

## Industrial Mixers

### Application Overview

Industrial mixers are widely used in food processing, rubber and plastics, pharmaceutical, chemical, agricultural, tire, pulp and paper, automotive, adhesive and sealant industries. The main application challenge is to maintain precise speed through changing material viscosities while protecting the mixing equipment from over-torquing or jamming. Emerson Control Techniques offers a wide range of AC Variable Frequency Drives (VFDs), DC Drives and options to meet the control needs of industrial mixer applications.

### Application Requirements

#### Control & Connectivity

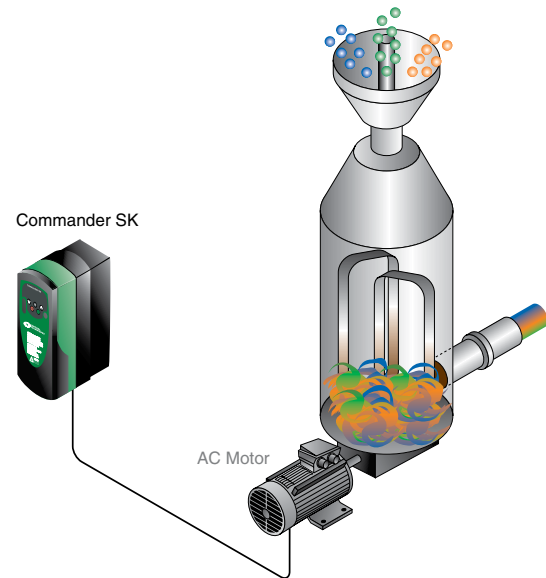
- Precise speed control through varying loads
- High breakaway torque
- Standalone or multiple drive system
- Operational flexibility (Connectivity to PLC / operator interface)
- Batch mixing control

#### Protection

- Motor, machine and system protection
- Minimize mechanical stress

#### Minimize Operating Costs

- Energy optimization
- Maximize uptime / high reliability
- Ease of setup /flexible control
- Intuitive diagnostics



### Control Techniques' Solutions

#### VFDs, DC Drives & Packaged Drives

- Wide range - available up to 2,900 hp
- Global voltage ratings (115/230/480/575/690 VAC)
- Global standards (UL/cUL/CE/C-Tick/ISO9002)
- NEMA 1 / UL Type 1 / NEMA 12 NEMA 4X drive options
- On-board PLC functionality
- Wide range of I/O option modules
- All major fieldbus connectivity options
- RS485 Modbus RTU standard
- Free configuration software
- Industry leading warranties
- Harmonic reduction solutions for high power installations



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# Industrial Mixer Solutions

## Control Techniques' Performance Advantages

### AC Drives

#### Control

- On-board PLC for mixer system control
- Excellent frequency accuracy (0.01%)
- Very high frequency/speed resolution
  - Open Loop – 0.1 Hz
  - Closed Loop – 0.1 rpm
- Wide constant torque speed range
  - Open Loop – 60:1
  - Closed Loop – 2000:1
- Local / Remote operator controls
- Speed / torque control
- 8 preset speeds; 8 sets of accel / decel rates
- Jog with independent accel / decel rates
- Volt / current / pulse speed reference options
- Built-in energy calculator (for batch control)

#### Total System Protection

- S-ramp soft start for prolonged mechanical life
- Built-in diagnostics
- Intelligent electronic motor overload protection
- Safety interlock

#### Maximum uptime

- Very high quality / product reliability
- Automatic restart
- Easy Setup
- Auto tune - static and rotational
- Last 10 trips logged



## World Class Products & Support

- Worldwide Application & Field Service Network
- 24/7 support line 1-800-893-2321



AC Drives

DC Drives

