

Integrated

systems design ltd



SYSTEMS,
ELECTRICAL ENGINEERING,
PROGRAM MAINTENANCE
& SERVICING

PRODUCTS
LASERS & SCANNERS
MOISTURE METERS
I-BEAM

www.integrated.co.nz

INTEGRATED SYSTEMS DESIGN LIMITED

COMPANY PROFILE

Integrated Systems Design Limited are specialists in sawmill process automation, offering total network solutions to meet the immediate and future needs of your business.

Based in Rotorua, New Zealand we have been involved in the timber processing industry for over 38 years, operating extensively throughout the South Pacific regions.

Our skilled and dedicated team will design, manufacture, install and commission a total automation package, with a commitment to offering all our customers the best of service and quality in workmanship in all that we endeavour to do.

Integrated Systems Design Limited will supply, service, install and train on each range of product.

Integrated Systems Design Ltd is the agent for numerous products with specialist applications.

- Ciris Engineering
- OSCAR true shape log optimiser
- Agents for New Zealand and Australia
- Merlin Moisture Meters
- Exclusive from Merlin Technologies in Germany
- 3-D Scanners:
- New Zealand suppliers for LMI scanners
- Citect Scada
- Lacey Harmer laser products
- Power Outlet Units:
 - I-Beam mounted to wall mounted units
 - three phase and single phase power outlets
 - circuit breakers to suit
 - Custom design and built to clients specific operation or needs.
- Cyber-Tech operator console hand pieces



Integrated

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SYSTEMS, ELECTRICAL ENGINEERING, PROGRAM MAINTENANCE & SERVICING

Integrated Systems Design Limited are pleased to offer a range of services tailored to meet the needs of our customers, from program maintenance, to automation and manufacture through to energy management for cost saving.

With over 38 years' experience in the electrical industry we are passionate about working with our clients to offer the best possible packages and solutions to provide cost effective results.

PROGRAM
MAINTENANCE

SWITCH GEAR
MANUFACTURING

PROCESS
AUTOMATION

ENERGY
MANAGEMENT

ELECTRICAL
ENGINEERING

 **WOODTECH**
Innovative Technology



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SYSTEMS, ELECTRICAL ENGINEERING, PROGRAM MAINTENANCE & SERVICING

PROGRAM MAINTENANCE

Integrated Systems Design Limited is trained in industrial and commercial installations with experience in Electrical Project Management for installation and breakdown. We have been involved in the industrial and commercial electrical field for over 38 years.

Maintenance experience such as:

- Mighty River Power dam service contract
- Multiple timber mill service contracts
- Patchell Industries Rotorua
- Roadmaster Trailers Rotorua
- Service contract for Clarkson Electrical including,
 - BP Service Stations
 - Mobil Service Stations
 - Gull Service Stations
 - Woolworths and Countdown
 - New World

Project installation experience such as:

- KPP Timberlands new log spray system, Kaingaroa
- Mahild timber kiln wiring and control, world wide
- Northpine Fuel handling system, Waipu
- Carriage networks, world wide
- Firth 2 meter rock cutter, Hinuera
- Archers spring machine, Rotorua
- Roadmaster trailers workshops, Rotorua
- And much more...

Our team is committed to a high level of quality control and performance. Site standards are always kept or improved over the length of our projects and installations.

Our areas of expertise include:

- Industrial safety experience
- Extensive Industrial Electrical knowledge
- Ability to install all types of industrial / commercial products
- Experienced in Automation
- Full Electrical job control, large or small installations

All our electricians and technicians have:

- Site Safe
- Yellow Card (Exon Mobil qualification)
- Practicing licence this also includes:
 - First Aid
 - CPR
 - Safe working practices
 - Testing



