

# RA-45

## In-line actuator series



High ingress protection



Compact size



Maintenance free



High lifting force



Elegant design



Quiet operation



Position control



Customizable

## High power density with a digital signal

The RA-45 is a compact, highly efficient linear actuator with a high load level of up to 2.000 N (450 lbf).

It's the most versatile actuator because, as well as its exceptional volume-performance ratio, it has a built-in **Hall sensor**, which makes it the best option for applications with limited space and which require position control with a digital signal.



### Main features



#### Powerful

Loads up to 2.000 N (450 lbf)



#### Compact

Retracted length of 176 mm (7 in) + stroke



#### Precise

Hall sensor



#### Resistant

IP65 rating  
Aluminium housing  
Stainless steel rod

# Technical specifications

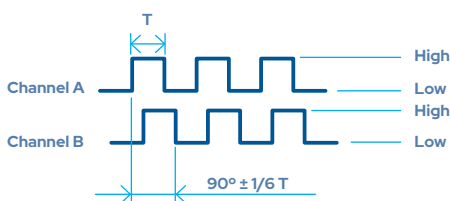
## General specifications

|                       |                                      |   |
|-----------------------|--------------------------------------|---|
| Stroke                | 37   50   73   80   100 mm           | 1,5   2   2,9   3,1   4 in                |
| Max. load             | 2.000 N at 2,8 mm/s                  | 449,6 lbf at 0,11 in/s                    |
| Max. speed (no load)  | 8,1 mm/s                             | 0,31 in/s                                 |
| Power supply          | 24 VDC                               |   |
| Max. current          | 1,9 A                                |   |
| Starting current      | 3 A                                  |   |
| Connector             | Molex 39-01-2066                     |   |
| IP Rating             | IP54                                 |   |
| Weight                | 850 g                                | 1,9 lb                                    |
| Housing material      | Aluminium                            |   |
| Rod material          | Polished stainless steel             |   |
| Color                 | Anodized black (RAL 9005)            |   |
| Operating temperature | -5°C to 40°C                         | 23°F to 104°F                             |
| Storage temperature   | -30°C to 70°C                        | -22 to 158°F                              |
| Duty cycle            | 10% (2 out of 20 min.)               |   |
| Lead                  | 1,55 mm (1.000 N) / 3,5 mm (2.000 N) | 0,06 in (224,8 lbf) / 0,14 in (449,6 lbf) |
| Cable length          | 150 or 500 mm                        | 6 or 20 in                                |

## Hall sensor specifications

|                                |                                 |
|--------------------------------|---------------------------------|
| Power supply                   | 3,5 - 20 VDC                    |
| Current consumption            | < 20 mA                         |
| Max. output current            | 10 mA                           |
| Control signal levels          | ≈ 0 VDC (low), > 3,5 VDC (high) |
| Max. frequency (no load)       | 536,67 Hz                       |
| Phase shift, channel A to B    | 90° ± 1/6 T                     |
| Rise/fall time (CLOAD = 20 pF) | 1,5 μs / 1,5 μs                 |
| Pulses per revolution (PPR)    | 7                               |
| Resolution                     | 6,5 μm / pulse                  |

### Output signal



### Customizable upon request

Stroke length  
Anodized colors  
Cable length  
Dimensions  
Connectors  
Brackets

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

# Code configuration



|                              |   |                    |   |   |                                      |  |
|------------------------------|---|--------------------|---|---|--------------------------------------|--|
| <b>RA45</b>                  | <b>2000</b>   | <b>100</b>         | <b>316</b>                              | <b>500</b>  | <b>H 10</b>                          | <b>E</b>   |
| Actuator type                | Max. Load (N)   | Stroke length (mm) | Retracted length, center to center (mm) | Cable length (mm)   | (H) Rod<br>D= Clevis<br>H = Standard | Position control<br>E= Hall sensor   |
|                              |   |                    |   |   | (10) Mounting hole diameter (mm)     |  |
|                              | 1.000 N - 449,6 lbf   |                    |   | 2.000 N - 224,81 lbf                                      |                                      |  |
| <b>Preset configurations</b> | RA45.1000.37.250.500.D8.E<br>RA45.1000.50.296.500.D8.E<br>RA45.1000.80.296.500.D8.E |                    |   | RA45.1000.100.276.500.D8.E<br>RA45.1000.100.316.500.H10.E |                                      | RA45.2000.50.296.500.D8.E<br>RA45.2000.80.296.500.D8.E<br>RA45.2000.100.276.500.D8.E |

