



Figure 11.2: The Five Motorized Movements of the MRD Cradle

Table 11.1: MRD Cradle Specifications of Adjustable Axes

Axis	Psi	Phi	X	Y	Z
Range	180° ( $\pm 90^\circ$ )	2 x 360°	100 mm	100 mm	11 mm
Minimum step size	0.01°	0.01°	0.01 mm	0.01 mm	1 $\mu\text{m}$
Reproducibility	$\leq 0.01^\circ$	$\leq 0.01^\circ$	0.1 mm	0.1 mm	1 $\mu\text{m}$
Slew speed	2.5°/s	70°/s	20 mm/s	20 mm/s	1 mm/s

maximum sample height: 24 mm

maximum sample mass: 0.5 kg (including sample holder)

Samples up to 100 mm x 100 mm can be fully scanned. There is space to mount larger samples if required although measurements will be limited to an area 100 mm x 100 mm.