RGI Series
Electric Rotary Gripper

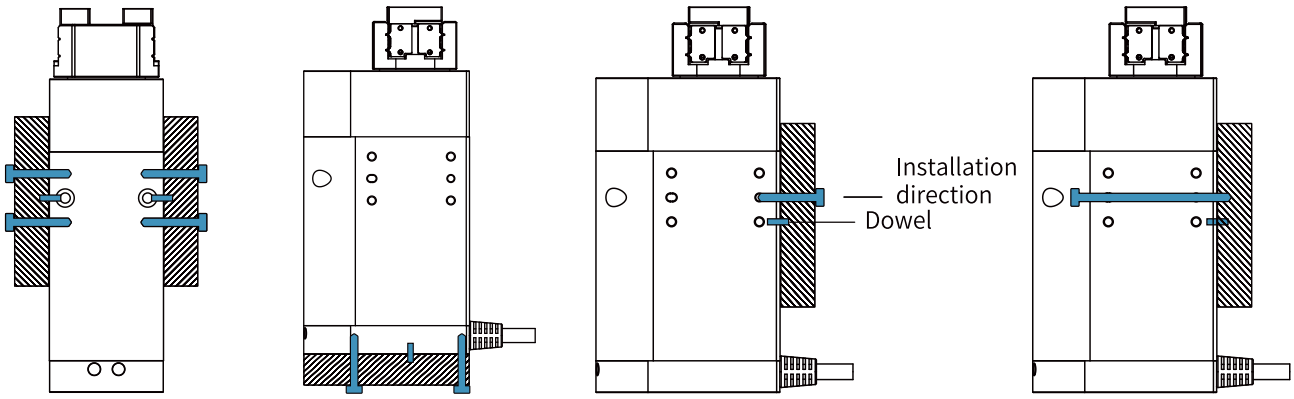
RGI (Standard)
RGI-100-14
RGI-100-22
RGI-100-30

RGIC (Compact)
RGIC-35-12
RGIC-100-35

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

Installation

1. Side installation: use side screw holes for installation
2. Bottom installation : use bottom screw holes for installation
3. Rear installation: use rear screw holes for installation
4. Front installation: Install with front screw holes



Product Feature

● Gripping & Infinite Rotation

The unique structural design in the industry can realize the 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.

Application

Medical automation reagents, blood samples, nucleic acids and other sample processing scenarios such as opening and closing covers, scaning code detection, etc.; RGI-100 series comes standard with fingertips and can be adapted to 10 mix 1 and 20 mix 1 size tubes to meet the needs of large-scale nucleic acid sampling.

RGI-100

Electric Rotary Gripper

Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Other
RGI	100	14	O	S	M1	L5	J0	F0	0
		14	O Without Brake	S Side	M1 Modbus (RS485)+I/O (NN) ★①★⑤	LX Without Extend Cable	J0 Without Fingertip	F0 Without Flange	0 Without USB to RS-485 Converter
		22		B bottom	M2 Modbus (RS485)+I/O (PP)	L1 1m Cable	J1 Standard Fingertip		4 USB to RS-485 Converter
		30			M3 Modbus (RS485)+I/O (NP)	L3 3m Cable			
					M4 Modbus (RS485)+I/O (PN)	L5 5m Cable			
						L10 10m Cable			

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

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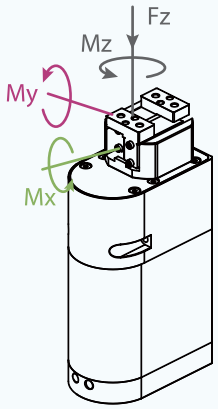
RGI-100-14 Parameters

Product Parameter	
Stroke	14 mm
Gripping force (per jaw)	30~100 N
Rated torque	0.5 N·m
Peak torque	1.5 N·m
Rotary range	Infinite Rotating
Recommended workpiece weight(Fingertip included)*②	1.5 kg
Max. rotation speed	2160 °/s
Repeat accuracy (swiveling)	± 0.05 °
Repeat accuracy (position)	± 0.02 mm
Opening/closing time	0.6 s/0.6 s
Weight	1.28 kg
Size	158 x 75.5 x 47 mm Rotaty Diameter：47.1 mm

