Quotation/Proforma Invoice

WorldSkills
Water Technology
Skill #55
126.431

Project
1756015

Date

09.07.2025

Your contact person

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Content

Position	Quantity	Description

WorldSkills Water Technology - EduKit PA

Pos. 1 | 1,00

Equipment set

549822

Picture similar

EduKit PA Basic for process technology

The EduKit PA Basic for process technology deals with projects with the following content:

- Assembly
- Commissioning
- Manual measurement, open and closed-loop control
- System efficiency analysis

The system is handy, easy to transport and simple to set up. It provides an introduction to closed-loop control without the need for sophisticated control technology. It is consistent and compatible with existing Festo Didactic systems and can be expandable. A workbook with solutions is available.

EduKit PA Basic package contains:

- Aluminium profile plate 350 x 200 x 20 mm
- Two transparent circular water tanks with mounting frame and aluminium profile stand
- Flexible pipe system DN15
- Rotary pump, normal intake, 24 Volt/26 W
- Electrical actuation with connecting block for pump connection, terminal strip, 2 buttons (NO and NC contact), 1 control switch and 1 LED indicator light (24V) for front panel installation with mounting bracket; 1 relay with 3 changeover contacts on mounting plate
- Pressure gauge
- Flow meter, float principle
- Various small parts for construction and assembly

The EduKit PA Basic is partially assembled and pre-wired.

Technical data:

- Power supply 24 V DC
- Packaging dimensions: 39.5 cm x 29.5 cm x 52.5 cm
- Assembly area: 35 cm x 20 cm
- Max. height at max. construction: approx. 110 cm
- Power supply unit 24 V DC, 4.5 A required

Position	Quantity	Description
		Version: EduKit PA Basic 1x Pump 170712 2x Tank, round 548596 1x Flow meter 548604
Pos. 2	1,00	**Pipe/tub cutter** 7658 Pipe and tubing cutter For plastic and Perbunan tubing with and without fabric reinforcement with outside diameters up to 20 mm. Ensures a vertical, burr-free cut through positive locking of tubing in the cutter. It also has a safety clip to prevent unauthorized opening. Supplied with two spare blades.  Picture similar
Pos. 3	1,00	**Tool** 539767 **Tool set** The tool set is an aid to easy working on stations. A practical mini-systainer includes: • 200 mm steel rule • Open-jawed spanners size 7, 8, 9, 10 • Adjustable spanner • Side cutter • Insulation-stripping pliers • Wire end sleeve pliers • Screwdriver set, hex, 1.5 – 6 • Screwdriver, hex, 0.9; 1.3 • Screwdriver, cross-head, PZ02 – short • Screwdriver, flat, 2.5 x 75; 4.0 x 100 • Screwdriver, flat, 1.2 – 1.6 • Tubing cutter • Fiber-optic cable cutter • Workpiece, red, black, silver • 100 x cable binders 2.5 x 100 • 100 x wire end sleeves 0.25 • 100 x wire end sleeves 0.75  Picture similar

Position	Quantity	Description
Pos. 4	1,00	**Power pack** 162417 **Tabletop power supply unit** • Input voltage: 85 – 265 V AC (47 – 63 Hz) • Output voltage: 24 V DC, short-circuit-proof • Output current: max. 4.5 A • Dimensions: 75 x 155 x 235 mm Type: Connector as per CEE 7/VII for DE, FR, NO, SE, FI, PT, ES, AT, NL, BE, GR, TR, IT, DK, IR, ID  Picture similar
Pos. 5	1,00	**Equipment set** 564631 Edukit PA Advanced The EduKit PA Advanced for process technology deals with projects with the following content: • Assembly • Commissioning • Automated measurement, open and closed loop control • System efficiency analysis The EduKit PA Advanced set is handy, easy to transport and simple to set up. It provides an introduction to automated closed loop control. The electrical interface board with SysLink connection enables the EduKit PA Advanced to be actuated using a PLC board, an I/O simulation box, FluidSim® or FluidLab PA in conjunction with EasyPort. EduKit PA Advanced package contains: • Electrical interface board, pre-wired and consisting of - I/O terminal for 8 digital outputs, 8 inputs with SysLink plug connection - Terminal block for analogue signals with 15-pin SUB-D connection - 24 V DC DIN H-rail relay with operating indicator - Motor controller with pulse width modulation for DC motors - Starting current limiter - 4-wire basic terminal block - Connection block 2-pin • 2 x capacitive sensor with mounting components and cable • Ultrasound proximity switch incl. plug socket with cable • Flow sensor with rotor and opto-electronic (infrared) evaluation incl. f/U transducer and cable  Picture similar

