

YOUR KNOWLEDGE PARTNER

JANATICS

DIDACTIC PRODUCT CATALOGUE



Complete range of
Didactic



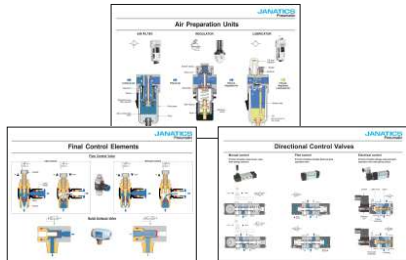
Products...

for a World Class Mechatronics Lab

1. TRAINER KIT

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Mountings	Accessories	
		
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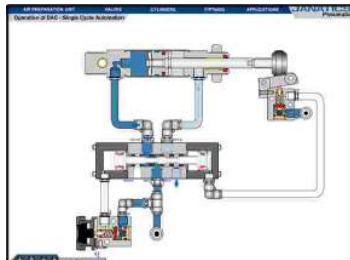
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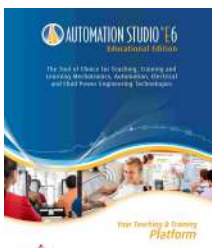
3. MECHATRONICS AND AUTOMATION SYSTEMS

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TRAINER KIT

TRAINER KIT

Series JTKP

Cat No JTKP-1-01-AA

PNEUMATIC TRAINER KIT

Features

- Sleek and rugged design
- Industrial components
- A unique snap-on mounting base saves time in mounting & removal of components
- Industrial application focussed exercises
- Suitable for modular aluminum extruded profile plate
- Upgradation and expansion possible



* Image shown is for illustration purposes only.
Actual product may vary.

Application

The Pneumatic trainer kit is designed with capability to demonstrate the design, construction and application of pneumatic components and circuits. Based on the integration of different technologies, there are three variants available such as Basic Pneumatic, Electro Pneumatic, and Electro Pneumatic with PLC. Applicable to various disciplines in academic institutions like Mechanical, Mechatronics, Production, Instrumentation and more, and for companies having ISO & TPM training systems.

Technical Specifications

Ordering code	JTKPX-X
Installation	Vertical / Horizontal
Ambient temperature	60°C Max.
Medium	Filtered Compressed air
Max. Operating Pressure (Recommended)	6 bar
Materials of construction	Aluminium, Brass, Steel, Nitrile rubber, Acetal

Note: The workbench in the above picture is only for reference, Refer mountings and accessories page for selection of suitable mountings and accessories as per requirement and order it.

TRAINER KIT

Series JTKP

Cat No JTKP-1-01-AA

Janatics range of trainer kits comes in different product configurations that offer specific levels of functionality to fit your needs. The matrix showcases the features and functionalities of the basic packages and of the subsequent add-on modules to enable the end user to choosing the right kit to suit the academic and industrial training needs.

Basic Packages & Add on modules Ordering code	Trainer Kits Ordering code	Pneumatic Kit		Electropneumatic kit		PLC Kit	
		Basic	Advanced	Basic	Advanced	Basic	Advanced
		JTKP1-1	JTKP1-2	JTKP2-1	JTKP2-2	JTKP3-1	JTKP3-2
Basic pneumatic package (JTK-KITA)							
<input type="checkbox"/> This is a mandatory basic package that includes basic pneumatic products like Air cylinder, FRL, Multi distributor units, One touch fittings, Final control elements, Tubes etc., <input type="checkbox"/> Function of air preparation units filter, regulator and lubricator <input type="checkbox"/> One touch fittings and tubing for easy connect and disconnect	✓	✓	✓	✓	✓	✓	
Basic pneumatic add on module (JTK-KITA-1)							
<input type="checkbox"/> Includes basic pneumatic products like directional control valves, logic elements, mechanically actuated valves etc., <input type="checkbox"/> Operation of single acting and double acting cylinder <input type="checkbox"/> Speed control techniques of pneumatic actuator <input type="checkbox"/> AND, OR logic operation <input type="checkbox"/> Position control using Roller lever valve <input type="checkbox"/> Operation of manual operated valves <input type="checkbox"/> Function of Quick Exhaust valve	✓	✓	-	-	-	-	
Advanced pneumatic add on module (JTK-KITA-2)							
<input type="checkbox"/> Includes advanced pneumatic products like pneumatic timer pneumatic counter, pressure sequence valve, proximity switch, etc., <input type="checkbox"/> Time delay operations, pulse counting using counter <input type="checkbox"/> Mid position control using Idle roller lever valve <input type="checkbox"/> Creation of advanced pneumatic circuits	-	✓	-	-	-	-	
Basic electro pneumatic package (JTK-KITB)							
<input type="checkbox"/> Includes basic electro pneumatic products like solenoid valves, magnetic sensors etc., <input type="checkbox"/> Solenoid valves for actuator control <input type="checkbox"/> Position sensing using magnetic sensors <input type="checkbox"/> Operation of signal elements <input type="checkbox"/> Cables with banana plugs for easy connect & disconnect <input type="checkbox"/> Creation of basic electro pneumatic circuits	-	-	✓	✓	✓	✓	
Basic electro pneumatic add on module (JTK-KITB-1)							
<input type="checkbox"/> Includes basic electro pneumatic products like relay etc., <input type="checkbox"/> Latching of solenoid coils using Relay <input type="checkbox"/> Function of 4C/O Relay <input type="checkbox"/> Understanding of Latching circuits <input type="checkbox"/> Creation of basic electro pneumatic circuits using relay	-	-	✓	✓	-	-	
Advanced electro pneumatic add on module (JTK-KITB-2)							
<input type="checkbox"/> Includes advanced electro pneumatic products like electrical timer and counter etc., <input type="checkbox"/> Functions of ON delay & OFF Delay timer <input type="checkbox"/> Pulse counting using counter <input type="checkbox"/> Operation of Various types of proximity sensors inductive, capacitive, Photo electric <input type="checkbox"/> Creation of advanced electro pneumatic circuits	-	-	-	✓	-	-	
Basic PLC add on module (JTK-KITC1-11) #							
<input type="checkbox"/> Includes Siemens LOGO PLC / equivalent with software and cable <input type="checkbox"/> Control of electro pneumatic components using PLC <input type="checkbox"/> Hardwired PLC with a proprietary I/O interface for banana plug connections <input type="checkbox"/> Simulation of PLC ladder logics without hardware	-	-	-	-	✓	-	
Advanced PLC add on module (JTK-KITC1-12) #							
<input type="checkbox"/> Includes Siemens S7-1200 PLC / equivalent with software and accessories <input type="checkbox"/> Control of electro pneumatic components using PLC <input type="checkbox"/> Hardwired PLC with a proprietary I/O interface for banana plug connections <input type="checkbox"/> Provision for OPC interface <input type="checkbox"/> Real time communication	-	-	-	-	-	✓	

- Refer the PLC Trainer kit catalogue for more details

TRAINER KIT

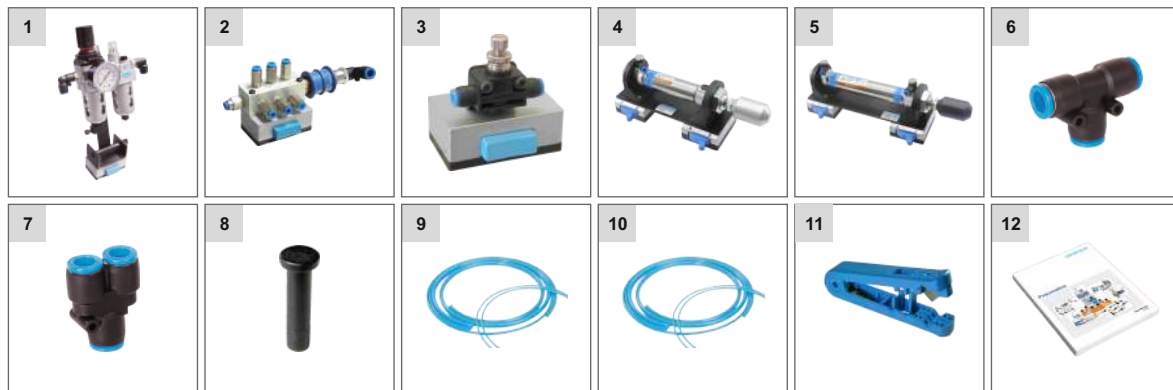
Series JTKP

Cat No JTKP-1-01-AA

JTK-KITA (Basic Pneumatic Package)

- This is a mandatory basic package that includes basic pneumatic products like Air cylinder, FRL, Multi distributor units, One touch fittings, Final control elements, Tubes etc.,
- Function of air preparation units filter, regulator and lubricator
- One touch fittings and tubing for easy connect and disconnect

Parts List



S. No	Description	Part No	Qty
1	FRL Unit with pressure gauge	MP0000	1
2	Junction box with Slide valve	MP0001	1
3	Flow control valve unit	MP0010	4
4	Single acting cylinder (SAC)	MP0014	1
5	Double acting cylinder (DAC)	MP0018	2
6	Union tee Dia4	WP2300404	4
7	Union Y Dia4	WP2400404	4
8	Plug Dia4	WP2600400	6
9	Tube (PU) OD8 (blue)	WH00B08	5 Meters
10	Tube (PU) OD4 (blue)	WH00B04	10 Meters
11	Tube cutter	WC1	1
12	Pneumatics - Text book	T101	1

TRAINER KIT **Series JTKP**

Cat No JTKP-1-01-AA

JTK-KITA-1 (Basic Pneumatic Add on Module)

- Includes basic pneumatic products like directional control valves, logic elements, mechanically actuated valves etc.,
- Operation of single acting and double acting cylinder
- Speed control techniques of pneumatic actuator
- AND, OR logic operation
- Position control using Roller lever valve
- Operation of manual operated valves
- Function of Quick Exhaust valve

Parts List



S. No	Description	Part No	Qty
1	3/2 NC Push Button (Green) Valve	MP0002	1
2	3/2 NC Push Button (Red) Valve	MP0003	1
3	5/2 Double external pilot operated valve	MP0006	4
4	5/2 External pilot operated valve with Spring return	MP0007	1
5	5/2 Hand lever operated valve with spring return	MP0008	1
6	5/2 Hand lever operated valve with Detent	MP0009	1
7	Shuttle valve (OR Valve)	MP0011	2
8	Quick Exhaust valve	MP0078	1
9	Dual pressure valve (AND Valve)	MP0016	1
10	Multi distributor fittings (for cascading)	MP0017	3
11	5/2 Valve with Lever head switch	MP0029	1
12	5/2 Valve with Mushroom head switch	MP0031	1
13	M5 Roller lever valve (Forwarding)	MP0070	2
14	M5 Roller lever valve (Reversing)	MP0071	2
15	Pneumatic Exercise Book - Basic	E101	1

TRAINER KIT

Series JTKP

Cat No JTKP-1-01-AA

JTK-KITA-2 (Advanced Pneumatic Add on Module)

- Includes advanced pneumatic products like pneumatic timer, pneumatic counter etc.,
- Time delay operations, Pulse counting using Counter
- Mid position control using Idle roller lever valve
- Position sensing using Pneumatic proximity switch, Back pressure valve
- Function of Pressure sequence valve
- Operation of pressure indicator
- Creation of advanced pneumatic circuits

Parts List



S. No	Description	Part No	Qty
1	5/3 Double external pilot operated valve with spring centered	MP0038	1
2	Idle return valve assembly - Forwarding	MP0049	1
3	Time delay valve	MP0050	1
4	Pneumatic counter	MP0118	1
5	Pneumatic proximity switch	MP0158	2
6	Pressure sequence valve	MP0136	1
7	Back pressure valve	MP0137	1
8	Pressure indicator	MP0138	1
9	Pneumatic Exercise Book - Advanced	E102	1

TRAINER KIT

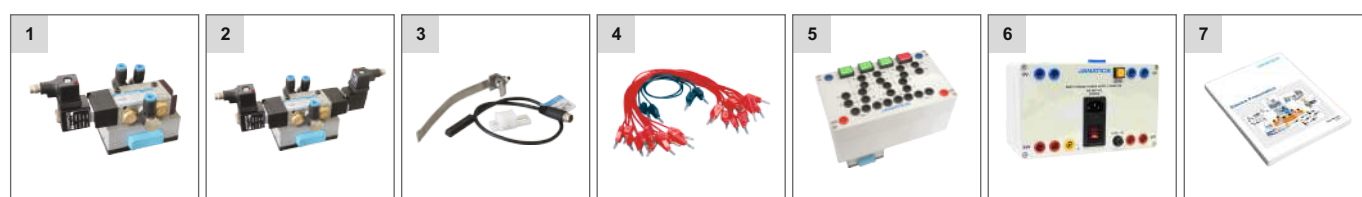
Series JTKP

Cat No JTKP-1-01-AA

JTK-KITB (Basic Electro Pneumatic Package)

- Includes basic electro pneumatic products like solenoid valves, magnetic sensors etc.,
- Solenoid valves for actuator control
- Position sensing using magnetic sensors
- Operation of signal elements
- Cables with banana plugs for easy connect & disconnect
- Creation of basic electro pneumatic circuits

Parts List

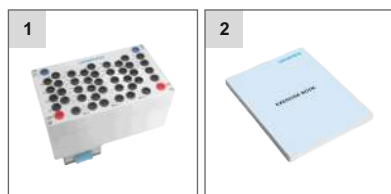


S. No	Description	Part No	Qty
1	5/2 Single solenoid valve with spring return (with LED)	MP0019	1
2	5/2 Double solenoid (with LED)	MP0020	2
3	Magnetic reed switch with clamp	MP0022	6
4	Electrical connection set	MP0027	1
5	Electrical push button module	MP0059	1
6	Profile mounted SMPS	MP0215	1
7	Electro pneumatics - Text book	T201	1

JTK-KITB-1 (Basic Electro Pneumatic Add on Module)

- Includes basic electro pneumatic products like relay etc.,
- Latching of solenoid coils using Relay
- Function of 4C/O Relay
- Understanding of Latching circuits
- Creation of basic electro pneumatic circuits using relay

Parts List



S. No	Description	Part No	Qty
1	Relay logic unit - 4C/O - 3 Relays	MP0074	2
2	Electro pneumatic Exercise Book - Basic	E201	1

TRAINER KIT

Series JTKP

Cat No JTKP-1-01-AA

JTK-KITB-2 (Advanced Electro Pneumatic Add on Module)

- Includes advanced electro pneumatic products like electrical timer and counter etc.,
- Functions of ON delay & OFF Delay timer
- Pulse counting using Counter
- Operation of signal elements
- Operation of Various types of proximity sensors - inductive, Capacitive, Photo electric
- Creation of Advanced Electro Pneumatic Circuits

Parts List



S. No	Description	Part No	Qty
1	Inductive proximity sensor assembly	MP0065	1
2	Capacitive proximity sensor assembly	MP0066	1
3	Optical proximity sensor assembly	MP0067	1
4	Electronic counter module	MP0075	1
5	Electrical buzzer with indicator module	MP0076	1
6	ON & OFF delay timer module	MP0077	1
7	Electro pneumatic Exercise Book - Advanced	E202	1

TRAINER KIT

Series JTKP

Cat No JTKAMP-1-01-AA

MOBILE PNEUMATICS

Features

- Designed with applications of pneumatics in Commercial vehicles / Bus
- Mobile pneumatic package includes specialised pneumatic products like Kneeling valve, Tire inflator valve etc.
- Hand's on circuits covers the real time applications like Kneeling application, Axial lifting, Tire inflator, Bus door opening / closing etc.,
- One touch fittings for easy connect and disconnect
- A unique Snap-on mounting base saves time in mounting & removal of components
- Upgradation and expansion possible



* Image shown is for illustration purposes only.
Actual product may vary.

