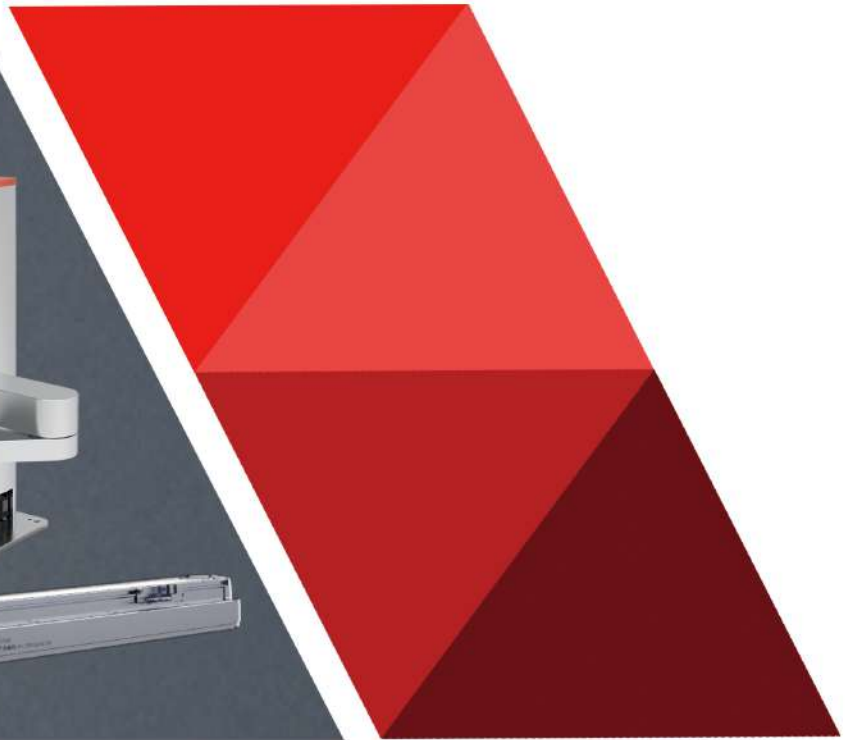




Product Brochure

The most affordable or nothing.

Main category: Industrial robot arm / Collaborative robot arm /
Electric gripper / Intelligent actuator / Automation solutions





Company Profile

Huiling-tech (HITBOT) Robotic Co., Ltd, as one of Xiaomi ecological chain enterprise which is a leading manufacturer of lightweight collaborative robot arm and electric gripper in the robot industry. Through nearly 10 years of research and development, Hibtot has successfully lowered the bar of automation transformation and benefits small and medium-sized enterprises in cost and accessibility, and as well as providing leading automation solution services in an efficient, low-cost and modular manner.

Founded in 2015, Hitbot always takes automation redefining as top mission, aiming to create the most cost-effective products, reducing the cost and operating bar of the intelligent manufacturing industry, and become the world's leading robot manufacturer and service provider. Hundreds of Thousands of customers all over the world have purchased Z-Arm and electric gripper EFG series for smart manufacturing, including Huawei, Xiaomi, Foxconn, P&G, BGI and many other world top 500 companies.

Honor & Cooperation

Honor

Huiling Technology has strong technology background and hires many domestic top technical talents. It provides customers with efficient and professional solutions for robot arms and related products. So far, Huiling Technology has owned more than 80 patents and received many domestic awards for contribution in the robotic area.



Around **70** patents,
including more than **10** invention patents



More than **10** domestic awards



CE, FCC certification



Cooperation Partners



Product Category

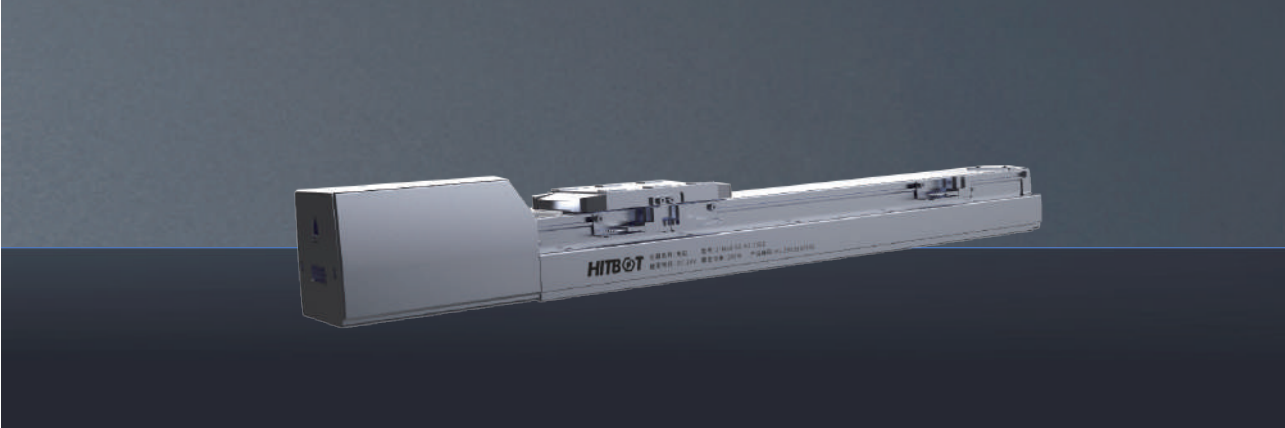
Z-Arm is a innovative lightweight collaborative robotic arm that overthrows the industry standard. solution.



The electric gripper is another series of products of HITBOT. It is the leading electric gripper capable of integrating a servo system in China. The electric gripper Z-EFG series can meet the production of flexible clamping, and can be digitally controlled, which is convenient and accurate to control the speed, position and clamping force.



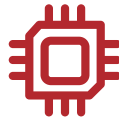
Z-Mod has made great innovations in the form of traditional smart electric actuators. It highly integrates the external motors and controllers inside the smart electric actuators, realizes the integration of the machines, optimizes the use of space and maximizes the use of travel.



Industry Application



Medical Industry



3C Electronics Industry



Other Industry



Education Industry

Industry Application

3C Electronics Industry, Medical and Chemical Industry, Testing Industry, New Retail, Food and Catering, Auto Parts Industry, Textile Industry, Plastic Industry, Scientific Research and Education



Chemical Industry



Automobile Industry



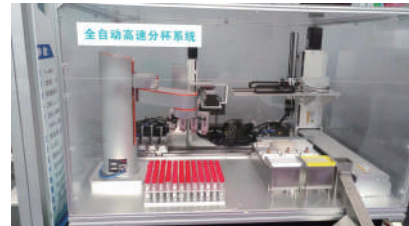
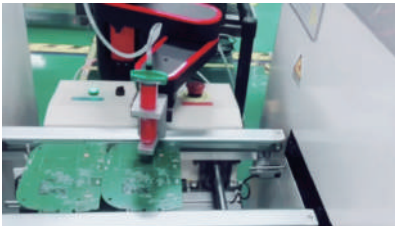
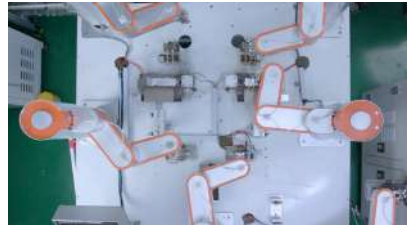
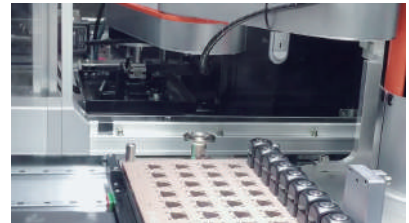
Advanced Manufacturing



New Retailing Industry

Application Scenarios

Loading, unloading, sorting and assembly of products and parts.
The sample is clamped and maintained to facilitate inspection and testing.
Circuit board welding, dispensing, Screwing and 3D printing.



Z-Arm Series Robot Arm

Z-Arm is an innovative lightweight collaborative robotic arm using drive/control and built-in method that overthrow the industry standard solution.



Z-Arm XX32



Z-Arm XX42



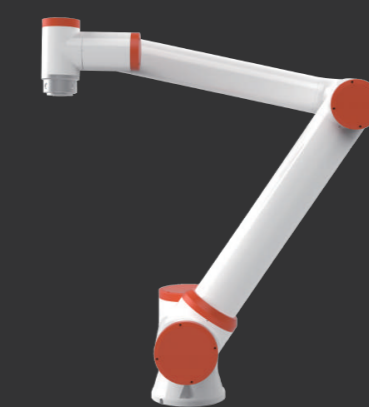
Z-Arm XX60



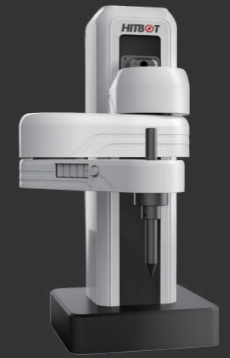
Z-Arm S622



Z-Arm S922



Z-Arm S1400



Z-Arm 1522

- Collaboration and Safety** ▶ Traditional robot arms are difficult and costly to operate processes that require flexibility and tactility. Collaborative robot arm is more efficient, equipped with unique collaboration functions, it can collaborate with people without isolation zone safely.
- Quick Station Change** ▶ Especially suitable for small batch, multi-category and other flexible production that requires frequent replacement of production lines. Flexible recognition, easy adjustment of production stations.
- Minimal Working Space** ▶ Small arms, Suitable for stacking operation space. Drive/control built-in body design.
- Cost-effective** ▶ Cost-effective for replacement of linear modules.
- Easy to Use** ▶ Simple operation. Get started in 5 minutes. Interface open.
- Z Axis Customization** ▶ Up and down travel, customization.

Model Definition

Z-Arm T1832C0-FXXX-01

Blank: 4-axis
F: 5-axis
T: 3-axis
S: 6-axis

Z-axis travel e.g. 18 (180mm)

Arm length e.g. 32 (320mm)

0: Silver colour
1: Black colour

Collaboration: C
Non-collaboration: N

F: Non-standard customization Version
Blank: Standard Version
XXX: Customer No.
01: Version No.

Z-Arm T2442C0-A0T1M1-G1-FXXX-01

Blank: 4-axis
F: 5-axis
T: 3-axis

Z-axis travel e.g. 24 (240mm)

Arm length e.g. 42 (420mm)

0: Silver colour
1: Black colour

Collaboration: C
Non-collaboration: N

A0 means 2 straight lines; A2 means two tracheas

T1 means the standard configuration of the I/O version, which can be adapted to Z-EFG-8S/Z-EFG-12/Z-EFG-20/Z-EFG-30
T2 means that the I/O version has 485, which can be connected to Z-EFG-100/Z-EFG-50/other users need 485 communication

Blank: Without installing electric grippers;
G1: Electric gripper installed, Gripper is installed horizontally to realize the hollow wiring;
G2: Electric gripper installed, Gripper is installed vertically to achieve hollow wiring

M1: Movement range of the second arm ±164 deg (External rotation)
M2: Movement range of the second arm 15deg-345deg (Internal rotation)

Z-Arm T4160N0-A0T1M1-G1-FXXX-01

Blank: 4-axis
F: 5-axis
T: 3-axis

Z-axis travel e.g. 41 (410mm)

Arm length e.g. 60 (600mm)

0: Silver colour
1: Black colour

Non-collaboration: N

A0 means 2 straight lines; A2 means two tracheas

T1 means the standard configuration of the I/O version, which can be adapted to Z-EFG-8S/Z-EFG-12/Z-EFG-20/Z-EFG-30
T2 means that the I/O version has 485, which can be connected to Z-EFG-100/Z-EFG-50/other users need 485 communication

Blank: Without installing electric grippers;
G1: Electric gripper installed, Gripper is installed horizontally to realize the hollow wiring;
G2: Electric gripper installed, Gripper is installed vertically to achieve hollow wiring

M1: Movement range of the second arm ±164 deg
M2: Movement range of the second arm 15deg-345deg

Specifications

Four-axis Collaboration



Item		Z-Arm XX32	Z-Arm XX42	Z-Arm XX60	Z-Arm 1522	
Basic Information	1 Axis	Arm Length	160mm	220mm	325mm	100mm
		Rotation Angle	±90°	±90°	±90°	±90°
	2 Axis	Arm length	160mm	200mm	275mm	120mm
		Rotation Angle	±143°	±164°	±164°	±150°
Z-axis	Stroke	180mm (Height customizable)	240mm (Height customizable)	410mm (Height customizable)	150mm	
R axis	Rotation Range	±1080°	±1080°	±1080°without mechanical limit / ±170° with mechanical limit	±180°	
Linear Speed		1017mm/s (Payload 0.5kg)	1255.45mm/s (Payload 1.6kg) / 799mm/s (Payload 2kg)	1500mm/s (Payload 3kg)	500mm/s	
Repeatability		±0.02mm	±0.03mm	±0.05mm	±0.1mm	
Standard Payload		0.5kg	2kg	3kg	0.3kg	
Maximum Payload		1kg	3kg	3.5kg	0.5kg	
Degree of Freedom		4	4	4	3	
Power Supply		220V/110V50-60HZ Adapted to 24VDC peak power 320W	220V/110V50-60HZ Adapted to 24VDC peak power 500W	220V/110V50-60HZ Adapted to 48VDC peak power 960W	220V/110V50-60HZ to 24V	
Communication		Ethernet	Ethernet	Ethernet	Serial port	
Scalability		Built-in integrated motion controller provides 24 I/Os	Built-in integrated motion controller provides 24 I/O + robot arm expansion	Built-in integrated motion controller provides 24 I/Os	Available	
Z-axis can be customized in height		0.1m-0.5m	0.1m-1m	0.1m-1m	/	
Z-axis Drag Teaching		/	/	/	√	
Electrical Reserved Interface		/	Standard: socket panel straight through to the lower cover of the arm 2 x 4*23awg (no shielding layer) wire	Standard: socket panel straight through to the lower cover of the arm 2 x 4*23awg (no shielding layer) wire	/	
		/	Optional: socket panel straight through flange 2 x φ4 air hose	Optional: socket panel straight through flange 2 x φ4 air hose	/	
Suitable for HITBOT Electric Gripper		Z-EFG-8S/Z-EFG-20	T1:Z-EFG-8S/Z-EFG-20/Z-EFG-12/Z-EFG-30/Z-EFG-20S, Fifth axis, 3D printing T2:Z-EFG-100/Z-EFG-50	T1:Z-EFG-8S/Z-EFG-20/Z-EFG-12/Z-EFG-20S/Z-EFG-30, Fifth axis, 3D printing T2:Z-EFG-100/Z-EFG-50	/	
Range of Movement of the Second Arm		Standard: ±143°	Standard: ±164°	Standard: ±164°	/	
		/	Optional: 15-345deg	Optional: 15deg-345deg	/	
Use Environment		Ambient temperature: 0-55°C Humidity: RH85 (No frost)	Ambient temperature: 0-55°C Humidity: RH85 (No frost)	Ambient temperature: 0-55°C Humidity: RH85 (No frost)	Ambient temperature: 0-55°C Humidity: RH85 (No frost)	
I/O Port	Digital Input (Isolated)	9+3	9+3 forearm extension (optional)	9+3 forearm extension (optional)	≤14	
	Digital Output (Isolated)	9+3	9+3 forearm extension (optional)	9+3 forearm extension (optional)	≤22	
	Analog Input (4-20mA)	/	/	/	≤6	
	Analog Output (4-20mA)	/	/	/	0	
Machine Height		500mm	596mm	830mm	400mm	
Machine Weight		≈11kg	≈19kg	410mm stroke Net weight 28.5kg	4.8kg	
Base Mounting Size	Base External Size	200mm*200mm*10mm	200mm*200mm*10mm	250mm*250mm*15mm	160mm*160mm*45mm	
	Distance Between Base Fixing Holes	160mm*160mm with four M5*12 screws	160mm*160mm with four M8*20 screws	200mm*200mm with four M8*20 screws	/	
Collision Detection		√	√	/	√	
Drag Teaching		√	√	/	√	
Chassis Compatibility		Fully compatible with the Z-Arm 1632 chassis	/	/	/	
Flange Compatibility		Compatible with Z-Arm 1632 Flanges	Compatible with Z-Arm 2140 Flanges	Compatible with Z-Arm xx42 Flanges	/	

