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**CROBOTP**  
China Robot Pioneer

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**CHENGDU CRP ROBOT TECHNOLOGY CO., LTD.**

# COMPANY INTRODUCTION

## CROBOTP



Chengdu Crp Robot Technology Co., Ltd. (abbreviated as "CROBOTP") was established in 2012 and is located in the Longtan Industrial Robot Industrial Functional Zone, Chenghua District, Chengdu. It is a high-tech enterprise specializing in the research and development, manufacturing, sales and service of core components and complete sets of equipment for intelligent industrial robots, the national key "little giant" enterprise for specialization, specialization and innovation, the "gazelle" enterprise in Sichuan Province. It has successively led and participated in the compilation of five national standards for industrial robots. CROBOTP has achieved independent research and development of fully electronic control hardware, software, and body design for industrial robots, which are widely used in welding, machine tool loading and unloading, bending, polishing and other functional fields, and are widely used in mechanical processing, electric power, 3C electronics, automobile manufacturing and other industries. The products are exported to more than 20 countries and regions overseas. By independently building the Sichuan Enterprise Technology Center innovation platform and accelerating the pace of technological breakthroughs and innovation, the company has obtained more than 400 valid intellectual property rights. Some technical backbones have won titles such as "Outstanding Contributor to Sichuan Enterprise Technological Innovation", "Chengdu May 1st Labor Medal", "Chengdu Smart Manufacturing Ecosystem Leading Talent", and "Chenghua Talent".

### Enterprise development history

- 2024** • Established CRP ROBOT MALAYSIA SDN. BHD.
- 2023** • The entire robot industry chain is covered. The layout of the four major overseas markets is complete, and industrial robots are the first to go overseas.
- 2022** • The first industrial robot production and research base in the southwest region with an area of over 35,000 square meters was completed and put into production. It was included in the list of national specialized and innovative "little giant" enterprises that are supported by the Ministry of Industry and Information Technology.
- 2021** • The shipment volume of six-joint robots weighing 20kg or less ranked first among domestically produced ones. National "Little Giant" enterprise specialized in specialties and innovations, and the first batch of Sichuan Province's new economy demonstration enterprises.
- 2020** • The robot sales volume reached over 3,000 units, and the comprehensive shipment volume of industrial robots ranked third in China, and the arc welding market ranked first in China.
- 2019** • "The first year of CROBOTP robots" The first domestic robot manufacturer to have sales of over 1,000 units after the commercialization of the robot body.
- 2018** • The controller accounted for 50% of the domestic robot controller sales that year, with cumulative sales of more than 30,000 units. The CROBOTP industrial robot was launched.
- 2014** • The domestic industrial robot controller sales volume ranks first, and the sales volume in the arc welding field accounts for 50% of the total.
- 2013** • Launched CRP-S40 and CRP-S80 controllers, which were purchased in large quantities by well-known companies such as BYD and Foxconn.
- 2012** • CROBOTP was established in Chengdu and entered the robotics industry with the robot controller (brain) business.
- 2007** • The core team was established and the first generation of industrial robot system was launched.

# PRODUCTION DEMONSTRATION

## Robot controllers

Deeply cultivated for many years, tens of thousands of applications, with a market share of 50%+



## Dedicated robot drive and control integrated

Professional team, integration of drive and control technologies to create high-performance drive and control integrated machines



## Factory test

13 automated tests ensure batch consistency



## Intelligent sensor

Smart sensors expand the depth, breadth, simplicity, and comprehensive functions of the industry



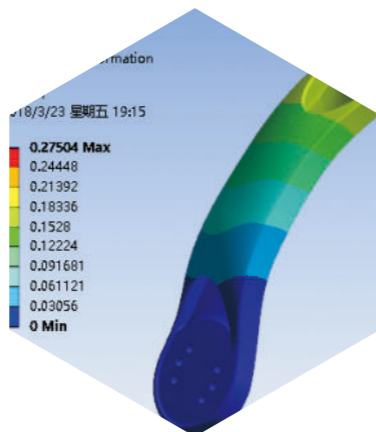
## Type test

16 major categories and 64 subcategories of comprehensive testing ensure stability, reliability, and high quality



## Mechanical design

Precision transmission design team, rigorous design, carefully crafted



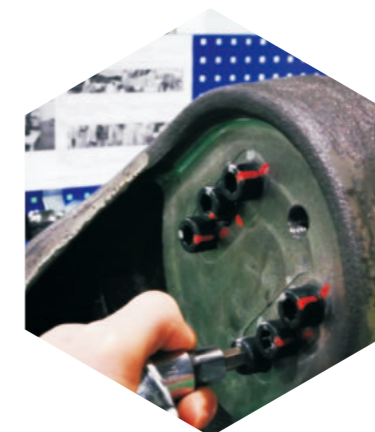
## Component inspection

Strict inspection of components, ensuring precision and quality



## Production process





Rigorous manufacturing processes, consistent and efficient



# Nynhan

## INTEGRATED HIGH PERFORMANCE WELDING ROBOT SERIES



-  High speed and performance
-  Rapid programming
-  Ultralow splash
-  Integration

### SYSTEM CONFIGURATION

Name: Arc welding robot  
 Model :CRP-RH14/18/21-06-W  
 Includes:  
 Body :CRP-RH14/18/21-06-W  
 Electrical cabinet :G9  
 Welding power supply :CRP-DS350-L  
 Welding torch: Fully enclosed 350A air cooled, with anti-collision  
 Teaching device :E type vertical teaching device, line length 6 meters  
 Operating box :2 (line length 5 meters)  
 Electrical cabinet and body interconnection line 5 meters  
 Wire tray and support, wire feeder and support, wire tube, etc

### PRODUCT CHARACTERISTICS

**CRP-RH14-06-W**  
**CRP-RH18-06-W**  
**CRP-RH21-06-W**

### INDUSTRIAL ROBOT WELDING USE

- High speed, 20% faster than the previous generation;
- Lighter weight, better accessibility;
- High protection :1,2 axes are equipped with dustproof cover to fully surround the welding gun;



### E TYPE VERTICAL DEMONSTRATOR

- Programming is fast, 30% faster than the previous generation;
- Lighter, 325g lighter than the previous generation;
- Independent system, cable up to 25 meters;



### SCOPE OF APPLICATION

- 0.6-6mm carbon steel (fillet weld/lap /T type 0.6mm and above, butt 0.7mm and above)
- 1.0-6mm stainless steel (fillet weld/lap /T type 1.2mm and above, butt 1.5mm and above)
- 0.8-6mm galvanized parts (fillet weld/lap/T-type 0.8mm and above, butt 1.0mm and above)
- DS350-L for thin plates, DS500-P for thick plates (carbon steel over 6mm)

### G9 INDUSTRIAL ROBOT CONTROL CABINET

- Smaller, 20% smaller than the previous generation;
- Standard UPS, support power failure regeneration;
- New system platform, support servo collision avoidance and gravity compensation;



### DS350-L/DS500-P WELDING MACHINE

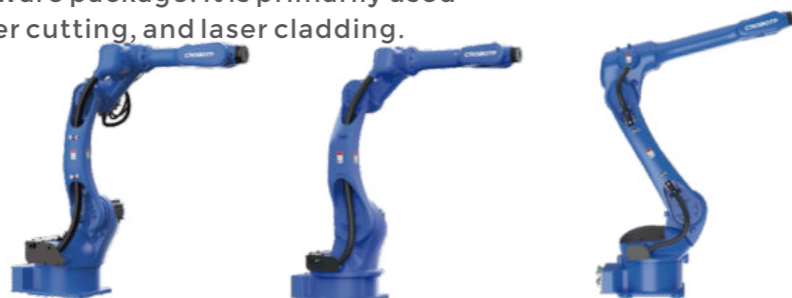
Ultra-low spatter, MAG/CO<sub>2</sub> can be realized, beyond the low spatter range, lower spatter year-on-year;

- Constant depth of fusion function, more stable arc;
- Higher arc starting success rate due to the pump-back arc starting function;
- Fish scale welding function, can weld thinner plate and appearance parts;
- Parameter integration, more intuitive, quick setting of all parameters;
- Compared with the conventional pulse, the short arc pulse is shorter, the heat is more concentrated, the welding speed is faster, the melting depth is deeper, and the weld seam is more beautiful.



# CRP-RA15-12-J CRP-RA18-20-J CRP-RA20-12-J

The laser welding robot consists of the robot body and the electrical cabinet, and is shipped with the laser welding software package. It is primarily used for applications such as laser welding, laser cutting, and laser cladding.



### Characteristics of robot performance

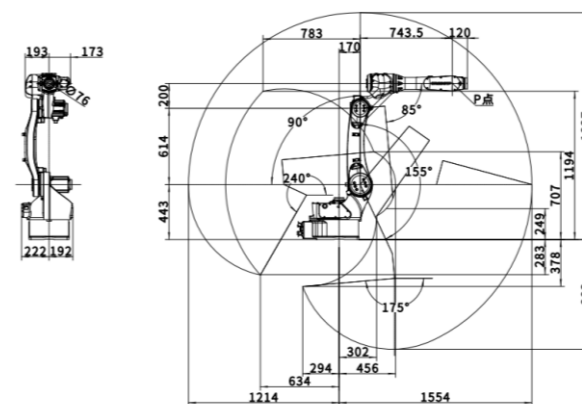
- A specialized interface for laser welding, featuring controllable power, wire feeding, soft start and stop, pre-laser emission and decay, wire sticking detection, pre-wire extraction, and wire replenishment, etc.
- Rigid, high precision, low jitter.
- It can control the wire feeding of servo or stepper motors.
- Using a vertical teaching pendant, the efficiency of robot programming is higher.
- Compact electrical cabinet, small in size, can be integrated into the laser host.
- Single-phase 220V input power supply, easy and quick to connect.
- Built-in UPS, supports power regeneration after outage.

### Contains

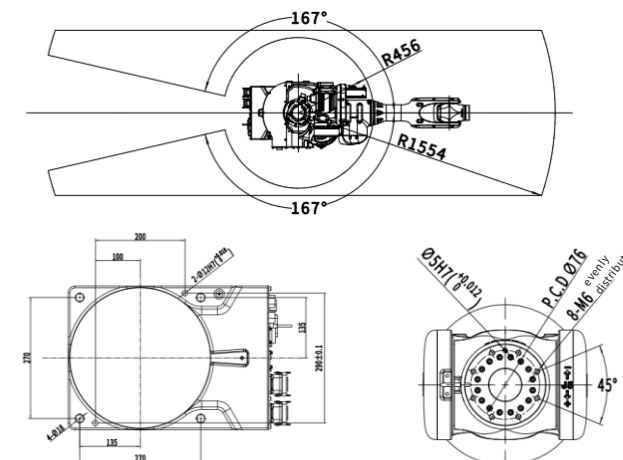
- Entity: RA15-12-J/RA18-20-J/RA20-12-J
- Electrical cabinet: G5A
- Teaching Pendant: E-type Teaching Pendant, cable length 6 meters
- Operation box: 2(with 5-meter cable)
- Control cabinet and main body interconnection cable 5 meters
- Welding wire drum and stand
- Optional two external axes

Model	CRP-RA15-12-J	CRP-RA18-20-J	CRP-RA20-12-J		
Degree of freedom	6 axis	6 axis	6 axis		
Maximum payload	12kg	20kg	12kg		
Maximum coverage	1554mm	1821mm	2015mm		
Repeated positioning accuracy	±0.05mm	±0.05mm	±0.08mm		
Maximum travel	J1	Formal/inverted mounting -167°~167°, wall mounting -30°~30°	Formal/inverted mounting -165°~165°, wall mounting -30°~30°	Formal/inverted mounting -170°~170°, wall mounting -30°~30°	
	J2	-30°~175°	-30°~175°	-50°~170°	
	J3	-80°~150°	-80°~150°	-80°~145°	
	J4	-190°~190°	-190°~190°	-190°~190°	
	J5	-135°~135°	-130°~130°	-135°~135°	
	J6	-360°~360°	-360°~360°	-360°~360°	
Maximum speed	J1	169°/S	160°/S	170°/S	
	J2	169°/S	160°/S	170°/S	
	J3	169°/S	169°/S	200°/S	
	J4	301°/S	301°/S	350°/S	
	J5	220°/S	342°/S	350°/S	
	J6	743°/S	708°/S	540°/S	
Arm load capacity	Allowable torque	J4	20N.m	55N.m	40N.m
		J5	20N.m	55N.m	40N.m
		J6	11N.m	24N.m	13N.m
	Allowable moment of inertia	J4	0.5kg.m <sup>2</sup>	2.1kg.m <sup>2</sup>	1.3kg.m <sup>2</sup>
		J5	0.5kg.m <sup>2</sup>	2.1kg.m <sup>2</sup>	1.3kg.m <sup>2</sup>
		J6	0.16kg.m <sup>2</sup>	0.9kg.m <sup>2</sup>	0.43kg.m <sup>2</sup>
Installation environment	Temperature □ 0~45°C Humidity □ 20%~80%RH(no condensation)				
Body interface	16Pin 2*φ8mm				
Body weight	170kg	288kg	262kg		
Installation mode	Formal, inverted, wall mounting				
IP level	Body IP 54 ,Wrist IP67				

## CRP-RA15-12-J



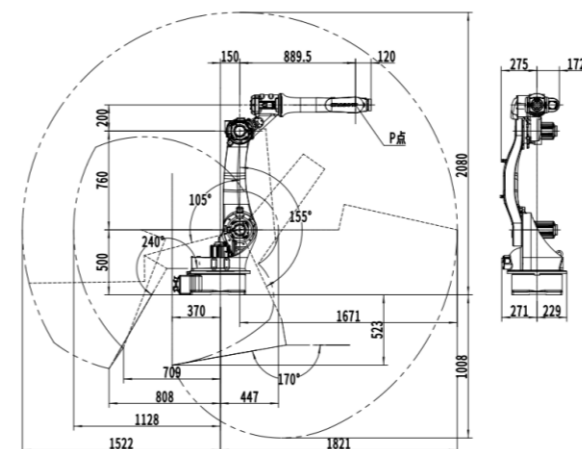
MOTION RANGE DIAGRAM



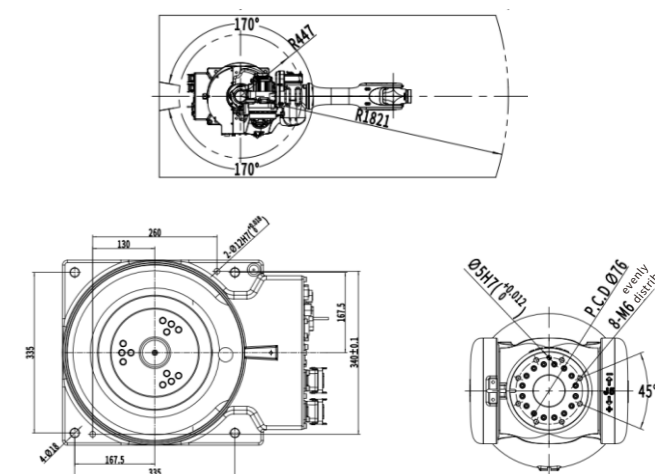
Installation Dimension of Base

Flange Dimensions

## CRP-RA18-20-J



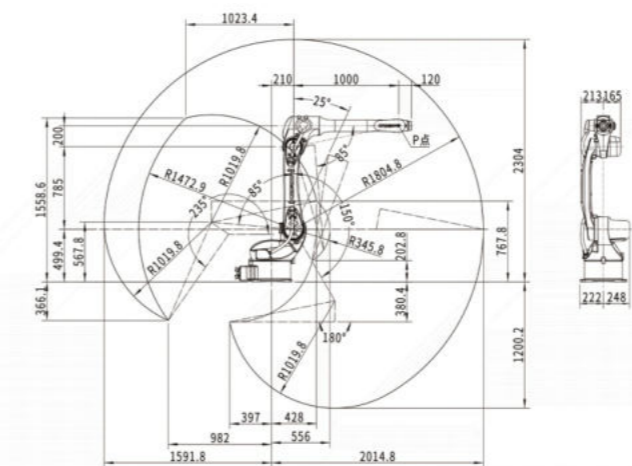
MOTION RANGE DIAGRAM



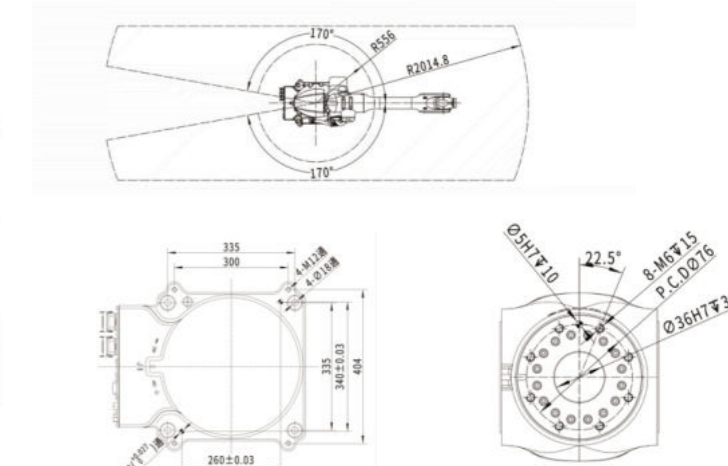
Installation Dimension of Base

Flange Dimensions

## CRP-RA20-12-J



MOTION RANGE DIAGRAM



Installation Dimension of Base

Flange Dimensions

# CRP-RA32-20-W

## INDUSTRIAL ROBOT WELDING APPLICATION



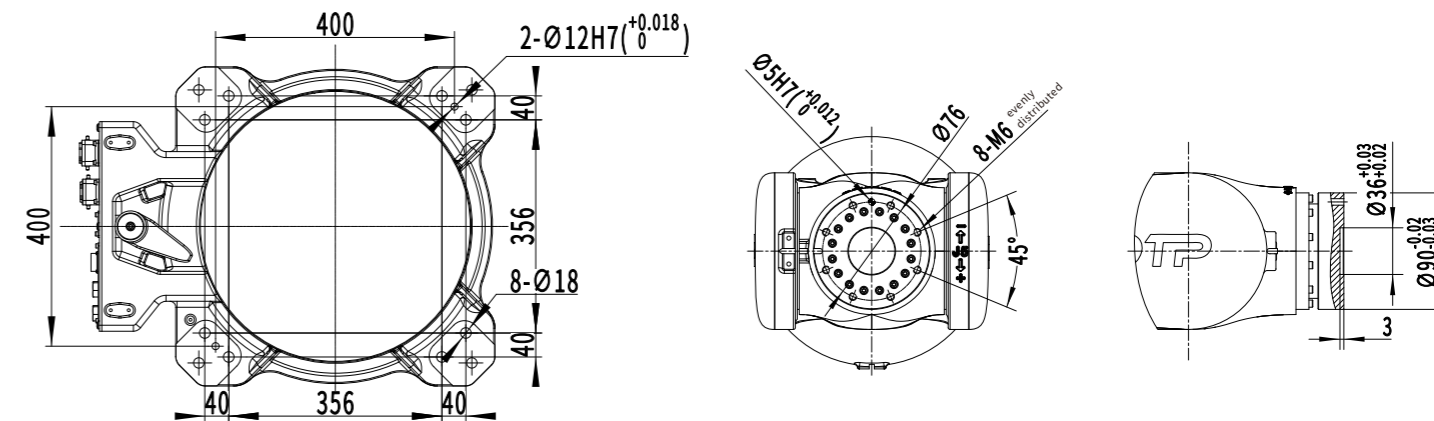
### FUNCTIONAL FEATURES

- The load capacity is strong, the working range is large, the flexibility is strong.
- Fast running speed, high repeated positioning accuracy, suitable for cutting, handling, welding and other application scenarios, a wide range of applications.
- A safety emergency stop board independent of the control system is configured, and a safety relay is used to provide double-circuit emergency stop to ensure the reliability of emergency stop.
- The main cable adopts the special cable for flexible robot.
- Through the single cantilever forearm structure, the terminal weight is reduced and the flexibility is improved, and the choice of manipulator, tool and workpiece shape is extended.
- Built-in cable, gas pipe, through the center of the forearm and wrist set hollow part, from the robot base to the end of the wrist built-in cable and gas pipe, more convenient for users, improve the efficiency of work.
- High scalability, a number of user support installation platforms are set on the robot body, which is convenient for users to determine the cable and its related auxiliary tooling.

### ROBOT BODY TECHNICAL PARAMETERS

Model		CRP-RH32-20-W
Arm form		Vertical multiple joints
Degree of freedom		6 axis
Maximum payload		20kg
Maximum coverage		3160mm
Maximum travel	Axis 1	-180°~180°
	Axis 2	-165°~70°
	Axis 3	-80°~165°
	Axis 4	-210°~210°
	Axis 5	-135°~135°
	Axis 6	-210°~210°
Maximum speed	Axis 1	130°/S
	Axis 2	125°/S
	Axis 3	124°/S
	Axis 4	224°/S
	Axis 5	350°/S
	Axis 6	540°/S
Allowable torque	Axis 4	40N.m
	Axis 5	40N.m
	Axis 6	20N.m
Allowable moment of inertia	Axis 4	1.2kg.m <sup>2</sup>
	Axis 5	1.2kg.m <sup>2</sup>
	Axis 6	0.8kg.m <sup>2</sup>
Repeated positioning accuracy		±0.06mm
Robot body weight		660kg
Installation mode		Formal, inverted, wall mounting
Noise level		<80dB(A)
Body interface	Reserved IO	26Pin
	Reserved gas	2*φ10mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(no condensation)
	Vibration	Under 0.5G
Others		Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level		Body IP54 ,Wrist IP67
Advantage features		Long arm span high coverage range high trajectory accuracy, small jitter, stop fast
Application		Handling, cutting, gluing, and welding
Electric cabinet configuration		G15A

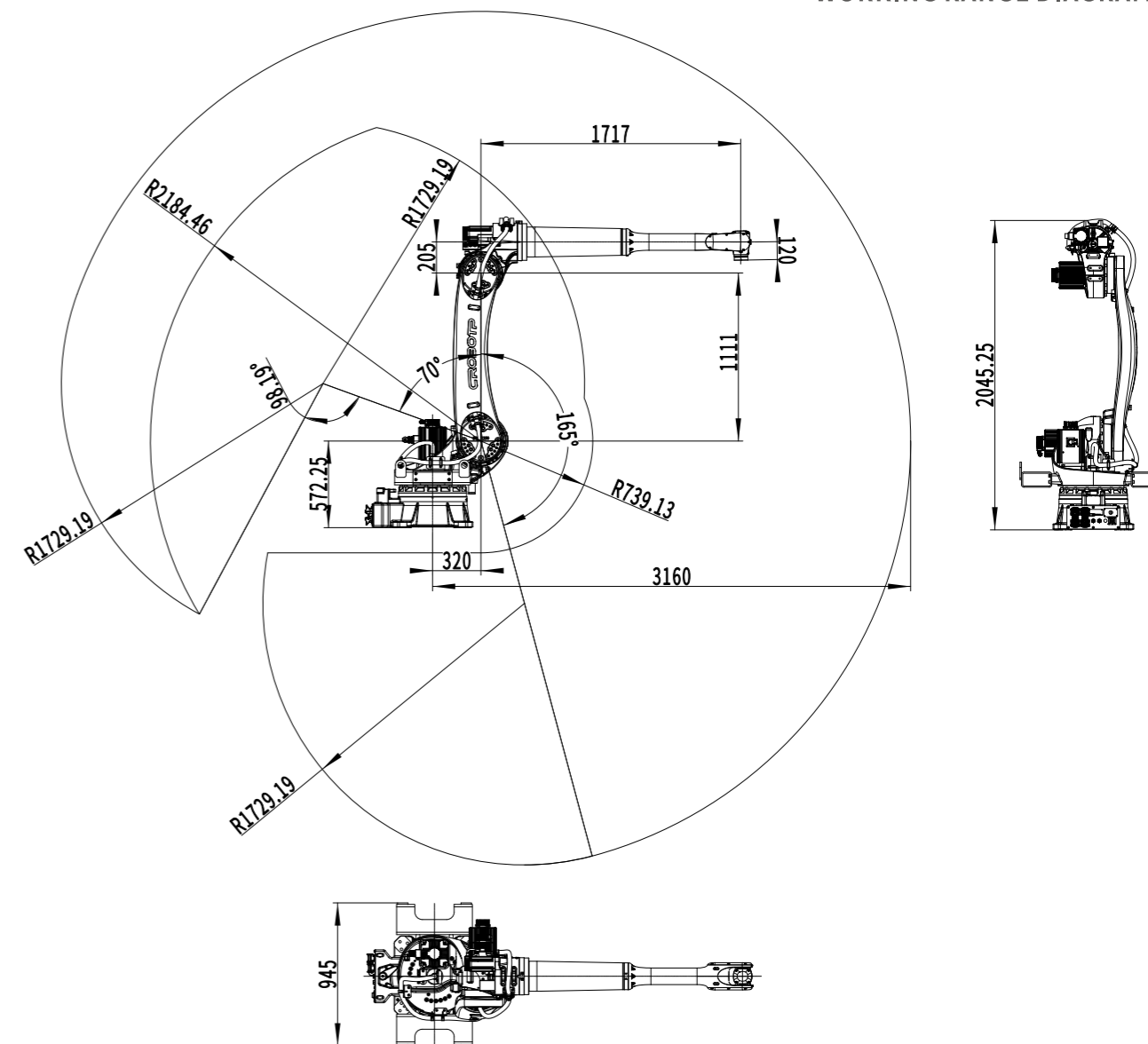
### INSTALLATION INTERFACE DIAGRAM



Installation Dimension of Base

Flange Dimensions

### WORKING RANGE DIAGRAM



# CRP-RH14-06-W

## INDUSTRIAL ROBOT WELDING APPLICATION



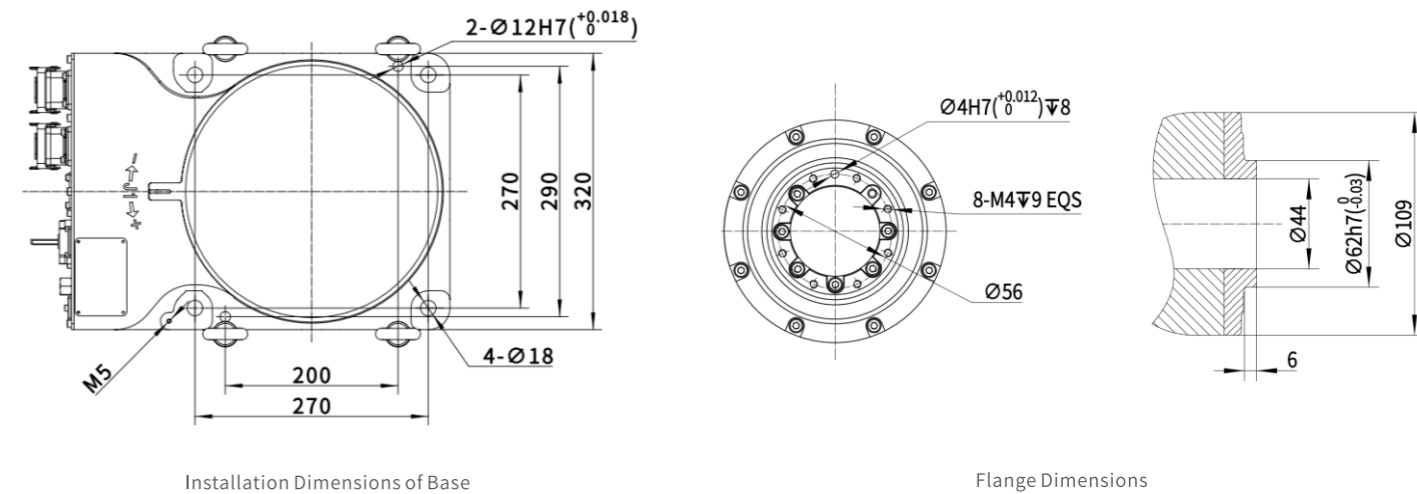
### FUNCTIONAL FEATURES

- Use high-speed motor, and do software optimization, the overall beat is 20% faster than the previous generation;
- Lighter weight, smaller forearm size, better accessibility;
- High protection :1,2 shafts are equipped with dustproof cover, and fully surrounded welding gun is used at the same time;
- J4,J6 axis hollow structure, can use hollow welding gun;
- Built-in user line, gas pipe, welding cable, smooth body, clean appearance;

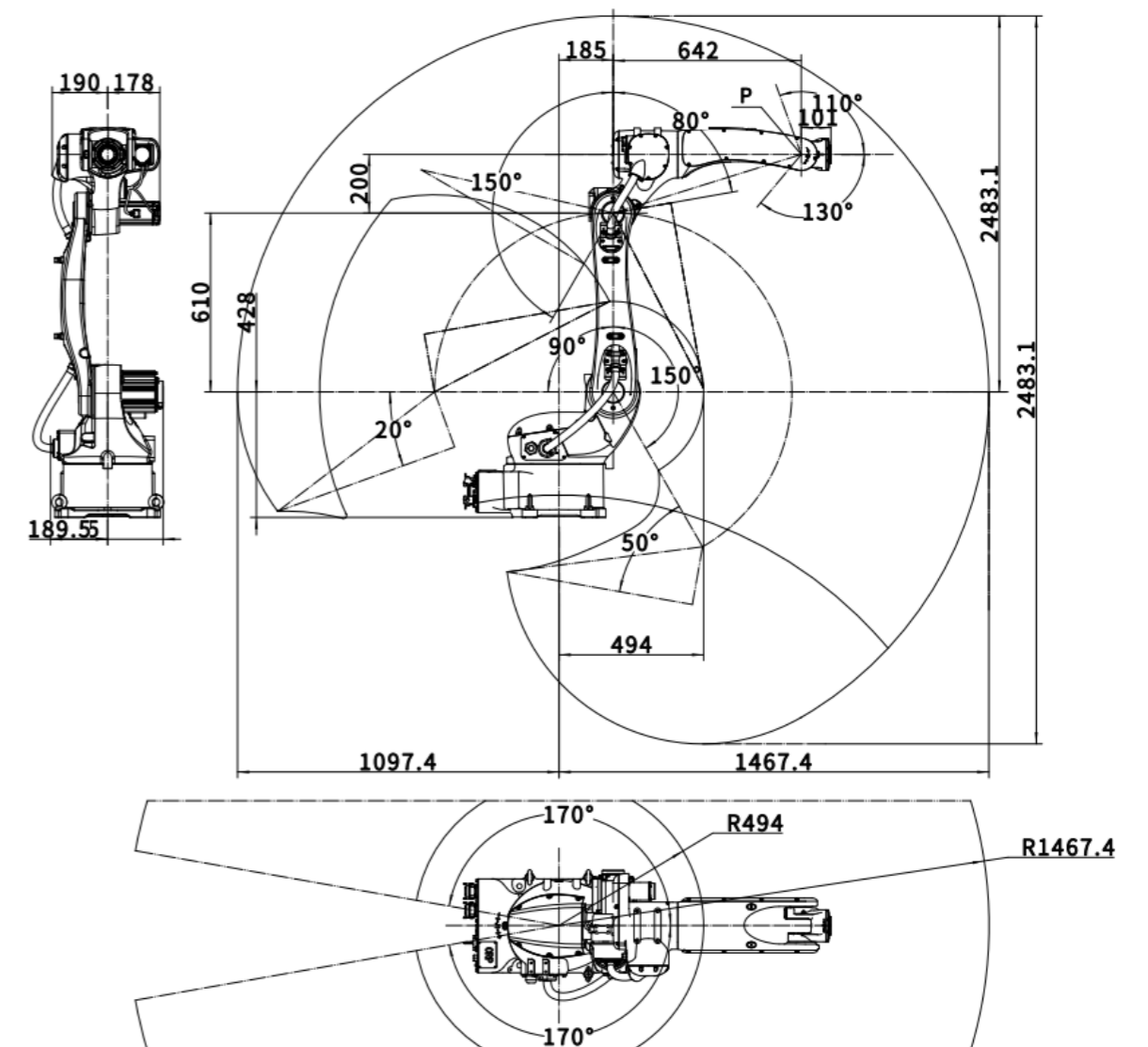
### ROBOT BODY TECHNICAL PARAMETERS

Model	CRP-RH14-06-W	
Arm form	Vertical multiple joints	
Degree of freedom	6 axis	
Maximum payload	6kg	
Maximum coverage	1468mm	
Maximum travel	Axis 1	Formal/inverted-168°~168°,wall mounting-30°~30°
	Axis 2	-50°~170°
	Axis 3	-78°~150°
	Axis 4	-190°~190°
	Axis 5	-110°~130°
	Axis 6	-190°~190°
Maximum speed	Axis 1	230°/S
	Axis 2	230°/S
	Axis 3	230°/S
	Axis 4	430°/S
	Axis 5	430°/S
	Axis 6	630°/S
Allowable torque	Axis 4	10N.m
	Axis 5	10N.m
	Axis 6	3N.m
Allowable moment of inertia	Axis 4	0.25kg.m <sup>2</sup>
	Axis 5	0.25kg.m <sup>2</sup>
	Axis 6	0.05kg.m <sup>2</sup>
Repeated positioning accuracy	±0.08mm	
Robot body weight	155kg	
Installation mode	Formal <input type="checkbox"/> inverted <input type="checkbox"/> wall mounting	
Body interface	Reserved IO	16Pin
	Reserved gas	2*φ8mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level	IP56	
Advantage features	Compact structure, high speed, high precision, high expansibility and easy operation	
Application	Welding	
Matching electrical cabinet	G9	

### INSTALLATION INTERFACE DIAGRAM



### WORKING RANGE DIAGRAM



# CRP-RH18-06-W

## INDUSTRIAL ROBOT WELDING APPLICATION

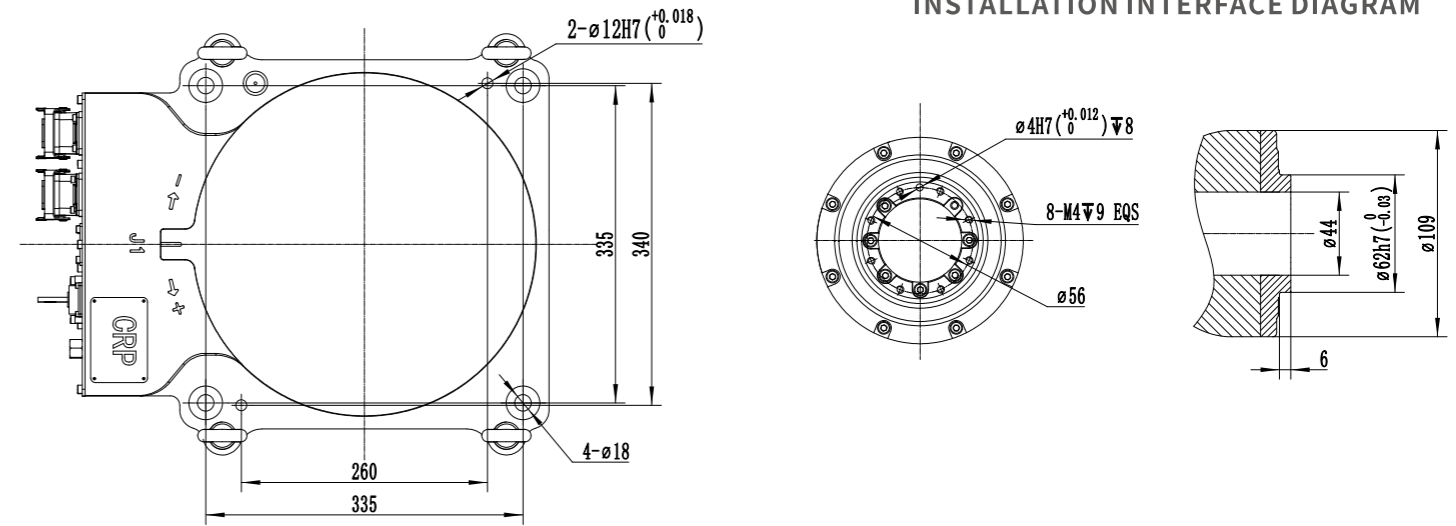


### FUNCTIONAL FEATURES

- Use high-speed motor, and do software optimization, the overall beat is 20% faster than the previous generation;
- Lighter weight, smaller forearm size, better accessibility;
- High protection :1,2 shafts are equipped with dustproof cover, and fully surrounded welding gun is used at the same time;
- J4,J6 axis hollow structure, can use hollow welding gun;
- Built-in user line, gas pipe, welding cable, smooth body, clean appearance;

### ROBOT BODY TECHNICAL PARAMETERS

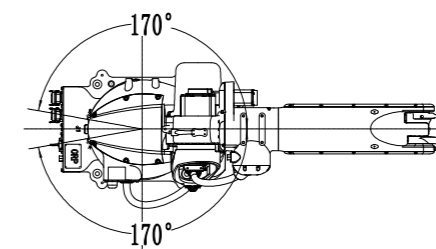
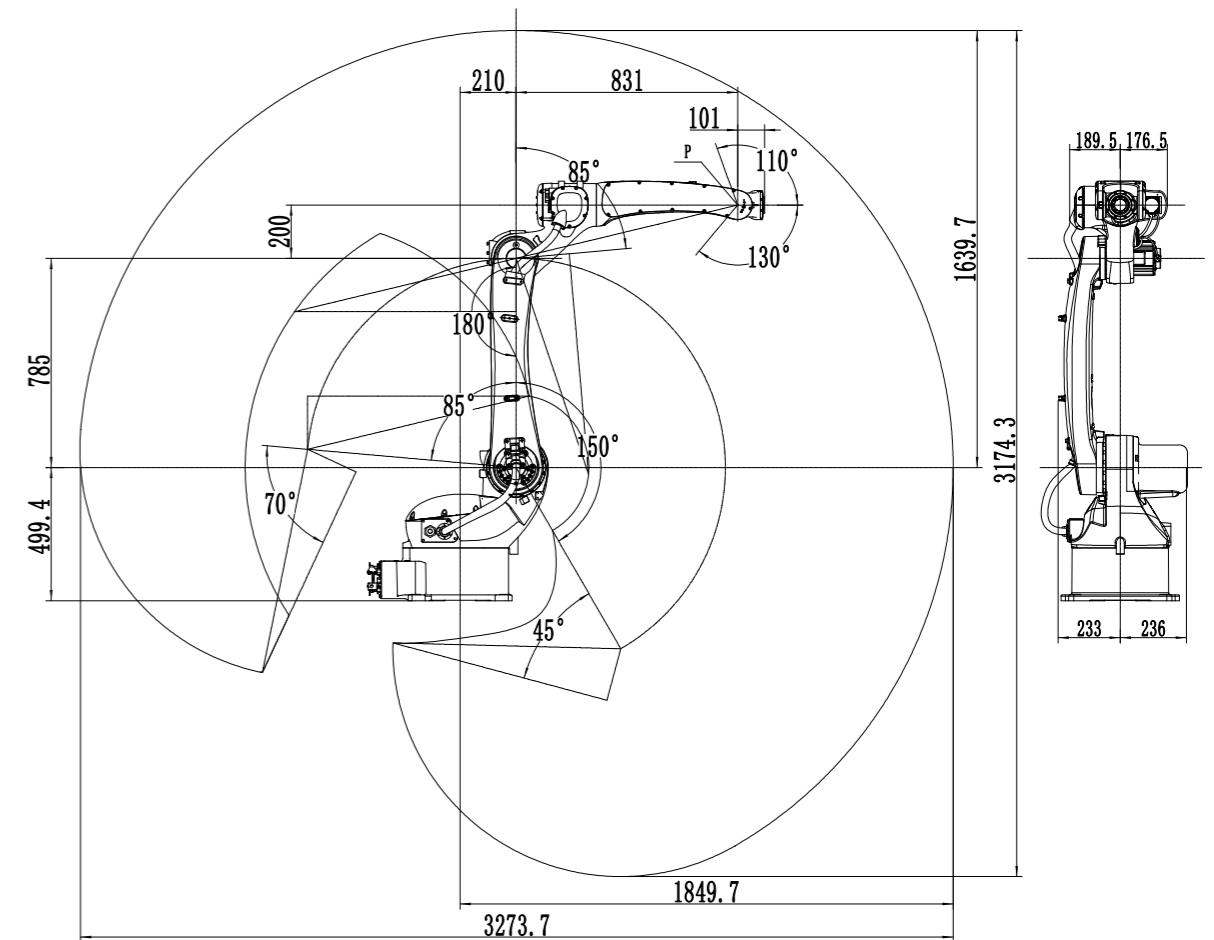
Model	CRP-RH18-06-W	
Arm form	Vertical multiple joints	
Degree of freedom	6 axis	
Maximum payload	6kg	
Maximum coverage	1850mm	
Maximum travel	Axis 1	Formal/inverted-168°~168°,wall mounting-30°~30°
	Axis 2	-50°~170°
	Axis 3	-78°~150°
	Axis 4	-190°~190°
	Axis 5	-110°~130°
	Axis 6	-190°~190°
Maximum speed	Axis 1	180°/S
	Axis 2	180°/S
	Axis 3	205°/S
	Axis 4	430°/S
	Axis 5	430°/S
	Axis 6	630°/S
Allowable torque	Axis 4	10N.m
	Axis 5	10N.m
	Axis 6	3N.m
Allowable moment of inertia	Axis 4	0.25kg.m <sup>2</sup>
	Axis 5	0.25kg.m <sup>2</sup>
	Axis 6	0.05kg.m <sup>2</sup>
Repeated positioning accuracy	±0.08mm	
Robot body weight	235kg	
Installation mode	Formal <input type="checkbox"/> inverted <input type="checkbox"/> wall mounting	
Body interface	Reserved IO	16Pin
	Reserved gas	2*φ8mm
	Ambient temperature	0~45°C
Installation environment	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level	IP56	
Advantage features	Compact structure, high speed, high precision, high expansibility and easy operation	
Application	Welding	
Matching electrical cabinet	G9	



Installation Dimensions of Base

Flange Dimensions

### WORKING RANGE DIAGRAM



# CRP-RH21-06-W

## INDUSTRIAL ROBOT WELDING APPLICATION

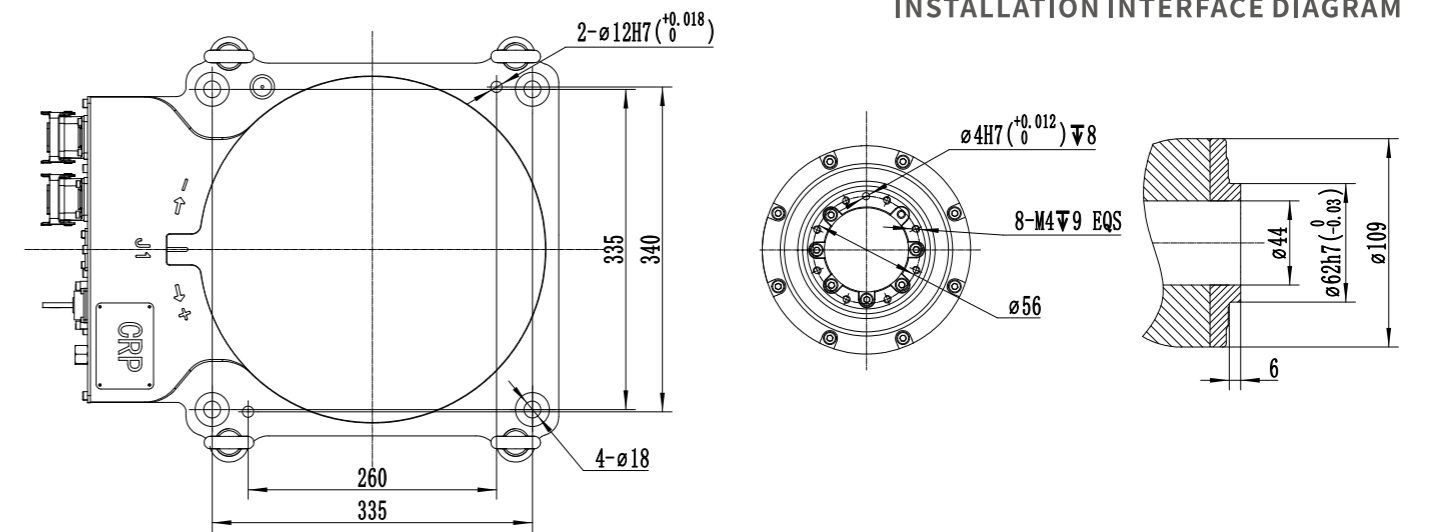


### FUNCTIONAL FEATURES

- Use high-speed motor, and do software optimization, the overall beat is 20% faster than the previous generation;
- Lighter weight, smaller forearm size, better accessibility;
- High protection :1,2 shafts are equipped with dustproof cover, and fully surrounded welding gun is used at the same time;
- J4,J6 axis hollow structure, can use hollow welding gun;
- Built-in user line, gas pipe, welding cable, smooth body, clean appearance;

### ROBOT BODY TECHNICAL PARAMETERS

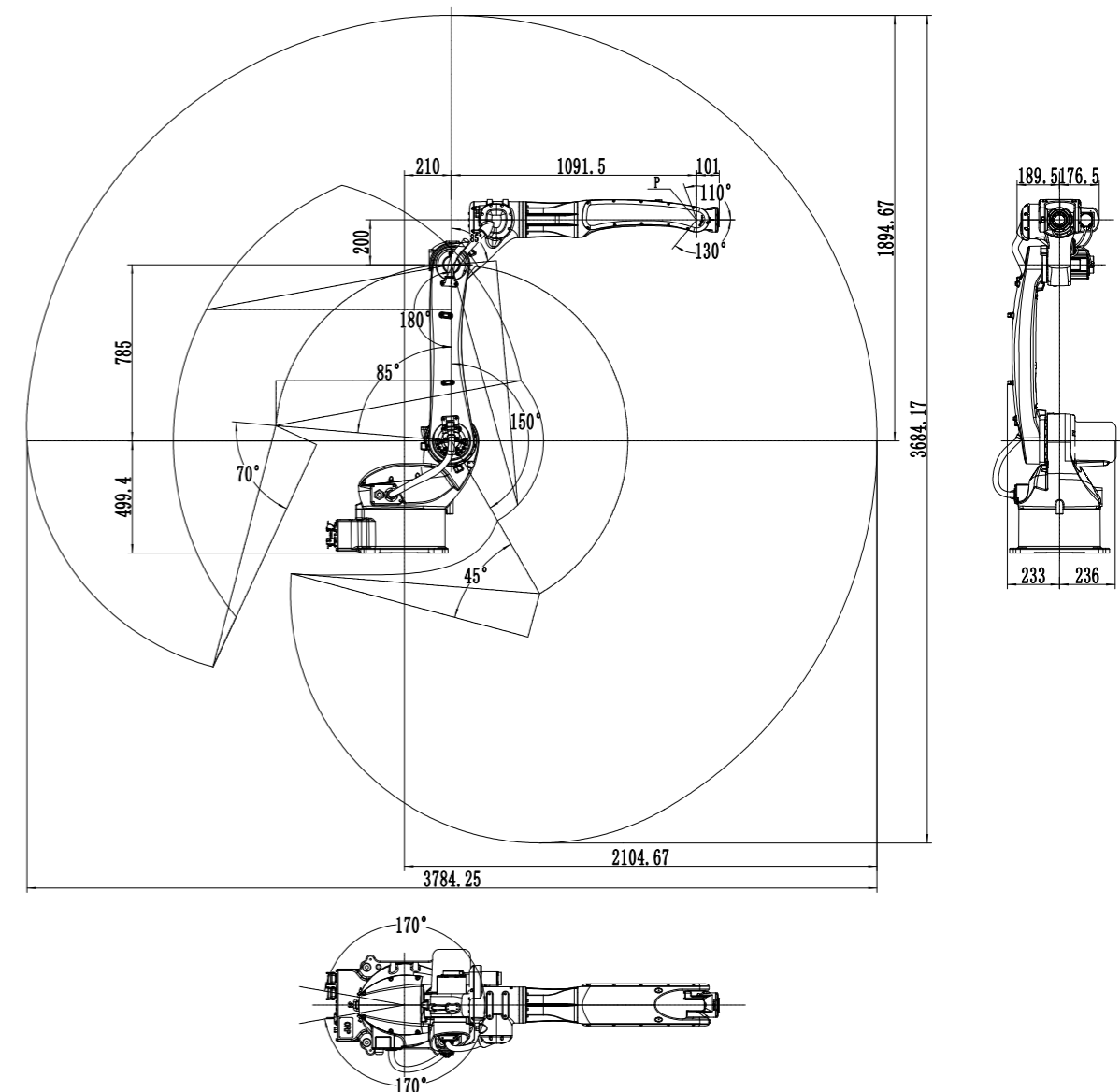
Model	CRP-RH21-06-W	
Arm form	Vertical multiple joints	
Degree of freedom	6 axis	
Maximum payload	6kg	
Maximum coverage	2093mm	
Maximum travel	Axis 1	Formal/inverted-168°~168°, wall mounting-30°~30°
	Axis 2	-50°~170°
	Axis 3	-78°~150°
	Axis 4	-190°~190°
	Axis 5	-110°~130°
	Axis 6	-190°~190°
Maximum speed	Axis 1	180°/S
	Axis 2	180°/S
	Axis 3	205°/S
	Axis 4	430°/S
	Axis 5	430°/S
	Axis 6	630°/S
Allowable torque	Axis 4	10N.m
	Axis 5	10N.m
	Axis 6	3N.m
Allowable moment of inertia	Axis 4	0.25kg.m <sup>2</sup>
	Axis 5	0.25kg.m <sup>2</sup>
	Axis 6	0.05kg.m <sup>2</sup>
Repeated positioning accuracy	±0.08mm	
Robot body weight	260kg	
Installation mode	Formal <input type="checkbox"/> inverted <input type="checkbox"/> wall mounting	
Body interface	Reserved IO	16Pin
	Reserved gas	2*φ8mm
	Ambient temperature	0~45°C
Installation environment	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level	IP56	
Advantage features	Compact structure, high speed, high precision, high expansibility and easy operation	
Application	Welding	
Matching electrical cabinet	G9	



Installation Dimensions of Base

Flange Dimensions

### WORKING RANGE DIAGRAM



# CRP-RH14-10-W

## INDUSTRIAL ROBOT WELDING APPLICATION

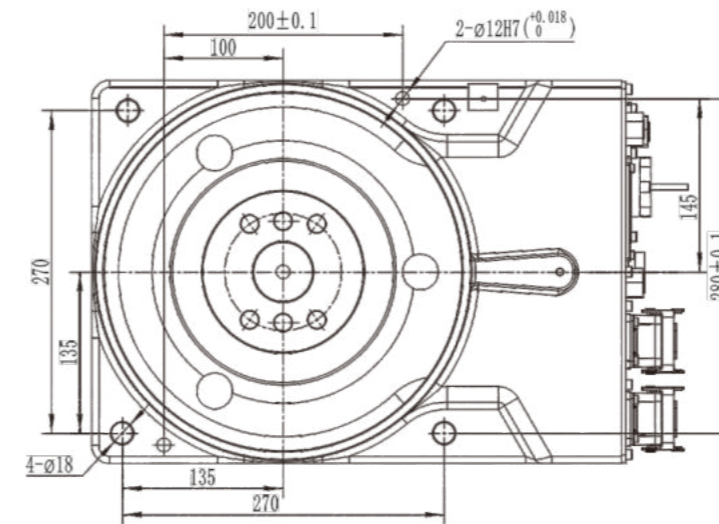


### FUNCTIONAL FEATURES

- The arm span is 1.4 meters. The design is highly compact and can be flexibly installed on the ground or upside down.
- With large working space, fast running speed and high repeated positioning accuracy, it is suitable for wide range of welding applications.
- The safety emergency stop board independent of the control system is equipped with, and the safety relay circuit is adopted to provide double-circuit emergency stop to ensure the reliability of emergency stop.
- The robot body adopts highly flexible special cable.
- Built-in three phase filter can effectively improve the performance of EMC and EMI.
- The robot body is with dual-circuit gas pipe to meet the welding demand.
- The inner diameter of 6-axis middle hole is 44mm, it can meet the installation.
- Built-in high flexible welding cable.

