

# EXTREME PERFORMANCE

Electromechanical Actuators: powerful, flexible, efficient



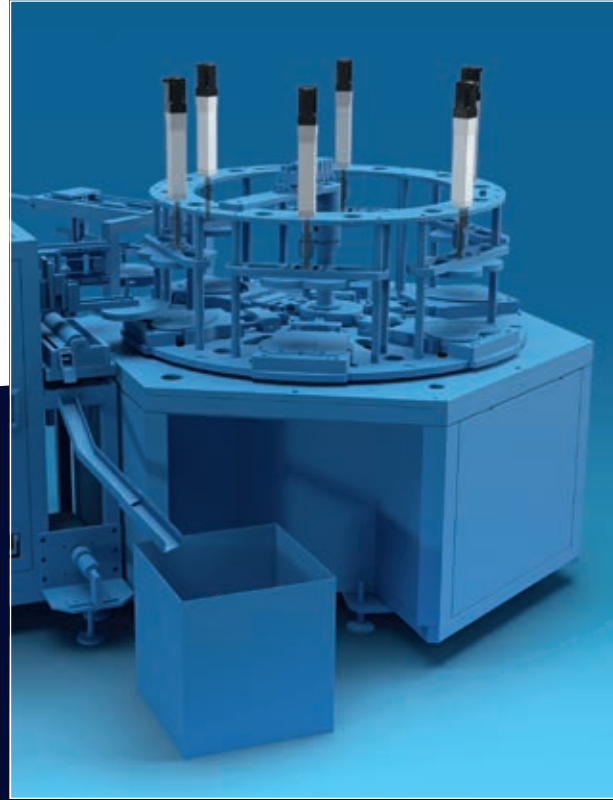
# Versatile solution for any application

## PRESSING



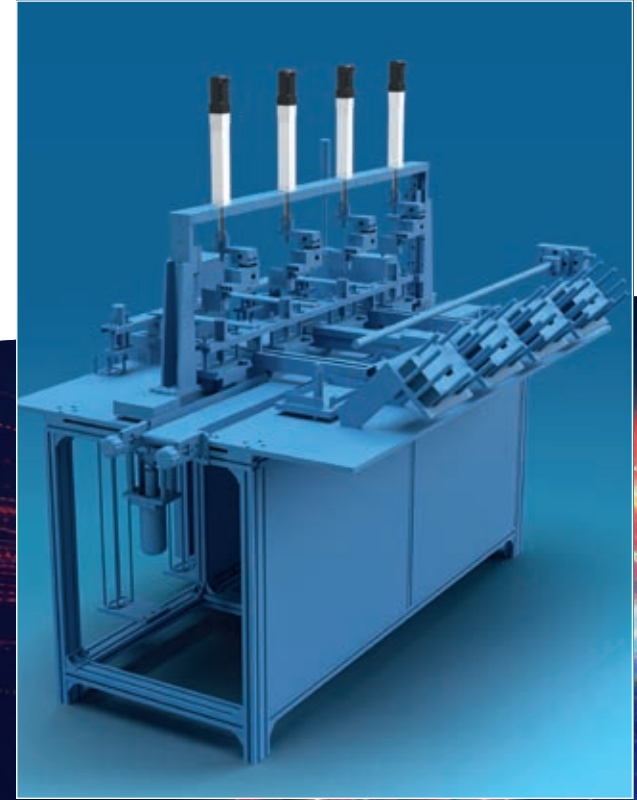
- ▶ Press fitting
- ▶ Punching
- ▶ Cutting
- ▶ Clinching

