

## Y-0053 PNEUMATIC & ELECTROPNEUMATIC TRAINING SET

The Pneumatic and electro pneumatic Training Set is produced for teaching three main subject: Pneumatic, Electropneumatic and PLC. The training set contains suitable components for basic level and advanced level applications.

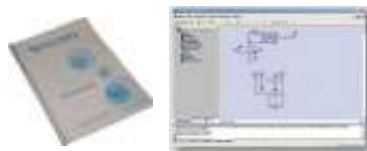
There are two kind of lab desk; one side and double side user, choosing according to your Lab size. We prepared basic pneumatic, advanced pneumatic and electropneumatic components list for your applications. Also, there is additional optional component list.

Some of components are in transparent structure in order to see the inside. All pneumatic and electropneumatic components have plastic holder for to mount the aluminium panel.

### **TRAINING SUBJECTS**

- Application of pneumatic & electropneumatic circuits
  - Application of single and double cylinders
  - Pressure adjusting regulators and pressure sequence valves
  - Application of Mechanical, Air piloted, Logic control valves
  - Circuit configuration with relays and logic electric moduls
  - Application of PLC and Electropneumatic
  - Cascad circuits applications
  - Proportional pneumatic applications
  - Using of sensors on electropneumatic circuits
  - DC and step motor applications
  - Using of signal lamps and buttons on circuits
  - Simulation of program
  - Application of digital inputs/outputs on PLC
  - Application of digital inputs/outputs on PLC
  - Setup and piping of preesurised air systems
  - Study on repairing of pneumatic circuits
  - Study on pneumatic documents
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- The application book is given with set.
  - There are two kind of simulation software for training set.
    - Automation studio
    - Autosim 200

We can supply these two training software



### **LAB DESK**

- Lockable wheeled, aluminium structure, laminat covered table
- According to your lab size, we can provide single or double side used lab desk
- There is part on the top of desk for control panels.

Code	Worktable Equipment List	Single Side Used	Double Side Used
Y-0053-T	Worktable (1200x800) Laminat Coated, One Sided	1	
Y-0053-TA	Worktable (1200x800) Laminat Coated, Double Sided		1
Y-0053-TS	Triple Drawer Group	1	2
Y-0053-AP	T-Channel Aluminium Plate (1000x700)	1	2

**Y-0053**

**PNEUMATIC & ELECTROPNEUMATIC TRAINING SET**

**BASIC PNEUMATIC**

The basic pneumatic set contains basic components for your applications. All components have plastic holder. With transparent cylinder you can study on mechanical structure. The component list is on below.

**TECHNICAL SPECIFICATION OF COMPONENTS**

- 0-10 bar operation pressure
- 4 mm air connection
- Easy connection between components
- Plastic holder with components
- New technology plastic holder, hold and never moved with any force.

**YOUR NEED FOR LAB**

- 25 lt/sec, 6 bar Air compresor



Code	Basic Pneumatic Equipment List	Pcs.
Y-0053-P001	3/2-Way Valve With Pushbutton, Normally Closed	2
Y-0053-P002	3/2-Way Valve With Pushbutton, Normally Open	1
Y-0053-P013	3/2-Way Valve With Emergency Switch, N. Open	1
Y-0053-P020	5/2-Way Valve With Selector Switch	1
Y-0053-P030	3/2-Way Roller Lever Valve, Normally Close	1
Y-0053-P035	3/2-Way Single Acting Pneumatic Valve, N. Close	1
Y-0053-P037	5/2 Way Single Acting Pneumatic Valve	1
Y-0053-P038	5/2 Way Double Acting Pneumatic Valve	1
Y-0053-P044	Filter Regulator (With Manometer)	1
Y-0053-P045	Regulator (With Manometer)	1
Y-0053-P047	Manometer	1
Y-0053-P049	Air Distribution Block (8's)	1
Y-0053-P051	OR Valve	1
Y-0053-P052	AND Valve	1
Y-0053-P056	3/2 Time Delay Valve, Normally Close	1
Y-0053-P058	Quick Exhaust Valve	1
Y-0053-P061	One Way Flow Control Valve For Cylinder Use	2
Y-0053-P073	Cylinders Single Acting Spring Ahead (20x50)	1
Y-0053-P079	Double Acting Cylinder (20x100)	1
Y-0053-P098	Double Acting and Shaft Transparent Cyl. (20x100)	1
Y-0053-P100	Polyurethane Hose 4 mm	15 mt.

**ADVANCED PNEUMATIC**

If you add following components to basic component list you can do advanced level pneumatic experiments.

