EWELLIX

A Schaeffler Company

Solutions for plastic and rubber

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.

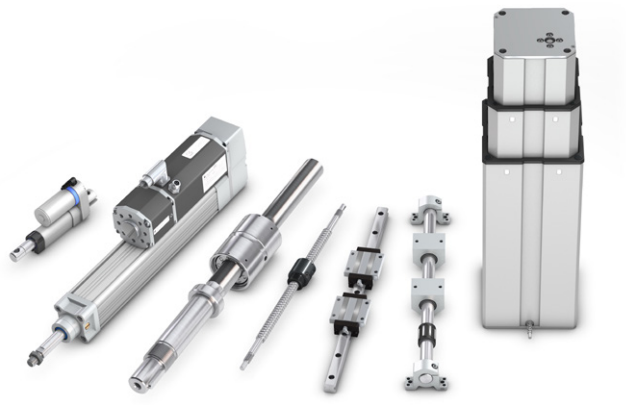
Technology leadership

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.

Innovations for more sustainability in the plastics industry

It is hard to imagine modern life without plastics. Their applications range from packaging to electronics to all kinds of vehicles. With the ever-increasing use of plastics, the performance and efficiency of plastics machinery have become key requirements for plastics processors.

The use of plastics poses a challenge in terms of sustainability, but at the same time offers opportunities to save weight and reduce energy consumption. The manufacturing of plastic parts requires machines that are capable of reducing the wall thickness of containers and packaging, adding layers of recycled material while complying with health and safety regulations. Process control and performance thus become key parameters for these machines.

The energy consumption of the machines itself is also an important factor in the net impact of plastic parts and components, and the electrification of fluid-powered functions is crucial to improve efficiency.

Ewellix strives to be the best partner for machine builders and users who want to set new standards for performance and reliability in plastics processing.

Ewellix supports customers with linear motion solutions that are ideally suited for plastics processing and provides:

- 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 positioning
- Increased productivity
- High energy efficiency
- Minimum downtime with outstanding reliability
- Compact and space saving design
- Reduced carbon footprint
- Easy integration
- Long service life

Plastic injection moulding

Plastic injection moulding is facing ever-increasing challenges in injecting plastic parts in a more sustainable way. Machine manufacturers need to increase injection pressure for thinner-walled packaging and achieve the highest movement speeds for lower dry cycles and higher productivity.

Ewellix roller screw technology offers high speed, quiet running and the most compact solution for injection, clamping and ejection functions.

Ewellix broad range of linear guides can fulfil most operating and auxiliary functions (machine doors) as well.

