Specifications- IR6$^+$ (B-2-A & B-2-B)

Industrial Articulated Robot Kinematic Trainer System

Introduction

Calculating kinematics is a cornerstone skill for robotics engineers.

Unfortunately, only traditional industrial robotic arm is available for training which does not have any access to firmware and thus the internal kinematics.

The **IR6+** is a full functioning industrial Articulated robot with complete access to internal firmware. This makes the **IR6+** an excellent robot kinematic learning platform. It can be used in its traditional roles of robot application trainer (such as pick-&-place)

Further, it is supplied with necessary functions and accessories such as academic curriculum, aids for conducting experiments, programming software with training, heavy duty table, pick & place kit, etc.

Industrial construction and latest industrial electronics ensure durability and long service life without obsolesce.

Versions Available

IR6+ Standard-

Hardware
- Industrial Articulated Manipulator
    - 20µm repeatability
    - AC Servo Motors
    - Absolute Encoders on axes
- Robot Controller
- heavy duty table
- Essential Toolkit

Software
- *MotionPerfect* V4
    - Basic
    - 3D Machine Simulation
    - Oscilloscope
- Training for Software
- Aids for academic Kinematic Experiments

IR6+ Advanced- Apart from all items from the standard version, following additional accessories are available with advanced version-

- Pick-&-Place kit Options
    - Pneumatic Suction Type
    - Pneumatic 2-finger gripper type
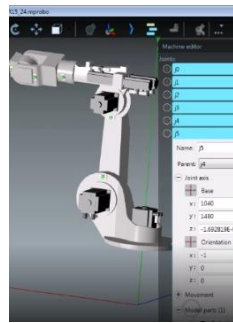
Options-

- Machine-Tending EoAT (End of the Arm Tooling) to tend your existing CNC machine
- Teach-Pendant Unit
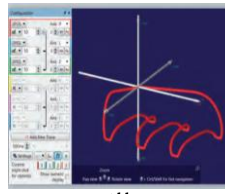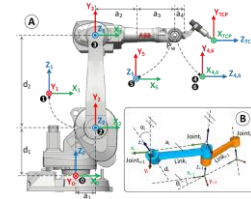- Electric, force-controlled gripper for soft objects
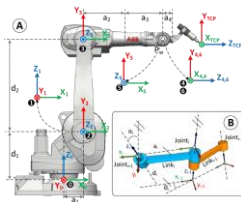
Features

Industrial Grade

3D Simulation

3D Oscilloscope

Academic Experiments

Applications

Kinematics Trainer

Machine Vision Assisted Robot Arm

Industrial Pick-&-Place & Machine Tending

Robotic Application Development

Mechatronics Lab

Computer Science / Electronics Lab
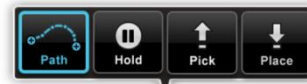
Small parts in Factories/Labs

Start-ups/Research Labs

Core Specifications- Manipulator

Item	Property	Value			
Payload	Maximum Payload	6kg			
Arm Length / Reach	Extended	730mm			
Repeatability & Max Speed	Axis	Range	Repeatability	Max Speed (Standard Load)	
	J1 (Base)	+/-170°	+/-0.02mm	450°/s	
	J2	-80° to +130°		315°/s	
	J3	-190° to +65°		370°/s	
	J4	+/-170°		450°/s	
	J5	+/-130°		470°/s	
	J6 (Wrist)	+/-360°		588°/s	
Physical	Net Weight	50kg			
	Controller	IR Separate Controller with 5m cabling			
	Robot Mounting	Table- Top/Celing			
	Environment	Temperature: 5-40°C; indoor Humidity: 10-80% (NC)			
Application Software	Software	MotionPerfect v4.0			
	System Requirements	Windows 10; Multi-core Processor, 4GB RAM, 1GB HDD space, Ethernet Port			

