

**EWELLIX**

A Schaeffler Company

# Full electric transition

Solutions for your electrification journey



# The heritage of innovation

Ewellix is a global innovator and manufacturer of linear motion and actuation solutions. Our state-of-the-art linear solutions are designed to increase machine performance, maximise uptime, reduce maintenance, improve safety and save energy. We engineer solutions for assembly automation, medical equipment, mobile machinery, distribution and a wide range of other industrial applications.

## Technology leadership

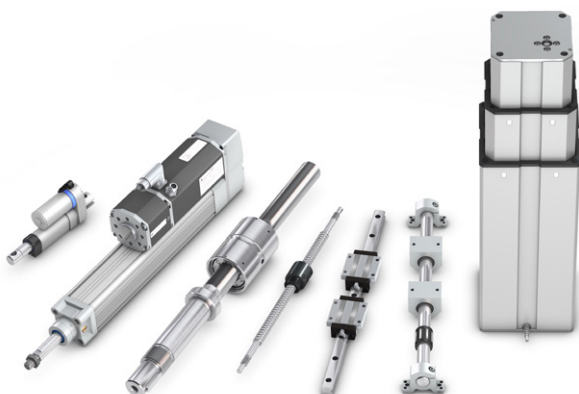
We earned our reputation through decades of engineering excellence. Our journey began over 50 years ago as part of the SKF Group, a leading global technology provider.

Our history provided us with the expertise to continuously develop new technologies and use them to create cutting edge products that offer our customers a competitive advantage.

In 2019, we became independent and changed our name to Ewellix. We are proud of our heritage. This gives us a unique foundation on which to build an agile business with engineering excellence and innovation as our core strengths.

## Global presence and local support

With our global presence, we are uniquely positioned to deliver standard components and custom-engineered solutions, with full technical and applications support around the world. Our skilled engineers provide total life-cycle support, helping to optimise the design, operation and maintenance of equipment thus improving productivity and reliability while reducing costs. At Ewellix, we don't just provide products; we engineer integrated solutions that help customers realise their ambitions.



## Schaeffler Group – We pioneer motion

Ewellix is since 2023 owned by the Schaeffler Group.

As a leading global supplier to the automotive and industrial sectors, the Schaeffler Group has been driving forward groundbreaking inventions and developments in the fields of motion and mobility for over 75 years.

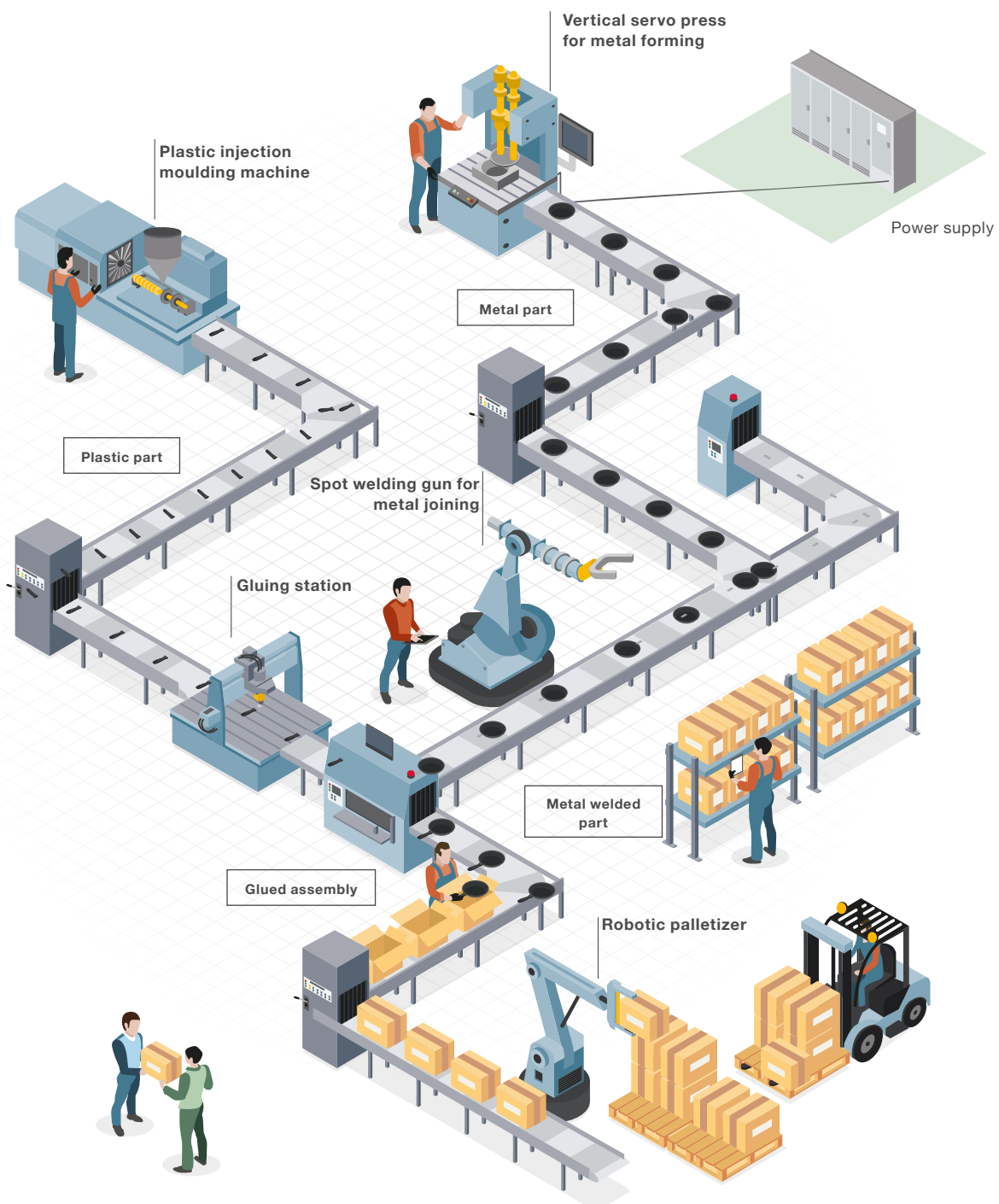
With innovative technologies, products, and services for electric mobility, CO<sub>2</sub>-efficient drives, Industry 4.0, digitalization, and renewable energies, the company is a reliable partner for making motion and mobility more efficient, intelligent, and sustainable.

Schaeffler manufactures high-precision components and systems for powertrain and chassis applications as well as rolling and plain bearing solutions for a large number of industrial applications.



# The electrification opportunities in manufacturing

This illustration represents a generic production line for cooking pans with different processing stations. The electromechanical solutions advantages are detailed in the following pages.



# Full electric transition

Energy-saving and sustainable solutions are the topic of the day.

The efficiency of electric technologies is usually much higher than that of alternatives based on fluid power. Therefore, electrification offers an excellent potential to reduce final energy consumption and is rapidly changing the mechanical design landscape in all sectors.

Depending on the industry, this trend may be in its early stages or already be more mature. While fluid power technology will continue to be used, the transition to electrified solutions will become more important in the future.

## Advantages of electromechanical solutions over established technologies such as pneumatics and hydraulics



### Increase productivity

Complete controllability and positioning precision with high speed



### Lower Total Cost of Ownership

Maximise uptime, increase quality and reduce maintenance cost



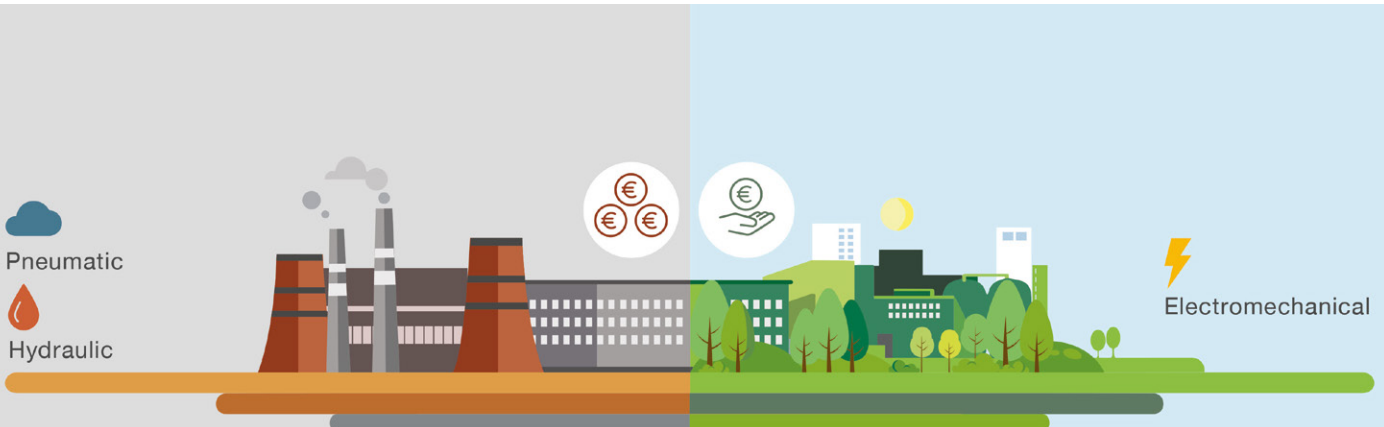
### Reduce carbon footprint

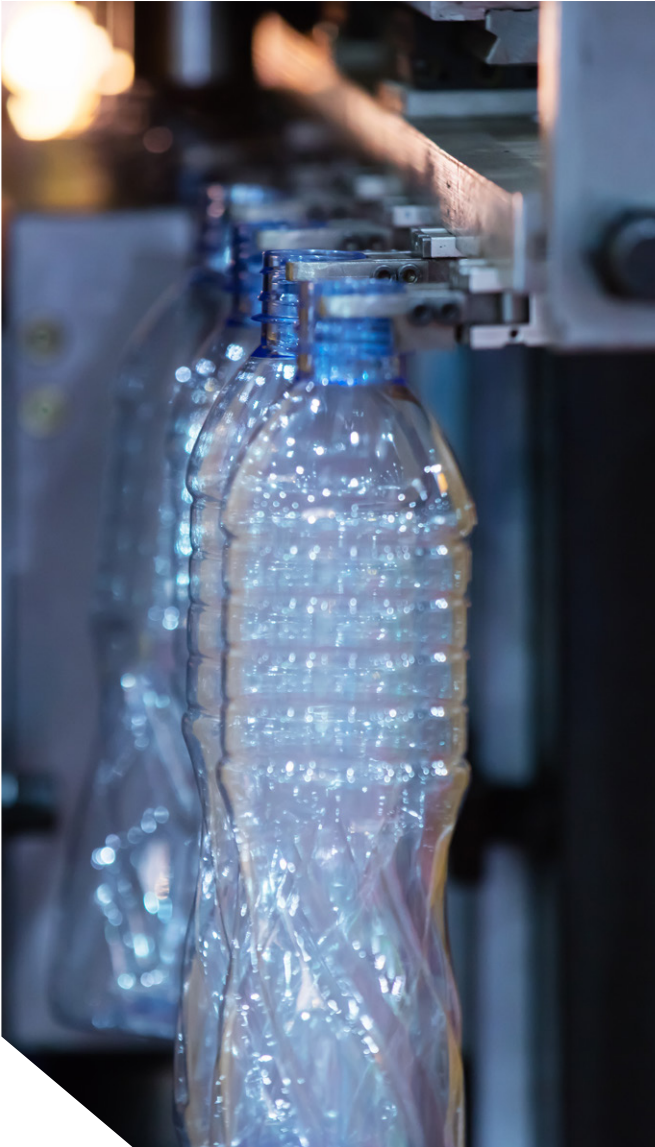
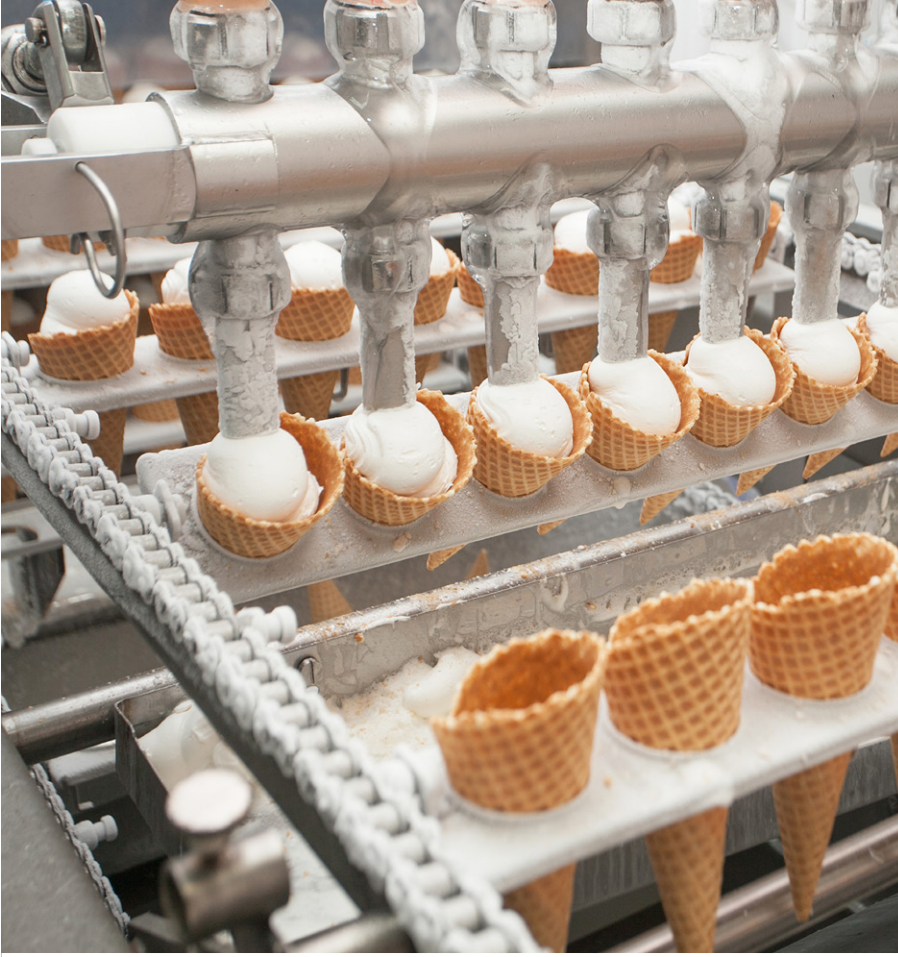
Higher efficiency with power consumption close to zero while not in use



