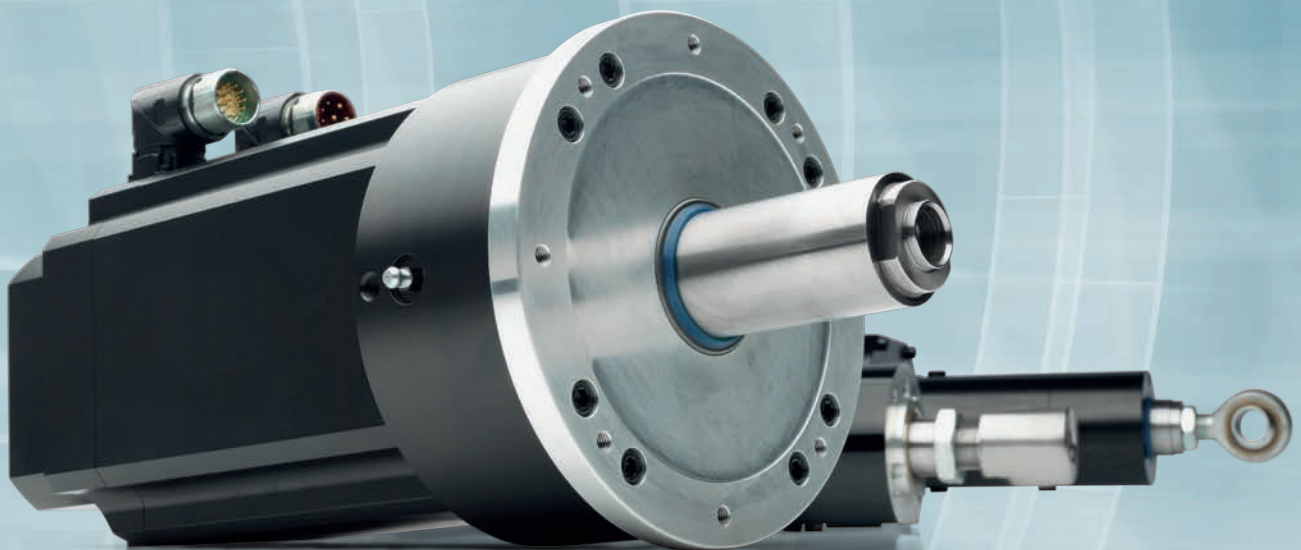




cyber motor

## cyber<sup>®</sup> force motors linear actuators

reliable  
compact  
precise



# Your Applications

## WITTENSTEIN – Products that know no limits



### Joining

Electromechanical cylinder with high accuracy for mating and pressing in processes that require careful monitoring of position and force.



### Assembly

Used in manual work stations or in automated production lines with the benefits of a very compact size.



### Positioning

Precise positioning of tools, even in rough environmental conditions.



### Adhering and Dispensing

Low maintenance and weight optimized linear actuators with the highest reliability for adhering and dispensing systems.

## Quality and Reliability

even in rough environmental conditions

### High Temperature

Operating environments up to 300°C / 572°F

### Vacuum

Operating pressure down to  $10^{-8}$  mbar with extremely low outgassing

### Radiation

Radiation fields up to  $10^7$  Gy

### ATEX

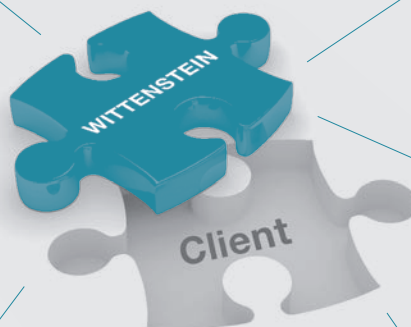
Flameproof enclosure for dust and gas protection according to IEC 60079

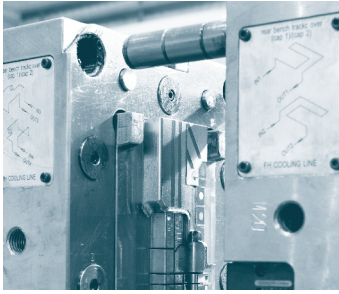
### Clean Room

ISO Class 5

### Food and Beverage Industry

Multiple stage enclosure with food grade lubrication and protection class up to IP69K





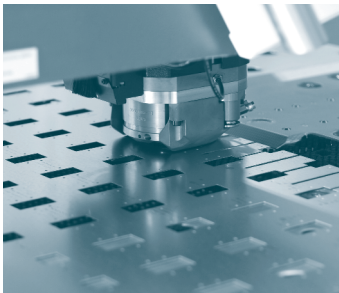
### Injection Molding

Very compact and energy efficient actuators with a long lifetime for ejector, injector, closing and dispensing axes.



