



**ELITE  
ROBOTS**



# Company Profile

2022

# Always Easier Than Before



Founded in 2016 by a group of PHDs from the renowned **Robotics Institute of Beihang University** in Beijing, an incubator for talents in China's robotics industry, it's safe to say that technology and research are in the DNA of Elite Robots.

Every component of Elite Robots cobots is a result of **independent Research and Development**. This includes everything from the underlying operating system to the embedded hardware and software as well as the revolutionary joint module technology. Such efforts in R&D have led over time to the filing of **over 100 technological patents** and make Elite Robots the collaborative robot company with the **highest independent R&D rate in China**.

After establishing the **Suzhou Corporate Headquarters & Manufacturing Plant** (a 8,700 square meters center) in 2018 and the **R&D and Operations**

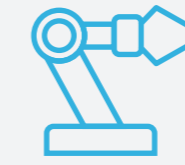
**Center** (2,400 square meters) in the hearth of the **Zhangjiang AI Robot Valley**, Shanghai's most important robot industry cluster, in 2020, the company has served an ever growing number of both domestic and overseas customers, with an **installed base of over 3,000 units worldwide**.

In the two-year period 2021 and 2022 the company has established **3 strategic foreign branches** in the United States, Germany and Japan and developed **key partnerships in over 20 countries**, as well as a growing local and international **sales and service force** with a rich experience in the robotic industry usage.

By taking these steps, Elite Robots intends to guarantee the **greatest possible proximity to all its users** and **reinforce its founding motto "Always easier than before"**, by always focusing on the practical applications cobots are deployed for and striving to simplify even the more complex processes.



An external glimpse at Elite Robots 8,700 square meters headquarters in Suzhou.



3K+

### Deployed Cobots Units

With over 3000 units installed around the world (and growing) for use by different types of industries, from automation to electronics to consumer stores, Elite Robots has established itself as a reliable supplier of collaborative robots.



100+

### Over 100 patents filed over time

By the cobots company with the highest independent R&D rate in China.



40%

### 40% R&D share allocation on total workforce

Which consist of approximately 300 employees headcounts.



-40%

### Up to -40% COGS

Compared to other industry players, while maintaining the same level of reliability.



8

### Quick payback starting from 8 months

The cost-effectiveness and easy and minimal maintenance required quickly offset the users investment costs and guarantee steady returns in a shorter time.

