



EXONDER®
A World of High Quality Products

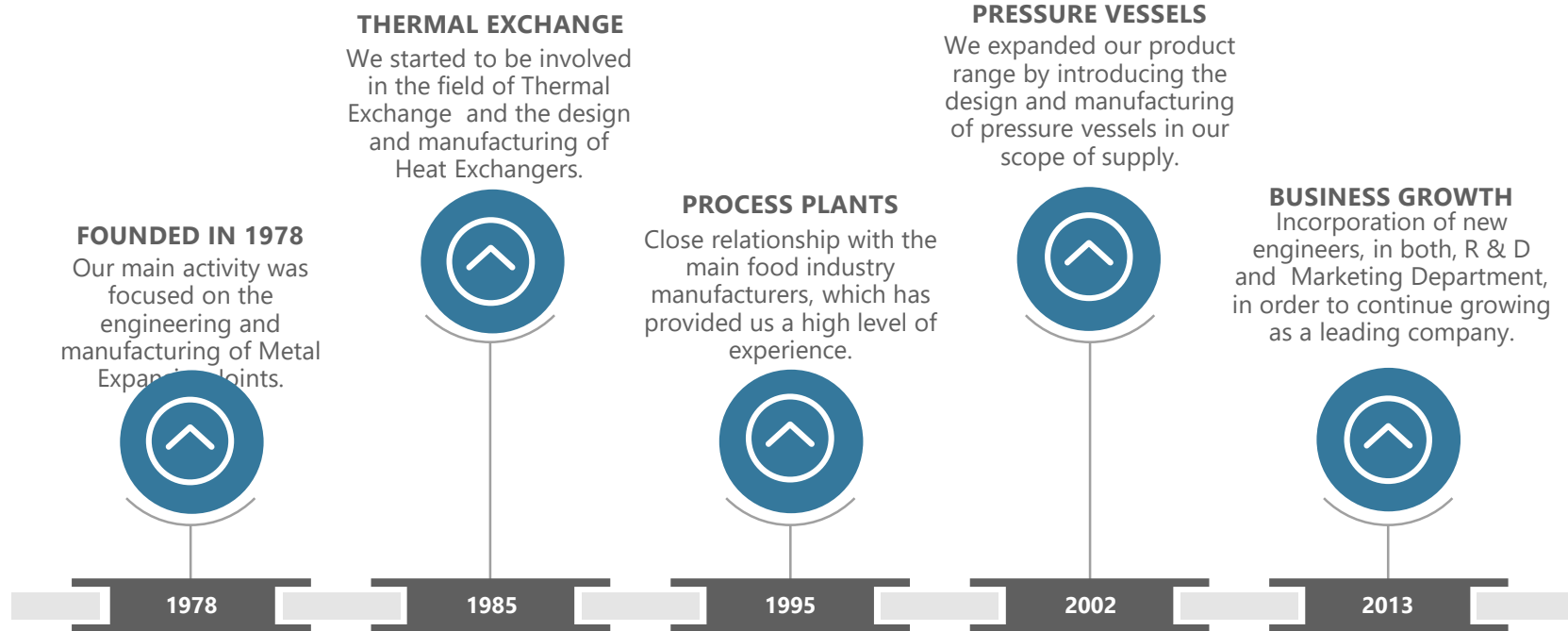


SANITARY LINE

TUBULAR HEAT EXCHANGERS

SACOME | TIMELINE

ENGINEERING, DESIGN AND MANUFACTURING SINCE 1978





SACOME | VALUES

EXPERTISE

More than 6.000 references worldwide.

RELIABILITY

Innovation & continuous improvements.

QUALITY

Quality products that fully meet the needs of our clients.

TEAMWORK

Teamwork skills and cooperation.



RESPONSIBILITY

We honour our commitments and agreements.

CUSTOMER-FOCUSED

In-dept analysis of customer needs and requirements.

FLEXIBILITY

Fully adapted and customized designs.

HONESTY

An ethical approach of honesty as integral part of our philosophy.