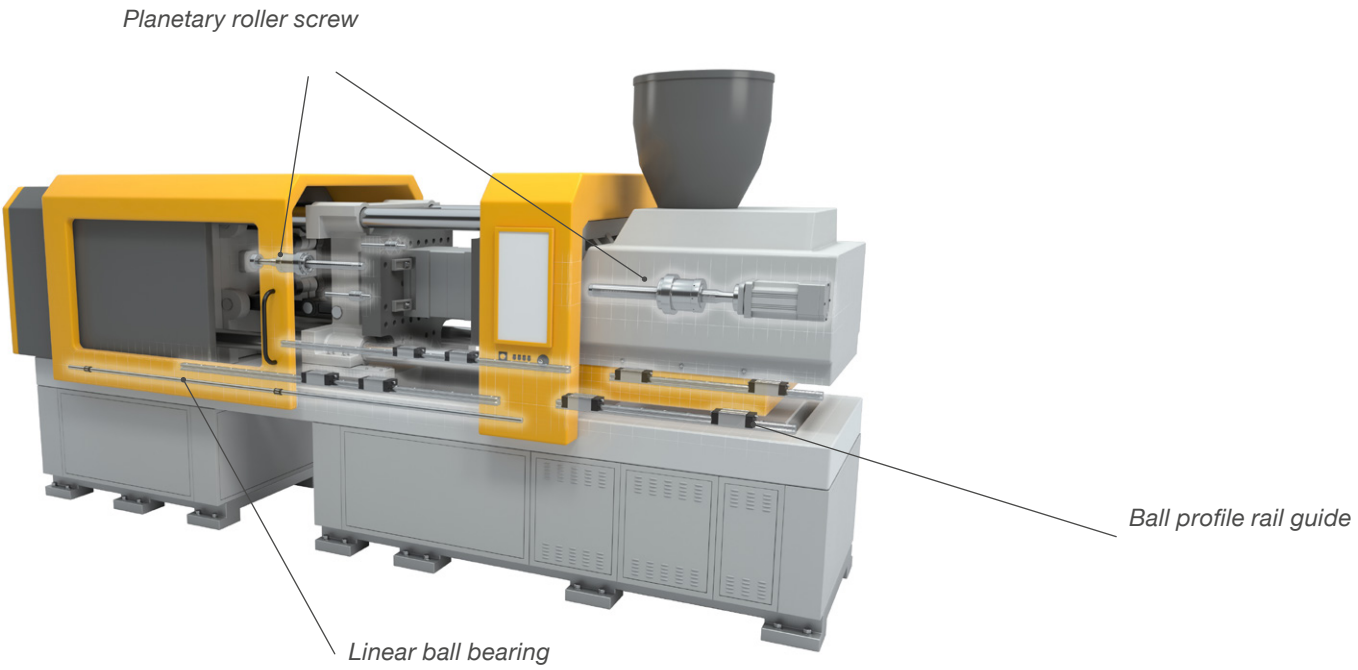
Mould linear movements such as slides, core pulls, ejection or hot runner valves can also benefit from Ewellix wide range of linear components or compact electromechanical actuators.

Features

- High speed and acceleration
- High force capacity
- High efficiency and robustness
- Clean production environment for medical and electronics

Benefits

- Precise positioning with high repeatability
- Optimised process controllability
- Customisation for easy integration
- Minimum downtime with outstanding reliability
- Long service life due to roller screw technology
- Long service life due to corrosion resistant and self-aligning linear guides



High-performance actuators

CASM-32/40/63

CEMC

Roller screws

Planetary roller screws

Linear Guides

LLT

LBB/LBCD

Plastic blow moulding

Plastic blow moulding is facing growing challenges in producing more sustainable plastic containers. Machine manufacturers have to implement the best techniques for energy efficiency and process control.

Ewellix roller screw technology offers unrivalled performance and low torque operation for high precision small movements of parison wall thickness control. Its high power density, lifetime and peak load acceptance make it also perfect for neck calibration, injection, bobbing and mould clamping.

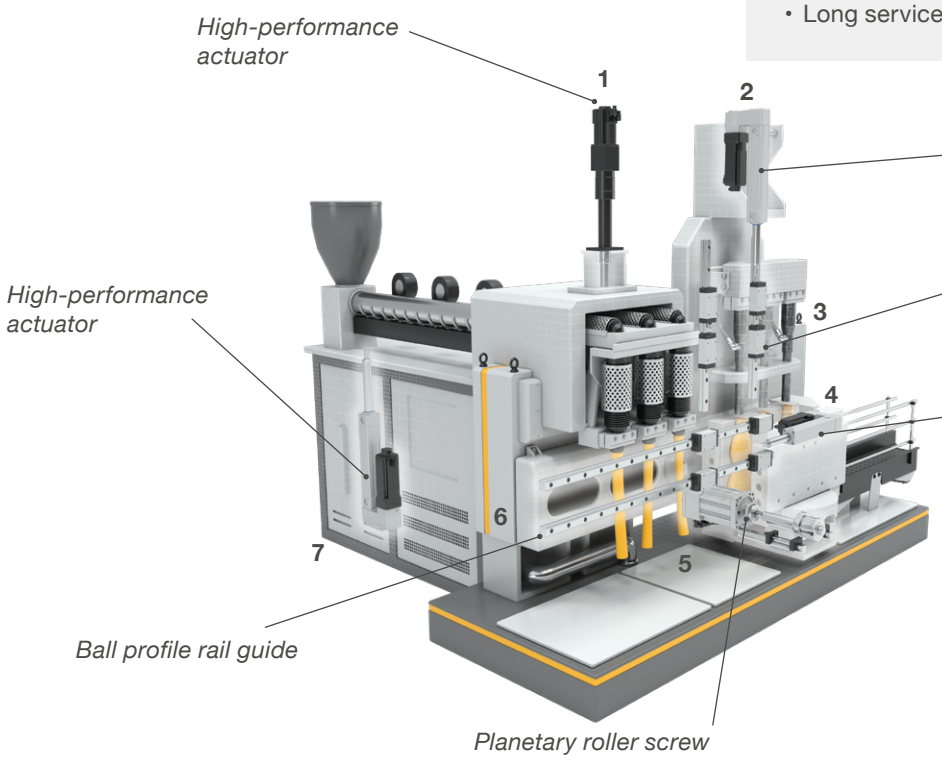
All Ewellix linear guides are also perfectly suitable for parison cutting, carriage movements or grippers guiding.

