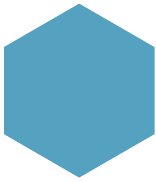


RGD Series Direct Drive Rotary Gripper

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

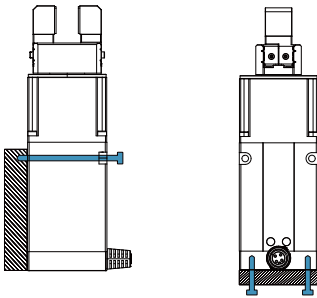


The RGD direct-drive electric rotary gripper of DH-Robotics adopts a direct-drive backlash-free rotation module to improve the rotary accuracy, and thus is perfectly suited for high-precision manufacturing applications.



Installation

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



Product Features

● Zero Rotary Backlash High Repeatability

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

● High Dynamic Response High-speed Stability

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

● All-in-one Design Power-off Protection

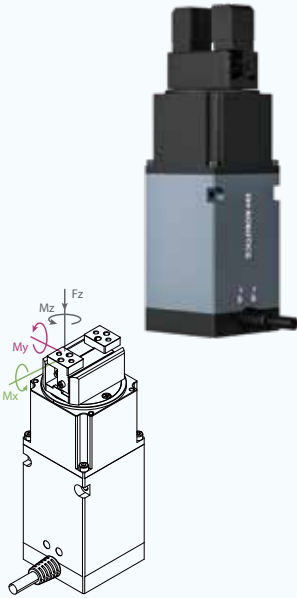
The gripper adopts the design of integrating the dual servo system of gripping and rotation with the drive control module, which is smaller and more compact, and applies to more scenarios. Brakes are optional to meet the requirements of various applications.



Application

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

RGD-5-14



Static Vertical Allowable Load

Fz 150 N

Allowable Loading Moment

Mx 2 N·m

My 1.5 N·m

Mz 2.5 N·m

Parameters

Product Parameter

Gripping force (per jaw)	2-5.5 N
Stroke	14 mm
Rated torque	0.1 N·m
Peak torque * ^①	0.25 N·m
Rotary range	Infinite Rotating
Recommended workpiece weight * ^②	0.05 kg
Max. rotation speed	1500 °/s
Rotary backlash	Zero backlash
Repeat accuracy (swiveling)	± 0.1 °
Repeat accuracy (position)	± 0.02 mm
Opening/closing time	0.5 s/0.5 s
Weight	0.86 kg(without brake) 0.88 kg(with brake)
Size	149 mm x 50 mm x 50 mm Rotary Diameter:48.7mm

Working Environment

Communication interface	Modbus RTU (RS485)
Rated voltage	24 V DC ± 10%
Rated current	1.2 A
Peak current	2.5 A
IP class	IP 40
Recommended environment	0~40°C, under 85% RH

