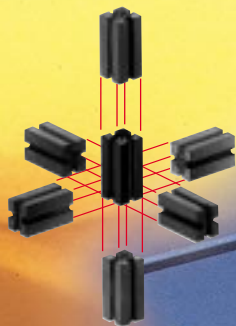


BUILDING BLOCKS FOR LIFE...

General catalogue
2001/2002

The world of technology is full of secrets waiting to be uncovered. fischertechnik makes gaining insights into this fascinating world as easy as child's play.

Because of its unique basic component, to which other components can be attached on all six sides, the only limits to creativity are the child's own imagination.



fischertechnik means ...

- a modern high-quality product -
Made in Germany
- greatly appreciated by parents,
teachers, and engineers
- all construction kits combine
perfectly with one another
- quick and safe
construction
with no external aids
- easily comprehensible
assembly instructions
- build load-bearing
working models, and ...
enjoy building and playing!

Look at this!

Join the world-wide fischertechnik FAN-CLUB!
More information overleaf.

fischertechnik



5 years upwards



JUNIOR STARTER

Art. No. 30 323

The starter kit ensures success quickly and in the form of play. With complete assembly instructions for 4 models. More than 80 components. 5 years upwards.



JUNIOR STARTER JUMBO PACK

Art. No. 16 551

With the "big" Junior it is possible to build all four models from the Junior Starter (Art. No. 30 323) at once. In addition to this, the assembly instructions include further suggestions and ideas for 10 even more complicated models. Specially suitable for Kindergarten and pre-school/day centres. More than 135 components. 5 years upwards.



7 years upwards

NEW

BASIC MECHANICS



BASIC MECHANICS

Art. No. 57 481

8 different mechanical models can be built from the parts in this kit, from the windscreen-wiper driven via four joints and a tiny giant wheel with bevel-gear drive to the workshop crane and the car-jack. A basic mechanical knowledge can be gained in play form by building the 8 models. With detailed assembly instructions. 7 years upwards. More than 130 components.



BASIC – the new series from fischertechnik. Attractive starter kits at attractive year-round prices. 7 years upwards.

NEW

BASIC VEHICLES



BASIC VEHICLES

Art. No. 57 483

The kit for building various different utility vehicles: a fork lift truck, and road roller, a snow plough, and a tanker lorry. All models with steering, the fork lift truck with lifting forks. With detailed assembly instructions for 4 models. 7 years upwards. More than 150 components.





UNIVERSAL – The Classic

Art. No. 30 308

Vise, block-and-tackle, lifting platform, sewing machine. 24 different possible ways of understanding everyday technology. Ideal for motorisation: Mini Motor Set, Art. No. 30 342 or Solar Set, Art. No. 30 343. With detailed assembly instructions. More than 450 components. 7 years upwards.



CARS & TRUCKS

Art. No. 34 950

The fantastic kit with so many different functions such as steering, suspension, winch, and tip-up load-space. The detailed assembly instructions show 4 trucks, 1 pick-up, and 1 off-roader with full suspension. The ideal complements: Drive with Power Motor Set, Art. No. 34 965, automatic steering with Mini Motor Set, Art. No. 30 342, and infrared remote control with IR-Control Set, Art. No. 30 344. For the power supply, we recommend Accu Set. More than 400 components. 7 years upwards.



POWER BULLDOZER

Art. No. 16 552

Sturdy tracked vehicle with many functions and possible additions. 4 models: exploration vehicle, bulldozer with adjustable blade, ski-track leveller, and rescue vehicle with winch and tow-hook. Can be motorised with 2 Power Motor Sets, Art. No. 34 965, and 1 Mini Motor Set, Art. No. 30 342. Can be remote controlled with IR Control Set, Art. No. 30 344. For the power supply, we recommend Accu Set. More than 700 components. 8 years upwards.



HARBOUR CRANES

Art. No. 30 201

Highly detailed model based on powerful harbour cranes. Ultra-fine functions such as various different jibs with single, double, or parallel guides are the distinguishing features of these models. Each crane model can be equipped with up to three motors, e.g. with three Mini Motor Sets, Art. No. 30 342. Detailed assembly instructions for three models. More than 550 components. 8 years upwards.



NEW



FUN PARK

Art. No. 57 484

The Ferris wheel with a height of more than 70 cm, the chair-o-plane roundabout with a diameter of almost 50 cm, and of course the Octopus with its sophisticated drive system, consisting of two counter-rotating eccentric drives which also produce the up-and-down movements. Ideal for motorisation: Power Motor Set, Art. No. 34965. With detailed assembly instructions. 8 years upwards. More than 900 components.

