

FANUC



**The Most Extensive
Collaborative Robot Lineup
...EVER**

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



FANUC's CR series of collaborative robots offers **more** choices, **more** payload, **more** reach and **more** speed than any other cobot series on the market. Safety-certified, FANUC cobots work hand in hand with humans to add value to your processes. Covering the needs of both experienced and first time automation users our cobot series contains exactly the right solution for a small business or large corporation.

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, FANUC cobots provide you with just the opportunity you are looking for. Quick to install, easy to use and offering unrivalled reliability, they represent a lasting solution that boosts your productivity and provides you with new growth opportunities. They also offer a quick return on investment. Let our experts advise you on exactly the right automation solution for your needs!



Easy to work with

Programming has never been easier - whether you use FANUC Hand Guidance or our new *i*HMI guides. FANUC's Hand Guidance allows you to teach your collaborative robot by leading it through paths. You can also use it as a manual assist to lift heavy objects. *i*HMI provides step-by-step guides to set up CR series cobots and create programs - not to mention other wizards and tutorials to help new users.

FANUC cobots stop at a touch and restart at the push of a button. Convenient hand guidance functionality also makes adapting to different applications very straightforward.

The CRX manual guided teaching function allows the user to easily move the robot around a space for easier teaching. CRX's new *i*HMI Editor programming interface features icon-based intuitive drag-and-drop programming.



MORE performance and MORE capability

Offering payloads of 4 kg, 7 kg, 10 kg, 14 kg, 15 kg and 35 kg and unrivaled reach, the CR series is ideally suited to handling processes that expose people to the risk of repetitive strain and other work-related injuries. Since FANUC cobots are precise and repeatable, they also offer you huge benefits in terms of quality and throughput.



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

CRX-10iA

Payload: 10 kg
Reach: 1,249 mm

CRX-10iA/L

Payload: 10 kg
Reach: 1,418 mm

CR-14iA/L

Payload: 14 kg
Reach: 911mm

CR-15iA

Payload: 15 kg
Reach: 1,441 mm

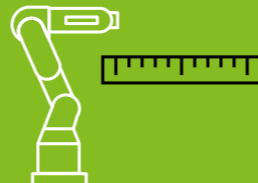
CR-35iA

Payload: 35 kg
Reach: 1,813 mm



More payloads – up to 35 kg

FANUC is the only automation company with eight cobot models offering payloads from 4kg to 35kg.



More reach – up to 1,813 mm

FANUC's cobots are available with reaches of 550 to 1,813 mm – all with a 360° work envelope.



More speed – up to 1,500 mm/sec*

To ensure safety, cobots limit force and momentum while working alongside people by operating at lower speeds than other robots. However, FANUC CR models can operate at even higher speeds while users are not in the area.

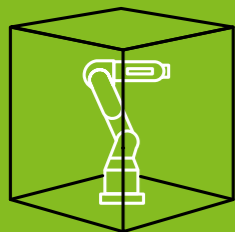
* CR-15iA robot in non-collaborative mode and no contact stop

MORE freedom and flexibility

The FANUC CR 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

The ISO 10218 and ISO 13849 Cat. 3 Pld. certified collaborative robots are equipped with ultra-safe FANUC contact stop protection based on proven sensor technology. All robots restart easily and quickly after a contact stop. In addition to contact stop, the CR series robots come with push back to escape functions to be able to push the robot out of the way for additional protection. The larger CR-35iA model comes wrapped in a passive soft cover to help dampen forces from the larger robot model. In addition, 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-35iA can be mounted upside-down, on a wall, or fixed to a mobile platform or rail.

MORE control

The FANUC Hand Guidance function is available for all FANUC collaborative robots. Depending on the model, it allows you to teach your collaborative robot by leading it through paths or to use it to lift heavy objects weighing up to 35 kg.

Easy teaching without programming

Teach your FANUC collaborative robot easily by leading it through paths and points. Hand guidance is easy and intuitive and eliminates the need for a pendant to teach positions. It also keeps your training costs low and saves you valuable time.

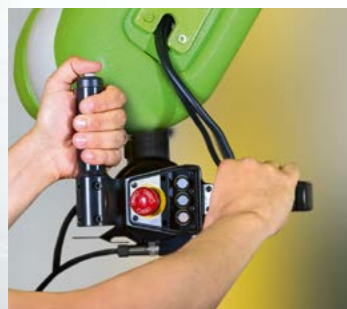
Hand guidance for easy intelligent lift assist

Using hand guidance, FANUC cobots can be used to pick up and carry heavy objects. Taking the strain off human operators on one-off operations, this is easily done by guiding the robot arm and tooling by hand to the right point, picking up and carrying the workpiece using hand guidance.



