

"Robot+" Intelligent Solution Integrator

Servo Electric Grippers

CN-2025.02

company : Tangsemi Electronics (Shenzhen) Co., Ltd

Sales manager : Magic
magic@tangsemi.com

Phone/whatsapp: +86 18898605270

www.tangsemi.com

Phase II 7 Flow , Burton Science Park, 1044 Chaguang Road,
Shuguang Community, Xili Street, Nanshan District, Shenzhen



Product Features

High-precision Control

Highly Flexible

Rapid Response

Intelligent Feedback and Adaptation

User-friendly and Easy to Maintain

Based on independently developed high-precision force control and other technologies, DH-ROBOTICS electric grippers can precisely adjust the gripping force and speed according to control signals, achieving high-precision positioning and gripping, ensuring the electric gripper stably and reliably grips precision objects, and completes tasks with high requirements for operational accuracy.

Diverse Installation Options:

The product offers a variety of installation methods, supporting 2 to 5 different installation directions.

Compact Structure and Small size:

Designed with an integrated approach, the product features a compact structure and small size, allowing for flexible application in limited spaces. It is compatible with lightweight collaborative robots, precision assembly, and other automation equipment, effectively helping enterprises build more compact and efficient automated production lines.

Wide Product Range:

The product lineup is extensive, including industrial parallel, industrial rotary, three-finger centering, and articulated types. This versatility not only meets the clamping needs for symmetric, planar workpieces but also caters to scenarios where workpiece surfaces have irregular curves or require clamping at specific angles.

The fastest opening and closing time can reach 0.15 seconds, perfectly adapting to production scenarios with high cycle times, small batches, and multiple varieties, significantly improving production efficiency, reducing workpiece loss, and enhancing the flexibility of the overall production system. In addition, it can also reduce the relative error generated during the coordination between the electric gripper and the robot arm and other equipment.

Based on the proprietary 'intelligent technology' of DH-ROBOTICS and core technologies such as the 3KHz speed loop bandwidth response, the product has realized intelligent data feedback functions and can also be integrated into MES systems. Through process data transmission and feedback, remote monitoring and diagnosis are achieved, operational compensation deviations are adjusted automatically and in a timely manner, ensuring the accuracy and consistency of operations, and reducing product defect rates.

With a modular design and a visual operation interface, the installation of DH-ROBOTICS electric grippers is convenient and the debugging is simple. Some series of products support plug-and-play with all mainstream collaborative robot brands on the market. The product uses a high-energy permanent magnet synchronous motor, with almost zero mechanical wear during operation. It maintains high efficiency even under long-term high-load operation, has a longer lifespan, and requires almost no regular replacement of parts, significantly reducing maintenance workload and maintenance costs in long-term use.

DH-Robotics Core Technology



Precision Control and Feedback Technology

Mechanical clearance and error compensation, multi-encoder compensation technology, nm high-precision encoder technology, and programmable high-strength clamping technology. Repeat positioning accuracy can reach the nm level.



High-precision Force Control Technology

With industry-leading direct drive force feedback and high-precision force sampling, this technology delivers exceptional performance, including 3KHz high-response force control, 2g force control accuracy, and a closed-loop force control accuracy of up to 0.1g.



Integrated Technology

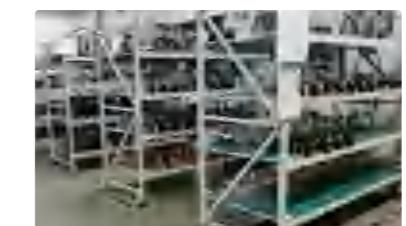
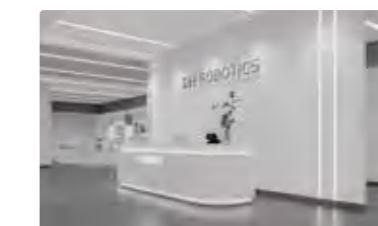
It can integrate autonomous drive, control, communication, encoders, motors, etc. The high power density transmission combined with intelligent software, makes it compact yet powerful, with optimized design for multiple scenarios, making it convenient and easy to use.



Intelligent Technology

Intelligent load identification, self-tuning, vibration suppression, high-speed response, intelligent prediction of force position accuracy loss, service life and fault prediction.

Our Support System



R&D System



New Technology



Innovation



Projects Assessment



Training



R&D



Engineering Management



Quality Supervision



After-sales Service

Manufacturing



Quality System



Stock Management

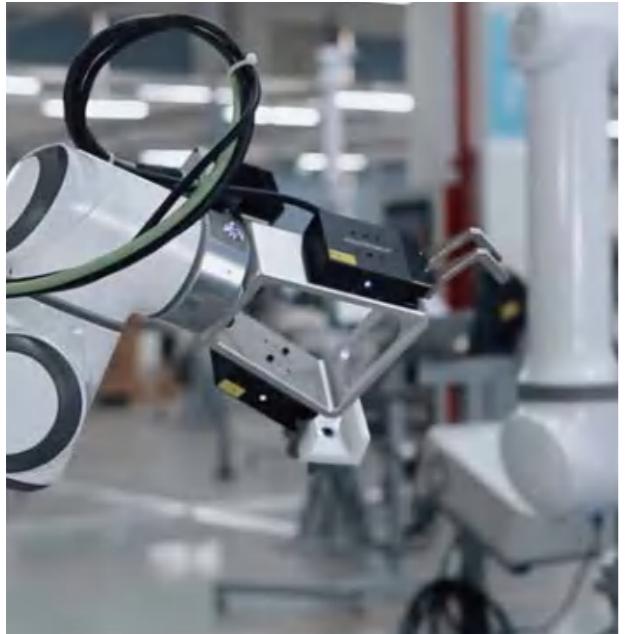


Supply Management



Manufacturing

Application Cases



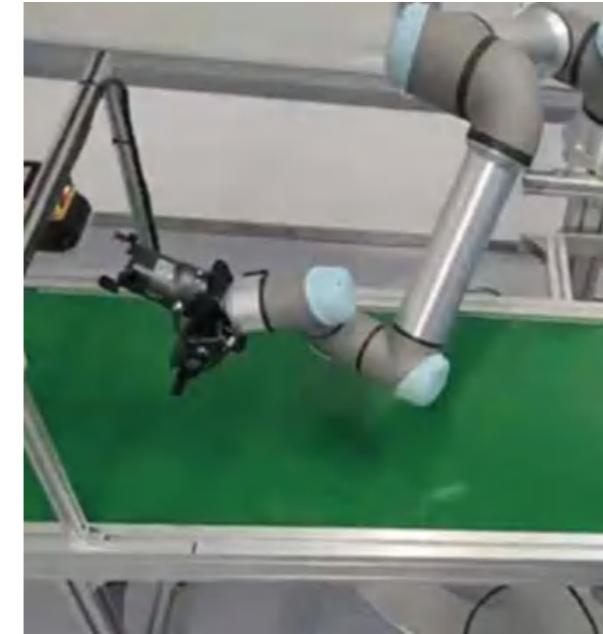
PGE-8-14 Automatic Application

One collaborative robot with two electric grippers to complete the loading and unloading.



PGE-8-14 Electronics

Handling and positioning of very small workpieces.



PGC-50-35 Automation

Two PGC-50-35 grippers were applied with UR robot to pick& place the work-pieces on production line.



AG-160-95 Automotive

AG-160-95 electric gripper was applied with a collaborative robot to complete the clamping and assembly of needle roller bearings.



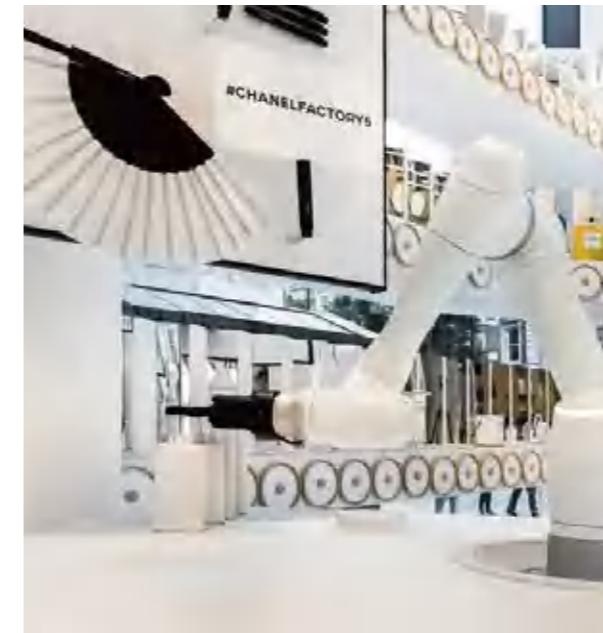
RGI-35-14 Medical Automation

Automated cup handling system: The gripper transfers a test tube to a specified position, rotates to open the cap, then automatically re-caps and returns it safely.



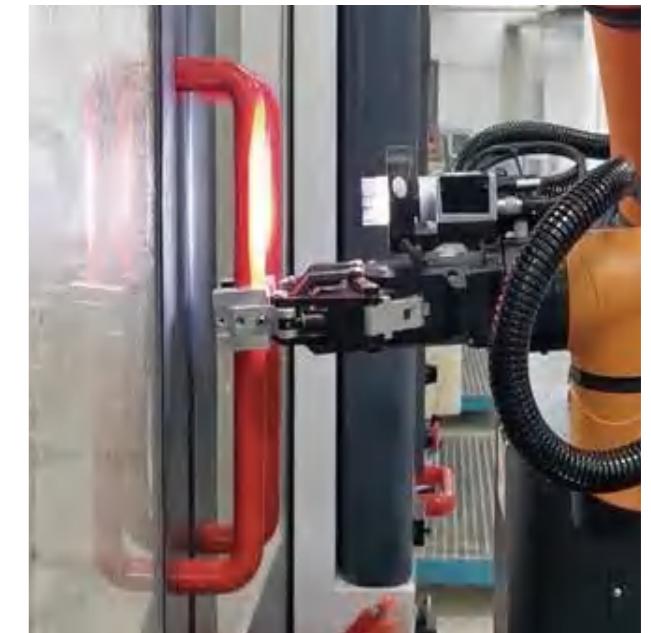
PGE-15-26 Medical Automation

Double-channel scan code to read the information, and unscrew the tube cover. Participate in automatic cup sharing process.



PGC-140-50 Robot New Retail

The PGC-140-50 was applied with DOOSAN robot to complete a show in CHANEL stores located in 20 countries to celebrate the 100th anniversary of CHANEL No. 5 perfume.



AG-160-95 Machining

The AG-160-95 electric gripper was applied with AGV and COBOT to complete machine tool loading and unloading and machine tool equipment management.

Electric Parallel Grippers

PGE / PGSE / PGI / PGC / PGHL Series



Serie	Gripping Force (Per Jaw)	Recommended Workpiece Weight	Stroke	Reference Page
PGE-2-12	0.8~2 N	0.05 kg	12 mm	P09-10
PGE-5-26	0.8~5 N	0.1 kg	26 mm	P11-12
PGE-8-14	2~8 N	0.1 kg	14 mm	P13-14
PGE-15-10	6~15 N	0.25 kg	10 mm	P15-16
PGE-15-26	6~15 N	0.25 kg	26 mm	P17-18
PGE-50-26/40	15~50 N	1 kg	26/40 mm	P19-20
PGE-100-26	30~100 N	2 kg	26 mm	P21-22
PGSE-15-7	6~15 N	0.25 kg	7 mm	P23-24
PGI-80/140-80	16~80 N/40~140 N	3 kg	80 mm	P25-26
PGC-50-35	15~50 N	1 kg	37 mm	P27-28
PGC-140-50	40~140 N	3 kg	50 mm	P29-30
PGC-300-60	80~300 N	6 kg	80 mm	P31-32
PGHL-400-80	140~400 N	8 kg	80 mm	P33-34

Product Features

DH-Robotics has launched several series of Electric Parallel Grippers to meet diverse automation needs. The PGE series is widely popular for its high precision and compact size, with the PGSE-15-7 being its economic option; the PGI series is designed for heavy-duty, long-stroke applications; the PGHL series focuses on high-load, high-precision gripping; and the PGC series, designed for collaborative robots, has won the Red Dot Award and the IF Award, featuring high protection and ease of use.

PGE / PGSE Series

Small Size Flexible Installation

With a minimum thickness of only **18mm**, the compact structure reduces the load and moment of inertia on the robot/module spindle, which helps to lighten the load of the robot/module and increase the speed. At the same time, it supports a variety of installation methods to meet the needs of gripping tasks and save design space.

High Working Speed

The fastest opening and closing time can reach **0.15 s / 0.15 s**, which can meet the high-speed and stable clamping requirements of the production line.

Precise Force Control

With special driver design and driving algorithm compensation, the gripping force is continuously adjustable, and the force repeat ability could reach **0.1 N**.

Application

Force control and flexible technologies are widely used in sectors like semiconductors, 3C electronics, and medical automation. They excel at handling miniature parts in compact production settings and also manage large, heavy workpieces in industries such as new energy lithium battery handling, automotive parts, and machining. Combined with collaborative robots, these technologies efficiently execute complex tasks in medical, 3C, and new energy industries, significantly boosting production efficiency, accuracy, and flexibility.

ELECTRIC PARALLEL GRIPPER
PGE / PGSE / PGI / PGC / PGHL Series
 Long Stroke High Load

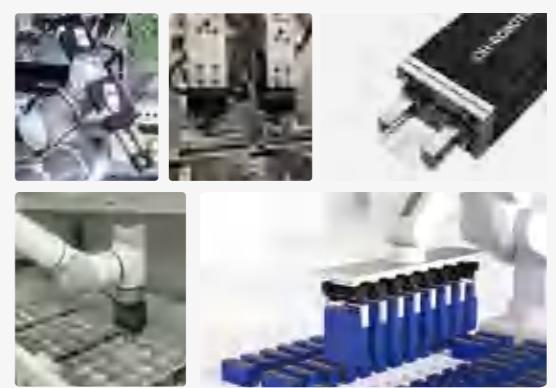
Industrial large stroke gripper, with a maximum single-side gripping force of **400N** and a maximum recommended load of **8kg**. The total stroke reaches **80mm**, and with the fingertips, it can stably grasp medium and large objects, meeting more diverse grasping needs.

High Protection Level

The PGC series boasts a maximum protection rating of **IP67**, while the PGI series reaches **IP54**, both industry-leading levels that can withstand harsh conditions such as those found in machine tool loading and unloading.

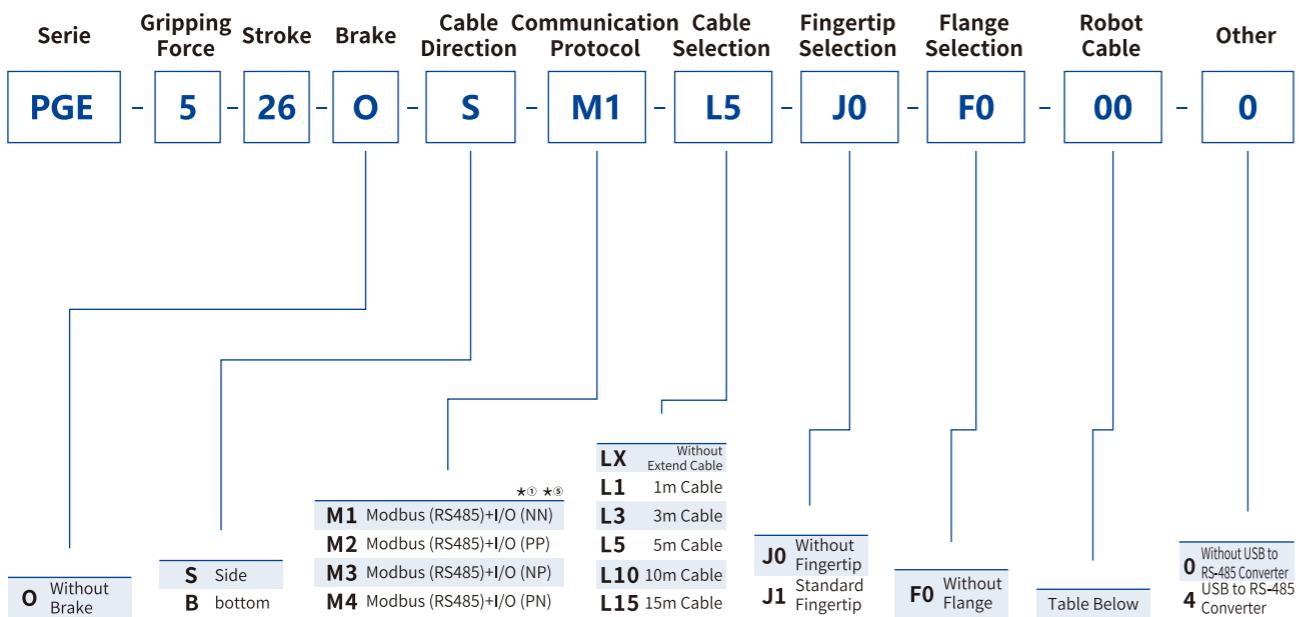
Quick Response Intelligent Planning Speed

Opening/closing time up to **1.0s/1.1s**, with speed control optimization and mechanical self-locking mechanism function, it can meet fast and stable gripping needs of the production line.





Selection Method



*①:

I/O(NN): NPN/NPN

I/O(PP): PNP/PNP

I/O(NP): NPN/PNP

I/O(PN): PNP/NPN

00

Without

Robot

Cable

01

SIASUN

DOBOT CR

UR CB

02

AUBO

Hanwha A

UR E

04

JAKA

DOBOT Nova

UR E

06

ROKAE SR

ROKAE ER

ELEPHANT

09

Doosan A

TECHMAN

MG400

11

Elite EC

Han's

DOBOT

13

Neuromeka

FAIRINO

UF x Arm

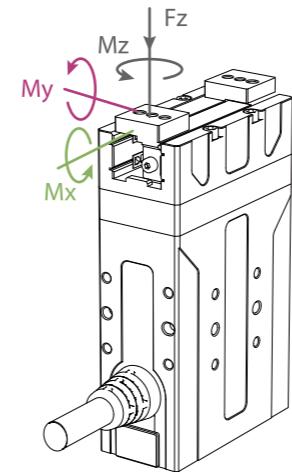
15

Hanwha HCR

ROKAE CR

*⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 50 N

Allowable Loading Moment

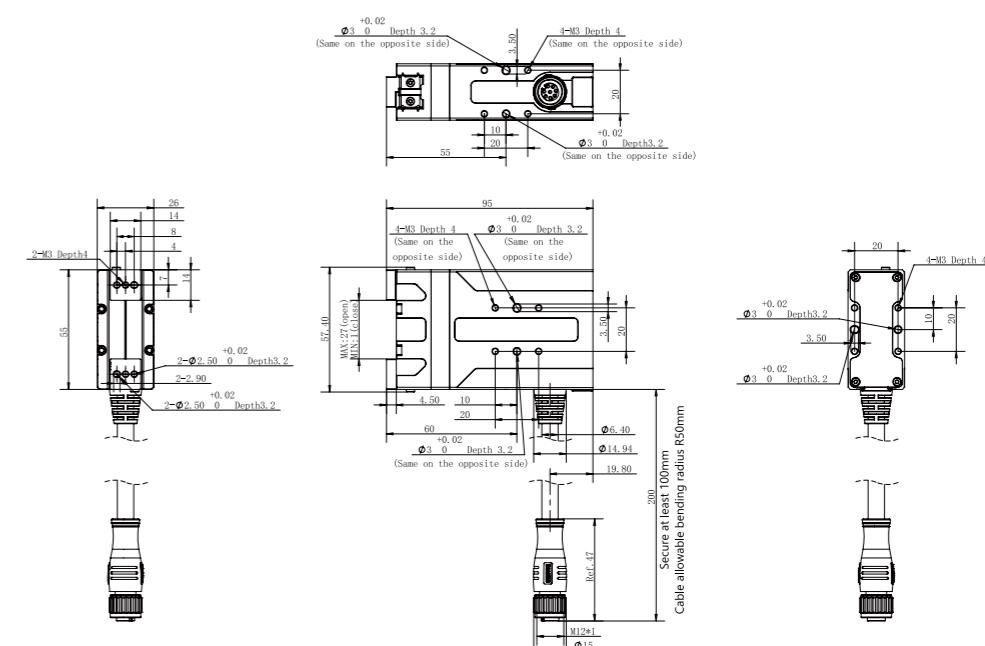
Mx 0.3 N·m

My 0.25 N·m

Mz 0.3 N·m

*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
 *③ Requires external communication convertor or customization, please contact sales or technical support.
 *④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Technical Drawings



Product Parameter

Gripping force (per jaw)	0.8~5 N
Recommended workpiece weight ^{*②}	0.1 kg
Stroke	26 mm
Full stroke opening/closing time	0.3 s/0.3 s
Repeat accuracy (position)	± 0.02 mm
Weight	0.4 kg
Size	95 mm x 55 mm x 26 mm
Noise emission	< 50 dB
Driving method	Precise planetary gears + Rack and pinion

Working Environment

Communication interface Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs)
Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT^{*③}

Rated voltage	24 V DC ± 10%
Current	0.4 A(Rated)/ 0.7 A(Peak) ^{*④}
Rated power	9.6 W
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

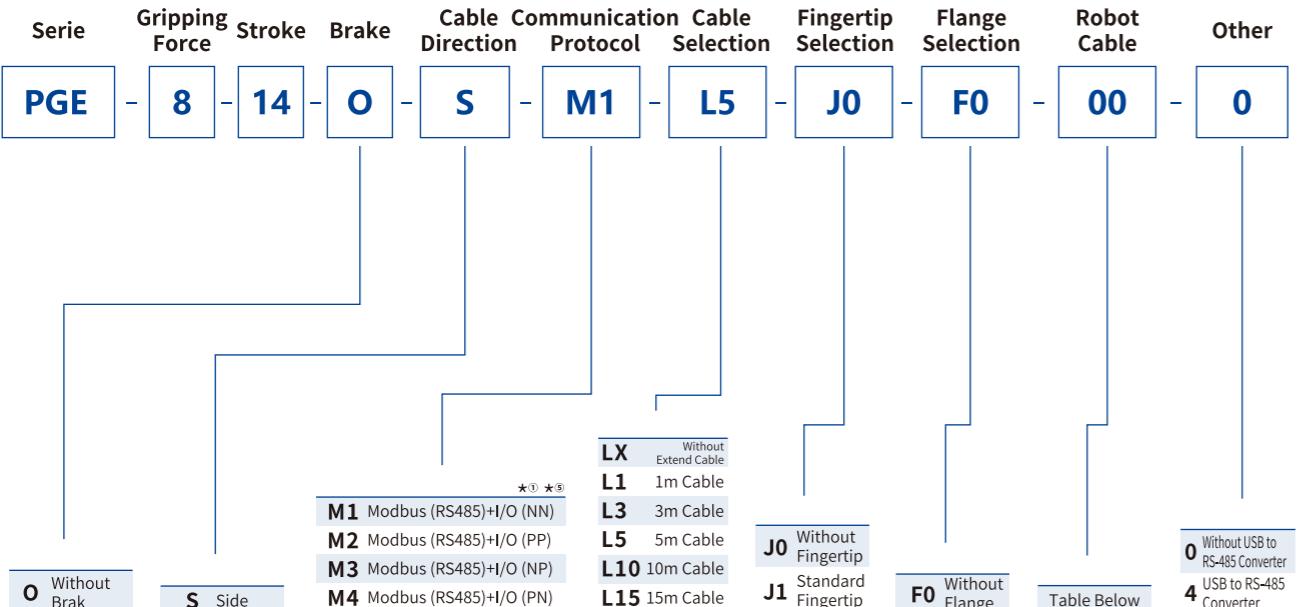


PGE-8-14

Slim-type Electric Parallel Gripper



Selection Method



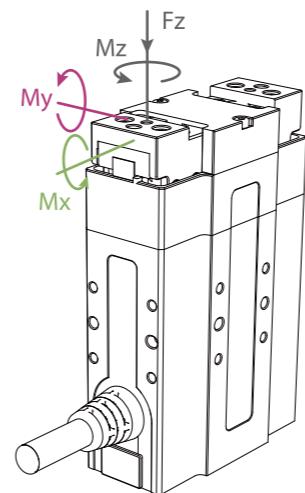
*①:

I/O(NN): NPN/NPN
 I/O(PP): PNP/PNP
 I/O(NP): NPN/PNP
 I/O(PN): PNP/NPN

00 Without Robot Cable
 01 SIASUN DOBOT CR
 02 AUBO 04 JAKA 06 ROKAE SR
 Elite CS Hanwha A DOBOT Nova
 03 ELEPHANT 05 TECHMAN 07 DOBOT
 UR CB URE MG400
 10 Doosan M 12 Han's 14 FAIRINO 16 UF x Arm 17 ROKAE CR

*⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur.
 If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 90 N

Allowable Loading Moment

Mx 0.55 N·m

My 0.45 N·m

Mz 0.55 N·m

*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.

