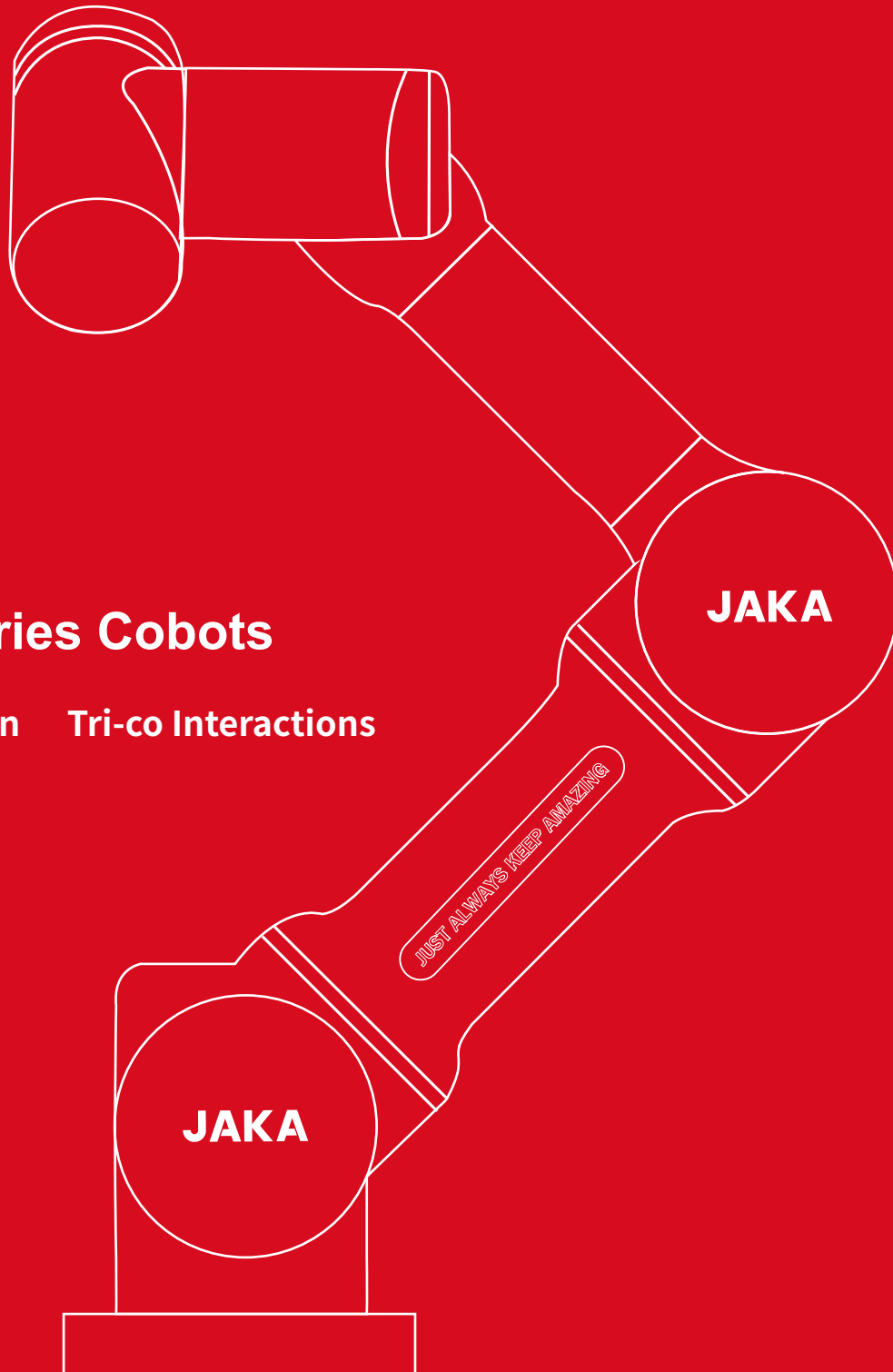


JAKA® | 节卡



JAKA Zu[®] Series Cobots

Wireless Connection Tri-co Interactions



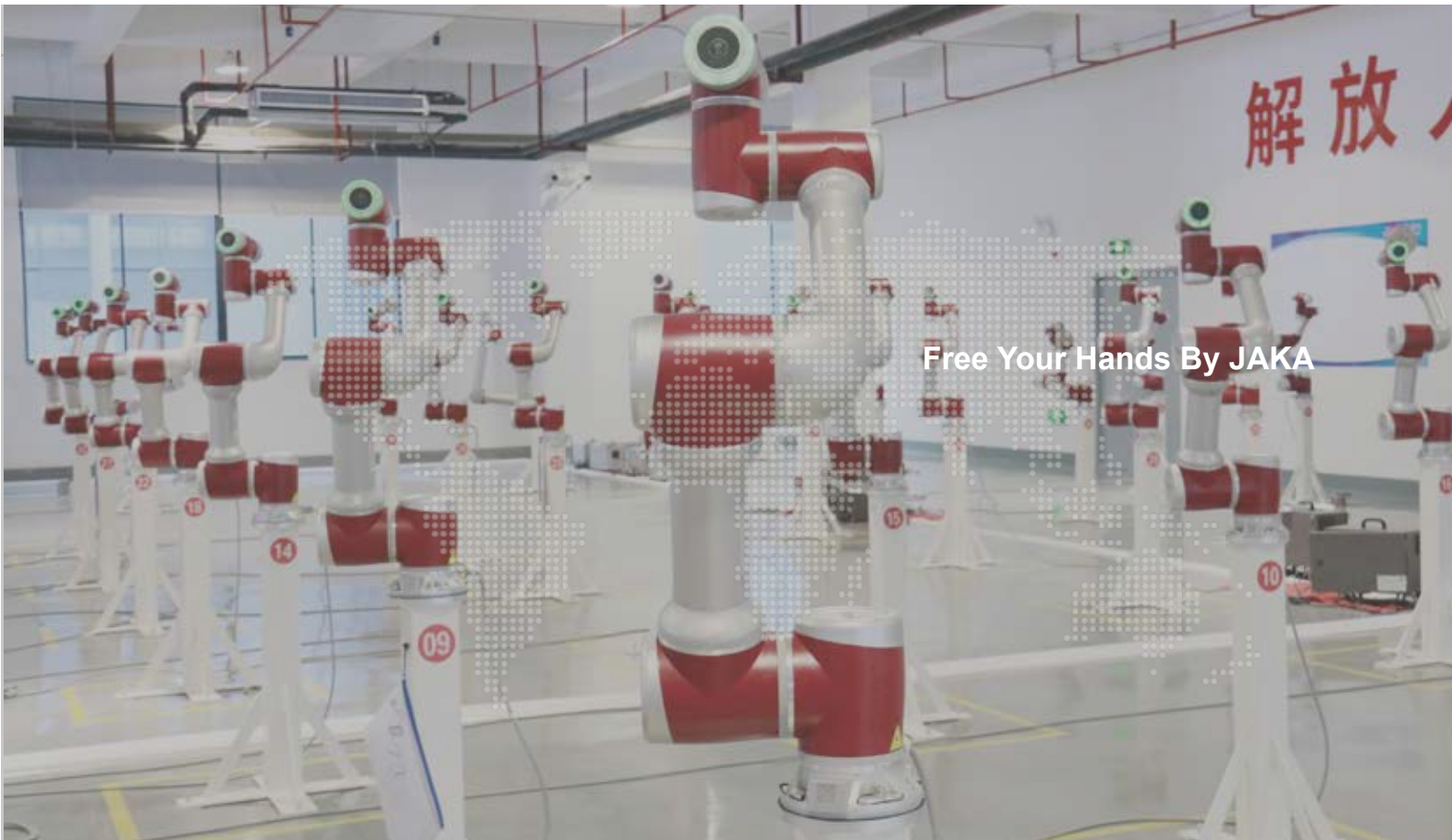
JAKA Zu® Series Cobots

Wireless Connection Tri-co Interactions

About Us

JAKA founded in 2014, stand for "Just Always Keeping Amazing". JAKA robotics is new and high-tech company aiming at innovation and R&D for new generation of cobots and smart factory.

JAKA has inherited the accumulation and genes of technology since 1979 from Shanghai Jiao Tong University and has a R&D department with strong scientific research ability organized by over than 10 leading experts and 100 senior engineers. Innovative breakthroughs have been made in many applications such as drive control integration, integrated joints, free-drive programming, wireless connection, etc. JAKA has continuously led the trend of robotics development. JAKA is on mission to "Free Your Hands By JAKA". We are in accordance with spirit of concentration, professionalism, and originalism to spread the sparkle of wisdom to every corner of the Earth, and facilitating enterprises striding onto Industry 4.0.



