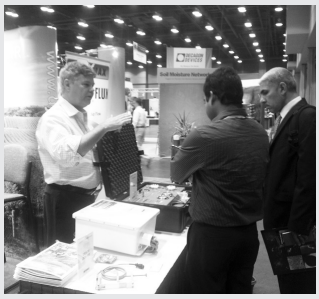
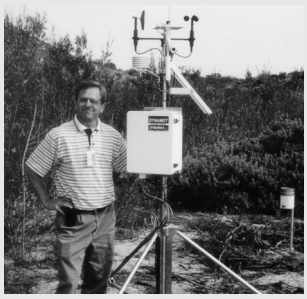
WATER
WIND
SOLAR
INSTRUMENTS

Dynamax



ABOUT US

Our goal at Dynamax is to maintain our position and recognition as a global leader in the production and integration of plant-environmental monitoring instrumentation. We are continuously building on that reputation by supplying only the highest grade sensors and monitoring systems for the professional, educational, industrial, governmental and commercial industries.

Our work at Dynamax is in the design and manufacture of unique and beneficial systems for assisting in understanding, regulating and managing plant, soil, water, solar, and wind resources. We offer complete solutions and provide the vital link between the plant and its environment. Our customer base includes researchers, universities, agronomists, farmers, horticulturists, the forest science community, and sports field managers.

The health and well-being of mankind depends on the water cycle and limited water resources. Accordingly, urban growth, agricultural productivity and our everyday environment depend on water, water quality, and water-efficient plant production. In that effort, Dynamax is solely focused on plant bio-sensors, plant transpiration measurement, plant bio-productivity and environmental conditions.

Within our wide range of products, our Dynagage Sap Flow Sensors record plant activity and water uptake for commercial production and for research. Sap flow sensing methods are key techniques in water management, nutrient uptake, plant-water status and food product quality. Transpiration, plant growth and biomass production are analyzed with Dynamax sensors.

At Dynamax, scientific excellence is our foundation for unique instruments and systems based on proven, sound, scientific principles.

Mike van Bavel, President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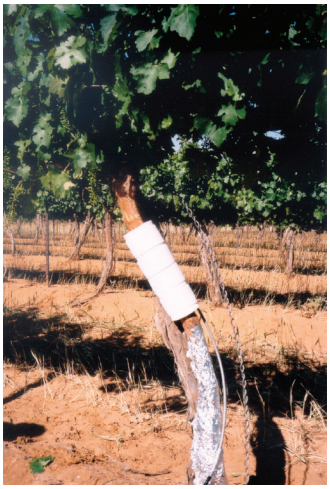
TRANSPIRATION
SAP FLOW

DYNAGAGE
SAP FLOW SENSOR

FEATURES
- **Measures total plant water use**
- **Absolute measurement with no calibration required**
- **Reusable and portable**
- **Harmless and conforms to plant size**
- **Reliable and proven method**
- **Helps correct decision making**



The Dynagage Sap Flow Sensors are used for measuring the sap flow, and thus the water consumption of plants. These energy balance sensors measure the amount of heat carried by the sap which is converted into real-time sap flow in grams or kilograms per hour.

The sensors are non-intrusive and not harmful since the plants are heated up 1° C to 5° C typically. The principles of heat balance sensors are scientifically proven and references exist for most major crops and many tree species. Unlike other methods, Dynagages require no calibration since sap flux is directly determined by the energy balance and rates of heat convection by the sap flow.

Dynamax introduced the first sap flow sensor prototypes in 1988 and today offers a full range of sensors from 2 mm up to 150 mm.

EXO-SKIN
SAP FLOW SENSOR

FEATURES
- **Low cost**
- **Low maintenance**
- **Same accuracy as Dynagage sensors**
- **Flexible sensor for odd shaped plant stems and growth**
- **NEW water shielding layer provided**

The EXO heat balance sap flow sensors offer more flexibility for stems 9 to 25 mm in diameter, and the stretchable Velcro insulation makes installation on uneven or branchy stems very easy. EXO sensors may be used on most crops or trees, in the greenhouse or in the field, and are excellent for determining plant transpiration, for irrigation scheduling, or for monitoring plant stress.

TDP
SAP VELOCITY PROBE

FEATURES
- **Easy to install**
- **Continuous sap velocity measurement**
- **No heat pulses**
- **Compatible with most data loggers**
- **Teflon coated probes for easier removal**
- **Proven Granier heat dissipation method**

The newest method of transpiration measurement is now available from Dynamax for large trees and plants. The Thermal Dissipation Probe (TDP) transpiration sensor measures sap velocity which is converted to volumetric flow rate. TDP is a simple and affordable device originally proposed by Granier. The basic TDP probe has two thermocouple needles inserted in the sapwood, the upper one containing an electric heater. The probe needles measure the temperature difference (dT) between the heated needle and the sapwood ambient temperature below. The dT variable and the maximum dTm at zero flow provide a direct conversion to sap velocity.

For uniform trees in a closed canopy, only one sensor per tree is needed. For irregular canopies or with mixed species, sap flow may vary around the circumference of the trees. Thus multiple probes are recommended in a single tree to make flow calculations accurately. Normally, install two probe sets per tree for trees 3" to 6" (75 to 150 mm) in diameter, and four probe sets per tree for trees 6" to 18" in diameter (>150 mm). Calibration is recommended for new species.