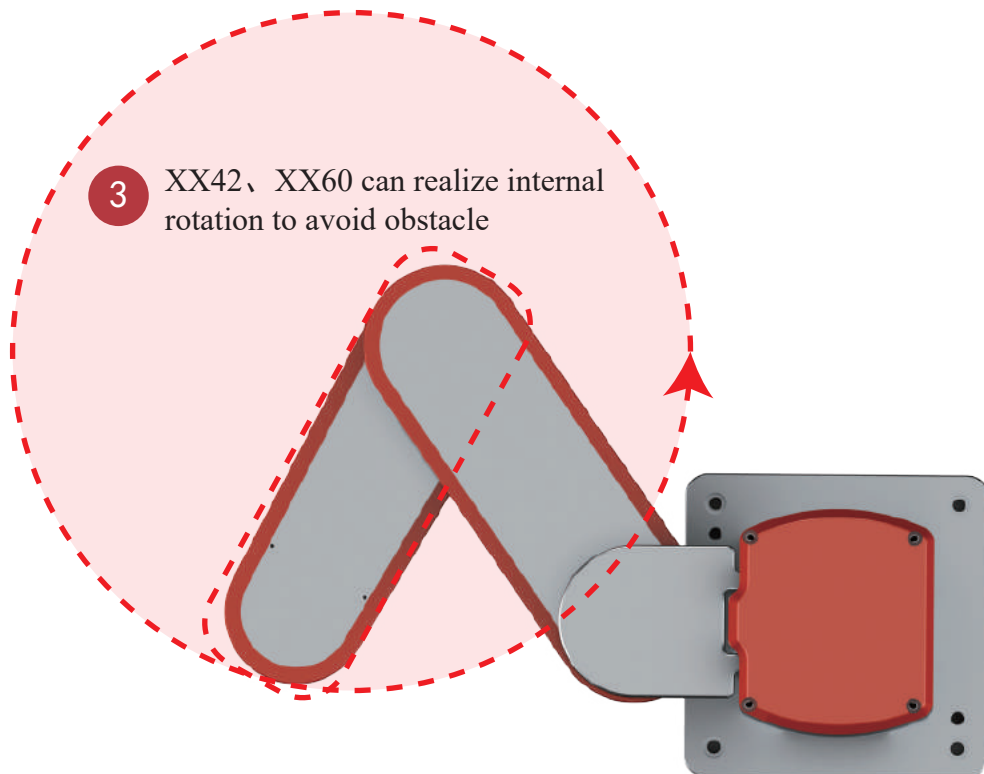
Six-axis Collaboration



Item	Z-Arm S622	Z-Arm S922	Z-Arm S1400
Weight	15kg	≈22kg	≈40kg
Payload	3kg	5kg	10kg
Working Range	622mm	922mm	1400mm
Joint Range of Motion Software Limit Limitation	Axis 1: ±175° Axis 2: +85°, -265°	Axis 1: ±175° Axis 2: +85°, -265°	Axis 1: ±175° Axis 2: +85°, -265°
	Axis 3: ±150° Axis 4: +85°, -265°	Axis 3: ±160° Axis 4: +85°, -265°	Axis 3: ±160° Axis 4: +85°, -265°
	Axis 5: ±175° Axis 6: ±175°	Axis 5: ±175° Axis 6: ±175°	Axis 5: ±175° Axis 6: ±175°
Maximum Joint Speed	180°/s	180°/s	180°/s
Repeatability	±0.06mm	±0.06mm	±0.06mm
Installation Area	φ130mm	φ150mm	φ190mm
Control Box Size	342*260*90mm (Without protrusion)	342*260*90mm (Without protrusion)	342*260*90mm (Without protrusion)
Degree of Freedom	6	6	6
Control Box I/O Port	Digital input: 16 Digital output: 16	Digital input: 16 Digital output: 16	Digital input: 16 Digital output: 16
	Analog input: 2 Analog output: 2	Analog input: 2 Analog output: 2	Analog input: 2 Analog output: 2
Noise	<65DB	<65DB	<65DB
End I/O Port	Analog input: 1 Analog output: 1	Analog input: 1 Analog output: 1	Analog input: 1 Analog output: 1
	Digital input: 2 Digital output: 2	Digital input: 2 Digital output: 2	Digital input: 2 Digital output: 2
Communication	Ethernet, TCP/IP, 485 Communication	Ethernet, TCP/IP, 485 Communication	Ethernet, TCP/IP, 485 Communication
I/O Power Supply	24V/1.5A	24V/1.5A	24V/1.5A
Protection Level	IP54	IP54	IP54
Coordinated Operation	With collision detection function, allowing custom collision levels	With collision detection function, allowing custom collision levels	With collision detection function, allowing custom collision levels
Power Supply	220V/50HZ	220V/50HZ	220V/50HZ
Use Environment	·Away from corrosive gases, liquids and explosive gases	·Away from corrosive gases, liquids and explosive gases	·Away from corrosive gases, liquids and explosive gases
	·Avoid equipment working under unstable current conditions	·Avoid equipment working under unstable current conditions	·Avoid equipment working under unstable current conditions
	·Away from vibrations and the vibration intensity is not higher than 0.5G	·Away from vibrations and the vibration intensity is not higher than 0.5G	·Away from vibrations and the vibration intensity is not higher than 0.5G
	·Avoid dust, smoke and water	·Avoid dust, smoke and water	·Avoid dust, smoke and water
Humidity	0-45°C	0-45°C	0-45°C
Temperature	20-80RH No condensation	20-80RH No condensation	20-80RH No condensation

Z-Arm XX42、XX32、XX60 Unique Feature

Integrated drive, without additional cables



Z-Arm 1832/Z-Arm XX32



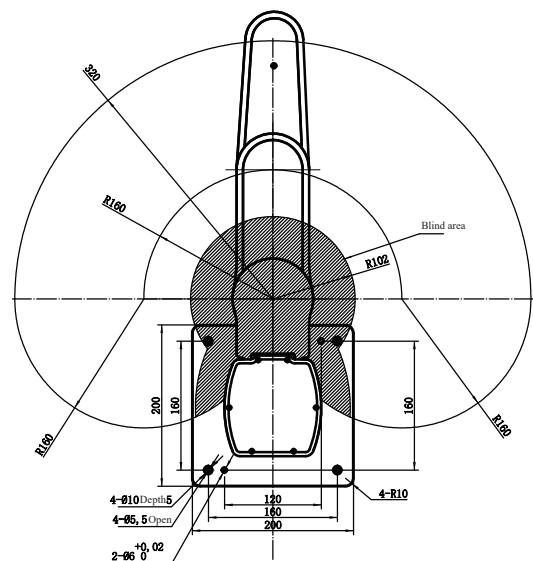
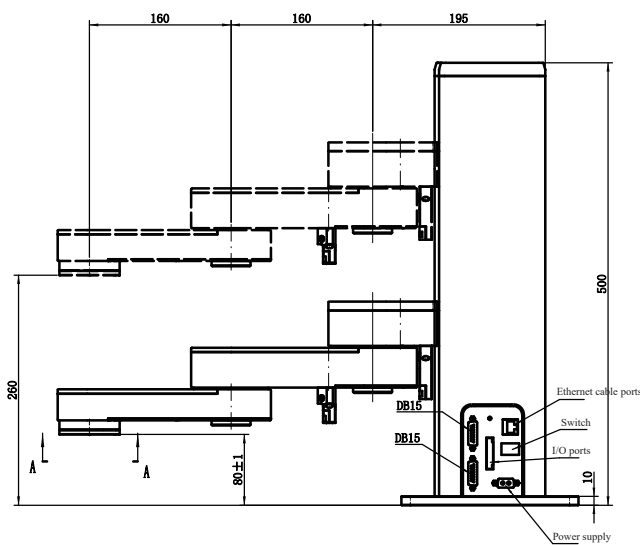
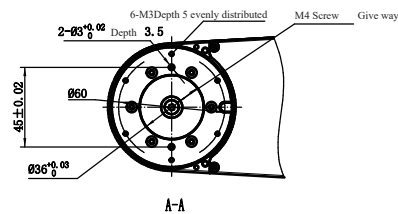
High Precision
 Repeatability
 ±0.02mm

Z Axis Customization
 0.1-0.5m

Arm Length
 Joint J1 160mm
 Joint J2 160mm

Cost-effective
 Industrial quality
 Competitive price

Range of Motion and Size



Remark: There is a cable below the arm of the machine, which is not shown in the figure, please refer to the actual product.

Z-Arm 2442/Z-Arm XX42



High Precision

Repeatability
 $\pm 0.03\text{mm}$

Large Payload

3kg

Arm Length

Joint J1 220mm
Joint J2 200mm

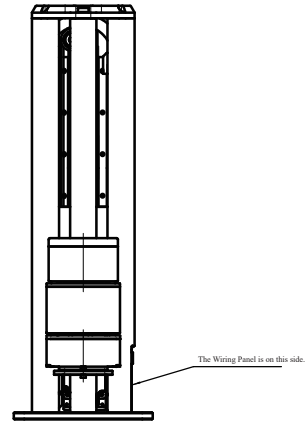
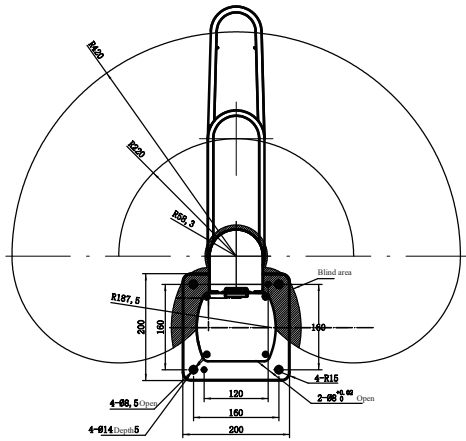
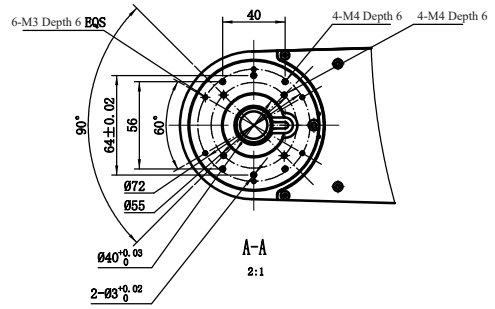
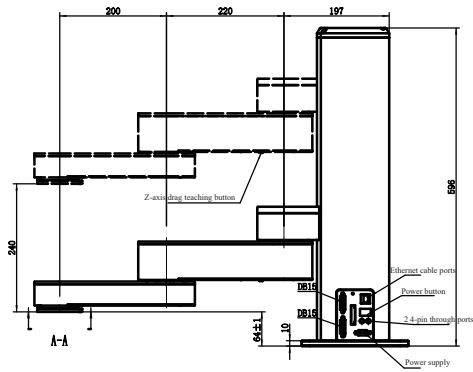
Cost-effective

Industrial quality
Competitive price

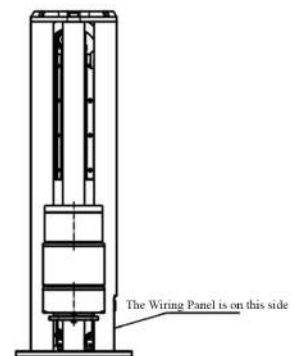
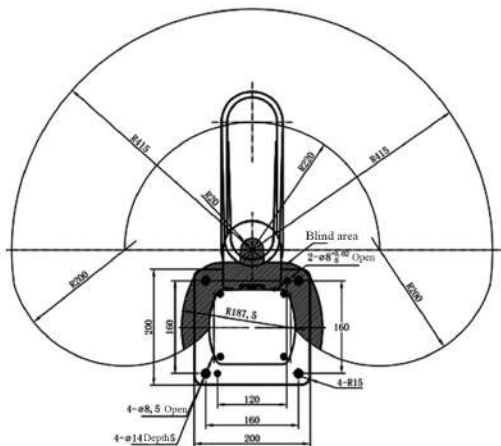
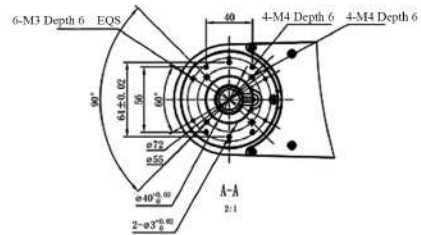
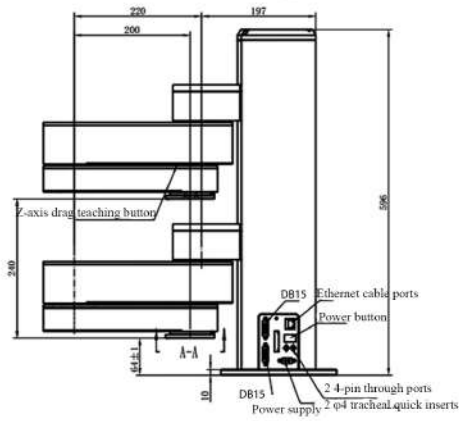
Integrated Design of End Effector



Motion Range M1 Version (External Rotation)



Motion Range M2 Version (Internal Rotation)



Specifications

Item	Z-Arm XX42 Collaboration Robot Arm	Z-Arm XX32 Collaboration Robot Arm
1 Axis Arm Length	220mm	160mm
1 Axis Rotation Angle	±90°	±90°
2 Axis Arm Length	200mm	160mm
2 Axis Rotation Angle	±164°	±143°
Z Axis Stroke	Height customizable	Height customizable
R Axis Rotation Range	±1080°	±1080°
Linear Speed	1255.45mm/s (Payload 1.5kg) 1023.79mm/s (Payload 2kg)	1017mm/s (Payload 0.5kg)
Repeatability	±0.03mm	±0.02mm
Standard Payload	2kg	0.5kg
Maximum Payload	3kg	1kg
Degree of Freedom	4	4
Power Supply	220V/110V50-60HZ Adapted to 24VDC peak power 500W	220V/110V50-60HZ Adapted to 24VDC peak power 320W
Communication	Ethernet	Ethernet
Scalability	Built-in integrated motion controller provides 24 I/O + robot arm expansion	Built-in integrated motion controller provides 24 I/O
Z-axis can be customized in height	0.1m-1m	0.1m-0.5m
Z-axis Drag Teaching	/	/
Electrical Reserved Interface	Standard: socket panel straight through to the lower cover of the arm 2 x 4*23 awg (no shielding layer) wire Optional: socket panel straight through flange 2 x φ4 air hose	/
Suitable for HITBOT Electric Gripper	T1 means the standard configuration of the I/O version, which can be adapted to Z-EFG-8S/Z-EFG-12/Z-EFG-20/Z-EFG-30 T2 means that the I/O version has 485, which can be connected to Z-EFG-100/ Z-EFG-50/users other needs 485	Z-EFG-8S/Z-EFG-20
Breathing Light	/	/
Range of Movement of the Second Arm	Standard: ±164° Optional: 15-345deg	Standard: ±143°
Optional Accessories	/	/
Use Environment	Ambient temperature: 0-55°C Humidity: RH85 (No frost)	Ambient temperature: 0-55°C Humidity: RH85 (No frost)
I/O Port Digital Input (Isolated)	9+3+ forearm extension (optional)	9+3
I/O Port Digital Output (Isolated)	9+3+ forearm extension (optional)	9+3
I/O Port Analog Input (4-20mA)	/	/
I/O Port Analog Output (4-20mA)	/	/
Machine Height	596mm	500mm
Machine Weight	240mm stroke≈19kg	180mm stroke≈11kg
Base External Dimensions	200mm*200mm*10mm	200mm*200mm*10mm
Distance Between Base Fixing Holes	160mm*160mm With four M8*20 screws	160mm*160mm With four M5*12 screws
Collision Detection	√	√
Drag Teaching	√	√

Z-Arm 4160/Z-Arm XX60



High Precision

Repeatability
 $\pm 0.05\text{mm}$

Z Axis Customization

0.1-1m

Arm Length

Joint J1 325mm
Joint J2 275mm

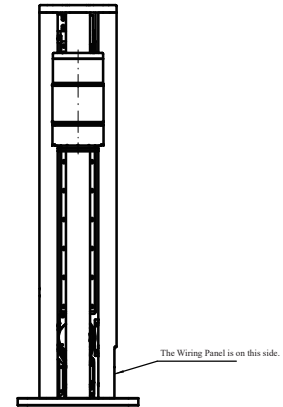
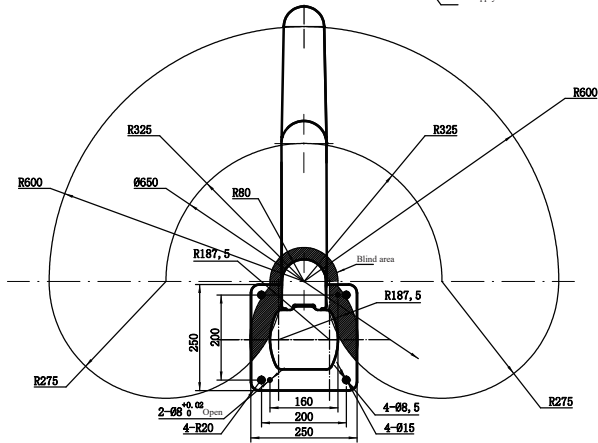
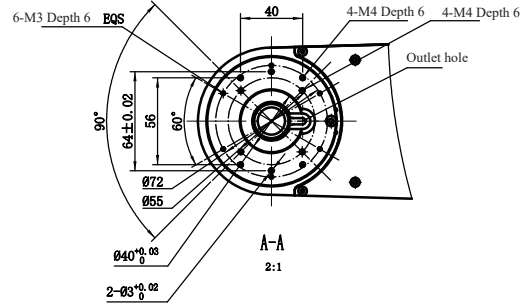
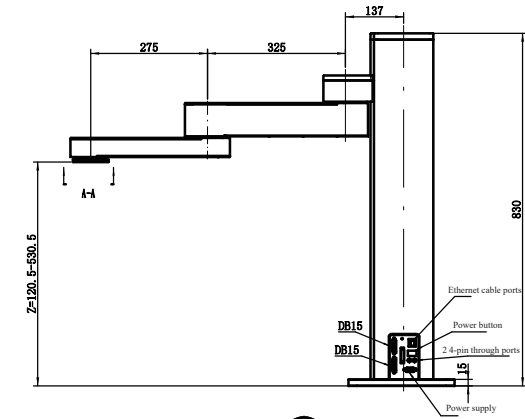
Cost-effective

Industrial quality
Competitive price

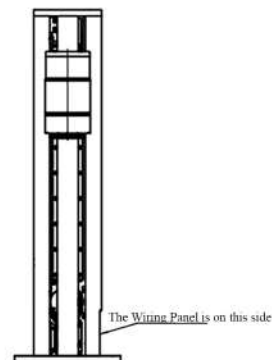
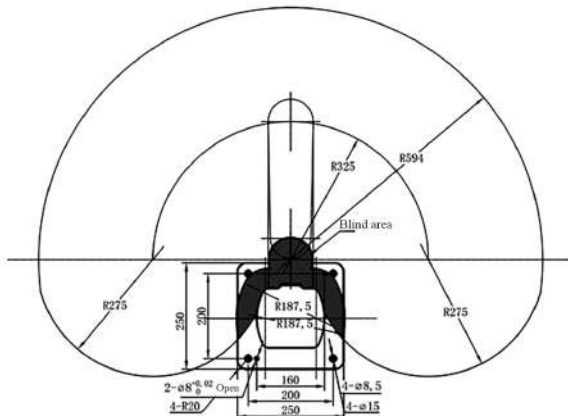
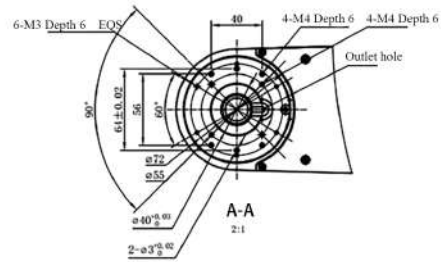
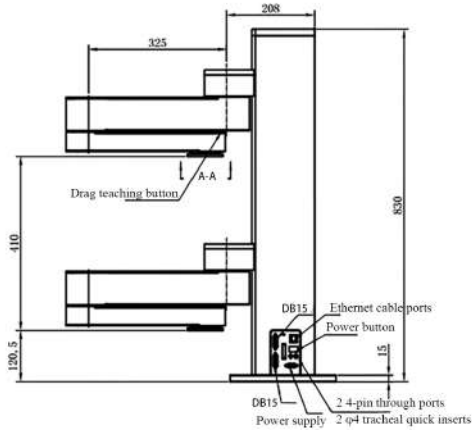
Integrated Design of End Effector



