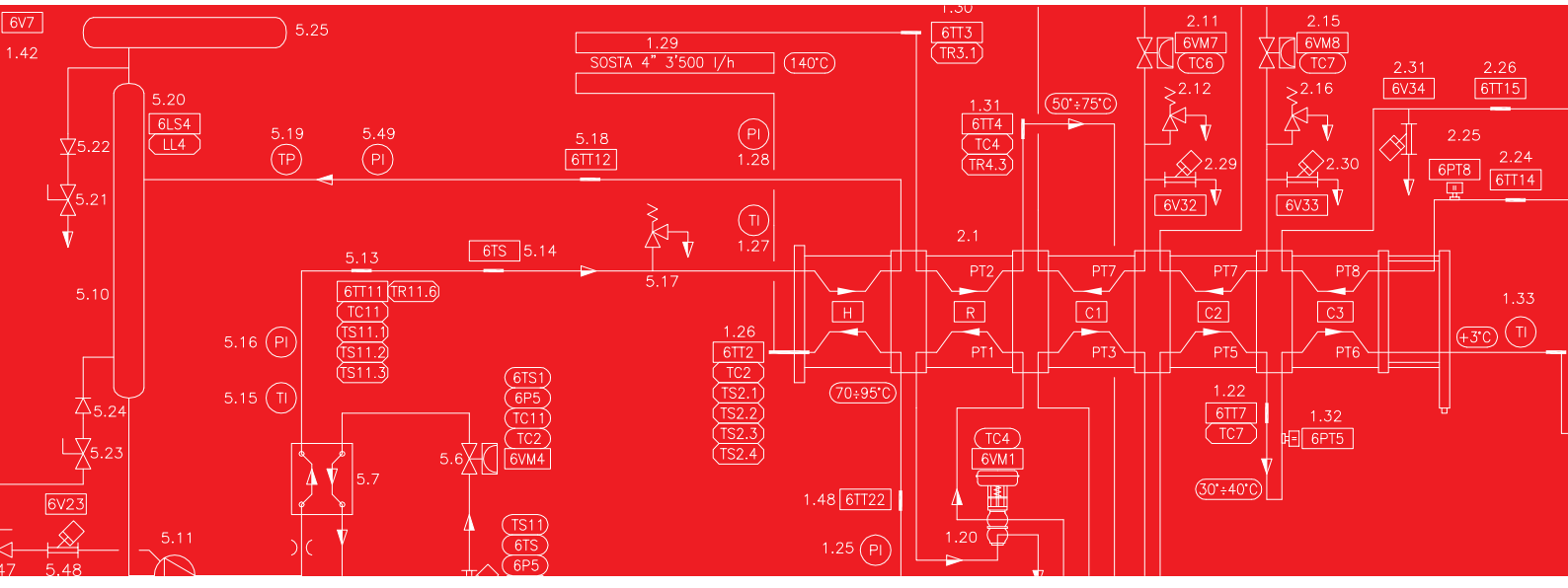
REDA

Food Processing Plants



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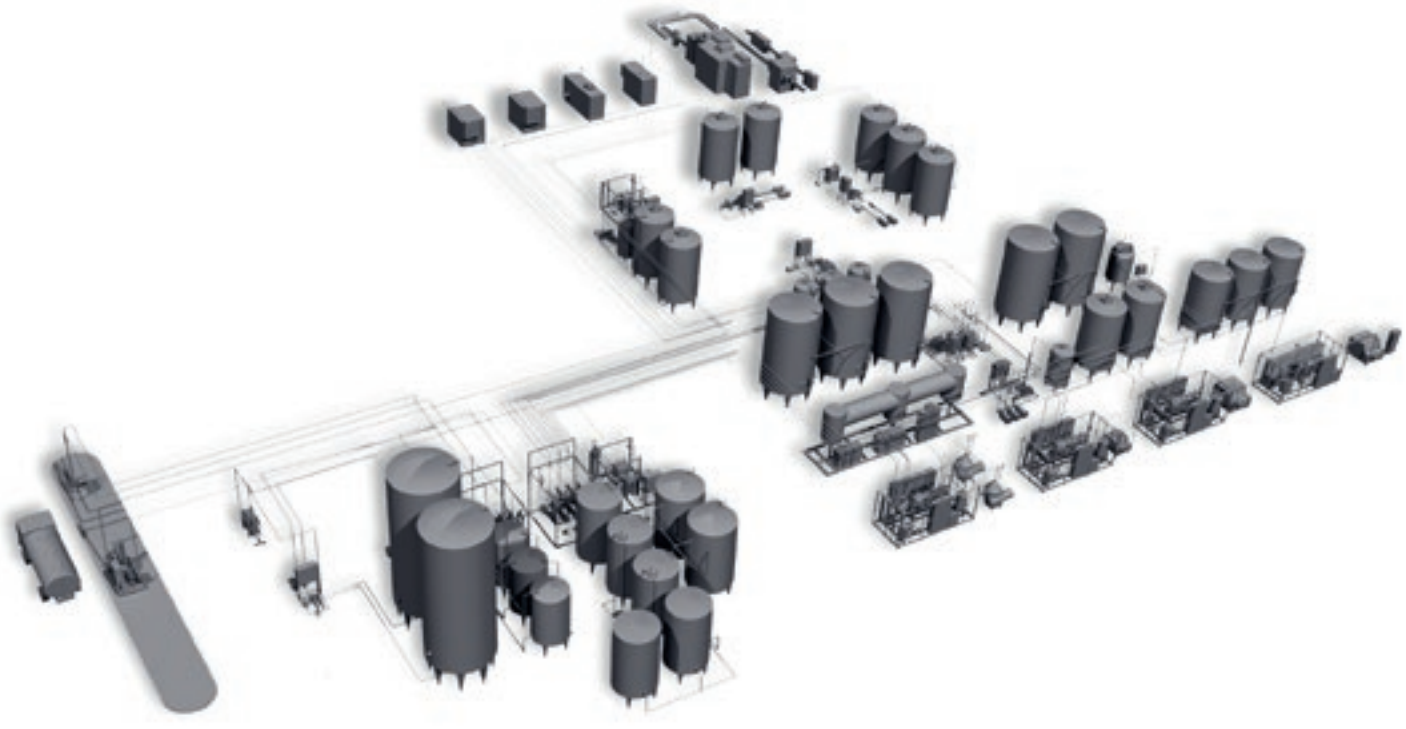
Over thirty years of activity have enabled REDA to become a world leader in the supply of integrated process solutions for the foods industry.



MILK AND BY-PRODUCTS

The milk processing industry is one of the most technologically advanced food sectors, thanks also to the continuous research and development of new products for the market.
REDA has always been involved in this field to guarantee the quality of this precious product, to preserve its quality and to improve its preservation.
REDA lines and machinery for the dairy industry are able to treat milk and its by-products at the highest quality levels thanks to sophisticated technologies and integrated solutions both during the treatment and control phases of the entire process.

Sterilization line for UHT milk and cream with Aseptic Storage

Automatic cream separators
for milk and whey

Inline automatic standardization
systems for milk/cream

Membrane filtration lines for:

MILK:	milk protein standardization, concentration, milk treatment for ESL production.
WHEY:	protein fractionation and concentration (WPC and WPI), concentration/demineralization.
BRINE:	continuous purification.
WATER:	purification and continuous purification of mozzarella rinsing water.

MILK AND BY-PRODUCTS

Example of full automatic line
for the production of UHT products:

- Milk
- Flavored milk
- Soy milk, almond milk, rice milk
- Desserts creme (pudding, creme caramel, cooked cream)
- Ice cream bases
- Coffe cream
- Drinkable yoghurt
- Smoothies, juices, fruit nectars

The same line is capable to produce Pasteurized and ESL Ultra-Pasteurized Milk/Cream.

1) Electric panel with Operator Panel for the handling of product preparation/storage group.

2) Mixing/storage tank.

