

"Robot+" Intelligent Solution Integrator

Servo Electric Grippers

CN-2025.02

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Product Features

High-precision Control

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

Diverse Installation Options:

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

Compact Structure and Small size:

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

Wide Product Range:

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

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

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

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

Highly Flexible

Rapid Response

Intelligent Feedback and Adaptation

User-friendly and Easy to Maintain

DH-Robotics Core Technology



Precision Control and Feedback Technology

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



High-precision Force Control Technology

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



Integrated Technology

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



Intelligent Technology

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

Our Support System



R&D System



New Technology



Innovation



Sales Network



Projects Assessment



Training



Manufacturing



Quality System



Stock Management



R&D



Engineering Management



Quality Supervision



After-sales Service



Supply Management



Manufacturing Management

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.



PGC-50-35 Automation

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



AG-160-95 Automotive

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



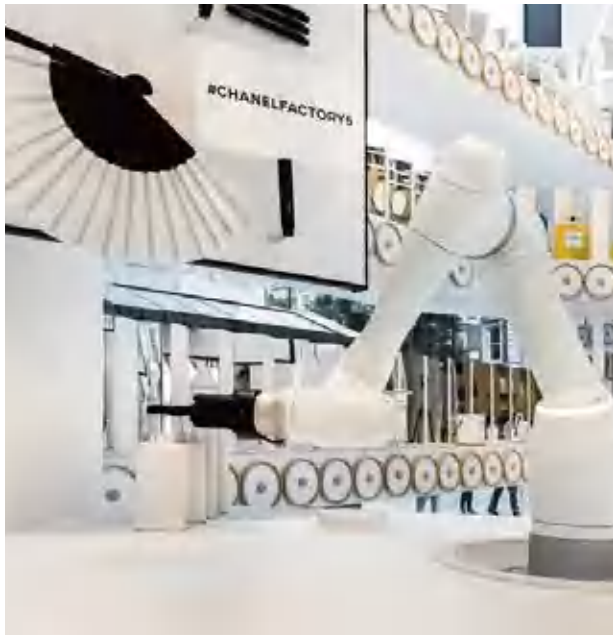
RGI-35-14 Medical Automation

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



PGE-15-26 Medical Automation

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



PGC-140-50 Robot New Retail

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



AG-160-95 Machining

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

Electric Parallel Grippers

PGE / PGSE / PGI / PGC / PGHL Series



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

Product Features

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

PGE / PGSE Series

 **Small Size**
Flexible Installation

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

 **High Working Speed**

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

 **Precise Force Control**

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

Application

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

ELECTRIC PARALLEL GRIPPER

 **Long Stroke**
High Load

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

 **High Protection Level**

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

 **Quick Response**
Intelligent Planning Speed

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



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
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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
								</		

PGE-50

Slim-type Electric Parallel Gripper



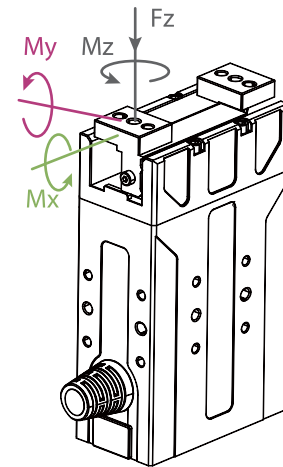
Selection Method

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
		40								
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 Fingerti									
F0	Without Flange									
	Table Below									
0	Without USB to RS-485 Converter									
4	USB to RS-485 Converte									

★①:	00	01	SIASUN	DOBOT CR	02	AUBO	04	JAKA	06	ROKAE SR	09	Doosan A	11	Elite EC	13	Neuromeka	15	Hanwha HCR
I/O(NN): NPN/NPN	Without Robot Cable	Elite CS	Hanwha A	DOBOT Nova	03	ELEPHANT	05	TECHMAN	07	DOBOT MG400	10	Doosan M	12	Han's	14	FAIRINO	16	UF x Arm
I/O(PP): PNP/PNP		UR CB	UR E															
I/O(NP): NPN/PNP																		
I/O(PN): PNP/NPN																		

★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.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 150 N

Allowable Loading Moment

PGE-50-26 PGE-50-40

Mx 2.5 N·m 4.5 N·m

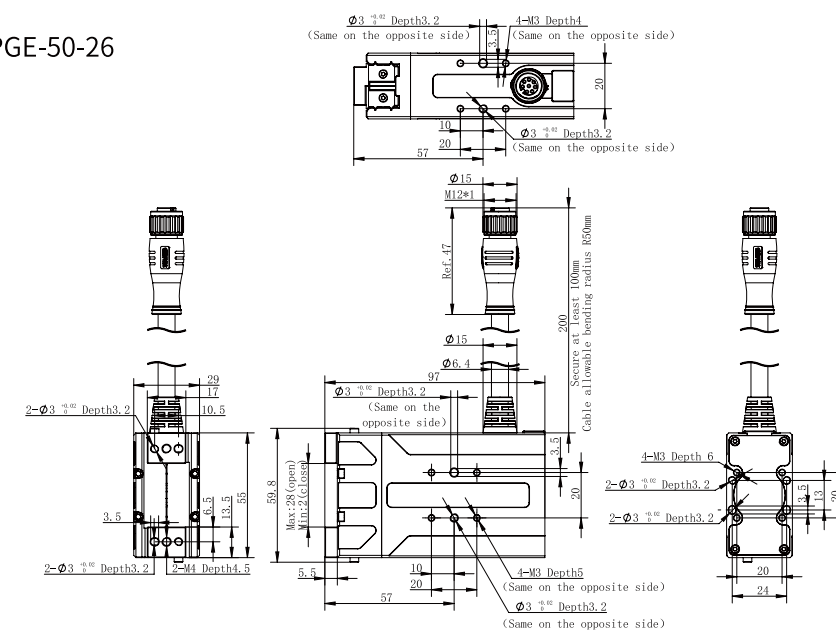
My 2 N·m 5 N·m

Mz 3 N·m 7 N·m

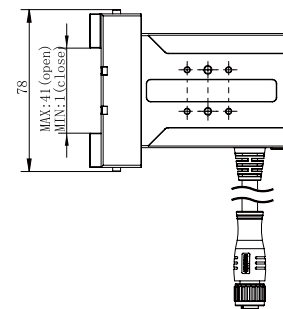
*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
*③ Requires external communication convertor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

Technical Drawings

PGE-50-26



PGE-50-40



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

Product Parameter

	PGE-50-26	PGE-50-40
Gripping force (per jaw)	15~50 N	15~50 N
Recommended workpiece weight *②	1 kg	1 kg
Stroke	26mm	40mm
Full stroke opening/closing time	0.45 s/0.45 s	0.6 s/0.6 s
Repeat accuracy (position)	± 0.02 mm	± 0.02 mm
Weight	0.4 kg	0.51 kg
Size	97 x 55 x 29 mm(without brake) 118 x 55 x 29 mm(with brake)	97 x 78 x 29 mm(without brake) 118 x 78 x 29 mm(with brake)
Noise emission	< 50 dB	< 50 dB
Driving method	Precise planetary gears + Rack and pinion	

Working Environment

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



Build-in Controller



Gripping Force Adjustable



Position Adjustable



Speed Adjustable



Drop Detection



Self-locking Mechanism

PGE-100-26

Slim-type Electric Parallel Gripper



Selection Method

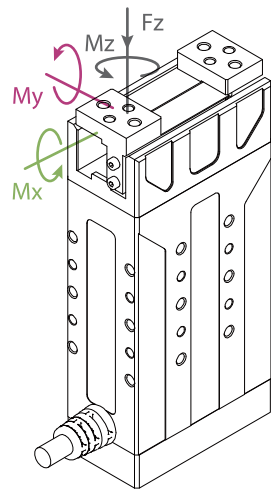
Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange Selection	Robot Cable	Other
PGE	100	26	O	S	M1	L5	J0	F0	00	0

O 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 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
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★①: I/O(NN): NPN/NPN I/O(PP): PNP/PNP I/O(NP): NPN/PNP I/O(PN): PNP/NPN	00	01	SIASUN	DOBOT CR	02	04	06	09	11	13	15	
	Without Robot Cable	Elite CS	Hanwha A	DOBOT Nova	AUBO	JAKA	ROKAE SR ROKAE ER	Doosan A	Elite EC	Neuromeka	Hanwha HCR	
		UR CB	UR E		03	05	07	10	12	14	16	17
					ELEPHANT	TECHMAN	DOBOT MG400	Doosan M	Han's	FAIRINO	UF x Arm	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.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 150 N