## FORMING



- ▶ Thermoforming
- ▶ Blow moulding

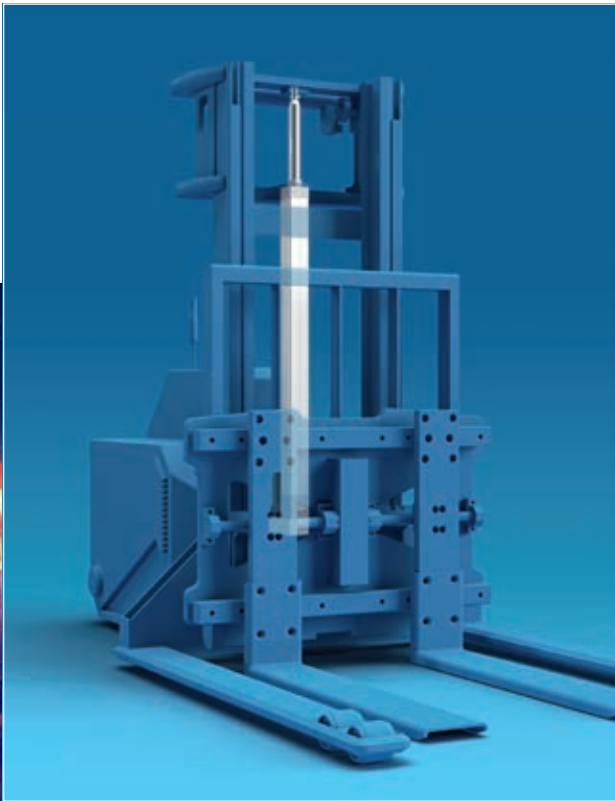
## PACKAGING



- ▶ Folding
- ▶ Bending
- ▶ Adjusting
- ▶ Punching

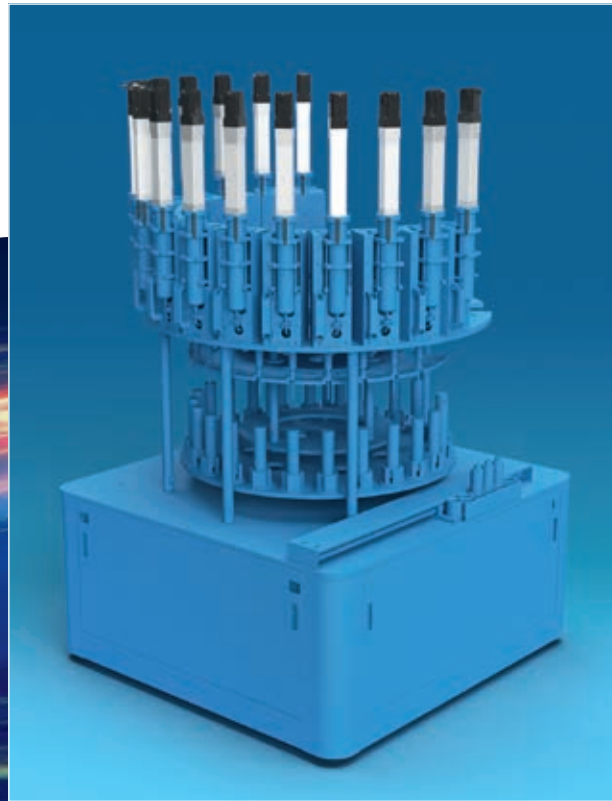
**Rexroth electromechanical actuators provide a versatile solution for factory automation and beyond. Their robust, compact design ensures long service life and consistently high performance – even in the most demanding environments. EMCs deliver precise positioning with exceptional controllability and dynamic response, making them ideal for applications requiring high precision and reliability.**

## MOBILE



- ▶ Lifting
- ▶ Steering
- ▶ Gripping

## VOLUMETRIC PUMPING



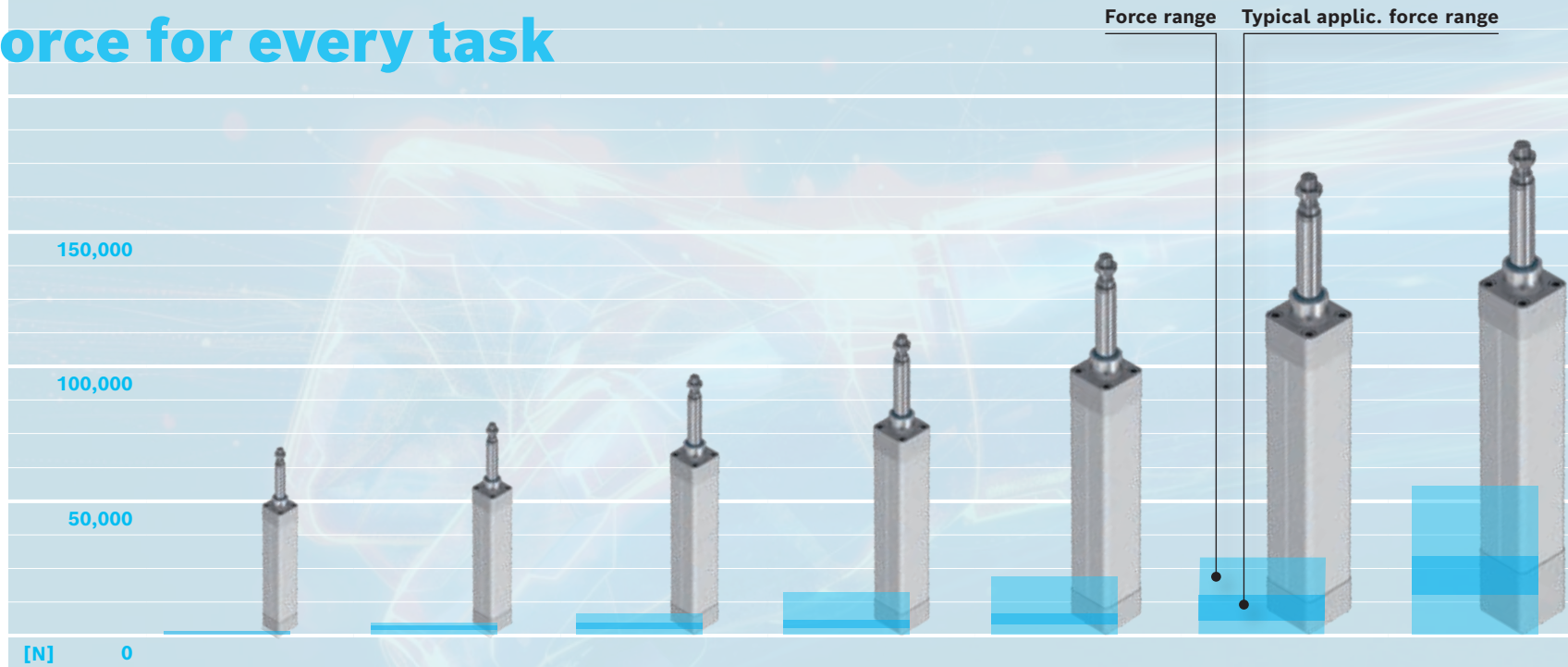
- ▶ Filling
- ▶ Pumping
- ▶ Dosing
- ▶ Capping

