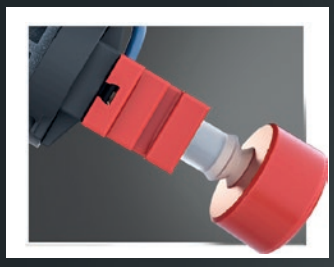

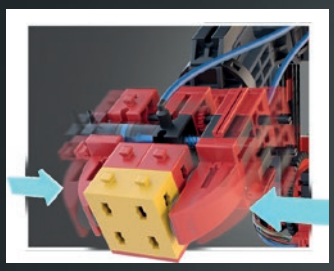

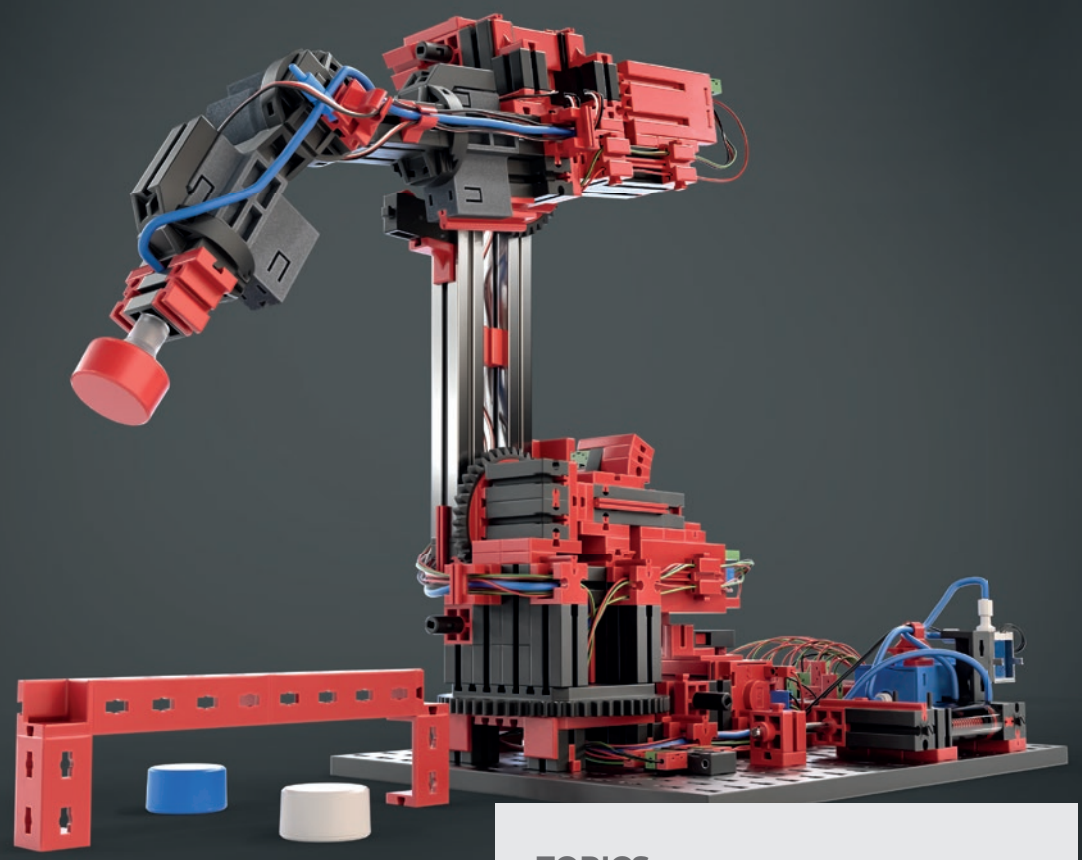

ROBOTICS ADD ON | SECONDARY SCHOOL

ROBOTICS ADD ON: INDUSTRIAL ROBOTS

Real industrial robotics directly in the classroom

This set allows learners to take an intensive look at the subject of industrial robots and to prepare themselves in a practical way to deal with the challenges of the modern world of work. Pupils assemble two realistic six-axle robot models by themselves and learn how to program these. This hands-on experience enables them not only to gain theoretical knowledge but to develop practical skills as well. Thanks to the didactic accompanying material and interaction with our models, learners develop analytical skills, problem-solving expertise and practical teamwork in addition to gaining technical know-how.

TOPICS

Structure and functionality of an industrial robot, basic concepts of robotics

Modeling and calculation of motion behavior, navigation through motor impulses, point control

Mathematical description of the kinematics and kinetics of robots, kinematics and dynamics of linear movements.

Coordinate systems

Understanding and utilizing sensors and actuators

Programming: Program structures (loops and conditions, variables), reuse of program parts, debugging

Teach-In programming

Robot components: Gripper, Vacuum gripper

STEM
SCIENCE TECHNOLOGY ENGINEERING MATHEMATICS
MATHEMATIK
INFORMATIK
NATURWISSENSCHAFT
TECHNIK

Robotics Add On: Industrial Robots
Facts

2 - 4 students

2 models

378 components, incl. replacement parts bag

8 experiments

Incl. servo joints with digital servos, spare parts bag, workpieces

Teaching materials can be downloaded free of charge at www.fischertechnik.de/schools

Item No.	564064
EAN	4048962458510
Dim. (mm)	320x80x230
Weight (g)	1.400

About fischertechnik education
Hands-on learning concepts for teaching important future skills

fischertechnik education offers innovative digital and analog learning concepts for use in many different subjects – in preschools, general education schools, as well as universities and vocational education. STEM (science, technology, engineering and mathematics) content is taught in an accessible and concrete way based on hands-on learning concepts. This helps students learn important future skills like problem solving, creative thinking, and emotional and social competence.

From robotics to artificial intelligence to automated, agile production simulators and the fundamentals of renewable energy sources, electronics, and mechanics – the fischertechnik product range includes solutions to teach STEM content relevant to your curriculum.

All learning concepts contain themed building kits, technical components like motors, sensors, and controllers, and freely accessible accompanying instructional and training materials, in the form of building and programming instructions, lesson plans with tasks and solutions, curriculum references and professional development.

Our solutions have been used successfully all over the world for more than 50 years in schools, universities, vocational training programs and industrial companies.

More information on our learning concepts is available at: fischertechnik.de/schools

FISCHERTECHNIK STEM KITS

Our **STEM Kits** are optimized for project-based work in primary and secondary schools. Each STEM kit deals with a specific technical topic from a STEM area.

The **learning concept** contains a set of of building blocks and technical components students can use to build several different models and conduct experiments. Thanks to **teaching materials available online,** incl. learning objectives, curriculum references, tasks and solutions, fischertechnik education STEM kits can be easily integrated into a range of STEM subjects.