Allowable Loading Moment

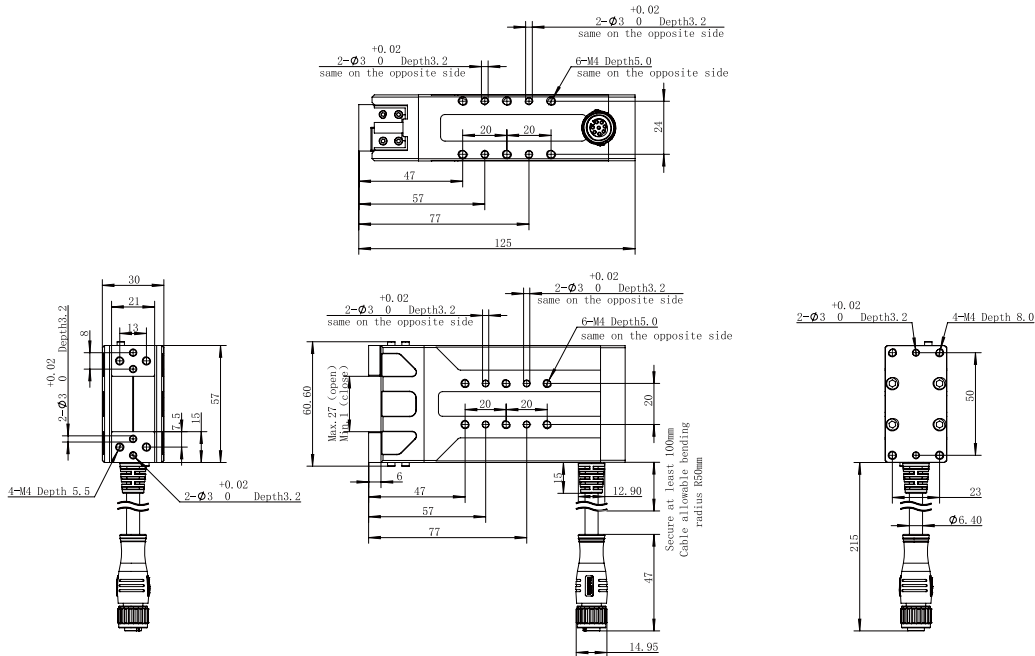
Mx 2.5 N · m

My 3 N · m

Mz 4 N · m

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

Technical Drawings



Product Parameter

Gripping force (per jaw) 30~100 N

Recommended workpiece weight *② 2 kg

Stroke 26 mm

Full stroke opening/closing time 0.5 s/0.5 s

Repeat accuracy (position) ± 0.02 mm

Weight 0.55 kg

Size 125 mm x 57 mm x 30 mm

Noise emission < 50 dB

Driving method Precise planetary gears + Rack and pinion

Working Environment

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

Rated voltage 24 V DC ± 10%

Current 0.3 A(Rated)/ 1.2 A(Peak) *④

Rated power 7.2 W

IP class IP 40

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

Certification CE, FCC, RoHS



Build-in Controller



Gripping Force Adjustable



Position Adjustable



Speed Adjustable



Drop Detection



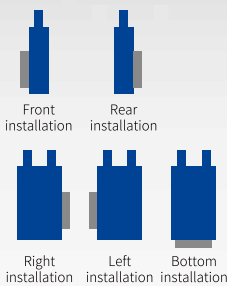
Self-locking Mechanism

PGSE-15-7

Slim-type Electric Parallel Gripper

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

Cost-effective

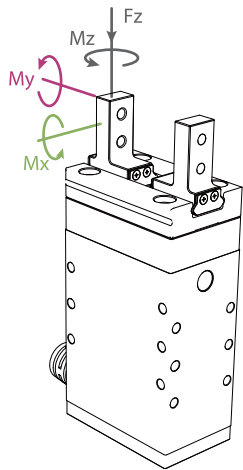


Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange Selection	Other
PGSE	15	7	O	S	M1	L5	J0	F0	0
<div>★①★⑧</div> <div><div><div>M1</div>Modbus (RS485)+I/O (NN)</div><div><div>M2</div>Modbus (RS485)+I/O (PP)</div><div><div>M3</div>Modbus (RS485)+I/O (NP)</div><div><div>M4</div>Modbus (RS485)+I/O (PN)</div></div> <div><div>L1</div>1.5m Cable</div> <div><div>L3</div>3m Cable</div> <div><div>L5</div>5m Cable</div> <div><div>L10</div>10m Cable</div> <div><div>J0</div>Without Fingertip</div> <div><div>F0</div>Without Flange</div> <div><div>0</div>Without USB to RS-485 Converter</div> <div><div>4</div>USB to RS-485 Converter</div>									

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

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 70 N

Allowable Loading Moment

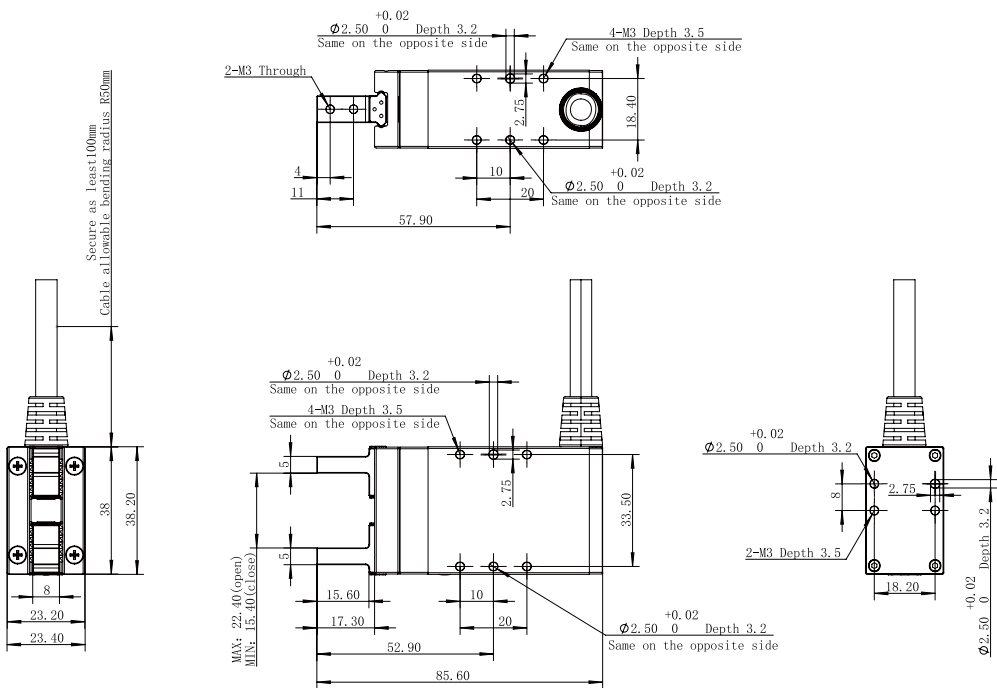
Mx 0.9 N · m

My 0.75 N · m

Mz 0.9 N · m

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

Technical Drawings



Product Parameter

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

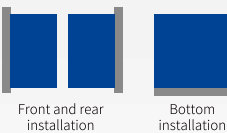
Working Environment

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

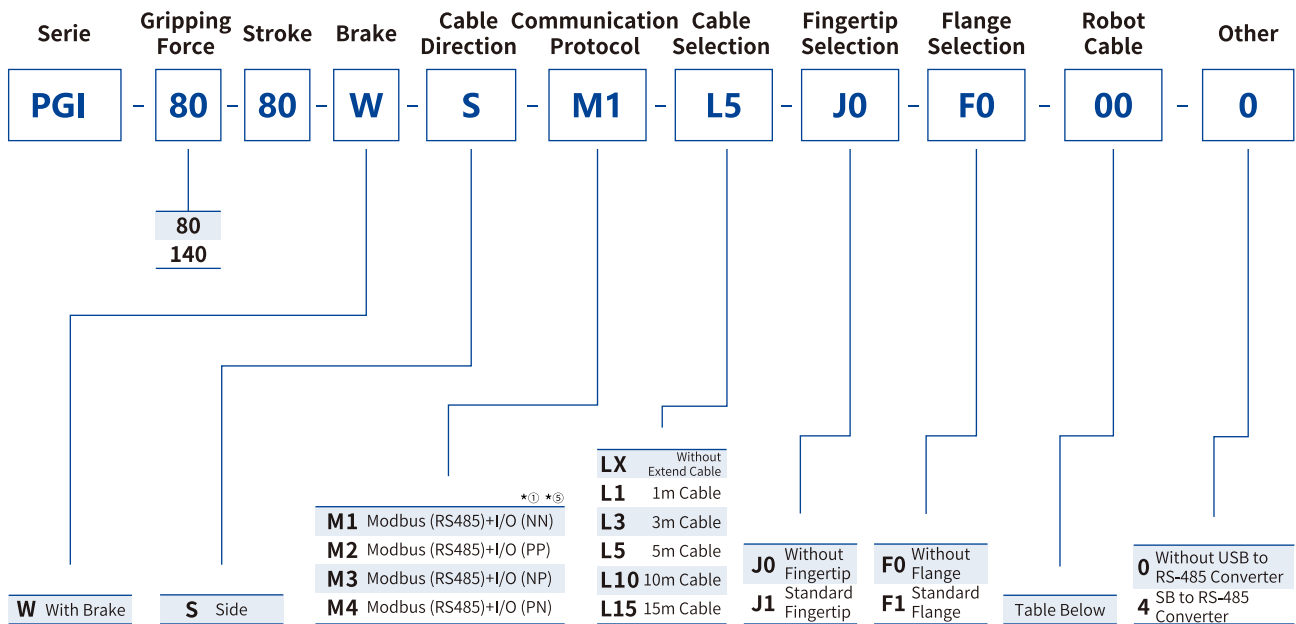


PGI

Electric Parallel Gripper



Selection Method

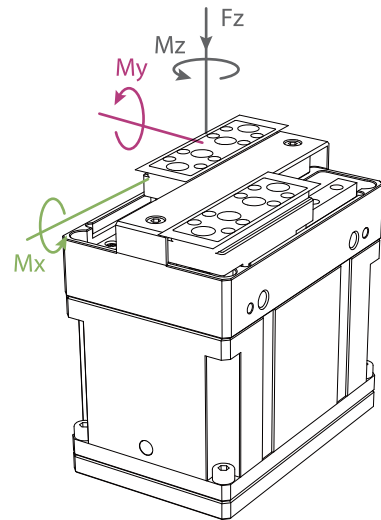


★ ①:

I/O(NN): NPN/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	
I/O(PP): PNP/PNP					03 ELEPHANT	05 TECHMAN	07 DOBOT MG400	10 Doosan M	12 Han's	14 FAIRINO	16 UF x Arm	17 ROKAE CR
I/O(NP): NPN/PNP												
I/O(PN): PNP/NPN												

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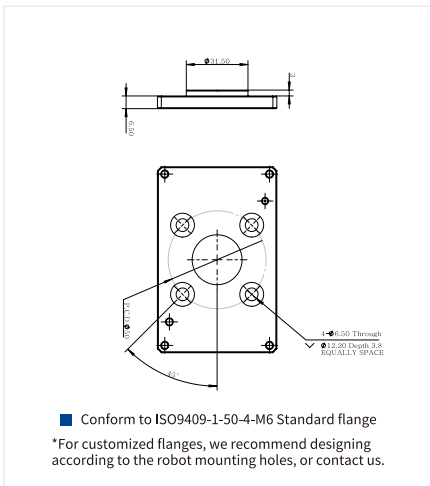
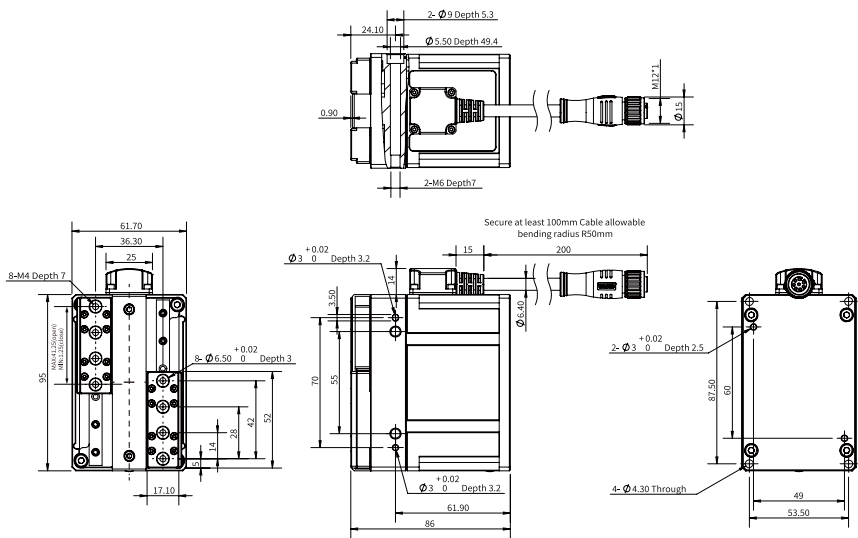
TECHNICAL SPECIFICATIONS









Static Vertical Allowable Load	
Fz	300 N
Allowable Loading Moment	
Mx	7 N · m
My	7 N · m
Mz	7 N · m