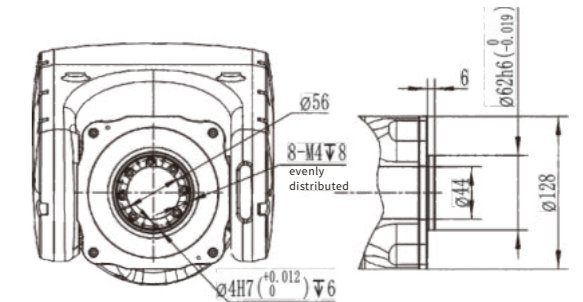
### ROBOT BODY TECHNICAL PARAMETERS

Model	CRP-RH14-10-W	
Arm form	Vertical multiple joints	
Degree of freedom	6 axis	
Maximum payload	10kg	
Maximum coverage	1454mm	
Maximum travel	Axis 1	Formal/inverted-167°~167°, wall mounting-30°~30°
	Axis 2	0°~175°
	Axis 3	-80°~150°
	Axis 4	-190°~190°
	Axis 5	-110°~130°
	Axis 6	-210°~210°
Maximum speed	Axis 1	169°/S
	Axis 2	169°/S
	Axis 3	169°/S
	Axis 4	280°/S
	Axis 5	240°/S
	Axis 6	520°/S
Allowable torque	Axis 4	10N.m
	Axis 5	10N.m
	Axis 6	3N.m
Allowable moment of inertia	Axis 4	0.25kg.m <sup>2</sup>
	Axis 5	0.25kg.m <sup>2</sup>
	Axis 6	0.05kg.m <sup>2</sup>
Repeated positioning accuracy	±0.08mm	
Robot body weight	170kg	
Installation mode	Formal <input type="checkbox"/> inverted <input type="checkbox"/> wall mounting	
Body interface	Reserved IO	16Pin
	Reserved gas	2*φ8mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level	Body IP54 <input type="checkbox"/> Wrist IP67	
Advantage features	Compact structure, high speed, high precision, high expansibility and easy operation	
Application	Welding	
Matching electrical cabinet	G9A	



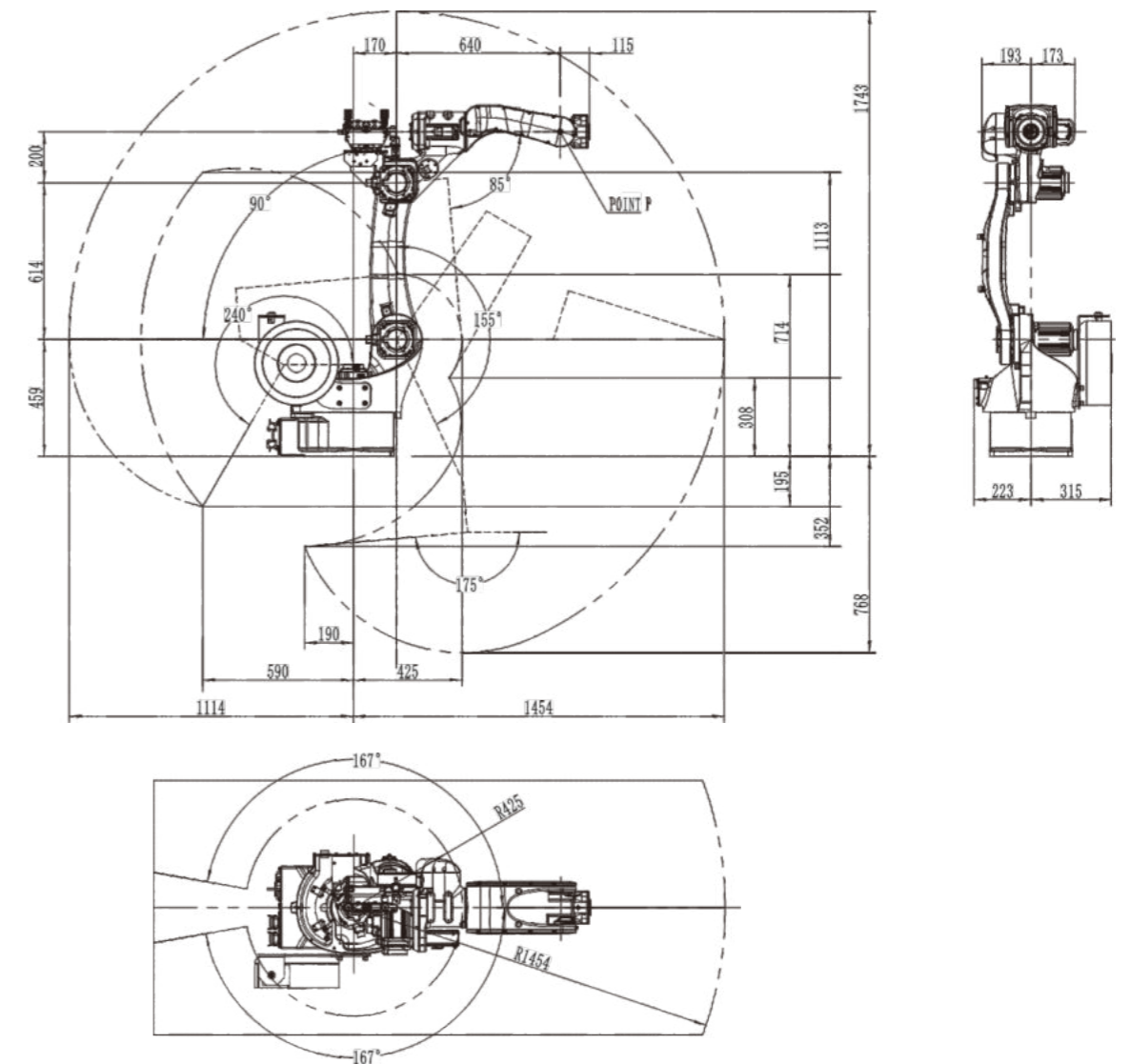
Installation Dimension of Base

### INSTALLATION INTERFACE DIAGRAM



Flange Dimensions

### WORKING RANGE DIAGRAM



# CRP-RH18-20-W

## INDUSTRIAL ROBOT WELDING APPLICATION

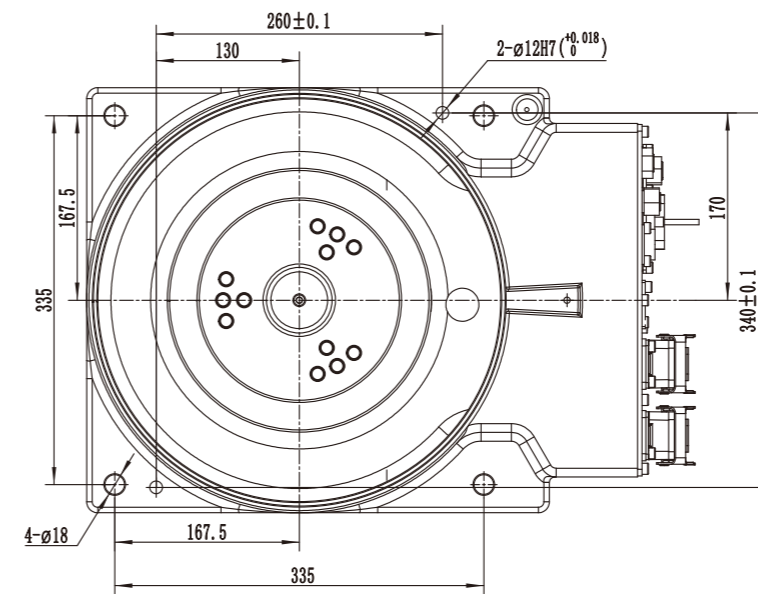


### FUNCTIONAL FEATURES

- The arm span is nearly 1.8 meters. The design is highly compact and can be flexibly installed on the ground or upside down.
- With large working space, fast running speed and high repeated positioning accuracy, it is suitable for wide range of welding applications.
- The safety emergency stop board independent of the control system is equipped with, and the safety relay circuit is adopted to provide double-circuit emergency stop to ensure the reliability of emergency stop.
- The robot body adopts highly flexible special cable.
- Built-in three-phase transformer makes 380V and 220V isolated to help the power supply more stable
- Built-in three-phase filter can effectively improve the performance of EMC and EMI.
- The robot body is with dual-circuit gas pipe to meet the welding demand.
- The inner diameter of 6-axis middle hole is 44mm, it can meet the installation requirements of water-cooling torch and bellows torch.
- Highly flexible welding cable is built-in.

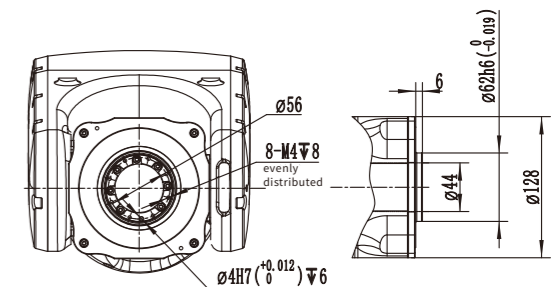
### ROBOT BODY TECHNICAL PARAMETERS

Model	CRP-RH18-20-W	
Arm form	Vertical multiple joints	
Degree of freedom	6 axis	
Maximum payload	20kg	
Maximum coverage	1730mm	
Maximum travel	Axis 1	Formal/inverted-165°~165°, wall mounting-30°~30°
	Axis 2	0°~175°
	Axis 3	-80°~150°
	Axis 4	-190°~190°
	Axis 5	-110°~130°
	Axis 6	-210°~210°
Maximum speed	Axis 1	159°/S
	Axis 2	159°/S
	Axis 3	169°/S
	Axis 4	280°/S
	Axis 5	240°/S
	Axis 6	520°/S
Allowable torque	Axis 4	48N.m
	Axis 5	48N.m
	Axis 6	28N.m
Allowable moment of inertia	Axis 4	1.8kg.m <sup>2</sup>
	Axis 5	1.8kg.m <sup>2</sup>
	Axis 6	0.8kg.m <sup>2</sup>
Repeated positioning accuracy	±0.08mm	
Robot body weight	285kg	
Installation mode	Formal <input type="checkbox"/> inverted <input type="checkbox"/> wall mounting <input type="checkbox"/>	
Body interface	Reserved IO	16Pin
	Reserved gas	2*φ8mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level	Body IP54 Wrist IP67	
Advantage features	Compact structure, high speed, high precision, high expansibility and easy operation	
Application	Welding	
Matching electrical cabinet	G9A	



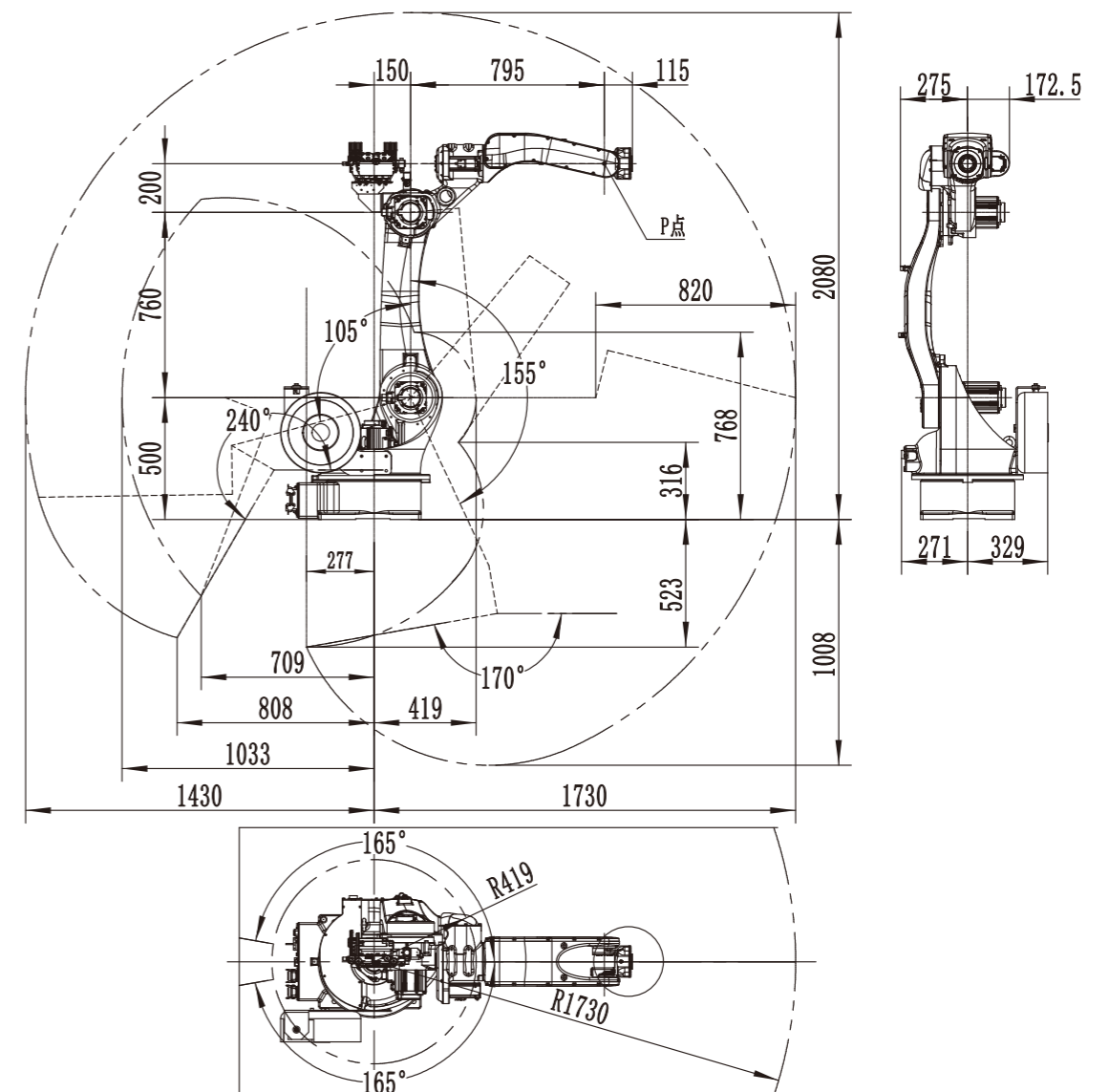
Installation Dimension of Base

### INSTALLATION INTERFACE DIAGRAM



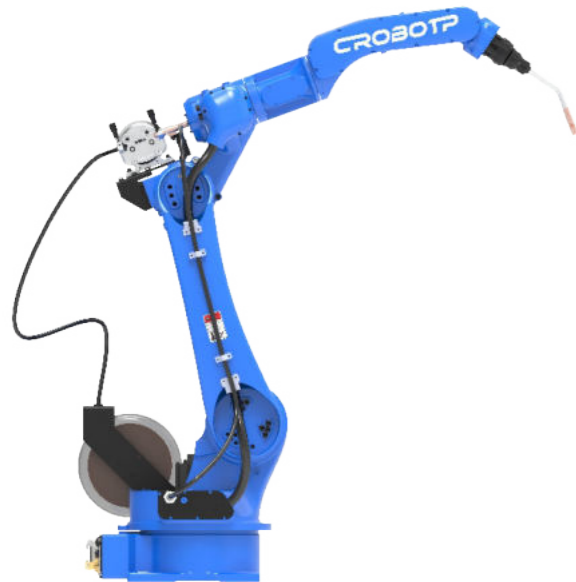
Flange Dimensions

### WORKING RANGE DIAGRAM



# CRP-RH20-06-W

## INDUSTRIAL ROBOT WELDING APPLICATION



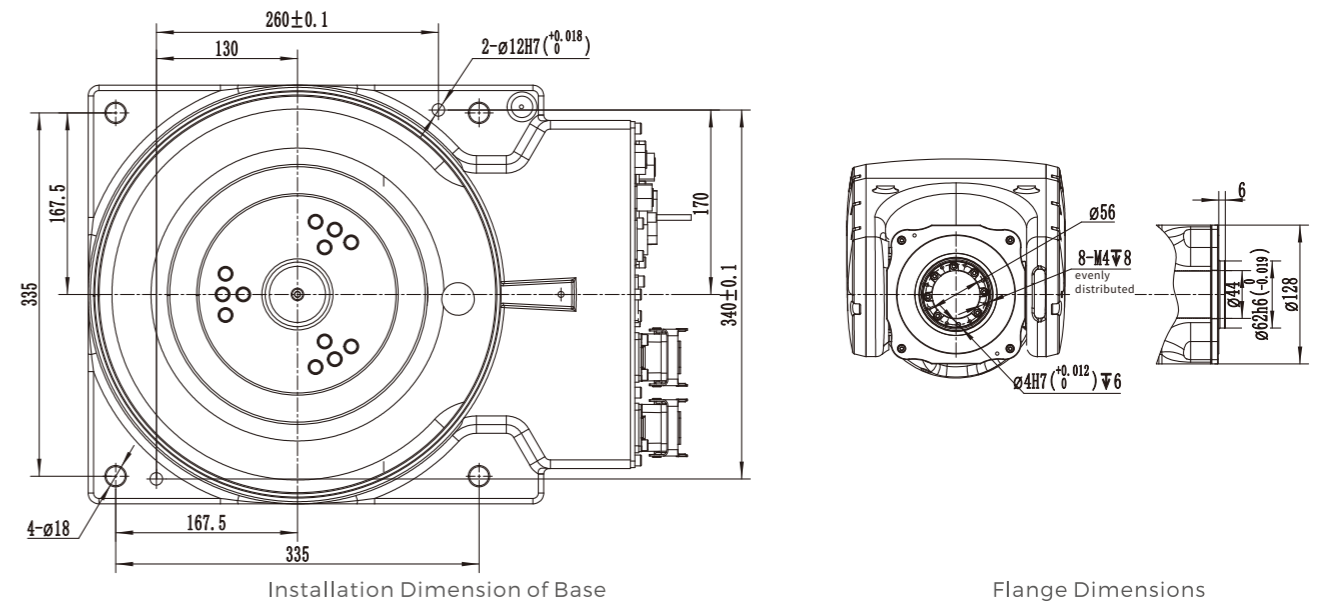
### FUNCTIONAL FEATURES

- The arm span is nearly 2.0 meters. The design is highly compact and can be flexibly installed on the ground or upside down.
- With large working space, fast running speed and high repeated positioning accuracy, it is suitable for wide range of welding applications.
- The safety emergency stop board independent of the control system is equipped with, and the safety relay circuit is adopted to provide double-circuit emergency stop to ensure the reliability of emergency stop.
- The robot body adopts highly flexible special cable.
- Built-in three-phase transformer makes 380V and 220V isolated to help the power supply more stable
- Built-in three-phase filter can effectively improve the performance of EMC and EMI.
- The robot body is with dual-circuit gas pipe to meet the welding demand.
- The inner diameter of 6-axis middle hole is 44mm, it can meet the installation requirements of water-cooling torch and bellows torch.
- Highly flexible welding cable is built-in.

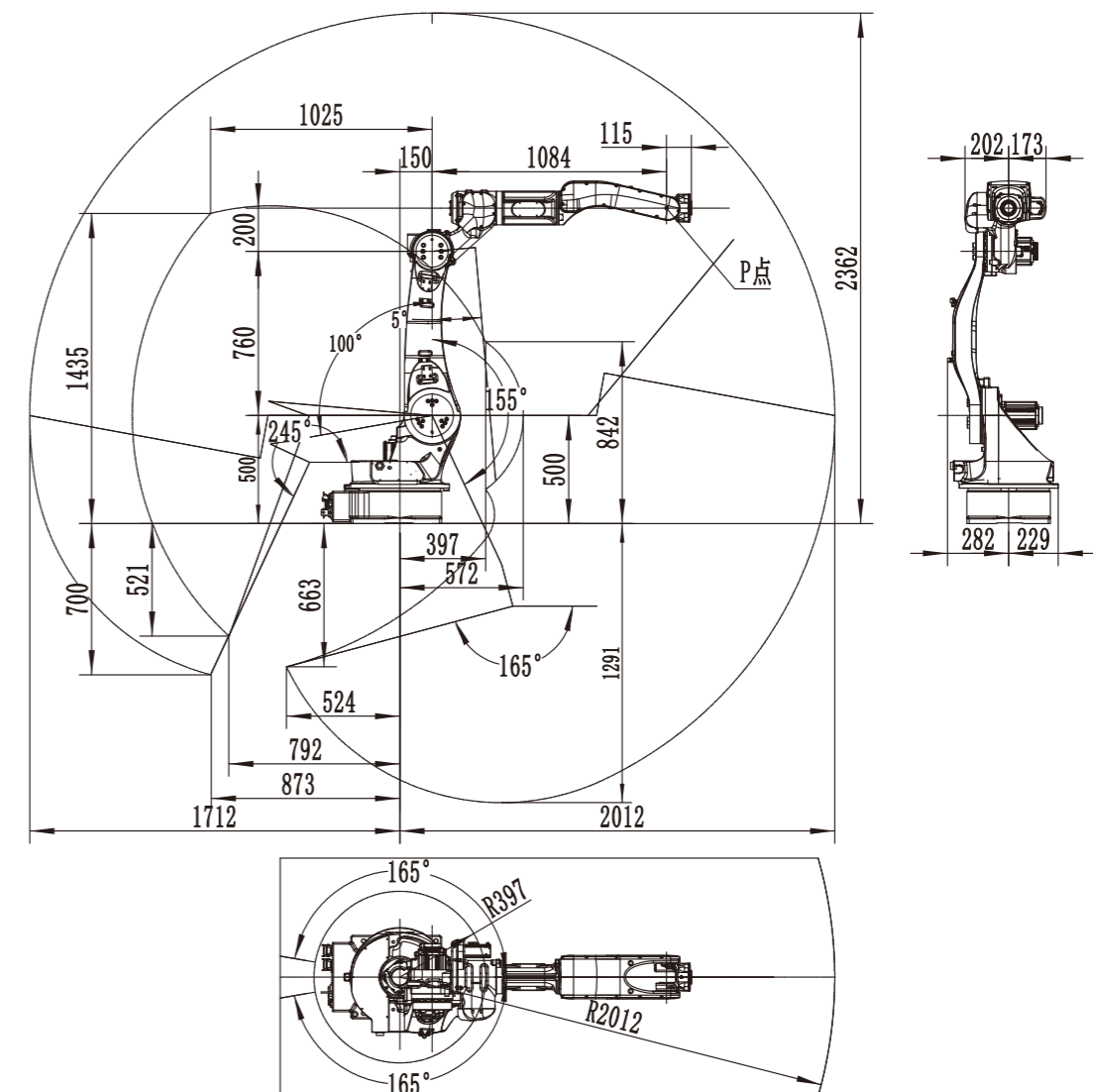
### ROBOT BODY TECHNICAL PARAMETERS

Model		CRP-RH20-06-W
Arm form		Vertical multiple joints
Degree of freedom		6 axis
Maximum payload		6kg
Maximum coverage		2012mm
Maximum travel	Axis 1	Formal/inverted-165°~165°, wall mounting-30°~30°
	Axis 2	0°~175°
	Axis 3	-80°~150°
	Axis 4	-190°~190°
	Axis 5	-110°~130°
	Axis 6	-210°~210°
Maximum speed	Axis 1	159°/S
	Axis 2	159°/S
	Axis 3	169°/S
	Axis 4	280°/S
	Axis 5	240°/S
	Axis 6	520°/S
Allowable torque	Axis 4	24N.m
	Axis 5	24N.m
	Axis 6	14N.m
Allowable moment of inertia	Axis 4	1.4kg.m <sup>2</sup>
	Axis 5	1.4kg.m <sup>2</sup>
	Axis 6	0.5kg.m <sup>2</sup>
Repeated positioning accuracy		±0.08mm
Robot body weight		291kg
Installation mode		Formal <input type="checkbox"/> inverted <input type="checkbox"/> wall mounting
Body interface	Reserved IO	16Pin
	Reserved gas	2*φ8mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level		Body IP54 Wrist IP67
Advantage features		Compact structure, high speed, high precision, high expansibility and easy operation
Application		Welding
Matching electrical cabinet		G9A

### INSTALLATION INTERFACE DIAGRAM



### WORKING RANGE DIAGRAM



# CRP-RC09-05-W CRP-RC13-10-W

## COLLABORATIVE ROBOT



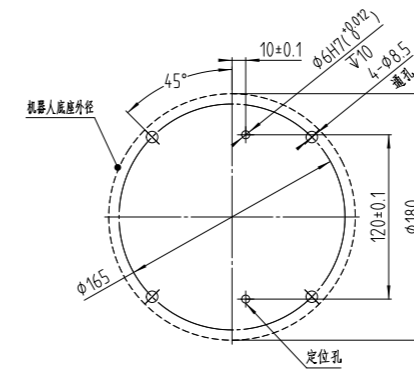
CRP-RC09-05-W



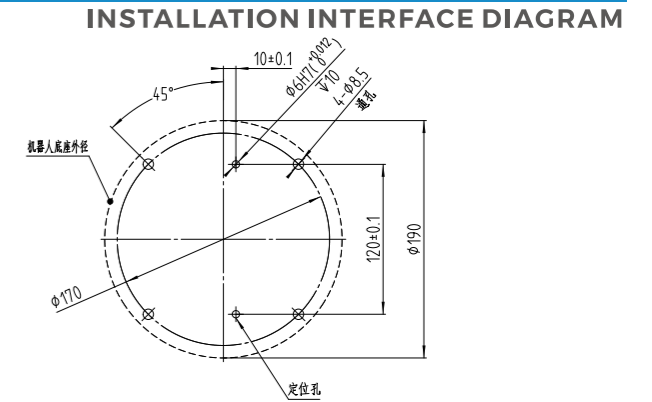
CRP-RC13-10-W

### ROBOT BODY TECHNICAL PARAMETERS

Model	CRP-RC09-05-W	CRP-RC13-10-W	
Degree of freedom	6 axis	6 axis	
Maximum load	5kg	10kg	
Maximum coverage	906mm	1320mm	
Repeated positioning accuracy	±0.02mm	±0.03mm	
Robot body weight	22.5kg	37.8kg	
Maximum travel	J1	-360°~360°	-360°~360°
	J2	-360°~360°	-360°~360°
	J3	-78°~256°	-75°~255°
	J4	-210°~210°	-210°~210°
	J5	-360°~360°	-360°~360°
	J6	-210°~210°	-210°~210°
Maximum speed	J1	225°/S	107°/S
	J2	225°/S	107°/S
	J3	225°/S	200°/S
	J4	250°/S	250°/S
	J5	250°/S	250°/S
	J6	250°/S	250°/S
IP level	IP54	IP54	
Matching electrical cabinet	X3 collaborative electrical cabinet	X3 collaborative electrical cabinet	

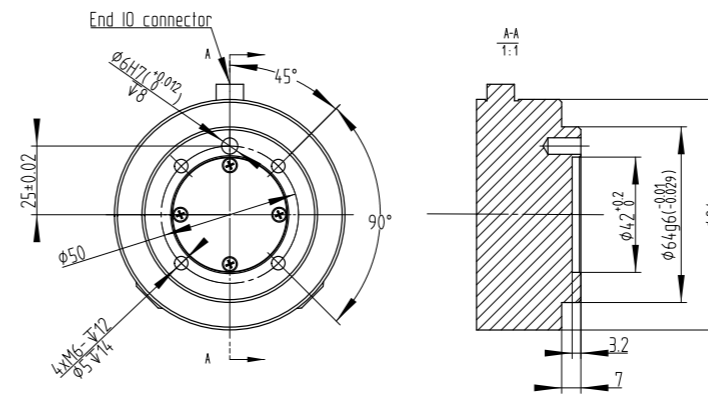


CRP-RC09-05/CRP-RC09-05-W

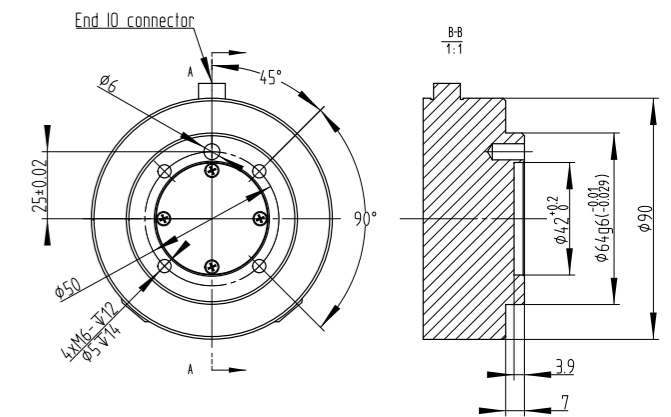


CRP-RC13-10/CRP-RC13-10-W

### Flange installation diagram

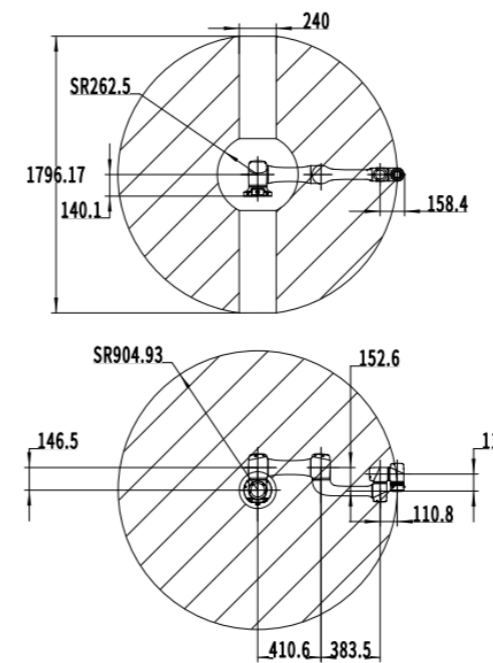


CRP-RC09-05/CRP-RC09-05-W

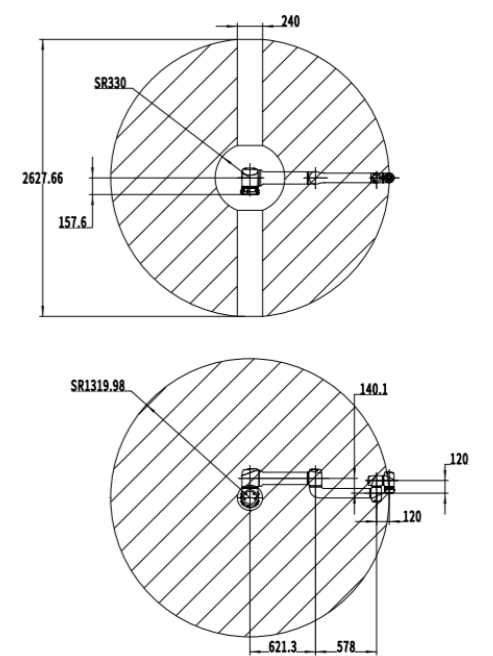


CRP-RC13-10/CRP-RC13-10-W

### WORKING RANGE DIAGRAM



CRP-RC09-05/CRP-RC09-05-W



CRP-RC13-10/CRP-RC13-10-W

# CRP-RA07A-08 CRP-RA09A-07

## INDUSTRIAL ROBOT HANDLING APPLICATION



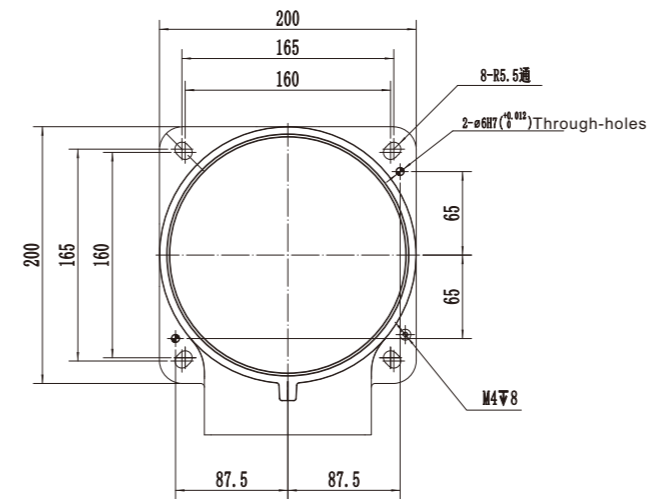
### FUNCTIONAL FEATURES

- Adopt modular design to effectively reduce the failure rate of the whole machine.
- Well-knit design makes the robot more convenient in small space.
- The arm span is 712/916mm. It has strong payload capacity, and rated payload 8kg/7kg. It is easily applied in multi application.
- Lighter structure design than other same level product, so it is easy to install inside a system or to mount upside-down.
- High rigidity arm and top level servo control technology guarantee the smoothness and stability while the movement.
- Built-in cable and external cable fixing base to meet customization requirements.
- Adopt leak-proof structure
- High expansibility, multiple user bracket installation platforms are set on the robot body, which is convenient for users to fix cables and related auxiliary tools.

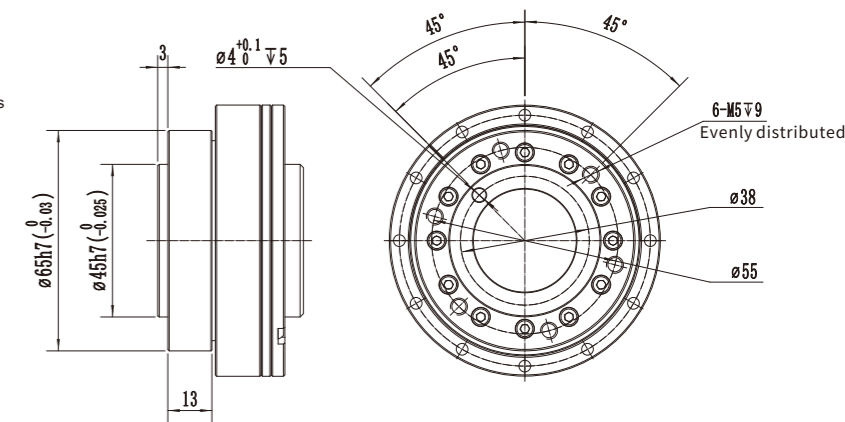
### ROBOT BODY TECHNICAL PARAMETERS

Model	CRP-RA07A-08	CRP-RA09A-07
Arm form	Vertical multiple joints	
Degree of freedom	6 axis	
Maximum payload	8kg	7kg
Maximum coverage	712mm	916mm
Maximum travel	Axis 1	Formal/inverted-170°~170°, wall mounting-30°~30°
	Axis 2	-135°~100°
	Axis 3	-62°~180°
	Axis 4	-185°~185°
	Axis 5	-125°~125°
	Axis 6	-360°~360°
Maximum speed	Axis 1	400°/S
	Axis 2	340°/S
	Axis 3	370°/S
	Axis 4	535°/S
	Axis 5	411°/S
	Axis 6	698°/S
Allowable torque	Axis 4	16.2N.m
	Axis 5	16.2N.m
	Axis 6	9.5N.m
Allowable moment of inertia	Axis 4	0.38kg.m <sup>2</sup>
	Axis 5	0.38kg.m <sup>2</sup>
	Axis 6	0.16kg.m <sup>2</sup>
Repeated positioning accuracy	±0.02mm	±0.03mm
Robot body weight	44kg	46kg
Installation mode	Formal, inverted, wall mounting	
Noise level	< 75dB(A)	
Body interface	Reserved IO	10Pin
	Reserved gas	2*φ6mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level	Body IP54 □ Wrist Ip67	
Advantage features	Compact structure, high speed, high precision, high expansibility and easy operation	
Application	Welding, cutting, assembly, handling, polishing, marking	
Matching electrical cabinet	G11	

### INSTALLATION INTERFACE DIAGRAM

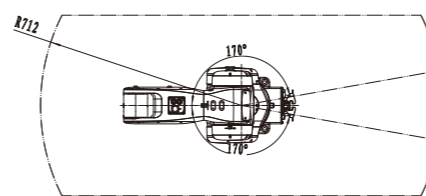
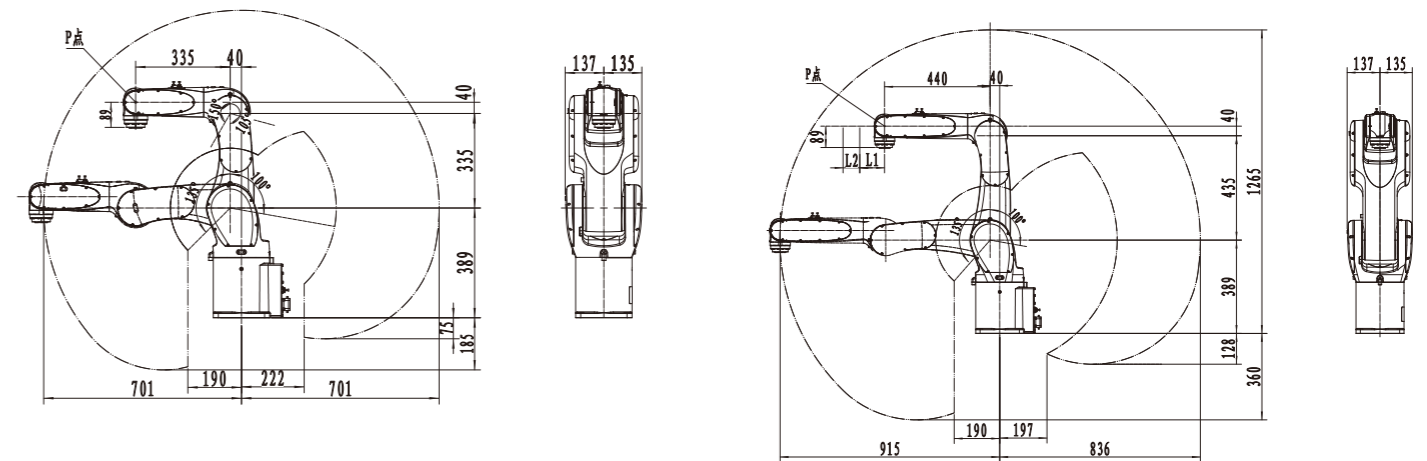


Installation Dimension of Base

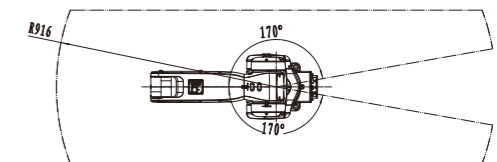


Flange Dimensions

### WORKING RANGE DIAGRAM



CRP-RA07A-08



CRP-RA09A-07

# CRP-RA09A-07(T3)

## PCB BOARD ROBOT



### THE INTRODUCTION AND FEATURES OF ROBOT

· CRP-RA09A-07 (T3) is mainly customized for the production and application of PCB board industry. It is applied in the loading and unloading process of PCB board industry. In order to adapt to the PCB industry, CRP robot with light weight, simple application, high speed and lower cost is launched to meet the needs of customers for robots.

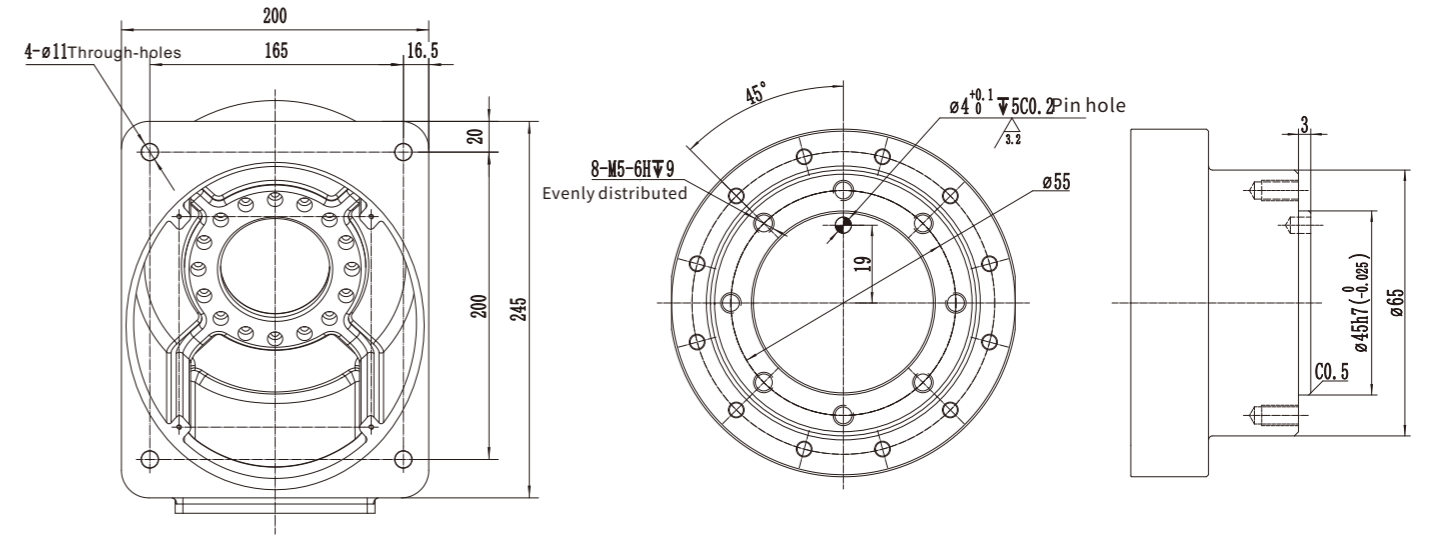
### FUNCTIONAL FEATURES

- Axis 2 adopts directly connected structure to effectively improve accuracy;
- Motor and reducer adopt spline connection to be more stable
- Adopt customized structure to effectively avoid interference and meet the need of application in narrow space;
- Compact structure and small volume
- Light weight and fast speed

### ROBOT BODY TECHNICAL PARAMETERS

Model		CRP-RA09A-07(T3)
Arm form		Vertical multiple joints
Degree of freedom		3 axis
Maximum payload		7kg
Maximum coverage		876mm
Maximum travel	Axis 1	/
	Axis 2	-135°~100°
	Axis 3	-62°~180°
	Axis 4	/
	Axis 5	-125°~125°
	Axis 6	/
Maximum speed	Axis 1	/
	Axis 2	297.5°/S
	Axis 3	426.5°/S
	Axis 4	/
	Axis 5	450°/S
	Axis 6	/
Allowable torque	Axis 4	/
	Axis 5	6.2N.m
	Axis 6	/
Allowable moment of inertia	Axis 4	/
	Axis 5	0.38kg.m <sup>2</sup>
	Axis 6	/
Repeated positioning accuracy		±0.03mm
Robot body weight		37kg
Installation mode		inverted mounting
Noise level		<75dB(A)
Body interface	Reserved IO	19Pin
	Reserved gas	2*φ6mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level		Body IP54 Wrist IP67
Advantage features		Compact structure, high speed, high precision, high expansibility and easy operation
Application		PCB transfer machine
Matching electrical cabinet		G11

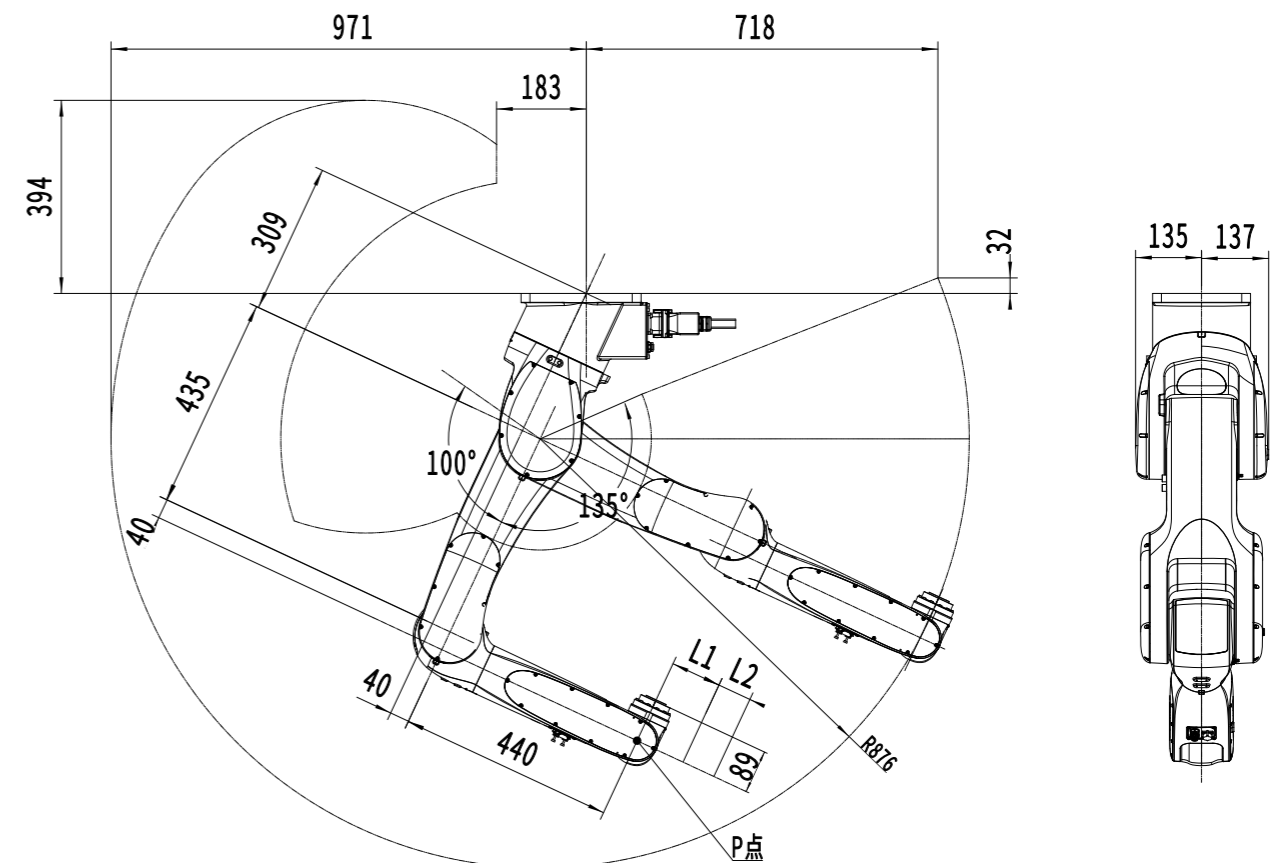
### INSTALLATION INTERFACE DIAGRAM



Installation Dimension of Base

Flange Dimensions

### WORKING RANGE DIAGRAM



# CRP-RA09-12 CRP-RA09-12T3 CRP-RA09-12T4 CRP-RA12-10

## INDUSTRIAL ROBOT HANDLING APPLICATION



### FUNCTIONAL FEATURES

- High speed, high precision, higher efficiency.the whole body adopts all-aluminum body design, lighter quality than the same level of products, RA09-12 series relative to RA09-07 series operation speed increased by 30%, standard door trajectory 0.42s, repeated precision positioning accuracy 0.03mm, to achieve rapid effect, improve production cap.45acity;
- Compact structure, flexible deployment. product motor and cable use built-in form, more compact structure, covers an area of 255mm\*255mm, flexible deployment in narrow space;
- New design, higher protection, stronger rigidity;
- The body adopts a high-rigidity design scheme with higher rigidity and full internal closure scheme. The forearm protection grade reaches IP67, the load is larger and the range is wider. The robot load is 10kg and 12kg, the arm s pan is 900mm and 1200mm, and the robot wrist has higher torque and inertia, stronger load bearing capacity and wider application scenarios;
- New CrobotpOS software, better control performance. The new CrobotpOS software is compatible with the functions of the old X8 software, and the new background tasks, Socket protocol, PC software, laser welding and other functions are added. The motion control adopts high-level control algorithm, which makes the trajectory more flexible and the beat faster;

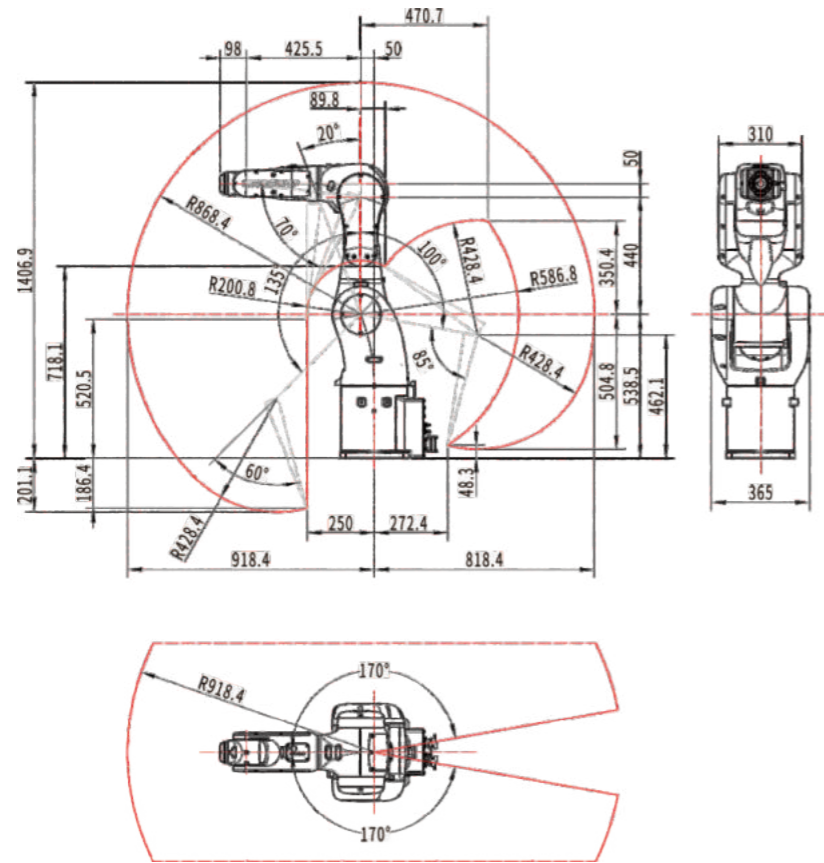


### ROBOT BODY TECHNICAL PARAMETERS

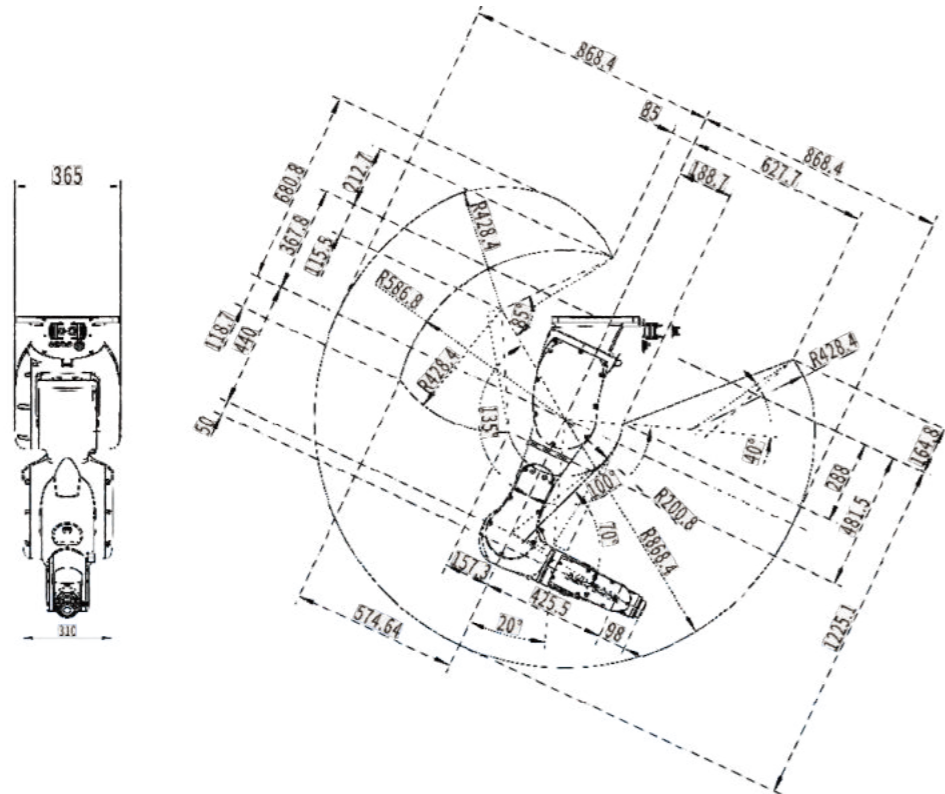
Model	CRP-RA09-12	CRP-RA12-10	CRP-RA09-12T3	CRP-RA09-12T4
Arm form	Vertical multiple joints			
Maximum payload	12kg	10kg	12kg	12kg
Maximum coverage	918mm	1222mm	868mm	868mm
Maximum travel	Axis 1	Formal,inverted±170°,side±30°	Formal,inverted±170°,side±30°	/
	Axis 2	-135°~100°	-135°~100°	-135°~100°
	Axis 3	-70°~210°	-70°~210°	-70°~210°
	Axis 4	-190°~190°	-190°~190°	/
	Axis 5	-135°~135°	-135°~135°	-135°~135°
	Axis 6	-360°~360°	-360°~360°	/
Maximum speed	Axis 1	305°/S	305°/S	/
	Axis 2	310°/S	310°/S	310°/S
	Axis 3	350°/S	350°/S	350°/S
	Axis 4	470°/S	470°/S	/
	Axis 5	480°/S	480°/S	480°/S
	Axis 6	720°/S	720°/S	/
Allowable torque	Axis 4	25N.m	25N.m	/
	Axis 5	15N.m	15N.m	15N.m
	Axis 6	12N.m	12N.m	/
Allowable moment of inertia	Axis 4	0.4kg.m <sup>2</sup>	0.4kg.m <sup>2</sup>	/
	Axis 5	0.22kg.m <sup>2</sup>	0.22kg.m <sup>2</sup>	0.22kg.m <sup>2</sup>
	Axis 6	0.22kg.m <sup>2</sup>	0.22kg.m <sup>2</sup>	/
Robot body weight	94kg	95kg	73kg	74kg
Repeated positioning accuracy	±0.03mm	±0.03mm	±0.03mm	±0.03mm
Installation mode	Formal, inverted, wall mounting		inverted mounting	
Noise level	<79.5dB(A)			
Body interface	Reserved IO	19 Pin		
	Reserved gas	2* φ6mm		
Installation environment	Ambient temperature	0~45°C		
	Relative humidity	20%~80%RH(No condensation)		
	Vibration	Under 0.5G		
Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference			
IP level	Body IP54 ,Wrist IP67			
Application	Handling, laser welding, loading and unloading		PCB transfer machine	
Matching electrical cabinet	G11		G11	

WORKING RANGE DIAGRAM

CRP-RA09-12

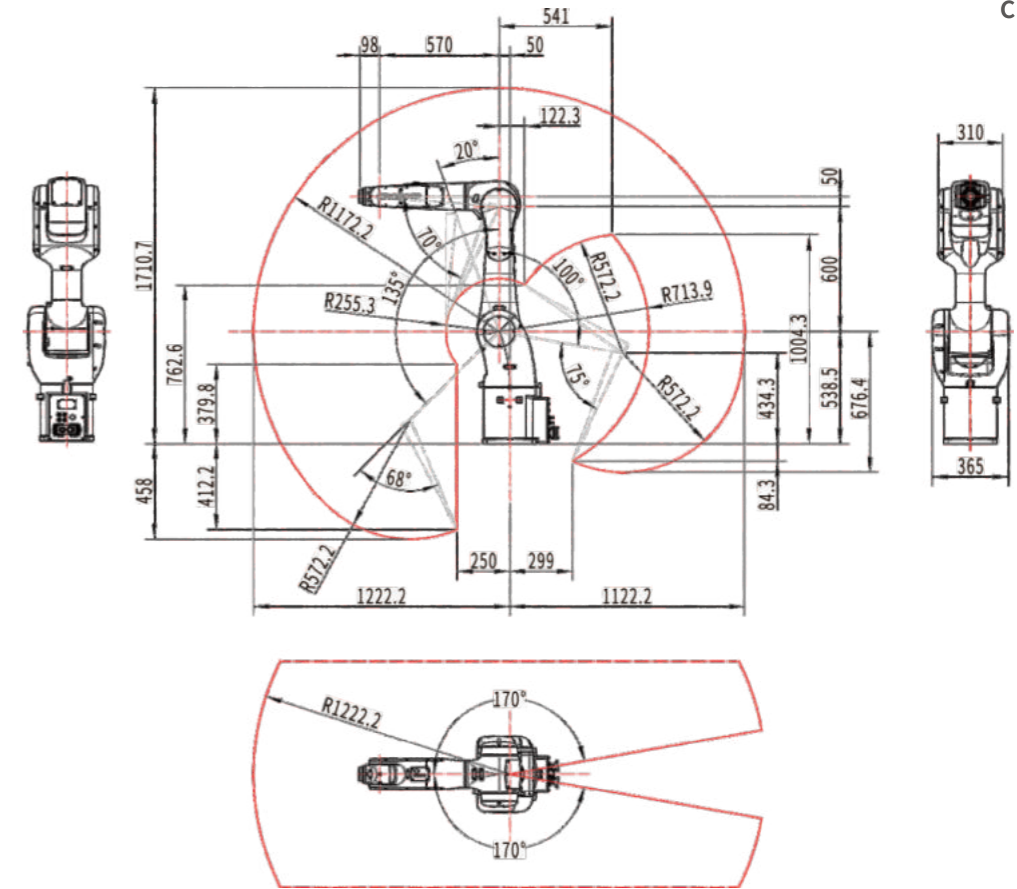


CRP-RA09-12-T3(T4)

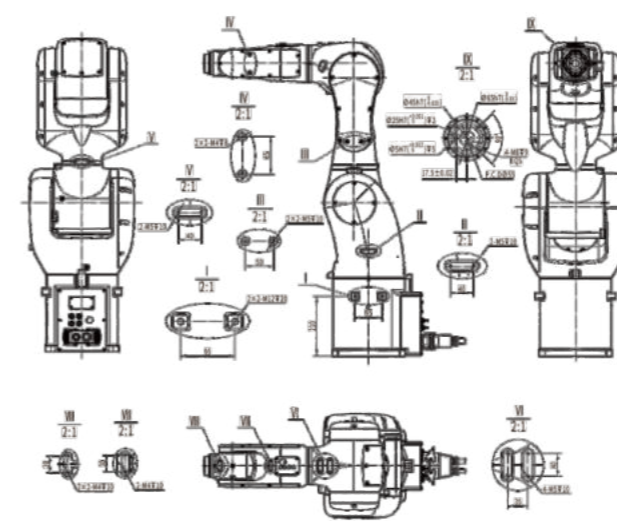


WORKING RANGE DIAGRAM

CRP-RA12-10

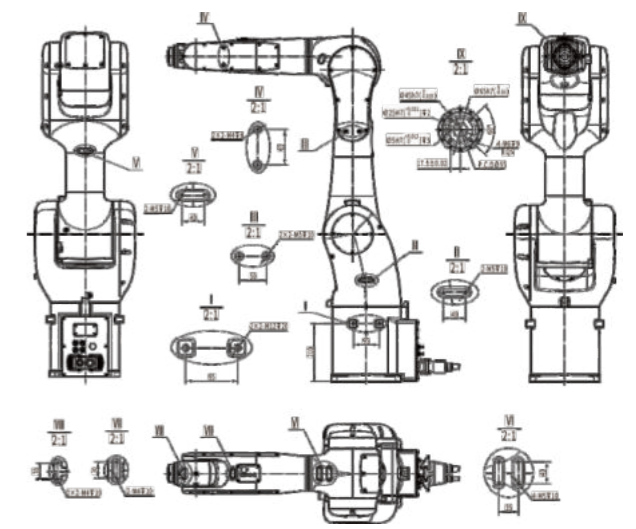


INSTALLATION INTERFACE DIAGRAM



CRP-RA09-12

Dimensions of load mounting holes and interfaces



CRP-RA12-10

Dimensions of load mounting holes and interfaces

# CRP-RA15-12

## INDUSTRIAL ROBOT HANDLING APPLICATION



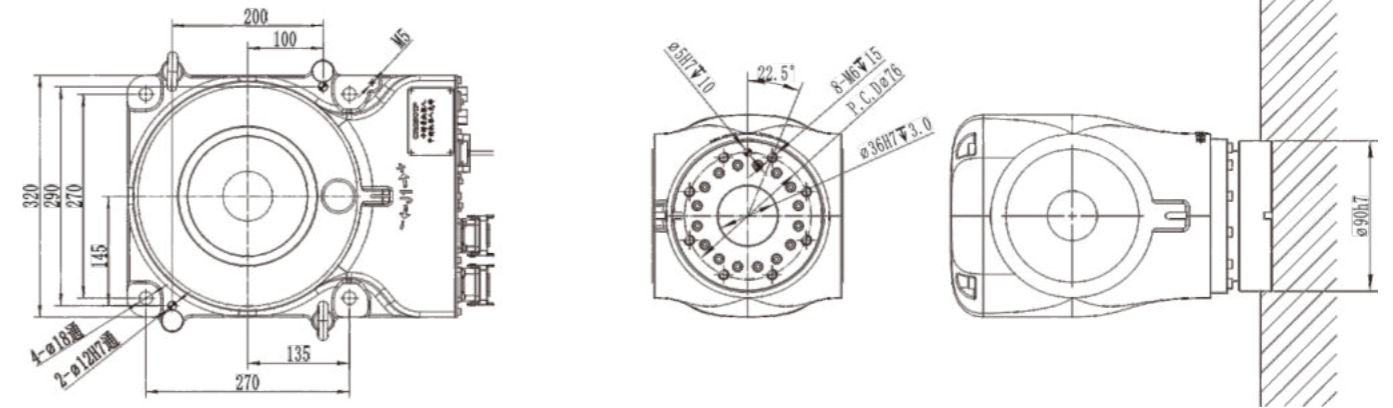
### FUNCTIONAL FEATURES

- The design of the robot is highly compact, which is more lightweight, especially the wrist is slender, so it can be applied in more scenarios.
- Adopt high speed motor, the robot has high rigidity and faster beat; Adopt leak-proof structure, the protection class of robot is up to IP 67 to adapt harsher working environment.
- The robot in the axes of J2 J3 J4 is reserved installation holes to install fixed solenoid valve and other accessories. There are IO port and dual-circuit gas pipe at J3 axis to meet the handling application.
- Driving adopts new advanced PID control technology to achieve faster response; With the functions of observer dynamic compensation and weak magnetism, the electric machine can be better controllable and more stable with higher speed.
- The new control algorithm combines Kinematics with Dynamics. The new design integrates driven algorithm and control algorithm to realize automatic programming and guarantee the service life of mechanical under the maximum working capacity based on the characteristics of mechanical components load and condition of loading. Meanwhile, the robot can realize high speed response, faster running speed and work beats with longer life span.
- With collision detection function, it can better protect the robot body and peripheral equipment; With the function of gravity compensation, the robot has higher precision, so it can be applied in more scenarios.
- Equipped with safety emergency stop board which is independent of the control system, and the safety relay circuit is adopted to provide double-circuit emergency stop to ensure the reliability of emergency stop.
- Built-in three-phase filter can effectively improve the performance of internal and external distractions.

