sooyee
Robotics

Highly cost-effective,
Well-knit structure,
High flexibility,
High reliability,
Easy maintenance.

SOOYEE Robotics Co.,Ltd.

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International web: www.sooyeerobot.com
Chinese web: www.cdsyzn.com

We foucus on VALUE, SERVICE, TALENTS, INNOVATION, DEVELOPMENT

Intelligence changes manufacturing.

SY series of industrial robots and application solutions

About us

INTELLIGENT
Change Manufacturing

We are industrial robotics manufacturer since 2005. We are one of China's earliest team working for the industrial robot technology research,development and application. Our technical team members have all engaged in projects of industrial robot control system, hardware, software development, as well as industrial robot structural design, motor transmission, machinery design and other research work. All of them have undertook integration projects of intelligent automation workstations, industrial welding robots, cnc machine robot, material handling systems and other big projects.

SOOYEE(SY) series of multi axies industrial robots are super cost-effective with payload 3kg 5kg, 6kg, 10kg, 20kg, 30kg, 50kg, 60kg, 80kg, etc. Our products are widely applied in machine tool loading and unloading, welding, palletizing,material handling, deburring, spraying etc. We have more than 20 patents and intellectual property rights.

SYB0803A

6 Axis Robot Arm
Payload :3kg
Armspan:800mm
Repeated Positioning
Accuracy:±0.05mm

SYH1505A

6 Axis Robot Arm
Payload :5kg
Armspan:1520mm
Repeated Positioning
Accuracy:±0.05mm

SYB1506A

6 Axis Robot Arm
Payload :6kg
Armspan:1500mm
Repeated Positioning
Accuracy:±0.05mm

SYB2020A

6 Axis Robot Arm
Payload :20kg
Armspan:2000mm
Repeated Positioning
Accuracy:±0.08mm

SYM1550A

6 Axis Robot Arm
Payload :50kg
Armspan:1500mm
Repeated Positioning
Accuracy:±0.12mm

SYB2380A

6 Axis Robot Arm
Payload :80kg
Armspan:2300mm
Repeated Positioning
Accuracy:±0.15mm

SYH1506K

6 Axis Robot Arm (Hollow)
Payload :6kg
Armspan:1500mm
Repeated Positioning
Accuracy:±0.05mm

SYB1410B

6 Axis Robot Arm
Payload :10kg
Armspan:1400mm
Repeated Positioning
Accuracy:±0.05mm

SYB1830A

6 Axis Robot Arm
Payload :30kg
Armspan:1800mm
Repeated Positioning
Accuracy:±0.08mm

SYB2560A

6 Axis Robot Arm
Payload :60kg
Armspan:2500mm
Repeated Positioning
Accuracy:±0.15mm

Industrial Robot Body

Electric Cabinet, Teaching Pendant

SY Series
Industrial Robots

SY series of industrial robot body and controller are researched and developed by our company with independent intellectual property rights.
The advantages are : highly cost-effective, Well-knit structure, flexibility, high reliability, easy maintenance.
The motion of each joint of the robot is realized by a servo motor and a high precision and rigidity reducer.Each servo motor is equipped with an power-off brake.Every unit of robot is equiped with electric cabinet and teaching pendant. This SY series is with high speed ability, high-precision, high safety, powerful function.

03/04

Technical Parameter

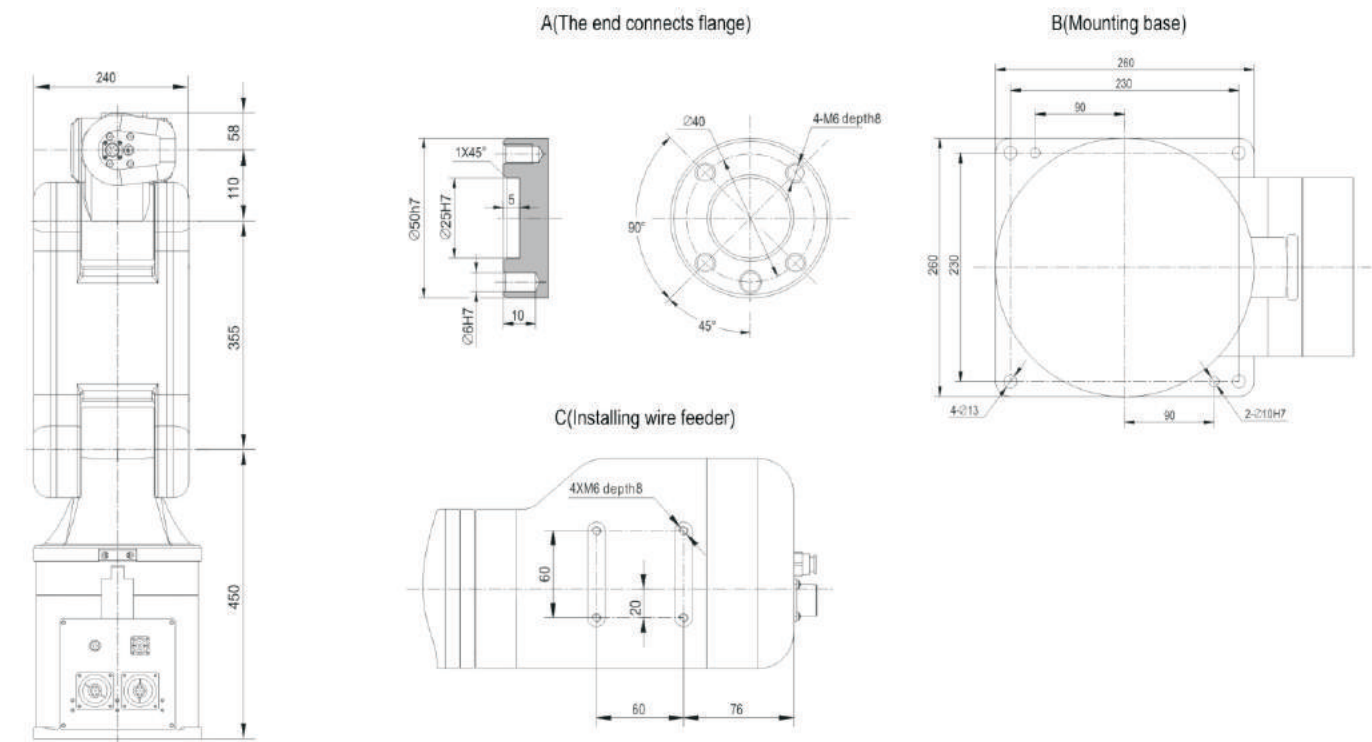|		SYB0803A	SYH1505A	SYH1506K	SYB1506A	SYB1410B	SYB2020A	SYB1830A	SYM1550A	SYB2560A	SYB2380A
Basic parameter	Degree of Freedom	6	6	6	6	6	6	6	6	6	6
	Payload	3 kg	5 kg	6 kg	6 kg	10 kg	20 kg	30 kg	50 kg	60 kg	80 kg
	Payload for J3 Axis	5 kg	12 kg	12 kg	12 kg	12 kg	25 kg	25 kg	20 kg	30 kg	30 kg
	Repeated Positioning Accuracy	±0.05mm	±0.05mm	±0.05mm	±0.05mm	±0.05mm	±0.08mm	±0.08mm	±0.15mm	±0.15mm	±0.15mm
	Self Weight	56 kg	158kg	164 kg	162 kg	160 kg	260 kg	255 kg	300 kg	560 kg	550 kg
	Installation Method	Ground Mounted	Ground Mounted	Ground Mounted	Ground Mounted	Ground Mounted	Ground Mounted	Ground Mounted	Ground Mounted	Ground Mounted	Ground Mounted
	Power Capacity	1.1 kw	3.0 kw	3.0 kw	3.0 kw	3.0 kw	5.0 kw	5.0 kw	7.0 kw	12.5 kw	12.5 kw
	Brake	J2,3,5 Shaft Brake	J2,3,4,5 Shaft Brake	Whole Shaft Brake	Whole Shaft Brake	Whole Shaft Brake	Whole Shaft Brake	Whole Shaft Brake	Whole Shaft Brake	Whole Shaft Brake	Whole Shaft Brake
Motion range	Maximum Reach Distance	800 mm	1520mm	1500mm	1500mm	1400 mm	2000 mm	1800 mm	1500 mm	2500 mm	2300 mm
	Minimum Reach Distance	190 mm	365 mm	365 mm	365 mm	365 mm	499 mm	491 mm	460 mm	710 mm	603 mm
	Axis J1(turn)	±170°	±170°	±170°	±170°	±170°	±170°	±170°	±170°	±170°	±170°
	Axis J2(lower arm swinging)	-90°~ +75°	-160°~ +80°	-160°~ +80°	-160°~ +80°	-160°~ +80°	-170°~ +90°	-170°~ +90°	-160°~ +90°	-165°~ +90°	-165°~ +90°
	Axis J3(uper arm swinging)	-90°~+90°	-85°~ +90°	-85°~ +90°	-85°~ +90°	-85°~+90°	-85°~ +95°	-85°~ +95°	-84°~ +90°	-84°~ +145°	-84°~ +145°
	Axis J4(arm rotary)	±170°	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°
	Axis J5(wrist pitch)	±120°	±120°	-100°~ +120°	±120°	±120°	±135°	±135°	±125°	±125°	±125°
	Axis J6(wrist rotary)	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°
Speed	Axis J1(turn)	190°/s	138°/s	138°/s	138°/s	138°/s	104°/s	104°/s	104°/s	83°/s	83°/s
	Axis J2(lower arm swinging)	225°/s	138°/s	138°/s	138°/s	138°/s	104°/s	104°/s	104°/s	83°/s	83°/s
	Axis J3(uper arm swinging)	270°/s	223°/s	223°/s	223°/s	223°/s	138°/s	138°/s	138°/s	104°/s	104°/s
	Axis J4(arm rotary)	270°/s	270°/s	270°/s	270°/s	270°/s	168°/s	168°/s	300°/s	212°/s	212°/s
	Axis J5(wrist pitch)	337°/s	337°/s	337°/s	337°/s	337°/s	270°/s	270°/s	223°/s	223°/s	223°/s
	Axis J6(wrist rotary)	420°/s	420°/s	550°/s	540°/s	540°/s	337°/s	337°/s	333°/s	333°/s	333°/s
	Synthetic arm tip speed	1.5 m/s	1.5 m/s	1.5 m/s	1.5 m/s	1.5 m/s	1.2 m/s	1.2 m/s	1.0 m/s	1.0 m/s	1.0 m/s
Application and other information	End flange	solid	solid	hollow	solid	solid	solid	solid	solid	solid	solid
	Can it be changed to 5 axis?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Can it be customized for the upside down installation?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
	Main Application	Material handling, palletizing, machine tool loading and unloading, education robot, playing chess	Welding	Welding	Material handling, palletizing, machine tool loading and unloading, Gluing, spraying	Material handling, palletizing, machine tool loading and unloading, Gluing, spraying	Material handling, palletizing, machine tool loading and unloading, spraying	Material handling, palletizing, machine tool loading and unloading, spraying	Material handling, palletizing, machine tool loading and unloading, deburring, polishing	Material handling, palletizing, machine tool loading and unloading	Material handling, palletizing, machine tool loading and unloading