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



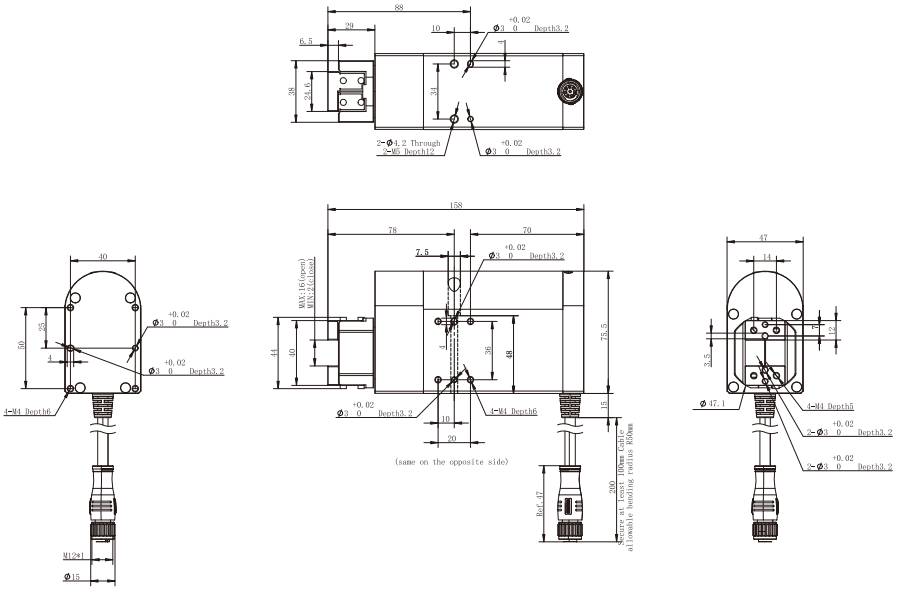
Static Vertical Allowable Load	
Fz	150 N

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

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

*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.
*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.

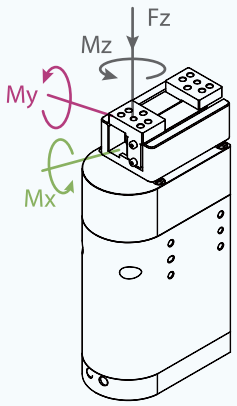
Technical Drawings



RGI-100-22 Parameters

Product Parameter	
Stroke	22 mm
Gripping force (per jaw)	30~100 N
Rated torque	0.5 N·m
Peak torque	1.5 N·m
Rotary range	Infinite Rotating
Recommended workpiece weight(Fingertip included)*②	1.5 kg
Max. rotation speed	2160 °/s
Repeat accuracy (swiveling)	± 0.05 °
Repeat accuracy (position)	± 0.02 mm
Opening/closing time	0.65 s/0.65 s
Weight	1.28 kg
Size	158 x 75.5 x 47 mm Rotaty Diameter：67.1 mm

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



Static Vertical Allowable Load	
Fz	200 N

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

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

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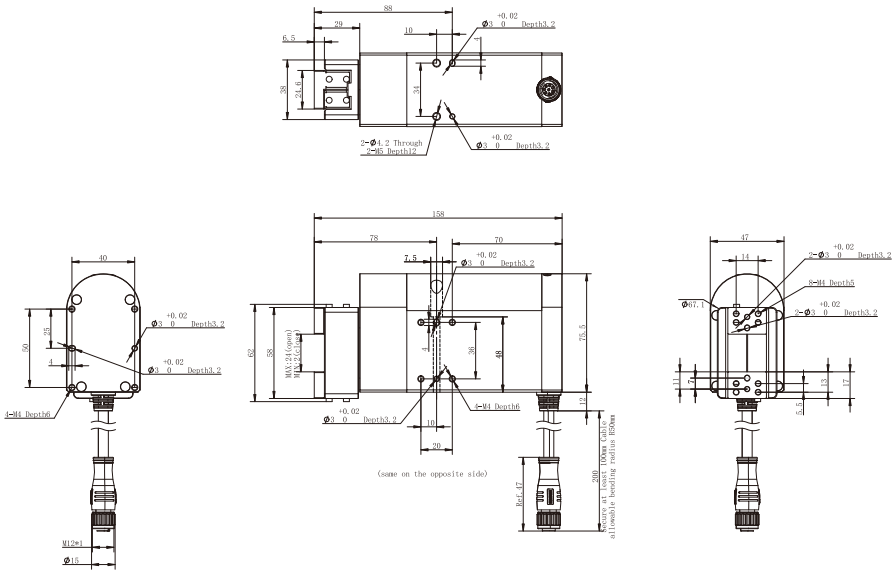
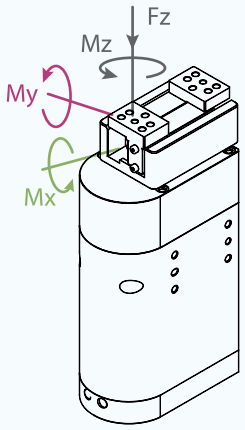
Technical Drawings