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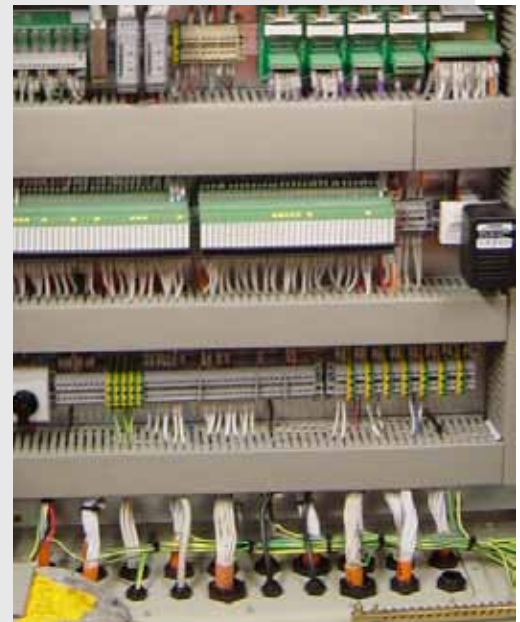
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SYSTEMS, ELECTRICAL ENGINEERING, PROGRAM MAINTENANCE & SERVICING

PROCESS AUTOMATION

Integrated Systems Design Limited are specialists in sawmill automation and offer a total solution that enhances production.

- Complete new system upgrades
- Retrofit upgrade into existing systems
- Pre-designed packages
- Designed to be flexible for systems alterations and upgrades (on site or via modem)
- Custom designs:
 - for site or one off operations
 - machinery
 - operator consoles

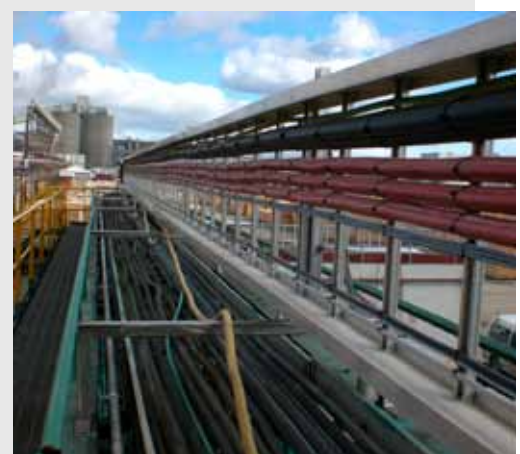


ELECTRICAL ENGINEERING

Integrated Systems Design Limited have been involved in the industrial and commercial electrical field for over 38 years.

- Hydro electric dam service contracts
- Timber mill maintenance and service contracts
- Project installation
- Log spray systems
- Timber kiln wiring and control
- Boiler fuel handling
- Carriage networks
- Quarry rock cutters
- Spring roll forming machines
- Heavy trailer manufacturing workshops
- Fuel pellet manufacture

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SYSTEMS, ELECTRICAL ENGINEERING, PROGRAM MAINTENANCE & SERVICING

SWITCH GEAR MANUFACTURING

Integrated Systems Design Limited specialise in the design and building of:

- Control Consoles
- PLC Panels
- Motor Control Centers
- Mains Distribution Boards

Integrated Systems Design Limited also has extensive knowledge in the modification and upgrading of switching panels.



ENERGY MANAGEMENT

Energy management requires a detailed understanding of existing load and utilisation to determine if energy cost savings can be made.

Integrated Systems Design Limited offers a comprehensive range of energy analyses and cost saving solutions.

We are yet to discover an industrial / commercial site where significant energy cost savings cannot be made.



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SYSTEMS, ELECTRICAL ENGINEERING, PROGRAM MAINTENANCE & SERVICING



Integrated Systems Design Limited specialise in all aspects of Sawmill Automation, offering a total network solution that enhances production. Woodtech control packages have been developed by Integrated Systems Design Limited over the last 38 years of being involved in the timber industry and have proven to be at the top of the line in all aspects of timber production.

