ROBOTICS

Product specification

IRB 360



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Product specification

IRB 360-1/1130
IRB 360-3/1130
IRB 360-8/1130
IRB 360-1/1600
IRB 360-6/1600

OmniCore

Document ID: 3HAC079010-001

Revision: F

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Overview of this specification

About this product specification

This product specification describes the performance of the manipulator or a complete family of manipulators in terms of:

- The structure and dimensional prints
- The fulfilment of standards, safety, and operating equipment
- The load diagrams, mounting or extra equipment, the motion, and the robot reach
- The specification of available variants and options

The specification covers the manipulator using the OmniCore controller.

Usage

Product specifications are used to find data and performance about the product, for example to decide which product to buy. How to handle the product is described in the product manual.

The specification is intended for:

- Product managers and product personnel
- Sales and marketing personnel
- Order and customer service personnel
- Integrators and customers

References

Reference	Document ID
Product specification - OmniCore C line RW 7	*3HAC065034-001*
Product manual - IRB 360	*3HAC030005-001*
Product specification - Robot user documentation, OmniCore with RobotWare 7	*3HAC065042-001*



Tip

All documents can be found via ABB Robotics One, *https://one.robotics.abb.com/en/knowledge-hub*.

Revisions

Revision	Description
A	First edition.
B	Published in release 21C. The following updates are done in this revision: • Text regarding fastener quality is updated.
C	Published in release 24B. The following updates are done in this revision: • Added Mains cable [3203-x]. • Added Stainless [3328-3].

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Continued

Revision	Description
D	Published in release 24D. The following updates are done in this revision: • The option for inverted mounting is phased out. • Added missing acceleration data for IRB 360-1/1600. • Minor corrections. • Updated options *[3203-X] Mains cable*.
E	Published in release R25.2. The following updates are done in this revision: • Company name updated to reflect current legal entities. • Updated portal name from myABB to ABB Robotics One.
F	Published in release R26.1. The following updates are done in this revision: • Protection class Wash-Down Stainless added. • Company name updated to reflect current legal entities. • Added support for OmniCore C30 Type B and RobotWare 8.

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1 Description

1.1 Structure

1.1.1 Introduction to structure

Robot family

The IRB 360 is a high performance industrial robot from ABB. Based on the famous IRB 340 robot family in a modular design. It is specially designed for industries with a great need for flexible automation, such as pick and place operations and assembly.The IRB 360 is extremely powerful with an acceleration of up to 10 g's, and a handling capacity of up to 8 kg. Thanks to optimized drive-chains and ABB's patented QuickMove™ functions it is the fastest robot in its class, up to 200 picks per minute (defined by cycle and load).

Operating system

The robot is equipped with the OmniCore C30 controller and robot control software, RobotWare. RobotWare supports every aspect of the robot system, such as motion control, development and execution of application programs, communication etc. See *Operating manual - OmniCore*.

Safety

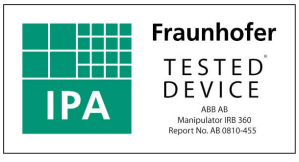
Safety standards valid for complete robot, manipulator and controller.

Additional functionality

For additional functionality, the robot can be equipped with optional software for application support - communication features - network communication - and advanced functions such as multi-tasking, sensor control, etc. For a complete description on optional software, see *Product specification - OmniCore C line RW 7*.

PickMaster® Twin is a PC and robot controller based application software for vision guided picking of random flow products on the fly. It is providing a task-oriented programming and executions of fast pick and place operations performed up to 10 robots, see *Product specification - PickMaster® Twin*.

Clean room robots



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The clean room robots are classified for room class 5 according to ISO 14644-1.

For options not selectable together with Clean Room, see *Specification of variants and options on page 41*.

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1.1.1 Introduction to structure
Continued

Stainless Wash Down Robots

The stainless version of the wash down robot has a stainless steel base, and all other main parts, such as delta plate, arm system and telescopic shaft made of stainless steel/composites.

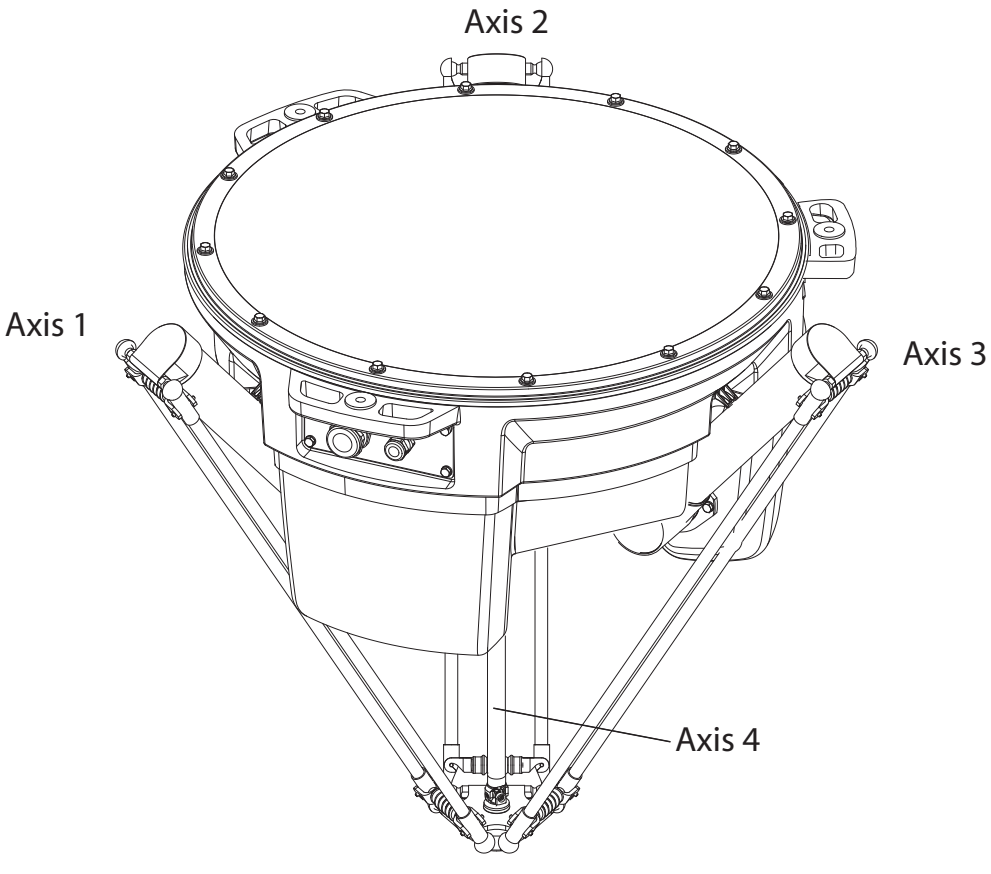
The stainless version is verified against the following detergents:

- Strongly alkaline: Topaz MD4 (3%)
- Strongly alkaline with chloride: Topaz CL2 (3%)
- Strongly acid (for removing calcium oxide): Topaz AC3 (3%)
- Acid (for disinfection): P3-topactive DES (1%)

Washdown statement

All components for Stainless WashDown protection class have been found to comply with USDA/FDA, Code of Federal Regulations Title 21 regarding choice of material, material behavior, and sanitary operations, as per 31 December 2007. Changes in the USDA/FDA regulations will be incorporated in the specification when appropriate. (Relevant chapters of CFR are part 100-199). The intended use is incidental food contact. Any gripper to be used must be investigated separately.

Manipulator axes



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1.1.2 Different robot variants

Robot variants

The following standard robot variants are available:

Robot variant	Handling capacity (kg)
IRB 360-1/1130	1 kg
IRB 360-3/1130	3 kg
IRB 360-8/1130	8 kg
IRB 360-1/1600	1 kg
IRB 360-6/1600	6 kg

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1.1.3 Definition of version designation

Weight

Manipulator	Weight
Standard Wash Down	120 kg
Stainless WashDown	145 kg

Other technical data

Data	Description	Note
Airborne noise level	The sound pressure level outside the working space	< 70 dB (A) Leq (acc. to Machinery directive 2006/42/EG)

