

2008

MECHATRONICS CATALOGUE



MATRIX



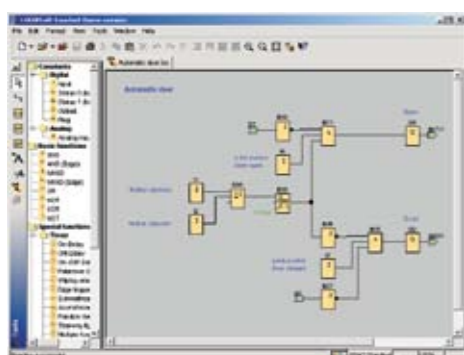
You can use the module with task board and task cards.....



...with a traffic light module.....



...or with the Fischertechnik interface and models.....



You can use a PC to program in block diagram or ladder logic and simulate your program on-screen.

What does it do?

A low cost training system for PLC programming

Description

These training modules – based on Siemens Logo! micro PLCs – are perfect for those learning and teaching PLC programming. The Basic kit is made up of a Logo! PLC, programming software, Logo! training module with 10 task cards, power supply and cable. This kit can be further expanded with a traffic light control board, or a Fischertechnik interface card and model construction kit. The unit can be programmed using the on-board buttons and LCD display, or from a PC using either ladder logic or Logo!'s own drag and drop programming language. Additional Logo! modules for additional input/output lines and communications are available. The Logo! unit itself will switch 10A at up to 24V.

The 10 task cards sit on top of the training module and provide a visual link between the input switches, input potentiometers and output LEDs for 10 tasks which include: logic functions, pedestrian crossing, automatic door, elevator control, corridor lighting, street lighting, heating control, simple input/output, and tank control.

The Fischertechnik starter kit allows 6 additional models to be built: a hand dryer, traffic lights, sliding door, mechanical press, car park barrier, welding robot.

Benefits

- Ultra-low cost starter system
- A very flexible learning system for PLC programming
- Short learning curve

Features

- Very low cost
- Program on the PLC itself, in ladder logic or block diagram modes
- Well supported with documentation
- Can be expanded for larger projects

Ideal for delivering the new 14- 19 diplomas

Product	Code	Price
Basic Logo! system (inc Logo!, PSU, base board, CD ROM, PLC software, and control cards)	MC420	£350
Traffic light task board	MC522	£50
Fischertechnik interface	MC396	£50
Fischertechnik starter kit	FLFTCSK	£55

What does it do?

A self contained, low cost, modular system for teaching automation technology.

Description

This fully working pneumatic press provides a great starting point for mechatronics. To work the unit all you need is a pneumatic supply and a PC. The unit can be bought with a Logo! PLC or it can be used with your own existing PLC. Students can use this model for a range of learning activities including electro-pneumatics, PLC programming, electrical wiring, sensors, and general mechatronics. Like a real press the unit is fitted with two safety control switches which must both be pressed to actuate the main pneumatic cylinder. Full technical documentation is supplied.

Benefits

- Very low cost starter system
- A wide range of teaching opportunities in one unit

Features

- Can be used to teach a wide range of automation disciplines
- Made from high quality industrial components
- Full documentation supplied

Technical data

Aluminium profile plate: 175x265mm

Operating voltage: 24V DC

Power supply: 240V AC

Sensors:

- 2 sensors for two hand safety control
- 4 cylinder end switches

Actuators:

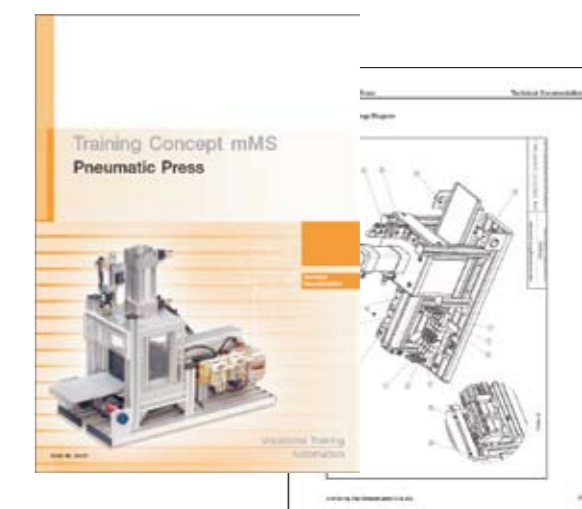
- 3 5/2 way valves
- 3 double acting pneumatic cylinders
- Connector modules
- 2 x 8 way connector plugs



You can use this mechatronic press with your own PLC....