System Specifications
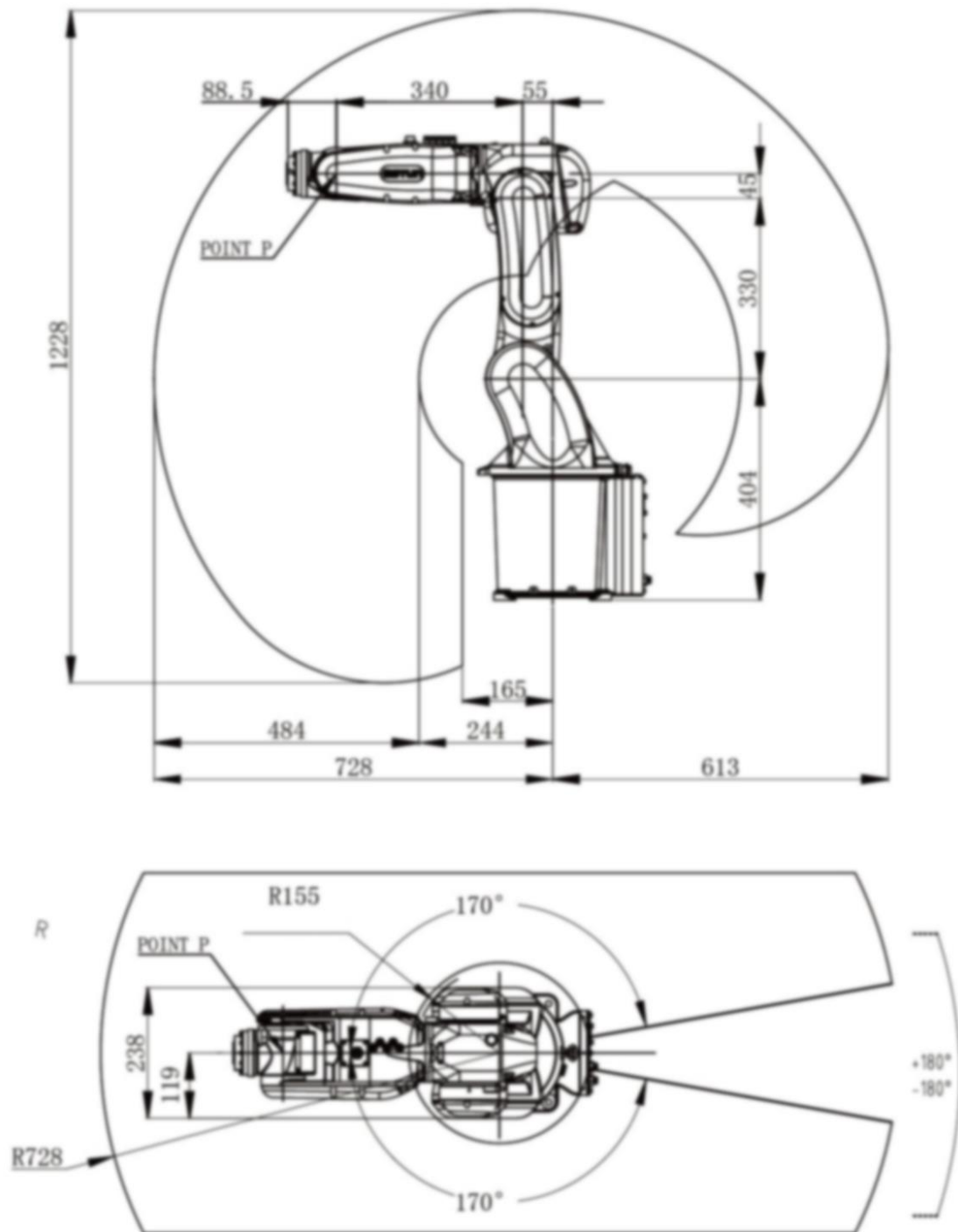
Item	Property	Value
Physical	Type	Table mounted
	Net Weight	125kg (including table, controller & manipulator)
	Environment	Temperature: 5-40°C; indoor Humidity: 10-80% (NC)
Other	Power Supply	Single power plug required- 230VAC, 25A with earthing
	Pneumatic Supply	2-6 bar

Notes-

1. A PC for running the application software is not a part of scope of supply.
2. End-user Training is typically organized at our partner location.

Manipulator Dimensions

- End