

# Quality Control Solutions for the Feed Industry



# Process monitoring and quality control for the feed industry

Feed millers from around the world use Perten Instruments' analytical equipment to improve efficiency and profitability. The DA 7200 At-line and DA 7300 On-line Near-Infrared (NIR) Analysis Systems are at the heart of it all. They are highly accurate and versatile, and provide great savings through better raw material usage and process optimization. In most cases the cost savings mean that the investment is paid back in only a few months.

## Complete solutions

When you buy an analysis system from us, we deliver a complete solution including instrument, installation and training, calibrations, software and after sales services. A Perten Instruments representative will install and train your staff locally. We offer calibration packages that range from basic needs to cutting edge applications. Our software solutions make sure the analysis results get to where you need them – your process control system, a LIMS system or supplied to a nutritionist. You can use the results to calculate updated formulations, monitor suppliers and optimize production.

## Feed milling – On-line and At-line process analysis

Our diode array based NIR instruments offer a wide range of analytical measurements – from incoming goods to finished feeds and forages.

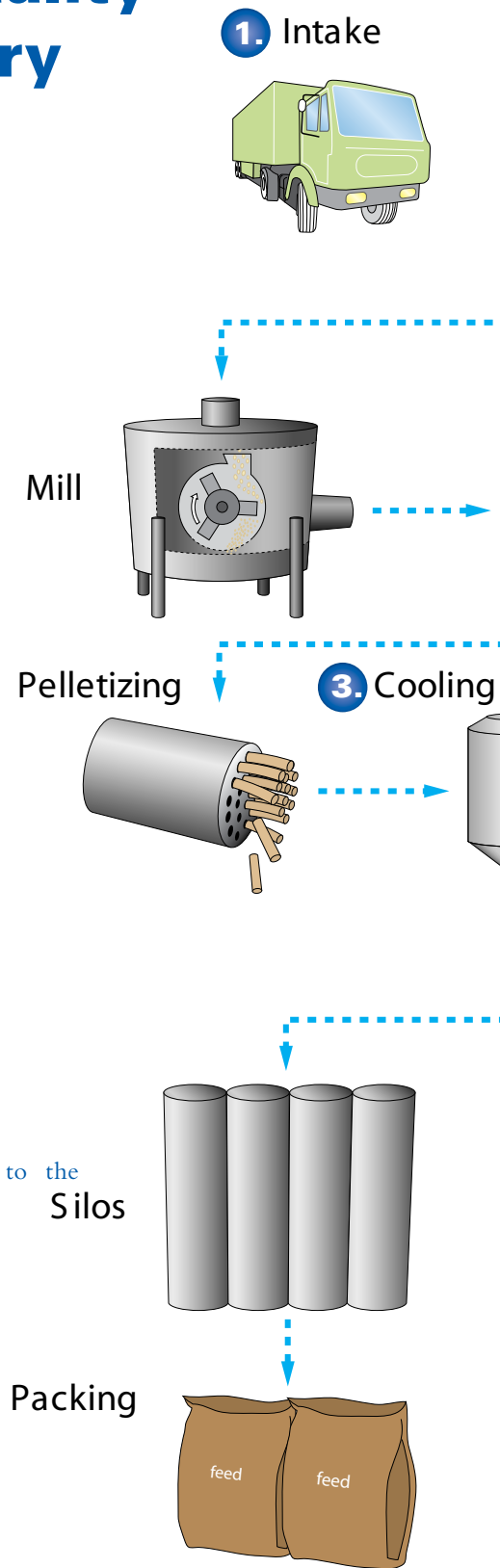
- The DA 7200 At-line instrument is extremely versatile and suitable for analysis of everything from incoming ingredients to process samples and finished products. Grains, pellets, powders, slurries and liquids can be analyzed in the same instrument. Typically no sample preparation is necessary, and an analysis takes only 6 seconds.
- DA 7300 On-line offers continuous measurement of moisture, protein, fat and more. It is installed in the process line and can feed data to the process control system for continuous optimization of production.

