

Training Catalogue

FESTO





We drive automation for your success.
We are your partner to inspire you.
We shape the future together.

→ **WE ARE THE ENGINEERS
OF PRODUCTIVITY.**

What makes us engineers of productivity?

We have a very big goal: your productivity.

Our motivation is to achieve this goal together with you.

We take advantage of everything possible to make you more successful: our knowledge, our capabilities, our performance, our products and our services. We achieve this goal with four outstanding qualities for which we stand: **security, efficiency, simplicity and competency.** And this makes us what we are.

Experts who don't give up. Professionals who make the working day easier for you. Trainers and consultants who always manage to get a bit more out of your technologies, your organization and your people.

In a word, this makes us engineers of productivity.

Festo Didactic



There are many training providers out there. But only tailored and practical training will ensure productivity!

As an integral part of the Festo Group, Festo Training and Consulting has its roots in automation and boasts “industrial DNA“. Working closely with Festo Automation, as well as operating in the same segments as our customers, provides us with deep insight into the challenges they face.

Festo Training and Consulting is therefore able to offer tailored and practical training courses for industry. These courses focus mainly on the core competencies in automation technology.

Training for the industry

The relentless competitive pressure on industries demands that all stakeholders, particularly manufacturing companies and the training organizations that serve them optimize productivity in order to survive.

Our training will improve the performance of your organization and consequently your productivity.

Our training program focuses on the attainment of professional competence by all trainees.

This means that you are guaranteed increased knowledge, skills and a professional attitude when you send your technicians to our workshops.

Our training equipment is setup with purely industrial components and enables trainees to work hands-on with real manufacturing processes either in Factory or in Process Automation.

A hands-on approach to learning

As the world’s leading training organization for automation, there is one thing you can be sure to get from **Festo Didactic : Excellence**

Your Ideal Partner in Training Courses, Workshops, Industrial consulting.

Maximized learning success and Productivity

Without doubt, no two sectors of industries are alike; a sector has its own requirements - and no one knows and reacts as individually as **Festo Didactic**.

Experienced instructors and consultants provide customized solutions to make your employees and your company successful.

Public or in-house, the focus is always on hands-on experience using actual products in learning factories.

**You are always one step ahead
when you partner with Festo!**

Global Facts and Figures

300,000 industrial customers

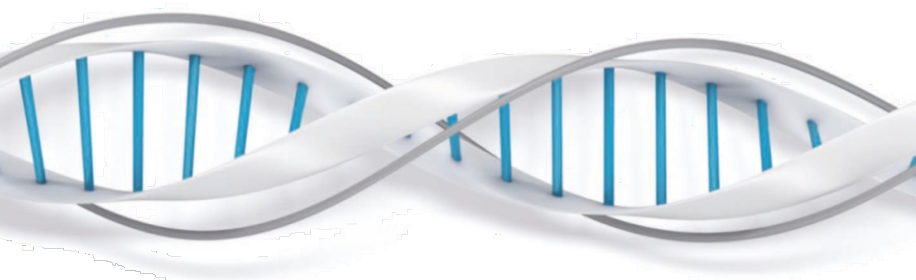
3,000 training courses/year

16,000 experts

250 branch offices

80 years of Festo Group

60 years of Festo Didactic



Training Courses

P111 - Industrial Pneumatic Control

[3 Days]

Rs.7,000/- plus 18.0% GST

Prerequisite : General technical ability.

Topics covered :

- Fundamentals of compressed air supply : Production, Preparation and distribution.
- Symbolic representation of devices as per ISO 1219 standards.
- Actuators : Cylinders construction, working and its applications.
- Valves : Direction control valves identification, construction, design features and operation of other control elements used in circuits.
- Position control : (Limit switches and sensors), Speed control : (Flow control valves), Logic control : (AND/OR valves), Pressure control : (Adjustable pressure sequence valve), Time-dependent control : (NO/NC timer) and counter application.

Outcomes :

- Develop the ability to select correct components for various application.
- Read, design, assemble and test basic pneumatic circuits.
- Develop troubleshooting skills to identify component malfunctioning and maintain pneumatic in basic control system.

EP211 - Industrial Electro-Pneumatic Control

[3 Days]

Rs.8,000/- plus 18.0% GST

Prerequisite : Successful completion of Industrial Pneumatic Control P111

Topics covered :

- Fundamentals in electro pneumatic control technology - control chain.
- Electric symbols used for contacts, switches, relays, timer and counter.
- Construction, working and use of solenoid operated pneumatic Direction control valves.
- Construction and working principle of sensors - magnetic, Inductive, capacitive, optical and pressure sensors.
- Interpret graphical symbols used in electrical circuits and on electro-pneumatic components.

Outcomes :

- Awareness on the role of pneumatics and electro-pneumatics in automation technology.
- Maintain and troubleshoot electro-pneumatic components used in basic control systems.
- Design, assemble and test basic electro-pneumatic circuits.
- Read electric control circuits and maintain simple electro pneumatic control systems.

