



PROCESS

As a pioneer in the agriculture industry with a global reputation for custom thermal processing equipment, United Wisconsin Grain Producers sought out FEECO to engineer a custom [rotary cooler](#) for processing their dried distiller's grains (DDGS).

DDGS is a by-product of ethanol production that holds nutritional value and can be used in livestock feed. Upon drying, it is desirable to cool DDGS in order to avoid product caking during storage or transport, as well as to reduce potential for mold or mildew.

FEECO engineered a custom rotary cooler for the task of cooling the DDGS. The cooler featured a counter-current air flow configuration to maximize heat transfer and provide optimal cooling efficiency. Flights, or lifters, affixed to the interior of the drum, lift material and drop it through the chilled air stream to maximize contact between the material and chilled air.

While the counter-current air flow provides many benefits, including improved product quality, lower discharge temperature, lower operating costs, reduced cooling air requirement, and decreased issues associated with storage, the main benefit is that it reduces dryer energy requirements. Through evaporative cooling, the rotary cooler can further reduce the moisture content of the material, essentially providing **"free" drying energy**—nominal 2% moisture removal is common.

The cooler provided UWGP with a reliable, low-maintenance cooling solution that produced a high-quality, stable DDGS, while reducing overall energy requirements.

PROJECT SPECS

Customer:

United Wisconsin Grain Producers

Equipment Supplied:

9' (2.7m) Dia. x 50' (15.2m) Long Rotary Cooler

Project Location:

Wisconsin, USA

Industry:

Agriculture

Material:

Dried Distiller's Grains (DDGS)

Project Engineer:

FEECO International, Inc.