RGI-100-30 Parameters

Product Parameter	
Stroke	30 mm
Gripping force (per jaw)	30~100 N
Rated torque	0.5 N·m
Peak torque	1.5 N·m
Rotary range	Infinite Rotating
Recommended workpiece weight(Fingertip included)*②	1.5 kg
Max. rotation speed	2160 °/s
Repeat accuracy (swiveling)	± 0.05 °
Repeat accuracy (position)	± 0.02 mm
Opening/closing time	0.7 s/0.7 s
Weight	1.28 kg
Size	158 x 75.5 x 47 mm Rotaty Diameter：84.8 mm

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



Static Vertical Allowable Load	
Fz	250 N

Allowable Loading Moment	
Mx	4.5 N·m
My	5 N·m
Mz	7 N·m

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

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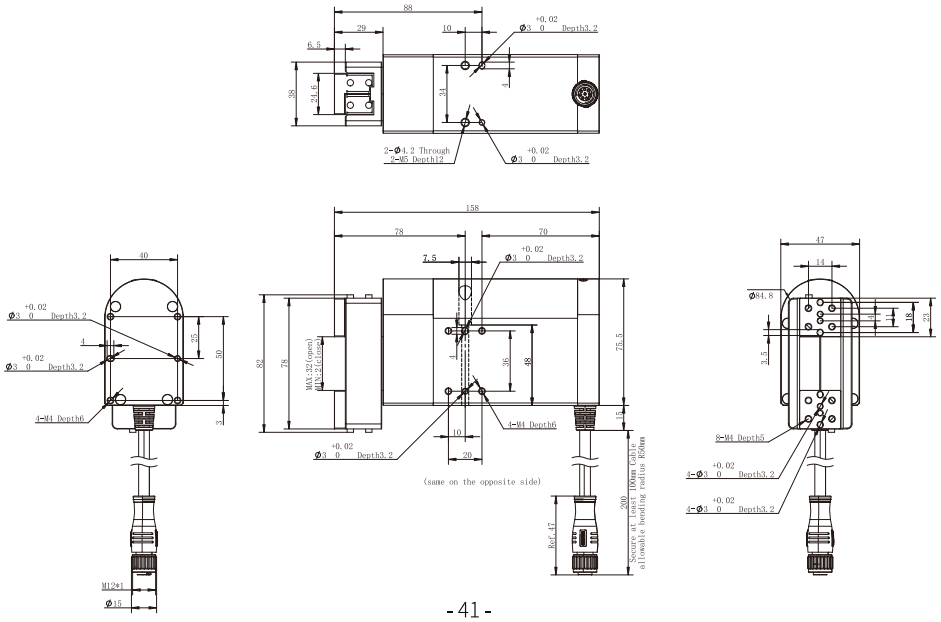
Technical Drawings



RGIC-35-12

Electric Rotary Gripper

Selection Method

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

Brake		Cable Direction		Communication Protocol ★① ★⑤		Cable Selection		Fingertip Selection		FLange selection		Other	
O	Without Brake	S	Side	M1	Modbus (RS485)+I/O (NN)	LX	Without Extend Cable	J0	Without Fingertip	F0	Without Flange	0	Without USB to RS-485 Converter
		B	bottom	M2	Modbus (RS485)+I/O (PP)	L1	1m Cable	J1	Standard Fingertip			4	USB to RS-485 Converter
				M3	Modbus (RS485)+I/O (NP)	L3	3m Cable						
				M4	Modbus (RS485)+I/O (PN)	L5	5m Cable						
						L10	10m Cable						

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

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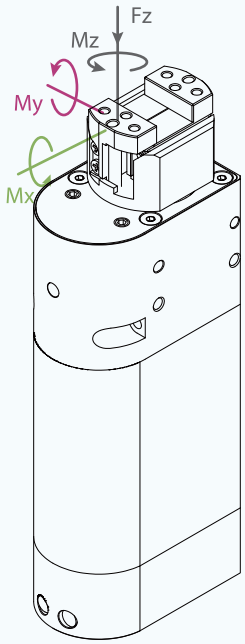
Parameters