Position	Quantity	Description
		• Pressure sensor 0 - 400 m bar, analogue output 0 - 10 V DC incl. connecting cable and screw-in fitting • Directly controlled 2/2 way solenoid valve; incl. connecting cable and screw-in fitting • Systainer®, 100% ABS plastic with inserts with carrying handle To use the EduKit PA Advanced modules, the EduKit PA Basic is required. Version: EduKit PA Advanced in the Systainer 1x I/O board for EduKit PA 549823 2x Sensor, capacitive 549824 1x Sensor, ultrasound 548689 1x Flow sensor for EduKit PA incl. transducer 549825 1x Pressure sensor 0 – 400 mbar 549826 1x 2/2-way solenoid valve 549827
Pos. 6	1,00	**Extension Kit EduKit PA - WorldSkills 2024 Lyon** 11950941 Extension Kit consisting of: • Pinch valve NO • Measuring jug • Float switch incl. bracket • Filter control valve with switch-on valve • Supplementary material Basic requirements: Existing EduKit PA Basic and EduKit PA Advanced system. This extension kit is required to realize the tasks for WorldSkills 2024 Lyon.

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67492	WorldSkills Water Technology Skill #55	126.431	09.07.2025	7 / 25

Position	Quantity	Description
Pos. 7	1,00	**Teachware** 563971 **Workbook for EduKit PA** This workbook explains the basic principles of process technology and provides an introduction to the subject. It covers manual and automated measurement, open and closed-loop control and system design topics such as planning, installation, commissioning, marketing and sales. You will be provided with exercises including all necessary worksheets as well as didactic information and solutions as support for trainers. The workbook contains detailed descriptions of the problems and parameters. The worksheets guide students through the required steps of planning, execution and function testing. The measurement/open and closed-loop control exercises relate to flow, level and pressure technology. The workbook includes a USB-Stick with or download access to the worksheets, data sheets and solutions. Workbook with solutions for control technology / process engineering training with EduKit PA. Trainees will learn how to classify different systems, describe components and functions and commission systems. This workbook can be used together with EduKit PA for process automation to achieve the following training goals: • Knowledge of the design and functioning of EduKit PA • Understand and complete flowcharts • Understand and complete simple electrical circuit diagrams • Become familiar with the setup and mode of operation of a pressure gauge • Become familiar with the setup and mode of operation of a pump • Become familiar with the setup and mode of operation of a flow sensor • Record and analyse characteristic curves • Knowledge of the terms control and closed-loop control • Knowledge of the principles of a discontinuous controller (two-step action controller) and a continuous controller • Knowledge of essential systems engineering work steps, from planning to operation B. Schellmann, H. Kaufmann 2009 edition, 430 pages, in folder, bound, incl. CD-ROM. Campus licence – permission to copy for internal purposes inclusive Campus licence: en

Picture similar

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Position	Quantity	Description
Pos. 8	1,00	**Carriage** 8039990 Trolley with plate Stable sheet steel construction with table plate. Dimensions (W x H x D including rollers to bottom edge of profile plate): 700 x 770 x 700 mm  Picture similar
Pos. 9	1,00	**Interface** 548687 EasyPort USB – An interface for measuring, open-loop control, closed-loop control. Connects the simulation to the real world EasyPort USB as table-top equipment for the transmission of analogue 0 to 10 V and 24 V digital process signals via USB to the PC. Via the SysLink interface (digital signals) and via a SUB D 15-pin plug connector (analogue signals), the EasyPort USB can be connected from the PC for measurements, control and adjustment to MPS®/MPS® PA stations, training packages or PLC boards. Technical data EasyPort USB: • 2 x 24 pin IEEE 488 compatible plug connectors SysLink for MPS®/MPS® PA station, training package, PLCs each with 8 digital inputs and 8 digital outputs (16I /16O) • 1 x SUB D 15-pin plug connector for MPS/MPS PA station, training package, PLC with 4 analogue inputs and 2 analogue outputs (12 bit resolution) • 24 V power supply connection via separate screw terminals or via SysLink • USB 2.0 interface to PC (galvanically separated) • Large LCD display • Display of digital signals: via LED The external PC interface can be used on the workbench or can be fixed to an aluminium profile with optionally available fixings. As standard, delivery includes: • 24 V connecting cable to 4 mm safety connectors • USB cable • CD-ROM: - 2D process display - EasyOPC driver - Datasheet - ActiveX control - Examples for control via LabVIEW Type: EasyPort USB  Picture similar

