

WELDEX

ROBOTIC WELDING SOLUTION



ACCREDITED
Management Systems
Certification Body
MSCB-166



ISO 9001
Management Systems
Certified



PRODUCT MANUAL



- › Modularization
- › Quick deployment
- › Easy operation

FAIR EVERYWHERE

PRODUCT ADVANTAGES

Collaborative robots will extend your time and space, liberate complex and inefficient repetition, and let you embrace a wider horizon. In the future, you will see **FAIR EVERYWHERE**. With its emergence, it not only improves the efficiency of human-machine collaboration, but also speeds up the automation process for more enterprises and frees floor space and lowers the cost of implementing robots for manufacturers.

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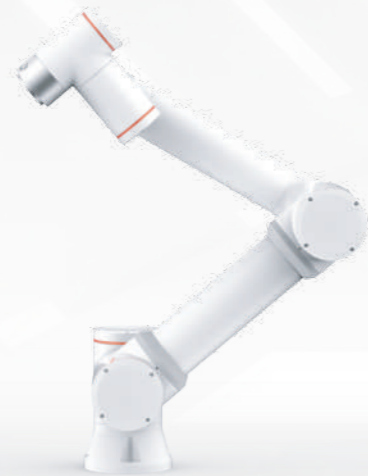


map

PRODUCT DISPLAY



FR3



FR5



FR10



FR16



FR20






SERIES LAYOUT

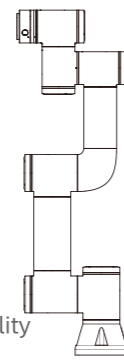
According to different payload and range, FAIR collaborative robot product line has five models: FR3, FR5,FR10,FR16& FR20.

The products are certified with CE, CR and ISO9001 quality management system, every robot joint has dual encoders so that can achieve higher precision. The open operating platform also lowers the barrier to use it in different scenarios.




