

INTRODUCTION TO PNEUMATICS

This training course has been developed by OakCAD/NCT to meet the growing need for technician engineers to update or upgrade their pneumatics knowledge and skills.

The course has been endorsed under the ABC Awards/Certa Quality Licence Scheme. This means that OakCAD/NCT has undergone an external quality check to ensure that the organisation and the courses it offers, meets defined quality criteria.

At the end of this course successful learners will receive a Certificate of Achievement from ABC Awards/Certa and a Learner Unit Summary (which lists the components the learner has completed as part of the course).

The course content has been developed in consultation with several of our large pharmaceutical and manufacturing clients over many years and can be provided as a tutor lead delivered course, as a distance learning course or flexibly, combining both methods.

This course is in modular form with each module individually assessed and consists of:

- 1 Course notes
- 2 Worked examples
- 3 Trainee self-assessments
- 4 Module assessments

On completion of all modules, there is an end of course and practical assessment.

Companies who are considering the development of their own Apprenticeship Scheme may wish to include this EAL accredited & certificated qualification into their plans.

If required OakCAD can also help develop an effective company scheme.

STUDY TIME

This course has been set at a level equivalent to Level 3 and it is expected that it will take you 20 - 30 hours of delivered time or approximately 60 hours of self-study time (distance learning).

COURSE FEE

The current level of course fees for distance learning courses is displayed on the NCT web site.

For delivered courses, please contact OakCAD.

REQUIREMENTS

To undertake this course, you should have good basic engineering and mathematical knowledge. OakCAD/NCT is able to advise you as to whether you have the necessary background knowledge and experience to undertake this course.

INDUSTRY

Although written for the pharmaceutical industry it is also appropriate for the Petro- chemical industry, Food Manufacture or any industry using automatic production lines and processes or having a modern maintenance requirement.

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Compressed Air Production and Conditioning:				
	Compressors		Coolers	
	Air Receivers		Air Dryers	
Compressed Air Distribution & Airline Installation:				
	Installation & Criteria		Pipework & Fittings	
Service Unit's (FRL'S):				
	Filters	Pressure Regulators	Lubricators	
Actuators (Working Elements):				
	Cylinders	Single Acting	Double Acting	
	Cushioning	Air Motors	Special Designs	
Directional Control Valves:				
Design, Construction & Function of:	2/2 way	3/2 way	4/2 way	5/2 way
	4/3 way	5/3 way	5/4 way	
Means of Operation & Actuation:				
Manual	Push Button	Lever	Detent	Foot Pedal
Pneumatic	Pilot	Differential Pilot		
Mechanical	Roller Lever	Idle Return Roller	(One-way trip)	Spring
Electrical	Soleniod (direct)	Soleniod(Internal Pilot)	Soleniod(External Pilot)	
Flow Control Valves:				
	Restrictor	Throttle	Throttle Check	Quick Exhaust
Pressure Control Valves:				
	Pressure Relief	Two Pressure (AND)	Pressure Sequence	
Non-Return Valves:				
	Check	Shuttle (OR)		

**GRAPHICAL SYMBOLS TO ISO 1219-1 / B.S.2917
 DESIGN AND CONSTRUCTION OF BASIC CIRCUITS
 IN-COURSE & PRACTICAL EXERCISES and ASSESSMENT**