

EWELLIX

A Schaeffler Company

Solutions for surgical and procedural modalities



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

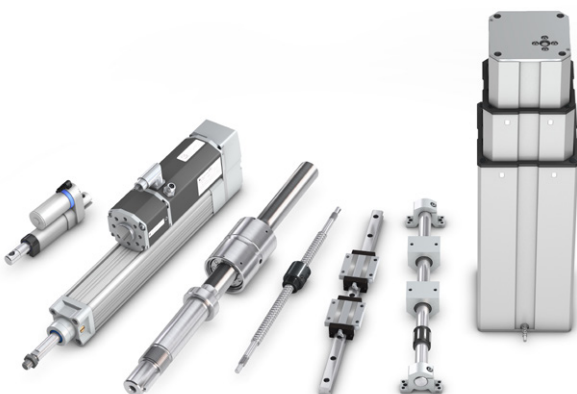
We earned our reputation through decades of engineering excellence. Our journey began over 50 years ago as part of the SKF Group, a leading global technology provider.

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, CO₂-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.



Enhancing efficiency, safety and ergonomics

Today's medical equipment needs to enable faster, safer, more reliable diagnostics and procedures. Surgical tables and chairs must manage ergonomics, increasing patient weight, lower entry levels, and deliver higher productivity.

Ensuring patient safety and confidence requires a high level of rigidity and robustness in surgical equipment. Ewellix provides first-class ready-to-install modular solutions with optimum stiffness and rigidity, guaranteeing play-free and smooth motion along with class-leading performance specification and safety.



From standard range to customised solutions

Ewellix provides a range of columns, actuators, and controllers to meet all your needs. From high-performing, robust products that have minimal play to straightforward configurations needed for less demanding jobs.

Application competence

Building on our more than 30 years' experience and knowledge in medical applications, Ewellix can support you with technical advice, system setup, and customised designs throughout the entire product development cycle.

Certified medical safety

Our motion solutions can significantly reduce your equipment certification time and costs. All products are UL certified according to IEC 60601-1 and are fully compatible and tested as a system to minimise your risk and time to market.

Strategic positioning, clinical value and efficiency, your customer's success

Electromechanical 3-axis lift and tilt module

Smart innovation for surgical tables and procedure chairs

Challenges

Manufacturers are challenged with the integration of all drive components into a very compact space, while meeting high performance requirements of harmonized motions, low entry height with high stroke, and high tilt angles.

Ewellix Solution

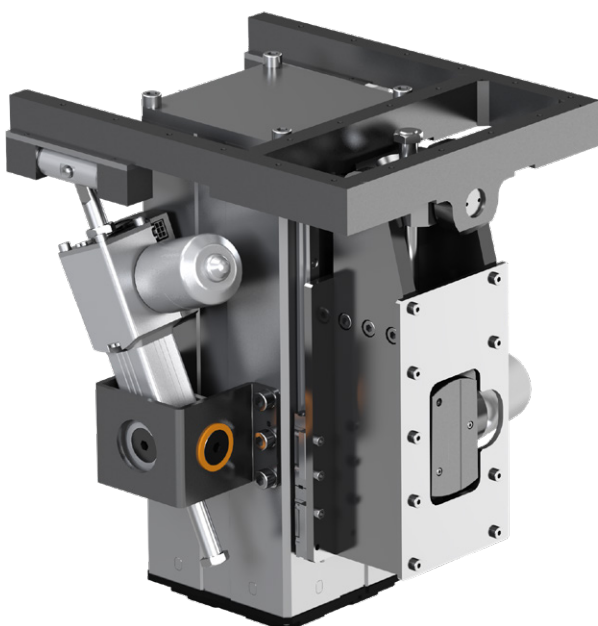
Our surgical module combines an innovative design with the strength of our single components (lifting column, tilt actuators and profile rail guides) to assist you with a unique value proposition. The module enables an accelerated time to market by reducing your design and testing efforts.

Features

- Very low retracted height
- High stroke and tilt angles
- Rigid and play-free design
- Fully electro-mech. module
- Maintenance free

Benefits

- Comfortable entry height for patient
- Ergonomic working position for surgeon
- High patient comfort and safety
- Sturdy base for robotic assisted surgeries
- Easily replacing hydraulic systems
- Reduces your service costs



Extra comfort

Feel the smooth movement introduced by our surgical module with play-free tilting actuators and a high stiffness lifting column.