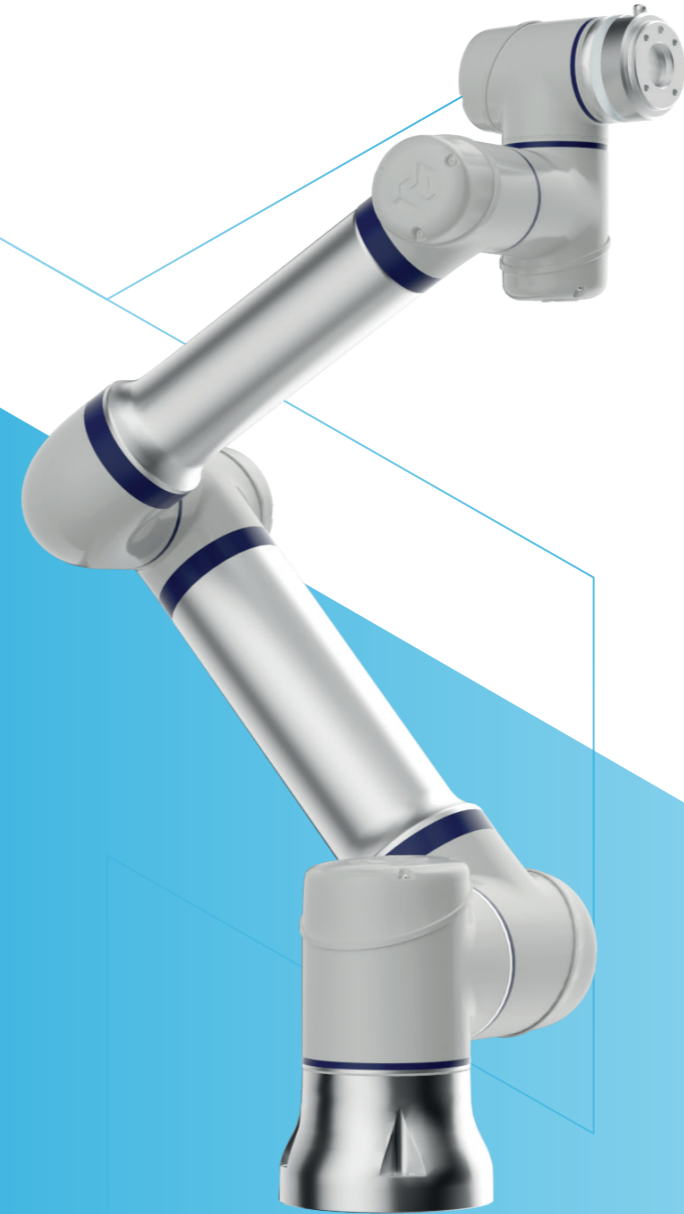
# Discover the cobots family



Called **collaborative robots** (in short, cobots) because of their ability to operate safely around humans, they are changing the way we think about automation. They are **smaller and easier to operate** than traditional industrial robots and thanks to integrated special sensors, cobots can “feel” when humans are working on or around them. This allows the cobots to pivot into safety mode so the danger to human workers is minimized and to work with the operational staff on the same production line, with **no need of any protective fence**.

Elite Robots entered the cobots arena in **2018** with the **EC Series**. Since its launch, the EC (acronym standing for

Elite Collaborative) Series has served an ever-growing customer base both domestically and overseas and quickly gained a prominent reputation in the robotics industry due to its **stable operations, light-weight design, flexibility, user-friendliness, and the excellent cost-performance ratio**. As a matter of fact, Elite Robots cobots can cost as **much as 40% less** compared to some industry players, while maintaining the same level of reliability. This will help users **quickly offset their upfront investment** and guarantee **steady returns in a much shorter time**.



In 2022, Elite Robots is launching the new **CS (Cobot Superior) Series**, a platform-level collaborative robot range based on new mechanical infrastructure, a wholly redesigned operation interface and new software display technology. This new generation of collaborative robots marks an important milestone in Elite Robots journey towards **simplifying the life of companies and individuals and further advances the entire collaborative robot industry**.

## A Productivity Companion

- ➔ **Lightweight:** The world's first collaborative robots which weigh less and charge more, with a **payload to self-weight ratio up to 0.36**, for effortless lifting and carrying and lower power consumption.
- ➔ **User-friendly:** Easy to assemble and disassemble. Plug & Play integration with third party end-effectors. The ultra-sensitive drag & drop function allows to smoothly teach the running path to the cobot. Interactive programming of teach pendant/PC.
- ➔ **Flexible:** Inter-model **interchangeable joints with  $\pm 360^\circ$  rotation**. Multiangle installation (floor / wall / ceiling). Supported multiple development languages and communication protocols.
- ➔ **Efficient:** Maximum speed **up to 3.2 m/s**, with **24/7 operating efficiency**, smooth trajectory and continuous motion to improve and accelerate production.
- ➔ **Industrial design:** Robust and flexible screw-hidden industrial design in aluminum alloy. The IP54 protection rating allows the cobot to properly function even in non-optimal environmental conditions.

# EC SERIES

## Make Complex Processes Simple

Launched in **2018**, the EC series first began to serve the needs of the local Chinese market and then was also gradually adopted by a growing number of satisfied overseas users.