*③ Requires external communication convertor or customization, please contact sales or technical support.

*④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Product Parameter

Gripping force (per jaw) 2~8 N

Recommended workpiece weight*② 0.1 kg

Stroke 14 mm

Full stroke opening/closing time 0.3 s/0.3 s

Repeat accuracy (position) ± 0.02 mm

Weight 0.4 kg

Size 97 mm x 62 mm x 31 mm

Noise emission < 50 dB

Driving method Precise planetary gears + Rack and pinion

Working Environment

Communication interface Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs)
 Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT *③

Rated voltage 24 V DC ± 10%

Current 0.4 A (Rated) / 0.7 A (Peak)*④

Rated power 9.6 W

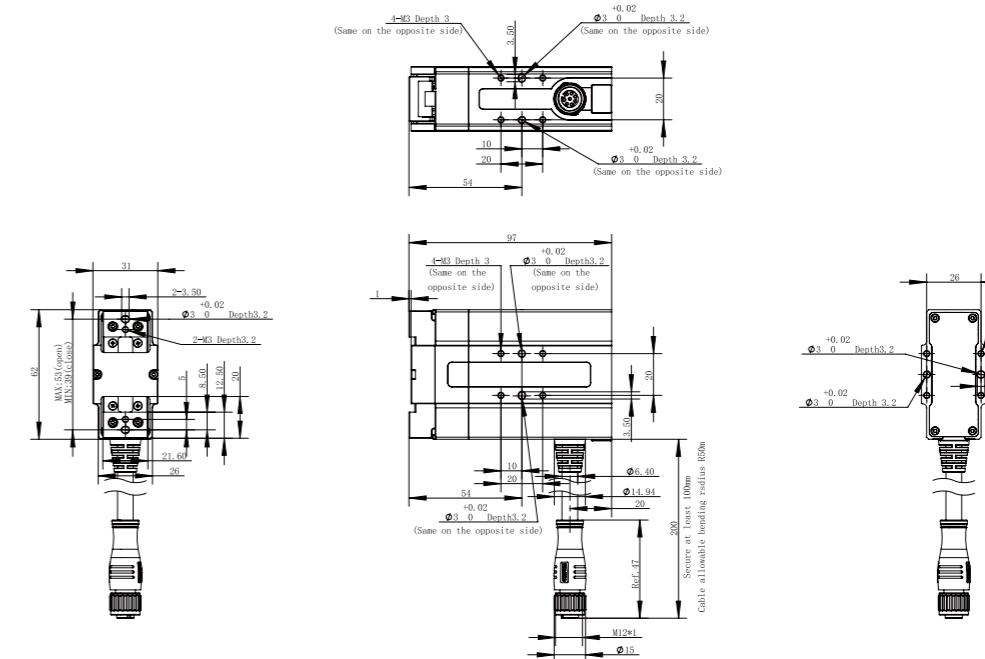
IP class IP 40

Recommended environment 0~40°C, under 85% RH

Certification CE, FCC, RoHS



Technical Drawings

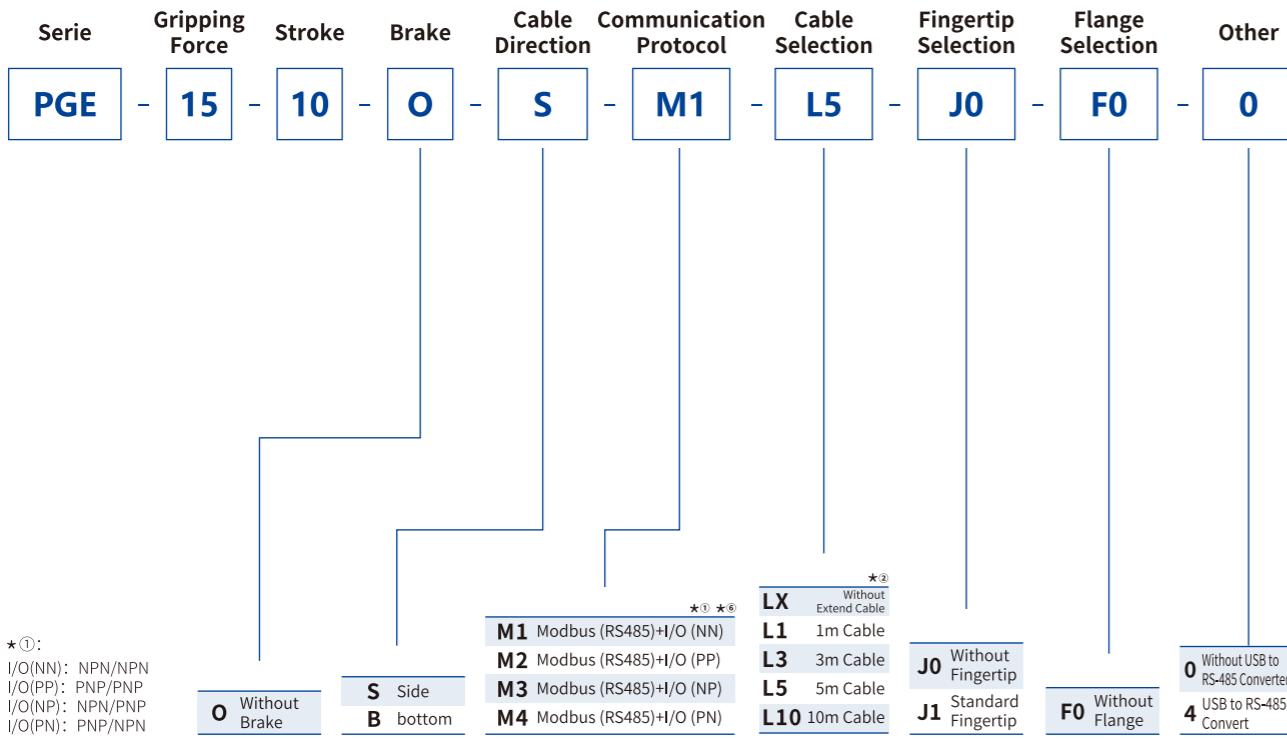


PGE-15-10

Slim-type Electric Parallel Gripper



Selection Method

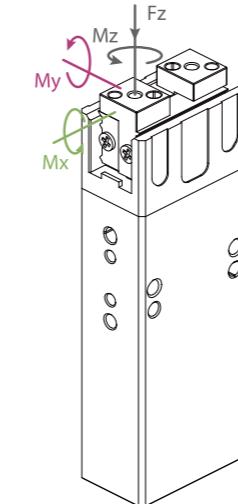


★ ①:
I/O(NN): NPN/NPN
I/O(PP): PNP/PNP
I/O(NP): NPN/PNP
I/O(PN): PNP/NPN

*② Cables longer than 10 meters pose a risk of communication interference.

*⑥ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS



Product Parameter

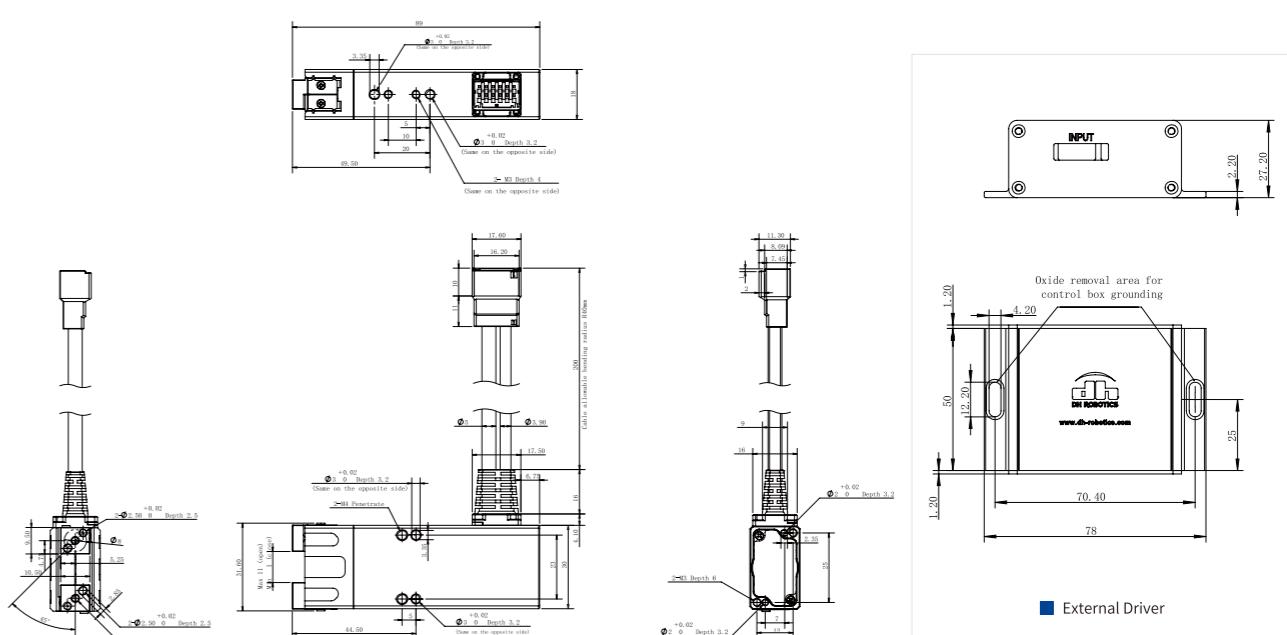
Gripping force (per jaw)	6~15 N
Recommended workpiece weight ^{*)}	0.25 kg
Stroke	10 mm
Full stroke opening/closing time	0.3 s/0.3 s
Repeat accuracy (position)	± 0.02 mm
Weight	0.155 kg
Size	Gripper Size: 89 mm x 30 mm x 18 mm Controller Size: 78 mm x 52.4 mm x 27.2 mm
Noise emission	< 50 dB
Driving method	Precise planetary gears + Rack and pinion

Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs) Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT [®]
Rated voltage	24 V DC ± 10%
Current	0.1 A (Rated) / 0.22 A (Peak) ^{**}
Rated Power	2.4 W
IP class	IP 40
Recommended environment	0~40°C, under 85% RH

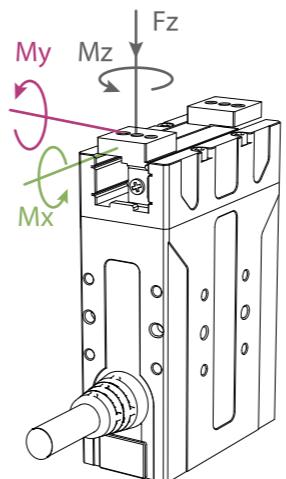


Technical Drawings





TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 70 N

Allowable Loading Moment

Mx 0.9 N·m

My 0.75 N·m

Mz 0.9 N·m

^② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.

^③ Requires external communication convertor or customization, please contact sales or technical support.

^④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Product Parameter

Gripping force (per jaw)	6~15 N
Recommended workpiece weight ^②	0.25 kg
Stroke	26 mm
Full stroke opening/closing time	0.5 s/0.5 s
Repeat accuracy (position)	± 0.02 mm
Weight	0.33 kg
Size	86.5 mm x 55 mm x 26 mm (without brake) 107.5 mm x 55 mm x 26 mm (with brake)
Noise emission	< 50 dB
Driving method	Precise planetary gears + Rack and pinion

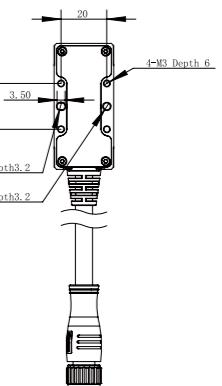
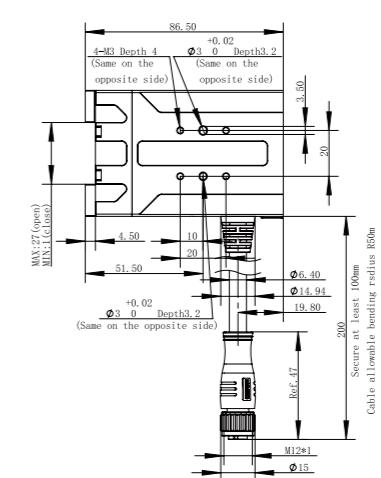
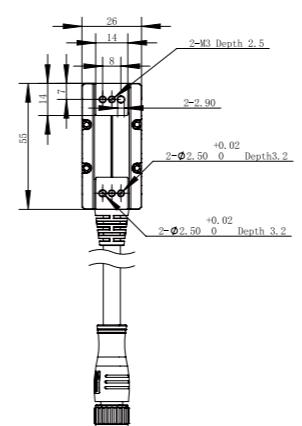
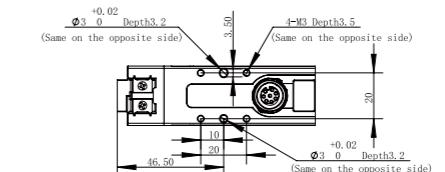
Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs) Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT ^③
Rated voltage	24 V DC ± 10%
Current	0.25 A (Rated)/ 0.5 A (Peak) ^④
Rated power	6 W
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

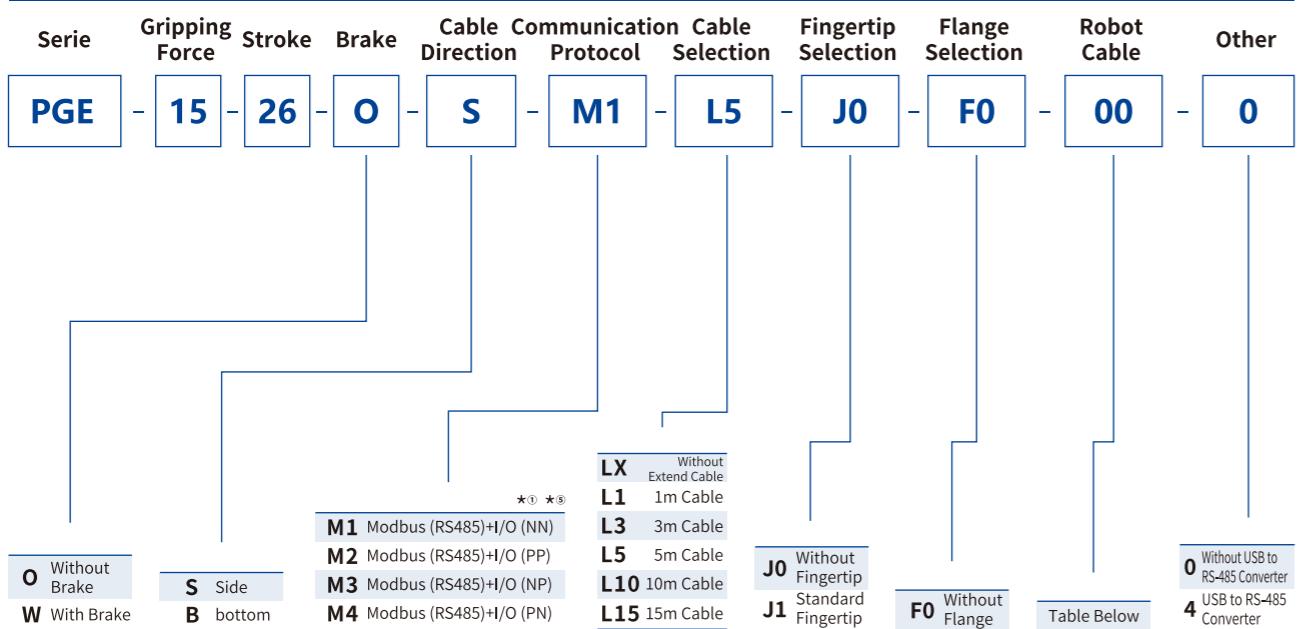


Technical Drawings

This drawing is for the gripper without the brake. If you need the drawing for the gripper with the brake, please download it from our official website or contact our sales.



Selection Method



00 Without Robot Cable	01 SIASUN DOBOT CR	02 AUBO	04 JAKA	06 ROKAE SR ROKAE ER	09 Doosan A	11 Elite EC	13 Neuromeka	15 Hanwha HCR
00 Without Robot Cable	01 SIASUN DOBOT CR	02 AUBO	04 JAKA	06 ROKAE SR ROKAE ER	09 Doosan A	11 Elite EC	13 Neuromeka	15 Hanwha HCR
00 Without Robot Cable	01 SIASUN DOBOT CR	02 AUBO	04 JAKA	06 ROKAE SR ROKAE ER	09 Doosan A	11 Elite EC	13 Neuromeka	15 Hanwha HCR

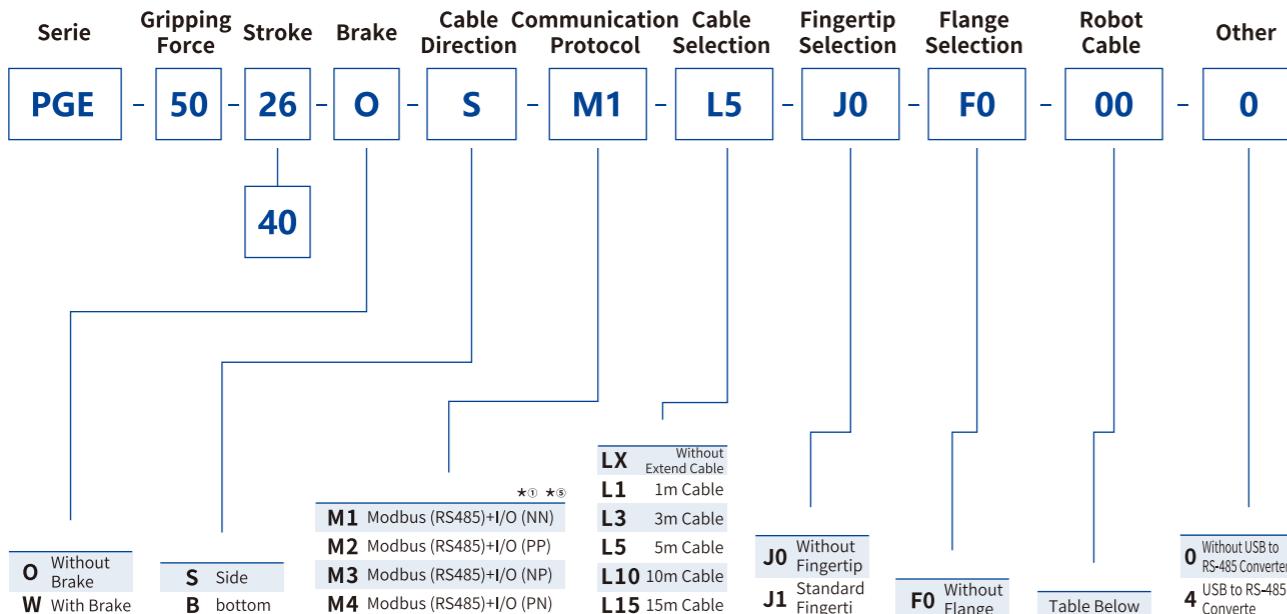
^⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

PGE-50

Slim-type Electric Parallel Gripper



Selection Method



*①:

I/O(NN): NPN/NPN

I/O(PNP): PNP/PNP

I/O(NP): NPN/PNP

I/O(PN): PNP/NPN

00

Without Robot Cable

01

SIASUN

DOBOT CR

02

AUBO

04

JAKA

06

ROKAE SR

ROKAE ER

09

Doosan A

11

Elite EC

13

Neuromeka

15

Hanwha HCR

03

ELEPHANT

05

TECHMAN

07

DOBOT

MG400

10

Doosan M

12

Han's

14

FAIRINO

16

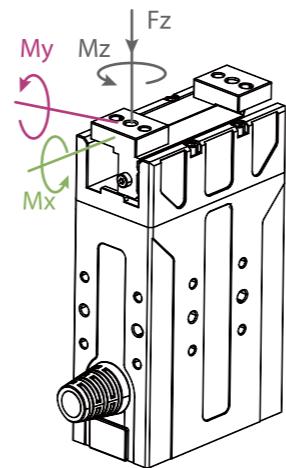
UF x Arm

17

ROKAE CR

*⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 150 N

Allowable Loading Moment PGE-50-26 PGE-50-40

Mx 2.5 N·m 4.5 N·m

My 2 N·m 5 N·m

Mz 3 N·m 7 N·m

*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.

*③ Requires external communication convertor or customization, please contact sales or technical support.

