

# Servo-Electric Grippers

EN-2023.07

# 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	5
Selection Reference	8
Products Brief Parameters	10

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## **PGE Series** Slim-type Electric Parallel Gripper



PGE-2-12	14
PGE-5-26	15
PGE-8-14	16
PGE-15-10	17
PGE-15-26	18
PGE-50-26	19
PGE-50-40	20
PGE-100-26	21

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## **PGSE Series** Slim-type Electric Parallel Gripper



PGSE-15-7	23
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## **RGI Series** Electric Rotary Gripper



RGIC-35-12	25
RGIC-100-35	26
RGI-100-14	27
RGI-100-22	28
RGI-100-30	29

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## **RGD Series** Electric Direct Drive Rotaty Gripper



RGD-5-14	31
RGD-5-30	32
RGD-35-14	33
RGD-35-30	34

## **PGI Series**

Electric Parallel Gripper



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PGI-140-80	36
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## **PGHL Series**

Heavy-Load Long-Stroke  
Electric Parallel Gripper



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PGHL-400-80	38
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## **PGS Series**

Miniature Electro-  
magnetic Gripper



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PGS-5-5	40
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## **PGC Series**

Electric Collaborative  
Parallel Gripper



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PGC-50-35	42
PGC-140-50	43
PGC-300-60	44

## **AG Series**

Electric Adaptive Gripper



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AG-160-95	46
AG-105-145	47
DH-3	48

## **CG Series**

Electric Centric Gripper

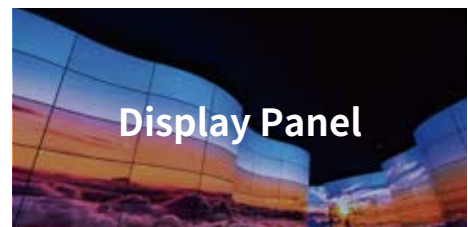
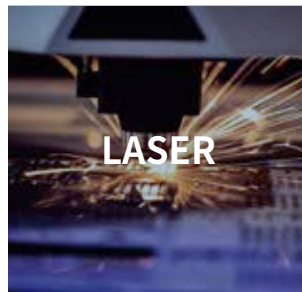
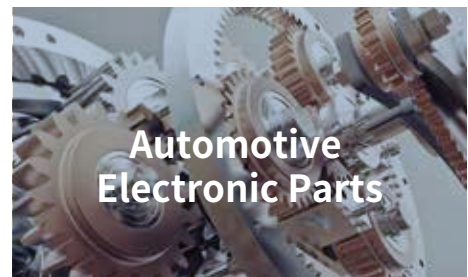
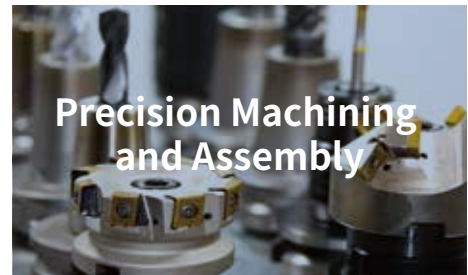
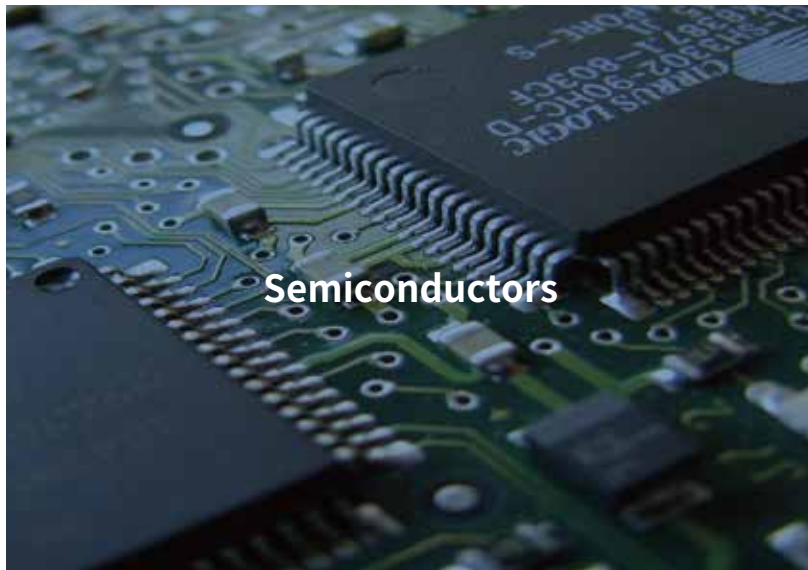


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CGE-10-10	50
CGI-100-170	51
CGC-80-10	52

# Applications in Cutting-edge Industries

More solutions and applications, please visit [www.dh-robotics.com](http://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.

Support electric gripper models	UR CB Series	UR E Series	UR E Series	DOBOT CR Series	Aubo	Jaka	Elite CS Series	Elite EC Series	TECHMAN ROBOT	Doosan A Series	Doosan M Series	Elephant	SINSUN	ROKAE	Han's Robot	Neuro meka	Hanwha	FAIRINO
Small current electric gripper (Peak current $\leq 0.6A$ )	Wo																	
Small current electric gripper (Peak current $< 1.5A$ )		Wa		Wa	Wc	Wg	Wa		Wh			Wd	Wa	Wi			Wa	
High current electric claw (Peak current $> 1.5A$ )			Wb															
In common (Support large and small current electric gripper)								Wj		We	Wf				Wk	Wl		Wm

## DH-Robotics' Gripper and Cylinder Communication Protocol Conversion Box

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 protocols, they will need to use the communication protocol conversion box. The following communication protocol conversion boxes are available for selection:

	Communication Protocol Conversion Box Name	Ordering Model		Communication Protocol Conversion Box Name	Ordering Model
	EtherCAT 1-1	FG-M2E-B1-1		TCP/IP 1-1	FG-M2T-B1-1-YBT
	EtherCAT 1-4	FG-M2E-B1-4		PROFINET 1-2	FG-M2P2-B1-2-HJ
	EtherCAT转 I/O 1-More	Please contact our technical staff confirm the specific parameters		PROFINET 1-11	FG-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

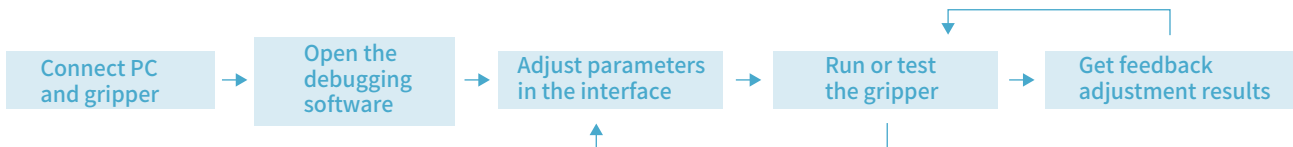


- ☐ IP class
- ☐ Temperature conditions
- ☐ ...

# 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.

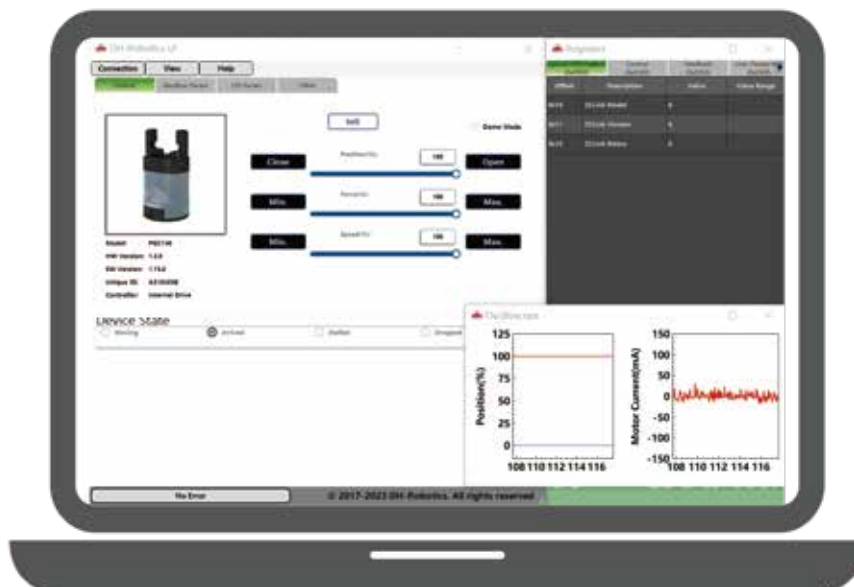


## Parameters Adjustable

- 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

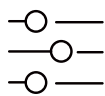
Precision  
force control

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	IP40
PGE-50-40	15~50	1	40	0.45	IP40
PGE-100-26	30~100	2	26	0.5	IP40

## PGSE Series

### 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

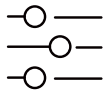
## RGI Series Electric Rotary Gripper

Infinite  
Rotation



All-in-one  
Design

Dual Servo  
System



Adjustable  
Parameters

Compact  
Type



Intelligent  
Feedback



Replaceable  
Fingertip



RGIC-35-12 RGIC-100-35



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

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

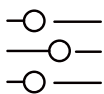
## RGD Series Electric Direct Drive Rotary Gripper

Zero  
Backlash



All-in-one  
Design

Infinite  
Rotation



Adjustable  
Parameters

Precise  
Positioning



Intelligent  
Feedback



Replaceable  
Fingertip



Self-locking  
Mechanism



RGD-5-14 RGD-5-30 RGD-35-14 RGD-35-30

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

## PGI Series

### Electric Parallel Gripper

High Load

High Protection  
Grade

Long Stroke



All-in-one  
Design



Adjustable  
Parameters



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-140-80	40~140	3	80	1.1	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

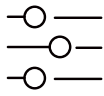
Plug and Play

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	0.6	IP67
PGC-300-60	80~300	6	60	0.8	IP67

## AG Series Electric Adaptive Gripper

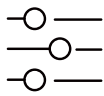
Plug and Play

Envelope  
Adaptive Gripping

Long Stroke



All-in-one  
Design



Adjustable  
Parameters



Intelligent  
Feedback



Replaceable  
Fingertip



Self-locking  
Mechanism



AG-160-95



AG-105-145



DH-3

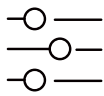
	Gripping Force (N)	Recommended workpiece weight(kg)	Stroke (mm)	Opening/closing time(s)	IP Class
AG-160-95	45~160	3	95	0.9	IP54
AG-105-145	35~105	2	145	0.9	IP54
DH-3	10~65	1.8	106(parallel)/122(centric)	0.7	IP40

## 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)	0.5	IP40
CGC-80-10	20~80	1.5	10 (Single jaw)	0.2	IP67

# PGE Series

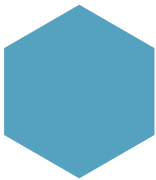
## Slim-type Electric Parallel Gripper

PGE-2-12      PGE-15-26  
PGE-5-26      PGE-50-26  
PGE-8-14      PGE-50-40  
PGE-15-10    PGE-100-26

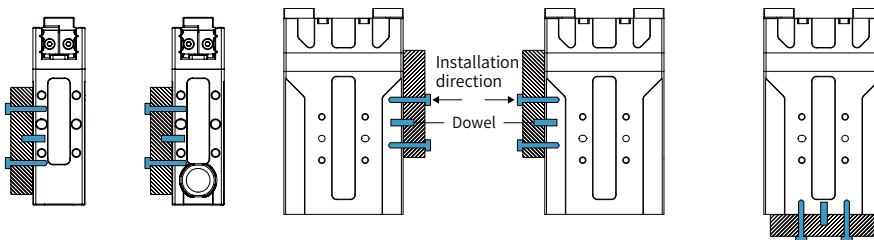


The PGE series is an industrial slim-type electric parallel gripper. With its precise force control, compact size and highly working speed, it has become a “Hot sell product” in the field of industrial electric gripper.

### 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

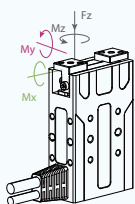
With special driver design and driving algorithm compensation, the gripping force is continuously adjustable, and the force repeatability could reach 0.1 N.



