

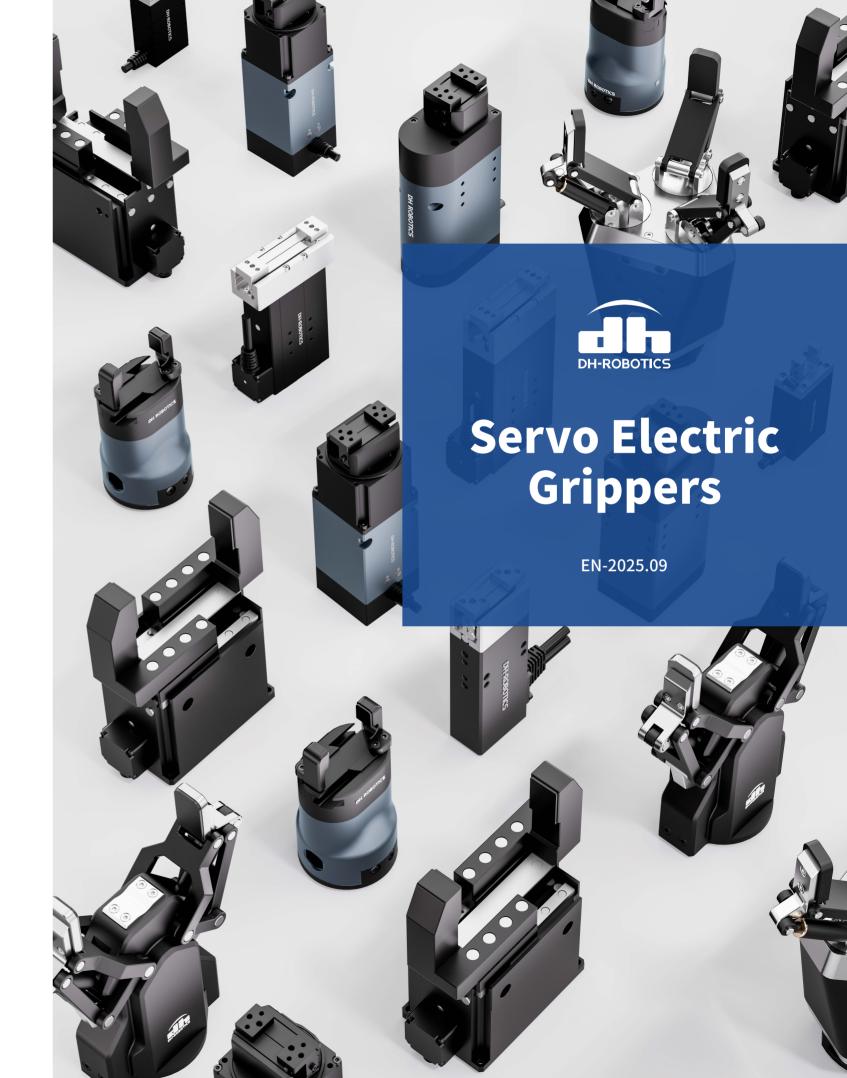
DH-Robotics Technology Co.,Ltd.





en.dh-robotics.com info@dh-robotics.com

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

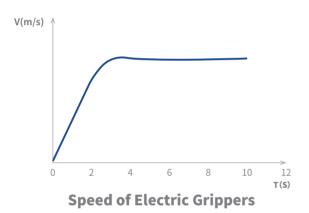


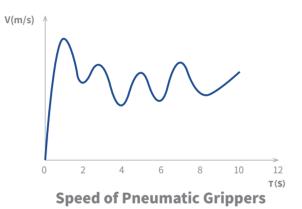
Advantages of Electric Grippers over Pneumatic Grippers

Speed Stability and Adjustable Force Control

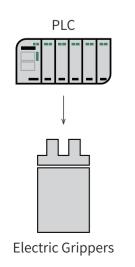
	Electric Grippers	Pneumatic Grippers
Speed	1、Stable speed – consistent operation Without fluctuation 2、No actuation delay – immediate response	1、Large speed fluctuations 2、Actuation delay
Force	1、Adjustable and controllable – rapid Parameter tuning via rs-485 communication 2、Precision force control – 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

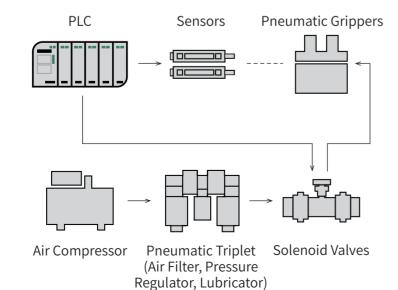
Speed Comparison





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.





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.





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 mainte-





Shorter Lead Time

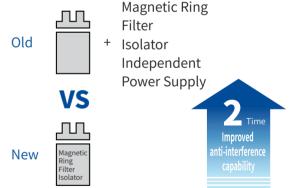
Optimized production process shortens delivery lead time to 10 days, enabling rapid response to customer demands and improving manufacturing efficiency.





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 depen-





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

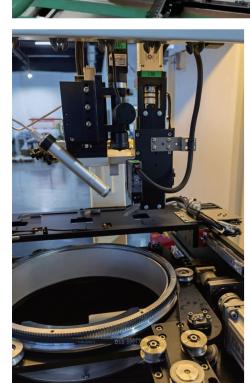


Application





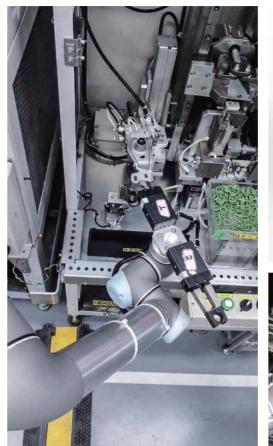
























Precautions on Model Selection

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

mg

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.

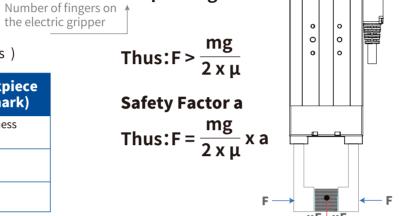
As shown in the right diagram:

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

O	8 , 1 , ,
Friction coefficient μ	Fingertip and workpiece material (benchmark)
0.1	Metal(Surface roughness under Rz3.2)
0.2	Metal
Over 0.2	Rubber, resin

To ensure the object doesn't fall:

2 x μF > mg



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

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

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

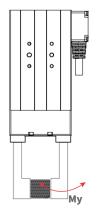
Note 3: Check the external force exerted on the gripper

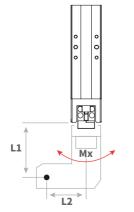
- ·The vertical load borne by the clamping jaw must be within the allowable load.
- ·The moment the clamping jaws bear must be within the maximum allowable load moment.

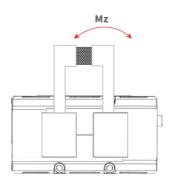
·Allowable load $F(N) = \frac{M(\text{Load allowable moment}) (N \cdot m)}{(N \cdot m)^2 + (N \cdot n)^2}$

L(mm) x 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 \geq 2.5 mm²; grounding resistance \leq 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

Gripper Selection

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

O: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:Do the grippers support internal gripping?

Yes. Our grippers support both force and position control, as well as speed control, during opening and closing.

Q:What motor is used in the gripper?

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

Q: Are fingertips included with the grippers?

Our grippers are generally supplied with standard fingertips. Customized fingertips are available for purchase, or customers may design and manufacture their own.

Q:What is the gripper's precision?

A.Repeat positioning accuracy: +0.02mm, position resolution: -0.03mm, force control accuracy: 0.1N (Validated by massproduction for top 10 global manufacturers).

Q:What are the advantages of electric grippers compared to pneumatic ones?

- 1. Precise force control to protect fragile components;
- 2. Adjustable stroke for handling various sizes;
- 3. Controllable gripping speed for efficiency;
- $4. \ Integrated \ drive \ and \ control \ with \ bus \ connection, simplifying \ wiring \ and \ saving \ space, \ clean \ and \ safe;$
- 5. Much lower energy consumption than pneumatic grippers.

Gripper Usage

Q: How to handle objects larger than the stroke?

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

Q:Is a separate driver controller required?

A:lintegrated 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 usedfor 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, andlow-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 mounting options are supported?

A: They can be mounted on robot arms using dedicated flanges, or via the mounting holes on the housing for flexible installation.

Q:Which communication protocols are supported?

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

Application Environment

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:Which international certifications are obtained?

A:All products are certified with CE, FCC, and RoHS standards.

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

A: The working voltage of the electric gripper is 24V DC $\pm 10\%$. 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:Can the grippers operate in high or low temperature environments?

A:Some models are certified for high/low temperature environments. Please refer to the manual or contact sales.

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 $27^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and a relative humidity of $45\%75^{\circ}$ 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.



Electric Parallel Grippers

PGE / PGEA / PGSE / PGC / PGHL / PGIA Series



Serie	Gripping Force (Per Jaw)	Recommended Workpiece Weight	Stroke	Reference Page
PGE-5-26	0.8~5 N	0.1 kg	26 mm	P11-12
PGE-8-14	2~8 N	0.1 kg	14 mm	P13-14
PGEA-2/15-10	0.8~2 N/6~15 N	0.05 kg/0.1 kg	10 mm	P15-18
PGEA-15/50/100-26	6~15 N/15~50 N/30~100 N	0.25 kg/1 kg/2 kg	26 mm	P19-22
PGEA-15/50/100-40	6~15 N/15~50 N/30~100 N	0.25 kg/1 kg/2 kg	40 mm	P23-26
PGSE-15-7	6~15 N	0.25 kg	7 mm	P27-28
PGC-50-35	15~50 N	1 kg	37 mm	P29-30
PGC-140-50	40~140 N	3 kg	50 mm	P31-32
PGC-300-60	80~300 N	6 kg	60 mm	P33-34
PGHL-400-80	140~400 N	8 kg	80 mm	P35-36
PGIA-140-80	16~80 N/40~140 N	1.6 kg/3 kg	80 mm	P37-40

Product Features

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

PGE / PGSE Series



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



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.

PGI / PGC / PGHL Series



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

High Protection Level

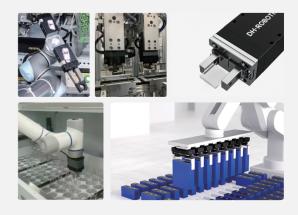
The PGC series boasts a maximum protection rating of IP67, while the PGI series reaches IP54, both industry-leading levels that can withstand harsh conditions such as those found in machine tool loading and unloading.

Quick Response **Intelligent Planning Speed**

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

Application

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



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PGE-5-26

Slim-type Electric Parallel Gripper

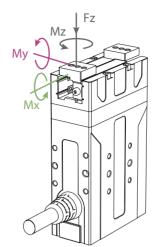


Sele	cti	on Me	tho	od									
Serie		Gripping Force	;	Stroke		Brake	Cable Direction		nication (Fingert Selecti		
PGE	_	5	_	26	-	0	- S	_	11 -	L5 -	JO	- FO	- 00
		lithout rake		S Side B botto	om	M2 M0	odbus (RS485)+ odbus (RS485)+ odbus (RS485)+	I/O (PP) I/O (NP)	LX with Extend Cc L1 1m Cal L3 3m Cal L5 5m Cal L10 10m Cal L15 15m Cal	ble ble ble ble ble ble	Without Fingertip Standard Fingertip	F0 Without Flange	Table Below
*①: I/O(NN): NPN/ I/O(PP): PNP/F I/O(NP): NPN/F I/O(PN): PNP/F	PNP	00 Without Robot Cable	01 Elite			OBOT CR OBOT Nova	02 AUBO 03 ELEPHANT	04 JAKA 05 TECHMAN	06 ROKAE SR ROKAE ER 07 DOBOT MG400			TC 13 Neuromeka 14 FAIRINO 16 UF >	15 Hanwha HCR

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

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

TECHNICAL



Static Vertical Allowable Load

Fz	50 N
1 4	J0 11

Allowable Loading Moment

Mx	0.3 N·m
Му	0.25 N·m
Mz	0.3 N·m

 $^\star \ensuremath{\textcircled{2}}$ 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.

