



SPX FLOW Infusion UHT plant

Thermal Processing

– Faster, affordable & proven

SPX FLOW has vast experience in UHT-technologies and can tailor solutions to match customers' specific processing and operational goals.

In 1912, the method for direct heating with steam was patented and achieved temperatures of 130 to 140°C, but without commercial aseptic systems progress for this technology was slow. However, this changed in 1953 when milk was packaged aseptically in cans and then in paperboard cartons in 1961. Through its APV brand, SPX FLOW was one of the pioneers of Ultra-High Temperature processing (UHT) development in the 1950s and 1960s, with the first commercial Infusion UHT system supplied by Pasilac / APV in 1963.

Today, thermal processing equipment and technology is one of the cornerstones of SPX FLOW's offerings to the global dairy, food & beverage industry. Some of the key trends in both developed and rapidly growing emerging markets in this industry include:

- Increased productivity
- Increased food safety
- Protection of nutritional values
- Environmentally friendly processing
- Flexible processing technology

SPX FLOW's selection of UHT technologies

The choice of technology is dependent upon factors such as product specification, viscosity and heat sensitivity of product contents e.g. proteins. When it comes to UHT processing of low viscosity products, such as varieties of drinking milk or other plant-based beverages, there are several technologies to choose from including steam infusion, steam injection, plate heat exchangers or tubular systems. SPX FLOW has vast experience in all these technologies and can tailor solutions to match customers' specific processing and operational goals.

SPX FLOW's standard and high heat Infusion systems provide ultra-fast, gentle heating with high efficiency and minimal chemical change to the final product. Indeed, the technic is so gentle it can produce a taste similar to fresh pasteurized milk; read more below under "Natural fresh milk". The unique SPX FLOW Instant Infusion process gives gentle, high temperature pasteri-

zation with efficient spore inactivation and bacteria kill rate. It can be used with high viscosity product lines and can produce less vitamin loss compared with other traditional UHT processes.

Tubular UHT Express

Whether from the standard range or a fully customized solution, SPX FLOW tubular UHT systems are designed to provide excellent quality results, consistency, processing flexibility, superb hygienic performance and cleanability to exceed food safety standards, and optimized energy and utility consumption.

SPX FLOW Tubular UHT Express packages are intended for use with standard UHT milk, chocolate milk, cream and a variety of specialty products. Never before has this quality engineering and expertise been so readily available and affordable. The packages utilize proven designs to give reassurance of system performance and include many of the benefits associated

Summary

Having been a pioneer in UHT processing, SPX FLOW continues to invest in research and development to set new benchmarks and deliver cutting-edge technology to the dairy industry. Its solutions are supported by in-depth understanding of thermal processes, advanced Innovation Centers and world-leading, dedicated dairy and food technologists. These help to test and trial new processes and recipes to create consistently innovative, customer-centric solutions for processing and end product improvements. The systems detailed above address the challenges of higher food safety requirements while offering the potential for more sustainable production, increased profitability and improved quality results, giving vital business advantages in increasingly competitive markets.

with custom SPX FLOW Tubular UHT systems, such as:

- Minimized energy, water and CIP chemical usage
- Reduced fouling, long run times
- Efficient cleaning
- Straightforward maintenance
- Food safety, high kill rates
- Sharp separation of product and water flows

Natural fresh milk

Realizing market trends in terms of long product lifetime, minimal product alterations for freshest tastes and high food safety, SPX FLOW R&D scientists have developed a groundbreaking thermal process known as APV InfusionPlus. This technology combines super high pasteurization at 150-160°C with an incredibly short holding time of 0.09

sec. The process has been proven to deliver an extremely high spore kill rate (B* value of 1.45) with low chemical effect (C* value of 0.04), ensuring a combination of high food safety and fresh milk taste while protecting the nutritional value and other desirable natural product characteristics.

The APV InfusionPlus technology not only enables the dairy industry and consumers to benefit from sterile extended shelf life (ESL) milk with true fresh milk taste, it also has interesting potential in other applications: In the treatment of cheese milk and powder milk it makes the clostridia spores and bacillus spores inactive, resulting in improved cheese and powder quality.

SPX FLOW

For further information:

SPX Flow Technology Danmark A/S
Pasteursvej 1
8600 Silkeborg
Phone: +45 8922 8922

SPXFLOW

FOOD + BEVERAGE



UHT for You!

Whether you want freshest tastes or high quality, economical solutions, SPX FLOW has the expertise and technology to meet your thermal processing needs.

APV InfusionPlus: Ground-breaking thermal processing technology for ESL milk with true fresh milk taste.

Tubular UHT Express: Affordable, quality engineering with proven, high-efficiency performance and fast delivery times.

FAST - AFFORDABLE - PROVEN

Contact SPX FLOW to find out more about how we can help you meet your potential for sustainability, profitability, quality and enhanced food safety.

Email: ftenquiries@spxflow.com
Web: www.spxflow.com



➤ Anhydro ➤ APV ➤ Waukesha Cherry-Burrell ➤ Gerstenberg Schröder ➤ Seital Separation