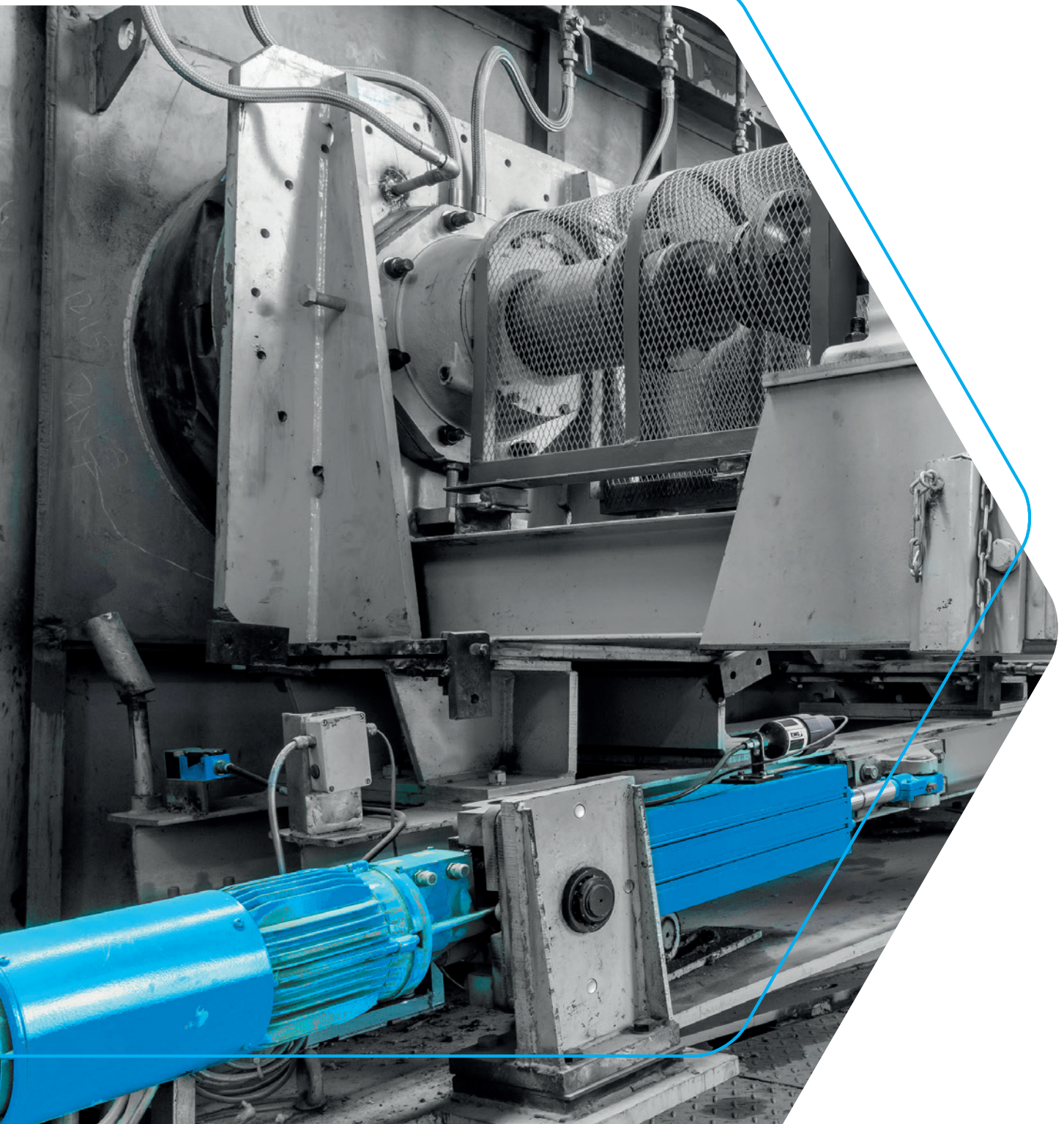