Certification

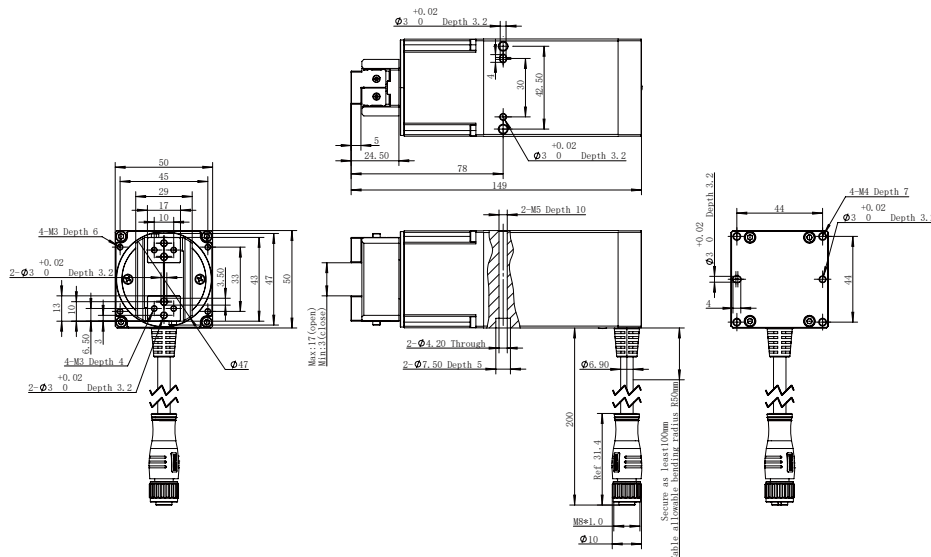
CE, FCC, RoHS

● Build-in Controller	● Gripping Force Adjustable	● Position Adjustable	● Speed Adjustable	● Drop Detection	● Rotary Adjustable	● Self-locking Mechanism
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*^① The peak torque can be increased up to 0.5N·m. Please consult the technical support staff for details.

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

Technical Drawings



RGD-5-30



Static Vertical Allowable Load

Fz 150 N

Allowable Loading Moment

Mx 2 N·m

My 1.5 N·m

Mz 2.5 N·m

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

Parameters

Product Parameter

Gripping force (per jaw)	2-5.5 N
Stroke	30 mm
Rated torque	0.1 N·m
Peak torque *①	0.25 N·m
Rotary range	Infinite Rotating
Recommended workpiece weight *②	0.05 kg
Max. rotation speed	1500 °/s
Rotary backlash	Zero backlash
Repeat accuracy (swiveling)	± 0.1 °
Repeat accuracy (position)	± 0.02 mm
Opening/closing time	0.5 s/0.5 s
Weight	1 kg(without brake) 1.02 kg(with brake)
Size	149 mm x 50 mm x 50 mm Rotary Diameter:83.6mm

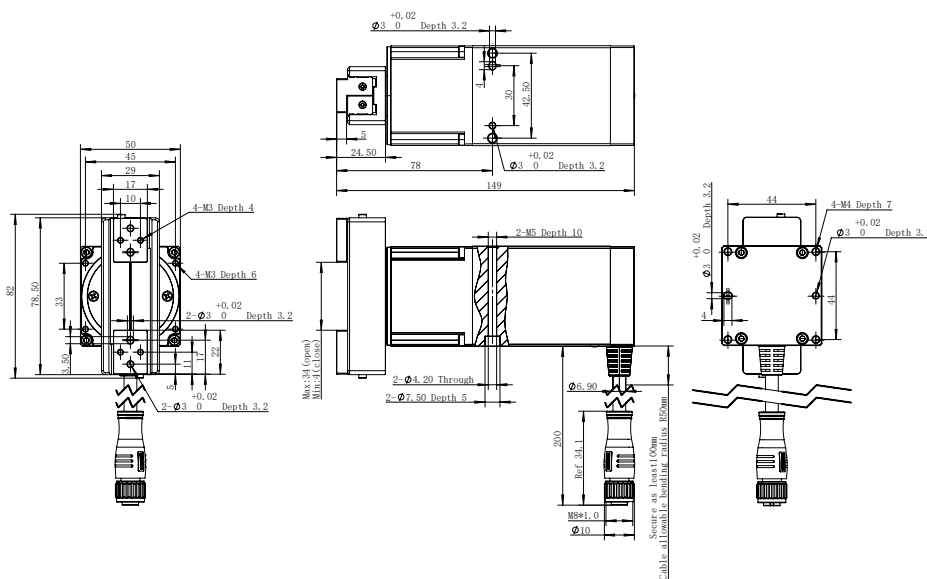
Working Environment

Communication interface	Modbus RTU (RS485)
Rated voltage	24 V DC ± 10%
Rated current	1.2 A
Peak current	2.5 A
IP class	IP 40
Recommended environment	0~40°C, under 85% RH