Motion Range M1 Version



Motion Range M2 Version



Specifications









Z-Arm XX60 Collaboration Robot Arm	Parameters
1 Axis Arm Length	325mm
1 Axis Rotation Angle	±90°
2 Axis Arm Length	275mm
2 Axis Rotation Angle	±164°
Z Axis Stroke	Height customizable
R Axis Rotation Range	±1080°without mechanical limit / ±170° with mechanical limit
Linear Speed	1500mm/s (payload 3kg)
Repeatability	±0.05mm
Standard Payload	3kg
Maximum Payload	3.5kg
Degree of Freedom	4
Power Supply	220V/110V50-60HZ Adapted to DC48V peak power 960W
Communication	Ethernet
Scalability	Built-in integrated motion controller provides 24 I/O + robot arm expansion
Z-axis can be customized in height	0.1m-1m
Electrical Reserved Interface	Standard: socket panel straight through to the lower cover of the arm 2 x 4*23awg (no shielding layer) wire Optional: socket panel straight through flange 2 x φ4 air hose Optional: socket panel straight through flange 2 x φ4 air hose
Optional Accessories	T1 means the standard configuration of the I/O version, which can be adapted to Z-EFG-8S/Z-EFG-12/Z-EFG-20/Z-EFG-30 T2 means that the I/O version has 485, which can be connected to Z-EFG-100/Z-EFG-50/users other needs 485
Use Environment	Ambient temperature: 0-55°C Humidity: RH85 (No frost)
I/O Port Digital Input (Isolated)	9+3+ forearm extension (optional)
I/O Port Digital Output (Isolated)	9+3+ forearm extension (optional)
I/O Port Analog Input (4-20mA)	/
I/O Port Analog Output (4-20mA)	/
Machine Height	830mm
Machine Weight	410mm stroke Net weight 28.5kg
Base External Dimensions	250mm*250mm*15mm
Distance Between Base Fixing Holes	200mm*200mm With four M8*20 screws
Collision Detection	/
Drag Teaching	/

Z-Arm 1522

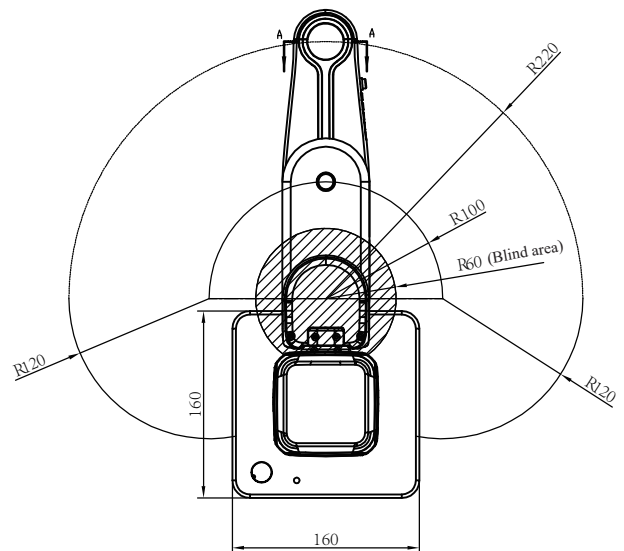
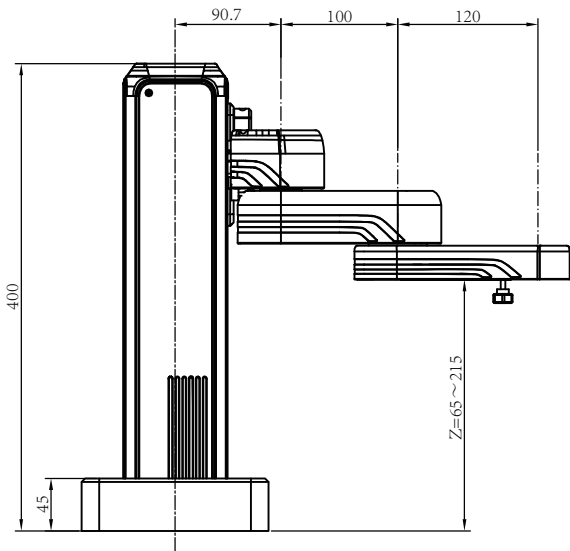
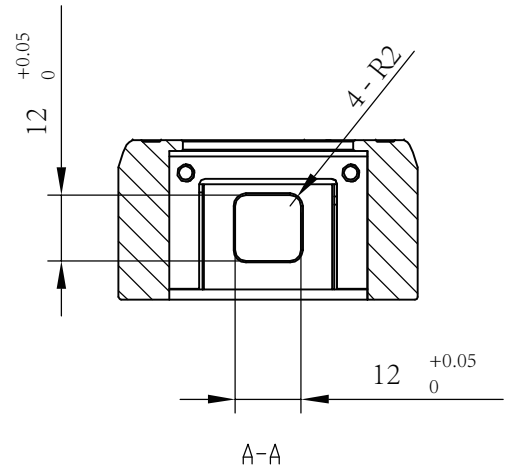


Educational robot arm, lighter body, richer functions

Integrated graphical programming Blockly application
Let children apply what they have learned and inspire their unlimited inspiration and creativity

- | | | | |
|---|---|---|---|
|  |  |  |  |
| Laser engraving | Drawing | 3D printing | Suction cup |
|  |  |  |  |
| Assembly line | Slide | Gobang | Gripper |

Range of Motion and Size



Specifications

Z-Arm 1522 Educational Robot Arm	Parameters
1 Axis Arm Length	100mm
1 Axis Rotation Angle	±90°
2 Axis Arm Length	120mm
2 Axis Rotation Angle	±150°
Z Axis Stroke	150mm
R Axis Rotation Range	±180°
Linear Speed	500mm/s
Repeatability	±0.1mm
Standard Payload	0.3kg
Maximum Payload	0.5kg
Degree of Freedom	3
Power Supply	220V/110V50-60HZ Adapt to 24V
Communication	Serial port
Scalability	Available
I/O Port Digital Input (Isolated)	≤14
I/O Port Digital Output (Isolated)	≤22
I/O Port Analog Input (4-20mA)	≤6
I/O Port Analog Output (4-20mA)	0
Machine Height	400mm
Machine Weight	4.8kg
Base External Dimensions	160mm*160mm*45mm
Collision Detection	√
Drag Teaching	√

Terminal Tools

3D Printing Head	Maximum print size (L*W*H)	150mm*150mm*150mm (MAX)
	3D printing supplies	Φ1.75mm PLA
	Precision	0.1mm
Laser	Electricity consumption	500mw
	Wavelength	405nm (Blue Laser)
	Power supply	12V,TTL trigger (With PWM Driver)
Pen Gripper	Brush diameter	10mm
Air Suction Cup	Diameter of suction cup	20mm
Air Pump	Power supply	12V,TTL trigger
	Pressure	±35Kpa
Air Gripper	Maximum opening	27.5mm
	Drive type	Pneumatic
	Clamping force	3.8N

Z-Arm S622



Multi-axis rotation, covering every angle

Simple operation
Highly integrated
Wide range of applications

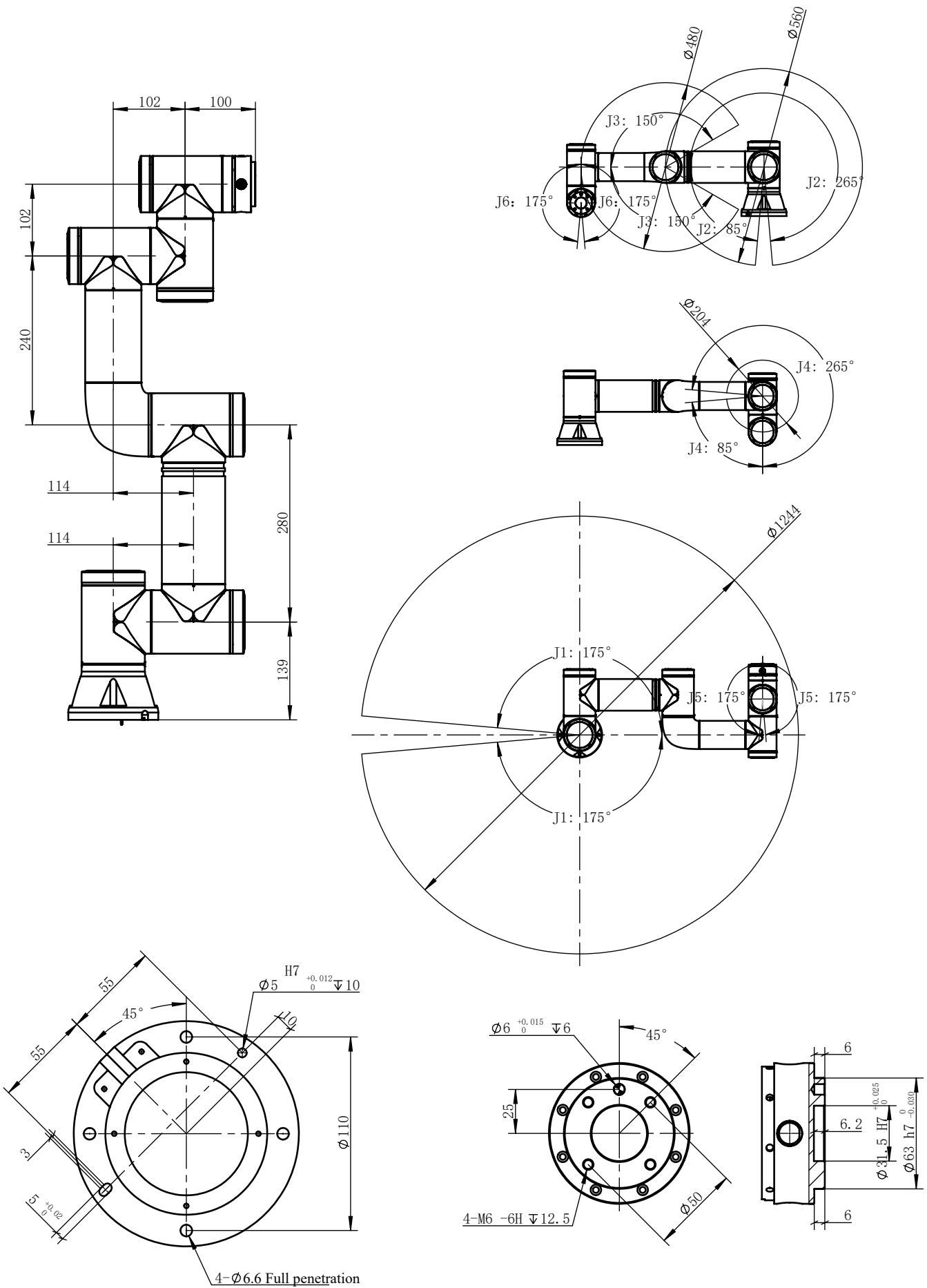
Space saving
Easy setup

Lightweight and flexible
Cost effective

Specifications

Z-Arm S622 Collaborative Robot Arm	Parameter
Weight	15kg
Payload	3kg
Working Range	622mm
Joint Range of Motion Software Limit Limitation	Axis 1: $\pm 175^\circ$ Axis 2: $+85^\circ, -265^\circ$ Axis 3: $\pm 150^\circ$ Axis 4: $+85^\circ, -265^\circ$ Axis 5: $\pm 175^\circ$ Axis 6: $\pm 175^\circ$
Maximum Joint Speed	180°/s
Repeatability	$\pm 0.06\text{mm}$
Installation Area	$\phi 130\text{mm}$
Control Box Size	330*262*90mm (Without protrusion)
Degree of Freedom	6
End I/O Port	Digital input: 2 Digital output: 2 Analog input: 1 Analog output: 1
Control Box I/O Port	Digital input: 16 Digital output: 16 Analog input: 2 Analog output: 2
I/O Power Supply	24V/1.5A
Communication	Ethernet、TCP/IP、485 communication
Noise	<60DB
Protection Level	IP54
Coordinated Operation	With collision detection function, allowing custom collision levels
Power Supply	220V/50HZ
Use Environment	·Away from vibrations and the vibration intensity is not higher than 0.5G ·Away from corrosive gases, liquids and explosive gases ·Avoid dust, smoke and water ·Avoid equipment working under unstable current conditions
Humidity	20-80RH No frost
Temperature	0-45°C

Range of Motion and Size



Z-Arm S922

Multi-axis rotation, covering every angle



Simple Operation

Drag teaching and graphical programming can effectively reduce application bar and time Cost, use easy-to-use PC terminal operation interface.

Highly Integrated

Reducer, motor, encoder and drive control are integrated easily for quick disassembly and assembly.

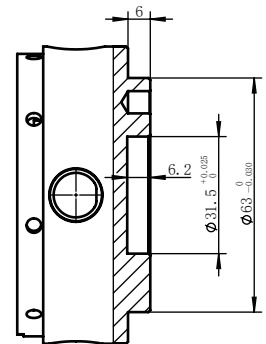
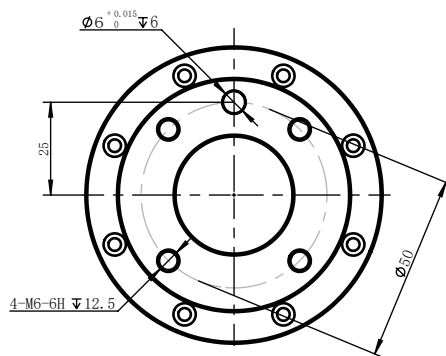
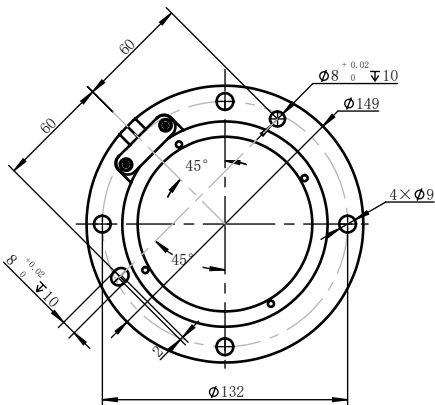
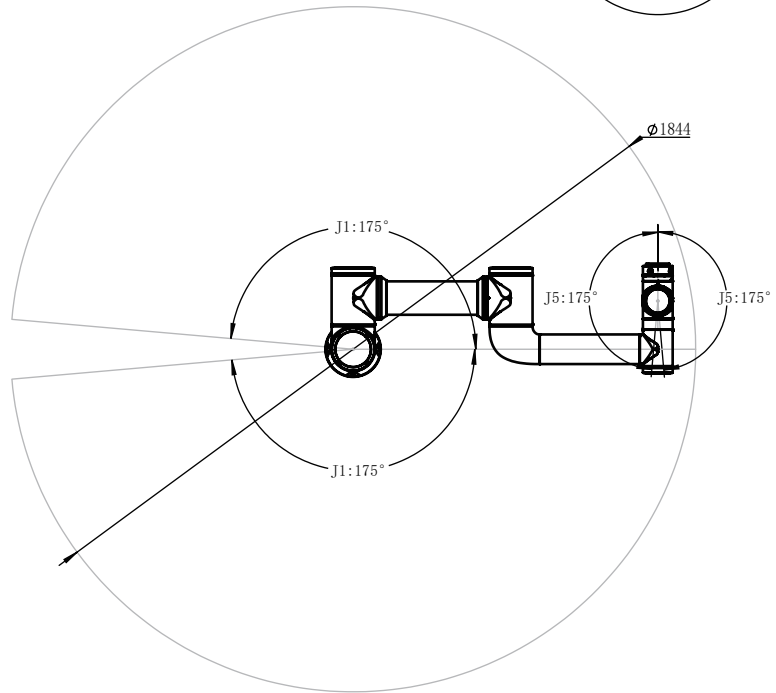
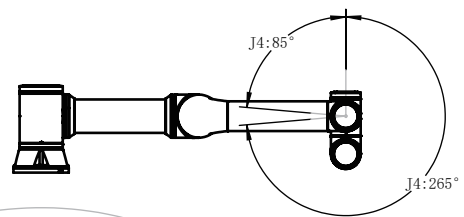
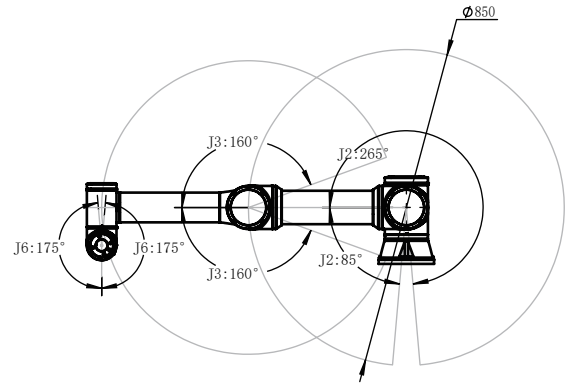
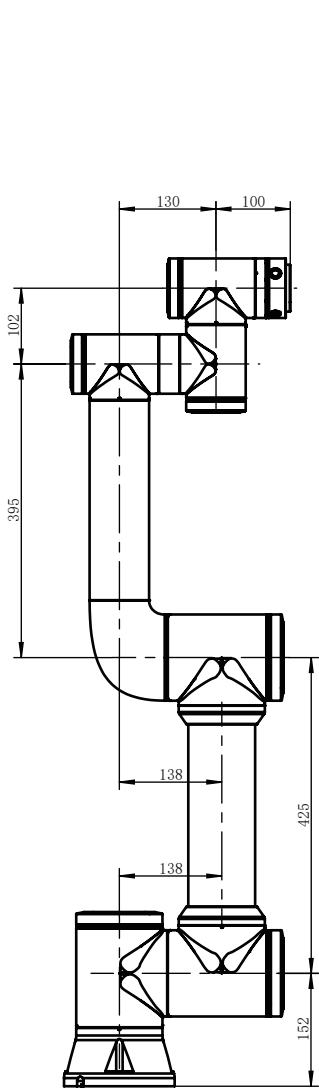
Wide Range of Applications

It can be used in the automotive industry, electronics industry, food and beverage industry, Health care and laboratory research fields, etc; to meet various functional needs, such as assemble, pick and place, twist screws, dispense, etc.