Application

The Mobile Pneumatic trainer kit is designed with capability to demonstrate the design, construction of specialized pneumatic components and real time applications in Commercial vehicles / bus. Suitable for Automobile engineering syllabus and Automobile companies having ISO & TPM training systems.

Technical Specifications

Ordering code	JTKP4-1
Installation	Vertical / Horizontal
Ambient temperature	60°C Max.
Medium	Filtered Compressed air
Max. Operating Pressure (Recommended)	6 bar
Materials of construction	Aluminium, Mild steel

Note: The workbench in the above picture is only for reference, Refer mountings and accessories page for selection of suitable mountings and accessories as per requirement and order it.

TRAINER KIT

Series JTKP

Cat No JTKAMP-1-01-AA

Parts List

- This is a mobile pneumatic package that includes mobile pneumatic products like, Kneeling valve, Inflator valve, Back pressure sensor, etc.,
- Function of valves, Actuators and Air preparation units
- One touch fittings and tubing for easy connect and disconnect



TRAINER KIT **Series JTKP**

Cat No JTKAMP-1-01-AA

S. No	Description	Part No	Qty
1	Double Acting Cylinder	MP0018	2
2	Flow control valve unit	MP0010	2
3	5/2 Double external pilot operated valve	MP0006	1
4	3/2 NC Push Button (GREEN) Valve	MP0002	1
5	3/2 NC Push Button (RED) Valve	MP0003	1
6	Electrical limit switch (Forwarding)	MP0057	1
7	5/2 Double sol. op. valve (With LED)	MP0020	1
8	Shuttle valve (OR Valve)	MP0011	2
9	PE converter	MP0056	1
10	5/2 Single sol. op. valve with spring Return	MP0019	1
11	Regulator with Pressure gauge	MP0032	1
12	Pressure sensor (w/o Analog output)	MP0055	1
13	Electro pneumatic sensor with fitting	MP0155	1
14	1/4-5/2,24V DC Sin. Sol. Double Pilot Valve	MP0142	1
15	Anti ram valve	MP0146	1
16	Emergency switch (Inner) with fittings	MP0147	1
17	3/2 Exhaust type valve	MP0148	1
18	Kneeling valve with fittings	MP0149	1
19	5/2 control valve	MP0150	1
20	3/2 Stem Actuator Valve with fittings	MP0151	1
21	2/2 Solenoid valve - PTO	MP0152	2
22	Dual Solenoid valve with manifold	MP0153	1
23	PE convertor with clamp	MP0154	1
24	Foot operated valve with fittings	MP0145	1
25	Air tank for tyre inflator	MP0162	1
26	Single acting cylinder (SAC)	MP0014	4
27	5/3 Hand lever sp. cen. valve - 1/4" (Exhaust)	MP0064	1
28	3/2 Normally closed Single solenoid pilot operated	MP0041	4
29	5/2 Hand lever op. valve with Detent	MP0009	1
30	Junction box with Slide valve	MP0001	1
31	FRL Unit with pressure gauge	MP0000	1
32	Different Dia Straight union Dia 4 x Dia 6	WP2140406	5
33	Union tee Dia 6	WP2300606	1
34	Union Y Dia 6	WP2400606	1
35	Union Y Dia 4	WP2400404	5
36	TUBE(PU) OD4 (Blue)	WH00B04	10 Meters
37	TUBE(PU) OD6 (Blue)	WH00B06	2 Meters
38	Tube cutter	WC1	1
39	Electrical Push Button Module	MP0059	1
40	Relay logic unit - 4C/O-3 Relays	MP0074	1
41	Electrical Connection set	MP0027	1
42	S7-1200 PLC Kit with analog I/O	MP0157	1
43	Profile mounted SMPS	MP0215	1
44	Mobile Pneumatic Exercise book - Basic	E103	1
45	Pneumatics Textbook	T101	1

TRAINER KIT

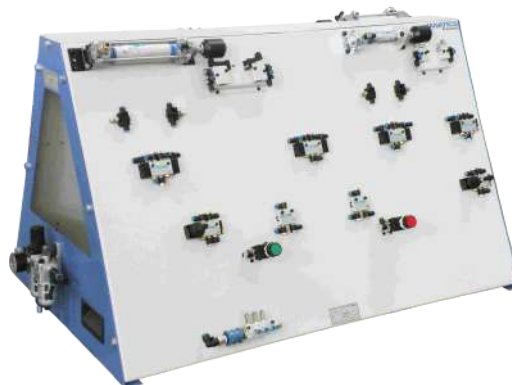
Series JPS

Cat No JTKJPS-1-01-AA

PNEUMATIC TRAINER KIT

Features

- Sleek and Sturdy
- Industrial components
- Provision for single sided and double sided mounting
- Desktop and workbench type mounting available



* Image shown is for illustration purposes only.
Actual product may vary.

Application

The “pneumatic trainer kit” is designed with the capability to demonstrate the design, construction and application of pneumatic components and circuits. It consists of selecting products prefixed on the sheet metal plate suitable for addressing basic academic requirements for the purpose of conducting lab experiments. Suitable for engineering syllabus for various disciplines like Mechanical, Mechatronics, Production, Instrumentation and more, and for companies having ISO & TPM training systems.

Technical Specifications

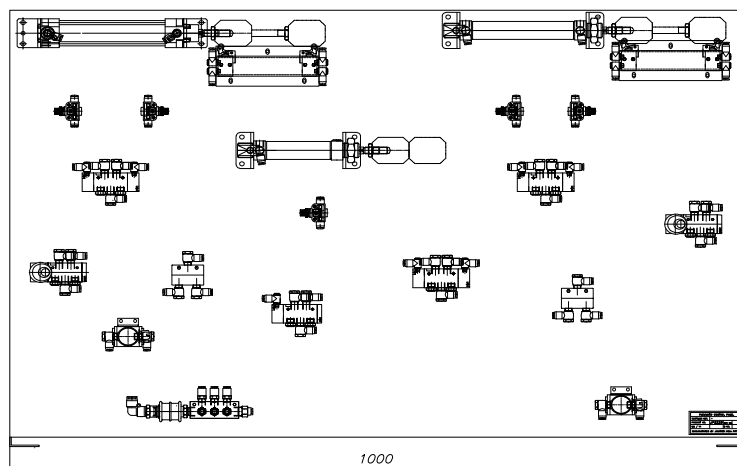
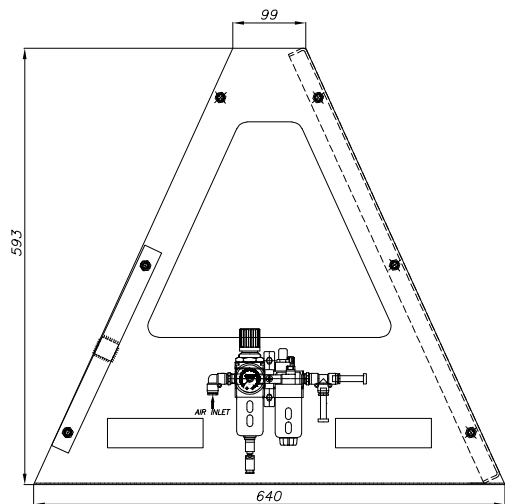
Ordering code	JPS228	JPS228/S
Model	Basic	Add on
Size (in cm)	100 x 64 x 60	
Installation	Vertical	
Ambient temperature	60°C Max.	
Medium	Filtered Compressed air	
Max. Pressure	6 bar	
Materials of construction	Aluminium, Mild steel	

Note: Refer mounting and accessories page for selection of suitable accessories (Work bench, SMPS & Compressor)

TRAINER KIT

Series JPS

Cat No JTKJPS-1-01-AA



Parts List

S. No	Description	Qty
1	Air preparation unit	1
2	Junction box with slide valve	1
3	Double acting cylinder - Tie rod model	1
4	Double acting cylinder - Crimping model	1
5	Single acting cylinder - Crimping model	1
6	Roller Lever valve (Forwarding & Reversing)	4
7	Inline flow control valve	5
8	5/2 way double external pilot operated valve	3
9	5/2 way Single External pilot operated valve with spring return	1
10	5/2 Hand lever valve with Sp. Return	1
11	5/2 Hand lever valve with detent	1
12	3/2 NC Valve with switch (Flush head - Green)	1
13	3/2 NC Valve with switch (Flush head - Red)	1
14	Quick exhaust valve with Quick coupler plug	1
15	OR Valve	1
16	AND Valve	1
17	Union Y Ø4	6
18	Union Tee Ø4	6
19	Plug Ø4	6
20	Tube Cutter	1
21	Tube Ø4 (Blue)	10 Meters
22	Tube Ø8 (Blue)	5 Meters
23	Screwdriver	1
24	Pneumatic textbook	1
25	Pneumatic exercise book - Basic	1

TRAINER KIT

Series JPS

Cat No JTKJPS-1-01-AA

ELECTRO PNEUMATIC TRAINER KIT

Features

- Sleek and Sturdy
- Industrial components
- Provision for single sided and double sided mounting
- Desktop and workbench type mounting available



* Image shown is for illustration purposes only.
Actual product may vary.

Application

The “Electro pneumatic trainer kit” is designed with capability to demonstrate the design, construction and application of pneumatic components and circuits, Design and function of a Electro pneumatic system. It consists of select products prefixed on the sheet metal plate suitable for addressing basic academic requirement for the purpose of conducting lab experiments. Suitable for engineering syllabus for various disciplines like Mechanical, Mechatronics, Production, Instrumentation and more, and for companies having ISO & TPM training systems.

Technical Specifications

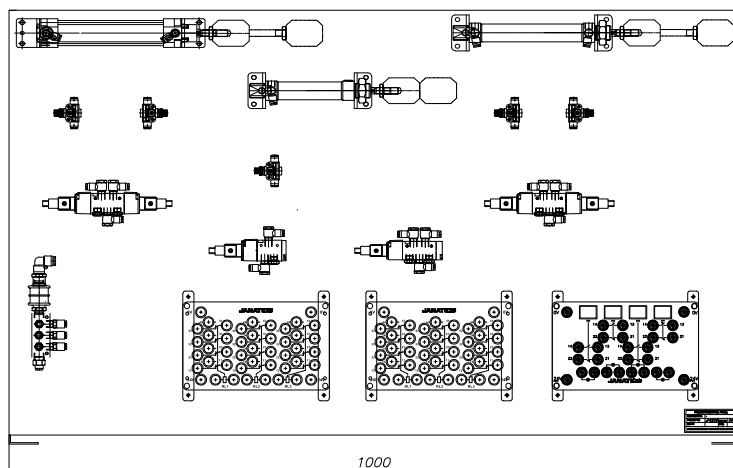
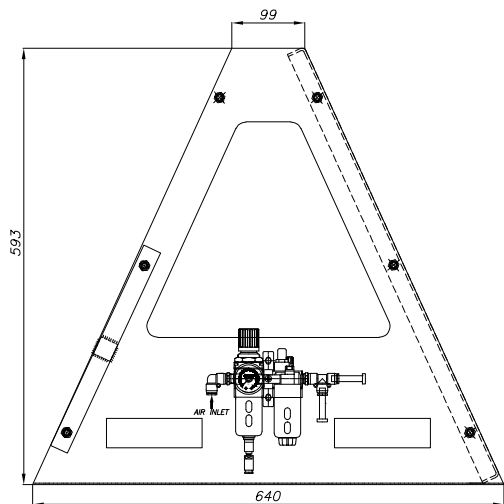
Ordering code	JPS229	JPS229/S
Model	Basic	Add on
Size (in cm)	100 x 64 x 60	
Installation	Vertical	
Ambient temperature	60°C Max.	
Medium	Filtered Compressed air	
Max. Pressure	6 bar	
Materials of construction	Aluminium, Mild steel	

Note: Refer mounting and accessories page for selection of suitable accessories (Work bench, SMPS & Compressor)

TRAINER KIT

Series JPS

Cat No JTKJPS-1-01-AA



Parts List

S. No	Description	Qty
1	Air preparation unit	1
2	Junction box with slide valve	1
3	Double acting cylinder - Tie rod model	1
4	Double acting cylinder - Crimping model	1
5	Single acting cylinder - Crimping model	1
6	Inline flow control valve	5
7	5/2 way Double solenoid operated valve	2
8	5/2 way Single solenoid operated valve with spring return	2
9	Relay logic unit - 4C/O-3 Relays	2
10	Electrical Push Button Module	1
11	Electrical Connection set	1
12	Union Y Ø4	6
13	Union Tee Ø4	6
14	Plug Ø4	6
15	Tube Cutter	1
16	Tube Ø4 (Blue)	10 Meters
17	Tube Ø8 (Blue)	5 Meters
18	Screwdriver	1
19	Electropneumatic textbook	1
20	Electropneumatic exercise book - Basic	1

TRAINER KIT

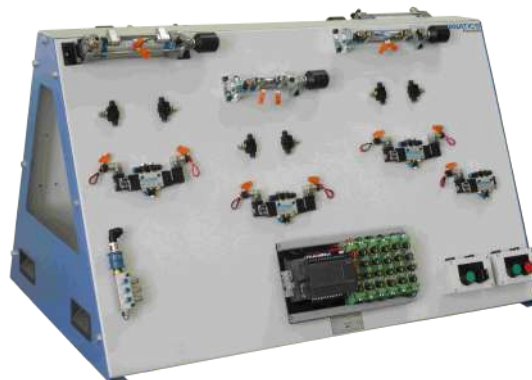
Series JPS

Cat No JTKJPS-1-01-AA

ELECTRO PNEUMATIC TRAINER KIT WITH PLC

Features

- Sleek and Sturdy
- Industrial components
- Available Siemens LOGO PLC / equivalent
- Provision for single sided and double sided mounting
- Desktop and workbench type mounting available



* Image shown is for illustration purposes only.
Actual product may vary.

