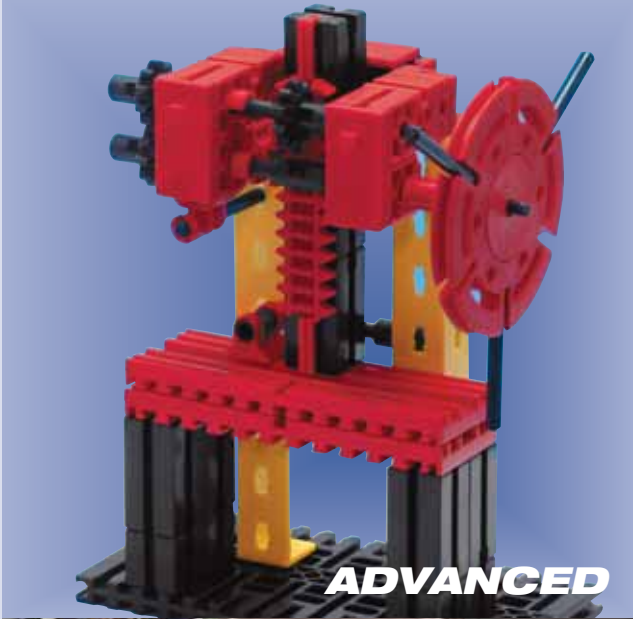


Building Blocks For Life

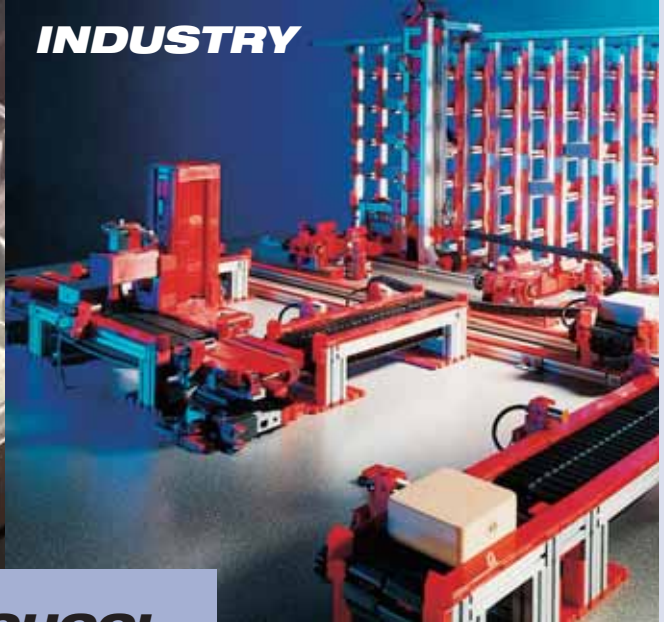
fischertechnik 



**ADVANCED
COMPUTING**



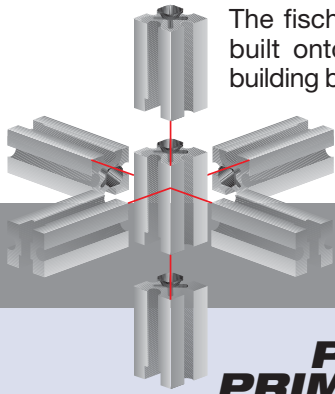
**PROFI
INDUSTRY**



- PRESCHOOL**
- SCHOOL**
- VOCATIONAL
SCHOOL**
- UNIVERSITY**
- INDUSTRY**

Learn about technology while playing

THE BASIC BUILDING BLOCK AN INGENUOUS IDEA



The fischertechnik basic building block can be built onto on all six sides. This "many-sided" building block forms the basis for all fischertechnik construction sets, which are put together according to age and capa-

bilities of the pupils and students. These sets allow you to experience the real technology and learn it by playing.

All of this taken together forms a logical concept where one fits with the other. Building block for building block.

OVERVIEW

PRE-/ PRIMARY SCHOOL

Children gain initial experience with technology and the way it functions at five years of age. The motto of the Junior Line is learning by playing and building with fast success. The Universal II construction set provides initial basic knowledge about mechanics. Comprehensive and easy to understand assembly instructions describe the construction of the 48 models. The technical functions are quickly comprehended and understood.

Applications (A):

Dump truck, cargo vehicle, tow truck, truck crane and portal crane.

Applications (B):

Fan, centrifuge, beam and scales, scales with sliding weight, kitchen appliance, sewing machine, clamp, lifting platform, crane, oil pump, lifting tackle, spindle press, die and planing machine.

SCHOOL/SECONDARY LEVEL

MECHANICS

Topics: electrical motor, worm gear pair, toothed gearing, steering, mandril screw spindle, coupled gear, lever, rope pulleys and lifting tackle.

Applications:

Vehicles, vehicles with steering, crank gear, gearbox, planetary gear, bevel gear unit, toothed gearing, differential, lathe, barrier, beam and scales, four-bar chain and windshield wiper.

STATICS

Topics: stability, struts and braces. Applications Table, double ladder, high hunting seat, girder bridge, bridges with underbeam, bridge with upperbeam and crane.

PNEUMATICS

Topics: make things move with air. Producing compressed air with a compressor The relation between force, area and pressure Pneumatic cylinder and valves.

Applications:

Compressor, lifting platform, catapult, sliding door, turntable with press, linear feed, excavator, pipe layer and front-end loader.

RENEWABLE ENERGIES



(A) Item No. 16 551



Item No. 500 882



(B) Item No. 93 290



Item No. 93 291



Item No. 93 291



Item No. 77 791

NEW

It doesn't matter how demanding the models become because you can always return to the components from other fischertechnik sets. To help you with the construction and discovery of the fascinating fischertechnik world, there is a comprehensive and

easy to understand set of assembly instructions. In addition, there are worksheets and instructional activity booklets with lots of background information, tasks and solutions.

SCHOOL/VOCATIONAL SCHOOL/UNIVERSITY/ INDUSTRY

UNIVERSITY/ INDUSTRY

Topics:
regenerative energies from wind, water and the sun. Production, storage and use of electrical energy.

Applications:
Oil pump, solar cell tracking, solar vehicle, crane, rotating swing, wind power system, water turbine and hammer drivers.

