SMC Industrial Training Program

Pneumatics have an important role in many branches of industry. Due to its affordable, clean, compact and durable power you will find a large proportion of pneumatic components in many applications. The use of pneumatics in an effective and optimal way; however, requires a good basic knowledge of the discipline. The SMC Industrial Training Program provides you the knowledge and skills needed to use pneumatics in a comprehensive way. It also provides you the latest new developments related to the specific training purposes.

Most of the training will take place in our state of the art training centers in Amsterdam and Antwerp. They are equipped with the latest materials and methods. Customized “in-house” company training is also one of the possibilities for enabling direct performance improvement in your own workspace.

The specific training purpose and goals are clearly defined in advance and can be linked to a measured end result for most courses. Afterwards the participants will be able to apply their newly acquired skills independently, professionally and safely.

On the SMC website, www.smcpneumatics.nl, you will find more information on the SMC Industrial Training Program as well as the current training dates. There you can also use the online registration tool.

Become acquainted with pneumatics (1 day)

You are regularly in contact with pneumatics in daily life, but you will always have questions like: Why use pneumatics? Why filtering? Why is this valve chosen for? In this course we will enable you to answer those questions. During this one day course we will go through an entire pneumatic system and address the various components.

Introduction to pneumatics (3 days)

This training provides a good base for your work when you are in daily contact with pneumatic controls. During the training “Introduction to pneumatics”, components are addressed as they occur in pneumatic control systems. You will learn the properties and applications of frequently used pneumatic components, read pneumatic diagrams and transfer single components into real working applications.
Electro-pneumatic control (4 days)

This course examines the principles that occur in electro-pneumatic control systems and provides a good base for your work when you are in daily contact with those systems. You will learn to draw combined electrical- and pneumatic circuit diagrams and connect them accordingly. By using motion diagrams and formulas, you will be able to translate requested motions into transparent working control diagrams. During the training, you will deal with valves, cylinders, relays, sensors and programmable controller functions.

Energy Saving in pneumatic systems (1 day)

SMC has many years of experience in the area of Energy Saving in pneumatic systems. In this training, SMC will go through the entire system from the compressor to the pneumatic actuators and spot the critical applications. The trainee will learn to look with an "energy-efficient eye" into his pneumatic installation. There are various measures available to reduce air consumption without making machine performance concessions. After this training the trainee will have acquired the knowledge to design a machine and/or installation in the most energy efficient way. In addition, the adjustment and system improvement of existing machines will be handled. The trainee will receive several software tools that help energy-efficient design in his own workplace.

Troubleshooting automated pneumatic equipment (2 days)

Failures in an automated process will cost time and money. If technicians are able to locate, identify and fix these failures fast, the downtime cost will reduce and the efficiency of production will increase. The training “Troubleshooting automated pneumatic equipment”, teaches technicians troubleshooting a system that fully meets the current state of automated industry technology. The system consists of six individual production cells that are linked in a PROFIBUS network. All the technologies used on this system along with the training method allow the user to develop professional troubleshooting skills required today.

Pneumatic and electric positioning (1 day)

Positioning is a very common when a product is moved by an actuator and often unnecessary seen as a complex function. Both pneumatic and electric actuators can be used for this function, depending on the load and requested accuracy. The training “Pneumatic and electric positioning” handles various options and discusses the advantage and disadvantage of positioning with both movement control systems.

Vacuum (1 day)

Vacuum is often used for handling products. The training “Vacuum” will go in depth on the use of low vacuum (20–90%) for picking and moving products using suction cups. Improving knowledge of vacuum enables the trainee to make the right choices in his in-house vacuum applications. The training has a proportion of theoretical content, but vacuum is a practical profession and that’s where this training is mainly focused on.