

High performance Vacuum Brazing Furnaces

Applications:

- ▶ Vacuum brazing for aluminium heat exchanger
- ▶ Copper brazing for stainless steel heat exchanger
- ▶ Special alloys brazing



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VACUUM FURNACES

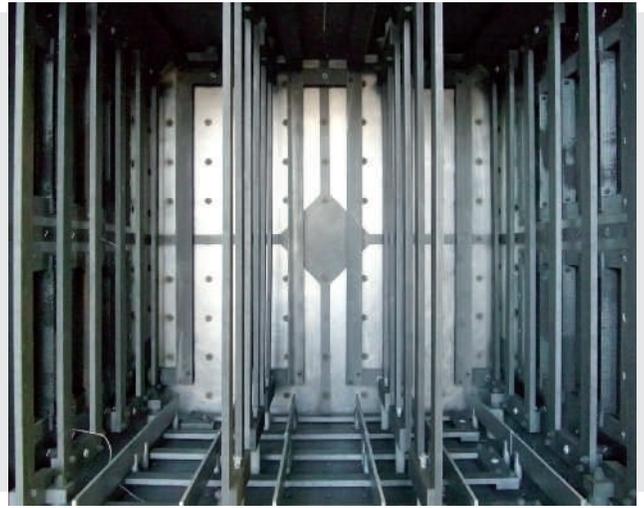
COPPER VACUUM BRAZING

Copper vacuum brazing is carried out under inert gas partial pressure at a temperature close to 1100 °C in furnaces with graphite hot zones.

One or more central heating elements and convection heating can be optionally added to improve the eating speed in the middle of massive loads. Suitably designed path for inert gas flow under partial pressure ensures uniformity in the brazing conditions.

Adjustable shield opening allows full control during vacuum cooling for solidification. Alternated gas flow provides uniform cooling.

High speed fan and high power motor contribute to shorten the final cooling and improve productivity.



ALUMINIUM VACUUM BRAZING

Aluminium brazing is carried out in all-metal chambers at a temperature close to 600 °C under high vacuum (1E-5 - 1E-6 mbar range).

Brazing filler metal can be provided in several forms: wire, sheet or as cladding on sheets made of the core alloy (brazing sheets).

Typical examples are 4004 alloy cladding on a 3003 or 6951 alloy core. In the vacuum furnaces, multizone heating elements ensure optimum temperature uniformity (± 3 °C), which is essential for the process. Double doors and hot zone design allow for more comfortable cleaning operation, especially for magnesium deposits.

Suitable filters protect the primary pumps for magnesium powder. Cooling of the load can be carried out in the furnace or in a separate cooling chamber.

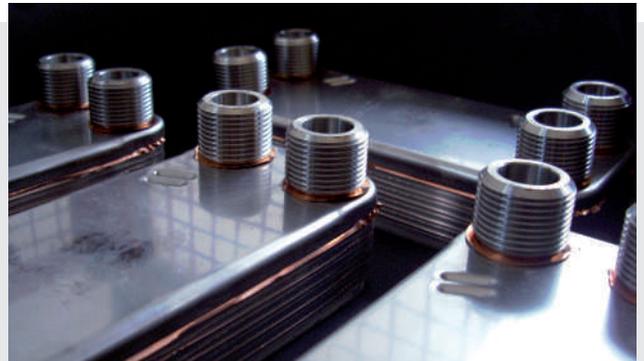
Different type of automatic loading/unloading systems can be optionally provided as required.

TAV VACUUM FURNACES designs and manufactures advanced vacuum furnaces with the highest quality standards in a wide range of geometries and dimensions, now installed and running in over 50 countries in the 5 Continents.

TAV VACUUM FURNACES continuously develops its technology and vacuum furnaces through a close collaboration with its customers and partners.

VACUUM FURNACES MAINLY FIND APPLICATION IN THE FOLLOWING INDUSTRIES:

- aero-engine manufacturing
- industrial gas turbine manufacturing
- heat exchanger manufacturing
- commercial heat treatment
- manufacturing of sintered components
- additive manufacturing
- research centers



TAV VACUUM FURNACES SPA

Via dell'industria, 11 - 24043 Caravaggio (BG) - ITALY
ph. +39 0363 355711 - info@tav-vacuumfurnaces.com

www.tav-vacuumfurnaces.com



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