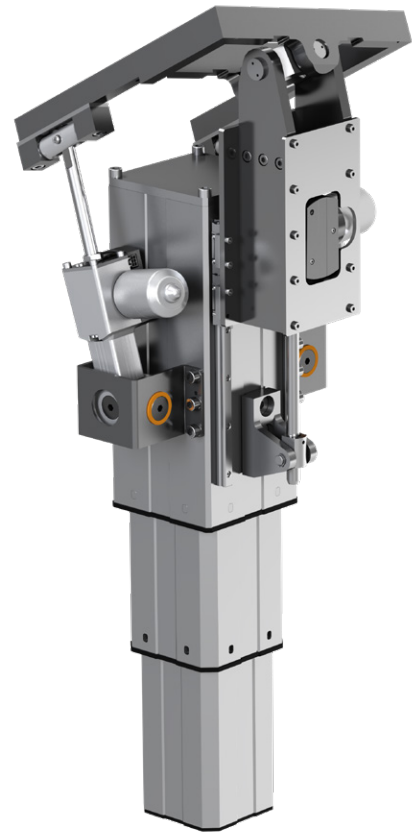
Due to the very low retracted height patients can easily and comfortable access the table and at the same time the high lifting stroke and the large tilt angles enable an optimal patient positioning increasing ergonomics and efficiency.

Safety and reliability

Our medical approved and proven in use products ensure highest safety to patients and caregiver and a long service life. The complete module fulfills the medical standards: 4 x static safety factor, back-up nut on all drives and a self-locking design (preventing unintended motion)

Hydraulic replacement

The module combines a compact cross section with high power density, which enables it to easily replace hydraulic systems. It is truly maintenance-free for its life-cycle. Frequent check-ups and oil leakages are history. The future is precise electrical motion-controlled patient positioning (synchronized motion, memory positions, programmable dependencies and restrictions).



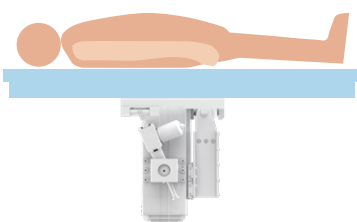
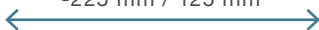
Customization

Working closely with our customers, we offer customization of surgical modules to meet your requirements.

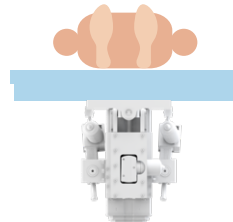
Longitudinal tilt (Trendelenburg)
-/+ 45°



Max. longitudinal patient
shift out of center
-225 mm / 125 mm



Lateral tilt
-/+ 25°



Retracted
height
435 mm



Max. patient
weight: 350 kg
(incl. table top)



Extended
height
1 135 mm



Surgical tables

The challenges facing manufacturers of operating tables today is to combine more functions with heavier patient weights. Faster speeds, better access heights and improved lifting capacities are also needed. Ewellix's extensive and unique range of electromechanical lifting columns combines controlled movements, low entry heights and heavy lifting capacities.

The patient's seat can be easily tilted both lengthwise (Trendelenburg position) and sideways using virtually backlash-free actuators and accessories. Our standard ranges of Medical certified actuators adjust leg supports and backrests, while our profiled rail guides ensure controlled longitudinal movement. Enhanced by fail-safe control units and operating switches, they make our products a world-leading range.