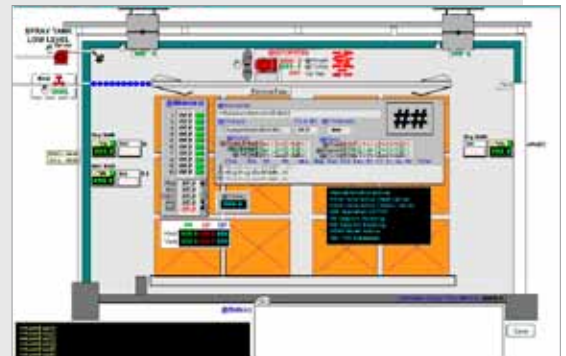
Woodtech features that latest technologies in process automation,

- Designed to be flexible for System changes (on site or via modem)
- Custom Design for machinery or one off operations
- Custom Designed for the operator or site
- Retrofit onto existing systems
- Complete System upgrades
- Pre-designed packages

The Woodtech V.10 Total kiln control system is a multi-stepped and scheduled system designed to control any type of kiln. This system is developed to give full control and flexibility to the operator/s. Woodtech V.10 has been tested and developed alongside experienced operators and technicians to ensure functionality of the software is at the highest standard.

Woodtech control systems are designed primarily for the timber industry and include systems for:

- Log debarking and cutting
- Primary log breakdown and re-saw networks
- Boiler and boiler in-feed
- Kiln drying
- Dust collection and handling
- Grading and product management
- Re-manufacturing and moulding



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PRODUCTS

Integrated Systems Design Limited through our strategic partnerships offer an exciting range of products that complement our business while offering our customers products with proven performance, reliability, accuracy, and a great return on investment.

Scanners - Oscar by Ciris Engineering. Oscar is Europe's most used true shape log carriage optimising package. Our partnership with Ciris Engineering gives our customer the full benefit of both optimising with full machine and plant control and valuable after sales servicing.

Laser Blazer Lasers "Benchmark of the Industry" by Lacey Harmer Co. have a proven record of performance over years of demanding duty; this has made the Laser Blazer Laser Diode the largest selling linemaker for the forest products industry.

LMI Technologies Inc. – 3D measurement sensors. LMI's chroma+scan sensors integrate high speed and high density 3D scanning for log and board optimisation. These leading edge sensors are designed to produce highly accurate and reliable data for today's high production machine centres. Mill operations will appreciate the value added by the integrated sensor technology enhanced by sensors with the capacity to collect large amounts of profile data to generate a complete model of the board or log, resulting in better cutting decisions and increased value realisation from the timber resource.

How wet is dry? Moisture Meters by Merlin Technology, as a leading company in the area of humidity control, Merlin has been involved for years in non-destructive moisture measurement technology for the materials wood, paper and building materials. Manual measuring devices of the Merlin brand enjoy huge international acclaim and are exported to over 70 countries. The product range includes innovative equipment for the end user and systems for the professional.

Introducing Biomass moisture meters by Merlin Technology. The Evo-Bio highly accurate moisture meter for wood chips, barks, pellets, sawdust etc. Evo-Chips insertion probe moisture meter for wood chips. The Moistec-Bio a moisture meter for measurements with high water content and measuring depth.

I-Beam trunked mains power distribution. Custom designed and built to suit our clients' specific operational needs. Three phase and single phase power outlets, circuit breakers to suit. I-Beam is designed to keep distributed power to outlets hidden within the building framing and safe from damage from gantry's, forklifts and vehicles.



OSCAR™ BY CIRIS ENGINEERING

OSCA by Ciris Engineering is an optimiser for log-carriage type headrigs.

Based on the latest true shape technologies, OSCA measures logs with a high degree of accuracy, calculates the optimal opening face and the best sawing pattern, then positions wood at full speed before entering the cut. The precision and the regularity of the solutions provided by OSCA make it possible to increase yield, productivity and value of every log cut. Regardless of the species or equipment used, OSCA is easy to install and operate. OSCA will provide better basic data which will improve production management.

