



## Moisture Tester & Inspection Instruments for Agricultural Use .....

### Grain and Seed Moisture Tester

Model **PM-600**



The PM-600 is the most advanced handheld moisture tester with marvelous functions

- Up to 99 product calibrations can be stored in memory.
- Average readings can be made at the press of a button.
- A range of 6 to 30% can be measured for almost all samples. Additionally, corn can be measured from 6 to 47%.
- An optional printer may be plugged into the PM-600 in order to print all data.

#### Specifications

Measuring method	Dielectric constant
Measuring range	6 ~ 30 %
Accuracy	0.3% below 20%
Power source	4pcs. 1.5V Batteries ("AA" size Alkaline)
Dimensions	130 (W) X 185 (D) X 210 (H) mm
Weight	Net 2.0kg Shipment 4.0kg

### Grain Moisture Tester

Model **PM-410**



KETT was the first company in Japan to develop a practical Grain Moisture Tester. Since that time, KETT has relentlessly pursued the further development of grain moisture testers. Now, KETT introduces PM-410 as the most reliable Grain Moisture Tester in the world. Calibration was made against Oven Method which designated as an official standard (ie: ISO or USDA). Operation is very easy and moisture content can be displayed by simply pouring a grain sample into the measuring section after pressing the "MEASURE" switch. PM-410 is very portable thus can be used immediately at any location.

#### Specifications

Measuring method	Dielectric constant
Measuring range	1 ~ 40 % (depends on Sample)
Accuracy	0.5%
Power source	4pcs. 1.5V Batteries ("AA" size)
Dimensions	130 (W) X 190 (D) X 210 (H) mm
Weight	Net: 1.0kg Shipment: 3.0kg



## Moisture Tester & Inspection Instruments for Agricultural Use .....

### Grain Moisture Tester Model Riceter m series



Kett was the first company in Japan to develop a practical grain moisture tester. Since that time, we have relentlessly pursued the further development of grain moisture testers. The compact light weight family of riceter moisture testers began with the introduction of the Riceter model in 1961. The Riceter has continued to evolve through a series of models such as the II, 2, 3, D, L and J. Recently Kett has introduced the newest generation, the Riceter-m. The Riceter-m is a completely new design based upon the extensive know-how that Kett has accumulated with the Riceter series. The Riceter-m was designed to be an even more reliable moisture tester providing even greater ease of use. Kett believes that an excellent measuring device must be both reliable and easy to use.

#### Specifications

Applications	Polished and Brown rice, paddy, wheat, barley, paddy in dryer, naked barley, oats, rapeseed,... (Depends upon model version)
Measurement ranges	10 ~ 40% (Depends On Samples)
Accuracy	0.5%
Power source	4pcs. 1.5V Batteries ("AA" size)
Dimensions	164(W) x 94 (D) x 65 (H)mm
Weight	Net 0.44kg Shipment 1.5kg
Accessories	Sample pans (2pcs.), brush, spoon with tweezers, "AA" size batteries (4pcs.), user's manual carrying case (optional), husker (optional).

### On-Line Grain Moisture Tester Model PT-2700



The PT-2700 can be mounted into a paddy dryer or measuring scale at a rice unloading station, enabling continuous moisture measurement. When mounted into a dryer, it is possible to automatically stop the dryer while taking moisture measurements.

#### Specifications

Measurement method	Electrical Resistance Method
Applications	Unhusked rice (paddy)
Measured variables	Moisture, Temperature
Measurement range	Moisture: 10-35%, Temperature: 0-50°C
Measurement precision	With respect to drying method (105°C 5g 5H crushed), 1 $\sigma$ - 0.5% or less, at moisture of 20% or less
Time for measurement	100 grains/ 40 s (brown rice, polished rice)
Measured volume	100 grains per measurement
Display format	Digital (LED, smallest displayed unit: moisture 0.1%, temperature 1°C)
Operating environment	0-50°C, 0-80% (however, must be free of condensation risk)
External output	RS-232C interface
Power source	AC100-240V (50/60V)
Power consumption	Max 120W
Dimensions & weight	Controller 170(W) x 110(D) x 248(H) mm, 1.2kg
Accessories	Moisture sensor (PU-333), Cable with thermistor



**Grain Moisture Tester**  
**Model PB-3000 series**





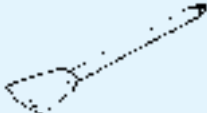






The PB-3000 is a rice and grain moisture tester intended for the purpose of measuring the moisture content of imported rice. The base unit has been modeled after the PB-1D2 rice and grain moisture tester which is used by many companies and is highly valued for its precision and durability. In responding to the influx of rice production in various countries in the world, we have made this unit to be able to measure short, medium, and long grains countries which are known to have the highest measuring frequencies. Of course, you can also measure domestic polished and brown rice with this unit.

**Specifications**

Measurement Method	Electrical resistance
Applications	Model PB-3003 Paddy, Rice, Parboiled Rice, Parboiled Paddy, Tapioka Pellet, Tapioka Flour. Model PB-3004 (for pasta processing) Wheat, Flour (Cake & Noodle), Flour (Bread & Pasta), Noodle, Pasta, Corn Flour.
Measurement Range	11.0-20.0%
Measurement Precision	Manufactured: $\pm 0.1\%$ , 105°C method: $\pm 0.5\%$
Display Format	Digital (LED, smallest displayed unit 0.1%)
Display Content	Moisture (%), Number of times measured
Temperature Correction	Automatic temperature correction according to thermostat
Output	Printer Terminal (based on Centronix)
Power Source	AC 100V (50/60Hz) or 1.5 ("D" size batteries) x 4. When using battery power, continuous running time is 15 hours.
Dimensions & Weight	250(W)x240(D)x125(H)mm, 3.5kg (Shipment 5.0kg)
Accessories	Sample tray, Tester, Brush, Small brush, Spoon
Options	Printer VZ-330

**Model PB-3000 Series Accessories**

Power cord		Measuring spoon	
Crushing handle		Spiral brush	
Measurement lever		Brush	
Sample dish		Cleaning brush	
Checker			



# Moisture Tester & Inspection Instruments for Agricultural Use .....

## Single Kernel Moisture Tester

### Model PQ-510



KETT introduces the PQ-510 moisture tester which check individual kernel moisture content from paddy, rice wheat and barley. PQ-510 provides the means of detecting blended high-moisture grain with a lower moisture contents. The also measures the uniformity of tempered grain prior to milling or the uniformity of a grain dryer output. PQ-510 can provide crop breeders data for numerous research applications. And the printout provides moisture percentages for each kernel, total number of kernels measured, average moisture percent, variance, standard deviation and histogram of the moisture distribution.

### COMPARISON CHART

	PQ-510
Measurement method	Electric resistance
Measuring range	9~40% (11 ~ 20% Rice)
Data output	Optical printer RS232C Output
Display	LED
Weight	10kg

### Hard Copies Provided

A printer is indispensable when making high-speed measurements of a large number of samples. Moisture content measurements of samples are meaningless if they are not recorded. In addition to providing hard copy output of the date and time of measurement, moisture content data and average moisture content, these units also print out the standard deviation and histograms, etc. as well.