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

Technical Drawings



Product Parameter	PGI-80-80	PGI-140-80
Gripping force (per jaw)	16~80 N	40~140 N
Recommended workpiece weight *②	1.6 kg	3 kg
Stroke	80 mm	80 mm
Full stroke opening/closing time	0.7s (80mm) 0.4s (50mm)	1.1 s/1.1 s
Repeat accuracy (position)	± 0.03 mm	
Weight	1 kg (Exclude fingers)	
Size	95 mm x 61.7 mm x 86 mm	
Noise emission	< 50 dB	
Driving method	Precise planetary gears + Rack and pinion	
Working Environment		
Communication interface	Standard: Modbus RTU (RS485)、Digital I/O(2 inputs 2 outputs) Optional: TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT *③	
Rated voltage	24 V DC ± 10%	
Current	0.5 A(Rated)/ 1.2 A(Peak) *④	
Rated power	12 W	
IP class	IP 54	
Recommended environment	0~40℃, under 85% RH	
Certification	CE, FCC, RoHS	
<div><div> Build-in Controller</div><div> Gripping Force Adjustable</div><div> Position Adjustable</div><div> Speed Adjustable</div><div> Drop Detection</div><div> Self-locking Mechanism</div></div>		

PGC-50-35

Electric Collaborative Parallel Gripper



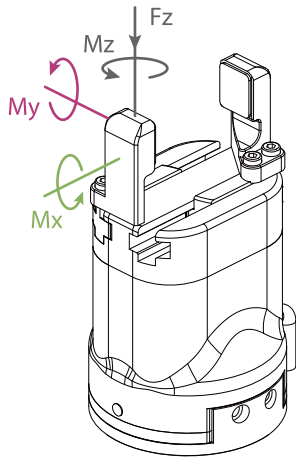
Selection Method

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
<div><div>O Without 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:		I/O(NN): NPN/NPN		I/O(PP): PNP/PNP		I/O(NP): NPN/PNP		I/O(PN): PNP/NPN	
00	Without Robot Cable	01	SIASUN Elite CS	02	DOBOT CR UR CB	03	DOBOT Nova UR E	04	DOBOT CR UR E
05	DOBOT CR UR E	06	DOBOT CR UR E	07	DOBOT CR UR E	08	DOBOT CR UR E	09	DOBOT CR UR E
10	DOBOT CR UR E	11	DOBOT CR UR E	12	DOBOT CR UR E	13	DOBOT CR UR E	14	DOBOT CR UR E
15	DOBOT CR UR E	16	DOBOT CR UR E	17	DOBOT CR UR E	18	DOBOT CR UR E	19	DOBOT CR UR E

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TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 150 N

Allowable Loading Moment

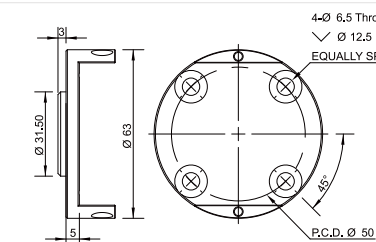
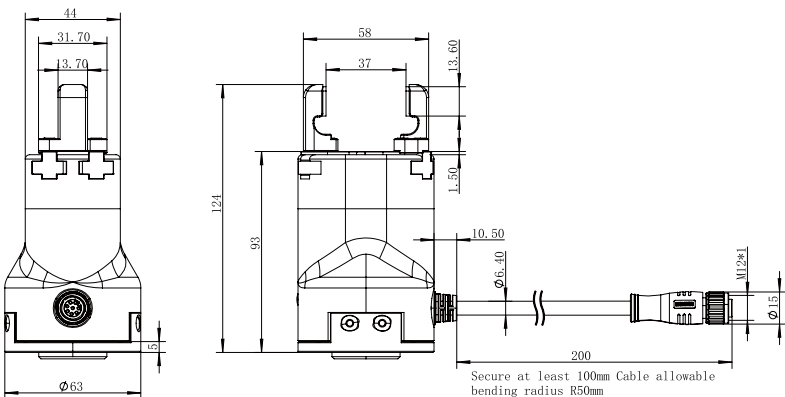
Mx 2.5 N · m

My 2 N · m

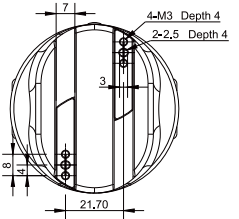
Mz 3 N · m

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

Technical Drawings



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

Product Parameter

Gripping force (per jaw) 15~50 N

Recommended workpiece weight *② 1 kg

Stroke 37 mm

Full stroke opening/closing time 0.7 s/0.7 s

Repeat accuracy (position) ± 0.03 mm

Weight 0.5 kg

Size 124 mm x 63 mm x 63 mm

Noise emission < 50 dB

Driving method Precise planetary gears + Rack and pinion

Working Environment

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

Rated voltage 24 V DC ± 10%

Current 0.25 A(Rated)/ 0.5 A(Peak) *④

Rated power 6 W

IP class IP 54

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

Certification CE, FCC, RoHS



Build-in Controller



Gripping Force Adjustable



Position Adjustable



Speed Adjustable



Drop Detection



Plug & Play



Self-locking Mechanism

Electric Collaborative Parallel Gripper



Selection Method

Series	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
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	F1 Standard Flange	Table Below	0 Without USB to RS-485 Converter 4 USB to RS-485 Converter

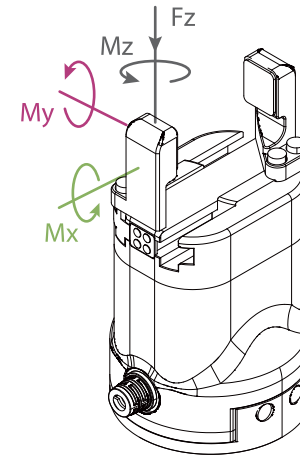
* ①:

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

00 Without Robot Cable	01 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 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 300 N

Allowable Loading Moment

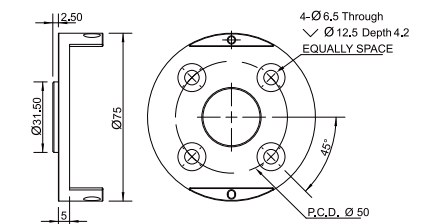
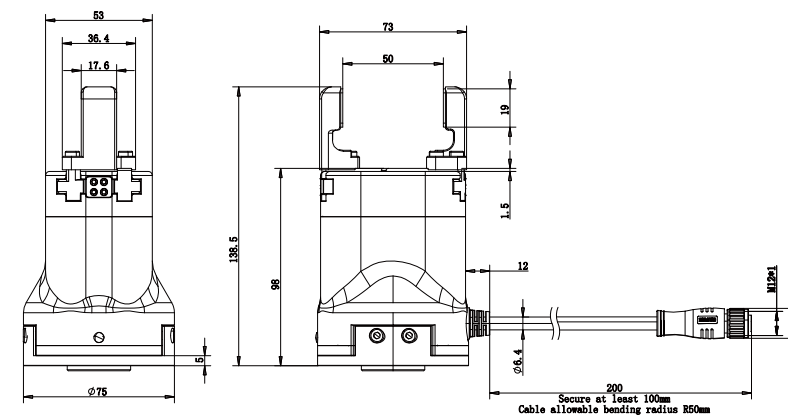
M_x	$7 \text{ N} \cdot \text{m}$
M_y	$7 \text{ N} \cdot \text{m}$
M_z	$7 \text{ N} \cdot \text{m}$

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

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

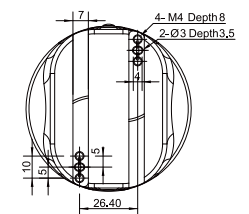
*④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Technical Drawings



■ 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

Product Parameter

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

Working Environment

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

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



Build-in
Control



Gripping Force
Adjustable



Position Adjustable



Speed Adjustable



Drop Detection



Plug & Play



Self-locking Mechanism

PGC-300-60

Electric Collaborative Parallel Gripper



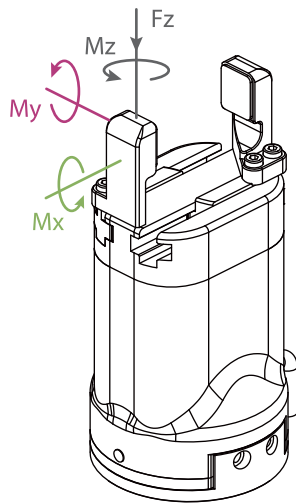
Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange Selection	Robot Cable	Other
PGC	300	60	W	S	M1	L5	J1	F1	00	0
<div><div><div>W With Brake</div><div>S Side</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</div><div>J1 Standard Fingertip F1 Standard Flange</div><div>Table Below</div><div>0 Without USB to RS-485 Converter 4 USB to RS-485 Converter</div></div></div>										

*①:		00	01	SIASUN	DOBOT CR	02	04	06	09	11	13	15
I/O(NN): NPN/NPN		Without	Elite CS	Hanwha A	DOBOT Nova	AUBO	JAKA	ROKAE SR	Doosan A	Elite EC	Neuromeka	Hanwha HCR
I/O(PP): PNP/PNP		Robot	UR CB	UR E				ROKAE ER				
I/O(NP): NPN/PNP		Cable				03	05	07	10	12	14	16
I/O(PN): PNP/NPN						ELEPHANT	TECHMAN	DOBOT MG400	Doosan M	Han's	FAIRINO	UF x Arm
												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.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 600 N

Allowable Loading Moment

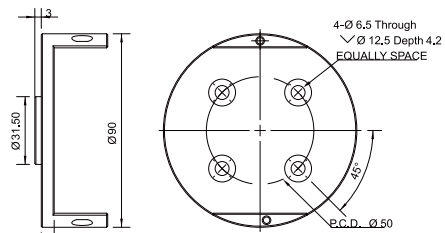
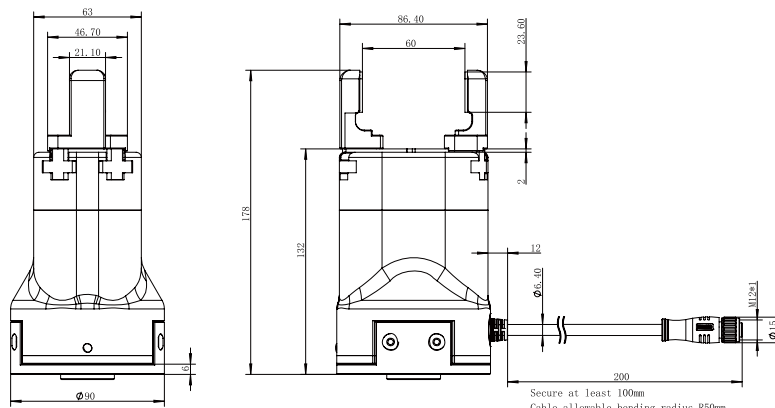
Mx 15 N · m

My 15 N · m

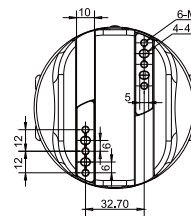
Mz 15 N · m

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

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

Product Parameter

Gripping force (per jaw) 80~300 N

Recommended workpiece weight*② 6 kg

Stroke 60 mm

Full stroke opening/closing time 0.8 s/0.8 s

Repeat accuracy (position) ± 0.03 mm

Weight 1.5 kg

Size 178 mm x 90 mm x 90 mm

Noise emission < 50 dB

Driving method Precise planetary gears + Rack and pinion

Working Environment

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

Rated voltage 24 V DC ± 10%

Current 0.4 A(Rated)/ 2 A(Peak)*④

Rated power 9.6 W

IP class IP 67

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

Certification CE, FCC, RoHS



Build-in Controller



Gripping Force Adjustable



Position Adjustable



Speed Adjustable



Drop Detection



Plug & Play



Self-Locking Mechanism

PGHL-400-80

Heavy-Load Long-Stroke Electric Parallel Gripper



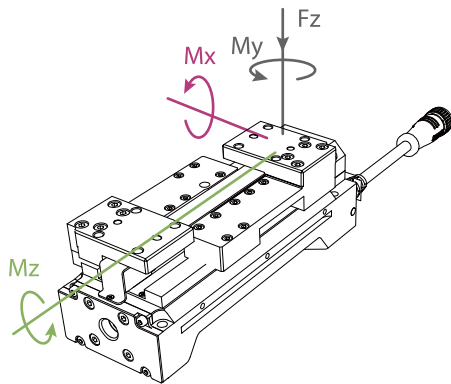
Selection Method

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
<div><div>W With Brake</div><div>S Side</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</div><div>F0 Without Flange</div><div>0 Without USB to RS-485 Converter 4 USB to RS-485 Converter</div></div>									

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

★⑤ It is recommended that no more than 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.