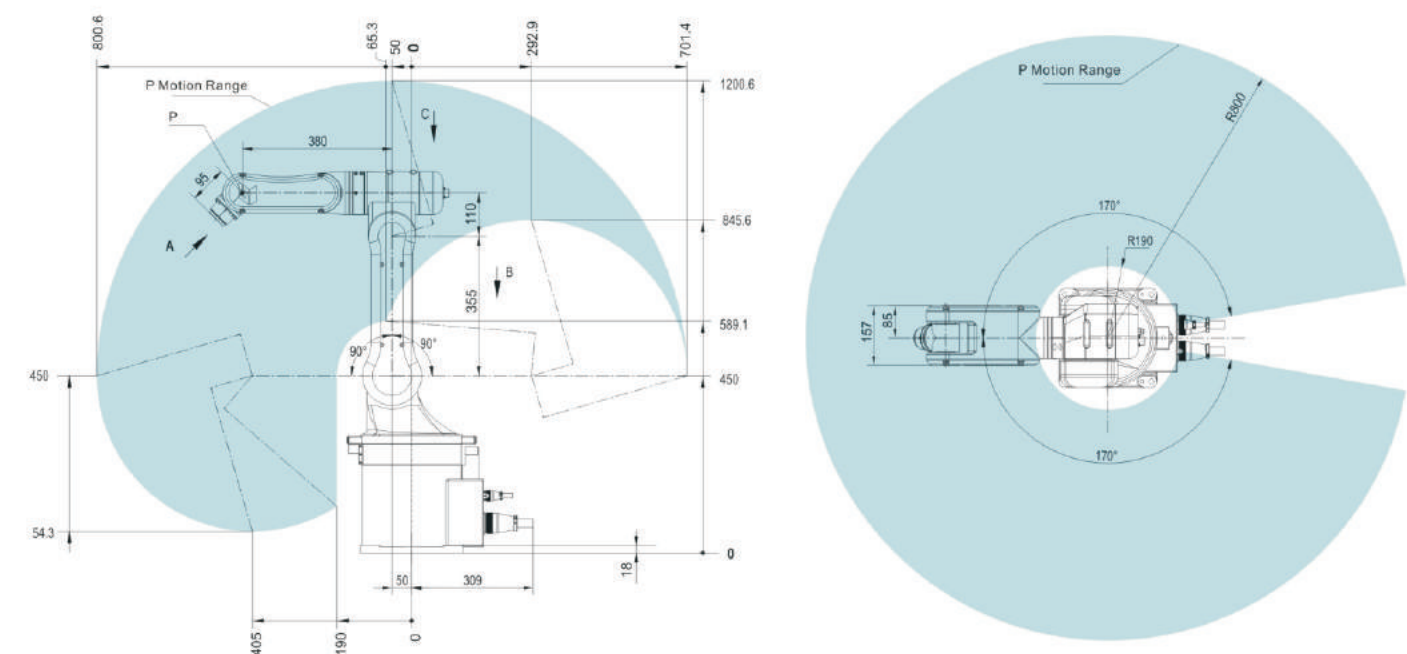# SYB0803A

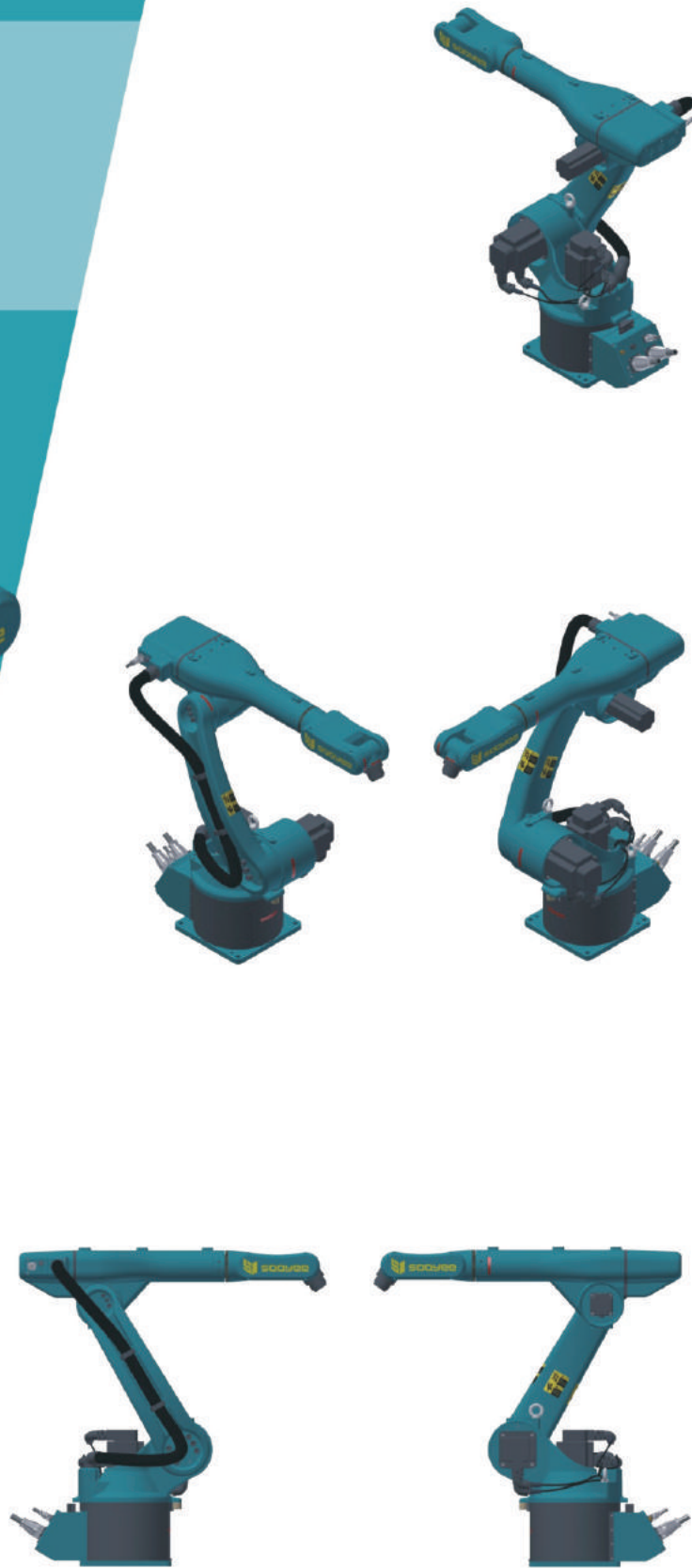## 6 axis industrial robot

Payload:
3KG

Dimension Drawing

A(The end connects flange)

B(Mounting base)

C(Installing wire feeder)

Motion Range

SYH1505A

6 axis industrial robot

Payload:

5KG

Dimension Drawing

A(The end connects flange)

B(Mounting base)

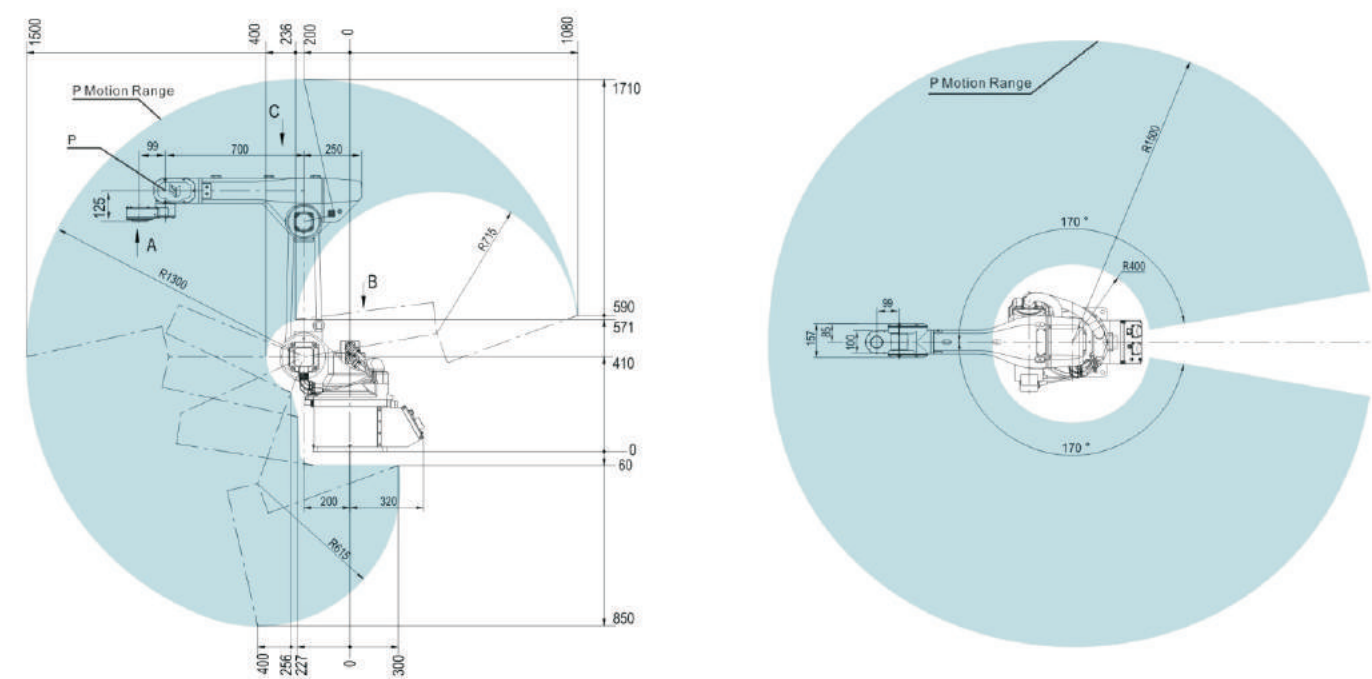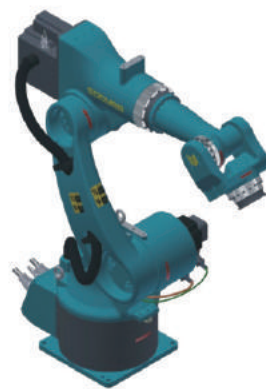C(Installing wire feeder)

B(Wire tray bracket mounting)
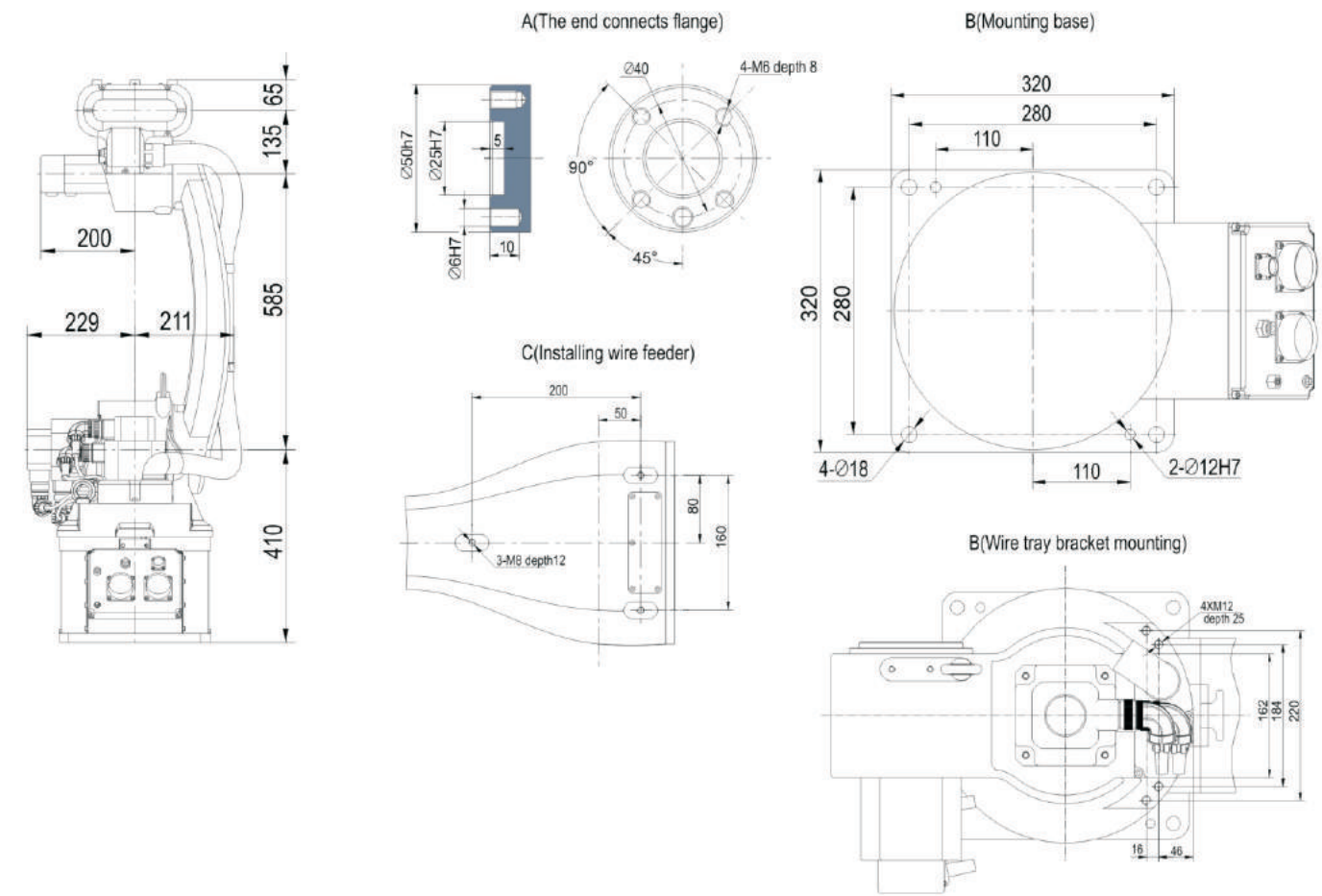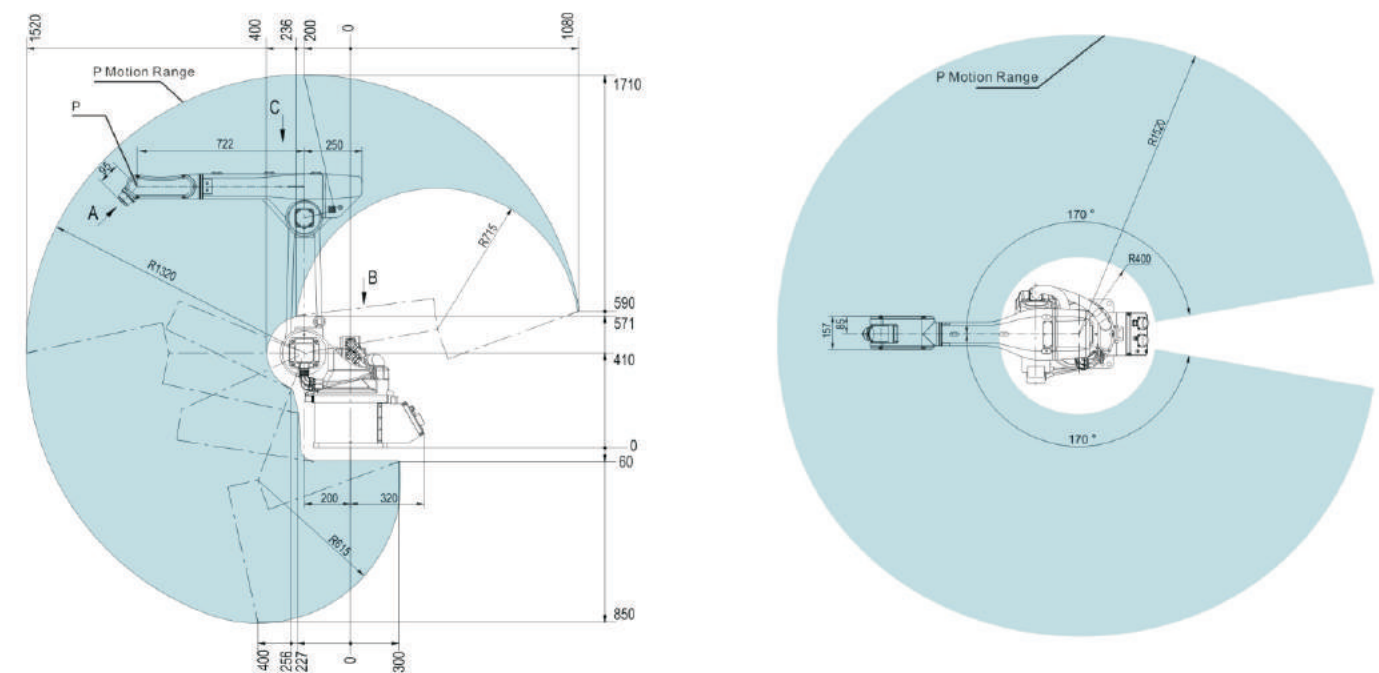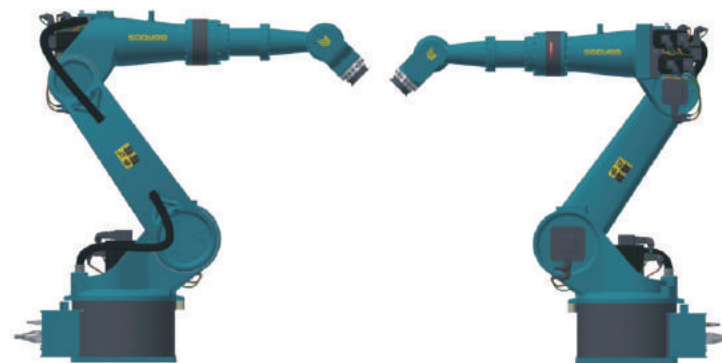
Motion Range

