

Servo Electric Grippers

EN-2024.07

DH-ROBOTICS

DH-Robotics is a high-tech company which focus on providing core components for industrial intelligent manufacturing scenarios. Based on the self-developed precision force control direct drive technology, we provide customers in various industries around the world with diversified electric grippers and precision motion products to reduce production costs, improve production efficiency, and achieve intelligent manufacturing.

Our Support System



R&D System



New Technology



Innovation



R&D



Engineering Management



Sales Network



Projects Assessment



Training



Quality Supervision



After-sales Service



Manufacturing



Quality System



Stock Management



Supply Management



Manufacturing

CONTENTS

Applications	4
Selection Reference	7
Products Brief Parameters	9

PGE Series Slim-type Electric Parallel Gripper



PGE-2-12	16
PGE-5-26	18
PGE-8-14	20
PGE-15-10	22
PGE-15-26	24
PGE-50-26	26
PGE-50-40	28
PGE-100-26	30

RGI Series Electric Rotary Gripper



RGI-100-14	39
RGI-100-22	40
RGI-100-30	41
RGIC-35-12	42
RGIC-100-35	44

PGSE Series Cost-effective Slim-type Electric Parallel Gripper



PGSE-15-7	34
-----------	----

RGD Series Electric Direct Drive Rotary Gripper



RGD-5-14	49
RGD-5-30	50
RGD-35-14	53
RGD-35-30	54

PGI Series

Electric Parallel Gripper



PGI-140-80	58
PGI-80-80	58

PGS Series

Miniature Electro Magnetic Gripper



PGS-5-5	66
---------	----

AG Series

Electric Adaptive Gripper



AG-160-95	78
AG-105-145	80
DH-3	82

PGHL Series

Heavy-Load Long-Stroke Electric Parallel Gripper



PGHL-400-80	62
-------------	----

PGC Series

Electric Collaborative Parallel Gripper



PGC-50-35	70
PGC-140-50	72
PGC-300-60	74

CG Series

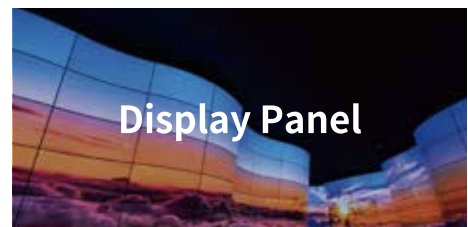
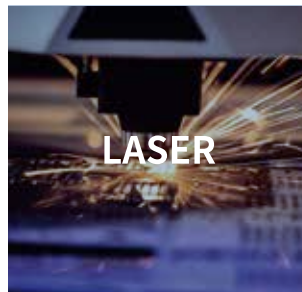
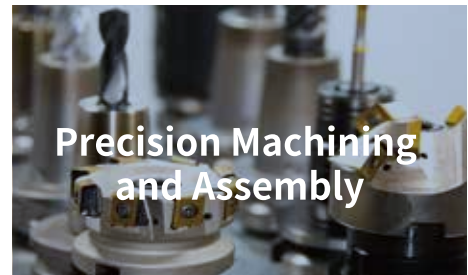
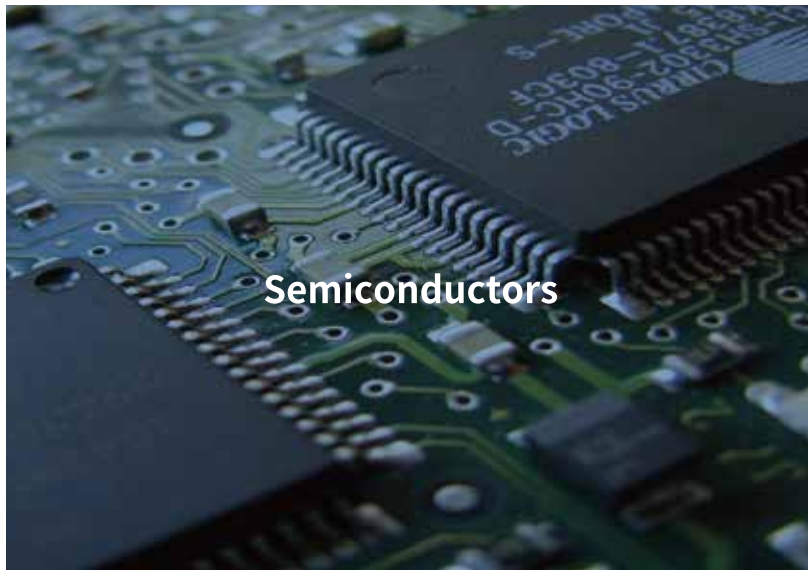
Electric Centric Gripper



CGE-10-10	86
CGI-100-170	88
CGC-80-10	90

Applications in Cutting-edge Industries

More solutions and applications, please visit www.dh-robotics.com



Application cases



PGE-8-14 Automatic Application

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



PGE-8-14 Electronics

Handling and positioning of very small workpieces.



RGI-35-14 Medical Automation

The automatic sub-cup processing system, through ABB's Scara robotic arm and DH-Robotics electric gripper, can automatically complete the operation of sample tube opening, scanning, information entry, pipetting, turning plate, and closing lid.



PGE-15-26 Medical Automation

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

Application cases



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.



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.







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	SIASUN	Hanwha A Series	ROKAE CR Series	DOBOT CR Series	DOBOT Nova Series	Aubo	Elephant	Jaka	ECHMAN	ROKAE SR Series	ROKAE ER Series	DOBOT MG400	UR E Series	Doosan A Series	Doosan M Series	Elite EC Series	Han's Robot	Neuromeka	FAIRINO	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	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. 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转 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



- ☐ Collaborative robot
 - ☐ Load
 - ☐ Peak current
- ☐ Industrial robot
- ☐ Automation module

Condition 2 Workpiece weight



- ☐ Workpiece shape
- ☐ Workpiece material
- ☐ Friction
- ☐ ...

Condition 3 Gripping stroke



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

Condition 4 Feature selection



- ☐ Rotary
- ☐ Self-locking
- ☐ Envelope grab
- ☐ ...

Condition 5 Environmental requirements



- ☐ 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/s^2)
- mg: Workpiece weight (N)

Friction coefficient μ	Fingertip and workpiece material (benchmark)
0.1	Metal(Surface roughness under Rz3.2)
0.2	Metal
Over 0.2	Rubber, resin

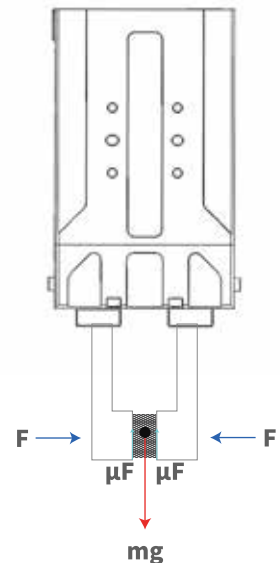
(Reference) The friction coefficient(μ) varies depending on the usage environment, surface pressure, workpiece shape, etc.

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

number of gripper fingers \uparrow

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

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



Note 2: Confirm gripper stroke and fingertip

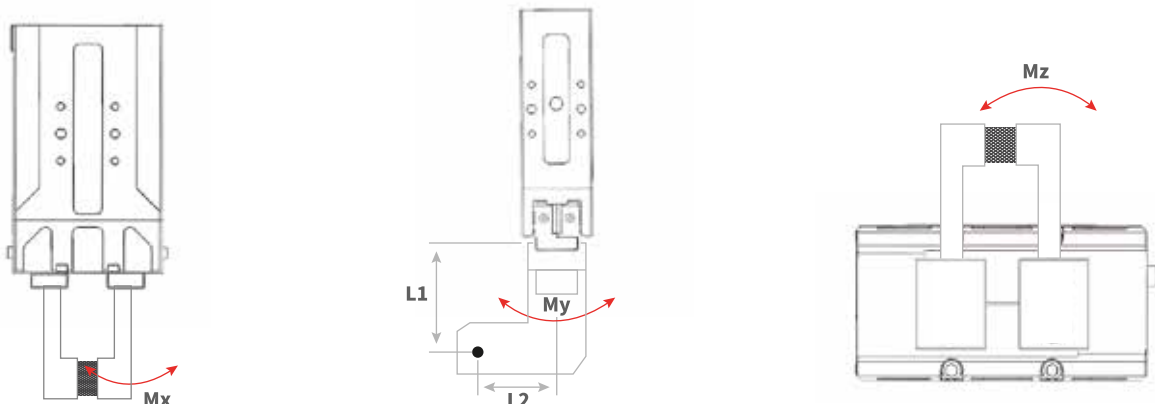
- The stroke of the gripper needs to be greater than the difference between the maximum and minimum dimensions of the workpiece.
- Choose the right fingertip: The fingertip is too long, too big, and the weight is too heavy, the inertia force or bending moment when opening and closing will affect the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

$$\text{Allowable load } F(\text{N}) = \frac{M(\text{Load allowable moment}) (\text{N} \cdot \text{m})}{L(\text{mm}) \times 10^{-3}}$$

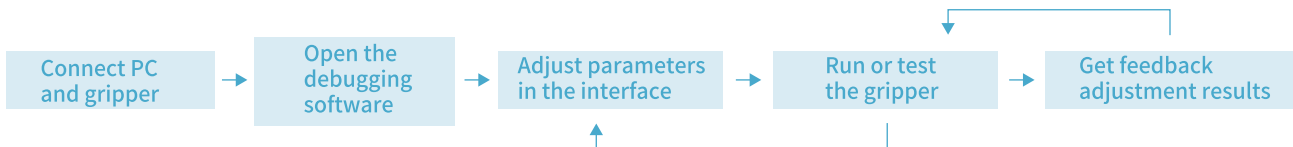
Note: M_x and M_y are calculated by L_1 , and M_z is calculated by L_2 . Confirm whether the calculated gripper can withstand the external force (based on the smaller F value calculated from M_x , M_y , M_z).



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 meaning time, 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.

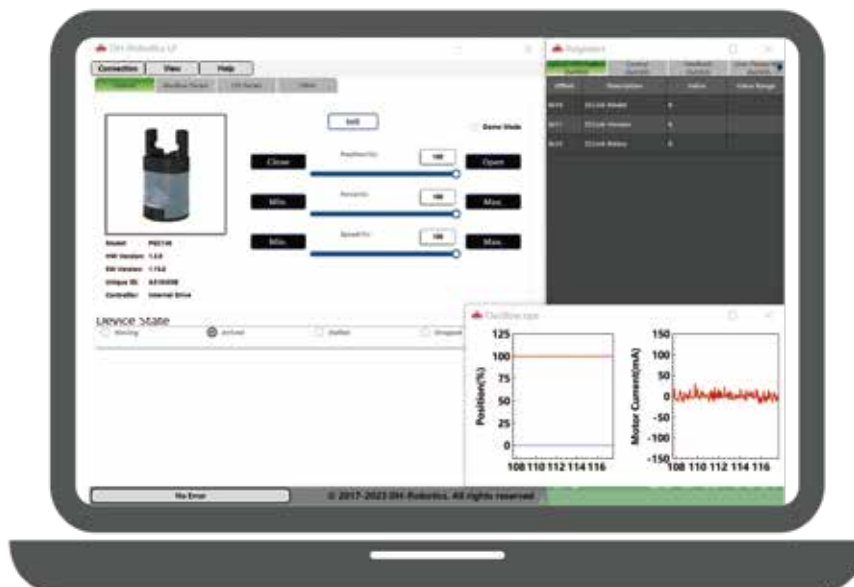


Parameters Adjustable

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

Real-time feedback

- four gripping states
 - ① movement status
 - ② in place
 - ③ clamp state
 - ④ dropped 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

Products Brief Parameters

PGE Series Slim-type Electric Parallel Gripper

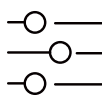
Precision
force control

Small Size

Fast
Response



All-in-one
Design



Adjustable
Parameters



Intelligent
Feedback



Replaceable
Fingertip



Self-locking
Mechanism



PGE-2-12



PGE-5-26



PGE-8-14



PGE-15-10



PGE-15-26



PGE-50-26



PGE-50-40



PGE-100-26

	Gripping Force (N)	Recommended workpiece weight(kg)	Stroke (mm)	Opening/closing time(s)	IP Class
PGE-2-12	0.8~2	0.05	12	0.15	IP40
PGE-5-26	0.8~5	0.1	26	0.3	IP40
PGE-8-14	2~8	0.1	14	0.3	IP40
PGE-15-10	6~15	0.25	10	0.3	IP40
PGE-15-26	6~15	0.25	26	0.5	IP40
PGE-50-26	15~50	1	26	0.45/0.45	IP40
PGE-50-40	15~50	1	40	0.6/0.6	IP40
PGE-100-26	30~100	2	26	0.5	IP40

PGSE Series Cost-effective Slim-type Electric Parallel Gripper

Small Size

Fast
Response



All-in-one
Design



Replaceable
Fingertip



PGSE-15-7

	Gripping Force (N)	Recommended workpiece weight(kg)	Stroke (mm)	Opening/closing time(s)	IP Class
PGSE-15-7	6~15	0.25	7	0.15	IP40

RGI Series

Electric Rotary Gripper

Infinite Rotation



All-in-one Design

Dual Servo System



Adjustable Parameters

Compact Type



Intelligent Feedback



Replaceable Fingertip



RGIC-35-12



RGIC-100-35



RGI-100

	Gripping Force (N)	Recommended workpiece weight(kg)	Stroke (mm)	Opening/closing time(s)	IP Class
RGI-100	30~100	1.5	14/22/30	0.6/0.65/0.7	IP40
RGIC-35-12	13~35	0.5	12	0.6	IP40
RGIC-100-35	40~100	1	35	0.9	IP40

RGD Series

Electric Direct Drive Rotary Gripper

Zero Backlash



All-in-one Design

Infinite Rotation



Adjustable Parameters

Precise Positioning



Intelligent Feedback



Replaceable Fingertip



Self-locking Mechanism



RGD-5



RGD-35

	Gripping Force (N)	Recommended workpiece weight(kg)	Stroke (mm)	Opening/closing time(s)	IP Class
RGD-5	2~5.5	0.05	14/30	0.5	IP40
RGD-35	10~35	0.35	14/30	0.5/0.7	IP40

PGI Series

Electric Parallel Gripper

High Load



All-in-one Design

High Protection Grade



Adjustable Parameters

Long Stroke



Intelligent Feedback



Replaceable Fingertip



Self-locking Mechanism



PGI-140-80

	Gripping Force (N)	Recommended workpiece weight(kg)	Stroke (mm)	Opening/closing time(s)	IP Class
PGI-80-80	16~80	1.6	80	1.1	IP54
PGI-140-80	40~140	3	80	0.7s (80mm) 0.4s (5mm)	IP54

PGHL Series

Heavy-Load Long-Stroke Electric Parallel Gripper

High Load

High Protection Grade

Long Stroke



All-in-one Design



Adjustable Parameters



Intelligent Feedback



Replaceable Fingertip



Self-locking Mechanism



PGHL-400-80

	Gripping Force (N)	Recommended workpiece weight(kg)	Stroke (mm)	Opening/closing time(s)	IP Class
PGHL-400-80	140~400	8	80	1.0/1.1	IP40

PGS Series

Miniature Electro-magnetic Gripper

Small Size

High Frequency

Easy Operation



Replaceable Fingertip



Self-locking Mechanism



PGS-5-5

	Gripping Force (N)	Recommended workpiece weight(kg)	Stroke (mm)	Opening/closing time(s)	IP Class
PGS-5-5	3~5.5	0.05	5	0.03	IP40

