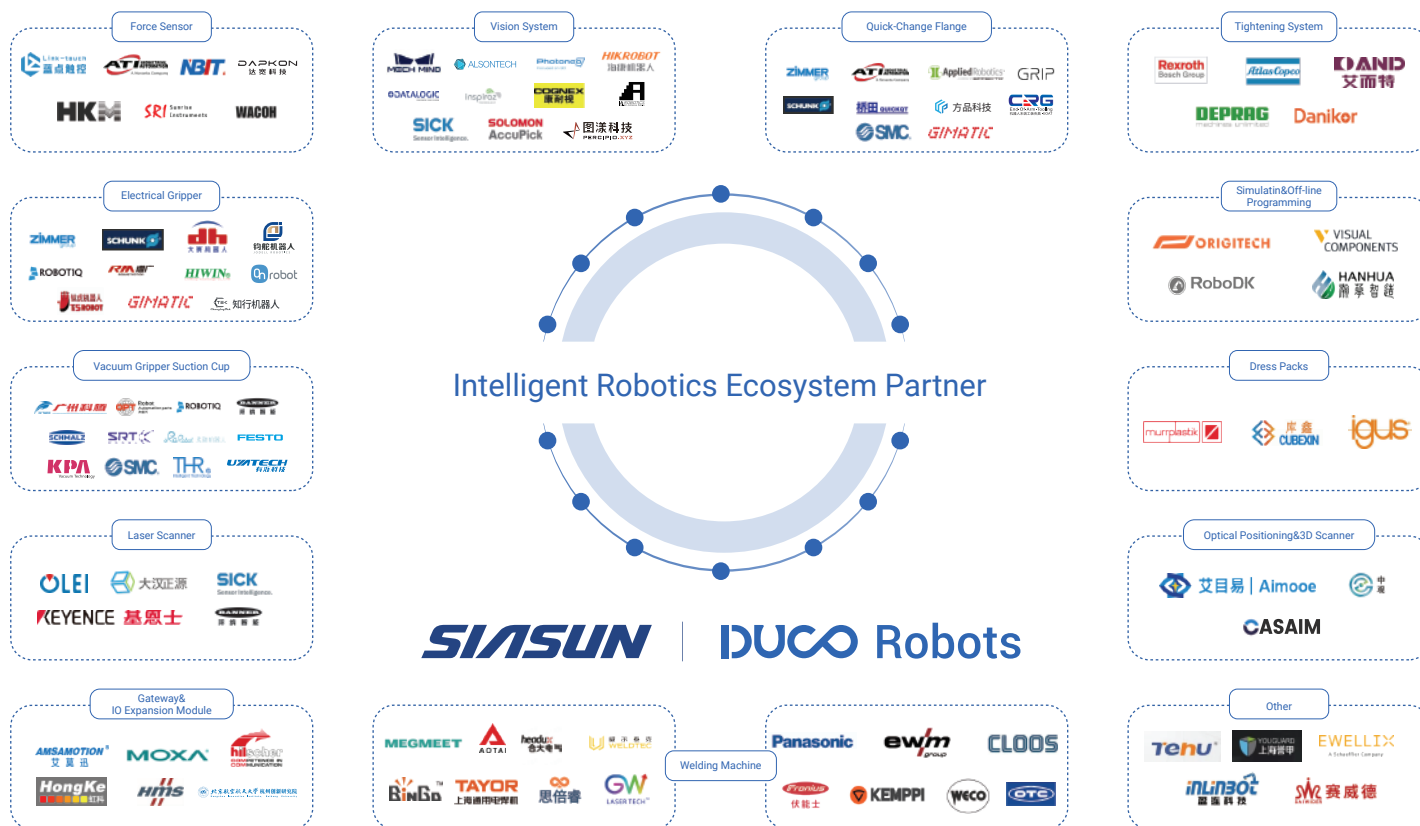