SYH1506K

6 axis industrial robot

Payload:

6KG

Dimension Drawing

A(The end connects flange)

B(Mounting base)

C(Installing wire feeder)

B(Wire tray bracket mounting)

Motion Range
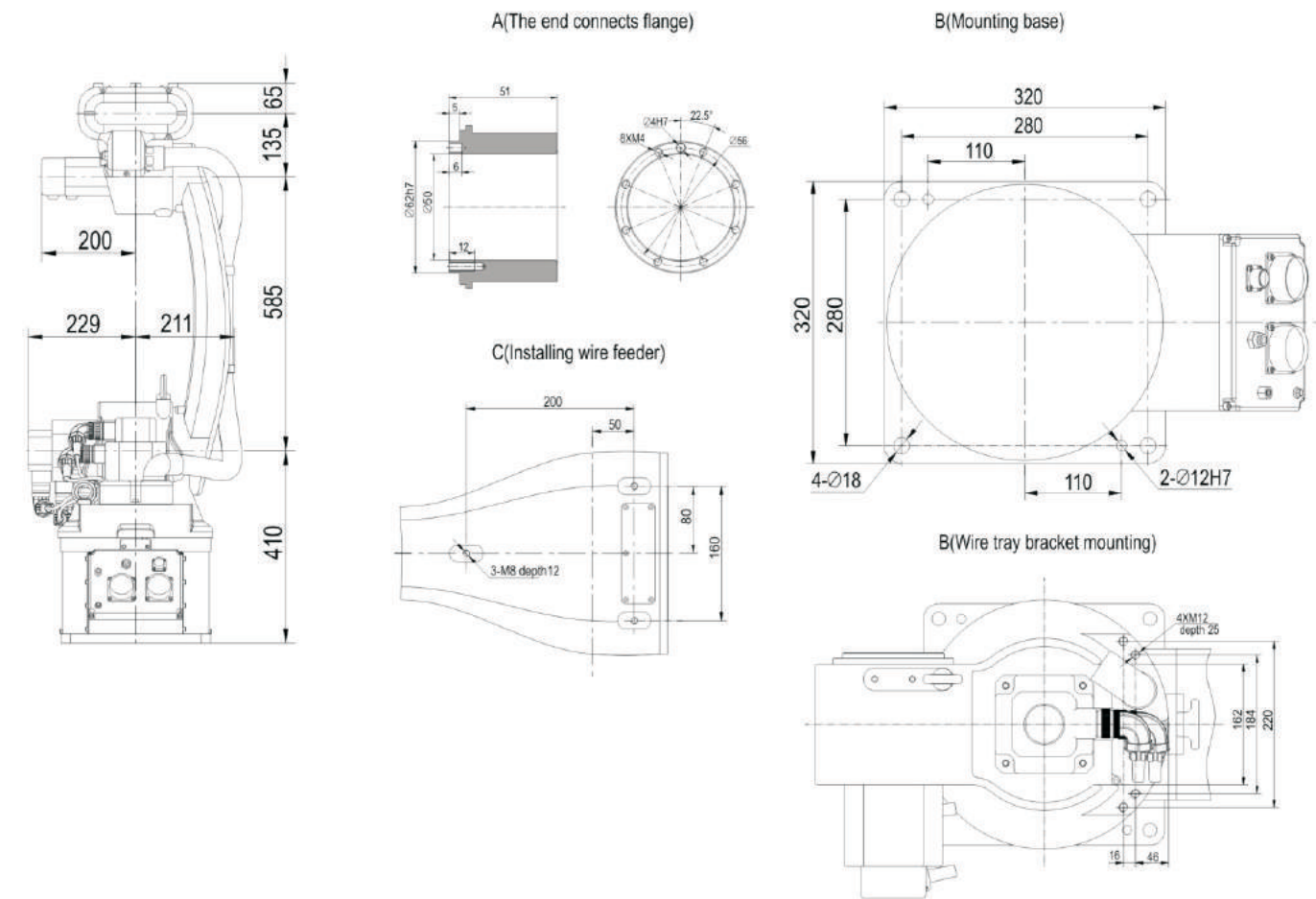
P Motion Range

P Motion Range

SYB1506A

6 axis industrial robot

Payload:

6KG

A(The end connects flange)

B(Mounting base)

C(Installing wire feeder)

Motion Range
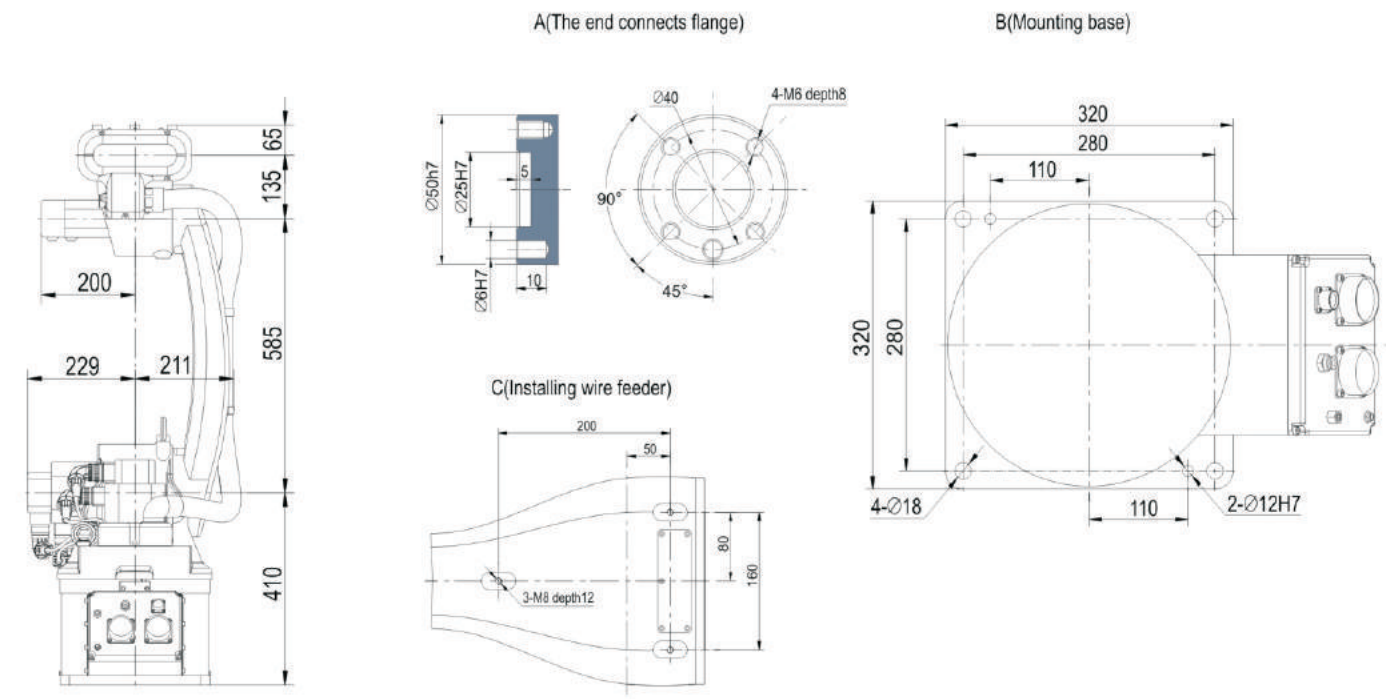
P Motion Range
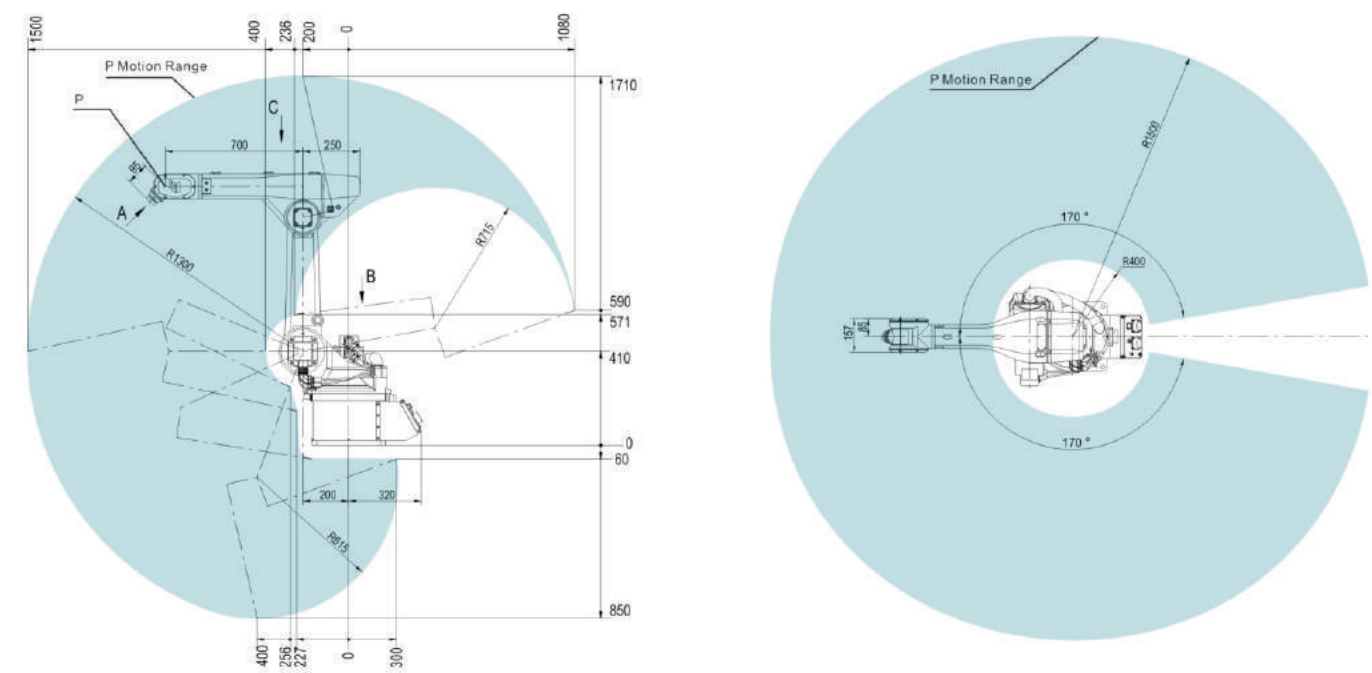
P Motion Range