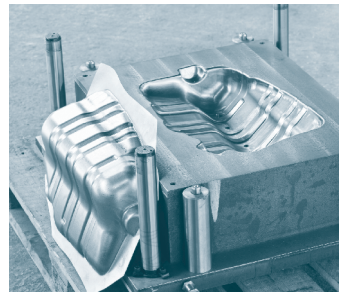
### Welding and Riveting

Servo motor controlled welding and riveting tongs allow for shorter cycle times and energy consumption.



### Bending and Stamping

Variable, force monitored motion for ambitious bending and stamping tasks.



### Deep-Drawing

Tension or compression reshaping of film or sheets via high compact and powerful linear actuators.

## Excellent Solutions for complex motion tasks

### Compactness

- Fully integrated unit consisting of a motor, ball screw, encoder and brake for minimal space
- Servo motors with high power density and overload capacity

### Precision

- Reproducible, monitored processes through precise force, speed and position control

### Customization

- Individual calculations and design by our linear motion experts
- Great support during design and development phase
- Support during start up

### Reliability

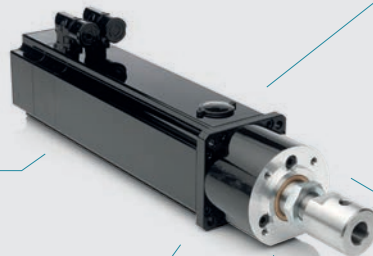
- Only high quality components and materials are used
- Every motor is tested (electrical, mechanical and functional)
- Stress tests and customer specific service life tests are available on request

### Dynamics

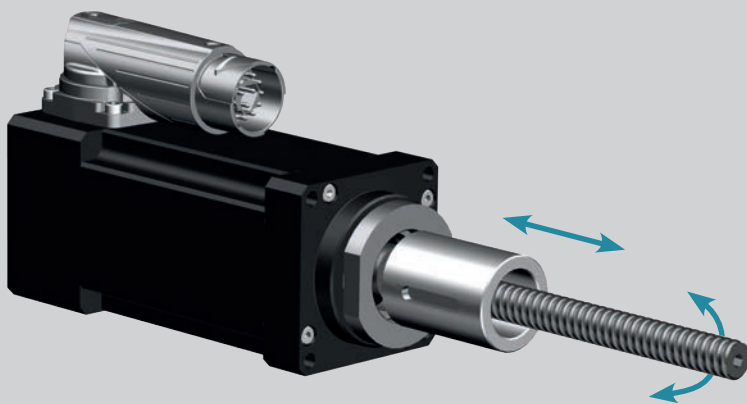
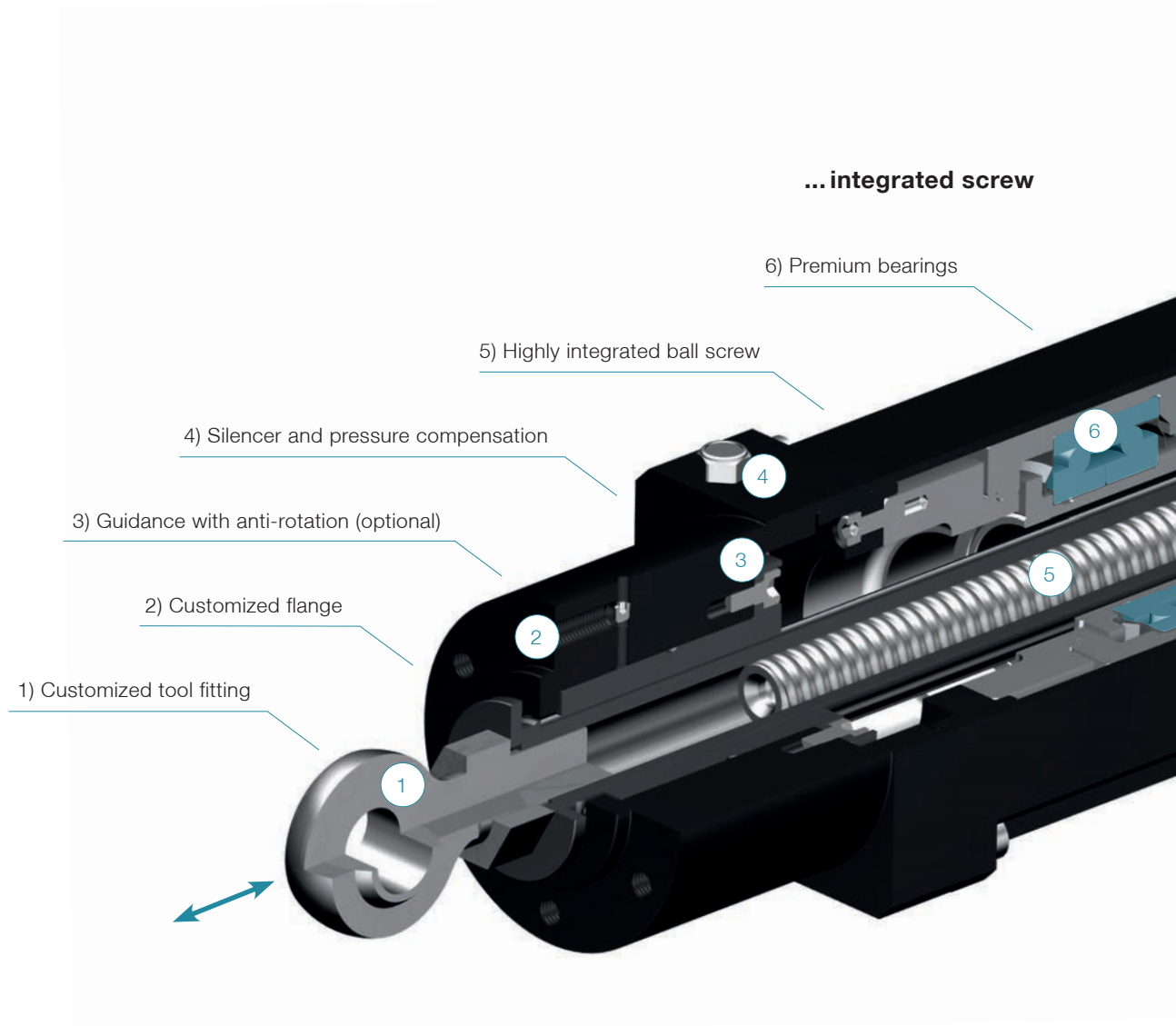
- Reduced cycle times due to very high dynamic performance and careful optimization

