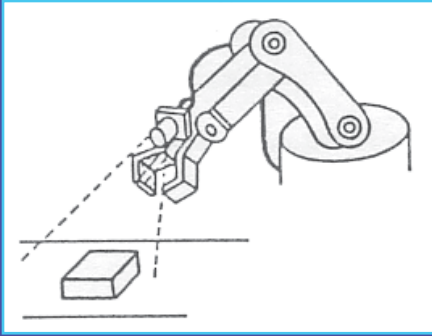
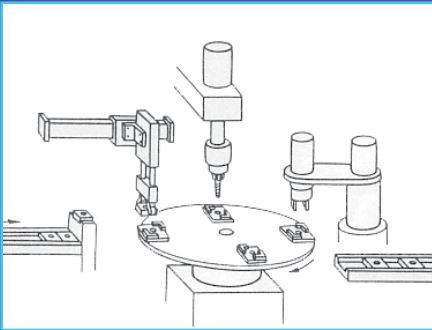


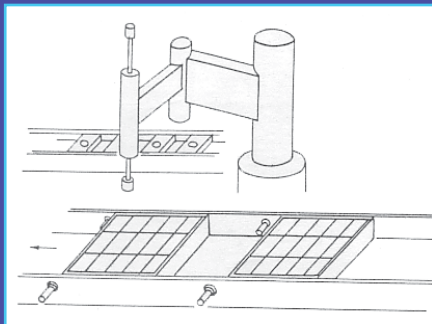
APPLICATIONS



Vision Inspection



Automated Assembly



Palletizing

The miniCRANE series robots are specifically designed for deliver unmatched performance and reliability in factory and laboratory applications including

- Pick and place
- Material handling
- Vision inspection
- Automated assembly
- Genetic analysis
- Clinical testing
- Sample preparation

DYNASERVO



miniCRANE450

Dynaservo's minCRANE series of desktop articulated robots feature harmonic drive 4 DOF or 5 DOF in a compact design with a maximum radial reach of up to 515mm. Equipped with the "C-HOST" ASCII communication protocol, miniCRANE easily interface with PC for PC-based control. The minCRANE weighs only 6 to 7 kg which makes it extremely portable. The miniCRANE offers unmatched performance and reliability at a very low cost for factory and laboratory automation solutions.

- **Compact, Low Cost, and High Performance**
- **Long Lifespan with Harmonic Gear Reducers**
- **Easy-to-use**
 - wide operation range
 - high speed motion
 - teaching in joint and user axes
 - PTP linear motion
 - ergonomic handheld robot terminal
- **Expandable Serial Link I/O Module**
 - up to 256DI and 256DO
- **Standard Robot Language Fics-PIII**
 - integrated motion & I/O control
 - multi-tasking and BASIC-like programming
- **PC-based Control/Data Acquisition**
 - easy interface with PC for PC-based control through C-HOST protocol
- **Flexible System Configuration**
 - built to custom specifications

Dynaservo Inc.

