

KISCO-8055

Thermometer case



FEATURE

- Suitable for safekeeping glass thermometers to prevent from its breakage
- Able to keep 150mm thermometers or 300 mm thermometers respectably
- Able to keep 75 units of thermometer all together

SPECIFICATION

- Material : Steel, Plating paint
- Grade : 45 units for 300 mm thermometers, 35 units for 150 mm thermometers
- Size : 330 × 170 × 170 mm

KISCO-900

Total Water Meter



FEATURE

- Strong and easy to carry as it is made of aluminum
- Convenient for measurement and speedy for test results
- Able to various water analysis by one equipment
- Useful for practice for students
- Able to get the details of water analysis with one description
- Safe from its breakage or alcohol or mercury or

Accessories

- Korean language description
- Case for keep and carry(aluminum case with a shoulder string)

SPECIFICATION

* Component

- | | |
|--------------------------------------|-------------------|
| • Digital thermometer : -
50~200C | • beaker |
| • pH-meter : -1~15.0 ph | • Water container |
| • TDS : 0~1990ppm | • Sample bottle |
| • COD tester | • measuring tape |
| • NH4 tester | • spectacles |
| • PH compensating liquid | • pincette |

KISCO-1

Scoliometer Edu System



SPECIFICATION

- measurement range : level : 0~45
 Support stand : 450 mm
 Extension stand : 160mm
- accuracy : level : 5
 Support stand : 10 mm
 Extension stand : 2mm
- measuring items : Shoulder slant angle
 pelvis slant angle
 Chest protrusion angle
 neck curve angle
 Front/ back chest curve angle
 Mean look front/back angle
- Size : 450*180*80mm
- Weight : 450g

FEATURE

- most suitable equipment to diagnose scoliosis without radiation damage by X-ray test
- newest equipment which meets all requirements of measurement
- precise measurement with scientific design
- Easy carry and convenient for use to apply to various measurements
- Able to measure cm, mm, and .
- strong surface intensity by special coated
- convenient for use by circular level

Accessories

- Descriptions
- Aluminium case

Basic understanding of scoliosis

- symptoms: vertebra metamorphosis of 'S' shape
 unbalance of pelvis
 Shoulder curving phenomenon of body
- occurrence time : After 10 years olds
- Occurrence frequency : about 10%

KISCO-8044

Globe Thermometer



FEATURE

- Measuring of temperature with heat radiation thermometer by black sphere which absorb heat well
- Easy to carry and convenient for use

SPECIFICATION

- Material : 0.5mm of thin copper plate, Black glossless paint
- thermometer : Alcohol 110C 1/1
- Black sphere size:

Accessories

- Thermometer
- rubber stopper
- humidity thermometer
- Case for keeping and carrying



DR101

Gas Diffusion Speed Measuring Device



FEATURE

- In the revised glass tube, cotton at both ends can be stained with sample material and accuracy of the speed measurement was enhanced.

SPECIFICATION

- $\Phi 24 \times 600\text{mm}$

HOW TO USE

- After inserting adequate quantity of clean cotton into both ends of glass tube, cover the tube with stopper.
- Put hydrochloric acid into a filler and ammonia water into another filler. Then, insert two fillers into bulged part of glass tube.
- Accurate test result can be obtained when you input sample material by pressing both fillers at the same time.
- Washing is easy because there's water tank that can sink whole glass tube.

DR102

Light Composition Testing Equipment



FEATURE

- Three light emitting devices are installed with each device radiating 3 primary colors into the screen. Position and brightness of each color light can be adjusted easily to create various colors thus helping to understand the phenomenon.

SPECIFICATION

- $320 \times 200 \times 215\text{mm}$ (W×D×H)

HOW TO USE

- Connect the power cable. Adjust the distance between screen and light emitting devices in order to maintain clear colors.
- Creating mixed colors is convenient if you adjust to the order of red, green and blue color at the brightest mode.
- Light emitting devices can move up and down and right-to-left.

DR106

SurfaceWave Projecting Device For OHP



FEATURE

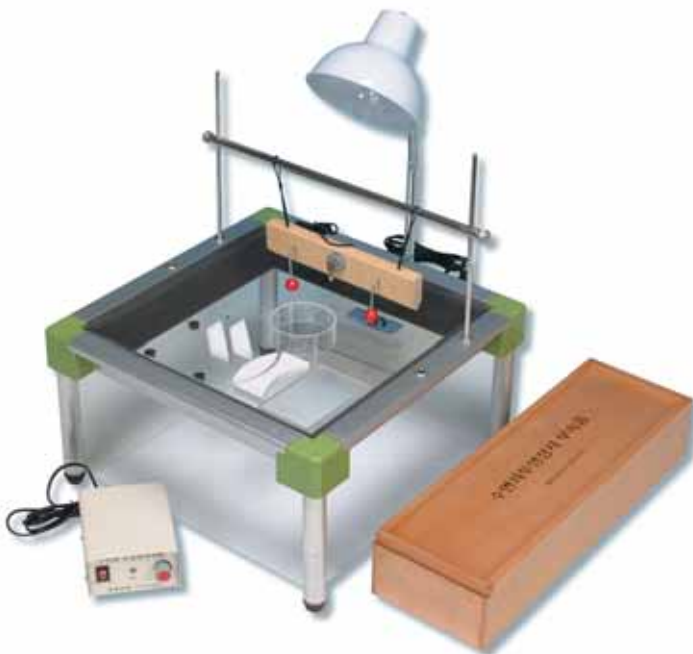
- Made to be convenient for teaching many students by projecting to screen putting small unit on OHP.

SPECIFICATION

- 400 × 400 × 50mm (W×D×H)

DR112

Mini Surface Wave Projecting Device



FEATURE

- Portable, easy to assemble and disassemble thanks to its small size. Can be also used for OHP. The device can adjust surface level and change generation position of surface wave. Reflective wave will not occur at the wall of water tank.

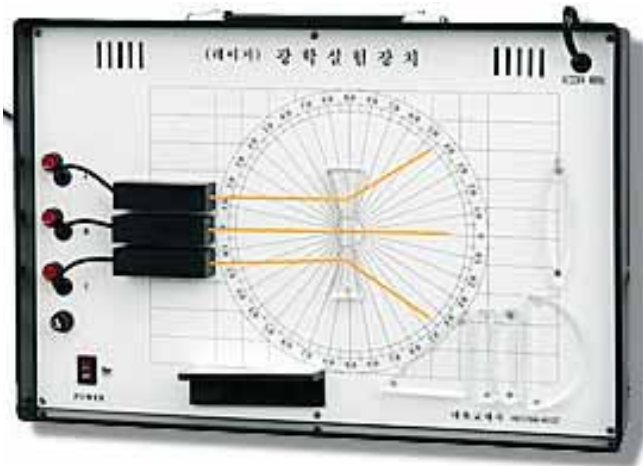
SPECIFICATION

- 400 × 400 × 230mm (W×D×H)



DR108

Laser Optical Experiment Device



FEATURE

- Composed to be easy to understand for experts and novices. The laser can always maintain bright light taking advantage of AC even when battery is changed. And the screen coated with special material supports the brightness of light. The screen can stay standing or laid due to its magnetic characteristic. Neonium magnet is attached at the back of the screen for the magnetic function.

SPECIFICATION

- 440 × 290 × 70mm (W×D×H)

HOW TO USE

- Convex Lens (two kinds), Concave Lens (two kinds), Flat mirror, Total reflection prism, Three laser sets

DR109

Water Bottle For Optical Studies



FEATURE

- Devised to turn 290 degrees for minute and dynamic observation of light refraction. Permanently bright light is supplied by electricity to get rid of inconvenience of laser battery change. Light is clearly visible thanks to the special coating at screen face of water bottle.

SPECIFICATION

- Water bottle, Laser, Power supply

DR111

Sound Wave Monitoring Device



FEATURE

- The sound wave is converted through a microphone into visible electric signal. Thus, all the sound around can be observed in the form of accurate wave and amplitude.

SPECIFICATION

- Braun tube : 12
- Power : AC 100 ~ 240V / 40W (Free voltage)
- Dimension : 305 × 300mm (W×D×H)
- Weight : 7.50 kg

DR113

Electric Resistance Experiment Circuit



FEATURE

- Made to enhance understanding basic knowledge of electricity by substituting electric bulb for traditional resistor. By adjusting brightness of the bulb, various kinds of circuit can be composed for observation of voltage and flow of electricity.

DIMENSION

- 440 × 290 × 70mm (W×D×H)

PACKAGE CONTENTS

- Lamp 10 units, Manual, Power cable, Plug with cable (Two sets)

WEIGHT

- 2.1kg



DR115

Motion energy teste



FEATURE

- Minimized friction to correctly measure motion energy.
- Able to control velocity according to cart backward motion distance.
- Has a slide point for motion distance measurement.
- Has motion distance scale of objects and cart (mass) respectively.
- Able to control the tilt of side by setting the height of iron stand.
- Able to control mass by putting a balance weight on the cart.

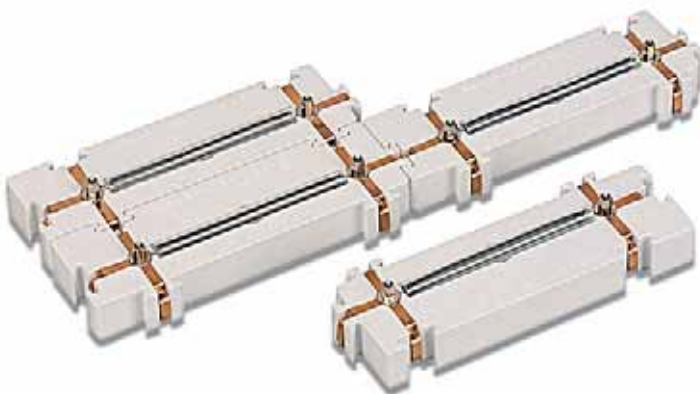
• KS-A-01-0063

SPECIFICATION

- Size: rail 1200 × 140 × 50(W × D × H)
- Object, Cart, Balance weight (100g), Timer stand, Vessel, Angle controller, Iron bead, Slide point

DR118

Nichrome wire resistance panel



FEATURE

- Able to know electric current and resistance
 - Able to connect bulb resistance panel with series or parallel or and series/parallel (mix) circuit without wire pincers.
 - Protected from heat damage of Nichrome wire during the test, as it is used strong heat resistance main body and glass.
 - For series connection, push downward to fit into panel, fixing one on the plane and the other on the groove.
- KS-A-01-0077

SPECIFICATION

- Size: 155 × 50 × 20(W × D × H)
- 4 pcs(set) of 10

DR107

Spring tester



FEATURE

- Able to know the property of spring
- Able to test correctly as it is no beginning tensile strength
- Has a slid point that indicates test point
- Able to test the property of spring by using the other 2 springs which have same wire thickness with different diameter.
- Control 'Zero point' hooking a spring on the main body.
- To minimize error, use large diameter of spring for 20g and small diameter of spring for 20g

SPECIFICATION

- Parts: Balance weight 20g × 5 ea, 30g × 3 ea
- Spring (2 kinds), Slide point
- Material: aluminum

DR119

Bulb resistance panel



FEATURE

- Able to connect bulb resistance panel with series or parallel or and series/parallel (mix) circuit without wire pincers.
- For series connection, push downward to fit into panel, fixing one on the plane and the other on the groove.
- KS-A-01-0072

SPECIFICATION

- Size: 155 *50*20(W*D*H)
- 4 ea(set) of 3V(exchangeable for 1.5V, 6V, 9V)

SDS-01-071

Magnifying Glass



FEATURE

- Usage : For Primary School Students' observation of Insects and Plant.
- Structure : Convex Glass Lens, Plastic(ABS) Frame and Holder.

SPECIFICATION

- Diameter : 5cm ~ 9cm

SDS-02-090

Lens and Mirror Set



FEATURE

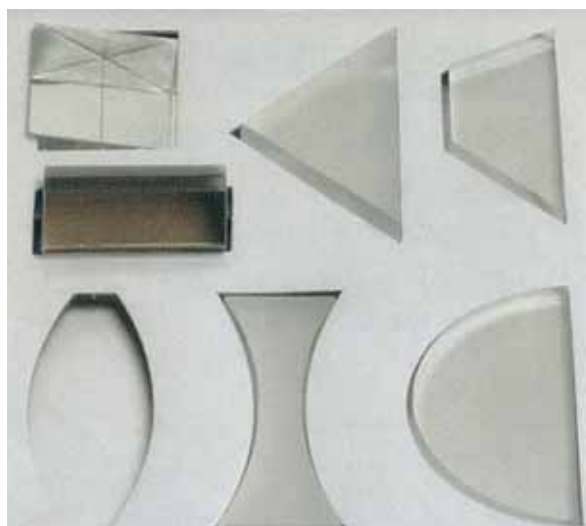
- Usage : For Primary School Students' indoors observation of Object
- Structure : Convex Lens, Concave Lens, Convex Mirror, Concave Mirror Stand

SPECIFICATION

- Dimension : Lens Diameter 76mm
Stand Height upto 250mm (adjustable)

SDS-02-087

Prism Set



FEATURE

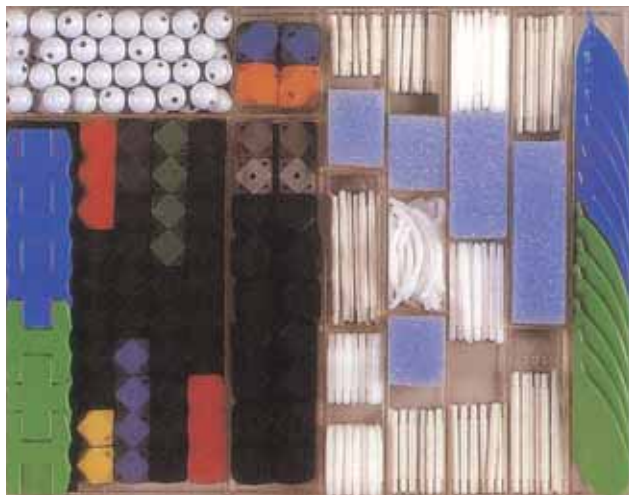
- Usage: For Primary School Students' Observation of how the Light spreads into different Colors
- Structure : 1 set composed of 7 kinds of prisms (Both sides Concave Lens, One side Concave Lens, Both sides Convex Lens, One side Convex Lens, Trapezoid type, Rectangle type 2 kinds)

SPECIFICATION

- Dimension : Flat Type, Thickness 10mm,
Length 100mm

SDS-01-004

Molecular Structure Model

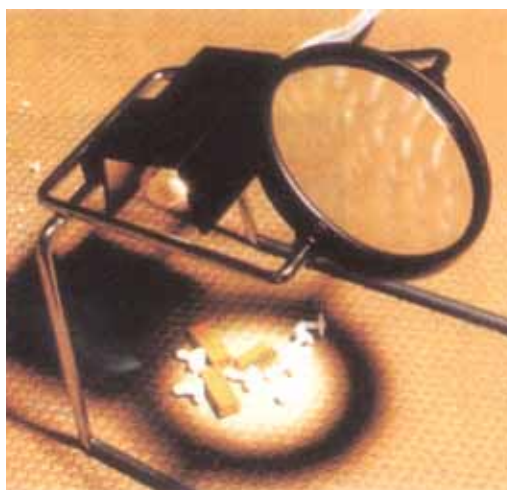


FEATURE

- Usage : For High School Students
- Material : Plastic
- Structure : Beads, Bonds, Others
- Features : Easy to assemble. Distance between Atoms can be measured accurately.

SDS-01-073

Stand type Magnifier



FEATURE

- Usage : For Primary School Students' observation of objects indoors.
- Structure : 3 inch Magnifier, Electric Stand, Power Cable (AC 220V)

SDS-101

Various Lenses



FEATURE

- Usage : For Primary School Students' observation of objects
- Components : 8 Kinds of various type Lenses

JIN HUNG SCIENTIFIC CO.

Power supply



FEATURE

- Equipment that converts general AC electric power into DC electric power
- Installed the circuit of constant voltage and electric current controller to protect over electric current or over load.

Model	Mode	Input	Output
Jhp-1500	Needle indicator V,A meter	AC220V60Hz	15V/5A
Jhp-1500A	Digital V,A meter	AC220V60Hz	15V/5A
Jhp-3000	Needle indicator V,A meter	AC220V60Hz	30V3A
Jhp-3000A	Digital V,A meter	AC220V60Hz	30V3A

Time recorder



FEATURE

- Used for the measurement of acceleration and deceleration of moving objects. This recorder marks with dot on the record paper vibrating regularly. The gap of dot is made by the speed of record paper.
- Conduction 80x135x40mm
- AC 220V 60Hz.
- Record time: 10,20,50,60,100 dots
- Marking dot is clear and there is no noise as it is electric conduction type.
- The time of marking dot is precise as it is set up a standard time by 8-bit micro processor (Class 0.001%).
- Able to select 'Fast movement' or 'Slow movement' by the optional setting of record time.
- Measurement error is minimized, as tape friction is small.
- Easy to taping.
- Able to measure variously with various fix methods.

Model	Record	Dot-marking time	Power	Class	Tape	Type
Jhd-10000	Conduction	10,20,50,60,100hz	AC 220V	1/10000	Conduction paper	Micro 8bit
Jh-10000	Dot-marking	60hz	AC 220V	1/60	Self paper	Magnet

Digital strobo scopes



FEATURE

- Xetone output 20W, 60~15,120rpm
- Used for taking a picture speedy stop motion like falling motion, uniform motion, and etc. or for measuring the speed of revolution.
- Classified into union set and disunion set.
- Controlled by digital up-down mode and controlled by 16bit micro processor and memorized the times of vibration by memory sector
- Easy to take a multi picture by falling delay system of magnet

Model	Type	Power	Output	Vibration range	Motive output	Magnet control
Jh-11000	Light uniform	AC220V	20W	60-15120/min	4-10Vpp	Control
Jh-11000	ALight dis-uniform	AC220V	20W	60-15120/min	4-10Vpp	Control

Digital stop watch



FEATURE

- 1/1000second(15 memory)
- Used to measure quick time in the test of velocity, acceleration, and up-down motion gravity acceleration.
- Able to measure from 0.001 seconds to 60 minutes and has the function of start, stop, lap, and reset.
- Able to measure the moving time of objects by using light sensor.

Photo-gate (Micro stop watch parts)

- A parts micro-chronometer and electronic switch which makes 'Start' and 'Stop switch' automatically operate after sensing the objects moving with quick velocity.
- Able to measure the velocity of up-down motion, uniform velocity motion, and acceleration motion with the error of $\pm 15\mu s$.
- Installed with verticality, horizontal, and all angle.
- Installed in the upper and lower sides of falling motion.



Jh-3008A	Digital stop watch	AC220V, DC9V	0.001sec-60min	15 Memory
Jh-5500	Photo gate	Micro-chronometer power	15us	

JIN HUNG SCIENTIFIC CO.

Magnetic Stirrer



FEATURE

- An instrument which blends more than two mixtures
- Magnetic type which is used to precipitate Magnetic Bar in liquid

Model	Mode	Power	rpm
Jh-3600	Magnetic	AC 85-220V	60-3600

Dynamic Cart



FEATURE

- Used for test of uniform motion, degree of acceleration, variation of mass by acceleration, raw of motion preservation, and stop/ inertia by spring
- Consisted of 1 set(2 carts with same mass)

Model	Cart weight	Balance weight	Total weight	Consist
Jh-1500p	500g	250g(2 ea(set))	1 kg	2 ea(set)

Electric Generator



FEATURE

- An instrument which generates electricity of coil by up-down motion of magnet
- Magnet motion track is installed in the empty core solenoid coil
- Small lamp is lighted with the positive and negative poles separately

Model	Mode	Coil	Display
Jh-4000T	Stick magnetic	2000/4000T	LED(2 ea)

Digital Meter



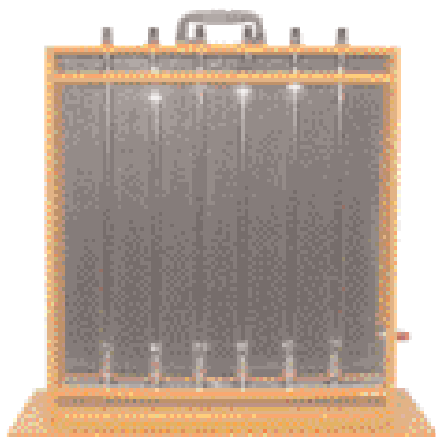
FEATURE

- 3.5 line digital-meter that measures voltage and electric current.

Model	Product name	Measuring range	Class	Power	Mode
JHV-1999D	DC voltmeter	0-199.9V	0.5%	DC 9V	L,C,D
JHV-1999A	AC voltmeter	0-300V	0.5%	DC 9V	L,C,D
JHA-1999D	DC galvanometer	0-1.999A	0.5%	DC 9V	L,C,D
JHA-1999A	AC galvanometer	0-19,99A	0.5%	DC 9V	L,C,D
JHG-1999	Galvanometer	0-1999uA	0.5%	DC 9V	L,C,D

HS-0022

Vacuum Discharge Tube



FEATURE

- Used for observation of discharge under vacuum.
- 6 vacuum tube with vacuum rate of 20, 10, 5, 1, 0.5, 0.01mmHg
- Stored in wooden box (395×155×530mm)
- Tube size : $\Phi 18 \times 370$ mm

Tube	1	2	3	4	5	6
Vacuum(mmHg)	20	10	5	1	0.5	0.01

Induction coil

FEATURE

- Used for the source of electric power, as an instrument, which makes high voltage power. Be suitable for a laboratory use as it is high voltage and low electric current.



Model	Electric power	Frequency	Polarity	Output control	Discharge distance
Jh-1061	AC220V, DC12V	Frequency control	Conversion	Control	120mm
Jh-2001	Involved discharging rod			x	100mm

HS-0014

Crooke's tube



FEATURE

- Used to observe the kinetic energy effect.
- Vertical type
- Dimension: 140×90×230(W×H×D)mm (with stand)
- When test using induction coil, the rolling plate turns forwarding the anode from cathode.
- Supplied with stand

HS-007

Crooke's tube



FEATURE

- To demonstrate the deviation of moved electrons in a magnetic field, visualization of the electron trajectory on the integrated fluorescence screen, electrodes on metal caps with connecting pins, tube on a base deviation with a rod magnet.
- Tube length: 300mm (approx)
- Tube diameter: 50mm (approx)

HS-0016

Crooke's tube



FEATURE

- To demonstrate rectilinear propagation of electron beams. Tube with folding metal cross inside, electrodes on metal caps with connecting pins, tube on a base.
- Tube length: 300mm (approx)
- Tube Diameter: 50mm (approx)

HS-0015

Crooke's tube

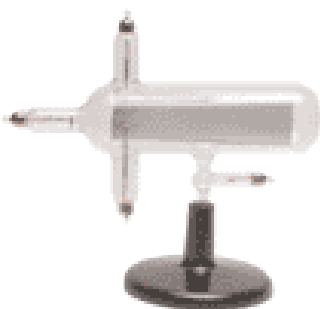


FEATURE

- From the fact that the rotor sealed in the discharge tube rotates owing to cathode rays, experiments are conducted to see that cathode rays are a flow of particles with momentum and energy.

HS-0021

Crooke's tube

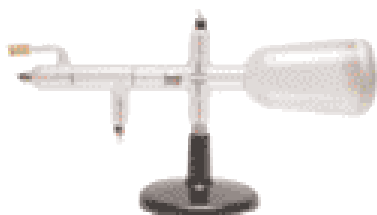


FEATURE

- That cathode rays polarize in a magnetic field is observed, and this phenomenon is explained on the basis of Fleming's Law to verify that cathode rays are a flow of particles charged with negative electric charges.
- A fluorescent plate is provided in the discharge tube for clear observation of the route of cathode rays.
- Tube length: 230mm (approx)
- Overall height on the stand: 270mm (approx)

HS-0020

Crooke's tube

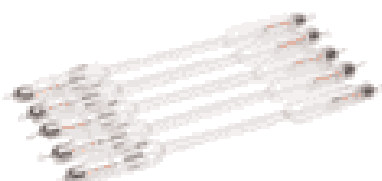


FEATURE

- A deflection plate is installed in a discharge tube to be observed, and this phenomenon is explained on the basis of Fleming's Law to verify that cathode rays are a flow of particles charged with negative electric charges.
- To be installed on a base
- To be length: 340mm (approx)
- Tube Diameter: 80mm (approx)

HS-0010

Spectrum tube

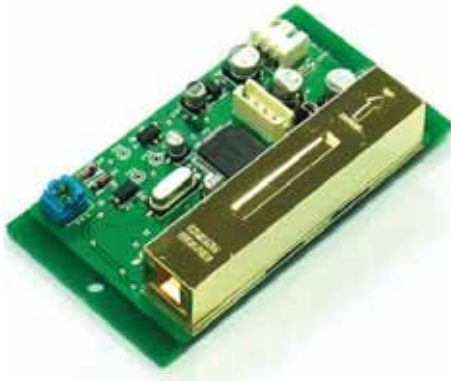


FEATURE

- Gas filled discharge tube for studying typical spectra of the different gases and for use in calibrating spectrometers. The body is of glass, constructed along the middle portion to concentrate the discharge glow.
- Dimension: 260mm×18mm diameter (approx)

KOREA DIGITAL CO., LTD.

CO₂ sensor module



FEATURE

model	KCD-AN
Detection method	Non-Dispersive Infrared(NDIR)Dual wavelength
Detection range	0~10,000 ppm(default range : 0~2000 ppm)
Operating Condition	5~45℃, 0~95% RH(non-condensing)
Storage temperature	-40~70℃
Output signal	PWN (5V TTL Level), ANALOG(0~4V)
Power	8~14V DC
Size	69.5mm × 44.5mm × 18mm

CO₂ Transmitter



FEATURE

Output signals for CO ₂	Selectable 0...20mA or 4...20mA or 0...10V, Relay Output
Resolution of analog outputs	10 ppm CO ₂
Recommended external load:	
Power supply	Nominal 24 VAC/VDC
Power consumption	< 2.5 W
Warm-up time	1minute
	30minutes full specification

CO₂ Science Experiments



FEATURE

Method	Non-Dispersive Infrared(NDIR)Dual wavelength
Measurement Range	0~5000ppm
Accuracy	± 100ppm(0~1000ppm) ± 10%(over1000ppm)
Response Time	0~90% < 1 minute
Signal Update	Every 1 seconds
Warm-up Time	< 5 minute
Operating condition	10~45℃, 0~95%RH Non condensing
Storage temperature	- 40 ~ 70℃
Output	Analog 0 ~ 2.5VDC
Power consumption	Peak 135mA, Low 15mA
Dimensions	16.0cm × 5.2cm × 3.0cm

ScienceCube Pro



FEATURE

sensor input port:3channels at the same time	
Conversion time : Excel application - 0.05sec/3channels,0.005/1chan. Embed application-0.0001sec/1channel	
Resolution : 12 bit AVD	
Digital input & output : 1 Channel	
Memory : 1Mbit	Communication port : USB 1 port and RS-232C 1port
Plug & play system:Auto Sensor Identification	
Software firmware upgrade	
Estimate with Digital Strobe Timing(Utilization for periodic time)	

Sensors & Probes



FEATURE

Voltage sensor	Range: $\pm 12.0V$, Resolution:0.07V
Current sensor	Range: $\pm 1.0A$, Resolution:0.001A
Galvanometer	Range: $\pm 12.5/ \pm 1.25/ \pm 0.125mA$
Stainless steel temperature	Range:-25 $^{\circ}C$ -125 $^{\circ}C$ Resolution:0.1 $^{\circ}C$
PT stainless temperature	Range:-50 $^{\circ}C$ ~ +180 $^{\circ}C$,Resolution: 0.06 $^{\circ}C$
Thermocouple probe	Range:-200 $^{\circ}C$ ~ +1200 $^{\circ}C$
Gas pressure sensor-A	Range:-1000hPa ~ +3000hPa,Resol:1.2hPa
Gas Pressure sensor-B	Range: $\pm 650hPa$, Resolution: 0.35hPa
Microphone	Range: 20Hz~20,000Hz,Re:50dbVrms~20db
O ₂ sensor	Range: 0~100%, Estimate Oxygen
Magnetic Field Sensor	Range: $\pm 50Gauss$, Resolution:0.025Gauss
Photodiode Light Sensor	Range:0~600/6000/15,000Lux,Re:0.16/1.6/3.7
Motion Detector	Range:0.4m~6.0m, Resolution:0.001m
PH Sensor	Range:0~14, Resolution:0.004
CO ₂ Sensor	Range:0 ~ 5000ppm, Resolution:20ppm
Dissolved Oxygen Probe	Range:0~15ppm(mg/L),Resol: 0.007ppm(mg/L)
Force Sensor	Range: $\pm 100N$, Resolution: 0.05N
Photogate Probe	Range: Detector rise time/500ns and less
Relative Humidity Sensor	Range: 0 ~ 100%
AC power control strip	Rated capacity : AC 250V~15A 50/60Hz



Educational Biological Microscope



FEATURE

- Stage slipping prevented by perfect harmony or 3 gears (helical, rack & spire)
- Built-in counter balance coarse and fine coaxial handle allows easy maneuvering
- Super Coating Lens used for antifungal purposes
- Wide Field Eye Lens
- Use of mirror allows observation without electrical device indoors and outdoors
- LED illuminator (semi-permanent) • Condenser device equipped with heat-reflecting

MODEL	DM-400	DM-600	DM-800Z	DM-900	DM-1200	DM-1500	DM-15CM
Total Mag.	40~400X	40~600X	40~800X(Zoom)	100~900X	100~1200X	100~1500X	100~1500X
Eyepiece	WF10X(DIN)	WF10X,15X	WF10~20X(ZOOM)	WF10X,15X	WF10X,20X	WF10X,15X	WF10X,20X
Objective	Ach. 4X, 10X, 40X			Ach. 10X, 40X, 60X		Ach. 10X, 40X, 100X	
Illuminator	Mirror, LED illuminator						
Focusing Mech.	Coaxial coarse and fine focus						

Educational Digital Biological Microscope



FEATURE

- Rugged construction combined with high optical standards accommodates both classroom and professional use
- Heavy cast metal construction with a large base for stability & chemically resistant stage
- Connect to the PC/Multimedia-Projector with USB/S-Video port

MODEL	DUM-400U	DUM-600U	DUM-800ZU	DUM-900U	DUM-1200U
Total Mag.	40~400X	40~600X	40~800X(Zoom)	40~400X	40~400X
Eyepiece	WF10X(DIN)	WF10X,15X	WF10~20X(ZOOM)	WF10X,15X	WF10X,20X
Objective	Ach. 4X, 10X, 20X, 40X			Ach. 10X, 20X, 40X, 60X	
Mechanism	Rack & Pinion Mechanism/ Built-in Light Intensity Control Device				
Digital CCD	1/3" 410,000pixels CCD, FILE:BMP, USB port				
Condenser	Brightfield (N.A.=0.65)				
Power	220V, Power Supply(B/I)				

Educational Stereoscopic Microscope



FEATURE

- The high optical quality and competitive price make these types of stereo microscope very popular
- Adjustable for interpupillary distance with field adjuster
- Accurate focus adjustment via rack & pinion, body up/down movement

MODEL	OAM 30SR	OAM 60SR	OAM 13SR	OAM 24SR
Total Mag.	10X, 30X	20X,30X,40X,60X	10X,30X	20X40X
Eyepiece	10X(WF)	10X,15X(WF)	10X(WF)	10X(WF)
Objective	1X,3X	2X,4X	1X,3X	2X,4X
Illumination	Option		6V15W Halogen (3 Steps)	

Digital Stereoscopic Microscope



FEATURE

- This has the incident illuminator (annular fluorescent ring lamp:8W)
- High contrast image can now be obtained through the newly designed optical system as well as the transport mechanism.
- Long 100.6mm working distance objective makes it possible to deal with a variety of work pieces
- OSM-1U can be connected to the PC/Multimedia-Projector with USB/S-Video port

MODEL	OSM-1	OSM-1U
Total Mag.	10X, 20X, 40X	
Eyepiece	Super Wide Field 10X : F.N=24mm	
Objective	Ach. 1X, 2X, 4X	
Head	Binocular	Binocular(Built in CCD-Camera)
	Antifungal Treatment, 45° Inclination & 360° Rotation Interpupillary Distance: 54-74mm, Dioptic Adjust: (±6.4Diopter)	
Focusing	Rack & Pinion Focusing Mechanism / Knob & Stopper/ Tension	
Working Distance	100.6mm	
Stand	Base Dimension: 300(W)X250(D)X40(H)mm	
CCD-Camera	410,000Pixels, 1/3" CCD 525TV Line, S/N:48dB	
Image-Translation	BMP File, Window 98, ME, 2000, XP	
	Out-Put: S-Video, AV, USB port	
Illumination	Incident Light (Annular Fluorescent Ring Lamp: 8W)	

Digital Biological Microscope



FEATURE

- This is equipped with plan achromatic objective and wide field eyepieces
- The observer can get the clear image in the wide field
- CCD-Camera makes additional image out-put device unnecessary
- It is suitable for scientific research, medical, health work and teaching demonstration in the colleges

MODEL	DW-THSP	DW-THSP(U)
Total Mag.	40X - 1500X	
Eyepiece	WF10X(DIN): F.N=18mm, WF15X(DIN):F.N=13mm	
Objective	Semi-plan 4X, 10X, 40X(Spring), 100X(Spring, Oil) (DIN)	
Stage	Rectangular Plate(140(W)X160(D)mm) Travel Range(50(Y)×75(X)mm)	
CCD-Camera	Color CCD 525TV Line, S/N:48dB	
Image-Translation	BMP File, Window 98, ME, 2000, XP	
	Out-Put: S-Video, AV, USB port	
Illuminator	LED Lamp / Rechargeable Power Supply	
Power	AC 220V, 50/60Hz	

Portable Digital Microscope



FEATURE

- Multi Mobile Microscope (Digital)
- High contrast image can now be obtained through the newly designed optical systems as well as the transport mechanism
- This can be connected to the PC/Multimedia-Projector with USB/S-Video port

MODEL	DDS-3000	DDS-3000P
Total Mag.	3,000X (: 14" Monitoring)	
Head	Monocular type (Removable)	
Objective	40X	40X(Phase Contrast)
Mechanical Stage	Rack & Pinion Mechanism/ Built-in Light Intensity Control Device	
Condenser	Abbe N.A. = 1.1	
CCD-Camera	410,000pixels, 1/3" CCD, 525 TV-Line, S/N:48dB	
Image-Translation	BMP File, Window98, ME, 2000. Out-Put: S-Video,AV,USB Port	
Illumination	AC 220V, 50/60Hz	
Size & Weight	150(L)X180(W)X75(H)mm 2.4Kg	
Power	AC 110-240V, 50/60Hz, 15W	



Polarizing Microscope



FEATURE

- This mechanism can be used for polarizing education and Professional research
- The observer can get the clear image in the wide field
- It is suitable for scientific research, medical and teaching demonstration in the colleges
- Adjust photograph, dark fields, phase contrast etc. to suit users' need

MODEL	PM-400	DL-400P	PLM-B	PLM-T
Total Mag.	40-400x			
Eyepieces	WF10X(DIN):F.N=18mm,FL=25mm		HWF10X(DIN):F.N=18mm,FL=25mm,Cross-Line	
Objective	Ach 4X, 10X, 40X		SM PLAN 4X, 10X, 40X	
Head	Monocular		Binocular	Trinocular
Analyzer			Analyzer in Slide for E-W Insertion	
Polarizer			Polarizer in Swing-out Clip/Clamp Mount. 0, ~90.	
Bertrand Lens			Bertrand Lens with Field-limiting Stop (E-W Insertion)	
Stage	Diameter:110mm, 360. Rotation		Ball-Bearing (Diameter:150mm), 360. Rotation	
Illumination	Mirror	6V 20W Halogen	Koehler Type Illuminator (6V 20W Halogen Lamp)	

Portable Digital Visual Projector



FEATURE

- Tas Korean Millennium Product in by the Ministry of Commerce Industry and Energy
- Head can be separated from main body easily, so that you can use it anywhere with extended 5M cables
- Macro shooting with Maximum 2cm
- Far infrared rays remote controller
- Select internal bottom lamp to use for slide film and OHP transparency
- Reflect a picture to positive & negative, color & B/W
- Available to move picture freely to up & down and left & right
- DVP-422U can be connected to the PC/Multimedial-Projector with USB/S-Video port

MODEL	DVP-422	DVP-422U
Camera	1/4" interline-transfer CCD, 410,000 gross pixel DSP	
Focusing	Manual Type	
Resolution	(Horizontal) More than 450 TV Line	
Zooming	2X Optical Zoom + 2X Digital Zoom (Total 4X Zoom)	
Head	Up and Down: 180, Slide to Slide: 350.	
In/Output Terminals	Video/Audio RCA ×2, S-Video ×1, Mic ×1, Power ×1	
Image-Translation (Digital)		BMP File, Window98, ME, 2000 Out-Put: S-Video, AV, USB port
Power Source	AC100-240V Free Volt., 50-60Hz, 5W(Max)	
Packing Dimension	420×320×430mm (Gross Weight: 3.7Kg)	

Digital Visual Projector



FEATURE

- Size of projecting materials up to B4 at maximum, Projection up to A4 at maximum
- Far infrared rays remote controller
- Upper light for clear image on screen in the dark room
- Internal bottom lamp for slide film and OHP transparency
- Converts any negative film to positive film as slide film
- Capable of using amplifier with built-in microphone jack
- DVP-416U can be connected to the PC/Multimedial-Projector with USB/S-Video port

MODEL	DVP-416	DVP-416U
Camera	1/4" interline-transfer CCD, 410,000 gross pixel DSP	
Focusing	Automatic / Powered	
Zooming	22X Optical Zoom + 8X Digital Zoom (Total 176X Zoom)	
Head	Antifungal Treatment, 30. Inclination & 360. Rotation	
Input Terminals	Video RCA ×2, Audio RCA ×2, Mic ×1	
Output Terminals	Video RCA ×2, Audio RCA ×2, S-Video ×1, RF ×1, LCD Monitor ×1	
Image-Translation (Digital)		BMP File, Window98, ME, 2000 Out-Put: S-Video, AV, USB port
Power Source	AC90-260V Free Volt., 50-60Hz, 30W(Max)	
Packing Dimension	518×578×233mm (Gross Weight: 7.9Kg)	

