

INFRABIOMASS

MOISTURE infrared measurement device in line dedicated to **eco-energy industries**



Biomass

The objective is to **optimize** the ICV (Internal Calorific Value) in order to guarantee a better thermal efficiency, insure the calorific value while protecting the furnace.

Compost

Check compost quality while regulating the process.

Pellets

Guarantee a wetness rate < 10% for a better filling-up and an optimal density.



INFRABIOMASS

- **Moisture measurement**
- In line moisture measurement
- Continuous measurement system
- Real-time measurement
- Contact free measurement
- Bio-energy specific
- Strong and adapted to aggressive environments
- Easy to install
- Easy to use
- Without maintenance
- Self-ruling autonomous system

INFRABIOMASS is a new intelligent INFRARED sensor, specially developed for moisture measurement on bio-energy products, biomass, compost, pellets, wood granulate, wood chips, paper mill and wood shavings.

INFRABIOMASS allows manufacturers on bio-energy sectors to measure moisture in real-time, simply with accuracy and reliability.

INFRABIOMASS optimizes the ICV, guarantees a better thermal yield, and allows the quality control of the processing, the manufacturing or the reception of bio-energy products.

INFRABIOMASS is based on 20 years of acquired experience in industrial measurement in line and in the infrared development of test and measuring device by EDIT Company.

INFRABIOMASS uses as a consequence, the latest infrared technologies by combining several wavelength of maximum absorption of the water molecule, to free itself at best from limits of the NIR technology and to assure the best precision of measure, whatever the process and product variations to measure.

INFRABIOMASS consists of optical, mechanical and electronic parts, specifically studied to work on bio-energy industries process.

INFRABIOMASS is an ideal moisture measuring device for the improvement of profitability and biomass quality control, compost and environment industries.



Biomass



Pellets



Compost



Digestate



Wood plates



Online infrared moisture measuring device

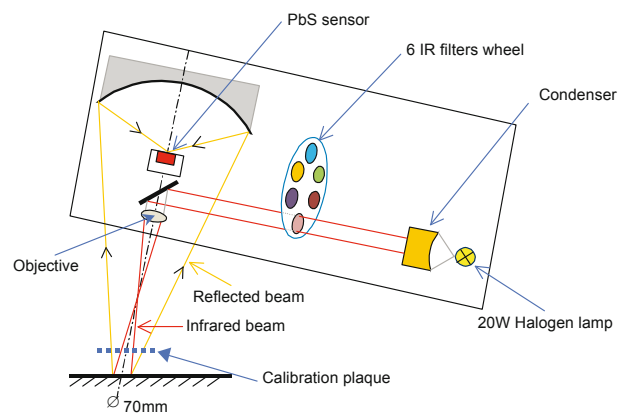
NIR measuring principles

INFRABIOMASSE is equipped with interferential filters that select **several wavelengths** corresponding to NIR ranges of water molecules absorption.

A continuous light source with wide spectral band irradiates the sample to be measured. A part of this radiation is retro spread and concentrated by a specific mirror on the sensor.

The flow recovered is correlated to the product concentration to be measured and thus of light absorbed.

Then, the data are treated and a calibration is created to read directly the moisture measure.



Functional plan

INFRABIOMASSE Advantages

Functional parts of INFRABIOMASSE have been studied, chosen or developed by the optical, mechanical and electronic research and development department of EDIT...

- Interferential filters
- Bright lamp
- PBS (Product Breakdown Structure) sensor
- Optical lenses
- Sight pipe
- Collapse (cowls) and mechanical base

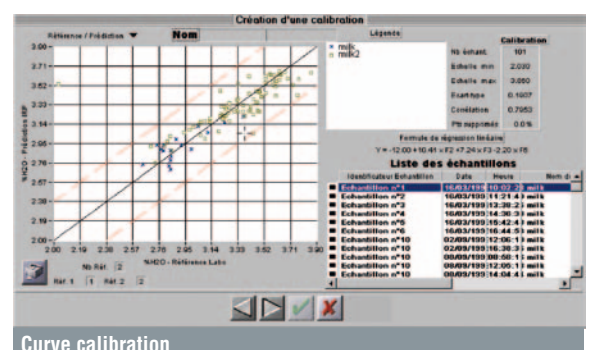
...to push forward functional limits of the INFRARED and allow a reliable and precise measure on many variable processes.

- Variation of the product granulometry
- Variation of colour
- Variation of temperature
- Variation in ambient brightness
- Continuous or intermittent processes
- Measure every 33,3 m/s
- Measuring surface of 70 mms

EDIT HMI (Human Machine Interface) + EDIT SOFTWARE

INFRABIOMASSE is delivered with INFRASOFTWARE. Working under Windows, this last one is constituted in standard version in the form of modules, permitting sensor calibration and evaluation of the measurement.