### Specifications

Measurement method	Electric resistance
Applications	Paddy, Unpolished Rice, Polished Rice, Wheat, Barley, Rye
Accuracy	0.5%
Display	Digital (LED numeric display & histogram display)
Data displayed	Numerical: Average moisture content, number of grains, time Histogram: Moisture distribution
Measurement time	100 grains/50 seconds (polished and unpolished rice)
Optional number of grains	10 - 1000grains
Operating environment	0 - 40°C
Temperature correction	Automatic temperature correction by thermistor
Power source	AC 100 ~ 240V (50/60Hz)
Power consumption	25W (maximum)
External output	Standard RS-232C
Dimensions	197(W) x 340(D) x 335(H)mm
Weight	Net 10.0kg Shipment 12.0kg
Option	Printer (VZ-330)
Data printed	Date & time, moisture content data, standard deviation, histogram



## Moisture Tester & Inspection Instruments for Agricultural Use .....

### Hay Moisture Tester Model **HX-700**



The control of moisture in hay is quite important for dairy farming exporters and importers. The specially designed model HX-700 makes moisture control quick and simple.

#### Specifications

Measuring method	Electrical resistance
Measuring range	8 ~ 30% (depends on calibration & samples)
Accuracy	Standard error: 1%
Ambient temperature	0 ~ 40°C
Power source	6pcs. 1.5V Batteries ("AA" size Alkaline)
Dimensions	110 (W) x 210 (D) x 50 (H) mm
Weight	Net 0.5kg Shipment 2.5kg

### Tatami (straw mat) Moisture Tester Model **HX-300**



The HX-300 displays the moisture (%) by the simple insertion of a needle-shaped sensor into the surface matting, or tatami stuffing ("tatamidoko"). It is known that the moisture content of the stuffing and atmospheric temperature are big factors in the outbreak of tatami mite infestations. Further, high moisture content in the stuffing can also be the cause of fungi and decay. Recently, there has been an increasing move from rice straw tatami stuffing to different types of building materials. This moisture tester can measure the moisture content of tatami surfacing, rice straw stuffing and tatami board (wooden board flooring material), control of the moisture content of which is prescribed by both the Japan Industrial Standard in particular, as well as the Japan Agricultural Standard.

#### Specifications

Measurement method	Electrical Resistance Method
Applications	Tatami surface matting, Rice straw stuffing, Tatami board (wooden board flooring material)
Measurement range	Tatami surface matting: 8-20%, Rice straw stuffing 7-25%, Tatami board: 7-35%
Measurement precision	Standard error: Tatami surface matting 0.8%, Rice straw stuffing 1.3%, Tatami board 1.3%
Display format	Digital (LCD, smallest displayed unit 0.1%)
Allowable temperature range	0 - 40°C
Additional functions	Automatic temperature compensation, Average value display, Max value alarm setting (10 - 79%, or OFF), Auto Off (turns power OFF automatically after approx. 5 min), Moisture value compensation (-9.9% - 9.9%)
Power source	6pcs. 1.5V Batteries ("AA" size Alkaline)
Dimensions & weight	110 (W) x 210(D) x 50(H) mm, 0.5 kg
Accessories	2-Needle sensor, 4pcs Spare needles, Spacer for sensor needles, Wrench, Shoulder strap, 6pcs 1.5V Batteries ("AA" size Alkaline), etc.





## Moisture Tester & Inspection Instruments for Agricultural Use .....

### Copra Moisture Tester

Model **HX-120**



Direct, accurate moisture percentages are obtained by simply driving the probe needles into the copra. The model HX-120 is indispensable for copra processors or exporters.

#### Specifications

Measurement method	Electrical resistance
Applications	Copra
Standard method	ISO 665
Measurement Range	3 to 20% (dry base)
Measurement Precision	Standard error 0.4% (moisture values of 10% or lower)
Display	Digital (LCD)
Resolution	0.1%
Operating Temperature Range	0 to 40°C
Functions	Moisture value bias adjustment (-9.9 to +9.9%), average value, Upper limit alarm, Automatic temperature compensation, Auto power off (automatically turns off after approximately 5 minutes)
Power Supply	6pcs. 1.5 V batteries (AA alkaline)
Power Consumption	approximately 0.45 W
Dimensions	110 mm (W) x 210 mm (D) x 50 mm (H)
Weight	0.5 kg
Accessories	Two needle probe, wrench, shoulder strap, 6pcs 1.5 V battery (AA alkaline), carrying case, operating manual
Options	Printer (VZ-330), printer connecting cable (VZC-26)

### Coffee, Cacao Moisture Tester

Model **PC-820**



A new model, the PC-820 was developed in cooperation with the IFCC (institute of France for Coffee and Cacao). It is now the official standard of the government of the Ivory Coast. Quick and easy measurements are made by merely thrusting the probe rod into the bale.

#### Specifications

Measuring method	Electric resistance
Measuring range	Coffee 4 ~14% Cacao 8 ~ 18%
Power source	8pcs. 1.5V Batteries ("AA" size)
Accuracy	0.5%
Dimensions	110 (W) x 160 (D) x 53 (H) mm
Weight	Net 1.5kg Shipment 3.0kg
PC-820	
Type II for corn and paddy	Corn : 10 ~ 40% Paddy : 10 ~ 30 %
PC-820	
Type III for peanut	Hulled : 5 ~ 12 % Unhulled : 4 ~ 18%



## Moisture Tester & Inspection Instruments for Agricultural Use .....

### Grain Inspector Model **RN-300**



State of the art hardware is faithful to human eye. It watches samples and reflectance and transmittance scan like human eye does. RN-300 distinguishes and analyzes the rice grain as it is like in the manner of a human eye. It displays its measurement results in numeric data with video pictures.

- Optical Measurement system body  
The sensor unit scans the sample to receive the RGB signals from it.
- 24sec. High speed process for the data and picture display  
It takes only 24 seconds to displays and the analyzed numeric data and the detected picture of all the 1,148grains.
- All-in-one type, measurement, display and print out on the site  
Camera, note PC, color LCD monitor and the printer is integrated in the Instrument.
- 10,000 memory capacity for pictures and detected data  
The high performance PC allows quick and easy process of the re-data 10,000 pictures of the detected data.

#### Specifications

Measurement format	Optical format
Object of measurement	Brown rice, Polished rice
Grain classifications	Selectable for three, 6 and 21 classifications
Processing capability	max 1148 grains per 24 seconds
Power source	AC100V±10% 50/60Hz
Accessories	PC, Printer, Scanner, Carrying bag
Options	Quality print software
Dimensions	580(W) x 230(D) x 420(H)mm
Weight	Net 12.0kg

### Rice Freshness Analyzer Model **RN-820**



The "Freshness Meister" is a joint development between Kett and the Japan Grain Inspection Association. By placing polished rice in the measuring tray, adding color with a pH indicator, then reading in with a scanner and analyzing the image of each individual grain of rice, it is possible to manage rice freshness using images and numerical values. Since it is possible to quantify the testing process without relying on detecting color differences with the naked eye, it is thus possible to completely standardize the freshness measurement. The test utilizes pH indicator specified by the Japan Grain Inspection Association.