Free Your Hands By JAKA

JAKA Zu® Cobots With Wireless Connection

JAKA Zu® Series are 6-axis cobots have launched JAKA Zu® series of common version (JAKA Zu® 3, JAKA Zu® 7, JAKA Zu® 12 and JAKA Zu® 18) and s (force control) version (JAKA Zu® 3s, JAKA Zu® 7s, JAKA Zu® 12s, JAKA Zu® 18s), employed creative designed App on MT (mobile terminal) and wireless connecting system. The versatility and flexibility of JAKA Zu® enable them have an easy access to production in various industries, and meet the needs of different production situations.

Owing to the achievements of JAKA Zu® are in drive control integration, integrated joints, drag-and-drop play, free-drive programming, wireless connection and so on. JAKA Zu® cobots have been applied to automation production in many industries, providing a strong and continuous foundation for industrial innovation.

Wireless Intelligent

Wireless Connection, Intelligent Recognition



Wireless Connection, No Need Of An Exclusive Teach Pendant.

JAKA Zu® cobots pioneered the mobile terminal APP control mode, freeing the traditional bulky teaching devices and lengthy control lines, making the teaching process in the local space more convenient.



Remote Collaboration, Breaking Geographical Restrictions.

JAKA Zu® cobots supports remote programming control collaboration, and is no longer limited to geographical boundaries. JAKA Zu® cobots also implement control of multiple robots by one mobile terminal.



Visual Perception, The Cobot Can Recognize.

JAKA Zu® cobots combine hardware and software devices with vision systems to enable recognition of 2D, object recognition, 3D object recognition, color recognition, location recognition, and distance recognition.

Safety & Flexibility

Safe Operation, Simple And Flexible

Free-drive Programming, Rapid Conversion

Manually dragging the end of the cobot to the corresponding point, the cobot arm learns the memory and completes the programming, even the zero-based operator can easily use, and the human-machine cooperation is more humanized. The new program is adjusting while editing, and the whole process takes only a few minutes to achieve rapid task conversion.

Torque Feedback, Collision-Detected Stop

Built-in torque feedback module, when the collision reaches the set upper limit of the torque, the cobot stops in time to avoid injury to people and other equipment, and achieve human-machine safety cooperation.

JAKA Safety Protection System

Integrated with cobot applications, the JAKA vision protection system can monitor and protect cobot working environments, which is suitable for human-robot interaction and cooperation scenarios, and could replace traditional safety protection products to ensure the safety of both human and machines.

Plug-And-Play, Convenient Deployment

JAKA Zu® cobots are light and compact, with easy installation, visual recognition, and strong equipment compatibility. The high passability and flexibility make the JAKA Zu® plug-and-play, convenient deployment process in any production environment. With JAKA Zu® cobots, you can achieve success in production as multi-batch, customized, short cycle, etc.

- JAKA Zu® cobots can be installed in the production line at any angle, greatly reducing space requirements.
- Excellent visual positioning system ensures that the robot can switch at several work station at any time.
- Outstanding compatibility with many option package, like gripping jaws, suction cups, and force sensors, of various brands.

Open Cooperation

Open Ecosystem And Tri-co Interaction.

Universal Control Interface To Support Multi-platform System Interaction.

JAKA Zu® cobots are based on the Linux system platform and has high compatibility. Users can remotely interact with robots via Ethernet protocol (TCP/IP) and Modbus from multi-platform systems such as Android, iOS, and Windows. With universal control interface JAKA Zu® cobots can quickly match with automation equipments in the supply chain.



ROS Driver For Secondary Development

With open source ROS robot operating system, customers can make the control connection with JAKA Zu® cobots through Ethernet interface, which is convenient for scientific research and development of complex applications.



Tri-co Interactions With Human, Robots And Working Environment.

The integrated industrial design concept, as well as excellent collision stop, 3D visual recognition and other functions, ensure that the JAKA Zu® cobots do not need a safety fence when working in harsh environments such as high temperature, high noise, high cleanliness and dust. It can fully take into account the harm of people and other equipment, complete the task well, achieve the integration and cooperation with the operators, other robots and the working environment.

