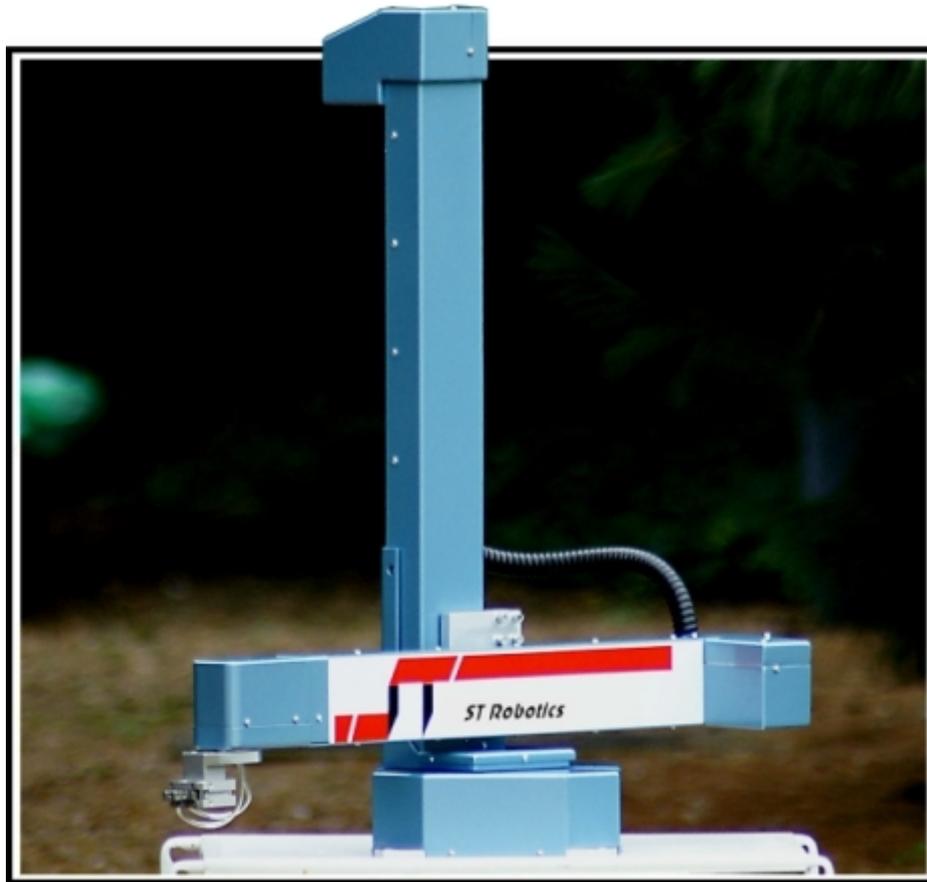


R19E bench top 4-axis cylindrical format robot arm



Ideal for laboratories as well as many industrial applications.
New design longer stroke for shorter physical axis length (less overhead)

Features

- 4 axis Cylindrical format
- Fully enclosed
- Fast and accurate
- Slim 'Ultraglide' extend arm and end effector drive for access to confined spaces
- 'Ultraglide' Z-axis.
- narrow axis apertures for safety and cleanliness
- Extend aperture inverted for cleanroom
- Simple teach pad
- Pneumatic or electric gripper (shown)
- Extensive input/output interfacing
- Non-volatile memory, dual fast processors
- Easy hardware and software integration into any system with serial (or USB) and ActiveX
- Complete with controller, manuals, software, cables, etc. Ready to go
- Optional track
- Choice of colors
- Optional cleanroom preparation

Linear Track



R19 may optionally be mounted on a linear track. This has dual crossed-roller linear bearings providing speed and precision along with smoothness and lack of vibration and noise. Max speed 1000mm/sec. Positional repeatability 0.2mm. R19D pictured on 1m track. High speed version available.

Description

R19 is a low cost entry to laboratory bench top robotics; it's 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. The mechanics are elegantly 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.