SYB1410B

6 axis industrial robot

Payload:
10KG

A(The end connects flange)

B(Mounting base)

C(Installing wire feeder)

Motion Range

P Motion Range

SYB2020A

6 axis industrial robot

Payload:

20KG

A(The end connects flange)

B(Mounting base)

C(Installing wire feeder)
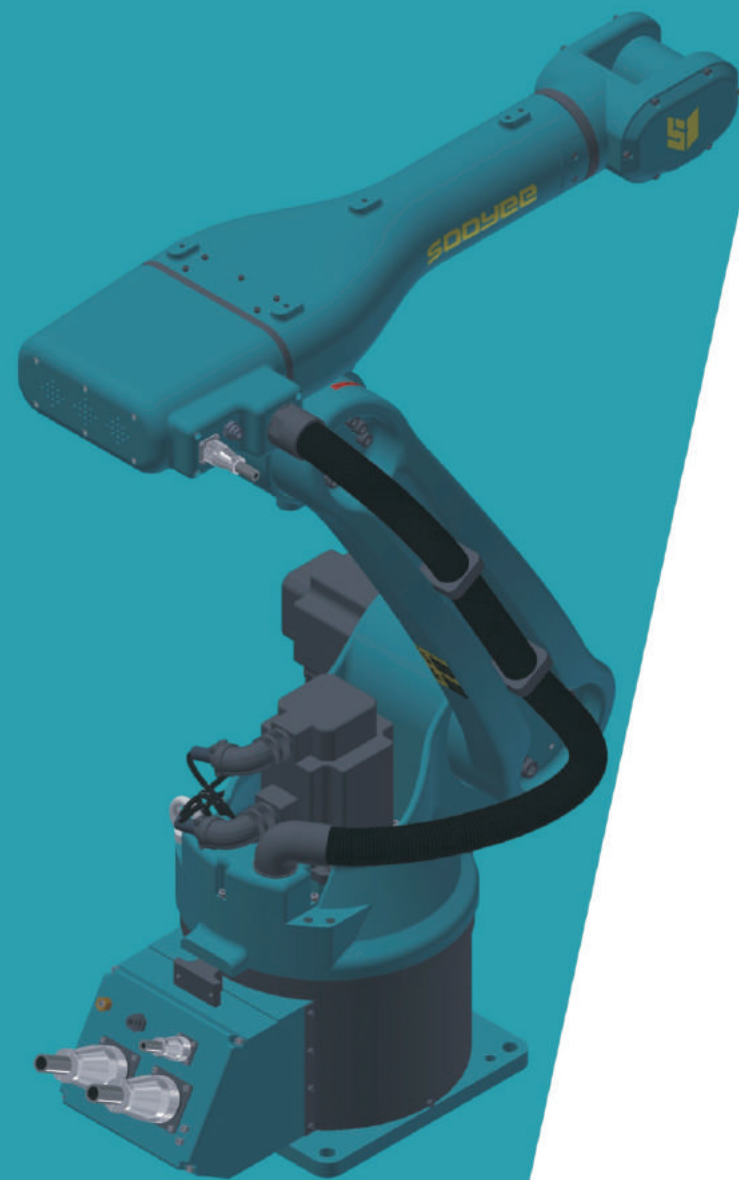
Motion Range
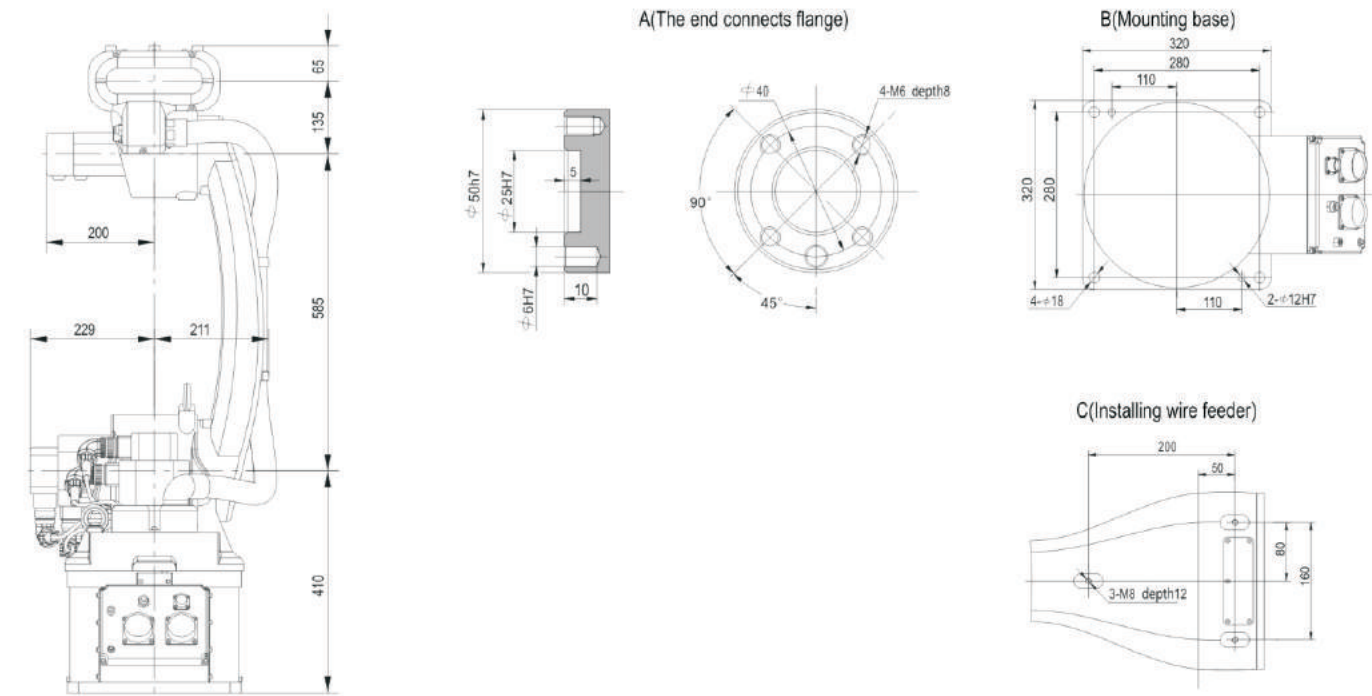
P Motion Range
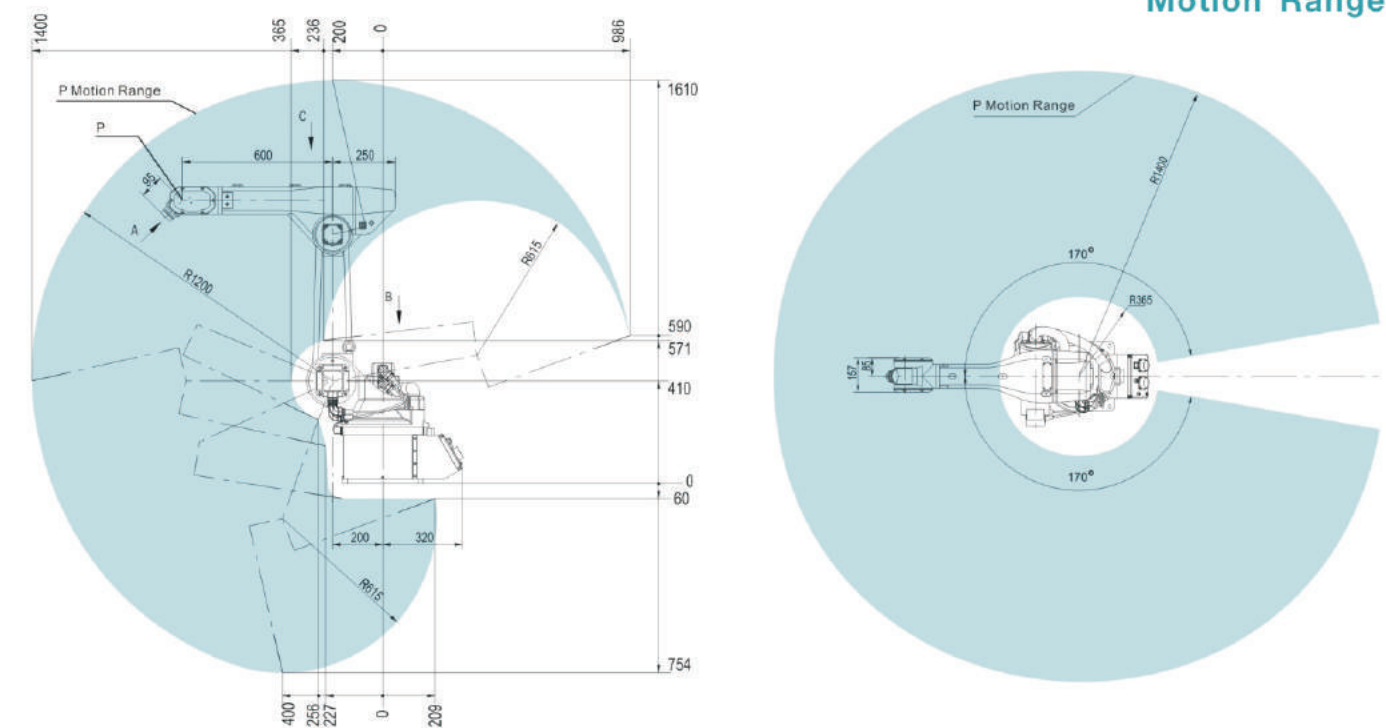
P Motion Range

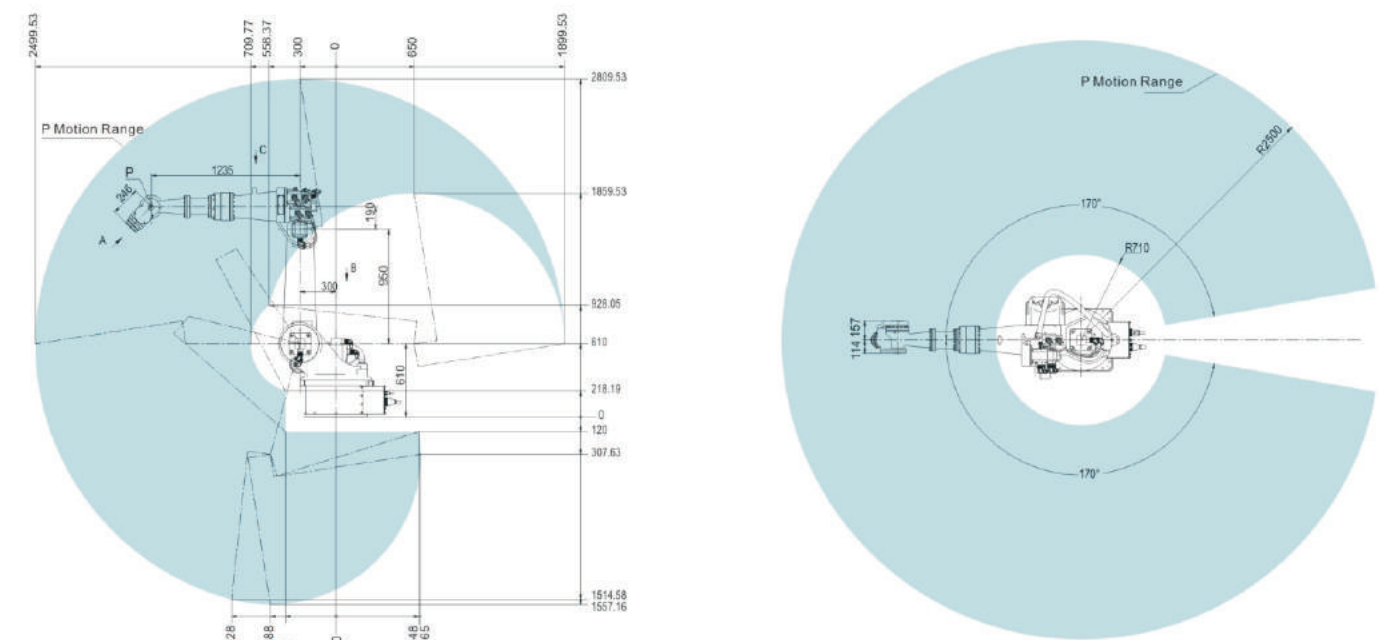# SYB1830A

6 axis industrial robot

Payload:

30KG

Dimension Drawing

A(The end connects flange)

B(Mounting base)

C(Installing wire feeder)

Motion Range
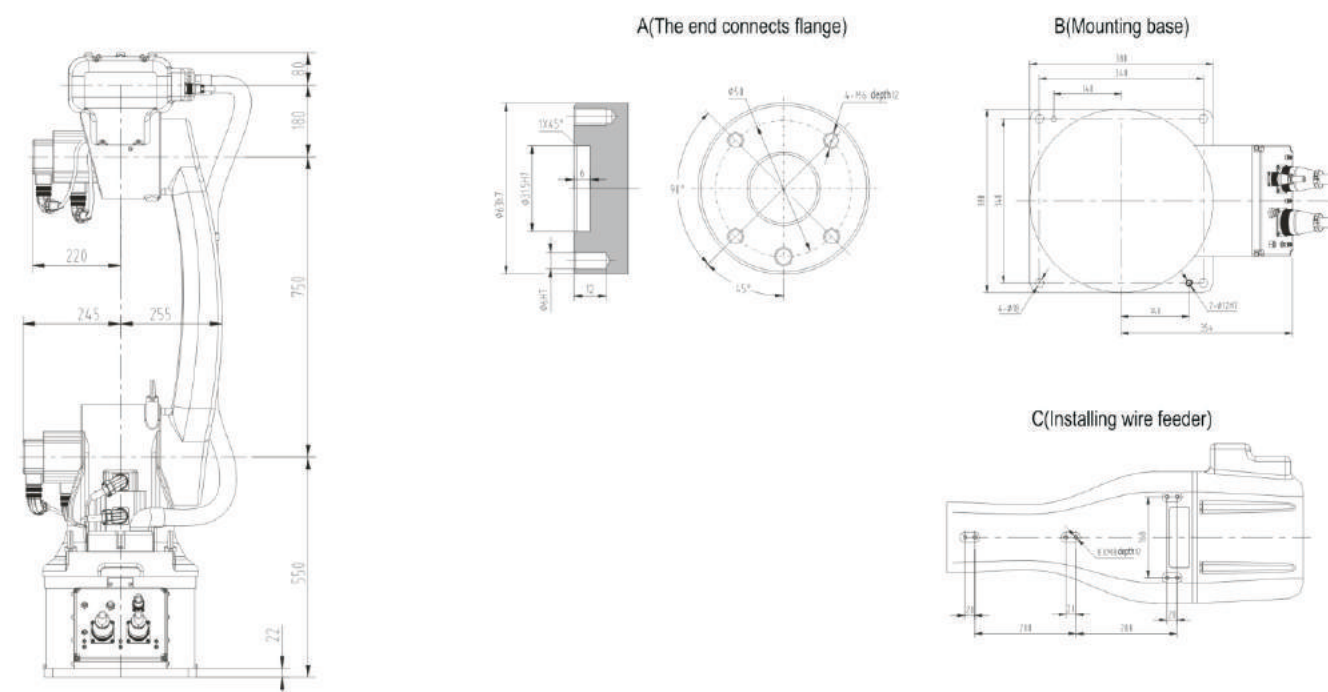
P Motion Range
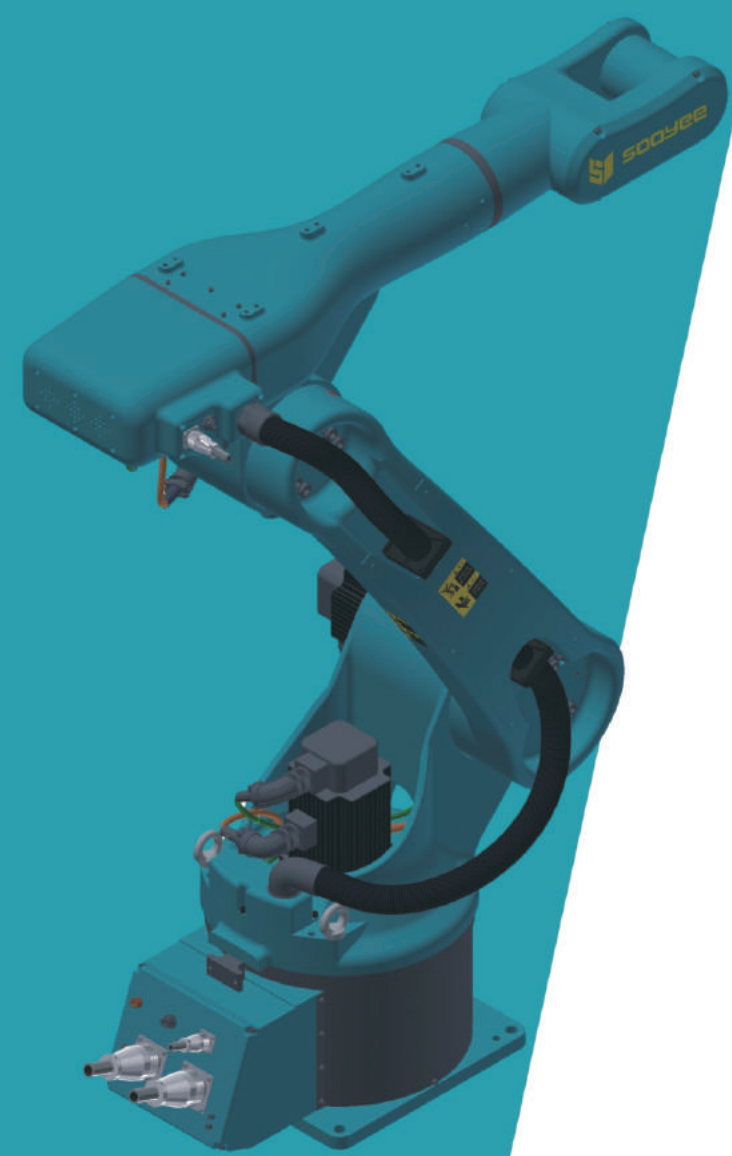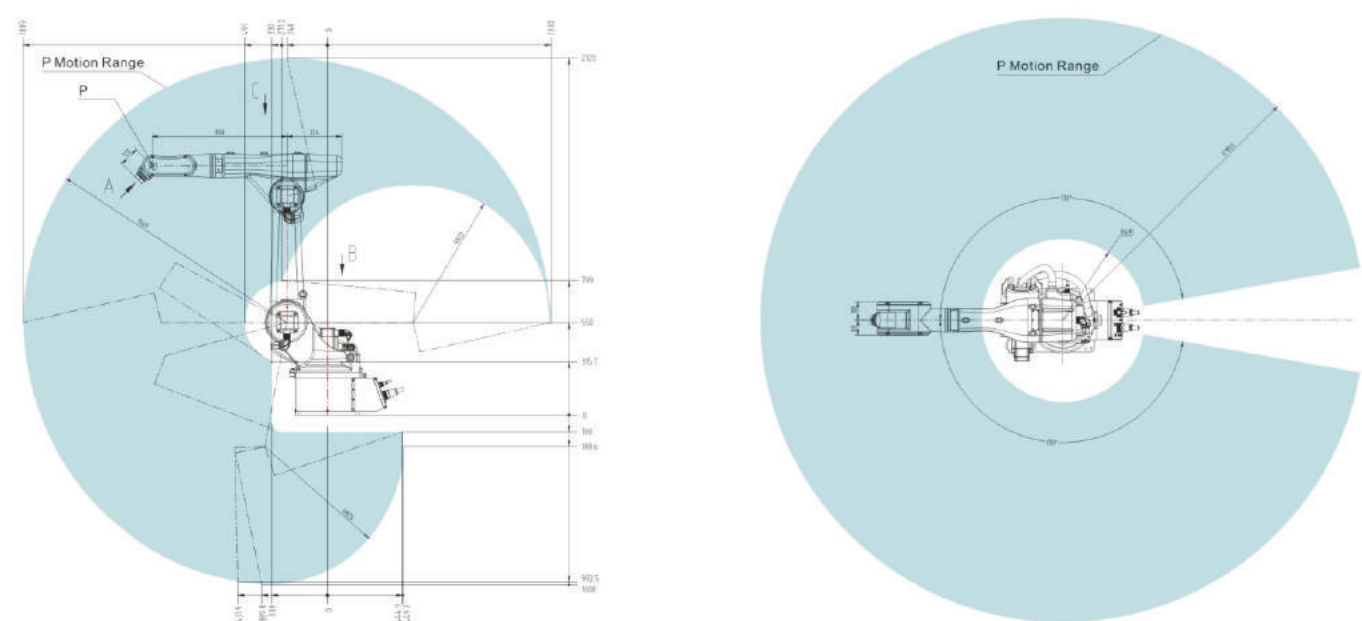
P Motion Range

SYM1550A

6 axis industrial robot

Payload:
50KG

A(The end connects flange)

B(Mounting base)

C(Installing wire feeder)