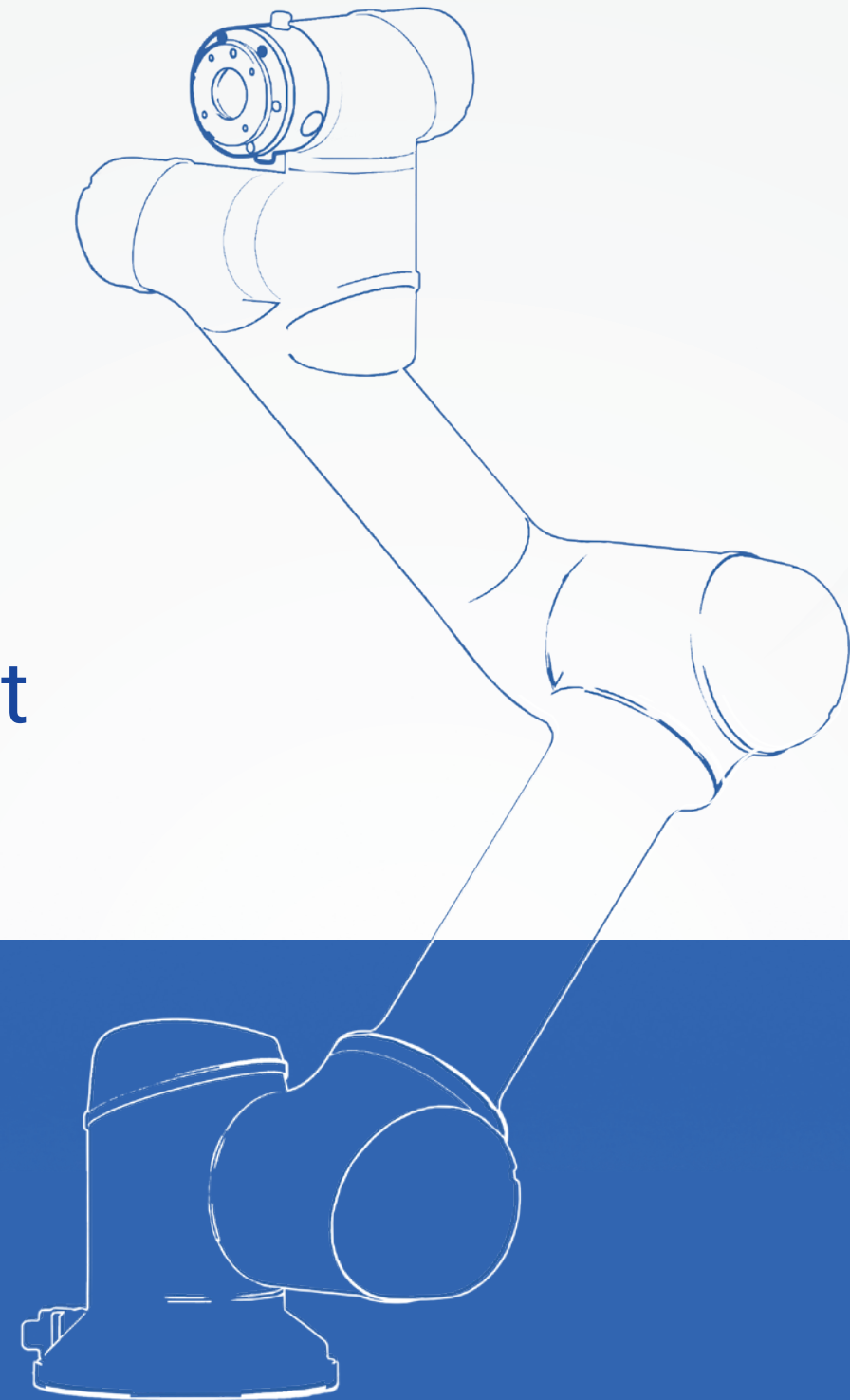