SAPIP-IRT
WIRELESS IR TEMPERATURE

FEATURES
- **Very narrow 20° field of view**
- **Excellent for Pivot or drip irrigation**
- **Rechargeable batteries (solar- 2 W sold separately)**
- **Up to 27 units per network on a coordinator**
- **10 sec to 60 min output timing**
- **± 0.5° C accuracy over wide range of ambient (0° to 60° C)**
- **300 – 500 ft range based on antennas distance**
- **Analog output versions available**

The SapIP-IRT wireless infrared (IR) temperature sensor is the latest development in IR leaf temperature sensing for use in irrigation scheduling and plant stress detection. This new system allows for up to (27) IRT sensors to be distributed throughout a field, and data to be collected with a single coordinator or gateway. Using the "Watcher" software, all data can be collected from the coordinator and stored on your computer. The data can easily be imported into a spreadsheet for analysis and graphing. Plant stress models are available and can be used to determine if, and when, your crops need irrigation, and flags are used when irrigation is required.

IRT Stress Accumulator Data Loggers can be used when remote IR sensor networks are required. Up to (25) IR sensors can be monitored simultaneously, and repeaters can be used to add distance and expand the system by adding more IRT sensors. Data is collected using a WiFi connection up to 50 ft away. Web page data access and mapping is included.

TRANSPIRATION
SAP FLOW

SAP FLOW SYSTEMS

FLOW10 FEATURES

- **Advanced Custom data logger**
- **Direct transpiration readings**
- **Fixed 10 sensor system, may add SDI sensors**
- **Easy to use logger support software, PC400**
- **30 MB flash memory**
- **Real-time sap flow**
- **Auto Ksh, auto zero algorithm built in**
- **Optional cell MODEM, WIFI, or RF**

For more than 30 years, Dynagage Sap Flow Sensors have been trusted by plant scientists around the globe. The Flow10 system builds on this legacy, combining advanced sensors with intuitive software to deliver the most accurate and efficient sap flow data available today.

With built-in algorithms, automated recalculations, and seamless Excel™ integration, the Flow10 system streamlines analysis and reporting—making sap flow research faster, easier, and more powerful than ever.

FLOW32-1K FEATURES

- **Real-time sap flow**
- **Automatic power down**
- **Modular and expandable system**
- **Auto Ksh zero stability algorithm - built in**
- **Easy to use support software**
- **Noninvasive sensors**
- **Direct transpiration readings**
- **No calibration**

The Dynagage Flow32-1K Sap Flow system has been servicing research plant scientists throughout the world for over 25 years. Powerful functions include auto zero and sensor status built into the data logger program. Sap flow data recalculation and automatic charting with an Excel™ Macro link makes the system a superior water relations measurement tool. Sap Flow has never been easier and more powerful.

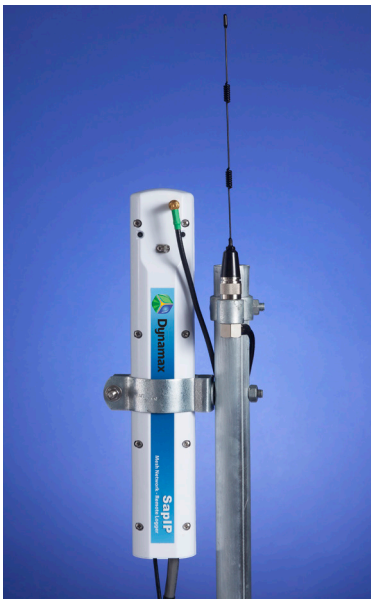
FLGS-TDP FEATURES

- **Built-in program computes sap flow for specific trees**
- **2 MB data memory, for up to 500,000 data values, or 200 days of hourly records**
- **Automatic night time zero set, saves processing time**
- **High-efficiency, 90%+, voltage regulators for sensor heater power**

FLGS-TDP XM1000 is a completely integrated measurement system for TDP sap velocity sensors. The XM1000 version of our TDP Sap Flow System includes the latest Expanded Memory Data Logger platform and extended features such as real-time sap flow calculations and auto zero. Each FLGS-TDP system can read up to 32 TDP10, 30, or 50 sensors.

This basic system can be expanded with additional multiplexer subsystems to read up to 128 TDP sensors. Each TDP thermocouple is connected to a differential channel on the logger. All the necessary electronics, software and sensors are assembled into a complete solution.

SAPIP
WIRELESS NETWORK



FEATURES

- **Available with soil moisture, sap flow, and weather**
- **Gateway collects and forwards all radio data to Agrisensors.NET servers**
- **Data can be transmitted with local area network (LAN) if on-site internet accessible**
- **Fully integrated wireless sensor mesh networking platform**
- **Self-Healing Network**
- **25 SapIP Nodes per Gateway Network**
- **GPRS Cellular Data Retrieval for remote sites**

The SapIP system from Dynamax, Inc., with EXO or Dynagage sap flow sensors, can be used to measure plant water use in "real-time" with no calibration. The SapIP gateway can monitor up to (25) SapIP nodes, that may be located up to 1000 meters away, and up to (5) hops are possible. This gives a total distance of 5 km or about 2.5 miles radius from the gateway. SapIP nodes for plant water use, soil moisture, or weather may be connected altogether in one wireless network system. Data is either collected directly from the SapIP nodes or accessed through the Dynamax Agrisensors.NET website for easy monitoring, graphing, and data download.

SapIP wireless monitoring systems will help you schedule irrigation and manage plant stress. With Dynamax SapIP, irrigation scheduling has never been easier and more maintenance free. You will have accurate data you can depend on to let you know the water status of your crops.

