

Kollmorgen Motors for Surgical Robotics:

PROVEN PROCESSES, RELIABLE DELIVERY

Few business challenges are as formidable as designing, manufacturing and supplying surgical robots to healthcare organizations around the world.

Risk mitigation is crucial at every stage to hit deadlines, transition successfully from prototype to full-rate production, and meet engineering, manufacturing and certification commitments in each region, for each region.

Our end-to-end processes help you integrate the most effective motion systems for surgeon consoles, patient tables and, crucially, the next generation of multiport surgical robots.

INITIAL DESIGN

ENGINEERING SUPPORT

FAST-TURN PROTOTYPING

ITERATIVE DESIGN

FINAL DESIGN

PRODUCTION

LONG-TERM REGIONAL SUPPORT

WHY KOLLMORGEN

Our engineering teams work with yours to understand your exact performance, quality and EMC requirements in order to provide the optimum motor and drive systems—with assured manufacturability to meet your volume and timeframe goals.

Our self-guided online tools—including 3D models, dimensions, technical publications, the Kollmorgen Developer Network and more—vastly simplify selection, sizing, configuration and programming of your motion systems. You also have access to live engineering support whenever you need it.

With our extensive modification capabilities, what would normally be considered a custom prototype is often a standard offering for Kollmorgen. Our global design and manufacturing teams typically deliver motors and drives that meet your exact requirements within just a few weeks, anywhere in the world.

Everything can look perfect in CAD, but upon constructing your prototype you will probably discover things you'd like to refine. We can rapidly iterate motor and drive systems for a perfect fit with your revised concept. Our breadth of products simplifies upward and downward mechanical scalability as needed.

We ensure full agreement with you on every final detail before beginning mass production of your motion systems. And because we understand the global certifications required of medical devices, we'll help usher your new product smoothly through any required qualification processes.

With lean manufacturing, repeatable processes and quality controls, Kollmorgen can quickly and reliably transition from prototype to full-rate production. We apply kanban workflow, one-piece flow cells, visual management and sophisticated inventory control to deliver your motion systems on time, every time.

Surgical robots can be in-market for decades. We have the proven ability to sustain product availability and performance on a global scale. We know how to comply with export, cybersecurity and other requirements. We engage in preferred supplier programs to ensure timely, defect-free delivery. And we manage costs while scaling production up or down as needed to support full-lifecycle success.

Our medical applications expertise, collaborative culture and customization skills catalyze your engineering success. Our global network of manufacturing, design, application and service centers ensure consistent supply and support. With a heritage of trusted reliability, we'll help you deliver the most effective motion systems for every application with the goal of improving outcomes for surgeons, patients and your business.

KEY MILESTONE:
JOINT SPECIFICATIONS REVIEW

KEY MILESTONE:
DOCUMENT GATHERING COMPLETE

KEY MILESTONE:
PRELIMINARY DESIGN REVIEW

KEY MILESTONE:
INTERMEDIATE DESIGN REVIEWS

KEY MILESTONE:
FINAL DESIGN REVIEW

KEY MILESTONE:
PRODUCTION READINESS REVIEW

KEY MILESTONE:
PERIODIC PROGRAMS REVIEW



Kollmorgen's broad portfolio of motors, drives, controls, gearing and actuation will help you optimize each axis of motion.



- 1 Surgical Console:** Kollmorgen's high-torque-density motors easily accommodate space limitations and offer ultimate precision for haptic feedback and control. Cogging compensation, vibration suppression and noise rejection ensure surgeons only feel what they should.
- 2 Robotic Arms:** Torque-dense frameless motors enable smaller, lighter arms and the highest definition control. Servo motors are ideal for the gantry and columns, which position robotic arms over the patient.
- 3 Patient Table:** Our precise, low-cogging servo motors allow for smooth, quiet operation with infinite positioning. Sophisticated controls synchronize table motion with robotic tools to allow even more freedom of movement during complex surgeries.

Ready to discover all your medical
technology is capable of?

Learn more at www.kollmorgen.com/robotics

Engineer the exceptional with Kollmorgen.

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www.kollmorgen.com

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