Small Hand Guidance model (only for CR series models)

- plug and play functionality with easy-to-attach joystick
- compact lightweight design
- wireless communication via *i*Pendant



Hand Guidance model for CR series and many traditional FANUC robot models

- collaborative handling during robot operation
- ISO-10218-compliant with 3 position enabling switch and emergency stop button
- equipped with FS-15iA force sensor for responsive control
- user-friendly handle mounted on robot wrist
- handle ensures easy control of robot and reduces training time



Easy programming with *i*HMI

FANUC's *i*HMI user interface offers ample processing power and clear high-resolution screen displays. To make operating your cobots as easy as possible, it can display setup, programming guides and tutorials on the main home page. By using the programming guide, even first-time robot users can create a program for simple handling tasks and execute it in just 30 minutes. Ease of use also facilitates system setup and maintenance to improve efficiency.



MORE reliability

All of FANUC's CR 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.

ROBOGUIDE simulation software



FANUC R-30iB Plus controller



R-30iB Mini Plus controller



CRX tablet pendant



Discover the wide range of collaborative opportunities

If you want to combine the strength, precision and repeatability of a robot with human know-how and manual dexterity, collaborative robots make the best choice – by working hand in hand, humans and robots can add real value to your processes. No need for safety fences – FANUC collaborative robots allow easy integration into human workspaces for even more efficiency and improved health and safety.

ASSEMBLY

Preventing the risk of repetitive strain injuries amongst assembly workers, the CR series will lift and position heavy components among machining and assembly lines. The repeatability offered by using a collaborative robot for these processes also improves quality and reduces cycle times. **Benefits: Higher output, more speed and improved quality**

MACHINE TENDING

The CR series is ideally suited to those machine tending applications that frequently require an operator's presence. **Benefits: Maximized efficiency, better quality, more throughput and improved performance**

MOBILE PLATFORM

Automated guided vehicles (AGVs) work effectively with CR series robots and people and provide an effective means of enhancing applications such as workpiece transfer on your CR production line. **Benefits: Enhanced flexibility thanks to the mobility of the robot**

HAND GUIDANCE

Available on the CR series robot, FANUC Hand Guidance allows you to forgo traditional programming and teach your collaborative robot by leading it along motion paths. It also enables you to use your robot to lift heavy objects weighing up to 35 kg. **Benefits: Reduced training costs and saves valuable time**

PART INSPECTION & TESTING

During part inspection, robots take over dull tasks where high-precision is required. Equipped with smart vision accessories, the CR series is ideally suited to perform a quality control (here microwaves) and, thanks to flexible mounting options, a CR cell can be designed to meet your exact requirements. **Benefits: Better repeatability and consistently high levels of product quality**

SEALING & DISPENSING

Whether they are used to apply sealants, adhesives, paints or other fluids, CR series robots work safely next to people in a wide range of industries. **Benefits: Reduce waste and increase accuracy**

