

# FANUC



The Most Extensive  
Collaborative Robot Lineup

**...EVER**



# Why settle for less when you can get **MORE?**



FANUC's CR and CRX series of collaborative robots offer **more** choices, payloads, reach and speeds than any other cobots on the market. Safety-certified, FANUC cobots will add value to your process by working hand-in-hand with your team, whether they are experienced or first-time automation users.

## More choices for more businesses

Do you run a small- or medium-sized company, and this is the first time you've thought about adding automation? If so, consider a FANUC cobot. Quick to install, easy to use and offering unrivalled reliability, they represent a lasting solution that will boost your productivity and provide new growth opportunities. They also offer a quick return on investment. Let FANUC help you find the right cobot solution to meet your needs!



## Easy and Intuitive

Programming has never been easier - whether you have a CR or CRX cobot, we've made it extremely easy for new users.

**CR Cobot** - Hand Guidance Option allows you to teach your CR cobot by leading it through paths. You can also use it as a manual assist to lift heavy objects.

**CRX Cobot** - Interactive programming gives you the freedom to teach points using built-in hand guidance function or a tablet interface with drag and drop icons.



Whatever FANUC cobot you choose, the iHMI editor provides step-by-step guides to set up your cobot, create programs and has tutorials for new users. In addition, all of our cobots are sensitive enough to stop at a touch and restart at the push of a button.



# **MORE** versatility and **MORE** precision

## Key Features

### INTEGRATION

Integration has never been easier thanks to our cobots' lightweight, slim, and compact design

### USABILITY

Ready for business in no time: the FANUC CRX series is quick to set up and exceedingly easy to program

### SERVICE

Enjoy 8 years of maintenance-free operations

**8 YEARS**  
**0 ZERO**  
MAINTENANCE

**100%** | **PROVEN**  
**INDUSTRIAL**  
**RELIABILITY**



**CRX-5iA**  
Payload: 5 kg  
Reach: 994 mm



**CRX-10iA**  
Payload: 10 kg  
Reach: 1,249 mm



**CRX-10iA/L**  
Payload: 10 kg  
Reach: 1,418 mm



**CRX-20iA/L**  
Payload: 20 kg  
Reach: 1,418 mm



**CRX-25iA**  
Payload: 25-30 kg  
Reach: 1,889 mm



# **MORE** capacity **MORE** collaboration

## Key Features

### WIDE RANGE

Experience wide-ranging payloads – from 4 up to 35 kg – and reaches: the CR series offers the right solution for a large variety of applications.

### STRONGEST COBOT ON THE MARKET

With a payload of 35 kg, the FANUC CR-35iB is by far the strongest cobot on the market today. Its combination of load capacity, extensive reach, and dependable safety certification make it ideally suited for an extensive spectrum of processes involving heavy lifting and handling.

### TEACHING

All our CR devices are quick studies – teaching them is an absolute breeze



**CR-4iA**  
Payload: 4 kg  
Reach: 550 mm



**CR-7iA**  
Payload: 7 kg  
Reach: 717 mm



**CR-7iA/L**  
Payload: 7 kg  
Reach: 911 mm



**CR-14iA/L**  
Payload: 14 kg  
Reach: 911mm



**CR-15iA**  
Payload: 15 kg  
Reach: 1,441 mm



**CR-35iB**  
Payload: 35-50 kg  
Reach: 1,831 mm

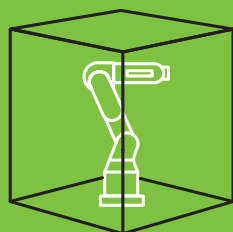


# **MORE** freedom and flexibility

The FANUC CR and CRX series can work side by side with people or collaborate with them without the need for external safety devices (in accordance with risk assessment). As a result, you enjoy better versatility and work ergonomics, benefit from flexible mounting options and save valuable production space.