#### Specifications

Measurement method	Involves taking images of polished rice grains that have been colored with a pH indicator, then image processing and determining their freshness using the dedicated software "Freshness Meister"
Applications	Polished rice
Measurement time	72 grains/ approx 10 min
Measurement results	Ranking based on freshness standard set by the Japan Grain Inspection Association. It is also possible to rank according to user settings
Display content	Measurement Results: Sample ranking and average pH, pH value of individual rice grains. Graph: pie graph and histogram showing pH distribution. Image: color image and scan image of rice grains. Numerical information: sample statistical data
Power source	AC100V±10% 50/60Hz
Dimensions & weight	276(W) x 450(D) x 116(H) mm, approx. 3.1kg (scanner)
Accessories	Scanner RN-820, Grain arrangement block, Shield plate, 3x Trays, 5x Petri dishes, Color compensation plate, Template, 2x Freshness Meister indicator fluid (500 mL), Lens cleaner, Pincers, Spoon, Stick, Measuring cup, USB cord, Software



## Moisture Tester & Inspection Instruments for Agricultural Use .....

### Single-grain Rice Inspector

Model **RN-600**



The RN-600 rice inspector shines light on each individual grain of brown rice or polished rice in a sample to determine the color of the grain based on transparency and reflection and employs a line image sensor to determine the grain's shape characteristics in order to separate the sample into 5 classes. The RN-600 has the capability of inspecting a sample of 1000 grains of brown rice in approximately 40 seconds, and in addition to displaying the percentages of even, cracked, immature, discolored and dead grain, this information can also be recorded using an optional printer.

#### Specifications

Measurement format	Optical format (RGB sensor, line image sensor)
Object of measurement	Brown rice (non-glutinous rice), Polished Rice
Grain classifications	Even grain, cracked grain, immature grain, discolored grain, dead grain
Measurable quantity	Grain Quality Specification Mode: 1-2000 grains Entire Sample Mode
Display format	Digital (dot-matrix LCD)
Display content	Number of grains per class, sample composition percentage, measurement threshold value
Processing capability	Approximately 1000 grains per 40 seconds (it differs depending on the condition)
Operating environment	5 ~ 35°C
Light source	LED
Power source	AC100V ± 10%(50/60Hz)
Dimensions & weight	404(W) x 486(D) x 384(H)mm, 15.0kg
Input/Output terminals	USB 1.1, Serial I/O Terminal (RS-232C), Parallel Output Terminal (for optional printer, Centrol standard)
Accessories	Blower brush, measuring spoon, silicon cloth, brush, tweezers, fuse, power supply cable (Standard plate (not included with RN-600 Ver.1.0))
Options	VZ-360 printer Data logger software "KDL"

### Data Management Software Software "Data Analyzer"



The "Data Analyzer" is software developed for transferring data measured with Kett products to a personal computer to perform statistical analysis and create databases.

Applicable devices:

Component Analyzer AN-820

Grain type determination tester RN-600

Brown rice / polished rice whiteness tester C-300 (manual input)

Rice / wheat moisture tester PB-1D2 (manual input)







## Moisture Tester & Inspection Instruments for Agricultural Use .....

### Near Infrared Component Analyzer

Model **AN-900**



The AN-900 is capable of measuring moisture content, Protein and Amylose in Short & Long Brown Rice and Milled Rice. Constituents are calculated based on the transmittance of the light. Processing of samples, such as husking and grinding etc., are not necessary with the AN-900.

Measurements are started by simply loading a sample into the sample case. This allows quick, simple and non-destructive constituent analysis. Compared to the infrared reflectivity measurement method, the Near-Infrared Transmittance method employed by the AN-900 is relatively little affected by the shape or color of the sample and thus excellent measurement characteristics.

#### Specifications

Measurement method	Near-Infrared transmittance (720-1100nm)
Applications	Brown Rice(Short & Long ) / Milled Rice(Short & Long )
Measured constituents	Protein / Moisture Content / Amylose
Sample volume	Approx. 60mL
Measurement range	Brown Rice & Milled Rice Moisture Content 10~20%,Protein 4~12%,Amylose 10~40%
Measurement time	Approx. 30 seconds
External output	RS-232C interface
Environmental conditions	Temperature : 0~40°C , Humidity : max of 85%RH
Power source	AC100~120V / 220~240V (50/60Hz) , max 50W
Dimensions & weight	390(W)x295(D)x186(H) , 9Kg (Shipment 15Kg)
Optional accessories	Printer VZ-330

### Near Infrared Component Analyzer

Model **AN-820**



The component analyzer AN-820 is able to measure components such as moisture, protein, and amylose (reference value) contained in brown and polished rice, without the need for preparations such as pulverizing the sample. It can also display a "quality rating value". This tester displays the component quality of rice, and we believe it is the optimal measuring device for quality control for rice producers, rice processors and wholesalers to scientifically manage the taste of rice.

#### Specifications

Measurement method	Penetrating-type near infrared spectroscopy
Light source	Tungsten lamp (life 20,000hr)
Applications	Brown Rice, Polished rice
Measured components	Moisture, Protein, Amylose (reference value)
Display range	Moisture 10-20%, Protein 4-10%, Amylose 15-25% (reference value)
Sample volume	Approx. 60 mL
Calibration curve	Memory Capacity :4 Components x 8 Channels
Operating environment	10-35°C
Display format	320 x 240 dot matrix backlit LCD
Input/Output terminals	RS-232C, Printer output terminal
Display content	Calibration curve label, Protein value, Moisture value, Amylose value (reference value), Quality rating value
Power source	AC100V - 240V (50/60 Hz)
Dimensions & weight	260(W) x 350(D) x 380(H)mm, 13kg
Accessories	1x Power cable, 2x Sample case, 1x Sampling cup, 1x Spare fuse, 1x Each of standard sample (Brown rice, Polished rice), 1x Storage container (standard sample)
Options	Dedicated printer VZ-330, Data management software "Data analyzer", Data logger software "AN-820 measurement macro"



## Moisture Tester & Inspection Instruments for Agricultural Use .....

### Near Infrared Component Analyzer

Model **AN-200WB**



AN-200WB can easily measure the moisture and protein content of wheat, barley and soybeans. For soybeans, it can also measure oil content. As the analyzer utilizes the near-infrared penetration method, sample preparation, such as crushing, etc before measurement is not required. Simply by placing the sample in the sample case and inserting this into the measuring chamber, the sample is measured automatically. An automatic elevating mechanism moves the sample case, measuring different parts of the sample and an average value is displayed after about 20 s.

#### Specifications

Measurement method	Near infrared penetration method (720 - 1100 nm)
Applications	Wheat, Barley, Soybeans (optional)
Measured components	Moisture, Protein, Oil (Soybeans)
Measurement range	Wheat: moisture 7-40%, protein 7-15%; Barley: moisture 7-40%, protein 7-15%; Soybeans (optional): moisture 6-16%, protein 13-46%, oil 14-25%
Measurement time	Approx. 20s (single sample measured 5 times)
Display format	Backlit dot matrix LCD
Input/Output terminals	RS-232C, Printer output terminal
Power source	AC100V (50/60Hz)
Dimensions & weight	330(W) x 270(D) x 220(H), 8kg



**Grain Polisher**  
Model **PEARLEST**



Removal of the bran is required for reliably measuring rice density, checking for damaged, rotten, or red-rust grains, or for determining whether glutinous and non-glutinous rice have been intermixed. The Pearlest was specifically designed to polish rice, wheat and barley for these purposes

**Specifications**

Sample weight	10g
Polishing time	Brown rice: 30 sec Barley : 1 min.
Power source	AC 100/220V (50/60Hz)
Dimensions	95 (W) x 130 (D) x 160 (H) mm
Weight	Net 2.0kg Shipment 4.0kg
Accessories	Spoon, brush, spatula, agitating file, metal disc, and metal ring (1 pc. each)

**Pearlest Parts and Accessories**

Rubber disc	
Rubber ring	
Metal disc	
Metal ring	
Spoon	
Brush	
Spatula	

**Rice Husker**  
Model **TR-120**



Improved accuracy in rice moisture measurements is obtained by husking before making measurements. This device effectively husks the rice by merely rotating its handle. The TR-120 is an accessory for the Riceter Model m.