## SIMULATORS

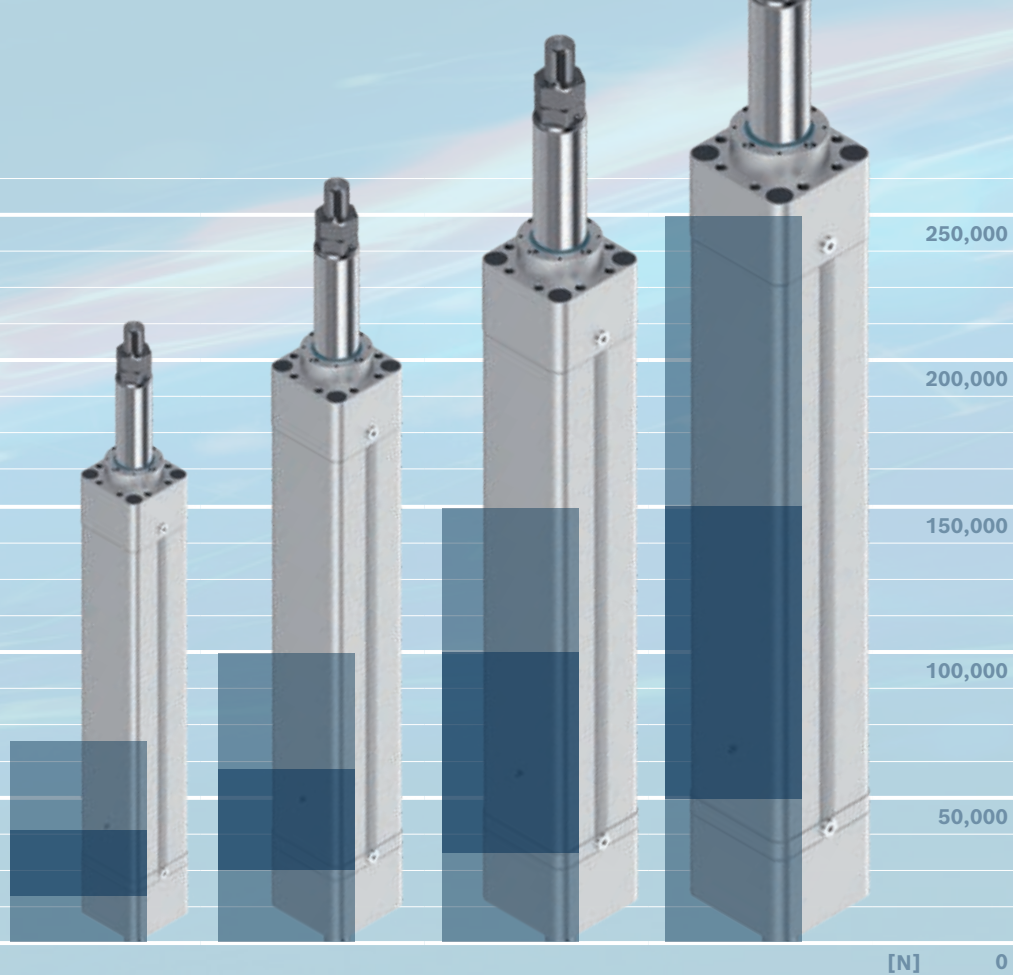


- ▶ Aerospace
- ▶ Vehicles
- ▶ Marine

# Key technical data: the right force for every task



EMC		EMC-032	EMC-040	EMC-050	EMC-063	EMC-080	EMC-100	EMC-100-XC
<b>Typical applic. force range</b>	[kN]	0.1 ... 0.8	1.0 ... 3.0	2.5 ... 4.5	3.0 ... 5.5	4.0 ... 8.0	5.5 ... 15.0	15.0 ... 30.0
	[lbf]	22 ... 180	224 ... 674	562 ... 1,011	674 ... 1,236	899 ... 1,798	1,236 ... 3,372	3,372 ... 6,774
<b>Max. force</b>	[kN]	1.2	4.5	7.8	15.9	22.0	29.0	56.0
	[lbf]	270	1,011	1,754	3,574	4,946	6,518	12,589
<b>Ball screw size and leads</b>	[mm]	Ø12 5, 10	Ø16 5, 10, 16	Ø20 5, 10, 20	Ø25 5, 10, 25	Ø32 5, 10, 20, 32	Ø40 5, 10, 20, 40	Ø50 10, 20
	[in]	Ø0.47 0.2, 0.39	Ø0.63 0.2, 0.39, 0.63	Ø0.79 0.2, 0.39, 0.79	Ø0.98 0.2, 0.39, 0.98	Ø1.26 0.2, 0.39, 0.79, 1.26	Ø1.57 0.2, 0.39, 0.79, 1.57	Ø1.97 0.39, 0.79
<b>Max. speed</b>	[m/s]	1.13	1.60	2.00	2.50	2.50	2.50	1.00
	[in/s]	44.5	62.9	78.7	98.4	98.4	98.4	39.4
<b>Min./max. stroke</b>	[mm]	30 ... 750	35 ... 750	40 ... 900	45 ... 1,200	50 ... 1,500	55 ... 1,500	90 ... 1,500
	[in]	1.18 ... 29.53	1.38 ... 29.53	1.57 ... 35.43	1.77 ... 47.24	1.97 ... 59.06	2.17 ... 59.06	3.54 ... 59.06
<b>Housing size</b>	[mm]	47	53	65	75	95	115	115
	[in]	1.85	2.09	2.56	2.95	3.74	4.23	4.23



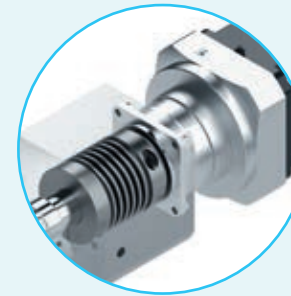
## ELECTROMECHANICAL CYLINDERS ADVANTAGES