SPECIFICATIONS

Product Parame	eter						
Gripping force (p	Gripping force (per jaw)						
Recommended v	Recommended workpiece weight **						
Stroke		26 mm					
Full stroke open	Full stroke opening/closing time						
Repeat accuracy	(position)	\pm 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					

Vor	king	Env	ironn	nent
	-			

Communication interface	Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs) Optional: TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT *®
Rated voltage	24 V DC \pm 10%
Current	0.4 A(Rated)/ 0.7 A(Peak)*®
Rated power	9.6 W
IP class	IP 40

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

Certification CE, FCC, RoHS



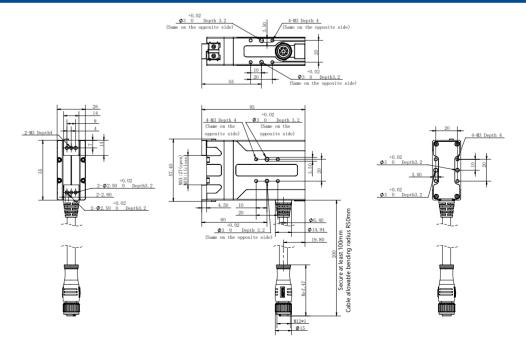












^{**(}a) When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

PGE-8-14



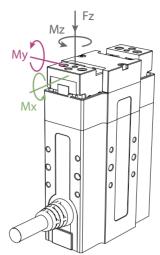
Sele	ction Meth	nod						
Serie	Gripping Force	Stroke	Brake		inication Cable tocol Selection	Fingertip Selection	Flange Selection	Robot Cable
PGE	_ 8	14 -	0	- S - N	11 - L5	- JO	- FO -	00
				*1 *8	LX Without Extend Cable L1 1m Cable			
			M1 Mo	dbus (RS485)+I/O (NN)	L3 3m Cable			
	I			dbus (RS485)+I/O (PP)	L5 5m Cable	JO Without Fingertip	I	
	O Without		_	dbus (RS485)+I/O (NP)	L10 10m Cable	11 Standard	Without -	
	Brak	S Side	M4 Mo	dbus (RS485)+I/O (PN)	L15 15m Cable	JI Fingertip	F0 Flange	Table Below

I/O(NN): NPN/NPN I/O(PP): PNP/PNP	Without	01 Flita CS		DOBOT CR DOBOT Nova		04 JAKA	06 ROKAE SR ROKAE ER	09 Doosan A	11 Elite EC	13 Neurom	neka 15	Hanwha HCR	
I/O(NP): NPN/PNP		UR CB		50501.11014	03 ELEPHANT	OS TECHMAN	OZ DOBOT	10 Doosan M	12 Han's 1	A ENIDINO 1	6 LIE v Arm	17 D∩K∧E ∩D	ı
I/O(PN): PNP/NPN	Cable	OILCD	UIVL		03 LLLI IIANI	03 ILCIIMAN	MG400	10 DOUSAIT W	12 Hall 5 1	- I VIIVIINO J	O OI A AIIII	TI KONAL CK	

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

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

TECHNICAL SPECIFICATION



Static Vertical Allowable Load

Fz	90	N
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Αl	lowa	ble	Load	ing N	lomer

Mx	0.55 N·m
Му	0.45 N·m
Mz	0.55 N⋅m

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

S	

Product Parameter	
Gripping force (per jaw)	2~8 N
Recommended workpiece wei	ght*® 0.1 kg
Stroke	14 mm
Full stroke opening/closing tim	ne 0.3 s/0.3 s
Repeat accuracy (position)	\pm 0.02 mm
Weight	0.4 kg
Size	97 mm x 62 mm x 31 mm
Noise emission	< 50 dB

Working Environment			•		
WOLKING ENVIRONMENT	м	Or	ZIDG	Enviro	nmont
	'Δ	WOI I	лиге.	EIIVIIO	

Communication interface	Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs) Optional: TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT *®
Rated voltage	24 V DC \pm 10%
Current	0.4 A (Rated) / 0.7 A (Peak) **

Driving method Precise planetary gears + Rack and pinion

Rated power	9.6 W
IP class	IP 40

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

Certification CE, FCC, RoHS



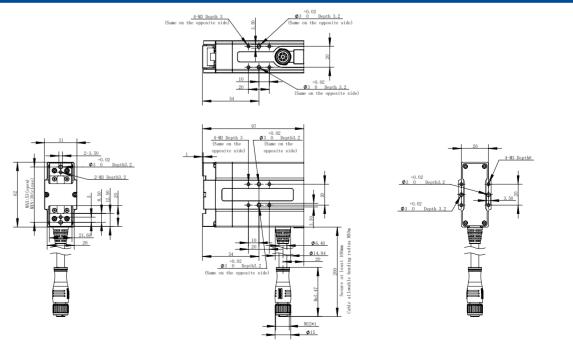












pleass contact sales or technical support.

*① 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.

PGEA-2/15-10

Slim-type Electric Parallel Gripper

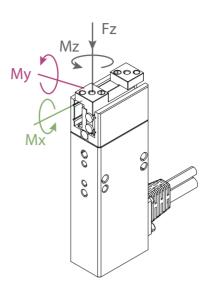


Selection Method Serie Stroke Cable Gripping Brake Cable Communication **Fingertip** Force Direction Protocol Selection Selection **PGEA** 10 0 **M1** L1 **JO** M1 Modbus (RS485)+I/O (NN) L1 1m Direct Cable Outlet M2 Modbus (RS485)+I/O (PP) L3 3m Direct Cable Outlet 2 M3 Modbus (RS485)+I/O (NP) L5 5m Direct Cable Outlet **B** Side Standard 15 10 O Without Brake M4 Modbus (RS485)+I/O (PN) L10 10m Direct Cable Outlet **S** Bottom

- *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
1 4	33 IV

Allowable Loading Moment

Mx	0.45 N·m
Му	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 *	0.05 kg	0.25 kg
Stroke	10 mm	10 mm
Repeat accuracy (positioning)	\pm 0.02 mm	\pm 0.02 mm
Weight	0.15 kg	0.15 kg
Dimensions (L xW x H)	Side: 89mm x 30mm x 18mm Bo Controller Size:78 mm x 52.4 mm x 27.2 mm	ttom: 94mm x 30mm x 18mm
Noise emission	< 50 dB	
Driving method	Rack and Pinion Crossed	d Roller Guide
Working Environme	nt	
Communication interface	Standard: Modbus RTU (RS485), Optional: TCP/IP、USB2.0、CAN2	

· ·		
Communication interface	Standard: Modbus RTU (RS485). Optional: TCP/IP、USB2.0、CAN	
Nominal voltage	24 V DC \pm 10%	
Nominal & Max. current	0.1 A ((Rated) 0.2 A (Peak)	0.2 A ((Rated) 0.3 A (Peak)* [©]
Max power	5 W	8 W
IP protection class	IP 40	
Recommended operating environment	0~40°C, under 85% RH	

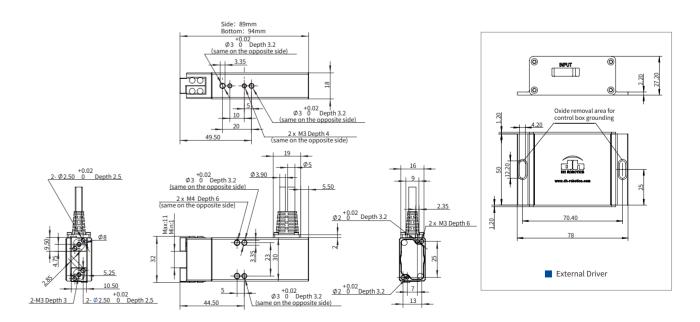
Overseas standards CE, FCC, RoHS

\odot	\odot	\odot	\odot	\odot	\otimes
External	Gripping Force	Position	Speed	Drop	Self-locking
Driver	Adjustable	Adjustable	Adjustable	Detection	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.

 ${}^{\bullet}$ ${}^{\odot}$ 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.



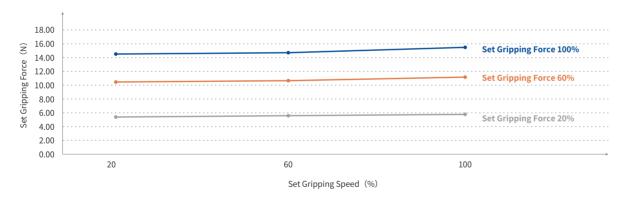
Gripping CT Reference Table

Test Type	[Impact, gripped object	g Time (ms) ct, target position set to 0, , 100% speed]	Gripping 7 [Impact, gripped object, 100% force, 1	target position set to 0,
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

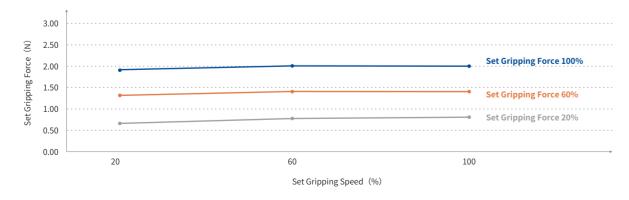
测试类型		Time (ms) speed to position]	Opening Time (ms) [100% force, 100% speed to position]		
Test Item Model	Side Avoidance 3mm Full Stroke Clamping		Side Avoidance 3mm	Full Stroke Clamping	
PGEA-15-10	260	339	186	236	
PGEA-2-10	207	298	204	183	

Actual Output Reference Curve for Different Force and Speed

PGEA-15-10

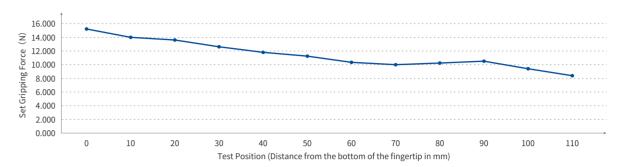


PGEA-2-10

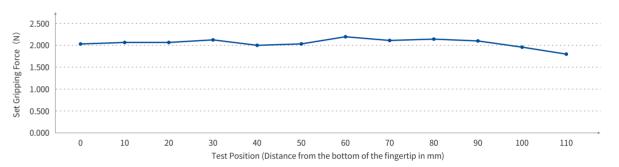


Gripping Distance Force Decay Reference Curve

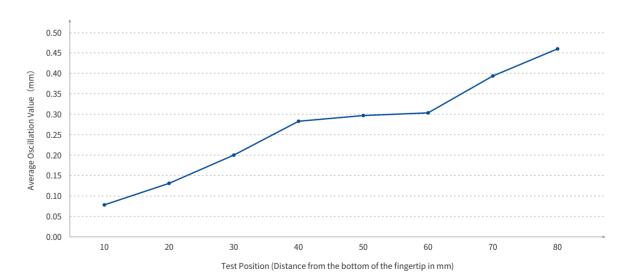
PGEA-15-10 Finger Length and Gripping Force Test



PGEA-2-10 Finger Length and Gripping Force Test



Gripping Distance Oscillation Reference Curve

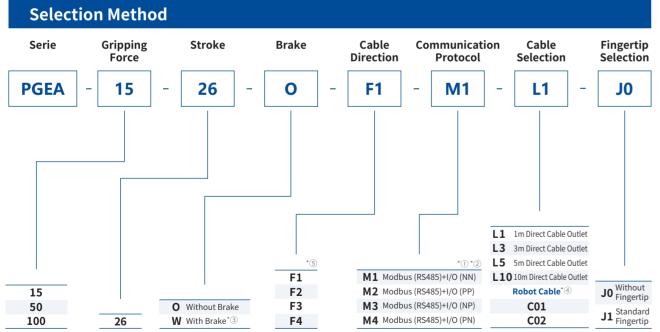




PGEA-15/50/100-26

Slim-type Electric Parallel Gripper



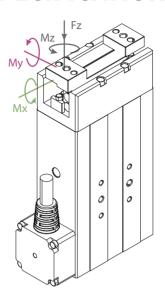


- *① I/O(NN): NPN/NPN I/O(PP): PNP/PNP I/O(NP): NPN/PNP I/O(PN): PNP/NPN
- *② It is recommended that no more than 4units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur.

