

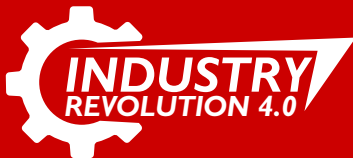
VICTRON VENTURE **PRODUCT CATALOG**

- ***TVET***
- ***STEM***
- ***Research & Development (R&D)***
- ***Laboratory equipments and apparatus***
- ***Industrial Revolution 4.0 (IR4.0)***
- ***Custom Fabrication***



INDUSTRY 4.0

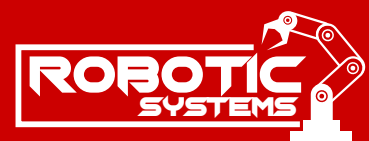
Get ready for the connected industry



IOT
Internet Of Things



SCADA
SUPERVISORY CONTROL AND DATA ACQUISITION



What We Provide



A

Process Engineering

B

Mechanical Engineering

C

Thermodynamic

D

Fluid Mechanics

E

*Electrical
Engineering*

F

Automation

G

*Renewal
Energy*

H

Environment

I

*Industry
Revolution 4.0*

J

Oil & Gas

K

R & D Development

L

Marine Engineering

M

*Combustion
Engineering*

N

*Food
Engineering*

O

Railway

P

Civil Apparatus

Q

*Food
Processing*



PROCESS ENGINEERING

UNIT OPERATION

Unit Operation is a basic step in a process to obtain the desired product. Unit operations involve bringing a physical change to the material used such as diffusion, absorption, separation, crystallization, evaporation, filtration, extraction, distillation, fractionation etc. A process may have many unit operations to achieve the expected result.



PROCESS ENGINEERING



PROCESS ENGINEERING

PROCESS CONTROL - **SAPC**

Process control- Self Assembly Process Control (SAPC) is the active changing of the process based on the results of process monitoring. Process Control-SAPC is easy to install and dismantle to let the trainee experience the all the process. All instruments, sensors, final control element (control valve), local control panel, controller is designed in a modular structure mounted with the connecting accessories for easy installation.



PROCESS ENGINEERING





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INDUSTRY
REVOLUTION 4.0

VIRTUAL REALITY

SCADA

AR
AUGMENTED REALITY

SMARTPHONE

PLC
SYSTEMS

DCS
SYSTEMS

ROBOTIC
SYSTEMS



PROCESS ENGINEERING

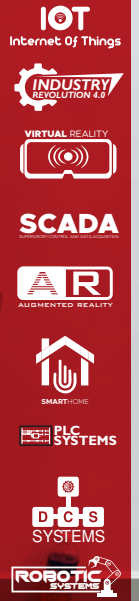
PROCESS CONTROL - *Trainer*

Process Control-Trainer is a fully integrated, self-contained training system with industrially relevant processes and instrumentation. Designed specially for hands-on training for extensive range of experiments on instrumentation and process control studies. Integrated with State-of-the-Art technology which is the process control training software. With SCADA system, the process control-trainer is equipped Industry 4.0 ready feature such as Internet of Things (IoT), Augmented Reality (AR), and Cloud database to enhance the teaching and learning of the subject.



PROCESS ENGINEERING





PROCESS ENGINEERING

PROCESS MEASUREMENT

A process which involves measurement of temperature, flowrate, pressure, and calibration is known as the process measurement. Most of the process measurement model is self-contained, compact system and fully integrated with digital instrumentation for SCADA and IoT application. A process measurement model with SCADA system can improve the teaching and learning of the subject which can conduct data monitoring and record the data obtained. The recorded data is in ASCII format, and it is stored in the SCADA workstation. This recorded data information can be exported into Microsoft Excel for further data analysis and reporting.



PROCESS ENGINEERING

Product List | Process Engineering

UNIT OPERATION

Model Description

Continuous Distillation Column System
Adsorption Training System
Absorption -Liquid & Gas Multi column
Absorption & Stripping Training System
Separation System
Crystallisation System
Corrosion Training System
Drying System
Evaporation System
Extraction Training System
Filtration System
Reaction System
Gas Diffusion Coefficient Apparatus
Liquid Diffusion Coefficient Apparatus
Gas Flow Measurement Bench
Distillation Column Training System
Dry Fractionation Pilot Plant
BioReactor Pilot Plant
Spray Dryer Pilot Plant
Fractionation Column Trainer
Catalytic Packed Bed Reactor
Pressure Drop Through Packed Bed
Solid in Air Diffusion Apparatus
Vapour in Air Diffusion Apparatus
Flow Through Fluidised Bed
Microwave Pyrolysis Reactor
Didactic Crystallization
Filter Press Training System
Multifunctional Extraction Plant
Multifunctional Reaction Plant
Crystallization Unit
Extraction Apparatus
Deep Bed Filtration Unit
Fixed Bed Adsorption Unit
Liquid Liquid Extraction Unit
Solid Liquid Extraction Pilot Plant
Double Effect Download Film Evaporation Pilot Plant
Gas Absorption Process
Falling Film Evaporator
Mini Spray Dryer Unit
Essential Oil Extraction Pilot Plant
Versatile Lyophilization Pilot Plant
Solid Liquid Extraction Pilot Plant
Solid Liquid Extraction Pilot Plant (2-method)
Filtration Pilot Plant

Model

A1011
A1021
A1031
A1041
A1051
A1061
A1071
A1081
A1091
A1101
A1111
A1121
A1131
A1141
A1151
A1161
A1171
A1181
A1191
A1201
A1211
A1221
A1231
A1241
A1251
A1261
A1271
A1281
A1291
A1301
A1311
A1321
A1331
A1351
A1361
A1371
A1381
A1391
A1401
A1411
A1421
A1431
A1441
A1451
A1461

PROCESS CONTROL - SAPC

Model Description

Liquid Level SAPC
Liquid Flow SAPC
Liquid Temperature SAPC
Shell & Tube Heat Exchanger SAPC
Liquid Temperature Trainer
Air Temperature SAPC
Air Flow SAPC
Air Pressure SAPC
Bioreactor SAPC
Chemical Analytical Process Control Plant
Air Temperature & Flow Cascade Inflow SAPC
Advance Feedforward SAPC
Advance Multivariable (Air, Flow, Pressure & Temperature)
Batch Blending Process Control System
MultiPumpRig(8Pump)
MultiPumpRig(5Water Pumps)
MultiPumpRig(4Water Pumps)
MultiPumpRig(6Water Pumps)
Integrated Bioreactor SAPC
Parallel and Series Centrifugal Pump Trainer
Liquid Level Flow SAPC