### 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



## Static Vertical Allowable Load

Fz 35 N

## Allowable Loading Moment

Mx 0.2 N·m

My 0.17 N·m

Mz 0.2 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 Use optional communication, need external communication conversion box, please consult the sales staff for details

## Parameters

### Product Parameter

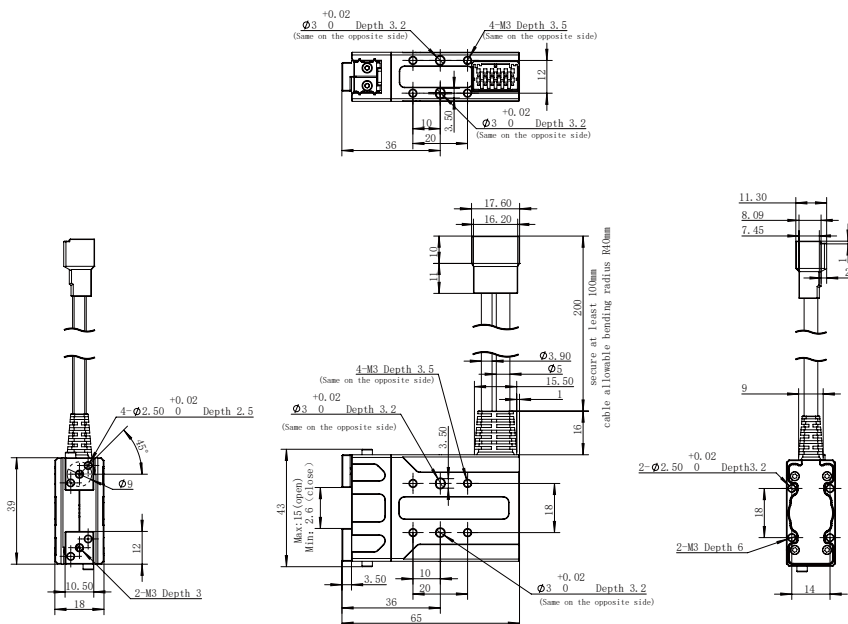
Gripping force (per jaw)	0.8~2 N
Stroke	12 mm
Recommended workpiece weight *①	0.05 kg
Opening/closing time	0.15 s/0.15 s
Repeat accuracy (position)	± 0.02 mm
Noise emission	< 40 dB
Weight	0.15 kg
Driving method	Rack and pinion + Cross roller guide
Size	Gripper Size: 65 mm x 39 mm x 18 mm Controller Size: 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 *②
Rated voltage	24 V DC ± 10%
Rated current	0.2 A
Peak current	0.5 A
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

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

## Technical Drawings



# PGE-5-26



## 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

\*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 Use optional communication, need external communication conversion box, please consult the sales staff for details

## Parameters

### Product Parameter

Gripping force (per jaw)	0.8~5 N
Stroke	26 mm
Recommended workpiece weight *①	0.1 kg
Opening/closing time	0.3 s/0.3 s
Repeat accuracy (position)	± 0.02 mm
Noise emission	< 40 dB
Weight	0.4 kg
Driving method	Rack and pinion + Cross roller guide
Size	95 mm x 55 mm x 26 mm(without brake) 113.5 mm x 55 mm x 30 mm(with brake)

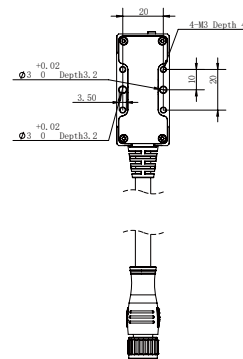
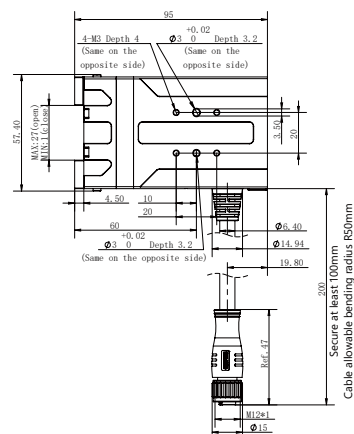
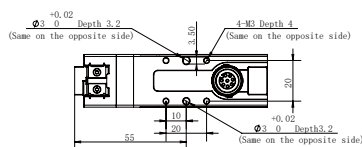
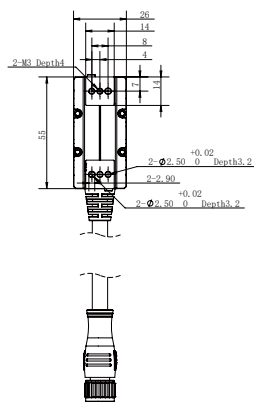
### Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT *②
Rated voltage	24 V DC ± 10%
Rated current	0.4 A
Peak current	0.7 A
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

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

## Technical Drawings

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



## Static Vertical Allowable Load

Fz 90 N

## Allowable Loading Moment

Mx 0.55 N · m

My 0.45 N · m

Mz 0.55 N · m

\*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 Use optional communication, need external communication conversion box, please consult the sales staff for details

## Parameters

### Product Parameter

Gripping force (per jaw)	2~8 N
Stroke	14 mm
Recommended workpiece weight *①	0.1 kg
Opening/closing time	0.3 s/0.3 s
Repeat accuracy (position)	± 0.02 mm
Noise emission	< 40 dB
Weight	0.4 kg
Driving method	Rack and pinion + Cross roller guide
Size	97 mm x 62 mm x 31 mm

### Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT *②
Rated voltage	24 V DC ± 10%
Rated current	0.4 A
Peak current	0.7 A
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

●  
Build-in  
Controller

●  
Gripping Force  
Adjustable

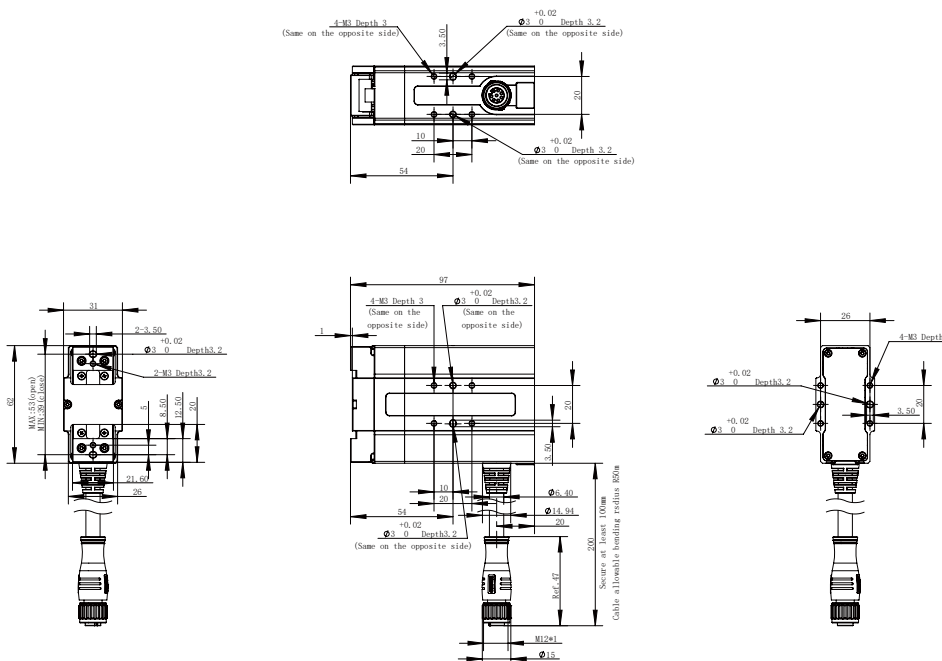
●  
Position  
Adjustable

●  
Speed  
Adjustable

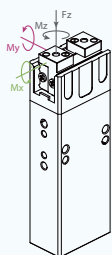
●  
Drop  
Detection

×  
Self-locking  
Mechanism

## Technical Drawings



# PGE-15-10



## 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

\*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 Use optional communication, need external communication conversion box, please consult the sales staff for details

## Parameters

### Product Parameter

Gripping force (per jaw)	6~15 N
Stroke	10 mm
Recommended workpiece weight *①	0.25 kg
Opening/closing time	0.3 s/0.3 s
Repeat accuracy (position)	± 0.02 mm
Noise emission	< 60 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 *②
Rated voltage	24 V DC ± 10%
Rated current	0.1 A
Peak current	0.22 A
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS



Build-in  
Controller



Gripping Force  
Adjustable



Position  
Adjustable



Speed  
Adjustable

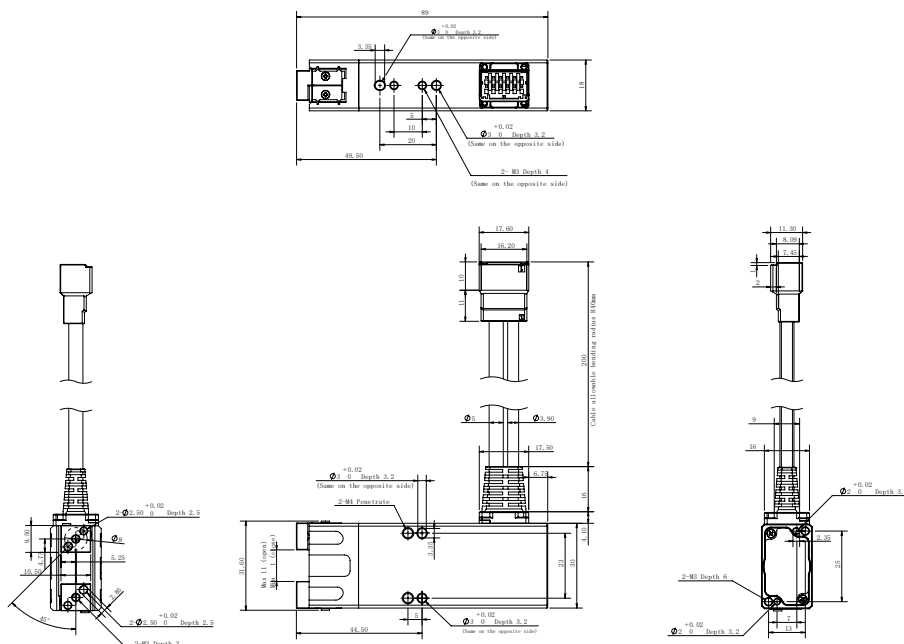


Drop  
Detection

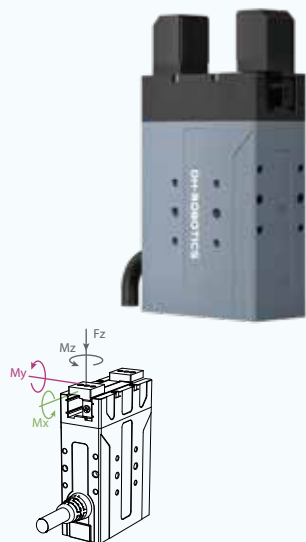


Self-locking  
Mechanism

## Technical Drawings



# PGE-15-26



## 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

\*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 Use optional communication, need external communication conversion box, please consult the sales staff for details

## Parameters

### Product Parameter

Gripping force (per jaw)	6~15 N
Stroke	26 mm
Recommended workpiece weight *①	0.25 kg
Opening/closing time	0.5 s/0.5 s
Repeat accuracy (position)	± 0.02 mm
Noise emission	< 40 dB
Weight	0.33 kg
Driving method	Precise planetary gears + Rack and pinion
Size	86.5 mm x 55 mm x 26 mm(without brake) 107.5 mm x 55 mm x 26 mm(with brake)

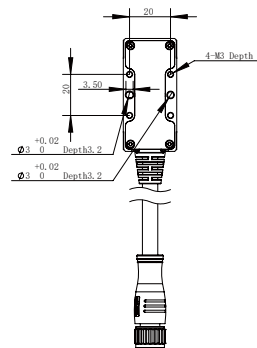
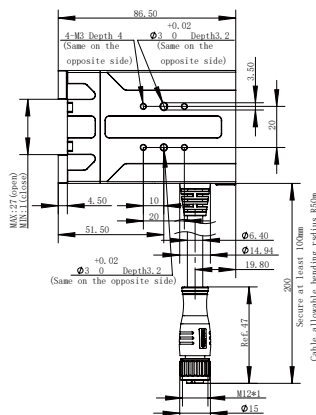
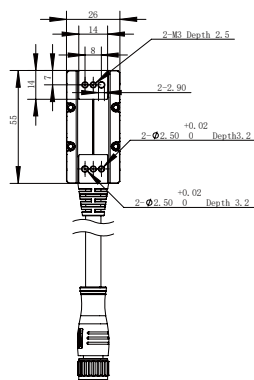
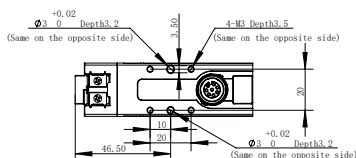
### Working Environment

