

INFRABELT

MOISTURE measuring infrared in line device for **bulk industries**



Moisture

Specifically developed for bulk products measurement on conveyors.

- Discontinuous processes
- Solid products with a variable granulometry
- Set height on fluctuating products
- Products colour variation
- Non constant temperature



INFRABELT

- **Moisture measurement**
- Online measurement
- Continuous measurement
- Real-time measure
- Contactfree
- Specific measurement on conveyors
- Robust and adapted to difficult environments
- Easy installation
- Easy to use
- Standalone product

INFRABELT is a new intelligent INFRARED sensor, specifically developed for bulk products moisture measurement, transported on a band conveyor.

INFRABELT allows bulk industries to check easily and with precision moisture content in real-time.

INFRABELT optimizes industrial processes, guarantees a greater thermal performance, and permits the transformation quality control, from the manufacturing or product bulk reception.

INFRABELT is based on 20 years old acquired experience in line on industrial measurement and on the INFRARED measurement and test device development by EDIT society.

INFRABELT therefore uses the last INFRARED technologies in particular by combining several water absorption wavelengths, to protect from limitations of NIR technologies and ensure a better precision in measurement, irrespective of the process variations and the products to measure.

INFRABELT consists of optical, mechanic and electronic parts, specifically studied to work in bulk industries process conditions.

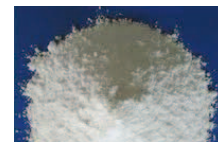
INFRABELT is the ideal moisture measurement device to ameliorate cost-benefits and bulk industrials quality control.



Lime



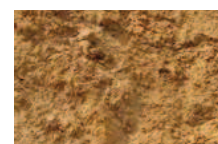
Clay



Kaolin



Wood chips



sand



Plaster



Cement



Soil



MOISTURE infrared measurement device in line for bulk industries.

INFRABELT Advantages

The functional parts of INFRABELT have been studied, chosen or developed by optical, mechanical and electronic R&D of EDIT...

- Interferential filters
- Halogen lamp
- PBS sensor (Product Breakdown Structure)
- Optical lenses
- Sight pipe
- Cover and mechanic base

...to challenge INFRARED functional limits and allow a stable and accurate measurement, also on very variable processes.

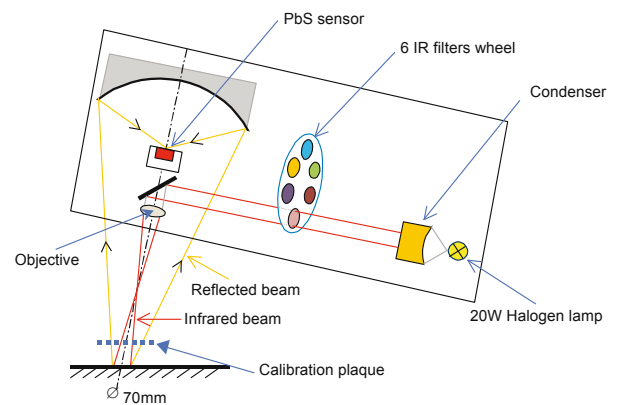
- Size grading product variation
- Colour variation
- Temperature variation
- Variation in ambient brightness
- Continuous or intermittent processes
- Measure every 33,3 m/s
- Measuring surface 70 mm

NIR measuring principle

INFRABELT is equipped by interferential filters that select several wavelengths corresponding to the water molecules absorptions NIR peaks.

A continuous light source with wide spectral band irradiates the measured sample. A part of this radiation is backscattered and concentrated by a spherical mirror on the sensor.

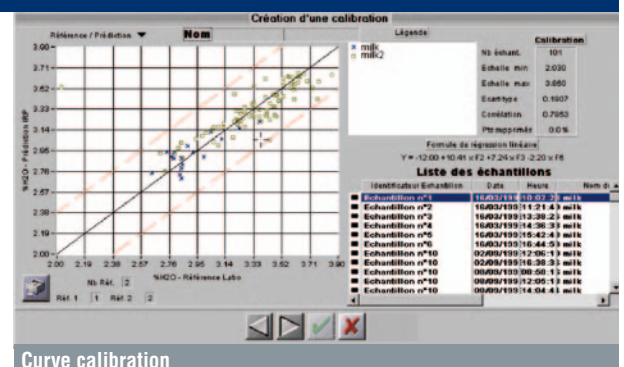
The flow recovered is correlated with the product concentration that we want to measure and also with the absorbed light. Then, data are processed and a calibration is created to read directly the moisture measurement.



