

Building Blocks for Life

fischertechnik

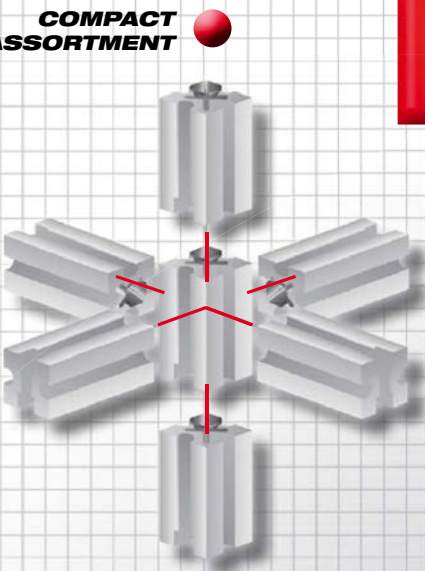


The fun and creative way to explore technology

2016

YOUR ADVANTAGE

The fischertechnik basic building block allows attachment on all six sides. This "many-sided" block forms the basis for all fischertechnik construction sets, which are put together according to age and capabilities of the children. These sets allow you to experience the real technology and learn it by playing.



COMPACT ASSORTMENT

USE OF FISCHERTECHNIK AT 'MULTIPLIER' SCHOOL

ALL CONSTRUCTION SETS CAN BE COMBINED WITH ONE ANOTHER

QUALITY 'MADE IN GERMANY'

CHILDREN LEARN BASIC UNDERSTANDING OF TECHNOLOGY BY PLAYING

PREMIUM BRAND WITH PREMIUM SERVICE AND SERVICE TEAM



EDUCATIONAL TOYS



fischertechnik is an educational toy 'made in Germany' and produced at the plant in Waldachtal in the Black Forest. All construction sets can be ideally combined with one another. In addition to the assembly instructions, the PROFi and ROBOTICS construction sets include educational background information, tasks and solutions. The high acceptance by parents, teachers and engineers make fischertechnik a successful teaching material at schools and universities. Moreover teachers and psychologists from the TransferCenter for Pseudosciences and Education (ZNL) have recommended fischertechnik construction sets for the 'Play at School' campaign. Educational success guaranteed!

LEARNING ABOUT TECHNOLOGY BY PLAYING, WITH THE FISCHERTECHNIK eLEARNING-PORTAL

The new eLearning portal by fischertechnik now lets children learn online with fischertechnik. The www.fischertechnik-elearning.com website provides lots of instructional information about various construction set topics. Entering the corresponding codes from the assembly instructions gives access to the technical background information, animations and videos about the construction sets PROFi Pneumatic Power, PROFi Solar Power, ROBOTICS Mini Bots and ROBOTICS TXT Discovery Set. Even without entering a code, customers can still see a preview of the activity booklets.

The eLearning-Portal will be growing in future. Instructional information with animations and videos etc. for all the new products in the PROFi and ROBOTICS line will be available for customers online.





AWARDS



... FOUR LINES ... FOR ALL AGES

Entry into the four different product lines is possible at any time. All of this taken together forms a logical concept where one fits with the other. Building block for building block. 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 at the fascinating fischertechnik world, there is a comprehensive and easy to understand set of assembly instructions.

JUNIOR



page 06

The fun of playing starts at the age of five with fischertechnik. The red junior line provides the first experience with technology and the way it functions. The motto is learning by playing and building with fast success.



ADVANCED

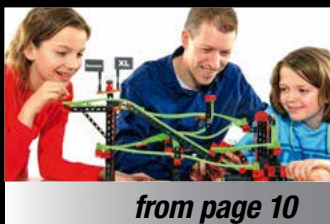


from page 07

Seven-year olds develop their knowledge and capabilities with the blue line. The models are not only realistic and understandable in their function, but really robust in construction and for playing.



PROFI



from page 10

The black line, which starts at seven of age, offers the technicians of tomorrow design construction sets that are very close to reality. Subjects such as mechanics, statics, pneumatics, electrical technology or regenerative energies guarantee outstanding experiences in the world of technology.



ROBOTICS



from page 18

Starting at the age of eight, children can program and control fischertechnik models and robots from the computer with our easy-to-use graphic software. An app is even available for control with smartphone.

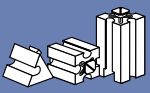


PLUS

+ LIGHT
+ MOTION
+ SOUND
from page 24

The optimum supplement. Everything to make fischertechnik even more attractive with light, motion, sound and more fun.





NEW

NEW

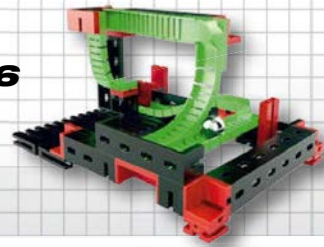
NEW



AVAILABLE from January 2016

- > Incl. 90° curve, 2x balls, 6x flex-rails 90
- > Ideal additions: All construction sets in the Dynamic Line, LED Set

PROFI Dynamic XS



Components	70	Dimension (mm)	225x65x150
Item No.	536619	Vol (m³)	0,0022
EAN	4048962250268	Weight (g)	280



* Templates for more games (free download)

Low-cost ball obstacle course by fischertechnik! The ball accelerates, picks up speed in the jump and flies through the fire ring - it's action time! 70 parts can be used step-by-step to make three exciting models: ball obstacle course, jump and dexterity game. Go to www.fischertechnik.de/Dynamic-XS to find templates for various games that can be downloaded free of charge: goal-shooting, balls and „fire ring“. The construction set can be combined and augmented with other construction sets in the PROFi Dynamic Line. Get the balls moving!



AVAILABLE from January 2016

- > Incl. Sound tube, 4x 90° curves, 3x balls, 6x flex-rails 90, 3x flex-rails 180
- > Ideal additions: All construction sets in the Dynamic Line, Sound+Lights, LED Set

PROFI Dynamic S



Components	140	Dimension (mm)	230x80x320
Item No.	536620	Vol (m³)	0,0058
EAN	4048962250275	Weight (g)	600



Ball obstacle course and fischertechnik: two classic toy systems guarantee lots of fun! The ball starts in the obstacle course and accelerates until it reaches the cross-over, where it drops further before racing down two different tracks - to the left and to the right! In the title model, the ball flies through several 90° curves and over a teeter-totter before brushing against the sound tube – „BING!“ The balls are collected at the end of the course and can be easily removed again. Three impressive obstacle courses can be made with the assembly instructions from more than 140 parts. Young engineers also have plenty of scope for making many other courses according to their own ideas. Three models: simple obstacle course, action obstacle course and obstacle course with twin tracks! Get completely immersed in the fascinating, creative world of the fischertechnik ball obstacle course for heaps of action!



AVAILABLE from March 2016

- > Ideal additions: Motor Set XS, LED Set, Power Set

ADVANCED Universal Starter



Components	240	Dimension (mm)	320x80x230
Item No.	536618	Vol (m³)	0,0058
EAN	4048962250251	Weight (g)	720

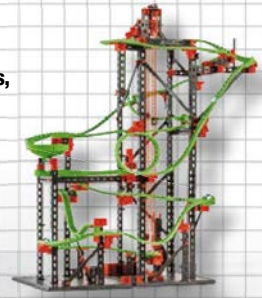


Models such as the crane with cable winch and worm gear, racing car with steering, teeter-totter with four-bar linkage teach children a basic understanding for technology. Other creative, mechanical models can be made from the gears, basic building blocks, static parts, wheels and many other parts. This construction set helps children to understand everyday technology by playing. For young designers from age 7.