PICKING, PACKING, PALLETIZING

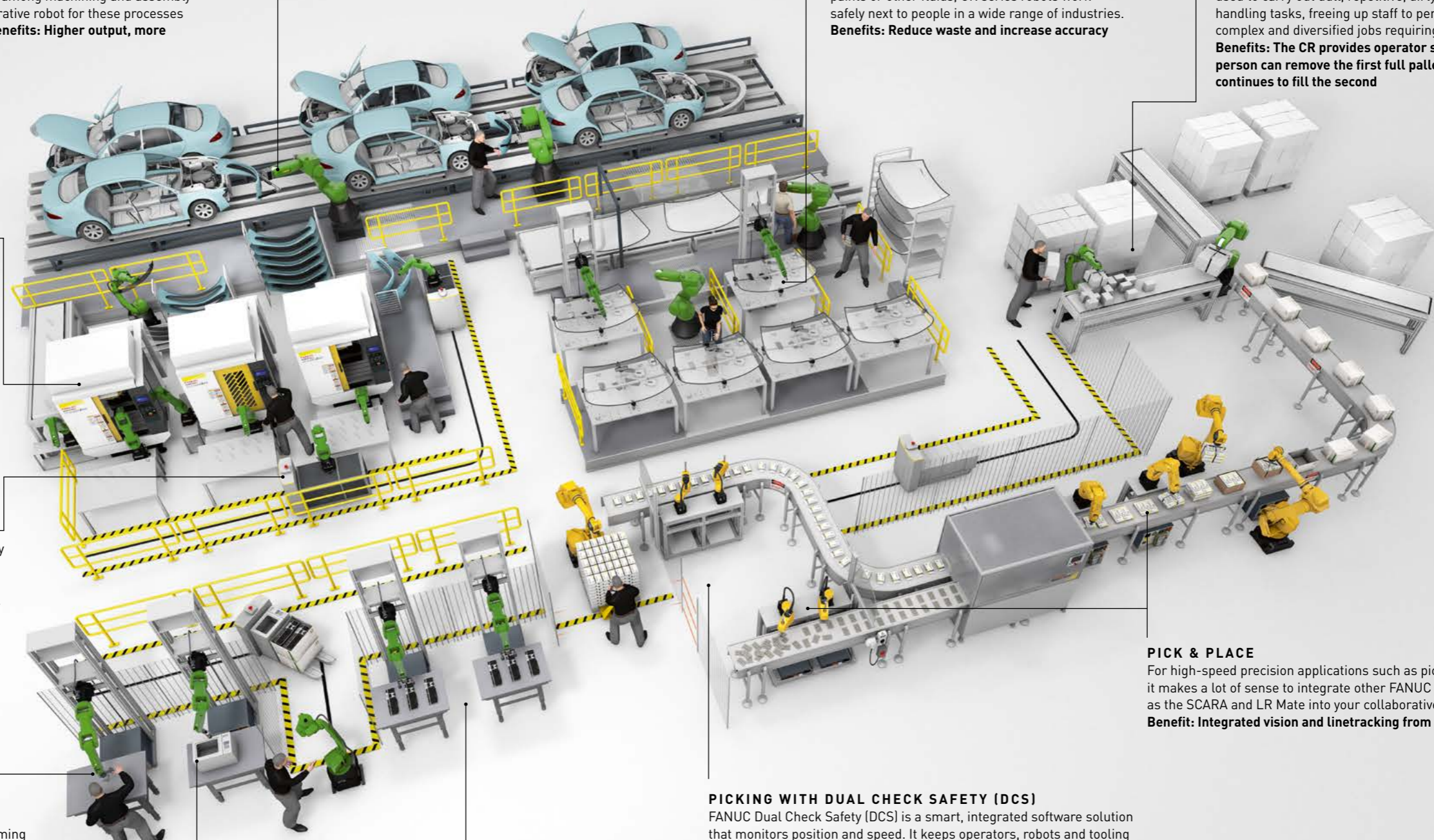
On packaging and palletizing lines, the CR series can be used to carry out dull, repetitive, dirty and dangerous handling tasks, freeing up staff to perform more complex and diversified jobs requiring human skills. **Benefits: The CR provides operator safety, and a person can remove the first full pallet while the robot continues to fill the second**

PICK & PLACE

For high-speed precision applications such as pick and place, it makes a lot of sense to integrate other FANUC robots such as the SCARA and LR Mate into your collaborative workforce. **Benefit: Integrated vision and linetracking from one supplier**

PICKING WITH DUAL CHECK SAFETY (DCS)

FANUC Dual Check Safety (DCS) is a smart, integrated software solution that monitors position and speed. It keeps operators, robots and tooling completely safe. With no need to invest in expensive space-taking safety equipment, it also helps keep the space required for robot cells to a minimum. **Benefits: Space-saving and cost-effective**



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 *i*RVision, 3D vision with FANUC 3D Vision Sensor, FANUC Force Sensors 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 *i*Pendant 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.



A sense of touch

FANUC Force Sensors detect force and torque applied to the end effector, allowing the robot to perform operations like assembly, fitting, weighing, and more.

