



PNEUMATICS

Condensed Course Outline

PNEUMATIC DIAGRAMS

- Pneumatic symbols
- Schematic construction
- Air supply diagrams
- Timing circuits
- Safety circuits

PRESSURE REGULATION & SAFETY

- Pressure regulators
- Safety & relief valves
- Pressure reducing valves
- Installation & repair

DIRECTIONAL CONTROL VALVES

- Two-, three-, four- & five-way valves
- Valve actuation methods
- Manifolds & subbases
- Control valve elements

CYLINDERS & ACTUATORS

- Single & double acting cylinders
- Cylinder sizing
- Mounting & installation
- Cushioning
- Cylinders with sensors
- Rotary actuators
- Air motors

FLOW CONTROLS

- Flow control valves
- Speed control
- Quick exhaust valves
- Excess flow valves
- Noise control & silencers

GAUGES & INSTRUMENTATION

- Pressure gauges
- Temperature gauges
- Gauge selection & installation
- Flowmeters
- Vacuum breakers

SYSTEM TROUBLESHOOTING

- Troubleshooting procedures
- Checking air supply
- Valve & actuator diagnostics
- Sequence & interlock checks
- Common pneumatic system problems