Features

- High speed and acceleration
- High peak load on closing and calibrating functions
- High lifetime on small movement under high load for parison control
- Precise guiding and stiffness for overhanging parison cutter
- Long stroke and tolerance to height difference for carriages guiding

Benefits

- Ideal solution for moving high loads with precise positioning and high speed
- Precise positioning and high speed are required
- Optimised process controllability
- Shorter design and commissioning time
- Minimum downtime with outstanding reliability
- Long service life due to roller screw technology



1. Parison wall thickness control
2. Calibration
3. Calibration unit guiding
4. Mould carriage side movement
5. Mould closing
6. Mould carriage
7. Bobbing

High-performance actuators

SRSA/SVSA

EMA-100

CASM-32/40/63

Ball and roller screws

Ball screws

Roller srews

Linear Guides

LLT

LBB/LBCD

Tyre manufacturing

Tyre building machines are a key element of tyre manufacturing in which all components such as tread, sidewall, inner liner, body ply, bead, and cord body are joined together. The components must be pushed axially and symmetrically in several assembly steps.

Ewellix roller screws can be offered in special versions with two nuts on the same shaft, one being right-handed and the other left-handed. It results in the smoothest and most robust design to achieve perfect tyres with very low maintenance.

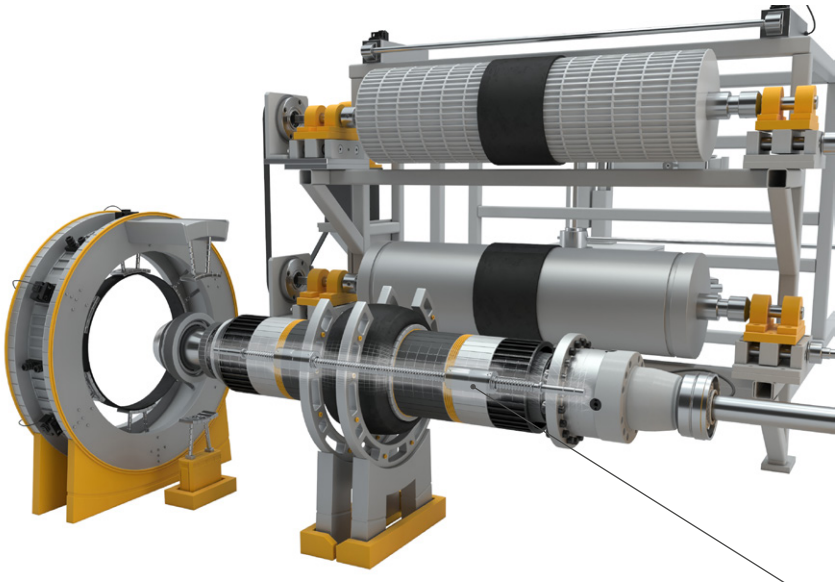
Other tyre manufacturing applications require pressing functions for which Ewellix linear components and high-performance actuators are also perfectly suited.