### Service

- Development, design and assembly in Germany
- 24h service
- Testing and certification (CE, UL, ATEX,...) from a single source



# Highly Compact linear actuators with ...

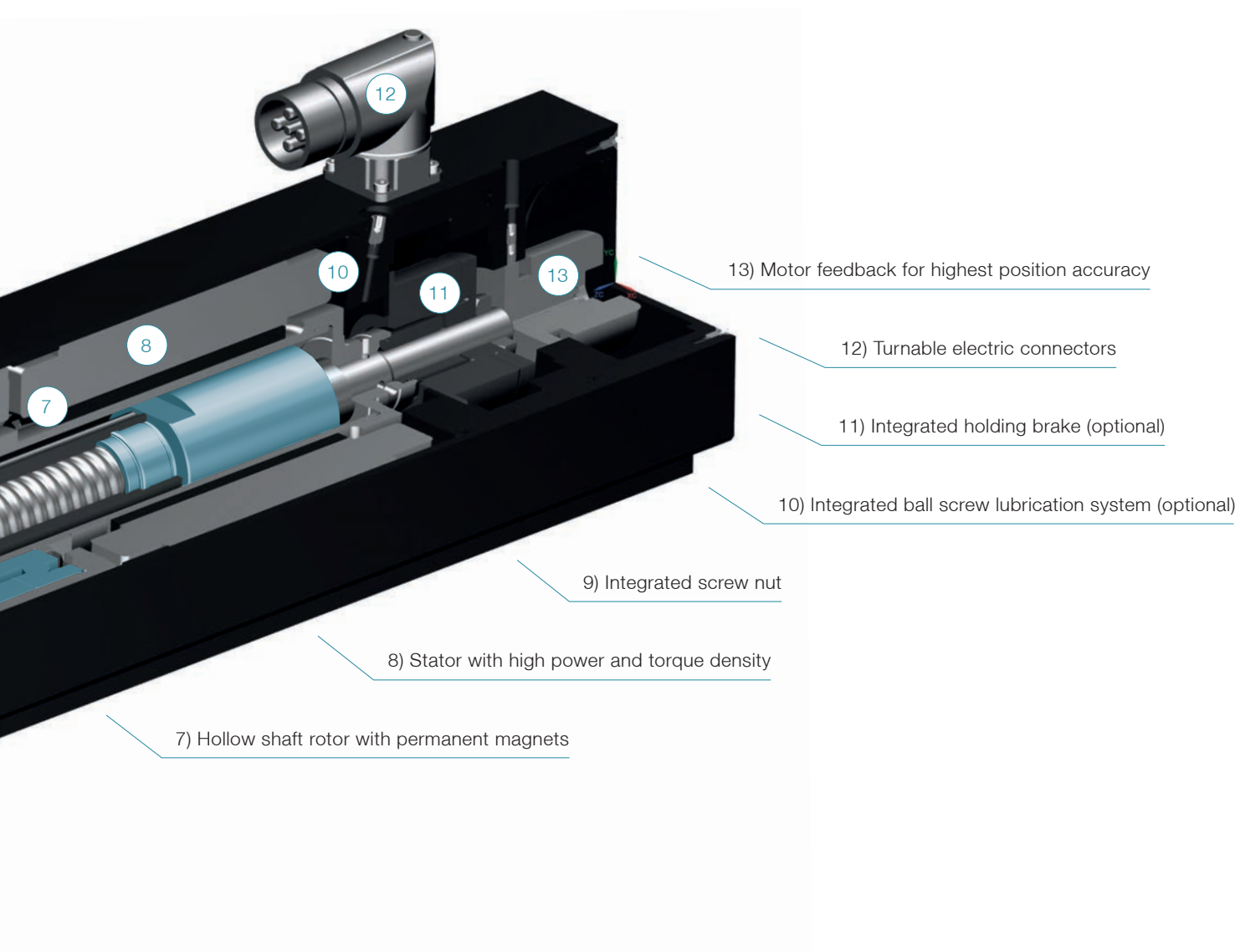


## ... directly driven screw

Ready-to-mount motor with directly driven ball screw for inexpensive solutions.