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

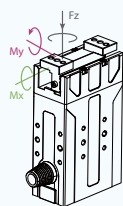
●	●	●	●	●	● ×
Build-in Controller	Gripping Force Adjustable	Position Adjustable	Speed Adjustable	Drop Detection	Self-locking Mechanism

## Technical Drawings

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-50-26



## 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 Use optional communication, need external communication conversion box, please consult the sales staff for details

## Parameters

### Product Parameter

Gripping force (per jaw)	15~50 N
Stroke	26 mm
Recommended workpiece weight *①	1 kg
Opening/closing time	0.45 s/0.45 s
Repeat accuracy (position)	± 0.02 mm
Noise emission	< 40 dB
Weight	0.4 kg
Driving method	Precise planetary gears + Rack and pinion
Size	97 mm x 55 mm x 29 mm(without brake) 118 mm x 55 mm x 29 mm(with brake)

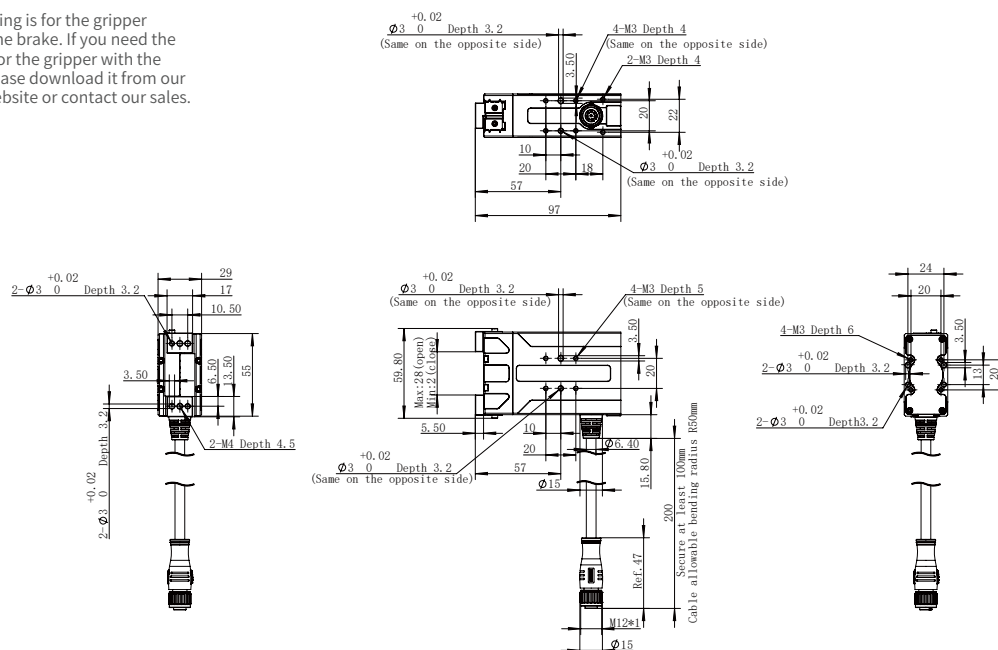
### Working Environment

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

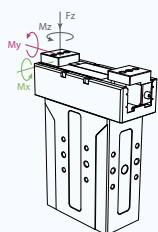
●	●	●	●	●	●×
Build-in Controller	Gripping Force Adjustable	Position Adjustable	Speed Adjustable	Drop Detection	Self-locking Mechanism

## Technical Drawings

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-50-40



## 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 Use optional communication, need external communication conversion box, please consult the sales staff for details

## Parameters

### Product Parameter

Gripping force (per jaw)	15~50 N
Stroke	40 mm
Recommended workpiece weight *①	1 kg
Opening/closing time	0.6 s/0.6 s
Repeat accuracy (position)	± 0.02 mm
Noise emission	< 40 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)

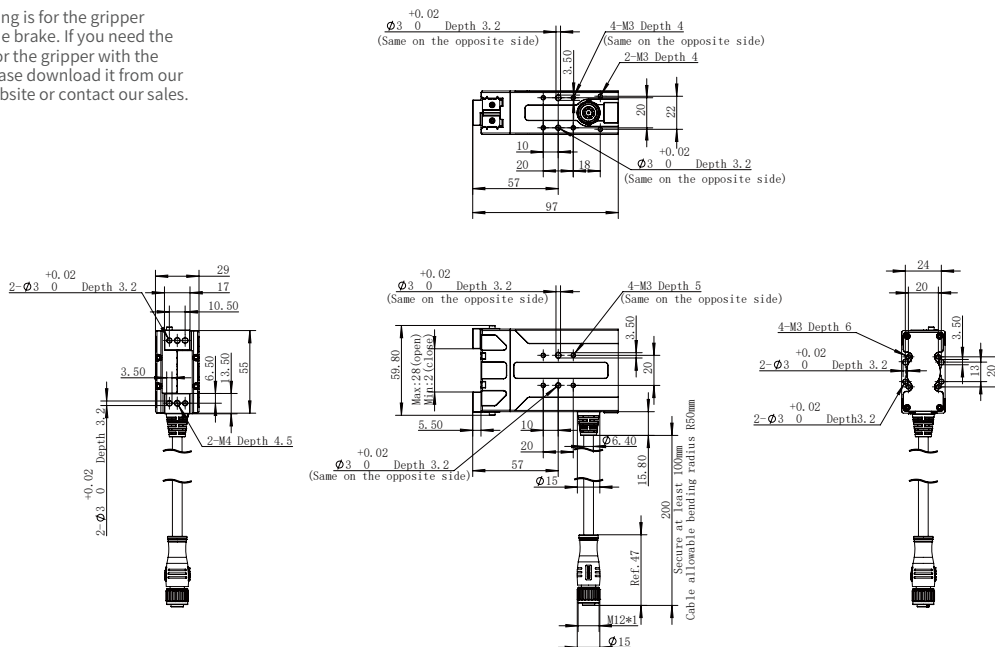
### Working Environment

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

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

## Technical Drawings

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.



## CG Series

# PGSE Series

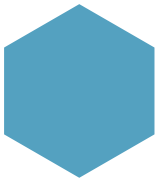
## Slim-type Electric Parallel Gripper

PGSE-15-7

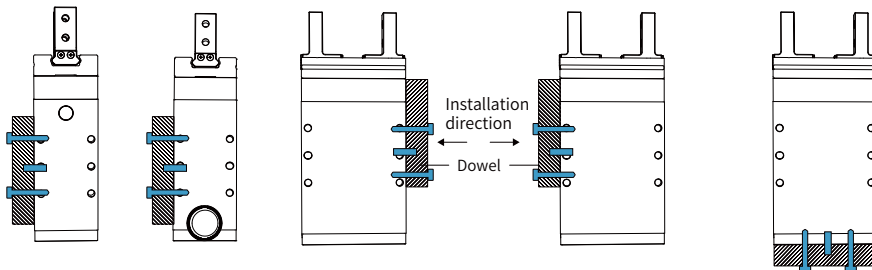


The PGSE Industrial Parallel Gripper is a miniature electric gripper specifically designed to meet the demand for quick grasping in narrow and compact installation spaces in industrial settings.

### 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

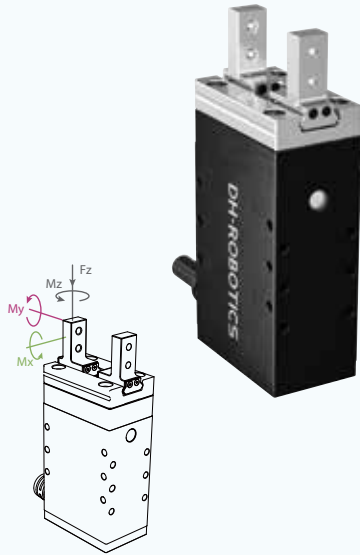
The gripper body of the PGSE model provides multiple mounting options, allowing for versatile installation in compact spaces. Coupled with its compact size, it facilitates easy installation in tight spaces.

### 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.



# PGSE-15-7



## 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

\*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 Use optional communication, need external communication conversion box, please consult the sales staff for details

## Parameters

### Product Parameter

Gripping force (per jaw)	6~15 N
Stroke	7 mm
Recommended workpiece weight *①	0.25 kg
Opening/closing time	0.15 s/0.15 s
Noise emission	< 60 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*②
Rated voltage	24 V DC $\pm$ 10%
Rated current	0.15 A
Peak current	0.8 A
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS



Build-in  
Controller



Gripping Force  
Adjustable



Position  
Adjustable



Speed  
Adjustable

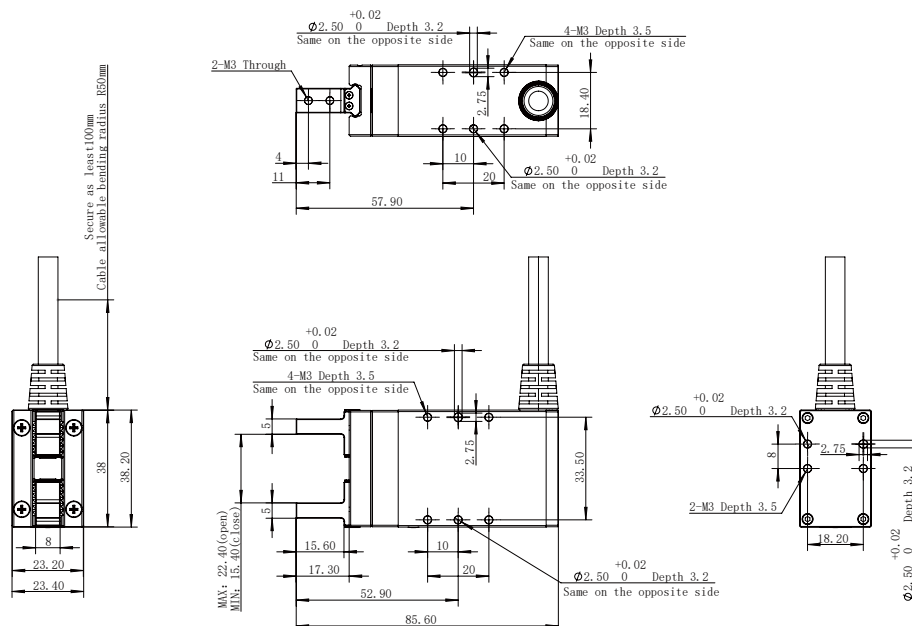


Drop  
Detection



Self-locking  
Mechanism

## Technical Drawings



# RGI Series Electric Rotary Gripper

RGIC-35-12    RGI-100-14  
RGIC-100-35    RGI-100-22  
                    RGI-100-30

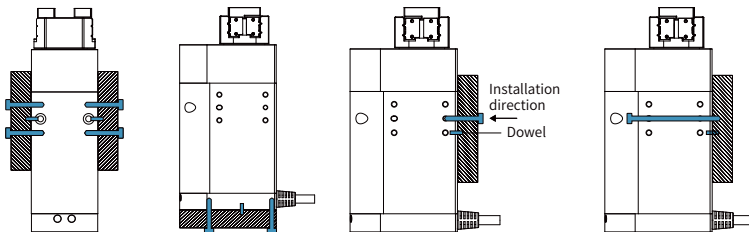


RGI series is the first fully self-developed infinite rotating gripper with a compact and precise structure on the market. It is widely applied in medical automation industry to grip and rotate the test tubes as well as other industries like electronics and New energy industry.

## 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

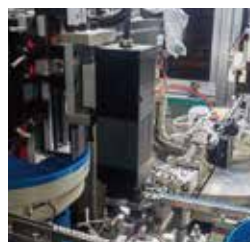
The unique structural design in the industry can realize the simultaneous gripping and infinite rotation on one electric gripper, and solve the winding problem in non-standard design and rotation.