SACOME| MAIN ADVANTAGES

MANUFACTURING SINCE 1978

ENGINEERING & DESIGN

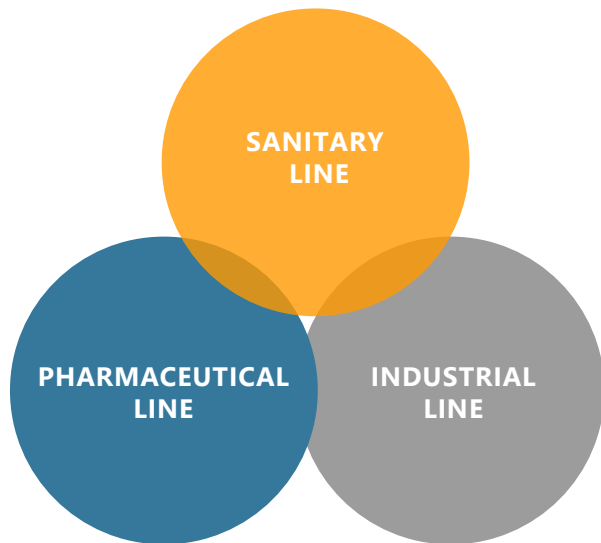
CUSTOM-MADE MANUFACTURING

QUALITY MANAGEMENT SYSTEM

RESEARCH, DEVELOPMENT & INNOVATION

**REGULATION & CONTROL FOR OUR
SYSTEMS & SKIDS**

SACOME | NEW LINES



SANITARY LINE

Optimized designs to favor a good CIP (Clean In Place) cleaning of the product channel, guaranteeing the best finishes and the drainability of the equipment.

PHARMACEUTICAL LINE

Designed in accordance with the recommendations set by the FDA. To avoid cross-contamination the exchanger has a double tubesheet. The finished meet the highest standards, with certified roughness if required. The design ensures drainability and product recovery.

INDUSTRIAL LINE

Designed both thermal and mechanically to ensure long life and high reliability.