Product Parameter	
Gripping force (per jaw)	13~35 N
Stroke	12 mm
Rated torque	0.2 N·m
Peak torque	0.5 N·m
Rotary range	Infinite Rotating
Recommended workpiece weight(Fingertip included)*②	0.5 kg
Max. rotation speed	2160 °/s
Repeat accuracy (swiveling)	± 0.05 °
Repeat accuracy (position)	± 0.02 mm
Opening/closing time	0.6 s/0.6 s
Weight	0.64 kg
Size	150 mm x 53 mm x 34 mm Rotaty Diameter: 33mm

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

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



Static Vertical Allowable Load	
Fz	100 N

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

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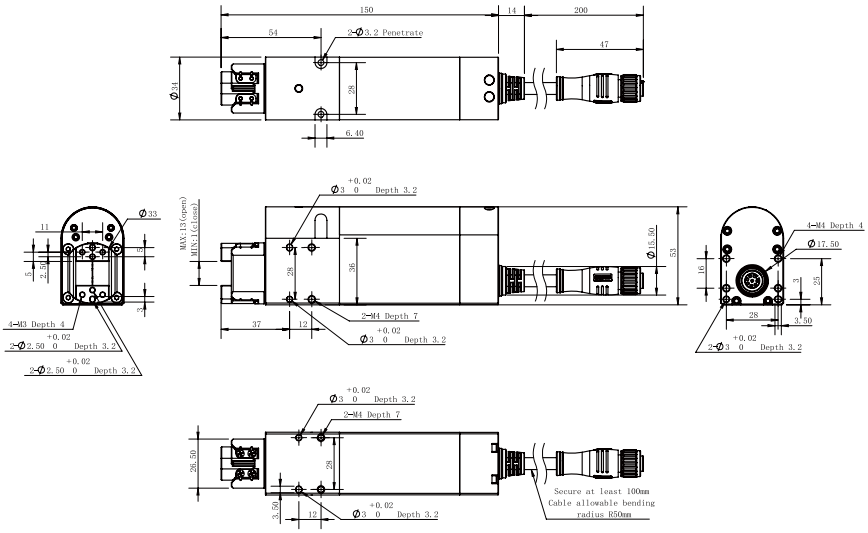
*④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Technical Drawings



RGIC-100-35

Electric Rotary Gripper

Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	FLange selection	Other
RGIC	100	35	O	S	M	L5	J0	F0	0

- **Brake**: O Without Brake
- **Cable Direction**: S Side; B bottom
- **Communication Protocol**: M Modbus (RS485) ★④
- **Cable Selection**: LX Without Extend Cable; L1 1m Cable; L3 3m Cable; L5 5m Cable; L10 10m Cable
- **Fingertip Selection**: J0 Without Fingertip; J1 Standard Fingertip
- **FLange selection**: F0 Without Flange
- **Other**: 0 Without USB to RS-485 Converter; 4 USB to RS-485 Converter

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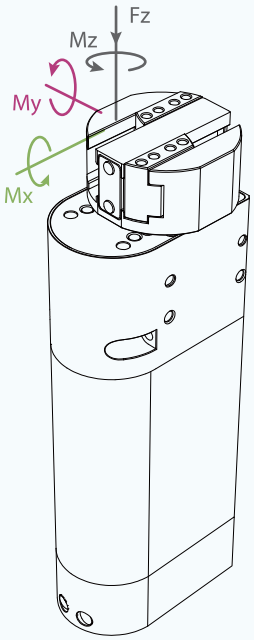
Parameters

Product Parameter	
Gripping force (per jaw)	40~100 N
Stroke	35 mm
Rated torque	0.35 N·m
Peak torque	1.5 N·m
Rotary range	Infinite Rotating
Recommended workpiece weight(Fingertip included)*①	1 kg
Max. rotation speed	1400 °/s
Repeat accuracy (position)	± 0.02 mm
Opening/closing time	0.9 s/0.9 s
Weight	0.65 kg
Size	159 mm x 53 mm x 34 mm Rotaty Diameter: 41 mm

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

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



Static Vertical Allowable Load	
Fz	100 N

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

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