Over Head Projector



FEATURE

- The head is 360° revolved so it is not necessary to change the direction of the main body
- Perfect auto-focusing function with achromatization to reflect clear images
- The lamp can be instantly exchanged by varying lever position

MODEL	DOP-3000N	DOP-4500N
Voltage	AC 110V/220V, 60Hz	
Luminous Sources	24V 275W (Halogen lamp)	36V 400W (Halogen lamp)
Projection lens	3 Elements f=280~320mm (Zoom)	
Data sheet	285 × 285mm	
Dimensions	470 × 350 × 200mm	
Weight	10.5Kg	

Plasma Display Panel



FEATURE

- Two TV tuners built in
- World first real PDP TV
- PIP & double screen function
- Digital Comb filter
- Nicam & A2stereo / MTS stereo & SAP

MODEL	DPD-5000	DPD-4220K
Pannel Size	1,106(H) × 622.1(W) × 127(D)mm	921(H) × 518(W) × 106(D)mm
Aspect Ratio	16:9	
Contrast Ratio	1,000:1	
Brightness	1000cd/m ²	
Display Modes	TV, Video, S-VHS, Component 16:9, Panorama, User Adjust	
PC Modes	PIP	
Dimension	1,246 × 793 × 100mm (Gross Weight: 43Kg)	

LCD Projector



FEATURE

- High Color Purity Optical System
- Progressive Circuit/3D Progressive Circuit
- 3D circuit emplys a movement adaptive moving images with a more natural and stunning diagonal resolution
- 3D Automatic Uniformity Correction Circuit
- Hybrid Cross Talk Canceller

MODEL	DLP-520	DLP-420	DLP-330
LCD Panel	1.3" Polysilicon TFT LCD × 3	1.0" Polysilicon TFT LCD × 3	0.79" Polysilicon TFT LCD × 3
Pixel	2,359,296 Pixels (1,024 × 768 dots)		
Resolution	XGA (1024 × 768)		
Brightness	5,000 ANSI Lumens	4,000 ANSI Lumens	2,500 ANSI Lumens
Contrast Ra	1200:1	900:1	450:1
Digital Zoom	1:1.3 Auto Zoom & Focus		1:1.5 Power Zoom
Connectable PC	PAL, SECAM, NTSC, NTSC4.43, PAL-M, PAL-M/N		
Lamp	300W NSH Lamp	250W UHP Lamp	200W UHP Lamp
Screen Size	31"~400"	30"~300"	40"~300"
Lens Shift	O	O	X
Size (W×H×D)	319×168×429.5mm	302×162×422mm	296×71×218mm
Weight	9.2Kg	7.8Kg	2.8Kg
Power	450W	350W	270W



Digital Teaching Board Solution



FEATURE

- The board demonstration combines complete electronic-board capacity
- The surroundings establishment function in accordance with purpose
- Window-Board demonstration
: Word, Office as well as Internet or living images is available in every Window-Program not only Internet or living images but also Word, Office, the writing is available
- Lesson Plan-Board demonstration
: In every slide, picture, document, multi-media screen, lesson-plan is available to be freely written and saved
- Telerecording: recording is available on writing, picture, voice etc.
- Program-update is available in the on-line

MODEL	DEB-M150	DEB-M170	DEB-K150 (Lecture Table)
Monitor	15" Touch	17" Touch	15" Touch
Touch Type	Tablet touch type or Pressure perception touch type (5-wire)		
Writing Tool	Hand, Ball-pen or Digital pen(Antialiasing)		
Brightness	180~230cd/m ²	250cd/m ²	230cd/m ²
Data	Image files (BMP, GIF, JPG, TIF, PSD etc)		
Partial enlargement	Vivid enlargement (2~6 times)		
Function	Recording of lecture / Teaching plan data Storage (ezn, exe, zip)		
Touch Type	10~15MB per hour (lecture's voice + written data + 20 pages of lesson plans)		
Interface Terminal	Condenser microphone, LAN, USB, RGB, KFYBOARD		



Personal Video Recorder

FEATURE

- Diverse recording modes/one touch recording& advanced programming, programmed recording
- Diverse playing moder/replay, skip repeat modes
- Editing and Copying function/ Title setting, editing files
- Other features include safeguarding of recorded& material, image quality adjustment on external receiver



MODEL	DWZBP-8000	DWZBP-12000
Recording	Hard Disk Drive - 80G	Hard Disk Drive - 120G
Input / Output	Video Audio Input (3×RCA, 1×S-Video)	
	Video Audio Input (2×RCA, 1×S-Video)	
	USB 2.0 2port, IR Blaster 1port	
Functions	Repeat, Skip, Replay, Pause, Fast/Slow motion	
	Continuous recording and playing time (80 Hours/120 Hours)	

Air Cleaner



FEATURE

- Collects and eliminates dust as fine as 0.01 micron
- Also includes a bacteria sterilization function
- Absorbs and eliminates harmful gas
- Completely deodorizes bad smells
- Emits large quantities of vitamins in air (anion emission)
- Functions as humidifier

MODEL	DW-35N1	DW-HAF150B	DW-HAF230B
Dry Process	5-8PY	10PY~	20PY~
Airflow (m/min)	4.409	5.193	6.196
Dust Collector	Ionized Electrical Precipitator (eliminates over 90% of fine particles)		
Noise	50dB	45dB	40dB
Anion	Over 1 million per 1CC		
Dimension(W×H×D)	870×250×725	465×250×725	380×140×275

Astronomical Telescope (Refractor)



FEATURE

MODEL	DA-400	DA-450	DA-470S
Mount	Altazimuth	Equatorial	Equatorial
Objective	D=60mm,F=900mm	D=80mm,F=900mm	D=102mm,F=1000mm
Eyepieces	H6, H12.5, H25mm	Sr4, H9, H20mm	LV7.5, LV18mm
Light Gathering	73×	131×	212×
Finder Scope	5×25(W.F)	6×30(W.F)	6×30(W.F)
Accessories	Filters (Sun, Moon)	Filters, Erecting Prism, Diagonal Prism	Diagonal Prism
Tripod	Aluminum	Aluminum	Aluminum

Astronomical Telescope (Reflector)



FEATURE

MODEL	DA-600R	DA-750R	DA-1500R
Mount	Altazimuth	Equatorial	Equatorial
Objective	D=80mm,F=600mm	D=114mm,F=900mm	D=153mm,F=1300mm
Eyepieces	H6, H20mm	H9, H20mm	K6, K25mm
Light Gathering	131×	256×	478×
Finder Scope	5×25(W.F)	5×25(W.F)	6×30(W.F)
Accessories	Filters (Sun, Moon)	Filters, Erecting Prism, Diagonal Prism	Diagonal Prism
Tripod	Aluminum	Aluminum	Wooden

Book Mate BM-05CH

Book Mate



FEATURE

- “Book Mate” is the only portable book light in the world that delivers you a great achievement of 300 LUX which is the best lighting level for your reading. Using ultra bright LED lamps, which represent the latest semiconductor lighting technology, it helps increase your concentration as the five LED lamps illuminate only the page where you are reading. The direct current-driven, eye-friendly, ultra white LED spectrum driven prevents eyes from getting strained quickly. It is GREAT for the time when you need some private light in bed or in your favorite chair without bothering anyone else.
- A clip-on, pocket sized book light with the best illumination for reading You can see such high-brightness beams of the five tiny dome LED lamps.

SPECIFICATION

- LED, the mainstream lighting source of today and the future
- Easy-to-use button on&off switch
- Electric power jack
- It is AA battery based, but home power or mobile phone power supply kits can be used as well
- 100,000 hours bulb life
- 48 hours run time in continuous use
- It can act as an emergency charger to recharge a mobile phone. It fits other recharge kit packs.



A Lecture Kit for e-Learning
High Resolution Digital Visual Presenter



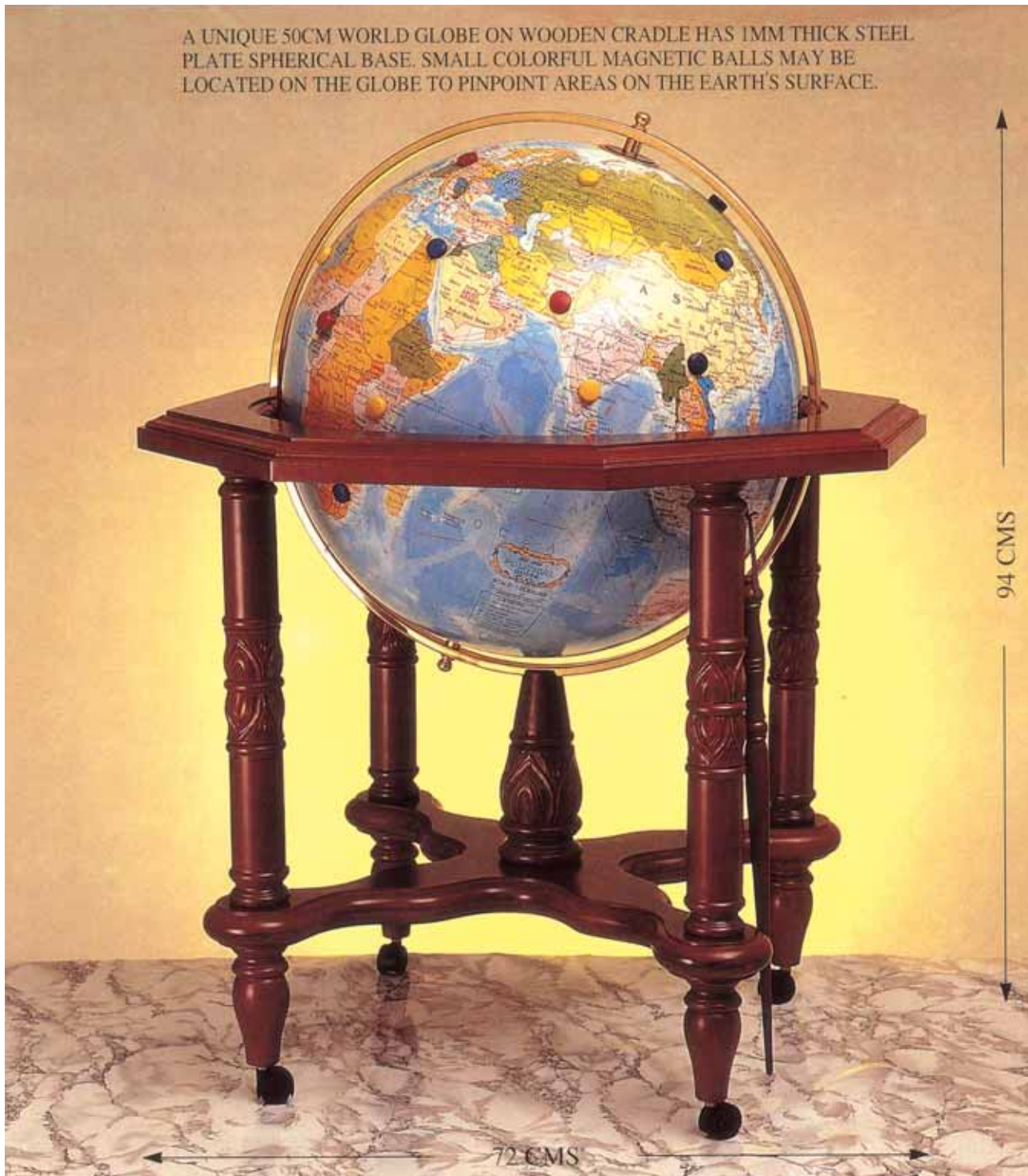
FEATURE

- Ultrahigh Picture Quality with 1.3 Megapixel Resolution.
- High-speed Image Shooting with Great Precision.
- Store and Edit Functions.
- Great Portability with Folding Frame Structure.
- Astonishing Shooting Capability for Fine Details with Great Sharpness at Various Angles and Locations.
- Rich Array of Features Including LED Lighting, 2x Digital Zoom, Electrically-Powered Focus, Magnifier.
- Versatile Functions Including Writing and Drawing on the Screen and Pentablet.

SJ-50-D

Political Globe

- THE LARGE SIZE GLOBE FOR TEACHER, BUSINESS PERSON, GOVERNMENT OFFICE, UNIVERSITY, LIBRARY, ETC. IN ALL FIELDS OF WORLD GEOGRAPHY

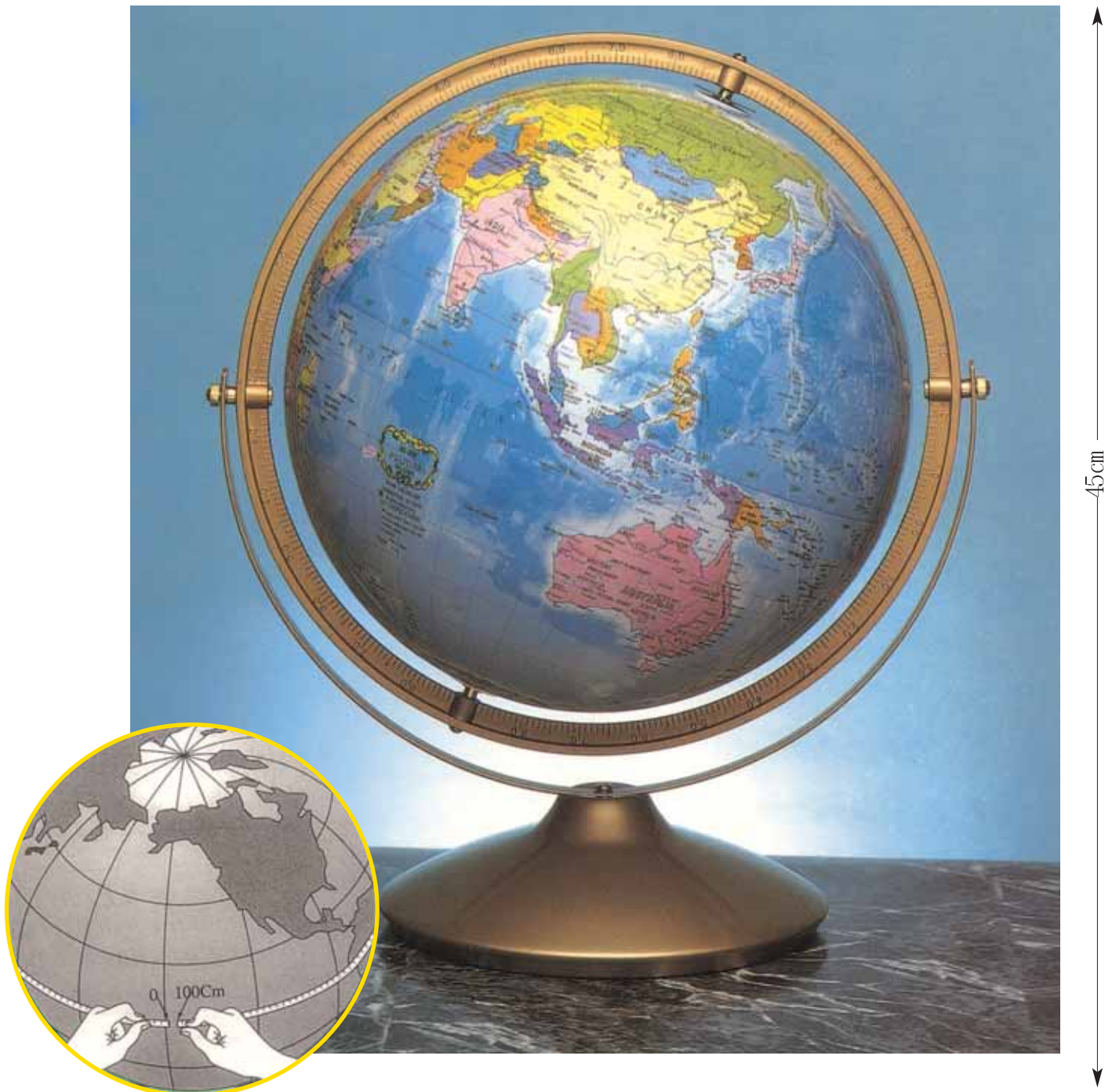


SPECIFICATIONS

- MODEL : SJ-50-D • DIAMETER : 50CMS • SCALE : 1/25,000,000 • CONTENT : POLITICAL GLOBE
- WEIGHT : 17.5KGS. • HEIGHT : 94CMS • CRADLE : WOOD • RING : RECTANGULAR BRASS
- POINTER : WOODEN BAR • ATTACHMENT : MAGNETIC BALL IN PLASTIC CASE

SJ-32-G1

Political Globe



- THE MOST STANDARD GLOBE IN ALL GRADE LEVEL OF SCHOOLS IS MOUNTED ON GYROMATIC ASSEMBLY OF METAL BASE.

FEATURE

- A unit of length of the metric system, 1 meter is originally taken to be 1/10 millionth of the quadrant of the meridian (1/10,000,000 arc distance from the equator to the pole). As the scale of diameter 32cm globe is exactly 1/40,000,000, the circumference of the globe is exactly 1 meter.

SJ-32-E

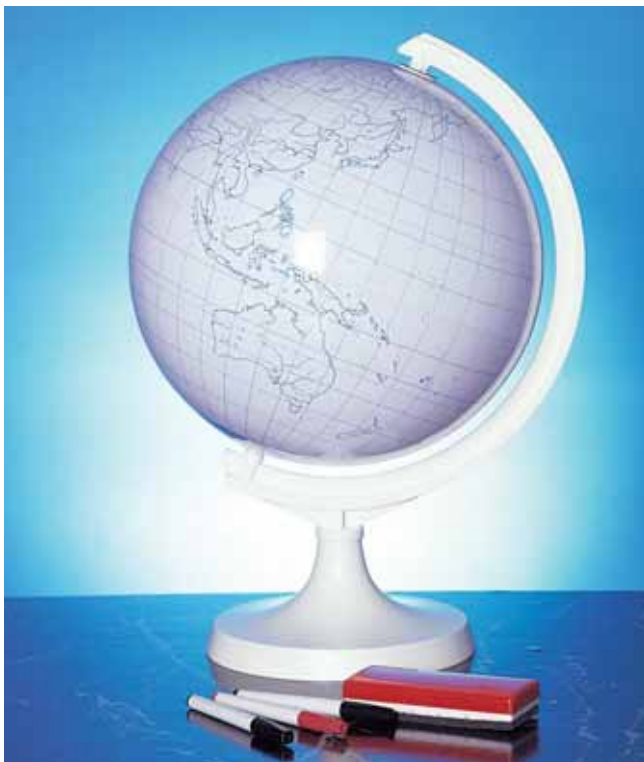
Physical Globe



- One property of physical Globe is the different colors contouring height of each 0, 200, 500, 1,000, 2000, 3000, more than 5000 meters above sea level. The other is also the different colors contouring depth of each 200, 1,000, 2,000, 3,000, 4,000, 5,000, 6,000, more than 8,000 meters below sea level.
- International boundaries, capital cities of countries are drawn in red color, and International Date Line as well, for quick reference.
- City more than 1,000,000 population is marked with a symbol of \odot . City more than 500,000 population is marked with a symbol of \bullet . Other city is marked with a symbol of \circ .
- Ocean currents are marked with arrows; warm current as a symbol of \rightarrow . Cold current as a symbol of \leftarrow .
- Tropic of Cancer, Arctic Circle, Tropic of Capricorn, Antarctic circle are drawn in broken line respectively.
- As the globe is formed from an encapsulated film which is directly vacuum-placed onto the globe sphere, the surface of globe is highly resistant to impact, chemicals and markable & erasable with dry board makers.
- MODEL NO : SJ-32-E • HEIGHT : 48.5CM • DIAMETER : 32CM
- BASE : PLASTIC • SCALE : 1/40,000,000 • RING : PLASTIC
- PACKING SYSTEM-KNOCKDOWN GLOBE

SJ-32-B

Blank Globe



PACKING SYSTEM - KNOCKDOWN GLOBE
- Markable and Erasable -

How to use a Blank Globe

At the geography lesson, practise the following exercises by marking geographic data on the surface of the blank globe.

Finding out the distributions and positions of all physical features of the earth

- Continents • Lakes
- Oceans • Straits • Seas
- Plains & Deserts
- Islands • Mountains
- Peninsulas • Rivers

Ascertaining the existence of the countries of the world

- Listing each country and ascertaining its position.
- Pinpointing each capital city.

Locating geographical place-names

- Locating special geographical terms and their positions.
- Locating the selected-notable geographical place-names.

Comparing the size

- Comparing the continents, countries, etc. in size.

Measuring the distances

- Measuring the distance between continents, places, and two points.

Visualizing the grid system

- Numbering longitude lines (meridians) along the equator on the globe at 10° intervals east and west from the prime meridian.
- Numbering latitude lines (parallels) on the globe at 10° intervals north and south from the equator.
- Drawing a set of imaginary lines of Arctic Circle, the Prime Meridian, International Date Line, and Equator.

Delineating the geographical extent

- Drawing the boundaries of extent of plains, deserts, drainage basins, national borders, and other geographical regions.
- Drawing of the length of mountain ranges and rivers.
- Drawing the lines of great circle route.

Marking all geographical data

- Marking all selected geographical data learned from Political Globe or Physical Globe for repeat and concentration.

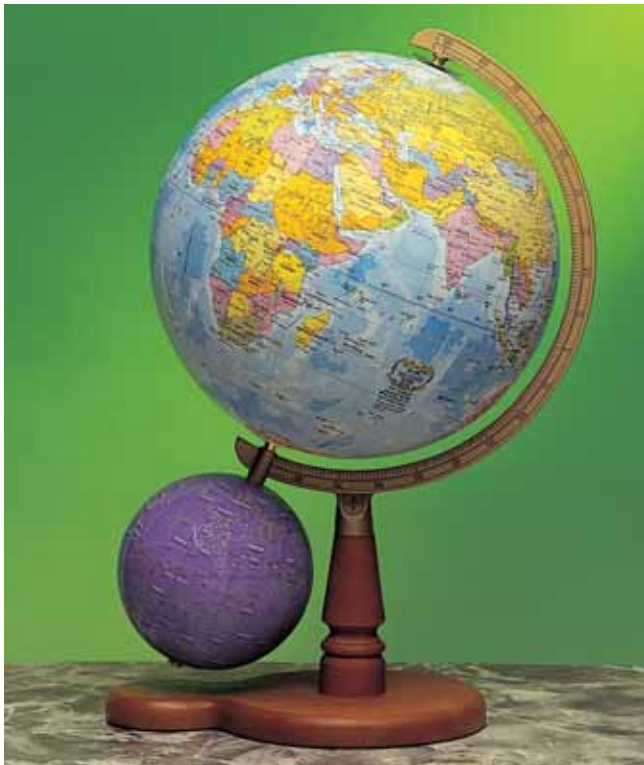
• MODEL NO : SJ-32-B • HEIGHT 48.5CM • DIAMETER : 32CM

• BASE : PLASTIC • SCALE : 1/40,000,000 • RING : PLASTIC

• ACCESSORIES : Dry Board Markers & Eraser

SJ-26-TC

Dual Globes



- ENRICH YOUR OWN STUDY OF THE NIGHT SKY BY USING THIS FANCIFUL TOOL OF CELESTIAL GLOBE
- FIND OUT 88 CONSTELLATIONS AND PINPOINT ALL IMPORTANT STARS IN THE NIGHT SKY
- IN A CELESTIAL GLOBE, IT SHOWS CONSTELLATIONS WITH THEIR ENGLISH AND LATIN NAMES, DOUBLE STARS, VARIABLE STARS, STAR CLUSTER OR NEBULAS, NOVAS, THE MILKY WAY AND ETC. THE PRINCIPAL STARS (NOTABLE BRIGHTEST STARS) IN ORDER OF STELLA MAGNITUDES UP TO 4TH ARE DENOTED ON THIS PRECISE CELESTIAL GLOBE
- TERRESTRIAL GLOBE : DIA. 26CM
- CELESTIAL GLOBE : DIA. 12.5CM
- HEIGHT : 43.5CM
- RING : DIECAST ZINC BASE : WOOD
- A TABLE OF 88 CONSTELLATIONS INCLUDED

SJ-32-C

Celestial Globe



■ This Celestial Globe Can Visual Aids For All Grade Level Of School

- SeoJeon Glove INVITES YOU INTO ASTRONOMY WITH AN ACCURATE DIAMETER 32CM CELESTIAL GLOBE.
- 88 constellations adopted officially by the International Astronomical Union, astronomy's governing body.
- The delimitation of precise boundaries of 88 constellations universally recongnized are marked
- All constellations' names are given both on Latin scientific name and English
- Stars over 900 or more ranging from 1st to 4th magnitude scale are denoted, and each star is identified by designations, the system of naming stars ; Bayer Letters, Flamsteed Numbers, and Messier Number.
- Major Double Star Variable Star, Star Cluster, Nebula, Nova, Galaxy, and Milky Way are denoted.
- Sun's position of each month around the Ecliptic are denoted.
- Shifting of the Celestial North or South Pole respectively based on 2000 Equinox are well denoted
- All constellations, apparent grouping s of star, more or less suggestive of the shapes of objects or creatures for which they are named since old time are depicted with the fanciful figure.
- 4 color' constellations -groupings - The constellations mainly visible to observers on Spring, Summer, Autumn, and Winter respectively differentiate between them in color for quick reference.
- MODEL NO : SJ-32-C• HEIGHT : 48.5CM
- DIAMETER 32CM • BASE : PLASTIC• RING : PLASTIC
- DIAMETER 26CM AVAILABLE ,TOO
- PACKING SYSTEM - KNOCKDOWN GLOBE
- A TABLE OF 88 CONSTELLATIONS INCLUDED



SHSPC-F002

Viscera (crusian carp)



FEATURE

- This SHSPC-F002 provides information of internal organs such as the blood vessel, intestines, the air bladder, the urinary bladder. These organs are treated with the color injection for natural color, so it provides clear vision too. Besides, SHSPC-F002 provides the names, shapes and others of the internal organs because each organ is indicated by a name tag.

SPECIFICATION

- Standard : $15 \times 32 \times 4 \text{cm}^3$

SHSPC-B001

Viscera (Fowl)



FEATURE

- This SHSPC-B001 provides information of internal organs. Its organs are treated with the color injection for natural color, so it provides clear vision too. For example, the artery, the vein are injected with the original color matters. Besides SHSPC-B001 provides the names, shapes and others of the internal organs because each organ is indicated a name tag.

SPECIFICATION

- Standard : $16 \times 42 \times 5 \text{cm}^3$

SHSPC-M001

Viscera (Squid)



FEATURE

- This SHSPC-M001 provides information of internal organs. Its organs are treated with the color injection for natural color, so it provides clear vision too. For example, the artery, the vein and intestines are injected with the original color matters. Besides SHSPC-M001 provides the names, shapes and others of the internal organs because each organ is indicated a name tag.

SPECIFICATION

- Standard : $15 \times 42 \times 4 \text{cm}^3$

SHSPC-M007

Viscera (Clam)



FEATURE

- This SHSPC-M007 provides information of internal organs. Its organs are treated with the color injection for natural color, so it provides clear vision too. For example, the blood vessel is injected with the original color matters. Besides SHSPC-M007 provides the names, shapes and others of the internal organs because each organ is indicated a name tag.

SPECIFICATION

- Standard : $15 \times 42 \times 4 \text{cm}^3$

SHSPC-C003

Dissection of Heart (Dog)



FEATURE

- This SHSPC-C003 provides information of internal organs. Its organs are treated with the color injection for natural color, so it provides clear vision too. For example, the artery, the vein heart valves, both ventricles and atria are injected with the original color matters. Besides SHSPC-C003 provides the names, shapes(atria, ventricles, heart valves) and others of the internal organs because each organ is indicated a name tag.

SPECIFICATION

- Standard : $15 \times 47 \times 4 \text{cm}^3$

SHSPC-S002

Dissection of Kidney (Pig)



FEATURE

- This SHSPC-S002 provides information of internal organs. Its organs are treated with the color injection for natural color, so it provides clear vision too. For example, the artery, the vein, the urinary vas are injected with the original color matters. Besides SHSPC-S002 provides the names, shapes(horizontal and vertical sections) and others of the internal organs because each organ is indicated a name tag.

SPECIFICATION

- Standard : $15 \times 42 \times 4 \text{cm}^3$

SCREEN

Motorized Screen



FEATURE

- Size(CM) : From 150×150 to 360×300
- Fabric
Matte White Type(Gain:1.1, View of Angle:50°)
Glass Beaded Type(Gain:2.5, View of Angle:30°)
Ultra Type(Gain:2.8, View of Angle:25°)
- 2Types: Wall & Ceiling mountable type / Ceiling recessed type
- Most versatile, uniform, washable, flame - retardant and mildew - resistant screen surface
- High reflectivity performance and efficiency
- Consistent brightness and resolution
- High contrast performance

SPECIFICATION

ULTRA TYPE		GLASS BEADED TYPE		MATTE WHITE TYPE	
MODEL	SIZE	MODEL	SIZE	MODEL	SIZE
AEU-102	210×180	AJA-102	210×180	AC-902	210×180
AEU-104	240×180	AJA-104	240×180	AC-904	240×180
AEU-105	270×240	AJA-105	270×240	AC-905	270×240
AEU-106	300×240	AJA-106	300×240	AC-906	300×240

Manual screen

Wall-mountable & Stand screen



FEATURE

- Angle regulator & Anti-screen shrinking system built-in for preventing keystone phenomena
- Screen surface washable

SPECIFICATION

ULTRA TYPE		GLASS BEADED TYPE		MATTE WHITE TYPE	
MODEL	SIZE	MODEL	SIZE	MODEL	SIZE
AWU-302	150×150	AJW-302	150×150	WSP-805	150×150
AWU-304	180×180	AJW-304	180×180	WSP-807	180×180
AWU-305	240×180	AJW-305	240×180	WSP-808	240×180
AWU-306	210×180	AJW-306	210×180	WSP-809	210×180



FEATURE

- X typed air absorber back up (minimum height 48cm up to maximum 216cm, International patent impending!)
- Both uses for Floor & Table.
- Sturdy self- standing screen with the screen surface raised and lowered smoothly and comfortably.
- NTSC(4:3) 80"/100" design with "Ultra Bright" surface.
- Environmentally friendly products(all of the materials can be recycled)
- The PET film screen surface is water - washable with mild soap.
- Light weight and mobile design.

SPECIFICATION

Specification / model	AUP-201	AUP-202
Maximum set up size	1680mm(W) × 2160mm(H)	2050(W) × 2160mm(H)
Maximum viewing size	1680(W) × 1282mm(H) 80"	2050(W) × 1560mm(H) 100"
Minimum upright height	48cm	48cm
Case Size	1920(L) × 180(W) × 190mm(H)	2300(L) × 180(W) × 190mm(H)
Net W'T	9.78KG	10.88KG
Gross W'T	12.74	14.5KG
Film Thickness	0.15T	0.15T
Viewing Angle	45degree	45degree
Gain	2.2/3.5	2.2/3.5
Ambient temperature	0℃~40℃	0℃~40℃

OPP-301

Integrated Stereo-Biological Video Microscope



SPECIFICATION

Spec/Model No.	OPP-301
Head	45° inclined, 180° rotating monocular with a built in CCD
magnification Range	10X~60X, 100X, 200X(on the basis of 29" Monitor)
eyepieces	30φWF 10X
Objectives	1X, 3X, including 2 X assistance lens
Working distance	80mm
Illumination	Incident lighting halogen(24V 20W)
	Transmitted lighting up/down halogen(24V 20W),
	Tungsten 12V
	21W built in light regulator & selector
CAMERA	1/3" CCD COLOR CAMERA, 410,000PIXEL
Minimum illuminance	2Lux(F1.2, 300K)
White balance	Auto/Manual
Electro shutter speed	1/60~1/10,000 per sec
Sound./ Noise Ratio	46dB

FEATURE

- The integrated microscope for Stereo and biological purpose
- Through built in CCD camera, Image capturing & videotaping a sample easily performed in connection with computer by using a USB port.
- Observation for the object ranging from 10X to 700X at maximum(In case that the combined lens is installed based on 43" sized monitor)

OPP-302

High Grade Video Biological Microscope



SPECIFICATION

Spec/Model No.	OPP-302
Head	Trinocular with dioptic adjuster, interpupillary distance adjustable(55~75mm), 45° inclined, 360° rotating
magnification Range	40X~1500X
eyepieces	DIN WF 10X, 15X
Objectives	DIN WF 4X, 10X, 40X(SP), 100X(OIL SP)
Stage	140X160mm Mechanical stage, 50~75mm movement range
Condenser	ABBE type N.A 1.25 with iris diaphragm, filter holder
Focus Control	Coaxial coarse & fine Knob
illumination	12V 20W Halogen with intensity regulator
CAMERA	1/3" CCD COLOR CAMERA, 410,000PIXEL
Minimum illuminance	2Lux(F1.2, 3200K)
White balance	Auto/Manual
Electro shutter speed	1/60~1/10,000 per sec
Sound./ Noise Ratio	46dB

FEATURE

- Integration of a CCD Camera into the ultra precision biological microscope
- Convenient in Image capturing, saving and editing through a built in CCD camera
- Easy scan & Real time image saving functions
- Convenient in Network & High resolution
- Upgraded function & S/W including editing, analyzing system.
- Multi application, Saving cost
- USB port

MP- I (15)/MP- II(17)"

Tablet PC Monitor



FEATURE

- MP-1 is LCD tablet monitor consisting of LCD panel and module with a electric pen and application. You can draw or write anything on the monitor and record & edit it in the computer, after you open any content file for education from your computer.

SPECIFICATION

TYPE	ITEM	MP- I(15")	MP-II(17")
H/W	LCD	TFT LCD	
	Screen Size	15"	17"
	Resolution	1024(H) × 768(V)	1280(H) × 1024(V)
	Contrast	350:1	450:1
	Pressure Sensing	512	512
	Tablet Type	Electromagnetic	
	Connecting Port	USB Type	
	O/S	Windows 98SE/ME/2000/XP	
	Video Signal	Analog RGB 15-pin D-sub	
S/W	Tablet Mode	Relative coordinate mode of Absolute coordinate mode	
	Pen mouse position control	Calibration	
	Input mode shift	Mouse mode/Pen mode	
	Color mode	32bit mode support	
	Thickness of Pen	10 levels of thickness	
	Eraser Function	Erase partly/Clear all	
	Presentation	Free pen mode, Color pen mode, Screen hiding, Check mark, Digital zoom, Show-all line function	

MPS-101P

Video Presenter



FEATURE

- Special design for education & presentation.
- Negative / Positive switching with one click.
- Easy connection to PC through built in USB cable for recording, editing & saving the images.
- Convenient infrared remote control.

SPECIFICATION

Spec/Model No.	MPS-101P
LENS	X22 ZOOM(F 1.6(WIDE), f = 3.9-85.8mm), X2-X7 DIGITAL ZOOM
PHOTOGRAPHIC AREA	300 X 270 mm(DATA DIMENSION)
FOCUS	MANUAL / AUTO FOCUS
ILLUMINATION	ATTACHED WITH OUTSIDE LIGHT/ HOUSED STAGE FOR TRANSPARENCY
IMAGE PICKUP DEVICE	1/4" COLOR CCD FOR 410,000 PIXELS
EFFECTIVE PIXELS No.	768(H) × 494(V) 380K / 752(H) × 582(V) 440K
HORIZONTAL RESOLUTION	MORE THAN 470 TV LINES
COLOR ADJUSTMENT	R OR B GAIN LEVEL CONTROL
WHITE BALANCE	AUTO/MANUAL(R&B GAIN LEVEL UP/DOWN)
BALCK & WHITE / COLOR	POSSIBLE SELECTION
SHUTTER SPEED(8 STEP)	AUTO/MANUAL(1/60-1/10000(NTSC), 1/50-1/10000(PAL))
UP & DOWN INVERSION	180° INVERSION(MANUAL)
HAED ROTATING	300° ROTATING
RF MODULATOR	HOUSED INSIDE
INPUT SELECT SWITCH	3 CHANNELS(BODY/INPUT1/INPUT2)
SUPPLIED VOLTAGE	AC 100-240V/50-60Hz (Free Voltage)
OSD	ON SCREEN DISPLAY

MPS-106

Flexible Video Presenter



SPECIFICATION

Item	Specification	Item	Specification
CAMERA	High resolution 1/3" CCD Camera	MIC INPUT	O
ENLARGEMENT	2 X Digital Zoom	VIDEO CONNECTION	S-VIDEO, RCA-VIDEO
		AUDIO CONNECTION	RCA, MONO OUT
SCANNING SYSTEM	2: 1 Interlac	POWER	DC 12V
Pixe	410000	GOOSE NECK	650MM LENGTH
MINIMUM ILLUMINANCE	3Lux	WEIGHT	2.3KGS
S/N RATIO	45DB	NEGA/POSI SHIFT	O
WHITE BALANCE	AUTOMATCIAL/MANUAL	USB PORT	O
FOCUSING	MANUA	REMOTE CONTROL	O
IMAGE ROTATION	MANUA		

FEATURE

- Potable, high quality multi- purpose video presenter with Goose neck.
- Easy connection to PC via built in USB cable for recording, editing and saving.
- Handy function control.
- Full operation using remote control functions.
- Voice out function through MIC input terminal.
- Procam-3600 is multi functional video presenter with high resolution CCD CAMERA(410,000), 2X digital zoom and RCA voice out support

ULTRASONIC CLEANER



FEATURE

- Excellent product as appearance safety and manufactured by design .
 For simple operation, such as timer, output and adjustment temperature, microcomputer is adopted.
 The built-in silicon rubber heater to provide fast, consistent and durable cleaning tank heats up.
 Smart surface and study ABS plastic structure design for corrosion and water resistance.

SPECIFICATION

MODEL	ACP-101	ACP-202	AJC-203
CONTENTS			
CAPACITY	10 ℓ	20 ℓ	60 ℓ
TANK SIZE(W*D*H)	295×240×160mm	450×290×160mm	500×350×350
Overall Size(W*D*H)	490×368×297mm	721×451×297mm	710×410×590
Temperature Range	0~70℃		0~65℃
Time Range	0~99minute		0~99minute
Transducer	BLT Type		
Ultrasonic Frequency	40 ^{kHz}		28 ^{kHz}
Input Power	AC 100V, 220V(50/60 ^{Hz})		AC 100V/50 ^{Hz} , 220V60 ^{Hz}
Ultrasonic Power	200W	400W	1200/600W
Weight	11kg	17kg	50kg/44kg
Body Material	ABS		SUS304/STEEL(Powder Painting)
Power Consumption	330W	620W	-

ORIENT AV CO.,LTD.