ELECTRICAL TECHNOLOGY

Topics: electrical circuits, electromechanical controls, controls with electronics, AND/OR circuit, series and parallel connection

Applications:
Continuity tester, elevator, turning signal, control of traffic lights, alarm system, parking garage barrier, punch press, hand dryer, flashlight, stairwell lighting, refrigerator lights, building block dispenser, garage door and tower with warning blinking light



Item No. 91 083

COMPUTER SCIENCE/MECHATRONICS

Topics: design of machines and robot models, programming of the control (interface) with graphic programming software.

Applications:
Traffic light, sliding door, pneumatic machining center, 3-axis robots, walking robots, robot with light detector and obstacle recognition

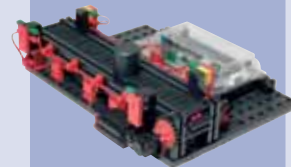


Item No. 46 234

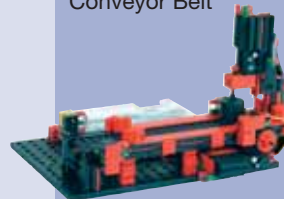
TRAINING MODELS

Topics: automation technology, control technology, programming with the help of finished function models

Available with 9V standard voltage or in 24V industry standard for connection to commercially available PLC



Conveyor Belt



Punching machine



Pneumatic processing center



high-rack warehouse
Siemens



Item No. 57 485



Item No. 41 863



Item No. 93 292

NEW



Item No. 96 782



Item No. 500 883



Indexed line



3-D-Robot

Support and Systematics

The instructional construction sets from fischertechnik are specially designed for use in technical instruction and in technical facilities for the basic and secondary level. Topics: mechanics, statics, electrical technology, regenerative energies and measuring, controlling, regulating (computer science, mechatronics and computing). Supported by instructional

books and worksheets, which are excellently prepared under the supervision of experienced teachers, these materials make it simpler for the teacher and the pupil to communicate and understand the contents of the instruction. In addition, there are intelligent storage systems that provide order and reliability for the everyday things at school.

DIDACTIC MATERIAL

How does a gearbox work? How is the movement of a windshield wiper produced? How do you design a stable bridge? How do you program and control a mobile robot? These and additional questions from the areas of mechanics, statics, electronics, computer science and robotics are answered in a graphic and easily understandable manner using our didactical activity booklets.

The activity booklets are in black and white and thus they can be reproduced as desired for instruction without any loss of quality. Additional worksheets can be downloaded from the fischertechnik Web site and with the thematically related tasks, these are an additional instrument to provide understanding of the corresponding instruction in a simple and precise manner and to test the learning success.



Assembly instructions and sorting suggestion for sorting box 500



Activity booklet



Work Sheets

SYSTEMATIC STORAGE

Every fischertechnik building block has its place in the very practical and well-thought-out storage system.



The sorting boxes in the construction sets create order.

Recommended storage (available separately)
Sorting suggestion contained in all assembly instructions
PROFI and COMPUTING.



Base Plate
258x186 mm
Item No.: 32 985

Box 500
Item No.: 94 828



Box 1000
Item No.: 30 383

JUNIOR

PRE-/PRIMARY SCHOOL

JUMBO PACK

Item No. 16 551

14 models and of these four can be built at the same time. Optimal for kindergarten and play groups!

- 135 components and 14 models



ADVANCED

SCHOOL/ SECONDARY LEVEL

UNIVERSAL II

Item No. 93 290

Vice, lifting platform with car, sewing machine and an entire amusement park. Several models can be built at the same time. Here, the everyday technology is understood and experienced.

- 400 components and 48 models
- Ideal additions are: Mini Motor Set, Power Motor Set, Energy Set.



CREATIVE BOX 1000

Item No. 91 082

More than 700 components from the current fischertechnik assortment. Packed in BOX 1000 with building board, 390 x 270 mm, as cover.

- 700 components + 8 sorting boxes



How do pneumatics work? What are a differential gear, planetary gear, universal joint and a compressor? How do an electrical circuit and a solar cell work? What is a phototransistor? Experience pure technology up close and learn it while playing. The instructional activity booklets provide support for this and contain a lot of background information, sample tasks and solutions.



SCHOOL/SECONDARY LEVEL

DA VINCI MACHINES

Item No. 500 882

This construction set combines several mechanical models, whose origin goes back to designs from Leonardo da Vinci: printing press, file cutting machine, pivoting bridge, odometer and chariot. An activity booklet with numerous illustrations and descriptions for the original designs from Leonardo da Vinci provides information, which is worth learning. History you can touch!

- Includes the didactic activity booklet "Machines from Leonardo da Vinci"
- 280 components and 10 models



NEW



Assembly instructions



Activity booklet



Work sheets



MECHANIC+STATIC

Item No. 93 291

The ultimate technology construction set for all future mechanical engineers, technicians and engineers: How does a gear box work? What is a planetary gear? How is the movement of a windshield wiper produced? How do you design a stable bridge? The answers to these and other elementary questions from the subject areas of mechanics and statics are found in this construction set with 30 different models.

- Includes the instructional activity booklet "Mechanics+Statics"
- Includes "Mini Motor", switch and battery holder
- 500 components and 30 models



Assembly instructions



Activity booklet



Work sheets



recommended storage
4 x item No. 94 828





PNEUMATIC II

Item No. 77 791

The Profi Pneumatics II provides playful learning of the basics of this "airy" technology and shows, using numerous application examples, the way that pneumatic valves and cylinders work in connection with a compressor and an air cell. It contains four double-acting pneumatic cylinders, three 4/3 way hand valves and one electrically operated compressor with air cell.

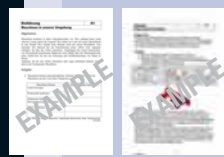
- Includes the instructional activity booklet "Pneumatics: Create Movement with Compressed Air"
- Includes compressor with "Mini Motor", switch and battery holder
- 400 components and 8 models



Assembly instructions



Activity booklet



Work sheets

C Compressor: driven by the minimotor, the compressor cylinder pumps air into the blue air cell.

V Valve: when the valve is opened air flows through the hoses into the pneumatic cylinder.