Application

The “Electro pneumatic trainer kit with PLC” consists of all the capabilities mentioned under the electro pneumatic training kit, as well as surpasses their capabilities by its flexibility in designing circuits & possibilities of achieving numerous logical circuits using the software interface, with no need for alterations in the connections given to the sensors / actuators. It consists of select products prefixed on the sheet metal plate suitable for addressing basic academic requirement for the purpose of conducting lab experiments. Suitable for engineering syllabus for various disciplines like Mechanical, Mechatronics, Production, Instrumentation and more, and for companies having ISO & TPM training systems.

Technical Specifications

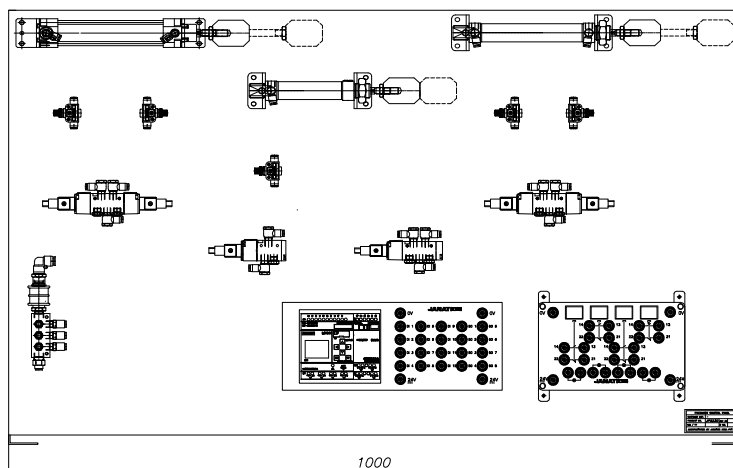
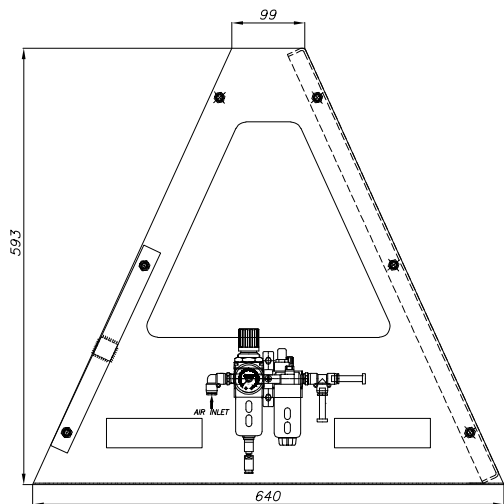
Ordering code	JPS230	JPS230/S
Model	Basic	Add on
Size (in cm)	100 x 64 x 60	
Installation	Vertical	
Ambient temperature	60°C Max.	
Medium	Filtered Compressed air	
Max. Pressure	6 bar	
Materials of construction	Aluminium, Mild steel	

Note: Refer mounting and accessories page for selection of suitable accessories (Work bench, SMPS & Compressor)

TRAINER KIT

Series JPS

Cat No JTKJPS-1-01-AA



Parts List

S. No	Description	Qty
1	Air preparation unit	1
2	Junction box with slide valve	1
3	Double acting cylinder - Tie rod model	1
4	Double acting cylinder - Crimping model	1
5	Single acting cylinder - Crimping model	1
6	Inline flow control valve	5
7	5/2 way Double solenoid operated valve	2
8	5/2 way Single solenoid operated valve with spring return	2
9	Logo PLC assembly	1
10	Logo programming software	1
11	Logo programming cable	1
12	Electrical push button module	1
13	Electrical Connection set	1
14	Union Y Ø4	6
15	Union Tee Ø4	6
16	Plug Ø4	6
17	Tube Cutter	1
18	Tube Ø4 (Blue)	10 Meters
19	Tube Ø8 (Blue)	5 Meters
20	Screwdriver	1
21	Electropneumatic textbook with PLC	1
22	Electropneumatic exercise book with PLC - Basic	1

TRAINER KIT

Series PTK

Cat No PTKP-1-01-AA

PNEUMATIC TRAINER KIT

Features

- Portable carry case with wheel
- Sleek, Compact and Sturdy
- Industrial components
- Available in 3 variants namely Pneumatic, Electro Pneumatic and Electro Pneumatic with PLC
- Inbuilt SMPS (Electro Pneumatic and Electro Pneumatic with PLC)



* Image shown is for illustration purposes only.
Actual product may vary.

Application

These space saving, compact and portable trainer kits facilitate a trainer to teach fundamental concepts and circuit designing of pneumatic products and is very handy for training and demonstrations.

Technical Specifications

Ordering code	PTK Series
Size (in cm)	60 x 50 x 25
Ambient temperature	60°C Max.
Medium	Filtered Compressed air
Max. Pressure	6 bar
Materials of construction	Aluminium, Mild steel, Wood

Ordering

Product Description	Ordering code
Pneumatic Trainer Kit The "Pneumatic trainer kit" is designed with capability to demonstrate the design, construction and application of pneumatic components and circuits.	PTK1
Electro Pneumatic Trainer Kit The "Electro pneumatic trainer kit" is designed with capability to demonstrate the design, construction and application of pneumatic components and circuits, Design and function of a Electro pneumatic system.	PTK2
Electro Pneumatic Trainer Kit with PLC The "Electro pneumatic kit with PLC" consists of all the capabilities mentioned under the electro pneumatic training kit, as well as surpasses their capabilities by its flexibility in designing circuits & possibilities of achieving numerous logical circuits using the software interface, with no need for alterations in the connections given to the sensors / actuators.	PTK3

Note: Refer mounting and accessories page for selection of suitable mountings and accessories.

TRAINER KIT

Series TTK

Cat No PTKP-1-01-AA

TRANSPARENT TRAINER KIT

Features

- Compact, Handy and Sleek design
- Partitions for component storage
- Visualisation of internal elements
- Effortless handling of components



* Image shown is for illustration purposes only.
Actual product may vary.

Application

Transparent Trainer Kit allows to visualise the functioning of internal elements of the product.

Technical Specifications

Ordering code	JTK-TTK7-1
Size (in cm)	40 X 40 X 20
Installation	Vertical / Horizontal
Ambient temperature	60°C Max.
Medium	Filtered Compressed air
Max. Pressure	4 bar
Materials of construction	Poly carbonate, Aluminium, Steel, Rubber

Parts List

S. No	Description	Qty
1	Air preparation unit	1
2	Junction box with slide valve	1
3	Double acting cylinder - Tie rod model	1
4	Single acting cylinder - Tie rod model	1
5	Roller Lever valve - Forwarding	1
6	Roller Lever valve - Reversing	2
7	Flow control valve	2
8	5/2 way double external pilot operated valve	1
9	5/2 way Single External pilot operated valve with spring return	1
10	5/2 Hand lever valve with detent	1
11	Plug Ø4	2
12	Tube (PU) Ø4 (Blue)	5 Meters
13	Tube (PU) Ø8 (Blue)	1 Meter
14	Tube cutter	1
15	Union Y Ø4	2

Note: Mountings and Accessories are to be ordered separately

TRAINER KIT

Series JTKH

Cat No JTKH-1-01-AA

HYDRAULIC TRAINER KIT

Features

- Sleek and rugged design
- Industrial components
- A unique Snap-on mounting base saves time in mounting & removal of components
- Industrial application focused exercises
- Suitable for modular aluminum extruded profile plate
- Upgradation and expansion possible



* Image shown is for illustration purposes only.
Actual product may vary.

Application

The Hydraulic trainer kit is designed with the capability to demonstrate the design, construction and application of Hydraulic components and circuits. Based on the integration of different technologies, there are three variants available such as Basic Hydraulic, Electro Hydraulic and Electro Hydraulic with PLC. Suitable for engineering syllabus for various disciplines like Mechanical, Mechatronics, Production, Instrumentation and more, and for companies having ISO & TPM training systems

Technical Specifications

Ordering code	JTKX-X
Installation	Vertical / Horizontal
Ambient temperature	60°C Max.
Medium	Oil VG68
Max. Operating pressure (Recommended)	20 bar
Materials of construction	Aluminium, Brass, Steel, Nitrile rubber, Acetal

Note: The workbench in the above picture is only for reference, Refer mountings and accessories page for selection of suitable mountings and accessories as per requirement and order it.

TRAINER KIT

Series JTKH

Cat No JTKH-1-01-AA

JTKH1-1 (Basic Hydraulic Kit)

Parts List



S. No	Description	Part No	Qty
1	Hydraulic double acting cylinder	MP0171	1
2	4/2 Hand lever operated valve spring return	MP0193	1
3	4/3 Hand lever operated valve with detent (AB to T)	MP0172	1
4	4/3 Hand lever operated valve with detent (closed mid position)	MP0194	1
5	Flow control valve (Two-way flow control valve)	MP0174	1
6	Flow control valve (One flow control valve)	MP0197	1
7	Pressure gauge with mounting (100kg/cm ²)	MP0176	3
8	Non-Return Valve type pilot operated	MP0179	1
9	Non return valve (0.6 Mpa opening)	MP0178	1
10	Measuring scale unit for cylinder	MP0185	1
11	4 Way junction box	MP0180	2
12	P&T Junction box (shut off valve)	MP0181	1
13	T- distributor	MP0183	2
14	Hose set	MP0184	1
15	Pressure relief valve	MP0188	1
16	Hydraulic motor	MP0189	1
17	Hydraulic cylinder with weight unit	MP0190	1
18	Hydraulic Exercise book - Basic	E401	1

TRAINER KIT

Series JTKH

Cat No JTKH-1-01-AA

JTKH2-1 (Electro Hydraulic Kit)

Parts List



S. No	Description	Part No	Qty
1	Hydraulic double acting cylinder	MP0171	1
2	4/3 way double solenoid valve with spring centered (Closed mid position)	MP0173	1
3	4/2 way single solenoid valve with spring return	MP0195	1
4	4/2 way double solenoid valve with detent	MP0196	1
5	Flow control valve (Two way flow control valve)	MP0174	1
6	Flow control valve (One flow control valve)	MP0197	1
7	Pressure gauge with mounting (100kg/cm ²)	MP0176	2
8	Non return valve (0.6 Mpa opening)	MP0178	1
9	Measuring scale unit for cylinder	MP0185	1
10	4 Way junction box	MP0180	2
11	P&T Junction box (Shut off valve)	MP0181	1
12	T - distributor	MP0183	2
13	Hose set	MP0184	1
14	Pressure relief valve	MP0188	1
15	Hydraulic cylinder with weight unit	MP0190	1
16	Pressure switch	MP0192	1
17	4 change over 3 relay	MP0074	1
18	Push button module	MP0059	1
19	Inductive proximity sensor	MP0065	2
20	Electrical connection set	MP0027	1
21	Profile mounted SMPS	MP0215	1
22	Electro Hydraulic Exercise book - Basic	E403	1

TRAINER KIT **Series JTKH**

Cat No JTKH-1-01-AA

JTKH3-1 (Basic Electro Hydraulic Kit with PLC)

Parts List



S. No	Description	Part No	Qty
1	Hydraulic double acting cylinder	MP0171	1
2	4/3 way double solenoid valve with spring centered (Closed mid position)	MP0173	1
3	4/2 way single solenoid valve with spring return	MP0195	1
4	4/2 way double solenoid valve with detent	MP0196	1
5	Flow control valve (Two way flow control valve)	MP0174	1
6	Flow control valve (One flow control valve)	MP0197	1
7	Pressure gauge with mounting (100kg/cm ²)	MP0176	2
8	Non return valve (0.6 Mpa opening)	MP0178	1
9	Measuring scale unit for cylinder	MP0185	1
10	4 Way junction box	MP0180	2
11	P&T Junction box (Shut off valve)	MP0181	1
12	T - distributor	MP0183	2
13	Hose set	MP0184	1
14	Pressure relief valve	MP0188	1
15	Hydraulic cylinder with weight unit	MP0190	1
16	Pressure switch	MP0192	1
17	Basic PLC add on module	JTK-KITC1-11	1
18	Push button module	MP0059	1
19	Inductive proximity sensor	MP0065	2
20	Electrical connection set	MP0027	1
21	Profile mounted SMPS	MP0215	1
22	Electro Hydraulic Exercise book - Basic	E403	1

TRAINER KIT

Series JTKH

Cat No JTKH-1-01-AA

JTKH3-2 (Advanced Electro Hydraulic Kit with PLC)

Parts List



S. No	Description	Part No	Qty
1	Hydraulic double acting cylinder	MP0171	1
2	4/3 way double solenoid valve with spring centered (Closed mid position)	MP0173	1
3	4/2 way single solenoid valve with spring return	MP0195	1
4	4/2 way double solenoid valve with detent	MP0196	1
5	Flow control valve (Two way flow control valve)	MP0174	1
6	Flow control valve (One flow control valve)	MP0197	1
7	Pressure gauge with mounting (100kg/cm ²)	MP0176	2
8	Non return valve (0.6 Mpa opening)	MP0178	1
9	Measuring scale unit for cylinder	MP0185	1
10	4 Way junction box	MP0180	2
11	P&T Junction box (Shut off valve)	MP0181	1
12	T - distributor	MP0183	2
13	Hose set	MP0184	1
14	Pressure relief valve	MP0188	1
15	Hydraulic cylinder with weight unit	MP0190	1
16	Pressure switch	MP0192	1
17	Advanced PLC add on module	JTK-KITC2-12	1
18	Push button module	MP0059	1
19	Inductive proximity sensor	MP0065	2
20	Electrical connection set	MP0027	1
21	Profile mounted SMPS	MP0215	1
22	Electro Hydraulic Exercise book - Basic	E403	1

TRAINER KIT

Series JTKV

Cat No JTKV-1-01-AA

VACUUM TRAINER KIT

Features

- Sleek and rugged design
- Industrial components
- A unique Snap-on mounting base saves time in mounting & removal of components
- Various size of vacuum ejectors
- Different types of suction cups
- Fail safe mode circuits
- Industrial application focused exercises
- Different shapes of work pieces
- Upgradation and expansion possible



* Image shown is for illustration purposes only.
Actual product may vary.

