

Wood Pellets - Moisture measurement & control

Moisture measurement and control is a crucial aspect of the wood pellet manufacturing process. MoistTech's new IR3000 Moisture Sensor allows you to do instant, non-contact, continuous moisture measurement, allowing you to gain complete control over your process.



Manufacturing wood pellets requires the refining, drying and blending of wood waste prior to entering the pellet press. By integrating MoistTech's IR3000 into the process, users are able to monitor 100% of their product quality, instantly and consistently. Measuring moisture throughout the wood pelletizing process will produce the pellets at a specific moisture percentage preventing the out of specification when the product is too wet or too dry. Additionally, pro-active adjustments can be made to the process, to optimize pellet manufacturing

Installation....

MoistTech recommends installing sensors in several locations throughout the pellet process. First, installing a sensor prior to the dryer will monitor the moisture levels going in. Too dry of a product will result in over drying causing a dusty, ambient environment but could also result in a fire. Installing sensors after the dryer, prior to the pelletizer will also result in significant cost savings. Product too dry will prevent pellets compacting and not molding together very well. Product too wet could cause the pelletizer to plug up—both resulting in shutting down the line and product waste.

Unlike other instrumentation of this type, some of the unique features of the IR 3000 is that it is able to monitor the product even with small gaps in product flow and is unaffected by ambient light without impacting the accuracy. Chain conveyors and most screw conveyors are not a problem either.

The sensor(s) can be located throughout the pellet process and can be directly connected to the users PLC or any laptop. Ethernet 4-20 ma are included as well as our high-tech Windows operating software. We also have a DPM-Digital Panel Meter and a Color Touch Screen Operator Interface as read-out options.

Environment....

Dust from the product is not normally a problem however in extreme dusty environments we recommend the installation of an air purge system to prevent the accumulation of material on the sensor's window. If the sensor has to be installed close

to dryer where it will be susceptible to extreme heat conditions, it may be necessary to cool the sensor with either air using MoistTech's [Vortex Air Cooling Panel](#).

Benefits....

- **improved product quality**
- **lower energy costs**
- **reduced start-up times**
- **less waste**
- **100% product inspection**
- **less downtime**

MoistTech is very experienced with the moisture sensing requirements in the wood pellets as we MoistTech has installations in wood pellet plants throughout the United States and Canada.

Our sensor calibrations, measurement wavelengths, algorithms and sensor optical requirements are pre-set at the factory. Typical accuracy is about $\pm 0.1\%$ moisture. Typical analog range is 0-80% moisture. The outputs can be adjusted to optimize PLC or recording requirements. For additional information or to discuss your application, please contact our headquarters.

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