

Extruders

Application Overview

Extruders are commonly used in rubber and plastic product manufacturing as well as food processing industries. Extruder screw speed control is one of the key factors that affect product quality. Emerson Control Techniques offer a wide range of easy to use variable speed AC & DC drive solutions that have advanced features including built-in PLC and fieldbus connectivity to meet the needs of extruder applications.

Application Requirements

Control & Connectivity

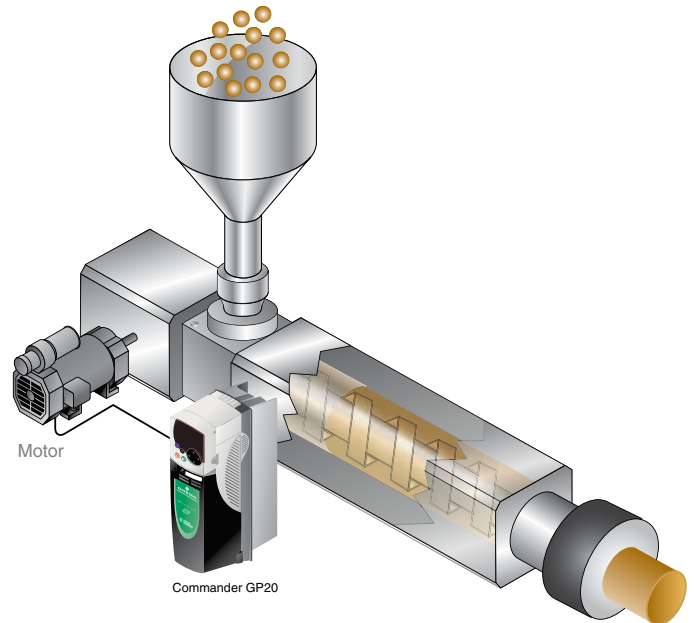
- Wide voltage & power range
- Full torque down to zero speed
- Starting torque control
- Speed synchronization with auxiliary processes
- Connectivity to PLC / Operator Interface
- Flexible speed setting inputs (Potentiometer; MOP; presets; master signal from auxiliary equipment)

Protection

- Motor, machine and system protection
- Accurate motor overload for screw protection

Minimize Operating Costs

- Increase efficiency
- Maximize uptime / High reliability
- Ease of setup / Flexible control
- Intuitive diagnostics



Control Techniques' Solutions

VFDs and DC drives

- Power range up to 2900 hp
- Global voltage ratings (115Vac to 690Vac)
- Global standards (UL/cUL/CE/C-Tick/ISO9002)
- Compatible with standard NEMA B motors
- NEMA1 / UL Type 1 options
- On-board PLC functionality
- Wide range of I/O option modules
- All major fieldbus connectivity options (Ethernet, EtherCAT, Profibus, DeviceNet)
- RS485 Modbus RTU standard
- Free commissioning software
- Industry leading warranties



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Extruder Solutions

Control Techniques' Performance Advantages

Control*

- V/Hz, open loop vector, RFC**, closed loop vector, regen & servo modes
- Wide constant torque speed range
 - Open loop vector – 150% torque 1 Hz min.
 - RFC** – 175% torque 0.8 Hz min.
 - Closed loop vector & servo – 175% torque 0 to rated speed
- Full line of digital DC drives for retrofit applications
- Flexible speed setting inputs for easy operator adjustment
- Complete range of connectivity options for full system integration
- Master-follower velocity synchronization options (for process synchronization)
- Built in configurable PID for process control

Total System Protection

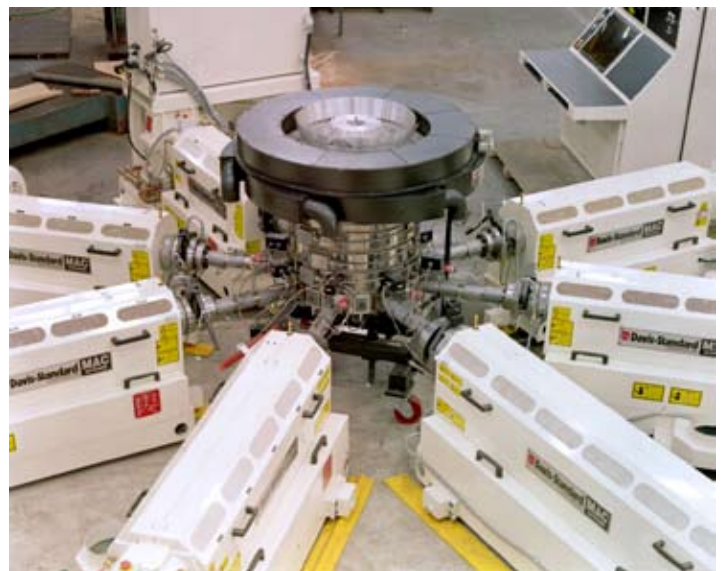
- S-ramp soft start for reduced mechanical stress
- Intelligent thermal motor protection
- Built-in diagnostics
- Accurate overload & current limit protection

Maximum uptime

- Very high quality—Product reliability
- Easy setup
- Auto-Tune - static & rotational
- Last 10 trips logged

* Features vary by model. Contact your local sales representative for assistance in product selection

** Rotor Flux Control (Encoderless closed loop vector)



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Commander GP20



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