Motor sets, remote control set, lighting, power supply, storage

MINI MOTOR SET

Art. No. 30 342

The universal motor set with S-motor, 9V battery holder, and many gear parts: gear wheels, angle drive, differential, universal joints, etc. More than 50 components.


POWER MOTOR SET

Art. No. 34 965

The high-performance geared motor. Motor data: voltage 9VDC, maximum output 1.4 W at 340 rpm, gear ratio 8:1. Includes other gear parts such as gear wheels, worms, and a differential, as well as a pole-changing switch, wiring, and plugs. More than 35 components. Power supply needed in addition (e.g. Accu Set).


SOLAR SET

Art. No. 30 343

The tried-and-trusted fischertechnik solar components from Profi Solar as a universal drive set: solar module, gold capacitor, bell-type armature gear motor, and solar switch. More than 20 components.


LIGHTS

Art. No. 34 970

Lighting set consisting of 4 lamps, coloured lamp covers, wiring, plugs, and flasher electronics for up to 8 lamps. Protected against short-circuits and overloads. For flashing or constant light. More than 35 components. Power supply needed in addition (e.g. Accu Set).


IR CONTROL SET

Art. No. 30 344

The universal infrared remote control unit, consisting of a transmitter and IR Receiver I. Performance characteristics: 10 metres range, 3 independent motor outputs, of which 2 can be controlled simultaneously. Two speed levels. Transmitter can control up to 6 motors (with IR Receiver II, Art. No. 30 183). Power supply needed in addition (transmitter: Two LR03/1.5V/AAA batteries, receiver e.g. Accu Set).


ENERGY SET

Art. No. 30 182

The complete, high-performance power supply from the wall socket for all fischertechnik models. Contains mains adapter (9V DC/1000mA) and regulator unit all in one.


FISCHERBOX 955

Art. No. 49 955

Double small-item box with 32 internal compartments and transparent covers – the ideal storage system for all individual fischertechnik parts (not included). Sturdy and user-friendly.

Dimensions: 390 x 360 x 140mm. Weight (empty): 1.8kg.

NEW

ACCU SET

Art. No. 34 969 (220V), Art. No. 57 487 (110V)

With new, improved charging system. The pack of NiCd 8.4V 940 mAh batteries can now be charged in only 1.8 hours. With ΔU monitoring to prevent overcharging. Consisting of one NiCad 8.4V 940 mAh battery pack and the special "Turbo Charge" micro-controller charging unit specially design to suit this battery pack (picture illustrated subject to later change).

Mini Kits 7 years upward



MINI CRANE

Art. No. 34 991



HELICOPTER

Art. No. 34 989



MINI TRIKE

Art. No. 34 992



GO CART

Art. No. 16 559



BULLDOZER

Art. No. 34 979



BEACH BUGGY

Art. No. 34 977



TRIKE

Art. No. 34 988



FIRE FIGHTER

Art. No. 16 556

Classic Line

Classic Line "Mobile Steam Engine"

Art. No. 16 555

The continuation of our "Classic Line" collector's series. Based on a mobile steam-engine such as used to power agricultural and static machinery. Many technical details such as moving piston-rods, fly-wheel with drive belt, and hand brake. With sturdy wooden panel. Can be subsequently motorised with Mini Motor Set, Art. No. 30 342. With detailed assembly instructions. More than 320 components.



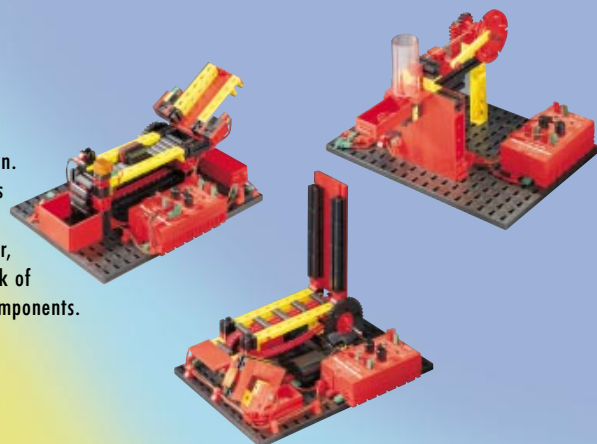
Profi



PROFI SENSORIC

Art. No. 30 491

Use sensors for contact-free switching and automation. Hand-dryers, ATMs, sorting machines – this kit shows how it works, with realistic models. Includes a FLIP-FLOP, photo transistor, reed contact, NTC resistor, switch, S-motor, gears, and a 9V battery holder. Book of detailed instructions for 7 models. More than 360 components. 9 years upwards.



