



ABB ROBOTICS

IRB 1100

Product Management, ABB Robotics

September 2018



Outline

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Targeted industry

Main dimensions

Outline manipulator

Easy integration

Specifications

OmniCore™ Controller

Targeted applications

Summary

Overview

Differentiated Value Proposition



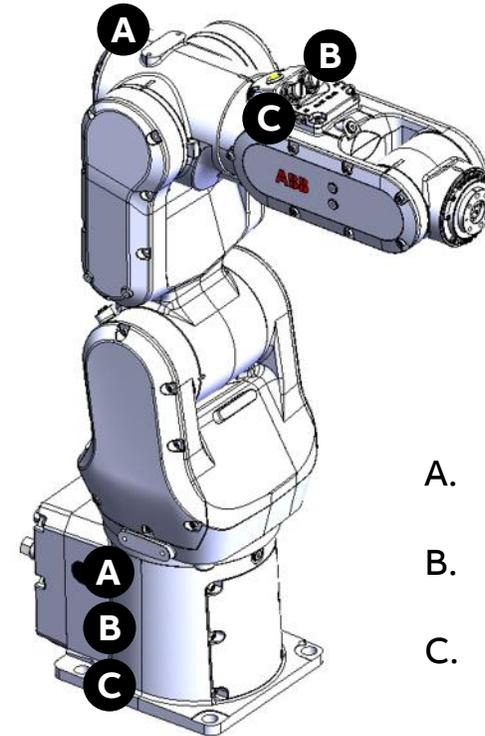
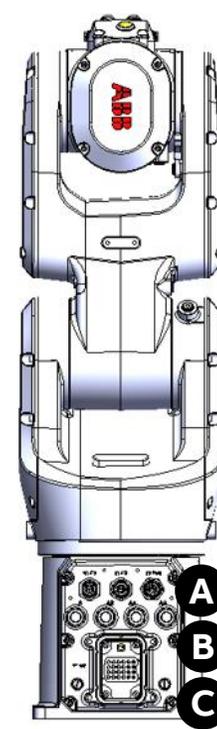
Further expanding ABB's small robot portfolio, IRB 1100 provides 35% increased productivity and up to 10% space savings.

Carry More, Move Faster and Act More Precisely While Taking Less Working Space

Features

IRB 1100 Preview

Item	Specification
Reach (mm)	475/580
Payload (kg)	4
Position repeatability (mm)	TBC
Protection	IP40
Cleanroom	CR4
Footprint (mm)	160 x 160
Mounting	Any angle



- A. M12 8pin CP/CS
- B. M12 8pin Ethernet
- C. $\Phi 4 \times 4$

Advantages and benefits

Smaller and yet perform better

Advantages

The highest payload in the class¹

The best repeatability in the class¹

Over 35% faster cycle times²

Over 10% smaller footprint and slimmer body²

Over 20% weight reduction because of new design²

Over 50% more I/O²

IP40 and Clean Room support³

Benefits

Flexibility & productivity within very limited space

Running the most accurate manufacturing process given very limited space

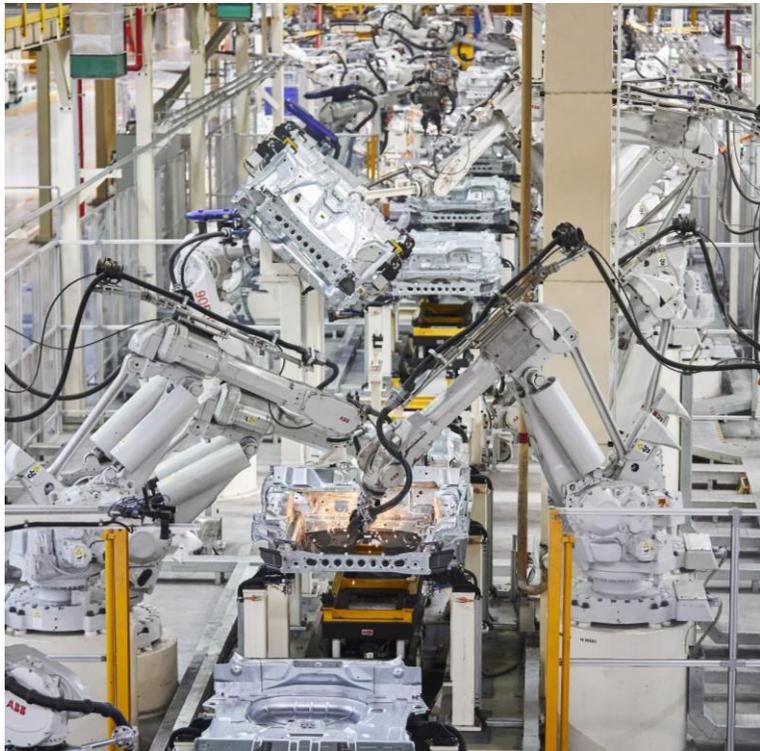
Handling heavier operations with more complex tool or end effector