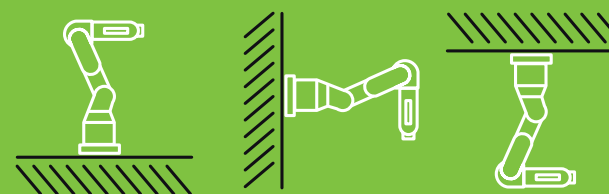
## **ISO-certified safe to work with people**

These collaborative robots are ISO 10218-1 and ISO 13849-1 certified and equipped with ultra-safe FANUC contact stop detection based on proven sensor technology. Highly sensitive contact stop function stop the robot smoothly even with light contact of people and all robots restart easily and quickly after a contact stop. In addition to contact stop, the CR and CRX series robots come with push to escape functions to be able to push the robot out of the way manually for additional safety. In addition, the robot will retract immediately when it contacts hard objects to minimize a pinching force. Speed and safety settings can be customized to help you adapt each collaborative robot to meet your exact specifications.



## **Dual Check Safety (DCS)**

DCS is a safety system that monitors position and speed. It is a proven technology used on many standard FANUC robots. On the CR series, third-party safety equipment can be connected to DCS to provide an additional level of safety and increase productivity.



## **Flexible mounting options**

For more flexible layouts, all models except the CR-35iB can be mounted upside-down, on a wall, or fixed to a mobile platform or rail.



# EASY programming

Whether you are a seasoned programmer or a first-time operator – FANUC cobots provide you with user-friendly and intuitive programming. Furthermore, you can also select:

## Easy programming with Tablet Teach Pendant

- FANUC's Tablet Teach Pendant is designed for intuitive programming, thanks to a large touch screen
- Additional drag & drop functionality lets you easily program an application within minutes
- Two interfaces are available:
  - New User Interface for beginners
  - iPendant User Interface for experienced operators

## Easy programming with iHMI on iPendant Touch

- FANUC's iHMI user interface offers ample processing power and clear high-resolution screen displays
- Display setup, programming guides and tutorials are all readily accessible from the main home screen
- 30 minutes – that's all it takes to create a program for simple handling tasks, thanks to FANUC's programming guide

# EASY teaching without programming



By leading it through paths and points, you can now easily teach your FANUC collaborative robot. Additionally, hand guidance is comfortable and intuitive, thereby eliminating the need for a pendant to teach the device positions. This will not only save you valuable time, but also money – as training costs can therefore be kept to a minimum.

While the CRX series was designed with manual guidance in mind, the CR series was built for heavier applications, and therefore requires a separate hand guidance model.



New user interface



# MORE reliability

All of FANUC's CR and CRX series robots use proven FANUC technology and a familiar interface. As a result, the collaborative robots operate like any other FANUC robot with exactly the same high degree of reliability, uptime, dexterity and world class +/- 0.01-0.05 mm repeatability.



## More features

With more than 250 software features, FANUC's R-30iB Plus controller guarantees the best processing speed and robot performance for every FANUC cobot. Designed for increased user-friendliness and minimal energy consumption, the R-30iB Plus comes in five different cabinets to help you make the most of your floor space and production cell layouts. With the addition of the CRX line, the R-30iB family expanded to include the R-30iB Mini Plus Controller for even more space savings.

## Proven technology

For more reliability, all FANUC cobots are based on proven FANUC technology. They offer exceptional repeatability and come with the standard FANUC interface for easy learning, programming and setup. As a result, no extensive retraining is necessary. Application scenarios can be easily modeled using ROBOGUIDE simulation software. FANUC cobots are customizable and include a large number of options. They are also backed by full spare parts availability, global service and 24/7 support.

**Service First** 

# MORE possibilities

As with all FANUC robots, FANUC's collaborative robot series can be equipped with any of FANUC's intelligence functions - made by FANUC, developed specifically for FANUC robots, to give you more possibility for automating with cobots. Intelligence-ready functions include FANUC 2D and 3D vision sensors using *iR*Vision and much more.