MORE information

Technical data CR series

Specifications	CR-4iA	CR-7iA	CR-7iA/L	CR-14iA/L	CR-15iA	CR-35iA
Type: articulated	•	•	•	•	•	•
Controlled axes	6	6	6	6	6	6
Max. load capacity at wrist [kg]	4	7	7	14	15	35
Reach [mm]	550	717	911	911*1)	1,441	1,813
Repeatability [mm] *2)	±0.01	±0.01	±0.01	±0.01	±0.02	±0.03
Mass [kg] *2)	48	53	55	55	255	990
Installation: floor upside down wall *3)	• • •	• • •	• • •	• • •	• • •	• - -
Motion range						
J1 axis rotation [°]	340	340	340	340	340	370
J2 axis rotation [°]	150	166	166	166	180	165
J3 axis rotation [°]	354	373	383	383	305	258
J4 axis wrist rotation [°]	380	380	380	380	380	400
J5 axis wrist swing [°]	200	240	240	240	280	220
J6 axis wrist rotation [°]	720	720	720	720	900	900
Max. speed [mm / s] *4)	1,000*5)	1,000*5)	1,000*5)	500*4)	800 / 1,500*6)	750*5)
Allowable load moment at wrist						
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
Allowable load inertia at wrist						
J4 axis [kgm ²]	0.2	0.47	0.47	0.66	0.90	4
J5 axis [kgm ²]	0.2	0.47	0.47	0.66	0.90	4
J6 axis [kgm ²]	0.067	0.15	0.15	0.30	0.30	1.5
Installation environment						
Acoustic noise level [dB]	64.7	64.7	64.7	64.7	< 70	< 70
Ambient operating temperature [°C]	0-45	0-45	0-45	0-45	0-45	0-45
Protection						
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)