P Pneumatic cylinder: transforms the compressed air into a linear movement. This lifts, for example, the excavator arm.



recommended storage
4 x item No. 94 828

OECO POWER

Item No. 57 485

"Renewable energies" will become our most important source of energy in the future. The production, storage and use of energy from natural energy sources such as water, wind and the sun are illustrated using eight models and numerous experiments. This is the way to create an understanding of the future energy forms.

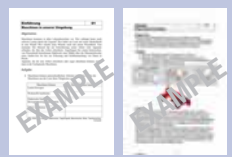
- Includes the instructional activity booklet "Renewable Energies"
- Includes solar motor, 2 solar cells and "Gold Cap" energy storage unit
- 190 components and 8 models



Assembly instructions



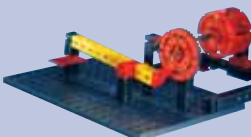
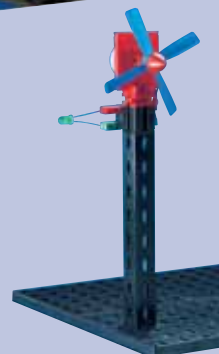
Activity booklet



Work sheets



recommended storage
2 x item No. 94 828



E-TEC

Item No. 91 803

Electrical circuits, electromechanics and electronic controls. Using functional models, for example, the principle of series and parallel connections and the control of a traffic light are explained step by step. For this purpose, the E-Tec module (see above) with eight set programs that control, for example, a burglar alarm with a buzzer, a hand dryer with a light barrier or a garage door with a magnetic sensor and these devices are controlled through three inputs for digital sensors such as a probe, phototransistor and reed contact and an output for a motor or two indicator lights.

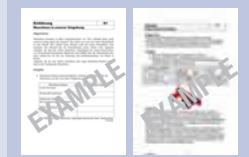
- Includes the instructional activity booklet "Electrical Technology"
- Includes Mini Motor, E-Tec module, sensor, light barrier, magnetic sensor and buzzer
- 260 components and 12 models



Assembly instructions



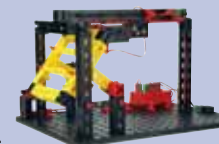
Activity booklet



Work sheets



recommended storage
3 x item No. 94 828



COMPUTING

Design machines and robot models, program the control software on the PC and put the entire thing in motion: What sounds so complicated and technical becomes a fascinating and creative game with Computing and this doesn't apply only to technical fans.

SCHOOL/VOCATIONAL SCHOOL/UNIVERSITY

ROBO STARTER SET

Item No.: 41 863

The complete beginner package: 150 components for eight simple-to-build models such as a traffic light, barrier, heating control or hand dryer. The ROBO I/O Extension as a passive interface to the PC, the software, ROBO Pro, and in addition the detailed programming book, which explains the graphic software in a simple and understandable manner.

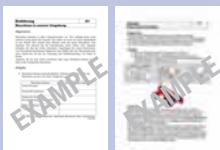
- Includes the instructional activity booklet "Programming and Control of fischertechnik Models with the PC"
- Includes "ROBO I/O Extension" as an interface for USB
- Includes control software, "ROBO Pro"
- Includes "Mini Motor", three sensing devices, one phototransistor and one NTC resistance for measuring temperatures and three light bulbs
- 150 components and 8 models
- Requires Energy Set or Accu Set on page 13.



Assembly instructions



Activity booklet



Work sheets



recommended storage
2 x item No. 94 828

8 models +
"ROBO I/O Extension"
as interface +
software "ROBO Pro"



inkl. ROBO Interface und
ROBO Pro Software

ROBO STARTER KIT

Item No.: 18 353

Like the "ROBO Starter Set", but without "ROBO I/O-Extension" and software "ROBO Pro".

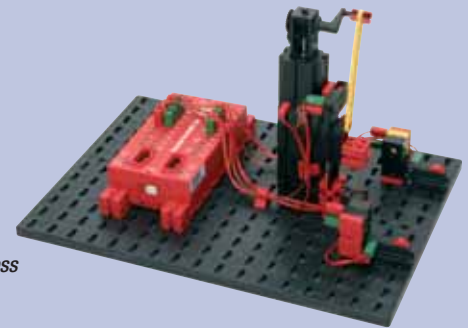
- Includes the instructional activity booklet "Programming and Control of fischertechnik Models with the PC"
- Includes "Mini Motor", three sensing devices, one phototransistor and one NTC resistance for measuring temperatures and three light bulbs
- 150 components and 8 models
- Requires Energy Set or Accu Set on page 13.



Model
Welding robot



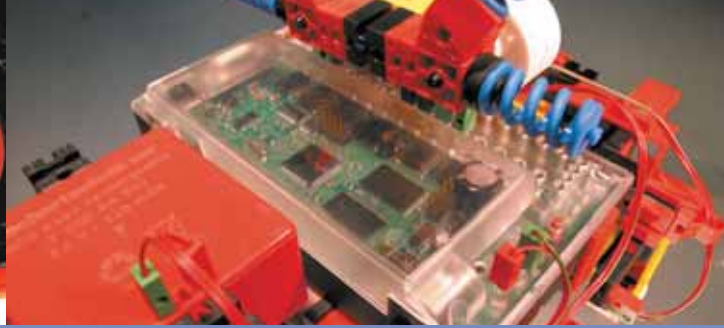
Model
Automatic door



Model
Punch press



Figure
sorting suggestion with 2 x sorting Box 500



ROBO MOBILE SET

Item No. 93 292

The complete Profi package, which consists of 480 components for the building of eight mobile robot models, the programmable "ROBO Interface" and the "ROBO Pro Software". The instructions explain the construction of the seven mobile robots with all-round edge recognition or obstacle recognition and the mobile robot with six legs. The robot with light detector continually follows a moving light source and the model, "trail searcher", follows a black line. In addition, the light detector can be combined with obstacle recognition. The mobile robot moves like an insect and can move forwards, backwards and right and left.