3) Ingredients loading/unloading unit (concentrates, purées, powders, etc.), mixing powder ingredients, heating, automatic valves for CIP drainage-loading-cleaning.

4) Intermediate storage Aseptic Tank.

5) Sterile air group and steam filtration for Aseptic Tank.

6) UHT sterilization line with Deaerator, Homogenizer, CIP cleaning unit.

7) Electric panel with Operator Panel for the handling of UHT line and Aseptic Tank.

8) In-line preparation and dosing unit for liquid ingredients (fat, vitamins, etc.).

Sterilization plants:

ATR serie:
Indirect tubular systems, max 137/143°C (low steam consumption).

Classic ATR-DIRECT serie:
UHT plants with direct heating from 85°C to 148°C (high steam consumption).

STERIFLEX serie:
Steam injection only in the final phase: eg. 130°C > 150°C
Ideal for a very white UHT milk, with total destruction of HRS spores, but with low steam consumption.

Pasteurization plants:

Pasteurization lines for fresh milk, high temperature pasteurized milk (ESL), cream (30-50%), milk for dairy products, milk reconstituted by powder.

Evaporation plants:

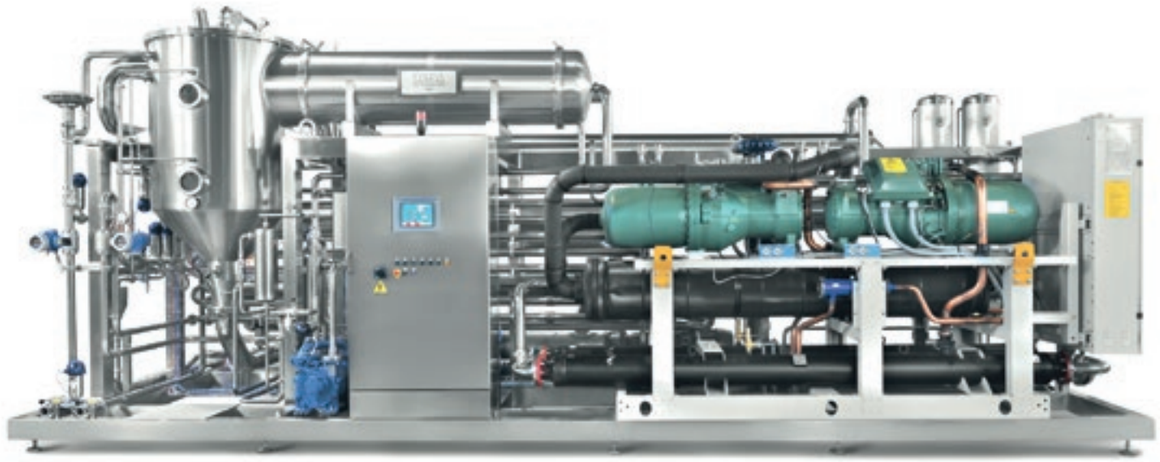
Hot or cold evaporation systems for milk or whey concentration, multi-effect type (with horizontal heat exchangers), MVR type (mechanical compression of vapors) at very low energy costs.

FRUIT JUICES

The great experience acquired in the process of highly sensitive products has enabled us to develop various technologies for a correct and appropriate treatment of the product to guarantee its quality.
Whether it is concerning a fruit juices preparation line (dosing and mixing), or a sterilization line (for aseptic filling), pasteurisation for normal or hot filling, or cold concentration plants, or a centrifuge for juice clarifying, REDA plants are designed to guarantee absolute hygiene and preservation of the natural and delicious fruit aroma.

Syrups rooms and preparation units (dosing and blending) for clear fruit juices, nectars, juices with fibers, other beverages.

Sterilization/pasteurization lines for clear fruit juices, nectars, juices with fibers, fruit concentrates 60/70°Brix, fruit purées with viscosity up to 6000/8000 c.poise.



Concentrators with hot or cold evaporation system for the production of juices, concentrated purées, fruit concentrates, sauces/jams, syrupy fruit.

CM series with evaporation temperatures of 20/24°C, MVR series (vapor compression) with evaporation at 60/70°C, multi-effect series at 2/3/4 stages.

