

## Sanitary/Hygienic Industry Overview and Terminology

### **Industries Served:**

Food, beverage, distillery, winery, brewery, Pharmaceutical, Food, Beverage, Biotech, Cosmetic, Poultry, Dairy, Oils, Beauty, Personal Care, Confectionary

### **Product Applications:**

Fruit juices, sauces, pastes, starches, wine, food-grade oil, jams, jellies, dairy, yogurt, cottage cheese, ice cream, fruit juices, sauces, food-grade oils, jams, personal care, pharmaceuticals, fruit juices, sauces, pastes, starches, wine, food-grade oil, jams, jellies, Food and Beverage, Prepared Food and Sauces, Poultry and Dairy, Sweeteners and Acids, Pharmaceutical and Cosmetics, Mayonnaise, Yogurt, Creams, Cottage Cheese, Milk, Butter, Eggs, Soy, Cheese, Pie Fillings, Juice Concentrates, Chocolate, Purees, Salad Dressing, Condiments, Sauces, Flavorings, Fructose, Dough, Paste, Ice Cream, Personal Care Products, Cosmetic Lotions, Creams, Gels, Soap, Perfume, Nutraceuticals, Beer, Wine, Juice Concentrates, Soup, Chicken Parts (Gizzards, Livers), Slurries

### **Organization Related Terminology:**

**ISO Organization** – [LINK](#) – International Organization for Standardization – a global network of 165 national standards bodies and sets standards for products, processes, services or supplying materials including Quality, Environmental, Health/Safety, Energy Management, Food Safety and IT security

#### **RELEVANT ORGANIZATIONS TO IWAKI AMERICA**

**DIN Standards** – [LINK](#) – Deutsches Institut für Normung (German Institute for Standardization) German Member of ISO

**ANSI Standards** – [LINK](#) – American National Standards Institute – US Member of ISO

**SCC Standards** – [LINK](#) – Standards Council of Canada – Canada Member of ISO

**DGN Standards** – [LINK](#) – Dirección General de Normas (National Standardization, Metrology and Conformity Assessment System) Mexico Member of ISO

**ABNT Standards** – [LINK](#) – Associação Brasileira de Normas Técnicas – Brazil Member of ISO

**JISC Standards** – [LINK](#) - Japanese Industrial Standards Committee (JISC) in charge of the Japanese Industrial Standards (JIS) – Japan Member of ISO

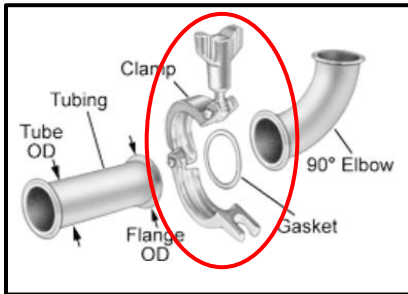
**All Others** – [LINK](#)

**ASTM Organization** – [LINK](#) – ASTM International (formally American Society for Testing and Materials) is an international standards organization that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services

**ASME Organization** – [LINK](#) – American Society of Mechanical Engineers is a professional association that promotes through education, training/development, codes/standards, research, conferences/ publications, government relations, and other outreach **Product**

**Related Terminology:**

**Tri-Clamp Connections** – clamps used within the food, beverage, and pharmaceutical industries to quickly create a leak-proof connection allowing easy assembly or disassembly for routine maintenance and inspection of process equipment



**Tri-Clover® Connections** – Copyrighted name for tri-clamp connections (by Alfa-Laval > 50 years ago)

**Clean-In-Place (CIP)** – CIP cleaning is a procedure of cleaning inside surfaces like piping/tubing lines, tanks/vessels and related pump/mixer/filling equipment without disassembly

**Clean-Out-Of-Place (COP)** – Process used when process systems and components are disassembled for cleaning in parts or cabinet washers

**Wetted Materials** – Stainless Steel of various polished finishes

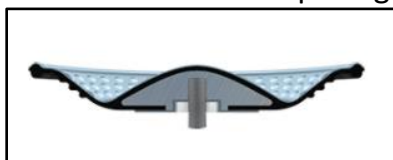
**Polishing Requirements** - Roughness average (Ra) is the most accurate and is measured in micro inches. For example, FDA Pumps have a Ra of 5.1; Sanitary Pumps have a Ra of 0.8; and Hygienic/Pharmaceutical Pumps have a Ra of 0.4.

**Elastomers** – Food Grade Santoprene, PTFE and over-molded PTFE

**Passivated stainless-steel** – Improves the corrosion resistance properties by facilitating the formation of a very thin, transparent oxide film, which protects the stainless steel from “selective” oxidation

**Rotating Stand** – Swivel stand used to drain so that the fluid can flow out of pump often without disassembly.

**One-Piece Diaphragm Design** – Diaphragm nut and plate are molded inside the middle of the diaphragm and is an alternative to the through-bolt design where the pump center rod goes through the diaphragm and is attached on the fluid side of the pump with a diaphragm plate, washer and screw exposing the materials to the fluid being pumped



Versa-Matic Fusion Diaphragm

**Industry Related:**

**USDA-Certified** – [LINK](#) – US Department of Agriculture is responsible for the safety of meat, poultry and egg products

**FDA-Compliant** – [LINK](#) – Food and Drug Administration is responsible for all other foods beyond USDA responsibility and will comply with FDA regulations, including the U.S. Code of Federal Regulations (CFR) Title 21.

**Cup and Fork Certification** – International symbol for food-safe materials on a voluntary basis

**3-A Certification** – [LINK](#) – Establish and certify equipment and processing systems developed using a process based on ANSI

**FDA CFR 21.177 Certification** – [LINK](#) – A list of permitted base elastomers, vulcanization materials, accelerators, retarders, activators, antioxidants, plasticizers, fillers, emulsifiers, and other additives.

**1935/2004/EC Certification** – [LINK](#) – The European safety standard for materials that come into contact with food during the production process

**USP Class VI\* Certification** – [LINK](#) – Method of testing to determine biocompatibility of materials and there are six classes, VI being the most rigorous and is aimed to certify that there are no harmful reactions or long-term bodily effects caused by chemicals that leach out of plastic materials

**ATEX Certification** – [LINK](#) - Appareils destinés à être utilisés en ATmosphères EXplosives (Equipment intended for use in EXplosive ATmospheres) The certification of equipment intended for use in potentially explosive atmospheres in the European Union and equipment intended for use in potentially explosive atmospheres in the United States must have the specific mark of one of a Nationally Recognized Testing Laboratory (NATL) recognized to test and certify this type of equipment

**CE Certification** – [LINK](#) – The European Union's (EU) mandatory conformity marking for regulating the goods sold within the European Economic Area (EEA) since 1985 and represents a manufacturer's declaration that products comply with the EU's New Approach Directives

**EHEDG Certification** – [LINK](#) – EHEDG, the (European Hygienic Engineering and Design Group) is a European-based non-governmental organization devoted to the advancement of hygienic design and food engineering. ... 25) on different aspects of hygienic design and provides certification for industries on equipment used in the food industry. Similar to 3-A in North America.

**NSF Certification** – [LINK](#) – National Sanitation Foundation outlines standards adopted by those in the retail and foodservice industry and have recently begun offering standards for manufacturing food processing equipment input

**NAMI Certification** – [LINK](#) – North American Meat Institute publishes the 10 points for sanitary design used in the meat and poultry industry for equipment and processing