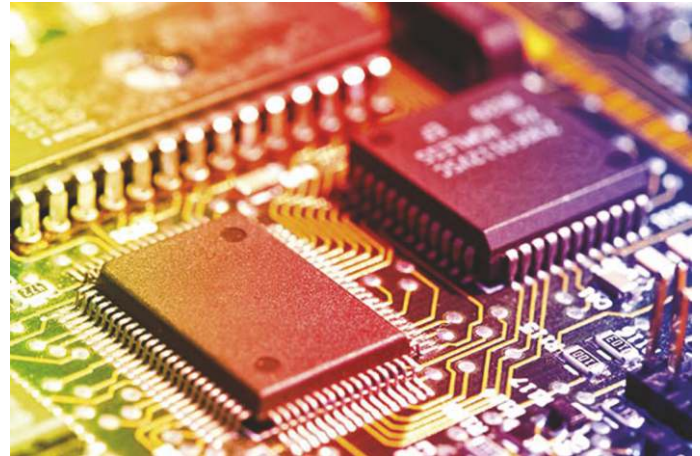


# Reflow Soldering

## We deliver:

- Up to 15% of nitrogen savings
- Continuous quality monitoring
- Easy operation



## The Industry Challenge

Currently, oxidation reaction, poor wettability and high peak temperature in reflow soldering will do harm to electronic solder joints. To offset these effects, using nitrogen to inert the atmosphere during soldering has become a globally accepted practice in electronic assembly. Nitrogen atmosphere improves the wettability of solder, reduces the degree of oxidation, and accelerates the speed of soldering reaction.

Whatever you need to control the atmosphere within your reflow ovens and simultaneously decrease nitrogen costs, **Nexelia™ for Reflow Soldering** is the unrivalled option.

## Your Solution

A comprehensive gas solution designed for and adapted to your specific needs, **Nexelia™ for Reflow Soldering** combines the best of our gases, application technologies and expert support. As with all solutions under the Nexelia™ label, we work closely with you to pre-define a concrete set of results, and we commit to delivering them.

A complete retrofit solution, **Nexelia™ for Reflow Soldering** was expertly designed by Air Liquide to generate and carefully monitor inert atmosphere into your reflow oven. The solution combines nitrogen supply with an automated controlling system to automatically adjust the inert atmosphere composition in the reflow oven.

**Nexelia™ for Reflow Soldering** is for the sectors within the electronic-manufacturing industry that use reflow soldering process.

## Your Advantages

- **Nitrogen savings of 5% to 15%**

**ECO NITROREFLOW** monitors and constantly regulates the nitrogen flow to maintain the required Residual Oxygen Level (ROL) inside the reflow oven. No need of over consumption for clearances, nitrogen consumption is permanently optimized, whatever the operating conditions.

- **Continuous quality monitoring of reflow atmosphere**

**ECO NITROREFLOW** detects and adjusts the internal atmosphere quality of the reflow oven throughout the day. The system works as a virtual operator, checking and adjusting the ROL in the reflow zone in real time, in accordance with the specifications. The equipment consistently maintains optimal performance levels, even with flexible production.

- **An easy-to-operate system**

The installation of **ECO NITROREFLOW** requires no modification of your reflow oven, neither maintenance. You only have to adjust the required ROL set point, and the Air Liquide control system starts to monitor.

# Core Features

Nexelia™ for Reflow Soldering consists of:

- **Nitrogen supply:**

From liquid storage or in a gaseous state on-site production system, nitrogen requirement is carefully calculated by our teams to ensure an optimized performance of your reflow soldering process.

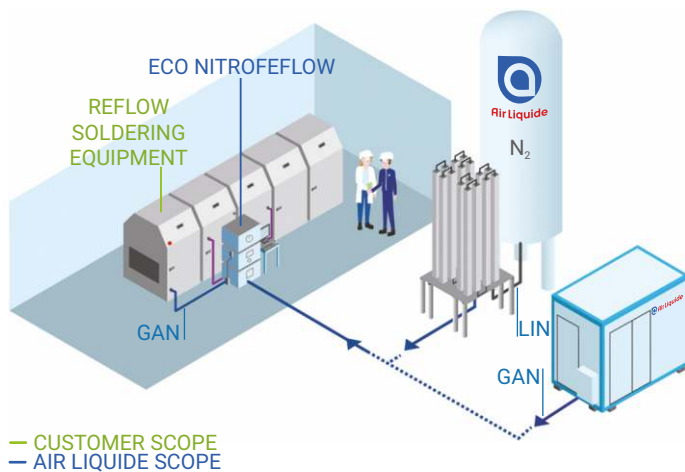
- **The equipment:**

**ECO NITROREFLOW** is a patented, automatic-control system designed by Air Liquide for the cautious monitoring of inert atmosphere into your reflow oven. The system is suitable for oxygen-level ranking from 0 to 3,000 ppm.

- **The full support of our application experts,**

from the very first point of the solution's design, right down to its implementation and maintenance.

## Installation Layout



## Related Offers

- Nexelia™ for Wave Soldering

# Case Study

Within an International EMS Company

**Parameters:**

- Working time: 1750 h/year
- €10/h operating cost

Solutions	Initial solutions	Upgrade with Air Liquide solution	Savings with Air Liquide solution vs. existing
Technical solution	ROL was at 150 ppm of O <sub>2</sub> because of oscillations	ROL fixed at 350 ppm	Setting higher ROL: less N <sub>2</sub> consumption
Nitrogen cost (€/y)	41.2	30.9	10.3
Operation cost (€/y)	2.6	0.9	1.8
Nexelia™ for Reflow Soldering fee (€/y)	0.0	3.6	-3.6
Investment (€k)	0.0	0.0	0.0
TCOO (€/y)	43.8	35.4	8.4

**Results:**

- + €8k/year savings from nitrogen consumption and operational costs
- Continued atmosphere quality monitoring within the reflow process

### Contact Us

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A world leader in gases, technologies and services for Industry and Health, Air Liquide is present in 75 countries with approximately 66,400 employees and serves more than 3.8 million customers and patients.