Intelligent human-machine cooperation system solutions

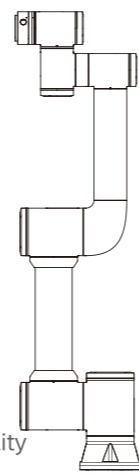
FR3

-  Payload 3kg
-  Reach 622mm
-  Repeatability ±0.02mm






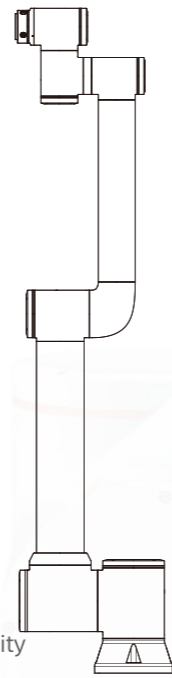
FR5

-  Payload 5kg
-  Reach 922mm
-  Repeatability ±0.02mm






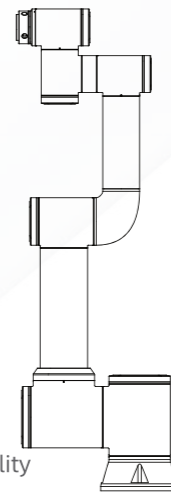
FR10

-  Payload 10kg
-  Reach 1400mm
-  Repeatability ±0.05mm






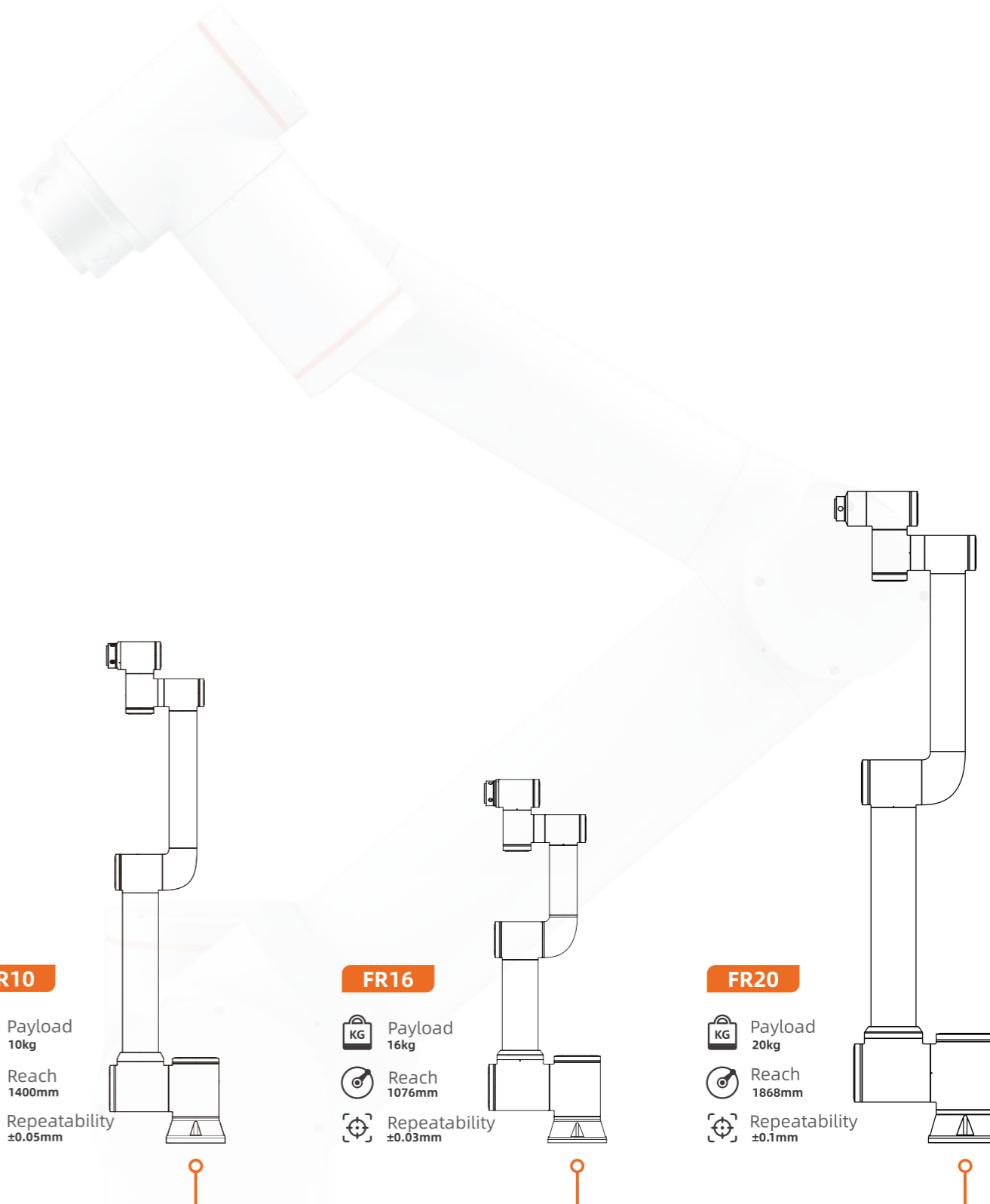
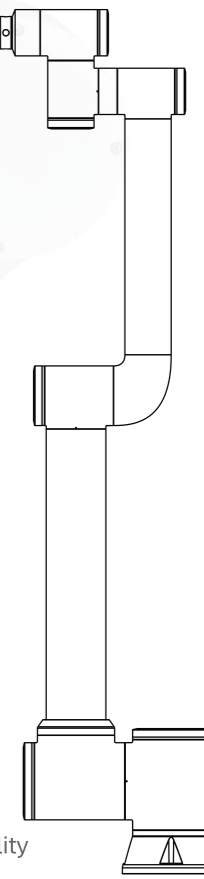
FR16