*④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Product Parameter PGE-50-26

Gripping force (per jaw) 15~50 N

15~50 N

Recommended workpiece weight *③ 1 kg

1 kg

Stroke 26mm

40mm

Full stroke opening/closing time 0.45 s/0.45 s

0.6 s/0.6 s

Repeat accuracy (position) ± 0.02 mm

± 0.02 mm

Weight 0.4 kg

0.51 kg

Size 97 x 55 x 29 mm (without brake) 118 x 55 x 29 mm (with brake)

118 x 55 x 29 mm (without brake) 118 x 78 x 29 mm (with brake)

Noise emission < 50 dB

< 50 dB

Driving method Precise planetary gears + Rack and pinion

Working Environment

Communication interface Standard: Modbus RTU (RS485), Digital I/O (2 inputs 2 outputs)
Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT *③

Rated voltage 24 V DC ± 10%

Current 0.25 A (Rated) / 0.5 A (Peak) *④

Rated Power 6 W

IP class IP 40

Recommended environment 0~40°C, under 85% RH

Certification CE, FCC, RoHS

Build-in Controller

Gripping Force Adjustable

Position Adjustable

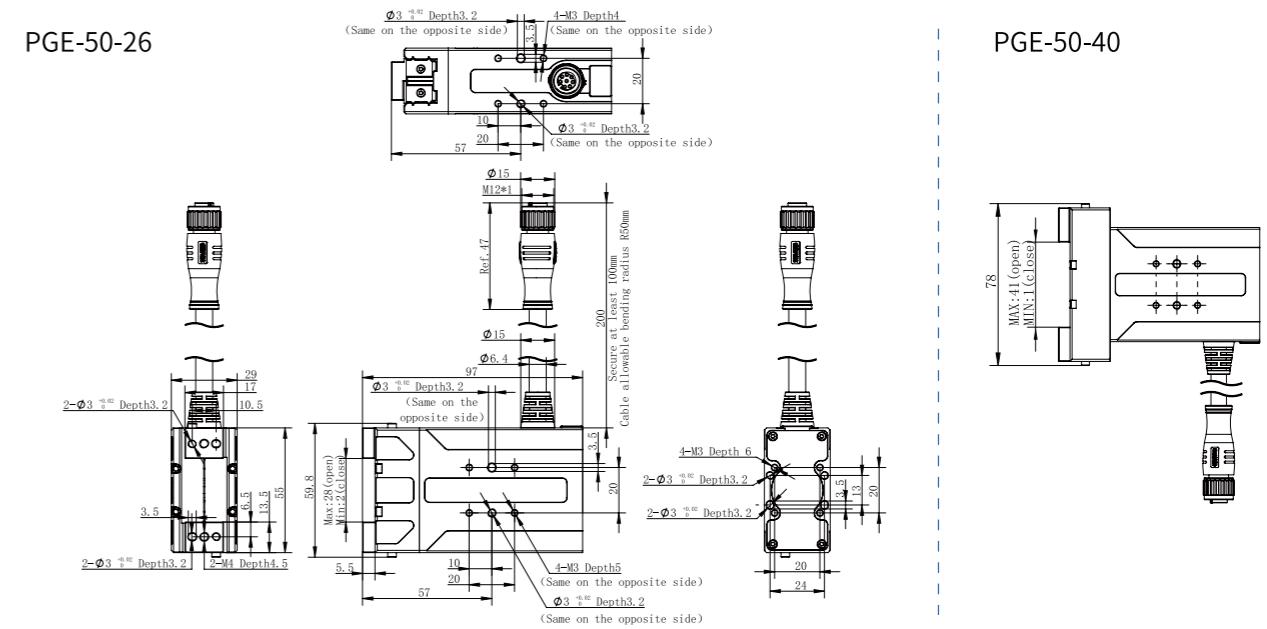
Speed Adjustable

Drop Detection

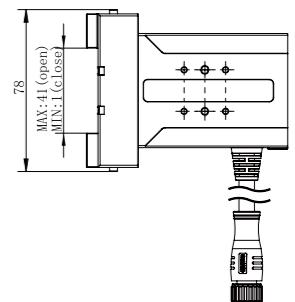
Self-locking Mechanism

Technical Drawings

PGE-50-26



PGE-50-40



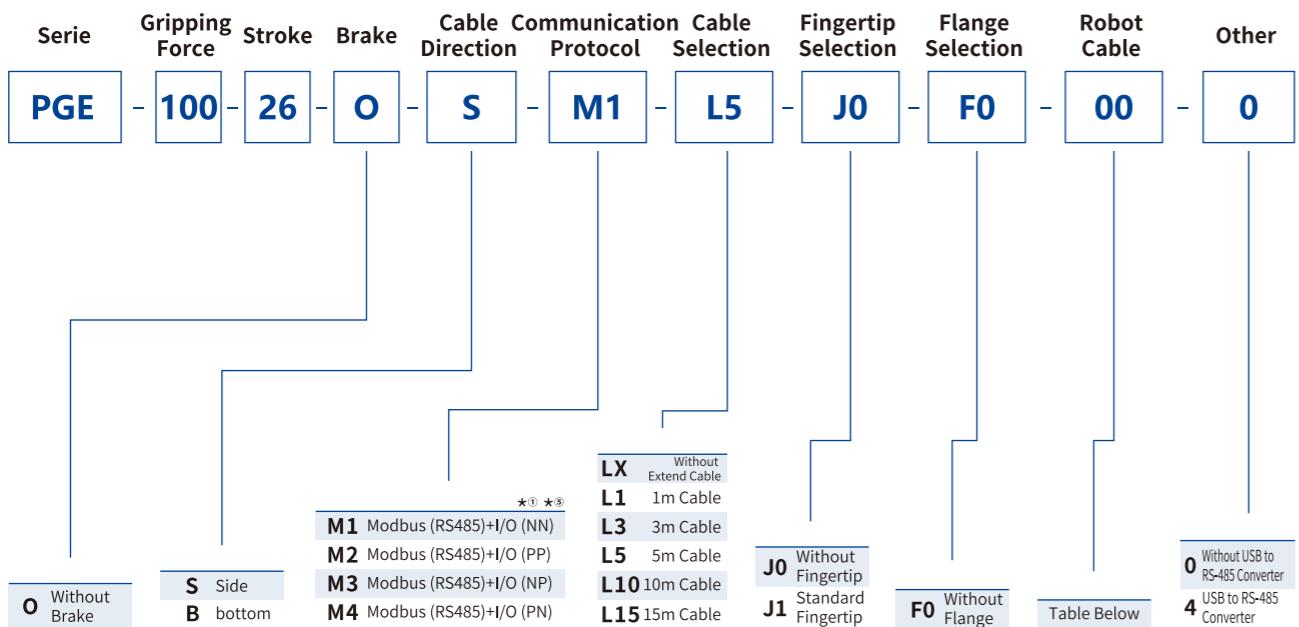
This drawing is for the gripper without the brake. If you need the drawing for the gripper with the brake, please download it from our official website or contact our sales.

PGE-100-26

Slim-type Electric Parallel Gripper



Selection Method



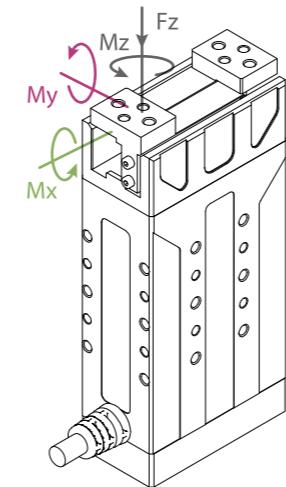
*①:
 I/O(NN): NPN/NPN
 I/O(PP): PNP/PNP
 I/O(NP): NPN/PNP
 I/O(PN): PNP/NPN

*⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur.
 If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS

Product Parameter

Gripping force (per jaw)	30~100 N
Recommended workpiece weight *②	2 kg
Stroke	26 mm
Full stroke opening/closing time	0.5 s/0.5 s
Repeat accuracy (position)	± 0.02 mm
Weight	0.55 kg
Size	125 mm x 57 mm x 30 mm
Noise emission	< 50 dB
Driving method	Precise planetary gears + Rack and pinion



Static Vertical Allowable Load

Fz 150 N

Allowable Loading Moment

Mx 2.5 N·m

My 3 N·m

Mz 4 N·m

*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.

*③ Requires external communication convertor or customization, please contact sales or technical support.

*④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Working Environment

Communication interface Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs)
Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT®

Rated voltage 24 V DC ± 10%

Current 0.3 A(Rated)/ 1.2 A(Peak)*④

Rated power 7.2 W

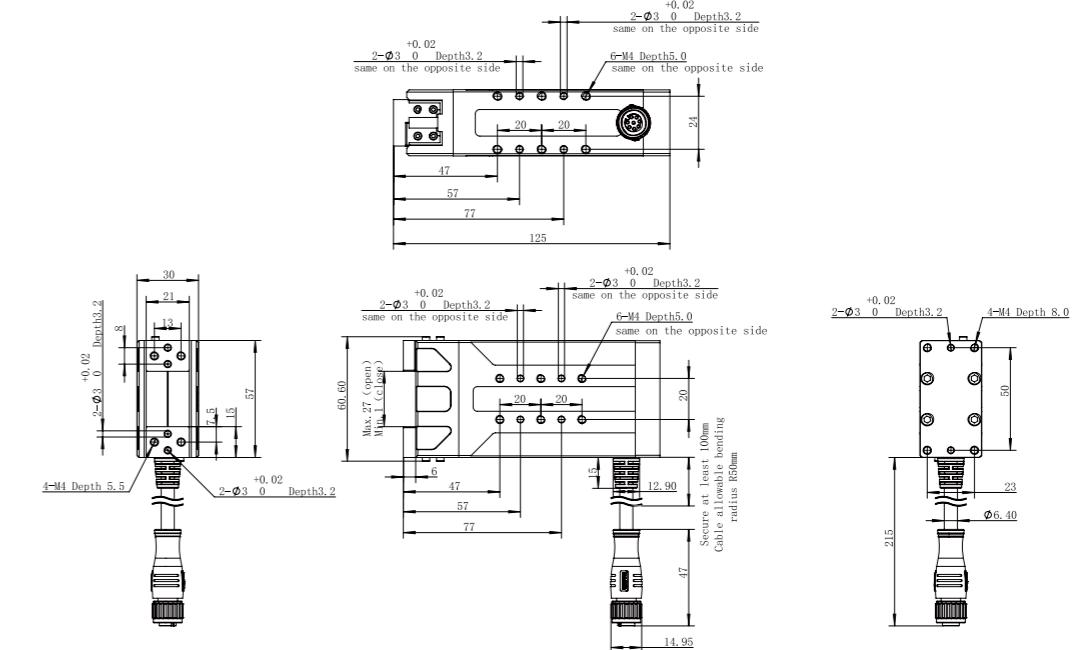
IP class IP 40

Recommended environment 0~40°C, under 85% RH

Certification CE, FCC, RoHS



Technical Drawings

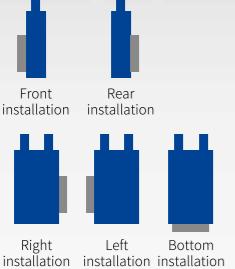


PGSE-15-7

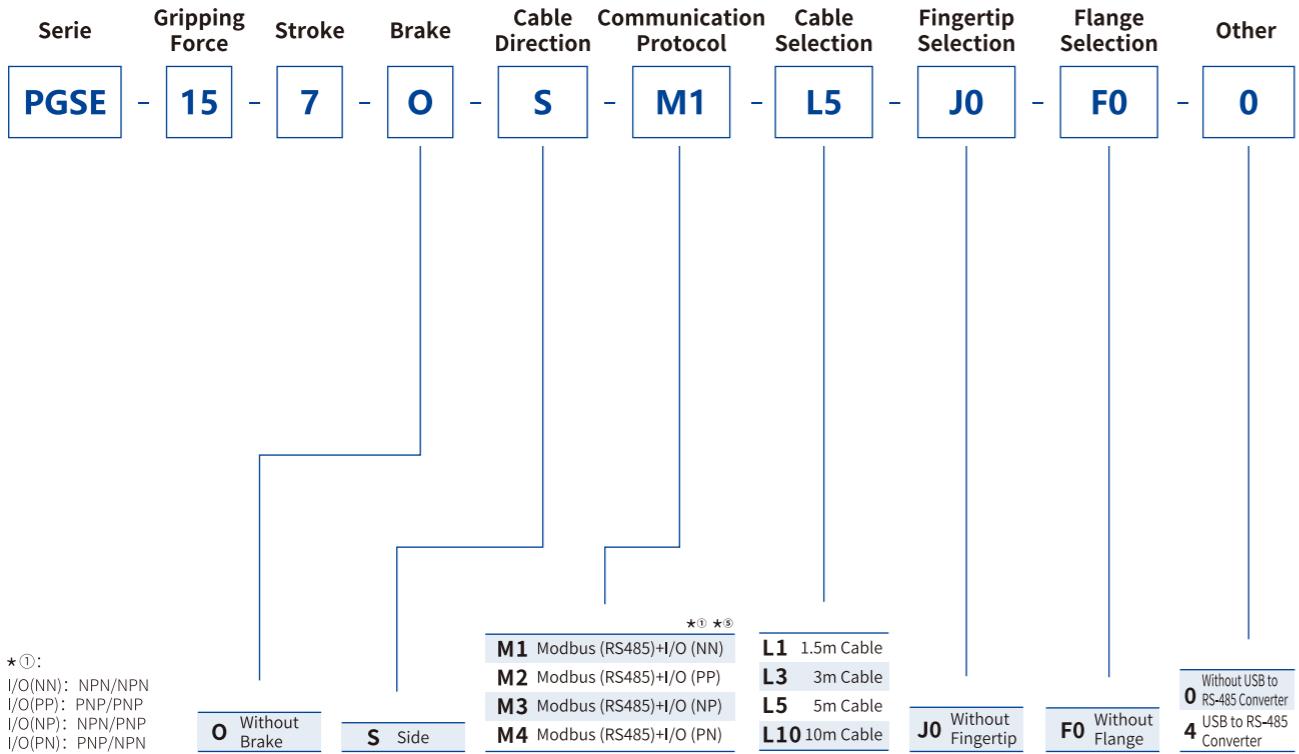
Slim-type Electric Parallel Gripper

Cost-effective solution for
replacing pneumatic
gripper with electric gripper.

Cost-effective



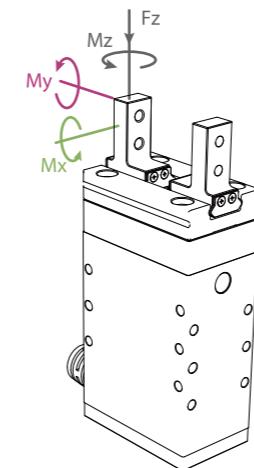
Selection Method



★ ①:
I/O(NN): NPN/NPN
I/O(PP): PNP/PNP
I/O(NP): NPN/PNP
I/O(PN): PNP/NPN

*⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS



Product Parameter

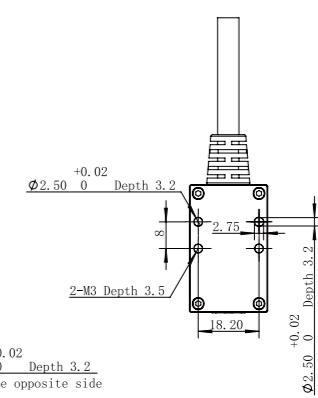
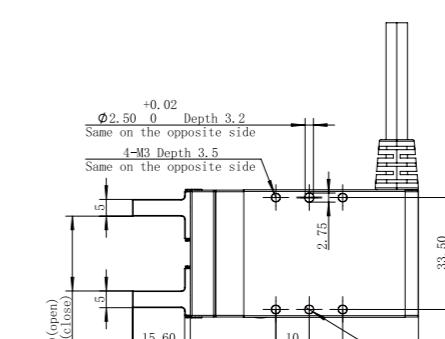
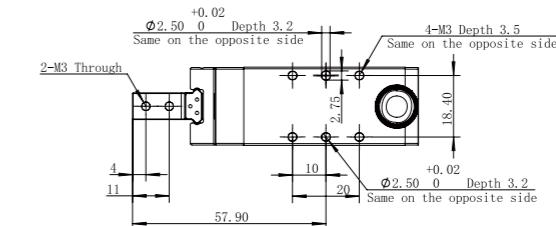
Gripping force (per jaw)	6~15 N
Recommended workpiece weight ^{**}	0.25 kg
Stroke	7 mm
Full stroke opening/closing time	0.15 s/0.15 s
Weight	0.15 kg
Size	85.6 mm x 38 mm x 23.2 mm
Driving method	Precise planetary gears + Rack and pinion
Noise emission	< 50 dB

Working Environment

Communication interface	Modbus RTU (RS485)、Digital I/O(2 inputs 2 outputs)*③
Rated voltage	24 V DC ± 10%
Current	0.15 A(Rated)/ 0.8 A(Peak)*④
Rated power	3.6 W
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS



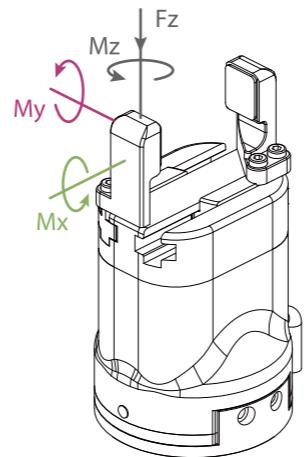
Technical Drawings



PGC-50-35

Electric Collaborative Parallel Gripper

TECHNICAL SPECIFICATIONS



Product Parameter

Gripping force (per jaw)	15~50 N
Recommended workpiece weight ^②	1 kg
Stroke	37 mm
Full stroke opening/closing time	0.7 s/0.7 s
Repeat accuracy (position)	± 0.03 mm
Weight	0.5 kg
Size	124 mm x 63 mm x 63 mm
Noise emission	< 50 dB
Driving method	Precise planetary gears + Rack and pinion

Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs) Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT ^③
Rated voltage	24 V DC ± 10%
Current	0.25 A(Rated)/ 0.5 A(Peak) ^④
Rated power	6 W
IP class	IP 54
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS



Static Vertical Allowable Load

Fz 150 N

Allowable Loading Moment

Mx 2.5 N·m

My 2 N·m

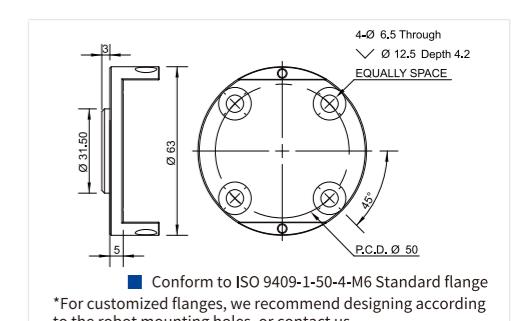
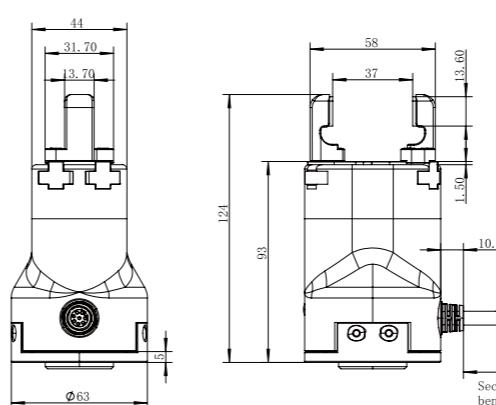
Mz 3 N·m

^② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.

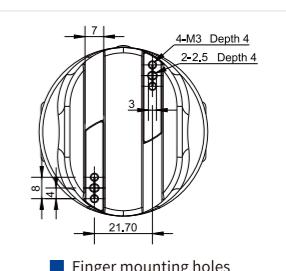
^③ Requires external communication converter or customization, please contact sales or technical support.

^④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Technical Drawings



Conform to ISO 9409-1-50-4-M6 Standard flange
For customized flanges, we recommend designing according to the robot mounting holes, or contact us.



reddot winner 2021



DH-ROBOTICS



Electric Parallel Gripper

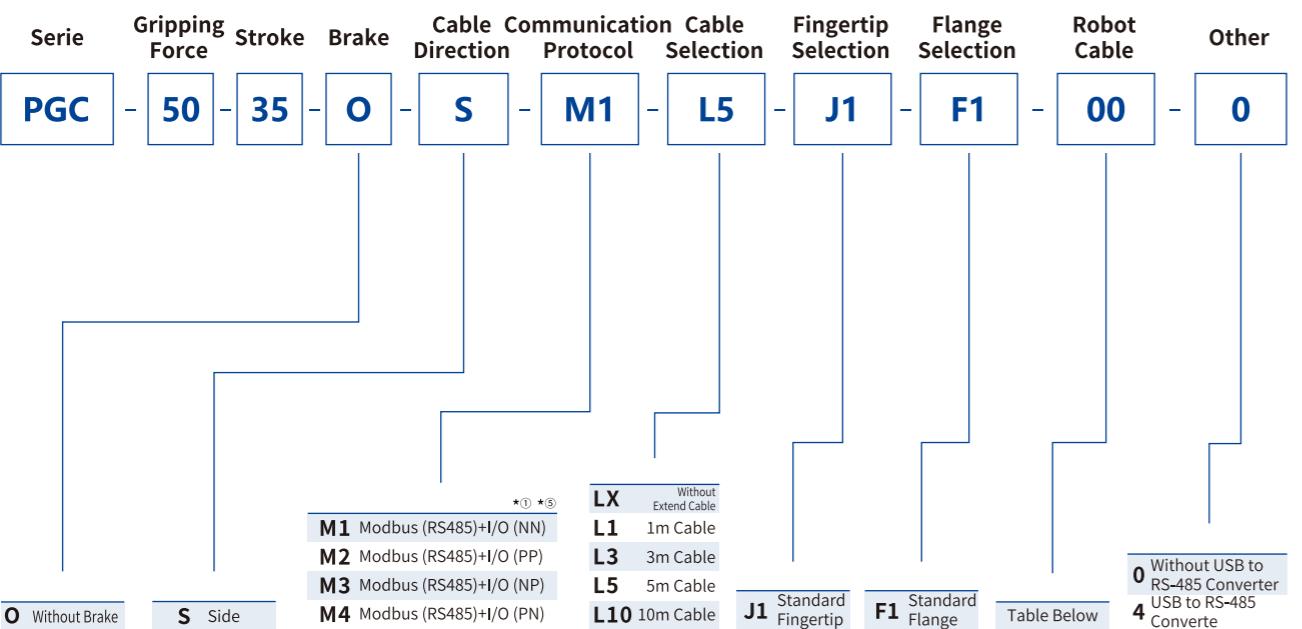
Electric Parallel Gripper

Electric Rotary Gripper

Electric Rotary Gripper



Selection Method



00	01	SIASUN	DOBOT CR	02 AUBO	04 JAKA	06 ROKAE SR ROKAE ER	09 Doosan A	11 Elite EC	13 Neuromeka	15 Hanwha HCR
Without Robot Cable	Without Robot Cable	Elite CS	Hanwha A	DOBOT Nova	UR CB	UR E	DOBOT MG400	Doosan M	Han's	FAIRINO
I/O(NN): NPN/NPN I/O(PP): PNP/PNP I/O(NP): NPN/PNP I/O(PN): PNP/NPN										

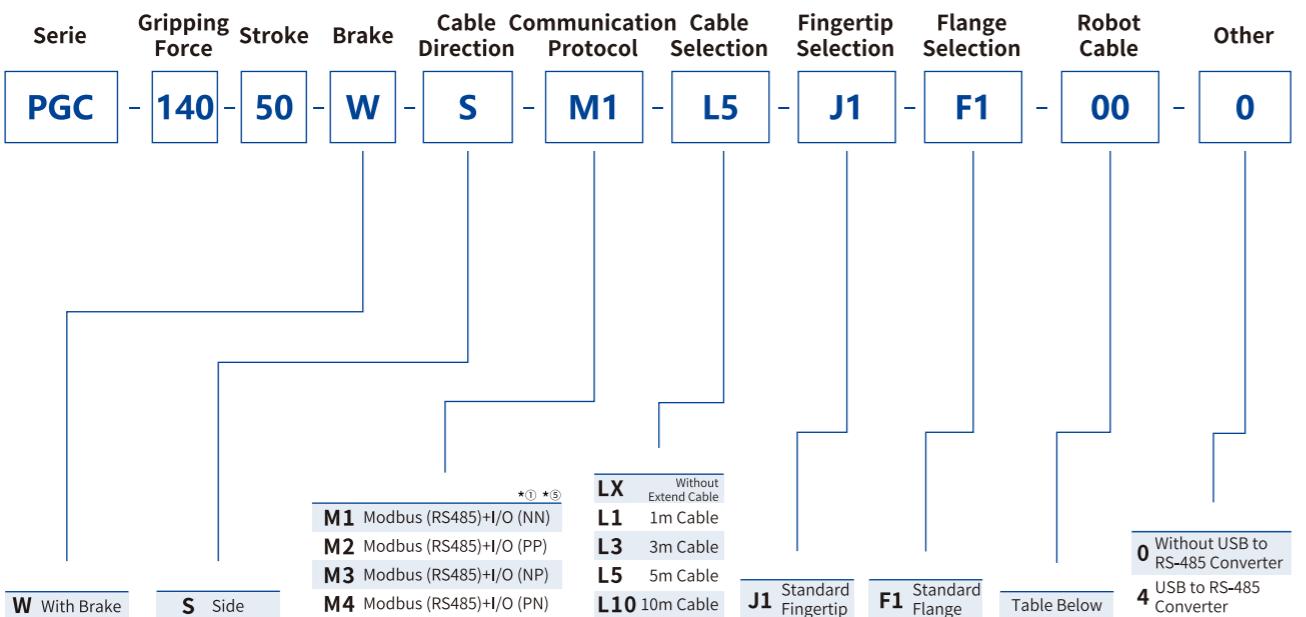
^⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

PGC-140-50

Electric Collaborative Parallel Gripper



Selection Method



*①:

I/O(NN): NPN/NPN
I/O(PP): PNP/PNP
I/O(NP): NPN/PNP
I/O(PN): PNP/NPN

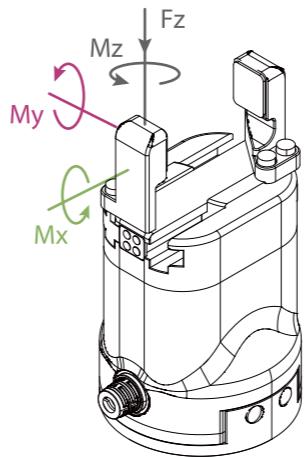
00 Without Robot Cable	01 SIASUN DOBOT CR Elite CS Hanwha A DOBOT Nova UR CB URE	02 AUBO	04 JAKA	06 ROKAE SR ROKAE ER	09 Doosan A	11 Elite EC	13 Neuromeka	15 Hanwha HCR
03 ELEPHANT	05 TECHMAN	07 DOBOT MG400	10 Doosan M	12 Han's	14 FAIRINO	16 UF x Arm	17 ROKAE CR	

*⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS

Product Parameter

Gripping force (per jaw)	40~140 N
Recommended workpiece weight ^②	3 kg
Stroke	50 mm
Full stroke opening/closing time	0.75 s/0.75s
Repeat accuracy (position)	± 0.03 mm
Weight	1 kg
Size	138.5 mm x 75 mm x 75 mm
Noise emission	< 50 dB
Driving method	Precise planetary gears + Rack and pinion



Static Vertical Allowable Load

Fz 300 N

Allowable Loading Moment

Mx	7 N·m
My	7 N·m
Mz	7 N·m

^② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.