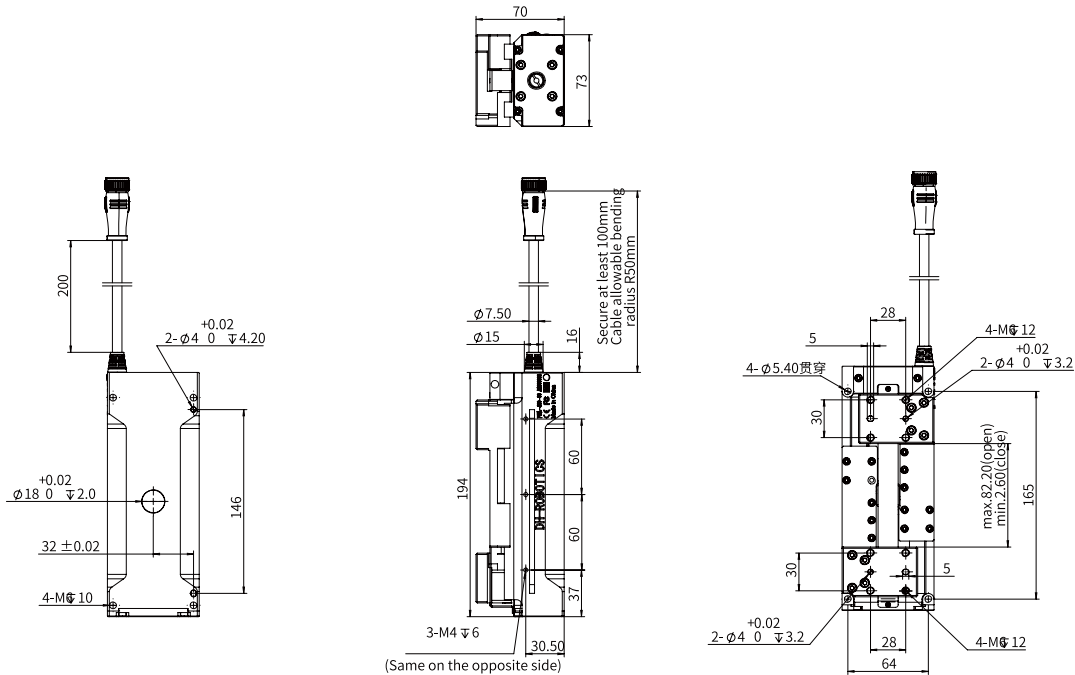
TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load	
Fz	1000 N
Allowable Loading Moment	
Mx	50 N · m
My	50 N · m
Mz	15 N · m

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

Technical Drawings



Product Parameter

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

Working Environment

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

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

RGI / RGD Series



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

Product Features

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

RGI Series

◆ Gripping & Infinite Rotation

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

◆ Compact Double Servo System

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

◆ High Gripping Force and Torque

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

RGD Series

◆ Zero Rotary Backlash High Repeatability

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

◆ High Dynamic Response High-speed Stability

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

◆ All-in-one Design Power-off Protection

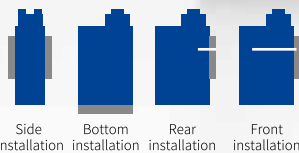
The gripper adopts the design of integrating the dual servo system of gripping and rotation with the drive control module, which is smaller and more compact, and applies to more scenarios. Brakes are optional to meet the requirements of various applications.

Application

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



Electric Rotary Gripper



Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange Selection	Other
RGI	100	14	O	S	M1	L5	J0	F0	0

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

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

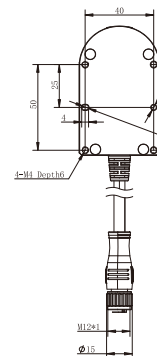
Fz	150 N	200 N	150 N
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Mx	2.5 N·m	3.5 N·m	3.5 N·m
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Mz 4 N·m 5.5 N·m 5.5 N·m

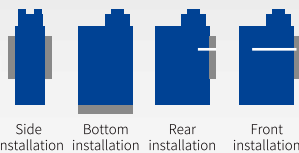
- *② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
- *③ Requires external communication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

RGI-100-14



Product Parameter	RGI-100-14	RGI-100-22	RGI-100-30
Gripping force (per jaw)	30~100 N	30~100 N	30~100 N
Recommended workpiece weight(Fingertip included) ★②	1.5 kg	1.5 kg	1.5 kg
Stroke	14 mm	22 mm	30 mm
Full stroke opening/closing time	0.45 s/0.25 s	0.5 s/0.3 s	0.55 s/0.35 s
Repeat accuracy (position)	± 0.02 mm	± 0.02 mm	± 0.02 mm
Repeat accuracy (swiveling)	± 0.05 °	± 0.05 °	± 0.05 °
Max. rotation speed	2160 °/s	2160 °/s	2160 °/s
Rated torque	0.5 N·m	0.5 N·m	0.5 N·m
Peak torque	1.5 N·m	1.5 N·m	1.5 N·m
Rotary range	Infinite Rotating	Infinite Rotating	Infinite Rotating
Weight	1.28 kg	1.4 kg	1.5 kg
Size	158 x 75.5 x 47 mm Rotaty Diameter: 47.1 mm	158 x 75.5 x 47 mm Rotaty Diameter: 67.1 mm	158 x 75.5 x 47 mm Rotaty Diameter: 84.8 mm
Working Environment			
Communication interface	Standard: Modbus RTU (RS485) , Digital I/O(2 inputs 2 outputs) Optional: TCP/IP, CAN2.0A, PROFINET, EtherCAT ★③		
Rated voltage	24 V DC ± 10%		
Current	1 A(Rated)/4 A (Peak) ★④		
Rated power	24 W		
IP class	IP 40		
Recommended environment	0~40℃, under 85% RH		
Certification	CE, FCC, RoHS		

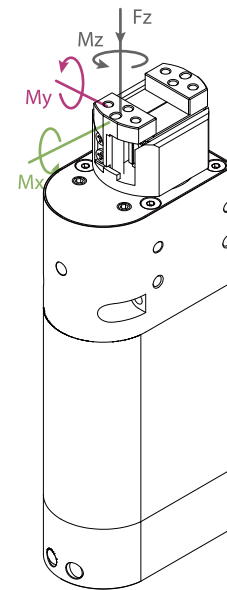
Electric Rotary Gripper



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

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

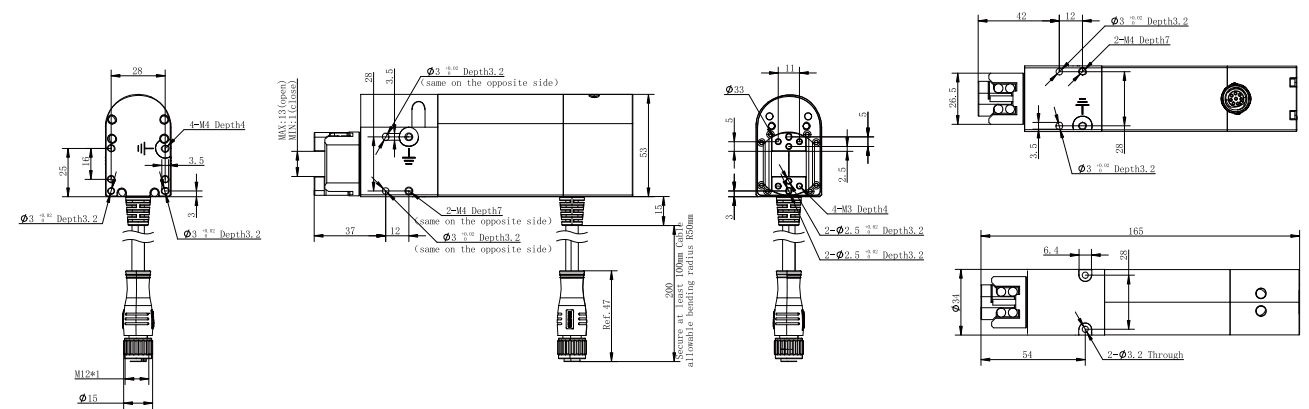
TECHNICAL SPECIFICATIONS



F_z	100 N
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M_x	$1.5 \text{ N} \cdot \text{m}$
M_y	$1.1 \text{ N} \cdot \text{m}$
M_z	$2.1 \text{ N} \cdot \text{m}$

Technical Drawings



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

Communication interface	Standard: Modbus RTU (RS485) , Digital I/O(2 inputs 2 outputs) Optional: TCP/IP, CAN2.0A, PROFINET, EtherCAT ★③
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Rated voltage	24 V DC \pm 10%
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Current 1.7 A(Rated)/ 2.5 A(Peak)*^④

Rated power	40.8 W
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IP class	IP 40
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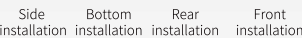
Recommended environment 0~40°C, under 85% RH

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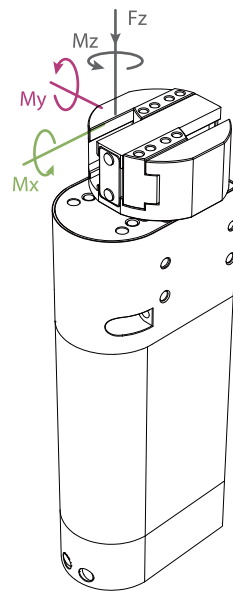
*Product size change on January 10, 2025: Height dimension changed from 150 to 165, others remain unchanged.

