

RGI Series Electric Rotary Gripper

RGI (Standard)

RGI-100-14

RGI-100-22

RGI-100-30

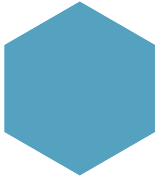
RGIC (Compact)

RGIC-35-12

RGIC-100-35

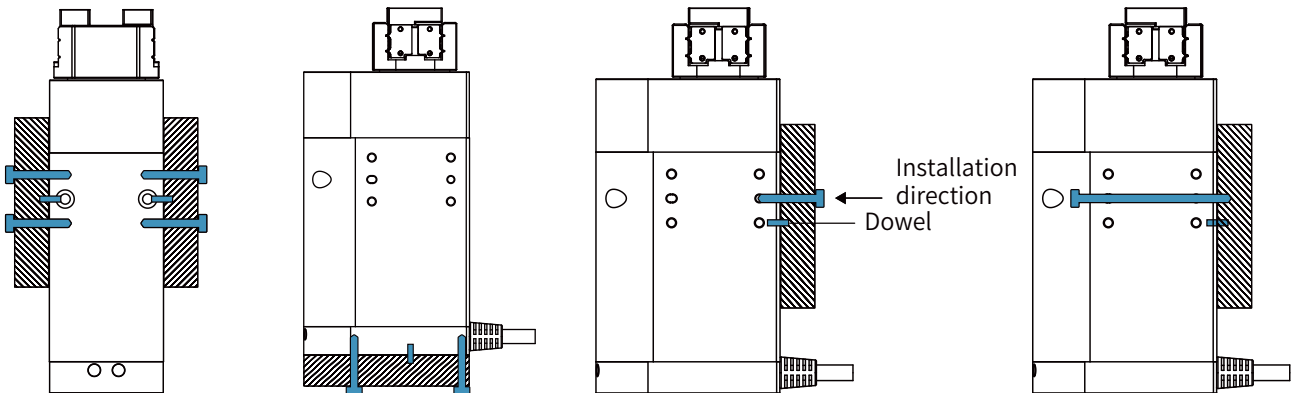


RGI series is the first fully self-developed infinite rotating gripper with a compact and precise structure on the market. It is widely applied in medical automation industry to grip and rotate the test tubes as well as other industries like electronics and New energy industry.



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 simultaneous gripping and infinite rotation on one electric gripper, and solve the winding problem in non-standard design and rotation.

● Compact Double Servo System

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

● High Gripping Force and Torque

The maximum single-sided gripping force is 100N, and the maximum torque is $1.5N \cdot m$. 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, scanning 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

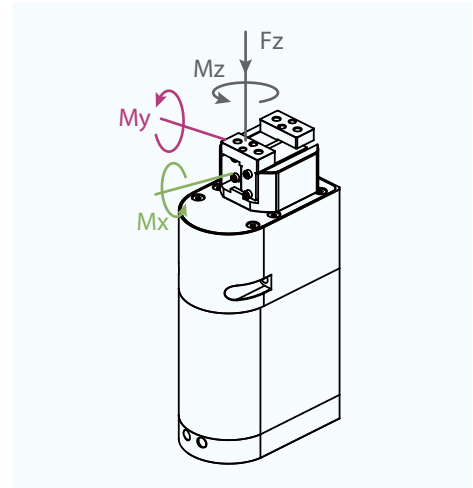
Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection	Flange selection	Other
RGI	100	14	O	S	M1	L5	J0	F0	0
		14 22 30							
			O Without Brake	S Side B bottom	M1 Modbus (RS485)+I/O (NN) M2 Modbus (RS485)+I/O (PP) M3 Modbus (RS485)+I/O (NP) M4 Modbus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

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

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* ^①	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 Rotary Diameter: 47.1 mm

Working Environment	
Communication interface	Standard: Modbus RTU (RS485), Digital I/O Optional: TCP/IP, CAN2.0A, PROFINET, EtherCAT**
Rated voltage	24 V DC ± 10%
Rated current	1.0 A
Peak current	4.0 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 2.5 N·m