**Specifications**

Rubber roller	27mm in diameter, hardness 85
Sample weight	5g
Dimensions	70 (W) x 49 (D) x 80 (H) mm
Weight	Net 0.22kg Shipment 0.5kg

**Husker Parts**

One set of Rubber rollers (with gears)	
--	--



## Moisture Tester & Inspection Instruments for Agricultural Use .....

### Rice Husker Model TR-200



Improved accuracy in rice moisture measurements is obtained by husking it before making moisture measurements with KETT brand PB-1D<sub>2</sub>, SP-1D<sub>2</sub>, and all models of RICETER. This device is motorized and most effectively removes the husk from rice.

#### Specifications

Capacity	1000 pcs whole grain (approx.20g) / mm
Hopper	45cm (approx.25g)
Safety system	Automatically cutoff when overloaded
Moisture range	12 ~ 18%
Power source	AC 100V (50/60Hz)
Dimensions	205 (W) x 130 (D) x 126 (H) mm
Weight	1.6kg

### Grainscope Model TX-200



This device is used as an aid in inspecting rice quality. Whether or not there are damaged grains in a sample, the extent of damage and the ratio of damaged grains present can be quickly determined by placing the grains on the panel.

#### Specifications

Sample size	50 rice grain or more
Power source	4pcs. 1.5V Batteries ("AA" size Alkaline) AC 100V (50/60Hz)
Dimensions	162 (W) x 134 (D) x 80 (H) mm
Weight	Net 0.5kg Shipment 1.5kg





## Moisture Tester & Inspection Instruments for Agricultural Use .....

### Grain Crusher Model TQ-100



This crusher is approved by the Japanese governments for official use for moisture measurements. It features a roller for crushing samples, and a light alloy body which can easily be clamped to the edge of a table with the built-in clamping screw

#### Specifications

Sample weight	5g
Grain size	20 ~ 30 meshes (rice)
Dimensions	80 (W) x 70 (D) x 180 (H) mm
Weight	Net 1.2kg Shipment 3.0kg

### Harvest Monitor Model OT-300



From the day rice sprouts, one must measure the rice paddy's ripening, and when the added amount reaches 1000°C, hitting the peak, one must harvest the paddy. There is a real danger, however, of harvesting too early or too late. Harvesting at the appropriate time guarantees the best yield and at the same time will yield a great improvement in quality. With this unit, if you set the rice paddy yield just once, it will automatically measure the temperature and display the most fruitful time to harvest

#### Specifications

Measurement method	Thermostat temperature detection
Applications	Integrated field temperature
Measurement range	A fixed area of a radius of 2km (depending on conditions)
Display format	Digital(LCD)
Power source	9V (Alkaline battery)
Dimensions & weight	Main unit: 60(W)x45(D)x105(H)mm, 0.15kg Support unit: 30x30x1300(L)mm x 2 Sunshade hood: 200(W)x200(D)x250(H)mm



## Wood Moisture Testers .....

### Wood Moisture Tester

Model **MT-900**



MT-900 supersedes the conventional MT-700 model. We have provided two new calibration curves under the labels "Broad-leaf" and "Conifer", and by using these curves, it is possible to cover a wide moisture range - 6-80% (Broad-leaf) and 7-80% (Conifer). It is also possible to call up the calibration curves of the original 16 tree species. Furthermore, we have provided a printer output terminal so that data can be printed out by connecting to an optional printer.

#### Specifications

Measurement method	Electrical Resistance Method
Applications	Single plank, all wooden materials
Calibration curves	Broad leaf tree, Conifer (Standard Method: ISO 3130), 16 types of tree species
Measurement range	6-80% (Broad leaf), 7-80% (Conifer), 4-40% (when tree types No. 1 - 16 selected, will depend on particular tree species)
Measurement precision	moisture < 20% ± 0.5%; moisture 20% ± 2.0% (precision compared to standard resistance)
Display format	Digital (LCD, smallest displayed unit 0.1%)
Allowable temperature range	0-40°C
Additional functions	Automatic temperature compensation, Average value display, Auto Off (turns power OFF automatically after approx. 5 min) Max value alarm setting (10 - 79%, or OFF), moisture value compensation (-9.9% - 9.9%)
Power source	6pcs. 1.5V Batteries ("AA" size Alkaline)
Power consumption	Approx. 0.45 W
Dimensions & weight	110 (W) x 210 (D) x 50 (H) mm, Net 0.5kg, Shipment 4kg
Accessories	4-Needle sensor, 10x Spare needles, 2x Conductive rubber pieces, Wrench, 6x 1.5V Batteries ("AA" size Alkaline), Carrying case, Shoulder strap, Tree species number chart (1x Japanese and 1x English)
Options	Printer (VZ-330), Printer cable (VZC26)

### Wood Moisture Tester

Model **MT-700**



Adopting conventional measuring principle, the MT-700 has been developed as versatile Wood moisture tester.

To make woody buildings or furniture last long, moisture control is, no doubt, the best choice tester featuring:

- Direct reading for 16 varieties of wood.
- Alarm for upper limit can be preset.
- Wide bias adjustment can be made.

#### Specifications

Measurement method	Electrical Resistance Method
Applications	Single plank, all wooden materials
Measurement range	5-40% (Depend on particular tree species)
Measurement precision	moisture < 20% ± 0.5%; moisture 20% ± 2.0% (precision compared to standard resistance)
Display format	Digital (LCD, smallest displayed unit 0.1%)
Allowable temperature range	0-40°C
Additional functions	Automatic temperature compensation, Average value display, Auto Off (turns power OFF automatically after approx. 5 min) Max value alarm setting (10 - 79%, or OFF), moisture value compensation (-9.9% - 9.9%)
Power source	6pcs. 1.5V Batteries ("AA" size Alkaline)
Power consumption	Approx. 0.45 W
Dimensions & weight	110 (W) x 210 (D) x 50 (H) mm, Net 0.5kg, Shipment 4kg
Accessories	4-Needle sensor, 10x Spare needles, Wrench, 6x 1.5V Batteries ("AA" size Alkaline), Carrying case, Shoulder strap



## Wood Moisture Testers .....

### Nondestructive Wood Moisture Tester

Model **HM-530**



The newest and smallest wood moisture tester, the HM-530 operates on the principle of electromagnetism. It is totally nondestructive to the surface of the wood being measured and can measure deep inside the wood. Using a built-in, powerful microcomputer, it displays direct readings. Any type of lumber can be measured by simply adjusting dials on the face of the instrument for depth, density and temperature. The tester comes with a manual listing the density of hundreds of wood types.