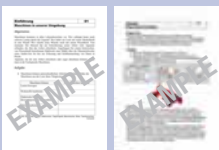
- Includes the instructional activity booklet "Programming and Control of fischertechnik Robots with the PC"
- Includes the ROBO Interface
- Includes control software, ROBO Pro
- Includes 2x Power Motor, 4 sensors, 2 phototransistors, 1 lens light bulb
- 480 components and 8 models
- Requires Accu Set on page 13.
- Ideal addition is ROBO RF Data Link on page 12.



Assembly instructions



Activity booklet



Work sheets



8 mobile robots +
"ROBO Interface" +
software "ROBO Pro"



includes ROBO Interface
and ROBO Pro Software

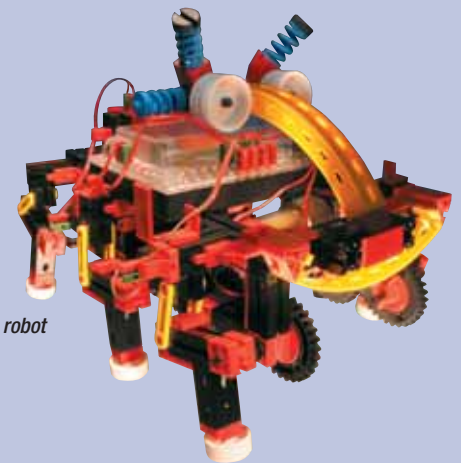
recommended storage
4 x item No. 94 828

ROBO MOBILE KIT

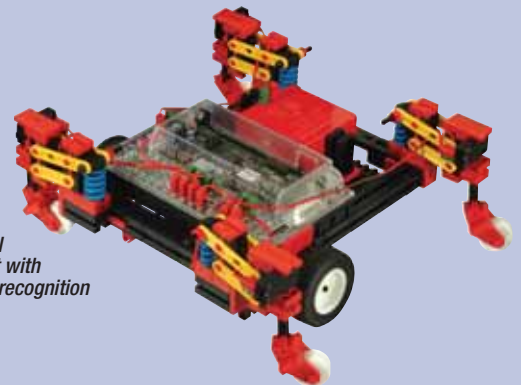
Item No. 96 808

Like the "ROBO Mobile Set", but without "ROBO Interface" and software "ROBO Pro".

- Includes the instructional activity booklet "Programming and Control of fischertechnik Robots with the PC"
- Includes 2x Power Motor, 4 sensors, 2 phototransistors, 1 lens light bulb
- 480 components and 8 models
- Requires Accu Set on page 13.
- Ideal addition is ROBO RF Data Link on page 12.



Model
Mobile robot



Model
Robot with
edge recognition



Figure
sorting suggestion with 4 x sorting Box 500



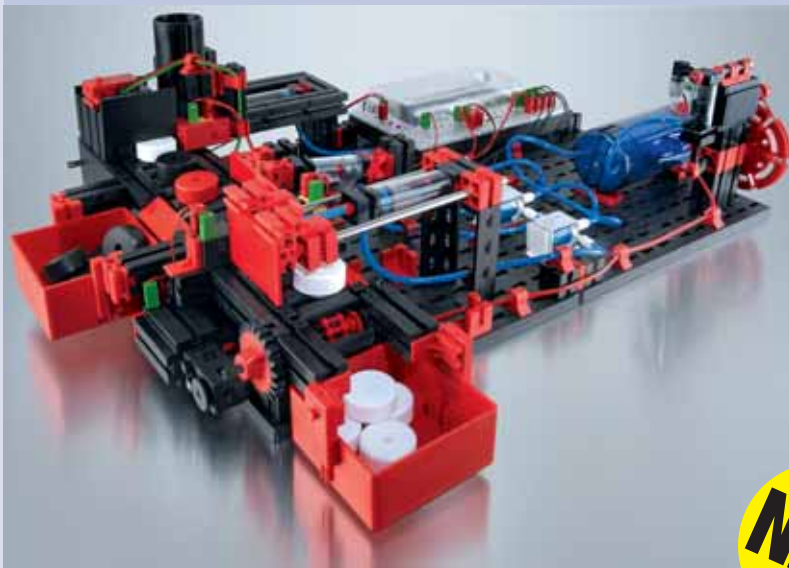
SCHOOL/VOCATIONAL SCHOOL/UNIVERSITY

ROBO PNEUVAC

Item No. 500 883

The themes, pneumatics and vacuum technology, are illustrated with the aid of four models. The electromagnetic valves, which are included, allow the control of the models with a PC. A special vacuum suction apparatus, three pneumatic cylinders, a complete compressor unit, two lights, two phototransistors, an optical color sensor and a conveyor belt round out the construction set.

- Includes vacuum suction apparatus, three pneumatic cylinders, compressor, two lights, two phototransistors, optical color sensor, conveyor belt and 2x "Mini Motor"
- 350 components and 4 models
- Additionally required is ROBO Interface, ROBO Pro Software on page 12 and Accu Set or Energy Set on page 13.
- Ideal addition: ROBO I/O-Extension, ROBO RF Data Link on page 12.



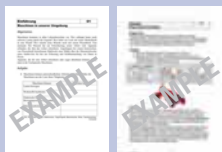
Model Sorting system



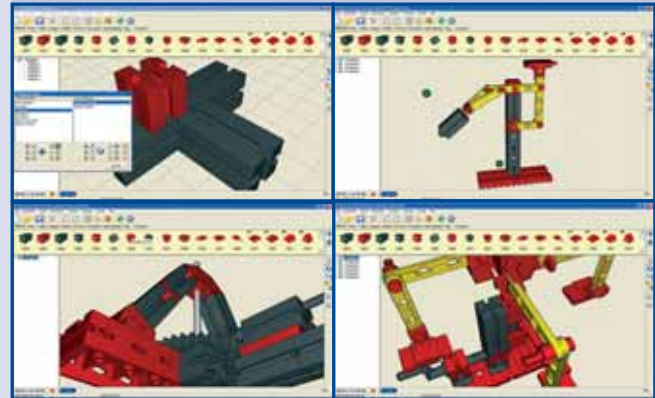
Assembly instructions



Activity booklet



Work sheets



NEW

SOFTWARE designer

Item No. 14 851

The perfect software for planning, developing and implementing fischertechnik models. But operating them is child's play and the scope of functions is gigantic. Ideal for school and training to allow the visualization of technical processes.