My 3 N·m

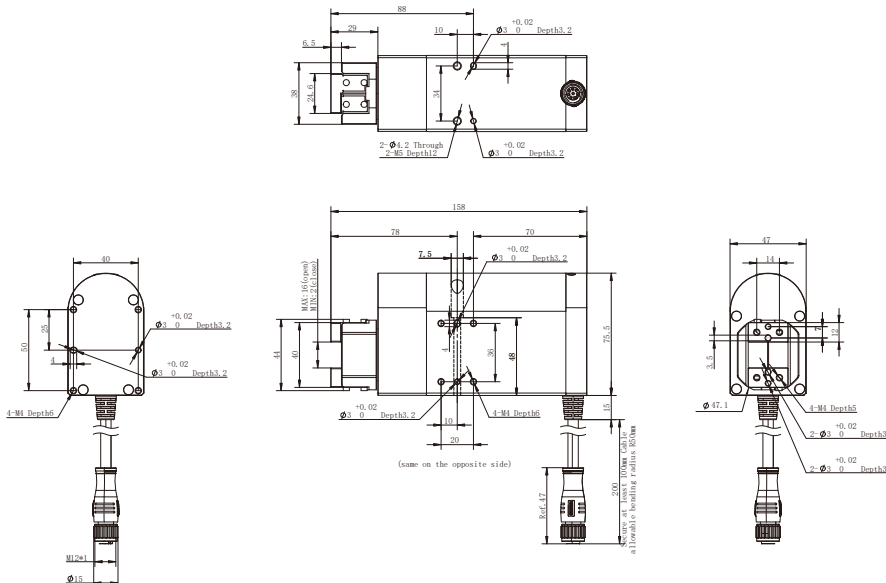
Mz 4 N·m

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

*^① 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.

**^② Use optional communication, need external communication conversion box, please consult the sales staff for details.

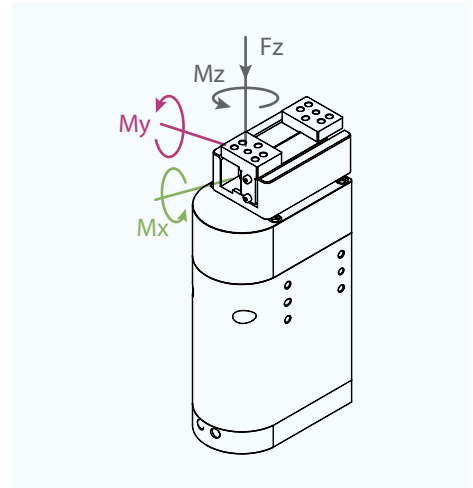
Technical Drawings



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* ^①	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**
Rated voltage	24 V DC ± 10%
Rated current	1.0 A
Peak current	4.0 A
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

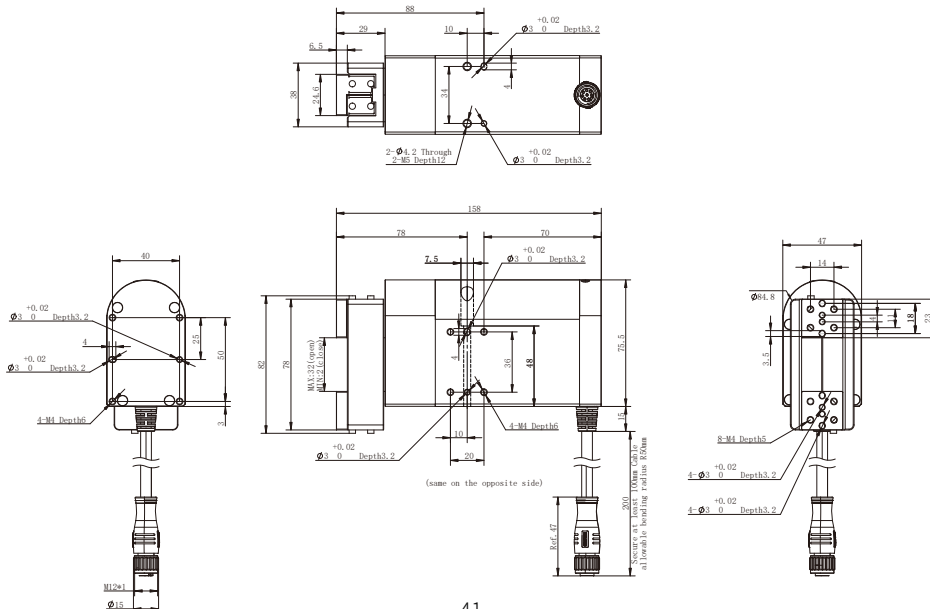
Mz 7 N·m

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<input checked="" type="checkbox"/> Drop Detection	<input checked="" type="checkbox"/> Rotary Adjustable	<input checked="" type="checkbox"/> Self-locking Mechanism	

