



[DATASHEET](#)

# RA90 LINEAR ACTUATOR SERIES



ANALOG  
FEEDBACK



LIMIT  
SWITCHES



ADVANCED  
ELECTRONICS



ADJUSTABLE  
STROKE



OVERCURRENT  
PROTECTION



HIGH INGRESS  
PROTECTION



HIGH LIFTING  
FORCE



COMPACT  
SIZE



MAINTENANCE  
FREE



QUIET  
OPERATION



EASY  
MOUNTING



CUSTOMIZABLE

## Compact, efficient and regulable in a unique way

The RA90 is a high-performance actuator with analog position control and an innovative & patented system to easily regulate the stroke endstops. This extremely compact actuator features advanced electronics and a digital encoder with analog output to precisely track the rod position as well as internal limit switches for safe operation. The RA90 provides a smooth and precise movement for loads up to 2500N.

### Main Features

- **Powerful:** loads of up to 2500 N in push and pull
- **Compact:** small retracted length (center to center) of 118 mm + stroke
- **Resistant:** IPX4 rating, polyamid housing, stainless steel rod
- **Safe:** Integrated limit switches and analog position control
- **Regulable:** Innovative adjustable endstops without programming

### Main applications

- Powered wheelchairs
- Battery-operated medical equipment
- Ergonomic medical furniture
- Robotics
- Safety equipment
- Home automation
- Automotive
- Industrial automation

### Customizable

- Stroke lengths
- Position control
- Adjustable endstops
- Built-in dimensions
- Colors
- Connectors
- Cable lengths
- Rod ends

# Technical Specifications

## Actuator Specifications

Max. Load	2500 N at 2 mm/s
Lead	1,55 mm
Max. Speed (No load)	3,6 mm/s
Max. Current	2,8 A
Starting Current	5 A
Power Supply	24 VDC
Strokes	10 - 170 mm
Duty Cycle	10 % (2 min out of 18 min)

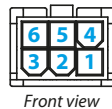
## Mechanical Specifications

Weight	950 g (75 mm stroke)
Housing material	Polyamid
Rod Material	Polished stainless steel
Color	Black
Limit Switches	At stroke endpoints

## Connector

Molex 39-01-3069

POSITIVE VOLTAGE EXTENDS,  
NEGATIVE VOLTAGE RETRACTS



Pin No.	Hall encoder analog output	Limit switches external signal	Limit switches only
1	Motor -	Motor -	Motor -
2	-	-	-
3	GND	Common	-
4	Feedback signal	Switch push	-
5	Motor +	Motor +	Motor +
6	5 VDC	Switch pull	-

## Position Feedback Specifications

### HALL ENCODER WITH ANALOG OUTPUT (OPTIONAL)

Supply voltage	4,5 VDC - 5,5 VDC
Output signal	 3,3 VDC (extended) 0,3 VDC (retracted)

### LIMIT SWITCHES EXTERNAL SIGNAL (OPTIONAL)

Supply voltage	0 VDC - 24 VDC
Output signals	Same as supply voltage

## Environment Specifications

IP Rating	IP X4
Operating temperature	+5 °C to + 40 °C
Storage temperature	-30 °C to + 70 °C

### Limit switches

When the actuator reaches its fully extended or fully retracted position, an electronic limit switch automatically cuts off the current to prevent damage to the motor.

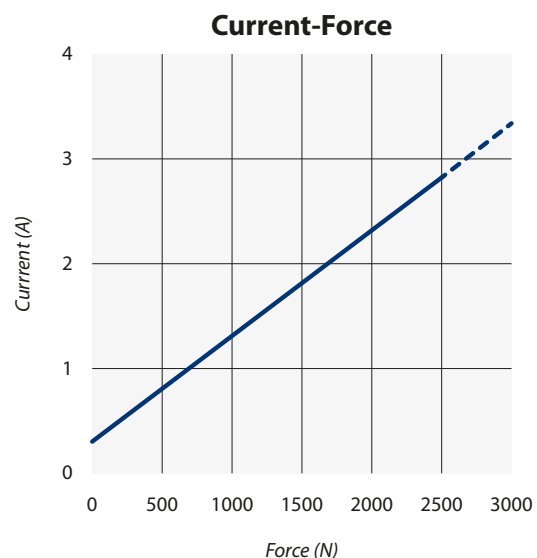
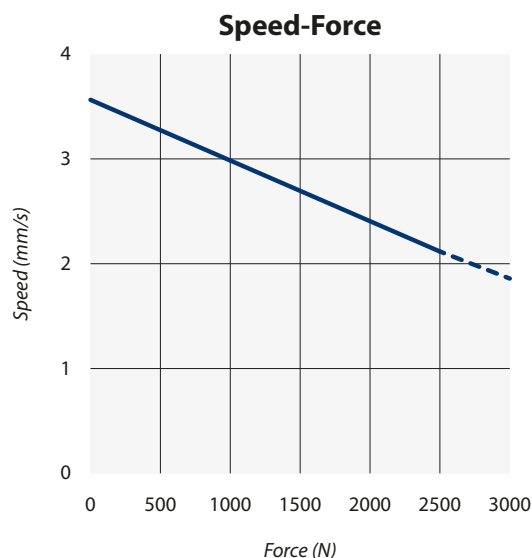
### Adjustable stroke

The front endstop or the rear endstop can be easily manually adjusted using a screwdriver to limit the stroke of the actuator up to 22 mm.