- Over 500 components from all areas including pneumatics, motor and gear unit, aluminum profiles and stickers.
- Animation of the models in real time including camera movements and zoom.
- Laying of elastic pneumatic hoses is possible as well as power supply and cabling.
- All models can be subdivided into any number of construction phases to allow the preparation of easy-to-understand assembly instructions. When this is done, construction phases can be hid or individual components can be colored white.
- Calculation of the costs for models or construction phases, manually correctable.
- For large models (or slow computers), the animation can also be calculated as an AVI file as well.
- Support of the free Raytracer "POV-Ray" for realistic pictures with shadows, reflections and radiosity.
- Export of the 3-D CAD data: RAW, VRML and POV. With the VRML format you can refine the models with almost all professional CAD systems.

Use

A building block is pulled into the 3-D window using drag & drop. Do the same to put the next building block on the first component. While this is being done, the component right under the mouse pointer turns violet so that you can see how the new component can be attached. After this, a window opens that allows you to set how both components are to be connected with each other. You can evaluate your experiments right away in the 3-D part in real time.

System Requirements

PC with Win95, 98, NT, 2000, ME
 Pentium processor starting with about 200MHz
 3-D graphic card with OpenGL support
 32MByte RAM

NEW



ROBO EXPLORER

Item No. 46 234

Explore unknown areas, measure distances, follow tracks, show driving directions by means of blinking signals, recognize colors, measure temperatures, avoid obstacles without touching them, recognize day and night, turn headlights on and off automatically and trigger an alarm etc. The ROBO explorer sensors can do all of this and lots more: The NTC resistor, the photoresistor, the new ultrasonic distance sensor, the infrared and color sensor and the specially developed track sensor. Thanks to two power motors and the crawler drive even almost impassable terrain can be explored and traveled on. With the rescue robot, which is contained as a model, the construction set provides the ideal basis for participation in the Robocup.

- Includes 2x "Power Motor", 2 sensors, 3 lights, buzzer, NTC resistor, photoresistor, ultrasonic distance sensor, color sensor and track sensor.
- 420 components and 6 models
- Additionally required is ROBO Interface + ROBO Pro Software on page 12, Accu Set on page 13.
- Ideal addition: RF Data Link on page 12.



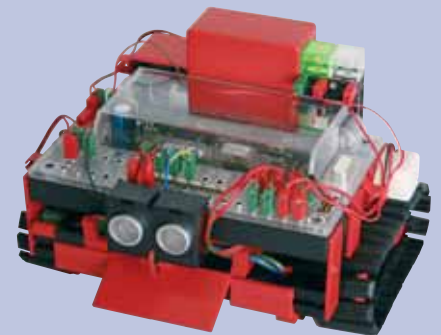
Assembly instructions



Activity booklet



Work sheets



Model
Rescue Robot



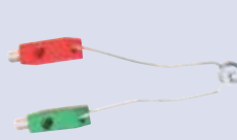
Model
Color Detector

ROBO-CUP & YOUTH RESEARCH

Participants in RoboCup and research by young people employ fischertechnik successfully in the most varied of areas. The high quality of workmanship and variability are highly valued. With fischertechnik, you can find the optimal solution for every application.

jugend forscht

All sensors and actuators included



SCHOOL/VOCATIONAL SCHOOL/UNIVERSITY

INDUSTRY ROBOTS II

Item No. 96 782

Three reality-based and fully functional industry robots with precise details: triple-axis industry robot and two welding robots.

- Includes the instructional activity booklet "Programming and Control of fischertechnik Robots with the PC"
- Includes "Power Motor", 3x "Mini Motor", 8 sensors and ball plug-in light
- 360 components and 3 models
- Additionally required is ROBO Interface + ROBO Pro Software on page 12, Energy Set or Accu Set on page 13.



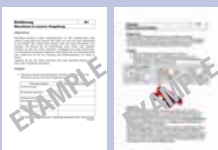
Model
Welding robot
one axis



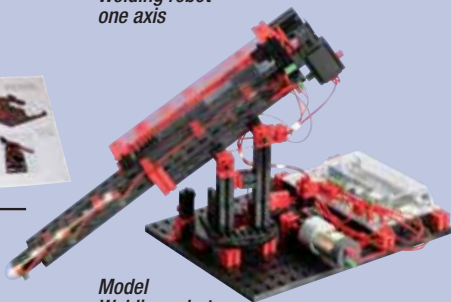
Assembly instructions



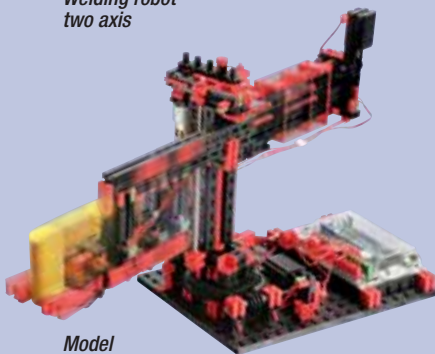
Activity booklet



Work sheets



Model
Welding robot
two axis



Model
3-axis robot
with gripping device



ROBO INTERFACE

Item No. 93 293

With 16 bit microcontroller, USB and serial interface, 128kB flash storage unit for downloading 2 programs

- 4 adjustable motor outputs 9V/250mA
- 8 digital inputs
- 2 analog inputs for resistors 0 to 5 kΩ
- 2 analog inputs for voltage 0 to 10V
- 2 analog inputs for gap sensors
- one connection each for "ROBO I/O Extension" module and radio interface

- "ROBO RF Data Link" interface for "IR Control Set"
- Programable with "ROBO Pro" or C-Compiler (not contained in scope of delivery).
- Requires Energy Set or Accu Set on page 13



ROBO I/O-EXTENSION

Item No. 93 294

Expansion module for "ROBO Interface". Connection using a 10-pin ribbon cable. USB interface for online operation directly on the PC. Connection for additional "ROBO I/O Extension" with up to 3 in a series.

- 4 adjustable motor outputs, 9 V, 250 mA
- 8 digital inputs
- 1 analog input for resistances of 0 to 5 kΩ
- Requires Energy Set or Accu Set on page 13.