#### Specifications

Measuring method	Dielectric constant
Applications	Wood, plywood
Measuring range	2 ~ 150%
Accuracy	0.5%
Alarm setting	4 ~ 19%
Power source	Battery 1 pc. 9V (006P Alkaline)
Dimensions	131(H) x 108(W) x 53(D)mm
Weight	Net 0.5kg Shipment 1.5kg



## Wood Moisture Testers .....

### Moisture Monitor Model MD-710



Moisture monitoring is very important factor at kiln dryer. Upto six data can be monitored and also RS232C output enables these data transferring to the computer.

#### Specifications

Measuring method	Electric resistance
Measuring range	4-129%
Output	RS-232C
Power source	AC100V (50/60Hz)
Accessories	Screw driver, Spacers 120pcs .
Optional	Printer (model: VZ-330)
Dimensions	320(W) X 300(D) X 150(H)mm
Weight	Net 6.0kg Shipment 9.0kg

### Moisture Grader Model HG-770



The HG-770 can be installed on production lines in plywood mills, etc., for selection based on wood moisture content and inspection purposes. The HG-770 features a large, high brightness LED display which makes it possible to clearly read the displayed moisture content values from a distance. Upper and lower limit moisture content control values can be set so that an alarm buzzer sounds and the set limit value blinks in the display when the measured moisture content is outside the set range. A signal is also output simultaneously. The HG-770 also allows selection between measurement of broadleaf tree woods and needle-leaf tree woods.

#### Specifications

Measuring method	Electrical resistance
Object of measurement	Processed lumber
Measuring range	7 ~ 35%
Accuracy	7 ~ 14% : $\pm 1\%$ , 14 ~ 35% : $\pm 2\%$
Display format	Digital (LED)
Power source	AC 100/240V (50/60Hz)
Dimensions	300 (W) x 140 (D) x 300 (H) mm
Weight	Net 8.0kg Shipment 16.0kg
Optional	Needle roller sensor





## Other Moisture Tester .....

### Paper Moisture Tester

### Model **HK-300 Series** (-1/-2/-3)



HK-300-1

This paper moisture sensor can measure the moisture content of a variety of paper types, such as kraft paper, liner board, copy paper and cardboard. The HK-300 series comes in three sets with different sensor types to accommodate the type of paper to be measured and the application: the HK-300-1 set includes a grip sensor, the HK-300-2 set includes an electrically conductive rubber sensor, and the HK-300-3 set includes a constant pressure sensor.

#### Specifications

Measurement method	Electrical Resistance Method
Applications	Kraft paper, Liner board, Copy paper, Cardboard, etc
Calibration curves	Kraft paper, Liner board, Copy paper, Cardboard
Standard method	JIS P8127 (copy paper, cardboard)
Measurement range	●Grip sensor: Copy paper, 4-15%/Cardboard, 6-20% ●Conductive rubber sensor: Copy paper, 4-25%/Liner board, 6-23%/Kraft paper, 5-24% ●Constant pressure sensor: Copy paper, 2-10%/Liner board, 5-15%/Kraft paper, 2-10%
Measurement precision	Standard error 0.4% (at 15% moisture or less)
Display format	Digital (LCD, smallest displayed unit 0.1%)
Power source	6x 1.5V ("AA" size Alkaline), approx 0.45W
Dimensions and weight	110(W) x 210(D) x 50(H)mm, 0.5kg
Accessories	Carrying case, Shoulder strap, 6x 1.5V batteries ("AA" size Alkaline)
Options	Printer (VZ-330), Printer cable (VZC-26)



HK-300-2



HK-300-3

### Paper Moisture Tester

### Model **KH-50**



Palm-top model KH-50 has five paper calibrations and one for customer calibration. Adopting Capacitance as measuring principle, the average moisture up to 30mm thickness can be obtained.

#### Specifications

Measuring method	Capacitance
Measuring range	0 ~ 40%
Accuracy	Depends on sample
Power source	Battery 9V (6LF22 Alkaline)
Dimensions	60 (W) x 150 (D) x 25 (H) mm
Weight	Net 0.16kg Shipment 1.5kg



## Other Moisture Tester

### Concrete and Mortar Moisture Tester

Model **HI-520**



For building and waterproofing industries, moisture control in concrete and mortar is one of the most important factors. The model HI-500 proves to be an ideal moisture tester since it employs a dielectric constant principle which can search the average moisture content to a depth of up to 4 cm.

#### Specifications

Measuring method	Dielectric constant
Measuring range	LWC 0 ~ 23% Mortar 0 ~ 15% ALC 0 ~ 100% GYP 0 ~ 50% Concrete 0 ~ 12%
Accuracy	0.5%
Power source	Battery 1pc. 9V
Dimensions	110 (W) x 56 (D) x 130 (H) mm
Weight	Net 0.5kg Shipment 1.5kg

### Concrete and Mortar Moisture Tester

Model **HI-800**



To prevent removal of the mortar or tile from concrete, recently, injection of epoxy into the space between them is quite popular. However, if, moisture in the spot where epoxy should be injected is high, satisfactory adhesion can not be expected, thus this moisture meter has been developed based on the project planned by Ministry of Construction.

#### Specifications

Measuring method	Electric resistance
Measuring range	Concrete : 0 ~ 10% Mortar : 0 ~ 15%
Accuracy	0.5% ~ 1.5%
Measuring depth	50mm Max. Available upto 150mm as optional.
Power source	Batteries 4pcs. "AA" size
Dimensions	75 (W) x 145 (D) x 31 (H) mm
Weight	Net 0.5kg Shipment 1.0kg



## Other Moisture Tester .....

### Universal Moisture Tester

Model **HB-300**



The HB-300 is new concept moisture tester which users can input calibrations easily by themselves for their own products. Various optional sensors can be available so that accurate measurement may be expected. Applications are solid, powder, granular or tablets, paste and sheets which are not including any electrolytic.

#### Specifications

Measuring method	Electric resistance
Measuring range	1 ~ 99% (depends on calibration & samples)
Accuracy	Depends on calibration
Ambient temperature	0 ~ 40°C
Power source	Batteries 6 pcs. "AA" size.
Dimensions	110 (W) x 210 (D) x 50 (H) mm
Weight	Net 0.5kg Shipment 4.0kg
Options	Printer (VZ-330) Sensors



Four Needled Sensor

Rubber Sensor

Pressure Type Sensor

### Fresh Concrete, Mortar and Sand Moisture Tester

HI-300 / HI-330



The HI-300 and HI-330 are fresh concrete moisture testers. By loading fresh concrete (mortar) that has been wet screened on-site into the sample container and simply pressing the measure key, these testers can both easily measure the moisture content and moisture weight of the sample, and output control data to a printer. Further, in addition to measuring the moisture content of fresh concrete, the HI-330 is also capable of measuring the surface moisture of fine aggregate.

#### Specifications

Measurement method	High frequency volumetric method
Applications	Mortar (wet screened fresh concrete). HI-330 is for mortar or fine aggregate
Measurement range	Mortar: 20-40% (volumetric ratio). Fine aggregate: ≤ 15% (surface moisture), Fresh concrete: 120-240 kg/m <sup>3</sup> (unit quantity of water)
Measurement precision (standard deviation)	Mortar: ± 0.3% (moisture), Fine aggregate: 0.14% (surface water), Fresh concrete 1.0 kg/m <sup>3</sup> (unit quantity of water)
Display format	Digital (LCD, smallest displayed unit 0.1%)
External output	RS-232C Interface
Power source	AC100V (when using 6V AC adaptor), or 6x 1.5V Batteries ("C" size)
Additional functions	Unit water estimation, Water/cement ratio estimation, User scale logging, Composition Data logging, Average value, 126 data point memory, Auto power OFF after 15 min. Varies between models
Dimensions & weight	300(W) x 264(D) x 197(H) mm, 2.5kg
Accessories	Sample case, Exchange connectors, Dummy, AC adaptor, Carrying case. Variations between models
Options	Printer (VZ-350), Wet screener TZ-610

The photo shows the HI-330.