NEW**NEW****NEW**

› AVAILABLE from June 2016

- › Incl. XS motor, 4x high-speed curves, 4x 90° curves, 3x 180° curves, 10x balls, 8x flex-rails 90, 17x flex-rails 180, cross-over, catch funnel, battery holder for 9V block (battery not included), instructional activity information (free download)
- › Ideal additions: All construction sets in the Dynamic Line, Sound+Lights, LED Set, Accu Set or Power Set



› PROFI Dynamic L2

Components	760	Dimension (mm)	465x80x390
Item No.	536621	Vol (m³)	0,0145
EAN	4048962250282	Weight (g)	2400



The new complete set Dynamic L 2 guarantees even more fun with new action models and the three new 180° curves. The four new high-speed curves with raised side edge let the balls roll at full speed through the curve! The balls simply race through the newly designed mechanical cross-over into various tracks. They just fly through the cross-over toward the rotary funnel or over the teeter-totter which releases a ball at the stopping point. The new 180° curve lets young architects change the direction of the ball in a tiny space. After passing through the looping and other obstacles, the ball finally arrives at the elevator waiting point. The balls are then brought back up to the top again by the elevator which is operated by an XS motor. The three different action courses with a length of up to 4.50 m offer unlimited fun on the ball obstacle course. The four instructional experiment models also unobtrusively explain the effects of the various physical phenomena (acceleration, mass inertia, the balance of forces, the law of conserving energy, the principle of linear momentum, the laws of motion). The eLearning portal (fischertechnik-elearning.com) offers exciting, instructional activity information, animations and videos all about physics. Let's roll ...!

› AVAILABLE from June 2016

- › Incl. XS motor, battery holder for 9V block (battery not included), instructional activity information (free download)
- › Ideal additions: Accu Set or Power Set



› PROFI Mechanic & Static 2

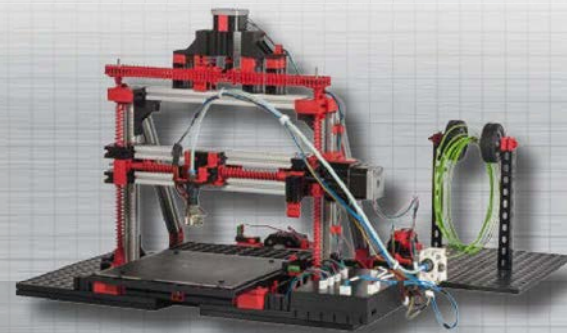
Components	500	Dimension (mm)	465x80x320
Item No.	536622	Vol (m³)	0,0119
EAN	4048962250299	Weight (g)	1850



The definitive technical construction set for all future engineers and technicians: how does a shaft drive or manual transmission work? What is a planetary gear? How do you design a stable bridge? The answers to these and other elementary questions from the subject areas of mechanics and statistics are found in this construction set with 30 different models. Discover the principles of technology by playing! The eLearning portal (fischertechnik-elearning.com) offers exciting, instructional activity information, animations and videos all about mechanics and statics.

› AVAILABLE from June 2016

› 3D-Printer



Components	600	Dimension (mm)	440x315x150
Item No.	536624	Vol (m³)	0,0207
EAN	4048962250312	Weight (g)	6300

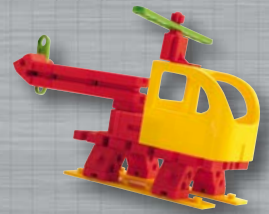


Build, Plug & Print! This build-it-yourself kit gives users a fascinating insight into the groundbreaking technology of 3D printing. Print your own parts yourself at any time - so individual, so easy, so flexible - for use in your own home! Either with the supplied printing examples or with your very own print data. The robust 3D printer is easy to build and can be used for 3D printing of different parts. Users acquire basic knowledge about 3D printing and an insight into this revolutionary technology that promises high future potential. PC software for controlling the printer via the USB interface.

- › Incl. Control PCB in fischartechnik housing with Atmel microcontroller, USB interface for PC (USB port Micro B, incl. interface cable), 4 step motor drivers (for x-, y-, z-axis and extruder), one power output (MOS-FET) for the extruder nozzle (hot end), connections for 3 limit switches and a temperature sensor, DC port for voltage supply 19V, 5A, dimensions: 150x90x25mm
- › Incl. 3D printer software on CD, with slicer and printer control, specially adapted to fischartechnik 3D printer (Windows 7, 8, 10). Numerous finished printing examples contained as G-codes
- › Incl. 4 high-torque step motors (x-/ y-/ z-axis, extruder), 3 mini push-buttons (as limit switches for x-/ y-/ z-axis), heated nozzle (for 1.75 mm Ø filament) with temperature monitoring, printing bed with removable printing plate
- › Incl. Power unit (AC input 100-240V, DC output 19V, 5A, 50-60Hz)
- › Incl. Top quality filament sample (PLA, 1.75 mm diameter). Quality filament (PLA) in special fischartechnik colors can be ordered separately



LITTLE STARTER



Components	60	Dimension (mm)	280x65x180
Item No.	511929	Vol (m³)	0,0033
EAN	4048962111262	Weight (g)	355



Starter set for young engineers from age 5. The large, easy-to-hold parts and assembly instructions written specifically for young children ensure quick construction success. Design work with this set develops important skills such as eye-hand coordination as well as gross and fine motor skills. 6 Models can be built: dump truck, helicopter, excavator, van ...



JUMBO STARTER



Components	135	Dimension (mm)	465x80x320
Item No.	511930	Vol (m³)	0,0119
EAN	4048962111279	Weight (g)	1185



Lowboy truck with crane, airplane, tractor ... Many different models encourage building and play. The large, easy-to-hold parts and assembly instructions written specifically for young children ensure quick construction success. Design work with this set develops important skills such as eye-hand coordination as well as gross and fine motor skills. A number of models can be built at the same time. For children from age 5.



BIKES

Components	80	Dimension (mm)	225x65x150
Item No.	505278	Vol (m³)	0,0022
EAN	4048962069396	Weight (g)	210



CARTS

Components	50	Dimension (mm)	225x65x150
Item No.	505279	Vol (m³)	0,0022
EAN	4048962069402	Weight (g)	220



SOLAR

Components	60	Dimension (mm)	280x65x180
Item No.	520396	Vol (m³)	0,0033
EAN	4048962168624	Weight (g)	250



BULLDOZER

Components	85	Dimension (mm)	280x65x180
Item No.	520395	Vol (m³)	0,0033
EAN	4048962168617	Weight (g)	300



TRACTORS

Components	130	Dimension (mm)	280x65x180
Item No.	520397	Vol (m³)	0,0033
EAN	4048962168631	Weight (g)	350



CABLE CARS

Components	130	Dimension (mm)	320x80x230
Item No.	41859	Vol (m³)	0,0058
EAN	4006209418598	Weight (g)	605



Glide down the slope on a 6-meter long cable with the gondola clear up at the top and then with the freight elevator clear down to the bottom. Have fun!



ADVANCED



NEW



> Ideal additions: Motor Set XS, LED Set, Power Set

UNIVERSAL STARTER

Components	240	Dimension (mm)	320x80x230
Item No.	536618	Vol (m ³)	0,0058
EAN	4048962250251	Weight (g)	720



Models such as the crane with cable winch and worm gear, racing car with steering, teeter-totter with four-bar linkage teach children a basic understanding for technology. Other creative, mechanical models can be made from the gears, basic building blocks, static parts, wheels and many other parts. This construction set helps children to understand everyday technology by playing. For young designers from age 7.



> Ideal additions: Motor Set XS, Motor Set XM, Sound+Lights, LED Set, Power Set

UNIVERSAL 3

Components	500	Dimension (mm)	465x80x320
Item No.	511931	Vol (m ³)	0,0119
EAN	4048962111286	Weight (g)	1815



40 models, such as vehicles with steering, bulldozer with tracks, crane with cable winch, windmill with reduction gear, allow children a fascinating glimpse into the world of technology while playing. The construction site and fair grounds play worlds with a number of models which can be built simultaneously guarantee a great deal of fun building and playing. The large number of parts leaves maximum leeway for creativity. A MUST for all fischer-technicians. For children from age 7.



ADVANCED



- > Incl. IR remote control, receiver, servo-steering, gear motor, battery holder for 9V block (2x 9V block batteries necessary – batteries not included)
- > Ideal additions: Motor Set XS, Sound+Lights, LED Set, Accu Set

▶ TRACTOR SET IR CONTROL

Components	540	Dimension (mm)	465x80x390
Item No.	524325	Vol (m³)	0,0145
EAN	4048962196085	Weight (g)	1800



Complete set with proportional 4-channel infrared remote control, servo-steering, powerful gear motor and battery holder. Over 540 parts allow construction of a tractor with 7 working attachments. The rotary mower, double rotary windrower and hay turner are driven by a rotating power take-off. A harrow, two-way plow, cable winch and pusher plate offer further features for more fun. The speed of the gear motor, the angle of the servo-steering and two additional motors (not included) are all designed for infinite control. Incl. play figure!



