

WHY EWELLIX**CAHB linear actuators**

Compact, robust, and cost-effective solution



The CAHB range represent the ideal electromechanical solution for replacing pneumatics and light hydraulics in low to medium load, low duty cycle applications.

This line features seven families of linear actuator that cover a force range from 120 to 10 000 N. They are virtually maintenance free, self-locking, and have an IP range up to IP69K.

Ewellix electromechanical CAHB linear actuators are engineered to operate in severe environments at temperatures from -40 to $+85$ °C with a maximum duty cycle of 25 %.

They are built with robust metal gears and corrosion-resistant housings.

The newest addition, the smart CAHB-2xS features an integrated controller and advanced functions.

Linear actuators convert electricity into linear motion. Ewellix electromechanical actuators replace hydraulic or pneumatic cylinders with a ball or roller screw mechanism powered by an electric motor and offer great benefits.

They are easy to integrate and use only a few components - just a few cables to transmit power and control systems. In addition linear actuators provide positions feedback, are safer, more energy efficient, and create less noise compared to traditional pneumatic and hydraulic systems.

Common applications

- Food packaging
- Automated guided vehicles
- Combine harvesters
- Utility vehicles
- Vertical lifting platforms
- Windows and shade panels
- Commercial grills

General features



Wide assortment

Wide stroke, force and speed ranges; possibility of integrated controller and advanced functions. Different voltage options are available.



Backward compatible with most existing solutions

Compact retracted length, assortment of attachment and position feedback options.



Stability

High static force and self-locking force.



Customizable

Add an electrical connector, customize the cable length, stroke length and the retracted length, the attachment, and force limitation. Additional design options are available like limit switches, positioning feedback and manual override.



Certified for harsh environment

Environmental, mechanical and electrical tests performed as requested by agricultural, construction and road vehicles industries.



7 families of linear actuators

Cost-effective and virtually maintenance-free.

Ewellix range overview

CAHB-10 xx A



- Narrow and compact
- Cost-effective
- Metal housing
- Short to medium stroke
- Low force
- Integrated limit switch

- Rated force (N): from 120 to 1 500
- Speed at rated force (mm/s): from 5 to 45
- Max Stroke (mm): 300
- Voltage (V): 12 or 24 VDC
- IP69K/66S

CAHB-20 xx A



- Medium force
- Medium load
- Cost-effective
- Optional limit switch

- Rated force (N): from 1 500 to 2 500
- Speed at rated force (mm/s): from 13 to 27
- Max Stroke (mm): 610
- Voltage (V): 12 or 24 VDC
- IP66

CAHB-20, 21, 22 xx E



- High force
- High speed
- High stability
- Optional limit switch
- Long stroke length
- Manual override option

- Rated force (N):
CAHB 20 xx E/S: from 1 500 to 4 500
CAHB 21 xx E/S: from 1 500 to 4 500
CAHB 22 xx E/S: from 2 300 to 10 000
- Speed at rated force (mm/s):
CAHB 20 xx E/S: from 13 to 27
CAHB 21 xx E/S: from 18 to 46
CAHB 22 xx E/S: from 10 to 48
- Max Stroke (mm): 700
- Voltage (V): 12 or 24 or 48 or 24-48 VDC
- SmartX platform integrated controller
- IP69K/66M

CAHB-20, 21, 22 xx S (SmartX platform)



- Same as above plus:
- Compact plug-and-play
- Integrated controller
- Sensor
- Monitoring and diagnostic
- Communication

CAHB-30 xx A, CAHB-31 xx N



- Powered by AC voltage
- Medium to high force
- Optional limit switch

- Rated force (N):
CAHB-30 xx A: from 1 500 to 2 300
CAHB-31 xx N: from 2 300 to 6 000
- Speed at rated force (mm/s):
CAHB-30 xx A: 12 and 25
CAHB-31 xx N: from 13 to 48
- Max Stroke (mm): 610
- Voltage (V): 115 VAC / 60 Hz or 230 VAC / 50Hz
- IP65S

Application examples

Harvester combine

Functions

- Reel-in out of the header
- Ladder rotation
- Concave adjustment
- Cleaning fan adjustment
- Chopper shift
- Straw deflector orientation
- Sieve table adjustment
- Auger folding
- Spout orientation
- Grain tank cover opening
- Armrest sliding panel

Benefits

- Precise adjustment
- Position feedback
- Smooth movement
- Lower TCO



Automated guided vehicle (AGV) Autonomous mobile robot (AMR)

Functions

- Unit load lift
- Height adjustment forklift
- Side movement
- Tow gripper

Benefits

- Oil-free
- Energy efficient
- Compactness
- Position feedback
- On-board diagnostic



Sweeper

Functions

- Height adjustment
- Arm deployment

Benefits

- Oil-free
- Energy efficient
- Smooth movement
- Lower TCO



Utility vehicle - Small battery electric vehicle

Functions

- Dump the tipper

Benefits

- Integrated controller with parallel motion of 2 actuators
- Oil-free
- Smooth movement



Ewellix CAHB actuators: how are they different?

High performance and stability

- Self-locking: up to 20 000 N.
- High speed with low current draw. The high speed and high force version uses a ball screw.
- Reliable IP69K/66M with a vent: the vent equalizes the pressure and maintains good operation of the sealing system.

Performance operation

- Manual override option: tool free.
- True absolute analogue position output: not impaired by wear, no calibration to do).
- Anti-rotation tube with free spinning front attachment. Easy to install, smooth and no shock operation.

Smart version: CAHB-2xS

- Integrated controller with functional safety. safe Torque Off SIL2, Safe direction SIL1 according to IEC 61508 and ISO 25119.
- Adjustable end stop with output signal.
- True absolute position feedback “no contact” (analog output option)
- Monitoring and diagnostic.

Actuator select

This simple tool helps you quickly navigate through the wide range of Ewellix actuators to select the right one for your specific needs.

Actuator selector includes the latest actuators, lifting columns and control units on offer along with a complete list their functions. Choose the desired product family and then, by entering a few simple parameters, you will be guided in the selection. The results will be automatically updated after each input entry.

www.ewellix.com/en/product-selectors/actuator-select



For more detailed information see our full **CAHB series** catalogue.

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