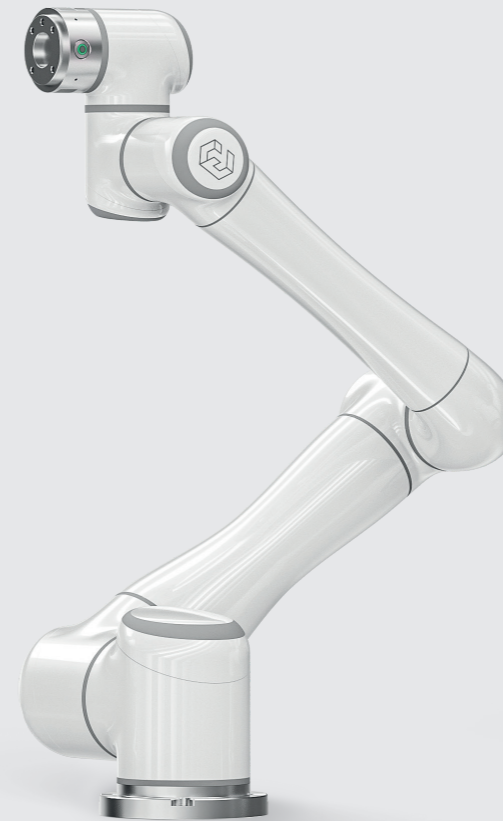
Over time, leading collaborative robotic projects have integrated the EC series across many **industrial sectors such as automotive, 3C electronics, F&B, metal processing, paper converting, home appliances, power, and education.**

In addition to this, the easy “Plug & Play” integration of the EC Series with solutions independently developed by third-party manufacturers (so-called “end effectors”) has further expanded the scope and abilities of the cobots developed by Elite Robots.

To take an example, the EC Series has been successfully deployed in many **composite mobile robot (AGV/AMR) projects**, where the small and compact structure and the lightweight design help users to easily install the cobot, reduce the vehicle power consumption and minimize downtime. **Small in size but great in applications.**







**EC 63**



**EC 66**



**EC 612**

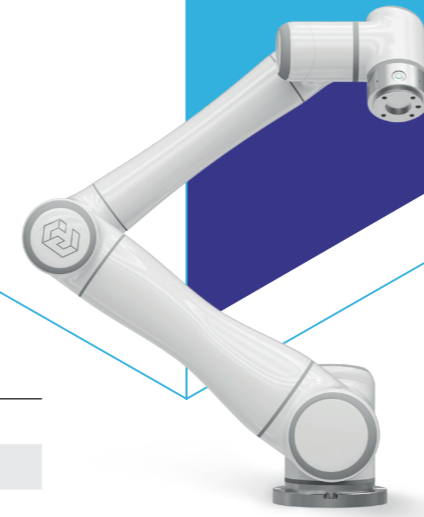
 <b>Weight</b>	<b>13 kg</b>	<b>17.5 kg</b>	<b>33.5 kg</b>
 <b>Payload</b>	<b>3 kg</b>	<b>6 kg</b>	<b>12 kg</b>
 <b>Footprint / Radius</b>	<b>Ø 128 / 624 mm</b>	<b>Ø 150 / 914 mm</b>	<b>Ø 200 / 1304 mm</b>
 <b>Repeatability</b>	<b>±0.03 mm</b>	<b>±0.03 mm</b>	<b>±0.03 mm</b>

# EC SERIES

## Robotic Arm

	EC63	EC66	EC612
Degrees of freedom		6	
Weight	13 kg	17.5 kg	33.5 kg
Payload	3 kg	6 kg	12 kg
Working radius	624 mm	914 mm	1304 mm
Repeatability		±0.03 mm	
Joints range		±360°	
Max joints speed	Joint 1	144°/s	120°/s
	Joint 2	144°/s	120°/s
	Joint 3	180°/s	144°/s
	Joint 4	224°/s	180°/s
	Joint 5	224°/s	180°/s
	Joint 6	224°/s	180°/s
TCP speed *	2.0 m/s	2.8 m/s	3.2 m/s
IP rating		IP54	
Ambient temperature		0-50 °C	
Relative humidity		5%~95% (No Condensation)	
Power consumption	150w	250w	500w
Mounting		Any angle	
Tool I/O		2xDI, 2xDO, 1xAI, 1xAO	
Tool I/O power supply		24 V, 2A (two pin mode), 1A (one pin mode)	
Tool communication		Any angle	
Footprint	Ø 128 mm	Ø 150 mm	Ø 200 mm
Cable length		5.5m	
Power supply		48V	