### ● 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 1.5N·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.

# RGIC-35-12



## 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 Use optional communication, need external communication conversion box, please consult the sales staff for details

## Parameters

### Product Parameter

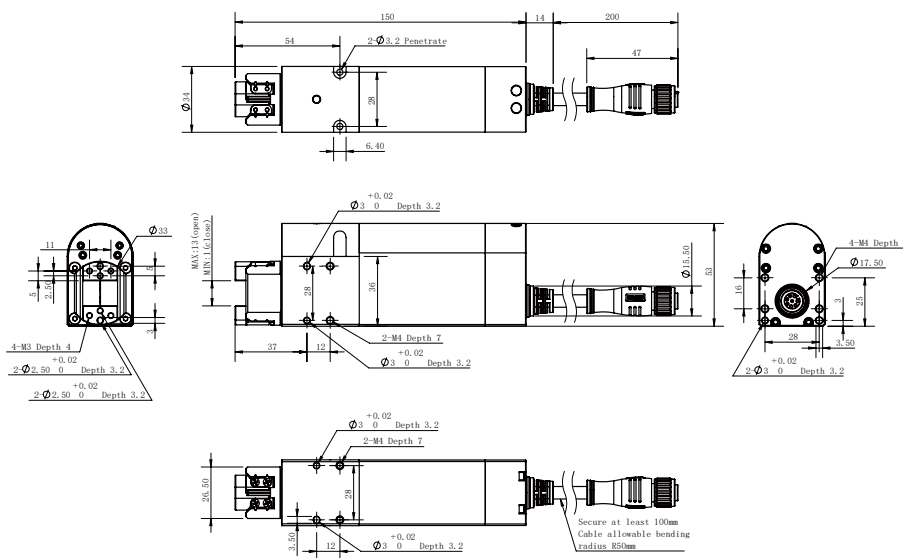
Gripping force (per jaw)	13~35 N
Stroke	12 mm
Rated torque	0.2 N·m
Peak torque	0.5 N·m
Rotary range	Infinite Rotating
Recommended workpiece weight *①	0.5 kg
Max. rotation speed	2160 °/s
Repeat accuracy (swiveling)	± 0.05 °
Repeat accuracy (position)	± 0.02 mm
Opening/closing time	0.6 s/0.6 s
Weight	0.64 kg
Size	150 mm x 53 mm x 34 mm Rotaty Diameter:33mm

### Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT*②
Rated voltage	24 V DC ± 10%
Rated current	1.7 A
Peak current	2.5 A
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
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## Technical Drawings



# RGIC-100-35



## Static Vertical Allowable Load

**Fz** 200 N

## Allowable Loading Moment

**Mx** 3 N·m

**My** 3 N·m

**Mz** 2.5 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 Use optional communication, need external communication conversion box, please consult the sales staff for details

## 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 *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:41mm

### Working Environment

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

Rated voltage 24 V DC ± 10%

Rated current 2.0 A

Peak current 5.0 A

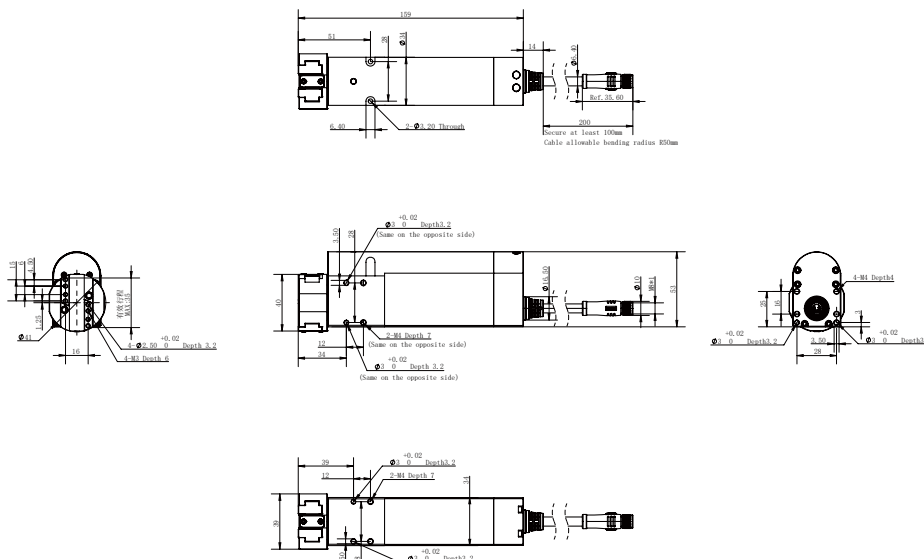
IP class IP 40

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

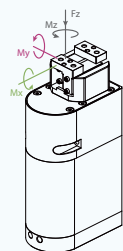
Certification CE, FCC, RoHS

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

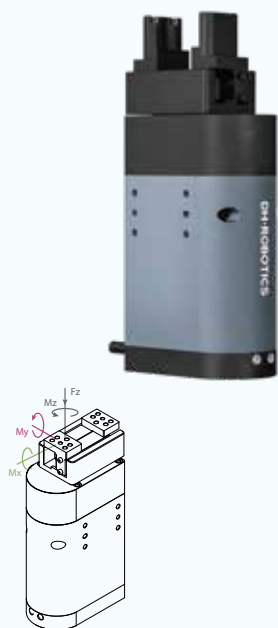
## Technical Drawings



## CG Series



# RGI-100-22



## Static Vertical Allowable Load

**Fz** 200 N

## Allowable Loading Moment

**Mx** 3.5 N·m

**My** 4 N·m

**Mz** 5.5 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 Use optional communication, need external communication conversion box, please consult the sales staff for details

## Parameters

### Product Parameter

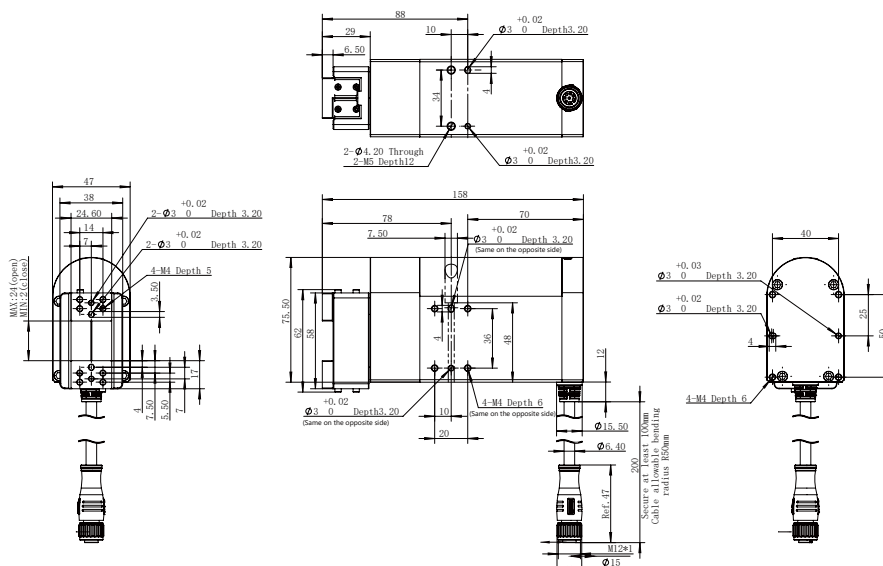
Gripping force (per jaw)	30~100 N
Stroke	22 mm
Rated torque	0.5 N·m
Peak torque	1.5 N·m
Rotary range	Infinite Rotating
Recommended workpiece weight *①	1.5 kg
Max. rotation speed	2160 °/s
Repeat accuracy (swiveling)	± 0.05 °
Repeat accuracy (position)	± 0.02 mm
Opening/closing time	0.65 s/0.65 s
Weight	1.4 kg
Size	158 mm x 75.5 mm x 47 mm Rotary Diameter: 67.1mm

### Working Environment

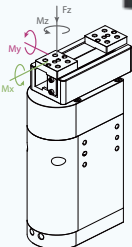
Communication interface	Standard: Modbus RTU (RS485), Digital I/O Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT *②
Rated voltage	24 V DC ± 10%
Rated current	1.0 A
Peak current	4.0 A
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

● Build-in Controller	● Gripping Force Adjustable	● Position Adjustable	● Speed Adjustable	● Drop Detection	● Rotary Adjustable	✗ Self-locking Mechanism
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## Technical Drawings



## CG Series



Mz 7 N · m

\*② Use optional communication, need external communication conversion box. please consult the sales staff for details

Size	158 mm x 75.5 mm x 47 mm Rotaty Diameter:84.8mm
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Certification	CE, FCC, RoHS
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## Technical Drawings



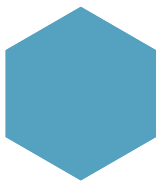
# RGD Series

## Electric Direct Drive Rotary Gripper

RGD-5-14    RGD-35-14  
RGD-5-30    RGD-35-30

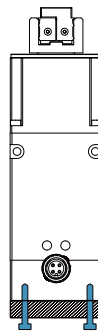
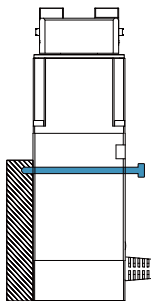


The RGD direct-drive electric rotary gripper of DH-Robotics adopts a direct-drive backlash-free rotation module to improve the rotary accuracy, and thus is perfectly suited for high-precision manufacturing applications.



### 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  $0.01^\circ$ , 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  $1500^\circ$  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

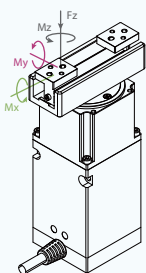
With the direct-drive technology, the RGD gripper can provide greatly improved rotary accuracy, which can be used in scenarios such as the high-precision positioning assembly, transport, and deflection correction of 3C electronics and semiconductors.



## CG Series

# RGD-5-30

A 3D perspective view of the RGD-5-30 industrial robot arm. The robot has a black upper section with a gripper and a grey lower section. A cable is connected to the bottom. To the left, a 2D schematic diagram shows the robot arm's coordinate system with axes  $F_z$  (vertical),  $M_x$  (horizontal), and  $M_y$  (rotational).



### Static Vertical Allowable Load

Fz	150 N
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### Allowable Loading Moment

$M_x$	$2 \text{ N} \cdot \text{m}$
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My                      1.5 N · m

Mz                      2.5 N · m

\*① The peak torque can be increased up to 0.5N·m. Please consult the technical support staff for details.

\*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.

## Parameters

Product Parameter	Specification	Test Method	Result
Material	304 Stainless Steel	Visual Inspection	Compliant
Dimensions	100mm x 50mm x 2mm	Caliper Measurement	100mm x 50mm x 2mm
Weight	150g	Scale Measurement	150g
Surface Finish	Polished	Visual Inspection	Polished
Corrosion Resistance	ISO 9001	Salt Spray Test	Pass
Strength	200MPa	Tensile Test	200MPa
Hardness	150HV	Rockwell C Test	150HV
Welding	Welded	Visual Inspection	Welded
Coating	None	Visual Inspection	None
Assembly	Assembly	Visual Inspection	Assembly
Storage	Storage	Visual Inspection	Storage
Transportation	Transportation	Visual Inspection	Transportation
Installation	Installation	Visual Inspection	Installation
Operation	Operation	Visual Inspection	Operation
Maintenance	Maintenance	Visual Inspection	Maintenance
Disposal	Disposal	Visual Inspection	Disposal

Gripping force (per jaw)	2-5.5 N
--------------------------	---------

Stroke	30 mm
--------	-------

Rated torque	0.1 N · m
--------------	-----------

Peak torque <sup>★①</sup>	0.25 N · m
---------------------------	------------

Rotary range	Infinite Rotating
--------------	-------------------

Recommended workpiece weight <sup>★②</sup>	0.05 kg
--	---------

Max. rotation speed	1500 °/s
---------------------	----------

Rotary backlash	Zero backlash
-----------------	---------------

Repeat accuracy (swiveling)	$\pm 0.1^\circ$
-----------------------------	-----------------

Repeat accuracy (position)	$\pm 0.02$ mm
----------------------------	---------------

Opening/closing time	0.5 s/0.5 s
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Weight	1 kg <sub>(without brake)</sub>	1.02 kg <sub>(with brake)</sub>
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Size	149 mm x 50 mm x 50 mm Rotaty Diameter:83.6mm
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## Working Environment

Communication interface	Modbus RTU (RS485)
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Rated voltage	24 V DC $\pm$ 10%
---------------	-------------------



Rated current	1.2 A
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Peak current	2.5 A
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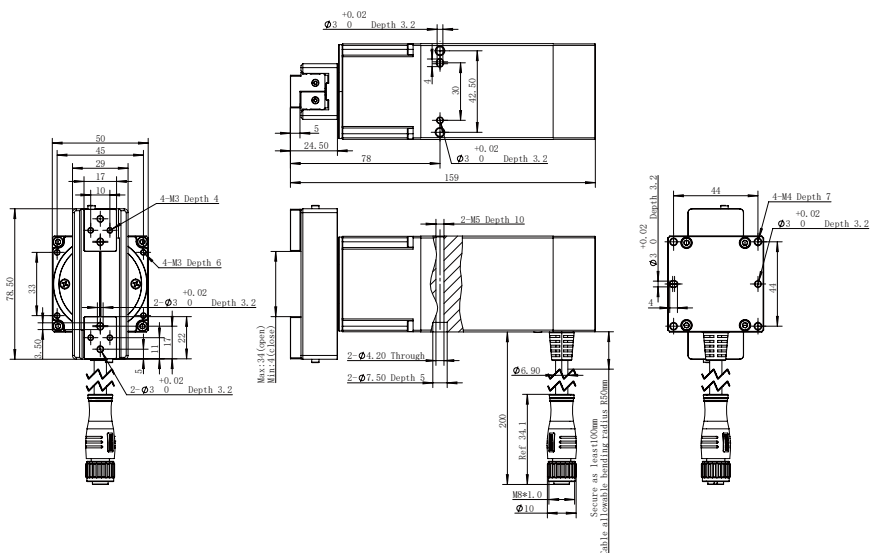
IP class	IP 40
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Recommended environment	0~40°C, under 85% RH
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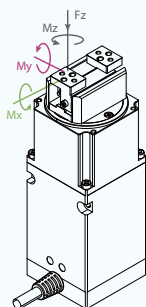
Certification	CE, FCC, RoHS
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Build-in Controller	Gripping Force Adjustable	Position Adjustable	Speed Adjustable	Drop Detection	Rotary Adjustable	Self-locking Mechanism

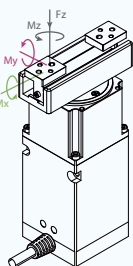
## Technical Drawings



## CG Series



# RGD-35-30



### Static Vertical Allowable Load

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

### Allowable Loading Moment

$$M_x = 2 \text{ N} \cdot \text{m}$$

**My**                      **1.5 N · m**

Mz                      2.5 N · m

\*① The peak torque can be increased up to 0.5N·m. Please consult the technical support staff for details.