PGC Series

Electric Collaborative Parallel Gripper

Plug and Play

High Protection Grade

High Load



All-in-one Design



Adjustable Parameters



Intelligent Feedback



Replaceable Fingertip



Self-locking Mechanism



PGC-50-35



PGC-140-50



PGC-300-60

	Gripping Force (N)	Recommended workpiece weight(kg)	Stroke (mm)	Opening/closing time(s)	IP Class
PGC-50-35	15~50	1	37	0.7	IP54
PGC-140-50	40~140	3	50	0.75	IP67
PGC-300-60	80~300	6	60	0.8	IP67

AG Series

Electric Collaborative Parallel Gripper

Plug and Play

High Protection
Grade

High Load



All-in-one
Design



Adjustable
Parameters



Intelligent
Feedback



Replaceable
Fingertip



Self-locking
Mechanism



AG-160-95



AG-105-145



DH-3

	Gripping Force (N)	Recommended workpiece weight(kg)	Stroke (mm)	Opening/closing time(s)	IP Class
AG-160-95	45~160	3	95	0.9	IP54
AG-105-145	35~105	2	145	0.9	IP54
DH-3	10~65	1.8	106(parallel)/122(centric)	0.7	IP40

CG Series

Electric Centric Gripper

Centric
Gripping



All-in-one
Design



Adjustable
Parameters



Intelligent
Feedback



Replaceable
Fingertip



Self-locking
Mechanism



CGE-10-10



CGI-100-170



CGC-80-10

	Gripping Force (N)	Recommended workpiece weight(kg)	Stroke (mm)	Opening/closing time(s)	IP Class
CGE-10-10	3~10	0.1	10 (Single jaw)	0.3	
CGI-100-170	30~100	1.5	φ40~φ170 (Inward work piece diameter)	1.35	IP40
CGC-80-10	20~80	1.5	10 (Single jaw)	0.5	IP67

PGE Series Slim-type Electric Parallel Gripper

PGE-2-12

PGE-5-26

PGE-8-14

PGE-15-10

PGE-15-26

PGE-50-26

PGE-50-40

PGE-100-26

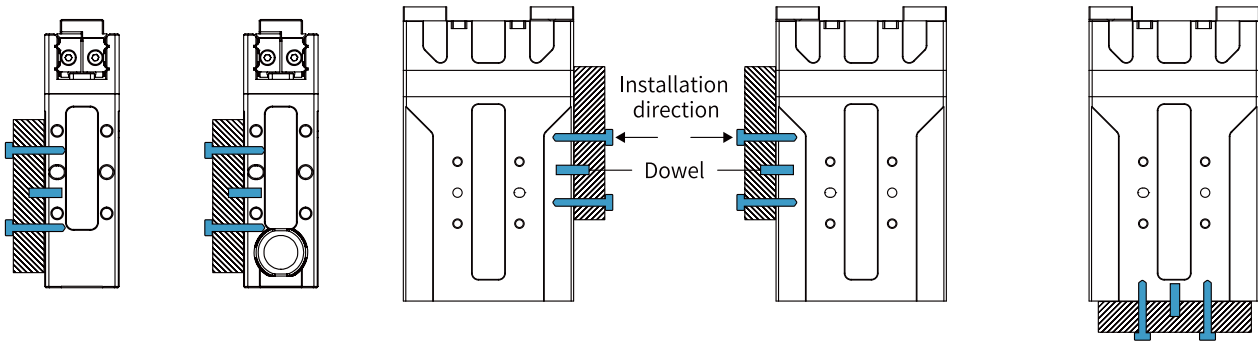


The PGE series is an industrial slim-type electric parallel gripper. With its precise force control, compact size and highly working speed, it has become a “Hot sell product” in the field of industrial electric gripper.



Installation

1. Front installation: use front screw holes for installation
2. Rear installation: use rear screw holes for installation
3. Right installation: use right screw holes for installation
4. Left installation: use left screw holes for installation
5. Bottom installation : use bottom screw holes for installation



Product Features

● Small size Flexible Installation

The thinnest size is 18 mm with compact structure, supports at least five flexible installation methods to meet the needs of clamping tasks & saves 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

For scenarios requiring force control or flexibility, such as assembly, sorting and loading and unloading in semiconductor, 3C electronics, medical automation and other industries.



PGE-2-12

Slim-type Electric
Parallel Gripper



Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Other
PGE	- 2	- 12	- O	- S	- M1	- L5	- J0	- F0	- 0
<div> <div> <p>★ ① Note:</p> <p>I/O(NN): NPN/NPN</p> <p>I/O(PP): PNP/PNP</p> <p>I/O(NP): NPN/PNP</p> <p>I/O(PN): PNP/NPN</p> </div> <div> <p>O Without Brake</p> <p>S Side</p> <p>B bottom</p> </div> <div> <p>★ ② ★ ③</p> <p>M1 Modbus (RS485)+I/O (NN)</p> <p>M2 Modbus (RS485)+I/O (PP)</p> <p>M3 Modbus (RS485)+I/O (NP)</p> <p>M4 Modbus (RS485)+I/O (PN)</p> </div> <div> <p>★ ③</p> <p>LX Without Extend Cable</p> <p>L1 1m Cable</p> <p>L3 3m Cable</p> <p>L5 5m Cable</p> <p>L10 10m Cable</p> </div> <div> <p>J0 Without Fingertip</p> <p>J1 Standard Fingertip</p> </div> <div> <p>F0 Without Flange</p> </div> <div> <p>0 Without USB to RS-485 Converter</p> <p>4 USB to RS-485 Converter</p> </div> </div>									

★ ② Cables longer than 10 meters are at risk.

★ ③ 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-5-26

Slim-type Electric
Parallel Gripper



Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Robot Cable	Other
PGE	5	26	O	S	M1	L5	J0	F0	00	0
<div style="display: flex; justify-content: space-between;"> <div style="width: 15%;"> <p>O Without Brake</p> </div> <div style="width: 15%;"> <p>S Side B bottom</p> </div> <div style="width: 15%;"> <p>M1 Modbus (RS485)+I/O (NN) M2 Modbus (RS485)+I/O (PP) M3 Modbus (RS485)+I/O (NP) M4 Modbus (RS485)+I/O (PN)</p> </div> <div style="width: 15%;"> <p>LX Without Extend Cable L1 1m Cable L3 3m Cable L5 5m Cable L10 10m Cable L15 15m Cable</p> </div> <div style="width: 15%;"> <p>J0 Without Fingertip J1 Standard Fingertip</p> </div> <div style="width: 15%;"> <p>F0 Without Flange</p> </div> <div style="width: 15%;"> <p>Table Below</p> </div> <div style="width: 15%;"> <p>0 Without USB to RS-485 Converter 4 USB to RS-485 Converter</p> </div> </div>										

* ① Note:

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 UR CB	02 DOBOT CR Hanwha A UR E	03 DOBOT Nova	04 AUBO	05 JAKA	06 ROKAE SR ROKAE ER	07 DOBOT MG400	09 Doosan A	10 Doosan M	11 Elite EC	12 Han's	13 FAIRINO	14 UF x Arm	15 ROKAE CR
-------------------------------	------------------------------------	--	----------------------	----------------	----------------	--------------------------------	-----------------------	--------------------	--------------------	--------------------	-----------------	-------------------	--------------------	--------------------

*⑤ It is recommended that no more than 4units 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.

Parameters

Product Parameter

Gripping force (per jaw)	0.8~5 N
Stroke	26 mm
Recommended workpiece weight ^{*②}	0.1 kg
Opening/closing time	0.3 s/0.3 s
Repeat accuracy (position)	± 0.02 mm
Noise emission	< 50 dB
Weight	0.4 kg
Driving method	Precise planetary gears + Rack and pinion
Size	95 mm x 55 mm x 26 mm(without brake) 113.5 mm x 55 mm x 30 mm(with brake)

Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O 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



Build-in
Controller



Gripping Force
Adjustable



Position
Adjustable



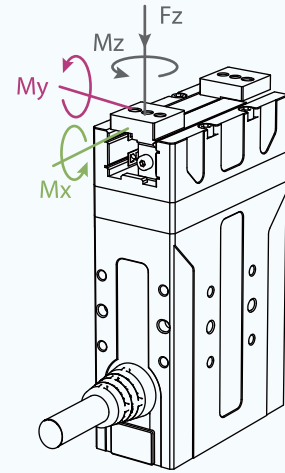
Speed
Adjustable



Drop
Detection



Self-locking
Mechanism



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

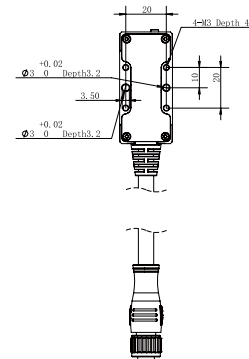
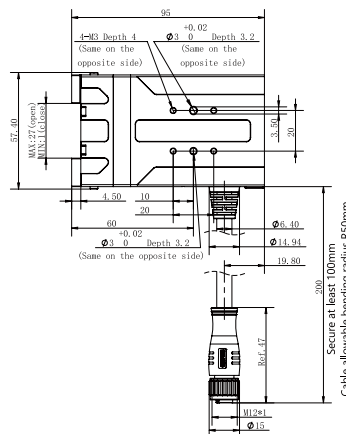
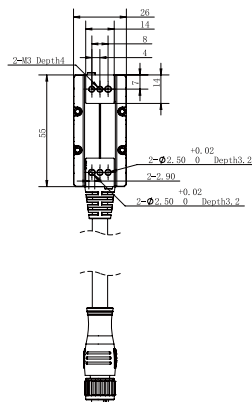
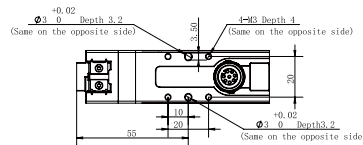
^{*②} It depends on the shape of the grasping object, the material and friction of the contact surface, and the acceleration of the motion. If you have any questions, please contact us.

^{*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

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-8-14

Slim-type Electric
Parallel Gripper



Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Robot Cable	Other
PGE	8	14	O	S	M1	L5	J0	F0	00	0
O Without Brak	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 J1 Standard Fingertip	F0 Without Flange	Table Below	0 Without USB to RS-485 Converter 4 USB to RS-485 Converter

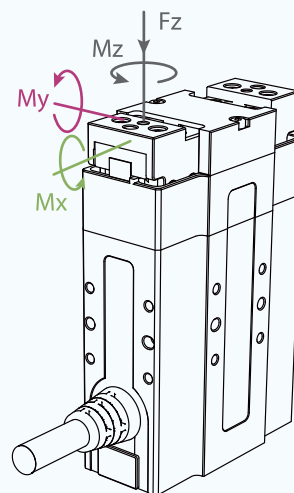
★ ① Note:

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 Elite CS UR CB	SIASUN Hanwha A UR E	DOBOT CR DOBOT Nova	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

*⑤ It is recommended that no more than 4units 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.

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



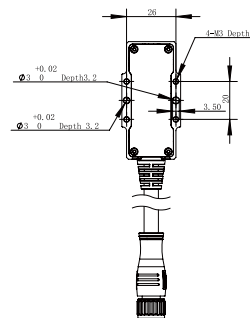
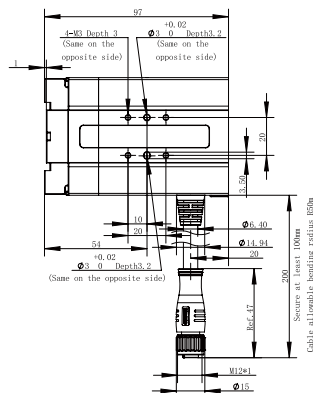
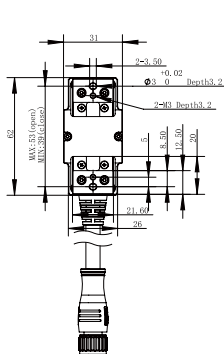
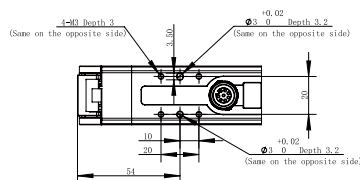
F_z	90 N
-------	------

M_x	$0.55 \text{ N} \cdot \text{m}$
M_y	$0.45 \text{ N} \cdot \text{m}$
M_z	$0.55 \text{ N} \cdot \text{m}$

*② It depends on the shape of the grasping object, the material and friction of the contact surface, and the acceleration of the motion. If you have any questions, please contact 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

[illegible]

*② Cables longer than 10 meters are at risk.

*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.

Parameters

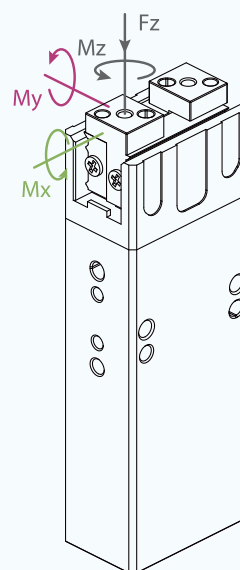
Product Parameter

Gripping force (per jaw)	6~15 N
Stroke	10 mm
Recommended workpiece weight ^{*③}	0.25 kg
Opening/closing time	0.3 s/0.3 s
Repeat accuracy (position)	± 0.02 mm
Noise emission	< 50 dB
Weight	0.155 kg
Driving method	Precise planetary gears + Rack and pinion
Size	Gripper Size: 89 mm x 30 mm x 18 mm Controller Size: 78 mm x 52.4 mm x 27.2 mm

Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT ^{**④}
Rated voltage	24 V DC ± 10%
Current	0.1 A (Rated) / 0.22 A (Peak) ^{*⑤}
Rated Power	2.4 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



Static Vertical Allowable Load

Fz	35 N
----	------

Allowable Loading Moment

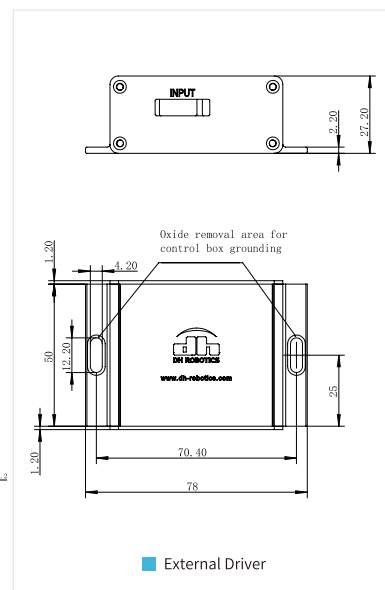
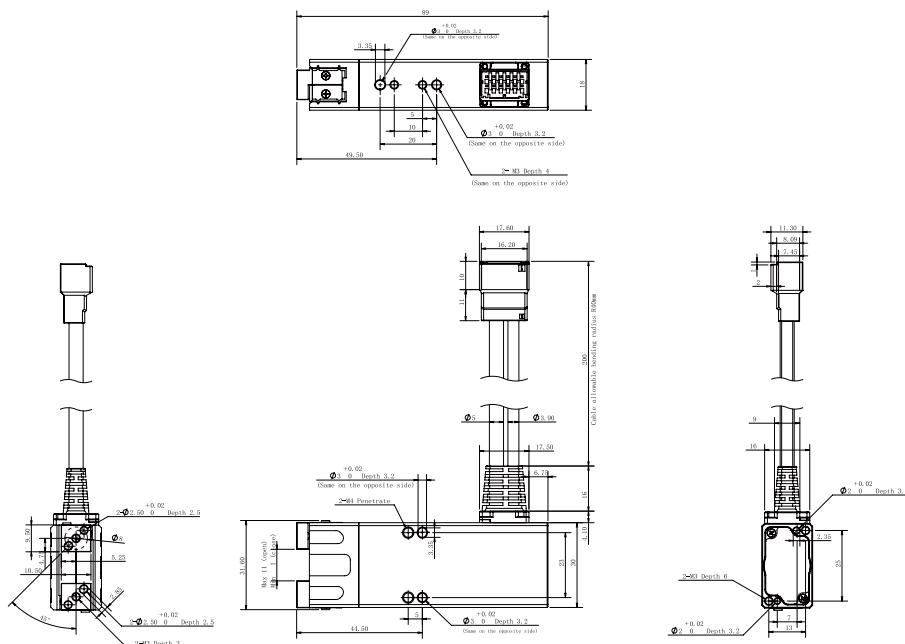
Mx	0.45 N · m
My	0.4 N · m
Mz	0.45 N · m

*③ It depends on the shape of the grasping object, the material and friction of the contact surface, and the acceleration of the motion. If you have any questions, please contact us.