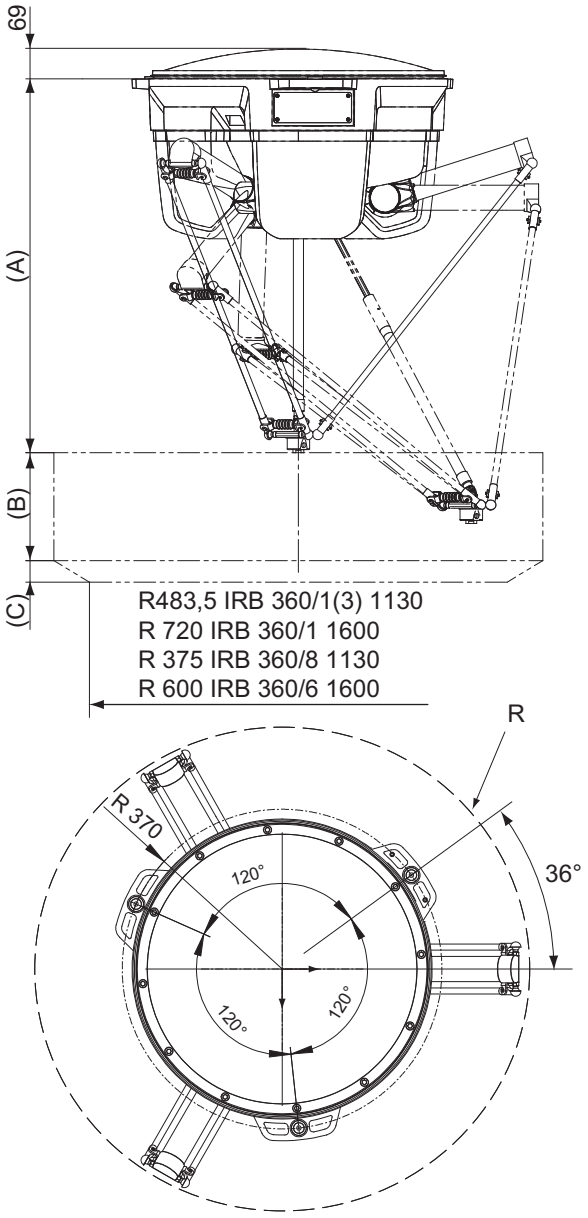
Power consumption at max load

Type of movement	IRB 360/1
Typical pick - and - place cycle with 1 kg payload	0.477 kW

IRB 360-1, IRB 360-3, 360-8, 360-1/800, IRB 360-1/1600 and IRB 360-6/1600

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Robot variant	A	B	C	R
IRB 360-1/1130	865	250	50	565
IRB 360-3/1130	865	250	50	565
IRB 360-8/1130	892	250	100	565
IRB 360-1/1600	1112	300	50	800
IRB 360-6/1600	1107.5	305	155	800

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1.2 Safety standards

1.2.1 Applicable standards

General

This product is designed according to the global product standard ISO 10218-1:2025, *Robots for industrial environments - Safety requirements - Part 1 Robots*, In case of deviation from ISO 10218-1:2025, these are listed in the declaration of incorporation. The declaration of incorporation is part of the delivery.

Robot standards

Standard	Description
ISO 9283	Manipulating industrial robots – Performance criteria and related test methods
ISO 9787	Robots and robotic devices – Coordinate systems and motion nomenclatures
ISO 9946	Manipulating industrial robots – Presentation of characteristics

Other standards used in design

Standard	Description
ISO 9283	Manipulating industrial robots - Performance criteria and related test methods
ISO 9787	Robots and robotic devices -- Coordinate systems and motion nomenclatures
ISO 9946	Manipulating industrial robots - Presentation of characteristics
IEC 61000-6-2	Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity standard for industrial environments
IEC 61000-6-4	Electromagnetic compatibility (EMC) – Part 6-4: Generic standards – Emission standard for industrial environments
IEC 61326-3-1	Immunity requirements for safety-related systems and for equipment intended to perform safety-related functions (functional safety) – General industrial applications

Region specific standards

Standard	Description
UL 1740 (option) CSA Z434 (option)	Standards For Safety - Robots and Robotic Equipment Industrial robots and robot Systems - General safety requirements Valid for USA and Canada.

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1.3 Installation

1.3.1 Introduction to installation

General

Depending on robot variant, an end effector with a max weight of 1 to 8 kg including payload, can be mounted on the robot mounting flange. See *Load diagrams on page 21*. Other equipment, such as a hose, can be mounted on the upper and lower arm, max weight 300g/m. See *Hose set mounted on the manipulator arms on page 29*.

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1.3.2 Operating requirements

Protection standards

Description	Protection standard IEC529
Standard	IP54
Wash-Down	IP67
Wash-Down Stainless (WDS)	IP69K
Clean Room, Stainless Clean Room	IP54

Clean room standards

Description	Protection standard DIN ISO 14644
Standard	Class 7
Clean Room	Class 5
Stainless Clean Room	Class 5

Explosive environments

The robot must not be located or operated in an explosive environment.

Ambient temperature

Description	Standard/Option	Temperature
Manipulator during operation	Standard	0°C [i] (+32°F) to +45°C (+113°F)
For the controller	Standard/Option	*Product specification - OmniCore C line RW 7*
Complete robot during transportation and storage	Standard	-25°C (-13°F) to +55°C (+131°F)

[i] At low environmental temperature < 10° C is, as with any other machine, a warm-up phase recommended to be run with the robot. Below 5° C this warm-up phase is mandatory. Otherwise there is a risk that the robot stops or run with lower performance due to temperature dependent oil- and grease viscosity.

Relative humidity

Description	Relative humidity
Complete robot during transportation and storage	Max. 95% at constant temperature
Complete robot during operation	Max. 95% at constant temperature

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1.3.3 Mounting the manipulator

General

Maximum load in relation to the base coordinate system. See Figure below.

Robot version IRB 360-1/800, IRB 360-1/1130, IRB 360-1/1600, IRB 360-3/1130

Force N	Max. load in operation
Fx	±330 N
Fy	±260 N
Fz	-1500 ±170 N

Torque Nm	Max. load in operation
Mx	±200 Nm
My	±230 Nm
Mz	±100 Nm

Robot version IRB 360-8/1130, IRB 360-6/1600

Force N	Max. load in operation
Fx	±550 N
Fy	±500 N
Fz	-1500 ±460 N

Torque Nm	Max. load in operation
Mx	±380 Nm
My	±440 Nm
Mz	±180 Nm

Robot frame is not included in the delivery.

Stiffness of robot frame

The stiffness of the robot frame must be designed to minimize the influence on the dynamic behavior of the robot. It is recommended that a frame with a lowest natural frequency (with the robot mounted in the frame) higher than 17 Hz is used for robot versions IRB 360-1/1130, IRB 360-3/1130, IRB 360-1/1600 and a frame with a lowest natural frequency higher than 40 Hz is used for robot version IRB 360-8/1130, IRB 360-6/1600. TuneServo can be used for adapting the robot tuning to a non-optimal foundation.

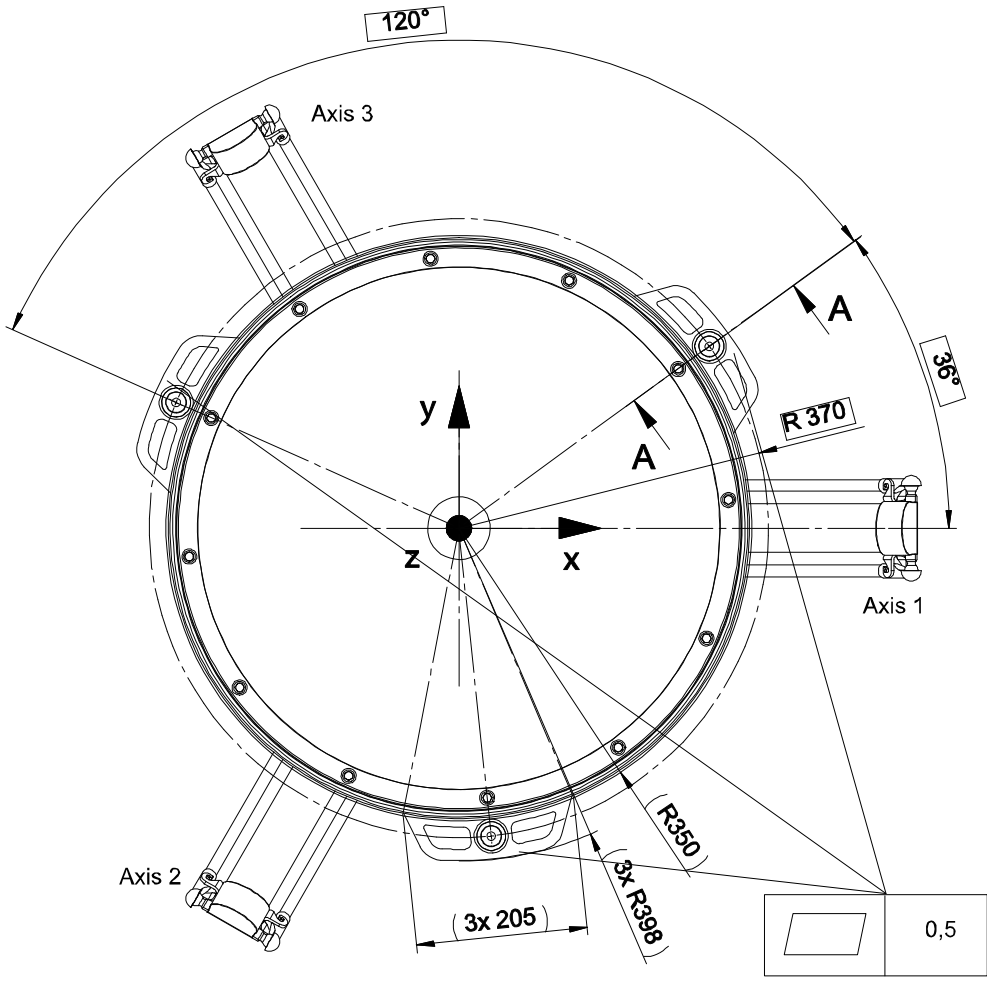
Note

The working space is shown in the first figure in *Robot motion on page 34*.

