

# INSTALLATION AND SETUP INSTRUCTIONS

Ref.: Dwg. 21888-01

## INSTALLATION

### ASSEMBLY

Holomatic units are shipped from the factory assembled except for motors, motor pulleys and belts. Motors should be mounted to the belt housings and the pulleys to the motor shafts in that order. Care in aligning pulleys and adjusting motor positions for proper belt tension will assure maximum life of belts and motor and drive bearings.

### MOUNTING

Holomatic units have a standardized and interchangeable mounting design that incorporates side flanges for clamping strips, screw holes for fixed position mounting and a central one-inch wide key on the bottom for alignment purposes. The use of a matching keyway in the machine base or in an adapter plate secured to the machine base simplifies initial alignment and subsequent service efforts.

### ELECTRIC POWER INPUT

Spindle drive motors operate on three phase, 50 or 60 Hertz, 230 or 460 volts electricity depending on the user's requirements. Motor nameplates should always be checked for motor characteristics before hookup.

### REMOTE CYCLE AND INTERLOCK CONTROLS

A lead screw control panel, Bul. 21913-01, is connected to the switch box control assembly on the unit as shown, to command the tapping motion sequence. A reversing controller and a plug stop are included for the spindle motor. 110 Volt, 60 Hertz, single phase current is standard for the control circuit.

### LUBRICATION

Spindles, drive and motors incorporate sealed-for-life type ball bearing assemblies and no further lubrication is required. Lead screw and nut should be lubricated daily as indicated on the unit. (Use MOBIL DTE #24 or EQUN)

REFER TO BUL. 21873-00 FOR LEAD SCREW AND NUT CHANGE INSTRUCTIONS.

### SETUP PROCEDURE

(Tapping and threading with solid tools)

The spindle motor power should be off.

The lead screw should be at a "stand out" position of  $\frac{3}{8}$ " minimum as shown.

Secure the Holomatic unit at approximate desired distance from work.

Manually rotate spindle forward to the desired depth of thread. Set advance depth adjustment knob to de-actuate depth switch at this point.

Manually rotate spindle in reverse to the desired retract position. Set retract position adjustment knob to actuate retract position switch at this point.

With the control panel connected according to the diagram and the motor drive belt removed, depress the cycle button. The motor should start and run in the direction to advance the spindle.

When the spindle is manually rotated forward to the set depth, the motor should reverse.

When the spindle is manually rotated in reverse to the desired retract position, the motor should "plug stop."

Notice which way the motor coasts after the plug stop action. If forward, decrease the setting on the time delay relay in the control panel. If the motor coasts in reverse, increase the setting. A minimum rolling stop is desired.

The unit should now be ready to operate with spindle power. Final adjustments, if required, can be made with tools in place.

### SAFETY FEATURES

If a "no hole" condition occurs in tapping or an obstruction to forward motion of the lead screw feed is encountered during normal operation, the motor will automatically reverse and return the spindle to the normal retract position. This automatic action interrupts the cycle and usually avoids tool breakage and other damage.

The proper functioning of this automatic emergency retract circuit can be verified by blocking the forward motion of the spindle.

If the spindle motor fails to reverse or stop due to a switch malfunction or a power failure, the lead screw may run out of the nut either forward or back with no damage.

If lead screw and nut are dis-engaged, disconnect the spindle motor power first, then re-engage the nut and screw manually by urging them together as the spindle is rotated, thereby avoiding damage to the end threads.

Re-connect the spindle motor and cycle with caution. If a power interruption was not apparent, inspect the depth switch and the retract position switch.

Refer to Hause machining computer for suggested spindle speeds in various materials.

For basic unit sub-assembly descriptions, refer to Bul. 21878-01.

For maintenance information, refer to individual sub-assembly bulletins.