



## COMPRESSED AIR SYSTEM -FULL FOUNDATION COURSE

Date & Venue : As scheduled  
Duration : 2 Days (9am-5pm)  
Fees : RM2800

### OVERVIEW

This technical training is designed to provide **Facility / Engineering / Energy Specialist or Engineer** with a comprehensive learning about Compressed Air System. From the Fundamental of Compressors technology & characteristic, Dryers & Filters selection; to understanding of Demand Side Management; students will acquire a strong foundation for day-to-day management and project planning of Compressed Air System

The Course also includes trainings on the process of Audit and Evaluation of Energy Performance on Compressed Air System, identifying the system weaknesses and develop Energy Saving Measurement (ESM) to achieve Energy-Efficient system and to achieve significant energy saving activities. Practical solutions and case studies will be shared and discussed during the interactive session

### OBJECTIVES

Participants will be able to learn:

- Comprehensive study of Compressor, Dryer, Filter technology
- The Characteristic of Screw technology, Centrifugal technology and Piston technology in Energy Efficiency and Operation Range.
- Selection of right compressor to develop Energy Efficiency system
- Demand Side Management and its impact on Energy consumption
- Biggest Energy wastage area: Artificial demand and how to eliminate it to achieve saving
- Audit processes to evaluate the energy performance of compressed air system
- Understand various audit methods and tools available in today's technology
- Practical solutions and case studies in solving Energy Wastage and develop Energy Saving Measurement.

### WHO SHOULD ATTEND

- Factory / Operation Manager or Engineer
- Facility / Utilities / Maintenance Manager or Engineer
- Energy Manager / Energy Consultant

### OUR CONSULTANT



#### MR PHUN LEE MING

- Founder and Director of Alpha Winac Engineering & Services Sdn Bhd.
- Former general manager for Atlas Copco for more than 12 years, for both Malaysia and Singapore.
- His extensive knowledge and experience in industrial compressed air technology was well recognized and was the main author for Compressed Air Manual published by NICAM (National Institute of Compressed Air Malaysia).
- He has also assisted numerous clients to realize true Energy Savings in Compressed Air System.
- Holds a Bachelor of Engineering (Mechanical & Production), NUS Singapore.

## COURSE CONTENT

### TITLE: COMPRESSED AIR SYSTEM – FULL FOUNDATION COURSE

#### Day 1:

##### **Fundamental of Compressor Technology (9:30am – 12:30pm) & (1:30pm – 2:30pm)**

- Basic of Compressor types - How it work (Screw, Centrifugal, Piston)
- Screw Compressor - Operating Principal and its application
- Variable Speed Screw Compressor - Operating principal and its application
- Centrifugal Compressor - Operating Principal and its application
- Piston Compressor - Operating Principal and its application
- Calculate Energy Efficiency of different types of Compressor
- Energy Efficiency Characteristics of different Compressor Technologies

##### **Dryer, Filters & Pipe Network (3:00pm – 5:00pm)**

- Air Quality and ISO 8573-1 : 2010
- Dew Points and Its meaning
- Dryer Technology : Refrigerant Dryer, Desiccant Dryer (Heatless and Heated)
- Selection of Right Dryers
- Filters types and its characteristic
- Basic guidelines of Pipe Network

#### Day 2:

##### **Demand Site Management (9:30am – 12:00pm)**

- What is Artificial Demand Wastage
- How Fluctuation of Pressure Trend affect Energy Consumption
- How to determine Artificial Demand Wastage
- Concept of Pressure Flow Controller and its application
- Utilisation of Pressure Flow Controller for Elimination of Artificial Demand Wastage

##### **Basic of Air & Energy Audit of Compressed Air System (1:00pm – 3:30pm)**

- Scope of Air & Energy Air Audit
- Flow Measurement - Method and its usefulness
- Power Measurement - Method and its usefulness
- Pressure Measurement - Method and its usefulness
- Leak Detection – Method and its usefulness

##### **Assesment & Evaluation (4:00pm – 5:00pm)**