^③ Requires external communication converter or customization, please contact sales or technical support.

^④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

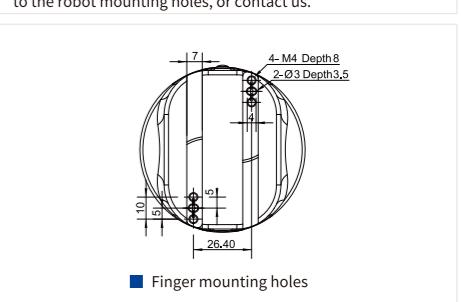
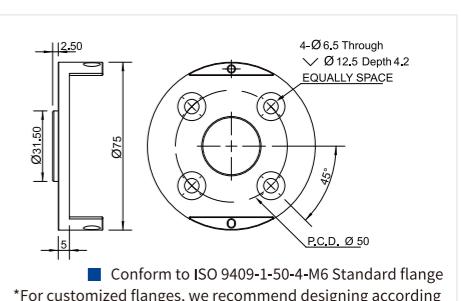
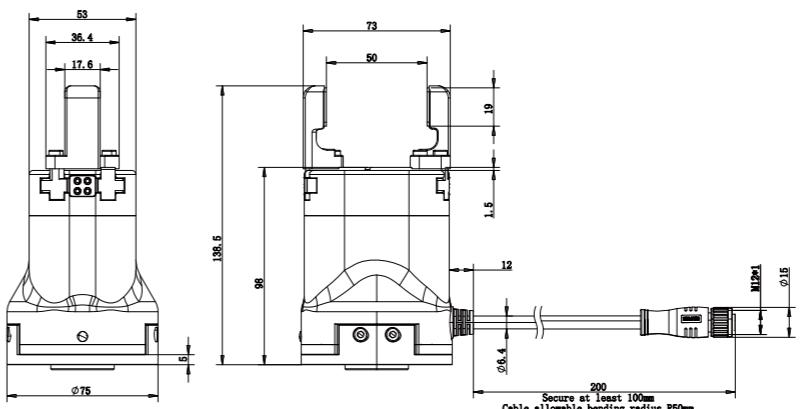
Working Environment

Communication Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs) interface
Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT ^③

Rated voltage	24 V DC ± 10%
Current	0.4 A(Rated)/ 1.2 A(Peak) ^④
Rated Power	9.6 W
IP class	IP 67
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS



Technical Drawings

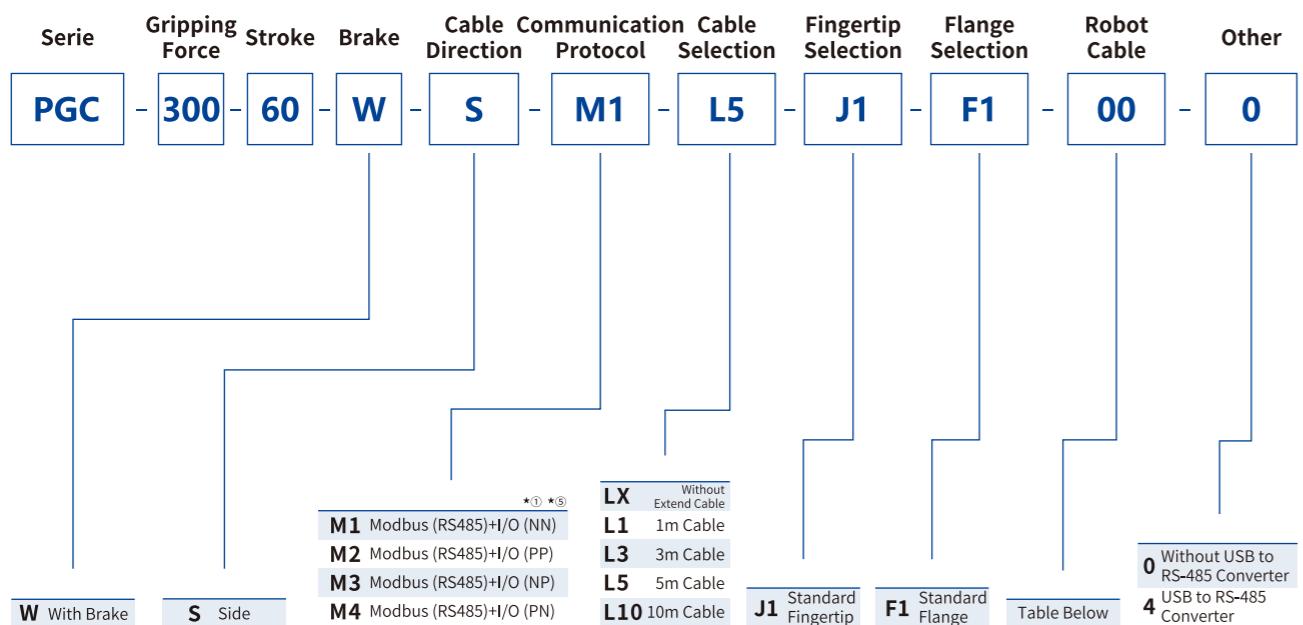


PGC-300-60

Electric Collaborative Parallel Gripper



Selection Method



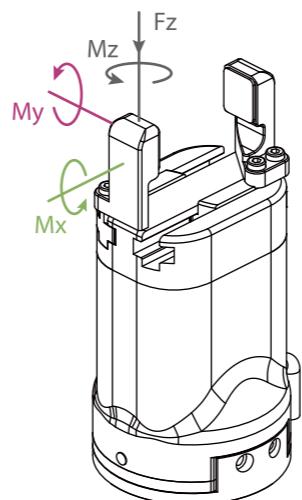
*①:

I/O(NN): NPN/NPN
I/O(PP): PNP/PNP
I/O(NP): NPN/PNP
I/O(PN): PNP/NPN

00 Without Robot Cable	01 SIASUN	DOBOT CR	02 AUBO	04 JAKA	06 ROKAE SR	09 Doosan A	11 Elite EC	13 Neuromeka	15 Hanwha HCR
Elite CS	UR CB	Hanwha A	DOBOT Nova	UR E	ROKAE ER				
UR CB			03 ELEPHANT	05 TECHMAN	07 DOBOT MG400	10 Doosan M	12 Han's	14 FAIRINO	16 UF x Arm
						14 FAIRINO	16 UF x Arm	17 ROKAE CR	

*⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 600 N

Allowable Loading Moment

Mx 15 N·m

My 15 N·m

Mz 15 N·m

*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.

*③ Requires external communication convertor or customization, please contact sales or technical support.

*④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Product Parameter

Gripping force (per jaw) 80~300 N

Recommended workpiece weight*② 6 kg

Stroke 60 mm

Full stroke opening/closing time 0.8 s/0.8 s

Repeat accuracy (position) ± 0.03 mm

Weight 1.5 kg

Size 178 mm x 90 mm x 90 mm

Noise emission < 50 dB

Driving method Precise planetary gears + Rack and pinion

Working Environment

Communication interface Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs)
Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT *③

Rated voltage 24 V DC ± 10%

Current 0.4 A(Rated)/ 2 A(Peak)*④

Rated power 9.6 W

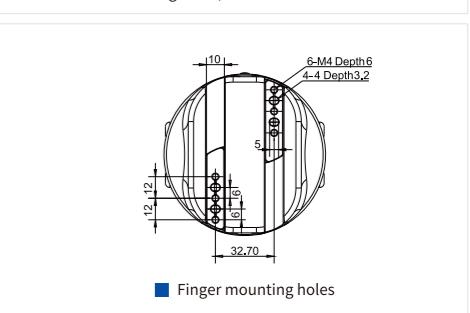
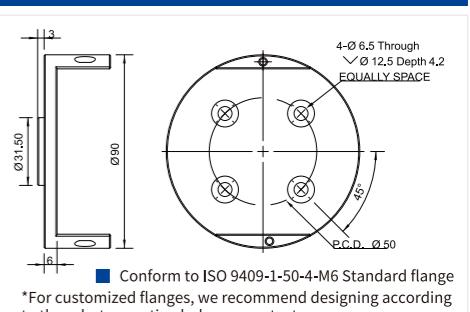
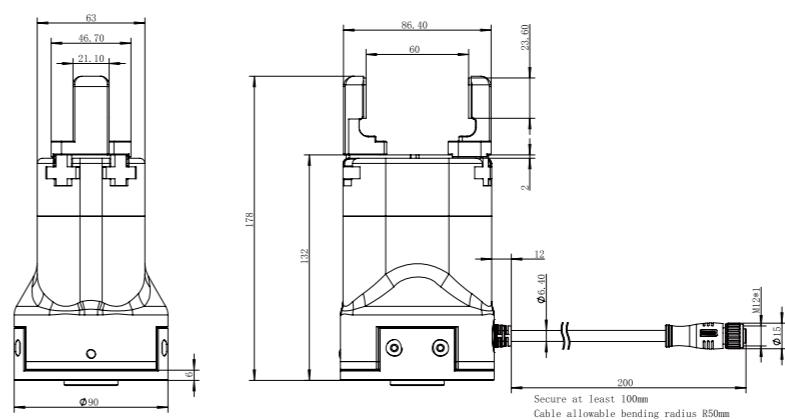
IP class IP 67

Recommended environment 0~40°C, under 85% RH

Certification CE, FCC, RoHS



Technical Drawings



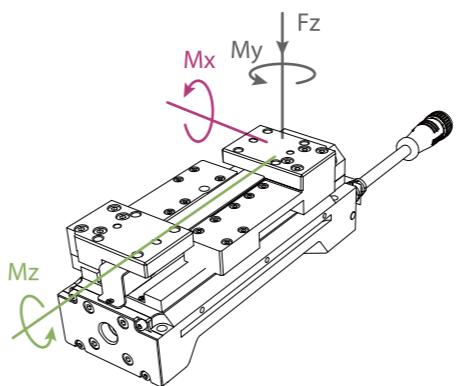
PGHL-400-80

Heavy-Load Long-Stroke Electric Parallel Gripper

TECHNICAL SPECIFICATIONS



Bottom installation



Static Vertical Allowable Load

Fz 1000 N

Allowable Loading Moment

Mx 50 N·m

My 50 N·m

Mz 15 N·m

^② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.

^③ Requires external communication convertor or customization, please contact sales or technical support.

^④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Product Parameter

Gripping force (per jaw) 140~400 N

Recommended workpiece weight^② 8 kg

Stroke 80 mm

Full stroke opening/closing time 1.0 s/1.1 s

Repeat accuracy (position) ± 0.02 mm

Weight 2.2 kg

Size 194 mm x 73 mm x 70 mm

Noise emission < 60 dB

Driving method Precise planetary gears+ T-shaped lead screw+Rack and pinion

Working Environment

Communication interface Standard: Modbus RTU (RS485), Digital I/O (2 inputs 2 outputs)
Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT^③

Rated voltage 24 V DC ± 10%

Current 1 A(Rated)/ 3 A(Peak)^④

Rated power 24 W

IP class IP 40

Recommended environment 0~40°C, under 85% RH

Certification CE, FCC, RoHS

Build-in Controller Gripping Force Adjustable Position Adjustable Speed Adjustable Drop Detection Self-locking Mechanism

Selection Method

Serie PGHL - Gripping Force 400 - Stroke 80 - Brake W - Cable Direction S - Communication Protocol M1 - Cable Selection L5 - Fingertip Selection J0 - Flange Selection F0 - Other 0

^①:
I/O(NN): NPN/NPN
I/O(PP): PNP/PNP
I/O(NP): NPN/PNP
I/O(PN): PNP/NPN

^②:
It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur.
If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

W With Brake S Side

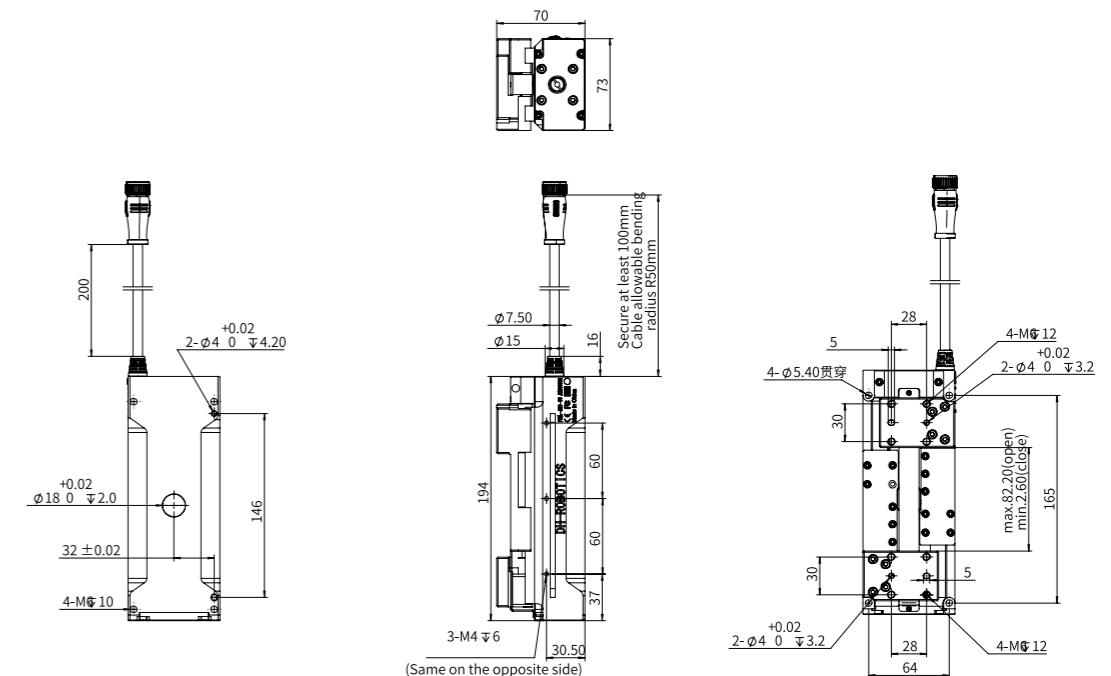
M1 Modbus (RS485)+I/O (NN)
M2 Modbus (RS485)+I/O (PP)
M3 Modbus (RS485)+I/O (NP)
M4 Modbus (RS485)+I/O (PN)

LX Without Extend Cable
L1 1m Cable
L3 3m Cable
L5 5m Cable
L10 10m Cable
L15 15m Cable

J0 Without Fingertip
F0 Without Flange

0 Without USB to RS-485 Converter
4 USB to RS-485 Converter

Technical Drawings



Electric Rotary Grippers

RGI / RGD Series



Product Features

DH-Robotics offers industrial Electric Rotary Gripper , including the RGI and RGD series. The RGI is the market's first fully independently developed infinite rotary gripper, overcoming the challenges of wiring and power supply, with a compact and precise structure. The RGD direct-drive rotary gripper adopts a zero-backlash rotary module, improving rotational accuracy and making it perfectly suitable for high-precision manufacturing scenarios.

RGI Series

❖ Gripping & Infinite Rotation

The unique structural design in the industry can realize the simultaneous gripping and infinite rotation on one electric gripper, and solve the winding problem in non-standard design and rotation.

❖ Compact Double Servo System

Dual servo systems are creatively integrated in a thin machine body, which is compact in design and can be adapted to many industrial scenes.

❖ High Gripping Force and Torque

The maximum single-sided gripping force is **100N**, and the maximum torque is **1.5N·m**. Though precise force control and position control, the RGI gripper can more stably complete the grasping and rotating tasks.

RGD Series

❖ Zero Rotary Backlash High Repeatability

The RGD series adopts direct-drive rotary motors to realize zero rotary backlash and a rotary resolution of up to 0.01° , which applies to rotary positioning scenarios in semiconductor production.

❖ High Dynamic Response High-speed Stability

The precision direct-drive technology, coupled with DH-Robotics' excellent drive control, realizes perfect control of gripping and rotation. The rotation speed is up to **1500°** per second.

❖ All-in-one Design Power-off Protection

The gripper adopts the design of integrating the dual servo system of gripping and rotation with the drive control module, which is smaller and more compact, and applies to more scenarios. Brakes are optional to meet the requirements of various applications.

Application

In the field of medical automation, the RGI-100 series electric grippers come standard with fingertip modules, which can be adapted to 10-in-1 and 20-in-1 size test tubes. They support the processing, opening and closing, and barcode scanning of samples such as reagents, blood samples, and nucleic acids, meeting the needs of large-scale nucleic acid sampling. The RGD grippers adopt direct drive technology, which greatly improves the rotation accuracy and is widely used in high-precision positioning assembly, handling, and correction adjustment in the fields of 3C electronics and semiconductors.

Serie	Gripping Force (Per Jaw)	Recommended Workpiece Weight	Stroke	Reference Page
RGI-100-14/22/30	30~100 N	1.5 kg	14/22/30 mm	P37-38
RGIC-35-12	13-35 N	0.5 kg	12 mm	P39-40
RGIC-100-35	40~100 N	1 kg	35 mm	P41-42
RGD-5-14	2~5.5 N	0.05 kg	14 mm	P43-44
RGD-35-14/30	10~35 N	0.35 kg	14/30 mm	P45-46



RGI-100

Electric Rotary Gripper



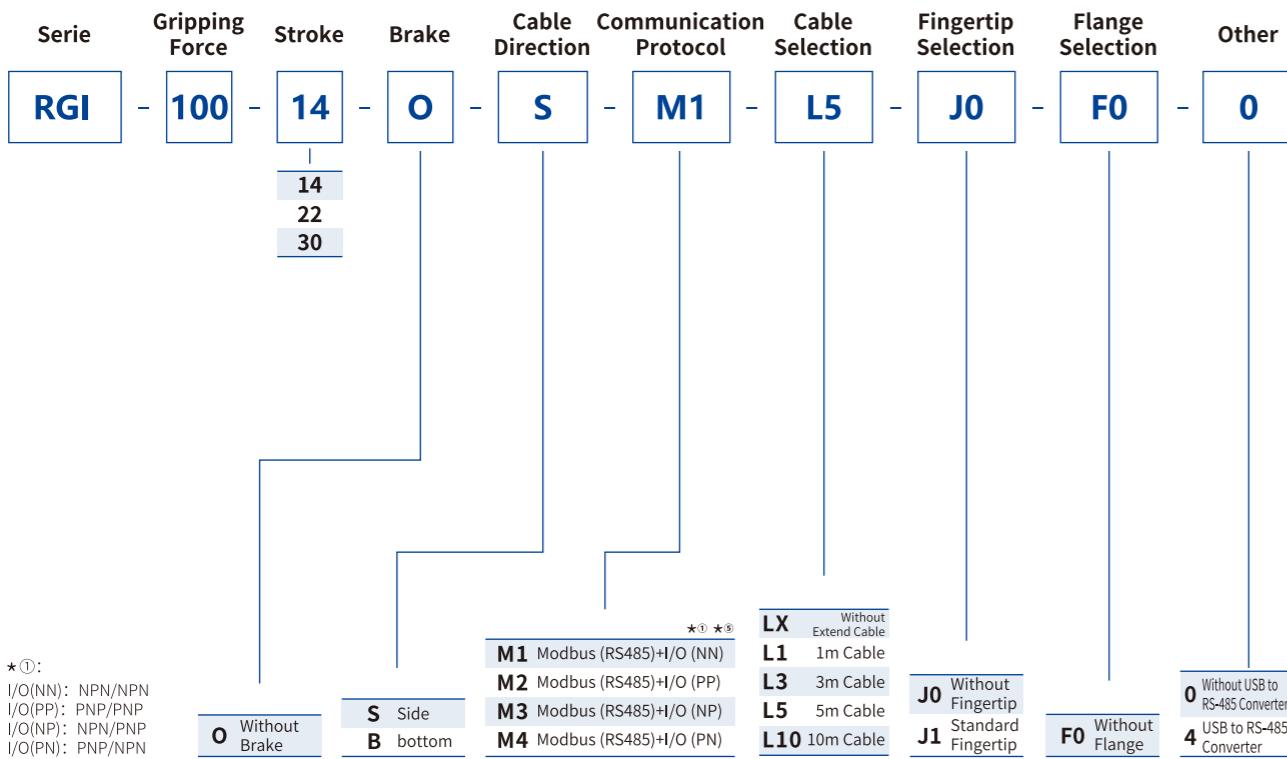
Electric Parallel Gripper

Electric Rotary Gripper

Articulated Electric Gripper

Electric Centric Gripper

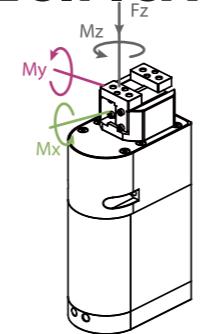
Selection Method



*①:
I/O(NN): NPN/NPN
I/O(PP): PNP/PNP
I/O(NP): NPN/PNP
I/O(PN): PNP/NPN

*⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

RGI-100-14 RGI-100-22 RGI-100-30

Fz 150 N 200 N 150 N

Allowable Loading Moment

Mx 2.5 N·m 3.5 N·m 3.5 N·m

My 3 N·m 4 N·m 4 N·m

Mz 4 N·m 5.5 N·m 5.5 N·m

Build-in Controller	✓	Gripping Force Adjustable	✓
Drop Detection	✓	Rotary Adjustable	✓
			Position Adjustable
			Speed Adjustable
			Self-locking Mechanism

*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.

*③ Requires external communication convertor or customization, please contact sales or technical support.

