

ELECTROMECHANICAL MOTION CONTROL OVERVIEW

Moog electromechanical portfolio at a glance

MAKING THE IMPOSSIBLE POSSIBLE IN MOTION CONTROL

Moog Industrial is your partner of choice when performance really matters. We combine world class technologies with expert advisory support to solve our customers' most difficult challenges in motion control.

Our Experience

Moog Industrial excels in a wide range of applications, including industrial automation, metal working, robotics and medical motion control - just to name a few.

Get exceptional customer support from our well-trained experts, backed by Moog's longstanding track record of high performance and trusted experience. All related technology is owned by Moog.

Will Make You Triumph

Moog's typical hands-on mentality and our ambition to make the impossible possible in motion control can provide you with a competitive advantage, which will most likely last for years.

Our formula:

- Superior and reliable machine design, based on technology-neutral approach
- Customize to your very specific requirements, including the utmost compactness and quietness
- Improved profitability through economically effective project design
- A trustful partnership, driven by empathy and passion

MOOG ELECTRIC MACHINE

IoT
Industry 4.0

ETHERNET



LOCAL HMI

CONTROLS



SMARTMOTOR™



DECENTRALIZED
DRIVES



MULTI-AXIS
DRIVES



RUGGEDIZED
DRIVES

MACHINE
CONTROLLERS



SINGLE-AXIS
DRIVES

MOTION



MOTORS AND
BLOWERS

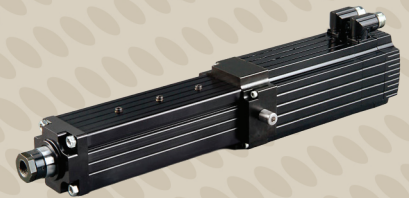


SERVO MOTORS



HF ROTOR AND
STATOR

ELECTROMECHANICAL ACTUATOR



INLINE



FOLDBACK

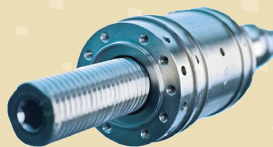


INTEGRATED

MECHANICAL



BALL SCREWS



ROLLER SCREWS



INVERTED ROLLER
SCREWS

MOOG PORTFOLIO

Moog consistently makes available to all its partners the high performance, deep technical know-how and absolute reliability that have made the company a world leading motion control solutions provider. By applying EM technology to solve our customers' problems in the industrial, energy, simulation, aviation and medical fields for decades, we have accrued a unique base of knowledge that sets us apart from the others.

With its vocation as a collaborative solutions provider Moog will help our customers develop the best applications to achieve their goals. Moog can leverage its ability to easily tailor its products to fulfill all specific machine requirements and to meet and exceed your expectations.

Our portfolio includes products at all levels of industrial automation machinery, from mechanical to motion to high precision control.

MECHANICAL



MOOG BALL SCREWS

High performance and precision design, reducing power requirements. Particularly effective in applications where the load on the screw varies quickly, such as machining tools.



MOOG PLANETARY ROLLER SCREWS

Also known as satellite roller screws. Low-friction precision screw-type actuator. Well suited for heavy loads, high duty, high rotational speeds. Extremely low maintenance requirements reducing machine downtimes. Inverted roller design also available.



MOOG INVERTED ROLLER SCREWS

An inverted roller screw works on the same principle as a planetary roller screw. In order to reduce the overall actuator dimensions, either the nut or screw can be directly used as a push tube, with the load acting directly on it.

MOTION



BRUSHLESS DC MOTORS - SILENCER™ SERIES

Compact in size and built for rugged applications and environments, the Silencer™ series' very quiet, efficient design is well suited for working conditions where low noise and reliable, long-life operation are particularly important. Inside rotor construction for quick acceleration.



SEALLESS COOLANT PUMP

Among the smallest on the market and designed to safely circulate coolants through mainframe computing systems, these leak-proof pumps with rotor magnetics integrated with the impeller, find also application in the cryogenics, petrochemical, pharmaceutical, biotech and semiconductor industries.



BLOWERS - AIRMAX™

High efficiency, low noise 3-phase brushless DC motor with internal drive electronics. Integrated electronics with customizable system interface. Configurable with any voltage, flow sensors and finger guards. Custom mounting flanges can be fabricated to fit exactly every application.



SERVO MOTORS

Fully customizable, modular motors, available with special feedbacks and natural, forced and liquid cooling. Our servo motor families can provide high dynamics and powers into compact dimensions (especially shorter lengths). Frameless packages, special axles, windings and designs are available.