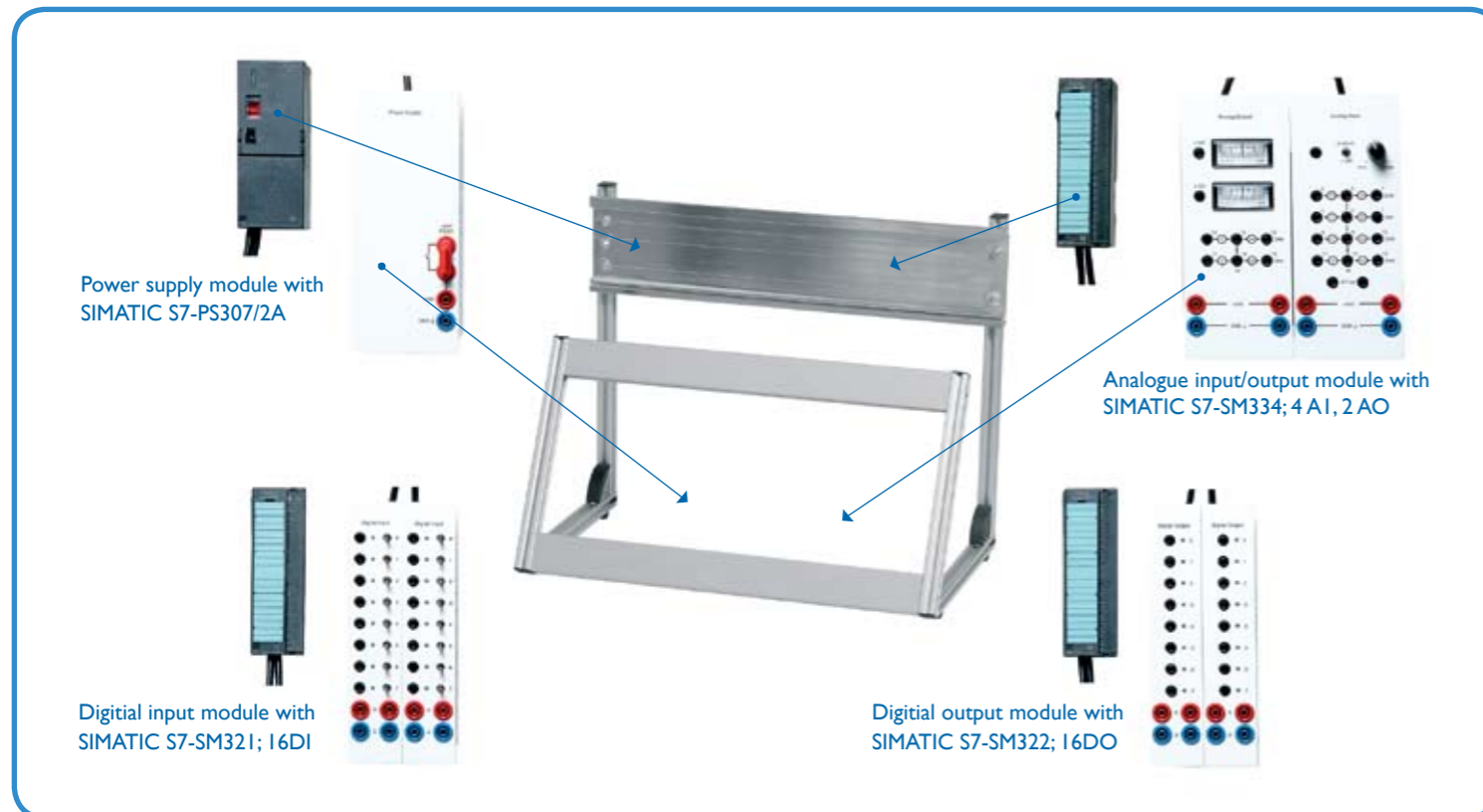
...or we can supply it with the Logo! PLC.



Technical documentation is supplied, teacher's and students' workbooks are available.

Product	Code	Price
Pneumatic press with Logo controller	MC64401	£1,433
Teacher's workbook	MC64702	£90
Student workbook	MC64703	£40
Hydraulic press	MC64477	£1,253
Teacher's workbook	MC64783	£70
Student workbook	MC64784	£30

Simatic S7-300 PLC training equipment



The STEP7 trainer package contains all the important PLC programming languages for 12 computers including STEP7 V5.3 + SP3 with LAD, IL, FBD, S7 Graph V5.3 + SP2, S7-SCL V5.3 + SP1, S7-PCLSIM V5.3 + SPI the offline/online testing tool for the PC, and S7-Higraph V5.3 for state graph programming. The package also includes 60 Student edition software packages which are limited to 365 days usage each. These can be reordered at a package price for 200 EUR per 20 students.

What does it do?

This equipment allows you to deliver a complete training course on PLC system development based on the Siemens Simatic S7-300 PLC.