Like all ST robots it uses new light weight, high speed, high efficiency stepping motors with encoder wtchdogs. 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.

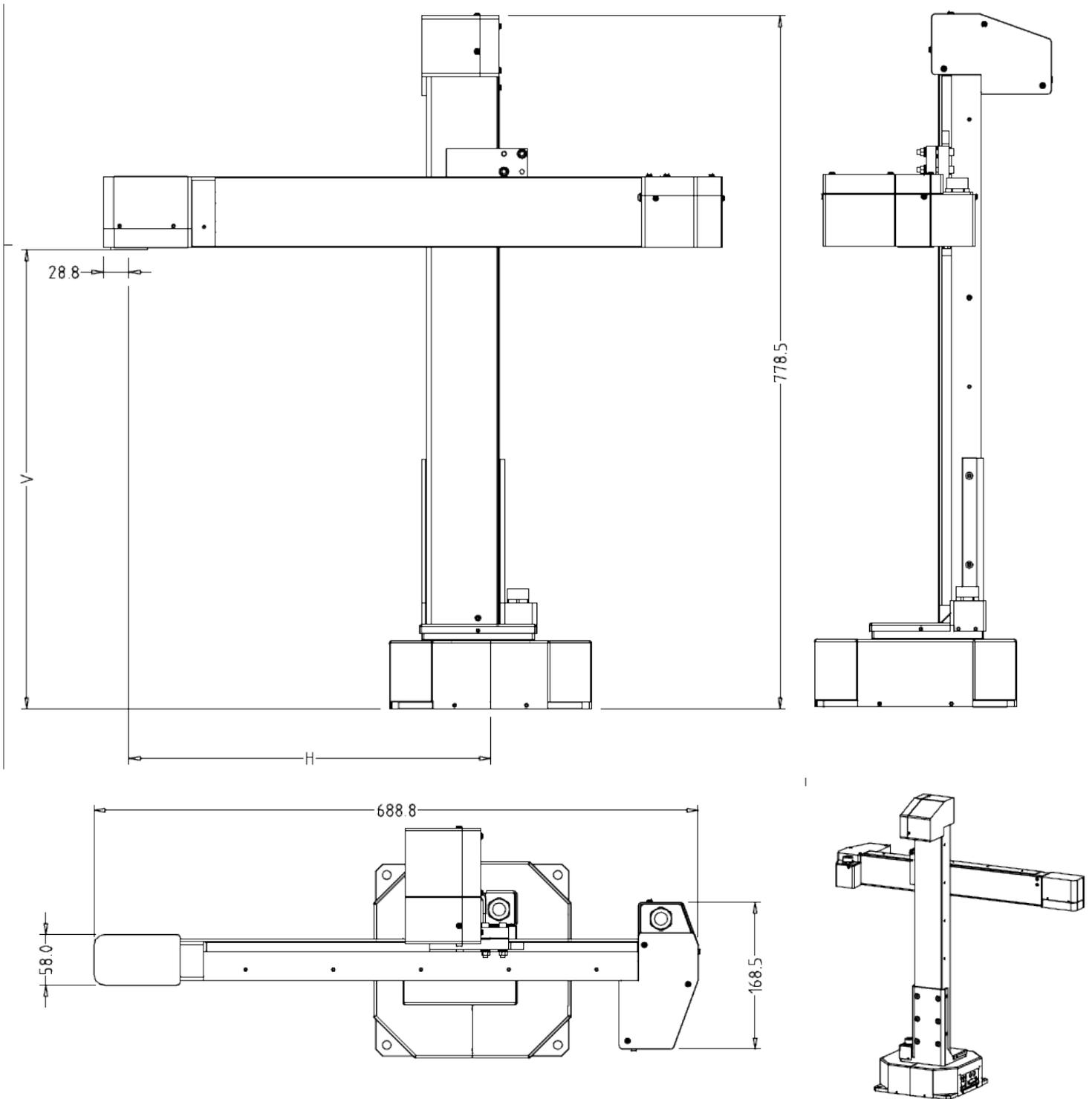
Specifications

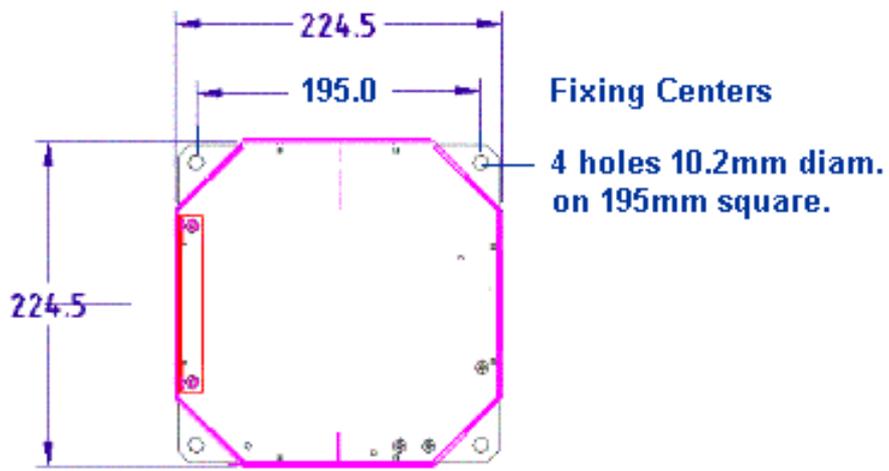
Drives:	Hybrid rare earth micro-stepped stepping motors, incremental encoder feedback
Reach:	max 549mm, min 149mm (H in diagram below)
Lift stroke:	501mm, mounting flange minimum 91mm above bench surface (V in diagram below)
Speed:	Waist 180 deg/sec. Lift 500mm/sec, extend 500 mm/sec, Wrist 360 deg/sec. (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.

note: repeatability is measured as a standard deviation of the worst dimension of the 3, measured at X=0 Y=500mm Z=0 at 50% speed and zero payload over 24 hours after a 1 hour warming up period. Figures for ISO 9283 available on request.