Model

A2011
A2021
A2031
A2041
A2051
A2061
A2071
A2081
A2091
A2101
A2111
A2121
A2131
A2141
A2151
A2161
A2171
A2181
A2191
A2201
A2211

PROCESS CONTROL - Trainer

Model Description

Level Process Control Trainer
Flow Process Control Trainer
Liquid Temperature Process Control Trainer
Air Temperature Process Control Trainer
Air Flow Process Control Trainer
Pressure Process Control Trainer
Liquid Level, Flow, Pressure, Temperature Process
pH Chemical Process Control Trainer
Liquid Level Temperature Process Control Trainer
2 Stage Serial & Parallel Pump
Shell & Tube Heat Exchanger Process Control Trainer
Pneumatic PID (3-Term) Controller Demonstration
Multivariables Process Trainer
PID Training Station
Liquid Pressure Process Control Trainer (PCT)
PressurePCT
Characteristics of P.I.D. Controller(KC)
Interacting & Non Interacting System
Process Control Trainer
Multiprocess Process Control Trainer

Model

A3011
A3021
A3031
A3041
A3051
A3061
A3071
A3081
A3091
A3101
A3111
A3121
A3131
A3141
A3151
A3161
A3171
A3181
A3191
A3201

PROCESS MEASUREMENT

Model Description

Liquid Level Measurement Trainer
Liquid Flow Measurement Trainer
Liquid Temperature Measurement Trainer
Air Temperature Measurement Trainer
Air Flow Measurement Trainer
Air Pressure Measurement Trainer
Analytical Measurement Trainer
Instrument Calibration Workbench
Flow Metering, Calibration & Tank Gauging Training
Control Valve Characteristic Trainer
Calibration Workbench
Control Valve Test Stand
Calibration Trainer
Smart Fluid Flow System
Coupled Tank Training System
Sensor Calibration System
Pressure Measurement Trainer

Model

A4011
A4021
A4031
A4041
A4051
A4061
A4071
A4081
A4091
A4101
A4111
A4121
A4131
A4141
A4151
A4161
A4171



MECHANICAL ENGINEERING

MATERIAL TESTING | PROPERTIES

The properties of materials such as stress, strain, torsion, force, and moment can be determined by conducting a material testing. Most of the material testing model designed with SCADA system and Internet of Things (IoT) application which can provide real time data monitoring and can achieve the accurate result of the material properties. By fully integrated with SCADA system, material testing model will have Industry Revolution (IR 4.0) features such as Augmented Reality (AR) application.



MECHANICAL ENGINEERING



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MECHANICAL ENGINEERING

MAINTENANCE | MACHINE | PILOT PLANT

Almost every maintenance of the machine and pilot pump can be conducted including pump, engine, valve, fitting, actuator, piping, spray dryer, tray dryer etc. Designed with compact and self-contained, most of the machine is suitable for teaching and learning purposes because it is suitable for the trainee to experience the hands-on training.



MECHANICAL ENGINEERING





MECHANICAL ENGINEERING

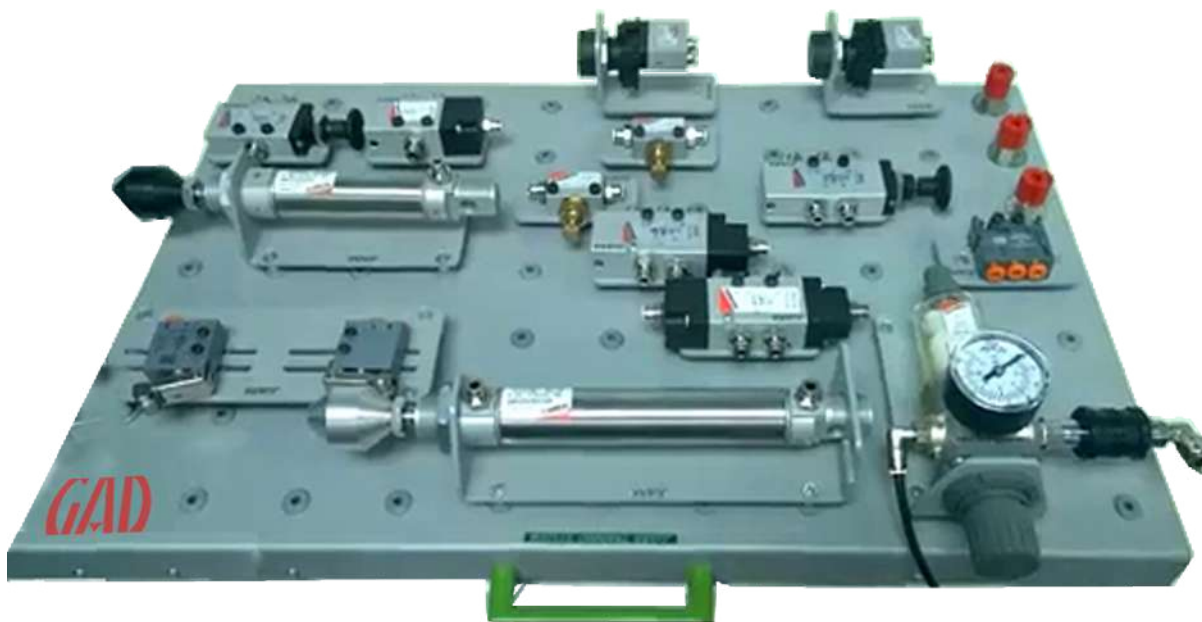
HYDRAULIC

The controlled movement of parts or a controlled application of force is a common requirement in the industries. The specially designed enclosed fluid systems can provide both linear as well as rotary motion. This kind of enclosed fluid-based systems using pressurized incompressible liquids as transmission media are called as hydraulic systems. Learning and understanding the Control of Hydraulic System is relatively important to control the fluid configuration and transforms the fluid energy into the mechanical work at specified locations



