

**DESCRIPTION:** Variable Frequency Drive (VFD) system(s) capable of variable frequency operation of two (2) different synchronous motors, the specifications for which are provided below. Input power provided for the VFD system(s) will be 480 VAC. One VFD system per motor is acceptable, although a single system to provide power to either motor is preferred. The VFD(s) shall:

- 1) Be portable for relocation from one facility to another
- 2) Be securely housed in a NEMA (or equivalent) enclosure
- 3) have provisions for remote control operation and monitoring
- 4) be generally fault tolerant as loss of motor control in this application can result in catastrophic failure
- 5) be capable of operating the motors in an open-loop control mode over a line length of approximately 75 feet (Closed-loop control modes are acceptable if the VFD(s) can be configured to default to open-loop control in a fault situation)
- 6) be able to control motor speed smoothly and continuously from 0 RPM to max RPM

A step-up transformer housed in a separate enclosure is acceptable, if necessary. The contractor shall provide system delivery and a minimum of three (3) days of on-site start-up and check-out services, inclusive of all travel, on a firm fixed-price contract. Offeror response shall adequately address each specification in this solicitation.

**Motor 1**

Max Voltage: 400 VAC

Max Frequency: 400 Hz

Volts per Hz: 1.0

Max RPM: 12,000

HP: 47

Calculated Full-Load Amps (FLA): 88 A

**Motor 2**

Max Voltage: 640 VAC

Max Frequency: 533 Hz

Volts per Hz: 1.2

Max RPM: 16,000

HP: 29

Calculated Full-Load Amps (FLA): 45 A

**NOTE:** Operation of this motor to a maximum of 600 V and 500 Hz is acceptable