- ▶ **Dynamic:** high speed and acceleration
- ▶ **Economic:** energy efficient, low maintenance costs
- ▶ **Precise:** high positioning accuracy and repeatability
- ▶ **Flexible:** easily adaptable to various applications
- ▶ **Robust:** IP65 seals and corrosion free materials

EMC-130-HP	EMC-160-HP	EMC-190-HP	EMC-220-HP		EMC-HP
20.0 ... 40.0	25.0 ... 60.0	30.0 ... 100.0	50.0 ... 150.0	[kN]	<b>Typical application force range</b>
4,496 ... 8,992	5,620 ... 13,488	6,744 ... 22,480	11,240 ... 33,721	[lbf]	
70.0	100.0	150.0	250.0	[kN]	<b>Max. force</b>
15,736	22,480	33,721	56,202	[lbf]	
Ø39 5, 10	Ø48 5, 10	Ø60 10, 20	Ø75 10, 20	[mm]	<b>Planetary screw size and leads</b>
Ø1.54 0.2, 0.39	Ø1.89 0.2, 0.39	Ø2.36 0.39, 0.79	Ø2.95 0.39, 0.79	[in]	
0.64	0.52	0.83	0.66	[m/s]	<b>Max. speed</b>
25.20	20.47	32.68	25.98	[in/s]	
110 ... 1,500	130 ... 1,500	160 ... 1,500	200 ... 1,500	[mm]	<b>Min./max. stroke</b>
4.33 ... 59.06	5.12 ... 59.06	6.30 ... 59.06	7.87 ... 59.06	[in]	
130	160	190	220	[mm]	<b>Housing size</b>
5.12	6.30	7.48	8.66	[in]	

# Technical highlights: highest quality for a longer lifetime

## EMC



▲ Inline flange



▲ Belt drive



- ▶ **Piston rod**
  - Stainless steel

- ▶ **Piston rod seals**
  - IP54 or IP65
  - Material: PUR

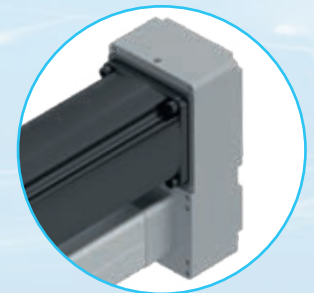
- ▶ **Housing**
  - Anodized aluminum
  - Smooth, easy to clean design
  - IP54
  - P65 with paper gaskets
  - IP65+R with corrosion resistant aluminum gaskets

- ▶ **Ball screw**
  - Bosch Rexroth in-house production
  - Sizes 12 – 50
  - Accuracy class T7
  - T5 on request
- ▶ **Built-in anti-rotation gaskets**

- ▶ **Lubrication options**
  - Lifetime lubrication, maintenance free for light duty applications
  - Grease lubrication
  - Liquid grease and connector for automated relubrication systems
  - H1 food grade grease lubrication
  - Without initial lubrication and special lubricants available on request

- ▶ **Pressure compensation hole**
  - In IP65 and IP65+R versions

- ▶ **Motor mounts**
  - Without motor mount for custom solutions
  - Inline flange mount
  - Parallel mount with belt drive
  - Adaptable to any motor from any manufacturer