PROFI CARTECH

Art. No. 30 492

With four-wheel drive, four-wheel steering, Ackermann steering, and gears. Complete vehicle technology. Fascinating models with comprehensive background information. Includes motor, differential gears, universal joints, numerous pinions, gear parts, and 9V battery holder. Book of detailed instructions for 17 models. More than 300 components. 9 years upwards. **With activity booklet on the subject of "Vehicle Technology".**



PROFI PNEUMATIC

Art. No. 30 494

Pneumatic kit, completely fitted out with a mini-compressor, 6 cylinders, 4 rotating-disc valves, and 9V battery holder. Book of detailed instructions for 6 models. More than 450 components. 9 years upwards.



PROFI SOLAR

Art. No. 30 497

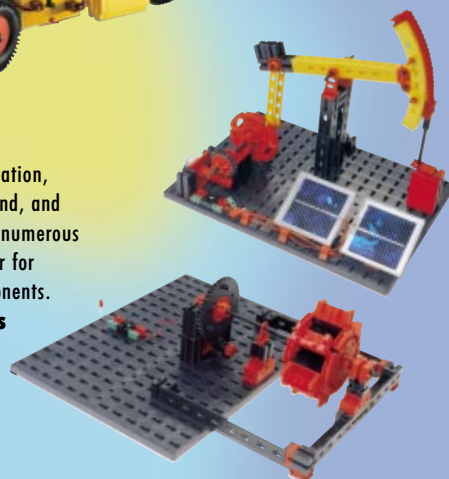
Environmentally conscious solar technology which even works in the dark. With a crystalline solar module (3.0V/240 mA), a gold capacitor (2.3V/10F) which stores the energy, bell-type armature gear motor which runs up particularly easily (right from 0.2V), and the solar switch as central control unit. Book of detailed instructions for 8 solar models. More than 300 components. 9 years upwards.



PROFI ECO POWER

Art. No. 57 485

"Regenerative Energies" is the theme of this Profi kit. The generation, storage, and use of energy from the natural sources of water, wind, and sun is explained with great clarity on the basis of 8 models and numerous experiments. With solar motor, two solar cells, the gold capacitor for energy storage, light-emitting diodes, and more than 150 components. 9 years upwards. **With detailed assembly instructions and an activity booklet on the subject of "Regenerative Energies".**



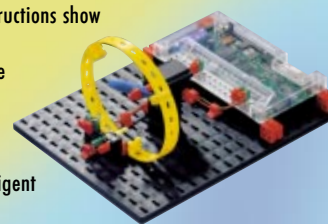


STARTER PACK

Art. No. 16 553

This complete package consists of the kit, the Intelligent Interface, and LLWin Software, and is the ideal point of entry into the fascinating world of computer-controlled fischertechnik models. The assembly instructions show 8 simple, easy-to-build models such as traffic lights, car-park entrance barriers, heating control systems, or hand-dryers. The comprehensive programming book explains how the models can be programmed with the graphic LLWin software, and finally the tried-and-trusted Intelligent Interface provides the control of the models. The kit contains more than 130 components, including one motor and numerous sensors such as 3 switches, a photo-transistor, and an NTC resistor for measuring temperatures. 12 years upwards. Also needed: power supply for the Intelligent Interface (e.g. Energy Set, Art. No. 30 182). **With activity booklet on the subject of "Programming with LLWin".**

Computing



MOBILE ROBOTS

Art. No. 30 400

In this complete package, consisting of the kit, the Intelligent Interface, and LLWin graphic software, everything centres around the subject of "mobile robots". The assembly instructions show 5 different mobile robots which can, for instance, recognise obstacles or tracks. This ideally shows the facility for the LLWin programmes to download to the Intelligent Interface. In addition to this, three starter models are illustrated: a sliding door, a stamp, and a pulse counter. The kit contains more than 280 components including 2 motors 6 switches, 2 photo-transistors, and a Power Block for the Intelligent Interface (for six 1.5V Mignon AAA batteries). 12 years upwards.