SACOME | QUALITY CERTIFICATES

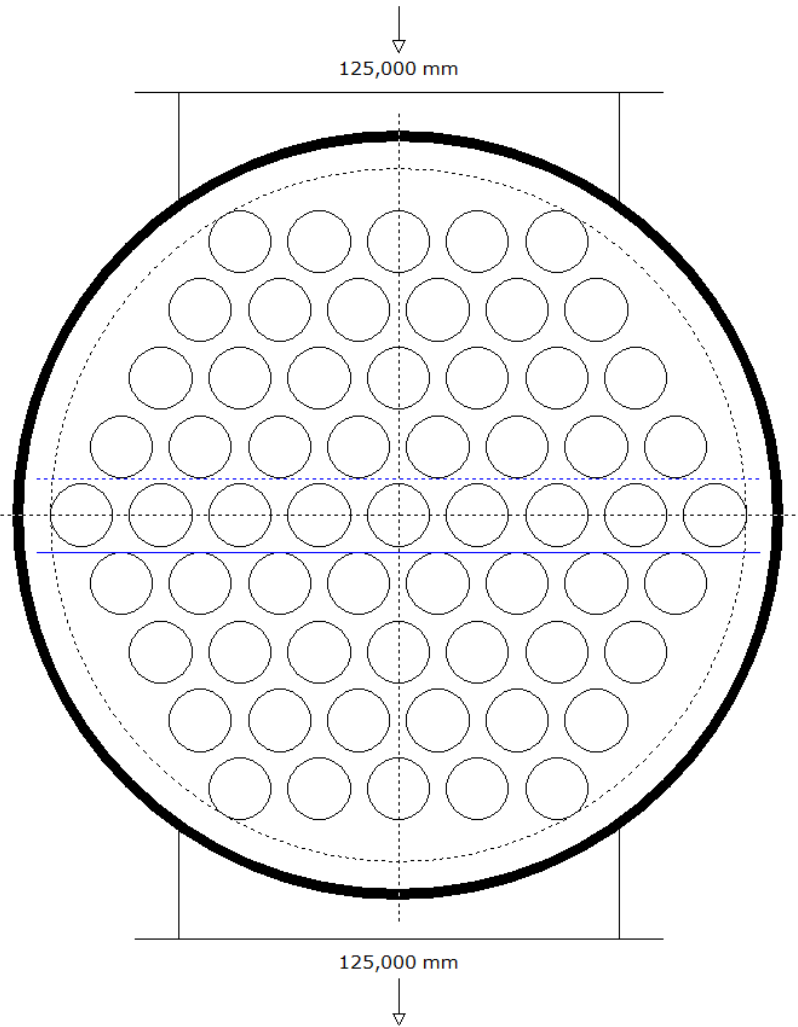


ISO 9001:2008 QUALITY SYSTEM UNE-EN-ISO9001: 2008

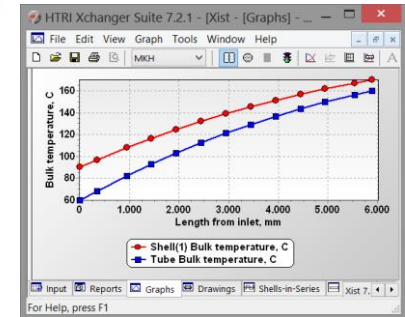
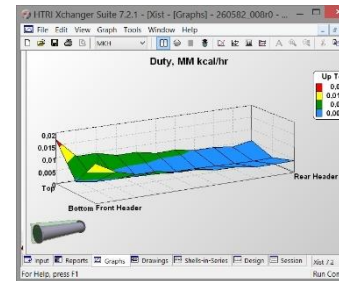