ROBO RF DATA LINK

Item No. 93 295

Radio interface for "ROBO Interface". Connection to the PC at the USB interface. Connection to the interface as an additional printed circuit board, which is plugged into the interface printed circuit board. Range is about 10 m. 79 adjustable frequencies for simultaneous operation of 8 devices in one room. Direct communications between 8 "ROBO Interfaces" with the same frequency is possible.

- Frequency: 2.4 GHz
- No additional power supply is needed.



ROBO PRO SOFTWARE

Item No. 93 296 individual license

(Windows 98, ME, NT, 2000, XP)

Item No. 93 298 school license (Windows)

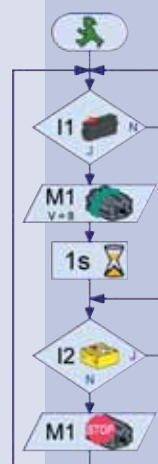
Simple entry for beginners through proven programming of flow charts consisting of various software building blocks. The exchange of the data between the software building blocks and the subprograms can be done through variable and graphical connections as well. This allows the program functions to be shown in an understandable manner. In addition, the graphic programming language, ROBO Pro, also offers professionals all of the important elements of modern programming languages such as arrays, functions, recursion, objects, asynchronous events and quasi parallel processing. The programs are translated directly into computer language so that extremely complex programs can be executed very efficiently as well. This is also optimally suited for advanced and experienced programmers. There are no problems with the preparation of teaching programs or simple data exchange with other Windows software. In the online mode several "ROBO Interfaces" can be controlled parallel for large models and can be prepared for the activation of individual control panels with switches, control units and display elements.

System Requirements

Minimum of Pentium II 500 MHz, 128 MB RAM, 40 MB free space on the hard drive.

Minimum of 1024 x 768 high color 16 bit.

One free USB or serial interface.



PLUS

Supplemental sets

Everything that makes fischertechnik more attractive. The fischertechnik supplemental sets create light, movement and additional functions for every model.

NEW



SOUND+LIGHTS

Item No. 500 880

• 30 components

Up to three different sounds, which can be activated with push buttons or automatically with digital inputs, are available on the sound module. Depending on the requirement, the sounds can be replaced very simply per USB. The blink connection, which is also included, allows the operation of up to six lights as blinking lights. The set contains a sound module with blink electronics, a USB cable, two lights with various colored luminous caps and a battery tray for a 9V block (battery not included).

NEW



CONTROL SET

Item No. 500 881

• Controller, receiver, servo

The three channel infrared remote control allows you to control fischertechnik models from a distance as well. Up to three motors and one servo can be driven proportionally. This means an infinitely variable turning angle of the steering wheel and infinitely variable speed control. Up to four receivers can be operated with the remote control; which allows numerous operational possibilities. The set contains a controller, receiver and a servo.



MINI MOTOR SET

Item No. 30 342

• 50 components

The universal motor set with Mini Motor, 9V battery holder and many gear unit parts: gear wheels, angular gear, differential and universal joint etc.

• Performance data: Voltage 9V \pm , Max. output 1.1 W at 5000 RPM



POWER MOTOR SET

Item No. 34 965

• Additionally required is Energy Set or Accu Set

The powerful gear unit motor with toothed wheels, worm gear, differential, pole-reversing switch, cable and plug.
• Performance data: Voltage 9V \pm , max. output 2.4 W at 340 RPM, gear reduction 8:1.



ACCU SET

Item No. 34969 (220V/EU)

Item No. 57487 (120V/US)

Item No. 79833 (230V/UK)

Item No. 52091 (240V/AUS)

• Charger + battery pack in one

Charger, which is controlled by a microcontroller and provides reliable protection against overcharging. Very short charging time, max. two hours, powerful NiMH rechargeable battery pack with fuse for protection against a short circuit, 8.4V, 1500mAh.



ENERGY SET

Item No. 30182 (220V/EU)

Item No. 91087 (120V/US)

• Power unit + control unit in one

The power supply from the electrical socket for all fischertechnik models
• Output: 9V \pm , 1000 mA



SORTING BOX 500

Item No. 94 828

Practical storage box with four sorting partitions without content and "Base Plate".

BASE PLATE

Item No. 32 985

Cover for "Sorting Box 500" 258 x 186 mm



BOX 1000

Item No. 30 383

• 8 sorting boxes
• Big building board

Practical storage box with eight sorting boxes and 32 sorting partitions The cover also serves as the big building board, 390 x 270 mm.

TRAININGS MODELS

Compact function models, which are already assembled, provide ideal training and demonstration models for training and in-service training and industrial automation. Available in the 9V standard voltage and in the worldwide 24V industrial standard.

Additional information is available at:
"www.fischertechnik.de"

VOCATIONAL SCHOOL/ UNIVERSITY/INDUSTRY



PUNCHING MACHINE WITH CONVEYOR BELT

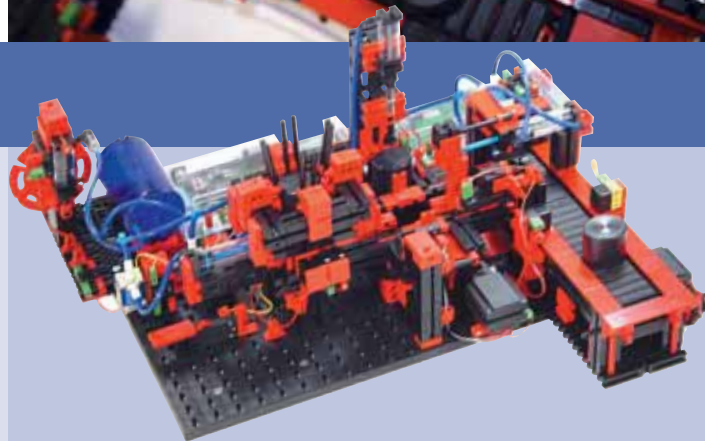
Item No. 51 663 (9V including ROBO Interface)

Item No. 96 785 (24V without ROBO Interface)

