

IRB 360 FlexPicker™ Industrial Robot

Main Applications

Assembly
Material handling
Picking
Packing

Features

- High speed flexibility
- High capacity – up to 3 kg payload
- Top mounted design
- Hygienic design for wash down applications
- Superior tracking performance
- Integrated vision software

The IRB 360 FlexPicker™, is the SECOND GENERATION delta robot solution for precision pick and place applications. Its outstanding features are incredible speed, high payload, accuracy, reliability and ease of use.

The IRB 360 range has been extended to three models. The compact version has a small footprint of just 800 mm x 800 mm which enables valuable space to be kept to a minimum. It also allows it to be built into machines and production lines for a broad variety of packaging applications.

The standard version retains its working range of 1130 mm. The high payload version carries up to an impressive 3 kg but has the same reach as the standard. The robot has also been configured to enable easy cleaning and reduced maintenance. The theta axis incorporates a stainless variant robust enough to withstand wash-down cycles in the open food industry.



Complementing the new generation FlexPicker™ is ABB's proven PickMaster™ software that makes programming simple. The software enables modelling for applications and assists with the optimization of multiple robot installations.

The reliable, market leading IRC5 controller is also an integral part of the FlexPicker™ robot solution. The IRC5 with TrueMove™ and QuickMove™ ensures the highest speed together with path following facilities - enabling the robot to track fast moving conveyor belts with high accuracy. The IRC5 is also available in a panel-mounted version that offers substantial space savings and easy integration into machines and production lines.

IRB 360

Specification

Robot versions	Handling capacity	Remarks
IRB 360/1	1 kg	Standard, Wash-down, Stainless wash-down
IRB 360/3	3 kg	Standard, Wash-down, Stainless wash-down
IRB 360/800	1 kg	Standard, Wash-down
Supplementary load		
on upper arm	350 gram	
on lower arm	350 gram	
Number of axis		
robot manipulator	3 or 4	
Integrated signal supply	12 poles 50V, 250mA	
Integrated vacuum supply	Max. 7 bar / max vacuum -0,75 bar	

Performance

Position repeatability	0.1 mm
Angular repeatability	
Standard and stainless wash-down	0.4°
Wash-down	1.5°

Working range	IRB 360/1 and IRB 360/3	IRB 360/800
Diameter	1130 mm (967 mm)	800 mm
Height	250 mm (300 mm)	200 mm
Rotation	Unlimited	Unlimited
Max speed		10 m/s
Max acceleration (approx.) 1 kg version		150 m/s ²
Max acceleration (approx.) 3 kg version		100 m/s ²

Typical robot cycle times 1 kg version

Cycle [mm]	Payload [kg]	Cycle time [s]
25/305/25	0.1	0.30
25/305/25	1.0	0.36
90/400/90	0.1	0.44
90/400/90	1.0	0.51

Typical robot cycle times 3 kg version

Cycle [mm]	Payload [kg]	Cycle time [s]
25/305/25	3	0.54
90/400/90	3	0.7

Cycle times including 35 ms activation for picking up and 35 ms activation time for placing
Product and 90° rotation of axis 4

Conveyor tracking*

Constant conveyor speed [mm/s]	Conveyor speed	Repeatability [mm]
200	1.0	
350-750	1.5	
800-1400	5.0	

Start/stop conveyor [mm/s]	Repeatability [mm]
500 (start/stop in 0.2 sec)	3.5

* Typical values measured with PickMaster & IRC5

Electrical Connections

Supply voltage	200-600 V, 50/60 Hz
Rated power	
Transformer rating	7.2 kVA
Power consumption at max load	
Type of Movement	IRB 360/1
Typical pick - and - place cycle with 1 kg payload	0.477 kW

PHYSICAL

Robot mounting	Inverted
Dimensions	
Robot incl. upper arms	950 x 1050 mm
Weight	
IRB 360 manipulator	120 kg
IRB 360 manipulator stainless	145 kg

Environment

Degree of protection	
Standard	IP56
Clean Room	IP54
Wash-down, Stainless	IP69K
Ambient temperature	
IRB 360 manipulator	±0°C to +45°C
Relative humidity	Max. 95 %
Noise level	< 70 dB(A)
Safety	Double circuits with supervision, emergency stops and safety functions, 3-position enabling device
Emission	EMC/EMI shielded
Options	Clean Room, class 5 (certified by IPA) Stainless Clean Room, class 5 (certified by IPA)



Data and dimensions may be changed without notice

Working range