*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



TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Allowable Loading Moment

Mx	2.5 N·m
Му	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 * $^{\odot}$	0.25 kg	1 kg	2 kg
Stroke	26 mm	26 mm	26 mm
Repeat accuracy (positioning)	\pm 0.02 mm	\pm 0.02 mm	\pm 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*2	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 G	uide
Working Environ	ment		
Communication interface	Standard: Modbus RTU Optional: TCP/IP、USB		ET、EtherCAT *⑦
Nominal voltage	24 V DC \pm 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)*®
Max power	20 W	20 W	30 W
IP protection class	IP 40		

Build-in Gripping Force Position Speed Drop Controller Adjustable Adjustable Adjustable Detection *(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.

 \bigcirc

CE, FCC, RoHS

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

Overseas standards

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If you have any questions, please feel free to contact us.

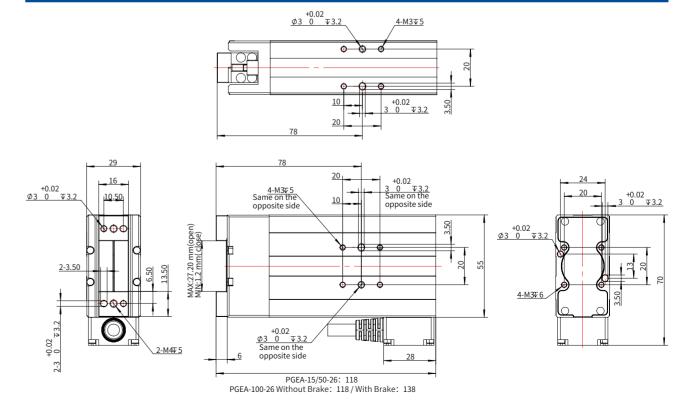
 $\langle \rangle$

Optional

Self-locking

Mechanism

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^{*} Requires external communication convertor or customization, pleass contact sales or technical support.

^{*®} 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.

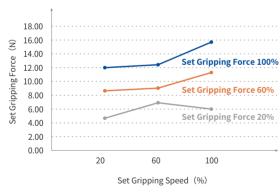
Gripping CT Reference Table

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]			on set to 0,
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

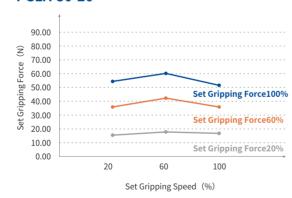
Test Type	Opening Time (ms) [50% force, 100% speed to position]				Opening Time (ms) [100% force, 100% speed to position]			
Test Item Model	Side Avoidance 3mm	Side Avoidance 5mm	Side Avoidance 10mm	Full Stroke Clamping	Side Avoidance 3mm	Side Avoidance 5mm	Side Avoidance 10mm	Full Stroke Clamping
PGEA-15-26	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

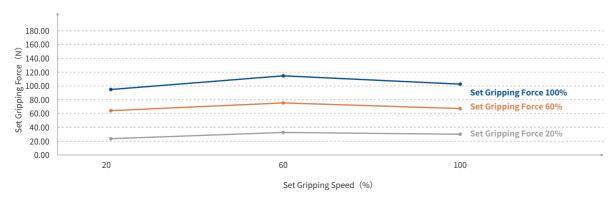




PGEA-50-26

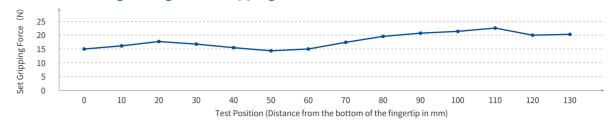


PGEA-100-26

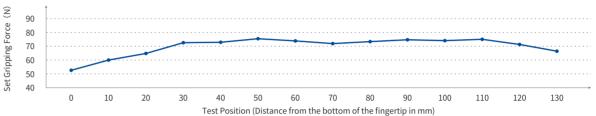


Gripping Distance Force Decay Reference Curve

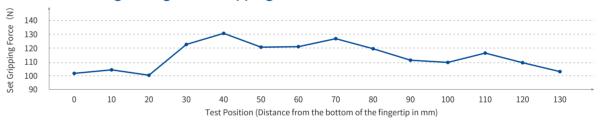
PGEA-15-26 Finger Length and Gripping Force Test



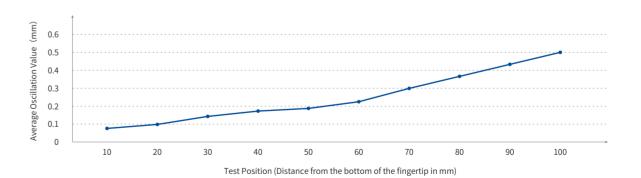
PGEA-50-26 Finger Length and Gripping Force Test



PGEA-100-26 Finger Length and Gripping Force Test



Gripping Distance Oscillation Reference Curve

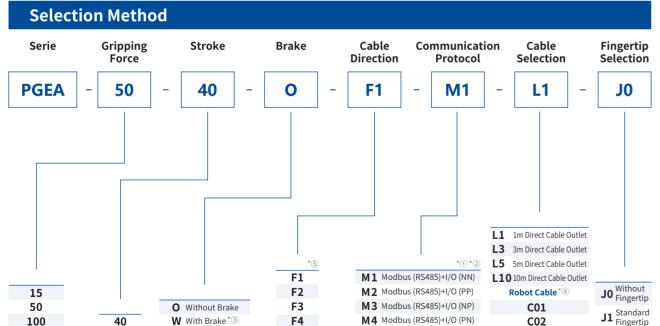


www.dh-robotics.com 21/22

PGEA-15/50/100-40

Slim-type Electric Parallel Gripper

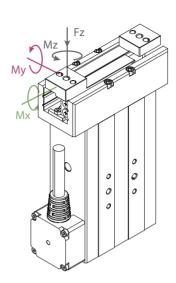




- *② It is recommended that no more than 4units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur.



TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Allowable Loading Moment

Mx	4.5 N·m
Му	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 * $^{\odot}$	0.25 kg	1 kg	2 kg
Stroke	40 mm	40 mm	40 mm
Repeat accuracy (positioning)	\pm 0.02 mm	\pm 0.02 mm	\pm 0.02 mm
Weight	0.6 kg (with or v	,	
Dimensions (L xW x H)	118mm*73.8mm*2	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 Environ	ment		
Communication interface	Standard: Modbus RT Optional: TCP/IP、USE	U (RS485)、Digital I/O 32.0、CAN2.0A、PROFIN	IET、EtherCAT *⑦
Nominal voltage	24 V DC \pm 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)*®
Max power	20 W		30 W
IP protection class	IP 40		
Recommended operating environment	0~40°C, under 8	5% RH	
Overseas standards	CE, FCC, RoHS		

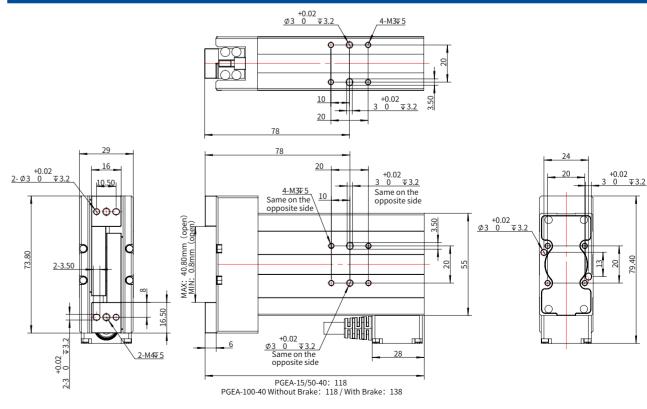
*(6) The shift in the center of gravity of the object being gripped can also affect the load, depending on factors such as the shape of the object, the material of the contact surface, friction, and the acceleration of movement. If you have any questions, please feel free to contact us.

Speed

Position

Adjustable

Technical Drawings



Build-in

Gripping Force

Adjustable

Optional

Self-locking

Drop

 $^{^{\}star}$ $^{\odot}$ Requires external communication convertor or customization, pleass contact sales or technical support.

^{*§} 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.

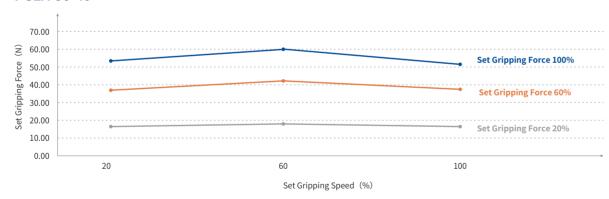
Gripping CT Reference Table

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

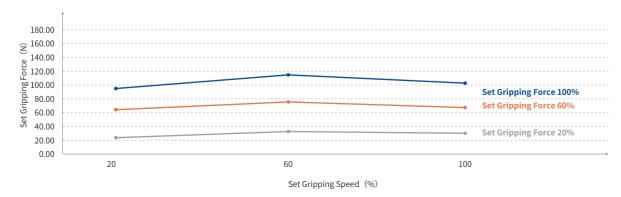
Test Type	Opening Time (ms) [50% force, 100% speed to position]			Opening Time (ms) [100% force, 100% speed to position]		
Test Item Model	Side Avoidance 3mm	Side Avoidance 5mm	Side Avoidance 10mm	Side Avoidance 3mm	Side Avoidance 5mm	Side Avoidance 10mm
PGEA-15-40	238	267	331	228	251	300
PGEA-50-40	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

