DH-ROBOTICS

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Servo Electric Grippers

EN-2025.05

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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.

Highly Flexible

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.

Rapid Response

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.

Intelligent Feedback and Adaptation

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.

User-friendly and Easy to Maintain

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

DH-Robotics Core Technology

Precision Control and Feedback Technology

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

High-precision Force Control Technology

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

Integrated Technology

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

Intelligent Technology

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

Our Support System

R&D System

New Technology
Innovation
R&D
Engineering Management

Sales Network

Projects Assessment
Training
Quality Supervision
After-sales Service

Manufacturing

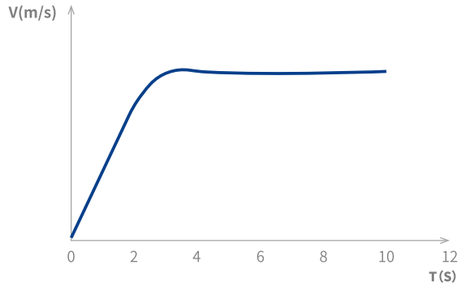
Quality System
Stock Management
Supply Management
Manufacturing

Advantages of Electric Grippers over Pneumatic Grippers

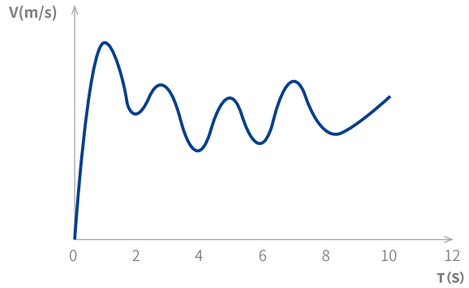
Speed Stability and Adjustable Force Control

	Electric Grippers	Pneumatic Grippers
Speed	1、Stable speed – consistent operation Without fluctuation 2、No actuation delay – immediate response	1、Large speed fluctuations 2、Actuation delay
Force	1、Adjustable and controllable – rapid Parameter tuning via rs-485 communication 2、Precision force control – achieves force Repeatability of up to 0.1n	1、Requires air circuit pressure Adjustment 2、Speed and force coupled – cannot Achieve high force at low speed

Speed Comparison

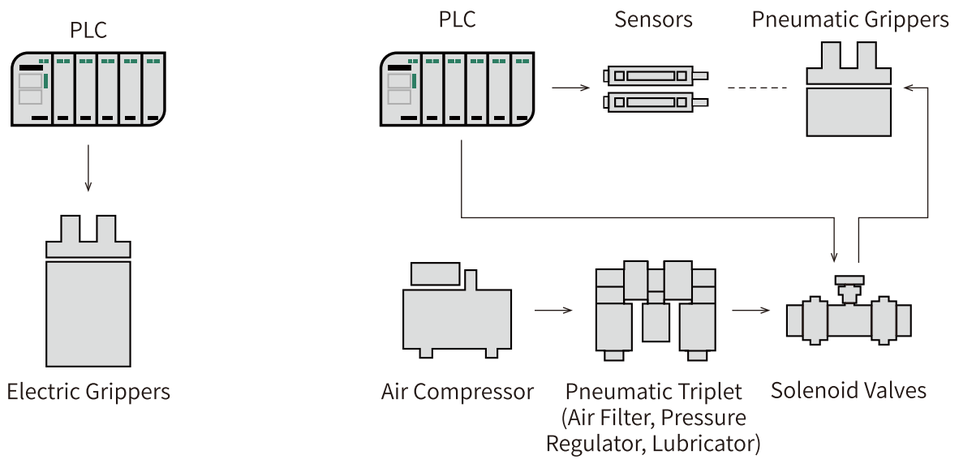


Speed of Electric Grippers



Speed of Pneumatic Grippers

Comparison of Connection Types



Advantages of the Upgraded Version Compared to the Previous Generation

Improved Cost-Effectiveness

The PGEA series offers a more affordable pricing structure across all models compared to the previous generation, while delivering enhanced performance. This provides users with a more competitive and cost-effective solution.

Shorter Lead Time

Optimized production process shortens delivery lead time to 10 days, enabling rapid response to customer demands and improving manufacturing efficiency.

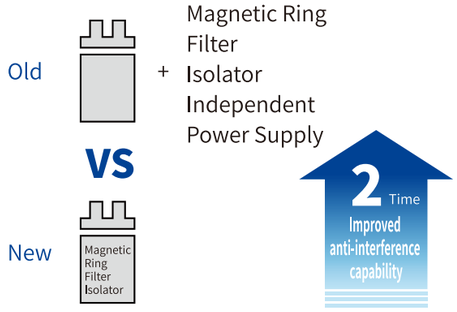
New

Simplified Selection

The external design has been streamlined from five variations to just two — external controller and integrated controller. Force Selection has been optimized, a brake function has been added, and cable outlet direction is adjustable without changing the gripper's dimensions or mounting hole positions.These improvements enhance internal compatibility and simplify Selection process.

Double the Interference Resistance

Equipped with high-performance isolation, anti-interference, and shielding ICs, improving power and signal interference immunity threefold. Products are tested by national-level reliability labs, ensuring suitability for complex electromagnetic environments and reducing abnormal operation rates and environmental dependency.



Features a Replaceable Straight-exit Cable Design

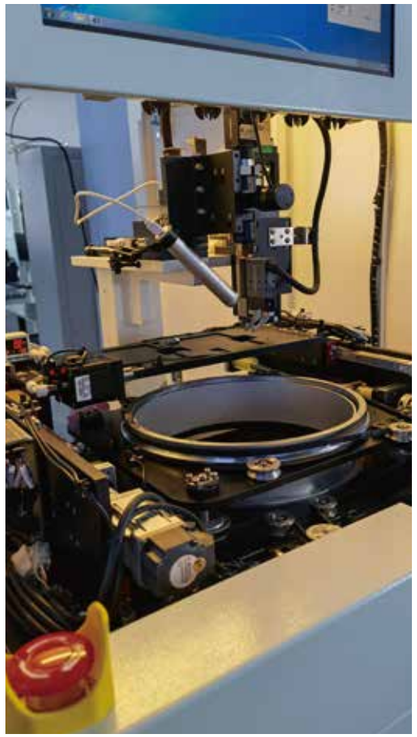
Features a replaceable straight-exit cable design, eliminating the need for aviation connectors.Cable direction can be changed simply by loosening and refastening screws — avoiding drag chain compatibility issues caused by bulky connectors.Even if the wrong Selection is selected, the cable direction can be adjusted on-site.When replacing the gripper, only the base of the cable needs to be removed — the existing cable can be retained for simplified maintenance.

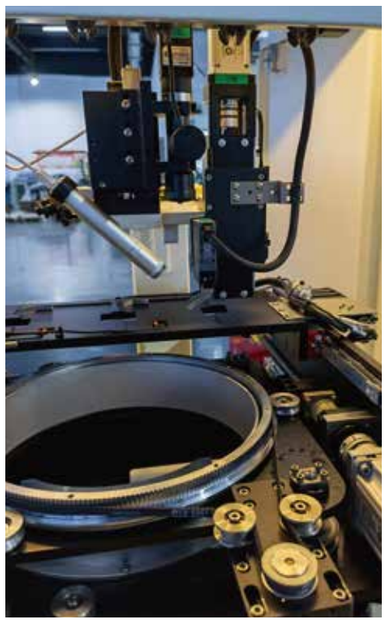
Compact Size and Flexible Deployment

With a minimum thickness of just 18mm, the compact structure reduces the robot's end-effector load and inertia, enabling lighter payloads and faster operation speeds.Supports multiple mounting ways to meet diverse gripping application requirements while saving machine space.

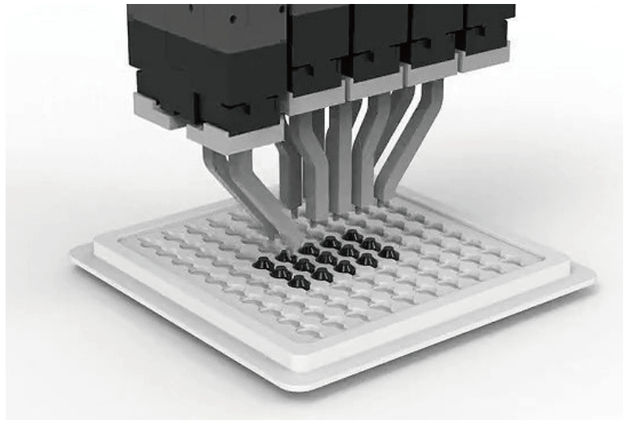
Application











Precautions on Model Selection

Note 1: Confirm the required gripping force and the mass of the workpiece to be manipulated.

① Selection of Effective Gripping Force ▶ ② Confirm Gripping Point ▶ ③ Confirm External Force Applied

As shown in the diagram, for general material handling with potential impact, a safety factor (a) of 4 is recommended. In this case, the gripping force should be 10–20 times the object's weight.

As shown in the right diagram:

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

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

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

To ensure the object doesn't fall:

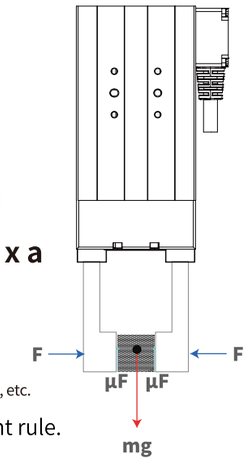
$$2 \times \mu F > mg$$

Number of fingers on the electric gripper

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

Safety Factor a

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



When friction coefficient μ>0.2, gripping force should still follow the 10–20x weight rule. For high acceleration or impact applications, a larger safety factor is required.

Note 2: Confirm gripper stroke and fingertip

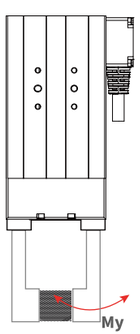
·The stroke of the gripper needs to be greater than the difference between the maximum and minimum dimensions of the workpiece.
·Choose the right fingertip: The fingertip is too long, too big, and the weight is too heavy, the inertia force or bending moment when opening and closing will affect the gripper,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

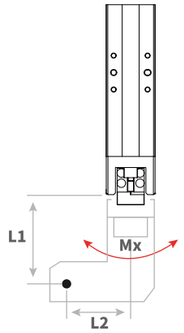
Note 3: Check the external force exerted on the gripper

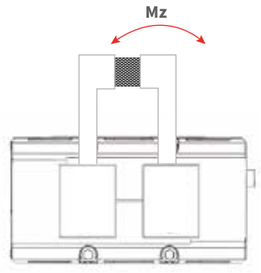
·The vertical load borne by the clamping jaw must be within the allowable load.
·The moment the clamping jaws bear must be within the maximum allowable load moment.

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

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).







On-Site Wiring Guidelines for Electric Grippers

To ensure precision and reliability under complex EMI environments, follow below operation requirements:

A、Installation and Wiring (Required)

1. Mechanical Isolation

a. Avoid mounting directly on high-interference devices (e.g., VFDs, servos, linear motors). Use shock-absorbing brackets or insulating backplates (e.g., aluminum).

b. Do not bundle electric grippers control cables with power lines of other devices (e.g., solenoids, sensors).

c. Ensure good conductivity between metal mounting surface and electric grippers shell to prevent static buildup (conductive paste is recommended).

2. Cable Management

a. Power and signal cables must be routed separately:
i. Power cables: Twisted pair with metal shielding, grounded at both ends.
ii. Signal cables (CAN/RS485/EtherCAT): Shielded twisted pair, shield grounded at controller end.
iii. PE Grounding Cable: Cross-sectional area ⩾ 2.5 mm^2; grounding resistance ⩽ 2 Ω (measured values must be recorded in the maintenance log).For multiple devices, use a star grounding topology—series connection is strictly prohibited.

b. Keep cables short; if over 3 m, use ferrite cores to suppress high-frequency noise.

c. Prohibited Practices (to avoid communication errors):
⚠ Do not route cables in the same Wire duct as pneumatic solenoids or sensors.
⚠ Do not wrap ties directly on electric grippers (use Velcro straps to minimize EMI).

B、Enhancements for Power & Signal Protection (Optional)

1. Power Isolation and Filtering

a. Use an isolated power module dedicated to the electric grippers to avoid voltage fluctuation from shared motor supply.

b. Install an EMI filter at the power input to suppress conducted switching noise. The recommended wiring sequence is: AC mains → EMI filter → isolation transformer → electric grippers controller.EMI filter shell must be grounded to cabinet ground bar.

2. Communication Interference Protection

a. Install signal isolation modules to block external EMI and prevent leakage currents from other devices.

Pre-sales Q&A

Q: How to quickly select the appropriate electric gripper?

A: Selection can be made based on five criteria:
1. Determine gripping force according to workpiece weight
2. Select stroke based on workpiece dimensions
3. Choose suitable gripper model and size for application scenario
4. Select functional options (e.g., power-off holding, adaptive enveloping, infinite rotation)
5. Match IP rating to operating environment

Q: What is effective stroke?

A: The maximum free movement range of gripper fingers. A gripper is suitable when its stroke exceeds the required maximum finger movement distance.

Q: What motor is used in the gripper?

A: Dahuan electric grippers utilize high-energy-density permanent magnet synchronous motors with slotless design, offering advantages over stepper and standard servo motors including: high continuous torque; high efficiency; precise speed control; compact size and light weight; low friction and minimal loss; excellent dynamic acceleration/deceleration.

Q: What is the gripper's precision?

A: Repeat positioning accuracy: ±0.02mm; position resolution: ±0.03mm; force control accuracy: 0.1N (Validated by mass production for top 10 global manufacturers).

Q: How to handle objects larger than the stroke?

A: The stroke specified in the parameter table refers to the effective stroke. For handling oversized items, custom-designed fingertips can be implemented. The gripper with corresponding stroke can be used as long as the dimensional variation between the largest and smallest items during gripping remains within the effective stroke range.

Q: Is a separate driver controller required?

A: Integrated drive-control design incorporates the controller within the gripper housing, eliminating need for external components. For specific model configurations, please consult our product selection guide or contact our sales representatives.

Q: What parameters in the electric grippers are adjustable?

A: All parameters (gripping position, clamping force, operating speed, rotation angle, etc.) are flexibly adjustable. It can be used for multiple functions in the same scenario and complete different tasks. Therefore, it can meet the various flexible requirements of manufacturing plants, including equipment unitization, parameter adjustment, agile manufacturing, quick line changing, and low-noise operation. Easily achieve efficient control over the production process in future intelligent manufacturing.

Q: Does the gripper support drop detection?

A: Yes. It can sense the gripping status and dropping events in real time and provide feedback on those situations.

Q: How to confirm successful gripping?

A: The four states (moving, positioned, gripping, dropped) can be monitored via infomation feedback and indicator lights. For specific instructions of the indicator lights, please refer to the operation manual of each series of gripper products.

Q: What robots are the electric grippers compatible with ?

A: The Dahuan electric gripper is compatible with all mainstream brands of industrial robots and collaborative robots on the market. It has developed plug-and-play plugins for the vast majority of robot brands, making it easy to install and use.

Q: What is the operating environment of the electric gripper?

A: The working voltage of the electric gripper is 24V DC ±10%. The recommended operating environment is at room temperature of 0~40°C and below 85% RH. The rated current, peak current, and protection environment need to be determined according to the specific product model. For details, please refer to the selection manual or contact our sales personnel.

Q: Will the electric gripper heat up after working for a period of time?