Electric Rotary Gripper



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	

TECHNICAL SPECIFICATIONS



F_z 100 N

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

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

Product Parameter	
Gripping force (per jaw)	40~100 N
Recommended workpiece weight(Fingertip included) *①	1 kg
Stroke	35 mm
Full stroke opening/closing time	0.9 s/0.9 s
Repeat accuracy (position)	± 0.02 mm
Rated torque	0.35 N·m
Peak torque	1.5 N·m
Rotary range	Infinite Rotating
Max. rotation speed	1400 °/s
Weight	0.65 kg
Size	159 mm x 53 mm x 34 mm 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℃, under 85% RH
Certification	CE, FCC, RoHS

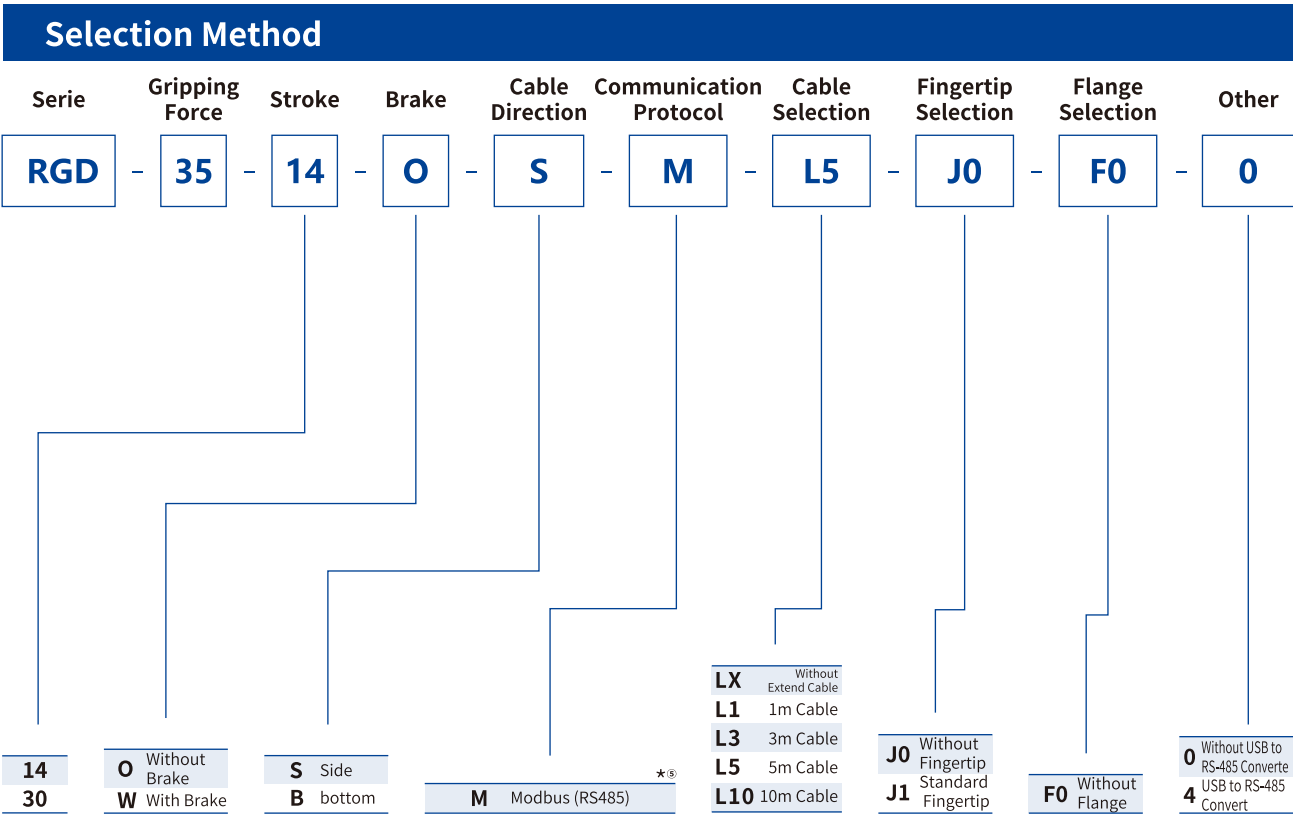
						
Build-in Controller	Gripping Force Adjustable	Position Adjustable	Speed Adjustable	Drop Detection	Rotary Adjustable	Self-locking Mechanism

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

RGD-35

Direct Drive Rotary Gripper



*Ⓒ 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.

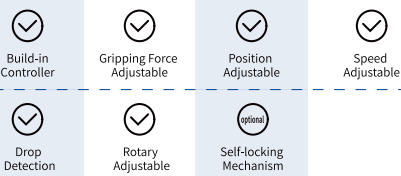
A 3D perspective diagram of a 6-axis force/torque sensor. The sensor is a rectangular block with a smaller rectangular plate on top. A vertical arrow labeled F_z points downwards from the center of the top plate. A curved arrow around the vertical axis is labeled M_z . A curved arrow around a horizontal axis (pointing left) is labeled M_y in pink. A curved arrow around another horizontal axis (pointing towards the viewer) is labeled M_x in green. At the bottom of the sensor, there is a threaded port with a connector.

F_z	150 N
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M_x	$2 \text{ N} \cdot \text{m}$
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My 1.5 N · m

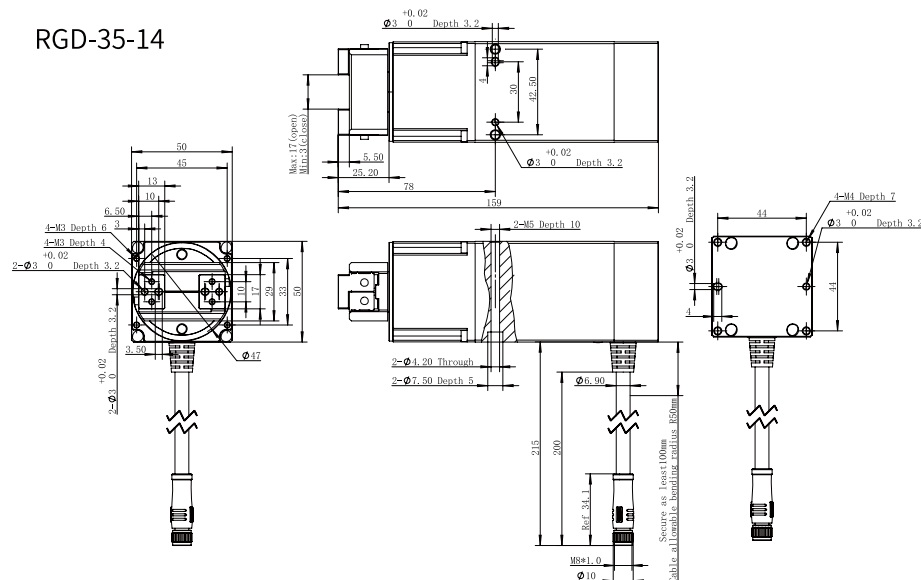
Mz 2.5 N · m



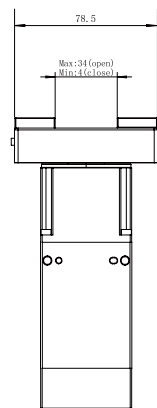
- *① The peak torque can be increased to a maximum of 0.5 N·m. For specific details, please consult with technical support personnel.
- *② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
- *③ Requires external communication converter or customization, please contact sales or technical support.
- *④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Technical Drawings

RGD-35-14



RGD-35-30



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

Articulated Electric Grippers

AG / DH Series



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

ARTICULATED ELECTRIC GRIPPER

Product Features

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

Envelope Adaptive Capture

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

Plug & Play

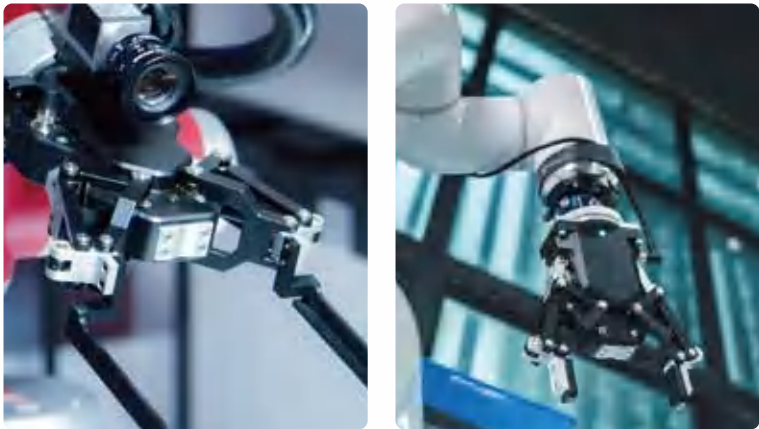
It supports plug & play with most collaborative robot brands on the market which is easier to control and program.

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 equip ment, new energy and other industries.



AG-105-145

Electric Adaptive Gripper



Selection Method

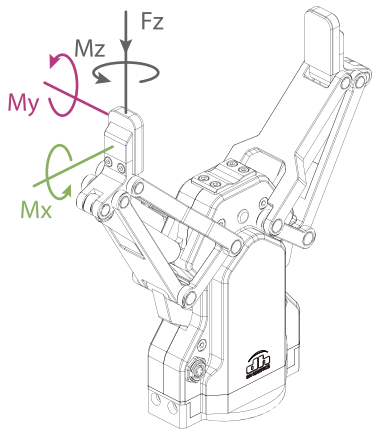
Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange Selection	Robot Cable	Other
AG	105	145	W	S	M1	L5	J1	F1	00	0

W Self-locking		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	F1 Standard Flange	Table Below	0 Without USB to RS-485 Converter 4 USB to RS-485 Converter
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*①:		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
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*⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 300 N