### Improve safety

No fluid under pressure during operation, safer during inspection and service











# Performance

Discover the future of industrial automation. Ewellix helps customers transition from established manufacturing process technologies to innovative approaches with easy, safe and environmentally friendly linear motion solutions.

## Controllability and positioning precision

The compressibility of air provides limitations on the level of control that can be achieved with pneumatic actuators. It's also difficult to provide the slow, controlled speeds that are needed in certain applications. With hydraulics, the situation improves but, to control in multiple positions, still requires a complex servo-hydraulic configuration that increases the cost and setup time of the overall system.







Electromechanical actuators have a direct mechanical link between the motor and the screw that provides complete controllability of the system, with high levels of repeatability, down to the micron level as well as higher stiffness. Moreover, it's very easy to precisely change the speed along the motion cycle. Finally, for electromechanical systems, there is no warm up time, increasing the productivity of the machine.

			
 <b>Positioning precision</b>	Low	Medium	High
 <b>Controlled speed</b>	Difficult	Possible, but complex	Easy
 <b>Warm up time</b>	Needed	Needed	Not needed

## Reliability and lifetime

While electromechanical actuators have more components than a generic pneumatic or hydraulic cylinder, the entire fluid power system has many more critical parts (compressor, filter/regulator, valves, seals, hoses....etc.). If these components have issues, it will affect the entire system, leading to machine downtime. The fluid power system is also very contamination sensitive and requires efficient filters that need to be serviced over time.

With electromechanical systems, the most common points of failure are the screw or the bearings. These components have  $L_{10}$  life ratings, which can be calculated based on the life equations typically found in the Ewellix catalogs. This greatly helps in selecting the correct product sizing, and facilitating predictive maintenance operations. Moreover, electromechanical actuators are less sensitive to contaminants as they do not have a complete circuit constantly under pressure (with several parts subject to wear).

			
 <b>System complexity</b>	High	High	Low
 <b>Predictive maintenance</b>	Possible	Possible	Easy
 <b>Contamination sensitivity</b>	High	High	Low

### Legend



Pneumatic



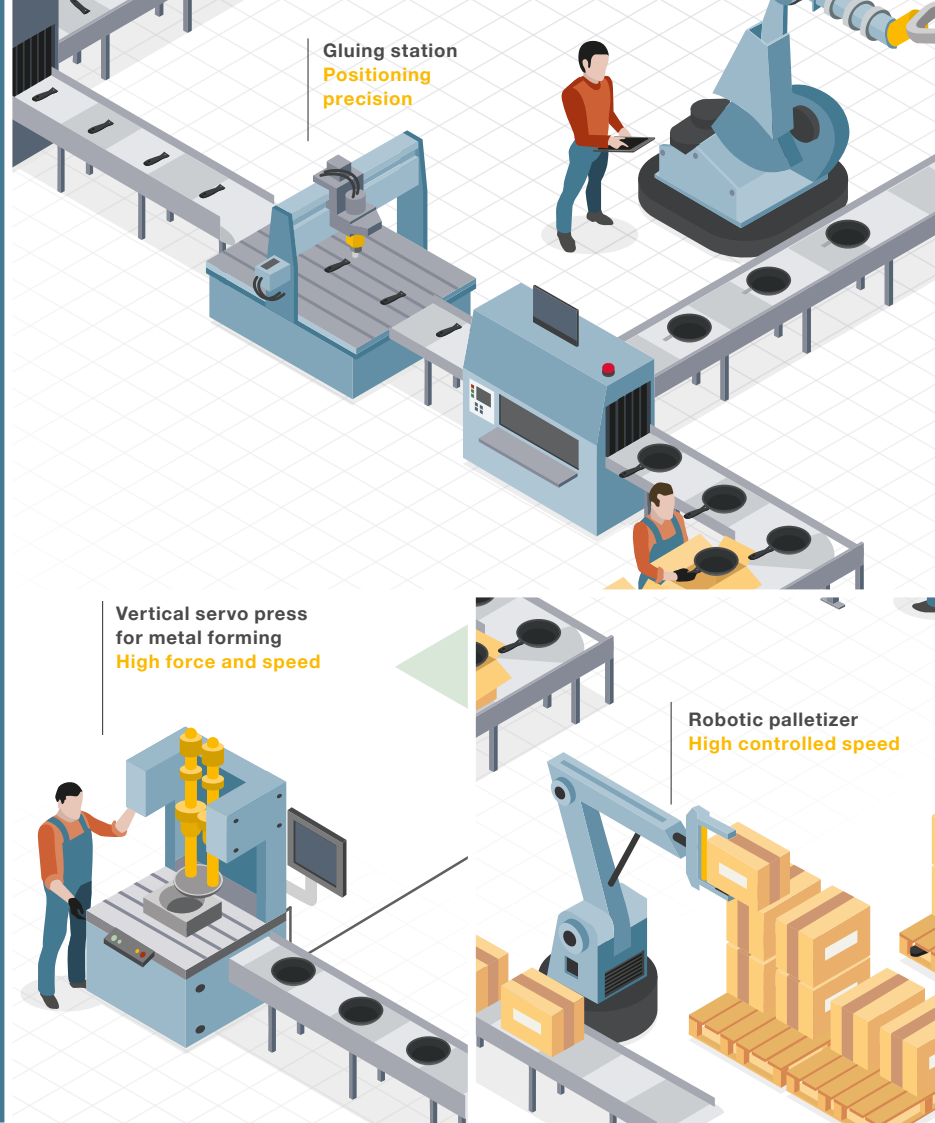
Hydraulic



Electromechanical

## Advantages

- Complete controllability
- Higher positioning repeatability
- Precise speed control
- No warm up time
- Easier predictive maintenance operation
- Less sensitive to contaminants, ensuring longer lifetime
- Lower power consumption, optimised for the application








## High speed performance

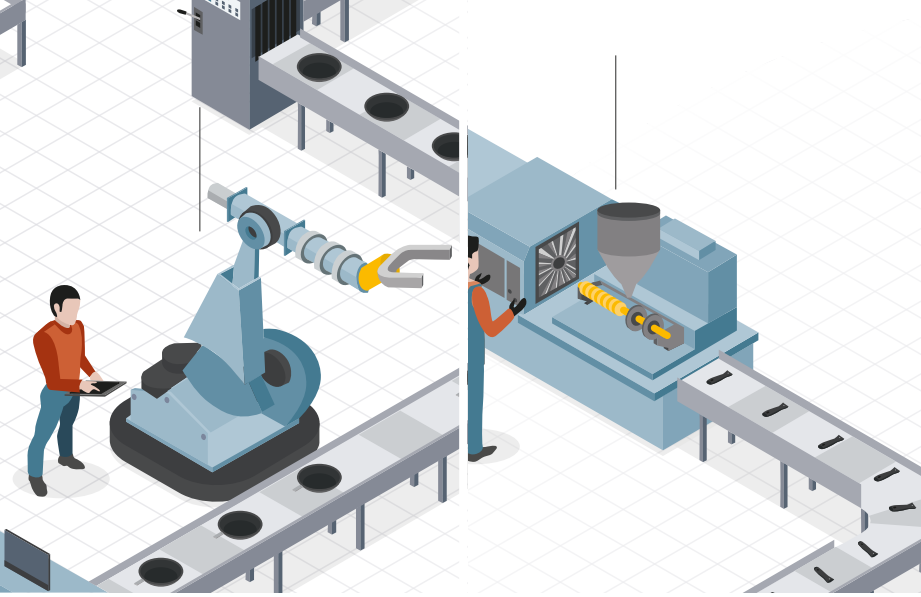
With pneumatic cylinders, it is easy to reach very high speeds in operation. With hydraulics, a large flow is needed to meet the same goal, but there must be enough pressurized oil in the system to reach the required flow level.

An accumulator can do the job by holding the pressurized volume, deploying additional capacity when needed.

In any event, this means a more complex and costly system setup that can lead to very high power consumption.

With electromechanical cylinders, it is easy to match the application needs by selecting the best combination of screw lead and gearbox ratio, which optimises the power consumption without any added system complexity.

			
 High speed	Very Easy	Difficult	Easy
 Power consumption	High	High	Low









## Advantages

- Smaller installation space required in the machine
- Overall system is significantly lighter

## Power density

Pneumatic cylinder force capacity is heavily limited by the maximum pressure (typically up to 6 bars) that can be achieved and by the related energy losses due to the air compression. This means that to generate high forces, very big cylinder diameters and pressure levels are needed. And forces are usually limited to 48 kN for a size 320 cylinder.






Electromechanical cylinders can always provide much higher forces compared to a pneumatic cylinder with the same section size, with a power density up to 8 times higher. Hydraulic cylinders can have an even higher power density but they need more installation space in the machine due to tubes and hoses. Electromechanical cylinders just use power cables for operation, requiring a smaller space.