A: According to third-party temperature rise tests, when the gripper works continuously in an environment with a room temperature of 27°C ±2°C and a relative humidity of 45%~75% RH, its surface temperature can still be kept below 50°C. For temperature performance under special working conditions, please contact our sales personnel for details.

Q: Is the electric gripper waterproof and dustproof?

A: The waterproof and dustproof capability depends on the protection level corresponding to each model, with the highest reaching IP67. The protection level of our products has passed professional third-party testing and holds inspection report certificates.

Slim-type Electric Parallel Gripper

PGEA Series

Product Features

The PGEA 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.

Small size | Flexible Installation

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

High Working Speed

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

Precise Force Control

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

Serie	Gripping Force (Per Jaw)	Recommended Workpiece Weight	Stroke	Reference Page
PGEA-2/15-10	0.8~2 N/6~15 N	0.05 kg/0.1 kg	10 mm	P09-12
PGEA-15/50/100-26	6~15 N/15~50 N/30~100 N	0.25 kg/1 kg/2 kg	26 mm	P13-16
PGEA-15/50/100-40	6~15 N/15~50 N/30~100 N	0.25 kg/1 kg/2 kg	40 mm	P17-20

PGEA-2/15-10

Slim-type Electric Parallel Gripper

Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection
PGEA	2	10	O	B	M1	L1	J0

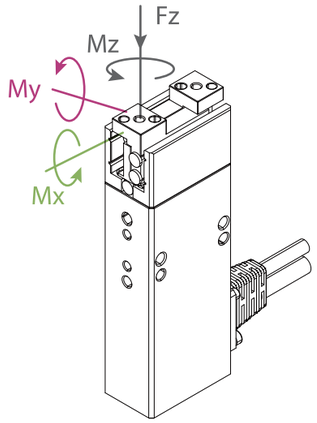
Gripping Force	Stroke
2	10
15	

Brake	Cable Direction
O Without Brake	B Side
	S Bottom

Communication Protocol *①*②	Cable Selection *③	Fingertip Selection
M1 Modbus (RS485)+I/O (NN)	L1 1m Direct Cable Outlet	J0 Without Fingertip
M2 Modbus (RS485)+I/O (PP)	L3 3m Direct Cable Outlet	J1 Standard Fingertip
M3 Modbus (RS485)+I/O (NP)	L5 5m Direct Cable Outlet	
M4 Modbus (RS485)+I/O (PN)	L10 10m Direct Cable Outlet	

*① I/O(NN)：NPN/NPN　I/O(PP)：PNP/PNP　I/O(NP)：NPN/PNP　I/O(PN)：PNP/NPN
*② It is recommended that no more than 4units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur.
*③ Cables longer than 10 meters pose a risk of communication interference.
Note：The RS485 module option has been removed from the selection parameters. Please purchase separately if needed.

TECHNICAL SPECIFICATIONS



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

Product Parameter	PGEA-2-10	PGEA-15-10
Gripping force(per jaw)	0.8~2 N	6~15 N
Recommended workpiece weight *④	0.05 kg	0.1 kg
Stroke	10 mm	10 mm
Repeat accuracy (positioning)	± 0.02 mm	± 0.02 mm
Weight	0.15 kg	0.15 kg
Dimensions (L xW x H)	Side：89mm x 30mm x 18mm　Bottom：94mm x 30mm x 18mm Controller Size:78 mm x 52.4 mm x 27.2 mm	
Noise emission	< 50 dB	
Driving method	Rack and Pinion Crossed Roller Guide	
Working Environment		
Communication interface	Standard: Modbus RTU (RS485)、Digital I/O(2 inputs 2 outputs) Optional: TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT *⑤	
Nominal voltage	24 V DC ± 10%	
Nominal & Max. current	0.1 A ((Rated) 0.2 A (Peak)	0.2 A ((Rated) 0.3 A (Peak) *⑥
Max power	5 W	8 W
IP protection class	IP 40	
Recommended operating environment	0~40°C, under 85% RH	
Overseas standards	CE, FCC, RoHS	

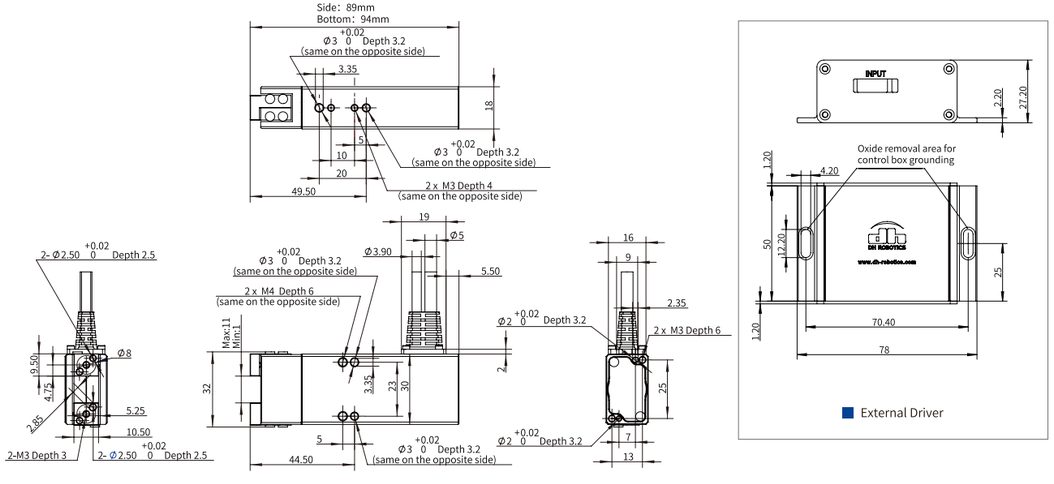
External Driver　Gripping Force Adjustable　Position Adjustable　Speed Adjustable　Drop Detection　Self-locking Mechanism

*④ The shift in the center of gravity of the object being gripped can also affect the load, depending on factors such as the shape of the object, the material of the contact surface, friction, and the acceleration of movement. If you have any questions, please feel free to contact us.

*⑤ Requires external communication convertor or customization, pleass contact sales or technical support.

*⑥ 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



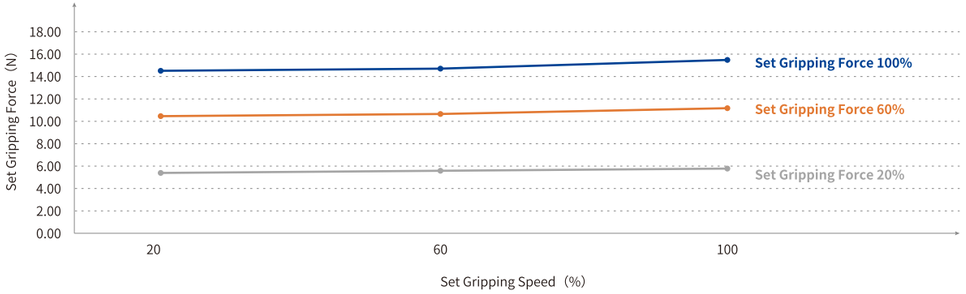
Gripping CT Reference Table

Test Type	Gripping Time (ms) [Impact, gripped object, target position set to 0, 50% force, 100% speed]		Gripping Time (ms) [Impact, gripped object, target position set to 0, 100% force, 100% speed]	
Test Item / Model	Side Avoidance 3mm	Full Stroke Clamping	Side Avoidance 3mm	Full Stroke Clamping
PGEA-15-10	266	336	178	236
PGEA-2-10	204	298	141	182

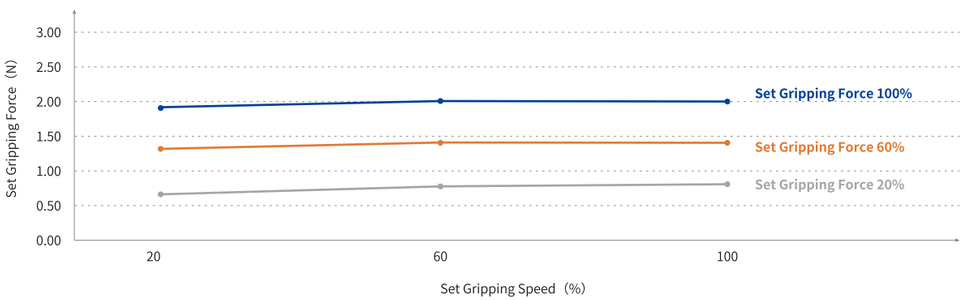
测试类型	Opening Time (ms) [50% force, 100% speed to position]		Opening Time (ms) [100% force, 100% speed to position]	
Test Item / Model	Side Avoidance 3mm	Full Stroke Clamping	Side Avoidance 3mm	Full Stroke Clamping
PGEA-15-10	260	339	186	236
PGEA-2-10	207	298	204	183

Actual Output Reference Curve for Different Force and Speed

PGEA-15-10



PGEA-2-10

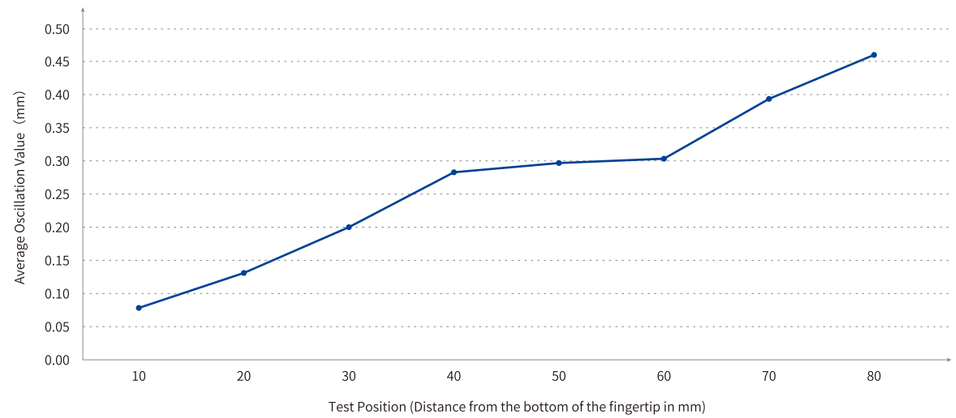


Gripping Distance Force Decay Reference Curve

PGEA-15-10 Finger Length and Gripping Force Test

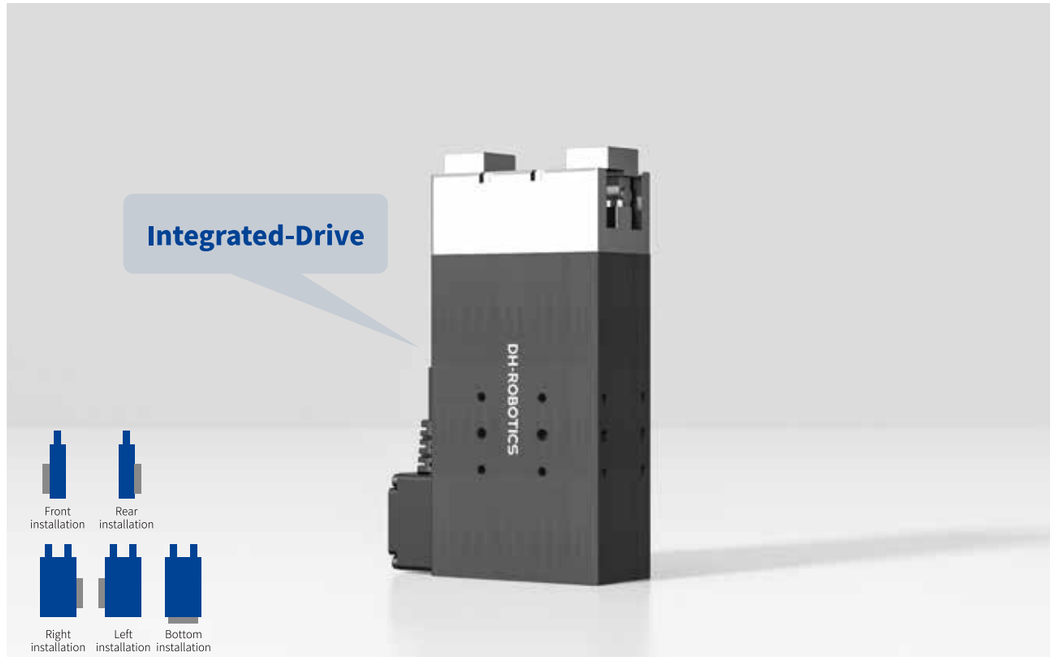
PGEA-2-10 Finger Length and Gripping Force Test

Gripping Distance Oscillation Reference Curve



PGEA-15/50/100-26

Slim-type Electric Parallel Gripper



Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection
PGEA	15	26	O	F1	M1	L1	J0

Gripping Force	Stroke	Brake	Cable Direction *⑤	Communication Protocol *①*②	Cable Selection	Fingertip Selection
15	26	O Without Brake	F1	M1 Modbus (RS485)+I/O (NN)	L1 1m Direct Cable Outlet	J0 Without Fingertip
50		W With Brake*③	F2	M2 Modbus (RS485)+I/O (PP)	L3 3m Direct Cable Outlet	J1 Standard Fingertip
100			F3	M3 Modbus (RS485)+I/O (NP)	L5 5m Direct Cable Outlet	
			F4	M4 Modbus (RS485)+I/O (PN)	L10 10m Direct Cable Outlet	
					Robot Cable*④	
					C01	
					C02	

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

*② It is recommended that no more than 4units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur.

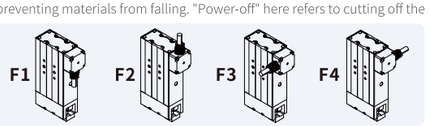
*③When selecting a model with a brake, the gripper can maintain a certain gripping force after power-off, preventing materials from falling. "Power-off" here refers to cutting off the 220V power supply, at which point the gripping force will decrease to 85% of the powered-on level.

*④

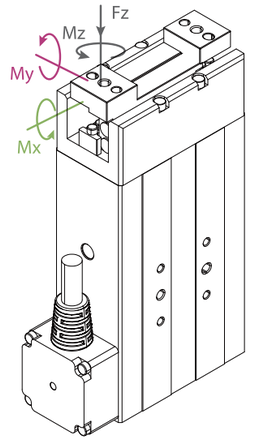
C01 Elite CS	SIASUN Hanwha A	DOBOT CR DOBOT Nova	UR CB UR E	**C02** JAKA

Note：The RS485 module option has been removed from the selection parameters. Please purchase separately if needed.