*④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Product Parameter	RGI-100-14	RGI-100-22	RGI-100-30
Gripping force (per jaw)	30~100 N	30~100 N	30~100 N
Recommended workpiece weight(Fingertip included) *	1.5 kg	1.5 kg	1.5 kg
Stroke	14 mm	22 mm	30 mm
Full stroke opening/closing time	0.45 s/0.25 s	0.5 s/0.3 s	0.55 s/0.35 s
Repeat accuracy (position)	± 0.02 mm	± 0.02 mm	± 0.02 mm
Repeat accuracy (swiveling)	± 0.05 °	± 0.05 °	± 0.05 °
Max. rotation speed	2160 °/s	2160 °/s	2160 °/s
Rated torque	0.5 N·m	0.5 N·m	0.5 N·m
Peak torque	1.5 N·m	1.5 N·m	1.5 N·m
Rotary range	Infinite Rotating	Infinite Rotating	Infinite Rotating
Weight	1.28 kg	1.4 kg	1.5 kg
Size	158 x 75.5 x 47 mm Rotary Diameter: 47.1 mm	158 x 75.5 x 47 mm Rotary Diameter: 67.1 mm	158 x 75.5 x 47 mm Rotary Diameter: 84.8 mm

Working Environment

Communication interface
Standard: Modbus RTU (RS485), Digital I/o(2 inputs 2 outputs)
Optional: TCP/IP, CAN2.0A, PRÖFINET, EtherCAT *③

Rated voltage
24 V DC ± 10%

Current
1 A(Rated)/4 A (Peak) *④

Rated power
24 W

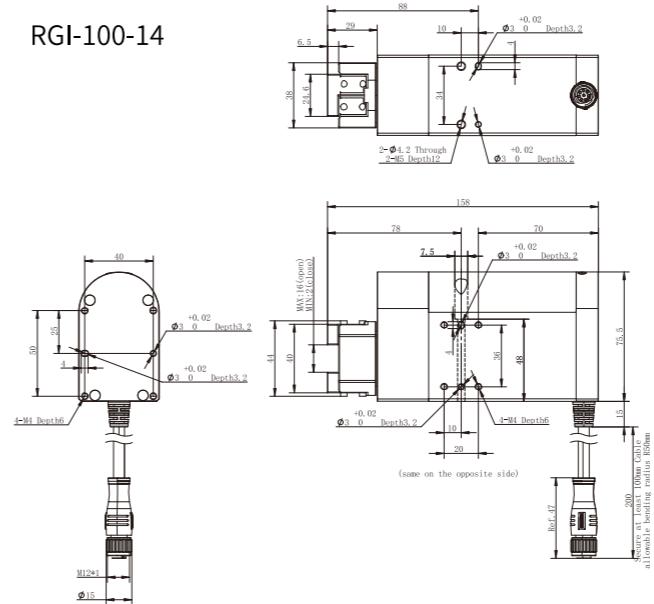
IP class
IP 40

Recommended environment
0~40°C, under 85% RH

Certification
CE, FCC, RoHS

Technical Drawings

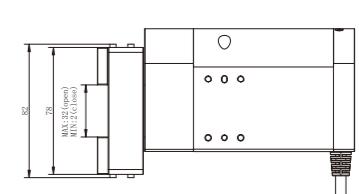
RGI-100-14



RGI-100-22



RGI-100-30

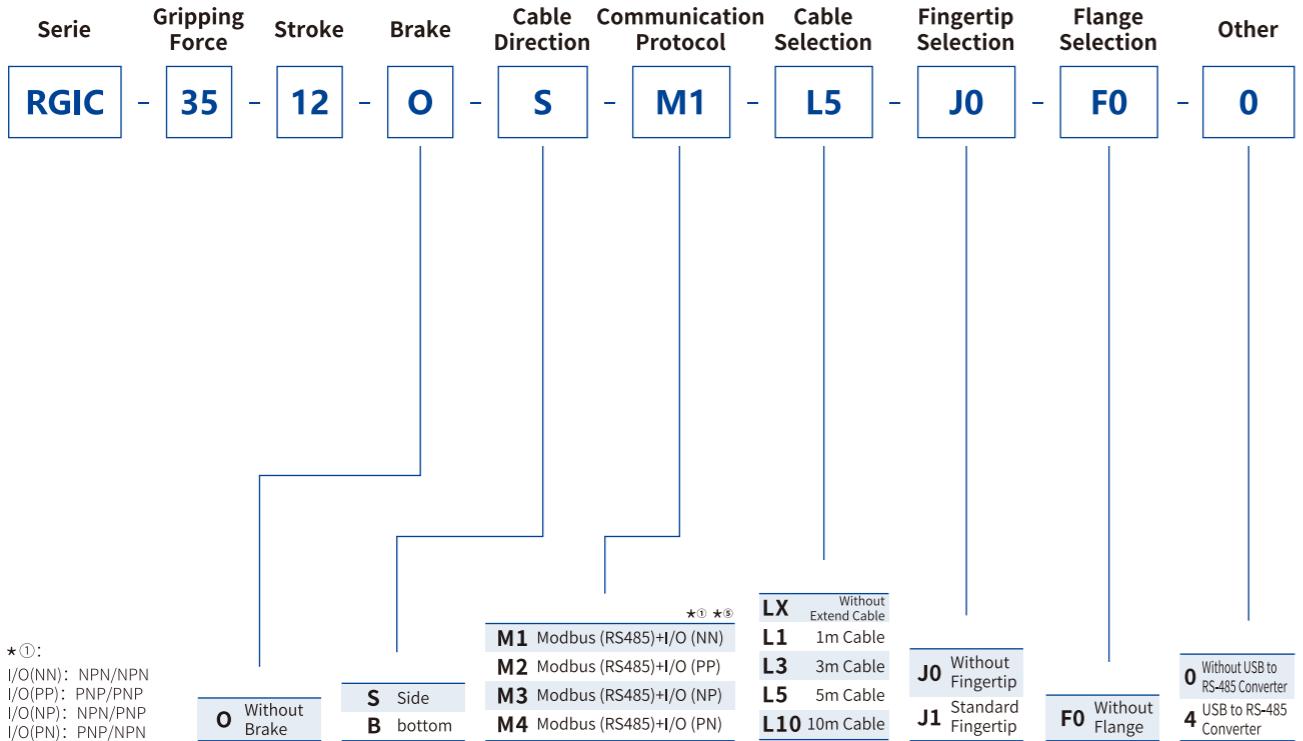


RGIC-35-12

Electric Rotary Gripper



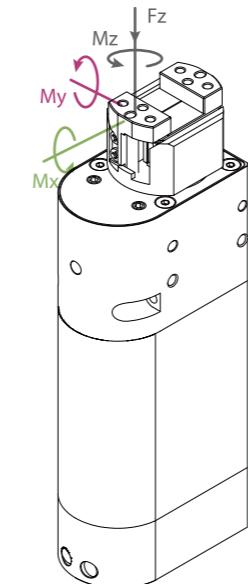
Selection Method



*①:
I/O(ONN): NPN/NPN
I/O(PP): PNP/PNP
I/O(NP): NPN/PNP
I/O(PN): PNP/NPN

*⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur.
If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS



Product Parameter

Gripping force (per jaw)	13~35 N
Recommended workpiece weight(Fingertip included) ^{*②}	0.5 kg
Stroke	12 mm
Full stroke opening/closing time	0.5 s/0.4 s
Repeat accuracy (position)	± 0.02 mm
Rated torque	0.2 N·m
Peak torque	0.5 N·m
Rotary range	Infinite Rotating
Max. rotation speed	2160 °/s
Repeat accuracy (swiveling)	± 0.05 °
Weight	0.64 kg
Size	150 mm x 53 mm x 34 mm Rotary Diameter:33 mm

Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs) Optional: TCP/IP, CAN2.0A, PROFINET, EtherCAT ^{*③}
Rated voltage	24 V DC ± 10%
Current	1.7 A(Rated)/ 2.5 A(Peak) ^{*④}
Rated power	40.8 W
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

<input checked="" type="checkbox"/> Build-in Controller	<input checked="" type="checkbox"/> Gripping Force Adjustable	<input checked="" type="checkbox"/> Position Adjustable	<input checked="" type="checkbox"/> Speed Adjustable	<input checked="" type="checkbox"/> Drop Detection	<input checked="" type="checkbox"/> Rotary Adjustable	<input checked="" type="checkbox"/> Self-locking Mechanism
---	---	---	--	--	---	--

Static Vertical Allowable Load

Fz 100 N

Allowable Loading Moment

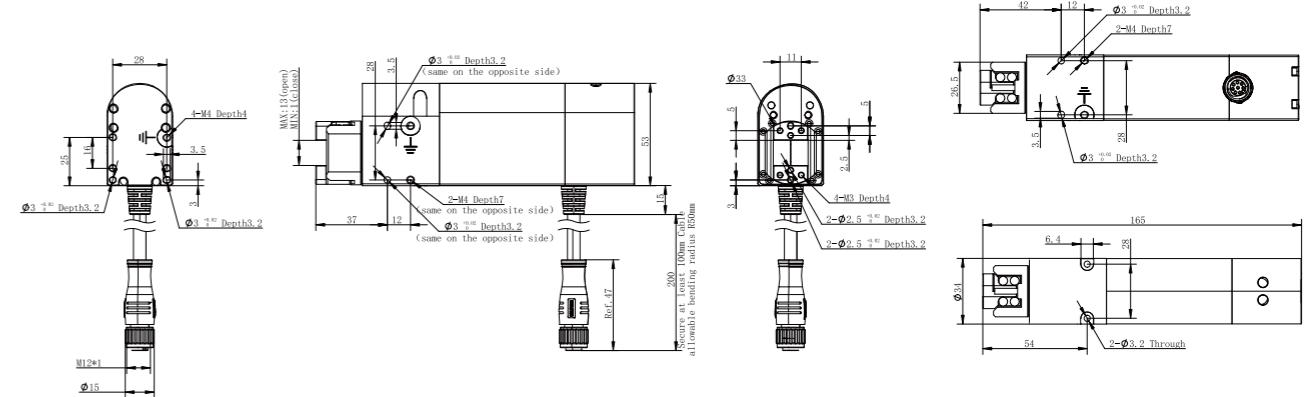
Mx 1.5 N·m

My 1.1 N·m

Mz 2.1 N·m

^{*②} The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
^{*③} Requires external communication convertor or customization, please contact sales or technical support.
^{*④} When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Technical Drawings



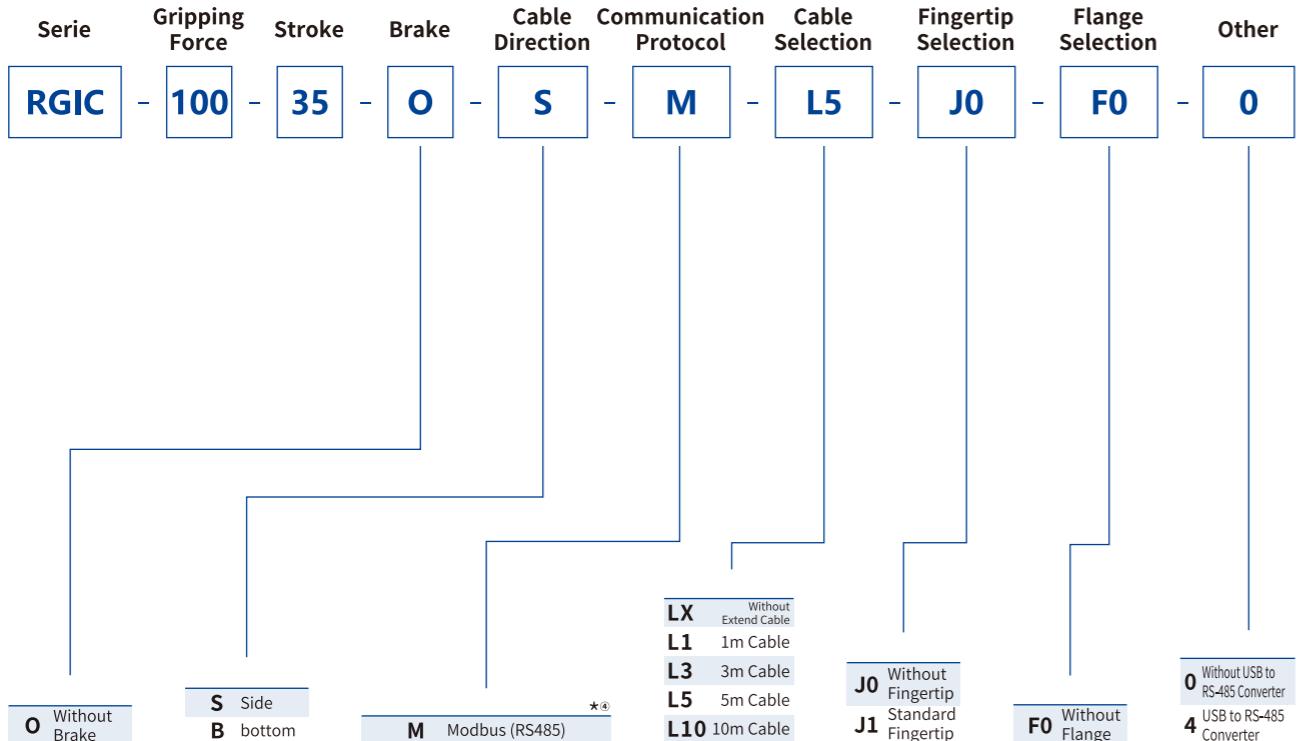
*⑤ Product size change on January 10, 2025: Height dimension changed from 150 to 165, others remain unchanged.

RGIC-100-35

Electric Rotary Gripper

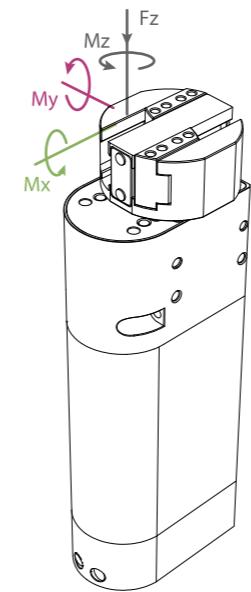


Selection Method



*④ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS



Product Parameter

Gripping force (per jaw)	40~100 N
Recommended workpiece weight(Fingertip included) *①	1 kg
Stroke	35 mm
Full stroke opening/closing time	0.9 s/0.9 s
Repeat accuracy (position)	± 0.02 mm
Rated torque	0.35 N·m
Peak torque	1.5 N·m
Rotary range	Infinite Rotating
Max. rotation speed	1400 °/s
Weight	0.65 kg
Size	159 mm x 53 mm x 34 mm Rotary Diameter: 41 mm

Working Environment

Communication interface	Standard: Modbus RTU(RS485) Optinal: TCP/IP, CAN2.0A, PROFINET, EtherCAT *②
Rated voltage	24 V DC ± 10%
Current	2 A(Rated)/ 5 A(Peak) *③
Rated power	48 W
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

<input checked="" type="checkbox"/>	Build-in Controller	<input checked="" type="checkbox"/>	Gripping Force Adjustable	<input checked="" type="checkbox"/>	Position Adjustable	<input checked="" type="checkbox"/>	Speed Adjustable	<input checked="" type="checkbox"/>	Drop Detection	<input checked="" type="checkbox"/>	Rotary Adjustable	<input checked="" type="checkbox"/>	Self-locking Mechanism
-------------------------------------	---------------------	-------------------------------------	---------------------------	-------------------------------------	---------------------	-------------------------------------	------------------	-------------------------------------	----------------	-------------------------------------	-------------------	-------------------------------------	------------------------

Static Vertical Allowable Load

Fz 100 N

Allowable Loading Moment

Mx 1.5 N·m

My 1.1 N·m

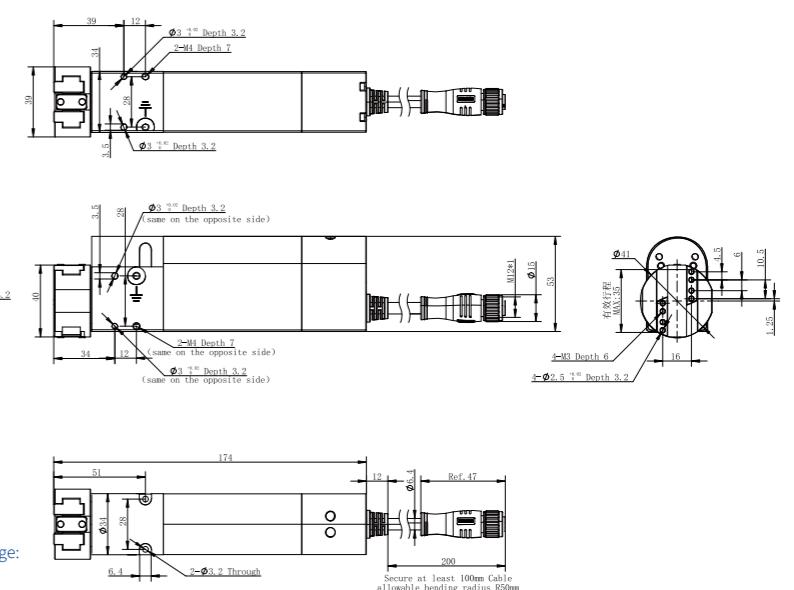
Mz 2.1 N·m

*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.

*③ Requires external communication convert or customization, please contact sales or technical support.

*④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

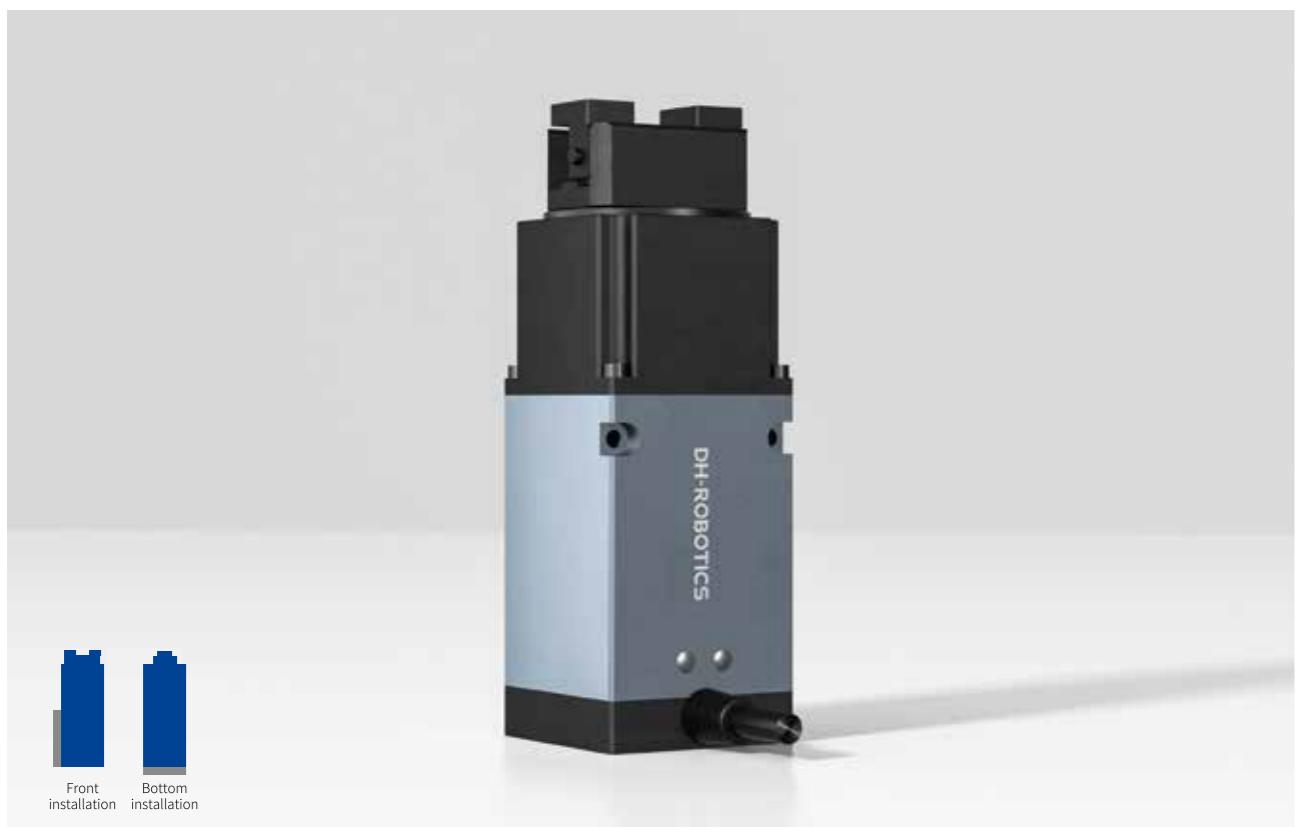
Technical Drawings



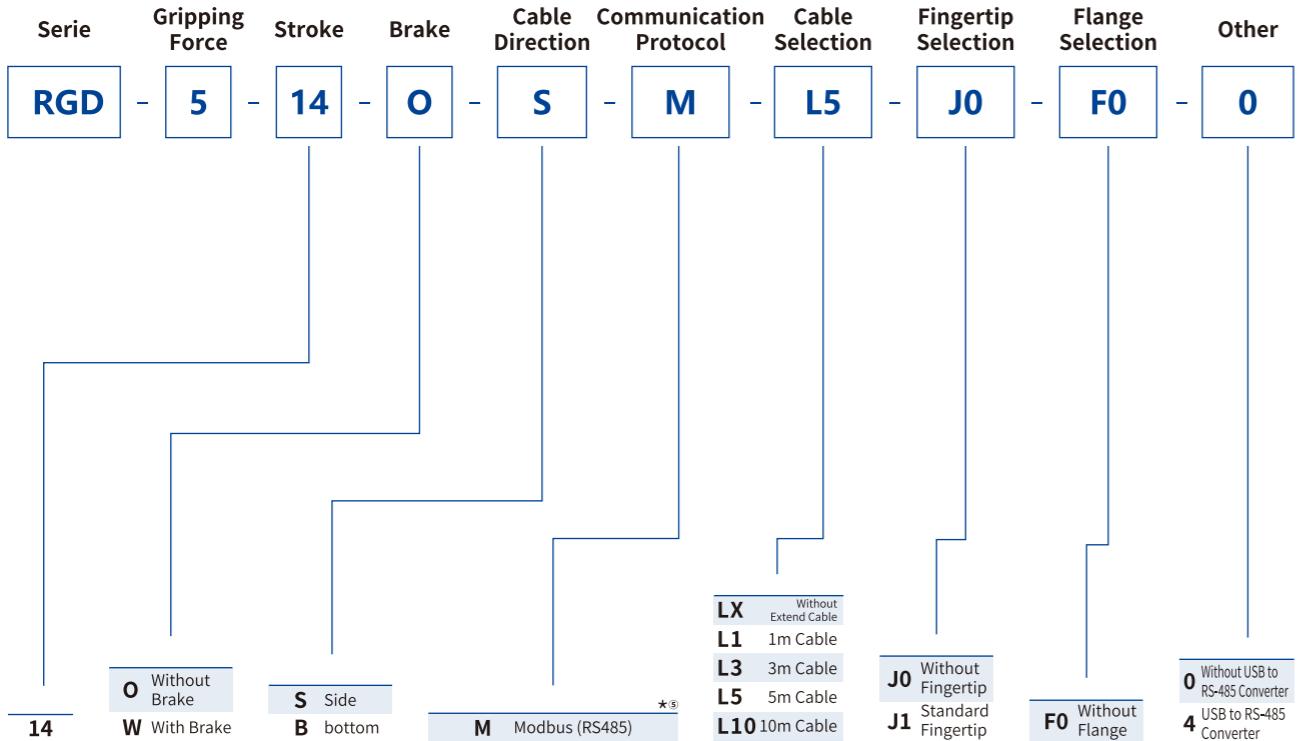
*④ On January 10, 2025, the product dimensions will change: the height dimension will be changed from 159 to 174, and the rest will remain unchanged.

RGD-5

Direct Drive Rotary Gripper

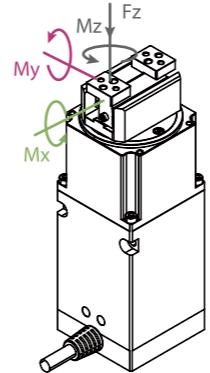


Selection Method



^{*5} It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 150 N

Allowable Loading Moment

Mx 2 N·m

My 1.5 N·m

Mz 2.5 N·m

<input checked="" type="checkbox"/> Build-in Controller	<input checked="" type="checkbox"/> Gripping Force Adjustable	<input checked="" type="checkbox"/> Position Adjustable	<input checked="" type="checkbox"/> Speed Adjustable
<input checked="" type="checkbox"/> Drop Detection	<input checked="" type="checkbox"/> Rotary Adjustable	<input checked="" type="checkbox"/> Position	<input checked="" type="checkbox"/> Self-locking Mechanism

^{*1} The peak torque can be increased to a maximum of 0.5 N·m.

For specific details, please consult with technical support personnel.
^{*2} The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.

^{*3} Requires external communication converter or customization, please contact sales or technical support.

