TECHNICAL DATA

DEMO advanced Applied Sciences Renewable Energy supplementary set Fuel Cells

Article no: 15582-88

Function and Applications

Supplementary equipment set for the DEMO Basic Set Renewable Energy Basics and Thermal Energy (15580-88). In combination with the set Basics and Thermal Energy another 7 demonstration experiments can be performed:

- Hydrogen technology (7 experiments)

Benefits

- For many qualitative and quantitative experiments on hydrogen technology, the source of useful energy is always the electric fuel cell. This kit contains the essential building blocks for the construction of a fuel cell
- The placement of fuel cell and electrolyzer onto the demo building blocks of the electric/electronic system allows a demonstrative and clear set-up on the board
- The quadruple PEM fuel cell can provide an output voltage of about 3.5 V and operate so larger bulbs and motors
- Electrolyzer with high gas production to provide the quadruple fuel cell
- Operation of the fuel cell also with air to represent realistic technology applications of H-technology, such as in automobiles or power supplies
- Corresponding students kits available (TESS advanced Renewable Energies): for flexible and competence-oriented science classes
- Complete equipment set in addition to Renewable Energies 1
- The equipment is stored in a robust aluminum case with removable lid
- Foam insert for a quick control of completeness and secure transport of the set
- Easy teaching and efficient learning through the digital experiment descriptions enclosed as QR codes
- Matched with international Curriculum: all topics are covered

Equipment and Technical Data

- The equipment set consists of all necessary components for the experiments

Scope of delivery

Connector, straight, module DB	09401-01	1
Solar battery, with cable, connectorsand magnet pads	06752-23	1
Blower, 12V	05750-00	2
Generator with metrical thread axis and nut	05751-01	2
Rotor, 2 pieces	05752-01	2
Clamping holder with 2 clamping possibilit, 0-13 mm,fixing magnet	02151-08	1
Clamp on holder	02164-00	1
Double PEM electrolyser, DB	09488-00	1
Double PEM fuel cell for hydrogen/ oxygen operation and hydrogen/ air operation, DB	09486-00	1
Gas storage tank (30 cm3) H2/02	06723-01	1
Pinchcock, width 10 mm	43631-10	2
Silicone tubing, various diameters	39292-00	2
Building Block with magnetic pad, DB	09490-00	2
Metal angle for building block with magnetic pad	09491-00	2
Connector, angled with socket, module DB	09401-12	1
Resistance decade, module DB	09420-00	1
Connecting cable, 32 A, red, various lengths	07362-01	1
Double sockets,1 pair,red a.black	07264-00	1
Connecting cable, 32 A, blue, various lengths	07362-04	1

Necessary accessories

DEMO advanced Applied Sciences Basic Set Renewable Energy, basics and thermal energy	15580-88
DEMO advanced Renewable Energy Basic Set , necessary accessories	15580-01
DEMO advanced Set Fuel Cells, necessary accessories	15582-01
PHYWE Demo Physics board with stand	02150-00

Recommended accessories

Moveable experimental table 90 x 75 cm, 30 mm table top withPP edge, with shelf for 3 boxes and socket board	15500-00
Handbuch Lehrerversuche Erneuerbare Energie auf der Tafel, inkl. CD ROM, DEMO advanced Physik (ENT), (in german)	01157-01
curricuLAB, single licence	14578-62
DEMO advanced Applied Sciences Renewable Energy supplementary set Solar cells, Wind energy, Hydropower	15581-88