OPTIONAL FEATURE

## Force, speed and current

Force (N)	No load	500 N	1000 N	1500 N	2000 N	2500 N	3000 N
Current (A)	0,3	0,7	1,4	1,9	2,3	2,8	3,3
Speed (mm/s)	3,6	3,3	3,0	2,8	2,5	2,1	1,9

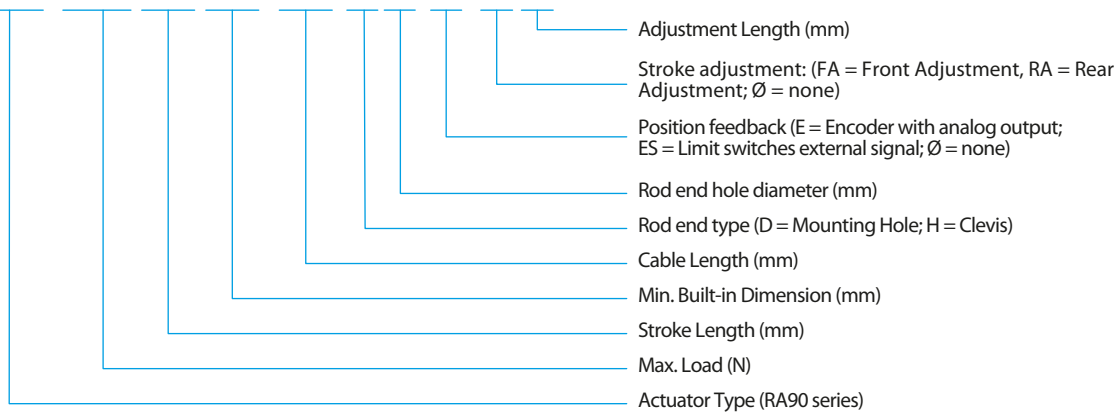


Use in the dashed area is not recommended.  
The above figures are with a room temperature of 20°C.

# Actuator configurations

## How to read the RA90 code

RA90 . 2500 . 75 . 193 . 250 . H 10 . E . FA 22



## Preset configurations

RA90.2500.75.193.250.H10.RA22

RA90.2500.50.168.140.H10.FA22

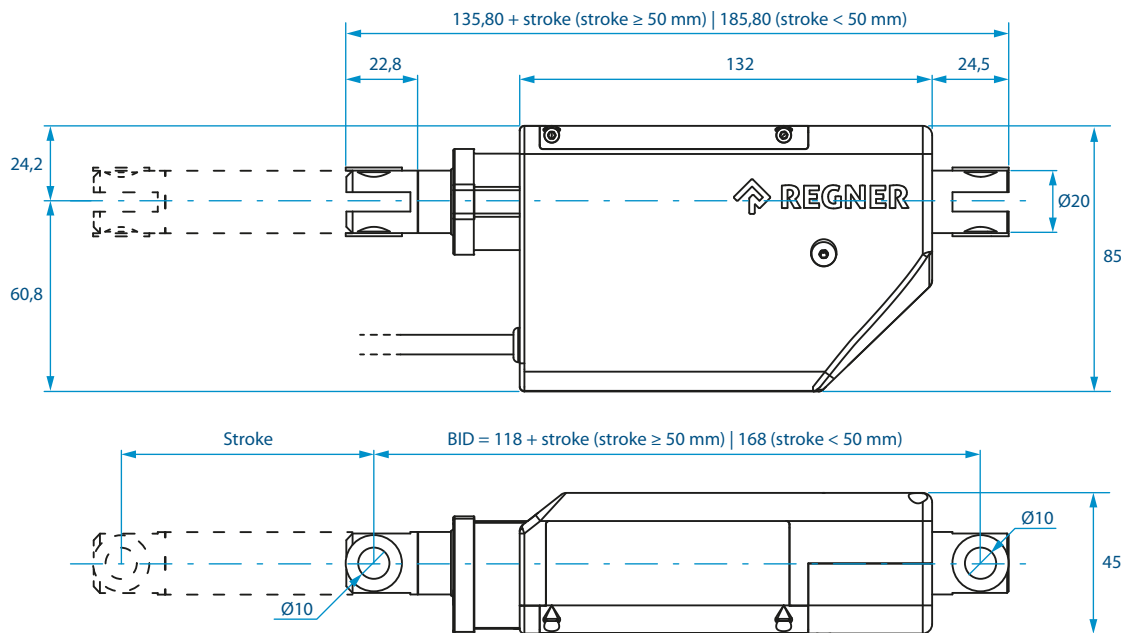
RA90.2500.16.168.400.H10.ES

RA90.2500.75.193.1200.H10.E

RA90.2500.170.288.800.H10.E

Please contact [info@regner.es](mailto:info@regner.es) for customized configurations.

## Dimensions (mm)



## Quality

### Forging ahead to achieve high quality

• We apply high quality components, semi-automatic production and rigorous testing to verify and validate each motion control solution before leaving our premises. Our continuously audited management systems ensure optimized agile manufacturing. All these measures make for high quality products.

### RA90 Quality control

• Every single RA90 goes through a strict quality control before leaving production in order to guarantee an optimum performance and durability.

### Certifications

- ISO 9001 : 2008 *Quality management*
- ISO 14001 : 2004 *Environmental management system*
- ISO 13485 : 2012 *Medical devices*

Quiet  
Safe  
Durable  
Easy  
Efficient  
Powerful  
Elegant  
Customizable