- > Incl. XS motor, battery holder for 9V block (battery not included)
- > Ideal additions: Sound+Lights, LED Set, Power Set

▶ SUPER FUN PARK

Components	660	Dimension (mm)	465x80x390
Item No.	508775	Vol (m³)	0,0145
EAN	4048962095647	Weight (g)	1900



Complete construction set with motor and battery holder. With over 660 components, you can build a motorized Ferris wheel or a merry-go-round. The Ferris wheel has a diameter of over 50 cm and is equipped with six gondolas – a model that creates a real fair atmosphere.



- > Incl. XS motor, 6x bucket, 6x caterpillar track, 2x conveyor belt, battery holder for 9V block (battery not included)
- > Ideal additions: Motor Set XS, Motor Set XM, Sound+Lights, LED Set, Control Set, Accu Set or Power Set

▶ POWER MACHINES

Components	1500	Dimension (mm)	465x160x390
Item No.	520398	Vol (m³)	0,0290
EAN	4048962168648	Weight (g)	5200



Gigantic: Nearly 1.40 m long, almost 80 cm high with 1,500 parts this construction kit sets new standards! This breath-taking bucket wheel excavator offers a variety of realistic features. The bucket wheel deposits the excavated material directly onto the conveyor belt for disposal. The excavator arm can be lifted and lowered. The entire excavator can be swiveled on the chassis platform with three crawler track units. A second crane model can also be built. Both models can be motorized with the PLUS sets, equipped with sound and lights as well as remote control.





NEW



- > Incl. 90° curve, 2x balls, 6x flex-rails 90
- > Ideal additions: All construction sets in the Dynamic Line, LED Set

Dynamic XS

Components	70	Dimension (mm)	225x65x150
Item No.	536619	Vol (m³)	0,0022
EAN	4048962250268	Weight (g)	280



* Templates for more games (free download)

Low-cost ball obstacle course by fischertechnik! The ball accelerates, picks up speed in the jump and flies through the fire ring - it's action time! 70 parts can be used step-by-step to make three exciting models: ball obstacle course, jump and dexterity game. Go to www.fischertechnik.de/Dynamic-XS to find templates for various games that can be downloaded free of charge: goal-shooting, balls and „fire ring“. The construction set can be combined and augmented with other construction sets in the PROFi Dynamic Line. Get the balls moving!

NEW



- > Incl. Sound tube, 4x 90° curves, 3x balls, 6x flex-rails 90, 3x flex-rails 180
- > Ideal additions: All construction sets in the Dynamic Line, Sound+Lights, LED Set

Dynamic S

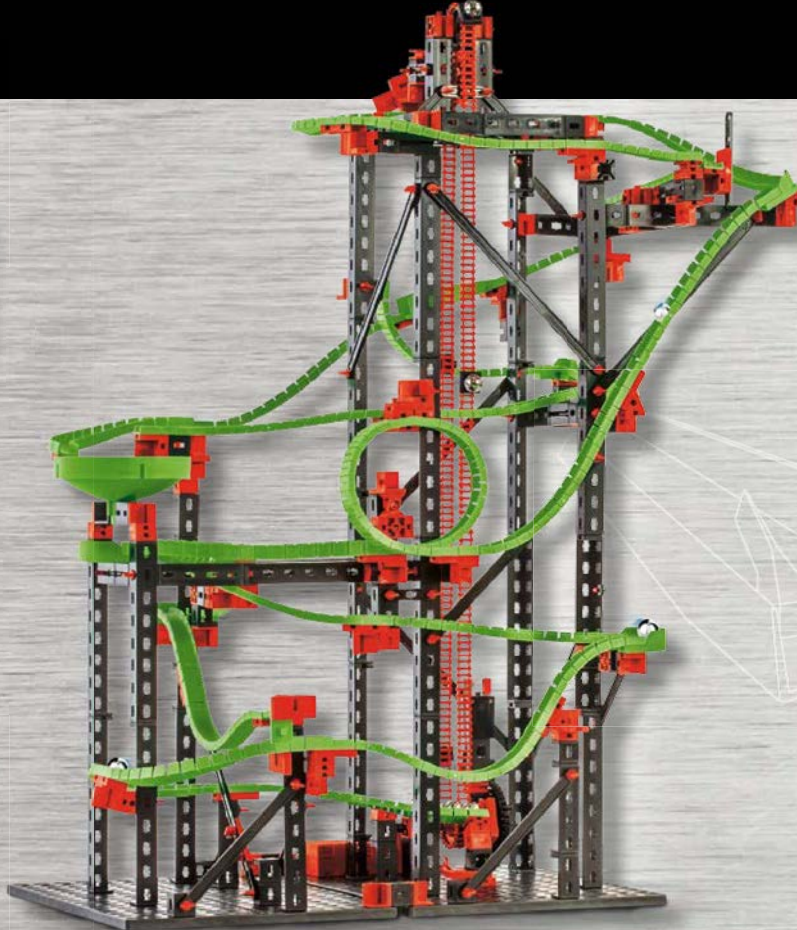
Components	140	Dimension (mm)	230x80x320
Item No.	536620	Vol (m³)	0,0058
EAN	4048962250275	Weight (g)	600



Ball obstacle course and fischertechnik: two classic toy systems guarantee lots of fun! The ball starts in the obstacle course and accelerates until it reaches the cross-over, where it drops further before racing down two different tracks – to the left and to the right! In the title model, the ball flies through several 90° curves and over a teeter-totter before brushing against the sound tube – „BING!“ The balls are collected at the end of the course and can be easily removed again. Three impressive obstacle courses can be made with the assembly instructions from more than 140 parts. Young engineers also have plenty of scope for making many other courses according to their own ideas. Three models: simple obstacle course, action obstacle course and obstacle course with twin tracks! Get completely immersed in the fascinating, creative world of the fischertechnik ball obstacle course for heaps of action!



29 track units
4,5m
 total track length



NEW



- > Incl. XS motor, 4x high-speed curves, 4x 90° curves, 3x 180° curves, 10x balls, 8x flex-rails 90, 17x flex-rails 180, cross-over, catch funnel, battery holder for 9V block (battery not included), instructional activity information (free download)
- > Ideal additions: All construction sets in the Dynamic Line, Sound+Lights, LED Set, Accu Set or Power Set

Dynamic L 2

Components	760	Dimension (mm)	465x80x390
Item No.	536621	Vol (m³)	0,0145
EAN	4048962250282	Weight (g)	2400



The new complete set Dynamic L 2 guarantees even more fun with new action models and the three new 180° curves. The four new high-speed curves with raised side edge let the balls roll at full speed through the curve! The balls simply race through the newly designed mechanical cross-over into various tracks. They just fly through the cross-over toward the rotary funnel or over the teeter-totter which releases a ball at the stopping point. The new 180° curve lets young architects change the direction of the ball in a tiny space. After passing through the looping and other obstacles, the ball finally arrives at the elevator waiting point. The balls are then brought back up to the top again by the elevator which is operated by an XS motor. The three different action courses with a length of up to 4.50 m offer unlimited fun on the ball obstacle course. The four instructional experiment models also unobtrusively explain the effects of the various physical phenomena (acceleration, mass inertia, the balance of forces, the law of conserving energy, the principle of linear momentum, the laws of motion). The eLearning portal (fischertechnik-elearning.com) offers exciting, instructional activity information, animations and videos all about physics. Let's roll ...!