MECHANICAL ENGINEERING





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MECHANICAL ENGINEERING

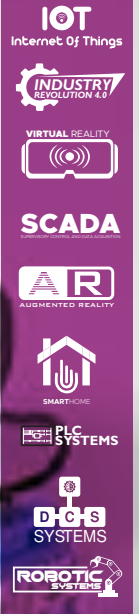
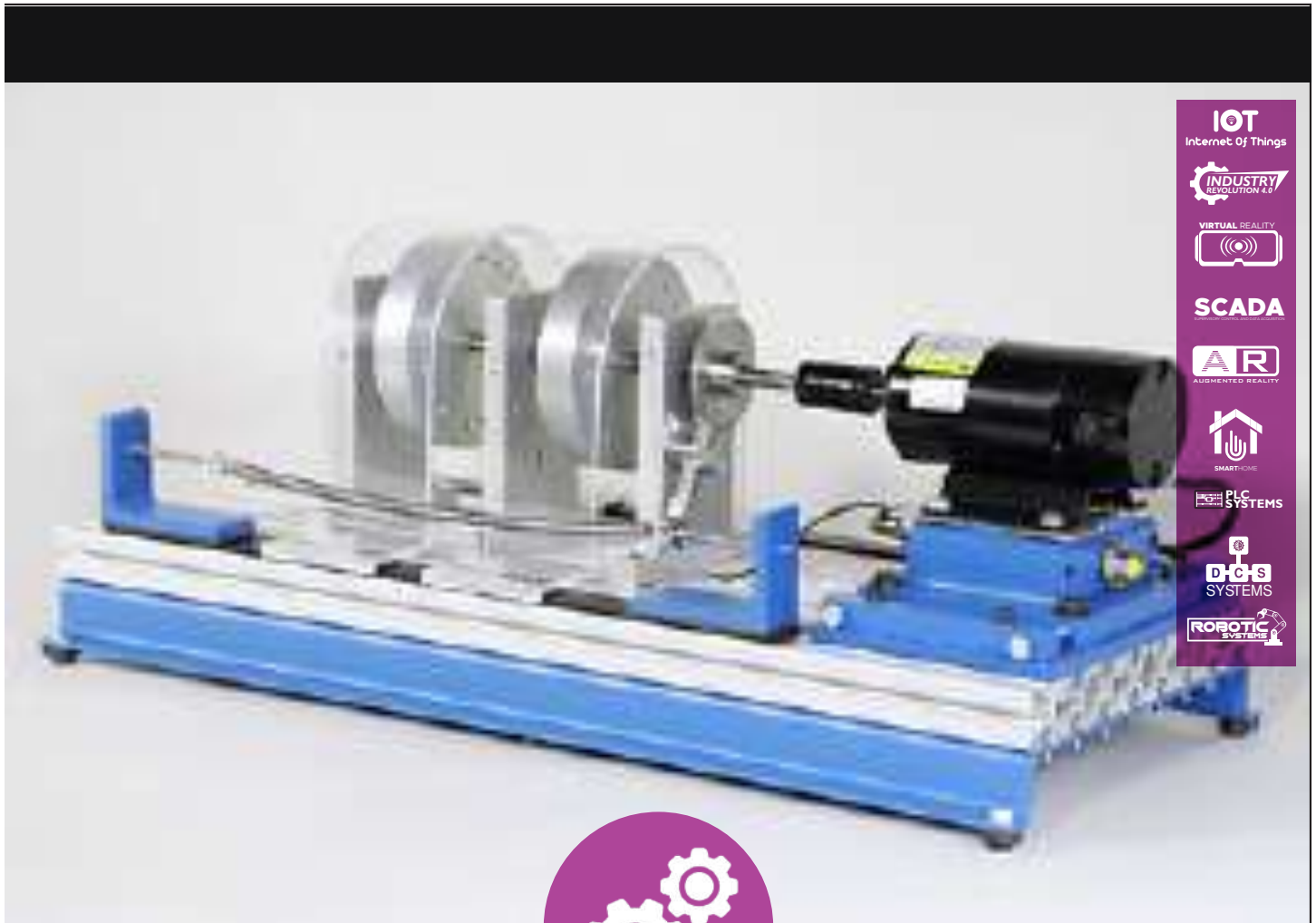
PNEUMATIC

Pneumatics is application of compressed air (pressurized air) to power machine or control or regulate machines. Simply put, Pneumatics may be defined as branch of engineering science which deals with the study of the behaviour and application of compressed air. Pneumatics can also be defined as the branch of compressed gas power technology that deals with generation, transmission and control of power using pressurized air. Using Pneumatic Control, it is indispensable source of power for such tools as air drills, hammers, wrenches, and even air cushion supported structures, not to mention the many vehicles using air suspension, braking and pneumatic tires.



MECHANICAL ENGINEERING





VIBRATION

Vibration is the mechanical oscillations of an object about an equilibrium point. The way material vibrates under given condition is an important aspect of design of civil structures or mechanical equipment. Historically, unexpected failures of bridges and columns have happened because designers did not consider effect of vibration. There are various type of vibration that tend to get induced due to various reasons. The various types of vibration are includes the Free Vibration, Forced Vibration, Damped Vibration, Random Vibration.





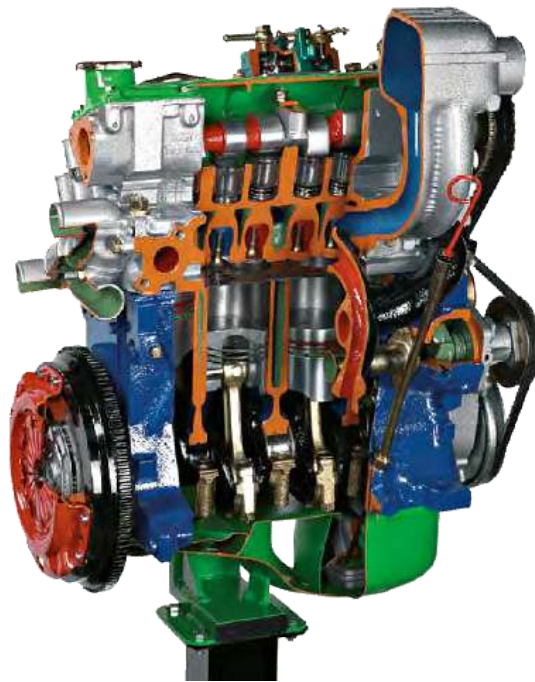
STRUCTURAL

Structural consist of several apparatus which can develop the understanding and hands-on training regarding the force, momentum, static, dynamic etc. By having a compact and self-contain design, the apparatus and equipment can provide a great exposure to the trainee for teaching and training purposes.