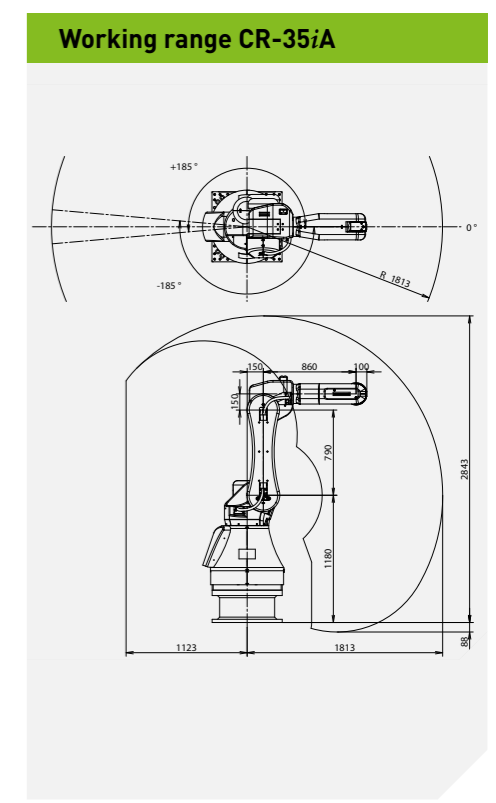
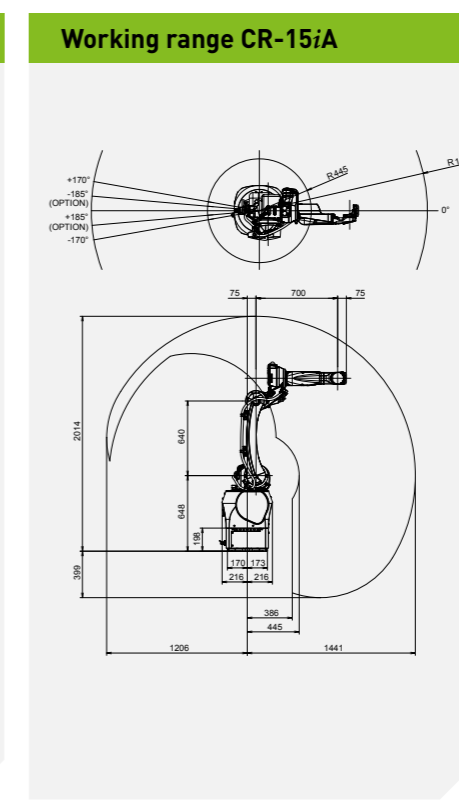
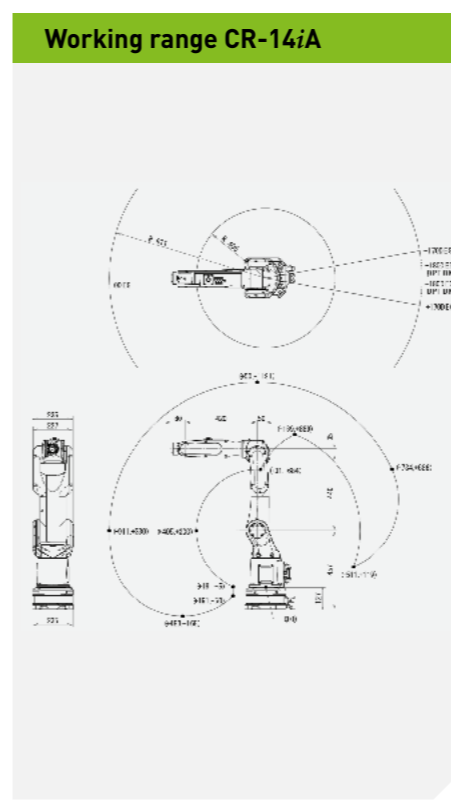
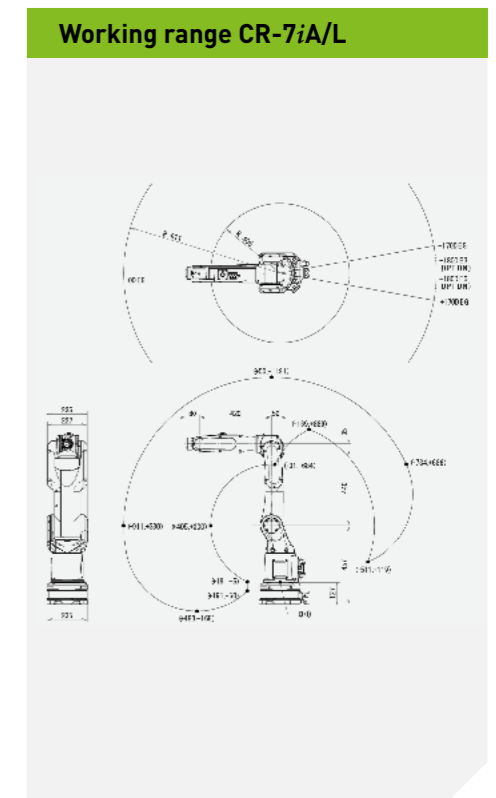
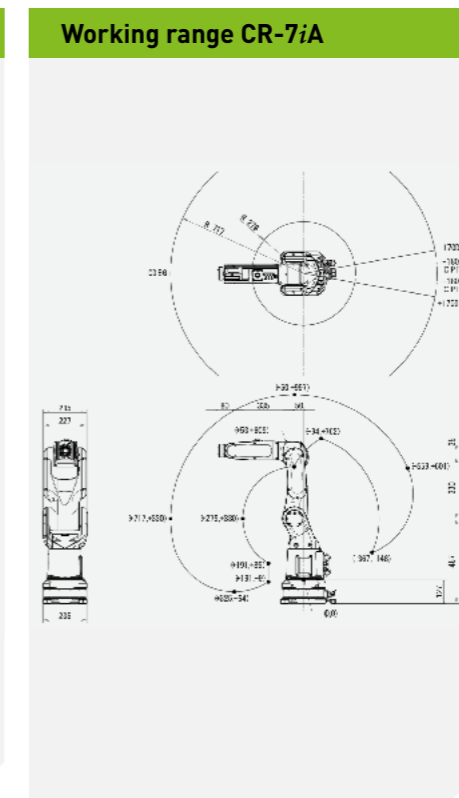
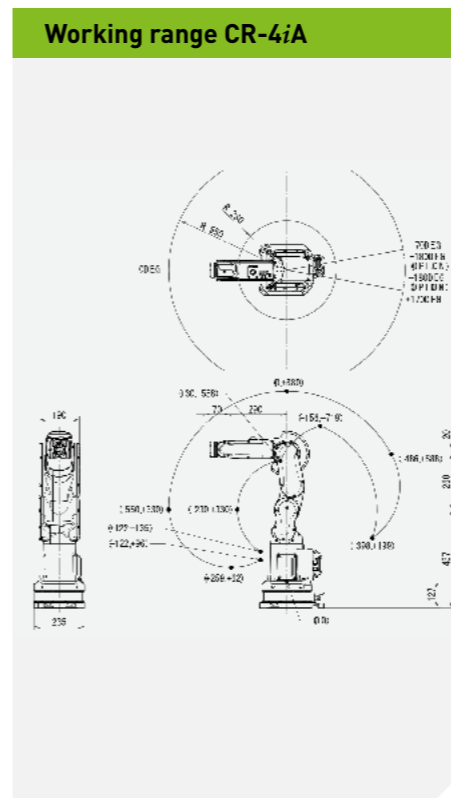
*2) ISO 9283