SAPIP
SOIL MOISTURE

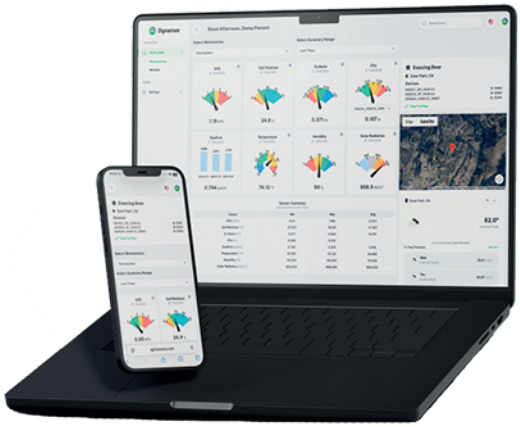
FEATURES

- **(6) Soil moisture sensors per SapIP**
- **(6) ML3 or SM150 sensors recommended**
- **Works with any DC power, DC input soil moisture sensors**
- **No solar panel required**
- **Single Network Gateway**
- **Add up to (25) SapIPs**
- **Mesh Network, Self-healing, Auto-hopping**

Dynamax SapIP wireless network systems can have up to (25) nodes for measuring plant water use, weather, IR leaf temperature, or soil moisture. When measuring soil moisture, either (4) or (6) SM150 soil moisture sensors may be attached to each SapIP node. The sensors may be buried at different depths in the soil and left in place for long periods of time. If soil moisture and soil temperature are needed, the ML3 or SM300 sensors can be used. The SapIP nodes use a rechargeable battery and solar panel for continuous operation. All data can be collected directly or viewed, graphed, and downloaded from the Agrisensors.NET webpage.

WEBSITE & GROWER SERVICES

AGRISENSORS DATA PLATFORM



FEATURES

- **Maps show sensor locations**
- **Account management with password access to field specific data**
- **Data history saved for a full year or growing season**
- **Interactive data graphics defined by the customer to show desired date ranges**
- **Plant water use with soil moisture and field weather data displayed**

Using Agrisensors you will have access to control and configure your SapIP sensors, locate them on a map, download and upload data remotely and get status reports from each unit. The data accumulated allows you to see daily sap flow rates, see how much water your plants are actually using each day. Also using your soil moisture data you can set your weekly irrigation schedule.

With the Dynamax SapIP wireless systems and Agrisensors.NET, graphical data is presented on the internet and accessible anytime by computer, cellphone or tablet, and system locations in your fields are displayed in Google maps. All data is password protected and accessible only by you, and those designated by you the end user.

GROWER SERVICES

FEATURES

- **Equipment installation and maintenance included**
- **Data presentation on a secure website - Agrisensors.net**
- **Consultation and data interpretation**
- **Data protection and security**

Water Management Made Easy – Let the plant tell you how much water it is using, then you will know how much water you have to put back.

Using Dynamax, Inc. SapIP wireless network systems and sap flow sensors, you can measure plant water use directly. Now, you can see how much water your crops are using and know if your plants need irrigation or not. This way, you can manage plant stress and conserve water while maximizing yields.

Our technicians install and manage the SapIP equipment to ensure reliable data is produced, and you can access the data anytime. You can then make irrigation decisions based on actual plant water use, soil moisture, or ET.

We will also consult with you and interpret the data so you can understand what the data means and how best to determine the water status of your crops.

PLANT HYDRAULIC CONDUCTANCE

HIGH PRESSURE FLOW METERS

HPFM FEATURES

- **High resolution generation 3**
- **Stem ranges - 1 mm to 55 mm**
- **USB powered data acquisition**
- **Works on roots or shoots, stems or petioles**
- **Measures conductivity of the entire root system**
- **High speed sensor conversion module**

The HPFM-Gen3 measures how water movement relates to the pressure differences required to draw water from the soil or through a plant. The hydraulic conductivity relationship is a quantitative analysis for roots and stems. The measurement is performed in the field, where in-situ root system can be measured in its natural environment. In the HPFM method, the resistance of the root and shoot are measured separately by pressure perfusion and added together. The HPFM will help plant physiologists and agronomists look forward to those seasonal studies of root and shoot progression, water potential, or soil treatment effects.

HCFM-XP FEATURES

- **Very portable briefcase design**
- **In-situ analysis of hydraulic conductance**
- **Stem Ranges - 1 mm to 36 mm**
- **Works on roots or shoots, stems or petioles**
- **Intelligent regression**
- **Flow Rates 0.01 to 100 ml/hr**

The HCFM-XP-Gen3 Hydraulic Conductance Flow Meter, is designed to perform quantitative root and stem analysis without having to dig up roots or drag limbs back to the lab. In most cases, the analysis of a sample root or shoot is completed in as little as 10 minutes. You can quickly measure the major components of the hydraulic conductance in the soil-plant atmosphere continuum. One can measure the values of the individual hydraulic resistances, then compute the pattern of water flow and water potentials in the resistance network.

AP4 LEAF POROMETER

FEATURES

- **For teaching or research**
- **Direct readout of stomatal conductance or resistance**
- **Simple menu-driven field calibration**
- **Stores up to 1,500 readings with notes facility**

Stomatal aperture controls the water loss from plant leaves, and the uptake of CO_2 for photosynthesis. It is an important indicator of the physiological condition of plants, and gives a valuable insight into their reaction to environmental factors, pollutants and other stresses. The design of the AP4 for measuring stomatal aperture is a breakthrough in performance, convenience and cost.

SOIL MOISTURE

SOIL MOISTURE SENSORS

ML3 THETAPROBE FEATURES

- **Soil Moisture with ± 1% accuracy**
- **New built-in temperature measurement (only when buried)**
- **New extendable cable system**
- **New white body - reduces radiative heating**
- **Improved calibration for soil salinity**

The new ML3 ThetaProbe has extra features, improved performance and a new look. With its 1% accuracy the ThetaProbe continues to set the standard for soil moisture measurement but now also measures soil temperature. Simply insert the soil moisture probe into the soil, connect to your data logger or readout unit, provide 5-15 V DC at 20 mA, and within seconds you can be logging soil moisture. The ML3 works well in a wide range of soil types and artificial medias.

SM150T FEATURES

- **Dependable ± 3% soil moisture accuracy**
- **Built in temperature measurement**
- **Robust and buriable, with 5 year warranty**

The new SM150T's advanced patented electronics and tough build produce a highly dependable sensor with exceptional salinity and temperature stability. The SM150T is engineered to withstand long term burial – the sensor, connectors and cable are all environmentally protected to IP68. It offers moisture accuracy of ± 3% (after soil specific calibration) and the built in temperature sensor achieves ± 0.5° C.