Description

This bench top PLC training system is designed to provide a flexible platform for learning PLC programming based on the Simatic S7 controller. The Simatic modules are mounted together on a rail above the trainer so that they are visible to the student. The input and output connections are routed to where LEDs and meters indicate the I/O line status and switches and potentiometers are used as basic input devices. The 4mm connectors can be used as test points, and to connect the trainer to a variety of external devices – including our Fischertechnik kit. Direct connection to the range of additional models is provided through additional cables.

A complete suite of curriculum and programming software – for institutions and students – is available.

Benefits

- Flexible, modular and extendable
- Complete solution – hardware, software and curriculum

Features

- 4 models available
- Input/output lines presented on 4mm connectors
- Compatible with all mechatronic modules

Product	Code	Price
SIMATIC STEP 7 Trainer Package Edition 2006	MC53774	£2,080

Simatic S7-300 PLC training equipment



Here you can see the 4 basic models of the Allrounder trainer that we offer. In the table below you can see the features of each model.

Product Equipment	Basic	Advanced	Pro	Allrounder
Table-top support in aluminium profile, S7 assembly support	X	X	X	X
Power supply module PS307/2A	X	X	X	X
CPU-Type (including micro memory card)	312	313C-2DP	314C-2DP	312C
Digital inputs	16	16	24	24
Fast counter inputs	–	3	4	2
Digital inputs are wired to	SM321	CPU	CPU	CPU+SM321
Digital outputs	16	16	16	16
Digital outputs are wired to	SM322	CPU	CPU	SM322
Analogue inputs	–	–	4	4
Potentiometer for simulation of an analogue input signal	–	–	X	X
Potentiometer output switchable 0-10V / 0-20 mA	–	–	X	X
PT 100 sensor input	–	–	1	–
Analogue inputs wired to	–	–	CPU	SM334
Analogue outputs	–	–	2	2
Output signal optional 0-10V or 0-20 mA	–	–	X	X
Analogue gauging instruments +/-10V	–	–	2	2
Analogue outputs wired to	–	–	CPU	SM334
Profibus DP interface	–	X	X	X
	–	at the CPU	at the CPU	CP342-5
Strapping plug for 24V / GND	X	X	X	X
Setup ready for operation	X	X	X	X
Completely modular setup	X	–	–	X
Extendable with additional connecting modules	X	X	X	X
Order number	MC56778	MC56779	MC56780	MC56787
Price in £	£1,612	£2,015	£3,064	£3,225

What does it do?

A modular, expandable suite of mechatronics units for teaching automation technology.

Description

This modular suite of mechatronics training units can be used for training on an individual aspect of mechatronics technology, or can be built up to form a complete production line. Flexibility is at the heart of this range of products: you can buy one functional unit, a cube with several functional units – or even a whole production line. The units and cubes are supplied with teacher's and student's workbooks. You can use your own PLC, or we can supply you with one.