Up to 16 I/Os for more sophisticated applications

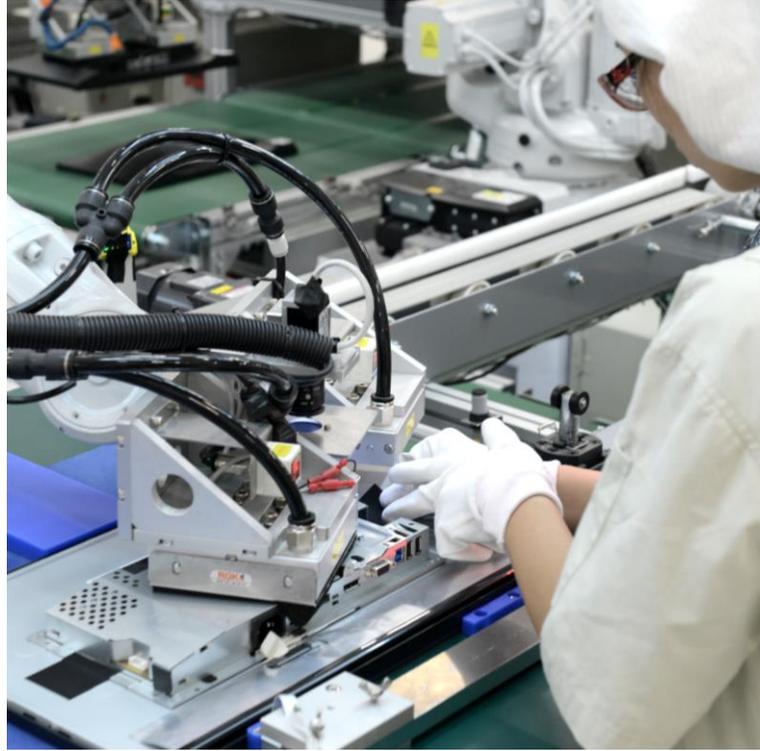
Targeted industry

Automotive, electronics and other general industries

Automotive



Electronics (3C)

