





### www.actuator.ru тел.:(495) 662-87-56, e-mail: iai@actuator.ru

	Slider type	Straight motor type		58mm wide	ERC2-SA6C	3
				68mm wide	ERC2-SA7C	5
	Rod type	Standard type		58mm wide	ERC2-RA6C	7
ERC2				68mm wide	ERC2-RA7C	9
		Guide-equipped	Single guide type	58mm wide	ERC2-RGS6C	11
series				68mm wide	ERC2-RGS7C	13
			Double guide type	58mm wide	ERC2-RGD6C	15
				68mm wide	ERC2-RGD7C	17

## RC2-SA6

Controller Integrated, Slider Type, Actuator Dimensions 58mm, Pulse Motor, Straight Type

■ Model Description ERC2 — SA6C — Motor type I/OType Cable length I: Incremental N: None P: 1m S: 3m M: 5m 12: 12mm specification (NPN) type NM: Reversed-home Specification 6: 6mm XX 🔲: Length designation 600:600mm PN: PIO 3: 3mm W□□: Cable with connector (set in 50-mm steps) (PNP) type R□□: Robot cable SE: SIO type RW□□: Robot cable with connectors See preceding section for model descriptions.



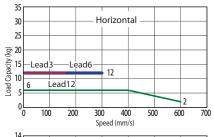
#### **译 P.451 Technical Reference**

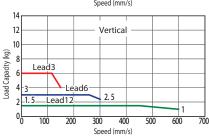
- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the desirable maximum speed in the Actuator Specification Table below
- Since the ERC2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the speed vs. payload graph at right.
- The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation

The above values are maximum acceleration.

#### ■Speed vs. Payload Graph

A characteristic of the ERC2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that there is sufficient speed at the desired payload.





#### Actuator Specification Table

(Note 1) Please note that the maximum payload decreases as the speed increases.

Model	Lead (mm)	Maximum payload (Note 1) Horizontal (kg) Vertical (kg)		Stroke (mm)
ERC2-SA6C-I-PM-12-①-②-③-④	12	Up to 6	Up to 1.5	
ERC2-SA6C-I-PM-6-①-②-③-④	6	12	Up to 3	50 to 600 (every 50mm)
ERC2-SA6C-I-PM-3-①-②-③-④	3	12	Up to 6	

Stroke	50 to 550 (every 50mm)	600 (mm)
	(010.7 0011111)	(11)
12	600	515
6	300	255
	000	200
3	150	125
"		.20
		(Unit = mm/s)
		(01111 - 111111/3)

Legend Stroke CO I/O Type CO Cable Length Options

The by S	Stroke and ② I/O Type					
① Stroke (mm)	Type code SA6C ② By I/O Type					
()	NP/PN	SE				
50	_					
100	_					
150	_					
200	_					
250	_					
300	_					
350	-	_				
400	-	_				
450	_					
500	-	_				
550		_				
600	_	_				

U Option i noo Liot			
Title	Option code	See page	Standard price
Brake	В	P437	_
Reversed-home specification	NM	P442	No charge

#### ③ Cable Length Price List

Туре	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
Special length	X06 (6m) - X10 (10m)	_
	W01 (1m) - W03 (3m)	_
Connectors	W04 (4m) - W05 (5m)	_
	W06 (6m) - W10 (10m)	_
	R01 (1m) - R03 (3m)	_
Robot cable	R04 (4m) - R05 (5m)	_
	R06 (6m) - R10 (10m)	_
Connectors	RW01 (1m) - RW03 (3m)	_
	RW04 (4m) - RW05 (5m)	_
Robot cable	RW06 (6m) - RW10 (10m)	_

See P364 for maintenance cables.

#### Actuator Specification

Item	Description
Drive System	Ball screw $\phi$ 10mm rolled C10
Positioning Repeatability	±0.05mm
Backlash	0.1mm or less
Allowable load moment	Ma: 8.9N·m Mb: 12.7N·m Mc: 18.6N·m
Overhang load length	Ma direction 150mm or less Mb-Mc direction 150mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Direction of allowable load moment



ERC2-SA6C



SIO

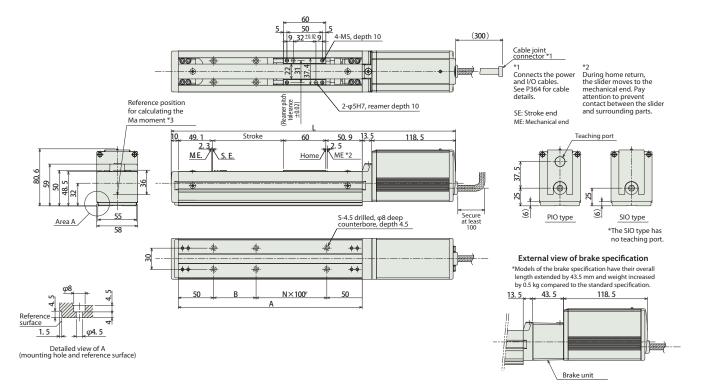
Туре



\* With the reversed-home specification, the dimension on the motor side (distance from the ME to the home) and that on the counter-motor side are reversed

I/O Type (Actuator with Integrated Controller)

ERC2-SA6C-I-PM-□-□-SE-□-□



### ■Dimensions and Weight by Stroke

			0.9	~, ~.								
Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	352	402	452	502	552	602	652	702	752	802	852	902
Α	210	260	310	360	410	460	510	560	610	660	710	760
В	10	60	10	60	10	60	10	60	10	60	10	60
N	1	1	2	2	3	3	4	4	5	5	6	6
S	6	6	8	8	10	10	12	12	14	14	16	16
Weight (kg)	1.9	2.0	2.1	2.3	2.4	2.6	2.7	2.8	3.0	3.1	3.3	3.4

#### I/O Type The integrated controller in the ERC2 Series can be selected from the following 3 types based on the type of external input and output (I/O). Select the type according to your application PIO Simple control type Type ERC2-SA6C-I-PM-□-□-NP-□-□ with up to 16-point 16 (NPN positioning Specifications) This type is compatible with the PIO PNP specification Туре I/O commonly used (See page at ERC2-SA6C-I-PM-D-D-PN-D-D 16 DC24V Maximum 2A P355 overseas. This is the PNP (PNP left) Specifications) specification for the I/O type

