

# ENGINEER CONFIDENCE.

MOTION CONTROL SOLUTIONS FOR SURGICAL ROBOTICS



# ACCELERATED INNOVATION. PRECISE EXECUTION. RAPID SUCCESS.

**The outcome is everything.** Hospitals, surgeons, and patients count on the robotic systems you design and build. Meet their needs with motion control solutions that deliver ultimate dexterity, precision, and reliability. Trust Regal Rexnord to help — with a broad portfolio of precision motion control technology, deep robotics expertise, strong collaboration, and the resources you need to accelerate your innovative design from prototype to full production.

Bring your vision for a transformational surgical robot to life with a partner you can trust. Regal Rexnord offers comprehensive solutions, deep robotics expertise, engineer-to-engineer collaboration, and the resources you need to accelerate your innovative design through prototype and production to market success.



## One partner, endless innovation potential

Motion makes the robot. The Regal Rexnord family brings together the motion control leaders for surgical robotics. Portescap for miniature precision motors. Kollmorgen for high-performance, torque-dense frameless and housed servo motors. Thomson for precision screws and linear guides. Warner Electric™ for compact electromagnetic clutches and brakes. Berg™ and Huco™ for miniature precision belts, gears, and couplings.

- A complete range of motion solutions for compact robotic arms, precise positioning of endoscopic end-effectors, highest-definition control at the surgeon console, and smooth, quiet operation of the patient table.
- Unlimited choice of standard and highly customized options — from components, to bundled solutions, to integration-ready subsystems — to realize your innovative design vision.
- One partner for deep surgical robotics-specific motion expertise, fully harmonized solutions, and supply chain simplicity.



## Collaborative confidence every step of the way

Teamwork drives results. With decades of expertise in medical motion control, Regal Rexnord collaborates using proven processes to create application-optimized components and integrated subsystems. Our collaborative culture also encompasses your engineering team, working together to build confidence into every motion-design choice.

- Engineer-to-engineer collaborative analysis of your design requirements.
- Agile teams and tried-and-true methods for rapid prototyping and iteration to final design approval.
- Trusted design and manufacturing from prototype to full-scale production.



## Speed to market without compromise

Progress in surgical robotics is accelerating. Competition is relentless. Since the industry's beginnings, Regal Rexnord has proven its ability to deliver solutions that power motion-critical axes on thousands of surgical robots. Today, Regal Rexnord is your reliable, agile partner for the long haul, with the global presence and scale to accelerate your speed to success.

- Proven scalability, from prototype to production, with global design and engineering centers and manufacturing operations.
- A commitment to operational quality and reliable supply, with 16 ISO 9001-certified production facilities worldwide.
- The responsive global support and expertise of 30,000 associates dedicated to your success.

# FROM PRECISION COMPONENTS ONE PARTNER FOR SURGICAL RO

## Regal Rexnord delivers all of your motion control needs.

- Premium components with proven medical-grade performance
- Multi-component bundles engineered for seamless operation
- Fully integrated motion subsystems

One partner for direct access to a full spectrum of collaborative engineering expertise.

