

## *Description*

R19 is a low cost entry to bench top robotics, fast, accurate and reliable and easy to program. It is of the cylindrical format with four axes ideally suited to working in a plane around the robot. Like our other robot arms it is excellent value fast and accurate. The mechanics are incredibly simple and phenomenally reliable; its predecessors have been running 3 shifts a day for a decade without failure, in fact we give a 2 year warranty. It is easy to apply and program yet is capable of the most intricate tasks. You'll find it a joy to use.

Like all ST robots it uses new light weight, high speed, high efficiency stepping motors with encoder feedback. The new design (R19E) has the motors mounted to the sides of the axis drives which reduces the physical lengths of the axes compared to strokes (total movement). This makes it even easier to fit in confined spaces such as fume cupboards or lead enclosures.

The package includes the Mk5 controller which is simple and reliable using a partnership of fast CPU and DSP processors and compact micro-stepping drives. Software is ROBOFORTH II which make this robot really easy to get started with yet the most complex motions, interfaces and peripherals may be programmed, assisted by ROBWIN project manager which brings everything together on one screen. ActiveX modules make it easy to integrate into larger systems. Everyone who uses this system agrees it is the most flexible robot software on the planet.

With programmable speed and acceleration, programmable gripper confirmation and intelligent error handling the R19 will carry your expensive sample quickly and safely without spilling or dropping or leaving you wrestling it from the gripper in some peripheral.

## *Specifications*

Drives:	Hybrid rare earth micro-stepped stepping motors, incremental encoder feedback
Reach:	max 549mm, min 149mm (H in diagram below)
Lift stroke:	501mm, mounting flange minimum 91mm above bench surface (V in diagram below)
Speed:	Waist 180 deg/sec. Lift 500mm/sec, extend 500 mm/sec, Wrist 360 deg/sec. (turbo available)
Waist rotation:	360 degrees
Wrist rotation:	445 degrees
Resolution:	Standard: 0.075mm, Turbo: 0.15mm
Payload:	nominal 2Kg/max 4Kg at flange.
Repeatability:	+/-0.1mm (see note)
Weight	14.5Kg/33lbs (robot only)
Power:	110/115/220/240v ac 250VA (standard controller)
MTBF:	10,000 hours
Warranty:	2 years or 10,000 hours whichever comes first
Finish:	Powder-coat, choice of colors.