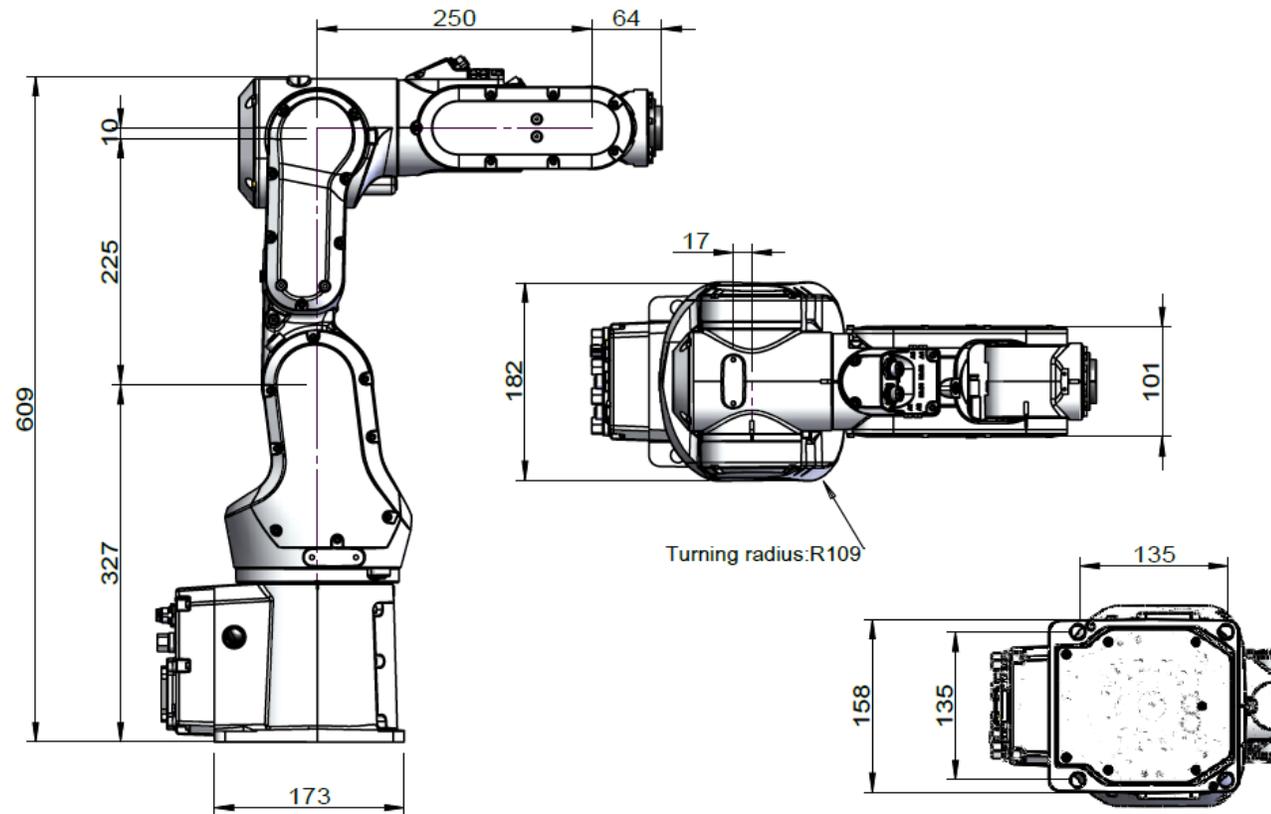


Others (General Industries)



