

## Why Two-Zone your Single-Zone Dryer?

Whether you view it as a safety issue or an economic opportunity, Two-Zone Dryers just make good sense. Here's a short list of the benefits offered by Two-Zoning your Longitudinal Dryer:

- Production increases averaging from 25% to 45% (and more)
- Greater efficiencies - lower energy costs
- Improved level of plant safety-reduced risk of fire
- Reduced fugitive in-plant emissions
- Rebuild to as-new condition for a fraction the cost of new
- Immediate reduction in associated maintenance costs

### Conversion: It's a straight forward process

Westmill's proven process of converting your Single-Zone Dryer to a Two-Zone system is a straight-forward and quick operation.



Single-Zone - Before



Westmill Two-Zone Rebuild

To minimize downtime and reduce costly installation labor during the rebuild process, Westmill provides pre-assembled, modular Dryer components ready for a 'quick-install'.

When you combine the field labor savings and the ease of installation with the minimal down-time, our Two-Zone conversion has a very quick payback.

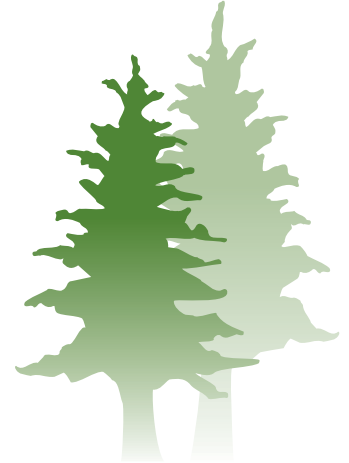
### Two-Zone design advantages

In a Single-Zone Dryer, two large fans circulate air along an upper duct, into the Dryer and through many sections of Dryer rolls, framework, and veneer, and finally back into the return fan manifold for re-circulation in the Dryer.

The design of a Two-Zone Dryer allows for control of static pressure at each end of the Dryer and the capability of maintaining high temperatures over the entire Dryer's length. Increased temperatures and the control over emissions from the Dryer is due to the two separate heating zones and the two

completely separate and opposing air circulation systems.

In a Two-Zone system, there are four fans - two at each end of the Dryer. The air circulates from each end towards the middle, where a partition wall directs the air down into the manifold doors and into the Dryer itself. An additional heat source is also incorporated into the Dryer's upper duct to provide uniform heat to the new zone of the Dryer.

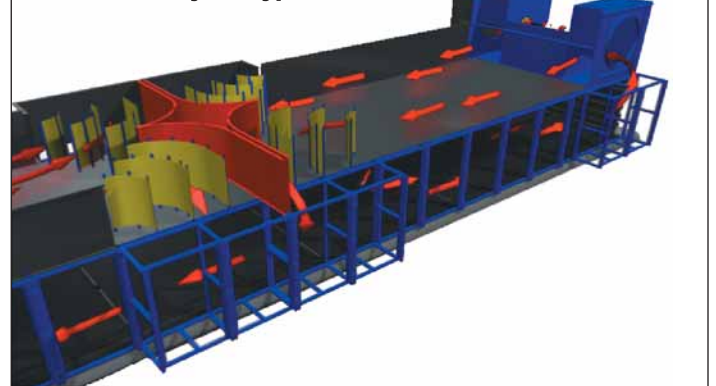


### Benefits you can expect

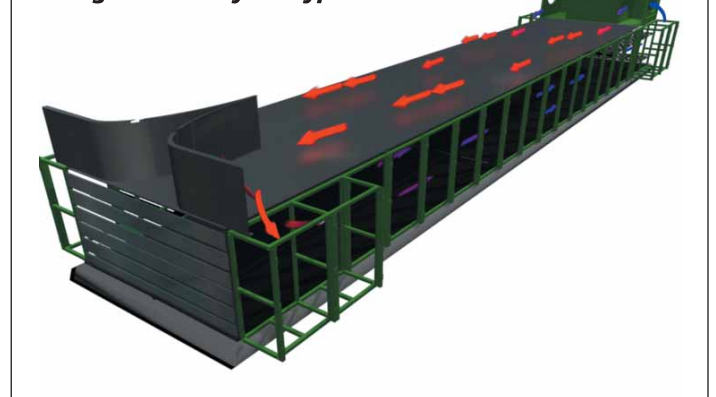
#### Increased production

Mills that have installed Westmill's Two-Zone conversion typically see a production increase of at least 25%. The actual increase obtained is largely dependent on your Dryer's present

Two-Zone Dryer - Typical



Single-Zone Dryer - Typical



condition, however increases can be estimated according to your existing production and energy consumption.