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GCR Series Cobot



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- Factory: No. 199 Boyi Road, Shanghai, China
- 400 088 5288
- marketing@ducorobots.com

Strive to be the Best Partner for Smarter Future

GCR Series Cobot



Safety

DUCO is equipped with safety functions such as collision detection, force and power detection, etc.
DUCO has been certified by TUV SUD and is the first domestic cobot manufacturer to pass the IEC61508 certification;
Making human-machine collaboration safer.



Smart

Deep integration of 2D/3D vision;
High-sensitivity force sensor and control;
Support for cloud-based robot data monitoring and remote OTA upgrades;
Support for one-click deployment of multiple devices and remote data backup



Wide Application

Equipped with multiple scene software packages (welding, palletizing, gluing, etc.);
Supports multiple peripheral interfaces (DI, DO, AI/O, etc.);
Complete ecosystem support for multi-application development.



Easy Operation

Direct teaching programming, lowering the usage threshold and easy to operate;
After 4 hours of training, one can achieve basic programming.



ECO

High load-to-weight ratio, power consumption as low as 200W;
No need to replace lubricating oil throughout the lifetime, reducing maintenance costs;
Lower environmental assessment costs and contribute to the development of carbon peaking and carbon neutrality.

Application Industry



Automotive



Semiconductor



3C



New energy



Education



Medical



Electrical



Agriculture



Petrochemical



Catering



Pan-industry



Other

Application scenarios



Material Handling



Palletizing



Welding



Gluing



Vision



Assembly



Screw fastening



Metal Tending



Painting



Grinding



Inspection



Other

Comprehensive certification

Company system certification: ISO 9001

Product certification: TUV, CE, CR, KCS, NRTL

Safety certification: ISO 15066, ISO 13849-1, ISO 10218-1, IEC 61508

Industry certification: SEMI SII, Cleanliness certification, Explosion-proof safety certification



Comprehensive Control and Management to Ensure Product Quality

Incoming material inspection:

100% incoming material inspection

20+ model test fixtures/software suites covering the

performance inspection of electrical components

40+ major categories of test standards and specifications

Full-size, full-function, full-quantity, and appearance inspection

coverage for key materials

Joint testing:

56 test points and test system

24 hour continuous operation test

Overall machine testing:

60 major test items

72 hour running test

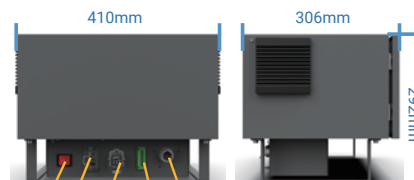
Control System



Control Box & Teach Pendant

The controller is used to control the robot's operations such as loading and unloading, grasping, polishing, handling, welding, gluing and oiling, as well as realizing the input and output control. The latest DUCO controller has compact size while taking into account the safety and flexibility, and has better performance in the field of human cooperation. It can be fully compatible with multiple series of robots, and also can be independently applied to automatic control systems

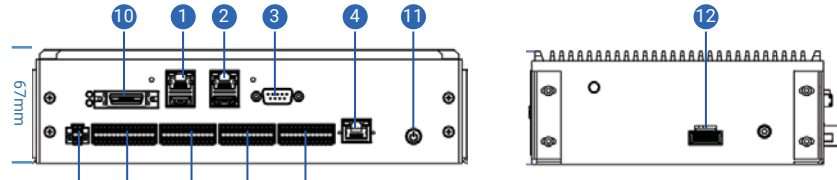
Control Box(DC15S/30D)



Weights:13.8kg

- A Power Switch
- B AC Input
- C Robot Arm Connector
- D Teach Pendant Shielding Interface
- E Teach Pendant Connector

Independent Controller (DC00)



weights:2.5kg

- 1 LAN1+USB 3.0
- 2 LAN2+USB 2.0
- 3 COM1
- 4 EtherCAT2
- 5 EIO
- 6 CIO
- 7 DIO
- 8 SIO
- 9 IO POWER
- 10 VGA&COM3/4
- 11 ON/OFF
- 12 TP

