



Heat Exchangers

Tetra Pak® Product Portfolio

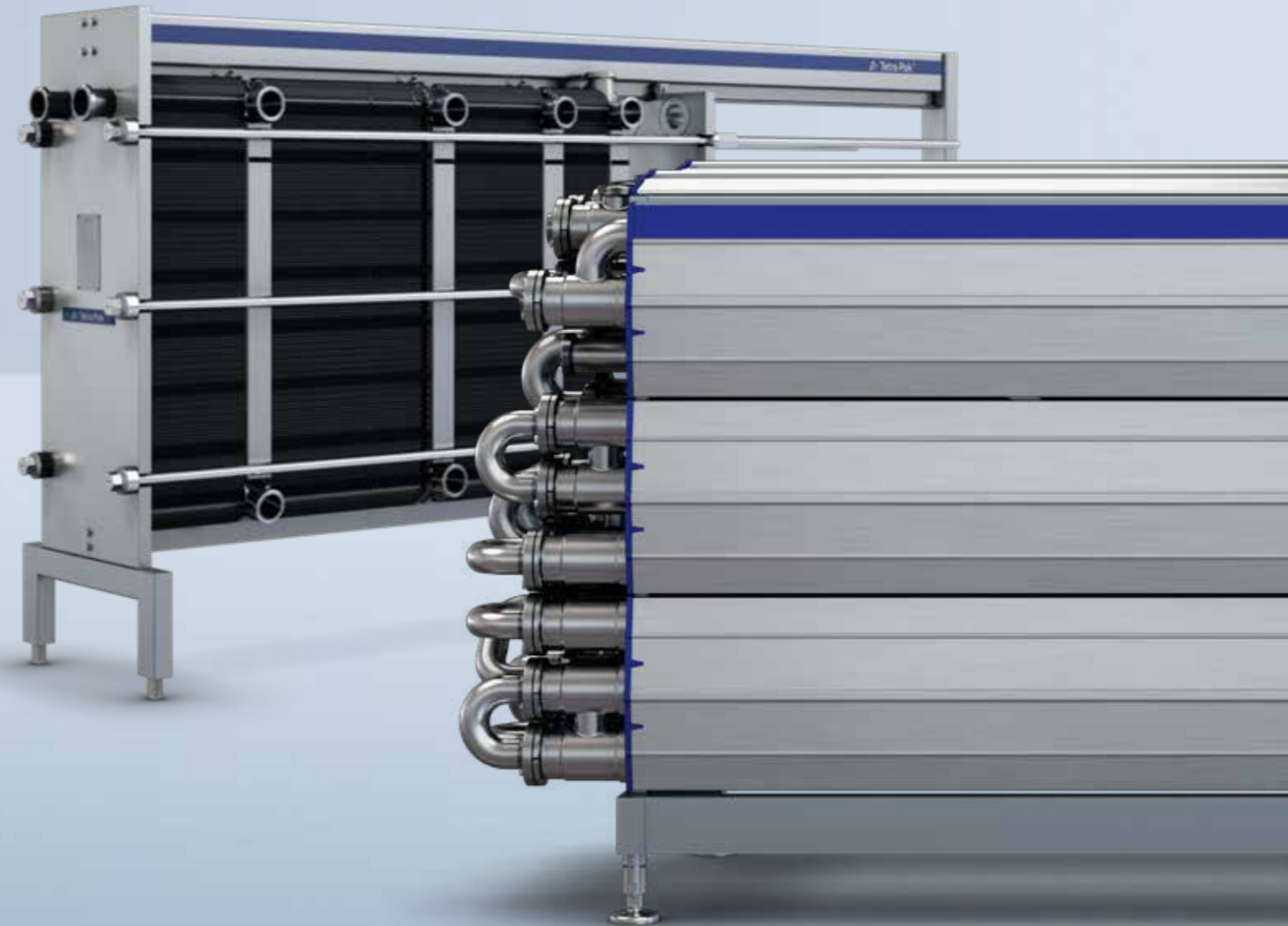
Efficient and reliable heat exchangers for optimal results

We deliver efficient and reliable heat transfer solutions which enable you to meet your customers' demands on safe and attractive food products.

Our heat exchangers are configurable to meet any requirement, sold as a standard unit with additional customizable options to fit all applications, as well as meet your process and automation needs.

Our range of flexible heat exchangers combine high performance with cost efficiency and low environmental impact.

Our heat exchangers are fully configurable to meet any requirements.



Our range of Tetra Pak® Heat Exchangers is a combination of knowledge and equipment excellence that will give you the optimal heat transfer solution. With Tetra Pak Heat exchangers, you will have access to a cost effective solution that ensure energy efficiency, with minimal consumption of water and other resources. Our wide range of heat exchangers will always fit your requirements and we will find the most suitable solution, no matter what products and raw materials you are processing.

Get the most at the best price

Each application, process and food product requires a customized solution. Every Tetra Pak® Heat Exchanger is sized on demand. With a complete portfolio of 4 different heat transfer technologies, Tetra Pak will always offer you the most cost-effective solution that will fit your expectations.

Food safety

We design all our components to remove all risks to food safety. The floating protection system of the Tetra Pak® Tubular Heat Exchanger eliminates the risk of product contamination due to expansion cracking. The T-clip design of the Tetra Pak® Plate Heat Exchanger gasket has specific features to enhance safety, such as a safety groove in the seal chamber to identify any

leakage visible from the outside of the unit. Our heat exchangers are designed to prevent the risk of cross contamination between product and media, ensuring food product safety every time.

