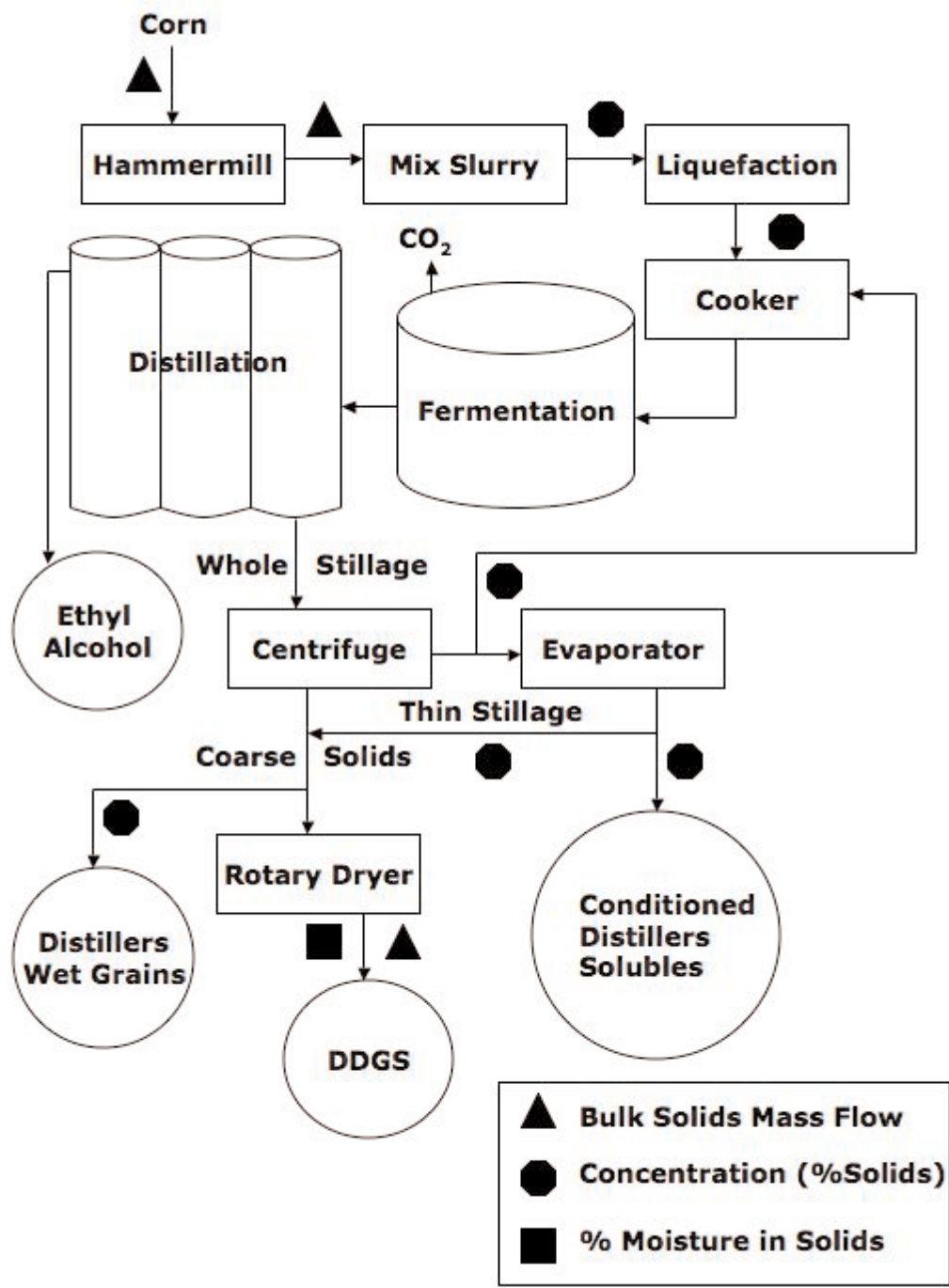


Measurement Solutions for Ethanol Production

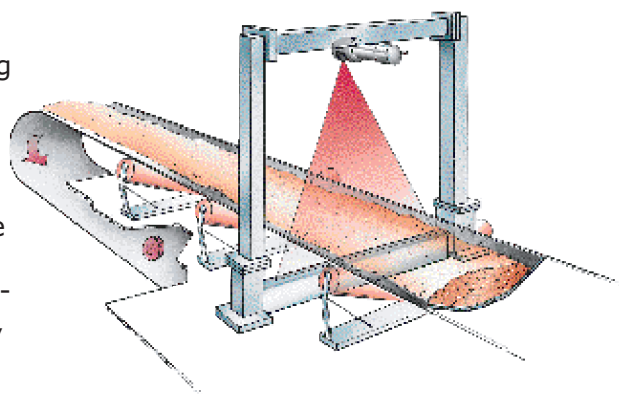


Measurement Solutions for Ethanol Production

Berthold Technologies' mass flow and density products are a reliable solution to application challenges in the ethanol production industry. Our non-contacting measurement principles provide maintenance-free system arrangements which are easily fitted to existing processes with no, or only minor, mechanical modifications required. The reliability and quality of Berthold instruments ensure exacting performance, exceptional repeatability and stability under all process conditions, complemented by a distinctive long life.

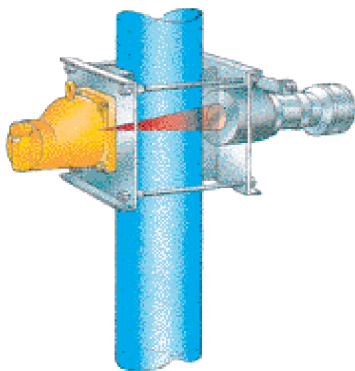
Bulk Solids Mass Flow Measurement

The uncomplicated retrofitting of mass flow measurement systems for bulk solids is achieved by installing a measuring frame around existing mechanical conveying systems. The non-contact measurement principle and the lack of moving parts in this system prevent wear on the system components. The space requirement for installation is minimal while no "straight runs" of the conveying system have to be considered. "Free fall" applications at suitable breaks in the conveying system are possible. Uses at an ethanol plant include: controlling feed to the hammermill and slurry tanks, establishing preferred corn blends, and measuring the production of DDGS (Distillers Dried Grains with Solubles).