The SM150T is a dual purpose probe – it can be used portably for instant moisture readings, or left installed in the soil connected to a data logger, to provide long-term moisture and temperature data.

WET150 FEATURES

- **Lower cost research-grade multi-parameter sensor**
- **Measures moisture, temperature and EC**
- **Digital SDI-12 for easy system integration**

When buried in soil or substrate the WET150 Sensor simultaneously measures three crucial variables that influence plant growth: moisture content, temperature, and electrical conductivity (EC) – a strong indicator of the general nutrient level.

A key strength of the WET150 is its ability to reliably calculate pore water conductivity (ECp), which is the ion content of the water available to the plant. The WET150s patented sensor electronics produce research grade measurement accuracy with exceptional salinity and temperature stability - essential for critical control and irrigation decisions.

SOIL MOISTURE

HH2
HAND HELD READOUT

FEATURES
- **Holds multiple user-defined soil calibrations**
- **Stores up to 1,100 time-stamped readings**
- **Includes PC data collection software**

The Moisture Meter type HH2 is a versatile readout unit for use with soil moisture sensors: the Profile Probe, ThetaProbe, SM150, SM300 and WET Sensor. The HH2 readout unit offers impressive functionality in a compact, hand-held unit, designed for field use. Readings are displayed on the LCD and can be stored to memory for later download to a PC.

The HH2 Readout can be operated with one hand for convenience in the field. Data is transferred to a PC using the RS-232 cable provided with each unit. The HH2Read Windows PC software provides a data import wizard for direct download into Excel or other PC spreadsheet packages, or into irrigation scheduling programs.

PR2
MULTI DEPTH PROBE

FEATURES
- **Soil moisture profile up to 1 meter depth**
- **Low salinity and temperature sensitivity**
- **Portable meter option for convenient multi-site measurement**
- **Dedicated DL6 Logger option for continuous monitoring**

Users can choose between the PR2/4, measuring at 4 depths down to 40 cm, or the PR2/6 measuring at 6 depths down to 100 cm. The nominal sensing depths are 10, 20, 30, 40, 60 and 100 cm.

A PR2 combined with an HH2 readout unit enables a single probe to be used at different locations, providing a low cost multi-site solution.

The PR2 can also be permanently installed and teamed with the dedicated DL6 Soil Moisture Logger for continuous soil moisture monitoring. Alternatively, for multi-probe applications, the GP2 Logger is ideal, handling combinations of Profile Probes and other environmental sensors (including weather stations).

SOIL MOISTURE

SM150-KIT
SOIL MOISTURE KIT

FEATURES
- **Complete low-cost kit**
- **± 3% accuracy**
- **Portable and easy to use**

The SM150 Soil Moisture Kit provides an affordable and easy-to-use tool for obtaining reliable moisture measurements with minimal soil or substrate disturbance.

The kit comprises an SM150T Soil Moisture Sensor, a dedicated HH150 Moisture Meter and a carry case. The HH150 Meter displays volumetric water content (% volume). Please note that although the SM150T Sensor has a built-in temperature sensor, the HH150 Moisture Meter does not measure or display temperature.

PORTABLE SOIL
MOISTURE SENSORS

FEATURES
- **Easy to use**
- **Plug and read**
- **Accurate and reliable**

The TH150 portable soil moisture probe is fast, accurate, and easy to use. It consists of an SM150T soil moisture sensor and an HH150 Readout, mounted on a handle for ease of use. This is the perfect tool for golf course and sports turf maintenance and irrigation scheduling.

- **Completely portable**
- **Soil moisture display**
- **Soils • Media • Sand • Clay • Peat**

The TH300 portable soil moisture probe consists of a SM150T soil moisture sensor and a HH2 Readout with data storage and memory. The HH2 readout contains standard calibrations for mineral and organic soils, but also has (5) open slots for additional soil calibrations. Golf course and sports turf management professionals appreciate the advantages offered by the TH300.

- **Durable and rugged**
- **Fast & accurate moisture monitoring**
- **Golf, sports turf, greenhouses, farms**

The TH_2O gives fast and accurate soil moisture readings in seconds using the Theta probe technology. The ML3 Theta probe and the HH2 Hand Held Readout are combined to make the TH_2O. Taking soil moisture readings "on the fly" is now easier than ever. The HH2 Readout can store up to 1100 time stamped soil moisture readings, which can later be downloaded to a PC.

SOIL MOISTURE

WET-150 SENSOR KIT

FEATURES

- **Complete low-cost kit**
- **± 3% accuracy**
- **Portable and easy to use**

The SM150 Soil Moisture Kit provides an affordable and easy-to-use tool for obtaining reliable moisture measurements with minimal soil or substrate disturbance.

The kit comprises an SM150T Soil Moisture Sensor, a dedicated HH150 Moisture Meter and a carry case. The HH150 Meter displays volumetric water content (% volume). Please note that although the SM150T Sensor has a built-in temperature sensor, the HH150 Moisture Meter does not measure or display temperature.

WET-2 WET SENSOR

FEATURES

- **Now with a more durable center rod - temperature and salinity element**
- **Measures Water content, EC (pore or bulk), and Temperature**
- **Measures directly within the root zone**
- **A vital tool for precision horticulture and managing effluent water irrigation**

The WET-2 Sensor has crucial applications in precision horticulture and soil science research and is usable in both soils and growing substrates. It is exceptional in its ability to measure pore water conductivity (ECp), the EC of the water that is available to the plant.

Where plants are grown in artificial substrates, nutrients are routinely supplied in irrigation water by fertigation. Nutrient levels are controlled by monitoring the water content and conductivity (EC) and adjusting the injection of liquid fertilizer into the irrigation water. The WET-2 Sensor excels in monitoring this crucial information.