^{*4} When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Product Parameter

Gripping force (per jaw) 2-5.5 N

Recommended workpiece weight^{*2} 0.05 kg

Stroke 14 mm

Full stroke opening/closing time 0.5 s/0.3 s

Repeat accuracy (position) ± 0.02 mm

Repeat accuracy (swiveling) ± 0.1 °

Max. rotation speed 1500 °/s

Rated torque 0.1 N·m

Peak torque^{*1} 0.25 N·m

Rotary backlash Zero backlash

Rotary range Infinite Rotating

Weight 0.86 kg (without brake)
0.88 kg (with brake)

Size 149 mm x 50 mm x 50 mm
Rotary Diameter: 47 mm

Noise emission < 60 dB

Working Environment

Communication interface Modbus RTU (RS485)
Optional: TCP/IP, EtherCAT^{*3}

Rated voltage 24 V DC ± 10%

Current 1.2 A (Rated) / 2.5 A (Peak)^{*4}

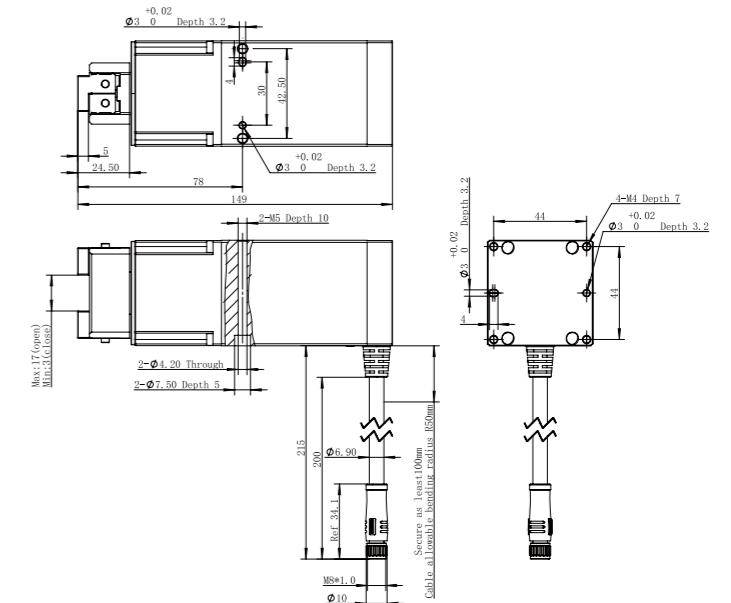
Rated power 60 W

IP class IP 40

Recommended environment 0~40°C, under 85% RH

Certification CE, FCC, RoHS

Technical Drawings



Parameter Table of Rotational Time in Place for Different Inertia Loads

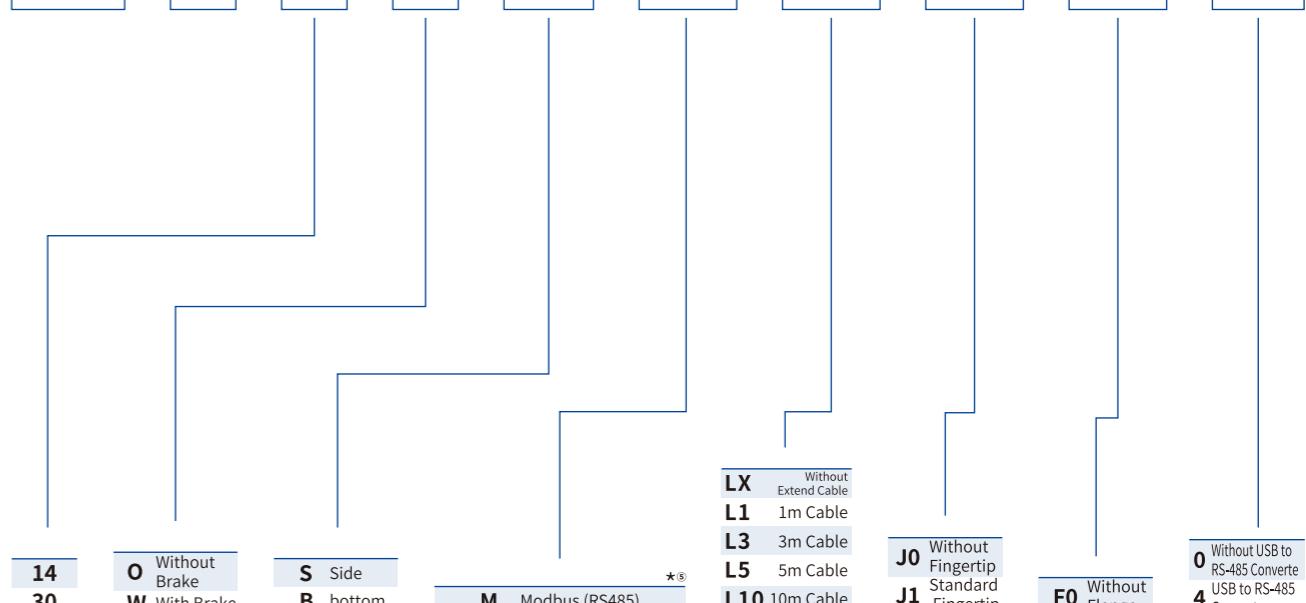
Reference Size/mm	Material	Weight/g	Corresponding Inertia/Kg · mm ²	Actual Rotation Angle/°	Reference Correction Time/ms
Unload	-	0	0	45	200
				90	200
				180	400
				360	500
				720	700
20*80*25	Aluminum Block	57	61	45	200
				90	300
				180	400
				360	500
				720	700
74.7*80*25	Aluminum Block	387	402	45	300
				90	350
				180	400
				360	550
				720	750
96.7*80*25	Aluminum Block	503	685	45	400
				90	450
				180	500
				360	650
				720	850
111.3*80*25	Aluminum Block	582	941	45	850
				90	1000
				180	1200
				360	1450
				720	1650
126*80*25	Aluminum Block	662	1263	45	1350
				90	1550
				180	1850
				360	1950
				720	2450

RGD-35

Direct Drive Rotary Gripper

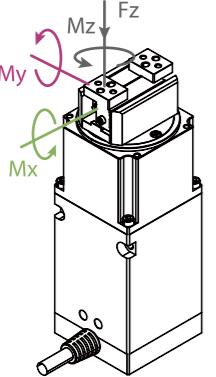


Selection Method



*⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 150 N

Allowable Loading Moment

Mx 2 N·m

My 1.5 N·m

Mz 2.5 N·m

<input checked="" type="checkbox"/> Build-in Controller	<input checked="" type="checkbox"/> Gripping Force Adjustable	<input checked="" type="checkbox"/> Position Adjustable	<input checked="" type="checkbox"/> Speed Adjustable
<input checked="" type="checkbox"/> Drop Detection	<input checked="" type="checkbox"/> Rotary Adjustable	<input checked="" type="checkbox"/> optional Self-locking Mechanism	

*① The peak torque can be increased to a maximum of 0.5 N·m.

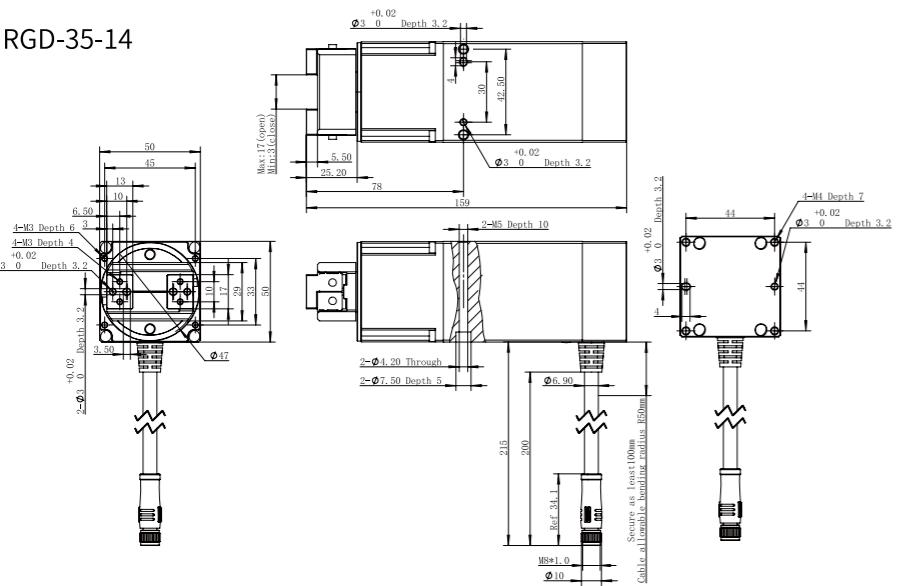
For specific details, please consult with technical support personnel.
*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.

*③ Requires external communication convert or customization, please contact sales or technical support.

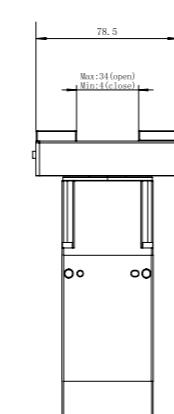
*④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Technical Drawings

RGD-35-14



RGD-35-30



Product Parameter	RGD-35-14	RGD-35-30
Gripping force (per jaw)	10-35 N	10-35 N
Recommended workpiece weight(Fingertip included) ^②	0.35 kg	0.35 kg
Stroke	14 mm	30 mm
Full stroke opening/closing time	0.5 s/0.5 s	0.7 s/0.7 s
Repeat accuracy (position)	± 0.02 mm	± 0.02 mm
Repeat accuracy (swiveling)	± 0.1 °	± 0.1 °
Max. rotation speed	1500 °/s	1500 °/s
Rated torque	0.1 N·m	0.1 N·m
Peak torque ^①	0.25 N·m	0.25 N·m
Rotary backlash	Zero backlash	Zero backlash
Rotary range	Infinite Rotating	Infinite Rotating
Weight	0.86 kg(without brake) 0.88 kg(with brake)	1 kg(without brake) 1.02 kg(with brake)
Size	159 mm x 50 mm x 50 mm Rotary Diameter: 47 mm	159 mm x 50 mm x 50 mm Rotary Diameter: 83.6 mm
Noise emission	< 60 dB	< 60 dB

Parameter Table of Rotational Time in Place for Different Inertia Loads

Reference Size/mm	Material	Weight/g	Corresponding Inertia/Kg · mm ²	Actual Rotation Angle/°	Reference Correction Time/ms
Unload	-	0	0	45	200
				90	200
				180	400
				360	500
				720	700
				45	200
				90	300
				180	400
				360	500
				720	700
20*80*25	Aluminum Block	57	61	45	300
				90	350
				180	400
				360	550
				720	750
				45	400
				90	450
				180	500
				360	650
				720	850
74.7*80*25	Aluminum Block	387	402	45	400
				90	450
				180	500
				360	650
				720	850
				45	400
				90	450
				180	500
				360	650
				720	850
96.7*80*25	Aluminum Block	503	685	45	400
				90	450
				180	500
				360	650
				720	850
				45	850
				90	1000
				180	1200
				360	1450
				720	1650
111.3*80*25	Aluminum Block	582	941	45	1350
				90	1550
				180	1850
				360	1950
				720	2450
				45	1350
				90	1550
				180	1850
				360	1950
				720	2450
126*80*25	Aluminum Block	662	1263	45	1350
				90	1550
				180	1850
				360	1950
				720	2450

Articulated Electric Grippers

AG / DH Series

ARTICULATED ELECTRIC GRIPPER



Product Features

The AG series is a linkage-type adaptive electric gripper which is independently developed by DH-Robotics. With Plug& Play software many and exquisite structural design , AG series is a perfect solution to be applied with collaborative robots to grip work-pieces with different shapes in different industries.

Envelope Adaptive Capture

The gripper linkage mechanism supports envelope adaptive grasping, which is more stable to grip round,spherical or special-shaped objects.

Plug & Play

It supports plug & play with most collaborative robot brands on the market which is easier to control and program.

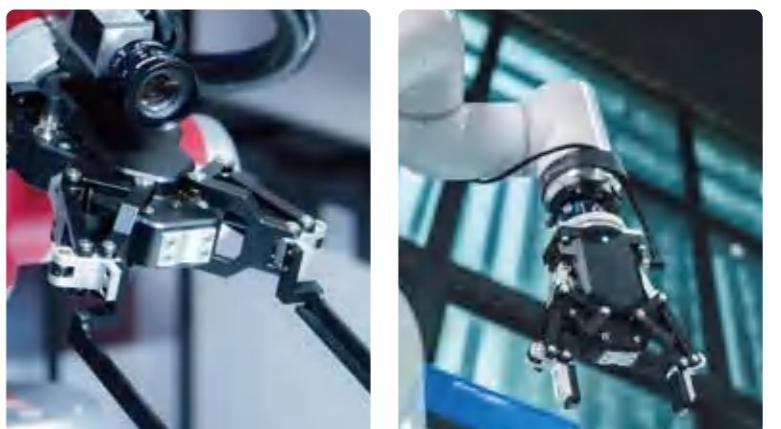
Long Stroke

The biggest stroke of the AG series is up to 145 mm. One gripper can meet the grasping needs of objects of different sizes with good compatibility.

Application

Cooperate with collaborative robot or industrial robot to complete material handling, loading and unloading, assembly, testing, sorting and other tasks in auto parts, automation equipment, new energy and other industries.

Serie	Gripping Force (Per Jaw)	Recommended workpiece weight	Stroke	Reference Page
AG-160-95	45~160 N	3 kg	95 mm	P51-52
AG-105-145	35~105 N	2 kg	145 mm	P53-54
DH-3	10~65 N	1.8 kg	106 mm (parallel) 122 mm (centric)	P55-56
DH-5	2~5.5 N	0.05 kg	14 mm	P57-58



AG-160-95

Electric Adaptive Gripper



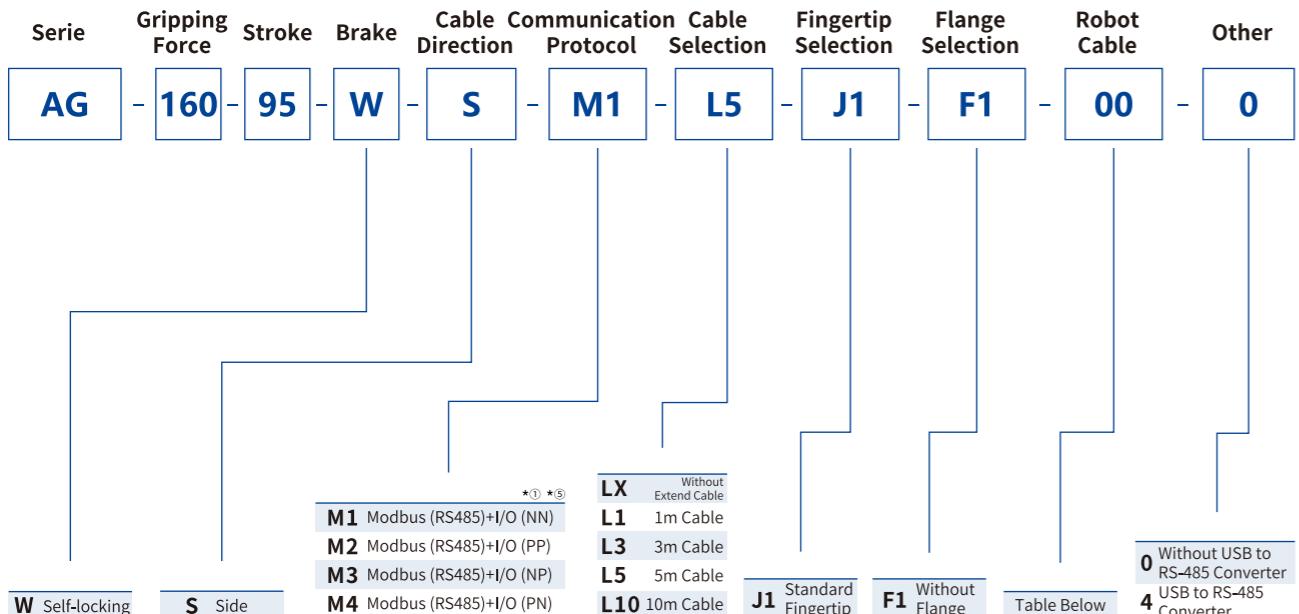
Electric Parallel Gripper

Electric Rotary Gripper

Articulated Electric Gripper

Electric Centric Gripper

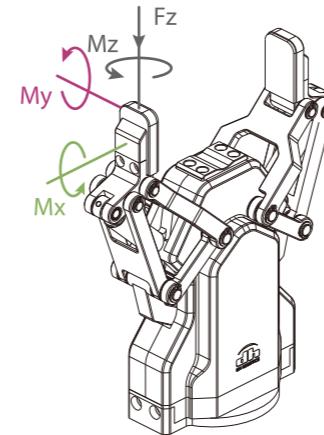
Selection Method



①:	00	01	SIASUN	DOBOT CR	02 AUBO	04 JAKA	06 ROKAE SR	09 Doosan A	11 Elite EC	13 Neuromeka	15 Hanwha HCR
I/O(NN): NPN/NPN											
I/O(PP): PNP/PNP	00	01	SIASUN	DOBOT CR	02 AUBO	04 JAKA	06 ROKAE SR	09 Doosan A	11 Elite EC	13 Neuromeka	15 Hanwha HCR
I/O(NP): NPN/PNP	Without Robot Cable	Elite CS	SIASUN	DOBOT CR	AUBO	JAKA	ROKAE SR	Doosan A	Elite EC	Neuromeka	Hanwha HCR
I/O(PN): PNP/NPN	UR CB	UR E									

*⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS



Product Parameter

Gripping force (per jaw)	45~160 N
Recommended workpiece weight *②	3 kg
Stroke	95 mm
Full stroke opening/closing time	0.9 s/0.9 s
Repeat accuracy (position)	± 0.03 mm
Weight	1 kg
Size	184.6 mm x 162.3 mm x 67 mm
Noise emission	< 60 dB
Driving method	Screw drive + Linkage system

Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs) Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT *③
Rated voltage	24 V DC ± 10%
Current	0.8 A(Rated)/ 1.5 A(Peak) *④
Rated power	19.2 W
IP class	IP 54
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS



Static Vertical Allowable Load

Fz 300 N

Allowable Loading Moment

Mx 4.75 N·m

My 4.75 N·m

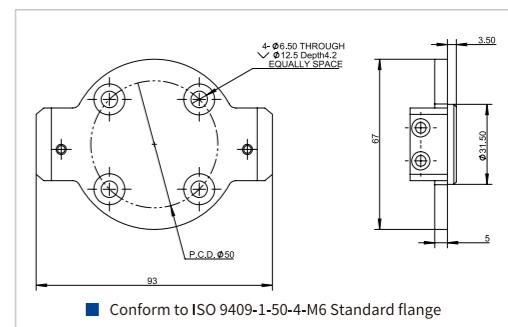
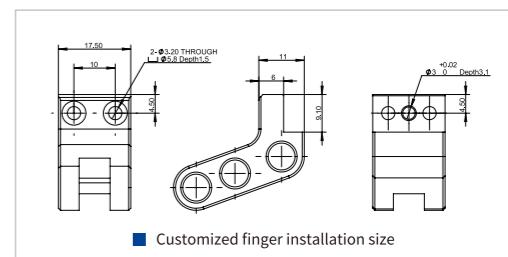
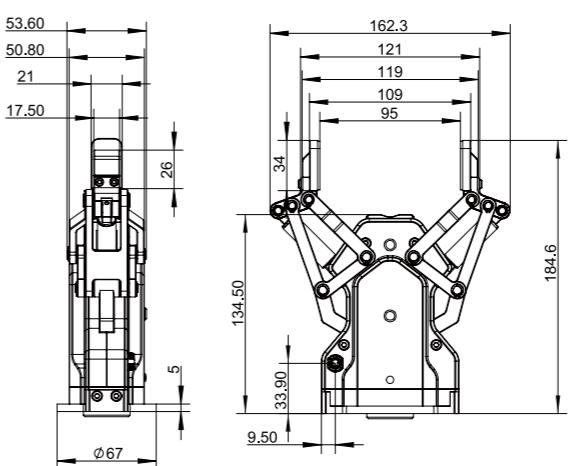
Mz 4.75 N·m

*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.

*③ Requires external communication convertor or customization, please contact sales or technical support.

*④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Technical Drawings

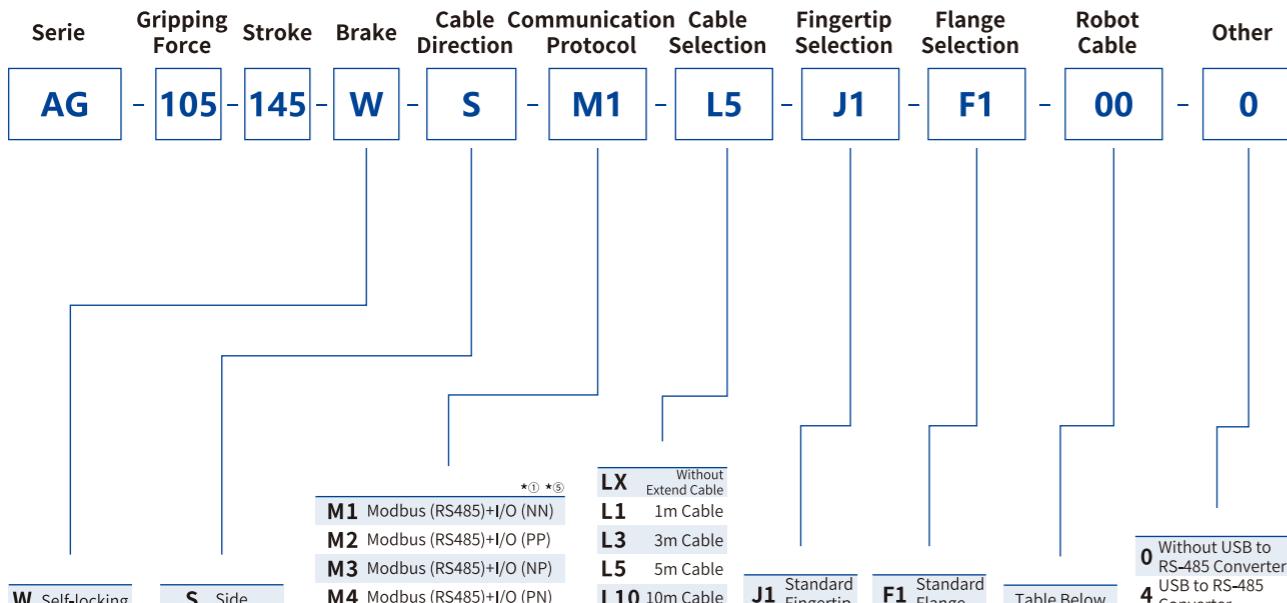


AG-105-145

Electric Adaptive Gripper



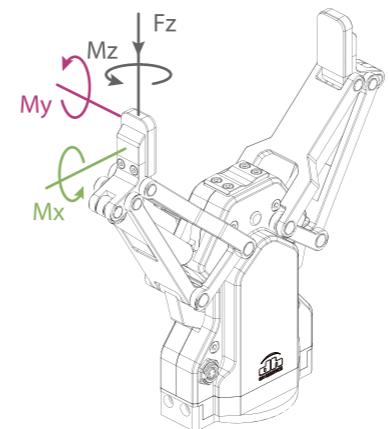
Selection Method



*①:	I/O(NN): NPN/NPN	00	01	SIASUN	DOBOT CR	02 AUBO	04 JAKA	06 ROKAE SR	09 Doosan A	11 Elite EC	13 Neuromeka	15 Hanwha HCR
I/O(PP): NPN/PNP	Without Robot Cable	01	02	Elite CS	DOBOT CR	UR CB	UR E	ROKAE ER	Doosan A	Elite EC	Neuromeka	Hanwha HCR
I/O(NP): NPN/PNP	03 ELEPHANT	04 TECHMAN	05 TECHMAN	06 DOBOT	07 MG400	08 DOBOT	09 MG400	10 Doosan M	11 Han's	12 FAIRINO	13 UF x Arm	14 ROKAE CR
I/O(PN): PNP/NPN	00	01	02	03	04	05	06	07	08	09	10	11

*⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 300 N

Allowable Loading Moment

Mx 1.95 N·m

My 1.95 N·m

Mz 1.95 N·m

*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.

*③ Requires external communication convertor or customization, please contact sales or technical support.