*⑤



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

Product Parameter	PGEA-15-26	PGEA-50-26	PGEA-100-26
Gripping force(per jaw)	6~15 N	15~50 N	30~100 N
Recommended workpiece weight*⑥	0.25 kg	1 kg	2 kg
Stroke	26 mm	26 mm	26 mm
Repeat accuracy (positioning)	± 0.02 mm	± 0.02 mm	± 0.02 mm
Weight	0.5kg with or without brake	0.5kg with or without brake	0.53kg/0.6kg with brake
Dimensions (L xW x H)	118mm*55mm*29mm with or without brake		118mm*55mm*29mm (without brake) 138mm*55mm*29mm (with brake)
Noise emission	< 50 dB	< 50 dB	< 50 dB
Driving method	Rack and Pinion Crossed Roller Guide		
Working Environment			
Communication interface	Standard: Modbus RTU (RS485)、Digital I/O Optional: TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT*⑦		
Nominal voltage	24 V DC ± 10%		
Nominal & Max. current	0.3 A (Rated) 0.8 A (Peak)	0.2 A (Rated) 0.8 A (Peak)	0.3 A (Rated) 1.2 A (Peak)*⑧
Max power	20 W	20 W	30 W
IP protection class	IP 40		
Recommended operating environment	0~40°C, under 85% RH		
Overseas standards	CE, FCC, RoHS		

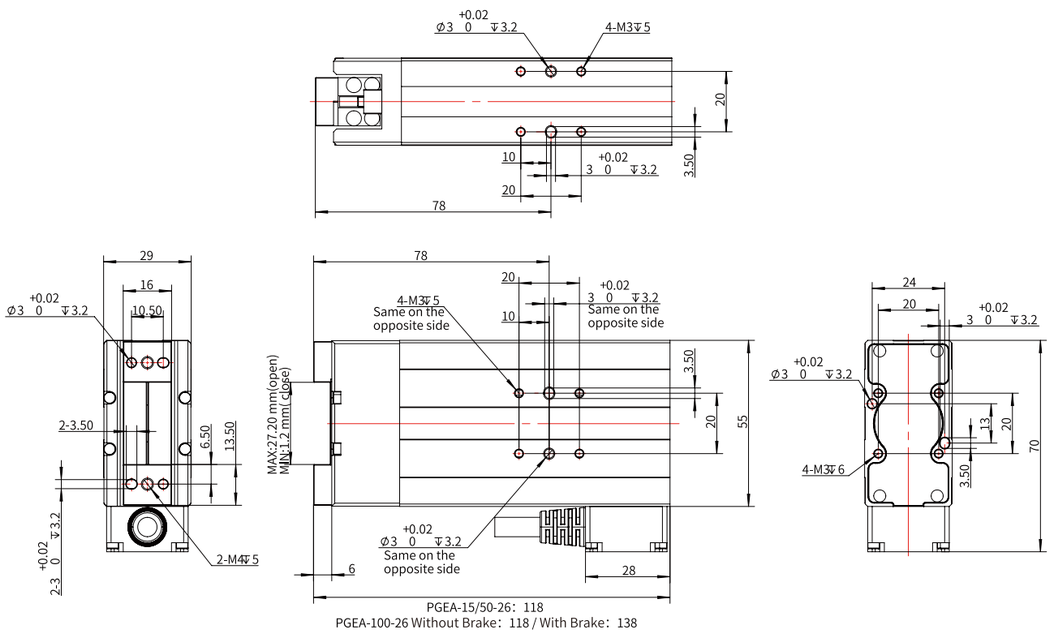
Build-in Controller　Gripping Force Adjustable　Position Adjustable　Speed Adjustable　Drop Detection　Self-locking Mechanism (Optional)

*⑥ The shift in the center of gravity of the object being gripped can also affect the load, depending on factors such as the shape of the object, the material of the contact surface, friction, and the acceleration of movement. If you have any questions, please feel free to contact us.

*⑦ Requires external communication convertor or customization, pleass contact sales or technical support.

*⑧ 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



PGEA-15/50-26：118
PGEA-100-26 Without Brake：118 / With Brake：138

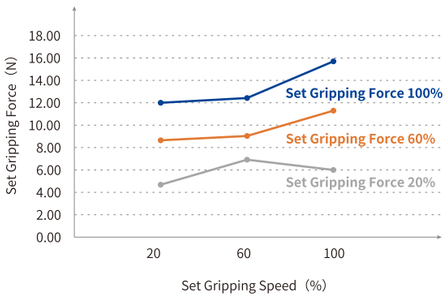
Gripping CT Reference Table

Test Type	Gripping Time (ms) [Impact, gripped object, target position set to 0, 50% force, 100% speed]				Gripping Time (ms) [Impact, gripped object, target position set to 0, 100% force, 100% speed]			
Test Item / Model	Side Avoidance 3mm	Side Avoidance 5mm	Side Avoidance 10mm	Full Stroke Clamping	Side Avoidance 3mm	Side Avoidance 5mm	Side Avoidance 10mm	Full Stroke Clamping
PGEA-15-26	172	215	298	376	168	208	269	329
PGEA-50-26	177	244	413	571	142	190	306	452
PGEA-100-26	222	303	508	646	151	198	327	447

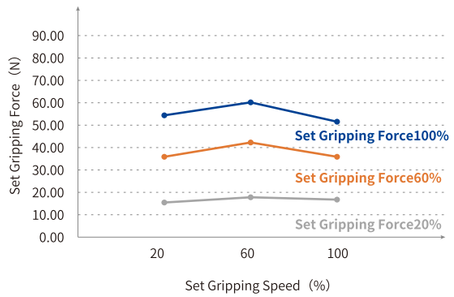
Test Type	Opening Time (ms) [50% force, 100% speed to position]				Opening Time (ms) [100% force, 100% speed to position]			
Test Item / Model	Side Avoidance 3mm	Side Avoidance 5mm	Side Avoidance 10mm	Full Stroke Clamping	Side Avoidance 3mm	Side Avoidance 5mm	Side Avoidance 10mm	Full Stroke Clamping
PGEA-15-26	238	267	331	372	228	251	300	323
PGEA-50-26	240	307	473	566	237	273	383	447
PGEA-100-26	254	333	536	641	236	274	383	441

Actual Output Reference Curve for Different Force and Speed

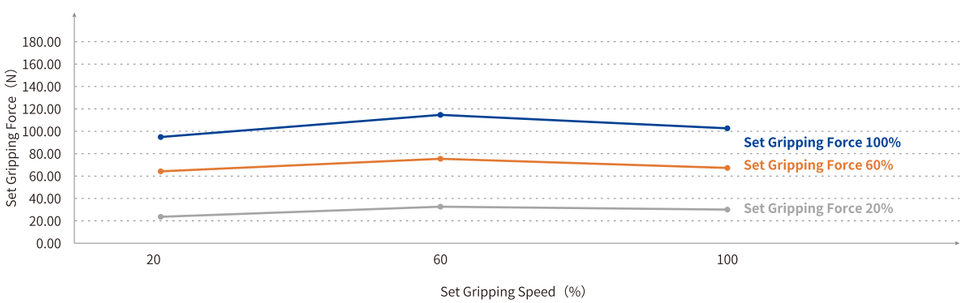
PGEA-15-26



PGEA-50-26

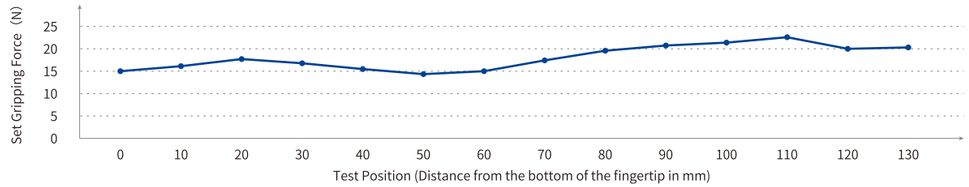


PGEA-100-26

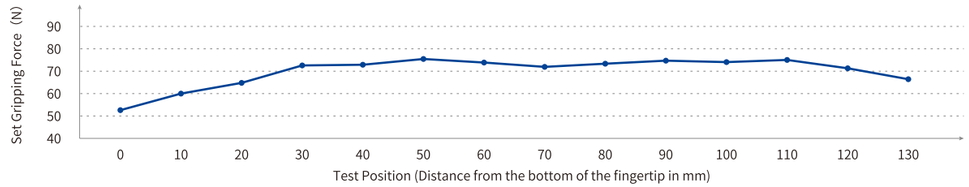


Gripping Distance Force Decay Reference Curve

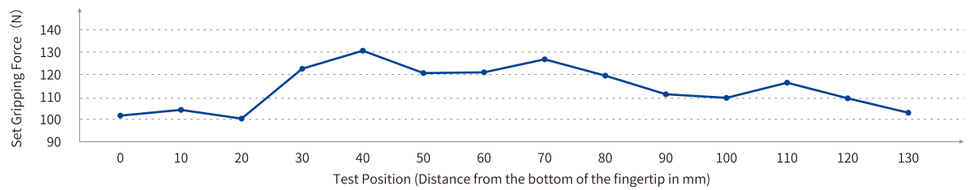
PGEA-15-26 Finger Length and Gripping Force Test



PGEA-50-26 Finger Length and Gripping Force Test



PGEA-100-26 Finger Length and Gripping Force Test



Gripping Distance Oscillation Reference Curve

PGEA-15/50/100-40

Slim-type Electric Parallel Gripper

Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection
PGEA	50	40	O	F1	M1	L1	J0

Gripping Force	Stroke	Brake	Cable Direction *⑤	Communication Protocol *①*②	Cable Selection	Fingertip Selection
15	40	O Without Brake	F1	M1 Modbus (RS485)+I/O (NN)	L1 1m Direct Cable Outlet	J0 Without Fingertip
50		W With Brake *③	F2	M2 Modbus (RS485)+I/O (PP)	L3 3m Direct Cable Outlet	J1 Standard Fingertip
100			F3	M3 Modbus (RS485)+I/O (NP)	L5 5m Direct Cable Outlet	
			F4	M4 Modbus (RS485)+I/O (PN)	L10 10m Direct Cable Outlet	
					Robot Cable *④	
					C01	
					C02	

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

*② It is recommended that no more than 4units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur.

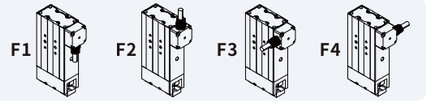
*③When selecting a model with a brake, the gripper can maintain a certain gripping force after power-off, preventing materials from falling. "Power-off" here refers to cutting off the 220V power supply, at which point the gripping force will decrease to 85% of the powered-on level.

*④

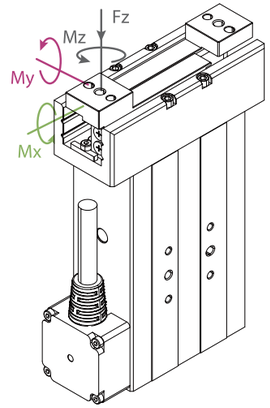
C01	SIASUN	DOBOT CR	UR CB	**C02** JAKA
Elite CS	Hanwha A	DOBOT Nova	UR E	

Note：The RS485 module option has been removed from the selection parameters. Please purchase separately if needed.

*⑤



TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz	150 N

Allowable Loading Moment

Mx	4.5 N·m
My	5 N·m
Mz	7 N·m

Product Parameter	PGEA-15-40	PGEA-50-40	PGEA-100-40
Gripping force(per jaw)	6~15 N	15~50 N	30~100 N
Recommended workpiece weight*⑥	0.25 kg	1 kg	2 kg
Stroke	40 mm	40 mm	40 mm
Repeat accuracy (positioning)	± 0.02 mm	± 0.02 mm	± 0.02 mm
Weight	0.6 kg (with or without brake)		
Dimensions (L xW x H)	118mm*73.8mm*29mm with or without brake	118mm*73.8mm*29mm (Without Brake) 138mm*73.8mm*29mm (With Brake)	
Noise emission	< 50 dB		
Driving method	Rack and Pinion Crossed Roller Guide		
Working Environment			
Communication interface	Standard: Modbus RTU (RS485)、Digital I/O Optional: TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT *⑦		
Nominal voltage	24 V DC ± 10%		
Nominal & Max. current	0.3 A (Rated) 0.8 A (Peak)	0.2 A (Rated) 0.8 A (Peak)	0.3 A (Rated) 1.2 A (Peak)*⑧
Max power	20 W		30 W
IP protection class	IP 40		
Recommended operating environment	0~40°C, under 85% RH		
Overseas standards	CE, FCC, RoHS		

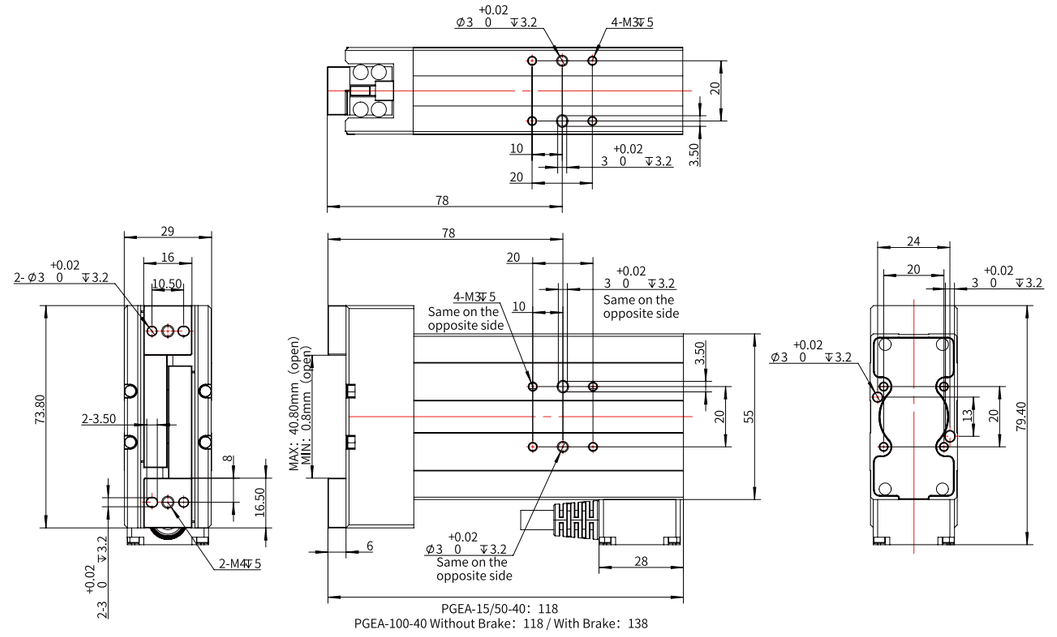
Build-in Controller　Gripping Force Adjustable　Position Adjustable　Speed Adjustable　Drop Detection　Self-locking Mechanism (Optional)

*⑥ The shift in the center of gravity of the object being gripped can also affect the load, depending on factors such as the shape of the object, the material of the contact surface, friction, and the acceleration of movement. If you have any questions, please feel free to contact us.

*⑦ Requires external communication convertor or customization, pleass contact sales or technical support.