Oscars Features

- Industrial-strength laser-based scanner heads
- Real-time optimisation
- Optional log scaling
- Saw blade deviation display and recording
- Touch-screen for user interface and 17" LCD flat screen, located near or within operator console

Optimisation Operation

- Once a log has been dogged, the carriage starts moving toward the saw. Scanner heads take real-shape measurement of front face as the carriage is moving.
- Carriage is set so that desired opening face is obtained very accurately and with very high repeatability.
- Cutting pattern is shown on screen, and display is adjusted as further cuts are made. OSCA connects to existing Networks so that the operator does not have to perform sets.
- Optimisation and carriage knee positioning takes place before the leading end of the log arrives in the saw.

Benefits of an OSCAR log carriage optimiser

- Is well adapted for all kinds of solutions, hardwood or softwood.
- Optimises all types of sawing patterns
- Increases recovery and profitability
- Improve speed of production
- Reduces production costs
- Decreases chance of human error
- Personnel training made easier

Other features of an OSCAR log carriage optimiser:

- Automatic skewing
- Optimised opening face
- Optimised sawing pattern
- Automatic setting
- Saw blade deviation control

OSCA prints out production reports giving information like log consumption per grade per shift. OSCA ensures production plans are made easy. OSCA has a set of data to inform saw doctors.

Ciris Engineering has installed over thirty OSCA log carriage optimiser through out Europe, making it Europe's most used true shape log carriage optimising package.

Integrated System Design Limited have partnered with Ciris Engineering to give the customer the benefit of both optimising, full machine and plant control.



LD-7000 LASER DIODE

The LD-7000 Laser Diode is an affordable option with positioning to suit any application, cannon or end shooter, right angle or side shooter, parallel or dot. These lasers are available in 5, 10, 15 and 20mW range.

Specifications

- Visible Laser Diode
- Semiconductor InGaP Laser Composition
- II, IIIa Laser class
- 635nm wave length
- 5 - 35mW output range
- 4 Elements Glass <0.3 Radiation collimation
- 5 – 90 Degrees beam angle
- 5 VDC regulated operating voltage
- 100mA operating current
- -20°C to 40°C Operating temperature
- 90V for 250ms Surge spike protection
- 300g for 1ms Mechanical shock resistance
- Nickel plated 6061-T6 aluminium housing



Models

xx-	05 = 5mW
	10 = 10mW
	15 = 15mW
	20 = 20mW

7xx0



7xx1 - Right Angle



7xx2 - Cannon



7xx3 - Parallel



LD-9400 LASER DIODE

The LD-9400 series linemaker is the most popular model; with proven performance it is built tough to withstand shocks. This reliable linemaker is available in a versatile range from 5-35mW, in dot or line projection. The line fan angle can be specified to suit the desired application. The exclusive optical system guarantees the accurate production of a perfectly straight line of constant width and uniformity.

Specifications

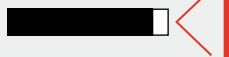
- Solid state diode light source
- 532 - 635nm nanometers standard light wavelength
- 5 - 35mW output range
- 5 - 90 Degrees lens fan angle
- 5 VDC regulated operating voltage
- 100mA operating current
- 115V AC standard input voltage (12V DC 24V DC and 230V AC)
- Water resistant
- Dot or line projection
- -20°C to 40°C Operating temperature
- Anodised aluminum hermetically sealed



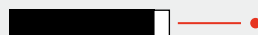
Models 94xx

xx-	05 = 5mW
	10 = 10mW
	15 = 15mW
	20 = 20mW

Standard 94 Series



94 "00" Series - Dot Projection

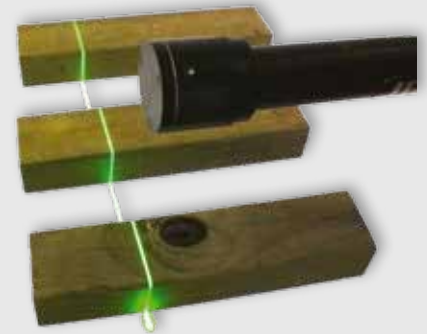


94 "R" Series - Right Angle Projection



GREEN LASER DIODE

The Green Laser Blazer self contained assembly provides intense green light in two power configurations 110VAC and 240VAC. These diode pumped lasers maintain constant output. The intense green beam is useful for visual application in harsh or industrial environments, with optics housed in a sealed cell to provide added protection against contaminants and moisture.