# EMC-HP



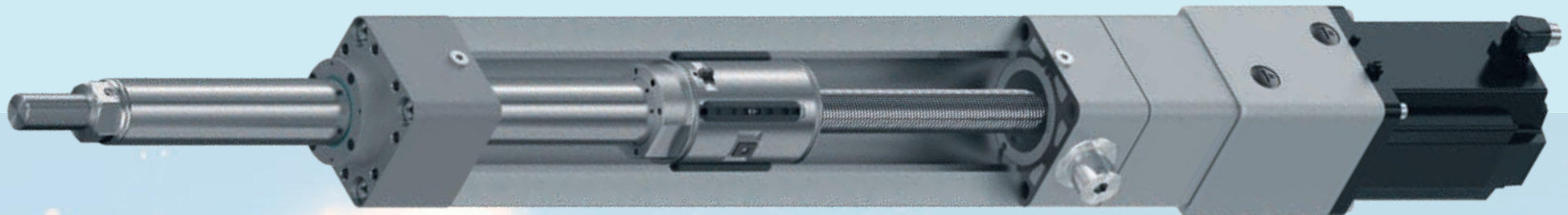
▲ Inline flange



▲ Belt drive



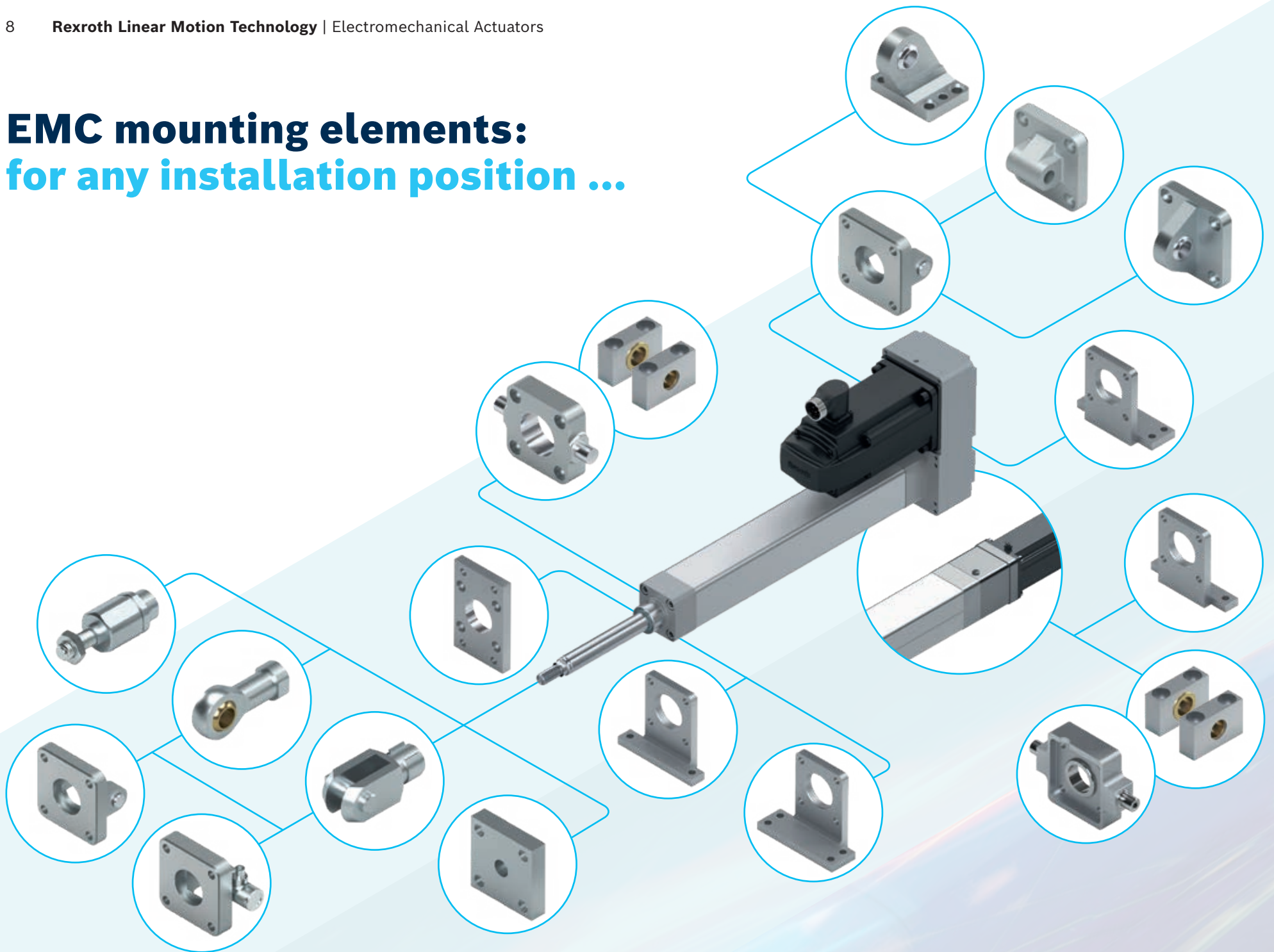
▲ Gear drive



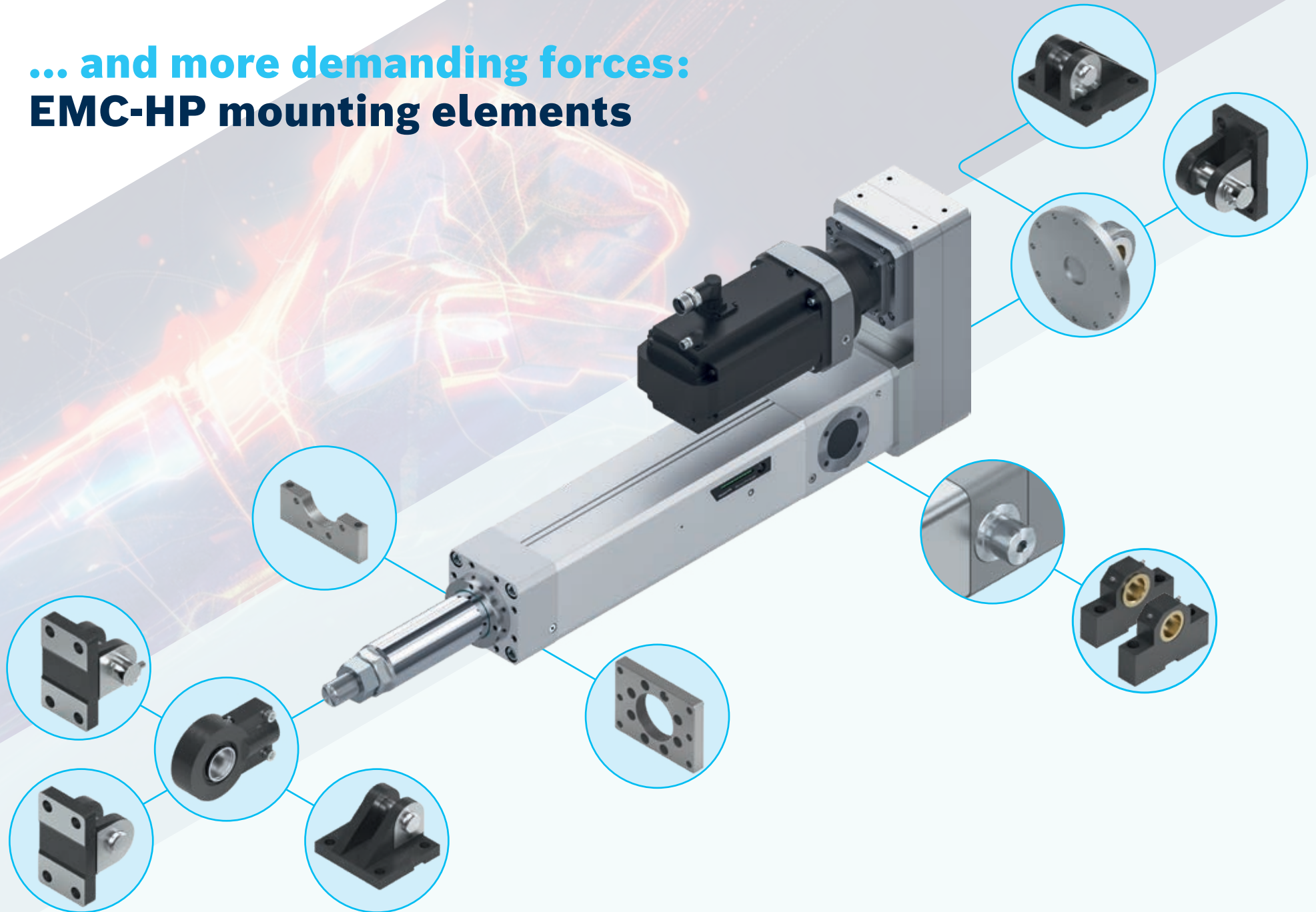
- ▶ **Piston rod**
  - Sizes 130 and 160: Stainless steel
  - Sizes 190 and 220: Chrome coated steel
- ▶ **Piston rod seals**
  - IP54
  - Material PUR
  - Field replaceable seal cartridge
- ▶ **Housing**
  - Anodized aluminum
  - IP54
- ▶ **Planetary screw assembly**
  - Bosch Rexroth in-house production
  - Sizes 39 - 75
  - Accuracy class T5
- ▶ **Built-in anti-rotation**
- ▶ **Lubrication options**
  - Grease, for normal applications
  - Oil bath, for heavy-duty applications and long service intervals
- ▶ **Sensor package**
  - Sizes 190 and 220 only
  - Real-time monitoring of relubrication or operating temperature
  - Operating modes: Standalone, IO or IO-Link
- ▶ **Motor mounts**
  - Without motor mount for custom solutions
  - Inline flange mount
  - Parallel mount
    - Sizes 130 and 160 with belt drive
    - Sizes 190 and 220 with gear drive
  - Adaptable to any motor from any manufacturer