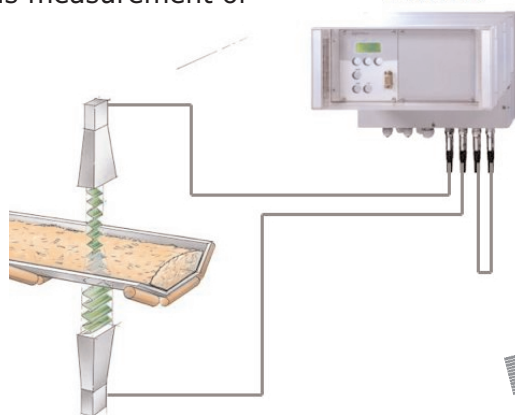
Percent Solids Measurement

Berthold Technologies can do non-contact and non-intrusive density measurements in pipes ranging in size from 1 inch to over 36 inches. Using either radiometric or microwave measurement technology (depending upon the application), Berthold Technologies can ensure excellent performance on a variety of concentration and percent solids measurements. Exceptional long term stability is assured by electronic compensation for drift and temperature influences. Particular applications include measuring slurries for liquefaction and percent solids measurement of stillage.



Bulk Solids Moisture Measurement

Microwave moisture systems are designed for the non-contact, online measurement of moisture in bulk solids on a conveyor belt, or in a chute, bunker, or container. With this technique, the entire material cross-section in the range of transmission is covered, ensuring representative online measurements for quality assurance and process optimization. Uses include moisture measurement of DDGS.



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