Features

- 532nm TEM00 operation
- Power stability > +5% to +10% over 8 hours
- Rugged industrial packaging
- Entirely self contained
- No additional heat sinking required
- 110VAC to 240VAC, 50Hz/60Hz
- 12 Months warranty
- Warm up time <10 minutes

Models

- GLD-9810
10mW, (20ft Line)
Bracket: 94 and MLD bracket
- GLD-9830
30mW, (65ft Line)
Bracket: #2701 Green Laser bracket

Typical Application

- OEM industrial equipment
- Sawmill equipment: Grading decks, carriage, log cut-offs
- Sheet metal fabrication
- Machine Vision - Camera, scanning / optimizing
- Textile processing
- Construction

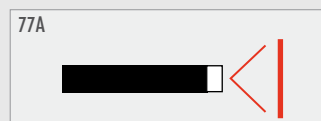
LASER BLAZER 77 HENE LASER

The Laser Blazer linemaker, a pioneer in the field of low-power lasers for application in the forest products industries, produces a dot or a line. When this line of light is laid on a log, a cant, a board or plywood sheet, it is narrow and bright for its entire length. This gives the operator and excellent reference line for the cut.

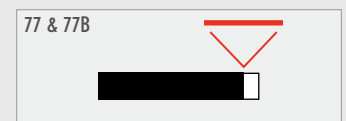


Sawmill applications for the Laser Blazer Linemaker

- On Optimisers
- Mounting on Edger's
- At the Headrig
- Trim Saws and Resaws
- Rip and Gang Saws
- Plywood Layup
- Levelling of Floors and Ceilings
- Positioning of overhead cranes



77A
Line projected from end of housing.



77 & 77B
Right angle projection, perpendicular and parallel to house axis.

EVO MOISTURE METERS



Evolution the latest non-destructive moisture meter series

How high is the moisture content in my wood and wood products? Test it quickly, accurately and without damaging the material with the precise non-destructive moisture meter from Merlin Technology GmbH.

Features

- Wood moisture and temperature measurement
- Self-calibration function
- Temporary hold function for current measured value
- Automatic shut-off function
- Display lighting
- Including soft case and batteries
- 21 wood groups pre programmed
- Enlarged density range from 0.175 up to 1.075 g/cm³ dry density
- Wood species and densities are selectable at the display menu
- High-definition 128 x 60 matrix display
- Ergonomically designed with tough housing with soft touch surface



How It Works

As soon as the sensor plate is in contact with the surface of the wood measuring starts.

The processor of the instrument analyses the sensor readings and displays the result as a percentage of the moisture content in the wood.

Application:	FLOORING	FURNITURE	SAWMILL
Instrument:	Evo 5	Evo 13	Evo 25
Dimension:	124 x 71 x 30 mm (4.88 x 2.80 x 1.18 inch.)	124 x 71 x 30 mm (4.88 x 2.80 x 1.18 inch.)	124 x 71 x 30 mm (4.88 x 2.80 x 1.18 inch.)
Weight:	175g (6.17 oz.)	175g (6.17 oz.)	175g (6.17 oz.)
Scanning Depth:	5 - 8 mm (0.19 x 4.06 inch.)	13 - 20 mm (0.51 x 0.78 inch.)	25 - 40 mm (0.98 x 1.57 inch.)
Sensor Dimension:	32 x 103 mm (1.26 x 4.06 inch.)	45 x 103 mm (1.77 x 4.06 inch.)	66 x 103 mm (2.60 x 4.06 inch.)
Measuring Range:	2% - 99%	2% - 99%	2% - 99%
Timber Group:	1 - 21	1 - 21	1 - 21
Density Range:	175 - 1075 kg /m ³ (0.10 - 0.62 oz/in ³)	175 - 1075 kg /m ³ (0.10 - 0.62 oz/in ³)	175 - 1075 kg /m ³ (0.10 - 0.62 oz/in ³)
Power Supply:	4 pcs. 1.5V AAA Alkaline batteries	4 pcs. 1.5V AAA Alkaline batteries	4 pcs. 1.5V AAA Alkaline batteries