IAI

64

Field Network

Connection

Serial Type (Gateway unit used)

ERC2-SA6C 4

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hripper/ otary

Splash

Controlle

Coupling

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ntednted-

Pulse Motor

Pulse Motor

Pulse Motor **56** P

86 P Servo Motor

Servo Motor

Servo Motor

Servo Motor

Servo Motor

Servo Motor

## RC2-SA7

Controller-Integrated, Slider Type, Actuator Diameter 68mm, Pulse Motor, Straight Type

■ Model Description ERC2 - SA7C -**PM** Encoder type Motor type I/O Type Cable length N: None R: Brake 16: 16mm I: Incremental PM: Pulse motor 50:50mm S: 3m 8mm (NPN) type NM: Reversed-home Specification specification X : Length designation
W : Cable with connectors
R : Robot cable 4: 4mm 600:600mm PN: PIO (set in 50-mm steps) (PNP) type SE: SIO type RW□□: Robot cable with con See preceding section model descriptions.

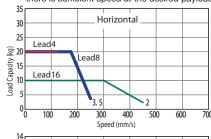


**Technical Reference** 译 P.451

- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the desirable maximum speed in the Actuator Specification Table below.
- Since the ERC2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the speed vs. payload graph at right.
- The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation The above values are maximum acceleration.

#### ■Speed vs. Payload Graph

A characteristic of the ERC2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that there is sufficient speed at the desired payload.





#### Actuator Specification Table

#### ■Leads and Payloads

Model	Lead	Maximum pay	Stroke	
Model	((mm))	Horizontal (kg)	Vertical (kg)	(mm)
ERC2-SA7C-I-PM-16-①-②-③-④	16	Up to 10	Up to 2.5	
ERC2-SA7C-I-PM-8-①-②-③-④	8	Up to 20	Up to 5	50 to 600 (every 50mm)
ERC2-SA7C-I-PM-4-①-②-③-④	4	20	Up to 10	
Legend ① Stroke ② I/O Type ③ Cable Length ④ Options				

### ■Stroke and Maximum Speed

Stroke	50 to 600 (every 50mm)
16	450 <400>
8	250
4	125
< > indicate vertice	cal service. (Unit = mm/s)

#### 1 Price by Stroke and 2 I/O Type

	Type code					
① Stroke	SA7C					
(mm)	② By I/	O Type				
	NP/PN	SE				
50		_				
100		_				
150	_					
200	_					
250	_					
300	_					
350	_					
400	-	_				
450	_					
500	_					
550	_					
600	-	_				

#### 4 Option Price List

Title	Option code	See page	Standard price
Brake	В	P437	_
Reversed-home specification	NM	P442	No charge

### ③ Cable Length Price List

Туре	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
Special length	X06 (6m) - X10 (10m)	_
	W01 (1m) - W03 (3m)	_
Connectors	W04 (4m) - W05 (5m)	_
	W06 (6m) - W10 (10m)	_
	R01 (1m) - R03 (3m)	_
Robot cable	R04 (4m) - R05 (5m)	_
	R06 (6m) - R10 (10m)	_
Connectors	RW01 (1m) - RW03 (3m)	_
	RW04 (4m) - RW05 (5m)	_
Robot cable	RW06 (6m) - RW10 (10m)	_

See P364 for maintenance cables.

#### Actuator Specification

Item	Description
Drive System	Ball screw
Positioning Repeatability	±0.05mm
Backlash	0.1mm or less
Allowable load moment	Ma: 13.8N·m Mb:19.7N·m Mc: 29.0N·m
Overhang load length	Ma direction 150mm or less Mb-Mc direction 150mm or less
Ambient operating temperature humidity	0 to 40°C, 85% RH or less (non-condensing)

Direction of allowable load moment

Overhang load length



Pulse Motor

86 P

10 w Servo Motor

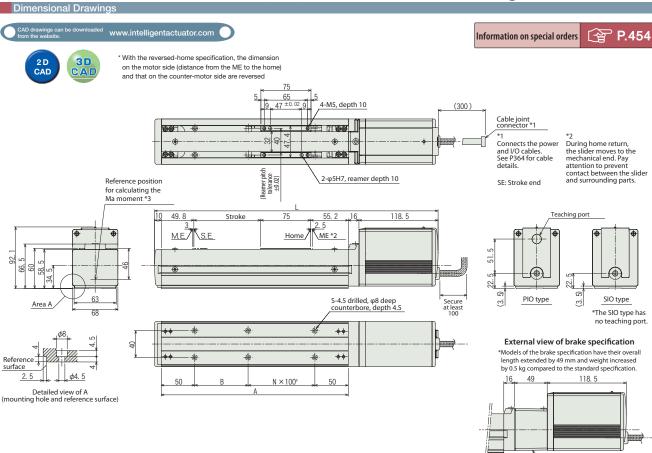
20 w Servo Motor

30 w

60 w Servo Motor

100 w Servo Motor

Servo Motor



■Dimensions and Weight by Stroke

				,								
Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	374.5	424.5	474.5	524.5	574.5	624.5	674.5	724.5	774.5	824.5	874.5	924.5
Α	230	280	330	380	430	480	530	580	630	680	730	780
В	30	80	30	80	30	80	30	80	30	80	30	80
N	1	1	2	2	3	3	4	4	5	5	6	6
S	6	6	8	8	10	10	12	12	14	14	16	16
Weight (kg)	3.1	3.2	3.4	3.6	3.7	3.9	4.0	4.2	4.3	4.5	4.6	4.8

Brake unit

#### I/O Type (Integrated Controller) I/O Type The integrated controller in the ERC2 Series can be selected from the following 3 types based on the type of external input and output (I/O). Select the type according to your application PIO Simple control type Туре ERC2-SA7C-I-PM-□-□-NP-□-□ with up to 16-point 16 (NPN positioning Specifications) This type is compatible with the PIO PNP specification Type (See page I/O commonly used Maximum 2A ERC2-SA7C-I-PM-D-D-PN-D-D DC24V 16 P355 overseas. This is the PNP specification (PNP at left) Specifications) for the I/O type Field Network SIO Connection ERC2-SA7C-I-PM-□-□-SE-□-□ 64 Туре Serial Type (Gateway unit used)

