



Smart PEF performance tools

INTRODUCING PiCON SENSE, VISION & FLOW.

Real-time monitoring and AI-supported optimisation tools that automatically adapt to changing raw materials and process conditions, ensuring optimal treatment performance with greater efficiency and control.

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PEF Inline Control tools

PiCON. BETTER PEF PROCESSING THROUGH INTELLIGENT AUTOMATION

Elea PEF systems are designed to deliver efficient and precise treatment across a wide range of applications. The PiCon range takes this further, reducing operator dependency through continuous monitoring, AI-supported analysis and automated optimisation.

Instead of relying on manual checks and periodic calibration, PiCon enables each system to adapt to changing production conditions and deliver optimal treatment.

Industrial food production is constantly changing. Raw materials naturally vary by season, variety, maturity and storage conditions, creating challenges for maintaining consistent processing conditions.

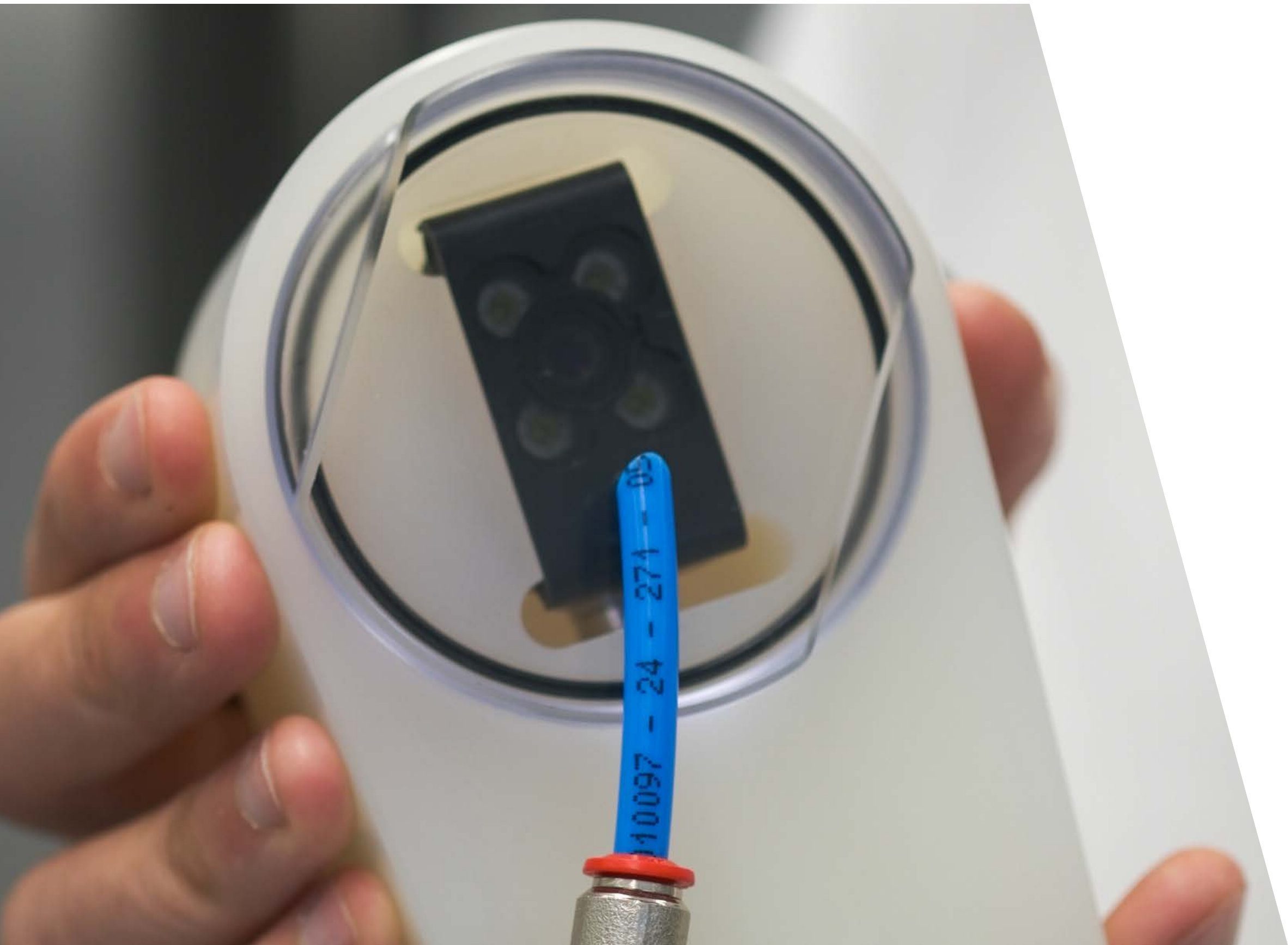
The PiCon range integrates intelligent sensors, real-time monitoring and AI-supported evaluation directly into the Elea PEF solution. By continuously analysing product behaviour and process conditions, PiCon enables automatic optimisation, removing manual calibration and ensuring each product receives the correct treatment.