*④ Requires external communication converter or customization, please contact sales or technical support.

*⑤ 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



PGE-15-26

Slim-type Electric
Parallel Gripper



Selection Method

Series	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Robot Cable	Other
PGE	15	26	O	S	M1	L5	J0	F0	00	0
O Without Brake W With Brake	S Side B bottom				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 J1 Standard Fingertip	F0 Without Flange		0 Without USB to RS-485 Converter 4 USB to RS-485 Converter

★① Note:

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 UR CB	02 DOBOT CR Hanwha A UR E	03 DOBOT Nova	04 AUBO JAKA	05 ROKAE SR ROKAE ER	06 DOBOT MG400	07 Doosan A	08 Elite EC	09 Neuromeka	10 Hanwha HCR
				11 ELEPHANT	12 TECHMAN	13 DOBOT MG400	14 Doosan M	15 Han's	16 FAIRINO	17 UF x Arm

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.

- 25 -

PGE-50-26

Slim-type Electric
Parallel Gripper



Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Robot Cable	Other
PGE	- 50	- 26	- O	- S	- M1	- L5	- J0	- F0	- 00	- 0
<div> <div> O Without Brake W With Brake </div> <div> S Side B bottom </div> <div> M1 Modbus (RS485)+I/O (NN) M2 Modbus (RS485)+I/O (PP) M3 Modbus (RS485)+I/O (NP) M4 Modbus (RS485)+I/O (PN) </div> <div> LX Without Extend Cable L1 1m Cable L3 3m Cable L5 5m Cable L10 10m Cable L15 15m Cable </div> <div> J0 Without Fingertip J1 Standard Fingertip </div> <div> F0 Without Flange </div> <div> 00 Without USB to RS-485 Converter 4 USB to RS-485 Converter </div> </div>										

★ ① Note:

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 Elite CS UR CB	SIASUN Hanwha A UR E	DOBOT CR DOBOT Nova	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

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.

CG Series

PGE-50-40

Slim-type Electric
Parallel Gripper



Selection Method

Series	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Robot Cable	Other
PGE	50	40	O	S	M1	L5	J0	F0	00	0
<div><div><div>O Without Brake</div><div>W With Brake</div></div><div><div>S Side</div><div>B bottom</div></div><div><div>M1 Modbus (RS485)+I/O (NN)</div><div>M2 Modbus (RS485)+I/O (PP)</div><div>M3 Modbus (RS485)+I/O (NP)</div><div>M4 Modbus (RS485)+I/O (PN)</div></div><div><div>LX Without Extend Cable</div><div>L1 1m Cable</div><div>L3 3m Cable</div><div>L5 5m Cable</div><div>L10 10m Cable</div><div>L15 15m Cable</div></div><div><div>J0 Without Fingertip</div><div>J1 Standard Fingertip</div></div><div><div>F0 Without Flange</div></div><div><div>00 Without USB to RS-485 Converter</div><div>4 USB to RS-485 Converter</div></div></div>										

★ ① Note:

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 UR CB	02 DOBOT CR Hanwha A UR E	03 DOBOT Nova	04 AUBO JAKA	05 ROKAE SR ROKAE ER	06 DOOSAN A	07 DOOSAN M	08 ELITE EC	09 NEUROMEKA	10 HANWHA HCR
				03 ELEPHANT	05 TECHMAN	07 DOBOT MG400	10 DOOSAN M	12 HAN'S	14 FAIRINO	15 UF x Arm
								16 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.







Parameters

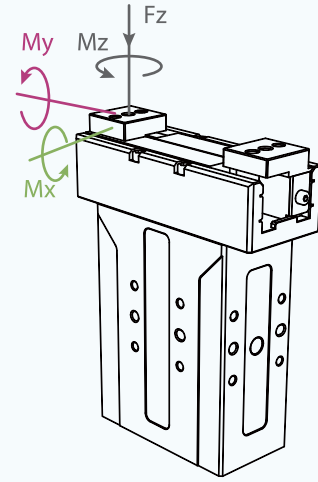
Product Parameter

Stroke	40 mm
Gripping force (per jaw)	15~50 N
Recommended workpiece weight ^{*②}	1 kg
Opening/closing time	0.6 s/0.6 s
Repeat accuracy (position)	± 0.02 mm
Noise emission	< 50 dB
Weight	0.51 kg
Driving method	Precise planetary gears + Rack and pinion
Size	97 mm x 78 mm x 29 mm(without brake) 118 mm x 78 mm x 29 mm(with brake)

Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O 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



Static Vertical Allowable Load

Fz	150 N
----	-------

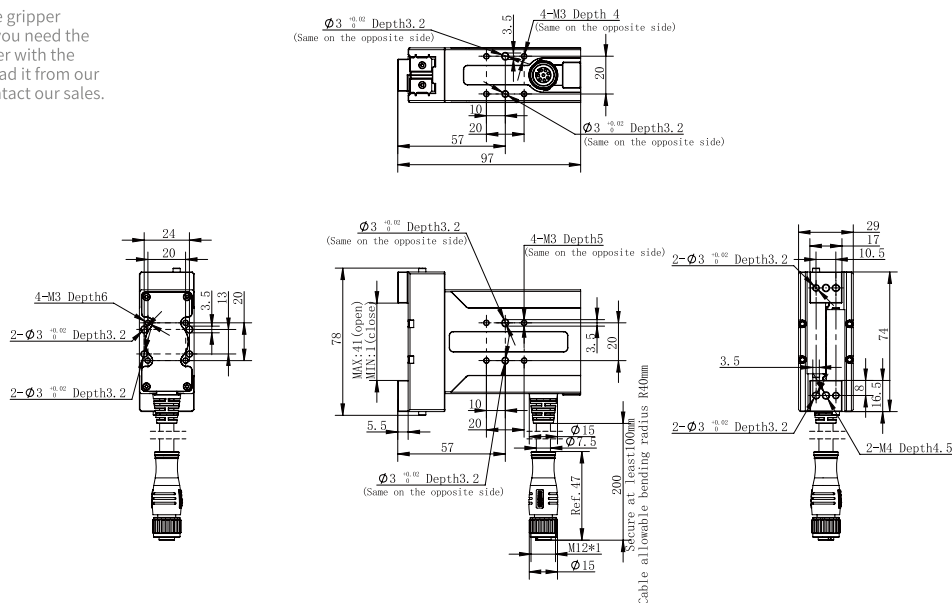
Allowable Loading Moment

Mx	4.5 N · m
My	5 N · m
Mz	7 N · m

^{*②} It depends on the shape of the grasping object, the material and friction of the contact surface, and the acceleration of the motion. If you have any questions, please contact 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

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

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Robot Cable	Other
PGE	100	26	O	S	M1	L5	J0	F0	00	0
O	S B						J0 J1	F0		0 4
	Side bottom						Without Fingertip Standard Fingertip	Without Flange		Without USB to RS-485 Converter USB to RS-485 Converter

* ① Note:

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 Elite CS UR CB	SIASUN Hanwha A UR E	DOBOT CR DOBOT Nova	02 AUBO 03 ELEPHANT	04 JAKA 05 TECHMAN	06 ROKAE SR ROKAE ER 07 DOBOT MG400	09 Doosan A 10 Doosan M	11 Elite EC 12 Han's	13 Neuromeka 14 FAIRINO	15 Hanwha HCR 16 UF x Arm 17 ROKAE CR
-------------------------------	-----------------------------	----------------------------	------------------------	--------------------------------------	-------------------------------------	--	--	---------------------------------------	--	--

* ⑤ It is recommended that no more than 4units 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.

Parameters

Product Parameter

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

Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT ^{**}
Rated voltage	24 V DC ± 10%
Current	0.3 A (Rated)/ 1.2 A (Peak) ^{**}
Rated Power	7.2 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



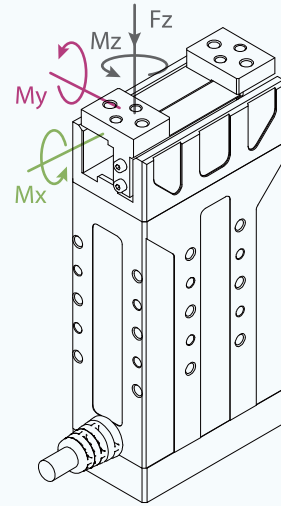
Speed Adjustable



Drop Detection



Self-locking Mechanism



Static Vertical Allowable Load

Fz 150 N

Allowable Loading Moment

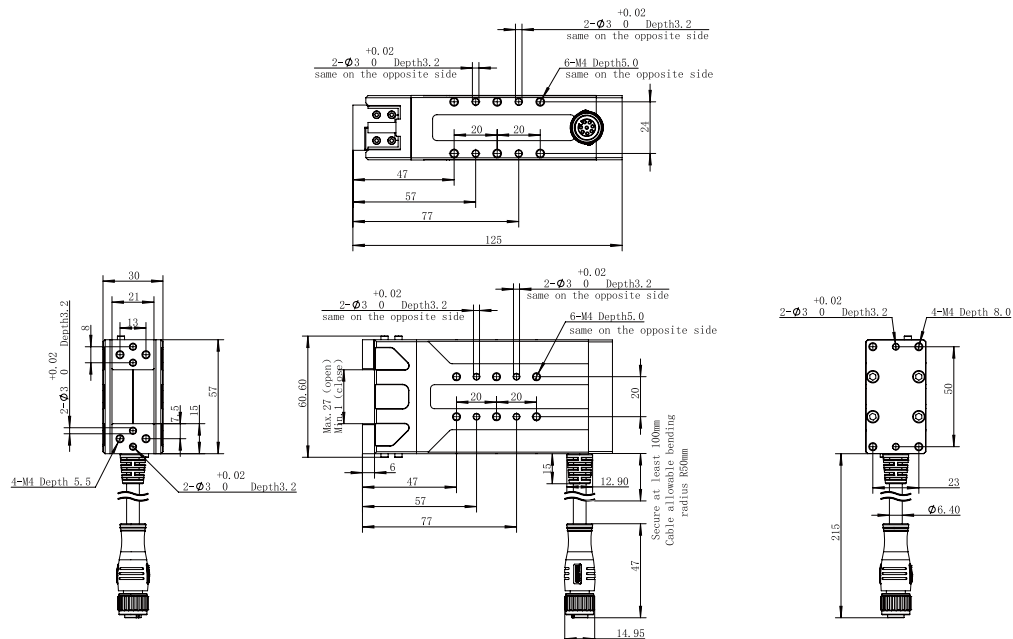
Mx 2.5 N·m

My 3 N·m

Mz 4 N·m

*② It depends on the shape of the grasping object, the material and friction of the contact surface, and the acceleration of the motion. If you have any questions, please contact 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



PGSE Series Slim-type Electric Parallel Gripper

PGSE-15-7

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

Cost-effective

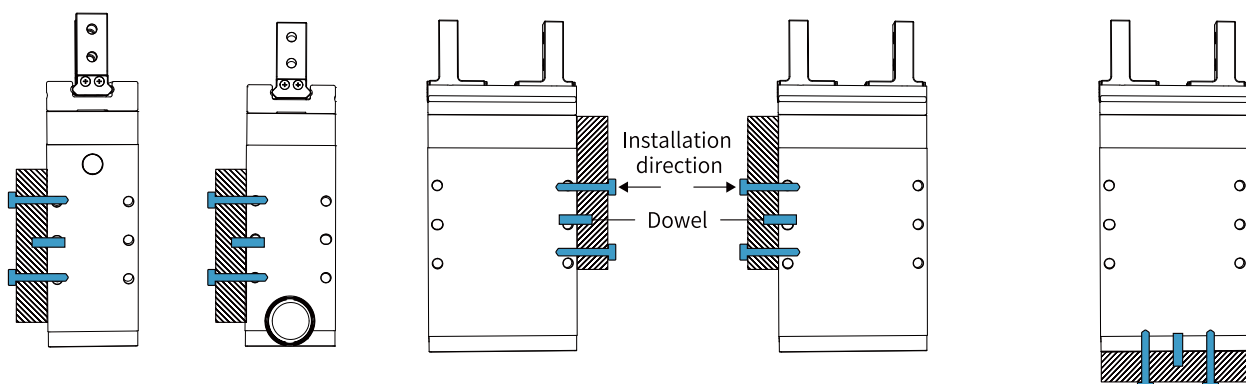


The PGSE Industrial Parallel Gripper is a miniature electric gripper specifically designed to meet the demand for quick grasping in narrow and compact installation spaces in industrial settings.



Installation

1. Front installation: use front screw holes for installation
2. Rear installation: use rear screw holes for installation
3. Right installation: use right screw holes for installation
4. Left installation: use left screw holes for installation
5. Bottom installation : use bottom screw holes for installation



Product Features

● Ultimate Slimness

The PGSE gripper features a compact and intricate design, with dimensions of only 85.6 x 38 x 23.2 mm (length x width x height), making it extremely slim and compact.

● High-Speed Response

The PGSE gripper offers rapid opening and closing times, with a minimum response time of as fast as 0.15 seconds for both opening and closing actions. This allows for quick grasping cycles, meeting the high-speed gripping requirements of production lines.

● Flexible Installation

The gripper body of the PGSE model provides multiple mounting options, allowing for versatile installation in compact spaces. Coupled with its compact size, it facilitates easy installation in tight spaces.

Application

The PGSE gripper is suitable for compact production environments, such as the semiconductor and 3C electronics industries, where it can be utilized for gripping, sorting, loading, and unloading of small-sized components.





Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Other
PGSE	15	7	O	S	M1	L5	JO	F0	0
			Without Brake	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)	L1 1m Cable L3 3m Cable L5 5m Cable L10 10m Cable	Without Fingertip	Without Flange	0 Without USB to RS-485 Converter 4 USB to RS-485 Converter

★ ① Note:
 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.