Application

The Vacuum trainer kit is designed with the capability to demonstrate the design, construction and application of pneumatic components and circuits. This enables trainees to learn the fundamentals of Vacuum technology and raises them to the level of designing suitable solutions for factory automation. Applicable to various disciplines in academic institutions like Mechanical, Mechatronics, Production, Instrumentation and more, and for companies having ISO & TPM training systems.

Technical Specifications

Ordering code	JTKV1-1
Installation	Vertical / Horizontal
Ambient temperature	60°C Max.
Medium	Filtered Compressed air
Max. supply pressure	6 bar
Vacuum pressure	- 0.6 bar
Materials of construction	Aluminium, Mild steel, Silicone

Note: The workbench in the above picture is only for reference, Refer mountings and accessories page for selection of suitable mountings and accessories as per requirement and order it.

TRAINER KIT

Series JTKV

Cat No JTKV-1-01-AA

Parts List



S. No	Description	Part No	Qty
1	Basic ejector (Ø10mm) with fittings assy	MP0200	1
2	Basic ejector (Ø15mm) with fittings assy	MP0201	1
3	Basic ejector (Ø20mm) with fittings assy	MP0202	1
4	Vacuum gauge with fittings assy	MP0203	1
5	Flat suction cup with nipple Ø15 knob assy	MP0205	1
6	Flat suction cup with nipple Ø20 knob assy	MP0206	1
7	Bellow suction cup with nipple Ø25 knob assy	MP0207	1
8	Bellow suction cup with nipple Ø33 knob assy	MP0208	1
9	Flat suction cup with nipple oval / Rectangle 30 x 10 knob assy	MP0209	1
10	Bellow suction cup with nipple oval / Rectangle 60 x 30 knob assy	MP0210	1
11	Vacuum check valve with filter knob assy	MP0211	1
12	Air pressure Reservoir 0.4 Ltr	MP0212	1
13	NRV with fittings assy	MP0213	1
14	Suction cups with manifold assembly	MP0249	1
15	3/2 NC Hand lever valve with Detent - 1/8" (Ø6mm)	MP0250	1
16	Pilot operated Non return valve 1/8"x Ø6	MP0251	1
17	Work piece for Vacuum Trainer kit	MP0252	1
18	3/2 NC manually operated valve (PB green)	MP0256	1
19	Inline slide valve	MP0257	1
20	Flow control valve unit (Ø6)	MP0258	1
21	FRL unit with pressure gauge	MP0000	1
22	Union Tee fitting Ø6	WP2300606	1
23	Tube (PU) Ø8 (Blue)	WH00B08	0.5 Meters
24	Tube (PU) Ø6 (Blue)	WH00B06	5 Meters
25	Tube cutter	WC1	1
26	Vacuum -Text book	T501	1
27	Vacuum - Exercise book	E501	1

TRAINER KIT

Series JTKS

Cat No JTKS-1-01-AA

SENSORIC TRAINER KIT

Features

- Sleek and rugged design
- Industrial components
- A unique Snap-on mounting base saves time in mounting & removal of components
- Various types of Sensors
- Different types of work pieces
- Fail safe mode circuits
- Industrial application focused exercises
- Upgradation and expansion possible



* Image shown is for illustration purposes only.
Actual product may vary.

Application

The Sensoric trainer kit is designed with the capability to demonstrate the design, construction and application of electrical components and circuits. This enables trainees to learn the fundamentals of sensorics and raises them to the level of designing suitable solutions for factory automation. Applicable to various disciplines in academic institutions like Electrical, Electronics, Mechatronics, Production, Instrumentation and more, and for companies having ISO & TPM training systems.

Technical Specifications

Ordering code	JTKS1-1
Installation	Vertical / Horizontal
Ambient temperature	60°C Max.
Operating voltage	24V DC
Materials of construction	Aluminium, Mild steel, Silicone

Note: The workbench in the above picture is only for reference, Refer mountings and accessories page for selection of suitable mountings and accessories as per requirement and order it.

TRAINER KIT

Series JTKS

Cat No JTKS-1-01-AA

Parts List



S. No	Description	Part No	Qty
1	Magnetic field sensor	MP0223	1
2	Inductive sensor (Flush type)	MP0224	1
3	Inductive sensor (Non-Flush type)	MP0225	1
4	Inductive analog sensor	MP0226	1
5	Capacitive sensor	MP0227	1
6	Optical Thru beam sensor	MP0228	1
7	Optical sensor - Retro reflective with polarization filter	MP0229	1
8	Reflector Rectangular	MP0230	1
9	Optical sensor - Diffuse with background suppression	MP0232	1
10	Optical sensor - Diffuse	MP0233	1
11	Fiber optic sensor amplifier unit	MP0234	1
12	Plastic Fiber optic - Diffuse type	MP0235	1
13	Plastic Fiber optic - Thru - beam type	MP0236	1
14	Colour sensor	MP0237	1
15	Ultrasonic sensor	MP0238	1
16	LM guide unit	MP0239	1
17	Workpiece for Magnetic sensor	MP0259-01	1
18	Workpiece for Inductive & Capacitive sensor	MP0259-02	1
19	Workpiece for Optical & Ultrasonic sensor	MP0259-03	1
20	Workpiece for Colour sensor	MP0259-04	1
21	Multimeter	MP0260	1
22	Electrical connection set	MP0027	1
23	Electrical Push button module	MP0059	1
24	Relay logic unit 4C/O - 3 Relays	MP0074	1
25	Profile mounted SMPS	MP0215	1
26	Sensoric - Text book	T601	1
27	Sensoric - Exercise book	E601	1

TRAINER KIT

Series JTK

Cat No JTKPLC-1-01-AA

PROGRAMMABLE LOGIC CONTROLLERS (PLC) TRAINER KIT

Features

- Compact design
- Multi brand PLC's (Siemens, Allen Bradley, Mitsubishi etc.)
- Suitable for Integrating with Pneumatic, Hydraulic, Vacuum, Sensorics trainer kits
- Industrial components
- A unique Snap-on mounting base saves time in mounting & removal of components
- Industrial application focused exercises
- Suitable for modular aluminum extruded profile plate



* Image shown is for illustration purposes only.
Actual product may vary.

Application

The PLC trainer kit is designed with the capability to demonstrate the design, construction and application of PLC and Programming. It can be integrated with Pneumatic, Hydraulic, Vacuum and Sensorics trainer kits. Applicable to various disciplines in academic institutions like Mechanical, Electrical, Electronics, Mechatronics, Production, Instrumentation and more, and for companies having ISO & TPM training systems.

Technical Specifications

Ordering code	JTK-KITCX-XX
Installation	Vertical / Horizontal
Ambient temperature	60°C Max.
Operating voltage	24V DC
Materials of construction	Steel, PVC

Note: Refer mounting and accessories page for selection of suitable mountings and accessories.

TRAINER KIT

Series JTK

Cat No JTKPLC-1-01-AA

JTK-KITC1-11 (Basic PLC Add on module)

- Includes Siemens LOGO PLC with software and cable
- Digital controls of 12 inputs and 8 outputs
- Digital control of electro pneumatic components using PLC
- Hardwired PLC with a proprietary I/O interface for banana plug connections
- Simulation of PLC ladder logics without hardware

Parts List



S. No	Description	Part No	Qty
1	Basic PLC Module	MP0030	1
2	PLC Programming software	A90134	1
3	PLC Programming cable	A90136	1
4	Programmable Logic Controller - Text book	T301	1
5	Electro pneumatic with PLC Exercise Book - Basic	E301	1

JTK-KITC1-12 (Advanced PLC Add on module)

- Includes Siemens S7-1200 PLC with software and accessories
- Digital controls of 12 inputs and 8 outputs
- Digital control of electro pneumatic components using PLC
- Hardwired PLC with a proprietary I/O interface for banana plug connections
- Provision for OPC interface

Parts List



S. No	Description	Part No	Qty
1	Advanced PLC Module	MP0141	1
2	PLC Programming software	A90137	1
3	PLC Programming cable	A90136	1
4	Programmable Logic Controller - Text book	T301	1
5	Electro pneumatic with PLC Exercise Book - Basic	E302	1

TRAINER KIT

Series JTK

Cat No JTKPLC-1-01-AA

JTK-KITC1-14 (Advanced PLC Add on module)

- Includes Siemens S7-1200 PLC / equivalent with software and accessories
- Digital controls of 8 inputs and 6 outputs
- Analog controls of 4 inputs and 2 outputs
- Digital and Analogue Control of electro pneumatic components using PLC
- Hardwired PLC with a proprietary I/O interface for banana plug connections
- Provision for OPC interface

Parts List



S. No	Description	Part No	Qty
1	Advanced PLC Module	MP0157	1
2	PLC Programming software	A90137	1
3	PLC Programming cable	A90136	1
4	Programmable Logic Controller - Text book	T301	1
5	Electro pneumatic with PLC Exercise Book - Basic	E304	1

How to order

JTK - KITC X - XX

- | | |
|-----------------------|--|
| 1 - Pneumatics | 11 - Siemens / LOGO |
| 2 - Hydraulics | 12 - Siemens / S7-1200 with Digital IO's |
| 3 - Vacuum | 14 - Siemens / S7-1200 with Digital and Analogue IO's |
| 4 - Sensorics | |

TRAINER KIT

Series JTK

Cat No JTKPLC-1-01-AA

PROGRAMMABLE LOGIC CONTROLLERS (PLC) TRAINER KIT

Features

- Compact design
- Modular simulation modules
- Multi brand PLC's (Siemens, Allen Bradley, ABB, Mitsubishi etc.)
- Suitable for standalone PLC programming and simulation
- Provision for connecting with field devices
- Industrial components
- Available in both compact and desktop variants



* Image shown is for illustration purposes only.
Actual product may vary.

Application

The PLC trainer kit is designed with capability to learn the PLC Programming and real-time simulation. It can be integrated with Pneumatic, Hydraulic, Vacuum and Sensoric trainer kits. Applicable to various disciplines in academic institutions like Electrical, Electronics, Mechatronics, Production, Instrumentation and more, and for companies having ISO & TPM training systems.

Technical Specifications

Ordering code	JTKCX-XXX
Installation	Modular / Desktop
Ambient temperature	60°C Max.
Operating voltage	24V DC
Materials of construction	Aluminium, Mild steel, Stainless steel, Nylon, Rubber

Note: Refer mounting and accessories page for selection of suitable mountings and accessories.

TRAINER KIT

Series JTK

Cat No JTKPLC-1-01-AA

COMPACT PLC

JTKC1-111 (Compact PLC trainer package with Digital controls - Siemens S7-1200)

- Includes Siemens LOGO PLC with software and cable
- Digital controls of 12 inputs and 8 outputs
- Digital control of electro pneumatic components using PLC
- Hardwired PLC with a proprietary I/O interface for banana plug connections
- Simulation of PLC ladder logics without hardware

Parts List

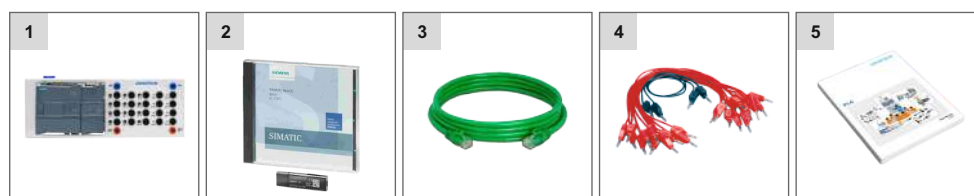


S. No	Description	Part No	Qty
1	PLC trainer kit with Digital I/O's	MP0343	1
2	PLC Programming software	A90134	1
3	PLC Programming cable	A90136	1
4	Electrical connection set	MP0317	1
5	Programmable Logic Controller - Text book	T301	1

JTKC1-121 (Compact PLC trainer package with Digital controls - Siemens S7-1200)

- Includes Siemens S7-1200 with CPU1214 with software and cable
- Digital controls of 12 inputs and 8 outputs
- Hardwired PLC with a proprietary I/O interface for banana plug connections
- Simulation of PLC ladder logics without hardware and field devices
- Provision for OPC interface

Parts List



S. No	Description	Part No	Qty
1	PLC trainer kit with Digital I/O's	MP0297	1
2	PLC Programming software	A90137	1
3	PLC Programming cable	A90136	1
4	Electrical connection set	MP0317	1
5	Programmable Logic Controller - Text book	T301	1

TRAINER KIT

Series JTK

Cat No JTKPLC-1-01-AA

UNIVERSAL PLC

JTKC2-121 (Universal PLC trainer package with Digital controls - Siemens S7-1200)

- Includes Siemens S7-1200 with CPU1214 with software and cable
- Digital controls of 16 inputs and 16 outputs
- Hardwired PLC with a proprietary I/O interface for banana plug connections
- Simulation of PLC ladder logics without hardware and field devices
- Provision for OPC interface
- Expandable I/O's

Parts List



S. No	Description	Part No	Qty
1	Universal PLC trainer kit with Digital I/O's	MP0333	1
2	PLC Programming software - Siemens TIA Portal	A90137	1
3	PLC Programming cable	A90136	1
4	Electrical connection set	MP0317	1
5	Programmable Logic Controller - Text book	T301	1

JTKC2-122 (Universal PLC trainer package with Digital & Analog controls - Siemens S7-1200)

- Includes Siemens S7-1200 with CPU1214 with software and cable
- Digital controls of 16 inputs and 16 outputs
- Analog controls of 4 inputs and 2 outputs
- Hardwired PLC with a proprietary I/O interface for banana plug connections
- Simulation of PLC ladder logics without hardware and field devices
- Provision for OPC interface
- Expandable I/O's

Parts List



S. No	Description	Part No	Qty
1	Universal PLC trainer kit with Digital & Analog I/O's	MP0335	1
2	PLC Programming software - Siemens TIA Portal	A90137	1
3	PLC Programming cable	A90136	1
4	Electrical connection set	MP0317	1
5	Programmable Logic Controller - Text book	T301	1

TRAINER KIT

Series JTK

JTKC2-132 (Universal PLC trainer package with Digital & Analog controls - Siemens S7-1200)

- Includes Siemens S7-1200 with CPU1215 with software and cable
- Digital controls of 16 inputs and 16 outputs
- Analog controls of 4 inputs and 2 outputs
- Hardwired PLC with a proprietary I/O interface for banana plug connections
- Simulation of PLC ladder logics without hardware and field devices
- Provision for OPC interface
- Dual Ethernet port for hardware to hardware communication
- Expandable I/O's

Parts List



S. No	Description	Part No	Qty
1	Universal PLC trainer kit with Digital & Analog I/O's	MP0334	1
2	PLC Programming software - Siemens TIA Portal	A90137	1
3	PLC Programming cable	A90136	1
4	Electrical connection set	MP0317	1
5	Programmable Logic Controller - Text book	T301	1

How to order

JTKC - X

- 1** - Compact
- 2** - Universal

- XX

- 11** - Siemens / LOGO
- 12** - Siemens / S7-1200 CPU1214
- 13** - Siemens / S7-1200 CPU1215

- X

- 1** - Digital
- 2** - Analog / Digital

TRAINER KIT

Series JTK

Cat No JTKHMI-1-01-AA

HUMAN MACHINE INTERFACE (HMI) TRAINER KIT

Features

- Compact design
- Multi brand HMI's (Siemens, Exor, Mitsubishi etc.)
- Configuration software
- TFT touchscreen display ranging from 4" to 10"
- Available communication protocols such as Ethernet, USB Serial bus (RS-232, RS-485, RS-422)
- Suitable for Integrating with Pneumatic, Hydraulic, Vacuum, Sensoric trainer kits through PLC
- Industrial components
- A unique standalone desktop trainer kit



* Image shown is for illustration purposes only.
Actual product may vary.