JAKA Zu® Series Cobots



JAKA Zu® 3

Weight 12kg **Payload** 3kg **Working radius** 626mm

Product Features:

Flexible and light
Small space requirement
High Cost-Effective



JAKA Zu® 7

Weight 22kg **Payload** 7kg **Working radius** 819mm

Product Features:

High payload and weight ratio ($\approx 1:3$)
High applicability
High Cost-Effective



JAKA Zu® 12

Weight 41kg **Payload** 12kg **Working radius** 1327mm

Product Features:

High payload and Major radius
High-strength applications
High Cost-Effective



JAKA Zu® 18

Weight 35kg **Payload** 18kg **Working radius** 1073mm

Product Features:

Higher Payload
Higher Security
High Cost-Effective



Recommended Markets:

3C electronics, Precision manufacturing, Education, Service industry, Medical equipment, Chemical fiber, Metal processing, Injection molding, Electrical appliances, Food, Automotive and related

Force sensor version of JAKA Zu® cobots

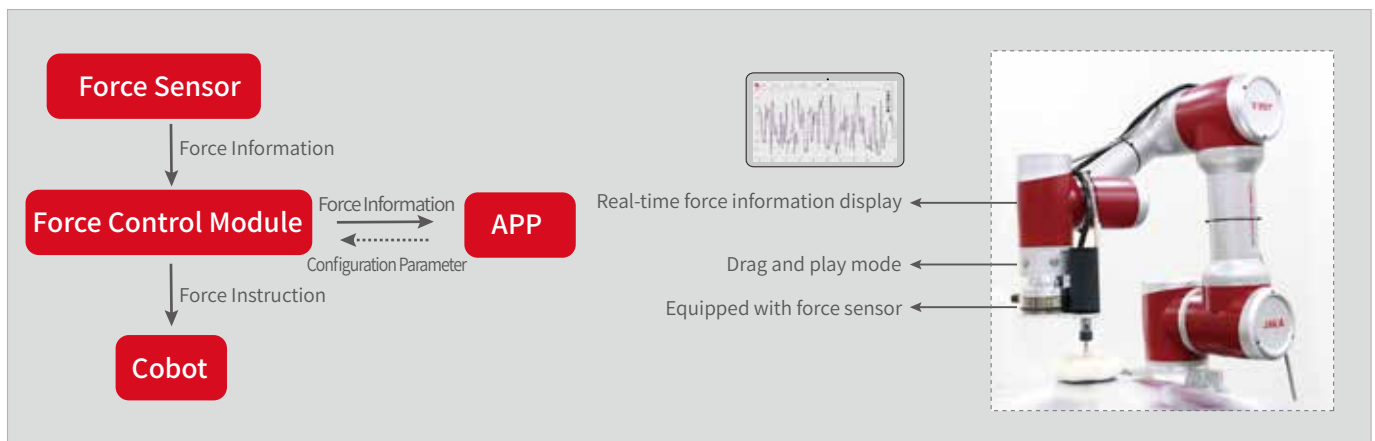


Product Description

Force sensor version of JAKA Zu cobots are equipped with advanced industrial force sensor, and integrated with force control algorithm of independent intellectual property rights, for improving the perception of cobots and provide better man-machine interaction experience and security guarantee for customers. They provide a variety of force control solutions such as constant force, normal tracking and speed mode to realize full-arm collision detection.

Basic Parameter

Hardware Platform	Force sensor
communication interface	TCP/UDP
Maximum accuracy of collision detection	10N
Maximum accuracy of constant force tracking	1N



Function Diagram

Product Features:

Force sensor version of JAKA Zu cobots are equipped with force control module, which can set the safe force. When the external force is higher than the safe value, the cobot will stop immediately. The force value is displayed in real time, the control parameters are set according to the application requirements, and the constant force or speed mode can be selected in the program.



