

Re-circulating Batch Dryer

What is a re-circulating batch dryer?

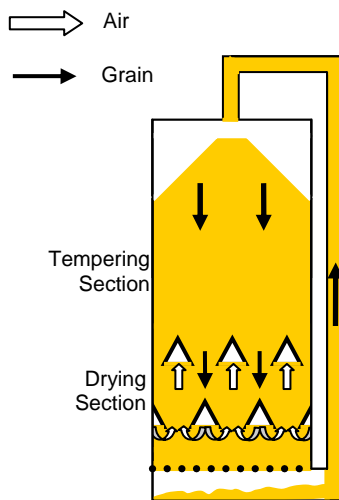
A dryer is a mechanical device or machine that removes the water from wet grains by forcing either ambient air or heated air through the grain bulk. In a re-circulating dryer the same quantity of grain is re-cycled through the dryer until final moisture content is reached.

What are the advantages of a re-circulating batch dryer?

Re-circulating batch dryers have a number of advantages over the cheaper fixed-bed batch dryers:

- Very small floor space requirements;
- Continuous mixing of the grains results in very low moisture content variation;
- During the circulation the grain is tempered, which improves drying efficiency and grain quality;
- Automatic controls with automatic shutoff make the dryer virtually fully automatic.

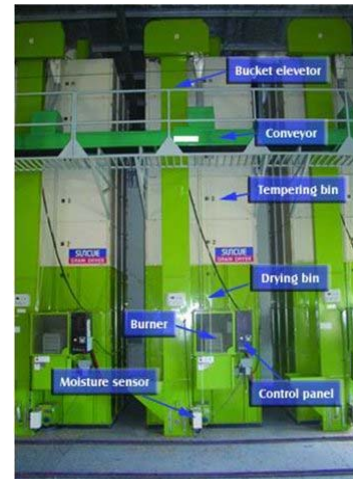
Principle of a re-circulating batch dryer



The grain is constantly moving through the drying bin from the top to the bottom passing first the tempering section and then the drying section.

Retention time for one pass is around 60 min. Drying rate around 1-2% per hour. Drying air temperature is up to 55°C.

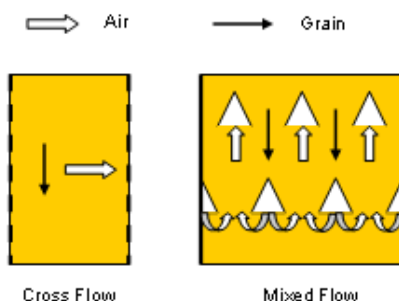
Components of re-circulating batch dryers



A re-circulating batch dryer consists of:

- Drying and tempering bin for holding the grains;
- Bucket elevators and conveyors for circulating, loading and unloading grains;
- Burner for heating the drying air; and
- Electronic controller and an on-line moisture meter for controlling the drying operation.

Types of re-circulating batch dryers



Depending in the air-flow relative of to the grain flow there are two different types of re-circulating dryers:

- Cross flow: Simpler construction, better with wet grain.
- Mixed flow: Better grain quality from better mixing.

For more information contact

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