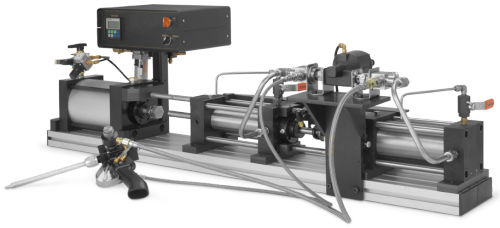
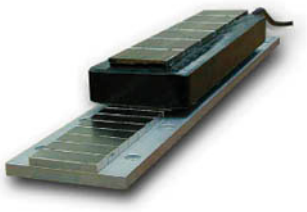
MOTOR MANUFACTURING





APPLICATION:

Stator encapsulation

PRODUCT SUPPLIED:

- 9450 Double Acting Inline Meter/Mix & Dispense System
- Heated Resin Components in a custom designed enclosure, mounted on a mobile platform
- VC-30 Vacuum Chamber
- Automatic Refill of Supply Vessels from Bulk Containers

CHALLENGE:

The company manufactures a wide range of linear, servo and permanent magnet motors, including models used in dirty duty, spark resistant and wash down applications.

Motor windings need to be encapsulated to protect copper windings and prevent electrical shorts. Encapsulants also need to be used around motor leads to prevent air and moisture from getting into the windings. Motor windings are densely configured with little room for resin saturation. The challenge was to provide a heated meter/mix system capable of maintaining an elevated resin temperature such that when it was introduced into the motor windings, the lowered viscosity would provide thorough penetration in and around the coil interstices.

In preliminary tests conducted at EXACT's facilities, it was determined that a vacuum environment would be required to ensure thorough encapsulation of the windings. Motors were pre-heated to further facilitate saturation.

SOLUTION:

EXACT Dispensing Systems engineers provided a fully integrated custom dispensing solution consisting of:

- Model 9450 Single Acting Meter/mix and Dispense System with Digital Preset shot size control using a Linear Encoder.
- Fully enclosed heated resin section (tank/pump, metering cylinder, diverting valve and outlet hose) with digital preset controllers.
- VC-30 Vacuum Chamber Automatic supply tank replenishment from bulk supply drums.
- EXACT designed Drum Lift for supporting drum lids during replenishment drum change out.

RESULT:

The EXACT system delivers optimally heated resin to the point of dispense, providing excellent impregnation/saturation of stator windings, improved encapsulation consistency and production throughput.

The customer reports that the equipment is reliable, can be operated with very little training and demonstrates high uptime.