OLC-908W System
Master side

Multi-Language Laboratory System(OLC-908W System)



OLC-908W Main Display

OLC-908W System is the most typical multimedia language lab. system and perfectly controlled by teacher computer where operating software of OLC-908W is installed.

FEATURE

- Simultaneous transmission available up to 4 different programs
- Seats arrangement displayed on master monitor and flexible rearrangement
- Remote controlled master & student records
- Help function with step-by-step instructions

FUNCTION

- All Call/Group Call
- Line Call (Adding Teacher's Voice)
- Monitoring Student's Practice and its Evaluation
- Intercom
- Model Voice
- Automatic Scanning Monitor
- Pair Study
- Tripartite Conference
- Free Talk
- Test, Evaluation & Result Print
- Bookmark (Quick Index Search)
- Group Assignment(up to 5)

Main Components of Master's side

- Master computer 1 set
- OLC-908W console & operating software 1 set
- Master recorder(including recorder cover)2ea
- Headset 1ea

OLC-908W System
Student side

Multi-Language Laboratory System(OLC-908W System)



Student's Recorder

Headset

Booth Amplifier

Cable & Connector

Depending on equipment installed in student's side, OLC-908W System has two applications : (i)Recorder Type and (ii)Booth Amplifier Type

Recorder Corder

- All of general recorder functions available
- P-Stop / Sentence Back / Block Repeat / Bookmark
- Essential functions for efficient language learning supported
- Main Components of Student's Side
- Recorder(including recorder cover)
- Headset
- Cable & Connector
- Power Trans Unit

Booth Amplifier Type

- Essential functions for efficient language learning supported
- Main Components of Student's Side
- Booth Amplifier
- Headset
- Cable & Connector

*[Optional]

when teacher intends to use visual materials in his/her class:Student Monitor, TV, DVD Combo, LCD Projector etc.

Address : 35-69 Tongui-dong Jongno-gu Seoul. KOREA
 Phone & Fax : Phone (+82-2-722-1112) Fax (+82-2-722-7412)
 E-mail : sky@orientav.co.kr URL http://www.orientav.co.kr

NuriNET-A
Master side

Digital Multimedia Language Laboratory System(NuriNet System)



NuriNET-A Main Display

NuriNET System is a cutting-edge solution for optimizing multimedia class as well as language class on network-based environment and specially of which unique audio / video controller allows quality-based transmission of whatever materials.

As the program for teacher/manager(including controller)installed in teacher computer, NuriNET-A enables teacher to perfectly control the class and give interesting and efficient lesson, sourcing various videos(real-time pictures) and materials from internet or multimedia instruments freely as teaching contents.

FEATURE

- Perfectly remote controlled class
- Excellent compatibility
- Easy to arrange students' seats same as the real class

FUNCTION

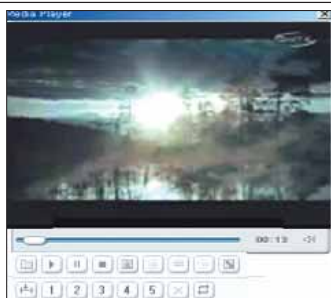
- Pair Study/ Group Study
- Attendance Check
- Electronic Board
- Bookmark
- Oral Test
- Intercom
- Monitoring
- Modeling
- Transferring teacher's screen, cassette tape and other media sources
- Call signal and Warning Signal
- Help function
- Function of Test Evaluation & Result Management(Optional)
- Function of VOD & Management (Optional)

Main Components of Master's side

- Master computer 1 set
- NuriNET-A (controller & operating software)1set
- Master recorder(including recorder cover)1ea
- Headset 1ea

NuriNET -S
Student side

Digital Multimedia Language Laboratory System(NuriNet System)



NuriNET-S Main Display & Media Player Function

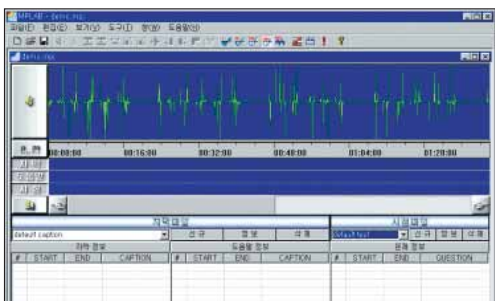
AS the program for student(including control board)installed in student computer, NuriNET-S aims to promote efficient study in linkage with NuriNET-A by providing all functions necessary for multimedia class as well as language class and self-study and facilitating free use of any external programs/materials.

FUNCTION

- Possible use of all kinds of video files
- Simple section repetition such as infinite repetition, sentence repetition etc.
- Excellent contents compatibility to maximize the use of data
- Calling teacher & Messages
- Recording function
- Media player and Electronic board supported
- Help function
- Search and use of VOD data (Optional)
- Convenient Testing(suitable for TOEIC and TOEFL)(Optional)

Main Components of Student's side

- Student computer
- NuriNet-S(control board &operating software)
- Headset
- Audio/video cable & connector



NuriNET-MPA/MPE Main Display

NuriNET-MP System is designed for future-oriented ICT education even under the circumstances of non-PC based with cost-efficient alternative, a digital recorder using MP3 technology and aims to maximize the efficient teaching and learning on the networked base. NuriNET-MP System allows teacher and student not only to have all the advantages of traditional audio-based exercises and PC-based language lab. but also to exploit a verity of materials from internet or multimedia equipment easily and efficiently along with powerful class control function and study/communication tools.

Main Components of Master's side

- Master computer 1st
- NuriNET-MPA : As a software installed on Master's PC, serves various functions for the class activities 1ea
- NuriNET-MPE: As a software installed on Master's PC , edits and produces teaching materials for the class 1ea
- Audio Hub : A hardware device connected to Master's PC 1ea
- Master Recorder(including recorder cover)1ea
- Headset 1ea



NuriNET-MPS
(Tapeless Comparative Digital Recorder for Student)

As a digital recorder(Tapeless)for student use connected to teacher's PC by TCP/IP network, NuriNET-MPS can provide various functions such as MP3 playback, digitizing analogue programs (MP3 encoding), drill recording as well as those of analogue recorder.

FUNCTION

- Availability of both digital and analogue teaching aids
- Caption and Help function
- Searching files(time-efficient owing to digital files)
- Searching sentences, Recording, Repetition
- Book mark, Oral test, Conversation-Slow play
- Universal functions of analogue recorder

Main Components of Student's side

- NuriNET-MPS
- Headset
- Cable & connector

*[Optional]
when teacher intends to use visual material in his /her class:
Student Monitor, TV, DVD Combo, LCD Projector etc.

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 E-mail : sky@orientav.co.kr URL http://www.orientav.co.kr

OLC-5200 System
 Master side

Multi-Language Laboratory System(OLC-5200 System)



OLC-5200 Console



Master's Recorder

OLC-5200 System is designed for simple laboratory and cost-efficient. It is characterized by easy -to-use, almost trouble free, and core functions for language lab supported.

FEATURE

- Present status displayd on LCD panel of master console
- Simultaneous transmission available up to 2 different programs

FUNCTION

- All Call
- Line Call(Adding Teacher's Voice)
- Monitoring Student's Practice and its Evaluation
- Intercom
- Model Voice
- Automatic (or manual)Scanning Monitor
- Pair Study
- Tripartite Conference
- Free Talk
- Test & analyzing
- Bookmark(Quick Index Search)

Main Components of Master's side

- OLC-5200 console 1ea
- Master recorder (including recorder cover)2ea
- Headset 1ea

OLC-5200 System
 Student side

Multi-Language Laboratory System(OLC-5200 System)



A-1 Recorder Type



B-1 Booth Amplifier Type

Depending on equipment installed in student's side, OLC-5200 System has two applications : (i)Recorder Type and (ii) Booth Amplifier Type

Recorder Type

- All of general recorder functions available
- P-Stop/Sentence Back/Block Repeat/Bookmark
- Essential functions for efficient language learning supported
- Main Components of Student's Side
- Recorder (including recorder cover)
- Headset
- Cable & Connector
- Power Trans Unit

Booth Amplifier Type

- Essential functions for efficient language learning supported
- Main Components of Student's Side
- Booth Amplifier
- Headset
- Cable & Connector

NS-PR(M)

Drafting Machine



- Drafting Machine is all-round drafting equipment which does not need any additional equipment such as Set square, T-square, Scale and Protractor. Accordingly it is very useful in mechanical drawing. You can accurately move Vertical and Horizontal Scale to ensure the correctness of Vertical and Horizontal line drawing. Also you can also adjust/fix the angle of Scale with free and easy for the convenient use.

FEATURE

- 5' Division Vernier Scale
- 15' Auto Index Settings
- CNC-Processed clear and precise Protractor

NS-ET(M)/SK-P(M)

Parallel Ruler



- Parallel Ruler is mainly used in construction, interior decoration and furniture company. The price is lower than Drafting Machine. But only Horizontal Scale is equipped that Set Square need in vertical line drawing.

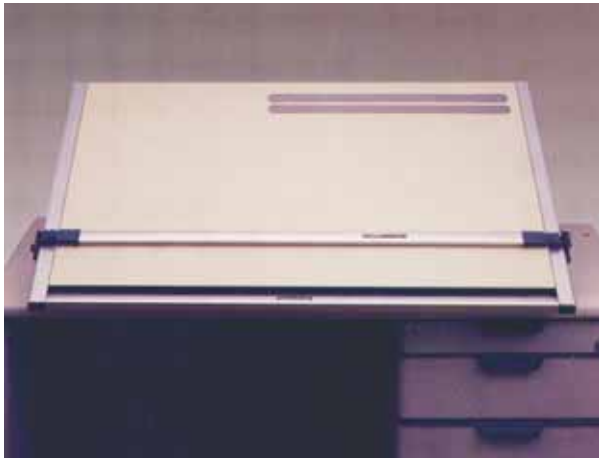
FEATURE

- Adjustment of I-Square Angle from 0°~15°
- Easy Wire-tension Adjustment.

Address : 331-2 Jeonggyo-ri Gasan-myeon Pocheons Gyeonggi-do. KOREA
 Phone & Fax : Phone (+82-31-543-2122) Fax (+82-31-542-8483)
 E-mail : newstar@dilli.co.kr URL http://www.dilli.co.kr

NS-PT(M)-DX
 SK-PR(M)/PR2(M)

Portable Drawing Set



- Portable Parallel Ruler is ideal for students & expert who often have to carry it. Also you can easily use it after installing on the desk. Portable bag is available for convenience

FEATURE

- Several Step Installation Angle Adjustment

SKA-OL/OT/OP

Surveying Instruments(Tripod etc.)



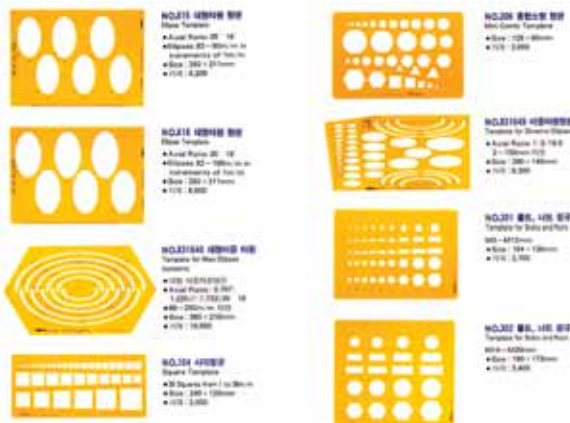
- Tripod is one of the most necessary arties in surveying. We make every parts by die-casting to ensure precision, strong durability and stable fix on the ground.

FEATURE

- Portable and reliable Tripod is made of Aluminium.

NO- 101/104
 130/150 etc.

Template



- Our template products are particularly useful for drawing job which is required precise measurements and accuracy as it is produced by special automatic engraving system. Production Type is Circle, Ellipse, Electronic, Character etc.

FEATURE

- Exact ruler measure and high precision.

TVM-300

Video Magnifier



FEATURE

- To be used as if it was Magnifier since it magnifies the small object to a large image
- More precise observation through the special camera equipped
- Economical comparing with the existing measuring Microscope

APPLICATION

- When to see the small characters into larger one(aged eyes)
- When to magnify the small objects
- To check the fault or defect of product

TVP-8100/8500

High Resolution Video Presenter



FEATURE

- Super wide angle 16x optical zoom, 4x digital zoom
- Image capture and store 9 frames
- Shows datas clearly even without supplemental lighting in dark areas
- Easy comparison of data due to PIP(picture in picture)

APPLICATION

- It enables a more efficient conference while showing presentations and three-dimensional materials clearly and can deliver much more information

TVP-2100/2300

Video Presenter



FEATURE

- Capturing, saving and printing available by connecting with computer (TVP-2300)
- Sharpness adjustment button attached to watch the image clearly
- Enlargement up to 44 times by 22 times optical zoom lens and 2 times digital

APPLICATION

- It can be used for audio/visual materials in conjunction with printed handout or educational textbook

TFV-200/300/400

Flex Vision



FEATURE

- World Didac Award 2000 for the best product
- Moving image in all directions by Pan/Tilt Function
- Easy movement and preservation by light weight
- Easily acceptable to any objects by gooseneck

APPLICATION

- This product is the same purpose product with video presenter but the size and the weight are much smaller and lighter. Especially, flex vision has applied flexible gooseneck, so it is easy to approach all kind of object.

TMC-2000

Multimedia Converter



By connecting Video Presenter, PC, LCD Projector & others with Multimedia Converter TMC-2000, all equipments can be used selectively just with simple button operating without cable replacement. Also, it's possible to Convert, Distribute, Control & Selecting of signal.

SPECIFICATION

- Input : Video x 2, S-Video x 1, RGB x 2
- Output : Video x 2, S-Video x 1, RGB x 2
- Power : Free volt(AC 100V~240V)
- Output Resolution : MAX SXGA(1280x1024)

VIS- 505/606
707/808

Overhead Projector



FEATURE

- First in the world, the amp and speaker are integrated in O.H.P. so that the speaker can communicate in a low voice with the many people and the user's convenience is much improved through the connection with the external speaker.
- Since the head is 360 rotatable, the image is projected widely to minimize the fatigue of eyes.

CEI-900

The Periodic Table of Elements



SPECIFICATION

- Power : AC110~240V, 50/60Hz
- Speaker output : 4 10W × 2CA
- Uses : For Learning, Education & Exhibition
- Type : Wall / Stand
- Dimension : 1350(W)×900(D)×66(H)mm

This is a learning material to accomplish audio-visual education with the periodic table and element group information. With the luminescence of each selected cell/element group and acoustics narration, students can reach their maximum learning effects.

The element of each cell is adopted from the pictures we can find actual life and can be used stably & usefully.

THS-200

High voltage Electrostatic Apparatus



<Middle School II > Science

- Electrostatic induction experiment of electric current

<high School II > Physics

- Electrostatic induction

Demonstrator exploring the electrostatic as an activity of supplement & deepening education

SPECIFICATION

- 6V direct current converter
- High voltage booster
- Built-in static electricity occurrence & +, - conversion function
- Dimension : 320(W)×230(D)×320(H)mm

TMB-300

Magnetic Buoyancy Apparatus



<High School I > Physics

- The experiment of magnetic levitation train with electric current & magnetic field.

Demonstrator exploring the basic principle of magnetic levitation with the change of magnetic field & the occurrence of electric current

SPECIFICATION

- Outer Diameter 20mm, Inner Diameter 17mm, Length 500mm
- Composition : Vertically installed 3kind of pipe made of Copper, Acryl & Stainless.
- Dimension : 400(W)×250(D)×600(H)mm

Address : 522-5, YONGHYUN-DONG, UIJONGBU-SI, KYONGGI-DO, KOREA

Phone & Fax : Phone (+82-31-852-1991) Fax (+82-31-852-2992)

E-mail : topex@topex.com URL http://www.topex.com

TSE-100

Sublimation Apparatus



<Middle School I > Science

- Iodine molecule arrangement in the three state of material

<Middle School I > Science

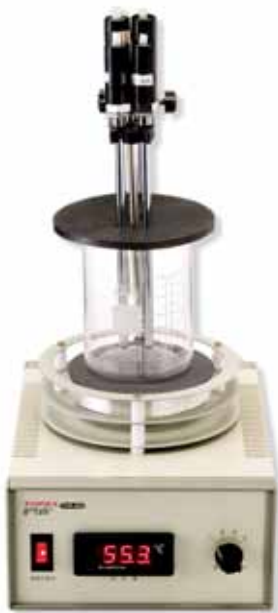
- Change of state and energy sublimation phenomenon
- Demonstrator for the three changing state of material

SPECIFICATION

- Heating Temperature : Heater (0℃~110℃)
- Composition Digital Thermometer
- Power : AC110~220V
- Dimension : 200(W)X300(D)X220(H)mm

THR-500

Thermal resistance Apparatus



<Middle School II > Science

- Material Characteristic

<High School I > Physics

- Applicable study of electric current & electric resistance

When the material charged with electric current, make out how resistance is changed according to material temperature & kind. Demonstrator exploring the change of resistance according to the temperature change of material.

SPECIFICATION

- Heater attached
- Digital thermometer attached
- Selective resistance measuring by sensor
- Power : AC110~220V
- Dimension : 220(W)X270(D)X440(H)mm

TLB-200

Light Box



FEATURE

- 15 inches in diagonal displaying screen
- Can be set declined both direction of horizontal and vertical
- To have slits able to insert the film and slide to stand
- 2 CCFL (cold cathode fluorescent lamp)
- Lamp life time is 15,000 hours approximately
- Slim and compact design (To be easy to use)

APPLICATION

- To view negative film in photo studio
- To view OHP film by connecting with video presenter
- To display film in photo studio

LSP-500

Microscopic Projector



FEATURE

- The series of this product enables the simultaneous observation of many persons on the large scale of screen by increasing the ratio to 100x, 200x, 300x, which innovates the concept of 1:1 observation of conventional type microscope to maximize the educational effects. The quality of this product is acknowledged by science and technology office.

SMC-300

Screen Microscope



FEATURE

- Screen microscope is the microscopic project with the concept that few persons can observe the object simultaneously through the screen attached onto the body.

TMS-700

Polarizing Microscope Monitor System



FEATURE

- The sample of the microscope can be observed through the CCD and color monitor and the data can be preserved permanently in the video for repeated education, which is the optical meeting with electronics.

TWPL-400

Polarizing Microscope



FEATURE

- Buttleland lens adopted
- 360° rotatable head
- Coarse/fine integration focusing

APPLICATION

- For observation of rock stone in the high school and college and research institute

TBL/TBM

Biological Microscope



FEATURE

- 45° inclined cask (360° rotatable)

APPLICATION

- Education: observation for cell and germs in primary, high school and college and also in the research institute
- Medical and hospital : observation of germs in clinic. experimental laboratory and seminar.
- Industry: observation for cell and micro living things

TSM

Stereoscopic Microscope



FEATURE

- Super wide angle eyepieces
- Adjusting of eyepiece angle
- Rotatable magnification control objectives(1x, 3x)
- Focus adjusting range (55~75mm)



HS24-01

Mineral collection 24

HS24 - 01 Ivory
211 × 162 × 22mm

Mineral Collection

- Mineral collection provides an excellent foundation to the science of mineralogy with first quality specimen materials gathered from around the world
- Various frame style
Ivory, blue, wooden pattern frame
- Custom-made frame color,
Custom-designed inner print
and box-design possible

HS24-02

Mineral collection 24

HS24 - 02 Blue
211 × 162 × 22mm

Mineral Collection

- Mineral collection provides an excellent foundation to the science of mineralogy with first quality specimen materials gathered from around the world
- Various frame style
Ivory, blue, wooden pattern frame
- Custom-made frame color,
Custom-designed inner print
and box-design possible

HS12-01

Birthstone collection

- Best for gift
- Real gemstones except diamond

HS12 - 01 Ivory
 HS12 - 02 Blue
 HS12 - 07 Wooden Pattern
 211×162×22mm



HS35-01

Mineral collection 35

HS35 - 01 Ivory
 HS35 - 02 Blue
 HS35 - 07 Wooden Pattern
 250×205×22mm



DS-52G4PC

Programmable CO₂ & Plant Growth Chamber



FEATURE

- LCD displayed full microprocessor program touch 11step control(Temperature, Humidity, Illumination, CO₂)
- Temperature : 0℃ to 60℃/ ±0.1℃ at 25℃
- Humidity : 30 to 98% RH /±0.5% at 70%
- CO₂ : 0 ~5000 ppm / ±20 ppm at 1000 ppm
- Illumination : F.L 40W × 15sets / 24hr10min / 0 ~ 23,000Lux
- Dimensions(in) : 600 × 600 × 1200(W×D×H)mm
(out) : 820 × 800 × 1900(W×D×H)mm
- Material(in/Out) : SUS304 / SCP-1
(Sidewell) : Vacuum pair glass
- Compressor : 3/4HP
- Shelves : Coating 3ea, Adjustable
- Power : 220V, 60/50Hz, 3Kw, 14A, 1phase

DS-541

Constant Temperature & Humidity Chamber



FEATURE

- Digital displayed full microprocessor (Temperature, Humidity)
- Temperature : -20℃ to 100℃/ ±0.2℃ at 37℃
- Humidity : 30 to 98% RH at 35℃/±1% at 70%(30℃)
- Time : 99Hr 59min or Hold
- Dimensions(in) : 500 × 500 × 600(W×D×H)mm
(out) : 800 × 700 × 1400(W×D×H)mm
- Material(in/out) : SUS 304 / SCP-1
- Compressor : 1.5HP
- Shelves : SUS 2ea, Adjustable
- Power : 220V, 60/50Hz, 1phase, 2.2Kw, 10A

Other size

- Dimensions(in) : 600× 700 × 800mm(DS-542)
- Dimensions(in) : 1000 × 800 × 1000mm(DS-543)

DS-21S3

Water Bath



FEATURE

- Temp. range : Ambient to 99℃
- Temp. accuracy : ±0.1℃ at 37℃
- Dimensions(in) : 245×295×150(W×D×H)mm×3room
(out) : 780×330×180(W×D×H)mm
- Capacity : 10 Liter x 3chamber
- Material(in/out/lid) : SUS304 / SCP-1 / SUS304
- Power : 220V, 60/50Hz, 1.3Kw, 6A, 1phase

Other size

- Dimensions(in) : 295 × 245 × 150mm(DS-21S)
- Dimensions(in) : 495 × 290 × 150mm(DS-21M)

Address : 571-3 Panweol-ri Taeon-eup kyonggi-do, Republic of Korea
Phone & Fax : Phone (+82-31-376-1526) Fax (+82-31-377-4264)
E-mail : dasolltd@unitel.co.kr URL http://www.dasolltd.co.kr

DS-10

Personal Incubator



FEATURE

- Digital displayed full microprocessor control
- Temperature : Ambient. +1℃ to 80℃ / ±0.01℃ at 37℃
- Time. controller : 99Hr. 59min or Hold
- Dimensions(in) : 400 × 400 × 300(W×D×H)mm
(out) : 600 × 470 × 370(W×D×H)mm
- Material(in/out) : SUS 304 / SCP-1
- Power : 220V, 60/50Hz, 0.2Kw, 1A, 1phase

Other size

- Dimensions(in) : 500 × 500 × 700mm(DS-10S)

DS-300M

Orbital Shaker



FEATURE

- Speed range : 0 - 350 R.P.M
- Speed controller : Solid state feed back controller
- Motor : Unique b/1 plate motor
- R.P.M. Set period : Set / Run S/W
- Shaker Size : 570 × 530 × 80(W×D×H)mm
- Plate size : 590 × 485(DxH)mm
- Material : SCP-1 / Anodized duralumin 5054
- Flask holder 250ml × 30ea (Interchangeable)
- Power : 220V, 60/50Hz, 0.3Kw, 1.4A, 1phase

Other size

- Plate size : 315 × 335(D×H)mm(DS-300SD)

DS-84E-1

Muffle Furnaces



FEATURE

- Type : Natural convection type
- Temp. range : Ambient to 1200℃
- Temp. accuracy : ±5℃ at 600℃
- Dimensions(in) : 250 × 300 × 150
(out) : 530 × 580 × 580mm(W×D×H)
- Capacity : 13 liters
- Heater : Super kanthal Elements Block heater
- Material(in/out) : SUS 304 / SCP-1
- Power : 220V, 60Hz, 5Kw, 22.7A, 1phase

Other size

- Dimensions(in) : 150 × 300 × 100mm(DS-84E)

LMS-1003

Hotplate Stirrer



FEATURE

- LMS-1003 Hotplate stirrer is made by excellent heat-resistance and anti-corrosive aluminum casting body with high class powder coating. High density ceramic coated stainless steel heating plate provides a perfect chemical resistance especially against strong acids, bases and solvents. It has excellent and precise speed control from 60 to 1500rpm with gentle revolution and heat up to 380 °C

GMC-SERIES

Microcentrifuge



FEATURE

- CE certified
- Compact personal Microcentrifuge for everyday spin-down and micro-filtration application.
- Durable transparent polycarbonate lid and ABS resin body
- Maximum RCF up to 2,200 x g
- Maximum RPM up to 6,600 rpm
- Built-in adjustable 10 min. Timer (Option : Model No. GMC-361 Timer)

LDO-SERIES

Digital Drying Ovens



FEATURE

- LDO-series ideal for baking, drying, conditioning, sterilizing and quality control even the most critical laboratory application temperature range from ambient to 250 °C Equipped with digital PID controller provides precision temperature control within ± 0.1 °C Tempered safety glass window for easy sample view without door opening. Both gravity and forced air convection type available. Fan motor and heater is automatically stops when door is opened for user's safety.

Address : 247-16 Gagok-ri, Hwado-eup, Namyangju-city, Kyonggi-do. KOREA
Phone & Fax : Phone (+82-31-593-9561) Fax (+82-31-593-9563)
E-mail : info@labtech.co.kr URL http://www.labtech.co.kr

LIB-SERIES

General Incubator



FEATURE

- LIB-Series Incubators are ideal for general laboratory incubation requires temperature range from ambient +5°C to 70°C It is equipped with membrane type touch keypad digital PID controller provides precise temperature control. Forced convection air flow by silent fan motor maintain uniforms temperature in the chamber and inner tempered glass door with silicon packing easy sample view without door opening.

LSI-SERIES

Shaking Incubator



FEATURE

- Shaking incubator provides a precisely controlled system for temperature and shaking in different sample containers at a constant temperature. The unit is ideal for tissue culture, bacterial incubation, enzyme reactions, fermentation, tissue section processing, dialysis, extractions and diffusions. Electronically controlled shaking mechanism provides quiet orbital motion and precise speed control and digital display.

LSI-SERIES

Multi-Stack Shaking Incubator



FEATURE

- Multi-stack shaking incubator provides a precisely controlled system for shaking large capacity of samples. The unit is ideal for tissue culture, bacterial incubation, enzyme reactions, fermentation, tissue section processing, dialysis, extractions and diffusions. Also it is designed for large quantity shaking incubation with 2 to 4 stacks of independently controlled shaking platform. It is included universal rack which can be used for various sized flasks.

LGC-SERIES

Growth Chamber



FEATURE

- Growth chamber are equipped programmable microprocessor PID control with touch-sensitive membrane type keypad provides precise temperature control from 0°C to 60°C, relative humidity from 30% to 98% and illumination from 0 to 25,000 Lux to maintain uniform and accurate growth environment. 10 step programmable controller provides automatic operation of variable temperature, humidity and illumination up to 999 cycles.

LGC-SERIES

Plant Growth Chamber



FEATURE

- Plant growth chambers are equipped programmable microprocessor PID control with touch-sensitive membrane type keypad provides precise temperature control from 0°C to 60°C, relative humidity from 30% to 98% and illumination from 0 to 25,000 Lux to maintain uniform and accurate growth environment. And built-in Lamp on Delay system protects plants from stress by prevention sudden change of light intensity.

LCL-SERIES

Cold Storage Chamber



FEATURE

- Cold storage chamber LCL-series are ideal for storage of expensive samples, reagents, raw materials and blood bags. Equipped with dual refrigeration system guaranteed a precise and constant temperature accuracy and stability. Turbo fan and unique air flow mechanism and structure provide precise temperature reproducibility and uniformity within $\pm 0.5^{\circ}\text{C}$ Automatic defrost system.

LLC-SERIES

Chiller



FEATURE

- Chiller is one of the most important equipment of an etching & CVD equipment to keep the temperature of water & chamber stable at certain level. Especially, LABTECH have two type chiller, compressor type chiller & unlikely from conventional compressor type chiller, operates by the Thermoelectric module which provides Solid state cooling. This is the equipment with high accuracy and high reliability.

LWB-SERIES

Digital Water Bath



FEATURE

- LWB-series Digital water Baths are ideal for industrial, pharmaceutical, clinical and biomedical experiments needs precision temperature control. Precision microprocessor based PID controller provides accurate and uniform temperature control of $\pm 0.5^{\circ}\text{C}$ uniformity and $\pm 0.1^{\circ}\text{C}$ accuracy under normal operation conditions. It offers specially designed thermo-regulation and automatic safety shut-down mechanism. Analog and Circulating Water Baths are also available..

LAC-SERIES

Autoclave



FEATURE

- LabTech Autoclaves are ideal for conventional laboratory steam sterilization of culture media, glassware. It is equipped with membrane type touch keypad digital PID controller provides precision temperature control for optimum sterilization process. The main controller displays time, current and user set temperature. Equipped with automatic and manual pressure release valve. Dual safety mechanism provides over pressure protection.

Labcare-900

Filtration Fume Cupboard



FEATURE

- Ductless Filtering Fume Cupboard System
- Toxic Gas & Odor Eliminated by Zeolite Chemical Filter System
- Purified Room Air by Filtration System

SPECIFICATION

- Dimension : 900(W)×750(D)×2,000(W)mm
- Filter type : Zeolite Chemical Filter
- Retention Capacity : More than 3,000g
- Air Flow : 300 CMH
- Air Velocity : More than 0.53 m/s
- Lighting : 36W×2ea
- Sound Level : Less than 49dBA
- Power Consumption : 100W (Except Lamp)
- Voltage : 230V-60Hz / 115V-50Hz
- Safety Device : Timer, Filter Check, Velocity Monitor, Fan Failure, Worksurface & Spill Tray

Labcare-EDU

Educational Filtration Fume Cupboard



FEATURE

- Ductless Filtering Fume Cupboard System
- Toxic Gas & Odor Eliminated by Zeolite Chemical Filter System
- Back Panel for the Education
- Purified Room Air by Filtration System

SPECIFICATION

- Dimension : 800(W)×650(D)×1,900(W)mm
- Filter type : Zeolite Chemical Filter
- Retention Capacity : More than 2,000g
- Air Flow : 150 CMH
- Air Velocity : More than 0.53 m/s
- Lighting : 55W
- Sound Level : Less than 49dBA
- Power Consumption : 50W (Except Lamp)
- Voltage : 230V-60Hz / 115V-50Hz
- Safety Device : Timer, Filter Check, Velocity Monitor, Fan Failure, Worksurface & Spill Tray

Labstore-Single

Filtration Reagent Storage Cabinet



FEATURE

- Ductless Filtering Reagent Storage System
- Toxic Gas & Odor Eliminated by Zeolite Chemical Filter System
- Purified Room Air by Filtration System

SPECIFICATION

- Dimension : 800(W)×500(D)×2,100(W)mm
- Storage Capacity : More than 100 bottle (1Liter)
- Filter type : Zeolite Chemical Filter
- Retention Capacity : More than 2,000g
- Air Flow : 90 CMH
- Air Velocity : More than 0.51 m/s
- Shelves : 5ea (Adjustable)
- Sound Level : Less than 49dBA
- Power Consumption : 50W
- Voltage : 230V-60Hz / 115V-50Hz
- Safety Device : Filter Check, Velocity Monitor, Fan Failure, Spill Tray, Lock System

Labstore-Double

Filtration Reagent Storage Cabinet



FEATURE

- Ductless Filtering Reagent Storage System
- Toxic Gas & Odor Eliminated by Zeolite Chemical Filter System
- Purified Room Air by Filtration System

SPECIFICATION

- Dimension : 1,600(W)×500(D)×2,100(W)mm
- Storage Capacity : More than 200 bottle (1Liter)
- Filter type : Zeolite Chemical Filter
- Retention Capacity : More than 2,000g
- Air Flow : 90 CMH
- Air Velocity : More than 0.51 m/s
- Shelves : 10ea (Adjustable)
- Sound Level : Less than 49dBA
- Power Consumption : 50W
- Voltage : 230V-60Hz / 115V-50Hz
- Safety Device : Filter Check, Velocity Monitor, Fan Failure, Spill Tray, Lock System

OPTIZEN 3220UV

UV/Vis Spectrophotometer (Double Beam Optics)



FEATURE

- Wavelength Range : 190nm to 1100nm
- Spectral Bandwidth : < 1nm
- Photometric Range : -3.0 - 3.0 ABS
- Photometric System : Double Beam Optics
- Light Source : Tungsten-Halogen Lamp & Deuterium Lamp
- User Interface : Embedded XP based Program,
Keyboard, Mouse & LCD Monitor available
Analysis Library included
- Power System : 110V/220V

OPTIZEN 2120UV

UV/Vis Spectrophotometer (Single Beam Optics)

※ Optizen 2120UV plus : Split Beam Optics



FEATURE

- Wavelength Range : 190nm to 1100nm
- Spectral Bandwidth : < 1nm
- Wavelength Accuracy : < ± 0.2 nm
- Wavelength Repeatability : < ± 0.05 nm
- Stray Light : 0.05 %T at 220 & 340 nm
- Photometric Range : -0.3 to 3.0A, 0% to 125%
- Photometric Accuracy : < 1% of signal
- Noise : 0.002A at 0A / 220nm & 340nm
- Drift : 0.002A/hr at 340nm
- Stability : ± 0.002 A/hr
- Light Source : Tungsten-Halogen Lamp and Deuterium Lamp
- Display Mode : LCD display
- Sample Holder : Automatic 8-position multi-cell holder
- Interface Ports : RS-232C and Centronics ports
- Power Requirement : 220V, 60/50Hz
- Dimensions : 510(W)mm \times 435(D)mm \times 235(H)mm

OPTIZEN 1412V

Visible Spectrophotometer



FEATURE

- Spectral Bandwidth : < 4nm
- Wavelength Range : 340 ~ 1100 nm
- Accuracy : < 1nm
- Repeatability : < 0.5nm
- Monochromator : Czerny-turner type
- Stray Light : < 0.1 %T at 340nm
- Photometric Range : -0.1 to 3.0A, 0 to 125%

- Accuracy : $\pm 0.003A$ from 0 to 0.3A, (1% of reading from 0.3 to 2A,
2% of reading from 2 to 3A)
- Stability : 0.002 A/h
- Light Source : Halogen Lamp
- Display Mode : LCD display
- Sample Holder : Standard rectangular cell holder
- Interface Port : RS-232C and Centronics port
- Standard Capability : Absorbance/%transmittance/Concentration
- Power Requirement : AC 100~230V, 50/60Hz, 1A
- Dimensions : 300(W)mm \times 250(D)mm \times 125(H)mm

OPTIZEN 1412H

Clinical Chemistry Analyzer



Optizen 1412H is a visible spectrophotometer that measures absorbance from 340nm to 1100nm by a holographic grating type monochromator with sipper system.

Our noise reduction circuit has led stable signal process and free voltage system for more precise measurements.

FEATURE

- 760 filters
- Direct display of absorbance and concentration
- Diversity in applicable program
- Built-in printer to record results
- Storage capacity : 100 tests programmable
- Cost-reduction for maintenance
- Large Graphic LCD display window
- Easy touch of button

OPTIZEN mini

Portable Spectrophotometer



FEATURE

- Wavelength Range : User Select able 4 Wavelength (350nm-1100nm, Step10nm)
- Photometric Range : 0.000~3.000 ABS
- Data Display : 128 × 64 dot Matrix Graphic LCD
- Readout Modes : %T, ABS, CONC, KINETIC
- External Communication : RS-232C Serial
- Power : 1.5 × 4 AA Alkaline or NI-MH Cell, DC 6V 1A Adapter
- Memory Size : 4k Measurement Data Memory (Maximum 2000 Times Measure)
- Cell Holder : 25mm, 16mm Tube (Optional Square Cell Holder)

OPTIZEN 1860TR

On-Line Turbidimeter



FEATURE

- Type : Separate Type
- Measuring Principle : ISO 7027
- Measurement Method : Four Beam Method
- Range : 0.001 ~ 1,000 NTU
- Light Source : Two 860nm LEDs (ISO 7021)
- Language : Korean, English, Chinese
- Display Unit : Graphic LCD (320 × 240)
- Memory Size : 1 Min (Interval) / 2 Month (Capacity)
- Enclosure Class : Conforming to IP65
- Power Supply : 100 ~ 250 VAC 60Hz Free Voltage
- Analog Output : 4 ~ 20 mA (0~5V Optional)
- Digital Output : RS-232C (RS-485 Optional)
- Accuracy : ±3%(0~10NTU)
- Linearity : ±5% (0~10 NTU)
- Response Time : <2Min (90%)
- Flow : 200~300ml/min
- Insulation Resistance : 5MΩ

ECO-Ro1600

Water Purification System



FEATURE

- This system has no noise.
- This system has a very reasonable and economic price.
- It is very easy to set and move the Water Purification System
- This system are registered to ISO9001, and certificated on EM Mark.

SPECIFICATION

- Product Rate (UP to) : 20L/Hr
- Conductivity : 1-25us/cm
- Function : Automatic Timer for RO Membrane Cleaning
- Power : 220V, 50/60Hz, 70W
- Display : Digital LED

ECO-Up9000

Ultra Pure Water System



FEATURE

- It is very easy and convenient to exchange. (Eco-UP Pack)
- It is economic model
- It is very easy to set and move the Water Purification System.
- This system are registered to ISO9001, and certificated on EM Mark.