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1.3.3 Mounting the manipulator
Continued



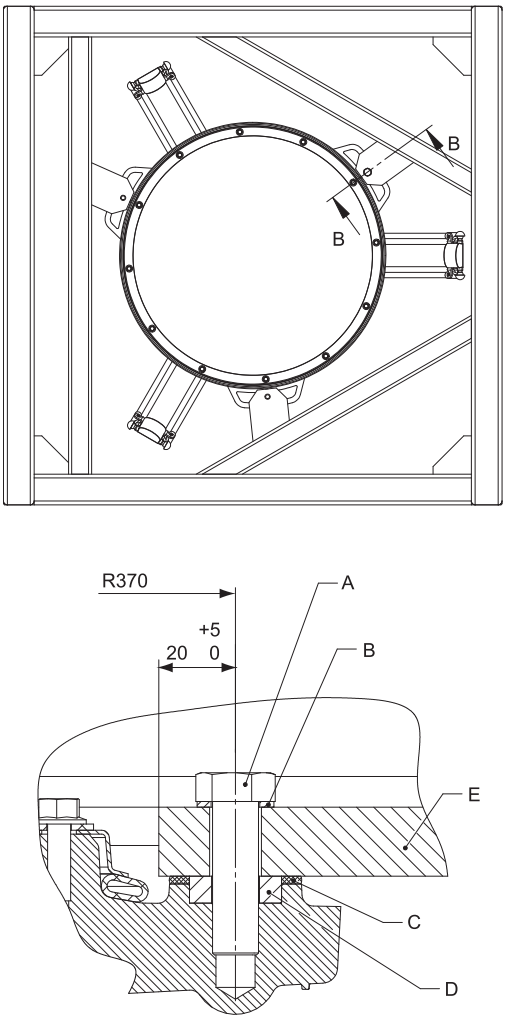
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The three support points of the manipulator base box shall be mounted against three flat surfaces within the specification above. Shims is used if necessary.

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Fastening the robot



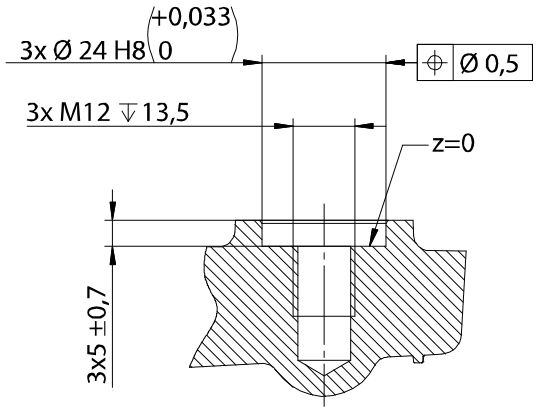
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Position	Description
A	M12 screw
B	Bonded seal washer, rubber/metal, if not a waterproof joint is required a plain washer can be used
C	Washer, EPDM-rubber, compressed 50%, If no need for waterproof joint is required you can disregard the rubber washer.
D	Spacer, metal
E	Robot frame

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1.3.3 Mounting the manipulator
Continued



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Recommended screws for fastening the robot to the frame	M12 x (50) 8.8 screw with yield strength 640 N/mm2 or M12 x (50) screw A2-70 with yield strength 450N/mm2 The length of the screws depend on the design of the robot frame.
Torque value	70 Nm

Detection of collisions

The IRB 360 has a basic feature that can detect a collision. This is a system that detects divergence between calculated and actual motor torques. The controller can also stop the robot if load parameters are defined incorrectly, due to that the moment of the torque deviates from the calculated. An advanced option that includes the possibility to manually setting parameters is called *Collision Detection*.

For more detailed information see *Product specification - OmniCore C line RW 7*.

Fastener quality

When fitting tools on the tool flange, only use screws with quality 12.9. For other equipment use suitable screws and tightening torque for your application.

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1.4 Load diagrams

1.4.1 Introduction to load diagrams

General



WARNING

It is very important to always define correct actual load data and correct payload of the robot. Incorrect definitions of load data can result in overloading of the robot.

If incorrect load data is used, and/or if loads outside the load diagram are used, the following parts can be damaged due to overload:

- motors
- gearboxes
- mechanical structure



WARNING

Robots running with incorrect load data and/or with loads outside the load diagram, will not be covered by robot warranty.

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1.4.2 Load diagrams

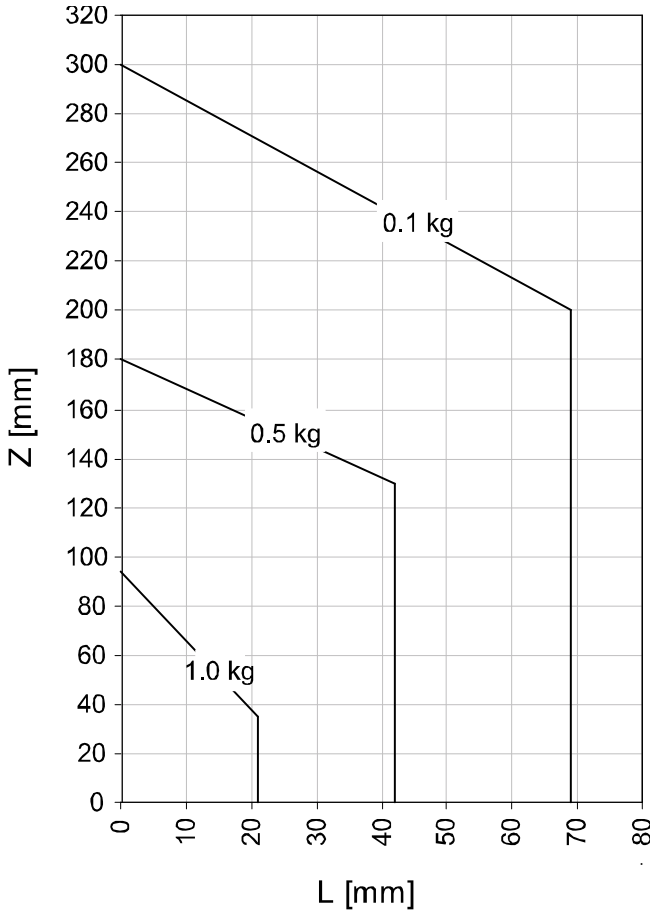
Note

The weight permitted for loads includes grippers etc.

The data types `loaddata` and `tooldata` with moment of inertia must be used!

IRB360-1/1130, IRB 360-1/1600 and IRB 360-1/800

Loads 0.1 kg, 0.5 kg and 1.0 kg:



xx0900000416

Load diagram above is valid for $J_{0\ zz}$ from 0-0.0018 kgm^2.

	Description
Z	See the above diagram and the coordinate system in *Product specification - OmniCore C line RW 7*.
L	Distance in X-Y plane from Z-axis to the mass center of gravity of the load.
`tooldata`	Weight of the gripper (kg). The center of gravity of the gripper (mm). The moment of inertia of the gripper (kgm^2). No value or wrong value may damage the robot. For more information see *Technical reference manual - RAPID Instructions, Functions and Data types*

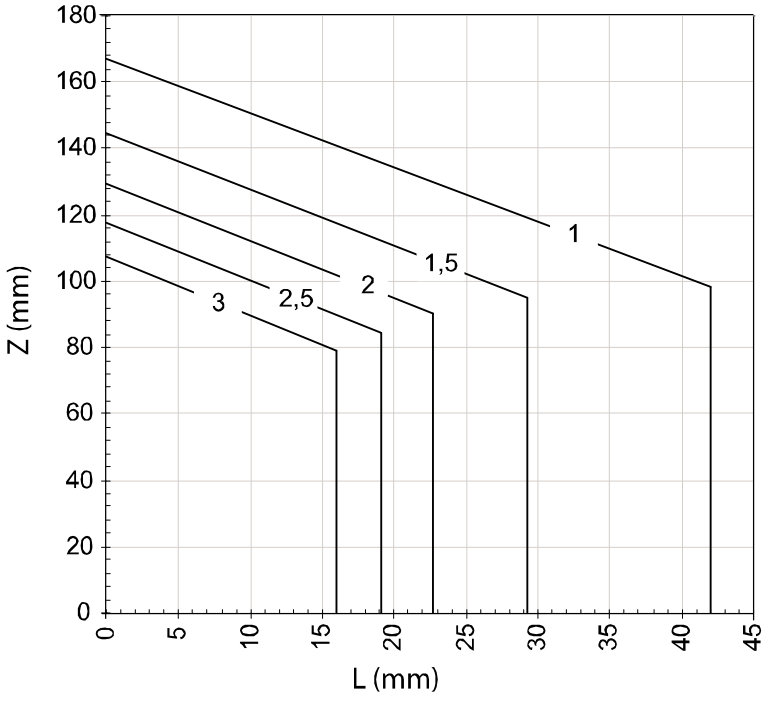
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	Description
loaddata	Weight of the product (kg). The center of gravity of the product (mm). The moment of inertia of the product (kgm^2). No value or wrong value may damage the robot. For more information see *Technical reference manual - RAPID Instructions, Functions and Data types*
	Max allowed inertia when L = 0, $J_{0\ zz}$= 0.012 kgm^2. For large off-sets in z-direction some combinations of J_o and movement of robot requires use of RAPID commands AccSet and/or TuneServo to minimize vibration of tool. This applies for limited inherent gripper stiffness and the backlash of the picked load, for example a shaking bag. **Note** Best possible performance of the IRB 360 is achieved when the gripper's center of gravity is close to axis 4 (L= 0 mm in load diagram). J_o=own moment of inertia of the total handle weight.