Nutrients are sometimes provided by fertigation but are often provided by Controlled Release Fertilizers, and the rate at which these are taken up depends on the weather conditions. The WET-2 Sensor can be used to measure the EC within the growing media taking much of the guesswork out of this process.

If the irrigation water is recycled or abstracted from rivers with high levels of dissolved salts, over time there can be a build up of soil salinity. Soil salinization will eventually reduce crop yields. The WET-2 Sensor is fast and efficient for sampling soil salinity, ensuring that farmers have the essential information they need to take remedial action as quickly as possible.

Readout and data storage in the field are handled by the HH2 Moisture Meter.

DATA LOGGERS

GP1 DATA LOGGER

FEATURES

- **2 soil moisture channels**
- **2 temperature channels**
- **2 pulse counters**
- **Smart relay control**
- **Ideal for automated irrigation control**
- **Self-contained and weatherproof**

The GP1 Data Logger is a complete logging solution housed in an weatherproof enclosure with battery power. The internal memory can hold >600,000 readings, more than enough for one year's typical operation. The GP1 is an excellent data logger for soil moisture monitoring and irrigation control in the field or in the greenhouse. It can also be used for irrigation scheduling in turf, golf, or sports field applications.

When connected to ML3 ThetaProbes, SM300 or SM150 Soil Moisture Sensors, the GP1 Logger provides simple high accuracy recording of moisture content at much lower cost than has so far been possible. This compact data logger has two high-resolution differential analog channels (0 to 2.5 V) that enable the ThetaProbe's outstanding accuracy to be achieved over its full operating range.

GP2 ADVANCED LOGGER

FEATURES

- **Powerful and rugged field data logger**
- **12 differential (or 24 single ended) channels**
- **Ideal for demanding research applications**
- **Powerful and diverse control capabilities**
- **Unique "program simulator" feature**
- **6 irrigation zone control**

The GP2 is a powerful 12 channel data logger that is easy to use, versatile, rugged and reliable. It can log most sensor types and accepts voltage, resistance, current, potentiometer, bridge, counter, frequency, and digital state inputs. DeltaLINK software helps the user set up logging sequences and provides control over reading frequency, sensor type, thresholds, units and much more. The GP2 is excellent for soil moisture monitoring and irrigation control for the field or greenhouse.

DL6
SOIL MOISTURE LOGGER

FEATURES

- **Complete logging solution with battery power and weatherproof case**
- **Package includes Windows programming software with real-time graphical display**
- **16,000 readings storage**
- **Relay controlled alarm output**
- **Accelerated logging feature triggered by rain gauge or event input**

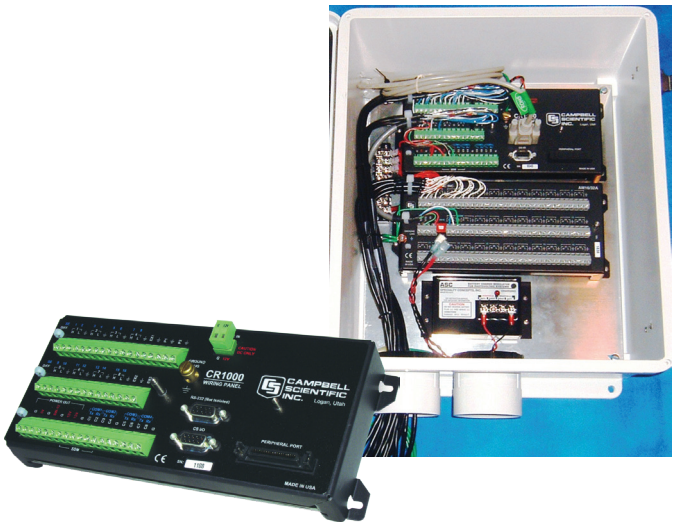
The DL6 is a dedicated soil moisture logger optimized for use with soil moisture sensors. It can be used with combinations of ML3 ThetaProbes, SM300, SM150, or PR2 Profile Probes and also accepts rain gauge and soil temperature probe inputs.

The DL6 is well suited to both research applications and irrigation monitoring. To minimise the need for opening the case, data is collected via an external RS-232 socket, and the status of the logger can be checked using a vibration-activated LED. DL6 Loggers include a novel accelerated logging feature to allow the tracking of wetting fronts.

DYNALOG-1K
GENERAL PURPOSE LOGGER

APPLICATIONS

- **Meteorology**
- **Soil Moisture**
- **Hydrology**
- **Agriculture Research**
- **Water Resources**



This instrument is a rugged measurement and control system that delivers accurate, reliable measurements in a variety of applications. It combines the ability to measure virtually any sensor with the control capability to respond to specific site conditions.

A general purpose logger system, fully assembled - DNX1K based self-contained DNX1K logger for 32 sensors. Incudes: 32 channel multiplexer, 8 control ports, 4 excitation channels, RS-232 Interface, 9 Pin to PC COM1, control cable, Windows based data retrieval and analysis software, rechargeable battery, 110 V, 60 Hz, or 220 V, 50 Hz charger, fiberglass enclosure, two outlets with PVC adapters. Requires selection of probes, cables, and a PC to make a complete system.

WEATHER STATIONS

SAPIP-WMET
WIRELESS WEATHER STATION

FEATURES
- **SapIP network for Micro-climate**
- **MaxiMet 500 Compact weather station**
- **Wind Speed & Direction Measurement**
- **Air Temp & RH Measurement**
- **Barometric Pressure Measurement**
- **Dew Point Measurement**
- **No moving parts**
- **AgriSensors.NET data graphics**
- **Access raw and calculated data**

The SapIP-WMET is a complete ETp (Evapotranspiration) weather station which included the SapIP logger and the MaxiMet 500 compact weather station kit. The system comes with all software for programming, data collection, and calculation of ETp. The SapIP-WMET is low-cost weather station ideal for research, commercial, or agricultural applications.