*⑧ 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



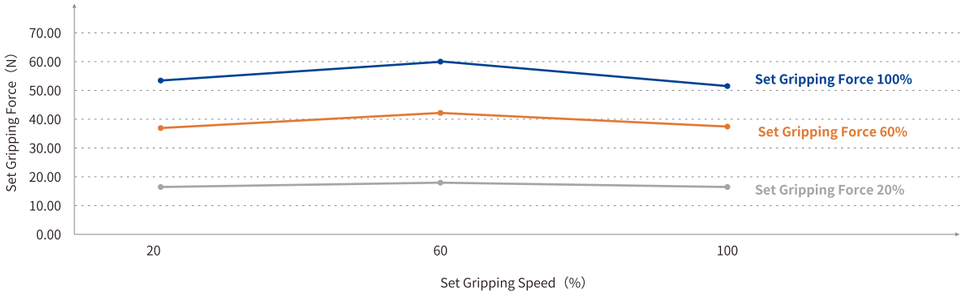
Gripping CT Reference Table

Test Type	Gripping Time (ms) [Impact, gripped object, target position set to 0, 50% force, 100% speed]			Gripping Time (ms) [Impact, gripped object, target position set to 0, 100% force, 100% speed]		
Test Item / Model	Side Avoidance 3mm	Side Avoidance 5mm	Side Avoidance 10mm	Side Avoidance 3mm	Side Avoidance 5mm	Side Avoidance 10mm
PGEA-15-40	172	215	298	168	208	269
PGEA-50-40	177	244	413	142	190	306
PGEA-100-40	222	303	508	151	198	327

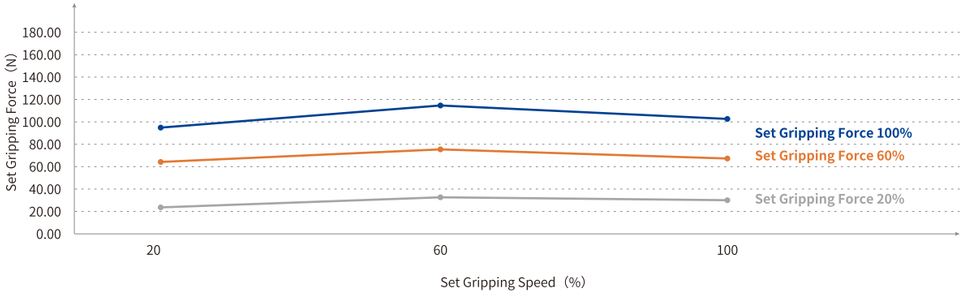
Test Type	Opening Time (ms) [50% force, 100% speed to position]			Opening Time (ms) [100% force, 100% speed to position]		
Test Item / Model	Side Avoidance 3mm	Side Avoidance 5mm	Side Avoidance 10mm	Side Avoidance 3mm	Side Avoidance 5mm	Side Avoidance 10mm
PGEA-15-40	238	267	331	228	251	300
PGEA-50-40	240	307	473	237	273	383
PGEA-100-40	254	333	536	236	274	383

Actual Output Reference Curve for Different Force and Speed

PGEA-50-40

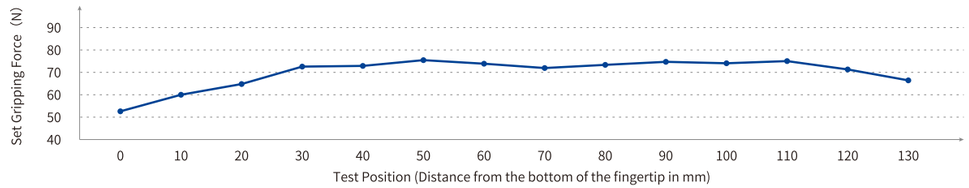


PGEA-100-40

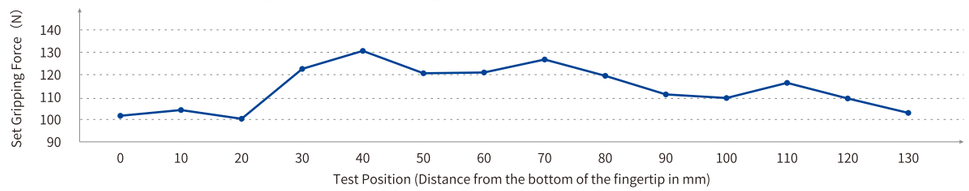


Gripping Distance Force Decay Reference Curve

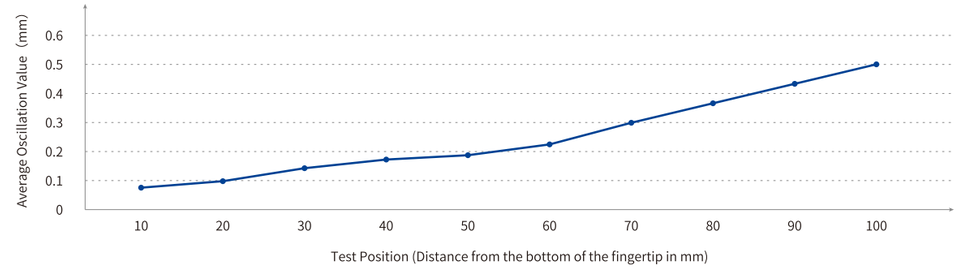
PGEA-50-40 Finger Length and Gripping Force Test



PGEA-100-40 Finger Length and Gripping Force Test



Gripping Distance Oscillation Reference Curve



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
PGE	5	26	O	S	M1	L5	J0	F0	00

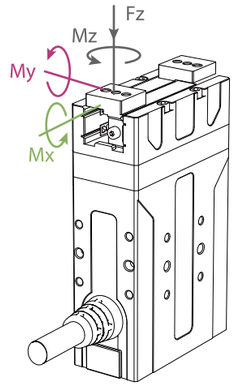
- Brake: **O** Without Brake
- Cable Direction: **S** Side; **B** bottom
- Communication Protocol (★① ★⑤): **M1** Modbus (RS485)+I/O (NN); **M2** Modbus (RS485)+I/O (PP); **M3** Modbus (RS485)+I/O (NP); **M4** Modbus (RS485)+I/O (PN)
- Cable Selection: **LX** Without Extend Cable; **L1** 1m Cable; **L3** 3m Cable; **L5** 5m Cable; **L10** 10m Cable; **L15** 15m Cable
- Fingertip Selection: **J0** Without Fingertip; **J1** Standard Fingertip
- Flange Selection: **F0** Without Flange
- Robot Cable: Table Below

★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 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.
The Modbus RTU (RS485) to USB module will no longer be provided for free. Please place a separate order if needed.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load	
Fz	50 N

Allowable Loading Moment	
Mx	0.3 N·m
My	0.25 N·m
Mz	0.3 N·m

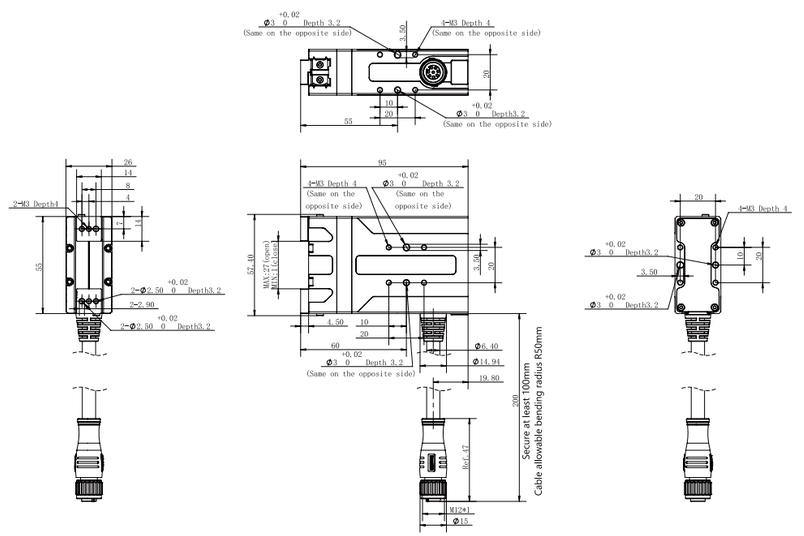
Product Parameter	
Gripping force (per jaw)	0.8~5 N
Recommended workpiece weight *②	0.1 kg
Stroke	26 mm
Full stroke opening/closing time	0.3 s/0.3 s
Repeat accuracy (position)	± 0.02 mm
Weight	0.4 kg
Size	95 mm x 55 mm x 26 mm
Noise emission	< 50 dB
Driving method	Precise planetary gears + Rack and pinion

Working Environment	
Communication interface	Standard: Modbus RTU (RS485)、Digital I/O(2 inputs 2 outputs) Optional: TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT *③
Rated voltage	24 V DC ± 10%
Current	0.4 A(Rated)/ 0.7 A(Peak)*④
Rated power	9.6 W
IP class	IP 40
Recommended environment	0~40°C， under 85% RH
Certification	CE, FCC, RoHS

*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, pleass 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.

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

Technical Drawings



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
PGE	8	14	O	S	M1	L5	J0	F0	00

Brake
- **O** Without Brak

Cable Direction
- **S** Side

Communication Protocol ★① ★⑤
- **M1** Modbus (RS485)+I/O (NN)
- **M2** Modbus (RS485)+I/O (PP)
- **M3** Modbus (RS485)+I/O (NP)
- **M4** Modbus (RS485)+I/O (PN)

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

Fingertip Selection
- **J0** Without Fingertip
- **J1** Standard Fingertip

Flange Selection
- **F0** Without Flange

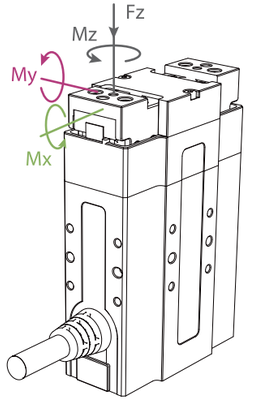
Robot Cable
- Table Below

★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 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.
The Modbus RTU (RS485) to USB module will no longer be provided for free. Please place a separate order if needed.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load	
Fz	90 N
Allowable Loading Moment	
Mx	0.55 N·m
My	0.45 N·m
Mz	0.55 N·m

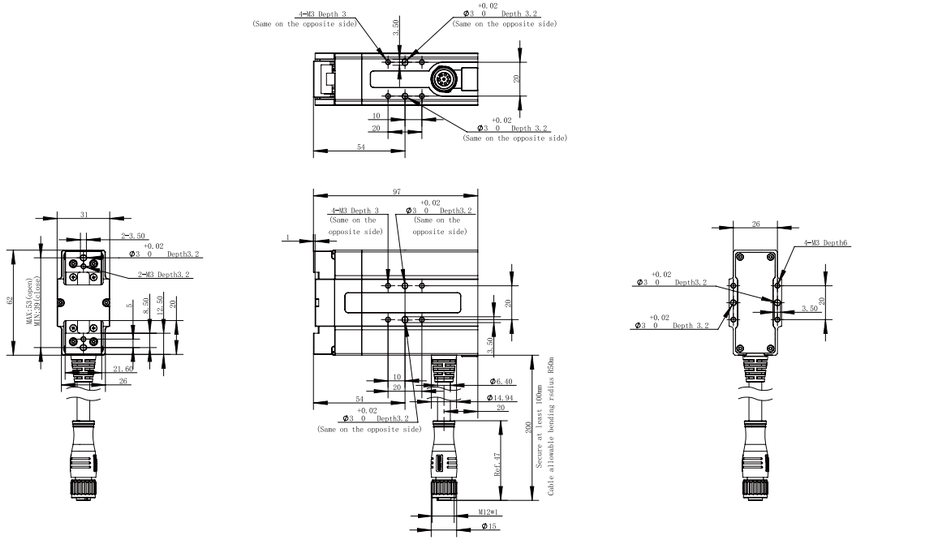
Product Parameter	
Gripping force (per jaw)	2~8 N
Recommended workpiece weight*②	0.1 kg
Stroke	14 mm
Full stroke opening/closing time	0.3 s/0.3 s
Repeat accuracy (position)	± 0.02 mm
Weight	0.4 kg
Size	97 mm x 62 mm x 31 mm
Noise emission	< 50 dB
Driving method	Precise planetary gears + Rack and pinion

Working Environment	
Communication interface	Standard: Modbus RTU (RS485)、Digital I/O(2 inputs 2 outputs) Optional: TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT *③
Rated voltage	24 V DC ± 10%
Current	0.4 A (Rated) / 0.7 A (Peak) *④
Rated power	9.6 W
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

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

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

Technical Drawings

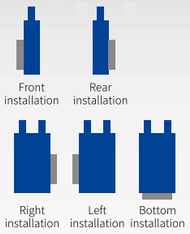


PGSE-15-7

Slim-type Electric Parallel Gripper

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

Cost-effective



Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange Selection
PGSE	15	7	O	S	M1	L5	J0	F0

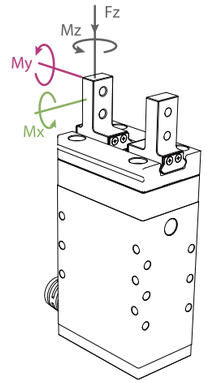
Brake		Communication Protocol ★①★⑤		Cable Selection	
O	Without Brake	M1	Modbus (RS485)+I/O (NN)	L1	1.5m Cable
S	Side	M2	Modbus (RS485)+I/O (PP)	L3	3m Cable
		M3	Modbus (RS485)+I/O (NP)	L5	5m Cable
		M4	Modbus (RS485)+I/O (PN)	L10	10m Cable

Fingertip Selection		Flange Selection	
J0	Without Fingertip	F0	Without Flange

★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.
The Modbus RTU (RS485) to USB module will no longer be provided for free. Please place a separate order if needed.

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

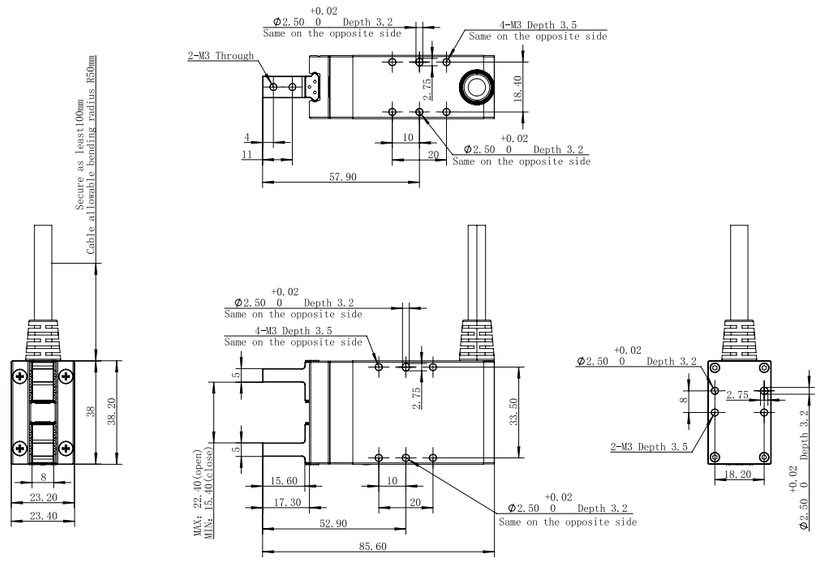
*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
*③ Requires external communication convertor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

Product Parameter	
Gripping force (per jaw)	6~15 N
Recommended workpiece weight *②	0.25 kg
Stroke	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

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

Technical Drawings



Electric Parallel Gripper

PGIA Series

*The dimensions and mounting hole positions are the same as the original PGI model, with only the wiring direction changed.

Product Features

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

Long Stroke

Long stroke reach to 80 mm. With the customiza tion 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 PGIA-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 PGIA-140-80 is 140 N, and the maximum recommend ed load is 3 kg, which can meet more diverse gripping needs.

Serie	Gripping Force (Per Jaw)	Recommended Workpiece Weight	Stroke	Reference Page
PGIA-80/140-80	16~80 N/40~140 N	1.6 kg/3 kg	80 mm	P21-24

PGIA-80/140-80

Electric Parallel Gripper

Selection Method

PGIA - 80 - 80 - O - F1 - M1 - L1 - J0

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection
80 140	80	O Without Brake W With Brake*③	*⑤ F1 F2 F3 F4	M1 Modbus (RS485)+I/O (NN) M2 Modbus (RS485)+I/O (PP) M3 Modbus (RS485)+I/O (NP) M4 Modbus (RS485)+I/O (PN)	*①*② M1 Modbus (RS485)+I/O (NN) M2 Modbus (RS485)+I/O (PP) M3 Modbus (RS485)+I/O (NP) M4 Modbus (RS485)+I/O (PN)	L1 1m Direct Cable Outlet L3 3m Direct Cable Outlet L5 5m Direct Cable Outlet L10 10m Direct Cable Outlet Robot Cable*④ C01 C02	J0 Without Fingertip J1 Standard Fingertip

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

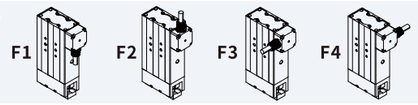
*② It is recommended that no more than 4units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur.