## Collaborative arc welding

FANUC's collaborative arc welding robots offer the same high level of performance that FANUC ARC Mate robots are known for including world-renowned technology and proven reliability. FANUC's arc welding cobots are equipped with FANUC ArcTool application software, an easy programming interface that supports both simple and complex applications.



## 3D bin picking

Opening up a wealth of possibilities, the 3D Vision Sensor even enables robots to detect randomly piled parts including shiny, multi-colored or semi-transparent items. Attached to the robot arm or a gantry, the FANUC 3D Vision Sensor is easy to set up using the *iPendant* handheld controller or PC.



## Recognition, reading and sorting

Using the Vision Sensor, the CR series is capable of locating workpieces, reading bar codes and sorting by color.

For the CRX series, new vision features include simple vision setup for beginners using the Tablet TP and drag & drop icons.

Vision features such as 1-marker and 3-marker offset for locating equipment are available when the robot is on a mobile hand-cart or AGV or AMR.



# **MORE** collaborative opportunities with FANUC cobots

## Key Industries



AUTOMOTIVE



LOGISTICS



PHARMACY



FOOD



TIER 1



**ASSEMBLING**  
Cobots are ideally suited to take over repetitive or complex assembly tasks while delivering a precise and consistent output.



**GRINDING AND DEBURRING**  
Tasks which involve removing material can easily be carried out by cobots, adding flexibility, efficiency, and quality to the process.



**HANDLING**  
FANUC Vision and Force accessories can quickly be connected to cobots so as to cover a variety of different handling operations.



**MACHINE TENDING**  
When it comes to repetitive operations such as machine tending, cobots help improve your process speed and quality while at the same time keeping operators safe.



**PARTS INSPECTION AND TESTING**  
Easy to program, FANUC cobots can carry out inspecting operations while assuring accurate production batches and product quality.



**PICKING, PACKING, PALLETISING**  
The payloads and reaches of FANUC cobots make them suitable to a wide range of handling tasks, relieving operators from heavy lifting.



**SANDING AND POLISHING**  
Equipping cobots with FANUC Force Sensor assures the precision and correct force needed for these kinds of operations.



**SCREWING**  
FANUC cobots can be used in screw driving applications with a tightening torque up to 200Nm (M16) – for higher consistency and quality.



**SEALING AND DISPENSING**  
Dispensing tasks like gluing and sealing can be efficiently carried over by cobots.



**WELDING**  
FANUC cobots are capable of offering consistent weld quality, on top of being easy to teach and program.



# MORE information

# Technical data CR series

Specifications	CR-4iA	CR-7iA	CR-7iA/L	CR-14iA/L	CR-15iA	CR-35iB
Type: articulated	•	•	•	•	•	•
Controlled axes	6	6	6	6	6	6
Max. load capacity at wrist [kg]	4	7	7	14	15	35/50
Reach [mm] *2)	550	717	911	911 *1)	1,441	1,831
Repeatability [mm] *3)	±0.01	±0.01	±0.01	±0.01	±0.02	±0.03
Mass [kg] *3)	48	53	55	55	255	375
Installation: floor   upside down   wall *4)	• • •	• • •	• • •	• • •	• • •	• - -
<b>Motion range</b>						
J1 axis rotation [°]	340	340	340	340	340	370
J2 axis rotation [°]	150	166	166	166	180	215
J3 axis rotation [°]	354	373	383	383	312	338
J4 axis wrist rotation [°]	380	380	380	380	380	400
J5 axis wrist swing [°]	200	240	240	240	280	280
J6 axis wrist rotation [°]	720	720	720	720	900	900
Max. speed [mm / s] *5)	1,000 *6)	1,000 *6)	1,000 *6)	500 *5)	800 / 1,500 *7)	750 *6)
<b>Allowable load moment at wrist</b>						
J4 axis [Nm]	8.86	16.6	16.6	31.0	26.0	110
J5 axis [Nm]	8.86	16.6	16.6	31.0	26.0	110
J6 axis [Nm]	4.9	9.4	9.4	13.4	11.0	60.0
<b>Allowable load inertia at wrist</b>						
J4 axis [kgm <sup>2</sup> ]	0.20	0.47	0.47	0.66	0.90	4.00
J5 axis [kgm <sup>2</sup> ]	0.20	0.47	0.47	0.66	0.90	4.00
J6 axis [kgm <sup>2</sup> ]	0.067	0.15	0.15	0.30	0.30	1.50
<b>Installation environment</b>						
Ambient operating temperature [°C]	0-45	0-45	0-45	0-45	0-45	0-45
<b>Protection</b>						
Body standard/optional	IP67	IP67	IP67	IP67	IP54	IP54
Wrist & J3 arm standard/optional	IP67	IP67	IP67	IP67	IP67	IP67

