



For
Self-Reliance
& Progress...





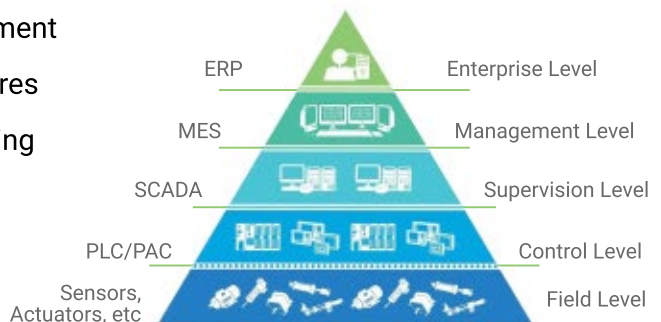
About Us

It started as engineering company in July 1990. Idea is to implement process control systems for upgradation and advancement of local industry. It renders systematic services in control technology and provides customized automation solutions which are based on high-tech pneumatics, electronics and PLC controls range.

Its association with leading European manufacturers and suppliers incorporates a perfect blend in engineering mechanics by offering project oriented support for mechanical low cost automation solutions. Service is based on state-of-the-art products with expertise backing of European manufacturers and controls.

Offering Services

- Automation Project - Design & Development
- Process Improvement & Control measures
- Customized Fabrication & Commissioning
- Restoration of existing controls
- Maintenance Contracts Services
- Controls Panels (Pneumatics & PLC)



Through our experience with industrial enterprises and our practical participation in Pakistan's industrial market, we, as APL have come to following conclusions;

- The market of up-grading existing machinery through automation in Pakistan is virtually untapped and very large.
- The top management of all industrial units is very keen to automate in order to increase efficiency, save materials, improve quality and thereby increase profits. The saving to them is self evident: only concern being dependability of the automation equipment and the vendor.

Our strategy of system integration has been extremely successful and within a very short period, we have an impressive list of satisfied clients and successful projects.

Our engineering network of technical support is designed to offer advice and assistance for proper application and design techniques. Site visits for discussing details are arranged through our service centers and different marketing campaigns.

Structural Strength

05 Design & development

13 Fabrication & installation

02 Software & instrumentation

05 Administration

20 Marketing

05 Industrial controls

02 Client support & after-sales

Company Overview

A Complete Suite of Automation Services

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



Custom Automation Components
Complete custom engineered solutions



Custom Control Cabinets
Comprehensive engineering support and on-site services



Complete Systems
Shipment, stocking and storage services

The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



Electromechanical
Electromechanical actuators, motors, controllers & drives



Pneumatics
Pneumatic linear and rotary actuators, valves, and air supply











PLCs and I/O Devices
PLC's, operator interfaces, sensors and I/O devices

Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

Company Overview

Product Overview		FESTO	
	Components	Systems	Customised system
Operating level	 Front end display FED (Key)  Front end display FED (Touch)		
Control level	 Integrated controller CPX-CEC  Modular controller CECX  Integrated controller FED-CEC		
Remote I/O	 Electrical terminal CPI  Modular electrical terminal CPX  Handheld MMI  Modular valve terminal CPX/MPA		
Valve terminals	 Valve terminal CPV  Valve terminal MPA/MPA-F  Valve terminal VTSA-VTSA-F  Valve terminal CDVI  Valve terminal CPV Ex-i for explosive areas	 Semi-rotary actuator DAPS with ball valve VZBC	 Units for high and low temperature applications
Field level	 Pilot valve VOFD (Namur)  Pilot valve VOFC (Namur)  Solenoid valve VSNB (Namur)  Standard valve NVF3 (Namur)  Solenoid valve MFH  Directional control valve CPE	 Semi-rotary actuator DAPS with ball valve VZBB	 Compact performance valve terminal CPV with stainless steel cover
Accessories	 Service units  Dryers  Couplings  Push-in fittings  Plastic tubing  Pressure boosters DPA  Local controller DLP-VSE  Positioner GEMU	 Semi-rotary actuator DFPB with ball valve VAPB	 Customised control cabinet solution, also for explosive areas
Sensors	 Sensor box DAPZ  Sensor box SRBF  Analogue/Binary Sensor box SRAP/SRBP  Sensor box QH-DR-E  Proximity sensor CRSMEO  Proximity sensor SME/SMT  Displacement encoder MLO-POT	 Semi-rotary actuator DAPS with butterfly valve VZSA	 Semi-rotary actuator DAPS with ball valve and sensor box
Actuators	 Semi-rotary actuator DFPB  Semi-rotary actuator DRD/DRE  Semi-rotary actuator DAPS  Manual semi-rotary actuator DAPS  Linear actuator DLP  Controlled linear actuator DFPI  Stainless steel round cylinder CRHD	 Linear actuator DLP with knife gate valve VZKA	
Valves/ process valves	 Butterfly valve VZAB  Ball valve VAPB/VZBA  Ball valve VZBC  Angle seat valve VZXF  Diaphragm valve VZWM/VZWP  Diaphragm valve VZWF  Direct actuated 2/2-way valve VZWD  Hygienic ball valve VZBB  Hygienic Butterfly valve VZFA		