MECHANICAL ENGINEERING

MECHANICAL ENGINEERING



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CUT-AWAY MODEL

The cutaway model for diesel engine is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.



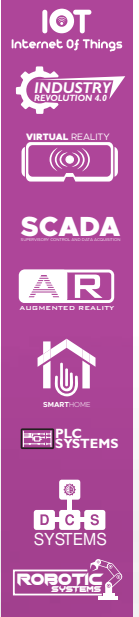
MECHANICAL ENGINEERING

MECHANICAL ENGINEERING



ENGINE

An engine is a machine designed to convert one or more forms of energy into mechanical energy. Heat engines convert heat into work via various thermodynamic processes. The engine is like the heart of a car which let the internal combustion to occur in the engine because of fuel and air will create the energy to move the pistons inside the engine.





GEAR | ROTARY

Gear is known as toothed machine part, such as a wheel or cylinder, which meshes with another toothed part in a rack to transmit motion or to change speed, torque, or direction. Gears and their mechanical characteristics are widely employed throughout industry to transmit motion and power in a variety of mechanical devices, such as clocks, instrumentation, and equipment. The function of gears is to reduce or increase speed and torque in a variety of motorized devices, including automobiles, motorcycles, and machines.



Product List | Mechanical Engineering

MATERIAL TESTING | PROPERTIES

Model Description	Number Model
Basic Elastic Properties	B1011
Stress Testing Apparatus	B1021
Strain Testing Apparatus	B1031
Torsion Testing Apparatus	B1041
Fatigue Testing Apparatus	B1051
Creep Testing Apparatus	B1061
Vibration Testing Apparatus	B1071
Torsion Tester (Twist & Bend)	B1081
Struts Apparatus (with Digital Interface)	B1091
Jominy End Quench Test Experiment Unit	B1101
Friction On Inclined Plane	B1111
Beam Experiment Apparatus	B1121
Structure Pin-Jointed Frames Experiment Apparatus	B1131
Torsion Machine Experiment Apparatus	B1141
Simple Harmonic Motion Experiment Apparatus	B1151
First Law Thermodynamic Experiment Apparatus	B1161
Gear Assembly Experiment Apparatus	B1171
Spring Apparatus	B1181
Journal Bearing Friction Apparatus	B1191
Extension of Spring	B1201
Compression of Spring	B1211
Polygon and Force Apparatus	B1221
Rubber Shear Apparatus	B1231
Deflection Of Beam Apparatus	B1241
Shear Force and Bending Moment Apparatus	B1251
Universal Testing Machine	B1261
Brinell Hardness Tester	B1271
Torsion Testing Machine	B1281
Heat Treatment Machine	B1291
Center of Pressure Apparatus	B1301

MAINTENANCE | MACHINE | PILOT PLANT

Model Description	Number Model
Pump Maintenance & Installation	B2011
Process Operation Maintenance Pilot Plant	B2021
Engine Test Bed (Diesel)	B2031
Engine test Module (Petrol)	B2041
Centrifugal Pump Demonstartion Unit	B2051
Plunger Pump Demonstartion unit	B2061
Mechanical Bench	B2071
Single Cylinder Engine Test Bed (2 Engines)	B2081
Pump & Valve & Fitting Test Stand	B2091
Valve & Fitting & Actuator Maintenance	B2101
Mechanical Energy Utilization	B2111
Overhead Crane Trainer	B2121
Engine Test Bed Trainer (3 Engines)	B2131
2-Stroke Petrol Engine Test Bed Trainer	B2141
Industry Piping System	B2151
Computer Controlled Plate & Frame Filter Press	B2161
Spray Dryer Unit	B2171
Tray Dryer Unit	B2181
Laboratory Scale Magnetic Separator Machine	B2191
Pressure Relief Valve Calibration Bench	B2201
Multi Pump Test Rig (6 Pumps)	B2211

HYDRAULIC

Model Description	Number Model
Hydraulic System Trainer	B3011
Portable Hydraulic Trainer	B3021

PNEUMATIC

Model Description	Number Model
Two Stage Air Compressor Apparatus	B4011
Air Compressor Study Unit	B4021
Basic Pneumatic Electropneumatic Trainer	B4011
Standard Electro- Pneumatic Table top Training Kit	B4021

VIBRATION

Model Description	Number Model
Vibration Experiment Unit	B5011
Universal Vibration Apparatus	B5021

STRUCTURAL

Model Description	Number Model
Force Kit	B6011
Moments Kit	B6021
Torsion of Circular	B6031
Pulley Kit	B6041
Equilibrium Apparatus	B6051
Structure Apparatus	B6061
Reaction Force Apparatus	B6071
Forces In a Simple Bar Structure	B6081
Work Done By A Variable Force	B6091
Center of Gravity Apparatus	B6101
Conservation Of Angular Momentum	B6111
Conservation Of Linear Momentum	B6121
Crank and Connecting Rod Apparatus	B6131
Static and Dynamic Balancing	B6141
Balancing Apparatus	B6151
Dynamic Behaviour of Multistage Planetary Gears	B6161
Investigation of CAM Mechanisms	B6171
Projectile Motion	B6181

CUT-AWAY MODEL

Model Description	Number Model
Cut-Away Engine Diesel for GENSET	B7011

ENGINE

Model Description	Number Model
TURBO INTERCOOLER DIESEL with AUTOMATIC TRANSMISSION GEAR TRAINING SYSTEM	B8011
FATC AIR CONDITIONING TRAINING SYSTEM	B8021
MDPS TRAINING SYSTEM	B8031
PETROL CAR ENGINE TRAINER (Proton CAMPRO)	B8041
PETROL CAR ENGINE TRAINER (PERODUA 1.3)	B8051
PETROL CAR ENGINE TRAINER (PERODUA 1.5)	B8061

GEAR | ROTARY

Model Description	Number Model
MECHANICAL TRANSMISSION TRAINER	B9011
CENTRIFUGAL COMPRESSOR TRAINER	B9021
CENTRIFUGAL FAN TRAINER	B9031



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- ROBOTIC
SYSTEMS



ELECTRICAL ENGINEERING

ELECTRICAL POWER

Electric power means the measurement of the rate of electrical energy transfer by an electric circuit per unit time. Electric power is usually produced by electric generators but can also be supplied by sources such as electric batteries. The electrical power usually supplied to businesses buildings and houses by the electric power industry such as TNB in Malaysia by using electric power grid.



