

## Rotating Drum Dryer

Efficient drying of radioactive liquid waste of various viscosities and consistencies

**Fast, efficient and reliable drying technique to produce a homogeneous dried product for safe long-term storage.**

### Challenge

Conventional drying methods for liquid waste used in the nuclear industry are energy-intensive, time-consuming. They often fail to achieve the required degree of drying or produce end products with excessive residual moisture. This may result in the batch being refused for storage.

### Solution

Framatome's Rotating Drum Dryers are the solution of choice for an efficient drying process, when a homogenous dried product with a low residual moisture is required. Solutions, suspensions and pastes of different consistencies and viscosities can be processed. The liquid waste, whether it has low or high solid content, is dried homogeneously. This uniformity is achieved thanks to the high surface-to-volume ratio.

The process involves three main steps:

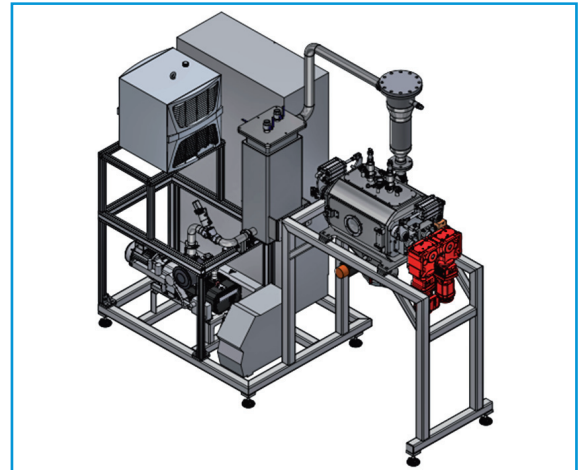
- The liquid is poured on the heated surface of the rotating drums
- A scraper blade scrapes off dried material
- The dried product can be collected in a drum or put on a transportation system (to the next treatment process)

Further reduction of the drying time is possible using higher vacuum.

### Customer benefits

- Homogenous dried product
- Fast drying process
- Significant energy savings
- Resistant to solid contents (e.g., large particles, fluffs and more)
- Easy sampling
- Fully-automated process
- Low maintenance of the system
- Mobile systems and permanent installations possible

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Rotating Drum Dryer: Mobile design example

### Technical Information

Rotating Drum Dryers can be designed as a permanent or mobile solution according to the operator's needs.

Main technical data for the mobile design:

- Working pressure: 10 – 100 mbar
- Design temperature rotating drum: 5 – 180 °C
- Heating area: 0.6 m<sup>2</sup>
- Flow-rate: approx. 10 L/h

According to the operator's needs, a broad range of technical specifications can be designed.

### Key Figures

**< 3 % residual moisture**

10 times less than with In Drum Drying

**Mobile system with 10 L/h flow rate** available as drying service

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