The rotor shaft of the high torque servo motor is combined with a ball screw.

Ideal for highly dynamic applications through minimal inertia.



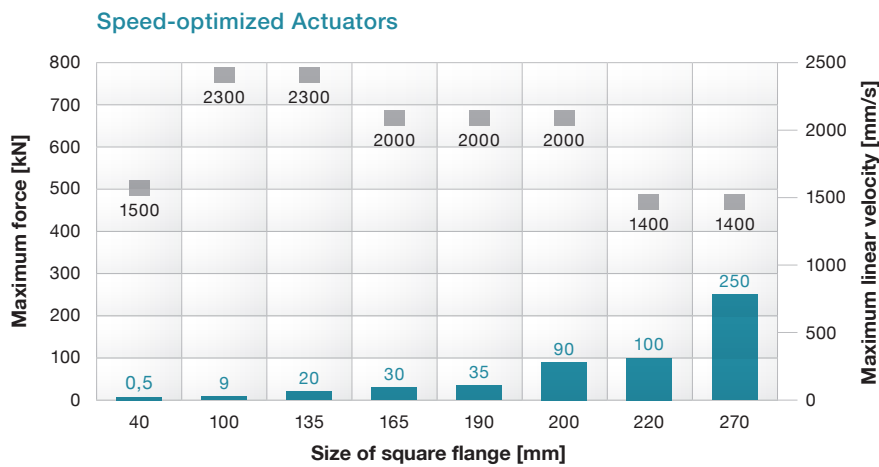
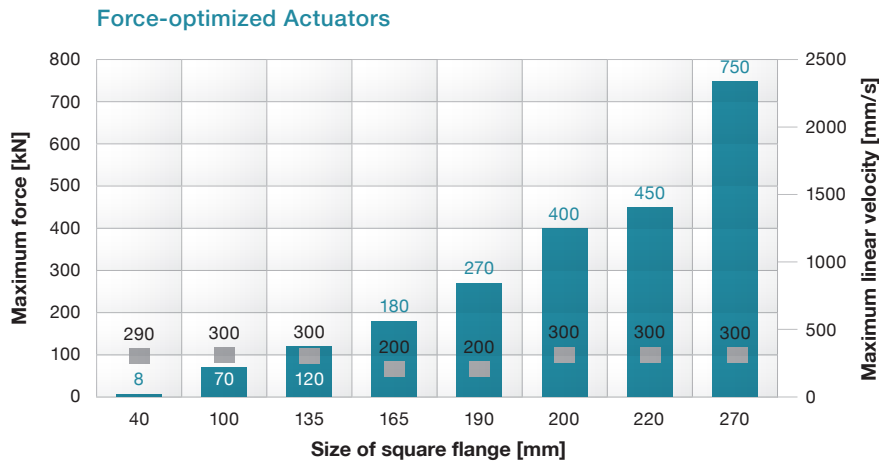
**... endless screw**

Moving the ball screw through the hollow shaft motor provides an “endless” stroke.