Benefits

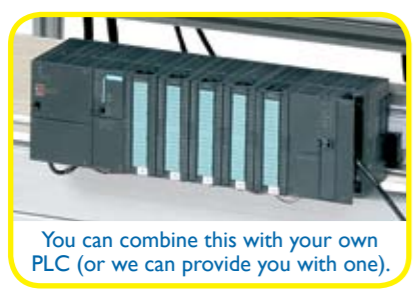
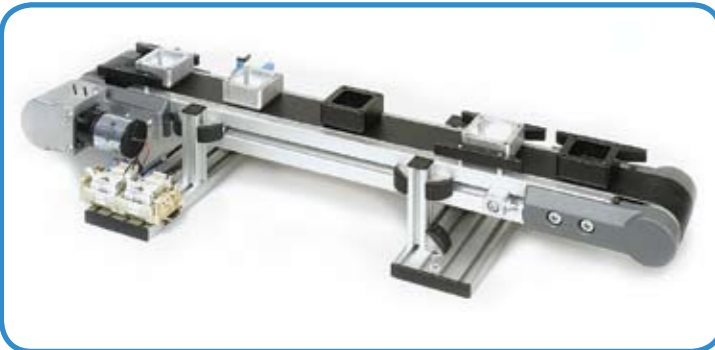
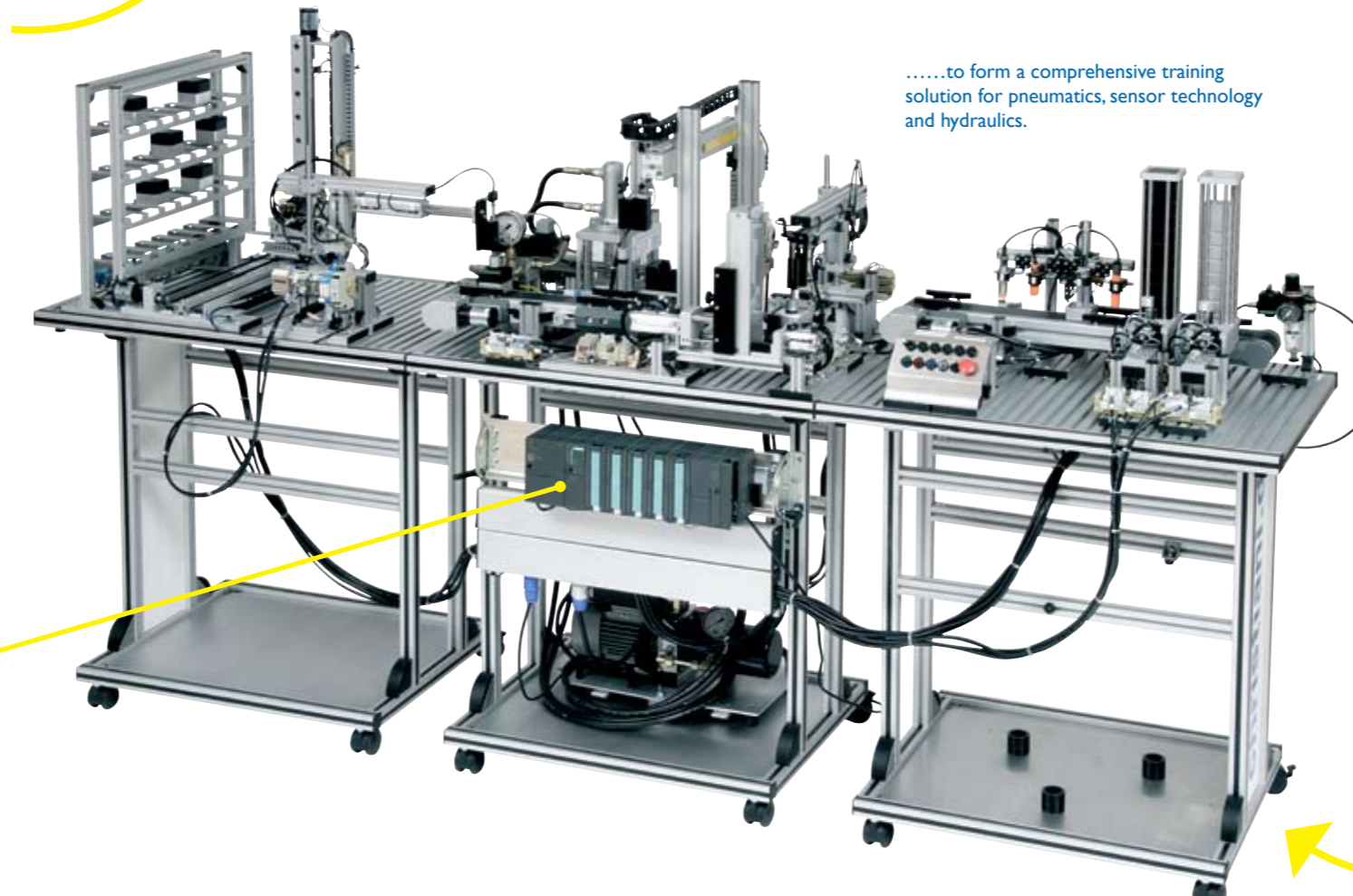
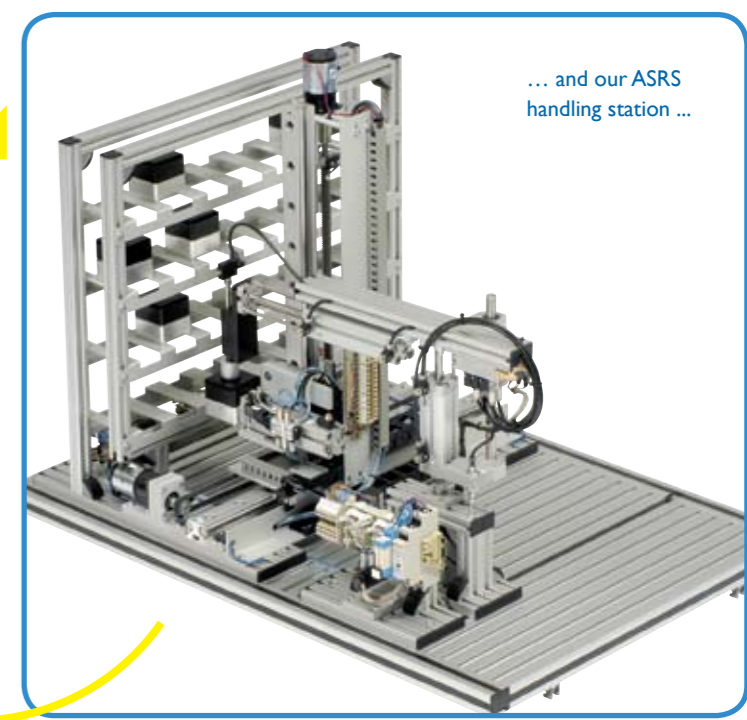
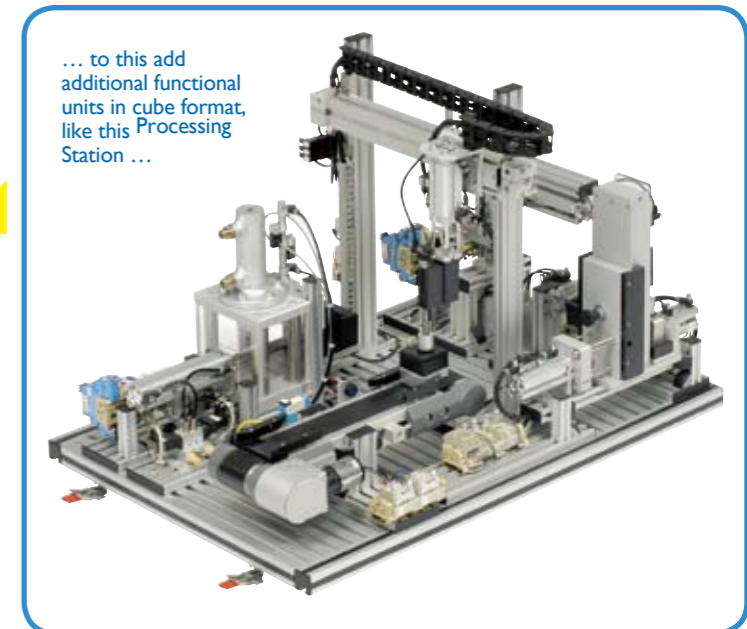
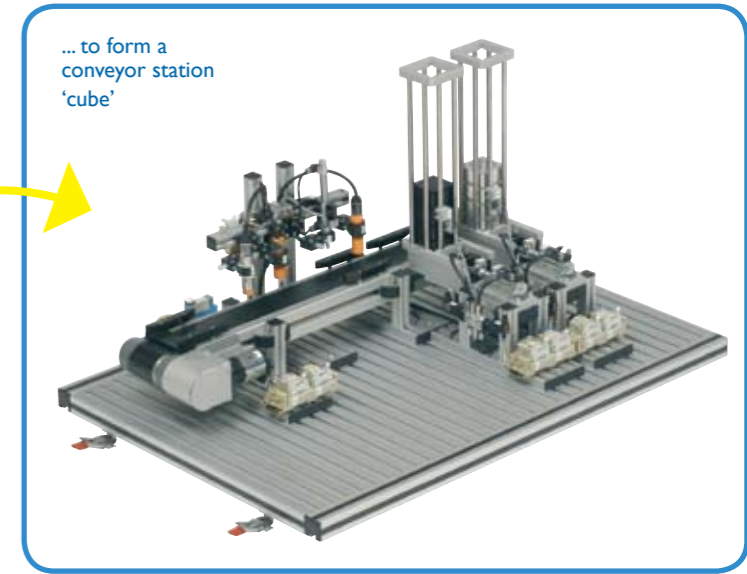
- A completely integrated learning solution
- Expandable as your requirements change