#### RC2-RA6 Integrated Controller, Rod Type, Actuator Dimensions 58mm, Pulse Motor, Straight Type ■ Model Description ERC2 — RA6C — Motor type I/O Type P: 1m M: 5m R: Brake NP: PIO 12: 12mm 50:50mm specification (NPN) type S: 3m NM: Reversed-home Specification 6: 6mm

3: 3mm



■Speed vs. Payload Graph

PN: PIO

SE: SIO type

(PNP) type

300:300mm

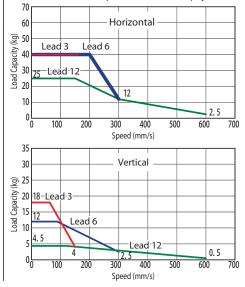
(set in 50-mm steps)

A characteristic of the ERC2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that there is sufficient speed at the desired payload.

X□□: Length designation
W□□: Cable with connectors

RW : Robot cable with connectors

R□□: Robot cable



See preceding section for model descriptions

- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the desirable maximum speed in the Actuator Specification Table below.
- Since the ERC2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the speed vs. payload graph at right.
- The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with 3 lead)

The above values are maximum acceleration.

(4) Horizontal payload is the value when external guides are used.

#### Actuator Specification Table ■Leads and Payloads (Note 1) Please note that the maximum payload decreases as the speed increases. Maximum payload (Note 1) Stroke Model Horizontal (kg) Vertical (kg) (mm) ERC2-RA6C-I-PM-12-1 - 2 - 3 - 4 12 Up to 25 Up to 4.5 78 50 to 300 ERC2-RA6C-I-PM-6-1 - 2 - 3 - 4 6 Up to 40 Up to 12 157 (every 50mm ERC2-RA6C-I-PM-3-1 - 2 - 3 - 4

3

40

Up to 18

304

50 to 250 12 600 500 6 250 300 150 125 (Note 2) See pushing force graph on P488. (Unit = mm/s)

■Stroke and Maximum Speed

1 Price by Stroke and 2 I/O Type

Legend ① Stroke ② I/O Type ③ Cable Length ④ Options

Trice by Stroke and 2 1/0 Type						
@ a	Type code RA6C					
① Stroke	I RA	16C				
(mm)	② By I/O Type					
	NP/PN	SE				
50	_					
100	_					
150	_					
200	_					
250	-	_				
300		_				

2 Cabla Langth Drice Lie

3 Cable Length Price List									
Туре	Cable symbol	Standard price							
	<b>P</b> (1m)	_							
Standard type	<b>S</b> (3m)	-							
	<b>M</b> (5m)	-							
Special length	X06 (6m) - X10 (10m)	-							
	W01 (1m) - W03 (3m)								
Connectors	W04 (4m) - W05 (5m)	-							
	W06 (6m) - W10 (10m)	ı							
	R01 (1m) - R03 (3m)	-							
Robot cable	R04 (4m) - R05 (5m)	-							
	R06 (6m) - R10 (10m)	_							
Connectors	RW01 (1m) - RW03 (3m)	_							
	RW04 (4m) - RW05 (5m)	_							
Robot cable	RW06 (6m) - RW10 (10m)	1							
Can D264 for maint	See P364 for maintenance cables								

### 4 Option Price List

Title	Option code	See page	Standard price
Brake	В	P437	_
Foot bracket	FT	P440	_
Reversed-home specification	NM	P442	_

#### Actuator Specification

Actuator openioation						
Item	Description					
Drive System	Ball screw $\phi$ 10mm rolled C10					
Positioning Repeatability	±0.05mm					
Backlash	0.1mm or less					
Rod Diameter	φ22mm special SUS pipe					
Non-rotary Rod Precision	±1.5 degree					
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)					

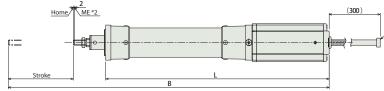




Caution -

Do not apply an external force on the rod in any direction other than the moving direction of the rod.

If the rod receives an external force from the right-angle direction or rotating direction, the detent may be damaged.

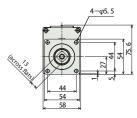


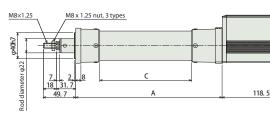
Cable joint connector \*1

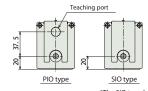
> Connects the power and I/O cables. See P364 for cable details.

\*2
During home return, the rod retracts to the mechanical end . Pay attention to prevent contact between the rod and surrounding parts.

ME: mechanical end



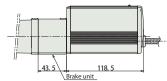




\*The SIO type has no teaching port.

External view of brake specification

\*Models of the brake specification have their overall length extended by 43.5 mm and weight increased by 0.5 kg compared to the standard specification.



#### ■Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300
L	293.5	343.5	393.5	443.5	493.5	543.5
Α	175	225	275	325	375	425
В	393.2	493.2	593.2	693.2	793.2	893.2
С	91	141	191	241	291	341
Weight (kg)	1.6	1.7	1.8	2.0	2.1	2.2

### I/O Type (Integrated Controller)

I/O Type

The integrated controller in the ERC2 Series can be selected from the following 3 types based on the type of external input and output (I/O). Select the type according to your application

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity		See page
PIO Type (NPN Specifications		ERC2-RA6C-I-PM-□-□-NP-□-□	Simple control type with up to 16-point positioning	positioning points				Coo page
PIO Type (PNP Specifications		ERC2-RA6C-I-PM-□-□-PN-□-□	This type is compatible with the PNP specification I/O commonly used overseas. This is the PNP specification for the I/O type	16	DC24V	Maximum 2A	(See page at left)	P355
SIO Type		ERC2-RA6C-I-PM-□-□-SE-□-□	Field Network Connection Serial Type (Gateway unit used)	64				

ERC2-RA6C

Slider Type

Type Body

l able Arm/Flat

> Gripper/ Rotary

plash-

Coupling

ct) Reve

Pulse Motor

Pulse Motor

35 P Pulse Motor

Pulse Motor

Pulse Motor **86** P

10 w Servo Motor

20 w Servo Motor

30 W Servo Moto

> 60 w Servo Motor

Servo Motor
100 w

## C2-RA

Integrated Controller, Rod Type, Actuator Dimensions 68mm,

Pulse Motor, Straight Type ■ Model Description ERC2 - RA7C -**PM** I/O Type Encoder type Motor type N: None specification 8: 8mm (NPN) type : Foot Bracket X :: Length designation Reversed-home 4: 4mm 300:300mm PN: PIO W□□: Cable with connectors
R□□: Robot cable Specification (set in 50-mm steps) (PNP) type SE: SIO type RW□□: Robot cable with connectors See preceding section for model descriptions.