Together, PiCon Sense, Vision and Flow provide a deeper understanding of every stage of the process. The result is a smarter, more adaptive PEF solution, combining Elea’s proven technology with intelligent automation for greater efficiency, consistency and process transparency.

PiCon Sense
Analyses product behaviour during cutting using acoustic monitoring and AI-supported evaluation to verify treatment effect and optimise PEF performance.

PiCon Vision
Uses intelligent camera technology and AI-supported image analysis to monitor incoming product flow, belt load, and to detect dirt and foam, helping to reduce energy consumption, optimise capacity, and improve system efficiency.

PiCon Flow
Enables precise monitoring of oil and water consumption in frying processes through advanced external flow measurement. Valuable data insights that support resource optimisation, cost reduction and more sustainable production.





PiCON SENSE REAL-TIME INSIGHT INTO PEF TREATMENT PERFORMANCE

PiCon Sense brings a new level of intelligence to PEF processing, combining advanced acoustic and vibration monitoring with AI-supported analysis to continuously assess treatment performance and optimise processing in real time.

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Continuous treatment verification. Automatic optimisation.

Natural raw materials are constantly changing. Variety, season, dry matter content and storage conditions can all influence how a product responds to PEF treatment. Traditionally, treatment effectiveness is verified through manual testing and routine quality checks. PiCon Sense transforms this process by continuously analysing acoustic and vibration signals during cutting, providing immediate feedback on treatment performance.

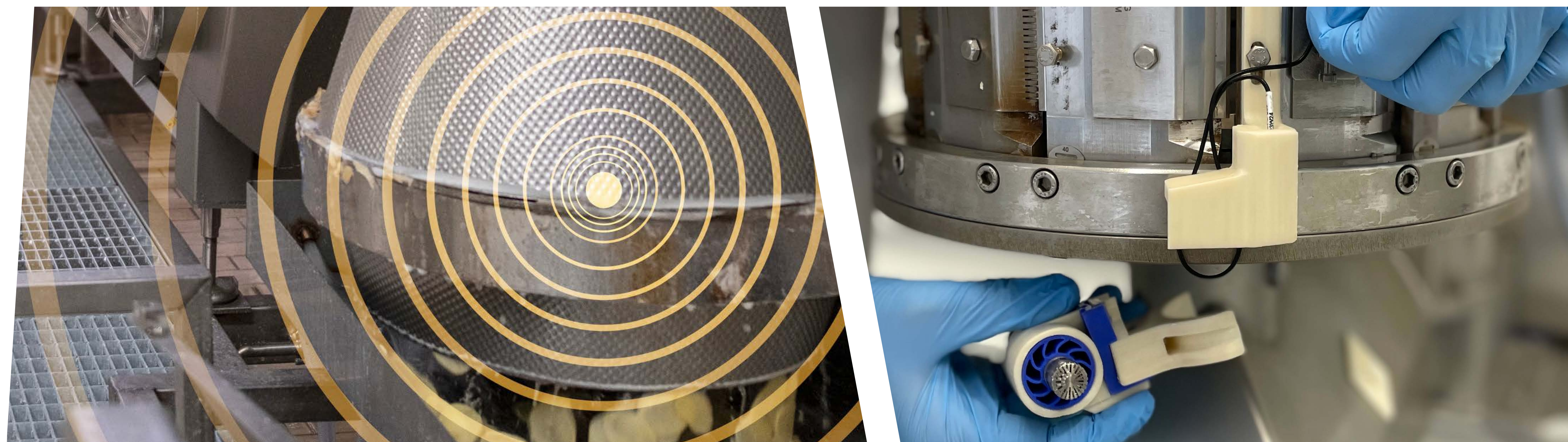
By combining precision sensors with AI-supported evaluation, PiCon Sense enables automatic optimisation of PEF parameters, ensuring each product receives the ideal treatment without the need for manual calibration.