SPECIFICATION

- Product Rate (UP to) : 1.5L/Min(90L/Hr)
- Resistivity : 18.2M Ω -cm (at 25 $^{\circ}$ C)
 - TOC : < 10ppb
 - Particles(0.2us) : < 1m ℓ
 - Bacteria : < 1cfu/m ℓ
- Function : Recirculation to inhibit Bacteria
- Power : 220V, 50/60Hz, 70W
- Display : Digital LED

Esse-Ro Basic 10

Water Purification System



FEATURE

- Puris, RO Water System is a instrument to make basic pure water in laboratory and you can use this pure water in general chemical test, final washing and rinsing for glassware, making the general test reagent, making the media and feed water in Ultra water purification system.
(This systems are produced under ISO9001 CE certified quality management system and EM mark for the best product quality and security)

SPECIFICATION

- Flow Rate (UP to) : 10L/Hr
- Conductivity : 1-25us/cm
 - Heavy Metals : < 100ppb
- Cartridge exchange reminder
- Time program for RO Membrane cleaning
- Automatic drain for less value than setting value
- Power : 120/230V, 50/60Hz, 65VA
- Display : Microprocessor Control LCD

Esse-up Analysis

Ultra Pure Water System



FEATURE

- Verified Ultrapure Quality of Water
- A Great Variety of Components
- Easy and Handy Function
- Sensational Design
- This systems are produced under ISO9001/CE certified quality management system and EM mark for the best product quality and security

SPECIFICATION

- Flow Rate (UP to) : 1.5L/min
- Resistivity (at 25 °C) : 18.2MΩ-cm
 - Inorganics : <0.1ppb
 - TOC : 1-5ppb
 - Particles (0.2μ) : <1/ml
 - Bacteria : <1cfu/ml
- Dispenser timer for product quantities
- UV Lamp exchange reminder
- Pack exchange reminder
- Power : 110/230V, 50/60Hz, 65VA
- Interface : RS-232C/RS45 for data output
- Display : Microprocessor Control LCD

Laboratory Scale Vacuum Freeze Dryer

FEATURE

- All the procedures of an experiment can be performed on one-touch manner based on the autocontrol system and safety and convenience of an experiment would be maintained by various systems such as backfill, auto-purging, alarm system, etc. Because the interior of the equipment is consist of stainless steel, it resists corrosion and can be cleaned and managed easily.
- Unlike the previously made freeze dryer, this equipment can be applied to both individual vial and bulk scale spontaneously and preparation freezing and drying process can be performed on one-step manner. The equipment can be mounted with stoppering apparatus optionally, which makes the automatic control of the entire freeze drying process in small space. Furthermore, the experimental data of the process can be obtained easily and the price is relatively low. The equipment can be also extended to pilot plant scale experiment.
- The user, according to the purpose of the experiment, can choose a variety of accessories such as centrifugal concentrator and gel dryer and install the various sample container such as the flakes, ampules and serum bottles.



Specifications of Laboratory Scale Vacuum Freeze Dryer-Consol Type

Model		VFDC05-0060	VFDC05-3060	VFDC05S-0060	VFDC05S-3060
Specification	Cabinet	705W×625D×1100Hmm			
	Chamber	310D×300Hmm			
	Shelf	300W×350Dmm			
Temperature	Cold trap	-60℃ Below / -85℃ Below (option)			
	Shelf	Ambient~+50℃	-30℃~+50℃	Ambient~+50℃	-30℃~+50℃
Ice holding capacity		5kg			
Compressor		1/3Hp		1/2Hp	1/3Hp
		1/2Hp			
Vacuum pump		200 liter/min			
Defrosting system		Hot gas system			
Vacuum gauge		1×10 ⁻³ toor			
Recorder		2pen			
Stoppering		Non-built-in type		Built-in type	
Electric Requirements		200V, 60Hz, 1ph, 1.5kW			
Option		Vacuum controller			



Specifications of Laboratory Scale Vacuum Freeze Dryer-Table Top Type

Model		VFDT05-0060	VFDT05-3060	VFDT05S-0060	VFDT05S-3060
Specification	Cabinet	820W×720D×630Hmm			
	Chamber	310D×300Hmm			
	Shelf	300W×350Dmm			
Temperature	Cold trap	-60℃ Below / -85℃ Below (option)			
	Shelf	Ambient~+50℃	-30℃~+50℃	Ambient~+50℃	-30℃~+50℃
Ice holding capacity		5kg			
Compressor		1/3Hp		1/2Hp	1/3Hp
		1/2Hp			
Vacuum pump		200 liter/min			
Defrosting system		Hot gas system			
Vacuum gauge		1×10 ⁻³ toor			
Recorder		2pen			
Stoppering		Non-built-in type		Built-in type	
Electric Requirements		200V, 60Hz, 1ph, 1.5kW			
Option		Vacuum controller, Stand : 840W×740D×450H			

- Specifications can be changed for improving the quality of our products
- The vacuum pump can be modified according to the customer's specification
- A variety of optional features are available
- The cold trap of -85℃ is optional

Pilot Plant Scale Vacuum Freeze Dryer



FEATURE

- The entire freeze drying process can be optimized by the programmable PID control system using microprocessor. The conditions of the drying materials and the equipment can be confirmed in real time by a digital display system. The data of drying process and the experimental results can be obtained by the recording system.
- The various system such as backfill and automatic sterilization are incorporated for the protection of the materials and the equipment. Such system makes the entire drying process safe and the long-term storage of the materials possible. This equipment can be applied to foods, pharmaceuticals and other industrial purposes as well as researches.

Specifications of Pilot Plant Scale Vacuum Freeze Dryer

Model		VFD0010	VFD0030	VFD0050	VFD0100	VFD0200	VFD0300				
Capacity	Ice holding capacity of condenser	10 kg	30 kg	50 kg	100 kg	200 kg	300 kg				
	Useable surface area of shelf	0.54 m ²	1.8 m ²	2.52 m ²	5.04 m ²	10.8 m ²	15.8 m ²				
	Volume of bulk material at 20mm thickness	10.8 liter	36 liter	50.4 liter	100.8 liter	216 liter	317 liter				
Shelf	Shelf temperature	-20℃~ +70℃	-50℃~ +70℃	-20℃~ +70℃	-50℃~ +70℃	-20℃~ +70℃	-50℃~ +70℃	-20℃~ +70℃	-50℃~ +70℃	-20℃~ +70℃	-50℃~ +70℃
	Shelf dimension	400 W×450 D mm	450 W×800 D mm	800 W×450 D mm	800 W×900 D mm	900 W×1,200 D mm	900 W×1,600 D mm				
	Usable shelf number	3	5	7	7	10	11				
	Space between shelves	60 mm									
Tray	Dimension	400 W×450 D×40H mm									
	Number	3	10	14	28	60	88				
Condenser temperature		-65℃ / -85℃	-65℃ / -85℃	-65℃ / -85℃	-65℃ / -85℃	-65℃ / -85℃	-65℃ / -85℃				
Vacuum pump speed		410 liter/min	650 liter/min	840 liter/min	1600 liter/min	3500 liter/min	5800 liter/min				
Cabinet dimension		1,100 W×1,300 D ×1,900H mm	1,100 W×1,900 D ×1,900H mm	1,800 W×2,200 D ×1,900H mm	1,800 W×2,500 D ×1,900H mm	2,100 W×2,800 D ×2,000H mm	2,100 W×3,250 D ×2,000H mm				
Defrosting system		Hot gas system / Water spray system									
Power consumption		220 V, 1 ph ×7.5 kW	220 V, 1 ph ×11 kW	380/220 V, 3 ph ×18 kW	380/220 V, 3 ph ×25 kW	380/220 V, 3 ph ×35 kW	380/220 V, 3 ph ×50 kW				
Condenser type		Air-born cooling / Water - borne cooling									

- Specifications can be changed for improving the quality of our products
- A variety of optional features are available
- The cold trap of -85℃ is optional

BIOCRYOS CO., LTD.

Deep Freezer

CHEST TYPE



More durable and high temperature stable than the upright type because of minimizing operation rate

CHARACTERISTICS

- Internal voltage booster
- High stability at ultra low temperature
- Minimizing internal temperature fluctuation
- Doubling durability by minimizing the equipment operation rate
- Stabilized internal temperature despite opening and shutting the door frequently
- Using environmentally friendly non-CFC refrigerant

Ultra Low Temperature Freezer

Model	Temperature range	Capacity	Interior dimension	* Exterior dimension	Power
UF9010	- 40℃ ~ - 90℃	101 liter	300 W×500 D×675 H mm	1000 W×760 D×1022 H mm	220 V, 1 ph
UF9020		202 liter	600 W×500 D×675 H mm	1300 W×760 D×1022 H mm	
UF9030		303 liter	900 W×500 D×675 H mm	1600 W×760 D×1022 H mm	
UF9040		405 liter	1200 W×500 D×675 H mm	1900 W×760 D×1022 H mm	

※ The size of lock, handle and hinge are excluded

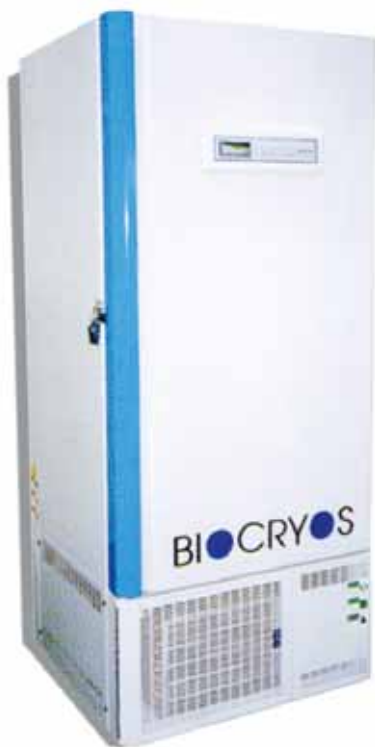
Low Temperature Freezer

Model	Temperature range	Capacity	Interior dimension	* Exterior dimension	Power
UF4510	- 20℃ ~ - 45℃	101 liter	300 W×500 D×675 H mm	1000 W×760 D×1022 H mm	220 V, 1 ph
UF4520		202 liter	600 W×500 D×675 H mm	1300 W×760 D×1022 H mm	
UF4530		303 liter	900 W×500 D×675 H mm	1600 W×760 D×1022 H mm	
UF4540		405 liter	1200 W×500 D×675 H mm	1900 W×760 D×1022 H mm	

※ The size of lock, handle and hinge are excluded

Deep Freezer

UPRIGHT TYPE



CHARACTERISTICS

- Internal voltage booster
- Minimizing the occupied space
- Convenient entry and exit of the samples/materials by installing the internal shelves
- Easy check-up of equipment conditions by locating the control system at the eye level
- Nearly perfect heat insulation by using the internal door with several angles and double gaskets
- The table top model suitable for small quantities of the samples/materials
- Using environmentally friendly non-CFC refrigerant

Maximizing the space utility
and locating the control system at the eye level

Ultra Low Temperature Freezer

Model	Temperature range	Capacity	Interior dimension	*Exterior dimension	Power
UF8606	- 40℃ ~ - 86℃	64 liter	500 W×430 D×300 H mm	760 W×700 D×885 H mm	220 V, 1 ph
UF8640		385 liter	590 W×510 D×1280 H mm	850 W×780 D×1995 H mm	
UF8650		498 liter	590 W×660 D×1280 H mm	850 W×930 D×1995 H mm	
UF8660		612 liter	725 W×660 D×1280 H mm	985 W×930 D×1995 H mm	

※ The size of lock, handle and hinge are excluded

Low Temperature Freezer

Model	Temperature range	Capacity	Interior dimension	*Exterior dimension	Power
UF4006	- 20℃ ~ - 45℃	64 liter	500 W×430 D×300 H mm	760 W×700 D×885 H mm	220 V, 1 ph
UF4040		385 liter	590 W×510 D×1280 H mm	850 W×780 D×1995 H mm	
UF4050		498 liter	590 W×660 D×1280 H mm	850 W×930 D×1995 H mm	
UF4060		612 liter	725 W×660 D×1280 H mm	985 W×930 D×1995 H mm	

※ The size of lock, handle and hinge are excluded

LiFlus GS

Fermentor



FEATURE

- Autoclavable lab scale fermentor
- Applicable for microbial fermentation and animal, plant cell, insect, mammalian. etc cell culture
- Autoclavable three types of vessels – Single, Double, Bowl vessel. 1.5L ~ 14L available.
- Temperature, pH, DO, Air controllable
- PC compatible and data saving

LiFlus GX

Fermentor



FEATURE

- Autoclavable lab scale fermentor
- State of the art touch screen monitor
- Applicable for microbial fermentation and animal, plant, insect, mammalian. etc cell culture
- Autoclavable three types of vessels – Single, Double, Bowl vessel. 1.5L ~ 14L available.
- Depth filter & Spin filter type for cell culture available
- Temperature, pH, DO, Air controllable
- PC compatible and data saving

LiFlus GM

Fermentor



FEATURE

- Autoclavable multi lab scale fermentor
- Multi fermentation performance at the same time
- Applicable for microbial fermentation and animal, plant, insect, mammalian. etc cell culture
- Working volume of vessel 250, 350, 500mL and 1, 3, 5L
- Temperature, pH, DO, Air controllable
- PC compatible and date saving

LiFlus SL

Fermentor



FEATURE

- In situ sterilizable fermentation system
- Applicable for microbial fermentation and animal, plant, insect, mammalian. etc cell culture
- Vessel capacity 5L ~ 40L
- Open frame structure and consisted of SUS316L
- Mechanically and electrically polished
- Air driven diaphragm valve
- DC motor Top drive (mechanical seal driving)
- Sterilization by heating system
- PC compatible and date saving

LiFlus SP 30~ 70L
100~1,000L

Fermentor



FEATURE

- In situ sterilizable pilot scale fermentation system
- Applicable for microbial fermentation and animal, plant, insect, mammalian. etc cell culture
- Vessel capacity 30~70L, 100~1,000L
- Open frame structure and consisted of SUS316L
- Mechanically and electrically polished
- Air driven diaphragm valve
- Sterilization by steam generator
- DC motor Top drive (mechanical seal driving)
- PC compatible and date saving
- Head lifting system
- Validation support documentation available(IQ, OQ)

LiFlus SP 2~30Ton

Fermentor



FEATURE

- In situ sterilizable industrial scale fermentation system
- Applicable for microbial fermentation and animal, plant, insect, mammalian. etc cell culture
- Vessel capacity 2t ~ 30t
- Open frame structure and consisted of SUS316L
- Mechanically and electrically polished
- Air driven diaphragm valve
- PC compatible and date saving
- Validation support documentation available(IQ, OQ)

BioTron equipments incorporate the cGMP principles.
 We are capable of IQ/OQ validation consulting and documentation for FDA approval.
 21 CFR Part11 compliant bioprocess system

VS-24SMTi

High Speed Refrigerated Centrifuge



FEATURE

- Max. RPM : 24,000RPM
- Max. RCF : $60,325 \times g$
- Max. Capacity : 1,000ml \times 4 Tubes
- Control : Microprocessor control
- Display : Dual Display, LCD & LED
- Operation mode : 3type / RPM, RCF, $\int w^2 dt$
- Step mode : 5 step programmable
- Program memory : 32 memory
- Drive system : Inverter type
- Acceleration / Deceleration : 10 profiles
- Timer : 99Hr. 59min. & Hold for long run
- Temperature range : -20°C to 40°C
- Dimension : 750 \times 975 \times 900/1250 [H]mm

VS-550

Multi Purpose Refrigerated Centrifuge



FEATURE

- Max. RPM : 15,000RPM (Angle) / 4,500RPM (Swing)
- Max. RCF : $21,130 \times g$ (Angle) / $3,735 \times g$ (Swing)
- Max. Capacity : 1,000ml (250ml \times 4 Tubes)
- Main control : Microprocessor controller
- Display : Back-lit LCD
- Programmability : 9 memory
- Acceleration / Deceleration : 9 profiles
- Temperature range : -20°C to 40°C
- Timer : 99Hr. 59min. & Hold for long run
- Cooling device : Hermetically sealed compressor
- Drive system : Brushless DC motor, Direct drive
- Dimension : 675 \times 545 \times 360 [H]mm

Address : 271-19 Samjeong-dong Ohjeong-gu Bucheon-si, Kyeonggi-do. KOREA

Phone & Fax : Phone (+82-32-672-7779) Fax (+82-32-676-3977)

E-mail : info@visionsci.co.kr URL http://www.visionsci.co.kr

VS-15000CFNII

Micro High Speed Refrigerated Centrifuge



FEATURE

- Max. RPM : 15,000RPM
- Max. RCF : $16,853 \times g$
- Max. Capacity : $1.5\text{ml} \times 24\text{Tubes}$
- Control : Microprocessor control
- Display : LCD display
- Running mode : 3 mode / RPM, RCF, $\int w^2 dt$
- Programmability : 9 memory
- Rotor recognition : Automatic
- Acceleration & Deceleration : 10 Profiles
- Timer : 99min. 59sec. & Hold for long run
- Temp. range : -10°C to 40°C
- Cooling device : Hermetically sealed compressor
- Drive system : Brushless DC motor. Direct drive
- Dimension : $370 \times 600 \times 330$ [H]mm
- Power : 220V, 2.5A, 60Hz

VS-202P

Orbital Shaker



FEATURE

- Capacity : $250\text{ml} \times 25\text{EA}$
- Dimension : $360 \times 360 \times 110$ [H]mm
- Speed : 10 ~ 350RPM
- Motion : Orbital
- Controller : Microprocessor control
- Programmability : 4 step
- Timer : 99Hr. 59min.
- Display : Back-light LCD
- Drive system : Beltless Direct drive
- Noise : Below 30dBa
- Various optional plate is available

VS-1203P1N

Low Temperature Incubator



FEATURE

- Main control : Microprocessor
- Temp. range : -5 °C to 70 °C
- Temp. Accuracy : +/-0.2 °C at 25 °C
- Temp. controller : Digital P.I.D. controller
4 step programming
- Display : LCD display
- Dimension [IN] : 500 × 500 × 1000 [H]mm
- Dimension [OUT] : 650 × 800 × 1730 [H]mm
- Capacity : 250Liter
- Material [IN] : Stainless steel, SUS304
- Material [OUT] : Steel plate with powder coating
- Door : Double door, silicon packing magnetic door
- Inner door : Tempered safety glass door
- Circulation Fan : Internal convectional fan
- Shelf : 3EA, Adjustable type
- Safety : Exclusive over/under temp. protector

VS-9000C

Mini CO2 Incubator



FEATURE

- Main control : Microprocessor control
- Temp. range : Ambient 5 °C to 40 °C
- Temp. accuracy : +/-0.1 °C at 25 °C
- CO2 range : 0 to 10%
- CO2 accuracy : +/-0.1% at 5%
- CO2 sensor : Infra-red sensor
- Humidification : Up to 96% RH at 37 °C
- Dimension [IN] : 330 × 300 × 330[H]mm
- Dimension [OUT] : 410 × 410 × 520[H]mm
- Capacity : 33Liter
- Water Jacket volume : 14Liter
- Door : Double door, Inner glass door
- Shelves : 3 EA (Stainless steel)

Address : 271-19 Samjeong-dong Ohjeong-gu Bucheon-si, Kyeonggi-do. KOREA

Phone & Fax : Phone (+82-32-672-7779) Fax (+82-32-676-3977)

E-mail : info@visionsci.co.kr URL http://www.visionsci.co.kr

VS-8480SRN

Shaking Incubator



FEATURE

- Temp. range : 10 °C to 60 °C
- Temp. controller : Digital P.I.D controller
- Speed range : 10 - 350RPM
- Program : 4 step program
- Display : Back-lit LCD
- Drive system : Beltless direct drive
- Motor : Brushless D.C. motor
- Input : Touch pad
- Working mode : Normal, Step, Frequently, Delay start
- Circulation fan : 5" convection fan × 2EA
- Dimension [IN] : 830 × 540 × 500 [H]mm
- Dimension [OUT] : 1160 × 705 × 985 [H]mm
- Lid : Shock absorber & Silicon packing
- Standard plate : 250ml × 40EA

VS-1321-80

Auto-steam Sterilizer



FEATURE

- Dimension [IN] : 4000 × 630[H]mm
- Dimension [OUT] : 700 × 580 × 950[H]mm
- Capacity : 80Liter
- Heater : 3KW
- Temp. range : Ambient to 121°C
- Temp. Accuracy : +/-1
- Operation pressure : 1.0 to 2.0Kg/CM
- Temp. controller : Microprocessor controller
- Display : LCD display
- Program : 9 program
- Timer : 0 ~ 60 min. & pre appointment function
- Pressure gauge : Digital type, 0 - 5kg/Cm
- Air vent : Automatic selectable
- Water level monitor : two point sensor, Auto refill function
- Safety : Over heat/ Over pressure protector
- Monitor unit : Audible & visible device
- Basket : Standard type, 2EA

SLV-6

VORTEX MIXER



FEATURE

- Fast & Powerful Vortexing (AC Brushless Motor)
- Variable Speed (Touch/Con't)
- Hand-free vortexing capacity 6 × 1.5ml tubes
- Comes with two mixing pads
- 5 Colors to choose from green, purple, blue, orange, & white

SPECIFICATION

- Speed : 100~3,000 rpm
- Size : 150×150×130 mm
- Weight : 1.2 Kg
- Power : 110/220 VAC, 50/60 Hz

SLFVL-3000

FUGE VORTEX



FEATURE

- Vortex & Spin-down simultaneously
- Comes with three different rotors:
 - 12 × 1.5ml tubes
 - 12 × 0.5 ml / 12 × 0.2ml tubes
 - 2 × 0.2ml Strip 8 tubes

SPECIFICATION

- Speed : 3,000 rpm (fixed)
- RCF : Up to 730 × g
- Weight : 1.2 Kg
- Power : 110/220 VAC

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SLRM-2M

INTELLI-MIXER



FEATURE

- Tube rotator + Mixer + Vortex in one
- 18 pre-program, 3 custom program, 2 vortexing modes
- Cold room & Incubator compatible
- 5 different racks are easily interchangeable:
 - SLRM-R1.5 : 30 × 1.5 ml tubes
 - SLRM-R15 : 16 × 15 ml tubes
 - SLRM-R50 : 10 × 50 ml tubes
 - SLRM-R100 : 8 × 1.5 ml / 8 × 2.0 ml / 4 × 15 ml / 2 × 50 ml
 - SLRM-HR : 6 × 30mm Bloating & Hybridization rack

SPECIFICATION

- Speed : 1~99 rpm (1 rpm increment)
- Size : 350 × 120 × 170 mm
- Weight : 1.6 Kg
- Power : 12 VDC, 1 A (external adaptor)

SL3D

MINI 3D SHAKER



FEATURE

- Cold room & Incubator compatible
- Comes with anti-slippery mat

SPECIFICATION

- Speed : 10~30 rpm
- Tilt angle : 7°
- Platform size : 200 × 200 mm
- Max load : 0.5 Kg
- Weight : 1.0 Kg
- Size : 90 × 150 × 80 mm
- Power : 12 VDC, 0.5A (external adaptor)

SLOS-20

ORBITAL SHAKER



FEATURE

- Convenient universal adjustable platform
- Cold room & Incubator compatible
- Digital speed control

SPECIFICATION

- Speed : 50~250 rpm
- Orbit range : 20 mm
- Digital timer : 1~999 min
- Max load : 2.5 Kg
- Weight : 3.9 Kg
- Size : 220 × 190 × 110 mm
- Power : 12 VDC, 1A (external adaptor)

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SLMR-1

MINI ROCKER



FEATURE

- Cold room & Incubator compatible
- Lab space-saver
- Comes with anti slippery mat

SPECIFICATION

- Speed : 8~30 rpm
- Tilt angle : 7
- Platform size : 20 × 20 mm
- Timer : 1min~24 Hrs
- Max load : 0.5 Kg
- Size : 130 × 150 × 90 mm
- Weight : 1.6 Kg
- Power : 12 VDC, 0.5 A (external adaptor)

SLPSU-2T

MICROPLATE SHAKER



FEATURE

- 2mm mixing orbit provides effective mixing
- Cold room & Incubator compatible
- 24 hrs timer is convenient

SPECIFICATION

- Speed : 150~1,000 rpm
- Timer : 1 min~24 hrs
- Orbit range : 2 mm
- Weight : 2.0 Kg
- Size : 180 × 180 × 100 mm
- Power : 12 VDC, 0.5A (external adaptor)

SLMSC-3000

PROGRAMMABLE CENTRIFUGE & VORTEX



FEATURE

- Save time & sample with Spin-Mix-Spin Cycle
- Easy programming with up/down button
- Most effective when sampling less than 100 ul
- Comes with 3 (three) rotors:
 - 12 x 1.5ml tubes
 - 12 x 0.5 ml / 12 x 0.2 ml
 - 2 x 0.2 ml strip 8 tubes

SPECIFICATION

- Speed : 1,000~3,000
- Spin timer : 1 sec ~ 99 min
- Number of Cycle : 1~999
- Weight : 1.8 Kg
- RCF : Up to 1,000 × g
- Vortex timer : 0~20 sec
- Size : 170 × 220 × 120
- Power : 12 VAC, 1A (external ada)

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SLMS-3000

MAGNETIC STIRRER



FEATURE

- Ideal for pH-metry, extraction or dialysis
- Stainless steel housing
- Up to 2 l stirring volume

SPECIFICATION

- Speed : 150~3,000 rpm
- Stirring point : 1
- Plate size : 110 × 110 mm
- Weight : 1.0 Kg
- Size : 120 × 160 × 60 mm
- Power : 12 VDC, 0.5 A (external adaptor)

SLTS-100

THERMO-SHAKER



FEATURE

- Effective for DNA analysis
- Simultaneous display of set and actual temp., time, speed (LCD)
- Comes with two interchangeable blocks
 - 20 × 1.5 ml tubes
 - 20 × 0.5 ml / 20 × 1.5 ml tubes

SPECIFICATION

- Speed : 250~1,400 rpm
- Orbit range : 2 mm
- Timer : 1 min~96 hrs
- Temp rang : Ambient~100 °C
- Size : 200 × 230 × 130 mm
- Weight : 3.5 Kg
- Power : 12 VDC, 4.0 A (external adaptor)

SLTDB-100

DRY BLOCK THERMOSTAT



FEATURE

- Simultaneous display of set & actual temp. and time (LCD)
- Block capacity: 24 × 1.5(2.0) ml / 15 × 0.5 ml / 10 × 0.2 ml

SPECIFICATION

- Temp. range : Ambient~ 100 °C
- Temp. Accuracy : +/- 0.5 °C
- Timer : 1 min~96 hrs
- Block diameter/depth : 130/45 mm
- Size : 210 × 230 × 110 mm
- Power : 110/220 VAC, 50/60 Hz

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- This machine is capable of washing, rinsing, sterilizing through the lamp-style sterilizer, and drying glass equipment used in experiments, substance analysis and examinations through an automated digital program control.

This allows for savings in time and work time for the operator, as well as improving the level of data acquired in experiments.

It is an easy to use cleaner using warm sterilized air during the drying

FEATURE

- The pattern for cleaning can be changed according to the residue on the instruments
- With the built in water filter the rinsing water is free from outside contamination
- In order to increase the level of cleaning, a separate hot water pipe is installed, in the event that hot water is not available, the built in heater can be used to enhance.
- With the built in lighting system you can inspect the nozzle, thereby preventing stoppage.
- An automatic liquid soap supplier is built in, and there is a separate switch to regulate the flow of liquid soap depending on the type of glass used and the degree of contamination
- A variety of baskets can be interchanged to accommodate the different sized instruments.
- The indicator shows the current cycle in the cleaning process
- The cleaner is equipped with an automatic door opener.
- With a built in water tank and pump the level of water provided is maintained at a constant level.

SPECIFICATION

- Controller : PV Display : 5 Digit 7-Segment red LED, Height 20mm
LCD Display : 32 x 128 DOT LCD Indicator
Status Indicator Lamp : Yellow and Green LEDs
Control Method & Input : Micro processor and touchpad
Power unit Lithium battery : For data storage, for

approx. 10 years

- Dimension(W×D×H) : (in size) 600×600×700mm
(out size) 930×760×1850mm
(rotation rack size) Φ 550 mm
- Material : External : Stainless H/L Plate
Internal : Stainless P/L Plate
- Door : Automatic System , Safety Glass
- Washing Pump : Goulds Pump NPE-LC Series
Impellor Material : SUS #304
Capacity : 60 ~ 160kg/min , H Max. : 40M , RPM : 3500rpm
Pressure : 2.2 ~ 3.3kg/cm²
Temperature : 100°C below
- Drying System : Heater : Infrared Ceramic Heater 1.5KW
Drying Fan Motor : Silocco Type , Forced Convection
Drying Ait Filter : Nylon
Air Drying : External
Drying Temperature : 90°C
- Water Heater : SUS #316 Pipe Heater 5KW
Boiler for hot water supply
- Power Consumption : 8.6KW (Max. : 6kw , Min. : 2.6kw)
- Water Supply : Hot and Cold Water (Pressure 0.5 ~ 2.5kg/cm²)
- Washing Method : Power Jet Spray
- Chamber : Up : Jet Rack
Down : Rotation Rack
- Drain Pump : Automatic Control and Manual Control
- Detergent Pump : Mechanical Magnetic Pump 30cc/Per cycle
- Water Consumption : 24 ~ 190 l / Pre Cycle
- Program Pattern : Pre Wash → Wash → Rinse → Dry → End (7-Pattern)
- Sterilization : U.V Ray 15W 2EA
- Interface : RS - 485
- Power Supply : 3 Phase 220V 60Hz

US - VM

Vortex Mixer



- Vortex Mixer is the product, which is designed to test the results such as through using tubes, tiny flask, etc.
 Mixing Plate has 5 holes in order to mix multiple test tubes simultaneously, it is designed to pursue convenience and speed of laboratory work.

FEATURE

- A variety of tube can be used without changing mixing plate, and the plate of Vortex Mixer is too soft, flexible, and resistible to be damaged easily.
- Through choice of switch button between full or touch, a researcher is able to proceed his experiment in terms of 3 options of operation of the product.
- Vortex Mixer is equipped with a speed controller, so a researcher can control the speed of his test work by virtue of sample in order to get more powerful results of experiment in lab.
- Vortex Mixer has suction cup, with a view to trivializing vibration while the product being operated.

SPECIFICATION

- Speed Range : 1000 ~ 3500 rpm
- Mixing Plate : Φ 90mm
- Mixing Method : Vibration Type
- Plate Stroke : 4mm
- Power Consumption : 0.5A
- Power Source : 220V/60Hz
- Use Container : Test Tube and Flask

TW - SC - D/DS

Steam Aging Test Bath



TW - SC - DS



TW - SC - D

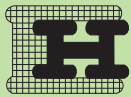
- Testing aging or quality status of any apparatus, this more advanced test bath employs digital mode in setting and indicating Temperature to develop operation, temperature reproducibility, and safety more than ever.

FEATURE

- The temperature control uses a digital format, reducing the level of error and enhancing the ease of operation and maintenance of required temperature
- The water supply and level is adjusted automatically, allowing for longer and safer use of the steam aging machine
- With the Auto Start, Auto Stop Timer it can be operated by simply inputting the temperature and time setting.
- The entire product is made of stainless steel.
- There is a viewing window in the front of the machine.
- This product is a steam aging tester appropriate for the Older Bility Test (Mil-Std-883C) of semi-conductors.

SPECIFICATION

- Temp. Range : Amb. +5 $^{\circ}$ C ~ 95 $^{\circ}$ C
- Temp. Control : Digital Set Readout PID Control
- Temp. Stability : $\pm 0.3^{\circ}$ C at 90 $^{\circ}$ C
- Dimension(W \times D \times H) : (in size) 685 \times 285 \times 240mm
 (out size) 965 \times 345 \times 475mm
- Material : All SUS #304
- Timer & Buzzer : auto start, auto stop, 99.9/hr, digital display
- Heater : 1KW \times 4
- Safety Device : Power Beraker Switch
- Power Source : AC 100 or 220V/60Hz



EH-HB-140E, 140L

Hydraulics Bench



EH-HB-140E
EH-HB-140L

FEATURE

- Self contained and fully mobile service unit for the water circulation and flow rate measuring support for Eunha Fluid mechanics and Hydraulics Instruments : - Bernoulli's theorem apparatus
- Flow measuring apparatus
- Orifice and jet apparatus & etc.

Continuous flow monitoring and the exact flow rate measurement.

An open channel and ample working space on the bench top for various experiment.

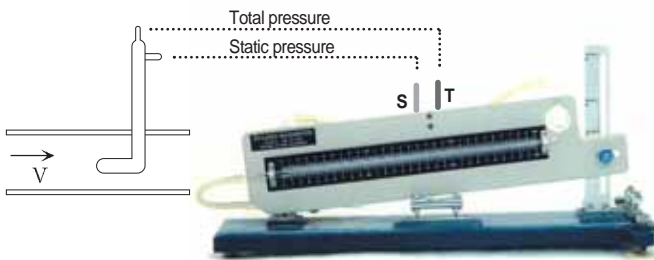
Supplied as standard Accessories, 3 type of weirs.

SPECIFICATIONS

MODEL	EH-HB-140E	EH-HB-140L
Open channel	23W×17H×80L(cm)	70W×100H×120L(cm)
Pump & motor	Magnetic coupling pump	
	Total head(Max) : 8m	
	220V(60Hz)	
	90(Out)~170(In)W	150(Out)~290(In)W
	70 ℓ/min (Max)	110 ℓ/min (Max)
Sump tank	Capacity : 150 ℓ(Max)	
Volumetric measuring tank	35 ℓ(Max)	
Sight tube & scale	0~40 ℓ(Max)	
Weight	110kg	131kg
Pressure gauge (delivery)	0~2 kg/cm ²	
Flow meter	4~40 ℓ/min (Max)	
Dimensions	70W×100H×120L(cm)	70W×100H×160L(cm)

EH-IM-100

Inclined Manometer



SPECIFICATIONS

Measuring range	100 (3:1)	60 (5:1)	30 (10:1)	15 (20:1)
Differential pressure (mmAq)	0~100	0~60	0~30	0~15
Minor divisions (mm)	0.33	0.2	0.1	0.05
Full scale range	300mm			
Velocity (Max.)	40m/sec			
Gauge fluid	Alcohol or Water			
Weight (Approx.)	3kg			
Dimension (Approx.)	520L×240H×160W (mm)			
* Option	Pitot tube			

EH-FVC-15

Flow Visualization Apparatus



FEATURE

- Visualize the flow patterns associated with submerged models in open channel. The silent flow to wide open channel (10 x 150 x 700 mm) of one side observation is obtained through pass round glass marbles. Array of 10 injection needles makes sharp parallel lines. Acceptable not only the 6 shaped supplied models but any shaped self made models also.

SPECIFICATIONS

Dye injection needles	10 ea.
Dye reservoir capacity	0.4 ℓ
Channel (Acryl)	Width - 10mm, Depth - 150mm, Length - 700mm
Water head tank	180W×180D×400H(mm)
Flow rate (Max.)	3.5 ℓ /min
Undershot weir	10mm (wide)
Dimensions (Approx.)	1030L×800H×350W (mm)

Address : 13-450 Seongsu1ga-dong Seongdong-gu Seoul. KOREA
 Phone & Fax : Phone (+82-2-463-0407) Fax (+82-2-462-0971)
 E-mail : ykw@ehf.co.kr URL http://www.ehf.co.kr

Model EH-JIM-M8

Jet Impact



FEATURE

- Demonstrate the force of water jet impinging to stationary object.
- For the best performance, connect to Eunha Hydraulics bench(EH-HB-140/140E) is essential.
- On the upper end of this stem is mounted a weight container.
- The dead weight of the moving parts is counter-balanced by a compression spring.
- Total of three targets are provided; a flat plate, a 120 degree cone and a hemispherical cup.

SPECIFICATIONS

Nozzle diameter	8mm
Target (PVC)	Flat plate : 35 ϕ Cone type : 40 ϕ (120 degree cone) Hemispherical cup : 40 ϕ
Tank (Cylindrical)	150 ϕ \times 300H (mm), Transparent acryl
Flow rate	20 ℓ /min (Max.)
Drain hole (Outlet)	25A
Dimension	250 ϕ \times 50H (cm)
Standard accessories	<ul style="list-style-type: none"> • Weight : 100gr - 2 ea, 50gr - 2 ea, 20gr - 3 ea, 10gr - 3 ea, 5gr - 2 ea. • Target : Flat plate, Cone (120 Degree), Hemispherical cup - 1 ea. • L-Wrench : 5/32" - 1 ea.

EH-FVO-G

Flow Measuring Apparatus



FEATURE

- A serial connection of Venturi, Orifice meter and 90 degree Elbow pipe with proprietary rotameter with tappings of prior or after each of devices. The 9 lane of vertically installed manometer tube is connected to each of devices so that they can shows energy loss of flow water. Determine of flow rate and pressure drops using a Venturi Meter, an Orifice Plate, 90 degree Elbow pipe and a Rotameter and Demonstrate the Bernoulli' s Equation. Measure the head loss across the devices of a sudden enlargement and sudden reduction. For the best performance, connect to Eunha Hydraulics bench(EH-HB-140/140E) is essential.

EH-VTX-400

Vortex Apparatus



SPECIFICATIONS

Rotating vessel	Transparent acryl
	Diameter (O.D) : 400mm (Approx)
	Deep : 190mm (Approx)
Spiral perforated cylinder	Transparent acryl
	Diameter (O.D) : 300mm (Approx)
	Deep : 190mm (Approx)
Speed Variation	DC voltage regulator : rpm 140 (Max)
	(Inlet voltage : AC 220V, 70W, 60Hz)
Probe, linear scale	Horizontal : 400mm
	Vertical : 180mm
Dimension (Approx.)	600W \times 700H \times 450L(mm)
Weight	25.5kg



EH-OJ-400H

Orifice and Jet Apparatus



FEATURE

- Scaled head tank with height and water level adjustable overflow unit.
- 3 sets of vertically attached moveable orifice of different diameter (3, 6, 9mm), The 10 needles represent the detail of trajectory of flow jet.
- Two magnetic strips hold graph paper on the support back board.
- Connect to Eunha Hydraulics bench(EH-HB-140/140E) is highly recommended.

RANGE OF EXPERIMENTS

- Experimentally determine the velocity coefficient for small orifices, 3, 6 and 9mm dia.
- Calculate the coefficient of discharge for a small orifice under the flow of constant and varying head.
- Demonstrate the Torricelli's law for the flow energy.