## Infrared Moisture Determination Balances .....

### Infrared Moisture Determination Balance Model **FD-800**

*Dual temperature sensing method*



The FD-800 employs a dual temperature sensing method to achieve highly precise moisture measurements. In addition to the thermistor that measures the environment temperature within the drying chamber, it is mounted with a radiation thermometer that measures the sample temperature directly without contact.

#### Specifications

Measurement method	Detection of weight loss by heating & drying
Sample mass	0.1-120g (optional weight sampling)
Measurement subject	Moisture / Solid content / Weight
Measurement range	0-100% (wet base, solids); 0-500% (dry base)
Repeatability (standard deviation)	Sample with a weight of 5g or higher : 0.05% Sample with a weight of 10g or higher : 0.02%
Resolution	Moisture percentage 0.01% / 0.1%; Weight 1 mg
Measurement modes	Automatic stop mode, Timer stop mode, Rapid drying mode, Equilibrium drying mode, Step drying mode, Predictive (comparative) measurement mode
External output	RS-232C interface
Environmental conditions	Temperature 5-40°C, Humidity : max of 85%RH Pollution degree 2, Altitude up to 2000m
Sample pan	SUS (diameter 130 mm, depth 13 mm)
Heat source	Mid-wave infrared quartz heater (200Wx2)
Power source	AC100-120V / 220-240V (50/60Hz)
Power consumption	Max 900W
Dimensions & weight	220(W)x415(D)x190(H), 4.5Kg, Shipment 10Kg
Accessories	Spare sample pan, Aluminum sheets, etc.
Options	Printer Set (VZ-330, Printer Cable: VZC-14) 10x Printer paper rolls, 500x Aluminum sheets Radiation thermometer calibration set GF-200 (digital thermometer, standard heating sample), FD-800 Data logger software FDL-01 (RS-232C cable, USB-RS232C conversion cable), Windshield with deodorizer case FW-100

### Infrared Moisture Determination Balance Model **FD-720**

*Most advanced Moisture Balance*



FD-720 is the most advanced new Moisture Balance. Equipped with high accuracy analytical balance and new designed long life(20,000 to 30,000 hours) Mid-wave Infrared quartz heater and 6 different measurement modes. The unique Bias function allows adjustment to the data Obtained by other measuring methods or other testers.

#### Specifications

Measurement Method	Heat drying and weight loss
Sample mass	0.5-120g
Measurement subject	Moisture / Solid content / Weight
Reproducibility (Standard deviation)	Sample with a weight of 5g or higher : 0.05% Sample with a weight of 10g or higher : 0.02%
Measurement range	0-100%(wet base, solids),0-500%(dry base)
Resolution	0.01%, 1mg
Temperature range	30-180°C
Measurement modes	Automatic operation mode:Timed operation mode (1~240min or continuous):High-speed drying mode:Low-speed drying mode:Stepped drying mode (max of 5 steps):Predictive measuring mode
External output	RS-232C interface
Environmental conditions	Temperature 5-40°C, Humidity : max of 85%RH Pollution degree 2, Altitude up to 2000m
Sample dish	SUS sample dish(130mm dia, 13mm depth)
Heat source	Mid-wave infrared quartz heater (200Wx2)
Power supply	AC100-120V / 220-240V (50/60Hz)
Power consumption	max 900W
Size and Weight	220(W)x415(D)x190(H), 4.5Kg, Shipment 10Kg
Accessories	Sample dish 2 pcs, Sample dish handler 2 pcs, Wind shield, Sample dish tray, Spoon and spatula set, Spare fuses(T8A 250V) 2 pcs, Power cord, Aluminum sheets(20 pcs)x2, Operating manual
Options	Printer set( Printer VZ-330), Data logger software(KDL-01)





## Infrared Moisture Determination Balances .....

### Infrared Moisture Determination Balance

### Model **FD-610**

*Simple Operating Type*



FD-610 is upgraded model from FD-600 which was one of the largest Selling IR moisture balances in Kett record. No other moisture testers offers the versatility of FD-610 which used 5mg resolution Weighing unit and a proven 185-Watt infrared bulb. Also feature is "Auto measurement mode" the total drying process control software, which halts the heating and displays the moisture content automatically, furthermore, Optional printer can be available.

#### Specifications

Measurement method	Detection of weight loss by heating & drying
Sample mass	5~70g(optional weight sampling)
Resolution	5mg / 0.1%
Measurement range	0~100%(Wet-base Moisture/Solid content) 0~500%(Dry-base Moisture content)
Precision	Sample 5g or greater; 0.1%
Display format	Digital LCD display
Measurement mode	Time/Automatic/Continuous measurement
External I/O	Standard RS-232C serial interface
Heat source	185W Infrared bulb X 1pc.
Power source	AC100/240V(50/60Hz)
Dimensions & weight	Net ; 210X320X335(mm), approx.3.2kg Shipment;280X430X580(mm) approx.7.5kg(including printer)
Sample pan	Diameter 95mm, depth 10mm(SUS manufactured)
Options	Printer model VZ-330(including printer cable) Data logger software(KDL-01)

### Micro Moisture Analyzer

### Model **FM-300A**



This simple-to-use system allows the user to accurately measure samples as low as two parts per million(2ppm). Unlike Karl Fisher Titrators since no chemical reagents are used, only moisture is measured (as chemical interaction is eliminated). Kett's FM-300A eliminates the cost of reagents and preparation necessary for Karl Fisher Titrators as well as the expensive disposal cost of the various wastes.

#### Specifications

Measurement method	Filter Moisture Adsorption
Sample mass	10mg~5g
Resolution	0.01mg) / 2ppm (When a sample weights 5g)
Measurement mode	Time/Automatic measurement
External I/O	Standard RS-232C serial interface Parallel out-put for optional printer
Heat source	400W EC heater
Power source	AC100/120/220/240V(50/60Hz)
Dimension & weight	Net;585(W)X520(D)X480(H)mm, approx.37kg Shipment; (Wooden)750X620X550(mm), approx.48kg (Carton)520X420X380(mm), approx.8.5kg
Options	Printer model VZ-330(including printer cable) Data logger software(KDL-01)



## Infrared Moisture Determination Balances .....

### Windshield with Deodorizer

Model **FW-100**

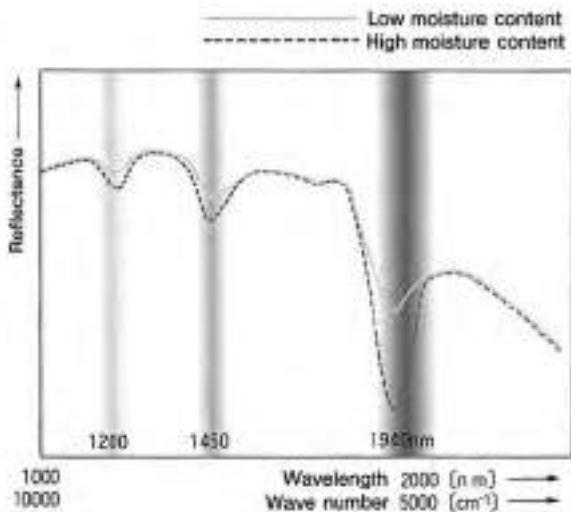
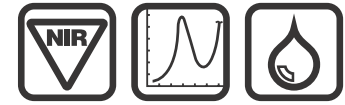


FW-100 is a windshield for the infrared moisture determination balance FD series, fitted with a deodorizing function. When an infrared moisture balance is placed within, the FW-100 reduces the effect of external air currents on the high precision balance. Furthermore, depending on the sample type, unpleasant odors may sometimes be emitted during moisture measurement. The deodorizing filter reduces this odor.