IRB360-3/1130

Load 1.0 kg - 3.0 kg



xx0900000419

Load diagram above is valid for $J_{0\ zz}$ from 0-0.0212 kgm^2.

	Description
Z	See the above diagram and the coordinate system in *Product specification - OmniCore C line RW 7*.
L	Distance in X-Y plane from Z-axis to the mass center of gravity of the load.

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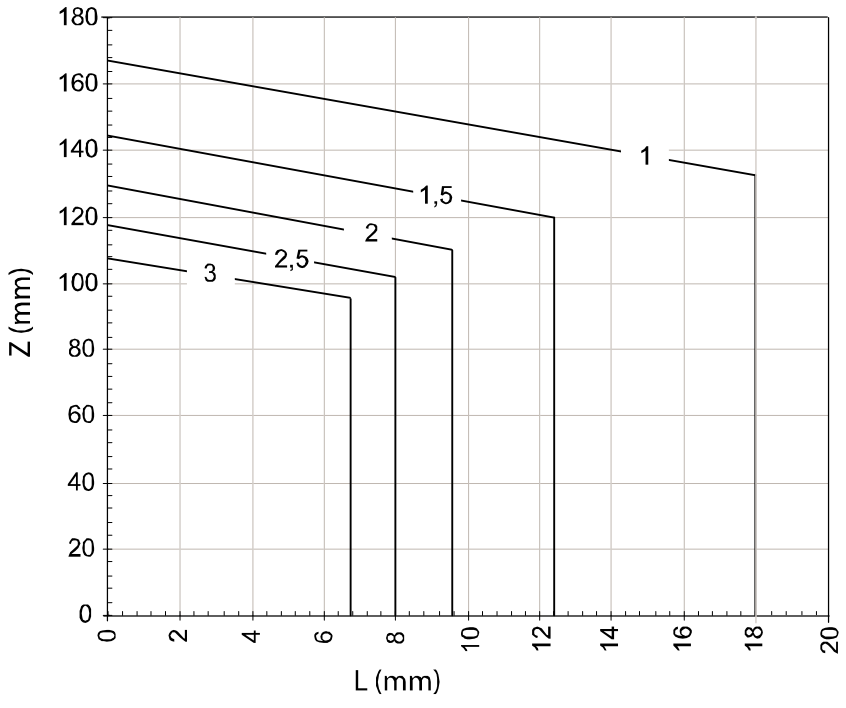
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1.4.2 Load diagrams

Continued

	Description
`tooldata`	Weight of the gripper (kg). The center of gravity of the gripper (mm). The moment of inertia of the gripper (kgm^2). No value or wrong value may damage the robot. For more information see *Technical reference manual - RAPID Instructions, Functions and Data types*
`loaddata`	Weight of the product (kg). The center of gravity of the product (mm). The moment of inertia of the product (kgm^2). No value or wrong value may damage the robot. For more information see *Technical reference manual - RAPID Instructions, Functions and Data types*
	Max. allowed mass moment of inertia is $J_{o\ zz}$ = 0.055 kgm^2. For increasing values of $J_{o\ zz}$ the allowed L-offset of the center of gravity decreases linearly from the values in load diagrams down to zero. For an example of high inertia see diagram on next page. For large off-sets in z-direction some combinations of J_o and movement of robot requires use of RAPID commands `AccSet` and/or `TuneServo` to minimize vibration of tool. This applies for limited inherent gripper stiffness and the backlash of the picked load, for example a shaking bag. **Note** Best possible performance of the IRB 360 is achieved when the gripper's center of gravity is close to axis 4 (L= 0 mm in load diagram). J_o=own moment of inertia of the total handle weight.

Figure below shows load diagrams for $J_{o\ zz}$ = 0.04 kgm^2.



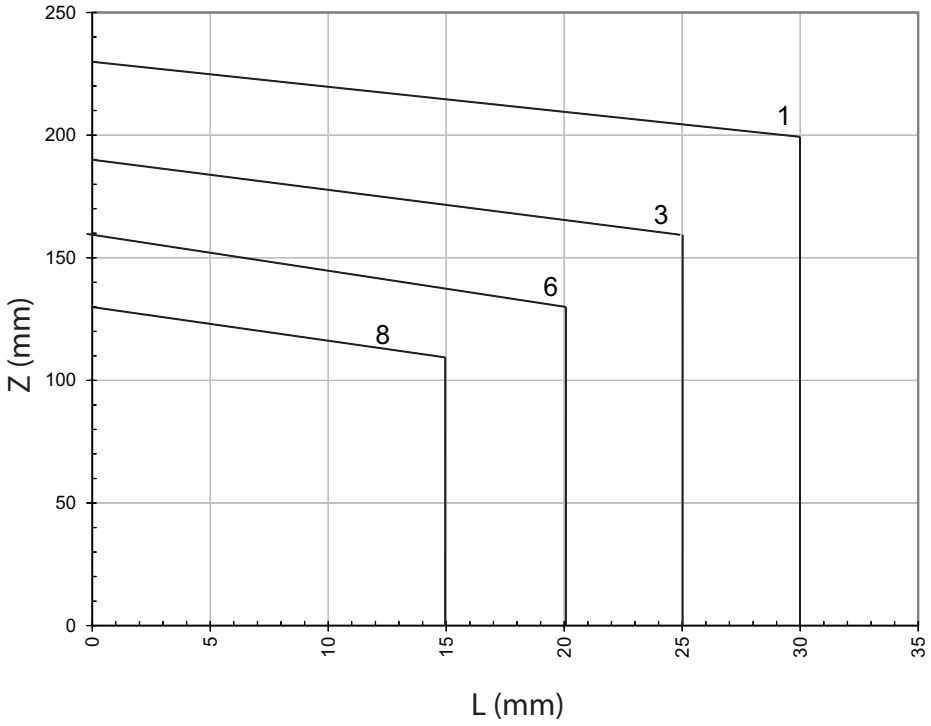
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IRB360-8/1130

Load 1.0 kg - 8.0 kg



xx1200001391

Load diagram above is valid for $J_{0\ zz}$ from 0-0.1 kgm^2.

	Description
Z	See the above diagram and the coordinate system in *Product specification - OmniCore C line RW 7*.
L	Distance in X-Y plane from Z-axis to the mass center of gravity of the load.
`tooldata`	Weight of the gripper (kg). The center of gravity of the gripper (mm). The moment of inertia of the gripper (kgm^2). No value or wrong value may damage the robot. For more information see *Technical reference manual - RAPID Instructions, Functions and Data types*
`loaddata`	Weight of the product (kg). The center of gravity of the product (mm). The moment of inertia of the product (kgm^2). No value or wrong value may damage the robot. For more information see *Technical reference manual - RAPID Instructions, Functions and Data types*

