EWELLIX

A Schaeffler Company

Solutions for metal forming

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.

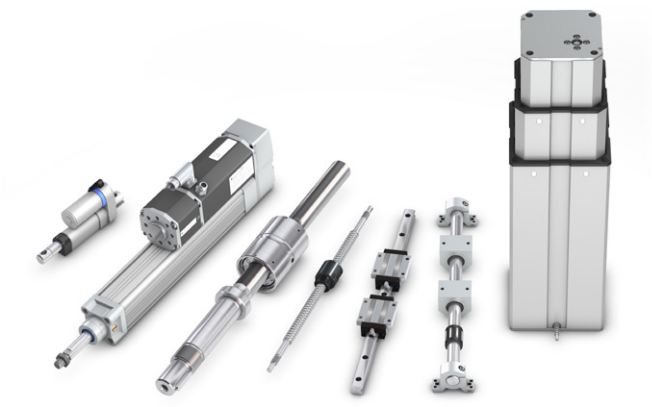
Technology leadership

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_2-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.

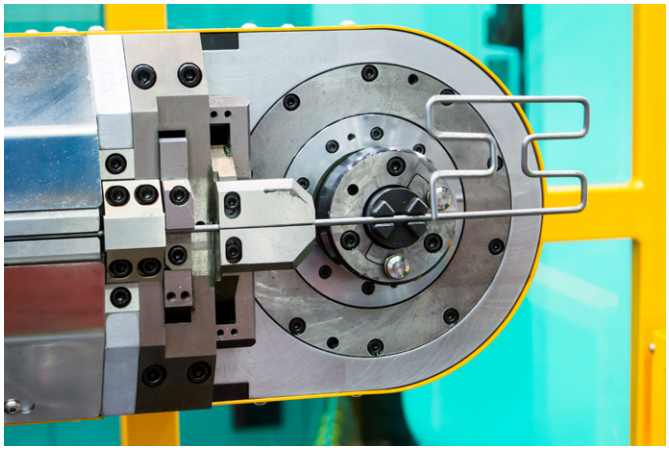
Get the perfect shape with our linear motion solutions

The key growth factors driving the global metal forming market are the increasing demand for machined parts across various industries like automotive, aerospace, construction, electronics, expanding automation and technological advancements in metal forming equipment.

The metal forming industry is constantly looking for new technologies, materials and processes to increase efficiency and product performance, improve sustainability while reducing costs and environmental impact. The energy consumption of the machines is also an important factor, and the electrification of fluid-powered functions is crucial to improving efficiency. Process control and performance are key parameters for these machines.

Ewellix is the preferred partner for innovative and efficient solutions pushing the boundaries of performance and reliability in material forming industry.

Our powerful electromechanical actuators, high efficiency screws and reliable linear guides fulfil demanding requirements and help to improve the overall performance of the metal forming process.



Ewellix supports customers with linear motion solutions providing:

- High performance products with high reliability
- Compact and robust design
- Extensive industry experience and knowledge
- Strong customisation capabilities
- Global presence and support

Ewellix value proposition

- Excellent repeatability with high precision
- Increased productivity
- High energy efficiency
- Oil-free operation
- Minimum downtime with outstanding reliability
- Long service life
- Compact and space saving design
- Easy integration

Servo press

Electromechanical servo presses feature a high degree of controllability and enable complex motion sequences as well as different forces, speeds and stroke lengths. They are used for a wide variety of applications including press fitting, stamping, and clinching. Larger presses can be used for high precision deep drawing.

The Ewellix roller screw technology and high-performance actuators with roller screws are the best solution for the high peak loads of press applications and offer the best service life, power density and reliability in their class.

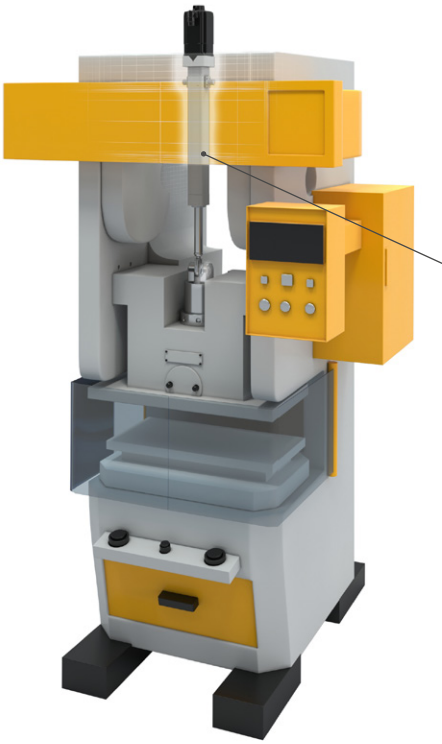
Ewellix solutions

Features

- High load carrying capacity
- High speed and acceleration capability
- High peak load acceptance over short stroke
- Compactness