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Technical Drawings



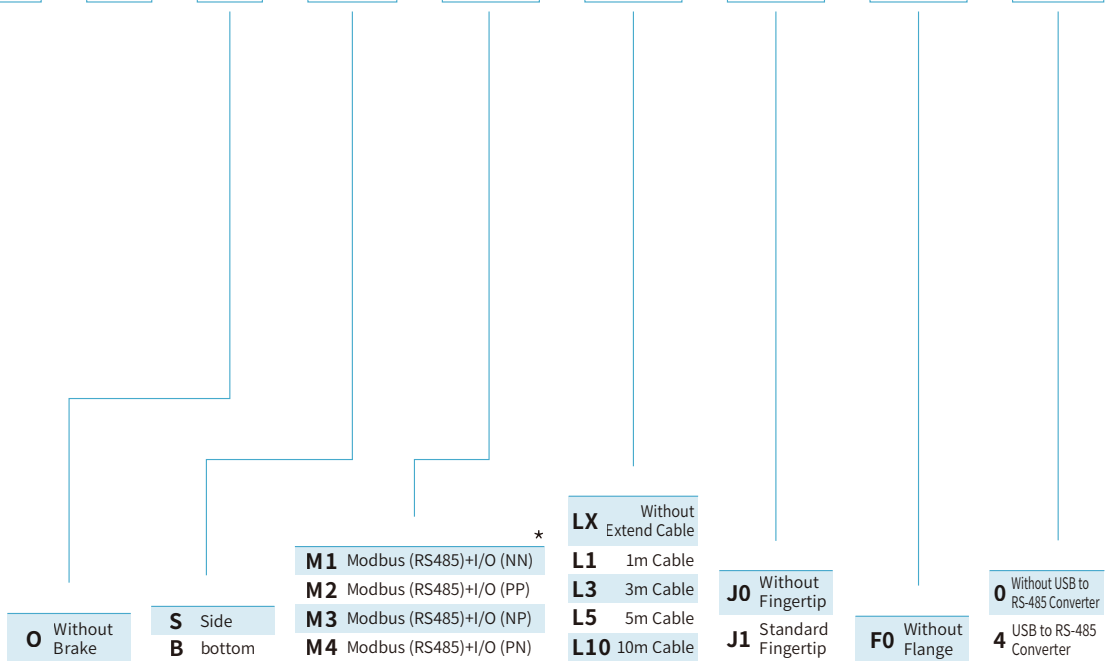
RGIC-35-12

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



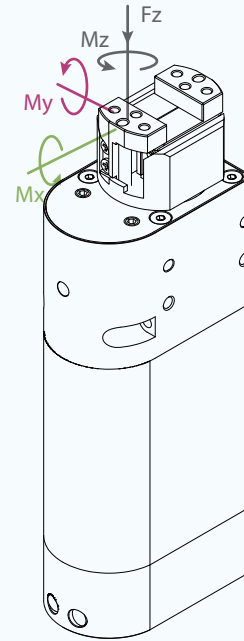
*Note:
I/O(NN): NPN/NPN
I/O(PP): PNP/PNP
I/O(NP): NPN/PNP
I/O(PN): PNP/NPN

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 *①	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 Rotary Diameter: 33mm

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

<input checked="" type="checkbox"/> Build-in Controller	<input checked="" type="checkbox"/> Gripping Force Adjustable	<input checked="" type="checkbox"/> Position Adjustable	<input checked="" type="checkbox"/> Speed Adjustable	<input checked="" type="checkbox"/> Drop Detection	<input checked="" type="checkbox"/> Rotary Adjustable	<input checked="" type="checkbox"/> Self-locking Mechanism
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Static Vertical Allowable Load