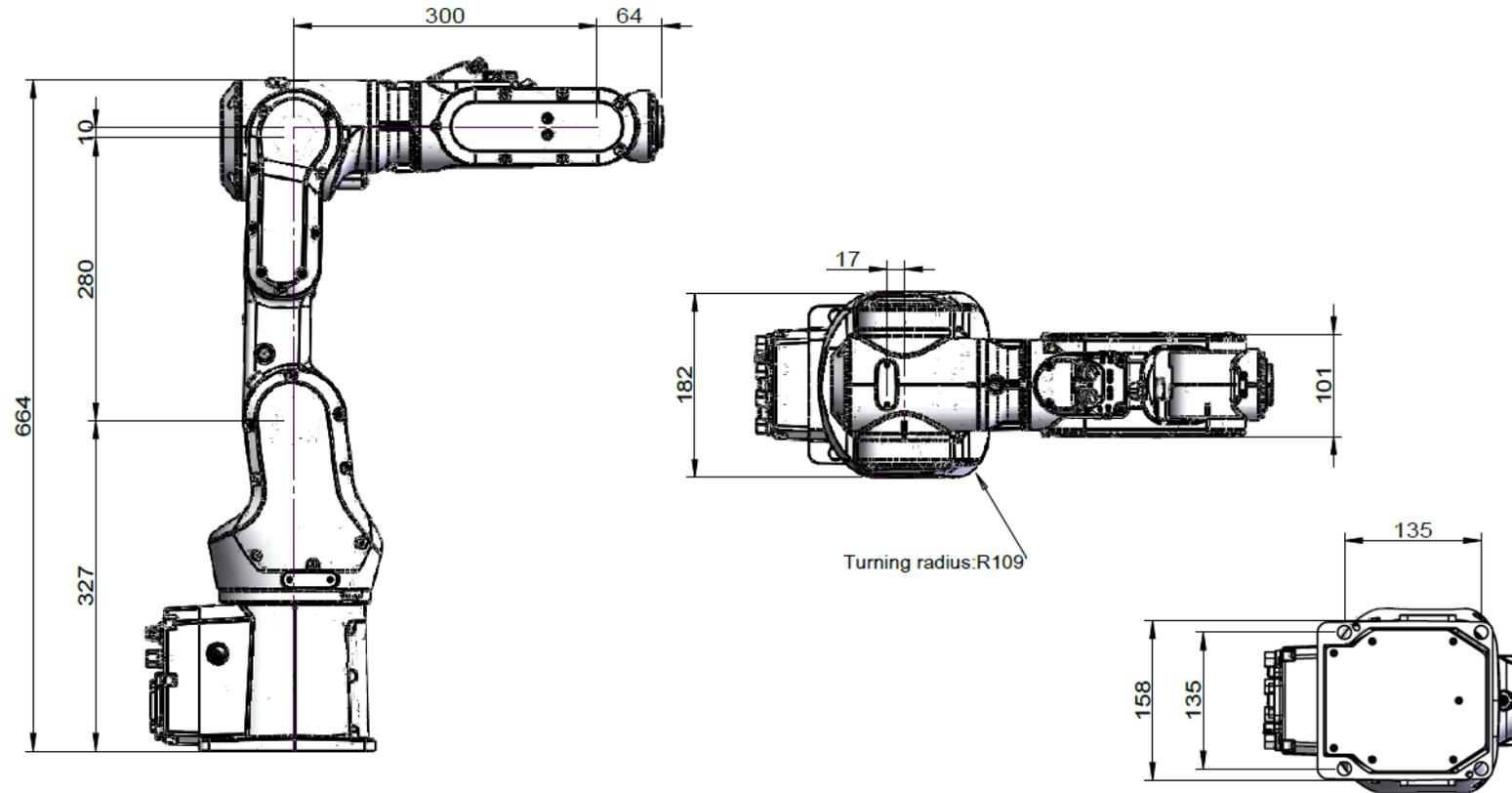
Main dimensions

IRB 1100-4/0.475



Main dimensions

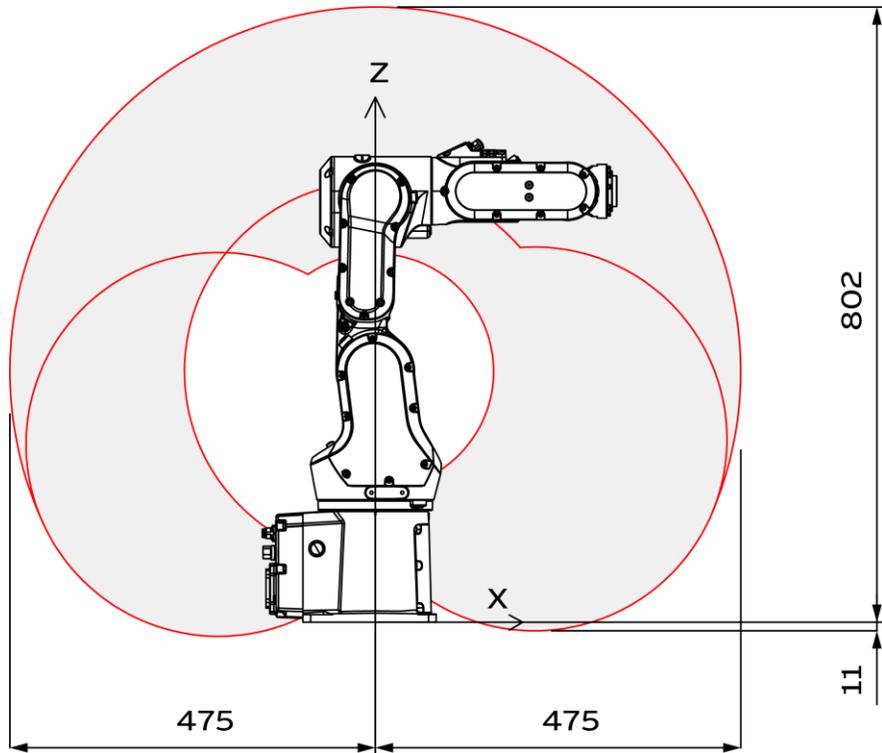
IRB 1100-4/0.58



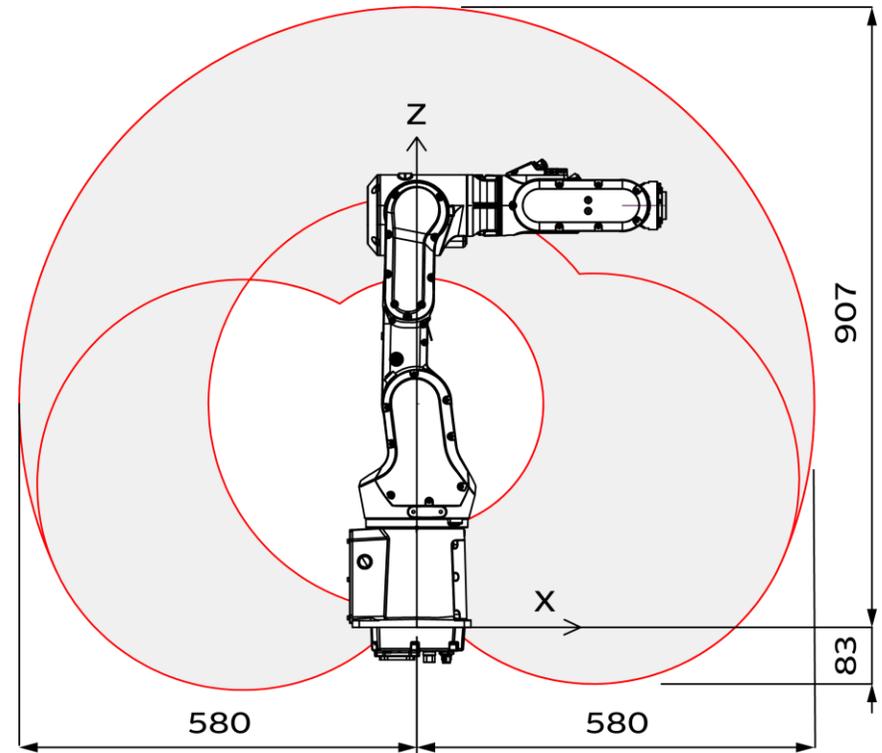
Main dimensions

Working Range

IRB 1100 – 4/0.475



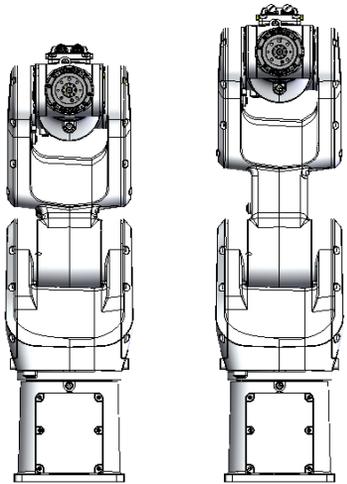
IRB 1100 – 4/0.58