Code	Advanced Pneumatic Equipment List	Pcs.
Y-0053-P003	3/2 Way Valve Lever Switch, Normally Close	1
Y-0053-P017	5/2 Way Valve Lever Switch	1
Y-0053-P023	5/3 Way Hand Lever Valve Mid Pos. Closed	1
Y-0053-P031	3/2 Way roller Lever Valve Single Side Actuated N. C.	1
Y-0053-P038	5/2 Way Double Acting Pneumatic Valve	2
Y-0053-P064	Pneumatic Counter	1
Y-0053-P067	Pneumatic Lamp (Line Type)	1
Y-0053-P068	Vacuum Generator	1
Y-0053-P069	Suction Cup	1
Y-0053-P080	Double Acting Cylinder With Cushion (20x100)	1

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**ELEKTROPNEUMATIC**

With following components you can study on electropneumatic applications. You can add control panels for your application. There is also transparent magnetic cylinder for study on mechanical structure and signals of magnetic sensor. The list of Electropneumatic components.

Code	ElectroPneumatic Equipment List	Pcs.
Y-0053-EP001	3/2 Way Single Acting Solenoid Valve N.Close	2
Y-0053-EP004	5/2 Way Single Acting Solenoid Valve	2
Y-0053-EP005	5/2 Way Double Acting Solenoid Valve	1
Y-0053-EP006	5/3 Way Mid Position Closed Solenoid Valve	1
Y-0053-EP015	Single Acting Cylinder With Magnet (20x50)	1
Y-0053-EP021	Double Acting Cylinder With Magnet (20x100)	1
Y-0053-EP037	Double Acting Transparent C. With Magnet (20x100)	1
Y-0053-EP041	Pressure Switch N.Open/N.Close	1
Y-0053-EP043	Inductive Sensor	1
Y-0053-EP044	Capacitive Sensor	1
Y-0053-EP045	Optical Sensor	1
Y-0053-EP047	Proximity Sensor For Cylinder Use	2
Y-0053-EP048	Digital Pressure Sensor	1
Y-0053-EP050	Limit Switch Roller	1
Y-0053-EP052	Cable Set	1 Set

**CONTROL PANELS**

This panels are designed for electropneumatic applications. All inputs and outputs with 4 mm sockets. Each control panel has circuit diagram on his board. Easy used on lab desk



Code	Control Panel Equipment List
Y-0053-01	Power Supply(24V DC, Short Circuit and Overcurrent Protection, Emergency Stop, On-Off Switch, 4 mm plug)
Y-0053-02	Group Load (DC Motor, Stepper Motor, a Lamp, Buzzer)
Y-0053-03	Relay Group (4 relays. Relay Discrete of a 3 x NO / NC Contact Output)
Y-0053-04	Counter-Timer (Time Relay Contact Output For Analog, Digital Counter Output Contacts)
Y-0053-05	Light Switch Panel (2 pcs a permanent, non permanent 2)
Y-0053-06	Operator Panel (Siemens KP 300, 10 button, 3.6")
Y-0053-07	PLC Module 8/8 digital inputs/outputs, input simulation switches, Programming CD

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**OPTION LIST OF PNEUMATIC AND ELECTROPNEUMATIC COMPONENTS**

You can order the additional components from this list for your applications.