-  Payload 16kg
-  Reach 1076mm
-  Repeatability ±0.03mm



FR20

-  Payload 20kg
-  Reach 1868mm
-  Repeatability ±0.1mm



SPECIFICATION

	FR3		FR5		FR10		
Specification	Payload	3kg	5kg	10kg			
	Reach	622mm	922mm	1400mm			
	Range	6	6	6			
	HMI	10.1 APP	10.1 inch teach pendant or mobile terminal APP				
Movement	Repeatability	±0.02mm		±0.05mm			
	Axis movement	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed
	1	±175°	±180°/s	±175°	±180°/s	±175°	±120°/s;
	2	+ 85°/ - 265°	±180°/s	+ 85°/ - 265°	±180°/s	+ 85°/ - 265°	±120°/s;
	3	±150°	±180°/s	±160°	±180°/s	±160°	±180°/s;
	4	+ 85°/ - 265°	±180°/s	+ 85°/ - 265°	±180°/s	+ 85°/ - 265°	±180°/s;
	5	±175°	±180°/s	±175°	±180°/s	±175°	±180°/s;
	6	±175°	±180°/s	±175°	±180°/s	±175°	±180°/s;
	TCP (Typical TCP speed)	1m/s	1m/s	1.5m/s			
	IP classification	IP54 (IP66)	IP54 (IP66)	IP54 (IP66)			
Features	Noise	<65dB		<65dB		<65dB	
	Robot mounting	Any orientation		Any orientation		Any orientation	
	Inside the Control Box (I/O)	Digital input (DI)2	Digital input (DO)2	Digital input (DI)2	Digital input (DO)2	Digital input (DI)2	Digital input (DO)2
		Analog input (AI)1	Analog input (AO)1	Analog input (AI)1	Analog input (AO)1	Analog input (AI)1	Analog input (AO)1
	Power supply	24V/1.5A		24V/1.5A		24V/1.5A	
	communication	I/O、TCP/IP、Modbus_TCP/RTU、Profinet		I/O、TCP/IP、Modbus_TCP/RTU、Profinet		I/O、TCP/IP、Modbus_TCP/RTU、Profinet	
	Development environment	C#/C++/Python/java/ROS		C#/C++/Python/java/ROS		C#/C++/Python/java/ROS	
	Physical	Footprint	130mm	150mm	190mm		
		Weight	≈15kg	≈22kg	≈40kg		
		Operating temperature	0-45°C		0-45°C		0-45°C
Operating humidity		90%RH(non-condensing)		90%RH(non-condensing)		90%RH(non-condensing)	
Materials		Aluminium、Steel		Aluminium、Steel		Aluminium、Steel	



SPECIFICATION

	FR16		FR20		
Specification	Payload	16kg	20kg		
	Reach	1076mm	1868mm		
	Range	6	6		
Movement	HMI	10.1 APP	10.1 inch teach pendant or mobile terminal APP		
	Repeatability	±0.03mm	±0.1mm		
	Axis movement	Working range	Maximum speed	Working range	Maximum speed
	1	±175°	±120°/s;	±175°	±120°/s;
	2	+ 85°/ - 265°	±120°/s;	+ 85°/ - 265°	±120°/s;
	3	±160°	±180°/s;	±160°	±120°/s;
	4	+ 85°/ - 265°	±180°/s;	+ 85°/ - 265°	±180°/s;
	5	±175°	±180°/s;	±175°	±180°/s;
	6	±175°	±180°/s;	±175°	±180°/s;
	TCP (Typical TCP speed)	1m/s	2m/s		
Features	IP classification	IP54 (IP66)	IP54 (IP66)		
	Noise	<65dB	<70dB		
	Robot mounting	Any orientation		Any orientation	
	Inside the Control Box (I/O)	Digital input (DI)2	Digital input (DO)2	Digital input (DI)2	Digital input (DO)2
		Analog input (AI)1	Analog input (AO)1	Analog input (AI)1	Analog input (AO)1
	Power supply	24V/1.5A		24V/1.5A	
	communication	I/O、TCP/IP、Modbus_TCP/RTU、Profinet		I/O、TCP/IP、Modbus_TCP/RTU、Profinet	
	Development environment	C#/C++/Python/java/ROS		C#/C++/Python/java/ROS	
	Physical	Footprint	190mm	240mm	
		Weight	≈40kg	≈65kg	
Operating temperature		0-45°C		0-45°C	
Operating humidity		90%RH(non-condensing)		90%RH(non-condensing)	
Materials		Aluminium、Steel		Aluminium、Steel	



COMPACT CONTROL BOX



Compact box: small size, light weight, convenient installation and flexible deployment; Provide rich interfaces: I/O, TCP/IP, Modbus_TCP/RTU,Profinet etc., supporting for multiple development environment: C#/C++/Python/java/ROS, etc.

