

PUMPING FOODS

FOOD REGULATIONS

The US Code of Federal Regulations, CFR 21 Part 110, states that each food processor must comply with Good Manufacturing Practice for Human Food. This means developing a Hazard Analysis and Critical Control Point (HACCP) plan to ensure food safety from biological, chemical and physical hazards. It does not mean that sanitary pumps are required to process sugar. A plant can use cast iron Viking pumps on sugar liquids as long as its HACCP plan states that the product isn't subject to contamination hazards. Since sugar liquids typically do not grow bacteria, most processors use cast iron pumps, as they have for more than 100 years.

The Food Safety and Modernization Act of 2011 states that animal food processors and their suppliers (molasses processors) must comply with Current Good Manufacturing Practice (CGMP). Again, this does not mean that final molasses pumps must be hygienic.

MATERIALS OF CONSTRUCTION

Pumps and equipment can contain hazardous materials (such as leaded bronze bushings) that could leach into food products. Viking offers material choices that have been tested to comply with either FDA or EC1935, which are two regulations that help ensure food contact materials are safe. Viking's iron, steel and stainless steel materials have been tested for food safety and are compliant. Your Viking distributor can help ensure that all materials in your pump are safe for food contact.

Some typical choices for specific parts include:

- Food Grade Packing instead of standard packing
- Hardened Iron Bushings instead of bronze bushings
- H1 food grade grease for behind-the-rotor seal pumps instead of petroleum grease

LIQUID SUGARS AND INVERTS

Because liquid sugars, invert sugars, glucose and fructose are processed with water, which can harbor bacteria, these may be handled with hygienic-style pumps that can be easily disassembled and cleaned, or cleaned in place. Viking's Hygienic Series pumps are recommended for processing and packaging these liquids. The Hygienic Series pumps offer the same internal gear design as our molasses, magma and massecuite pumps, but are made of polished stainless steel and offer hygiene certifications including 3A and EHEDG. With only one shaft seal, they are much simpler to clean and maintain than timed lobe, circumferential piston or screw pumps.



Viking KK4157B Hygienic Pump