Code	Pneumatic Optional Equipment List	Code	Pneumatic Optional Equipment List
Y-053-P000	Silent Compressor, 6 Bar Pressure, Flow Rate 25 liters/min, with 20 liters of Air Tank, 220 VAC		
Y-053-P004	3/2-Way Hand Lever Spring Return Valve N.O.	Y-053-P078	Dbl Acting Cyl With Cushion 20x50
Y-053-P009	3/2-Way Valve With Selector Switch N.C.	Y-053-P081	Dbl Acting Through-Rod Cyl 20x100
Y-053-P014	3/2-Way Spring Return Pedal Valve N.C.	Y-053-P082	Dbl Acting Through-Rod Cyl Cus 20x100
Y-053-P016	5/2-Way Valve With Pushbutton	Y-053-P083	Rotary Cyl
Y-053-P022	5/2-Way Spring Return Pedal Valve	Y-053-P084	Rodless Cylinder 25x100
Y-053-P029	3/2-Way Valve Mechanically Actuated N.C.	Y-053-P085	Rodless Cylinder with Cushion 25x100
Y-053-P032	5/2-Way Valve Mechanically Actuated	Y-053-P086	Tandem Cylinder
Y-053-P033	5/2-Way Roller Lever Valve	Y-053-P087	Cascade Cylinder
Y-053-P034	5/2-Way Roller Lever Valve Sng Side Actuated	Y-053-P088	Telescopic Cylinder
Y-053-P036	3/2-Way Dbl Acting Pneumatic Valve N.C.	Y-053-P089	Pneumatic Motor
Y-053-P039	5/3-Way Mid Position Closed Valve	Y-053-P090	Trs Sng Acting Cyl Front Spring 20x50
Y-053-P042	3/2-Way Sliding Valve N.C.	Y-053-P092	Trs Sng Act Cyl Rear Spring Cus 20x50
Y-053-P043	Pneu Conditioner 2'li (Filter Reg.+Oil FR+L)	Y-053-P094	Trs Dbl Acting Cylinder (20x50)
Y-053-P046	Cylinder Regulators Over	Y-053-P095	Trs Dbl Acting Cylinder with Cus 20x50
Y-053-P048	Manometer in Line	Y-053-P096	Trs Dbl Acting Cylinder 20x100
Y-053-P050	Pressure Sequence Valve	Y-053-P097	Trs Dbl Acting Cylinder with Cus 20x100
Y-053-P057	Time Delay Valve N.O.	Y-053-P099	Trs Dbl Acting Thr-Rod Cly Cus 20x100
Y-053-P059	Two Way Flow Control Valve in Line	Y-053-P101	Hose Cutter
Y-053-P060	One Way Flow Control Valve in Line	Y-053-P102	Y Branch, Quick Push-in Fittings 4 mm
Y-053-P062	Check Valve	Y-053-P103	T Branch, Quick Push-in Fittings 4 mm
Y-053-P063	Check Valve With Pilot	Y-053-P105	Nipple Connection
Y-053-P071	Flowmeters	Y-053-P111	Plastic Holder
Y-053-P075	Sng Acting Cyl Rear Spring Cus.(20x50)	Y-053-P112	Ball Valves
Y-053-P077	Dbl Acting Cylinder (20x50)	Y-053-P113	Removing Hose Tool

Code	ElectroPneumatic Opt. Equipment List	Code	ElectroPneumatic Opt. Equipment List
Y-053-EP002	3/2-Way Sng Acting Solenoid Valve N.O.	Y-053-EP025	Rotary Cylinder with Mgn
Y-053-EP003	3/2-Way Dbl Acting Solenoid Valve N.O.	Y-053-EP026	Rodless Cylinder with Mgn 25x100
Y-053-EP007	5/3-Way Mid Position Solenoid Valve	Y-053-EP027	Rodless Cyl with Cushion and Mgn 25x100
Y-053-EP008	5/3-Way Dbl Act Cly Valve Y(Pressure)Center	Y-053-EP028	Tandem Cylinder with Mgn
Y-053-EP009	With Five Blok (For 2/2-3/2 valve)	Y-053-EP030	Trs Sng Acting Cyl Front Spring Mgn 20x50
Y-053-EP010	With Five Blok (For 5/2-5/3 valve)	Y-053-EP032	Trs Sng Act Cyl Rear Spring Cus Mgn 20x50
Y-053-EP011	Rodless Cly with Position Transducer 25x200	Y-053-EP034	Trs Dbl Acting Cyl with Mgn 20x50
Y-053-EP012	Encoder (For Rotary Elements)	Y-053-EP035	Trs Dbl Acting Cyl with Cus and Mgn 20x50
Y-053-EP013	Proportional Regulators	Y-053-EP036	Trs Dbl Acting Cyl with Mgn 20x100
Y-053-EP014	Proportional Module 5/3 Closed Center+Driver	Y-053-EP038	Trs Dbl Acting Thr-Rod Cyl Mgn 20x100
Y-053-EP017	Sng Acting Cyl. Rear Spring, Mgn 20x50	Y-053-EP039	Trs Dbl Act Thr-Rod Cyl Cus Mgn 20x100
Y-053-EP019	Dbl Acting Cylinder, Mgn (20x50)	Y-053-EP040	3/2-Way Proximity Valve N.C.
Y-053-EP020	Dbl Acting Cyl With Cushion and Mgn 20x50	Y-053-EP042	Vacuum Switch N.A./N.K.
Y-053-EP022	Dbl Acting Cyl With Cushion and Mgn 20x100	Y-053-EP046	Proximity Sensor For Cyl Use
Y-053-EP023	Dbl Acting Through-Rod Cyl With Mgn 20x100	Y-053-EP049	Digital Vacuum Sensor N.O/N.C/1...5V Ang
Y-053-EP024	Dbl Ac. Thr-Rod Cy with Cus and Mgn 20x100	Y-053-EP051	Digital Flow Meter