Specifications

Z-Arm S922 Collaborative Robot Arm	Parameter
Weight	≈22kg
Payload	5kg
Working Range	922mm
Joint Range of Motion Software Limit Limitation	Axis 1: ±175° Axis 2: +85°, -265° Axis 3: ±160° Axis 4: +85°, -265° Axis 5: ±175° Axis 6: ±175°
Maximum Joint Speed	180°/s
Repeatability	±0.06mm
Installation Area	φ150mm
Control Box Size	330*262*90mm (Without protrusion)
Degree of Freedom	6
End I/O Port	Digital input: 2 Digital output: 2 Analog input: 1 Analog output: 1
Control Box I/O Port	Digital input: 16 Digital output: 16 Analog input: 2 Analog output: 2
I/O Power Supply	24V/1.5A
Communication	Ethernet、TCP/IP、485 communication
Noise	<60DB
Protection Level	IP54
Coordinated Operation	With collision detection function, allowing custom collision levels
Power Supply	220V/50HZ
Use Environment	·Away from vibrations and the vibration intensity is not higher than 0.5G ·Away from corrosive gases, liquids and explosive gases ·Avoid dust, smoke and water ·Avoid equipment working under unstable current conditions
Humidity	20-80RH No frost
Temperature	0-45°C

Range of Motion and Size



Z-Arm S1400



Multi-axis rotation, covering every angle

Simple operation

Highly integrated

More capacity

Wider range of applications

Larger payload

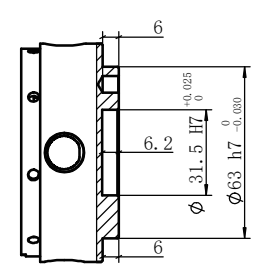
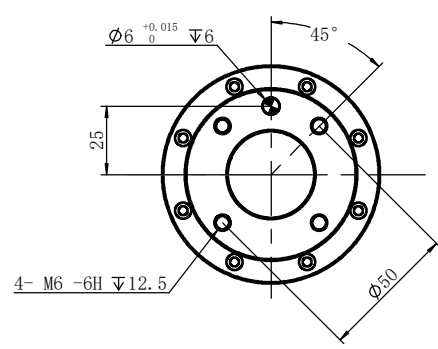
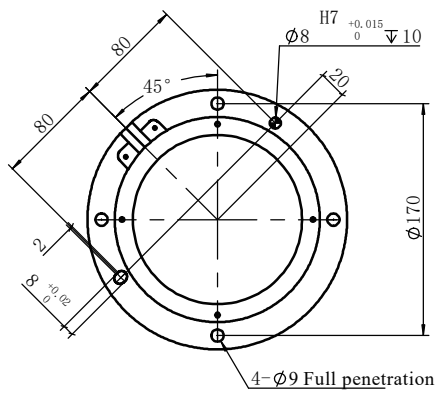
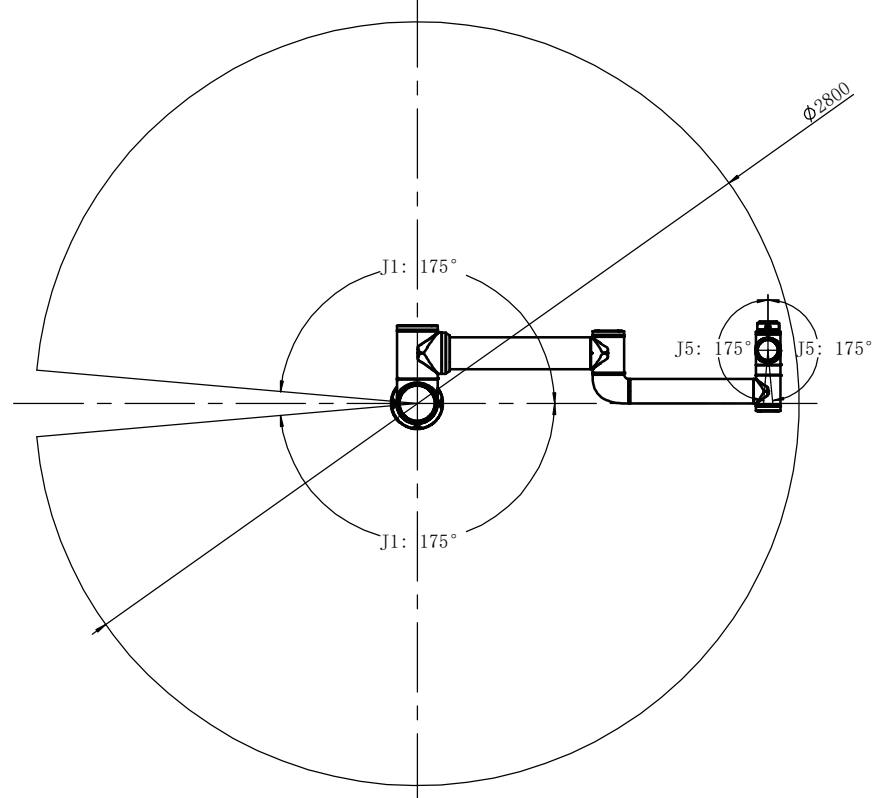
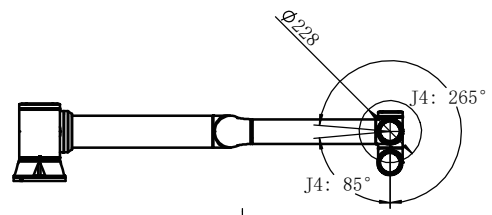
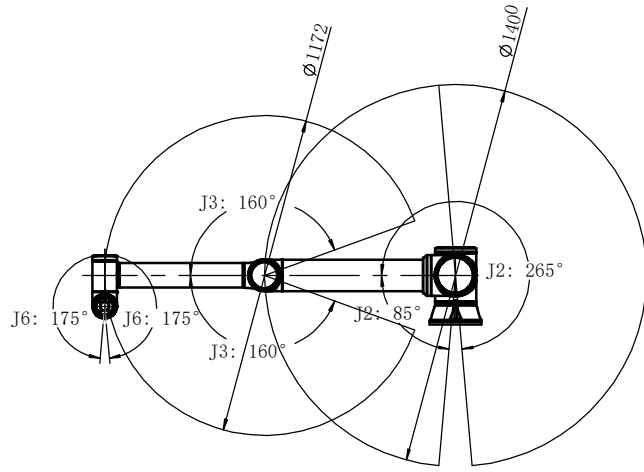
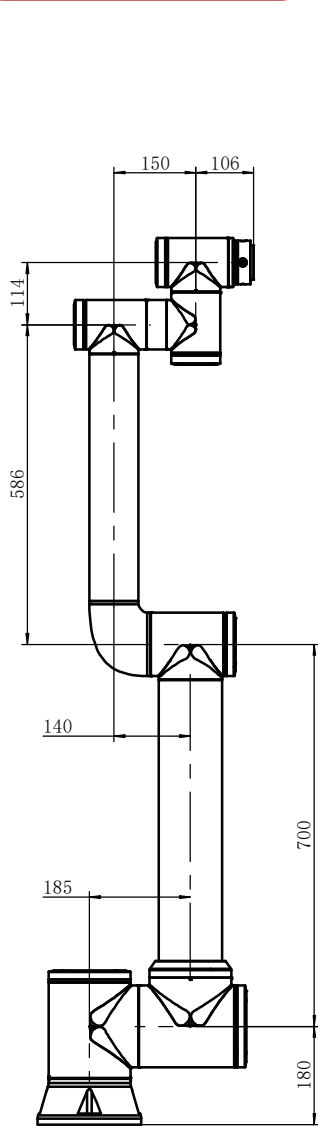
Longer arm span

higher precision

Specifications

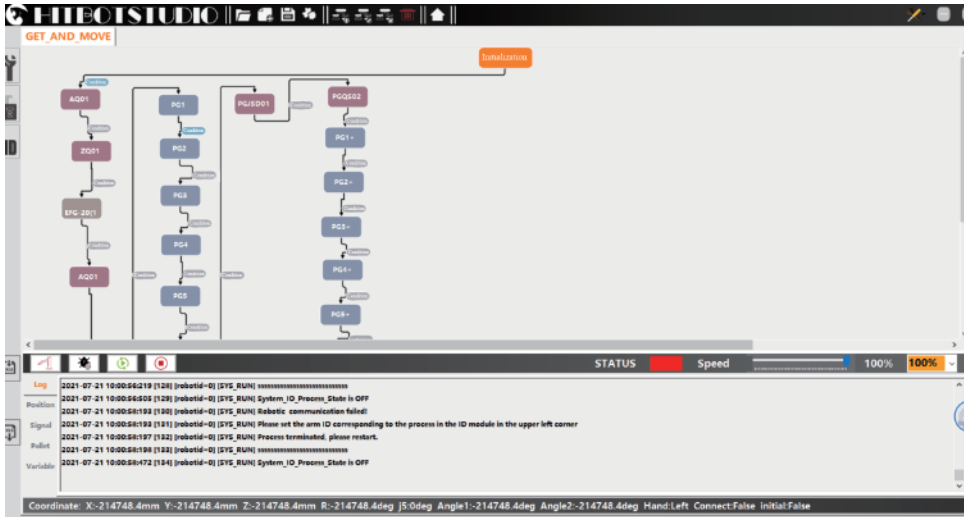
Z-Arm S1400 Collaborative Robot Arm	Parameter
Weight	≈40kg
Payload	10kg
Working Range	1400mm
Joint Range of Motion Software Limit Limitation	Axis 1: ±175° Axis 2: +85°, -265° Axis 3: ±160° Axis 4: +85°, -265° Axis 5: ±175° Axis 6: ±175°
Maximum Joint Speed	180°/s
Repeatability	±0.06mm
Installation Area	φ190mm
Control Box Size	330*262*90mm (Without protrusion)
Degree of Freedom	6
End I/O Port	Digital input: 2 Digital output: 2 Analog input: 1 Analog output: 1
Control Box I/O Port	Digital input: 16 Digital output: 16 Analog input: 2 Analog output: 2
I/O Power Supply	24V/1.5A
Communication	Ethernet、TCP/IP、485 communication
Noise	<60DB
Protection Level	IP54
Coordinated Operation	With collision detection function, allowing custom collision levels
Power Supply	220V/50HZ
Use Environment	·Away from vibrations and the vibration intensity is not higher than 0.5G ·Away from corrosive gases, liquids and explosive gases ·Avoid dust, smoke and water ·Avoid equipment working under unstable current conditions
Humidity	20-80RH No frost
Temperature	0-45°C

Range of Motion and Size



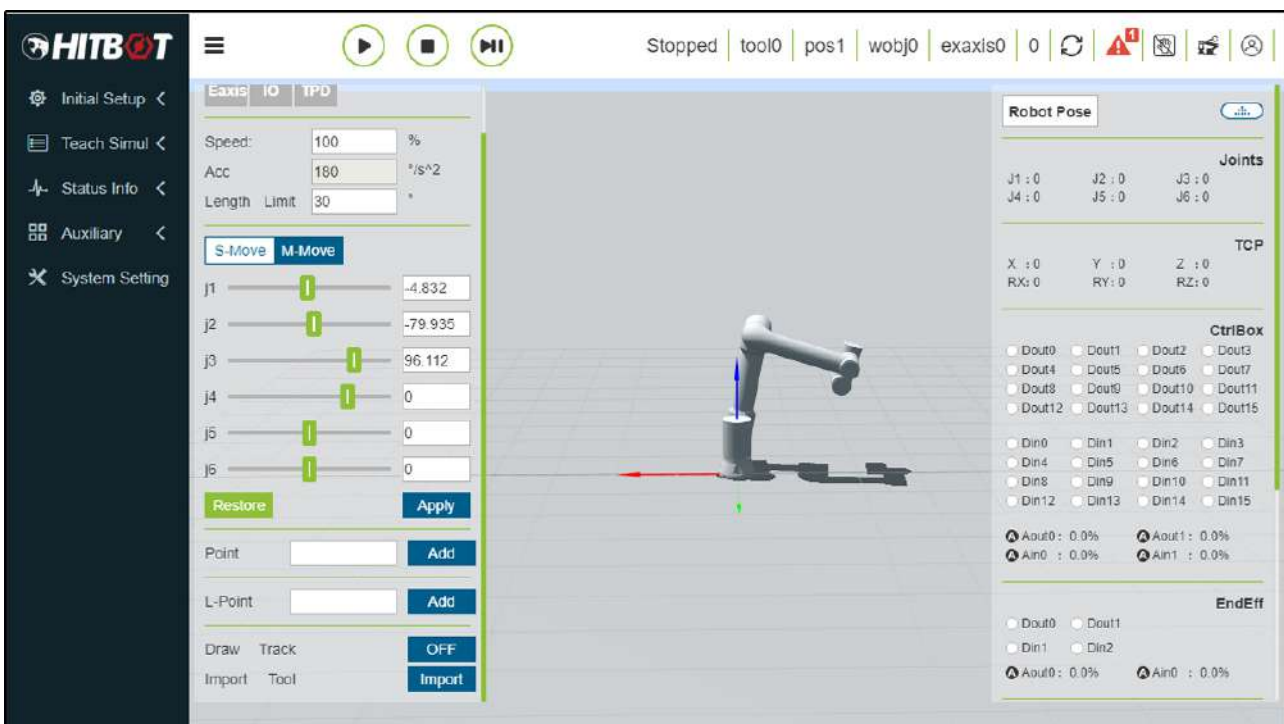
Four-axis Software Description

This software is based on graphical programming and provides basic function modules such as point position, output signal, electric gripper, pallet, delay, sub-process, reset, etc. The user can drag and drop the above basic modules in the programming area to realize the logic of the related process control of the robot arm, which is convenient, intuitive, and easy to learn.



Six-axis Software Description

The control of the six-axis robot arm is based on WEB. The user can easily access the control page through the browser to realize the operation of the robot arm. The software provides a variety of motion modes and rich tool control. The robot arm supports drag teaching, trajectory teaching and collision protection. The human-machine collaboration is simpler and more convenient. At the same time, it supports setting tool coordinates, programming element calibration, graphics,



Z-EFG / EMG / ERG Series Electric Gripper

Leading domestic electric gripper with integrated servo system
Aiming to promote a revolution of electric gripper replacing pneumatic gripper

Z-EFG-8S,Z-EFG-FS: Adjustable clamping force

Z-EFG-20,Z-EFG-R: Adjustable stroke

Z-EFG-12,Z-EFG-L: The design of the electric gripper,
The frequency of the pneumatic gripper

Z-EFG-30,Z-EFG-50: Precise control via Modbus

Z-ERG-20 Rotating Gripper: Support unlimited rotation

The electric gripper Z-EFG series is a domestic leading electric gripper with an integrated servo system. It can perfectly replace air compressor + filter+solenoid valve + throttle valve + pneumatic gripper.

The electric gripper Z-EFG series supports flexible clamping. It can grip fragile items, such as test tubes, eggs, etc., which cannot be achieved by pneumatic grippers.

The end part of the electric gripper can be replaced at any time, and the users can design the gripper according to their needs to ensure that the gripper can complete the gripping work to the greatest extent.

In addition, the Z-EFG series of electric grippers can be adapted to Universal Robots robot arms, AUBo robot arms, etc. They can be equipped with UR robot arms directly.

■ Servo motor or DC brushless

■ It can pick up fragile and deformed objects such as eggs, test tubes, rings, etc.

■ Use in laboratories, hospitals and other places where there is no gas source.

■ Long service life, multi cycles, better than pneumatic gripper

■ Built-in controller: small footprint and easy integration

■ Multiple control methods



Z-EMG-4



Z-EFG-8S



Z-EFG-20S



Z-EFG-26



Z-EFG-12



Z-EFG-20



Z-ERG-20



Z-EFG-FS



Z-EFG-L



Z-EFG-R



Z-EFG-30



Z-EFG-50



Z-EFG-100

Model Definition

Z-EFG-8SPK-U-FXXX-01

EFG: 2-finger parallel electric gripper
ECG: 3-finger slider electric gripper
EMG: Electromagnetic gripper
ERG: Rotating electric gripper
.....

8S: 8mm stroke
12: 12mm stroke
20: 20mm stroke
20S: 20mm stroke
30: 30mm stroke
50: 50mm stroke
100: 90mm stroke

FS: 8mm Upgraded version of six-axis robot arm
R: 20mm Upgraded version of six-axis robot arm
L: 12mm Upgraded version of six-axis robot arm

Communication mode
NK: standard NPN type I/O control
NM: standard NPN type pulse control
PK: standard PNP type I/O control
PM: standard PNP type pulse control
NMA: NPN type Pulse-controlled power-up stationary
PMA: PNP type Pulse-controlled power-up stationary
TXA: 485 communication
ALL: 485 communication+I/O+Pulse
.....

F: Non-standard customization Version
Blank: Standard Version
XXX: Customer No.
01: Version No.