INDUSTRY ROBOTS

Art. No. 30 408

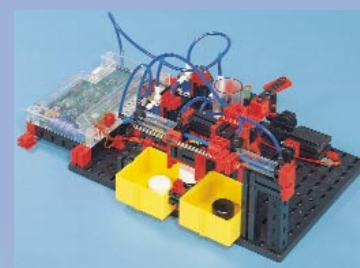
This kit contains the parts for 4 highly realistic industrial robots which are described in detail in the assembly instructions: two 3-axis gripping robots, a lathe, and a welding robot. It contains more than 500 components, including 4 motors, 8 switches, and a CD with the relevant examples of programmes for LLWin and a separate "Teach-in" programme (for Windows 95, 98 and NT). Also required: the Intelligent Interface, Art. No. 30 402, with a power supply (e.g. Energy Set, Art. No. 30 182) and software LLWin, Art. No. 30 407.



PNEUMATIC ROBOTS

Art. No. 34 948

Pneumatically powered machines can be programmed and controlled with the Intelligent Interface and LLWin software via the PC. The valves are not now opened and closed manually but electro-magnetically. The air supply comes from the tried-and-trusted fischertechnik mini-compressor, which has been enlarged to include an air storage tank. The kit contains more than 350 components for building 4 models: a processing centre, a sorting line, a door-opener, and a pneumatic gripper. With 4 pneumatic cylinders, three 3/2-way solenoid valves, 2 motors, 1 light-barrier, 1 CD containing the LLWin programme examples, and many other good things as well. 12 years upwards. Also needed: the Intelligent Interface, Art. No. 30 402, with a power supply (e.g. Energy Set, Art. No. 30 182) and software LLWin, Art. No. 30 407.



BIONIC ROBOTS

Art. No. 57 486

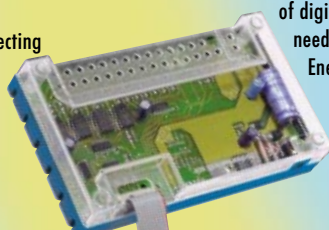
Bionics – technology copied from Nature. Walking robots with either 6 or 4 legs, all computer controlled by the software LLWin and the Intelligent Interface. The drive comes from two Power Motors, so that the robots can move not only forwards and backwards but also left and right. These moving machines can sense their surroundings via various sensors. 12 years upwards. More than 300 components. Also needed: Intelligent Interface, Art. No. 30 402, with power supply (e.g. Accu Set) and software LLWin, Art. No. 30 407.

With book of instructions and an activity booklet on the subject of "Bionic Robots/Walking Machines".

INTELLIGENT INTERFACE

Art. No. 30 402

4 digital motor outputs, 8 digital and 2 analogue inputs, integrated micro-processor, serial RS 232 port with SubD9 connecting cable, online and download operation.



EXTENSION MODULE

Art. No. 16 554

This extension module for the Intelligent Interface (Art. No. 30 402) doubles the number of motor outputs from the interface from 4 to 8 and the number of digital inputs from 8 to 16. The extension module needs its own 9V DC/1000 mA power supply (e.g. Energy Set, Art. No. 30 182).

SOFTWARE LLWIN 3.0

Art. No. 30 407 (single licence)

Art. No. 37 321 (school licence)

As a genuine 32-bit application, LLWin 3.0 runs under Win95/98/2000 and Windows NT. The programme modules are clearly and graphically displayed. The user surface and the editing of the modules are user-friendly and convenient (e.g. automatic connection of modules set directly underneath one another, copying of sub-programmes to other projects, deletion and relocation of groups and symbol bar). Additional functions such as the use of simple formulae and Boolean operations further extend the range of programming possibilities. In addition to this, Version 3.0 is capable of several different languages and the required one can be selected via the menu.



Focus

The Focus kits* has been specially designed for use in Design & Technology at the primary and secondary levels.

Mechanisms Kit

Art. No. 35 356

■ Learning kit for 2 to 3 pupils.

The Mechanisms Kit offers a wide range of mechanical systems, including:

- rotating movements, power transfer, gear systems (crown gears, bevelled gears, worm drives, plate-wheel gears, etc.
- conversion of rotating into linear movements – toothed racks, spindles.
- conversion of rotating into to-and-fro and swinging movements – cams, pusher cranks, crank oscillations
- chains, belt pulleys, and belt drives.

The subject-matter also include the basic mathematical theory of reduction gears and speed relationships, the laws of levers, and levels of efficiency.

