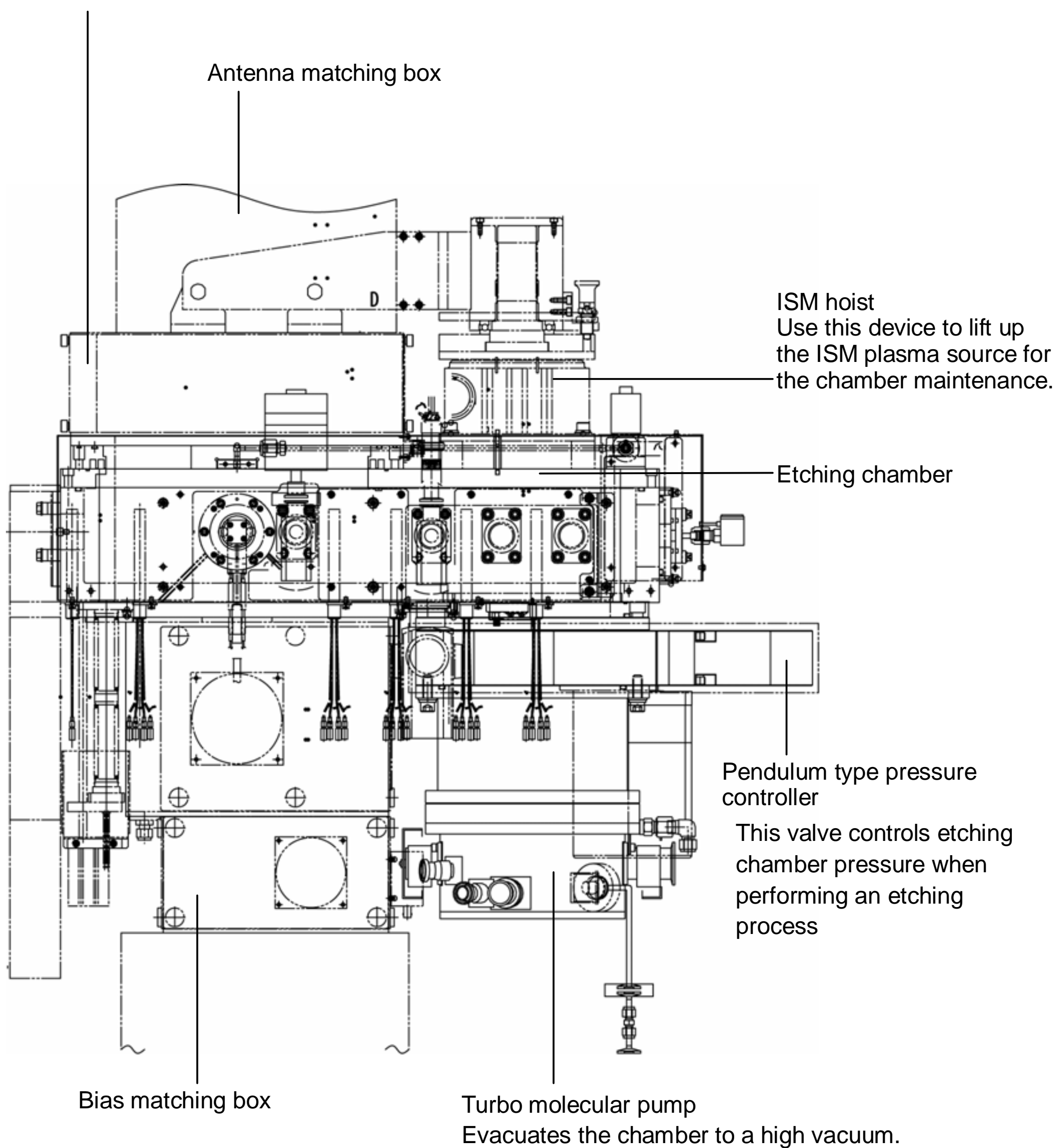
2-8. Etching chamber

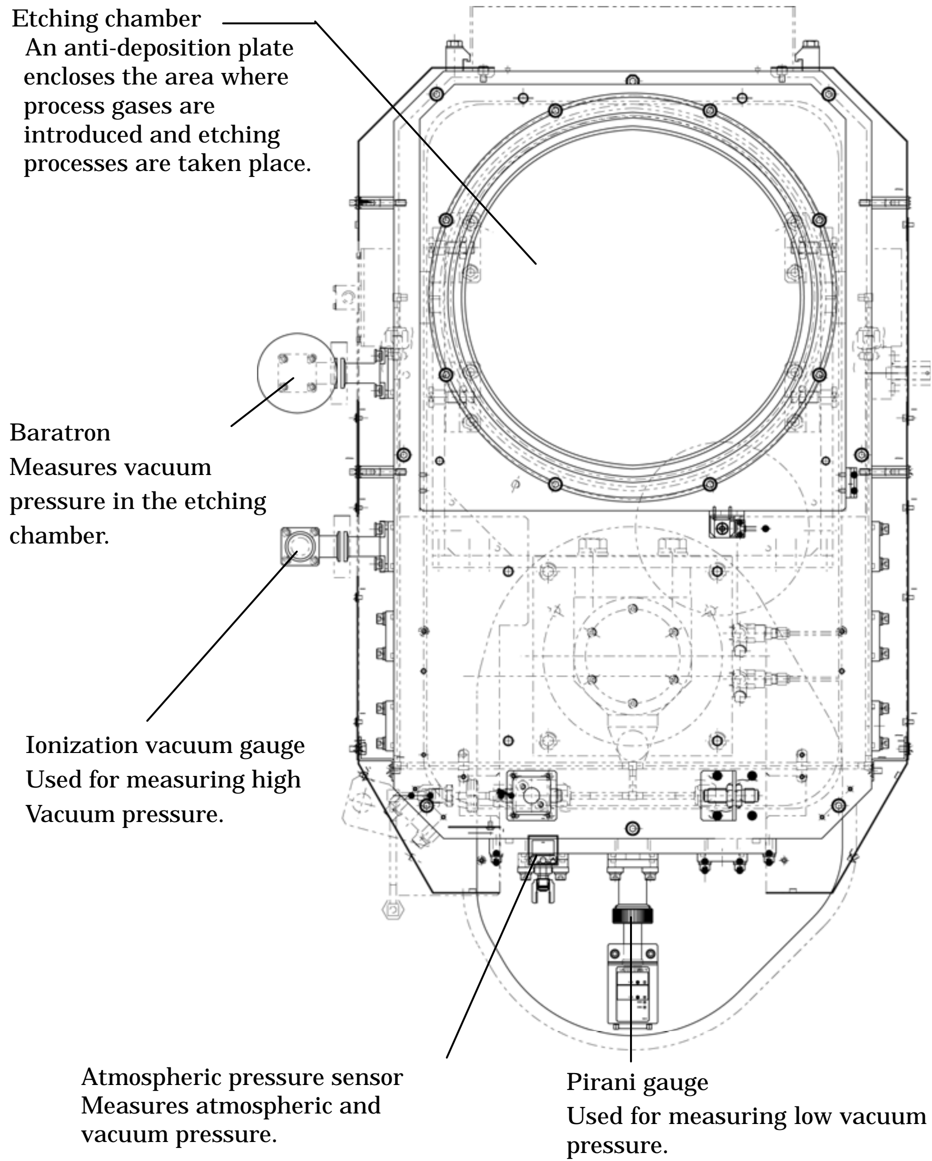
2-8-1. Etching chamber 3

ISM plasma source

An ISM plasma source is installed in the shield box.

Caution：Make sure that the RF power supply is off when opening the shield box for maintenance.




