

# Rayeman Compression Dryer

The **Rayeman Compression Dryers'** ground-breaking, patented technology safely and efficiently converts wet grain to premium dry grain in a process that yields the benefits of the reduction of emissions and explosions, a smaller footprint, and significantly lower capital outlay and operating costs than conventional dryer systems.

The **Rayeman Compression Dryers'** secret lies in the unique sets of counter-rotating, intermeshing, electrically heated screws, housed in a barrel, operating at low temperatures (+220F). As wet distillers grain is distributed in a thin layer over the high surface area of the screws within the restricted space of the barrel:

- grain is mechanically compressed and sheared, producing mechanical energy
- simultaneously, the water is squeezed out of the grain
- economically evaporates the water out of the grain
- results in lower operating costs than any other drying method

This process provides the optimization of heat transfer while continuously moving wet grain through the system at a constant rate.

As the corn oil and/or syrup in the grain does not burn at +220F, a lighter colored, nutrient preserved grain is produced.

The overall result is uniform, higher quality dry grain which:

- is dried to a customizable percentage of moisture
- preserves the highest fat and/or protein levels in the industry
- commands a premium selling price

## Four Section Rayeman Compression Dryer



The **Rayeman Compression Dryer** is unmatched in its flexibility of desired moisture levels removed, and consistent quality of grain dried.

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**Additional benefits** of the low operating temperature of the **Rayeman Compression Dryer**:

- produces a lighter colored grain
- emits minimal harmful VOCs
- explosion/fire proof
- operates at a much lower operating cost compared to conventional dryers
- adds capacity inexpensively to existing dryer system at front end and/or back end
- has a significantly lower capital cost to purchase and install

## System Performance

This system is effective in taking wet grain of up to 95% moisture and drying it to as low as 5% moisture, depending on your desired output capacity. The dry grain produced has no irregularities and completely maintains its original nutritional properties.

## Configurations

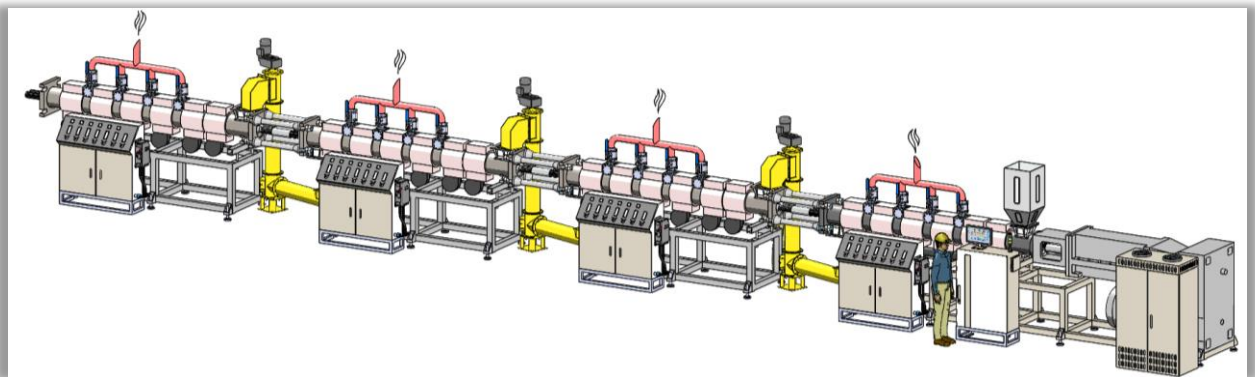
The **Rayeman Compression Dryer** is designed to be flexible, dependent on desired output and temperature. The barrel and screw arrangements can be hooked up in series, or in a parallel configuration, with grain being distributed to subsequent sections via conveyors.

Calculations based on:

- Input - Wet Distillers Grain at 65% moisture content, on average
- Output - Dry Distillers Grain at 12% moisture content, on average
  - Operating cost to dry Wet Distillers Grain at material temps of +220F is \$12.00/ton @ \$0.07/KWH = 171 KW/ton

Dry Output Capacity/day	Screw Size (mm)
100 - 300 tons	160mm
301 - 600 tons	235mm
601 - 900 tons	320mm
901 - 1500 tons	360mm

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At Rayeman Elements, we strive to be the leaders of the industry not only for our technology and innovations but for our dedication and commitment to you.

Please contact us for more information, and to discuss your project requirements.