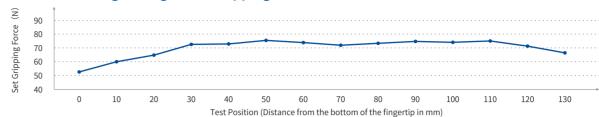


PGEA-100-40

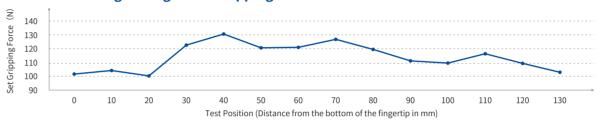


Gripping Distance Force Decay Reference Curve

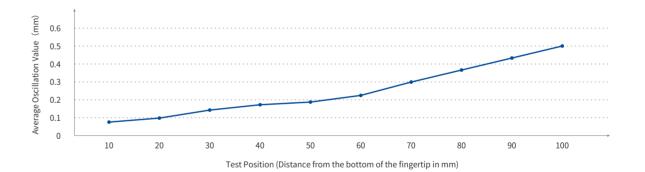
PGEA-50-40 Finger Length and Gripping Force Test



PGEA-100-40 Finger Length and Gripping Force Test



Gripping Distance Oscillation Reference Curve





Slim-type Electric Parallel Gripper

Cost-effective solution for replacing pneumatic

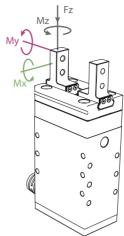


Selection Method Communication Cable **Gripping Fingertip** Flange Serie Stroke Brake Selection Force Direction Protocol Selection Selection **PGSE** 15 0 **M1** L5 **JO** F₀ M1 Modbus (RS485)+I/O (NN) **L1** 1.5m Cable M2 Modbus (RS485)+I/O (PP) L3 3m Cable I/O(NN): NPN/NPN I/O(PP): PNP/PNP M3 Modbus (RS485)+I/O (NP) L5 5m Cable J0 William Fingertip FO Without Flange I/O(NP): NPN/PNP M4 Modbus (RS485)+I/O (PN) **L10** 10m Cable **S** Side

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

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

llowable	Load	ing	Mon	1en	t
x			0 9	N٠	m

Mx	0.9 N·m
Му	0.75 N·m
 М7	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

Product Parameter
Gripping force (per jaw)
Recommended workpiece weight *®

Stroke

Weight

0.25 kg 7 mm 0.15 s/0.15 s 0.15 kg

6~15 N

Size 85.6 mm x 38 mm x 23.2 mm

Driving method Precise planetary gears + Rack and pinion

Full stroke opening/closing time

Noise emission < 50 dB

Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs) *®

interface

Rated voltage	24 V DC \pm 10%

0.15 A(Rated)/ 0.8 A(Peak)*® Current

Rated power 3.6 W

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

CE, FCC, RoHS Certification

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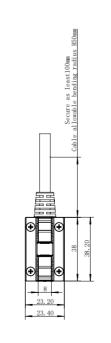
Working Environment

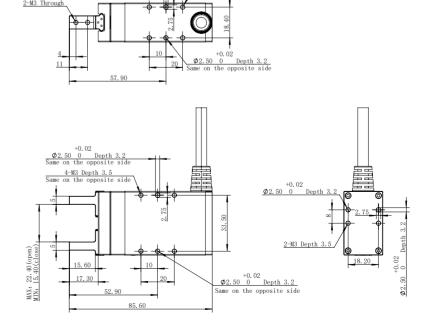
Communication

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 \otimes

(X)Self-locking Mechanism





PGC-50-35

Electric Collaborative Parallel Gripper



Selec	tion M	ethoc	d								
Serie	Grippin Force	g s	troke	Brake	Cable Direction		nication C ocol Sel		Fingerti Selectio		
PGC	- 50		35 -	0	- S	- M	1 -	L5 -	J1	- F1	- 00
0	Without Brake	5	Side	M2 Mo M3 Mo	dbus (RS485)+l, dbus (RS485)+l, dbus (RS485)+l, dbus (RS485)+l,	/O (NN) /O (PP) /O (NP)	LX	ble ble ble ble ble sle	andard ngertip	F1 Standard -	Table Below
*①: I/O(NN): NPN/NF I/O(PP): PNP/PN	D MILLION		SIASUN	DOBOT CR DOBOT Nova	02 AUBO	04 JAKA	06 ROKAE SR ROKAE ER	09 Doosan A	11 Elite EC	13 Neuromeka	15 Hanwha HCR
I/O(NP): NPN/PN I/O(PN): PNP/NP	P RODO		Hanwha A UR E	DOROL NOVA	03 ELEPHANT	05 TECHMAN	DOROT		12 Han's	14 FAIRINO 16 UF	x Arm 17 ROKAE CR

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

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

z	150 N

Allowable Loading Moment

Mx	2.5 N·m
Му	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.

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

					ment
mar		$\sigma = r$		/ 41 41	
WVUI	МП	ᇎᆸ	101	UIII	шчи
		o			

Communication interface	Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs) Optional:TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT *®
Rated voltage	24 V DC \pm 10%
Current	0.25 A(Rated)/ 0.5 A(Peak) *®
Rated power	6 W

IP 54 IP class

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

Certification

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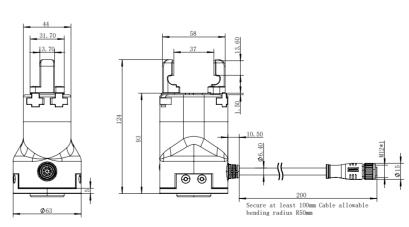
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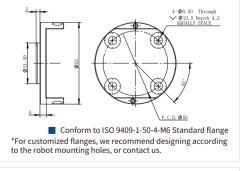
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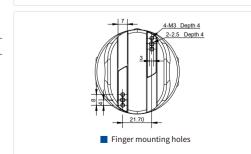
 \odot \odot Drop Detection Plug & Plav

 \otimes Self-locking Mechanism

CE, FCC, RoHS







pleass contact sales or technical support. * 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.

*****1:

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

I/O(PN): PNP/NPN

PGC-140-50

Electric Collaborative Parallel Gripper

09 Doosan A | 11 Elite EC | 13 Neuromeka | 15 Hanwha HCR

10 Doosan M 12 Han's 14 FAIRINO 16 UF x Arm 17 ROKAE CR



Sele	ction Meth	od							
Serie	Gripping Force	Stroke	Brake	Cable Co Direction	ommunica Protoco	tion Cab l Selec			
PGC	- 140 -	50 -	W	- S	- M1	- L5	5 - J1	- F1	- 00
					LV	Without			
			M1 Mod	dbus (RS485)+I/O (N	D ★⑤ LX L1	Extend Cable 1m Cable			
			M2 Mo	dbus (RS485)+I/O (F	PP) L3	3m Cable			
_				dbus (RS485)+I/O (N		5m Cable	■ Standard	■ Standard	
1	N With Brake	S Side	M4 Mo	dbus (RS485)+I/O (F	L1(10m Cable	J1 Standard Fingertip	F1 Flange	Table Below

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

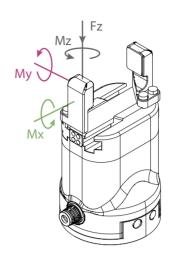
00 01 SIASUN DOBOT CR 02 AUBO

Robot Elite CS Hanwha A DOBOT Nova

Cable UR CB UR E

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

300 N	

Allo	wa	ble	Loa	din	ig M	lom	en	t
Mx						7	N٠	m

IVIX	/ IN · III
Му	7 N·m
Mz	7 N·m

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

*

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 ja	Gripping force (per jaw)				
Recommended work	piece weight *®	3 kg			
Stroke		50 mm			
Full stroke opening/c	losing time	0.75 s/0.75s			
Repeat accuracy (pos	sition)	\pm 0.03 mm			
Weight		1 kg			
Size	138.5 mm	n x 75 mm x 75 mm			
Noise emission		< 50 dB			

Driving method Precise planetary gears + Rack and pinion

Working Environment

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

Rated voltage $24 \text{ V DC} \pm 10\%$

Current 0.4 A(Rated)/ 1.2 A(Peak) **

Rated Power 9.6 W IP class IP 67

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

Certification CE, FCC, RoHS



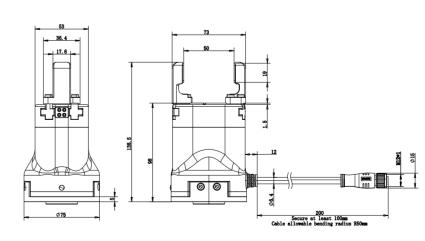


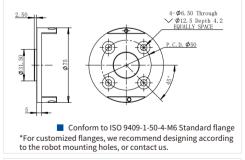


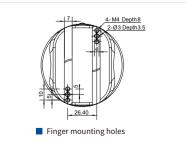






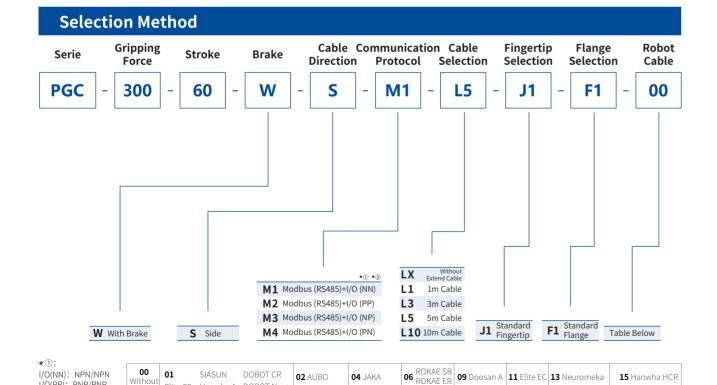






Electric Collaborative Parallel Gripper

| 10 Doosan M | 12 Han's | 14 FAIRINO | 16 UF x Arm | 17 ROKAE CR



03 ELEPHANT 05 TECHMAN 07 MG400

* 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.

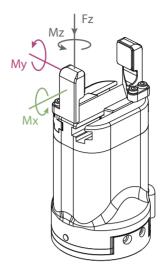
Elite CS Hanwha A DOBOT Nova

I/O(PP): PNP/PNP

I/O(NP): NPN/PNP

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 6	00 N
------	------

Allowable	Loading Momen
Mx	15 N·

MX	12 N·W
Му	15 N·m
Mz	15 N·m

 $^\star \ensuremath{\textcircled{2}}$ 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 Param	eter			
Gripping force (p	Gripping force (per jaw)			
Recommended	workpiece weight*®	6 kg		
Stroke	Stroke			
Full stroke openi	ing/closing time	0.8 s/0.8 s		
Repeat accuracy	(position)	\pm 0.03 mm		
Weight		1.5 kg		
Size	178 m	nm x 90 mm x 90 mm		
Noise emission		< 50 dB		
Driving method	Precise planetary go	ears + Rack and pinion		

	•		
MACE	vina		3 M M A A M T
WULL	АШЕ	EIIVII	onment

Communication interface	Standard: Modbus RTU (RS485)、Digital I/O(2 inputs 2 outputs) Optional: TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT *®
Rated voltage	24 V DC \pm 10%
Current	0.4 A(Rated)/ 2 A(Peak)*®
Rated power	9.6 W

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

Certification



IP class





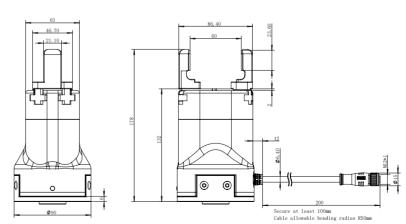


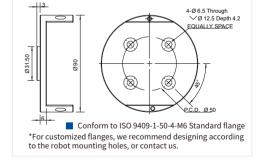


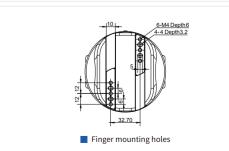
CE, FCC, RoHS



IP 67







PGHL-400-80

Heavy-Load Long-Stroke Electric Parallel Gripper

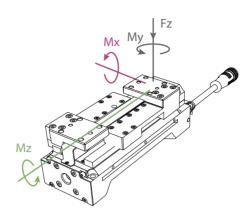


Selec	ctic	on Met	tho	d															
Serie		Gripping Force		Stroke		Brake		Cabl Direct			nmunic Protoc			Cable lection	1		gertip ection		Flange Selection
PGHL	-	400	-	80	_	W	-	S		-	M1	_		L5	_	j	10	-	F0
													LX	With Extend Ca	out				
								M1 N	1odhi	ıs (RS4	*(1 85)+I/O (N	1) *(\$)	L1 L3	1m Cal	ole				
*①: I/O(NN): NPN/N	IPN										85)+I/O (P		L5	5m Cal					
I/O(PP): PNP/PN I/O(NP): NPN/PI I/O(PN): PNP/NI	NP NP		W	With Brake		S Side					85)+I/O (N 85)+I/O (P			10m Cab 15m Cab			/ithout ingertip		F0 Without Flange

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

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	Ν
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Allowable Lo	oading Moment
Mx	50 N⋅m
Му	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.