ELECTRICAL ENGINEERING





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ELECTRICAL ENGINEERING

ENERGY MANAGEMENT

The energy management means that the ability to develop understanding about energy auditing, environmental monitoring, sustainable architecture, and green structure design. The energy management also covers the residential and commercial structures and support systems including electricity fundamentals, electrical loads and charges including power consumption, basic energy auditing in residential and commercial structures and how various type of devices and materials most directly influence the amount of energy required, environmental monitoring and how to evaluate air pollutants and creating sustainable architecture design.



ELECTRICAL ENGINEERING





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ELECTRICAL ENGINEERING

ELECTRICAL MOTOR

Electric Motor which is the replacement of muscles powers and stem engines is widely used in various types of industries after the second industrial revolution. The electric motor basically transforms electric power into rotational motion that usually can perform tones of mechanical works such as fans, pumps, compressors, refrigerators. Vice versa, electric motor can be treated as Generators that produce electrical energy. Hence, the studies of electric motors and generators are often important in the engineering related fields. Electric Motors commonly installed in industries can be divided into:

- 1) Alternative Current (AC) Motor
- 2) Direct Current (DC) Motor



ELECTRICAL ENGINEERING





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ELECTRICAL ENGINEERING

SENSOR | ELECTRONIC

Electronic sensor is an electronic equipment that is used to detect and observe the physical activities and pass the signal to other electrical control devices. In simple way, electronic sensor is an electronic device that can transform energy from one form to another form. The sensors measure real world quantities, which are then converted into an electrical signal. All types of sensors can be classified into 2 types:

- i) Analog sensors
- ii) Digital sensors



ELECTRICAL ENGINEERING



Product List | Electrical Engineering

ELECTRICAL POWER

Model Description

Main Switchboard c/w Capacitance bank Panel
Building Electrical Wiring Training System
Home Appliance Training System
Electrical Control Panel Training System
Lighting Wiring Training System
SwitchBoard Training System
Synchronizing Simulation System with SCADA System & RLC Load Bank
Synchronizing Simulation System with SCADA System Electrical Switchboard Training System
Low Voltage Main Switch Board Training System
Double Feeder MSB Training System
Single Feeder MSB ST Training System
Single Feeder MSB UV Training System
Synchronising MSB Training System
Simulator Synchronising Training System
Simulator Synchronising Training System with RLC Load Bank
Power Supply 3Phase for Training Module
Power Supply Work Bench Trainer
Street Lighting System Training Unit
Neon Lighting System Training Unit
Underground Cable Trench Training Simulation
Diesel Generator Trainer Set
Outdoor Substation Trainer
Low Voltage Training System: Feeder Pillar
AMF Panel Board Training System
Power Quality Monitoring of Induction Motor
Load Bank Training System (Resistive, Capacitive, Inductive)
Main Switchboard Panel (MSB, 600A/415VAC)
Network Fire Alarm System with Surveillance Control
Emmisivity Measuring Apparatus

Model

E1011
E1021
E1031
E1041
E1051
E1061
E1071

E1081
E1091
E1101
E1111
E1121
E1131
E1141
E1151
E1161

E1171
E1181
E1191
E1201
E1211
E1221
E1231
E1241
E1251
E1261
E1281

E1291
E1301
E1311

ENERGY MANAGEMENT

Model Description

Energy Audit Training System
Sustainable Energy Conservation Technology Training System

Model

E2011
E2021

ELECTRICAL MOTOR

Model Description

Motor Speed Trainer
Squirrel Cage Motor & DC Shunt Generator Training System
Single Phase AC Motor Trainer
Air Temperature Process Control Trainer
Three Phase AC Motor Trainer
Motor Control Trainer with IR4.0
3-Phase Slip Ring Induction Motor Trainer
Motor Control Board
Motor Starters Panel Trainer
DC Motor Speed Control

Model

E3011
E3021
E3031
E3041
E3051
E3061
E3071
E3081
E3091
E3101

SENSOR | ELECTRONICS

Model Description

Digital Logic Laboratory Trainer
Drone Education System Trainer Model
IoT Smart Trainer
Robotic Training Kit For Education
Air Flow Measurement TrainerPneumatic Trainer

Model

E4011
E4021
E4031
E4041
E4051

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CONTROL SYSTEM

A control system is a set of mechanical or electronic devices that regulates other devices or systems by a two main types of control loops which is open and closed control loops. Nowadays, control system are a central part of industry and automation. The types of control loops that regulate these processes include Industrial Control Systems such as Supervisory Control and Data Acquisition (SCADA) and Distributed Control Systems (DCS)



AUTOMATION ENGINEERING

AUTOMATION ENGINEERING



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AUTOMATION ENGINEERING

FACTORY AUTOMATION

Most of the company in this country slowly starting to invest a lot of money for the automated product to enhance the productivity thus can increase the company's revenue. Factory Automation is one of the upcoming trends in the factory which is the implementation of technology and systems to automate a manufacturing process to increase productivity and reducing cost. The level of automation may be from single operation automations to end-to-end automation where there is no human involvement.



AUTOMATION ENGINEERING





AUTOMATION ENGINEERING

BUILDING AUTOMATION

With the upcoming Industry Revolution (IR 4.0), building automation system (BAS) is one of the latest systems which provide automated control and monitoring within a building. When control is centralized, the systems can be monitored and adjusted from a small number of stations located throughout the building. The aim is to provide a comfortable, consistent environment, ensure the safety of all occupants and reduce energy costs. In a simple way, this system is to control such as lighting, ventilation, air-conditioning, alarm, security, fire safety etc.



