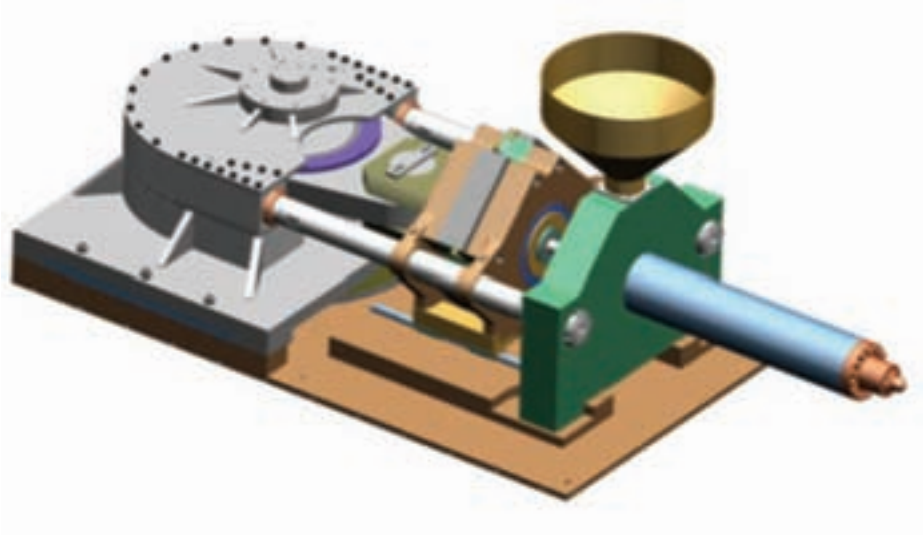
HIGH POWER, HIGH SPEED INJECTION SYSTEM

All-electric solution for small- to medium-size high performance injection molding machines

Machine builders require sufficient injection speed, response and injection pressure to fill complex molds for thin wall parts in a mere fraction of a second . The harsh operating conditions create the need for extending machine life for thin wall molding.

The Moog High Power, High Speed Injection System is the ideal all-electric solution for the molding of thin wall parts on small- to medium-size machines. It provides more power and higher injection speed, extends machine life, and reduces consumption of raw materials.

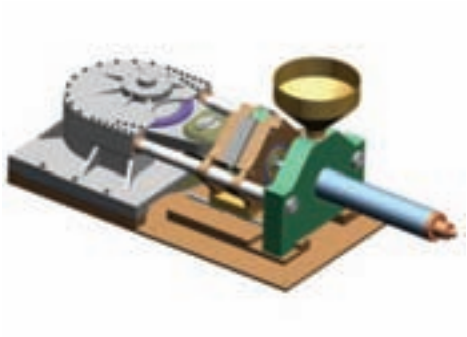
In addition, the system can also be used to produce high quality thick wall parts, ensuring maximum machine flexibility by providing longer holding times at higher holding pressure.



ADVANTAGES

- More efficient use of power, higher speed and better dynamics for faster fill times due to use of non-linear actuator and high torque, direct drive AC servomotor to drive the injection screw
- Reduces overall inertia and maximizes energy efficiency for more power and higher speed in a shorter time than conventional ball screw/timing belt arrangements
- Thanks to its low-friction and reliable non-linear actuator, 30,000 hours of mean time between maintenance
- Lower material costs:
  The combination of a low-friction actuator, which keeps system heat lower, and Moog's method for superior pressure control during the transfer between the injection and holding phases allows the High Power, High Speed Injection System to maintain tighter tolerances on shot weight to significantly reduce raw material costs.
- Increased holding time:
  The non-linear characteristic of the unit's actuation system closely matches the molding process for thick wall parts where only force or speed is required at one time. The actuator acts like a lever, where a small change in angle multiplies pressure when the injection screw is fully extended. This allows longer hold-on time at higher pressure, with minimal power consumption.

SPECIFICATIONS



EXAMPLE SPECIFICATIONS

Screw size	mm (inch)	50 (2.0)	56 (2.2)
Injection stroke	mm (inch)	200 (7.9)	
Injection rate	cm^3 ($inch^3$)	1178 (71,9)	1478 (90,2)
Maximum injection speed	mm/s (inch/s)	600 (23,6)	
Acceleration time	ms	30	
Injection power	kW	300	
Maximum injection pressure	MPa	250	200
Maximum holding pressure*	MPa	200	160
Screw speed	rpm	320	
Clamping force	ton	200-250	

*unlimited holding time

KEY FEATURES

- Can be used for thin wall parts
- Designed fro simple integration into machine designs
- Completely scalable for various speed, torque and power requirements
- Fully supported by trained Moog engineers

SUPPORTED BY MOOG EXPERTISE

Our design engineers work collaboratively with customers, providing the guidance, support and expertise they need to overcome their toughest motion control challenges and move their ideas forward.

Moog has offices around the world.
For more information or the office nearest you, contact us online.

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