Allowable Loading Moment

Mx 1.95 N·m

My 1.95 N·m

Mz 1.95 N·m

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

Product Parameter

Gripping force (per jaw) 35~105 N

Recommended workpiece weight *② 2 kg

Stroke 145 mm

Full stroke opening/closing time 0.9 s/0.9 s

Repeat accuracy (position) ± 0.03 mm

Weight 1.3 kg

Size 203.9 mm x 212.3 mm x 67 mm

Noise emission < 60 dB

Driving method Screw drive + Linkage system

Working Environment

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

Rated voltage 24 V DC ± 10%

Current 0.8 A(Rated)/ 1.5 A(Peak) *④

Rated power 19.2 W

IP class IP 54

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

Certification CE, FCC, RoHS



Build-in Controller



Gripping Force Adjustable



Position Adjustable



Speed Adjustable



Drop Detection

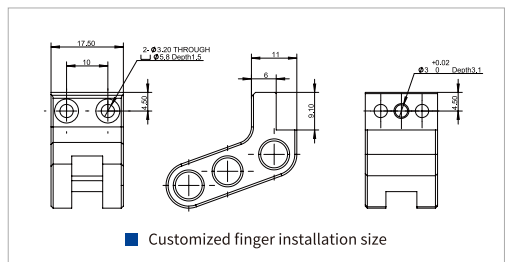
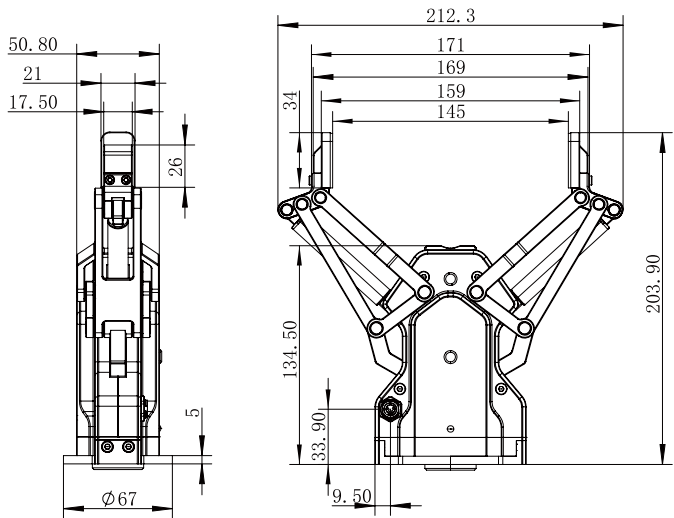


Plug & Play

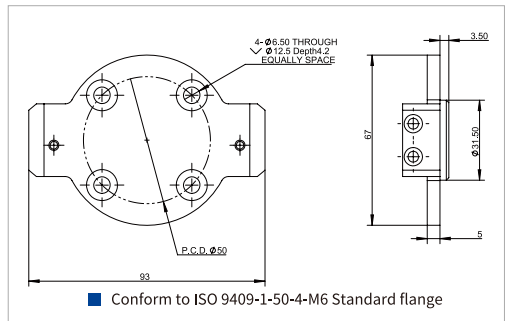


Self-locking Mechanism

Technical Drawings



Customized finger installation size



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

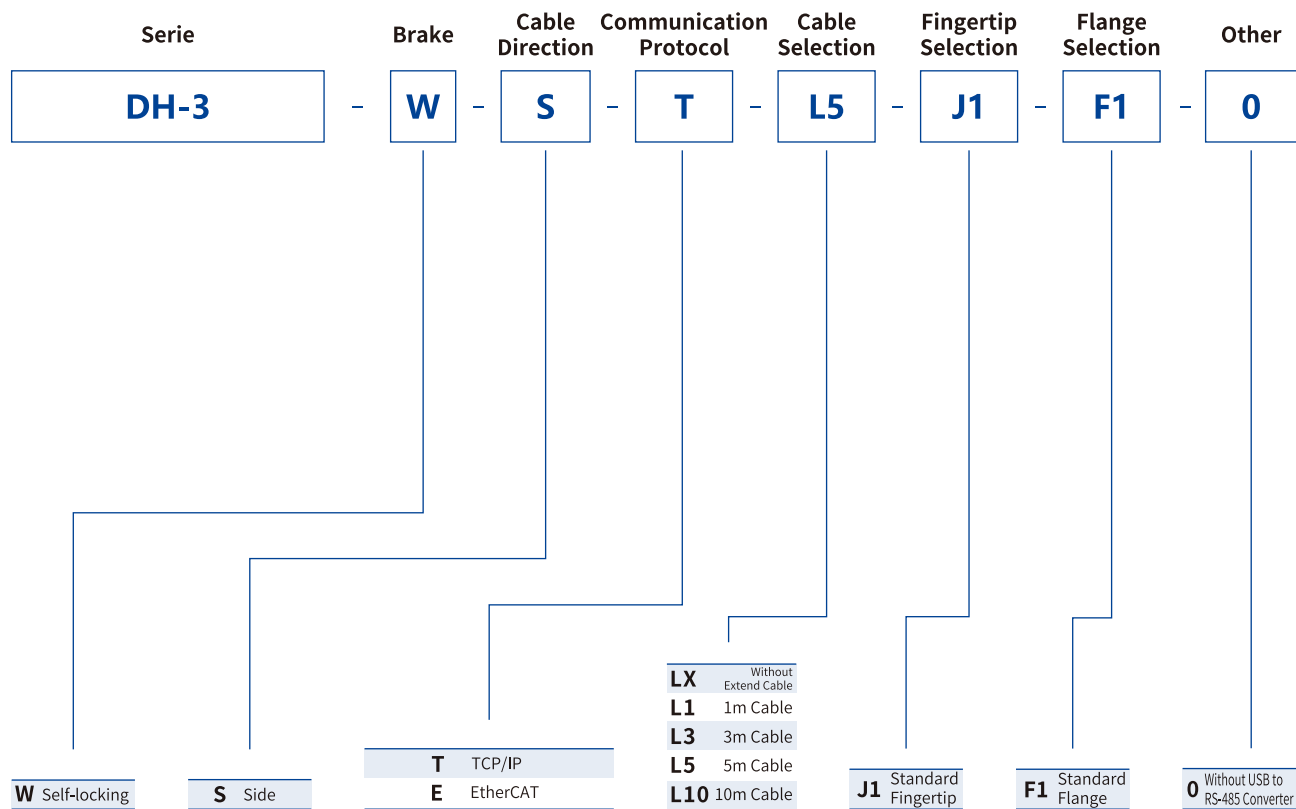
DH-3

Electric Adaptive Gripper

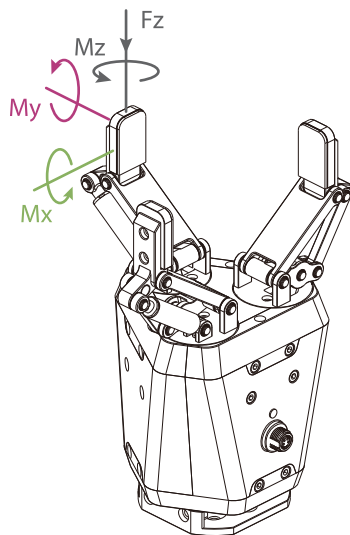


Bottom installation

Selection Method



TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 150 N

Allowable Loading Moment

Mx 2.5 N·m

My 2 N·m

Mz 3 N·m

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

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

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

Product Parameter

Gripping force (per jaw) 10~65 N

Recommended workpiece weight *① 1.8 kg

Stroke 106 mm (parallel) 122 mm (centric)

Full stroke opening/closing time 0.7 s/0.7 s

Repeat accuracy (position) ± 0.03 mm

Weight 1.68 kg

Size 213.5 mm x 170 mm x 118 mm

Noise emission < 60 dB

Driving method Screw nut + gear driv + linkage mechanism

Working Environment

Communication interface Standard: TCP/IP, USB2.0, CAN2.0A
Optional: EtherCAT *②

Rated voltage 24 V DC ± 10%

Current 0.5 A(Rated)/ 1 A(Peak) *③

Rated power 12 W

IP class IP 40

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

Certification CE, FCC, RoHS



Build-in Controller



Gripping Force Adjustable



Position Adjustable



Speed Adjustable



Drop Detection

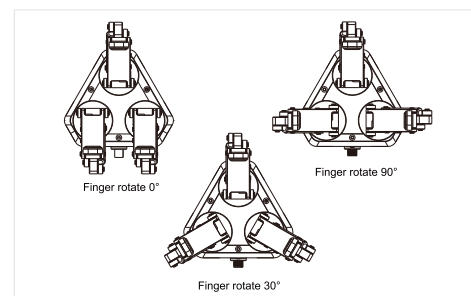
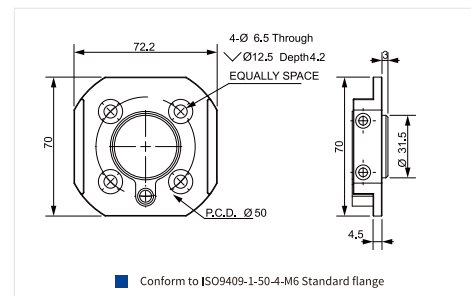
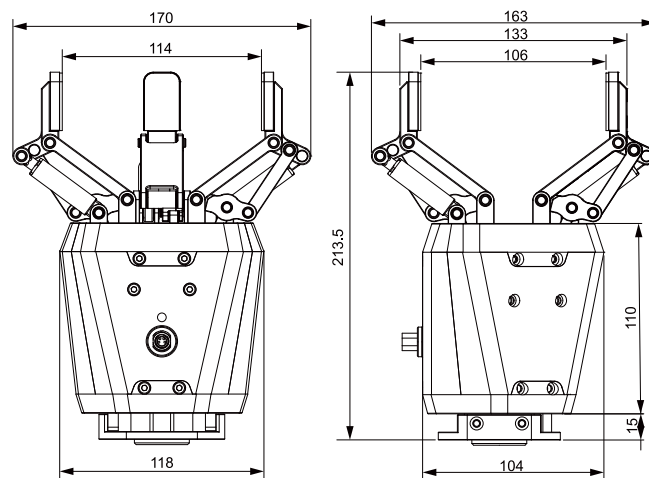