email: sales@dynaservo.com <http://www.dynaservo.com>

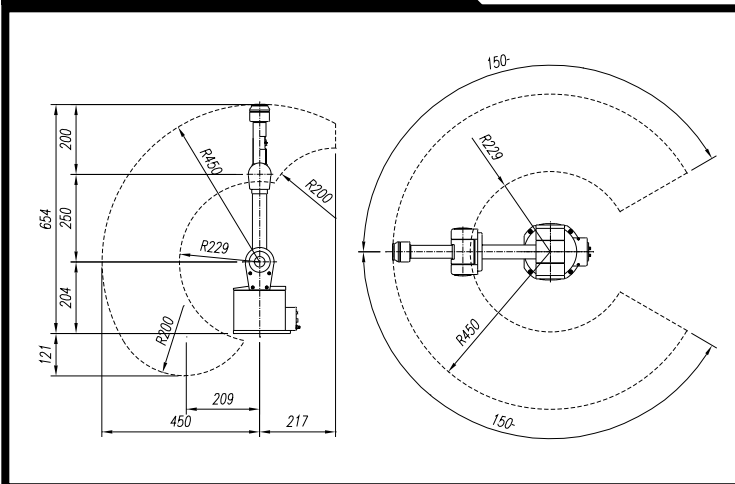
Mechanical Specifications

Model	miniCRANE 450/4	miniCRANE 450/5
Motion degrees of freedom	4 DOF	5 DOF
Arm Length (mm)	250 + 200	250 + 200 + 65
Maximum radial reach	450 mm	515 mm
Motor drive	R, A, B Axis(AC Servo) U Axis(DC Servo)	R, A, B Axis(AC Servo) C, U Axis(DC Servo)
Position detection	Incremental encoder	Incremental encoder
Maximum load capacity	1.2 kg	1.0 kg
Repeatability	At Point P +/-0.2 mm	
Operating range	R axis	-150 deg ~ +150 deg
	A axis	-30 deg ~ +150 deg
	B axis	-120 deg ~ +60 deg
	C axis	---
	U axis	-160 deg ~ +160 deg
Gear Ratio	R Axis	100:1
	A Axis	200:1
	B Axis	120:1
	C Axis	---
	U Axis	100:1
Maximum speed	R axis	180 deg/s
	A axis	90 deg/s
	B axis	180 deg/s
	C axis	---
	U axis	180 deg/s
Weight	Approx 6.8kg	Approx 7.2kg

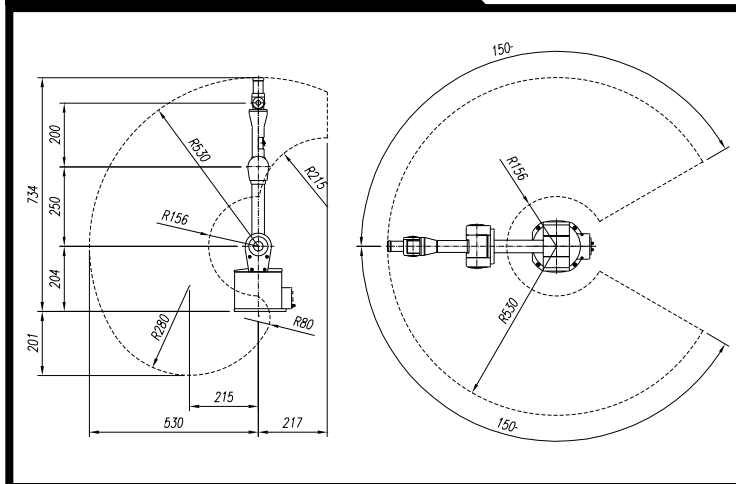
Electrical Specifications

Structure	Free standing, enclosed type
Dimensions (mm)	370(w) x 300(d) x 95(h)
Weight	About 6kg
Cooling System	Fan cooling
Ambient Temperature	During operation: 0 --- 40 deg During storage: -10 --- +60 deg
Relative Humidity	90% max. non-condensing
Primary Power	100-120VAC +/- 10%, single phase, 50/60Hz (230VAC single phase optionally available)
Rated Input Current	2.5A (6-8A fuse for 100AVC)
On-board Digital I/O	opto-isolated NPN type 16DI and 16DO (programmable as 24DI and 8 DO)
I/O terminal type	Phoenix spring cage terminal block
Expansion I/O Module	Up to 256DI and 256DO
Position Data	99 programmable positions
RT1 Com. Port	RS232C communication port for interfacing with RT1 (handheld robot terminal)
Host Com. Port	RS232C communication port for interfacing with PC for program loading using <i>WinFics</i> or PC-based control
E-Stop	Push-lock, dual-channel dry contact relay outputs type
Safety	3-position enable switch (ANSI/RIA R15.06-1999 and Canadian safety standards)
Robot and Controller Interconnection Cable	Motor power & sensor cable and encoder cable (1m) (by default)

Dimensions for 4 DOF



Dimensions for 5 DOF



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