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VACUUM BRAZING TECHNOLOGY

ADVANTAGES OVER CAB BRAZING

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HAUGG COOLING SYSTEMS:

SOLUTIONS IN THERMAL MANAGEMENT – HIGH-END, TAILOR-MADE.



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COMPARISON OF BRAZING PROCESSES

PLATE BAR COOLER

✓ VACUUM BRAZING TECHNOLOGY

Atmosphere in the brazing furnace

- Vacuum 10^{-5} mbar – 10^{-6} mbar
- No oxygen
→ no oxide layer

Solder connections

- No corroded soldered seams
- Outgassed soldered seams

Reliability

- Long service life
- High pressure stability

✗ CAB BRAZING PROCESS

- No vacuum
- Protective gas/oxygen mix
→ oxide layer

- Corrosion of the soldered seams
- Flux residues and cavities

- Shorter service life
- Strength of the soldered seams reduced

✓ VACUUM BRAZING TECHNOLOGY

Weldability

- TIG/WIG weldable
- Easy to weld
with no preparatory work

Appearance

- No flux residue
- Glossy aluminium colour

Flux residues

- None, as the process is flux-free

✗ CAB BRAZING PROCESS

- TIG/WIG weldable
after mechanical processing

- Matt surface
from the oxide layer

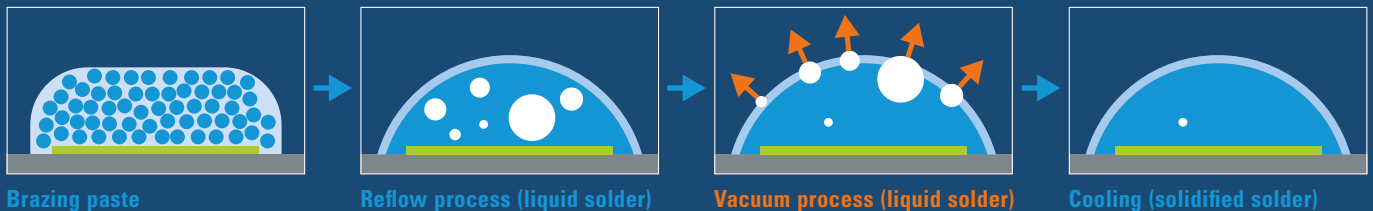
- Fluorine and crystalline residues in the cooling circuit cause clogging of the cooling channels or failure of the coolant pump



Contamination / residues during the CAB brazing process

BRAZING PROCESS WITH AND WITHOUT VACUUM

VACUUM BRAZING TECHNOLOGY



CAB BRAZING PROCESS