Plug & Play



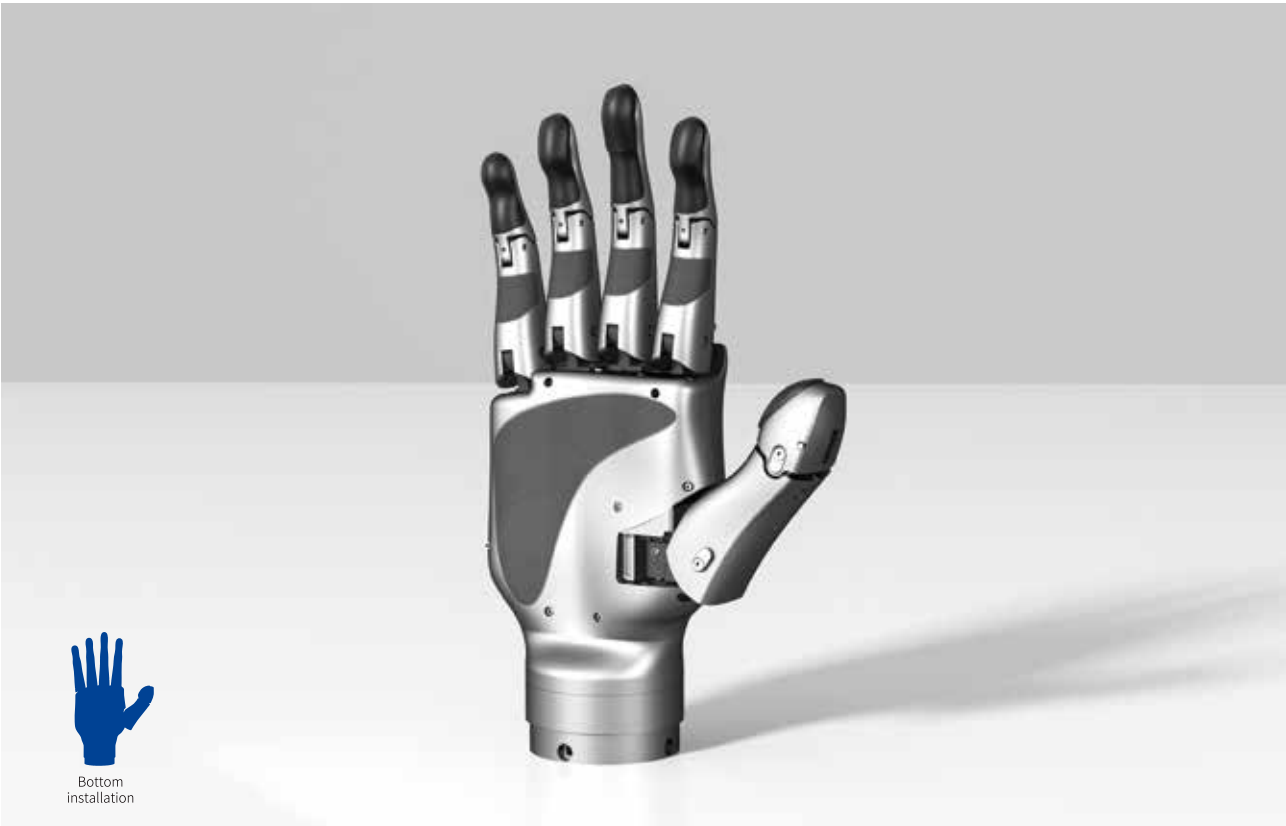
Self-locking Mechanism

Technical Drawings



DH-5

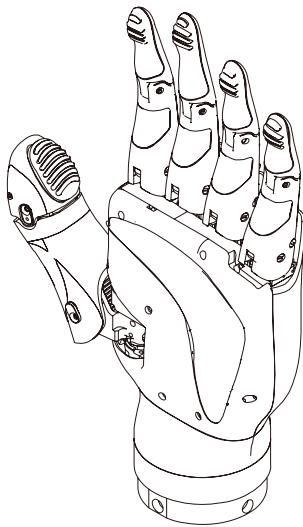
Dexterous Hand



Selection Method

Serie	Hand Shape	Degrees of Freedom	Grip Strength	Wrist Interface	Cable Direction	Other
DH-5	L	11	10	N	M1	0
	L left hand R right hand	11 Degrees of freedom	10 10 N 30 30 N	N Standard interface F Quick-release interface	M1 EtherCAT M2 Modbu M3 Modbus-RTU M4 CANFD	0 Without USB to RS-485 Converter

TECHNICAL SPECIFICATIONS



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

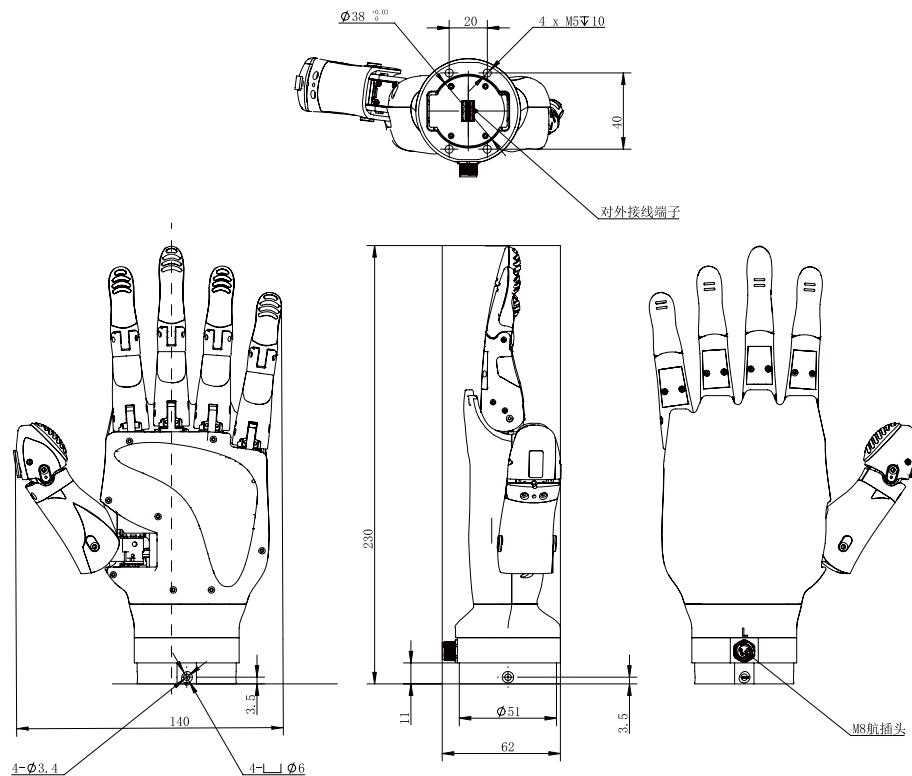
Product Parameter

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

Working Environment

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

Technical Drawings



Electric Centric Grippers

CGE / CGI / CGC Series

ELECTRIC CENTRIC GRIPPER



Product Features

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

High Performance

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

Long Lifetime

Continuous and stable work above

Overload Protection

The high-performance servo motor

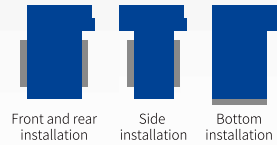
Application

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



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

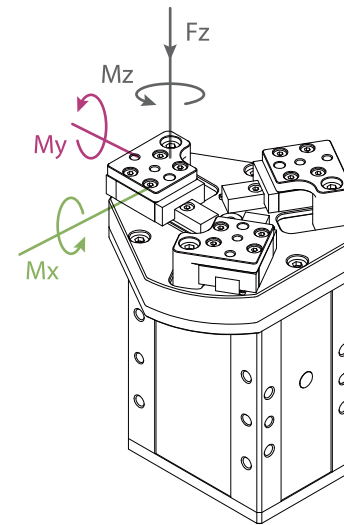
Electric Centric Gripper



Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange Selection	Robot Cable	Other
CGE	10	10	O	S	M1	L5	J0	F0	00	0

★ ①:													
I/O(NN): NPN/NPN	00 Without Robot Cable	01	SIASUN	DOBOT CR	02 AUBO	04 JAKA	06	ROKAE SR	09 Doosan A	11 Elite EC	13 Neuromeka	15 Hanwha HQ	
I/O(PP): PNP/PNP		Elite CS	Hanwha A	DOBOT Nova			ROKAE ER						
I/O(NP): NPN/PNP		UR CB	UR E		03 ELEPHANT	05 TECHMAN	07	DOBOT	10 Doosan M	12 Han's	14 FAIRINO	16 UF x Arm	17 ROKAE
I/O(PN): PNP/NPN							MG400						

TECHNICAL SPECIFICATIONS



Fz	150 N
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Allowable Loading Moment	
M_x	$0.62 \text{ N} \cdot \text{m}$
M_y	$0.62 \text{ N} \cdot \text{m}$
M_z	$0.62 \text{ N} \cdot \text{m}$

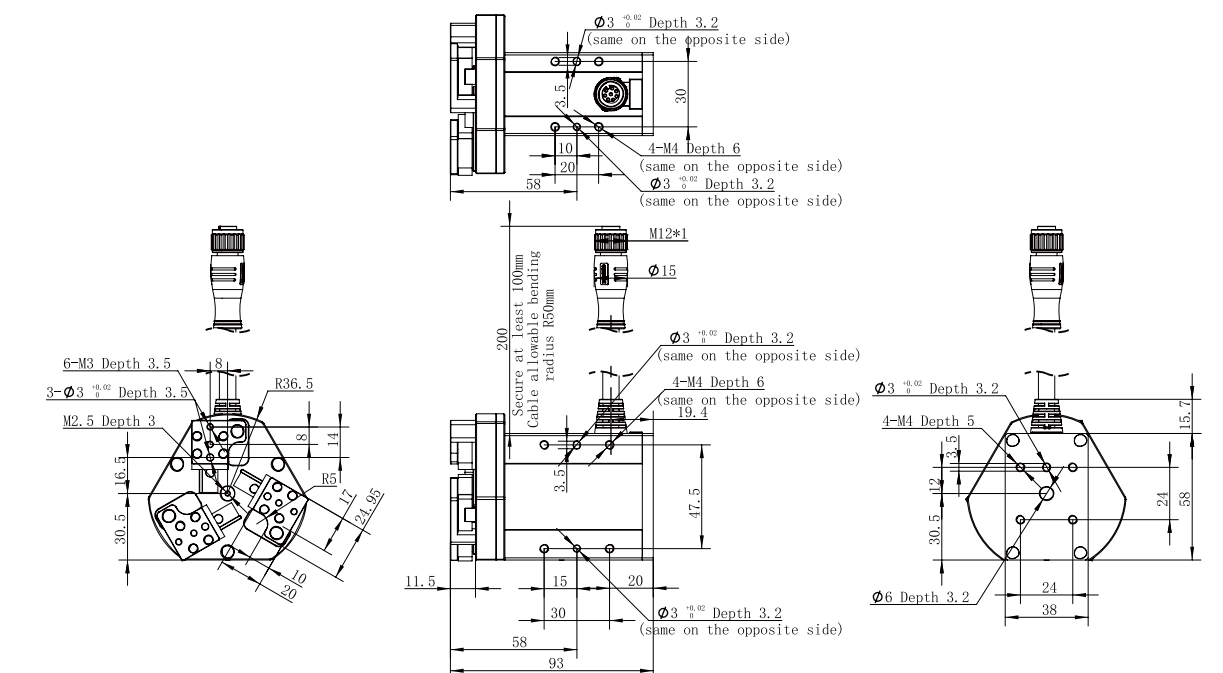
Technical Drawings

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

Communication interface	Standard: Modbus RTU (RS485)、Digital I/O(2 inputs 2 outputs) Optional:TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT	*③
Rated voltage	24 V DC \pm 10%	
Current	0.3 A(Rated)/ 0.6 A(Peak) *④	
Rated power	7.2 W	
Recommended environment	0~40℃, under 85% RH	
Certification	CE, FCC, RoHS	



Technical Drawings



CGI-100-170

Electric Centric Gripper



Bottom installation

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	F1	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 F1 Standard Fingertip	Table Below	0 Without USB to RS-485 Converter 4 USB to RS-485 Converter
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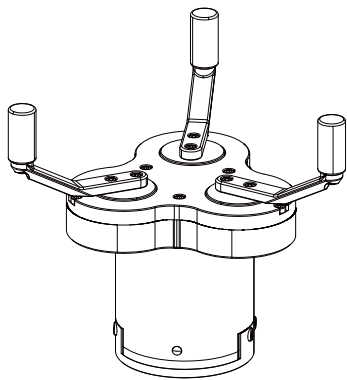
★①:

I/O(NN): NPN/NPN I/O(PP): PNP/PNP I/O(NP): NPN/PNP I/O(PN): PNP/NPN	00 Without Robot Cable	01 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

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

*⑤ It is recommended that no more than 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.