User Interface

DI

User DI	16 Channels(8 channels can be equipped with functional DI)
Input Effective Level	PNPL:-3V-5V,H:11V-30VDC,2-15mA
Switching Time	TON:50ms TOFF:50ms

SDI

Emergency Signal Input	1Channels(Passive signal, dry contact input)
Protective Stop Input	1Channels(Passive signal, dry contact input)
Configurable Secure Input	2Channels(Passive signal, dry contact input)

DO

User DO	16 Channels(8 channels can be equipped with functional DO)
VOU	PNP, 22-28V,Max:0.5A
LOUT	PNP, <2A(When exceeding 2A, the user needs to expand the power supply)
Switching Time	TON:50ms TOFF:50ms

SDO

Configurable Secure Output	2Channels(PNP Active Signal)
Emergency Stop Feedback Output	1Channels(PNP Active Signal)
VOU	23.52V-25.2VDC (Max 0.5A ScP)

A I/O

Analog Voltage Input 2	Input Voltage Signal	0-10V Accuracy ±1%
	Input Impedance	48KΩ
	Resolution	12-bit
Analog Voltage Output 2	Output Voltage Signal	0-10V Accuracy ±1%
	Resolution	12-bit

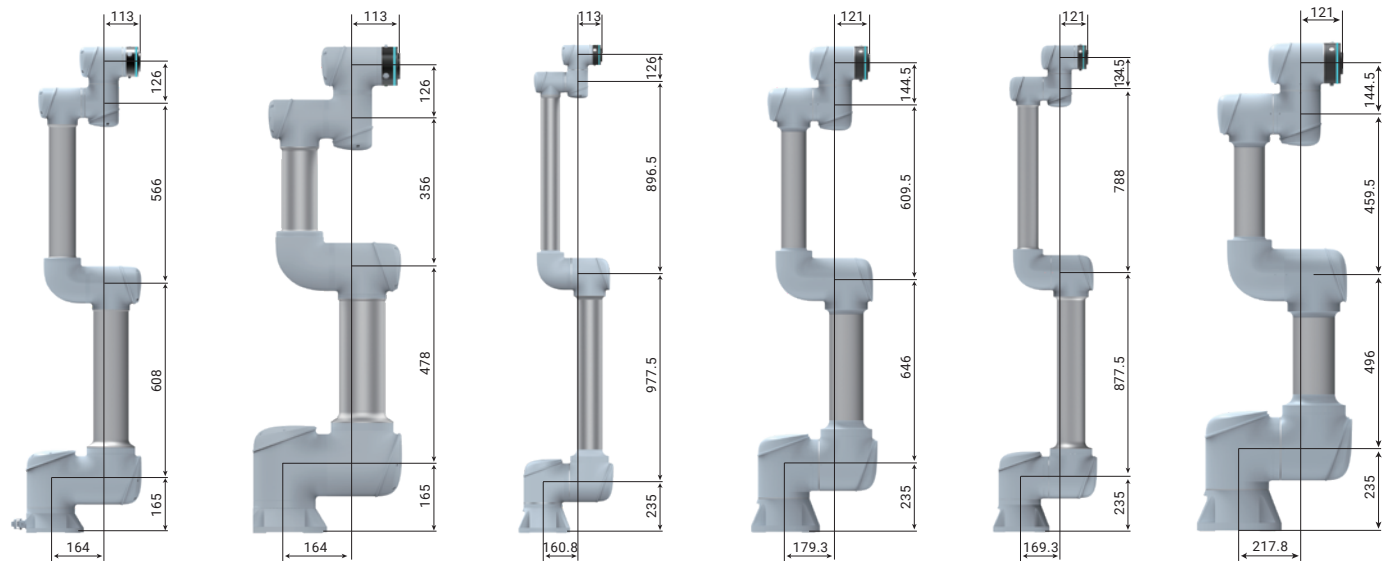
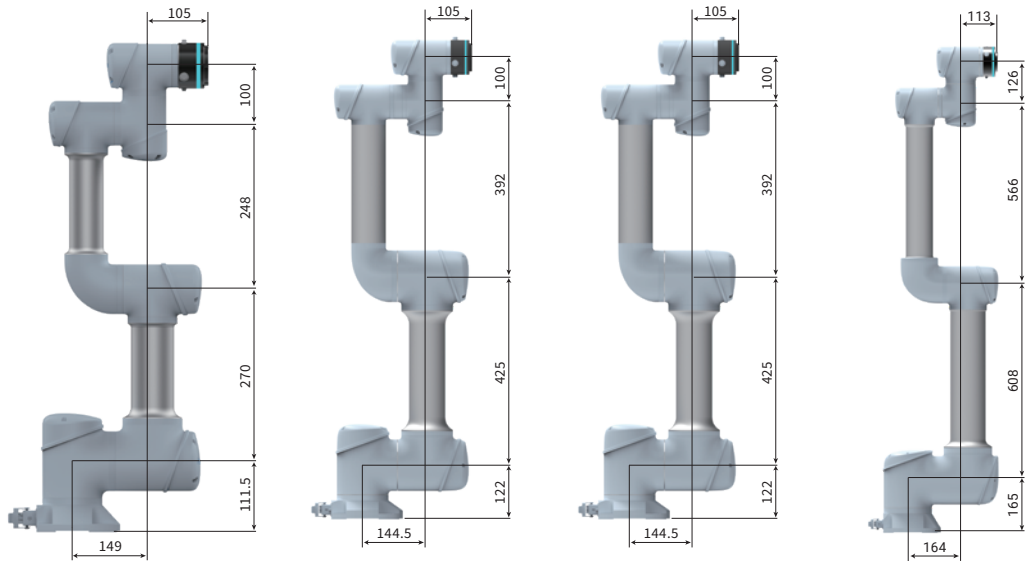
COM