\* Maximum TCP speed



## Controller

	EC63	EC66	EC612
Cabinet size (W x H x L)		ERB: 478 x 380 x 120 mm	ERB: 478 x 380 x 138 mm
		ERB2: 505 x 448 x 245 mm	ERB2: 505 x 448 x 245 mm
Weight		15 kg	17 kg
Material		Aluminum, Steel	
IP rating		ERB: IP20	
		ERB2: IP44	
I/O interface	16 x DI, 16 x DO, 2 x AI, 4 x AO 16 x DI, 16 x DO, 2 x AI, 4 x AO		
I/O power supply	Voltage: 24V; Current: 2A (internal power)		
Communication	1 Ethernet port, 1 RS485/RS232, TCP/IP, MODBUS TCP/RTU, EtherNet/IP, Profinet, CCLink		
Power supply	100-240 VAC, 50-60 Hz		
Ambient temperature	0-50 °C		
Relative humidity	5% ~ 95% (No Condensation)		
Programming method	JBI, free drag programming, offline programming, LUA-script		



## Teach Pendant

Screen display size	12.1"
Resolution	1280 x 800 pixels
Material	Aluminum, Plastic
Weight	1.8 kg
Cable length	5.5 m
IP rating	IP65
Ambient temperature	0-50 °C
Relative humidity	5% ~ 95% (No Condensation)



# CS SERIES

## Your Superior Automation Partner

The CS Series is the latest arrival of Elite Robots collaborative robots family and, as its acronym (which stands for **Cobot Superior**) suggests, it aims to **take productivity to a superior level**. Based on the “platformization” concept, the CS Series is the result of Elite Robots’ entirely in-house R&D and embodies the flexibility and openness of a new generation of collaborative robots which ensure **maximum expandability, customization and easy integration for end effectors, developers, and end users**.

The CS Series includes **three models** – **CS63, CS66 and C612**, with each cobot offering a different reach and payload.

With a 3kg payload, the **CS63** is the entry-level member of the family. Despite its small size, it features a very wide working radius of 624 mm. A 128 mm only footprint makes it suitable for table-top applications.

The **CS66** is the CS Series model with the widest spectrum of applications. Thanks to a 6kg payload and a working radius of over 900 mm it has very few rivals in the mid-size market segment. Finally comes the **CS612**, the strongest and fastest member of the family. The 12 Kg payload and a 3.0 m/s Max tool speed make the CS Series top of the range ideal for the toughest jobs.