Prod	luct Parame	ter	
Gripp	oing force (pe	140~400 N	
Reco	mmended w	8 kg	
Strok	ке		80 mm
Fulls	stroke openir	ng/closing time	1.0 s/1.1 s
Repe	at accuracy	(position)	\pm 0.02 mm
Weig	ht		2.2 kg
Size	Size		mm x 73 mm x 70 mm
Noise	e emission		< 60 dB
Drivi	ng method		cise planetary gears+ rew+Rack and pinion

Working Environment

working Enviro	Jiiiii Ciii	
Communication interface		J (RS485)、Digital I/O(2 inputs 2 outputs) B2.0、CAN2.0A、PROFINET、EtherCAT *®
Rated voltage		24 V DC \pm 10%
Current		1 A(Rated)/ 3 A(Peak)*®
Rated power		24 W
IP class		IP 40
Recommended	environment	0~40°C, under 85% RH





Certification

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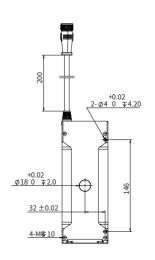
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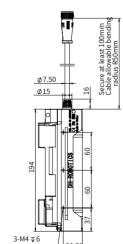
 \odot Drop

CE, FCC, RoHS

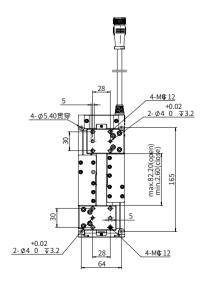
 \odot Self-locking

Technical Drawings





(Same on the opposite side)



^{**}③ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Electric Parallel Gripper

PGIA Series



Product Features

Based on the industrial requirements of "long stroke, high load, and high protection level", DH-Robot ics 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 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.

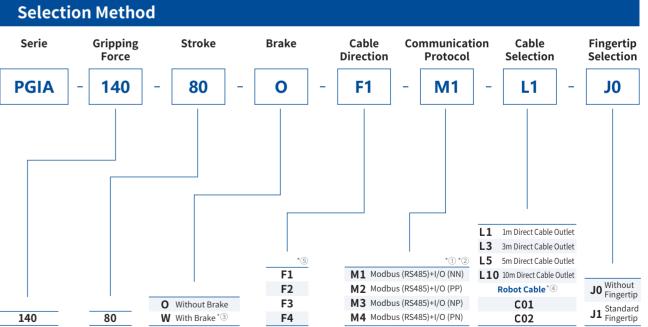
High Load

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.

PGIA-140-80

Electric Parallel Gripper

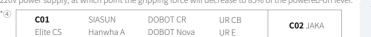




*① I/O(NN): NPN/NPN I/O(PP): PNP/PNP I/O(NP): NPN/PNP I/O(PN): PNP/NPN

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

*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.



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



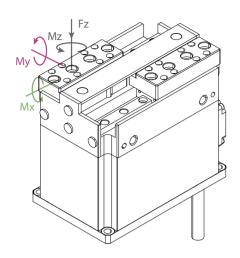








TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz 300 N

Allowable Loading Moment

MX	/ N·m	
Му	7 N·m	
Mz	7 N·m	

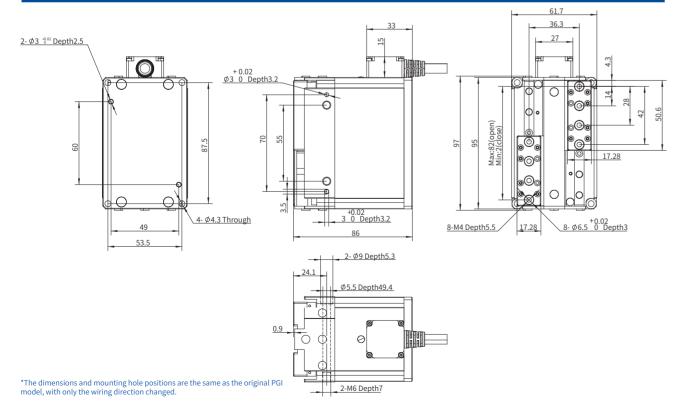
Produ	ct Parame	ter	PGIA	-140-80		
Gripping	g force(per jaw	<i>ı</i>)	40~140 N			
Recomme	nded workpiece v	veight*®	3 kg			
Stroke			80 m	m		
Repeat a	ccuracy (position	oning)	\pm 0.0)2 mm		
Weight			1 kg			
Dimensi	ons (L xW x H)	97mr	n*62mm*86	mm	
Noise en	nission		< 50 c	dΒ		
Driving r	method		Rack and Pinion Crossed Roller Guide			
Worki	ng Environ	ment				
Commu	nication interf	ace	Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs) Optional: TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT *®			
Nominal	l voltage		24 V DC \pm 10%			
Nominal	l & Max. currer	nt	0.7 A (Rated) / 1.6 A (Peak)*®			
Max pow	ver		40 W			
IP prote	ction class		IP 54			
Recommended operating environment			0~40°C, under 85% RH			
Oversea	s standards		CE, F	CC, RoHS		
Build-in ontroller	Gripping Force Adjustable	Posit Adjusta		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

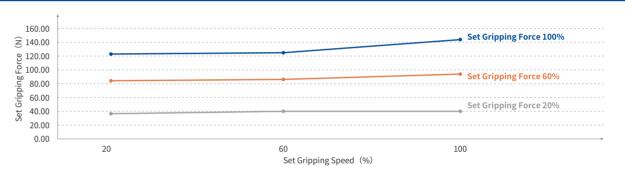


Gripping CT Reference Table

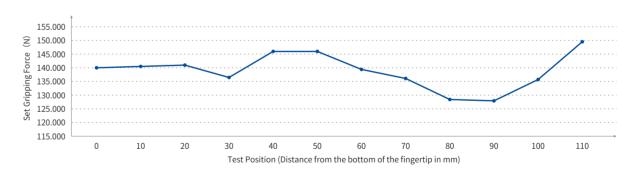
Test Type	Gripping Time (ms) [Impact, gripped object, target position set to 0, 50% force, 100% speed]			Gripping Time (ms) [Impact, gripped object, target position set to 0, 100% force, 100% speed]				
Test Item Model	Side Avoidance 3mm	Side Avoidance 5mm	Side Avoidance 10mm	Full Stroke Clamping	Side 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

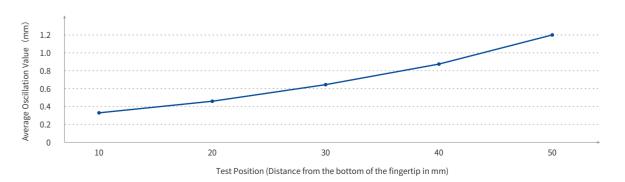
Actual Output Reference Curve for Different Force and Speed



Gripping Distance Force Decay Reference Curve



Gripping Distance Oscillation Reference Curve



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Electric Rotary Grippers

RGI / RGD Series



Serie	Gripping Force (Per Jaw)	Recommended Workpiece Weight	Stroke	Reference Page
RGI-100-14/22/30	30~100 N	1.5 kg	14/22/30 mm	P43-44
RGIC-35-12	13-35 N	0.5 kg	12 mm	P45-46
RGIC-100-35	40~100 N	1 kg	35 mm	P47-48
RGD-5-14	2~5.5 N	0.05 kg	14 mm	P49-51
RGD-35-14/30	10~35 N	0.35 kg	14/30 mm	P52-54

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



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



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 assembly, handling, and correction adjustment in the fields of 3C electronics and semiconductors.





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RGI-100

Electric Rotary Gripper

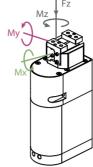


Selecti	ion Meth	od						
Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	n Cable Selection	Fingertip Selection	Flange Selection
RGI -	100	- 14 -	0 -	- S	- M1	- L5 -	- J0	- FO
		14 22 30						
*①: I/O(NN): NPN/NPN I/O(PP): PNP/PNP I/O(NP): NPN/PNP I/O(PN): PNP/NPN		O Without Brake	S Side B bottom	M2 Modbi	*® *® us (RS485)+I/O (NN) us (RS485)+I/O (PP) us (RS485)+I/O (NP) us (RS485)+I/O (PN)	LX Without Extend Cable L1 Im 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 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

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
Му	3 N·m	4 N·m	4 N·m
Mz	4 N·m	5.5 N·m	5.5 N·m

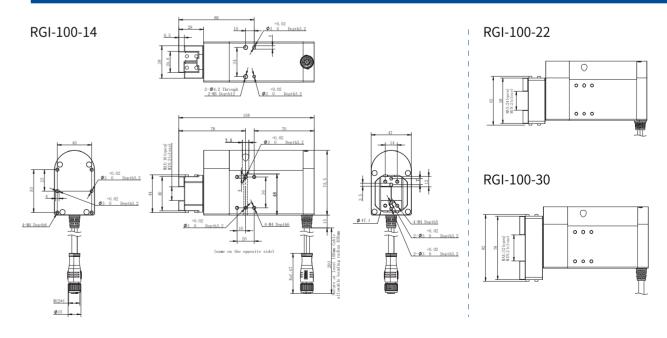
Build-in	Gripping Force	Position	Speed
Controller	Adjustable	Adjustable	Adjustable
Drop	Rotary	Self-locking	
Detection	Adjustable	Mechanism	

*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,

Product Parameter	RGI-100-14	RGI-100-22	RGI-100-30
Gripping force (per jaw)	30~100 N	30~100 N	30~100 N
Recommended workpiece weight(Fingertip included) *	1.5 kg	1.5 kg	1.5 kg
Stroke	14 mm	22 mm	30 mm
Full stroke opening/closing tin	ne 0.45 s/0.25 s	0.5 s/0.3 s	0.55 s/0.35 s
Repeat accuracy (position) ± 0.02 mm	\pm 0.02 mm	\pm 0.02 mm
Repeat accuracy (swiveling	± 0.05°	± 0.05°	\pm 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
\17 <u>0</u>			.58 x 75.5 x 47 mm taty Diameter: 84.8 mm

Marking	Environmen
WORKINS	
1101111115	

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



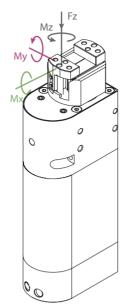
pleass contact sales or technical support. **@ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Selection Method Gripping Cable Communication Cable **Fingertip** Flange Serie Stroke Brake Selection Selection Force Direction Protocol Selection 12 **RGIC** 35 0 S **M1** F₀ *1 *5 M1 Modbus (RS485)+I/O (NN) L1 1m Cable J0 Without Fingertip M2 Modbus (RS485)+I/O (PP) L3 3m Cable I/O(NN): NPN/NPN I/O(PP): PNP/PNP I/O(NP): NPN/PNP **M3** Modbus (RS485)+I/O (NP) **L5** 5m Cable **S** Side O Without Brake FO Without Flange Standard M 4 Modbus (RS485)+I/O (PN) **L10** 10m Cable **B** bottom

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

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

TECHNICAL SPECIFICATI



Static Vertical Allowable Load

Fz 100 N

Allowable Loading Moment					
Mx	1.5 N⋅m				
Му	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.