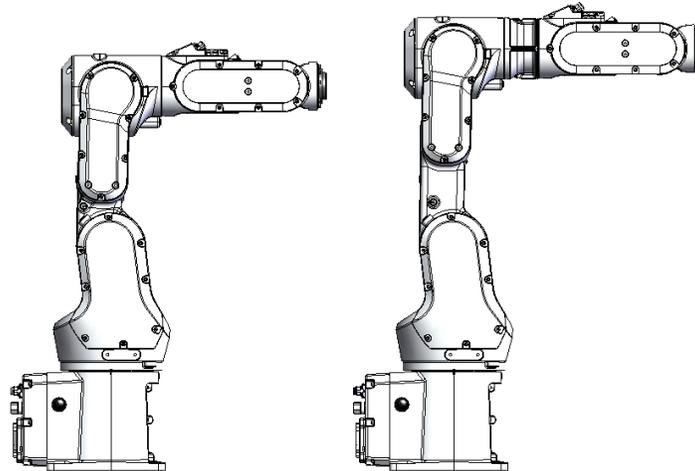
Outline manipulator

IRB 1100-4/0.475 vs IRB 1100-4/0.58

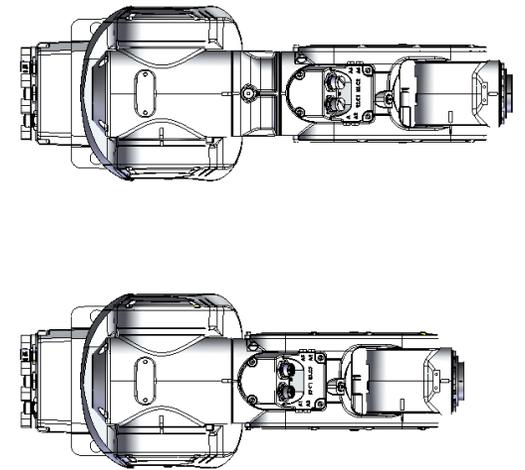
Front view



Side view

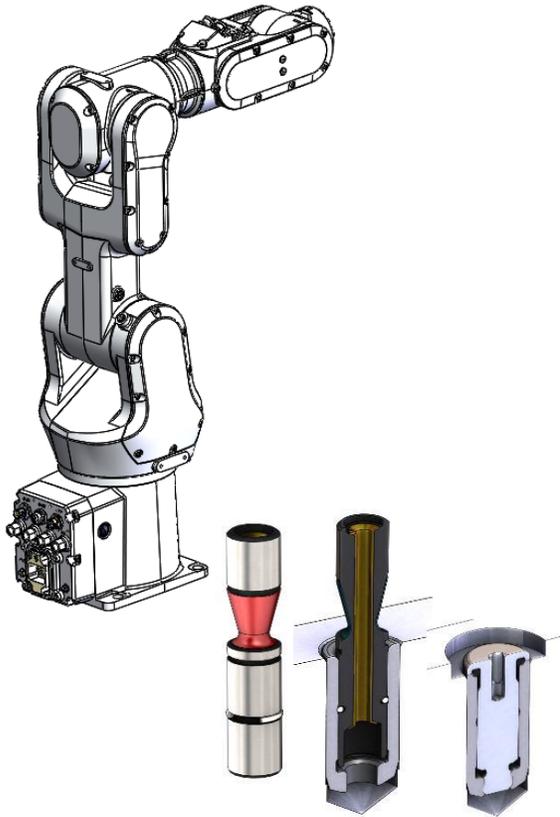


Top view

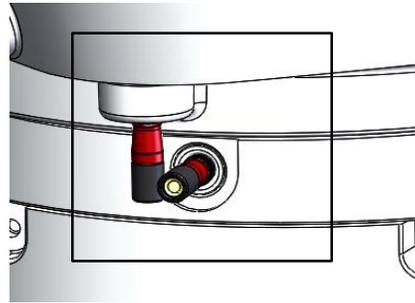


Outline manipulator

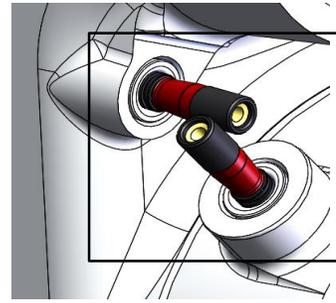
Calibration