**CS 63**



**CS 66**

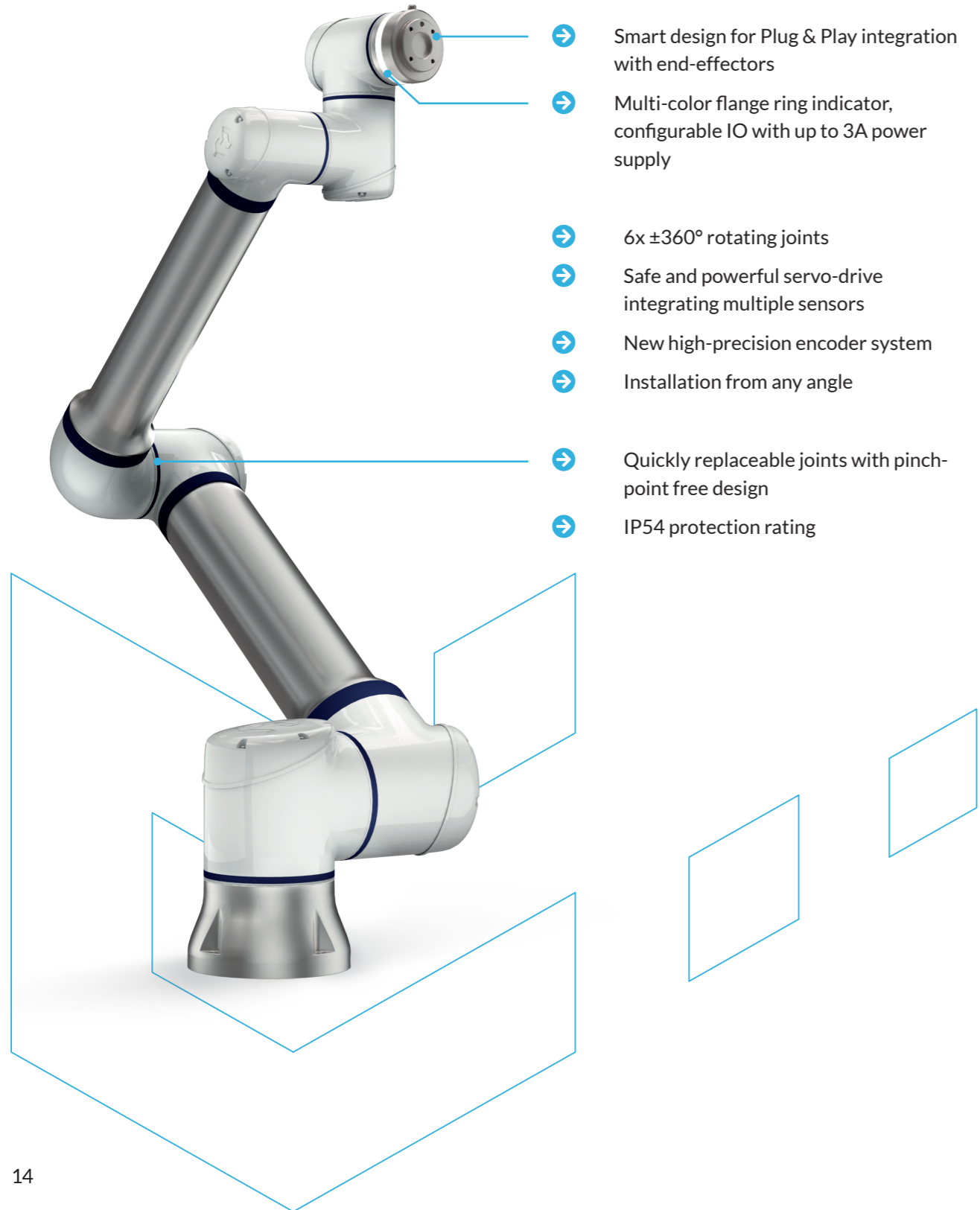


**CS 612**

 <b>Weight</b>	<b>16.5 kg</b>	<b>22 kg</b>	<b>37 kg</b>
 <b>Payload</b>	<b>3 kg</b>	<b>6 kg</b>	<b>12 kg</b>
 <b>Footprint / Radius</b>	<b>Ø 128 / 624 mm</b>	<b>Ø 150 / 914 mm</b>	<b>Ø 190 / 1304 mm</b>
 <b>Repeatability</b>	<b>±0.02 mm</b>	<b>±0.03 mm</b>	<b>±0.05 mm</b>

# CS SERIES

## New Software & Hardware Architecture



- Smart design for Plug & Play integration with end-effectors
- Multi-color flange ring indicator, configurable IO with up to 3A power supply
- 6x ±360° rotating joints
- Safe and powerful servo-drive integrating multiple sensors
- New high-precision encoder system
- Installation from any angle
- Quickly replaceable joints with pinch-point free design
- IP54 protection rating

## Improved User Interaction

- Expandable Java-based modular architecture supporting third-party plug-ins
- Intuitive and user-friendly GUI with flow chart software
- New Python-based script language for quick learning and easy programming
- Real-time robot status display in 3D view
- One-tap software upgrade
- IP54 protection rating



## Powerful Controller

- Independent safety controller with dual channel robot data verification
- Integrated motherboard supporting more I/O ports (24 DI, 24 DO, 2 AI, 2 AO) and high-speed system bus.
- Multiple communication protocols (TCP/IP, MODBUS TCP/RTU, EtherNet/IP, Profinet).
- DC and OEM version
- IP54 protection rating