Position	Quantity	Description
Pos. 10	1,00	**Cable** 34031  Picture similar I/O data cable with SysLink connectors (IEEE 488) For connection of SysLink interfaces, for example an EduTrainer PLC, with the universal connection unit, digital (Order no. 162231). 2.5 m
Pos. 11	1,00	**Cable** 529141  Picture similar Analogue cable, parallel EasyPort/PLC connection for a real process or a simulation box. Analogue cable, parallel, 15-pin SUB-D type connector on both ends, 150 cm. 2 m
Pos. 12	1,00	**SOFTWARE** 8208217 FluidLab-PA Closed-Loop This software enables the measurement, control, and regulation of pressure, temperature, flow, and level process loops using real or simulated hardware: EduKit PA, MPS PA Compact Workstation, MPS PA stations, or EDS Water Management. The FluidLab-PA Closed-Loop software provides an easy-to-use platform for connecting learners with real-world process automation systems. Using the EasyPort interface, users configure, monitor, operate, and control various learning systems. Learners can adjust sensor values, modify signal strength for analog inputs, and display physical values in different units to accurately reflect process conditions. The software allows customization, including reversing controller directions, adjusting continuous control settings, and choosing simulation modes. Learners can view and analyze binary and analog process data, record sensor characteristics, and measure step responses. Features like zoom and cursor tools help users analyze data while adjusting measurement channels and test times. The characteristic curve feature helps users study control elements like pumps and valves to see how voltage affects pressure, flow, and level. The point controller menu focuses on level and temperature control systems, offering practical, hands-on learning.

Position	Quantity	Description
		For continuous regulation, learners can experiment with and fine-tune control processes using P, PI, PD, or PID controllers, seeing immediate results in the system. They can also document control parameters, measurements, and curve profiles using interactive block diagrams. The industrial controller function mimics real-world process control, letting learners set target values, set warning limits, and switch between manual and automatic modes for better control. Lastly, the simulation model shows process sequences as they would occur in real systems, helping learners gain a deeper understanding of closed-loop control. Benefits: - Provides a realistic, interactive platform that immerses students in real-world process control scenarios. - Offers advanced visualization of complex processes such as continuous regulation and control systems. - Enhances engagement through graphical data displays and real-time system feedback. - Features customizable settings, enabling personalized learning and experimentation to suit individual needs. - Ensures seamless integration with hardware systems for hands-on, practical experience. Learning goals: - Develop proficiency in control engineering fundamentals. - Apply control technology concepts in practical scenarios. - Integrate hardware components into a control system. - Customize settings (adjusting sensor values, signal attenuation, and simulation modes) - Analyze and interpret data. Technical requirements: PC with current version of Windows (10/11) Type: FluidLab-PA Closed-Loop, Perpetual, 1 user

Position	Quantity	Description
Pos. 13	1,00	**SOFTWARE** 8208223 FluidLab-PA Process, Perpetual, 1 user This software fosters an understanding of process control engineering and allows easy commissioning, operation, and monitoring of the EduKit PA and selected stations of the MPS PA or EDS Water Management systems. The FluidLab-PA Process software provides a user-friendly, digital environment for those who beginning their journey in process engineering. Learners are guided through the commissioning of various learning systems. They complete a checklist to enable the system and can print a commissioning protocol for documentation purposes. Using the EasyPort, learners engage with system behavior through simple process examples, illustrating both continuous and discontinuous control processes. This approach fosters essential skills in focused observation and system analysis. Condition monitoring enhances safety and efficiency by continuously recording machine conditions and detecting deviations for analysis. The simulation software FluidSIM allows learners to experiment with control engineering principles in real time, creating and testing custom process sequences through electrical circuit diagrams and logic diagrams. The virtual reactor simulates processes through an animated step chain, where learners must observe, analyze, and document production orders while responding to error messages. For those learning PLC programming, the Virtual PLC module facilitates an understanding of binary and analog signal processing using platforms like STEP 7, PLCSIM, and CODESYS. Finally, the software integrates with Excel for real-time order data exchange and is also compatible with the IoT Kit. Benefits: - Interactive training that boosts understanding of theoretical concepts through practical application - Revamped interface offering a consistent operating and control concept across all hardware systems - Easy switch between real or simulated hardware systems enables remote learning and curriculum expansion without additional hardware costs - New architecture that allows for easy integration of additional hardware and updates Learning goals: - Understand system behavior, process operations, and various types of controllers. - Develop system commissioning skills to ensure safety and efficiency. - Monitor machine status, manage alarms, and analyze deviations. - Program process sequences using electrical circuit diagrams, logic diagrams, and GRAFCET. Technical requirements: PC with current version of Windows (10/11)