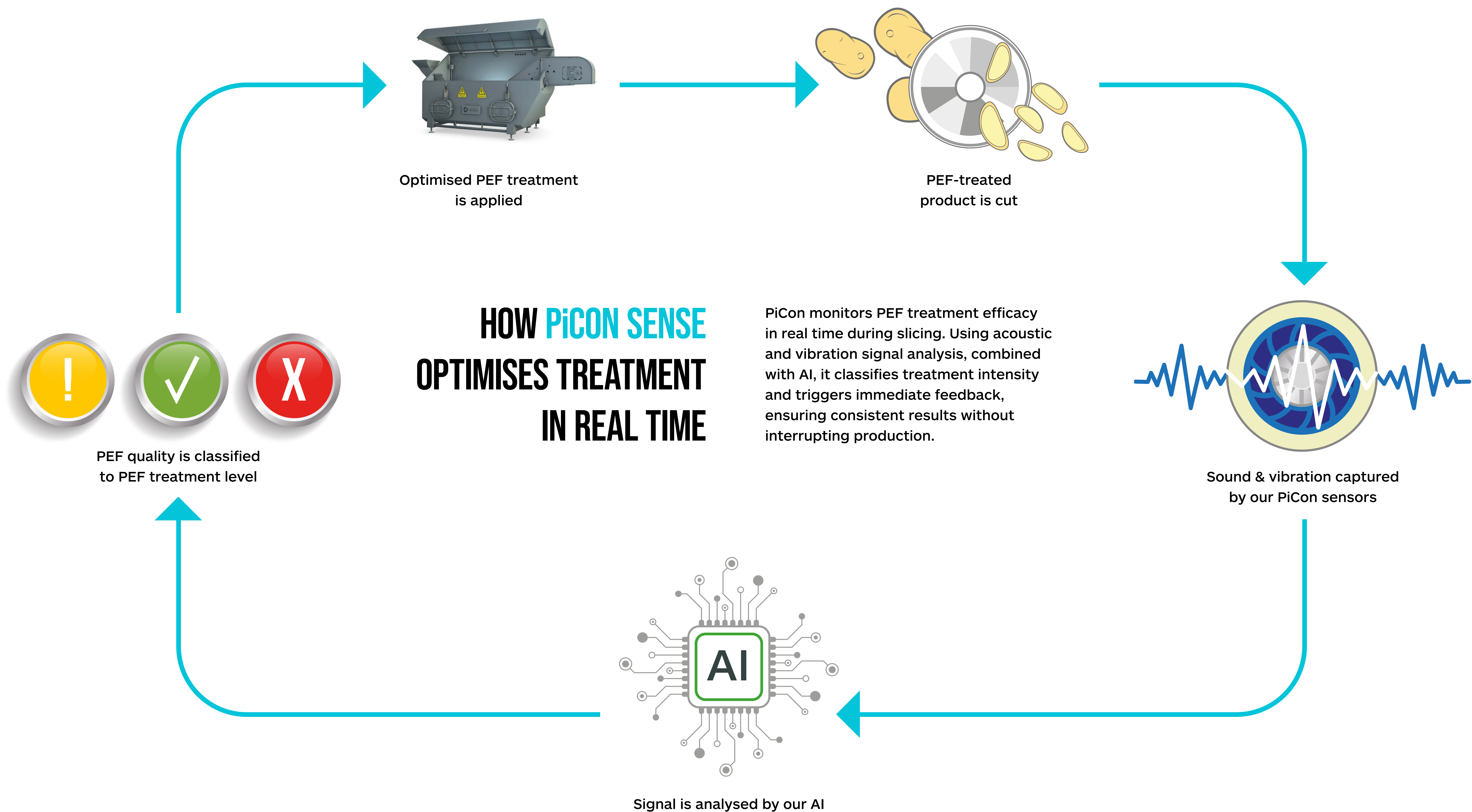
Beyond treatment verification, continuous monitoring provides greater process awareness, helping identify unexpected changes in raw material behaviour and