			
 <b>Force</b>	Up to 48 kN	> 500 kN	Up to 500 kN
 <b>Cylinder dimension vs force</b>	1	More than 8 times smaller	Up to 8 times smaller
 <b>Installation space</b>	Big	Big	Small

## Weight

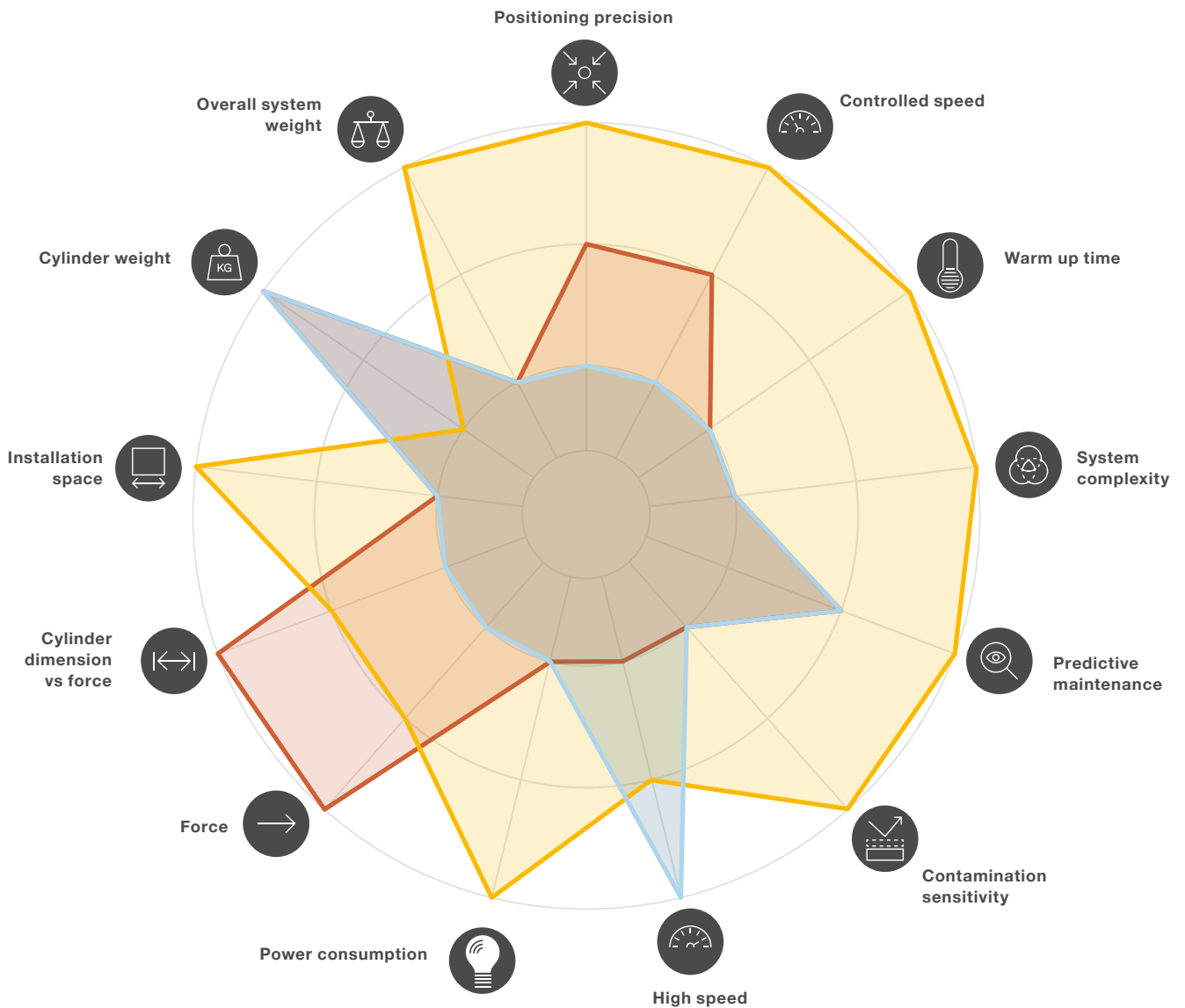
Pneumatic cylinders by themselves are lightweight devices, but if we consider other components like hoses, valves, air filter and so on, the overall system weight increases. The same concept applies to hydraulics.

Electromechanical actuators have a higher weight if compared just to an equivalent fluid power cylinder, but are significantly lighter once we consider the overall system.

			
 <b>Cylinder weight</b>	Low	Low	High
 <b>Overall system weight</b>	High	High	Low



# Performance overview



## Legend

 Pneumatic       Hydraulic       Electromechanical       Positive  
Medium  
Negative

# Environment

Performance optimisation, easy integration and environmental friendliness are 3 key factors that lead to savings in total cost of ownership.

## Safety

Hydraulic cylinders usually work with very high pressures (up to 350 bars) and represent a potential hazard for personnel working around the system, due to pinhole leaks and improper couplings. Moreover, if mineral oil is used, they can create a potential fire hazard. For pneumatics, the situation improves but the stored energy can still be a danger during maintenance checks or unexpected system shutdowns.






It is possible to minimize such risks by using relief and bleed valves, non-combustible fluid, automatic fire alarm systems and dedicated safety procedures for inspection and maintenance. However, doing so dramatically raises the overall cost and complexity of the system.





Electromechanical actuators do not have fluid under pressure and therefore are safer during operation, inspection, and service. In addition, by cutting off the motor power, the entire system is de-energised and can therefore be handled safely. Finally, by using selflocking actuators or an external fail safe brake, it's also possible to significantly minimise safety risks and the hazard of accidents and personal injury.

## Energy saving

Pressure losses and air compressibility make pneumatics less efficient than other linear motion methods. Hydraulics have better efficiency but still experience several losses in the conversion between pressure generation and linear movement. In both cases, a compressor must run continuously, creating pressure even if there is no movement.

Electromechanical systems use energy on demand, so they have consumption close to zero while not in use. Their higher efficiency in converting electric into mechanical power allows them to achieve tangible energy savings in operation. Moreover, in battery-operated devices such as mobile machinery, it is possible to recuperate energy, e.g. in lifting applications, while moving downwards, which dramatically increases the uptime allowing to downsize the battery pack.

			
 <b>Potential hazard</b>	Medium	High	Low
 <b>Safety in operation</b>	Complex	Complex	Very easy

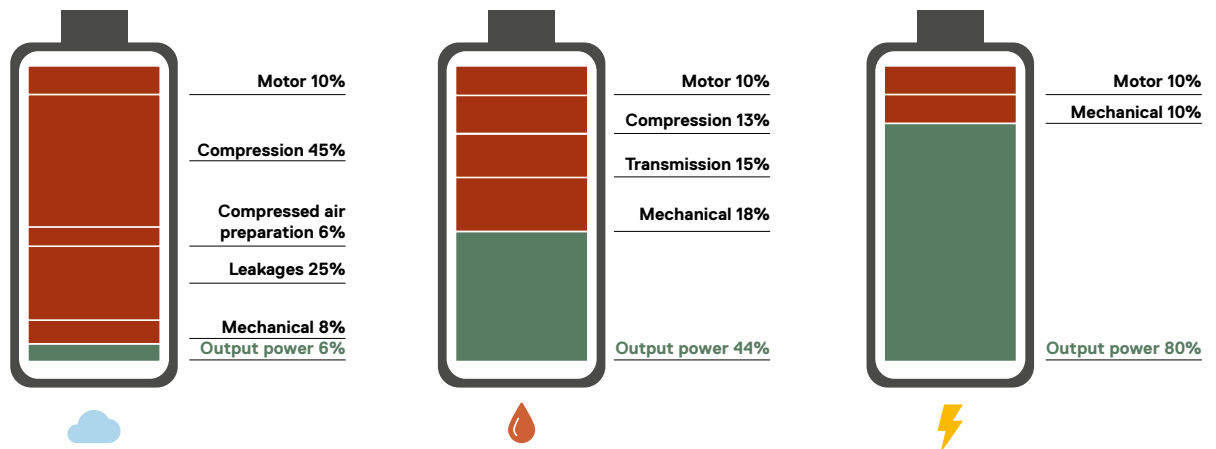
			
 <b>Consumption while not in use</b>	Medium	High	Close to zero

## Advantages

- Safer during inspection and service
- Safer during machine operation
- Power consumption close to zero while not in use
- Higher efficiency in converting electric into mechanical power



## Efficiency: Energy losses comparison





## Advantages

- Noise is generated only when operated
- Noise level is usually negligible
- Grease lubricant entirely contained inside the actuator body
- Very low heat generation

## Environmental

Even though air is free, it can be contaminated by oil or other impurities and needs to be filtered to avoid environmental pollution. Also, the leakages and disposal of hydraulic oil represent a significant environmental issue and a potential source of pollution.

A single hydraulic leak of one drop per second is equal to approximately 1 500 l/year, at a cost of about € 5 000/year.

However, the costs associated with hydraulic leaks are much higher than the cost of the hydraulic oil. What starts as a “small” leak can eventually lead to a system failure that causes higher costs.

Furthermore, there are costs for energy losses, safety, environmental concerns, hazardous waste disposal, clean-up and downtime for repairs.

The energy losses on the whole system, especially on hydraulic, can cause ambient overheating that must to be evacuated, causing extra energy waste for the cooling system.

Electromechanical systems use grease as lubricant that is entirely contained inside the actuator body. As a result, the quantity used is small and doesn't represent a significant source of pollution.






Electromechanical actuators also generate heat but at a negligible level compared to hydraulic, and are much more efficient.

## Noise






Pressure pulsation, created by the operation of pumps in a fluid power system, is one of the primary causes of noise issues for this technology. But also other components like valves and compressors are contributing to noise generation.

The average noise level of hydraulic systems is 80-90 dB.

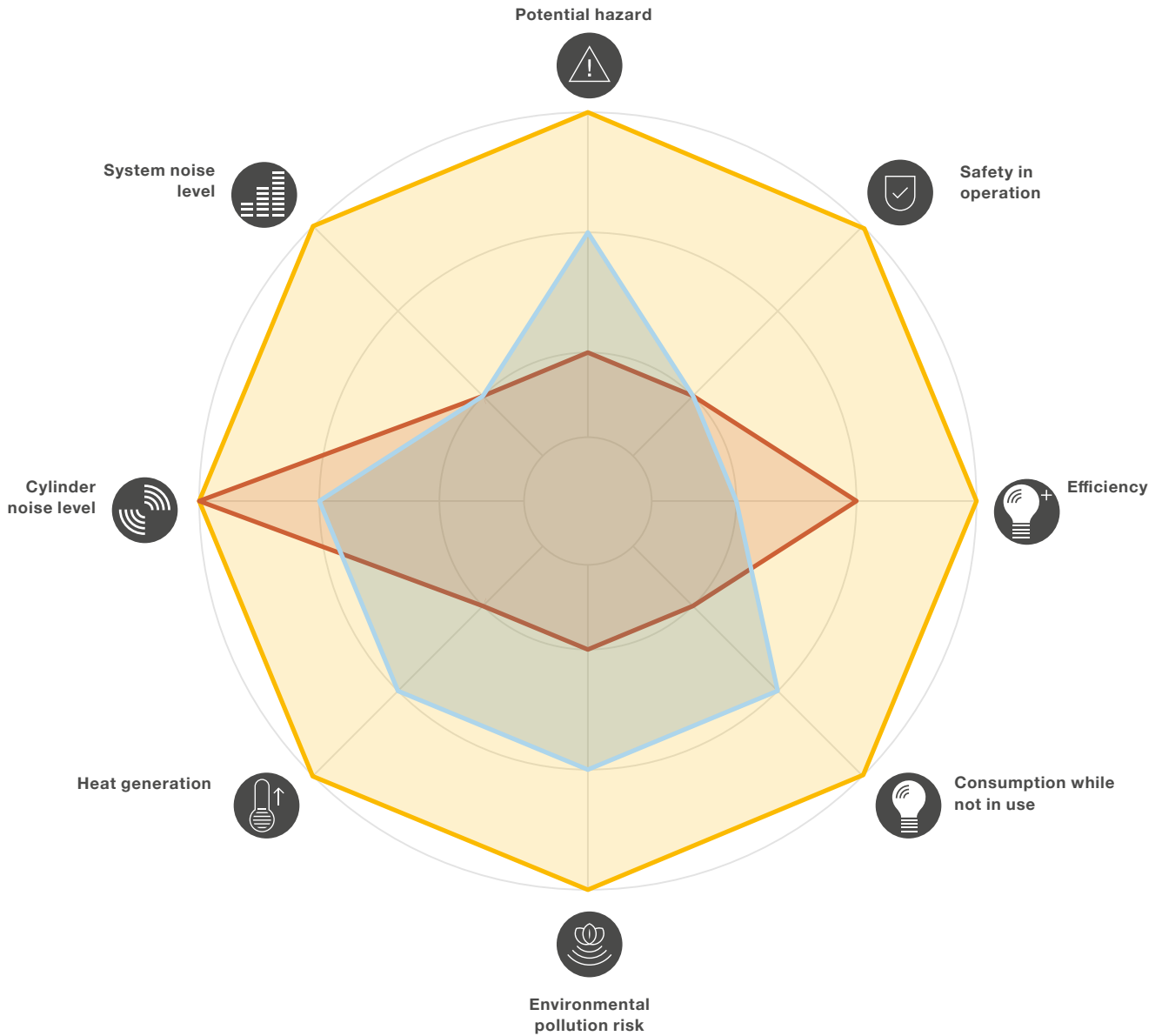
Electromechanical systems are generating noise primarily from the screw movement. Therefore, noise is generated only when the actuator is in use. Moreover, the overall noise level of <45 dB is usually negligible compared to a fluid powered system.