AUTOMATION ENGINEERING





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PLC
PROGRAMMABLE LOGIC CONTROLLER

DCS
DISTRIBUTED CONTROL SYSTEMS

ROBOTIC
SYSTEMS



AUTOMATION ENGINEERING

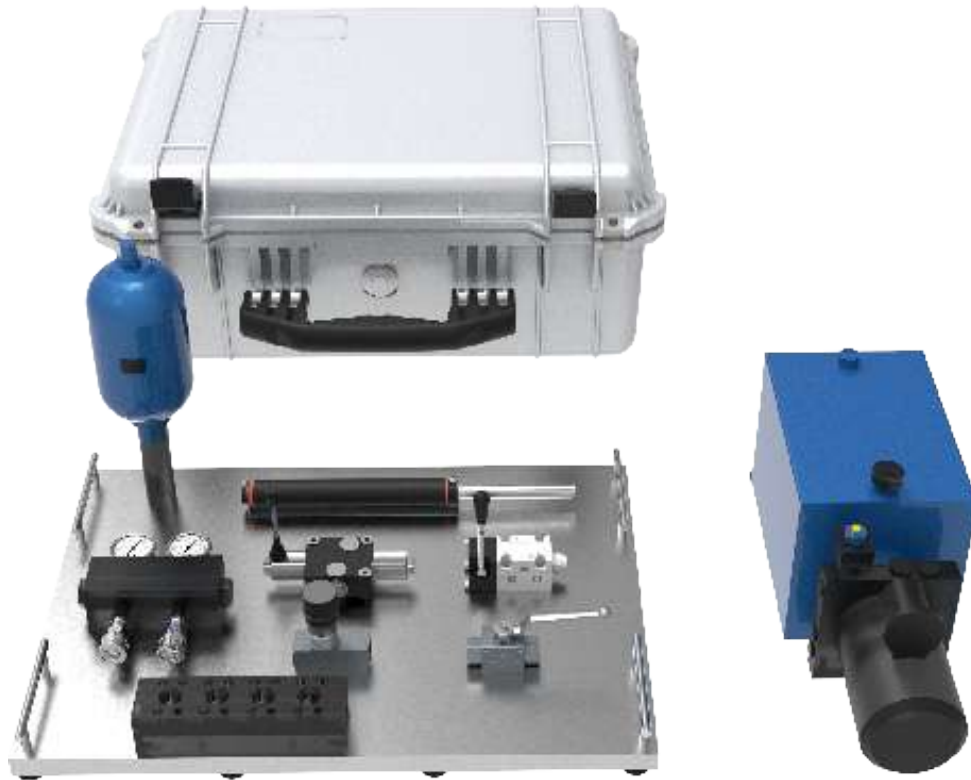
AR APPLICATION

By using the SCADA system, Augmented Reality (AR) application is the technology that superimposes an image onto a user's view of the real world and enhances it with sound, touch, and even smell. It is a combination of the real scene viewed by the user and a virtual scene generated by the computer.

Augmented Reality (AR) is increasingly being a variety of uses like assembly, maintenance, repair, education, training, retail showcasing and diagnostics. The workforce is already being enhanced in industries such as Pharmaceuticals, Oil and Gas, military, aerospace, automotive, and manufacturing. This tech enables real-time collaboration between field personnel and remote experts.

AUTOMATION ENGINEERING





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SYSTEMS

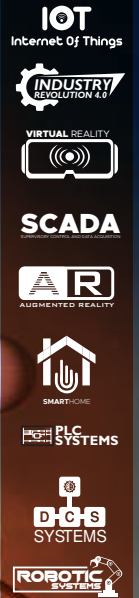
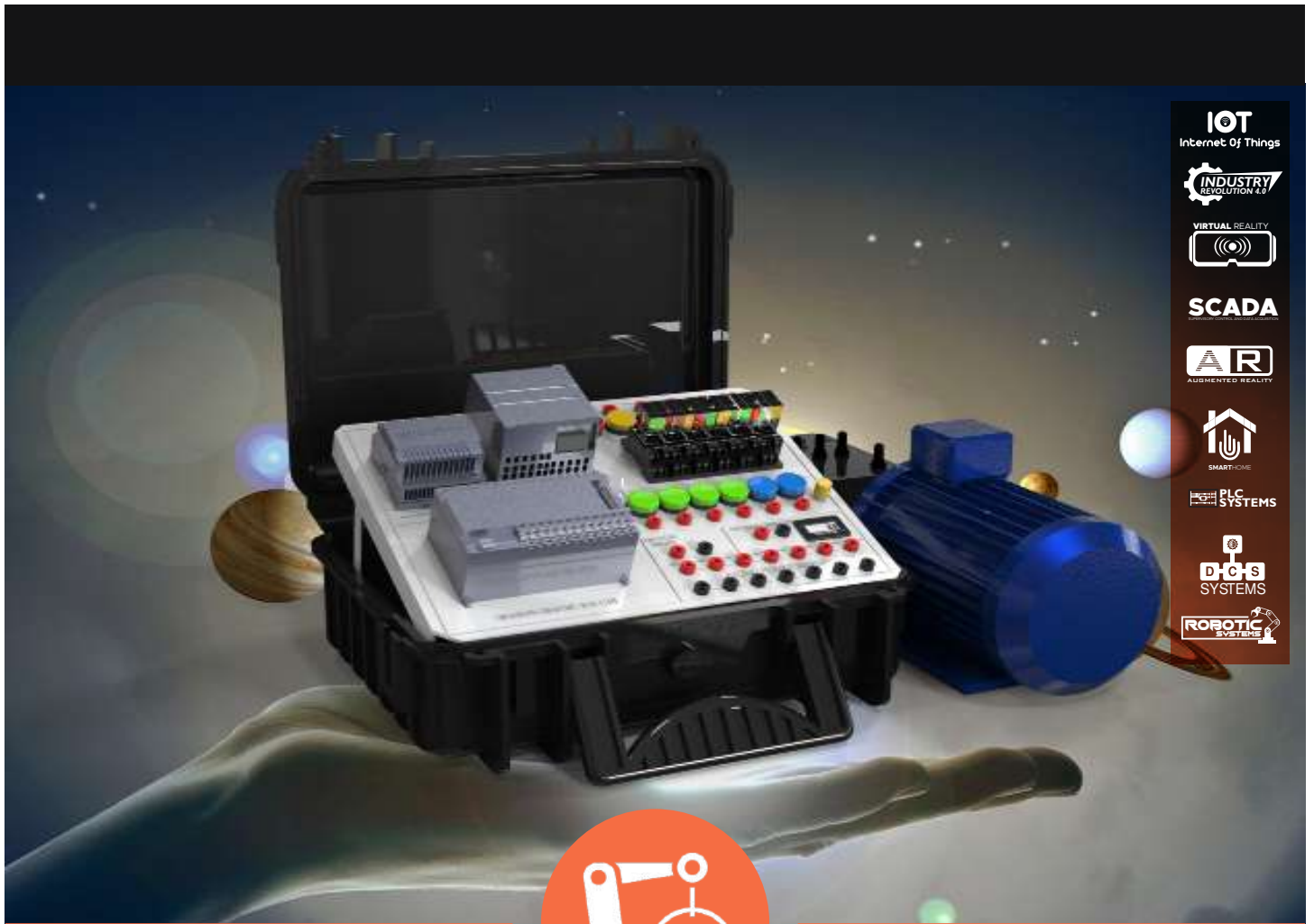


HYDRAULIC APPLICATION

Hydraulics are often used in the machine tools of heavy industry for the high power generated and the ability to realize high precision position control with non-compressed fluid. The GAD hydraulics training set is composed of industrial parts which are used in real applications. Most of the equipment are specially developed to prevent the leakage of oil with Non-Leakage Quick Coupling connector and can be used in basic hydraulic training courses.