P121 - Maintenance of Pneumatic Systems

[3 Days]

Rs.7,000/- plus 18.0% GST

Prerequisite : Successful completion of Industrial Pneumatic Control P111

Topics covered :

- Production systems and dependence on maintenance, various maintenance strategies, performance indicator for maintenance department.
- Systematic approach to troubleshooting pneumatic control systems, design and working of control elements.
- Identify possible causes of component failure in pneumatic systems, describe their symptoms and recommend repair.
- Practical example for servicing typical pneumatic components -cylinder, valves and service units.

Outcomes :

- Awareness on various maintenance strategies and performance indicators for maintenance department.
- Maintain and troubleshoot pneumatic controls and control elements used in pneumatic.

P122 - Advanced Industrial Pneumatic Control

[3 Days]

Rs.7,000/- plus 18.0% GST

Prerequisite : Successful completion of Industrial Pneumatic Control P111

Topics covered :

- Basic concepts in sequential multi cylinder control.
- Signal overlap – methods of overcoming signal overlap in sequential control.
- Plotting motion diagram, control diagram to identify signal overlap.
- Cascade principle, sequential multi cylinder cascade control and cascade control by grouping method.
- Stepper sequencer principle, sequential multi cylinder control by grouping method and using expansion module.
- Vacuum generation and its accessories for control application.

Outcomes :

- Awareness on the application of advanced pneumatics in automation technology.
- Read, develop and troubleshoot sequential multi cylinder pneumatic circuits.
- Identify signal flow and managing control signals.
- Use vacuum in control application.

EPA311 - Electro-Pneumatic Automation with PLC

[5 Days]

Rs.13,000/- plus 18.0% GST

Prerequisite : Successful completion of Industrial Pneumatic Control P111

Topics covered :

- Fundamentals in electro pneumatic control technology - control chain, electric symbols used for contacts, switches, relays, timer and counter.
- Construction, working and use of solenoid operated pneumatic Direction control valves.
- Construction and working principle of sensors - magnetic, inductive, capacitive, optical and pressure sensors.
- Construction and working of PLC unit and introduction to programming environment.
- Development of PLC logic control using electro pneumatic control elements and communicating PC with PLC for commissioning.
- Identify and describe the type of sensor devices that can connect to a PLC, based on its specifications.

Outcomes :

- Use of electro-pneumatics, sensors and PLC's in control system.
- Design, maintain and troubleshoot PLC controlled electro-pneumatic control systems.
- Develop programs for PLC to automate electro pneumatic controls.

PLC311- Introduction to PLC Programming

[3 Days]

Rs.8,000/- plus 18.0% GST

Prerequisite : Successful completion of Industrial Electro-Pneumatic Control EP211

Topics covered :

- Design, assemble and test basic PLC based control circuits, using commonly available PLC's
- Maintain and troubleshoot basic PLC based control sequences written in ladder language
- Identify and describe the type of sensor devices that can connect to a PLC based on its specifications.
- Interpret technical specifications and data relating to electro-pneumatic and sensing devices.

Outcomes :

- Knows the role of electro-pneumatics, sensors and PLC's in automation technology
- Is familiar with different techniques that are used in PLC programming, and the applications and uses of each.
- Knows innovative development and current trends in automation products and their application.

Training Courses

H511 - Industrial Hydraulic Control

[3 Days]

Rs.10,000/- plus 18.0% GST

Prerequisite : General technical ability.

Topics covered :

- Working media selection criteria.
- Basic fundamentals involved, hydraulic system structure.
- Construction, design feature, working principle of - Pumps, Pressure control valves, Direction control valve, check valve, Flow control valve, accumulator and cylinders.
- IS 1219 representation of symbols used in identifying, reading and interpreting basic hydraulic circuit components.
- Simple application circuits and calculations on pressure, flow, force, speed and power.

Outcomes :

- Design, assemble and test basic hydraulic circuits.
- Identify graphical symbols and develop troubleshooting abilities of hydraulic circuits.
- Set up systems in accordance with circuit diagram basic hydraulic controls.

EH611 - Industrial Electro-Hydraulic Control

[3 Days]

Rs.12,000/- plus 18.0% GST

Prerequisite : Successful completion of Industrial Hydraulic Control H511

Topics covered :

- Fundamentals in electro hydraulic control technology - control chain, electric symbols used for contacts, switches, relays, timer and counter.
- Construction, working and use of solenoid operated hydraulic Direction Control valves.
- Construction and working principle of sensors- magnetic, inductive, capacitive, optical and pressure sensors.
- Interpret graphical symbols of electrical and electro-hydraulic components.

Outcomes :

- Awareness on the use of hydraulic and electro-hydraulic for automation task.
- Develop troubleshooting abilities on electro-hydraulic components used in basic control systems.
- Read, design, assemble and test basic electro-hydraulic circuits.
- Read electric control circuits and design simple electro hydraulic control systems.