Benefits

- Accurate positioning with excellent repeatability
- Minimum downtime with outstanding reliability
- Excellent technology for pressing
- Long service life due to roller screw technology
- Easy to integrate complete actuator solutions



High-performance actuators

Ball and roller screws

Roller srews

High-performance actuators

SRSA

LEMC

EMA-100

Tube and wire forming

Tube and wire bending machines are highly versatile machines to shape complex, highly precise and repeatable 3D shaped metal parts that are used for vehicle fluid handling, exhaust systems or electrical busbar.

The most compact, efficient and reliable machine for bending and forming of any shape and diameter can be equipped with Ewellix roller screws and high-performance actuators. The high speed and performance of the roller screws enable the highest productivity for spring forming machines, multi-slides, tube & wire bending and end-forming machines.

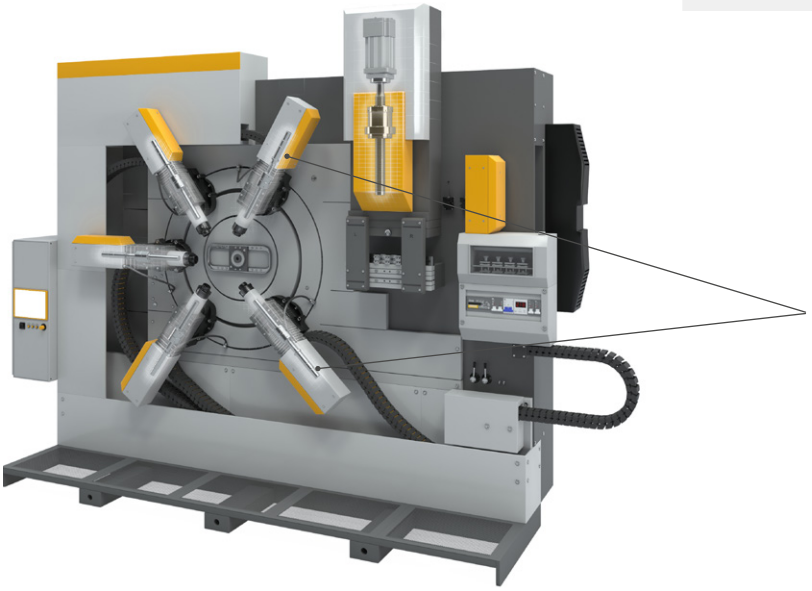
Ewellix solutions

Features

- High speed and acceleration capability
- High peak load acceptance
- High power density
- Compactness

Benefits

- Minimum downtime with outstanding reliability
- Long service life due to roller screw technology
- Easy installation with matching bearing support units
- Compact and easy to integrate components
- Easy to integrate complete actuator solutions



Planetary roller screws

Ball and roller screws

Roller srews

High-performance actuators

EMA-100

Press brake machine

Press brake machines need to offer high precision and flexibility and are suitable for a wide range of applications that require complex shapes, tight tolerances and repeatable bending processes common in industries such as aerospace, automotive and electronics. The switch to electrification of fluid powered functions is essential for improving efficiency, repeatability and sustainability.

Ewellix roller screws are available with various combinations of sizes and leads to best match customer requirements in terms of force capacity, robustness and speed.

Our linear guides ensure precise guidance of the tools.