Fz 100 N

Allowable Loading Moment

Mx 1.5 N·m

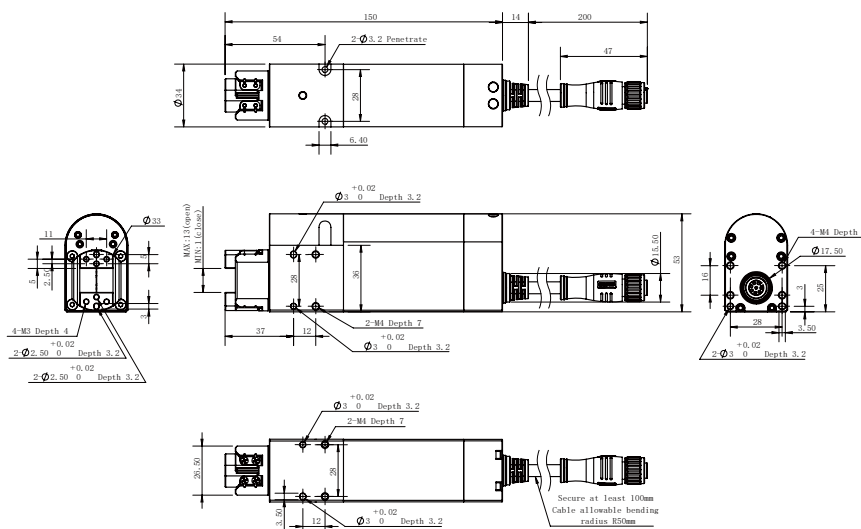
My 1.1 N·m

Mz 2.1 N·m

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Technical Drawings

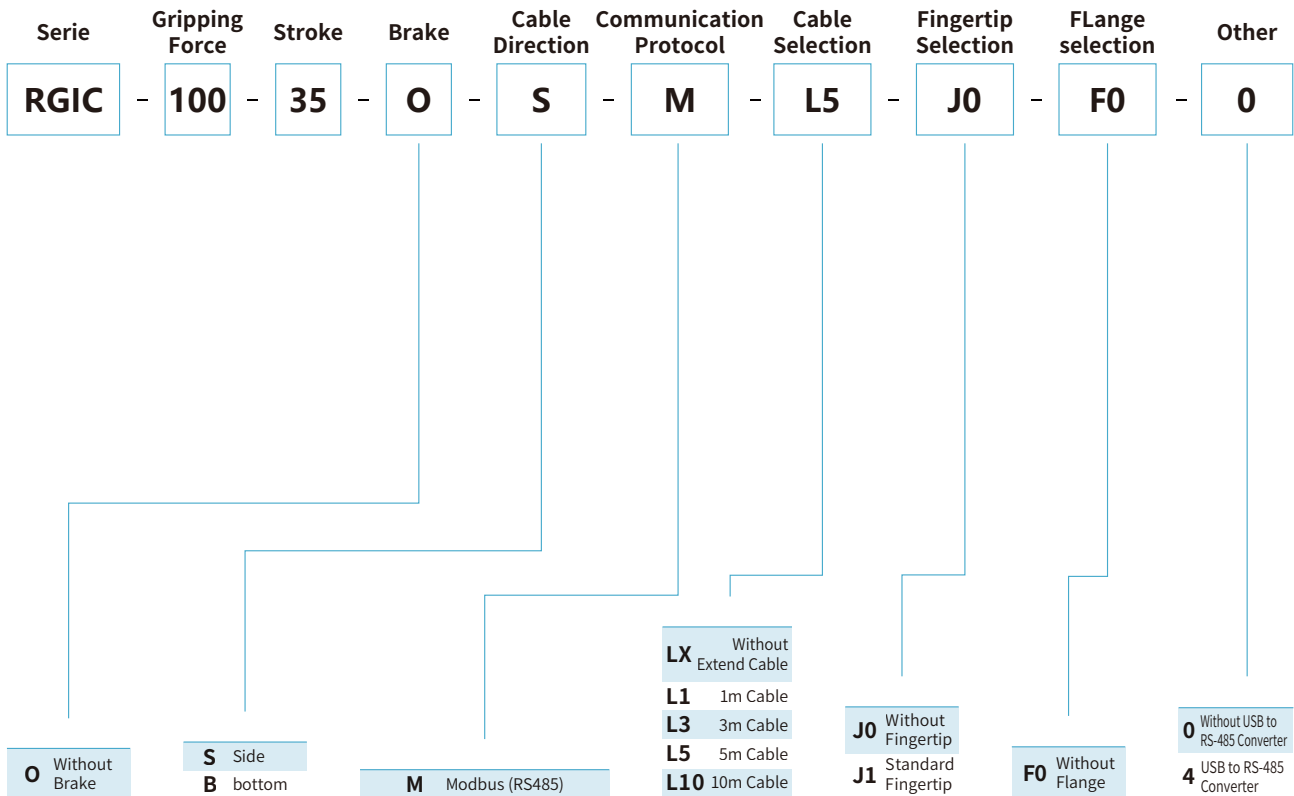


RGIC-100-35

Electric Rotary Gripper



Selection Method

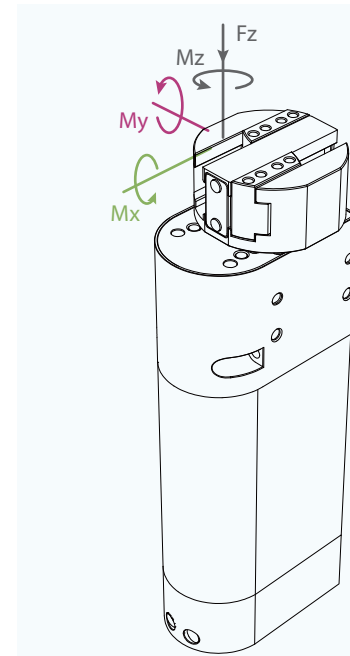


Parameters

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 ^{*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 Rotary 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%
Rated current	2.0 A
Peak current	5.0 A
IP class	IP 40
Recommended environment	0~40°C, under 85% RH
Certification	CE, FCC, RoHS

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