# EMC mounting elements: for any installation position ...



# ... and more demanding forces: EMC-HP mounting elements



# All automation components from single source: Faster design. Smoother commissioning. Maximum efficiency.

**Unlock the full potential of your machine or automation system with a seamlessly matched portfolio of components from Bosch Rexroth.**

By sourcing everything – from mechanics, controllers and drives to sensors, software, and safety technology – from a single supplier, you eliminate compatibility issues, reduce engineering effort, and accelerate every step of your project.

Our integrated automation solutions simplify design, streamline installation, and ensure trouble free commissioning – even for complex applications. The result: shorter development cycles, higher productivity, and a system that simply works.

**One supplier. One ecosystem. Infinite possibilities.**

## ADVANTAGES

- ▶ **Perfectly matching components**
- ▶ **Powerful engineering tools**
- ▶ **Easy commissioning**
- ▶ **Guaranteed performance**



# Smart Function Kit Pressing: The whole package + operating software

**Bosch Rexroth servo presses are available as 8 kits with nominal forces from 2 kN up to 70 kN – each pre-assembled in a package. The browser-based HMI of the pre-installed operating software reduces commissioning to just a few minutes. No programming knowledge is needed for process creation and quality monitoring. A connection to higher-level control systems can be easily realized via the provided field-bus function blocks.**

## System overview

- ▶ **Force:** from nominal 2 kN up to 70 kN
- ▶ **Stroke:** individually configurable up to 400 mm or even more
- ▶ **Sensor:** force measuring with DMS technology
- ▶ **Safety:** Safe Torque Off or Safe Motion

## ADVANTAGES

- ▶ **Easy:** product selection and configuration through pre-selected kits
- ▶ **Intuitive:** pre-installed operating software, zero programming, web HMI
- ▶ **Fast:** commissioning wizard with auto-configuration and parameterization of the servo drive
- ▶ **Complete:** all components from one supplier



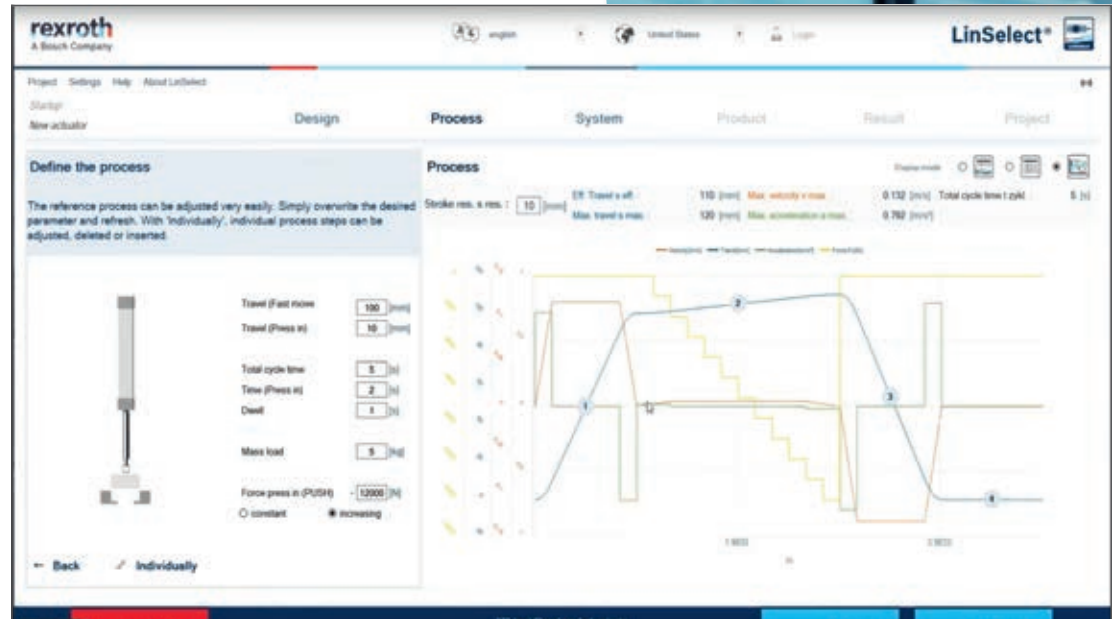
# Extremely fast: intuitive online tools