INTELIMET
WEATHER STATIONS

INTELIMET ADVANTAGE 5 FEATURES
- **MaxiMet 500 Compact weather station**
- **Tipping Bucket Rain Gage**
- **Barometric Pressure Measurement**
- **Dew Point Measurement**
- **Wind Speed & Direction Measurement**
- **Air Temp & Relative Humidity Measurement**
- **Solar Radiation Measurement**
- **Lightning rod**

INTELIMET ADVANTAGE 6 FEATURES
- **MaxiMet 600 Compact weather station**
- **Optical Rain Gage**
- **Barometric Pressure Measurement**
- **Dew Point Measurement**
- **Wind Speed & Direction Measurement**
- **Air Temp & Relative Humidity Measurement**
- **Solar Radiation Measurement**
- **Lightning rod**

The InteliMet Advantage is a complete ETp (Evapotranspiration) weather station range that includes the DynaLog200 data logger and the MaxiMet compact weather station kit. The system comes with all software for programming, data collection, and calculation of ETp. The optical rain sensor on the InteliMet 6 model has no moving parts, so needs very little maintenance. A battery and solar panel, grounding kit, and lightning rod kit are also included. The InteliMet's are low-cost weather station ideal for research, commercial, or agricultural applications. The systems comes ready to mount on a 2" rigid pipe, or tripod.

DYNAMET
WEATHER STATIONS

DYNAMET-2 FEATURES

- **MaxiMet 500 Compact weather station**
- **Tipping Bucket Rain Gage**
- **Barometric Pressure Measurement**
- **Dew Point Measurement**
- **Wind Speed & Direction Measurement**
- **Air Temp & Relative Humidity Measurement**
- **Solar Radiation Measurement**
- **Lightning rod**

DYNAMET-5 FEATURES

- **MaxiMet 500 Compact weather station**
- **Tipping Bucket Rain Gage**
- **Barometric Pressure Measurement**
- **Dew Point Measurement**
- **Wind Speed & Direction Measurement**
- **Air Temp & Relative Humidity Measurement**
- **Solar Radiation Measurement**
- **Lightning rod**

DYNAMET-6 FEATURES

- **MaxiMet 600 Compact weather station**
- **Optical Rain Gage**
- **Barometric Pressure Measurement**
- **Dew Point Measurement**
- **Wind Speed & Direction Measurement**
- **Air Temp & Relative Humidity Measurement**
- **Solar Radiation Measurement**
- **Lightning rod**

The DynaMet Weather Station Range is a complete ETp (Evapotranspiration) system that includes the MaxiMet compact weather station kit and the DYNALOG-300 or DYNALOG-1K data logger depending on the system chosen. The system comes with all software for programming, data collection, and calculation of ETp. The DynaMet's are a low-cost, research grade, weather station ideal for research and commercial, or agricultural applications. They come complete with a 6 ft Tripod, cross-arm, grounding kit, rechargeable battery and 10 Watt solar panel.

WEATHER STATION COMPARISON CHART

Model	Wind	Air Temp.	Humidity	Pressure	Solar Radiation	Rain	Compass	Dew Point	Solar Panel	Logger	Soil Temp.	Soil Moisture	GPS (optional)
SapIP-WMET	✓	✓	✓	✓	✓		✓	✓		SapIP		O	✓
MaxiMet 500	✓	✓	✓	✓			✓	✓					✓
MaxiMet 301		✓	✓	✓	✓			✓					
MetPak	✓	✓	✓	✓				✓					
MaxiMet 600	✓	✓	✓	✓		Optical	✓	✓					✓
MetPak Pro	✓	✓	✓	✓				✓					
MaxiMet 501	✓	✓	✓	✓	✓		✓	✓					✓
MaxiMet 560	✓	✓	✓	✓			✓						✓
IMET-ADV5	✓	✓	✓	✓	✓	Bucket	✓	✓	✓	CR350			✓
IMET-ADV6	✓	✓	✓	✓	✓	Optical	✓	✓	✓	CR350			✓
DYNAMET 2	✓	✓	✓	✓	✓	Bucket	✓	✓	✓	CR350	O		✓
DYNAMET 5	✓	✓	✓	✓	✓	Bucket	✓	✓	✓	CR1000	O		✓
DYNAMET 6	✓	✓	✓	✓	✓	Optical	✓	✓	✓	CR1000	O		✓

✓ = Included O = Optional

WEATHER STATIONS

METCONNECT
WEATHER STATIONS

FEATURES

- **Flexible design can be tailored to application requirements**
- **High quality integrated sensors**
- **Robust construction with high IP rated connectors**

MetConnect is a highly flexible, multi-parameter weather station. Individual sensors can be placed together in a compact arrangement, or separated to suit individual application requirements. Additional sensors can be added to the system, and the measurements added to the data reported by the station.

MetConnect is available in two models: MetConnect One, with an integrated wind sensor, and MetConnect THP without a wind sensor.

MetConnect is an update of the MetPak product range.

MAXIMET®
COMPACT WEATHER STATIONS

FEATURES

- **9 models available with a variety of sensor combinations**
- **Easy installation**
- **Maintenance free**
- **Plug and Play**
- **Cost effective**
- **Easy to use software**
- **Robust construction**

MaxiMet is an advanced compact weather station using proven technology to measure meteorological and environmental parameters to international standards.

MaxiMet incorporates all the measurement parameters that meet the requirements of users in demanding applications where cost, quality and performance are essential.

With features such as wind, precipitation, solar radiation, temperature, humidity, barometric pressure, low power 'Eco Mode', GPS, compass, Bluetooth and more, MaxiMet is unique in its ability to provide a wide number of measurements and output protocol options. which makes it easy to install, easy to use, and with zero maintenance.