EDIT HMI (Human Machine Interface) + EDIT INFRA software

INFRABELT is delivered with INFRASOFTWARE. Working under Windows®, this last one is constituted in standard version with different modules which permit the sensor calibration archiving, and the evaluation of the measurement.

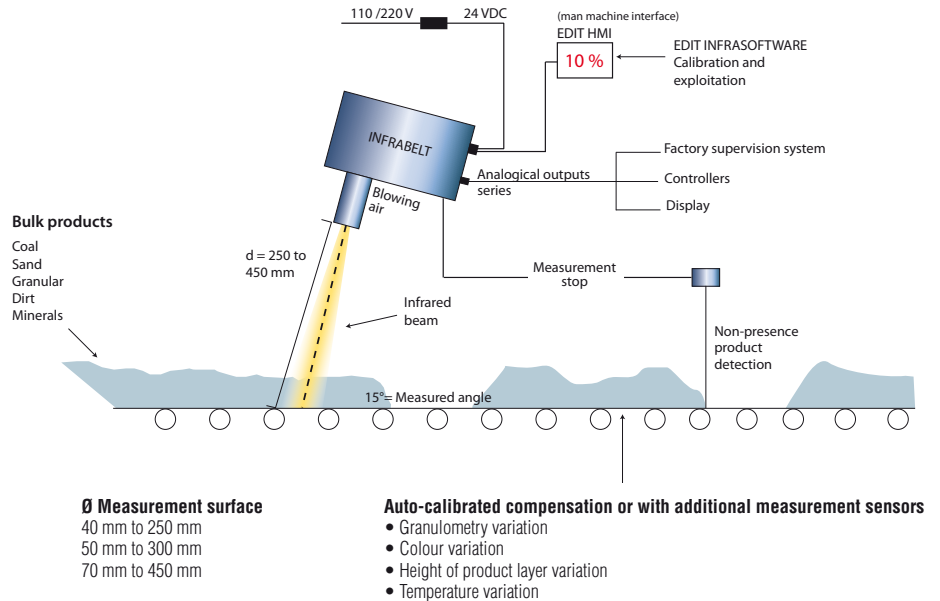
- Calibration by sampling
- Measurement display
- Products selection
- Set-up
- Traceability and monitoring production



INFRABELT - Setup and installation

Very easy to install and configure.

One of the most flexible and functional moisture devices on bulk industries market.



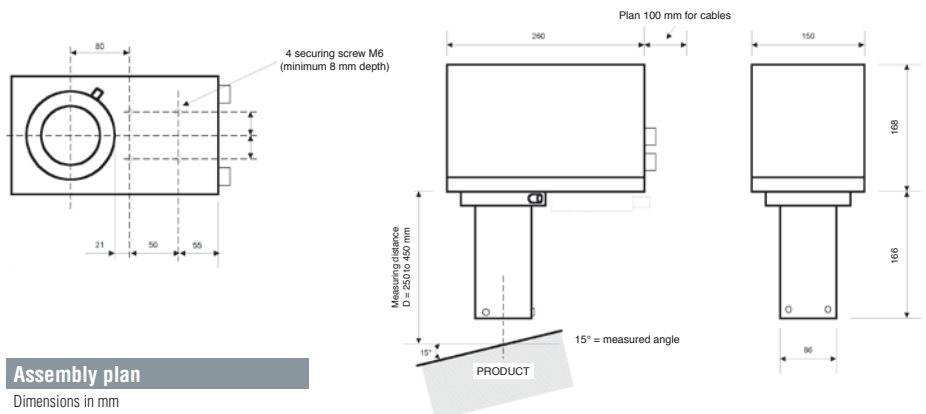
TECHNICAL CHARACTERISTICS

Measuring range : 0,2 to 98 % H₂O
 Power supply : 24 VDC (Volts of Direct Currents)
 Time of answer / response time : 100 ms
 Resolution : 0,01 %
 Output : analogical, serial
 Using temperature: until 50° C in ambient temperature
 IP : 65(66 in option)

version ATEX (Explosive Atmosphere version)

Additional protection for very aggressive 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 his 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 his international customers the same quality concerning innovation product 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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