*③When selecting a model with a brake, the gripper can maintain a certain gripping force after power-off, preventing materials from falling. "Power-off" here refers to cutting off the 220V power supply, at which point the gripping force will decrease to 85% of the powered-on level.

*④

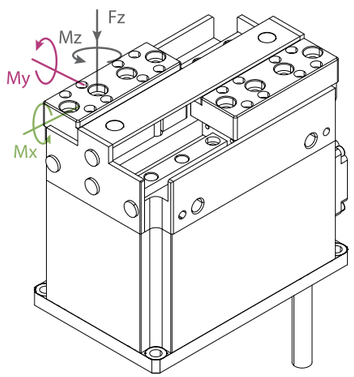
C01	SIASUN	DOBOT CR	UR CB	C02 JAKA
Elite CS	Hanwha A	DOBOT Nova	UR E	

*⑤



Note: The RS485 module option has been removed from the selection parameters. Please purchase separately if needed.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz	300 N

Allowable Loading Moment

Mx	7 N·m
My	7 N·m
Mz	7 N·m

Product Parameter	PGIA-140-80	PGIA-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
Repeat accuracy (positioning)	± 0.02 mm	
Weight	1 kg	
Dimensions（L xW x H)	97mm*62mm*86mm	
Noise emission	< 50 dB	
Driving method	Rack and Pinion Crossed Roller Guide	

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
Nominal voltage	24 V DC ± 10%
Nominal & Max. current	0.7 A（Rated）/ 1.6 A（Peak)*④
Max power	40 W
IP protection class	IP 54
Recommended operating environment	0~40°C, under 85% RH
Overseas standards	CE, FCC, RoHS

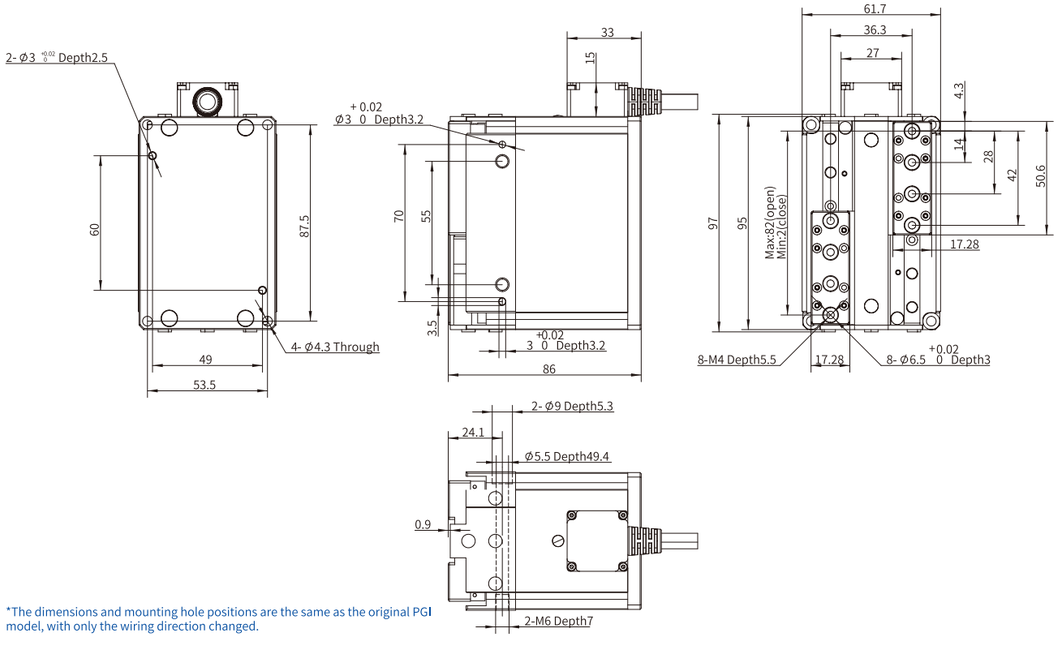
Build-in Controller | Gripping Force Adjustable | Position Adjustable | Speed Adjustable | Drop Detection | Self-locking Mechanism

*② The shift in the center of gravity of the object being gripped can also affect the load, depending on factors such as the shape of the object, the material of the contact surface, friction, and the acceleration of movement. If you have any questions, please feel free to contact us.

*③ Requires external communication convertor or customization, pleass 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



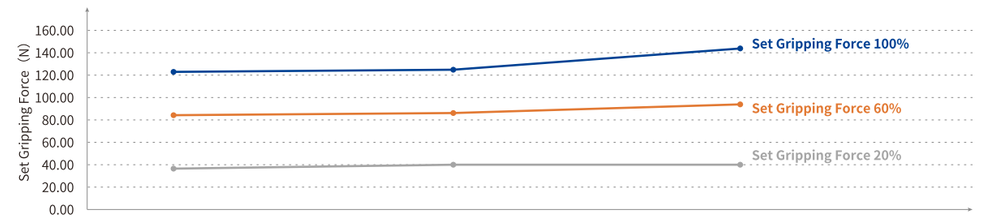
*The dimensions and mounting hole positions are the same as the original PGI model, with only the wiring direction changed.

Gripping CT Reference Table

Test Type	Gripping Time (ms) [Impact, gripped object, target position set to 0, 50% force, 100% speed]				Gripping Time (ms) [Impact, gripped object, target position set to 0, 100% force, 100% speed]			
Test Item / Model	Side Avoidance 3mm	Side Avoidance 5mm	Side Avoidance 10mm	Full Stroke Clamping	Side Avoidance 3mm	Side Avoidance 5mm	Side Avoidance 10mm	Full Stroke Clamping
PGIA-140-80	185	244	387	1239	140	181	262	776

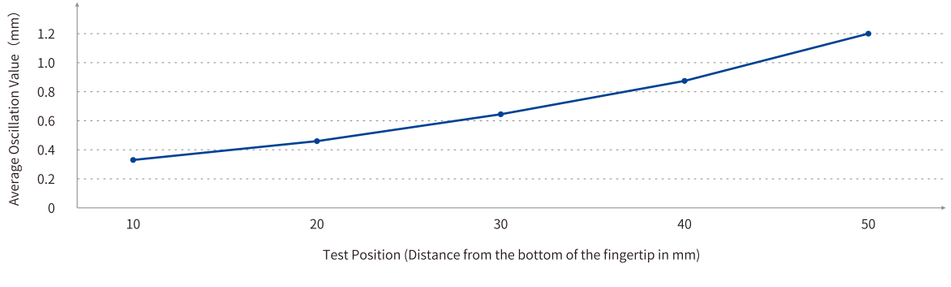
Test Type	Opening Time (ms) [50% force, 100% speed to position]				Opening Time (ms) [100% force, 100% speed to position]			
Test Item / Model	Side Avoidance 3mm	Side Avoidance 5mm	Side Avoidance 10mm	Full Stroke Clamping	Side Avoidance 3mm	Side Avoidance 5mm	Side Avoidance 10mm	Full Stroke Clamping
PGIA-140-80	189	243	383	1240	187	215	298	777

Actual Output Reference Curve for Different Force and Speed



Gripping Distance Force Decay Reference Curve

Gripping Distance Oscillation Reference Curve



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
PGC	50	35	O	S	M1	L5	J1	F1	00

Brake
- **O** Without Brake
- **S** Side

Communication Protocol *①*⑤
- **M1** Modbus (RS485)+I/O (NN)
- **M2** Modbus (RS485)+I/O (PP)
- **M3** Modbus (RS485)+I/O (NP)
- **M4** Modbus (RS485)+I/O (PN)

Cable Selection
- **LX** Without Extend Cable
- **L1** 1m Cable
- **L3** 3m Cable
- **L5** 5m Cable
- **L10** 10m Cable

Fingertip Selection
- **J1** Standard Fingertip

Flange Selection
- **F1** Standard Flange

Robot Cable
- Table Below

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

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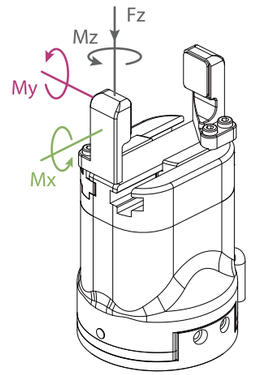
The Modbus RTU (RS485) to USB module will no longer be provided for free. Please place a separate order if needed.

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

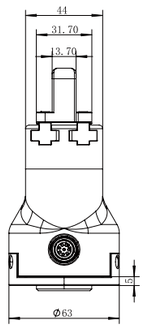
*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
*③ Requires external communication convertor or customization, pleass 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.

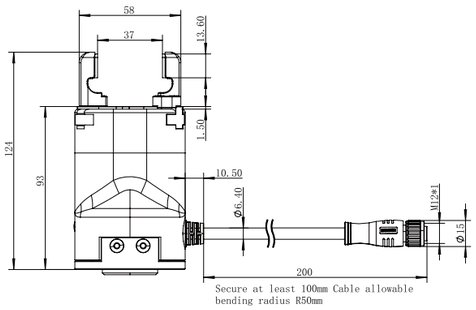
Product Parameter	
Gripping force (per jaw)	15~50 N
Recommended workpiece weight *②	1 kg
Stroke	37 mm
Full stroke opening/closing time	0.7 s/0.7 s
Repeat accuracy (position)	± 0.03 mm
Weight	0.5 kg
Size	124 mm x 63 mm x 63 mm
Noise emission	< 50 dB
Driving method	Precise planetary gears + Rack and pinion

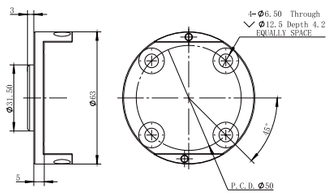
Working Environment	
Communication interface	Standard: Modbus RTU (RS485)、Digital I/O(2 inputs 2 outputs) Optional:TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT *③
Rated voltage	24 V DC ± 10%
Current	0.25 A(Rated)/ 0.5 A(Peak) *④
Rated power	6 W
IP class	IP 54
Recommended environment	0~40°C, under 85% RH
Certification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

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

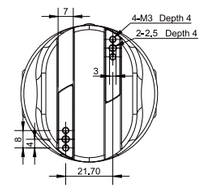
Technical Drawings







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



■ Finger mounting holes

PGC-140-50

Electric Collaborative Parallel Gripper

Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange Selection	Robot Cable
PGC	140	50	W	S	M1	L5	J1	F1	00

- **W** With Brake
- **S** Side
- ★①★⑤
  - **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

★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			

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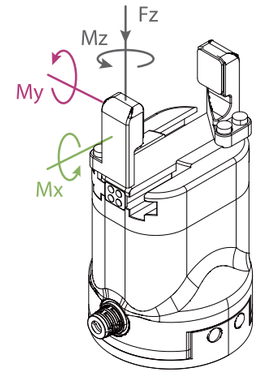
TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load	
Fz	300 N

Allowable Loading Moment	
Mx	7 N·m
My	7 N·m
Mz	7 N·m

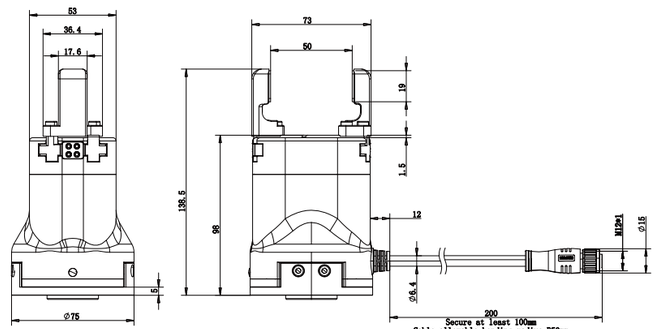
Product Parameter	
Gripping force (per jaw)	40~140 N
Recommended workpiece weight ★②	3 kg
Stroke	50 mm
Full stroke opening/closing time	0.75 s/0.75s
Repeat accuracy (position)	± 0.03 mm
Weight	1 kg
Size	138.5 mm x 75 mm x 75 mm
Noise emission	< 50 dB
Driving method	Precise planetary gears + Rack and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

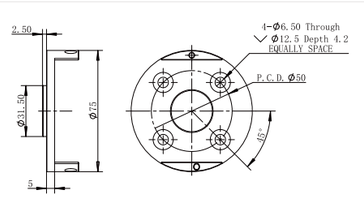
Working Environment	
Communication interface	Standard: Modbus RTU (RS485)、Digital I/O(2 inputs 2 outputs) Optional: TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT ★③
Rated voltage	24 V DC ± 10%
Current	0.4 A(Rated)/ 1.2 A(Peak) ★④
Rated Power	9.6 W
IP class	IP 67
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

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

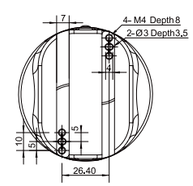
★② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
★③ Requires external communication convertor or customization, pleass 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

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
PGC	300	60	W	S	M1	L5	J1	F1	00

Brake
- **W** With Brake

Cable Direction
- **S** Side

Communication Protocol *①, *⑤
- **M1** Modbus (RS485)+I/O (NN)
- **M2** Modbus (RS485)+I/O (PP)
- **M3** Modbus (RS485)+I/O (NP)
- **M4** Modbus (RS485)+I/O (PN)

Cable Selection
- **LX** Without Extend Cable
- **L1** 1m Cable
- **L3** 3m Cable
- **L5** 5m Cable
- **L10** 10m Cable

Fingertip Selection
- **J1** Standard Fingertip

Flange Selection
- **F1** Standard Flange
- Table Below

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

Robot Cable

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	

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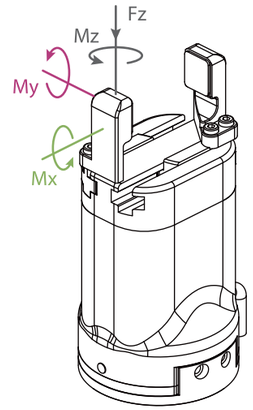
TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load	
Fz	600 N
Allowable Loading Moment	
Mx	15 N·m
My	15 N·m
Mz	15 N·m

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

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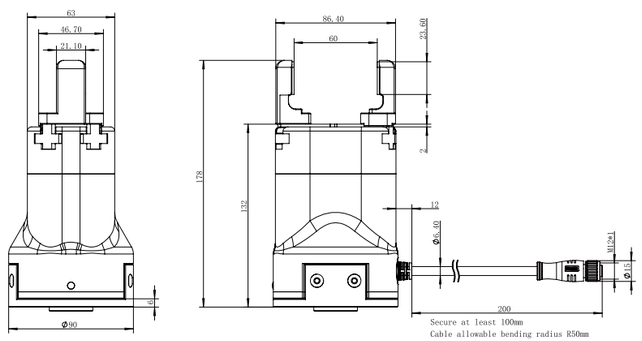
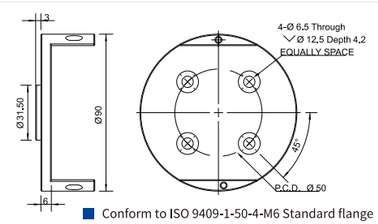
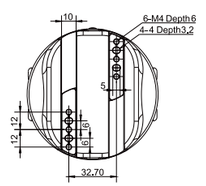
*④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

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

PGHL-400-80

Heavy-Load Long-Stroke Electric Parallel Gripper

Bottom installation

Selection Method

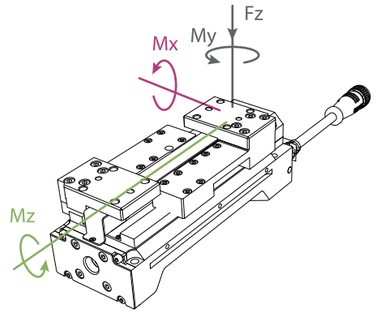
Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange Selection
PGHL	400	80	W	S	M1	L5	J0	F0

- Brake: W With Brake
- Cable Direction: S Side
- Communication Protocol *①*⑤: M1 Modbus (RS485)+I/O (NN); M2 Modbus (RS485)+I/O (PP); M3 Modbus (RS485)+I/O (NP); M4 Modbus (RS485)+I/O (PN)
- Cable Selection: LX Without Extend Cable; L1 1m Cable; L3 3m Cable; L5 5m Cable; L10 10m Cable; L15 15m Cable
- Fingertip Selection: J0 Without Fingertip
- Flange Selection: F0 Without Flange

*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.
The Modbus RTU (RS485) to USB module will no longer be provided for free. Please place a separate order if needed.