Position	Quantity	Description

WorldSkills Water Technology - EDS Watermanagement

Pos. 14 | 1,00

Station

8024507

Picture similar

Wastewater treatment station

Function
The station maps the physical functions of wastewater treatment after the sludge treatment and contains an aeration tank and a secondary settlement tank. Plastic granules are used as the soiled load and can be air-dried and re-used after utilization. The sludge return has a flow measurement system with an adjustable pump for setting and monitoring the sludge return ratio. The oxygen feeding on the station functions using an electrically adjustable compressed air diaphragm pump. Combined with the available oxygen sensor, there is also an option of extending the oxygen feeding system to a control circuit.

Economical oxygen regulation
Adding oxygen to water is not only relevant in the wastewater sector, but also in fish breeding or bioreactors.

In order to guarantee energy-optimized oxygen feeding, in-line oxygen measurement is required and must be combined with the oxygen feeding actuator in a control circuit. That avoids unnecessary energy use and possible biochemical malfunction.

EDS Water Management forms a neutral learning environment on the subject of oxygen feeding regulation. Periodic addition of sodium sulphite (Na2SO3) to the upstream supply water causes a continuous oxygen consumption, thus simulating the oxygen demand of bacteria eating up organic substances in a real biological treatment of wastewater.

Handling with real wastewater is too complex and therefore not planned.

The station is fully assembled, wired and tested.

Including control system with FluidLab®-EDS Water Management, EasyPort, connecting cables, accessory set with sedimentation simulation agents and "Getting Started" technical documentation.

Main components
3 l tank, including an overflow rim, 10 l tank, ventilation system, capacitive proximity sensor, float switch, magnetic-inductive flow sensor, centrifugal pump, 2/2-way solenoid valve, electric connection board, aluminum profile plate.

Note
For single operation, a water supply tank/ground water (order no. 8024503) is required.

General training content

- Controlling, regulating and monitoring physical variables such as levels, flows and pressure
- Technical/physical functions of sensors and actuators as well as wiring, adjustment and parameterization

Position	Quantity	Description
		• Analysing controlled systems, parameterizing and optimizing regulators • System operation, maintenance, troubleshooting and repair • Plant engineering • Optimisation and energy monitoring • Electronic data processing **Learning content for project work** • Behavior of flakes at different flow velocities and different solid loads • Hydraulic overload of a wastewater treatment plant and the consequences • Basic function of aerobic water treatment • Function of sludge return • Analogue level measurement via a pressure sensor **Training content with additional oxygen measurement package** • Measuring the quantity of dissolved oxygen • Showing the advantages of continuous measurement/control of the oxygen content **Technical data** • Water (10 – 15 l) • Power supply: 24 V DC • 5 digital inputs • 5 digital outputs • 4 analog inputs • 2 analog outputs • Dimensions (H x W x D): 710 x 900 x 400 mm **Recommended training media** • Wastewater Treatment Workbook • Monitoring, Control and Optimization Workbook • Energy Optimization Workbook • eLearning course Open- and Closed-Loop Control • eLearning course Process Automation • Water supply technology training set • Sewage technology training set Wastewater treatment station