### ROBOT BODY TECHNICAL PARAMETERS

Model		CRP-RA15-12
Arm form		Vertical multiple joints
Degree of freedom		6 axis
Maximum payload		12kg
Maximum coverage		1510mm
Maximum travel	Axis 1	Formal/inverted-170°~170°, wall mounting-30°~30°
	Axis 2	-153°~90°
	Axis 3	-90°~150°
	Axis 4	-190°~190°
	Axis 5	-135°~135°
	Axis 6	-360°~360°
Maximum speed	Axis 1	235°/S
	Axis 2	208°/S
	Axis 3	235°/S
	Axis 4	376°/S
	Axis 5	440°/S
	Axis 6	698°/S
Allowable torque	Axis 4	23N.m
	Axis 5	23N.m
	Axis 6	9.3N.m
Allowable moment of inertia	Axis 4	0.63kg.m <sup>2</sup>
	Axis 5	0.63kg.m <sup>2</sup>
	Axis 6	0.17kg.m <sup>2</sup>
Repeated positioning accuracy		±0.05mm
Robot body weight		160kg
Installation mode		Formal <input type="checkbox"/> inverted <input type="checkbox"/> wall mounting
Body interface	Reserved IO	16Pin
	Reserved gas	2*φ8mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level		Body IP54 Wrist IP67
Advantage features		Compact structure, high speed, high precision, high expansibility and easy operation
Application		Handling <input type="checkbox"/> loading and unloading <input type="checkbox"/> palletizing <input type="checkbox"/> welding <input type="checkbox"/> dispense glue <input type="checkbox"/> spraying
Matching electrical cabinet		G9A

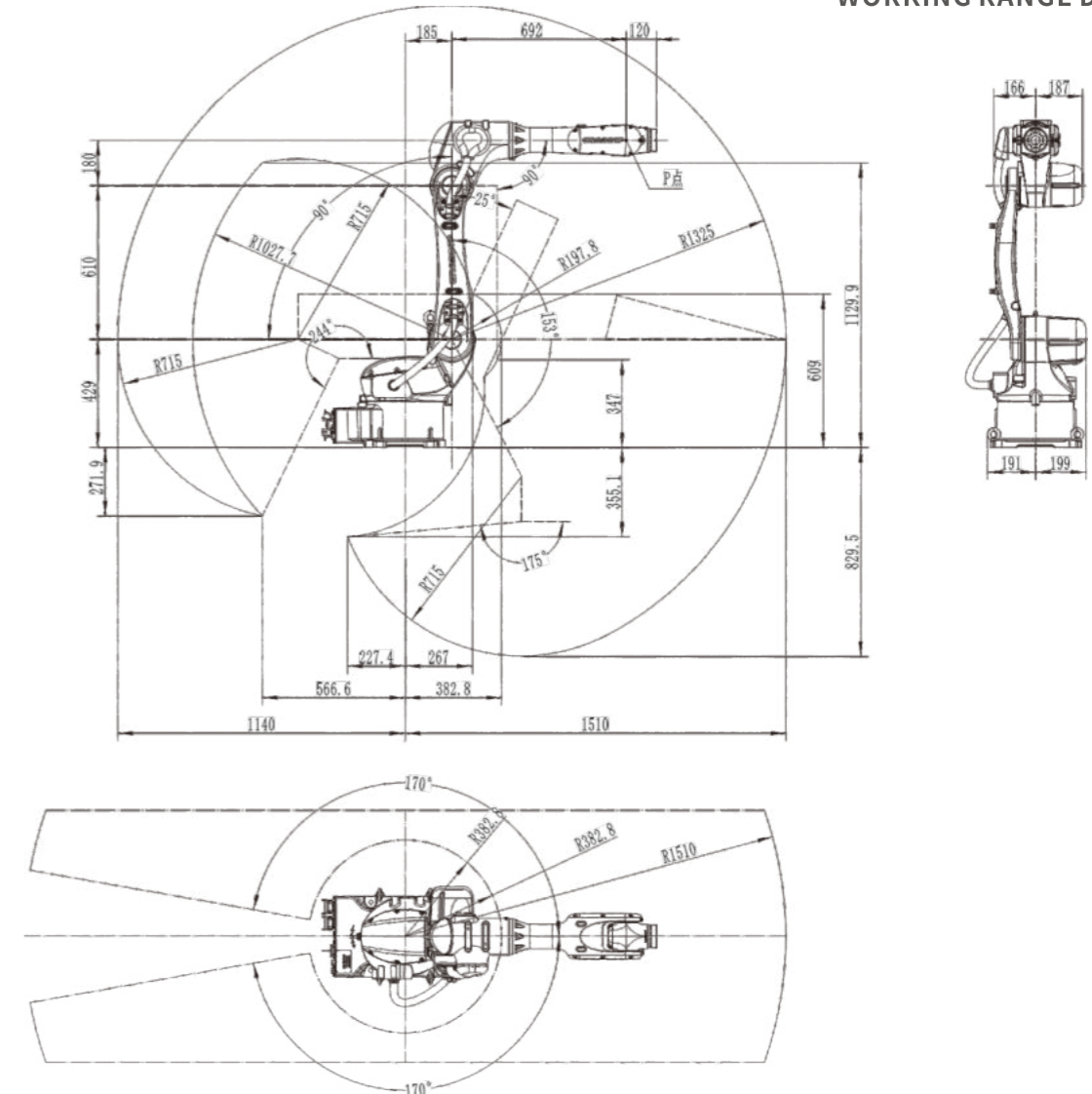
### INSTALLATION INTERFACE DIAGRAM



Installation Dimension of Base

Flange Dimensions

### WORKING RANGE DIAGRAM



# CRP-RA15A-12

## INDUSTRIAL ROBOT HANDLING APPLICATION



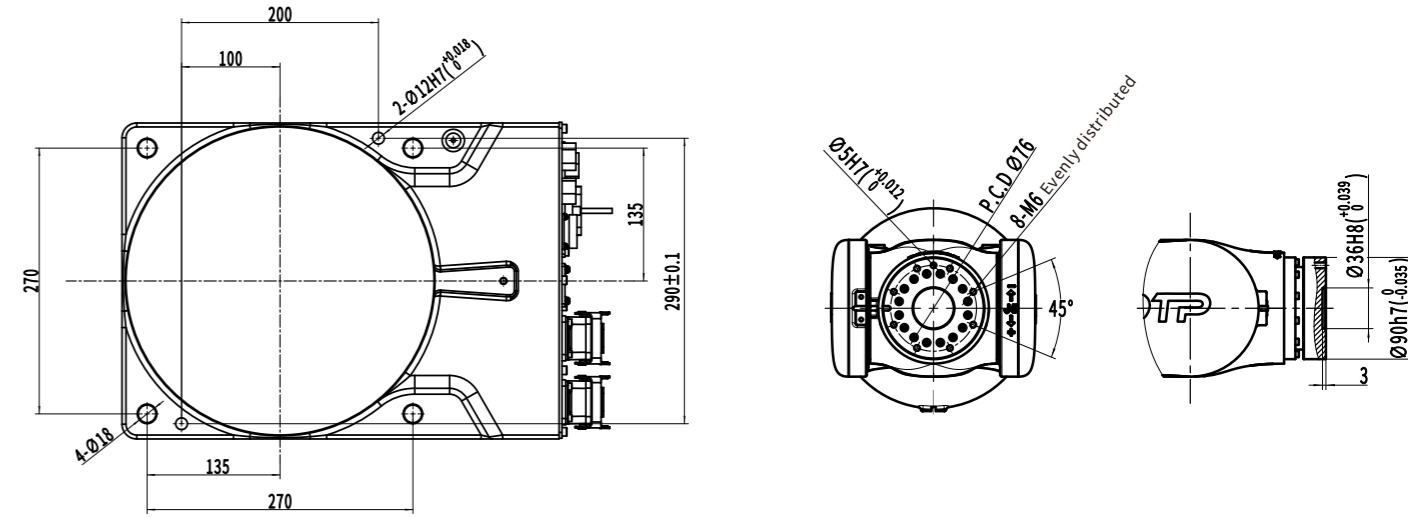
### FUNCTIONAL FEATURES

- The design of the robot is highly compact, which is more lightweight, especially the wrist is slender, so it can be applied in more scenarios.
- Adopt high speed motor, the robot has high rigidity and faster beat; Adopt leak-proof structure, the protection class of robot is up to IP 67 to adapt harsher working environment.
- The robot in the axes of J2 J3 J4 is reserved installation holes to install fixed solenoid valve and other accessories. There are IO port and dual-circuit gas pipe at J3 axis to meet the handling application.
- Driving adopts new advanced PID control technology to achieve faster response; With the functions of observer dynamic compensation and weak magnetism, the electric machine can be better controllable and more stable with higher speed.
- The new control algorithm combines Kinematics with Dynamics. The new design integrates driven algorithm and control algorithm to realize automatic programming and guarantee the service life of mechanical under the maximum working capacity based on the characteristics of mechanical components load and condition of loading. Meanwhile, the robot can realize high speed response, faster running speed and work beats with longer life span.
- With collision detection function, it can better protect the robot body and peripheral equipment; With the function of gravity compensation, the robot has higher precision, so it can be applied in more scenarios.
- Equipped with safety emergency stop board which is independent of the control system, and the safety relay circuit is adopted to provide double-circuit emergency stop to ensure the reliability of emergency stop.
- Built-in three-phase filter can effectively improve the performance of internal and external distractions.

### ROBOT BODY TECHNICAL PARAMETERS

Model		CRP-RA15A-12
Arm form		Vertical multiple joints
Degree of freedom		6 axis
Maximum payload		12kg
Maximum coverage		1554mm
Maximum travel	Axis 1	Formal/inverted-167°~167°, wall mounting-30°~30°
	Axis 2	-155°~90°
	Axis 3	-85°~155°
	Axis 4	-190°~190°
	Axis 5	-135°~135°
	Axis 6	-360°~360°
Maximum speed	Axis 1	169°/S
	Axis 2	169°/S
	Axis 3	169°/S
	Axis 4	301°/S
	Axis 5	220°/S
	Axis 6	743°/S
Allowable torque	Axis 4	20N.m
	Axis 5	20N.m
	Axis 6	11N.m
Allowable moment of inertia	Axis 4	0.5kg.m <sup>2</sup>
	Axis 5	0.5kg.m <sup>2</sup>
	Axis 6	0.16kg.m <sup>2</sup>
Repeated positioning accuracy		±0.05mm
Robot body weight		170kg
Installation mode		Formal <input type="checkbox"/> inverted <input type="checkbox"/> wall mounting <input type="checkbox"/>
Body interface	Reserved IO	16Pin
	Reserved gas	2*φ8mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level		Body IP54 Wrist IP67
Advantage features		Compact structure, high speed, high precision, high expansibility and easy operation
Application		Handling, cutting, mounting, marking, welding, polishing
Matching electrical cabinet		G9A

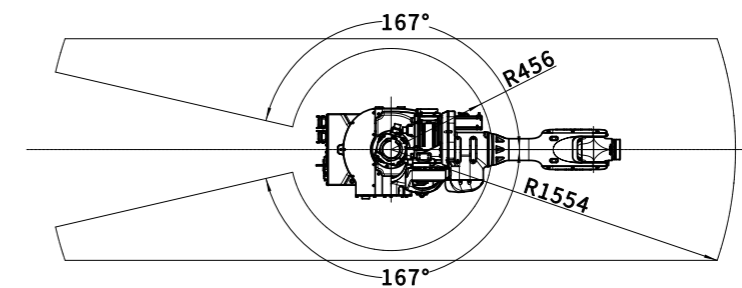
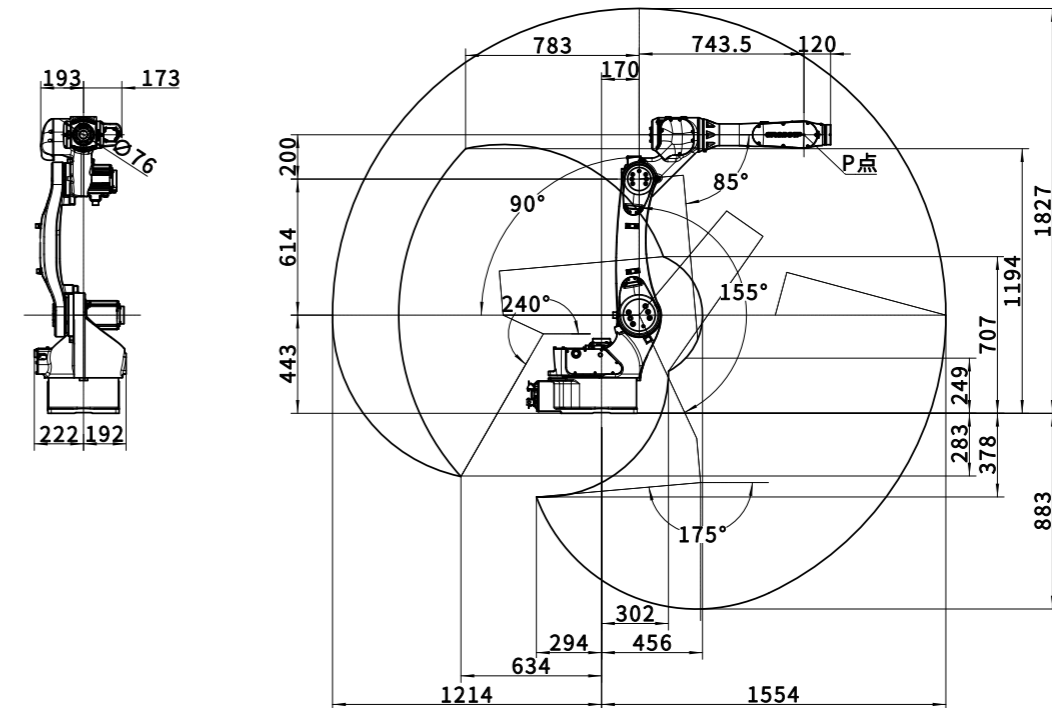
### INSTALLATION INTERFACE DIAGRAM



Installation Dimension of Base

Flange Dimensions

### WORKING RANGE DIAGRAM



# CRP-RA18-20

## INDUSTRIAL ROBOT HANDLING APPLICATION



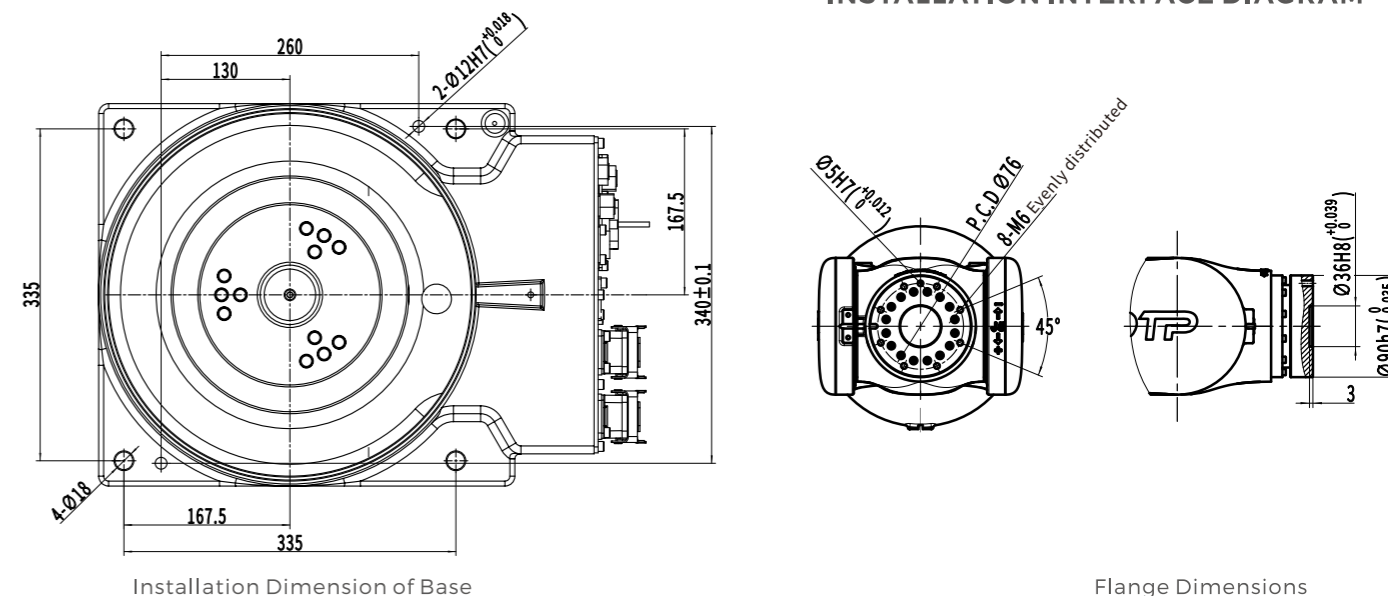
### FUNCTIONAL FEATURES

- The design of the robot is highly compact, which is more lightweight, especially the wrist is slender, so it can be applied in more scenarios.
- Adopt high speed motor, the robot has high rigidity and faster beat. Adopt leak-proof structure, the protection class of robot is up to IP 67 to adapt harsher working environment.
- The robot in the axes of J2 J3 J4 is reserved installation holes to install fixed solenoid valve and other accessories. There are IO port and dual-circuit gas pipe at J3 axis to meet the handling application.
- Driving adopts new advanced PID control technology to achieve faster response. With the functions of observer dynamic compensation and weak magnetism, the electric machine can be better controllable and more stable with higher speed.
- The new control algorithm combines Kinematics with Dynamics. The new design integrates driven algorithm and control algorithm to realize automatic programming and guarantee the service life of mechanical under the maximum working capacity based on the characteristics of mechanical components load and condition of loading. Meanwhile, the robot can realize high speed response, faster running speed and work beats with longer life span.
- With collision detection function, it can better protect the robot body and peripheral equipment. With the function of gravity compensation, the robot has higher precision, so it can be applied in more scenarios.
- Equipped with safety emergency stop board which is independent of the control system, and the safety relay circuit is adopted to provide double-circuit emergency stop to ensure the reliability of emergency stop.
- Built-in three-phase filter can effectively improve the performance of internal and external distractions.

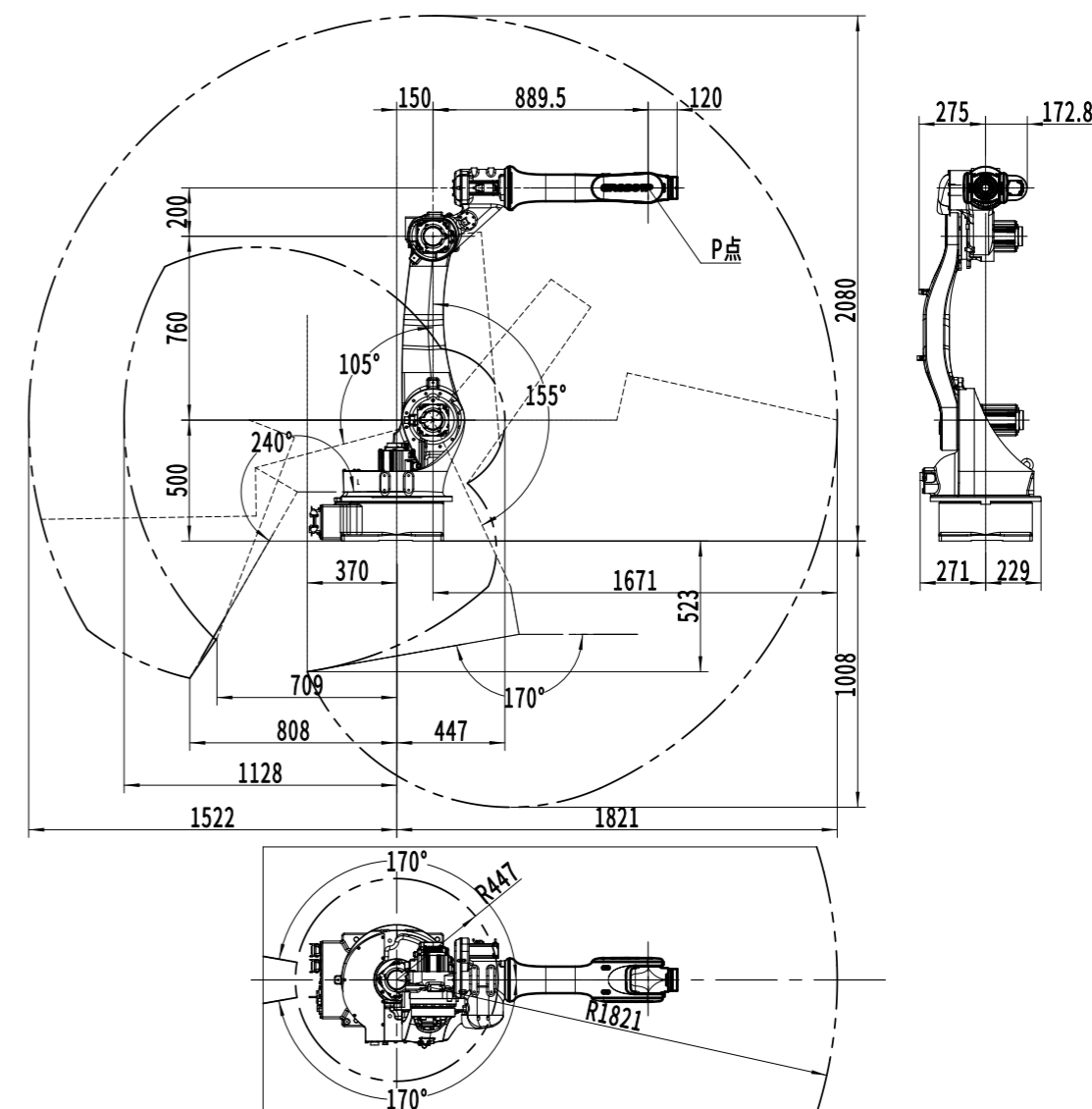
### ROBOT BODY TECHNICAL PARAMETERS

Model	CRP-RA18-20	
Arm form	Vertical multiple joints	
Degree of freedom	6 axis	
Maximum payload	20kg	
Maximum coverage	1821mm	
Maximum travel	Axis 1	Formal/inverted-167°~167°, wall mounting-30°~30°
	Axis 2	-155°~105°
	Axis 3	-90°~135°
	Axis 4	-190°~190°
	Axis 5	-130°~130°
	Axis 6	-360°~360°
Maximum speed	Axis 1	160°/S
	Axis 2	160°/S
	Axis 3	169°/S
	Axis 4	301°/S
	Axis 5	342°/S
	Axis 6	708°/S
Allowable torque	Axis 4	55N.m
	Axis 5	55N.m
	Axis 6	24N.m
Allowable moment of inertia	Axis 4	2.1kg.m <sup>2</sup>
	Axis 5	2.1kg.m <sup>2</sup>
	Axis 6	0.9kg.m <sup>2</sup>
Repeated positioning accuracy	±0.05mm	
Robot body weight	288kg	
Installation mode	Formal, inverted, wall mounting	
Body interface	Reserved IO	16Pin
	Reserved gas	2*φ8mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference	
IP level	Body IP54 Wrist IP67	
Advantage features	Compact structure, high speed, high precision, high expansibility and easy operation	
Application	Handling <input type="checkbox"/> cutting <input type="checkbox"/> mounting <input type="checkbox"/> marking <input type="checkbox"/> welding <input type="checkbox"/> polishing	
Matching electrical cabinet	G9A	

### INSTALLATION INTERFACE DIAGRAM



### WORKING RANGE DIAGRAM



# CRP-RA18-25

## INDUSTRIAL ROBOT HANDLING APPLICATION



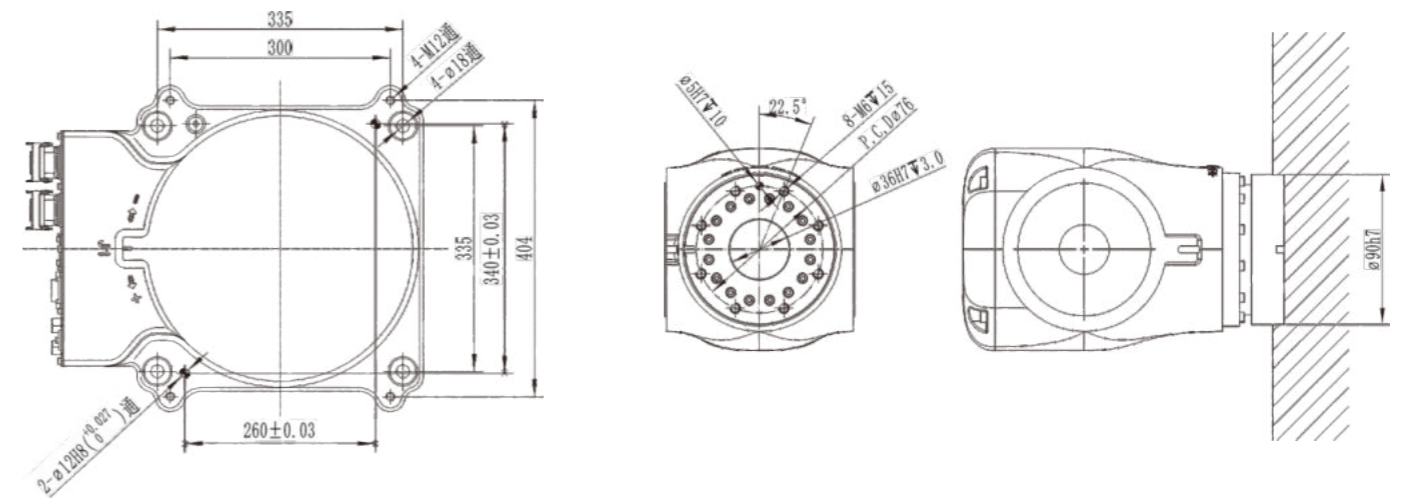
### FUNCTIONAL FEATURES

- The design of the robot is highly compact, which is more lightweight, especially the wrist is slender, so it can be applied in more scenarios.
- Adopt high speed motor, the robot has high rigidity and faster beat.
- Adopt leak-proof structure, the protection class of robot is up to IP 67 to adapt harsher working environment.
- The robot in the axes of J2 J3 J4 is reserved installation holes to install fixed solenoid valve and other accessories. There are IO port and dual-circuit gas pipe at J5 axis to meet the handling application.
- Driving adopts new advanced PID control technology to achieve faster response. With the functions of observer dynamic compensation and weak magnetism, the electric machine can be better controllable and more stable with higher speed.
- The new control algorithm combines Kinematics with Dynamics. The new design integrates driven algorithm and control algorithm to realize automatic programming and guarantee the service life of mechanical under the maximum working capacity based on the characteristics of mechanical components load and condition of loading. Meanwhile, the robot can realize high speed response, faster running speed and work beats with longer life span.
- With collision detection function, it can better protect the robot body and peripheral equipment. With the function of gravity compensation, the robot has higher precision, so it can be applied in more scenarios.
- Equipped with safety emergency stop board which is independent of the control system, and the safety relay circuit is adopted to provide double-circuit emergency stop to ensure the reliability of emergency stop.
- Built-in three-phase filter can effectively improve the performance of internal and external distractions.

### ROBOT BODY TECHNICAL PARAMETERS

Model		CRP-RA18-25
Arm form		Vertical multiple joints
Degree of freedom		6 axis
Maximum payload		25kg
Maximum coverage		1836mm
Maximum travel	Axis 1	Formal/inverted-170°~170°, wall mounting-30°~30°
	Axis 2	-150°~85°
	Axis 3	-85°~150°
	Axis 4	-190°~190°
	Axis 5	-135°~135°
	Axis 6	-360°~360°
Maximum speed	Axis 1	170°/S
	Axis 2	170°/S
	Axis 3	200°/S
	Axis 4	363°/S
	Axis 5	350°/S
	Axis 6	540°/S
Allowable torque	Axis 4	52N.m
	Axis 5	52N.m
	Axis 6	30N.m
Allowable moment of inertia	Axis 4	1.3kg.m <sup>2</sup>
	Axis 5	1.3kg.m <sup>2</sup>
	Axis 6	0.56kg.m <sup>2</sup>
Repeated positioning accuracy		±0.05mm
Robot body weight		250kg
Installation mode		Formal, inverted, wall mounting
Body interface	Reserved IO	16Pin
	Reserved gas	2*φ8mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level		Body IP54 Wrist IP67
Advantage features		Compact structure, high speed, high precision, high expansibility and easy operation
Application		Handling, cutting, marking, polishing
Matching electrical cabinet		G9A

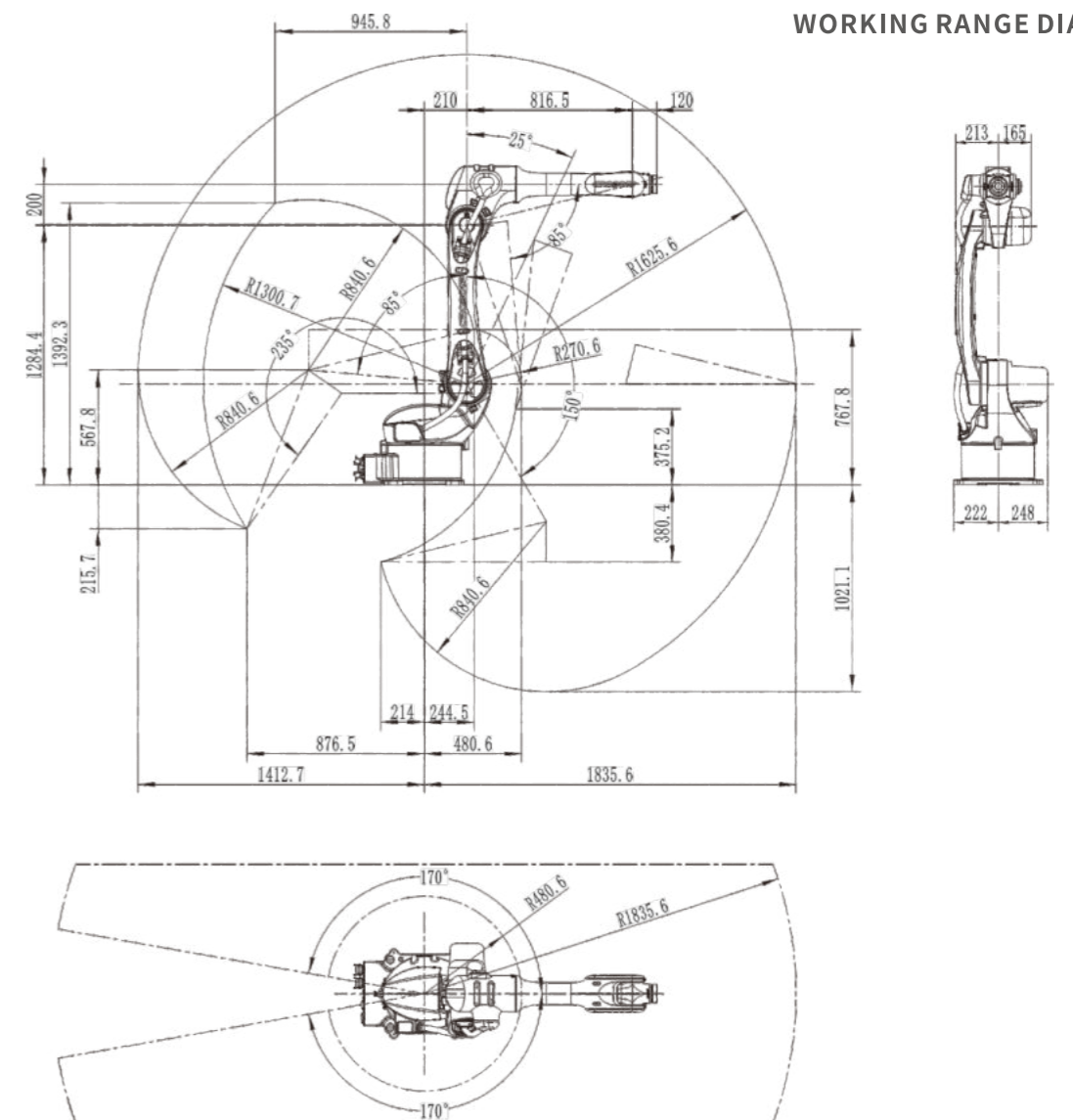
### INSTALLATION INTERFACE DIAGRAM



Installation Dimension of Base

Flange Dimensions

### WORKING RANGE DIAGRAM



# CRP-RA18-30

## INDUSTRIAL ROBOT HANDLING APPLICATION



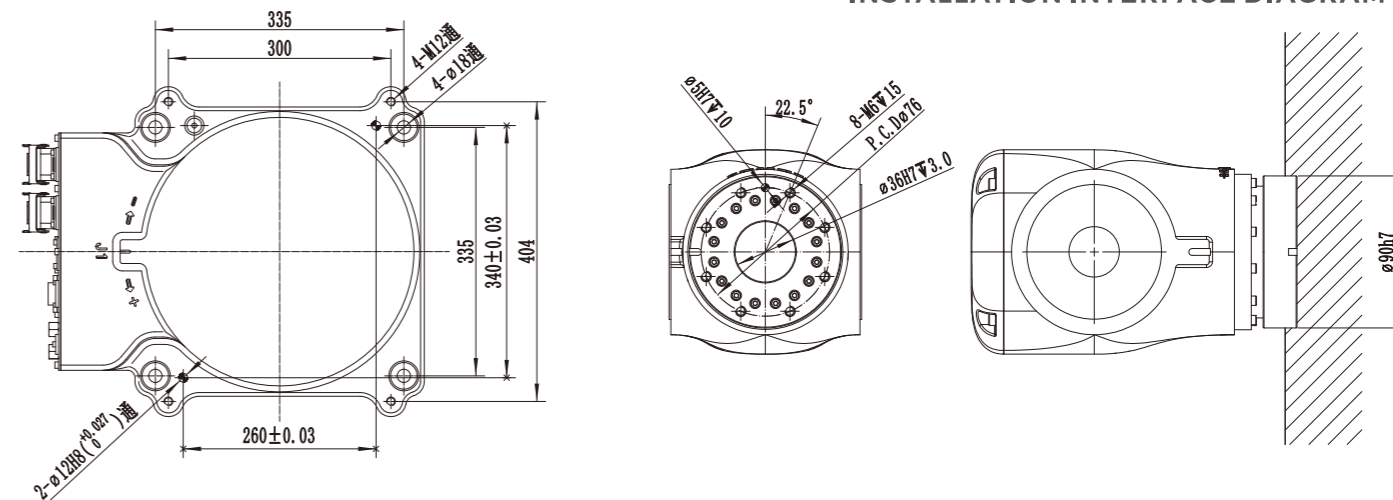
### FUNCTIONAL FEATURES

- The design of the robot is highly compact, which is more lightweight, especially the wrist is slender, so it can be applied in more scenarios.
- Adopt high speed motor, the robot has high rigidity and faster beat.
- Adopt leak-proof structure, the protection class of robot is up to IP 67 to adapt harsher working environment.
- The robot in the axes of J2 J3 J4 is reserved installation holes to install fixed solenoid valve and other accessories. There are IO port and dual-circuit gas pipe at J5 axis to meet the handling application.
- Driving adopts new advanced PID control technology to achieve faster response. With the functions of observer dynamic compensation and weak magnetism, the electric machine can be better controllable and more stable with higher speed.
- The new control algorithm combines Kinematics with Dynamics. The new design integrates driven algorithm and control algorithm to realize automatic programming and guarantee the service life of mechanical under the maximum working capacity based on the characteristics of mechanical components load and condition of loading. Meanwhile, the robot can realize high speed response, faster running speed and work beats with longer life span.
- With collision detection function, it can better protect the robot body and peripheral equipment. With the function of gravity compensation, the robot has higher precision, so it can be applied in more scenarios.
- Equipped with safety emergency stop board which is independent of the control system, and the safety relay circuit is adopted to provide double-circuit emergency stop to ensure the reliability of emergency stop.
- Built-in three-phase filter can effectively improve the performance of internal and external distractions.

### ROBOT BODY TECHNICAL PARAMETERS

Model	CRP-RA18-30	
Arm form	Vertical multiple joints	
Degree of freedom	6 axis	
Maximum payload	30kg	
Maximum coverage	1836mm	
Maximum travel	Axis 1	Formal/inverted-170°~170°, wall mounting-30°~30°
	Axis 2	-150°~85°
	Axis 3	-85°~150°
	Axis 4	-190°~190°
	Axis 5	-135°~135°
	Axis 6	-360°~360°
Maximum speed	Axis 1	110°/S
	Axis 2	100°/S
	Axis 3	120°/S
	Axis 4	260°/S
	Axis 5	220°/S
	Axis 6	450°/S
Allowable torque	Axis 4	52N.m
	Axis 5	52N.m
	Axis 6	30N.m
Allowable moment of inertia	Axis 4	1.5kg.m <sup>2</sup>
	Axis 5	1.5kg.m <sup>2</sup>
	Axis 6	0.7kg.m <sup>2</sup>
Repeated positioning accuracy	±0.05mm	
Robot body weight	250kg	
Installation mode	Formal, inverted, wall mounting	
Body interface	Reserved IO	16Pin
	Reserved gas	2*φ8mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level	Body IP54 Wrist IP67	
Advantage features	Compact structure, high speed, high precision, high expansibility and easy operation	
Application	Handling, cutting, mounting, marking, polishing	
Matching electrical cabinet	G9A	

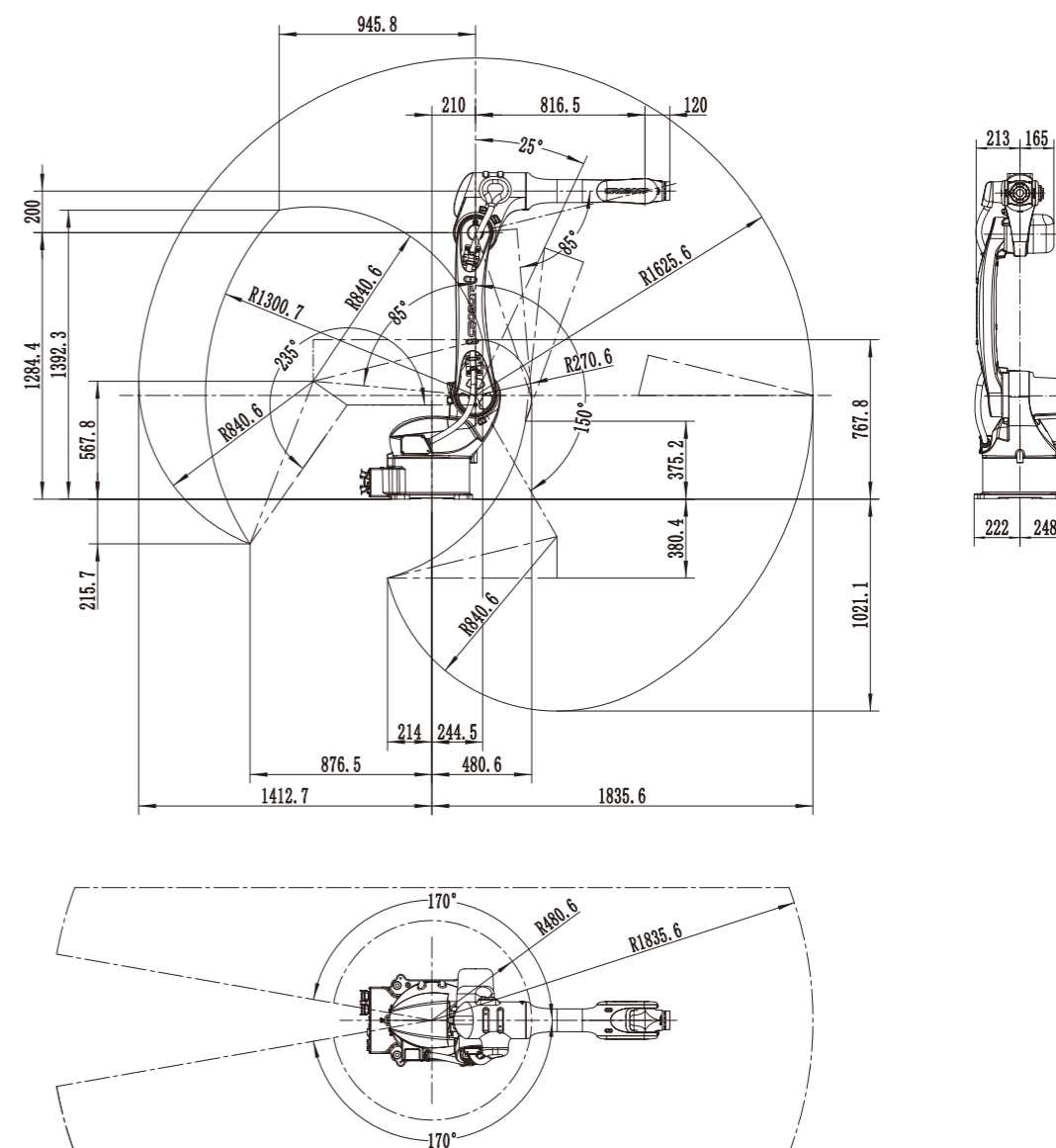
### INSTALLATION INTERFACE DIAGRAM



Installation Dimension of Base

Flange Dimensions

### WORKING RANGE DIAGRAM



# CRP-RA20-12

## INDUSTRIAL ROBOT HANDLING APPLICATION



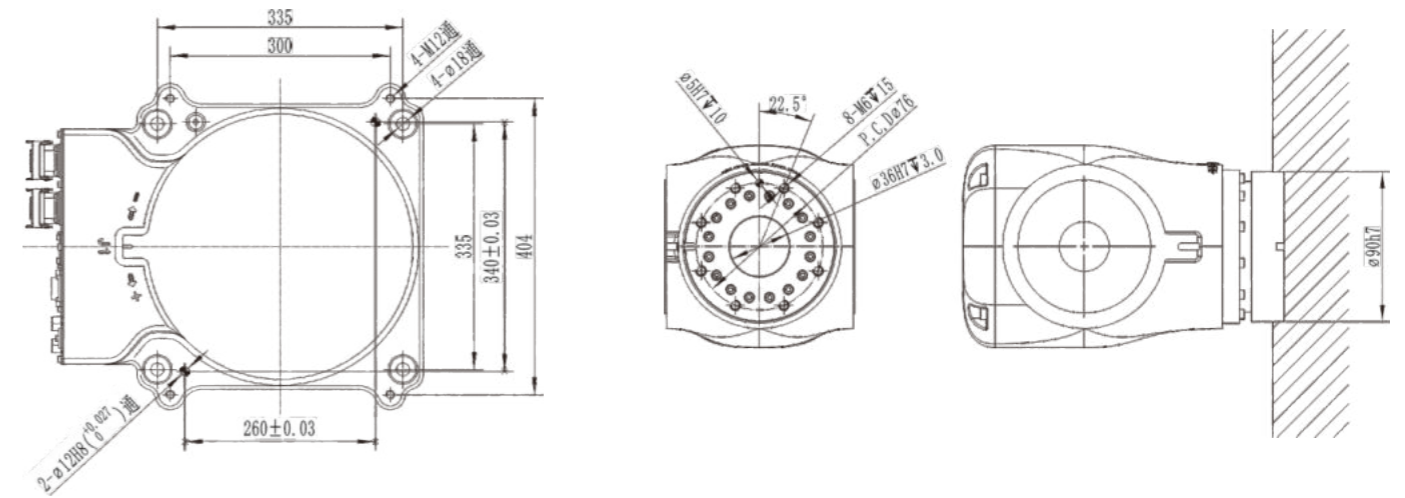
### FUNCTIONAL FEATURES

- The design of the robot is highly compact, which is more lightweight, especially the wrist is slender, so it can be applied in more scenarios.
- Adopt high speed motor, the robot has high rigidity and faster beat.
- Adopt leak-proof structure, the protection class of robot is up to IP 67 to adapt harsher working environment.
- The robot in the axes of J2 J3 J4 is reserved installation holes to install fixed solenoid valve and other accessories. There are IO port and dual-circuit gas pipe at J3 axis to meet the handling application.
- Driving adopts new advanced PID control technology to achieve faster response. With the functions of observer dynamic compensation and weak magnetism, the electric machine can be better controllable and more stable with higher speed.
- The new control algorithm combines Kinematics with Dynamics. The new design integrates driven algorithm and control algorithm to realize automatic programming and guarantee the service life of mechanical under the maximum working capacity based on the characteristics of mechanical components load and condition of loading. Meanwhile, the robot can realize high speed response, faster running speed and work beats with longer life span.
- With collision detection function, it can better protect the robot body and peripheral equipment. With the function of gravity compensation, the robot has higher precision, so it can be applied in more scenarios.
- Equipped with safety emergency stop board which is independent of the control system, and the safety relay circuit is adopted to provide double-relay emergency stop to ensure the reliability of emergency stop.
- Built-in three-phase filter can effectively improve the performance of internal and external distractions.

