

Tetra Spiraflo®

– One for Every Liquid Food



Tetra Spiraflo is a range of tubular heat exchangers that provide effective and gentle solutions for pasteurization and other types of heating and cooling of all kinds of liquid foods. Its unique modular design means that Tetra Spiraflo can be customized to handle an extensive range of products and applications in the food industry. The modules' design, materials and finish satisfy the strictest standards of hygiene and actively contribute to high product safety. The Tetra Spiraflo is designed to eliminate the risk of intermixture between product and medium.

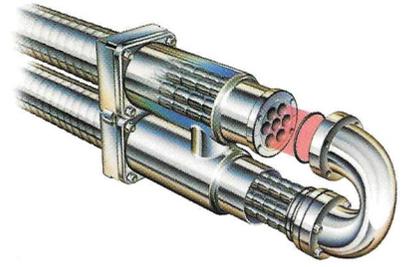
Tetra Spiraflo tubular heat exchangers are designed to permit the free flow of product with very low fouling, and hence long, often extremely long, running times. This makes Tetra Spiraflo ideal for applications involving round-the-clock processing.

CIP is easy and effective. Maintenance and service costs are low. And the same heat exchanger can often be employed for several different duties.

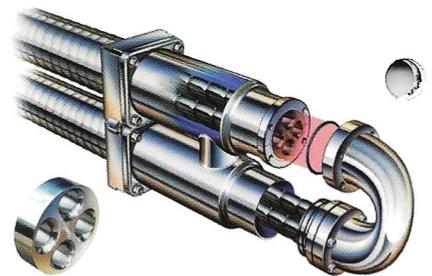
Taken together, these characteristics contribute to greater productivity and lower overall expenditures.

Every detail in a Tetra Spiraflo is based on well-known and proven technology, but the finished unit also comprises many unique features. One good example is the floating end design that eliminates the risk of stress corrosion and thermal expansion cracking – two problems often associated with welded tube designs. The floating end design also facilitates both unit assembly and opening the unit for inspection of the media side – the tube bundles are easily withdrawn from the shell.

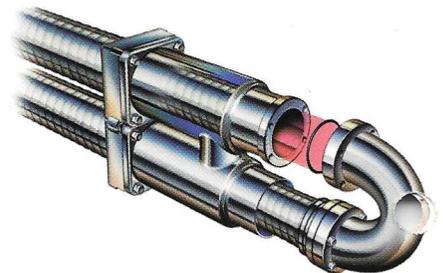
Another feature is the option of having Spiraflo delivered with tubes in alternative materials. Tubes made of SMO reduce the risk of corrosion when processing aggressive products, e.g. those with a high salt content.



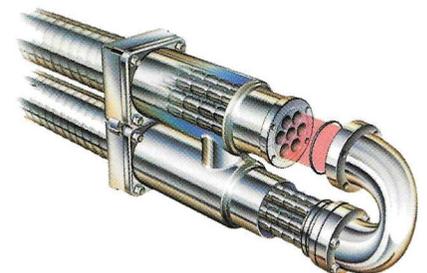
Tetra Spiraflo® MT Multitube This tubular heat exchanger handles a wide range of liquid foods, including those containing small particles. The Multitube delivered to you has been customized for your specific product and process, including smooth or corrugated inner tubes available in different diameters.



Tetra Spiraflo® FT Fibretube The Fibretube is specially designed for fruit juices with a very high content of pulp and fibres. The end plates of the Fibretube have rounded inlets to prevent long fibres from clinging to the edges between inlets.

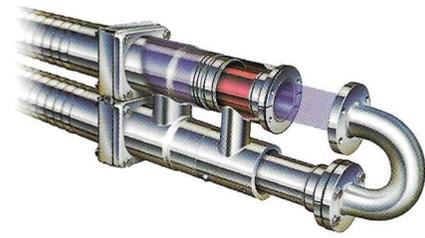


Tetra Spiraflo® MT Monotube The Monotube is a tubular heat exchanger specially designed for gentle treatment of products containing large particles. As the name implies, a single product tube lies within the media shell.