EXPLOSION PROOF DYNAMIC SERVO MOTORS - ExD SERIES




Designed and tested for operation in conditions where vapors or gases form flammable or explosive environments. Flameproof housing withstands internal explosions. Certified for ATEX, IECEx, UL, CCC EX, KOSHA and TRCU.



HF ROTOR STATOR UNIT







The HF rotor/stator high frequency units are designed to be integrated in the motor spindles for milling, grinding, drilling, in pumps, fans, compressors, centrifuges etc. both for classical spindle manufacturers and industrial machinery manufacturers, each according to their specific performance requirements. The asynchronous and permanent magnet units are available in versions with 2, 4, 6 and 8 poles and more, with an external diameter from 52 to 300 mm and speed of rotation up to 26,000 rpm.

ELECTROMECHANICAL ACTUATORS

	INLINE	HIGH PERFORMANCE LINEAR ACTUATION With rising utility costs and increasing exposure to environmental action, design engineers need a solution that will help them incorporate an electric solution without sacrificing precision, speed and productivity. Our experience in servoactuation within power generation, flight simulation and subsea equipment has positioned us perfectly for this.
	FOLDBACK	
	INTEGRATED	

- Performance and reliability that increases lifetime and return on investment
- Easier installation, creating less downtime so you are operating faster
- High efficiency, leading to lower energy costs

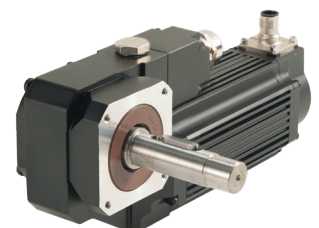
CONTROL

	SMARTMOTOR™ Highly programmable, integrated servo motor system consisting of a motor, an encoder, an amplifier, a controller, RS-232/RS-485 communication, and IOs. Works with Combitronic™, proprietary parallel processing system. Easy integration into linear actuators and sub-assemblies for high-end automation.
	MULTI-AXIS SERVO DRIVES Compact design and multi-axis modular architecture. Maximum flexibility and exceptional synchronization between axes. Safe Torque Off. User-friendly graphic interface. Wide range of control systems: EtherCAT®, CANopen® and PROFINET® among others.
	SINGLE-AXIS SERVO Extremely compact design, smallest cabinet footprint on the market, modular architecture. Safe Torque Off. User-friendly graphic interface. Wide range of control systems: EtherCAT®, CANopen® and PROFINET® among others.
	DECENTRALIZED MOTOR INTEGRATED SERVO DRIVES Decentralized architecture with IP65 protection rating. Maximum mounting flexibility. Safe Torque Off (STO) and Safe Brake Control. Complete integration with multi-axis system. Daisy-chain connection for simplified wiring.
	DECENTRALIZED RUGGED SERVO DRIVES Decentralized architecture with IP67 protection rating. Absolute mounting flexibility on any surface of the machine. Shared power supply (integrated within a multi-axis system). Daisy-chain connection for simplified wiring.
	MACHINE CONTROLLERS Support of multiple controllers in one project, multiple applications running on one controller. Extended visualization and programming features (i.e. Object Oriented Programming - OOP). Analog functions with high resolution and modular design.