#### Specifications

Dimensions	333 (W) x 465 (D) x 509 (H) mm(when assembled)
Weight	5.3 kg
Applicable devices	FD-800, FD-720, FD-620, FD-610, FD-600, FD-240
Set contains	Upper Lid (includes shutter, 2x deodorizing filters), 2x Side panels, Rear panel, Front face metal fixtures
Replacement parts	Deodorizing filter

# NEAR INFRARED COMPOSITION ANALYZERS & MOISTURE METERS

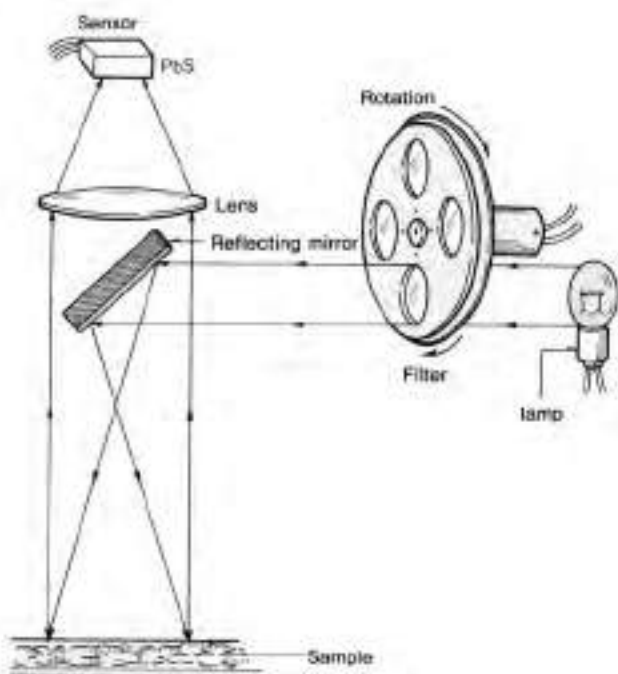


## Principle of near infrared light absorption

When a substance containing component is illuminated with near infrared light, the energy of the light is absorbed by the material. This absorption is proportional to the amount of constituent within the product. This phenomenon occurs due to the structure of the component molecule. These molecules resonate with certain wavelengths of near-infrared light.

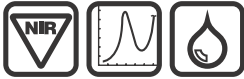
The process of resonating captures and uses the energy of the light rather than reflecting it.

To measure constituents, at least 5-7 filters with different wavelengths should be used.



## Near-infrared component analyzer mechanical design:

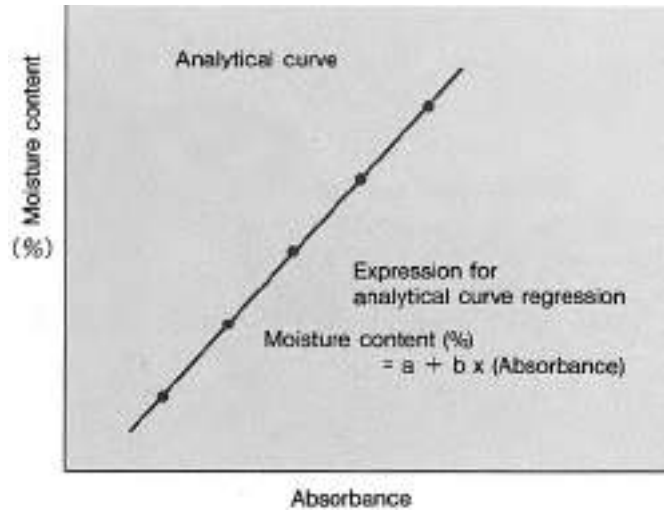
- (1) A tungsten light bulb is used to generate near infrared energy.
- (2) A rotation disk containing narrow bandpass optical filters is spun in front of the tungsten bulb. The filters pass specific wavelengths of light which are absorbed by component as well as reference wavelengths.
- (3) The 5-7 wavelength bands are alternatively directed on to the sample.
- (4) An optical sensor (lead sulfide) measures the amount of energy which is reflected from the sample for each of the wave lengths.
- (5) The internal micro-computer calculates the ratio of the amount of light absorbed at the 5-7 wavelengths bands. This ration is used to determine the amount of constituents within the sample.



### Conversion between absorbance and moisture content

There is a direct relationship between a product's absorption of near infrared light and the product's moisture content. This relationship measured by the JE Series instrument can be easily established:

- (1) Obtain a set of samples of varying moisture levels.
- (2) Measure the samples on a JE Series instrument and record the absorbance readings. Then determine the moisture in the samples via a laboratory method, e.g. oven drying or Karl Fisher.
- (3) These points can be plotted and the regression curve solved.



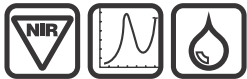
Once the regression curve has been solved, the absorbance measured by the instrument can be converted into the moisture content of the material. The optical system measures the absorbance of the material in seconds and automatically converts it into percent moisture.

### Samples and their moisture content

Type		Moisture content value (%)							
		0	0.1	0.5	1	5	10	20	50
Powder	Flour	←————→							
	Alumina	←————→							
	Ferrite	←————→							
	Slag cement	←————→							
	Gravel	←————→							
	Coal	←————→							
	Calcium carbonate	←————→							
	Calcium hydroxide	←————→							
	Nylon pellet	←————→							
	Solid	Newspaper	←————→						
Polyethylene film		←————→							
Polycarbonate board		←————→							
Wood		←————→							
Liquid	Alumina	←————→							
	Liquid soup	←————→							
	Organic solvent	←————→							
	Oil-base liquid	←————→							

- The moisture measurements are estimates using the wet-base method. The moisture contents is calculated by the formula:  

$$\text{Moisture content}(\% \text{WB}) = \frac{\text{Quantity of evaporated water}}{\text{Weight of sample after water is removed by drying} + \text{Quantity of evaporated water}} \times 100$$
- It is available to measure the moisture content of other samples, please contact to us.