Cable lead-out method
HCA: 5-pin aviation plug male connector (M12)
HCB: 4-pin aviation plug male connector (M8)
HW: rubber tail
U: UR version cable lead-out (plug + Longbao line)
A: AUBO version cable lead-out (plug + Longbao line)
E: ELITE version cable lead-out
S: adapt to S622/S922/S1400
Z1: cable lead-out with HITBOT 1632 (unshielded cable)
Z2: cable lead-out with HITBOT 2140 (unshielded cable)
Z3: adapt to HITBOT XX42/XX60 (flange hollow internal wiring)
LMC: cable lead-out by side of nut
LMH: cable lead-out by back of nut

Note: Unless otherwise specified (such as the case with HITBOT above), shielded wire will be used

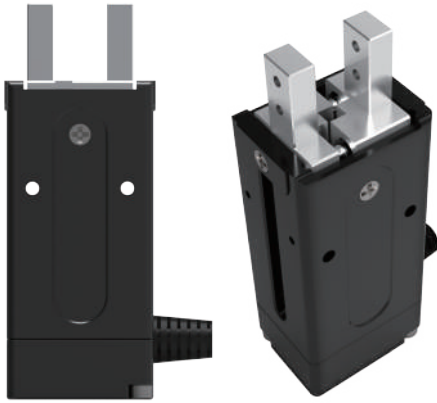
Specifications



Item	Parallel Electric Gripper												Y Electric Gripper	Item	Rotary Electric Gripper
	Z-EMG-4	Z-EFG-8S	Z-EFG-FS	Z-EFG-12	Z-EFG-L	Z-EFG-20	Z-EFG-R	Z-EFG-20S	Z-EFG-26	Z-EFG-30	Z-EFG-50	Z-EFG-100	Z-ERG-20		
Total Stroke	4mm	8mm	8mm	12mm	12mm	20mm	20mm	20mm	26mm	30mm	50mm	90mm	Total Stroke	20mm	
Clamping Force	3-5N	8-20N	8-20N	30N	30N	80N	80N	8-20N	6-15N	10-40N	15-50N	35-60N	Clamping Force	10-35N	
Recommended Clamping Weight ≤	100g	300g	300g	500g	500g	800g	800g	300g	300g	400g	500g	500g	Recommended Maximum Clamping Weight	400g	
Adjustable Stroke	Not adjustable	Not adjustable	Not adjustable	Not adjustable	Not adjustable	Adjustable	Adjustable	Not adjustable	Adjustable	Adjustable	Adjustable	Adjustable	Maximum Rotating Torque	0.3NM	
Adjustable Clamping Force	Not adjustable	Adjustable	Adjustable	Not adjustable	Not adjustable	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	Maximum Rotation Speed	240RPM	
Machine Weight	0.23kg	0.25kg	0.3kg	0.342kg	0.4kg	0.458kg	0.5kg	0.35kg	0.45kg	0.55kg	0.7kg	0.925kg	Rotation Range	Infinite rotation	
Size	35*26*92mm	30*24*93.9mm	67*67*101.9mm	48*32*105.6mm	68*68*113.6mm	44*30*124.7mm	68*68*132.7mm	43*24*93.9mm	55*26*97mm	52*38*108mm	68*38*108mm	203*144*45mm (Open) 222*64*45mm (Close)	Machine Weight Size	1kg 54*54*141mm	
One-way Stroke Movement Time	≤0.05s	≤0.1s	≤0.1s	≤0.2s	≤0.2s	≤0.45s	≤0.45s	≤0.15s	≤0.25s	≤0.2s	≤0.3s	≤1s	One-way Stroke Movement Time	≤0.2s	
Rated Voltage	24V	24V	24V	24V	24V	24V	24V	24V	24V	24V	24V	24V	Rated Voltage	24V	
Peak Current	3A	0.6A	0.6A	1A	1A	1A	1A	0.6A	1A	2A	2A	1.5A	Peak Current	3A	

Note: The recommended gripping force does not mean the maximum gripping force, the maximum gripping force is related to the design of the gripper. The maximum gripping force is about 3-4 times of the recommended gripping force.

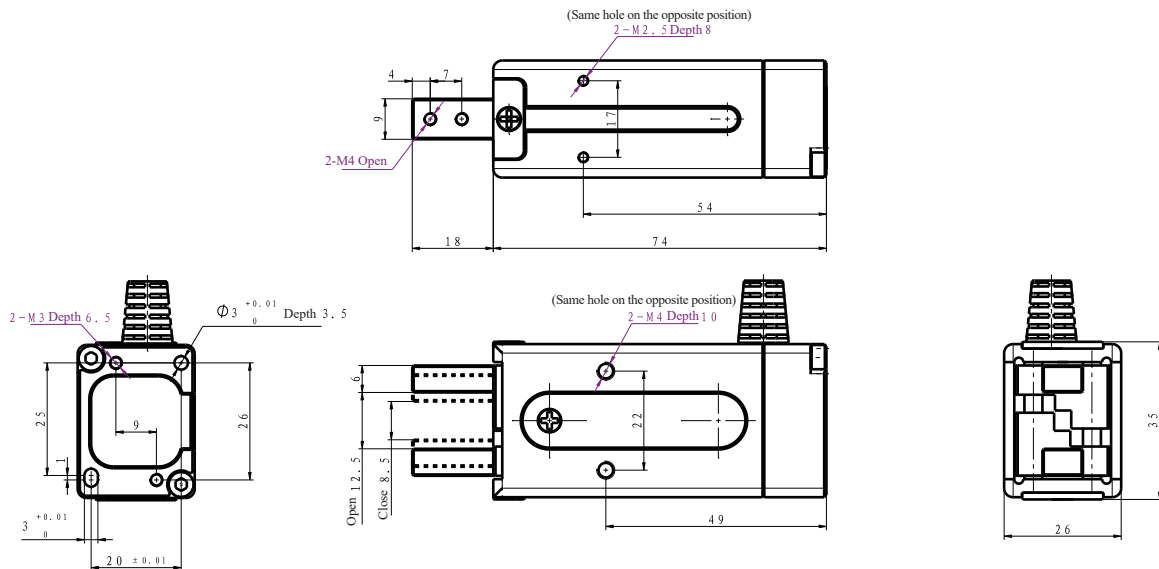
Z-EMG-4



Product Features

- Small volume
- Competitive price
- Clamping in a small space
- 0.05sec opening and closing speed
- Long service life, multi cycles, better than pneumatic gripper
- Built-in controller: small footprint and easy integration
- Control method: I/O input and output

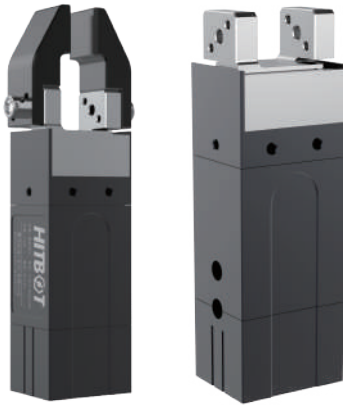
Range of Motion and Size



Specifications

Model No. Z-EMG-4	Parameter
Total Stroke	4mm
Clamping Force	3-5N
Recommended Operating Frequency	≤150 (cpm)
Transfer Method	Compression spring + cam mechanism
Recommended Use Environment	0-40°C, below 85% RH
Weight	0.23kg
Dimensions	35*26*92mm
Backlash	One side below 0.5mm
Control Method	Digital I/O
Operating Voltage	DC24V±10%
Rated Current	0.1A
Peak Current	3A
Rated Voltage	24V
Power Consumption in Clamping State	0.1W
Cooling Method	Natural air cooling

Z-EFG-8S

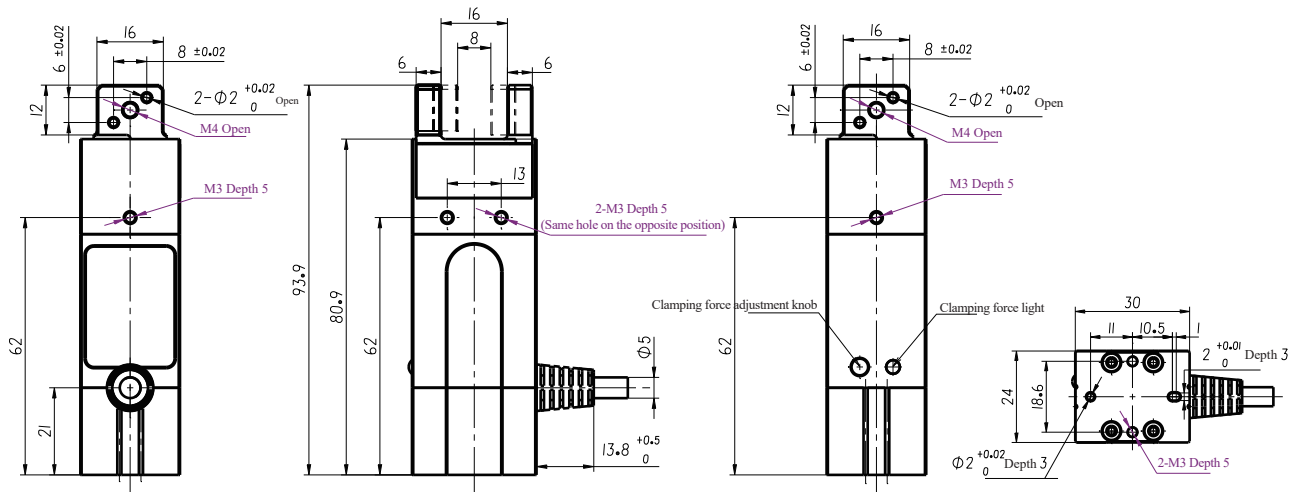


Product Features

- 0.1 second closing time
- The force is adjustable in four gears, and the force can be adjusted through the knob.
- Long service life, multi cycles, better than pneumatic gripper
- Built-in controller: small footprint and easy integration
- Control method: I/O input and output

(Excluding fingers, the model is for reference only)

Range of Motion and Size



Specifications

Model No. Z-EFG-8S	Parameter
Total Trip	8mm
Clamping Force	8-20N (Adjustable)
Backlash	Single side 0.2mm
Recommended Clamping Weight	0.3kg
Transfer Method	Gear rack + cross roller guide
Grease Replenishment for Moving Elements	1 million times / return or every six months
One-way Travel Movement Time	≤0.1s
Weight	0.25kg
Dimensions	30*24*93.9mm
Operating Voltage	24V±10%
Rated Current	0.2A
Maximum Current	0.6A
Protection Class	IP20
Motor Type	Servo motor
Operating Temperature Range	5-55°C
Operating Humidity Range	RH35-80 (No frost)

Z-EFG-FS

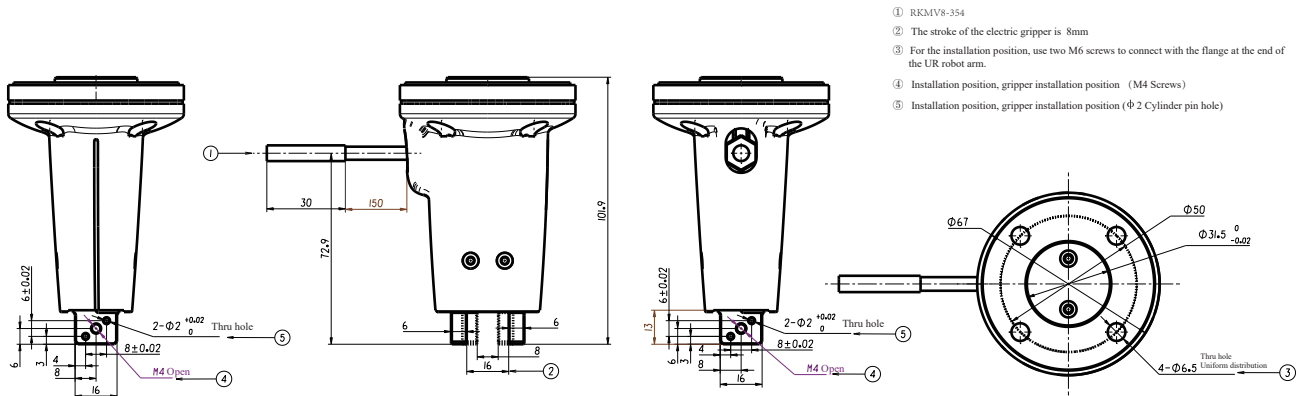


Product Features

- Small size, adjustable clamping force
- Clamping in small space, fragile items
- Exclusive 8mm stroke electric gripper for six-axis robot arm
- Long service life, multi cycles, better than penumatic gripper
- Built-in controller: small footprint and easy integration
- Control method: I/O input and output

(Excluding fingers, the model is for reference only)

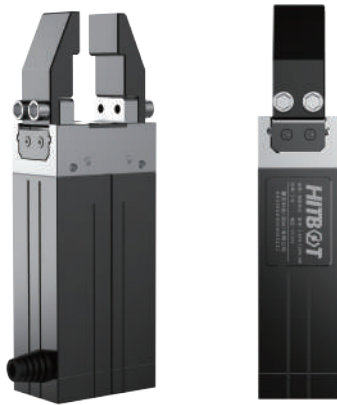
Range of Motion and Size



Specifications

Model No. Z-EFG-FS	Parameter
Total Stroke	8mm
Clamping Force	8-20N
Recommended Clamping Weight	0.3kg
Transfer Method	Gear rack + cross roller guide
Grease Replenishment for Moving Elements	1 million times / return or every six months
One-way Stroke Movement Time	≤0.1s
Operating Temperature Range	5-55°C
Operating Humidity Range	RH35-80 (No frost)
Movement Method	Two-finger flat motion
Adjustable Stroke	Not adjustable
Adjustable Clamping Force	Adjustable
Weight	0.3kg
Dimensions (L*W*H)	67*67*101.9mm
Controller Placement	Built-in
Power	3.6W
Motor Type	Servo
Rated Voltage	24V
Peak Current	0.6A
Six-axis Adaptation	UR, AUBO

Z-EFG-12

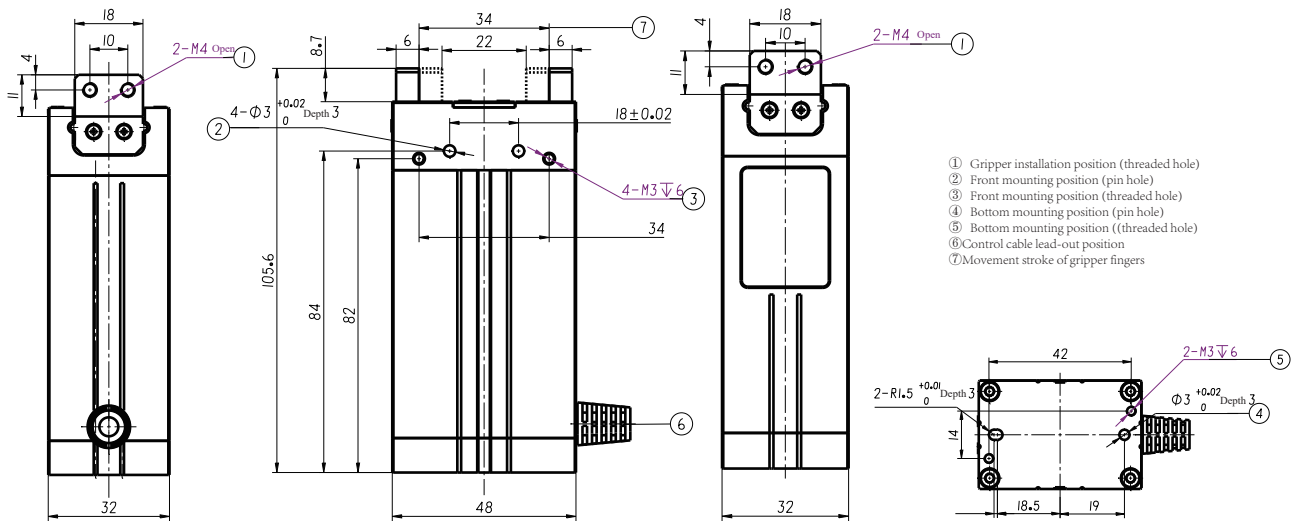


Product Features

- Fast opening and closing
- Clamping in small spaces, fragile items
- Long service life, multi cycles, better than pneumatic gripper
- Built-in controller: small footprint and easy integration
- Control method: I/O input and output

(Excluding fingers, the model is for reference only)

Range of Motion and Size



Specifications

Model No. Z-EFG-12	Parameter
Total Stroke	12mm
Clamping Force	30N
Recommended Clamping Weight	0.5kg
Transfer Method	Gear rack + roller Ball
Grease Replenishment for Moving Elements	1 million times / return or every six months
One-way Stroke Movement Time	≤0.2s
Operating Temperature Range	5-55°C
Operating Humidity Range	RH35-80 (No frost)
Movement Method	Two-finger flat motion
Adjustable Stroke	Not adjustable
Adjustable Clamping Force	Not adjustable
Weight	0.342kg
Dimensions (L*W*H)	48*32*105.6mm
Controller Placement	Built-in
Power	5W
Motor Type	DC Brushless
Rated Voltage	24V
Peak Current	1A

Z-EFG-L

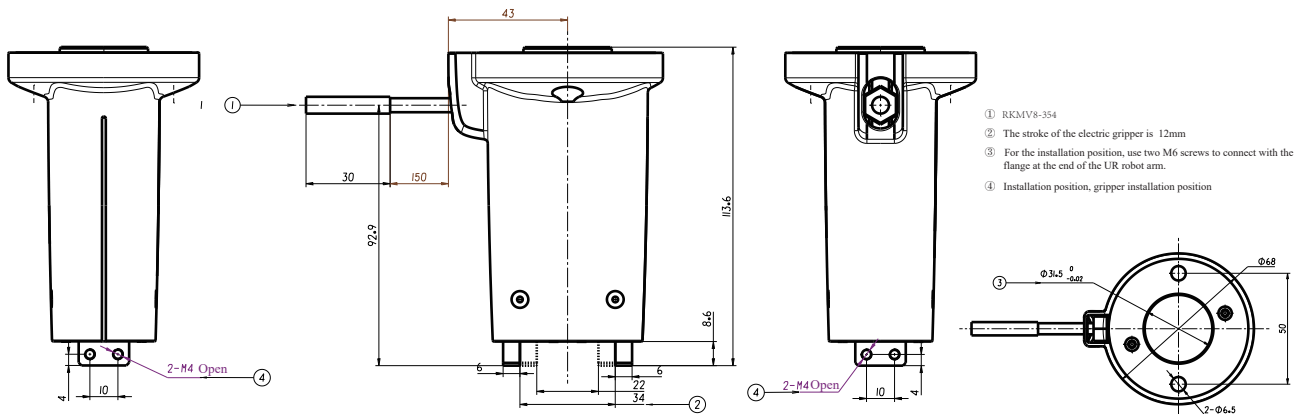


Product Features

- Fast opening and closing
- Clamping in small spaces, fragile items
- 12mm stroke electric gripper for six-axis robot arm
- Long service life, multi cycles, better than pneumatic gripper
- Built-in controller: small footprint and easy integration
- Control method: I/O input and output

(Excluding fingers, the model is for reference only)