			
 Environmental pollution risk	Medium	High	None
 Heat generation	Medium	High	Low



			
 Cylinder noise level	Medium	Low	Low
 System noise level	Very high	Very high	Null

# Environmental overview



## Legend

 Pneumatic

 Hydraulic

 Electromechanical

 Positive

 Medium

 Negative

# Simplicity






We are in a fourth era in the history of manufacturing, Industry 4.0, where technologies and processes are connected in a collaborative network.

## Installation

Pneumatic systems require many components, including hoses, pumps, valves, regulators, lubricators, and air filters. Hydraulic systems, as well, require a complex setup including a fluid reservoir, pumps, motors, release valves, heat exchangers, along with noise-reduction equipment. This means the commissioning time is also long since several parts of the system must be fine-tuned.

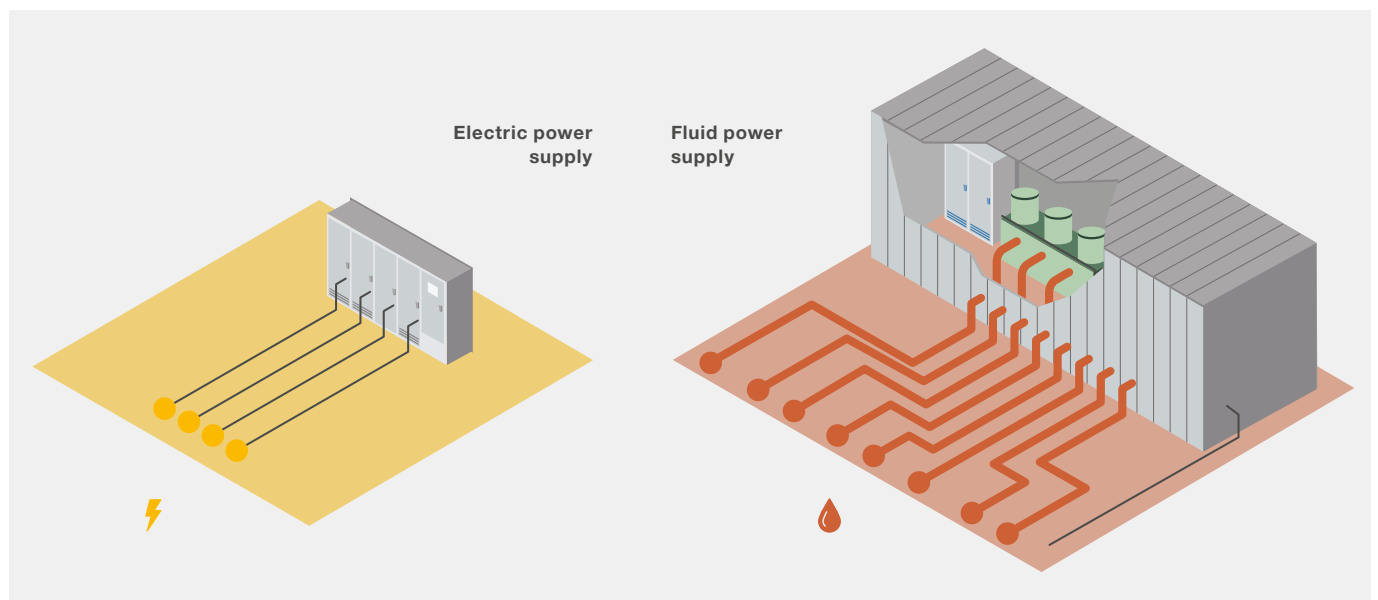
Electromechanical systems only require a motor, electric cables and, depending on the motor type, a driver.

This allows a much smaller system footprint and a simple mechanical layout, reducing significantly the installation and commissioning time of the equipment.

			
 <b>Footprint</b>	Large	Large	Very small
 <b>System commissioning time</b>	Very long	Very long	Short

## Advantages






- Significant reduction of the occupied production floor footprint
- Reduced installation and commissioning time



## Design

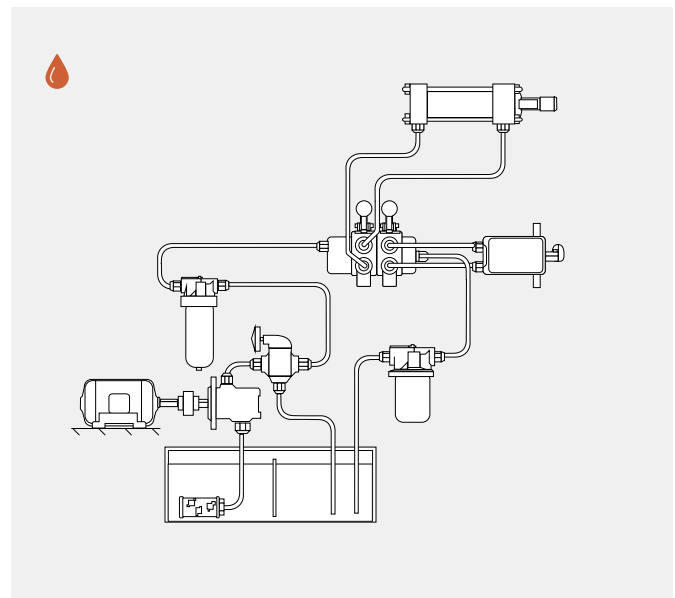
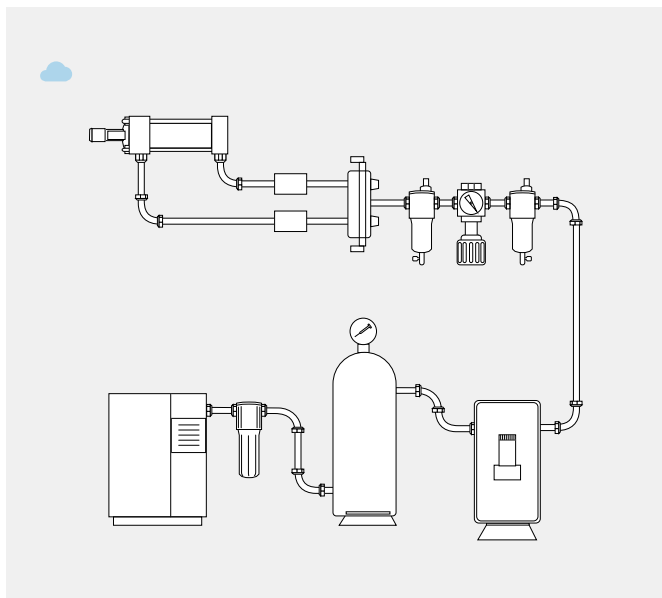
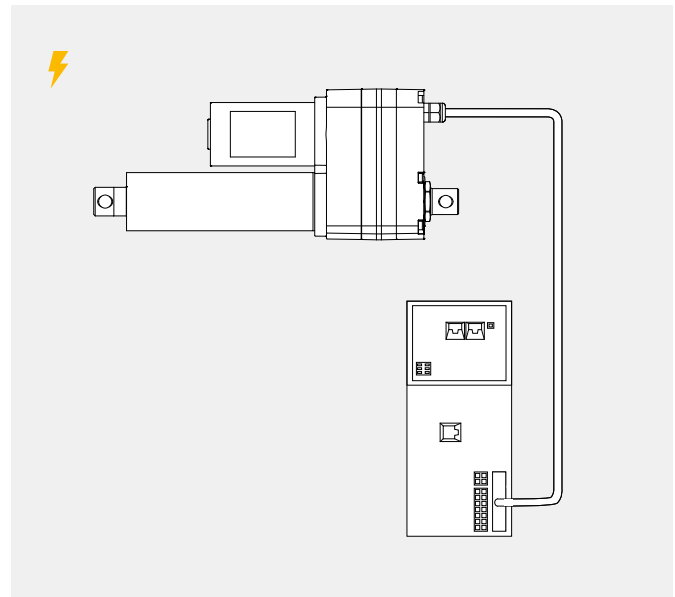
When designing a fluid powered system, it's important to correctly place the numerous components and to accurately define the right route for the pipes and hoses, creating constraints in the machine layout. Depending on the number of cylinders, the distance between them and the overall machine layout, the design phase can take some time as the designer also has to consider a simple installation and maintenance process.

With electromechanical systems, the design process is lean thanks to fewer components and to the usage of electric cables only, that allow a more flexible routing and installation.

			
 <b>Design time</b>	Long	Long	Short
 <b>Project constraints</b>	Significant	Significant	Less

## Advantages

- Shorter machine design time
- Easier routing with wiring harness compared to tubes and hoses





## Advantages







- Virtually maintenance free
- Easier implementation of predictive maintenance strategies
- Easier and quicker cylinder replacement
- No recalibration required after cylinder replacement

## Maintenance

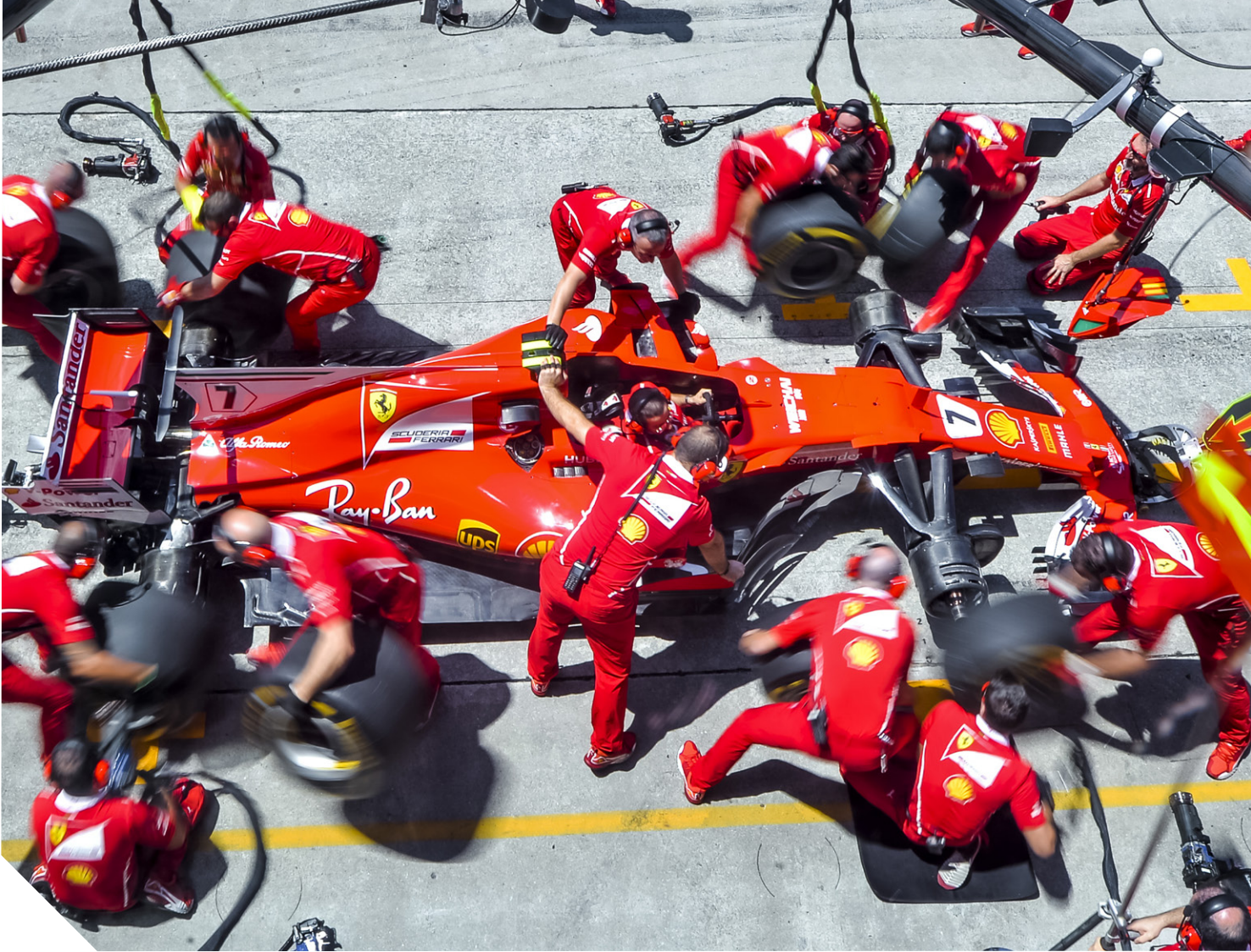
Fluid powered systems require constant maintenance to achieve overall system efficiency, avoiding leaks and failures. Filtering system, valves, pipes and fittings should be monitored and serviced to improve cylinder performance over time. Moreover, manual inspection operations are required to check the system status and spot possible issues.

