

What dryer features can I select to speed and simplify routine cleaning?

Selecting the best dryer features to aid routine cleaning will depend on the material you're drying. Typical dryer features you'll want are access doors and clean-out ports as well as the ability to empty the dryer before shutdown. Other features to consider are specific washdown nozzles, vacuum systems, air lances, sonic horns, and vibration equipment. Most dryer manufacturers will custom-design equipment to meet your application's specific requirements.

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Before selecting a dryer, first determine what cleaning and sanitation requirements must be met for your application. Certain federal, state, or local regulatory agencies, including the USDA and FDA, dictate minimal requirements for proper sanitary construction and design. Sanitary fabrication and design standards have also been developed by organizations like 3-A Sanitary Standards, Underwriters Laboratories (UL), and the National Sanitation Foundation (NSF).

Equipment cleanability starts with proper design. Select a dryer that's manufactured specifically to avoid internal ledges, sharp corners, or cracks where material can collect. Proper welding can also eliminate pits and crevices. Internal welds should be ground and can also be polished smooth. Natural weld ripple may be allowable in some applications as long as it can be easily cleaned by an incidental spray of water or clean-in-place (CIP) solution. If possible, gaskets should be minimized in material contact areas because they must typically be removed for effective cleaning. For processes requiring frequent cleaning, integrated CIP systems with spray balls that cover the dryer's entire internal surface area are ex-

tremely beneficial. Use hinged access doors for easy access to the internal components. Or, if hinged doors aren't practical, install access ports to flush to the internal surface.

Other considerations for sanitary design involve using the proper construction materials for material contact and surface finishes. Type 304 stainless steel is the most common material for a dryer's wet processing areas. Standard mill surface finishes include a 2B mill finish for standard sanitary applications, a #4 sanitary finish for dairy uses, and a #8 mirror finish for pharmaceuticals. Exterior finishes are typically glass-bead blasted. The dryer's exterior design should ensure that any drive components, sensors, switches, probes, or other instrumentation are suitable for the area classification and for your cleaning process.

A careful review of your application and process needs with your dryer manufacturer prior to purchase will ensure proper machine design and ideal cleaning features. This will save you money both at the outset and over time by reducing required cleaning downtime.

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