Manipulator Specification Worksheet

MOUNTING FLANGE	Size (CF): Other Type Bolt Hole Type: Tapped Metric
MANIPULATOR ORIENTATION	VERTICAL ☐ HORIZONTAL ☐ INVERTED ☐ OTHER ☐ Payload Weight: (Required for horizontal mount)
MOTOR CONTROLLER	Yes ○ No ○
Z-AXIS:	(Specify in 1" increments.) Resolution:
Z-AXIS CONTROL:	Manual Knob Adjust ☐ or Motor Drive ☐ Limits ☐ Encoder: None ☐ Rotary ☐ or Linear ☐ Encoder Resolution:
X-Y AXES:	± 0.5" ☐ ± 1.0" ☐ Resolution:
X-Y AXES CONTROL:	Manual Micrometer Adjust ☐ or Motor Drive ☐ Limits ☐ Encoder: None ☐ Rotary ☐ or Linear ☐ Encoder Resolution:
POLAR ROTATION:	± ° Resolution:
POLAR ROTATION CONTROL:	Manual ☐ or ☐ Motor Drive Limits ☐ Encoder None ☐ Rotary ☐ Encoder Resolution:

If incorporating a sample, continue to page 2.

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Heating and cooling notes: Specifications are estimates. Temperatures quoted refer to *face of sample platen*; actual *sample* temperature depends on many factors including but not limited to size, thickness, emissivity, cooling, and attachment methods.

SAMPLE ORIENTATION:	Sample axis in-line ☐ Perpendicular to Z axis ☐ Other:
SAMPLE AZIMUTHAL ROTATION:	± ° Resolution:
SAMPLE AZIMUTHAL ROTATION CONTROL:	Manual ☐ or Motor Drive ☐ Limits ☐ Encoder: None ☐ Rotary ☐ Encoder Resolution:
SAMPLE FLIP MOTION:	± ° Resolution:
SAMPLE FLIP CONTROL:	Manual ☐ or Motor Drive ☐ Limits ☐ Encoder: None ☐ Rotary ☐ Encoder Resolution:
SIZE OF SAMPLE/WAFER:	Size and Shape:
SAMPLE THICKNESS: (Required if offset is critical)	
SAMPLE OFFSET:	
SAMPLE HEATING: (Specify in °C, cont., max. & duration)	
SAMPLE COOLING: (Specify in °C)	
SAMPLE PLATEN STYLE:	STLC ☐ (with TTC, LR, HRD options if known) SPF ☐ Other ☐ Materials:
SAMPLE PLATEN ELECTRICAL: (CHOOSE ONE)	Fully Isolated ☐ (default, floating, can build up static charge) Grounded ☐ (sample platen grounded through system components) Selective Isolation ☐ (incorporates BNC feedthrough to isolate, ground, or connect meter to read current) Biased ☐ (applied voltage, must be specified to design spark gaps and provide correct feedthroughs)
IN-VACUUM SAMPLE TRANSFER:	Yes ○ No ○
IN-VACUUM WIRING INSULATION:	Ceramic Beads ☐ or Kapton® coated ☐
REDUCED MAGNETIC PERMEABILITY:	No ○ Yes ○ If yes, Gauss level at measured distance from sample:
VACUUM ENVIRONMENT / PRESSURE:)	Chamber base pressure: Highest operating pressure: Gasses and partial pressures REQUIRED if applicable:
HEATER POWER SUPPLY:	Yes ○ No ○
MAXIMUM BAKE OUT TEMPERATURE: (RNN™ rotary seal is limited to 150° C, all other limits are 200° C)	
OTHER:	

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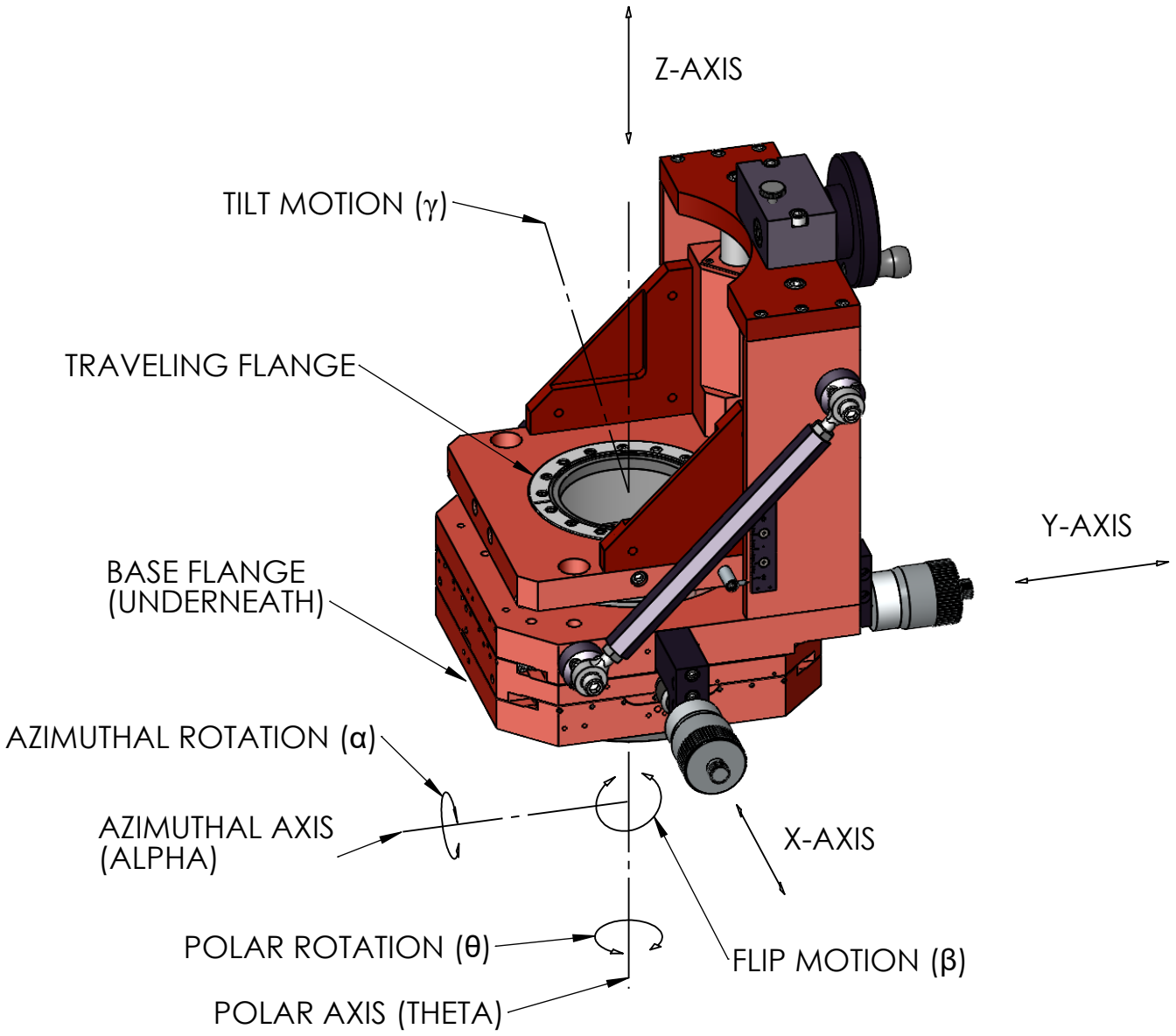

This drawing is a Conceptual Layout.
It is not to be used as a final approval drawing. Some components may not be to scale or may depict features which have not been purchased with this project. Final approval drawings may be available prior to manufacturing.

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