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

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

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

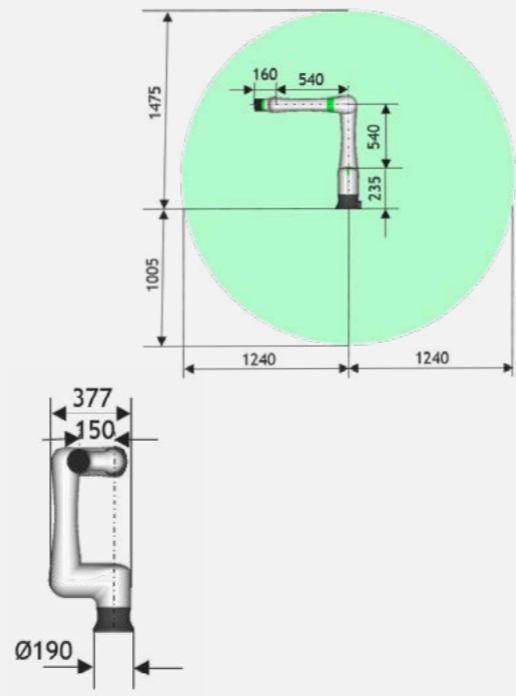
*6) If the area is monitored by a safety sensor (located separately).



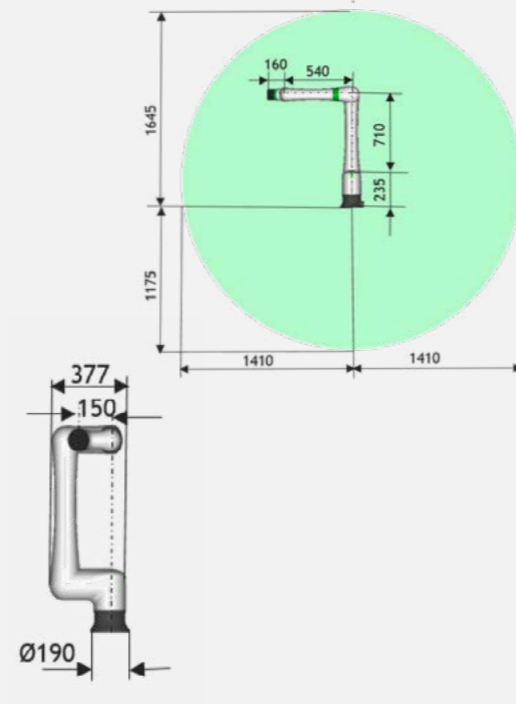
Technical data CRX series

Specifications	CRX-10iA	CRX-10iA/L
Type	10	10
Controlled axes	6	6
Max. load capacity at wrist [kg]	10	10
Reach [mm]	1,249	1,418
Repeatability [mm] *2)	±0.05	±0.05
Mass [kg] *2)	39	39
Installation: floor upside down wall *3)	• • •	• • •
Motion range		
J1 axis rotation [°]	380	360
J2 axis rotation [°]	360	360
J3 axis rotation [°]	570	540
J4 axis wrist rotation [°]	380	380
J5 axis wrist swing [°]	360	360
J6 axis wrist rotation [°]	380	380
Max. speed [mm / s] *4)	1,000	1,000
Allowable load moment at wrist		
J4 axis [Nm]	34.8	34.8
J5 axis [Nm]	26.0	26.0
J6 axis [Nm]	11.0	11.0
Allowable load inertia at wrist		
J4 axis [kgm ²]	1.28	1.28
J5 axis [kgm ²]	.90	.90
J6 axis [kgm ²]	.30	.30
Installation environment		
Input power source [VAC]	100-120 200-240	100-120 200-240
Ambient operating temperature [°C]	0-45	0-45
Protection		
Body standard/optional	IP54	IP54
Wrist & J3 arm standard/optional	IP54	IP54

Working range CRX-10iA



Working range CRX-10iA/L



MORE sleek

The lightweight and compact design of the CRX models allow for easy integration into any work area or existing system. Users can easily program and teach points on a CRX cobot using all-new manual guiding programming features and new icon based drag-and-drop teach pendant user interface.



• standard
 *1) 911mm (load capacity < 12 kg) - 820 mm (load capacity ≥ 12 kg)
 *2) ISO 9283
 *3) In case of the wall mount, the operation space will be restricted according to the payload.
 *4) In case of short distance motion, the speed may not reach the maximum value stated.
 *5) It is necessary to set a motion speed according to risk assessment of system considering pinching with the surroundings.
 *6) If the area is monitored by a safety sensor (located separately).

MORE choices
MORE payload
MORE reach
MORE control