Position	Quantity	Description
Pos. 15	1,00	**Station** 8024503 Water supply tank/ground water **Function** The water supply tank acts as a simulated water source and is the start and finishing point of a water circuit, while also functioning as intermediate water storage. In this specific case, ground water is simulated as a water source. **Main components** • Systainer® with T-LOC system (tank capacity: 30 l) • Pipe connection adapter • Submersible pump • Prefilter • Float switch • Water sieve • Mobile dolly truck **Actuators** • 1 submersible pump (24 V DC, safe for unlubricated operation up to 2 hours, max. delivery rate: 10 l/min, max. delivery pressure: 0.5 bar) **Sensors** • 1 float switch (height-adjustable, for protection against unlubricated pump operation) **Filter system** • 1 stainless steel wire mesh insert (flexible, square mesh, stainless steel wire, mesh size: 0.25/0.16 b = 1000 for separating the wastewater (granulate)) • Large in-line filter (with ½" x ½" sight glass, material: PP, sight glass: PA, filter cartridge: 0.2 mm mesh size, pressure: max. 10 bar, flow rate: 55 l/min at 0.5 bar, prevents particles from entering the inlet) **Mechanical system** • The filter system for separating contamination must be attached to the top of the container as a removable drawer system. The filter unit must be designed with a flange plate for nine plug-in pipe returns with an outside diameter of 15 mm. • Container made of ABS plastic, colour: RAL 7035 light grey, 30 l capacity, stackable, mobile, rollers easily removable as frame. Dimensions: H420 x W400 x D300 mm.  Picture similar

Position	Quantity	Description
		Water supply tank/ground water
Pos. 16	1,00	**Power pack** 162417 **Tabletop power supply unit** • Input voltage: 85 – 265 V AC (47 – 63 Hz) • Output voltage: 24 V DC, short-circuit-proof • Output current: max. 4.5 A • Dimensions: 75 x 155 x 235 mm Type: Connector as per CEE 7/VII for DE, FR, NO, SE, FI, PT, ES, AT, NL, BE, GR, TR, IT, DK, IR, ID  Picture similar
Pos. 17	1,00	**Accessories** 8025418 Optional oxygen measurement package Optional extension for the wastewater treatment station. Measuring cell for dissolved oxygen with integrated optoelectronics. Measuring principle: Oxygen-dependent luminescence.  Picture similar
Pos. 18	1,00	**DC Wattmeter** 8216170 DC Wattmeter The first step towards discovering potential savings involves measurement of power consumption. The DC Wattmeter is a smart meter for training facilities with a 24 V DC power supply and up to 120 W power consumption. All measured values can be read out via data transmission with the integrated Ethernet port. Power consumption is read out as an analog signal within a range of either 0 to 10 V DC or 4 to 20 mA.  Picture similar

Position	Quantity	Description
Pos. 19	1,00	**Carriage** 8039990 Trolley with plate Stable sheet steel construction with table plate. Dimensions (W x H x D including rollers to bottom edge of profile plate): 700 x 770 x 700 mm  Picture similar
Pos. 20	1,00	**Tool** 539767 **Tool set** The tool set is an aid to easy working on stations. A practical mini-systainer includes: • 200 mm steel rule • Open-jawed spanners size 7, 8, 9, 10 • Adjustable spanner • Side cutter • Insulation-stripping pliers • Wire end sleeve pliers • Screwdriver set, hex, 1.5 – 6 • Screwdriver, hex, 0.9; 1.3 • Screwdriver, cross-head, PZ02 – short • Screwdriver, flat, 2.5 x 75; 4.0 x 100 • Screwdriver, flat, 1.2 – 1.6 • Tubing cutter • Fiber-optic cable cutter • Workpiece, red, black, silver • 100 x cable binders 2.5 x 100 • 100 x wire end sleeves 0.25 • 100 x wire end sleeves 0.75  Picture similar
Pos. 21	1,00	**Pipe/tub cutter** 7658 Pipe and tubing cutter For plastic and Perbunan tubing with and without fabric reinforcement with outside diameters up to 20 mm. Ensures a vertical, burr-free cut through positive locking of tubing in the cutter. It also has a safety clip to prevent unauthorized opening. Supplied with two spare blades.  Picture similar

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Position	Quantity	Description
Pos. 22	1,00	**EDS Watermanagement Workbook** 8208239 EDS Water Management Campus License EDS Water Management is a modular training system that presents the core processes of a water and wastewater treatment plant in the form of a water cycle from the source to the wastewater treatment plant and back. The campus license includes both the teacher and learner versions of all EDS Water Management PDF workbooks: “Water Treatment”, “Water Supply”, “Wastewater Transport”, “Wastewater Treatment”, “Sand Filtration”, “Membrane Filtration”, “Monitoring, Control and Optimization of Operation” and “Energy Optimization in Water and Wastewater Treatment Plants”. All workbooks contain - Sample solutions - Didactic notes - Worksheets for the learner - Multimedia with graphics Campus license: en/de/sp/fr

