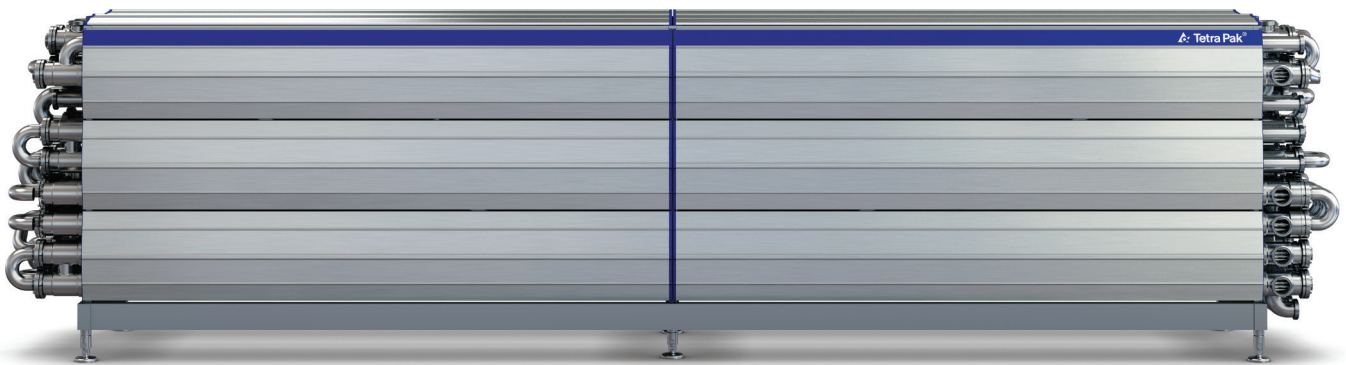




Tetra Pak® Tubular Heat Exchanger with P2P technology

Ultra-hygienic heat exchanger with high energy savings



Highlights

- Greatly reduced energy consumption
- Ultra-hygienic 3-A-approved design with unique welding technique
- Takes up less floor space
- Enhanced operational flexibility
- Innovative spring box for free product flow
- Lower environmental impact
- Reduced investment cost

Application

Tetra Pak® Tubular Heat Exchangers are used to heat and cool products during processing.

This P2P version uses product-to-product technology. This is the most efficient form of heat transfer and is commonly used for pasteurization and UHT treatment of a wide range of food products, including multiple milk products such as white milk, flavoured milk, soy beverages, beverages with fibres, and coffee and tea drinks.

Working principle

The Tetra Pak® Tubular Heat Exchanger with P2P technology comes in two models: the CMR and CMRF. Both offer unique opportunities to save energy. Processed product flows through an assembly of parallel tubes, and unprocessed product flows between and around these tubes. The tubes are normally corrugated to increase turbulence and heat transfer efficiency. For special applications, some smooth tubes may be used.

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Features

Floating protection system

Like other Tetra Pak® Tubular Heat Exchangers, the Tetra Pak® Tubular Heat Exchanger with P2P technology is equipped with a floating protection system that absorbs thermal pressure and prevents tubes from cracking due to thermal expansion.

Because the unit is not welded shut, the inner tubes are easy to inspect – a major advantage when product flows on the shell side.

New welding technique

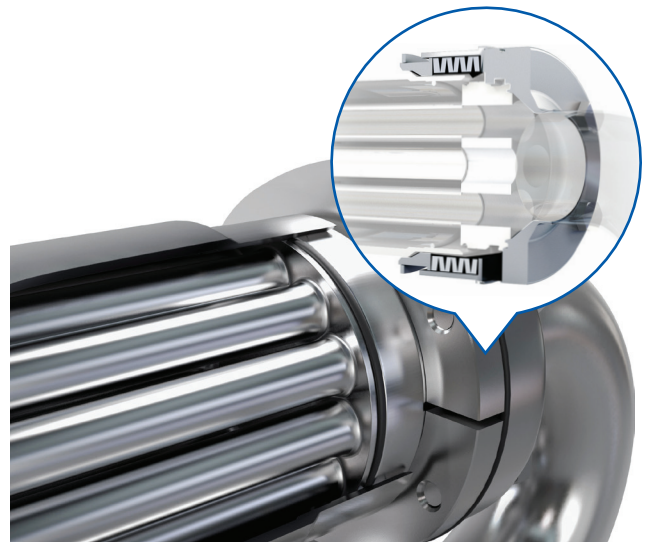
Tetra Pak has developed a new smart technology featuring a crevice-eliminating weld. This makes the unit fully hygienic and suitable for P2P applications. It is certified by the international 3-A hygiene standard.

Patented spring box

For products containing fibres or fines – and for customers that want to avoid fixed internal tube dividers – an optional spring box keeps the tubes apart without baffles or fixed dividers. Unlike traditional internal tube dividers, the spring box is an encased external spring that enables free product flow and avoids potential hygiene blind spots (see graphic below).

Design

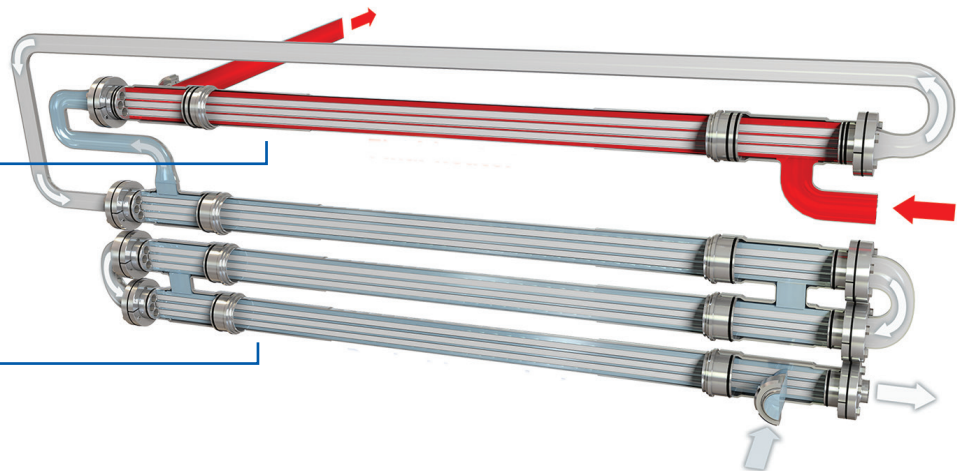
P2P inserts are easy to remove from the shell for inspection – without any cutting or welding. The possibility of inspection improves food safety and allows individual part replacement, reducing downtime and cost significantly.



Layout

Final heater

Product-to-product regenerative section



The Tetra Pak Tubular Heat Exchanger with P2P technology comes with an optional spring box that eliminates all internal tube supports to ensure free product flow and unrivalled hygiene.

