

Sanitary Seal Division

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Metal Detectable O-Rings – The Basics

It goes without saying that food, beverage and pharmaceutical manufacturing processes must be designed to ensure that foreign materials remain out of the final products.

It is widely accepted that o-rings and gaskets used in food, beverage and pharmaceutical processing equipment are a potential source of contamination. Contamination can occur when rubber fragments are created when an o-ring or gasket is damaged while in service. Damage to o-rings and gaskets happen for a myriad of reasons ranging from faulty installation or over time from extreme temperatures, continuous vibration and corrosive clean-in-place (CIP) chemicals. Once created, rubber fragments can migrate into the product stream.

If rubber particles do find their way into the product, operators have no alternative than to shut down equipment to visually inspect for the contaminant. This detection process can be very difficult and expensive. Not to mention, the significant down time involved. If undetected, product recall can't be ruled out.

To combat this problem, many processors utilize a HACCP (Hazard Analyses Critical Control Point) program that requires that all parts be metal detectable and X-Ray inspectable.

The use of metal detectable o-rings is a very effective method for locating rubber fragments of seals and gaskets that have migrated into the process stream. Metal Detectable o-rings are rubber o-rings (Nitrile, EPDM, Silicone, Viton® and Sanifluor®) that have been compounded with a very fine metal powder and additives that allows them to be detected by in-line metal detection equipment and also by X-Ray machines. Particles as small as 2mm can be detected with standard in-line x-ray inspection and metal detection systems. Once detected, the contaminating particle can be removed with magnetic equipment or by hand.

Metal detectable o-rings are designed to be drop in replacements for standard conventional o-rings and perform as well as standard Nitrile, EPDM, Silicone, Viton® and Sanifluor® O-Rings.

The Sanitary Seal Division of PTI, Inc. offers the SEALDETECT™ line of metal detectable o-rings in AS568 and metric standard sizes. SEALDETECT™ O-Rings and Sanitary gaskets are state of the art metal detectable and X-Ray inspectable sealing components.

Contact us today to speak with us about the optimum SEALDETECT™ products for your applications. TEL 610-603-7546