Other Business Partners

KIMO Instruments

Portable Instruments, Data acquisition,
Datalogger, Flowmeter, Hygrometer, Luxmeter,
Anemometer, and Thermometer



ALIA Inc

Flowmeters, Recorder & Transmitter.



COPADATA

Zenon SCADA Software



SENECA

Data acquisition modules, remote distributed, automation
systems, Converters and interfaces, displays, field bus
systems, Operator panels, graphic touch screen display



Wonderware

SCADA Software



Mobiform

Status Vision SCADA Software & HMI



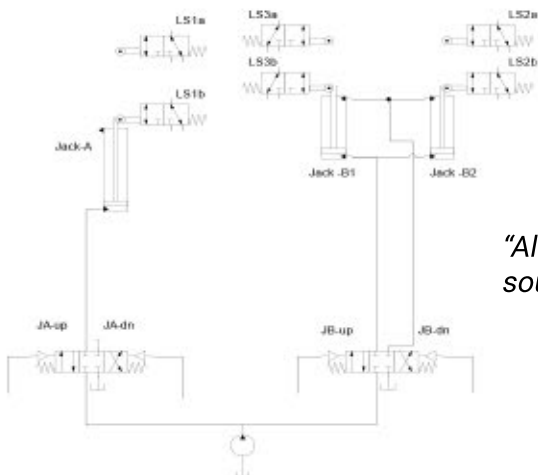
Fields of Expertise & Operations

1. PNEUMATIC PRODUCT PROGRAM

With close collaboration with leading manufacturing companies in field of automation products, producing range of pneumatics elements worldwide market leader in field of pneumatics.

The Range Comprising

- Solenoid valve and Valve accessories
- Pneumatic cylinders and cylinder fittings
- Compressed Air preparation units
- Air tubing, fittings and assembly accessories
- Proximity sensors
- Handling and Vacuum technology
- Valve terminals & bus system
- Instrumentation controls
- Vacuum Handling units



"All from one single source is our motto."



Innovative Engineering Solution

Designing, development and realization of control application is our core business. In this business section, we focus on application needs of a customer. In most of the applications, no data is made available for handling the task.

Our engineering team interacts with customer to closely study ground information of the requirement. These inputs are incorporated in to systematic design. To conceive a successful plan, all in-feeds are focused for resulting operator-friendly sequence, which must be easily absorbing in actual environment and covering key needs of operational output.

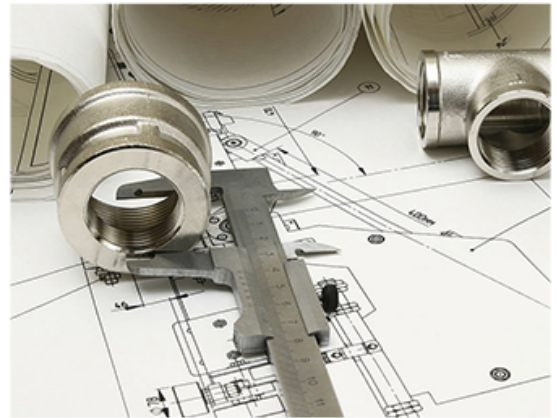
There are many land-mark projects in our long list of such achievements.