Certification CE, FCC, RoHS

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

Technical Drawings



RGD-35-14



Parameters

Product Parameter

Gripping force (per jaw)	10-35 N
Stroke	14 mm
Rated torque	0.1 N·m
Peak torque * ^①	0.25 N·m
Rotary range	Infinite Rotating
Recommended workpiece weight * ^②	0.35 kg
Max. rotation speed	1500 °/s
Rotary backlash	Zero backlash
Repeat accuracy (swiveling)	± 0.1 °
Repeat accuracy (position)	± 0.02 mm
Opening/closing time	0.5 s/0.5 s
Weight	0.86 kg (without brake) 0.88 kg (with brake)
Size	149 mm x 50 mm x 50 mm Rotary Diameter: 48.7 mm

Working Environment

Communication interface	Modbus RTU (RS485)
Rated voltage	24 V DC ± 10%
Rated current	1.2 A
Peak current	2.5 A
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

Static Vertical Allowable Load

Fz 150 N

Allowable Loading Moment

Mx 2 N·m

My 1.5 N·m

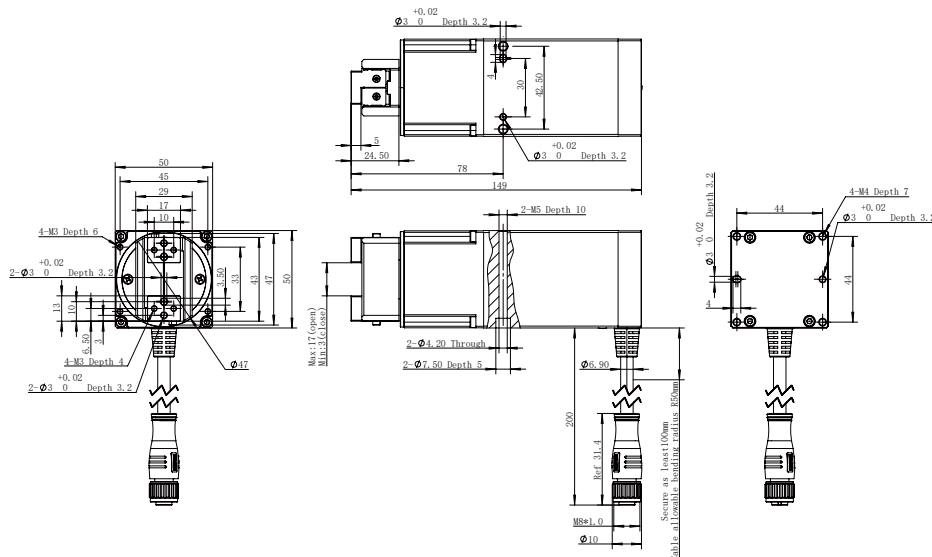
Mz 2.5 N·m

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

Technical Drawings



RGD-35-30



Static Vertical Allowable Load

Fz 150 N

Allowable Loading Moment

Mx 2 N·m

My 1.5 N·m

Mz 2.5 N·m

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

Parameters

Product Parameter	
Gripping force (per jaw)	10-35 N
Stroke	30 mm
Rated torque	0.1 N·m
Peak torque * ^①	0.25 N·m
Rotary range	Infinite Rotating
Recommended workpiece weight * ^②	0.35 kg
Max. rotation speed	1500 °/s
Rotary backlash	Zero backlash
Repeat accuracy (swiveling)	± 0.1°
Repeat accuracy (position)	± 0.02 mm
Opening/closing time	0.7 s/0.7 s
Weight	1 kg(without brake) 1.02 kg(with brake)
Size	149 mm x 50 mm x 50 mm Rotary Diameter:83.6mm

Working Environment

Communication interface	Modbus RTU (RS485)
Rated voltage	24 V DC ± 10%
Rated current	1.2 A
Peak current	2.5 A
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

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Technical Drawings