Aseptic / Ultra-Clean Tank for intermediate storage prior to aseptic filling.

Automatic centrifugal separators for the clarification of natural fruit juices.

GRAPE MUST AND WINES

The very long and deepening experience acquired in the processing of highly sensitive food products has allowed REDA to develop some specific applications dedicated to quality wine producers.
These solutions respond effectively and reliably to specific requirements common to many wineries around the world.

Concentration

When the must have not reached the desired sugar content due to an unfavorable season (for poor maturation or excessive rainfalls before or during harvest), REDA cold concentrators represent the best self-enriching technique of grape musts in order to allow the wine to regain its quality characteristics. Starting from 2009, it is also possible, with the same installation, to lower the alcoholic grade of wine (eg 15°Alcohol to 13°Alcohol).

Alcohol removal

In recent years market trends are more and more interested in products with a low alcohol content. To meet this demand, REDA proposes an alcohol removal technology under vacuum conditions, that is a flexible and effective technique that guarantees respect for the structure and the organoleptic qualities of the treated wine. These installations (DVR series), developed thanks to the experience gained in the field of controlled evaporation under-vacuum, represent the best solution in the winery for the partial or total removal of alcohol of wines (results up to 0.1° of residual alcohol).

Thermovinification

REDA has developed an innovative and effective thermal treatment technique for a better extraction of polyphenols from red grapes. A special, continuous and ultra-fast process allows the maximum extraction of anthocyanins, tannins and aroma precursors, giving wines with a greater texture, color and perfume, with total respect of their typicity.

Clarification

REDA offers its longterm experience in the centrifugal separation, with the wide range of automatic clarifiers for musts, wines and sparkling wines. Hundreds of wine producers around the world have been able to test on the field the efficiency, reliability and excellent performance of these separators.
Have you ever thought, drinking some Italian, French, Spanish or Portuguese wine, that its transparency and brightness may be the result of the centrifugal force of REDA clarifiers?
Unfortunately, this cannot be written on the bottle label.

SPECIAL PRODUCTS

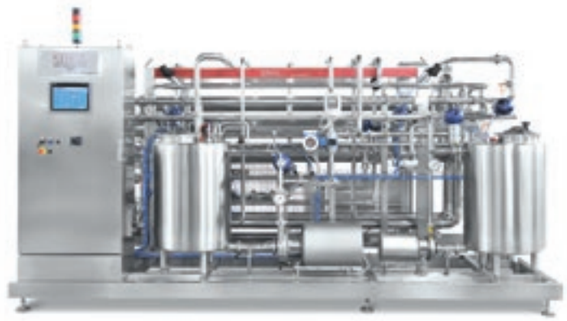
Thanks to the deep knowledge gained during its long-standing activity, REDA has extended and developed its applications to a wide range of special products, including:

Vegetable drinks: soy milk, rice, oats, almond, spelled, millet

REDA is always sensible and careful to market trends and therefore has developed complete lines of extraction, preparation and treatment of vegetable drinks, in order to offer highly efficient solutions to the modern food processing industry. These plants, starting from the raw material (seeds, grains, flours), guarantee end-to-end safe and very high quality products with maximum optimization of production.

Purées / Concentrates / Fruit syrups

- Pasteurization and sterilization lines for hot or aseptic filling.
- Degasation/deaeration systems with aromas recovery.
- Concentrators with low temperature evaporation system.
- Aseptic storage tanks for storage prior to aseptic filling.



Whey

For the exploitation of whey and its derivatives, REDA proposes a combination of technologies developed and tested during its long experience. Whey constituents (in particular whey proteins and lactose) can be recovered and transformed into high added value products (ex. WPC - Whey Protein Concentrates), which can be used in a variety of industries: food and baby foods, nutrition, health industry, pharmaceuticals.

Beer

Pasteurization and clarification treatments for instant removal of solids in the beer. These processes concern clarification of beer at the end of fermentation, clarification of raw beer (green beer), in-line clarification combined with cartridge filtration module, elimination of yeasts.