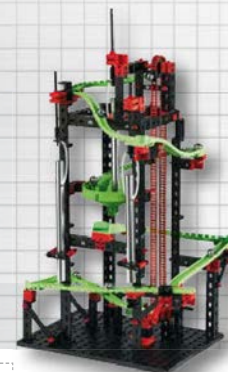
- > Incl. rotary funnel, 3x sound tubes, cross-over, 5x 90° curves, magnet holder, 8x balls, 4x flex-rails 90, 14x flex-rails 180
- > Ideal additions: All construction sets in the Dynamic Line, Motor Set XS, Sound+Lights, LED Set

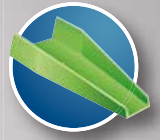
Dynamic M

Components	550	Dimension (mm)	465x80x320
Item No.	533872	Vol (m³)	0,0119
EAN	4048962229707	Weight (g)	1625



Action and sound parts open up many possibilities for even more exciting courses. While they race downwards, the steel balls let the sound tubes create melodic tones. The rotary funnel offers a completely new way of bringing the balls onto the next rail. The balls also shoot and fly down the obstacle course through narrow 90° curves and a cross-over. On arriving at the bottom, the manual chain lift brings the balls back up to the top again. The Dynamic M construction set is ideal for making four exciting obstacle courses.





catch funnel



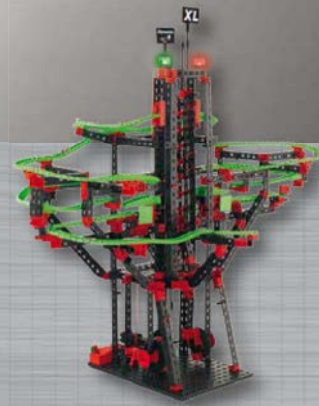
cross-over



90° curve



- > Incl. didactic activity booklet
- > Incl. Mini motor, 2x rainbow LED, 31x flex-rails 180, 12x balls, 5x 90° curve, cross-over, catch funnel, battery holder for 9V block (battery not included)
- > Ideal additions: All construction sets in the Dynamic Line, Sound+Lights, LED Set, Accu Set or Power Set



DYNAMIC XL

Components	1250	Dimension (mm)	465x80x390
Item No.	524327	Vol (m³)	0,0145
EAN	4048962196108	Weight (g)	3500



More action, much faster and much larger! With new special parts such as 90° curves, cross-overs and jumps with catch funnel, the balls race through tight curves and chutes and shoot through different tracks. Discover new, fascinating conveying techniques: With our new mega model the balls are transported back up by a motor-driven conveying wheel. Then even higher by the innovative stage conveyor, which transports the balls one by one all the way to the top in a zig-zag pattern. Once there the balls shoot along their own path downward through the loop, quarterpipe and jumping loop. More ingenious models such as a launching pad, stair step conveyor and chain lift make the subject of conveying technology inspiring.

- > Incl. 2x cross-overs, 2x catch funnels, 4x 90° curves, 2x magnet holders, 8x balls, 4x flex-rails 90, 10x flex-rails 180, various add-on elements (angular blocks, angular girders etc.)
- > Ideal additions: All construction sets in the Dynamic Line

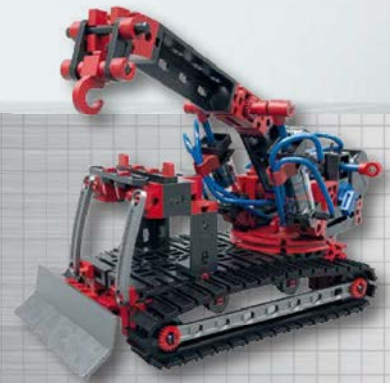


DYNAMIC TUNING SET

Components	180	Dimension (mm)	225x65x150
Item No.	533873	Vol (m³)	0,0022
EAN	4048962229714	Weight (g)	320



The Dynamic Tuning Set is ideal for making all fischertechnik obstacle courses even bigger and faster with additional obstacle course parts and add-on elements. Many special parts such as 90° curves, cross-overs, catch funnels, short and long flex-rails promise even more excitement. The Dynamic Tuning Set gives free rein to the imagination of young obstacle course engineers.



- > Incl. 2x pneumatic cylinders, pump cylinder, 2x hand valve, compressed air reservoir

PNEUMATIC POWER

Components	200	Dimension (mm)	320x80x230
Item No.	533874	Vol (m³)	0,0058
EAN	4048962229721	Weight (g)	632



The low-cost Pneumatic Power construction set takes a learning-by-playing approach to the principles of pneumatics, with realistic models to show how pneumatic valves and cylinders work. The air is pumped manually into an air chamber. Pressing the hand valves conveys the compressed air through the hoses into the pneumatic cylinder. An excavator and four other models can be constructed. The didactic activity information for pneumatics is available online for the young engineers.



- > Incl. solar module (2V; 200mA), solar motor (2V...), boat hull

SOLAR POWER

Components	160	Dimension (mm)	320x80x230
Item No.	533875	Vol (m³)	0,0058
EAN	4048962229738	Weight (g)	490



Renewable energy sources will play an increasingly significant role in future. A solar module generates electricity from the energy of the sun to move the solar boats and the solar car. Whether on water or land, the construction set is a learning-by-playing approach to solar power. Water fun is guaranteed with the floating „Solar Catamaran“ and „Paddle Steamer“. The solar module and solar motor can also be used to make a solar vehicle and a ventilating fan. The didactic activity information about solar module is available online.



- > Incl. didactic activity booklet
- > Incl. compressor, 4x pneumatic cylinder, 4x 4/3-way manual valve, battery holder for 9V block (battery not included)
- > Ideal additions: Accu Set



➤ PNEUMATIC 3

Components	440	Dimension (mm)	465x80x320
Item No.	516185	Vol (m³)	0,0119
EAN	4048962136838	Weight (g)	1930



This play-and-learn construction set helps children learn the principles of pneumatics and uses realistic models to demonstrate how compressors, pneumatic valves and cylinders work. The powerful and compact compressor guarantees a reliable supply of compressed air to the models. In addition to vehicles such as front loaders, hay bale pickers, hay trunk grips, other educational models provide young inventors with background knowledge on the subject of pneumatics in combination with the instructional activity booklet.



- > Incl. didactic activity booklet
- > Incl. friction motor
- > Ideal additions: Motor Set XM, Control Set, Sound+Lights, LED Set, Accu Set

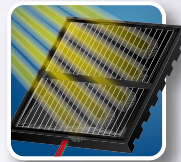


➤ CARS & DRIVES

Components	280	Dimension (mm)	465x80x320
Item No.	516184	Vol (m³)	0,0119
EAN	4048962136821	Weight (g)	1600



How does a balloon drive or a bending rod drive work? What is the difference between a friction drive and a rubber-band drive. How can wind be used as a drive? This set provides a glimpse into how different types of drives work. The brawny offroad vehicle with functioning steering and suspension can also be combined perfectly with the Motor Set XM and Control Set for remote control. The instructional activity booklet provides a great deal of interesting information. For young engineers from age 8!



- > Incl. didactic activity booklet
- > Incl. solar motor (2V), 2x solar modules (1V; 400 mA), Gold Cap power storage device, LED, ON/OFF switch
- > Ideal additions: Fuel Cell Kit (Item No. 520401)



OECO ENERGY

Components	370	Dimension (mm)	465x80x320
Item No.	520400	Vol (m³)	0,0119
EAN	4048962168662	Weight (g)	1900

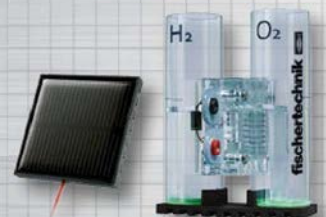


How can ecological electric power be produced? "Renewable energies" will become our most important suppliers of energy in the future. Production, storage and use of electricity from natural energy sources such as water, wind and the sun are graphically illustrated using various models and numerous experiments. These two new solar modules not only guarantee more power; the many new attachment possibilities ensure flexible use in the models. The Gold Cap included for power storage can release the stored power at a slower rate. This helps children understand energy forms of the future. The "Fuel Cell Kit" (Item No.: 520401) offers an ideal addition. With this expansion construction set, you can build other models and operate them with a fuel cell.