Application

The HMI trainer kit is designed with capability to demonstrate the design, construction and application of HMI and Programming. It can be integrated with Pneumatic, Hydraulic, Vacuum and Sensoric trainer kits via PLC. Applicable to various disciplines in academic institutions like Electrical Electronics, Mechatronics, Production, Instrumentation and more, and for companies having ISO & TPM training systems.

Technical Specifications

Ordering code	JTK-HMIXX-XX
Installation	Desktop
Orientation	Horizontal / Vertical
Ambient temperature	60°C Max.
Operating voltage	24V DC
Materials of construction	Mild steel, Stainless steel, Plastic

Note: Refer mounting and accessories page for selection of suitable mountings and accessories.

TRAINER KIT

Series JTK

Cat No JTKHMI-1-01-AA

JTK-HMI-13-22 (HMI trainer package with Exor eSmart10)

- Includes Exor 10" HMI with software and cable
- Digital controls of Electrical, Electro pneumatic, Electro hydraulic, Electro vacuum components using PLC
- Communication protocols - Ethernet, USB and Serial ports



Specifications	
Make	Exor
Model	eSMART10
Supply voltage	24V DC
Display type	TFT LCD, Touchscreen
Screen size	10"
Ethernet port	✓
USB port	✓
Serial port	✓
Orientation	Horizontal
Dimension (W x H)	282 x 197 mm

Parts List

S. No	Description	Part No	Qty
1	HMI Trainer kit with Exor eSmart10	MP0323	1
2	J Mobile studio - Exor HMI Programming software	A90370	1
3	PLC Programming cable	A90136	1

JTK-HMI-23-22 (HMI trainer package with Exor eSmart10)

- Includes Exor 10" HMI with software and cable
- Digital controls of Electrical, Electro pneumatic, Electro hydraulic, Electro vacuum components using PLC
- Communication protocols - Ethernet, USB and Serial ports



Specifications	
Make	Exor
Model	eSMART10
Supply voltage	24V DC
Display type	TFT LCD, Touchscreen
Screen size	10"
Ethernet port	✓
USB port	✓
Serial port	✓
Orientation	Vertical
Dimension (W x H)	154 x 86 mm

Parts List

S. No	Description	Part No	Qty
1	HMI Trainer kit with Exor eSmart10	MP0340	1
2	J Mobile studio - Exor HMI Programming software	A90370	1
3	PLC Programming cable	A90136	1

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TRAINER KIT

Mountings and Accessories

TRAINER KIT

Series JTK

Cat No JTKMA-1-01-AA

MOUNTINGS AND ACCESSORIES

Features

- Modular
- Sleek and Sturdy
- Available with Desktop & Work bench type
- Suitable for JTK series trainer kits



* Image shown is for illustration purposes only.
Actual product may vary.

Application

These are the supporting Mountings and Accessories for Trainer kits. It is available with desktop and workbench series. Suitable for all kind of Laboratory and training centers

Horizontal Profile plate



Ordering code	JTK-PTT
Size (L x W x H)	100 x 64 x 4 cm
Profile groove width	8.3 mm
Material	Anodised Aluminium Extrusion

Inclined Profile plate (Single side)



Ordering code	JTK-PTI
Size (L x W x H)	100 x 64 x 40 cm
Profile groove width	8.3 mm
Material	Anodised Aluminium, Steel

Inclined Profile plate (Double side)



Ordering code	JTK-PTID
Size (L x W x H)	100 x 64 x 40 cm
Profile groove width	8.3 mm
Material	Anodised Aluminium, Steel

TRAINER KIT

Series JTK

Cat No JTKMA-1-01-AA

Vertical Profile plate



Ordering code	JTK-PTVD
Size (L x W x H)	100 x 64 x 68 cm
Profile groove width	8.3 mm
Material	Anodised Aluminium, Steel

Horizontal work bench



Ordering code	JTK-PTHWB
Size (L x W x H)	102 x 66 x 83 cm
Profile groove width	8.3 mm
Material	Anodised Aluminium

Inclined work bench (Single side)



Ordering code	JTK-PTIWB
Size (L x W x H)	102 x 66 x 120 cm
Profile groove width	8.3 mm
Material	Anodised Aluminium, Steel

Inclined work bench (Double side)



Ordering code	JTK-PTIDWB
Size (L x W x H)	102 x 66 x 140 cm
Profile groove width	8.3 mm
Material	Anodised Aluminium, Steel

TRAINER KIT

Series JTK

Cat No JTKMA-1-01-AA

Vertical work bench



Ordering code	JTK-PTVWB
Size (L x W x H)	116 x 86 x 165 cm
Profile groove width	8.3 mm
Material	Anodised Aluminium, Steel, Wood

Vertical work bench with single draw unit



Ordering code	JTK-PTVWB-D1
Size (L x W x H)	116 x 86 x 165 cm
Profile groove width	8.3 mm
Profile groove to groove width	40 mm
Draw unit	1 No
Material	Aluminium, Steel, Wood

Vertical work bench with double draw unit



Ordering code	JTK-PTVWB-D2
Size (L x W x H)	116 x 86 x 165 cm
Profile groove width	8.3 mm
Profile groove to groove width	40 mm
Draw unit	2 Nos
Material	Aluminium, Steel, Wood

Electrical controls mounting table top



Ordering code	JTK-ECT
Size (L x W x H)	116 x 8 x 14 cm
Profile groove width	8.3 mm
Material	Anodised Aluminium, Steel

TRAINER KIT

Series JTK

Cat No JTKMA-1-01-AA

PC mounting table top



Ordering code	JTK-PCT
Size (L x W x H)	60 x 50 x 33 cm
Mounting	Frame mounting
Material	Wood, Steel

Accessories mounting clamp



Ordering code	JTK-ACC-AM
Size (L x W x H)	6 x 8 x 10 cm
Material	Stainless steel

Cable mounting clamp



Ordering code	JTK-ACC-CM
Size (L x W x H)	20 x 11 x 3 cm
Material	Stainless steel

Hose mounting clamp



Ordering code	JTK-ACC-HM
Size (L x W x H)	20 x 11 x 3 cm
Material	Stainless steel

TRAINER KIT

Series JTK

Cat No JTKMA-1-01-AA

Draw unit without wheel



Ordering code	JTK-PTD/W
Size (L x W x H)	45 x 58 x 70 cm
No. of racks	4
Material	Steel

Draw unit with wheel



Ordering code	JTK-PTD
Size (L x W x H)	45 x 58 x 75 cm
No. of racks	4
Material	Steel

Switch Mode Power Supply



Ordering code	JTK-SMPS
Size (L x W x H)	19 x 14 x 6 cm
No. of output	1
Input	85 - 264 V AC, 47 - 63 Hz
Output	24V DC, 4.5A
Output indication	LED indicator, AMBER color
Protection (Overload & Short circuit)	Fuse glass type (Input 2A, Output 4A)
Power inlet	ELCOM EMI-11 Socket 3Pin, Type D
Material	ABS

Note: All 230V SMPS with "TYPE D" power plug

TRAINER KIT

Series JTK

Cat No JTKMA-1-01-AA

Silent compressor - 24L



Ordering code	JTK-COMP
Size (L x W x H)	16 x 16 x 27 cm
HP	0.5 (0.35 kW)
Input	50 ltrs
Output	37 lpm
Tank	24 ltrs
Noise	40 dB
Max. Pressure	8 bar / 120 PSI
Power supply	230V, 50Hz
Power cord	3Pin, Type D
Material	Steel

Silent compressor - 30L



Ordering code	JTK-COMP-01	JTK-COMP-11
Size (L x H)	40 x 61 cm	40 x 61 cm
HP	0.75 (0.54 kW)	0.75 (0.54 kW)
Input	80 ltrs	80 ltrs
Output	45 lpm	45 lpm
Tank	30 ltrs	30 ltrs
Noise	55 dB	55 dB
Max. Pressure	8 bar / 120 PSI	8 bar / 120 PSI
Power supply	230V, 50Hz	230V, 60Hz
Power cord	3Pin, Type D	3Pin, Type D
Material	Steel	Steel

How to order

JTK-COMP - X - X

0 - Domestic **1** - 30 litre
1 - Export (60Hz) **2** - 50 litre

Note: All 230V Compressors with "TYPE D" power plug

TRAINING AIDS

TRAINING AIDS

Cut Section

Cat No JTKCS-1-01-AA

CUT SECTION - PNEUMATICS

Features

- Compact, Handy and Sleek design
- Precut foam for component storage
- Visualisation of internal elements
- Effortless handling of components



* Image shown is for illustration purposes only.
Actual product may vary.

Application

Pneumatic cut section enables a trainer to demonstrate the internal construction of a product with real world products that are to actual scale and makes the trainees to visualise them and gives a realistic view of components in a better way than the graphical representations on books and animations.

Technical Specifications

Ordering code	JTKCS
Size	40 x 40 x 20 cm
Installation	Vertical / Horizontal
Ambient temperature	60°C Max.
Materials of construction	Aluminium, Polyacetal, Steel, Rubber

Parts List

S. No	Description	Qty
1	Double acting cylinder	1
2	Single acting cylinder	1
3	FRC	1
4	Hand lever valve with detent	1
5	NRV	1
6	Flow control valve	1
7	Push button valve	1
8	Roller lever valve	1
9	Double external pilot operated valve	1
10	Quick exhaust valve	1
11	AND valve	1
12	OR valve	1

TRAINING AIDS

Cut Section

Cat No JTKCS-1-01-AA

CUT SECTION - HYDRAULICS

Features

- Compact, Handy and Sleek design
- Precut foam for component storage
- Visualisation of internal elements
- Effortless handling of components



* Image shown is for illustration purposes only.
Actual product may vary.

Application

Hydraulics cut section enables a trainer to demonstrate the internal construction of a product with real world products that are to actual scale and makes the trainees to visualise them and gives a realistic view of components in a better way than the graphical representations on books and animations.

Technical Specifications

Ordering code	JTKH-CS
Size	40 x 40 x 20 cm
Installation	Vertical / Horizontal
Ambient temperature	60°C Max.
Materials of construction	Aluminium, Polyacetal, Steel, Rubber

Parts List

S. No	Description	Qty
1	Double acting cylinder	1
2	One way flow control valve	1
3	Two way flow control valve	1
4	4/2 Single solenoid valve	1
5	4/2 Double Solenoid valve	1
6	4/3 Double Solenoid valve	1
7	4/3 Hand lever valve	1
8	Pilot Operated NRV	1
9	Pressure relief valve	1

TRAINING AIDS

Magnetic Symbols

Cat No JTKMS-1-01-AA

MAGNETIC SYMBOLS - PNEUMATICS

Features

- Symbols as per ISO1219/ ISO5599
- Partition for storage of symbols
- Symbols with magnetic strip
- Light weight



* Image shown is for illustration purposes only.
Actual product may vary.

Application

Magnetic Symbols are used for training on ISO symbols and circuit designing. These pre-printed magnetic symbols helps in saving time during circuit preparation. Permanent magnetic strips provided on back side of the symbols allows quick snapping of the symbols on a metallic board and lets the user to focus on making the connection lines.

Technical Specifications

Ordering code	JTKMS
Size	40 x 40 x 20 cm
Installation	Vertical / Horizontal
Ambient temperature	60°C Max.
Materials of construction	PVC, Rubber magnet

Parts List

S. No	Description	Qty
1	Working elements	1 Set
2	Final control elements	1 Set
3	Control elements	1 Set
4	Signal control elements	1 Set
5	Source and Service elements	1 Set

TRAINING AIDS

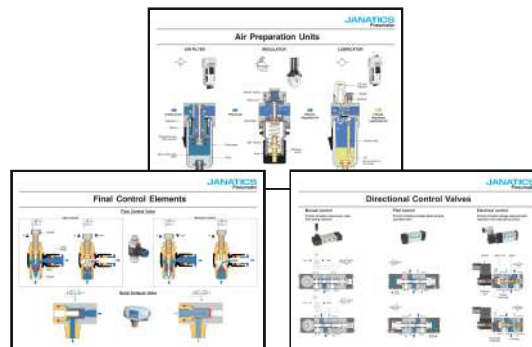
Poster

Cat No JTKWP-1-01-AA

TECHNICAL ILLUSTRATION POSTERS - PNEUMATICS

Features

- Symbols as per ISO 1219 / 5599
- Long life due to lamination
- Sturdy frame
- Covers complete product range
- Cross sectional illustrations



* Image shown is for illustration purposes only.
Actual product may vary.