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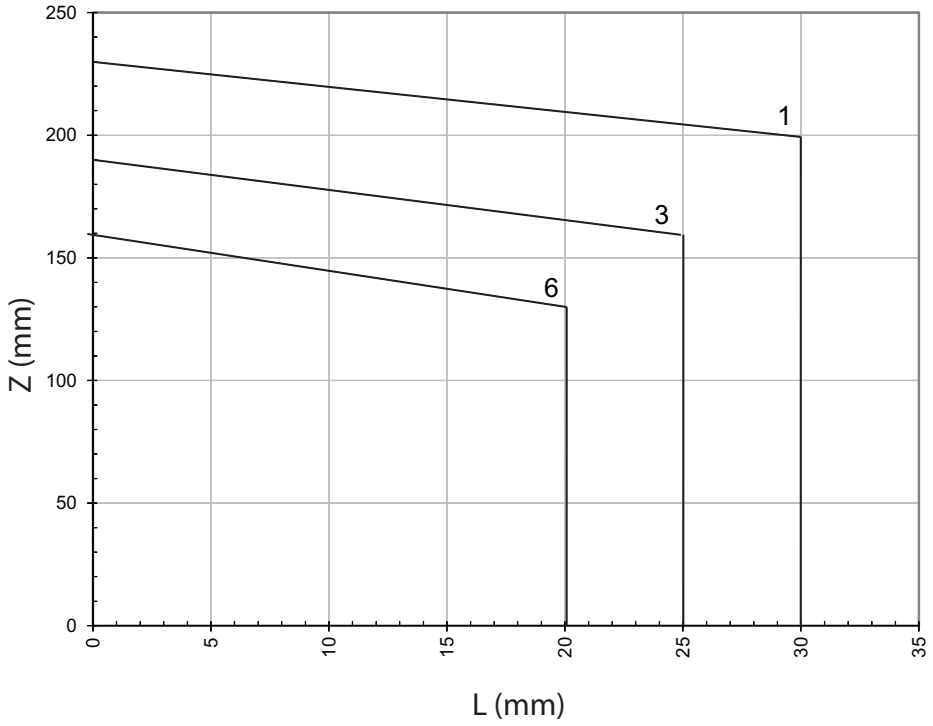
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1.4.2 Load diagrams
Continued

	Description
	Max. allowed mass moment of inertia is $J_{o\ zz}$ = 0.15 kgm^2. For large off-sets in z-direction some combinations of J_o and movement of robot requires use of RAPID commands `AccSet` and/or `TuneServo` to minimize vibration of tool. This applies for limited inherent gripper stiffness and the backlash of the picked load, for example a shaking bag. **Note** Best possible performance of the IRB 360 is achieved when the gripper's center of gravity is close to axis 4 (L= 0 mm in load diagram). J_o=own moment of inertia of the total handle weight.

IRB360-6/1600

Load 1.0 kg - 6.0 kg



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Load diagram above is valid for $J_{0\ zz}$ from 0-0.1 kgm^2.

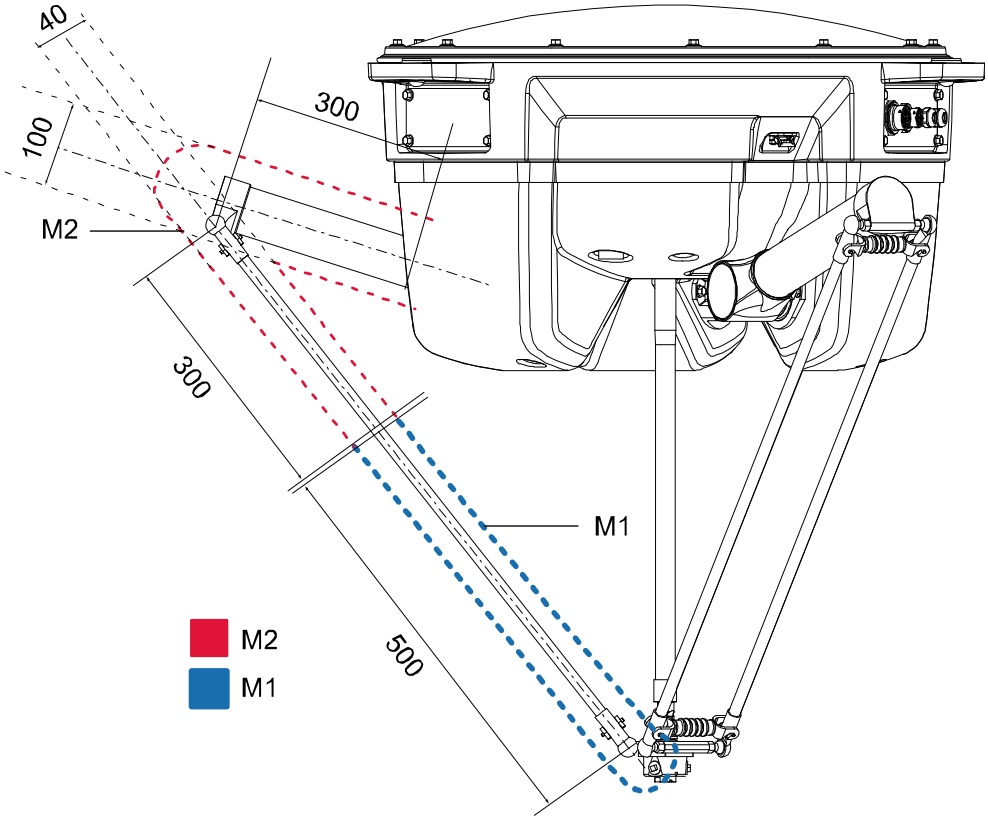
	Description
Z	See the above diagram and the coordinate system in *Product specification - OmniCore C line RW 7*.
L	Distance in X-Y plane from Z-axis to the mass center of gravity of the load.
`tooldata`	Weight of the gripper (kg). The center of gravity of the gripper (mm). The moment of inertia of the gripper (kgm^2). No value or wrong value may damage the robot. For more information see *Technical reference manual - RAPID Instructions, Functions and Data types*

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	Description
`loaddata`	Weight of the product (kg). The center of gravity of the product (mm). The moment of inertia of the product (kgm^2). No value or wrong value may damage the robot. For more information see *Technical reference manual - RAPID Instructions, Functions and Data types*
	Max. allowed mass moment of inertia is $J_{o\ zz}$ = 0.15 kgm^2. For large off-sets in z-direction some combinations of J_o and movement of robot requires use of RAPID commands `AccSet` and/or `TuneServo` to minimize vibration of tool. This applies for limited inherent gripper stiffness and the backlash of the picked load, for example a shaking bag. **Note** Best possible performance of the IRB 360 is achieved when the gripper's center of gravity is close to axis 4 (L= 0 mm in load diagram). J_o=own moment of inertia of the total handle weight.

Extra equipment mounted on the manipulator arms



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M1	Limitation lines for center of gravity for M1
M2	Limitation lines for center of gravity for M2

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1.4.2 Load diagrams
Continued

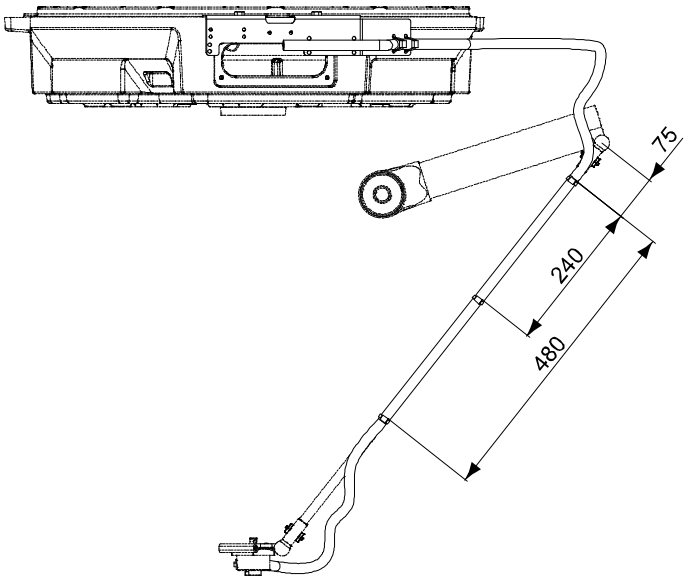
The robot is tuned for the Vacuum system or medium sized hose (options). If one of these options is used no extra load should be defined. If neither the vacuum system nor the medium sized hose is chosen:

- and both M1 and M2 are less than 175 g each, the robot can run with full performance and no extra load should be defined.
- and M1 is more than 175 g, an extra load should be defined in the load definition. The extra load should be M1-175 g. Maximum extra load allowed is 175 g (M1 max = 350g).
- and M2 is more than 175 g, an extra load should be defined in the load definition. The extra load should be M2-175 g. Maximum extra load allowed is 175 g (M2 max = 350 g).
- The extra load should be defined in TCP 0

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1.4.3 Hose set mounted on the manipulator arms