EH-FO-13M

Flow Through an Orifice



SPECIFICATIONS

Standard orifice	13mm Dia.
Head (Max.)	390mm
Cylindrical tank (Acryl)	180 ϕ \times 40H (cm)
Inlet pipe (With dissipator)	19mm
Overflow pipe (Variable head)	22mm
Overflow tank (Acryl)	100D \times 110W \times 270H (mm)
Flow rate (Approx.)	18 ℓ /min
Traverse mechanism	Lead screw with adjusting nut calibrated 1/10(mm) per division (With pitot tube)
Dimension (Approx.)	340 ϕ \times 800H (mm)

FEATURE

- Full analysis of Vertical water jet and orifice flow.
- Integral pitot traverse tube.
- Direct measurement of total head, head loss and diameter of jet.
- Determination of the actual discharge coefficient by measuring the flow rate.
- For the best performance, connect to Eunha Hydraulics bench(EH-HB-140/140E) is essential.

EH-FF-2000

Fluid Friction Apparatus



FEATURE

- Total 14 devices with manometer tabs are arranged in a single board.
- Eenergy loss experiments due to the friction of fluid flows of any conditions are performed accurately.
- Multiple lanes of manometers, two u-tube mercury and three pair of water manometer measures the pressure head of 5 devices simultaneously.
- Eunha Hydraulics bench(EH-HB-140/ 140E) included.

RANGE OF EXPERIMENTS

- Fluid Friction in a smooth bore pipe
- Head loss due to friction & pipe fittings
- Head loss due to Sudden Contraction & Enlargement
- Fluid Friction in a roughened pipe
- Flow measurement using differential head (Orifice, Venturi, Pitot-tube)

EH-HEW-1500

Heat Exchanger

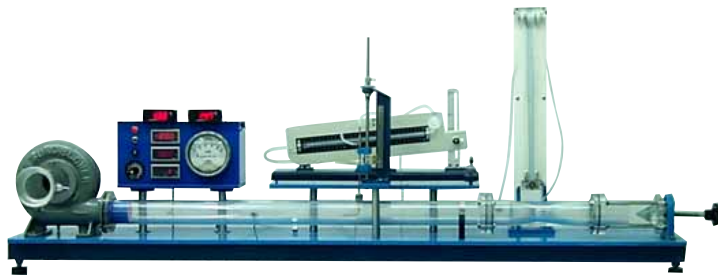


SPECIFICATIONS

Heat exchanger (Concentric tube)	Tube (Copper) : 16mm O.D. Wall Thickness : 1.0mm Effective length : 1.5m
Working temperature	80°C (Max.)
Temperature controller	Digital, Accuracy : ±0.5°C
Temperature indicator (Digital)	6 Points (6ea.) Accuracy approx. : ±0.5°C Thermocouple : Pt 100Ω
Circulating pump	Magnetic coupling pump Capacity : 7 ℓ/min Max. temp : 80°C
Heater (Immersion type)	220V(60Hz), 2.4kw
Heater regulator	Thyristor controlled
Sump tank	Capacity : 24 ℓ (Max.), Stainless steel
Flow meters	1~7 ℓ/min (Hot water), 1~7 ℓ/min (Cold water)
Dimensions	125H×85W×60D (cm)

EH-FTR-C50

Fan Test Rig



SPECIFICATIONS

Centrifugal	Flow rate : 200~250m ³ /h Rotational speed : 0~3600rpm Drive motor : DC 90V, 0.1KW
Duct (In)	50mm
Flow rate control	Throttle Valve
Flow rate measuring detector	Venturi
Velocity measuring detector	Pitot tube (with Vertical Traverse)
Pannel meters (Control Box)	DC volt meter & DC Ampere meter (Digital) Temperature Indicator, Tacho meter (Digital) Differential pressure gauge (Analog) Water Manometer (400mm)
※ Option	Inclined Manometer

EH-TFC-200

Tilting Flow Channel



SPECIFICATIONS

Working section (Channel)	2200L×250H×100W (mm)
Bed slope (Adjustable)	1/120 ~ 5/120cm
Flow meter (Range)	15~150 ℓ/m
Pump, Motor	220V(60Hz), 400W 160 ℓ/min (Ht=7m)
Sump tank (PVC)	300 ℓ (Max.)
Overall dimensions	Height : 180cm (To top of point gauge) Width : 50cm Length : 310cm
Standard accessories	Hook & Point gauge : 0~180mm Weir • Sharp crested weir • Ogee weir • Broad crested weir • Crump weir Adjustable sluice gate

- Demonstrate flow behaviors over the various weirs, sluice and slope in a uniform flow of open channel.

In case of quality improvement control specification can be changed without notification and please make the detailed inquiry for the particular product of interesting.

J-300S/300M

Forced Convection Drying Oven



Model		J-300S	J-300M
Type		Forced convection system	
Overall size (W×D×H) m/m		580×600×820	730×650×870
Chamber size (W×D×H) m/m		450×450×450	600×500×500
Capacity		191	150
Temperature	range	Amb+5℃~260℃	
	accuracy	±0.5℃at 200℃	
	uniformity	±1.0℃at 200℃	
	controller	P.I.D controller	
regulator		SSR type	
Thermocouple		K type (CA)	
Heater (Incoloy sheath)	W	1,100	1,200
Circulation fan and motor	Hp	1/36	
Insulation		Glass wool	
Observation window		Reinforced glass	
Safety device		ELB or NFB, overheating protection	
Shelves		3ea	3ea
Material	interior	Stainless steel plate	
	exterior	Steel plate with powder coated finish	
Power source		AC 220V 60Hz 1Ø	
Net Weight	kg	51	64

J-100S/100M

Gravity Convection Incubator



Model		J-100S	J-100M
Type		Gravity convection system	
Overall size (W×D×H) m/m		580×600×820	730×650×870
Chamber size (W×D×H) m/m		450×450×450	600×500×500
Capacity		191	150
Temperature	range	Amb+5.0℃~60.0℃	
	accuracy	±0.5℃	
	uniformity	±1.0℃	
	controller	P.I.D controller	
regulator		SSR type	
Thermocouple		pt 100 ohms	
Heater (Incoloy sheath)	W	200	300
Timer		Electronic timer with delay timer	
Observation door		Safety clear glass inner door	
Safety device		ELB, overheating protection	
Shelves		3ea	3ea
Material	interior	Stainless steel plate	
	exterior	Steel plate with powder coated finish	
Power source		AC 220V 60Hz 1Ø	
Net Weight	kg	46.5	59.5

J- SIS/SIL SIS-R /SIL-R

Shaking Incubator



Model		J-SIS	J-SIL	J-SIS-R	J-SIL-R
Type		Reciprocating type		Rotation type	
Overall size (W×D×H) m/m		600×890×800			
Chamber size (W×D×H) m/m		540×540×350(130/350)			
plat-form size		m/m 450× 450			
Temperature	range	Amb+5.0℃-60.0℃	0℃-60.0℃	Amb+5.0℃-60.0℃	0℃-60.0℃
	accuracy	±0.1℃			
	uniformity	±0.5℃			
	controller	P.I.D controller			
regulator		SSR type			
Thermocouple		pt 100 ohms			
Heater (Ni-Cr)	W	600			
Capacity	ml	500 erlenmeyer flask×16ea			
Shaking speed	rpm	20-300			
Refrigeration compressor	Hp	No	1/4	No	1/4
Material	interior	Stainless steel plate (STS#304)			
	exterior	Steel plate with powder coated finish			
Safety device		ELB, overheating protection			
Power source		AC 220V 60Hz 1Ø			
Net weight	kg	51.3	72.2	51.3	72.2

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J- RHC1/RHC2
 RHC3/RHC4

Constant Temp & Humidity Chamber



Model		J-RHC1	J-RHC2	J-RHC3	J-RHC4
Overall size (W×D×H) m/m		1,170×680×1,460			
Chamber size (W×D×H) m/m		500×500×600			
Capacity l		150			
Temperature	range	A type -20.0℃~+60.0℃ B type -20.0℃~+150.0℃	-30.0℃~+60.0℃ -30.0℃~+150.0℃	-50.0℃~+60.0℃ -50.0℃~+150.0℃	-70.0℃~+60.0℃ -70.0℃~+100.0℃
	accuracy	±0.3℃ ~at 37.0℃			
	controller regulator	P.I.D controller or programmable controller			
Humidity	range	35%~95%			
	accuracy	±2.0% at 40.0%			
	controller regulator	P.I.D controller or programmable controller			
Thermocouple		Pt 100 ohms			
Heater(sheath) W		4,500			
Temperature down-up-time		Amb+5.0℃~ -20.0℃(45min) Amb+5.0℃~ -70.0℃(100min)	Amb+5.0℃~ -50.0℃(70min)		Amb+5.0℃~+60.0℃(45min)
Refrigerator	condenser system	One stage (air cooling)		Two stage (air cooling)	
	compressor	Hermetically type 1/3-2×1ea		Hermetically type 1-3×2ea	
Insulation		Glass wool			
Observation window		Reinforced glass			
Safety device		Overload prevent, alarm, ELB, water empty, current leak over current			
Shelves		3ea			
Material	interior	Stainless steel plate(STS #304)			
	exterior	STS #304 or SS #400 with powder coated finish			
	sight glass	Yes		Heater being thin curtain (For defrosting)	
Power source		AC220V 60Hz 1Ø or AC220V 60Hz 3Ø			
Net weight kg		230			

J-MPB

Multi-Purpose Water Bath



Shaking water bath
(equipped with shaking app.)



Shaking app. & control head



Soxhlet ring hole
& clamps holder



Circulating apparatus

FEATURE

• Versatile usability and Application

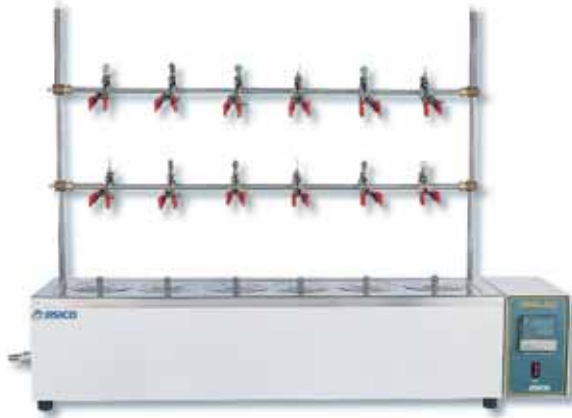
This equipment is very powerful and economic with versatile usability and applications. By attaching or detaching the modular functional parts such as immersion circulating bath, soxhlet water bath and shaking water bath to the basic unit, everyone can use this instrument according to one's purpose.

※ Certified C,E mark (D.N.V)

Model		J-MPB
Shaking type		Reciprocating type
Overall size (W×D×H) m/m		820×540×440 (330/140)
Bath inner size (W×D×H) m/m		580×380×220
Capacity l		48.5
Formation (optional accessories)	water bath	Basic set
	circulating bath	Control head
Function	soxhlet bath	Ring hole 8ea, Clamp holder
	shaking bath	Shaking apparatus
Temperature	range	Amb+5℃~95℃
	accuracy	±0.1℃
	uniformity	±0.5℃
Shaking	controller regulator	PID controller or programmable controller
	range	SSR type
	controller	20~250 r.p.m
Shaking	display setting	Feed-back control system
	display setting	Digital display
Stroke m/m		30
Heater W		3000
Motor	circulating W	60
	shaking (brushless) W	20
safety device		ELB or NFB overheating protection
Material	interior	stainless steel plate
	exterior	stainless steel plate
Power source		AC220V 60Hz 1Ø

J-BS3D

Soxhlet Water Bath



FEATURE

- Used for extracting lipids, the upper parts and bath are made of stainless steel plate. Both PID and digital types are optionally available.

Model	J-BS3D	
Type	6hole opening type	
Bath inner size (W×D×H) m/m	890×170×130	
capacity	19	
Temperature	range	Amb+5℃~100℃
	accuracy	±0.1℃
	controller	P.I.D controller
	regulator	SSR type
Thermocouple	pt 100 ohms	
Heater (sheath)	W 1,500~2,000	
Material	interior	Stainless steel plate
	exterior	Steel plate with powder coated finish
Power source	AC 220V 60Hz 1Ø	
Net weight	kg	20.7

J-FM2/FM3/FM4

Electric Muffle Furnace



Model	J-FM2	J-FM3	J-FM4
Overall size (W×D×H) m/m	410×550×525	560×605×660	690×740×
Chamber size (W×D×H) m/m	150×300×100	250×350×160	1200
Capacity	4.5	14	350×450×400
Temperature	range	Amb+5℃~-1,200℃(Max) 63	
	using temp.	300℃~1,000℃	
	controller	P.I.D autotuning controller	
	regulator	SSR type	SSR or SCR
Thermocouple	K type (CA)		
Heater capacity	W 3,000	4,500	
Heating element	Kanthal AF		14,000
Insulation	Fiber. ceramic		
Power source	AC220V 60Hz 1Ø		AC220V 60Hz 3Ø
Net Weight	kg 47.35	81.6	

J- CBW1/CBW2
CBW3/CBW4

Clean Bench / Laminar Flow Cabinet



FEATURE

- Two types available : horizontal type and vertical type. Horizontal type is used for jobs where just clean air is required. Vertical type is used for jobs where ventilation of gases generated out of the experiments is required.

Model	J-CBW1	J-CBW2	J-CBW3	J-CBW4
Type	Vertical type		Horizontal type(For clean room)	
Overall size (W×D×H) m/m	880×790/820×1,900	1,340×790/820×1,900	880×790/820×1,670	1,040×790/820×1,670
Inner size (W×D×H) m/m	780×630×720	1,240×630×720	780×570×660	1240×570×720
Main control	Full digital microprocessor control with membrane touch type			
Main filter	HEPA filter(99.97% efficient on particle 0.3µ)			
Pre filter(Nylon)	No		Yes	
FLlamp	W 20×1ea	40×1ea	20×1ea	40×1ea
Germicidal lamp	W 20×2ea	40×2ea	20×1ea	40×1ea
Working table	Stainless steel plate			
Air flowing volum m ³ /min	16	32	16	32
Velocity m/sec	0.5 ± 0.2			
Lux	More than 1,200			
Vibration(Body)	Average below 1.5µ			
Consumption power	W 200	400	200	400
Power source	AC220V 60Hz 1Ø			

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J- NAS3/NAS4
 NAS5/NAS6

Automatic Autoclave, Sterilizer



FEATURE

- Adopting four arm holder, one touch type switch opens and closes the lid.

Model	J-NAS3	J-NAS4	J-NAS5	J-NAS6
Overall size (W×D×H) m/m	650×450×	700×500×	750×550×	800×600×
Inner size (∅×H) m/m	300×1650	350×1650	400×1650	450×1650
Capacity l	45.9	62.5	81.6	103
Method sterilization	High pressure system			
Using temperature	121℃			
Using pressure kg/cm ²	1.2			
Temperature regulator	SSR type			
Temp. setting method	Digital setting and display			
Internal air exhaust	About 20 minutes			
Heater (sheath) W	3,000	3,500	4,000	4,500
Timer	Digital setting and display (99 hr 59 min)			
Pressure gauge kg/cm ²	Mechanical type 0~5			
Basket (STS #304)	2ea			
Power source	AC220V 60Hz 1∅			

J-924/924A

Glove Box



Model		J-924	J-924A
Body	Overall size (W×D×H) m/m	800×580×850	800×580×850
	Using size (W×D×H) m/m	790×570×750	790×570×750
	Material	Stainless steel plate	
	Window (W×D×T) m/m	Safety clear glass 670×580×5	
	Valve	Gas valve×1ea	
	Lamp W	15×1ea	
	Consents	Double consents×1ea	
	Glove	2ea	
Interchange box	Overall size (W×D×L) m/m	206×206×330	
	Inner size (W×D×L) m/m	200×200×300	
	Material	Stainless steel plate (STS #304)	
	Valve	Gas valve : 3ea (STS #304)	
	pressure gauge	1ea	
Photohelic pressure swich/gauge U.S.A		No	Yes

J-USR/NSS

Shaker



FEATURE

- Two models of J-USR and J-NSS are designed mainly for culturing microbes and further for culturing, mixing, extracting and manipulating microbiological and plant tissues.

Model	J-USR	J-NSS
Shaking type	Rotation type	Slide
Overall size (W×D×H) m/m	300×350×120	
Plat-form size m/m	300×300	
Stroke m/m	10-35	
Shaking speed rpm	35-250	
Motor Hp	1/20	
Capacity ml	100×16ea/250×9ea/500×6ea	
Power source	220V 60Hz 1∅	
Equipped function	Speed controller and timer	
Net weight kg	23	

J-TUS

Triple Shaker



FEATURE

- With shaking motions of stroking, rotating and S movement in accordance with applications such as culturing of plant tissues and microbial cells, and as mixing, melting, manipulation and antibody reaction of a material, the triple shaker is multipurposed.

Model	J-TUS	
Shaking type	Reciprocating, rotation & S movement	
Overall size (WxDxH)	m/m	450×380×150
Plat-form size (WxDxH)	m/m	400×300
Stroke	m/m	10~40
Shaking speed	rpm	35~250
Capacity	ml	250×15ea
Limited weight of load	Approx 8kg (contain with rack)	
Power source	220V 60Hz 1Ø	
Equipped function	Speed controller and timer	
Net weight	kg	20.3

J-MF

Vortex Tube Mixer



FEATURE

- This apparatus used in clinical and biochemical laboratories mixes small quantity of specimen efficiently. Changing the head makes it possible to use for tube mixing and flask mixing.

Model	J-MF	
Overall size (WxDxH)	m/m	125×110×130
Speed range	rpm	3,000(Max)
Motor	Hp	1/15
Material	Aluminum die casting	
Power source	AC 220V 60Hz 1Ø	
Net weight	kg	2.6

J-MS/MS4

Hot-Plate Magnetic Stirrer



J-MS4



J-MS

FEATURE

- Heating and stirring is performed at the same time.
- Top-plate is aluminum die casting coated with teflon or ceramic, very resistant to corrosive chemicals.
- Either heating and shaking operation is separable or can be performed at the same time.
- Four or six heating stirrers are built in row to perform multiple tests simultaneously.

Model	J-MS	J-MS4
Size (top-plate)	m/m 200×200	Ø150×4ea
Temperature(surface)	350℃(Max)	
Speed	rpm 2,000(Max)	
Heater(sheath)	W 800	300×4ea
Material (top-plate)	Aluminum die-casting	
Equipped function	Temp. & speed controller	
Power source	AC 220V 60Hz 1Ø	
Net weight	kg 4.25	11.7

J-893

Sieve Shaker



FEATURE

- The shaker is Ro-tap type which has excellent separating capabilities by rotating very gently.

Model	J-893
Shaking type	Ro-tap type
Overall size(WxDxH) mm	680×530×670
Ro-tap speed rpm	240
Hammer speed(up/down) rpm	130
Motor Hp	1/4
Seive Q.ty	Ø8"×2"H×6ea
Sieve size	Ø8"×2"H
Timer min	60
Power source	AC 220V 60Hz 1Ø
Net Weight kg	74.1

※ Accessory option : Sieve

J-VSS

Vibratory Sieve Shaker



Model	J-VSS	
Shaking type	Vibration type(up/down)	
Overall size(WxDxH) mm	360×460×620(170/450)	
Vibration control	Hz control	
Controller (vibration time)	Digital setting & display	
Vibration mode : 4mode	Interval vibratory motion :3.2.1sec Continuous & vibrative motion	
The number of vibrations	130 a time/min	
Capacity(sieve) (Ø×H)	8"×2"×6ea	
Marterial	cover	Aluminum casting
	interior	Steel casting
	extreior	F.R.P
Power consumption W	500	
Power source	AC 220V.60Hz, 1Ø	
Net weight kg	23.5	

※ Accessory option : Sieve, Sieveing ring, Rubber ball

J-WD/WD-1/WD-2

Water Distilling Apparatus



Model	J-WD	J-WD-1	J-WD-2
Heater(sheath) w	3,000	6,000	9,000
Material	All stainless steel plate		
Capacity l/hr	4	8	12
Power source	AC 220V 60Hz, 1Ø		
Net weight kg	6.5	11.7	14.0

- ※ Classic stills consist of a double-walled evaporator
- ※ External constant-level device to maintain proper water level
- ※ Removeable cover for easy cleaning

HS-2005S

Rotary evaporator



FEATURE

- 6 Types of flasks ranging from 50ml to 2000ml
- HAHNVAPOR is equipped with speed control. and RPM valve is displayed in digital.
- Digital Water bath covers ambient temperature up to 100 °C
- If water level at heating bath goes down, power will be cut off automatically by sensor.
- Speed control 20 ~ 280rpm
 - Slant condenser
- Standard distillation`
 - Continuous supply device for large capacity
- Dimensions(W×D×H):720×340×510mm
- Power source: AC 220V 50/60Hz 2.5A
- Heating bath power wattage:1000W 4.5A • Weight:20kg

HS-2005V

Rotary evaporator

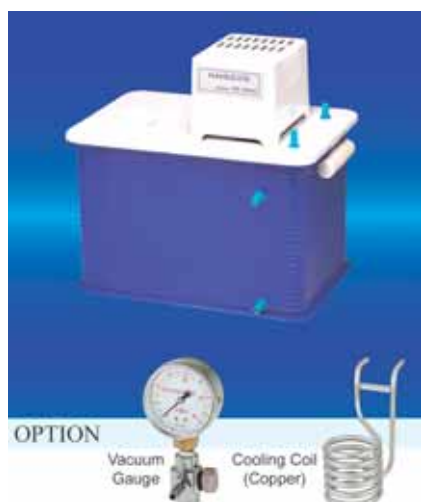


FEATURE

- 6 Types of flasks ranging from 50ml to 2000ml
- HAHNVAPOR is equipped with speed control. and RPM valve is displayed in digital.
- Digital Water bath covers ambient temperature up to 100 °C
- If water level at heating bath goes down, power will be cut off automatically by sensor.
- Speed control 20 ~ 280rpm
 - Standard distillation
- Continuous supply device for large capacity
 - Central connection
- Dimensions(W×D×H):610×340×730mm
- Power source: AC 220V 50/60Hz 2.5A
- Heating bath power wattage:1000W 4.5A • Weight:21kg

HS-3000

Electric aspirator



FEATURE

- Excessive consumption of water may be reduced that can happen when city piped water is used.
- Utilizing water pressure gained by motor pump, two Aspirator can be installed.
- By preventing reflux, vacuum filtration and vacuum distillation are possible.
- Applicate to Rotary vacuum evaporator.
- Cooling coil may be installed to prevent loss of vacuum effect due to rise in temperature of water(option)
- Vacuum controller may be equipped for checking degree of vacuum status during operation
- Bath made of polypropylene is strong and lasts long.

SPECIFICATION

- Pump capacity: 18 ℓ /min×2EA
- Motor power:150W
- Safety: Fuse
- Dimensions(W×D×H):380×265×360mm
- Bath capacity:13 ℓ
- Material of bath: Polypropylene
- Power source: AC 220V 50/60Hz 0.7A
- Weight: 7kg

HS-0245

Vacuum controller

FEATURE

- Solid state module maintains precise control($\pm 3\%$) of the system vacuum by cycling the pump on/off as required.
Adjustable for any level between 1mmHg and 760mmHg
- Power source: AC 220V 50/60Hz
- Dimensions(W×D×H):160×130×95mm
- Weight: 1.7kg



HS-3003

Cold trap bath

FEATURE

- When it requires cold trap which needs extremely low temperature.
- Solvent vapor trap to prevent contamination of vacuum pump by lubricating oil.
- Quick freezing of sample for freeze-drying
- Quick freezing for reaction stop of enzyme.

SPECIFICATION

- U Type glass trap to cover
- Temp. range: Down to -42°C
- Cooling system: one -step refrigerator
- Defrost: Yes
- Bath size: $\Phi 220 \times 210(6 \ell)$
- Temp. setting and reading: Digital
- Compressor: 1/2HP
- Dimensions(W×D×H):325×410×610mm
- Power source: AC 220V 50/60Hz 2.5A
- Weight: 26kg



HS-3005N

Cooling water Circulator(Bath)

FEATURE

- As a source of cooling water to Rotary evaporator and fermenter and as a heat-emitting equipment it supplies sufficient quantity of cooling water as highly efficient chemical pumps are installed and does not contaminate other instruments as it does not get corroded.

SPECIFICATION

- Temp. controller range: Down to $\sim -21^{\circ}\text{C}$
- Temp. Indicator: Digital Display
- Refrigerator unit: 343W(295kcal/h)
- Circulator pump: Magnet 40W
Max. flow 19 ℓ /min
- Bath size: $\Phi 220 \times 210(6 \ell)$
- Overall dimensions(W×D×H):325×410×520mm
- Power source: AC 220V 50/60Hz 1.8A
- Weight: 26kg



P.NIX Power Series (RO & UP)

Water Purification System



FEATURE

- Certified CE, ISO 9001, GD, QD mark
- Built-in RS 232C Port
- Built-in Volumetric dispensing function

SPECIFICATION

	P.NIX Power I	P.NIX Power II	P.NIX PowerIII
Product (RO, UP)	Max. 18L/Hr	Max. 28L/Hr	Max. 38L/Hr
Water Quality	-Pure Water : 0.0 to 30.0 μ s/cm -Ultra Pure : Up to 18.3M Ω -cm		
Controller functions	1) Self test for external & internal system 2) Auto cleaning and monitoring function 3) Filter exchange indicator 4) Auto monitoring of Feed water quality		
Dimensions(W×D×H)	400×567×500mm		
Power	230V(110V on request), 50/60Hz, 60W		

P.NIX RO Series

Pure Water System



FEATURE

- Certified CE, ISO 9001, GD, QD mark
- Built-in RS 232C Port
- Built-in Volumetric dispensing function

SPECIFICATION

	P.NIX RO 180	P.NIX RO 280	P.NIX RO 380
Product (RO)	Max. 18L/Hr	Max. 28L/Hr	Max. 38L/Hr
Water Quality	-Pure Water : 0.0 to 30.0 μ s/cm		
Controller functions	1) Self test for external & internal system 2) Auto cleaning and monitoring function 3) Filter exchange indicator 4) Auto monitoring of Feed water quality		
Dimensions(W×D×H)	295×500×465mm		
Power	230V(110V on request), 50/60Hz, 60W		

P.NIX UP System

Ultra Pure Water System



FEATURE

- Certified CE, ISO 9001, GD, QD mark
- Built-in RS 232C Port
- Built-in Volumetric dispensing function

SPECIFICATION

	P.NIX UP 900
Product (UP)	1.2L/min
Water Quality	-Ultra Pure : Up to 18.3M Ω -cm
Controller functions	1) Self test for external & internal system 2) Auto recirculation function 3) Filter/UV Lamp exchange indicator 4) Auto monitoring of Feed water quality
Dimensions(W×D×H)	295×500×465mm
Power	230V(110V on request), 50/60Hz, 60W

New Human Power Series (RO & UP)

Water Purification System



Selectable colors !

FEATURE

- Certified CE, ISO 9001, GD, QD mark
- Programming by 2 steps of water quality for the filter exchange.

SPECIFICATION

the Filter-Pack(Molding Type)

	New Human Power I	New HumanPower II	New Human Power III
Product (RO, UP)	Max. 18L/Hr	Max. 28L/Hr	Max. 38L/Hr
Water Quality	-Pure Water : 0.0 to 30.0 μ s/cm -Ultra Pure : Up to 18.3 Ω -cm		
Controller	1) Self test for external & internal system 2) Auto cleaning functions 3) Filter exchange indicator		
Dimensions(W×D×H)	400×567×500mm		
Power	230V(110V on request), 50/60Hz, 60W		

New Human RO Series

Pure Water System



Selectable colors !

FEATURE

- Certified CE, ISO 9001, GD, QD mark
- Programming by 2 steps of water quality for the filter exchange.
- Very simple to exchange the Filter-Pack(Molding Type)

SPECIFICATION

	New Human RO 180	New Human RO 280	New Human RO 380
Product (RO)	Max. 18L/Hr	Max. 28L/Hr	Max. 38L/Hr
Water Quality	-Pure Water : 0.0 to 30.0 μ s/cm		
Controller	1) Self test for external & internal system 2) Auto cleaning functions 3) Filter exchange indicator		
Dimensions(W×D×H)	400×567×500mm		
Power	230V(110V on request), 50/60Hz, 60W		

New Human UP System

Ultra Pure Water System



Selectable colors !

FEATURE

- Certified CE, ISO 9001, GD, QD mark
- Programming by 2 steps of water quality for the filter exchange.
- Very simple to exchange the Filter-Pack(Molding Type)

SPECIFICATION

	New Human UP 900
Product (UP)	1.2L/min
Water Quality	-Ultra Pure : Up to 18.3 Ω -cm
Controller	1) Self test for external & internal system 2) Auto cleaning functions 3) Filter exchange indicator
Dimensions(W×D×H)	400×567×500mm
Power	230V(110V on request), 60Hz, 60W

Nex Power Series (RO & UP)

Water Purification System



FEATURE

- Certified ISO 9001
- Produce Pure water & Ultra Pure water, simultaneously
- Very simple to exchange the Filter-Pack

SPECIFICATION

	Nex Power 1000	Nex Power 2000	Nex Power 3000	Nex Power 4000
Product (RO, UP)	Max. 18L/Hr	Max. 28L/Hr	Max. 38L/Hr	Max. 48L/Hr
Water Quality	-Pure Water : 0. to 30 μ s/cm -Ultra Pure : Up to 18.3M Ω -cm			
Display	Digital Display (RO : 0 to 200 μ s/cm) (UP : 1 to 18.3M Ω -cm)			
Dimensions(W×D×H)	400×638×500mm			
Power	230V(110V on request), 50/60Hz, 60W			

Nex RO Series

Pure Water System



FEATURE

- Certified ISO 9001
- ASTM Type II grade water
- Very simple to exchange the Filter-Pack

SPECIFICATION

	Nex RO 1000	Nex RO 2000	Nex RO 3000	Nex RO 4000
Product (RO)	Max. 18L/Hr	Max. 28L/Hr	Max. 38L/Hr	Max. 48L/Hr
Water Quality	-Pure Water : 0 to 30 μ s/cm			
Display	Digital Display (RO : 0 to 200 μ s/cm)			
Dimensions(W×D×H)	400×638×500mm			
Power	230V(110V on request), 50/60Hz, 60W			

Nex UP System

Ultra Pure Water System



FEATURE

- Certified ISO 9001
- ASTM Type I grade water
- Very simple to exchange the Filter-Pack

SPECIFICATION

	Nex UP 1000
Product (UP)	1.2L/min
Water Quality	-Ultra Pure : Up to 18.3MΩ-cm
Display	Digital Display (UP : 1 to 18.3MΩ-cm)
Dimensions(W×D×H)	400×638×500mm
Power	230V(110V on request), 50/60Hz, 60W

Silent Pilot RO System

Water Purification System



FEATURE

- Certified ISO 9001 (Certified No : K-920)
- Motor should be silent when the system works.
- Built in the double safety systems (Pump / Motor)

SPECIFICATION

	Silent RO 200P	Silent RO 300P	Silent RO 400P	Silent RO 500P
Product (RO)	150-250L/Hr	250-350L/Hr	350-450L/Hr	450-550L/Hr
Water Quality	-Pure Water : 0 to 50µs/cm -Ultra Pure : Up to 18.3MΩ-cm(Optional)			
Display	LED digital Display			
Dimensions(W×D×H)	500×400×1415mm			
Power	220V(110V on request), 50/60Hz, 1KW			

G-3008-A

Engine simulation educational system**FEATURE**

(Gasoline engine)

- It is high standard educational system to simulate actual operation of gasoline engine.
- Engine specifications: gasoline/ 1500cc class/ 4 cylinders / in-line I head type electronic-controlled engine
- Installation of check terminals provides convenience for diagnostic instrumentations.
- Instruments, vacuum gage, fuel pressure gage, voltmeter, connectors for diagnosis, and power source jack are provided for educational information.
- Accelerator cable can be finely adjustable.
- Powder coating, vibration resistant structure
- A robust frame, made of steel and painted, can be easily moved and stopped by 4 wheels.
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- product size L150×120×120 Wt≒350kg



G-3006-S

Engine A/T simulation educational system**FEATURE**

(Gasoline engine+A/T)(Avante)

- It is high standard educational system to simulate actual operation of gasoline engine and automatic transmission.
- Engine specifications: gasoline/ 2000cc class/ 4 cylinders / in-line I head type/ electronic-controlled engine
- It is effective to educate operating principle, fault diagnosis, and testing of gasoline engine and automatic transmission during actual operation.
- Installation of check terminals provides convenience for diagnostic instrumentations.
- Instruments, vacuum gage, fuel pressure gage, voltmeter, connectors for diagnosis, and power source jack are provided for educational information.
- Accelerator cable can be finely adjustable.
- A robust frame, made of steel and painted, can be easily moved and stopped by 4 wheels.
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- product size L150×120×120 Wt≒400kg



G-3004-X

Engine &A/T simulation educational system**FEATURE**

(3,000cc class gasoline engine+A/T+hydraulics+Pin)(Grandeur XG, Delta VIS engine)

- It is high standard educational system to simulate actual operation of gasoline engine and automatic transmission.
- Engine specifications: gasoline/ 2,000cc~2,500cc/ V6 / DOHC/ electronic-controlled engine
- It is effective to educate operating principle, fault diagnosis, and testing of gasoline engine and automatic transmission during actual operation.
- By installing instruments, check terminals, and toggle switches on the front panel, fault diagnosis, test, and practical training can be easily done.
- Pressure gages are installed at P, R, N, D and L hydraulic circuits of automatic transmission to instruct operation of hydraulic circuits according to each range.
- Installation of check terminals provides convenience for diagnostic instrumentations.
- Instruments, vacuum gage, fuel pressure gage, voltmeter, connectors for diagnosis, and power source jack are provided for educational information.
- A robust frame, made of steel and painted, can be easily moved and stopped by 4 wheels.
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- product size L180×120×120 Wt≒400kg



G-3032-4

A/T simulation educational system



FEATURE

(F/F, 4 speed A/T)

- It is high standard educational system of simulation type to study operating principle, internal structures, hydraulic lines, and practical training of 4 speed automatic transmission.
- Cross-sectioned A/T can be operated by two mode, auto and manual modes.
- Changing the speed of A/T, the movement of gears is visible to easily understand the operating principle of A/T.
- Components of A/T such as one-way clutch, brakes, gears from oil pump to turbine shaft are cross-sectioned for better understanding of internal structures. It is operation type.
- The shift lever can be set to be P, R, N, D, 2, L, and control program under Korean patent 5488 is used.
- To show the gear ratio at each range, rpm sensors are installed at input and output shafts to be shown in digital value
- Single phase 220V/ DC motor/ inverter/ LCD display
- product size L90×80×150 Wt≒180kg

G-30291EC

ETACS educational system



FEATURE

- It is simulation-type educational system for operating principle and practical training of EF Sonata's ETACS(Electronic time and alarm control system)
- It is manufactured for educating operating principle of ETACS, its diagnosis, and practical training. It includes ETACS unit, combination switch, wiper motor, washer motor, wiper relay, door switch lamp, instrument panel, door modules, power window relay and motor, windshield heater switch, seat belt, door lock actuator, starter relay, buzzer, diagnostic connector, etc.
- ETACS circuit diagram is color-printed, coated, and installed at aluminum panel. Wirings are installed at back side of panel.
- Terminals for checking signals are installed at various points, so testing is easy.
- Control box and power supply system are designed and manufactured by our company's technical spec., and installed at inside of panel.
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- product size L190×60×165 Wt≒200kg

G-30552

Air conditioner simulation educational system



FEATURE

(Cooling and heating, MTC, inverter, circuit diagram)

- It is simulation-type educational system for understanding operating principle of manual air conditioning system equipped at passenger car.
- Air conditioning system is manual temperature control type.
- Heating system is specially designed by G3, which includes hot water, automatic heater, and circulation system.
- The sensors and actuators can be operated under actual operating conditions of vehicle to make practical training of circulation process of refrigerant, temperature, and pressure easy.
- All components of air conditioning system such as compressor, condenser, dryer, expansion valve, orifice, evaporator, blower, duct, cooling fan, control panel are installed.
- Refrigerant: HFC(Hydro Fluro Carbon)-134a
- Compressor: operated by 5 HP motor, speed control by inverter
- 5 KW heater with automatic circulation system of hot water
- Self-generating and charging system
- High and low pressure gages, 2 side glasses, and 3 digital thermometer are installed.
- Power of 220/380V and 9KW, AC/DC circuits, control box
- Colorful circuit diagram of air conditioning system is provided
- product size L190×130×165 Wt≒300kg

G-1030

Air bag simulation educational system



FEATURE

- It is simulation-type educational system for understanding internal structure and operating principle of air bag system.
- Two air bags of driver and passenger seats are installed to be operated for education.
- Continuous operation can be achieved by adopting G3 control circuits and operating mechanism.
- All the components of air bag system are installed and are cross-sectioned for education.
- Air bag, seat belt, and sensors are simultaneously controlled by pedal operation.
- Reserved pneumatic pressure are safely and fast operated.
- The connection box is installed to manually measure inputs and outputs of ECU with multimeter or oscilloscope.
- The switches and terminals connecting and disconnecting all the input and output wires of ECU are installed.
- Artificial changes of sensor and actuator signals are possible and they can be measured by instruments.
- 220V power/ circuits/ commercial pneumatic reservoir tank/ circuit diagram on panel
- product size L122×50×160 Wt≒100kg

G-3051P

ABS simulation educational system



FEATURE

(1 Inverter, check pin, luxury model)

- It is simulation-type educational system of 4 sensors and 4 channels ABS equipped at passenger car of 2,000cc class or higher.
- It can simulate the actual operating states of ABS during running and braking.
- Its components are the same as actual ABS such as ECU, hydraulic unit, speed sensors, 4 wheels, master vacuum system, etc.
- The driving system of ABS is installed inside to be safe, and rpms of 4 wheels are controlled by an inverter. The ABS is operated to control tire force by hydraulic control based on wheel speed difference.
- The special equipment considering inertia and skid during driving and braking is installed for higher quality education.
- By installing instruments, check terminals, and toggle switches on the front panel, fault diagnosis, test, and practical training can be easily done.
- The installation of diagnostic connectors makes measurements of signal of each sensor easy, based on which diagnosis, testing, and experiment can be easily done.
- The hydraulic and electric circuits of ABS are color-printed, and installed at panel. Pressure gages and digital rpm meter of 4 wheels, pressure gages of master vacuum system and master cylinder, ABS indicating lights are installed.
- Power source of 220V/ 5HP control motor of 380V/ inverter of 0~450 rpm/ self-generating, charging, vacuum system
- product size L160×122×165 Wt≒600kg

G-3075

ECS simulation educational system



FEATURE

- It is simulation-type educational system for understanding internal structure and operating principle of ECS such as position control, damping control, height control, self-diagnosis, etc.
- All the components of ECS such as air cylinder, control lever, instrument panel, actuator, voltmeter, ammeter, buttons, ECS mode switch, self-diagnostic connector, check terminals, steering wheel, steering angle sensor, brake switch, idle switch, and accelerator are installed and can be operated.
- Loads, front load of 80Kg and rear load of 70Kg, are applied to simulate vehicle height, which can be measured.
- The height of each wheel can be controlled by air cylinders.
- Damping force can be controlled by each mode.
 - Anti- squat, roll, and dive control can be achieved.
- By changing sensor outputs and ECU outputs artificially, the response of ECS can be monitored with self-diagnostic instrument or oscilloscope to understand the operating principle of their control system.
- Color-printed ECS circuit diagram, pneumatic circuit, 4 pressure gages for shock absorbers, and pressure gage for high pressure tank are installed.
- Power source are AC 220V and DC 12V, and pneumatic source is commercial pneumatic type.
- product size L290×150×180 Wt≒800kg

G-1014

SOHC engine educational system



FEATURE

(4×4 electronic controlled engine, motor-operated)

- This model clearly shows structure and operating principle of SOHC(single overhead camshaft) engine installed at the stand.
- The whole system has been cross-sectioned, painted by different colors and powder coating, and operated by AC motor.
- Engine specifications: gasoline/ 1,800cc/ 4 cylinders/ SOHC/ electronic-controlled engine
- Internal structure of SOHC engine such as 4 cylinders, crankshaft, cylinder head, camshaft, valve, electrical system, colling system and lubricating system are clearly seen by cross-sectioning engine. It is effective to educate the operating principle of SOHC engine.
- Intake and exhaust systems, cooling system, fuel system, lubricating system, electrical system are cross-sectioned, and operated for better educational quality.
- Bulb on and off for ignition/ single phase 220V of motor power/ 12~15 rpm/ a halogen lamp/ control box
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- product size L94×65×120 Wt≒200kg

G-1017

4×4 Diesel engine educational system



FEATURE

This model clearly shows internal structure and operating principle of Diesel engine installed at the stand.

