

High Quality Soldering + High Purity N₂ Gas = an Electric Combination!

The Challenge

Our customer is a UK-based contract electronics manufacturing company offering a variety of services such as surface mount assembly and complete PCB manufacturing services. They offer customers an end-to-end electronics manufacturing services solution, from one-off prototypes and ultra-low volume through to medium volume repeat production batches.

To improve production processes and increase output in the assembly of printed circuit boards, they purchased a selective solder machine to replace the manual soldering process.

Selective soldering requires an inert atmosphere of high purity Nitrogen gas otherwise oxidisation will occur causing product spoilage. The client turned to Maziak for advice on the best solution.

Maziaks' Solution

Maziak recommended an on-site gas generation solution with an attractive payback on investment. We installed an N2C-8NCALA Parker Nitrogen Generator rated @4.5m³/h @6.8 barg, purity > 99.995% (50ppm), with a permanent LCD display of the quality of gas generated. Additional air compressor capacity was installed to supply the nitrogen generator.

This benefits of this solution include:

- ◆ More cost effective than cylinder gas supply.
- ◆ Futureproofing the cost of Nitrogen supply over cylinder gas price. I.e. mitigating against uncontrollable increases/rentals/levies etc.
- ◆ All gas generated can be used, unlike cylinders that have a wastage level of 10% of unusable gas.
- ◆ Safer for staff as there is no manual handling of heavy high pressure cylinders required and no need for deliveries and offloading of cylinders.
- ◆ More reliable, with no chance of running out of gas if cylinders are not changed regularly or not available when needed and no supervision of cylinder stock levels is required.

Results

Not only are they now benefitting from improved production capacity but the new system can deliver enough Nitrogen generation capacity for a future 2nd selective soldering machine at no extra cost.

