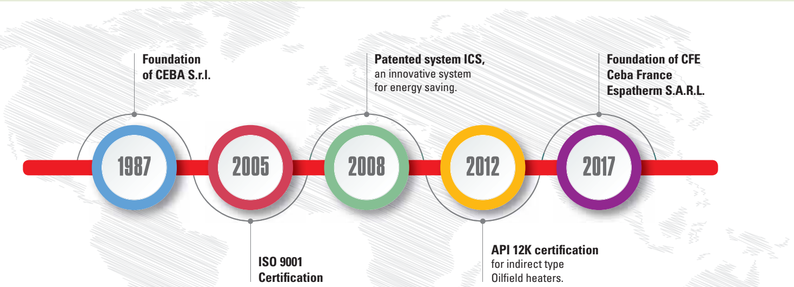
Mission: ***to be a world leader in combustion, offering the market innovative, customized and reliable solutions, focusing on energy saving and sustaining our development from a financial, social and environmental perspective.***

COMPANY PROFILE



RESEARCH AND DEVELOPMENT

Innovation, research and development play a key role in CEBA's policy, with the aim to keep the innovation continuously alive and supply every time the best technology to its Customers.
The investment on the research concerns not only the design and manufacturing but also the testing area included in its facilities. CEBA boasts a test rig area where two test heaters are installed for test of burners and development of new combustion solutions.

CERTIFICATIONS AND STANDARDS

CEBA is certified ISO 9001: 2015, the latest issue of the international standard for Quality Management Systems, for providing assurance about the ability to satisfy quality requirements and to enhance Customer satisfaction in supplier-Customer relationships. The highly qualified staff and the control of the goods in all the phases of the production, grants CEBA to face the market only with very high quality products. CEBA is also qualified among the world's most distinguished Engineering and Contractor companies and the whole design of each project is realized from basic to detailed engineering according to Customers' specification and international standards and directives.

CUSTOMER CARE

CEBA's services are extended also to after sales and spare parts. Actually CEBA assists the Customer during installation, commissioning, start-up, start-in production, maintenance. Moreover CEBA is always available to supply any spare parts either finding it on the market or producing it.

ENVIRONMENT AND ENERGY EFFICIENCY

One of the main goal of CEBA's production is the achievement of environmentally friendly solutions in order to minimize emissions and wastes. In this way, CEBA can assure a low impact on the environment and economical operation by offering products that comply with current environmental regulations. This view is also reflected on its workshop, where CEBA has adopted photovoltaic systems.

BATH HEATERS

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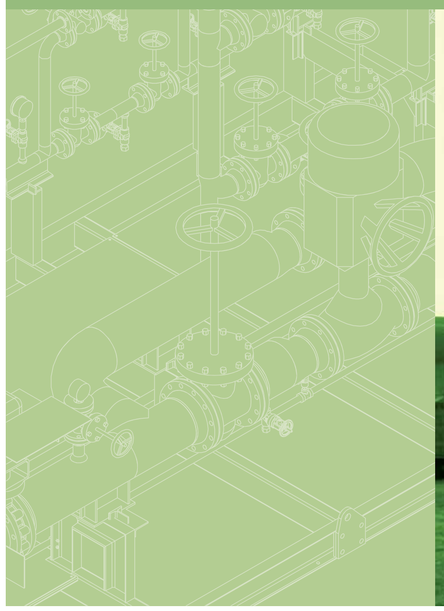


BATH HEATERS

grfstudio

INDIRECT FIRED HEATERS

Bath heaters are designed for heating a process liquid and gases indirectly through a process coil submerged into a bath solution heated by a fire tube style burner.
Indirect fired heaters are used in order to prevent the formation of ice crystals and hydrates occurring during expansion of the Natural Gas for the Joule-Thompson effect but they are also used for instance to heat up crude oil to reduce viscosity or to heat up well-heads.

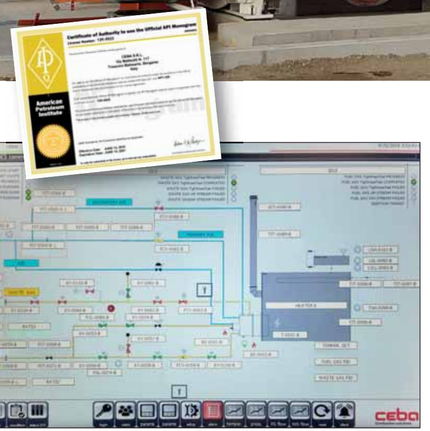
STANDARD EQUIPMENT DATA

Thermal Duty	0,9 MW ÷ 10 MW
Bath fluid and bath temperature	Water, 80- 92 °C glycol + water, 90-98°C diathermic oil, 140 -250 °C molten salt 200-400 °C
Burner	Natural or forced draft
Fuel	Natural Gas, LPG, Light Oil

The main advantage offered by this technology is the possibility to transfer energy to any process fluid at lower temperature and with higher safety levels.

The indirect fired heater consist of an insulated bath heater shell where the bath fluid is heated through a fire tube exchanger placed in the bottom part using combustion gas produced by a burner.
By means of natural convection the water or other bath fluid transfers the heat to the process fluid circulating into a series of process coils located at the top of the heater shell.
An expansion tank placed on the top of the heater is used to compensate the change volume of the liquid with temperature.
Indirect fired heaters have long life and reduced maintenance.
The efficiency of the system depends on the surface exchange and from burner design that can be forced or natural draft.

TYPICAL APPLICATIONS



- Heating of high pressure natural gas before pressure reduction to prevent external frost formation/condensation phenomena.
- Heating of high pressure natural gas downstream low temperature storages.
- Heating of crude oil to maintain fluid viscosity at a minimum and above paraffin pour point.
- Preventing hydrate formation in stream fluids.
- Heating of well-heads fluids before separation phase.

The design is complying with the API 12-K and CEBA is one of the few company in the world qualified with official API monogram.

DESIGN CRITERIA

UPSTREAM

- **SPECIAL DESIGN** of our engineering department with dedicated software, developed in collaboration of University of Bergamo, to assure safe operation, low consumption and low emissions.
- **SKID MOUNTED, WIRED AND ASSEMBLED** to the maximum possible extent before shipment.
- **PROCESS COIL (OR TUBE BUNDLE)** designed according to main international standard (ASME, TEMA,…).
- **SINGLE OR TWIN FIRE TUBE AND STACK**.
- **LOW NOX BURNER** with proprietary design.
- **BURNER MANAGEMENT SYSTEM AND PROCESS CONTROL PANEL** with relay logic or programmable logic system.
- **FUEL GAS VALVE TRAIN** complying with main international standards (EN, NFPA,ATEX,…).
- **FIRST CLASS INSTRUMENT** in order to assure reliability and long life.
- **PLATFORM AND LADDER** to assure access to the stack and easy maintenance of equipment.