Position	Quantity	Description
WorldSkills Water Technology - EDS Watermanagement Pump Station		
Pos. 23	1,00	**EDS WMGT Pump Station WorldSkills Edition** 610423 EDS WMGT Pump Station WorldSkills Edition Pumps are the heart of process plants. The station has an eccentric screw pump incl. overheating protection, pump drive 400 AC gear motor, a stainless steel water basin 120 l, stainless steel drip pan the size of the entire plant frame, a piping system with manual valves for fault simulation, pressure/vacuum sensors on the pressure and suction side, bypass line with adjustable safety valve. A pneumatically driven gate valve and butterfly valve are connected to a compressed air accumulator as an energy buffer for emergency operation, The water basin is located above the pump so that a learning situation "Safe working in the pump basement" can be trained. The pump is accessible for recovery with a workshop crane. incl. Padlogs for work safety training "lockout tagout". Stable aluminum profile frame incl. height-adjustable feet for leveling on uneven floors. Suitable for transport with a lift truck, Seperate control cabinet with PLC and operator touch panel, multifunctional frequency converter, intelligent energy monitoring and web-enabled process visualization serves as a learning field for electrical engineering work modeled on Water 4.0.  Picture similar
Pos. 24	1,00	**Extension Kit EDS Watermanagemt Pump Station - WorldSkills 2024 Lyon** 11950941 Extension Kit EDS Watermanagement Pump Station Consisting of: • Manual level measurement incl. assembly material (beading process) • Pumping Station Replacement Kit Seals Basic requirements- Existing EDS WMGT pumping station WorldSkills Edition This extension kit is required to realize the tasks for WorldSkills 2024 Lyon.

Position	Quantity	Description
Pos. 25	1,00	**Workbench** 119 Workbench With beech worktop 40 mm thick Legs C-section steel 70x50 mm Technical data: • Width: 2000 mm • Depth: 700 mm • Height: 840 mm • Color: Light grey (RAL 7035)
Pos. 26	1,00	**Parallel Vice** 119 Bench vice Entirely forged from steel, guaranteed unbreakable; Slides forward on opening; Milled case-hardened jaws; Strong lead screw with trapezoidal thread; Adjustable guide; Broad hardened anvil area; Forged pipe clamping jaws Technical data: • Jaw width: 140 mm • Span: 200 mm • Clamping depth: 100 mm Supplied with fasteners for attachment to the workbench
Pos. 27	1,00	**Tool Trolley** 119 Tool trolley With scratch-resistant non-slip X-ABS top, 2 fixed castors and 2 swivel castors with brake Technical data: • Number of drawers: 5

Position	Quantity	Description
		• Drawer load capacity: 40 kg • Drawer runner extension: 100 % • Drawer runner extension: Anti-tilt lock • Drawer front height: 75; 75; 200; 200; 200 mm • Drawer usable width / depth: 500 / 400 mm • Drawer usable width / depth in G: 20x16 G • Cylinder lock: Modular lock barrel • Hoffmann perforated panel grid interval: 9 x 9 mm • Trolley dimensions (WxDxH): 800 x 500 x 1000 mm • Color: Two-tone powder-coated, silver combined with RAL 7016 anthracite Tool assortment for tool trolley drawers Supplied in moulded PE rigid foam inlays

Position	Quantity	Description
Pos. 28	1,00	**Hydraulic workshop crane,** 119 Foldable hydraulic workshop crane With 4 rubber and nylon wheels; Extendable arm in 4 working positions; 360° revolving hook; Two-speed hydraulic pump; Safety valve to avoid any possible overload Technical data: • Capacity: 1000 kg • Arm length: 1170 - 1470 mm • Max. height: 2320 mm
Pos. 29	1,00	**Lifting round sling** 119 Round slinge Made from polyester (PES) EN 1492-2 with double stitchless protection sleeve and capacity label; PU-starched, thermally fixed; UV-resistant, eliminating material ageing or embrittlement Technical data: • Heat resistant up to +100° C • Moisture-resistant fabric, thus preventing frost damage (up to approx. -40° C) • Length: 4 m • Circumference: 8 m • Capacity: 2000 kg • Thickness / width under load: approx. 6 / 57 mm • Color: Green
Pos. 30	1,00	**COMPRESSOR** 91030 **Compressor** Oil-lubricated, very quiet (45 dB (A)) compressor. This makes it ideal for use in classrooms. With pressure reducer and water separator. • Pressure: 800 kPa (8 bar) Pmax • Suction capacity: 50 l/min