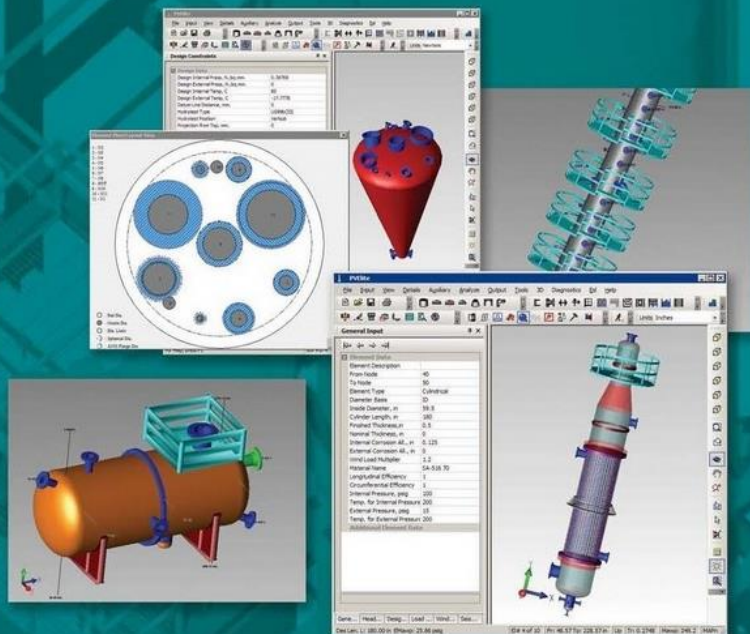
2014/68/EU NEW DIRECTIVE 2014/68/EU





SACOME THERMAL DESIGN

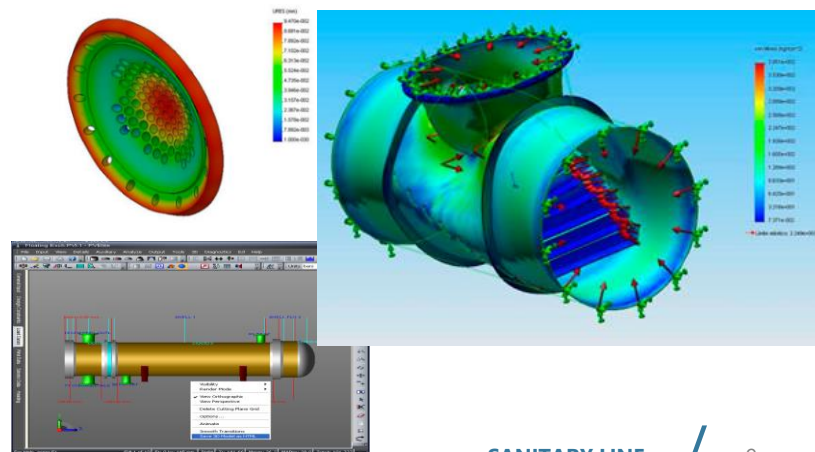




SACOME MECHANICAL DESIGN

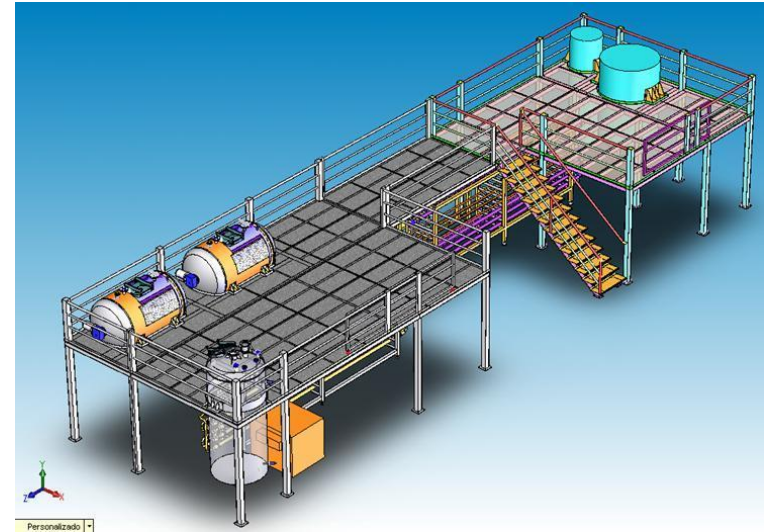
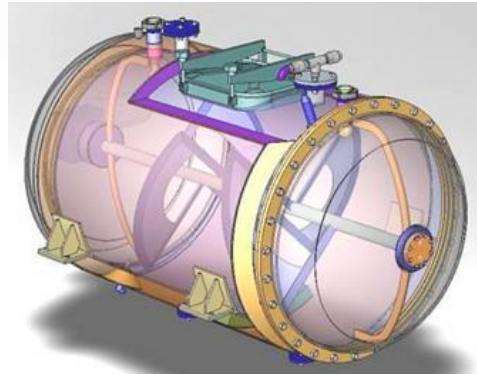
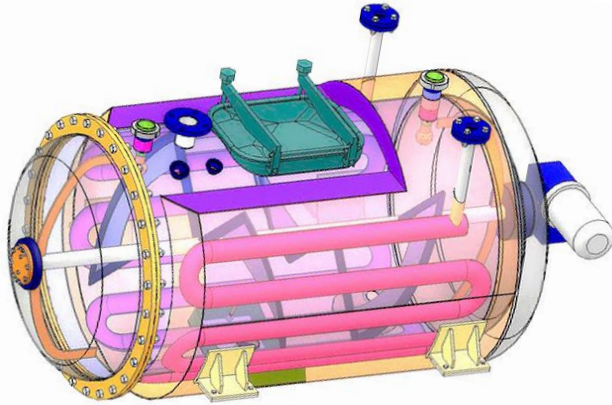
» FINITE ELEMENTS ANALYSIS (FEA)

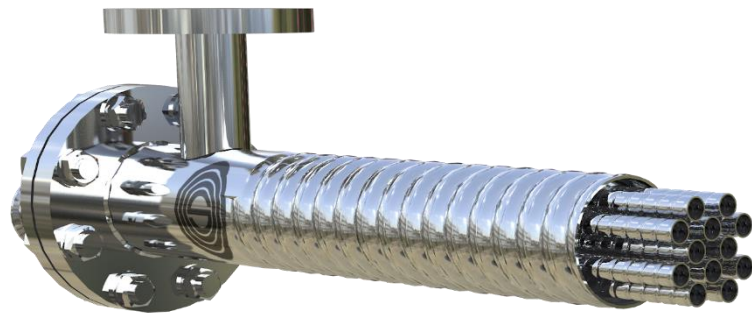
» PV Elite





SACOME CAD 2D & 3D DESIGN





ADVANTAGES HEAT EXCHANGERS

SACOME TUBULAR HEAT EXCHANGERS

LOW MAINTENANCE COSTS

HIGH WORKING PRESSURES

HIGH WORKING TEMPERATURES

PROCESSING OF PARTICULATE OR FIBRE
PRODUCTS

EASY INSPECTION AND DISASSEMBLY

HIGH SECURITY IN ASEPTIC PROCESSES

EASY TO ENLARGE



CORRUGATION TECHNOLOGY

ADVANTAGES OF CORRUGATED HEAT EXCHANGERS

HYGIENIC PROFILE

DIFFERENT CORRUGATION GEOMETRIES (SOFT / HARD)

