

# Radial Sample Distribution

## RTTA 3-Axis

(Rotary & telescopic extension with lift/lower)



The 3-axis RTTA provides 360° rotation, 760mm linear extension and Z shift to provide arm lift/lower to aid in sample transfer. Less than 1mm deflection at full arm extension with 10N load, linear reproducibility of <0.1mm and rotational reproducibility of <0.2mRad. Motorization options available.

### RTTA 3-Axis Key Advantages

- » 760mm extension
- » Less than 1mm deflection at full extension under 10N load
- » Rotational reproducibility to less than 0.2mRad
- » Linear reproducibility to less than 0.1mm

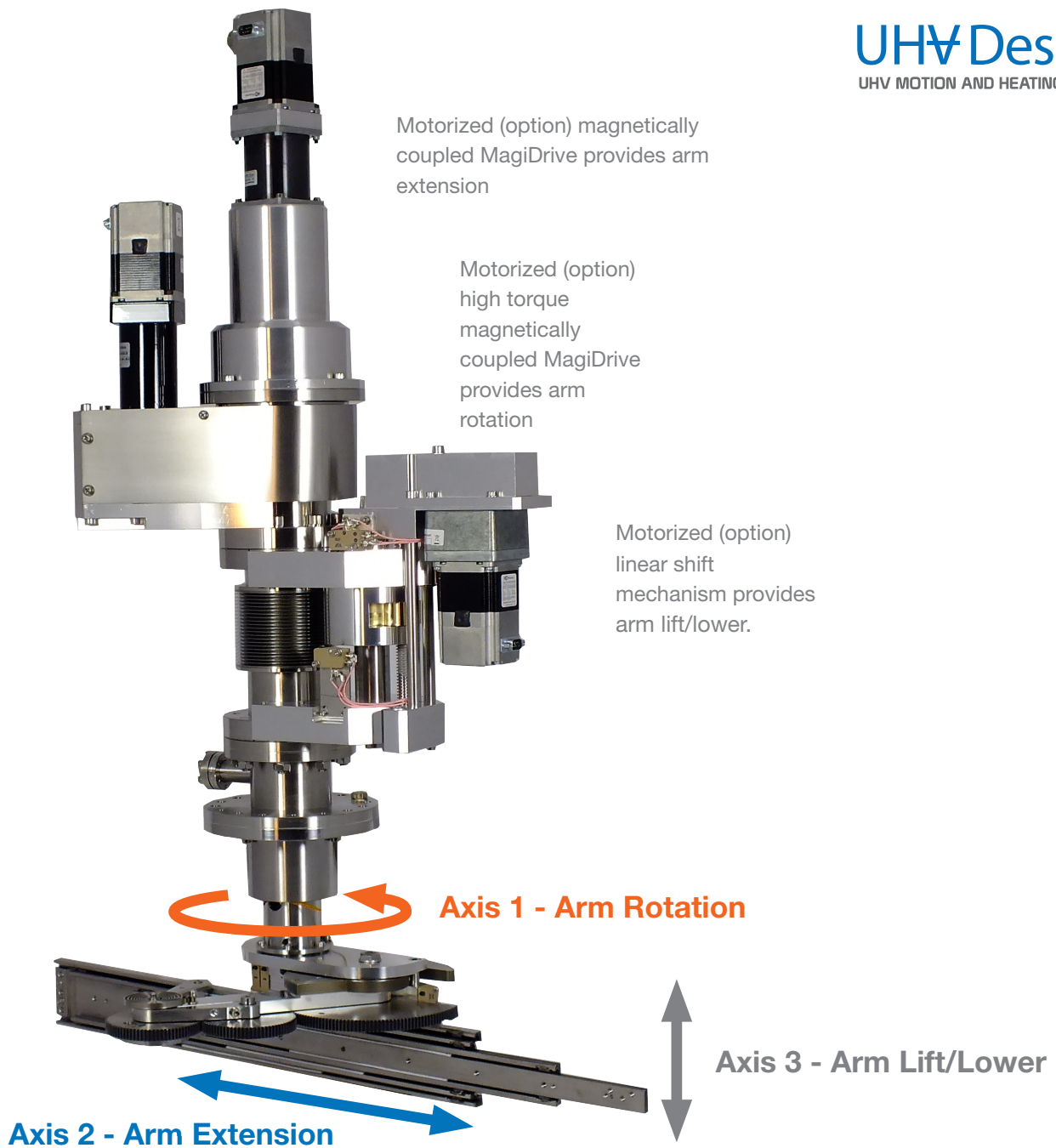
The RTTA has been designed to provide an alternative to traditional radial distribution sample transfer devices. The unique patent pending mechanism provides unrivalled extension and exceptional linear and rotary reproducibility for the minimum system footprint.

A high torque MagiDrive (see section 1) provides an extremely stiff coupling for the radial motion (Axis 1) achieving angular reproducibility of <0.2mRad. A secondary MagiDrive is used to drive the arm in and out of satellite chambers with a linear reproducibility of <0.1mm when fully extended. The addition of a Linear Shift Mechanism (see section 8) provides arm lift/lower to aid in sample transfer.

Using high torque magnetically coupled drives to provide arm rotation and extension provides an inherently clean and robust operation.

### Specification Table

MODEL	RTTA 3-Axis
Mounting Flange	CF150 (6" OD)
Min radial port size and clear bore required for assembly	CF200 (8" OD) and 150mm bore
Min radial port flange size for arm	CF150 (6" OD) (Arm lift dependent on radial port ID)
Rotation motion	Infinite manual and +/-180° motorized
Minimum chamber ID	>630mm
Minimum chamber ID free height	152mm
Arm lift motion stroke	50mm
Arm extension	760mm
Arm stiffness at full extension	<1mm deflection with 10N load
Rotational reproducibility	0.2mm at full extension
Bakeout temperature	250°C (with motors removed)



### RTTA Part Codes

RTTA	Actuation	Part Number
RTTA 3-AXIS	Manual	RTTA-ZH-RH-EH-760
	Stepper motorized	RTTA-ZS-RS-ES-760
	DC motorized	RTTA-ZSM-RSM-ESM-760
	Configured for motorization (supply own motor)	RTTA-ZNM-RNM-ENM-760

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