Etching chamber
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Baratron
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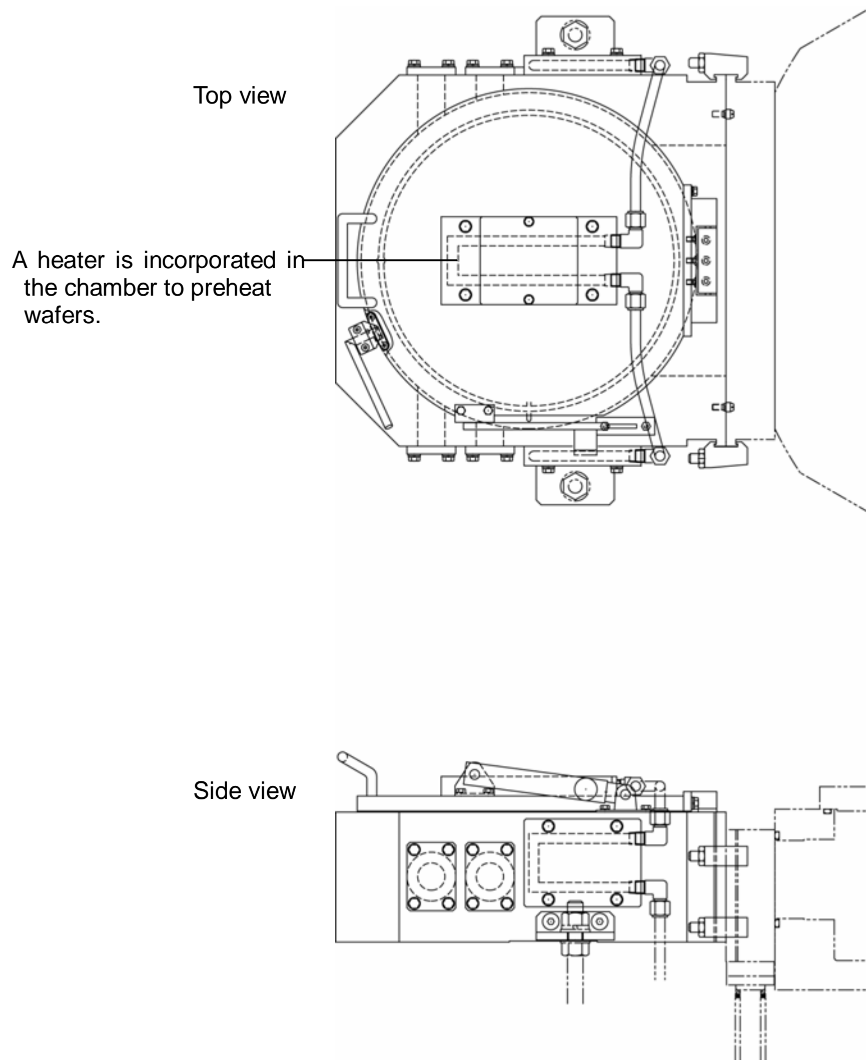
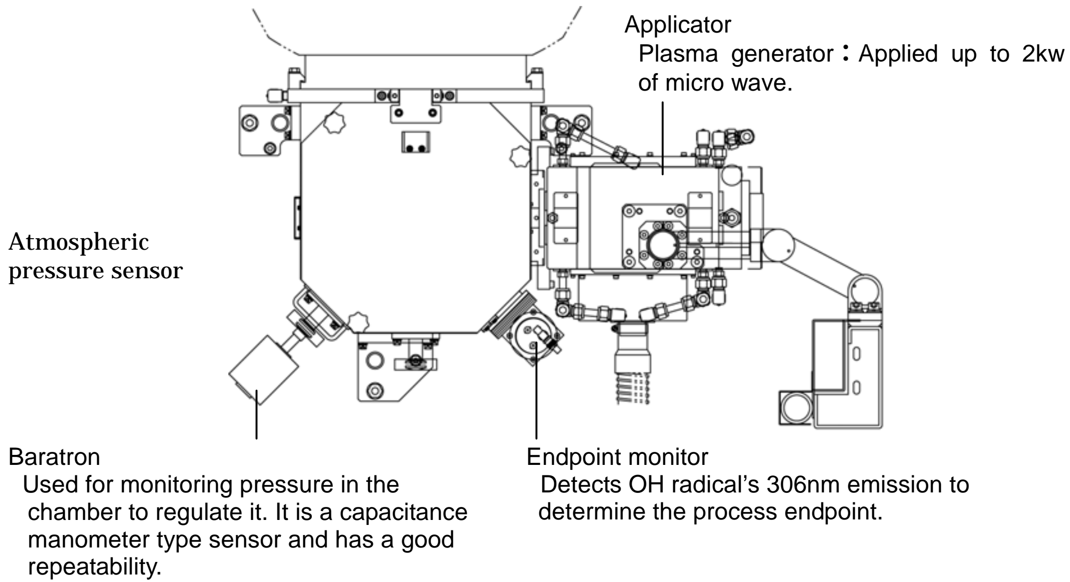