potential process abnormalities before they impact production.

The result is a smarter, more adaptive PEF process with improved efficiency, greater transparency and confidence in every treatment.

- Real-time verification of PEF treatment effect
- Automatic optimisation of treatment parameters
- No manual calibration required
- Adapts to changing raw material conditions
- AI-supported detection of process abnormalities
- Increased process transparency
- Reduced operator dependency





PiCON VISION

INTELLIGENT PRODUCT MONITORING FOR OPTIMISED PEF PERFORMANCE

PiCon Vision uses advanced camera technology and AI-supported image analysis to continuously monitor products entering the PEF system, providing real-time insight into production conditions.

By analysing product distribution, belt loading and process conditions, PiCon Vision automatically optimises system performance, helping maintain ideal treatment conditions while maximising capacity and efficiency. Continuous monitoring improves process awareness, supporting early identification of issues such as foam formation, fouling and unexpected variations within the product stream. Alerts and automated responses help maintain stable operation while reducing manual intervention.

The result is a smarter, more adaptive PEF process, delivering improved efficiency and greater control over production performance.

- Continuous monitoring of incoming product flow
- AI-supported analysis of product distribution and belt loading
- Automatic optimisation of system capacity & performance
- Supports stable operation and automated responses
- Increased process transparency & operational efficiency
- Early identification of foam and fouling
- Helping minimise energy consumption



PiCON FLOW. REAL-TIME CONTROL OF WATER, OIL AND PROCESS FLOW

Consistent and efficient PEF processing requires accurate information from every stage of production. PiCon Flow delivers resource and process intelligence through continuous monitoring of water, oil and process flows across critical production stages, including the washer, PEF system and fryer. Advanced flow measurement technology provides real-time visibility into resource consumption, process conditions and operational performance.

In addition to measuring flow rates, PiCon Flow analyses water stream composition and sugar levels, generating valuable process data that supports optimisation of washer and PEF settings. This enables operators to make data-driven decisions that improve process stability, maximise product quality and maintain ideal processing conditions.

Continuous monitoring increases process transparency and operational control, helping identify optimisation opportunities throughout production. By gaining a deeper understanding of how water and oil are used, processors can optimise resource consumption, improve efficiency and reduce unnecessary costs without compromising performance.

The result is a smarter, more sustainable production process with enhanced control over resource usage, improved operational efficiency and actionable insights for continuous improvement.

- Continuous monitoring of water & oil flows at PEF system, washer & fryer
- Measure water stream composition & sugar levels to optimise washer & PEF settings
- Data-driven optimisation of water and oil usage
- Increased process transparency and operational control



CALL US & CHOOSE **PiCON**

If you're looking for smarter, more transparent food processing that doesn't rely on chance or manual checks, PiCon is your answer.

It's a transformative step forward for any processor using PEF.

PiCon is patent pending, ensuring you're investing in an innovative, protected technology at the forefront of industrial food processing.

Let PiCon bring intelligence, efficiency and peace of mind to your production line.



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