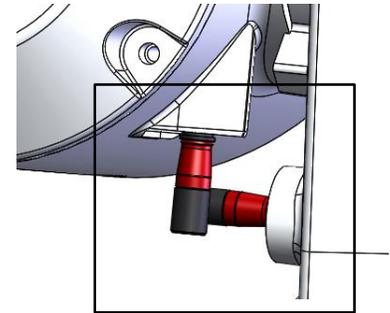
Axis 1



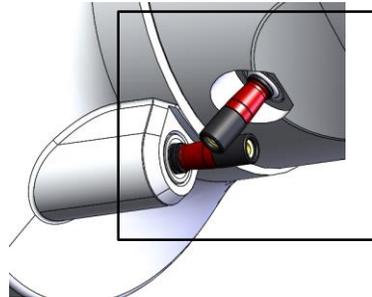
Axis 2



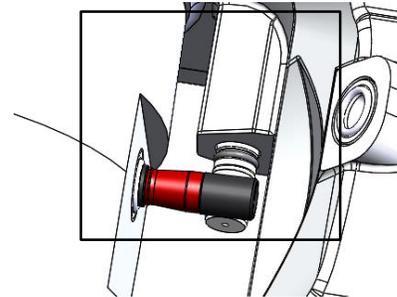
Axis 3



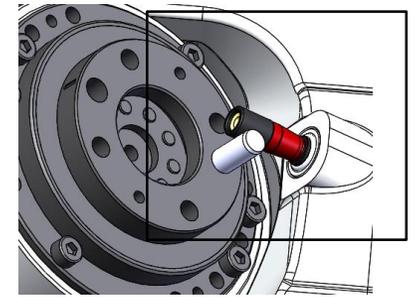
Axis 4



Axis 5



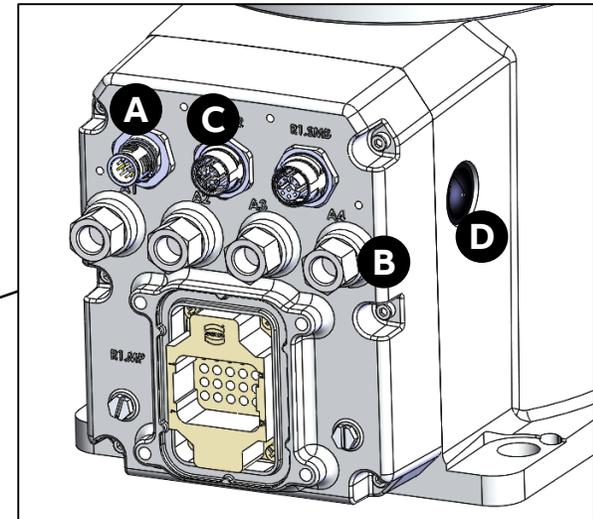
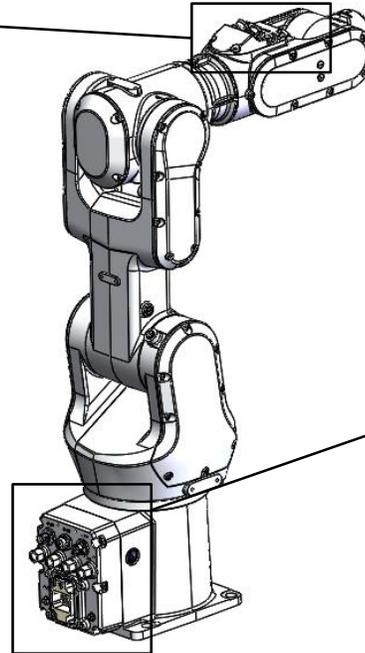
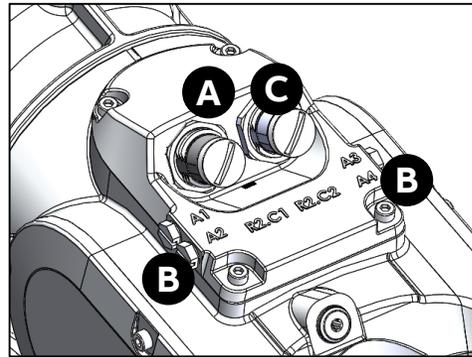
Axis 6



