

# RCP2-GR3LM

ROBO Cylinder, 3-Finger Gripper, Lever Type, Actuator Width 80mm, Pulse Motor

Model Description	<b>RCP2</b>	—	<b>GR3LM</b>	—	<b>I</b>	—	<b>42P</b>	—	<b>30</b>	—	<b>19</b>	—	<b>P1</b>	—	<input type="checkbox"/>	—	<input type="checkbox"/>
	Series		Type		Encoder type		Motor type		Deceleration ratio		Stroke		Compatible Controllers		Cable length		Option
					I: Incremental specification		42P: Pulse motor 42 Size		30: Deceleration ratio 1/30		19: 19 degrees		P1: PCON PSEL		N : None P : 1m S : 3m M : 5m X <input type="checkbox"/> : Length R <input type="checkbox"/> : Robot cable		SB : Shaft bracket FB : Flange bracket

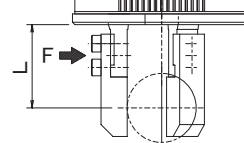
See preceding section for model descriptions.



Technical Reference P. 451

- POINT**  
Notes on selection
- (1) The maximum opening/closing speed indicates the operating speed on one side. The relative operating speed is twice this value.
  - (2) The maximum gripping force is the sum of gripping forces of all fingers when the gripping point distance is 10 and overhang distance is 0. Refer to the explanation on the right when determining the weight of a work part that can be physically transferred.
  - (3) The rated acceleration during movement is 0.3G.

### Grip Force vs. Current-limiting Graph Lever Type (GR3LS/GR3LM)



\*Please note that speed is fixed at 5mm/s when gripping (pushing).

\*The values in the graph below are the grip strength at a gripping point 10mm from the base. The actual gripping force decreases in inverse proportion to the distance from the opening/closing fulcrum.

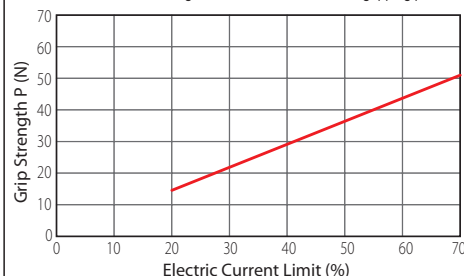
Calculate the actual gripping force using the formulas below:

Effective gripping force (S type) =  $P \times 24 / (L + 14)$

Effective gripping force (M type) =  $P \times 28.5 / (L + 18.5)$

P = Gripping force determined from the graph

L = Distance from the finger attachment surface to the gripping point



### Actuator Specification Table

#### Leads and Payloads

Model	Gear Ratio (mm)	Max. gripping force (N)	Stroke (degrees)
RCP2-GR3LM-I-42P-30-19-P1-①-②	30	51	19

Legend: ① Cable length ② Option

#### Stroke and Max. Opening/Closing Speed

Deceleration ratio	Stroke	19 (degrees)
	30	200

(Unit = mm/s)

### Price List by Stroke

Stroke (mm)	Type code
	<b>GR3LM</b>
10	Encoder type
	Incremental

### ① Cable Length Price List

Type	Cable symbol	Standard price
Standard type	<b>P</b> (1m)	-
	<b>S</b> (3m)	-
	<b>M</b> (5m)	-
Special length	<b>X06</b> (6m) to <b>X10</b> (10m)	-
	<b>X11</b> (11m) to <b>X15</b> (15m)	-
	<b>X16</b> (16m) to <b>X20</b> (20m)	-
Robot cable	<b>R01</b> (1m) to <b>R03</b> (3m)	-
	<b>R04</b> (4m) to <b>R05</b> (5m)	-
	<b>R06</b> (6m) to <b>R10</b> (10m)	-
	<b>R11</b> (11m) to <b>R15</b> (15m)	-
	<b>R16</b> (16m) to <b>R20</b> (20m)	-

\*See P374 for maintenance cables.