TURBULENT FLOW, THAT IS ACHIEVED WITH LOWER REYNOLDS NUMBER THAT FOR SMOOTH TUBES

HIGHER HEAT TRANSFER COEFFICIENTS

LOWER EXCHANGE AREA

HOMOGENEOUS THERMAL TREATMENT

LOWER FOULING

SHORTER RESIDENCE TIMES

LONGER RUNNING TIMES



SANITARY LINE HEAT EXCHANGERS

Since the beginning of our industrial activity in the sector of Tubular Heat Exchangers we have consolidated a close collaboration with the Food Industry.

This close collaboration with the most important manufacturers of the Food and Beverage Industry has allowed us to reach the highest level of experience and knowledge of processes and applications of this type of industry.

Optimized designs to favor a good CIP (Clean In Place) cleaning of the product channel, guaranteeing the best finishes and the drainability of the equipment.

HEAT EXCHANGERS SANITARY LINE

TUBULAR HEAT EXCHANGERS FOR THE FOOD INDUSTRY APPLICATIONS



S-TF20-I TUBE IN TUBE



NON REMOVABLE INNER TUBE

S-TF20-D TUBE IN TUBE



**COMPACT DESIGN WITH
REMOVABLE INNER TUBE**

S-TFM-I MULTITUBE



**NON REMOVABLE TUBE
BUNDLE**

S-TFMP-I MULTIPLE PASS



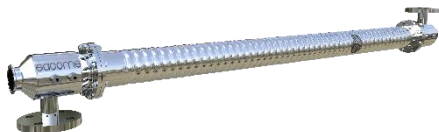
**MULTIPLE PASS AND NON
REMOVABLE TUBE BUNDLE**

HEAT EXCHANGERS SANITARY LINE

TUBULAR HEAT EXCHANGERS FOR THE FOOD INDUSTRY APPLICATIONS



S-TF40A-D ANNULAR SPACE



AXIAL PRODUCT INLET

S-TF40R-D ANNULAR SPACE



RADIAL PRODUCT INLET

S-TF40AH-D ANNULAR SPACE



SPECIAL DESIGN FOR HIGH PRESSURE

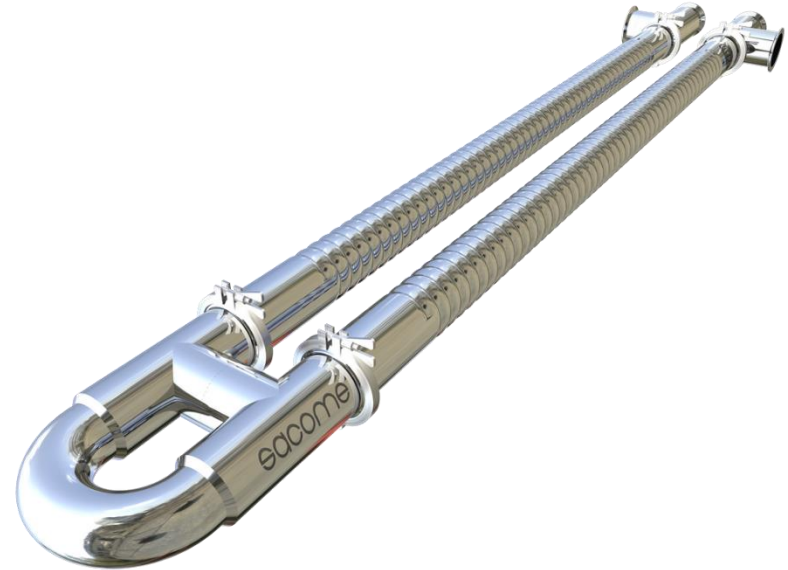
S-TF20-I TUBE EN TUBE

TUBE IN TUBE HEAT EXCHANGER. NON REMOVABLE INNER TUBE.



S-TF20-D TUBE IN TUBE

TUBE IN TUBE HEAT EXCHANGER. REMOVABLE INNER TUBE.



S-TFM-I MULTITUBE

MULTITUBE HEAT EXCHANGER. NON REMOVABLE TUBE BUNDLE.



