



DATASHEET

RA45 IN-LINE ACTUATOR SERIES



COMPACT
SIZE



ENCODER
FEEDBACK



HIGH LIFTING
FORCE



EQUAL PUSH
& PULL FORCE



EASY
MOUNTING



ELEGANT
DESIGN



MAINTENANCE
FREE



OVERCURRENT
PROTECTION



HIGH INGRESS
PROTECTION



QUIET
OPERATION



CUSTOMIZABLE

Power & precision condensed

The RA45 is a linear actuator with a maximum thrust of 2000N that features a precise digital position feedback system.

The RA45 has been specially conceived for applications where the space is limited. Its compactness, in-line configuration, stylish design and anodized aluminum all empower the RA45 as the perfect choice for advanced and efficient applications.

Main Features

- Power supply: 24 VDC
- Max. load: 1000 N / 2000 N (push/pull)
- Max. speed: 8.1 / 4.4 mm/s
- Min. built-in dimension: 176 mm + stroke
- Incremental encoder digital feedback
- Aluminum housing
- Stainless steel piston rod
- Protection class: IP65

Applications

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

Customizable

- Stroke lengths
- Built-in dimensions
- Anodized colors
- Connectors
- Cable lengths
- Rod ends

Technical Specifications

Actuator Specifications

Max. Load	1000 N at 6.1 mm/s 2000 N at 2.8 mm/s
Lead	1.55 3.5 mm
Max. Speed (No load)	8.1 4.4 mm/s
Max. Current	1.5 1.9 A
Starting Current	3 A
Power Supply	24 VDC
Strokes	10 - 150 mm
Duty Cycle	10 % (2 min out of 18 min)

Mechanical Specifications

Weight	850 g
Housing material	Aluminum
Rod Material	Polished stainless steel
Color	Anodized Black
Connector	Molex 39-01-2066

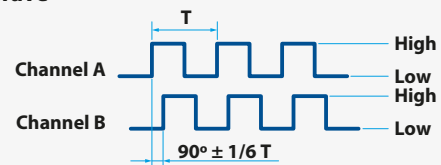
Environment Specifications

IP Rating	IP 65
Operating temperature	- 5 °C to + 40 °C
Storage temperature	-30 °C to + 70 °C

Encoder Feedback Specifications

Type	Incremental encoder
Supply voltage	3.5 - 20 VDC
Current consumption	< 20 mADC
Max. output current	10 mADC
DC signals levels	≈0 VDC low level, >3.5 VDC high level
Signal output	2 channels (A and B) square waves
Maximum frequency (no load)	536.67 Hz
Phase shift, channel A to B	90° ± 1/6 T
Max. signal rise/fall (C_{LOAD} = 20pF)	1.5 μs / 1.5 μs
Pulses per revolution (ppr)	7
Resolution	6.5 μm / pulse

Output wave

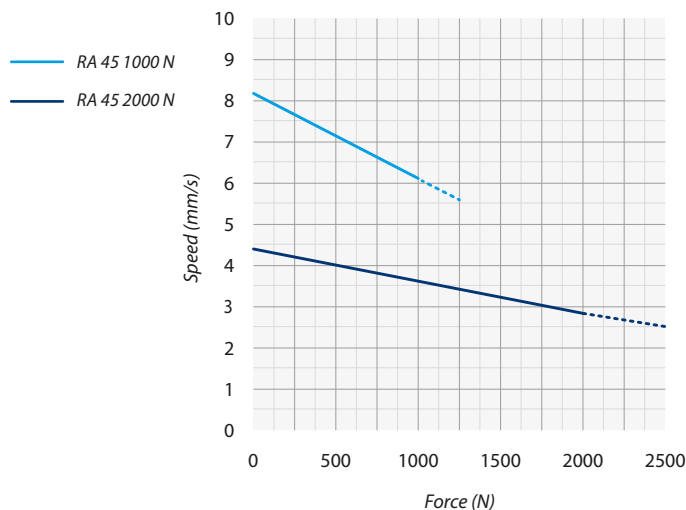


Force, speed and current

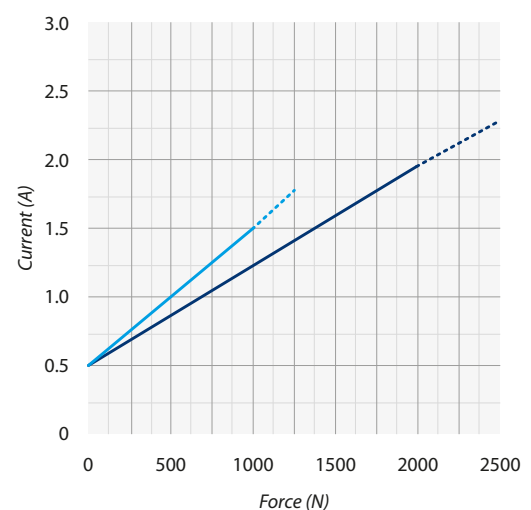
	Force (N)	No load	250 N	500 N	750 N	1000 N	1250 N
RA45 1000 N	Average Current (A)	0.5	0.8	1.0	1.3	1.5	1.7
	Speed (mm/s)	8.1	7.6	7.2	6.7	6.1	5.6