HM8 MOISTURE METERS

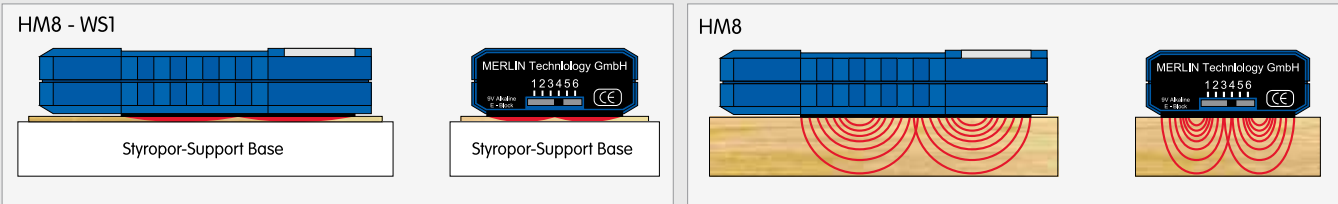


HM8 non-destructive moisture meter

How much is the accurate moisture content in my wood and wood products? Test it with a quick and precise non-destructive moisture meter from Merlin Technology GmbH.

How It Works

As soon as the sensor plate is in contact with the surface of the wood measuring starts. The processor of the instrument analyses the sensor reading and displays the result as a percentage of moisture content in the wood.



APPLICATION:	veneER	FLOORING	FURNITURE	SAWMILL
Instrument:	HM8 - WS1	HM8 - WS5	HM8 - WS13	HM8 - WS25
Dimension:	120 x 60 x 25 mm (4.75 x 2.36 x 0.98 inch.)	120 x 60 x 25 mm (4.75 x 2.36 x 0.98 inch.)	120 x 60 x 25 mm (4.75 x 2.36 x 0.98 inch.)	120 x 60 x 25 mm (4.75 x 2.36 x 0.98 inch.)
Weight:	150g (5.29 oz.)	150g (5.29 oz.)	160g (5.64 oz.)	160g (5.64 oz.)
Scanning Depth:	0.5 - 1.6 mm (0.04 inch.)	5 - 8 mm (0.19 - 0.31 inch.)	13 - 20 mm (0.51 - 0.78 inch.)	25 - 40 mm (0.98 - 1.57 inch.)
Sensor Dimension:	67 x 42 mm (2.63 x 1.65 inch.)	67 x 42 mm (2.63 x 1.65 inch.)	78 x 45 mm (3.07 x 1.77 inch.)	80 x 72 mm (3.14 x 2.83 inch.)
Measuring Range:	4% - 99%	4% - 99%	4% - 99%	4% - 99%
Timber Group:	1 - 6	1 - 6	1 - 6	1 - 6
Density Range:	370 - 670 kg /m ³ (0.21 - 0.38 oz/in ³)	370 - 670 kg /m ³ (0.21 - 0.38 oz/in ³)	370 - 670 kg /m ³ (0.21 - 0.38 oz/in ³)	370 - 670 kg /m ³ (0.21 - 0.38 oz/in ³)
HD - Version:	450 - 950 kg /m ³ (0.26 - 0.55 oz/in ³)	450 - 950 kg /m ³ (0.26 - 0.55 oz/in ³)	450 - 950 kg /m ³ (0.26 - 0.55 oz/in ³)	450 - 950 kg /m ³ (0.26 - 0.55 oz/in ³)
Power Supply:	9V battery or NiCD Akku	9V battery or NiCD Akku	9V battery or NiCD Akku	9V battery or NiCD Akku

EVO-BIO MERLIN® BIOMASS MOISTURE METER EVO-BIO

Highly accurate moisture meter for quick determination of the water content of: wood chips, barks, wooden pellets, Miscanthus, wood shavings and sawdust. For suppliers and operators of heating plants using biomass.