Parameters

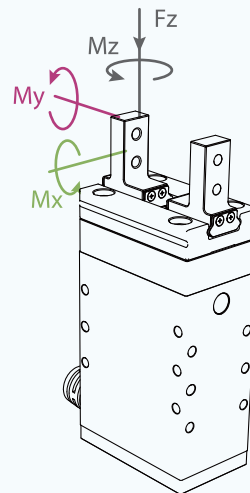
Product Parameter

Gripping force (per jaw)	6~15 N
Stroke	7 mm
Recommended workpiece weight ^{*②}	0.25 kg
Opening/closing time	0.15 s/0.15 s
Noise emission	< 50 dB
Weight	0.15 kg
Driving method	Precise planetary gears + Rack and pinion
Size	85.6 mm x 38 mm x 23.2 mm

Working Environment

Communication interface	Modbus RTU (RS485)、Digital I/O ^{*③}
Rated voltage	24 V DC \pm 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

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



Static Vertical Allowable Load

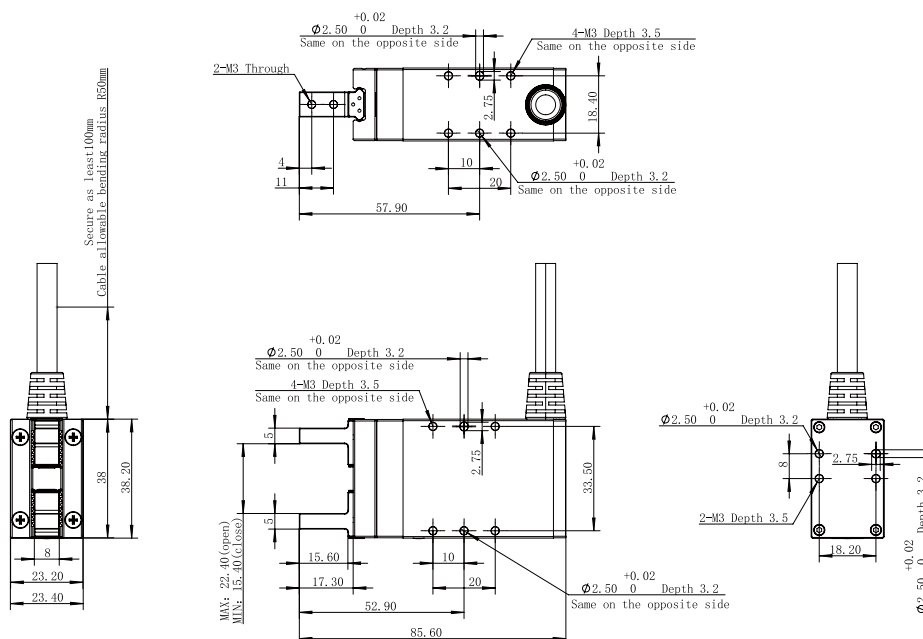
Fz	70 N
----	------

Allowable Loading Moment

Mx	0.9 N·m
My	0.75 N·m
Mz	0.9 N·m

^{*②} It depends on the shape of the grasping object, the material and friction of the contact surface, and the acceleration of the motion. If you have any questions, please contact 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



RGI Series Electric Rotary Gripper

RGI (Standard)

RGI-100-14

RGI-100-22

RGI-100-30

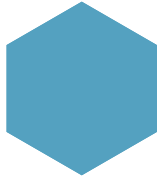
RGIC (Compact)

RGIC-35-12

RGIC-100-35

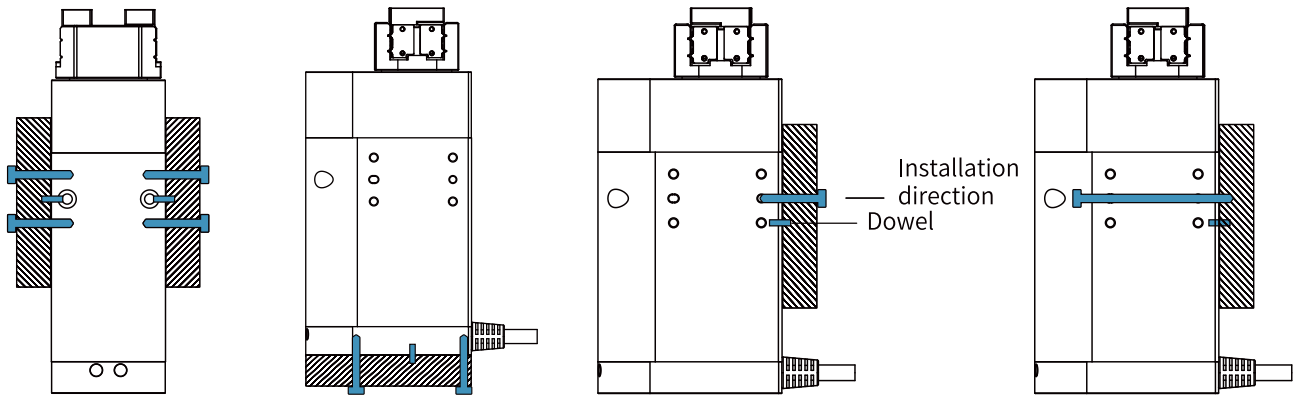


RGI series is the first fully self-developed infinite rotating gripper with a compact and precise structure on the market. It is widely applied in medical automation industry to grip and rotate the test tubes as well as other industries like electronics and New energy industry.



Installation

1. Side installation: use side screw holes for installation
2. Bottom installation : use bottom screw holes for installation
3. Rear installation: use rear screw holes for installation
4. Front installation: Install with front screw holes



Product Feature

● 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

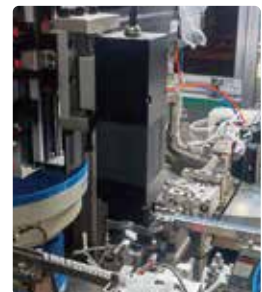
Dual servo systems are creatively integrated in a thin machine body, which is compact in design and can be adapted to many industrial scenes.

● High Gripping Force and Torque

The maximum single-sided gripping force is 100N, and the maximum torque is $1.5\text{N} \cdot \text{m}$. Though precise force control and position control, the RGI gripper can more stably complete the grasping and rotating tasks.

Application

Medical automation reagents, blood samples, nucleic acids and other sample processing scenarios such as opening and closing covers, scanning code detection, etc.; RGI-100 series comes standard with fingertips and can be adapted to 10 mix 1 and 20 mix 1 size tubes to meet the needs of large-scale nucleic acid sampling.





Selection Method

[illegible]

*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.

CG Series



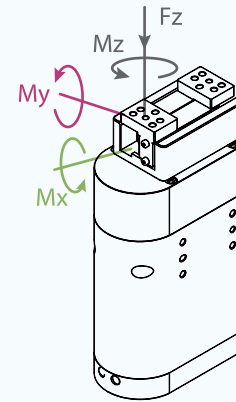
RGI-100-22 Parameters

Product Parameter

Stroke	22 mm
Gripping force (per jaw)	30~100 N
Rated torque	0.5 N·m
Peak torque	1.5 N·m
Rotary range	Infinite Rotating
Recommended workpiece weight(Fingertip included)* ^②	1.5 kg
Max. rotation speed	2160 °/s
Repeat accuracy (swiveling)	± 0.05 °
Repeat accuracy (position)	± 0.02 mm
Opening/closing time	0.65 s/0.65 s
Weight	1.28 kg
Size	158 x 75.5 x 47 mm Rotaty Diameter: 67.1 mm

Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O Optional: TCP/IP, CAN2.0A, PROFINET, 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



Static Vertical Allowable Load

Fz	200 N
----	-------

Allowable Loading Moment

Mx	3.5 N·m
My	4 N·m
Mz	5.5 N·m

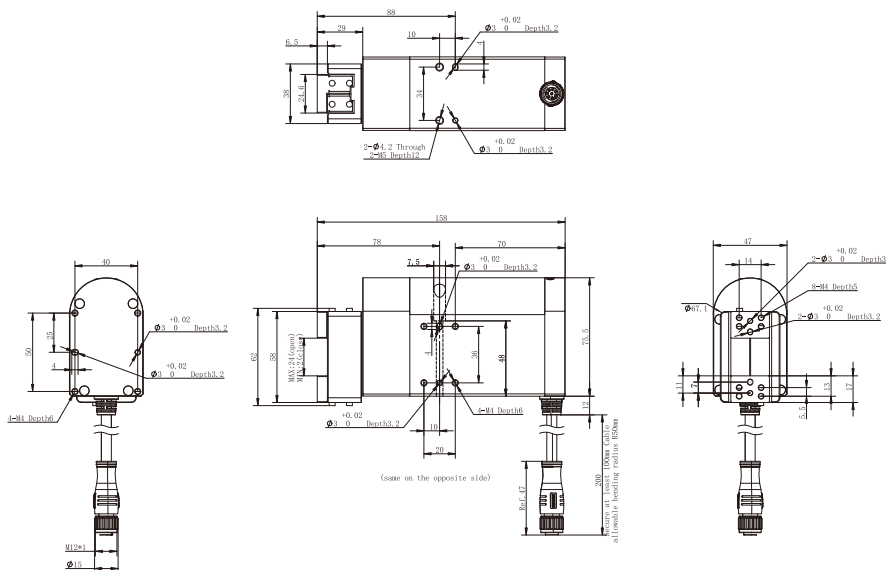
<input checked="" type="checkbox"/> Build-in Controller	<input checked="" type="checkbox"/> Gripping Force Adjustable	<input checked="" type="checkbox"/> Position Adjustable	<input checked="" type="checkbox"/> Speed Adjustable
<input checked="" type="checkbox"/> Drop Detection	<input checked="" type="checkbox"/>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

*^② It depends on the shape of the grasping object, the material and friction of the contact surface, and the acceleration of the motion, if you have any questions, please contact 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



CG Series

Electric Rotary Gripper



Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange selection	Other
ERGIC	35	12	O	S	M1	L5	J0	F0	0

The diagram illustrates the available cable configurations for the RS-485 interface. A central vertical line represents the main connection point. From this line, several horizontal branches extend to the left and right, each leading to a specific cable option. These options include different cable lengths (LX, L1, L3, L5, L10) and different connector types (O, S, B, M1-M4, J0, J1, F0). Each option is detailed in a box below the diagram.

Cable Type	Description
O	Without Brake
S	Side
B	bottom
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
J0	Without Fingertip
J1	Standard Fingertip
F0	Without Flange
0	Without USB to RS-485 Converter
4	USB to RS-485 Converter

★① Note:
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.

CG Series

RGIC-100-35

Electric Rotary Gripper



Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Other
RGIC	100	35	O	S	M	L5	J0	F0	0
O Without Brake	S Side B bottom		M Modbus (RS485) ★④	LX Without Extend Cable L1 1m Cable L3 3m Cable L5 5m Cable L10 10m Cable		J0 Without Fingertip J1 Standard Fingertip	F0 Without Flange	0 Without USB to RS-485 Converter 4 USB to RS-485 Converter	

*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.

Parameters

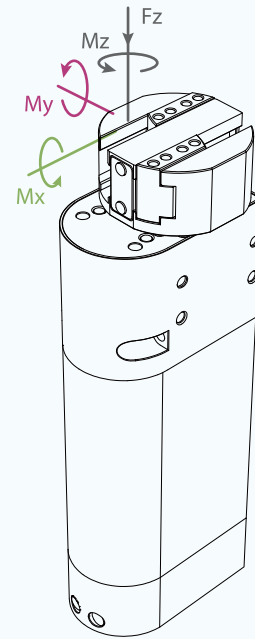
Product Parameter

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

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



Static Vertical Allowable Load

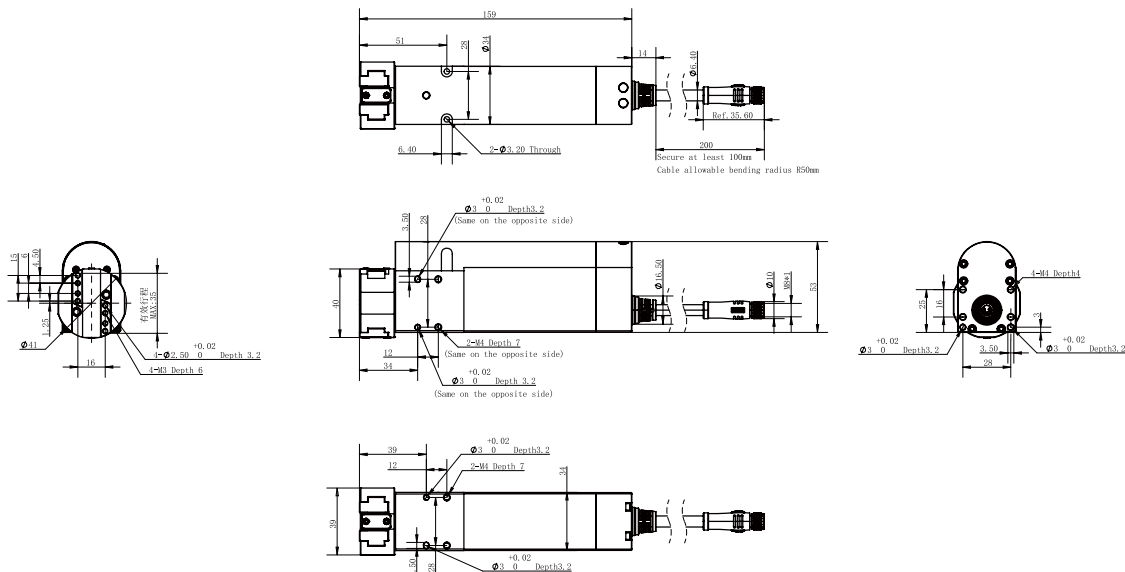
Fz	100 N
----	-------

Allowable Loading Moment

Mx	1.5 N·m
My	1.1 N·m
Mz	2.1 N·m

*① It depends on the shape of the grasping object, the material and friction of the contact surface, and the acceleration of the motion, If you have any questions, please contact us.
 *② Requires external communication convertor or customization, please contact sales or technical support.
 *③ 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 Series Electric Direct Drive Rotary Gripper

RGD-5-14

RGD-5-30

RGD-35-14

RGD-35-30

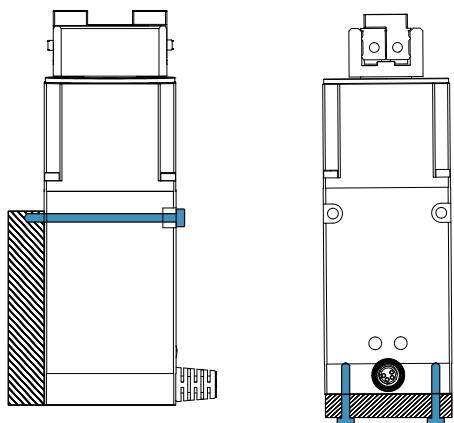


The RGD direct-drive electric rotary gripper of DH-Robotics adopts a direct-drive backlash-free rotation module to improve the rotary accuracy, and thus is perfectly suited for high-precision manufacturing applications.



Installation

1. Front installation: use front screw holes for installation
2. Bottom installation: use bottom screw holes for installation



Product Features

● 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

With the direct-drive technology, the RGD gripper can provide greatly improved rotary accuracy, which can be used in scenarios such as the high-precision positioning assembly, transport, and deflection correction of 3C electronics and semiconductors.



RGD-5

Direct Drive
Rotary Gripper



Selection Method

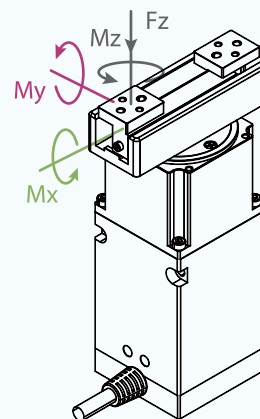
Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Other
RGD	5	14	O	S	M	L5	J0	F0	0
14 30	O Without Brake W With Brake	S Side B bottom			M Modbus (RS485)	LX Without Extend Cable L1 1m Cable L3 3m Cable L5 5m Cable L10 10m Cable	J0 Without Fingertip J1 Standard Fingertip	F0 Without Flange	0 Without USB to RS-485 Converter 4 USB to RS-485 Converter

*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.