- The whole system has been cross-sectioned, painted by different colors and powder coating, and operated by AC motor.
- Engine specifications: Diesel/ 2,500cc/ 4 stroke/ 4 cylinders/ rotary injection pump/ in-line I head type
- Internal structure of engine such as 4 cylinders, crankshaft, cylinder head, camshaft, valve, electrical system, cooling system and lubricating system are clearly seen by cross-sectioning engine. It is effective to educate the operating principle of engine.
- Intake and exhaust systems, injection pump, cooling system, fuel system, lubricating system, electrical system are cross-sectioned, and operated for better educational quality.
- Single phase 220V of motor power/ 12~15 rpm/ a halogen lamp/ control box
- product size L94×65×150 Wt≒150kg

G-1018

V6 engine exhibition system



FEATURE

(Engine, motor-operated, circular stand, rotating stand)

- This model clearly shows gasoline V6 engine such as piston, crank shaft, cylinder head, cam , valve, cooling, and lubricating system.
- The whole system has been cross-sectioned, painted by different colors and powder coating, and operated by AC motor.
- In addition to the rotation of engine, the exhibition stand is also rotated by a motor. It is perfect for exhibition.
- Engine specifications: gasoline/ 3,000cc/ V6 cylinders/ electronic controlled engine
- Single phase 220V of motor power/ engine:12~15 rpm/ stand:7~10 rpm/ on and off of LED by stroke/ a halogen lamp/ control box
- The model is painted by our company's detailed specifications for painting to enhance educational quality.
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- product size W Φ100×160 Wt≒350kg

G-1001

F/R automotive power train educational system**FEATURE**

(4×4, gasoline vehicle, rear drive, motor-operated)

- This model clearly shows power train system of a passenger car such as engine, clutch, transmission, propeller shaft, differential gear, rear axle shaft, brake, tire.
- The whole system has been cross-sectioned, painted by different colors and powder coating, and operated by AC motor.
- Complicated internal structures and operating principle can be easily seen by cross-sectioning and each system can be illustrated by operating it.

- A5 speed manual transmission is cross-sectioned, so internal structure and operating principle can be easily explained.
- Engine specifications: gasoline/ 2,000cc/ FR type/ 4 stroke/ 4 cylinders/ water-cooled/ in-line I head type/ SOHC/ electronic-controlled engine
- Internal structure and operating principle of 4-stroke, 4-cylinder engine such as crankshaft, piston, valve, etc are clearly seen by cross-sectioning cylinder and head.
- Intake and exhaust systems, cooling system, fuel system, lubricating system, electrical system, air-conditioning system are cross-sectioned, and operated for better educational quality.
- Clutch, transmission, propeller shaft, differential gear, brake, etc are cross-sectioned, and can be trained during operation of clutch, shift lever, and brake pedal.
- Bulbs on and off for ignition/ single phase 220V of motor power/ 12~15 rpm/ a halogen lamp/ control box
- product size L310×155×135 Wt≈450kg



G-10011

F/F automotive power train educational system**FEATURE**

(4×4, gasoline vehicle, front drive, motor-operated)

- Actual body of automotive vehicle is applied, and power train system of FF type passenger car is demonstrated.
- Structure, steering and suspension system of front engine front drive vehicle are emphasized Engine specifications: gasoline/ 2,000cc/ FF type/ 4 stroke/ 4 cylinders/ water-cooled/ in-line I head type/ SOHC/ electronic-controlled engine
- Internal structure and operating principle of 4-stroke, 4-cylinder engine such as crankshaft, piston, valve, etc are clearly seen by cross-sectioning cylinder and head.

- Intake and exhaust systems, cooling system, fuel system, lubricating system, electrical system, air-conditioning system are cross-sectioned, and operated for better educational quality.
- Bulbs on and off for ignition/ single phase 220V of motor power/ 12~15 rpm/ a halogen lamp/ control box
- product size L380×165×140 Wt≈500kg



G-10014

Diesel 4WD automotive power train educational system**FEATURE**

(4×4, Diesel vehicle, 4WD, motor-operated)

- This model clearly shows power train system of 4 wheel-drive(4WD) Diesel vehicle such as engine, clutch, transmission, propeller shaft, differential gear, rear axle shaft, brake, tire.
- The whole system has been cross-sectioned, painted by different colors and powder coating, and operated by AC motor.
- Complicated internal structures and operating principle can be easily seen by cross-sectioning and each system can be illustrated by operating it.
- 4WD manual transmission is cross-sectioned, so internal structure and operating principle can be easily explained.
- Engine specifications: Diesel/ 4WD/ 2,600cc/ 4 stroke/ 4 cylinders/ water-cooled/ in-line I head type/ Jeep by Kia Motor Co.
- Internal structure and operating principle of 4-stroke, 4-cylinder Diesel engine such as crankshaft, piston, valve, etc are clearly seen by cross-sectioning cylinder and head.
- Intake and exhaust systems, cooling system, fuel system(injection pump), lubricating system, electrical system, air-conditioning system are cross-sectioned, and operated for better educational quality.
- Clutch, transmission, propeller shaft, differential gear, brake, etc are cross-sectioned, and can be trained during operation of clutch, shift lever, and brake pedal.
- Structure and operating principle of steering, suspension systems, and actual body frame can be demonstrated.
- Single phase 220V of motor power/ 12~15 rpm/ two halogen lamps/ control box
- product size L360×155×150 Wt≈900kg



G-30297

MOTRONIC educational system



FEATURE

(DLI, integrated control system)

- It is educational system for engine control system and includes actual DLI Motronic components and additional equipment for education. DLI Motronic system is commercial electronic engine control system, which involves distributorless ignition system, fuel injection, etc.
- DLI Motronic circuit diagram is color-printed, coated, and installed at aluminum panel. Wirings are installed at back side of panel.
- Terminals for checking signals are installed at various points, so measurement of signals is easy.
- Input and output signals from sensors and actuators may be measured with diagnostic connectors. Input and output signals of ECU can be easily measured by additional jacks connected with signal lines of ECU.
- Voltages from TPS, ATS, WTS, AFS, and oxygen sensor can be changed by intentionally, so their effects on fuel injection and ignition timing can be monitored.
- Control box and power supply system are designed and manufactured by our company's technical spec., and installed at inside of panel.
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- product size L122×W50×H160cm Wt≒100kg

G-30142-C

Integrated electric & electronic components educational system



FEATURE

(Circuit diagram, EF Sonata, distributorless ignition system)

- It is educational system for practical training of all electric and electronic system adopted at passenger car of 2,000cc class.
- All the electric and electronic components and related-complicated electric wirings are well integrated and installed at aluminum panel stand, based on system-wise, for easy training. This model includes instrument panel, steering wheel, multi-function switch, alternator, actuators, wiper system, door, radio, speaker, fuel system, lighting system, fan motors, control switch, sensors, relays, etc.
- All the components can be operated to be adequate for educating theory and practical training of electric and electronic system of vehicle.
- Every sensor and actuator has extra output terminal for measurement of their input and output signals.
- Circuit diagram is color-printed and coated, and electrical wirings are installed at back side of panel. • 220V 2HP motor/ automatic charging/ DC 12V battery
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- product size L250×W80×H180cm Wt≒320kg

G-30123

Automotive electric parts educational system(A+B)



FEATURE

(A type + B type = 12 system, 1 set)

- It is educational system for understanding the operating principle and practical training of automotive electric systems.
- Changing operating mode to practice mode, internal circuit is opened. After terminals of components is correctly connected by lead wires and circuit is completed, the system works. So, it is very helpful to understand circuits of electric systems.
- Each system can be easily separated from whole system to be convenient and effective for educating it.
- Electric systems and circuits are installed at panel made of aluminum to be durable. • AC 220V/ separate type/ operating type/ terminals/ key switch/ control switch
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- Type A - Starting Motor educational system - Horn educational system - Cooling fan educational system - Alternator educational system
- Head light educational system - Lamps educational system
- Product size 220×80×180cm (L×W×H), Weight≒250Kg
- Type B - Wiper educational system - Door Lock educational system - Power Window educational system - Ignition educational system
- Heater educational system - Electric circuit educational system
- Product size 220×80×180cm (L×W×H), Weight≒250Kg

G-7006

Computerized ETACS educational system



FEATURE

(ETACS, computerized system)

- Model G-30291E is interfaced with computer. It is a state-of-the-art educational system for ETACS system of vehicle by inputting 16 analog and 64 digital signals.
- By changing sensor outputs such as combination switch, door, and ETACS-related sensors and ECU outputs artificially under actual operating condition, the response of ETACS system can be monitored to understand the operating principle of their control system.
- Input and output signals from ETACS ECU can be easily monitored with PC and interface module. The measured data help to understand the functioning of electronic control system.
- The switch connecting and disconnecting all the input and output wires of engine's ECU is installed.
- The connection box is installed to manually measure inputs and outputs of ETACS ECU with multimeter or oscilloscope.
- All input and output lines are made to be fault intentionally through activating relay by portable controller, and PC controller can monitor the status of fault. (RS232C communication, Baud rate: 38400)
- PC stand size ≐ 59×73×140cm (L×W×H), Weight=100Kg
- Product size ≐ 190×60×165cm (L×W×H), Weight=200Kg

G-7007

Computerized MOTRONIC educational system



FEATURE

(MOTORONIC engine, computerized system)

- Computer interface system is adopted to G-30298. It is a state-of-the-art educational system for engine control system by inputting 32 analog and 64 digital signals.
- By changing sensor outputs and ECU outputs artificially, the response of engine and automatic transmission can be monitored to understand the operating principle of their control system. Signals between sensors and actuators and ECU may be checked.
- All signals from engine can be easily measured and disconnected.
- Input and output signals from electronic-controlled engine can be easily monitored with PC and interface module. The measured data help to understand the functioning of electronic control system.
- The connection box is installed to manually measure inputs and outputs of engine's ECU with multimeter or oscilloscope. The measured data help to understand the functioning of electronic control system.
- All input and output lines are made to be fault intentionally through activating relay by portable controller, and PC controller can monitor the status of fault. (RS232C communication, Baud rate: 38400)
- PC stand size ≐ (L)59×(W)73×(H)140 Wt=100Kg
- product size ≐ L122×W50×H147 Wt=100kg

G-7002

Computerized gasoline engine&A/T educational system



FEATURE

(Gasoline engine, A/T, computerized system)

- Computer interface system is adopted to the electronic-controlled gasoline engine and automatic transmission of G-3004. It is a state-of-the-art educational system for control system by inputting 32 analog and 64 digital signals.
- By changing sensor outputs and ECU outputs artificially, the response of engine and automatic transmission can be monitored to understand the operating principle of their control system.
- Input and output signals from electronic-controlled engine can be easily monitored with PC and interface module. The measured data help to understand the functioning of electronic control system.
- The connection box is installed to manually measure inputs and outputs of engine's ECU with multimeter or oscilloscope.
- The switch connecting and disconnecting all the input and output wires of engine's ECU is installed.
- Artificial changes of sensor and actuator signals are possible and they can be measured by instruments.
- Hydraulic and vacuum pressure gages are installed to monitor the pressures during engine operation.
- All input and output lines are made to be fault intentionally through activating relay by portable controller, and PC controller can monitor the status of fault. (RS232C communication, Baud rate: 38400)
- PC stand size ≐ (L)59×(W)75×(H)158 Wt ≐ 100Kg
- product size ≐ (L)180×(W)122×(H)110 Wt ≐ 350kg

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G-3010-P

Diesel engine simulation educational system

FEATURE



- It is high standard educational system to simulate actual operation of 2,500cc Diesel engine.
- It is effective to educate operating principle, fault diagnosis, and testing of diesel engine.
- Installation of check terminals provides convenience for diagnostic instrumentations.
- The front panel is made of aluminum plate to be beautiful and durable by CNC engraver.
- Installation of check terminals provides convenience for diagnostic instrumentations.
- Instruments, vacuum gage, fuel pressure gage, voltmeter, connectors for diagnosis, and power source jack are provided for educational information.
- Accelerator cable can be finely adjustable.
- Powder coating, vibration resistant structure
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- product size ≙ L150×W120×H120cm Wt≙ 400kg

G-30081

Engine practical training educational system

FEATURE



- (Disassembly, assembly, starting, engine stand, panel, 1,500cc ~ 2,000cc)
- Electronic-controlled gasoline engine is installed at the engine stand, and it is good for practical training of gasoline engine during actual operation.
 - Disassembly, assembly, starting, diagnosis, and maintenance can be easily performed.
 - Installation of check terminals provides convenience for diagnostic instrumentations.
 - Instruments, vacuum gage, fuel pressure gage, voltmeter, connectors for diagnosis, and power source jack are provided for educational information.
 - The front panel is made of aluminum plate to be beautiful and durable by CNC engraver.
 - Accelerator cable can be finely adjustable.
 - Engine stand is very firm and stable by applying main shaft brake of G-6000, so engine can be continuously operated.
 - Powder coating, vibration resistant structure
 - The model is designed and manufactured according to ISO 9001 and our company's technical spec.
 - product size ≙ L120cm×W120cm×H120cm Wt≙ 350kg

G-D3004-S

CRDI Diesel engine&A/T simulation educational system

FEATURE



- (Common Rail Direct Injection engine+A/T+hydraulics+Pin)
- It is high standard educational system to simulate actual operation of CRDI Diesel engine and automatic transmission.
 - Engine specifications: CRDI Diesel/ 2,000cc~2,500cc
 - It is effective to educate operating principle, fault diagnosis, and testing of gasoline engine and automatic transmission during actual operation.
 - By installing instruments, check terminals, and toggle switches on the front panel, fault diagnosis, test, and practical training can be easily done.
 - Pressure gages are installed at P, R, N, D and L hydraulic circuits of automatic transmission to instruct operation of hydraulic circuits according to each range.
 - Installation of check terminals provides convenience for diagnostic instrumentations.
 - The front panel is made of aluminum plate to be beautiful and durable by CNC engraver.
 - Instruments, vacuum gage, fuel pressure gage, voltmeter, connectors for diagnosis, and power source jack are provided for educational information.
 - Accelerator cable can be finely adjustable.
 - Powder coating, vibration resistant structure
 - The model is designed and manufactured according to ISO 9001 and our company's technical spec.
 - product size ≙ L180cm×W120cm×H120cm Wt≙ 500kg

G-3034M

A/T structure educational system

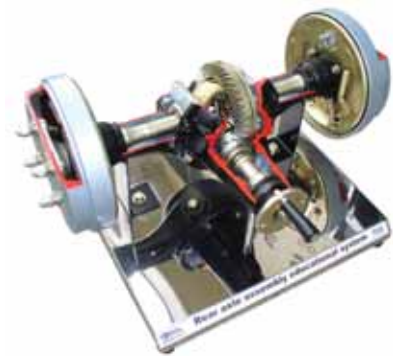


FEATURE

- It is educational system to study operating principle, internal structures, hydraulic lines, and practical training of automatic transmission equipped at F/R type passenger car.
- It is educational system to study operating principle, internal structures, hydraulic lines, and practical training of automatic transmission.
- Components of A/T such as one-way clutch, brakes, gears, and torque converter from oil pump to turbine shaft are cross-sectioned for better understanding of internal structures.
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- product size: L80cm × W40cm × H40cm Wt: 60kg

G-3045

Rear axle assembly educational system



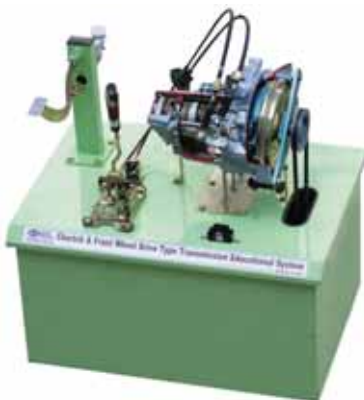
FEATURE

(Mirror stand, manual, drum brake)

- It is educational system for understanding internal structure and operating principle of hypoid type final gear and differential gear in rear axle assembly by precisely cross-sectioning components.
- Drum brake is installed, so its operating principle and components such as lining, wheel cylinder, brake shoe, and adjuster can be taught.
- The difference in rotational speeds of left and right wheels can be clearly seen during operation.
- Power transfer process from propeller shaft to axle shaft via drive pinion, ring gear, differential case, pinion shaft, and side gear can be clearly seen.
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- Mirror stainless steel adjustable base frame
- product size: L70cm × W40cm × H30cm Wt: 55kg

G-3038

M/T clutch structure educational system



FEATURE

- It is educational system to study internal structures and the operating principle of clutch and 5 speed manual transmission.
- Shifting mechanism of manual transmission can be clearly seen by cross-sectioning it.
- Operations of master cylinder, release cylinder, release fork, pressure plate, and clutch plate can be clearly seen by pedal.
- This model slowly rotates by 2 phase 220V gear motor.
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- A robust stand, made of steel and powder-coated, can be easily moved and stopped by 4 wheels.
- product size: L94cm × W65cm × H110cm Wt: 80kg

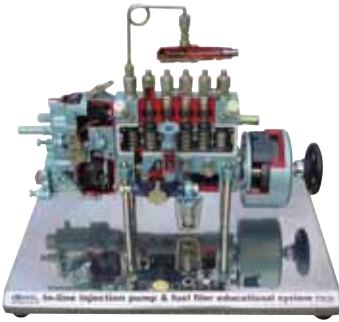
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G-20422

In-line injection pump structure educational system



FEATURE

- It is educational system for understanding internal structures and operating principle of in-line injection pump for 6 cylinders by cross-sectioning components such as pump, cam shaft, tappet, plunger, governor, timer, injection nozzle.
- It can be manually operated.
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- Mirror stainless steel adjustable base frame
- product size ≙ L49cm×W40cm×H40cm Wt≙ 25kg

G-5000

Tractor structure educational system



FEATURE

- It is educational system for understanding the operating principle and internal structures of agricultural middle-sized 4-wheel tractor by precisely cross-sectioning components such as cylinder, cylinder head, injection nozzle, rocker arm, camshaft, valve, intake and exhaust systems, fuel system, cooling system, etc.
- Transmission, clutch, differential gear, hub, brake, driving part, PTO, hydraulic system, steering system, working system, etc are cross-sectioned and operated.
- It is effective to understand power train system of tractor as well as technical training such as fault diagnosis, periodic inspection, and maintenance.
- An electric geared motor, powered by single phase AC 50~60 Hz 220V, drives whole system with 12~15 rpm.
- C/B control box/ electric circuit/ 2 halogen lamps/ safety equipments
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- product size ≙ L320cm×W154cm×H180cm Wt≙ 900kg

G-5001

Tractor electric system educational system



FEATURE

- It is educational system for understanding operating principle of electrical wiring system equipped at agricultural tractor.
- Water temperature sensor, oil sensor, temperature gage, regulator, starting switch, brake switch, rear switch, head lamp switch, horn switch, instrument panel, tail lamp, etc of electric system are installed, which can be operated.
- It is effective for technical training such as fault diagnosis, periodic inspection, and maintenance.
- 98 terminals and colored wiring diagram are installed to enhance educational quality.
- An electric motor, powered by single phase AC 50~60 Hz 220V, drives system.
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- product size ≙ L194cm×W60cm×H165cm Wt≙ 200kg

G-5008

Combine structure educational system

FEATURE



- It is educational system for understanding internal structures and operating principle of combine.
- It clearly shows power generation mechanism of 4 stroke Diesel engine, from which power transfer processes to driving, cutting, and threshing parts are clearly seen.
- It is effective for technical training such as fault diagnosis, periodic inspection, and maintenance.
- Complicated whole system is divided into three major subsystem such as cutting, threshing, and power source parts.
- Power source part: engine, intake and exhaust systems, fuel system, lubricating system, cooling system, clutch, caterpillar.
- Cutting part: upper and lower cutting blades, feeding chain, driving shaft gear
- Threshing part: feed system, threshing system, screw, reservoir tank
- Power train parts are cross-sectioned, and are operated.
- An electric gear motor of 2 HP, powered by single phase AC 50~60 Hz 220V, drives system with 12~15 rpm.
- C/B control box, electric circuit, halogen lamp, and safety equipments are installed.
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- Power train part: size : product size L 300cm × W 160cm × H 245cm Wt 970kg
- Cutting part size : product size L 120cm × W 160cm × H 170cm Wt 540kg
- Threshing part size : product size L 250cm × W 170cm × H 170cm Wt 785kg

G-5007

Power tiller structure educational system

FEATURE



- It is educational system for understanding internal structure and operating principle of power tiller by cross-sectioning components.
- It clearly shows power generation mechanism of 4 stroke Diesel engine, from which power transfer processes to driving, and working parts are clearly seen.
- It is effective for technical training such as fault diagnosis, periodic inspection, and maintenance.
- Cylinder, crankcase, valve, injection, intake and exhaust systems, fuel system, cooling system, transmission, clutch, differential gear, hub, brake, and working parts are cross-sectioned and operated.
- An electric gear motor, powered by single phase AC 50~60 Hz 220V, drives system with 12~15 rpm.
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- product size: L293cm × W90cm × H160cm Wt: 420kg

G-5006

Transplanter structure educational system

FEATURE

(Pedestrian type)



- It is educational system for understanding internal structures and operating principle of pedestrian type transplanter by cross-sectioning components such as cylinder, intake and exhaust systems, fuel system, transmission, clutch, front and rear axle, transplanting part, steering system, brake, etc.
- It clearly shows power generation mechanism of 4 stroke gasoline engine, from which power transfer process to transplanting parts is clearly seen.
- It is effective for technical training such as fault diagnosis, periodic inspection, and maintenance.
- An electric gear motor, powered by single phase AC 50~60 Hz 220V, drives system with 12~15 rpm.
- Hydraulic pump and hydraulic lines are operated and halogen lamp and C/B control box are installed.
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- product size: L230cm × W150cm × H140cm Wt: 190kg

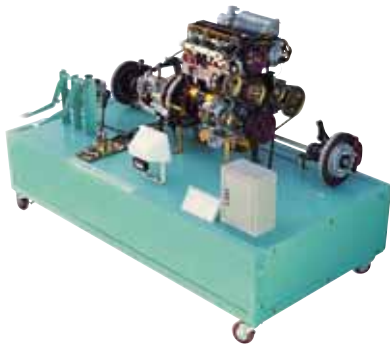
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E-mail : www.dsg-3.co.kr URL http://www.dsg-3.co.kr

G-1004

F/F gasoline automotive power train educational system



FEATURE

(Electronic controlled engine/clutch/transmission/differential gear/rear axle/brake, motor-operated)

- This model clearly shows power train system of a FF car such as engine, clutch, transmission, differential gear, rear axle shaft, brake.
- The whole system has been cross-sectioned, painted by different colors and powder coating, and operated by AC motor.
- Complicated internal structures and operating principle of power train system can be easily seen by cross-sectioning and each system can be illustrated by operating it.
- A 5 speed manual transmission is cross-sectioned, so internal structure and operating principle can be easily explained.
- Internal structure and operating principle of 4-stroke, 4-cylinder engine such as crankshaft, piston, valve, etc are clearly seen by cross-sectioning cylinder and head.
- Cooling system, fuel system, lubricating system, electrical system, air-conditioning system are cross-sectioned, and operated for better educational quality.
- Clutch, transmission, brake, etc are cross-sectioned, and can be trained during operation of clutch, shift lever, and brake pedal.
- Bulb on and off for ignition/ single phase 220V of motor power/ 12~15 rpm/ a halogen lamp/ control box
- product size ≙ L 180cm × W110cm × H155cm Wt ≙ 300kg

G-1011

F/R Diesel automotive power train educational system



FEATURE

(Engine/clutch/transmission/differential gear/full floating rear axle/brake, motor-operated)

- This model clearly shows power train system of a passenger car such as engine, clutch, transmission, propeller shaft, differential gear, rear axle shaft, brake, tire.
- The whole system has been cross-sectioned, painted by different colors and powder coating, and operated by AC motor.
- Complicated internal structures and operating principle of FR type power train can be easily seen by cross-sectioning and each system can be illustrated by operating it.
- A 5 speed manual transmission is cross-sectioned, so internal structure and operating principle can be easily explained.
- Internal structure and operating principle of 4-stroke, 4-cylinder engine such as crankshaft, piston, valve, etc are clearly seen by cross-sectioning cylinder and head.
- Intake and exhaust systems, cooling system, fuel system, lubricating system, electrical system, air-conditioning system are cross-sectioned, and operated for better educational quality.
- Clutch, transmission, propeller shaft, differential gear, brake, etc are cross-sectioned, and can be trained during operation of clutch, shift lever, and brake pedal.
- Single phase 220V of motor power/ 12~15 rpm/ a halogen lamp/ control box
- product size ≙ L240cm × W100cm × H120cm Wt ≙ 470kg

G-6000

Engine stand for practical training



FEATURE

- It is engine stand for practical training of disassembly, assembly, and starting of engine.
- Engine is installed at stand to be rotated to 360°.
- Engine is perfectly fixed to be stable by adopting braking system to major axis.
- Engine stand is designed and manufactured by Korean patent 0251812.
- The model is designed and manufactured according to ISO 9001 and our company's technical spec.
- Rotating parts such as major axis and worm gear are made of special metal.
- It is easily moved and stopped by 4 wheels.
- product size ≙ L122cm × W78cm × H96cm Wt ≙ 100kg

LD-FCD

Center Table



MODEL	FCD-300	FCD-360	FCD-420
W	3000	3600	4200
D	1500		
H	800/1800		

FEATURE

- This model is a Furnished Center Table with a Wood Shelf a Laboratory Sink, Electrical Outlets, Water Faucets and Movable Laboratory Drawer Underneath. Complete and Convenient to use for any kind of lab-work

SPECIFICATION

- Work Top : Lab-Board THK 20m/m
- Panel : Chip-Board with L.P.M Coated
- Frame : Steel Pipe with Powder Coated
- Sink Bowl : Polypropylene or stainless (sus304)

OPTION

- Electric Consent : 220v or 110v 15A
- Water Faucet : 1way, 2way, Mixing

LD-FSD

Side Table



MODEL	FSD-180	FSD-210	FSD-240
W	1800	2100	2400
D	750		
H	800		

FEATURE

- This model is a Simple Side Table with a movable Laboratory drawer Underneath Convenient to use.

SPECIFICATION

- Work Top : Lab-Board THK 20m/m
- Panel : Chip-board with L.P.M Coated
- Frame : Steel Pipe with Powder Coated

OPTION

- Electric Consent : 220v or 110v 15A

RCD

Chemical Safety Cabinet



FEATURE

- This Item, Storage Cabinet, Equipped with Filter can Protect you from Chemical Fumes.

SPECIFICATION

- Cabinet:Steel Plate with Powder Coated
- Sheet:steel Rod with PVC coated Basket
- Filter Box:Steel Plate with Powder Coated
- Filter:Activated Carbon
- Fan:Fiber Glass
- Control:Lcd Display

MODEL	RCD-120
W	1250
D	500
H	2200

LD-SWB

Sink Table



FEATURE

- This Model is a Sink Table for cleaning of Labwares and Equipments, comprisal in a sink bowl and a cabinet and Furnished with water Faucet.

SPECIFICATION

- Sink Bowl: Polypropylene
- Cabinet: Chip Board with L.P.M Coated

OPTION

- Trap (siphon) Polypropylene
- Water Faucet : 1way. 3way. Mixing

MODEL	LD-SWB
W	1200
D	750
H	800

DFH-N

Ductless Fume Hood



FEATURE

- This Item, Ductless Fume Hood, Equipped with Filter, Has no Need for Extra Exhaust Duct. It Can Protect you from Hazardous Chemical Fumes.

SPECIFICATION

- Exterior: Poly Carbonate Plate
- Filter Box: Steel Plate with Powder Coated
- Filter: Activated Carbon
- Fan: Fiber Glass
- Work Surface: Compact Board 20T
- Cabinet: Chip Board with L.P.M Coated
- Anemometer

OPTION

- Electric Consent

MODEL	DFH-N
W	830
D	600
H	1700

LD-FHA

Fume Hood



FEATURE

- This model is a Ducted Fume Cup Board to ventilate toxic Chemical vapors and gases and hazard particles. Separated by 2 Parts, Upper and Lower Section and All materials chemical resistant

SPECIFICATION

- Exterior : C.L Board THK 10m/m or SUS304 Plate
- Interior : C.L Board THK 4m/m
- Work Top : Lab-Board or Epoxy THK 20m/m
- Window : Safety Clear Glass THK 5m/m
- Cabinet : Steel Frame with Chip Board Panel or Steel Plate with Powder Coated

OPTION

- Cup Sink , Water Valve & Cock
- Utility (Gas, N2, Vac, Air) Valve & Cock
- Lamp
- Blower (Fan)

MODEL	LD-FHA
W	1500
D	800
H	2300

CHC-001

Arm Hood



Local Extractor System protects personnel from toxic gases where it happens of narrow place in laboratory

FEATURE

- Easy to turn and move
- Damper adjustment for control of airflow
- Save energy better than conventional Fume hood

SPECIFICATION

- Pipe holder : PP
- pipe : PP Φ 75
- Dome Hood : Acrylic, Aluminum, PP
- Bracket : Steel plate 2.3t (Epoxy powder coated)

CHC-051

Ductless Hood



Optimum filters can be selected depending upon various kinds of fumes occurred during experiments. Replacement of filters can be found to be much easier and convenient for all users.

CHC-200

Clean Bench



FEATURE

- Protect users from harmful substances.
- Clean laboratory environment is not be hampered.
- Excellent in drug and heat resistance
- High cleanliness can be maintained due to the use of high efficient Hepa Filter.
- Life span of the filter can be checked using Hour Meter and Mano Meter.

SPECIFICATION

- clinical pathology
- Dealing with lethal bacteria
- Epidemic bacteria
- Semi-conductor Industry
- Pharmacy & Medical field

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E-mail : chc@chclab.com URL http://www.chclab.com

CHC-063

Ductless Storage Cabinet



It is easy to be installed and it is movable. Various options can be chosen and installed inside the cabinet. Safe and enjoyable experiment shall be carried out.

All models of the storage cabinet are equipped with microprocessor that can display the status of the storage cabinet

One of the options users can choose is Measuring kit that can detect saturation of the filters, so that a decision whether the filters should be replaced can be easily made.

Drawers are installed at the bottom of the cabinet, so that exposure of harmful materials can be minimized.

Doors are made of visible materials that have strong chemical resistance. Safe maintenance of the stored bottles is very well enough to last for a long time due to total elimination of noxious gases, vapors and smell.

CHC-101

Fume Hood



SPECIFICATION

- Exterior
- SS 41 Plate with powder coated
- Interior
- Trespa
- Work top
- Trespa
- Window
- Safety clear glass(5t)
- Two cock valves
- Receptacle : 220V

Option

- Work top : Epoxy resin
- Exterior : Trespa
- Spray Nozzle (Side:2, Center:1)
- Cock valve addition
- Blower (SUS/PVC)
- 110V is available

MS MOTOR SYSTEM CO., LTD.

MSG - 550

ENGINE SIMULATOR(Gasoline & Diesel)

SPECIFICATION



- The experiment of engine and automatic transmission, educational equipment equal real vehicle for practice.
- The examination of various kinds complete equipment with educational system's principle and convenient equipment for using check.
- The understanding of principle about electronic control function (ECU, TCU and additional equipment for education in various kinds sensor and very effective educational equipment for practical technique.)
- INTERFACE CARD (MS-3110) having within
 - control board : control board for signal handling of input-output.
 - control program : control board for processing data and program for PC communication.
 - window program : the program with the price of input-output to receive data(control board) for analysis
- Expressing digital pressure of fuel, engine oil, automatic transmission
- Equipment for educational in ECU, TCU check point (PCB design making with ECU ON BOARD TYPE)
- Computer : more than pentium
- Monitor : 15" (LCD color monitor)
- Size : 1500 × 1600 × 950mm
- Weight : 520kg

MSE-750

AUTOMOTIVE ELECTRIC TEST SYSTEM

SPECIFICATION



- Educational system for electric wiring of 1500cc ~2000cc passenger car.
- This model includes instrument panel, steering wheel, multi-function switch, alternator, actuators, wiper system, door, radio, speaker, fuel system, lighting system, fan motors, control switch, sensors, relays, etc.
- A robust frame, made of steel and painted, can be easily moved and stopped by 4 wheels.
- Size : 3,000(L) × 1,500(W) × 2,000(H)mm
- Weight : 300kg

MSA-850

AIR BRAKE SYSTEM

SPECIFICATION



- It is educational system for understanding structures and operating principle of air brake, ABS, and ASR equipped at large commercial vehicle.
- It is manufactured by actual components, and is operation type for education.
- The detailed specifications are fixed by order.
- Size : 3300(L) × 1500(W) × 2000(H)mm
- Weight : 600kg

MSP-950

Automotive Educational System



SPECIFICATION

- This model is the same structure as actual vehicle equipped with CRDi diesel engine and is effective to maintenance training.
- Testing and educating functions for engine, automatic transmission, and electrical system are added.
- Education for structure, operating principle, and maintenance training of 4WD power train car can be achieved by adopting exposure type frame.
- It is applicable to tune-up and performance test of electronic-controlled engine.
- Installation of check terminals provides convenience for diagnostic instrumentations.
- Size : 3500(L)×2000(W)×1750(H) mm
- Weight : 1,720kg

MSAS-1000

Air-Con Simulation Educational System



SPECIFICATION

- Air-conditioning system consists of compressor, condenser, evaporator, heater core, and blower.
- Practical training of refrigerant charging, exchange, recycling, and diagnosis is easy due to manual air-conditioning system.
- It is effective to educate operating principle, fault diagnosis, and testing of gasoline engine and automatic transmission during actual operation.
- Installation of check terminals provides convenience for diagnostic instrumentations.
- Instruments, vacuum gage, fuel pressure gage, voltmeter, connectors for diagnosis, and power source jack are provided for educational information.
- Accelerator cable can be finely adjustable.
- Power coating, vibration resistant structure.
- A robust frame, made of steel and painted, can be easily moved and stopped by 4 wheels.
- Size : 1850(L)×1250(W)×1250(H) mm
- Weight : 500kg

MS-382

Air-Con Gas Recover/Recycling/Recharging System



SPECIFICATION

- Application refrigerant : HFC-R134a, CFC-R12
- Method of control : Mycom type (Electronic scale, sensor, solenoid)
- Filter : SPORLAN (Catch-All) 33sq.In (Block core type moisture, dust etc)
- Scale : 10~ 50kg (Electronic scale system)
- Compressor : 220V/110V 3.0A (TECUMSER/3900BTU)
- Vacuum pump : 220V/110V 2.0A (Oil-less type)
- Tank capacity : 13kg (For internal tank)
- Case : High impact ABS plastic wood & steel structure
- Using temperature : 15°C~45°C
- Power : AC220V/110V/ 50Hz/60Hz
- Weight : 87kg
- Dimensions : 750×500×1080 mm

MS MOTOR SYSTEM CO., LTD.

