



CentriFlow®

Product Application Bulletin

SHELLED CORN
PRODUCT: CORN

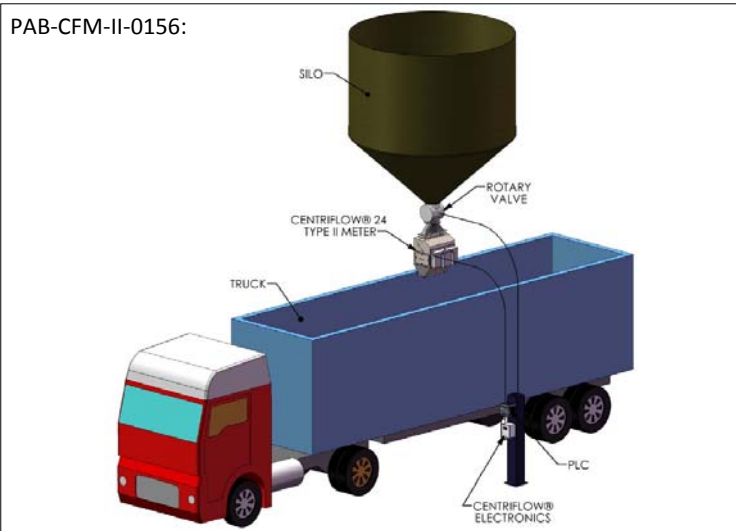


CentriFlow®

Problem: The customer needed to accurately measure the mass flow rate and total weight of shelled corn being unloaded from silos into trucks. Due to existing space constraints in height, the mass flow meter needed to be compact. The meter also needed to be reliable, durable, and wear resistant to the abrasive nature of the corn.

The average density of the corn was 45 lb/ft³ (769 kg/m³) with a maximum flow rate of 100,000 lb/hr and a minimum flow rate of 30,000 lb/hr. This meant that the flow meter needed to be capable of handling and accurately measuring 11-37 ft³/min

PAB-CFM-II-0156:



of product. The flow meter of product from the silo, and needed to have a local display the total weight being loaded into the truck.

Solution: The customer installed a CentriFlow® Meter. The unit selected for installation between the valve and the Load-out truck was a 24" Type II CentriFlow® Meter. The meter's signal was linked to a valve feeding the meter, thus allowing



electronic control of the product's flow. Our CentriView™ or "intelligent" electronics were installed, which allowed the meter to shut off the valve feeding it, based on the flow rate through the meter, before the specified weight had passed over the meter, thus meeting the setpoint. As truck fills continued throughout the day, the meter's electronics "learned" the valve shut off time, to more accurately determine when to shut off the valve to obtain even more accurate fill totals. The

meter's electronics were supplied with a touch screen HMI that allowed the operator to select the amount to be loaded out for each fill, recorded the fill totals, and gave them a graphical representation of the filling operation.



Results: Due to the CentriFlow® Meter's ease of calibration, it was calibrated and commissioned within hours after installation and the customer was immediately pleased with its performance. The units performed reliably and well within the stated accuracy, and the customer has not seen any noticeable wear of the CentriFlow's® wear surfaces. The use of the CentriFlow® Meter has allowed trucks to be filled to their maximum level before approaching the truck scales, thus eliminating any wasted storage space or costly refills.