C500GB – v2.0

CEPIC

Anticorrosion since 1958

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Specialist since 1958 in the manufacture of anticorrosion chemical engineering equipment, CEPIC offers its customers a wide range of material:

- Centrifugal pumps in CEPIC impregnated graphite, Carbonite®, and plastics
- Carbonite® heat exchangers
- Systems and skids (dilution of H2SO4, treatment of HCl, ejectors, vacuums)
- Carbonite® rupture discs
- Carbonite® made-to-specification machined parts

Our recently-built, **5000** m² production plant is located in Saint Etienne du Rouvray, 120 km north-west of Paris, France.

We master every aspect of the conception, sizing and manufacture of our products. Our process equipment is produced from the following materials: polypropylene (PP), high density polyethylene (HDPE), polyvinylidene fluoride (PVDF), polytetrafluorethylene (PTFE), carbon, graphite and impregnated artificial graphite, Carbonite®.
Our technology is based on our selection of the highest-quality materials (fine-grained graphite, top-quality plastics…), on tested machining techniques, on our teams' many years of experience and on close collaboration with our customers.

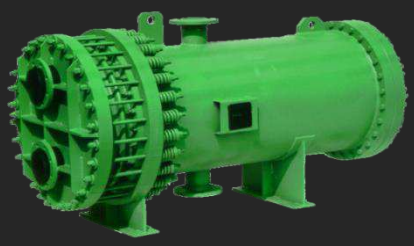
CEPIC equipment is used on all five continents in a wide range of applications :

- Iron and Steel industry
- Heavy chemicals, fine chemicals or specialties
- Petrochemicals
- Pharmaceuticals
- Water treatment
- Agro-food industry
- Incineration and waste treatment…

Our engineers are available to study your needs and offer you the solutions that correspond to your applications. The materials we use allow you to obtain safe solutions for your most aggressive fluids and will reduce your total costs of ownership.

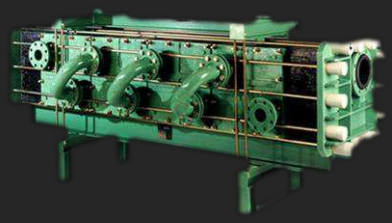
We design, size and manufacture cylindrical and cubic bloc heat exchangers in CEPIC impregnated artificial graphite, Carbonite®. Carbonite® is an excellent heat conductor and has remarkable chemical inertia.
Our exchangers insure heating, cooling, condensation, etc. of corrosive fluids. The corrosive fluids only come into contact with the anticorrosion materials: Carbonite®, PVDF, coated steel. The fluids on the service side (vapor, water, etc.) are in contact with steel and coated parts.
Each CEPIC exchanger is made up of one or more Carbonite® exchange blocs. The exchange blocs are drilled with two series of channels on parallel planes in which the circulation of the fluids takes place. The process and service channels never cross, which guarantees that there will be absolutely no contact between the process and service fluids.
All of our devices are sized in function of our customer's process and application specifications and are manufactured according to the European Pressure Equipment Directive (PED) 97/23/EC.
As part of our full service offer, our new heat exchangers include high-level after-sales service that is fully compliant with current regulations (repairs carried out on our premises, retesting, and genuine spare part) .

Cylindrical horizontal exchangers "EH"



- ✓ Exchange area up to 21 m²
- ✓ Maximum service pressure: 15 bars
- ✓ Process material: Carbonite ®

Cubic section exchangers "ESC"



- ✓ Exchange area up to 120 m²
- ✓ Maximum service pressure: 6 bars
- ✓ Process material: Carbonite ®
- ✓ Service material: steel
- ✓ Can be fiitted in ATEX areas

Horizontal channel exchangers "EHC"

- ✓ Exchange area up to 28 m²
- ✓ Maximum service pressure: 5 bars
- ✓ Process material: Carbonite ®
- ✓ Service material: Carbonite ®
- ✓ Can be fitted in ATEX areas

Cylindrical vertical exchangers "EV"

- ✓ Exchange area up to 144 m²
- ✓ Maximum service pressure: 15 bars
- ✓ Process material: Carbonite ®
- ✓ Service material: steel

CEPIC's centrifugal pumps ensure the completely safe transfer of corrosive liquids. Depending on the model, our line can handle flows of from 1 m³/h to up to 700 m³/h and discharge heads of from 2 meters to up to 130 meters. CEPIC's centrifugal pumps are massive pumps, built in materials that are particularly resistant to corrosion: impregnated artificial graphite, Carbonite ®, or plastics (PP, HDPE, PVDF and PTFE). An ATEX series is also available (94/9/EC). Sturdy and dependable, CEPIC's pumps are used on all five continents for the most severe types of applications.