# CS SERIES

## Robotic Arm

	CS63	CS66	CS612
Degrees of freedom		6	
Weight	16.5 kg	22 kg	37 kg
Payload	3 kg	6 kg	12 kg
Working radius	624 mm	914 mm	1304 mm
Repeatability	±0.02 mm	±0.03 mm	±0.05 mm
Joists range		±360°	
Max joints speed	Joint 1	180°/s	120°/s
	Joint 2	180°/s	120°/s
	Joint 3	180°/s	150°/s
	Joint 4	230°/s	180°/s
	Joint 5	230°/s	180°/s
	Joint 6	230°/s	180°/s
TCP speed *		1.5 m/s	
IP rating		IP54	
Ambient temperature		0-50 °C	
Relative humidity		<90% (No Condensation)	
Power consumption	150w	250w	500w
Mounting		Any angle	
High speed digital input		4	
Tool I/O		4 x DIO, 1 x AI, 1 x AO	
Tool I/O power supply		12 V / 24 V, 3A (three pin mode), 2A (two pin mode), 1A (one pin mode)	
Tool communication		RS485	
Footprint	Ø 128 mm	Ø 150 mm	Ø 190 mm
Cable length		5.5m	
Power supply		48V	

\* Typical TCP speed



## Controller

Cabinet size (W x H x L)	550 x 432 x 257 mm
Weight	14 kg
Material	Aluminum, Steel
IP rating	IP54
I/O interface	24 x DI (8 x DI Configurable), 24 x DO (8 x DO Configurable), 2 x AI, 2 x AO
I/O power supply	Voltage: 24V; Current: 3A (internal power), 6A (external power)
Communication	3 Ethernet ports (FB1/FB2/FB3), 1 RS485, TCP/IP, MODBUS TCP/RTU, EtherNet/IP, Profinet
Power supply	100-240 VAC, 50-60 Hz
Ambient temperature	0-50 °C
Relative humidity	<90% (No Condensation)
Programming method	Graphic programming, offline programming, Python-script



## Teach Pendant

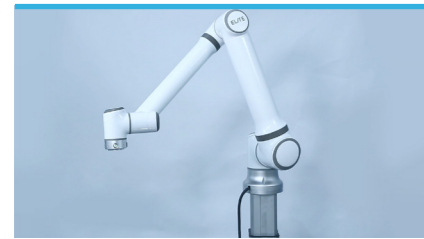
Screen display size	12.1"
Resolution	1280 x 800 pixels
Material	Aluminum, Plastic
Weight	2.1 kg
Cable length	5.5 m
IP rating	IP54
Ambient temperature	0-50 °C
Relative humidity	<90% (No Condensation)



# A Plug & Play Ecosystem

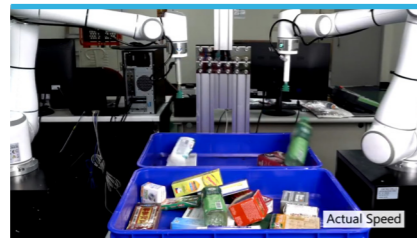
The Elite Robots ecosystem provides end users with a turnkey solution for their production needs that is easily implemented and cost-effective. By collaborating with expert end-effectors, each of whom has great knowledge of the industry or application for which their products are

used, Elite Robots ensures that every step of the production process is automated in the best possible way. Here are some demonstrations of the collaboration between Elite Robots and some of its most reliable Eco-partners.



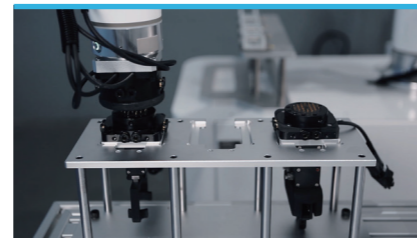
## ELITE ROBOTS + EWELLIX lift kit

Increases productivity while maintaining the same footprint by adding vertical articulation.



## ELITE ROBOTS + SOLOMON Vision

Add random pick and place functionality through vision-guided robotics (VGR).



## ELITE ROBOTS + GIMATIC EQC electric quick change

Rapidly switch end-effectors based on your needs.



## ELITE ROBOTS + SENSOPART Camera

Improves loading and unloading precision.



## ELITE ROBOTS + OnRobot gripper

Direct end-to-end connection to avoid complex wiring.



## ELITE ROBOTS + Geek+ moving system

A combination widely used for inspection, material Management and assembly applications among others.