\*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.

## Parameters

Product Parameter	Value
Product Name	Product A
Product ID	123456
Product Description	Product A Description
Product Price	100.00
Product Weight	1.00 kg
Product Dimensions	100 x 100 x 100 mm
Product Material	Material A
Product Color	Color A
Product Category	Category A
Product Status	Status A
Product Location	Location A
Product Date	2023-10-27

Gripping force (per jaw)	10-35 N
--------------------------	---------

Stroke	30 mm
--------	-------

Rated torque	0.1 N·m
--------------	---------

Peak torque <sup>★①</sup>	0.25 N · m
---------------------------	------------

Rotary range	Infinite Rotating
--------------	-------------------

Recommended workpiece weight * <sup>②</sup>	0.35 kg
---	---------

Max. rotation speed	1500 °/s
---------------------	----------

Rotary backlash	Zero backlash
-----------------	---------------

Repeat accuracy (swiveling)	$\pm 0.1^\circ$
-----------------------------	-----------------

Repeat accuracy (position)	$\pm 0.02$ mm
----------------------------	---------------

Opening/closing time	0.7 s/0.7 s
----------------------	-------------

Weight	1 kg(without brake)	1.02 kg(with brake)
--------	---------------------	---------------------

Size	149 mm x 50 mm x 50 mm Rotaty Diameter:83.6mm
------	--

## Working Environment

Communication interface	Modbus RTU (RS485)
-------------------------	--------------------

Rated voltage	24 V DC $\pm$ 10%
---------------	-------------------







Rated current	1.2 A
---------------	-------

Peak current	2.5 A
--------------	-------

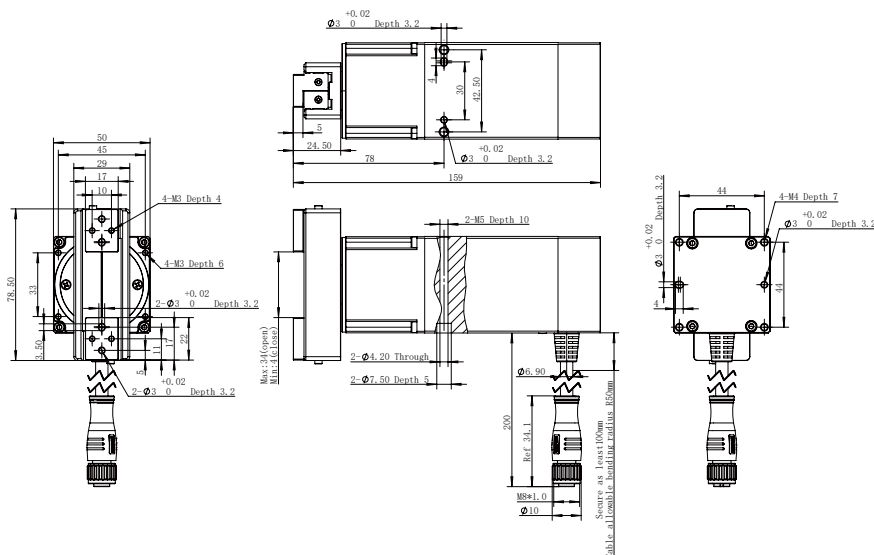
IP class	IP 40
----------	-------

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

## Technical Drawings



# PGI Series Electric Parallel Gripper

PGI-140-80

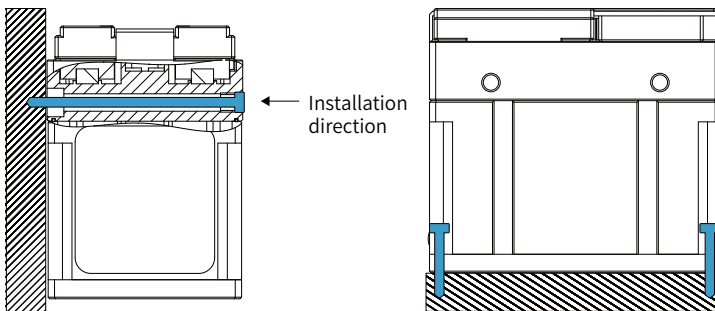


Based on the industrial requirements of “long stroke, high load, and high protection level”, DH-Robotics independently developed the PGI series of industrial electric parallel gripper. The PGI series is widely used in various industrial scenarios with positive feedback.

## 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

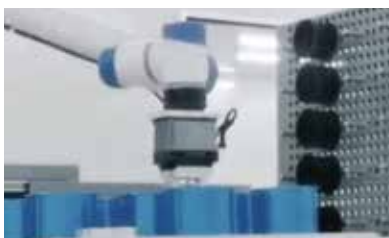
Long stroke reach to 80 mm. With the customization fingertips, it can stably grasp the medium and large objects below 3kg and suitable for lots of industrial scenes.

### ● 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

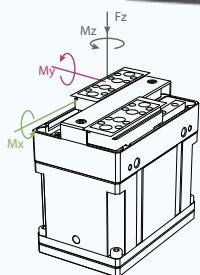
The maximum single-sided gripping force of PGI-140-80 is 140 N, and the maximum recommended load is 3 kg, which can meet more diverse gripping needs.



## 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.

## CG Series



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

\*② Use optional communication, need external communication conversion box, please consult the sales staff for details

Size	95 mm x 67.1 mm x 92.5 mm
------	---------------------------

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



### Self-locking Mechanism

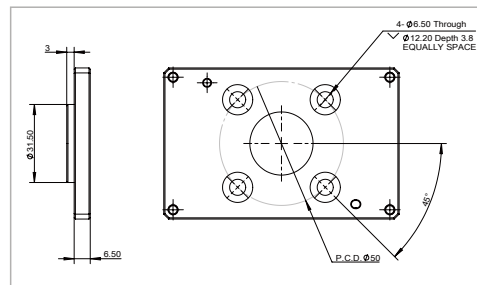
Technical drawing of a mechanical part showing dimensions and tolerances. The drawing includes a detail view of a threaded hole and a main view of the part.

**Detail View (Top Left):**

- Feature: Threaded hole.
- Dimension:  $2 \cdot \Phi 3 \pm 0.02$  Depth 2.5.
- Label: "allowable mm" with a vertical arrow indicating a tolerance range.

**Main View (Right):**

- Feature: Flange with four holes.
- Dimension:  $4 \cdot \Phi 4.30$  Through (pointing to the holes).
- Dimension: 87.50 (overall width).
- Dimension: 60 (distance between holes).
- Dimension: 49 (distance from center to edge).
- Dimension: 53.50 (overall width).



# PGHL Series

## Heavy-Load Long-Stroke Electric Parallel Gripper

PGHL-400-80

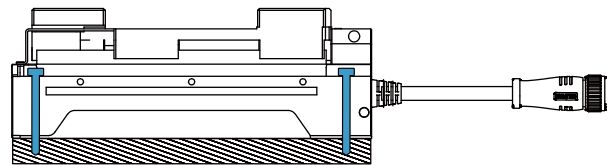
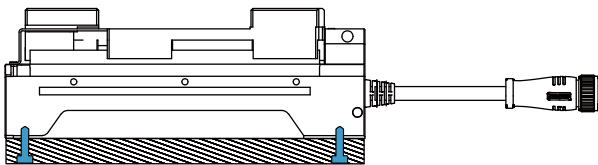


PGHL series is an industrial flat electric gripper developed and produced by DH-Robotics. With its compact design, heavy load and high force control accuracy, it can be applied to heavier load clamping requirements and more application scenarios.



### 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

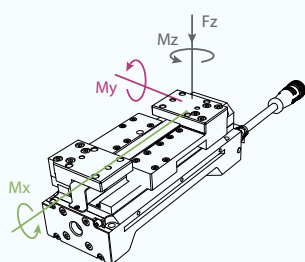
Opening/closing time up to 1.0s/1.1s, with speed control optimization and mechanical self-locking mechanism function, it can meet fast and stable gripping needs of the production line



### 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.

# PGHL-400-80



## Static Vertical Allowable Load

**Fz** 1000 N

## Allowable Loading Moment

**Mx** 50 N·m

**My** 50 N·m

**Mz** 15 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 Use optional communication, need external communication conversion box, please consult the sales staff for details

## Parameters

### Product Parameter

Gripping force (per jaw)	140~400 N
Stroke	80 mm
Recommended workpiece weight *①	8 kg
Opening/closing time	1.0 s/ 1.1 s
Repeat accuracy (position)	± 0.02 mm
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 *②
Rated voltage	DC 24 V ± 10%
Rated current	1.0 A
Peak current	3.0 A
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE、FCC、RoHS

Build-in Controller

Gripping Force Adjustable

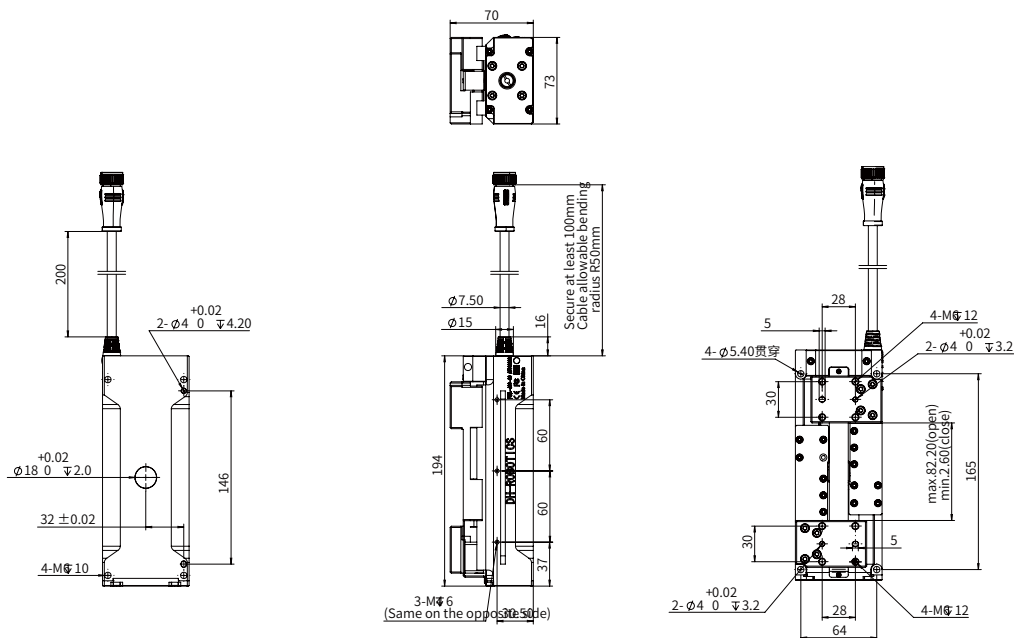
Position Adjustable

Speed Adjustable

Drop Detection

Self-locking Mechanism

## Technical Drawings



# PGS Series Miniature Electro-magnetic Gripper

PGS-5-5

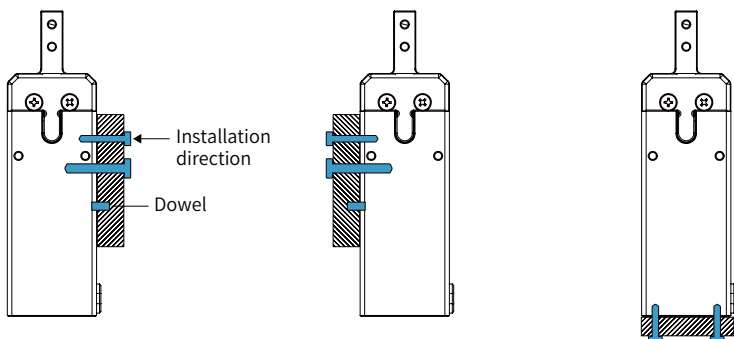


The PGS series is a miniature electromagnetic gripper with high working frequency. Based on a split design, the PGS series could be applied in space-limited environment with the ultimate compact size and simple configuration.