- > Incl. didactic activity booklet
- > Incl. reversible fuel cell with integrated hydrogen storage unit, solar module (1V; 400 mA)
- > Absolutely necessary: Oeco Energy or Oeco Tech



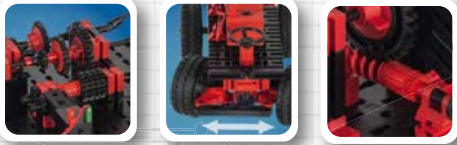
FUEL CELL KIT



Components	20	Dimension (mm)	225x65x150
Item No.	520401	Vol (m³)	0,0022
EAN	4048962168679	Weight (g)	400



How does a fuel cell work and how does it generate hydrogen? The Fuel Cell Kit brings this technology of the future directly into the child's play room and provides answers to these and other questions! With the fuel cell and the additional solar module, interesting additional models can be built in connection with the "Oeco Energy" construction set. The instructional activity booklet offers assistance. **(CAUTION: Absolutely necessary for operation is Oeco Energy - Item No.: 520 400 or Oeco Tech - Item No.: 505 284)**



NEW



- > Incl. XS motor, battery holder for 9V block (battery not included), instructional activity information (free download)
- > Ideal additions: Accu Set or Power Set



Mechanic & Static 2

Components	500	Dimension (mm)	465x80x320
Item No.	536622	Vol (m ³)	0,0119
EAN	4048962250299	Weight (g)	1850



The definitive technical construction set for all future engineers and technicians: how does a shaft drive or manual transmission work? What is a planetary gear? How do you design a stable bridge? The answers to these and other elementary questions from the subject areas of mechanics and statistics are found in this construction set with 30 different models. Discover the principles of technology by playing! The eLearning portal (fischertechnik-elearning.com) offers exciting, instructional activity information, animations and videos all about mechanics and statics.



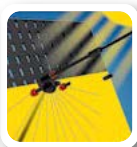
- > Incl. didactic activity booklet

DA VINCI MACHINES

Components	260	Dimension (mm)	465x80x320
Item No.	500882	Vol (m ³)	0,0119
EAN	4048962003284	Weight (g)	1580



This construction set combines several mechanical models, whose origin goes back to designs from Leonardo da Vinci: file cutting machine, pivoting bridge 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!



- > Incl. didactic activity booklet
- > Incl. 3x optical lenses (two focal lengths), Rainbow-LED, mirror, optical fiber, 2x lens tip lamp, battery holder for 9V block (battery not included)
- > Ideal additions: Accu Set or Power Set

OPTICS

Components	270	Dimension (mm)	465x80x320
Item No.	520399	Vol (m³)	0,0119
EAN	4048962168655	Weight (g)	1710



Investigate optical phenomena and experiment with light! The planetary model clearly demonstrates why the moon has phases or why solar and lunar eclipses occur. Optical lenses with various focal lengths, mirror, lens tip lamps and a variety of other parts allow construction of a microscope, magnifier, telescope and periscope. With the periscope you can look around corners and the microscope makes tiny objects really big! With the sun dial you can determine the time of day, and the model with optical fiber demonstrates what total reflection is and how data can be transferred using light. This construction set gives young scientists a glimpse into the world of optics.



- > Incl. didactic activity booklet
- > Incl. Electronic-module, XS motor, 2x transistor, 2x capacitor, 3x resistor, 2x push button, phototransistor, temperature sensor, lens tip lamp, 2x LED, battery holder for 9V block (battery not included)
- > Ideal additions: Accu Set or Power Set

ELECTRONICS

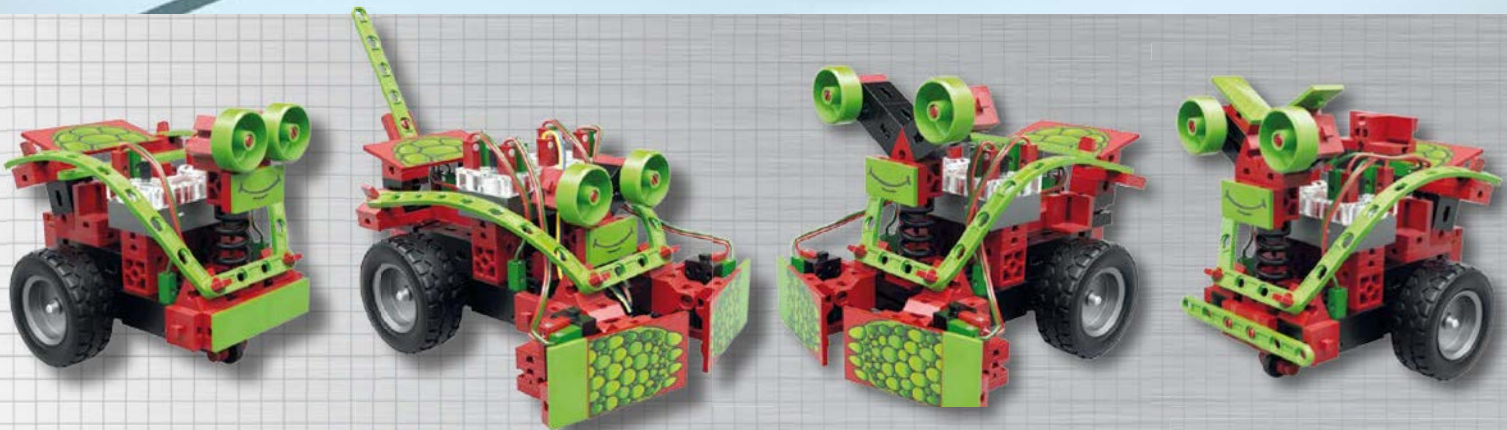
Components	260	Dimension (mm)	465x80x320
Item No.	524326	Vol (m³)	0,0119
EAN	4048962196092	Weight (g)	1750



Simple circuits, series and parallel connections, electronic circuits with transistors, capacitors, resistors and LED's. Step by step, this construction set teaches the basic principles of electronics. The Electronic-module, a control with 16 fixed programs, has 2 motor outputs, 3 analog inputs for sensors and potentiometers for controlling the speed of the motor. Many fascinating as well as functional models can be built with this construction set, from a simple flash light to ship see-saw, alternating flasher and controllable ventilating fan.



ROBOTICS



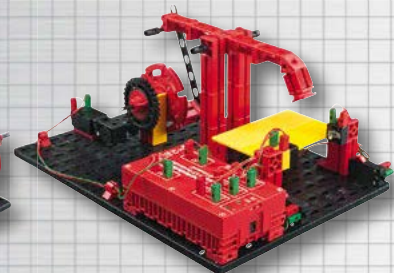
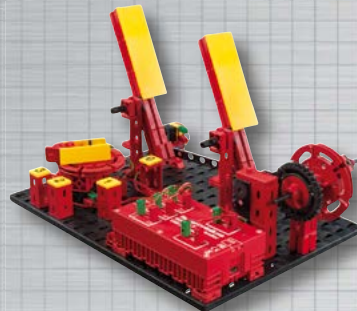
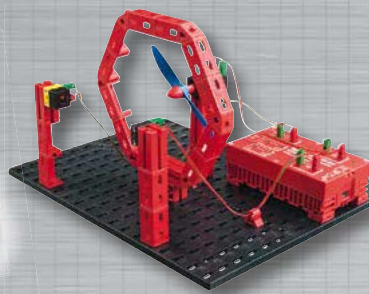
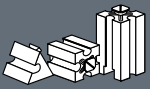
> Incl. ROBOTICS module, IR trail sensor, 2x push button, 2x XS motor, battery holder for 9V block (battery not included)

MINI BOTS

Components	145	Dimension (mm)	320x80x230
Item No.	533876	Vol (m³)	0,0058
EAN	4048962229745	Weight (g)	686



The Mini Bots have their own special approach to robots and make it easy for children to discover this special world. The clever robot models can follow lines and avoid hindrances. Five nimble action robots can be made from actuators and sensors, such as IR trail sensor and push buttons. The Mini Bot programs are saved on the fischertechnik ROBOTICS module and can be adjusted with the DIP switches.



- > Incl. didactic activity booklet
- > Incl. ROBO LT Controller (USB interface/USB power supply)
- > Incl. Software ROBO PRO Light
- > Incl. XS motor, 2x light, lens tip lamp, phototransistor, 2x push button



LT BEGINNER SET

Components	200	Dimension (mm)	465x80x320
Item No.	524370	Vol (m³)	0,0119
EAN	4048962196382	Weight (g)	1720



Complete beginner's package for children age 8 and older. With over 200 components and the aid of sensors (phototransistor, push buttons) and actuators (XS motor, indicator lights), children can construct 12 easy-to-understand models such as a hand dryer, stamping machine, lighthouse with blinking light, merry-go-round or automatic sliding door. The »ROBO LT Controller« with 3 inputs for sensors and 2 outputs for motors or indicator lights has a USB interface for simultaneous power supply. The ROBO Pro Light software makes quick programming easy as pie. The detailed didactic activity booklet supports the learning process for children making programming easy to understand. For tomorrow's engineers. System: Windows® XP, Vista, 7, 8 or 10.