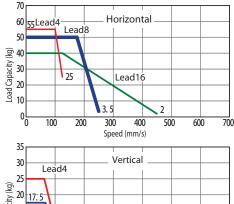


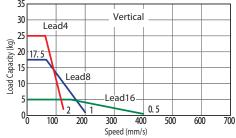
#### Technical Reference [音 P.451

- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the desirable maximum speed in the Actuator Specification Table below.
- Since the ERC2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the speed vs. payload graph at right.
- The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with 4 lead) .
  - The above values are maximum acceleration.
- (4) Horizontal payload is the value when external guides are used.

#### ■Speed vs. Payload Graph

A characteristic of the ERC2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that there is sufficient speed at the desired payload.





#### Actuator Specification Table ■Leads and Payloads

(Note 1) Please note that the maximum payload decreases as the speed increases.

	Model	Lead	Maximum pa		Maximum pushing force	Stroke		Stroke	
	11100001	(mm)	Horizontal (kg)	Vertical (kg)	(N) (Note 2)	(mm)	L	.ead	
	ERC2-RA7C-I-PM-16-①-②-③-④	16	Up to 40	Up to 5	220			16	
	ERC2-RA7C-I-PM-8-①-②-③-④	8	Up to 50	Up to 17.5	441	50 to 300 (every 50mm)		8	
	ERC2-RA7C-I-PM-4-①-②-③-④	4	Up to 55	Up to 25	873			4	
i	Legend ① Stroke ② I/O Type ③ Cable Length ④ Options			(Note 2) See	pushing force (	graph on P488.	*<	> indicate verti	cal service.

#### ■Stroke and Maximum Speed

Stroke	50 to 300 (every 50mm)
16	450 <400>
8	250<200>
4	125

(Unit = mm/s)

#### ① Price by Stroke and ② I/O Type

	Type code				
① Stroke	RA7C				
(mm)	② By I/O Type				
	NP/PN SE				
50	<del>-</del>				
100	_				
150	_				
200	_				
250	_				
300	-	_			

### ③ Cable Length Price List

Туре	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
Special length	X06 (6m) - X10 (10m)	_
	W01 (1m) - W03 (3m)	_
Connectors	W04 (4m) - W05 (5m)	_
	W06 (6m) - W10 (10m)	_
	R01 (1m) - R03 (3m)	_
Robot cable	R04 (4m) - R05 (5m)	_
	R06 (6m) - R10 (10m)	_
Connectors	RW01 (1m) - RW03 (3m)	_
	RW04 (4m) - RW05 (5m)	_
Robot cable	RW06 (6m) - RW10 (10m)	_

See P364 for maintenance cables.

Actuator Specification

## 4 Option Price List Bi Fo

Title	Option code	See page	Standard price	Item	Description
Brake	В	P437	_	Drive System	Ball screw $\phi$ 12mm rolled C10
Foot bracket	FT	P440	_	Positioning Repeatability	±0.05mm
Reversed-home specification	NM	P442	No charge	Backlash	0.1mm or less
				Rod Diameter	φ30mm special SUS type
				Non-rotary Rod Precision	±1.5 degree
				Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

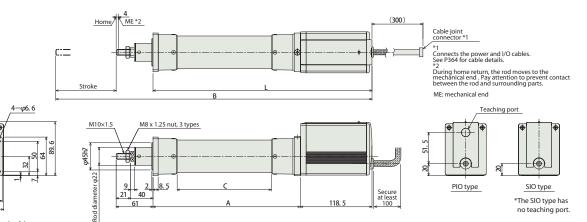




- Caution —

Do not apply external force on the rod in any direction other than the moving direction of the rod.

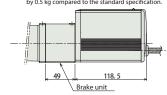
If the rod receives external force from the right-angle direction or rotating direction, the detent may be damaged.



Note: The actual angle of the across flats surface is slightly different

#### External view of brake specification

\*Models of the brake specification have their overall length extended by 49 mm and weight increased by 0.5 kg compared to the standard specification.



#### ■Dimensions and Weight by Stroke

Difficusions and Weight by Stroke							
Stroke	50	100	150	200	250	300	
L	312.5	362.5	412.5	462.5	512.5	562.5	
Α	194	244	294	344	394	444	
В	423.5	523.5	623.5	723.5	823.5	923.5	
С	106	156	206	256	306	356	
Weight (kg)	2.7	2.9	3.0	3.2	3.3	3.5	

### I/O Type (Integrated Controller)

#### I/O Type

The integrated controller in the ERC2 Series can be selected from the following 3 types based on the type of external input and output (I/O). Select the type according to your application

1	Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
1)	PIO Type NPN ifications)		ERC2-RA7C-I-PM-ロ-ロ-NP-ロ-ロ	Simple control type capable of positioning to a maximum of 16 points.	16						
(F	PIO Type PNP ifications)		ERC2-RA7C-I-PM-ロ-ロ-PN-ロ-ロ	This type is compatible with the PNP specification I/O commonly used overseas. This is the PNP specification for the I/O type	16	DC24V	Maximum 2A	(See page at left)	P355		
	SIO Type		ERC2-RA7C-I-PM-D-D-SE-D-D	Field Network Connection Serial Type (Gateway unit used)	64						