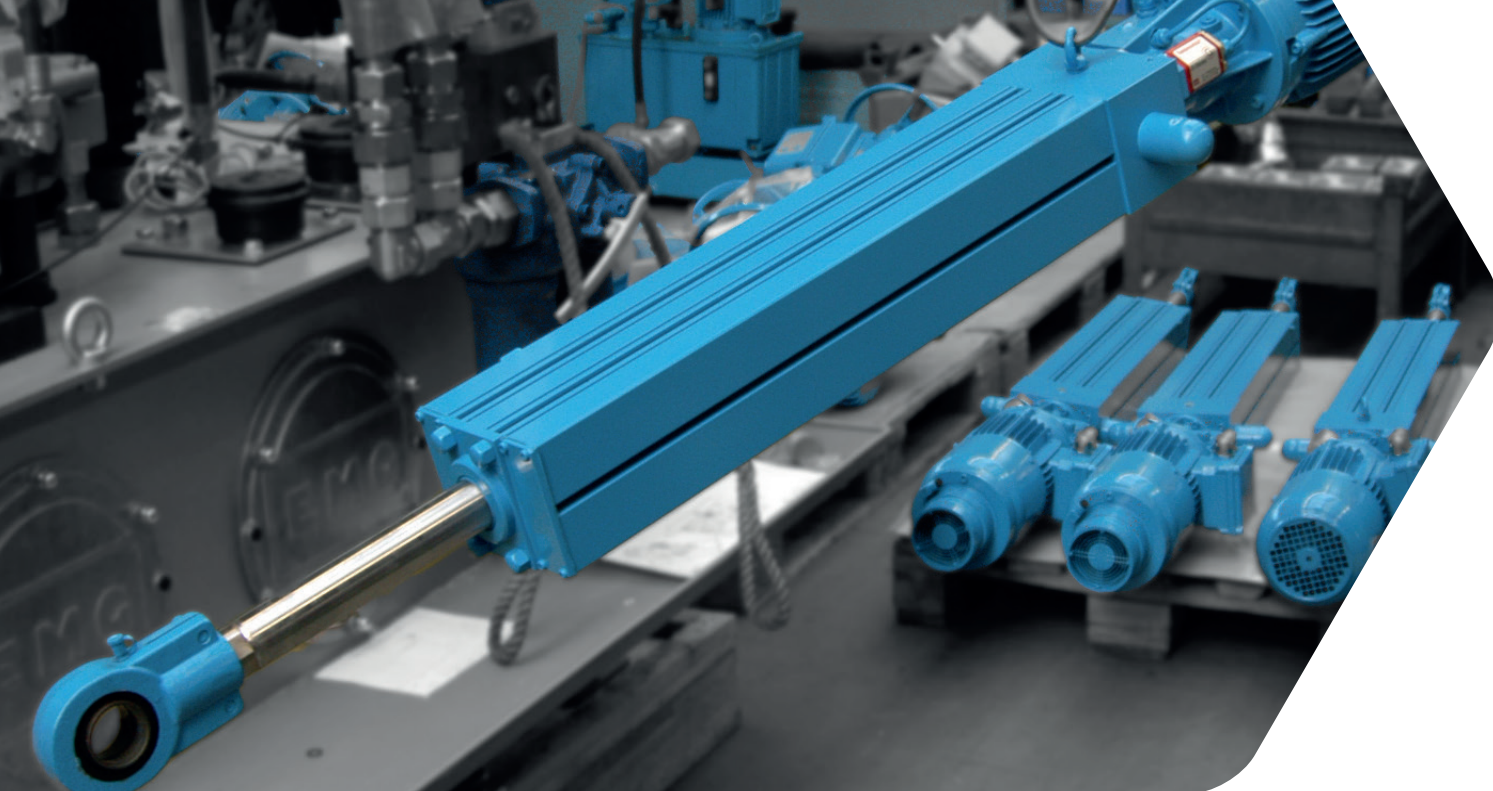


