

GASPU Provides Foxconn With Dozens Of Nitrogen Generators For Use In Wave Soldering Or Reflow Soldering On Apple Product

Our Product Introduction

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Basic Information

- Place of Origin: CHINA
- Brand Name: GASPU
- Certification: CCS CE
- Model Number: NG -100



Product Specification

- Atmospheric Dew Point: ≤ 40
- Transport Package: Container Loading
- Capacity: 5-5000 Nm³/h
- Guarantee: 1 Year
- Application: General Industrial Fields
- Control Power Supply: 0.2kw 220v 50Hz
- Oxygen Analyzer: Included
- Production Capacity: 5-1000 M³/hour
- Reliability: High
- Port: Shanghai
- Dew Point: < -60
- Electrical Requirements: 230V50/60Hz
- Key Selling Points: High Productivity
- Highlight: reflow soldering nitrogen generator, wave soldering nitrogen generator,



More Images



Product Description

Using nitrogen gas in wave soldering or reflow soldering

Nitrogen (N₂) is used in the production of electronic products because it creates a protective atmosphere that prevents oxidation during the welding process, ensuring optimal product quality. Due to GASPU's latest technological innovation, the on-site generated N₂ provides the possibility of making production more environmentally friendly. The self generation of N₂ will also be part of the sustainable development strategy, as it has much lower carbon dioxide emissions than LIN (liquid nitrogen) supply.

Profitability and productivity are the primary goals of every company. Therefore, the company has been seeking ways to reduce costs in order to enhance its competitiveness. At the same time, legal requirements for environmental protection and decarbonization are also increasing, which is usually related to cost increases. However, what may seem like competing goals at first glance has turned into a win-win situation in practice, with companies gaining dual benefits from it.

Requirements for lead-free soldering

Nitrogen is particularly used in selective soldering, wave soldering, or reflow soldering processes. Inert gas replaces oxygen in the system and prevents oxidation to achieve high-quality soldering connections of electronic components. The pollution caused by the formation of slag and whiskers, as well as the corresponding subsequent damage (such as short circuits), is effectively avoided, and the consumption of solder and flux is reduced. In addition, according to the EU's RoHS (Restriction of Hazardous Substances) directive, the use of nitrogen is a prerequisite for soldering lead-free solder.

The nitrogen required for this can be produced on-site in an environmentally friendly manner. A nitrogen generator uses PSA technology to adsorb the required quantity and quality of nitrogen from ambient air. The compressed air used is generated by a compressor. The disadvantage here is that most of the provided electrical energy is converted into thermal energy by the compressor and evaporates without any impact. The solution will be an innovative concept of gas power generation waste heat, which reduces electricity demand while making the generated heat energy usable.

Nitrogen purifier and heat recovery save energy

The production of nitrogen requires different quantities of compressed air. The traditional system requires a compressed air coefficient of 5 to 6, while the new PSA system only consumes 3-4.0 cubic meters of compressed air per cubic meter (N₂).

With the help of a nitrogen purifier, the required amount of compressed air is greatly reduced. In the two-stage process, the purity of "raw" nitrogen gas is 99.5% -99.9%, and then with the help of a nitrogen purifier, nitrogen gas with a purity of 99.999-99.9999% is produced in the second step. Through this method, a large amount of high-purity nitrogen can be produced while significantly reducing the demand for compressed air (compressed air coefficient of 3.0), thereby saving 70% of the electricity required by traditional PSA technology.

In addition, the waste heat from the air compressor can be recovered to improve the energy balance of self generation. Using heat recovery technology (WRG), waste heat is used as warm air or hot water to heat rooms and processes. By using waste heat, fossil fuels can usually be replaced and saved. Hydrogen and heat recovery can save energy.

Sustainable actions

Legal norms encourage a shift towards greater sustainability. Companies are increasingly following the EU's ESG guidelines, which require sustainable actions in the ecological, social, and legal (governance) areas. The federal government's National Climate Protection Act requires a 55% reduction in greenhouse gas emissions by 2030. In addition, greenhouse gas neutrality should be achieved by 2050. Investing in resource-saving and environmentally friendly technologies to reduce carbon dioxide emissions from industrial processes (decarbonization) and protect the climate is becoming an important factor for long-term success of enterprises. To achieve these goals, governments across Europe are developing economic incentives. The Federal Office of Economics and Export Control (BAFA) supports businesses by promoting energy efficiency in the economy and process heat energy (EEW) from renewable energy sources. Its foundation is the reduction of carbon dioxide emissions achieved through investment. Therefore, the energy consumption of energy-saving systems is compared with that of "conventional" nitrogen power generation systems.

