

CENTRIFUGAL, RECIPROCATING & SCREW COMPRESSOR

Why Choose this Training Course?

This practical and highly interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators. This course is designed to provide delegates with a detailed and up-to-date overview of reciprocating and screw compressors. It covers the various types of compressors; the principles of gas compression; the effect of staging, stage and interstage cooling; the practical compressor theory; the mechanical design and compressor systems; the systematic alignment techniques; the support criteria of centrifugal compressors; and the centrifugal compressor parameters. Further, the course will also cover centrifugal process compressors; the process conditions; the positive displacement compressors; the compressor operation; the reciprocating compressor cycle; the effect of staging; the oil free cylinders of floating pistons; condensation and liquid slugs; and the valve response and capacity control of reciprocating compressor. During this interactive course, participants will learn the compressor control; performance considerations; the gas pulsations and reduction of pulsations; the proper techniques in starting up, running, and shutting down compressors; the practical screw compressor theory; the screw compressor process packages; the areas of application; the operating principles and capacity control; the power requirement and fitting control; and the performance, condition monitoring and troubleshooting.

What are the Goals?

By the end of the training, participants will be able to:

Apply proper operating techniques of reciprocating and screw compressors.
Discuss the various types of compressors and employ the principles of gas compression. Identify the effect of staging, stage and interstage cooling and recognize the positive displacement compressors, reciprocating compressor cycle, compressor valves and compressor capacity control.
Employ the proper techniques in starting up, running, maintaining, and shutting down the reciprocating and screw compressors.
Use the latest applications and operating principles of the reciprocating and screw compressors and determine their capacity control and performance.

Who is this Training Course for?

This course is intended for Engineers, Supervisors, Technicians and Operators who are responsible for the operation of reciprocating and screw compressors.

How will this Training Course be Presented?

In addition to a set of slides and a training manual, a highly interactive instructor presentation of the most important concepts, procedures, and issues will be provided. Furthermore, the course will also use several interactive Workshops and Exercises. In addition, a selected number of highly appropriate Videos will be shown.

Course Outlines:

DAY 1:

- PRE-TEST
- Compressor Types
 - Positive Displacement – Reciprocating, Rotary
 - Dynamic – Centrifugal, Axial
- Principles of Gas Compression
- Effect of Staging, Stage and Interstage Cooling
- Positive Displacement Compressors

DAY 2:

- Reciprocating Compressor Cycle
- Effect of Staging
- Oil Free Cylinders – Floating Pistons
- Process Operating Conditions
- Condensation
- Slugs
- Reciprocating Compressor Valves – Valve Response

DAY 3:

- Reciprocating Compressor Capacity Control
- Performance Considerations
- Gas Pulsations – Reduction of Pulsations
- Stating up, Running, Shutting Down
- Screw Compressors

DAY 4:

- Areas of Application
- Operating Principles
- Capacity Control
- Performance

DAY 5:

- Simulator (Hands-on Practical Sessions)
 - Practical sessions will be organized during the course for participants to practice the theory learnt. Participants will be provided with an opportunity to carry out various exercises using the simulators “CBT on Compressors.”
- Course Conclusion
- Post-test and evaluation

Course Completion Certificate

On successful completion of the Training Course, the participants will be awarded with a 5M International Consultancy & Training Company Certificate.