## 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

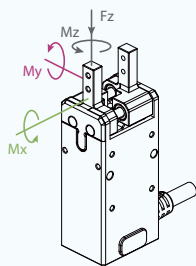
The configuration is simple with the Digital I/O communication protocol.



## Application

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

# PGS-5-5



## 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

\*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.

## Parameters

### Product Parameter

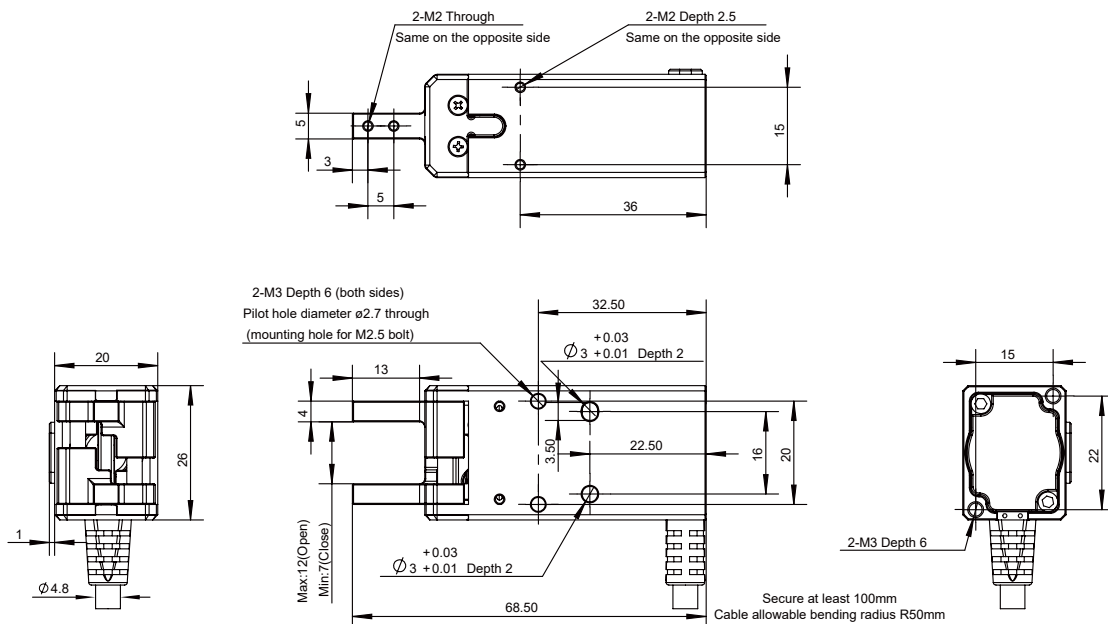
Gripping force (per jaw)	3.5-5 N
Stroke	5 mm
Recommended workpiece weight *	0.05 kg
Opening/closing time	0.03 s/0.03 s
Repeat accuracy (position)	± 0.01 mm
Noise emission	< 50 dB
Weight	0.2 kg
Driving method	Electromagnet + Spring
Size	Gripper Size: 68.5 mm x 26 mm x 20 mm Controller Size: 67.7 mm x 66.8 mm x 29.6 mm

### Working Environment

Communication interface	Digital I/O
Rated voltage	24 V DC ± 10%
Rated current	0.1 A
Peak current	3.0 A
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

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

## Technical Drawings



# PGC Series

## Electric Collaborative Parallel Gripper



PGC-50-35

PGC-140-50

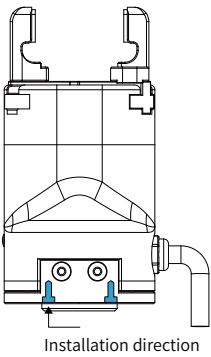
PGC-300-60

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

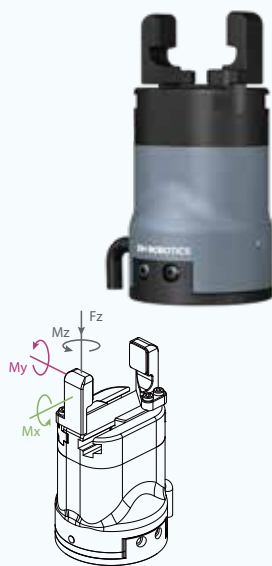
The gripping force of the PGC series could reach 300 N, and the maximum load can reach 6 kg, which can meet more diverse gripping needs.



## 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



## 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 Use optional communication, need external communication conversion box, please consult the sales staff for details

## Parameters

### Product Parameter

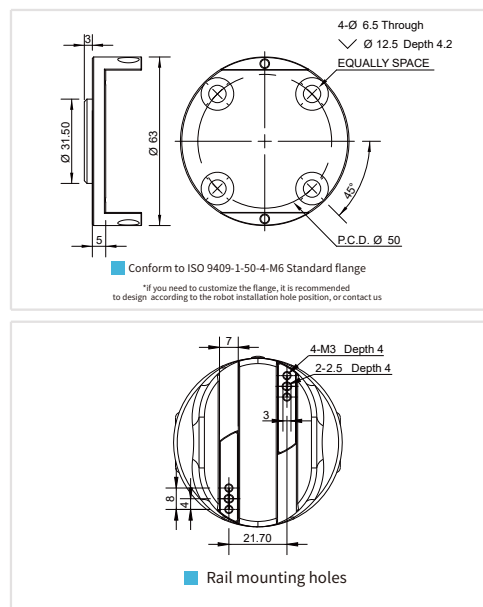
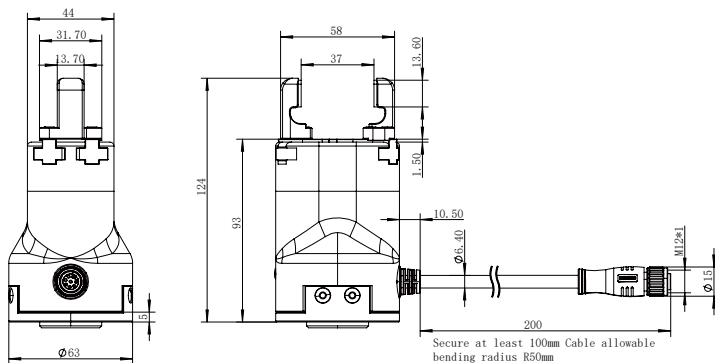
Gripping force (per jaw)	15~50 N
Stroke	37 mm
Recommended workpiece weight *①	1 kg
Opening/closing time	0.7 s/0.7 s
Repeat accuracy (position)	± 0.03 mm
Noise emission	< 50 dB
Weight	0.5 kg
Driving method	Precise planetary gears + Rack and pinion
Size	124 mm x 63 mm x 63 mm

### Working Environment

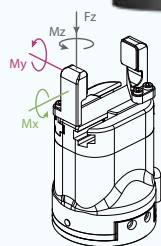
Communication interface	Standard: Modbus RTU (RS485), Digital I/O Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT *②
Rated voltage	24 V DC ± 10%
Rated current	0.25 A
Peak current	0.5 A
IP class	IP 54
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

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

## Technical Drawings



## CG Series



Mz 7 N · m

\*② Use optional communication, need external communication conversion box, please consult the sales staff for details

Size	138.5 mm x 75 mm x 75 mm
------	--------------------------

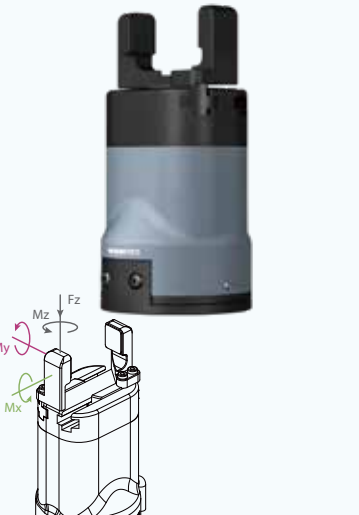
Certification	CE, FCC, RoHS
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●

\*if you need to customize the flange, it is recommended to design according to the robot installation hole position, or contact us



# PGC-300-60



The photograph shows the PGC-300-60 machine, a black and grey device with a vertical column and a horizontal arm. The schematic diagram below it illustrates the force axes:  $F_z$  (vertical force),  $M_z$  (torque around the vertical axis),  $M_y$  (torque around the horizontal axis), and  $M_x$  (torque around the vertical axis).

### Static Vertical Allowable Load

Fz                      600 N

### Allowable Loading Moment

$M_x$	$15 \text{ N} \cdot \text{m}$
-------	-------------------------------

My                      15 N · m

Mz                      15 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 Use optional communication, need external communication conversion box, please consult the sales staff for details

## Parameters

Product Parameter	Specification	Test Method	Acceptance Criteria
Material Composition	99.99% Purity	Mass Spectrometry	±0.01% deviation
Molecular Weight	150.15 g/mol	Size Exclusion Chromatography	±0.5% deviation
Purity	99.99%	HPLC	±0.01% deviation
Stability	12 months	Accelerated Degradation	±0.01% deviation
Solubility	100 mg/mL	UV-Vis Spectroscopy	±0.01% deviation
Biocompatibility	ISO 10993-5	In Vitro Testing	±0.01% deviation
Manufacturing Process	Controlled Environment	Process Monitoring	±0.01% deviation
Storage Conditions	2-8°C	Temperature Monitoring	±0.01% deviation
Shelf Life	12 months	Stability Testing	±0.01% deviation
Regulatory Compliance	FDA, EMA	Documentation Review	±0.01% deviation

Gripping force (per jaw)	80~300 N
--------------------------	----------

Stroke	60 mm
--------	-------

Recommended workpiece weight * <sup>①</sup>	6 kg
---	------

Opening/closing time	0.8 s/0.8 s
----------------------	-------------

Repeat accuracy (position)	$\pm 0.03$ 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 *②
-------------------------	---

Rated voltage	24 V DC $\pm$ 10%
---------------	-------------------

Rated current	0.4 A
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Peak current	2.0 A
--------------	-------

IP class	IP 67
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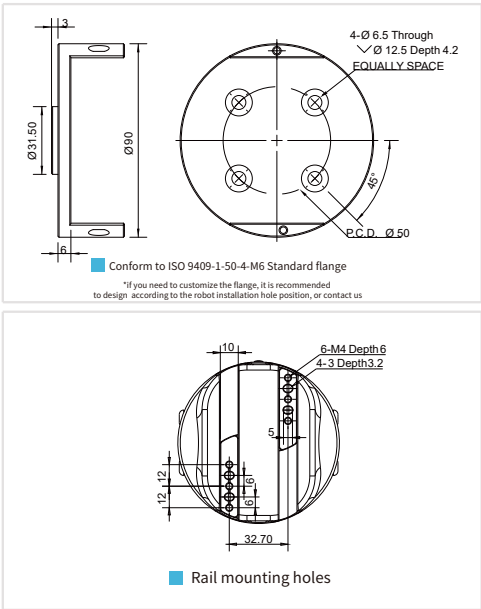
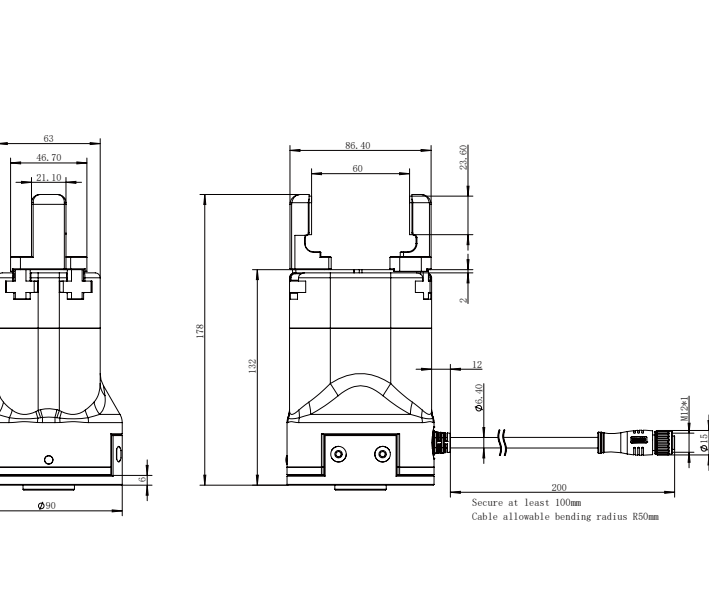
Recommended environment	0~40°C, under 85% RH
-------------------------	----------------------

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

Date		Page	

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

## Technical Drawings



# AG Series Electric Adaptive Gripper



reddot award 2019  
winner



reddot award 2020  
winner

AG-160-95

AG-105-145

DH-3

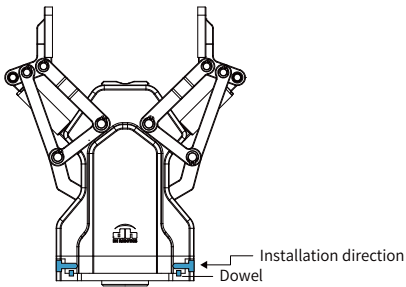


The AG series is a linkage-type adaptive electric gripper which is independently developed by DH-Robotics. With Plug& Play software many and exquisite structural design, AG series is a perfect solution to be applied with collaborative robots to grip work-pieces with different shapes in different industries.