Each pump is adapted to our customers' needs. Our engineers choose the materials, the sealing solution (magnetic drive, single mechanical sealing, double…) and the hydraulic sizing, according to the specifications for each application. The pumps we supply are heavy-duty, dependable and have very low carrying costs.

All our pumps are individually tested at the end of the production process, in order to guarantee totally safe operation and perfect customer satisfaction.

We guarantee special follow-up of our pumps and supply quality spare parts that are in strict conformity with the original specifications, even several dozen years after the initial installation.

Magnetic Drive Pumps PEM

- ✓ Absolute tightness
- ✓ Hydraulic fittings in plastic materials
- ✓ Single-stage or bearing construction

Submersible Vertical Pumps PVI

- ✓ Hydraulic fittings in plastics or impregnated graphite
- ✓ Submersion depth up to 3 meters
- ✓ Cantilever or with submerged bushings

Standardized horizontal pumps PHN

- ✓ Single, double or rinsed mechanical sealing
- ✓ Hydraulic fittings in plastics or impregnated artificial graphite, Carbonite ®
- ✓ Oversized bearing construction as per ISO 5199/EN22858

Close coupled pumps PMB/PMC

- ✓ Economical design
- ✓ Hydraulic fittings in plastic materials
- ✓ 4 types of sealings

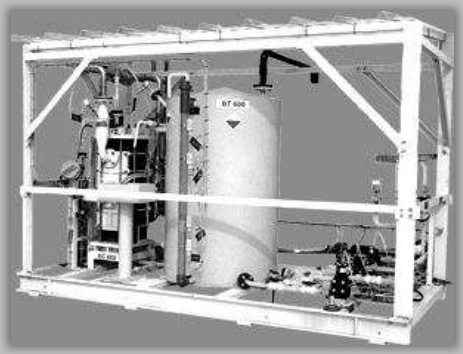
Vertical Pumps PV

- ✓ Turbine sealing
- ✓ Hydraulic fittings in plastics or impregnated graphite
- ✓ Single-stage or bearing construction

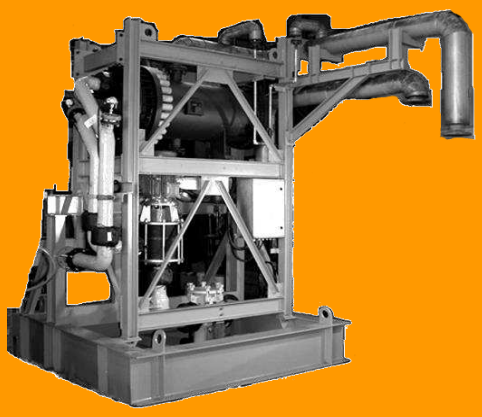
Our manufacturing and engineering capacities allow us to combine our different products in order to create complete skid-fitted systems that can be directly integrated on our customer's premises. We take charge of manufacturing the entire system, thus providing you with a ready-to-install skid.
Our engineers will be happy to study your requirements and work with you to define various complete systems: vacuum generators for up to 1 mbar, skid assemblies for the continuous dilution of sulfuric acid, heating units for hydrochloric acid…

Vacuum Generators

Sulfuric Acid Dilution Units



Heating Units



PROCESS EQUIPMENT

Our know-how in machining large scale parts in impregnated graphite and plastics has allowed us to develop complementary product ranges.

Ejectors

Totally static device that allows for the creation of a vacuum through the use of steam or another motor fluid
Construction in impregnated graphite or in plastic materials

Micro-filters

In complement to the anticorrosion pumps, provides protection against solids that may be circulating in the equipment.
Construction in impregnated graphite or plastic materials

Thermowells

Device allowing for the installation of a temperature gage in a vat or tubing
Construction in impregnated graphite
Sizing as per
ASME PTC 19.3

Dilutors

Device allowing for the static mixing of a concentrated acid with another liquid (for example, water)
Construction in Carbonite ®

Agitators

Standard or made to specification
Vertical or lateral installation
Materials adapted to the application (stainless steel, plastics…)
Many different sealings available

Made to Specification Parts

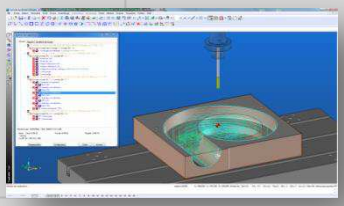
Our production methods allow us to machine parts of the following dimensions:
Max. diameter: 1400mm
Max. Length : 1800 mm

GRAPHITE RUPTURE DISCS

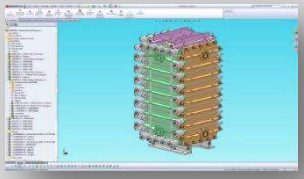
- Designed to protect installations that undergo stress due to variations in pressurization.
- Highly economical and can be used with no corrosion constraints
- Maximum nominal diameter: 500 mm
- Maximum pressure: 70 bars
- Can be used in vacuums
- Material: impregnated graphite

Due to the full integration of the design and manufacturing phases of our material, we are experts in a number of technological domains. This allows us to be highly reactive to your most varied needs.