WINDSONIC
ULTRASONIC WIND SENSOR

FEATURES

- **Low-cost 2-axis ultrasonic wind sensor**
- **Solid-state, maintenance-free**
- **0-60 m/s (134 mph) wind speed, 0-359º wind direction**
- **Corrosion-free polycarbonate exterior**

The WindSonic is a robust, low cost ultrasonic wind sensor with no moving parts. This 2-axis ultrasonic wind sensor offers maintenance-free wind speed and direction monitoring for true 'fit and forget' wind sensing. Never needs re-calibration.

The Gill WindSonic is a genuine low cost alternative to conventional cup and vane or propeller wind sensors, with all of the advantages of solid-state ultrasonic technology. With no moving parts to jam, break, or wear out, this ultrasonic wind sensor is ideal for use in harsh weather conditions.

The WindSonic is a 2-axis ultrasonic wind sensor, providing wind speed and direction data via one serial or two analogue outputs. Versions for RS232, RS422, RS485, SDI12 or analogue outputs are available.

WINDSONIC M
METAL WIND SENSOR

FEATURES

- **Hard-Anodized Aluminium Construction**
- **Optional Heating System**
- **0-60 m/s (134 mph) wind speed, 0-359º wind direction**
- **-40° C to +70° C Operation (heated)**

WindSonic M is a robust ultrasonic wind speed and direction sensor with aluminium alloy construction and optional heating system. The sensor is solid-state with no moving parts, using ultrasonic measurement technology to detect wind speed and direction at speeds up to 60 m/s (134 mph).

The robust aluminium alloy housing is hard-anodized to ensure suitability in harsh marine environments, and the optional heating system allows operation down to -40º C. WindSonic M has been designed to comply with all the applicable sections of BS EN 60945 standard for 'exposed equipment'. These include but are not limited to; corrosion (salt mist), vibration, radiated and conducted emissions and water ingress. This sensor is recommended for use in harsh environmental industrial conditions and is particularly suited to marine and land based installations.

WindSonic M provides a marine-standard NMEA 0183 output, with options for RS232, 422, 485 and analogue outputs also available to ensure compatibility with most systems.

SONIC ANEMOMETERS

WINDOBSERVER INDUSTRIAL ANEMOMETERS

WINDOBSERVER RANGE

- **Robust ultrasonic wind sensors for challenging environments**
- **Precision wind measurement**
- **Robust stainless steel construction**
- **Models for marine, aviation & hazardous areas**

Quality and high performance measurement is assured across the WindObserver range. WindObserver anemometers have sophisticated error checking and fault reporting built-in. An instrumentation status code is transmitted alongside the measurement outputs to confirm correct operation ensuring confidence in reported data. Calibration (option) traceable to national standards available on all models (except WindObserver IS).

WindObserver anemometers hold many approvals and certifications for critical applications including those required for hazardous areas (including offshore), marine, wind turbine control and airport wind measurement.

Output protocol options for WindObserver include RS422/RS485 full duplex/half duplex for WindObserver 65, 70, 75, 90 and II. WindObserver IS, intrinsically safe anemometer, RS422 & RS232 from power supply and interface. RS422 from anemometer.

Gill ultrasonic technology provides accurate and reliable wind speed and direction data using solid state technology, with no moving parts, reducing the need for maintenance and making WindObserver ideal for harsh weather environments and remote locations.

WINDMASTER 3D ANEMOMETERS

WINDMASTER HS 75 FEATURES

- **Horizontal head for minimal flow disturbance**
- **Integral electronics**
- **0-45 m/s (134 mph) wind speed**
- **Stainless steel construction**

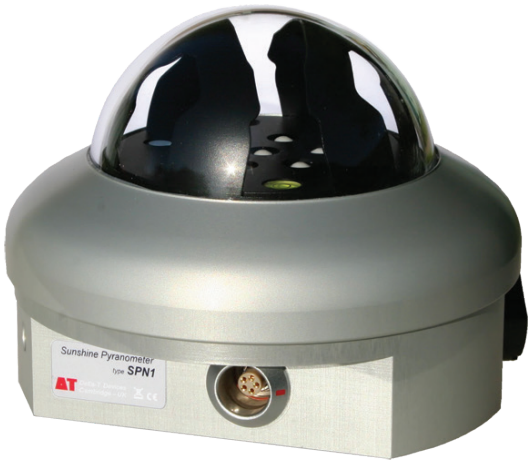
The Gill WindMaster HS provides all of the advantages of the scientific grade HS measurement head design with the ease and feature set from the Gill WindMaster range. The horizontal head design allows for highly accurate vertical flow analysis with minimal interruption from the anemometer geometry.

U, V, W vector components, sonic temperature and speed of sound outputs are available as standard. The WM HS has a stainless steel external construction.

SPN1
SUNSHINE PYRANOMETER

FEATURES

- **Global (Total) and Diffuse irradiance in W.m^{-2}**
- **WMO sunshine threshold: 120 W.m^{-2} direct beam**
- **No routine adjustment or polar alignment**
- **No moving parts, shade rings or motorized tracking**
- **Excellent reference light sensor**



The Sunshine Pyranometer is a patented, meteorological class instrument, with built-in heater, designed for long-term outdoor exposure. It is an affordable alternative to shade-ring pyranometers, pyrheliometers and traditional sunshine recorders.

The SPN1 is exceptionally easy to use; it needs no routine adjustment or polar alignment and works at any latitude.

The Sunshine Pyranometer provides 2 analogue voltage outputs for global and diffuse radiation, and a digital output for sunshine duration, which can be connected to data loggers, such as the GP1 and GP2. Readings can also be obtained directly from the RS-232 port.

The SPN1 is good for performing energy balances, solar panel, efficiency monitoring or wherever a reference light sensor is needed.