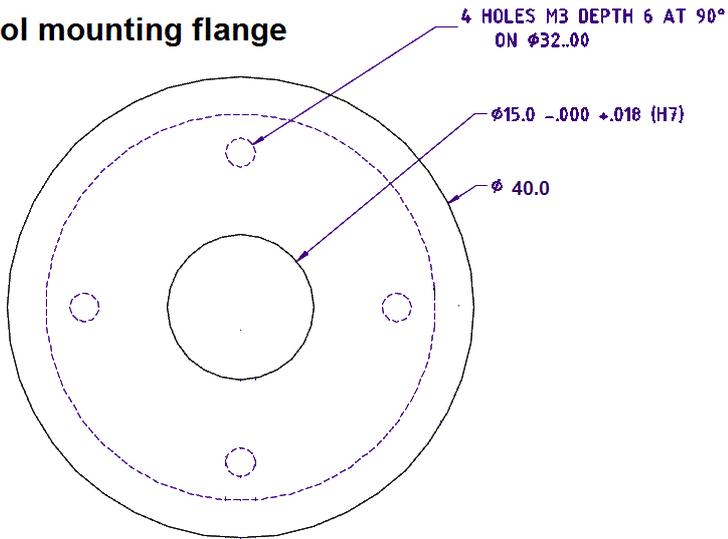
Workspace

Workspace is a cylinder approx 1100mm in diameter by 500mm high. (see H and V in specifications above and diagrams below). End effector will affect reach i.e. longer fingers will increase reach. Reach is normally measured to the center-line of rotation of the gripper.





tool mounting flange



Warranty, Maintenance and Support

- MTBF for this model is 10,000 hours under normal use.
- Warranty is 2 years or 10,000 hours whichever comes first.
- 24 hour technical support by phone or email (English)
- The mechanics are simple and intuitive, easy to service or repair by any competent technician.

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