CG Series

Size 149 mm x 50 mm x 50 mm
Rotary Diameter: 83.6 mm

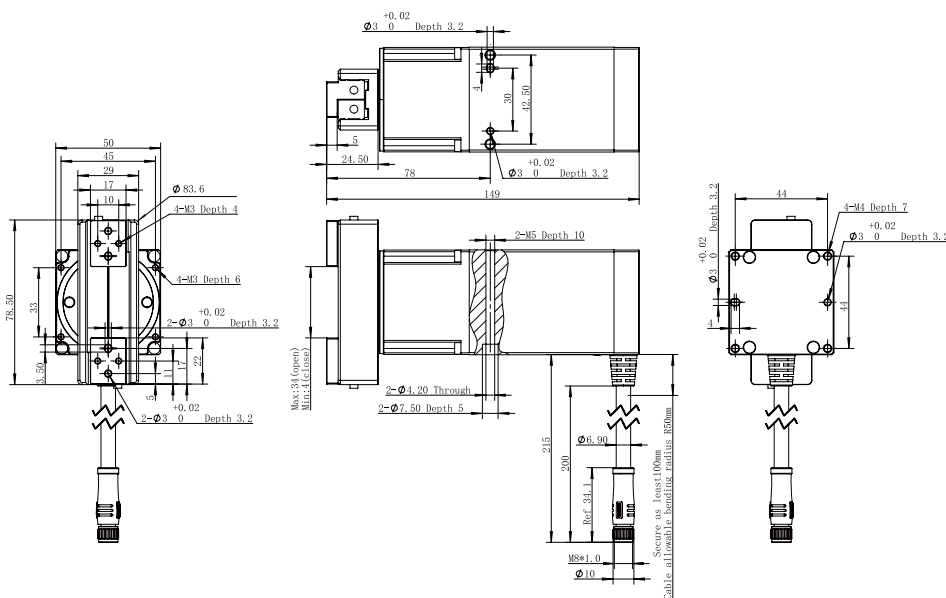
Certification	CE, FCC, RoHS
---------------	---------------



Mz 2.5 N · m

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

*④When 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.



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 Tme/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

PGE Series

PGSE Series

RGI Series

RGD Series

PGI Series

PGHL Series

PGS Series

PGC Series

AG Series

CG Series

RGD-35

Direct Drive
Rotary Gripper



Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Other
RGD	35	14	O	S	M	L5	J0	F0	0
14 30	O Without Brake W With Brake	S Side B bottom	M Modbus (RS485)	LX Without Extend Cable L1 1m Cable L3 3m Cable L5 5m Cable L10 10m Cable	J0 Without Fingertip J1 Standard Fingertip	F0 Without Flange	0 Without USB to RS-485 Converter 4 USB to RS-485 Converter		

*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.

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 Tme/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

PGE Series

PGSE Series

RGI Series

RGD Series

PGI Series

PGHL Series

PGS Series

PGC Series

AG Series

CG Series

PGI Series

Electric Parallel Gripper

PGI-80-80

PGI-140-80

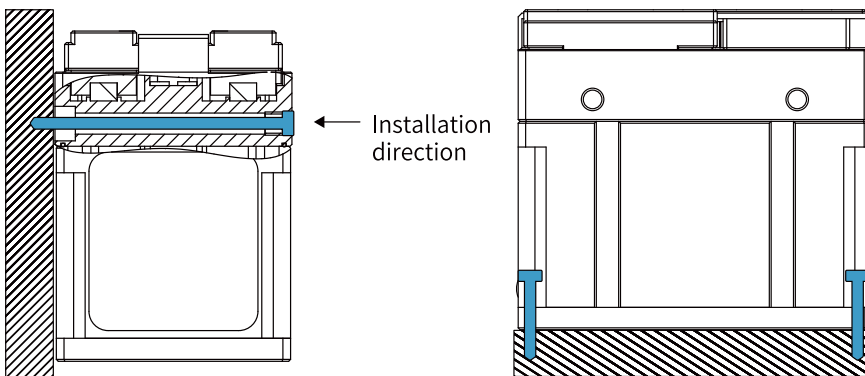


Based on the industrial requirements of “long stroke, high load, and high protection level”, DH-Robotics independently developed the PGI series of industrial electric parallel gripper. The PGI series is widely used in various industrial scenarios with positive feedback.



Installation

1. Front and rear installation: use front and rear screw holes for installation
2. Bottom installation : use bottom screw holes for installation



Product Features

● Long Stroke

Long stroke reach to 80 mm. With the customization fingertips, it can stably grasp the medium and large objects below 3kg and suitable for lots of industrial scenes.

● High Protection Level

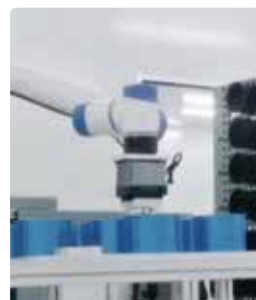
The protection level of PGI-140-80 reaches to IP54, which is able to work under harsh environment with dust and liquid splash.

● High Load

The maximum single-sided gripping force of PGI-140-80 is 140 N, and the maximum recommended load is 3 kg, which can meet more diverse gripping needs.

Application

In industrial scenarios, it is used for gripping, handling and assembly of heavy workpieces. Mostly used in new energy, auto parts, machining, 3C electronics and other industries.

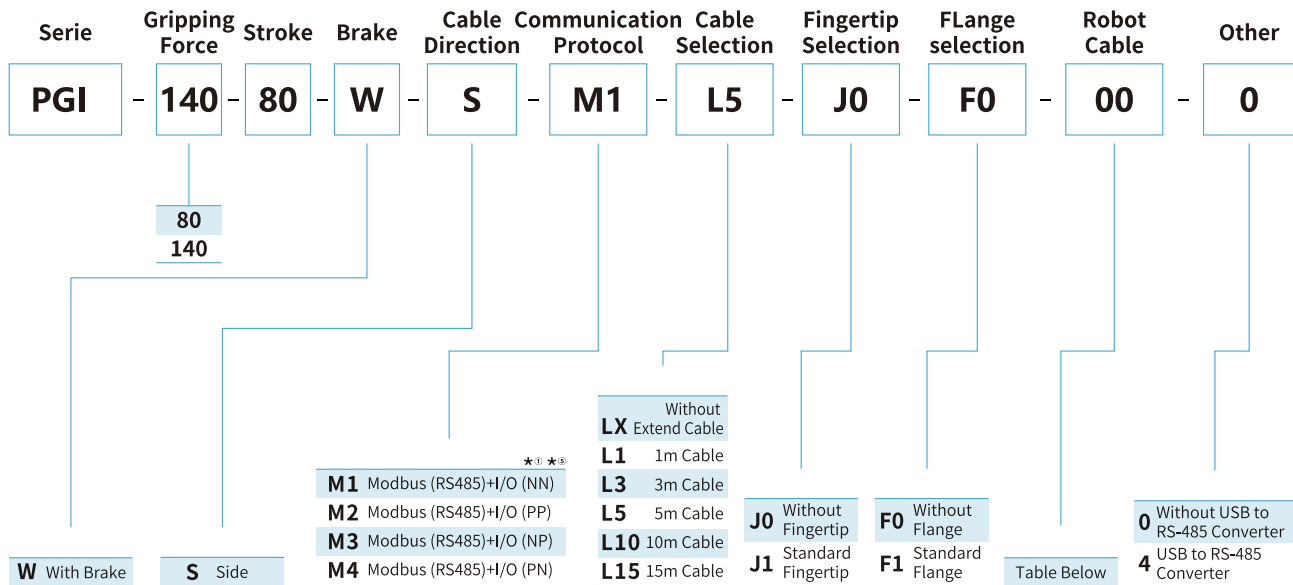


PGI-140-80

Electric Parallel Gripper



Selection Method



*① Note:

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 Elite CS UR CB	SIASUN Hanwha A UR E	DOBOT CR DOBOT Nova	02 AUBO 03 ELEPHANT	04 JAKA 05 TECHMAN	06 ROKAE SR ROKAE ER 07 DOBOT MG400	09 Doosan A 10 Doosan M	11 Elite EC 12 Han's	13 Neuromeka 14 FAIRINO	15 Hanwha HCR 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.

Parameters

Product Parameter	PGI-80-80	PGI-140-80
Gripping force (per jaw)	16~80 N	40~140 N
Stroke	80 mm	80 mm
Recommended workpiece weight	1.6 kg	3 kg
Opening/closing time**	0.7s (80mm) 0.4s (5mm)	1.1 s/1.1 s
Repeat accuracy (position)	± 0.03 mm	
Noise emission	< 50 dB	
Weight	1 kg (exclude fingers)	
Driving method	Precise planetary gears + Rack and pinion	
Size	95 mm x 61.7 mm x 86 mm	

Working Environment

Communication interface	Standard:Modbus RTU (RS485)、Digital I/O Optional: TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT **
Rated voltage	24 V DC \pm 10%
Current	0.5 A (Rated)/ 1.2 A (Peak)**
Rated Power	12 W
IP class	IP 54
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS



Build-in Controller



Gripping Force Adjustable



**Position
Adjustable**



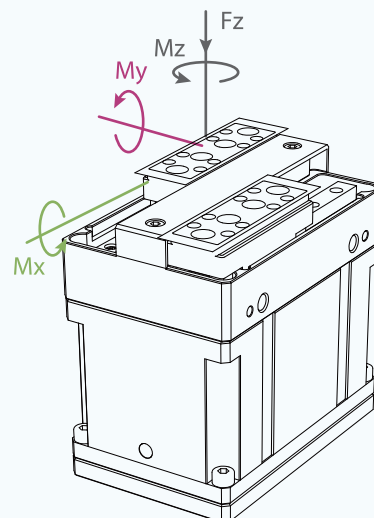
**Speed
Adjustable**



Drop Detection



Self-locking Mechanism



Static Vertical Allowable Load

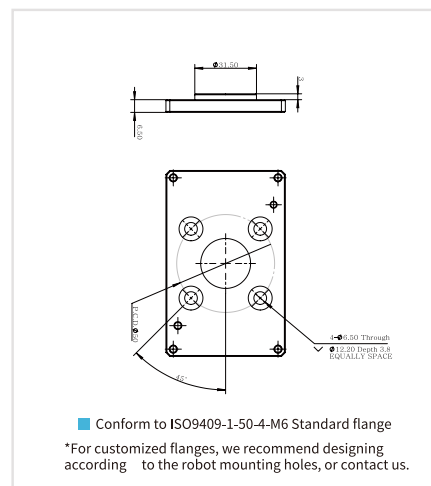
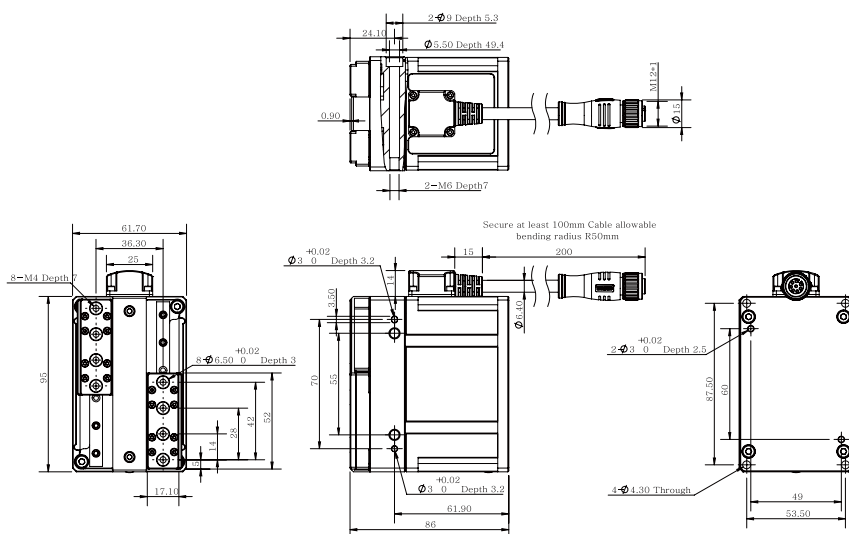
F_z	300 N
-------	-------

Allowable Loading Moment

M_x	$7 \text{ N} \cdot \text{m}$
M_y	$7 \text{ N} \cdot \text{m}$
M_z	$7 \text{ N} \cdot \text{m}$

- *2 It depends on the shape of the grasping object, the material and friction of the contact surface, and the acceleration of the motion, if you have any questions, please contact 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



PGHL Series Heavy-Load Long-Stroke Electric Parallel Gripper

PGHL-400-80

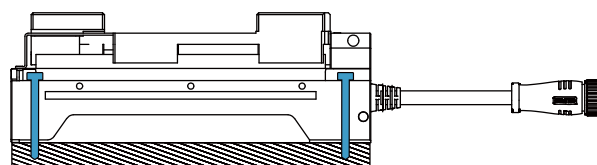
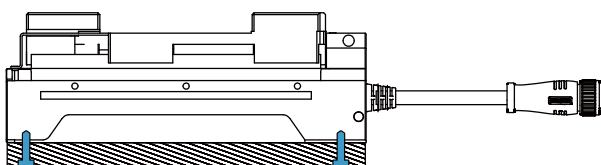


PGHL series is an industrial flat electric gripper developed and produced by DH-Robotics. With its compact design, heavy load and high force control accuracy, it can be applied to heavier load clamping requirements and more application scenarios.



Installation

Bottom installation: use bottom screw holes for installation



Product Features

● Flat Electric Gripper High Energy density

PGHL-400-80 industrial flat electric gripper, the structure of which is delicate and meticulous. The length, width and height dimensions is only $194 \times 73 \times 70\text{mm}$. This model can provide large clamping force and fast clamping beat, coming with mechanical self-locking mechanism, challenge the limit of large load and thin size.

● High Force Control Accuracy

The force repeatability is $\pm 40\text{N}(\pm 10\%)$. Far better than ordinary products in the market by $\pm 10\% \sim \pm 20\%$ of force control accuracy.

● 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.

Application

Applied in industrial production of large weight and large volume workpieces gripping and handling, such as lithium batteries in the new energy industry package gripping, large machined parts in automobile assembly production in automotive assembly.



Heavy-Load Long-Stroke Electric Parallel Gripper

Heavy-Load Long-Stroke Electric Parallel Gripper



Selection Method

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

* ① Note:

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

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
---------------------	---------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	--------------------------------	--------------------	--------------------	--------------------	----------------------	----------------------	-----------------------------	--------------------------	--	----------------------------------

Parameters

Product Parameter

Gripping force (per jaw)	140~400 N
Stroke	80 mm
Recommended workpiece weight ^{*②}	8 kg
Opening/closing time	1.0 s/1.1 s
Repeat accuracy (position)	± 0.02 mm
Noise emission	< 60 dB
Weight	2.2 kg
Driving method	Precise planetary gears+ Tshaped lead screw+Rack and pinion
Size	194 mm x 73 mm x 70 mm

Working Environment

Communication interface	Standard: Modbus RTU (RS485)、Digital I/O 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, 85% RH 以下
Certification	CE, FCC, RoHS



Build-in Controller



Gripping Force Adjustable



Position Adjustable



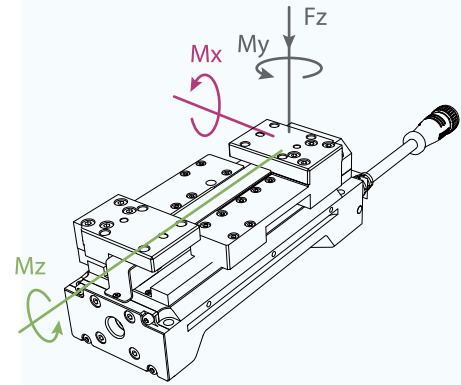
Speed Adjustable



Drop Detection



Self-locking Mechanism



Static Vertical Allowable Load

Fz 1000 N

Allowable Loading Moment

Mx 50 N·m

My 50 N·m

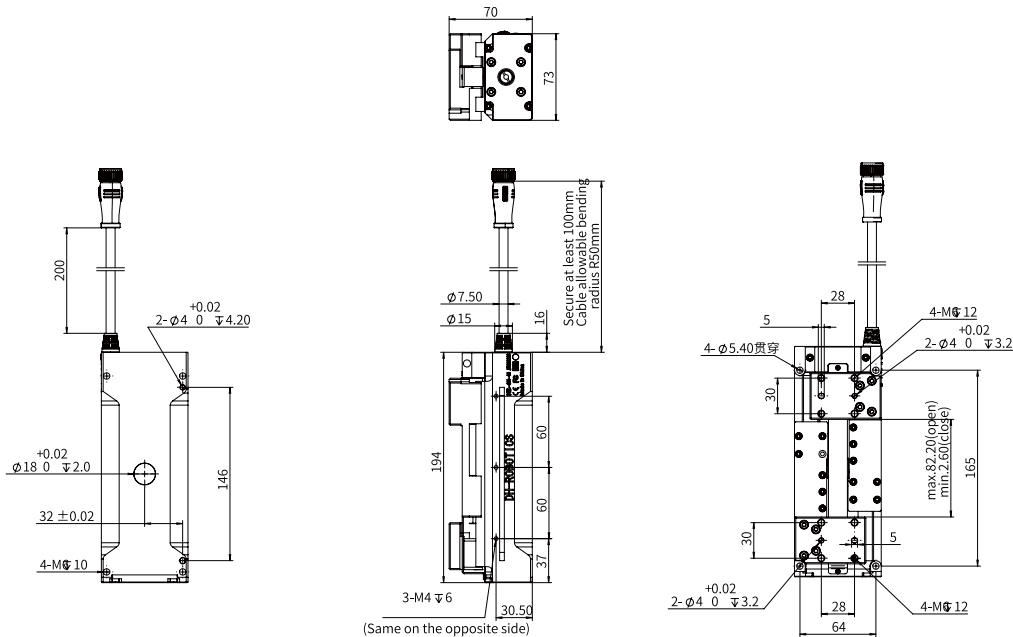
Mz 15 N·m

^{*②} It depends on the shape of the grasping object, the material and friction of the contact surface, and the acceleration of the motion. If you have any questions, please contact 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