SPECIAL PRODUCTS

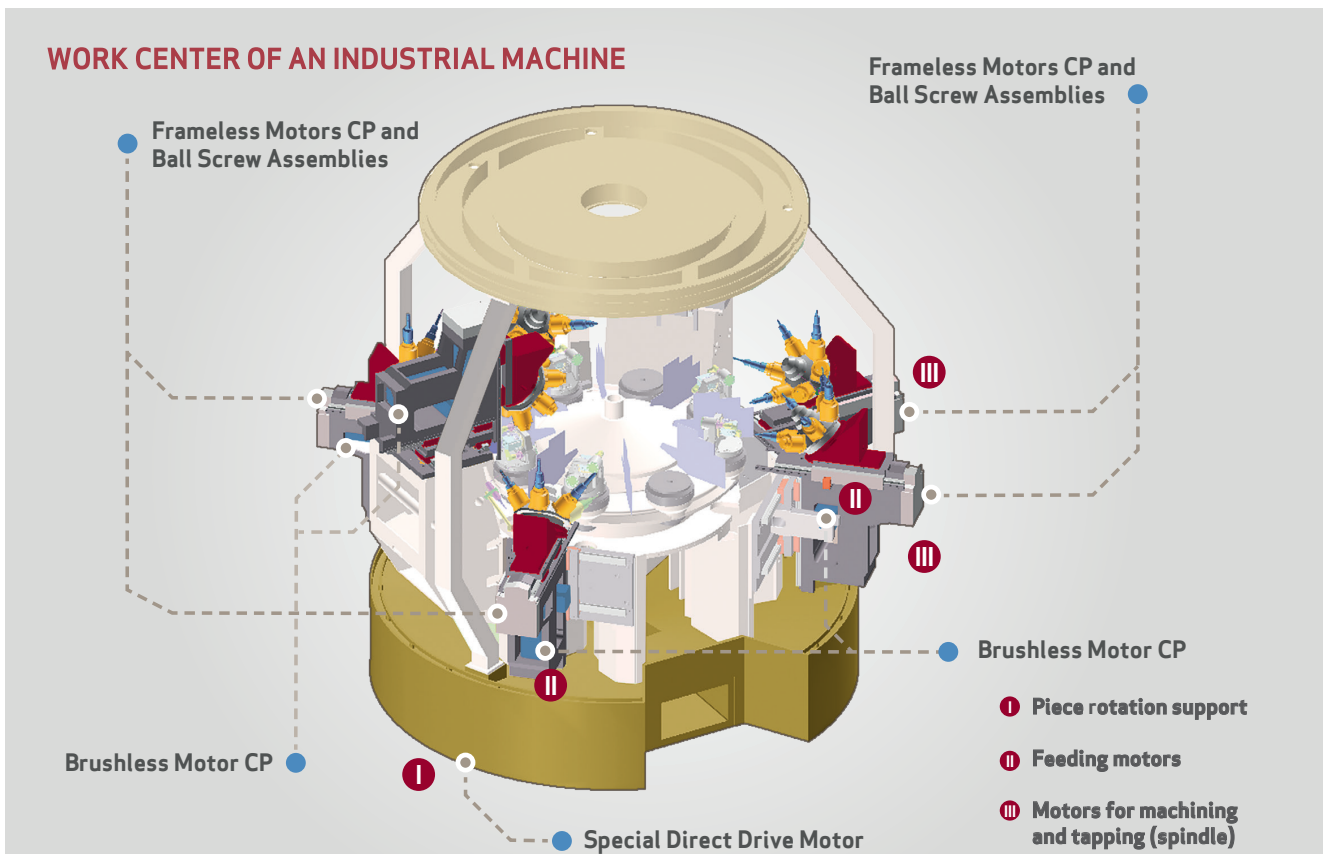
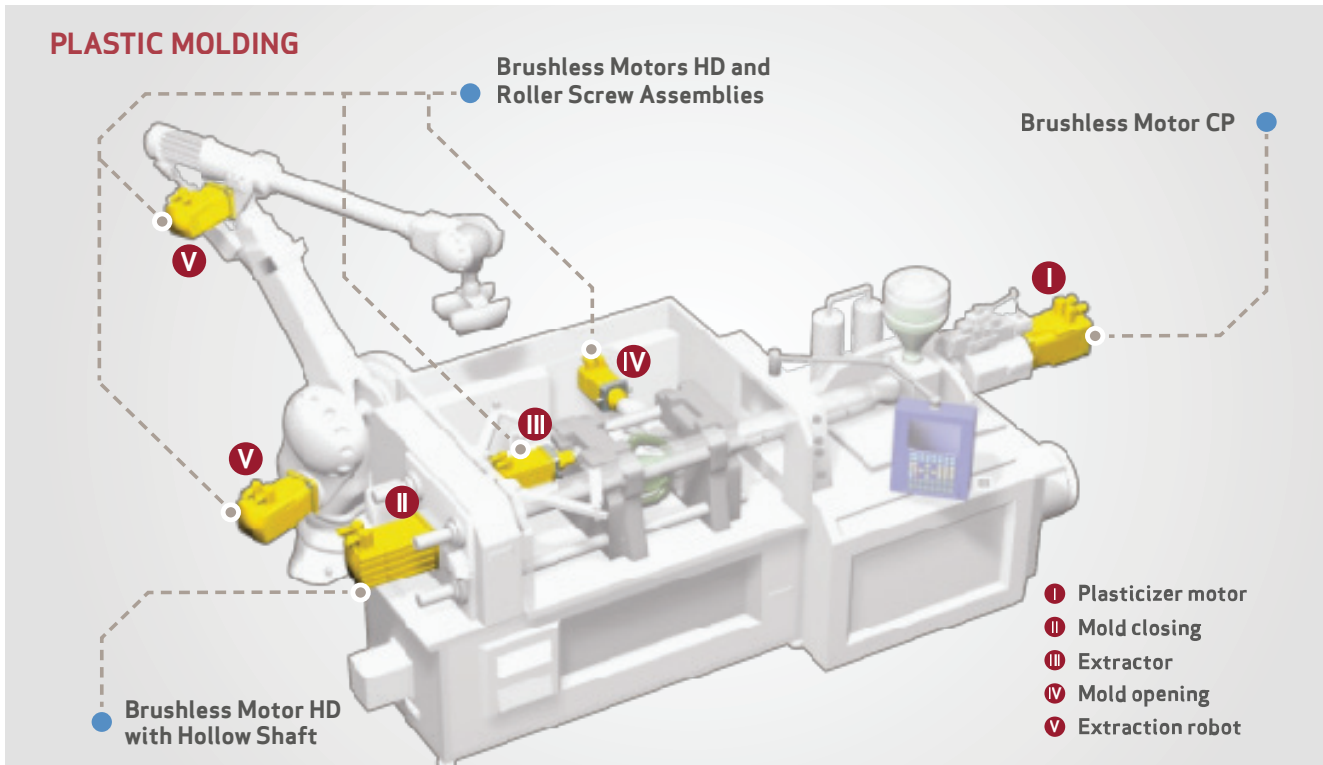
Moog's deep know-how and our extended production capabilities around the world, allow us to create special custom made solutions to fit the most challenging and complex requirements. One of a kind applications, special prototypes, ruggedizing for extreme working conditions, whatever our customer needs, our expert design teams will deliver.