MS-E0401&E0501

INTAKE & EXHAUST SYSTEM SIMULATOR



SPECIFICATION

- This simulator allows you to study the sensors and actuators which are used in intake & exhaust system of vehicle.
- With this simulator, you can control the various driving conditions as if a real engine is driven.
- You can measure the output waveforms of sensors and actuators of the system according to the various driving conditions.
- You can study the control algorithms and wirings of sensors and actuators in this system.
- Dimension : 2080 (L) × 500 (W) × 2200 (H) mm
- Engine parts : All new parts consisted of the system
- Computer : Processor : over Pentium IV
RAM : over 256 MB
Monitor : 15" LCD
The others parts is general spec.
- AD converter : Analog input : 16 CH
Analog output : 2 CH
Sampling rate : 200kS/s
Resolution : 16 bits
- Software : Programming by Labview 7.0
- Courseware : Flash & PowerPoint (CD materials) (English version)
- Manual : Manual book, E-manual CD (English version)

MS-E0601

IGNITION SYSTEM SIMULATOR



SPECIFICATION

- This simulator allows you to study the angle detect sensors and many kinds of ignition systems which are used in vehicle.
- With this simulator, you can control the various driving conditions as if a real engine is driven.
- You can measure the output waveforms of sensors and data related to the system according to the various driving conditions.
- You can study the control algorithms and wirings of sensors in this system.
- Dimension : 2080 (L) × 500 (W) × 2200 (H) mm
- Engine parts : All new parts consisted of the system
- Computer : Processor : over Pentium IV
RAM : over 256 MB
Monitor : 15" LCD
The others parts is general spec.
- AD converter : Analog input : 16 CH
Analog output : 2 CH
Sampling rate : 200kS/s
Resolution : 16 bits
- Software : Programming by Labview 7.0
- Courseware : Flash & PowerPoint (CD materials) (English version)
- Manual : Manual book, E-manual CD (English version)

MS-E0701

INJECTION SYSTEM SIMULATOR



SPECIFICATION

- This simulator allows you to study the measurement of injection amount and two kinds of injection systems which are used in vehicle.
- With this simulator, you can control the various driving conditions the system as if a real engine is driven.
- You can measure the output waveforms of sensors and data related to the system according to the various driving conditions.
- You can measure the injection amounts of the various driving conditions.
- You can study the control algorithms and wirings of this system.
- Dimension : 2080 (L) × 500 (W) × 2200 (H) mm
- Engine parts : All new parts consisted of the system.
- Electric scale : Capacity : Max. 120g ~ Min. 0.01g
Power : DC 12V - Load cell type
- Computer : Processor : over Pentium IV
RAM : over 256 MB, Monitor : 15" LCD
The others parts is general spec.
- AD converter : Analog input : 16 CH
Analog output : 2 CH
Sampling rate : 200kS/s
Resolution : 16 bits
- Software : Programming by Labview 7.0
- Courseware : Flash & PowerPoint (CD lecture materials of fifteen weeks) (English version)
- Manual : Manual book, E-manual CD (English version)

MS-E1101

ELECTRICAL EQUIPMENT WIRING SIMULATOR



SPECIFICATION

- This simulator allows you to study the circuits and wirings of electrical equipments which are used in vehicle.
- This simulator consists of 19 modules, functioned independently.
- With this simulator, you can understand the operation theories of electrical equipments as if a real vehicle is driven.
- You can study the basic circuits and wirings of electrical equipments.
- Modules : All new parts consisted of the system
- Rack dimension : 1750 (L) × 1260 (W) × 1820 (H) mm
- Module dimension : 425 (L) × 315 (W) × 60 (H) mm
- Courseware : Flash & PowerPoint (CD lecture materials of fifteen weeks) (English version)
- Manual : Manual book, E-manual CD (English version)

NeoMet pH-25N

Portable Meter for pH/ISE/mV/ORP/Temp.



FEATURE

- Wide and clear custom LCD illuminated
- Waterproof housing & internal diagnosis for normal operation
- Extremely short response time and easy-to use
- Simultaneously display of Data, Temp. and Current time
- Automatic/Manual calibration for convenient use
- Two-way RS232C communications & Certificate of CE Mark, ISO9001

SPECIFICATION

- Range (pH: -2,000 to 19,999/ ISE: 0.0001 to 19999mg/l/Temp.: -10 to 110°C etc)
- Data-log: 100points, Calibration Point: Auto (3)/ Manual (3), Temp Compensation: Auto
- Print Capability and Rechargeable Battery & DC Power Adaptor

Standard Accessories

- Combination pH Electrode(#5733528) & ATC Probe
- Buffer Solution (pH 4.00,7.00,10.00) each 125ml
- Rechargeable Battery & DC Power Adapter
- Instruction Manual

NeoMet pH-200L

Laboratory Meter for pH/mV/Temp.



FEATURE

- Wide and clear custom LCD illuminated
- Extremely short response time and easy-to use
- Simultaneously display of Data, Temp. and Current time
- Automatic/Manual calibration for convenient use
- Two-way RS232C Communications & Certificate of CE Mark, ISO9001

SPECIFICATION

- Range (pH: -2,00 to 19,99/Temp.: -10 to 110°C etc)
- Data-log: 100points, Calibration Point: Auto (3)/Manual (5), Temp Compensation: Auto
- Print Capability and AC / DC Power Adaptor

Standard Accessories

- Combination pH Electrode(#5733526) & ATC Probe
- Buffer Solution (pH 4.00,7.00,10.00) each 125ml
- AC/ DC Power Adapter & Instruction Manual

NeoMet pH-250L

Laboratory Meter for pH/ISE/mV/ORP/Temp.



FEATURE

- Wide and clear graphic LCD illuminated
- Extremely short response time and easy-to use
- Simultaneously display of Data, Temp. and Current time
- Automatic/Manual calibration for convenient use
- Using SDIS, available display or print of each data logging via Excel
- Two-way RS232C Communications & Certificate of CE Mark, ISO9001
- The inner Print (Optional), easy to print of measured data.

SPECIFICATION

- Range (pH: -2,000 to 19,999/ ISE: 0.0001 to 19999mg/l/Temp.: -10 to 110°C etc)
- Data-log: 200points, Calibration Point: Auto (5)/Manual(5), Temp Compensation: Auto
- Print Capability and AC / DC Power Adaptor

Standard Accessories

- Combination pH Electrode(#5773504) & ATC Probe
- Buffer Solution (pH 4.00,7.00,10.00) each 125ml
- AC/ DC Power Adapter & Instruction Manual

NeoMet DO-35N

Portable Meter for DO/O₂/Air/Temp.



Standard Accessories

- Combination pH Electrode(#023IP17S)/ATC Probe
- Filling Solution & DO Membrane
- Rechargeable Battery & DC Power Adaptor
- Instruction Manual

FEATURE

- Wide and clear custom LCD illuminated
- Waterproof housing & internal diagnosis for normal operation
- Extremely short response time and easy-to use
- Simultaneously display of Data, Temp. and Current time
- Two-way RS232C communications & Certificate of CE Mark, ISO9001

SPECIFICATION

- Range (DO: 0.00 to 19.99mg/l, O₂: 0.0 to 60.0%, Temp.: -10 to 60°C etc)
- Data-log: 100points, Salinity Correction: 0 to 70ppt, Altitude Correction: 0 to 4000m
- Print Capability, Rechargeable Battery & DC Power Adaptor

NeoMet DO-300L

Laboratory Meter for DO/O₂/Air/Temp.



Standard Accessories

- DO Polarographic Electrode(#023IP15G) & ATC Probe
- Filling Solution & DO Membrane
- AC/DC Power Adapter & Instruction Manual

FEATURE

- Wide and clear custom LCD illuminated
- Extremely short response time and easy-to use
- Calibrate by Electrode Zeroing in Air or in Liquid
- Salinity and barometric pressure compensated automatically
- Simultaneously display of Data, Temp. and Current time
- Two-way RS232C Communications & Certificate of CE Mark, ISO9001

SPECIFICATION

- Range (DO: 0.0 to 19.9mg/l, O₂: 0.0 to 60.0%, Temp.: -10 to 60°C etc)
- Data-log:100points, Salinity Correction:0 to 70ppt, Altitude Correction : 0 to 4000m
- Print Capability, AC/ DC Power Adaptor

NeoMet DO-370L

Laboratory Meter for DO/O₂/Air/pO₂/Temp.



Standard Accessories

- DO Polarographic Electrode(#023IP15G) & ATC Probe
- Filling Solution & DO Membrane
- AC/DC Power Adapter & Instruction Manual

FEATURE

- Wide and clear graphic LCD illuminated
- Extremely short response time and easy-to use
- Simultaneously display of Data, Temp. and Current time
- Calibrate by Electrode Zeroing in Air or in Liquid
- Salinity and barometric pressure compensated automatically
- Using SDIS, available display or print of each data logging via Excel
- Two-way RS232C Communications & certificate of CE Mark, ISO9001
- The inner Print (Optional), easy to print of measured data.

SPECIFICATION

- Range (DO: 0.00 to 19.99mg/l, O₂: 0.0 to 60.0%, Temp.: -10 to 60°C etc)
- Data-log:200points, Salinity Correction:0 to 70ppt, Altitude Correction : 0 to 4000m
- Print Capability, AC/ DC Power Adaptor

NeoMet EC-40N

Portable Meter for Conductivity/TDS/Salinity/Temp.



FEATURE

- Wide and clear custom LCD illuminated
- Waterproof housing & internal diagnosis for normal operation
- Extremely short response time and easy-to use
- Simultaneously display of Data, Temp. and Current time
- Automatic/Manual calibration for convenient use
- Two-way RS232C communications & Certificate of CE Mark, ISO9001

SPECIFICATION

- Range (EC:0 to 199,999 μ S/cm, TDS:0 to 1999mg/L, Salinity :0.0 to 80.0ppt, Temp.: -10 to 110 $^{\circ}$ C)
- Data-log: 100points, Temp Compensation: Auto, Print Capability,
- Power : Rechargeable Battery, DC Power Adaptor

Standard Accessories

- Conductivity Cell (K=1.0, #5731302) & ATC Probe
- Conductivity Std Solution (1413 μ S/cm) each 125ml
- Rechargeable Battery/DC Power Adaptor & Instruction Manual

NeoMet EC-400L

Laboratory Meter for Conductivity/Salinity/Temp.



FEATURE

- Wide and clear custom LCD illuminated
- Extremely short response time and easy-to use
- Simultaneously display of Data, Temp. and Current time
- Automatic/Manual calibration for convenient use
- Two-way RS232C Communications & Certificate of CE Mark, ISO9001

SPECIFICATION

- Range (EC:0 to 199,999 μ S/cm, Salinity :0.0 to 80.0ppt, Temp.: -10 to 110 $^{\circ}$ C)
- Data-log: 100points, Temp Compensation: Auto, Print Capability: Yes
- Power :AC/DC Power Adaptor

Standard Accessories

- Conductivity Cell (K=1.0, #5731302) & ATC Probe
- Conductivity Std Solution (1413 μ S/cm) each 125ml
- AC/DC Power Adaptor & Instruction Manual

NeoMet EC-470L

Laboratory Meter for Conductivity/TDS/Salinity/Temp.



FEATURE

- Wide and clear graphic LCD illuminated
- Extremely short response time and easy-to use
- Simultaneously display of Data, Temp. and Current time
- Automatic/Manual calibration for convenient use
- Using SDIS, available display or print of each data logging via Excel
- Two-way RS232C Communications & Certificate of CE Mark, ISO9001
- The inner Print (Optional), easy to print of measured data.

SPECIFICATION

- Range (EC:0 to 199,999 μ S/cm, TDS:0 to 1999mg/L, Salinity :0.0 to 80.0ppt, Temp.: -10 to 110 $^{\circ}$ C)
- Data-log: 200points, Temp Compensation: Auto, Print Capability, Power : AC/ DC Power Adaptor
- Resistivity : 5 Ω \times cm to 100M Ω \times cm

Standard Accessories

- Conductivity Cell (K=1.0, #5731302) & ATC Probe
- Conductivity Std Solution (1413 μ S/cm) each 125ml
- AC/DC Power Adaptor & Instruction Manual

Address : Room 1011 Hanshin IT Tower, #235 Kuro-dong, Kuro-ku, Seoul. KOREA
 Phone & Fax : Phone (+82-2-2108-8400) Fax (+82-2-2108-8430)
 E-mail : istek@istek.co.kr URL http://www.istek.co.kr

NeoMet PDC-700L

Laboratory Multi Meter for pH/ISE/DO/EC/Temp.



FEATURE

- Wide and clear graphic LCD illuminated
- Extremely short response time and easy-to use
- Simultaneously display of Data, Temp. and Current time
- Calibrate by Electrode Zeroing in Air or in Liquid
- Salinity and barometric pressure compensated automatically
- Using SDIS, available display or print of each data logging via Excel
- Two-way RS232C Communications & certificate of CE Mark, ISO9001
- The inner Print (Optional), easy to print of measured data.

Standard Accessories

- Combination pH Electrode(#5733504) & ATC Probe
- Buffer Solution (pH 4.00,7.00,10.00) each 125ml
- AC/DC Power Adapter & Instruction Manual

SPECIFICATION

- Range pH: -2.000 to 19.999, DO: 0.00 to 19.99mg/l, EC: 0 to199,999 μ s/cm
- ISE: 0.0001 to 1999mg/l, TDS:0 to 1999mg/L, Salinity :0.0 to 80.0ppt
- Data-log: 300points, Calibration: pH/mV (Auto 5Points/Maunal 5Points), ISE/DO/O₂/EC(Auto)
- Print Capability, AC/DC Power Adaptor, Resistivity : 5 Ω \times cm to 100M Ω \times cm

SOWA COD200Mn

On-line COD Mn(Chemical Oxygen Demand)



FEATURE

- Analysis method : Potentiometric
- Application : filtration plant, wastewater disposal plant, sewage water disposal plant, lake & river, drinking water etc.
- Range : 0 ~ 200ppm (over 200ppm : user's option)
- Measuring time : 60 minutes
- Measuring electrode : ORP electrode
- Output : 4~20mA(RS232/485, internet, Lan(TCP/IP))
- Auto self-control
- LCD touch screen
- Dimension : 1600mm(H) \times 650mm(W) \times 750mm(D)

SOWA pH910(pH/ORP), DO920(DO), EC930(EC/Salinity)

On-line Controller (pH/Oxygen/Conductivity)



FEATURE

- Microprocessor type controller using microchip
- Convenient interactive programmable dialogue manu
- Application : filtration plants, wastewater disposal plant, sewage water disposal plant etc.
- pH range : 0.00 ~ 14.00 (accuracy \pm 0.01)
- DO range : 0.00 ~ 19.99ppm (accuracy \pm 0.5%)
- EC range : 0 ~ 199,999 μ s/Cm (accuracy \pm 0.5%)
- Output : 4~20mA(RS232/RS485)
- Control-cut function
- Respond time : about 90% response in 10seconds
- Dimension : 185mm(H) \times 210mm(W) \times 84mm(D)

GMK-315

HONEY MOISTURE METER



FEATURE

- FOR MEASURING MOISTURE CONTENT OF HONEY
- MEASURING RANGE : 12 ~ 40 %
- ACCURACY : ± 0.2 %
- POWER SOURCE : BATTERY 9 V \times 1 EA
- WEIGHT : ABOUT 1 KG
- SIZE : 158(L) \times 70 (W) \times 40 (H) m/m
- TEMPERATURE COMPENSATION IS AUTOMATIC

GMK-1010

WOOD MOISTURE METER



SPECIFICATIONS

APPLICATIONS	WOOD
MEASURING RANGE	9 ~ 50 %
DISPLAY	DIGITAL LCD
TEMP. COMPENSATION	AUTOMATIC
POWER SOURCE	BATTERY 9V \times 1EA
ACCURACY	± 0.5 %
DIMENSIONS	150(L) \times 70(W) \times 25(H)mm
WEIGHT	APPROX. 2,150 g

GMK-3306

TOBACCO MOISTURE METER



SPECIFICATIONS

APPLICATIONS	TOBACCO LEAVES
MEASURING RANGE	11 ~ 40 %
DISPLAY	DIGITAL LCD
ACCURACY	± 0.5 %
POWER SOURCE	BATTERY 9V \times 1EA
DIMENSIONS(mm)	BODY: 120(L) \times 78(W) \times 26(H) SENSOR : 180
WEIGHT	APPROX. 730 g

GMK-703

DIGITAL SUGAR METER



SPECIFICATIONS

APPLICATIONS	FRUITIS, FOODS
MEASURING RANGE	0 ~ 32 BRIX %
OPERATING TEMP	5 ~ 40 °C
MEASURING TIME	ABOUT 3 SEC.
ACCURACY	± 0.3 BRIX %
SAMPLE VOLUME	0.5 ml ~ 1.0 ml
POWER SOURCE	BATTERY 9V×1EA
DIMENSIONS (mm)	136(L)×69(W)×32 (H)

GMK-701R

DIGITAL REFRACTOMETER



FEATURE

- SUGAR CONTENT(BRIX %) MEASURABLE
- MEASURING RANGES & APPLICATIONS

MODEL: GMK-701R (0 ~ 45 BRIX %)	FRUITS, JUICES, MILK, SOFT DRINKS, COFFEE, TOMATO KETCHUP
MODEL: GMK-702R (45 ~ 90 BRIX %)	JAMS, HONEY, RAW LIQUID SUGAR
MODEL: GMK-704R (0 ~ 60 BRIX %)	FRUITS, JELLIES, CONCENTRATED JUICES

- ACCURACY : ± 0.2 BRIX %

GMK-835

DIGITAL ACIDITY METER



FEATURE

- FOR MEASURING ACIDITY OF FRUITS
- ACCORDING TO THE KINDS OF FRUITS & ACIDITY, THERE ARE SIX MODELS AS BELOWS:

MODEL	FRUITS	ACIDITY
GMK-835	CITRUS	CITRIC ACID
GMK-835A	ORANGE	CITRIC ACID
GMK-835B	PINEAPPLE	CITRIC ACID
GMK-845	GRAPE	TARTARIC ACID
GMK-855	APPLE	MALIC ACID
GMK-855A	PEAR	MALIC ACID

- ACCURACY : ± 0.05%

GMK-706R

BRIX-ACIDITY METER



FEATURE

- FOR MEASURING SWEETNESS & SOURNESS OF FRUITS.
- FOR CITRUS, ORANGE, KIWI, PINEAPPLE, GRAPE & APPLE
- ACCURACY : $\pm 0.2\%$ (BRIX), $\pm 0.05\%$ (ACIDITY)
- POWER SOURCE : BATTERY 1.5 V \times 4 EA
- AUTOMATIC TEMPERATURE COMPENSATION
- MEASUREMENT DATA CAN BE PRINTED BY SMALL PRINTER (OPTION)

GMK-550

DIGITAL SALT METER



FEATURE

- FOR MEASURING THE SALT % OF DILUTE SOLUTION OF FOODS
- ACCORDING TO MEASURING RANGE, THERE ARE THREE MODELS AS BELOWS :

MODEL	GMK-530	GMK-530	GMK-530
RANGES	0 ~ 3 %	0 ~ 5 %	0 ~ 10 %
ACCURACY	$\pm 0.05\%$	$\pm 0.2\%$	$\pm 0.2\%$
POWER	BATTERY 9V \times 1EA		
SIZE	136(W) \times 69 (L) \times 32 (H) mm		
WEIGHT	APPROX. 500 g		

GMK-920HT/930HT

THERMO-HYGROMETER



FEATURE

- FOR MEASURING TEMPERATURE AND HUMIDITY OF THE AIR
- ACCORDING TO SENSOR TYPE, THERE ARE TWO MODELS AS BELOWS;

MODEL	GMK-920HT	GMK-930HT
SENSOR TYPE	INSIDE	OUTSIDE
MEASURING RANGE	TEMP : -50 ~ 100 $^{\circ}$ C HUMIDITY : 5 ~ 95 %RH	
ACCURACY	TEMP. : $\pm 0.3\%$ HUMIDITY : $\pm 2\%$ RH	
WEIGHT	APPROX. 700 g	APPROX. 780 g

DYTEK 40/70/130
/230/400

Eddy Current Dynamometer - Machine



FEATURE

- The increasing demands to improve technology of vehicle test systems have become a major concern in line with the development of automotive industry all over the world. Leading suppliers strive arduous efforts to produce better engine related test equipment which is regarded as a basis in testing engines.

DYTEK 2000

Dynamometer Main Control System

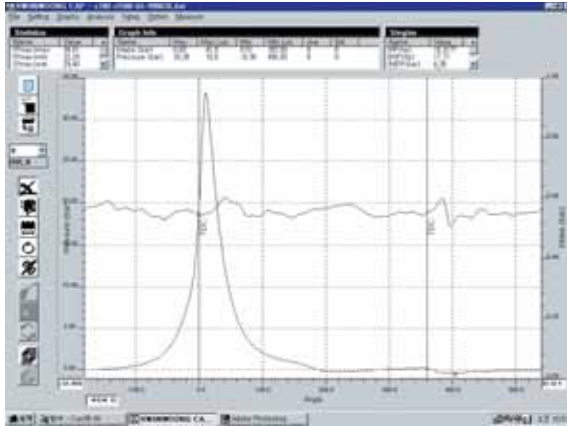


FEATURE

- Our high quality engine dynamometer is the result of ceaseless research and expertise invested for more than 10 years in this field. Advanced know-how and skill in both precision and assembling assure us high competitiveness and therefore produce every year innovative latest systems with high stability and endurance.
- Every unit is subject to stringent inspection to insure high quality and safety, Reliability precision and stability means our Dynamometer Controller

DYTEK 5200

Engine Combustion Analysis System



FEATURE

- Total S/W Package for Combustion Analysis
- Real Time Scanning & Graphic Display
- Real Time Measuring
- Pointing Zoom (Free Scale)
- Pressure Graphs
- Crank Angle Cylinder Pressure
- Crank Angle Intake
- Crank Angle Based Graphs
- P - \dot{Q} , P - V Curve, $dp/d\theta$ $dQ/d\theta$ \dot{Q} , Poly-
 , Statistical Service : IMEP
 Cycle, Pmax/Pmin Cycle Pmax-Hist, Pmin-Hist, Cycle

DYTEK 6000

Chassis Dynamometer



FEATURE

- Our chassis dynamometer is a system to fulfill accurate measurements through simulating on-road driving conditions of four-wheel drive vehicles by giving flywheel inertia and electrical control. Nothing can carry out correct test performance better than our advanced measurement technology. Our product enables the operator to capture quite precise measurement values such as the number of roller rotation and torque by measuring damping force gained from break work. Applications, depending on the vehicle type and performance aims, can be classified according to the missions such as assessment of exhaust gas components, endurance test, general function measurement and further research.

- Among various chassis dynamometers for exhaust gas component measurement, our product is engineered essentially with flywheel-130kw(180ps)/200kw(260ps) Eddy Current Dynamometer equipped with widely accepted ©™220mm twin roller which not only answers the E.P.A. standards but offers significant strengths in ease of control, durability covering specific range and competitive cost frames. Materials are carefully adopted by our analysers through perfect examinations and thorough research on the structure and functional characteristics of chassis dynamometer system. Key parts like flywheel and roller are uncomparatively designed with sophisticated design know-how.

DYTEK 5000

Automation System for Dynamometer



FEATURE

- Carrying out high speed integral data acquisition from engine performance test units, our auto measuring system features a wide range of capabilities in accurate data conversion, output in graphs and record by user's easier operation.
- In combustion chamber examination, it presents reliable measurement values of torque, engine speed, pressure, temperature, fuel consumption ratio and throttle on-off effect, etc. Computer base forms signal from sensor units, Interface measurement device, data acquisition board and built-in programmes.

MDA-DSP

DSP TMS320C50 Board



FEATURE

- MDA-DSP Integration Development Environment Program
- Direct input to machine language.
- LCD display function use to key-board.
- I/O Port experiment use to C-Language.
- Analog signal input function use to 16bit A/D converter
- Analog signal output function use to 16 bit D/A converter
- Various command function
- In-output function use to audio or analog signal
- +5V,+12V,-12V S.M.P.S(Free Voltage)Power
- Wood case

MDA-EMS196

16Bit Micro Controller 80C196KC Emulation Board

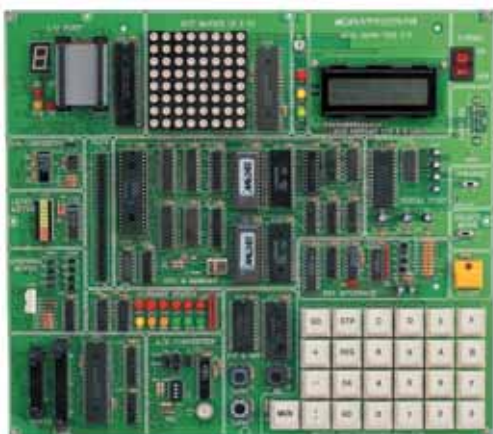


FEATURE

- MDA-EMS196 Integration Development Environment Program.
- LED display to current system bus status
- Key Board of various function
- I/O port experiment by C-language.
- Experiments use to micro controller test units.
- Experiments Read/Verify/Write/Erase of 28C256(EEPROM)
- Volt meter, temperature, and photo sensor experiment by A/D converter.
- D.C Motor speed control by PWM of 80C196KC.
- +5V, +12V, -12V S.M.P.S(Free Voltage) Power.
- Various interrupt experiment by PTS
- Wood case

MDA-8086

16Bit Processor 8086 Board



FEATURE

- Program debugging function by PC.
- Program down-load and trace function.
- Display to register contents.
- Memory contents modification and dump function.
- Various command function.
- Include with stepping motor interface circuit.
- LCD Display experiment.
- D/A and A/D converter experiment.
- Sound experiment by speaker.
- interrupt experiment.
- A/D converter experiment by thermistor.
- D/A converter experiment by Level Meter.
- Wood case.

MDA-68000

16Bit Processor 68000 Board



FEATURE

- RS-232C Communication(Terminal mode and Host mode).
- Down-Load and Up-Load function.
- Program trace function.
- I/O experiment.
- Include matrix(3 color) experiment.
- Interrupt function.
- Disassemble function.
- Register contents modification and display function
- Baud-rate select function.
- various command function.
- software debugging function by break point.
- Wood case

MDA-EMS51

8Bit Micro Controller 8051 Emulation Board

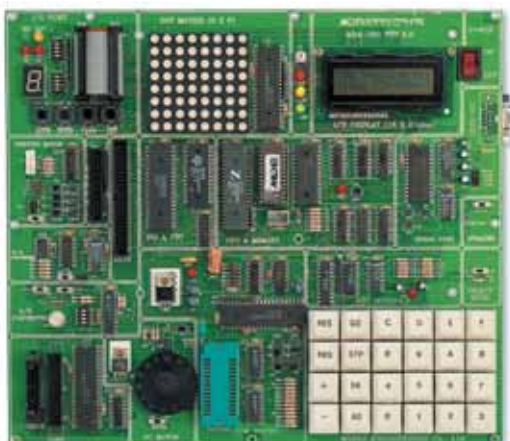


FEATURE

- MDA-EMS51 Integration Development Environment Program.
- I/O port experiment by C-language.
- Key Board function
- I/O port experiments.
- Dot matrix(3 color) experiment.
- Volt meter experiment by A/D converter.
- Sound experiment.
- 8751, 89C51 Read/Verify/Write/Erase funtion.
- Experiments use to Micro controller test units.
- 16×2 Line LCD display function.
- Key-board function.
- Wood case

MDA-Z80

8Bit Processor Z80 Board

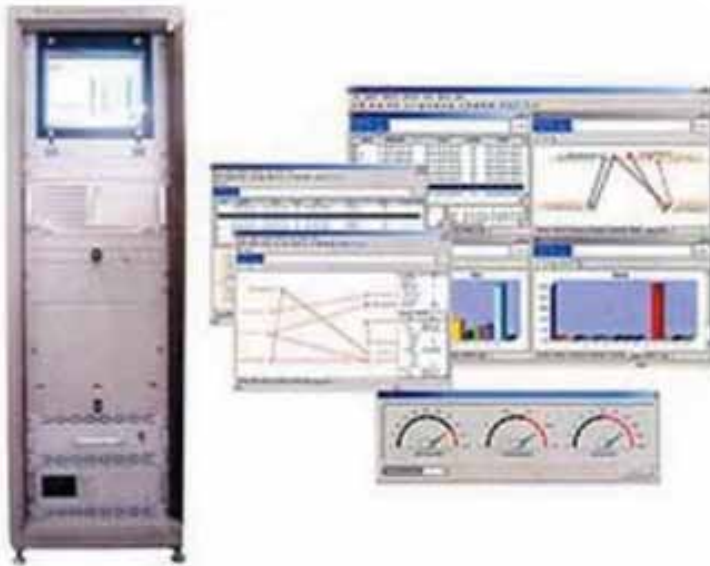


FEATURE

- Program debugging function by PC.
- Memory contents modification and dump function.
- Program Down-load and Disassemble.
- Single step function.
- Various command function.
- ROM writer function(2764~27512).
- Stepping motor interface circuit.
- D/A and A/D converter experiment.
- Sound experiment.
- 16×2 Line LCD function.
- +5V, +12V, -12V S.M.P.S(Free Voltage) Power.
- D.C moter control
- Wood case.

ANYPA WLAN

WLAN Protocol Analyzer



FEATURE

- Logging 14 channels at the same time
- Support 802.11 (from Version 2.0)
- Support education package (WLAN Protocol Analyzer design & development)
- Data logging with packet generation, real time packet data
- 802.11 a, b and 802.3 Protocol Analyzer
- Problem finder function
- Support Excel, TXT,

USAGE

- Wireless network protocol analysis and data communication practice package

DESCRIPTION

- 802.11 Protocol Decode + Network Management System (NMS) + Net Tools + Packet Filter + Finder Diagnosis + Security

ANYPA LAN & GIGABIT LAN

LAN & Gigabit LAN Protocol Analyzer



FEATURE

- Practical network constitutions
- Network traffic matrix
- Real time flow board
- Statistic report
- Network management
- Protocol distribution
- Gigabit Protocol structure analysis on network TCP/UDP flow
- Packet blocking system
- Net tool and education package

USAGE

- NMS function of LAN communication protocol analysis and data communication practice package

DESCRIPTION

- Network Management (NMS) + Protocol Decode + Net Tools + Packet Block + Education Package + Packet Filter + Packet Blocking System + SNMP Management

ANYPA NT-1000

Network Training System



FEATURE

- Set of LAN and WLAN network
- Understand internet, serve net and serve net layers by DSU/CSU, router, hub setting
- CDMA wireless network analysis and signal message
- Packet generator
- Protocol decoder
- Protocol analyzer design
- Fire wall practice
- Optimum cable practice
- NMS

USAGE

- IT course in university

DESCRIPTION

- Network Wire + Network Construction and Traffic Analysis + LAN Cable Tester Design and Making + Network Security + Network with optical module + LAN & WLAN Protocol Analyzer + Hardware Practice

ANYPA CDMA

CDMA Protocol Analyzer



FEATURE

- Analytical module for optimize a base station
- Temporal analyzer graph (support Ec/Io, Neighbor)
- Support Power Control, Vocoder Rate, FER graph
- Auto call generation and statistic report
- Support IS 95 A/B
- Status information of mobile station (ESN, Chn, RF mode, SCI)
- Support 4 fingers
- Presentation accumulated statistics for each channel
- Status display, Memory viewer, logging, Diagnostic message display

USAGE

- Optimize CDMA base station and CDMA education

DESCRIPTION

- Temporal Analyzer + Channel Display + Memory Viewer + Finger + Log Data Analyzing + Markov Test + Handset Emulation + DIP Switch + Protocol Analyzer

ANYPA IMT-2000

IMT-2000 Protocol Analyzer



FEATURE

- Analytical module for optimize a base station
- Powerful Mobile Diagnostic Monitor (MDM) for over-the-air CDMA system
- Measurement system for voice call completion ratio, data call and system verification
- Support IS 95 A/B/C and CDMA2000 1x and EV-DO
- US IS-95 series (CDMA cellular) and J-STD-008 (CDMA PCS) standard of target system
- Analysis packet traffic
- Various display type of functions as table, graph, map, and statistics.
- Analysis of mobile communication net

USAGE

- Optimize CDMA base station and CDMA education

DESCRIPTION

- Mobile Information + Channel Statistics + IMT-2000 Signal + Memory Control + Call Generator + Message Analyzing + Map Display + Replay

Mobile Communication Universal Lab



FEATURE

- Connector training System
- Repeater Training System
- Cable Training System
- Amplifier Training System
- Antenna Training System
- CDMA / IMT-2000 Signal Analyzing
- Diagnose complex obstacle and maintain repair practice
- Decline loss efficiency signal, correspond amplitude practice

DESCRIPTION

- IMT-2000 Protocol Analyzer + CDMA Protocol Analyzer + WLAN Protocol Analyzer + NT-1000 + Practice Hardware

USAGE

- IT Course in University and Education Sector

ANYPA EMBEDDED SYSTEM

Embedded Network System



DESCRIPTION

- Manufacturing Router + Manufacturing AP + Architecture CPU and Understand H/W Specification + Manufacturing Boot Loader + Manufacturing Kernel + Manufacturing File System

FEATURE

- Universal solution through by network system
- Variety of resources on developing embedded system and network equipments
- Theoretical concept, simulation and design of many types of network
eg) E1/T1, ATM, MPLS/GMPLS, Gigabit Ethernet
- LAN protocol analysis with TCP/IP

USAGE

- Research institute for test and research tool

OSC-1100 / 1060 / 1035 / 1030 / 1020

100/60/35/30/20 MHz Analog Oscilloscope



DESCRIPTION

- Measured Waveform Frequency , Voltage and repair or Design of Electronic System

FEATURE

- Frequency : DC ~ 100 / 60 / 35 / 30 / 20 MHz
 - Trigger : 100 / 60 / 35 / 30 / 20 MH
 - Vert Trigger
 - Vertical Sensitivity : 5mV(MAG 1 mV)
 - Channel : 2CH
 - Trace : 2
 - Cooling Fan System
- 370 × 137 × 416
■ 8.2 Kg

FG-8021C

20 MHz Function Generator with Counter



DESCRIPTION

- Supply Many Kinds of Waveform for Telecommunication & Electronic System

FEATURE

- Frequency Range : 0.2Hz to 20MHz In the 8 Ranges
 - Versatile Waveforms : sine, Triangle, Square, Ramp and pulse, Sawtooth
 - 0.2Hz ~ 150MHz INT/EXT Frequency Counter
 - Fast, High-Resolution, 8 Digits LED Display
 - TTL/CMOS Leveled Square Wave Output
 - DC Offset Control
 - AM/FM Modulation
 - Internal/External Burst
- 255 × 80 × 260
■ 2.7 Kg

FG-220C / 205C
 / 202C

20 / 5 / 2 MHz Function Generator with Counter



DESCRIPTION

- Supply Many Kinds of Waveform for Telecommunication & Electronic System

FEATURE

- Frequency Range : 0.2Hz~20MHz (8 Range) / 0.05Hz~5MHz (7 Range) / 0.02Hz~2MHz (7 Range)
- Built-in 6 / 5 Digital Green LED display
- Versatile Waveforms : sine, Triangle, Square, Ramp and pulse, Sawtooth
- 0.2Hz ~ 150MHz INT/EXT Frequency Counter Self • Made Insert ASIG
- Built-in 6 Digits Green LED Display
- TTL/CMOS Levelled Square Wave Output
- DC Offset Control
- 255 × 80 × 260
- 2.7 Kg

FC-155 / FC-121

5.5 MHz / 2.1 GHz Reciprocal Frequency Counter



FEATURE

- Frequency Range : 0.2 Hz ~ 5.5 GHz / 0.2 Hz ~ 2.1 GHz
- Built -in CMOS Gate Array
- Fast, High -Resolution 10 Digits Green LED Display
- Self Diagnosis Routine
- INT/EXT Time Base Selectable
- Low Pass Filter (100KHz ,3dB)
- 255 × 80 × 260
- 2.8 Kg

DESCRIPTION

- Measure Frequency, RPM, Period, Time Interval & Others

FC-150U
 / FC-116U

150 MHz / 1.6 GHz Universal Frequency Counter



FEATURE

- Frequency Range : 0.2 Hz ~ 150 MHz / 0.2 Hz ~ 1.6 GHz
- Built -in CMOS Gate Array
- Fast, High -Resolution 10 Digits Green LED Display
- INT/EXT Time Base Selectable
- Low Pass Filter (100KHz ,3dB)
- Universal Function Slope, Trigger, Time, Interval Measurement, Ratio Measurement
- 255 × 80 × 260
- 2.8 Kg

DESCRIPTION

- Measure Frequency, RPM, Period, Time Interval & Others

AO-301C

Audio Oscillator (with Counter)



FEATURE

- Frequency Range : 10Hz ~ 1MHz (5Decade Steps)
- Very LOW Distortion : <0.5%
- Output Voltage : 22.6Vp-p Option Circuit
- Built-in 5 Digits Green LED Display
- 400Hz & 1KHz Fixed Special Function
- Sine Wave and Square Wave Easily Choice
- Variabe Frequency with Poly Varicon

■ 255 × 90 × 280

■ 2.5 Kg

DESCRIPTION

- Products Test for Audio Products

DM-540TR

4 1/2 Digital Multimeter



FEATURE

- 6 Functions (AC/DC Voltage, AC/DC Current, Resistance and Diode Test)
- 4 1/2 Digits
- High Resolution 10 μ V, 10nA
- High Current Range 10A
- High Voltage Range 1000V
- All Range Protected

■ 255 × 80 × 260

■ 2.4 Kg

DESCRIPTION

- Measure Voltage, Current, Resistance, Diode & Others

DSP-303DM

DC Switching Power Supply



FEATURE

- Multi-channel Switching Power Supply
- 5 Channel, 209W High Quality Power Supply (Variable DC ~ 30V / 3A Dual, Fixed DC +12V/1A, -12V/1A, +5V/1A)
- Thermal Shutdown (Fixed DC Output only)
- Compact Size : 255(W)×80(H)×260(D) mm
- Current Limit & Over Protection
- Digital Meter

■ 255 × 90 × 270

■ 2.2 Kg

GENERAL SPECIFICATION

- Voltage 0~30V Dual, \pm 12V & 5V Fixed
- Current 0~3A Dual, 1A Fixed
- 3kV (10mA)
- Ripple Voltage < 150mV(p-p)
- Temperature -5 $^{\circ}$ C to +50 $^{\circ}$ C
- Power Free Voltage (90 ~ 260V, 50/60Hz)

DP-305XX

DC Power Supply



■ 250 X 155 X 275 (DUAL), 134 X 155 X 275 (SINGLE)
 ■ 4.2 / 8 Kg

FEATURE

- Min. Ampere < 100mA
- Ripple Voltage < 1.5mV(p-p)
- Stability < 5mV
- Fixed Output 5V 2A ± 10%
- Temperature 0 to + 40 °C
- Power 115 / 230V ± 10%, 50/60Hz

MODEL NO	Variable Voltage	Variable Ampere	Fixed V/A	Display
DP-305SD	0 to 30V	0 to 5A	5V / 2A	Single, Digital
DP-303SD	0 to 30V	0 to 3A	5V / 2A	Single, Digital
DP-305DD	0 to ± 30V	0 to 5A		Dual, Digital
DP-303DD	0 to ± 30V	0 to 3A		Dual, Digital

US-9123D / US-9123

All in One Instrument



FEATURE

- One Instrument with test and measuring system (Frequency Counter, Function Generator, Digital Multimeter and Dual type Power Supply)
- Ideal for Laboratory, Production Line and R&D Engineer's Working Bench
- High Accuracy and Low cost for Specialist and Hobbyists
- Unique Performance to save space
- Light Weight and Attractive Design ■ 370 × 160 × 340
- INT/EXT Time base selectable ■ 15.0Kg

LT-9600M

Logic Circuit Trainer



USAGE

- Educational circuit practice for students

DESCRIPTION

- Practicing and understanding 18 experiment for logic circuits

FEATURE

- Composing of 1 frame and 6 modules
- Indicating green and red colors for input and output

DC Voltage	+ 5V, 1A / Each 6
Display	Logic input terminal: Green
	Logic output terminal: Red LED
Dual, Digital	1 Hz, 10 Hz (H: 4.5V, L:2.0V approximate)
Dual, Digital	5 Slide Switches

Module (6 EA)	
2-Input AND gate & 2-Input OR gate	HEA INVERTER & Exclusive OR gate
2-Input NAND gate & 2-Input NOR gate	J-K Flip Flop & D-Flip Flop
2-Input NAND gate & 3-Input NOR gate	BCD to decimal Decoper & 8 Bit, P-OUT/ S-IN shift Resistor

PM3300

Digital Power Meter (3phase & 1phase)



FEATURE

- High Speed Response of Auto Range
- Measurement Range -1P2W, 3P3W, 3A3V
- Phase Detect function
- Rs 232 Interface Function
- Compare Function (Hi, Go, Lo)
- 4Digits LED Display
- Frequency Bandwidth 40Hz~1000Hz

SPECIFICATIONS

- Operating Temperature : 0°C~+50°C, 40~85RH
- Acline Input Voltage : 90~240V 50/60HZ
- Dimension : 280(W)×95(M)×270(D)mm
- Weight : □2.5kg

PM-2200/2200K

Digital Power Meter(1phase)



FEATURE

- High Speed Response of Auto Range
- Measurement Range - 1P2W, AC/DC
- RS232 Interfaces Function
- Compare Funtion (Hi, Go, Lo)
- 4Digits Green LED Display
- Bandwidth:
 - DC and, 10HZ~100KHZ(PM-2200K)
 - DC and, 10HZ~20KHZ(PM-2200)

SPECIFICATIONS

- Operating Temperature : 0°C~+50°C, 40~85RH
- Acline Input Voltage : 90~240V 50/60HZ
- Dimension : 280(W)×95(M)×270(D)mm
- Weight : □2.5kg

HPM-300

HAND-Held Power Meter



FEATURE

- 128×64pixel Large Graphical Display
- 5 Digitsdis Play for Energy Integrator
- lphase AC/DC Direct Display Power Meter(0.05~20A)
- Measurements (rms)
Am, VoLTS, WATT, Var, Cosq, Wh, Hz
- Low Bat Display
- Load Wire (Plug and play) is Supplied as Standard accessory

PQA-1200

Powermeters



SPECIFICATIONS

Harmonics

Function	Range	Accuracy
Volts	1st to 20st	±(3%+2) to ±(10%+5)
Amps	1st to 20st	±(3%+2) to ±(10%+5)
WATT	1st to 20st	±(5%+2) to ±(20%+5)

POWER

Function	Range	Accuracy
Watts, VAR, VA	0.0W to 600KW	±(1.5%+5dgts)+probe spec
PF, DPF	0.00 to 1.00	±0.04
Power Bandwidth		10~15A KHz

METER

Function	Range	Accuracy
Volts	2V~600V RMS	±(0.5%+5dgts)
Amps	1A~1000A	±(1%+5dgts)
Frequency	5Hz~100Hz	±(0.3%+2)

WATT hour

- 1 Hour, 1 Daily (Chart)
- All Data Real Time Measurements and Memory
- All Data Waveform Display

Measurements lines

- AC/DC 1P2W, 3P3W (Balance Type)
- 1P2W → 10mA~10A (Direct) 10A~1000A (Clamp on sensor)

FEATURE

- This product is designed by compact hand held type. It is able to measure not only electrical power but also harmonic analysis and wave displaying high speed and multifunction electrical power analyzer. This product has functions of 50keys measuring and data logging of 1 month power totalizing

A2011/2013

Portable Volts & Ammeter



FEATURE

- The A2013 and A2014 are moving iron and rectifier type instruments using a Taut-Band suspension and hair spring system. These instruments have excellent reproducibility and are highly resistant to vibration and shock.