### ROBOT BODY TECHNICAL PARAMETERS

Model	CRP-RA20-12	
Arm form	Vertical multiple joints	
Degree of freedom	6 axis	
Maximum payload	12kg	
Maximum coverage	2015mm	
Maximum travel	Axis 1	Formal/inverted-170°~170°, wall mounting-30°~30°
	Axis 2	-150°~85°
	Axis 3	-85°~150°
	Axis 4	-190°~190°
	Axis 5	-135°~135°
	Axis 6	-360°~360°
Maximum speed	Axis 1	210°/S
	Axis 2	210°/S
	Axis 3	265°/S
	Axis 4	420°/S
	Axis 5	420°/S
	Axis 6	885°/S
Allowable torque	Axis 4	55N.m
	Axis 5	55N.m
	Axis 6	32N.m
Allowable moment of inertia	Axis 4	2.3kg.m <sup>2</sup>
	Axis 5	2.3kg.m <sup>2</sup>
	Axis 6	1.2kg.m <sup>2</sup>
Repeated positioning accuracy	±0.08mm	
Robot body weight	262kg	
Installation mode	Formal, inverted, wall mounting	
Body interface	Reserved IO	16Pin
	Reserved gas	2*φ8mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level	Body IP54 Wrist IP67	
Advantage features	Compact structure, high speed, high precision, high expansibility and easy operation	
Application	Handling, cutting, mounting, marking, polishing	
Matching electrical cabinet	G9A	

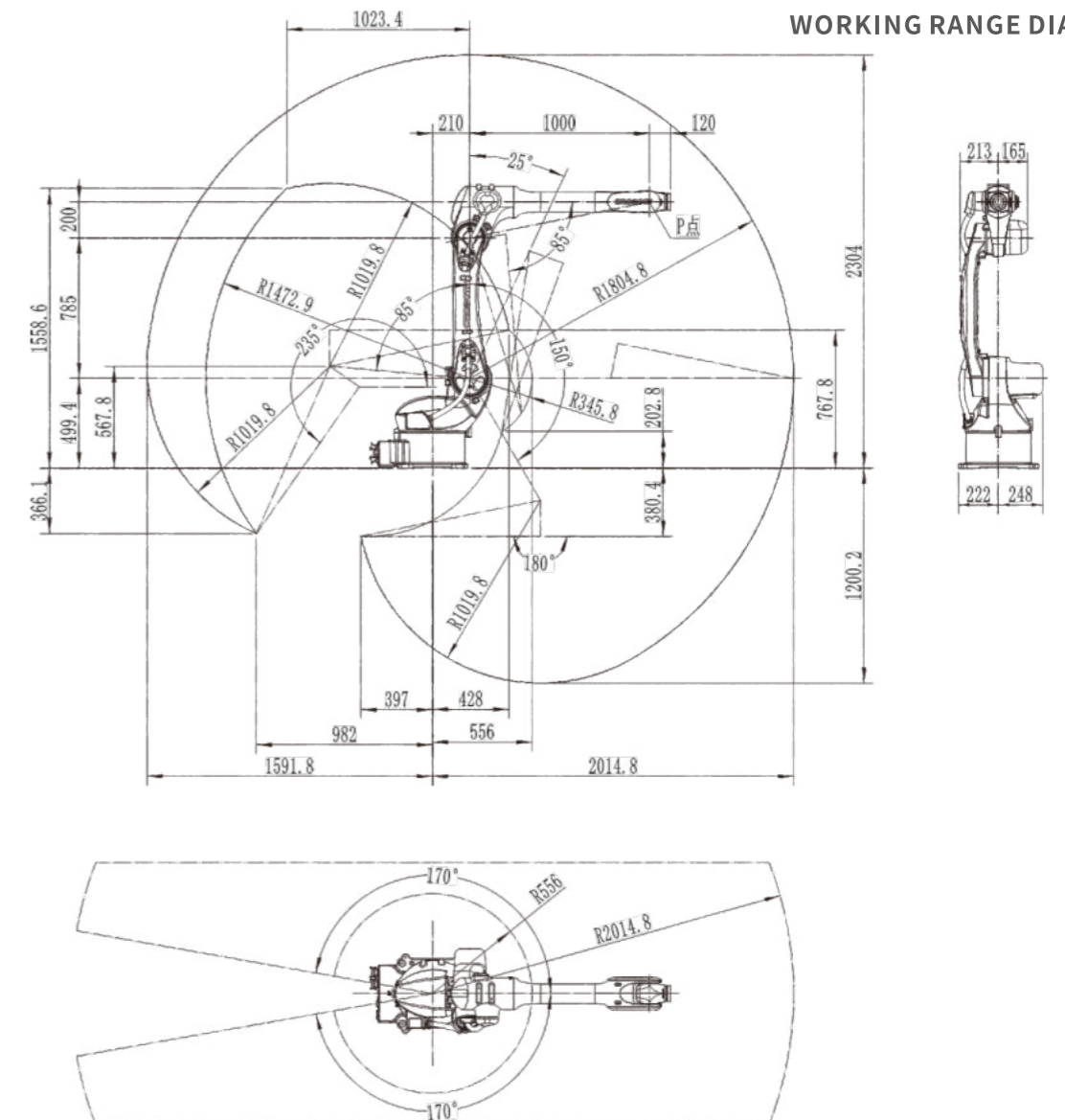
### INSTALLATION INTERFACE DIAGRAM



Installation Dimension of Base

Flange Dimensions

### WORKING RANGE DIAGRAM



# CRP-RA21-10

## INDUSTRIAL ROBOT HANDLING APPLICATION



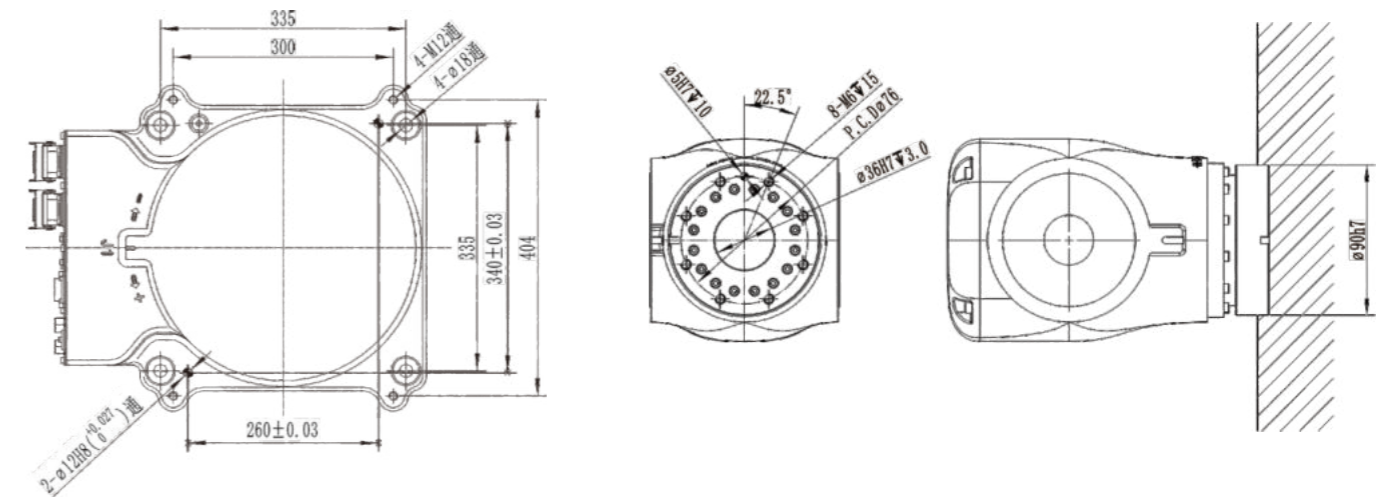
### FUNCTIONAL FEATURES

- The overall structure of the robot is highly compact, lightweight, more lightweight and applicable, especially the wrist is smaller to meet more scenes.
- The robot has high rigidity, high speed motor and faster beat.
- The robot motor adopts a sealed design with a protection level of up to IP67 to adapt to harsher application environments.
- J2J3J4 shaft are reserved for installation holes, easy to install and fix the solenoid valve and other accessories. The J3 axis position provides the user IO interface and the dual-circuit gas pipe, which is more suitable for handling applications.
- Drive with new PID control, forward-looking technology, fast response; Observer dynamic compensation, weak magnetic function, better motor control, more stable, higher speed.
- New control algorithm, combining kinematics and dynamics. The new design, drive algorithm and control algorithm are integrated, according to the characteristics of mechanical parts and load conditions, automatic planning is realized, and the robot works at the maximum capacity allowed while ensuring the mechanical life, the robot has a longer life, the robot realizes high-speed response, faster running speed, more flexible and more stable, and the working beat is faster.
- It has collision detection function, better protection of robot body and peripheral equipment, gravity compensation function, higher robot accuracy, to meet the higher accuracy of the scene application, and expand the application scenario.
- The safety emergency stop board independent from the control system is configured, and the forced disconnecting relay is adopted to provide double-circuit emergency stop to ensure the reliability of emergency stop.
- Built-in three-phase filter to effectively isolate external interference and prevent internal interference output.

### ROBOT BODY TECHNICAL PARAMETERS

Model		CRP-RA21-10
Arm form		Vertical multiple joints
Degree of freedom		6 axis
Maximum payload		10kg
Maximum coverage		2118mm
Maximum travel	Axis 1	Formal/inverted-170°~170°, wall mounting-30°~30°
	Axis 2	-150°~85°
	Axis 3	-85°~150°
	Axis 4	-190°~190°
	Axis 5	-135°~135°
	Axis 6	-360°~360°
Maximum speed	Axis 1	210°/S
	Axis 2	210°/S
	Axis 3	265°/S
	Axis 4	420°/S
	Axis 5	420°/S
	Axis 6	885°/S
Allowable torque	Axis 4	40N.m
	Axis 5	40N.m
	Axis 6	13N.m
Allowable moment of inertia	Axis 4	1.3kg.m <sup>2</sup>
	Axis 5	1.3kg.m <sup>2</sup>
	Axis 6	0.43kg.m <sup>2</sup>
Repeated positioning accuracy		±0.08mm
Robot body weight		258.5kg
Installation mode		Formal mounting
Body interface	Reserved IO	16Pin
	Reserved gas	2*φ8mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level		Body IP54 Wrist IP67
Advantage features		Compact structure, high speed, high precision, high expansibility and easy operation
Application		Handling, palletizing, depalletizing, punching, loading and unloading
Matching electrical cabinet		G9A

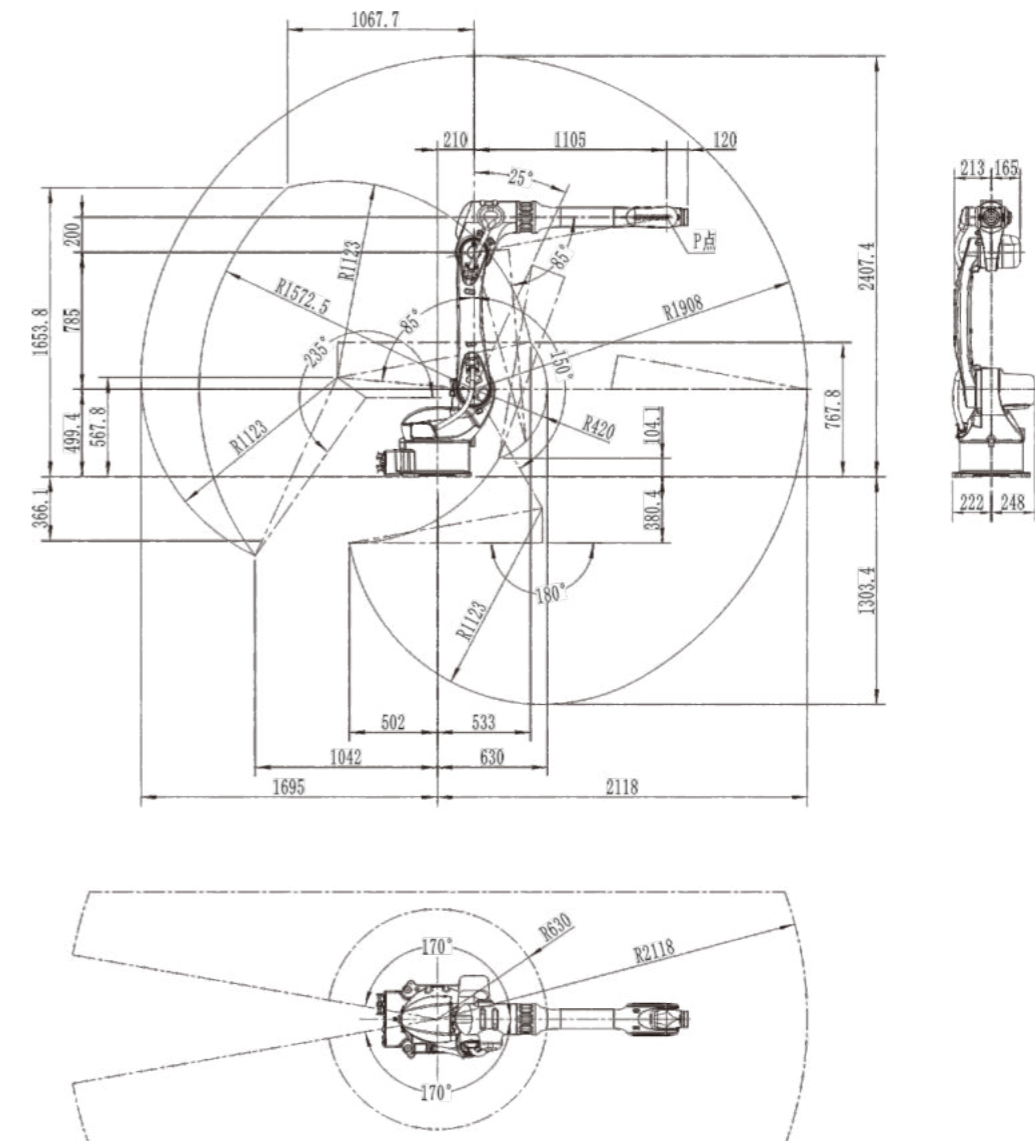
### INSTALLATION INTERFACE DIAGRAM



Mounting dimensions of the base

Flange size

### WORKING RANGE DIAGRAM



# CRP-RA21-50

## INDUSTRIAL ROBOT HANDLING APPLICATION



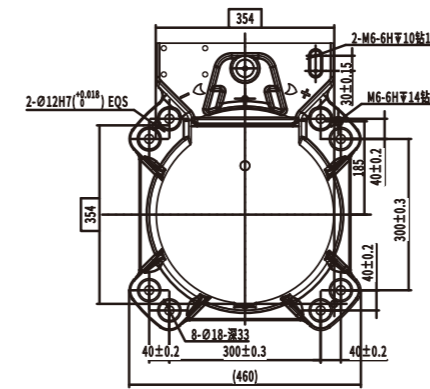
### FUNCTIONAL FEATURES

- Arm span of 2.13m, strong load capacity, large working range and high flexibility.
- Fast operation speed, repeated positioning accuracy, suitable for handling, assembly, grinding and other scenarios.
- Built-in cables and trachea to reduce external interference, more convenient for customers to use and improve operation efficiency.
- The safety emergency stop board independent of the control system is configured, and the imported forced disconnect relay is adopted to provide double-circuit emergency stop to ensure the reliability of emergency stop.
- Built-in three-phase filter to effectively isolate external interference and prevent internal interference output.
- The body provides dual air pipes to meet the needs of transportation.

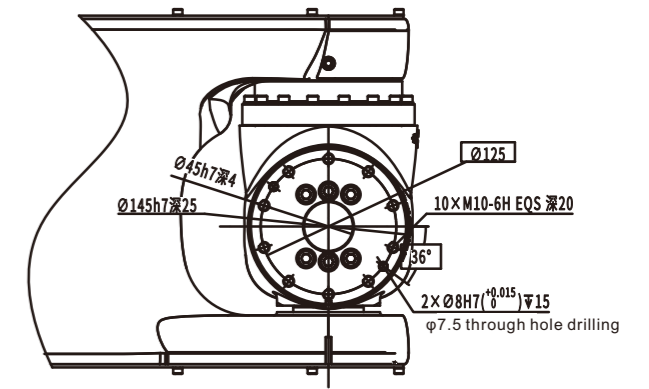
### ROBOT BODY TECHNICAL PARAMETERS

Model	CRP-RA21-50	
Arm form	Vertical multiple joints	
Degree of freedom	6 axis	
Maximum payload	50kg	
Maximum coverage	2130mm	
Maximum travel	Axis 1	-180°~180°
	Axis 2	-140°~92°
	Axis 3	-87°~135°
	Axis 4	-360°~360°
	Axis 5	-125°~125°
	Axis 6	-360°~360°
Maximum speed	Axis 1	175°/S
	Axis 2	175°/S
	Axis 3	180°/S
	Axis 4	220°/S
	Axis 5	250°/S
	Axis 6	340°/S
Allowable torque	Axis 4	240N.m
	Axis 5	240N.m
	Axis 6	135N.m
Allowable moment of inertia	Axis 4	27kg.m <sup>2</sup>
	Axis 5	27kg.m <sup>2</sup>
	Axis 6	11kg.m <sup>2</sup>
Repeated positioning accuracy	±0.05mm	
Robot body weight	560kg	
Installation mode	Formal, inverted, wall mounting	
Body interface	Reserved IO	26Pin
	Reserved gas	2*φ10mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level	Body IP54 Wrist IP67	
Advantage features	Compact structure, high speed, high precision, high expansibility and easy operation	
Application	Handling, palletizing, polishing	
Matching electrical cabinet	G15A	

### INSTALLATION INTERFACE DIAGRAM

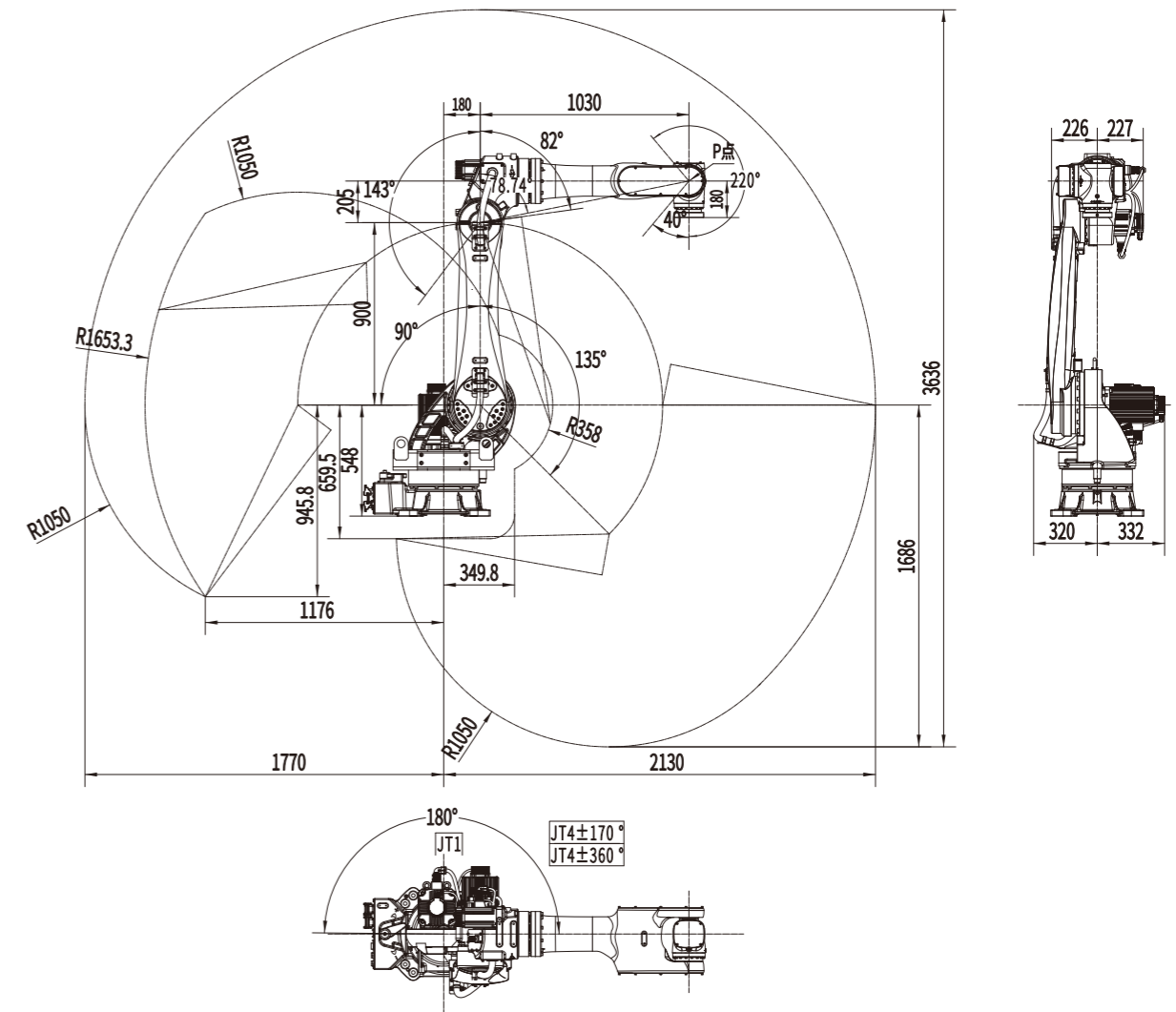


Mounting dimensions of the base



Flange size

### WORKING RANGE DIAGRAM



# CRP-RA21-70T5

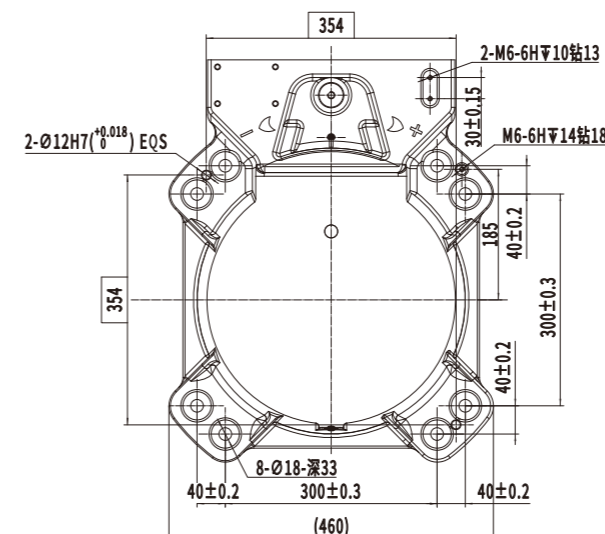
## INDUSTRIAL ROBOT HANDLING APPLICATION

### FUNCTIONAL FEATURES

- Arm span of 2.13m, strong load capacity, large working range and high flexibility.
- Fast operation speed, repeated positioning accuracy, suitable for handling, assembly, grinding and other scenarios.
- Built-in cables and trachea to reduce external interference, more convenient for customers to use and improve operation efficiency.
- The safety emergency stop board independent of the control system is configured, and imported forced disconnect relay is adopted to provide double-circuit emergency stop to ensure the reliability of emergency stop.
- Built-in three-phase filter to effectively isolate external interference and prevent internal interference output.
- The body provides dual air pipes to meet the needs of transportation.
- Optimized for packaging and palletizing scenarios, with precise operation and strong power, making code work easy.

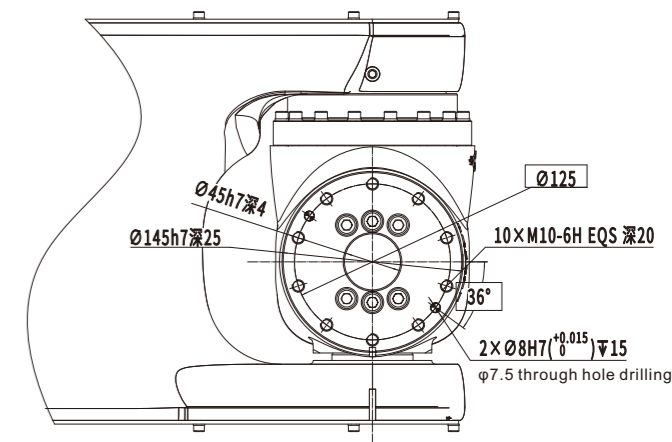
### ROBOT BODY TECHNICAL PARAMETERS

Model		CRP-RA21-70T5
Arm form		Vertical multiple joints
Degree of freedom		5 axis
Maximum payload		70kg
Maximum coverage		2130mm
Maximum travel	Axis 1	-180°~180°
	Axis 2	-140°~92°
	Axis 3	-87°~135°
	Axis 4	/
	Axis 5	-125°~125°
	Axis 6	-360°~360°
Maximum speed	Axis 1	175°/S
	Axis 2	175°/S
	Axis 3	180°/S
	Axis 4	/
	Axis 5	250°/S
	Axis 6	340°/S
Allowable torque	Axis 4	/
	Axis 5	240N.m
	Axis 6	135N.m
Allowable moment of inertia	Axis 4	/
	Axis 5	27kg.m <sup>2</sup>
	Axis 6	11kg.m <sup>2</sup>
Repeated positioning accuracy		±0.05mm
Robot body weight		540kg
Installation mode		Formal, inverted, wall mounting
Body interface	Reserved IO	26Pin
	Reserved gas	2*φ10mm
	Ambient temperature	0~45°C
Installation environment	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level		Body IP54 Wrist IP67
Advantage features		Compact structure, high speed, high precision, high expansibility and easy operation
Application		Handling, palletizing, loading and unloading
Matching electrical cabinet		G15A



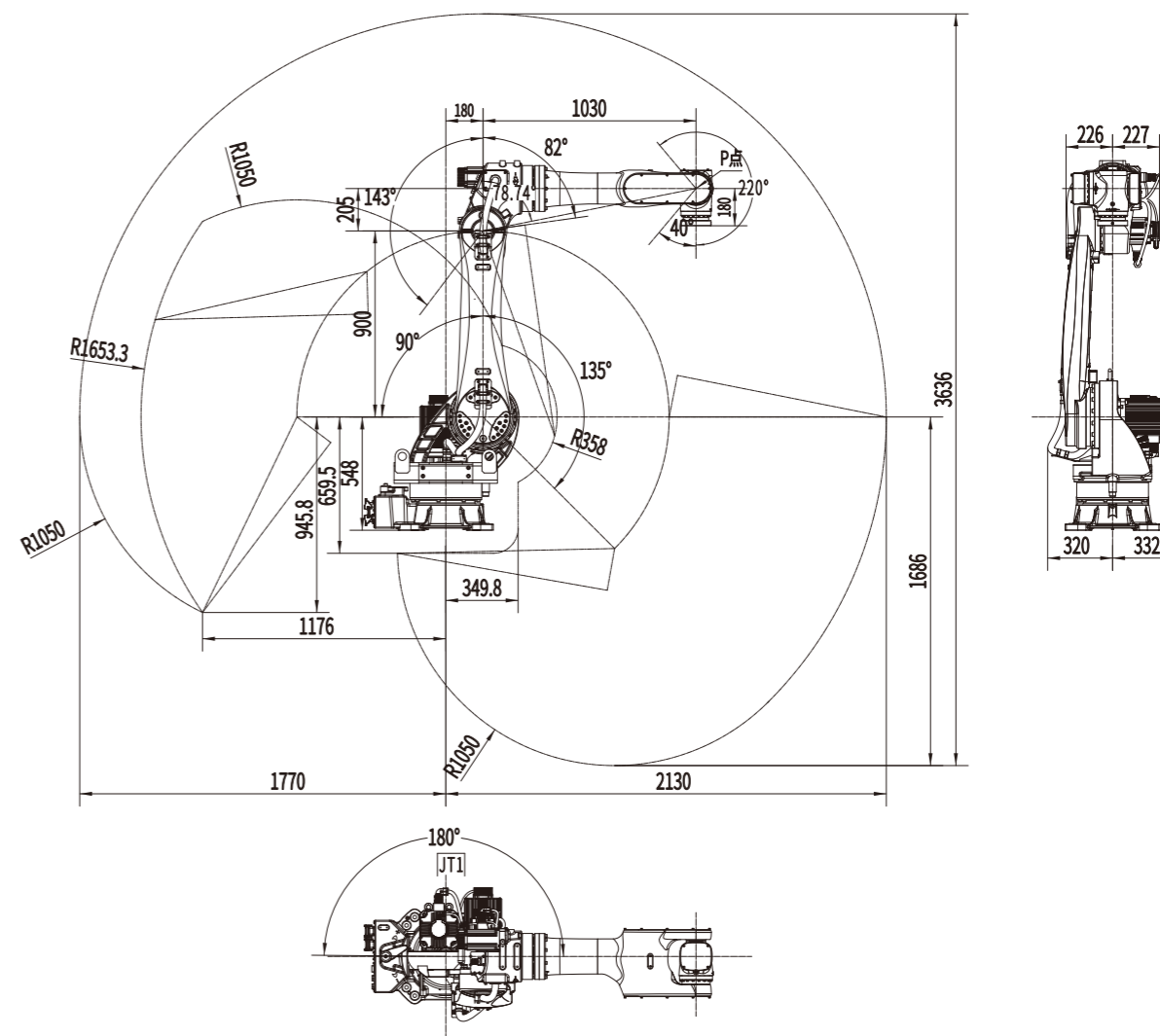
Mounting dimensions of the base

### INSTALLATION INTERFACE DIAGRAM



Flange size

### WORKING RANGE DIAGRAM



t conditions: (1) the robot is firmly fixed on a flat ground;  
 (2) Test at a distance of 2900mm from the center of rotation of joint JT1;  
 (Noise level varies according to the conditions, background noise has a certain effect)

# CRP-RA22-80

## INDUSTRIAL ROBOT HANDLING APPLICATION

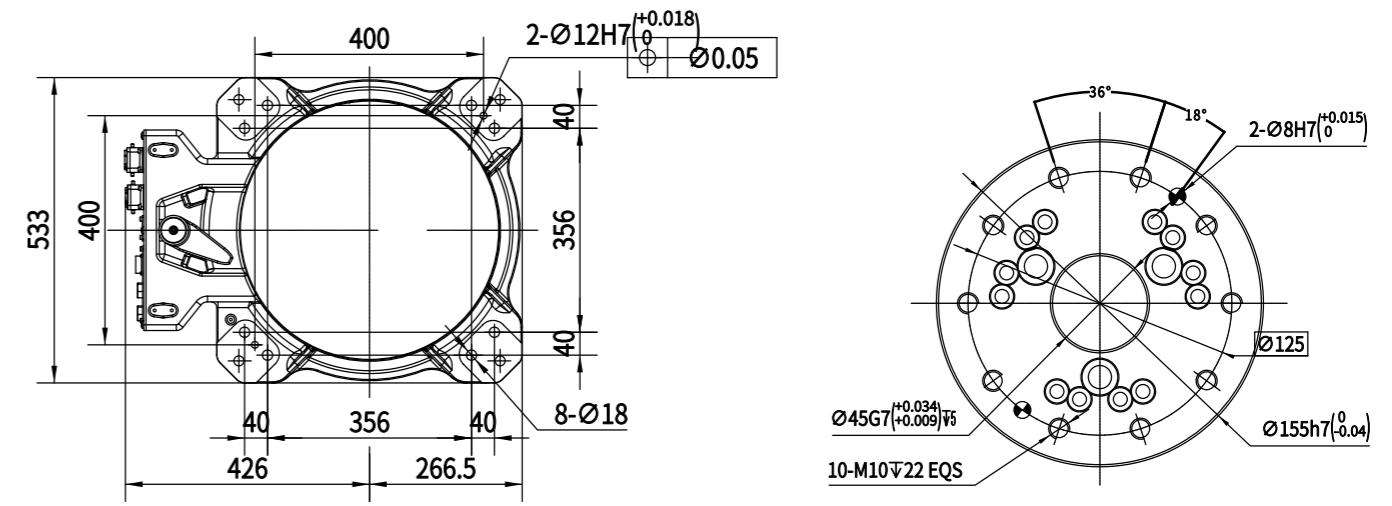
### FUNCTIONAL FEATURES

- The arm span is 2.2 meters. It has strong payload capacity, large working space and high flexibility.
- With fast running speed and high repeated positioning accuracy, it has a wide range of applications, such as loading and unloading, handling, sorting, assembly, etc.
- Equipped with safety emergency stop board which is independent of the control system, and the safety relay circuit is adopted to provide double-circuit emergency stop to ensure the reliability of emergency stop.
- The robot body adopts highly flexible special cable.
- Built-in three-phase filter can effectively improve the performance of EMC and EMI.
- The robot body is with  $\phi 10$  dual-circuit gas pipe to meet the handling demand.
- The single cantilever structure is adopted to reduce the terminal weight and improve its flexibility. The selectivity range of manipulators, tools and workpiece shapes is expanded.
- Built-in cables and gas pipe. The hollow part is set at the center of the forearm and wrist. The cables and gas pipe are built in from the base of the robot to the end of the wrist, which is more convenient for users and improves work efficiency.
- High expansibility, multiple user bracket installation platforms are set on the robot body, which is convenient for users to fix cables and related auxiliary tools.

### ROBOT BODY TECHNICAL PARAMETERS

Model	CRP-RA22-80	
Arm form	Vertical multiple joints	
Degree of freedom	6 axis	
Maximum payload	80kg	
Maximum coverage	2200mm	
Maximum travel	Axis 1	-180°~180°
	Axis 2	-160°~75°
	Axis 3	-80°~165°
	Axis 4	-170°~170° (with mechanical limit), -360°~360° (without mechanical limit)
	Axis 5	-125°~125°
	Axis 6	-360°~360°
Maximum speed	Axis 1	130°/S
	Axis 2	125°/S
	Axis 3	124°/S
	Axis 4	224°/S
	Axis 5	190°/S
	Axis 6	285°/S
Allowable torque	Axis 4	328N.m
	Axis 5	328N.m
	Axis 6	198N.m
Allowable moment of inertia	Axis 4	35.06kg.m <sup>2</sup>
	Axis 5	35.06kg.m <sup>2</sup>
	Axis 6	15.38kg.m <sup>2</sup>
Repeated positioning accuracy	±0.08mm	
Robot body weight	713kg	
Installation mode	Formal, inverted, wall mounting	
Body interface	Reserved IO	26Pin
	Reserved gas	2* $\phi 10$ mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference	
IP level	Body IP54 Wrist IP67	
Advantage features	Compact structure, high speed, high precision, high expansibility and easy operation	
Application	Cutting, mounting, handling, marking, polishing	
Matching electrical cabinet	G15A	

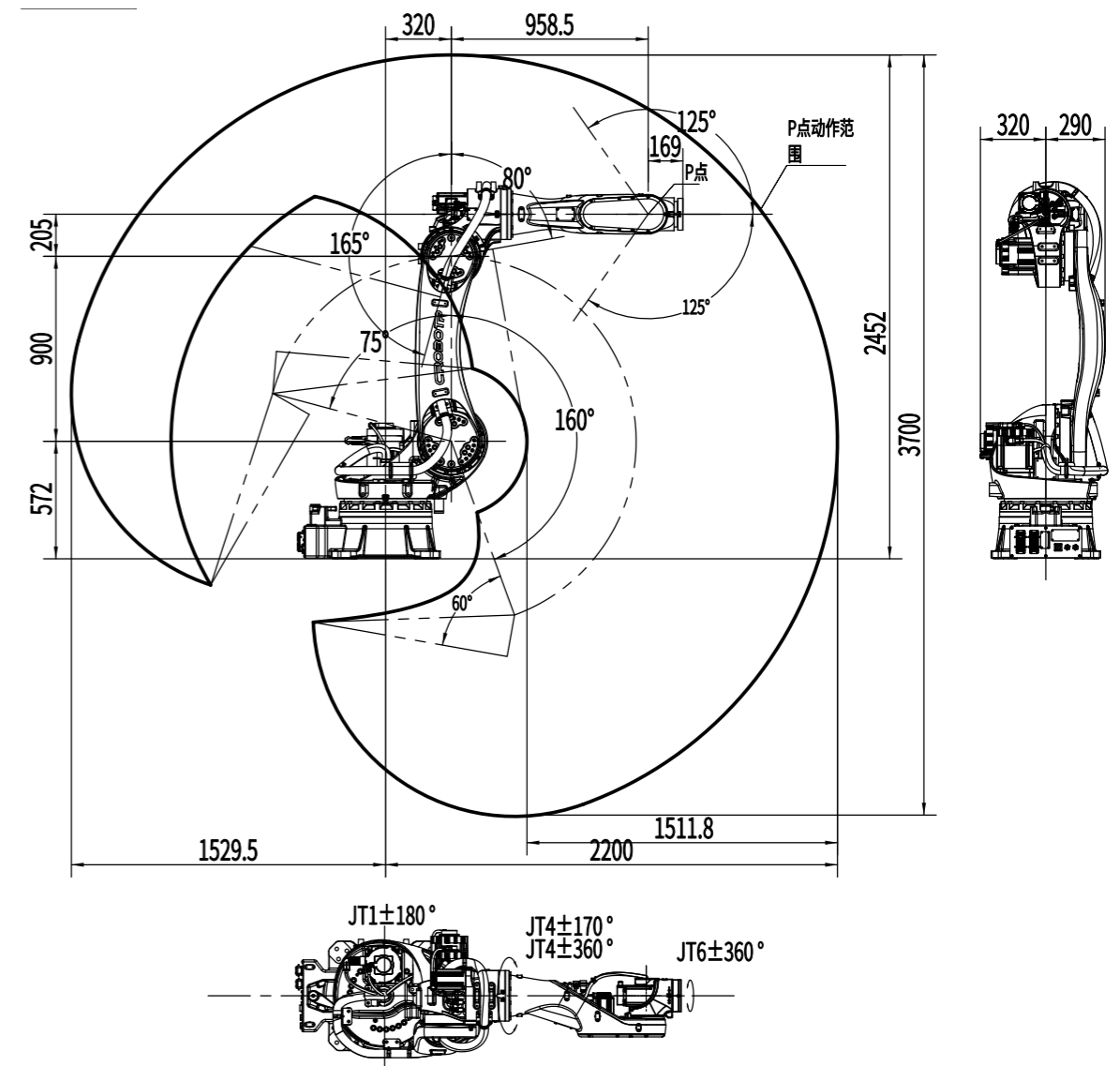
\* Measurement conditions:  
 (1) the robot is firmly fixed on the flat ground;  
 (2) Test at a distance of 3300mm from the rotation centre of joint JT1; (Noise level varies according to conditions. Background noise has some influence.)



Installation Dimension of Base

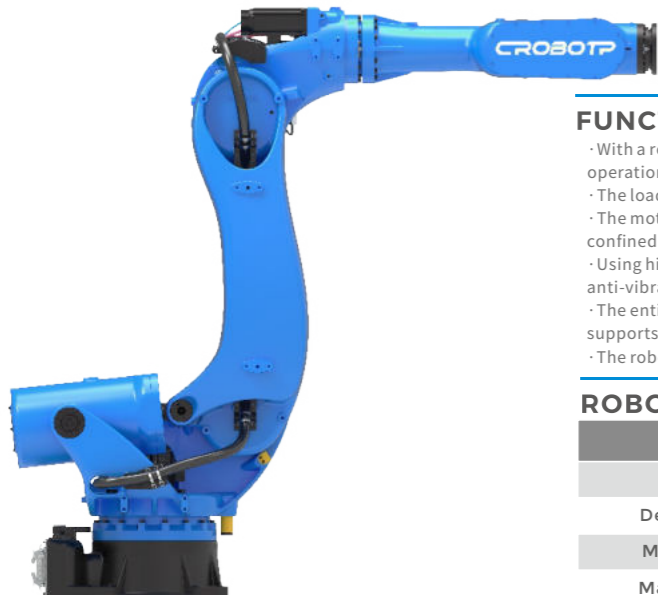
Flange Dimensions

### WORKING RANGE DIAGRAM



# CRP-RA26-220

## Heavy payload handling robot

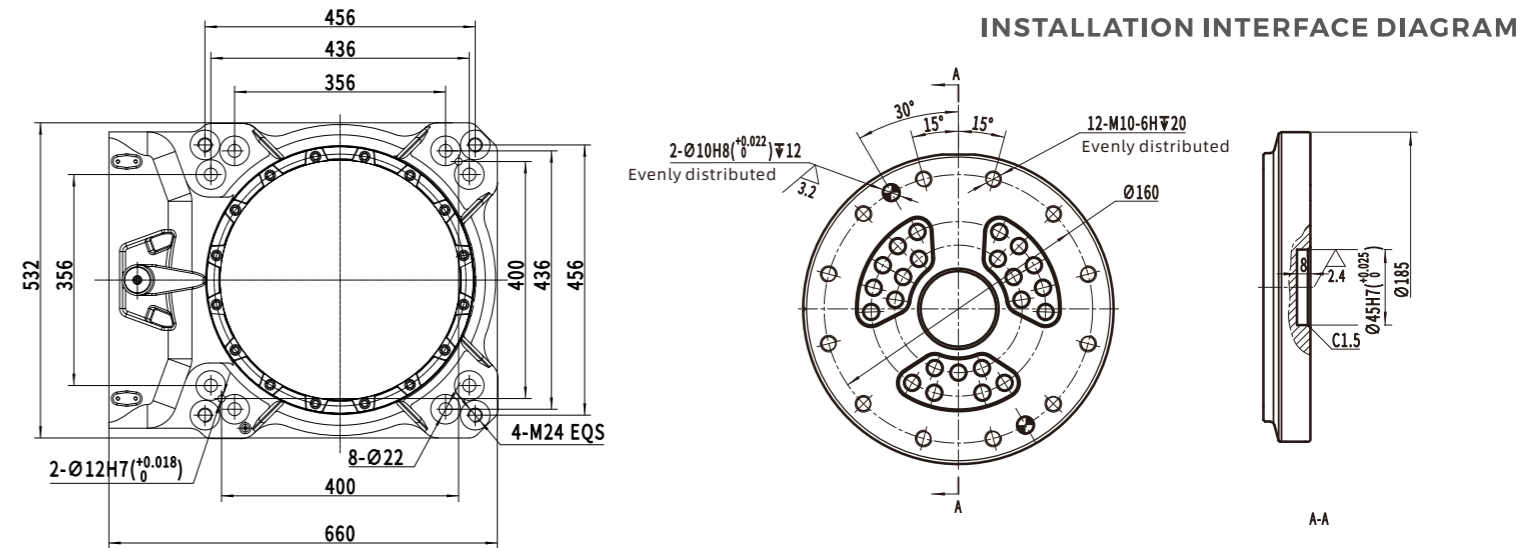


### FUNCTIONAL FEATURES

- With a reach of 2.65 meters, high rigidity, strong load bearing capacity, and smoother operation, it represents an improvement of about 2% compared to the previous generation.
- The load capacity is 220kg, an improvement of about 5% compared to the previous generation.
- The motor is built into the arm, giving a clean appearance and making it suitable for working in confined spaces, with more flexible movement.
- Using high-speed, high-overload capacity servo motors, high-precision RV reduces, and the latest anti-vibration control strategies, the pitch operation time is shortened.
- The entire machine installation occupies less space, enabling high-density installation and wiring, and supports collaborative operation of multiple units.
- The robot has a simple structure, a user-friendly operation interface, and is easy to maintain.

### ROBOT BODY TECHNICAL PARAMETERS

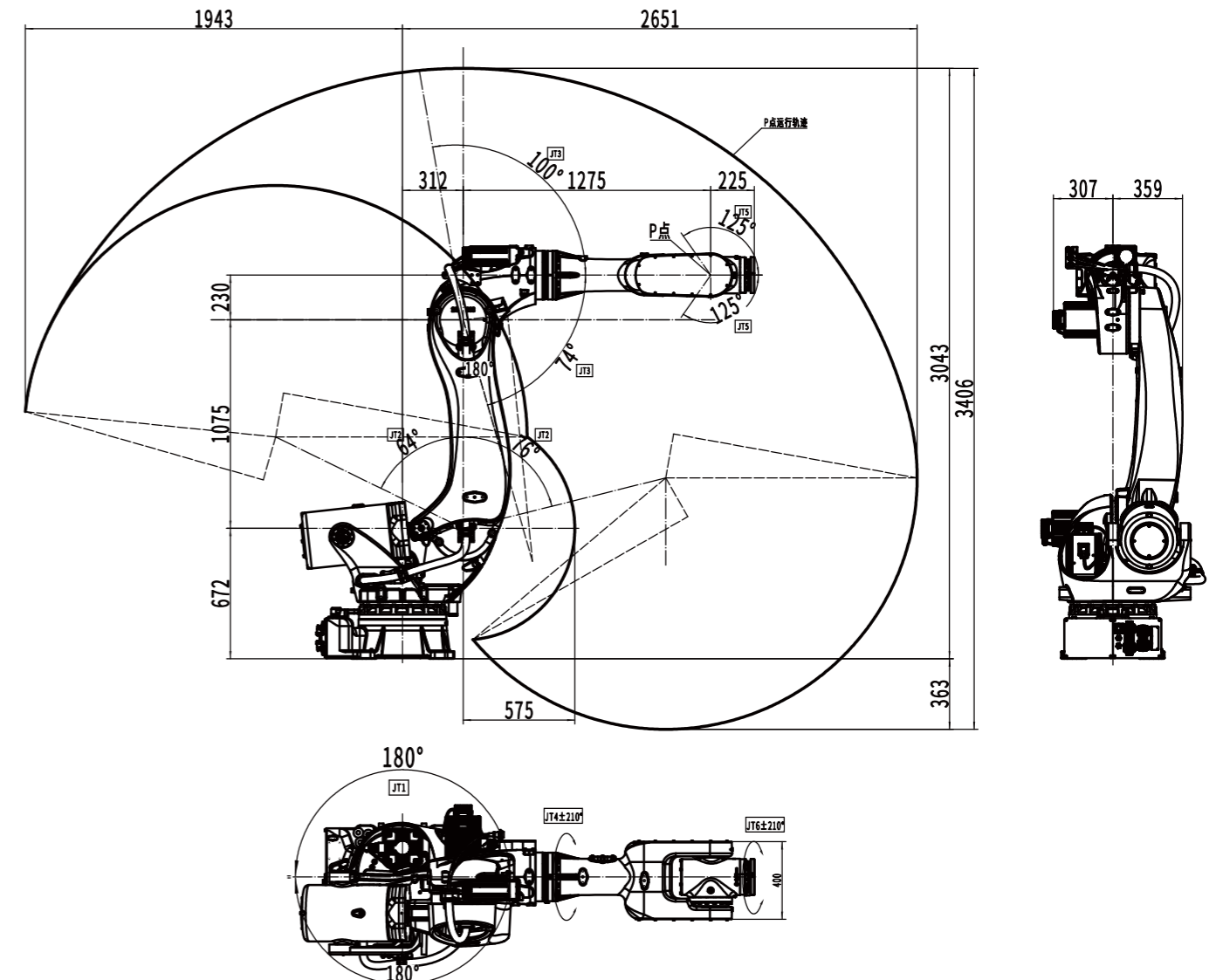
Model		CRP-RA26-220
Arm form		Vertical multiple joints
Degree of freedom		6 axis
Maximum payload		220kg
Maximum coverage		2650mm
Maximum travel	Axis 1	-180°~180°
	Axis 2	-76°~64°
	Axis 3	-74°~100°
	Axis 4	-210°~210°
	Axis 5	-125°~125°
	Axis 6	-360°~360°
Maximum speed	Axis 1	120°/S
	Axis 2	90°/S
	Axis 3	100°/S
	Axis 4	140°/S
	Axis 5	130°/S
	Axis 6	220°/S
Allowable torque	Axis 4	1370N.m
	Axis 5	1370N.m
	Axis 6	613N.m
Allowable moment of inertia	Axis 4	200kg.m <sup>2</sup>
	Axis 5	200kg.m <sup>2</sup>
	Axis 6	160kg.m <sup>2</sup>
Repeated positioning accuracy		±0.06mm
Robot body weight		1190kg
Installation mode		Formal mounting
Body interface	Reserved IO	26Pin
	Reserved gas	2*φ12mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	38%~85%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level		Body IP54 Wrist IP67
Advantage features		Compact structure, high speed, high precision, high expansibility and easy operation
Application		Handling, mounting, cutting, spot welding, marking, polishing
Matching electrical cabinet		G15A



Installation Dimension of Base

Flange Dimensions

### WORKING RANGE DIAGRAM



# CRP-RA27-50/ CRP-RA27-80

## INDUSTRIAL ROBOT HANDLING APPLICATION



### FUNCTIONAL FEATURES

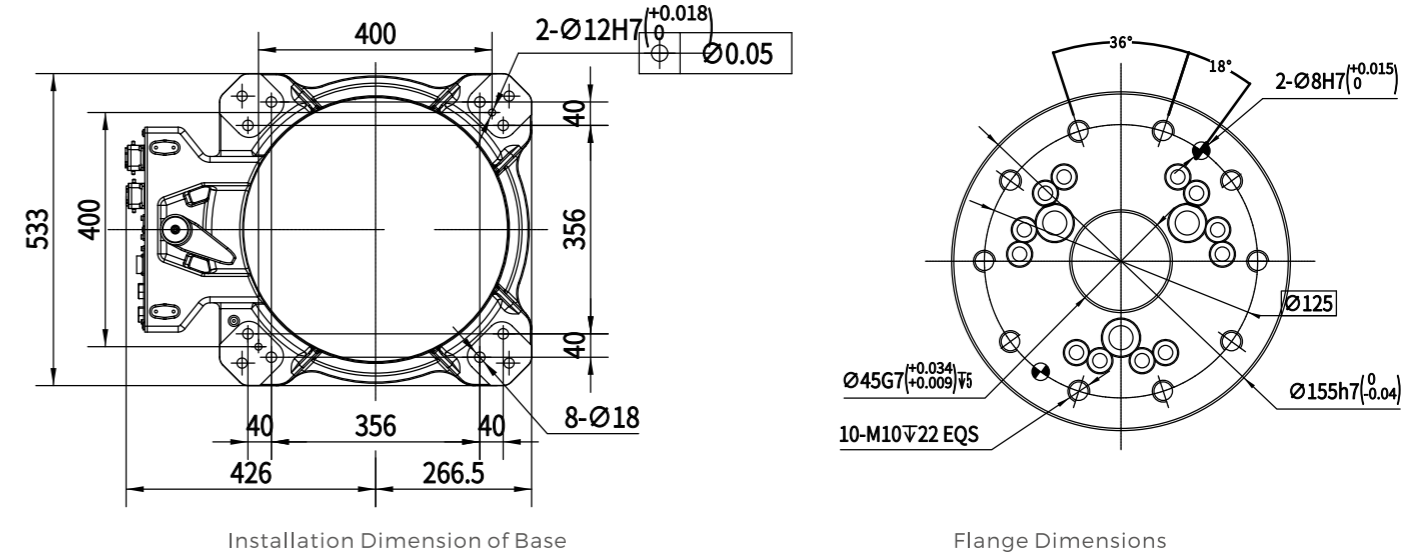
- The arm span is 2.7 meters. It has strong payload capacity, large working space and high flexibility.
- With fast running speed and high repeated positioning accuracy, it has a wide range of applications, such as loading and unloading, handling, sorting, assembly, etc.
- Equipped with safety emergency stop board which is independent of the control system, and the safety relay circuit is adopted to provide double-circuit emergency stop to ensure the reliability of emergency stop.
- The robot body adopts highly flexible special cable.
- Built-in three-phase filter can effectively improve the performance of EMC and EMI.
- The robot body is with ID10 dual-circuit gas pipe to meet the handling demand.
- The single cantilever structure is adopted to reduce the terminal weight and improve its flexibility. The selectivity range of manipulators, tools and workpiece shapes is expanded.
- Built-in cables and gas pipe. The hollow part is set at the center of the forearm and wrist. The cables and gas pipe are built in from the base of the robot to the end of the wrist, which is more convenient for users and improves work efficiency.
- High expansibility, multiple user bracket installation platforms are set on the robot body, which is convenient for users to fix cables and related auxiliary tools.

### ROBOT BODY TECHNICAL PARAMETERS

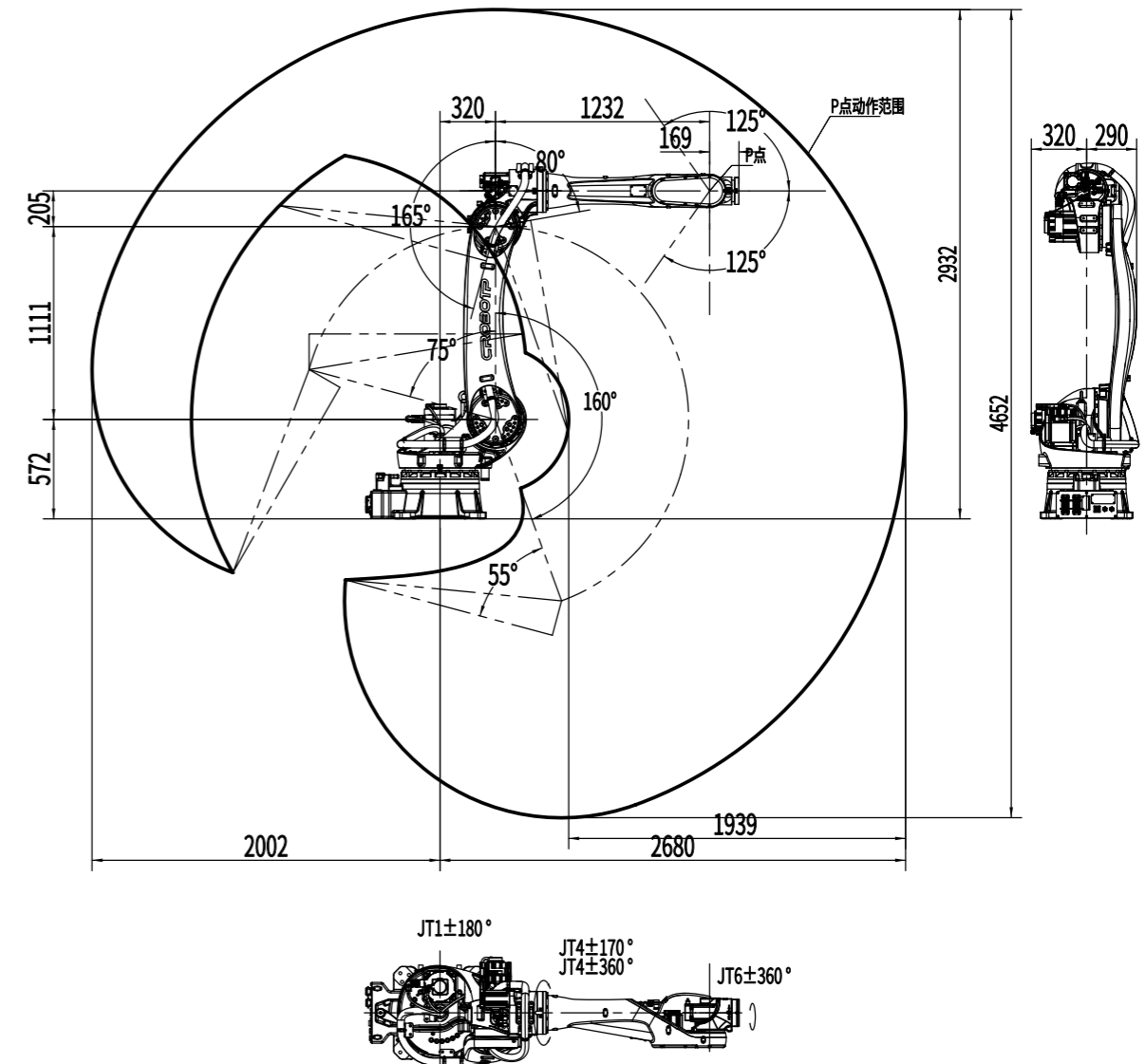
Model	CRP-RA27-50	CRP-RA27-80
Arm form	Vertical multiple joints	
Degree of freedom	6 axis	
Maximum payload	50kg	80kg
Maximum coverage	2680mm	
Maximum travel	Axis 1	-180°~180°
	Axis 2	-160°~75°
	Axis 3	-80°~165°
	Axis 4	-170°~170° (with mechanical limit), -360°~360° (without mechanical limit)
	Axis 5	-125°~125°
	Axis 6	-360°~360°
Maximum speed	Axis 1	130°/S
	Axis 2	125°/S
	Axis 3	124°/S
	Axis 4	224°/S
	Axis 5	190°/S
	Axis 6	285°/S
Allowable torque	Axis 4	231N.m
	Axis 5	231N.m
	Axis 6	135N.m
Allowable moment of inertia	Axis 4	27.34kg.m <sup>2</sup>
	Axis 5	27.34kg.m <sup>2</sup>
	Axis 6	12.30kg.m <sup>2</sup>
Repeated positioning accuracy	±0.08mm	
Robot body weight	728kg	
Installation mode	Formal, inverted, wall mounting	
Noise level	<80dB(A)	
Body interface	Reserved IO	26Pin
	Reserved gas	2*φ10mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level	Body IP54 Wrist IP67	
Advantage features	Compact structure, high speed, high precision, high expansibility and easy operation	
Application	Cutting, mounting, handling, marking, polishing	
Matching electrical cabinet	G15A	

\* Measurement conditions:  
(1) the robot is firmly fixed on the flat ground;  
(2) Test at a distance of 3700mm from the rotation center of joint JT1. (Noise level varies according to conditions. Background noise has some influence.)