Features

- High speed and acceleration capabilities
- High peak load for pressing functions
- High lifetime with small movement under high load
- High tolerance to harsh environment
- Right- and left-hand thread on the same shaft
- Perfectly symmetrical and timed movement

Benefits

- Space saving compact solution
- Improved process controllability
- Shorter design time thanks to a wide range of product variants and options
- Shorter design and commissioning time
- Minimum downtime with outstanding reliability
- Long service life due to roller screw technology



Planetary roller screw

High-performance actuators

EMA-100

Roller screws

Roller srews

Plastic welding

Welding is one of the most widely used processes for bonding polymers, valued for its speed, flexibility, and low cost. The market is now calling for more controlled and consistent welding processes, especially in the medical industry.

Ewellix high-performance and compact actuators provide the dynamics, the resolution and repeatability necessary to meet these new demands.

For highly customised solutions, Ewellix can also support the integration of all key components (screws, guides etc.)

They are suitable for most plastic welding processes requiring a piloted pressing function, including:

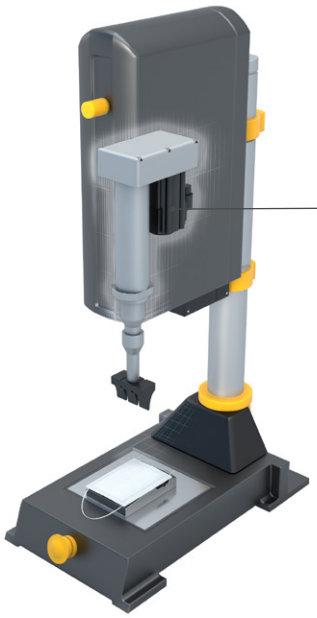
- Ultrasonic welding
- Hot plate welding
- Laser welding
- Friction welding

Features

- High process accuracy and repeatability
- High duty for automated versions
- Compactness
- Quick machine set-up
- Low noise operation thanks to absence of recirculation of rolling elements
- Compact and easy to integrate actuators or components

Benefits

- Long service life due to roller screw technology
- Excellent technology for pressing applications over few millimetres
- Smooth and low noise operation
- Shorter design and commissioning time
- Minimum downtime with outstanding reliability



High-performance actuator

High-performance actuators

SEMC

CEMC

Roller screws

Roller srews

Linear Guides

LLT

Product overview

High-performance actuators

	SRSA / SVSA	EMA-100	CASM-32/40/63	CEMC	SEMC
Dynamic axial force	up to 500 kN	up to 82 kN	up to 5,4 kN	up to 25 kN	up to 10 kN
Dynamic load capacity	up to 572 kN	up to 106 kN	up to 21 kN	up to 59 kN	up to 27,4 kN
Speed	up to 1 111 mm/sec	up to 890 mm/s	up to 1 067 mm/s	up to 480 mm/s	up to 600 mm/s
Max. stroke	1 500 mm	2 000 mm	800 mm	300 mm	125 mm

Ball and roller screws

	SP	SR	SV
Diameter	8 to 16 mm	8 to 240 mm	8 to 125 mm
Lead	2 to 5 mm	2 to 50 mm	1 to 5
Acceleration	up to 4 000 rad/s²	up to 20 000 rad/s²	up to 4 000 rad/s²
Dynamic load capacity	from 2,2 kN to 7,6 kN	from 8 kN to 4 000 kN	from 8.5 kN to 756 kN
Maximum speed	120 000/Ø rpm	160 000/Ø rpm	30 000/Ø rpm

Linear guides

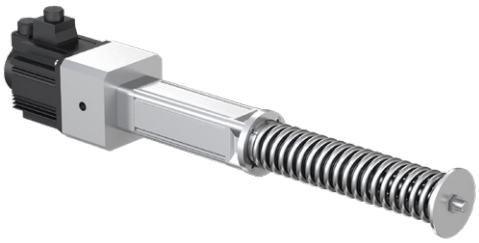
	LB-range	LLT-range	LLS-range
Size and range	3 to 80	15 to 45	7 to 15
Dynamic load rating	up to 37,5 kN	up to 80,3 kN	up to 12,5 kN
Speed	up to 5 m/sec	up to 5 m/sec	up to 5 m/sec
Acceleration max	100 m/s²	up to 75 m/s²	up to 140 m/s²