General

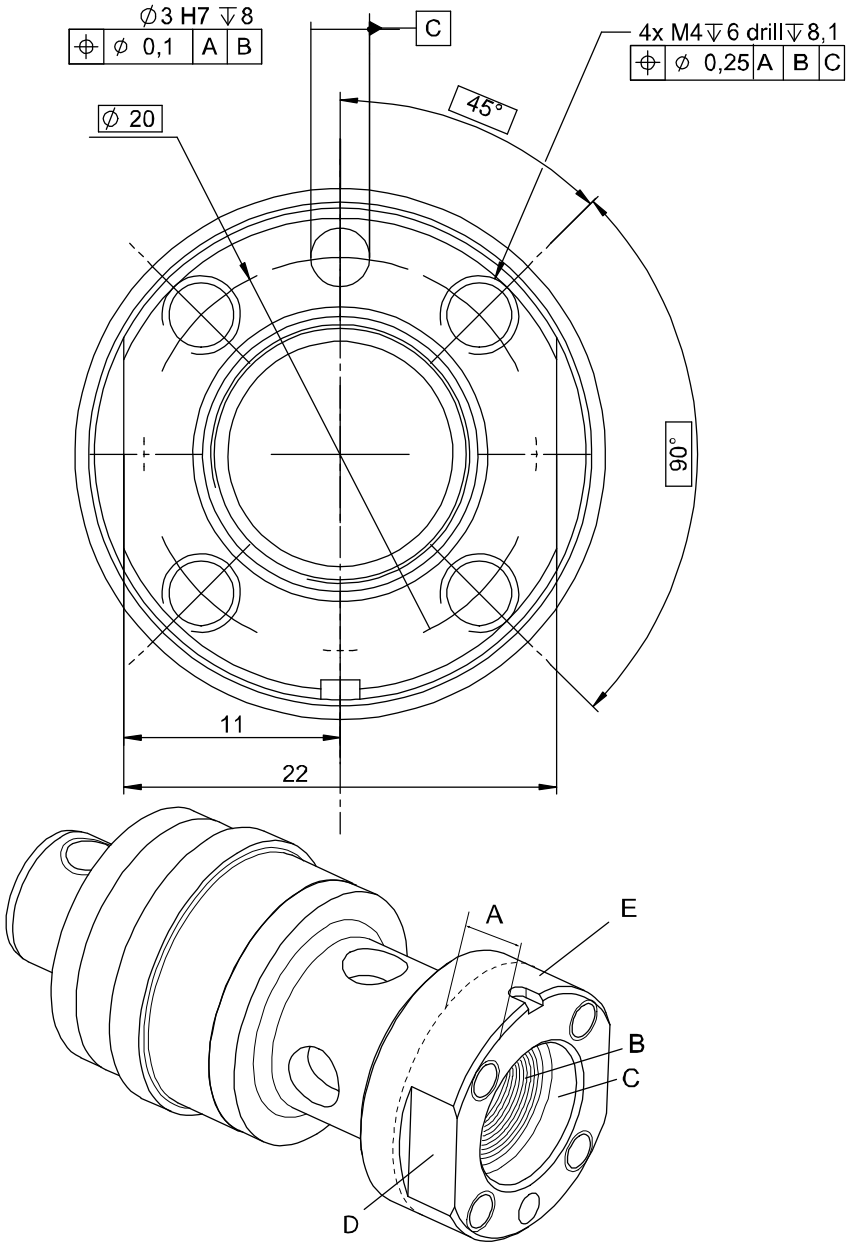


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1.4.4 Mechanical interface

IRB 360-1/1130, IRB 360-3/1130, IRB 360-1/1600



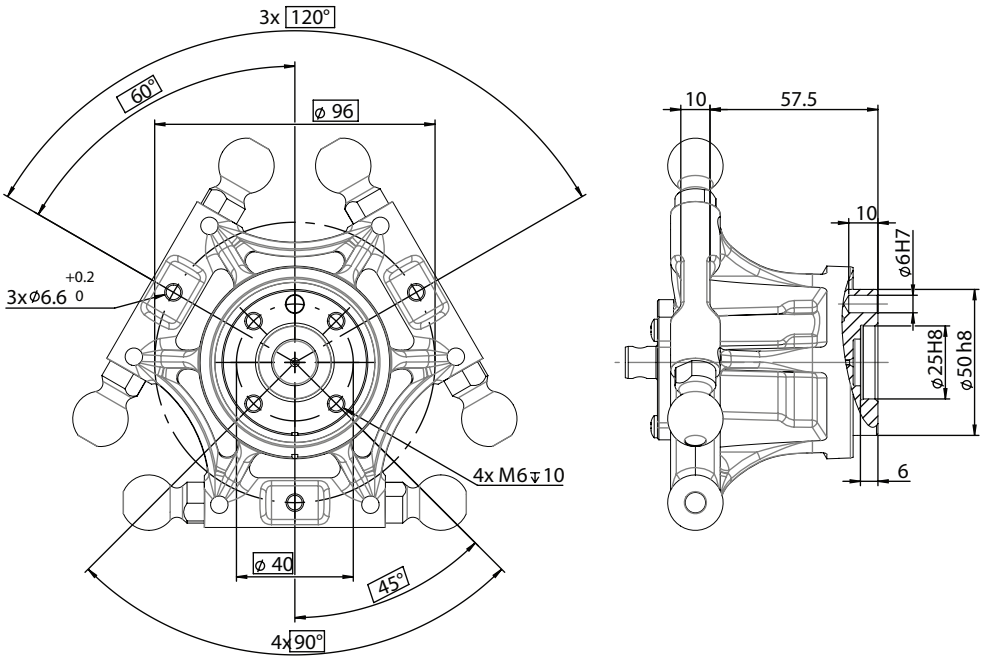
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Position	Description
A	Free space, depth 6 mm
B	R1/4”
C	Ø 14 H8 depth 4 mm
D	Key grip = width 22 mm height 5,5 mm
E	Ø 25 h8 depth 6 mm

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IRB 360-8/1130, IRB 360-6/1600



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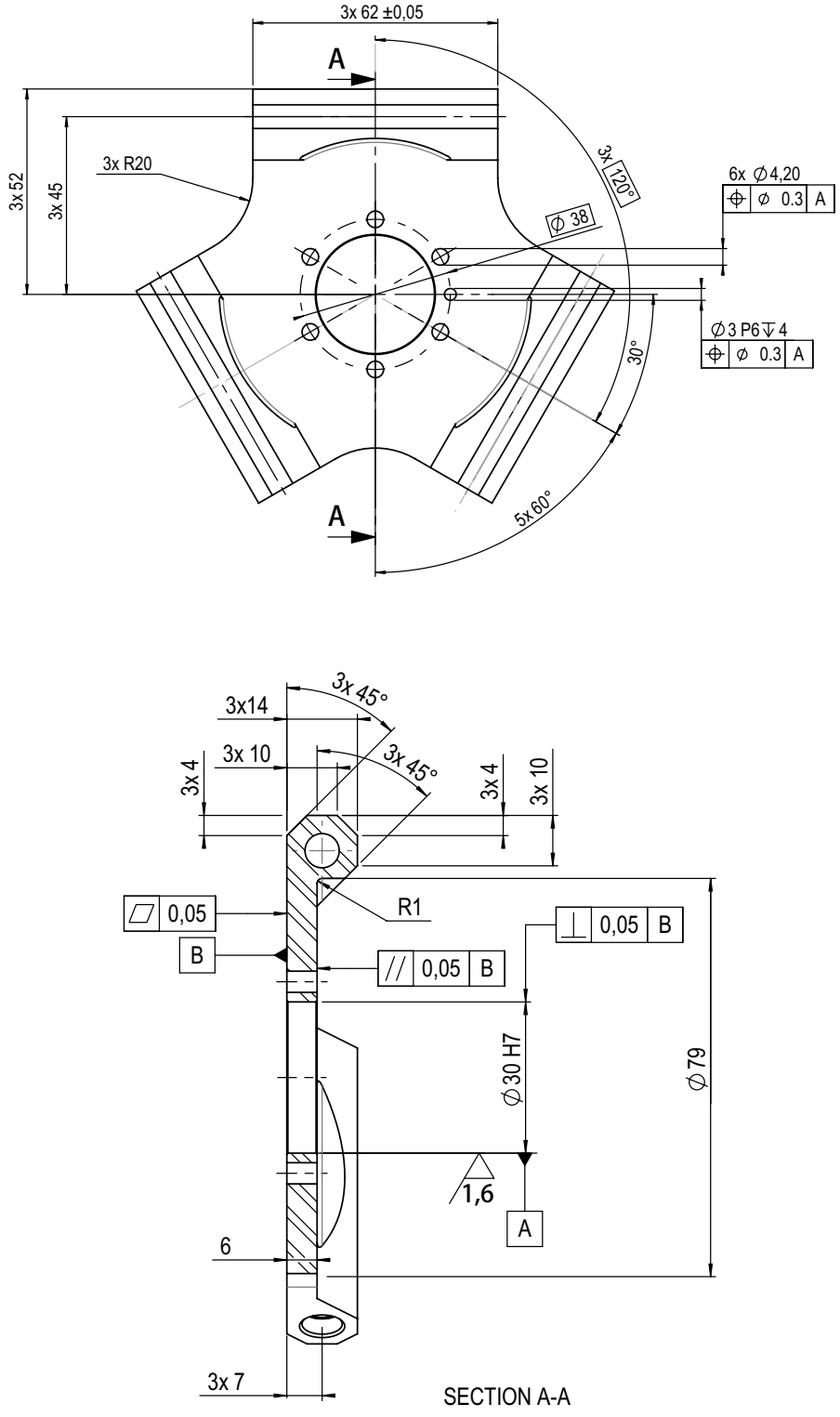
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1.4.4 Mechanical interface
Continued

Interface without axis 4

IRB 360-1/1130, IRB 360-3/1130, IRB 360-1/800



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1.5 Maintenance and troubleshooting

1.5.1 Introduction to maintenance and trouble shooting

General

The robot requires only minimum maintenance during operation. It has been designed to make it as easy to service as possible:

- Maintenance-free AC motors are used.
- Oil is used for the gear boxes.
- All cabling is fixed, no movements. In the unlikely event of a failure, its modular design makes it easy to change.

