H&W Machine Repair & Rebuilding Inc.

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H&W Machine Repair Frequency Drive Unit Instructions

The Frequency Drive System is for machine shops, home shops or tool rooms with single phase power or for machines with 3-phase power on a "step pulley" head that would like the convenience of variable speed control. Using the VFD (Variable Frequency Drive) allows the operator to change spindle speeds by turning the speed dial and watching the readout display on the VFD box.

The unit is sold as a kit with all parts required for mounting & connecting the unit to your motor. The kit includes the following:

- Variable Frequency Drive Unit-230 volt single phase *note 3- phase input is ok. Single pahase imput of either 115v or 220v Single Phase. VFD is for 1HP Motor.
- Mounting Box to hold the VFD
- Mounting Arm for System
- All Required Electrical Wires and Connectors
- Step-by-Step Installation Instructions
- VFD Operators Manual
- H&W Toll Free Support at 800-285-5271

Installation Instructions:

1. Turn off main power (230 volt) that feeds the milling machine.
2. **Remove the drum switch**, remove the incoming wires to the switch and remove the wires to the motor, new flex will be supplied to the motor. Be sure the motor is wired 230 volt 3-phase.
3. First, find a good location on the side of the ram to mount the box. Most people mount the box on the left side of the ram because readout systems are traditionally mounted on the right.
4. Using a transfer punch, mark the location where you are going to mount the arm bracket.
5. Drill and tap 4 ¼-20 holes and install the bracket (leave the four SHCS loose).
6. Install the bracket arm onto the bracket.

7. Using a level and the four alignment screws level the arm and tighten down the two mounting screws.
8. Mount the control box to the arm with the supplied mounting hardware, align bottom bolt to level the VFD control box, then tighten bolt.
9. Remove the cover of the power box that is mounted to the mounting arm, remove the top cover and locate the 2 incoming power lines & ground (230V).
10. Run two power wires and a green ground wire from your power source up to the power box on the mounting arm. Attach the 2 power source lines to the 2 power lines in the power box. The ground wired can be attached inside the box.
11. Run the supplied Seal-Tite Flex cord from the VFD up to the motor. The #14 gage wires that come prewired are good up to 15 amps (the unit will not pull more than 6.0 amps under full load).
12. Attach the 2 wires from the VFD to the 3 wires from the motor. Make sure your motor is wired 240v and Double check all wiring to ensure you have proper clearance.
13. Apply 230 volt to the input and turn on.
14. Push the display button on the left side of the control panel keypad, notice the readout changing. Display reads, rpm, voltage, frequency and parameters (choose RPM for speed).
15. Turn the speed potentiometer left, all the way down to zero. Push Fwd/Rev key and notice the LED indicators. Push "Run" key and turn the speed potentiometer clock wise and the motor will begin to turn. Push the "Fwd/Rev" key and the motor will reverse. Push the "Stop" key and the motor will stop.
16. At this point your unit should be up and ready to go. If you have any questions or problems with the installation please contact our electrical/electronic department at 800-285-5271 or email at barry@hwmachinerepair.com