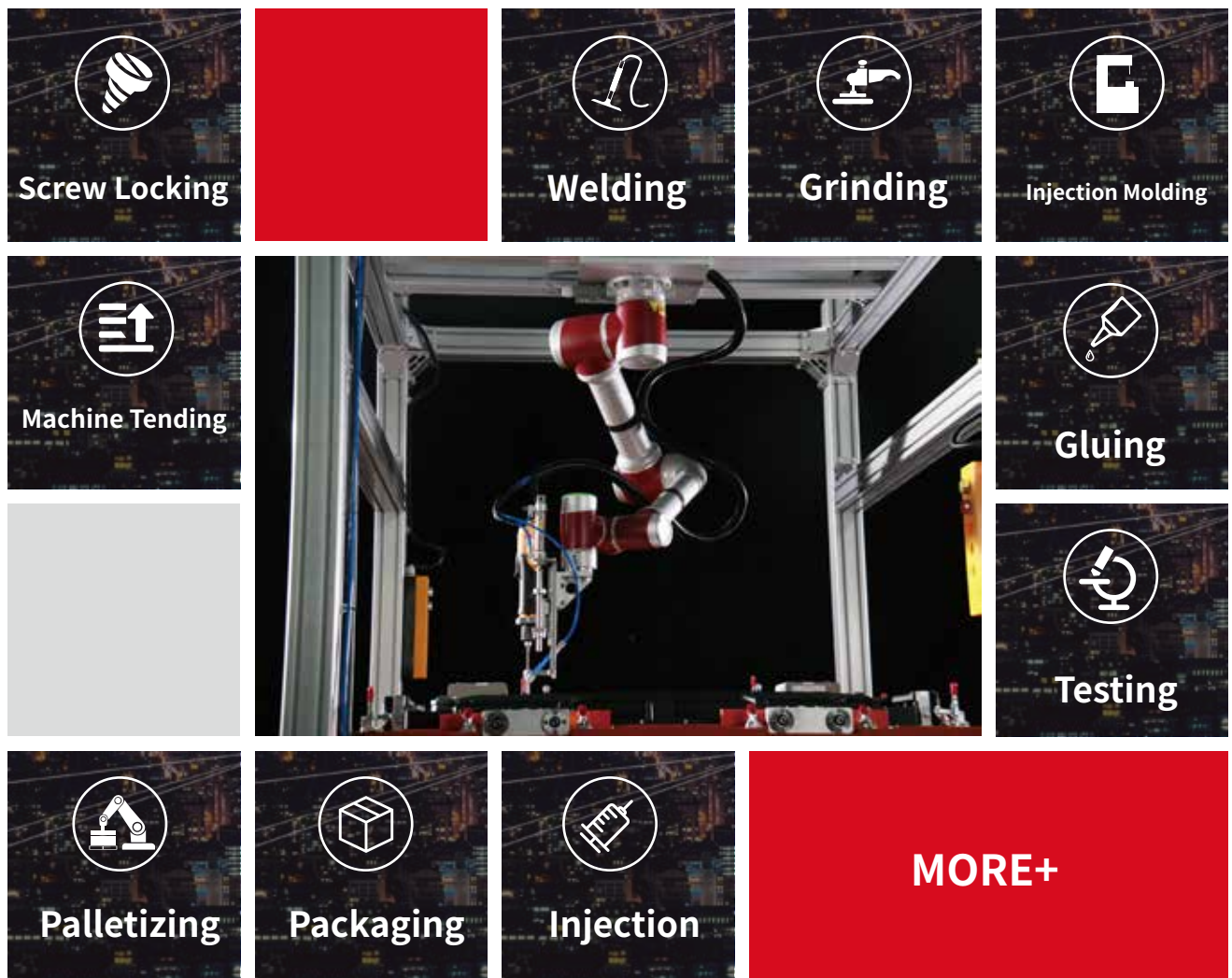
JAKA Zu® Cobots Bring You A Smart Factory.

Traditional industrial robot production lines are often repetitive, boring, and mechanically operated, and are full of potential hazards. Today, as labor costs continue to rise, it is extremely expensive for companies to recover their investment costs.

JAKA Zu® cobots have all the advantages of advanced robotic automation technology, but avoiding the extra costs of programming, startup settings and safety protection settings necessary for traditional robots, and freeing people by work assignments. The super-high efficiency of JAKA Zu® cobots allow companies to recover their investment costs in a short period of time and achieve modern smart factory.

Industry Application

Benefit by JAKA core technologies like integrated joint , wireless connection, free-drive model demonstration, visual programming, safety protection, etc., currently Zu® Series cobots are widely used in various assembly lines and work stations.



Parameter Of JAKA Zu®

JAKA Zu® 3

JAKA Zu® 7

JAKA Zu® 12

JAKA Zu® 18

Character

Payload	3kg	7kg	12kg	18kg
Weight (W cable)	12kg	22kg	41kg	35kg
Work radius	626mm	819mm	1327mm	1073mm
Repeatability	±0.03mm	±0.03mm	±0.03mm	±0.03mm
Axis	6	6	6	6
Programming	Graphical programming, free-drive			
Teach pendant	MT (PAD/Mobile) APP			
Collaborative operation	Accordance with GB11291.1-2011			