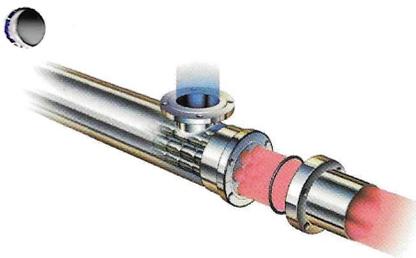
Tetra Spiraflo® MTR This regenerative tube is designed to permit energy savings via direct product-to-product heat recovery. Also handles liquids containing small particles, pulp and fibres.

Pulp and fibers – no problem with Tetra Spiraflo!



Tetra Spiraflo® MTC The MTC is designed to facilitate gentle and uniform yet effective heat treatment of high viscosity products. The product flows through a narrow gap with media on both sides.

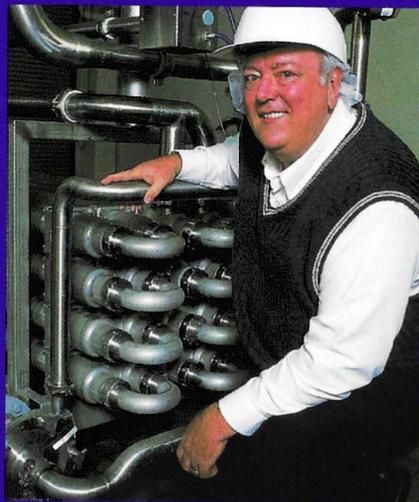
Tetra Spiraflo® MT Pilot The Spiraflo range also includes this heat exchanger suitable for pilot runs and small-scale production.



Tetra Spiraflo® CIP Heater This compact and reliable CIP heater is very easy to install and requires minimal maintenance.



Tetra Spiraflo® Q Combining clever and simple design with top-class performance, the Tetra Spiraflo Q gives excellent value for money and is very easy to install. The all-welded compact construction (length 3 m) permits heat treatment of low viscosity products up to 110°C.



“If you want to produce the best juice, you have to invest in the best equipment”, says Ralph L. Hayes, vice president in charge of juice manufacturing operations for the Golden Gem Growers citrus cooperative in the heart of Florida. The folks at Golden Gem have consistently relied on Tetra Spiraflo for pasteurizing orange juice.

Golden Gem Growers was founded in 1947, and has since become one of Florida's foremost juice producers. In addition to making single-strength and concentrated juices for private brands, the cooperative also packages fruit for export to most parts of the world. Deliveries come in from 450 growers all over Florida during the processing season, October to June.

Mr. Hayes has worked in the citrus industry since the mid-70s. During that time he has been responsible for creating many facilities for juice processing. He thinks that if you want to succeed, you cannot compromise on raw materials or on your choice of components for a processing plant.

“The competition in this business is tough, and you really have to be able to deliver high-quality juice at a competitive price. Every processor has its own special requirements, and if you're going to obtain the product quality you want, you have to be able to control the process precisely. That's one of the reasons we use Tetra Spiraflo.”

It is not only the performance of the Spiraflo units that is valued at Golden

Gem. Mr. Hayes also thinks that it is a great advantage to work with a supplier who offers solid application expertise.

“A case in point occurred when one of our customers required processing parameters that were different than the ones our Tetra Spiraflo heat exchangers were designed to provide. One of the solutions obviously was to purchase a new pasteurizing unit, but with Tetra Pak's help we were able to easily adapt one of our existing units to accommodate this customer's special requirements.”

Golden Gem uses a Tetra Spiraflo FT (Fibre Tube) to pasteurize juice containing 45% pulp and fiber. This unit has a capacity of 3,500 liters per hour.

“The Fibre Tube provides uniform heat transfer with gentle pasteurization and it's designed to maintain pulp fiber suspension throughout the juice stream,” says Mr. Hayes. Golden Gem has invested in a special Spiraflo MTR regenerative tube for pasteurizers handling single-strength orange juice. This solution yields a degree of regeneration over 80%, which also means appreciable energy savings. These pasteurizers have capacities ranging from 11,500 to 18,000 liters per hour.

“Tetra Spiraflo works perfectly and gives us longer operating times. We CIP our pasteurizers and processing systems every 48 hours. It's also very easy to disassemble the Spiraflo units for inspecting both the inner tubes and the shells.”

Golden Gems' consistent dedication to quality has been rewarding.

“We are running an expansive business, and our market share is going up all the time,” says a pleased Ralph Hayes, one of Florida's Juice Industry experts.