• standard

\*1) 911mm (load capacity < 12 kg) - 820 mm (load capacity ≥12 kg)

\*2) Reach specification is with respect to J5 axis center

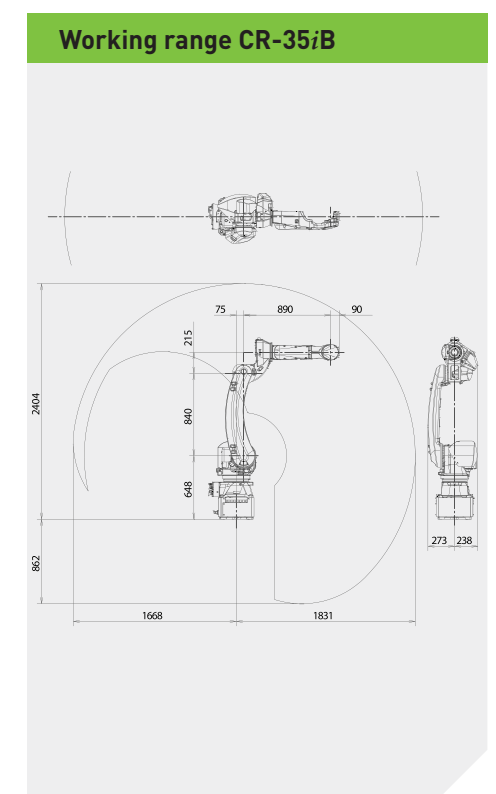