### INSTALLATION INTERFACE DIAGRAM

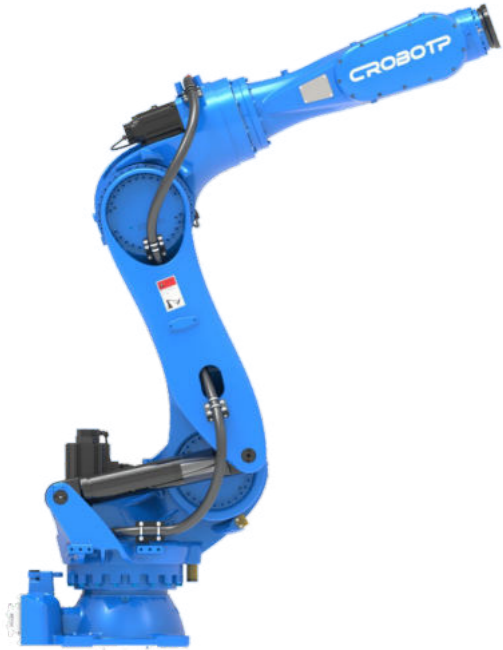


### MOTION RANGE DIAGRAM



# CRP-RA28-360

## INDUSTRIAL ROBOT HANDLING APPLICATION



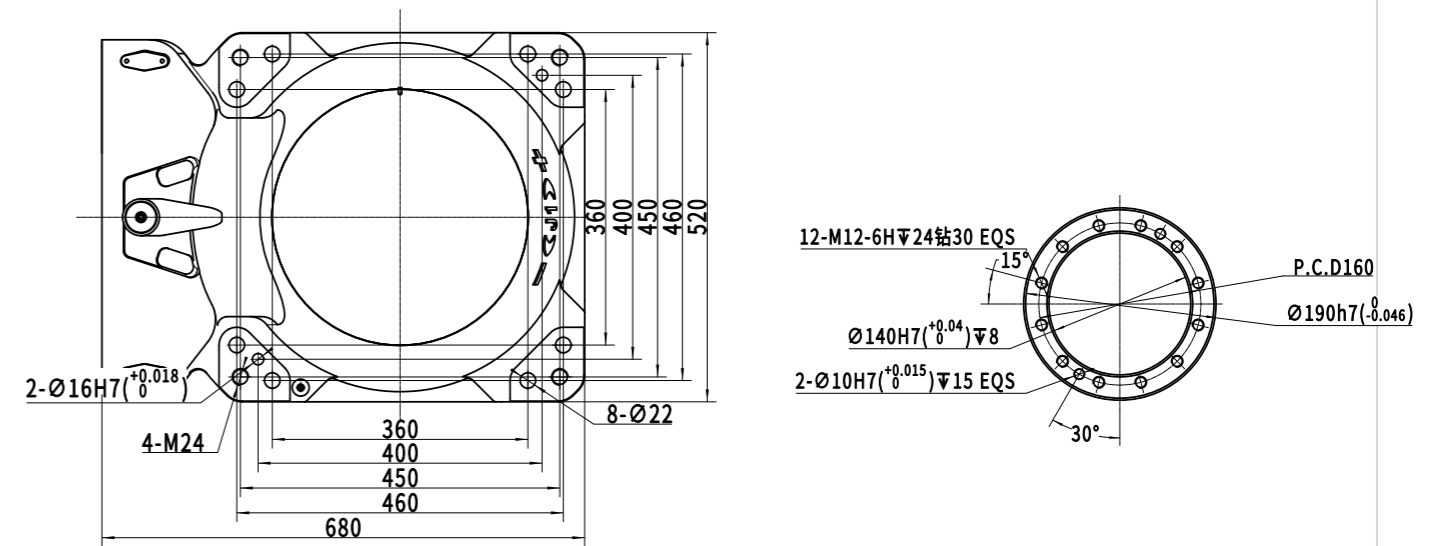
### FUNCTIONAL FEATURES

- High rigidity, strong load capacity, more stable operation.
- The body adopts the hollow arm structure and the built-in wrist cable, without considering the interference with the adjacent robot or peripheral equipment caused by the external winding mode.
- Motor built-in, simple appearance, suitable for small space operation, more flexible movement.
- According to the user's use scenario, provide a variety of optional configurations, can be used for spot welding, riveting, handling, grinding, assembly and other production lines.
- The robot body cable adopts the special cable for flexible robot.
- The robot body can be configured  $\phi 12$  double circuit trachea to meet the needs of welding and handling.
- Speed, high overload capacity servo motor, high precision RV reducer and the latest anti-vibration control strategy, shorten the pitch operation time.
- The installation area of the whole machine is small, which can achieve high density installation and wiring, and multiple units work together.
- The robot has simple structure, friendly operation interface, easy maintenance and easy operation.

### ROBOT BODY TECHNICAL PARAMETERS

Model		CRP-RA28-360
Arm form		Vertical multiple joints
Degree of freedom		6 axis
Maximum payload		360kg
Maximum coverage		2771mm
Maximum travel	Axis 1	-180°~180°
	Axis 2	-85°~65°
	Axis 3	-75°~160°
	Axis 4	-210°~210°
	Axis 5	-125°~125°
	Axis 6	-360°~360°
Maximum speed	Axis 1	90°/S
	Axis 2	82°/S
	Axis 3	82°/S
	Axis 4	100°/S
	Axis 5	100°/S
	Axis 6	200°/S
Allowable torque	Axis 4	2060N.m
	Axis 5	2060N.m
	Axis 6	1060N.m
Allowable moment of inertia	Axis 4	260kg.m <sup>2</sup>
	Axis 5	260kg.m <sup>2</sup>
	Axis 6	160kg.m <sup>2</sup>
Repeated positioning accuracy		±0.08mm
Robot body weight		1574kg
Installation mode		Formal mounting
Noise level		<80dB(A)
Body interface	Reserved IO	26Pin
	Reserved gas	2* $\phi 12$ mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	35%~85%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level		Body IP54 Wrist IP67
Advantage features		Compact structure, high speed, high precision, high expansibility and easy operation
Application		Handling, spot welding, cutting, mounting, milling, polishing
Matching electrical cabinet		G15A

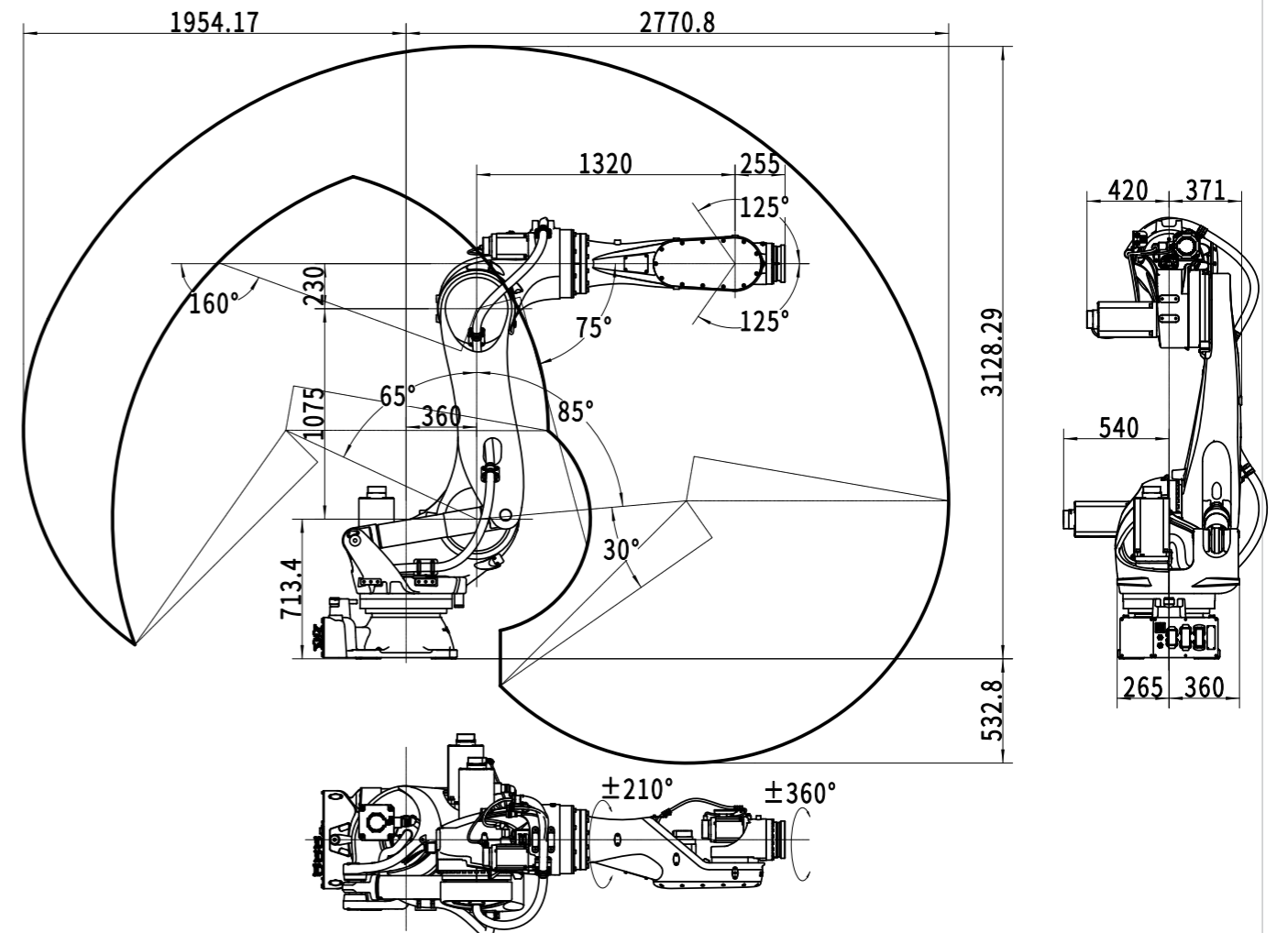
### INSTALLATION INTERFACE DIAGRAM



Installation Dimension of Base

Flange Dimensions

### MOTION RANGE DIAGRAM



# CRP-RA32-20

## INDUSTRIAL ROBOT HANDLING APPLICATION



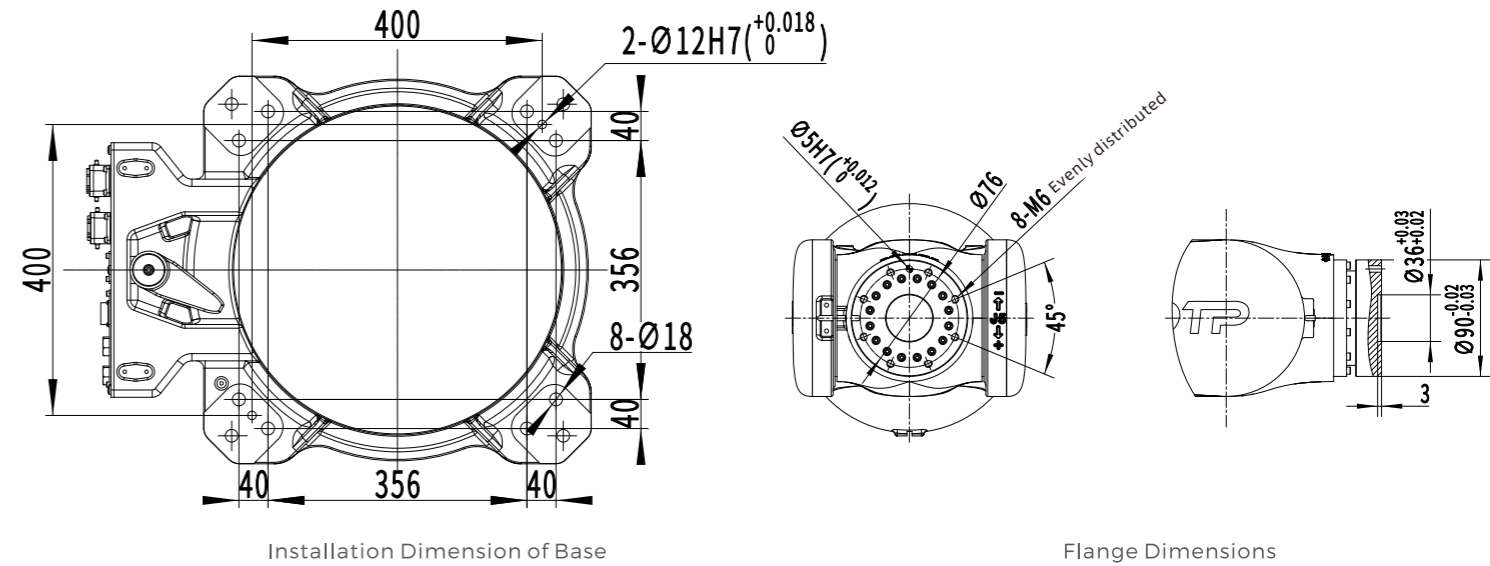
### FUNCTIONAL FEATURES

- The arm span is 3.2 meters, the load capacity is strong, the working range is large, the flexibility is strong.
- Fast running speed, high repeated positioning accuracy, suitable for cutting, handling, welding and other application scenarios, a wide range of applications.
- A safety emergency stop board independent of the control system is configured, and a safety relay is used to provide double-circuit emergency stop to ensure the reliability of emergency stop.
- The main cable adopts the special cable for flexible robot.
- Built-in three-phase filter to effectively improve EMC and EMI performance.
- The body provides  $\phi 10\text{mm}$  double circuit trachea to meet the peripheral requirements.
- Through the single cantilever forearm structure, the terminal weight is reduced and the flexibility is improved, and the choice of manipulator, tool and workpiece shape is extended.
- Built-in cable, gas pipe, through the center of the forearm and wrist set hollow part, from the robot base to the end of the wrist built-in cable and gas pipe, more convenient for users, improve the efficiency of work.
- High scalability, a number of user support installation platforms are set on the robot body, which is convenient for users to determine the cable and its related auxiliary tooling.

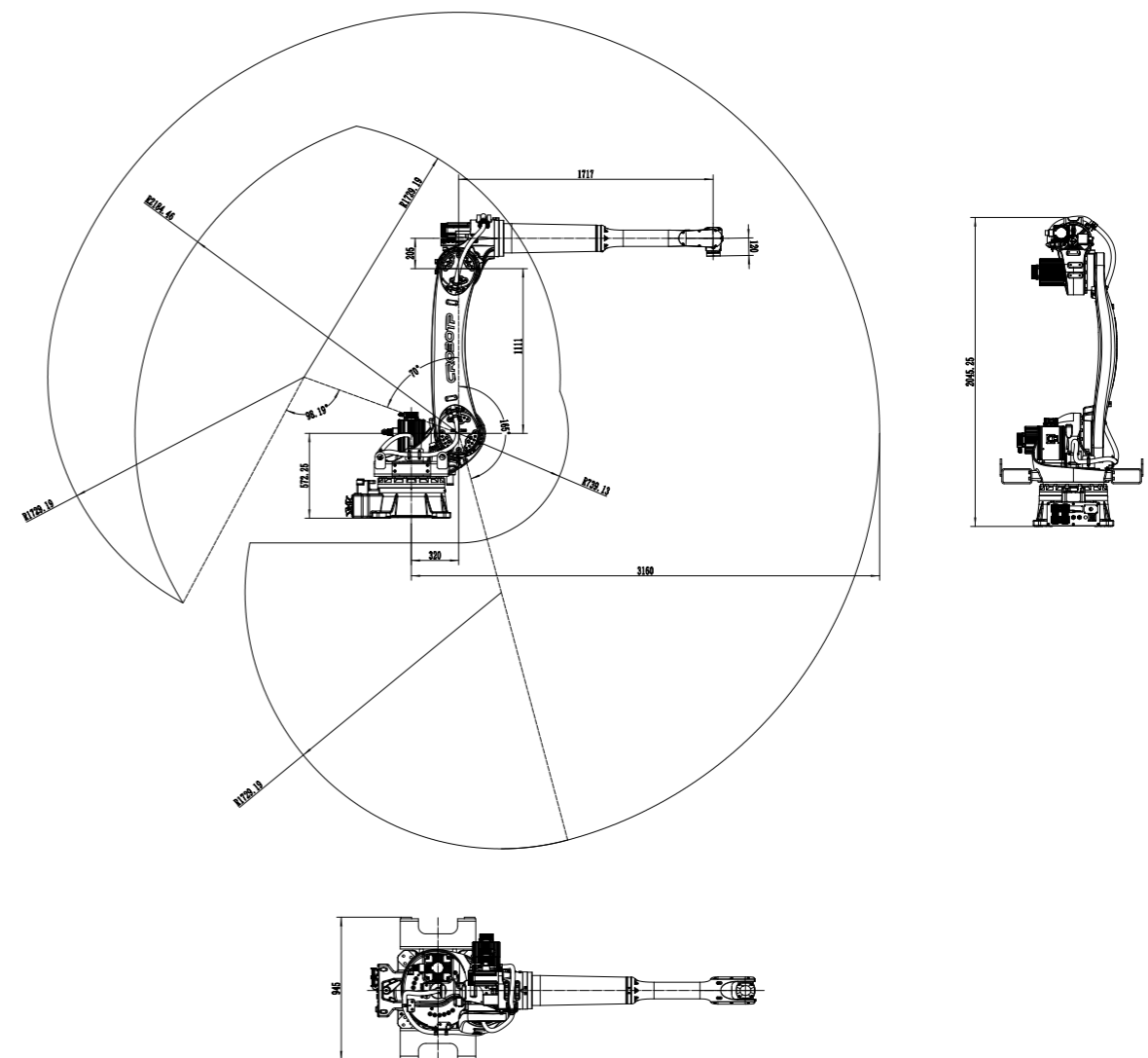
### ROBOT BODY TECHNICAL PARAMETERS

Model	CRP-RA32-20	
Arm form	Vertical multiple joints	
Degree of freedom	6 axis	
Maximum payload	20kg	
Maximum coverage	3160mm	
Maximum travel	Axis 1	-180°~180°
	Axis 2	-165°~70°
	Axis 3	-80°~165°
	Axis 4	-360°~360°
	Axis 5	-135°~135°
	Axis 6	-360°~360°
Maximum speed	Axis 1	130°/S
	Axis 2	125°/S
	Axis 3	124°/S
	Axis 4	224°/S
	Axis 5	350°/S
	Axis 6	540°/S
Allowable torque	Axis 4	40N.m
	Axis 5	40N.m
	Axis 6	20N.m
Allowable moment of inertia	Axis 4	1.2kg.m <sup>2</sup>
	Axis 5	1.2kg.m <sup>2</sup>
	Axis 6	0.8kg.m <sup>2</sup>
Repeated positioning accuracy	$\pm 0.06\text{mm}$	
Robot body weight	660kg	
Installation mode	Formal, inverted, wall mounting	
Noise level	<80dB(A)	
Body interface	Reserved IO	26Pin
	Reserved gas	2* $\phi 10\text{mm}$
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level	Body IP54 Wrist IP67	
Advantage features	Compact structure, high speed, high precision, high expansibility and easy operation	
Application	Handling, cutting, gluing, welding	
Matching electrical cabinet	G15A	

### INSTALLATION INTERFACE DIAGRAM



### MOTION RANGE DIAGRAM



# CRP-RA32-150

## INDUSTRIAL ROBOT HANDLING APPLICATION

### FUNCTIONAL FEATURES

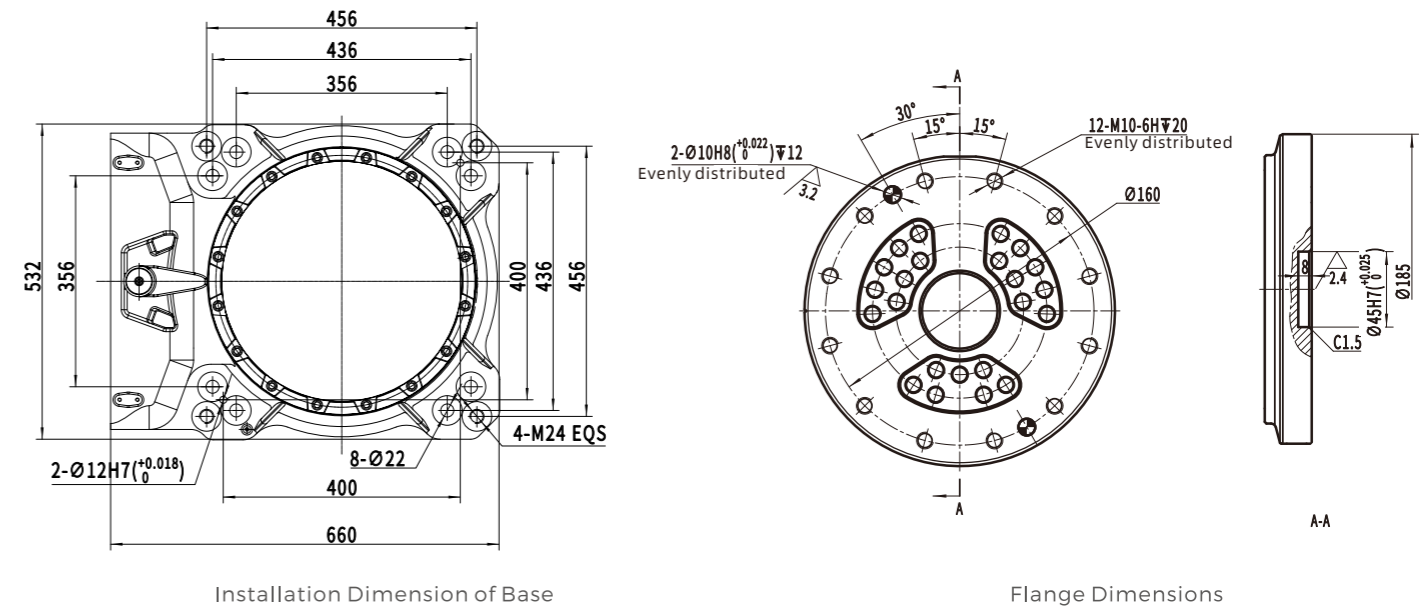
- The arm span is 3.2 meters, high rigidity, strong load capacity, more stable operation, and the load capacity is 150kg, which is about 15% higher than the previous generation.
- Arm motor built-in, simple appearance, suitable for small space operation, more flexible movement.
- With high speed, high overload capacity servo motor, high precision RV reducer and the latest anti-vibration control strategy, shorten the pitch operation time.
- The installation area of the whole machine is small, which can achieve high density installation and wiring, and multiple collaborative work.
- The robot has simple structure, friendly operation interface and easy maintenance.

### ROBOT BODY TECHNICAL PARAMETERS

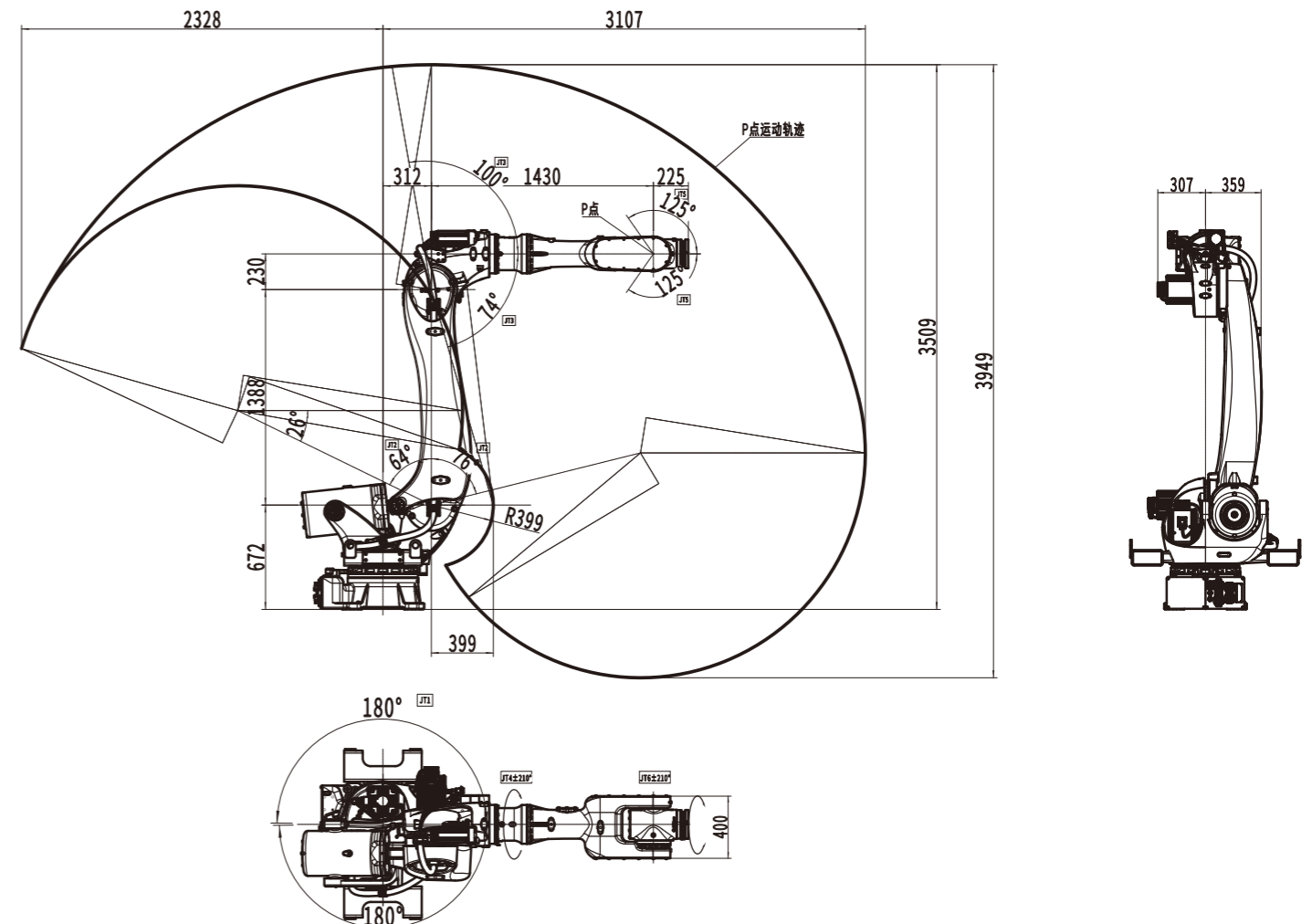
Model		CRP-RA32-150
Arm form		Vertical multiple joints
Degree of freedom		6 axis
Maximum payload		150kg
Maximum coverage		3107mm
Maximum travel	Axis 1	-180°~180°
	Axis 2	-76°~64°
	Axis 3	-74°~100°
	Axis 4	-210°~210°
	Axis 5	-125°~125°
	Axis 6	-360°~360°
Maximum speed	Axis 1	105°/S
	Axis 2	100°/S
	Axis 3	100°/S
	Axis 4	170°/S
	Axis 5	170°/S
	Axis 6	284°/S
Allowable torque	Axis 4	830N.m
	Axis 5	830N.m
	Axis 6	442N.m
Allowable moment of inertia	Axis 4	85kg.m <sup>2</sup>
	Axis 5	85kg.m <sup>2</sup>
	Axis 6	45kg.m <sup>2</sup>
Repeated positioning accuracy		±0.06mm
Robot body weight		1272kg
Installation mode		Formal mounting
Noise level		<80dB(A)
Body interface	Reserved IO	26Pin
	Reserved gas	2*φ12mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	38%~85%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level		Body IP54 Wrist IP67
Advantage features		Compact structure, high speed, high precision, high expansibility and easy operation
Application		Handling, mounting, cutting, marking, polishing
Matching electrical cabinet		G15A



### INSTALLATION INTERFACE DIAGRAM



### MOTION RANGE DIAGRAM



# CRP-RA32-280

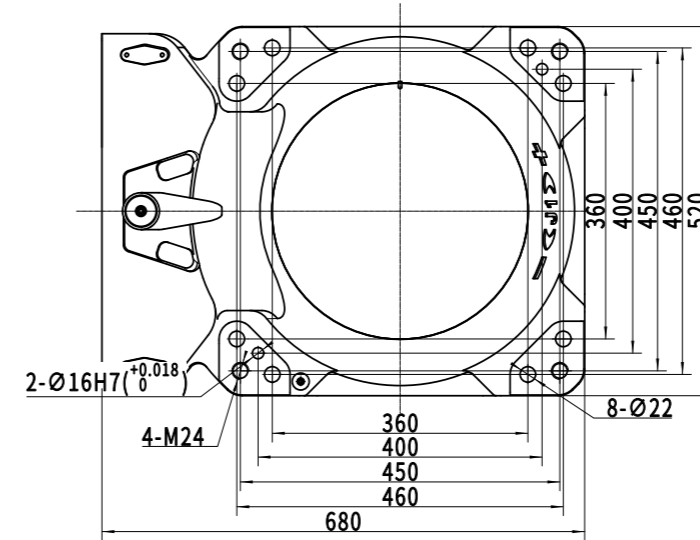
## INDUSTRIAL ROBOT HANDLING APPLICATION

### FUNCTIONAL FEATURES

- High rigidity, strong load capacity, more stable operation.
- The body adopts the hollow arm structure and the built-in wrist cable, without considering the interference with the adjacent robot or peripheral equipment caused by the external winding mode.
- Motor built-in, simple appearance, suitable for small space operation, more flexible movement.
- According to the user's use scenario, provide a variety of optional configurations, can be used for spot welding, riveting, handling, grinding, assembly and other production lines.
- The robot body cable adopts the special cable for flexible robot.
- The robot body can be configured  $\phi 12$  double circuit trachea to meet the needs of welding and handling.
- Speed, high overload capacity servo motor, high precision RV reducer and the latest anti-vibration control strategy, shorten the pitch operation time.
- The installation area of the whole machine is small, which can achieve high density installation and wiring, and multiple units work together.
- The robot has simple structure, friendly operation interface, easy maintenance and easy operation.

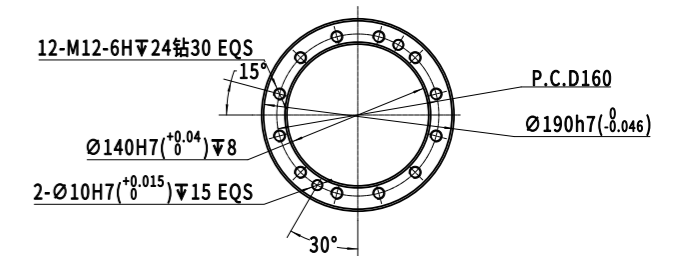
### ROBOT BODY TECHNICAL PARAMETERS

Model		CRP-RA32-280
Arm form		Vertical multiple joints
Degree of freedom		6 axis
Maximum payload		280kg
Maximum coverage		3107mm
Maximum travel	Axis 1	-180°~180°
	Axis 2	-85°~65°
	Axis 3	-75°~160°
	Axis 4	-210°~210°
	Axis 5	-125°~125°
	Axis 6	-360°~360°
Maximum speed	Axis 1	100°/S
	Axis 2	90°/S
	Axis 3	90°/S
	Axis 4	110°/S
	Axis 5	110°/S
	Axis 6	200°/S
Allowable torque	Axis 4	1745N.m
	Axis 5	1745N.m
	Axis 6	960N.m
Allowable moment of inertia	Axis 4	215kg.m <sup>2</sup>
	Axis 5	215kg.m <sup>2</sup>
	Axis 6	140kg.m <sup>2</sup>
Repeated positioning accuracy		±0.08mm
Robot body weight		1624kg
Installation mode		Formal mounting
Noise level		<80dB(A)
Body interface	Reserved IO	26Pin
	Reserved gas	2* $\phi 12$ mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	35%~85%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level		Body IP54 Wrist IP67
Advantage features		Compact structure, high speed, high precision, high expansibility and easy operation
Application		Handling, spot welding, cutting, mounting, milling, polishing
Matching electrical cabinet		G15A



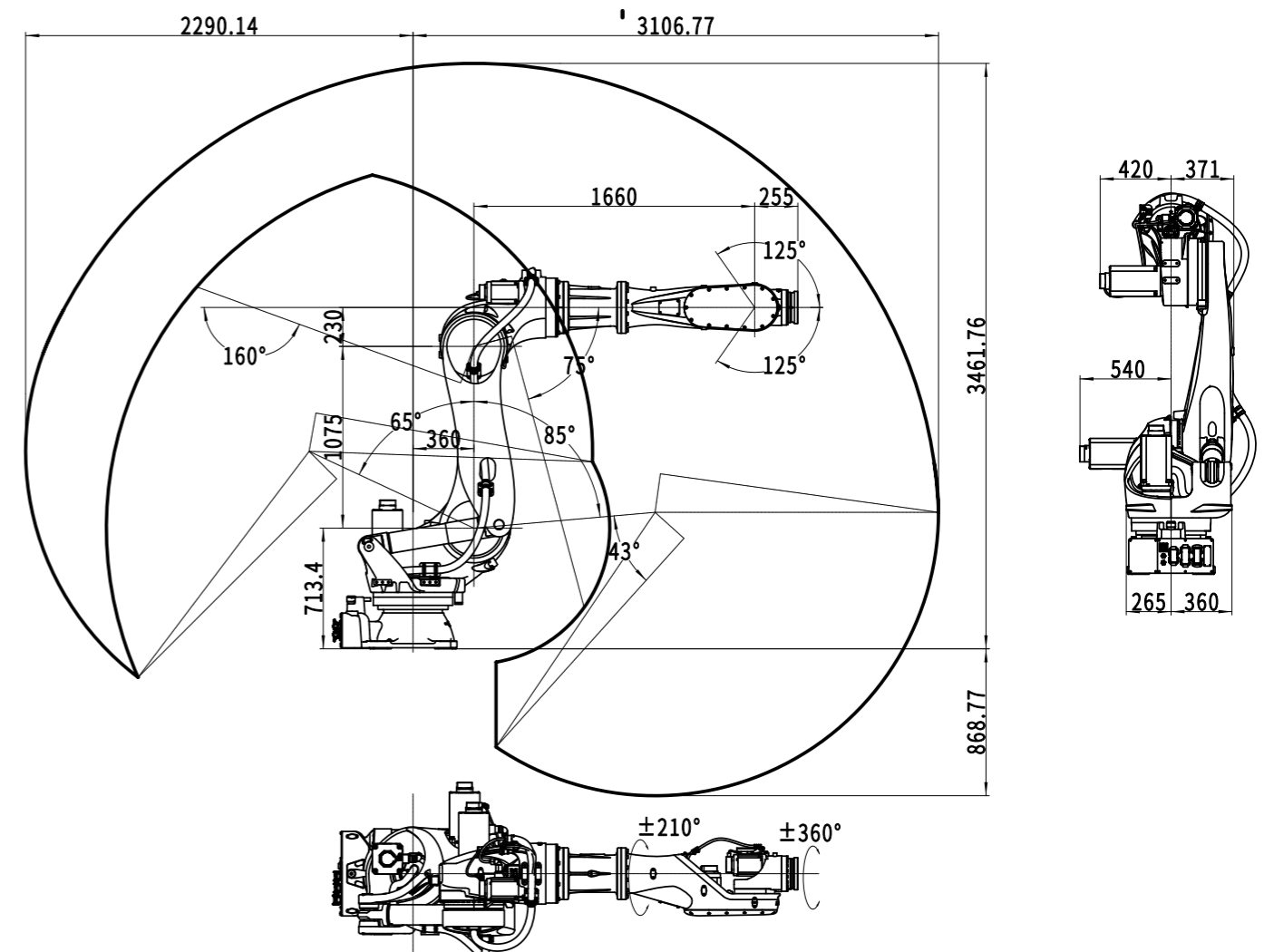
Installation Dimension of Base

### INSTALLATION INTERFACE DIAGRAM



Flange Dimensions

### MOTION RANGE DIAGRAM



# CRP-RA35-180

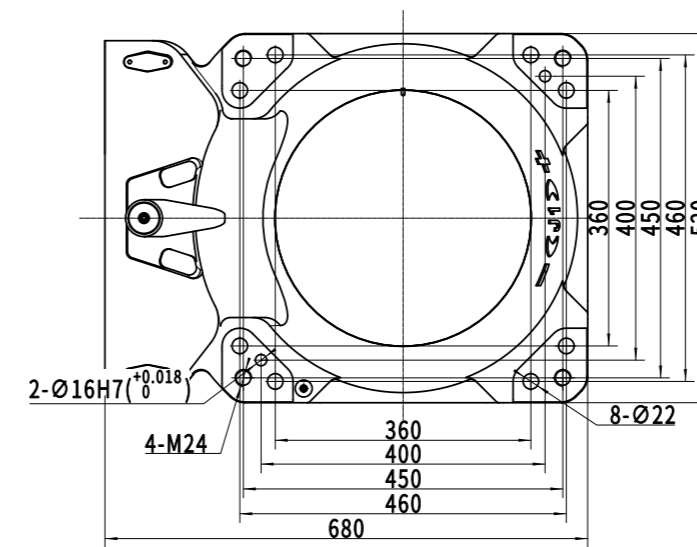
## INDUSTRIAL ROBOT HANDLING APPLICATION

### FUNCTIONAL FEATURES

- High rigidity, strong load capacity, more stable operation.
- The body adopts the hollow arm structure and the built-in wrist cable, without considering the interference with the adjacent robot or peripheral equipment caused by the external winding mode.
- Motor built-in, simple appearance, suitable for small space operation, more flexible movement.
- According to the user's use scenario, provide a variety of optional configurations, can be used for spot welding, riveting, handling, grinding, assembly and other production lines.
- The robot body cable adopts the special cable for flexible robot.
- The robot body can be configured  $\phi 12$  double circuit trachea to meet the needs of welding and handling.
- Speed, high overload capacity servo motor, high precision RV reducer and the latest anti-vibration control strategy, shorten the pitch operation time.
- The installation area of the whole machine is small, which can achieve high density installation and wiring, and multiple units work together.
- The robot has simple structure, friendly operation interface, easy maintenance and easy operation.

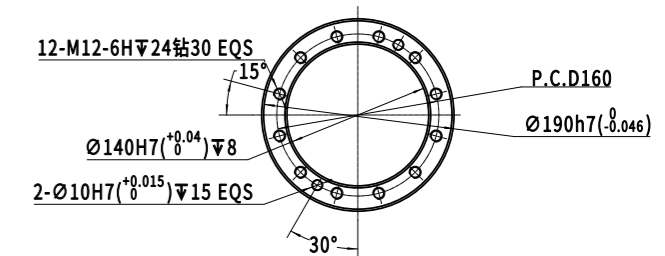
### ROBOT BODY TECHNICAL PARAMETERS

Model		CRP-RA35-180
Arm form		Vertical multiple joints
Degree of freedom		6 axis
Maximum payload		180kg
Maximum coverage		3444mm
Maximum travel	Axis 1	-180°~180°
	Axis 2	-85°~65°
	Axis 3	-75°~160°
	Axis 4	-210°~210°
	Axis 5	-125°~125°
	Axis 6	-360°~360°
Maximum speed	Axis 1	90°/S
	Axis 2	82°/S
	Axis 3	82°/S
	Axis 4	100°/S
	Axis 5	100°/S
	Axis 6	200°/S
Allowable torque	Axis 4	1380N.m
	Axis 5	1380N.m
	Axis 6	900N.m
Allowable moment of inertia	Axis 4	150kg.m <sup>2</sup>
	Axis 5	150kg.m <sup>2</sup>
	Axis 6	100kg.m <sup>2</sup>
Repeated positioning accuracy		±0.08mm
Robot body weight		1670kg
Installation mode		Formal mounting
Noise level		<80dB(A)
Body interface	Reserved IO	26Pin
	Reserved gas	2* $\phi 12$ mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	35%~85%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level		Body IP54 Wrist IP67
Advantage features		Compact structure, high speed, high precision, high expansibility and easy operation
Application		Handling, spot welding, cutting, mounting, milling, polishing
Matching electrical cabinet		G15A



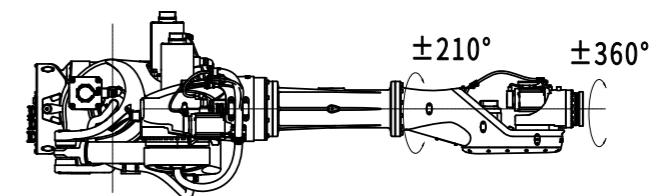
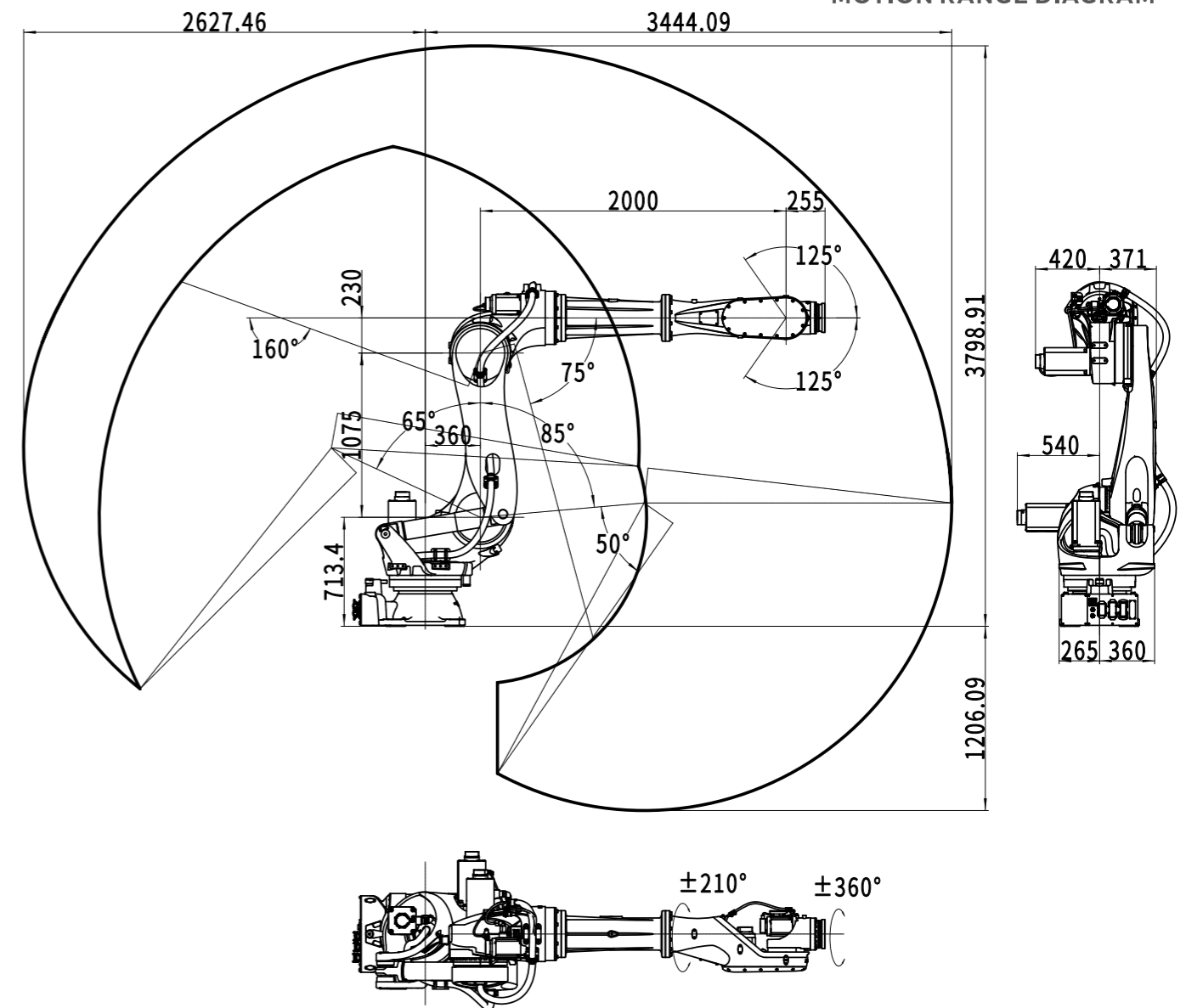
Installation Dimension of Base

### INSTALLATION INTERFACE DIAGRAM



Flange Dimensions

### MOTION RANGE DIAGRAM



# CRP-RH26-210

## INDUSTRIAL ROBOT HANDLING APPLICATION

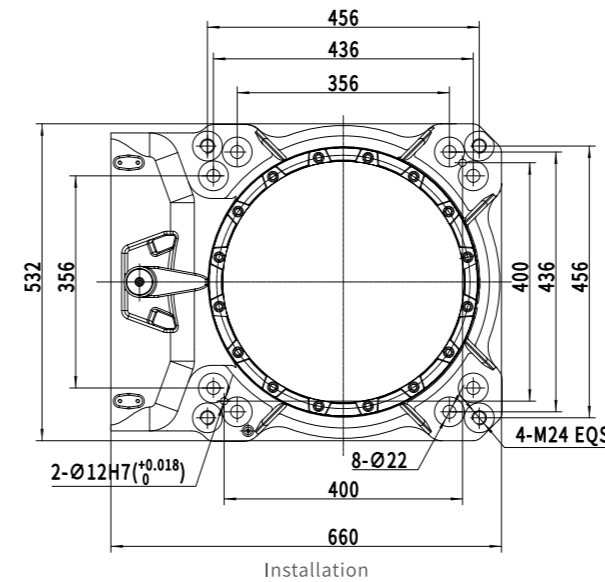


### FUNCTIONAL FEATURES

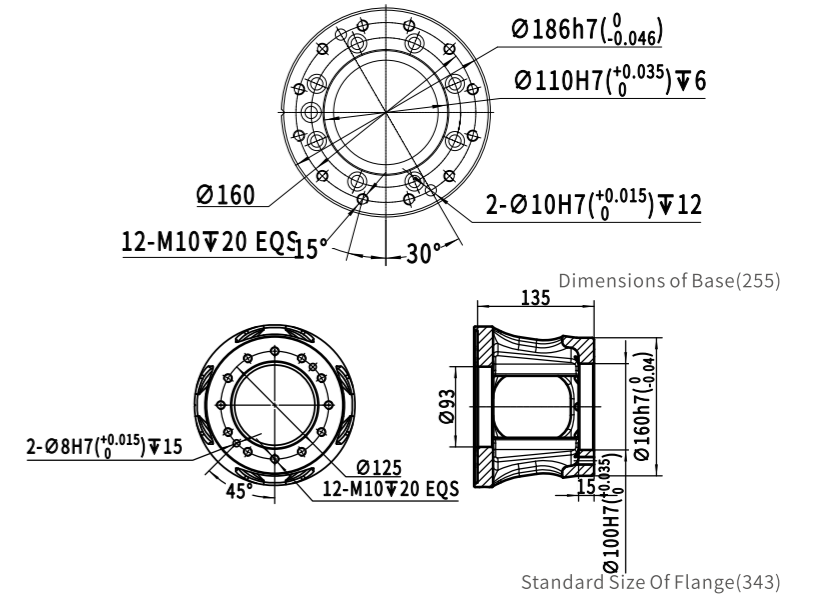
- Arm span 2.6 meters, high rigidity, strong load capacity, more stable operation.
- Adopt a hollow arm structure and built-in wrist cable, without considering the interference caused by the external winding mode with the neighboring robot or peripheral equipment.
- Adopt a hollow arm structure and built-in wrist cable, without considering the interference caused by the external winding mode with the neighboring robot or peripheral equipment.
- Adopt a hollow arm structure and built-in wrist cable, without considering the interference caused by the external winding mode with the neighboring robot or peripheral equipment.
- The robot body adopts highly flexible special cable.
- Built-in three-phase filter can effectively improve the performance of EMC and EMI.
- The body provides  $\phi 12\text{mm}$  dual-loop gas pipes and  $\phi 19.5\text{mm}$  dual-loop water pipes to meet welding and transportation requirements.
- Using high-speed, high-overload capacity servo motor, high-precision RV reducer and the latest anti-vibration control strategy, shorten the pitch operation time, optimize the gun shaft operation sequence of the servo welding torch, and significantly shorten the cycle time.
- The installation area of the whole machine is small, which can achieve high density installation and wiring, and multiple units work together.
- Simple structure, friendly operation interface, easy maintenance, easy to operate.

### ROBOT BODY TECHNICAL PARAMETERS

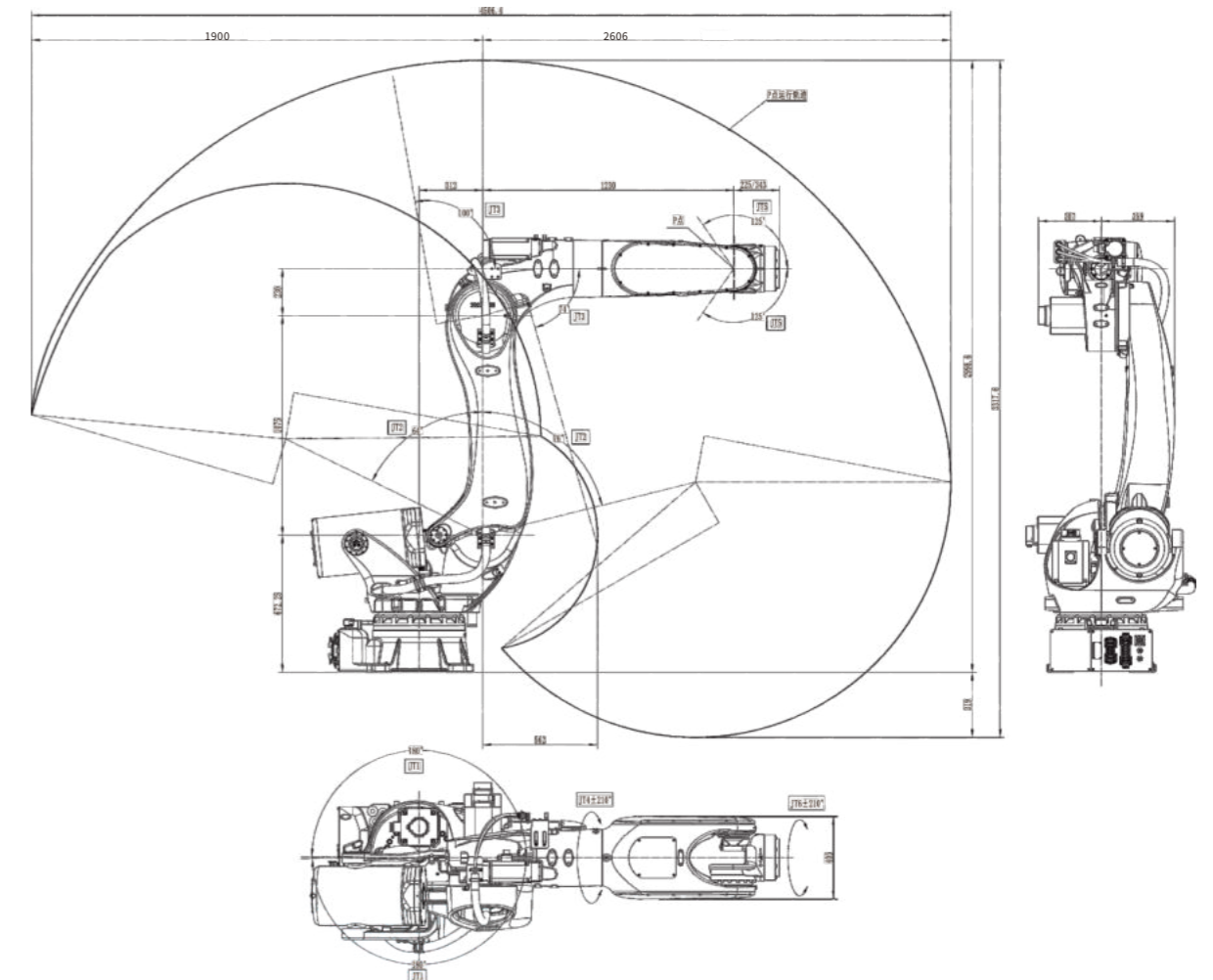
Model		CRP-RA26-210
Arm form		Vertical multiple joints
Degree of freedom		6 axis
Maximum payload		210kg
Maximum coverage		2606mm
Maximum travel	Axis 1	-180°~180°
	Axis 2	-76°~64°
	Axis 3	-74°~100°
	Axis 4	-200°~200°
	Axis 5	-125°~125°
	Axis 6	-360°~360°
Maximum speed	Axis 1	120°/S
	Axis 2	90°/S
	Axis 3	100°/S
	Axis 4	140°/S
	Axis 5	130°/S
	Axis 6	220°/S
Allowable torque	Axis 4	1370N.m
	Axis 5	1370N.m
	Axis 6	613N.m
Allowable moment of inertia	Axis 4	200kg.m <sup>2</sup>
	Axis 5	200kg.m <sup>2</sup>
	Axis 6	160kg.m <sup>2</sup>
Repeated positioning accuracy		±0.06mm
Robot body weight		1270kg
Installation mode		Formal mounting
Noise level		<80dB(A)
Body interface	Reserved IO	26Pin
	Reserved gas	2* $\phi 12\text{mm}$
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level		Body IP54 Wrist IP67
Advantage features		Compact structure, high speed, high precision, high expansibility and easy operation
Application		Handling, spot welding, cutting, mounting, milling, polishing
Matching electrical cabinet		G15A



### INSTALLATION INTERFACE DIAGRAM



### WORKING RANGE DIAGRAM



\* Measurement conditions  
 (1) The robot is firmly fixed on a flat ground;  
 (2) Test at 3700mm away from the center of rotation of joint JT1  
 (noise level changes according to the conditions, background noise has a certain impact)

# CRP-RH35-100

## INDUSTRIAL ROBOT HANDLING APPLICATION

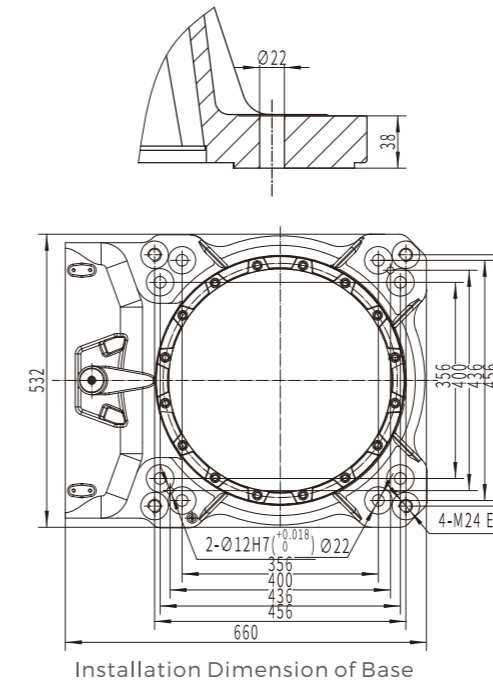


### FUNCTIONAL FEATURES

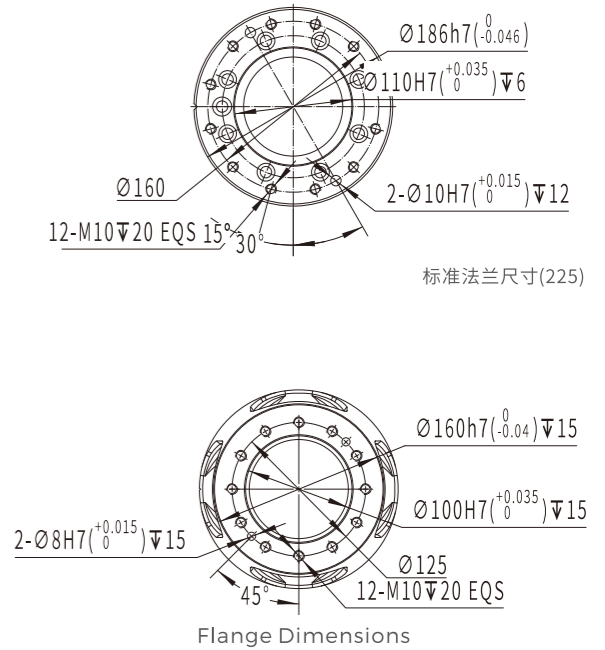
- Arm span 3.5 meters, high rigidity, strong load capacity, more stable operation.
- With a hollow arm structure and a built-in wrist cable, there is no need to consider the interference caused by external winding with neighboring robots or peripheral equipment.
- Arm motor built-in, simple appearance, suitable for small space operation, more flexible movement.
- According to the user's use scenario, provide a variety of optional configurations, can be used for spot welding, handling, grinding, assembly and other production lines.
- The main cable adopts the special cable for flexible robot.
- Built-in three-phase filter to effectively improve EMC and EMI performance.
- The use of high-speed, high-overload capacity servo motor, high-precision RV reducer and the latest anti-vibration control strategy, shorten the pitch operation time and significantly reduce the cycle time.