IAI

ERC2-RA7C 10

Slide Type

Type

l able Arm/Flat

> Gripper/ Rotary

olash-

Coupling

ct) Rev

Pulse Motor

Pulse Motor

35 P

42 P Pulse Motor

Pulse Motor

10 w

Servo Motor 20 w

Servo Motor

Servo Motor

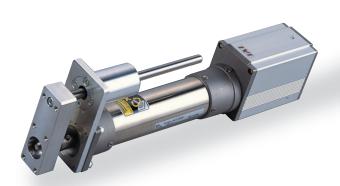
Servo Motor 100 w

150 w

## C2-RGS6

Integrated Controller, Single-guide Rod Type, Actuator Diameter 58mm, Pulse Motor, Straight Type

■ Model Description ERC2 —RGS6C — **PM** Encoder type Motor type N: None 12: 12mm 50:50mm FT : Foot Bracket specification 6: 6mm (NPN) type X□□: Length designation Reversed-home 3: 3mm PN: PIO 300:300mm W□□: Cable with connectors
R□□: Robot cable Specification (set in 50-mm steps) (PNP) type SE: SIO type RW□□: Robot cable with connectors See preceding section for model descriptions.



#### Technical Reference

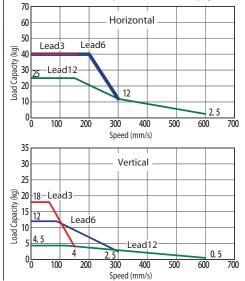
译 P.451



- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs Confirm the desirable maximum speed in the Actuator Specification Table below.
- Since the ERC2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the speed vs. payload graph at right. In addition, use the value minus the guide weight (see page at right) as the payload.
- The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with 3 lead). The above values are maximum acceleration
- (4) Horizontal payload is the value when external guides are used

#### ■Speed vs. Payload Graph

A characteristic of the ERC2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that there is sufficient speed at the desired payload.



#### Actuator Specification Table Leads and Payloads

Leads and Payloads (Note 1)	Please note tr	iat the maximum	i payload decre	eases as the sp	eed increases.
Model	Lead	Maximum pay	Maximum payload (Note 1)		Stroke
lviodei	(mm)	Horizontal (kg)	Vertical (kg)	force (N) (Note 2)	(mm)
ERC2-RGS6C-I-PM-12-①-②-③-④	12	Up to 25	Up to 4.5	78	
ERC2-RGS6C-I-PM-6-①-②-③-④	6	Up to 40	Up to 12	157	50 to 300 (every 50mm)
ERC2-RGS6C-I-PM-3-①-②-③-④	3	40	Up to 18	304	

#### ■Stroke and Maximum Speed

Stroke	50 to 250 (every 50mm)	300 (mm)		
12	600	500		
6	300	250		
3	150	125		

(Note 2) See pushing force graph on P488.

(Unit = mm/s)

#### 1 Price by Stroke and 2 I/O Type

Legend 1 Stroke 2 I/O Type 3 Cable Length 4 Options

Type code					
① Stroke	RGS6C				
(mm)	② By I/O Type				
	NP/PN	SE			
50	<u>-</u>				
100	-	_			
150	-	_			
200	-	_			
250	-	_			
300	_	_			

© 0 pt. 0			
Title	Title Option code		Standard price
Brake	В	P437	_
Foot bracket	FT	P440	_
Reversed-home specification	NM	P442	No charge

#### 3 Cable Length Price List

Туре	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
Special length	X06 (6m) - X10 (10m)	_
	W01 (1m) - W03 (3m)	_
Connectors	W04 (4m) - W05 (5m)	_
	W06 (6m) - W10 (10m)	_
	R01 (1m) - R03 (3m)	_
Robot cable	R04 (4m) - R05 (5m)	_
	R06 (6m) - R10 (10m)	_
Connectors	RW01 (1m) - RW03 (3m)	_
	RW04 (4m) - RW05 (5m)	_
Robot cable	RW06 (6m) - RW10 (10m)	_

See P364 for maintenance cables.

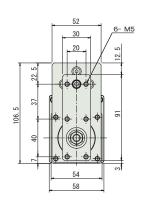
#### Actuator Specification

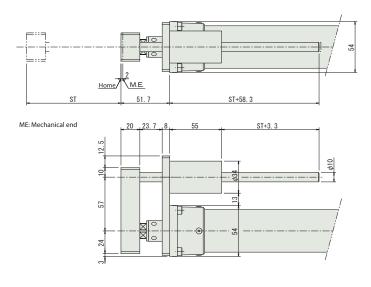
Item	Description
Drive System	Ball screw $\phi$ 10mm rolled C10
Positioning Repeatability	±0.05mm
Backlash	0.1mm or less
Rod Diameter	φ22mm special SUS pipe
Non-rotary Rod Precision	±0.05 degrees
Ambient operating temperature, humidity	0 to 40°C 85% RH or less (non-condensing)

Option Price List









See P8 for actuator dimensions.

#### ■Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300		
Guide weight (kg)	0.2	0.2	0.3	0.3	0.3	0.4		
Guide + actuator weight (kg)	1.8	1.9	2.1	2.3	2.4	2.6		

## I/O Type (Integrated Controller)

#### I/O Type

The integrated controller in the ERC2 Series can be selected from the following 3 types based on the type of external input and output (I/O). Select the type according to your application

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page			
PIO Type (NPN Specifications)		ERC2-RGS6C-I-PM-□-□-NP-□-□	Simple control type with up to 16-point positioning	16		Maximum 2A					
PIO Type (PNP Specifications)		ERC2-RGS6C-I-PM-□-□-PN-□-□	This type is compatible with the PNP specification I/O commonly used overseas. This is the PNP specification for the I/O type	16	DC24V		(See page at left)	P355			
SIO Type		ERC2-RGS6C-I-PM-🗆-🗆-SE-🗆-🗆	Field Network Connection Serial Type (Gateway unit used)	64							



ERC2-RGS6C 12

ontroller- S

Type

Arm/Flat

Gripper, Rotary Type

C Pantoom

Splash-

Coupling

rect)