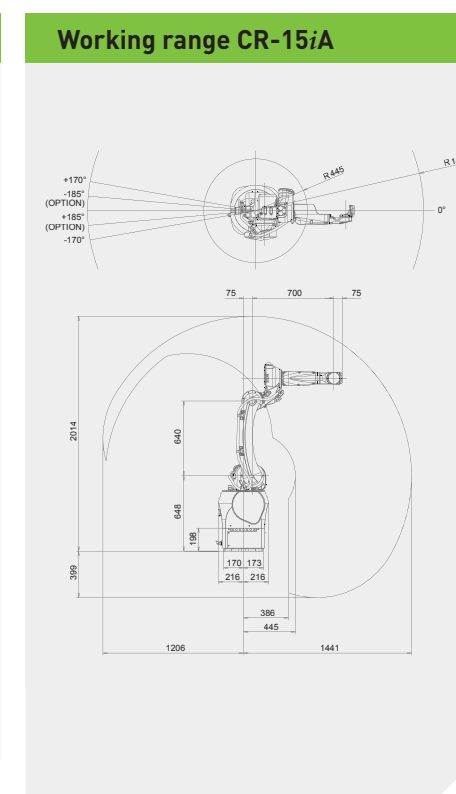
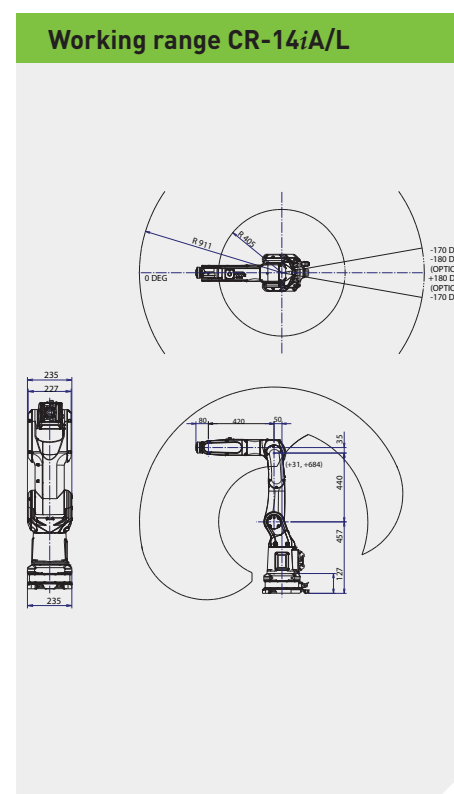
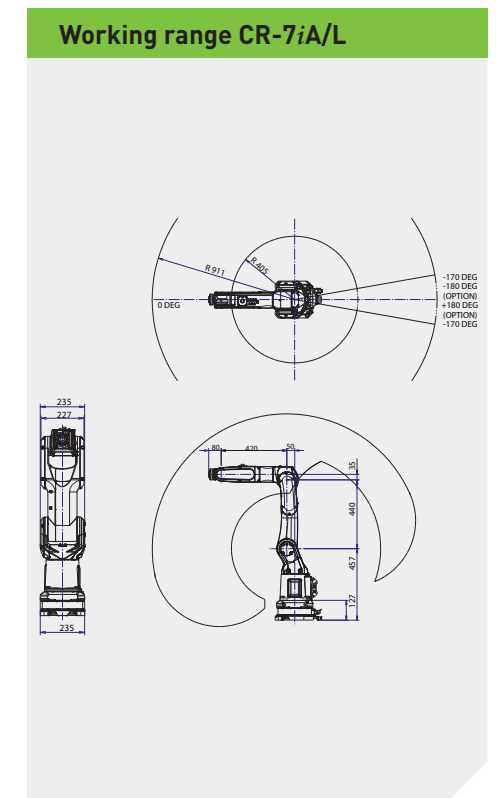
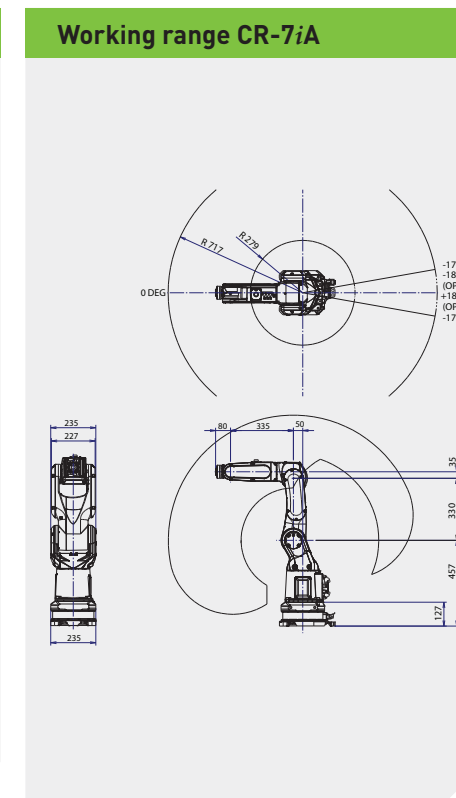
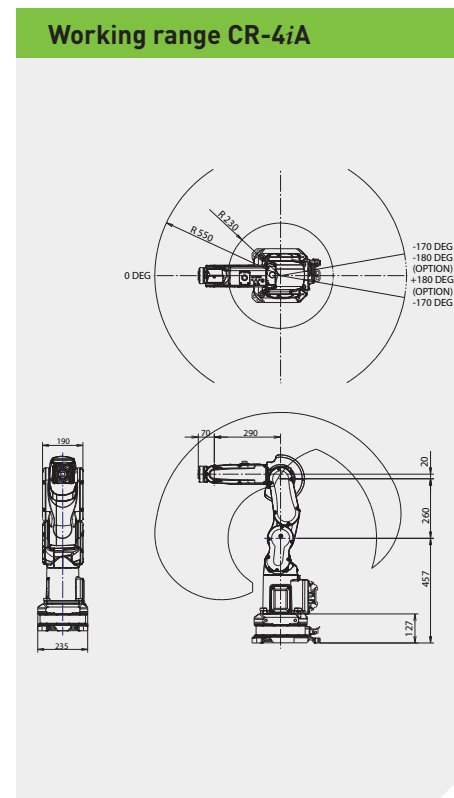
\*3) ISO 9283