PGS Series Miniature Electro-magnetic Gripper

PGS-5-5

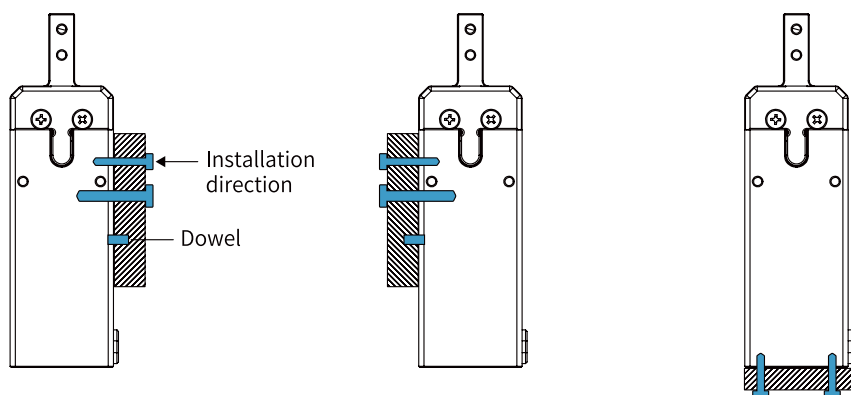


The PGS series is a miniature electromagnetic gripper with high working frequency. Based on a split design, the PGS series could be applied in space-limited environment with the ultimate compact size and simple configuration.



Installation

1. Front and rear installation: use front and rear screw holes for installation
2. Bottom installation : use bottom screw holes for installation



Product Features

● Small Size

Compact size with 20×26 mm, it can be deployed in a relatively small environment.

● High Frequency

The opening/closing time could reach 0.03s to meet the needs of fast grasping.

● Easy to Use

The configuration is simple with the Digital I/O communication protocol.

Application

High-frequency fast capture, detection, adjustment and other scenarios in 3C electronics, medical automation, semiconductor and other industries.



PGS-5-5

Miniature Electro-magnetic Gripper









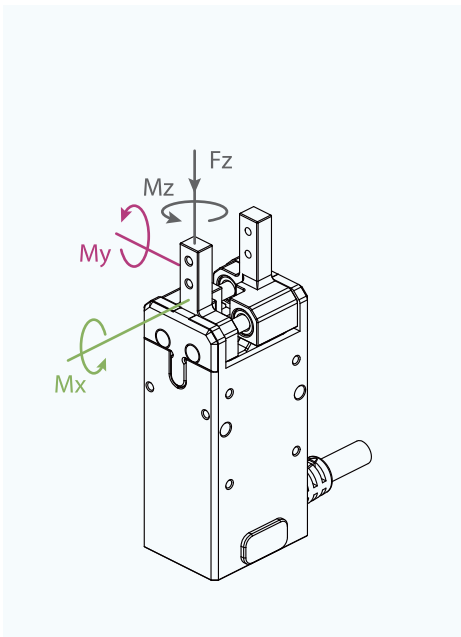
Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Other
PGS	- 5	- 5	- O	- S	- PP	- L5	- J1	- F0	- 0
<div> <div>O Without Brake</div> <div>S Side</div> <div> <div>PP Digital I/O (PNP/PNP)</div> <div>NN Digital I/O (NPN/NPN)</div> <div>PN Digital I/O (PNP/NPN)</div> <div>NP Digital I/O (NPN/PNP)</div> </div> <div> <div>L1 1.5m Cable</div> <div>L5 5m Cable</div> </div> <div>J1 Standard Fingertip</div> <div>F0 Without Flange</div> <div>0 Without USB to RS-485 Converter</div> </div>									

Parameters

Product Parameter	
Gripping force (per jaw)	3.5-5 N
Stroke	5 mm
Recommended workpiece weight * ^①	0.05 kg
Opening/closing time	0.03 s/0.03 s
Repeat accuracy (position)	± 0.01 mm
Noise emission	< 60 dB
Weight	0.2 kg
Driving method	Electromagnet + Spring
Size	Gripper Size:68.5 mm x 26 mm x 20 mm Controller Size:67.7 mm x 66.8 mm x 29.6 mm

Working Environment					
Communication interface			Digital I/O		
Rated voltage			24 V DC \pm 10%		
Current			0.1 A (Rated)/ 3 A (Peak) ^{*2}		
Rated Power			2.4 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



Static Vertical Allowable Load

Fz	150 N
----	-------

Allowable Loading Moment

Mx	0.62 N · m
----	------------

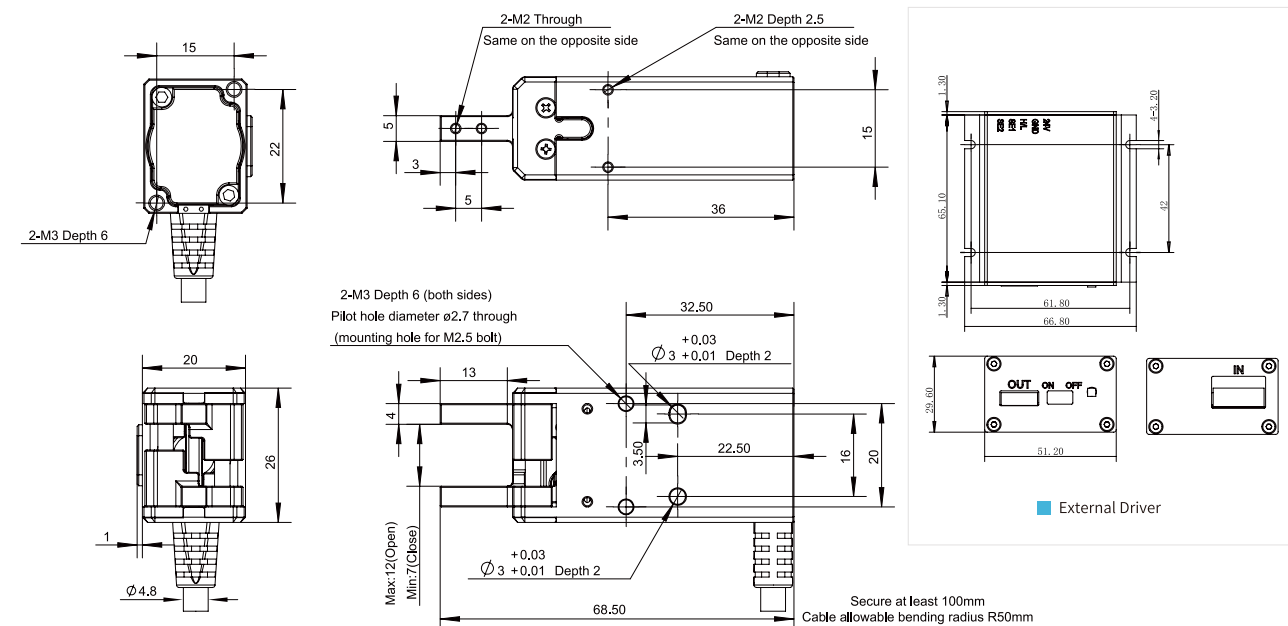
My 0.62 N · m

Mz	0.62 N · m
----	------------

*① It depends on the shape of the grasping object, the material and friction of the contact surface, and the acceleration of the motion. If you have any questions, please contact us.

*② 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



PGC Series Electric Collaborative Parallel Gripper



PGC-50-35
PGC-140-50
PGC-300-60

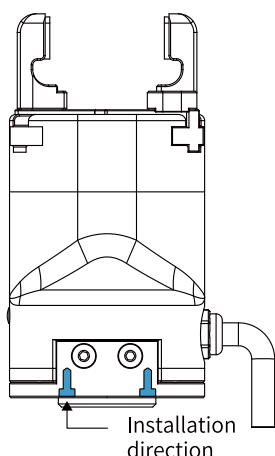


DH-Robotics PGC series of collaborative parallel electric grippers is an electric gripper mainly used in cooperative manipulators. It has the advantages of high protection level, plug and play, large load and so on. The PGC series combines precision force control and industrial aesthetics. In 2021, it won two industrial design awards, the Red Dot Award and the IF Award.



Installation

1. Bottom installation : use bottom screw holes for installation



Product Features

● High protection level

The protection level of PGC series is up to IP67, so the PGC series is able to work under harsh conditions such as machine tending environment.

● Plug & Play

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

● High Load

The gripping force of the PGC series could reach 300 N, and the maximum load can reach 6 kg, which can meet more diverse gripping needs.

Application

With collaborative robots, it can complete a series of complex processes including gripping, handling, and assembly in scenarios such as medical automation, 3C electronics, new energy, and new robot retail.



PGC-50-35

Electric Collaborative
Parallel Gripper



Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Robot Cable	Other
PGC	50	35	O	S	M1	L5	J1	F1	00	0
O Without Brake	S Side									
							</			

*① Note:

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 Elite CS UR CB	SIASUN Hanwha A UR E	DOBOT CR DOBOT Nova	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 4units 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.

Parameters

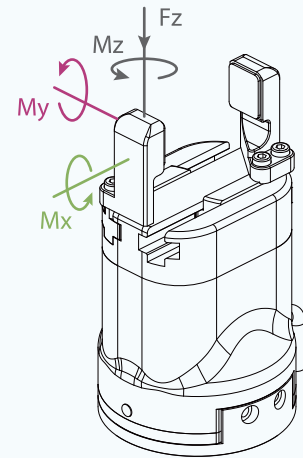
Product Parameter

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

Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O 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) ^{**}
Rated Power	6 W
IP class	IP 54
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

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



Static Vertical Allowable Load

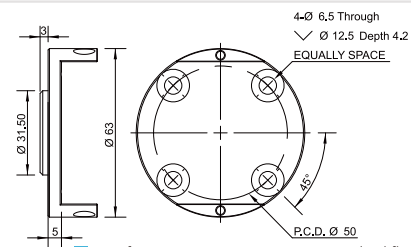
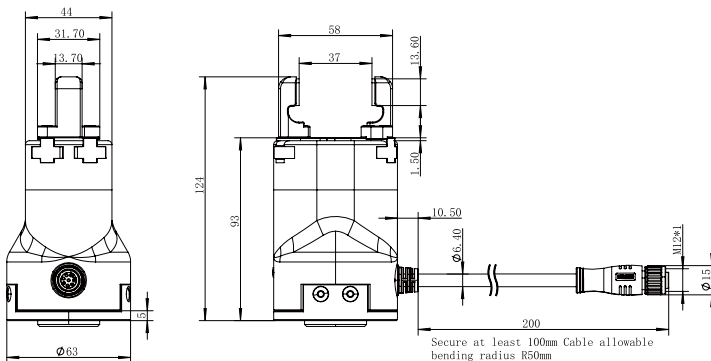
Fz	150 N
----	-------

Allowable Loading Moment

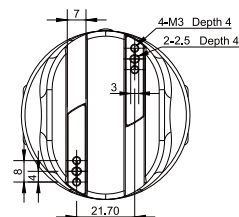
Mx	2.5 N·m
My	2 N·m
Mz	3 N·m

*① It depends on the shape of the grasping object, the material and friction of the contact surface, and the acceleration of the motion. If you have any questions, please contact us.
 *② Requires external communication convertor or customization, please contact sales or technical support.
 *③ 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.



■ Finger mounting holes

PGC-140-50

Electric Collaborative
Parallel Gripper



Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Robot Cable	Other
PGC	- 140	- 50	- W	- S	- M1	- L5	- J1	- F1	- 00	- 0
<div> <div>W With Brake</div> <div>S Side</div> <div> <div>M1 Modbus (RS485)+I/O (NN)</div> <div>M2 Modbus (RS485)+I/O (PP)</div> <div>M3 Modbus (RS485)+I/O (NP)</div> <div>M4 Modbus (RS485)+I/O (PN)</div> </div> <div> <div>LX Without Extend Cable</div> <div>L1 1m Cable</div> <div>L3 3m Cable</div> <div>L5 5m Cable</div> <div>L10 10m Cable</div> </div> <div> <div>J1 Standard Fingertip</div> <div>F1 Standard Flange</div> <div>Table Below</div> </div> <div> <div>0 Without USB to RS-485 Converter</div> <div>4 USB to RS-485 Converter</div> </div> </div>										

★① Note:

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 Elite CS UR CB	SIASUN Hanwha A UR E	DOBOT CR DOBOT Nova	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

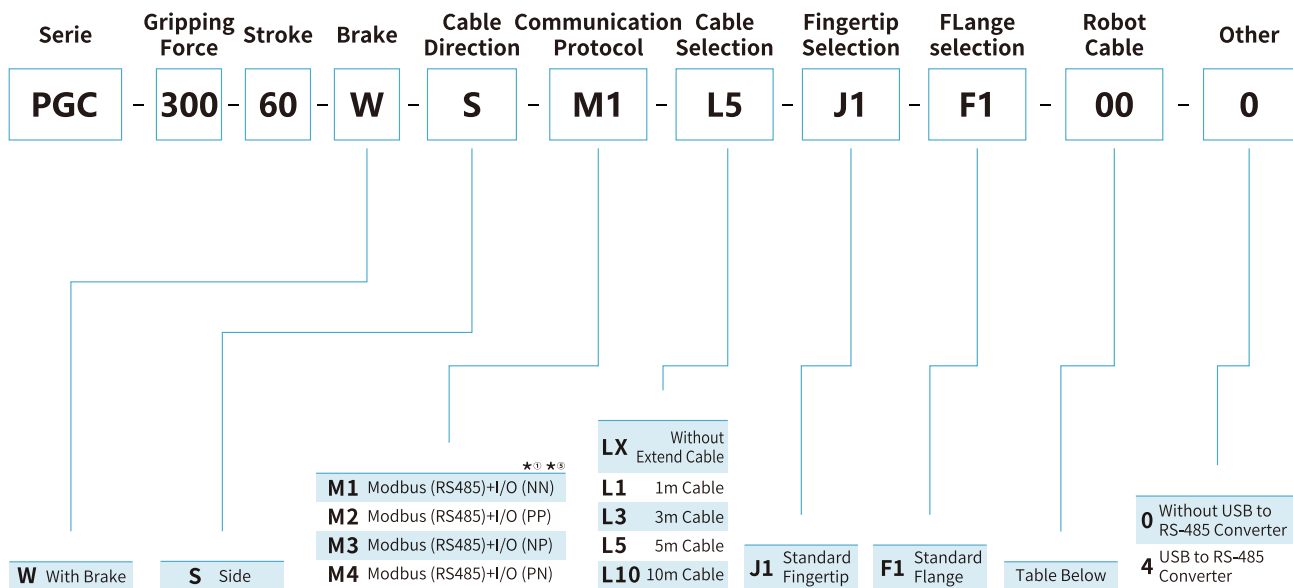
*⑤ It is recommended that no more than 4units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur.
If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

PGC-300-60

Electric Collaborative
Parallel Gripper



Selection Method



★① Note:

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

00 Without Robot Cable	01 Elite CS UR CB SIASUN	Hanwha A DOBOT CR DOBOT Nova	02 AUBO 03 ELEPHANT	04 JAKA 05 TECHMAN	06 ROKAE SR ROKAE ER 07 DOBOT MG400	08 UR E 09 Doosan A	10 Doosan M 11 Elite EC	12 Han's 13 Neuromeka	14 FAIRINO 15 Hanwha HCR	16 UF x Arm 17 ROKAE CR
-------------------------------	---------------------------------------	------------------------------------	--------------------------------------	-------------------------------------	--	--------------------------------------	--	--	---	--

*⑤ It is recommended that no more than 4units 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.