TECHNICAL SPECIFICATIONS



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

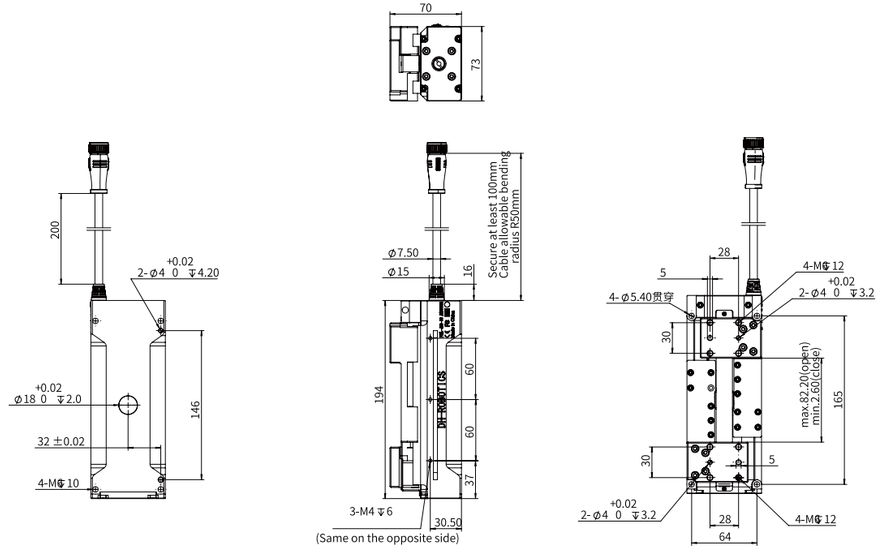
*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
*③ Requires external communication convertor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

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



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 simultane ous griping 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 semiconduc tor 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 require ments 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 assem-bly, handling, and correction adjustment in the fields of 3C electronics and semiconductors.

RGI-100

Electric Rotary Gripper

Selection Method

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

Stroke: 14 / 22 / 30

Brake: O Without Brake; S Side; B bottom

Cable Direction: S Side; B bottom

Communication Protocol (★③ ★⑤): M1 Modbus (RS485)+I/O (NN); M2 Modbus (RS485)+I/O (PP); M3 Modbus (RS485)+I/O (NP); M4 Modbus (RS485)+I/O (PN)

Cable Selection: LX Without Extend Cable; L1 1m Cable; L3 3m Cable; L5 5m Cable; L10 10m Cable

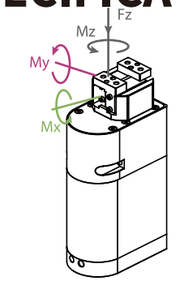
Fingertip Selection: J0 Without Fingertip; J1 Standard Fingertip

Flange Selection: F0 Without Flange

★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.
The Modbus RTU (RS485) to USB module will no longer be provided for free. Please place a separate order if needed.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load	RGI-100-14	RGI-100-22	RGI-100-30
Fz	150 N	200 N	150 N

Allowable Loading Moment			
Mx	2.5 N·m	3.5 N·m	3.5 N·m
My	3 N·m	4 N·m	4 N·m
Mz	4 N·m	5.5 N·m	5.5 N·m

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

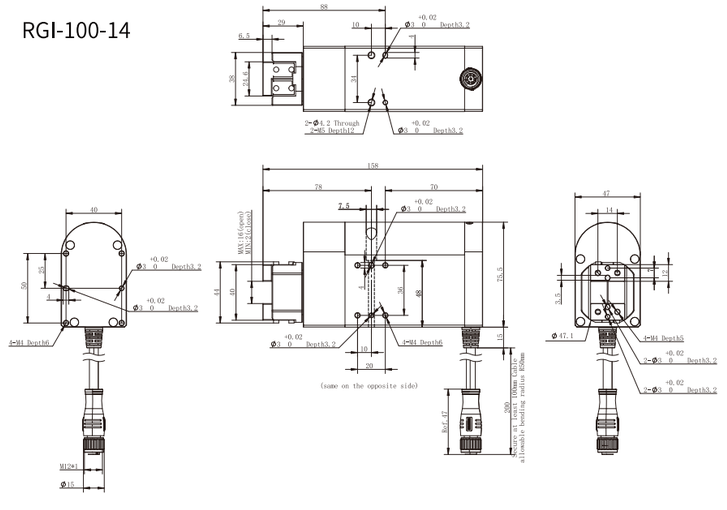
*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
*③ Requires external communication convertor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

Product Parameter	RGI-100-14	RGI-100-22	RGI-100-30
Gripping force (per jaw)	30~100 N	30~100 N	30~100 N
Recommended workpiece weight(Fingertip included) *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

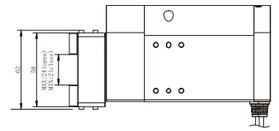
Working Environment	
Communication interface	Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs) Optional: TCP/IP, CAN2.0A, PROFINET, EtherCAT *③
Rated voltage	24 V DC ± 10%
Current	1 A(Rated)/4 A (Peak) *④
Rated power	24 W
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification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

Technical Drawings

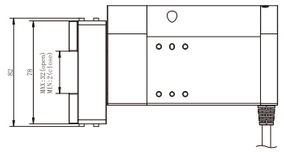
RGI-100-14



RGI-100-22



RGI-100-30



RGIC-35-12

Electric Rotary Gripper

Selection Method

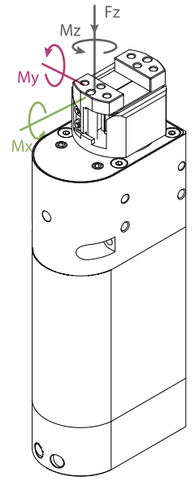
Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange Selection
RGIC	35	12	O	S	M1	L5	J0	F0

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

- O Without Brake
- S Side
- B bottom
- M1 Modbus (RS485)+I/O (NN) ★①★⑤
- M2 Modbus (RS485)+I/O (PP)
- M3 Modbus (RS485)+I/O (NP)
- M4 Modbus (RS485)+I/O (PN)
- LX Without Extend Cable
- L1 1m Cable
- L3 3m Cable
- L5 5m Cable
- L10 10m Cable
- J0 Without Fingertip
- J1 Standard Fingertip
- F0 Without Flange

*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.
The Modbus RTU (RS485) to USB module will no longer be provided for free. Please place a separate order if needed.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load	
Fz	100 N

Allowable Loading Moment	
Mx	1.5 N·m
My	1.1 N·m
Mz	2.1 N·m

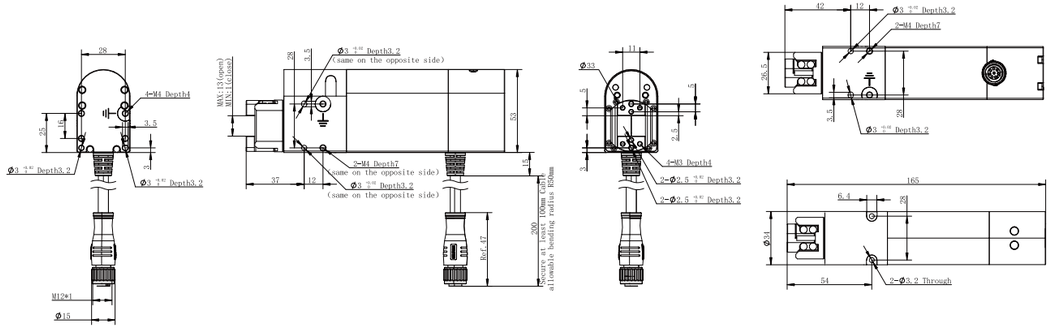
*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
*③ Requires external communication convertor or customization, pleass 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)	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	165 mm x 53 mm x 34 mm Rotaty Diameter:33 mm

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

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

Technical Drawings



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

RGIC-100-35

Electric Rotary Gripper

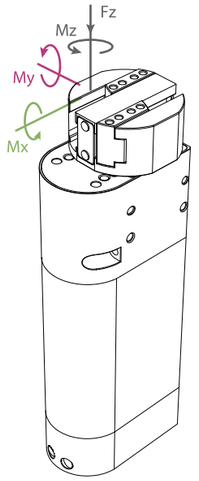
Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange Selection
RGIC	100	35	O	S	M	L5	J0	F0

- **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

*④ 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.
The Modbus RTU (RS485) to USB module will no longer be provided for free. Please place a separate order if needed.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load	
Fz	100 N

Allowable Loading Moment	
Mx	1.5 N·m
My	1.1 N·m
Mz	2.1 N·m

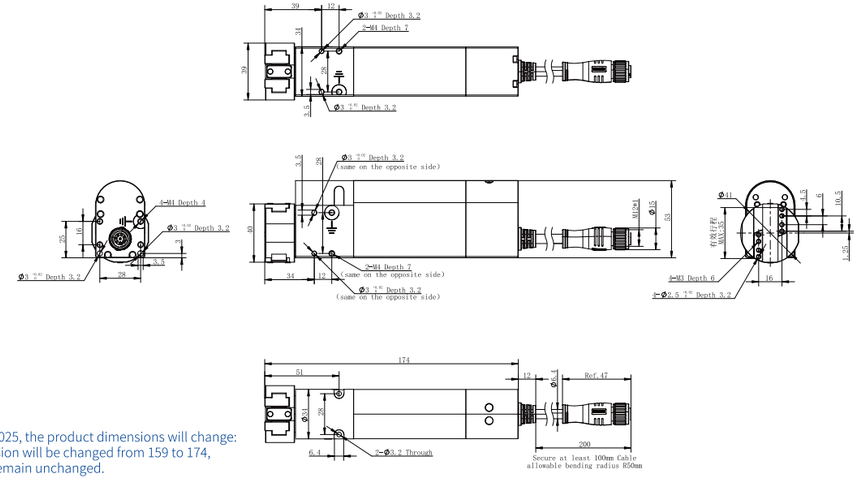
*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
*③ Requires external communication convertor or customization, pleass 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)	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	174 mm x 53 mm x 34 mm Rotaty Diameter：41 mm

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

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

Technical Drawings



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

RGD-5

Direct Drive Rotary Gripper

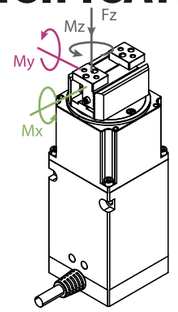
Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange Selection
RGD	5	14	O	S	M	L5	J0	F0

- 14
- O Without Brake; W With Brake
- S Side; B bottom
- M Modbus (RS485) *⑤
- 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

*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.
The Modbus RTU (RS485) to USB module will no longer be provided for free. Please place a separate order if needed.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load	
Fz	150 N

Allowable Loading Moment	
Mx	2 N·m
My	1.5 N·m
Mz	2.5 N·m

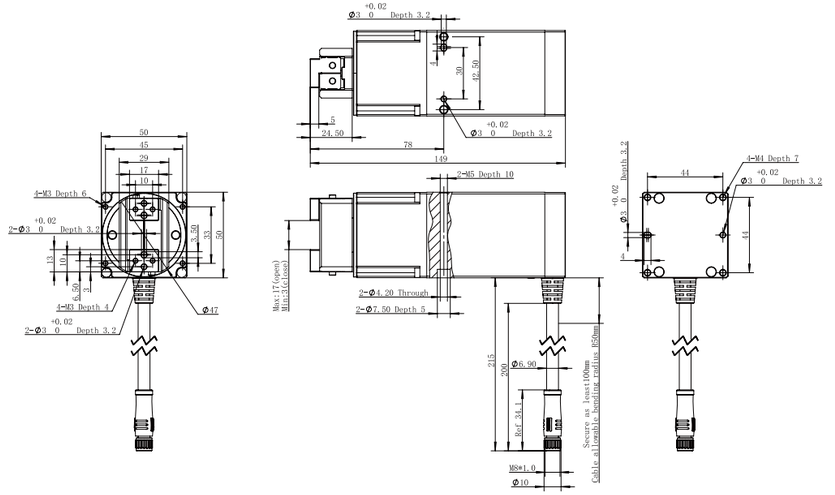
Build-in Controller · Gripping Force Adjustable · Position Adjustable · Speed Adjustable · Drop Detection · Rotary Adjustable · Self-locking Mechanism (optional)

*① The peak torque can be increased to a maximum of 0.5 N·m. For specificdetails, 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 convertor or customization, pleass contact sales or technical support.
*④When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Product Parameter	
Gripping force (per jaw)	2-5.5 N
Recommended workpiece weight *②	0.05 kg
Stroke	14 mm
Full stroke opening/closing time	0.5 s/0.3 s
Repeat accuracy (position)	± 0.02 mm
Repeat accuracy (swiveling)	± 0.1 °
Max. rotation speed	1500 °/s
Rated torque	0.1 N·m
Peak torque *①	0.25 N·m
Rotary backlash	Zero backlash
Rotary range	Infinite Rotating
Weight	0.86 kg(without brake) 0.88 kg(with brake)
Size	149 mm x 50 mm x 50 mm Rotaty Diameter：47 mm
Noise emission	< 60 dB

Working Environment	
Communication interface	Modbus RTU (RS485) Optional: TCP/IP、EtherCAT *③
Rated voltage	24 V DC ± 10%
Current	1.2 A(Rated)/ 2.5 A(Peak) *④
Rated power	60 W
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE，FCC，RoHS

Technical Drawings



Parameter Table of Rotational Time in Place for Different Inertia Loads

Reference Size/mm	Material	Weight/g	Corresponding Inertia/Kg · mm²	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

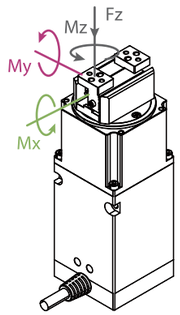
Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange Selection
RGD	35	14	O	S	M	L5	J0	F0
		30	O Without Brake W With Brake	S Side B bottom	M Modbus (RS485) *ⓢ	LX Without Extend Cable L1 1m Cable L3 3m Cable L5 5m Cable L10 10m Cable	J0 Without Fingertip J1 Standard Fingertip	F0 Without Flange

*ⓢ 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.