Range of Motion and Size



Specifications

Model No. Z-EFG-L	Parameter
Total Stroke	12mm
Clamping Force	30N
Recommended Clamping Weight	0.5kg
Transfer Method	Gear rack + roller Ball
Grease Replenishment for Moving Elements	1 million times / return or every six months
One-way Stroke Movement Time	≤0.2s
Operating Temperature Range	5-55°C
Operating Humidity Range	RH35-80 (No frost)
Movement Method	Two-finger flat motion
Adjustable Stroke	Not adjustable
Adjustable Clamping Force	Not adjustable
Weight	0.4kg
Dimensions (L*W*H)	68*68*113.6mm
Controller Placement	Built-in
Power	5W
Motor Type	DC Brushless
Rated Voltage	24V
Stand-by Current	0.02A
Peak Current	1A
Six-axis Adaptation	UR, AUBO

Z-EFG-R

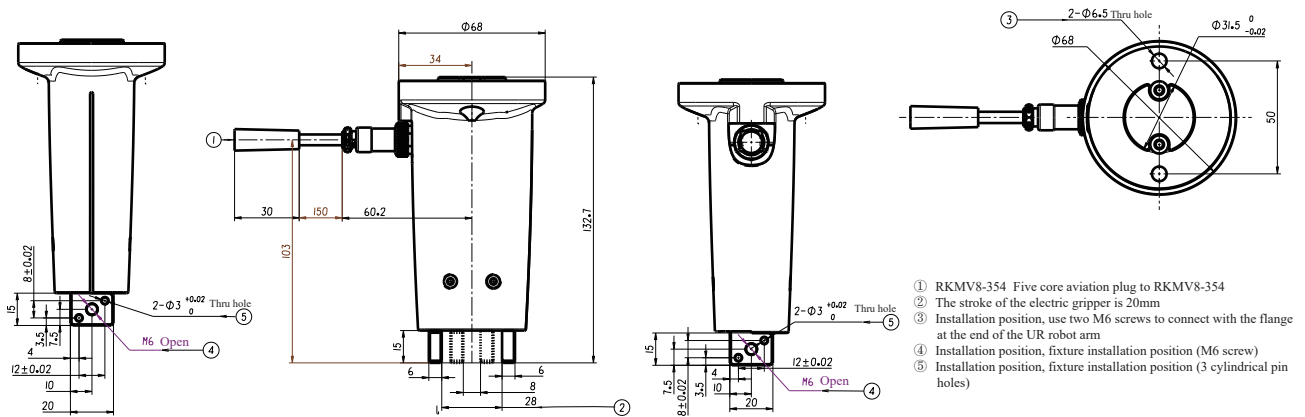


Product Features

- Large clamping force
- Adjustable stroke, adjustable clamping force
- 20mm stroke electric gripper for six-axis robotic arm
- Long service life, multi cycles, better than pneumatic gripper
- Built-in controller: small footprint and easy integration
- Control mode: I/O

(Excluding fingers, the model is for reference only)

Range of Motion and Size



Specifications

Model No. Z-EFG-R	Parameter
Total Stroke	20mm
Clamping Force	80N
Repeatability	±0.02mm
Recommended Clamping Weight	0.8kg
Transfer Method	Gear rack + cross roller guide
Grease Replenishment for Moving Elements	1 million times / return or every six months
One-way Stroke Movement Time	≤0.45s
Operating Temperature Range	5-55°C
Operating Humidity Range	RH35-80 (No frost)
Movement Method	Two-finger flat motion
Adjustable Stroke	Adjustable
Adjustable Clamping Force	Adjustable
Weight	0.5kg
Dimensions (L*W*H)	68*68*132.7mm
Controller Placement	Built-in
Power	5W
Motor Type	DC Brushless
Rated Voltage	24V
Peak Current	1A
Six-axis Adaptation	UR, AUBO

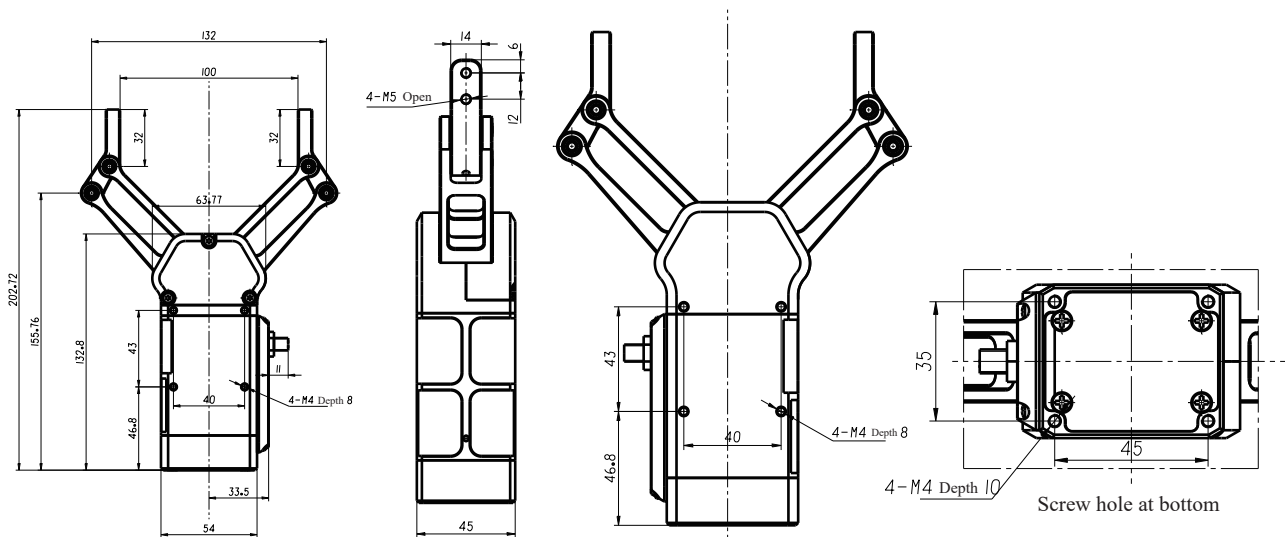
Z-EFG-100



Product Features

- Effective stroke length
- Adjustable stroke, adjustable clamping force
- Long service life, multi cycles, better than pneumatic gripper
- Built-in controller: small footprint and easy integration
- Control mode: 485 communication

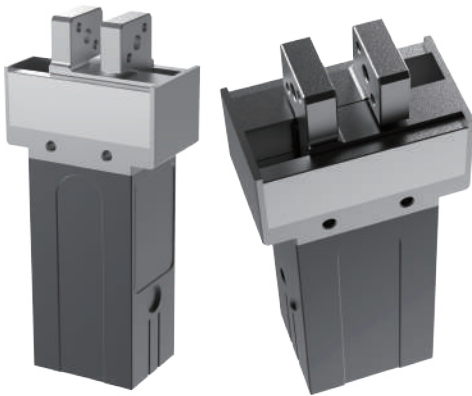
Range of Motion and Size



Specifications

Model No. Z-EFG-100	Parameter
Total Stroke	90mm
Clamping Force	35-60N
Repeatability	±0.02mm
Recommended Clamping Weight	0.5kg
Transfer Method	Screw nut + Linkage
Grease Replenishment for Moving Elements	1 million times / return or every six months
One-way Stroke Movement Time	≤1s
Operating Temperature Range	5-55°C
Operating Humidity Range	RH35-80 (No frost)
Movement Method	Link
Adjustable Stroke	Adjustable
Adjustable Clamping Force	Adjustable
Weight	0.925kg
Dimensions (L*W*H)	203*144*45mm (open) 222*64*45MM (closure)
Controller Placement	Built-in
Power	30W
Motor Type	DC Brushless
Rated Voltage	24V
Peak Current	1.5A

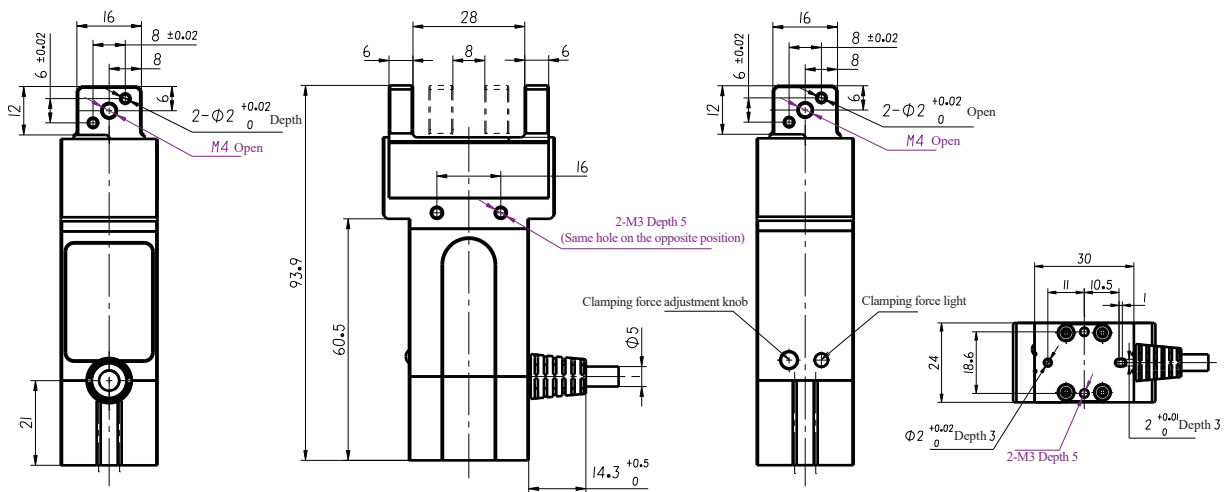
Z-EFG-20S



Product Features

- 0.15 second closing time
- Four-speed adjustable clamping force
- Long service life, multi cycles, better than pneumatic gripper
- Built-in controller: small footprint and easy integration
- Control mode: I/O input and output

Range of Motion and Size



Specifications

Model No. Z-EFG-20S	Parameter
Total Stroke	20mm
Clamping Force	8-20N
Recommended Clamping Weight	0.3kg
Transfer Method	Gear rack + cross roller guide
Grease Replenishment for Moving Elements	1 million times / return or every six months
One-way Stroke Movement Time	≤0.15s
Motor Type	Servo motor
Weight	0.35kg
Dimensions (L*W*H)	43mm*24mm*93.9mm
Operating Voltage	24V±10%
Rated Current	0.2A
Maximum Current	0.6A
Protection Class	IP20
Operating Temperature Range	5-55°C
Operating Humidity Range	RH35-80 (No frost)

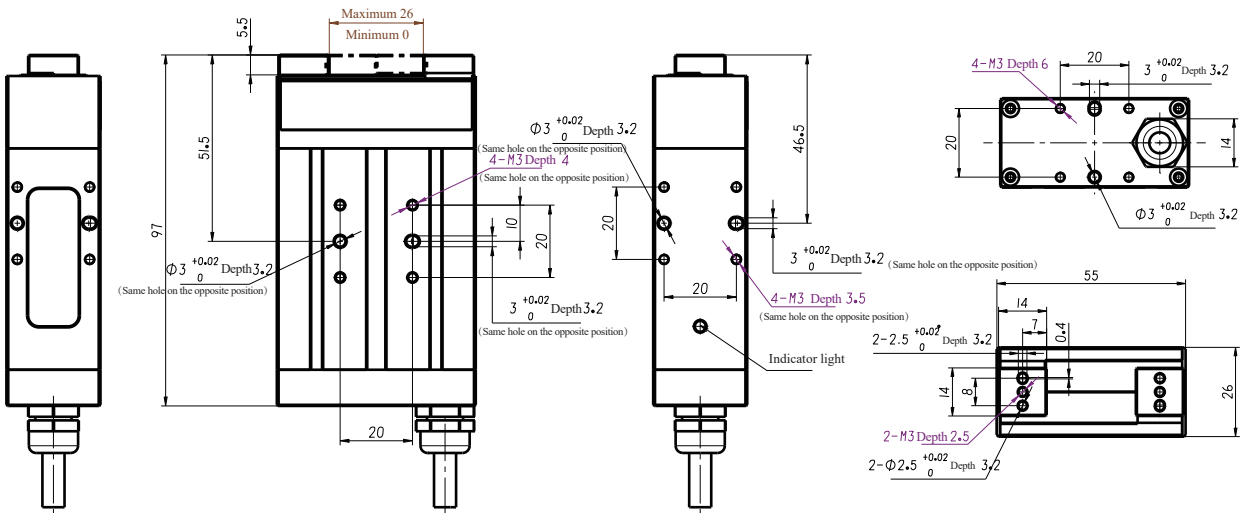
Z-EFG-26



Product Features

- Clamping drop detection and area output function
- Force, position and speed can be precisely controlled via Modbus
- Long service life, multi cycles, better than pneumatic gripper
- Built-in controller: small footprint and easy integration
- Control mode: 485 (Modbus RTU) , pulse, I/O

Range of Motion and Size



Specifications

Model No. Z-EFG-26	Parameter
Total Stroke	26mm
Clamping Force	6-15N
Recommended Clamping Weight	0.3kg
Transfer Method	Gear rack + cross roller guide
Grease Replenishment for Moving Elements	1 million times / return or every six months
One-way Stroke Movement Time	≤0.25s
Motor Type	Servo motor
Weight	0.45kg
Dimensions (L*W*H)	55mm*26mm*97mm
Operating Voltage	24V±10%
Rated Current	0.4A
Maximum Current	1A
Protection Class	IP20
Operating Temperature Range	5-55°C
Operating Humidity Range	RH35-80 (No frost)

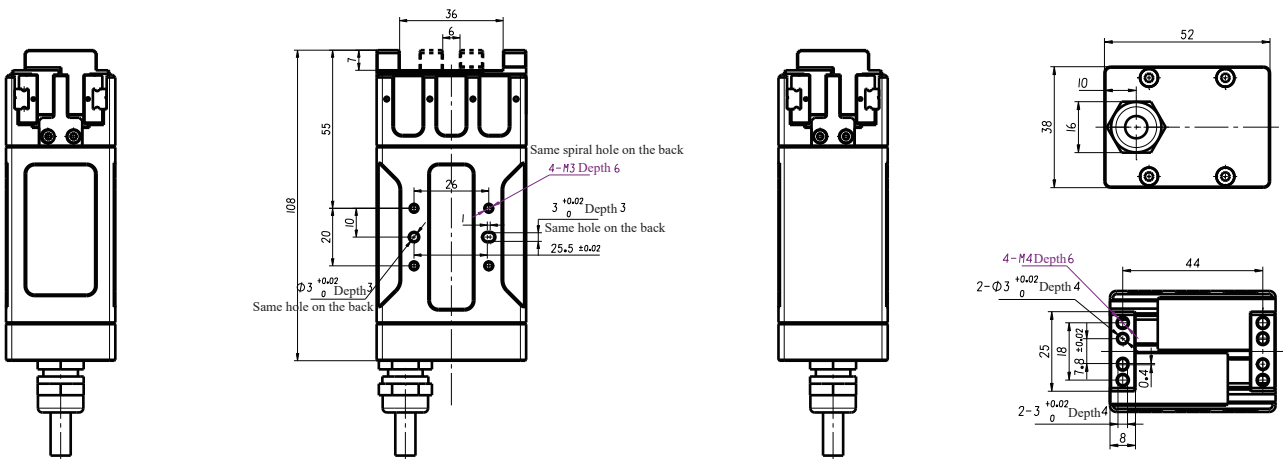
Z-EFG-30



Product Features

- Clamping drop detection and area output function
- Force, position and speed can be precisely controlled via Modbus
- Long service life, multi cycles, better than pneumatic gripper
- Built-in controller: small footprint and easy integration
- Control mode: 485 (Modbus RTU) , pulse, I/O

Range of Motion and Size



Specifications

Model No. Z-EFG-30	Parameter
Total Stroke	30mm
Clamping Force	10-40N
Repeatability	±0.02mm
Recommended Clamping Weight	0.4kg
Transfer Method	Gear rack + Linear guide
Grease Replenishment for Moving Elements	1 million times / return or every six months
One-way Stroke Movement Time	≤0.2s
Motor Type	Servo motor
Weight	0.55kg
Dimensions (L*W*H)	52mm*38mm*108mm
Operating Voltage	24V±10%
Rated Current	0.5A
Maximum Current	2A
Protection Class	IP20
Operating Temperature Range	5-55°C
Operating Humidity Range	RH35-80 (No frost)

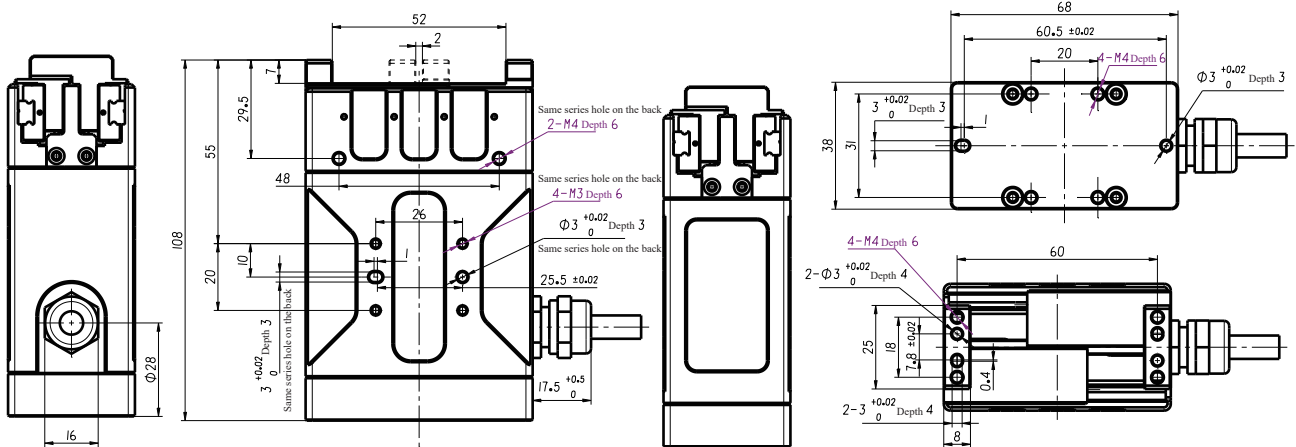
Z-EFG-50



Product Features

- Clamping drop detection and area output function
- Force, position and speed can be precisely controlled via Modbus
- Long service life, multi cycles, better than pneumatic gripper
- Built-in controller: small footprint and easy integration
- Control mode: 485 (Modbus RTU) , pulse, I/O

