

## TECHNICAL TRAINING - SWAPPING DOWNTIME FOR PRODUCTIVITY!

# Industrial Pneumatic Systems - Syllabus

### Overview:

This is a highly intensive hands-on training course designed to enable its target group to understand and become competent with working on a range of pneumatic equipment. The course covers a multitude of important learning topics from compressed air theory to circuit design and building. Furthermore, it forms the necessary foundation step to further training in the area of factory automation and associated control technologies.

### Target Group:

- Production / Process Personnel.
- Maintenance Personnel.
- Production & Engineering Supervisors.
- Technical Trainers.
- Sales Personnel.

### Syllabus:

- Fundamentals of Fluid Power Systems.
- So which should I use; Pneumatics or Hydraulics?
- Be safe around Pneumatics!
- Pressure: Units & Conversions.
- Gauge & Absolute pressure.
- Pneumatic Symbols & Circuits to ISO 1219/1, 1219/2.
- First principals of Pneumatic Circuit Drawing.
- Design & Build! (Session 1)
- Production & Preparation of Compressed air.
- Distribution Networks & further Preparation of Compressed air.
- The Service Unit & final Preparation of Compressed air.
- Service Unit Ancillary Equipment.
- Strip, Rebuild and Re-Mount a Pneumatic Cylinder.
- Actuator Designs: Linear, Semi-rotary & Rotary.
- Design & Build! (Session 2)
- Vacuum Pumps, Generators & Ejectors.
- Controlling Speed, Force & Direction.
- Design & Build! (Session 3)
- Dwell Control using N/O & N/C Timers.
- Design & Build! (Session 4)
- Implementing Pneumatic Logic with AND | OR | NOT logic functions.
- Design & Build! (Session 5)
- Proximity Detection using Low-Level Pneumatics.
- Design & Build! (Session 6)
- Hydro-Pneumatics, What, Why & When?
- Open floor discussion session.

### Prerequisites:

A keen aptitude in things mechanical and an appreciation for the role of Pneumatics in Industry, coupled with a willingness to learn!

### Duration:

24 hours (Three 8-hour days)