All kinds of linear actuation

Electro-Servo-Cylinder ESZ





EMG Actuators

Electro-Servo-Cylinder ESZ

The Electro-Servo-Cylinder developed by EMG is used as a control and positioning cylinder. It converts by means of a Planetary Gear Thread (PGT) the rotation generated by a threephase current motor into a linear movement.

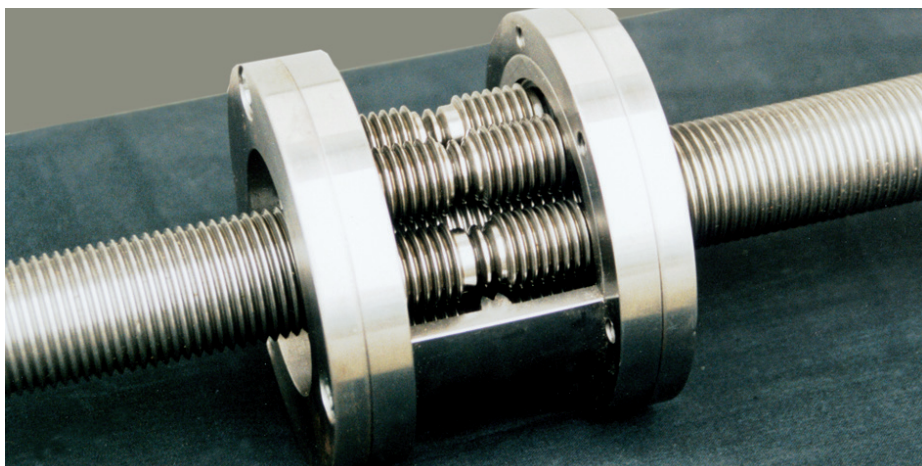
The function principle is based on a rolling motion at low friction and consequently low wear.

The standard model of the Electro-Servo-Cylinder consists of the following components:

- » threephase asynchronous motor
- » spindle with planetary gear thread, thrust housing and piston rod with knuckle
- » rotating lock of piston rod
- » housing with pivot

Customer's benefit ESZ:

- » compact design without gear
- » high drive speed, small motor torque
- » high positioning accuracy
- » low friction, robust and reliable
- » clean and environmentally friendly
- » requiring little maintenance
- » long service life
- » easy replacement of hydraulic or pneumatic cylinders
- » compact design at high power transmission
- » integration of position transducer and limit switch
- » operation without inflammable media



Planetary gear thread

Options:

- » folded bellows to protect the pushrod from dirt
- » external position indication switches, mechanically positioned during on-site installation
- » electrical locking brake, optionally releasable at loss of voltage
- » cardanic mounting to avoid critical lateral forces on the piston rod of the electro-servo-cylinder
- » activation and positioning of the actuator via frequency converter with overlaid control via EMG's control amplifier
- » separate ventilation motor for enduring motor cooling in difficult ambient environment
- » alternative types of mounting on request

Technical data:

- » max. force (no nominal force): 10; 25; 50 and 100 kN
- » protection class: IP 54
- » ambient temperature: 0 ... +50 °C; ...70 °C with separate cooling fan
- » nominal stroke: 100 ... 700 mm
- » nominal speed: 30 mm/s, controlled by frequency converter

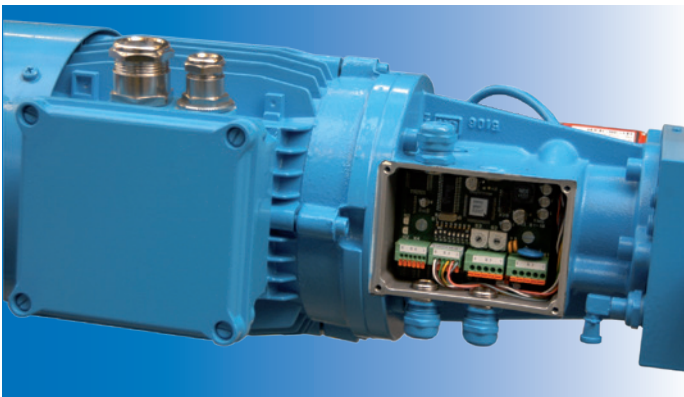
Lubrication and maintenance:

- » recommended lubrication of the planetary gear thread with 10-20 cm³ after approx. 5000 operating hours
- » option: automatical control of lubrication of the ESZ via overlaid counter of operating hours with an adjustable lubrication of the cylinder of up to three years ("automatic lubrication")

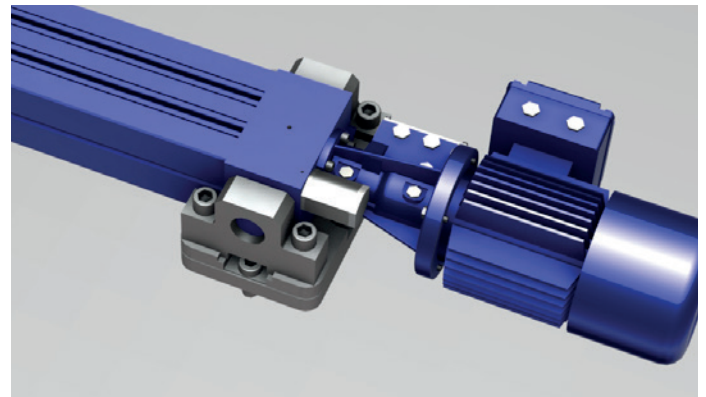
- » option: battery controlled automatic lubrication with precise lubricant allocation over one operating year. Battery and lubricant available as one device.

Application areas:

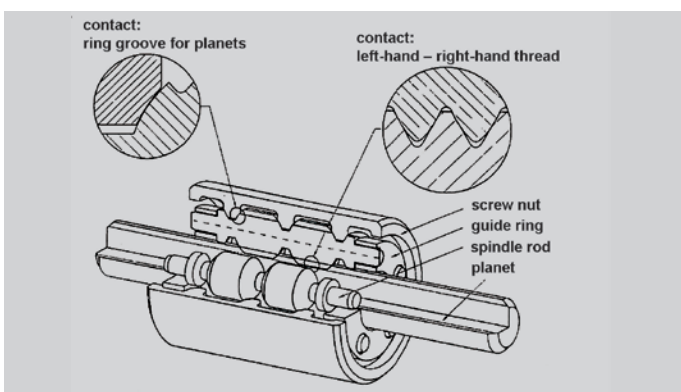
- » used as control or position actuator with high demands on resolution and repeatability
- » alternative to hydraulic or pneumatic cylinders
- » exact positioning of parts
- » precise adjustment of butterfly valves, nozzles and rotors etc.
- » bigger handling systems
- » all kinds of linear actuation



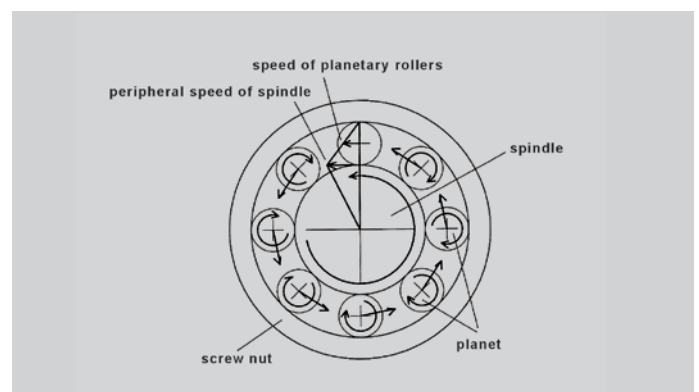
Electronics with DIP switch for easy set up



ESZ with cardanic mounting



Interior view of spindle



Cross-section of spindle

The logo for EMG Automation GmbH, consisting of the letters 'EMG' in a bold, white, sans-serif font.

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