TECHNICAL SPECIFICATIONS



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

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

Product Parameter

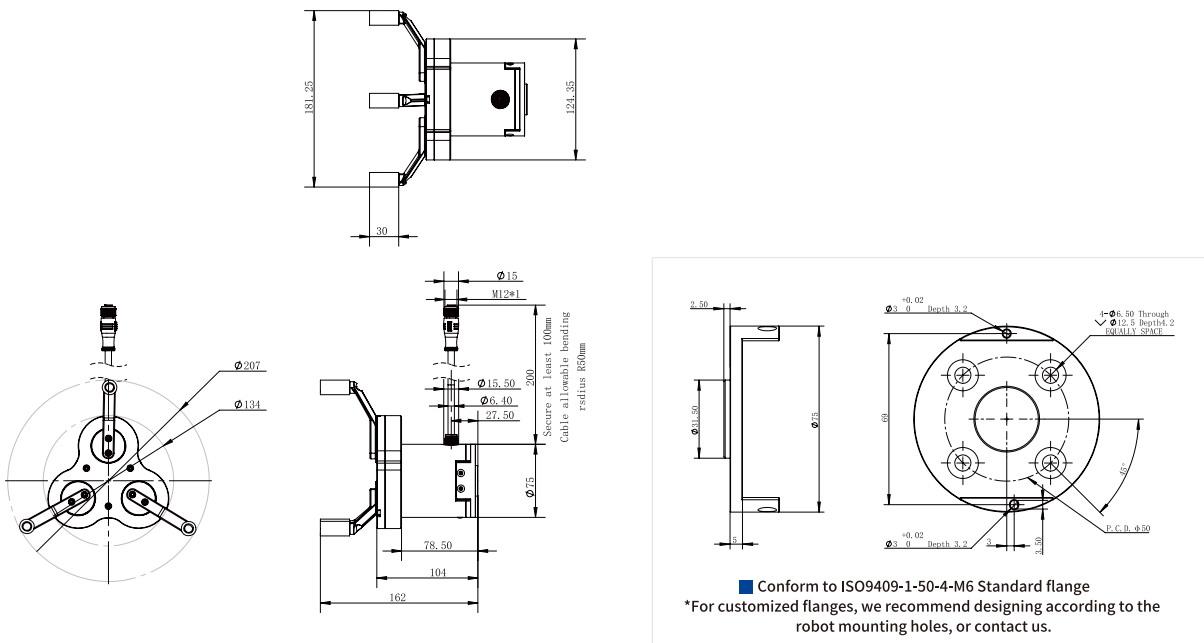
Gripping force (per jaw)	30~100 N
Recommended workpiece weight *②	1.5 kg
Recommended workpiece diameter (inward)	Φ40~Φ170 mm
Full stroke opening/closing time	1.35 s
Repeat accuracy (position)	± 0.03 mm
Weight	1.5 kg
Size	158.4mmx124.35mmx116mm (without brake/with brake,same size)
Noise emission	< 50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

Working Environment

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

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



■ Conform to ISO9409-1-50-4-M6 Standard flange
*For customized flanges, we recommend designing according to the robot mounting holes, or contact us.

Electric Collaborative Centric Gripper



Bottom installation

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

[illegible]

★①:

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

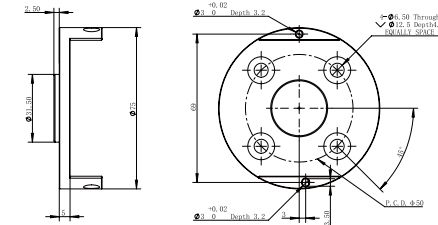
00 Without Robot Cable	01 Elite CS UR CB	SIASUN Hanwha A UR E	DOBOT CR DOBOT Nova	02 AUBO	04 JAKA	06 ROKAE SR ROKAE ER	09 Doosan A	11 Elite EC	13 Neuromeka	15 Hanwha HCR
				03 ELEPHANT	05 TECHMAN	07 DOBOT MG400	10 Doosan M	12 Han's	14 FAIRINO	16 UF x Arm

*⑤ It is recommended that no more than 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.

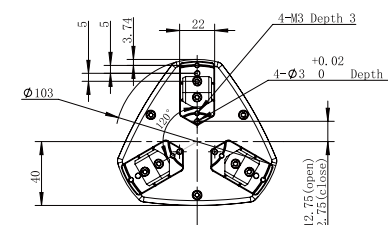
F_z	200 N
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M_x	$2.5 \text{ N} \cdot \text{m}$
M_y	$2 \text{ N} \cdot \text{m}$
M_z	$3 \text{ N} \cdot \text{m}$

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



■ 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

Gripping force (per jaw)	20~80 N
Recommended workpiece weight ^{*②}	1.5 kg
Single jaw	10 mm
Full stroke opening/closing time	0.5 s/0.5 s
Repeat accuracy (position)	± 0.03 mm
Weight	1.5 kg
Size	141 mm x 103 mm x 75 mm
Noise emission	< 50 dB
Driving method	Precise planetary gear reducer + Rack and pinion

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

Rated voltage	24 V DC \pm 10%
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Current 0.5 A(Rated)/ 1.2 A(Peak) ^{*(4)}

Rated power	12 W
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IP class IP 67

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 Adjustment

Position
AdjustaSpe
Adjus

Det

F

Se
M







Short wire correspondence table

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

Support electric gripper models	UR CB Series	UR E Series	Elite CS Series	SJASUN	Hanwha A Series	ROKAE CR Series	DOBOT CR Series	DOBOT Nova Series	Aubo	Elephant	Jaka	ECHMAN	ROKAE SR Series	ROKAE ER Series	DOBOT MG400	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≤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(2 inputs 2 outputs). If customers choose other communication converter, they will need to use the communication converter.
The following communication converter are available for selection:

	communication converter Name	Ordering Model		communication converter Name	Ordering Model
	EtherCAT 1-1	M2E-B1-1		TCP/IP 1-1	M2T-B1-1-YBT
	EtherCAT 1-4	M2E-B1-4		PROFINET 1-2	M2P2-B1-2-HJ
	EtherCAT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:

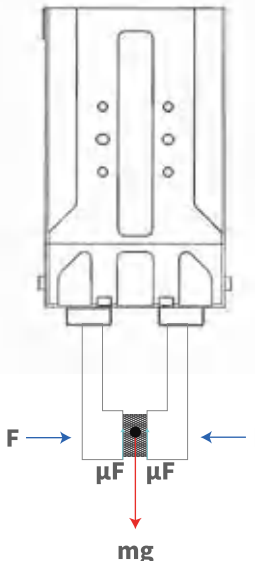
- F: Clamping force (N)
- μ: Friction coefficient
- m: Workpiece quality (kg)
- g: Acceleration due to gravity (9.8m/s²)
- mg: Workpiece weight (N)

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

$2 \times \mu F > mg$

number of gripper fingers ↑

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



Note 2: Confirm gripper stroke and fingertip

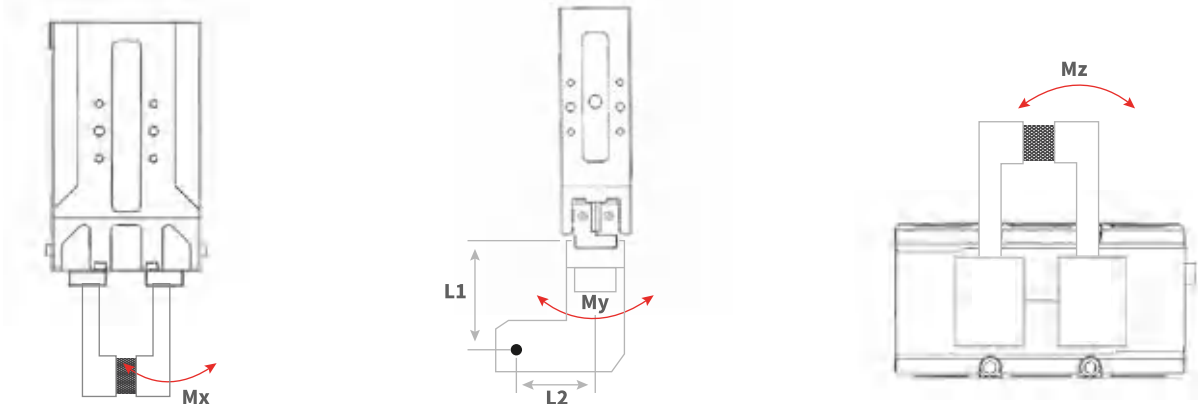
- The stroke of the gripper needs to be greater than the difference between the maximum and minimum dimensions of the workpiece.
- Choose the right fingertip: The fingertip is too long, too big, and the weight is too heavy, the inertia force or bending moment when opening and closing will affect the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

Note 3: Check the external force exerted on the gripper

- The vertical load borne by the clamping jaw must be within the allowable load.
- The moment the clamping jaws bear must be within the maximum allowable load moment.

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

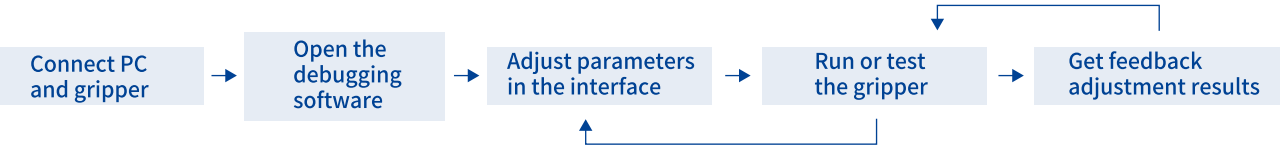
Note: Mx and My are calculated by L1, and Mz is calculated by L2. Confirm whether the calculated gripper can withstand the external force (based on the smaller F value calculated from Mx, My, Mz).



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 fuction of time



Example: DH-Robotics PC software

* Please consult sales person for specific applicable models

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

Customer Trust

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



Product Distribution

Chinese Agent Distribution Cties

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

Overseas Agents Distribution Area

Europe: Spain / France / Italy / Germany / UK / Czech Republic / Romania / Russia /
Netherlands / Lithuania / Sweden / Denmark / Norway
Asia: Israel / Bangladesh / India / Japan / Thailand / South Korea / Malaysia
Australia: Australia / New Zealand
America: United States / Mexico
Middle East: Saudi Arabia / Tunisia / Türkiye

VERSION CHANGE LOG

Revision Date	Released Version	Change Log
2025.02	CN.2502	<ul style="list-style-type: none">· Discontinuation of RGD-5-30 and PGS-5-5 products· RGIC-35-12 height changed from 150 to 165· RGIC-100-35 height changed from 159 to 174· PGE-2-12: 0.15s / 0.2s· RGI-100-14: 0.45s / 0.25s· RGI-100-22: 0.5s / 0.3s· RGI-100-30: 0.55s / 0.35s· RGIC-35-12: 0.5s / 0.4s· New Electric Adaptive Gripper: DH-5
2024.07	CN.2407	<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

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