Versedounted

20 P

28 P Pulse Motor

Pulse Motor

Pulse Motor **56** P

Pulse Motor

10 w

Servo Motor

Servo Motor

Servo Motor

Servo Motor 100 w

Servo Motor

## RC2-RGS7

Integrated Controller, Rod Type, Actuator Diameter 68mm, Pulse Motor, Straight Type

■ Model Description **ERC2** — **RGS7C** — I Type

16: 16mm 8: 8mm 4: 4mm

50:50mm 300:300mm (set in 50-mm steps)

I/O Type NP: PIO (NPN) type (PNP) type

SE: SIO type

Cable length P: 1m M: 5m N: None X□□: Length designation
W□□: Cable with connectors R□□: Robot cable

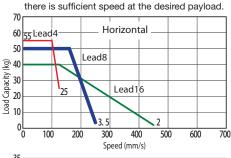
■Speed vs. Payload Graph

FT : Foot Bracket Reversed-home Specification

See preceding section for model descriptions.



specification



A characteristic of the ERC2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that

35 30 Vertical Lead4 25 20 17.5 Capacity (¢ Lead8 ) pg 10 Lead16 400 200 600 Speed (mm/s)

■Stroke and Maximum Speed

**Technical Reference** 

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As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the desirable maximum speed in the Actuator Specification Table below.

Since the ERC2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the speed vs. payload graph at right. In addition, use the value minus the guide weight (see page at right) as the payload.

The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with 4 lead). The above values are maximum acceleration.

(4) Horizontal payload is the value when external guides are used.

### Actuator Specification Table

■Leads and Payloads	(Note 1) Pleas	se note th	at the maximum	payload decre	eases as the sp	eed increases.
Model		Lead (mm)	Maximum pay Horizontal (kg)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Maximum pushing force (N) (Note 2)	Stroke (mm)
ERC2-RGS7C-I-PM-16-①-②-③-④		16	Up to 40	Up to 5	220	
ERC2-RGS7C-I-PM-8-①-②-③-④		8	Up to 50	Up to 17.5	441	50 to 300 (every 50mm)
ERC2-RGS7C-I-PM-4-1 - 2 - 3 - 4		4	Up to 55	Up to 25	873	

50 to 300 (every 50mm) 16 450 < 400 > 250 <200> 4 125

1) Price by Stroke and 2 I/O Type

Legend 1 Stroke 2 I/O Type 3 Cable Length 4 Options

© :					
	Type code				
① Stroke	RGS7C				
(mm)	② By I/O Type				
	NP/PN	SE			
50	_	_			
100	_				
150	_	_			
200	_	_			
250	_	_			
300	_				

#### 3 Cable Length Price List

Туре	Cable symbol	Standard price			
	<b>P</b> (1m)	_			
Standard type	<b>S</b> (3m)	_			
	<b>M</b> (5m)	_			
Special length	X06 (6m) - X10 (10m)	_			
	W01 (1m) - W03 (3m)	_			
Connectors	W04 (4m) - W05 (5m)	_			
	W06 (6m) - W10 (10m)	_			
	R01 (1m) - R03 (3m)	_			
Robot cable	R04 (4m) - R05 (5m)	_			
	R06 (6m) - R10 (10m)	_			
Connectors	RW01 (1m) - RW03 (3m)	_			
	RW04 (4m) - RW05 (5m)	_			
Robot cable	RW06 (6m) - RW10 (10m)	_			
Cas DOC4 for maint		•			

\*< > indicate vertical service.

See P364 for maintenance cables.

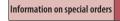
## 4 Option Price List

Title	Option code	See page	Standard price	Ite
Brake	В	P437	_	Drive System
Foot bracket	FT	P440	_	Positioning Re
Reversed-home specification	NM	P442	No charge	Backlash
			<u> </u>	Rod Diameter

Actuator Specification				
Item	Description			
Drive System	Ball screw $\phi$ 12mm rolled C10			
Positioning Repeatability	±0.05mm			
Backlash	0.1mm or less			
Rod Diameter	φ30mm special SUS type			
Non-rotary Rod Precision	±0.05 degrees			
Ambient operating temperature, humidity	0 to 40°C. 85% RH or less (non-condensing)			

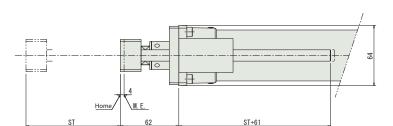
3D CAD



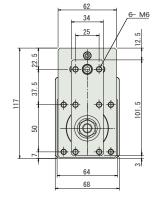


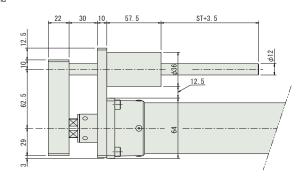






ME: Mechanical end





See actuator dimensions on P10.

#### ■Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300
Guide weight (kg)	0.3	0.3	0.4	0.4	0.5	0.5
Guide + actuator weight (kg)	3.0	3.2	3.4	3.6	3.8	4.0

## I/O Type (Integrated Controller) I/O Type

The integrated controller in the ERC2 Series can be selected from the following 3 types based on the type of external input and output (I/O). Select the type according to your application

ſ	Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
	PIO Type (NPN Specifications)		ERC2-RGS7C-I-PM-□-□-NP-□-□	Simple control type with up to 16-point positioning	16				
	PIO Type (PNP Specifications)		ERC2-RGS7C-I-PM-□-□-PN-□-□	This type is compatible with the PNP specification I/O commonly used overseas. This is the PNP specification for the I/O type	16	DC24V	Maximum 2A	(See page at left)	P355
	SIO Type		ERC2-RGS7C-I-PM-🗆 - 🗆 - SE-🗆 - 🗆	Field Network Connection Serial Type (Gateway unit used)	64				

ERC2-RGS7C 14

Slider Type

Type

Table Arm/Flat

Gripper, Rotary Type

Oleanroom

Splash-

Coupling

irect)