Features

- Used for a wide range of topics including pneumatics, hydraulics, motor control, PLC programming and sensor technology
- High quality documentation supplied
- Industrial components and sensors used



...and our high quality documentation.....



What does it do?

Low cost functional units for teaching mechatronics.

Description

These functional units each provide opportunities for learning within mechatronics. They are available fully built and tested with technical details and basic operating instructions. You can use these units as individual tasks for students or you can build them into a bigger system of your own design. The units are made from high quality industrial fittings and can be used with a range of PLCs. The units operate on square half sectioned work pieces which are available in black plastic, white plastic and aluminium. Work pieces allow students to carry out various exercises in test, assembly, and processing.

Benefits

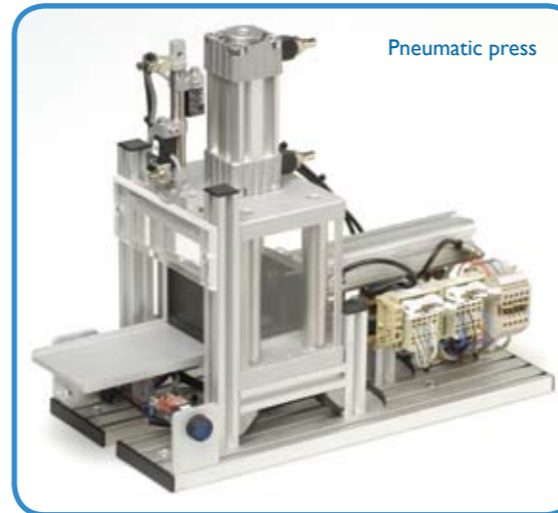
- Design and build a system to suit your needs
- Flexible and expandable

Features

- A completely flexible approach
- Compatible with most PLCs
- Full technical documentation supplied