PORTESCAP

KOLLMORGEN

THOMSON

WARNER ELECTRIC™

BERG™

HUCO™

SURGICAL CONSOLE  
& FOOT PEDAL



ROBOT ARM  
& ARM CART



1

Miniature  
Precision  
Motors



2

High-Performance,  
Torque-Dense  
Frameless Motors



4

Electromagnetic  
Brakes and  
Clutches

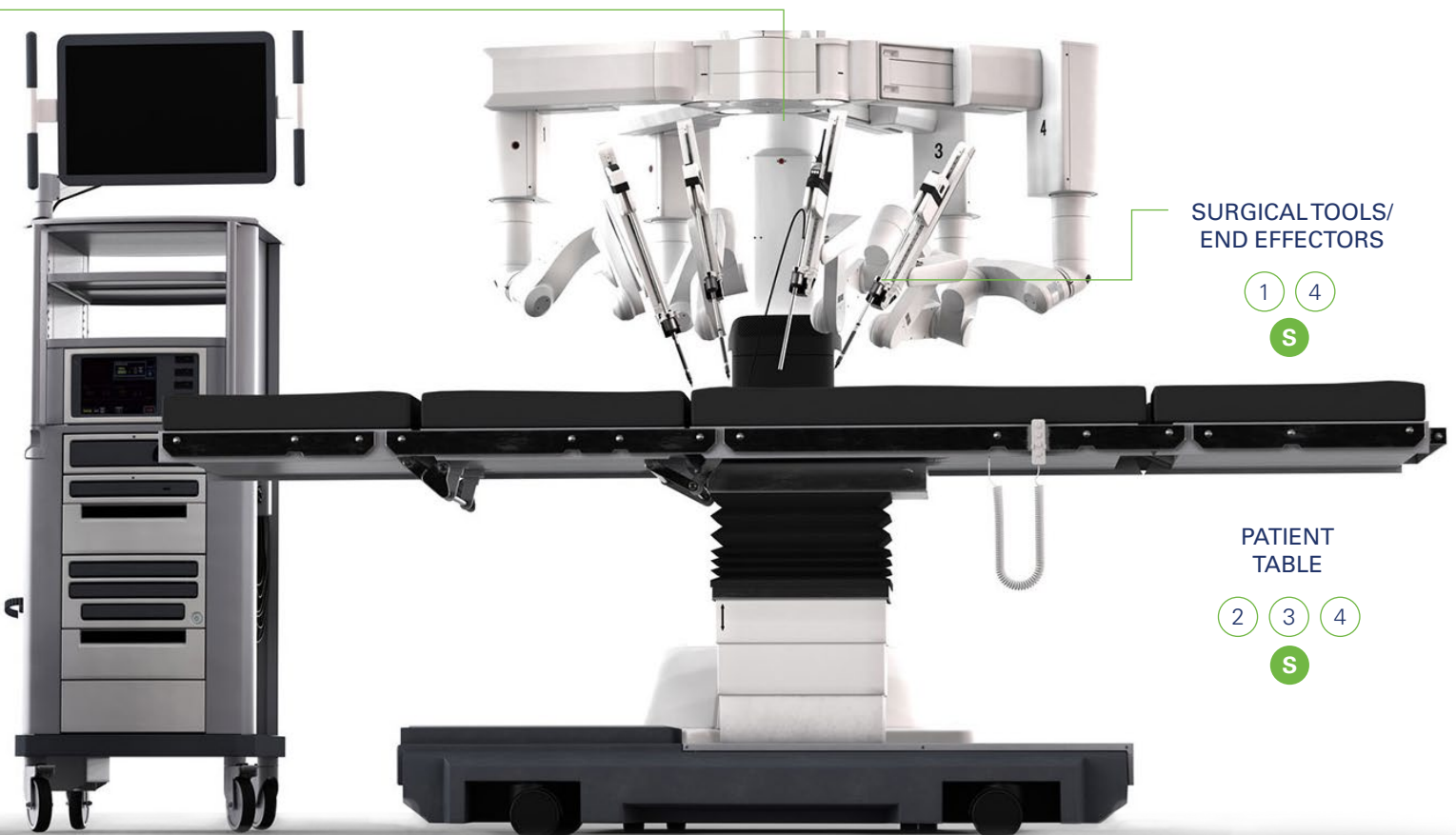


Miniature  
Precision Belts  
and Gears





# TO INTEGRATED SUBSYSTEMS. BOTICS SUCCESS.



SURGICAL TOOLS/  
END EFFECTORS

1 4  
S

PATIENT  
TABLE

2 3 4  
S

3

Precision  
Screws and  
Linear Guides



Miniature  
Precision  
Couplings



## Integrated Motion Subsystems

S

Performance-optimized, vertically integrated motion subsystems combine Regal Rexnord components with unsurpassed engineering expertise for seamless operation and accelerated time to full-scale production.