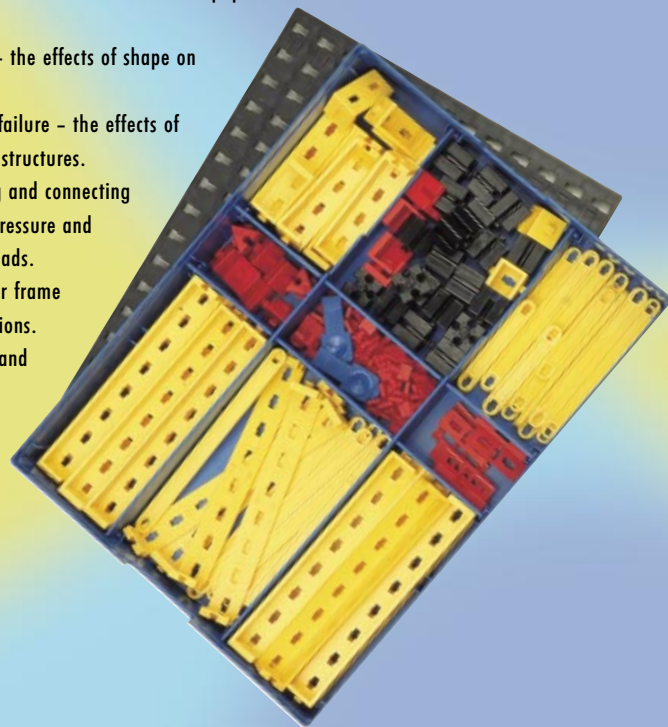


Structures Kit

Art. No. 35 363

■ Quickly building simple static models enables knowledge to be gained of the laws of static forces. Kit for 2 to 3 pupils.

- rigidity – the effects of shape on strength.
- types of failure – the effects of loads on structures.
- stiffening and connecting parts – pressure and tensile loads.
- triangular frame constructions.
- stability and centre of gravity.



Computing Starter Kit

Art. No. 18 353 (for picture see page 11)

■ Learning kit on the subject of "Computing – programming/ automation via the PC", for 2 to 3 pupils.

- kit taken from the complete Computing Starter Pack (Art. No. 16 553), i.e. without the Intelligent Interface and the LLWin Software.
- ideal for schools which combine several kits under one schools licence for LLWin 3.0 (Art. No. 37 321, required additionally) or still wish to use the parallel "Interface Computing" (Art. No. 30 520).
- contains more than 130 components, including 1 motor and numerous sensors such as 3 switches, 1 photo-transistor, and 1 NTC resistor for measuring temperatures.
- for storage purposes there are 2 of the tried-and-trusted sorting bins with 1 base plate, 258 x 186 mm
- with instructions for building 8 simple, quick-to-make models such as traffic lights, car-park entrance barriers, heating controls, or hand-dryers, and a comprehensive activity booklet for teachers and pupils on the subject of "Programming with LLWin" (Art. No. 30 435)
- the motors and sensors are controlled by the relevant interface (needed additionally). For the power supply, we recommend the Energy Set (Art. No. 30 182) or Accu Set.

NEW

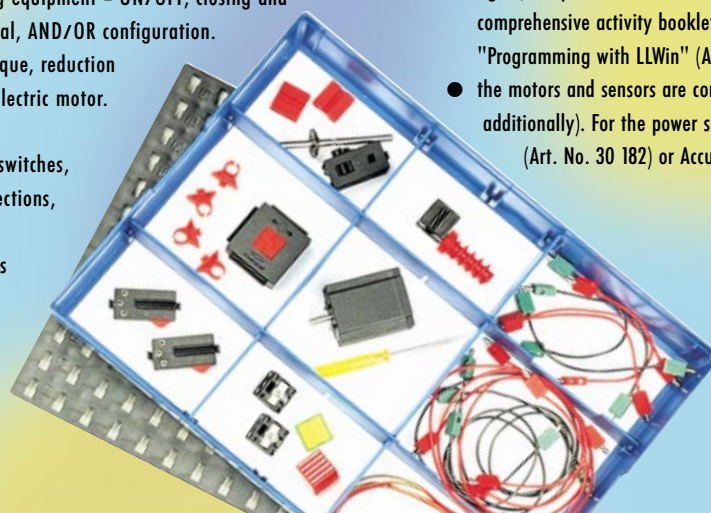
Electrical Control Kit

Art. No. 35 362

■ Supplementary kit to the Mechanisms Kit for 2 to 3 pupils

- simple electric circuits, series and parallel wiring, wiring diagrams and symbols.
- use of switches for controlling equipment – ON/OFF, closing and opening switches, pole reversal, AND/OR configuration.
- motorised gear systems – torque, reduction gears, effects of load on an electric motor.

The kit contains a motor, gears, switches, lamps, wiring with push-in connections, and various basic fischertechnik components. A 9V power supply is also necessary – we recommend Energy Set (Art. No. 30 182) or Accu Set.



