

# The Revolution of Industrial Drying by PIM: HSCD (High Speed Cold Dryer)

## Global challenges and the urgent need for innovation

Today's context is marked by urgent challenges: **energy saving, dependence on fossil fuels, circularity, environmental protection** and **resource recovery**. The food industry, in particular, requires radical innovations to respond to these needs and align with the principles of **Industry 5.0** and the recent European Regulation NET-ZERO INDUSTRY ACT.

Thanks to the twenty-year expertise of the Technical Team, gained in the industrial food drying sector, **a highly energy-intensive sector, conditioned by the use of fossil fuels and linked to long drying times** (if not to the detriment of the quality of the processed product), the PIM company has carried out an intense Research and Development activity, born from the union of ethical values and skills, aimed at developing revolutionary solutions in the world of food drying.

*The PIM company presents the **Revolutionary HSCD SSD-SA 001 drying system** at ANUGA 2024, a highly innovative technological system, **internationally patented**, which uses non-ionising electromagnetic waves applied in different combinations and in vacuum, with extraordinary results in terms of **energy saving, environmental sustainability, significant reduction in drying times, significant reduction in overall dimensions while respecting the organoleptic qualities** of the treated product (we work at high speed but at temperatures between 20°C and 35°C - depending on the needs of the customer and the product - so we do not degrade the raw material), **recovering the extracted water**, all obviously in line with the requirements linked to **Industry 5.0 and the NZIA regulation**.*

*"A drying system, the **HSCD**, which radically changes the traditional production model and which allows food products to be processed through a high-yield process which, moreover, thanks to the low energy requirement, can also be powered entirely by **renewable sources**, with a significant **reduction in CO2 emissions**".*

The **Net-Zero Industry Act (NZIA)**, adopted in March 2023, represents a milestone on the EU's journey towards climate neutrality. The regulation sets ambitious targets for the production and use of net-zero emissions technologies, aiming to reach at least 40% of annual deployment needs by 2030.

**HSCD SSS -SA 001 by PIM allows companies in the food industry to grasp the urgent need to adapt to the new regulation.** The NZIA introduces a series of **obligations and incentives** that will have a significant impact on the operations of businesses.

## Obligations:

- Companies will have to **report their greenhouse gas emissions** and define concrete plans for their reduction.
- They will have to **use net zero emissions technologies** for their production processes and products.

- They must **respect the sustainability criteria** established by the regulation for access to public funding.

#### **Incentives:**

- The regulation provides **public funding** for companies investing in net-zero emissions technologies.
- **Authorization procedures** for strategic projects will also be simplified .
- Companies that comply with the regulation will be in an advantageous position to **compete in the global market** for green technologies.

**Inaction is not an option.** Companies that do not comply with the NZIA risk being left behind and losing competitiveness. It is essential that businesses start **implementing the necessary measures to comply with the regulation** as soon as possible.

The pluses of HSCD SSD-SA 001:

1. It allows **energy savings to be always greater than 3 times** compared to traditional methods;
2. It allows a **production capacity always higher than 3 times** compared to traditional methods;
3. It allows a **time saving of up to 9 times**, for different products, compared to traditional methods, modulable according to the customer's production needs;
4. Allows 100% recovery of the extracted water;
5. It keeps **the quality of the product 100% unchanged** with colours, flavours, aromas and values as "raw";
6. it is 100% Green, NO fossil fuels, can also be powered only by renewable sources;
7. it is Industry 5.0 ready and compliant with the European NZIA Regulation.

The HSCD SSD-SA 001 Technology has already been applied on over 50 types of vegetables and products of animal origin and comparisons between traditional and HSCD systems demonstrate that with the same production capacity, the HSCD system records significantly lower consumption and temperatures without the need **for pre-treatments that block oxidation and maceration** to guarantee healthiness.

**The Net-Zero Industry Act represents a unique opportunity for European companies to lead the transition to a net-zero emissions economy.** It's time to act to build a more sustainable and competitive future.

*As CEO Sonia De Bortoli Gazzuola states, "ANUGA 2024 takes place in a historical period which, like never before, represents the urgency of solutions regarding significant energy savings, less dependence on the use of fossil fuels, the need for circularity, to safeguard the environment, to recover every possible resource in all phases of food processing."*

*“We believe that the **HSCD drying system**”, as confirmed by **Vittorio Cogo, Head of the Research and Development department**, “can optimally respond to needs that the current economic situation has brought to the forefront”.*

*“As the great physicist Erwin Schrödinger wisely said, **discovery is not so much seeing what no one has yet seen, but rather thinking what no one has ever thought about something that everyone sees.***

*We are aware of the fact that we are presenting a drying technology that radically changes the traditional production model, but we are equally certain of the fact that the market needs to adapt as soon as possible to a more sustainable and respectful approach and will welcome a proposal with interest and enthusiasm which allows producers in the agri-food sector to obtain enormous benefits in terms of **energy saving** and **production quality** deriving from a **high-speed and low-temperature drying system**, with all the known advantages with respect to the **organoleptic and nutritional qualities, typical of artisanal** and Furthermore, compliant with the requirements of Industry 5.0 and the NZIA Regulation”.*

*“PIM is promoting training and development based on **principles, ethical values and respect for the planet**, with the awareness that the future of the environment is inextricably linked to our future and that, however demanding and ambitious a challenge may seem, it is our duty to work hard to guarantee a future for the planet and future generations.”*