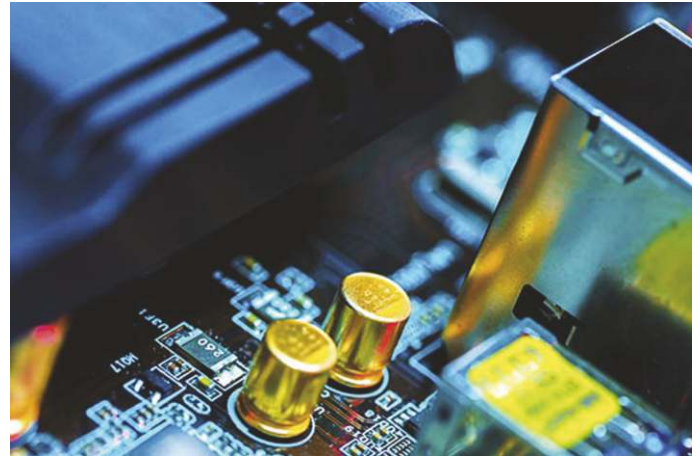


# Wave Soldering

## We deliver:

- Up to 90% dross reduction
- Up to 40% flux consumption reduction
- Up to 40% soldering joint defects reduction



## The Industry Challenge

Currently, oxidation reaction, poor wettability and high peak temperature during soldering of PCBs create harm to electronic solder joints. To offset these effects, using nitrogen to inert the atmosphere during soldering has become a globally accepted practice within 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 inert your wave soldering equipment and simultaneously decrease costs, **Nexelia™ for Wave Soldering** is the optimal choice.

## Your Solution

A comprehensive gas solution designed for and adapted to your specific needs, **Nexelia™ for Wave 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 predefine a concrete set of results, and we commit to delivering them.

**Nexelia™ for Wave Soldering** is a total retrofit solution to generate and carefully maintain an inert atmosphere during the wave-soldering process.

**Nexelia™ for Wave Soldering** is the ideal solution for the electronic-manufacturing industry operating the wave-soldering process.

## Your Advantages

### ▪ Up to 90% dross reduction

Dross consists of mostly tin oxide mixed with good solder. Through specific blanketing performed with the **Nexelia™ for Wave Soldering** solution, the dross formation in your wave-soldering equipment can be reduced by up to 90%.

### ▪ Up to 40% flux consumption reduction

Fluxes are chemical cleaners sprayed onto the PCB. Thanks to the optimal inerting achieved by **Nexelia™ for Wave Soldering**, oxides are reduced and solder wettability improves significantly; thus you can reduce flux consumption by up to 40%.

### ▪ Up to 40% soldering joint defects reduction

The quality of the soldering process is largely dependent upon the ability of the molten metal to stick or wet on the other surface. Thanks to **Nexelia™ for Wave Soldering**, the surface tension is significantly increased on the wave of molten alloy, improving wetting and reducing soldering joint defects by up to 40%.

# Core Features

Nixelia™ for Wave Soldering consists of:

- **Nitrogen supply:**

From liquid storage or within a gaseous state on-site production system, your nitrogen requirement is calculated in detail by our teams to ensure optimized performance in conjunction with your wave process.

- **The equipment:**

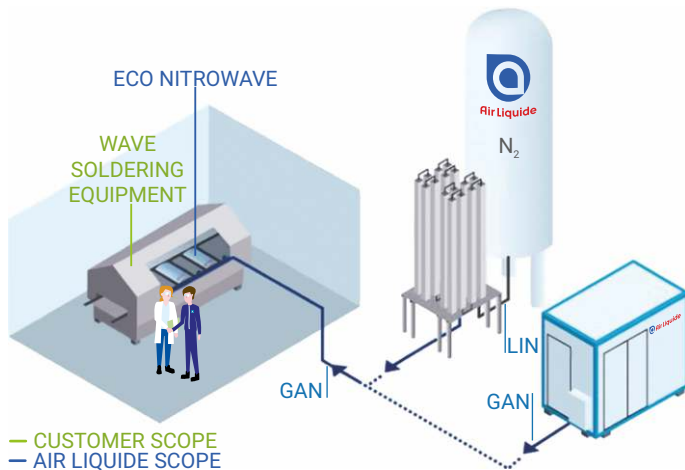
**ECO NITROWAVE** is highly specific, patented equipment that diffuses nitrogen through plenums for optimal inerting of the solder pot and ensures a consistently low level of residual oxygen within the wave process.

In addition, hot nitrogen option increases the heat transfer to the PCB and avoids clogging of the nitrogen diffuser.

- **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

- **Nixelia™ for Reflow Soldering**

# Case Studies

## Case study #1: Dross and Flux Reduction Costs

**Parameters:**

- Solder price: €12/kg
- Flux price: €2/liter
- Number of waves: 19

**Total savings:**

- + €3.5k/year per wave
- + €66k/year for 19 waves

Benefits			
Dross reduction			-80%
Flux reduction			-30%
Economical balance per wave (in €k/year)			
Cost	Initial solution (under air)	With Nixelia™ Solution	Savings
Dross	19.0	5.7	13.3
Flux	14.4	8.6	5.8
Nixelia™	0.0	15.6	-15.6
<b>Total</b>	<b>33.4</b>	<b>29.9</b>	<b>3.5</b>

## Case study #2: Dross and Flux Reduction Costs

**Parameters:**

- Solder price: €23/kg
- Flux price: €8/liter
- Number of waves: 3

**Total savings:**

- + €3.5k/year per wave
- + €57k/year for 3 waves

Benefits			
Dross reduction			-70%
Flux reduction			-40%
Economical balance per wave (in €k/year)			
Cost	Initial solution (under air)	With Nixelia™ Solution	Savings
Dross	32.8	6.5	26.6
Flux	6.0	4.2	1.8
Nixelia™	0.0	9.1	-9.1
<b>Total</b>	<b>38.8</b>	<b>19.8</b>	<b>19.0</b>

### Contact Us

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