ROBOTICS

Inclusive:



USB camera



- > Incl. ROBOTICS TXT Controller, Software ROBO Pro, USB camera (1 MP), 2x encoder motor, XS motor, 2x LED, 2x push button, phototransistor, NTC resistor
- > Required: Accu Set



TXT DISCOVERY SET



Components	310	Dimension (mm)	465x80x320
Item No.	524328	Vol (m³)	0,0119
EAN	4048962196115	Weight (g)	2000



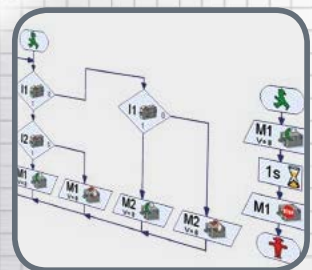
Complete Robotics Set with 310 parts, new ROBOTICS TXT Controller and extended ROBO Pro software for control of mobile and stationary robot models. A camera allows images to be transferred via USB or WiFi, color recognition, line tracking and motion recognition. The controller has the following features: Color 2.4" touch display, combined WLAN/Bluetooth module, Micro SD card slot for additional memory space, IR receiver diode, integrated loud speaker, 4 motor outputs, 8 digital/analog inputs for sensors and 4 high speed numerical inputs. Additional sensors and actuators such as encoder motors, XS motor, push buttons, NTC resistors, phototransistors and LED's allow construction of mobile rover vehicle, surveillance stations, alarm centers, etc.! Preprogrammed modules are also provided for beginners. This set is compatible with other ROBOTICS construction sets.
System: Windows® XP, Vista, 7, 8 or 10.



Dual Processor
600 MHZ

Memory
128 MB RAM
64 MB FLASH

TOUCH DISPLAY



⚠ > Additionally required is Accu Set or Power Set



ROBOTICS TXT CONTROLLER

Components	/	Dimension (mm)	225x65x150	EAN	4048962179828
Item No.	522429	Vol (m³)	0,0022	Weight (g)	450

The compact ROBOTICS TXT Controller (90x90x25 mm) can be controlled easily with the color 2.4" touch display. The combined Bluetooth/WiFi RF module provides the perfect, wireless interface for numerous applications. The numerous interfaces also include a USB host port for USB sticks and other components such as the fischertechnik USB camera. The integrated Micro SD card slot allows expansion of the memory capacity. 2 Controllers can be coupled.

- > Processor: Dual core, main processor ARM Cortex A8 (32bit/600MHz) + Cortex M3
- > Memory capacity: 128 MB DDR3 RAM, 64 MB Flash
- > Memory expansion Micro SD card slot
- > Display: Color 2.4" touch display (320x240 pixels)
- > 8 Universal inputs: Digital/analog 0-9VDC, analog 0-5 kΩ
- > 4 high speed numerical inputs: Digital, frequency up to 1kHz
- > 4 Motor outputs 9V/250mA (max: 800 mA): speed infinitely controllable, short-circuit proof, alternative 8 single outputs for components such as lights, etc.
- > Combined Bluetooth/WiFi RF module: BT 2.1 EDR+ 4.0, WLAN 802.11
- > Infrared receiver diode: for fischertechnik Control Set transmitter
- > USB 2.0 Client: Mini USB port for connection to PC
- > USB Host interface: USB A port for fischertechnik USB camera, USB sticks, etc.
- > Camera interface: over USB Host, Linux camera driver integrated into operating system
- > 10-pin male connector for additional inputs and outputs as well as I²C interface
- > Integrated loud speaker
- > Integrated real time clock with exchangeable buffer battery: for capturing measured values within a defined period of time
- > Linux-based open source operating system
- > Programming possible with ROBO Pro, C-Compiler, PC-Library, and many others.
- > Link to smartphones/tablet PC's via Bluetooth or WLAN, allowing them to be used as terminals for the controller.
- > Dimensions: 90x90x25 mm
- > Power supply: 9V DC 3.45 mm socket, or 2.5 mm fischertechnik sockets (for Accu Pack)

ROBO PRO SOFTWARE



System	Windows® XP, Vista, 7, 8, 10	Dimension (mm)	210x25x150	EAN	4006209932964
Item No.	93296	Vol (m³)	0,0008	Weight (g)	85

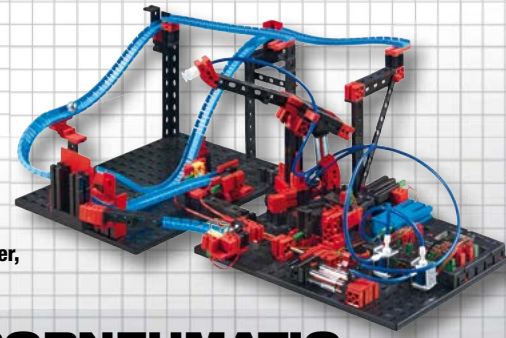
Simple entry for beginners through programming of flow charts consisting of various software building blocks. The exchange of the data between the software building blocks and the subprograms can be done through variables and graphical connections as well. This allows the program functions to be shown in an understandable manner. There are no problems with the preparation of teach-in programs or data exchange with other Windows® software.



- > Incl. related didactic material on CD
- > Incl. compressor, Mini motor, 2x solenoid valve, optical color sensor, vacuum exhauster, 3x cylinder with spring, 2x photo transistor, 2x lens tip lamp, 11x flex-rail 180



- > Additionally required is ROBOTICS TXT Controller, Software ROBO Pro, Accu Set or Power Set



ROBO TX ELECTROPNEUMATIC

Components	440	Dimension (mm)	465x80x320
Item No.	516186	Vol (m³)	0,0119
EAN	4048962136845	Weight (g)	2105



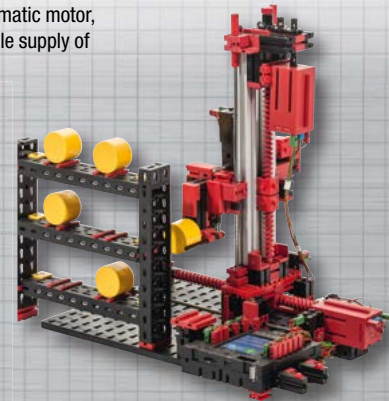
The subjects of electro-pneumatics and vacuum technology are demonstrated clearly with the aid of fascinating models such as the pneumatic motor, color sorting robot for colored parts, ball obstacle course and pinball machine. The powerful and compact compressor guarantees a reliable supply of compressed air to the models. The electro-magnetic valves included allow remote control of the models with a PC.



- > Incl. related didactic material on CD
- > Incl. 2x Encoder motor, 2x XS motor, 6x push button



- > Additionally required is ROBOTICS TXT Controller, Software ROBO Pro, Accu Set or Power Set



ROBO TX AUTOMATION ROBOTS

Components	510	Dimension (mm)	465x80x320
Item No.	511933	Vol (m³)	0,0119
EAN	4048962111309	Weight (g)	2270



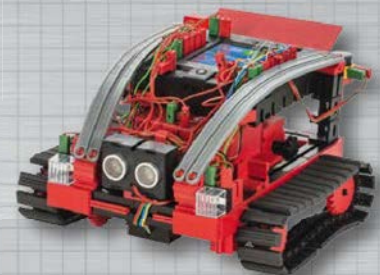
Four reality-based and fully functional industrial robots: High-rack storage, 3-axis robot and 2 other grappler robots. Sturdy fischertechnik aluminum profiles used in all models. The instructional activity booklet provides support in the form of background information, projects and programming tips. For programmers and designers from age 10.