EHA 711- Electro-Hydraulic Automation with PLC

[5 Days]

Rs.15,000/- plus 18.0% GST

Prerequisite : Successful completion of Industrial Hydraulic Control H511

Topics covered :

- Fundamentals in electro hydraulic control technology - control chain, electric symbols used for contacts, switches, relays, timer and counter.
- Construction, working and use of solenoid operated hydraulic Direction control valves.
- Construction and working principle of sensors— magnetic, inductive, capacitive, optical and pressure sensors.
- Construction, working of PLC unit and introduction to programming environment.
- Development of PLC logic control using electro hydraulic control elements and communicating with PC and PLC for commissioning.
- Identify and describe the type's of sensor devices that can connect to a PLC, based on its specifications.

Outcomes :

- Awareness in devising electro-hydraulic controls using sensors and PLCs for automation task.
- Design, maintain and troubleshoot PLC controlled electro-hydraulic control systems.

M711 - Fundamentals of Mechatronics

[5 Days]

Rs.13,000/- plus 18.0% GST

Prerequisite : Basic control engineering

Topics covered :

- Basic physical principles.
- Fundamentals of Pneumatics, Hydraulics, Electrics & Mechanics
- PLC in Automation for motion control.
- Assemble and test basic mechatronics circuits (Pneumatics, Electrics & PLC)
- Virtual process simulation using software.
- Commissioning and Testing motion control in operation mode.
- Troubleshooting of PLC outputs.
- Application of various types of programming used in Industry.

Outcomes :

- To device simple Mechatronics systems.
- Assemble and test basic mechatronics circuits.
- Interpret technical specifications / data relating to pneumatic, electro -pneumatic, sensors, electrical, PLC components.

M721 - Advanced Mechatronics

[5 Days]

Rs.15,000/- plus 18.0% GST

Prerequisite : Successful completion of EPA311

Topics covered :

- Install, replace and commission pneumatic, electro-pneumatic, sensoric, electrical and PLC hardware components of a modular production system (MPS station).
- Identification, interpreting technical specification and working principle of Modular production system (MPS) components.
- Planning, commissioning of – MPS Distribution / MPS Testing / MPS Processing / MPS Handling station.
- Developing and downloading PLC program for MPS Distribution /MPS Testing / MPS Processing / MPS Handling station and commission a PLC control system.
- Assemble, test and troubleshoot basic factory automation systems of a MPS station (pneumatic, electrical and software).

Outcomes :

- Commission and test mechatronic system.
- Connect pneumatic and electric components according to PLC control logic.
- Find and eliminate fault and restore them to documented status.

i 4.0 - Implementing Industry 4.0

[3 Days]

Rs.12,500/- plus 18.0% GST

Prerequisite : General interest in Industry 4.0

Topics covered :

- Introduction to Industry 4.0
- Difference between Industry 3.0 and 4.0
- Overview of the core elements and technologies of Industry 4.0, e.g.- RFID, Big data, NFC, M2M communication, vertical and horizontal integration, decentralized self-controlling production, augmented reality.
- Social-technological developments and their consequences.
- I 4.0 Business Models and creating new business ideas.
- Bottom-Up and Top-Down strategies to implement Industry 4.0
- Competences development Industry 4.0
- Change Management Industry 4.0
- Hands-on exercises with Industry 4.0 Trainer Kit - MPS® 203 I4.0 (Modular Production System)

Outcomes :

- Enable the delegates to take their first actions towards implementing Industry 4.0



General Information

How to apply

Write to us specifying the course name, dates and name of participants. Seat confirmation will be given after receipt of payment. Festo Didactic will confirm all reservations by e-mail.

Registration

Registration can be made by sending your cheques/DD, made in favour of **"Festo India Pvt. Ltd."** payable at the location where the course is opted for.

Student Discount

Special discount on the course fee applicable for students.

Course documents

Extensive course documents provide an indispensable practical reference work.

Inclusions

The Course fee includes the course material, lunch and light refreshment during the break.

Certification

A certificate recognized in the industry is awarded for successful completion of a course.

Training Centers

Ahmedabad

Festo India Pvt.Ltd
33, Sardar Patel Nagar,
Off C. G. Road, Navrangapur,
Ahmedabad 380 006

Bangalore

Festo India Pvt.Ltd
237B, Hosur Road,
Bommasandra Industrial Area,
Bangalore 560 099

Chennai

Festo India Pvt.Ltd
AA Business Centre
No.27 & 28, 2nd & 3rd Floor, E Park St,
Shenoy Nagar, Chennai 600030

Mumbai

Festo India Pvt.Ltd
502, "Raheja Point 1"
Vokala, Santacruz (East)
Mumbai 400 055

Noida

Festo India Pvt.Ltd
A2, Phase II,
Noida 201 305

Pune

Festo India Pvt.Ltd
T130 MIDC, Bhosari
Pune 411 026

FESTO



Turn our experience into your expertise.

Our customer advisors will be pleased to assist you with any questions on content, location and dates

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