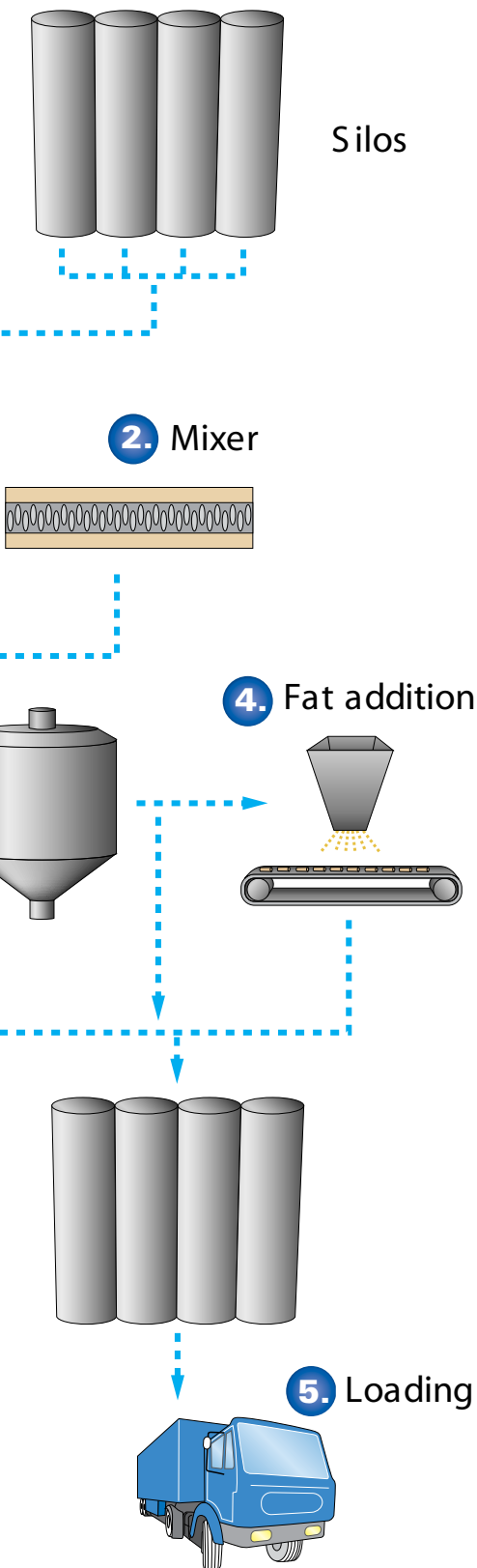
The two systems are based on the same platform and calibrations are fully transferable between them.

## Savings at intake

1. Agricultural products are highly variable and heterogeneous. The 6-second analysis speed of the DA 7200 allows the user to analyze every shipment of incoming material. Monitor suppliers for out-of-spec claims and avoid placing poor quality material into your bins.

As there is considerable variation in energy and protein of different shipments, the DA 7200 is used to identify high quality material for segregation and optimal use.





### Improved formulation

- Optimal formulation requires actual and accurate compositional information of ingredients as opposed to book values or COAs. The DA 7200 not only analyzes ingredients for composition, but can be fully integrated with your Least Cost Formulation software through our SimPLUS software option. Analytical results are sent to the formulation software, making certain that formulations are based on current data and that no transcription errors are made. When a feed product has been reformulated, all updated product limits, targets and action items are sent to the DA 7200, guaranteeing that changes are implemented in production. For companies with multiple sites, formulation changes made centrally can be distributed automatically to the instruments at the respective site.

### Higher production capacity and better quality

You can achieve great savings and quality improvements with the DA 7300 On-line, the DA 7200 At-line or a combination of the two. The following benefits are available whether on-line or at-line analysis suits your situation better.

- 2.** Make last-minute adjustments and avoid re-work by verifying what you have in the mixer.
- 3.** Immediate moisture analysis after the dryer allows you to better match specification avoiding over dried product (i.e. loss of revenue and greater energy use) and under dried product which can enable toxin or mould growth.
- 4.** Optimize the fat coating of pellets. Measure fat content and immediately adjust the coating to be right on specifications.

### On spec deliveries

- 5.** Reduce customer claims and returns to virtually nil. The DA 7200 can analyze of unground feed samples in only 6 seconds, allowing you to verify the correct product is loaded and specifications met before the product leaves your facility.

### Forage testing

The DA 7200 determines a wide range of parameters in all types of forages. The large sample surface analyzed reduces or eliminates drying and grinding requirements. This greatly improves lab throughput and efficiency. Additionally, the large analysis area and multiple number of analyses provides significantly more representative results for these very heterogeneous products.

## Integrated operations

### Animal husbandry

Ensuring animal wellbeing and health is a key to profitability. The DA 7200 measures feed nutritional content for all stages of animal development. Manure can be analyzed to detect non-optimal performance and effects of disease.

### Meat processing

Meat, meat products, and by-products such as organ meats can all be analyzed with minimal sample preparation and clean-up. Determine parameters such as moisture, protein, fat, collagen and ash with high accuracy.

### Rendering

Many analytical needs of a rendering facility can be met by the DA 7200. Typically no grinding or other sample preparation is necessary, and process operators can confidently perform analyses. Rapid analysis of moisture, protein, fat and ash in meat meals improves your ability to optimize the process. Accurate analysis of FFA and iodine value in greases and oils provides rapid and efficient quality control.

## Recommended products

- DA 7200** Grain & grain products – moisture, protein, fat, fiber, energy etc.  
 Oilseed meals – moisture, protein, fat, fiber, energy etc.  
 Feeds – moisture, protein, fat, fiber, ash, energy etc.  
 Forages & mixed rations – moisture, protein, ADF, NDF etc.  
 Meat meal, blood meal, feather meal – moisture, protein, fat, ash etc.  
 Rendered oils & greases – moisture, free fatty acids, iodine value etc.
- DA 7300** On-line analysis of ingredients, feed mix and feed pellets  
 - moisture, protein, fat, fiber, energy, ash, sugar etc.
- IM 9500** Grain – moisture, protein, test weight, fat, fiber etc.
- AM 5200** Grain – moisture, test weight
- Lab mills** Grain & feed – Prepare samples for air oven moisture analysis, Kjeldahl, dumas combustion, Soxhlet etc.
- RVA** Ingredients – starch and protein characteristics  
 Feeds – degree of cook