Application

The wall mounted posters contain technical illustrations of products with their cut section, part information and respective ISO symbols. A quick glance on the set of posters provide an overview of pneumatic product range.

Technical Specifications

Ordering code	JTKWPA1
Size	91 x 45 x 2 cm
Installation	Wall mounting
Materials of construction	PVC Foam board, Aluminium

Parts List

S. No	Description	Qty
1	Classification of Pneumatic Elements	1
2	Working Elements	1
3	Final Control Elements	1
4	Signal Elements	1
5	Directional Control Valves	1
6	Air Preparation Units	1
7	ISO Symbols - Air Preparation Units, Working Elements, Supplementary Elements	2

[illegible]

MECHATRONICS & AUTOMATION SYSTEMS

DYNAMIC AUTOMATION SYSTEM

Series DPD

Cat No DPDAP-1-01-AA

AUTOMATED PIANO

Features

- Cartridge type cylinders and valves with space saving design
- High response valves with response time of 10 milli seconds
- High speed miniature cylinders with cycles upto 900 cycles per minute



* Image shown is for illustration purposes only.
Actual product may vary.

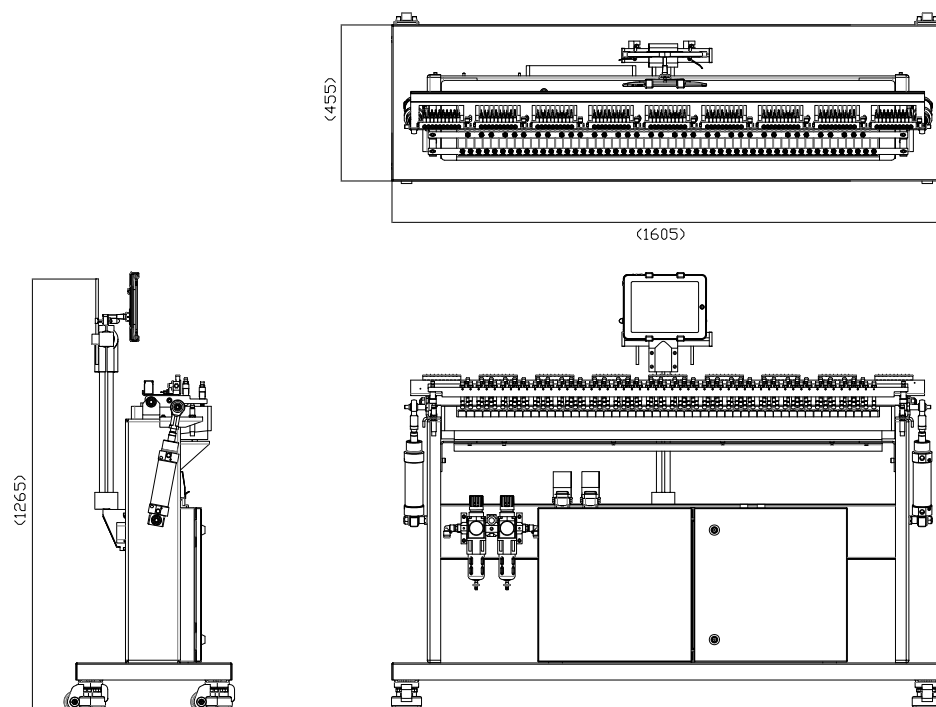
Application

Automated Piano is a pneumatically operated, MIDI controlled self-playing system. A simple, yet a very fascinating application that helps many to learn and demonstrate the enormous potential of pneumatic application in various non industrial automation like entertainment, amusement etc.,

Technical Specifications

Ordering code	DPD01
Size	160 x 46 x 126 cm
Installation	Vertical
Ambient temperature	60°C Max.
Medium	Filtered Compressed air
Max. Pressure	4 bar
Primary operating Voltage and Power consumption	AC 230V, 50Hz. 360W
Secondary operating voltage	24V DC for Solenoid coils & 12V DC for Controller board
Materials of construction	Aluminium, Mild steel, Wood

Dimensions



DYNAMIC AUTOMATION SYSTEM

Series DPD

Cat No DPDHS-1-01-AA

HANDLING SYSTEM

GUIDE UNITS FOR SQUARE PROFILE CYLINDERS

Features

- Suitable for ISO15552,VDMA 24562 Air cylinders
- Three variants - Plain bush bearing, Ball bearing & Plastic bearing
- Double lip seal provided with Plain & Ball bearing version helps retain lubrication
- Flange mounting available



* Image shown is for illustration purposes only.
Actual product may vary.

ROTARY INDEXING TABLE - RIT-180

- Angle accuracy $\pm 0.1^\circ$
- VDMA standard cylinder mounted
- Indexing stages 4, 6, 8, 12, 24

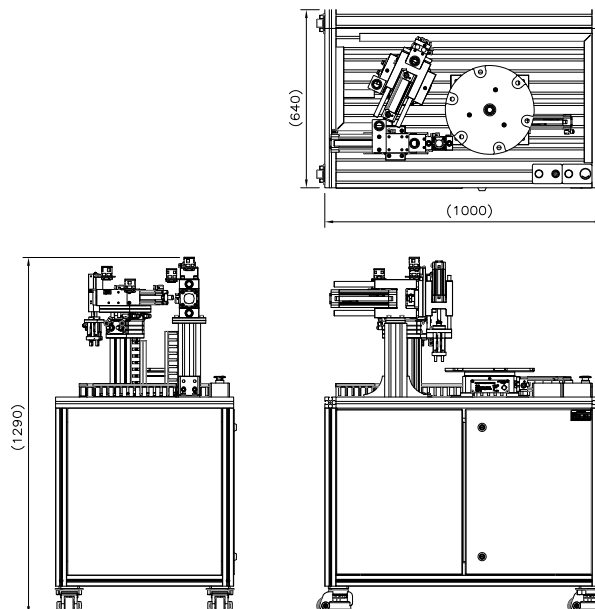
Application

Application of various types of cylinders in industry, their mounting and accessories can't be explained better than this compact and simple PLC driven Electro pneumatic system.

Technical Specifications

Ordering code	DPD02
Size	100 x 64 x 129 cm
Installation	Vertical
Ambient temperature	60°C Max.
Medium	Filtered Compressed air
Max. Pressure	6 bar
Primary operating Voltage and Power consumption	AC 230V, 50Hz. 180W
Secondary operating voltage	24V DC
Materials of construction	Aluminium, Mild steel

Dimensions



DYNAMIC AUTOMATION SYSTEM

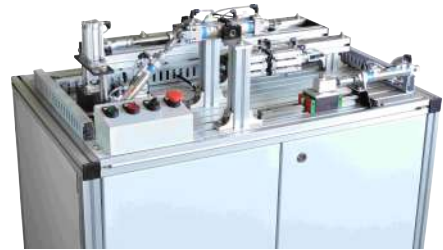
Series DPD

Cat No DPDMA-1-01-AA

AIR CYLINDER MOUNTING AND ACCESSORIES

Features

- VDMA cylinders, ISO standard cylinders, Compact ISO cylinders and Miniature cylinders
- Wide varieties of mountings as per ISO 6431, 6432, 15552 / VDMA 24562 standards
- Multi position cylinders for achieving 3 to 4 positions
- Double end cylinders for simultaneous pick and place
- Magnetic sensor common for all sizes
- High temperature (Viton seals) 150°C max
- Non corrosive Stainless steel piston rod and piston rod lock nut (SS 304)



* Image shown is for illustration purposes only.
Actual product may vary.

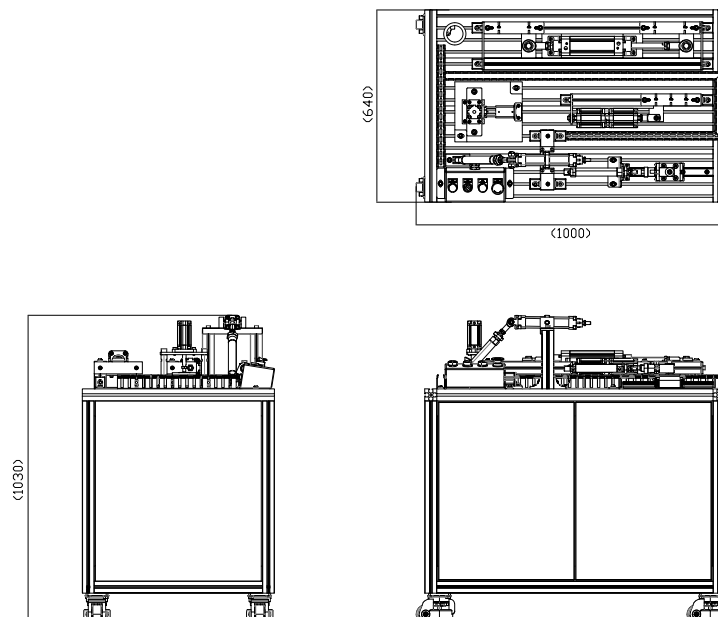
Application

Application of various types of cylinders in industry, their mounting and accessories can't be explained better than this compact and simple PLC driven Electro-pneumatic system

Technical Specifications

Ordering code	DPD03
Size	100 x 64 x 110 cm
Installation	Vertical
Ambient temperature	60°C Max.
Medium	Filtered Compressed air
Max. Pressure	6 bar
Primary operating Voltage and Power consumption	AC 230V, 50Hz. 180W
Secondary operating voltage	24V DC
Materials of construction	Aluminium, Mild steel

Dimensions



DO IT YOURSELF KIT

Series DIY

Cat No DIYFS-1-01-AA

DIY KIT - FEEDER STATION

Features

- Precut foam for parts storage
- Workbook with tasks and solutions
- Complete set of tools for assembly and dismantling

Application

DO IT YOURSELF" (DIY) kits are modules of mechatronic systems used to build and assemble fully functional mechatronic systems without the aid of experts or professionals. DIY kits enable students to build and test new automation systems of their own with various technologies such as pneumatics, electrical, PLC, mechanical and sensor to produce actual applications that replicate real life industrial scenario.



* Image shown is for illustration purposes only.
Actual product may vary.

Technical Specifications

Ordering code	DIY01
Size	54 x 64 x 135 cm
Installation	Vertical / Horizontal
Ambient temperature	60°C Max.
Medium	Filtered Compressed air
Max. Pressure	4 bar
Materials of construction	Aluminium, Steel

Function

The Feeder Station separates the components from the Stack magazine and distribute the components one by one via rotary pick and place module for further processing.

DO IT YOURSELF KIT

Series DIY

Cat No DIYFS-1-01-AA

Parts List

S. No	Description	Product No	Qty / set
1	Common module for feeder station	DIY025	1
1.1	FRL Module	-	1
1.2	3 Valve Manifold assembly & compact ejector module	-	1
1.3	I/O Interface Module	-	1
1.4	Control console	-	1
1.5	Cable duct accessories	-	1
2	Dispensing module	DIY002	1
3	Rotary pick and place module	DIY003	1
4	PLC control for Feeder Station	DIY017	1
5	Horizontal profile table work bench	MMS-PTHWB	1
6	Horizontal profile plate	MMS-PTT	1
7	Work piece approved & rejected	A90126	1
8	PLC Software with Cable Accessories	A90097	1
9	Tube (PU) Ø4 (Blue)	WH00B04	4
10	Tube (PU) Ø6 (Blue)	WH00B06	2
11	Assembly templates for DIY01	A90220	1
12	DIY Tool kits	DIY-TOOLS	1

MODULAR MANUFACTURING SYSTEM

Series MMS

Cat No MMS-1-01-AA

MODULAR MANUFACTURING SYSTEM

Features

- Modular system
- Various technologies connected to Mechatronics and Automation
- Material handling techniques like conveyor, linear or rotary pick and place units
- Various combinations possible
- Robotics
- Industrial / HMI control console



* Image shown is for illustration purposes only.
Actual product may vary.

Application

The Modular Manufacturing System is a miniature Factory Automation System which demonstrates the application of manufacturing processes and Automation Technologies. It enables user to learn and understand the following technologies connected to Mechatronics and Automation.

Technical Specifications

Ordering code	Refer the datasheet of single or combination station
Type	Single / Combination
Installation	Vertical
Medium	Compressed air
Materials of construction	CRCS, Aluminium, SS

MODULAR MANUFACTURING SYSTEM

Series MMS

Cat No MMSFS-1-01-AA

FEEDER STATION

Features

- Vacuum based 180° Rotary Pick and Place
- Energy saving vacuum ejector
- Industrial control console
- Completely preassembled system
- Easy to use and commission
- Workbook with tasks and Solutions



* Image shown is for illustration purposes only.
Actual product may vary.

Function

The Feeder station separates the components from the Stack Magazine and distributes the components one by one via rotary pick and place module for further processing.

Application

These Mechatronics systems are fully functional models of actual applications, mimicking hybrid, real life, industrial automation scenarios. A wide variety of project assignments and learning objectives help students to build hybrid systems by integrating important automation technologies, such as

- Pneumatics
- Electrical
- PLC
- Mechanical
- Sensors
- Vacuum
- Fault finding techniques

Technical Specifications

Model	MMS01
Size	54 x 70 x 134 cm
Installation	Vertical
Ambient temperature	60°C Max.
Medium	Filtered Compressed air
Operating Pressure range	6-8 bar
Operating Voltage +/- 10%	230V AC, 50HZ
Power consumption	55 W
Sensors and actuator operating voltage	24V, DC
Materials of construction	Aluminium, Mild steel, Plastic, etc.,

MODULAR MANUFACTURING SYSTEM

Series MMS

Cat No MMSIS-1-01-AA

INSPECTION STATION

Features

- LVDT based height measurement
- Rod less Pneumatic drive
- Industrial control console
- Completely preassembled system
- Easy to use and commission
- Workbook with tasks and Solutions



* Image shown is for illustration purposes only.
Actual product may vary.

Function

The Inspection station measures the height of the components received from its downstream station and transfers the correct and incorrect components to appropriate slides.