AUTOMATION ENGINEERING

AUTOMATION ENGINEERING



AUTOMATION ENGINEERING

IOT APPLICATION

Internet of Things (IoT) application is one of the latest Industry Revolution (IR 4.0) feature which can run on IoT devices and can be created to be specific to almost every industry including healthcare, industrial automation, smart homes and buildings, automotive and oil & gas. Most of the GAD equipment can be designed and installed with IoT feature which can conduct the data monitoring through Cloud.



AUTOMATION ENGINEERING



Product List | Automation Engineering

CONTROL SYSTEM

Model Description

Smoke House Training System
DCS Process Simulation Trainer
PLC & SCADA Process Simulation Trainer
Elevator Trainer (Single)
Multibuses Automation System
DCS Simulator Trainer
PLC Conveyor Trainer
PLC Trainer (OMRON)
Fire Alarm Training System
KNX TRAINING UNIT with IR4.0
PLC Arduino Training System
PLC Trainer (Siemens)
PLC and IoT Training System (Panasonic)
Micro PLC Trainer (Panasonic)
SCADA NETWORK SYSTEM (SNS)
Shell and Tube Heat Exchanger

Model

F1011
F1021
F1031
F1041
F1051
F1061
F1071
F1081
F1091
F1101
F1111
F1121
F1131
F1141
F1151
F1161

IOT APPLICATION

Model Description

IoT Basic Trainer
Furniture Machine IoT System

Model

F6011
F6021

FACTORY AUTOMATION

Model Description

BASIC MPS SYSTEM TRAINER with IR4.0
BASIC BOTTLING MPS SYSTEM with IR4.0
SMART FACTORY TRAINER (MPS TABLE TOP) with IR 4.0
Electro-Pneumatic Trainer
Computer Integrated Machine
Hybrid Robot Automation
Mini Mechatronic Trainer
INTEGRATED CIM TRAINING SYSTEM with IR4.0
BASIC MPS SYSTEM TRAINER with IR4.0
hydraulic Trainer
AutoSIM
AutoLAB
Mobile Robot Trainer
Integrated MPS System Trainer
Mini Smart Manufacturing Trainer
Mechatronics Training System

Model

F2011
F2021
F2031
F2041
F2051
F2061
F2081
F2091
F2111
F2121
F2121-S
F2121-L
F2131
F2141
F2151
F2161

BUILDING AUTOMATION

Model Description

Smoke House Training System
Elevator Trainer
Fire Alarm Training System
KNX Training System with IR4.0
IoT Home Service Trainer
Building Automation

Model

F3011
F3021
F3031
F3041
F3051
F3061

AR APPLICATION

Model Description

Small Car Motion Training Equipment

Model

F4011

HYDRAULIC APPLICATION

Model Description

Micro Hydraulic Trainer

Model

F5011



RENEWAL ENERGY

SOLAR POWER

As the increasing of worldwide demand for renewable energy to replace the traditional fuel, the renewable energy has become the focus by most developed country where the environment awareness rising. Renewable energy is derived from regenerative resources that are naturally replenished such as sunlight and wind. The sunlight is the prime source of the renewable energy via solar radiation. Solar energy means that it can generate electricity in several ways including photovoltaic (PV) cells and concentrated solar engines.



RENEWAL ENERGY





RENEWAL ENERGY

WIND POWER

Renewable energy derives from several main source of natural processes that cannot depleted and are able to supply the continuous of clean energy. This includes sunlight, geothermal heat, wind, tides, water, and various forms of bio-mass. Wind power or wind energy is the use of wind to provide mechanical power through wind turbines to turn electric generators for electrical power. Wind power is the favourite sustainable, renewable energy source which has a much smaller impact on the environment compared to the burning fossil fuels.



RENEWAL ENERGY





RENEWAL ENERGY

GAS | STEAM

The steam is regularly used for the propulsion which is the driving force in applications such as steam turbines. Steam is used in wide range of industries including manufacturing, oil & gas, biodiesel plant and chemical plant. The example of common applications for steam are steam heated processes in plant and factories. While the steam driven turbines is used in electric power plants to generate electricity.



RENEWAL ENERGY



IOT
Internet Of Things

INDUSTRY
REVOLUTION 4.0

VIRTUAL REALITY

SCADA

AR
AUGMENTED REALITY

SMART HOME

PLC
SYSTEMS

DCS
SYSTEMS

ROBOTIC
SYSTEMS



HYDRO POWER

Hydro power or also known as water power is derived from the energy of falling and fast running water which can be utilize for useful purposes. Hydroelectricity is the term referring to electricity generated from hydropower, the production of electrical power by using gravitational force falling and running water. It is the most widely used form of renewable energy, accounting for 16 percent of global electricity generation. The cost of hydroelectricity is relatively low, making it a competitive source of renewable electricity. Hydro is also a flexible source of electricity since plants can be ramped up and down very quickly to adapt to changing energy demands. Hydropower plants harness water's energy and use simple mechanics to convert that energy into electricity. Hydropower plants are based on a simple concept which is water flowing through a dam turns a turbine, which turns a generator.



RENEWAL ENERGY

RENEWAL ENERGY



RENEWAL ENERGY

FUEL CELL

A fuel cell can be defined as an electrochemical cell that generates electrical energy via electrochemical reaction. These cells require a continuous input of fuel and oxygen to sustain the reactions that generate the electricity. Therefore, these cells can constantly generate electricity until the supply of fuel and oxygen is cut off. Currently, fuel cell can be categorised into three broad areas which is portable power generation, stationary power generation and power for transportation. Heavy research regarding the fuel cell has been conducted to manufacture the fuel cell electric vehicles which use clean fuels and therefore more eco-friendly compared to internal combustion engine-based vehicles. Fuel cells are also used as primary or backup sources of electricity in many remote areas.