CAN	1Channels,bps configurable10k、20k、50k、100k、125k、250k、500k、1000k bps
RS485	1Channels,bps configurable4800、9600、19200、38400、115200 bps
LAN	2-way (1-way gigabit, 1-way 100Mbit)Support MODBUS TCP, PROFINET, TCP/IP
EtherCAT	1Channels, EtherCAT COM
INC A+, A-, B+, B-, Z+, Z-	Working voltage: 24VDC Frequency: <200KHz Input: square wave signal

Product Introduction

This series includes 10 general-purpose 6-axis collaborative robot products with load capacities ranging from 3 to 30 kg and arm reaches from 618 to 2000 mm. They can meet a wider range of application requirements and feature safety, ease of operation, quick deployment, and low power consumption, among other collaborative robot characteristics.

GCR Series Cobot



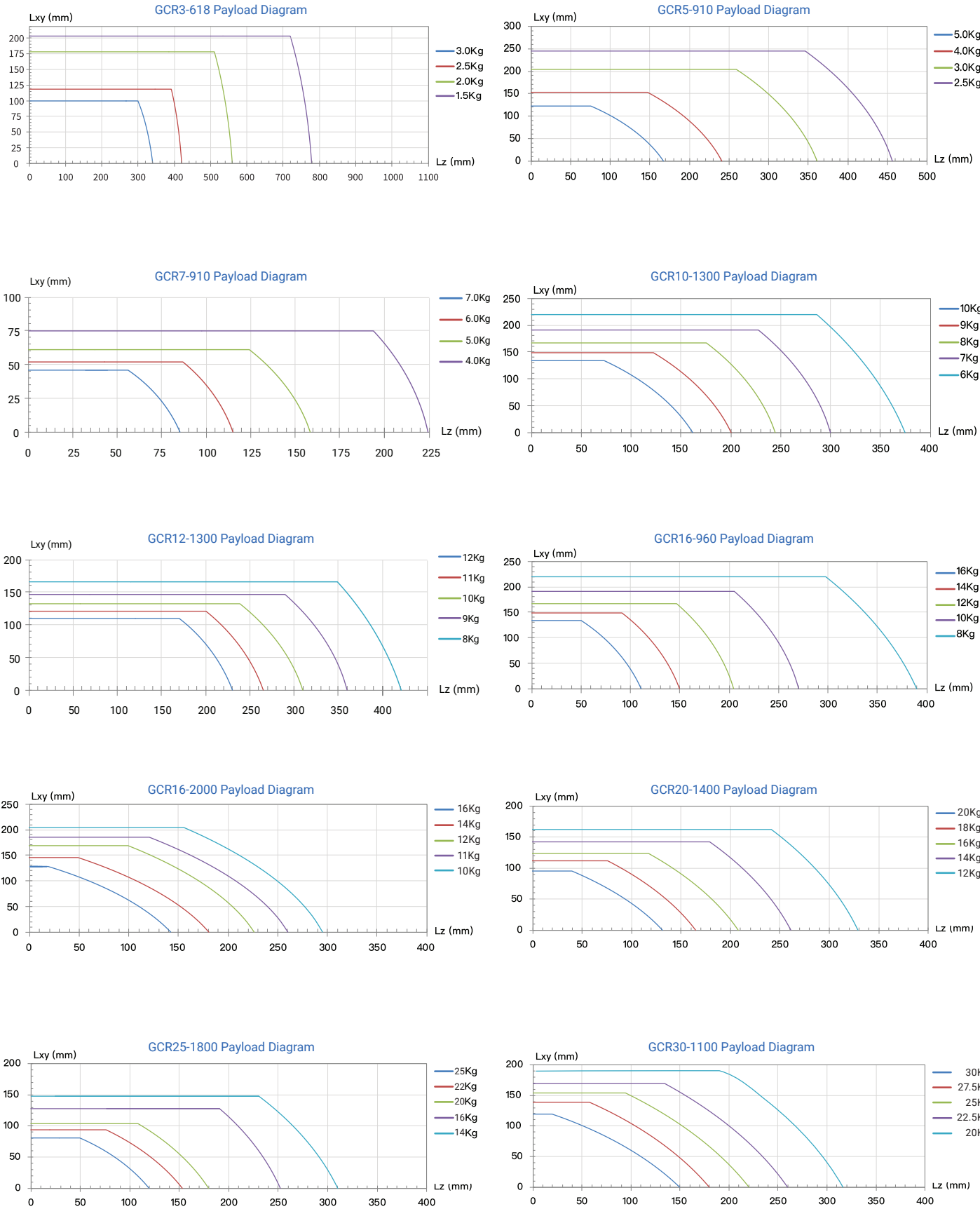
Technical Parameters	
Cobot	Max Payload
	Degree of Freedom
	Max TCP Speed
	Max Straight-line Speed
	Reach
	Reposition Accuracy
	Joint Range
	Wrist1/2/3
	Elbow
	Shoulder
	Base
	Power Consumption
	Installation
	IP Class
	Ambient Temperature Range
Control Box	Storage Temperature Range
	End I/O Port
	Robot Package Size
	Net/Gross Weight
	Input Power Supply
Teach Pendant ⁽¹⁾	IP Class
	Communication Interface
	I/O Interface
	Size
	Weight

