

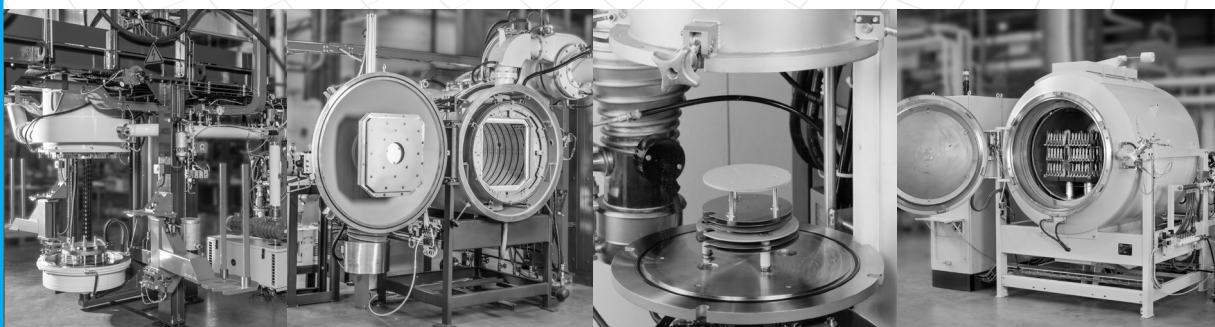


**ECM**  
TECHNOLOGIES

# VACUUM FURNACES: CRISTAL



Cristal



Diamant

Turquoise

Lilliput

Vesuve

## EXPERTISE IN VACUUM APPLICATIONS FOR ALL TREATMENTS

Since 1964, ECM Technologies has been on the leading edge of vacuum furnace manufacturing. Today, there are over 1,500 vacuum furnaces in operation across the globe delivering high-quality results in a wide range of applications. ECM Technologies crafts its own molybdenum resistors to ensure an optimal radiating surface and unrivalled control, thereby guaranteeing the effectiveness of the heating performance.

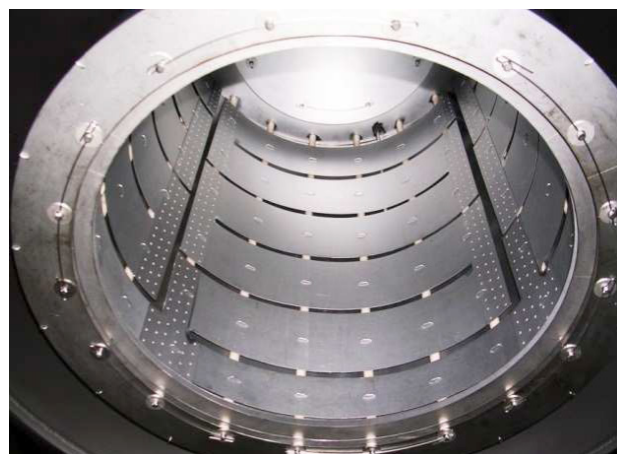
## BELL FURNACES FOR MOLECULAR VACUUMS AND CONTROLLED ATMOSPHERES

The furnace is fitted with a metallic insulation and a choice of heating element is offered: molybdenum or tungsten. It is the ideal system for clean high-temperature treatments. Its design allows precise positioning of the parts directly on the load carrier. The patented design of the heating element guarantees exceptional control over the process.

