

Practical Features - TrueCap[®] RF Capacitance

Quick-Connect Tri-Clamps: Suitability in 3-A[®] and Standard Industrial Equipment

Introduction

Monitor Technologies has released an alternative connecting system for the TrueCap[®] RF Capacitance line. This connection system uses the quick-connect tri-clamp system common in most food processing environments. Proper understanding of the design and the related regulations in the industry will ensure appropriate use of the tri-clamp connection option.

General Background

To ensure safe food and adequate sanitation programs, the equipment used for the processing and handling of food products must be designed, fabricated, constructed and installed according to sound sanitary principles. This ensures the equipment can be adequately cleaned and sanitized, and that surfaces are resistant to daily exposure to corrosive food products and cleaning/sanitizing chemicals.

3-A Sanitary Standards have been developed for a variety of equipment used in the dairy industry, as well as some equipment used in egg processing. These standards dictate design constraints for two product categories:

1. Food product contact surfaces: defined as a surface in "direct contact with food residue, or where food residue can drip, drain diffuse or be drawn"
2. Non-product contact surfaces: defined as part of equipment (e.g. legs, supports, housings) that do not directly contact food



Examples of sanitary fittings.

Generally, all food contact surfaces should be: smooth, impervious, free of cracks and crevices, nonporous, nonabsorbent, non-contaminating, nonreactive, corrosion resistant, durable and maintenance free, nontoxic and cleanable.

Stainless steel is the preferred general use metal for food contact surfaces. Non-metal materials (plastic, rubber and rubber-like materials) should be food grade and should meet 3-A[®] Sanitary standards.

Fabrication should be free of sharp corners or crevices. All matting surfaces must be continuous (e.g. substantially flush). Construction of equipment should allow for easy disassembly for cleaning and inspection. [More on next page >>>](#)



TrueCap[®] RF capacitance level probe with tri-clamp fitting & optional accessories.

Quick-Connect Tri-Clamps: Suitability in 3-A® and Standard Industrial Equipment (Continued)

The 3-A® Symbol is a registered mark used to identify equipment that meets 3-A Sanitary Standards for sanitary design and fabrication. All equipment displaying the 3-A Symbol must pass a comprehensive, independent Third Party Verification (TPV) inspection to assure it meets the sanitary design criteria in a 3-A Sanitary Standard

Unless the supplier is an authorized 3-A Symbol holder, the buyer is solely responsible for verifying whether the equipment meets the desired (and expected) sanitary design and fabrication criteria.

What About Monitor's Quick-Connect?

Monitor's release of the quick-connect tri-clamp TrueCap® configuration has NOT been independently verified and therefore does NOT hold the 3-A® symbol. Applications in the dairy and egg industry where the most strict sanitation requires exist should be avoided.

(NOTE: It is believed that the construction for the TrueCap® quick-connect tri-clamp configuration is very close to 3-A compliance quality; however, the exercise in submitting the design for certification has not been completed at this point.)



Other applications of food production where a safe process environment is required but not regulated by USDA and the related 3-A standards can be good matches for the Monitor quick-connect tri-clamp connection system. Monitor's tri-clamp connection system used on the TrueCap® level sensor is a suitable means to enhance food safety through its use of qualified construction materials (stainless steel and food grade nylon) and easy disassembly and cleaning system.

Before recommending the purchase of the Monitor quick-connect tri-clamp connection system for sanitary applications, the end-user's plant manager should be consulted to qualify the particular sanitation requirements for that facility.