GCR3-618	GCR5-910	GCR7-910	GCR10-1300
3kg	5kg	7kg	10kg
6	6	6	6
2.4m/s	3.6m/s	3.2m/s	3.8m/s
0.8m/s	1.5m/s	1.5m/s	1.5m/s
618mm	917mm	917mm	1300mm
±0.02mm	±0.02mm	±0.02mm	±0.03mm
Max Speed			
225°/s	225°/s	225°/s	225°/s
225°/s	225°/s	225°/s	225°/s
225°/s	225°/s	200°/s	180°/s
225°/s	225°/s	200°/s	180°/s
Typical Power Consumption200W	Typical Power Consumption200W	Typical Power Consumption200W	Typical Power Consumption400W
Installed in any Direction			
IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65
-10°C~50°C	-10°C~50°C	-10°C~50°C	-10°C~50°C
-40°C~55°C	-40°C~55°C	-40°C~55°C	-40°C~55°C
2DI, 2DO, EtherCAT, RS485			
532x431x330mm	698x588x450mm	698x588x450mm	958x508x516mm
13kg/20kg	22kg/30kg	22kg/30kg	37.8kg/46kg
100-240VAC 47-63Hz 10A			
IP44	IP44	IP44	IP44
TCP/IP, Modbus/TCP,Profinet(Slave Station), Ethernet/IP(Slave Station), CAN, RS485			
16DI, 16DO (PNP, 24V/Max 500mA), Among which 8DI/8DO can be configured			
410x306x292mm	410x306x292mm	410x306x292mm	410x306x292mm
13.6kg	13.6kg	13.6kg	13.6kg
295x225x45mm (Without a grip handle)			
IP54	IP54	IP54	IP54
10.4 Inches			
800*600@60HZ			
1.3kg	1.3kg	1.3kg	1.3kg