A few to fill the examples comprises;

- 48 cigarette packing machine "CAPSTAN"
- Dry Leak testing stations to encapsulate parts
- Thin Aluminum Seal packaging for food stuffs
- Powder Transfer vacuum conveyors

Design & Engineering

- Mechanical Design
- Electrical Design
- AutoCAD, 3 D MAX, CoDeSys
- E & I Design
- Design Software



CONVENTIONAL SYSTEM

In our industry, there is constant demand of bringing in used plants from off-shore sites. These 2nd hand machines are landed without installation aides and supervisory concerns.

We offer our engineering expertise to evaluate, refurbish and commissioning of these jobs. In such projects, basic structure of conventional hardware is used. Hi-tech controls are incorporated - keeping operational fundamentals as of original. Smooth running and trouble free operations are ensured by adapting electro-pneumatic feedback controls.

- Up-gradation of electrical & mechanical engine assembly line at Millat Tractors Limited, 'MESSY-FERGOUSON' brand tractors
- Liquid filling lines - FMC United
- Liquid filling lines - ICI (Pakistan) Ltd.
- Powder filling lines - Aventis (Pakistan) Ltd.
- Sack pick & placement - Rafhan Bestfoods Ltd.

PRODUCT RANGE



Vacuum components

- » Vacuum Suction Pads
- » Special Grippers
- » Mounting Elements
- » Vacuum Generators
- » Valve Technology
- » Switches and System Monitoring
- » Filters and Connections

Vacuum Handling Systems

Vacuum Gripping Systems

Vacuum Clamping Systems

PRODUCT RANGE



Pneumatic Vibrators

- » Rotary Vibrator
- » Turbine, Roller, Ball, External Vibrators
- » Linear Vibrators
- » Impactors
- » Internal vibrators

Electric vibrators

- » External Vibrator
- » Internal Vibrator

Hydraulic Vibrators



ENGINEERING CONTRACTS

We offer technical services on contractual basis, to operate their controls, smooth, trouble-free and highly productive, on contractual basis

The service covers following areas;

- Maintenance of mechanical machine operation
- Design engineering concepts of new process
- Maintenance of PLC & electrical logics
- Pneumatic control circuitry
- Electrical & Instrumentation
- Installation & Commissioning of new plants
- Dismantling & shifting of units from site

Ready-to-install solutions

Individually configured

- Control cabinets,
- Mounting plates, assemblies
- Integrated solutions



System Integration Solutions

- PLC Based Control System
- SCADA System & Telemetry Control
- Distributed Control System (DCS)
- Electronic Control System
- Electro Pneumatic Control System
- Pneumatic Control System

Panels & Accessories

- Control Panels
- Power Supplies
- HMI Displays
- Indicators
- Terminal Blocks



Solutions for the Food & Beverage Industry

Optimization of process costs, securing productivity

Optimization of process costs, securing productivity

- Understanding processes from continuous processes to end-of-line packaging
- Organizing solutions - joint engineering
- Creating synergies - everything from a single source



Maximum safety in food production

- Consistently safer - Clean Design
- Products with materials approved for food industry
- Recommendations for resistance to cleaning agents



Fastest Optimal Solutions

- Qualified - Sales and application experts
- Fast - Worldwide networking of application expertise
- Tailor made - Customer involvement in R&D

