

Compressors

Application Overview

Compressors are used to compress refrigerants used in air conditioners and refrigeration systems, natural gas in remote power generation facilities and air in wide variety of production and test equipment. While constant speed compression using single or dual speed motors is still a common practice, Variable Speed Drives offer significant energy savings primarily due to accurate process control and reduced compressor cycling. Emerson Control Techniques offers a wide range of AC Variable Frequency Drives (VFDs) and soft starters with built-in intelligence and control options.

Application Requirements

Control & Connectivity

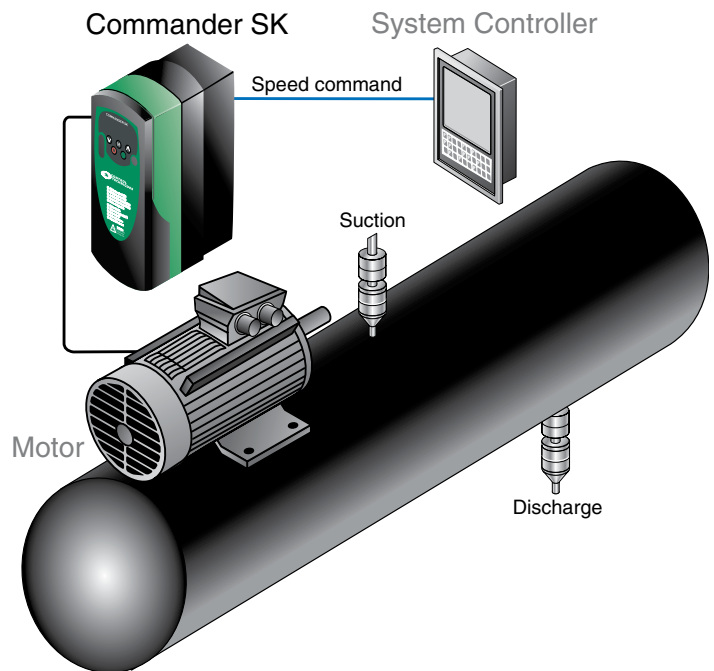
- Capacity and process control (pressure/flow/temperature)
- High starting torque
- I/O interface / logic capability
- Low noise levels
- Over speed operation

Protection

- Motor, machine & system protection
- Avoid mechanical resonance
- Reverse operation inhibit

Minimize Operating Costs

- Energy savings / lower utility costs
- Low maintenance / high reliability
- Reduced compressor cycling



Control Techniques' Solutions

VFDs and Soft Starters

- Power range up to 2900 hp
- Global voltage ratings (115/230/480/575/690Vac)
- Global standards (UL/cUL/CE/C-Tick/ISO9002)
- On-board PLC functionality
- Variety of I/O option modules
- All major fieldbus connectivity options
- RS485 Modbus RTU standard
- Free commissioning software
- Wide range of HMI options
- Industry leading warranties



CONSIDER IT SOLVED™

Compressor Solutions

Control Techniques' Performance Advantages

Control*

- Energy savings through accurate capacity control
- Built-in power meter, energy cost calculator
- V/Hz, open loop vector, RFC** and closed loop vector modes
- Built-in PID (for process control)
- Reverse inhibit
- 16 bit analog speed reference
- Parameter cloning option
- Real time clock option
- Over speed operation
- Minimum speed adjustment for various compressor types

Total System Protection

- Intelligent thermal motor protection
- Over pressure/temperature interlock
- Built-in diagnostics

Maximum uptime

- Very high quality—Product reliability
- Reduced compressor cycling
- Reduced stress on system piping and valves
- Automatic reset
- Easy setup
- Auto tune—Static and 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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Variable Frequency AC Drives



Soft Starters