* Focus Kits: © Copyright by Economatics (Education) Ltd., Sheffield, England

The book on the Focus Kits

Art. No. 35 364

- clearly structured courses with clear learning goals on the subjects of "Structures", "Mechanisms", and "Electrical Control".
- guides pupils in building, investigating, and developing simple models. Technical concepts and systems are developed and designed for specific applications and situations.
- supports the route from goal-orientated practical projects to design and production data.
- contains homework designed to deepen the acquired knowledge and apply it in new contexts.
- working data sheets can be copied and ensure the flexible use for varying requirements.
- comprehensive information section for the teacher contains suggested solutions, possible extensions, and a brief introduction to the fischertechnik construction system.



Teaching guides



Computing Starter (Art. No. 30 435)

- comprehensive activity booklet on the subject of "Programming and controlling fischertechnik models via the PC" (which is also the contents of the Computing Starter Pack Kit, Art. No. 16 553, and the Computing Starter Kit, Art. No. 18 353).
- supports the route of goal-orientated practical projects from assembly and wiring to programming
- contains numerous programming exercises with the graphic LLWin 3.0 programming software, including tips and solutions.
- the black-and white print enables it to be photocopied quickly and flexibly, without any loss of quality.
- language versions: German and English (French, Portuguese, and Spanish available from the autumn of 2001 onwards)



Profi Cartech (Art. No. 24 970)

- comprehensive activity booklet on the subject of "Vehicle Technology" (also the contents of the Profi Cartech kit (Art. No. 30 492).
- supports the route of goal-orientated practical projects from assembly to motorisation.
- contains numerous experiments/exercises on the subjects of power transfer via a chain, gearbox, vehicle steering, vehicle drive, etc.
- the black-and white print enables it to be photocopied quickly and flexibly, without any loss of quality
- language versions: German, English, French, Dutch, Portuguese, and Spanish.



Universal (Art. No. 35 722)

- comprehensive activity booklet on the Universal kit, Art. No. 30 308 (NOT the contents of the kit).
- comprehensive information section for the teacher with brief instructions, procedures, suggested solutions, and extension possibilities.
- contains numerous experiments / exercises on the subjects of power transfer, laws of levers, rotary movement, axial and circular movement, and gears.
- the black-and white print enables it to be photocopied quickly and flexibly, without any loss of quality
- language versions: English (French, Portuguese, and Spanish currently at the planning stage)

Further activity booklets for Computing Bionic Robots and Profi Eco Power available in German, English, French, Dutch, Portuguese, and Spanish from the autumn of 2001 onwards.

Training models

3-D-Robot

Art. No. 16 286

**Completely built, compact,
working models for quick,
flexible use at a fair price.**

3-axis robot with grabber claw, 4 DC motors, 4 limit switches (floating), 4 pulse counters for travel measurements, all counters are zero-potential. Model mounted on sturdy wooden panel. Size (l/w/h) 385x270x350 mm. Packed in wooden box. Model available in 9VDC or 24VDC versions.

Degrees of freedom: Axis 1: 180° of rotation, Axis 2: 100 mm back and forth, Axis 3: 160 mm raise/lower.

Standard scope of supply:

No controller, interface: 1 ribbon cable, 24-conductor, colour-coded with 26-pin male connector (model illustrated with fischertechnik "Intelligent Interface", Art. No. 30 402, also available for 9V version). For other accessories, see price list.

Model is combinable with "Punching Machine with Conveyor Belt", Art. No. 51 663, and "Indexed Line with 2 Machining Stations", Art. No. 51 664.