Control Solutions

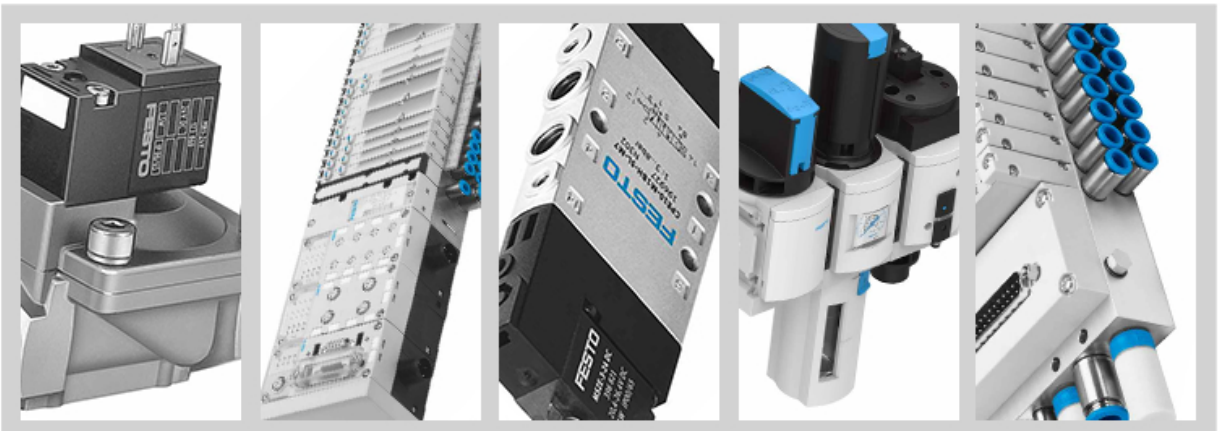
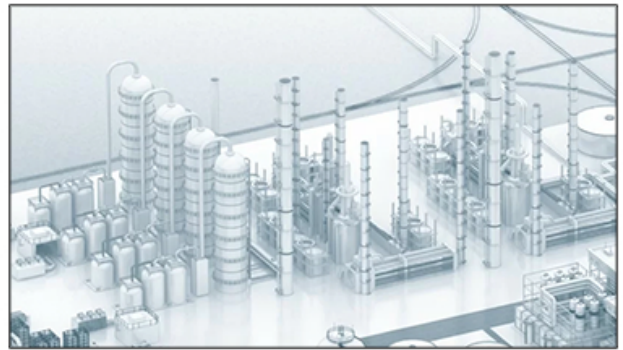
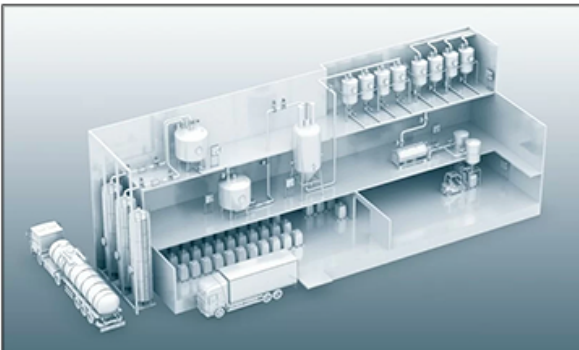
- | | |
|------------------------------------|------------------------------|
| - RFID and Bar Code Systems | - Cooling & Refrigeration |
| - Bulk Material Storage / Delivery | - Packaging Line Control |
| - Batching & Blending Systems | - Defect Detect & Reject |
| - Raw Material Unload / Receive | - Can / Bottle / Bag Filling |
| - Mixer / Kettle Control | - Case Packaging |
| - Lab / QC Management | - Ovens / Dryers |
| - Depalletizing / Palletizing | |



Solutions for the Fertilizers & Chemical Industry

Automation Solutions from Festo:

- Air preparation for use in explosive and non-explosive areas
- Solenoid valves with explosion-proof coils mounted directly on the actuator (NAMUR interface) in explosive areas
- Solenoid valves in explosion-proof cabinets with tubing to the actuators
- Solenoid valves in a control cabinet outside the explosive area with tubing to the drives
- Intrinsically safe valve terminals in a control cabinet inside the explosive area for activating groups of actuators
- Valve terminals outside the explosive area for activating groups of actuators
- I/O remote systems outside the explosive area for recording and outputting electrical signals
- Quarter-turn and linear actuators with and without sensor boxes outside the explosive area for opening/closing process valves



Power generation & process engineering for power stations

Automation Solutions from Festo:

- Explosion-proof designs
- Sealing
- Ease of cleaning
- Pressure and vacuum resistance
- Temperature resistance
- Weather resistance
- Service life and reliability
- High operational/process reliability
- Sturdy design
- Resistant to extreme external contamination