RENEWAL ENERGY



RENEWAL ENERGY

ENERGY POWER

Renewable energy often referred to as clean energy involves the use of main sources to generate electricity without harming the environment. Moreover, one of the renewable energies is the geothermal energy which create electricity by brings the hot underground water to the surface as hydrothermal resource which is then pumped through a turbine. Geothermal plants typically emit low emissions if the steam and water pump back into the reservoir.

RENEWAL ENERGY





RENEWAL ENERGY

BIOGAS

Biogas refers to a mixture of gases produced by the anaerobic decomposition of organic matter such as agricultural waste, municipal waste, plant residue, food waste etc. Biogas consists of methane, carbon dioxide along with a small amount of Hydrogen Sulphide, and moisture. Today, there are increasing demand on the biogas renewable energy due to the easy to obtain from waste substances



RENEWAL ENERGY



Product List | Renewal Energy

SOLAR POWER

Model Description

Solar Energy Demonstartion
Biodiesel Production Unit
Solar PV Trainer
4KW Off Grid Solar System
10kw On Grid Solar System
Wind Power Trainer
Fuel Cell Trainer
Renewal Energy Trainer
BioFuel Trainer
Phototaic PV Modules
4KW ON Grid Solar System
Mock Up Solar PV Roof
12kw On Grid Solar System
12kw Off Grid Solar System
Solar Power and Wind Turbine Hybrid Training System
8kw Solar Grid Connected PV Training System
10kw Solar PV Training System
Solar System Light DC 12/24V 50W Solar Energy street
Clean Energy Trainer
Solar Trainer

Model

G1011
G1021
G1031
G1041
G1051
G1061
G1071
G1081
G1091
G1101
G1111
G1121
G1131
G1141
G1151
G1161
G1171
G1181

G1191
G1201

BIOGAS

Model Description

Biogas Digester System
Ethanol Prodcution Plant Trainer

Model

G7011
G7011

WIND POWER

Model Description

1.2kw Off Grid Vertical Wind Power Training System
3kw On Grid Horinzontal Wind Power Training System

Model

G2011
G2021

GAS | STEAM

Model Description

Rankine Cycle Turbine Power System
Gas Turbine Power Plant Trainer
Steam Turbine Pilot Plant
Gasification Process Pilot Plant
Steam Engine Test Unit

Model

G3011
G3021
G3031
G3041
G3051

HYDRO POWER

Model Description

Hydro Turbine Trainer
Hydro Power Plant Trainer (Desktop Unit)
Pelton Turbine Trainer
Centrifugal Pump and Francis Turbine Trainer
Centrifugal Pump with Pelton and Francis Turbine Trainer
Hydro Power Plant Trainer (Floor Stand)
Micro Hydro Generation Training Kit

Model

G4011
G4021
G4031
G4041
G4051
G4061
G4071

FUEL CELL

Model Description

Fuel Cell Trainer

Model

G5011

ENERGY POWER

Model Description

Electrical Energy Auditing System

Model

G6011



IOT
Internet Of Things

INDUSTRY
REVOLUTION 4.0

VIRTUAL REALITY

SCADA
SUPERVISORY CONTROL AND DATA ACQUISITION

AR
AUGMENTED REALITY

SMART HOME

PLC
SYSTEMS

DCS
SYSTEMS

ROBOTIC
SYSTEMS



ENVIRONMENT



AIR POLLUTION CONTROL

Due to the rapid growth of population and industrialization, environmental pollution also increasing rapidly. Thus, air is getting polluted by the high emission of carbon monoxide and sulphur dioxide, industrial effluents, agricultural discharges, detergents, toxic metals, and radioactive materials. The increasing rate of environment pollution especially air pollution is due to the transport system which includes motor vehicles, trains, and aircraft. Also, air pollution is due to the high emission of dangerous gases from factory which can lead to the long-term effect for living organism and earth itself. Therefore, it is very significant to have air pollution control equipment which can reduce the risk of getting serious disease.



ENVIRONMENT





ENVIRONMENT

WATER TREATMENT SYSTEM

Water is an essential and indispensable element in nearly all industrial processes. In sectors such as food and beverage or pharmaceutical production, water is either used as a primary product or in the area of cooling, steam generation or boiler feed systems. Using water in the industrial environment requires consistently high-water quality. Since the late '90s, the water treatment market has been in continuous growth, subject to changes such as the boom of membrane-related technologies. Depending on the application area, our customers must face different challenges in water treatment processes ranging from securing high water quality, providing reliable measurements to meet stringent regulations.



ENVIRONMENT





ENVIRONMENT

GREEN AGRICULTURE

Agriculture has made an enormous environmental footprint and is making agricultural development risky. Green agriculture uses well-developed modern farming and sustainability concepts to improve natural agricultural techniques. It also draws on green technology to enhance farming. A greenhouse is one of the examples which implement the green agriculture. The purpose of a greenhouse is to shield crops from excess cold or heat and unwanted pests. A greenhouse makes it possible to grow certain types of crops years round, and fruits, tobacco plants, vegetables, and flowers are what a greenhouse most commonly grows.

ENVIRONMENT



Product List | Environment

AIR POLLUTION CONTROL

Model Description

Gas Emission & Air Treatment Pilot Plant
Multi Cyclone
Electrostatic Precipitator

Number Model

H1011
H1021
H1031

WATER TREATMENT SYSTEM

Model Description

Waste Water Treatment Process Plant
Aerobic Digester
Anaerobic Digester
Flocculation Test Unit
Sedimentation Study Apparatus
Fully Integrated Biological Wastewater Plant
Flumes & Channels Experiment Unit
Portable Sewage Water Treatment Apparatus
Corrosion Study Kit
Jar Test Apparatus with Benchtop Turbidity Meter
TSS Apparatus
BOD System
Reverse Osmosis Unit
ION Exchange Unit
Laboratory Flume System
Water Treatment for PCB System
Smart Raindrop Simulator System

Number Model

H2011
H2021
H2031
H2041
H2051
H2061
H2071
H2081
H2091
H2101
H2111
H2121
H2131
H2141
H2151
H2161
H2181

GREEN AGRICULTURE

Model Description

Automated Green House System

Number Model

B3011