Easy to rebuild

Process and the food products can change, which would mean a need to upgrade at the lowest investment cost.

The Tetra Pak Plate Heat Exchanger has connections that are bolted, rather than welded to the connection plates.

The modular design of the Tetra Pak Tubular Heat Exchanger makes the operation simple.

Environmental advantages

Helping our customer to be more environmentally friendly is in the heart of all Tetra Pak branded products and even more in our heat exchanger range. The unique product-to-product (P2P) design of our Tetra Pak Tubular Heat Exchanger helps you to reduce energy consumption up to 55%.

Gentle food processing

Preventing the food product from high shear rate is quite often key. The design of Tetra Pak Heat Exchangers will help you achieve the highest level of quality of the final product, as if it were cooked at home. Tetra Pak® Coiled Heat Exchangers have only one inlet and one outlet connection. This enables gentle mechanical treatment and ensures excellent particle integrity for particles of up to 25 millimeters in diameter.

The tall and narrow shape of the plate heat exchanger's plates, the surface pattern, and the size of the portholes enable a product flow and a product distribution over the entire plate which reduces fouling and thus enables longer production runs. Even distribution of the flow makes cleaning more effective, and faster.

The floating protection system of our tubular heat exchanger makes it possible to offer compact and efficient heat exchangers without any risk of cracks in the tubes.

Easy and low maintenance requirement

The floating protection system of the inner and outer tubes and the connections of the tubes enable the inspection of all parts and secures easy exchangeability. On top of that, the horizontal position of the tubes, rather than being stacked vertically, enables easy access for maintenance.

The gaskets of the Tetra Pak Plate Heat Exchanger used to seal the plates have robust T-clip design which are easy to remove and reassemble.

From simple to most complex food product

With over one century of heat transfer experience, Tetra Pak can support all applications for any food product, from products with high viscosity, complex thermal behaviour and more.

Product portfolio

Tetra Pak® Heat Exchangers



Our range of Tetra Pak® Heat Exchangers is a combination of knowledge and equipment excellence that will give you the optimal heat transfer solution.



Main applications

	Tetra Pak® Plate Heat Exchangers			
	C	CW	CD	M
DAIRY				
Milk cooling / heating	●		●	●
Milk pasteurization	●		●	●
Cream pasteurization / cooling	●			●
Milk / cream UHT	●			
Cultured milk cooling	●			
Concentrated milk heating	●			
Whey pasteurization	●		●	●
Ice cream mix pasteurization	●			
BEVERAGE				
Clear juice / still drink / water pasteurization	●	●	●	●
Juice / nectar fibre < 5mm pasteurization		●		
Juice / nectar < 15mm pasteurization				
Juice / nectar > 15mm pasteurization				
Clear juice concentrates	●		●	●
Juice concentrates with pulp & fibre		●		
Isotonic sport drinks	●	●		●
Tomato / vegetable juice		●		
Smoothies		●		
Soy milk / drinks UHT	●			
Tea / coffee UHT				

● Recommended ● Suitable * For concentration duties

Tetra Pak® Tubular Heat Exchangers							Tetra Pak® Coiled Heat Exchangers		
CD	CM	CMP	CMR	CMRF	CC	S	Coiled	Contherm®	Convap
	●		●						
	●		●	●					
	●						●		●
	●						●		●
	●	●		●					
	●	●		●			●		
		●					●		
	●				●		●	●	●
	●			●					
	●		●	●					
	●		●	●					

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Other applications

	Tetra Pak® Plate Heat Exchangers			
OTHER LIQUID PRODUCTS	C	CW	CD	M
Tomato products	●			
Fruit preparations			●	
Fruit purees	●			
Fruit mash				
Soups & sauces	●			
Desserts	●			
Liquid egg products	●			
Products with particles > 15mm				
Sticky products				
UTILITIES	C	CW	CD	M
Heating of CIP	●			●
Water & media heating / cooling	●			●
MAXIMUM CAPACITY	C	CW	CD	M
Pasteurization, low-viscous products, l/h	100,000	30,000	65,000	80,000
Heating / cooling, low-viscous products, l/h	150,000	30,000	65,000	100,000
Water, l/h	200,000	75,000	130,000	200,000
Max working pressure, bar (g)	16 (21)	7	10	10 (19)

● Recommended ● Suitable * For concentration duties

Tetra Pak® Tubular Heat Exchangers							Tetra Pak® Coiled Heat Exchangers		
CD	CM	CMP	CMR	CMRF	CC	S	Coiled	Contherm®	Convap®
	●				●		●	●	●
●	●	●			●		●	●	●
	●				●		●	●	●
●		●					●	●	●
	●				●		●	●	
	●				●		●	●	●
●	●						●	●	
							●	●	●
CD	CM	CMP	CMR	CMRF	CC	S	Coiled	Contherm®	Convap®
						●			
						●			
CD	CM	CMP	CMR	CMRF	CC	S	Coiled	Contherm®	Convap®
30,000	50,000	50,000	50,000	35,000	10,000		20,000	5,000	
80,000	80,000	80,000		10,000	60,000		60,000	5,000	
	120,000						15,000		
80	80	60	50	50	75	40	300	20	20

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Tetra Pak® Plate Heat Exchangers

Durable design with plate geometry optimized for food applications

Our range of plate heat exchangers provides gentle, energy efficient heat treatment, optimized to maintain product quality. They're easy to clean, service and maintain, and can even be rebuilt for new applications or different capacities. Best yet, we can guarantee long equipment lifetime thanks to the robustness of gaskets and plate pressing technology.