Conveyor belt with two light barriers, one machining station and one workpiece

Scope of Delivery

- 2 DC motors, 2 limit switches (potential free), 2 light barriers consisting of phototransistor and lens tip bulb
- Model is mounted on fischertechnik base plate. Carton packaging
Large model: about 280x215x185 mm (LxWxH)
- 4 digital inputs
- 4 outputs, 9 V \pm /24 V \pm (2 motors counter-clockwise, clockwise rotation)
- Ribbon cable, 14-pin and color coded with 14-pin pin connector, only for 24V
- Model can be ideally combined with 3-D Robot



PNEUMATIC MACHINING CENTER

Item. No.: 77 577

(9V including ROBO Interface and ROBO I/O-Extension)

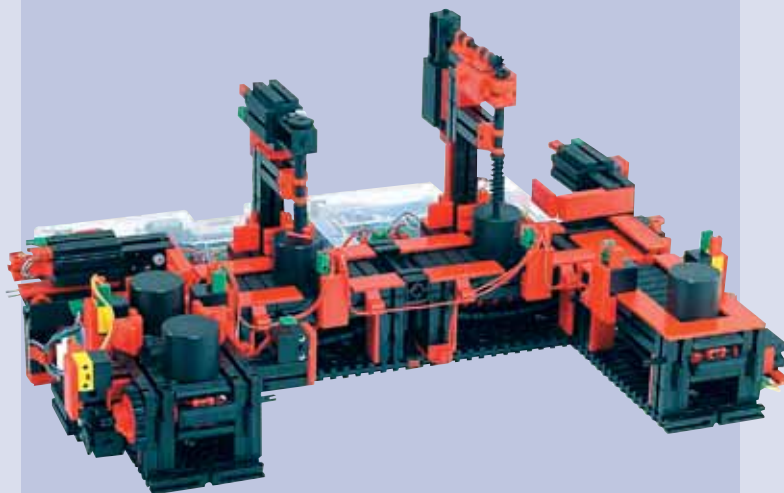
Item. No.: 96792

(24V without ROBO Interface, without ROBO I/O-Extension)

Machining center with bin for workpieces, turntable, machining station, compressor and conveyor belt for the transport of workpieces

Scope of Delivery

- 2 double-action and one single-action pneumatic cylinder, five 3/2 way magnetic valves, 2 DC motors, 4 sensors (potential free), 4 light barriers consisting of phototransistor and lens tip bulb
- Model is mounted on a stable wooden board. Packed in wooden crate.
Large model: about 450x410x190 mm (LxWxH).
- 8 digital inputs
- 7 outputs, 9 V \pm /24 V \pm
- 2 ribbon cables, 16-pin and color coded with 16-pin pin connector, only for 24V



INDEXED LINE WITH TWO MACHINING STATIONS

Item. No.: 51 664

(9V including ROBO Interface and ROBO I/O-Extension)

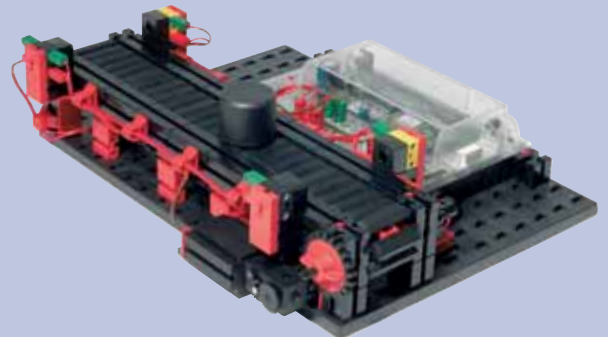
Item. No.: 96 790

(24V without ROBO Interface, without ROBO I/O-Extension)

Conveyor belt, arranged in U-shape, for intermittent transport and for the machining of several workpieces

Scope of Delivery

- 2 machining stations, 4 conveyor belts, 8 DC motors, 4 limit switches (potential free), 5 light barriers consisting of phototransistor and lens tip bulb
- Model is mounted on a stable wooden board. Packed in wooden crate
Large model: about 450x410x190 mm (LxWxH).
- 9 digital inputs
- 10 outputs, 9 V \pm /24 V \pm (6 motors with one direction of rotation, 2 motors counter-clockwise, clockwise rotation)
- 2 ribbon cables, each 18-pin and color coded with 18-pin pin connector, only for 24V



CONVEYOR BELT

Art. No. 50461

(construction set ROBO conveyor belt 9 V \pm without ROBO interface)

Art. No. 50463

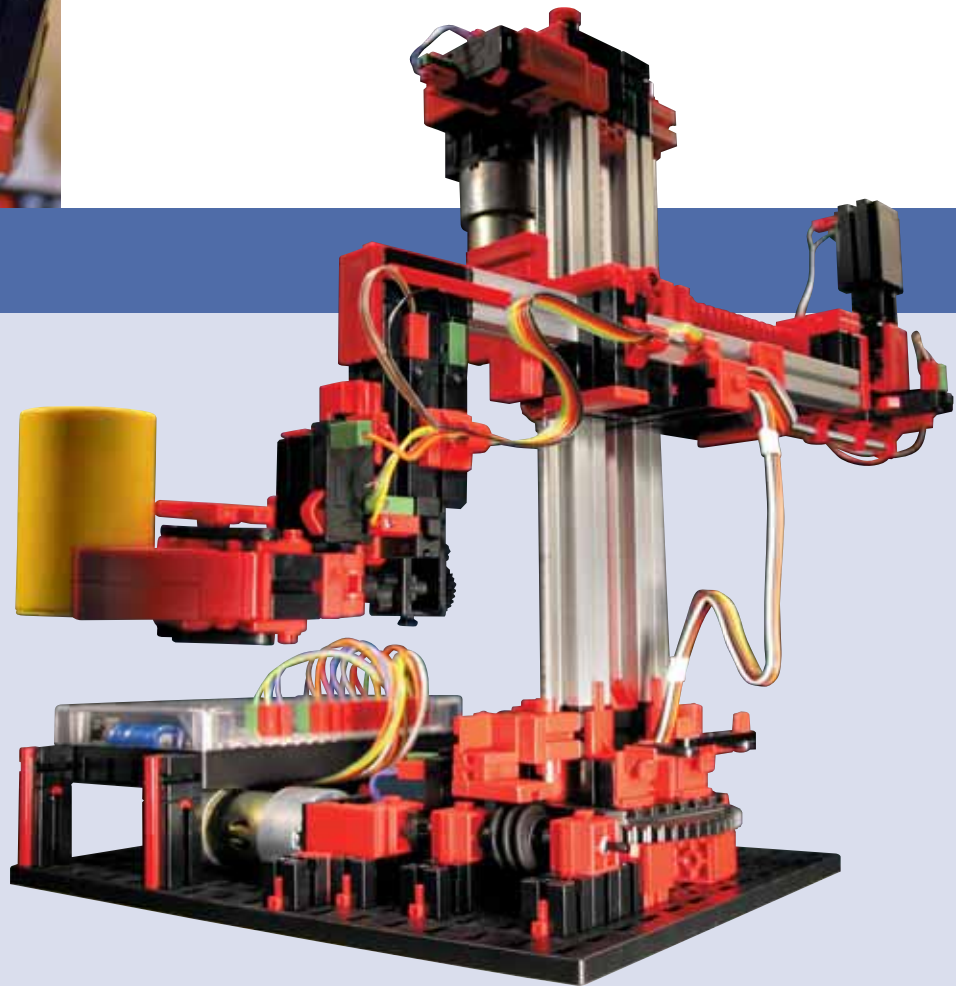
(training model conveyor belt 9 V \pm with ROBO interface)