Electromechanical actuators can be operated virtually without maintenance for their whole lifetime or, depending on the working cycle and application, they may just require a relubrication operation at defined intervals.

It's also possible to perform predictive maintenance strategies thanks to the integrated sensors (like current, displacement, force, acceleration) that allow real-time remote monitoring and that can be used to forecast product lifetime in operation.

			
 <b>Maintenance</b>	Constant	Constant	Not required / seldom
 <b>Cost of maintenance</b>	High	High	Very low
 <b>Remote monitoring</b>	Possible	Possible	Easy










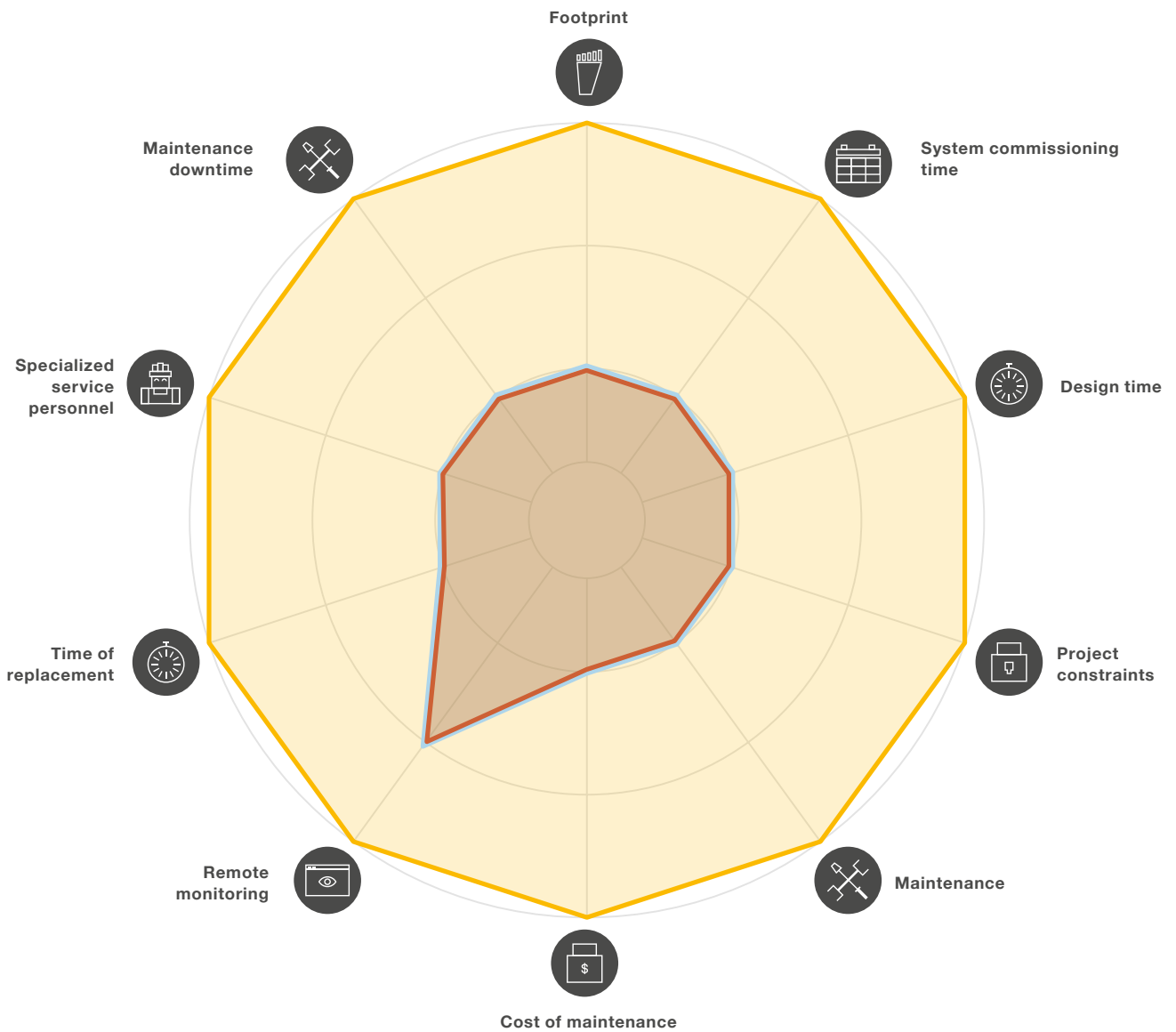
## Quicker replacement

Replacing components in a fluid power system requires de-pressurization, oil disposal (in the case of hydraulics), part substitution and re-calibration to get back into operation. This requires a defined amount of time with specialized service personnel.


Electromechanical actuators can be quickly replaced by disconnecting the cables and substituting the current actuator with a new one. No further action is required to restart operation.

			
 Time of replacement	Long	Long	Very short
 Maintenance downtime	Longer	Longer	Very short


# Simplicity overview





## Legend

 Pneumatic

 Hydraulic

 Electromechanical

 Positive  
 Medium  
 Negative

# Total cost of ownership

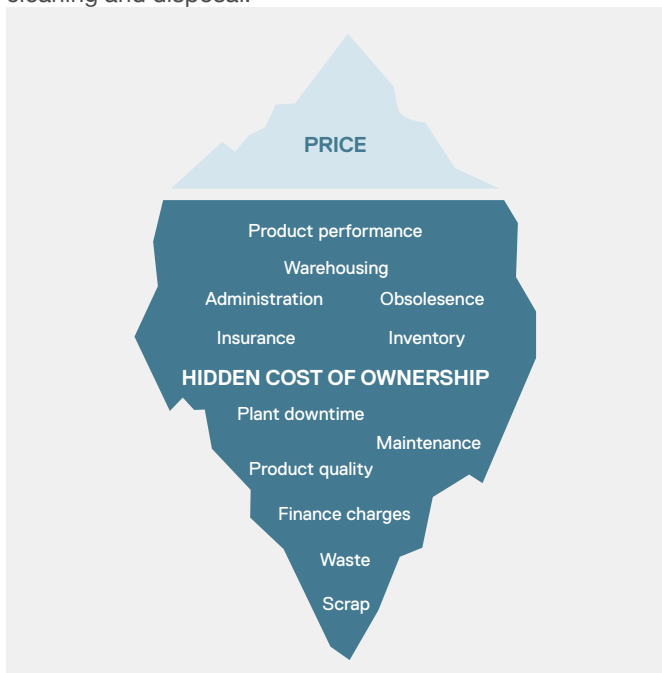
The continuous industrial processes evolution is becoming more demanding in terms of motion control performance. The current pneumatics and hydraulics solutions are not competitive in terms of TCO (Total Cost of Ownership) that considers all direct and indirect costs associated with an asset over its entire life cycle.

Beside the more obvious performance advantages, there are several others hidden behind the technology or the usual production and factory processes.

For example, a higher system efficiency - both in operation or standby situation - lead to direct savings proportional to the number of cylinders, in the monthly and yearly energy expenses.

Concerning costs related to machine downtime and maintenance operation, a system with less components, less sensitivity to re-lubrication needs, easier to be serviced and with a quicker replacement time can provide tangible savings in different accounting areas of the factory. Moreover, less components mean less spare parts need and so a lower capital investment on stock.

Another hidden cost concerns safety and hazard prevention devices and procedures. A system with an embedded higher safety level can dramatically reduce the cost to run a safe manufacturing operation. Moreover, removing the oil from some areas of the plant helps to reduce costs related to oil cleaning and disposal.



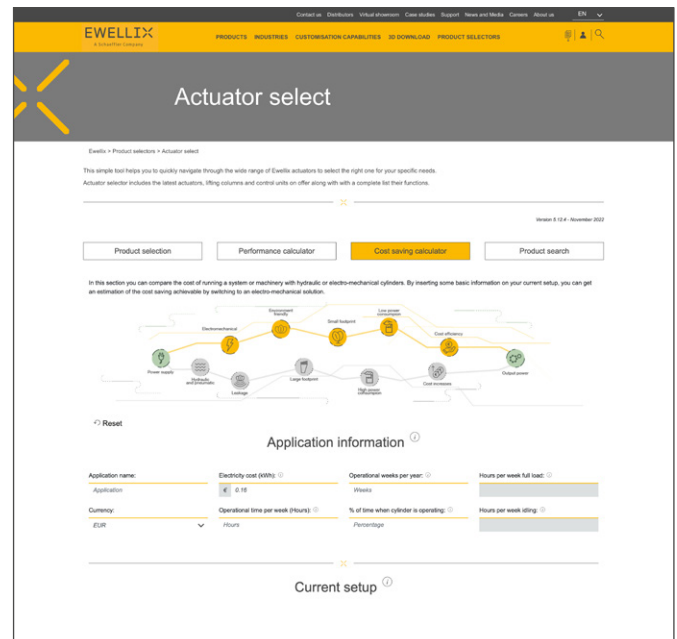
## Cost saving calculator

Ewellix has developed a tool to support customers in evaluating the cost of running their machinery comparing, hydraulic or electromechanical technologies. By inserting some basic information into the tool, the user can get an estimation of the cost saving achievable by switching to mechatronic solutions.

↳ Visit Ewellix Actuator select in the Cost saving calculator section to get started.



[Click here to open](#)

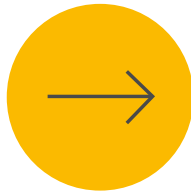


# Replacement advice

To realise all the advantages of electro-mechanical actuators, the approach to system redesign must be different from the commonly adopted one. As pneumatic, hydraulic and electromechanical cylinders have unique features, there needs to be a change in thinking when it's time to replace one with the other.

In fact, it's important to understand the different mechanical and electrical specifications along with the required budget, as there are always multiple ways to replace one application. This requires more time to analyze and study but it's the only way to make an effective product selection that can save a lot of money at the end.

There are some common mistakes that designers can make when replacing a fluid powered cylinder with a electro-mechanical one that may lead to oversized systems. To avoid them, it's important to consider the following:



## Define the real force requirement

In many applications, the real work load and related required push and pull forces are not known, as it's quite easy with fluid power to oversize the system by using higher pressures or bigger cylinder diameters. This can lead to an oversize of the actuator screw and motor that significantly increases the cost. Instead, by measuring the real force in the application, it's possible to select an optimised solution that delivers the required performance at the right price.



