



EWELLIX

## EWELLIX CAHB linear actuators

Compact, robust, and cost-effective solution

We pioneer motion

**SCHAEFFLER**

# Our offer

The EWELLIX CAHB range offered by Schaeffler 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 10000 N. They are virtually maintenance free, self-locking, and have an IP range up to IP69K. EWELLIX electromechanical CAHB linear actuators offered by Schaeffler, 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 offered by Schaeffler 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



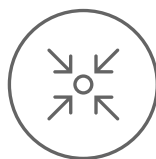
### Backward compatible with most existing solutions

Compact retracted length, assortment of attachment and position feedback options



### 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.



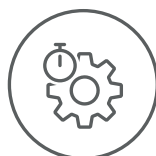
### Stability

High static force and self-locking force



### Certified for harsh environment

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



### 7 families of linear actuator

Cost-effective and virtually maintenance-free

# Products overview

## EWELLIX CAHB actuator series

	Features	Technical data
<b>EWELLIX CAHB-10 xx A</b> 	<ul style="list-style-type: none"> <li>• Narrow and compact</li> <li>• Cost-effective</li> <li>• Metal housing</li> <li>• Short to medium stroke</li> <li>• Low force</li> <li>• Integrated limit switch</li> </ul>	<ul style="list-style-type: none"> <li>• Rated force (N): from 120 to 1500</li> <li>• Speed at rated force (mm/s): from 5 to 45</li> <li>• Max Stroke (mm): 300</li> <li>• Voltage (V): 12 or 24 VDC</li> <li>• IP69K/66S</li> </ul>
<b>EWELLIX CAHB-20 xx A</b> 	<ul style="list-style-type: none"> <li>• Medium force</li> <li>• Medium load</li> <li>• Cost-effective</li> <li>• Optional limit switch</li> </ul>	<ul style="list-style-type: none"> <li>• Rated force (N): from 1 500 to 2500</li> <li>• Speed at rated force (mm/s): from 13 to 27</li> <li>• Max Stroke (mm): 610</li> <li>• Voltage (V): 12 or 24 VDC</li> <li>• IP66</li> </ul>
<b>EWELLIX CAHB-20, 21, 22 xx E</b> 	<ul style="list-style-type: none"> <li>• High force</li> <li>• High speed</li> <li>• High stability</li> <li>• Optional limit switch</li> <li>• Long stroke length</li> <li>• Manual override option</li> </ul>	<ul style="list-style-type: none"> <li>• Rated force (N): <ul style="list-style-type: none"> <li>– CAHB 20 xx E/S: from 1500 to 4500</li> <li>– CAHB 21 xx E/S: from 1500 to 4500</li> <li>– CAHB 22 xx E/S: from 2300 to 10000</li> </ul> </li> <li>• Speed at rated force (mm/s): <ul style="list-style-type: none"> <li>– CAHB 20 xx E/S: from 13 to 27</li> <li>– CAHB 21 xx E/S: from 18 to 46</li> <li>– CAHB 22 xx E/S: from 10 to 48</li> </ul> </li> </ul>
<b>EWELLIX CAHB-20, 21, 22 xx S (SmartX platform)</b> 	<ul style="list-style-type: none"> <li>• Same as above plus:</li> <li>• Compact plug-and-play</li> <li>• Integrated controller</li> <li>• Sensor</li> <li>• Monitoring and diagnostic</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Max Stroke (mm): 700</li> <li>• Voltage (V): 12 or 24 or 48 or 24-48 VDC</li> <li>• SmartX platform integrated controller</li> <li>• IP69K/66M</li> </ul>
<b>EWELLIX CAHB-30 xx A, CAHB-31 xx N</b> 	<ul style="list-style-type: none"> <li>• Powered by AC voltage</li> <li>• Medium to high force</li> <li>• Optional limit switch</li> </ul>	<ul style="list-style-type: none"> <li>• Rated force (N): <ul style="list-style-type: none"> <li>– CAHB-30 xx A: from 1 500 to 2300</li> <li>– CAHB-31 xx N: from 2 300 to 6000</li> </ul> </li> <li>• Speed at rated force (mm/s): <ul style="list-style-type: none"> <li>– CAHB-30 xx A: 12 and 25</li> <li>– CAHB-31 xx N: from 13 to 48</li> </ul> </li> <li>• Max Stroke (mm): 610</li> <li>• Voltage (V): 115 VAC / 60 Hz or 230 VAC / 50Hz</li> <li>• IP65S</li> </ul>

# 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

## Automatic guided vehicle (AGV) and 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

## Small battery electric vehicle (BEV)



### Functions

- Dump the tipper

### Benefits

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

# The 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.

# Supporting tool

## Digital

Schaeffler has developed a portfolio of tool to support customers in easy selection and calculation the right Schaeffler product for their application.

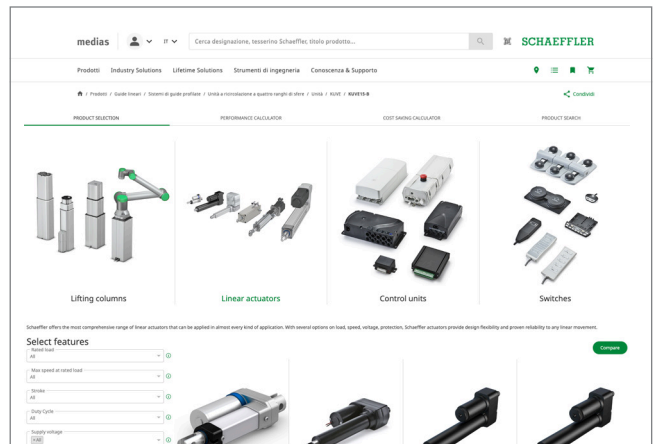
### EWELLIX Actuator select

- Product selection
- Performance calculator
- Cost saving calculator



### EWELLIX Actuator select

- > Scan QR code
- > Click on [link](#)



## Publications

Supporting documents are available for download on Schaeffler.com on each product page under the technical data section:

- Operating manual
- Mounting instruction



**EWELLIX Linear actuator**

**CAHB series**

› Scan QR code

› Click on [link](#)

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