For the concentration of beer in bottles or drums, REDA proposes the Flash-Pasteurization system that replaces the overcome pasteurization system of bottles in a tunnel.

Honey

For this product REDA proposes pasteurization, degasing and concentration process:

- Pasteurization: the combination of temperature of treatment and holding time allows the destruction of enzymes that are the main responsible for the crystallization of the product. As a result of this treatment, honey will always remain fluid (observing the appropriate preservation measures and the HMF parameter).
- Honey degasation: it's a fundamental process to prevent that oxygen darkens the product due to oxidative effect and the appearance of bubbles of air in the packs.
- Concentration: by evaporation at low temperature, the amount of moisture/water in excess that the honey tends to accumulate during the collection, storage and transport stages is reduced, while keeping its organoleptic characteristics unchanged.

Eggs

For this sector REDA proposes:

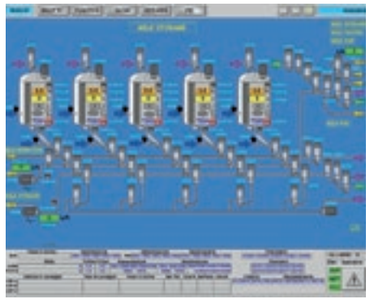
- Liquid egg storage systems.
- Plate and tubular pasteurizers.
- Liquid eggs dosing systems.
- Complete lines for filtering and cooling of yolk, white or egg mixture.
- Software and hardware applications for the control and handling of the above mentioned lines.

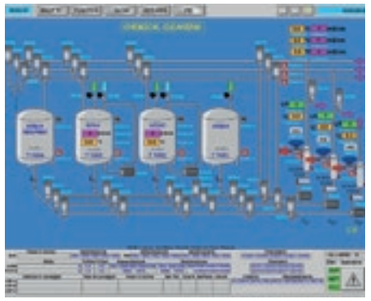
Extraction of natural aromas

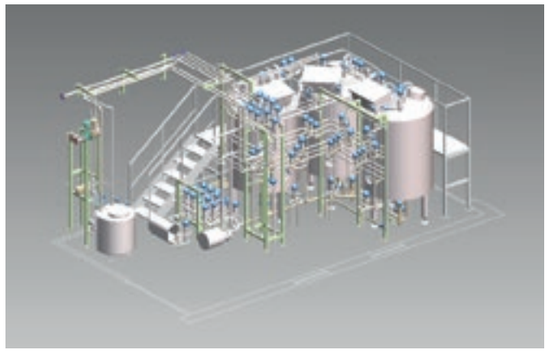
In recent years the world market demand for natural food is increasing and often the solution, in order to give more flavor to natural foods, is in nature itself. Natural extracts add a natural and unique flavor to foods as well as enrich their nutrient principles.
Thanks to the under-vacuum evaporation techniques at low temperatures, REDA solutions allow the extraction of aromatic raw materials derived from natural fruits, vegetables, flowers, plants, leaves, herbs, seeds, spices, seaweeds, roots, etc. in an extremely delicated way and in full respect of the quality characteristics of the raw material.
Extraction can be carried out with varying degrees of concentration starting from aqueous solutions, infusions, hydroalcoholic solutions (Atex), or directly from the fruit (juices, purées, concentrates).