Motion Range

P Motion Range

21/22
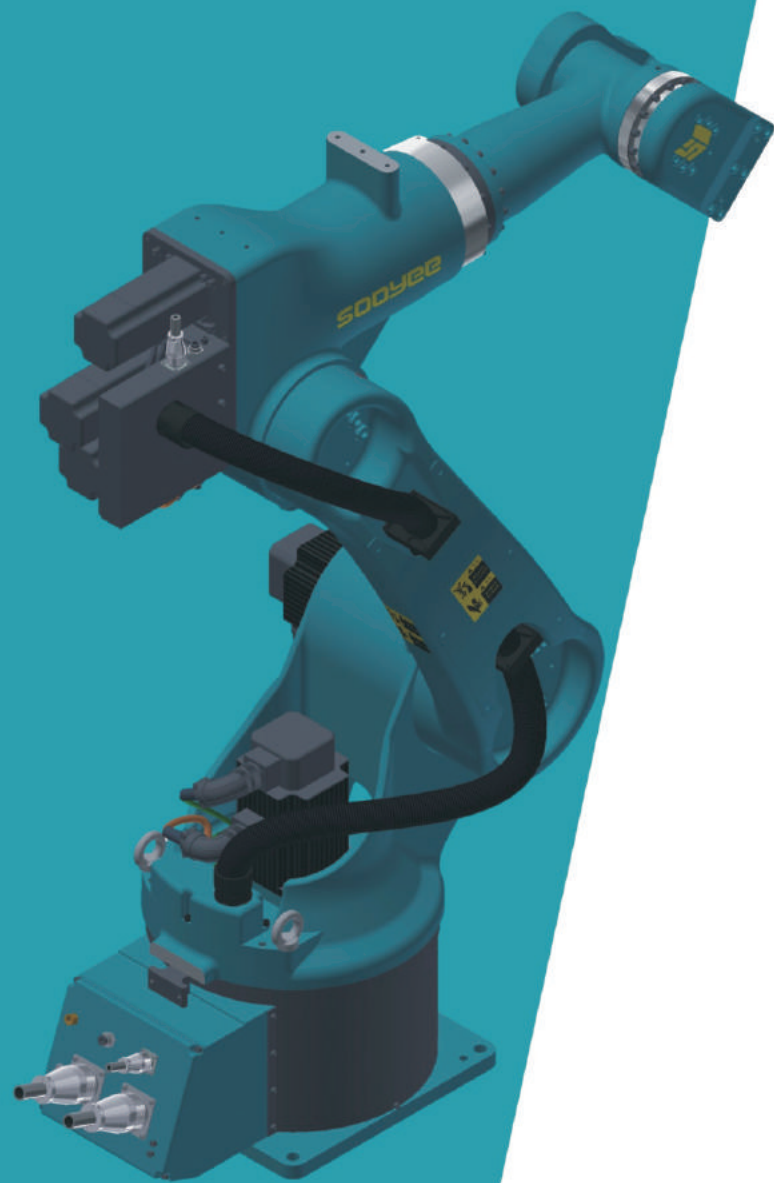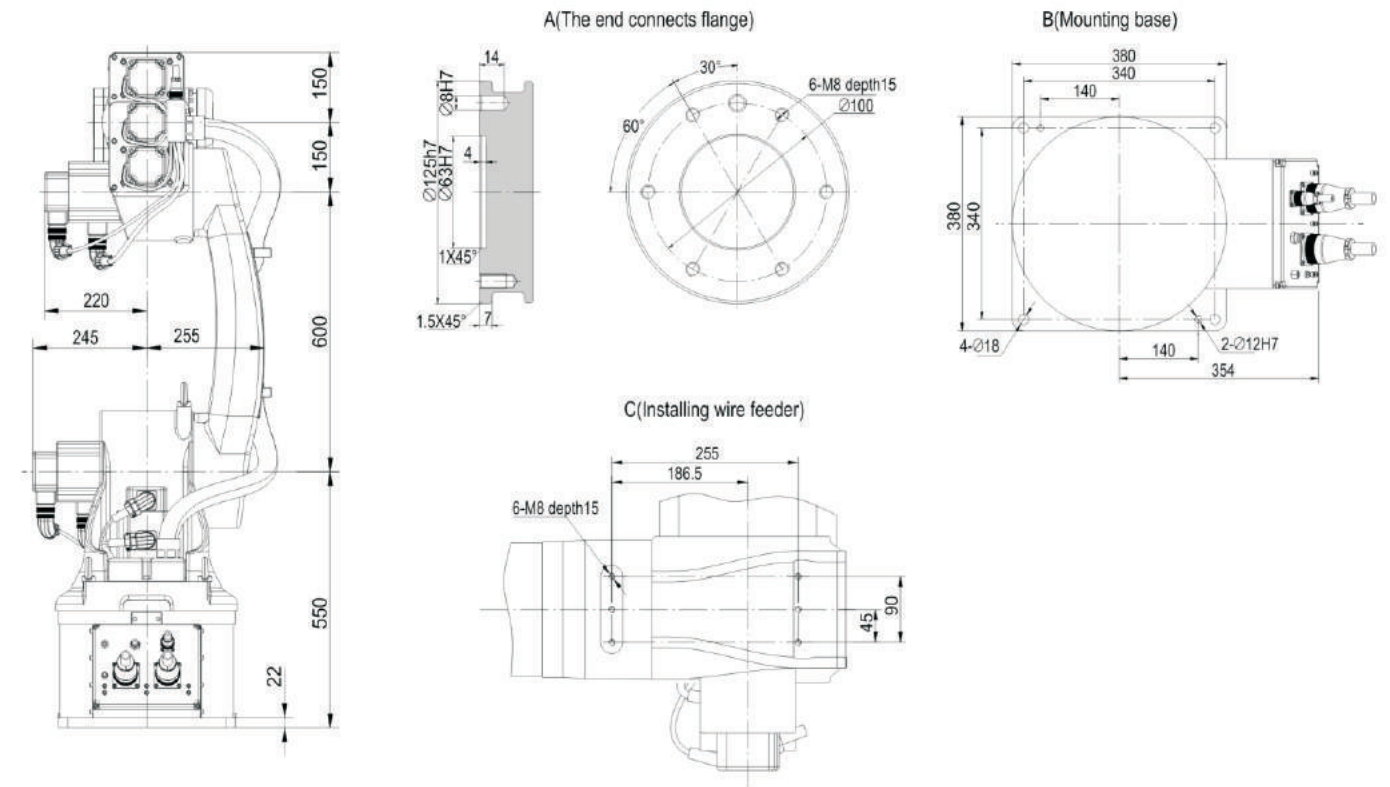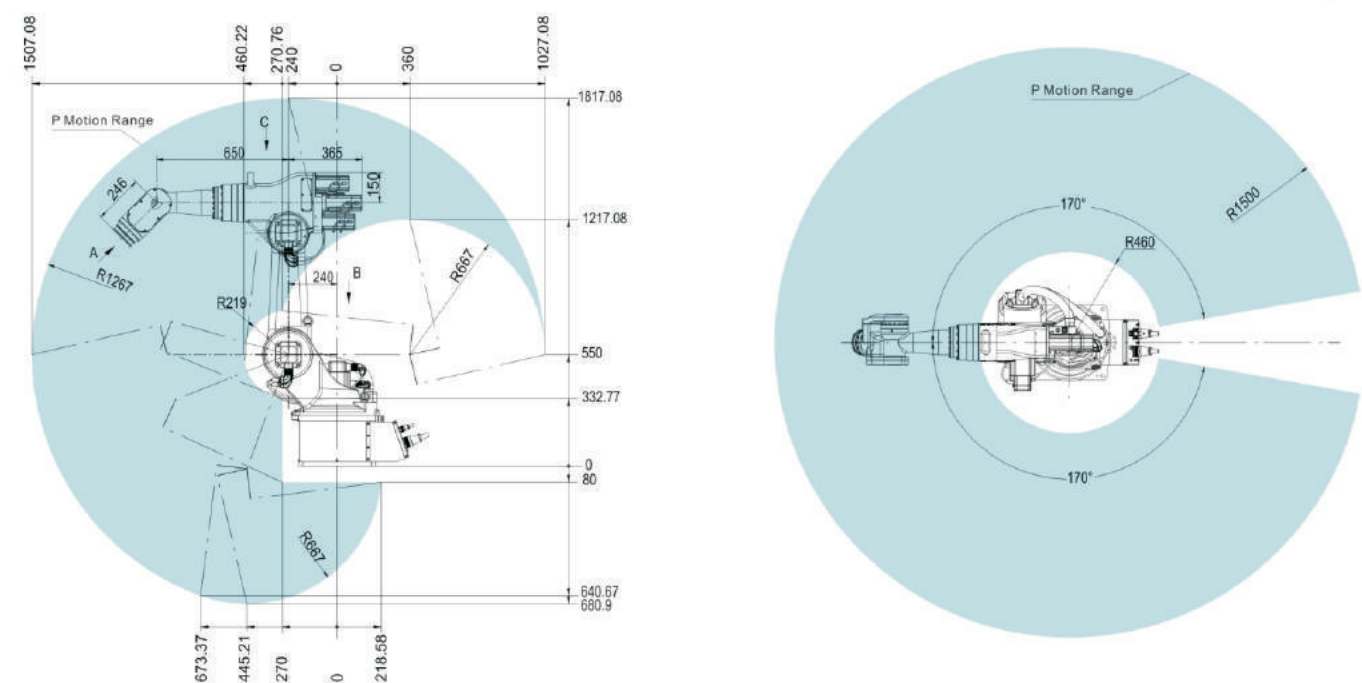
SYB2560A

6 axis industrial robot

Payload:

60KG

Dimension Drawing

A(The end connects flange)

B(Mounting base)

C(Installing wire feeder)
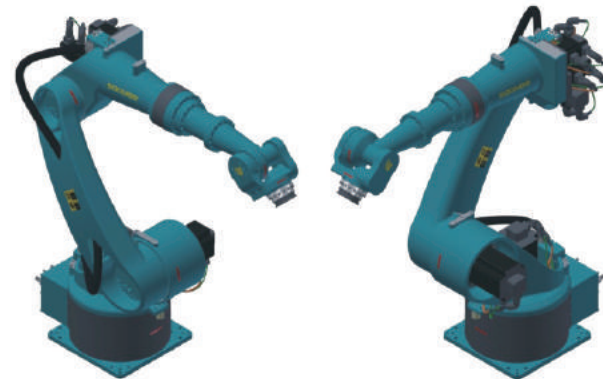
Motion Range
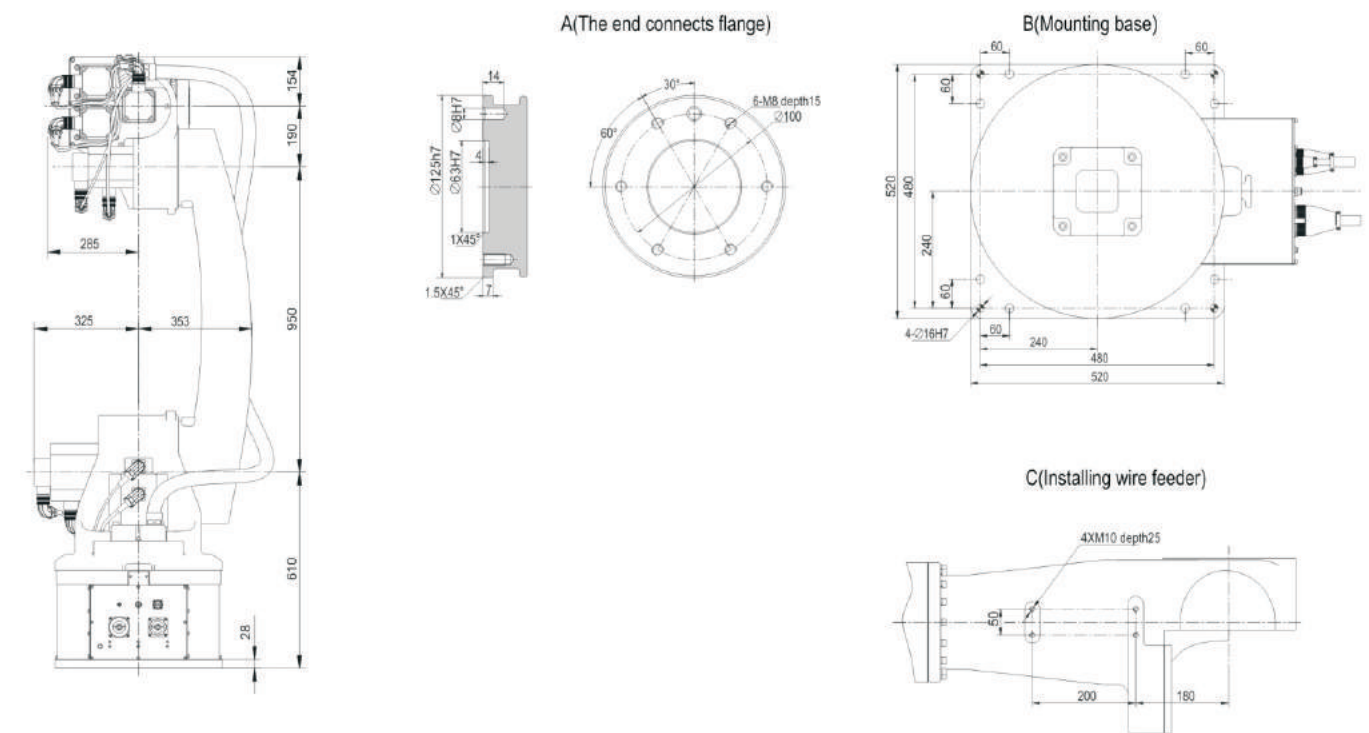
P Motion Range

P Motion Range

SYB2380A

6 axis industrial robot

Payload:

80KG

Dimension Drawing

A(The end connects flange)

B(Mounting base)

6-M8 depth15
□100

4-Ø16H7

C(Installing wire feeder)

