

## Hydraulic Basic and Advanced

**Course duration:** 32 Hours

### **Course Content:**

- Introduction to the hydraulic and pneumatic control
- The difference between hydraulic and pneumatic control
- the advantages and disadvantages of each system
- Applications of hydraulic and pneumatic systems
- Important Definitions
- Types of hydraulic oils and specifications
- Introduction of pipeline flow and pipeline network
- Hydraulic Symbols
- Planning hydraulic circuit
- Calculation diameter hydraulic hose
- Types of hydraulic cylinders and uses
- hydraulic pumps and Theory of operation
- Direction control valves
- pressure control valves
- flow control valves
- Hydraulic motors and accumulator
- Hydraulic reservoirs and filtration
- the efficiency of hydraulic systems
- troubleshooting in hydraulic circuit
- planning and design of hydraulic circuits
- Design hydraulic circuits by using Automation studio
- Hydraulic circuit accessories
- preliminary study of pneumatic theory , components and circuits