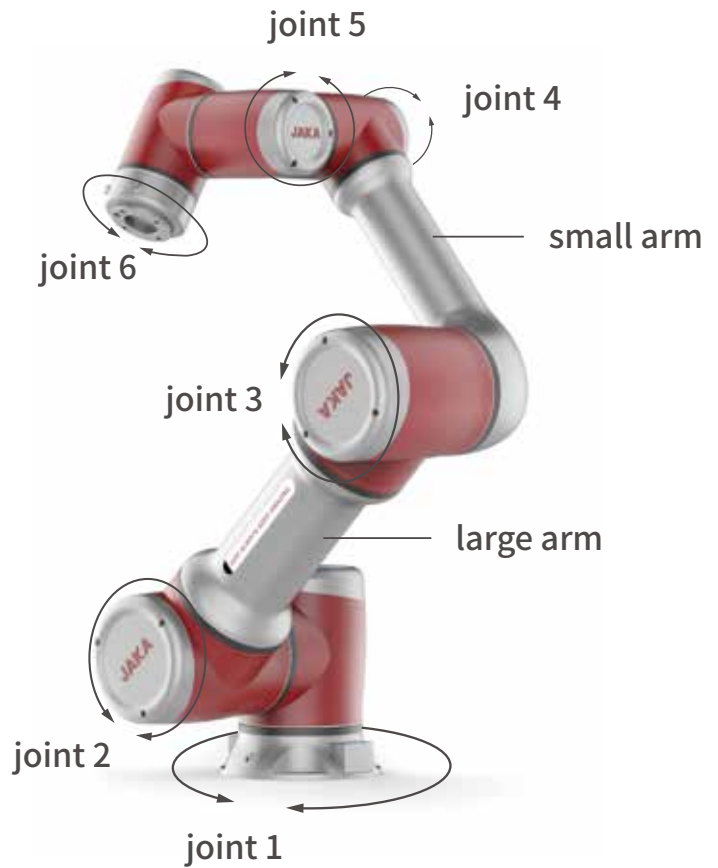
Scope and speed


Robot	Work scope	Max speed	Work scope	Max speed	Work scope	Max speed	Work scope	Max speed
Joint 1	±270°	180°/s	±270°	180°/s	±270°	120°/s	±270°	120°/s
Joint 2	-85°, +265°	180°/s	-85°, +265°	180°/s	-85°, +265°	120°/s	-85°, +265°	120°/s
Joint 3	±175°	180°/s	±175°	180°/s	±175°	120°/s	±175°	180°/s
Joint 4	-85°, +265°	180°/s	-85°, +265°	180°/s	-85°, +265°	180°/s	-85°, +265°	180°/s
Joint 5	±270°	180°/s	±270°	180°/s	±270°	180°/s	±270°	180°/s
Joint 6	±270°	180°/s	±270°	180°/s	±270°	180°/s	±270°	180°/s
Max speed	/	1.5m/s	/	2.5m/s	/	3m/s	/	3.5m/s

Specifications

Rated power	150W	350W	500W	600W
Temperature range	0-50°C	0-50°C	0-50°C	0-50°C
IP Specification	IP54	IP54	IP54	IP54
Installation	Installation at any Angle			
Tool I/O	Digital input	2	Digital input	2
	Digital output	2	Digital output	2
	Analog input	1	Analog input	1
Tool I/O power	24V	24V	24V	24V
base diameter	129mm	158mm	188mm	188mm
Materials	Aluminum, PC			
Tool I/O size	M8	M8	M8	M8
Cable length	6m	6m	6m	6m

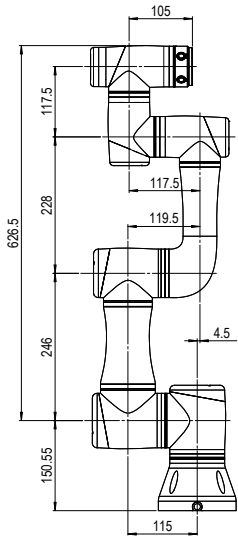
JAKA Zu® Structure and Control Cabinet



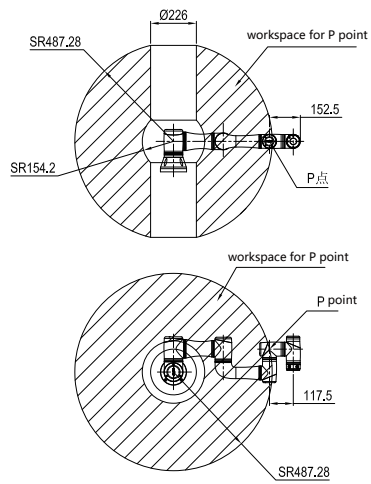
 <p>Control Cabinet</p>	IP Specification	IP44
	Tool I/O	16 Digital input/16 Digital output /2 Analog input or output
	I/O Power	24V
	communication	TCP/IP, Modbus TCP, Modbus RTU
	power	100-240VAC, 50-60Hz
	size	410×307×235 (mm) (W×H×D)
	weight	12kg (Zu 3, Zu 7) / 16kg (Zu 12, Zu 18)
	material	Stainless steel