## Force, speed and current

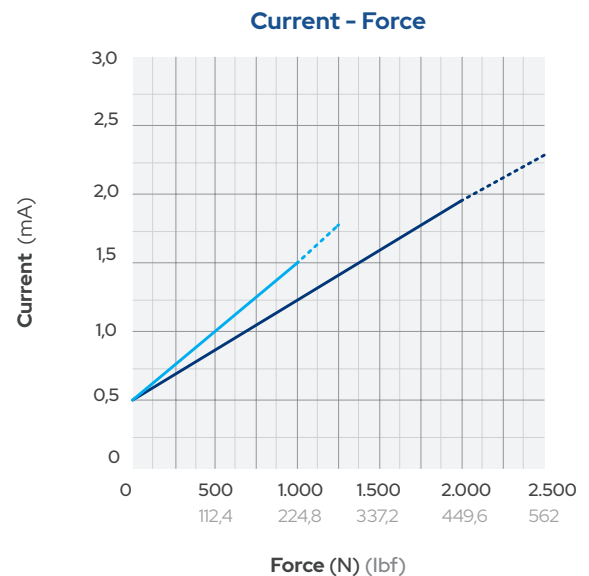
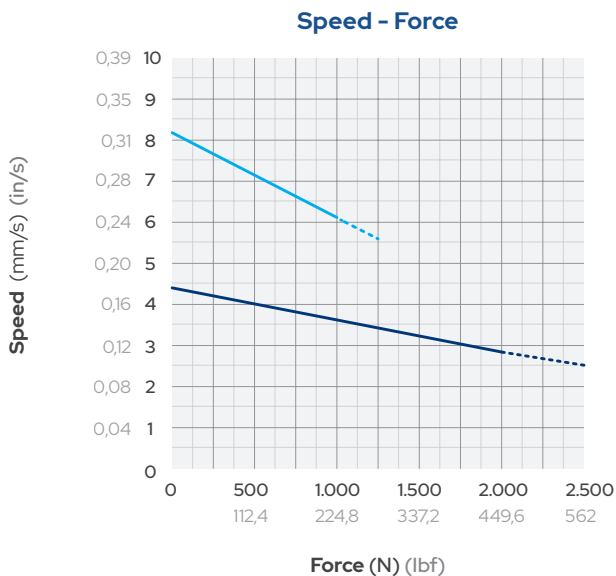
|                             | No load    | 250 N      | 500 N      | 750 N      | 1.000 N    |
|-----------------------------|------------|------------|------------|------------|------------|
| <b>Force (N) (lbf)</b>      | No load    | 56,20 lbf  | 112,4 lbf  | 168,6 lbf  | 224,8 lbf  |
| <b>Average current (mA)</b> | 0,5        | 0,8        | 1,0        | 1,3        | 1,5        |
| <b>Speed (mm/s) (in/s)</b>  | 8,1 - 0,32 | 7,6 - 0,30 | 7,2 - 0,28 | 6,7 - 0,26 | 6,1 - 0,24 |

|                             | No load    | 500 N      | 1.000 N    | 1.500 N    | 2.000 N    |
|-----------------------------|------------|------------|------------|------------|------------|
| <b>Force (N) (lbf)</b>      | No load    | 112,4 lbf  | 224,81 lbf | 337,2 lbf  | 449,6 lbf  |
| <b>Average current (mA)</b> | 0,5        | 0,8        | 1,2        | 1,6        | 1,9        |
| <b>Speed (mm/s) (in/s)</b>  | 4,4 - 0,17 | 4,0 - 0,16 | 3,6 - 0,14 | 3,2 - 0,13 | 2,8 - 0,11 |