Solution for Textiles industry

Stitching, weaving and cutting fabric using pneumatics

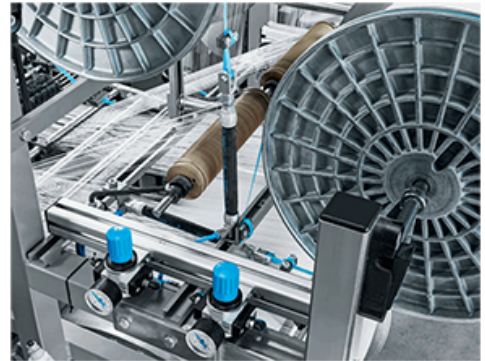
Permanently repeated movements with clear program sequences can be automated economically with pneumatic systems.

High-performance spinning machines with Festo pneumatics:

216 rod less drives with integrated valves moves the fibers.

Compact linear drives with or without guide

Mechanically coupled cylinders with optimized mounting options for simple mounting and magnetically coupled cylinders for use as a pressure tight and zero leakage system



Linear drive DGC



- Space-saving
- Quick and easy installation
- Optimized mounting options
- Highly precise guide



Linear drive DGO

- Magnetic power transmission
- Pressure tight and zero leakage
- Dirt and dust cannot enter
- Linear drive DGO in the catalogue

Linear drive DGP/DGPL



- Low space requirement
- High precision and load capacity
- Reliable: service life of up to 40,000 km



Linear drive unit SLM

- Slide with recalculating ball bearing guide
- Magnetically coupled
- Individual choice of end position cushioning and sensing

Linear drive SLG

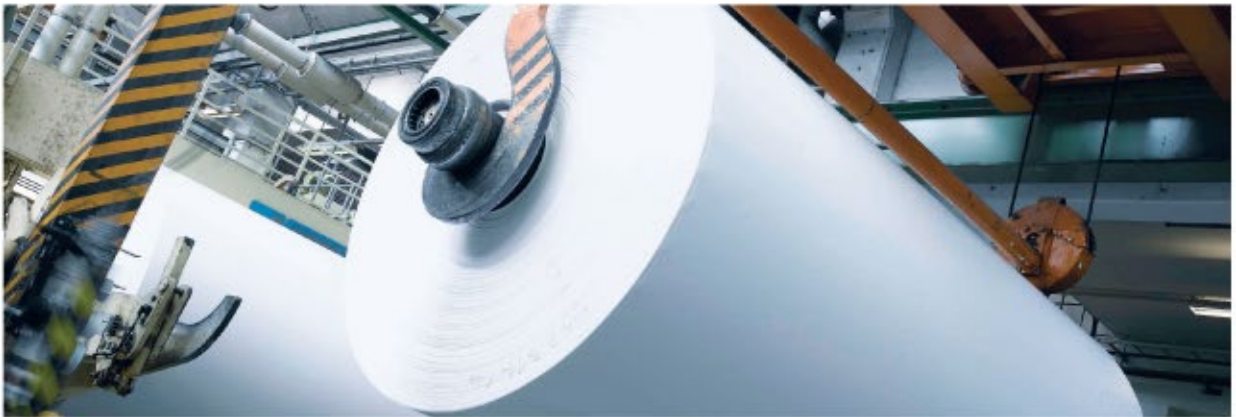


- Extremely flat design
- Integrated precision guide
- Adjustable end stops
- Choice of supply ports

Solution for Pulp / Paper industry

Automating slides and butterfly valves in critical environments

Complex processes, aggressive environmental conditions, continuous operation: water, sludge, fibrous material, rejects and pollutants of different consistencies pass through the production stations and need to be separated, sorted or filtered.