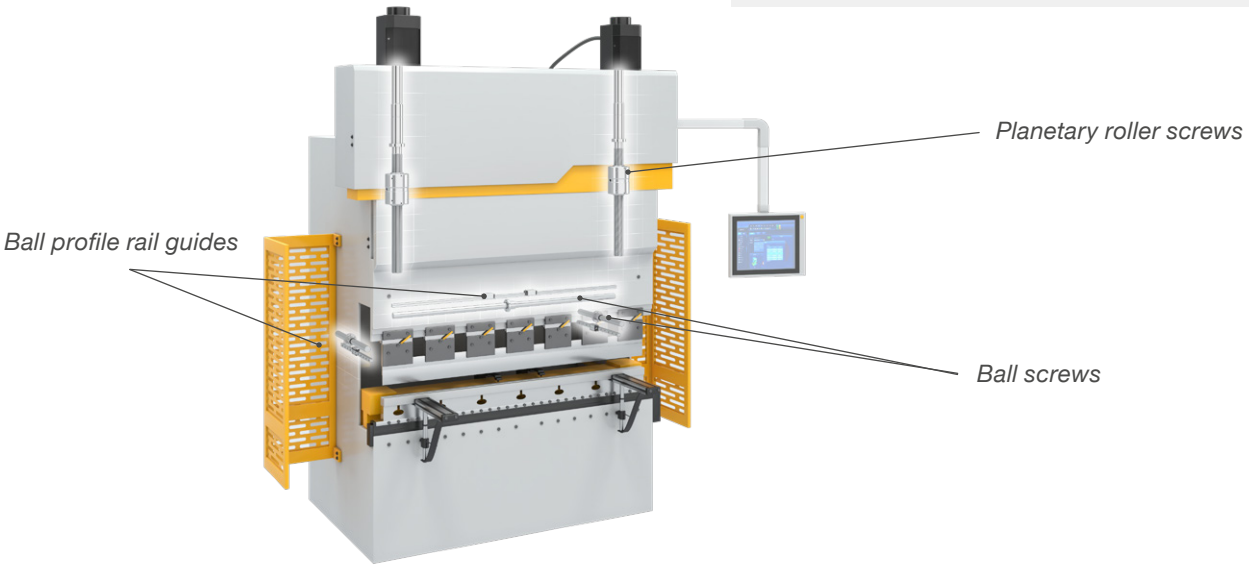
Ewellix solutions

Features

- Highest load carrying capacity
- High speed and high acceleration capability
- High precision and rigidity
- Long lasting sealing solution (linear guides)

Benefits

- Accurate positioning with excellent repeatability
- Minimum downtime with outstanding reliability
- Most compact solution for high force linear motion
- Easily customized design for easy integration
- Long service life due to roller screw technology
- Virtually maintenance free with lubrication reservoirs (linear guides)



Ball and roller screws

Roller srews

Ball screws

Linear guides

Ball profile rail guides

Laser cutting

2D and 3D laser cutting is an extremely versatile, precise and advanced manufacturing process that utilises laser technology to precisely cut materials such as metal, wood, plastic and glass. The precision, speed and versatility of 2D/3D laser cutting make it an invaluable technology for industries where complex shapes, tight tolerances and high-quality finishes are required.

Ewellix linear guides enable precise small axial movement of laser head. Our ball screw allow smooth movement of the X axis.

Ewellix solutions

Features

- High precision and rigidity
- Minimum friction
- Compactness
- No recirculation of the steel balls (precision rail guides)
- Anti-creeping system (precision rail guides)

Benefits

- Smooth and efficient running performance
- Flexibility in design and integration
- Easily customized design for easy integration
- Long service life
- Low maintenance

Ball and roller screws

Ball screws

Linear guides

Precision rail guides

Ball profile rail guides

Move towards electrification

Greater controllability of machines as well as energy-saving and sustainable solutions are also crucial in the metal forming industry. By electrifying metal forming processes, manufacturers can significantly increase productivity, improve product quality, save energy and reduce environmental impact, thus contributing to sustainable manufacturing processes.
Ewellix helps customers transition from established manufacturing process technologies to innovative approaches with easy, safe and environmentally friendly linear motion solutions.

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

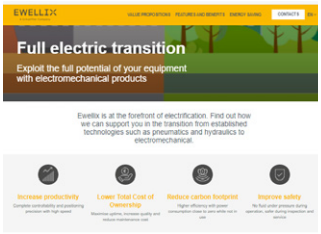
Increase productivity
Complete controllability and positioning precision with high speed

Lower Total Cost of Ownership
Maximise uptime, increase quality and lower maintenance cost

Improve safety
No fluid under pressure during operation safer during inspection and service

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

Do you want to discover more?
Visit our website for "Full electric transition" to learn more.



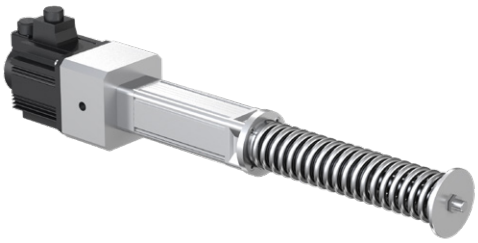
How much can you save in your application?
This simple tool helps you to quickly navigate through the wide range of Ewellix actuators to select the right solution for your specific needs.