## Configure like never before

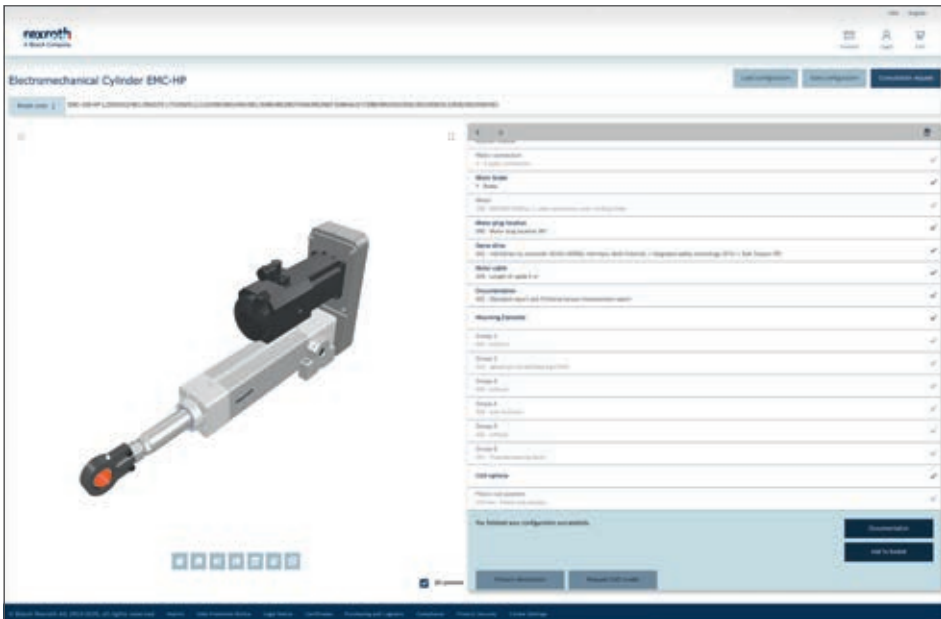
With the LinSelect tool and the new online configurator, you can put together your individual solution from over 3,000 cylinder variations in just a few minutes instead of hours.