- > Incl. didactic activity booklet
- > Incl. 2x Encoder motor, 3x indicator light, buzzer, NTC resistor, photoresistor, ultrasonic distance sensor, optical color sensor, IR trail sensor



- > Additionally required is ROBOTICS TXT Controller, Software ROBO Pro, Accu Set

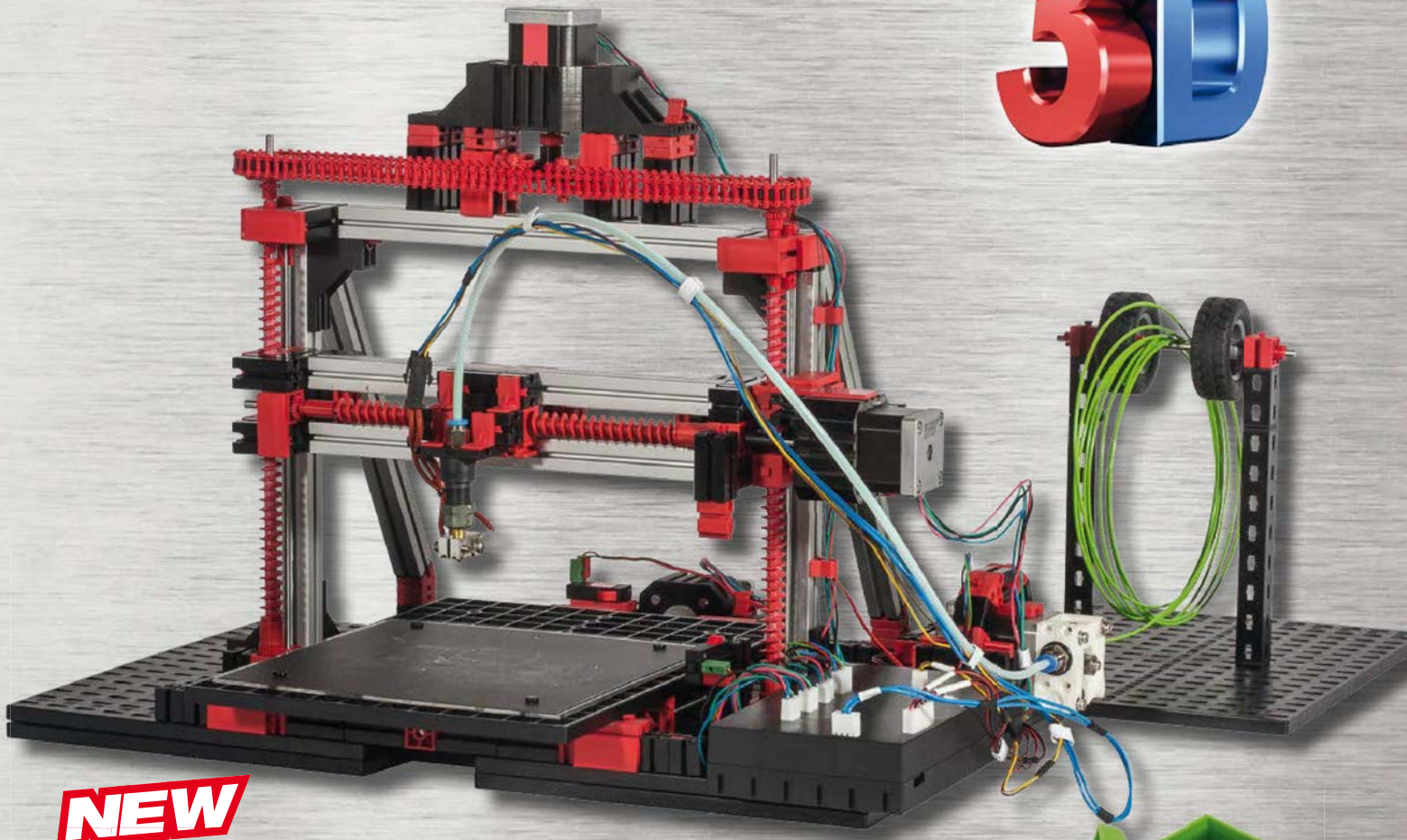
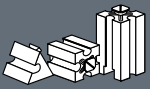


ROBO TX EXPLORER

Components	400	Dimension (mm)	465x80x320
Item No.	508778	Vol (m³)	0,0119
EAN	4048962095678	Weight (g)	1590



Explore unknown areas, measure distances, follow trails, 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 TX Explorer sensors can do all of this and lots more: The NTC resistor, the photoresistor, the ultrasonic distance sensor, the infrared color sensor and the specially developed trail sensor. Thanks to two encoder motors, the tracks can be controlled precisely and steered synchronically. With the rescue robot, which is contained as a model, the construction set provides the ideal basis for participation in the RoboCup.



NEW



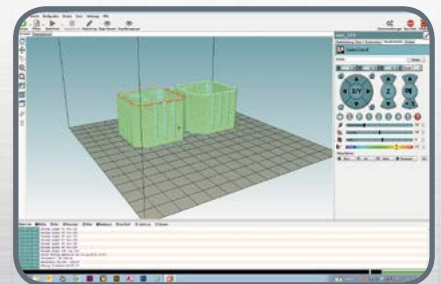
3D-Printer

Components	600	Dimension (mm)	440x315x150
Item No.	536624	Vol (m³)	0,0207
EAN	4048962250312	Weight (g)	6300



Build, Plug & Print! This build-it-yourself kit gives users a fascinating insight into the groundbreaking technology of 3D printing. Print your own parts yourself at any time - so individual, so easy, so flexible - for use in your own home! Either with the supplied printing examples or with your very own print data. The robust 3D printer is easy to build and can be used for 3D printing of different parts. Users acquire basic knowledge about 3D printing and an insight into this revolutionary technology that promises high future potential. PC software for controlling the printer via the USB interface.

- > Incl. Control PCB in fischertechnik housing with Atmel microcontroller, USB interface for PC (USB port Micro B, incl. interface cable), 4 step motor drivers (for x-, y, z-axis and extruder), one power output (MOS-FET) for the extruder nozzle (hot end), connections for 3 limit switches and a temperature sensor, DC port for voltage supply 19V, 5A, dimensions: 150x90x25mm
- > Incl. 3D printer software on CD, with slicer and printer control, specially adapted to fischertechnik 3D printer (Windows 7, 8, 10). Numerous finished printing examples contained as G-codes
- > Incl. 4 high-torque step motors (x-/ y-/ z-axis, extruder), 3 push buttons (as limit switches for x-/ y-/ z-axis), heated nozzle (for 1.75 mm Ø filament) with temperature monitoring, printing bed with removable printing plate
- > Incl. Power unit (AC input 100–240V, DC output 19V, 5A, 50–60Hz)
- > Incl. Top quality filament sample (PLA, 1.75 mm diameter). Quality filament (PLA) in special fischertechnik colors can be ordered separately

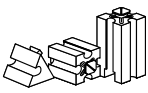


Technical data:

- > Printing range: 150x100x80 mm
- > Layer thickness: min. 0.1 mm
- > Filament diameter: 1.75 mm
- > Nozzle diameter: 0.5 mm
- > Material: PLA (polylactide)

Powered by:





- > Incl. 2x Rainbow LED, 2x white LED, battery holder for 9V block (battery not included)
- > Ideal additions: Accu Set or Power Set



LED SET

Components	40	Dimension (mm)	225x65x150	EAN	4048962229752
Item No.	533877	Vol (m³)	0,0022	Weight (g)	175

The LED Set is just the right solution for more light! The construction sets can now be upgraded even further with more luster and additional light effects. The set contains two Rainbow LEDs that flash in different colors and frequencies, together with two white LEDs and a battery holder.

- > Only Windows® compatible
- > Ideal additions: Accu Set or Power Set



SOUND+LIGHTS

Components	30	Dimension (mm)	225x65x150	EAN	4048962003260
Item No.	500880	Vol (m³)	0,0022	Weight (g)	270

If you want to breathe still more „life“ into the fischertechnik models using sounds and lights then the „Sound+Lights Set“ is the ideal solution! Up to three different sounds, which can be activated with push buttons or automatically with digital inputs, can be placed 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 eight indicator lights as blinking lights. The set contains a sound module with blink electronics, a USB cable, two indicator lights with various colored luminous caps and a battery holder for a 9V block (battery not included).

- > Performance data: Voltage 9V..., max. output 1.0 W at 6000 RPM



MOTOR SET XS

Components	45	Dimension (mm)	225x65x150	EAN	4048962069426
Item No.	505281	Vol (m³)	0,0022	Weight (g)	200

Thanks to the compact measurements, this motor can be installed almost anyplace. In addition to the building blocks, gearbox parts and toothed gears, the set also contains a safety battery holder with integrated pole-reversing switch for 9V block (battery not included).