4XM10 depth25

Motion Range

P Motion Range

P Motion Range

170°

R2500

R803

170°
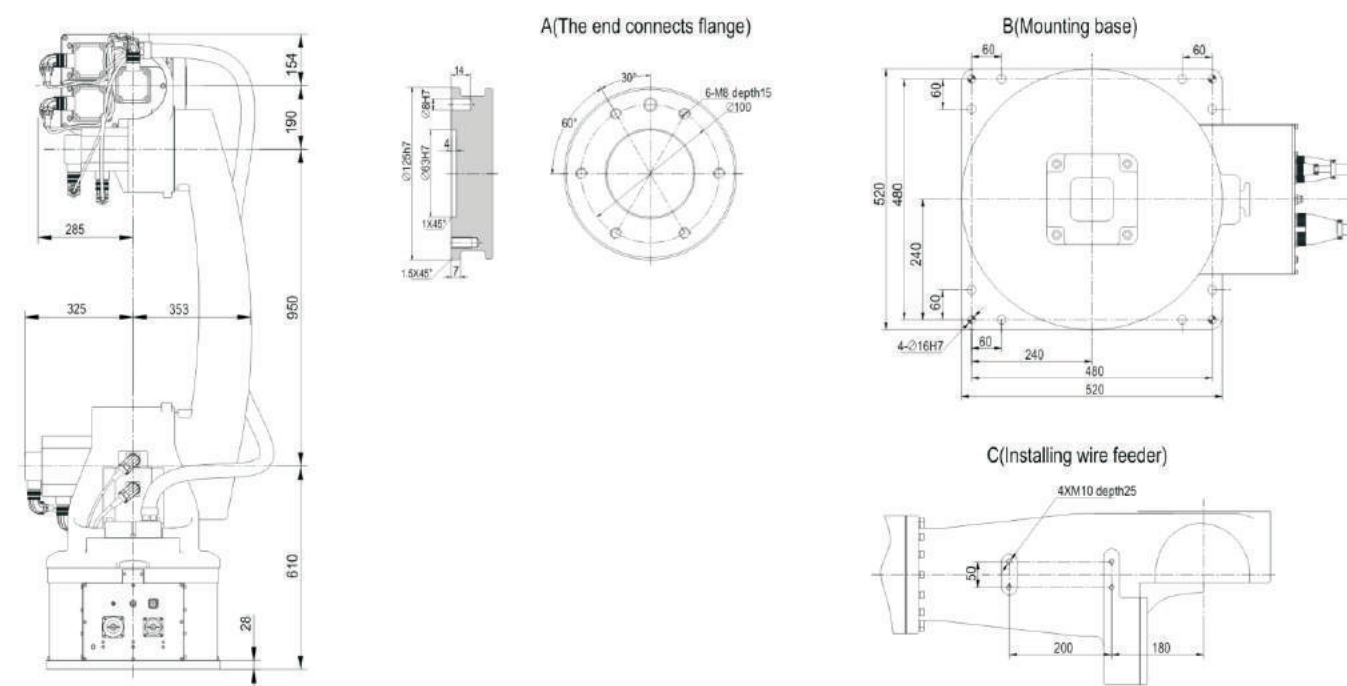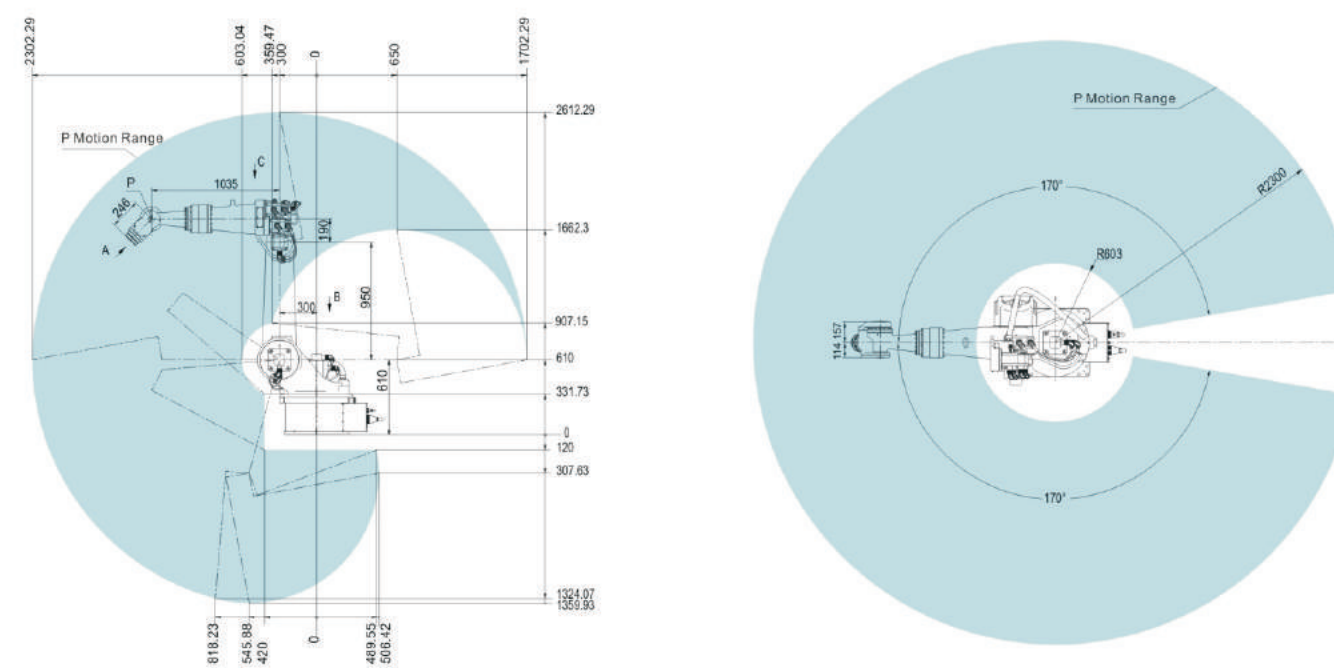
SY800

Industrial Robot Control System

Functional Characteristics

- The mainstream and efficient hardware platform is composed of the industrial computer with high performance 800MHz main frequency CPU and 512MB memory X86 frame and FPGA motion control card.
- With industrial grade, mature and stable embedded operating system.
- Equipped with 4 USB2.0 interfaces, one VGA interface, one Ethernet interface, and one PS/2 interface.
- 8 inch TFT-LCD, button + touch screen, mode selection switch, safety switch, emergency stop button.
- Self-develped industrial robot control software, embedded real-time operating system and soft PLC function, flexible configuration and rich functions.
- Simple operation interface with button + touch screen input mode. It's simple and convenient.
- Supporting Maximum 8 axis. (6+2 extended axis)
- Continuous operation for 30*24 hours without trouble.
- Widely applied in industrial production. Such as: machine tool material loading and uloading, welding, material handling, palletizing, spraying, etc.

Teaching pendant

Dimension Drawing
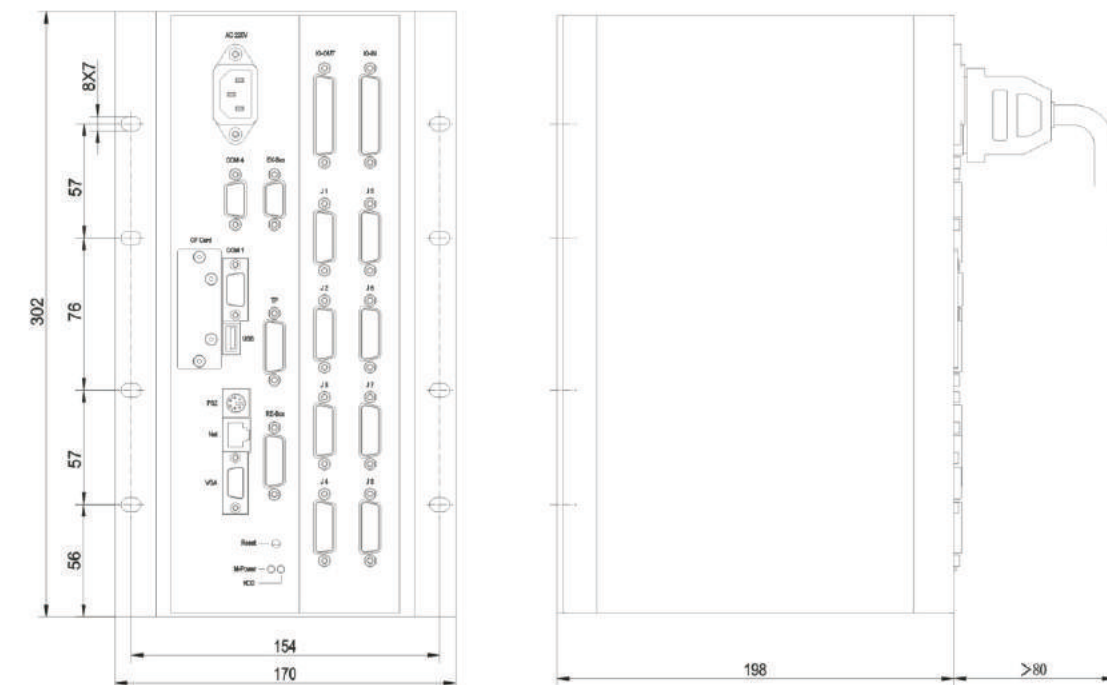
SY-S80
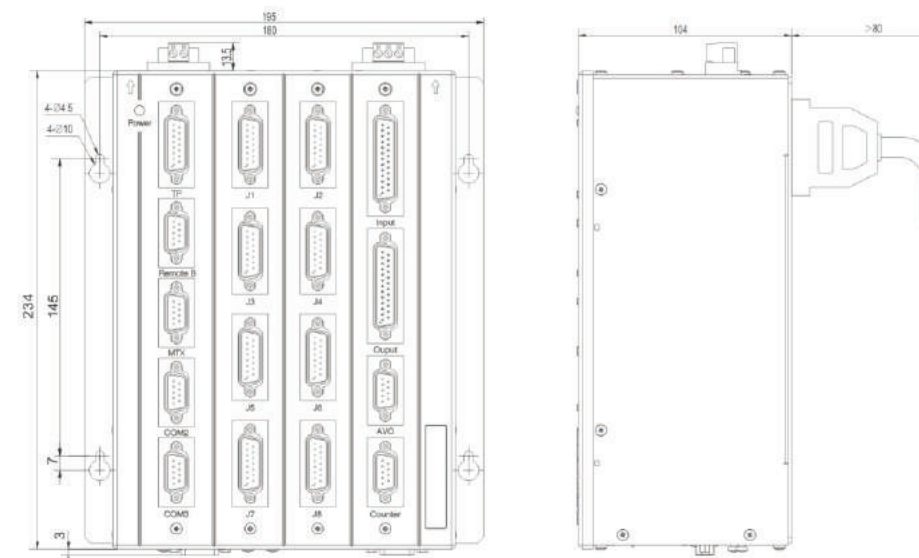
Industrial Robot Control System

Technical features

- Optimized structure algorithm. Applied to work with many forms of robots.
- Modular function setting to make a variety of applications.
- 8 axis control, can realize the external axis (walking slider, positioner) control
- Improved computer bus interface to ensure reliability and practicality.
- Open structure, same with international level, convenient for function expansion.
- With software PLC function, it is convenient for logical control.
- Working process function, simplified programming, easy operation.
- Suitable for various increments with absolute servo.
- With Safety module to ensure the safety of robot workstation.

Technical index

User memory space	200M
Teaching pendant	8 inch TFT-LCD, button + touch screen, mode selection switch, safety switch, emergency stop button
Axis quantity that can be controlled	6+2 axis, 6 robot body axes + 2 external axes
Interface	Digital I/O interface, With 2 version I/O options (24 input / output or 32 input / output(expandable))
	4 way 0-10V analog output, 12 bit accuracy.
	Multiplex encoder signal interface (position tracking)
	Special terminal interface for robot,hard limit, Anti-collision, Maintenance switch, Brake control
	Ethernet interface, serial communication (RS232, 485, 422) interface.
Safety module	Associated with abrupt stop. Robot abnormal signals will ensure rapid stopping of robots.
Servo control	Absolute, incremental type.It can work with Delta, Yaskawa, MITSUBISHI, Sanyo, Matsushita, Fuji, Tamagawa and other servo brands made in China.
Operation mode	Teaching, reproduction, remote.
Programming mode	Teaching programming to work the whole working process.(palletizing, welding, gluing, tracking, vision, booking etc.)
Moving function	Point-to-point, straight line, Arc.
Command system	Motion, logic, process, operation.
Control mode	position control.
Coordinate system	Joint coordinates, cartesian coordinates, user coordinates, tool coordinates, and base coordinates.
Software PLC function	Ladder diagram editing, 5000 steps.
Abnormal detection function	Abnormal stop, abnormal servo , anti-collision, safety maintenance, abnormal arc, abnormal user coordinates, abnormal tool coordinate etc.
Structure algorithm	Vertical multi joint series, vertical multi joint parallelogram, vertical multi joint L shape wrist robot etc.
Zero position function	Absolute type: Battery memory; incremental type: turn back to zero and save the coordinates automatically.
Application	Handling, welding, spraying, palletizing, cutting, polishing, forging, casting etc.
Power Supply	AC220V±15% 50/60Hz 200W
Outline size	34*192*104 mm

Dimension Drawing


SY-S80 industrial robot control system adopts the popular openning hardware and software platform.It is equipped with a special multi axis motion control card, a data acquisition card, a robot dedicated terminal and a safety interface.Modularized software designs are for different ontology structures, application industries, functions etc.It can control vertical multi joint robot, vertical articulated parallelogram robot, vertical multi joint L wrist robot, Vertical multi joint spherical wrist robot, coordinate robot, multi axis special machinery and many other types of robots.
It can be applied in loading and unloading,welding, painting,palletizing,material handling etc.The standard computer bus can communicate with whole onsite automation system, such as vision system.

