

IRB 360 FlexPicker™

Main Applications

Assembly
Material handling
Picking
Packing

Features

- High speed flexibility
- High capacity – up to 8 kg payload
- Hygienic design for washdown applications
- Superior tracking performance
- Integrated vision software
- Integrated control of indexing belts

ABB's IRB 360 family of robots, more commonly known as the FlexPicker, can handle payloads of between 1 kg and 8 kg. Each of the family's variants is capable of the fastest picking applications and have been optimized for packing applications. The robot has outstanding motion performance with the shortest cycle times, precision accuracy and high payloads.

Whether operating at high speeds, in narrow or large spaces (maximum 1,600 mm), the IRB 360's stainless steel design allows for easy clean up and sterilization.



A stainless option for food handling applications is IP69K validated so that it can be washed down with industrial detergents and high pressure hot water. This variant is also designed with smooth and easy to rinse-off surfaces and lubricant free joints that are resistant to most corrosives.

Setting up an application becomes easy using PickMaster™ software which has evolved into an invaluable help for integrators and users of IRB 360. It simplifies vision configuration and offers the application tools needed for efficient high speed picking.

The reliable, market leading IRC 5 controller is also an integral part of the FlexPicker robot family. The IRC 5 with TrueMove™ and QuickMove™ guarantees high speeds and path following facilities which allows these robots to track fast moving conveyor belts with extreme accuracy. The IRC 5 also is 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	Diameter	No. Axes
IRB 360-1/800	1 kg	800 mm	4
IRB 360-1/1130 *	1 kg	1130 mm	3/4
IRB 360-3/1130	3 kg	1130 mm	3/4
IRB 360-1/1600	1 kg	1600 mm	4
IRB 360-6/1600	6 kg	1600 mm	4
IRB 360-8/1130	8 kg	1130 mm	4

Supplementary load

on upper arm	350 gram
on lower arm	350 gram

Integrated signal supply 12 poles 50V, 250mA

Integrated vacuum supply Max. 7 bar/max vacuum 0.75 bar

* Tested by IPA, all axes

Physical

Robot mounting	Inverted
Weight	120 kg (Standard & Wash-down) 145 kg (Stainless Wash-down)

Performance

Position repeatability 0.1 mm

Angular repeatability

Standard & stainless axis 4	0.4°
Wash-down axis 4	1.5°

Cycle time 0.1 kg 1 kg 3 kg 6kg 8 kg

25/305/25 (mm)

IRB 360-1/1130 0.30 0.36

IRB 360-3/1130 0.40 0.40 0.52

IRB 360-8/1130 0.38 0.42 0.60

IRB 360-1/1600 0.35 0.40

IRB 360-6/1600 0.43 0.48 0,60

90/400/90 (mm)

IRB 360-1/1130 0.44 0.51

IRB 360-3/1130 0.60 0,60 0.75

IRB 360-8/1130 0.55 0.65 0.92

IRB 360-1/1600 0.50 0.54

IRB 360-6/1600 0,57 0.63 0,80

* Cycle times for IRB 360-1/800 differ in cycle time. Please use Robot-Studio or real cycle time tests to verify actual cycle time.

Conveyor tracking**

Constant conveyor speed	Conveyor speed
speed [mm/s]	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
Indexing conveyor control	Repeatability [mm]
3.5 g acceleration/deceleration	2

** The tracking performance is measured under real conditions with IRB 360-1/1130 and PickMaster. The figures may vary depending on the actual robot max. speed and acceleration performance in relation to what the application demands.

Electrical Connections

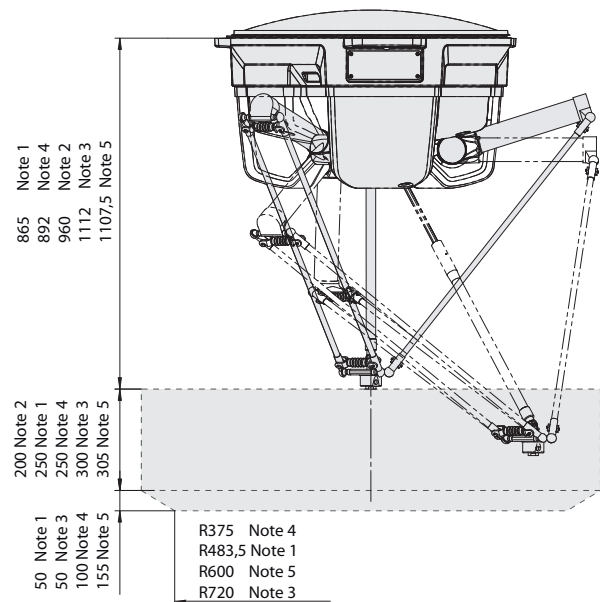
Supply voltage	200-600 V, 60 Hz
Rated power	
Transformer rating	7.2 kVA
Power consumption at max load	
Type of Movement	IRB 360/1
Typical pick - and - place cycle with 1 kg payload	0.477 kW

Environment

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
Clean Room options axis 4	Standard - Clean room 7 Wash-down- Clean room 5 (certified by IPA) Stainless - Clean Room class 5 (certified by IPA)
Option	Collision detection

Data and dimensions may be changed without notice

Working range and physical dimensions



Note 1: IRB 360-1/1130 and IRB 360-3/1130
Note 2: IRB 360-1/800
Note 3: IRB 360-1/1600
Note 4: IRB 360-8/1130
Note 5: IRB 360-6/1600