\*4) In case of the wall mount, the operation space will be restricted according to the payload.

\*5) In case of short distance motion, the speed may not reach the maximum value stated.

\*6) It is necessary to set a motion speed according to risk assessment of system considering pinching with the surroundings.

\*7) If the area is monitored by a safety sensor (located separately).



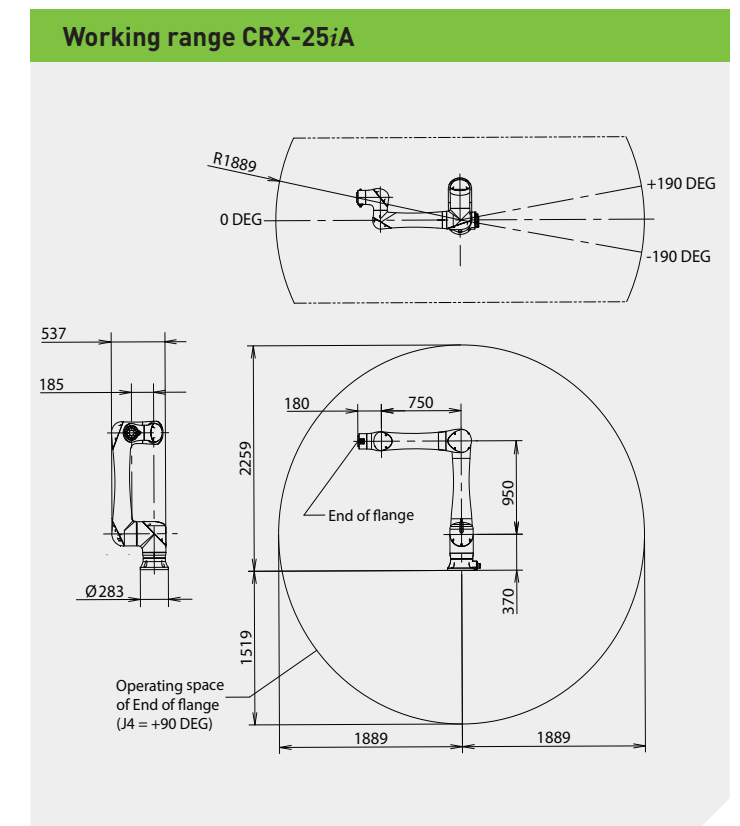
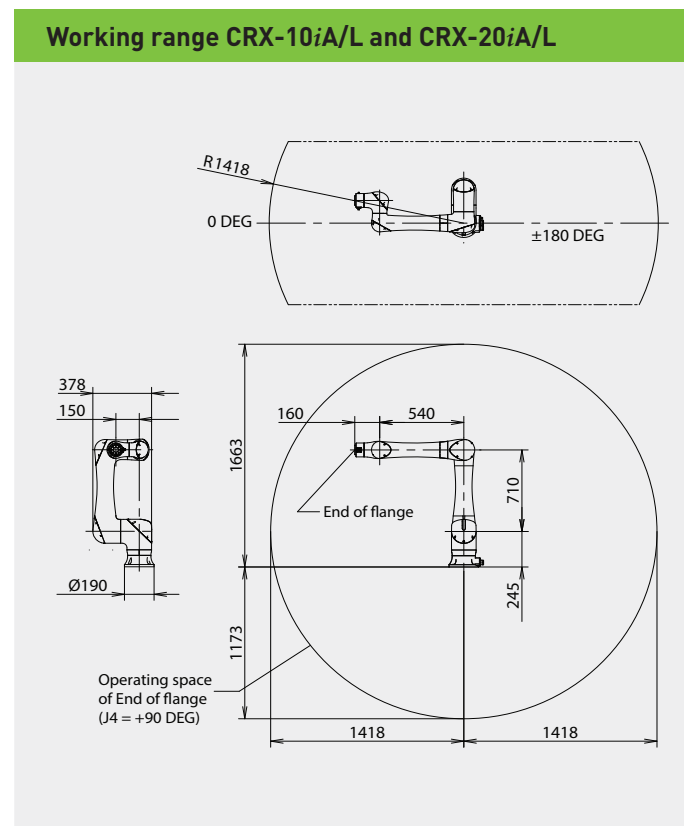
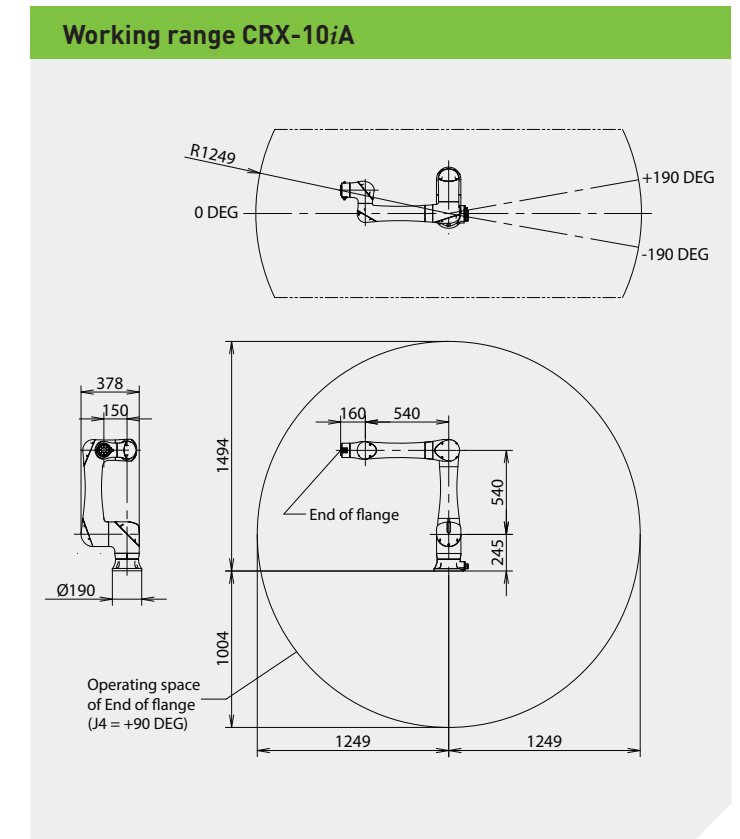
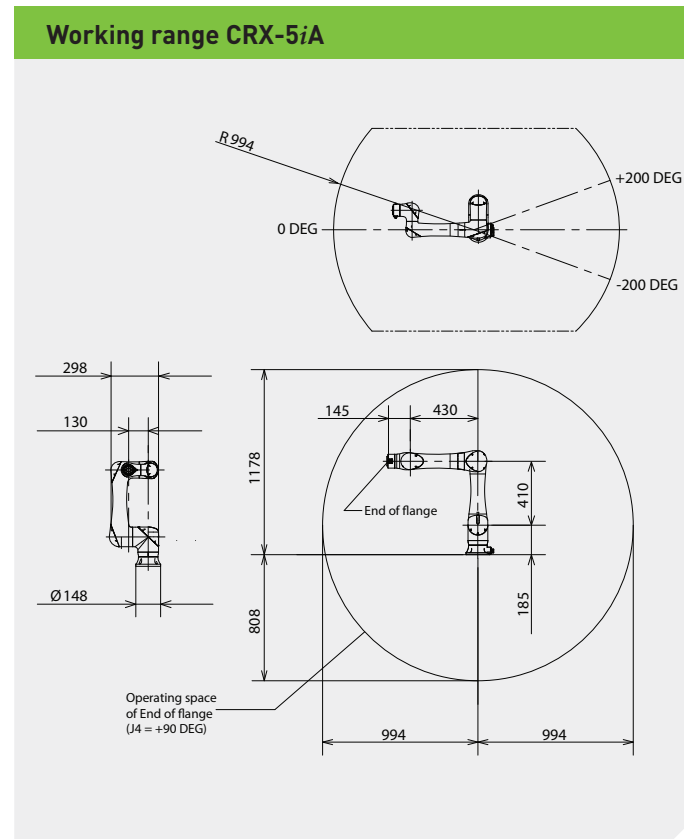


