In development

Technical data

Robotic arm

Item	Specifications
Type	Articulated robot
Number of axes	6
Maximum arm reach (J2–J5)	600mm
Pose repeatability	±0.02mm
Direct teaching force	1～10N
Protected stop threshold	110N
Maximum payload	3kg
Standard cycle time*	1.2 seconds
Working ranges	J1: ±270° J2: ±150° J3: ±150° J4: ±180° J5: ±180° J6: ±270°
Max. speed	J1 to J6: ±180°/s Linear interpolation speed: 2 m/s
Mass	25 kg

* For reciprocating motion 25 mm up/down, 300 mm horizontally

Robotic hand

Item	Specifications
Number of fingers	2
Gripping pose repeatability	±0.02 mm
Gripping force	0.5–90 N
Gripping accuracy	±0.5 N
Max. open-close travel	70 mm
Mass	1.5 kg

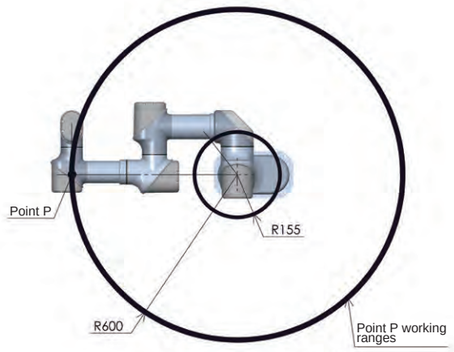
Controller

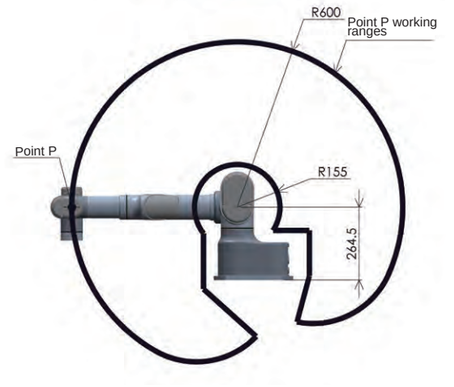
Item		Specifications
Communication Interface	Ethernet ports	2 (1 Gbps)
	USB	1
	Emergency Stop DI	1
	Protective Stop DI	1
	Safety DI	4
	Safety DO	4
	General-purpose DI	8
	General-purpose DO	8
Supply voltage		AC 100–240 V
Power consumption		1200 W max.
Power frequency		50/60 Hz
Dimensions		350×450×200 mm (H×W×D)

UI device

Item	Specifications
Dimensions	280×374×37 mm (H×W×D)
Mass	1.8 kg
Screen size	12.1 inch

Working ranges





● "Ethernet" is a registered trademark of Fuji Xerox Co., Ltd.

Azbil Corporation

** Yamatake Corporation changed its name to Azbil Corporation*

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Please direct requests to the following, or contact one of our offices.

C2-SR18-001

In development

azbil

NEXT-GENERATION SMART ROBOT

THE ANSWER IS ...

A robot with near-human sensing abilities.

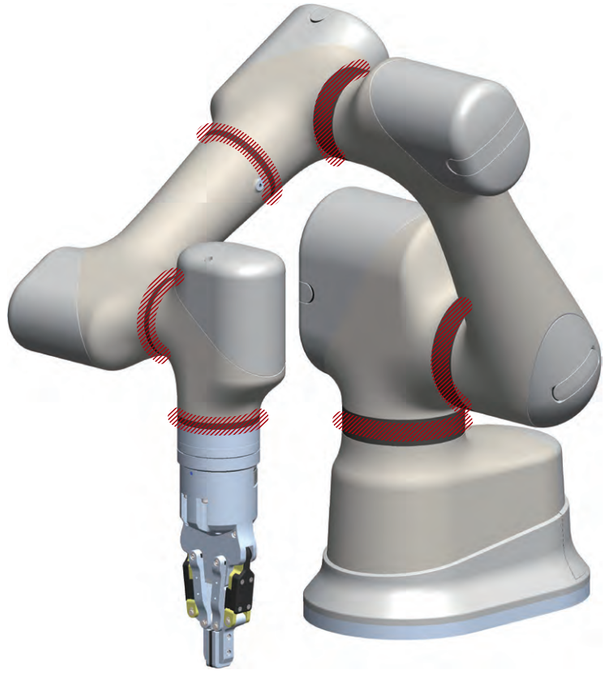
Azbil combined the sensing and control technologies it has cultivated

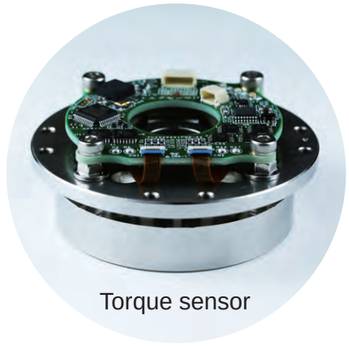
over many years in order to tackle a variety of challenges at production sites.