Ideal for highly compact solutions with a long travel range.

# Wide Range of Motors

our base for customized solutions



## Your Application

Customized design for your duty cycle to find the ideal balance between force and speed.

- = Maximum force
- = Maximum velocity

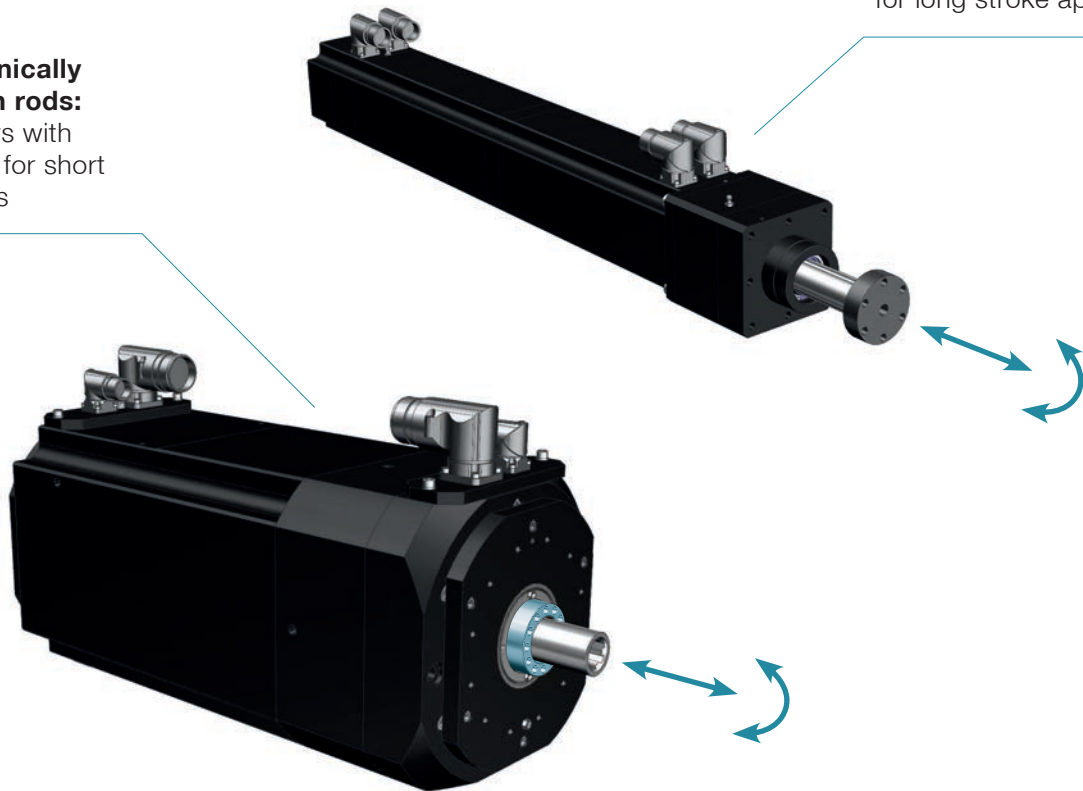
## Options

- All standard feedback systems available
- Integrated holding brake
- Water cooling with filtered or unfiltered water
- Integrated rotation prevention
- Tool Holder
  - According to DIN
  - Spherical
  - Customized
- Assembly Flange
  - Wall mounting
  - Flange mounting
  - Spherical mounting
- Customized threaded screw
  - Ball screw
  - Planetary roller screw
  - Trapezoid threaded screw
- Patented lubrication system
  - No disassembly needed
  - Service during operation
  - Maintenance free system

# Combined Linear Rotary Actuators for independent rotary and linear motion

**With two mechanically separated piston rods:**  
Compact actuators with high force density for short stroke applications

**With one combined piston rod:**  
High dynamic actuators for long stroke applications



## Typical applications

### Injection Molding

Plasticizing and injecting of plastic

#### Rotation:

Drives the plasticizing screw to melt the plastic

#### Linear Motion:

Injecting the plastic into the mould

### Bottle Closer „Capper“

Screws caps on filled bottles in high speed

#### Rotation:

Torque and position controlled rotation to safely screw the caps on the bottles

#### Linear Motion:

Pressing of the preheated caps on the bottle threads

### Controlled Welding and Soldering

Welding and soldering of complex contours with high position accuracy of the welding/soldering head

#### Rotation:

Turning of the welding/soldering head

#### Linear Motion:

Linear motion of the welding/soldering head



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