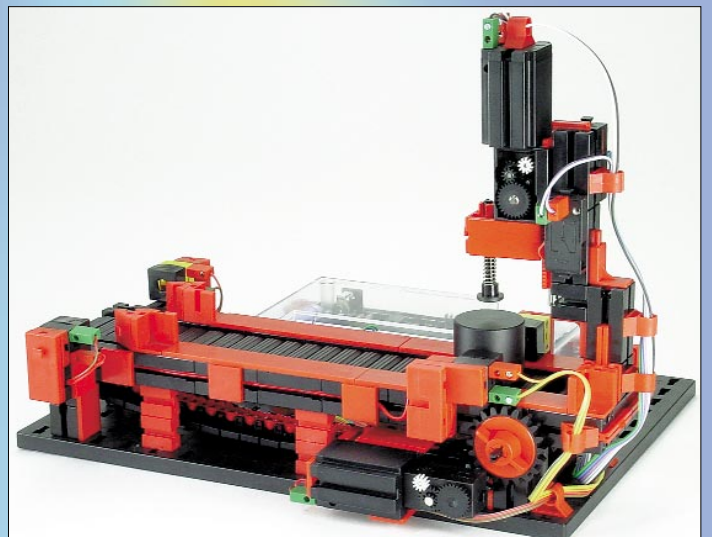
Indexed Line with 2 Machining Stations

Art. No. 51 664

2 machining stations, 4 conveyor belts arranged in U-shape, 8 DC motors, 4 limit switches (floating), 5 light barriers each comprising a phototransistor and one lens lamp, model mounted on sturdy wooden panel. Size (l/w/h) 450x410x190mm. Packed in wooden box. Model available in 9VDC or 24VDC versions.

Standard scope of supply:

No controller, interface: 1 ribbon cable, 16-conductor, colour-coded with 16-pin male connector, 1 ribbon cable, 18-conductor, colour-coded with 20-pin male connector (model illustrated with fischertechnik "Intelligent Interface", Art. No. 30 402 and "Extension Module", Art. No. 16 554, also available for 9V version). For other accessories, see price list.



Punching Machine with Conveyor Belt

Art. No. 51 663

2 DC motors, 2 limit switches (floating) 2 light barriers, each comprising a phototransistor and a lens lamp.

Model mounted on fischertechnik base plate. Size (l/w/h) 280x215x185mm. Packed in cardboard. Model available in 9VDC or 24VDC versions.

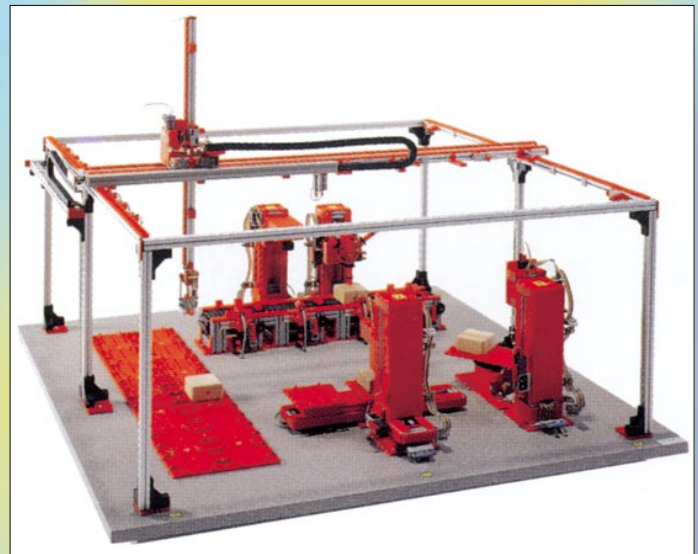
Standard scope of supply:

No controller, interface: 1 ribbon cable, 14-conductor, colour-coded with 14-pin male connector (model illustrated with fischertechnik "Intelligent Interface", Art. No. 30 402, also available for 9V version). For other accessories, see price list.

Model is ideally combinable with "3-D Robot", Art. No. 16 286.

The last step before reality – fischertechnik plan & simulation Reducing creative risks

■ The working models in fischertechnik plan & simulation are a tried-and-trusted, and also inexpensive, means of planning, developing, and testing the running of industrial control units and related software. They are used all over the world in the fields of basic **vocational training, development, and presentation.**



"Mofa France"

The control software for a real-life installation can be completely developed and tested out without any danger by connecting the models to a modern industrial control system such as a PLC with a field-bus systems.