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

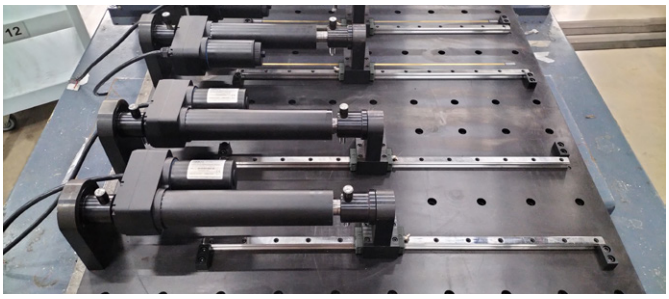


CASM with spring around the push tube

Cylinder with very long stroke length

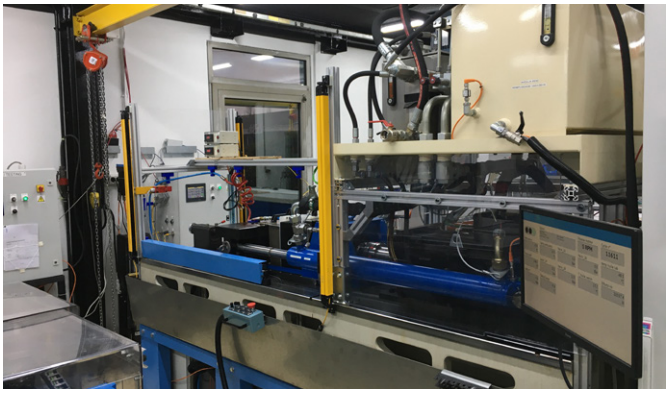
Testing capacities

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

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

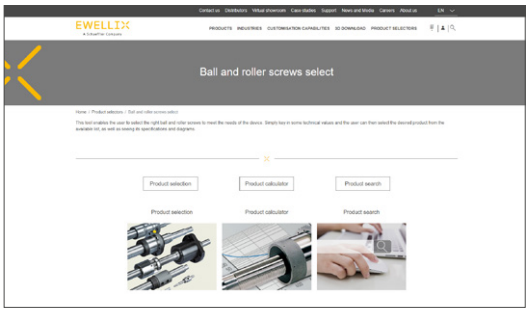
- Product selection
- Product calculator
- Product search

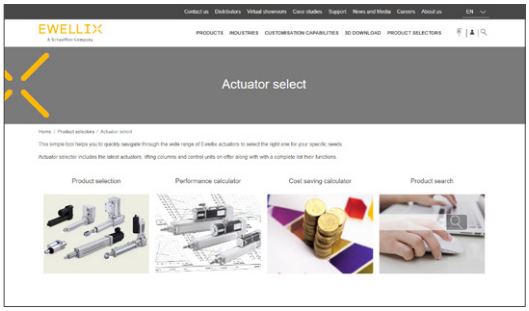
Actuators

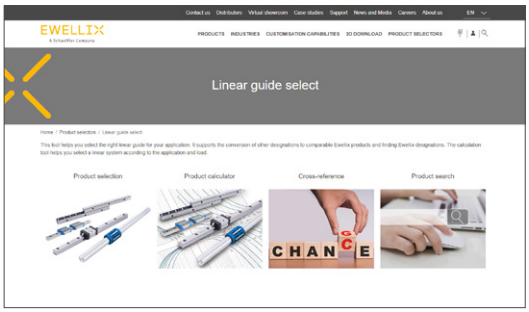
- Product selection
- Performance calculator
- Cost-saving calculator
- Product search

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

Roller screw

Ball screws

High-performance actuator SRSA

High-performance actuator EMA-100

High-performance actuator CASM-32/40/63

High-performance actuator SEMC

High-performance actuator CEMC

Linear ball bearings LBB

Ball profile rails LLT

Miniature profile rails LLS

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