



Airless Dryer

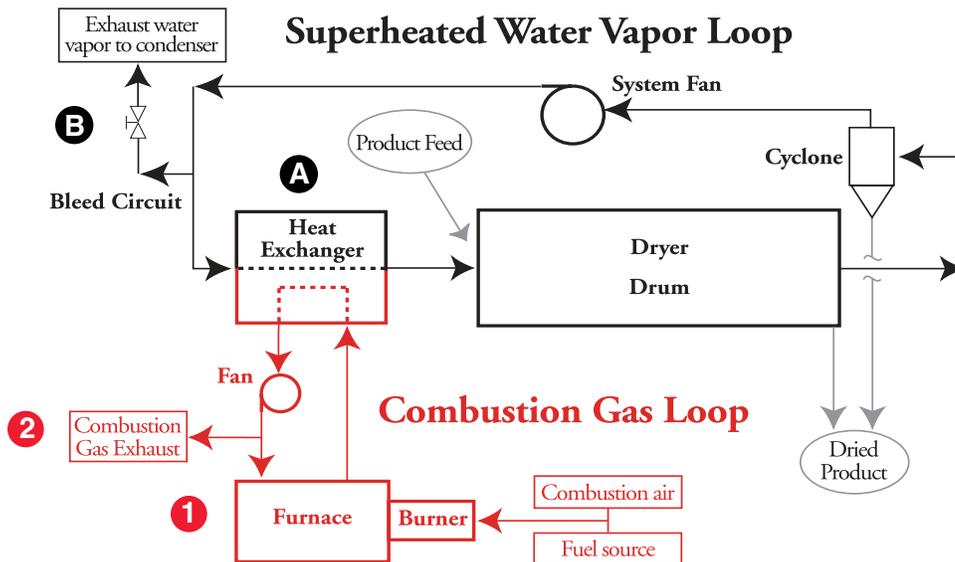
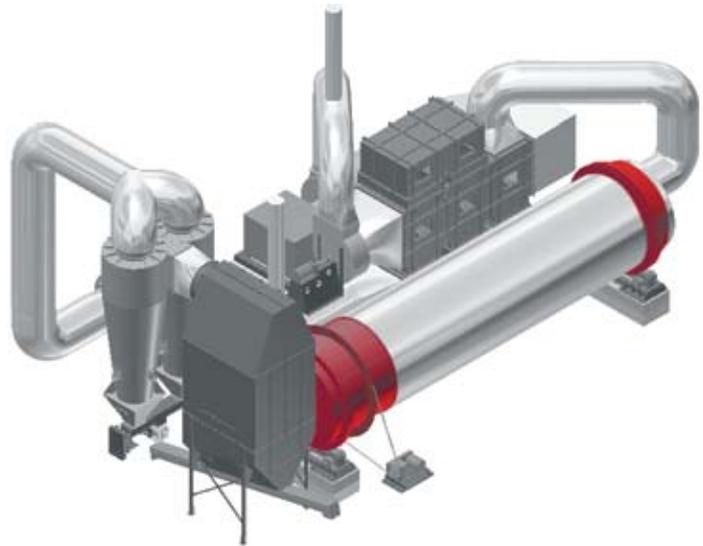
**Unique rotary drum dryer
features superheated water
vapor at atmospheric pressure
as the drying medium.**



- The innovative Dupps Airless Dryer is an indirect heated dryer—the products of combustion are isolated from the process loop of the dryer.
- There is minimal risk of in-drum fires because of the oxygen-starved environment.
- There is no visible plume of dryer exhaust. The dryer's exhaust is essentially water vapor, which can be condensed to recover thermal energy and used elsewhere in the plant.
- No pressure vessel is required because the dryer operates at atmospheric pressure.
- Minimal odor control equipment is needed. Exhaust volume is much less than comparable heated air dryers. So if an RTO is used, it will be considerably smaller and less expensive.

Airless Dryer

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System fan creates a circulating loop of water vapor. Heat is picked up from the heat exchanger (A) to drive the evaporation of moisture from wet feed in the dryer drum. The water evaporated from the feed displaces air in the water vapor loop, creating the “airless” environment. To maintain atmospheric pressure in the dryer, a bleed circuit (B) is needed to exhaust water vapor. This water vapor can be treated with a conventional condensing system for energy recovery.

Flue gases from a conventional combustion furnace (1) supply heat to the exchanger. These flue gases are circulated several times through the heat exchanger for maximum efficiency before being exhausted into the atmosphere (2).

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