

MAC 240
FOR CD/DVD MASTER DEPOSITION



Performance and lowest cost-of-ownership
for CD/DVD mastering

Coating · Cryo Preparation
Ion Etching · Solid State Preparation
Accessories and more...

KEY FEATURES INCLUDE:

- Simple one button operation
- Easy loading/unloading of master with magnetic coupling
- Quick and user-friendly maintenance and target changes
- Compatible with all common mastering processes (Ag, Ni, Ni/Va)
- Low target material cost
- Small footprint, single phase, no external water cooling required
- Lowest cost-of-ownership

MAC 240
FOR CD/DVD MASTER DEPOSITION



The MAC 240 has been designed to coat 180/240 mm CD and DVD masters with nickel, nickel/vanadium or silver.

DRY VACUUM SYSTEM

The MAC 240 is configured with a turbomolecular drag pump backed by diaphragm pump. The ultimate vacuum in this configuration is in the 10^{-6} mbar range.



The pump-down time of the clean aluminum chamber to process vacuum of 8×10^{-5} mbar is approx. 5 minutes. The pump-down and vent cycle under production conditions take 9 to 13 minutes. Vacuum is measured by a full range Pirani and Inverted Magnetron gauge.

SPUTTER GUNS

The base unit is equipped with one 2 inch DC sputter gun. The MAC 240 can deposit pure Ni, Ni/Va or Ag (Silver). That means the MAC 240 is compatible to all commonly used mastering processes. Quick-latch target clamping allows a target change in less than

30 seconds. After the base pressure is reached, the sputter process starts. A big advantage of the MAC 240 are the low-power sputter sources in conjunction with the substrate rotation to

minimize the heat load and subsequent damage on the photo resist. A typical deposition time for 80 nm of Nickel with one source is 10 minutes. This time can be reduced to 3.3 minutes by adding 2 additional sputter sources. Because of the substrate rotation the MAC 240 achieves an excellent film thickness uniformity on the master

INTEGRATED WATER COOLING

The MAC 240 has an built-in closed loop water cooling system for cooling of the sputter sources. The flow is monitored continuously by a flow sensor to guarantee a safe operation.

GAS FLOW SYSTEM

A mass flow controller monitors the flow of the argon gas into the process chamber. The flow is programmable for each process step and monitored by the process control.

SIMPLE LOADING/ UNLOADING OF MASTER

The master is loaded onto the swivel arm holder and held in place by magnetic coupling. After pressing the START keys, the swivel arm closes automatically and the process starts. After the process is completed, you simply press the OPEN key. Then, the chamber opens and you can remove the master and load the next master. The simple handling interface offer to the user the possibility to pick and place the master with a robot for continuous 24 hour operation.

PROCESS CONTROL

The MAC 240 uses a proven SIEMENS SIMATIC PLC controller with a WINDOWS™ software interface on PC. All parameters are programmable and recipes can be saved on the PC. Operation of the system, once the recipe is set, requires simply pressing the START and OPEN key.

TECHNICAL DATA**Dimensions:**

width x height x depth
538 x 1400 x 1050 mm

Weight: approx. 140 kg

Electrical supply:

208-240 V, 50-60 Hz,
single phase

Power consumption:

1 kW max.

Ordering information:

MAC 240 Master Coater
Part. No.: BU 019 075 -T

Consumables:

Nickel target DN 54 x 0.2 mm
Part. No.: LZ 02309 FN

Silver target DN 54 x 0.2 mm
Part. No.: LZ 02226 KN

Silver target DN 54 x 1.5 mm
Part. No.: B 8010 072 31

Set of protective shields
Part. No.: BU 019 098 -T

Set of gun shield and insulator
Part. No.: BU 019 054 -T

The simple and reliable coater
is available as stand-alone unit
or as OEM in-line unit.

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