Range of Motion and Size



Specifications

Model No. Z-EFG-50	Parameter
Total Stroke	50mm
Clamping Force	15-50N
Repeatability	± 0.02 mm
Recommended Clamping Weight	0.5kg
Transfer Method	Gear rack + Linear guide
Grease Replenishment for Moving Elements	1 million times / return or every six months
One-way Stroke Movement Time	≤ 0.2 s
Motor Type	Servo motor
Weight	0.70kg
Dimensions (L*W*H)	68mm*38mm*108mm
Operating Voltage	24V $\pm 10\%$
Rated Current	0.5A
Maximum Current	2A
Protection Class	IP20
Operating Temperature Range	5-55°C
Operating Humidity Range	RH35-80 (No frost)

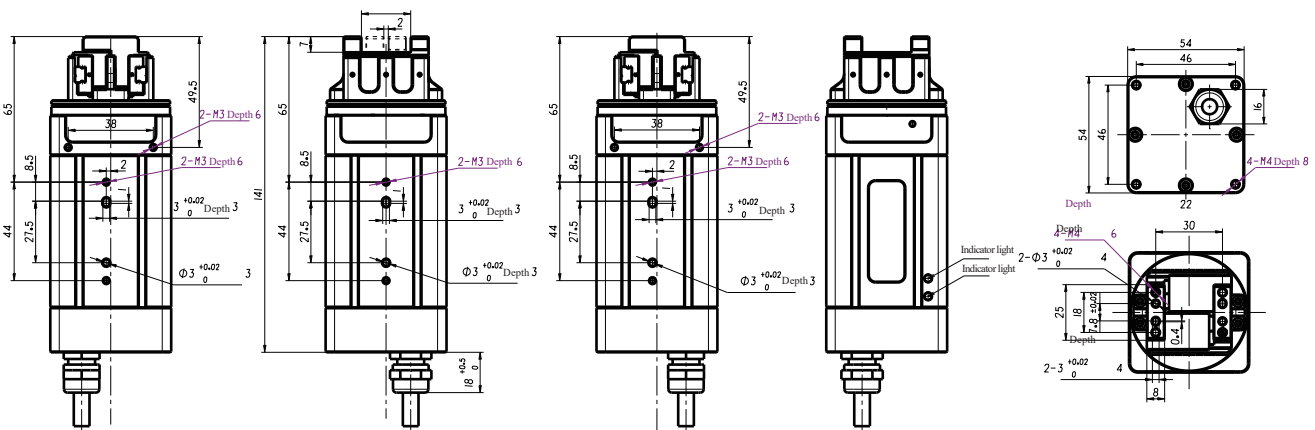
Z-ERG-20



Product features

- Support infinite rotation and relative rotation, no slip ring, low maintenance cost
- Rotation and clamping force, position and speed can be precisely controlled
- Long service life, multi cycles, better than pneumatic gripper
- Built-in controller: small footprint and easy integration
- Control mode: Support Modbus control and I/O control

Range of Motion and Size



Specifications

Model No. Z-ERG-20	Parameter
Total Stroke	20mm
Clamping Force	10-35N
Repeatability	$\pm 0.2\text{mm}$
Recommended Clamping Weight	0.4kg
Transfer Method	Gear rack + Linear guide
Grease Replenishment for Moving Elements	1 million times / return or every six months
One-way Stroke Movement Time	$\leq 0.2\text{s}$
Rotating Maximum Torque	0.3NM
Rotating Maximum Speed	240RPM
Rotation Range	Infinite rotation
Rotating Backlash	$\pm 1^\circ$
Motor Type	Servo motor
Weight	1kg
Dimensions	54*54*141mm
Operating Voltage	24V $\pm 10\%$
Rated Current	1.5A
Maximum Current	3A
Protection Class	IP20
Operating Temperature Range	5-55°C
Operating Humidity Range	RH35-80 (No frost)

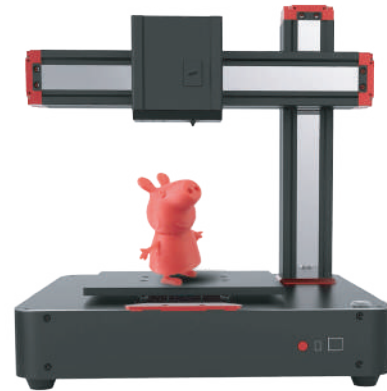
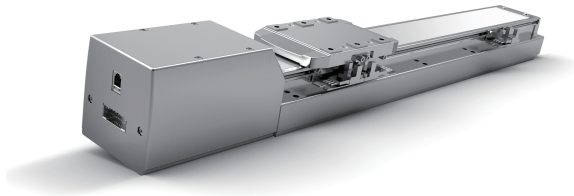
Z-Mod Series Electric Actuator

Ingenuity

Simplicity

Light Weight

Multi-function



Highly Integrated

- Great innovation has been made in the traditional module form, eliminating the need for sensors, highly integrated motors and controllers inside the module
- Maximum use of space and maximum use of stroke

Easy to Use Software

- No need for users to build their own motion platform, easy to operate through Z-Arm series control software
- Extremely simplified programming environment, so that users without experience can also work together quickly and efficiently

Simplify

- Servo series: No external sensor required

Competitive Cost

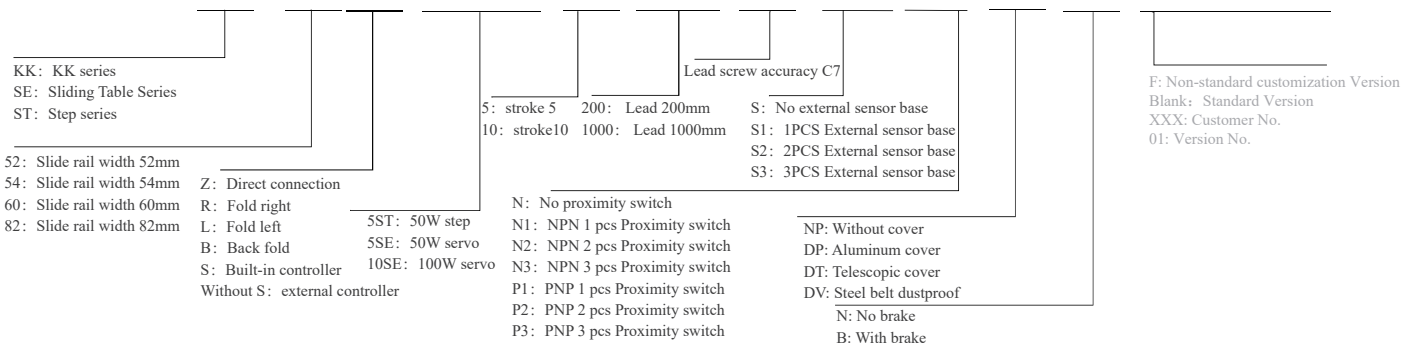
- Z-Mod can provide more services with better performance and competitive price

Unique Collaboration Function

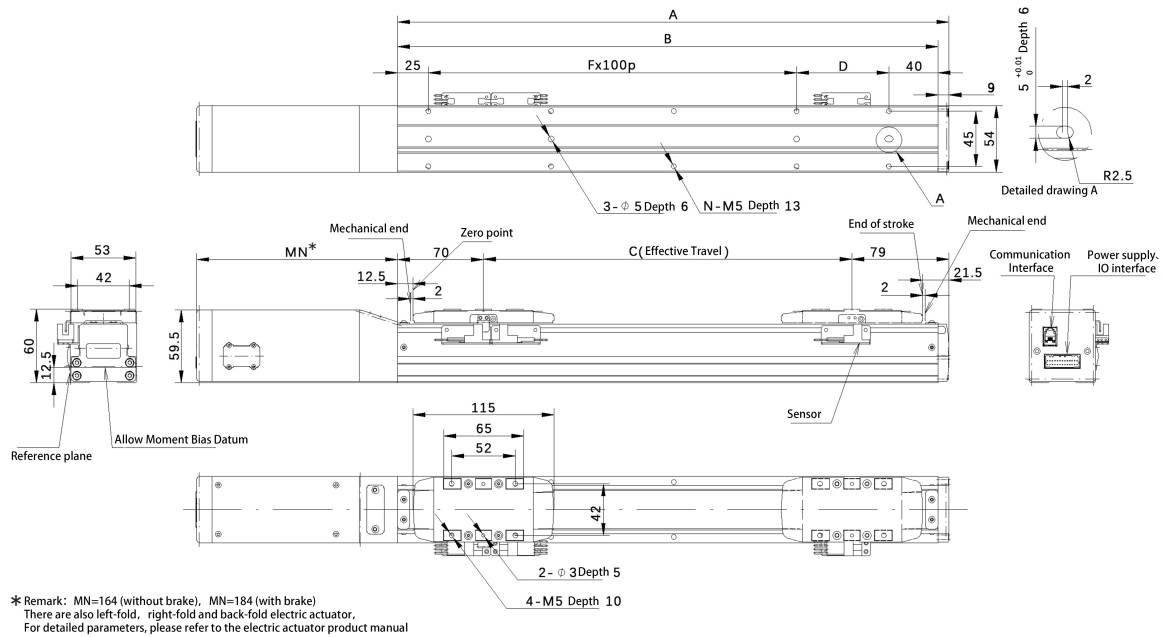
- Higher placement accuracy can be achieved by adjusting parts and fixed alignment, making operation more reliable
- Torque/sport mode can be carried out at the same time without resetting
- The height of the object to be pushed can be detected in the push mode
- These all make Z-Mod's actions smarter

Model Definition

Z-Mod-KK-82ZS-20SE-10-200-C7-S1-N1-DP-N-FXXX-01



Z-Mod-SE-54-10SE Electric Actuators



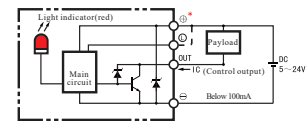
Specifications

Model Performance

DC Servo Motor Power (W)	100		
Rated Torque (N·m)	0.32		
Ball Screw Lead (mm)	5	10	20
Maximum Speed (mm/sec)	250	500	1000
Rated Acceleration (※1)	0.3G	0.3G	0.3G
Max. Loadable Weight Horizontal/Wall Mounted (kg)	30	15	10
Vertical	10	5	2.5
Rated Thrust (N)	361.7	180.9	90.5
Stroke Range	50-800 (50 Interval)		
Motor Rated Speed (RPM)	3000		

Note: 1G=980mm/sec².

Sensor Wiring Diagram

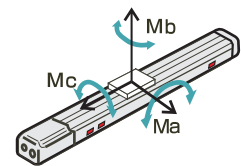


General Specifications

Repeatability	±0.02mm
Drive Method	Ball screw Φ16mm converted to C7 grade
Dynamic Allowable Torque (Note 1)	Ma: 7.3N·m, Mb: 10.2N·m, Mc: 17.5N·m
Load Allowable Extension Length	Below 300mm
Sensor	①-LS,②HOME,③+LS ,NPN, 24V DC
Sensor Cable Length	2m
Base Material	Extruded aluminum material, white luster
Installation Area Accuracy Requirement	Flatness below 0.05mm
Use Environment	0-40°C,85%RH (no frost)

Note: Value at 10,000k motion life

Torque Definition



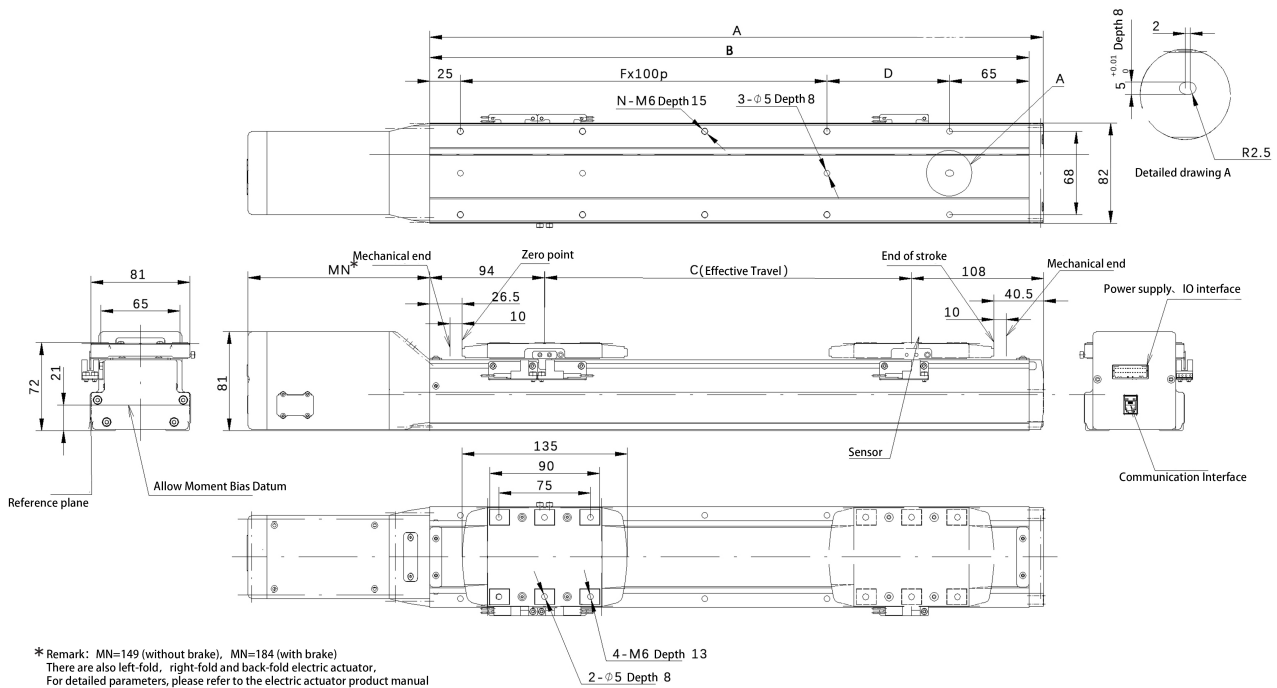
Direct motor mounting type

Dimensional drawing code description-quality

Unit: mm

Effective Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	199	249	299	349	399	449	499	549	599	649	699	749	799	849	899	949
B	190	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940
C	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
D	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
F	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Quality (kg)	2.1	2.25	2.4	2.55	2.7	2.85	3	3.15	3.3	3.45	3.6	3.75	3.9	4.05	4.2	4.35

Z-Mod-SE-82-20SE Electric Actuators



Specifications

Model Performance

DC Servo Motor Power (W)	200		
Rated Torque (N·m)	0.64		
Ball Screw Lead (mm)	5	10	20
Maximum Speed (mm/sec)	250	500	1000
Rated Acceleration (※1)	0.3G	0.3G	0.3G
Max. Loadable Weight Horizontal/Wall Mounted (kg)	50	30	12
Vertical	15	8	2.5
Rated Thrust (N)	723.5	361.7	180.9
Stroke Range	50-1050 (50 Interval)		
Motor Rated Speed (RPM)	300		

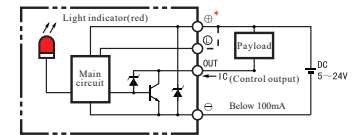
Note: 1G=9800mm/sec².

General Specifications

Repeatability	±0.02mm
Drive Method	Ball screw Φ16mm converted to C7 grade
Dynamic Allowable Torque (Note 1)	Ma: 25.9N·m, Mb: 36.2N·m, Mc: 59.5N·m
Load Allowable Extension Length	Below 300mm
Sensor	①-LS,②HOME,③+LS ,NPN, 24V DC
Sensor Cable Length	2m
Base Material	Extruded aluminum material, white luster
Installation Area Accuracy Requirement	Flatness below 0.05mm
Use Environment	0-40°C,85%RH (no frost)

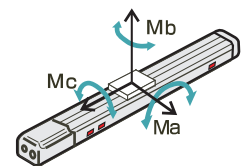
Note: Value at 10,000k motion life

Sensor Wiring Diagram



* The terminal configuration is different from the model, please confirm by the outline size chart.

Torque Definition













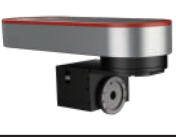
Direct motor mounting type

Dimensional drawing code description-quality

Unit: mm

Effective Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	252	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002	1052	1102	1152	1202	1252	1302
B	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290
C	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
D	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
F	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
Quality (kg)	4.1	4.4	4.7	5	5.3	5.6	5.9	6.2	6.5	6.8	7.1	7.4	7.7	8	8.3	8.6	8.9	9.2	9.5	9.8	10.1	10.4

Examples of Accessories

Flange					
AH-Z42E8S-FC 	AH-Z42E12-FC 	AH-Z42E20-FC 	AH-Z42E8S-FS 	AH-Z42E12-FS 	AH-Z42E20-FS 
Flange		Enclosure Flange		Fifth axis	
AH-Z32E8S-FC 	AH-Z32E20-FC 	AH-Z42E8S-FSW 	AH-Z42E20-FSW 	AFA-Z42FA 	
Accessories Kit					
AE-Z42-MF/DB15/DB9+F3.57 DB9 One male and one female socket with wire DB15 One male and one female socket with wire			AE-Z32-MF/DB15+F3.57 KF2EDGKM-3.5-7pin one plug DB15 One male and female socket with wire		

Accessory Definition

AH - Z42E30 - FSW - FXXX-01

AH: Hardware clamping accessories
(Such as: clamp finger/adapting flange etc.)
AE: electrical wiring
AS: Standard parts, such as couplings, timing belts, etc.
AFA: Fifth axis assembly
AG: Comprehensive accessories
AD: WIFI wireless network module \modbus\ optical coupling isolation

Z42E30: Z-Arm xx42 and Z-EFG-30 related accessories
Z42E20: Z-Arm xx42 and Z-EFG-20 related accessories
Z42E8S: Z-Arm xx42 and Z-EFG-8S related accessories
Z42E50: Z-Arm xx42 and Z-EFG-50 related accessories
Z42ER20: Z-Arm xx42 and Z-ERG-20 related accessories
Z32E20: Z-Arm xx32 and Z-EFG-20 related accessories
Z32E8S: Z-Arm xx32 and Z-EFG-8S related accessories
Z60E20: Z-Arm xx60 and Z-EFG-20 related accessories
Z60E30: Z-Arm xx60 and Z-EFG-30 related accessories
Z60E50: Z-Arm xx60 and Z-EFG-50 related accessories
Z60ER20: Z-Arm xx60 and Z-ERG-20 related accessories

Z42: just an accessory for Z-Arm xx42
E30: just an accessory for Z-EFG-30
Z22: just an accessory for Z-Arm 1522
...and so on

F: Non-standard customization Version
Blank: Standard Version
XXX: Customer No.
01: Version No.