Standards for judging success in learning

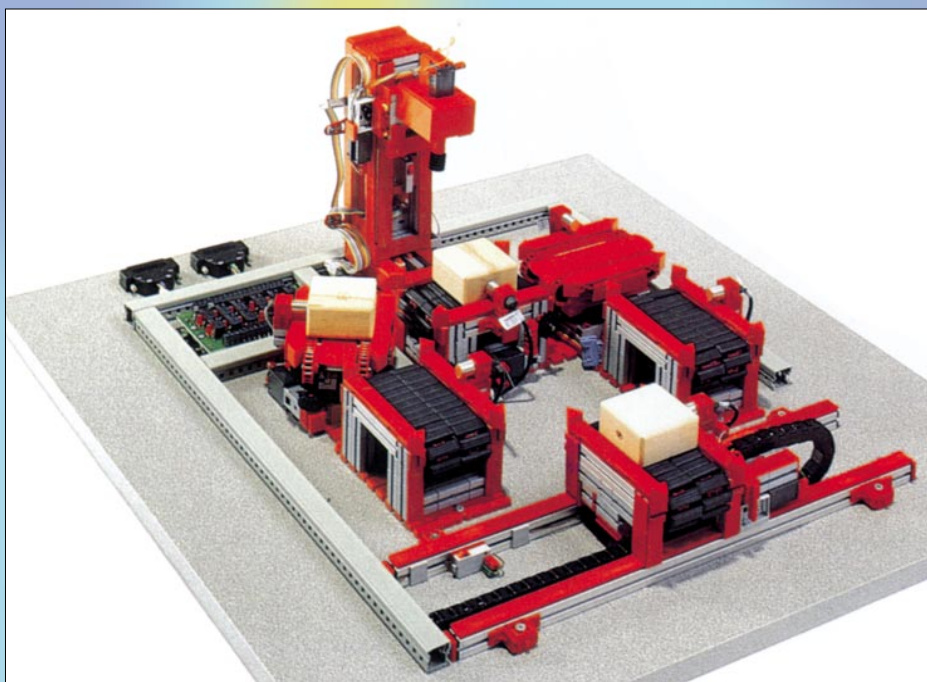
■ The working models provide highly efficient learning for technical apprentices, trainee technicians, and engineering degree students by simulating real-life operation. With industrial projects, the elimination of errors in the planning phase reduces the total costs of a project considerably, and this means that it is always profitable to acquire a model.

Because of the high level of abstraction in the models, complicated technical installation are presented in a way that is easy for anybody to see and understand. In particular, project participants from the commercial departments can form a precise picture which enables them to make well informed investment decisions.

For detailed documentation on the fischertechnik plan & simulation range, please contact us direct (for address see back cover of catalogue).

Not much is plenty

■ The flexibility and modularity of the fischertechnik system opens up virtually unlimited possibilities for hardware simulation in connection with industrial-standard sensors and actuators, and the control units produced by leading manufacturers. Compared with conventional model-building, fischertechnik models offer the advantages of using low-cost ready-made parts, quick assembly, and reusable materials. Modules have been developed for designing and optimising technical production processes which make it possible to build the simulation system quickly and efficiently.



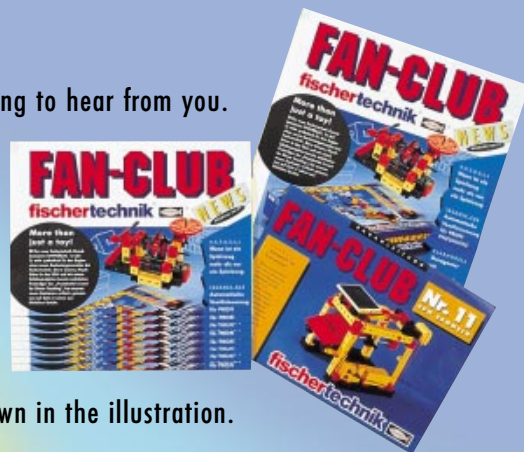
Process cell "SIDAC"

. . . U N B E A T A B L E S E R V I C E



Join in, be completely up to date, and know more than others: with the fischertechnik FAN CLUB. And, of course, everything connected with it: the club card, the club magazine "FAN CLUB NEWS", and the current fischertechnik events. Any questions regarding fischertechnik? Or any tips or suggestions?

The hotline is waiting to hear from you. The parts service can provide you with even the smallest component. Simply order the individual part shown in the illustration.



A P P L I C A T I O N

Yes, I would like to become a member of fischertechnik's free FAN-CLUB

Name:

Street:

City/Postal code:

Country:

Date of birth:

Cut out and send to

fischertechnik, Postfach 1152, 72176 Waldachtal, Germany



fischerwerke

Artur Fischer GmbH & Co. KG

Weinhalde 14-18, 72178 Waldachtal, Germany

Phone ++ 49 74 43 12-43 69

Fax++ 49 74 43 12-45 91

<http://www.fischertechnik.de>

email: fischertechnik@fischerwerke.de

For further inquiries, please check also our international web pages:

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Denmark www.fischertechnik.dk (Phone 04565 2299)

France www.fischertechnik.tm.fr (Phone 01-4709 9200)

Great Britain www.fischertechnik.co.uk (Phone 01484-860 006)

Luxembourg www.fischertechnik.lu (Phone 026-554 533)

Netherlands www.fischertechnik.nl (Phone 0546-492 160)

USA/Canada www.fischertechnik.com (Phone 209-575 3445)

Other countries www.fischertechnik.de (Phone++49-7443 124293)

fischertechnik®

