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VFD Application Checklist

The following VFD Application Checklist includes most of the questions that should be answered before selecting an AC Drive for a specific application. Please fill out as much of this checklist as you can and email it to sales@usdrivesinc.com. A US Drives Application Engineer will contact you.

Use one VFD Application Checklist for each AC Drive. Successful Drive application does not require a complete answer to each and every question contained in this Checklist. Many of the questions in this VFD Application Checklist are designed to help identify specific requirements that will not be found in many applications.

Your Company: _____ Phone: _____
Your Name: _____ Email: _____

Application Information:

Customer Name: _____
Project / Item Identification: _____
Application Description: _____ (Pump, Fan, Other)
Load Type: _____ (Constant Torque, Variable Torque, Other)
Breakaway Torque: _____ (Pound-Feet, Newton-Meters, or Percent Full Load)
Acceleration Time: _____ Seconds
Deceleration Time: _____ Seconds
Inertia: _____ (Pound Feet Squared or other Identifiable Units)
Stopping Requirements: _____ (Coast to Rest, Ramp Stop, Dynamic or Regen Braking)
Braking Requirements: _____ (Pound-Feet, Newton Meters, or Percent Full Load)
Braking Time / Duty Cycle: _____ (Continuous Seconds On, Percent Duty Cycle)
Additional Comments: _____

Environment:

City / State / Country: _____
Elevation: _____ (Feet or Meters Above Sea Level)
Indoors or Outdoors: _____ (Control Location / Motor Location – In Sun or Shaded)
Maximum Temperature: _____ (Control Location / Motor Location – Degrees C or F)
Minimum Temperature: _____ (Control Location / Motor Location – Degrees C or F)
Additional Comments: _____

AC Power System Information:

Supply Source: _____ (Utility, Generator, Both, Other)
Transformer KVA: _____ KVA
Configuration: _____ (Wye, Delta, Grounded Neutral, Ungrounded System)
Voltage: _____ VAC (208, 240, 380, 400, 415, 480, 600, Other)
Frequency: _____ Hz (60, 50, Other)
Fault Current: _____ Amperes
Additional Comments: _____



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AC Drive Requirements:

Horsepower: _____ Horsepower
 Full Load Current _____ FLA

Overload Requirements:
 Continuous Overload: _____ Percent Full Load
 60 Second Overload: _____ Percent Full Load
 Other Overload: _____

Control Type: _____ (V/Hz, Open Loop Vector, Closed Loop Vector)
 Percent Speed Regulation: _____ Percent (of Maximum Speed)
 Input Rectifier Circuit: _____ (6 Pulse - Standard, 12 and 18 Pulse –Optional)
 Enclosure Type: _____ (Chassis, Nema 1, Nema 12, Nema 3R, Nema 4, Nema 4X,
 _____ Ventilated, Non-Ventilated, Wall Mount, Floor Mount,
 _____ Floor Mount with Feet, Air Conditioned, Other)

Maximum Enclosure Size: _____ (H x W x D – Inches or mm)
 Ambient Temperature: _____ Degrees C or F (Minimum and Maximum)

AC Power Distribution Options:
 Input Protection: _____ (None, Input Disconnect, Input Circuit Breaker)
 Bypass: _____ (None, Manual Bypass, Automatic Bypass)
 DC Link Reactor: _____ (No, Yes – 3%)
 AC Line Reactor: _____ (No, Yes – 3% or 5%, Inside Drive Enclosure or External Mount)
 Output Reactor: _____ (No, Yes – 3% or 5%, Inside Drive Enclosure or External Mount)
 Long Lead Filter _____ (Specify Distance to Motor in Feet)

Inputs:
 Digital: _____ (Quantity, Voltage Level, Type)
 Analog: _____ (Quantity, 0 to +/- 10 Volts and / or 4 to 20 ma)

Outputs:
 Digital: _____ (Quantity, Voltage Level, Max Current, Type)
 Analog: _____ (Quantity, 0 to +/- 10 Volts and / or 4 to 20 ma)

Communications Options: _____ (None, RS-232/422/485, Modbus, DeviceNet, Profibus,
 _____ Ethernet, Metasys, Other)

Door Mounted Keypad: _____ (Standard with 2 Line, 32 Character Digital Readout,
 _____ Start & Stop Keys, Speed Increase & Decrease Keys,
 _____ Forward/Reverse Key, Miscellaneous Indicators)

Additional Metering Devices: _____ (Voltmeter, Ammeter, Others - Digital or Analog Type)
 Additional Operators: _____ (Start & Stop Pushbuttons, Speed Pot, Auto/Manual
 _____ and/or Local/Remote Selector Switch, Other Devices)

Miscellaneous Options:
 AC Blower Motor Starter: _____ (Yes, No, Blower Motor Volts, 1/3 Phase, FL Amps)
 Space Heater: _____ (Yes, No, External or Internal Source Voltage)
 Brake Control: _____ (AC or DC Coil, Voltage and Current Rating)

Certifications: _____ (None, UL, cUL, CE, Other)
 Testing: _____ (Certified Test Reports, Factory Witness Test, Other Tests)
 Other Special Requirements: _____