Art. No. 50464 (training model conveyor belt 24 V \pm without control)

Length 275 mm, transports workpieces with a diameter of up to 29 mm. Several conveyor belts can be connected to each other to form a conveyor belt of any length.

Scope of Delivery

- 1 DC motor, 1 sensing device (potential-free), choice as pulse counter, can be used for distance traveled or as an activation button; 2 light barriers consisting of phototransistor and lens tip bulb, which can be connected together to an output for the control or directly to the power supply. 1 workpiece diameter 29 mm, h = 25 mm.
- Large model: about 275 x 210 x 70 mm (LxWxH)
- 3 digital inputs
- 1 output, 9 V \pm /24 V \pm (1 motor for drive for conveyor belt)



3-D-ROBOT

Item No. 16 286 (9V including ROBO Interface)

Item No. 96 787 (24V without ROBO Interface)

3-axis robot with gripping device.

Degree of freedom

axis 1: 180° rotation

axis 2: forwards, backwards 100 mm

axis 3: raising, lowering 160 mm

Scope of Delivery

- 4 DC motors, 4 limit switches, 4 pulse sensing devices for measuring distances (all sensors are potential free)
- Model is mounted on a stable wooden board. Packed in wooden crate. Large model: about 385x270x350mm (LxWxH).
- 8 digital inputs
- 8 outputs, 9 V \pm /24 V \pm (4 motors counter-clockwise, clockwise rotation)
- Ribbon cable, 24-pin and color coded with 26-pin pin connector, only for 24V
- Model can be ideally combined with the Punching Machine and the Indexed Line

SIMULATION

The function models from fischertechnik simulation are a proven and inexpensive means to plan, develop and test industrial applications with the help of industrial

controls and software. They are employed worldwide in the areas of training, development and presentation.

Additional information is available at: "www.fischertechnik.de"

Less is more.

The flexibility and the modularity of the fischertechnik system in connection with the industry-adapted sensors and actors as well as the controls from leading manufacturers open up almost unlimited possibilities for hardware simulation. Compared to the conventional construction of models, fischertechnik models provide the advantages of using inexpensive finished parts, fast assembly and recycling of the material. For the design and the optimization of technical production processes, modules were developed that allow quick and efficient construction of the simulation system. The control software for a real system can be completely developed and tested without risk through the connection of the models to modern industrial control systems or programmable logic controllers and field bus systems.

Standards for Learning Success

A high learning effect for trainees in the commercial technical area and the technicians and engineers of tomorrow is provided by the functional models through the simulation of actual operations. For industrial projects, the elimination of errors in the planning phase reduces the total costs for a project significantly so that the procurement of a model always remains profitable. Due to the high degree of abstraction of the models, complicated technical systems are shown in a graphic and understandable manner. In particular, the project participants from the commercial area can get a precise picture so that they can make factually based decisions concerning investments.

Contact us directly for more detailed documents concerning the assortment available from fischertechnik simulation. (See reverse side of catalogue for address.)





Make Things, Glue, Build and Paint with fischer TiP

Small colorful cylinder-shaped elements made from potato starch and food dyes form the basic modules for this creative material for making things with your hands. Even kids, who are only three years old, have their creativity and fantasy fired by the colorful elements, which allow them to make things with their own hands, while playing.

It is so simple: The TiPs are moistened with water, pressed together, and now they are stuck firmly together. They can be easily cut, pressed and formed. Thus, fischer TiP is a versatile material for children that can be transformed by ideas into imaginative works of art. The right tools are supplied and help to do this: The cutting tool, which is specially made for kids, the sponge cloth for moistening the building blocks, the sprayer, the paint brush and paint palette, the paint cap and glue cap, the combination grater for TiP flakes or the building blocks mold, which presses rectangular building blocks from round TiPs with various stencil inserts for brickwork.



www.fischertip.de



What do the pupils get from this?

This is quite simple: they learn about technology while playing. Assembly is creative and concentrated, the teamwork is friendly and supportive and curiosity and discovery are part of the experimentation and exploring.

What do the TEACHERS get from this?

Instructional material that helps their pupils to playfully submerge themselves in the world of technology to understand this world and to comprehend it. The constructing of the fischertechnik models promotes logical thinking and creativity. Thus, you are supporting the natural talent of your pupils in learning about technology in the truest sense of the word. The fischertechnik world knows no limits because all construction sets and all components fit together ideally and complement each other.

- A quality product made in Germany.
- High degree of acceptance by parents, teachers and engineers
- All construction sets can be ideally combined with one another.
- Promotes motoric abilities and the fine motor functions.
- fischertechnik is used very successfully in schools and universities as instructional material.



The right to errors and technical and assortment changes is reserved. Liability for printing errors and deficiencies is excluded.

www.fischertechnik.de

fischertechnik GmbH
 Weinhalde 14-18, D-72178 Waldachtal
 Phone +49 74 43/12-48 79, Fax +49 74 43/12-45 91
 E-mail: info@fischertechnik.de