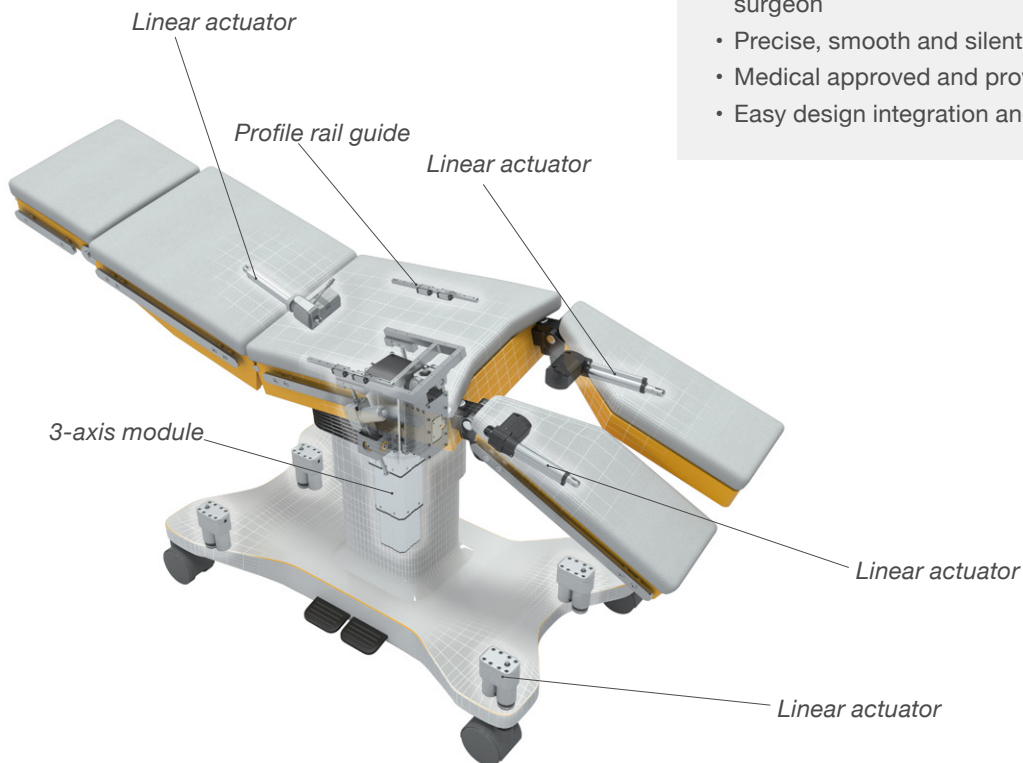
Ewellix solutions

Features

- Innovative modular based solutions
- Centric lifting force up to 6000 N
- Excellent off-center load capacity up to 1400 Nm
- Low retracted height and high lifting stroke
- Compact cross section and dimensions
- Play-free tilt motion at a large tilt angle range (up to $\pm 45^\circ$)
- Position and speed controlled electrical motion
- Low friction linear guides
- Compliant with medical standard (IEC 60601-1)

Benefits

- Able to handle 350 kg (770 lbs) patients
- High stiffness, rigidity and safety
- Superb comfort and ergonomics for patient and surgeon
- Precise, smooth and silent patient positioning
- Medical approved and proven in use solutions
- Easy design integration and reduced time to market



Lifting columns



TLT CPMT

Linear actuators



CAMT MAX CAFL ECO

Control boxes and controls



SCU EHA

Profile rail guide



LLT

Procedure chairs

Today, manufacturers of patient chairs are faced with the challenge of providing specialist products that not only offer increased comfort and functionality but are more efficient. Ewellix's extensive and unique range of electromechanical lifting columns combines controlled movements with low access heights and heavy lifting capacity.

The patient's seat can be easily tilted both longitudinally (Trendelenburg position) and laterally with the aid of our high-quality actuators and accessories. Medical certified actuators are used to adjust leg supports and backrests in our standard ranges, while our profiled rail guides ensure maximum longitudinal control. Fail-safe control units and operating switches enhance this range of products.