Position	Quantity	Description
		• Tank volume: 24 l • Compressed air outlet: ¼" or KD4 • Noise level: 45 dB (A)/1 m • Duty cycle: max. 50% • Pressure regulator with gauge Version: 230 V/50 Hz With IEC power socket and IEC power cable to CEE 7/VII suitable for: DE, FR, NO, SE, FI, PT, ES, AT, NL, BE, GR, TR, IT, DK, IR, ID.
Pos. 31	1,00	**Compressor Accessories** 8201523 Compressor accessories Consisting of: • Coupling socket (KD3-CK-4 and KD4-1/4-A) • Coupling plug (KS4-CK-4) • Tubing (6 x 1 silver 2,5 m)

Position	Quantity	Description
WorldSkills Water Technology - Magnetic Cards		
Pos. 32	1,00	**Magnetic Card Set** 8174093 **Sewage technology training set** How does a wastewater treatment plant work? Playfully explains and demonstrates sewage technology with didactically designed magnet cards, learning card set and catalog of questions. is an innovative interactive training tool for hands-on learning of wastewater processes. All the important stages of wastewater treatment are vividly depicted on 63 magnetic picture cards. On a flipchart or whiteboard, you can quickly and easily reconstruct the complex processes, test your knowledge, or organize group work. Complete training set consisting of: • 63 Magnetic picture cards (DIN A6) for presentation on whiteboards. Each card is labeled discretely in English and has space to add the heading term in your language manually. • User Manual (GB) with list of heading terms for the cards. Heading terms in further languages are available on the DWA product platform. • 1 Permanent marker to label the cards in your language. • 1 Workbook “Fit in Wastewater Technology?” with exercises and case studies • 2 Flashcard sets with 63 picture cards for group work learning and discussion of scenarios. • 5 Whiteboard markers enable you to draw material flows in your process diagrams. • 1 high quality transport case. **Extra** You will get access to the DWA (Deutsch Water Association) product platform which contains further information such as video tutorials, videos 360° for exercises with VR glasses and the list of heading terms in further languages.

Position	Quantity	Description
WorldSkills Water Technology - Connected Learning		
Pos. 33	1,00	**Cloud Access Festo LX** 8219587 Festo LX for Industry (1 year) Festo Learning Experience for Industry - the digital learning portal for individual learning experiences The Festo Learning Experience (LX) for Industry is our all-in-one plattform solution for digital learning with access to all contents, features and the AI supported authoring tool - for your perfect Learning Experience from small to large enterprises. Benefits - Content: Find more than 600 courses in various formats (eLearning courses, eLab courses, Evaluations, Learning Videos,...) and more than 40 ready to use learning paths - Learning paths: Give your workforce the best guidance in their individual learner journey and ensure that learning goals are met - LX Creator AI: Create your own learning courses and evaluations. Customize our courses according your needs. Let smart integrated AI support you to generate professional content - Efficiency: Anywhere and at any time on all devices - Hands-on Skills: Find the matching eLab courses to your Learning Systems to combine theory with practical skills and get recommended courses Further Information Festo LX for Industry offers a variety of learning content for many areas of technical training for your workforce. Our content ranges from technical basics to current trend topics in the industry. From factory automation and fluid power to IIoT and Industry 4.0, electrical engineering and power generation, process automation, renewable energies and STEM. Festo LX offers a mix of stand-alone and learning equipment-based courses to facilitate the hands-on experiments in technical fields. Our integrated LX Creator AI supports you to create new learning content easily. Experience seamless learning with FluidSIM integrated into Festo LX. Access circuits and simulations, create circuits as a teacher, and edit and simulate them as a student - all within Festo LX. Say goodbye to switching between multiple programs and devices, as FluidSIM works flawlessly on any device with a modern web browser. Manage your licenses conveniently within Festo LX, the comprehensive and user-friendly platform for circuit simulations. Updates are provided regularly and fully automatically so that you always use the latest version and content. The content is accessible for unlimited users with your choice of concurrent users. Subscription duration will start with delivery of the activation code. Licenses will not renew automatically. The subscription duration is 1 year.

Position	Quantity	Description