Example applications:

Beverages

- Juice/nectar/still drinks
- Fruit concentrates
- Carbonated soft drinks
- Soy milk/drinks

Utilities

- CIP
- Water
- Media

Prepared foods

- Tomato products
- Soups & sauces
- Desserts

Dairy

- Milk
- Milk/cream
- Cultured milk
- Whey
- Ice cream mix



Key features

Supplier with a complete portfolio

Plate geometry

- Narrow plate shape
- Port-hole size adapted to model
- Distribution and port area pattern
- No stagnant areas

Pressing pattern

- Distribution area and port area pattern
- Heat transfer area pattern
- One step, single-tool pressing
- Optimized heat load on the product
- Optimized running time
- Optimized use of pumping power, water, heating and cooling media
- The 5-point hanger alignment system

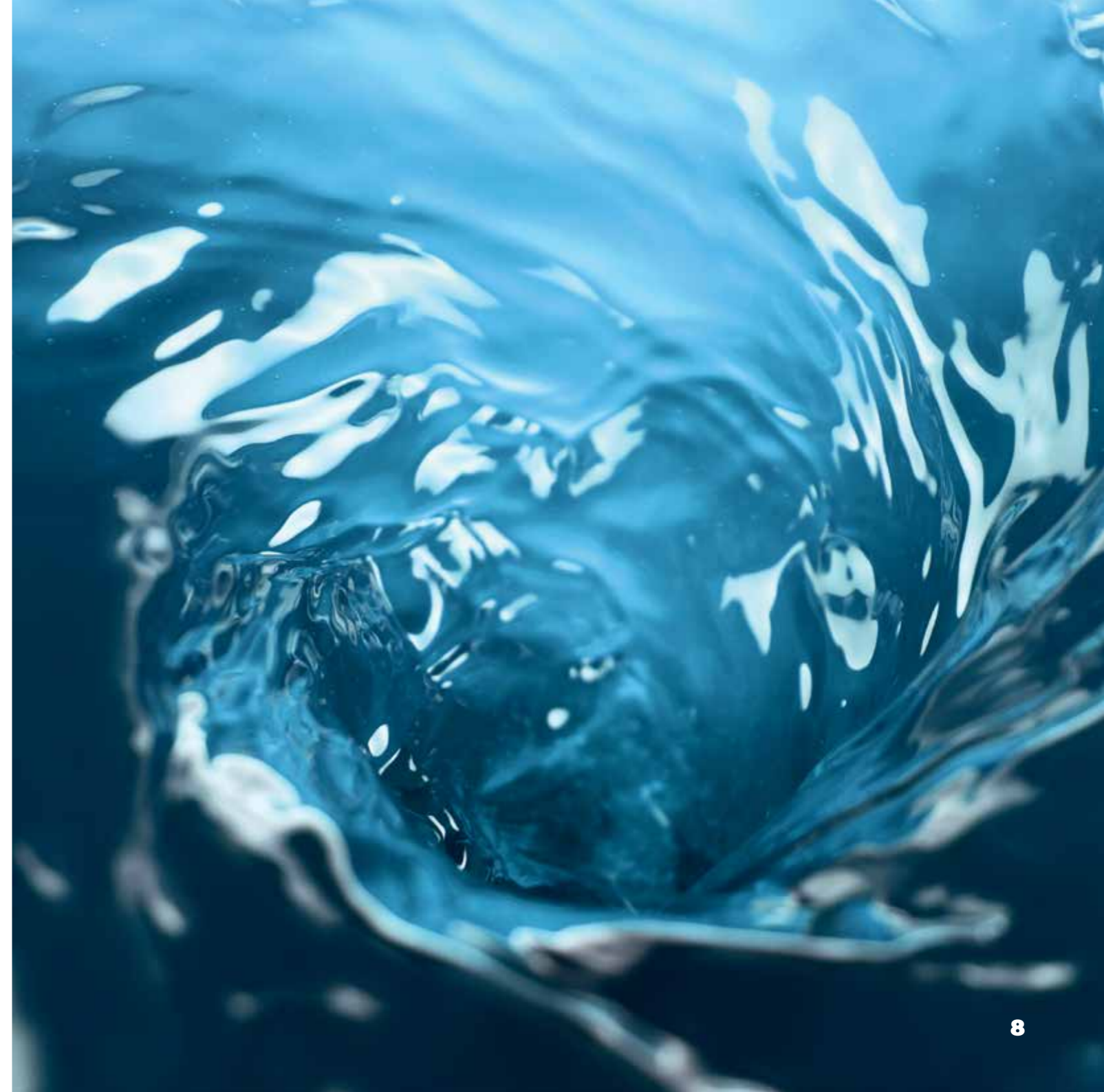


Clip-on gaskets

- Clip-on mounting
- Roof-top design with perfect fit with plate groove
- Adapted materials for food products and temperature ranges (incl. FDA approved)
- Leak indication chamber

Easy to adapt

- Modular and robust frame – simple to upgrade and rebuild
- A wide range of plates and gaskets, for different applications



Our range

Tetra Pak® Plate Heat Exchangers



**Tetra Pak®
Plate Heat Exchanger C**

Premium range

- From 1000 l/h to 200.000 l/h
- Design for up to 21 Bars
- Larger pressing depth:
 - Less fouling and longer Operation time
 - Gentle treatment
 - Higher thermal performance for lower utility consumption
- Lots of available options



**Tetra Pak®
Plate Heat Exchanger M**

Standard range

- From 1000 l/h to 200.000 l/h
- Design for up to 16 bars
- More Suitable for simple application



