

Vacuum brazing systems – aluminium brazing under vacuum.

High quality products from stainless steel, ceramic or aluminium may only – in accordance with today's technical requirements – be manufactured by brazing under vacuum. For this purpose, Ipsen offers manual, half- and fully-automatic single or multiple chamber furnaces.

The process

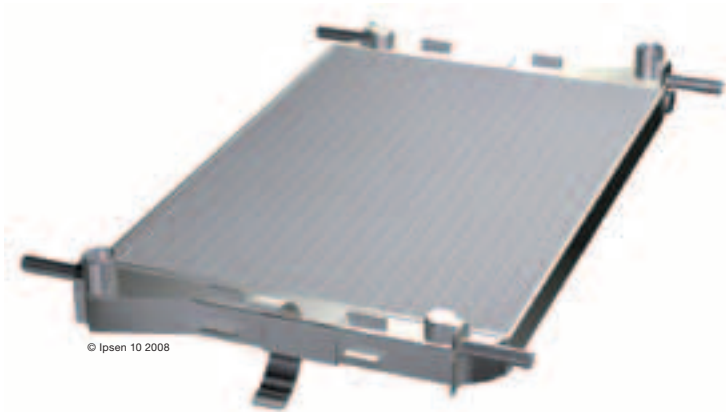
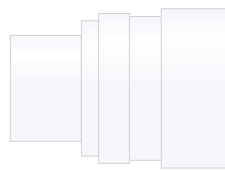
The process uses magnesium containing brazing alloy in the form of batch-plated strips. During flux-free brazing under high-vacuum, the aluminium oxide skin breaks – before the brazing alloy starts to flow – and finally removed by the vaporising magnesium.

Single chamber brazing systems

- Parts up to 1,600 x 7,800 x 2,400 mm (W x L x H)
- Workpiece weights up to 30 t
- Temperature uniformity better than ± 5 K
- Working vacuum in the range of less than 10^{-5} mbar

Three chamber brazing systems

- Throughput of up to 2,000 kg per hour
- Working vacuum of the brazing chamber in the range of less than 10^{-6} mbar
- Temperature uniformity of the brazing chamber ± 5 K
- Pre-chamber designed for cleaning of parts (thermal degreasing)



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Radiator

The advantages

of vacuum brazing in Ipsen brazing systems

- **Adjustable furnace atmosphere**
- **Excellent temperature uniformity**
- **Fast temperature control**
- **Environmentally friendly, flux-free brazing**
- **No post-processing of parts, no disposal of flux residues, no wear of the furnace chamber by fluxes**
- **Brazed joint does not affect the mechanical strength or corrosion resistance because of flux inclusions**
- **High cleanliness brazed joint**
- **High joint strength in the zone next to the base material**

If you require further information or would like to know more about our company and the products we make, please contact us.

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Hard work wins