Reversed-mounted

Pulse Motor **20** P

28<sub>P</sub>

Pulse Motor

Pulse Motor

Pulse Motor 86 P

Servo Motor 10 w

Servo Motor

Servo Motor

Servo Motor

Servo Motor

30 v

Servo Motor

100 VV

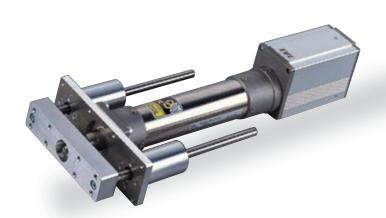
Servo Motor

150w Servo Motor 750w

## ERC2 ROBO Cylinder www.actuator.ru тел.:(495) 662-87-56, e-mail: iai@actuator.ru

# ERC2-RGD6C Integrated Controller, Double-guide Rod Type, Actuator Diameter 58mm, Pulse Motor, Straight Type

■ Model Description **ERC2** −**RGD6C** − I/O Type Cable length 12: 12mm NP: PIO 50:50mm M: 5m specification 6: 6mm (NPN) type : Foot Bracket X□□: Length designation
W□□: Cable with connectors Reversed-home 3: 3mm PN: PIO 300:300mm Specification (PNP) type (set in 50-mm steps) R□□: Robot cable SE: SIO type RW □□: Robot cable with connectors See preceding section for model descriptions



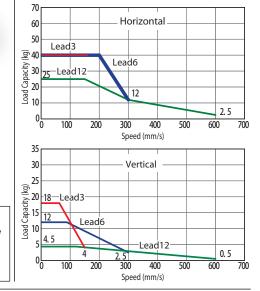
### Technical Reference P.451

Notes on selection

- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs Confirm the desirable maximum speed in the Actuator Specification Table below.
- (2) Since the ERC2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the speed vs. payload graph at right. In addition, use the value minus the guide weight (see page at right) as the payload.
- (3) The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with 3 lead). The above values are maximum acceleration.
- (4) Horizontal payload is the value when external guides are used.

# ■ Speed vs. Payload Graph A characteristic of the ERC2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that

there is sufficient speed at the desired payload.



#### Actuator Specification Table ■Leads and Payloads (Note 1) Please note that the maximum payload decreases as the speed increases. Maximum payload (Note 1) Maximum pushing Stroke Lead Model Horizontal (kg) Vertical (kg) (N) (Note 2) (mm) (mm) ERC2-RGD6C-I-PM-12-1 - 2 - 3 - 4 12 Up to 25 Up to 4.5 50 to 300 ERC2-RGD6C-I-PM-6-1 - 2 - 3 - 4 6 Up to 40 Up to 12 157 (every 50mm) ERC2-RGD6C-I-PM-3-1-2-3-4 Up to 18

i payload decreases as the speed increases.				■ Stroke and	waximum spee	eu .
yload (Note 1)	Maximum pushing	Stroke		Stroke	50 to 250	300
Vertical (kg)	force (N) (Note 2)	(mm)		Lead	(every 50mm)	(mm)
Up to 4.5	78			12	600	500
Up to 12	157	50 to 300 (every 50mm)		6	300	250
Up to 18	304			3	150	125
(Note 2) See pushing force graph on P488. (Unit = mm/					(Unit = mm/s)	

#### ① Price by Stroke and ② I/O Type

Legend 1 Stroke 2 I/O Type 3 Cable Length 4 Options

	Type code	
① Stroke	RGD6C	
(mm)	② By I/O Type	
	NP/PN	SE
50	-	_
100	-	_
150	-	_
200	-	_
250	_	_
300	_	_

#### ③ Cable Length Price List

Туре	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
Special length	X06 (6m) - X10 (10m)	_
	W01 (1m) - W03 (3m)	_
Connectors	W04 (4m) - W05 (5m)	_
	W06 (6m) - W10 (10m)	_
	R01 (1m) - R03 (3m)	_
Robot cable	R04 (4m) - R05 (5m)	_
	R06 (6m) - R10 (10m)	_
Connectors	RW01 (1m) - RW03 (3m)	_
	RW04 (4m) - RW05 (5m)	_
Robot cable	RW06 (6m) - RW10 (10m)	_
Soo D264 for maint		

See P364 for maintenance cables.

4 Option Price List			
Title	Option code	See page	Standard price
Brake	В	P437	_
Foot bracket	FT	P440	_

P442

No charge

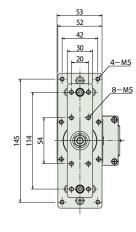
Actuator Specification			
Item	Description		
Drive System	Ball screw \$\phi\$10mm rolled C10		
Positioning Repeatability	±0.05mm		
Backlash	0.1mm or less		
Rod Diameter	φ 22mm special SUS pipe		
Non-rotary Rod Precision	±0.05 degrees		
Ambient operating temperature, humidity	0 to 40°C, 85% BH or less (non-condensing)		

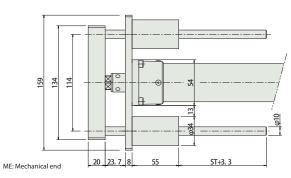
Reversed-home specification

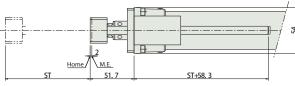
Information on special orders











See P8 for actuator dimensions.

#### ■Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	
Guide weight (kg)	0.4	0.4	0.5	0.6	0.6	0.7	
Guide + actuator weight (kg)	2.0	2.1	2.3	2.6	2.7	2.9	

### I/O Type (Integrated Controller)

#### I/O Type

The integrated controller in the ERC2 Series can be selected from the following 3 types based on the type of external input and output (I/O). Select the type according to your application

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
PIO Type (NPN Specifications)		ERC2-RGD6C-I-PM-□-□-NP-□-□	Simple control type capable of positioning to a maximum of 16 points	16		Maximum 2A	um 2A (See page at left)	P355
PIO Type (PNP Specifications)		ERC2-RGD6C-I-PM-□-□-PN-□-□	This type is compatible with the PNP specification I/O commonly used overseas. This is the PNP specification for the I/O type	16	DC24V			
SIO Type		ERC2-RGD6C-I-PM-ロ-ロ-SE-ロ-ロ	Field Network Connection Serial Type (Gateway unit used)	64				

IAI

ERC2-RGD6C 16

ler-Slide

Type

Table Arm/Flat

Gripper/ Rotary Type

lash-

Co

Reverse

Pulse Motor

Pulse Motor 28 P

35 P Pulse Motor

42P
Pulse Motor

Pulse Motor 86 P

10 w

20 w

30 W

Servo Moto

Servo Motor

150 w

Pulse Motor
35 P
Pulse Motor
42 P
Pulse Motor
56 P
Servo Motor
10 w
Servo Motor
20 w