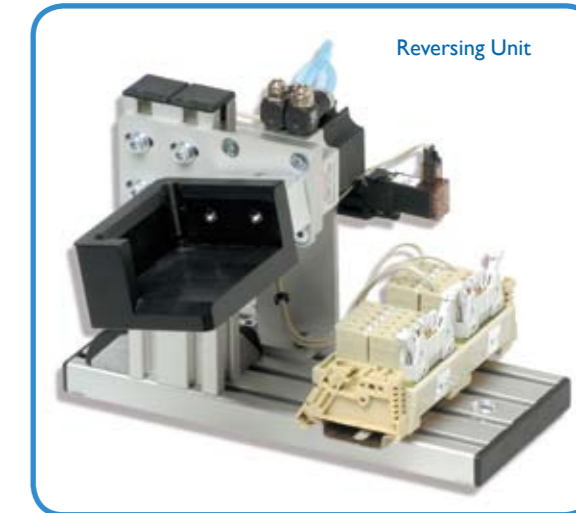
Service unit



Pneumatic press



Hydraulic press



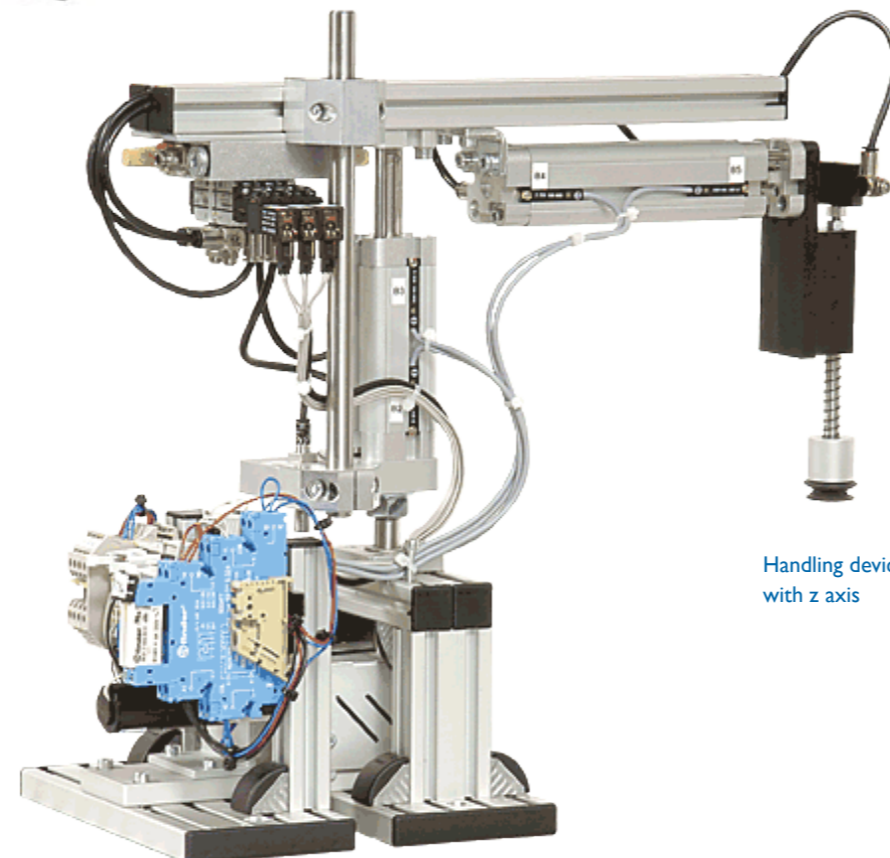
Reversing Unit

Functional Assembly
Pin UnitZ-axis
handling
deviceASRS (Automated Storage &
Retrieval System)