Application

These Mechatronics systems are fully functional models of actual applications, mimicking hybrid, real life, industrial automation scenarios. A wide variety of project assignments and learning objectives help students to build hybrid systems by integrating important automation technologies, such as

- Pneumatics
- Electrical
- PLC
- Mechanical
- Sensors

Technical Specifications

Model	MMS02
Size	68 x 64 x 135 cm
Installation	Vertical
Ambient temperature	60°C Max.
Medium	Filtered Compressed air
Operating Pressure range	6-8 bar
Operating Voltage +/- 10%	230V AC, 50HZ
Power consumption	50 W
Sensors and actuator operating voltage	24V, DC
Materials of construction	Aluminium, Mild steel, Plastic, etc.,

MODULAR MANUFACTURING SYSTEM

Series MMS

Cat No MMSBS-1-01-AA

BUFFER STATION

Features

- DC Brushless motor conveyor
- Twin Piston rod cylinders
- Industrial control console
- Completely preassembled system
- Easy to use and commission
- Workbook with tasks and Solutions



* Image shown is for illustration purposes only.
Actual product may vary.

Function

Buffer Station ensures steady flow of components to the process station by allowing one component at a time for processing. It can store upto 5 work pieces at a time and if the count has exceeded 5, it communicates with the downstream stations to STOP the processing activities until the count reaches 5.

Application

These Mechatronics systems are fully functional models of actual applications, mimicking hybrid, real life, industrial automation scenarios. A wide variety of project assignments and learning objectives help students to build hybrid systems by integrating important automation technologies, such as

- Pneumatics
- Electrical
- PLC
- Mechanical
- Sensors

Technical Specifications

Model	MMS03
Size	55 x 64 x 106 cm
Installation	Vertical
Ambient temperature	60°C Max.
Medium	Filtered Compressed air
Operating Pressure range	6-8 bar
Operating Voltage +/- 10%	230V AC, 50HZ
Power consumption	85 W
Sensors and actuator operating voltage	24V, DC
Materials of construction	Aluminium, Mild steel, Plastic, etc.,

MODULAR MANUFACTURING SYSTEM

Series MMS

Cat No MMSPS-1-01-AA

PROCESS STATION

Features

- 6 stage Rotary Indexing table
- Rod less Pneumatic drive
- Pneumatic motor
- Vacuum based linear Pick and Place
- Energy saving vacuum ejector
- Completely preassembled system
- Easy to use and commission
- Workbook with tasks and Solutions



* Image shown is for illustration purposes only.
Actual product may vary.

Function

The Process Station performs mechanical operations like Drilling, Inspection etc. on a pneumatically driven rotary indexing table and transfers the work piece via Pick and place module to downstream Station.

Application

These Mechatronics systems are fully functional models of actual applications, mimicking hybrid, real life, industrial automation scenarios. A wide variety of project assignments and learning objectives help students to build hybrid systems by integrating important automation technologies, such as

- Pneumatics
- Electrical
- PLC
- Mechanical
- Sensors
- Vacuum

Technical Specifications

Model	MMS04
Size	72 x 64 x 141 cm
Installation	Vertical
Ambient temperature	60°C Max.
Medium	Filtered Compressed air
Operating Pressure range	6-8 bar
Operating Voltage +/- 10%	230V AC, 50HZ
Power consumption	70 W
Sensors and actuator operating voltage	24V, DC
Materials of construction	Aluminium, Mild steel, Plastic, etc.,

MODULAR MANUFACTURING SYSTEM

Series MMS

Cat No MMSSS-1-01-AA

SORTING STATION

Features

- DC Brushless conveyor
- Twin piston rod cylinder
- Inductive sensor
- Optical based RGB colour sensor
- Completely preassembled system
- Easy to use and commission
- Workbook with tasks and Solutions



* Image shown is for illustration purposes only.
Actual product may vary.

Function

Sorting Station sorts the incoming work piece based on colour and material characteristics to appropriate slides.

Application

These Mechatronics systems are fully functional models of actual applications, mimicking hybrid, real life, industrial automation scenarios. A wide variety of project assignments and learning objectives help students to build hybrid systems by integrating important automation technologies, such as

- Pneumatics
- Electrical
- PLC
- Mechanical
- Sensors

Technical Specifications

Model	MMS05
Size	54 x 64 x 110 cm
Installation	Vertical
Ambient temperature	60°C Max.
Medium	Filtered Compressed air
Operating Pressure range	6-8 bar
Operating Voltage +/- 10%	230V AC, 50HZ
Power consumption	110 W
Sensors and actuator operating voltage	24V, DC
Materials of construction	Aluminium, Mild steel, Plastic, etc.,

MODULAR MANUFACTURING SYSTEM

Series MMS

Cat No MMSRS-1-01-AA

ROBOT STATION

Features

- 6 Axis Articulated Robot
- Servo operated
- 2 Kg Payload
- 1 Phase power supply
- Inbuilt servo controller
- Completely preassembled system
- Easy to use and commission
- Workbook with tasks and Solutions



* Image shown is for illustration purposes only.
Actual product may vary.

Function

Robot station with the combination of assembly station assembles the incoming work piece with spring and digital sensor assembly and sends to downstream station.

Application

These Mechatronics systems are fully functional models of actual applications, mimicking hybrid, real life, industrial automation scenarios. A wide variety of project assignments and learning objectives help students to build hybrid systems by integrating important automation technologies, such as

- Pneumatics
- Electrical
- PLC
- Mechanical
- Sensors

Technical Specifications

Model	MMS06
Size	54 x 64 x 155 cm
Installation	Vertical
Ambient temperature	60°C Max.
Medium	Filtered Compressed air
Operating Pressure range	2-3 bar
Operating Voltage +/- 10%	230V AC, Single phase 50HZ
Power consumption	1.25 kW
Sensors and actuator operating voltage	24V, DC
Materials of construction	Aluminium, Mild steel, Stainless steel, Plastic, etc.,

MODULAR MANUFACTURING SYSTEM

Series MMS

Cat No MMSAS-1-01-AA

ASSEMBLY STATION (Add on Module)

Features

- Pneumatic drives-based feeder system
- Industrial control console
- Completely preassembled system
- Easy to use and commission
- Workbook with tasks and Solutions



* Image shown is for illustration purposes only.
Actual product may vary.

Function

Assembly station is an Add-on module of Robot station. Cap dispensing module dispenses the digital sensor and spring dispensing module dispenses the spring required for assembly.

The testing and assembly module allows the robot to test and assemble the work pieces. Outward module allows the assembled work pieces to move to the downstream station. Rejection module holds the rejected components/work pieces.

Application

These Mechatronics systems are fully functional models of actual applications, mimicking hybrid, real life, industrial automation scenarios. A wide variety of project assignments and learning objectives help students to build hybrid systems by integrating important automation technologies, such as

- Pneumatics
- Electrical
- PLC
- Mechanical
- Sensors

Technical Specifications

Model	MMS07
Size	54 x 64 x 115 cm
Installation	Vertical
Ambient temperature	60°C Max.
Medium	Filtered Compressed air
Operating Pressure range	2-3.5 bar
Operating Voltage +/- 10%	230V AC, 50HZ
Power consumption	50 W
Sensors and actuator operating voltage	24V, DC
Materials of construction	Aluminium, Mild steel, Stainless steel, Plastic, etc.,

MODULAR MANUFACTURING SYSTEM

Series MMS

Cat No MMSASRS-1-01-AA

ASRS STATION

Features

- Electrically operated XY gantry
- RFID Technology
- Pneumatic precision slide table
- Complete preassembled system
- Easy to use and commission
- Variable speeds
- Workbook with tasks and Solutions



* Image shown is for illustration purposes only.
Actual product may vary.

Function

The ASRS station stores the incoming work pieces to the target location based on RFID identification code and retrieve and transfers to downstream station on demand.

Application

These Mechatronics systems are fully functional models of actual applications, mimicking hybrid, real life, industrial automation scenarios. A wide variety of project assignments and learning objectives help students to build hybrid systems by integrating important automation technologies, such as

- Pneumatics
- Electrical
- PLC
- Mechanical
- Sensors

Technical Specifications

Model	MMS08
Size	140 x 64 x 54 cm
Installation	Vertical
Ambient temperature	60°C Max.
Medium	Filtered Compressed air
Operating Pressure range	6-8 bar
Operating Voltage +/- 10%	230V AC, 50HZ
Power consumption	115 W
Sensors and actuator operating voltage	24V, DC
Materials of construction	Aluminium, Steel, Acetal

MODULAR MANUFACTURING SYSTEM

Series MMS

Cat No MMSHSE-1-01-AA

HANDLING STATION (Electrical)

Features

- Electrical linear drive-based Pick and Place
- Twin piston rod cylinder
- RFID Technology
- Complete preassembled system
- Easy to use and commission
- Variable speeds and positions
- Workbook with tasks and Solutions



* Image shown is for illustration purposes only.
Actual product may vary.

Function

The Electrically driven handling station picks and places the incoming work piece based on colour and material to appropriate slides in standalone condition and as well as it transfers work piece to downstream station in a combination.

Application

These Mechatronics systems are fully functional models of actual applications, mimicking hybrid, real life, industrial automation scenarios. A wide variety of project assignments and learning objectives help students to build hybrid systems by integrating important automation technologies, such as

- Pneumatics
- Electrical
- PLC
- Mechanical
- Sensors

Technical Specifications

Model	MMS09
Size	140 x 64 x 110 cm
Installation	Vertical
Ambient temperature	60°C Max.
Medium	Filtered Compressed air
Operating Pressure range	6-8 bar
Operating Voltage +/- 10%	230V AC, 50HZ
Power consumption	170 W
Sensors and actuator operating voltage	24V, DC
Materials of construction	Aluminium, Mild steel, Plastic, etc.,

MODULAR MANUFACTURING SYSTEM

Series MMS

COMBINATION STATION

By means of a combination of different stations, it is possible to achieve installations with a wide range of different functions. With these installations, it is possible to deal with more complex training content such as

- Planning
- Project design
- PLC Programming
- Operation of installation and maintenance of more complex systems
- Quality management
- Industrial communication

Combination \ Stations	MMS 01	MMS 02	MMS 03	MMS04			MMS 05	MMS 06	MMS 07	MMS 08	MMS 09
				00	01	02					
Feeder & Sorting	✓	-	-	-	-	-	✓	-	-	-	-
Feeder, Inspection & Sorting	✓	✓	-	-	-	-	✓	-	-	-	-
Feeder, Processing & Sorting	✓	-	-	✓	-	-	✓	-	-	-	-
Feeder, Processing, Handling & Sorting	✓	-	-		-	✓	✓	-	-	-	✓
Feeder, Buffer, Processing & Sorting	✓	-	✓	✓	-		✓	-	-	-	-
Feeder, Buffer, Processing, Handling & Sorting	✓	-	✓		-	✓	✓	-	-	-	✓
Feeder, Inspection, Buffer, Processing & Sorting	✓	✓	✓	✓	-		✓	-	-	-	-
Feeder, Inspection, Buffer, Processing, Handling & Sorting	✓	✓	✓		-	✓	✓	-	-	-	✓
Feeder, Processing, Robot, Assembly & Sorting	✓	-	-	-	✓		✓	✓	✓	-	-
Feeder, Processing, Robot, Assembly, ASRS & Sorting	✓	-	-	-	✓		✓	✓	✓	✓	-
Feeder, Processing, Handling, Robot, Assembly & Sorting	✓	-	-	-	-	✓	✓	✓	✓	-	✓
Feeder, Processing, Handling, Robot, Assembly, ASRS & Sorting	✓	-	-	-	-	✓	✓	✓	✓	✓	✓
Feeder, Robot, Assembly & Sorting	✓	-	-	-	-	-	✓	✓	✓	-	-
Feeder, Robot, Assembly, ASRS & Sorting	✓	-	-	-	-	-	✓	✓	✓	✓	-
Feeder, Inspection, Buffer, Processing, Robot, Assembly & Sorting	✓	✓	✓	-	✓	-	✓	✓	✓	-	-
Feeder, Inspection, Buffer, Processing, Robot, Assembly, ASRS & Sorting	✓	✓	✓	-	✓	-	✓	✓	✓	✓	-
Feeder, Inspection, Buffer, Processing, Handling, Robot, Assembly & Sorting	✓	✓	✓	-	-	✓	✓	✓	✓	✓	✓
Feeder, Inspection, Buffer, Processing, Handling, Robot, Assembly, ASRS & Sorting	✓	✓	✓	-	-	✓	✓	✓	✓	✓	✓

MODULAR MANUFACTURING SYSTEM

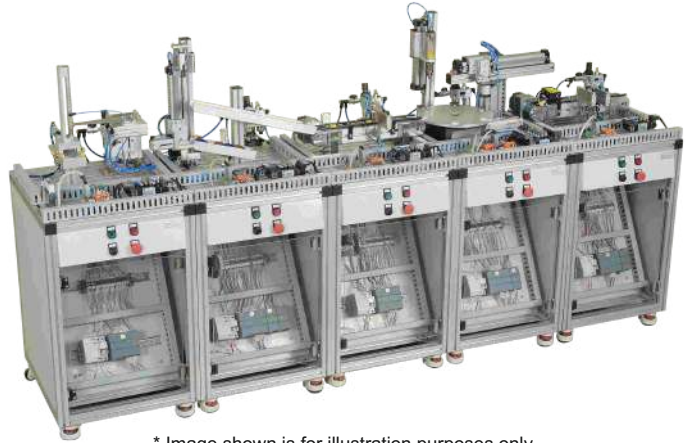
Series MMS

Cat No MMS-1-01-AA

MODULAR MANUFACTURING SYSTEM - COMBINATION STATION

Features

- Modular System
- Various technologies connected to Mechatronics and Automation
- Material handling techniques like conveyor, linear or rotary pick and place units
- Various combinations possible
- Industrial/HMI Control Console



* Image shown is for illustration purposes only.
Actual product may vary.

Function

The Modular Manufacturing System combination comprises of 5 different stations such as Feeder, Inspection, Buffer, Process and Sorting.

The feeder station feeds the work pieces to an inspection station, where the testing of work piece height is carried out and approved work pieces are transferred to buffer station. Buffer station maintains a buffer stock of up to 5 work pieces and allows one by one to process station based on the demands arises from the process station. The process station is performing drilling operation and further transfers the work pieces to Sorting Station. The sorting station segregates the work pieces based on the material type and colour and makes them available for Logistics.

Application

The Modular Manufacturing System is a miniature Factory Automation System which demonstrates the application of manufacturing processes and Automation Technologies. It enables user to learn and understand the following technologies connected to Mechatronics and Automation.