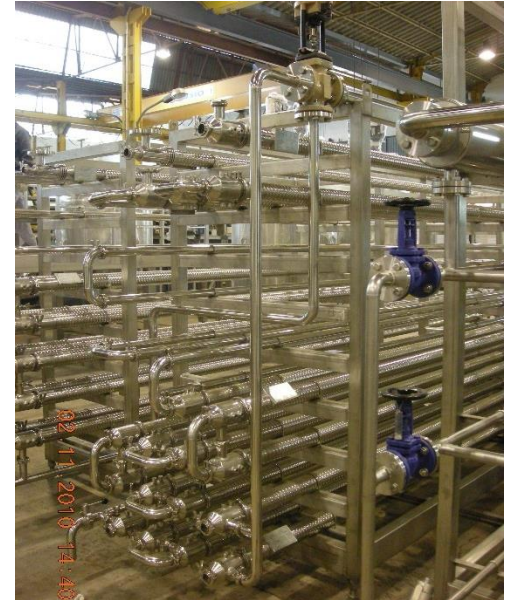
S-TFMP-I MULTIPLE PASS

MULTIPLE PASS HEAT EXCHANGER. NON REMOVABLE TUBE BUNDLE.



S-TF40A-D ANNULAR SPACE

ANULAR SPACE HEAT EXCHANGER. REMOVABLE INNER TUBE. AXIAL PRODUCT INLET.



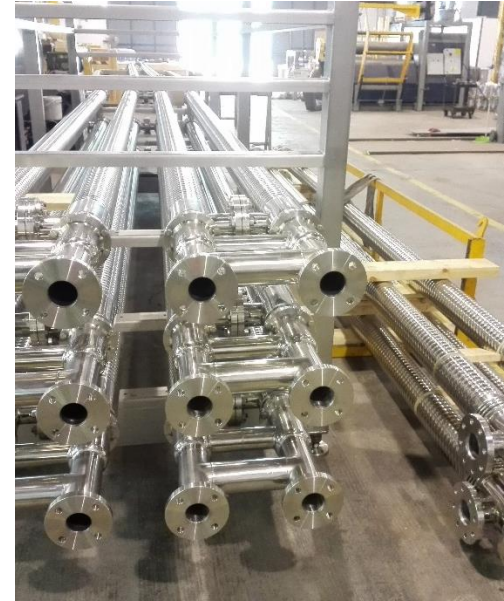
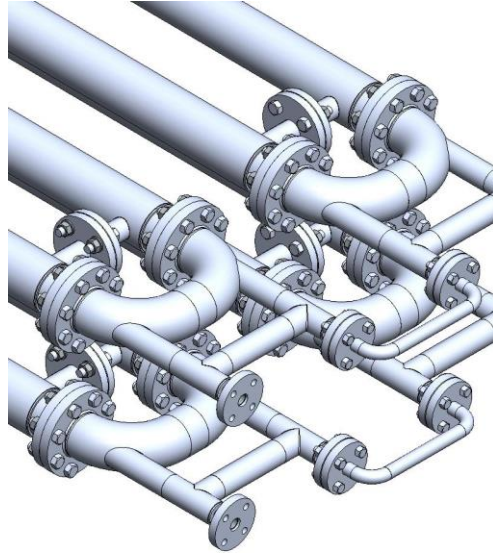
S-TF40R-D ANNULAR SPACE

ANULAR SPACE HEAT EXCHANGER. REMOVABLE INNER TUBE. RADIAL PRODUCT INLET.



S-TF40AH-D ANNULAR SPACE

ANULAR SPACE HEAT EXCHANGER. REMOVABLE INNER TUBE. AXIAL PRODUCT INLET. FOR HIGH PRESSURE.



APPLICATIONS SANITARY LINE





APPLICATIONS PARTICULATE PRODUCTS

SACOME heat exchangers, process plants & pressure vessels are suitable to process particulate products as minced fish, meat, guts and intestines and convert it into products with a better quality.

These products containing big pieces (i.e. meat and fish) have an excellent performance with our **S-TF20-I** tube in tube heat exchangers that avoids the risk of blocking of the tubes and gets lower fouling and longer running times than with other geometries.

The process system is carefully designed to avoid its blocking due to the large size of the solids, taking care of ensuring the quality and safety of the whole process.