### ROBOT BODY TECHNICAL PARAMETERS

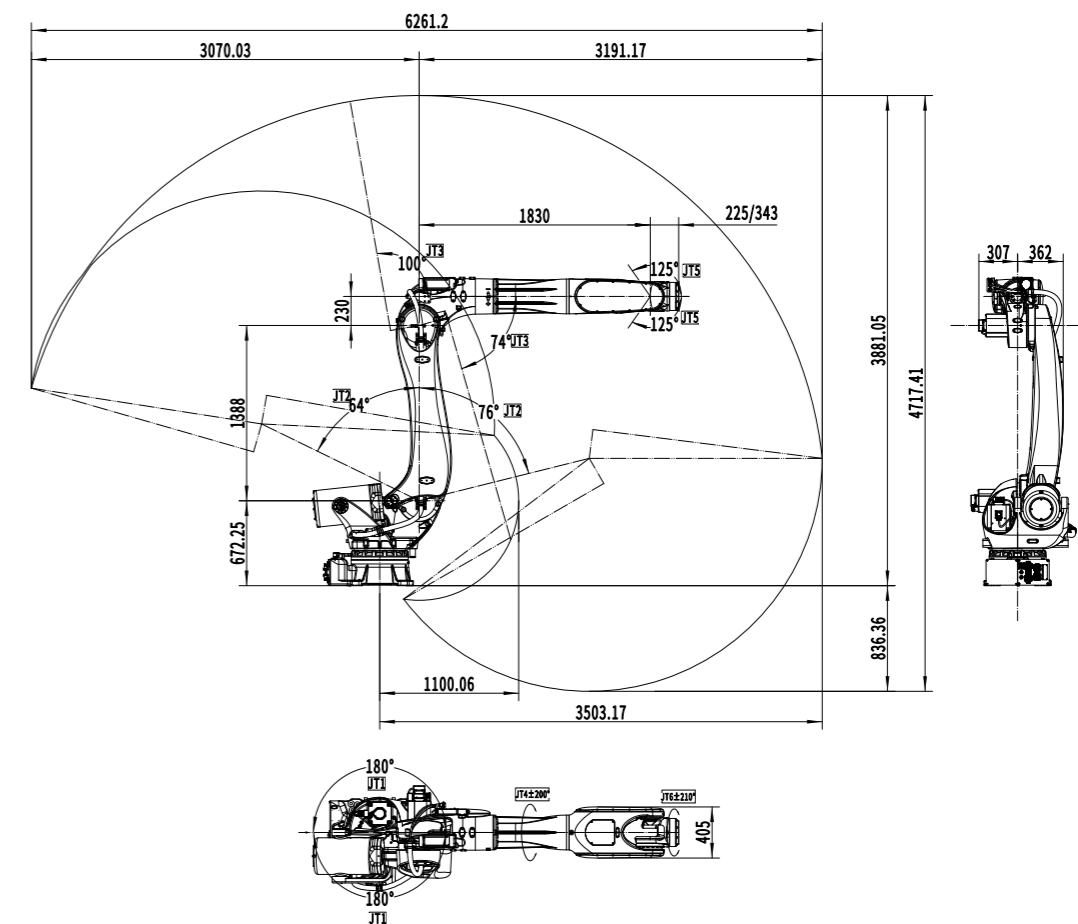
Model		CRP-RH35-100
Arm form		Vertical multiple joints
Degree of freedom		6 axis
Maximum payload		100kg
Maximum coverage		3503mm
Maximum travel	Axis 1	-180°~180°
	Axis 2	-76°~64°
	Axis 3	-74°~100°
	Axis 4	-200°~200°
	Axis 5	-125°~125°
	Axis 6	-360°~360°
Maximum speed	Axis 1	100°/S
	Axis 2	100°/S
	Axis 3	85°/S
	Axis 4	105°/S
	Axis 5	120°/S
	Axis 6	200°/S
Allowable torque	Axis 4	720N.m
	Axis 5	720N.m
	Axis 6	400N.m
Allowable moment of inertia	Axis 4	80kg.m <sup>2</sup>
	Axis 5	80kg.m <sup>2</sup>
	Axis 6	35kg.m <sup>2</sup>
Repeated positioning accuracy		±0.06mm
Robot body weight		1390kg
Installation mode		Formal mounting
Noise level		<80dB(A)
Body interface	Reserved IO	26Pin
	Reserved gas	2*φ12mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(No condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level		Body IP54 Wrist IP67
Advantage features		Compact structure, high speed, high precision, high rigidity, high life, high expansibility and easy operation
Application		Cutting, mounting, Handling, marking, polishing
Matching electrical cabinet		G15A



### INSTALLATION INTERFACE DIAGRAM



### MOTION RANGE DIAGRAM



# CRP-RP15-15

INDUSTRIAL ROBOT  
HANDLING  
APPLICATION



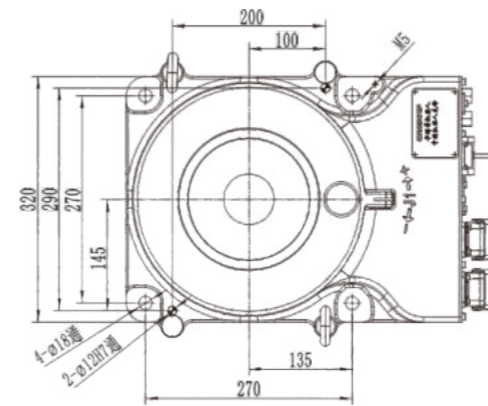
## FUNCTIONAL FEATURES

- With the features of high speed, high precision and high stability, CRP-RP15-15 can be adopted in more application scenarios;
- Rod joint adopts high protection design so it has longer life span. And the robot has better performance in waterproof and dustproof with maintenance-free in usage period;
- Equipped with special punching and palletizing package, customized interface to make operation be more convenient and easy.
- J4 axis adopts higher rigid reducer so the robot has stronger bearing capacity;
- The gravity compensation function ensures the accuracy of the robot at any position;
- Adaptive acceleration can improve the life span of the robot and ensure reasonable acceleration of arbitrary trajectory to achieve more efficient movement

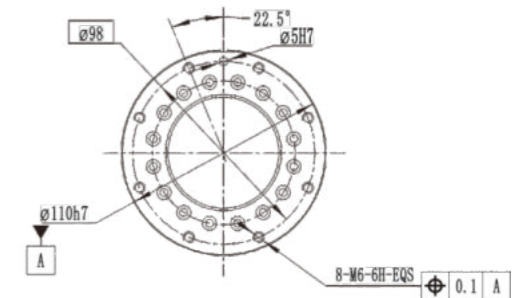
## ROBOT BODY TECHNICAL PARAMETERS

Model		CRP-RP15-15
Arm form		Multi joints+connecting rod
Degree of freedom		4 axis
Maximum payload		15kg
Maximum coverage		1530mm
Maximum travel	Axis 1	-170°~170°
	Axis 2	-90°~45°
	Axis 3	-75°~105°
	Axis 4	-360°~360°
Maximum speed	Axis 1	235°/S
	Axis 2	235°/S
	Axis 3	235°/S
	Axis 4	530°/S
Allowable moment of inertia	Axis 4	1.3kg.m <sup>2</sup>
Repeated positioning accuracy		±0.05mm
Robot body weight		155kg
Installation mode		Formal mounting
Body interface	Reserved IO	16Pin
	Reserved gas	2* φ8mm
	Ambient temperature	0~45°C
Installation environment	Relative humidity	20%~80%RH(no condensation)
	Vibration	Under 0.5 G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level		IP56
Advantage features		Compact structure, high speed, high precision, high rigidity, high life, high expansibility and easy operation
Application		Handling, palletizing, depalletizing, loading and unloading
Matching electrical cabinet		G12

## INSTALLATION INTERFACE DIAGRAM

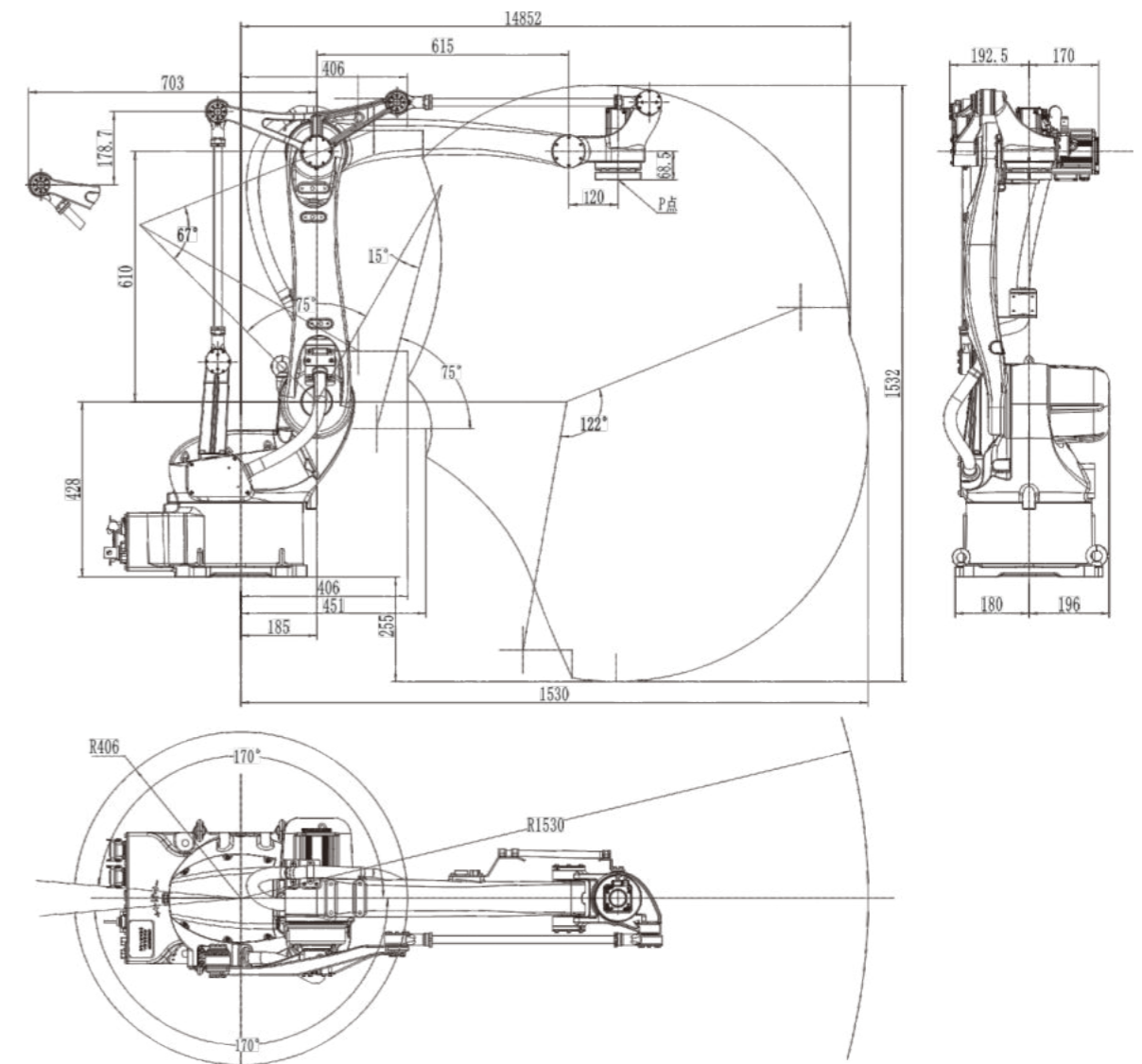


Installation Dimension of Base



Flange Dimensions

## MOTION RANGE DIAGRAM



# CRP-RP18-25

## INDUSTRIAL ROBOT HANDLING APPLICATION



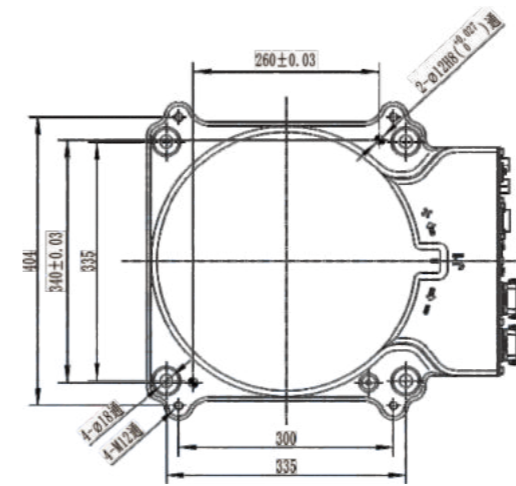
### FUNCTIONAL FEATURES

- Equipped with safety emergency stop board which is independent of the control system, and the safety relay circuit is adopted to provide double-circuit emergency stop to ensure the reliability of emergency stop.
- Built-in three-phase filter can effectively improve the performance of internal and external distractions.
- The robot body adopts highly flexible special cable.
- The robot body is with dual-circuit gas pipe to meet the handling demands.
- The 4-axis structure of the 25-type harmonic reducer has stronger rigidity, meeting the special requirements of handling scenarios.
- Rod joint adopts high protection design so it has longer life span. And the robot has better performance in waterproof and dustproof.

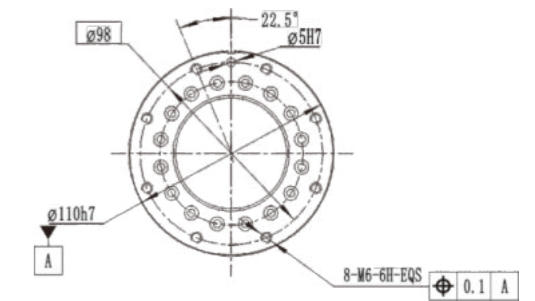
### ROBOT BODY TECHNICAL PARAMETERS

Model		CRP-RP18-25
Arm form		Multi joints+connecting rod
Degree of freedom		4 axis
Maximum payload		25kg
Maximum coverage		1885mm
Maximum travel	Axis 1	-170°~170°
	Axis 2	-90°~45°
	Axis 3	-75°~105°
	Axis 4	-360°~360°
Maximum speed	Axis 1	172°/S
	Axis 2	172°/S
	Axis 3	212°/S
	Axis 4	350°/S
Allowable moment of inertia	Axis 4	1.5kg.m <sup>2</sup>
Repeated positioning accuracy		±0.08mm
Robot body weight		245kg
Installation mode		Formal mounting
Body interface	Reserved IO	16Pin
	Reserved gas	2* φ8mm
Installation environment	Ambient temperature	0~45°C
	Relative humidity	20%~80%RH(no condensation)
	Vibration	Under 0.5 G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level		IP56
Advantage features		Compact structure, high speed, high precision, high rigidity, high life, high expansibility and easy operation
Application		Handling, palletizing, depalletizing, loading and unloading
Matching electrical cabinet		G12

### INSTALLATION INTERFACE DIAGRAM

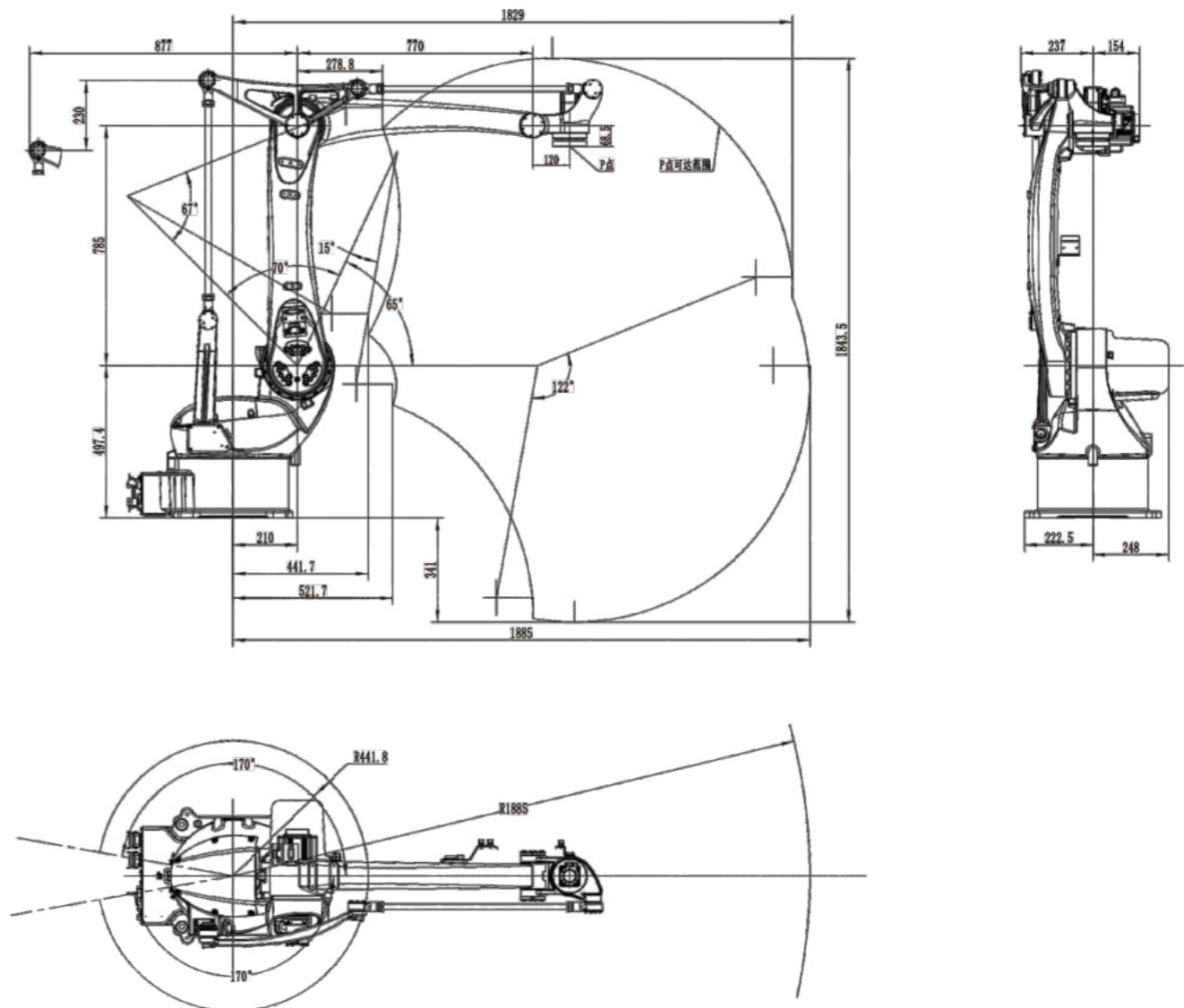


Installation Dimension of Base



Flange Dimensions

### MOTION RANGE DIAGRAM



# CRP-RP24-130

## Industrial palletizing robot



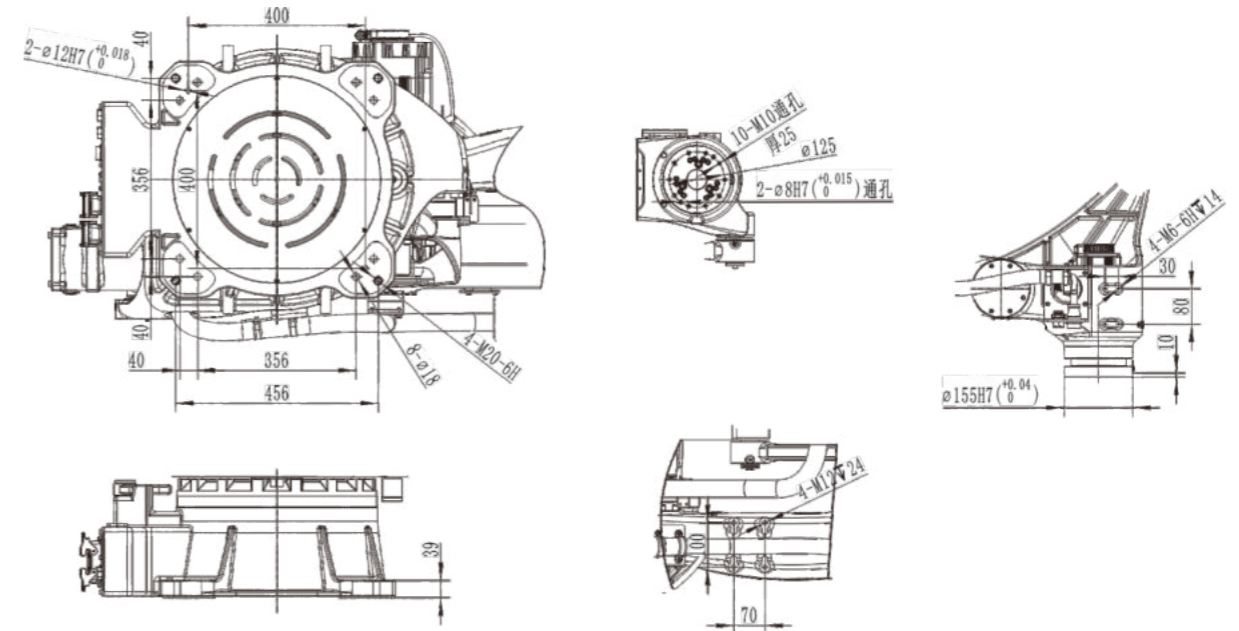
### FUNCTIONAL FEATURES

- Equipped with safety emergency stop board which is independent of the control system, and the safety relay circuit is adopted to provide double-circuit emergency stop to ensure the reliability of emergency stop.
- The main cable adopts a flexible robot specific cable.
- Equipped with a three-phase filter, effectively improving EMC and EMI performance.
- Equipped with gravity compensation, load adaptation, and S-T function, the whole machine has higher accuracy, smaller impact, and faster typical working cycle.
- Adopting parallel spring cylinders, it occupies a smaller area, consumes less power, and has smoother control.
- Dual channel large-diameter trachea, meeting the requirements of high load vacuum suction cups.

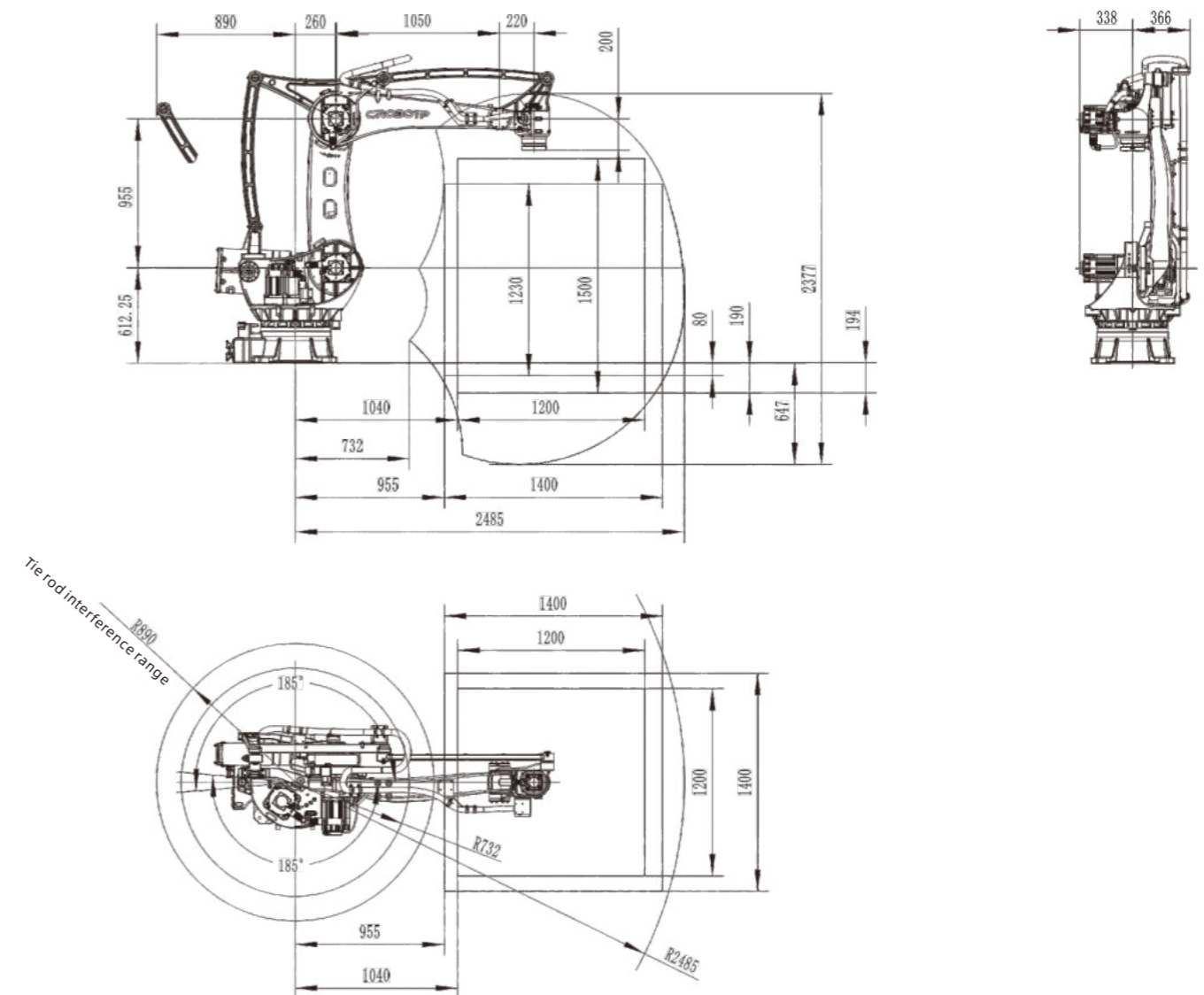
### ROBOT BODY TECHNICAL PARAMETERS

Model		CRP-RP24-130
Arm form		Multi joints+connecting rod
Degree of freedom		4 axis
Maximum payload		130kg
Maximum coverage		2485mm
Maximum travel	Axis 1	-175°~175°
	Axis 2	-87°~39°
	Axis 3	-71°~105°
	Axis 4	-360°~360°
Maximum speed	Axis 1	154°/S
	Axis 2	166°/S
	Axis 3	104°/S
	Axis 4	271°/S
Allowable torque	Axis 4	125N.m
Allowable moment of inertia	Axis 4	13kg.m <sup>2</sup>
Repeated positioning accuracy		±0.2mm
Robot body weight		820kg
Installation mode		Formal mounting
Body interface	Reserved IO	26Pin
	Reserved gas	2* φ12mm
	Ambient temperature	0~45°C
Installation environment	Relative humidity	20%~80%RH(no condensation)
	Vibration	Under 0.5 G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
IP level		Body IP54, wrist IP67
Advantage features		Compact structure, high speed, high precision, high rigidity, high life, high expansibility and easy operation
Application		Handling, palletizing, depalletizing, loading and unloading
Matching electrical cabinet		G15A

### INSTALLATION INTERFACE DIAGRAM



### MOTION RANGE DIAGRAM



# CRP-RP32-180

## Industrial palletizing robot



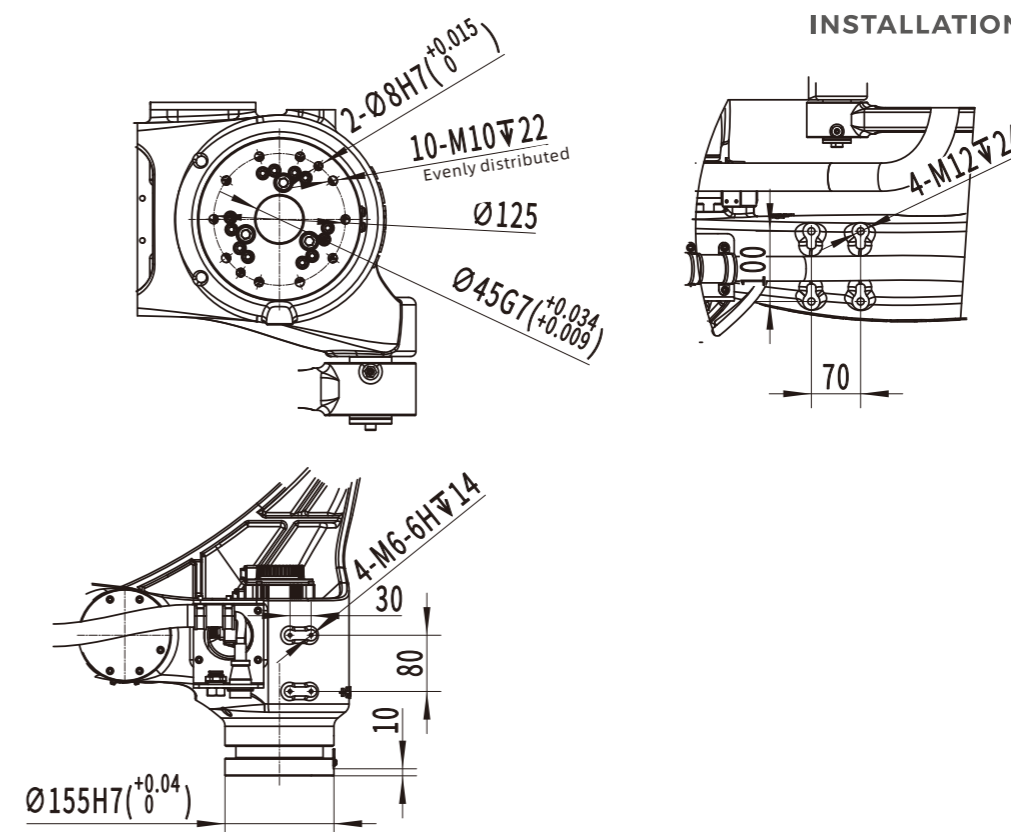
### FUNCTIONAL FEATURES

- Equipped with safety emergency stop board which is independent of the control system ,and the safety relay circuit is adopted to provide double-circuit emergency stop to ensure the reliability of emergency stop.
- The main cable adopts a flexible robot specific cable.
- Equipped with a three-phase filter, effectively improving EMC and EMI performance.
- Equipped with gravity compensation ,load adaptation ,and S-T function, the whole machine has higher accuracy ,smaller impact, and faster typical working cycle. Adopting parallel spring cylinders, it occupies a smaller area, consumes less power, and has smoother control.
- Dual channel large-diameter trachea, meeting the requirements of high load vacuum suction cups.

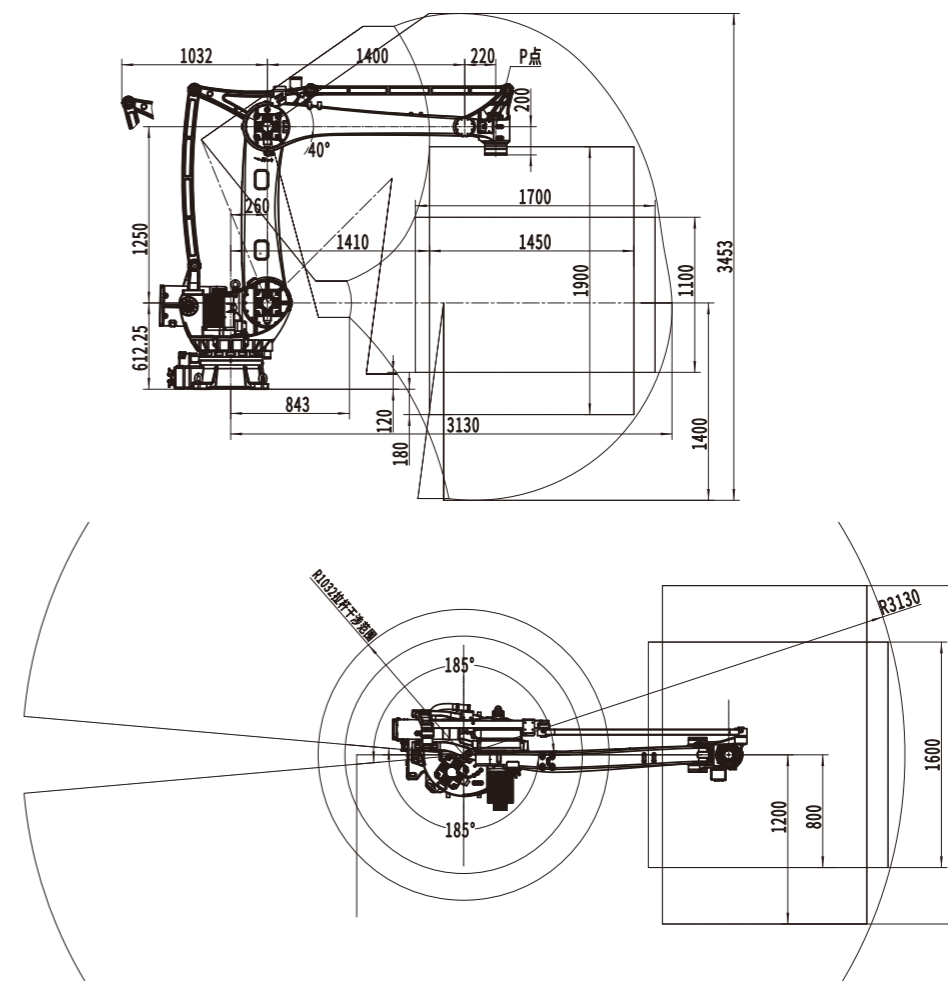
### ROBOT BODY TECHNICAL PARAMETERS

Model		CRP-RP32-180
Arm form		Multi joints+connecting rod
Degree of freedom		4 axis
Maximum payload		180kg
Maximum coverage		3130mm
Maximum travel	Axis 1	-175°~175°
	Axis 2	-85°~35°
	Axis 3	-70°~100°
	Axis 4	-360°~360°
Maximum speed	Axis 1	135°/S
	Axis 2	130°/S
	Axis 3	130°/S
	Axis 4	280°/S
Allowable torque	Axis 4	190N.m
Allowable moment of inertia	Axis 4	50kg.m <sup>2</sup>
Repeated positioning accuracy		±0.1mm
Robot body weight		845kg
Installation mode		Formal mounting
Body interface	Reserved IO	26Pin
	Reserved gas	2* φ12mm
	Ambient temperature	0~45°C
Installation environment	Relative humidity	20%~80%RH(no condensation)
	Vibration	Under 0.5 G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
	IP level	Body IP54, wrist IP67
Advantage features	Compact structure, high speed, high precision, high rigidity, high life, high expansibility and easy operation	
Application	Handling, palletizing, depalletizing, loading and unloading	
Matching electrical cabinet	G15A	

### INSTALLATION INTERFACE DIAGRAM



### WORKING RANGE DIAGRAM



# CRP-RS04-03Z17

## SCARA ROBOTS



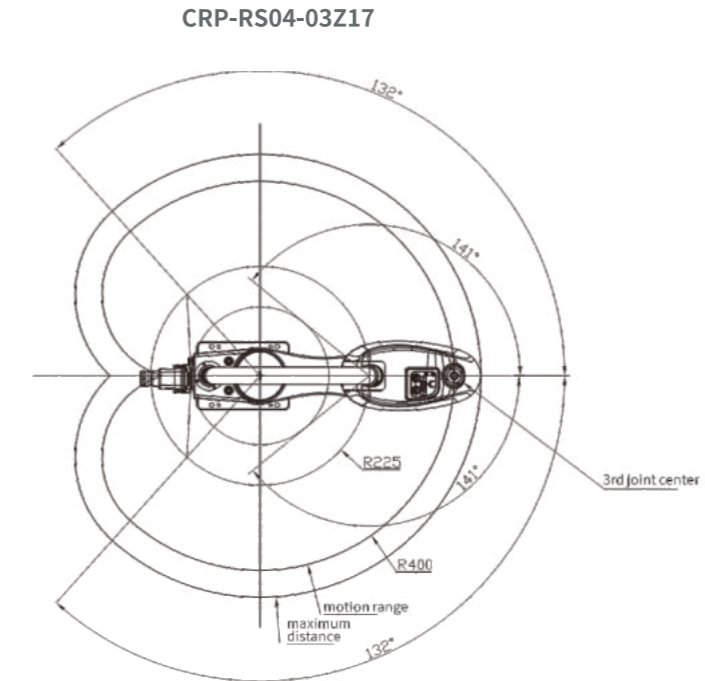
### FUNCTIONAL FEATURES

- Compact and flexible structure, fast running speed, high transmission accuracy and low noise.
- Highly rigid arm design realizes high load and high speed in one package.
- 400 mm armlengthsize,3kg payload.
- Suitable forG12 electric cabinet ,provide 24-road custom IO.
- Support serial port ,network ,USB and other interface forms.
- Suitable for handling,palletizing,assembly,3C and other application fields

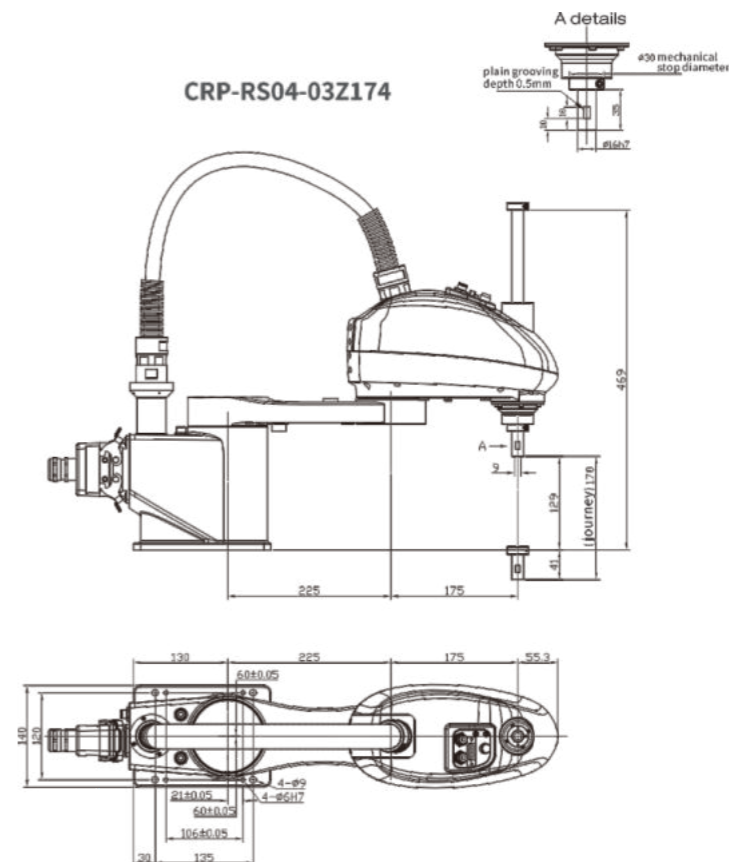
### ROBOT BODY TECHNICAL PARAMETERS

Model		CRP-RS04-03Z17
Maximum payload		3kg
Maximum coverage		400mm
Standard cycle time beat		/
Maximum travel	J1	±132°
	J2	±141°
	J3	200mm
	J4	±360°
Maximum speed	J1~J2	7791mm/s
	J3	1000mm/s
	J4	2500°/s
J4 Allowable moment of inertia	Rating value	0.005kg.m <sup>2</sup>
	Maximum value	0.05kg.m <sup>2</sup>
Repeated positioning accuracy	J1~J2	±0.01mm
	J3	±0.01mm
	J4	±0.01°
Robot body weight		13kg
Installation mode		Countertop mounting
Body interface	Reserved IO	12Pin
	Reserved gas	2*φ6mm
Installation environment	Ambient temperature	0~40°C
	Relative humidity	20%~80%RH(no condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference
Application		Handling, palletizing, depalletizing, 3C
Matching electrical cabinet		G12

### WORKING RANGE DIAGRAM



### INSTALLATION INTERFACE DIAGRAM



# CRP-RS05-06Z20

# CRP-RS06A-06Z20

# CRP-RS07-06Z20

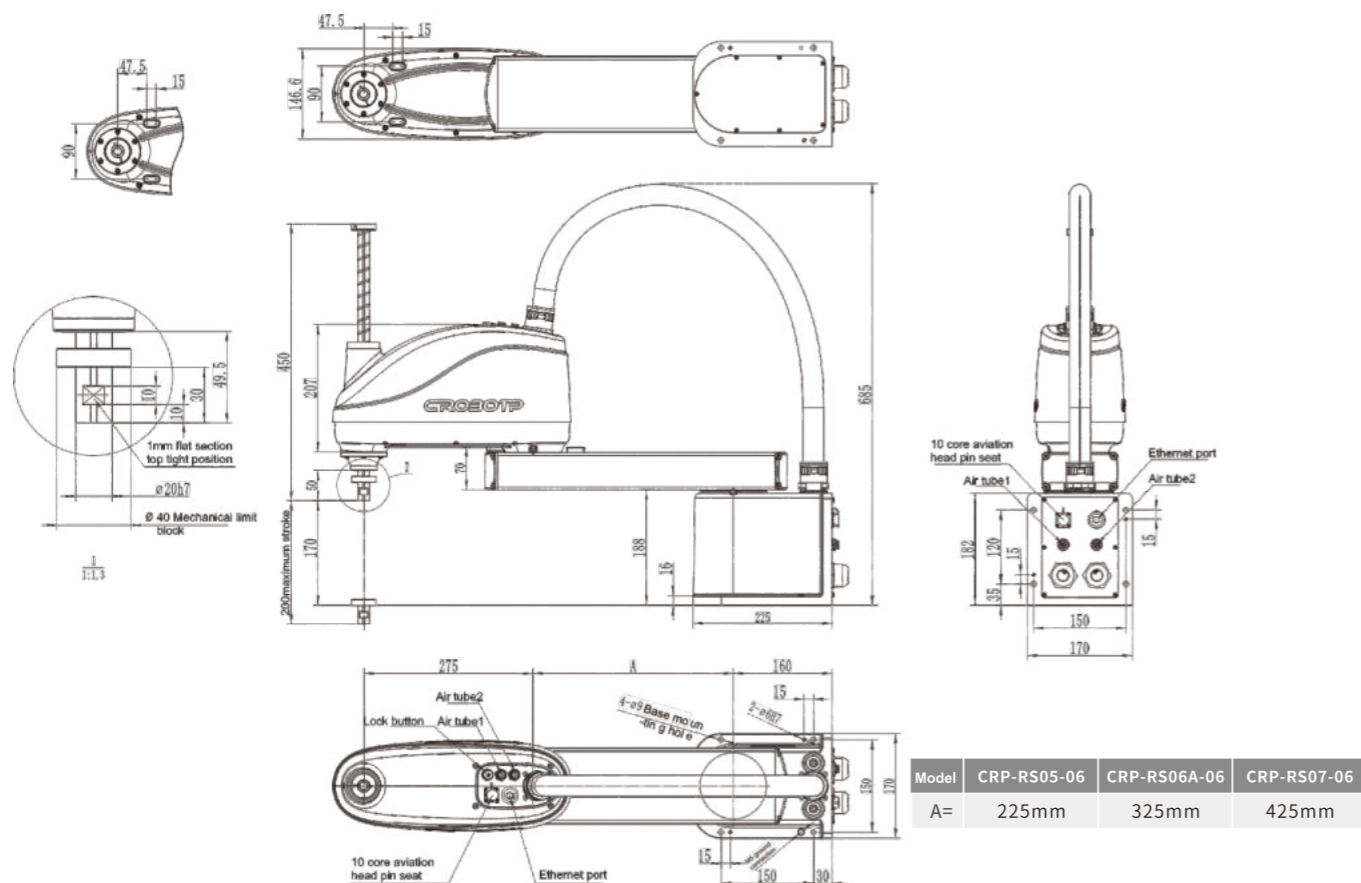
## SCARA BOBOTS



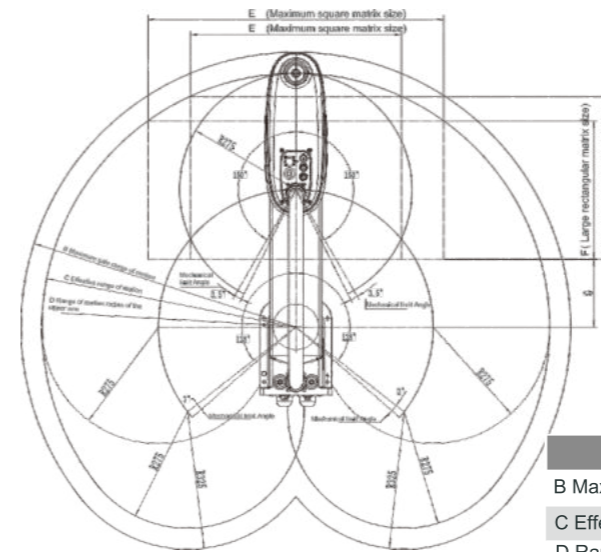
### FUNCTIONAL FEATURES

- High speed, high precision, high stability;
- Adaptive acceleration, improve the life of the robot, ensure that arbitrary trajectory acceleration is more reasonable, more efficient movement;
- Arm built-in gigabit network cable, easy to connect the camera;
- High speed motor, faster speed;
- The large arm adopts modular design, which can meet the customized needs of customers.

### OVERALL DIMENSION



### WORKING RANGE DIAGRAM



Name/Model	CRP-RS05-06Z20	CRP-RS06A-06Z20	CRP-RS07-06Z20
B Maximum safe range of motion	550mm	650mm	750mm
C Effective range of motion	500mm	600mm	700mm
D Range of motion radius of the upper arm	225mm	325mm	425mm
E Maximum square matrix size	400~600mm	500~700mm	500~800mm
F Large rectangular matrix size	240~300mm	325~385mm	350~430mm
G Safe distance from base	160mm	160mm	224mm

### ROBOT BODY TECHNICAL PARAMETERS

Model	CRP-RS05-06Z20	CRP-RS06A-06Z20	CRP-RS07-06Z20
Maximum payload	6kg	6kg	6kg
Maximum coverage	500mm	600mm	700mm
Standard cycle time beat	0.35s	0.36s	0.39s
Maximum travel	J1	±130°	±130°
	J2	±150°	±150°
	J3	200mm	200mm
	J4	±360°	±360°
Maximum speed	J1~J2	7120mm/S	7710mm/S
	J3	1000mm/S	1000mm/S
	J4	2000°/S	2500°/S
	J4 Allowable moment of inertia	Rated load 0.01kg.m <sup>2</sup>	0.01kg.m <sup>2</sup>
Repeated positioning accuracy	Maximum load 0.12kg.m <sup>2</sup>	0.12kg.m <sup>2</sup>	0.12kg.m <sup>2</sup>
	J1~J2	±0.02mm	±0.02mm
	J3	±0.01mm	±0.01mm
Robot body weight	J4	±0.01°	±0.01°
		19kg	20kg
		21kg	
Installation mode	Countertop mounting	Countertop/wall mounting	Countertop mounting
	Reserved IO	10Pin	
	Reserved gas	2*φ8mm, pressure resistance: 0.59Mpa	
Installation environment	Ambient temperature	0~40°C	
	Relative humidity	20%~80%RH(no condensation)	
	Vibration	Under 0.5G	
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference.	
Application	Handling, labeling, lockpicking, glueing, sensing, plug-in, mounting		
Matching electrical cabinet	G12		

# CRP-RS06-10Z40H CRP-RS07-10Z40H CRP-RS08-10Z40H

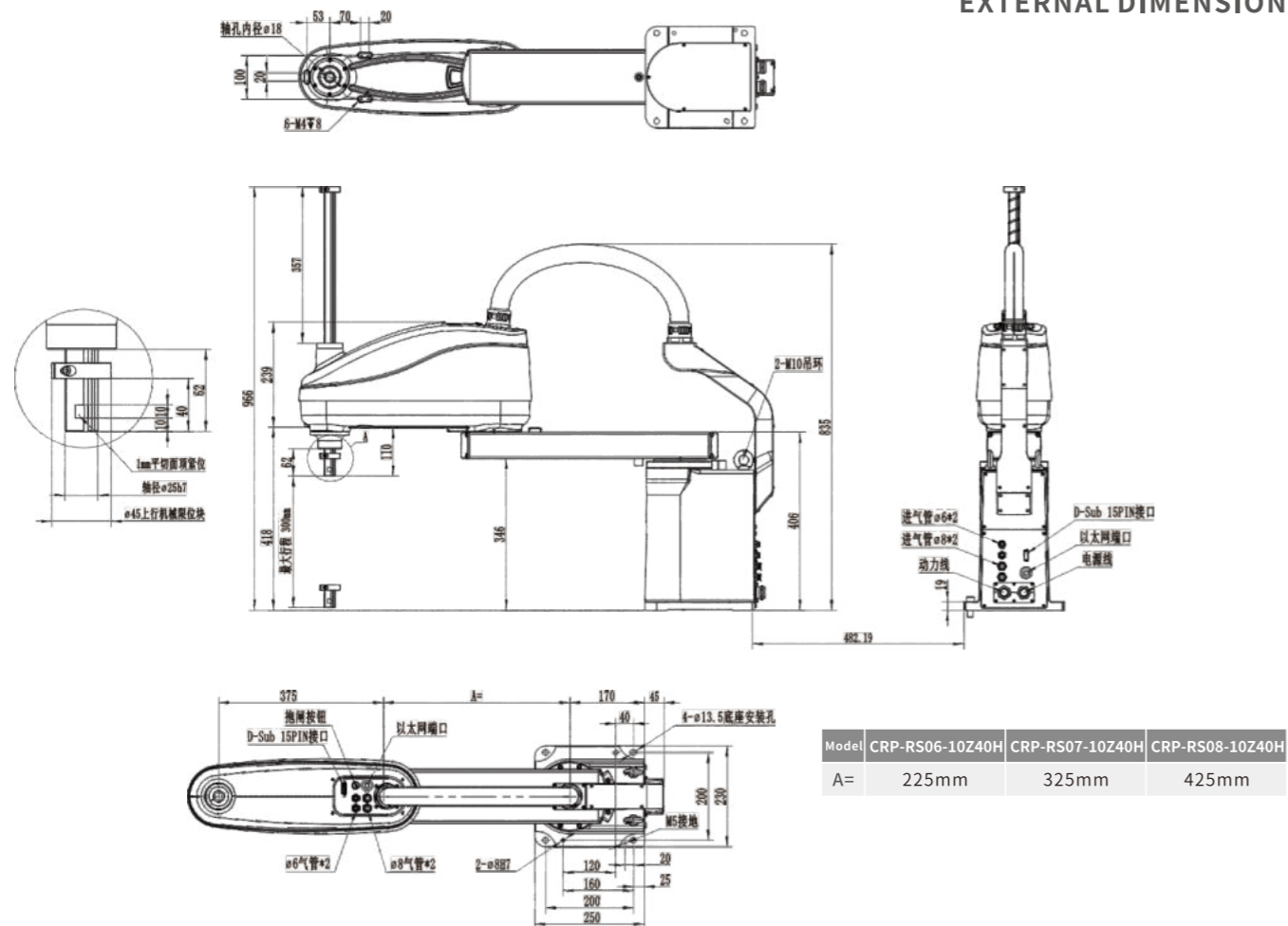
## SCARA ROBOTS



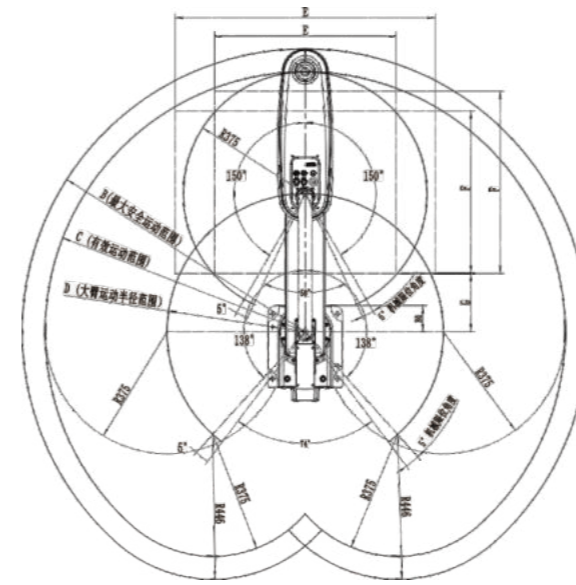
### FUNCTIONAL FEATURES

- Unique structural design, fast running speed, high transmission accuracy, low noise.
- Available in 600, 700, 800 mm arm length specifications, up to 10kg payload, rated payload of 5kg.
- The robot body adopts the special cable for flexible robot, which has high life.
- Equipped with G12 control cabinet, ARM architecture, strong stability, excellent performance.
- It provides dedicated security interface I/O, supports expansion of three network ports, supports hot swap of the teaching device, and ADAPTS to the upper software on the PC. With gravity compensation, load adaptive, and S-T function; The whole machine has higher precision, less impact and faster beats in typical working conditions.
- This machine is mainly used in 3C industry, production line sorting and loading, handling, palletizing, soldering, dispensing, pad printing and other light industrial automation integration fields.

