	CR7		CR12		CR18		CR20	

Specifications

Payload	7 kg	12 kg	18 kg	20 kg
Reach	988 mm	1,434 mm	1,062 mm	1,798 mm
Weight (including built-in controller)	About 27 kg	About 43 kg	About 40 kg	About 75 kg
Degrees of freedom	6	6	6	6
MTBF	> 50,000 h	> 50,000 h	> 50,000 h	> 50,000 h
Power supply	90-264VAC, 47-63Hz/48VDC			
Programming	Direct teaching control and graphical interface			

Performance

Typical Power	300 w		500 w		600 w		1000 w	
Safety	Over 20 adjustable safety features including collision detection, virtual walls, and collaboration mode.							
Certification	EN ISO 13849-1, Cat.3, PL d, EN ISO 10218-1, and EU CE marking requirements							
Force sensing (tool flange)	Force, x-y-z	Torque, x-y-z	Force, x-y-z	Torque, x-y-z	Force, x-y-z	Torque, x-y-z	Force, x-y-z	Torque, x-y-z
Force measurement resolution	0.1 N	0.02 Nm	0.1N	0.02Nm	0.1N	0.02Nm	0.1N	0.02Nm
Relative accuracy of force control	0.5 N	0.1 Nm	0.5N	0.1Nm	0.5N	0.1Nm	0.5N	0.1Nm
Adjustable range of Cartesian stiffness	0~3,000 N/m, 0~300 Nm/rad		0~3,000 N/m, 0~300 Nm/rad		0~3,000 N/m, 0~300 Nm/rad		0~3,000 N/m, 0~300 Nm/rad	
Operating temperature	0°C~50°C		0°C~50°C		0°C~50°C		0°C~50°C	
Humidity	⩽ 93% RH (non-condensing)		⩽ 93% RH (non-condensing)		⩽ 93% RH (non-condensing)		⩽ 93% RH (non-condensing)	

Motion

Repeatability	±0.02 mm		±0.03 mm		±0.03 mm		±0.05 mm	
Motion joint	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed
Axis 1	±175°	180°/s	±175°	120°/s	±175°	120°/s	±175°	120°/s
Axis 2	±175°	180°/s	±170°	120°/s	±170°	120°/s	±175°	120°/s
Axis 3	±175°	234°/s	±175°	180°/s	±165°	180°/s	±170°	120°/s
Axis 4	±175°	240°/s	±175°	234°/s	±175°	180°/s	±175°	180°/s
Axis 5	±175°	240°/s	±175°	240°/s	±175°	180°/s	±175°	234°/s
Axis 6	±175°	300°/s	±175°	240°/s	±175°	180°/s	±175°	234°/s
Axis 7	—		—		—		—	
Maximum speed at tool end	⩽ 3.2 m/s		⩽ 3.0 m/s		⩽ 3.0 m/s		⩽ 3.5 m/s	

Features

IP rating	IP54/IP67
ISO cleanroom class	5
Noise	⩽ 70 dB(A)
Robot installation	At any angle
Tool I/O ports	2 Digital outputs, 2 Digital inputs, 2 Analog inputs
Tool communication interface	RS485
Tool I/O power supply	12V/24V 1A
Pedestal common I/O ports	4 Digital outputs, 4 Digital inputs, 4 safety I/O
Pedestal communication interface	1 channels Ethernet
Pedestal output power supply	24V, 1.5A

ROKAE Robotics

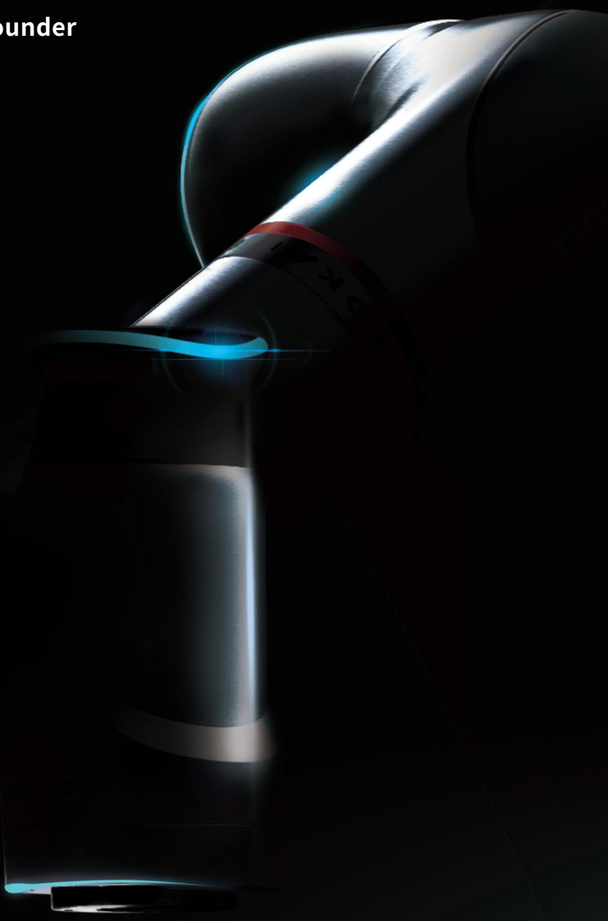
400-010-8700
www.rokae.com
sales@rokae.com