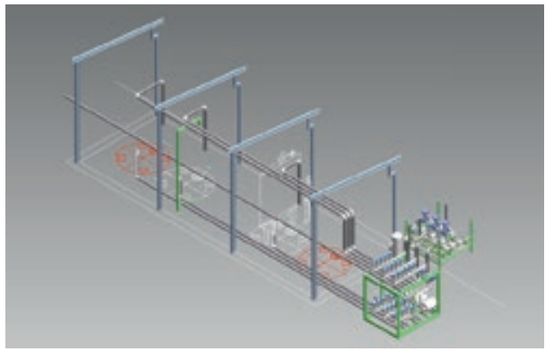
ENGINEERING & AUTOMATION

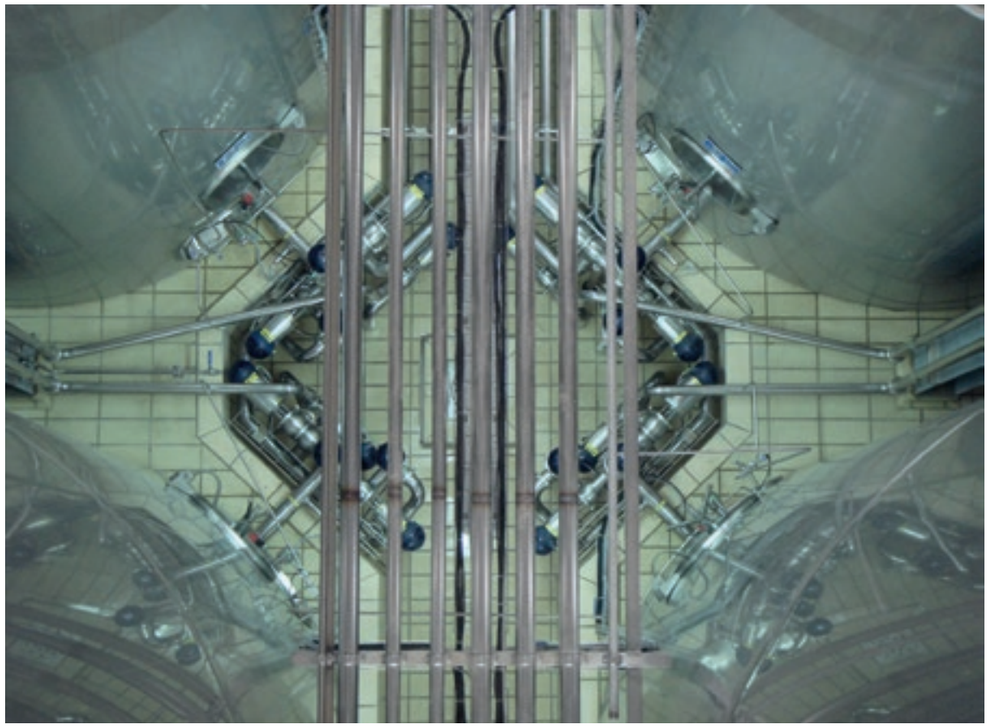
REDA Engineering Division, with its long-lasting know-how in the food field, designs and realizes production plants for dairy, beverages, special products and pasta industry (e.g. liquid eggs).
The projects may include turn-key plants and those accessory plants for auxiliary services (heating plants, chillers, air compressors, vacuum generators, piping lines, thermoregulation systems, CIP cleaning systems, pneumatic and and electric circuits).
Based on the requirements and needs of the customer, the automation process can be applied for a single line, including supervision and control systems, up to the whole factory with direct or remote control of all the production phases by exploiting dedicated sofware developed inside REDA. All this to ensure efficiency and reliability with reduced running costs and optimization of energy consumptions.











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AFTER-SALE SERVICE

REDA priority objective is to provide the Customer with a prompt technical assistance at any time, 24 hours a day.

REDA is therefore committed to provide a constant after-sales service that covers all customer needs with professional quality and global coverage of the markets.
All this is done through a first telephone assistance and/or Teleservice aid and, when necessary, with intervention of own agents or technical staff directly from REDA factory.

The guide lines of REDA technical service are:
- Maximize the performances for the entire lifecycle of its plants and machinery.
- Be close to their customers wherever they are.
- Offer continuous support from the first installation of the plant to technical assistance and spare parts management after sale.

REDA can offer complete packages of preventive maintenance and the remote monitoring/control of its installations through Ethernet technologies and Teleservice support.

As a completion of its services, REDA promotes “tailor-made” training courses both care of the end-user premises or at its headquarter held by its own “service team” and composed of qualified specialists, thus contributing to increasement of productivity and reducing times and maintenance costs.

REDA
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The wide range of plants and machinery, process groups and complete lines, represents a precise and efficient response to the production needs of the modern liquid food processing industry.

