EWELLIX
A Schaeffler Company

Compact actuator updates

To extend our technical range on the CEMC series and to meet customer needs in the automotive market.

The latest generation of Compact Electro-Mechanical Cylinder (CEMC) is part of the Ewellix heavy-duty actuator series. It combines planetary roller screw technology with hollow shaft motors directly onto the roller screw nut, resulting in a very compact yet powerful solution.

The new CEMC18 version extends our series. It brings new possibilities in performances to the market, achieving customer needs and bringing higher speed and longer stroke capacity whilst keeping the exact external body dimensions and motor definitions.

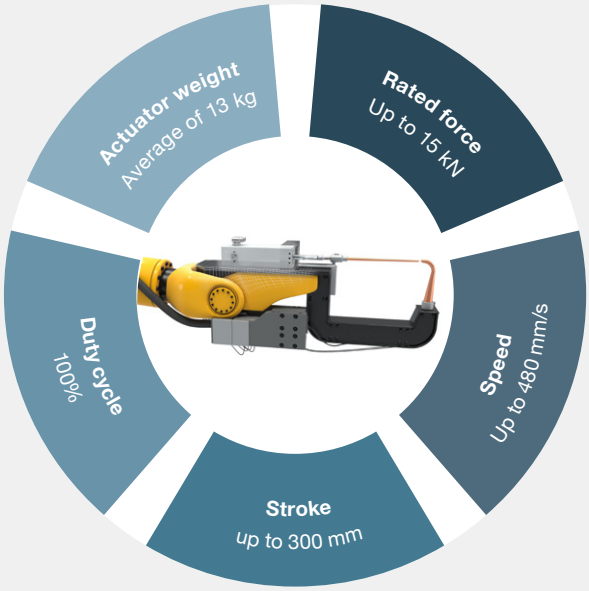
Thanks to standard and modular concept, CEMC options and modules support our customers with hundreds of configurations either for spot welding specifications or automation industry performances.

At Ewellix, agility and flexibility are in our DNA, providing ideal solutions to our customers.

CEMC18 benefits

- Compact design fits small spaces, offering high power density and up to 15 kN force
- Higher roller screw pitch to meet faster linear speeds
- Smaller roller screw with extended stroke capacity within the same 100 mm square frame
- Aluminium housings and a reduced number of parts result in a lightweight design for easy integration into equipment
- Exceptionally reliable planetary roller screw technology provides long service life with millions of cycles
- They are constructed individually with various module options, giving more than six hundred configurations with the CEMC21 and CEMC18 series to match customer requirements

CEMC18 main output data



CEMC modularity

Without or with an anti-rotation option

Brake option
Two power supply possibilities
24 V DC
90 V DC

Seven feedback system options:

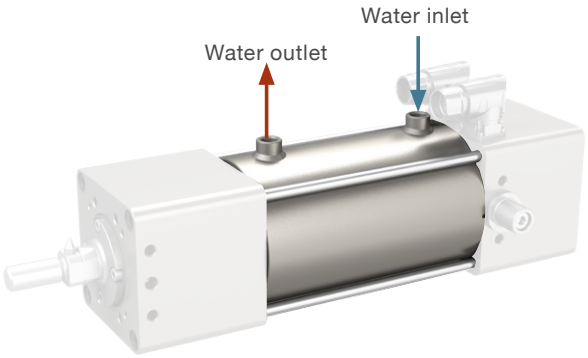
- Resolvers compatible with Kuka, ABB or Comau robots
- Absolute Encoders:
  - Sick (Hiperface)
  - Heidenhain (EnDat)
  - Fanuc
  - Yaskawa

Eight motor options:

- Two motor lengths with 3 or 5 magnets
- Two motor windings with 325 or 540 VDC bus voltage
- Two cooling options with natural convection or water-cooling housing

Water cooling option

Following increased market productivity needs, the optional water-cooling system allows water flow to circulate all around the motor stator, reducing the actuators running a temperature while operating with higher duty cycles.

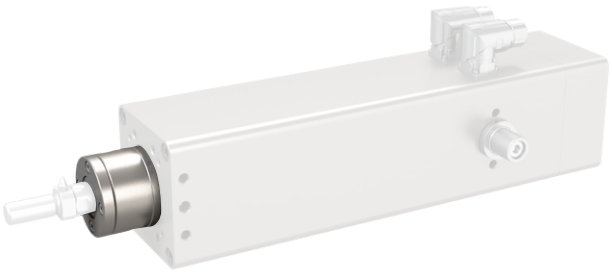


Benefits:

- Consistent cooling around the stator increases actuator capabilities, allowing for a heavier duty cycle.
- The actuator length is unchanged from the standard design with natural cooling.
- Water connections can be at the top or bottom as per customer requirements.

Anti-rotation

When the actuator has to self-move without any other guidance to fulfil its function, the Ewellix integrated anti-rotation device is the ideal solution. The robust, no-play embedded system prevents push rods from rotating with minimal maintenance needs (over actuator lifetime).



Benefits:

- A stiff and robust solution to meet millions of cycles.
- Modularity with minimal impact on actuator length.
- Ease of relubrication through direct access.

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PUB NUM EL-04012-EN-July 2022