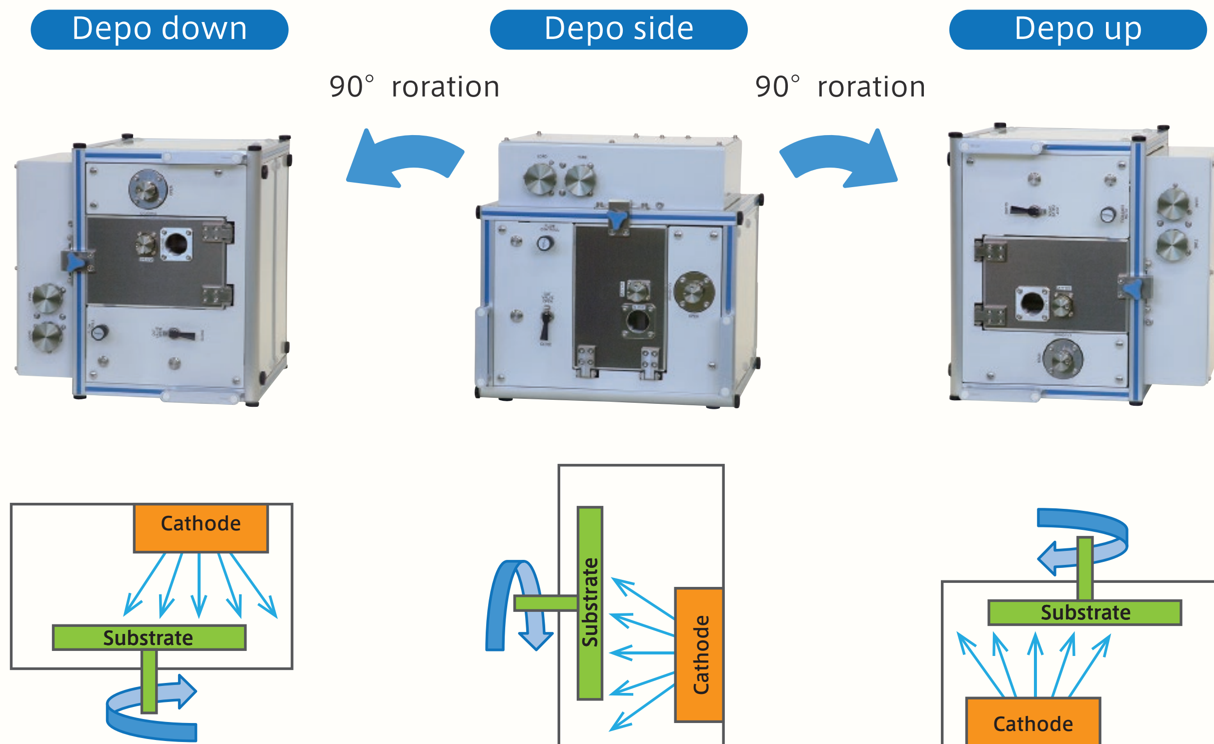
Direction of sputtering

- **Depo up**
  It is best for preventing the particles from adhering to the substrate.

- **Depo side**
  It is best for high quality deposition while the particle adhesion to the substrate or the flake adhesion to the target can be avoid.

- **Depo down**
  It is best for the deposition on irregular substrates that you can just put on the holder.



By changing the body mounting surface, you can set the deposition direction as you want.

SSP Series

SSP1000 Cubic Sputtering Equipment

— Notice of Export Control —
In the event that any product described or contained herein falls under the category of strategic products controlled under the Foreign Exchange and Foreign Trade Control Law of Japan, exporting of such products shall require an export license from the Japanese government in accordance with the above law.

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SUGA

Cubic Sputtering Equipment SSP1000

SSP1000 cubic sputtering equipment is a desktop compact system enabling high deposition performance at low cost.

Its unique design allows you to change the deposition direction (upward, sideward, and downward) as you want. So you can do your experiments in all the three directions within one simple device.

Since the RF power supply is equipped, not only metal targets, but also insulators, such as Al_2O_3 or SiO_2, can be sputtered.

With compact design and low cost, you can do a variety of your experiments.

Feature

Diversity

- Due to its cubic shape, you can choose the sputtering direction by setting different working plane.
- Magnetic targets are also available if you use the cathode magnet (optional).
- One process gas with a flow meter is equipped. You can purchase an additional gas line with little price (up to 2 lines).