Features	(IP classification)	IP54
	(Operating temperature)	0-45°C
	(Operating humidity)	90%RH(non-condensing)
Physical	Inside the Control Box (I/O)	Digital input (DI) 16 Digital input (DO)16 Analog input (AI) 2 Analog input (AO) 2 (High speed pulse input) 2
	(Power supply)	24V/1.5A
	(L*W*H)	245*180*44.5mm
	(Weight)	2.1kg
	(Materials)	Galvanized sheet

TEACH PENDANT [Optional]

All operations are gathered in the hand



The teach pendant, computer, tablet or mobile phone is connected to the WebAPP system to realize the operation of the collaborative robot.

- The user interface is more intuitive
- Wide range of technological packages
- Cloud deployment provides greater convenience

Features	(IP classification)	IP54
	(Operating humidity)	90%RH(non-condensing)
	(Display resolution)	1280 x 800 pixels
Physical	(L*W*H)	268*210*88mm
	(Weight)	1.6kg
	(Materials)	ABS、PP
	(Cable length)	5m

COMPANY PROFILE

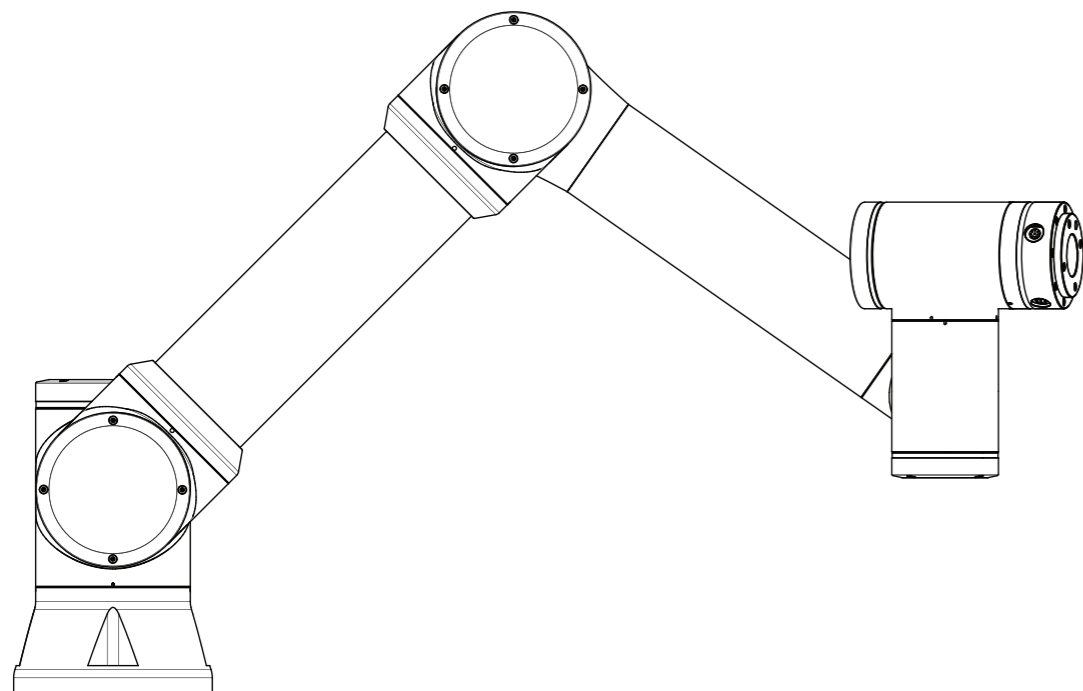
FAIR is the collaborative robot company who has achieved independent R&D of all core components.

We focus on user experience and are dedicated to offering the industry with artificial intelligent robot system.

We provide customized components, complete machines and systems for industry customers, the open development platform provides more convenience and possibility for our partners.

FAIR, as always, provides values and grow together with customers and partners.

Welcome to the intelligent world of FAIR.