# MORE information

# Technical data CRX series

Specifications	CRX-5iA	CRX-10iA	CRX-10iA/L	CRX-20iA/L	CRX-25iA
Type	5	10	10	20	25
Controlled axes	6	6	6	6	6
Max. load capacity at wrist [kg]	5	10	10	20	25/30
Reach [mm] <sup>*2)</sup>	994	1,249	1,418	1,418	1,889
Repeatability [mm] <sup>*5)</sup>	±0.03	±0.04	±0.04	±0.04	±0.05
Mass [kg] <sup>*6)</sup>	25	40	40	41	135
Installation: floor   upside down   wall <sup>*1)</sup>	• • •	• • •	• • •	• • •	• • •
<b>Motion range</b>					
J1 axis rotation [°]	400	380	360	360	360
J2 axis rotation [°]	360	360	360	360	360
J3 axis rotation [°]	635	570	540	540	540
J4 axis wrist rotation [°]	380	380	380	380	380
J5 axis wrist swing [°]	360	360	360	360	360
J6 axis wrist rotation [°]	450	450	450	450	450
Max. speed: Collaborative mode [mm / s] <sup>*3)*4)</sup>	1,000	1,000	1,000	1,000	1,000
Max. speed: High speed mode [mm / s] <sup>*3)*4)</sup>	2,000	2,000	2,000	1,000	2,000
<b>Allowable load moment at wrist</b>					
J4 axis [Nm]	19.0	34.8	34.8	70.0	100.0
J5 axis [Nm]	15.4	26.0	26.0	64.0	74.0
J6 axis [Nm]	6.7	11.0	11.0	30.0	32.0
<b>Allowable load inertia at wrist</b>					
J4 axis [kgm <sup>2</sup> ]	0.77	1.28	1.28	4.00	4.70
J5 axis [kgm <sup>2</sup> ]	0.50	0.90	0.90	4.00	4.00
J6 axis [kgm <sup>2</sup> ]	0.10	0.30	0.30	2.00	2.00
<b>Installation environment</b>					
Input power source [VAC]	100-120 200-240	100-120 200-240	100-120 200-240	100-120 200-240	100-120 200-240
Ambient operating temperature [°C]	0-45	0-45	0-45	0-45	0-45
<b>Protection</b>					
Body standard/optional	IP67	IP67	IP67	IP67	IP67
Wrist & J3 arm standard/optional	IP67	IP67	IP67	IP67	IP67

- standard
- \*1) There is no limit of operating space for all installation types.
- \*2) Reach specification is with respect to J6 axis center [i.e. at faceplate]
- \*3) During short distance motions, the axis speed may not reach maximum value stated.
- \*4) It is necessary to set a motion speed according to risk assesment of system.
- \*5) Compliant with ISO9283.
- \*6) Without Controller.





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**MORE** choices  
**MORE** payload  
**MORE** reach  
**MORE** control