We work closely with our partners to develop together the best motion solutions for them.

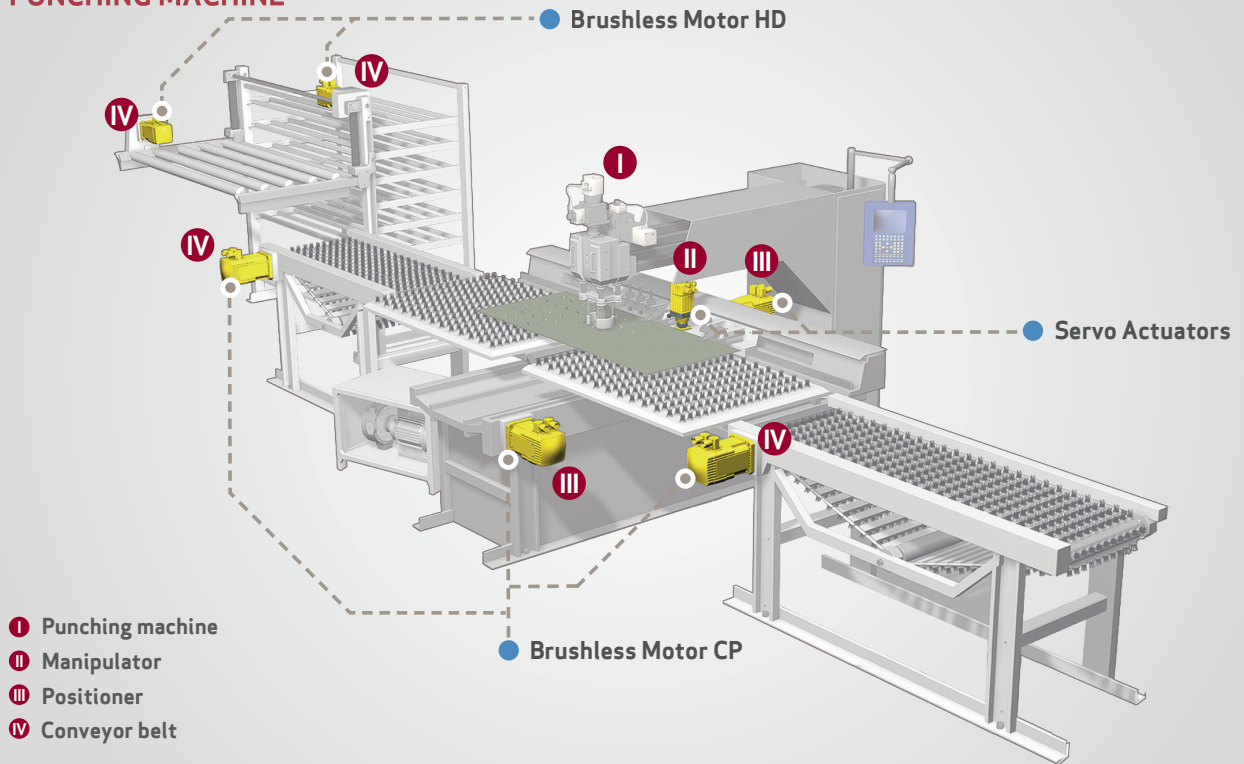


APPLICATIONS

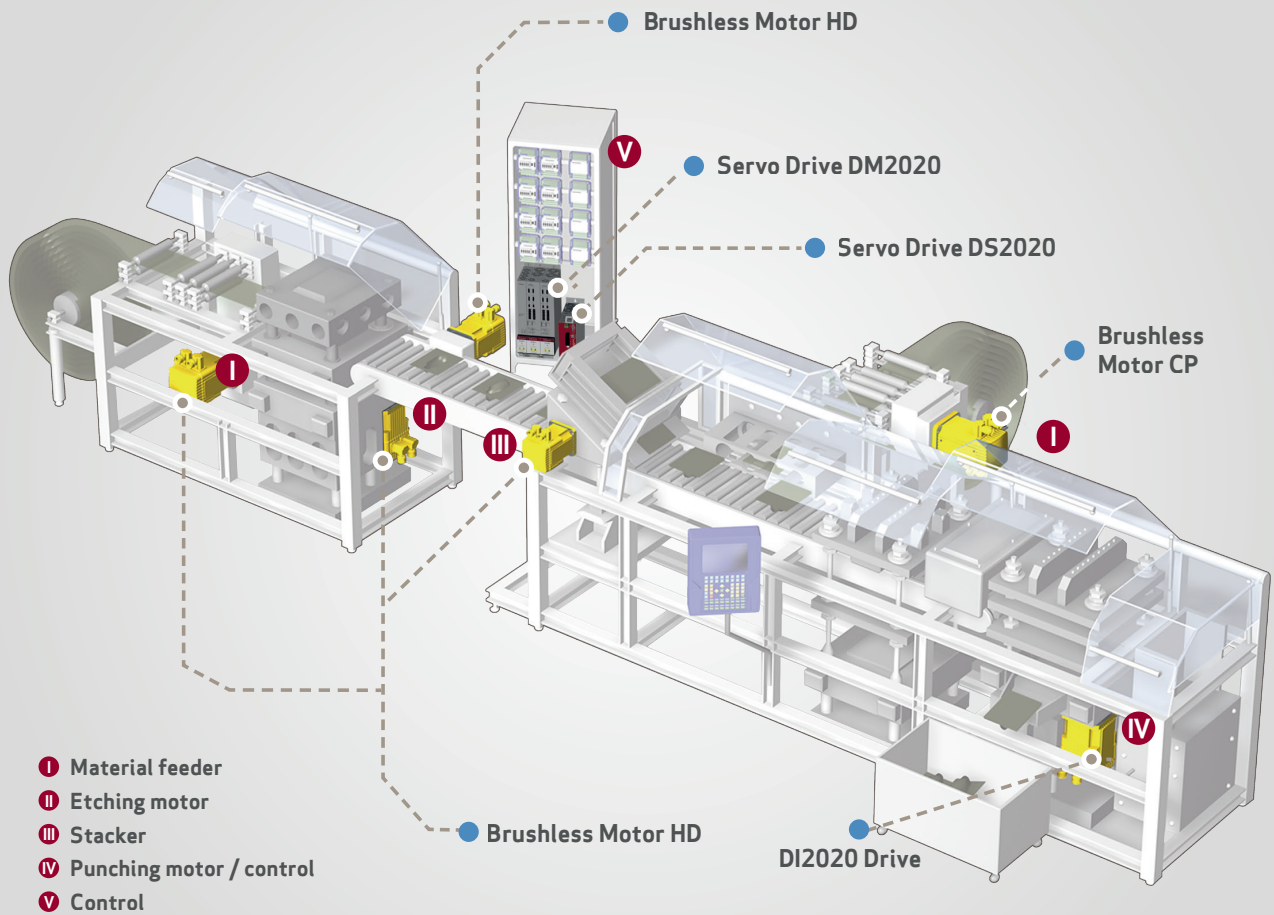
Moog technology can be found at the core of an endless variety of applications. See here just a few examples from the world of industrial automation:



PUNCHING MACHINE



PACKAGING



PRODUCTS, SOLUTIONS, AND SERVICES TO SOLVE YOUR COMPLEX CHALLENGES.

Moog Industrial excels in supporting manufacturers in a wide range of applications to achieve higher productivity, premium-quality products, and maximum energy efficiency. Find out how we can collaborate with you to differentiate your next generation machine with our high performance motion control products, solutions and services.

For more information, visit www.moog.com/industrial

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MOOG