Brazed Heat Exchangers (BHE)

Stainless steel plates, copper brazed

Applications

- Heating and Cooling
- Refrigeration

Benefits

- Gasket free
- Compact and easy to install
- Very limited maintenance required
- High heat transfer efficiency
- Standard items on stock for fast delivery



Alfa Nova

100% Stainless Steel, fusion-bonded

Applications

- Heating and Cooling
- Refrigeration
- Suitable for aggressive media

Benefits

- Gasket free
- Copper free
- Compact and easy to install
- Very limited maintenance required
- High heat transfer efficiency
- Standard items on stock for fast delivery

Available options

For C and M series

Valid for C series

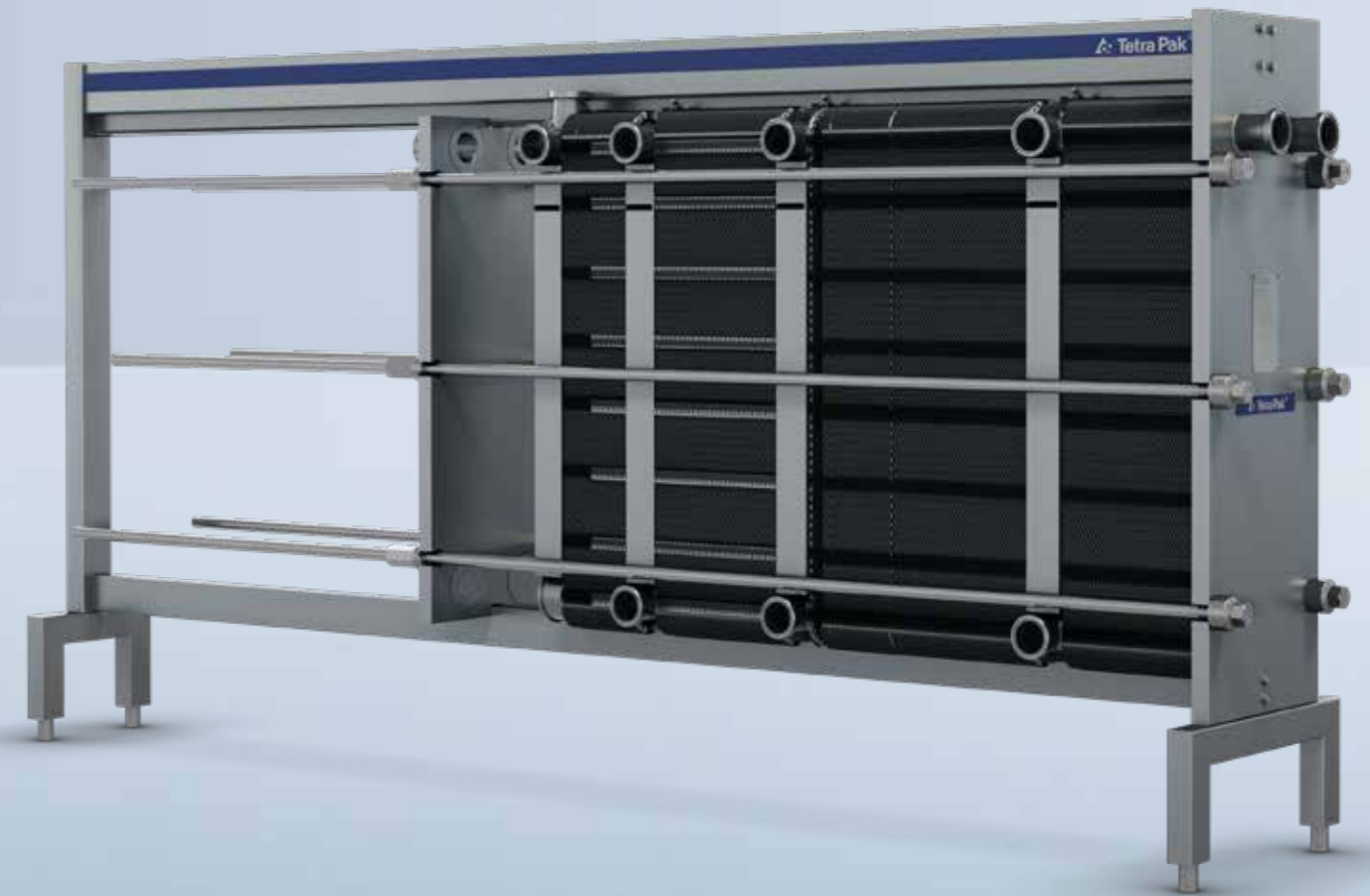
- Plates in stainless steel, titanium or SMO
- Gasket NBRFF or EPDMFF
- Double-wall plates (sizes C6, C8, C10)
- Bolt protectors, stainless steel
- Protection sheets
- Adjustable feet
- 3-A finish
- Test and material certificates
- Testing by authorized third-party inspectors

Valid for M series

- Plates in stainless steel, titanium or SMO
- Gasket NBRP, NBRB, NBRFF, or EPDMFF
- Double-wall plates (sizes M3, M6 and M15)
- Protection sheets
- Low-adjustable feet
- 3-A finish
- Test and material certificates
- Testing by authorized third-party inspector



Our plate heat exchangers provide gentle and energy efficient heating, optimized to maintain product quality.



Tetra Pak® Tubular Heat Exchangers

With floating protection system

Tubular heat exchangers are used to process liquid dairy products, beverages, and infant formula as well as many other food applications. The frame, tubes and other component parts of the heat exchanger are specifically assembled to allow for easy dismantling and rebuilding. This makes it possible to customise the heat exchanger for different recipes, capacities, and to run different products. More than 27,000 Tetra Pak heat exchangers are installed around the world.