## 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

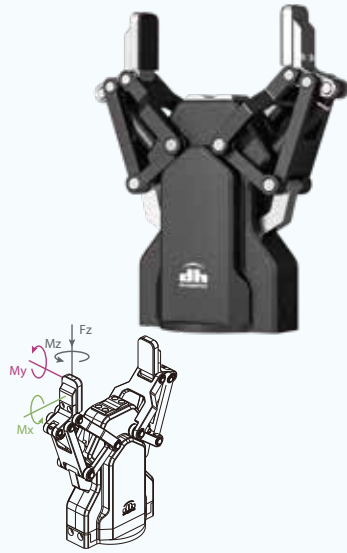
The biggest stroke of the AG series is up to 145 mm. One gripper can meet the grasping needs of objects of different sizes with good compatibility.



## 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



## Static Vertical Allowable Load

Fz 300 N

## Allowable Loading Moment

Mx 4.75 N·m

My 4.75 N·m

Mz 4.75 N·m

\*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 Use optional communication, need external communication conversion box, please consult the sales staff for details

## Parameters

### Product Parameter

Gripping force (per jaw)	45~160 N
Stroke	95 mm
Recommended workpiece weight *①	3 kg
Opening/closing time	0.9 s/0.9 s
Repeat accuracy (position)	± 0.03 mm
Noise emission	< 50 dB
Weight	1 kg
Driving method	Screw drive + Linkage system
Size	184.6 mm x 162.3 mm x 67 mm

### Working Environment

Communication interface	Standard: Modbus RTU (RS485), Digital I/O Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT *②
Rated voltage	24 V DC ± 10%
Rated current	0.8 A
Peak current	1.5 A
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

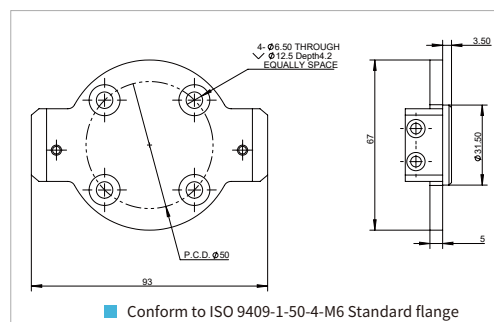
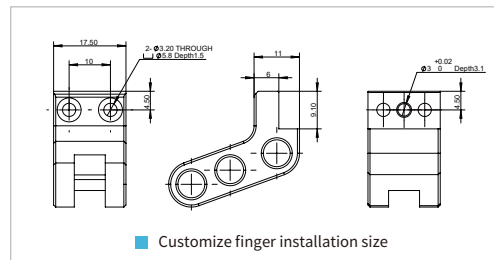
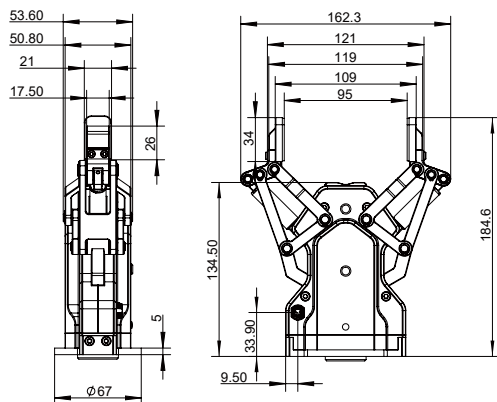


Plug &  
Play

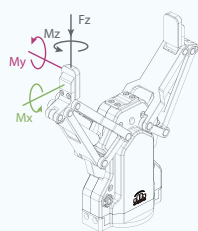


Self-locking  
Mechanism

## Technical Drawings



## CG Series



Mz 1.95 N · m

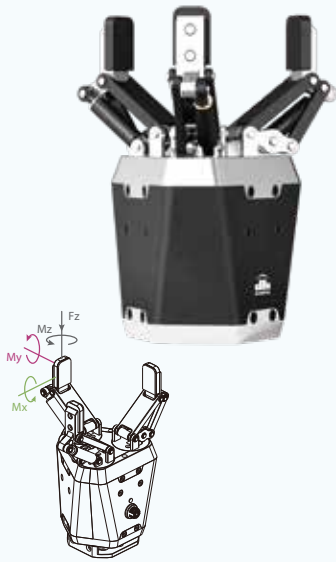
\*② Use optional communication, need external communication conversion box, please consult the sales staff for details

Size	203.9 mm x 212.3 mm x 67 mm
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Certification	CE, FCC, RoHS
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- 47 -

# DH-3



## 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 Use optional communication, need external communication conversion box, please consult the sales staff for details

## 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	< 50 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%
Rated current	0.5 A
Peak current	1 A
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS



Built-in  
Controller



Gripping Force  
Adjustable



Position  
Adjustable



Speed  
Adjustable



Drop  
Detection

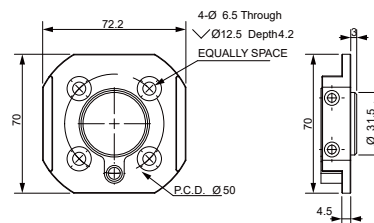
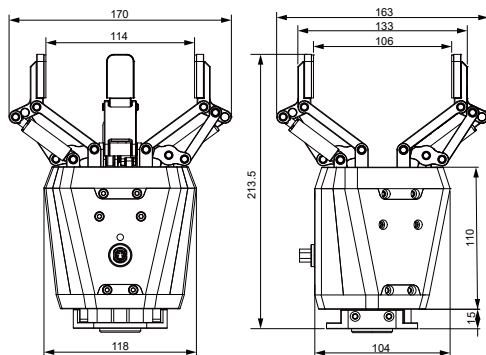


Plug &  
Play

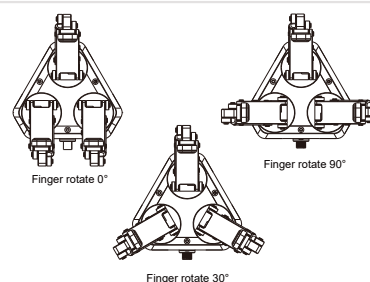


Self-locking  
Mechanism

## Technical Drawings



Conform to ISO 9409-1:50-4-M6 Standard flange



# CG Series Electric Centric Gripper

CGE-10-10

CGI-100-170

CGC-80-10

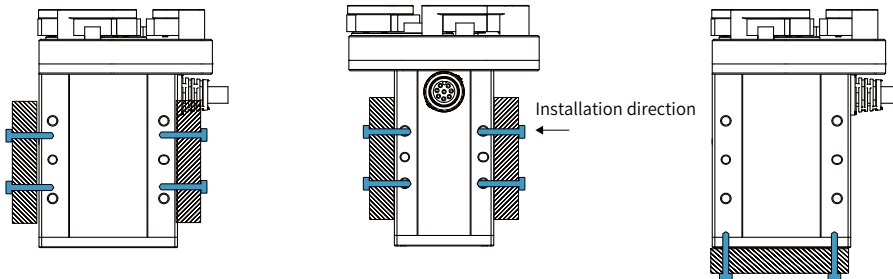


The CG series is a three-finger centric gripper independently developed by DH-Robotics. The three-finger gripping method can better cope with the grasping task of cylindrical workpieces. The CG series is available in a variety of models for a variety of scenarios, stroke and end devices.



## 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

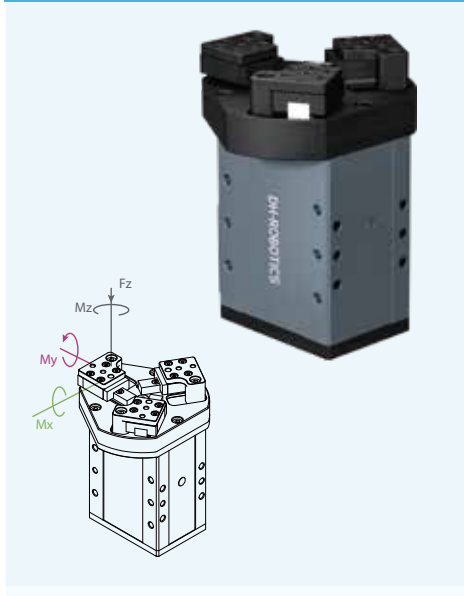
The high-performance servo motor can provide instantaneous overload protection



## Application

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

## CGE-10-10



### Static Vertical Allowable Load

Fz                      150 N

### Allowable Loading Moment

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

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 Use optional communication, need external communication conversion box, please consult the sales staff for details

## Parameters

Product Parameter	Specification	Test Method	Acceptance Criteria
Material Composition	99.99% Purity	Mass Spectrometry	±0.01% deviation
Molecular Weight	150.15 g/mol	Size Exclusion Chromatography	±2% deviation
Purity	99.99%	HPLC	±0.01% deviation
Stability	12 months	Accelerated Degradation	±5% deviation
Biocompatibility	ISO 10993-5	In Vitro Testing	Pass
Environmental Impact	RoHS Compliant	Material Analysis	Pass

Gripping force (per jaw)	3~10 N
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Stroke	10 mm
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Recommended workpiece weight * <sup>①</sup>	0.1 kg
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Opening/closing time	0.3 s/0.3 s
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Repeat accuracy (position)	$\pm 0.03$ mm
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Noise emission	< 40 dB
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Weight	0.43 kg
Driving method	Precise planetary gear reducer + Rack and pinion