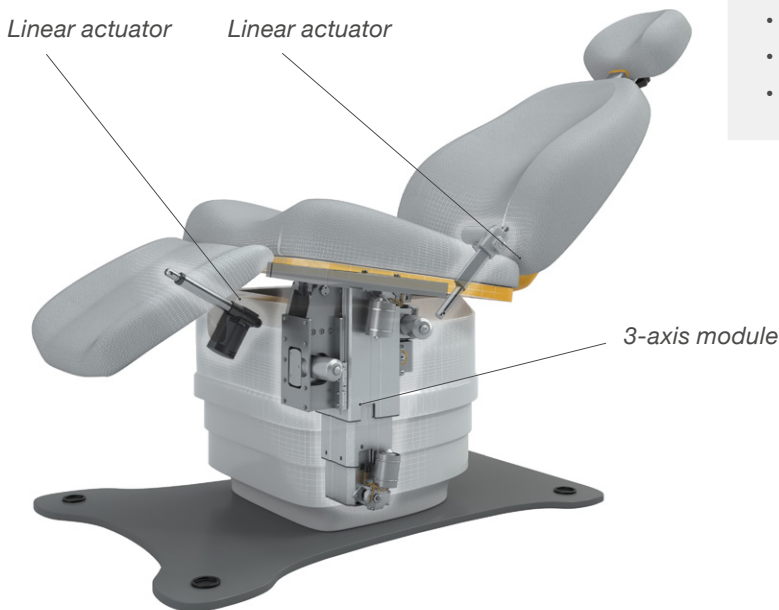
Ewellix solutions

Features

- Full platform offering
- Centric lifting force up to 6000 N
- Compact cross section and space saving design
- Low retracted height combined with high lifting stroke
- Play-free and smooth tilt motion
- Position and speed controlled electrical motion
- Quick release function to enable CPR (Cardiopulmonary resuscitation)
- Compliant with medical standard (IEC 60601-1)

Benefits

- Able to handle 350 kg (770 lbs) patients
- Excellent stiffness, rigidity and safety
- Comfortable patient accessibility due to a very low entry height of 430 mm (17 inch)
- Precise, smooth and silent patient positioning
- High ergonomics and efficiency during treatment
- Medical approved and proven in use solutions
- Easy design integration and reduced time to market



Lifting columns



TLT

TLG

CPMT

Linear actuators



CAMT

CAJA35

Control boxes and controls



ECO

SCU

EHA

Surgical robotics

Currently, the healthcare system is adopting advanced technologies like next-generation surgical robotics, which offers a safer surgical procedure by making it accurate and minimally invasive for patients.

This technology can provide better clinical outcomes for providers and patients and improve surgical workflow patterns for healthcare systems. Our focus is understanding surgical trends, customers' needs and providing innovative solutions

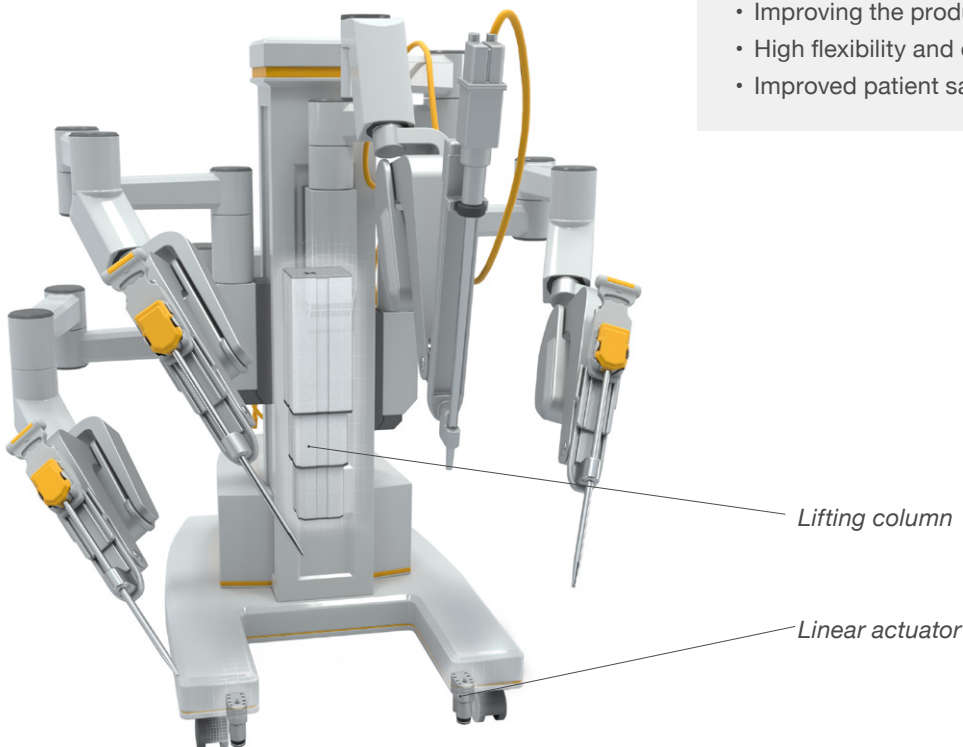
Ewellix solutions

Features

- High stiffness, rigidity and reliability
- Large lifting range at low retracted height
- Excellent ratio between lifting force and speed
- Compact and space saving design
- Highest product safety in medical
- Built-in position encoder
- Compliant with medical standard (IEC 60601-1)

Benefits

- Providing a stable and rigid base enabling high precision and repeatability
- High productivity and efficacy
- Offering a wide positioning range and precise positioning
- Improving the productivity and the efficacy
- High flexibility and easy design integration
- Improved patient safety