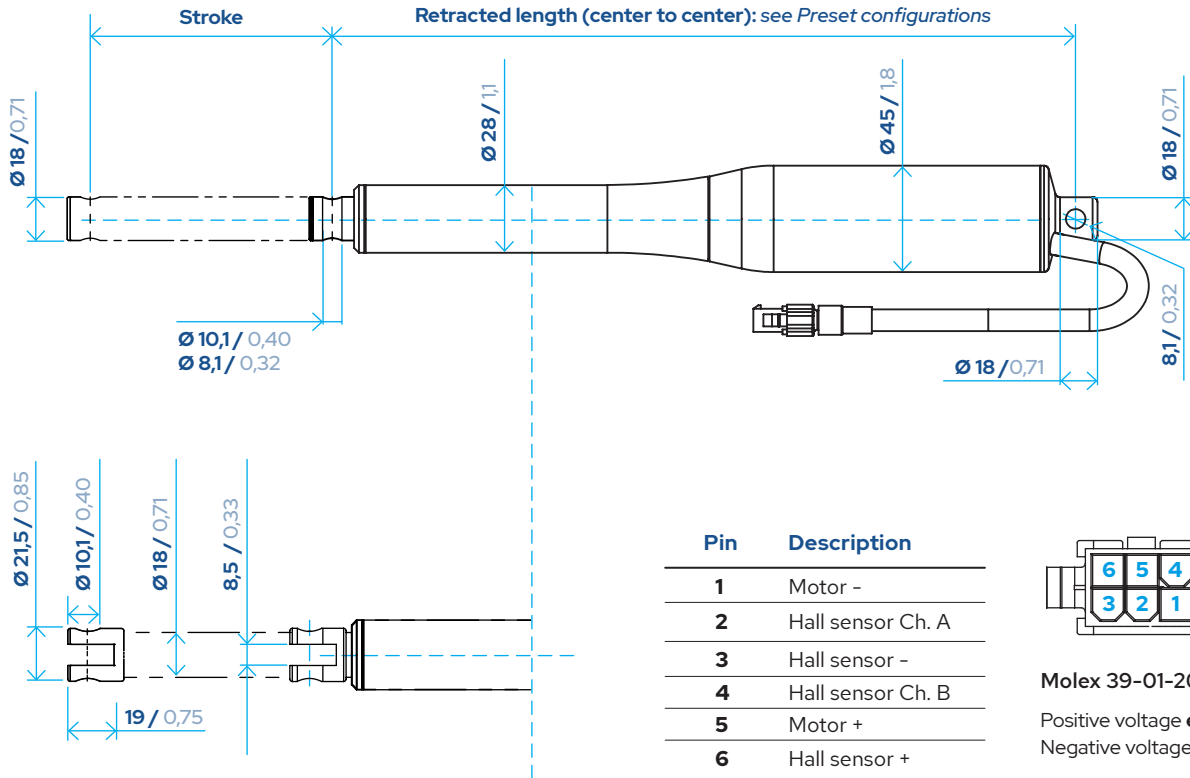
**RA-45**  
**1.000 N**  
**(224,8 lbf)**

**RA-45**  
**2.000 N**  
**(449,6 lbf)**



Use in the dashed area is not recommended.  
The above values are with a room temperature of 20 °C / 68°F.

## Dimensions (mm) (in)



## Forging ahead to achieve high quality

ISO 9001 Quality management  
ISO 14001 Environmental management system  
ISO 13485 Medical devices

We use **high quality components and apply semiauto-matic production** and rigorous testing to verify and validate each motion control solution before they leave our premises. Plus, our management systems, which are continuously audited, ensure optimized agile manufacturing. All these measures translate into high quality products.

Every single **RA-45** undergoes strict QC assessments during production in order to guarantee optimal performance and durability.

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