JAKA Zu® Layout

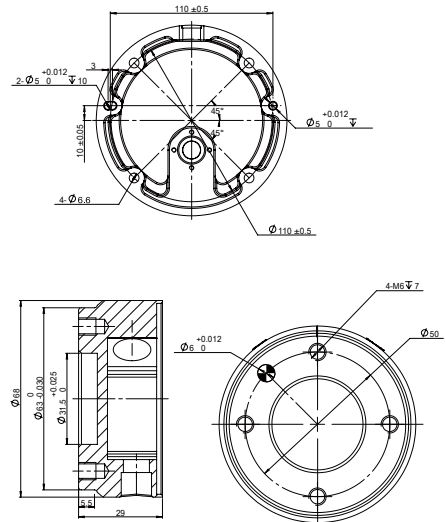
JAKA Zu 3 Layout



JAKA Zu 3 work radius

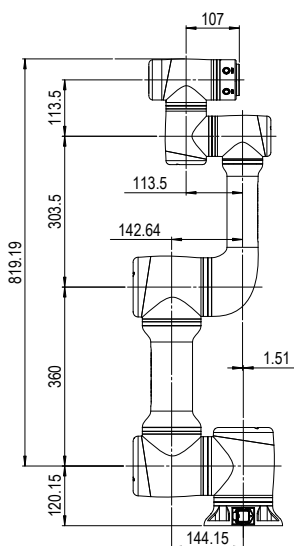


JAKA Zu 3 P point front view / top view

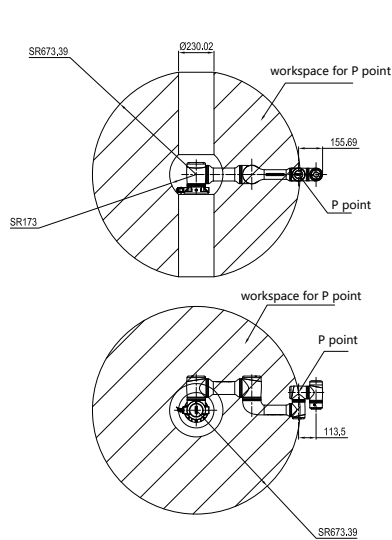


JAKA Zu 3 base / flange

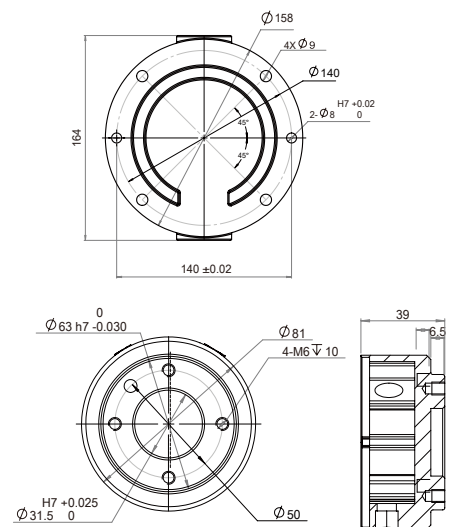
JAKA Zu 7 Layout



JAKA Zu 7 work radius

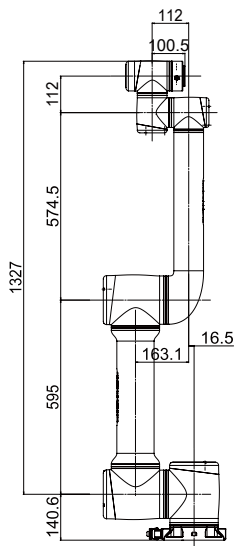


JAKA Zu 7 P point front view / top view

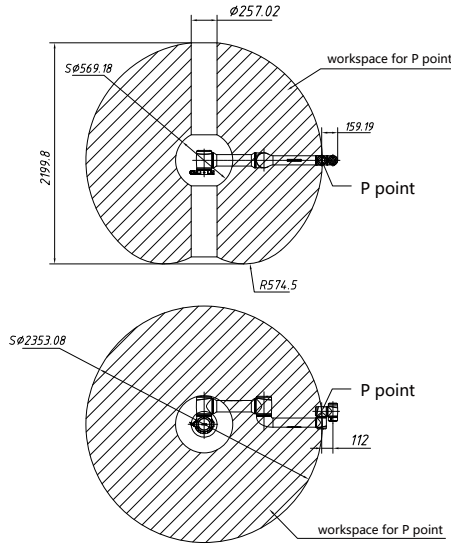


JAKA Zu 7 base / flange

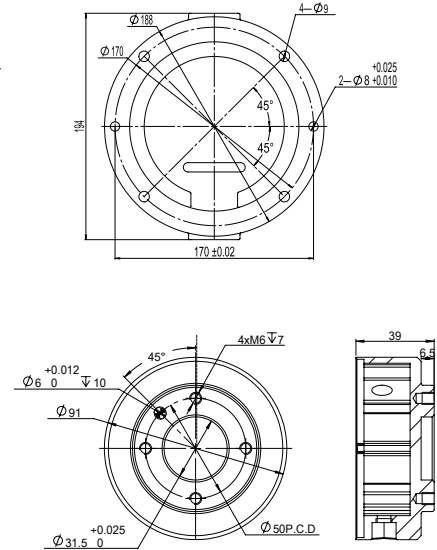
JAKA Zu 12 Layout



JAKA Zu 12 work radius

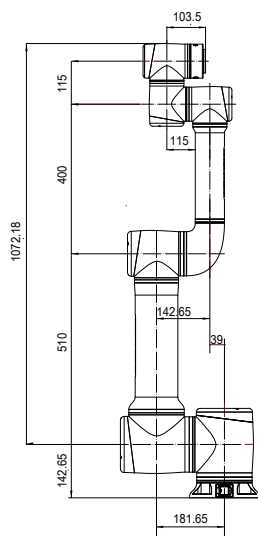


JAKA Zu 12 P point front view / top view

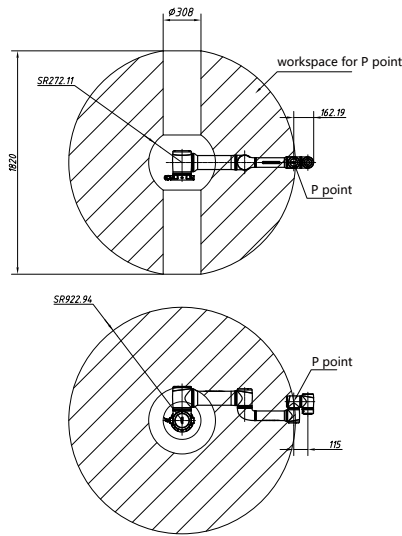


JAKA Zu 12 base / flange