Maintenance

The maintenance intervals depend on the use of the robot, the required maintenance activities also depends on selected options. For detailed information on maintenance procedures, see *Product manual - IRB 360*.

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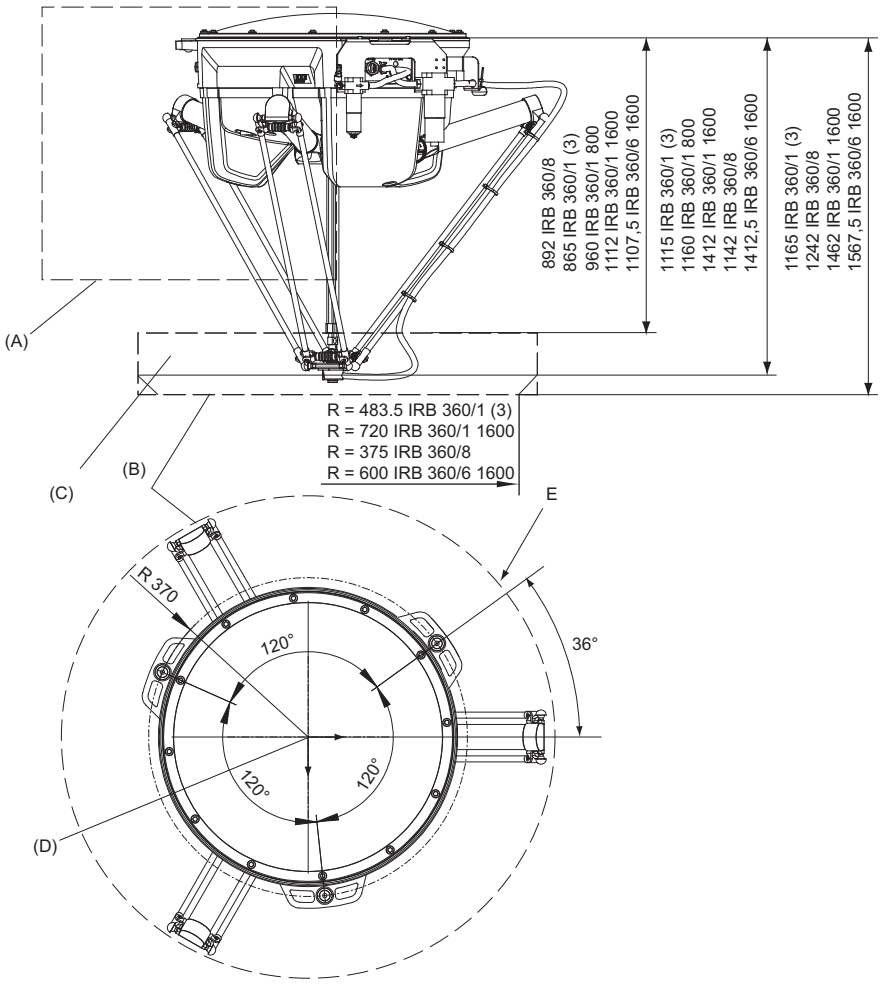
1.6 Robot motion

1.6.1 Introduction to robot motion

General

Note

The extreme position of the robot arm is shown in *Extreme position on page 35*.



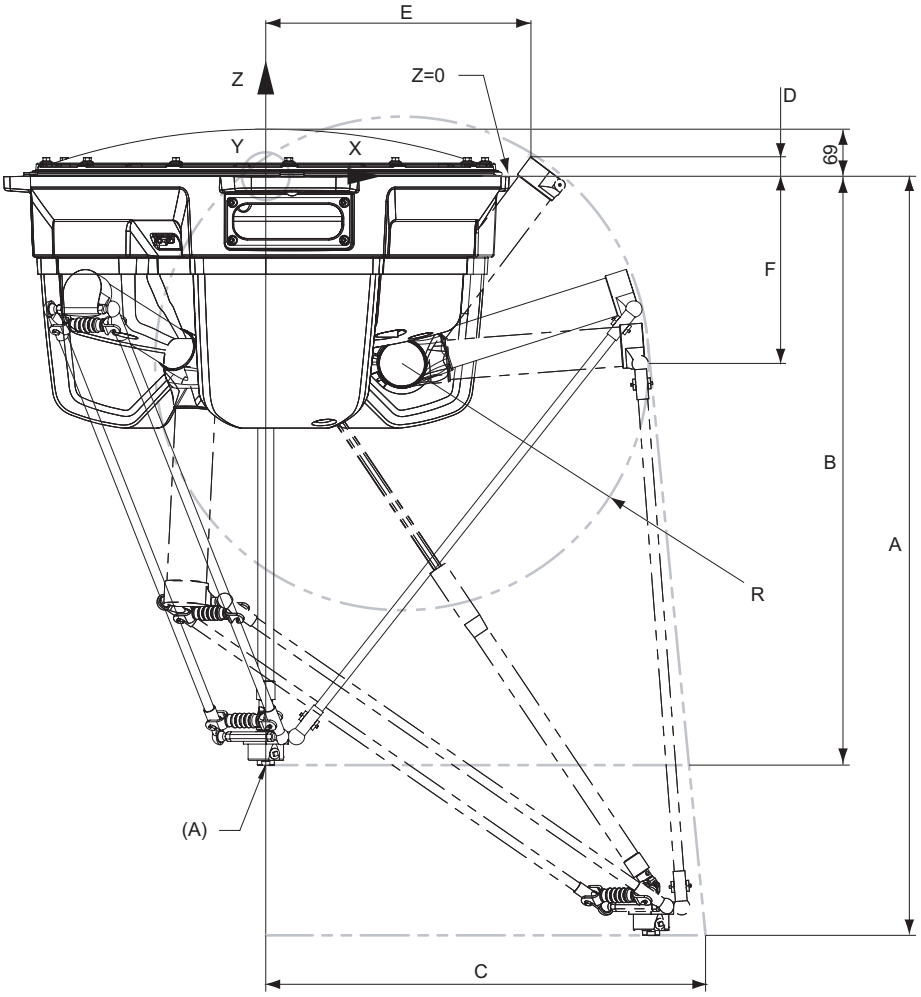
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Position	Description
A	Extreme position, see *Extreme position on page 35*.
B	Maximum working space inside cylinder. Working space can be reduced in x-y-z coordinates.
C	Marked area = actual working area
D	Base coordinate system
E	Radius 565 mm for IRB 360-1(3, 8)/1130, 400 for IRB 360-1/800 and 800 for IRB 360-1(6)/1600

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Extreme position



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Position	Description
A	TCP (this position x=0, y=0, z=865) TCP (this position x=0, y=0, z=892) Valid for IRB 360-8/1130

	A	B	C	D	E	F	R
IRB 360-1/800	1160	960	480	-	-	275	251
IRB 360-1(3)/1130	1115	865	646	28.5	389,5	275	366
IRB 360-1/1600	1412	1112	880	95	438	275	447
IRB 360-8/1130	1142	892	650	28,5	389.5	275	366
IRB 360-6/1600	1412.5	1107.5	883	148.3	478.9	275	515

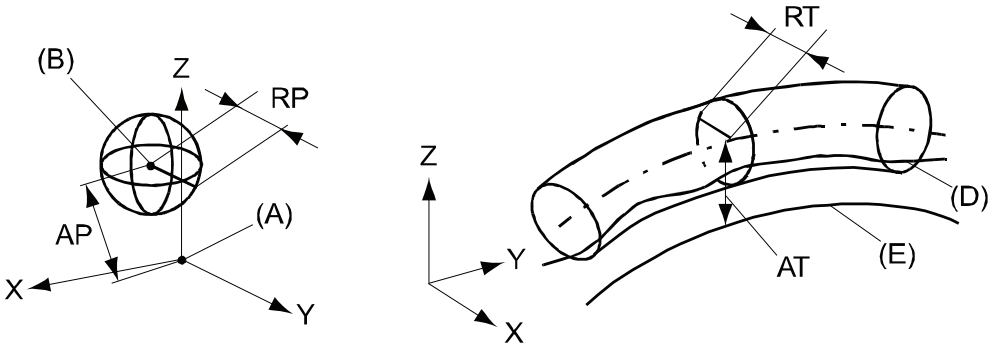
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1.6.2 Performance according to ISO 9283

General

At rated load and 0.8 m/s velocity on ISO test plane with all four robot axes in motion, with different payload. Values in the table below are the average result of measurements on a small number of robots. The result may differ depending on where in the working range the robot is positioning, velocity, arm configuration, from which direction the position is approached, the load direction of the arm system. Backlashes in gearboxes also affect the result.