# EXPERT COLLABORATION. EXPEDITED DEVELOPMENT. ENDLESS INNOVATION POTENTIAL.

When you work with Regal Rexnord, one partnership delivers everything you need to succeed. Our engineers offer decades of proven experience solving the most complex motion control challenges in medical and surgical robotics applications. We use an established collaborative design approach to define your unique requirements and quickly translate these into prototypes and full-scale production solutions. Whether you are seeking a highly engineered custom component, a bundled solution, or a fully integrated motion subsystem, Regal Rexnord has the design engineering, global-scale production, and long-term support you need to win in today's rapidly evolving marketplace.

## Initial Design

Through a collaborative process based on your unique design requirements, we'll engineer the right combination of components and subsystems — all working together for optimal performance and assured manufacturability.

## Collaborative Engineering

Rely on the collaborative engineering support of our teams, combining expertise across the range of Regal Rexnord technologies.

## Rapid Prototyping

Our solutions offer extensive modification capabilities to reduce prototyping timelines.



## Iterative Design

After the initial prototype, we keep our foot on the gas. Our rapid iteration process ensures that components work flawlessly in the face of ongoing design revisions.

## Manufacturing at Scale

After final design approvals, we're ready for production at scale with 16 ISO 9001-certified manufacturing facilities whose quality management systems ensure predictable, reliable supplies of products globally.

## Long-Term Support

We support your surgical robotics design for the long haul with sustained product availability, export and certification support, and flexible, cost-efficient production that can scale up or down as needed.



## Creating a Better Tomorrow.

At Regal Rexnord, we create a better tomorrow with sustainable solutions that power, transmit, and control motion. Focused on customer needs and committed to sustainability, we harness innovation to transform industries and create a brighter future. From high-performance, precision motion control systems that power surgical robots, humanoids, satellites, and unmanned aerial vehicles, to advanced automation systems that optimize motion across factory floors, to precision-engineered power transmission components and innovative air-moving solutions that drive efficiency, our technologies fuel progress.

The impact of Regal Rexnord's innovation capability goes far beyond our expertise and resources in surgical robotics. For more than 125 years, our portfolio of technology brands has grown intentionally and thoughtfully. We find the best and brightest ideas, bring them together under a single roof, build them to suit each customer's purpose, and create value far beyond their individual potential.

Utilizing our deep knowledge of the unique motion needs of the industries we serve — robotics, aerospace, space, defense, medical, data centers, factory automation, renewable energy, agriculture, construction, and more — we collaborate with our customers and serve as trusted advisors to deliver optimized solutions. Customer-focused innovation drives us, and our global network of design and manufacturing centers enables us to effectively engineer and reliably produce the complex solutions required to drive progress all around the world.

Headquartered in Milwaukee, Wisconsin, and with a worldwide presence of over 200 locations and 30,000 associates dedicated to customer success, Regal Rexnord (NYSE: RRX) empowers global industries to thrive sustainably while **Creating a Better Tomorrow.**

To learn more about surgical robotics motion control solutions from Regal Rexnord and our portfolio of proven brands, contact your sales representative or visit [regalrexnord.com/surgicalrobotics](https://www.regalrexnord.com/surgicalrobotics)

The proper selection and application of products and components, including assuring that the product is safe for its intended use, are the responsibility of the customer. To view our Application Considerations, please visit <https://www.regalrexnord.com/Application-Considerations>.

To view our Standard Terms and Conditions of Sale, please visit <https://www.regalrexnord.com/Terms-and-Conditions-of-Sale> (which may redirect to other website locations based on product family).

"Regal Rexnord" is not indicative of legal entity. Refer to product purchase documentation for the applicable legal entity.

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Creating A Better Tomorrow.