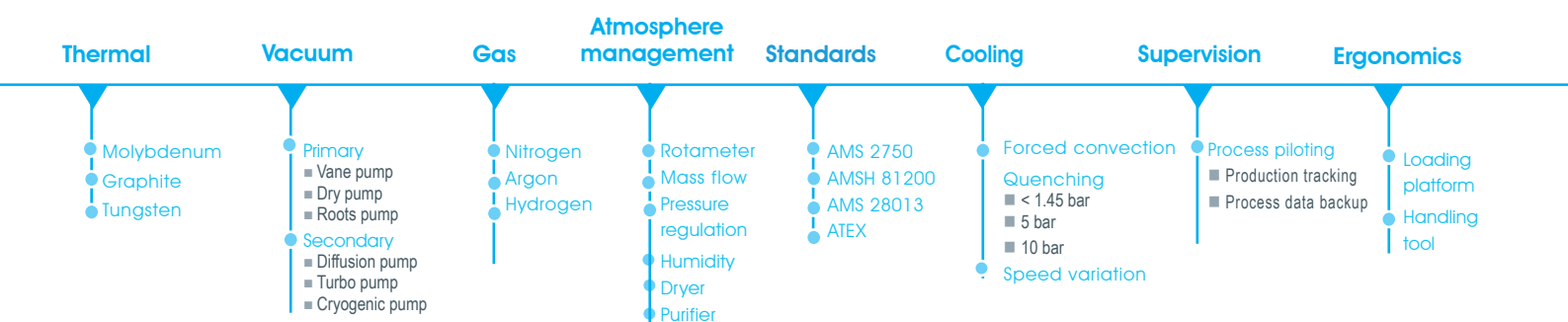
## POSSIBLE APPLICATIONS

A great number of operations can be performed with these furnaces:

- Tempering
- Magnetic annealing
- Bright annealing
- Hyper-quench hardening under gas
- Degassing
- Sintering
- Glass-to-metal sealing
- Metal ceramic brazing: electronic, nuclear, and space applications
- Brazing under vacuum :
  - Stainless steel: heat exchangers, equipment parts, nuclear application, machines.
  - Aluminium alloys: car/vehicle radiators
  - Super alloys
  - Titanium alloys
  - Refractory metals



# AVAILABLE FUNCTIONS



## INSIDE DIMENSIONS

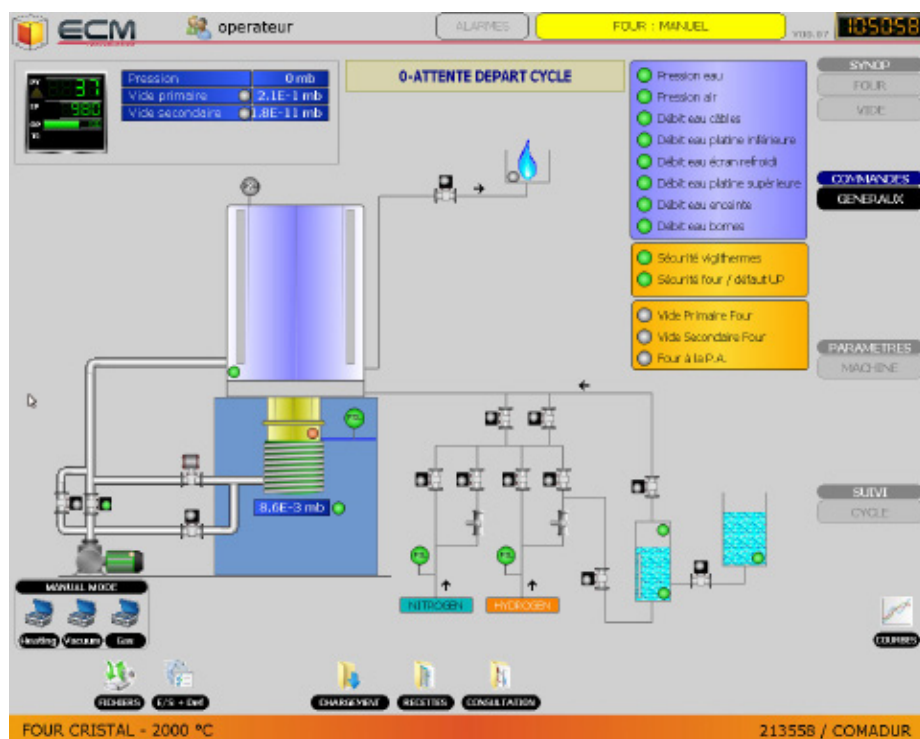
| Type          | Ø * H (mm) |
|---------------|------------|
| Cristal 40-40 | 400 * 400  |
| Cristal 40-60 | 400 * 600  |

## OPERATING TEMPERATURE

Possibility to choose the type of heating elements and heat shields depending on the operating conditions and the treated materials.

- Graphite (operation up to 3,000 °C)
- Molybdenum (operation up to 1,600 °C)
- Tungsten (operation up to 2,350 °C)

## SUPERVISORY SYSTEM



## OUR REFERENCES\*

THALES Crif SIEMENS

SAFRAN Sagem Schneider Electric cea

Höganäs ASB GROUP CMG TECHNOLOGIES cetim

istec PHILIPS AREVA

GE SANDVIK ZF

EGIDE MERSEN comadur CERN

\*Non-exhaustive list

## EXAMPLES OF LOADS



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