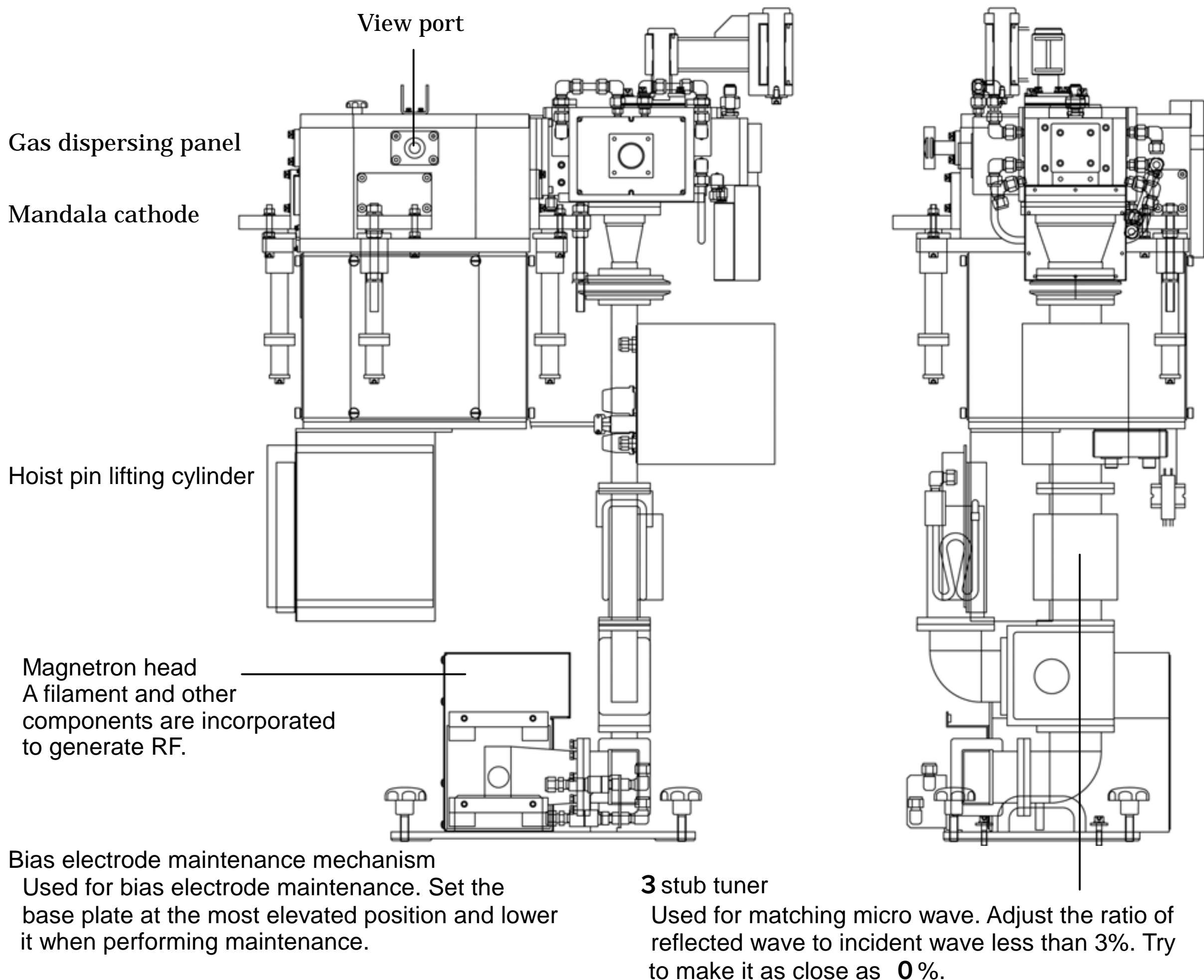
Ionization vacuum gauge
Used for measuring high Vacuum pressure.
Atmospheric pressure sensor
Measures atmospheric and vacuum pressure.
Pirani gauge
Used for measuring low vacuum pressure.