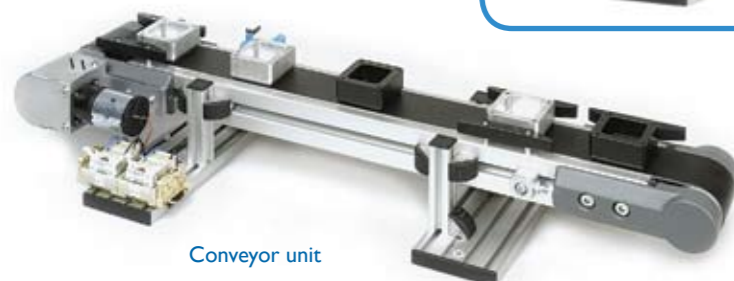
Operator panel



Testing unit

Handling device
with z axis

Magazine unit



Conveyor unit

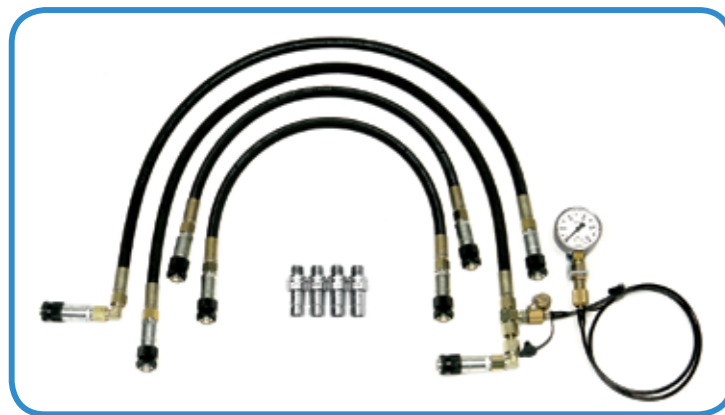
Product	Code	Price	Teachers's Workbook		Student Workbook	
			Code	Price	Code	Price
Conveyor unit	MC64325	£950	MC64417	£100	MC64418	£40
Testing unit	MC64326	£450	MC64432	£100	MC64433	£40
Magazine unit I	MC64324	£580	MC64440	£100	MC64441	£40
Z-axis handling device	MC64336	£1,141	MC64404	£100	MC64405	£40
Hydraulic press	MC64477	£1,253	MC64985	£90	MC64984	£30
Pneumatic press	MC64337	£1,127	MC64785	£100	MC64786	£40
Operator panel	MC64334	£390	MC64408	£40	MC64409	£20
Service unit	MC64335	£85	MC64442	£40	MC64443	£20
Profile plate kit (800*550)	MC84054	£190	-	-	-	-
Trolley	MC64222	£267	-	-	-	-
Reversing Unit	MC64327	£431	MC64452	£15	MC64453	£30
Functional Assembly Pin Unit	MC64328	£1,072	MC64454	£30	MC64455	£70
Portal	MC64338	£1,048	MC64994	£30	MC64993	£70
ASRS (Automated Storage & Retrieval System)	MC64402	£2,285	MC64778	£30	MC64777	£70



Product	Code	Price
Half aluminium workpieces - 4 off	MC53320	£36
Half workpieces black - 4 off	MC53321	£36
Half workpieces white - 4 off	MC53322	£36
Spring pins for cubes - 10 off	MC53331	£33
Cube set - 2 cubes varied	MC53485	£25



Product	Code	Price
Compressor 8 bar silent	MC64080	£520



Product	Code	Price
Hydraulic Hoses	MC53248	£54



Product	Code	Price
Compressor 8 bar oil free	MC64069	£199



Product	Code	Price
Portable Hydraulic pump	MC64072	£1,041



Product	Code	Price
Connecting Cables	MC53361	£15

What does it do?

Modular systems for teaching automation technology.

Description

These functional 'cubes' are comprised of a number of mechatronics units supplied with coloured aluminium and plastic components which pass through the various operations. The cubes are designed to teach the manufacturing technologies used in automation, feeding, testing, materials handling, transport and storage. Full technical documentation is supplied. PLCs not included. The Complete mechatronics system is made up of all three cubes and provides a fully working mechatronics system made up of all functional units in the range.

Benefits

- A completely integrated learning solution
- Easy to integrate into your existing programme of study

Features

- Can be used to teach a wide range of automation disciplines
- Made from high quality industrial components
- Can be expanded to suit your needs

Cube Contents

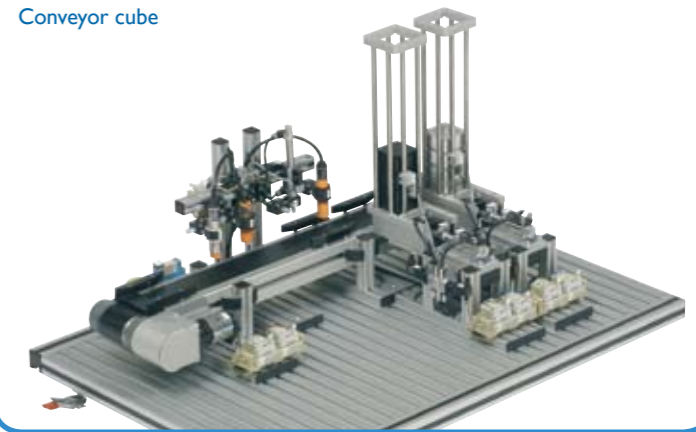
The conveyor cube containing: 2 stack magazines, 1 conveyor belt, 1 testing unit, 1 service unit, 1 operator panel and a mounting plate.

The Processing cube contains a handling device with z-axis, a pneumatic press, a short conveyor belt, a portal, a pinning station, a turning station, and a mounting plate.