Example applications

- Sterilization of milk products
- Sterilization of soy, coconut and plant based products
- Pasteurization of fruit products with fibres
- Heat treatment of tomato products, soups, desserts and egg products
- Heating of CIP liquid

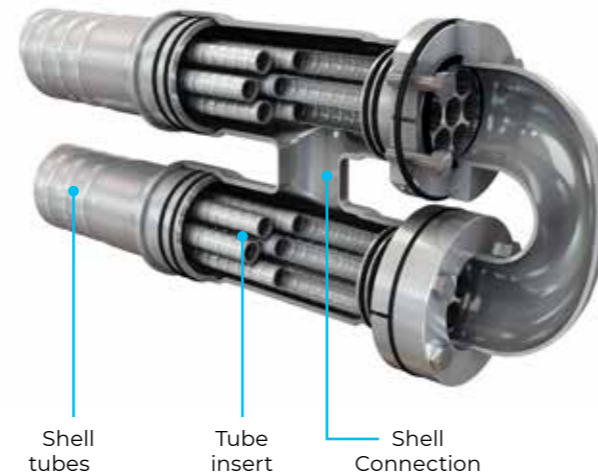


Floating protection system

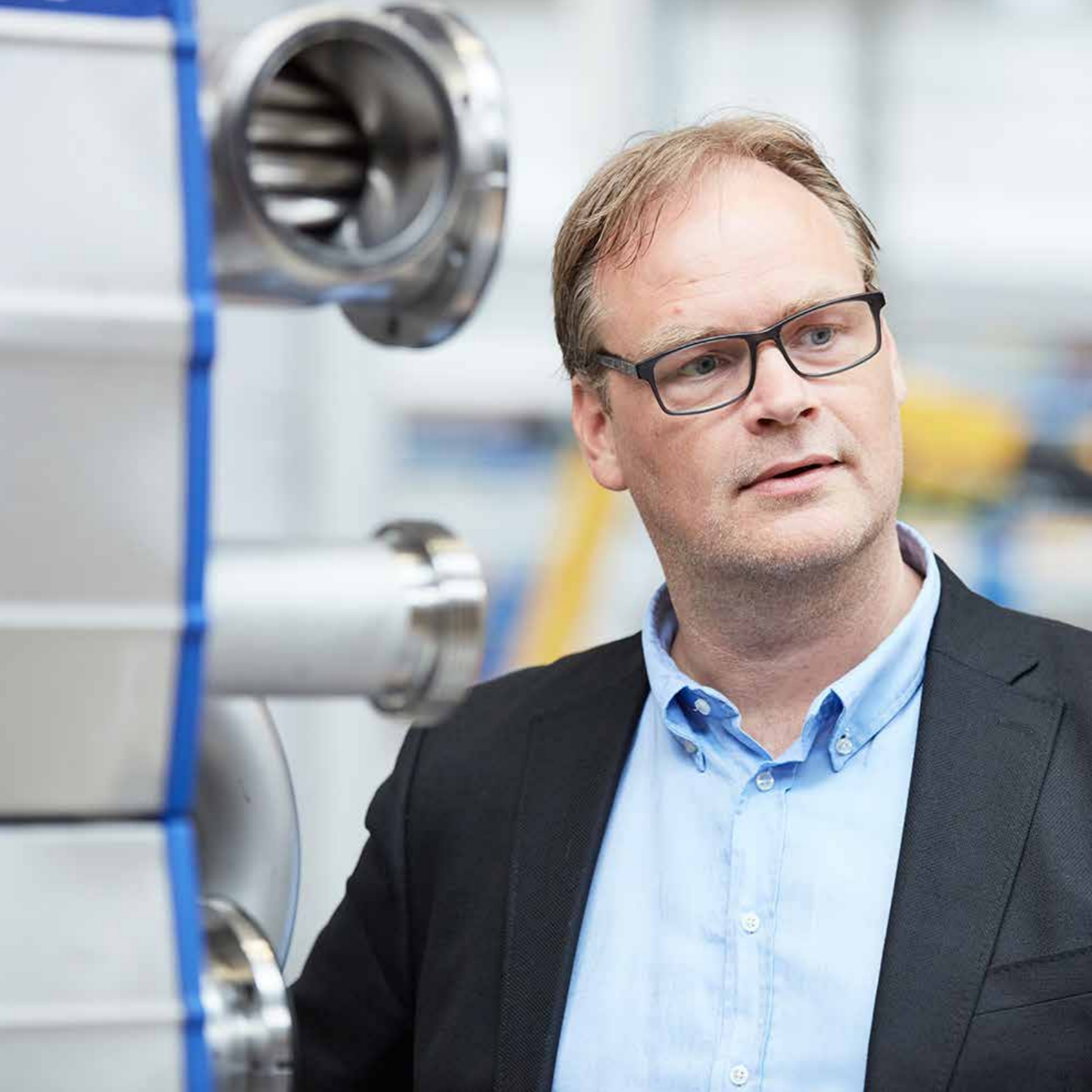
The floating protection system is a unique design with multiple, independently moving, floating (not fixed or welded) parts that – individually and as a system – enable superior thermal stress absorption, resulting in protection for your food products, production and investment. It also enables inspection and exchange of all parts.