*④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Product Parameter

Gripping force (per jaw)	35~105 N
Recommended workpiece weight ^{*②}	2 kg
Stroke	145 mm
Full stroke opening/closing time	0.9 s/0.9 s
Repeat accuracy (position)	± 0.03 mm
Weight	1.3 kg
Size	203.9 mm x 212.3 mm x 67 mm
Noise emission	< 60 dB
Driving method	Screw drive + Linkage system

Working Environment

Communication interface Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs)
Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT^{*③}

Rated voltage 24 V DC ± 10%

Current 0.8 A(Rated)/ 1.5 A(Peak)^{*④}

Rated power 19.2 W

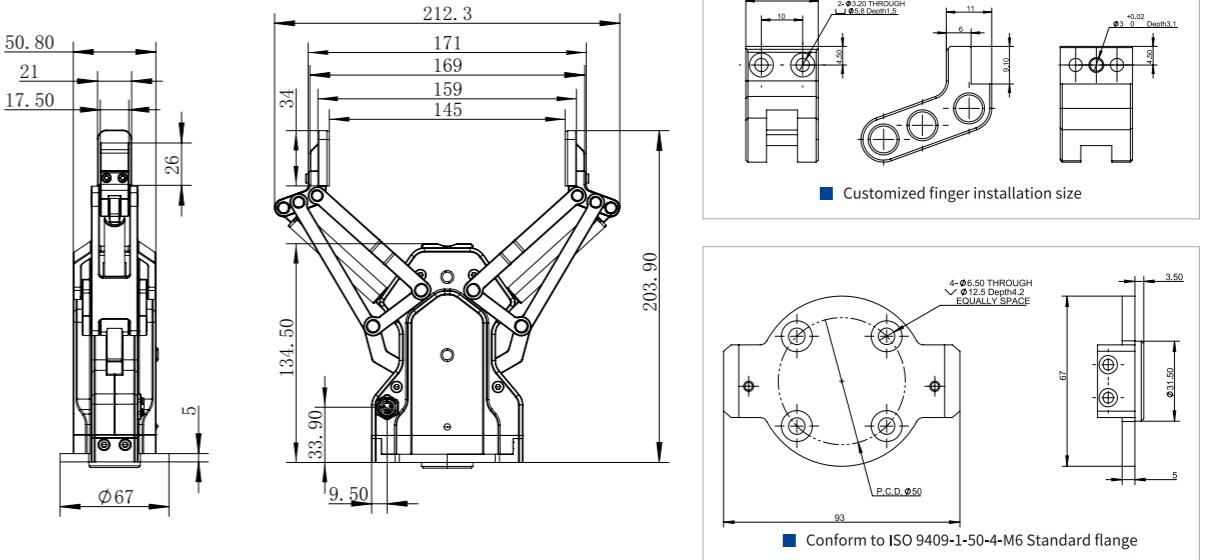
IP class IP 54

Recommended environment 0~40°C, under 85% RH

Certification CE, FCC, RoHS

<input checked="" type="checkbox"/> Build-in Controller	<input checked="" type="checkbox"/> Gripping Force Adjustable	<input checked="" type="checkbox"/> Position Adjustable	<input type="checkbox"/> Speed Adjustable	<input checked="" type="checkbox"/> Drop Detection	<input checked="" type="checkbox"/> Plug & Play	<input checked="" type="checkbox"/> Self-locking Mechanism
---	---	---	---	--	---	--

Technical Drawings

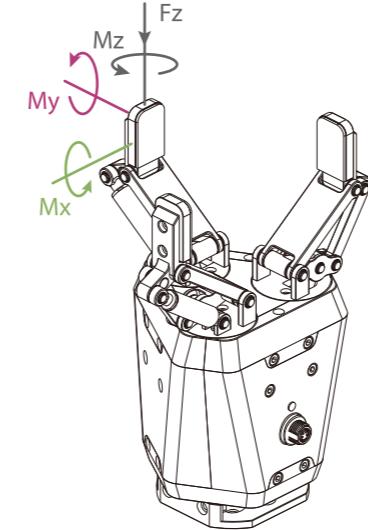


DH-3

Electric Adaptive Gripper



TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 150 N

Allowable Loading Moment

Mx 2.5 N·m

My 2 N·m

Mz 3 N·m

^② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.

^③ Requires external communication converter or customization, please contact sales or technical support.

^④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Product Parameter

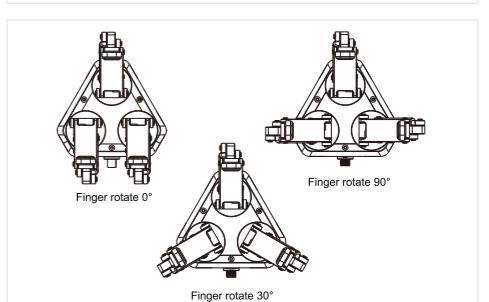
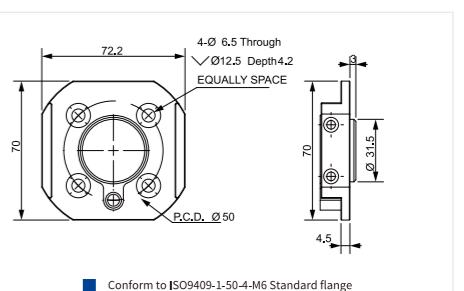
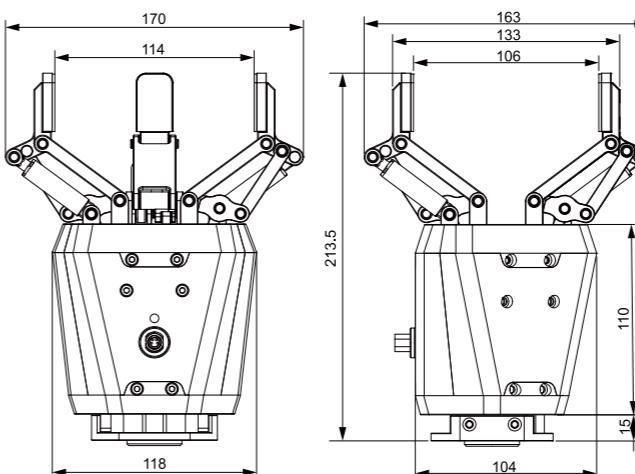
Gripping force (per jaw)	10~65 N
Recommended workpiece weight ^①	1.8 kg
Stroke	106 mm (parallel) 122 mm (centric)
Full stroke opening/closing time	0.7 s/0.7 s
Repeat accuracy (position)	± 0.03 mm
Weight	1.68 kg
Size	213.5 mm x 170 mm x 118 mm
Noise emission	< 60 dB
Driving method	Screw nut + gear driv + linkage mechanism

Working Environment

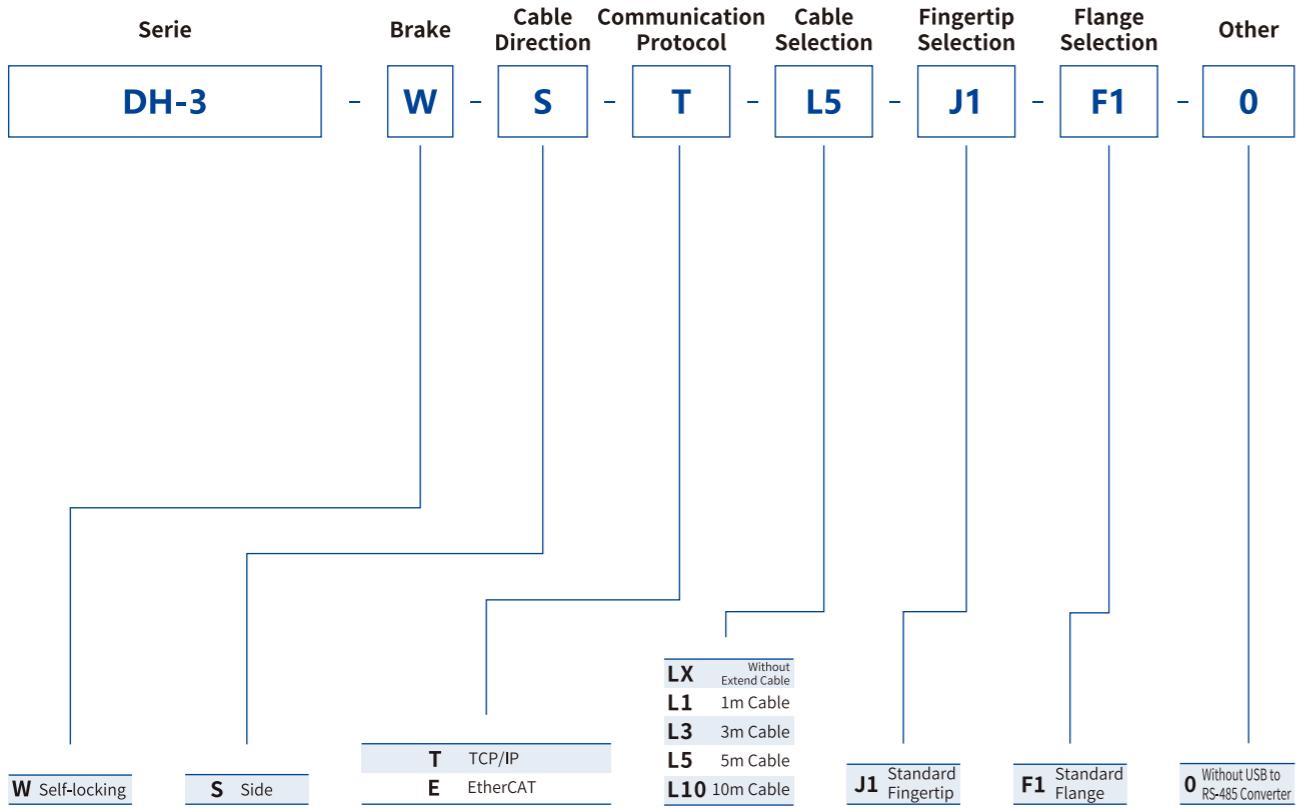
Communication interface	Standard: TCP/IP, USB2.0, CAN2.0A Optional: EtherCAT ^②
Rated voltage	24 V DC ± 10%
Current	0.5 A(Rated)/ 1 A(Peak) ^③
Rated power	12 W
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

<input checked="" type="checkbox"/> Build-in Controller	<input checked="" type="checkbox"/> Gripping Force Adjustable	<input checked="" type="checkbox"/> Position Adjustable	<input type="checkbox"/> Speed Adjustable	<input type="checkbox"/> Drop Detection	<input checked="" type="checkbox"/> Plug & Play	<input checked="" type="checkbox"/> Self-locking Mechanism
---	---	---	---	---	---	--

Technical Drawings



Selection Method



DH-5

Dexterous Hand



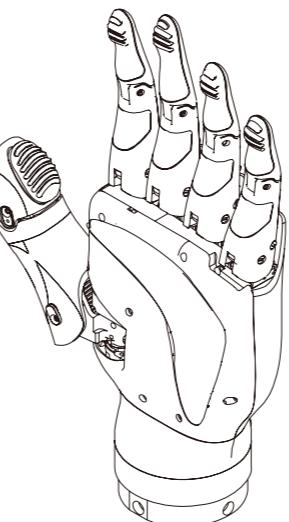
Electric Parallel Gripper

Electric Parallel Gripper

Articulated Electric Gripper

Electric Centric Gripper

TECHNICAL SPECIFICATIONS



<input checked="" type="checkbox"/> Build-in Controller	<input checked="" type="checkbox"/> Gripping Force Adjustable	<input checked="" type="checkbox"/> Position Adjustable	<input type="checkbox"/> Speed Adjustable
<input type="checkbox"/> Drop Detection	<input checked="" type="checkbox"/> Plug & Play	<input checked="" type="checkbox"/> Self-locking Mechanism	

Product Parameter

Degrees of freedom	11
Active degree of freedom	6
Working speed	1.0 s
Four-finger bending angle	80°+90°
Thumb bending angle	30°+15°
Thumb lateral swing angle	70°
Single fingertip force	10 N
Recommended maximum friction load	2 kg
Recommended maximum structural lifting load	4 kg
Hand grip strength	30 N
Lifting load	10 kg
Weight	700 g
Driving method	Coreless Motor +Planetary Reducer +Screw + Connecting Rod
Size	Adult Hand Size (230 mm*85 mm*51 mm)

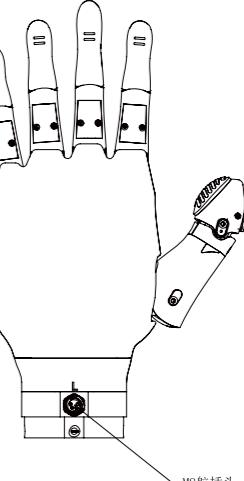
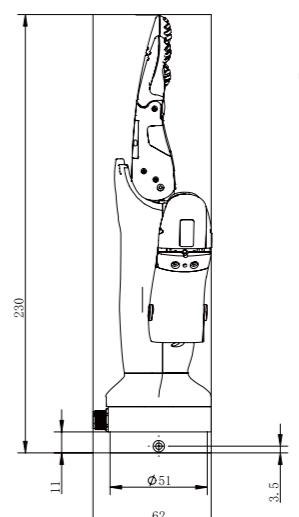
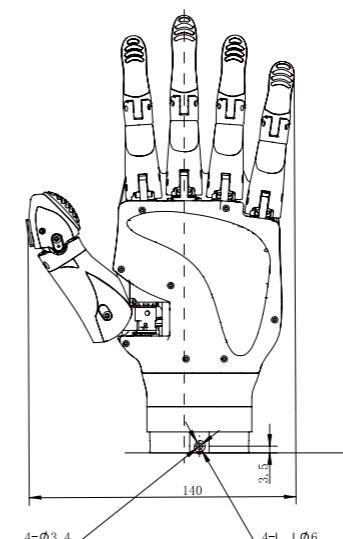
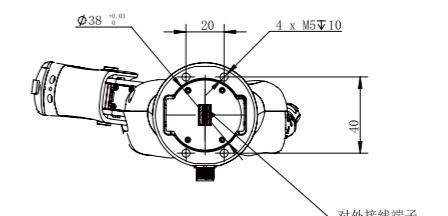
Working Environment

Communication interface	Modbus-RTU/CAN
Rated voltage	24 V DC ± 10%

Technical Drawings

Serie	Hand Shape	Degrees of Freedom	Grip Strength	Wrist Interface	Cable Direction	Other
DH-5	-	L	-	11	-	10
						N
						M1
						0

L left hand
R right hand
11 Degrees of freedom
10 10 N
30 30 N
N Standard interface
F Quick-release interface
M1 EtherCAT
M2 Modbus
M3 Modbus-RTU
M4 CANFD
0 Without USB to RS-485 Converter



Electric Parallel Gripper

Electric Parallel Gripper

Articulated Electric Gripper

Electric Centric Gripper

Electric Centric Grippers

CGE / CGI / CGC Series

ELECTRIC CENTRIC GRIPPER



Product Features

The CG series is a three-finger centric gripper independently developed by DH-Robotics. The three-finger gripping method can better cope with the grasping task of cylindrical workpieces. The CG series is available in a variety of models for a variety of scenarios, stroke and end devices.

High Performance

Realize high-precision centering and grasping, the process structure meets the requirements of high rigidity, and the energy density exceeds that of similar products.

Long Lifetime

Continuous and stable work above

Overload Protection

The high-performance servo motor

Application

Accurate and stable grasping of cylindrical workpieces in the fields of auto parts, automation equipment, precision measurement and assembly, etc.

Serie	Gripping Force (Per Jaw)	Recommended Workpiece Weight	Stroke	Reference Page
CGE-10-10	3~10 N	0.1 kg	10 mm	P61-62
CGI-100-170	30~100 N	1.5 kg	Φ40~Φ170 mm	P63-64
CGC-80-10	20~80 N	1.5 kg	10 mm	P65-66



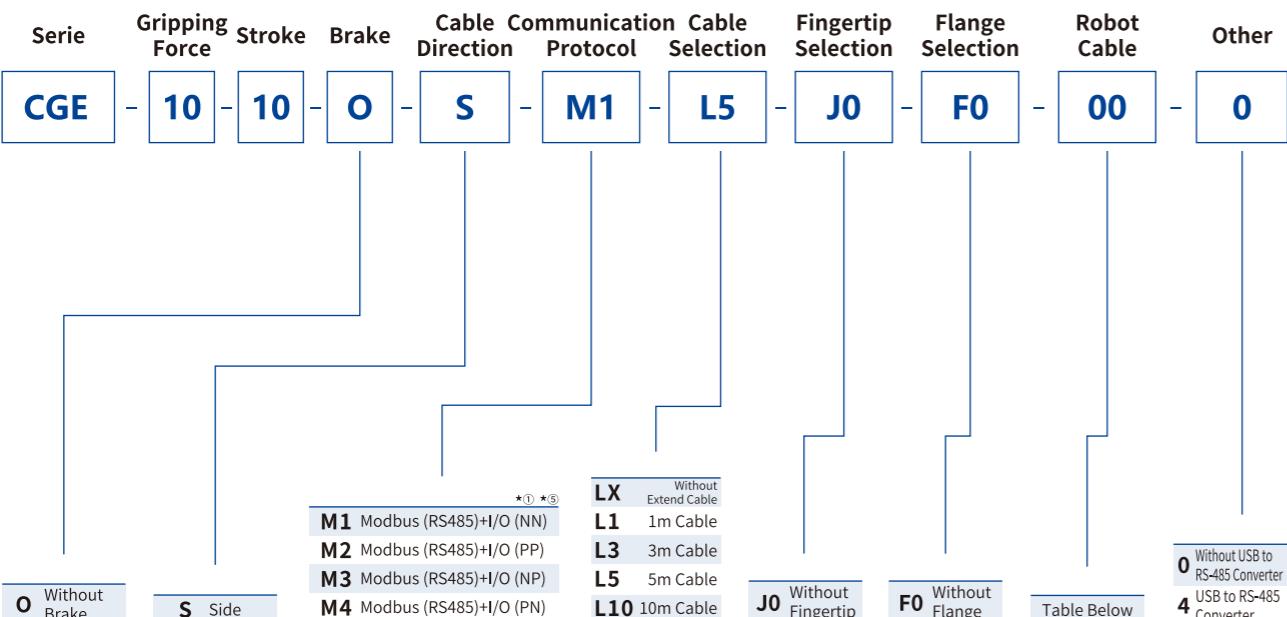
CGE-10-10

Electric Centric Gripper



Front and rear
installation Side
installation Bottom
installation

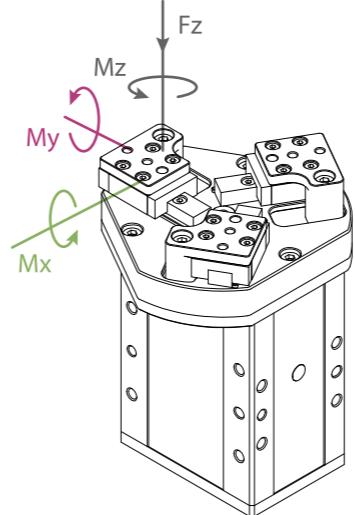
Selection Method



- ★ ①:
 - I/O(NN): NPN/NPN
 - I/O(PP): PNP/PNP
 - I/O(NP): NPN/PNP
 - I/O(PN): PNP/NPN

*⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 150 N

Allowable Loading Moment

$$M_x = 0.62 \text{ N} \cdot \text{m}$$

My 0.62 N·m

My 0.02 N H₂

Mz 0.62 N·m

The recommended load calculation is based on pure friction gripping, with a friction coefficient of 0.2 and a safety factor of 1.5. The center of gravity shift of the gripped object will also be considered.

it the load. If you have any questions, please consult us. Requires external communication convertor or customization,

When selecting the power supply, please select according to the following table.

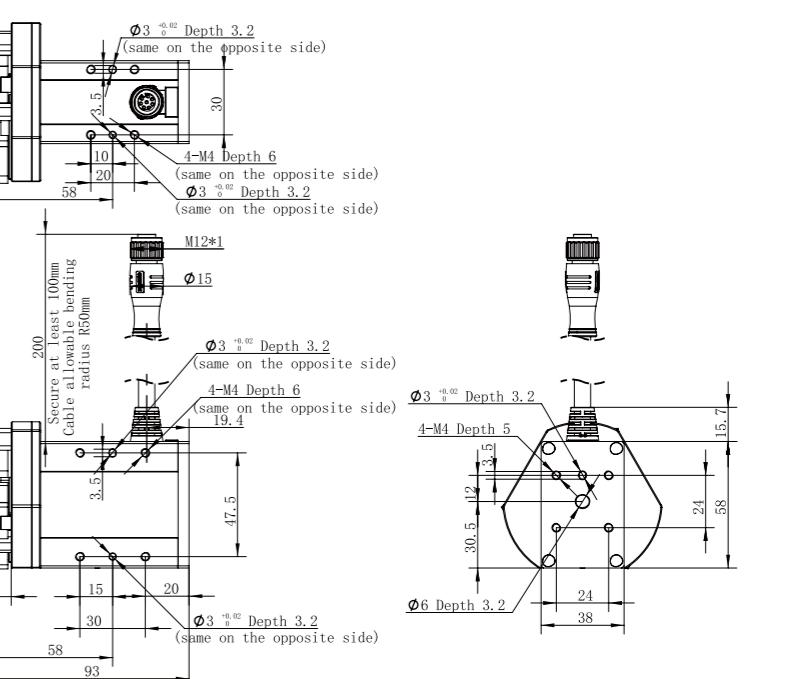
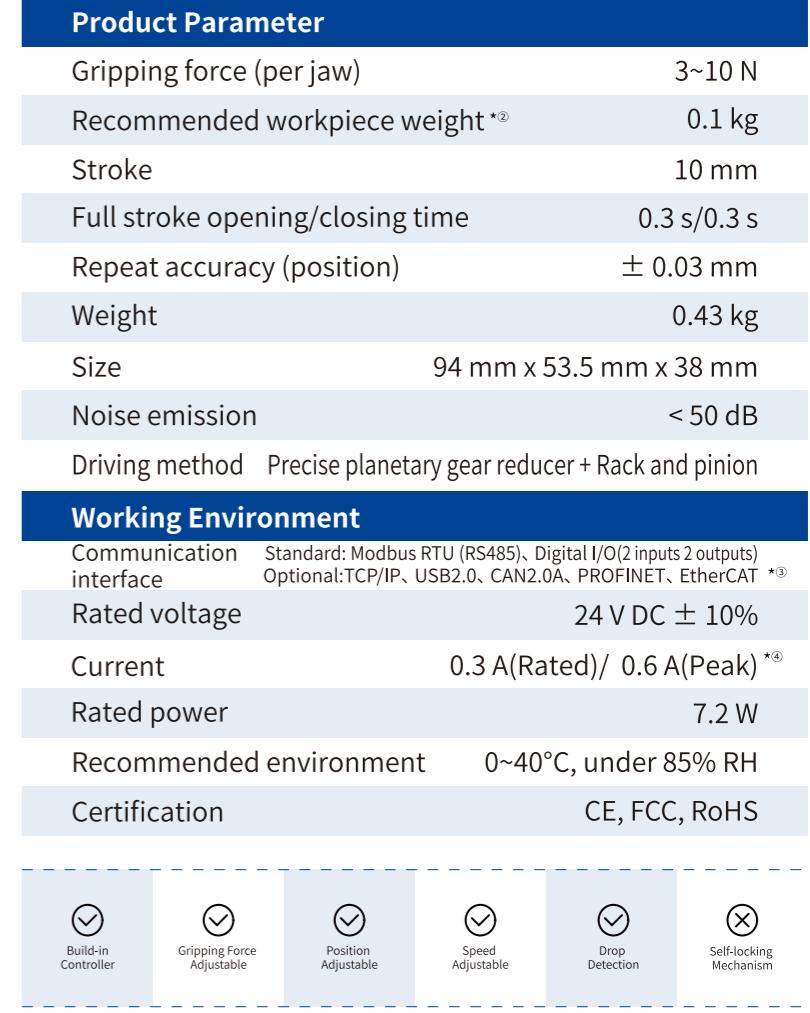
When selecting the power supply, please select according to peak current. If the current is lower than the parameter, it will not affect the product to work normally.

the product can not work normally.