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

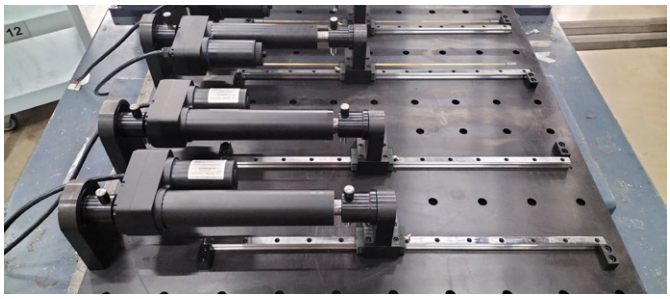


CASM with spring around the push tube

Cylinder with very long stroke length

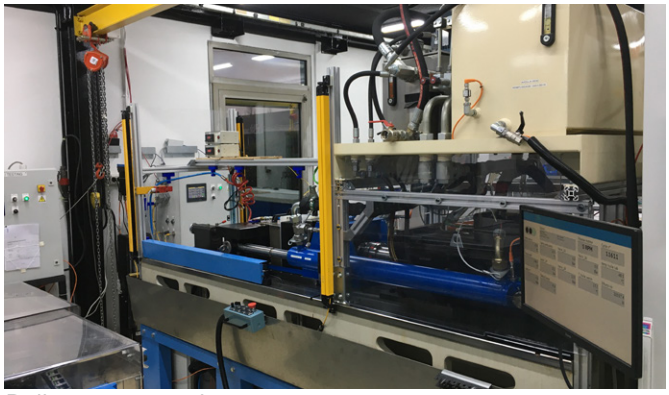
Testing capacities

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

Product overview

High-performance actuators

	SRSA	LEMC	EMA-100	CASM - 32/40/63
Max. dynamic axial force	500 kN	80 kN	82 kN	up to 25 kN
Max. dynamic load capacity	to 572 kN	106,3 kN	106 kN	up to 59 kN
Max. speed	1 111 mm/sec	1 000 mm/s	890 mm/s	up to 480 mm/s
Max. stroke	1 500 mm	800 mm	2 000 mm	300 mm

Ball and roller screws

	SP	SR
Diameter	8 to 16 mm	8 to 240 mm
Lead	2 to 5 mm	2 to 50 mm
Acceleration	up to 4 000 rad/s²	up to 20 000 rad/s²
Dynamic load capacity	from 2,2 kN to 7,6 kN	from 8 kN to 4 000 kN
Maximum speed	120 000/Ø rpm	160 000/Ø rpm

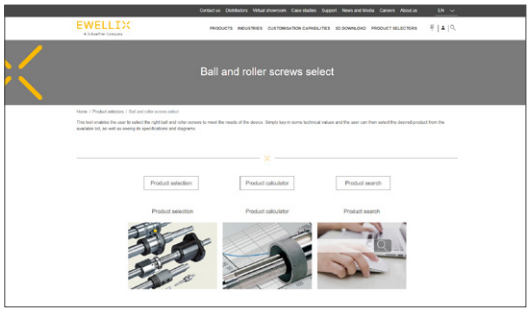
Linear guides

	LLT-range	LW-range
Size and range	15 to 45	3 to 12 30x15 to 80x50
Dynamic load rating	up to 72,5 kN	64,5 kN
Speed	up to 5 m/sec	up to 2 m/sec
Acceleration max	up to 75 m/s²	up to 160 m/s²
Accuracy	up to 18 µm at 4 m	up to 2 µm at 1 000 mm

Supporting tools

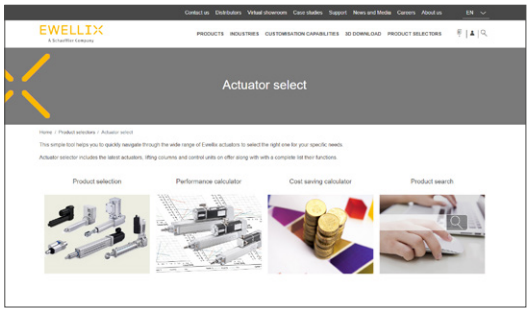
Digital

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



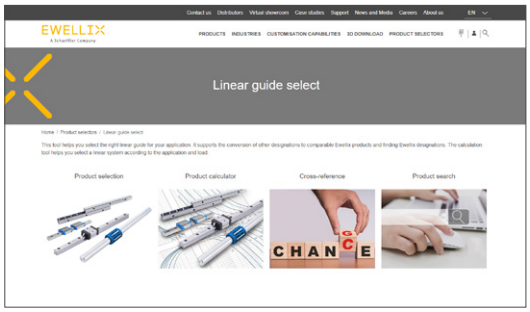
Ball and roller screws

- Product selection
- Product calculator
- Product search



Actuators

- Product selection
- Performance calculator
- Cost-saving calculator
- Product search



Linear guides

- Product selection
- Product calculator
- Cross-reference
- Product search

Publications

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

- Operating manual
- Mounting instructions

High-performance actuator SRSA		**Roller screws**	
High-performance actuator LEMC		**Ball screws**	
High-performance actuator EMA-100		**Ball profile rails LLT**	
High-performance actuator CASM-32/40/63		**Precision rail guides LW**	

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