*@ 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.

ONS	

Product Parameter	
Gripping force (per jaw)	13~35 N
Recommended workpiece weight (Fingertip included) *	[®] 0.5 kg
Stroke	12 mm
Full stroke opening/closing time	0.5 s/0.4 s
Repeat accuracy (position)	\pm 0.02 mm
Rated torque	0.2 N⋅m
Peak torque	0.5 N·m
Rotary range In	finite Rotating
Max. rotation speed	2160 °/s
Repeat accuracy (swiveling)	± 0.05°
Weight	0.64 kg
\$17 <u>0</u>	nm x 53 mm x 34 mm taty Diameter:33 mm

Working Environment

Working Envir	Omment		
Communication interface		J(RS485),Digital I/O(2 inputs 2 outputs) al: TCP/IP,CAN2.0A,PROFINET,EtherCAT ★◎	0
Rated voltage		24 V DC \pm 10%	
Current		1.7 A(Rated)/ 2.5 A(Peak)*®)
Rated power		40.8 W	
IP class		IP 40	
Recommended	l environment	0~40°C, under 85% RH	
Certification		CE, FCC, RoHS	





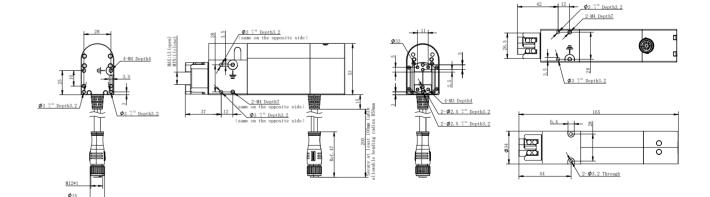








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^{*}Product size change on January 10, 2025: Height dimension changed from 150 to 165, others remain unchanged.

RGIC-100-35

Electric Rotary Gripper

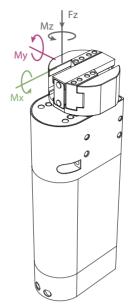


Selec	ction Met	thoc													
Serie	Gripping Force		Stroke		Brake		Cable Directio		mmunic Protoco		Cable Selectio	n	Fingertip Selection		Flange Selection
RGIC	- 100	_	35	_	0	_	S	_	M1	_	L5	_	J0	_	FO
	_														
											lithout				
*1:							us (RS485)+I us (RS485)+I		LX L1 L3	1m C	able	IA/Sa	hout		
I/O(NN): NPN/NF I/O(PP): PNP/PNI I/O(NP): NPN/PNI I/O(PN): PNP/NP	P With		-	Side bottom	М3	Modb	us (RS485)+l us (RS485)+l	/O (NP)	L5	5m C 10m C	able	JO Fin	nout gertip ndard gertip		Without Flange

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

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

100 N

Allowable Loading Moment

Mx	1.5 N·m
Му	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. *2 Requires external communication convertor or customization, pleass contact sales or technical support.

**@ 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) $^{\star\circ}$	1 kg
Stroke	35 mm
Full stroke opening/closing time	0.9 s/0.9 s
Repeat accuracy (position)	\pm 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
\$17 <u>0</u>	4 mm x 53 mm x 34 mm otaty Diameter: 41 mm

V	or	ki	ng	Env	ironn	nent

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

Rated voltage $24 \text{ V DC} \pm 10\%$

2 A(Rated)/ 5 A(Peak)*® Current 48 W

Rated power IP class IP 40

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

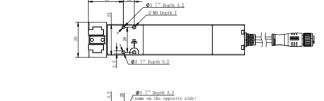
Certification CE, FCC, RoHS

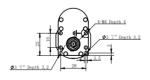
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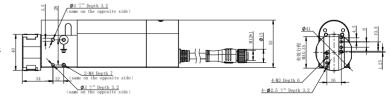
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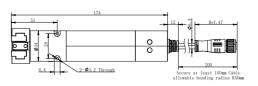
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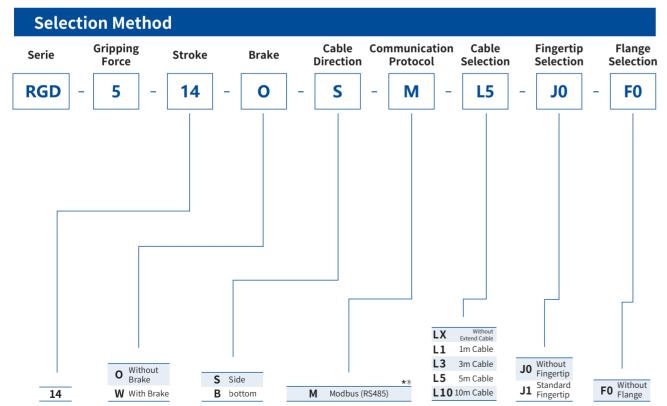


^{*}On January 10, 2025, the product dimensions will change: the height dimension will be changed from 159 to 174, and the rest will remain unchanged.

RGD-5

Direct Drive Rotary Gripper

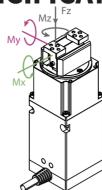




*(§) It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

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

150 N

Allowable Loading Moment Мχ 2 N · m

1117	2 11 111
Му	1.5 N⋅m
Mz	2.5 N·m

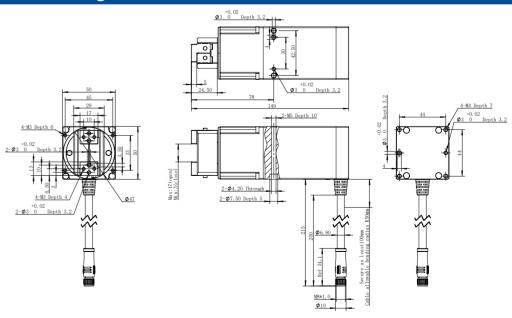
\odot	\odot	\odot	\odot
Build-in Controller	Gripping Force Adjustable	Position Adjustable	Speed Adjustable
\odot	\odot	optional	
Drop	Rotary	Self-locking Mochanism	

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

Product Parameter	
Gripping force (per jaw)	2-5.5 N
Recommended workpiece weight*®	0.05 kg
Stroke	14 mm
Full stroke opening/closing time	0.5 s/0.3 s
Repeat accuracy (position)	\pm 0.02 mm
Repeat accuracy (swiveling)	\pm 0.1 $^{\circ}$
Max. rotation speed	1500 °/s
Rated torque	0.1 N·m
Peak torque ^{*®}	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 *®
Rated voltage	24 V DC \pm 10%
Current	1.2 A(Rated)/ 2.5 A(Peak)**
Rated power	60 W
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS



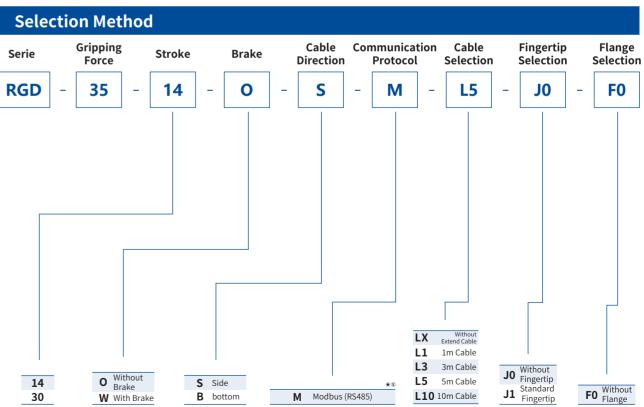
Parameter Table of Rotational Time in Place for Different Inertia Loads

Reference Size/mm	Material	Weight/g	Corresponding Inertia/Kg·mm²	Actual Rotation Angle/°	Reference Correction Tme/ms
				45	200
				90	200
Unload	-	0	0	180	400
				360	500
				720	700
				45	200
				90	300
20*80*25	Aluminum Block	57	61	180	400
	Bioch			360	500
				720	700
				45	300
				90	350
74.7*80*25	Aluminum Block	llock 387 402 18	180	400	
	Block			360	550
				720	750
				45	400
				90 450	450
96.7*80*25	Aluminum Block	503	685	180	500
	DIUCK			360	650
				720	850
				45	850
				90	1000
111.3*80*25	Aluminum Block	582	941 180	1200	
	Diock			360	1450
				720	1650
				45	1350
				90	1550
126*80*25	80*25 Aluminum Block	662 1263	1263	180	1850
				360	1950
				720	2450

RGD-35

Direct Drive Rotary Gripper





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

If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

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 1	50
------	----

Allowable Loading Moment

Mx	2 N·m
Му	1.5 N·m
Mz	2.5 N⋅m

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

^{*}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.

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

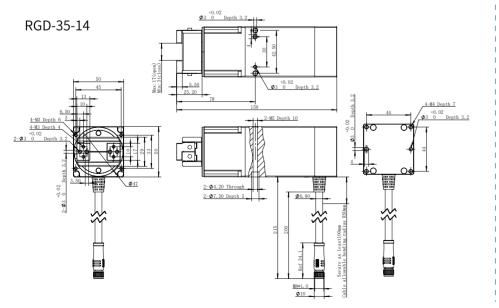
*(4) When selecting the power supply please select according to the

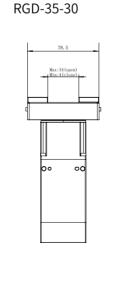
Which selecting the power supply, please select according to the
peak current. If the current is lower than the parameter, it will cau
the product can not work normally.