- > Performance data: Voltage 9V..., max. output 3.0 W about 340 RPM
- > Additionally required is Accu Set or Power Set



MOTOR SET XM

Components	40	Dimension (mm)	225x65x150	EAN	4048962069433
Item No.	505282	Vol (m³)	0,0022	Weight (g)	275

High performance geared motor in compact plastic casing with numerous possibilities for attachments. With many toothed gears, axles and gearbox parts.

ACCU SET



Components	Charger + battery pack in one	Dimension (mm)	225x65x150	EAN	4006209349694
Item No.	34969	Vol (m³)	0,0022	Weight (g)	490



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.

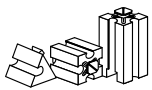
- > Power Pack Performance Data: Voltage 9V.../2,5 A.
- > Power Controller Performance Data: Regulated output 1A max., additional output with 9V.../1 A max. (not regulated), both outputs short circuit-proof with overload protection

POWER SET




Components	Power unit + control unit in one	Dimension (mm)	225x65x150	EAN	4048962069440
Item No.	505283	Vol (m³)	0,0022	Weight (g)	430

Power pack and infinite Power Controller. The power supply from the electrical socket for all fischertechnik models.



➤ CONTROL SET

 > Additionally required: Accu Set, 9V-Block (battery not included)

Components	Controller, receiver, servo	Dimension (mm)	225x65x150	EAN	4048962003277
Item No.	500881	Vol (m³)	0,0022	Weight (g)	370

The four channel infrared remote control allows you to control fischertechnik models from a distance as well. Up to three motors and one servo can be controlled 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 applications.



➤ CREATIVE BOX 1000

Components	720	Dimension (mm)	390x95x270	EAN	4006209910825
Item No.	91082	Vol (m³)	0,0100	Weight (g)	2750

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



➤ BOX 1000

Components	/	Dimension (mm)	390x95x270	EAN	4006209303832
Item No.	30383	Vol (m³)	0,0100	Weight (g)	1860

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



Shelf strips, 125x3,5 cm
Item No. 39911



SALES PROMOTION



»PROFI« poster, DIN A1
Item No. 39125



ROBOTICS« poster, DIN A1
Item No. 39126



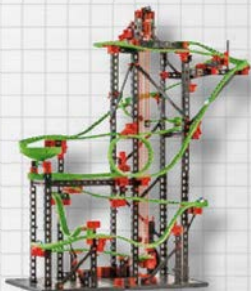
Flag, 200x80 cm
Item No. 500887



Dekorative ferris wheel model
Item No. 533922 (230V)



Shopping bag, 46x59 cm
Item No. 43355



Dekorative models
(on request)



Consumer brochure
Item No. 44465



Digital photo frame
(on request)



Brochure stand
(on request)



Toy box – Item No. 41 682

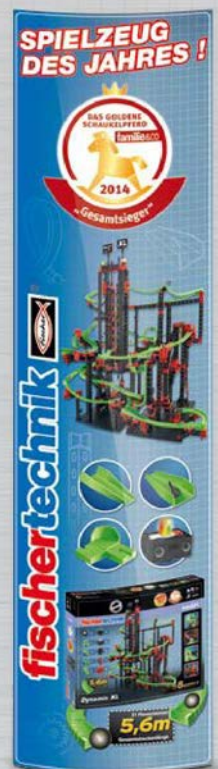
The toy box allows small designers to experience the world of fischertechnik up close. With many components and instructions, the toy box is the optimum activity for your events. And best of all: It can be used again and again.



Dekorative cube, 25x25x25 cm
Item No. 142202



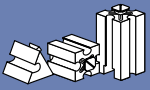
Beach Flag, 215 cm
Item No. 522425



Stand
Dynamic XL
Item No. 533077



Top sign 125x30 cm – Item No. 39917
100x30 cm – Item No. 47227



SALES PROMOTION

▶ OPTIMUM PRESENTATION - FOR BEST POSSIBLE SALE

We support your sales with highly effective and attention-getting measures and aids so that you can achieve the optimal presentation at the point of sale (POS) and in the display window for the best-possible attraction of the end consumer.



Stand-up Poster
Item No. 523240



Show window decoration package
(on request)

▶ FISCHERTECHNIK BOOSTS SALES

We help you with our eye-catching print and online marketing activities. fischertechnik goes with the times and is very active in the social media. On facebook, Twitter, YouTube and Instagram our customers and fans can take a look behind the scenes at fischertechnik and keep constantly informed. Our customers have shown an excellent response to the reports, pictures, product videos and animations which boost the online presence of the fischertechnik and fischerTiP brands.

The regular fischertechnik Newsletter keeps our target group informed promptly about important, current news.

Blogging campaigns ensure that the authentic test reports as seen by the final consumers (bloggers) also reach your customers and potential new customers.

We present our products throughout Germany and on an international scale at consumer fairs and events where fischertechnik products are explained and can be tested by the customers.

Furthermore, this year fischertechnik is also investing in a major consumer campaign to support your sales and enhance brand awareness.



Scan QR code with smart phone to obtain additional information.

FAN CLUB

More than 30.000 fans are members at no cost in the fischertechnik Fan Club. Every fan regularly receives current information and has his personal member identification.

fischertechnik opens the doors once a year on Fan Club Day. The fans receive the exclusive opportunity to take a peek behind the curtains of the traditional brand.

With our biannual Fan Club NEWS we guarantee that our target group gets important information such as notification of new items.





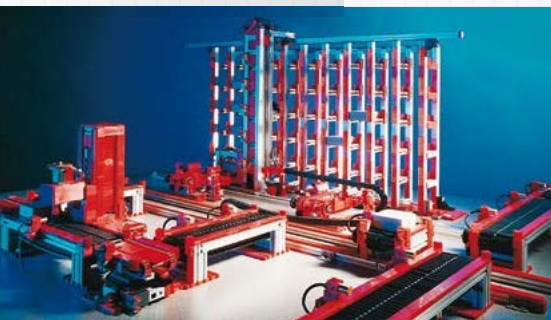
Building Blocks For Life

SCHOOL + INITIAL AND ADVANCED TRAINING



- **Assembly instructions**
- **Activity booklet**
- **Worksheets**

How does a manual transmission work? What is a planetary gear? How is the movement of a windshield wiper controlled? These are questions which the instructional activity information illustrates and explains in a way that is easy to understand. This starts with elementary questions from areas such as mechanics, statics, electronics and information science, and progresses to practical, understandable implementation of everyday technical devices such as traffic lights, ventilating fans and hoists, through to technically refined, sophisticated robotics solutions. The instructional activity information together with thematically structured questions and answers act as an additional instrument for simple, precise teaching of the specific contents and for checking the success rate. The products by fischertechnik Education come in practical, well thought-out storage boxes.

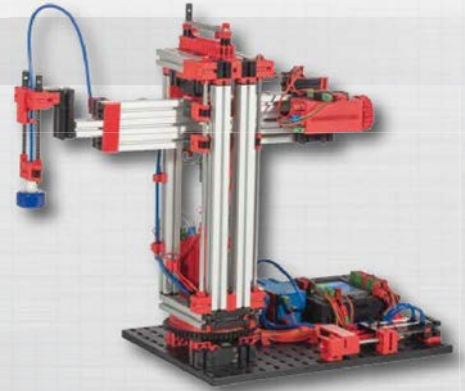


PLAN + SIMULATION

The function models from fischertechnik, plan + simulation, are a proven and inexpensive means to plan and to develop industrial controls with the associated software and to test processes. They are employed worldwide in the areas of training, development and presentation.

TRAINING MODELS

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



The flexibility and the modularity of the fischertechnik system in connection with the industrially adapted sensors and actuators as well as the controls from leading manufacturers open up almost unlimited possibilities for hardware simulation. Complicated technical systems are presented realistically and thus perfectly simulated so that they are understandable for everyone. This makes investment decisions easier and reduces the costs for the correction of planning mistakes.

fischertechnik 

fischertechnik GmbH
Klaus-Fischer-Str. 1, D-72178 Waldachtal
Tel. +49 74 43/12-42 93, Fax +49 74 43/12-45 91
E-Mail: info@fischertechnik.de
www.fischertechnik.de

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