**Greater control of heat loss = energy savings**

A Two-Zone Dryer's configuration with opposing airflow design offers control of 'air-ingestion' at both ends of a Dryer. This is a great advantage over a Single-Zone configuration. Here's why:

In a standard Single-Zone Dryer it is almost impossible to control or stop air from escaping into the dead-air space/cooler sections of the Dryer's positive end. To offset this, 'make-up' air is pulled through the 'negative' (fan-end) baffles or through any poorly sealed panels and doors. This ingested cool air causes a considerable amount of wasted heat energy and severe pitch build-up inside the Dryer.

**Increased overall dryer temperatures**

In a Single-Zone Dryer, the high temperature air enters at one end of the Dryer, and cools as it passes through the length of the Dryer. A typical Single-Zone Dryer sees a drop of 10° F per door section which equals a 150° to 200° F drop in temperature from the delivery manifold to the return manifold (depending on a Dryer's length).

Two-Zoning provides two separate control zones which provide increased and uniform heating from one end of the dryer to the other.

**Lowering the risk of fire**

In order to sustain a fire, three elements must be present: a heat source, a fuel source, and oxygen. The operation of a Veneer Dryer requires high heat and veneer (fuel), but without unwanted oxygen or 'make- up air'.

Two-Zoning allows control over air ingestion/escape at both ends of the Dryer. By simply adjusting the exhaust stack damper to the desired position, we can control the positive, negative or neutral airflow from the Dryer's ends. Remove unwanted air-intake and you can virtually eliminate fires.

**Improved design offers less resistance**

As the volume of air moves through a Dryer, every drying section adds a degree of resistance to the air stream. In a Single-Zone Dryer, the air must flow through twice the sections of resistance than in a Two-Zone Dryer.

A Two-Zone Dryer offers far less restricted airflow because there are fewer drying sections through which the air must travel before being re-circulated. Better airflow results in improved quality and faster drying.



*Doors and Side Panels - Before*



*Westmill Doors and Side Panels - After*

**Reduce in-plant fugitive emissions**

Westmill's Two-Zone Dryer provides the ability to control of the static pressure at the Dryer's ends. With the completely seal-welded dryer housing, in-plant fugitive emissions are prevented from escaping the Dryer altogether.

**Maintenance-free flooring**

Westmill's Two-Zone conversion includes flat, upper-duct flooring. As a result your Dryer's hot-box will remain virtually free from the debris build-up normally associated with standard corrugated or ribbed upper duct flooring. Airflow is also increased with our smooth flooring system.

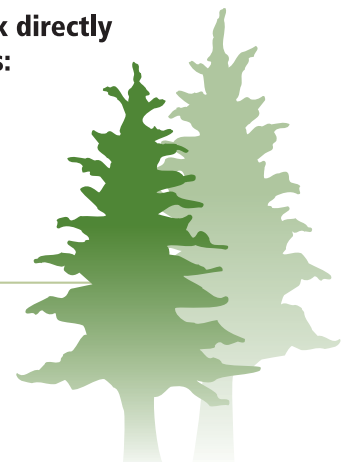
**Two-Zone: for all the right reasons**

In today's competitive market, companies need to work smarter to survive and prosper. Two-Zone Dryers offer increased production, lower heating costs, improved drying flexibility and provide greater plant safety. It's a hard combination to beat.

For over 30 years, we've been helping companies find innovative and cost-effective ways to improve their business and build profits. Let Westmill put you out in front.

**For more information or to speak directly to one of our company principals:**

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