In development

Next-Generation Smart Robot Uses Force-Sensing and Vision to Perform Delicate Tasks With Dexterity

Each joint has a built-in torque sensor for accurate detection and control of operating force.
The optional visual function uses image recognition technology, allowing simpler fixture design.
Teaching and programming the robot are easy to do, making it possible to begin automated production quickly.
In addition, the robot's hand, which has a controlled gripping force, can manipulate even soft and flexible items.





Torque sensor

Built-in torque sensor locations

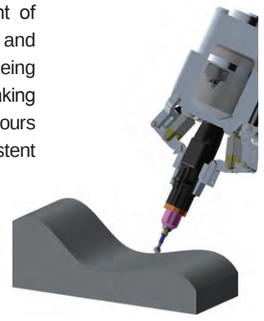
THE ANSWER IS ...

Compliant and Exploratory Motion

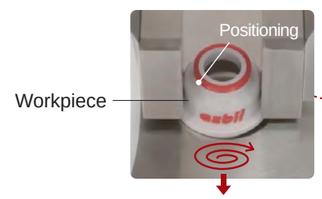
In addition to conventional positioning control, the robot detects the amount of force being applied to the workpiece, achieving a level of dexterity similar to human work.

〈Compliant motion〉
Torque sensors in each joint of the robotic arm detect and control the force that is being applied to the workpiece, making it possible to track the contours of the workpiece using consistent amounts of force.

Deburring

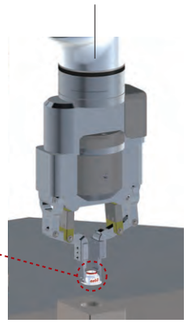


〈Exploratory motion〉
In precision assembly operations, light force is used to check the position of the hole in the workpiece. The robot finds the correct position and pushes the part into place.



Contact with force control and exploratory motion

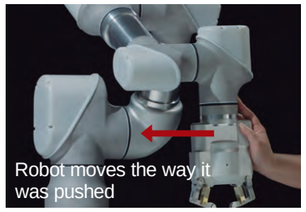
Robotic arm

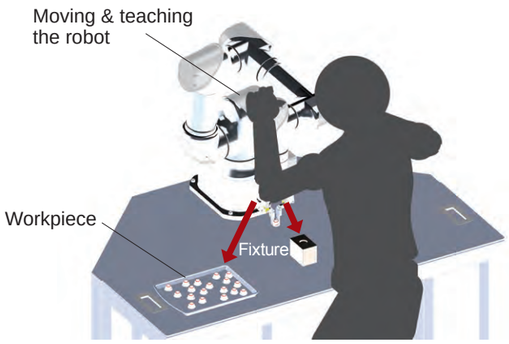


THE ANSWER IS ...

Direct teaching

Programming was once an obstacle to the introduction of robots for manufacturing, but we have made it easier. To teach the robot to do an operation, a person simply moves the robot directly. This reduces the programming burden.

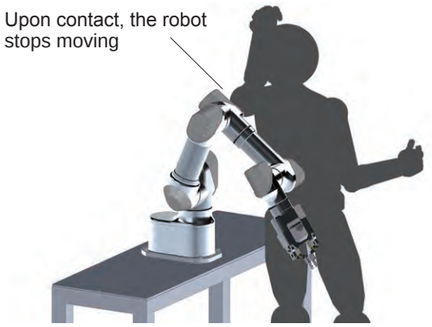




THE ANSWER IS ...

High-accuracy collision detection

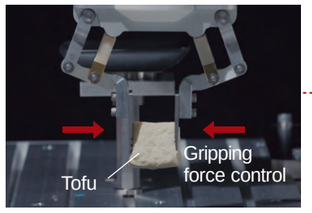
The robot is people-friendly. If it comes into contact with a person, it detects the contact and stops moving immediately.

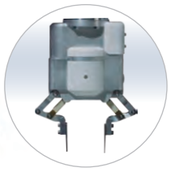


THE ANSWER IS ...

Delicate handling

Using its precisely controlled gripping force, which is accurate to 0.5 N, the robot can handle items that are easily broken or easily scratched, or soft materials such as tofu or clay.

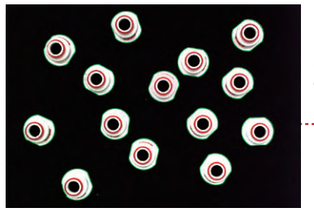




THE ANSWER IS ...

Advanced image recognition

Equipped with Azbil's proprietary image-processing technology, the robot learns the position, shape, and other attributes of the workpiece, and uses that information to control its movements.



Camera image and object recognition processing