Parameters

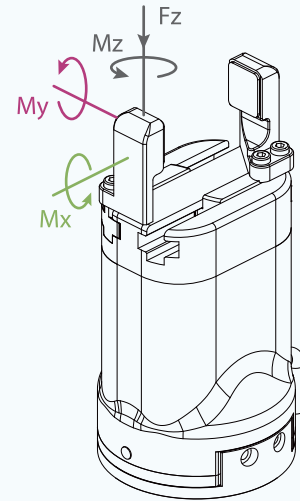
Product Parameter

Gripping force (per jaw)	80~300 N
Stroke	60 mm
Recommended workpiece weight ^{**}	6 kg
Opening/closing time	0.8 s/0.8 s
Repeat accuracy (position)	± 0.03 mm
Noise emission	< 50 dB
Weight	1.5 kg
Driving method	Precise planetary gears + Rack and pinion
Size	178 mm x 90 mm x 90 mm

Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT ^{**}
Rated voltage	24 V DC ± 10%
Current	0.4 A (Rated)/ 2 A (Peak) ^{**}
Rated Power	9.6 W
IP class	IP 67
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

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



Static Vertical Allowable Load

Fz	600 N
----	-------

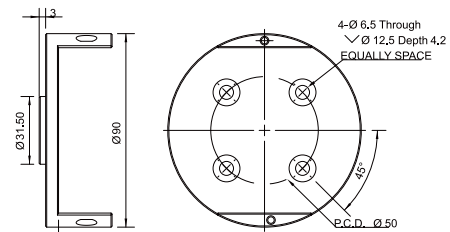
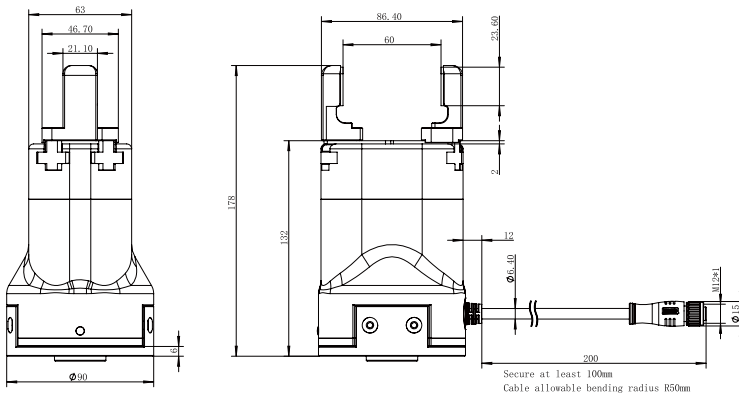
Allowable Loading Moment

Mx	15 N · m
My	15 N · m
Mz	15 N · m

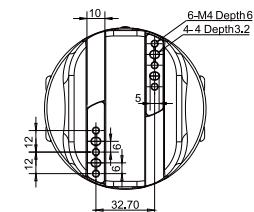
*② It depends on the shape of the grasping object, the material and friction of the contact surface, and the acceleration of the motion. If you have any questions, please contact us.
*③ Requires external communication convertor or customization, please contact sales or technical support.

*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



■ 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.



■ Finger mounting holes

AG Series

Electric Adaptive Gripper



AG-160-95
AG-105-145
DH-3

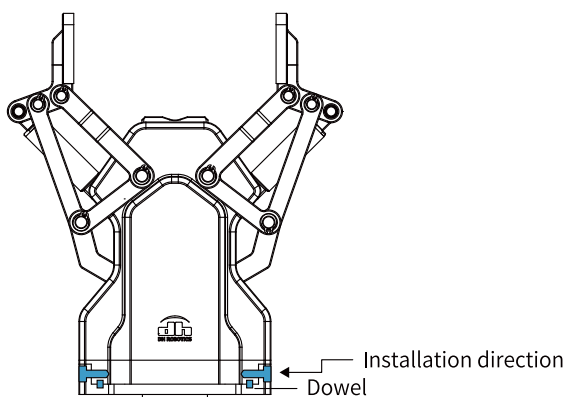


The AG series is a linkage-type adaptive electric gripper which is independently developed by DH-Robotics. With Plug& Play software many and exquisite structural design , AG series is a perfect solution to be applied with collaborative robots to grip work-pieces with different shapes in different industries.



Installation

1. Bottom installation : use bottom screw holes for installation



Product Features

● 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.



AG-160-95

Electric Adaptive Gripper



Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Robot Cable	Other
AG	- 160	- 95	- W	- S	- M1	- L5	- J1	- F1	- 00	- 0
<div> <div>W Self-locking</div> <div>S Side</div> <div> <div>★①★⑤</div> <div>M1 Modbus (RS485)+I/O (NN)</div> <div>M2 Modbus (RS485)+I/O (PP)</div> <div>M3 Modbus (RS485)+I/O (NP)</div> <div>M4 Modbus (RS485)+I/O (PN)</div> </div> <div> <div>LX Without Extend Cable</div> <div>L1 1m Cable</div> <div>L3 3m Cable</div> <div>L5 5m Cable</div> <div>L10 10m Cable</div> </div> <div> <div>J1 Standard Fingertip</div> <div>F1 Without Flange</div> <div>Table Below</div> </div> <div> <div>0 Without USB to RS-485 Converter</div> <div>4 USB to RS-485 Converter</div> </div> </div>										

★① Note:

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

00 Without Robot Cable	01 Elite CS UR CB	SIASUN Hanwha A UR E	DOBOT CR DOBOT Nova	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

*⑤ It is recommended that no more than 4units 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.

AG-105-145

Electric Adaptive Gripper



Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Robot Cable	Other
AG	- 105	- 145	- W	- S	- M1	- L5	- J1	- F1	- 00	- 0
				★① ★★ 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	J1 Standard Fingertip	F1 Standard Flange	Table Below	0 Without USB to RS-485 Converter 4 USB to RS-485 Converter
W Self-locking				S Side						

★① Note:

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

00 Without Robot Cable	01 SIASUN Elite CS UR CB	02 DOBOT CR Hanwha A UR E	03 DOBOT Nova	04 AUBO	05 JAKA	06 ROKAE SR ROKAE ER	07 DOBOT MG400	08 Doosan A	09 Doosan M	10 Elite EC	11 Han's	12 FAIRINO	13 UF x Arm	14 ROKAE CR	15 Hanwha HCR
-------------------------------	---------------------------------	----------------------------------	----------------------	----------------	----------------	-----------------------------	-----------------------	--------------------	--------------------	--------------------	-----------------	-------------------	--------------------	--------------------	----------------------

*⑤ It is recommended that no more than 4units 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.

Parameters

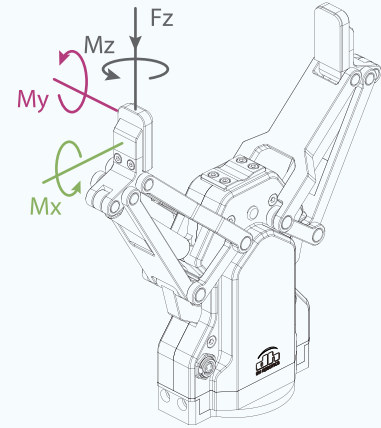
Product Parameter

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

Working Environment

Communication interface	标配: Modbus RTU (RS485)、Digital I/O 选配: 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

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



Static Vertical Allowable Load

Fz	300 N
----	-------

Allowable Loading Moment

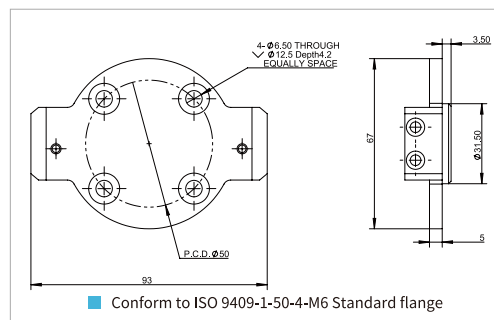
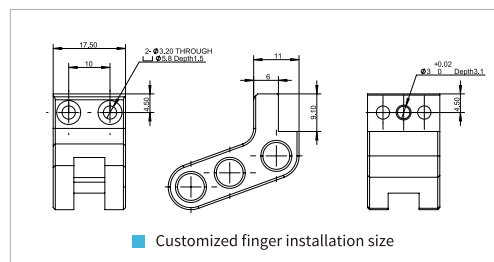
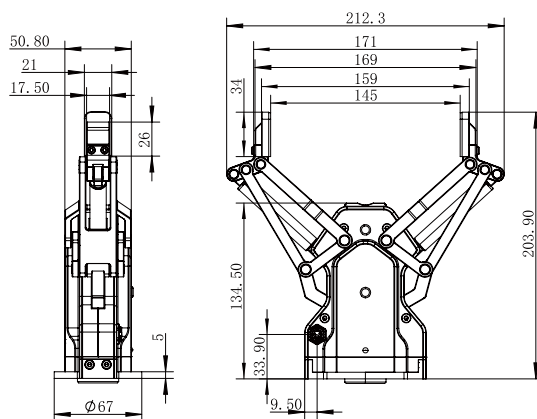
Mx	1.95 N · m
My	1.95 N · m
Mz	1.95 N · m

^{*②} It depends on the shape of the grasping object, the material and friction of the contact surface, and the acceleration of the motion. If you have any questions, please contact 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



DH-3

Electric Adaptive Gripper



Selection Method

Serie	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Other							
DH-3	- W	- S	- T	- L5	- J1	- F1	- 0							
W Self-locking														
S Side														

Parameters

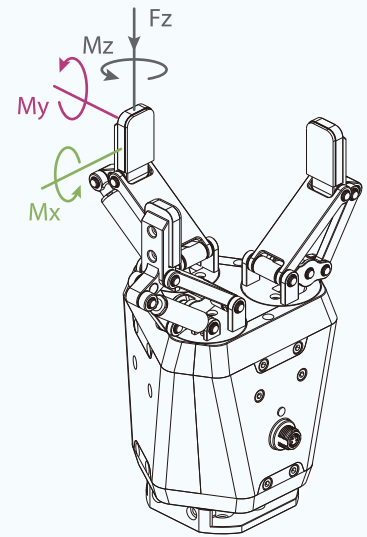
Product Parameter

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

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

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



Static Vertical Allowable Load

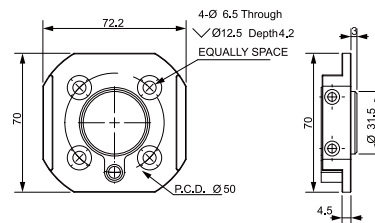
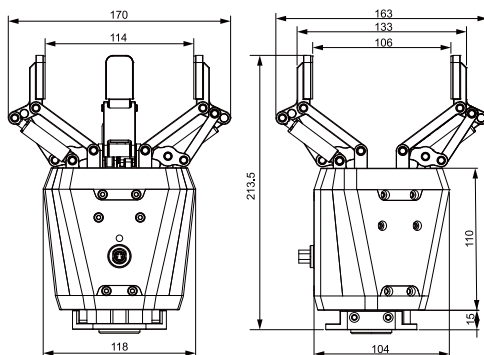
Fz	150 N
----	-------

Allowable Loading Moment

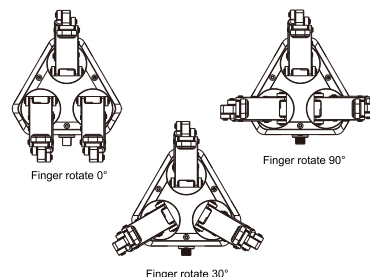
Mx	2.5 N·m
My	2 N·m
Mz	3 N·m

*① It depends on the shape of the grasping object, the material and friction of the contact surface, and the acceleration of the motion. If you have any questions, please contact us.
 *② Requires external communication convertor or customization, please contact sales or technical support.
 *③ 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 ISO9409-1:50-4-M6 Standard flange



CG Series

Electric Centric Gripper

CGE-10-10

CGI-100-170

CGC-80-10

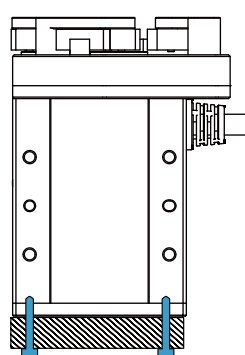
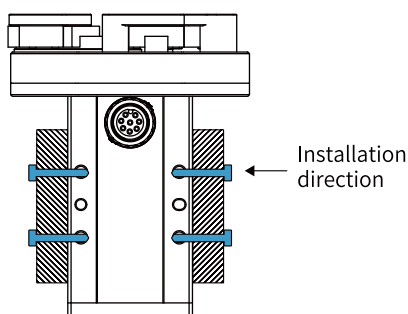
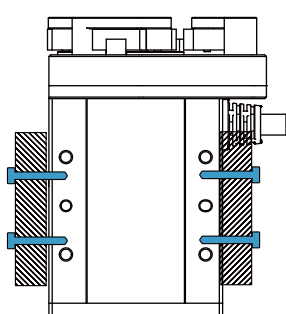


The CG series is a three-finger centric gripper independently developed by DH-Robotics. The three-finger gripping method can better cope with the grasping task of cylindrical workpieces. The CG series is available in a variety of models for a variety of scenarios, stroke and end devices.



Installation

1. Front and rear installation: use front and rear screw holes for installation
2. Side installation: use side screw holes for installation
3. Bottom installation : use bottom screw holes for installation



Product Features

● 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 10 millions times without maintenance.

● Overload Protection

The high-performance servo motor can provide instantaneous overload protection.

Application

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





Selection Method

[illegible]

★ ① Note:

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

00 Without Robot Cable	01 Elite CS UR CB	SIASUN Hanwha A UR E	DOBOT CR DOBOT Nova	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 FAIRING	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.