Teaching pendant

Robot system Solution

SOOYEE robot can be applied in machine tool material loading and unloading, materrial handing, palletizing, welding, painting ect.
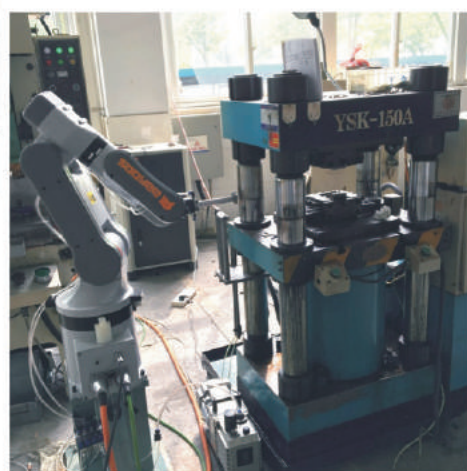
SOOYEE on Western China International Fair
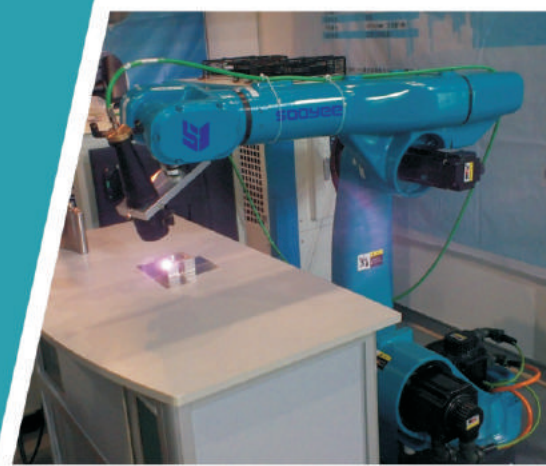
▼ Load and unload robot

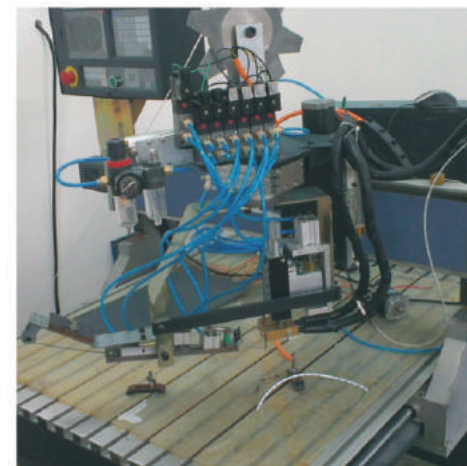◄ Automatic inspection workstation

▼ 1 robot works with 2 assembly to do palletzing

◄ Automobile oil pan welding

▲ Customized special equipment for customers

◄ Machine tool loading and unloading

▲ Automated detection in the eletronnic industry

▲ Laser processing

▲ Punching machine material loading and unloading

▲ Punching machine material loading and unloading
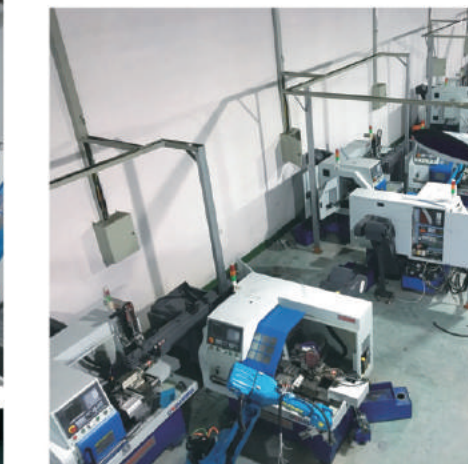
▲ 1 robot works with 3 cnc machine to do material loading and unloading

◄ Welding robot
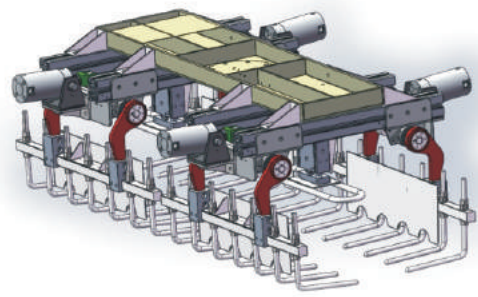
Handling fixture
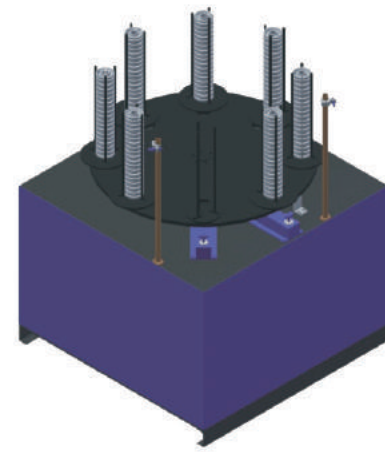
Multi station rotary lifting platform

Welding wire bracket
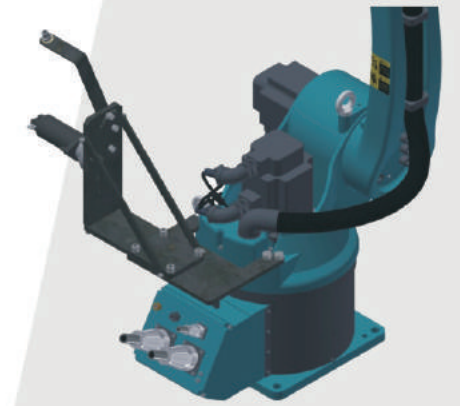
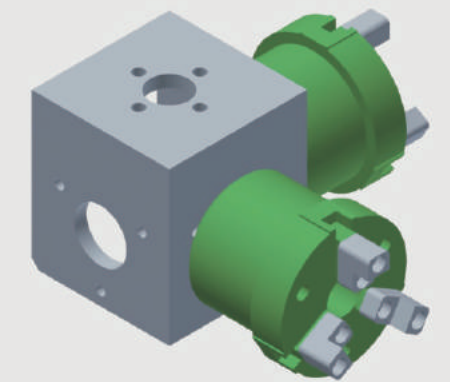Welding wire bracket installation picture
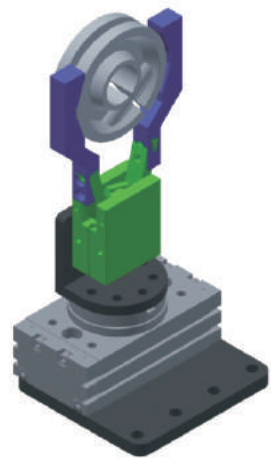
Overturning table
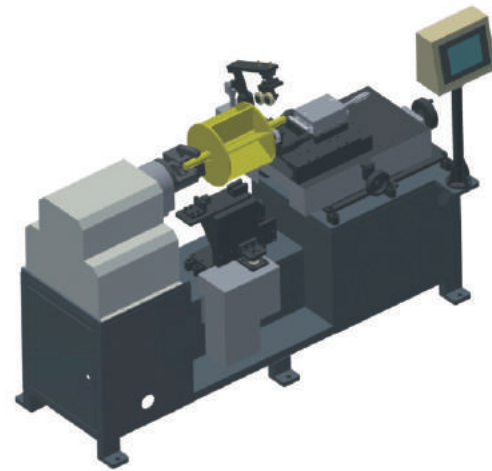
Welding positioner
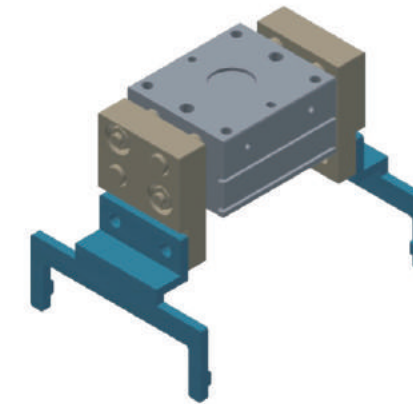
Robot hand gripper 1

Robot hand gripper 2
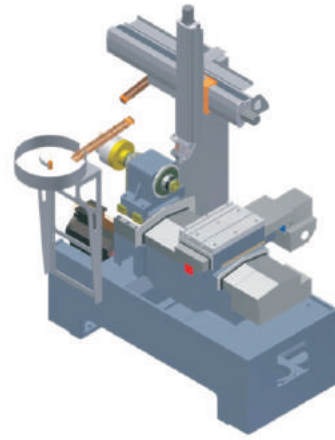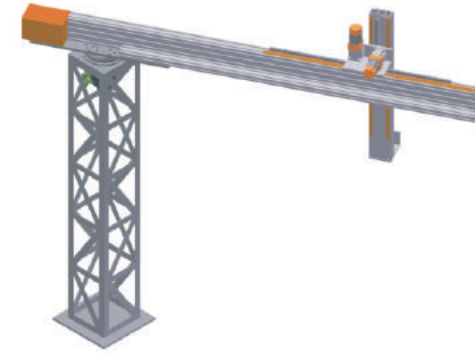
Special equipment for robots
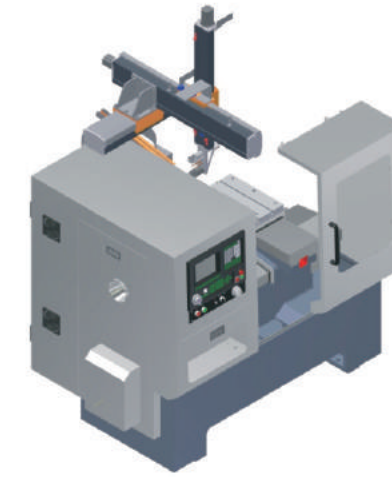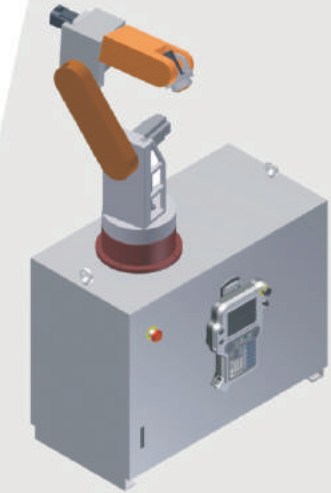
8kg six axis robot
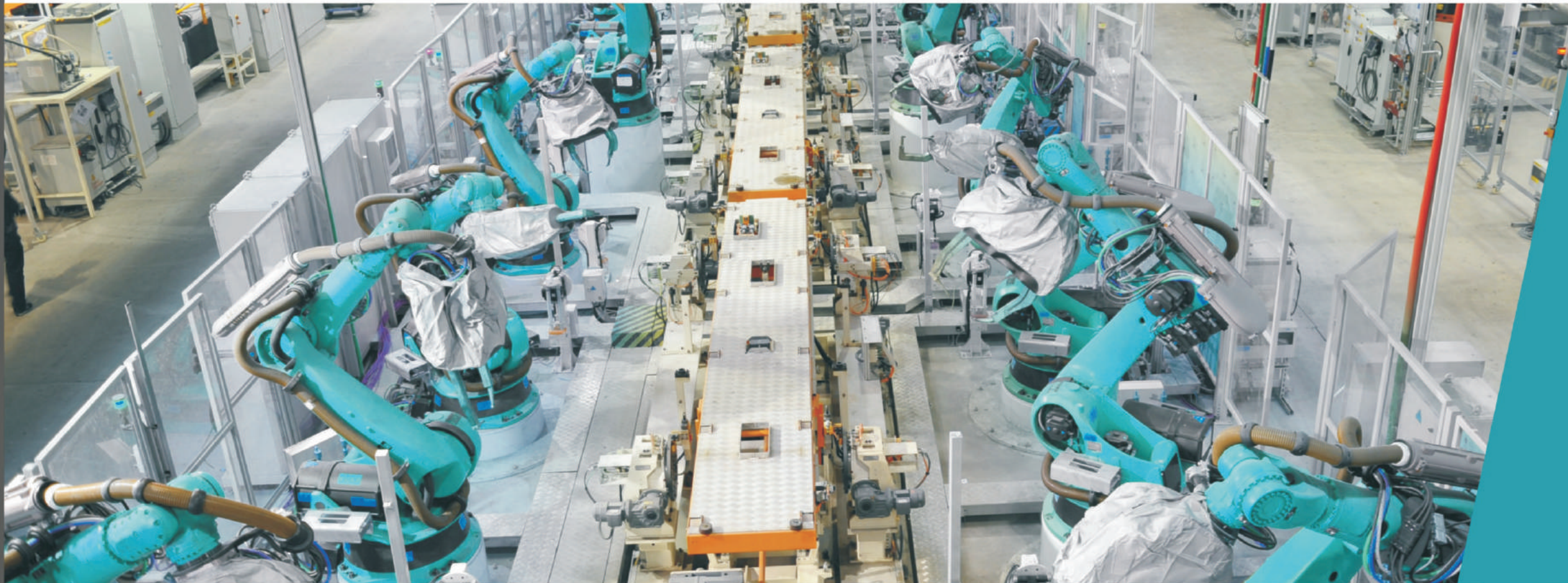
20kg six axis robot

Right angle coordinate -2 axis

Rotary + right angle

Right angle coordinate -3 axis

3kg six axis robot

Customize Your Special Robot