The values that have led to know the quality of REDA plants in the world, contributing to the growth of customer companies, can be summarized in:

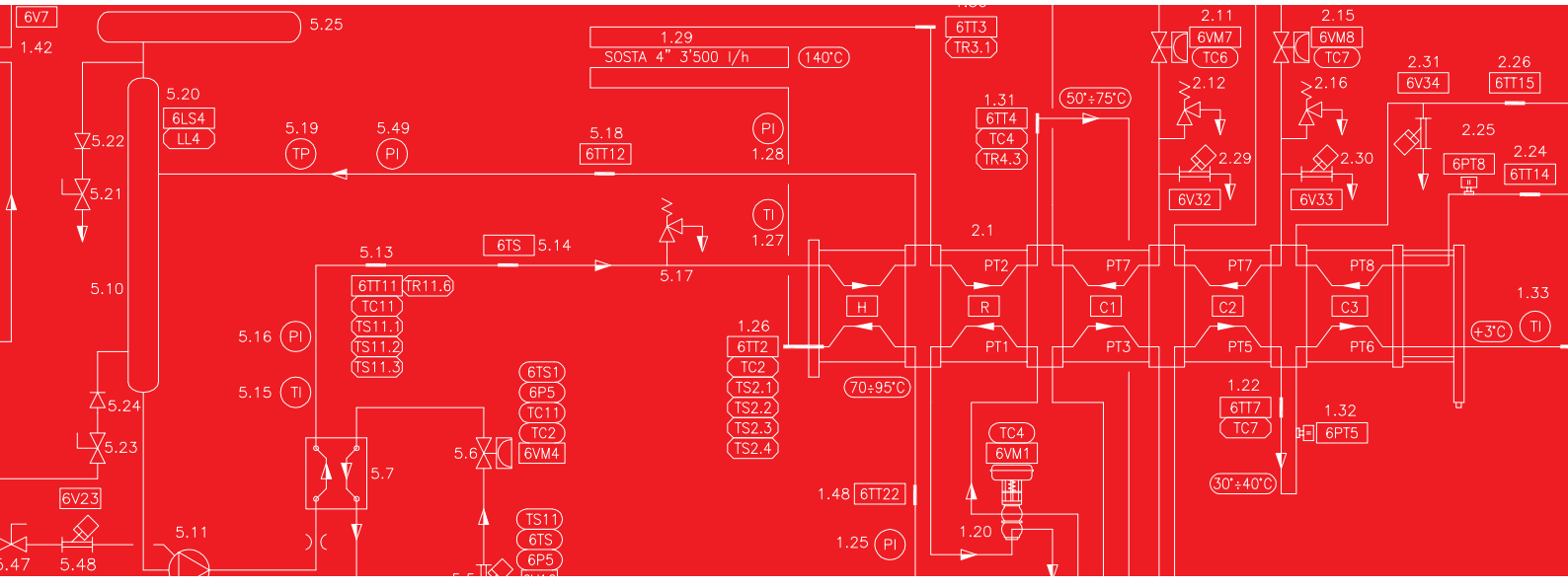
- Passion for research and development of state-of-the-art solutions.
- Great attention to innovation and the security of performances of its installations.
- Customer Satisfaction.

In a more and more exigent global market, REDA has been able to adapt its capabilities to develop new innovative technologies, while accepting the ongoing challenges that new products on the market require.

REDA goal is to design and build very high quality process machines, from single machines or process lines, up to the most complex customized solutions, even with the “turn-key” formula.
All this by acting in accordance with the procedures defined by the quality management system ISO 9001 / UNI EN ISO 9001: 2008.

All the process solutions proposed by REDA, in the aseptic sector, or mechanical separation, or engineering or automation, are based on a very simple concept: to offer the best solution for customer need.

Each plant and machinery supplied by REDA combines efficiency, reliability, safety, flexibility and durability. And each project designed by REDA allows great production flexibility with an optimization of energy, water and other natural resources consumption.
That is the reason why REDA continues to be successful worldwide.



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