

# RCS3-RA20R

## Ultra-high Thrust Rod Type (Servo Press Model with Load Cell)

Battery-less  
Absolute

Motor  
Unit  
Type

Side-mounted  
Motor

Body Width  
200\*  
mm

230v  
AC Servo  
Motor

### Model Specification Items

RCS3

RA20R

WA

3000

4

Stroke

T3

Cable Length

Options

Series

Type

Encoder Type

Motor Type

Lead

Stroke

Applicable Controllers

Cable Length

Options

WA: Battery-less  
Absolute

3000: Servo  
motor  
3000W

4: Lead 4mm

100: 100mm  
?  
500: 500mm  
(Every 100mm)

T3: SCON-CGB  
(For servo press only)

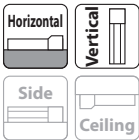
N : None  
P : 1m  
S : 3m  
M : 5m  
X□□ : Specified length

Refer to Options  
table below.  
\* Make sure to  
specify MT (Side-  
mounted motor  
on top).

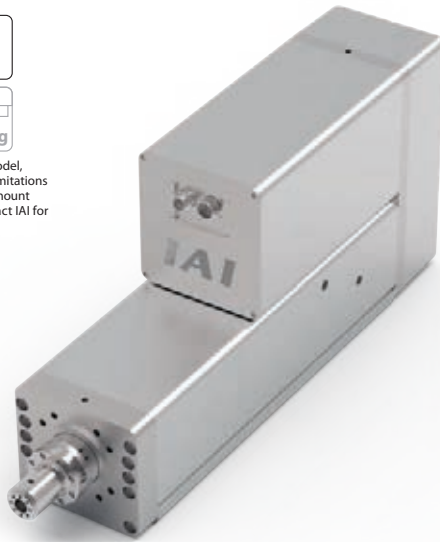
\* Does not include a controller.

\* Please contact IAI for more information about the model specification items.

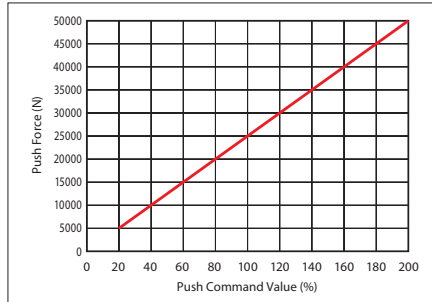
\* Body width does not include the width of the side-mounted motor.



Depending on the model, there may be some limitations to using the vertical mount position. Please contact IAI for more information.



### Correlation Diagram of Push Force and Current Limit Value



#### Caution:

- The correlation between push force and push command value are strictly for reference purposes. Actual numbers may vary slightly.
- The push command value should be 20% or more because the push force will be unstable when the push command value is low.



- For push-motion operation, check the allowable time period of continuous push-motion set with a different thrust force. Also, please check that the allowable continuous operational thrust force for the actual push cycle is less than the allowable continuous operational thrust force. (Even if there is no push motion) Please refer to P.28 for more information.
- Customer's tooling is to be mounted on the load cell itself. In case any radial or moment load is applied to the load cell, please consider adding the external guides, etc. to offset those side loads.
- Please install a support block when front mounting a horizontally mounted actuator. (Refer to page 34 "Notes When Installing")
- Servo Press with load cell should not be used for pulling motion. It will damage the load cell.
- The maximum payload for vertical mounting is 220kg when using the M5 tapped mounting hole at the tip of the load cell. When using the M8 tapped mounting hole on the side of the load cell tip and fixing with a setscrew, the payload should be 15 kg or less. Use either the M8 or M5 tapped mounting hole but not both.

### Actuator Specifications

#### Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. speed (mm/s)	Max. acceleration (G)	Max. payload (kg)	Rated thrust (N)	Max. push force (N)
RCS3-RA20R-WA-3000-4-①-T3-②-③	3000	4	220	0.1	15	220	25902
							50000

Legend: ① Stroke ② Cable Length ③ Option \* Max. horizontal payload means max. weight on the customer's external guide. \*\* Max. push force can be achieved only within 1~10mm/s speed range.

#### Stroke and Max Speed

Lead (mm)	Stroke (mm)	100~500
4		220

(Unit: mm/s)

### Cable Length

Type	Cable Code
Standard (Robot cable)	P(1m) S(3m) M(5m)
Specified length (Robot cable)	X06(6m) ~X10(10m) X11(11m)~X15(15m) X16(16m)~X20(20m)

\* Please refer to the backside for maintenance cables.

\* Robot cable specification is standard.

### Actuator Specifications

Item	Description
Drive system	Ball screw ø40mm ground
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Load cell rated capacity	50000N
Loading repeatability (*1)	±0.5% F.S (*2)
Ambient operating temp. & humidity	0°C~40°C, 85% RH or less (non-condensing)

(\*1) Ratio (in percentage) of the load variations caused by the repeated operations to the load cell rated capacity

(\*2) F.S.: Full Scale, the maximum measurable value.

### Options

Name	Option Code	Reference Page
Brake	B	See P.35
Cable exit direction (Top)	CJT	See P.35
Cable exit direction (Right)	CJR	See P.35
Cable exit direction (Left)	CJL	See P.35
Equipped with load cell (Standard equipment) (*1)	LCT	See P.37
Side-mounted motor direction (Top)	MT	See P.37

(\*1) Please make sure to enter "LCT" in the box of Model Specification Items to select the actuator with load cell option.