BF5
SUNSHINE SENSOR

FEATURES

- **No routine adjustment or polar alignment**
- **No moving parts, no shade rings**
- **Outputs can be set to Energy (W.m^{-2}), PAR (µmol.m^{-2}.s^{-1}) or Lux**

The Sunshine Sensor is a patented design*. It uses an array of photodiodes with a unique computer-generated shading pattern to measure incident solar radiation. A microprocessor calculates the Global and Diffuse components of the radiation and determines the sunshine status. A built-in heater keeps the BF5 clear of dew, ice and snow down to -20°C.

Two analogue voltage outputs are provided for the Global and Diffuse radiation. The sunshine state is represented by a digital output (contact closure). The three outputs can be connected to appropriate channels on data loggers e.g. the logger type GP2, or other loggers commonly used for environmental monitoring.

LEAF & CANOPY MEASUREMENT

SUNSCAN
CANOPY ANALYSIS SYSTEM

FEATURES

- **Direct display of Leaf Area Index (LAI)**
- **Proven, research-grade canopy analyzer**
- **Measures incident and transmitted PAR in plant canopies**
- **Usable in cloudy, clear and changeable conditions**
- **Ideal for phenotyping based research**

The portable SunScan Canopy Analysis System uses field measurements of Photosynthetically Active Radiation (PAR) in crop canopies to provide valuable information about Leaf Area Index (LAI) and biomass production. The SunScan canopy analyzer is optimized for low regular canopies such as most agricultural crops. The 1 m probe enables rapid spatial averaging of large areas, and PAR mapping for non-uniform crops such as vineyards and orchards. Radio link option available.

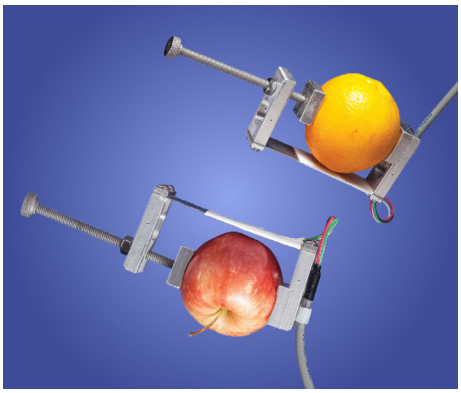
WINDIAS 3
LEAF IMAGE ANALYSIS SYSTEM

FEATURES

- **Advanced leaf area meter with perimeter, length, width, object count and more**
- **Measures healthy, diseased and pest-damaged area**
- **Conveyor belt option for quick results**
- **LED lighting with adjustable brightness**
- **Ideal for phenotyping based research**

The WinDIAS leaf area measurement system can measure percentage diseased leaf area, making it ideal for plant pathology, agronomy, plant physiology and forestry. The recently upgraded WinDIAS 3 Leaf Image Analysis System provides fast, accurate measurement of leaf area and leaf features. WinDIAS's analysis features are well suited to applications where precise color discrimination is critical.

DEX
ELECTRONIC DENDROMETERS



FEATURES

- **Non-destructive**
- **Measure plant growth or stress level**
- **Long-term measurements possible**
- **Weatherproof and rugged for field study**
- **Woody stemmed, herbaceous plants, & fruits**
- **Real-Time measurements**

The DEX20, DEX70, DEX100 and DEX200 are highly precise electronic dendrometers that measure the growth and size of plant stems and fruits. The effects of environmental factors on the water balance of plants and stem size variations over time are easily monitored with a temperature compensated dendrometer. The DEX is a caliper-style device with a full bridge strain gage attached to a flexible arm. The output signal is then recorded by a data logger or computer in real time. The millivolt sensor output shows both the diurnal and long term growth or stress level of the plant. The device has been used to test plants under conditions of water stress, elevated ozone and other atmospheric pollutants. Applications for screening plants for growth rate and stress tolerance are also common.

DEX-LOG
DEX LOGGER SYSTEM

FEATURES

- **Complete DEX logging kit**
- **Measure growth or stress**
- **Long term monitoring possible**

The DEX-Log dendrometer data logging system is comprised of a GP1 data logger and (2) DEX electronic dendrometers and can be used to monitor plant growth rate or stress levels over long periods of time, and can operate completely unattended. The GP1 data logger offers a self-contained solution for monitoring DEX electronic dendrometers, soil moisture and weather sensors. Data can be monitored and displayed in real-time or output to a PC using the supplied RS-232 serial data cable.

The DEX Electronic Dendrometers can be clamped on stems or fruits (citrus, apples, plums, etc.) and can measure very tiny changes in stem or fruit diameter (~0.004 mm). A trend upward represents the growth rate of the plant, whereas a leveling off or trend downward indicates plant stress. This way, growers know when, and how much stress the plants are under. This information can then be used to schedule irrigation or fertilizer applications as well as keeping track of growth rates over time.

Terms and Conditions
The terms of payment are "Net 30 Days" with approved credit, or enclose a check or money order with your purchase order. C.O.D. is also available. To establish an open account, please provide a bank reference with account number and three trade references (Call our accounting department for all details. Visa, MasterCard, Discover and American Express are accepted.

All shipments are made FOB Houston, TX. Freight charges are prepaid and will be added to your invoice.

Warranty
One year warranty against defects in materials and workmanship is standard on all sensors and systems. Three year warranty applies to data loggers. Details are available by request.

Pricing
Price quotations/proforma invoices are available on request from Dynamax or your local representative. Direct quotes are normally provided with EX-works pricing. However, with the addition of freight, insurance and documentation included, we are happy to provide pricing quotes for CPT (Carriage Paid to Destination), CIP (Carriage and Insurance Paid to Destination), with duties, fees and taxes the responsibility of the buyer.

Shipment and Delivery
Many items are shipped from stock. Typical systems delivery is 4-6 weeks from order. All items are shipped by air cargo in export cartons.

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