The figures for AP, RP, AT and RT are measured according to figure below.



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Position	Description	Position	Description
A	Programmed position	E	Programmed path
B	Mean position at program execution	D	Actual path at program execution
AP	Mean distance from programmed position	AT	Max deviation from E to average path
RP	Tolerance of position B at repeated positioning	RT	Tolerance of the path at repeated program execution

IRB 360-1/1130, IRB 360-3/1130 and IRB 360-8/1130	At 0.1 kg	At 1.0 kg	At 3.0 kg	At 8.0 kg
Pose accuracy, AP (mm)	0.01	0.04	0.10	0.04
Pose repeatability, RP (mm)	0.10	0.09	0.06	0.07
Pose stabilization time, Pst (s) within 0.2 mm of the position	i	0.03	0.05	0.05
Path accuracy, AT (mm)	0.51	0.52	1.00	2.32
Path repeatability, RT (mm)	0.30	0.21	0.14	0.10

i Data not yet available.

IRB 360-1/800	At 1.0 kg
Pose accuracy, AP (mm)	0.07
Pose repeatability, RP (mm)	0.04
Pose stabilization time, Pst (s)	0.03
Path accuracy, AT (mm)	0.22
Path repeatability, RT (mm)	0.15

Continues on next page

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IRB 360-1(6)/1600	At 1.0 kg	At 6.0 kg
Pose accuracy, AP (mm)	0.04	0.01
Pose repeatability, RP (mm)	0.03	0.03
Pose stabilization time, Pst (s)	0.08	0.38
Path accuracy, AT (mm)	0.42	1.91
Path repeatability, RT (mm)	0.33	0.13

Backlash axis 4

Protection class	Value
Standard	0.8°
Wash-Down	1.0°
Wash-Down Stainless	0.8°

Velocity

Direction	Description
x, y, z	10 m/s
θ	2880 º/s

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1.6.3 Acceleration

General

Direction	IRB 360-1/800	IRB 360-1/1130	IRB 360-3/1130	IRB 360-8/1130	IRB 360-1/1600	IRB 360-6/1600
x, y, z [m/s^2]	150	150	100	100	150	100
θ [rad/s^2]	1,200	1,200	1,200	1,200	1,200	1,200

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1.6.4 Robot stopping distances and times

Introduction

The stopping distances and times for category 0 and category 1 stops, as required by EN ISO 10218-1 Annex B, are listed in *Product specification - Robot stopping distances according to ISO 10218-1* (*3HAC048645-001*).

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1.7 Typical cycle times

1.7.1 Introduction to typical cycle times

General

Both cycles incorporate an air activation time of 35 ms for picking and 35 ms for placing. Air activation takes place during the cycle time.

Description of typical cycles
Cycle 1 is a 25 - 305 - 25 movement, with 90 degrees rotation of axis 4.
Cycle 2 is a 90 - 400 - 90 movement, with 90 degrees rotation of axis 4.

Approximate cycle times

Performance (ppm= pick per minute) in the table below is valid for robots with protection class Standard and WashDown.

	IRB 360-1/1130		IRB 360-3/1130		
Payload	0.1 kg	1.0 kg	0.1 kg	1.0 kg	3.0 kg
Cycle 1	200	170	150	150	115
Cycle 2	135	120	100	100	80

	IRB 360-8/1130		
Payload	1.0 kg	4.0 kg	8.0kg
Cycle 1	160	140	100
Cycle 2	110	90	65

	IRB 360-1/800		IRB 360-1/1600	
Payload	0.1 kg	1.0 kg	0.1 kg	1.0 kg
Cycle 1	180	155	170	150
Cycle 2	120	115	120	110

	IRB 360-6/1600		
Payload	1.0 kg	3.0 kg	6.0kg
Cycle 1	140	125	100
Cycle 2	105	95	75

1-phase power supply

No noticeable reduction in cycle time has been observed for typical pick and place cycles (25/305/25) for an IRB 360-3/1130 with 3 kg payload with 220 V and default settings. To test the cycle time RobotStudio can be used. For detailed information see the system parameter *Mains tolerance min*, in *Technical reference manual - System parameters*.

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2 Specification of variants and options

2.1 Introduction to variants and options

General

The different variants and options for the IRB 360 are described in the following sections. The same option numbers are used here as in the specification form.

The variants and options related to the robot controller are described in the product specification for the controller.

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2.2 Manipulator

Variants

Option	Description	Note
3300-22	IRB 360-1/1130	
3300-23	IRB 360-3/1130	
3300-24	IRB 360-1/1600	Not together with options 3328-2, 3328-3, and 3329-1
3300-25	IRB 360-8/1130	Not together with options 3351-5, 3328-2, 3328-3, and 3329-1
3300-26	IRB 360-6/1600	Not together with options 3351-5, 3328-2, 3328-3, and 3329-1

Manipulator protection

Option	Description	Note
3351-5	Cleanroom 5	ISO Class 5

Base box

Option	Protection class	Note
3327-1	Standard/WashDown	
3327-2	Stainless	

Arm system

Option	Protection class	Note
3328-1	Standard	Not together with option 3351-5
3328-2	WashDown	
3328-3	Stainless	

Axis 4

No telescopic shaft and a delta plate without swivel are delivered.

Option	Description	Note
3329-1	No axis 4	Not together with option 3328-3

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2.3 Floor cables

Note

To comply with the EMC directive, the total cable length (including cables for the motor connection box) must not exceed 30 m between:

Controller and robot (IRB)

Controller and motor & gear units (MU/GU) or track motion (IRT)

Controller and positioner (IRP)

Manipulator cable - length

Option	Description
3200-1	3 m
3200-2	7 m
3200-3	15 m

Mains cable

Option	Lengths	Description
3203-1	EU mains cable, 3 m	Cable assembly with CEE7/VII line-side plug
3203-5	CN mains cable, 3 m	Cable assembly with CPCS-CCC line-side plug
3203-6	AU mains cable, 3 m	Cable assembly with AS/NZS 3112 line-side
3203-7	All regions cable, 5 m	Cable assembly without line-side plug

Tip

The option *Mains cable* requires option *3000-105 OmniCore E10* or *3000-130 OmniCore C30*.

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2.4 Warranty

Warranty

For the selected period of time, ABB will provide spare parts and labor to repair or replace the non-conforming portion of the equipment without additional charges. During that period, it is required to have a yearly *Preventative Maintenance* according to ABB manuals to be performed by ABB. If due to customer restrains no data can be analyzed with ABB Connected Services for robots with OmniCore controllers, and ABB has to travel to site, travel expenses are not covered. The *Extended Warranty* period always starts on the day of warranty expiration. Warranty Conditions apply as defined in the *Terms & Conditions*.

Note

This description above is not applicable for option *Stock warranty* [438-8]

Option	Type	Description
438-1	Standard warranty	Standard warranty is 12 months from *Customer Delivery Date* or latest 18 months after *Factory Shipment Date*, whichever occurs first. Warranty terms and conditions apply.
438-2	Standard warranty + 12 months	Standard warranty extended with 12 months from end date of the standard warranty. Warranty terms and conditions apply. Contact Customer Service in case of other requirements.
438-4	Standard warranty + 18 months	Standard warranty extended with 18 months from end date of the standard warranty. Warranty terms and conditions apply. Contact Customer Service in case of other requirements.
438-5	Standard warranty + 24 months	Standard warranty extended with 24 months from end date of the standard warranty. Warranty terms and conditions apply. Contact Customer Service in case of other requirements.
438-6	Standard warranty + 6 months	Standard warranty extended with 6 months from end date of the standard warranty. Warranty terms and conditions apply.
438-7	Standard warranty + 30 months	Standard warranty extended with 30 months from end date of the standard warranty. Warranty terms and conditions apply.
438-8	Stock warranty	Maximum 6 months postponed start of standard warranty, starting from factory shipment date. Note that no claims will be accepted for warranties that occurred before the end of stock warranty. Standard warranty commences automatically after 6 months from *Factory Shipment Date* or from activation date of standard warranty in WebConfig. **Note** Special conditions are applicable, see *Robotics Warranty Directives*.

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3 Accessories

3.1 Introduction to accessories

General

There is a range of tools and equipment available, especially designed for the manipulator.

Basic software and software options for robot and PC

For more information, see *Product specification - OmniCore C line RW 7*.

PickMaster and vision system

For more information, see *Product specification - PickMaster® Twin*.

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3.2 User documentation

User documentation

The user documentation describes the robot in detail, including service and safety instructions.



Tip

All documents can be found via ABB Robotics One, *https://one.robotics.abb.com/en/knowledge-hub*.

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