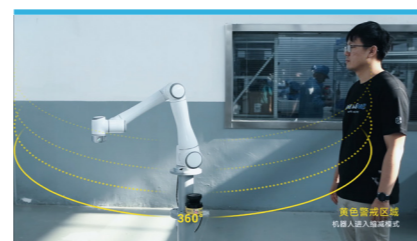
## ELITE ROBOTS + Silver XEG series gripper

Increases productivity while maintaining the same footprint by adding vertical articulation. Improves loading and unloading precision. Simplify your configuration and make installation easier with 485 communication.



## ELITE ROBOTS + ZIMMER HRC-02 gripper

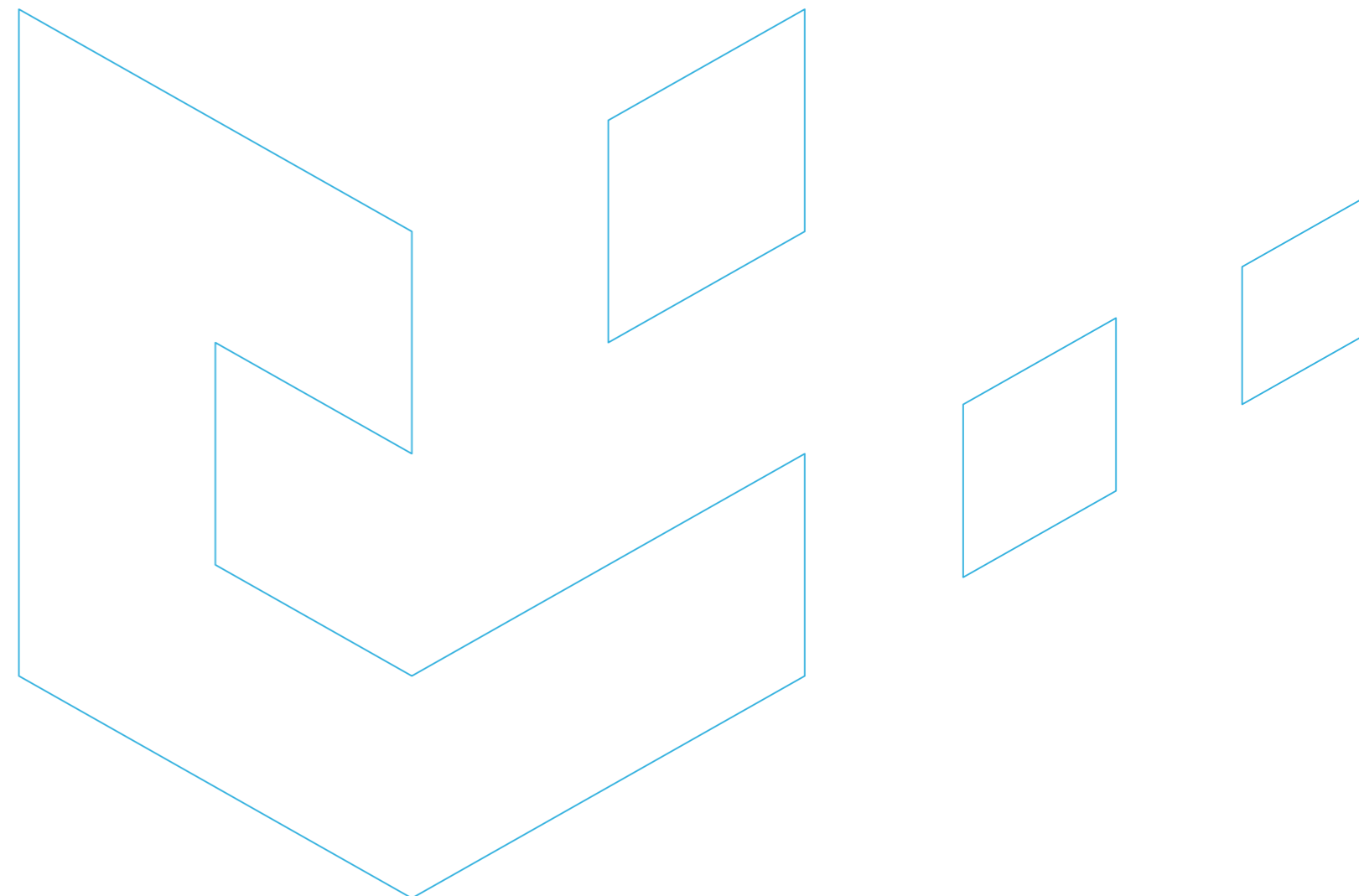
IO control for a more flexible way of switching to different clamping settings.