### ② Option Price List

Title	Option code	See page	Standard price
Shaft bracket	<b>SB</b>	→P445	-
Flange bracket	<b>FB</b>	→P437	-

### Actuator Specification

Item	Description
Drive System	Worm gear + Worm wheel gear
Positioning Repeatability	±0.01 degrees
Backlash	1° or less per side (fingers always pressured to open side via spring)
Weight	1.1kg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

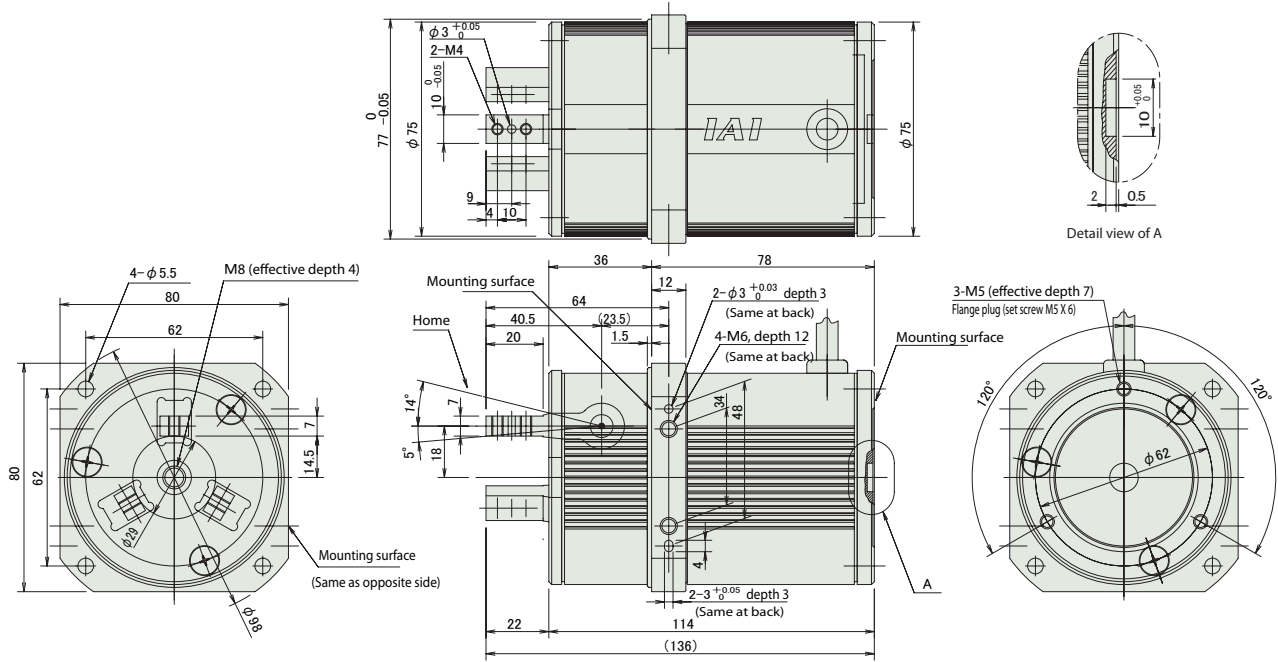
Dimensional Drawings

CAD drawings can be downloaded from the website. [www.intelligentactuator.com](http://www.intelligentactuator.com)



\* During home return, the fingers return along a line expanding outward by 1° from the home. Pay attention to prevent contact between the fingers and surrounding parts.  
 \* See P374 for motor-encoder cable details.

Information on special orders **P. 454**



Weight (kg) 1.1

Compatible Controllers

The RCP2 series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Max. positioning points	Input power	Power-supply capacity	Standard price	See page	
Positioner type		PCON-C-42PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	→P365	
Safety category compatible positioner type		PCON-CG-42PI-NP-2-0					-		
Solenoid valve type		PCON-CY-42PI-NP-2-0	Same as solenoid valve controlled operation enabled	3 points			-		
Pulse series input type (differential line driver specification)		PCON-PL-42PI-NP-2-0	Differential line driver compatible pulse series input type	(-)			-		
Pulse series input type (open collector specification)		PCON-PO-42PI-NP-2-0	Open collector compatible pulse series input type				-		
Serial communication type		PCON-SE-42PI-NP-0-0	Serial communications special type	64 points			-		
Field network type		RPCON-42P	Field network dedicated type	768 points			-		→P343
Program control type		PSEL-C-1-42PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points			-		→P395

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W