2-9. Preheat chamber

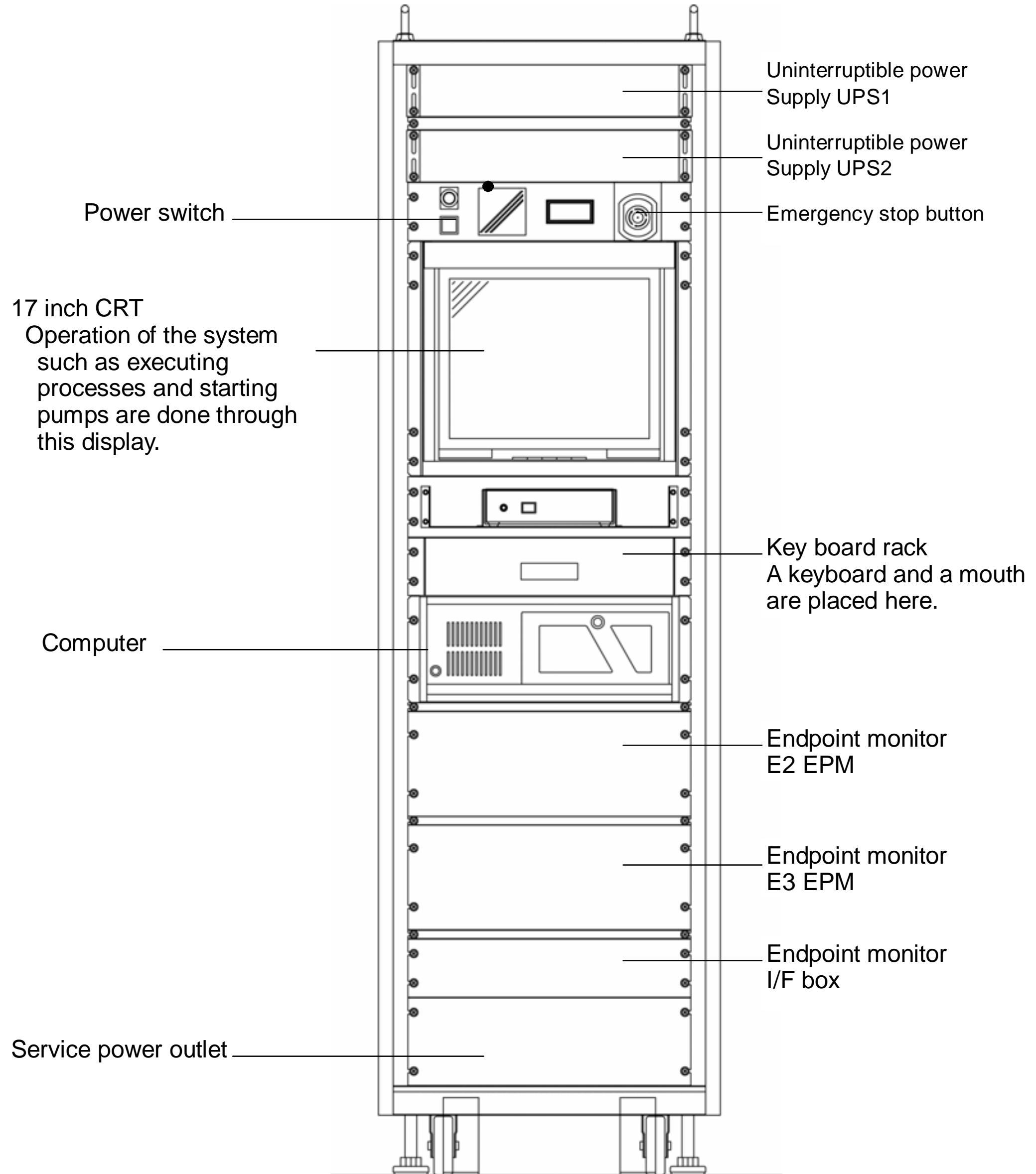


2-10. Ashing chamber

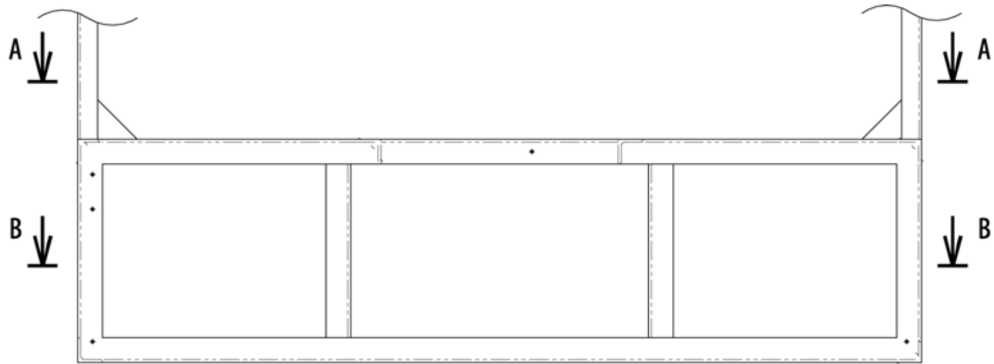


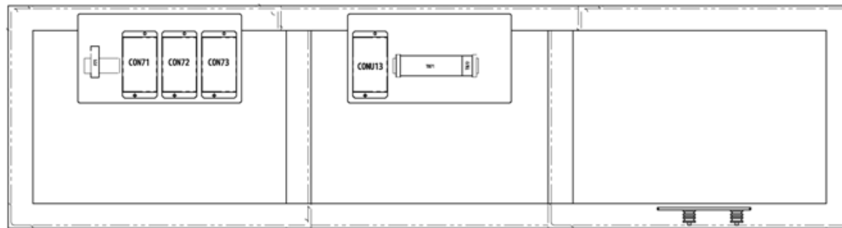


2-11. Control cabinet