## Evaluate the duty cycle in operation

While duty cycle can have a minor impact on fluid powered systems, in actuators it can determine the type of motor technology required and therefore the related system complexity and cost. If the application is done from time to time (e.g. 1 minute operating – 4 minutes standing still), it's possible to use brushed motors that can deliver the required power much cheaper than equivalent brushless motors with drivers.

## Applications using high performance actuators and ball and roller screws



Spot welding

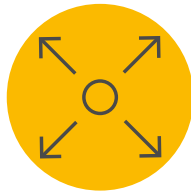


Dispensing



### Analyze the mechanical layout

Hydraulics can deliver more power in a smaller package than electromechanical actuators. In case of leveraged connections (e.g. scissor mechanism), it's quite common to have an unfavorable situation where the high forces are exerted over a very short stroke. By slightly revising the mechanical layout, it may be possible to have more favorable leverages that spread the load over a longer stroke, requiring less peak output power and then a smaller actuator.



### Define the required motion accuracy

Depending on the application, it may be needed to perform a simple motion from one position to another and back or to have fine control of the speed and acceleration in multiple positions. With electromechanical actuators, the simple DC and asynchronous AC motors can perform basic movements in an ON/OFF control mode while with a servo motor, it's possible to achieve complete control in operation with the use of a motion controller. Moreover, depending on the positioning accuracy required, it's possible to select a simple trapezoidal screw with axial play or a recirculating pre-loaded roller screw

for the ultimate positioning precision and repeatability, down to microns. The cost and control complexity rises linearly allowing a direct selection tailored to real application needs.

With more than 40 years of experience in making electromechanical actuators, Ewellix has extensive expertise in sizing electromechanical solutions for different types of industries and applications. A dedicated team of Application Engineers are available to support customers in defining the right solution, and advising on the best choice based on theoretical calculation and field expertise.

Ewellix offers the widest range of actuators on the market that can also be customized to fit any application requirements.

↳ Visit Ewellix Actuator select in the Performance calculator section to easily select and size your actuator and to get in contact with our experts.



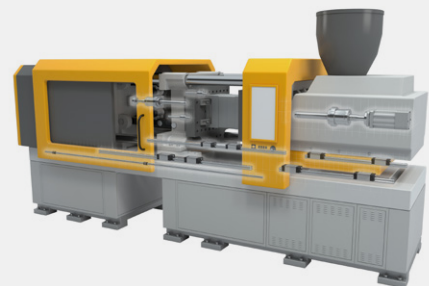
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Press forming



Servo press



Plastic injecting moulding

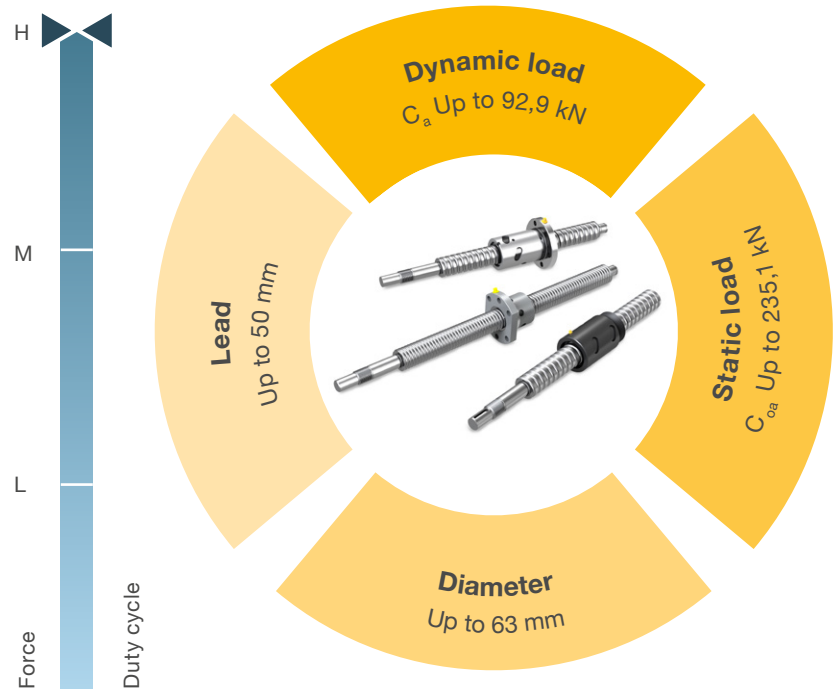
# Ewellix solutions

## Pneumatic replacement

### Ball screws

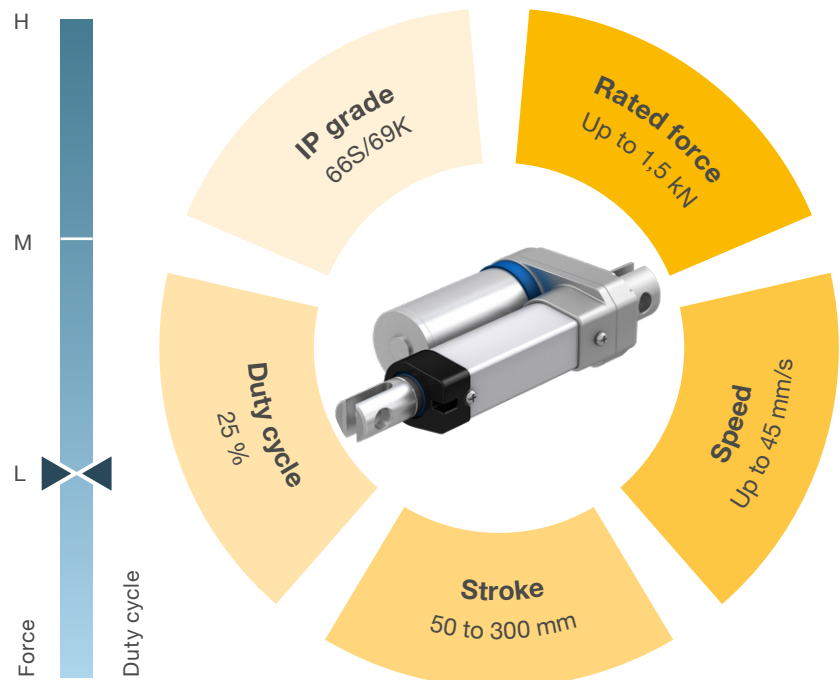
Ewellix offers a wide range of rolled and ground ball screw variants for applications that require high precision and high stiffness. Ewellix ball screw assemblies provide high performance solutions suitable for a wide range of applications where precision driving and durability are prerequisites.

High technology machinery associated with precise control of the cold forming and metallurgical processes enable the production of screws that offer virtually the same accuracy and performance of ground ball screws, but at a lower cost.



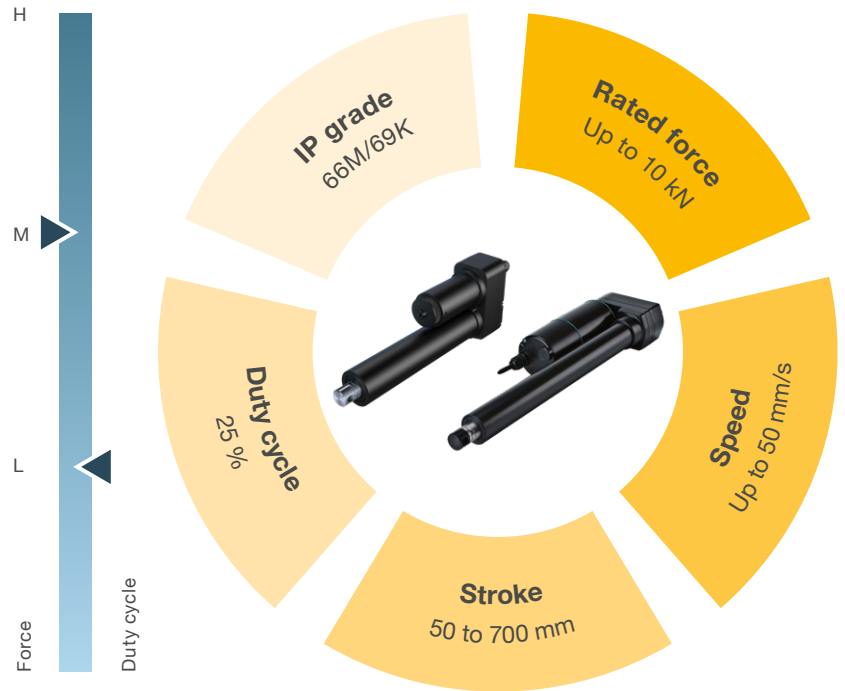
### CAHB-10

This compact solution for low-load applications is virtually maintenance-free and self-locking. Designed to operate in temperatures from  $-40$  to  $85$  °C. The CAHB-10 actuator features robust metal gears and corrosion-resistant housings. Additional design options are available. They represent the ideal solution for replacing pneumatics in low load, low duty cycle applications.



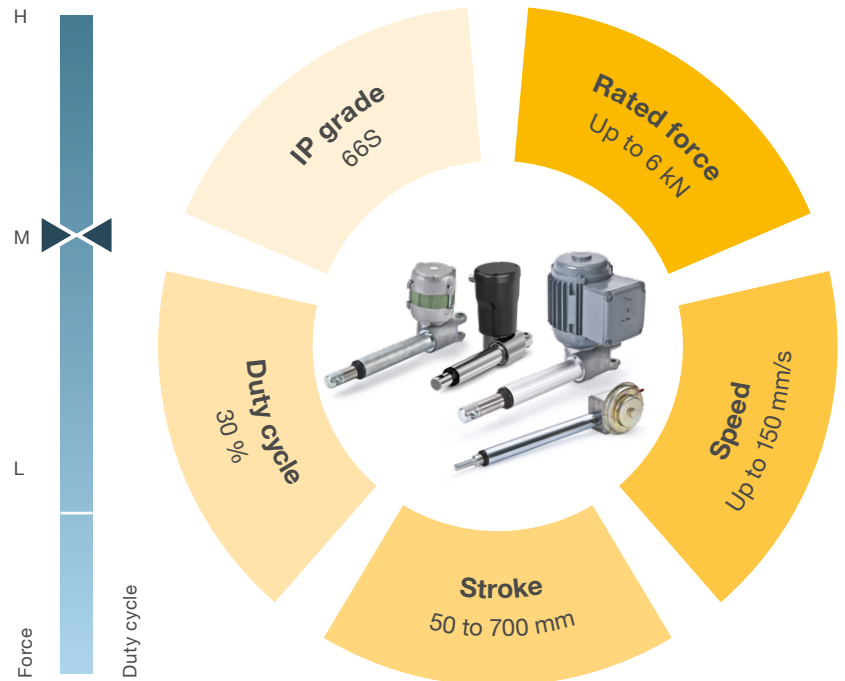
## CAHB-2xE/S – 31N

This range is for medium and heavy load applications and is virtually maintenance-free, self-locking and has an IP grade up to 69K. Designed to operate in temperatures from -40 to 85 °C up to 25 % duty cycle, CAHB 20E-22E and 30A-31N actuators features robust metal gears, high force, high holding force, medium speed, mechanical overload protection, and a manual override option. The smart CAHB-2xS, offers unique features at a competitive cost with integrated controller with BUS communication. The CAHB series can provide high stability compared to the rated load, up to 20 kN. Equipped with DC and AC motor variants with different voltages, they represent the ideal solution for replacing pneumatics and light hydraulics in medium load, low duty cycle applications.