The Modbus RTU (RS485) to USB module will no longer be provided for free. Please place a separate order if needed.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz	150 N

Allowable Loading Moment

Mx	2 N·m
My	1.5 N·m
Mz	2.5 N·m

Build-in Controller · Gripping Force Adjustable · Position Adjustable · Speed Adjustable
Drop Detection · Rotary Adjustable · Self-locking Mechanism (optional)

*① The peak torque can be increased to a maximum of 0.5 N·m. For specificdetails, 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 convertor or customization, pleass contact sales or technical support.
*④When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

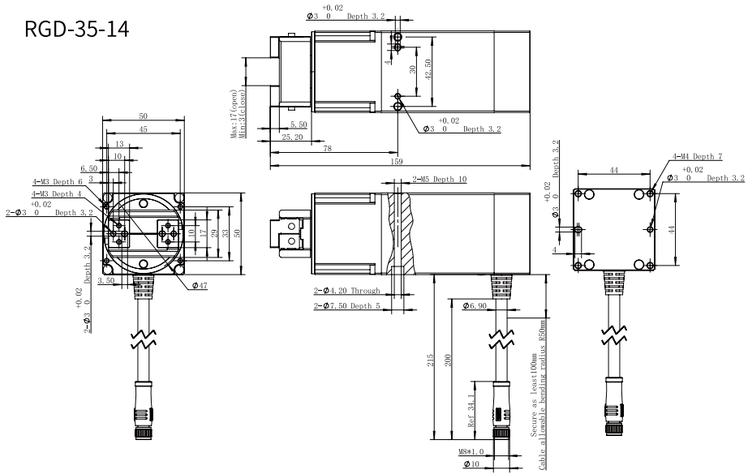
Product Parameter	RGD-35-14	RGD-35-30
Gripping force (per jaw)	10-35 N	10-35 N
Recommended workpiece weight(Fingertip included) *②	0.35 kg	0.35 kg
Stroke	14 mm	30 mm
Full stroke opening/closing time	0.5 s/0.5 s	0.7 s/0.7 s
Repeat accuracy (position)	± 0.02 mm	± 0.02 mm
Repeat accuracy (swiveling)	± 0.1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

Working Environment

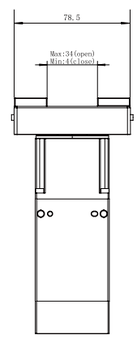
Communication interface	Modbus RTU (RS485) Optional：：TCP/IP、EtherCAT*③
Rated voltage	24 V DC ± 10%
Current	1.2 A(Rated)/ 2.5 A(Peak) *④
Rated power	60 W
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE，FCC，RoHS

Technical Drawings

RGD-35-14



RGD-35-30



Parameter Table of Rotational Time in Place for Different Inertia Loads

Reference Size/mm	Material	Weight/g	Corresponding Inertia/Kg · mm²	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

Articulated Electric Grippers

AG / DH Series

ARTICULATED ELECTRIC GRIPPER

Product Features

The AG series is a linkage-type adaptive electric gripper which is independently developed by DH-Robotics. With Plug& Play software many and exquisite structural design , AG series is a perfect solution to be applied with 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.

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

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-160-95

Electric Adaptive Gripper

Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange Selection	Robot Cable
AG	160	95	W	S	M1	L5	J1	F1	00

Brake
- **W** Self-locking

Cable Direction
- **S** Side

Communication Protocol *①, *⑤
- **M1** Modbus (RS485)+I/O (NN)
- **M2** Modbus (RS485)+I/O (PP)
- **M3** Modbus (RS485)+I/O (NP)
- **M4** Modbus (RS485)+I/O (PN)

Cable Selection
- **LX** Without Extend Cable
- **L1** 1m Cable
- **L3** 3m Cable
- **L5** 5m Cable
- **L10** 10m Cable

Fingertip Selection
- **J1** Standard Fingertip

Flange Selection
- **F1** Without Flange

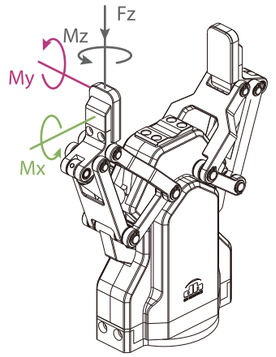
Robot Cable
- Table Below

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 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.
The Modbus RTU (RS485) to USB module will no longer be provided for free. Please place a separate order if needed.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load	
Fz	300 N
Allowable Loading Moment	
Mx	4.75 N·m
My	4.75 N·m
Mz	4.75 N·m

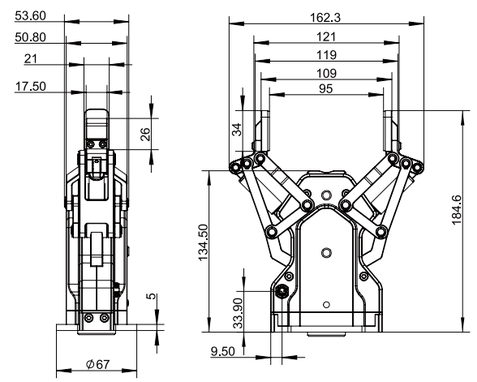
*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
*③ Requires external communication convertor or customization, pleass 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.

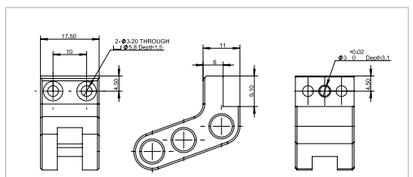
Product Parameter	
Gripping force (per jaw)	45~160 N
Recommended workpiece weight *②	3 kg
Stroke	95 mm
Full stroke opening/closing time	0.9 s/0.9 s
Repeat accuracy (position)	± 0.03 mm
Weight	1 kg
Size	184.6 mm x 162.3 mm x 67 mm
Noise emission	< 60 dB
Driving method	Screw drive + Linkage system

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

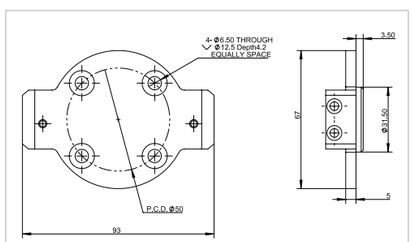
Build-in Controller	Gripping Force Adjustable	Position Adjustable	Speed Adjustable	Drop Detection	Plug & Play	Self-locking Mechanism
✓	✓	✓	✗	✓	✓	✓

Technical Drawings





■ Customized finger installation size



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

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
AG	-	105	-	145	-	W	-	S	-	M1	-	L5	-	J1	-	F1	-	00

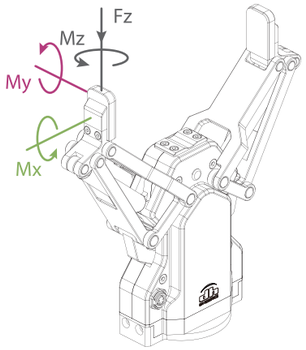
- Brake: **W** Self-locking
- Cable Direction: **S** Side
- Communication Protocol (★① ★⑤): **M1** Modbus (RS485)+I/O (NN); **M2** Modbus (RS485)+I/O (PP); **M3** Modbus (RS485)+I/O (NP); **M4** Modbus (RS485)+I/O (PN)
- Cable Selection: **LX** Without Extend Cable; **L1** 1m Cable; **L3** 3m Cable; **L5** 5m Cable; **L10** 10m Cable
- Fingertip Selection: **J1** Standard Fingertip
- Flange Selection: **F1** Standard Flange
- Robot Cable: Table Below

★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 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.
The Modbus RTU (RS485) to USB module will no longer be provided for free. Please place a separate order if needed.

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

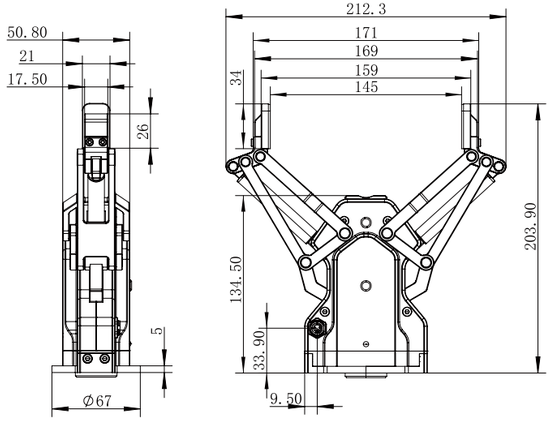
*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
*③ Requires external communication convertor or customization, pleass 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.

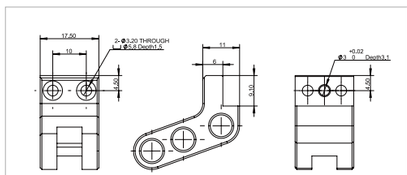
Product Parameter	
Gripping force (per jaw)	35~105 N
Recommended workpiece weight *②	2 kg
Stroke	145 mm
Full stroke opening/closing time	0.9 s/0.9 s
Repeat accuracy (position)	± 0.03 mm
Weight	1.3 kg
Size	203.9 mm x 212.3 mm x 67 mm
Noise emission	< 60 dB
Driving method	Screw drive + Linkage system

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

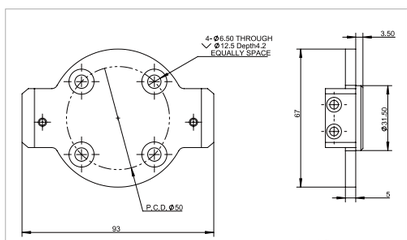
Build-in Controller · Gripping Force Adjustable · Position Adjustable · Speed Adjustable · Drop Detection · Plug & Play · Self-locking Mechanism

Technical Drawings





Customized finger installation size



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

DH-3

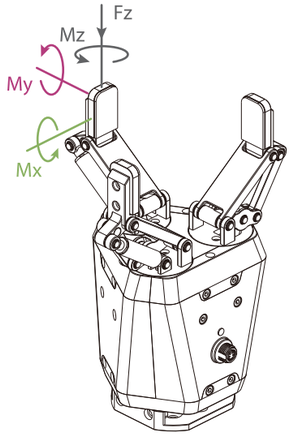
Electric Adaptive Gripper

Selection Method

Serie	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange Selection
DH-3	W	S	T	L5	J1	F1

- **W** Self-locking
- **S** Side
- **T** TCP/IP
- **E** EtherCAT
- **LX** Without Extend Cable
- **L1** 1m Cable
- **L3** 3m Cable
- **L5** 5m Cable
- **L10** 10m Cable
- **J1** Standard Fingertip
- **F1** Standard Flange

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

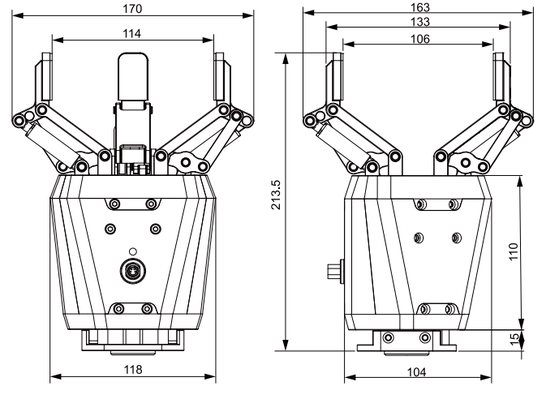
*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
*③ Requires external communication convertor or customization, pleass 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.

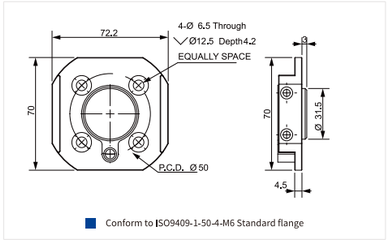
Product Parameter		
Gripping force (per jaw)		10~65 N
Recommended workpiece weight *①		1.8 kg
Stroke	106 mm (parallel)	122 mm (centric)
Full stroke opening/closing time		0.7 s/0.7 s
Repeat accuracy (position)		± 0.03 mm
Weight		1.68 kg
Size		213.5 mm x 170 mm x 118 mm
Noise emission		< 60 dB
Driving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

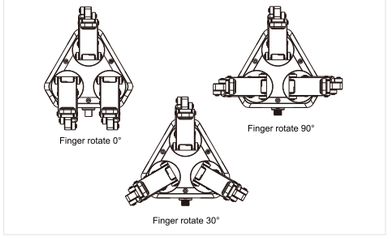
Working Environment	
Communication interface	Standard: TCP/IP, USB2.0, CAN2.0A Optional: EtherCAT *②
Rated voltage	24 V DC ± 10%
Current	0.5 A(Rated)/ 1 A(Peak) *③
Rated power	12 W
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

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

Technical Drawings

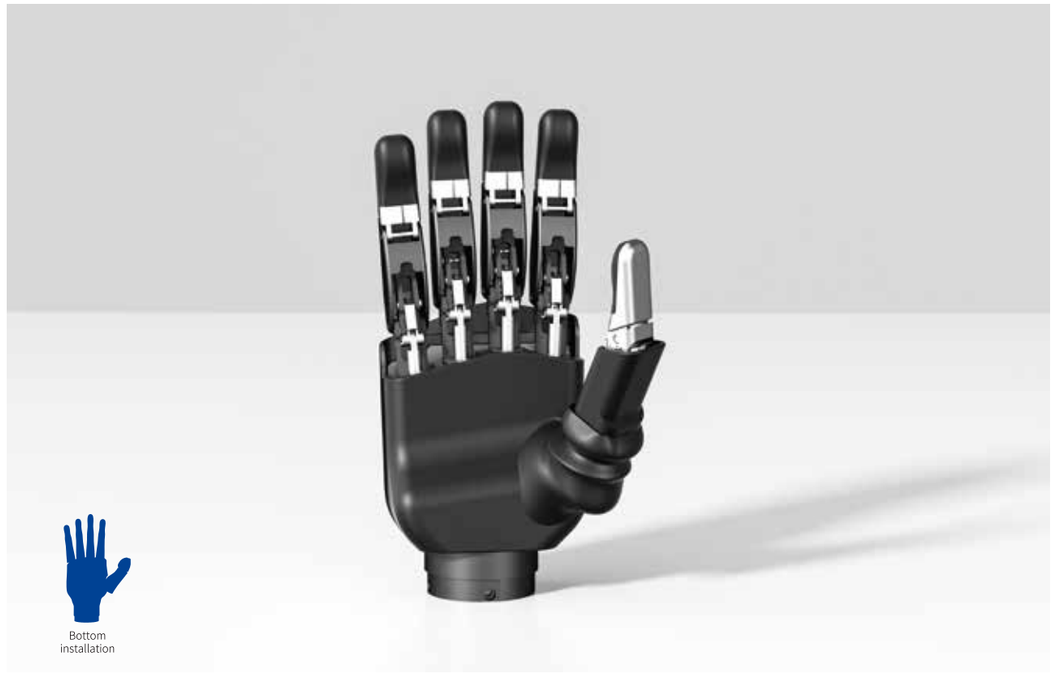






DH-5-6

Dexterous Hand



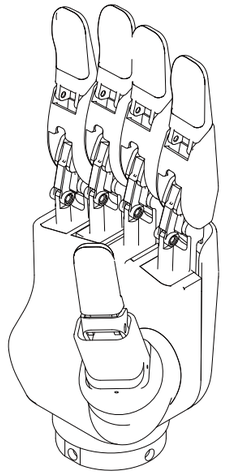
Bottom installation

Selection Method

Serie	Number of Fingers	Hand Shape	Active Degrees of Freedom	Degrees of Freedom	Wrist Interface	Cable Direction	Sensors	Cable Configuration	Mounting Flange
DH	5	L	6	11	N	M3	C0	L3	Z0