Technical Drawings

10 of 10 | Page | [Report a problem](#) | [Feedback](#) | [Help](#) | [About](#) | [Privacy](#) | [Terms](#) | [Conditions](#) | [Sitemap](#) | [Contact](#)

Technical Drawings



CGI-100-170

Electric Centric Gripper



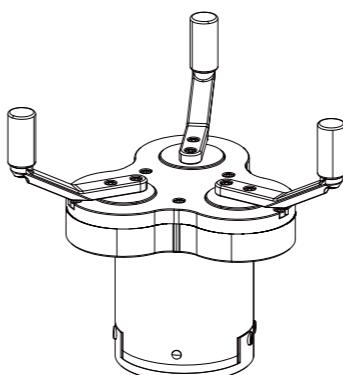
Electric Parallel Gripper

Electric Rotary Gripper

Articulated Electric Gripper

Electric Centric Gripper

TECHNICAL SPECIFICATIONS



This type of gripper is recommended to use the standard finger. If you need to replace it in the application, please contact us for confirmation.

Product Parameter

Gripping force (per jaw)	30~100 N
Recommended workpiece weight ^{*②}	1.5 kg
Recommended workpiece diameter (inward)	Φ40~Φ170 mm
Full stroke opening/closing time	1.35 s
Repeat accuracy (position)	± 0.03 mm
Weight	1.5 kg
Size	158.4mmx124.35mmx116mm (without brake/with brake,same size)
Noise emission	< 50 dB
Driving method	Precise planetary gears + Rack and pinion

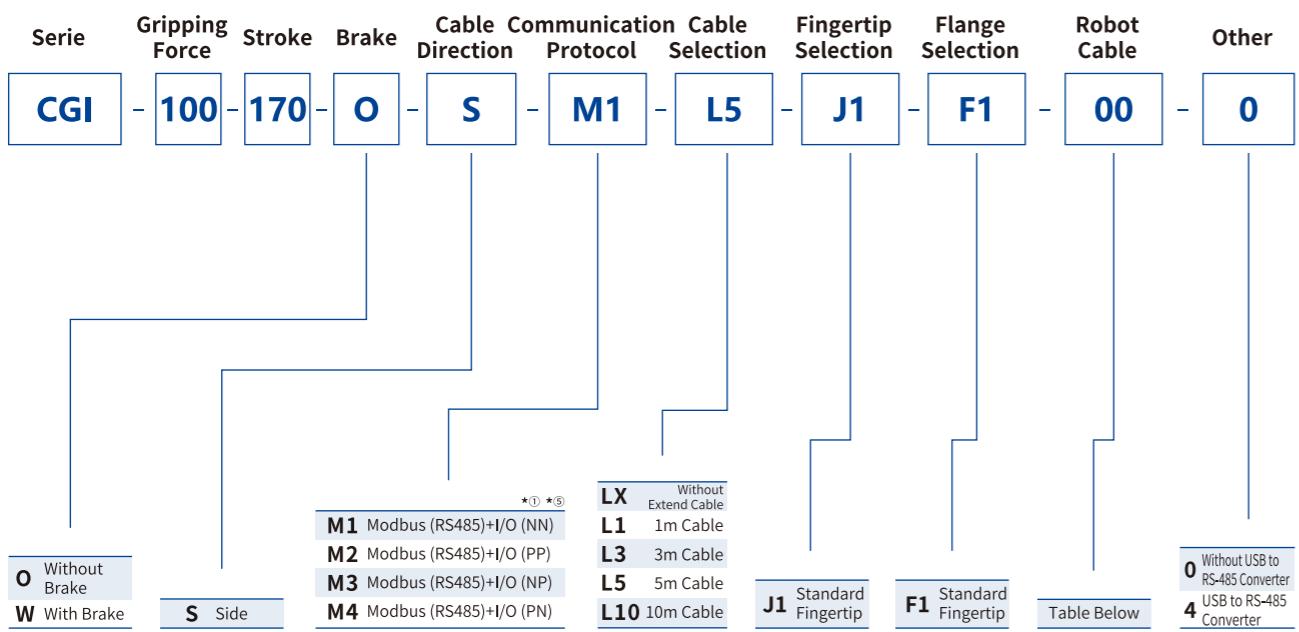
Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs) Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT ^{*③}
Rated voltage	24 V DC ± 10%
Current	0.4 A(Rated)/ 1 A(Peak) ^{*④}
Rated power	9.6 W
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

<input checked="" type="checkbox"/> Build-in Controller	<input checked="" type="checkbox"/> Gripping Force Adjustable	<input checked="" type="checkbox"/> Position Adjustable	<input checked="" type="checkbox"/> Speed Adjustable	<input checked="" type="checkbox"/> Drop Detection	<input type="checkbox"/> optional Self-locking Mechanism
---	---	---	--	--	--

^{*②} The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
^{*③} Requires external communication convertor or customization, please contact sales or technical support.
^{*④} When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

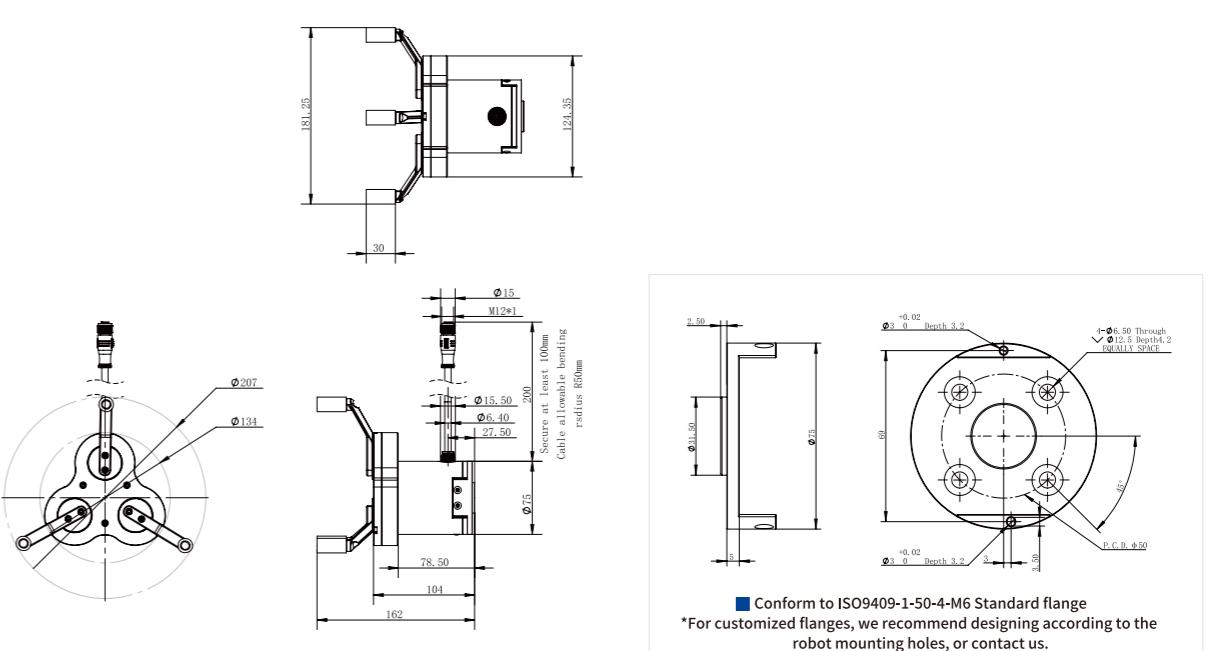
Selection Method



00 Without Robot Cable	01 SIASUN	02 AUBO	04 JAKA	06 ROKAE SR	09 Doosan A	11 Elite EC	13 Neuromeka	15 Hanwha HCR
00 Without Robot Cable	01 SIASUN	02 AUBO	04 JAKA	06 ROKAE SR	09 Doosan A	11 Elite EC	13 Neuromeka	15 Hanwha HCR
00 Without Robot Cable	01 SIASUN	02 AUBO	04 JAKA	06 ROKAE SR	09 Doosan A	11 Elite EC	13 Neuromeka	15 Hanwha HCR

*⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur.
If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

Technical Drawings

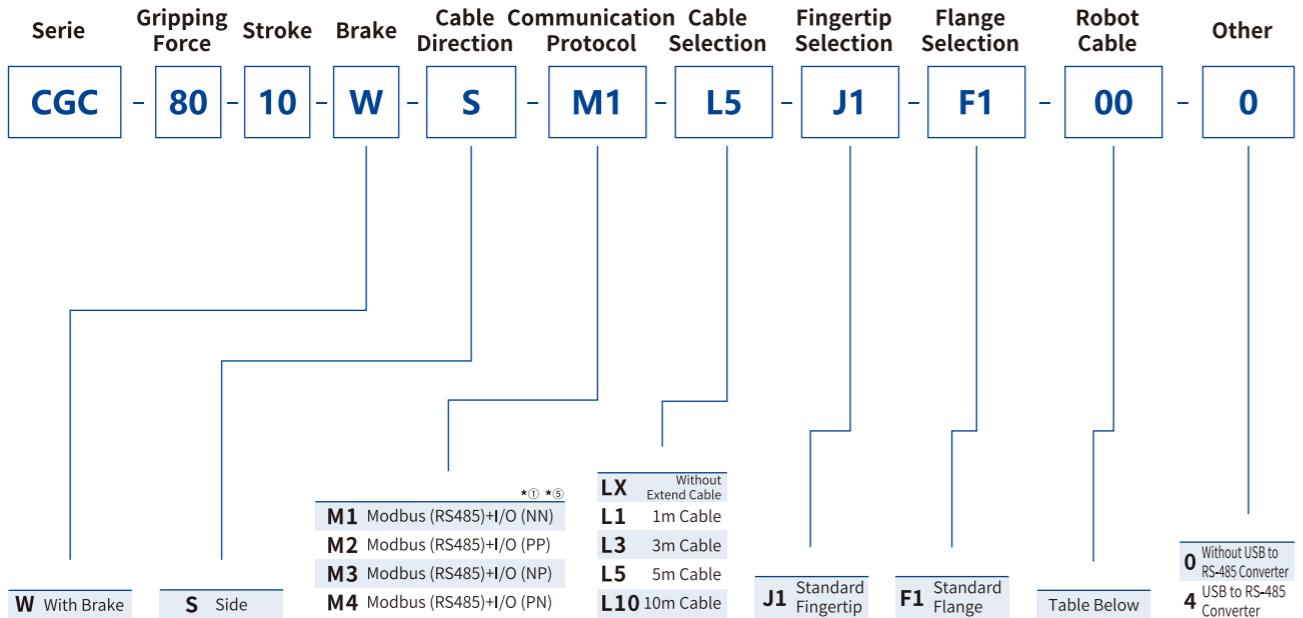


CGC-80-10

Electric Collaborative Centric Gripper



Selection Method

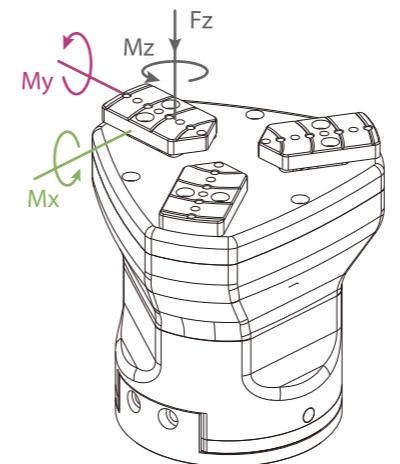


*①:
 I/O(NN): NPN/NPN
 I/O(PP): PNP/PNP
 I/O(NP): NPN/PNP
 I/O(PN): PNP/NPN

00 Without Robot Cable	01 SIASUN Elite CS	02 DOBOT CR	03 AUBO	04 JAKA	06 ROKAE SR	09 Doosan A	11 Elite EC	13 Neuromeka	15 Hanwha HCR
I/O(NN): NPN/NPN	I/O(PP): PNP/PNP	I/O(NP): NPN/PNP	I/O(PN): PNP/NPN	UR CB	UR E	Hanwha A	DOBOT Nova	DOBOT	ROKAE CR

*⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur.
 If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 200 N

Allowable Loading Moment

Mx 2.5 N·m

My 2 N·m

Mz 3 N·m

*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.

*③ Requires external communication convertor or customization, please contact sales or technical support.

*④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Product Parameter

Gripping force (per jaw) 20~80 N

Recommended workpiece weight*② 1.5 kg

Single jaw 10 mm

Full stroke opening/closing time 0.5 s/0.5 s

Repeat accuracy (position) ± 0.03 mm

Weight 1.5 kg

Size 141 mm x 103 mm x 75 mm

Noise emission < 50 dB

Driving method Precise planetary gear reducer + Rack and pinion

Working Environment

Communication interface Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs)
Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT *③

Rated voltage 24 V DC ± 10%

Current 0.5 A(Rated)/ 1.2 A(Peak)*④

Rated power 12 W

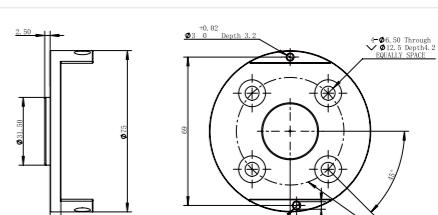
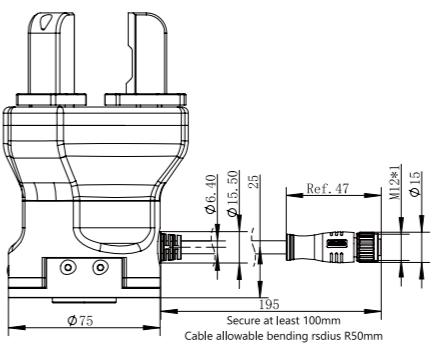
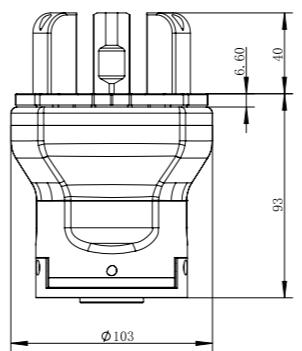
IP class IP 67

Recommended environment 0~40°C, under 85% RH

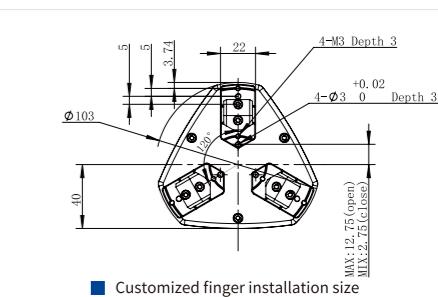
Certification CE, FCC, RoHS



Technical Drawings



Conform to ISO 9409-1-50-4-M6 Standard flange
*For customized flanges, we recommend designing according to the robot mounting holes, or contact us.



Customized finger installation size

Electric Parallel Gripper

Electric Rotary Gripper

Electric Centric Gripper

Articulated Electric Gripper

Electric Parallel Gripper

Electric Rotary Gripper

Electric Centric Gripper

Articulated Electric Gripper

Short wire correspondence table

Our gripper can directly connect to the end interface of each brand of collaborative robot through a short wire.
(The serial number represent the short wire type.)

Support electric gripper models	UR CB Series	UR E Series	Elite CS Series	SJASUN	Hanwha A Series	ROKAE CR Series	DOBOT CR Series	DOBOT Nova Series	Aubo	Elephant	Jaka	ECHMAN	ROKAE SR Series	ROKAE ER Series	DOBOT MG400 Series	UR E Series	Doosan A Series	Doosan M Series	Elite EC Series	Han's Robot	Neuromeka	FARINO	Hanwha HCR	UF xArm	ROKAE CR
Small current electric gripper (Peak current $\leq 0.6A$)	01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Small current electric gripper (Peak current $< 1.5A$)	-	01	01	01	-	-	-	-	02	03	04	05	06	06	07	-	-	-	-	-	-	-	-	-	
High current electric claw (Peak current $> 1.5A$)	-	-	-	-	-	-	-	-	-	-	-	-	-	08	-	-	-	-	-	-	-	-	-	-	
In common (Support large and small current electric gripper)	-	-	-	-	01	01	01	-	-	-	-	-	-	-	09	10	11	12	13	14	15	16	17	-	

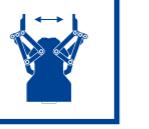
DH-Robotics' Gripper and Cylinder communication converter

The communication within DH-Robotics' Servo Gripper and Servo Electric Cylinder defaults to Modbus RTU (RS485) and a small number of I/O(2 inputs 2 outputs). If customers choose other communication converter, they will need to use the communication converter. The following communication converter are available for selection:

	communication converter Name	Ordering Model		communication converter Name	Ordering Model
	EtherCAT 1-1	M2E-B1-1		TCP/IP 1-1	M2T-B1-1-YBT
	EtherCAT 1-4	M2E-B1-4		PROFINET 1-2	M2P2-B1-2-HJ
	EtherCAT I/O 1-More	Please contact our technical staff confirm the specific parameters		PROFINET 1-11	M2P-B1-11-9

Quick Selection Reference

According to the following five conditions, you can quickly and initially select the matching gripper model; or you can also consult sales for detailed understanding and selection.

Condition 1 Application	Condition 2 Workpiece weight	Condition 3 Gripping stroke	Condition 4 Feature selection	Condition 5 Environmental requirements
				

Collaborative robot
 Load
 Peak current
 Industrial robot
 Automation module

Workpiece shape
 Workpiece material
 Friction
 ...

Workpiece size
 Parallel / centric
 Outer clip, inner support
 Fingertip design
 ...

Rotary
 Self-locking
 Envelope grab
 ...

IP class
 Temperature conditions
 ...

Precautions on Model Selection

Note 1: Confirm the required gripping force and workpiece quality

When the workpiece is clamped by the friction force generated by the clamping force, the required clamping force is calculated as follows:

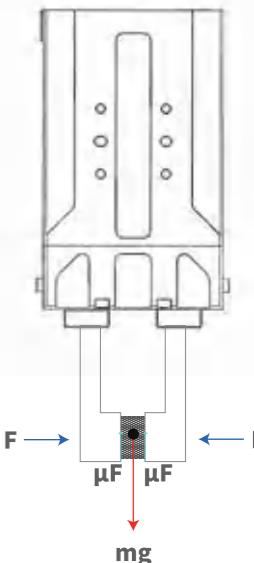
- F : Clamping force (N)
- μ : Friction coefficient
- m : Workpiece quality (kg)
- g : Acceleration due to gravity (9.8m/s²)
- mg : Workpiece weight (N)

Clamped workpiece, The condition that the workpiece will not fall is

$$2 \times \mu F > mg$$

number of gripper fingers

Thus: $F > \frac{mg}{2 \times \mu}$



(Reference) The friction coefficient(μ) varies depending on the usage environment, surface pressure, workpiece shape, etc.

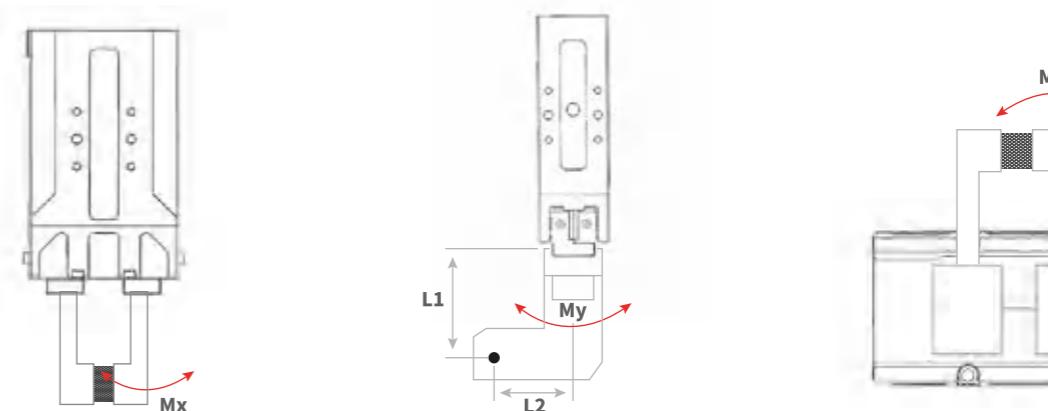
Note 2: Confirm gripper stroke and fingertip

- The stroke of the gripper needs to be greater than the difference between the maximum and minimum dimensions of the workpiece.
- Choose the right fingertip: The fingertip is too long, too big, and the weight is too heavy, the inertia force or bending moment when opening and closing will affect the gripper, which may cause the performance of the gripper to decrease or shorten the service life.

Note 3: Check the external force exerted on the gripper

- The vertical load borne by the clamping jaw must be within the allowable load.
- The moment the clamping jaws bear must be within the maximum allowable load moment.
- Allowable load $F(N) = \frac{M(\text{Load allowable moment}) (N \cdot m)}{L(\text{mm}) \times 10^{-3}}$

Note: M_x and M_y are calculated by L_1 , and M_z is calculated by L_2 . Confirm whether the calculated gripper can withstand the external force (based on the smaller F value calculated from M_x , M_y , M_z).



Host Computer Debugging Software (PC Side)

User-friendly

The host computer debugging software was self-developed by DH-Robotics, it can help customers easily and quickly complete various function parameters adjustments, testing and initialization setting on the PC side. At the meantime, various status information is provided in real time, which can save a lot of production line setup time and reduce the difficulty of operation and maintenance for on-site engineers.



Parameters Adjustable

- gripping force
- fingertip position
- gripping speed
- rotation angle*
- rotation speed*
- rotation force(torque force)*

Real-time feedback

- four gripping states
 - ①movement status
 - ②in place
 - ③clamp state
 - ④dropped state
- location versus time graph
- clamping current as a function of time



Example: DH-Robotics PC software

* Please consult sales person for specific applicable models

Honors and Certificates

- Some of Our Certificates



5

6

7

- 1.CE Certificate
2. IP Class Certificate
- 3.RoHS Certificate
- 4.EMC Certificate
- 5.FCC Certificate
- 6.Low Temperature Test Report
- 7.Intellectual Property Management System Certification

Customer Trust

More than 800 customers around the world are using DH-Robotics products

The number of customers continues to grow rapidly...



Product Distribution

Chinese Agent Distribution Cities

Beijing/Changchun/Changsha/Chengdu/Chongqing/Dalian/Dongguan/
Guangzhou/Hangzhou/Hefei/Jinan/Nanchang/Nanjing/Ningbo/Qingdao/
Shanghai/Shenyang/Shenzhen/Suzhou/Wuhan/Wuxi/Xi'an/Xiamen/Yantai/
Yangzhou/Zhengzhou/Zhuhai

Overseas Agents Distribution Area

Europe: Spain / France / Italy / Germany / UK / Czech Republic / Romania / Russia /

Netherlands / Lithuania / Sweden / Denmark / Norway

Asia: Israel / Bangladesh / India / Japan / Thailand / South Korea / Malaysia

Australia: Australia / New Zealand

America: United States / Mexico

Middle East: Saudi Arabia / Tunisia / Türkiye

VERSION CHANGE LOG

Revision Date	Released Version	Change Log
2025.02	CN.2502	<ul style="list-style-type: none">Discontinuation of RGD-5-30 and PGS-5-5 productsRGIC-35-12 height changed from 150 to 165RGIC-100-35 height changed from 159 to 174PGE-2-12: 0.15s / 0.2sRGI-100-14: 0.45s / 0.25sRGI-100-22: 0.5s / 0.3sRGI-100-30: 0.55s / 0.35sRGIC-35-12: 0.5s / 0.4sNew Electric Adaptive Gripper: DH-5
2024.07	CN.2407	<ul style="list-style-type: none">New Product in the PGI Series: PGI-80-80Added the rated parameter, the precautions for power supply selection, the precautions for 485 communication protocolPGE-2-12 & PGE-15-10 added controller diagram and grounding tips, cable length notesPGE-5-26 canceled brakePGE-100-26 added bottom cable versionPGE-5-26, PGE-8-14, PGE-15-26, PGE-50, PGE-100-26 added 15 meter extend cablePGC-140-50 open/close time updated to 0.75s, peak current updated to 1.2A, drawing updatedCGC-80-10 open/close time updated to 0.5s, rated current update to 0.5A, peaked current updated to 1.2A, added 01 robot cablePGS-5-5 cable updated to L1, L5, added controller diagramCGE-10-10 product iteration, product structure updated, drawing updatedNotes on optional communication protocol updatedPGS-5-5 added external diagramRGD Series added parameter table of rotational time in place for different inertia loadsCGC-80-10 added 01 robot cable

Due to continuous product upgrades, content changes may occur without prior notice.

All rights reserved © DH-ROBOTICS Technology Co., Ltd.