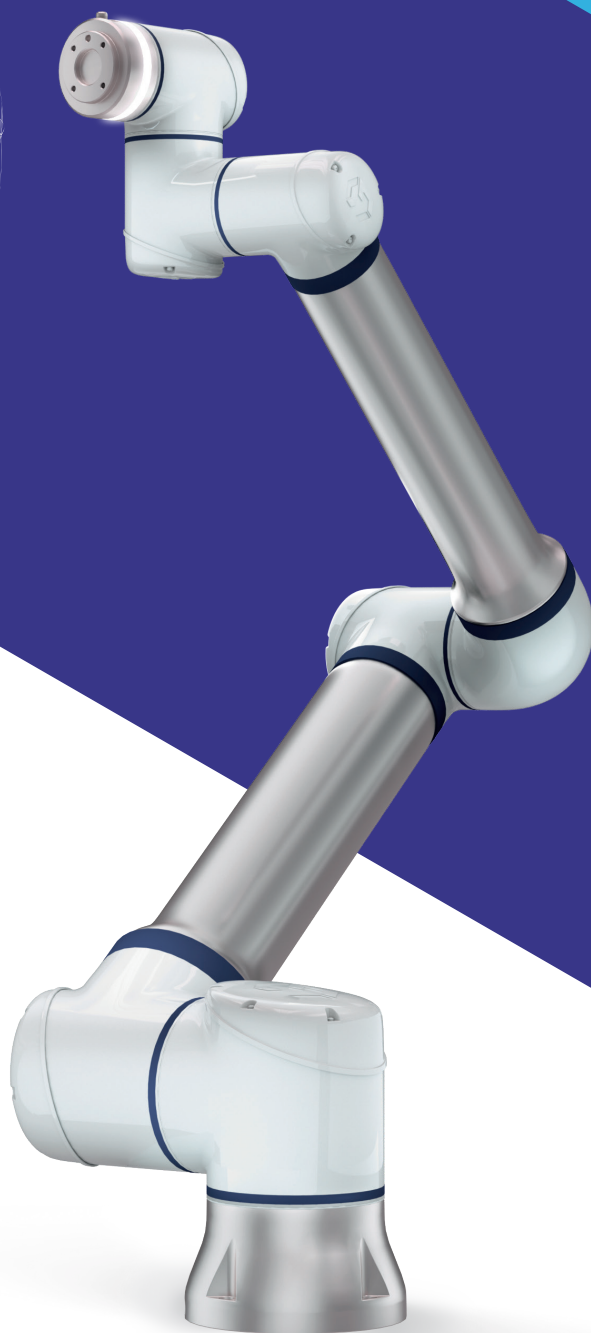
## ELITE ROBOTS + SICK Safe Distance Sensor

Enable contactless safeguards: safety stop and reduced movement modes.

# Trusted by



# Contact



**Shanghai Elite Robots Co., Ltd.**

Xuelin Road 36  
201210, Shanghai  
China

**Elite Robots Inc.**

10521 Research Dr., Ste 104 Knoxville  
TN 37932  
United States

**Elite Robots Deutschland GmbH**

Hersbrucker Weg 5  
85290, Geisenfeld  
Germany

**Elite Robot Japan Co., Ltd.**

Aichi Industry & Labor Center, 4-4-38, 18F  
450-0002, Nagoya  
Japan



[www.elite-robotics.com](http://www.elite-robotics.com)  
[contact@elibot.com](mailto:contact@elibot.com)



Eliterobots



EliterobotsOfficial



Elite Robots