Key benefits

- No bellow, not fully-welded
- Eliminates risks of cracking
- Ensures uncompromising food safety
- Enables product-to-product heat regeneration for exceptional efficiency
- Improves equipment lifetime



Unique
thermal stress
absorbing
design



Key features

Efficient, reliable and durable

The floating protection system enables food safety and exceptional efficiency

- Energy-efficient compact frame with product-to-product heat recovery and insulation system.
- The modular design enables us to customize each unit and makes it easy to service and upgrade them.
- Inspectability ensures uncompromising food safety.

All is optimized by our unique knowledge, our unique technical design program (Quantum) and our complete range.



Product to product

Unique design for an optimal performance

Our quest for superior P2P hygiene led us to develop new welding technology in order to avoid a potential crevice. Instead of welding the tubes from the outside, we invented a way to weld inside.

Key benefits

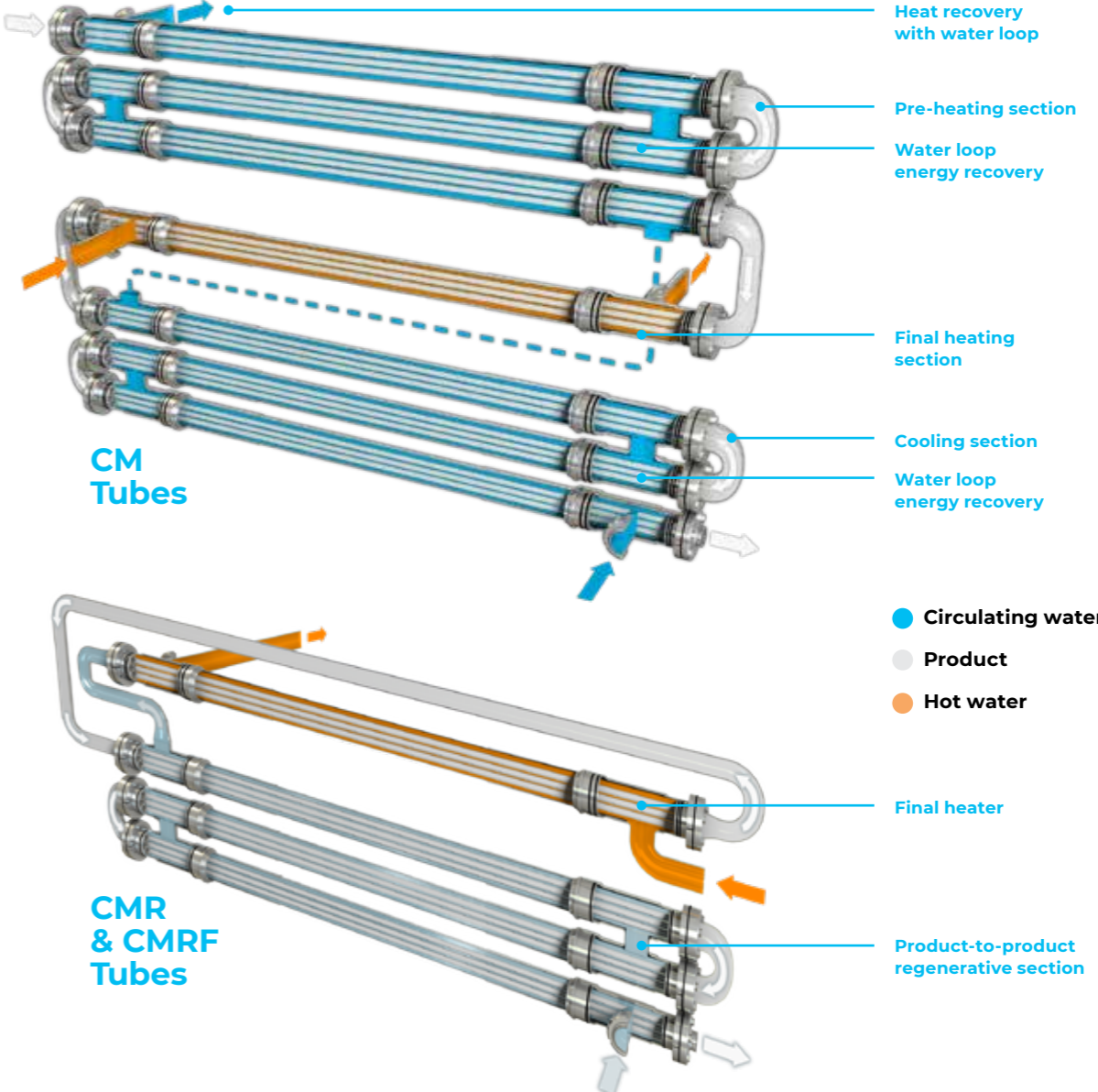
- Patent-pending solution ensuring fully hygienic P2P production
- Higher heat recovery and lower energy use
- Highest heat recovery
- Minimal heat loss
- Lower investment