SPECIFICATIONS

- Principle : Moving iron or Rectifier Type
- Operating Temp & Humi : 0~40℃, 40~80% RH
- Rated Accuracy : $\pm 0.5\%$ of full scale value
- Scale Length : Approx. 135mm(5.3/8)
- Frequency Influence : Within 0.2% of indicated value (45 to 65Hz)

A2041/2042

Portable Wattmeter



FEATURE

- The A2041 and A2042 are electrodynamicometer type and use the hair spring system. These instruments are highly reliable, and designed for use in laboratories for precise measurement of power at DC and commercial frequencies up to 1,000Hz. These instruments are housed in phenol resin cases and shield with double permalloy sheets to block external magnetic fields.

SPECIFICATIONS

- Principle : Electrodynamicometer type
- Rated Accuracy : $\pm 0.5\%$ of full scale value
- Scale Length : Approx. 135mm(5.3/8)
- Frequency Ranges :
 - A2041 ; DC, 25 to 1,000Hz($\cos \phi=1.0$)
 - DC, 25 to 500Hz($\cos \phi=0.2$)
 - A2042 ; DC, 25 to 1,000Hz($\cos \phi=1.0$)

A2038/2039

Power Factor & Frequency Meter



FEATURE

- The A2039 is used for measurement in single-phase and balanced three-phase circuits, from a phase discriminating circuits, the output of the built-in transducer produces a DC proportional to the phase between voltage and current to operate the DC indicator.

SPECIFICATIONS

- A2039
- Principle : Rectifier Type
 - Rated Accuracy : 3.0%
 - Scale : Power Factor : Lead 0 - 0.3 - 1.0 - 0.3 - 0 Lag
 - Phase Angle : Lead 90° - 0° - 90° Lag
 - Effective Power Factor Measuring Range : Lead 0.5-1.0-0.5 Lag
 - Scale Length : Approx. 135mm(5-3/8)
 - Frequency Influence : Within $\pm 1.5^\circ$ Phase angle at 45-65Hz

A2038

- Principle : Frequency sensing transducer
- Rated Accuracy : $\pm 0.2\%$ of full scale value on 45 to 65Hz range
 $\pm 1.0\%$ of full scale value on 20 to 100Hz

A2707/2708

Galvanometer



SPECIFICATIONS

- A2707
- Measuring Range : $\pm 250\mu V +20\%$, $\pm 250\mu V -10\%$
 - Maximum Sensitivity : $10\mu V/div.$

- Input Resistance : Approx. $9k\Omega$
- Response Time : Approx. 3 seconds
- Common Mode Rejection : More than 140dB at DC and line frequencies (50 or 60Hz)
- Normal Mode Rejection : More than 60dB
- Vibration of pointer : Less than $1\mu V$ (peak-to-peak)
- Drift : Less than $1\mu V/10$ minutes or $2\mu V/20^\circ C$
- Max. Input Voltage : 5V
- Power Source : Single 9V battery (JIS 006P, ANSI 6F22, Energiblock 9V or equivalent)
- Battery Life : Approx. 300 hours (continuous)

■ A2708

- Current Sensitivity : $0.9\mu A/div. \pm 10\%$
- Voltage Sensitivity : $540\mu V/div. \pm 15\%$
- Period : Approx. 1.9 seconds
- Internal Resistance : 150Ω
- External Critical Resistance: 450Ω

WSB-60

Programmable Logic Control Trainer (Portable Type)

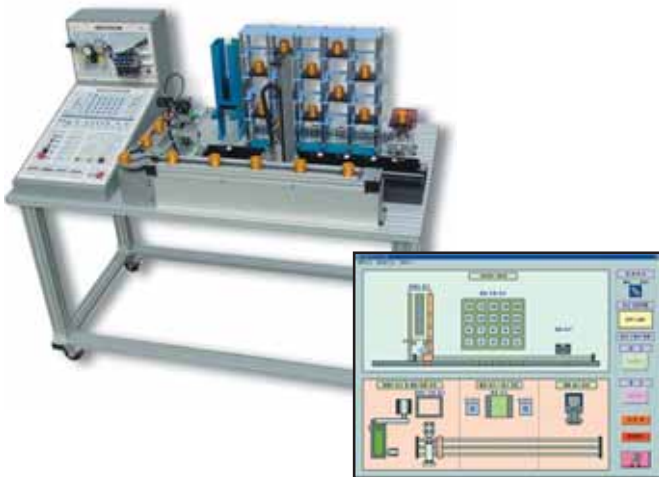


FEATURE

- It can run P.L.C training without other devices.
- The approach switch, photo sensor and small induction motor are equipped to detect number of rotation of a motor
- The push button switch can be used as a load of a program simulator.
- The output lamp and buzzer can be used as a load program simulator.
- The input and output module and sensor contain power supply.
- Whenever users want to change modules, it is very easy because this is attaching type.
- The experimental manual contains from basic to applications.

WSR-6

Auto Storage System Trainer



FEATURE

- This equipment drives induction motor and air cylinder system to auto storage and take out storage goods with 3 axis control auto storage ware house system for accuracy actuating.
- It can be controlled with manual and auto.
- It makes opening type to find out mechanical structure.
- According to internal air supply system the equipment operate without any other device.
- There is a experimental manual of auto storage system.
- Dimension : 1400(W)×800(D)×1400(H) mm

WST-9/12/10

DC Servo Motor / AC Servo Motor / Stepping Trainer PART



FEATURE

- This equipment could be test out principle and introduction of DC servo PID controller operation and position control. (WST-9)
- The Cover of each panel shows oscillator circuit, control circuit and drive circuit etc. (WST-10)
- That equipment is applied for position, speed control and operational experiment of C.N.C application. That is designed as the same equipment which is used in industry field. (WST-12)



WSM-5

Electric Machine Structure Exp. Trainer



FEATURE

- This device is developed for study of electrical machine. The equipment contains there are field coils around modular pole and circular yokes.
- The rotor sets central of yokes. permanent magnet and field coil DC generator, rotary field type and rotary type generator, rotary converter and generator, permanent magnet & DC motor, synchronous motor & 3 ϕ induction motor, shading coil type 1 ϕ induction motor etc.
- The rotor is classified by 6 different type as it were. T type rotor for DC machine and rotary field type 3 ϕ generator, squirrel rotor for rotary converter and revolving-armature type generator, rotary compass for rotating field and disk rotor.
- There is a experimental manual of 9 generators and 14 motors experimental.

WSM-24

Transformer Experimental Trainer



FEATURE

- This equipment contains three single transformers.
- The equipment can be experiment of principal, current ratio, polarity, parallel connection etc.
- Also voltmeter & ampere meter are attached in out side for convenient experiment.
- 1Phase Transformer 300VA : 3 EA
 Primary : 0 / 110 / 220 / 380V
 Secondary : 0 / 110 / 220 / 380V
- AC Voltage Meter
- AC Ampere Meter
- Dimension : 800(W)×430(D)×340(H) mm

WSP-4

Electro-Pneumatic Trainer (Quick Module Type)



FEATURE

- This Equipment contains solenoid valve, all sorts of switch, relay, sensor for basic electro pneumatic to application practice.
- This equipment is designed for pneumatic modular type & modular type that use at the AL injection molding board.
- Clearance of AL injection molding board is 30 β / E .
- Attach method of au modules each kind module is quick & easy type. It is plastic injection molding type plastic injection molding size is 100(W)×85(D)×15(H) mm.
- The graphic symbol plate with magnet is helpful to teach.
- There is a experimental manual of electro pneumatic control & knowledge.

DEM-2000

Digital Electrical Multifunctional Meter



DEM-2000 is a unique Digital Electrical Multi-functional Meter designed to measure Insulation Resistance, Ground Resistance, AC Voltage, DC Voltage, Electroscope and Phase testing that combines 4 instruments in one package. More than ever before, DEM-2000 is offering to a wide range of test applications in energy equipment supply company, electric safety control company and other electric business companies. Now, easy-to-read displays and many other features, the readings you are taking are precise and accurate and you can measure them in confidence with DEM-2000.

FEATURE

- Digital graphic LCD with 9999 counts and Back-light
- Data Communication to PDA and PC through IrDA port
- Auto Power Off & Auto Back-Light Off
- Display the battery voltage
- LCD Display the probe information
- Display year, month, date and time
- Data Hold & Data Memory
- Display of both minimum and maximum values simultaneously
- Auto Calibration with Push Switch Control
- Protect of over voltage
- DEM-2000 comes as a complete set including ;
 - Test leads(Red and Black, 5000V 1.2m Style 3357 Belden Wire, Each 1ea)
 - Alligator clip(Black, EN 61010 CAT III, 1ea)
 - Test probe(KSC 3325 1.25mms 2 1.2m Green Wire, 1ea)
 - Test probe(Red and Black/600V CAT II, 1ea)
 - Earth Measuring Leads Wire (Red : 20m, Yellow : 10m, Green : 5m/600V 1.25mm 2, 1ea)
 - Earth test rod(2ea)
 - Soft carrying case bag(SOT-2000, Optional)
 - Hang-on-neck type(SFT-2000, Standard)



Physical Properties	Specifications
Display	Graphic LCD multifunction display, 9999 Counts
AC Voltage	0~999.9V(MAX. AC 750V) / 0~99.99V / 0~9.999V
DC Voltage	0~999.9V(MAX. DC 1,000V) / 0~99.99V / 0~9.999V
Insulation Resistance (Mega Ω)	DC 500V, 0~999.9MΩ / 0~99.99MΩ / 0~9.999MΩ
Ground Resistance (Earth Ω)	0~9999Ω (MAX.5,000 Ω) / 0~999.9Ω / 0~99.99Ω 2 Points, 3 Points Measurement Method
Earth Voltage (EV)	0~9.999V / 0~99.99V / 0~750.0V
Electroscope Meter (HOT)	70.00~750.0V / Buzzer & LCD Display
Phase Meter (PHA)	AC 110.0V~750.0V / R.S.T GOOD, N.G LCD Display
Resistance Measurement & Continuity Test	Display and continuity buzzer under 0 ~ 40 Ω Display the more 40 Ω ~ 9999 Ω
Dimension/Weight	Size : 88(W)×175(H)×42(D)mm Weight : 475g

EIS-2000

Electric Installation Safety & Measuring Trainer



EIS-2000 is simulation equipment that can be measured to combine AC voltage, DC voltage, Ground resistance and Insulation resistance etc of interior wiring. This equipment manufactured that can test connecting with DEM-2000. And it is produced educate safety inspection before electrical device, communication device, use of industry safety.

FEATURE

- Measurement education of protective ground(systematic, device, etc)
- Education of ground by each ground position(power, communication, signal)
- Two-wire and three-wire ground resistance measurement education
- Insulation between line, insulation between earth, device insulation measurement education
- Leakage current measurement
- Measurement of R, S, T and HOT electroscopes
- VAC, DC voltage, continuity, wiring resistance measurement education
- Earth leakage breaker establishment and safety inspection for electric shock prevention .
- Single-phase and three phases circuit breaker establishment and safety inspection

Physical Properties	Specifications
Main Connection	3Φ AC 220V Input - 3Phase Type 3P+N+PE 1Φ AC 220V Input - 1Phase Type L1+N+PE
AC Voltage Output	1Φ & 3Φ AC 220V output
AC Voltage	1Φ & 3Φ AC 220V
DC Voltage	DC5V , DC12V , DC24V
Insulation Resistance (Mega Ω)	1Φ Insulation Resistance - Variable 80kΩ ~ 200MΩ 3Φ Insulation Resistance - Variable 90kΩ ~ 500MΩ
Ground Resistance (Earth Ω)	MPE - MOTOR, Water pipe, GAS pipe, Heater, Radiator between ground resistance measurement 2 Points , 3 Points Measurement Method
Leakage Current	Variable 0.1mA ~ 30mA, Measurement leakage current by capacity (102 pF, 103 pF, 104 pF)
Ground Voltage	Variable AC 6V , AC9V
Phase (PHA)	R , S , T
Electroscope (Hot)	HOT Line
Earth Resistance	Variable 0 ~ 10kΩ
Dimension / Weight	Size : 660 (W) × 550 (H) mm Weight : 20Kg approx

PQA-MN312S

Power Quality Analyzer & Network System

FEATURE

- PQA View : Electric Measuring Data View
- TFT 15" LCD XGA 1024 × 768 Touch Screen
- Network connection all PQA controlling data and monitoring
- Data analysis & real-time inspection
- Max. 32 measurement data display
- PQA-N312SR : Electric Measuring Network System
- Included THD, 63rd harmonic measurement
- 5" LCD screen display
- Several connection wiring measurement
- 4 channel voltage & 3 channel current
- Max. 2048KB flash memory
- Max 256 sampling of real-time data analyze
- Huge data logging System Console
- All kinds cable and storage clamp
- 19" standard rack case



Measurement target	Single-phase two-wire, single-phase three-wire system, three phase 3 wires(Δ), three phase 4 wires(Y)
Measurement range	Voltage : 600V _{AC} MAX × 4CH Current : 10,000A _{AC} MAX × 3CH Sampling : 256 Sampling/cycle
Measuring Function	Power Quality Analyze, Voltage, Current, Power, Effective electric power, wattless power, apparent power, Energy, reverse rate, accumulation Electric Energy, high frequency(More than 63rd), Sag, Swell etc. Real-time measuring & Analyze Real-Time Digital Oscilloscope PC Interface Remote Control Data Logging, Data Monitoring LCD Graphic Monitor Neutral Voltage & Current Display Optional PC Software(Power IQ)



HL-PS 950

P.L.C. & AC SERVO MOTOR



ACCESSORIES

- Connectors, Power Cord, Protection Cover, Operation Manual, Teaching Unit.

- 2 kinds of AC servo motor test is available by use of P.L.C. and teaching unit controller.
- Direction of motor rotation change is available with jog.
- Understand servo motor function by ball screw operation which enables you to know the concept of exact location control.

SPECIFICATION

ITEM	DESCRIPTION	ITEM	
CPU	24K STEPS	POWER	AC220V, 50/60Hz
BASIC INPUT / OUTPUT	32 / 32 POINTS	POSITION UNIT	1 UNIT
AC SERVO MOTOR	ABOVE 100W	KEY PAD	22KEY, 1 E / M KEY
OUTPUT	ENCODER A, B, Z PHASE	CONTROL METHOD	IPM PWM CONTRO
DISPLAY	7-SEGMENT × 2	USER I / O	8 / 8 (TR, 24V/ 0.3A)
PHOTO S / W	6 pcs	DIMENSION	(W)750 × (D)500 × (H)230

HL-E 1051

ELEVATOR MODEL SYSTEM IV



ACCESSORIES

- Connectors, Power Cord, Protection Cover, Operation Manual

- Program configuration ability may be improved through the experiment of elevator, that is the core of sequence, in the same situation as an actual condition.
- Operation principle of elevator for passenger and elevator for freight can be understood at the same time.
- Operated with the S/W inside and outside of elevator in the same way as the real condition, and door is opened and closed.
- Easy to move and storage because of using aluminium profile for main structure and small size.

SPECIFICATION

ITEM	DESCRIPTION	ITEM	DESCRIPTION
OPERATING DISTANCE	480 mm	POWER	AC220V, 50/60Hz
INPUT POINT	23 POINTS	DRIVE UNIT	GEAR HEAD MOTOR (2 pcs)
OUTPUT POINT	24 POINTS	IN/OUT FLOOR DISPLAY	7-SEGMENT (5 pcs)
DOOR OPERATING DISTANCE	70 mm	IN CALL FLOOR DISPLAY	S/W & L.E.D.(5 pcs)
MANUAL S / W	2 pcs	IN/OUT, UP/DN DISPLAY	S/W & L.E.D.(5 pcs)
MICRO S / W	11 pcs	DIMENSION	(W)750 × (D)400 × (H)920

HL-AC 1120

AUTOMATIC CONVEYOR SYSTEM III



ACCESSORIES

- Goods Model, Connectors, Power Cord, Protection Cover, Operation Manual
- *OPTION : Air Compressor.

- Easy to transfer and storage because of using aluminium profile for main structure.
- It can be operated with other manufacturer's P.L.C.
- This distinguishes metal and nonmetal, stores it separately.
- Miniature of simple automation line.

SPECIFICATION

ITEM	DESCRIPTION	ITEM	
BELT WIDTH	50mm	POWER	AC220V, 50/60Hz
BELT LENGTH	600mm	DRIVE UNIT	GEAR HEAD MOTOR
TOGGLE S/W	1pcs	INPUT POINT	17 POINTS
PUSH S/W	2pcs	OUTPUT POINT	9 POINTS
LEAD S/W	8pcs	LAMP	2pcs
PROXIMITY S/W	1pcs	COUNTER	1pcs
PHOTO S/W	3pcs	DIMENSION	(W)750 × (D)500 × (H)280

HL-CP 1300

CAR PARKING SYSTEM



ACCESSORIES

- Connectors, Power Cord, Protection Cover, Operation Manual, Car Model(8pcs), Car Pallet(10pcs)

- Down scaled 5th floors tower parking system for application program of P.L.C.
- A car loaded on pallet is moved up and down by induction motor.
- Easy to move and storage because of using aluminium profile for main structure and small size.
- Enter-exit states of car is moved left and right by DC motor.
- Parking state of car is checked by photosensor and confirmation each floor is checked by limit

SPECIFICATION

ITEM	DESCRIPTION	ITEM	DESCRIPTION
UP/DN OPERATING DISTANCE	360 mm	POWER	AC220V, 50/60Hz
L/R OPERATING DISTANCE	EACH 150 mm	DRIVE UNIT	GEAR HEAD MOTOR (3 pcs)
INPUT POINT	60 POINTS	NUMBER OF STORE HOUSE	5 FLOOR 2 ROW
OUTPUT POINT	19 POINTS	CAR MODEL	8 pcs
TOGGLE S/W	2 pcs	IN/OUT COUNTER	2 pcs
IN/OUT PUSH S/W	20 pcs	PHOTO S/W	12 pcs
MICRO SW	27 pcs	DIMENSION	(W)750×(D)500×(H)760

HL-AS 1400

AUTOMATIC STOREHOUSE SYSTEM



ACCESSORIES

- Connectors, Power Cord, Protection Cover, Operation Manual, Goods Model(11 pcs), Pallet(11pcs)

- Storing, taking goods out of 12 storehouse.
- It can be operate by use of electrical power.
- It can be controlled by other company's P.L.C. Trainer.
- Easy to move and storage because of using aluminium profile for main structure and small size.
- Enter-exit states of car is moved forward and back by DC motor.

SPECIFICATION

ITEM	DESCRIPTION	ITEM	DESCRIPTION
UP/DN OPERATING DISTANCE	260 mm	POWER	AC220V, 50/60Hz
L/R OPERATING DISTANCE	400 mm	DRIVE UNIT	GEAR HEAD MOTOR (3 pcs)
IN PUT POINT	71 POINTS	NUMBER OF STOREHOUSE	3 FLOOR 4 ROW
OUT PUT POINT	23 POINTS	GOODS MODEL	11 pcs
TOGGLE S/W	3 pcs	IN/OUT COUNTER	2 pcs
IN/OUT PUSH S/W	24 pcs	PHOTO S/W	20 pcs
MICRO S / W	26pcs	DIMENSION	(W)1,000X(D)450X(H)560

HL-AT 1500

AUTOMATIC TRANSFER SYSEM



ACCESSORIES

- Connectors, Power Cord, Protection Cover, Operation Manual, Goods Model(12pcs)
OPTION : Air Compressor.

- Goods model can be transferred from 12 stores by using robots and conveyors located in left and right side.
- Down scaled auto transfer system for application program of P.L.C.
- It can be controlled by other company's P.L.C. trainer.
- Easy to move and storage because of using aluminium profile for main structure and small

SPECIFICATION

ITEM	DESCRIPTION	ITEM	DESCRIPTION
CYLINDER OPERATING DISTANCE	15-50 mm	POWER	AC220V, 50/60Hz
GOOD TRANSFER DISTANCE	50-700 mm	DRIVE UNIT 1	GEAR HEAD MOTOR (4 pcs)
INPUT POINT	30 POINTS	DRIVE UNIT 2	AIR CYLINDER (4 pcs)
OUTPUT POINT	20 POINTS	SOLENOID VALVE	6pcs
MAGNATIC S / W	6 pcs	AIR UNIT	1 SET
PROXIMITY S/W	12 pcs	COUNTER	2 pcs
PHOTO S / W	14 pcs	DIMENSION	(W)1,000X(D)600X(H)280

FMP-TA

Modular Production System



The MPS stations are the central elements of the Modular Production System. Each station consists of one or more modules linked by controller such as PLC or VLC which is brand-new pc-based controller with fieldbus.

FEATURE

- Comprehensive system from module to integrated system
- Stations can be mixed and matched individually.
- Standardized and uniquely defined interfaces at station and system level.
- Distribution, transporting, processing, handling and sorting stations are combined each other.
- It is possible to assemble the stations by team work project.

FPCS-110

Process Control System



You can train individual industrial process control sequences, combine these and expand the system gradually.

FEATURE

- Measuring of process variables such as temperature, flowrate, level and pressure
- How to control the closed loop system
- Setup, commissioning, modification and maintenance of closed control loops
- Getting to know and parameterizing a digital industrial controller
- Reading and creating flowcharts and documentation
- Setup, piping, wiring and commissioning of systems
- Control and monitoring of processes with LabVIEW, PLC or VLC(PC-based controller)



FP-100 series

Pneumatics training kit



FEATURE

- The pneumatics training kit is composed of various industrial pneumatic parts. All the parts are adopted one-touch mounting clamp so that you can easily attach it and make a pneumatic circuit.

Pneumatic training package is consist of FP101, FP102, FP201 and FP202.

FP101 is for basic level of pneumatics and FP102 is for advanced level. FP201 and FP202 are electro-pneumatic training packages. FP201 is for basic level and FP202 is for advanced level.

FH-100 series

Hydraulics training kit



FEATURE

- The hydraulics training kit is composed of various industrial hydraulic parts. All the parts are adopted one-touch mounting clamp so that you can easily attach it and make a hydraulic circuit.

Hydraulic training package is consist of FH101, FH102, FH201 and FH202.

FH101 is for basic level of hydraulics and FH102 is for advanced level. FH201 and FH202 are electro-hydraulic training packages. FH201 is for basic level and FH202 is for advanced level.

FH-230

Hydraulics transparent models



FEATURE

- FH230 is a set of transparent hydraulic model to learn the basic principle of hydraulics. You can easily design a hydraulic circuit by connecting quick connectors. Usually, it can be operated on the OHP to show the flow of hydraulic oil and mechanical movement of a valve and cylinder.

FPLC-LMS-TK

PLC training kit



FEATURE

- PLC module(power, CPU, IO)
- Input/Output socket for 4mm plug
- cylinder module(included reed SW, flow control valve)
- solenoid valve module(included pressure regulator, shut-off valve)
- Switch and volume module
- lamp and buzzer module
- Regulated power supply
- DC and stepping motor for position control

SRTS-110

Robot training kit



FEATURE

- SCARA and multi axes robot
- user input and output port for expansion
- various applications for each curriculum
- strong poly carbonate fence for safe operation
- conveyor and pneumatic valve and actuator
- included robot controller and software
- any kind of maker(FANUC, Mitsbisi, Robostar)

FMAT-130-M

Automatic Production training kit



FEATURE

- It is possible to separate and unite the distribution, drilling, transport and sorting modules
- operation and monitoring board
- Any kind of controller is possible for example PLC, microprocessor and VLC a brand-new PC-based controller.
- Basic pneumatic control, sequence control
- Composing additional conditions
- Fault searching and safety of pneumatic system
- Electric sequence control circuit

FS-100 series

Sensors training kit

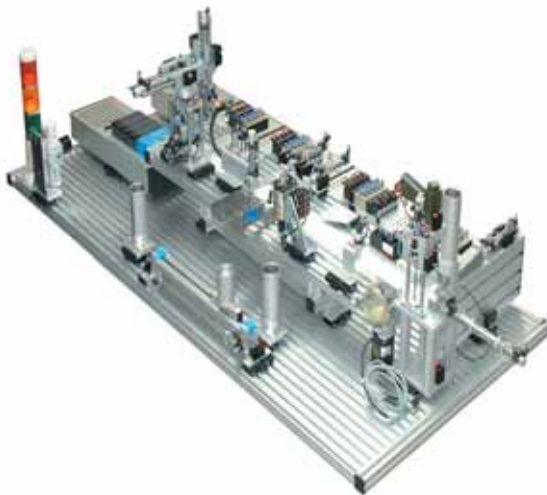


FEATURE

- Sensor training package is consist of FS110, FS120, FS130. FS110 is Poximity Sensors training packages. The equipment set FS 110 offers comprehensive training on the topic of proximity sensors. FS120 is sensors for distance and displacement. FS130 is sensors for force and pressure. The equipment set FS130 uses force and pressure sensors with an analog output. The output signals of the analog sensors are measured with a digital multimeter.

FME-110

Mechatronics training kit



FEATURE

- The base of MPS equipment and adapted manufacturing automation system
- Composed of various actuators and sensors. It is very easy to place and displace
- Introduced 'cell concept' that is modulized part.
- Any kind of controller is possible for example PLC, microprocessor and VLC a brand-new PC-based controller

FMS-110

FMS training kit

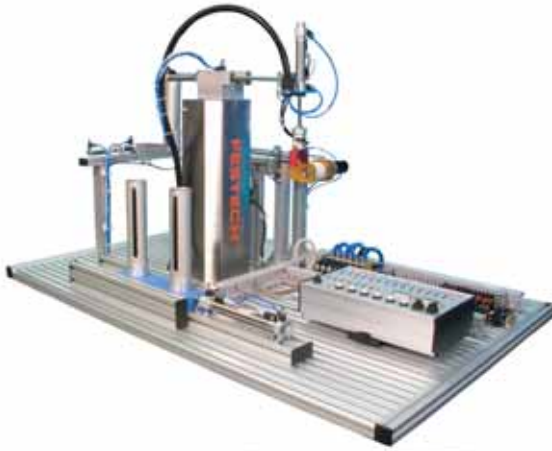


FEATURE

- Constructing and positioning of automatic warehouse
- Controlling 3 axes servo motor
- Controlling servo drive
- Structure and applying a encoder
- utilize all sorts of sensors
- System constructing and programming using PLC
- Management automatic warehouse using PC
- Data transfer using Ethernet

FPLC-PTP-ROB-TK

PTP training kit



FEATURE

- position decision function
- DC motor and conveyor
- pneumatic gripper and cylinders
- solenoid valves and relay
- operating box for manual and automatic control
- Any kind of controller is possible for example PLC, microprocessor and VLC a brand-new PC-based controller.

FPLC-EP-ELE-TK

Elevator training kit



FEATURE

- simulated elevator training kit
- 3 floors(standard)
- DC geared motor with a balance weight
- 4mm wiring socket for external control
- strong poly carbonate transparent fence
- 4 casters for easy movement
- Any kind of controller is possible for example PLC, microprocessor and VLC a brand-new PC-based controller.

FPLC-AS/RS-TK

AS/RS training kit

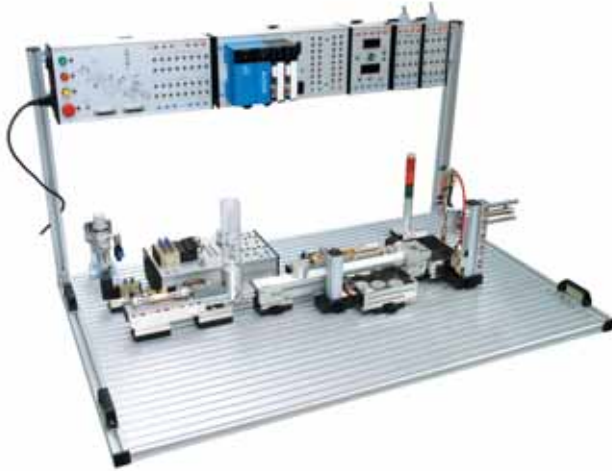


FEATURE

- Automatic Storage / Retrieval System
- 2 stepping motors(X and Y axes)
- powerful stepping motor driver
- 3 type of work pallet
- user operating panel(option: touch)
- Any kind of controller is possible for example PLC, microprocessor and VLC a brand-new PC-based controller.

FMAT-140-M

Automatic Production training kit



FEATURE

- It is possible to separate and unite the distribution, drilling, transport and sorting modules
- operation and monitoring board
- Any kind of controller is possible for example PLC, microprocessor and VLC a brand-new PC-based controller.
- Basic pneumatic control, sequence control
- Composing additional conditions
- Fault searching and safety of pneumatic system
- Electric sequence control circuit

MAPC-120

Microprocessor training kit

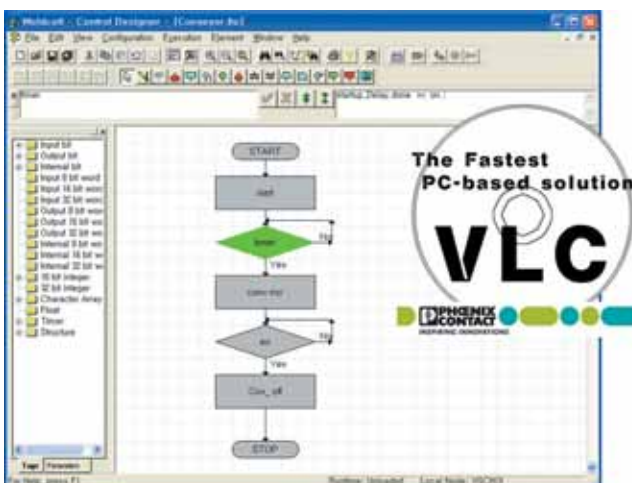


FEATURE

- 3 type of 8bit microprocessors are available(PIC, Intel 8051, Atmel AVR)
- 4 digit 7-segment and LEDs
- easy programming and correction with ISP(in system programming)
- DC5V/24V convert
- pneumatic solenoid valves and cylinders
- position control with stepping motor and belt
- DC motor control

VLC

Visual Logic Controller



FEATURE

- flowchart and RLL programming
- built-in monitoring and debugging features
- runtime with configurable scan rate as fast as 200 microseconds
- drag-and-drop positioning of elements, and cut-copy-paste support
- open architecture: OPC, DDE, Ethernet
- built-in HMI that uses the same tag database as the control program
- included math functions

HI-AnyNET XScale
255/SA1110 V8.0

Multi - Embedded Linux Trainer



FEATURE

- Support various CPUs : XScale255(PXA255 400MHz)
StrongArm(SA1110 206MHz)
- Self-fabrication Stand Alone Web Server
- Various Peripheral Devices for Experiment
- Alternative of Linux or Window CE

HI-AnyNET 8051/80196
Combo V8.0

Multi-Embedded Network & Microprocessor Trainer



FEATURE

- Dual Booting Modes
(Conventional Microprocessor and Embedded Network).
- Any-NET Combo is Network-Based Control Trainer used for Microprocessor Experiments and Data Communication through internet.
- Networkign Program coded by Visual Basic/Visual C++/Java Languages
- Support Self-fabrication for Stand-alone Web Server.

HI-AnyNET 89S51/AVR/PIC V9.0
HI-Multi Digital Breadboard 89S51/AVR/PIC V2.0A,V2.0B

Multi One-Chip Microprocessor Trainer



FEATURE

- 3Kinds of One-chip MCU (89S51, AVR8535, PIC16F874) are used for experiment, each.
- Replacement of MCU Modules is very easy, since AnyNET is divided into 2Modules such as MCU, and Peripherals.
- AnyNET is applicable for experiment of Pneumatic, and Hydraulic.
- AnyNET has Various Peripheral Part of 13 Modules.
- Breadboard or Digital I/ O with Relay and PPI Expansion (User Selectible)
- Abundant Source Codes, Schematic Diagrams, and so on.

HI-Extreme R1

Multi - Robot System Trainer

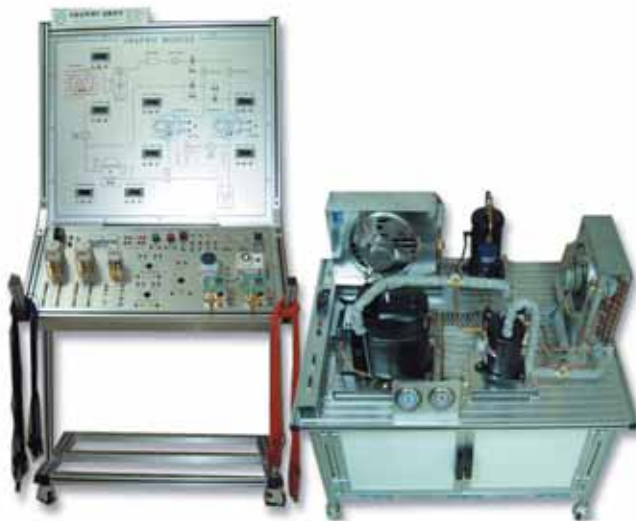


FEATURE

- Best experimental item of Microprocessor Applications
- 3 Functions - Micro Mouse, Line Tracer, RC Soccer Robot
- Support 3 MCUs - 89C51AC2, ATmega32, PIC18F452
- Program update is very easy through ISP (In System Programming) Function

HE-1000

Standard Refrigeration Trainer



FEATURE

- Study Fundamental Theories, Application, Temperature, and Pressure of Refrigeration
- Installing leak tester and device for refrigerant charging.
- Temperature measurement at arbitrary section of refrigerator.
- Drawing P-I diagram.
- The system is composed of Graphic Control, Mechanical Modules and Additional Equipment is easily added to this system.

HS04/HS08/HS16

Digital Security System / Digital Video Recorder Stand-Alone



FEATURE

- Image Compression Method : Motion JPEG
- Frame Rate (Monitoring/Recording)
 - HS04 (120FPS/60FPS), HS08 (240FPS/60FPS), HS16(480FPS/60FPS)
- Recording Mode
 - Continuous, Motion Detection, Alarm/Sensor
- Remote View, Access, and Control under TCP/IP