Technical Specifications

Ordering code	MMS001
Size	270 x 64 x 140 cm
Installation	Vertical
Medium	Compressed air
Operating Voltage (Primary)	230V AC, 50Hz
Power Consumption (Max.)	1.5 kW
Operating Voltage (Secondary)	24V DC
Materials of construction	CRCS, Aluminium, SS

Note: Refer the accessories page for compressor (Page no. 1.44)

MODULAR MANUFACTURING SYSTEM

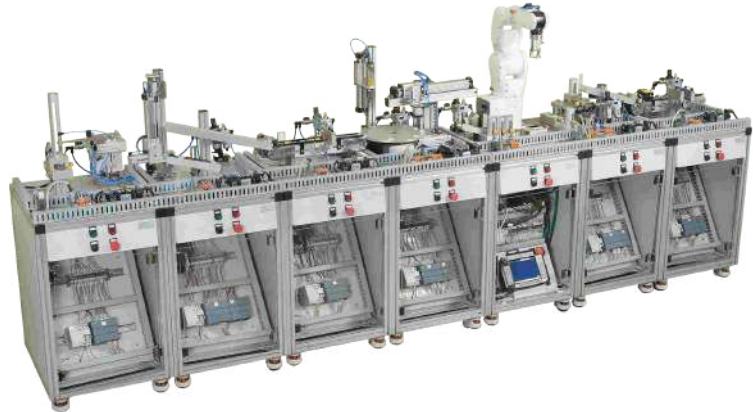
Series MMS

Cat No MMS-1-01-AA

MODULAR MANUFACTURING SYSTEM - COMBINATION STATION

Features

- Modular System
- Various technologies connected to Mechatronics and Automation
- Material handling techniques like conveyor, linear or rotary pick and place units
- Various combinations possible
- Robotics
- Industrial/HMI Control Console



* Image shown is for illustration purposes only.
Actual product may vary.

Function

The Modular Manufacturing System combination comprises of 7 different stations such as Feeder, Inspection, Buffer, Process, Robot, Assembly and Sorting.

The feeder station feeds the work pieces to an inspection station, where the testing of work piece height is carried out and approved work pieces are transferred to buffer station. Buffer station maintains a buffer stock of up to 5 work pieces and allows one by one to process station based on the demands arises from the process station. The process station is performing drilling operation and further transfers the work pieces to the Robot and assembly station for assembly of Digital pressure gauge and quality testing. After testing the assembled work piece, it is transferred to the Sorting station. The sorting station segregates the work pieces based on the material type and colour and makes them available for Logistics.

Application

The Modular Manufacturing System is a miniature Factory Automation System which demonstrates the application of manufacturing processes and Automation Technologies. It enables user to learn and understand the following technologies connected to Mechatronics and Automation.

Technical Specifications

Ordering code	MMS006
Size	380 x 64 x 150 cm
Installation	Vertical
Medium	Compressed air
Operating Voltage (Primary)	230V AC, 50Hz
Power Consumption (Max.)	1.5 kW
Operating Voltage (Secondary)	24V DC
Materials of construction	CRCS, Aluminium, SS

Note: Refer the accessories page for compressor (Page no. 1.44)

MODULAR MANUFACTURING SYSTEM

Series MMS

Cat No MMS-1-01-AA

MODULAR MANUFACTURING SYSTEM - COMBINATION STATION

Features

- Modular System
- Various technologies connected to Mechatronics and Automation
- Various combinations possible
- Robotics
- Material handling techniques like conveyor, linear or rotary pick and place units
- Industrial/HMI Control Console



* Image shown is for illustration purposes only.
Actual product may vary.

Function

The Modular Manufacturing System combination comprises of 9 different stations such as Feeder, Inspection, Buffer, Process, Handling, Robot, Assembly, ASRS and Sorting.

The feeder station feeds the work pieces to an inspection station, where the testing of work piece height is carried out and approved work pieces are transferred to buffer station. Buffer station maintains a buffer stock of up to 5 work pieces and allows one by one to process station based on the demands arises from the process station. The process station is performing drilling operation and further transfers the work pieces to the Robot and assembly station for assembly of Digital pressure gauge and quality testing. After testing the assembled work piece, it is transferred to ASRS station for Storage. Based on the demand arises from Sorting Station, The ASRS retrieves the respective component and delivers to Sorting Station. The sorting station segregates the work pieces based on the material type and colour and makes them available for Logistics.

Application

The Modular Manufacturing System is a miniature Factory Automation System which demonstrates the application of manufacturing processes and Automation Technologies. It enables user to learn and understand the following technologies connected to Mechatronics and Automation.

Technical Specifications

Ordering code	MMS009
Size	486 x 64 x 150 cm
Installation	Vertical
Medium	Compressed air
Operating Voltage (Primary)	230V AC, 50Hz
Power Consumption (Max.)	1.5 kW
Operating Voltage (Secondary)	24V DC
Materials of construction	CRCS, Aluminium, SS

Note: Refer the accessories page for compressor (Page no. 1.44)



MODULAR MANUFACTURING SYSTEM

Series MMS

Cat No MMSA-1-01-AA

MECHATRONICS & AUTOMATION SYSTEM ACCESSORIES

PLC SOFTWARE AND ACCESSORIES

Ordering No	A90097	
PLC programming software - Siemens TIA Portal		
Make	Siemens TIA Portal Basic	
License	Single User, Floating license	
Supported programming language	ST, FBD, Ladder	
Version	V15 or Latest	
Packing	CD with case, OSD	
PLC programming cable		
Make	Pheonix	
Cable	RJ45 to RJ45	
Length	5 Meters	
Packing	-	

ASSEMBLY TEMPLATES

It contains assembly templates required for the assembly of respective stations and for the different combination functions. It is made up of plain anodized Aluminium sheet with handle.

S. No	Description	Qty
1	Assembly template_MMS01(1-4-5)	1
2	Assembly template_MMS01(1-3-4-5)	1
3	Assembly template_MMS05(1-5)	1
4	Assembly template_MMS05(1-2-5)	1
5	Assembly template_MMS01	1
6	Assembly template_MMS02	1
7	Assembly template_MMS03	1
8	Assembly template_MMS04	1
9	Assembly template_MMS05	1



MODULAR MANUFACTURING SYSTEM

Series MMS

Cat No MMSA-1-01-AA

TECHNICAL DOCUMENTS

Technical document contains technical details of the station according to DIN ISO 1219 standard. It includes Pneumatic circuit, Electrical circuit, Positional sketch, Assembly procedure, Installation procedure, Technical specifications of components and troubleshooting etc.




S. No	Description	Qty
1	Technical document for Feeder station	1
2	Technical document for Inspection station	1
3	Technical document for Buffer station	1
4	Technical document for Process station	1
5	Technical document for Sorting station	1
6	Technical document for Robot station	1
7	Technical document for Assembly station	1
8	Technical document for ASRS station	1
9	Technical document for Handling station	1
10	Technical document for Combination stations	1

MODULAR MANUFACTURING SYSTEM


Series MMS

Cat No MMSA-1-01-AA

WORK PIECE SET - 1


Ordering code		MMS-WP-S1-00	
Work piece Approved	Diameter	39.5 mm	
	Height	25 mm	
Work piece Rejected	Diameter	39.5 mm	
	Height	23.5 mm	
Work piece Approved (Aluminium, Delrin & Hylam)		Each 6 no's	
Work piece Rejected (Aluminium, Delrin & Hylam)		Each 2 no's	

WORK PIECE SET - 2

Ordering code		MMS-WP-S2-00	
Work piece Approved	Diameter	39.5 mm	
	Height	25 mm	
Work piece Rejected	Diameter	39.5 mm	
	Height	23.5 mm	
Work piece Approved (Aluminium, Delrin & Hylam)		Each 6 no's	
Work piece Rejected (Aluminium, Delrin & Hylam)		Each 2 no's	
Digital cap Approved		18 no's	
Digital cap Rejected		6 no's	

WORK PIECE SET - 3

Ordering code		MMS-WP-S3-00	
Type	Inbuilt with RFID tag		
Work piece Approved	Diameter	39.5 mm	
	Height	27 mm	
Work piece Rejected	Diameter	39.5 mm	
	Height	23.5 mm	
Work piece Approved (Aluminium, Delrin & Hylam)		Each 6 no's	
Work piece Rejected (Aluminium, Delrin & Hylam)		Each 2 no's	
Digital cap Approved		18 no's	
Digital cap Rejected		6 no's	



MODULAR MANUFACTURING SYSTEM

Series MMS

Cat No MMSA-1-01-AA

WORK PIECE SET - 4

Ordering code		MMS-WP-S4-00
Type	Inbuilt with RFID tag	
Work piece Approved	Diameter	39.5 mm
	Height	27 mm
Work piece Rejected	Diameter	39.5 mm
	Height	23.5 mm
Work piece Approved (Aluminium, Delrin & Hylam)		Each 6 no's
Work piece Rejected (Aluminium, Delrin & Hylam)		Each 2 no's
Digital cap Approved		18 no's
Digital cap Rejected		6 no's





DIGITAL LEARNING SOLUTIONS

DIGITAL LEARNING SOLUTIONS

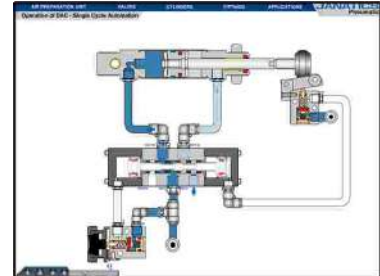
Series JASP

Cat No JASP-1-01-AA

JANATICS ANIMATION SOFTWARE FOR PNEUMATICS

Features

- Functional animation of products and symbols
- Circuit designing tutorial
- Product description
- Construction of elements



Application

This software package is a handy tool for the trainers in educational institutes & corporate training centres to explain about the products in a very short period, to allow the trainees to have ample time to use trainer kits to gain more practical knowledge. The virtual cut sectional animation lets the trainees know the internal details of the product & understand the functions simultaneously.

Access Key

The software is delivered with a USB type hardware lock for accessing the software application.



This key is the only access to JASP

Ordering code: JASP 5.0

SOFTWARE

SOFTWARE

Series JAS

Cat No JAS-1-01-AA

AUTOMATION STUDIO SOFTWARE

Features

- Create, Analyze, Troubleshoot and Validate Multi-technology circuits
- Illustrated Libraries
- E-Learning & Teachware
- Manufacturers catalogues
- Remote access licensing
- Co-Simulation via API & OPC
- Digital Twin



Application

Automation Studio is a user-friendly platform with access to built-in component libraries to help accelerate your design process. With integrated simulation capabilities, it makes it easy to quickly animate, analyze and validate the systems' performance. All technologies can be linked together to create and simulate an entire machine.

Libraries	Packages								
	Premium	Fluid power	Pneumatic	Hydraulic	Electrical	Automation	Pneumatic Lite	Hydraulic Lite	Automotive
Hydraulics & Proportional Hydraulics	✓	✓	-	✓	-	-	-	✓	✓
Pneumatic & Proportional Pneumatics	✓	✓	✓	-	-	-	✓	-	✓
Component Sizing Module	✓	✓	✓	✓	✓	-	-	-	✓
Mechanical Links	✓	✓	✓	✓	-	-	-	-	✓
Electro technical (AC, DC, Motor Control)	✓	-	-	-	✓	-	-	-	✓
Electro technical SAE Standard (Automotive)	-	-	-	-	-	-	-	-	✓
One line Electro technical diagram	✓	-	-	-	✓	-	-	-	✓
Electrical Control (JIC & IEC)	✓	✓	✓	✓	✓	✓	✓	✓	✓
PLC, Allen Bradley™	✓	Anyone of these	Anyone of these	Anyone of these	-	✓	Anyone of these	Anyone of these	✓
PLC, Siemens™	✓				-	✓			✓
PLC IEC 1131-3	✓				-	✓			✓
PLC, LSIS	✓				-	✓			✓
HMI 2D/3D & Control Panel	✓	✓	✓	✓	✓	✓	-	-	✓
SFC Grafcet IEC 61131	✓	✓	✓	✓	✓	✓	-	-	✓
Digital Electronics	✓	✓	✓	✓	✓	✓	-	-	✓
Diagnostics & Trouble shooting	✓	✓	✓	✓	✓	✓	-	-	✓
BOM and Report Module	✓	-	-	-	-	-	-	-	✓
OPC Client	✓	✓	✓	✓	✓	✓	-	-	-
Embedded View	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sequence Diagram	✓	✓	✓	✓	✓	✓	✓	✓	✓
Block Diagram (Math) Workshop	✓	-	-	-	-	-	-	-	✓
Mitsubishi	✓	Anyone of these	Anyone of these	Anyone of these	-	-	Anyone of these	Anyone of these	✓

SOFTWARE

Series JAS

Cat No JAS-1-01-AA

AUTOMATION STUDIO SOFTWARE

Annual Maintenance Includes:

- Software updates, service releases, new versions
- Online training sessions (2 hrs)
- Unlimited access to technical support
- Manufacturers catalogues
- Remote access licensing (WAN1) with 3 licenses or more throughout its period of validity
- Teachware (Hydraulics, Pneumatics, Electrical)
- Access to already made exercises using Unity 3D

How to order

JAS	x	xx	x	-	x	x	-	xxx	-	x
		Existing Version	New Version		Package	PLC Library type		No. of licenses		Maintenance
0 - Educational		00 (New)	80		0 - Premium	0 - All Complete		1 - 200		0 - Nil
1 - Corporate					1 - Pneumatic	1 - Siemens				1 - With
					2 - Hydraulic	2 - IEC				M - Renewal
					3 - Fluid power	3 - Fluid power				Maintenance
					4 - Electrical	4 - LSIS				
					5 - Automation	5 - AB				
					6 - Pneumatic lite					
					7 - Hydraulic lite					
					8 - Automotive					

Ordering Example:

Package: Educational Edition
 Fluid power package with Siemens PLC library
 10 user license
 1 Year annual maintenance
Ordering code: JAS00080-3-1-010-1

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3 Centres of Excellence
& more than **400** lab installations

FEW ESTEEMED CUSTOMERS



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♦ Hubli ♦ Hyderabad ♦ Indore ♦ Jaipur ♦ Kolhapur ♦ Kolkata ♦ Ludhiana ♦ Mumbai
♦ Mysore ♦ Nagpur ♦ Nashik ♦ Noida ♦ PCMC ♦ Pune ♦ Rudrapur ♦ Sonapat ♦ Tiruppur

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