Parameters

Product Parameter

Gripping force (per jaw)	3~10 N
Stroke	10 mm
Recommended workpiece weight ^{*②}	0.1 kg
Opening/closing time	0.3 s/0.3 s
Repeat accuracy (position)	± 0.03 mm
Noise emission	< 50 dB
Weight	0.43 kg
Driving method	Precise planetary gear reducer + Rack and pinion
Size	94 mm x 53.5 mm x 38 mm

Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT ^{*③}
Rated voltage	24 V DC ± 10%
Current	0.3 A (Rated)/ 0.6 A (Peak) ^{*④}
Rated Power	7.2 W
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS



Build-in
Controller



Gripping Force
Adjustable



Position
Adjustable



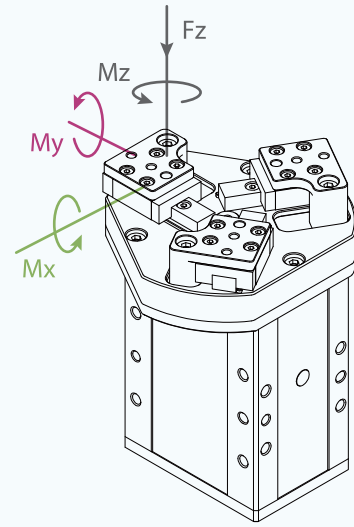
Speed
Adjustable



Drop
Detection



Self-locking
Mechanism



Static Vertical Allowable Load

Fz	150 N
----	-------

Allowable Loading Moment

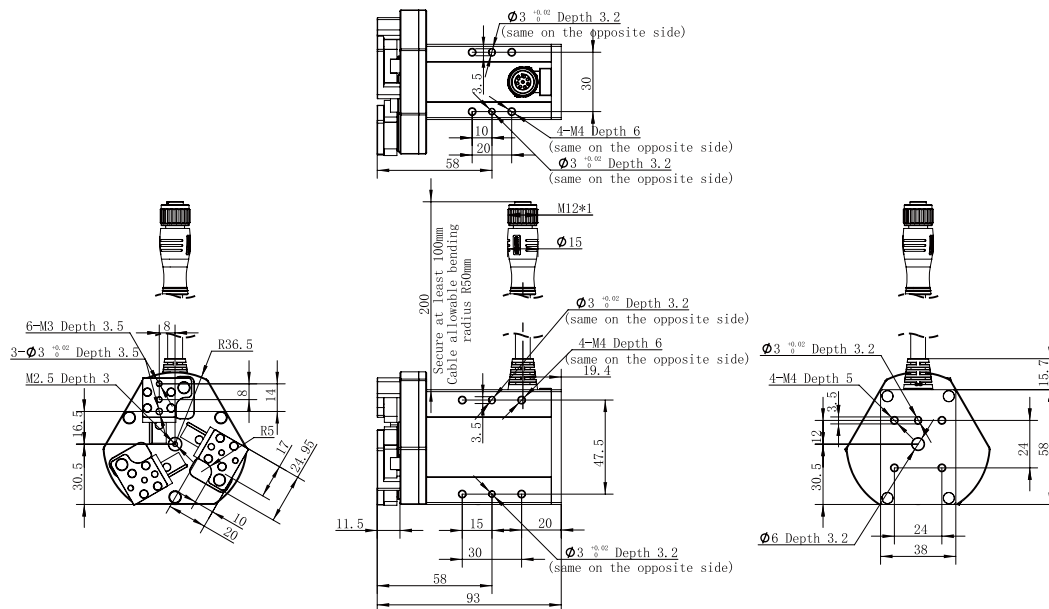
Mx	0.62 N · m
My	0.62 N · m
Mz	0.62 N · m

^{*②} It depends on the shape of the grasping object, the material and friction of the contact surface, and the acceleration of the motion. If you have any questions, please contact 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



CGI-100-170

Electric Centric Gripper



Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Robot Cable	Other
CGI	100	170	O	S	M1	L5	J1	F0	00	0
O Without Brake 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	J1 Standard Fingertip	F0 Without Flange F1 Standard Fingertip		0 Without USB to RS-485 Converter 4 USB to RS-485 Converter

★ ① Note:

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

00 Without Robot Cable	01 Elite CS UR CB	SIASUN Hanwha A UR E	DOBOT CR DOBOT Nova	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 4units 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.

Parameters

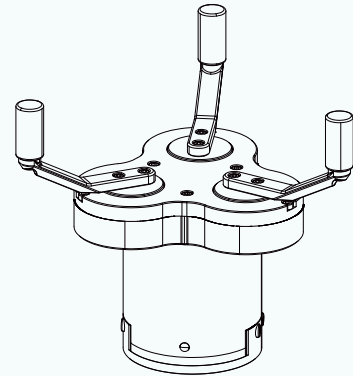
Product Parameter

Gripping force (per jaw)	30~100 N
Recommended workpiece diameter (inward)	Φ40~Φ170 mm
Recommended workpiece weight **	1.5 kg
Opening/closing time	1.35 s
Repeat accuracy (position)	± 0.03 mm
Noise emission	< 50 dB
Weight	1.5 kg
Driving method	Precise planetary gears + Rack and pinion
Size	158.4 mm x 124.35 mm x 116 mm (without brake/with brake, same size)

Working Environment

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

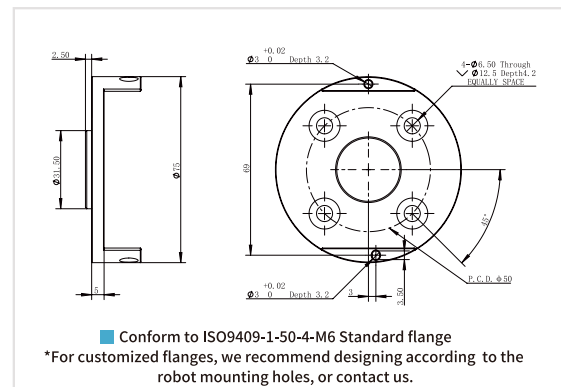
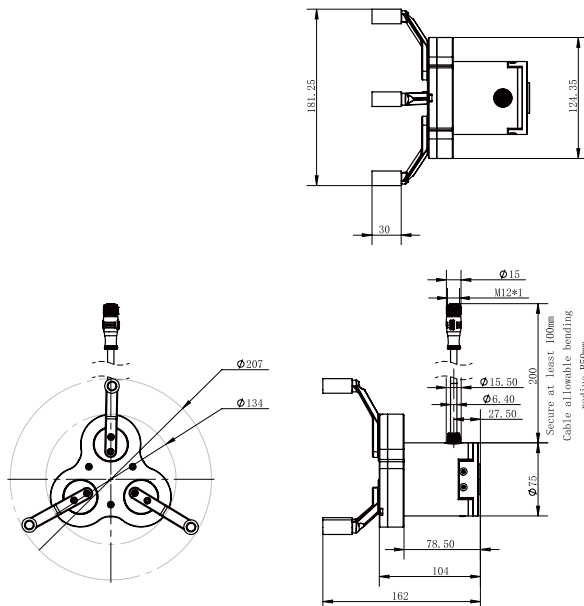
 Build-in Controller	 Gripping Force Adjustable	 Position Adjustable	 Speed Adjustable	 Drop Detection	 Self-locking Mechanism
--	--	--	---	---	---



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.

*② It depends on the shape of the grasping object, the material and friction of the contact surface, and the acceleration of the motion. If you have any questions, please contact 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



CGC-80-10

Electric Collaborative Centric Gripper



Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Robot Cable	Other
CGC	80	10	W	S	M1	L5	J1	F1	00	0
										<div>0 Without USB to RS-485 Converter</div> <div>4 USB to RS-485 Converter</div>
W With Brake		S Side	<div>★ ① ★ ②</div> <div>M1 Modbus (RS485)+I/O (NN)</div> <div>M2 Modbus (RS485)+I/O (PP)</div> <div>M3 Modbus (RS485)+I/O (NP)</div> <div>M4 Modbus (RS485)+I/O (PN)</div>		<div>LX Without Extend Cable</div> <div>L1 1m Cable</div> <div>L3 3m Cable</div> <div>L5 5m Cable</div> <div>L10 10m Cable</div>		J1 Standard Fingertip	F1 Standard Flange	Table Below	

★ ① Note:

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 Elite CS UR CB	SIASUN Hanwha A UR E	DOBOT CR DOBOT Nova	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 4units 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.

Parameters

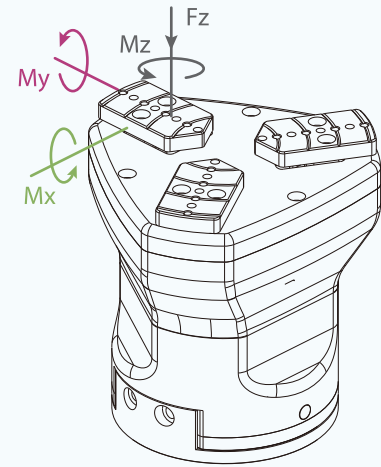
Product Parameter

Gripping force (per jaw)	20~80 N
Single jaw	10 mm
Recommended workpiece weight **	1.5 kg
Opening/closing time	0.5 s/0.5 s
Repeat accuracy (position)	± 0.03 mm
Noise emission	< 50 dB
Weight	1.5 kg
Driving method	Precise planetary gear reducer + Rack and pinion
Size	141 mm x 103 mm x 75 mm

Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT **
Rated voltage	24 V DC ± 10%
Current	0.5 A (Rated) / 1.2 A (Peak) **
Rated Power	12 W
IP class	IP 67
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

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



Static Vertical Allowable Load

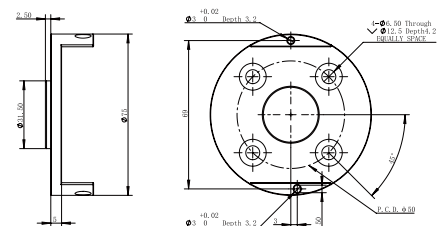
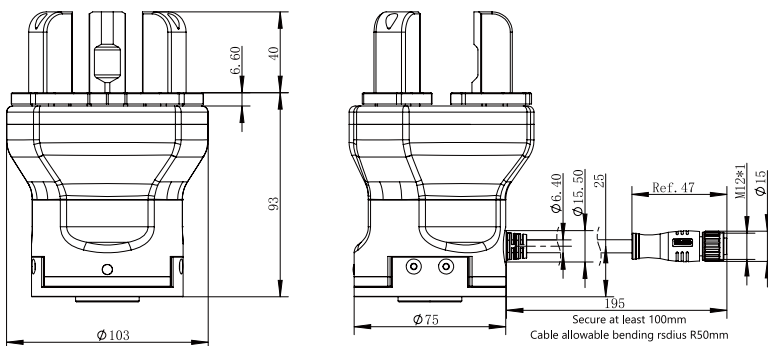
Fz	200 N
----	-------

Allowable Loading Moment

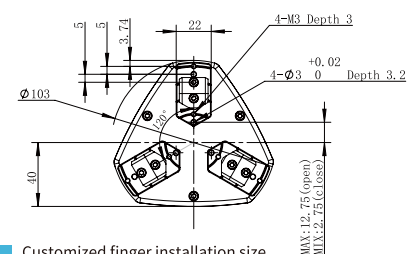
Mx	2.5 N · m
My	2 N · m
Mz	3 N · m

*② It depends on the shape of the grasping object, the material and friction of the contact surface, and the acceleration of the motion. If you have any questions, please contact 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



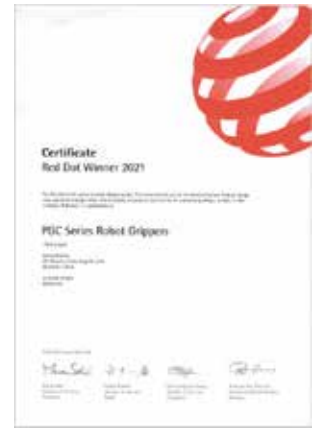
■ Conform to ISO 9409-1-50-4-M6 Standard flange
 *For customized flanges, we recommend designing according to the robot mounting holes, or contact us.



■ Customized finger installation size

Honors and Certificates

– Some of Our Certificates



1



2



3



4



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

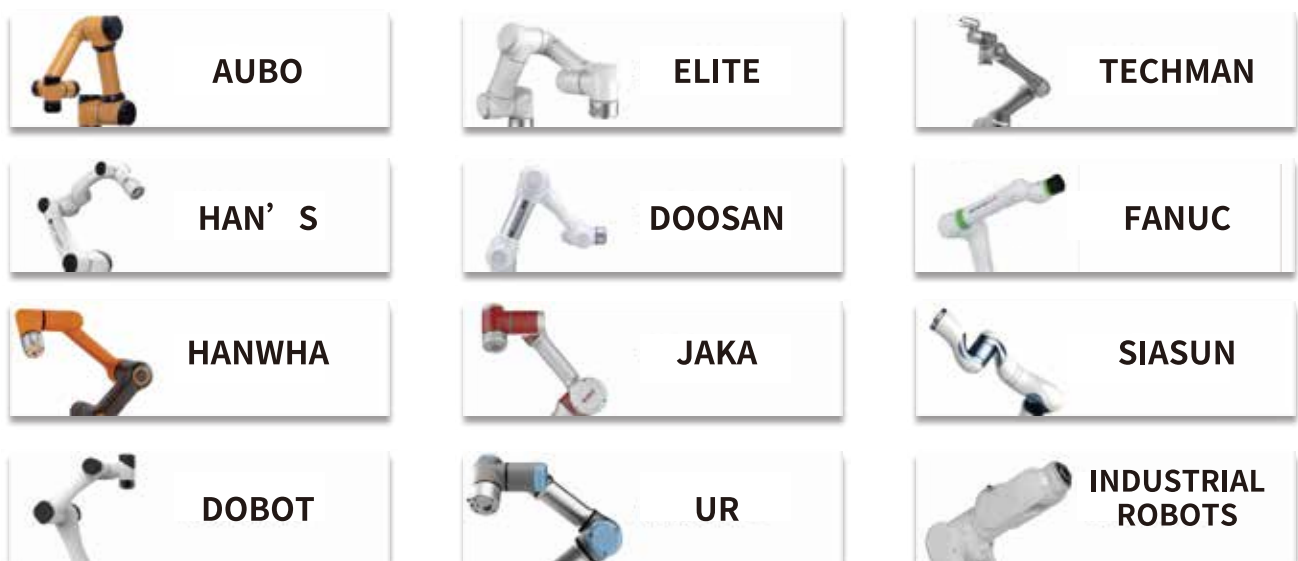
Our Customers

More than 800 customers around the world are using DH-Robotics products
The number of customers continues to grow rapidly...



Our Eco-Partners

DH-Robotics is a high-quality partner of global collaborative robots



DH-ROBOTICS

is committed to provide first-class
core components of precision motion control.



Version Change Log

Revision Date	Released Version	Change Log
2024.06	CN.2406	<ul style="list-style-type: none">· New Product in the PGI Series: PGI-80-80· Added the rated parameter, the precautions for power supply selection, the precautions for 485 communication protocol· PGE-2-12 & PGE-15-10 added controller diagram and grounding tips, cable length notes· PGE-5-26 canceled brake· PGE-100-26 added bottom cable version· PGE-5-26, PGE-8-14, PGE-15-26, PGE-50, PGE-100-26 added 15 meter extend cable· PGC-140-50 open/close time updated to 0.75s, peak current updated to 1.2A, drawing updated· CGC-80-10 open/close time updated to 0.5s, rated current update to 0.5A, peaked current updated to 1.2A, added 01 robot cable· PGS-5-5 cable updated to L1,L5, added controller diagram· CGE-10-10 product iteration, product structure updated, drawing updated· Notes on optional communication protocol updated· PGS-5-5 added external diagram· RGD Series added parameter table of rotational time in place for different inertia loads· CGC-80-10 added 01 robot cable
2024.03	CN.2403	<ul style="list-style-type: none">· Update CGI-100-17 with a new open/close time of 1.35s.· Remove cable configuration option LX from PGSE-15-7.· Update the short line sequence number of the Lushi robot CR series to 17.

Due to continuous product upgrades, content changes may occur without prior notice.
All rights reserved © DH-Robotics Technology Co., Ltd.



DH-Robotics Technology Co.,Ltd.

Linked  |  **YouTube** [Search DH-Robotics](#)

en.dh-robotics.com

info@dh-robotics.com

14th Floor, Building A4, Nanshan Intelligence Park, No. 1001 Xueyuan Avenue,
Taoyuan Street, Nanshan District, Shenzhen City, Guangdong Province, China