

# CUSTOM-DESIGNED MANIPULATORS

The CreaTec team designs and manufactures a large variety of UHV and MBE substrate manipulators according to your specifications. The manipulators can be built for all types of sample holders and various substrate sizes.

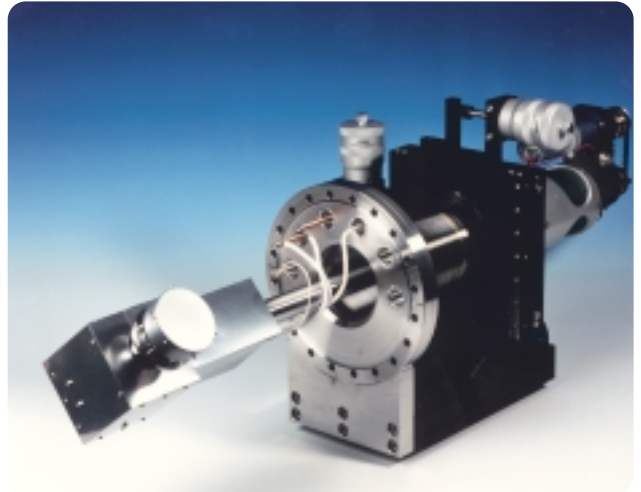
Temperatures up to 1300 °C are standard. Special manipulators reaching higher temperatures (up to 1700 °C) are available, as well as cooling stages for liquid nitrogen and liquid helium.

Different linear and rotational degrees of freedom allow a precise adjustment of sample in the MBE system.

Continuous sample rotation is standard. Manual or motorized linear and rotational drives are available.

The manipulator fits the wafer transfer system of the customers facility. An optional shutter is used to protect the substrate before and after epitaxial growth.

## MHT- 2RZ



Typical MBE Manipulator for heating a 2 inch substrate holder up to 1100 °C (optional 1300 °C). The substrate holder is continuously rotatable and the manipulator itself can be turned by more than 200 °C.

All parts are covered with molybdenum or tantalum shields to avoid material condensation.

### Technical Data

#### Standard:

Type . . . . .	MHT - 2RZ
Sample holder . . . . .	2 inch (or as specified)
Sample rotation . . . . .	Continuous
Heating system . . . . .	Radiation heating, tantalum or tungsten wire, self-supported
Temperature range . . . . .	1100 °C (Ta - Filament) 1300 °C (W - Filament)
Motion . . . . .	X, Y $\pm 12,5$ mm, Z $\pm 35$ mm
Rotation . . . . .	PHI1 = $\pm 170^\circ$ (max.) PHI2 = continuous
Conditioning . . . . .	Heated to maximum temperature in UHV
Shipping . . . . .	Stainless steel container with valve

#### Options :

Other dimensions . . . . .	As specified
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