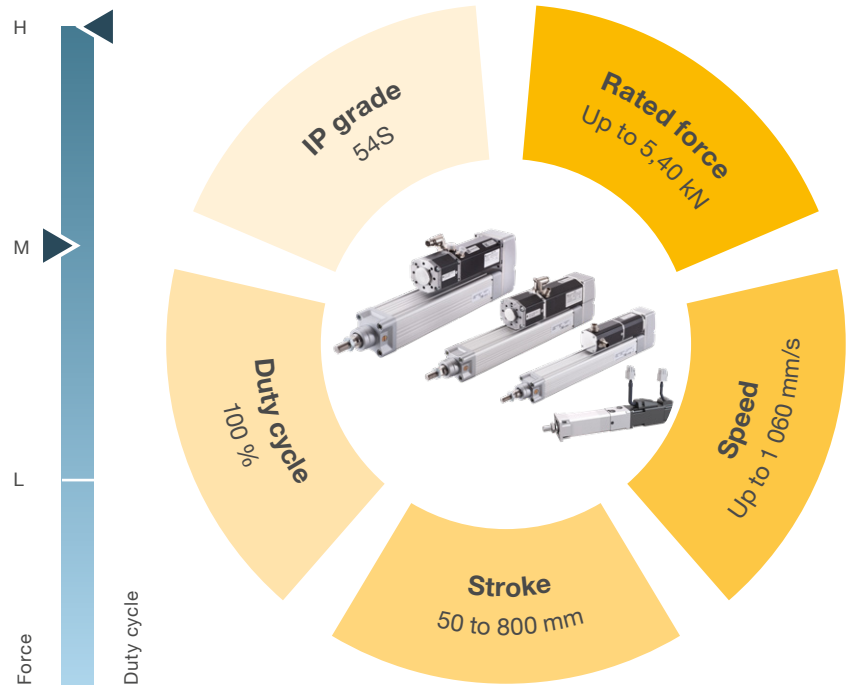
## CAT – CAR Series

The CAT-CAR modular design concept makes it easy to interchange critical components such as motors, gears, screws, attachments, etc. Custom-built actuators are easily and cost efficiently configured from standard parts. This range flexibility makes it suitable for an infinite number of applications of application with duty cycles up to 30 %. They represent the ideal solution for replacing pneumatics in medium load, medium duty cycle applications.



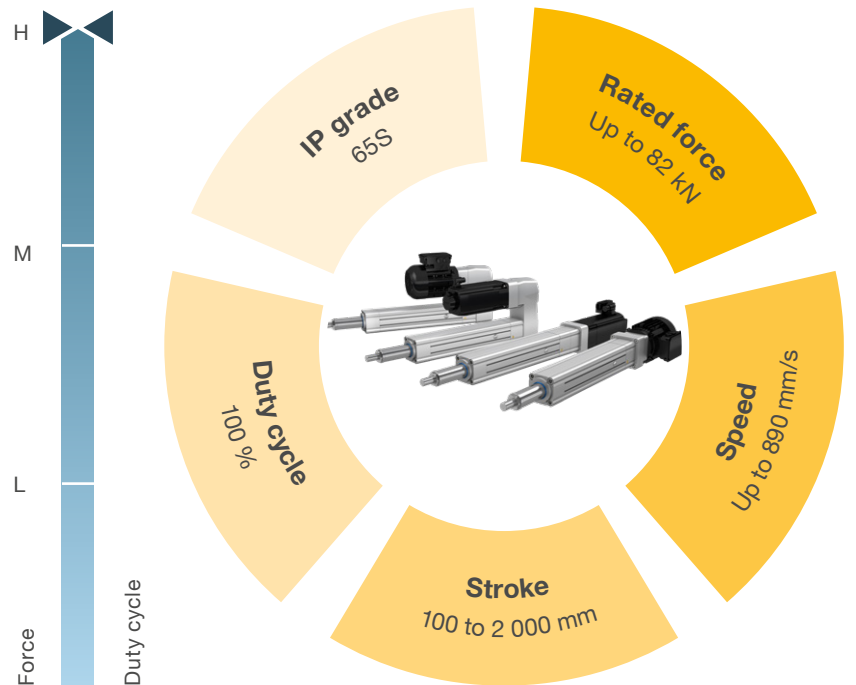
## CASM-25 – 63

Made of high-grade material, the CASM-25-63 is a linear unit designed to fulfill the most demanding factory automation applications. It represents the ideal solution for replacing pneumatics in high duty cycle applications. This linear unit is available with ball or trapezoidal screws, in different sizes and stroke lengths, with IP grade 54S and duty cycles up to 100 %. Several options are available, like adjustable proximity switches, and these actuators can be fitted with different types of servo motors and BLDC motors. They represent the ideal solution for replacing pneumatics in medium load, high duty cycle applications.



## EMA-100

This innovative modular electric cylinder platform addresses most of the applications in automation and heavy machinery industries. In this new design, instead of limiting the selection on the “linear unit - gearbox – motor” modules only, Ewellix takes a decisive step further. The modularity has been extended to the base component level. Within each module, the customer can select the components inside to build a custom-like solution as standard with the best performance/cost ratio. Several options are available, making EMA-100 the ideal solution for replacing pneumatics and hydraulics in high load, medium to high duty cycle applications.



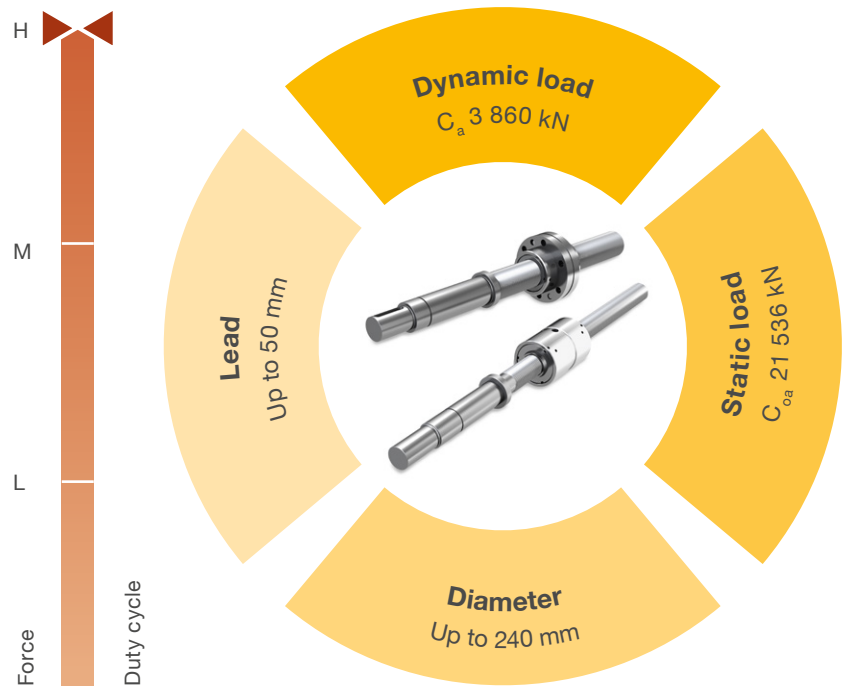


# Ewellix solutions

## Hydraulics replacement

### Roller screws

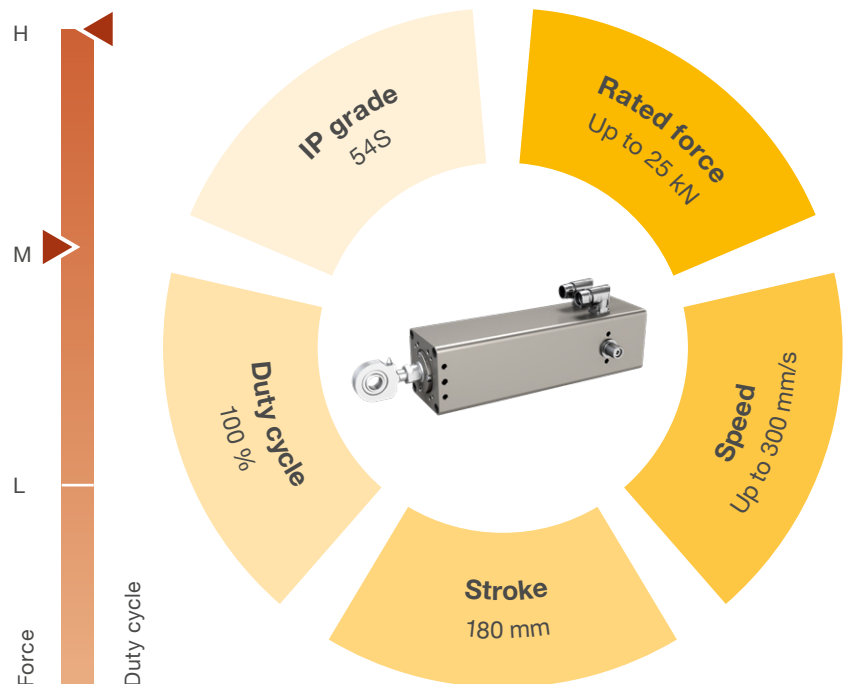
Ewellix Roller screws offer a performance level far beyond the capabilities of ball screws. They are well suited for heavy loads, and high duty applications even in harsh environments. Planetary roller screws feature high rotational speed, high linear speed, high accelerations coupled with extremely high load carrying capacities. Recirculating roller screws provide ultimate positioning precision and rigidity, thanks to their very short leads.



### CEMC

This product range provides high power density in a small package. Whatever the requirements, CEMC cylinders provide a compact and dynamic solution, maximum performance and value through high reliability, productivity and result in low costs through the life of the product. By using inverted roller screws, these actuators can reach the shortest possible retracted length while providing a very high output power.

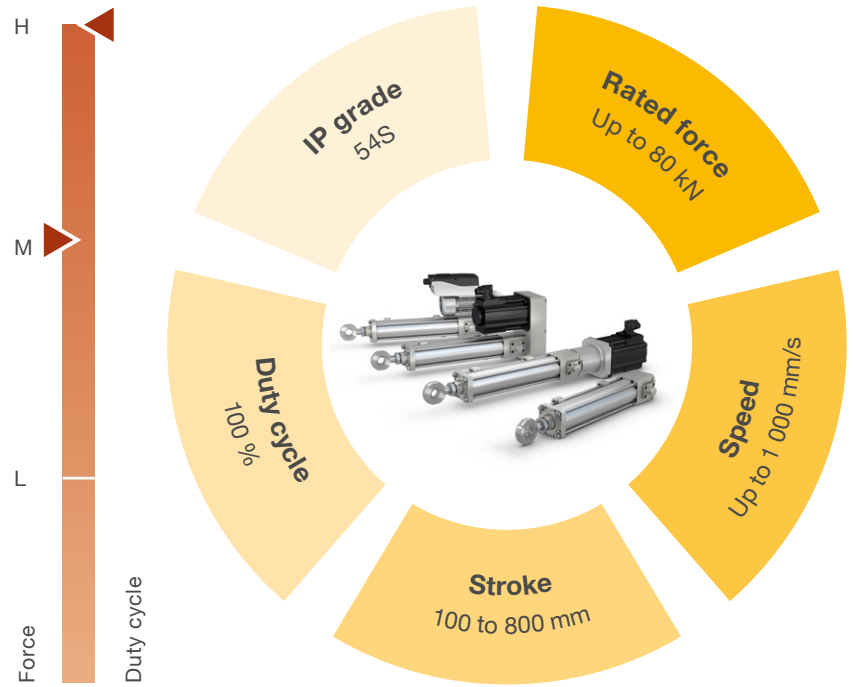
They represent the ideal solution for replacing hydraulics in medium load, high duty cycle applications.



## LEMC

It is a modular electromechanical cylinder made by linear unit, motor adapter, limit switch, motor and controller. Constructed from high-grade materials, LEMC are designed to withstand the harshest industrial conditions making it an ideal replacement solution for hydraulics. The design with tie rods and the strong support bearing arrangement provides increased system stiffness, leading to higher position precision in application.