Design



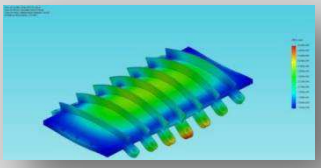
FAO Programming



Calculations and thermal, hydraulic, and mechanical design

CEPIC sas		HEAT EXCHANGER EQUIPMENT SPECIFICATION SHEET		N°	E718
Tél.(33) 2 32 82 37 82				Date :	25/02/2014
Fax (33) 2 32 82 37 88					
1 Customer:		Pickling line n°22		Reference:	HO 3138
2 Service of Unit:		HCl 15% Heater			
3 Type of Unit:		Compact Heat Exchanger, graphite block			
4 No. of Units:		1		Installation:	Vertical
5 SPECIFICATIONS, OPERATING CONDITIONS			PROCESS	SERVICE	UNITS
6 Fluid Circulated					
7 Total Fluid Entering					
8	Vapor			560	kg/h
9	Liquid		144000		kg/h
10	Steam				kg/h
11	Non-Condensables				kg/h
12 Fluid Vaporised or Condensed					kg/h
13 Steam condensed					kg/h
14 Liquids	Specific Gravity		1200		kg/m³
15	Viscosity		0,90		cP
16	Specific Heat		0,89		kcal/kg.K
17	Thermal Conductivity		0,52		kcal/h.m°C

Sizing the processes

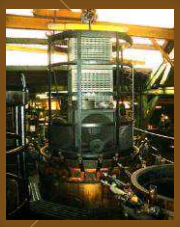


Calculation and design according PED 97/23/EC

Production

Traditional CN machining

Graphite, plastics, steel machining



Phenolic impregnation

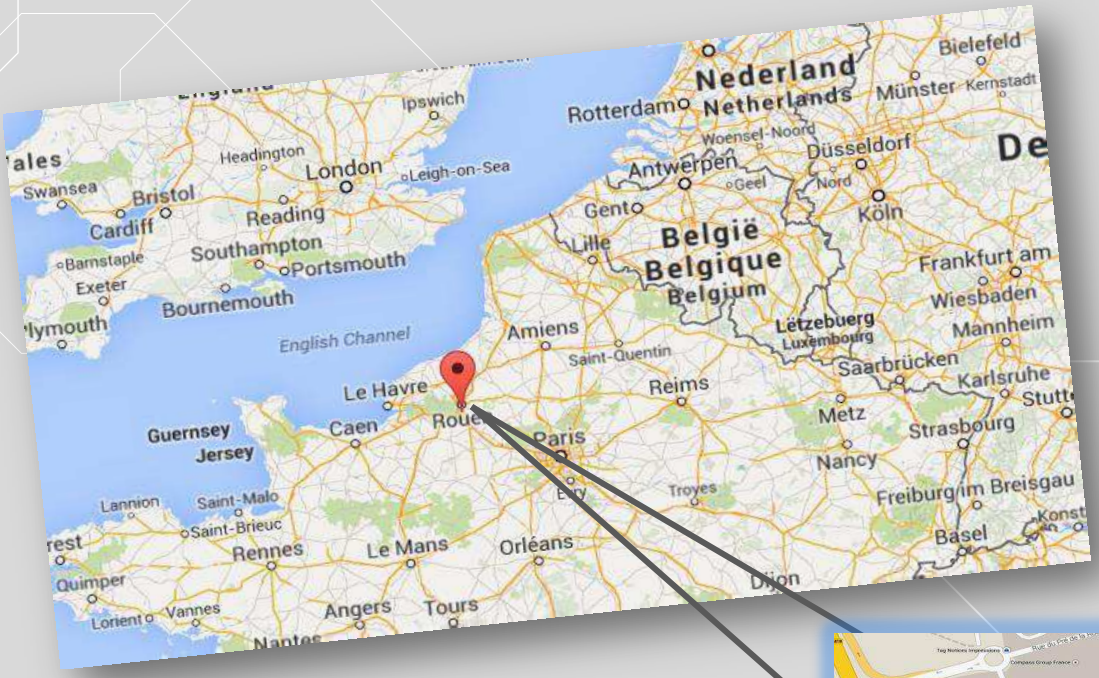
Expertise and Renovation

Fitting in workshop and on site

Expertise

Tests and Trials

Renovation and Repair



By car Paris, Highway A13, exit 22.
By train from St Lazare -> Oissel

Agent/Distributor :

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