### EXTERNAL DIMENSION



### MOTION RANGE DIAGRAM



NAME / Model	CRP-RS06-10Z40H	CRP-RS07-10Z40H	CRP-RS08-10Z40H
B Maximum safe range of motion	670mm	770mm	870mm
C Effective range of motion	600mm	700mm	800mm
D Radius of upper arm movement	225mm	325mm	425mm
E The maximum square matrix size	450mm	550~750mm	560~800mm
F Large rectangular square size	250mm	400~460mm	500~560mm
G Base safety distance	300mm	180mm	180mm

### ROBOT BODY TECHNICAL PARAMETERS

Model	CRP-RS06-10Z40H	CRP-RS07-10Z40H	CRP-RS08-10Z40H
Maximum payload	10kg	10kg	10kg
Maximum coverage	600mm	700mm	800mm
Standard cycle time beat	0.48s	0.48s	0.48s
Maximum travel	J1	±142°	±142°
	J2	±160°	±160°
	J3	400mm	400mm
	J4	±360°	±360°
Maximum speed	J1~J2	9000mm/S	10500mm/S
	J3	1100mm/S	1100mm/S
	J4	2600°/S	2600°/S
	J4 Allowable moment of inertia	Rated load	0.02kg.m <sup>2</sup>
	Maximum load	0.25kg.m <sup>2</sup>	0.25kg.m <sup>2</sup>
Repeated positioning accuracy	J1~J2	±0.025mm	±0.025mm
	J3	±0.01mm	±0.01mm
	J4	±0.01°	±0.01°
Robot body weight	36kg	37kg	38kg
Installation mode	Countertop mounting	Countertop/wall mounting	Countertop mounting
Body interface	Reserved IO	15Pin	
	Reserved gas	2*φ6mm, 2*φ8mm, pressure resistance: 0.59Mpa	
Installation environment	Ambient temperature	0~40°C	
	Relative humidity	20%~80%RH(no condensation)	
	Vibration	Under 0.5G	
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference.	
Application	Handling, sorting, loading and unloading, palletizing, soldering, dispense glueing, pad printing		
Matching electrical cabinet	G12		



# CRP-RS12-60Z40

## SCARA ROBOT



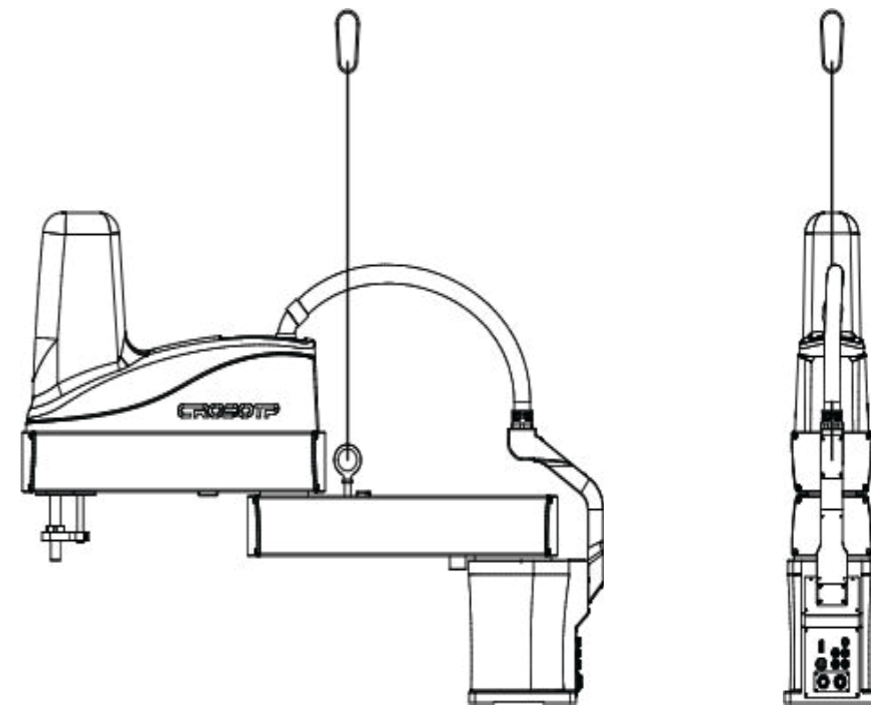
### FUNCTIONAL FEATURES

- The maximum load of the robot can reach 60kg,the arm span can reach 1200mm,andthe effective travel of the Z-axis can meet 400mm;
- Standard door type beat up to 0.79s,faster speed,fast handling;
- Robot built-in 1 gigabit network cable,can meet the need for network cable communication,reduce cable interference;
- The product structure is compact,the weight is only 120kg,combined with software algorithm processing,to achieve stable and efficient operation of the robot in practical applications.

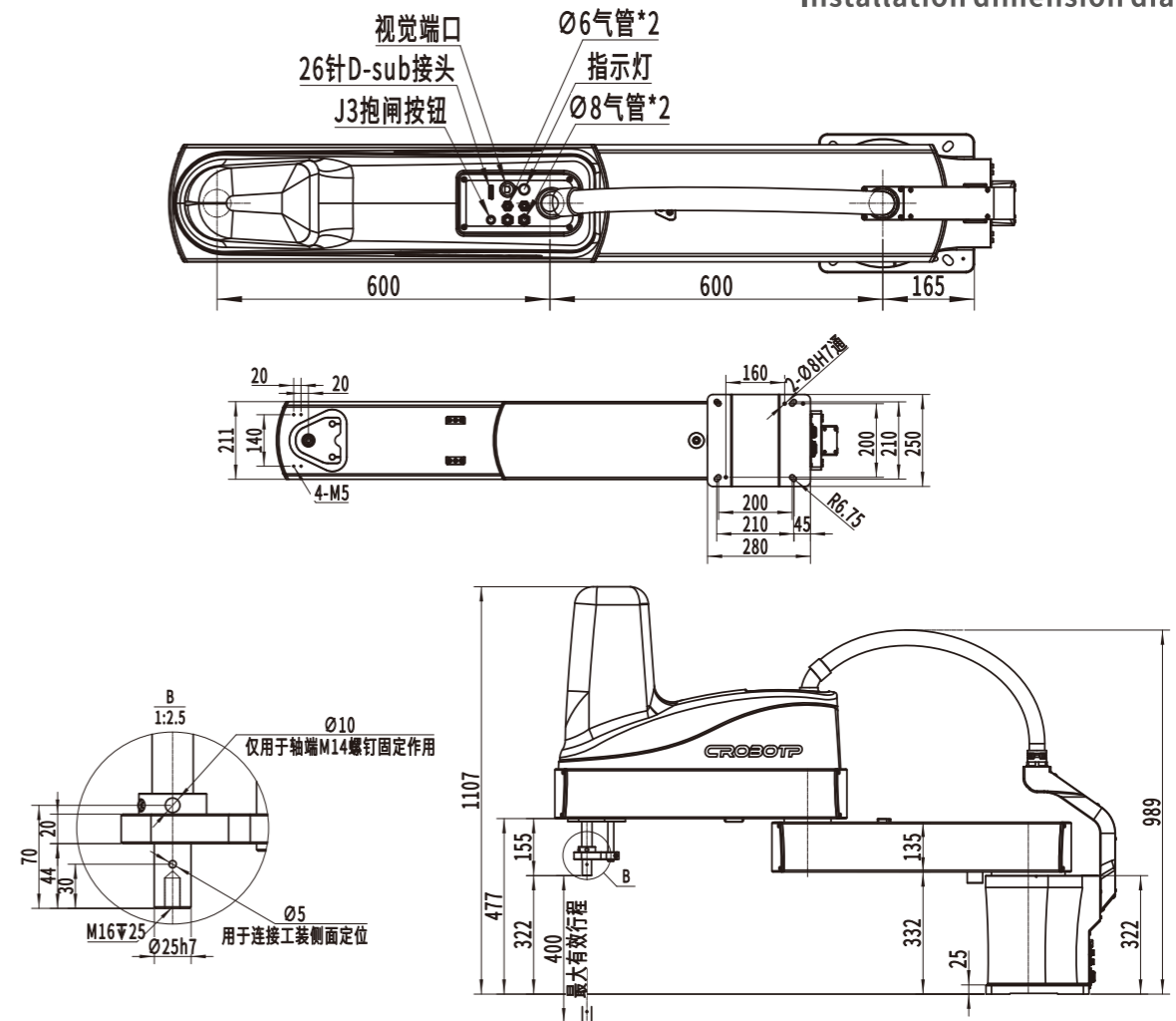
### ROBOT BODY TECHNICAL PARAMETERS

Model		CRP-RS12-60Z40
Maximum payload		60kg
Maximum coverage		1200mm
Standard cycle time beat		0.79s
Maximum travel	J1	±130°
	J2	±150°
	J3	400mm
	J4	±360°
Maximum speed	J1~J2	8062mm/S
	J3	760mm/S
	J4	669°/S
	J4 Allowable moment of inertia	Rated load
	Maximum load	2.4kg. □
Repeated positioning accuracy	J1~J2	±0.03mm
	J3	±0.02mm
	J4	±0.05°
Robot body weight		120kg
Installation mode		Countertop mounting
Body interface	Reserved IO	15Pin
	Reserved gas	2*φ6mm, 2*φ8mm, pressure resistance: 0.59Mpa
Installation environment	Ambient temperature	0~40°C
	Relative humidity	20%~80%RH(no condensation)
	Vibration	Under 0.5G
	Others	Robot installation must be away from: flammable or corrosive liquids or gases, electrical sources of interference.
Application		Handling, sorting, loading and unloading, palletizing, soldering, dispense glueing, pad printing
Matching electrical cabinet		G12

Hoisting diagram



Installation dimension diagram



# CRP-RC09-05

# CRP-RC13-10

Collaborative robot



CRP-RC09-05

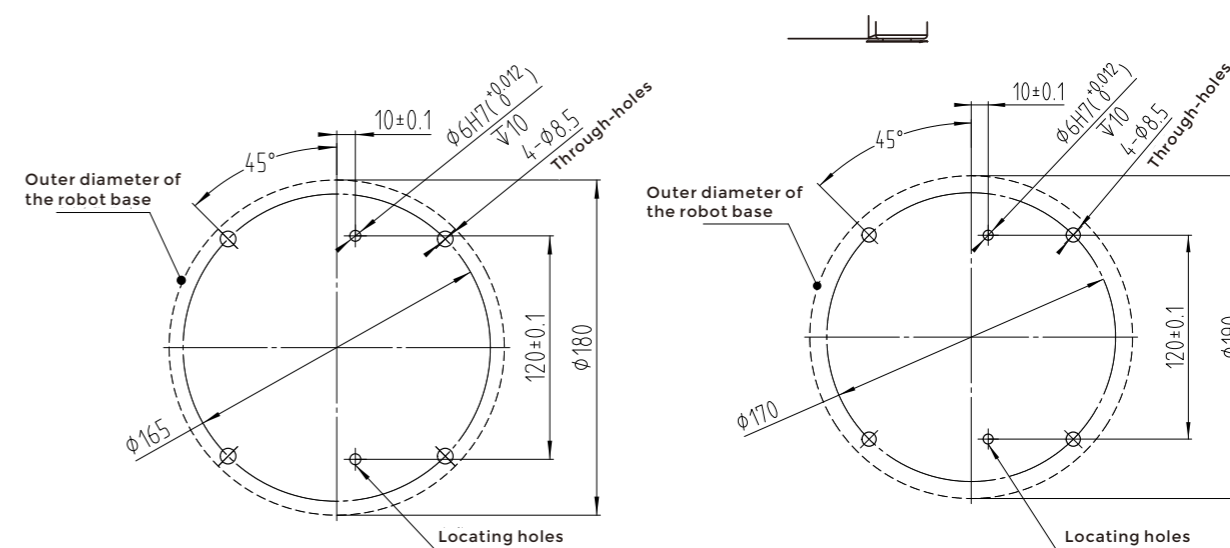


CRP-RC13-10

## ROBOT BODY TECHNICAL PARAMETERS

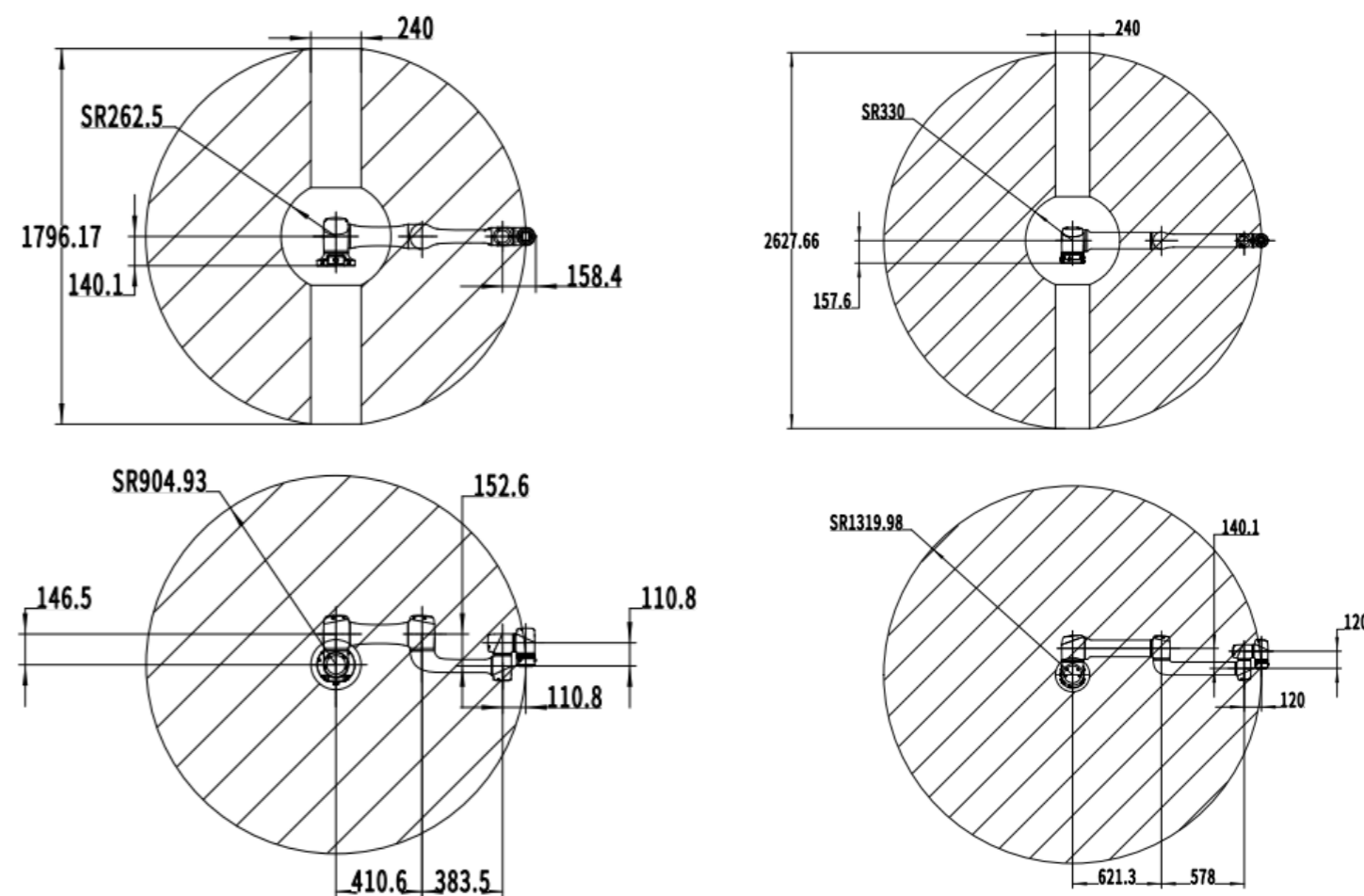
Robot Model		CRP-RC09-05	CRP-RC13-10
Degree of freedom		6 axis	6 axis
Maximum load		5kg	10kg
Maximum coverage		906mm	1320mm
Repeated positioning accuracy		±0.02mm	±0.03mm
Robot body weight		25kg	37.8kg
Maximum travel	J1	-360°~360°	-360°~360°
	J2	-360°~360°	-360°~360°
	J3	-78°~256°	-75°~255°
	J4	-360°~360°	-360°~360°
	J5	-360°~360°	-360°~360°
	J6	-360°~360°	-360°~360°
Maximum speed	J1	225°/s	107°/s
	J2	225°/s	107°/s
	J3	225°/s	200°/s
	J4	250°/s	250°/s
	J5	250°/s	250°/s
	J6	250°/s	250°/s
IP level		IP54	IP54
Matching electrical cabinet		X3 cooperative electrical cabinet	X3 cooperative electrical cabinet

## INSTALLATION INTERFACE DIAGRAM



CRP-RC09-05/ CRP-RC09-05-w Robot flanges    CRP-RC13-10/ CRP-RC13-10-w Robot flanges

## MOTION RANGE DIAGRAM

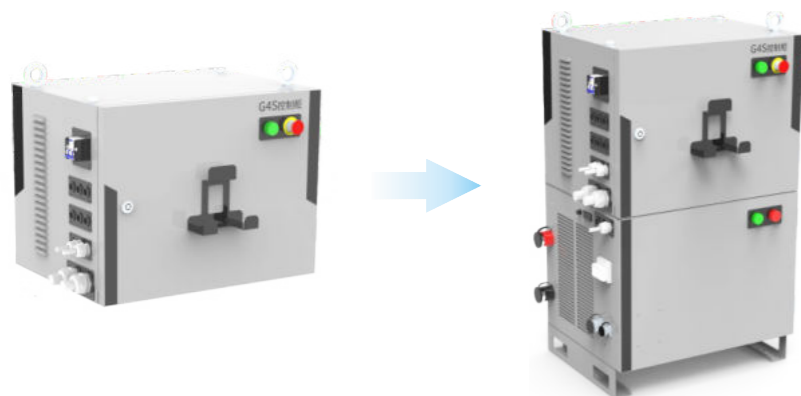


CRP-RC09-05/CRP-RC09-05-W

CRP-RC13-10/CRP-RC13-10-W

# CRP-G4S-CD60

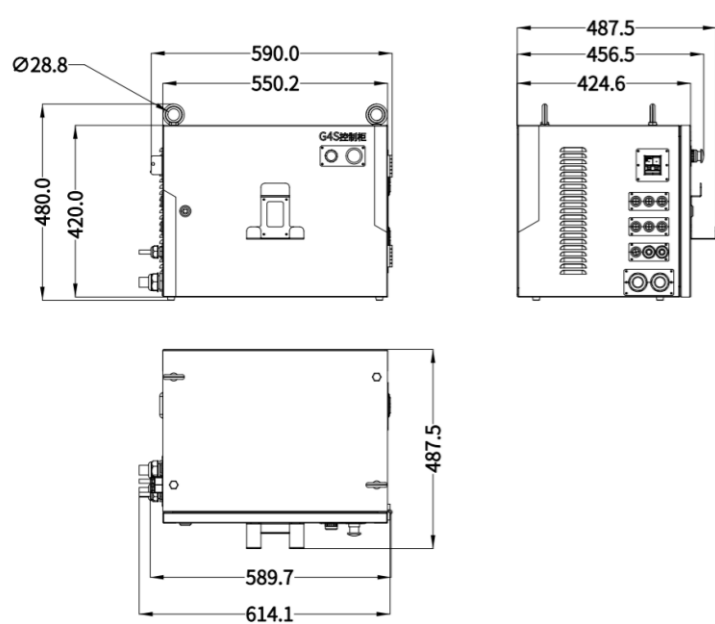
## INDUSTRIAL ROBOT ELECTRICAL CABINET



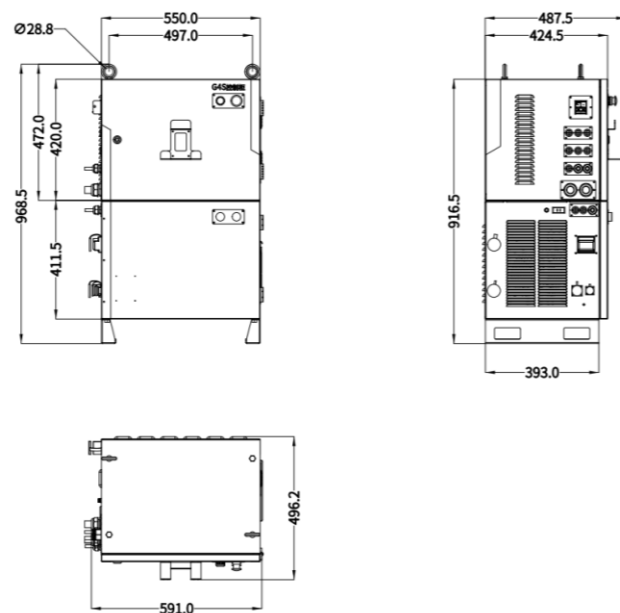
### Function features

1. Welding Pro series electrical cabinet.
2. The integrated design of the electrical cabinet and welding machine features a compact structure and small footprint.
3. Single-phase 220V input power supply, convenient for quick access.
4. Built-in UPS, supports power regeneration after outage.
5. Independent air duct, prevents dust from entering, ensures long-term stability.

### CABINET DIMENSIONAL DRAWING



G4S installation dimensions



G4S+DS350-L installation dimensions

### G4SCABINET TECHNICAL INDEX

Model	CRP-G4S-CD60-CRX8
Teaching pendant	Touch Panel, Emergency Stop Button, Mode Selector Switch, Safety Switch, Quick Keypad
	V2 Teaching pendant, standard 6m cable
Size weight	8-inch TFT-LCD touch panel
	156(W)×310(H)×50(T)mm, 0.88kg
Protective structure	IP51
Cooling method	Forced air cooling
Environmental parameters	Storage temperature: -10~65°C
	Use temperature: 0~45°C
	Relative humidity: 20~85%RH (no condensation)
	Altitude: ≤2000m
Power supply	Single-phase AC220V ±10%, 50/60Hz
Connection cable	Power cord standard 3 meters, interconnecting cable standard 5 meters
Grounding	Must have protective earth (PE)
System configuration	Main Frequency: 500MHz, Memory: 256M DDR SDRAM, Hard Disk: 2G SSD, UPS: 7S
Hardware interface	Digital I/O interface, 23-channel NPN input/23-channel output, output voltage 24V, output current 8-channel relay 3A, 16 way transistor 200mA
	4-channel 0~10V analog output, 2-channel optional isolation, 12-bit precision.
	2 encoder signal interfaces, 5V encoder power supply
	1 channel 100Mbps network
Robot safety	1-way RS485, 1-way CAN2.0, 1-way RS232
	2-way USB2.0
EMC Test standards	2 workstation boxes
Communication protocols	Cabinet door emergency stop, external emergency stop, anti-collision, servo STO
Operating mode	IEC 61000-6-2:2016
	ModbusRTU, ModbusTCP
Command system	Teach, reproduce, remote
Coordinate system	Point-to-point, linear interpolation, circular interpolation
Software package	Motion, Logic, Process, Arithmetic
Other	Joint coordinates, Cartesian coordinates, User coordinates, Tool coordinates, Base coordinates
Number of control axis	Basic welding
Supported body model	/
	6+2 axes (6 axes standard, external axes optional)
	Six-axis low load series

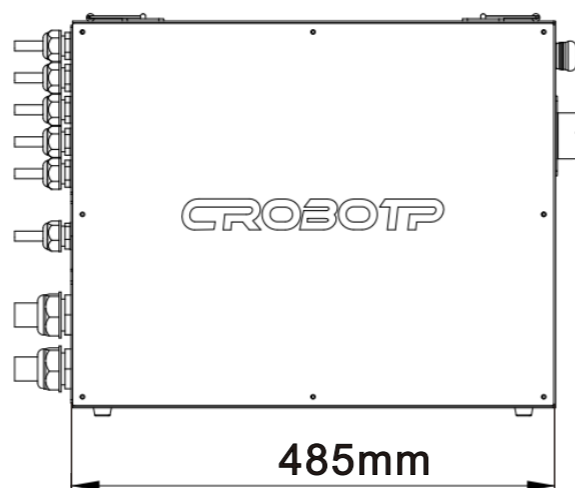
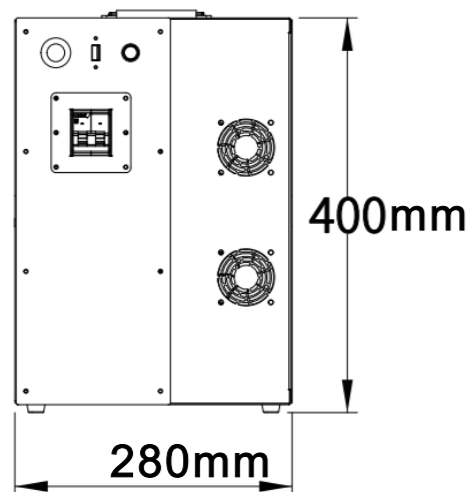
# CRP-G5A-CD60C



## Function features

- 1、The cabinet structure is more compact, occupying less space.
- 2、The layout is more flexible, with various installation methods.
- 3、Using a quick connector, wiring is more convenient.
- 4、Independent duct, prevents dust from entering, ensures long-term stability.
- 5、The interface is more versatile, supporting various communication protocols.

## CABINET DIMENSIONAL DRAWING



## G5A CABINET TECHNICAL INDEX

Model	CRP-G5A-CD60-CRX9
Teaching pendant	Touch Panel, Emergency Stop Button, Mode Selector Switch, Safety Switch, Quick Keypad
	E-type Teaching pendant, standard 6m cable
	5.6-inch TFT-LCD touch panel, express programming
Size weight	290(W)×218(H)×113(T)mm, 1.29kg
	279(W)×400(H)×485(D)mm, 35kg
Protective structure	IP51
Cooling method	Forced air cooling
Environmental parameters	Storage temperature: -10~65°C
	Use temperature: 0~45°C
	Relative humidity: 20~85%RH (no condensation)
	Altitude: ≤2000m
	Corrosion: no corrosive gases and liquids
Power supply	Single-phase AC220V ±10%, 50/60Hz
Connection cable	Power cord standard 3 meters, interconnecting cable standard 5 meters
Grounding	Must have protective earth (PE)
System configuration	Main Frequency: 1.6GHz, Memory: DDR4L 1333MHz 2GByte, Hard Disk: 8G EMMC, UPS: 7S
Hardware interface	Digital I/O interface, 24-channel NPN input/24-channel output, output voltage 24V, output current 8-channel relay 3A, 16 way transistor 200mA
	4-channel 0~10V analog output, 2-channel optional isolation, 12-bit precision.
	2 encoder signal interfaces, 5V encoder power supply
	2-channel 100Mbps network (1 channel occupied by the demonstrator), 2-channel Gigabit network can be expanded according to customer requirements
	2-way RS485, 2-way CAN2.0
Robot safety	1 USB2.0 for cabinet door pane
EMC Test standards	3 workstation box interface
Communication protocols	Cabinet door emergency stop, external emergency stop, anti-collision, servo STO
Operating mode	IEC 61000-6-2:2016
	ModbusRTU, ModbusTCP
Command system	Teach, reproduce, remote
Coordinate system	Point-to-point, linear interpolation, circular interpolation, gate motion
Software package	Motion, Logic, Process, Arithmetic
	Joint coordinates, Cartesian coordinates, User coordinates, Tool coordinates, World coordinates
Other	Welding/spot welding/handling/palletizing/etc. optional
Number of control axis	Built-in PLC, power failure regeneration, encoder interface (support synchronous belt), vision software (optional)
Supported body model	6+2 axes (6 axes standard, external axes optional), EtherCAT bus extension
	Six-axis low load laser welding

# G9A Control cabinet

## light load control cabinet



### Functional Features

**Using a split design**

The electrical cabinet is mainly divided into a power room and a control room. The power room primarily houses heat-generating components, using multiple groups of fans+duct design to ensure good heat dissipation for these components. The control room is isolated from the power room to prevent dust and oil contamination, ensuring cleanliness in the control from being affected by dust and oil, which could lead to abnormal operation.

**Multiple sets of anti-interference components**

Power filters, isolation transformers, and dual-switch power supplies are used to ensure the stable and reliable operation of the control cabinet.

**Built-in safety emergency stop board**

Using imported forced-disconnection relays, dual-circuit emergency stop is provided externally. When any emergency stop button is pressed, the power circuit and servo unit are simultaneously and immediately processed to forcibly stop the robot's movement, thereby achieving safe emergency stop.

**Collision softening**

When the anti-collision signal is effective, the system and driver respond simultaneously, quickly softening the attitude axis to avoid damage to the body and welding gun.

**Automatic external power-on function**

Ensure that the operator's line of sight is diverted away from the robot to safeguard the operator's personal safety.

**Energy-saving mode**

Effectively reduce standby energy consumption. At the same time, prevent personnel from accidentally entering the robot area during standby status, which can cause injury.

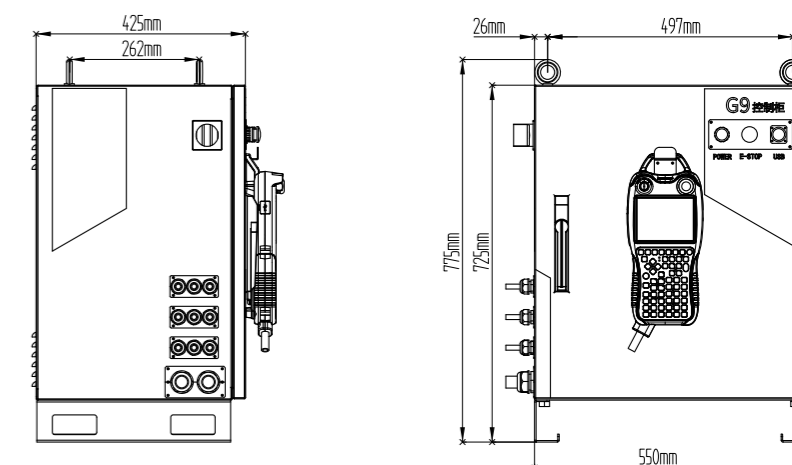
Equipped with a three-phase transformer, isolated at 380V and 200V, the power supply is more stable. It also contains a three-phase filter, effectively isolating external interference and preventing internal interference from being output.

Dual power supply design to avoid internal power interference.

### G9A CABINET TECHNICAL INDEX

Model	CRP-G9A-CD60D-CRA9	
Teaching pendant	Touch Panel, Emergency Stop Button, Mode Selector Switch, Safety Switch, Quick Keypad	
	C-type Teaching pendant, standard 6m cable	E-type Teaching pendant, standard 6m cable
	8-inch TFT-LCD touch panel	5.6-inch TFT-LCD touch panel, express programming
	156(W)×310(H)×50(T)mm, 0.88kg	290(W)×218(H)×113(T)mm, 1.29kg
Size weight	550(W)×725(H)×425(D)mm, 90kg	
Protective structure	Control front compartment IP54, cooling rear compartment IP20, front and rear compartment isolation, unlocked cabinet door disconnect main power	
Cooling method	Forced air cooling	
Environmental parameters	Storage temperature: -10~65°C	
	Use temperature: 0~45°C	
	Relative humidity: 20~85%RH (no condensation)	
	Altitude: ≤2000m	
	Corrosion: no corrosive gases and liquids	
Power supply	Three-phase AC380V ±10%, 50/60Hz	
Connection cable	Power cord standard 3 meters, interconnecting cable standard 5 meters	
Grounding	Must have protective earth (PE)	
System configuration	Main Frequency: 1.6GHz, Memory: DDR4L 1333MHz 2GByte, Hard Disk: 8G EMMC, UPS: 7S	
Hardware interface	Digital I/O interface, 24-channel NPN input/24-channel output, output voltage 24V, output current 8-channel relay 3A, 16 way transistor 200mA	
	4-channel 0~10V analog output, 12-bit precision.	
	2 encoder signal interfaces, 5V encoder power supply	
	2-channel 100Mbps network (1 channel occupied by the demonstrator), 2-channel Gigabit network can be expanded according to customer requirements	
Robot safety	2-way RS485, 2-way CAN2.0	
	1 USB2.0 for cabinet door pane	
	3 workstation box interface	
EMC Test standards	IEC 61000-6-2:2016	
Communication protocols	ModbusRTU, ModbusTCP	
Operating mode	Teach, reproduce, remote	
Command system	Point-to-point, linear interpolation, circular interpolation, gate motion	
Coordinate system	Motion, Logic, Process, Arithmetic	
Software package	Joint coordinates, Cartesian coordinates, User coordinates, Tool coordinates, World coordinates	
	Handling / Palletizing / Vision / Tracking / Background Tasks / Servo Collision / Soft Float / Chinese Programming	Arc Welding / Spot Welding / Laser Welding / Pendulum Arc / Arc Tracking / Expert database / servo collision / torch collision / Chinese programming
Other	Built-in PLC, power failure regeneration, encoder interface (support synchronous belt)	
Number of control axis	Standard configuration 6 axes (external axes are optional, maximum extension of external axes is 6 axes)	
Supported body model	Six-axis low load series (handling) Six-axis low load series (welding)	

### Dimensions of the electrical cabinet



# G11-CD40C-CRA9

## INDUSTRIAL ROBOT ELECTRICAL CABINET

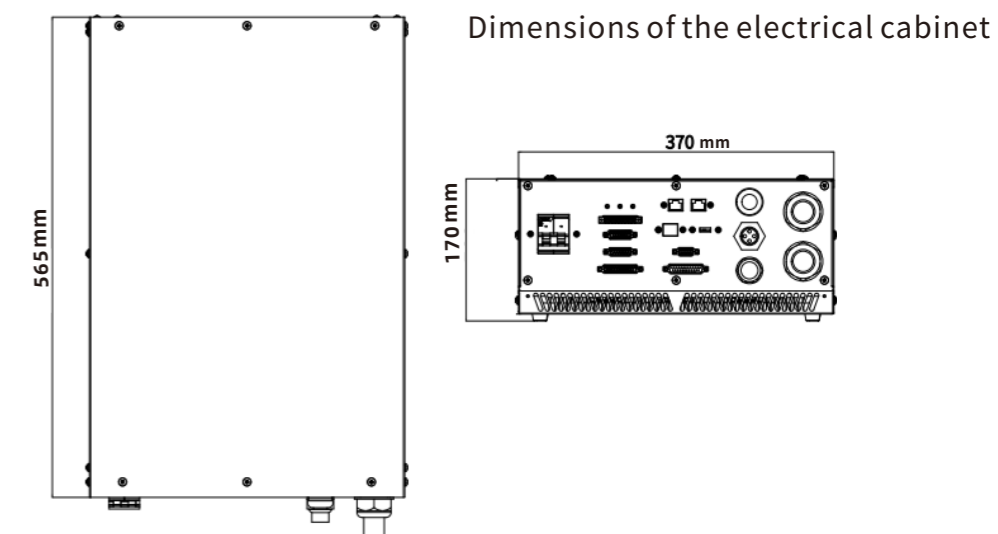


### Functional Features

- Strong stability :ARM architecture has the characteristic of strong stability ,the controller system operation stability, high reliability, can support various industrial agreements, network interfaces and a variety of peripheral devices
- Excellent performance: The industrial robot control cabinet based on ARM platform has high efficiency, low power consumption and multi-task capability, and can support real-time multi-service operation; ensure the accuracy and speed of the robot
- Volume reduction: Compared with the first generation of products, the size of the robot electric cabinet is further reduced, which can realize the installation within a small space range and further save space.

### G11CABINET TECHNICAL INDEX

Model	CRP-G11-CD60C-CRX9
Teaching pendant	Touch Panel, Emergency Stop Button, Mode Selector Switch, Safety Switch, Quick Keypad C-type Teaching pendant, standard 6m cable
Size weight	8-inch TFT-LCD touch panel 290(W)×220(H)×110(T)mm, 1.3kg 370(W)×170(H)×565(D)mm, 33kg
Protective structure	IP20
Cooling method	Forced air cooling
Environmental parameters	Storage temperature: -10~65°C Use temperature: 0~45°C Relative humidity: 20~85%RH (no condensation) Altitude: ≤2000m Corrosion: no corrosive gases and liquids Place of use: indoor, ventilated, non-confined
Power supply	Single-phase AC220V ±10%, 50/60Hz
Connection cable	Power cord standard 3 meters, interconnecting cable standard 5 meters
Grounding	Must have protective earth (PE)
System configuration	Main Frequency: 1.6GHz, Memory: DDR4L 1333MHz 2GByte, Hard Disk: 8G EMMC, UPS: 7S
Hardware interface	Digital I/O interface, 24-channel NPN input/24-channel output, output voltage 24V, output transistor 200mA 4-channel 0~10V analog output, 2-channel optional isolation, 12-bit precision. 2 encoder signal interfaces, 5V encoder power supply 1 Gigabit network, 1 Hundred Gigabit network (1 occupied by the demonstrator), 2 Gigabit networks can be expanded according to customer demand 2-way RS485, 2-way CAN2.0 1 USB2.0 for cabinet door pane
Robot safety	Cabinet door emergency stop, external emergency stop, anti-collision, servo STO
EMC Test standards	IEC 61000-6-2:2016
Communication protocols	Standard: ModbusRTU master/slave, ModbusTCP master/slave, EtherCAT master Options: PROFINET slave, EtherCAT slave, EtherNet/IP slave, CC-Link IE Field slave
Operating mode	Teach, reproduce, remote Point-to-point, linear interpolation, circular interpolation, gate motion
Command system	Motion, Logic, Process, Arithmetic
Coordinate system	Joint coordinates, Cartesian coordinates, User coordinates, Tool coordinates, World coordinates
Software package	Handling, Palletizing, Vision, Tracking, Background Tasks, Servo Collision, Soft Float, Chinese Programming
Other	Built-in PLC, regeneration in case of power failure, encoder interface (synchronous belt support), CrobotLab (PC programming).
Number of control axis	Standard configuration 6 axes (external axes are optional, the maximum expansion of external axes 6 axes)
Supported body model	Six-axis low load series /small six-axis series



# G12 control cabinet

## light load four-axis control cabinet



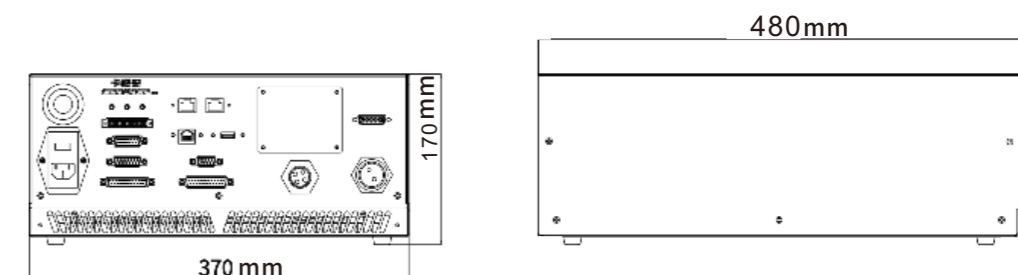
### Functional Features

- Strong stability :ARM architecture has the characteristic of strong stability ,the controller system operation stability, high reliability, can support various industrial agreements, network interfaces and a variety of peripheral devices
- Excellent performance: The industrial robot control cabinet based on ARM platform has high efficiency, low power consumption and multi-task capability, and can support real-time multi-service operation; ensure the accuracy and speed of the robot
- Volume reduction: Compared with the first generation of products, the size of the robot electric cabinet is further reduced, which can realize the installation within a small space range and further save space.

### G12 CABINET TECHNICAL INDEX

Model	CRP-G12-CD40C-CRA9
Teaching pendant	Touch Panel, Emergency Stop Button, Mode Selector Switch, Safety Switch, Quick Keypad C-type Teaching pendant, standard 6m cable 8-inch TFT-LCD touch panel 290(W)×220(H)×110(T)mm, 1.3kg
Size weight	370(W)×170(H)×480(D)mm, 30kg
Protective structure	IP20
Cooling method	Forced air cooling
Environmental parameters	Storage temperature: -10~65°C Use temperature: 0~45°C Relative humidity: 20~85%RH (no condensation) Altitude: ≤2000m Corrosion: no corrosive gases and liquids Place of use: indoor, ventilated, non-confined
Power supply	Single-phase AC220V ±10%, 50/60Hz
Connection cable	Power cord standard 3 meters, interconnecting cable standard 5 meters
Grounding	Must have protective earth (PE)
System configuration	Main Frequency: 1.6GHz, Memory: DDR4L 1333MHz 2GByte, Hard Disk: 8G EMMC, UPS: 7S
Hardware interface	Digital I/O interface, 24-channel NPN input/24-channel output, output voltage 24V, output transistor 200mA 4-channel 0~10V analog output, 2-channel optional isolation, 12-bit precision. 2 encoder signal interfaces, 5V encoder power supply 1 Gigabit network, 1 Hundred Gigabit network (1 occupied by the demonstrator), 2 Gigabit networks can be expanded according to customer demand 2-way RS485, 2-way CAN2.0 1 USB2.0 for cabinet door pane
Robot safety	Cabinet door emergency stop, external emergency stop, anti-collision, servo STO
EMC Test standards	IEC 61000-6-2:2016
Communication protocols	Standard: ModbusRTU master/slave, ModbusTCP master/slave, EtherCAT master Options: PROFINET slave, EtherCAT slave, EtherNet/IP slave, CC-Link IE Field slave
Operating mode	Teach, reproduce, remote Point-to-point, linear interpolation, circular interpolation, gate motion
Command system	Motion, Logic, Process, Arithmetic
Coordinate system	Joint coordinates, Cartesian coordinates, User coordinates, Tool coordinates, World coordinates
Software package	Handling, Palletizing, Vision, Tracking, Background Tasks, Servo Collision, Soft Float, Chinese Programming
Other	Built-in PLC, regeneration in case of power failure, encoder interface (synchronous belt support), CrobotLab (PC programming).
Number of control axis	Standard configuration 4 axes (external axes are optional, the maximum expansion of external axes 6 axes)
Supported body model	4-axis SCARA series / 4-axis small palletizing series

### Dimensions of the electrical cabinet



# G15A control cabinet

## Control cabinets for medium and large loads



### The Introduction and Features of Electrical Cabinet

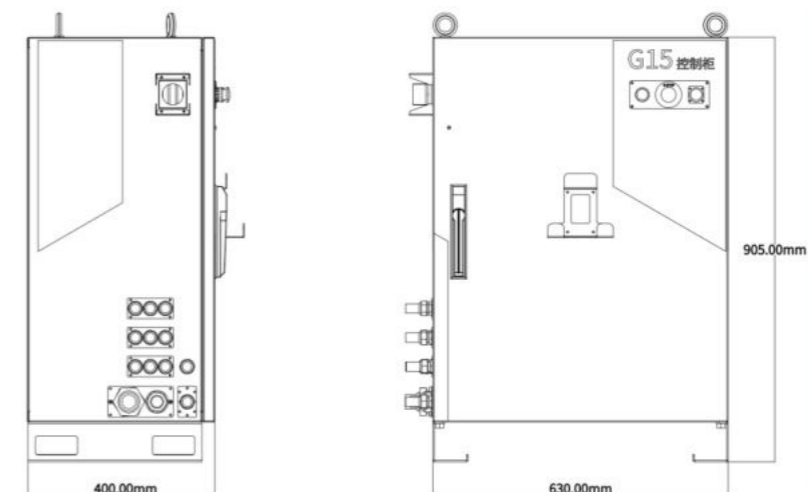
- Using a split design  
The electrical cabinet is mainly divided into a power room and a control room. The power room primarily houses heat-generating components, using multiple groups of fans+duct design to ensure good heat dissipation for these components. The control room is isolated from the power room to prevent dust and oil contamination, ensuring cleanliness in the control from being affected by dust and oil, which could lead to abnormal operation.
- Configure a safety emergency stop panel independent of the control system, using imported forced-break relays to provide dual-circuit emergency stop externally, ensuring the reliability of the emergency stop.
- Automatic external power-on function  
Ensure that operators can control the robot while their line of sight is shifted or away from the robot, thereby safeguarding the personal safety of the operators.
- Energy-saving mode  
Effectively reduce standby energy consumption. At the same time, prevent personnel from accidentally entering the robot area during standby status, which can cause injury.
- Using a three-phase 380V power supply directly, it saves the transformer and reduces costs.
- Equipped with a three-phase filter, effectively isolating external interference and preventing internal interference from being output.
- Add a USB port to the cabinet door, allowing program import and export without opening the cabinet door.
- New door detection function added; power cannot be supplied if the door is not closed, avoiding the impact of dust entering due to unclosed cabinet doors on the control system.
- Built-in reactor, to prevent power surges from impacting the control system.
- Built-in UPS power supply, to avoid the impact of emergency stops and power outages on the robot's reducer.
- High output power, capable of driving a load of 50-220kg.

### G15 CABINET TECHNICAL INDEX

Model	CRP-G15A-CDH80B-CRA9
Teaching pendant	Touch Panel, Emergency Stop Button, Mode Selector Switch, Safety Switch, Quick Keypad
	C-type Teaching pendant, standard 6m cable
	8-inch TFT-LCD touch panel
Size weight	156(W)×310(H)×50(T)mm, 0.88kg
	630(W)×905(H)×400(D)mm, 120kg
Protective structure	Control front compartment IP54, cooling rear compartment IP20, front and rear compartment isolation, unlocked cabinet door disconnect main power
Cooling method	Forced air cooling
Environmental parameters	Storage temperature: -10~65°C
	Use temperature: 0~45°C
	Relative humidity: 20~85%RH (no condensation)
	Altitude: ≤2000m
	Corrosion: no corrosive gases and liquids
Power supply	Three-phase AC380V ±10%, 50/60Hz
Connection cable	Power cord standard 3 meters, interconnecting cable standard 5 meters
Grounding	Must have protective earth (PE)
System configuration	Main Frequency: 1.6GHz, Memory: DDR4L 1333MHz 2GByte, Hard Disk: 8G EMMC, UPS: 7S
	Digital I/O interface, 24-channel NPN input/24-channel output, output voltage 24V, output current 8-channel relay 3A, 16-channel transistor 200mA
Hardware interface	4-channel 0~10V analog output, 12-bit precision.
	2 encoder signal interfaces, 5V encoder power supply
	2-way 100Mbps network (1-way for tutor), 2-way Gigabit network can be extended according to customers' requirements.
	2-way RS485, 2-way CAN2.0
Robot safety	3 station box interfaces Cabinet door emergency stop, external emergency stop, anti-collision, servo STO
EMC Test standards	IEC 61000-6-2:2016
Communication protocols	Standard: ModbusRTU master/slave, ModbusTCP master/slave, EtherCAT master Options: PROFINET slave, EtherCAT slave, EtherNet/IP slave, CC-Link IE Field slave
Operating mode	Teach, reproduce, remote
	Point-to-point, linear interpolation, circular interpolation, gate motion
Command system	Motion, Logic, Process, Arithmetic
Coordinate system	Joint coordinates, Cartesian coordinates, User coordinates, Tool coordinates, World coordinates
Software package	Handling, Palletizing, Vision, Tracking, Background Tasks, Servo Collision, Soft Float, Chinese Programming
Other	Built-in PLC, regeneration in case of power failure, encoder interface (synchronous belt support).
Number of control axis	Standard configuration 6 axes (external axes are optional, the maximum expansion of external axes 6 axes)
Supported body model	Six-axis medium and large load series.

\*Please note that it is easy to condense when the temperature drops and the humidity rises.

### Dimensions of the electrical cabinet



# X2 Control cabinet

## Collaboration electrical box

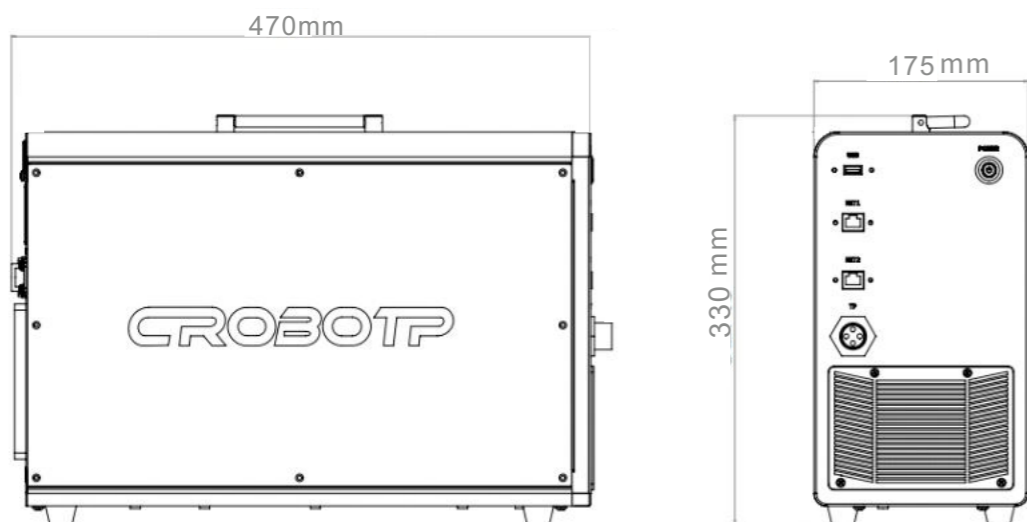


### Functional Features

CRP-X2-ZMC900E control box, referred to as the X2 control box, is a dedicated control box for collaborative robots on the ARM platform.

- Strong stability :ARM architecture has the characteristic of strong stability ,the controller system operation stability, high reliability, can support various industrial agreements, network interfaces and a variety of peripheral devices
- Excellent performance: The industrial robot control cabinet based on ARM platform has high efficiency, low power consumption and multi-task capability, and can support real-time multi-service operation; ensure the accuracy and speed of the robot

### Dimensions of the electrical cabinet



### X2 Collaboration control cabinet specifications

Model	CRP-X2-ZMC900E
Teaching pendant	Touch Panel, Emergency Stop Button, Mode Selector Switch, Safety Switch, Quick Keypad
	C-type Teaching pendant, standard 6m cable
	8-inch TFT-LCD touch panel
Size weight	156(W)×310(H)×50(T)mm, 0.88kg
	173(W)×329(H)×458(D)mm, 11.5kg
Protective structure	IP20
Cooling method	Forced air cooling
Environmental parameters	Storage temperature: -10~65°C
	Use temperature: 0~45°C
	Relative humidity: 20~85%RH (no condensation)
	Altitude: ≤2000m
	Corrosion: no corrosive gases and liquids
Power supply	Single-phase AC110V~242V, 50/60Hz
Connection cable	Power cord standard 2 meters, interconnecting cable standard 5 meters
Grounding	Must have protective earth (PE)
System configuration	Cores include 4+1 64-bit Arm® Cortex®-A55 cores at 2GHz and 3 Cortex-R5F cores at 800MHz. 4GB LPDDR4, 8GB eMMC, and 32KB FRAM are onboard.
Hardware interface	16 user isolated quantity inputs, active low; Do13, DO14, DO15)
	16 user-isolated NPN-type digital outputs, 300mA load (except DO12, DO13, DO14, DO15)
	2-way quadrature coding or two-way pulse counting, DI10 multiplexed to A+, DI11 multiplexed to A-, DI12 multiplexed to B+, DI13 multiplexed to B-, DI14 multiplexed to C+, DI15 multiplexed to C-
	DO12, DO13, DO14, DO15 can be multiplexed to PWM output, 0.1Hz~50KHz, 250mA load
	Cabinet door panel 1x 100 Gigabit, 1x Gigabit (configurable as EtherCAT master 2)
Robot safety	Built-in 1-channel RS485, 1-channel CAN2.0
	Cabinet door panel 1 channel standard USB3.0 Host
	Cabinet door emergency stop, external emergency stop
EMC Test standards	IEC 61000-6-2:2016
Communication protocols	Standard: ModbusRTU master/slave, ModbusTCP master/slave, EtherCAT master
Operating mode	Teach, reproduce, remote
	Point-to-point, linear interpolation, circular interpolation, gate motion
Command system	Motion, Logic, Process, Arithmetic
Coordinate system	Joint coordinates, Cartesian coordinates, User coordinates, Tool coordinates, World coordinates
Software package	Arc Welding / Spot Welding / Laser Welding / Pendulum Arc / Arc Tracking / Expert Database / Servo Collision / Torch Collision / Chinese Programming
Number of control axis	Standard configuration 6 axes (external axes are optional, the maximum expansion of external axes 6 axes)
Supported body model	RC Series Collaborative Robots

# X3 Control cabinet

## Collaboration electrical box



Touch Panel, Emergency Stop Button, Mode Selector Switch, Safety Switch, Quick Keypad

### X3 Collaboration control cabinet specifications

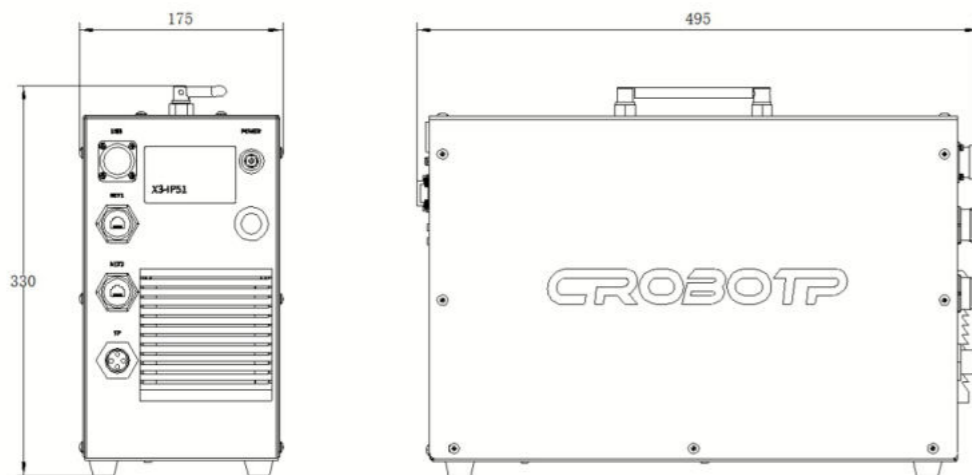
Model	CRP-X2-ZMC900E
Teaching pendant	Touch Panel, Emergency Stop Button, Mode Selector Switch, Safety Switch, Quick Keypad C-type Teaching pendant, standard 6m cable
Size weight	8-inch TFT-LCD touch panel 156(W)×310(H)×50(T)mm, 0.88kg 175(W)×330(H)×495(D)mm, 13kg
Protective structure	IP51
Cooling method	Forced air cooling
Environmental parameters	Storage temperature: -10~65°C Use temperature: 0~45°C Relative humidity: 20~85%RH (no condensation) Altitude: ≤2000m Corrosion: no corrosive gases and liquids Place of use: indoor, ventilated, non-confined
Power supply	Single-phase AC110V~242V, 50/60Hz
Connection cable	Power cord standard 2 meters, interconnecting cable standard 3 meters
Grounding	Must have protective earth (PE)
System configuration	Cores include 4+1 64-bit Arm® Cortex®-A55 cores at 2GHz and 3 Cortex-R5F cores at 800MHz. 4GB LPDDR4, 8GB eMMC, and 32KB FRAM are onboard.
Hardware interface	16 user isolated quantity inputs, active low; 16 user-isolated NPN-type digital outputs, 300mA load (except DO12, DO13, DO14, DO15) 2-way quadrature coding or two-way pulse counting, DI10 multiplexed to A+, DI11 multiplexed to A-, DI12 multiplexed to B+, DI13 multiplexed to B-, DI14 multiplexed to C+, DI15 multiplexed to C- DO12, DO13, DO14, DO15 can be multiplexed to PWM output, 0.1Hz~50KHz, 250mA load Cabinet door panel 1x 100 Gigabit, 1x Gigabit (configurable as EtherCAT master 2) Built-in 1-channel RS485, 1-channel CAN2.0 Cabinet door panel 1 channel standard USB3.0 Host
Robot safety	Cabinet door emergency stop, external emergency stop
EMC Test standards	IEC 61000-6-2:2016
Communication protocols	Standard: ModbusRTU master/slave, ModbusTCP master/slave, EtherCAT master
Operating mode	Teach, reproduce, remote Point-to-point, linear interpolation, circular interpolation, gate motion
Command system	Motion, Logic, Process, Arithmetic
Coordinate system	Joint coordinates, Cartesian coordinates, User coordinates, Tool coordinates, World coordinates
Software package	Arc Welding / Spot Welding / Laser Welding / Pendulum Arc / Arc Tracking / Expert Database / Servo Collision / Torch Collision / Chinese Programming
Number of control axis	Standard configuration 6 axes (external axes are optional, the maximum expansion of external axes 6 axes)
Supported body model	RC Series Collaborative Robots

### Functional Features

CRP-X3-ZMC900E electrical cabinet, abbreviated as X3 electrical cabinet, is a specialized electrical cabinet for collaborative robots on the ARM platform.

