

Substrate Manipulators & Heaters

- Field-proven equipment for horizontal geometry
- Reliable and rugged design
- Continuous rotation up to 40 rpm typical
- Efficient shielding to prevent from material contamination
- Exists for 2 or 3"
- Adaptable to fit MBE32 and Compact 21 TM series



Product introduction

The ARM substrate holder models are positioned on a horizontal port and allows for a continuous rotation at up to 40 rpm.

Rotation is performed using a magnetically coupled motor. The ARM includes additional X, Y, Z motions for further versatility, e.g. RHEED oscillation experiments. It allows the main axis location to be adjusted with precision micrometers.

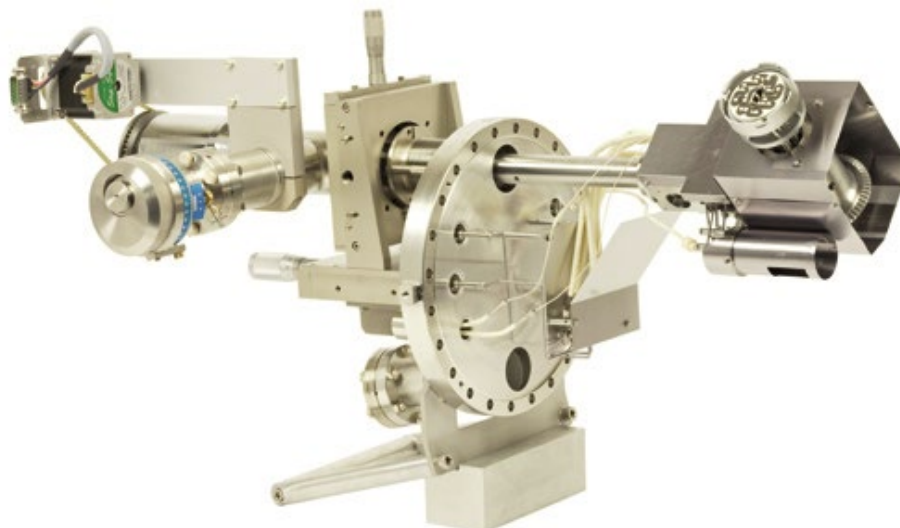
A flux gauge is directly mounted on the

end of the manipulator and allows for precise measurement of the flux at the exact position of the platen. At this time, the substrate is protected from stray depositions. On the contrary, during growth, the flux gauge is protected from the flux.

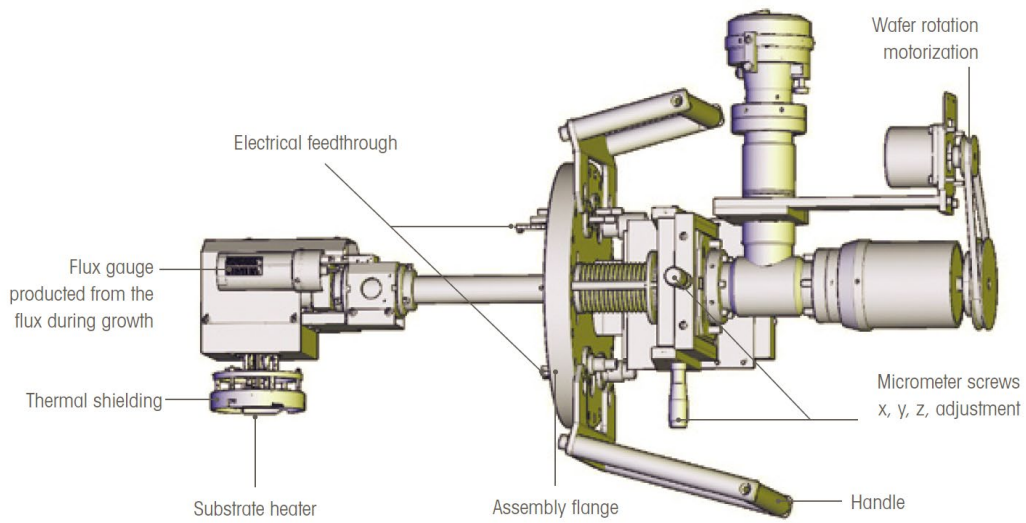
These ARM series first on MBE32 MBE systems but also on Compact 21 TM series, enabling to use this manipulator onto vertical-design machines, to adapt from MBE32 legacy design to

modernized Compact 21 chambers. It can then be kept when upgrading a chamber from MBE32 to Compact 21 (higher cells filling capabilities, more cells ports).

It exists also on 2 sizes, 2 and 3", to accommodate variety of ovens and enabling to address different kind of applications from 10 x 10mm up to 3" wafers.



Layout



Specifications

Characteristics	ARM 2"	ARM 3"
MBE system of choice	MBE 32	MBE 32 / Compact 21 TM
Substrate heater size*	2 "	3"
Double filament oven	No	
Molybloc size	2"	4"
Mounting flange	CF200	
Typical rotation speed	0-40 RPM	
Max operation / outgassing temperature (heater dependent)*	800°C /1000°C	
Main shutter available	No	

* Please consult substrate heater section for more details

For special configurations (temperature range, type of T/C, in contact or not, optical access,...), please consult Ribber

Component interfacing