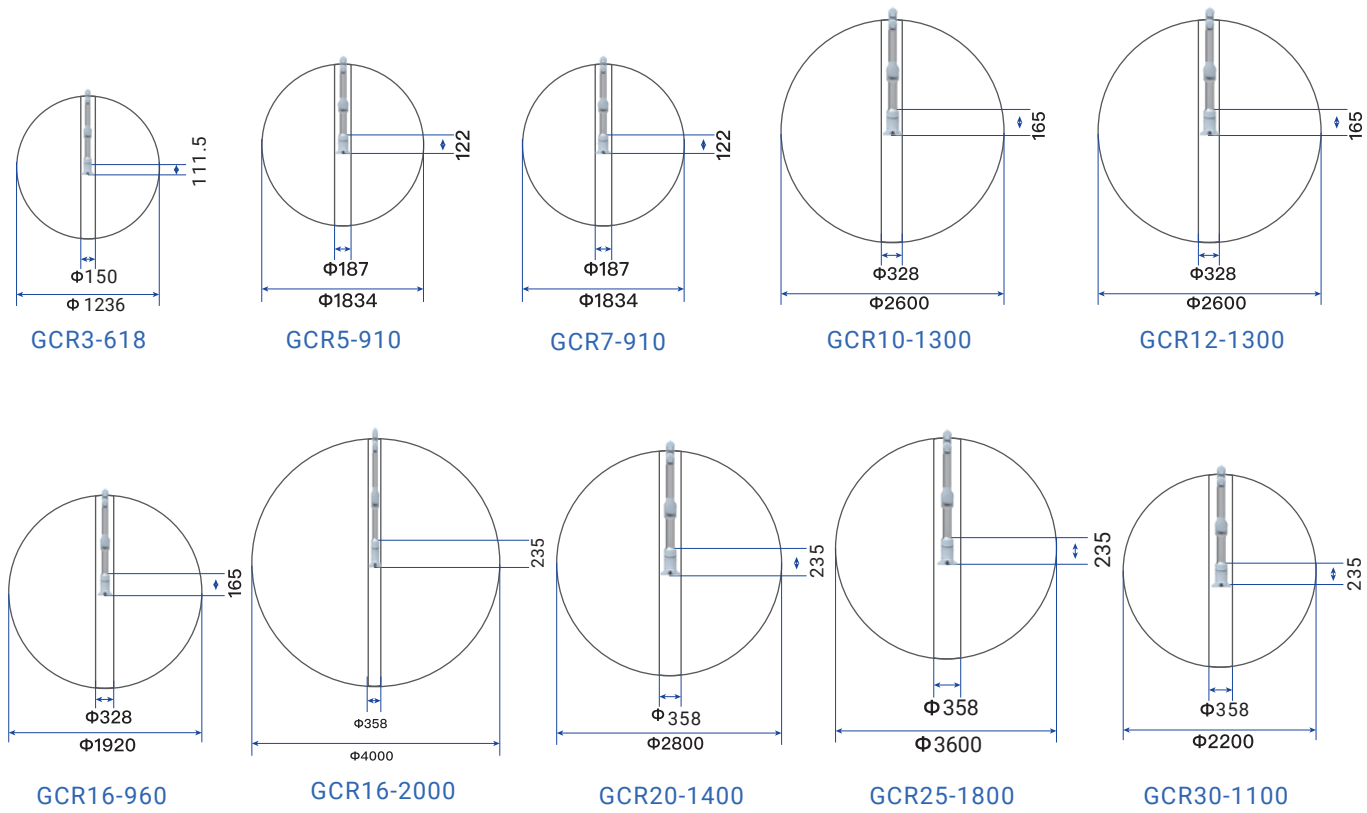
GCR12-1300	GCR16-960	GCR16-2000	GCR20-1400	GCR25-1800	GCR30-1100
12kg	16kg	16kg	20kg	25kg	30kg
6	6	6	6	6	6
3.8m/s	3.0m/s	3.5m/s	2.2m/s	2.5m/s	2.0m/s
1.5m/s	1.5m/s	1.8m/s	1.5m/s	1.5m/s	1.0m/s
1300mm	960mm	2000mm	1400mm	1800mm	1100mm
±0.03mm	±0.03mm	±0.05mm	±0.05mm	±0.05mm	±0.05mm
Max Speed					
225°/s	225°/s	225°/s	225°/s	225°/s	225°/s
225°/s	225°/s	180°/s	180°/s	150°/s	180°/s
180°/s	180°/s	120°/s	120°/s	100°/s	120°/s
180°/s	180°/s	120°/s	120°/s	120°/s	120°/s
Typical Power Consumption500W	Typical Power Consumption400W	Typical Power Consumption600W	Typical Power Consumption600W	Typical Power Consumption600W	Typical Power Consumption600W
Installed in any Direction				Land tyoe	Installed in any Direction
IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65
-10°C~50°C	-10°C~50°C	-10°C~50°C	-10°C~50°C	-10°C~50°C	-10°C~50°C
-40°C~55°C	-40°C~55°C	-40°C~55°C	-40°C~55°C	-40°C~55°C	-40°C~55°C
