

RESEARCH AND TESTING FACILITY



PROVEN DESIGN AND COMPETITIVE SOLUTIONS

DEDERT PILOT DRYERS AND EVAPORATORS

PILOT PLANT FACILITY

- 10,000 sq ft
- Laboratory
- Evaporator
- Ring Dryer
- Spray Dryer

Dedert's fully-equipped, 10,000 square foot onsite research facility allows customers' products to be tested on a pilot scale to establish the correct parameters and material characteristics needed for optimal design and scale-up, and to produce samples for market research.

As well as testing, Dedert also offers modular pilot drying and evaporating systems for purchase to customers looking for a small scale production plant.



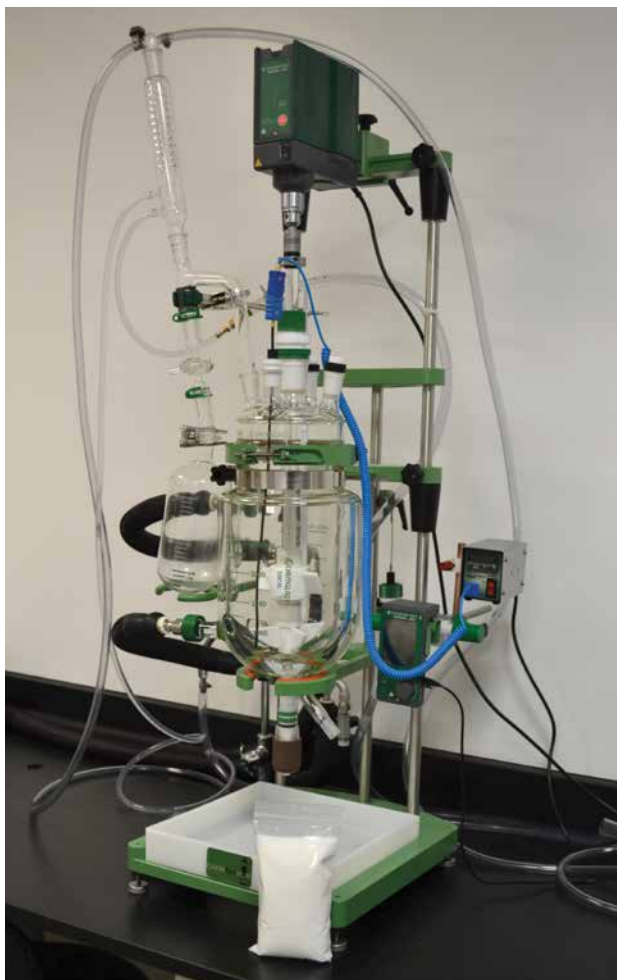
Pilot Spray Dryer



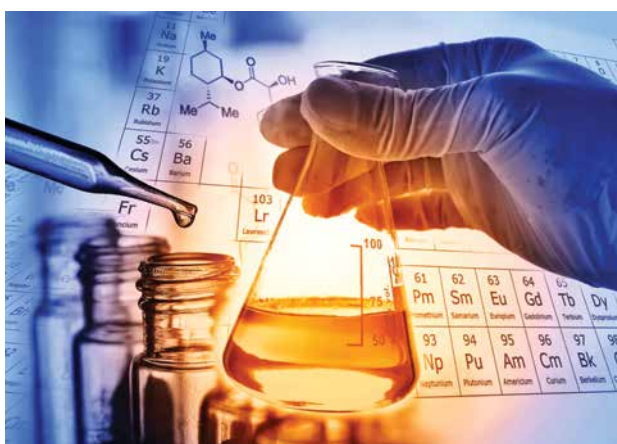
Pilot Ring Dryer



Pilot Evaporator



Batch Reactor for Crystallization



The laboratory allows detailed analysis of product quality.

Observations are made concerning liquor properties including BPE, Viscosity (at various shear rates), Density, DS/TS ratio (centrifugation/filtration), PSD (crystallization), and pH at various concentration levels and conditions. Dryer analytical work includes IR moisture measurement, sieve analysis, bulk density and fluidization velocity. A report reflecting these findings is then generated.

Dedert's experienced professional engineers assist customers in developing dryer and evaporator processes, taking them from concept to pilot scale to production.

Contact us today to test innovative process solutions designed to increase your competitive advantage.



Sample Testing

PILOT EVAPORATOR

The pilot evaporator is instrumented for acquisition of key operating parameters and has a nominal evaporation capacity of 150 lb/hr. It is designed as a single-effect unit capable of operating as a falling film, recirculated falling film, or forced circulation system. Specific capacity varies depending on the product.

- 150 lb/hr Evaporation
- Single-effect
- Falling Film
- Recirculated Falling Film
- Forced Circulation

Additional evaporation trials and physical property measurement can be performed in the laboratory.



Vapor Separator



Falling Film Configuration

PILOT RING DRYER



Dedert's multi-purpose pilot flash and ring dryer is capable of up to 150 lb/hr water evaporation and is equipped with a mixing system, high efficiency cyclone and dust collector.

- 150 lb/hr Evaporation
- Exhaust Gas Recycle
- Mixing System
- PLC Controls
- Cyclone/Dust Collector



5 x 5 Ring Dryer



Disintegrator



Paddle Mixer

PILOT SPRAY DRYER

Dedert's 3 meter diameter multi-stage pilot spray dryer is a fully modular design with the flexibility to operate as a single-stage, two-stage or three-stage dryer. It has both internal and external fluid bed units for drying, cooling and conditioning. The state-of-the-art dryer evaporation capacity is up to 440 lb/hr, depending on operating temperature.

Powder agglomeration is possible with a fines return system. The dryer features both rotary and nozzle atomization, a high efficiency cyclone and dust collection. Heating systems are either indirect or direct fired with gas. Post drying, cooling screening and classification are also available.



PLC Automation



Drying Chamber Discharge

PILOT SPRAY DRYER



Dedert's pilot spray dryers are capable of drying a broad range of products within the Starch/Food and Chemical industries.

As well as testing, Dedert offers this modular system for purchase to customers looking for a small scale production plant.

Let Dedert's team of spray dryer experts help to take your product from idea through testing to production.



3 Meter Drying Chamber



Air Handling Room



Multi-Stage Spray Dryer External Fluid Bed



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