# ERC2 ROBO Cylinder www.actuator.ru тел.:(495) 662-87-56, e-mail: iai@actuator.ru

## C2-RGD

Integrated Controller, Rod Type, Actuator Dimensions 68 mm, Pulse Motor, Straight Type

■ Model Description **ERC2** — **RGD7C** — Encoder type Lead I/O Type Cable length N: None P: 1m I-Incremental PM: Pulse motor 16: 16mm B : Brake S- 3m M· 5m : Foot Bracket specification 8: 8mm (NPN) type X□□: Length designation NM : Reversed-home 4: 4mm 300:300mm PN: PIO W□□: Cable with connectors R□□: Robot cable Specification (PNP) type (set in 50-mm steps) SE: SIO type RW□□: Robot cable with con See preceding section for model descriptions.



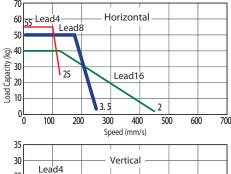
译 P.451 **Technical Reference** 

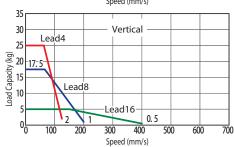
(Note 1) Please note that the maximum payload decreases as the speed increases.

- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs Confirm the desirable maximum speed in the Actuator Specification Table below
- Since the ERC2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the speed vs. payload graph at right. In addition, use the value minus the guide weight (see page at right) as the payload.
- The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with 4 lead). The above values are maximum acceleration.
- (4) Horizontal payload is the value when external guides are used.

#### ■Speed vs. Payload Graph

A characteristic of the ERC2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that there is sufficient speed at the desired payload.





#### Actuator Specification Table

■Leads and Payloads Load Maximum payload (Note 1) Maximum pushing Causalia

	Model		iviaximum pa	yload (Note 1)	force	Stroke
			Horizontal (kg)	Vertical (kg)	(N) (Note 2)	(mm)
	ERC2-RGD7C-I-PM-16-①-②-③-④	16	Up to 40	Up to 5	220	
	ERC2-RGD7C-I-PM-8-①-②-③-④	8	Up to 50	Up to 17.5	441	50 to 300 (every 50mm)
	ERC2-RGD7C-I-PM-4-①-②-③-④	4	Up to 55	Up to 25	873	
	Legend ① Stroke ② I/O Type ③ Cable Length ④ Options (Note 2) See pushing force graph on P488.					

### ■Stroke and Maximum Speed

Lead	50 to 300 (every 50mm)
16	450 <400>
8	250 <200>
4	125

\*< > indicate vertical service. (Unit = mm/s)

#### 1) Price by Stroke and 2) I/O Type

<b>,</b>	, , , , , , , , , , , , , , , , , , ,				
① Stroke		code D7C			
(mm)	② By I/O Type				
	NP/PN	SE			
50	_	_			
100	_				
150	_				
200	-	_			
250	_	_			
300					

#### 3 Cable Length Price List

Туре	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
Special length	X06 (6m) - X10 (10m)	_
	W01 (1m) - W03 (3m)	_
Connectors	W04 (4m) - W05 (5m)	_
	W06 (6m) - W10 (10m)	_
	R01 (1m) - R03 (3m)	_
Robot cable	R04 (4m) - R05 (5m)	_
	R06 (6m) - R10 (10m)	_
Connectors	RW01 (1m) - RW03 (3m)	_
	RW04 (4m) - RW05 (5m)	_
Robot cable	RW06 (6m) - RW10 (10m)	_

See P364 for maintenance cables.

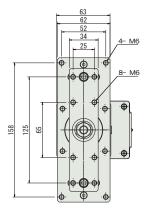
### 4 Option Price List

Title	Option code	See page	Standard price
Brake	В	P437	_
Foot bracket	FT	P440	_
Reversed-home specification	NM	P442	No charge

#### Actuator Specification

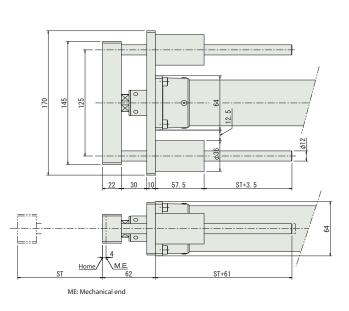
Actuator openication				
Item	Description			
Drive System	Ball screw $\phi$ 12mm rolled C10			
Positioning Repeatability	±0.05mm			
Backlash	0.1mm or less			
Rod Diameter	φ 30mm special SUS type			
Non-rotary Rod Precision	±0.05 degrees			
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)			





I/O Type (Integrated Controller)

SIO



See actuator dimensions on P10.

#### ■Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	
Guide weight (kg)	0.5	0.6	0.7	0.8	0.9	1.0	
Guide + actuator weight (kg)	3.2	3.5	3.7	4.0	4.2	4.5	

#### I/O Type The integrated controller in the ERC2 Series can be selected from the following 3 types based on the type of external input and output (I/O). Select the type according to your application Simple control type Type ERC2-RGD7C-I-PM-□-□-NP-□-□ with up to 16-point 16 (NPN positioning Specifications) This type is compatible with the PIO PNP specification I/O commonly used Type (See page at ERC2-RGD7C-I-PM-□-□-PN-□-□ DC24V Maximum 2A P355 16 overseas. This is the PNP specification (PNP left) Specifications) for the I/O type

IAI

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Field Network

Connection

Serial Type (Gateway unit used)

ERC2-RGD7C-I-PM-□-□-SE-□-□

ERC2-RGD7C 18

Slider

Type

Table Arm/Flat

> Gripper, Rotary Type

Tean room

ash-

Coupling

D inect

Reversed-

20 P

28 P Pulse Motor

Pulse Motor

Pulse Motor **56** P

Pulse Motor

86 P

10 w Servo Motor

Servo Motor

30 W Servo Motor

Servo Motor

Servo Motor

750 w