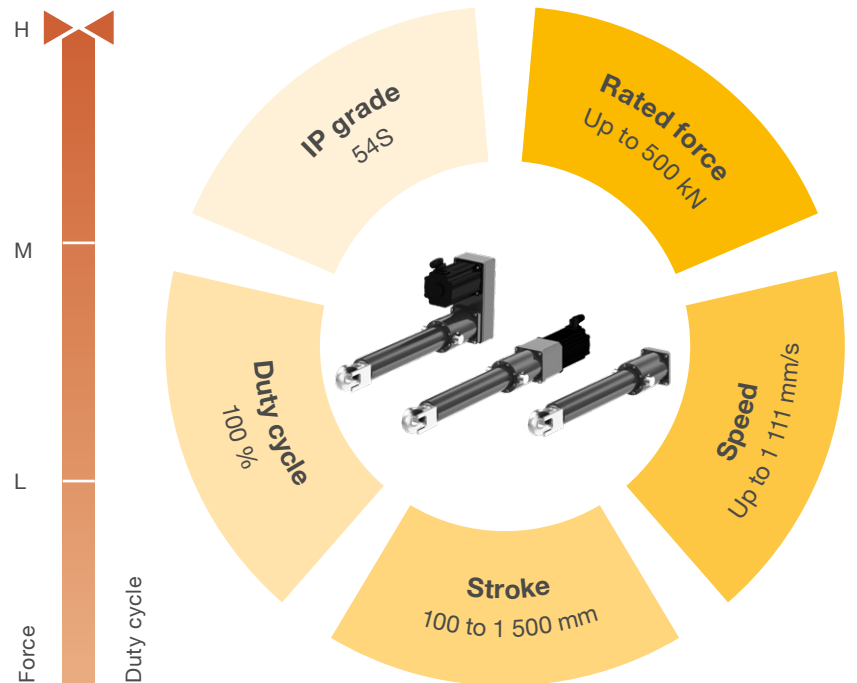
They represent the ideal solution for replacing hydraulics in medium load, high duty cycle applications.



## SRSA, SVSA

These high-power cylinders are equipped with Ewellix planetary and recirculating roller screws. With a wide range of sizes and leads, they are expanding the limits of linear cylinders toward extreme power hydraulic cylinder replacement. They are designed for long life, high accelerations and very high force applications.

They represent the ideal solution for replacing hydraulics in high or extremely high load, high duty cycle applications.



## EMA-100

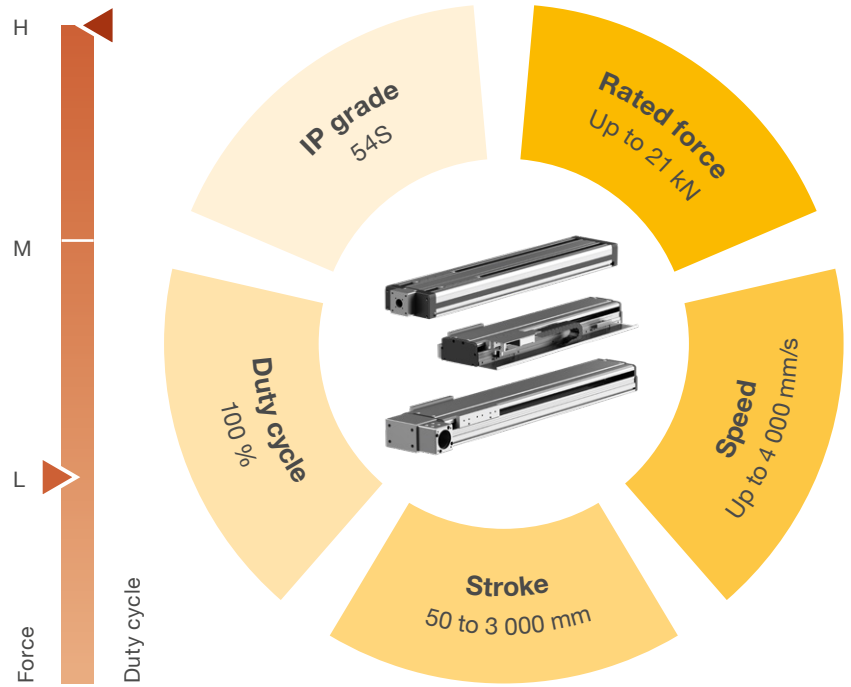
↳ See page 24

## CLSM

The linear module range from Ewellix provides precise motion with different drive units (ball screw, belt and linear motor) and motor types (servo AC, brushless DC and linear motors).

With their high load and life time capacity and their flexible design for customization, these products represent a good solution to couple the driving and guiding function in one compact solution.

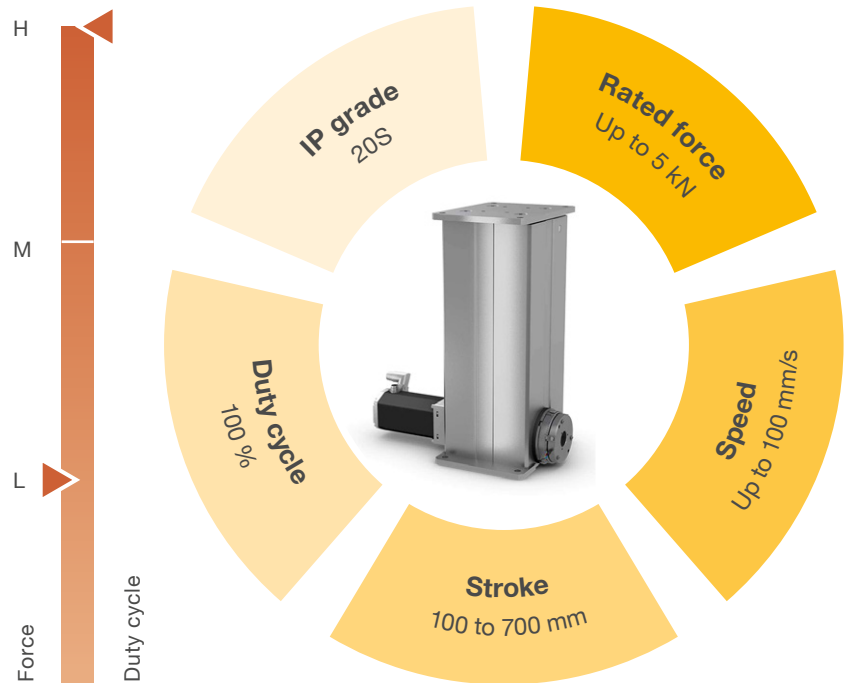
They represent the ideal solution for replacing hydraulics in low to medium load, high duty cycle applications.



## CPSM

Lifting columns CPSM are the ideal solution to combine strong guiding functions with linear movements. The robust, manually adjusted and virtually backlash-free aluminium extrusions are able to carry high eccentric loads in push and pull directions. To provide enough power to lift and lower heavy weights with high speed, the columns are equipped with brushless DC or servo motors. Of course, Ewellix also supports the usage of preferred motors with a customizable motor interface. Optional brakes and damping elements are key features that allow effective usage in heavy duty industrial applications.

They represent the ideal solution for replacing hydraulics in low load, high duty cycle applications.



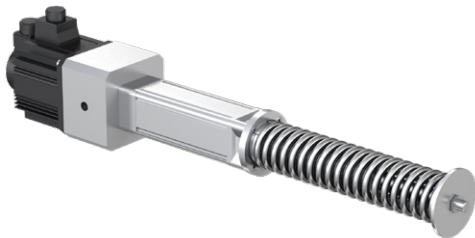
# Your engineering partner

## Customisation

With more than 50 years of experience, Ewellix provides customers with tailor-made solutions that fit any application needs. Our extensive product knowledge, combined with engineering expertise, transforms customer needs into tailored solutions. Focusing on client-specific requests, our engineers help customers develop and implement cost-effective solutions to optimise the performance of the application.



*EMA made of stainless steel*



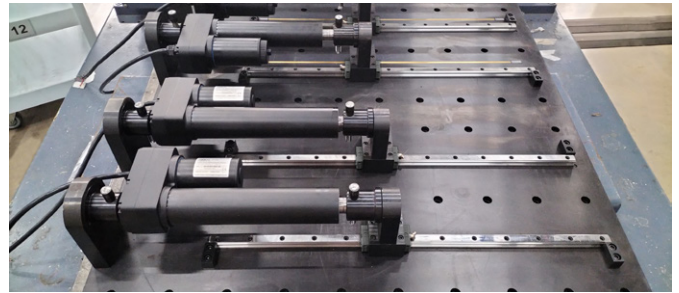
*CASM with spring around the push tube*



*Cylinder with very long stroke length*

## Testing capacities

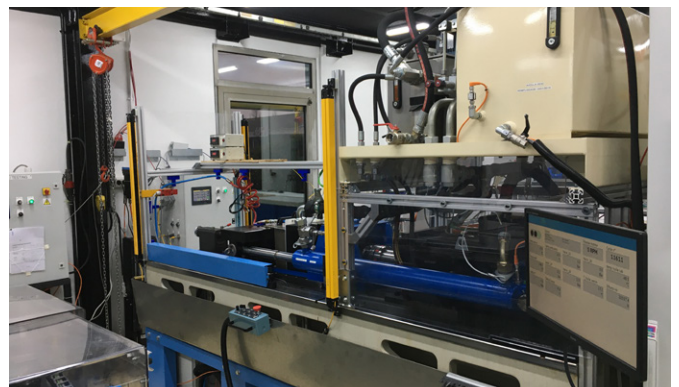
All our products are extensively tested for their key parameters according to a comprehensive test plan that covers all regulatory and environmental requirements and meets the most stringent industry standards. We are able to test all components down to the ball or roller screw. In addition, we can simulate mechanical, electrical and environmental application conditions.



*Vibraton test*



*EMA testing*



*Roller screws testing*

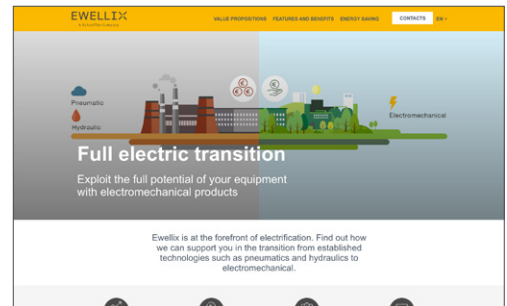
# Supporting tools

## Ewellix Full electric transition

Exploit the full potential of your equipment with electromechanical solutions.



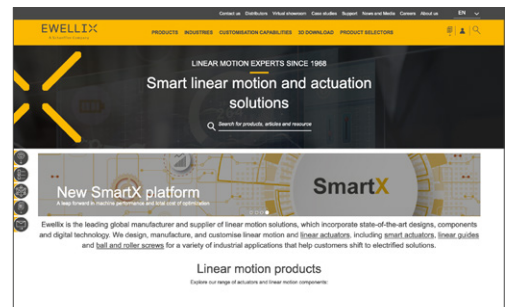
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## Ewellix website



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## Digital tools

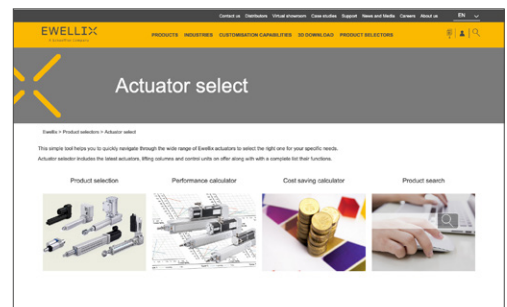
Ewellix has developed numerous online tools to help customers select and calculate the most suitable Ewellix product for their application.

### Actuators select

- Product selection
- Performance calculator
- Cost-saving calculator



[Click here to open](#)

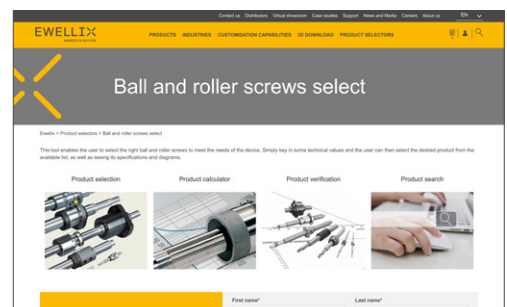


### Ball and roller screws select

- Product selection
- Product calculator
- Product verification



[Click here to open](#)



## Publications

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

- Operating manual
- Mounting instructions

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### Ball screws

[Click here to open](#)



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### Roller screws

[Click here to open](#)



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### CAHB-10

[Click here to open](#)



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### CEMC

[Click here to open](#)



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### CAHB-2xE/S - 31N

[Click here to open](#)



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### LEMC

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### CAT – CAR Series

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### SRSA, SVSA

[Click here to open](#)



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### CASM-25

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### CLSM

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### CASM-32 – 63

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### CPSM

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### EMA-100

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