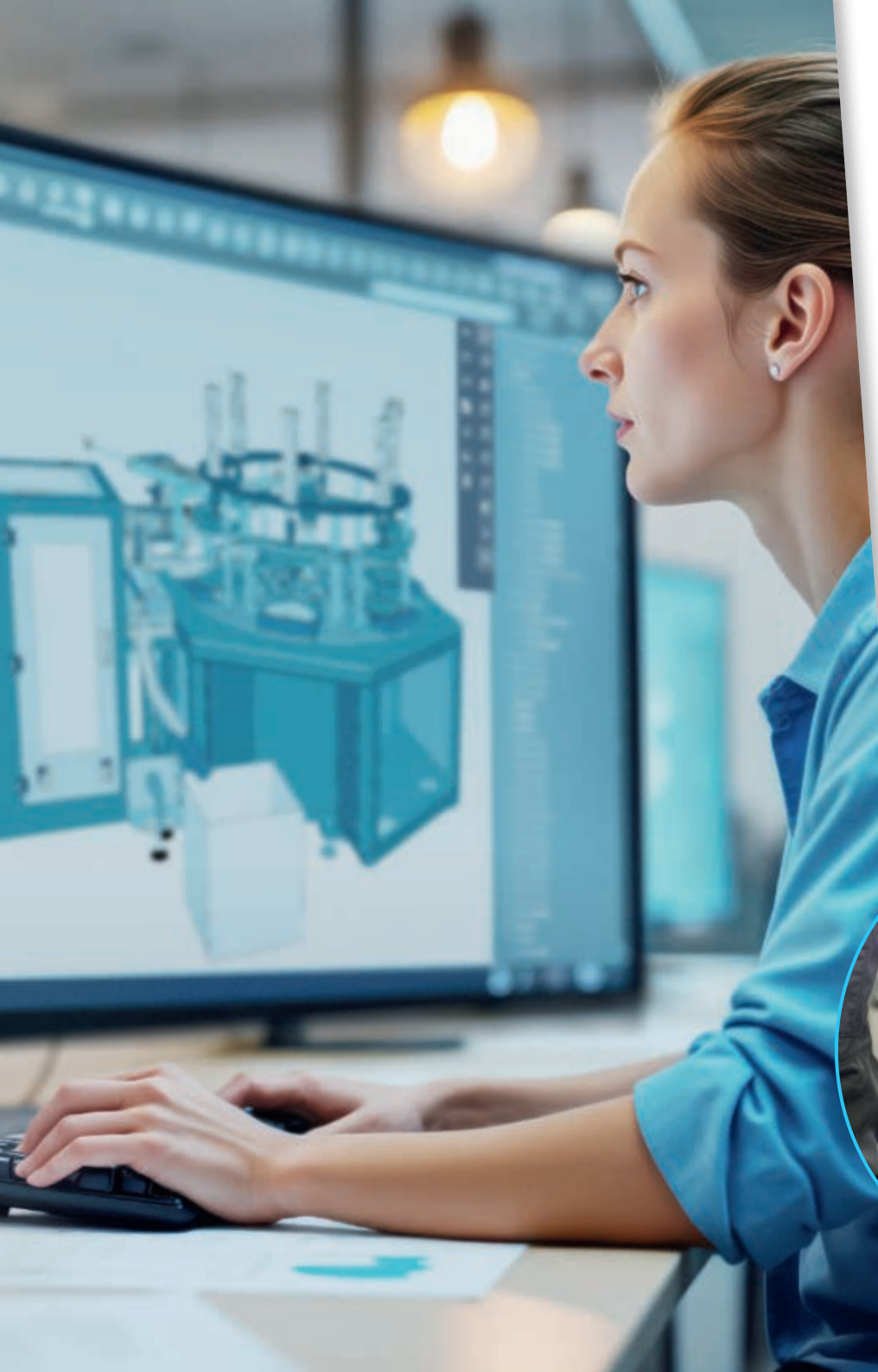


- Saves time and money – smart selection and sizing with LinSelect



- ◀ Step by step online configuration, real-time CAD generation and download





## **Before and After Sales Service: We are there for you. Always.**

### **Engineering as a partnership**

At Bosch Rexroth, 30 years of experience as a leading supplier in linear technology is not only reflected in our eTools or the world's broadest product portfolio, but above all in our people. Benefit from the linear technology know-how of our specialists and all-round support.

### **Maximum machine availability, lowest TCO**

The Bosch Rexroth repair service analyses, repairs and optimizes all your linear technology components in guaranteed OEM quality. At top speed. With the same warranty as a new part. Get in touch with us.





## Winning application: new force in washing machine production

BSH Group, Europe's leading manufacturer of household appliances, has optimized its pressing and joining processes in washing machine production using **Smart Function Kits** from Bosch Rexroth.

These mechatronic subsystems deliver enhanced flexibility, stability, and transparency across the global production network. As a result, BSH has achieved continuous process improvements and can quickly adapt to changes in components or new product variants.

Assembly quality has significantly improved due to the high repeatability of the press-fit operations. Additionally, transitioning from pneumatic to electromechanical systems has boosted energy efficiency by gradually replacing pneumatic components and compressors.



**Bosch Rexroth AG**  
Linear Motion Technology  
Ernst-Sachs-Straße 100  
97424 Schweinfurt, Germany



**rexroth**  
A Bosch Company

**Evolution Motion Solutions**  
13835 Senlac Dr, Farmers  
Branch, TX 75234  
800-569-9801

## DISCOVER MORE HERE:



**Electromechanical Actuators:**  
[www.boschrexroth.com/emc](http://www.boschrexroth.com/emc)

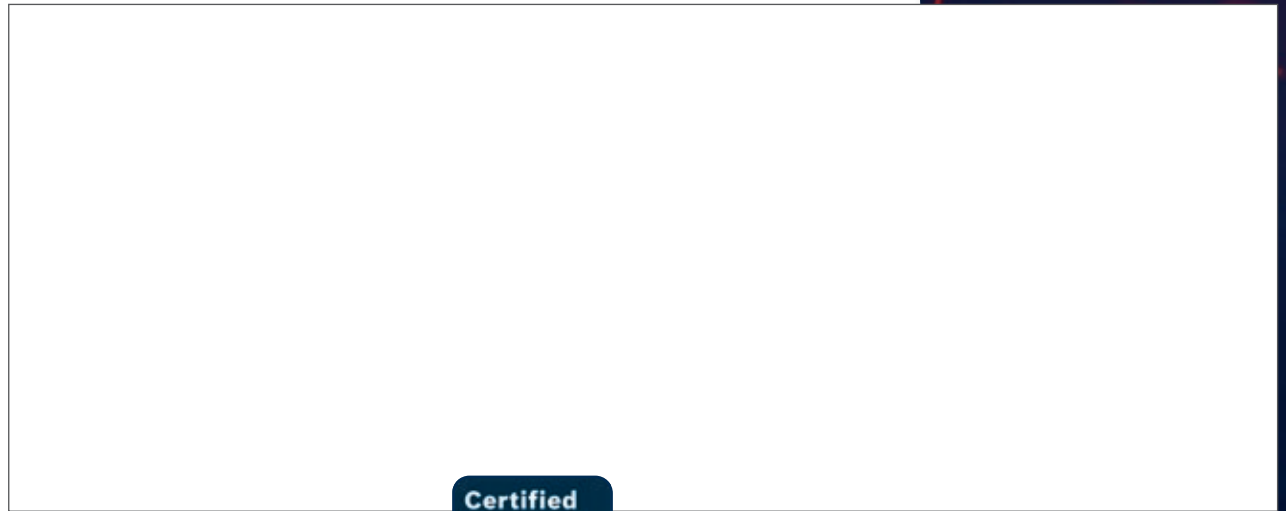


**Smart Function Kit Pressing:**  
[www.boschrexroth.com/sfk-pressing](http://www.boschrexroth.com/sfk-pressing)



Evolution Motion Solutions  
[www.evolutionmotion.com](http://www.evolutionmotion.com)  
info@[evolutionmotion.com](mailto:info@evolutionmotion.com)

## WE ARE CLOSER THAN YOU THINK:



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