Product Parameter	RGD-35-14	RGD-35-30
Gripping force (per jaw)	10-35 N	10-35 N
Recommended workpiece weight(Fingertip included) *3	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)	\pm 0.02 mm	\pm 0.02 mm
Repeat accuracy (swiveling)	\pm 0.1 $^{\circ}$	\pm 0.1 $^{\circ}$
Max. rotation speed	1500 °/s	1500 °/s
Rated torque	0.1 N·m	0.1 N·m
Peak torque*®	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*®
Rated voltage	24 V DC \pm 10%
Current	1.2 A(Rated)/ 2.5 A(Peak) *®
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
		0	0	45	200
				90	200
Unload	-			180	400
				360	500
				720	700
				45	200
				90	300
20*80*25	Aluminum Block	57	61	180	400
	Brock			360	500
				720	700
				45	300
			402	90	350
74.7*80*25	Aluminum Block			180	400
	Diock		360	550	
				720	750
				45	400
				90 45	450
96.7*80*25	Aluminum Block	Block 503 685 18	180	500	
	DIOCK			360	650
				720	850
				45	850
				90	1000
111.3*80*25	Aluminum Block	582	941	180	1200
	Dioch			360	1450
				720	1650
				45	1350
				90	1550
126*80*25	Aluminum Block	662	1263	180	1850
				360	1950
				720	2450

Articulated Electric Grippers

AG / DH Series



Serie	Gripping Force (Per Jaw)	Recommended workpiece weight	Stroke	Reference Page
AG-160-95	45~160 N	3 kg	95 mm	P57-58
AG-105-145	35~105 N	2 kg	145 mm	P59-60
DH-3	10~65 N	1.8 kg	106 mm (parallel) 122 mm (centric)	P61-62

Serie	Total Degrees of Freedom	Payload Capacity	Five-Finger Gripping Force	Reference Page
DH-5-6	11	10 kg	80N	P63-64

ARTICULATED ELECTRIC GRIPPER

Product Features

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

Envelope Adaptive Capture

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

Plug & Play

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

Long Stroke

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

Application

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



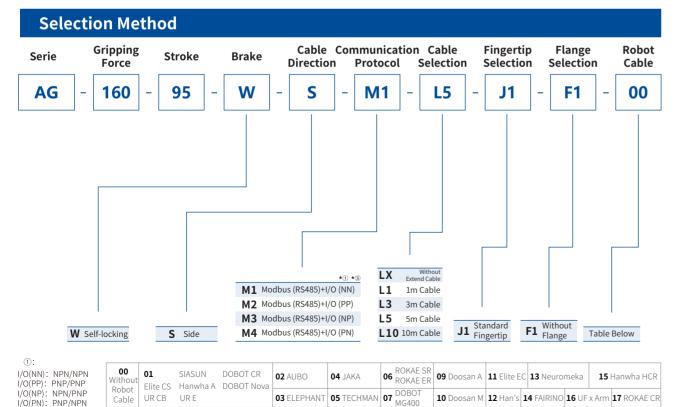


I/O(PN): PNP/NPN

AG-160-95

Electric Adaptive Gripper



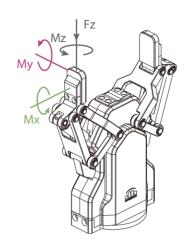


* It is recommended that no more than 4units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur.

If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

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

Allowable Lo	ading Momen
Mx	4.75 N·

Mx	4.75 N·m
Му	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.
*① 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 workpi	ece weight *®	3 kg
Stroke		95 mm
Full stroke opening/clo	sing time	0.9 s/0.9 s
Repeat accuracy (posit	ion)	\pm 0.03 mm
Weight		1 kg
Size	184.6 mm x 16	2.3 mm x 67 mm
Noise emission		< 60 dB

Working Environment

Driving method

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

Rated voltage	24 V DC ± 10%
Current	0.8 A(Rated)/ 1.5 A(Peak)

Rated power	19.2 W

IP class		IP 54

Recommended environment	0~40 C, under 85% RF

Certification	CE, FCC, RoHS





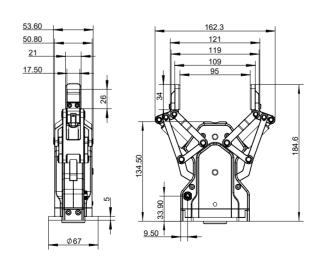


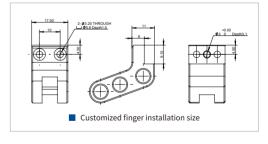


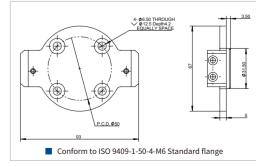
Screw drive + Linkage system



\odot









Serie		Gripping Force		Stroke	Brake	D	Cable C irection	ommur Prote		on Cabl Select			Flange Selectio		Robo Cable
AG	_	105	_	145 -	W	-	S	- M	1	- L5	- J1	-	F1	-	00
														Г	
							*	1 *S I	L X Ext	Without end Cable					
					M1	Modbus	* (RS485)+I/O (Litte	Without end Cable m Cable					
					М2	Modbus		NN) I PP) I	L 1 1	end Cable					

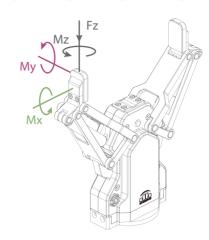
k	(1)	:	
/	0	(N	Ν

* U).													
1/0	(NN): NPN/NPN (PP): PNP/PNP	Without	01	SIASUN Hanwha A	DOBOT CR DOBOT Nova	02 AUBO	04 JAKA	06 ROKAE SR ROKAE ER	09 Doosan A	11 Elite E	C 13 Neuro	meka	15	Hanwha HCR
	(NP): NPN/PNP (PN): PNP/NPN		UR CB		DOBOT NOVa	03 ELEPHANT	05 TECHMAN	07 DOBOT MG400	10 Doosan M	12 Han's	14 FAIRINO	16 UF	x Arm	17 ROKAE CR

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

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 Lo	oading Moment
Mx	1.95 N·m
Му	1.95 N·m
Mz	1.95 N·m

 $^\star \ \$ 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.

Product Parameter		
Gripping force (per jav	v)	35~105 N
Recommended workp	iece weight*®	2 kg
Stroke		145 mm
Full stroke opening/cl	osing time	0.9 s/0.9 s
Repeat accuracy (posi	tion)	\pm 0.03 mm
Weight		1.3 kg
Size	203.9 mm x 212	2.3 mm x 67 mm
Noise emission		< 60 dB

Working Environment

Driving method

Communication interface	Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs) Optional: TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT *®
Rated voltage	24 V DC \pm 10%
Current	0.8 A(Rated)/ 1.5 A(Peak)*®
Rated power	19.2 W
IP class	IP 54

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

 \otimes

Certification







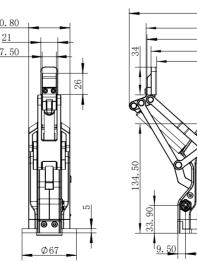
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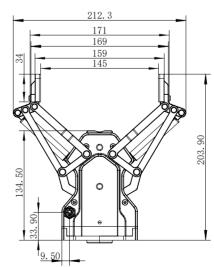
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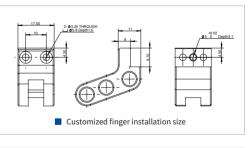
Screw drive + Linkage system

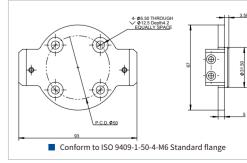


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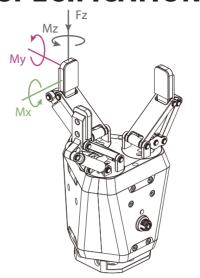
^{**@} When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

DH-3 Electric Adaptive Gripper



Selection Meth	nod										
Serie		Brake		Cable Direction	Co	mmunication Protocol	Cable Selection		Fingertip Selection	Fla Sele	ange ectio
DH-3	_	W	-	S	-	T -	L5	-	J1	- F	-1
						L1 1m Ca L3 3m Ca L5 5m Ca	Cable able able able	ıı St	andard		
	DH-3	DH-3 -	Serie Brake DH-3 - W	Serie Brake DH-3 - W -	Serie Brake Cable Direction DH-3 - W - S	Serie Brake Cable Co DH-3 - W - S -	Serie Brake Cable Direction Protocol DH-3 - W - S - T -	Serie Brake Cable Direction Protocol Selection DH-3 - W - S - T - L5 LX SMRDOUT Extend Cable L1 In Cable L3 3m Cable L5 5m Cable Selection	Serie Brake Cable Direction Protocol Selection DH-3 - W - S - T - L5 - LX stend Cable L1 In Cable L3 3m Cable L5 5m Cable L5 5m Cable	Serie Brake Cable Direction Protocol Selection Selection DH-3 - W - S - T - L5 - J1 LX Extend Cable L1 and Cable L3 am Cable L5 5m Cable Selection	Serie Brake Cable Direction Protocol Selection Sel

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

	150 N
	TOO 14

Allowable Loading Moment

Mx	2.5 N·m
Му	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. pleass contact sales or technical support.

Product Parameter Gripping force (per jaw)

Recommended workpiece weight *®

Stroke 106 mm (parallel) 122 mm (centric) Full stroke opening/closing time $0.7 \, \text{s} / 0.7 \, \text{s}$

 \pm 0.03 mm Repeat accuracy (position)

1.68 kg Weight

Size 213.5 mm x 170 mm x 118 mm

< 60 dB Noise emission

Driving method Screw nut + gear driv + linkage mechanism

Working Environment

Communication interface	Standard: TCP/IP, USB2.0, CAN2.0A
Rated voltage	24 V DC \pm 10%
Current	0.5 A(Rated)/ 1 A(Peak)*®

Rated power 12 W IP class IP 40

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

CE, FCC, RoHS Certification







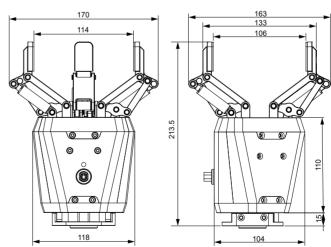




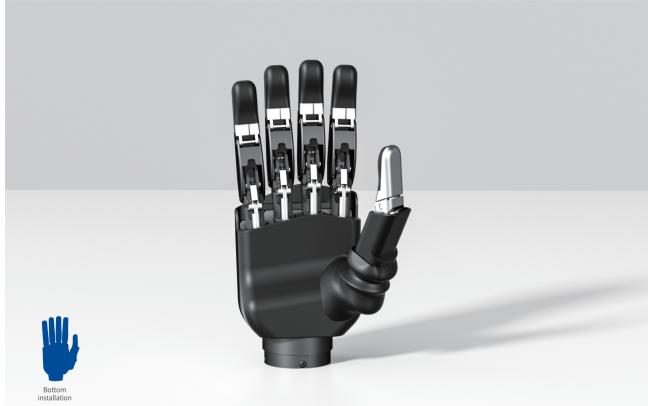
\odot Plug & Play

10~65 N

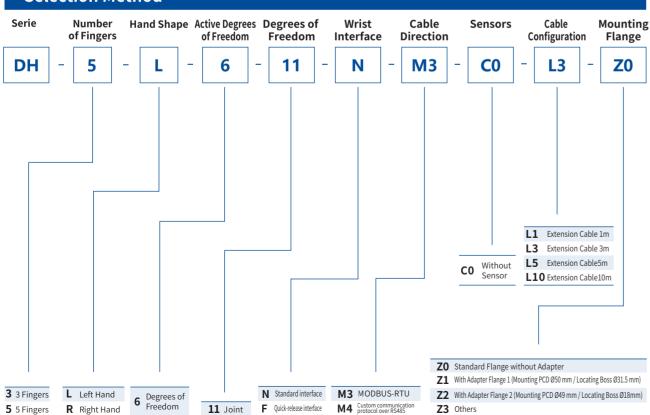
1.8 kg



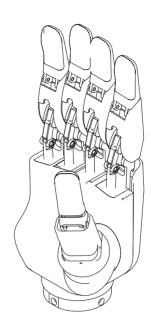
^{**} When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.



