

Valmet Chip 'n' Bark Moisture Analyzer

Continuous measurement to improve
process productivity and efficiency



Precise results
now save
12-24
hours



Excellent laboratory
correlation

Benefits of Valmet CBA:

- Accurate biomass moisture measurement
- Continuous measurements with less laboratory sampling
- More information available than with standard single laboratory sample
- Reliable moisture input for more accurate process control
- Exact water content data for digester chemical dosage
- More accurate biomass heat content information

Continuous chip and bark moisture analyzer for stable measurements

The Valmet Chip 'n' Bark Moisture Analyzer (Valmet CBA) offers a new tool for improved process productivity and efficiency. Automatic moisture measurements of chips, bark, and other forest-based biomass reduce the need for time-intensive laboratory testing, and puts essential data at your fingertips for more accurate process control.

Traditional laboratory measurements are based on small samples taken once or twice a shift, providing a narrow view of information. The data obtained through manual laboratory sampling is non-representative, with delays of hours or even a full day, providing little in terms of information for on-time process adjustment and control.

Valmet CBA utilizes safe microwave technology to offer accurate readings before the digester or power boiler feed. A continuous sample is taken by a sampling screw from the process conveyor chute into the measurement chamber, before being returned back to the process.

Get much more value than single laboratory readings

The information is exceptionally reliable, and its correlation with laboratory testing is excellent. With proven laboratory correlation of more than 0.9, information is exceptionally reliable which reduces the need for laboratory testing. In the cooking process, chip moisture is one part of the liquor-to-wood ratio calculation and can affect chip air removal efficiency as well as pulp yield, kappa number and pulp quality.

Valmet CBA helps the pulp mill know exactly the amount of wood mass and water in the digester, which is necessary for calculating the correct dosage of chemicals. This not only saves on chemicals, but also stabilizes the cooking circumstances and the delignification process.

In power plants, reliable and on-time fuel moisture information enables more accurate determination of fuel heat content: Fuel moisture increases the total mass of incoming fuel, but decreases its actual heat content. Valmet CBA provides a tool to minimize fluctuations in power production, and to help achieve the desired power demand.

Technical specifications

Sensor material: Polyethylene

Sensor body material: Corrosion protected aluminum (option: AISI 316L)

Measuring range: 0-70 % moisture

Measuring principle: Microwave resonance, multi-variable measurement

Measured material: Wood chips, bark, forest based-biomass

Sampling screw diameter: 100 mm (3.9")

Screw material: Stainless steel / hard welded flighting

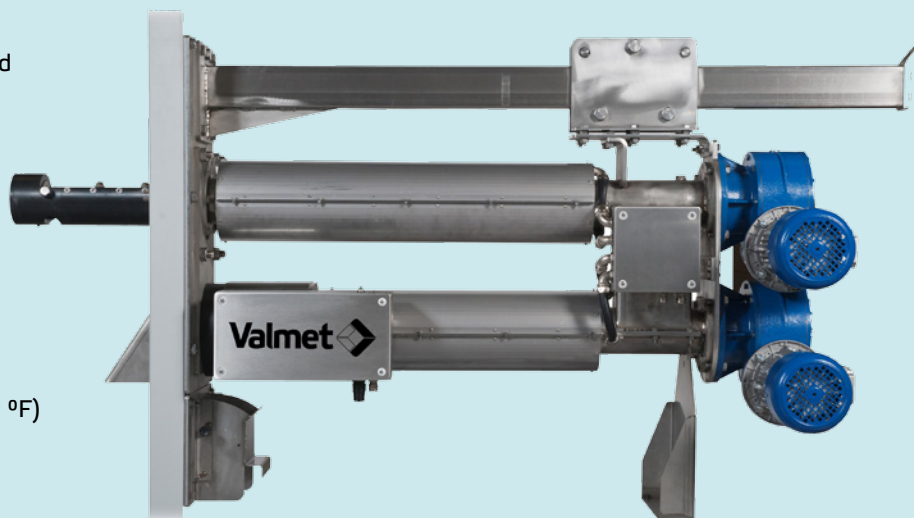
Temperature range: +10...+65 °C (50...149 °F)

Protection class: IP65

Weight: Approximately 350 kg (772 lb)

Mill system interface: 4-20 mA, Ethernet

Power supply: 400 VAC / 480 VAC / 200 VAC 3-phase 16 A



Designed for wide applicability

Valmet CBA can be used in a moisture measurement range of 0-70% and for all wood species. An optional heating system can be utilized to address frozen material, while cutting features can tear through large chip material.

The Valmet CBA main assembly consists of installation parts, sampling unit and Valmet CBA sensor. The measurement unit is positioned outside the main process, giving easy access for maintenance needs.

Comprehensive Industrial Internet access is available and the functions, data and alarms of Valmet CBA can also be accessed remotely or through an Ethernet connection. The robust construction and design ensure that everything is straightforward, from installation to a long life and trouble-free operation.



Valmet optimization services and solutions

With Valmet optimization services and solutions you can optimize your process performance for maximized success in reaching your production goals.

Valmet's advanced process control options offer great transparency and control through better optimization. Savings can be seen in the energy and raw materials

required to deliver your product. Long-term solutions mean that process and production performance is continuously monitored to ensure gains are maintained over time.

Valmet's optimization solutions and innovative measurements come together for greater opportunities in enhancing operations – a flexible addition to your production.



Valmet's professionals around the world work close to our customers and are committed to moving our customers' performance forward – every day.



For more information, contact your local Valmet office. www.valmet.com
Specifications in this document are subject to change without notice.
Product names in this publication are all trademarks of Valmet Corporation.

