Basic Sizing Instructions for a

**Variable Frequency Drive** for an

AC Induction motor type,

3 phase, 200-480 or 590V, 50/60Hz

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1) What is the Motor Horsepower or KW rating listed on the motor name plate or motor specification sheet?

2) What is the FULL LOAD AMP or CURRENT rating for the required motor voltage as listed on motor plate?

3) What is the SUPPLY side voltage and phase to be supplied to the VFD, per the application?

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Other factors to consider when specifying a variable frequency drive:

What are the environmental conditions that the VFD must operation in for the application?

- Temperature (F or C)
- Wash down
- Indoor
- Outdoor
- Direct Sunlight

What type of drive does your application need?

- Constant Torque (Volts/Hertz) – examples; conveyors, hoists, etc.
- Variable Torque (Dynamic Torque) – examples; centrifugal fans and pumps, etc.
- Sensorless Vector – examples; compressors, hoists, stamping/punch presses, conveyors, extruders, etc.
- Closed Loop Vector - examples; injection molding, roll processes, winders, positioning functions, indexing

Other electrical requirements (which may be needed or required):

- Electrical Disconnects ( per NEC code or Safety Requirements)
- **AC Line reactors** ( absorbs AC power line disturbances, voltage spikes, AC line harmonics)
- AC Load Reactors/Filters – recommended for longer cable distances between VFD and motor
- **Molded Case Circuit Breakers** with or without integrated disconnects
- High Speed Fuses and Fuse blocks
- Factory remote key pads
- Factory communication cards
- Factory dynamic brake transistors and/or resistors
- Factory encoder communications card (model dependent)
- Mechanical push buttons, emergency stops, switches for auxiliary/remote control circuits
- Electrical Enclosures to achieve higher NEMA or UL ratings