Selection Method



TECHNICAL SPECIFICATIONS











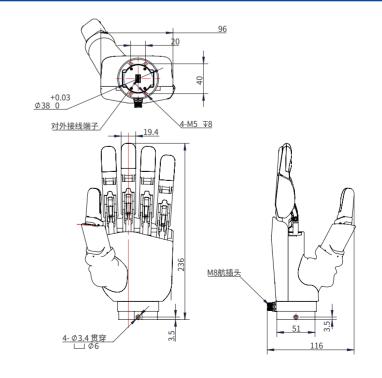


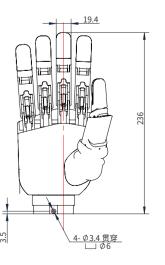
Product Parame	eter						
Total degrees of	Total degrees of freedom 11						
Active degree of f	reedom	6					
Working speed		0.8 s					
Four-finger bend	ing angle	83°+87°					
Thumb bending a	angle	38°+7°					
Thumb lateral sw	Thumb lateral swing angle 85°						
Single fingertip fo	Single fingertip force 25 N						
Recommended n	Recommended maximum friction load 2 kg						
Recommended n	Recommended maximum structural lifting load 4 kg						
Hand grip streng	th	80 N					
Lifting load		10 kg					
Weight		790 g					
Sensors	Multi-point Tactile Sensing (C	ptional)					
Safety features	Safety features Anti-collision Buffering for Inward Grasping						
Driving method	Coreless motor + planeta + ball screw						
Size	236 mm*116 mm	_					
Working Enviro	nment						

Communication interface

Rated voltage

Technical Drawings





Modbus-RTU/Custom communication protocol over RS485

 $24 \text{ V DC} \pm 10\%$

Electric Centric Grippers

CGE / CGI / CGC Series



Serie	Gripping Force (Per Jaw)	Recommended Workpiece Weight	Stroke	Reference Page
CGE-10-10	3~10 N	0.1 kg	10 mm	P67-68
CGI-100-170	30~100 N	1.5 kg	Ф40~Ф170 mm	P69-70
CGC-80-10	20~80 N	1.5 kg	10 mm	P71-72

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, automation equipment, precision machining and assembly, etc.



*1):

I/O(NN): NPN/NPN

Sele	ction Me	thod						
Serie	Gripping Force	Stroke	Brake		munication Ca rotocol Sele	able Fingerti ection Selectio		Robot Cable
CGE	- 10	- 10 -	0	- S -	M1 - I	L5 - J0	- FO -	00
			M1 Mod	*① *③ bus (RS485)+I/O (NN)	LX Withou Extend Cabl L1 1m Cable	e		
				bus (RS485)+I/O (NN) bus (RS485)+I/O (PP)	L3 3m Cable			
	O Without Brake	S Side		bus (RS485)+I/O (NP) bus (RS485)+I/O (PN)	L5 5m Cable L10 10m Cable	• Without	F0 Without Ta	able Below

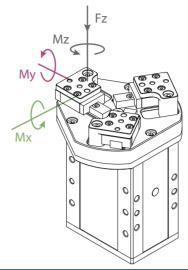
Robot Cable UR CB UR E 03 ELEPHANT 05 TECHMAN 07 DOBOT MG400 I/O(NP): NPN/PNP 10 Doosan M 12 Han's 14 FAIRINO 16 UF x Arm 17 ROKAE CR I/O(PN): PNP/NPN *⑤ It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur. If you need to access more than 4 devices, it is recommended to contact the sales staff for product adjustment.

| 06 ROKAE SR | 09 Doosan A | 11 Elite EC | 13 Neuromeka | 15 Hanwha HCR

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

00 01 SIASUN DOBOT CR Without 51: CG Harvilla A DOBOT Name

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Fz	150 N
ΓZ	130 IV

Allowable Loading Moment

Mx	0.62 N·m
Му	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,

Product Parameter		
Gripping force (per jaw)		3~10 N
Recommended workpiece w	reight *®	0.1 kg
Stroke		10 mm
Full stroke opening/closing	time	0.3 s/0.3 s
Repeat accuracy (position)		\pm 0.03 mm
Weight		0.43 kg
Size	94 mm x 53.5 m	m x 38 mm

Driving method Precise planetary gear reducer + Rack and pinion

Working Environment

Noise emission

Communication interface	Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs) Optional:TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT *
Rated voltage	24 V DC \pm 10%
	0.0.4/D + 1\/.0.6.4/D +1*6

Current 0.3 A(Rated) / 0.6 A(Peak) Rated power 7.2 W

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

Certification CE, FCC, RoHS





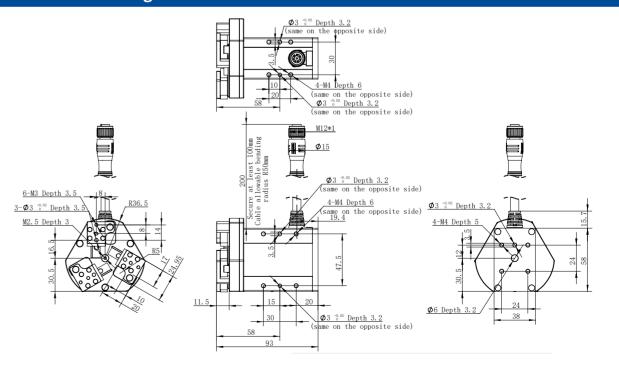








< 50 dB



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

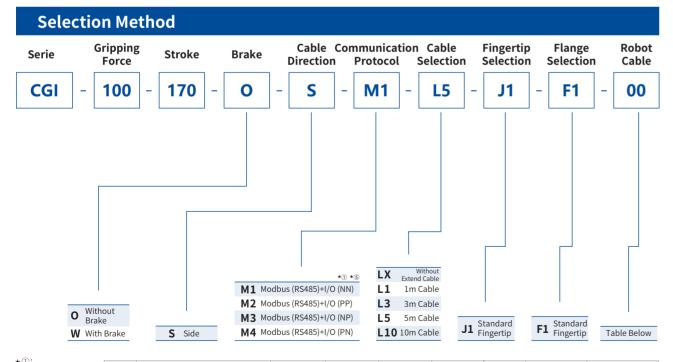
CGI-100-170

Electric Centric Gripper

| 06 ROKAE SR | 09 Doosan A | 11 Elite EC | 13 Neuromeka | 15 Hanwha HCR

10 Doosan M 12 Han's 14 FAIRINO 16 UF x Arm 17 ROKAE CR





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

03 ELEPHANT 05 TECHMAN 07 MG400

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

Elite CS Hanwha A DOBOT Nova

00 01

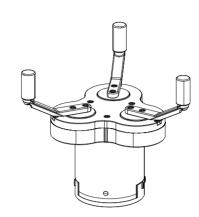
Cable UR CB UR E

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

I/O(PN): PNP/NPN

SIASUN DOBOT CR 02 AUBO

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.

 $^\star \ensuremath{\textcircled{2}}$ 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.

Produ	ict Parameter	
Grippi	ng force (per jaw)	30~100 N
Recon	nmended workpiece weight *2	1.5 kg
	nended workpiece r (inward)	Ф40~Ф170 mm
Full st	roke opening/closing time	1.35 s
Repea	t accuracy (position)	\pm 0.03 mm
Weigh	t	1.5 kg
Size	158.4 mm x 124.35 mm x 116 mm (without l	orake/with brake, same size)
Noise	emission	< 50 dB

Driving method Precise planetary gears + Rack and pinion

Working Environment

Communication	Standard: Modbus RTU (RS485), Digital I/O(2 inputs 2 outputs)
interface	Optional: TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT *
Rated voltage	$24 \text{ VDC} \pm 100\%$

Rated voltage $24 \text{ V DC} \pm 10\%$ 0.4 A(Rated)/ 1 A(Peak) ** Current

Rated power 9.6 W

IP class IP 40

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

Certification CE, FCC, RoHS



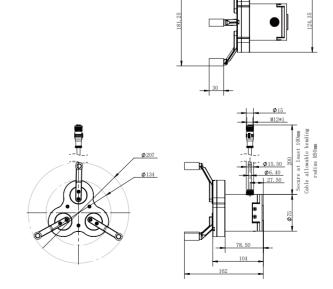


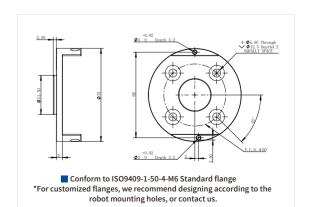












^{*4} When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Electric Collaborative Centric Gripper

09 Doosan A | 11 Elite EC | 13 Neuromeka | 15 Hanwha HCR

10 Doosan M 12 Han's 14 FAIRINO 16 UF x Arm 17 ROKAE CR



Serie	Grippi Force		Stroke	Brak	e D	Cable Co irection	mmunica Protoco	ation Cab l Select			Robo
CGC	- 80	_	10	- W		S -	M1	- L5	- J1	- F1	- 00
	I										
							_	NGI .			
				М 1	Modhus (*® LX	Without Extend Cable			
						*① [RS485)+I/O (NI [RS485)+I/O (PF	N) L1	Without Extend Cable 1m Cable 3m Cable			

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

03 ELEPHANT 05 TECHMAN 07 MG400

Elite CS Hanwha A DOBOT Nova

00 01

Robot Elite CS Hanwl Cable UR CB UR E

I/O(NN): NPN/NPN

I/O(NP): NPN/PNP

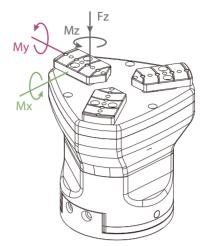
I/O(PN): PNP/NPN

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.

SIASUN DOBOT CR 02 AUBO

TECHNICAL SPECIFICATIONS



Static Vertical Allowable Load

Allowable Loading Moment 2 5 N. m

IVIX	2.5 N · III
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.

Product Parameter				
Gripping force (per ja	20~80 N			
Recommended work	1.5 kg			
Single jaw	Single jaw			
Full stroke opening/o	Full stroke opening/closing time			
Repeat accuracy (pos	sition)	\pm 0.03 mm		
Weight		1.5 kg		
Size	141 mm x	103 mm x 75 mm		
Noise emission	< 50 dB			
Driving method	Precise planeta	ry gear reducer + Rack and pinion		

Working Environment

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

Rated voltage $24 \text{ V DC} \pm 10\%$

0.5 A(Rated)/ 1.2 A(Peak) ** Current

Rated powert 12 W IP class IP 67

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

Certification CE, FCC, RoHS



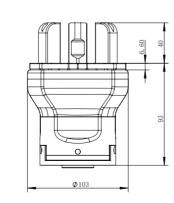


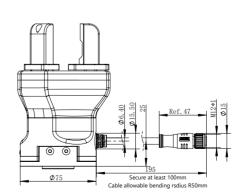


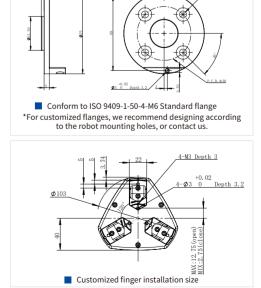












^{*(4)} When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally

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		I I					
Small current electric gripper (Peak current<1.5A)		C01	C01	C01	C01			C02
High current electric claw (Peak current>1.5A)	I		I I					
In common (Support large and small current electric gripper)	I I	 	I I			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
O the control of the	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
the state of the s	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
2025.09	CN.2509	 Integration of old and new electric gripper selection manuals; Added notes on rotational repeatability accuracy for RGI & RGIC Introduction of the new DH-5-6 dexterous hand
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

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