Easy integration

Customer interfaces

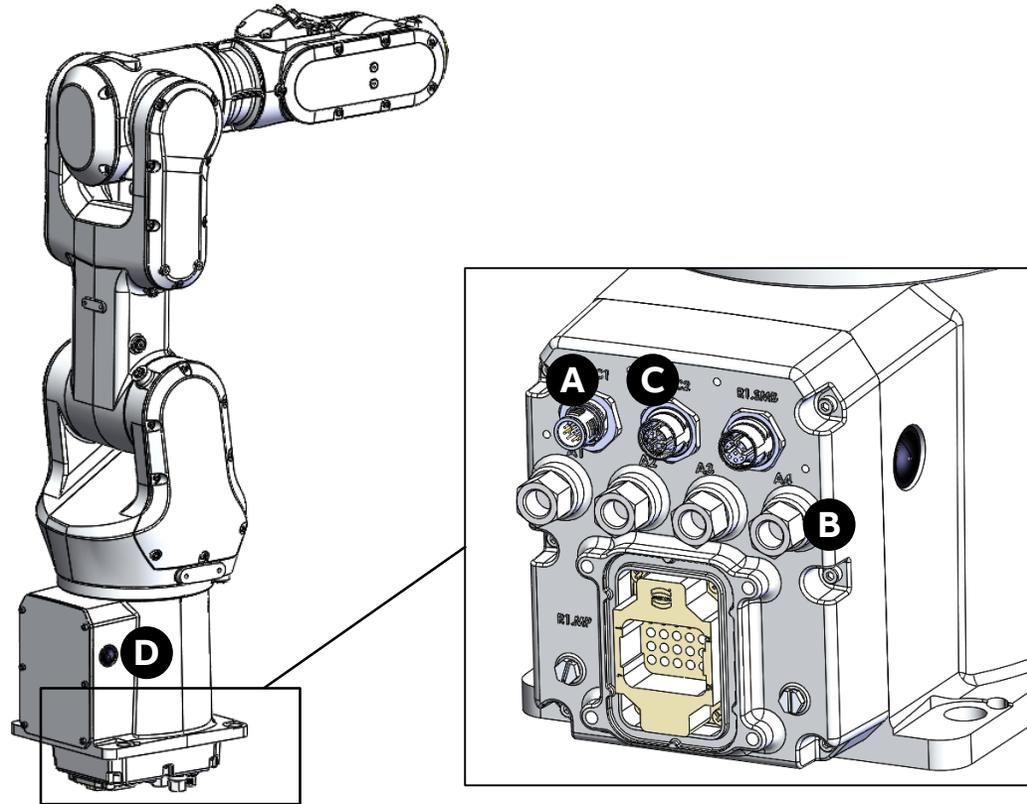
- A. 8 x customer signals 30V,0.5A
- B. 4 x air, 5bar (4 x $\phi 4$)
- C. Ethernet
- D. Break Release



Easy integration

Underlying connections

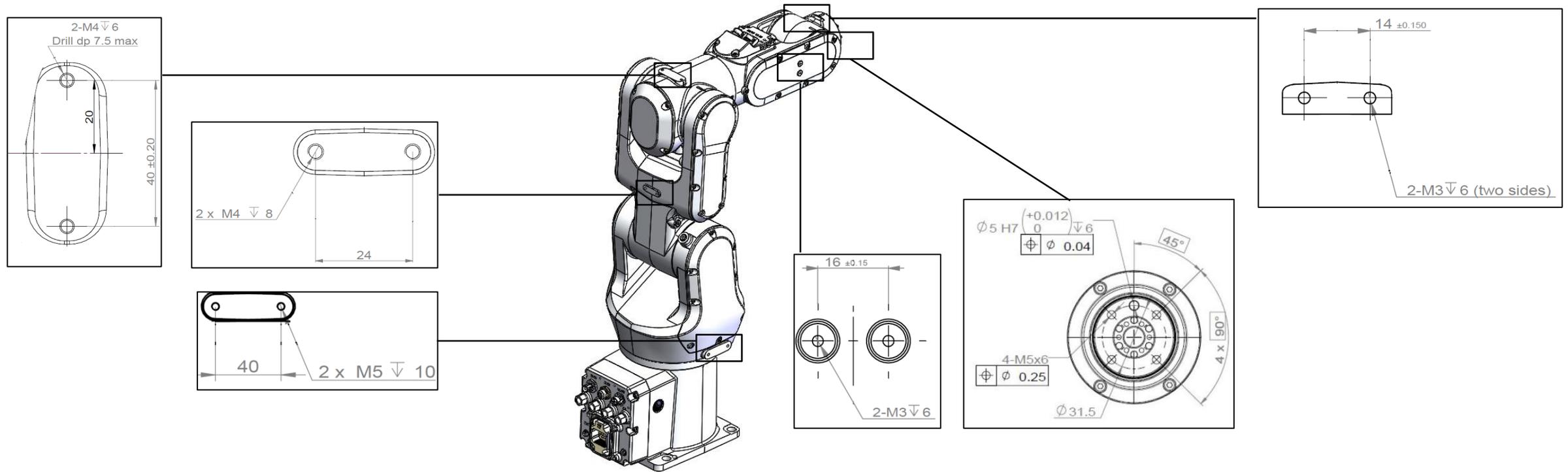
- A. 8 x customer signals 30V,0.5A
- B. 4 x air, 5bar (4 x $\phi 4$)
- C. Ethernet
- D. Break Release



Easy integration

Mounting interfaces

IRB 1100



Specifications

Robot version	Reach (mm)	Payload (kg)	Armload (kg)
IRB 1100-4/0.48	475	4	0.5
IRB 1100-4/0.58	580	4	0.5
Protection	IP40		
Mounting	Any angle		
Controller	OmniCore		
Integrated signal and power supply	8 signals on wrist		
Integrated air supply	4 air outer arm (5 Bar)		
Integrated Ethernet	1 Gbit/s port		

Performance (according to ISO 9283)

1 kg picking cycle

25 x 300 x 25mm

0.42 s

Position repeatability

TBC

Technical information, physical

Dimensions robot base

160 x 160 mm

Weight IRB 1100-4/0.48

20.5 kg

Weight IRB 1100-4/0.58

21 kg

OmniCore™ Controller

IRB 1100 is Equipped with The State-of-the-art Controller



The first offering from ABB's new era of flexible, intelligent and tailored solutions

A impressive range of controllers to deliver the ideal solution for every need

Designed for the rigorous performance and reliability needed to support 24/7 production of high-mix, low-volume products in shorter product cycles

Significant size reduction for installation space savings.