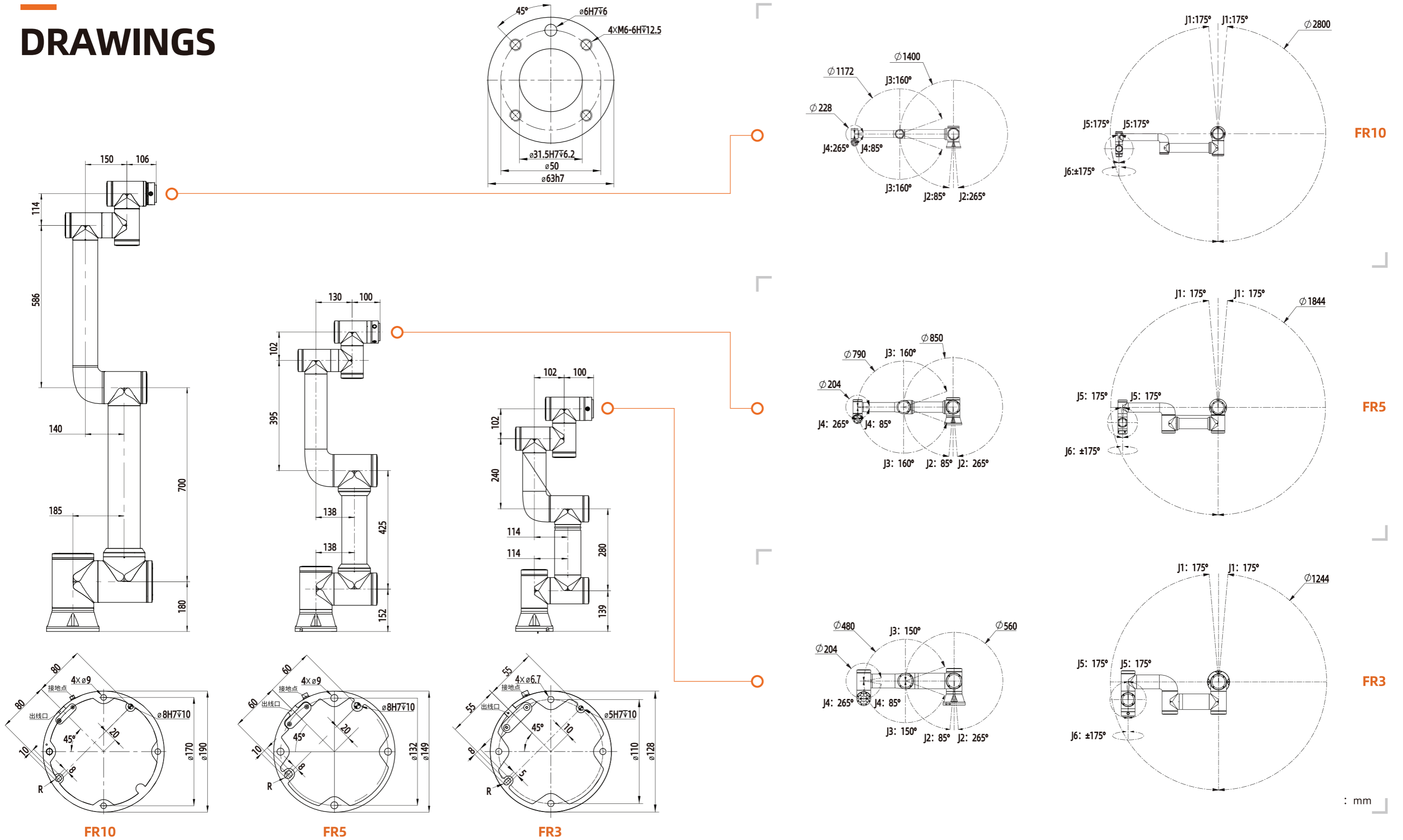


Lots of manufacturers have begun taking advantage of AIoT and human-machine collaboration. What can collaborative robots do for them?