2DI, 2DO, EtherCAT, RS485					
958x508x516mm	958x508x516mm	1465x516x472mm	1060x500x600mm	1295x540x515mm	1060x500x600mm
37.8kg/46kg	37kg/45kg	60kg/68kg	66kg/75kg	61.6kg/70kg	64kg/75kg
220-240VAC 47-63Hz10A/100-200VAC 47-63Hz 16A					
IP44	IP44	IP44	IP44	IP44	IP44
TCP/IP, Modbus/TCP,Profinet(Slave Station), Ethernet/IP(Slave Station), CAN, RS485					
16DI, 16DO (PNP, 24V/Max 500mA), Among which 8DI/8DO can be configured					
410x306x292mm	410x306x292mm	410x306x292mm	410x306x292mm	410x306x292mm	410x306x292mm
13.6kg	13.6kg	13.8kg	13.8kg	13.8kg	13.8kg
295x225x45mm (Without a grip handle)					
IP54	IP54	IP54	IP54	IP54	IP54
10.4 Inches					
800*600@60HZ					
1.3kg	1.3kg	1.3kg	1.3kg	1.3kg	1.3kg

(1) Teaching Pendant types are classified as PC/mobile terminal (PAD/mobile phone)/standard Teaching Pendant. The data displayed above is for the standard Teaching Pendant.

Payload Diagram



WorkSpace



EOAT Flange