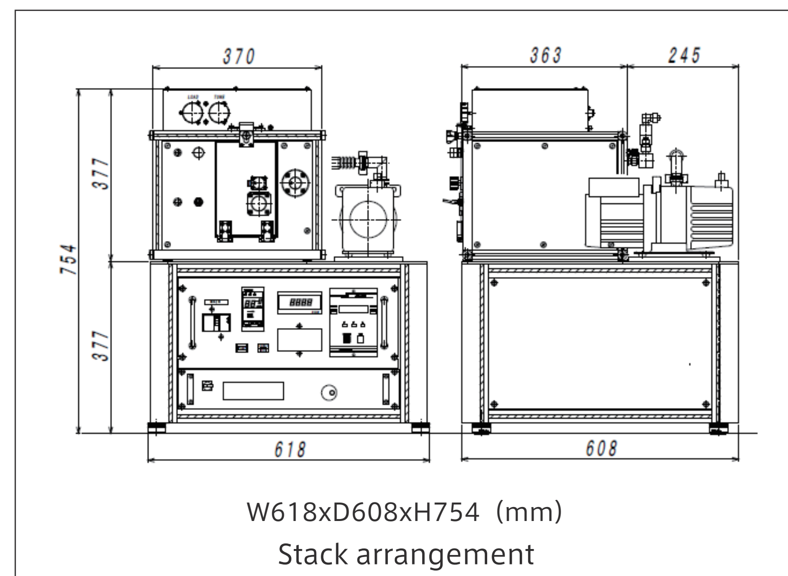
Performance

- The deviation of the film thickness is below ±5% in an area of ϕ100mm in the substrate.
- Using the pulse mode provided by the standard equipped RF power supply, insulator targets can also be sputtered by the abnormal discharge.
- During deposition, you can determine to either let the substrate rotate automatically or just hold it above the target.

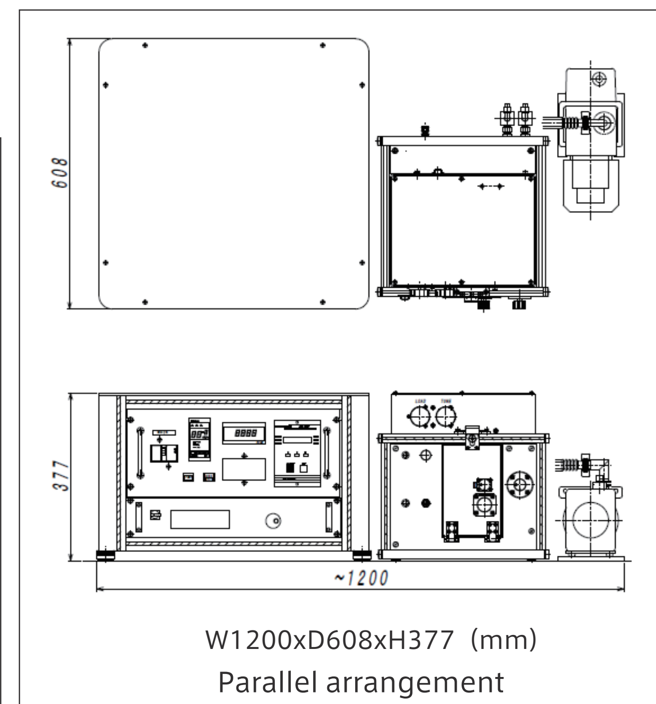
Easily to use

- Compact device, easy to be installed on the table.
- Fully automatic evacuation.
- A view port (with shield glass and shutter) and a shield plate are installed inside the chamber.
- A cathode shutter is equipped for preventing contaminations of the substrate during pre-sputtering.
- A sputter timer working together with the cathode shutter is equipped for you to control the thickness.

External dimensions



W618xD608xH754 (mm)
Stack arrangement



W1200xD608xH377 (mm)
Parallel arrangement

Main specificatons

Performance			
Vacuum performance	Vacuum pressure	≦ 9×10^{-5} Pa	
Deposition performance	Film thickness uniformity	Substrate rotatinon	ϕ100mm area ≦±5%
		Substrate fixed	ϕ40mm area ≦±10%

Specification			Standard option
Direction of sputtering		Depo up, Depo side, Depo down	—
Cathode		ϕ2” PMC (Plain Magnetron Cathode) 1 piece	—
Target		Non-magnetic target ϕ50.8mm×t3mm	Magnetic target
Substrate holder	Holder size	ϕ120mm	—
	Substrate size	ϕ100 MAX or indeterminate form	—
	Rotation	Automatic 5rpm or fixed at cathode position	—
Cathodal shutter		Manual drive shutter	—
Distance between target and substrate		55~70mm/Manual control	—
Vacuum pump	Main pump	Turbo molecular pump	—
	Backing pump	Rotary vane pump	Dry pump
Process gas	Process gas	Ar mass flow meter/1 system	1system can be added.
Gas flow control		Needle valve	—
Vent (Atmosphere)		Automatic vent valve	—
Sputtering power supply	RF power supply	300W RF power supply (With pulse mode)	—
	Matching box	Manual adjustment	—
Pump control		Automatic control	—
Weight		Main part : 31kg, Power supply : 51kg, Rotary vane pump : 10kg	—
Others		—	Chamber baking, Water circulation bath, Ar gas cylinder, Special table

Utility					
Process gas (Ar gas)	Pressure supply	0.1MPa	Coolant	Flux	≧ 1L/min
	Connect	1/4Swagelok		Pressure supply	0.1~0.3MPa
Electric power	Power	3ϕ 200V±10% 10A 50/60Hz		Temperature	15~30℃
	Ground	Ground with the ground resistance of 100Ω or less		Connect	Rc1/4(with Couplers)
	Input cable	Length 5m (appendant parts), Cable terminal on user side : M5 solderless terminals			

Product specifications are subject to change without notice.