## Near Infrared Composition Analyzers & Moisture Meters .....

### NIR Moisture Meter Model **KJT-130**

Handheld Model



#### Specifications

Measurement distance :	150mm±25mm
Measurement diameter :	φ25mm (150mm)
Measurement distance indication :	The red LED beam falls on the circumference of the measurement beam.
Response time :	2 seconds
Display refresh cycle :	0.2 seconds
Number of analytical curves :	50
Display :	LCD with back light
Display character :	Alphanumeric characters, symbols
External communications :	RS-232C, Equivalent to Hirose MX30-6P-C.
External output data :	Measured data Analytical curve data Input data for analytical curve calculation
External connecting devices :	Dedicated printer (one-way communication) IBM PC compatible (two-way communication)
Power source :	DC6.8V, 2A (steady state)
Mounting screw for fixing the machine:	3/8-inch standard mounting screw
Ambient temperature :	10 to 30 (temperature compensation range)
Ambient humidity :	0 to 80%RH (without condensation)
Dimensions :	210 (W) x 102 (D) x 172 (H) mm
Weight :	Net 1.1kg Shipment 3.0kg
Accessories :	Battery (1), Carrying case, Hood with zero adjustment plate AC100V to 240V Charger, Strap

#### The first-ever battery operated moisture meter

The world's first rechargeable battery operated portable moisture meter enables measurements where no AC power is available. The instrument requires a 6.8 volt DC source. A battery compatible with the Sony 8mm video Handycam(tm) can be used.

#### Distance indicator

A unique and easily used system is employed to determine the measuring distance from the instrument to the object. Two light sources are used, a red and a white. When the red circle of light (10mm) is within the white circle (25mm) then the instrument is 150mm from the object and at the correct measuring distance.

#### Simple analytical curve selection

Five different analytical curves can be programmed into the F1 through F5 keys. At the touch of an F button the appropriate curve is selected.

#### Storage of up to 99 readings

The instrument will store up to 99 moisture measurements in nonvolatile memory. Even removing power will not cause memory loss. Also stored are the time the readings were taken and the actual absorbance data.

#### Small and light

The unit is lightweight (1.1kg) and compact, easily carried to the measurement site. It can be mounted on a standard tripod or other available support accessories.

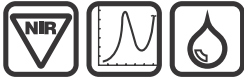
#### Data hold function

A Simple button press will keep the last measurement made on the display until the sampling mode button is pressed. In normal on-line applications, measurements can be continuously displayed.

#### Optional parts list

Model	Model name	Description
KJT-130-CBL	RS-232C cable	One-side D-SUB25P-M
KJT-130-ADC	AC adapter	DC6V
KJT-130-FDP	Hood extension	150mm when mounted
KJT-130-PRT	Thermosensitive printer	4 size "AA" dry-cell batteries
KJT-130-RSP	Printer cable	
KJT-130-BAT	Battery pack	6V, 2400mAH
KJT-130-PC	PC software	NEC PC-9801





## NIR Moisture Meter Model **KJT-230**

*Desk Top Model*



### Specifications

Measurement distance :	120mm±5mm
Measurement diameter :	∅20mm
Response time :	2 seconds
Display refresh cycle :	0.3 seconds
Number of analytical curves :	50
Analytical curve selection method :	Key-in, communications line
Approximate expressions :	Linear, quadratic, and cubic equations of analytical curves
Light source :	Tungsten lamp (standard life: 20000 hours)
Display :	7-segment LED
Display data :	Moisture content value, absorbance, other data
External communications :	RS-232C, D-SUB25P-M
Self-adjustment :	Automatic zero adjustment
Time constant (smoothing) :	6 settings (0 to 16 sec.)
Self-diagnostic function :	Error code display
Power source :	AC100V ~ 240V (50/60Hz)
Power consumption:	36VA
Ambient temperature :	10 to 40 (temperature compensation range)
Ambient humidity :	0 to 80%RH (without condensation)
Dimensions :	230 (W) x 265 (D) x 305 (H) mm
Weight :	Net 9.0kg Shipment 11.0kg
Accessories :	Sample containers with glass covers 60mm∅ 18mm (3sets) Fuse 1A

### Measurement of samples with rough grains

To accommodate samples with rough surfaces, the KJT-230 uses a rotating sample turntable. This allows a large area of the samples to be measured and averaged.

### Automatic zero adjustment function

When no sample is present, the instrument automatically makes a zero adjustment every 10 seconds to eliminate any possible drift.

### Measurement of samples using a container with a glass cover

If a sample is likely to quickly lose or gain moisture, it can be placed in a sample cup with a glass cover. Since the light emission and reception axis are inclined. There is no specular reflection of light from the glass.

### Measurement of liquid samples

Glass slides and covers are available for measuring jelly and slurry samples whose glossy surfaces make measurement difficult. The covers can be cleaned after measurement, thus highly viscous samples are not a problem.

### Convenient automatic measuring mode

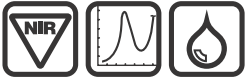
In automatic mode, the turntable begins rotating immediately after the sample is placed on it and the measurement begins. When the measurement is completed the turntable stops and the results are displayed.

### External output feature

An external printer can be connected directly to the KJT-230 to print results, or a personal computer can be connected to store the data in a file.

### Optional parts list

Model	Model name	Description
KJT-230-GSC	Sample container with cover	Standard accessory
KJT-230-BSC	Black sample container	Anodic oxide coating
KJT-230-CBL	RS-232C cable	Both ends D-SUB25P-M
KJT-230-LIQ	Glass slide and cover	Rectangular glass
KJT-230-RST	Printer cable	
KJT-230-PRT	Thermosensitive printer	RS-232C connection
KJT-230-PC	JE-230 PC software	Software for Windows
KJT-230-PLA	Flattening plate	For smoothing the surface
KJT-230-CVR	Light-shielding cover	Black plastic
KJT-REF-S	Diffusion reflector ∅75mm	Made of metal
KJT-MIL	JT mill	Rotary cutter type



## Near Infrared Composition Analyzers & Moisture Meters .....

### NIR Composition Analyzers

Model **KJT-270 / KTE-270F**

*Desk Top Models*



The KJT-270 is a desktop near-infrared composition analyzer. Just put the sample in the sample tray and place the tray on the turntable, and this high-precision component analyzer can measure it. When testing simple substances, this unit can display 4 component analyses consecutively, and when connected to a personal computer, 4 component analyses can be displayed simultaneously.

The KTE-270F enables measurement with both transmittance and reflectance. By preparing two fiber probes for transmittance and reflectance, 270F can be available for many samples.

- Plural components can be measured by a single operation.
- Low cost and compact.
- Even liquid sample can be measured.
- 270F enables measurement with both transmittance and reflectance.
- The PC software is supplied as standard equipment.

#### Specifications

Measurement method	KJT-270: Near infrared Reflectance KTE-270F: Near infrared transmittance and reflectance
Applications	Milk powder, Wheat flour, Buckwheat powder, Rice powder, Fish powder, Feed, Processed paper, Non-woven paper, Organic solvent, Film, etc.
Components	Moisture, Protein, Oil, Sugar content, Fiber content, etc.
Measurement range	differs depending on the sample
Display format	Digital(LED)
Output	RS-232C interface
Power source	AC100V(50/60Hz)
Dimensions & Weight	249(W)x300(D)x335(H)mm, 9.5kg

### NIR Composition Analyzers

Model **KJT-70-5 / 70-7**

*On-Line Models*



#### Two versions can be available

Low cost KJT-70-5 (equipped five filters) and KJT-70-7 can be available to satisfy customer's requirement.

#### No Controller is necessary

The PC software supplied as standard accessory makes controller optional.

#### Self diagnostic function

The sensor head can be remotely monitored for information such as reflectance voltages, reference wavelengths, temperature and humidity.