With the same superior precision, cycle times and speed that ABB is renowned for the new controllers can tackle the toughest challenges

Fast time to market

Smaller

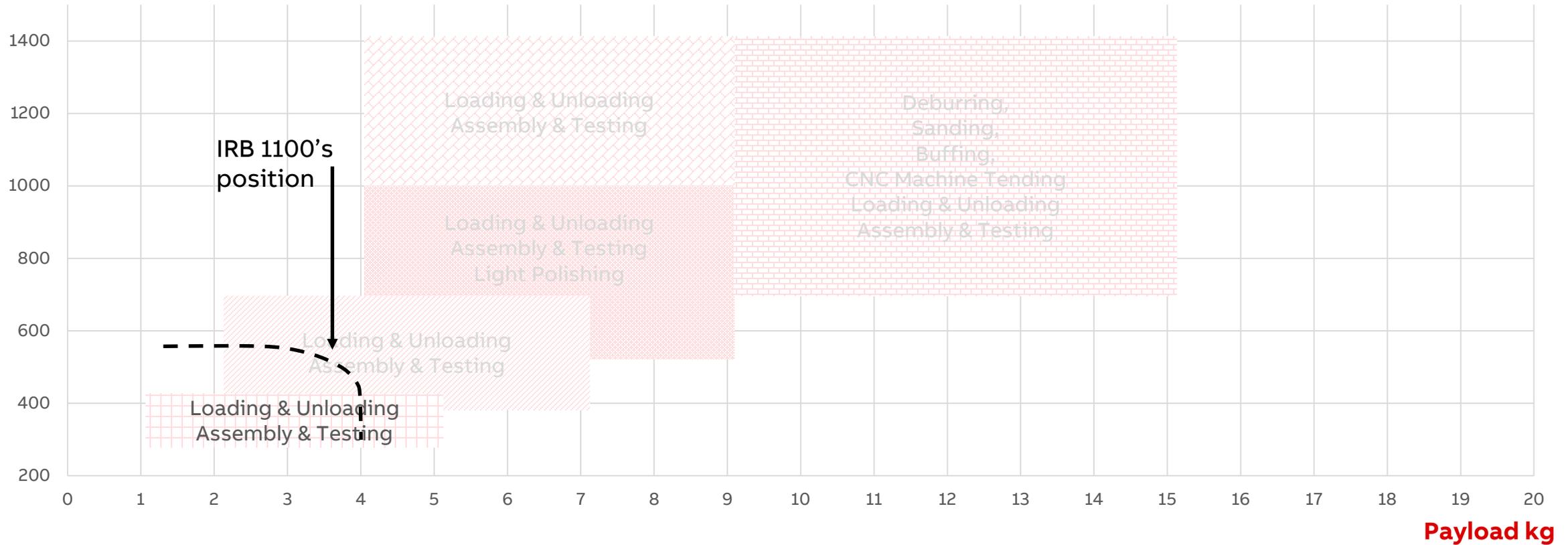
High throughput

The ABB Ability™ for the connected “Factory of the Future”

Targeted applications

Loading & unloading/assembly & testing

Reach mm



Targeted applications

Application examples

1. Assembly
2. Screw Driving
3. Rubber Insertion
4. Labeling
5. Soldering
6. Tampon Printing
7. Dimension Measuring
8. Function Testing
9. Filming
10. LCD Panel Stacking
11. Picking & Placing
12. Sealing
13. Packaging
14. Loading & Unloading
15. Sorting
16. Testing
17. More...

Flexibility



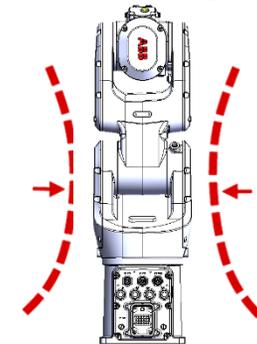
Higher Payload



Better Performance



Slimmer Body Smaller Footprint



Summary

Outstanding Performance Without Space Headaches

Be More Productive with Less Space

Flexibility & productivity within very limited space

Running the most accurate manufacturing process given very limited space

Handling heavier operations with more complex tool or end effector

Up to 16 I/Os for more sophisticated applications



ABB