P2W product-to-water heat recovery



P2P product-to-product heat recovery



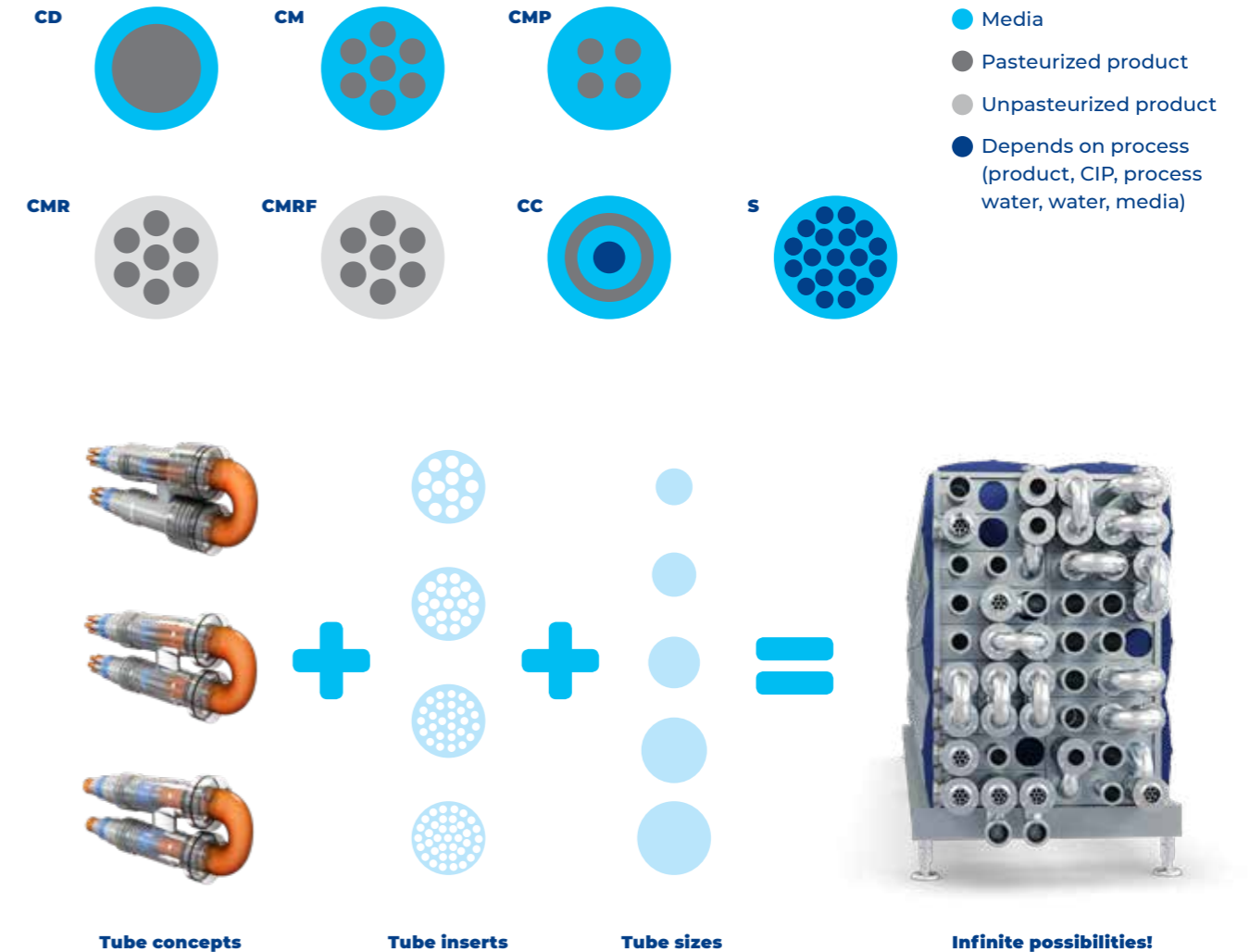
A wide portfolio

	CD Doubletube	CM Multitube	CMP Multitube for pulp	Product-to-product heat recovery CMR	CMRF	CC Concentric tube	CIP & Water Heater
Low viscous product without fibres or particles	●	●	●	●	●	●	
Low viscous product with fibres or smaller particles	●	●	●		●	●	
Medium viscous product with fibres or smaller particles	●	●	●			●	
High viscous product with fibres or smaller particles		●	●			●	
Product with long fibres >15 mm or high amounts of pulp >10%			●				
Products with larger particles (>15 mm)	●						
Heating of water and CIP solution							●

● Ideal ● Good

A complete product portfolio
to meet all your needs!

Tube variants



Available options

For our tubular heat exchangers

Options

- Tube inserts and bends AISI316L, SMO
- Shell AISI 304L or AISI 316L
- Product seals EPDM or PTFE
- Lengths 3 or 6 meters (except CMRF and CC versions)
- PED certification or other pressure-vessel codes
- Holding tubes
- Insulation
- Protective panels (compulsory for high-temperature and highpressure applications)

Certifications and compliance

Tetra Pak® Tubular Heat Exchangers have become the first tubular heat exchangers to receive the EHEDG certification meeting the leading food safety standards in Europe, in accordance with new standards.

EHEDG – possible on a range of CM modules.
3A – available on several types of our tubular heat exchangers.



Tetra Pak® Tubular Heat Exchangers give independent proof of excellent cleanability and hygienic design.



Tetra Pak® Coiled Heat Exchangers

Maximise versatility and efficiency in heat treatment

The Tetra Pak® Coiled Heat Exchanger provides efficient heating and cooling of a wide range of products, from low to high viscosity, and smooth to particulate products.

The pressure rating of the Tetra Pak® Coiled Heat Exchanger enables you to process higher capacities of high viscous products, improving production efficiency and cutting cost per litre.

Tetra Pak® Coiled Heat Exchanger proven solutions deliver excellent product and particle integrity, with outstanding operational efficiency and uncompromising food safety, thanks to the high-pressure rating and a coiled design with floating ends, as well as few welds and connections.



Low-viscous

- Milk
- Broth
- Fruit concentrates

High-viscous

- Soups
- Sauces
- Puddings

Prepared foods

- Particulates
- Yogurt fruit
- Fruit preparations
- Tomato products



How it works

In the Tetra Pak® Coiled Heat Exchanger, product flows through a coil-shaped tube and media flows around the product tube to heat or cool the product. An additional feature of the coiled design is that it creates a second flow pattern (the Dean effect) at high velocity, which increases heat transfer efficiency.