Lifting columns

Linear actuators



TLT



CPMT



CAFL

Products overview

Lifting columns



	TLT10-A1	TLG10-AA	TLT10-A2	TLT20	CPMT1-1S	CPMT1-2M
Rated push load	3000 N	4000 N	4000 N	5000 N	5000 N	6000 N
Speed	11 to 16 mm/s	10 to 14 mm/s	13 to 19 mm/s	18 to 28 mm/s	14 to 34 mm/s	12 to 26 mm/s
Retracted length	Stroke/2 + 170 mm	Stroke + 180 mm	Stroke/2 + 240 mm	Stroke/2 + 130 mm	Stroke/2 + 120 mm	Stroke/2 + 240 mm
Bending load	Up to 400 Nm	Up to 600 Nm	Up to 1000 Nm	Up to 500 Nm	Up to 450 Nm	Up to 1400 Nm
Stiffness	++	+++	++++	+	+	++++

Linear actuators



	MAX1-C	ECO5	CAJA35	CAMT
Rated push load	1500 N	2000 N	3500	6000 N
Rated pull load	1500 N	2000 N	3500	6000 N
Speed	13 to 18 mm/s	9 to 13 mm/s	5,5 to 8,5 mm/s	5 to 6,5 mm/s
Retracted length	Stroke + 195 mm	Stroke + 160 mm	Stroke + 180	Stroke + 80 mm



	ECO9	MAX3-A	CAFL
Rated push load	6000 N	8000 N	6800 N
Rated pull load	4000 N	6000 N	-
Speed	4 to 7 mm/s	5 to 7 mm/s	12 mm/s
Retracted length	Stroke + 160 mm	Stroke + 215 mm	Stroke + 88,5

Control boxes



	SCU
Motor ports	3 or 6
Output voltage (nominal)	24 VDC
Total output current (max)	18A / 30A
Operating device ports	3
Soft Start/Stop	✓
Encoder processing	✓
Memory Functions	✓
Configurable binary inputs / outputs	2 / 4
Configurable smart functionality	✓
Optional battery	✓
Optional RS232 interface	✓
Synchronous run of actuators (encoder processing)	✓
Smart configurable functionality (e.g., Memory - and virtual limit positions)	✓

Profile rail guides



	LLT-range
Size and range	15 to 45
Dynamic load rating	up to 72,5 kN
Speed	up to 5 m/sec
Acceleration	up to 75 m/ sec ²
Accuracy	up to 18 µm at 4 m
Material options	Coatings
Characteristics	Economic solution

Supporting tool

Digital

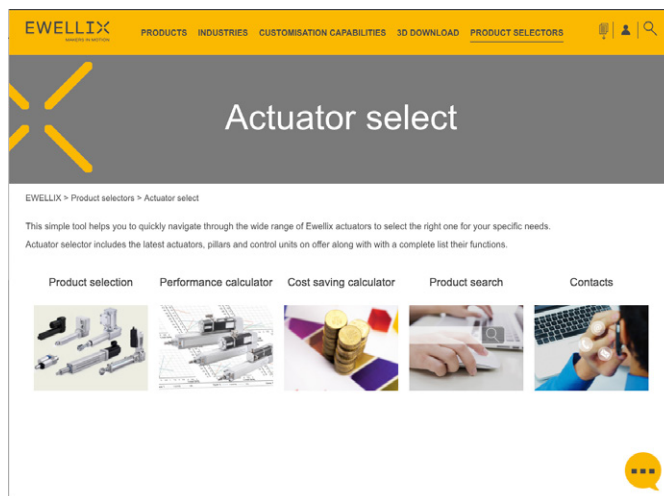
Ewellix has developed a portfolio of tools to support customers in the easy selection and calculation of the right Ewellix product for their application.

Actuators

- Product selection
- Performance calculator
- Cost saving calculator

Linear guides

- Product selection
- Product calculator
- Cross reference



Publications

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

- operating manual
- mounting instruction

Lifting column TLG



Linear actuators CAJA



Profile rail guides LLT



Lifting column TLT



Linear actuators CAFL



Linear actuator CAMT



Lifting column CPMT



Linear actuators Matrix series



Electro-mechanical 3-axis module



Linear actuators Ecomag



Control units





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PUB NUM EL-03016-1-EN-February 2023

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