1. Strong stability: ARM architecture has the characteristics of strong stability, stable and reliable controller system operation, and can support various industrial protocols, network interfaces, and various peripheral devices.
2. Excellent performance: Industrial robot control cabinets based on the ARM platform have high efficiency, low power consumption, and multitasking capabilities, supporting real-time multitasking operations to ensure robot accuracy and speed.
3. The structural design of IP51 can better adapt to harsh environments and ensure the normal operation of robots.

### Dimensions of the electrical cabinet



# CRP-VLS-160GA-V01

## LASER SEAM TRACKER



### ADVANTAGES OF LASER SEAM TRACKER

- Support a variety of weld types, fast switching
- Improve productivity and yield
- Greatly reduce the impact of poor workpiece consistency on welding quality
- The welding torch can be in the ideal position
- Compensation for production, equipment and operation tolerances
- For complex weldments, it can greatly reduce the workload of robot teaching and programming
- Some scenes can realize the robot exemption from teaching
- Non-contact welding seam tracking, saving fixture production costs for customer
- Seamless connection with CRP robots
- The sales and after-sales support of laser seam tracker and the robot are in the same team, reducing the time and cost of communication with customers

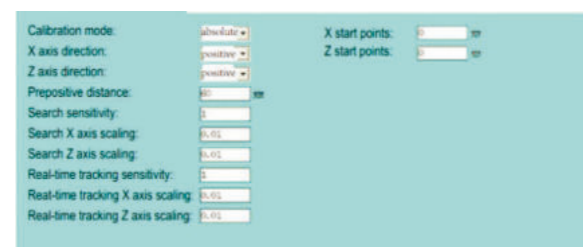
### TECHNICAL CHARACTERISTICS

- Gap range: 1.0-15.0mm
- Horizontal error: 0.1mm
- Height error: 0.1mm
- Standard installation height: 160mm
- Average field of view width: 50mm
- The nearest height: 130mm
- The farthest height: 200mm
- Can be used for all kinds of gas shielded welding
- A variety of weld shape options, suitable for different weld types: expert fuzzy control, intelligent identification of different weld characteristics
- According to the welding seam type, real-time display of current welding seam deviation, welding seam width, misalignment amount and other information to facilitate welding process optimization
- Real-time tracking of weld level, high and low directions
- Strong anti-interference. It can still accurately identify the weld under strong arc interference

### APPLICABLE SCENE

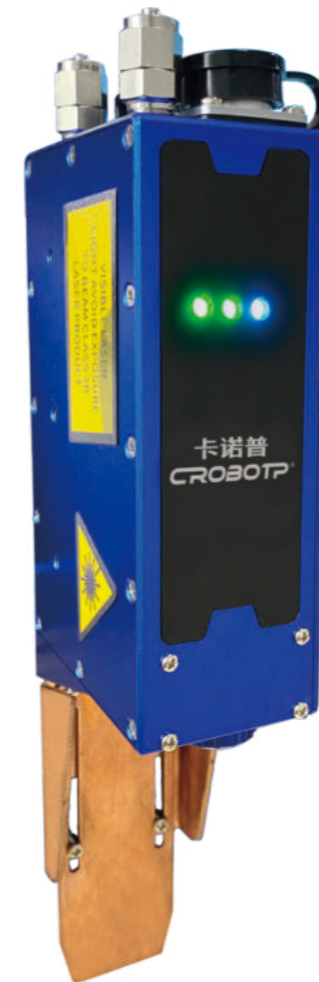
- Real-time tracking scenes that require forward-looking distance, and the minimum forward-viewing distance is 35mm
- Welding current <=200A
- Larger curvature of the weld

### PROCESS AND INTERFACE



# CRP-VLS-160HB-V01

## LASER SEAM TRACKER



### ADVANTAGES OF LASER SEAM TRACKER

- Support a variety of weld types, fast switching
- Improve productivity and yield
- Greatly reduce the impact of poor workpiece consistency on welding quality
- The welding torch can be in the ideal position
- Compensation for production, equipment and operation tolerances
- For complex weldments, it can greatly reduce the workload of robot teaching and programming
- Some scenes can realize the robot exemption from teaching
- Non-contact welding seam tracking, saving fixture production costs for customer
- Seamless connection with CRP robots
- The laser weld tracker and the robot sales and after-sales support are in the same team, reducing the time and cost of communication with customers

### TECHNICAL CHARACTERISTICS

- Gap range: 0.8-10.0mm
- Horizontal error: 0.05mm
- Height error: 0.05mm
- Standard installation height: 160mm
- Average field of view width: 35mm
- The nearest height: 145mm
- The farthest height: 185mm
- Can be used for all kinds of gas shielded welding
- A variety of weld shape options, suitable for different weld types: expert fuzzy control, intelligent identification of different weld characteristics
- According to the welding seam type, real-time display of current welding seam deviation, welding seam width, misalignment amount and other information to facilitate welding process optimization
- Real-time tracking of weld level, high and low directions
- Strong anti-interference. It can still accurately identify the weld under strong arc interference

### APPLICABLE SCENE

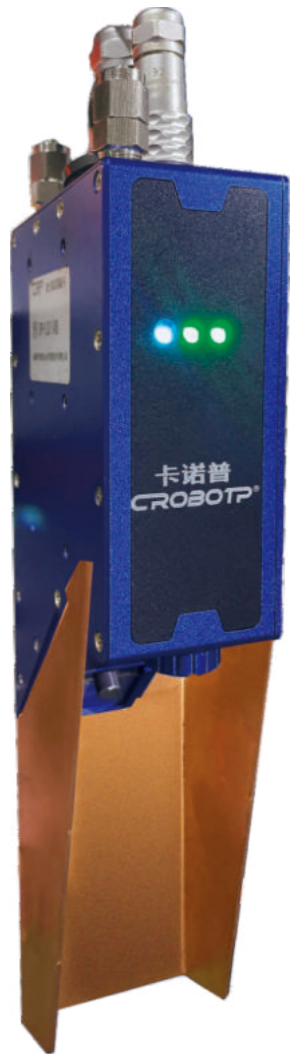
- Minimum forward-viewing distance 90mm
- Resistant to strong arc and splash
- Welding current <=200A
- Real-time tracking of long straight welds
- Suitable for storing points, scanning before welding (such as tube sheet) scenes

### PROCESS AND INTERFACE



# CRP-VLS-240GB-V01

## LASER SEAM TRACKER



### ADVANTAGES OF LASER SEAM TRACKER

- Support a variety of weld types, fast switching
- Improve productivity and yield
- Greatly reduce the impact of poor workpiece consistency on welding quality
- The welding torch can be in the ideal position
- Compensation for production, equipment and operation tolerances
- For complex weldments, it can greatly reduce the workload of robot teaching and programming
- Some scenes can realize the robot exemption from teaching
- Non-contact welding seam tracking, saving fixture production costs for customer
- Seamless connection with CRP robots
- The sales and after-sales support of laser seam tracker and the robot are in the same team, reducing the time and cost of communication with customers

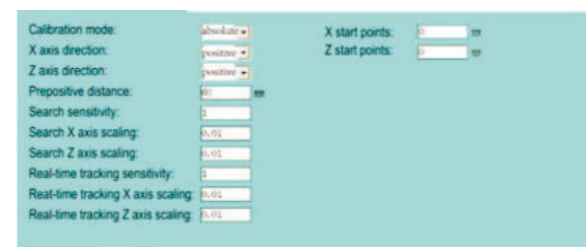
### TECHNICAL CHARACTERISTICS

- Gap range: 1.5-20.0mm
- Horizontal error: 0.1mm
- Height error: 0.1mm
- Standard installation height: 240mm
- Average field of view width: 60mm
- Nearest height: 210mm
- The farthest height: 290mm
- Can be used for all kinds of gas shielded welding
- A variety of weld shape options, suitable for different weld types; expert fuzzy control, intelligent identification of different weld characteristics
- According to the welding seam type, real-time display of current welding seam deviation, welding seam width, misalignment amount and other information to facilitate welding process optimization
- Real-time tracking of weld level, high and low directions
- Strong anti-interference. It can still accurately identify the weld under strong arc interference

### APPLICABLE SCENE

- Minimum forward-viewing distance 110mm
- Resistant to strong arc and splash
- Welding current <=400A, water-cooled heat dissipation can reach 500A
- Suitable for storing points, scanning first and then welding (such as powder tanker tube sheet, tower foot, steel structure, etc.) scenes

### PROCESS AND INTERFACE



# CRP-VLS-330GB-V01

## LASER SEAM TRACKER



### ADVANTAGES OF LASER SEAM TRACKER

- Support a variety of weld types, fast switching
- Improve productivity and yield
- Greatly reduce the impact of poor workpiece consistency on welding quality
- The welding torch can be in the ideal position
- Compensation for production, equipment and operation tolerances
- For complex weldments, it can greatly reduce the workload of robot teaching and programming
- Some scenes can realize the robot exemption from teaching
- Non-contact welding seam tracking, saving fixture production costs for customer
- Seamless connection with CRP robots
- The sales and after-sales support of laser seam tracker and the robot are in the same team, reducing the time and cost of communication with customers

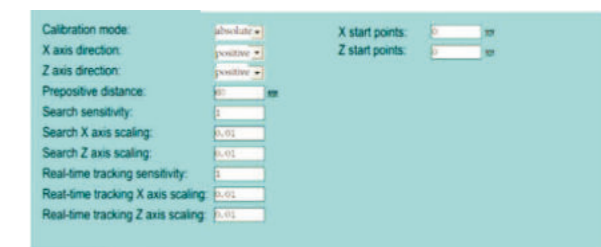
### TECHNICAL CHARACTERISTICS

- Gap range: 1.5-20.0mm
- Horizontal error: 0.1mm
- Height error: 0.1mm
- Standard installation height: 330mm
- Average field of view width: 80mm
- Nearest height: 290mm
- The farthest height: 390mm
- Can be used for all kinds of gas shielded welding
- A variety of weld shape options, suitable for different weld types; expert fuzzy control, intelligent identification of different weld characteristics
- According to the welding seam type, real-time display of current welding seam deviation, welding seam width, misalignment amount and other information to facilitate welding process optimization
- Real-time tracking of weld level, high and low directions
- Strong anti-interference. It can still accurately identify the weld under strong arc interference

### APPLICABLE SCENE

- Minimum forward-viewing distance 103mm
- Resistant to strong arc and splash
- Welding current <=500A
- It is mainly suitable for the scene requiring high visual distance and large field of view, such as fan, box interior and other storage point welding scenes. It also suitable for real-time tracking in large visual field and high visual field with strong anti-splash ability
- Limited application scenarios: some scenarios with limited space; For example, in tower foot welding, it needs a long time to weld.

### PROCESS AND INTERFACE



# Tracer P1

## 3D WELDING VISION SYSTEM



### ADVANTAGES OF 3D Welding Vision System

- Greatly reduce the impact of workpiece in raw materials and team errors on welding quality
- For complex workpiece, it can greatly reduce the robot teaching programming workload
- Part of the scene can be drawings without teaching
- With high-speed real-time scanning, it can output 2 to 10 frames of point cloud data in 1 second.
- It has Industrial accuracy and 3d point cloud repetition accuracy can be up to 0.1mm.
- Adopt anti-splash protection device to avoid welding slag splash damage lens.
- High temperature resistance and reliable operation in work.

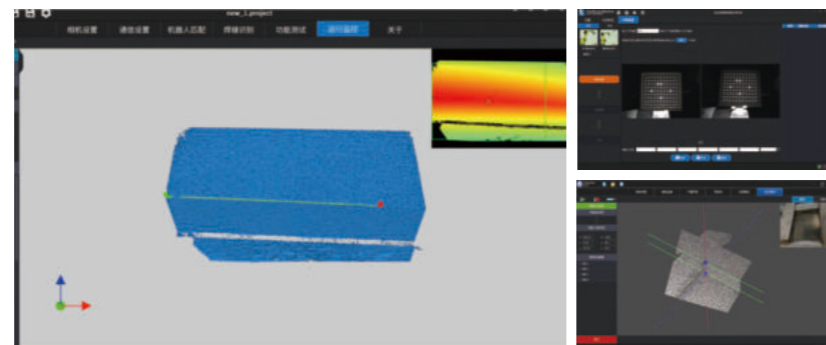
### TECHNICAL CHARACTERISTICS

- 3D vision adopts micro-structured light technology to realize three-dimensional surface scanning of welding parts so it can output the welding track. In cooperation with robots, it can realize the functions of features extraction of complex welds, track locating, workpiece alignment and others.

### APPLICABLE SCENE

- Scene: Steel structure and carriage board
- Material: carbon steel fillet weld (three-side splicing), workpiece without polishing treatment
- Trajectory type: straight trajectory(arc is not applicable)

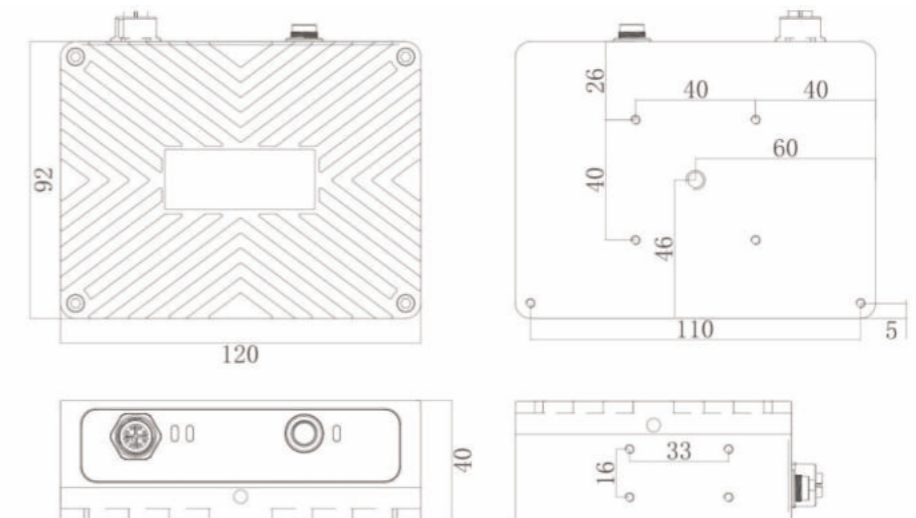
### PROCESS AND INTERFACE



### TECHNICAL PARAMETERS

3D Welding Vision System			
Model	Tracer P1	Weight	750g
Theory	Binocular structured light	Data Interface	TCP/IP, support POE
Light source	Infrared laser	Overall Power Consumption	5W
Working distance	250-500mm	Operating environment	Indoor
FOV	H55°xV35°	Working Temperature	-10~70°C
Repeated Accuracy	±0.5mm	Working Humidity	20%~65%(No condensation)
Depth map resolution	960x600@max 5fps	IP	IP65
Dimension	120x92x40mm	Other(peripheral)	Add protective guard plates, air cooling
Materials	Aluminum Alloy	Notes	The repeated accuracy means that the standard laboratory environment is obtained by the standard test method, and the specific user environment may affect the accuracy.

### INSTALLATION INTERFACE DIAGRAM



### APPLICATION OF THE SCENE



# GYXW-V2

## HIGH-VOLTAGE SEARCHING BOX



### THE PURPOSE

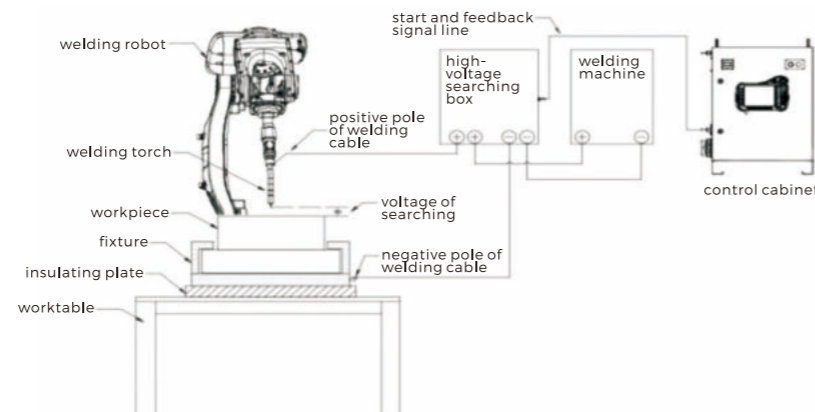
- At present, when welding robots are welding medium-thick plates, due to the workpiece blanking or inaccurate assembly, the welding points (arc starting point, intermediate point, and end point) are inaccurate, causing the deviation of the welding bead.
- This equipment cooperates with the welding robot's welding wire locating function, feedbacks the signal that the welding wire hits the workpiece, the robot automatically calculates the position deviation, corrects the position point, and enables the robot to find the actual welding point.

### THE CHARACTERISTICS

- The output voltage is about 425V±5%, which can effectively penetrate oil stains, rust stains, and water stains. Fast searching speed;
- The current limit design has been made internally, which can effectively control the current that is lower than the safety current of the national standard;
- During searching, since the welding cable is disconnected from the welding machine, the voltage will not enter the welding machine, so it will not damage the welding machine.

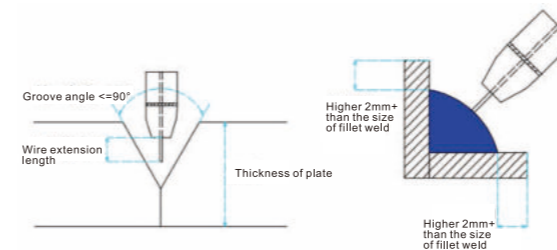
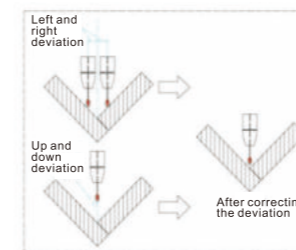
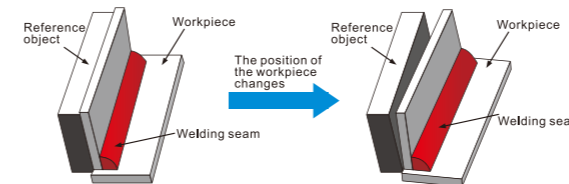
### TECHNICAL INDEX

Name	High-voltage searching box
Model	GYXW-V2
Input power	AC220V±10%, 50HZ, with reliable grounding
Output power	DC425V±5%, current≤5mA
Welding current carrying current	500A, 85% duty cycle
The resistance of the positive and negative poles of the output terminal of the welding cable	≥10KΩ
Temperature and humidity	Temperature: -20°C to +45°C; Relative humidity: no more than 75%RH at 40°C; no more than 95%RH at 20°C
Dimensions	530mmX255mmX290mm
Weight	16KG



# CRP-CAW-V2

## ARC TRACKING SENSOR



### TECHNICAL CHARACTERISTICS

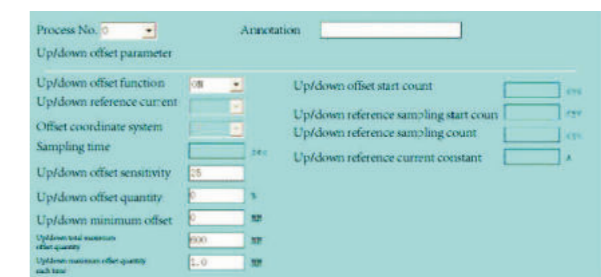
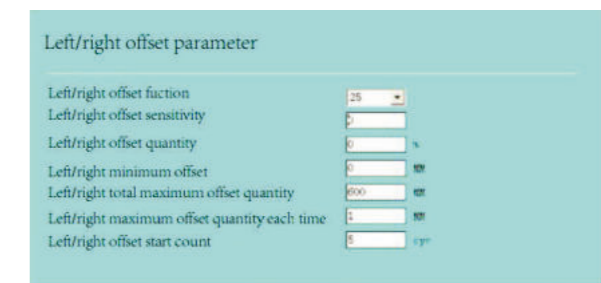
CRP-CAW-V2 is a universal arc tracking sensor researched and developed independently by CRP Automatic, not affected by arc light and dust during the working process, so it has high reliability. It can be used for welding seam tracking under different welding conditions by fuzzy control. This sensor can work with CROBOTP robot control system to track fillet weld, butt weld, lap weld and other weld types. Under the situation of no changing the mechanical structure, it can achieve the seam tracking function only through simple installation and commissioning, thus it is convenient and easy to use, and improves the welding production efficiency of medium and thick plates with low precise incoming materials and assembly.

- This sensor is used when the welding seam of medium and thick plate workpiece is deformed or deviated in CO<sub>2</sub>/MAG welding process;
- The arc seam tracker samples the current of swing welding in the welding seam in real time;
- The system judges the difference between the current weld and the preset current according to the current amplitude, and confirms its up, down, left, and right deviation values;
- The system automatically corrects the trajectory of the current robot;

### APPLICATION CONDITIONS

- Gas: CO<sub>2</sub>, MAG
- Welding wire diameter: 1.0mm-1.6mm
- Wire extension length: 15mm-25mm
- Type of welded joints: T-type fillet weld (1-2mm gap is allowed), V-type groove (30, 45)
- Welding conditions: current >180A, welding speed <15mm/s, welding length >100mm
- Swing conditions: width: 1.5mm-5mm, swing frequency: 1.5HZ-4HZ
- Swing type: Z shape
- Welding form: DC / pulse

### PROCESS AND INTERFACE

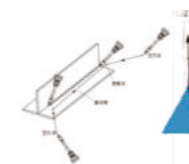


# /Robot Function Introduction

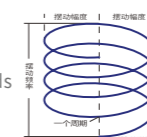
Introduction to robot functions



## WEAVESINE



Zigzag oscillation is suitable for flat welds and fillet welds



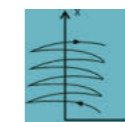
Arc oscillation is suitable for flat welds, and fill welds (the robot's motion trajectory resembles alternating arcs in a spiral pattern)



Equilateral oscillation is suitable for vertical welding.



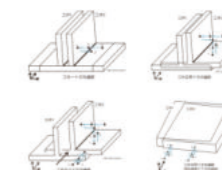
A crescent moon swing is suitable for underlay.



The reverse crescent swing is suitable for multi-layer and multi-pass.

## POSITION FINDING FUNCTION

When the workpiece as a whole is offset, the deviations of each point can be found through multi-point contact positioning (SEARCH); the overall deviation can be calculated using (COUN-OFFSET); and then the OFFSET-START offset can be used to organize the path, It can achieve: fillet weld 1D, 2D, 3D, 2D+, 3D+; inner and outer diameters; points; cameras; surfaces; and various other methods. The overall positioning function is suitable for situations where the workpiece is prone to overall and local offsets.



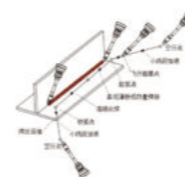
### Basic functions comprehensive coverage

- Complete welding process control
- Flexible welder matching
- Professional welder TCP calibration
- Open background PLC
- Multi-station configuration



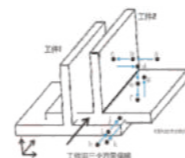
### Thin plate functions efficient, quality

- Fish scale welding (intermittent welding)
- Take off in an arc
- Small line segment acceleration
- Welding wire retracting to a fixed length



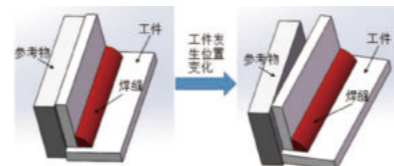
### Thick plate functions expertized application

- Oscillating welding
- Positioning function
- Arc tracking
- Multi-layer multi-pass



### Other functions smart and simple

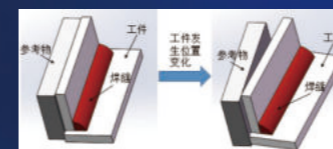
- Laser tracking
- External axis coordination
- Graphical programming function



## ARCTACKSTART

Note: This function needs to be used with the CRP-CAW-V2 arc tracker.

The robot system uses oscillating arc welding, positioning the weld seam by collecting current fluctuations caused by changes in arc length during the welding process through an external arc sensor, thus performing tracking movements. It is suitable for medium to thick plate welding, and in scenarios where large piece welding may have positioning deviations.



## OPENLASERTRACK

The robotic system collects the position of the weld seam during the welding process using an external laser tracking sensor, makes real-time path corrections, and tracks offsets. It is suitable for welding scenarios where tooling is difficult to locate or inaccurate, where the workpiece may deform during the welding process, and where incoming materials are inaccurate.



## Laser fixed-point tracking

Laser fixed-point tracking is usually an application method for laser tracking welding in conjunction with an external axis. During the laser tracking process, the position and orientation of the body are kept relatively still, while the weld seam is moved by the rotation or translation of the external axis. The deviations during the laser search process are ultimately compensated into the welding trajectory. Fixed-point tracking is suitable for welding scenarios such as large and small circles, multi-circle long straight lines, etc., and can also address the trajectory error issues that are likely to occur during significant changes in orientation.

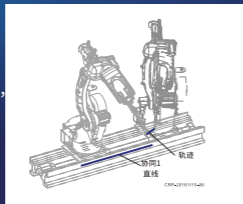


## /Welding function

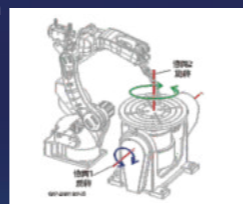
### System function introduction

#### Straight line/Arc coordination (COORD)

**Linear coordination:** The external axis is a linear axis, which can be attached to any one or two directions that coincide with the geodetic coordinates X, Y and Z of the robot, and form a 7/8 axis linkage with the 6 axes of the body to carry out interpolation movement. That is, in the process of the external linear axis, the end of the robot can still maintain a straight line or circular interpolation motion. It is suitable for applications where the robot arm span is not enough, but continuous operation is required, such as oversized welding, ultra-long weld welding, etc.



**Rotational Coordination:** The external axis serves as the rotation axis, which can be equipped with one or two additional external rotation axes. The rotation axis can perform both flipping and rotational movements, and together with the six axes of the main body, it forms a 7/8 axis linkage for interpolation motion. This means that during the movement of the external rotation axis, the end effector of the robot can still maintain linear or circular interpolated motion. It is suitable for applications where the robot's pose coverage is insufficient but continuous operation is required, such as intersecting line welding and full pose circular welding.



## /Introduction to the Welding Outfit Series

### Pro series

- Suitable for single-station workstations for thin plate welding, including models RH14-10-W/RH20-06-W;
- Ultra-low spatter welding with mixed gas and Co<sub>2</sub>;
- Supports expansion of 2 external axes;
- Integrated design of electrical cabinet and welder, compact structure, small footprint;
- Standard configuration of UPS, supports power failure regeneration;
- Includes robot body, G4S electrical cabinet, DS350-L/DS500-P welder, welding torch, wire feeder + stand + wire guide spool + wire spool assembly, etc.



### RH series

- Full-featured series, including RH14-10-W/RH18-20-W/RH20-06-W models;
- Equipped with full-featured software for thin plates, thick plates, tracking, vision, etc., stable performance, powerful functions, suitable for various scenarios;
- Optional hardware includes positioning, arc tracking, laser, etc.;
- Low spatter welders or medium-to-heavy plate welders can be selected based on requirements;
- Supports expansion up to 4 external axes;
- Standard configuration includes UPS and supports power failure recovery;
- Includes the main unit, G4 electrical cabinet, welder, welding torch, wire feeder + bracket + wire guide wheel + wire spool assembly;
- This series also supports TIG welding, aluminum welding, cutting, laser, and other applications.



### Spirit welding series

- High-end series, including RH14-06-W/RH18-06-W/RH21-06-W three models;
- Integrated, high-performance, and high-protection;
- High-speed (20% faster than the old model);
- Vertical teaching pendant, fast programming (30% faster than horizontal screen programming);
- Integrated self-developed welding machine: ultra-low spatter, retracting arc ignition, positioning, constant penetration, ripple welding, pulsing;
- Standard UPS included, supports power failure regeneration, supports expansion bus of more than 10 axes; supports full-function application of RH series;
- Includes body, G9 electrical cabinet, DS welder, welding gun, wire feeder + bracket + wire guide + wire reel assembly, etc.



### Laser welding series

- Dedicated laser welding series, including three models: RA15-12-J, RA18-20-J, and RA20-12-J;
- High performance and high precision;
- Supports control of servo wire feeder;
- Vertical teaching pendant for fast programming;
- Compact cabinet, easier to integrate with laser host;
- Standard UPS, supports power failure regeneration;
- Includes main unit, G5A electrical cabinet, and wire spool components.



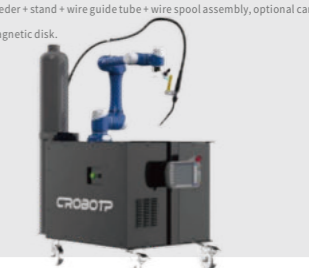
### Spot welding series

- Spot welding robot, model RH26-210;
- It can achieve external axis torque control of servo welding tongs;
- Hollow forearm with internal cables to reduce interference;
- Comprehensive spot welding software package;
- Standard UPS configuration, supports power failure regeneration;
- Includes the main body and G15A electrical cabinet.



### Collaborative welding series

- Collaborative welding series, easy to use, available in two models RC09-05-W/RC13-10-W;
- Featuring a unique end-effector that allows for quick alignment of weld points and direct programming of welding procedures;
- Supports rapid dragging and quick single-unit deployment;
- Supports welding functions for medium and thick plates;
- Includes the main unit, X2 electrical cabinet, welder, welding torch, wire feeder + stand + wire guide tube + wire spool assembly, optional cart, and magnetic disk.

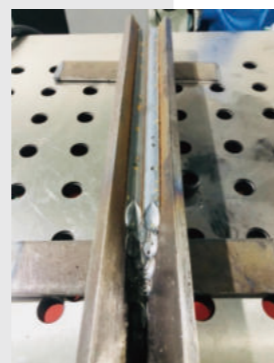


## Multi-layered and multi-channel

It is a commonly used welding method in the welding field to repeatedly stack and weld the same weld or the same path, so as to meet the requirements of welding leg height and overall welding strength. The multi-layer multi-pass function only needs to teach the foundation path once, and then the number of stacks and stacking rules of the weld path are designed by command. Greatly reduce the time required for programming and reduce the difficulty of programming. Multi-layer multi-pass is suitable for applications that require stacking for welding.

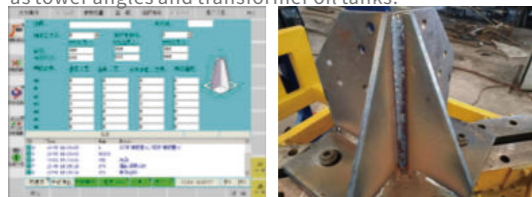


- Program the first weld seam through coding (with the option to add a search function to locate the underlying weld seam).
- Predefine parameters, storing the offset values for layers and passes as a parameter set.
- Invoke the predefined multi-layer multi-pass parameter set to automatically generate the path and produce the actual weld seam.



## Parameterized programming

Parameterized programming is a welding application tailored for specific workpieces. For workpieces of the same type with similar shapes but different sizes, it uses a specially developed interface to directly input the dimensional information of the workpiece, enabling automatic welding. Examples include workpieces such as tower angles and transformer oil tanks.



## Sweep before welding function

Scan before welding is a method where robots work in conjunction with vision systems. Before welding, the robot quickly scans the workpiece to obtain position points and deviations. The robot then automatically corrects based on these deviations before performing the welding. Examples of applications include heat exchanger welding and sieve welding, etc.



# CRP ROBOT SYSTEM

## System function introduction(coating,bending,palletizing)

### 1.coating

The system provides four analog interfaces for spraying. It includes built-in standard trajectory templates for quick generation of spray trajectories and also supports user-created spray trajectories. For more details, see the 《CRP-S80 Spraying Instruction Manual》.

·Analog interface

Four-channel analog output, convenient for controlling fan shape, atomization, flow rate, air pressure, and other spraying equipment.



· Track template

Plane inching    Plane    Arc    Arc surface inching    Arc surface    Straight line

### 2.bending

The bending process is mainly used in the loading and unloading of the bending industry, and the bending of the workpiece follows. Because of its 24-hour uninterrupted work, strong consistency, replacing labor, realizing unmanned and automated, it can realize fixed-speed tracking(old bending equipment), sensors (grating, encoders) real-time tracking (CNC bending machine).Auto-reciprocal leveling function. The system instructions can be followed by bending, as detailed in the 《CRP-Bending Process Manual》.

折弯角度:	<input type="text"/>	回程加速时间:	<input type="text"/>	ms
折弯速度:	<input type="text"/>	回程减速时间:	<input type="text"/>	ms
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折弯减速时间:	<input type="text"/>	折弯刀嘴型号:	<input type="text"/>	
下清距离:	<input type="text"/>	刀口到后挡块距离:	<input type="text"/>	mm
下清速度:	<input type="text"/>	L1到L2距离:	<input type="text"/>	mm
下清加速时间:	<input type="text"/>	L1到L3距离:	<input type="text"/>	mm
下清减速时间:	<input type="text"/>	L2到L3距离:	<input type="text"/>	mm
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回程速度:	<input type="text"/>	回平加速时间:	<input type="text"/>	ms

### 3.palletizing

Palletizing refers to setting basic parameters such as the external dimensions, number of pallets, and number of layers, and performing a simple confirmation of the placement position of the pallets. Simple palletizing instructions can achieve both palletizing and depalletizing functions. See the 《CrobotpOS Palletizing Process Manual》 for details.



	X	Y	Z	A	B	C
准备点	850.605	-45.824	95.037	179.991	-0.018	0.702
离开点	850.605	-45.824	95.037	179.991	-0.018	0.702

码垛层数	层排样号	层间距	过渡点高度偏移
第1层	1	0.01	0.01
第2层	1	0.02	0.02
第3层	1	0.03	0.03
第4层	1	0.04	0.04
第5层	1	0.05	0.05
第6层	1	0.06	0.06
第7层	1	0.07	0.07
第8层	1	0.08	0.08
第9层	1	0.09	0.09
第10层	1	0.10	0.10

	X	Y	Z	A	B	C
准备点	850.605	-45.824	95.037	179.991	-0.018	0.702
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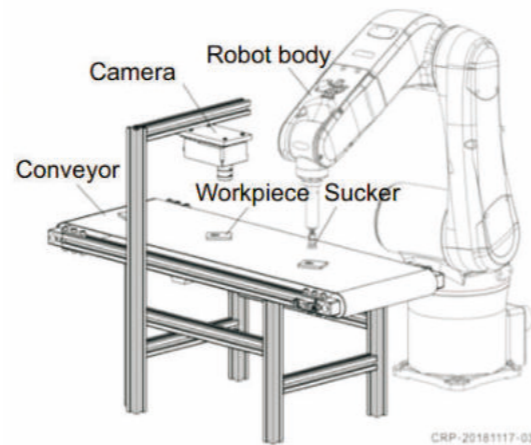
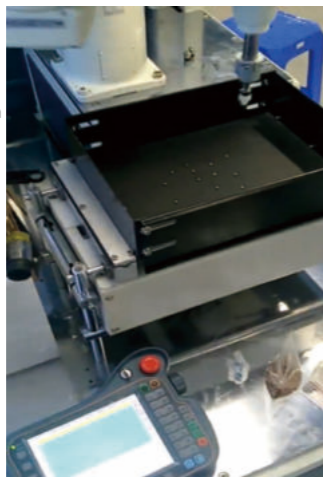
# CRP ROBOT SYSTEM

## System function introduction (vision, track, stamping)

### 4. Vision

#### Plane Vision

Plane vision support multiple vision equipments and protocols(OMRON, Cognex, DALASA, etc). Three trigger mode: construction, timing, distance. Applied in conveyor sortation. It's with the application of one camera working with multiple robots. Camera can be fixed at the end of the robot body or other external devices, identifying,grabing, vision correction. See more details-CRP-S40, S80 Vision Fuction Brochure.



#### 3D Vision

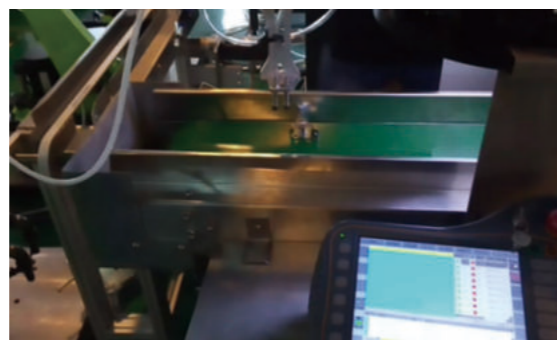
Through 3D laser skin on the scattered objects, unordered parts, the robot system can form a 3D image of these parts, then calculate the posture and position of these skinned parts,sothe robot can conduct all-attitude capture operation.Unlike plane vision(2D), 3D vision can do height identification,ABC all-attitude identification, so it can applied in different height overlapping and unordered vision identification.



### 5. Tracking

Trcaking means the robot can grasp parts following the movement of the conveyor(point track) or the robot move following the movement of the conveyor(trace tracking, e.g. spraying, gluing)Tracking function can realize: current product single tracking(grasp,spraying), multiple tracking(assembling), queue tracking.Setting tracking detect point, start point, stop point, detect range according to different application. Flexible parameter setting, suits conveyor crawl.

More detail on CRP-S40, S80 Tracking Fuction Brochure.

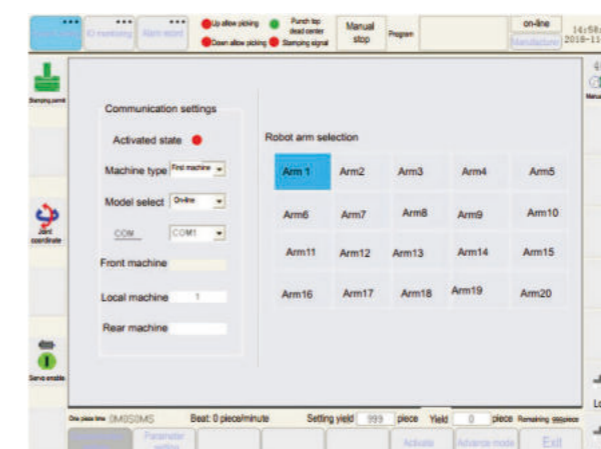
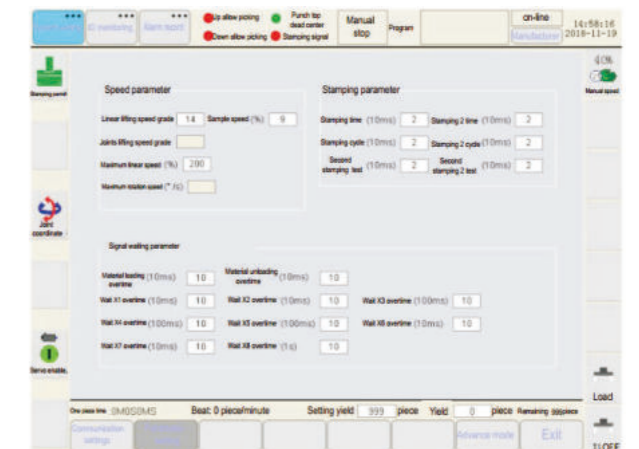


### 6. Stamping

Stamping process is based on CRP standard controller, including all controller fuctions. At the same time developed: stamping process, stamping interface, stamping cable and a whole set of solutions. Fast connection, easy to use, easy maintenance, adjustable beat.

#### Main feature:

1. Fast connection, bus communication, no complex I/O cable, low failure rate, easy maintenance.
2. Disconnection detection, robot will ring the alarm right after the disconnection, the automation line will wait till the alarm is cleared.
3. Based on the standard controller, all controller functions available.
4. Dedicated stamping interface, hide all the other information that is not related with stamping, clear interface.
5. Modularization programming, built-in standard stamping process, it only need record points to start, no complicated teaching line by line.
6. Built-in multi working program block, all you have to do is insert the program block. Can be applied in multi working scenario.
7. Authority management, right man to do the right thing.
8. No external master control needed, one-button enable, one-button start, one-button reset.
9. Built-in detection logic for each process, the robot system will ring the alarm right after something is wrong, easy maintenance and safer.
10. Physical emergency stop curcuit related to every safety switch, reliable and safe.
- 11.Directing display: working beat, workpiece count, remaining workpiece count, etc.
12. Parameter open, easy to adjust working speed and working beat.
13. Built-in sample run and no-load run, so it's convenient for debugging and testing.



# CRP ROBOT SYSTEM

## System function introduction

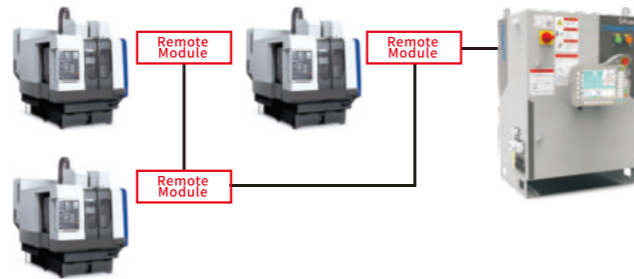
### (Machine tool loading and unloading)

#### 7. Machine tool loading and unloading

The machine tool loading and unloading process is a special process developed for CNC automatic processing machine tools based on the CRP standard controller. It can always meet the increasingly stringent machine tool production efficiency and processing quality. Meanwhile, it will make you quickly adapt to new technologies, improve traditional processes, shorten the construction period and promote the overall efficiency of man, machine, method, material and environment.

##### · Easy for installation

The remote module and one-stop communication service are used between the machine tool and the robot, changing the traditional complex wiring form and making the wire connection simple, fast and easy to maintain.



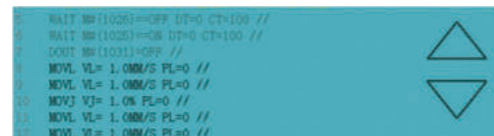
##### · Remote module

##### · Easy for commissioning

Fixed I/O definition and full Chinese/English annotation makes the interactive signal clear to understand.

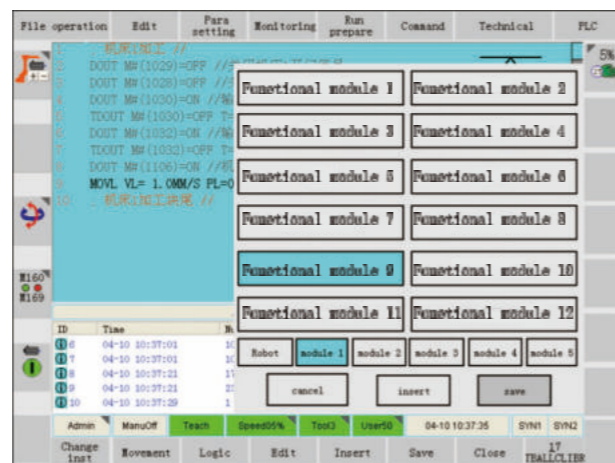
##### · Easy for maintenance

Based on standardized design, new technicians can operate easily and proficiently after the replacement of personnel, and the subsequent maintenance is simple.



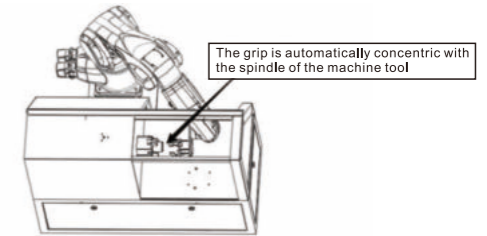
##### · Module programming, simple operation

The safety logic relationship is programmed into the function block in advance, and the on-site programming can be easily called, so that the programming is no longer complicated. CROBOTP robots come with Chinese safety logic function blocks when they leave the factory, and the operator can easily program after getting a system training, which ensures the production efficiency and upgrades the factory intelligence.



##### · One key concentric

The three-point method can easily find the coordinate system of the machine tool, and the gripper and machine tool spindle are automatically concentric through one-key operation, no need for traditional cumbersome commissioning.



##### · Single layer palletizing

Single-layer matrix palletizing technology means that 5 points simple setting is easy to calibrate the entire pallet coordinate, making de-stacking and stacking become no longer complicated.



##### · Automatic detection

precise detection of processed products one by one, real-time detection of deviations and timely corresponding processing, truly an unmanned automated factory. The accuracy automatic detection function of the processed products can accurately detect the processed products one by one, find the deviation in real time and do the corresponding correction in time, so as to truly achieve the unmanned automation factory

##### · Multi-scene application

It can carry out loading and unloading operations on injection molding machines, die-casting machines, CNC lathes, CNC milling machines, CNC machining centers, special machines and other equipments to improve production efficiency and ensure product quality.



Injection molding machine loading and unloading



CNC machine tool loading and unloading

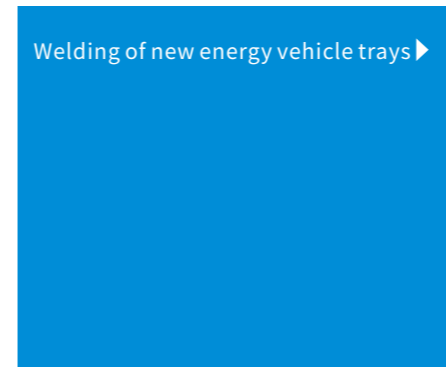


Special machine loading and unloading

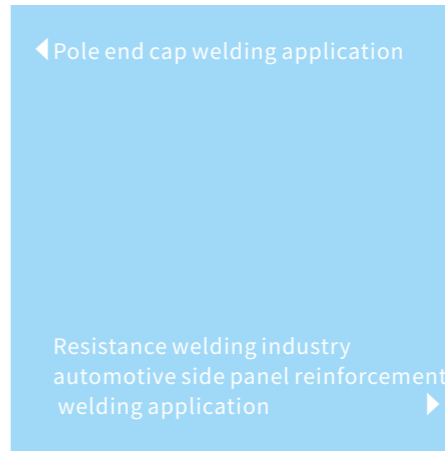
# APPLICATION CASE



◀ Intelligent welding of new energy mixing tank



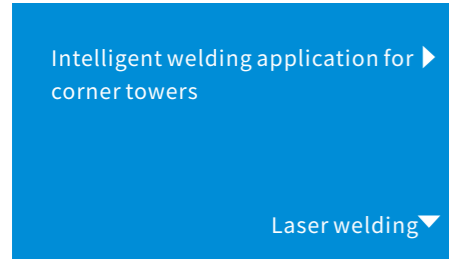
Welding of new energy vehicle trays ▶



◀ Pole end cap welding application

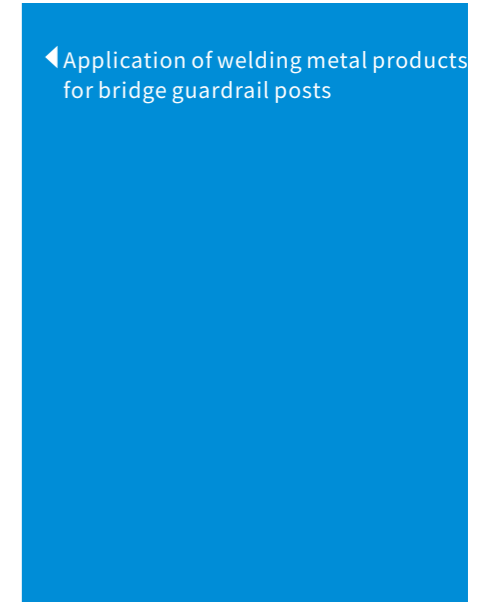


Resistance welding industry automotive side panel reinforcement welding application ▶

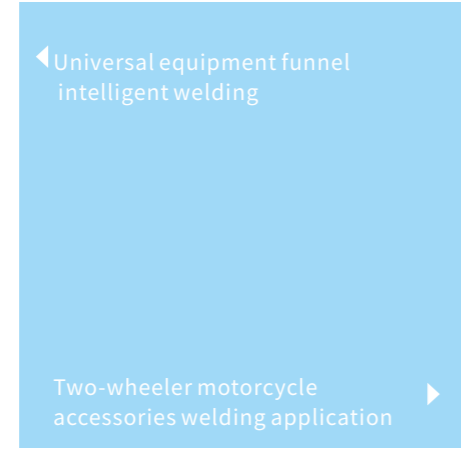


Intelligent welding application for corner towers ▶

Laser welding ▶

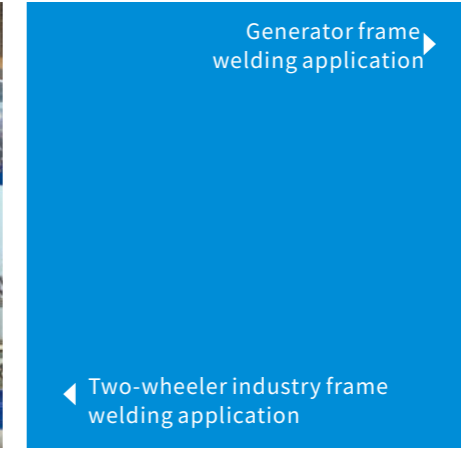


◀ Application of welding metal products for bridge guardrail posts



◀ Universal equipment funnel intelligent welding

Two-wheeler motorcycle accessories welding application ▶



Generator frame welding application ▶

◀ Two-wheeler industry frame welding application

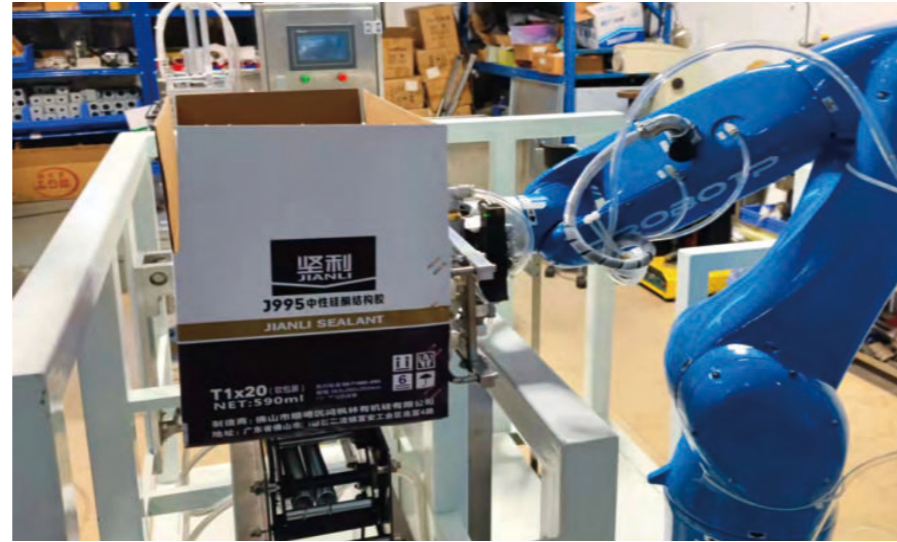


# APPLICATION CASE

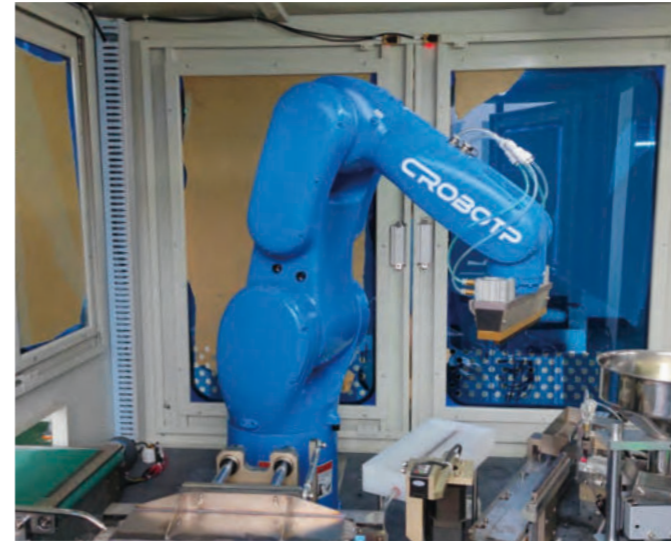
· Machine tool-CNC cutting tool



· Automated carton sealing



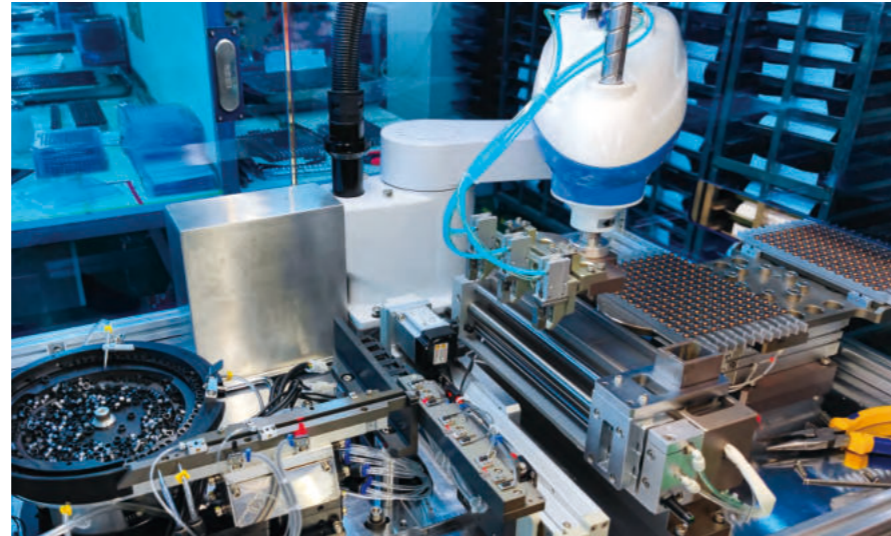
· 3C industry-inductor soldering



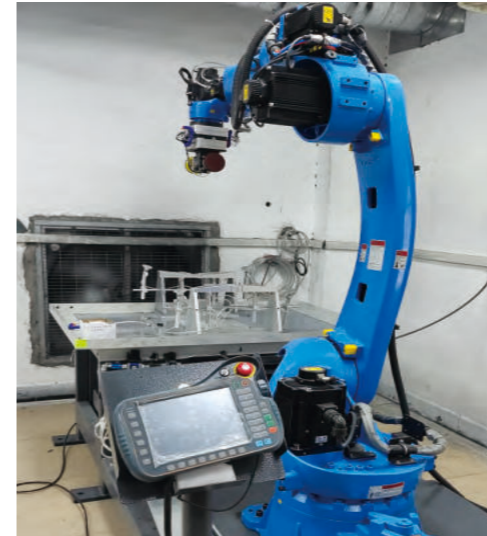
· Handling



· 3C industry-keyboard handling



· 3C industry-component handling



· Polishing industry-metal products structural components



· handling