Measuring range: 5 to 60% water content depending on the material

Resolution: 0.1% water content

Technical specification:

- Calibration accuracy +/- 1.5%
- Bulk density compensated by using scales
- 13 litre sample volume
- Temperature can be set to °C or °F as required
- Automatic temperature compensation
- Measurement within seconds without prior treatment of samples
- Sample temperature measurement
- Hold Function, manual saving of results, data log for 10.000 logs with measuring point report
- High resolution LCD display
- Robust stainless housing
- Menu languages: German, English, Italian, French, Spanish and Russian
- Incl. plastic bucket and batteries
- Incl. digital scales with batteries and power supply unit

Optional: Factory calibration certificate, printer (Price on application)

EVO-BIO-PC

MERLIN® Biomass Moisture Meter EVO-BIO PC (incl. PC interface). Technical specification as listed.

Including following features:

- PC interface (USB), PC software and USB cable
- Customer calibration function for special products
- Online function for data transfer
- Supplier's data and batch number can be recorded

Optional: Factory calibration certificate, printer (Price on application)

EVO-CHIPS MERLIN® BIOMASS MOISTURE METER EVO-CHIPS

Moisture meter with insertion probe. For determination of the water content of wood chips.

Measuring range:

- Water content: 10 % to 50 % (represents 100 % wood moisture) Resolution: 0,5 %
- Temperature: -10 to +80 °C

Technical specification:

- Length of stainless insertion probe: 1 metre
- Sample temperature measurement
- Automatic temperature compensation
- Temperature range for determination of water content 0 to + 40°C
- Temperature can be set to °C or °F as required
- Measurement within seconds without prior treatment of samples
- Hold function, manual saving of results, data log for 10.000 logs with measuring point report
- Supplier's data can be recorded
- High resolution LCD display
- Incl. wooden box and grab bar (steel)

EVO-CHIPS-PC

MERLIN® Biomass Moisture Meter EVO-CHIPS PC (incl. PC interface). Technical specification as listed.

Including following features:

- PC interface (USB)
- PC software for measuring data recording and analysis
- USB cable for PC

MOISTEC-BIO MERLIN® TIMBER MOISTURE METER MOISTEC-BIO

Moisture meter for measurements with high water content and measuring depth.

For heating plants using biomass or wood, suppliers of timber and split logs.

Measuring range:

- Water content: 10 % to 60 % (represents 150 % wood moisture) Resolution: 0,1 %
- Temperature: -10 to +80 °C

Technical specification:

- Automatic temperature compensation
 - Temperature can be set to °C or °F as required
 - Hold function, manual saving of results, data log for 10.000 logs with measuring point report
 - High resolution LCD display
 - Measurement within seconds without prior treatment of samples
 - Incl. plastic case, ram-electrode and batteries
- Optional:** printer, isolated nails (price on application)

MOISTEC-BIO-PC

MERLIN® Biomass Moisture Meter EVO-BIO PC (incl. PC interface). Technical specification as listed.

Including following features:

- PC interface (USB), PC software and USB cable
- Customer calibration function for special products
- Online function for data transfer
- Supplier's data and batch number can be recorded

Optional: Factory calibration certificate, printer (Price on application)



I-BEAM

Power supply, trunked system. Any commercial building can be set up with a purpose distributed power outlet grid, and all powerpoints are hidden within the potential frame keeping them concealed and safe from the damage. All cabling is trunked throughout the building from the main switchboard.



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