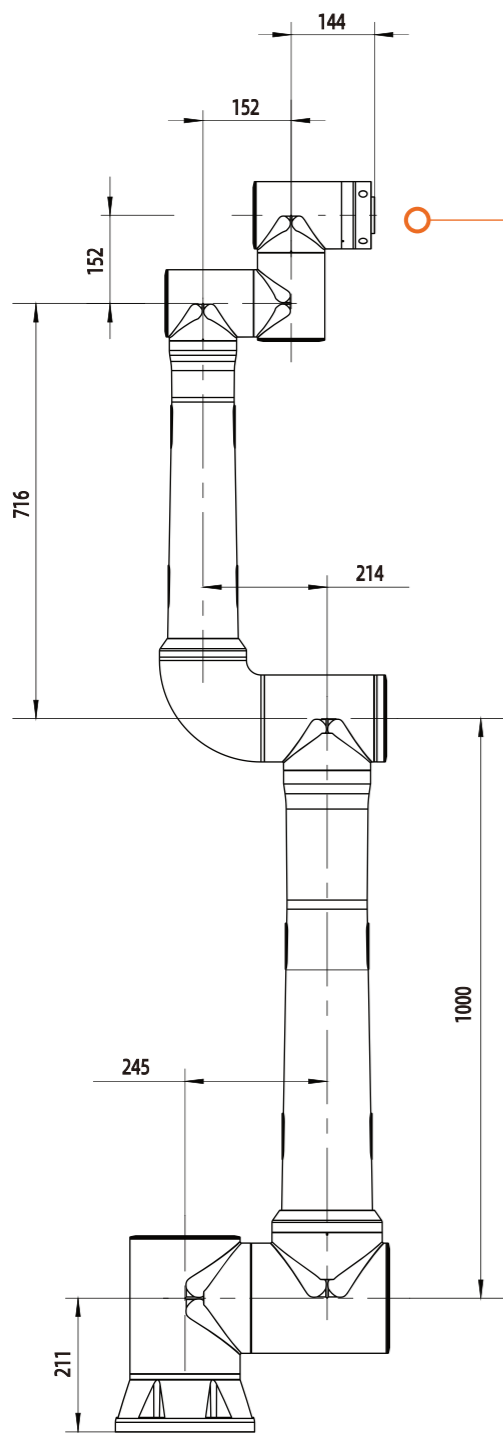
Collaborative robots decrease manufacturing costs, increase the efficiency of production and enhance the skills of employees. They also offer better service quality and improve the customer experience. By providing the standardized functions and low deploying costs, cobots are widespread in commercial scenarios such as household chores, room cleaning and cooking.

Cobots are believed to have unlimited potential and would be introduced to more scenarios in the future.

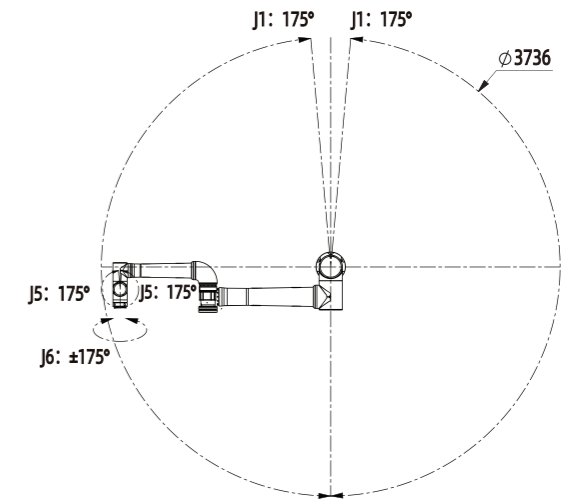
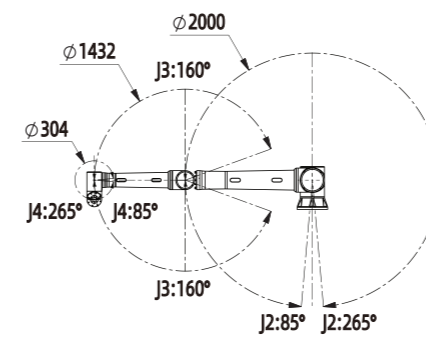
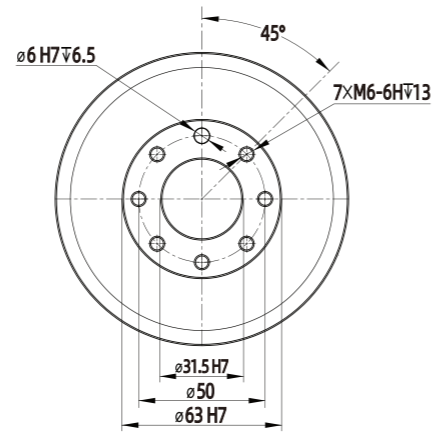
DRAWINGS