APPLICATIONS TOMATO & SAUCES

Low, medium and high-viscosity sauces, with or without salt contents, tomato-based sauces (as ketchup) or others (as mayonnaise or mustard), particulate (diced tomato) or non particulate, newtonian or non newtonian fluids, as well as different sorts of creams and soups, can be successfully processed through SACOME corrugated tube heat exchangers, process plants & pressure vessels.

The great advance of using the corrugation for these seasonings and dressings is the increasing of the thermal exchange coefficients and the reduction of the processing time, keeping the aromas and flavours of the product.

Moreover, for high viscosities (i.e. tomato paste 36 ° Brix) there is no competition between our **S- TF40AH-D** or triple tube design and other configurations, as this can do the thermal treatment of very pasty products, and can be designed up to design pressures up to 130 bar.



APPLICATION WORTS COOLERS

Cooling of worts carried on after cooking and before fermentation in whisky production is an essential part of the process.

The special process conditions, the high content in suspended solids in the fluid to be cooled, and many other strict conditions, recommend to use our corrugated tube heat exchangers instead of others as plate or spiral heat exchangers.

SACOME is a renowned supplier for this application, fact that is supported by dozens of references with the world-leading companies supplying whisky and other spirit drinks.



APPLICATIONS DESSERTS

SACOME designs, manufactures and installs turnkey systems for the desserts applications. Within our scope of supply we can provide as much the thermal treatment section (with our different configurations of corrugated tube heat exchangers) as the equipment for doing the mixing, cooking or sterilization. We have references with several application such a gelatins, dairy products as porridge, yoghurt, cheese cream, bakery cream, custard, or liquid egg, among others.

We have a broad experience calculating and supplying mixing equipment for the production of milk (starting from its ingredients, as powder milk, water and some additives), cooking vessels (horizontal or vertical, including steam or hot water outer shell, and agitation-scraper system), as well as thermal treatment lines (pasteurization, sterilization, cooling for hot or aseptic filling).



APPLICATIONS MARGARINE

SACOME has supplied to world-leading food companies, corrugated tube heat exchangers to remelt and fluidify semisolid margarine and to do the cooling of it before filling.

Our Technical department has designed state-of-the-art equipment for this application, taking a special care in the choice of the suitable material (due to the high content in salts) and in the hygienic design of the heat exchanger.



APPLICATIONS DAIRY PRODUCTS

SACOME has become an important partner in the engineering, design and manufacture of tubular heat exchangers, pressure vessels & process plants for the Dairy Industry. Our range of products have processed with success low-viscosity (as standard whole milk), medium-viscosity (as shake mix or smoothies) and high-viscosity products (as cheese curd), non particulate (skimmed milk) or particulate-rich by-products (yoghurt with pieces, or baby food containing cereals).

Special processes as ultra-high-temperature (UHT) require systems with high running times and low fouling, and in this field our corrugated heat exchangers have no competition with other configurations. Besides, the absence of gaskets (as in plate heat exchangers), reduces meaningfully the maintenance and operational costs of the equipment.



APPLICATIONS JUICE & BEVERAGE

SACOME heat exchangers are customized to handle a wide range of products from low viscosity (as fruit juices) up to high viscosities (as orange concentrate 65° Brix). Pasteurization to eliminate the presence of micro-organisms and extend the product shelf life, or cooling for aseptical filling are some representative examples of the typical processes to be carried out.

The corrugation in the inside tubes increases the turbulence of the product that improves the thermal performance and gets lower running times, safeguarding the flavour, aromas and other organoleptic properties of the product.

Moreover, in order to reduce the energy consumption (both for heating and cooling utilities) and the operational costs a preheating and a pre cooling section can be designed up to high rates of regeneration.



APPLICATIONS EGG TREATMENT

The heat treatment techniques for the egg and eggs by-products are well known, but they must be applied with care.

With the aim to extend the shelf life of the liquid egg and its by-products (as egg yolk or egg white), the pasteurization is the core step.

The lower running time achieved by SACOME corrugated tube heat exchangers helps to protect the nutritional and organoleptic properties of the egg.

FOOD INDUSTRY MAIN REFERENCES





Our References



CONTACT US!

**Our Technical Staff shall be delighted to
provide you with detailed information**



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