Size	94 mm x 53.5 mm x 38 mm
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Country	Year	Population (millions)	Urban population (millions)	Urban population (%)
Algeria	2000	24.0	14.0	58.3
Algeria	2005	26.0	15.0	57.7
Algeria	2010	28.0	16.0	57.1
Algeria	2015	30.0	17.0	56.7
Algeria	2020	32.0	18.0	56.3
Algeria	2025	34.0	19.0	55.9
Algeria	2030	36.0	20.0	55.6
Algeria	2035	38.0	21.0	55.3
Algeria	2040	40.0	22.0	55.0
Algeria	2045	42.0	23.0	54.8
Algeria	2050	44.0	24.0	54.5
Algeria	2055	46.0	25.0	54.3
Algeria	2060	48.0	26.0	54.2
Algeria	2065	50.0	27.0	54.0
Algeria	2070	52.0	28.0	53.8
Algeria	2075	54.0	29.0	53.7
Algeria	2080	56.0	30.0	53.6
Algeria	2085	58.0	31.0	53.4
Algeria	2090	60.0	32.0	53.3
Algeria	2095	62.0	33.0	53.2
Algeria	2100	64.0	34.0	53.1
Algeria	2105	66.0	35.0	53.0
Algeria	2110	68.0	36.0	52.9
Algeria	2115	70.0	37.0	52.9
Algeria	2120	72.0	38.0	52.8
Algeria	2125	74.0	39.0	52.7
Algeria	2130	76.0	40.0	52.6
Algeria	2135	78.0	41.0	52.6
Algeria	2140	80.0	42.0	52.5
Algeria	2145	82.0	43.0	52.4
Algeria	2150	84.0	44.0	52.4
Algeria	2155	86.0	45.0	52.3
Algeria	2160	88.0	46.0	52.3
Algeria	2165	90.0	47.0	52.2
Algeria	2170	92.0	48.0	52.2
Algeria	2175	94.0	49.0	52.1
Algeria	2180	96.0	50.0	52.1
Algeria	2185	98.0	51.0	52.0
Algeria	2190	100.0	52.0	52.0
Algeria	2195	102.0	53.0	51.9
Algeria	2200	104.0	54.0	51.9
Algeria	2205	106.0	55.0	51.9
Algeria	2210	108.0	56.0	51.9
Algeria	2215	110.0	57.0	51.8
Algeria	2220	112.0	58.0	51.8
Algeria	2225	114.0	59.0	51.8
Algeria	2230	116.0	60.0	51.7
Algeria	2235	118.0	61.0	51.7
Algeria	2240	120.0	62.0	51.7
Algeria	2245	122.0	63.0	51.6
Algeria	2250	124.0	64.0	51.6
Algeria	2255	126.0	65.0	51.6
Algeria	2260	128.0	66.0	51.6
Algeria	2265	130.0	67.0	51.5
Algeria	2270	132.0	68.0	51.5
Algeria	2275	134.0	69.0	51.5
Algeria	2280	136.0	70.0	51.5
Algeria	2285	138.0	71.0	51.4
Algeria	2290	140.0	72.0	51.4
Algeria	2295	142.0	73.0	51.4
Algeria	2300	144.0	74.0	51.4
Algeria	2305	146.0	75.0	51.3
Algeria	2310	148.0	76.0	51.3
Algeria	2315	150.0	77.0	51.3
Algeria	2320	152.0	78.0	51.3
Algeria	2325	154.0	79.0	51.3
Algeria	2330	156.0	80.0	51.3
Algeria	2335	158.0	81.0	51.3
Algeria	2340	160.0	82.0	51.3
Algeria	2345	162.0	83.0	51.2
Algeria	2350	164.0	84.0	51.2
Algeria	2355			

## Working Environment

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





Rated voltage	24 V DC $\pm$ 10%
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Rated current	0.3 A
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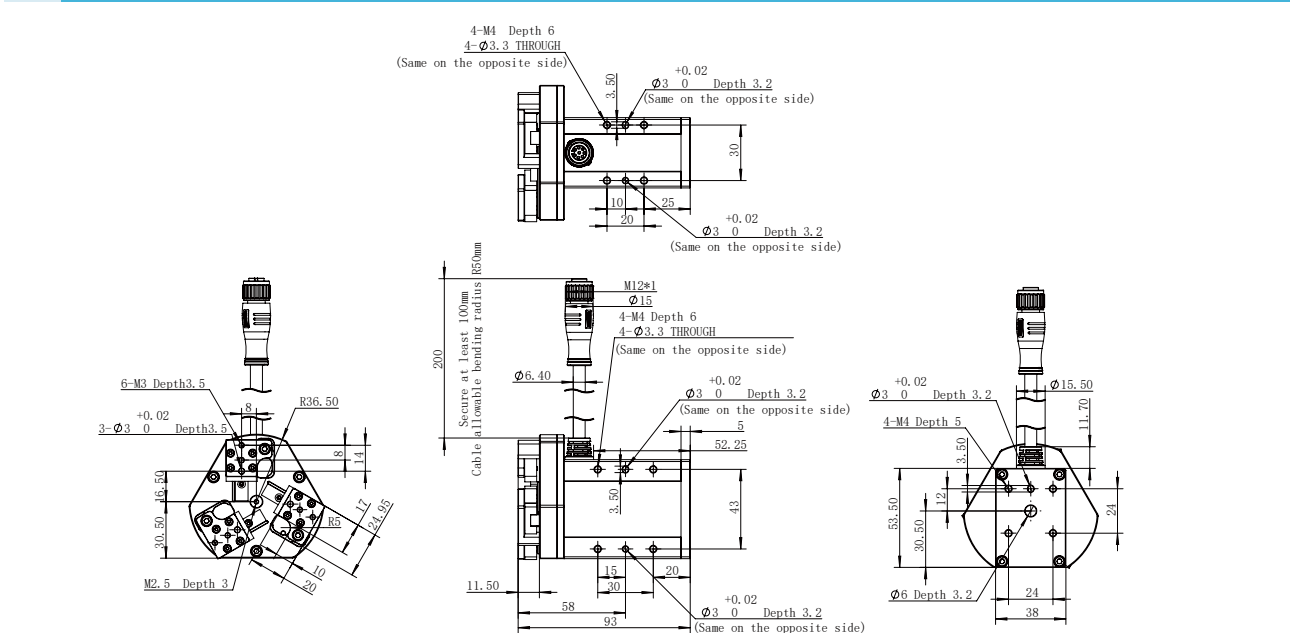
Peak current	0.6 A
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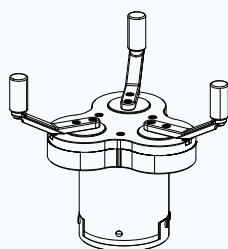
Recommended environment	0~40°C, under 85% RH
Certification	CE FCC RoHS

Certification	CE, FCC, RoHS
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Build-in Controller	Gripping Force Adjustable	Position Adjustable	Speed Adjustable	Drop Detection	Self-locking Mechanism

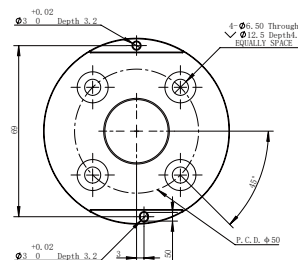
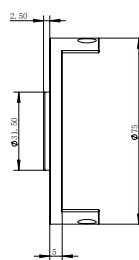
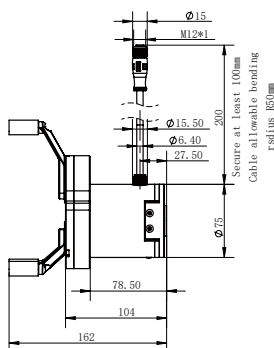
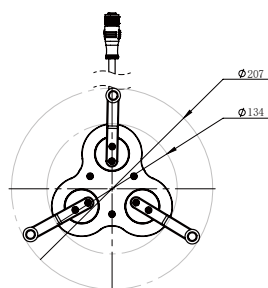
## Technical Drawings





\*② Use optional communication, need external communication conversion box, please consult the sales staff for details

### Self-locking Mechanism



\*If you need to customize the flange, it is recommended to design according to the robot installation hole position, or contact us.

## CGC-80-10



### Static Vertical Allowable Load

Fz	200 N
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### Allowable Loading Moment

$M_x$	$2.5 \text{ N} \cdot \text{m}$
-------	--------------------------------

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 Use optional communication, need external communication conversion box, please consult the sales staff for details








## Parameters

[illegible]

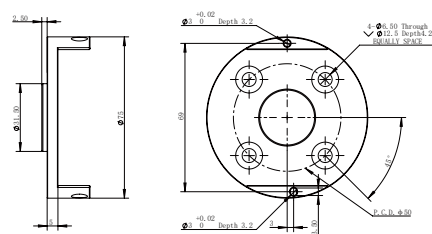
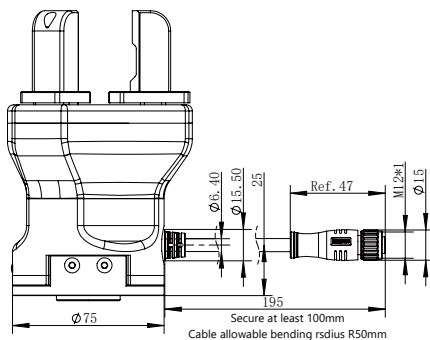
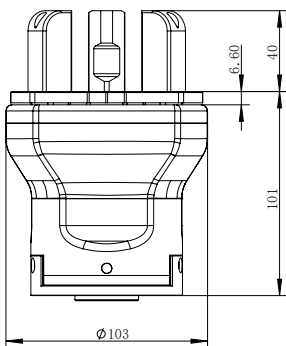
Gripping force (per jaw)	20~80 N
Single jaw	10 mm
Recommended workpiece weight <sup>★①</sup>	1.5 kg
Opening/closing time	0.2 s/0.2 s
Repeat accuracy (position)	± 0.03 mm
Noise emission	< 50 dB
Weight	1.5 kg
Driving method	Precise planetary gear reducer + Rack and pinion
Size	141 mm x 103 mm x 75 mm

## Working Environment

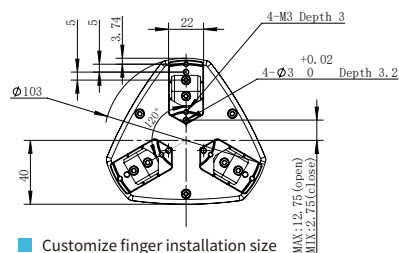
Communication interface	Standard: Modbus RTU (RS485), Digital I/O Optional: TCP/IP, USB2.0, CAN2.0A, PROFINET, EtherCAT *②
Rated voltage	24 V DC $\pm$ 10%
Rated current	0.3 A
Peak current	1 A
IP class	IP 67
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

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

## Technical Drawings



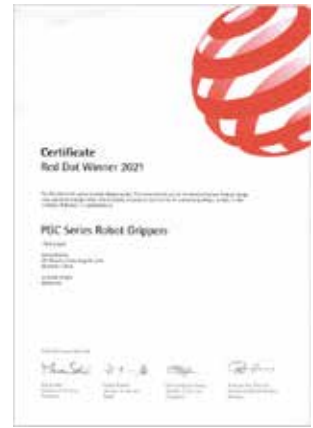
**Conform to ISO 9409-1-50-4-M6 Standard flange**  
\*If you need to customize the flange, it is recommended to design according to the robot installation hole position, or contact us



■ Customize 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

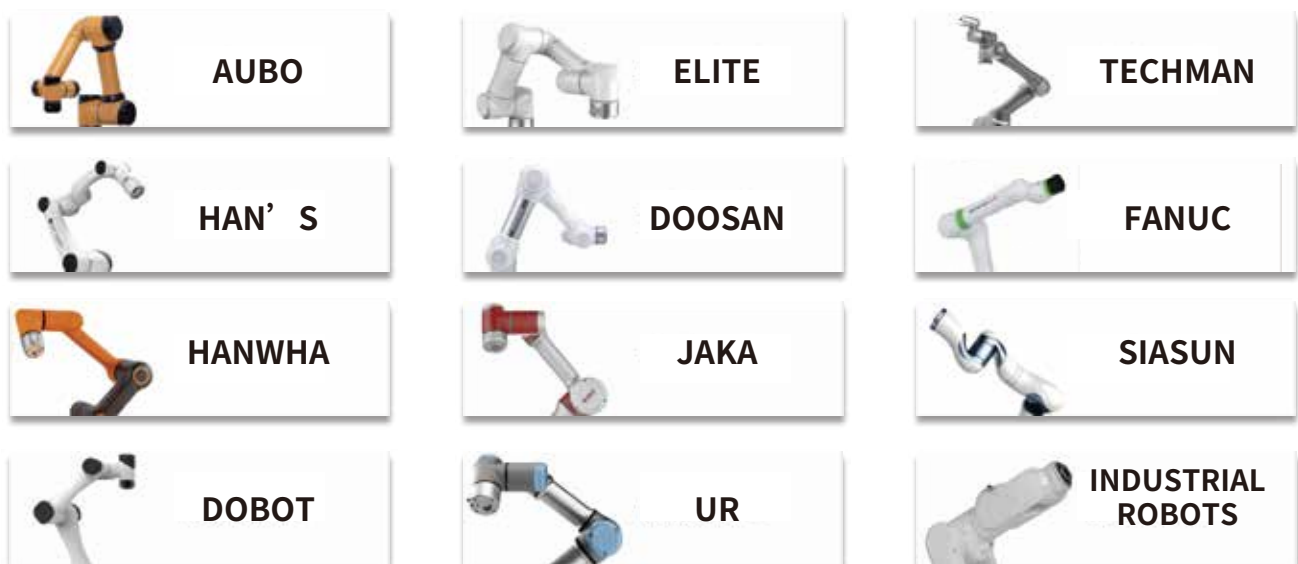
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The number of customers continues to grow rapidly...



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