2023-06-29

ROKAE

CR Series Flexible Collaborative Robots

A Powerful Yet Flexible All-Rounder



xMate

CR Series

Flexible Collaborative Robots

The new **xMate CR** series flexible collaborative robots are built on the force-position hybrid control framework and xCore, a new self-developed high-performance control system for industrial robots. Designed for industrial applications, the robots deliver improved motion performance, force control, safety, ease of use, and reliability. This makes it an ideal choice for different applications in various industries, helping enterprises implement flexible production quickly.

Model CR7
Payload 7 kg
Reach 988 mm

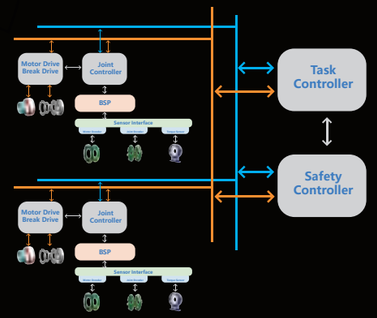
Model CR12
Payload 12 kg
Reach 1.434 mm

Model CR18
Payload 18 kg
Reach 1,062 mm

Model CR20
Payload 20 kg
Reach 1,798 mm

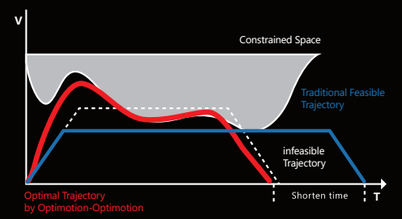
Extreme Safety

Suction band-type brakes, independently certified safety controllers, over 20 certified safety features, and ultrasensitive collision detection by torque sensors, comprehensively ensure a safer human-machine collaboration.



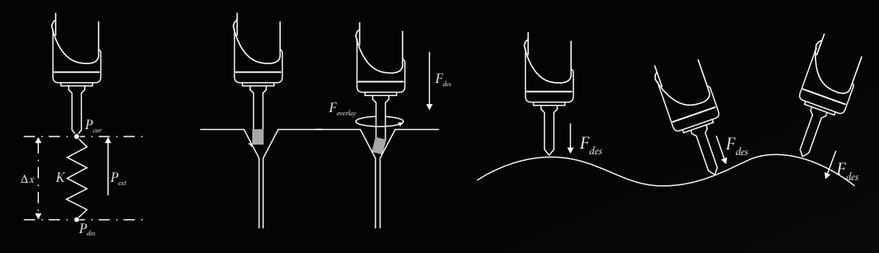
Superior Performance

Cutting-edge motion control technologies for industrial robots to deliver first-class path accuracy, combined with customized motor drive control systems, create a powerful performance.



Compliant Flexibility

By adopting force-position hybrid control technology, highly dynamic force control is integrated into robot joints, which provides compliance control close to human hands,
while the force control process kit helps greatly enhance force control task efficiency with no additional extensions required.



Applications

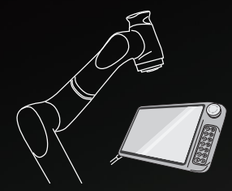
xMate CR series flexible collaborative robots can undertake a variety of tasks, including

- compliant assembly
- screw locking
- inspection and measurement
- handling
- material removal
- gluing
- equipment care

driving improved productivity and flexible automation for companies of all sizes.

Ease of Use

Fast installation and flexible deployment thanks to the cabinet-free design, direct teaching control, and graphical programming enable greater ease of use. Applicable to a variety of application scenarios by supporting most extensions in the industrial ecosystem.



Excellent Reliability

IP67 protection, 100+ design verification experiments, and 20+ factory tests, build them into an ideal choice for industrial applications.

A Powerful Yet Flexible All-Rounder