- Serie: DH
- Number of Fingers: 3 3 Fingers; 5 5 Fingers
- Hand Shape: L Left Hand; R Right Hand
- Active Degrees of Freedom: 6 Degrees of Freedom
- Degrees of Freedom: 11 Joint
- Wrist Interface: N Standard interface; F Quick-release interface
- Cable Direction: M3 MODBUS-RTU; M4 Custom communication protocol over RS485
- Sensors: C0 Without Sensor
- Cable Configuration: L1 Extension Cable 1m; L3 Extension Cable 3m; L5 Extension Cable5m; L10 Extension Cable10m
- Mounting Flange: Z0 Standard Flange without Adapter; Z1 With Adapter Flange 1 (Mounting PCD Ø50 mm / Locating Boss Ø31.5 mm); Z2 With Adapter Flange 2 (Mounting PCD Ø49 mm / Locating Boss Ø18mm); Z3 Others

TECHNICAL SPECIFICATIONS

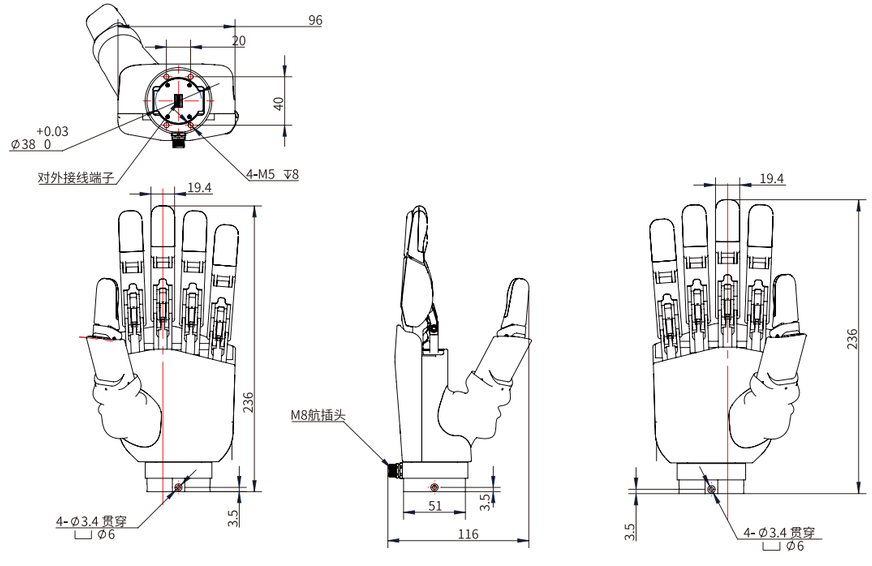


Build-in Controller · Gripping Force Adjustable · Position Adjustable · Speed Adjustable

Drop Detection · Plug & Play · Self-locking Mechanism

Product Parameter	
Degrees of freedom	11
Active degree of freedom	6
Working speed	0.8 s
Four-finger bending angle	83°+87°
Thumb bending angle	38°+7°
Thumb lateral swing angle	85°
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	760 g
Sensors	Multi-point Tactile Sensing (Optional)
Safety features	Anti-collision Buffering for Inward Grasping
Driving method	Coreless Motor +Planetary Reducer +Screw + Connecting Rod
Size	236 mm*116 mm*96 mm
Working Environment	
Communication interface	Modbus-RTU/Custom communication protocol over RS485
Rated voltage	24 V DC ± 10%

Technical Drawings



Electric Centric Grippers

CGE / CGI / CGC Series

ELECTRIC
CENTRIC
GRIPPER

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

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 avail able 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

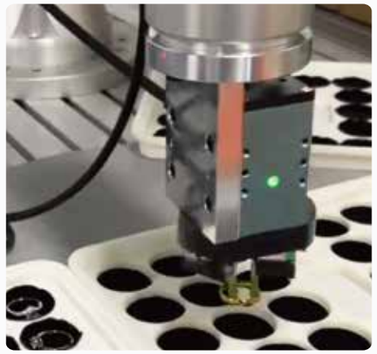
Continuous and stable work above 10 millions times without maintenance.

Overload Protection

The high-performance servo motor can provide instanta neous overload protection.

Application

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



CGE-10-10

Electric Centric Gripper

Front and rear installation | Side installation | Bottom installation

Selection Method

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

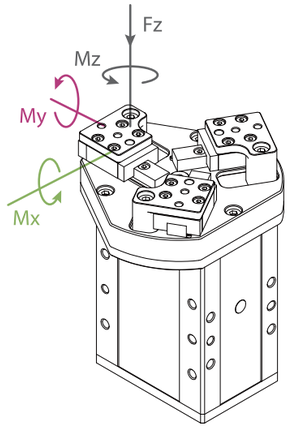
- Brake: **O** Without Brake
- Cable Direction: **S** Side
- Communication Protocol (*①, *⑤): **M1** Modbus (RS485)+I/O (NN); **M2** Modbus (RS485)+I/O (PP); **M3** Modbus (RS485)+I/O (NP); **M4** Modbus (RS485)+I/O (PN)
- Cable Selection: **LX** Without Extend Cable; **L1** 1m Cable; **L3** 3m Cable; **L5** 5m Cable; **L10** 10m Cable
- Fingertip Selection: **J0** Without Fingertip
- Flange Selection: **F0** Without Flange
- Robot Cable: Table Below

*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 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.
The Modbus RTU (RS485) to USB module will no longer be provided for free. Please place a separate order if needed.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load	
Fz	150 N

Allowable Loading Moment	
Mx	0.62 N·m
My	0.62 N·m
Mz	0.62 N·m

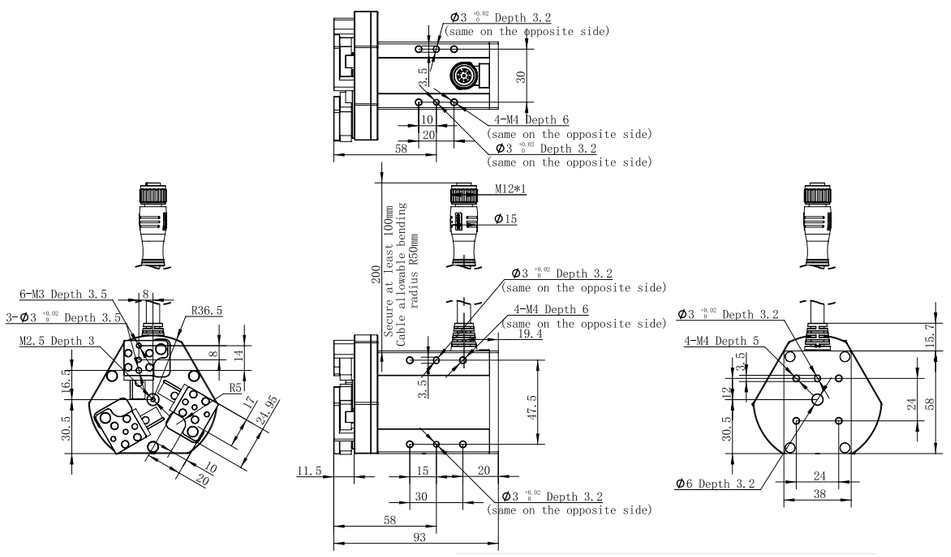
*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
*③ Requires external communication convertor or customization, pleass 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)	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

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)/ 0.6 A(Peak) *④
Rated power	7.2 W
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

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

Technical Drawings



CGI-100-170

Electric Centric Gripper

Bottom installation

Selection Method

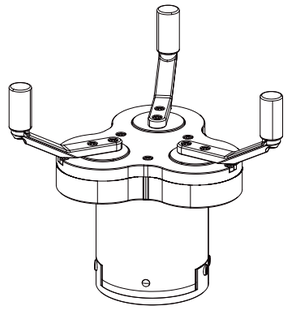
Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange Selection	Robot Cable
CGI	100	170	O Without Brake W With Brake	S Side	*① M1 Modbus (RS485)+I/O (NN) M2 Modbus (RS485)+I/O (PP) M3 Modbus (RS485)+I/O (NP) M4 Modbus (RS485)+I/O (PN)	*⑤ LX Without Extend Cable L1 1m Cable L3 3m Cable L5 5m Cable L10 10m Cable	J1 Standard Fingertip	F1 Standard Fingertip	Table Below

*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 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.
The Modbus RTU (RS485) to USB module will no longer be provided for free. Please place a separate order if needed.

TECHNICAL SPECIFICATIONS



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

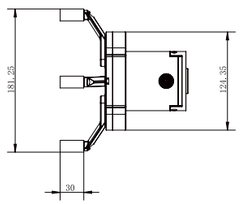
Product Parameter	
Gripping force (per jaw)	30~100 N
Recommended workpiece weight *②	1.5 kg
Recommended workpiece diameter (inward)	Φ40~Φ170 mm
Full stroke opening/closing time	1.35 s
Repeat accuracy (position)	± 0.03 mm
Weight	1.5 kg
Size	158.4 mm x 124.35 mm x 116 mm (without brake/with brake, same size)
Noise emission	< 50 dB
Driving method	Precise planetary gears + Rack and pinion

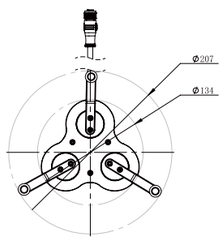
Working Environment	
Communication interface	Standard: Modbus RTU (RS485)、Digital I/O(2 inputs 2 outputs) Optional: TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT *③
Rated voltage	24 V DC ± 10%
Current	0.4 A(Rated)/ 1 A(Peak) *④
Rated power	9.6 W
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification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

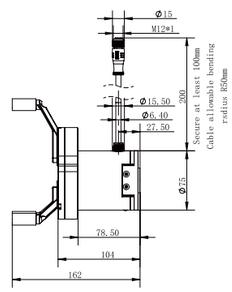
Build-in Controller | Gripping Force Adjustable | Position Adjustable | Speed Adjustable | Drop Detection | Self-locking Mechanism (optional)

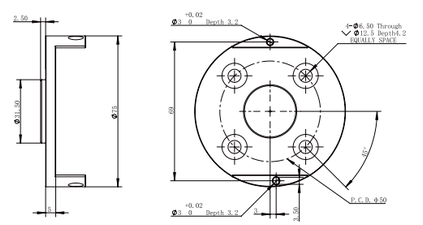
*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
*③ Requires external communication convertor or customization, pleass 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 ISO9409-1-50-4-M6 Standard flange
*For customized flanges, we recommend designing according to the robot mounting holes, or contact us.

CGC-80-10

Electric Collaborative Centric Gripper

Bottom installation

Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange Selection	Robot Cable
CGC	80	10	W	S	M1	L5	J1	F1	00

W With Brake

S Side

M1 Modbus (RS485)+I/O (NN) *① *⑤
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

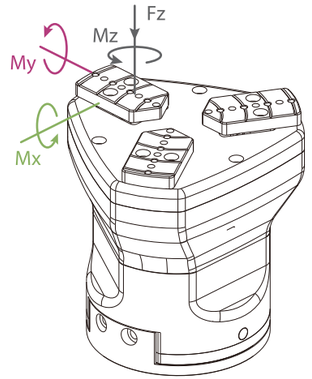
Table Below

*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 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.
The Modbus RTU (RS485) to USB module will no longer be provided for free. Please place a separate order if needed.

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load	
Fz	200 N

Allowable Loading Moment	
Mx	2.5 N·m
My	2 N·m
Mz	3 N·m

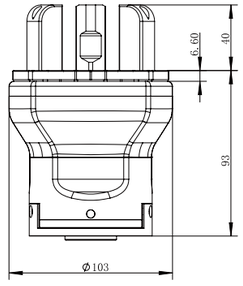
*② The recommended load calculation is based on pure friction force gripping, with a friction coefficient of 0.2 and a safety factor of 4. The center of gravity shift of the gripped object will also affect the load. If you have any questions, please consult us.
*③ Requires external communication convertor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

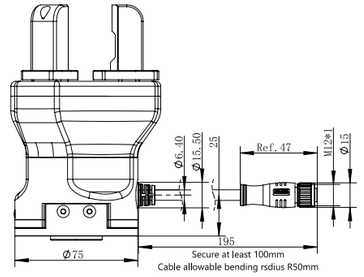
Product Parameter	
Gripping force (per jaw)	20~80 N
Recommended workpiece weight *②	1.5 kg
Single jaw	10 mm
Full stroke opening/closing time	0.5 s/0.5 s
Repeat accuracy (position)	± 0.03 mm
Weight	1.5 kg
Size	141 mm x 103 mm x 75 mm
Noise emission	< 50 dB
Driving method	Precise planetary gear reducer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

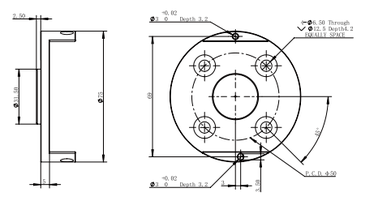
Working Environment	
Communication interface	Standard: Modbus RTU (RS485)、Digital I/O(2 inputs 2 outputs) Optional: TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT *③
Rated voltage	24 V DC ± 10%
Current	0.5 A(Rated)/ 1.2 A(Peak) *④
Rated powert	12 W
IP class	IP 67
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

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

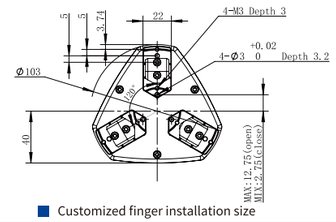
Technical Drawings







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



■ Customized finger installation size

Short Wire Correspondence Table

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

Support electric gripper models	UR CB Series	UR E Series	Elite CS Series	SIASUN	Hanwha A Series	ROKAE CR Series	DOBOT CR Series	Jaka
Small current electric gripper (Peak current≤0.6A)	C01							
Small current electric gripper (Peak current<1.5A)		C01	C01	C01	C01			C02
High current electric claw (Peak current>1.5A)								
In common (Support large and small current electric gripper)						C01	C01	

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
	EtherCAT 1-1	M2E-B1-1
	EtherCAT 1-4	M2E-B1-4
	EtherCAT to I/O 1-More	Please contact our technical staff confirm the specific parameters
	TCP/IP 1-1	M2T-B1-1-YBT
	PROFINET 1-2	M2P2-B1-2-HJ
	PROFINET 1-11	M2P-B1-11-9
	Modbus RTU (RS485) to USB Converter Module	A801-0036-WG

Customer Trust

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

Version Change Log

Revision Date	Released Version	Change Log
2025.04	CN.2504	· New option added for robot short-line configuration.; · The free configuration for Modbus RTU (RS485) to USB module has been canceled. If needed, please place a separate order for purchase.。
2025.03	CN.2503	· Version one