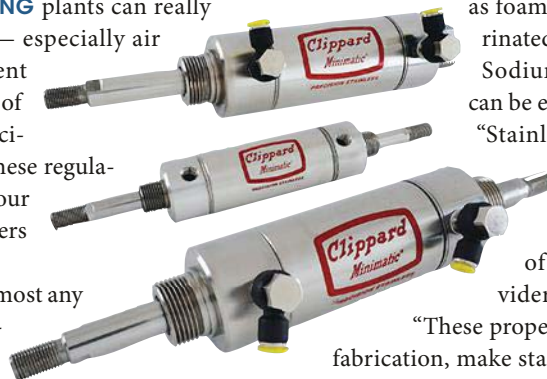


# All-stainless air cylinders stand up to washdown

**APPLICATIONS IN FOOD-PROCESSING** plants can really be tough on machine components — especially air cylinders. That’s because government agencies require frequent washdown of equipment that comes in direct or incidental contact with food products. These regulations are enacted not only to protect our food supply, but also to protect workers at the food-processing plants.

Because bacteria can be found in almost any food-handling scenario, OSHA standard 1910.141(h) specifies that, “In all places of employment where all or part of the food service is provided, the food dispensed shall be wholesome, free from spoilage, and shall be processed, prepared, handled and stored in such a manner as to be protected against contamination.” To comply with this and other OSHA and FDA standards, the food industry—from production to processing—relies on chemical washdown processes to eliminate bacteria.

Chemicals used in washdown processes typically are corrosive or caustic, characteristics that damage metals, such



as foaming acid and self-foaming chlorinated caustic cleaners and sanitizers. Sodium hydroxide is another, which can be extremely caustic.

“Stainless steels have a proven record of being inert and are easily cleaned and sanitized,” explained James D. Fritz, PhD, of TMR Stainless, a service provider to the stainless steel industry.

“These properties, combined with the ease of fabrication, make stainless steels well suited for food processing applications. Typically, other materials—such as aluminum, copper alloys, and coated carbon steels—do not have the same resistance for food processing and cleaning environments.”

## A STAINLESS SOLUTION

In response to these challenges, Clippard Instrument Laboratory, Cincinnati, recently introduced a line of stainless-steel cylinders intended for use in a broad range of applications, including those in washdown and other caustic environments. The cylinders are constructed of SAE 303 and 304 stainless steel and are available in bores from ¾ to 2 in., with standard strokes from 1 to 32 in. on some models. Other features include:

- Maximum pressure rating of 250 psig;
- Nitrile U-cup piston and rod seals;
- Nitrile U-cup rod seals for leak-proof operation;
- SAE 303 stainless-steel endcaps;
- Dimensionally interchangeable with other common brands of round-body cylinders;
- FDA-compliant grease lubrication and wipers;
- Temperature range from -20 to 230° F (-29 to 110° C)
- Cylinders have SAE 304 stainless-steel tubes with polished-bore low breakaway friction; and
- Full piston area breakaway to ensure full power from the beginning of each stroke. ■



Applications subjected to frequent washdown, such as this poultry processing operation, require components that can withstand caustic and corrosive chemicals, which is why Clippard recently introduced a line of all-stainless-steel cylinders.

FOR DETAILS ON Clippard’s new stainless-steel cylinder, visit [www.clippard.com/link/hp1567556](http://www.clippard.com/link/hp1567556), or call (513) 521-4261.