- Calibration by sampling
- Measurement display
- Selection of products
- Configurations setting
- Traceability and production monitoring

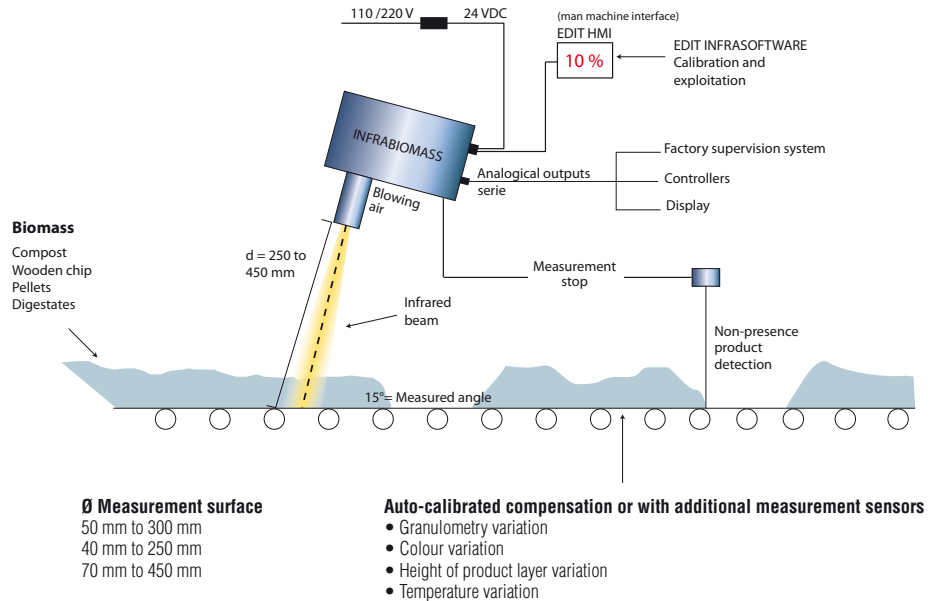


Curve calibration

INFRABIOMASSE - Configuration and installation

Very easy to install and configure.

One of the most flexible and functional moisture measuring devices on bio-energy market.



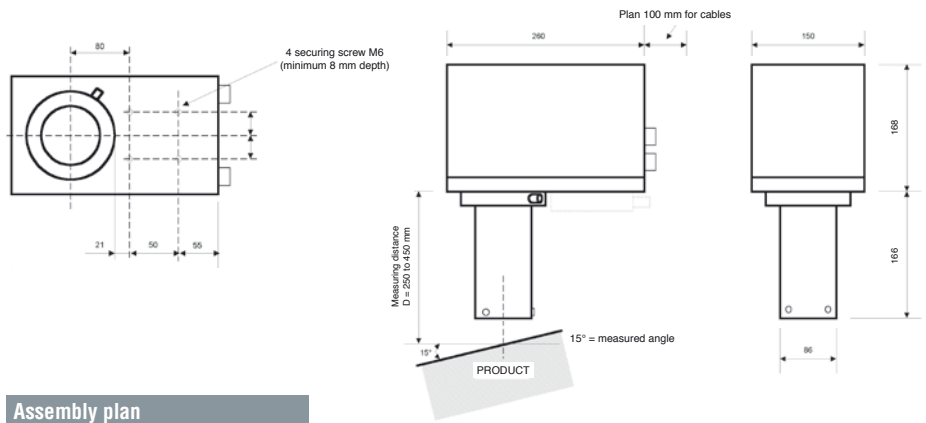
TECHNICAL CHARACTERISTICS

Measuring range : 0,2 to 98 % H₂O
 Electric feed : 24 VDC (Volts of Direct Currents)
 Response time : 100 ms
 Resolution : 0,01 %
 Output : analogical, series
 Using temperature: until 50° C in ambient temperature
 IP : 65(66 in option)

**ATEX version
(Explosive Atmosphere version)**

Complementary protection in difficult environments

- AIR Cooling plate
- WATER cooling plate
- AIR blowing system for optical protection



EDIT is a FRENCH company, specialized for more than 20 years in conception and manufacturing of measuring devices for industry.

EDIT supplies annually several hundreds of infrared and microwave devices to their industrial customers all around the world, so they can simply control with reliability their process.

EDIT invests every year in human and material resources to guarantee to their international customers the same quality on innovating products and reliability of result.

EDIT is an active member of numerous poles and technological clusters, and is recognized as an innovative actor on the market.

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