The coiled mono-tube unit has only one inlet and one outlet connection. This enables gentle mechanical treatment and ensures excellent particle integrity for particles of up to 25 millimetres in diameter.



Key features

Ensures gentle mechanical treatment

The coiled product tube is placed in a vertical chamber where media flows. The bottom product tube connection is sealed by O-rings to create a system that allows movement between the product tube and the media shell.

The unit is designed for high hygiene and easy maintenance – with a floating end through the bottom flange. This design absorbs the effects of thermal expansion and prevents the tube from cracking.

- High pressure rating up to 300 bar
- Duplex 2205 (EN 1.4462) all parts in product contact
- Mono tube with diameter from 14 up to 60 mm
- Up to 100 m long product pipe in one vessel
- Pressure rating on media vessel 10 bar
- In total 5 gaskets – product and media in and outlet and bottom flange
- Available in 15 different configurations



Contherm® Scraped Surface Heat Exchangers

Designed for complex products

Contherm® Scraped Surface Heat Exchangers are suited for hygienic heating and cooling of viscous, sticky and particulate food products. With a complete portfolio of design options, each unit is optimally configured for any specific application need, and can operate with a wide range of media products. The gentle-flow design of the tangential product inlet and outlet, with optimised rotor configuration, secures gentle product treatment.

Hinged-type blade mount and centrifugal force impact results in efficient scraping of the heat transfer surface, securing a fouling-free process and longer production times. With the integrated rotor lift, the service-friendly design provides safe, quick and easy inspection and maintenance for efficient and flexible production.

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High-viscous

- Puddings
- Sauces and gravies
- Peanut butter
- Hummus

Heat sensitive

- Cream cheese
- Whey protein
- Liquid and scrambled egg products

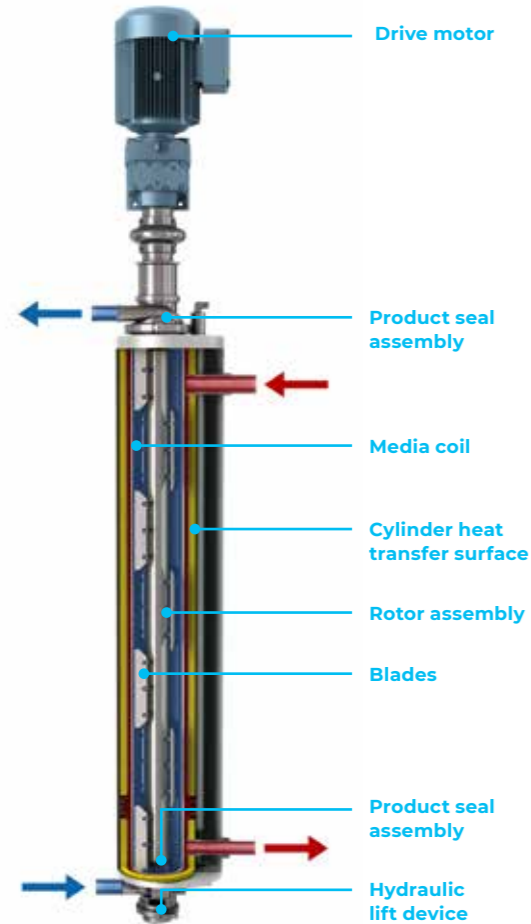
Prepared foods

- Particulates
- Yogurt fruit
- Fruit preparations
- Jams and preserves

Sticky / fouling

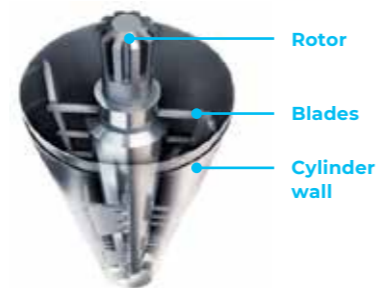
- Cheese sauce
- Rice pudding
- Custard

Fully customizable solutions



With over 179 million combinations, each Contherm® is made special according to the specifications of the product that is going to be processed.

- Cylinder materials
- Blades design and material
- Rotor size & assembly
- Media coil for hot, cool water, Steam, NH₃.
- Drive motor
- Seals type and materials



Key features

- Heating, cooling, pasteurizing or sterilizing
- Vertical mounting for lowest floor space
- No air introduction
- Adaptable configuration
- Gentle product treatment
- Integrated rotor lift for easy maintenance and inspection



Offering you innovation excellence

With outstanding food application expertise and heat transfer solutions, Tetra Pak® is a market leader in technical innovation and a source of exceptional food know-how for industry partners.

Your success – at the heart of everything we do

We dedicate ourselves to understanding your needs using our global presence and proven application expertise to help you fulfil your performance targets.

The Tetra Pak® portfolio enables you to operate with excellent performance and support throughout the whole lifecycle.

With Tetra Pak® as a partner, you get the portfolio, people, support and service to achieve your business ambitions.



A world of expertise with a reliable portfolio

Superior level of support

- Expertise & presence
- Everywhere at anytime
- Global & Local Service support
- Best Product selection based on application
- Support throughout the product's entire lifecycle

One portfolio

- Wide portfolio manufactured by Tetra Pak
- Components sourced from leading suppliers
- Get value in sourcing components in single, bundled or complex orders

Reliable & high quality

- Trustworthy partnership with reliable products
- Support throughout the product's entire lifecycle



CONTACT



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