	Force (N)	No load	500 N	1000 N	1500 N	2000 N	2500 N
RA45 2000 N	Average Current (A)	0.5	0.8	1.2	1.6	1.9	2.1
	Speed (mm/s)	4.4	4.0	3.6	3.2	2.8	2.5

Speed - Force



Current - Force



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

Standard Configurations

Available strokes-BID	RA 45 1000						RA 45 2000			
Strokes (mm)	37	50	73	80	100	100	50	80	100	100
Min. Built-in Dimension (mm)	250	296	250	296	276	316	296	296	276	316

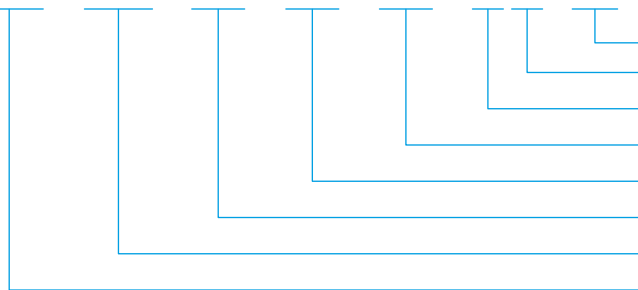
Standard Options

Cable Length	150, 500 mm
Rear Mounting Hole	8.1 mm
Front Bracket	Standard (8.1, 10.1 mm) or Clevis (10.1 mm)
Connector	Molex 39-01-2066
Color	Anodized black
Feedback	Digital encoder

Customizable upon request

- Stroke lengths
- Built-in dimensions
- Anodized colors
- Connectors
- Cable lengths
- Front/rear brackets

RA45 . 2000 . 100 . 316 . 150 . H 10 . E

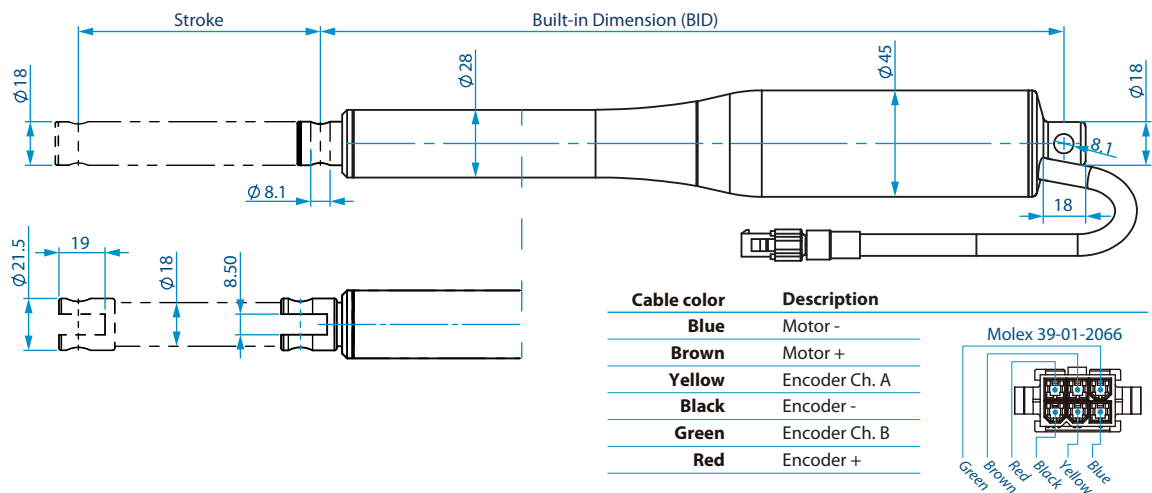


Ordering Example

- Feedback (E = Encoder)
- Rod End Diameter (mm)
- Rod End Type (D = standard / H = clevis)
- Cable Length (mm)
- Min. Built-in Dimension (mm)
- Stroke Length
- Max. Load (N)
- Actuator Type

Please contact 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.

RA 45 Quality control

- Every single RA45 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
Durable
Easy
Efficient
Powerful
Elegant
Customizable