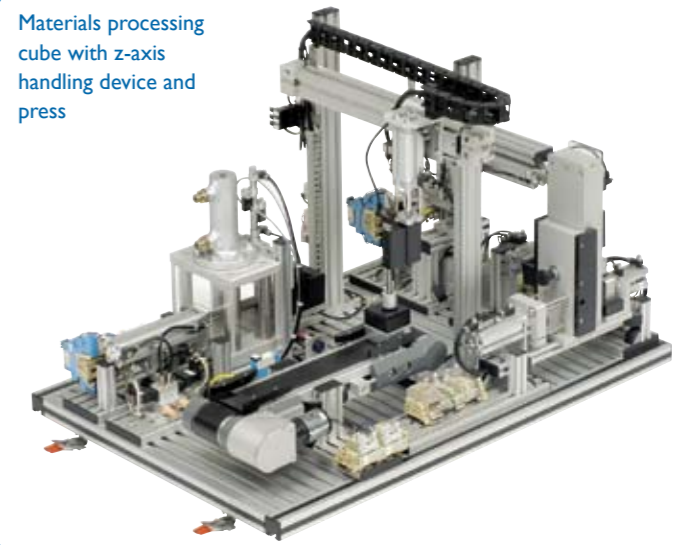
The ASRS station consists of: a handling device with z-axis, an automatic storage and retrieval system with vertical and horizontal axis and a mounting plate.

The complete mechatronics system consists of all three cubes. Trolleys and PLC not included.

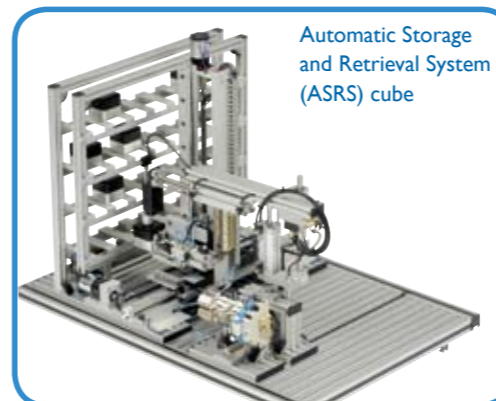
Conveyor cube



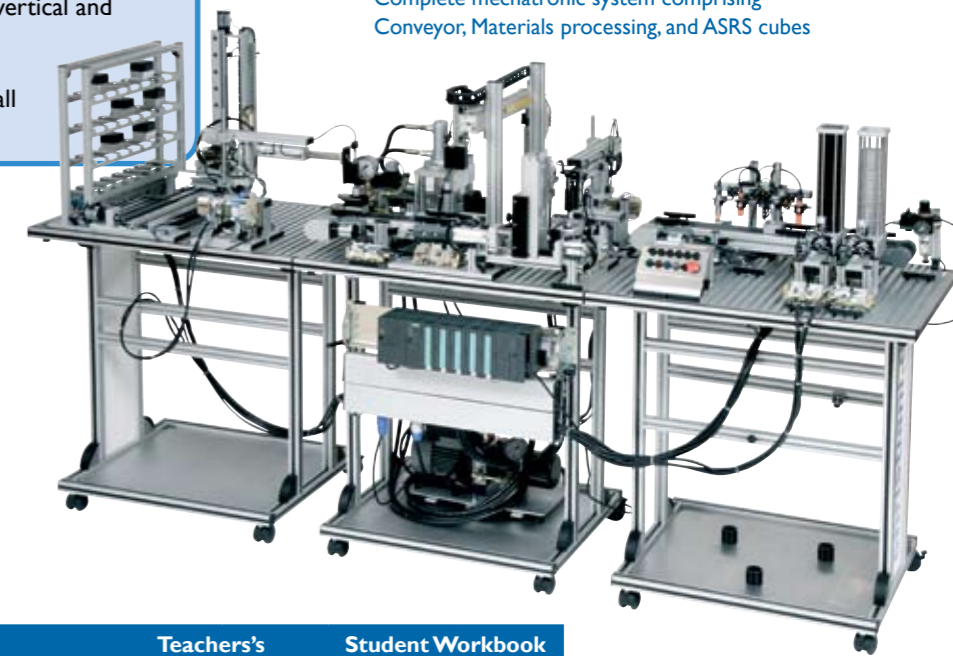
Materials processing cube with z-axis handling device and press



Complete mechatronic system comprising Conveyor, Materials processing, and ASRS cubes



Automatic Storage and Retrieval System (ASRS) cube



Product	Code	Price	Teachers' Workbook		Student Workbook	
			Code	Price	Code	Price
Conveyor cube	MC64381	£3,351	MC64692	£195	MC64693	£93
Processing cube	MC64478	£6,081	MC64694	£303	MC64695	£150
ASRS cube	MC64389	£3,802	MC64696	£195	MC64697	£93
Complete mechatronics system	MC64736	£13,715	MC65460	£455	MC65461	£196

Note that the Materials processing part of the Complete mechatronic system is delivered with a pneumatic, not hydraulic press.



MATRIX

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