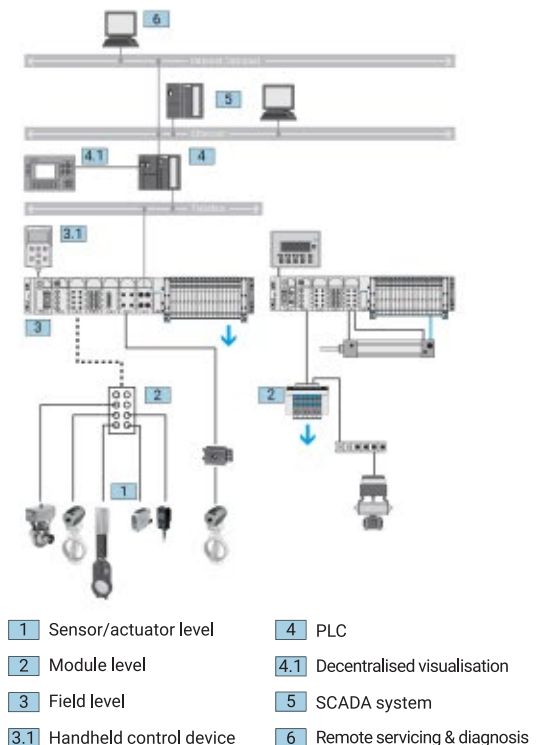


Automation solutions from Festo:

Pneumatic actuators ensure that the gates and flaps function optimally:

- Sturdy and corrosion resistant
Maintenance-free
- Able to cope with continuous loads and overloads
- Application areas for pneumatics:
 - Raw material handling
 - Sorting
 - Cleaning systems
 - Bleaching processes
 - Washing processes
 - Filter systems

Everything from a single source:
from process valves to process visualisation.



Industrial Sectors



Oil & Gas



Petrochemical



Biotechnology/
Pharmaceutical



Fertilizers



Chemical



Water/Wastewater



Pulp/Paper
Processing



Food/Beverage
Processing



Sugar



Textile



Automotive



Engineering Firms

VOCATIONAL TRAINING

Qualified and motivated employees of an organization are decisive potential for long term success in the market



Particularly in manufacturing industry skilled technical staff is lethal key to charged competitiveness and targeted deadlines. In addition to specialist knowledge, key qualifications and core competencies such as ability to learn, problem solving, teamwork and creativity are of growing importance in rapidly changing technology network.

To meet these challenges, Automate training division has developed a comprehensive learning system of automation.

It is specially tailored to modern qualification needs. Aim is to help customers in achieving success with training, throughout the entire spectrum of automation technology.



Our training division is working with some vision

a) In-campus regular training course

42 hours (six days) training modules for covering core subjects; Basic Pneumatics, Advance Pneumatics, Basic Electro-Pneumatics, Advance Electro-Pneumatics, PLC, Control system troubleshooting



b) Tailor-made client calls for training;

Specially designed courses for textile (weaving & spinning units), Packaging, Pharmaceutical, Cement industries. Cut-to-size, on demand of our customers, at our campus seminar room or at client shop-floor premises

c) Assistance in setting up training lab

Festo - training expertise is available for setting up a vocational training centre, with all added gadgetries including course ware, text books, training tables, trainer training etc. These services have been successfully operational in

- Pak-Swiss training centers - Karachi.
- PITAC - Lahore
- GTZ - German training Centers - Lahore
- GIK - Ghulam Ishaq Khan Institute - Topi



BASIC PNEUMATIC TRAINING

This hands-on course is designed for people wanting a basic understanding of pneumatics systems and sufficient knowledge to identify, isolate, and correct problems that occur on pneumatic machines.

Learning Outcomes

To give participants an in-depth knowledge of pneumatics through principles and uses of compressed air, circuit logic, sequencing, and control functions using circuit design and hands-on construction.

Participants learn pneumatic components and their uses in industrial applications. Circuits are designed using cylinders and directional control valves as well as logic, timing, sequencing functions. Designing, constructing, and reading pneumatic circuit diagrams give the participant a strong understanding of circuit operation and a good base for troubleshooting.



Target Audience

This course is ideally suited to those with little or no pneumatics experience.

Duration

2 Days

Course Content

- Characteristics of Air
- Understand Air Generation And Distribution
- Characteristics Of Pneumatic Systems
- Pneumatics Symbols And Standards
- Components Of A Pneumatic System
- Actuator And Output Devices
- Cylinders (Single & Double Acting)
- Directional Control valves
- Non-return Valves
- Flow Valves, Pressure Valves
- Construction of Pneumatic Circuits & Diagrams
- Configuration, Troubleshooting & Repair Of Pneumatic Circuits



ADVANCE ELECTRO-PNEUMATICS TRAINING

The course deals with the control of pneumatic actuators using electrical sensing and switching devices. Electrical principles are covered at a basic level, but some previous knowledge of pneumatic equipment is required. Both functions and operation of switches, relays, solenoid- operated valves and proximity sensors are included and delegates put theory into practice with practical exercises. A strong emphasis is placed on safety and appropriate working practices throughout the course, especially during the practical sessions.