Empty: Electric gripper is installed without shell
W: Electric gripper installation with shell

C: Electric gripper is installed vertically
S: Horizontal installation of electric gripper

F: The connecting flange between the robot arm and the electric gripper
DK: The connecting wire between the mechanical arm and the electric gripper
J: Standard finger of electric gripper
3D: 3D printer accessories
LA: Laser engraving accessories
MF: a pair of male and female socket
M: Female socket only
MF/DB15/DB9: DB15 and DB9 male and female sockets each each model one pair
M/DB15: 1 female DB15 socket
F3.57: One KF2EDGKM-3.5-7pin plug

For example:

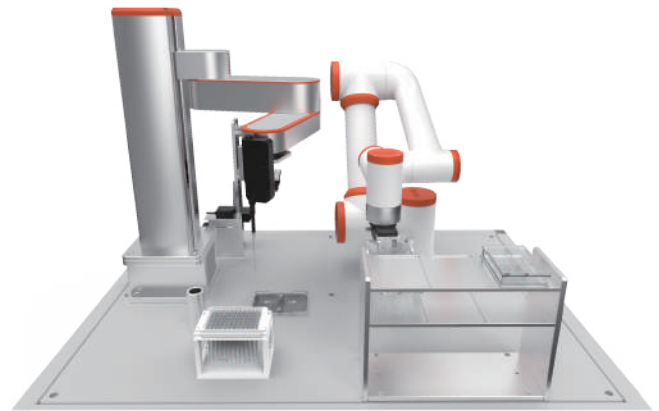
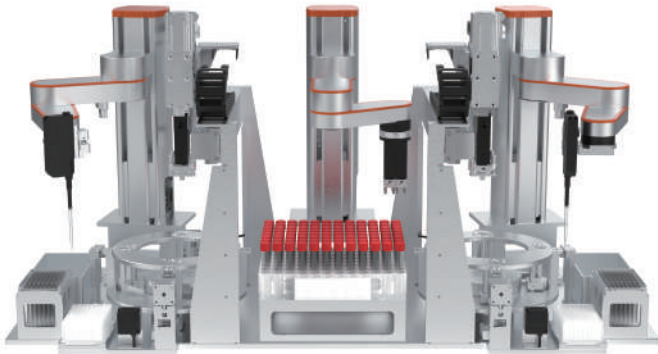
AH-Z42E50-FC: on behalf of Z-Armxx42 and Z-EFG-50 vertical mounting flange, without shell
AH-Z42E30-FSW: on behalf of Z-Armxx42 and Z-EFG-30 horizontally mounted flange with shell
AE-Z42E30-DK: represents the control wire between Z-Armxx42 and Z-EFG-30
AH-E30-J: the standard finger on behalf of the Z-EFG-30 finger
AE-Z42-XX: represents a certain electrical related accessory in the Z-Armxx42 robot arm
If the existing model cannot be reflected, please contact sales to add...

Accessories Package List

Model No.	Compatible Model No	Specification Description
AH-Z42E30-FSW	AH-Z60E30-FSW	Accessories _ Hardware Clamping _ 42 Arm-length Robot Arm _ Z-EFG-30 Electric Gripper _ Flange _ Horizontal Installation _ With Shell _ V00 Version
AH-Z42E08S-FSW	AH-Z60E08S-FSW	Accessories _ Hardware Clamping _ 42 Arm-length Robot Arm _ Z-EFG-8S Electric Gripper _ Flange _ Horizontal Installation _ With Shell _ V00 Version
AH-Z42E20-FSW	AH-Z60E20-FSW	Accessories _ Hardware Clamping _ 42 Arm-length Robot Arm _ Z-EFG-20 Electric Gripper _ Flange _ Horizontal Installation _ With Shell _ V00 Version
AH-Z42E30-FC	AH-Z42E50-FC / AH-Z60E50-FC / AH-Z42E30-FC / AH-Z60E30-FC	Accessories _ Hardware Clamping _ 42/60 Arm-length Robot Arm _ Z-EFG-50/30 Electric Gripper _ Flange _ Vertical Installation _ Without Shell _ V00 Version
AH-Z42E20-FC	AH-Z60E20-FC / AH-Z60E08S-FC / AH-Z42E08S-FC / AH-Z42E12-FC / AH-Z60E12-FC	Accessories _ Hardware Clamping _ 42/60 Arm-length Robot Arm _ Z-EFG-20/12/8S Electric Gripper _ Flange _
AH-Z32E20-FC	AH-Z32E08S-FC / AH-Z32E12-FC / AH-Z32E20-FS / AH-Z32E08S-FS / AH-Z32E12-FS / 1632-FC08 / 1632-FC20 / 1632-FS12-L / 1632-FS20-L / 1632-FS08-L	Accessories _ Hardware Clamping _ 32 Arm-length Robot Arm _ Z-EFG-20/12/8S Electric Gripper _ Flange _ Vertical/Horizontal Installation _ Without Shell _ V00 Version
AH-Z42E50-FS	AH-Z60E50-FS	Accessories _ Hardware Clamping _ 42 Arm-length Robot Arm _ Z-EFG-50 Electric Gripper _ Flange _ Horizontal Installation _ Without Shell _ V00 Version
AH-Z42E30-FS	AH-Z60E30-FS	Accessories _ Hardware Clamping _ 42 Arm-length Robot Arm _ Z-EFG-30 Electric Gripper _ Flange _ Horizontal Installation _ Without Shell _ V00 Version
AH-Z42E20-FS	AH-Z60E20-FS / AH-Z60E08S-FS / AH-Z42E08S-FS / AH-Z42E12-FS / AH-Z60E12-FS	Accessories _ Hardware Clamping _ 42/60 Arm-length Robot Arm _ Z-EFG-20/12/8S Electric Gripper _ Flange _ Horizontal Installation _ Without Shell _ V00 Version
AH-Z42E100-FC	AH-Z60E100-FC	Accessories _ Hardware Clamping _ 42/60 Arm-length Robot Arm _ Z-EFG-100 Electric Gripper _ Flange _ Vertical Installation _ Without Shell _ V00 Version
AH-Z40E20-W1	2140-FS20 Shell	Accessories _ Hardware Clamping _ 40 Arm-length Robot Arm _ Z-EFG-20 Electric Gripper _ Flange _ Horizontal Installation _ With Shell _ V00 Version
AH-Z40E20-W2	2140-FS20 Cover	Accessories _ Hardware Clamping _ 40 Arm-length Robot Arm _ Z-EFG-20 Electric Gripper _ Flange _ Horizontal Installation _ With Cover _ V00 Version
AH-Z40E08S-W1	2140-FS08 Shell	Accessories _ Hardware Clamping _ 40 Arm-length Robot Arm _ Z-EFG-8S Electric Gripper _ Flange _ Horizontal Installation _ With Shell _ V00 Version
AH-Z40E08S-W2	2140-FS08 Cover	Accessories _ Hardware Clamping _ 40 Arm-length Robot Arm _ Z-EFG-8S Electric Gripper _ Flange _ Horizontal Installation _ With Cover _ V00 Version
AH-Z40E20-FC	AH-Z40E12-FC / AH-Z40E08S-FC / AH-Z40E08S-FS / AH-Z40E20-FS / AH-Z40E12-FS / 2140-FS08-L / 2140-FS20-L / 2140-FS12-L / 2140-FC12 / 2140-FC08 / 2140-FC20	Accessories _ Hardware Clamping _ 40 Arm-length Robot Arm _ Z-EFG-20/12/8S Electric Gripper _ Flange _ Horizontal / Vertical Installation _ Without shell _ V00 Version
AH-ER-W	R Plastic Shell	Accessories _ Hardware Clamping _ 3D Printer- Z-EFG-R Electric Gripper _ Plastic Shell _ White color _ N _ V00 Version
AH-EL-W	L Plastic Shell	Accessories _ Hardware Clamping _ 3D Printer- Z-EFG-L Electric Gripper _ Plastic Shell _ White color _ N _ V00 Version
AH-EFS-W	F Plastic Shell	Accessories _ Hardware Clamping _ 3D Printer- Z-EFG-FS Electric Gripper _ Plastic Shell _ White color _ N _ V00 Version
AH-ER-F	EFG-R Flange	Accessories _ Hardware Clamping _ N _ Z-EFG-R Electric Gripper _ Flange _ White color _ N _ V00 Version
AH-Z40E20-F	2140 External flange	Accessories _ Hardware Clamping _ 40 Arm-length Robot Arm _ Z-EFG-20/12/8S Electric Gripper _ Flange _ Horizontal / Vertical Installation _ Without Shell _ V00 Version
AH-Z32E20-F	1632 External flange	Accessories _ Hardware Clamping _ 32 Arm-length Robot Arm _ Z-EFG-20/12/8S Electric Gripper _ Flange _ Horizontal / Vertical Installation _ Without Shell _ V00 Version
AH-E08S-J		Accessories _ Hardware Clamping- N _ Z-EFG-8S Electric Gripper _ Standard Gripper _ N _ N _ V00 Version
AH-E20-J		Accessories _ Hardware Clamping- N _ Z-EFG-20 Electric Gripper _ Standard Gripper _ N _ N _ V00 Version
AH-E30-J	AH-E50-J / AH-ER20-J	Accessories _ Hardware Clamping _ N _ Z-EFG-30/Z-EFG-50/Z-ERG-20r _ Standard Gripper _ N _ N _ V00 Version
AE-Z40E20-DK	2140 Robot arm 20 lines	Accessories _ Electrical _ 40 Arm-length Robot Arm _ Z-EFG-20 Electric Gripper _ Control Cable _ N _ N _ V00 version
AE-Z32E20-DK	1632 Robot arm 20 lines	Accessories _ Electrical _ 32 Arm-length Robot Arm _ Z-EFG-20 Electric Gripper _ Control Cable _ N _ N _ V00 version
AFA-Z42FA	AFA-Z40FA / AFA-Z60FA	Accessory _ Fifth Axis Accessory _ 42/40/60 Arm-length Robot Arm _ Fifth axis assembly _ N _ N _ N _ V00 version
AD-Z40WF	AD-Z40WF / AD-Z32WF	Accessories _ Board Function Module Class _ 40 Arm-length Robot Arm _ Wifi Module _ N _ N _ N _ V00 version
AE-URE20-DK	Long Bao Line	Accessories _ Electrical _ RU _ Z-EFG-R Electric Gripper _ Longbao Cable _ 15cm in Length _ N _ N _ V00 version

For example: If you place an order for AH-Z42E50-FC or AH-Z60E50-FC, you can place an order for AH-Z42E30-FC; if you place an order for AH-Z60E20-FS, you can place an order for AH-Z42E20-FS, and so on.

Medical Automation



Automatic cup dispensing equipment
(Pro version)

Automatic cup dispensing equipment

Mainly includes:

1. Automated sample pre-processing for food and medical testing
2. Automation of R&D and production interchange of biological and pharmaceutical products
3. Automation of medical equipment & consumables production

The main customer groups are:

1. Biological and pharmaceutical production enterprises
2. Testing agency
3. Hospital
4. CRO
5. Instrument manufacturer

Industry Advantage

1. The cost is low and reasonable

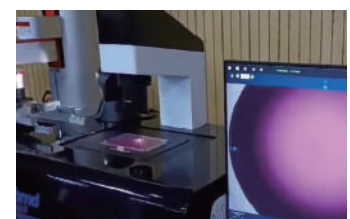
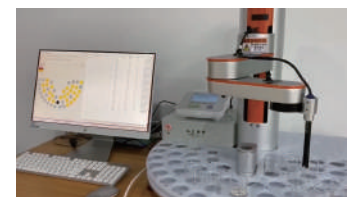
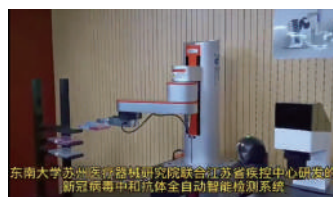
- Self-sufficient core components such as robot arms, linear modules, electric grippers and machined parts.
- Successful experience in related modules and control, low labor cost on the project.

2. Small size, space saving

- Integrated design of robot arm and direct-connected linear module, no external drive controller, space saving.

3. Humanization and simple operation

- 3D graphical teaching, you can get started in a few minutes, and the operation is simple.
- The interface is open for easy expansion and upgrade.



Machining Introduction

Advanced equipment
Unified management and more thoughtful service
Sampling service, one-piece delivery, mass production, perfect service
On-time follow-up, transparent process, let you fully understand the production progress



Help Customers Solve Six Major Points

- Small order is not accepted
- No one follow up
- High cost
- No quality assurance
- Long leading time
- Poor after-sales

Real View of Machining Factory



FAQ

1. Can the internal part of the robot arm be connected to the trachea?

Answer: The internal of 2442/4160 series can take trachea or straight wire.

2. Can the robot arm be installed upside down or horizontally?

Answer: Some robot arm models, such as 2442, support inverted installation, but do not support horizontal installation at the moment.

3. Can the robot arm be controlled by PLC?

Answer: Since the protocol is not open to the public, it currently does not support the PLC to communicate with the robot arm directly. It can communicate with the arm's standard host computer Hitbot Studio or secondary development software to realize the control of the robot arm. The robot arm is equipped with a certain number of I/O interface which can carry out signal interaction.

4. Can the software terminal run on Android?

Answer: It is not currently supported. The standard host computer Hitbot Studio can only run on Windows (7 or 10), but we provide a secondary development kit (SDK) on the Android system. Users can develop applications to control the arm according to their needs.

5. Can one computer or industrial computer control multiple robot arms?

Answer: Hitbot Studio supports independent control of multiple robot arms at the same time. You only need to create multiple workflows. A host IP can control up to 254 robot arms (same network segment). The actual situation is also related to the performance of the computer.

6. What languages does the SDK development kit support?

Answer: Currently supports C#, C++, Java, Labview, Python, and supports Windows, Linux, and Android systems.

7. What is the role of server.exe in the SDK development kit?

Answer: server.exe is a server program, which is responsible for the transmission of data information between the robot arm and the user program.

8. Can the robot arm be used with machine vision?

Answer: At present, the robot arm cannot directly cooperate with the vision. The user can communicate with Hitbot Studio or secondary developed software to receive the visual related data to control the robot arm. In addition, the Hitbot Studio software contains a Python programming module, which can directly perform custom modules' development.

9. There is a requirement for the concentricity of rotation when using the gripper, so when the two sides of the gripper are close, does it stop at the middle position each time?

Answer: Yes, there is a symmetry error of <0.1mm, and the repeatability is $\pm 0.02\text{mm}$.

10. Does the gripper product include the front gripper part?

Answer: Not included. Users need to design their own fixtures according to the actual clamped items. In addition, Huiling also provides a few fixture libraries, please contact the sales staff to get them.

11. Where is the drive controller of the gripper? Do I need to purchase it separately?

Answer: The drive is built-in, no need to purchase it separately.

FAQ

12. Can the Z-EFG gripper move with one finger?

Answer: No, the single-finger movement gripper is under development. Please contact the sales staff for details.

13. What is the clamping force of Z-EFG-8S and Z-EFG-20, and how to adjust?

Answer: The clamping force of Z-EFG-8S is 8-20N, which can be manually adjusted by the potentiometer on the side of the clamping gripper. The clamping force of Z-EFG-12 is 30N, which is not adjustable. The clamping force of Z-EFG-20 is 80N by default. Customers can ask for other force when purchasing, and it can be set to a customized value.

14. How to adjust the stroke of Z-EFG-8S and Z-EFG-20?

Answer: The stroke of Z-EFG-8S and Z-EFG-12 is not adjustable. For Z-EFG-20 pulse type gripper, 200 pulses correspond to 20mm stroke, and 1 pulse corresponds to 0.1mm stroke.

15. Z-EFG-20 pulse type gripper, 200 pulses correspond to 20mm stroke, what happens if 300 pulses are sent?

Answer: For the standard version of 20-pulse gripper, the extra pulse will not be executed and will not cause any impact.

16. Z-EFG-20 pulse-type gripper, if I send 200 pulses, but the gripper grips something when it moves to 100 pulse distance, will it stop after gripping? Will the remaining pulse be useful?

Answer: After the gripper grips the object, it will remain in the current position with a fixed gripping force. After the object is removed by the external force, the gripping finger will continue to move.

17. How to judge something is clamped by the electric gripper?

Answer: The I/O series of Z-EFG-8S, Z-EFG-12 and Z-EFG-20 only judge if the gripper stops. For the Z-EFG-20 gripper, the feedback of the pulse quantity shows the current position of the grippers, so the user can judge whether the object is clamped according to the number of pulses' feedback.

18. Is the electric gripper Z-EFG series waterproof?

Answer: It is not waterproof, please consult the sales staff for special needs.

19. Can the Z-EFG-8S or Z-EFG-20 be used for the object larger than 20mm?

Answer: Yes, 8S and 20 refer to the effective stroke of the gripper, not the size of the object being clamped. If the maximum to minimum size repeatability of the object is within 8mm, you can use Z-EFG-8S for clamping. Similarly, Z-EFG-20 can be used for clamping the items whose maximum to minimum size repeatability is within 20mm.

20. If it works all the time, will the motor of the electric gripper overheat?

Answer: After the professional test, Z-EFG-8S has been working at an ambient temperature of 30 degrees, and the surface temperature of the gripper gripper will not exceed 50 degrees.

21. Does the Z-EFG-100 gripper support IO or pulse control?

Answer: Currently Z-EFG-100 supports 485 communication control only. Users can manually set parameters such as movement speed, position and clamping force.

Worldwide Selling



YouTube



LinkedIn



Company website



The most affordable or nothing.



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