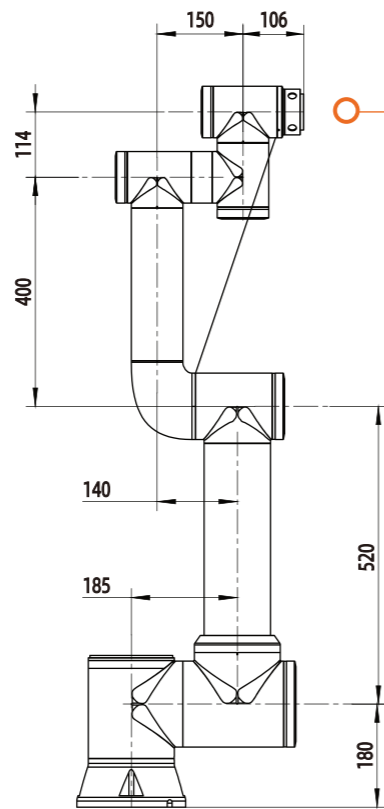
DRAWINGS



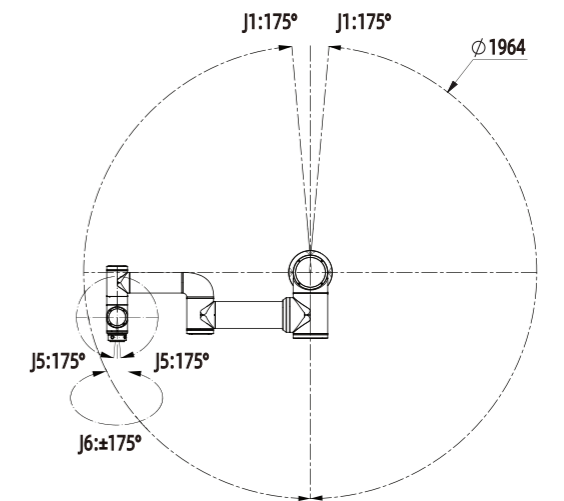
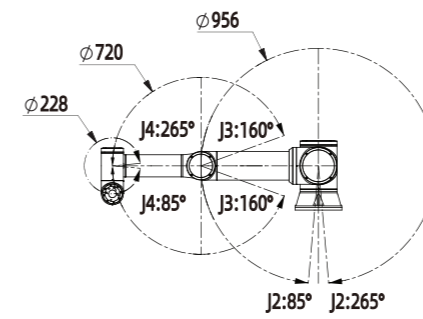
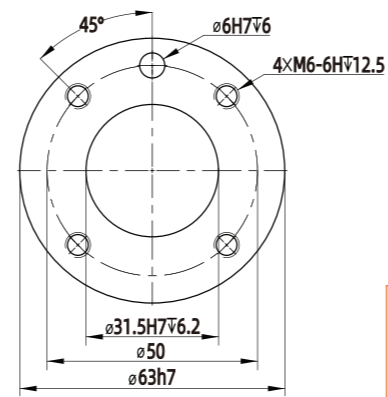
FR20



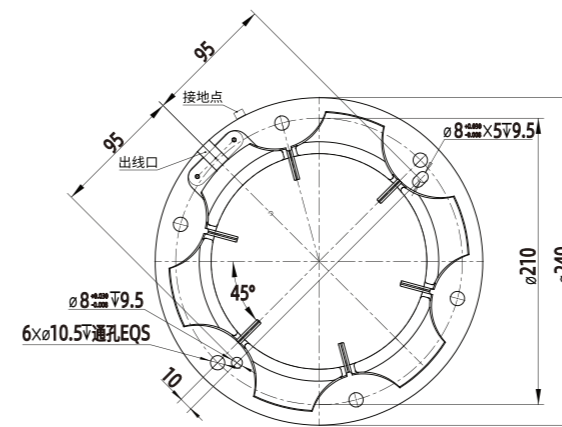
FR20



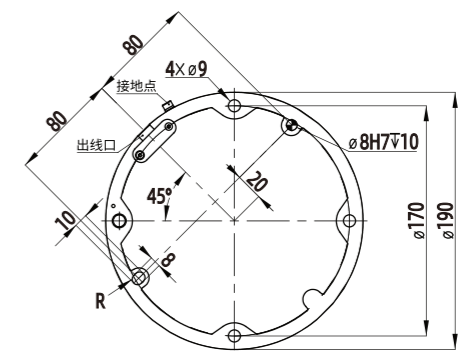
FR16



FR16



FR20



FR16

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