Learning Outcomes

At the end of the course delegates will have a good understanding of pneumatic and electro pneumatic manufacturing systems and be able to maintain, modify and fault find in a safe and competent manner.

Target Audience

This is suitable for those working in a maintenance environment, with responsibility for machines with electro- pneumatic equipment included in the control systems.

Duration

2 Days

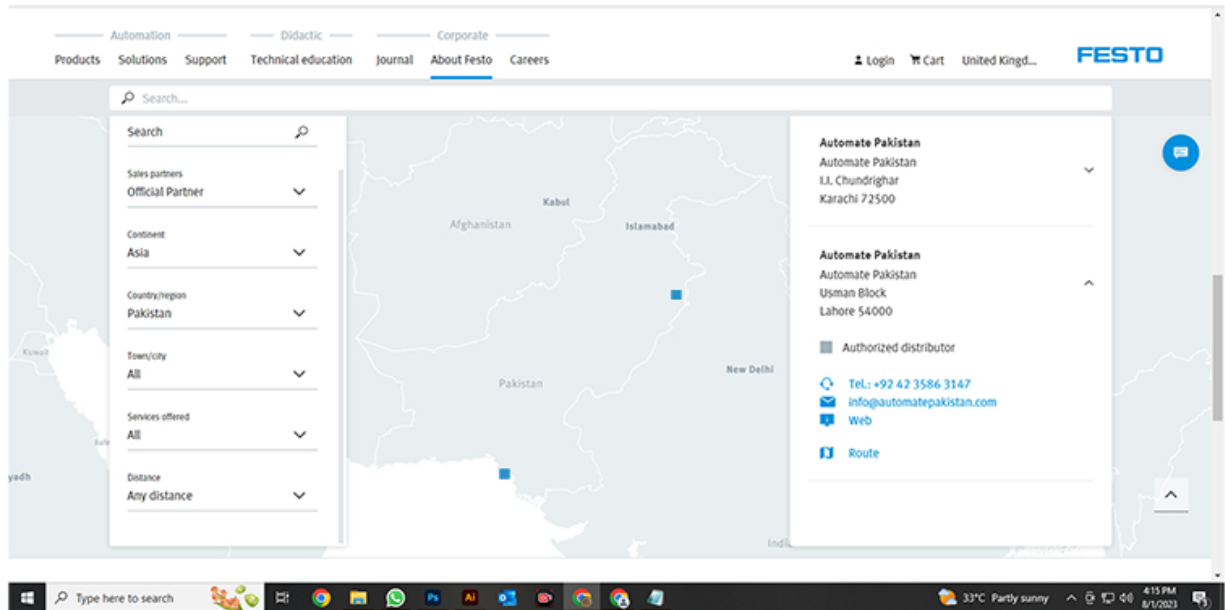
Course Content

- Review of Pneumatic System & Its Components
- Introduction to Electro-pneumatics
- Basic Electric Circuits
- Electro Pneumatics Devices
- Sensors (Proximity Sensors & Limit Switches)
- Valves (Air And Solenoid Operated, Sequence, Directional Control)
- Actuators (Cylinders And Rotary)
- AND/OR Elements, Relays, Timers, Flow
- Controls And Quick Exhausts
- Pneumatic Relays
- Flow Control Valves
- Direction Control Valves
- Actuating Devices
- Introduction to Basics of PLC
- PLC Input & Output Devices



Official Partner - Festo

Automate Pakistan



Festo addresses worldwide

Festo has a world-wide presence, in 61 companies and 250 branch offices. Find the one which is close to you - just enter the search criteria which apply to you.



BUSINESS ASSOCIATES



FOR SELF RELIANCE & PROGRESS



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