PIPING FOR BASIC AIR DRILLING-TAPPING CIRCUIT

Interlock Switch

Depth Switch

Flow Control Valves with controlled flow out

Feed Sol. Retract Sol.

4-way Double Solenoid Momentary Contact 2-position Air Valve

Lubricator Regulator Filter

Air In
BASIC AIR DRILLING-TAPPING CIRCUIT

230/460 Volts
3 Phase 60 Cycle
Thru Fused Disconnect

L1 L2 L3

Cycle Start
L1

Power On

Master Relay

2, 4

Anti-Tie-Down Relay

3, 5

Motor Forward Coil

8, 10

Motor Reverse Coil

8, 10

IMPORTANT

THIS CIRCUIT IS A BASIC METHOD OF CONTROLLING HYPNEUMAT EQUIPMENT.
CHECK LOCAL, STATE, & OSHA REGULATIONS FOR SPECIFIC CIRCUIT REQUIREMENTS.
CYCLE SEQUENCE FOR AIR DRILLING-TAPPING CIRCUIT

DRILL OPERATION SEQUENCE

1. Turn Tap-Drill selector switch to “DRILL”

2. Turn Motor Selector Switch to “ON”

3. Push Cycle start Button
   a. Supplies power to circuit (1CR)

4. Push Twin Palm feed buttons
   a. Valve shifts and unit feeds forward

5. Depth Switch is actuated at Depth required
   a. Valve shifts and unit rapid retracts

EMERGENCY STOP

1. Push Emergency Stop Button
   a. 1CR Master Relay drops out
   b. Motor shuts off and coasts to stop
   c. Valve shifts and unit rapid retracts

TAP OPERATION SEQUENCE

1. Turn Tap-Drill Selector Switch to “TAP”

2. Turn Motor Selector Switch to “ON”

3. Push Cycle Start Button
   a. Supplies power to Circuit (1CR)
   b. Motor Forward Coil (MF) starts motor in clockwise rotation

4. Push Twin Palm Feed Buttons
   a. Valve shifts and unit feeds forward

5. Depth Switch is actuated
   a. Motor Forward Coil (MF) is dropped out
   b. Motor Reverse Coil (MR) is energized and starts motor in a counterclockwise rotation
   c. Valve shifts and unit begins to retract

6. Unit Returns to full retract position and actuates Interlock Switch
   a. Motor Forward Coil (MF) returns motor to clockwise rotation

EMERGENCY STOP

1. Push Emergency Stop Button
   a. 1CR Master Relay drops out
   b. Motor Forward Coil (MF) is dropped out
   c. Valve shifts to retract position

NOTE: A. If Tap is “NOT” in part, unit will rapid retract and motor coasts to stop

NOTE: B. If Tap is “IN” part, motor will stop and unit will not rapid retract (see operation #2 for tap removal from part)

2. To return unit to full retract position, if tap is “IN” part
   a. Push Emergency Stop button and hold down
   b. Motor Reverse Coil (MR) is actuated and motor rotates counterclockwise
   c. Tap leaves part and unit returns to full retract position
   d. Release Emergency Stop Button
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.

Flow Control Valves With Controlled Flow Out

4-way 5-port Air Valve
Double Solenoid Momentary Contact. Normal Exhaust ports Used As Inlet Ports. Not All 4-way Valves Can Be Piped In This Manner.

Feed Sol. Retract Sol.

Feed Regulator Retract Regulator

Air In

Filter Lubricator


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HYPNEUMAT INC.
AUTOMATIC DRILLING & TAPPING UNITS