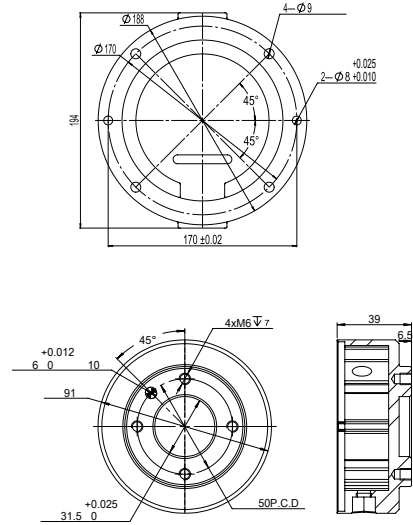
JAKA Zu 18 Layout



JAKA Zu 18 work radius



JAKA Zu 18 P point front view / top view



JAKA Zu 18 base / flange

www.jaka.com



Shanghai JAKA Robotics Ltd

上海节卡机器人科技有限公司

400-006-2665

Email : marketing@jaka.com

JAKA Shanghai : Room 201, Building 3, No.555 Dongchuan Rd, Shanghai, China

JAKA Changzhou : Building 10, No.377 South Wuyi Rd, Changzhou, Jiangsu, China

JAKA Shenzhen : Room 501, Building 7, Taihua Wutong Industrial Park, Baoan District, Shenzhen, China

© Copyright 2020 JAKA , All rights reserved.

All rights reserved by JAKA. Reproduction in whole or part without written permission is prohibited. All warranty information, product functions and specifications are subject to the change without notice.