

Simply doubling up on efficiency

CoolSold reduces costs and CO₂ emissions for PCB soldering

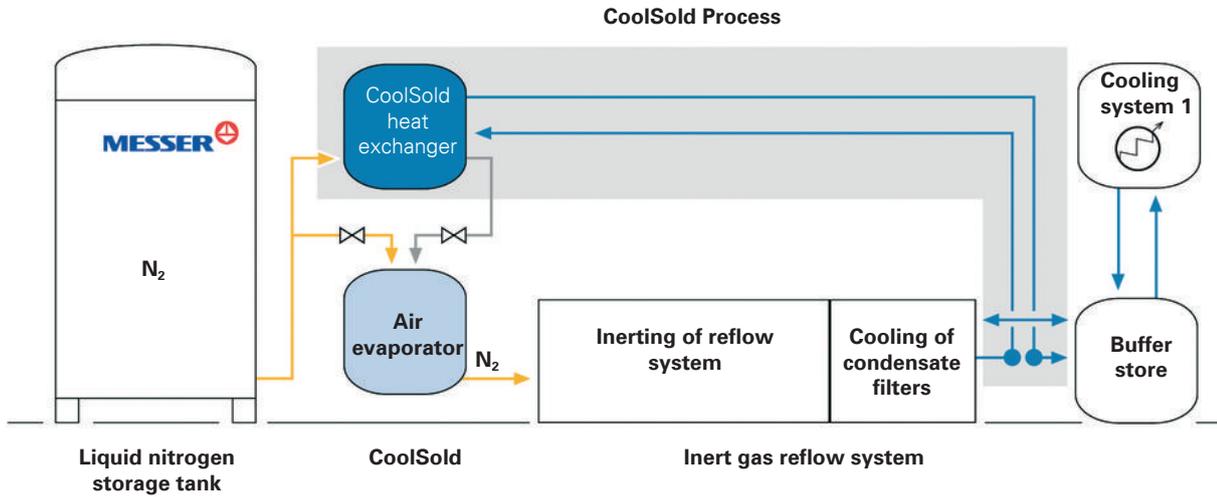
Modern circuit boards are becoming increasingly efficient performers. One of the key factors here is the production process: printed circuit boards are soldered under inert gas which prevents residues in gaseous or droplet form. The inert gas used in this process is gaseous nitrogen (N₂). Its cooling energy subsequently escapes into the atmosphere largely unused.

Cold with dual use

Thanks to the CoolSold process from Messer, the cooling energy of the nitrogen is also used to cool the soldering system's condensation filters. As a consequence, the electrical cooling units for filter cooling, which are a feature of such soldering systems, are used much less frequently. This is reflected in reduced power consumption, resulting in lower costs and CO₂ emissions.



Liquid nitrogen storage tank



Straightforward retrofit: system layout with CoolSold components



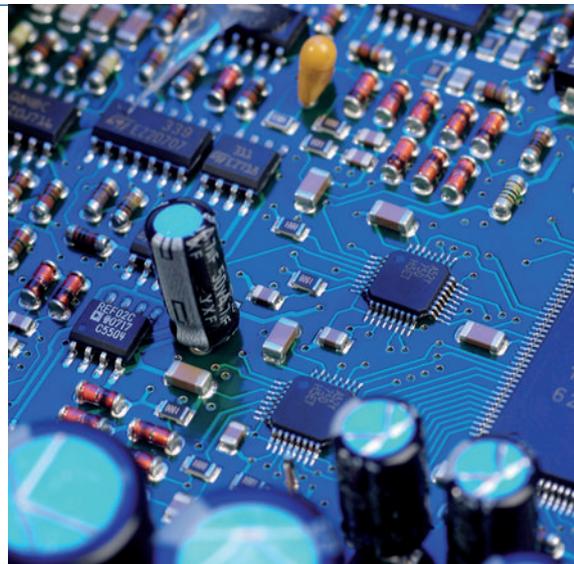
Modern inert gas reflow system

Best practice:

Seidel Elektronik GmbH

Just how well CoolSold works is demonstrated by its use at a Messer customer's plant which specialises in the manufacture of electronic and mechatronic products. The CoolSold process was introduced here recently and is delivering impressive results*:

Energy saving:	31.000 kWh per
CO₂ reduction:	19.000 kg per annum
Kosteneinsparung	37 per cent
Amortisation period:	< 1 year



** Figures are specific to this customer and may vary depending on the application.*

Making use of existing plant and equipment

The technical modifications associated with the use of the CoolSold process are manageable: the cooling circuits for the inert gas atmosphere and the filter system, which were previously operated separately, are connected with each other via a heat exchanger. The nitrogen source – a liquid nitrogen tank – is already in place anyway due to production requirements. All that remains are the costs for the heat exchanger and the associated piping, which will pay for themselves within a short period of time.

Your benefits at a glance:

- Lower energy costs
- Lower CO₂ emissions
- Rapid amortisation of conversion costs
- Reliable technology

If you have any questions regarding the CoolSold process or would like an individual consultation with our application experts, please do not hesitate to contact us.

You can also download this and other brochures in PDF format from our website:
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