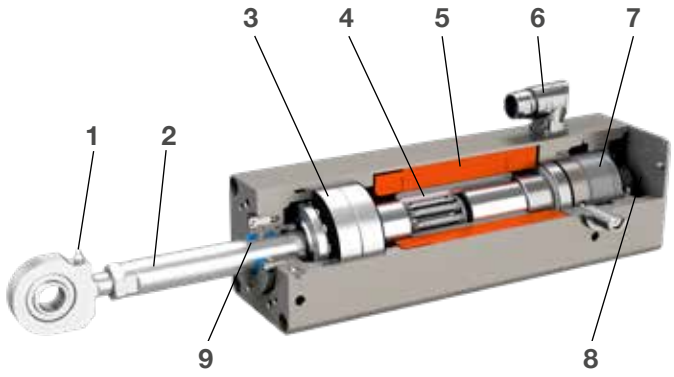
EWELLIX
MAKERS IN MOTION

High power density solution

Compact Electro-Mechanical Cylinder to meet the automation market challenges

The latest generation of Compact Electro-Mechanical Cylinder (CEMC) is part of the Ewellix heavy duty actuator series. The planetary inverted roller screw technology allows the integration of hollow shaft motors directly onto the roller screw nut, resulting in a very compact yet powerful solution. As well as its external dimension, this design minimizes inertia for excellent control, responsive performance, reduced cycle time and higher productivity.



The CEMC series combines multiple tried and tested technologies to provide best-in-class performances for applications such as resistance spot welding, joining, dispensing, pressing, assembly operations, where high force, robustness and productivity are essential.

1. Lubrication grease fitting
2. Push tube
3. High quality angular contact ball bearings
4. High quality planetary inverted roller screw for highest axial load rating, low axial play and high efficiency
5. Integrated hollow shaft servo motor
6. Motor connectors
7. Fail safe brake option
8. Position feedback options for compatibility with main brands of robots/controllers
9. Scraper seal to keep contamination out

CEMC21 benefits

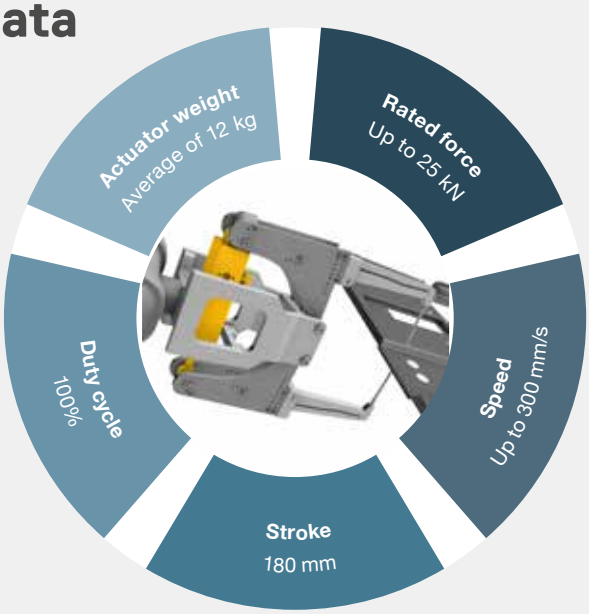
Compact design within 100 mm square frame, fitting in small spaces, while offering high power density and force up to 25 kN.

Aluminum housings and reduced number of components, resulting in light weight for easy integration in automation equipment.

High reliability of inverted roller screw technology for long service life with millions cycles.

Construction with individual modules and various options, more than 300 possible configurations, to match customer application requirements.

CEMC21 main output data



CEMC modularity

Without or with anti-rotation option

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

8 motor options:

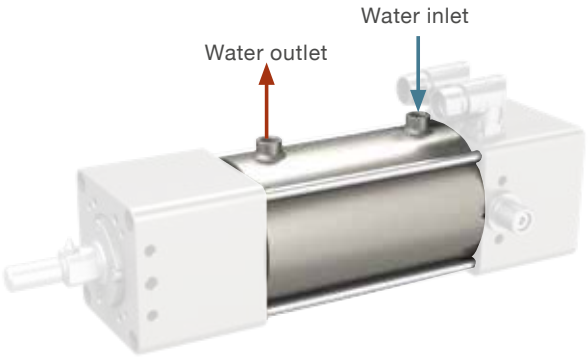
- 2 motor lengths, with 3 or 5 magnets
- 2 motor windings, with 325 or 540 VDC bus voltage
- 2 cooling options, with natural convection or water-cooling housing

7 feedback system options:

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

Water cooling option

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

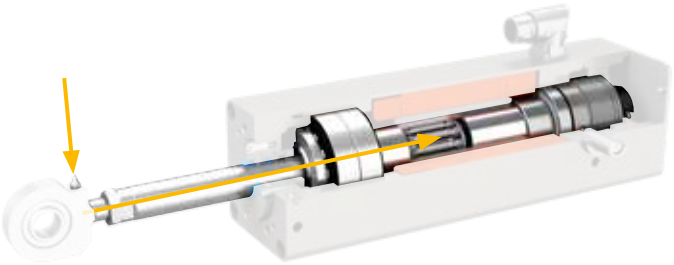


Benefits:

- Consistent cooling all around the stator, for increased actuator capabilities, allowing for heavier duty cycle.
- Actuator length unchanged from standard design with natural cooling.
- Top or bottom water connections per customer requirements.

Lubrication

Moving the grease access from the body to the pushrod attachment allows for quick and easy re-lubrication, with the actuator stopped at any stroke position.



Benefits:

- Fresh grease is injected directly into the roller screw mechanism, without waste of grease inside the actuator housing.
- No need for homing the actuator prior to re-lubrication operation.
- Re-lubrication operation < 1 minute.

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