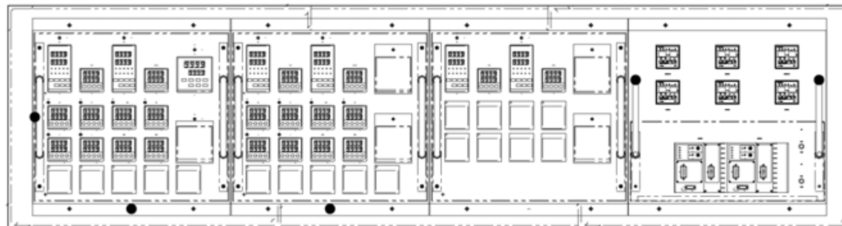


2-12. Temperature controller panel





B–B



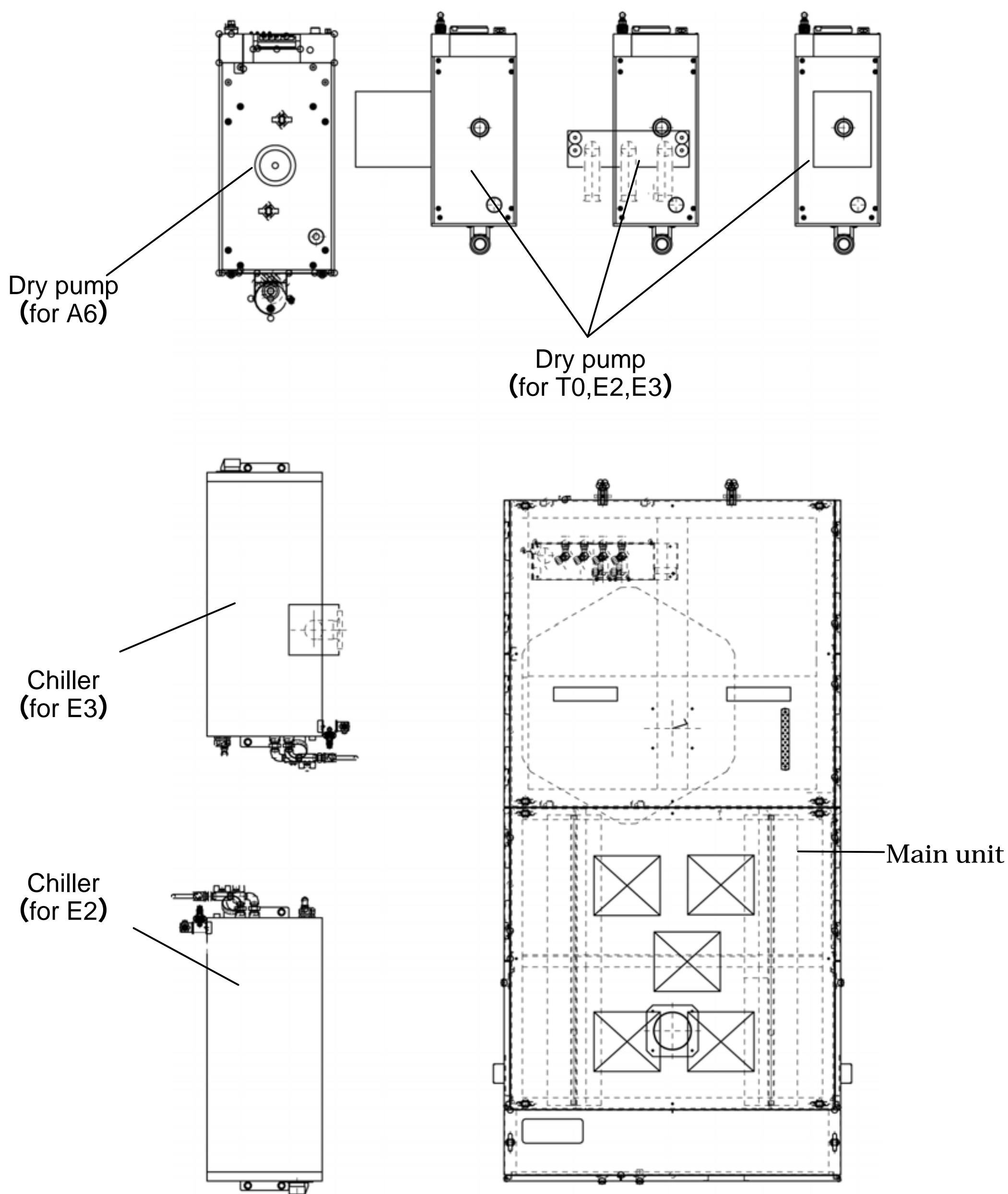
A–A

2-13. Vacuum pump

Dry pump model numbers.
T0,E2,E3：ESR20N（Ebara corporation）
A6：ESR200WN（Ebara corporation）

Chiller model number.
E2,E3：HRZ002-W-X002（SMC）

Refer to “The equipment manual” (supplemental) for further information.



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