LS-300 & LS-500
PIPING FOR BASIC LEAD SCREW TAPPING CIRCUIT WITH AIR RAPID APPROACH AND ELECTRIC BRAKE MOTOR

Electric brake is on when power to motor is off.

Stop Collar

Greaser

Motor Start Switch

Scribe Line

Cam Operated Switch

Interlock Switch

Depth Switch

4-way 5-port Double Solenoid Momentary Contact Air Valve

Flow Control Valves

Controlled Flow Out

Feed Sol.

Retract Sol.

Interlock Switch

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Electric brake is on when power to motor is off.
230/460 Volts
3 Phase 60 Cycle
Thru Fused Disconnect

Line No.
1
2
3
4
5
6
7
8
9

Cycle Start
Emer. Stop
N.O.
N.O.

Feed
Feed

Depth Sw.
Motor Start Sw.
Cam Sw.
N.C.
N.O.
N.C.
N.O.

N.O.

115V

Power On

O.L.'s

Master Relay
2, 4

Anti-Tie-Down Relay
3, 5, 9

Cycle Relay
6, 7, 8, 9, 10

Motor Forward Coil
Motor Reverse Coil

IMPORTANT
THIS CIRCUIT IS A BASIC METHOD OF CONTROLLING HYPNEUMAT EQUIPMENT.
CHECK LOCAL, STATE, & OSHA REGULATIONS FOR SPECIFIC CIRCUIT REQUIREMENTS.

Hypneumat Inc. • 5900 West Franklin Drive • Franklin, WI 53132-9178 • (414) 423-7400 • Fax: (414) 423-7414
1. Turn Motor Selector Switch to “ON"
2. Push Cycle Start Button
   a. Supplies Power to Circuit (1CR)
3. Push Twin Palm Feed Buttons
   a. Valve shifts for rapid approach
   b. 3CR is energized
   c. Brake is released and unit moves forward
4. Stop Collar on Lead Screw Cartridge makes contact with Motor Start Switch
   a. Motor starts clockwise rotation (MF)
5. Cam Operated switch is set to actuate just after Motor Start Switch is actuated
6. Depth Switch is actuated at depth required
   a. 3CR is dropped out
   b. Motor starts counterclockwise rotation (MR)
   c. Valve “does not” shift
7. Cam Switch drops off cam
   a. Power to Motor is shut off
   b. Brake is energized
   c. Valve shifts to Rapid Retract position

    **EMERGENCY STOP**  (Tap in part)

1. Pushing Emergency Stop Button, causes all motion to stop.
2. To return unit to back position, “Cycle” start button must be pressed and unit will automatically go to normal retract position.

    **NO HOLE IN PART**

1. Unit Rapid approaches
2. Normal Cycle begins
3. Tap makes contact with part
4. Unit cannot feed forward so Lead Screw Cartridge backs out of Rear Housing. Backing off of cartridge causes Motor Start Switch to deactuate.

    **RETURNING UNIT TO START POSITION**

1. Push Emergency Stop
2. Push Cycle Start button (unit retracts)
3. Remove part and Cycle unit one time to allow unit to reset Scribe line in cartridge

**NOTE:**  A. In this circuit “Cam Switch” has no function on the way in.
**NOTE:**  B. The “Motor Start Switch” has no function on the way out.
OPTIONAL PIPING FOR DUAL PRESSURE SYSTEM

NOTE!
This system used for vertical operation with heavy multiple spindle heads.
Separate pressures for feed and retract strokes.

Note!
Not All 4-way 5-port Air Valves Can Be Used In This Manner