

EVO Blowers with **Smartwave** technology

The reduction of acoustic
and environmental impact



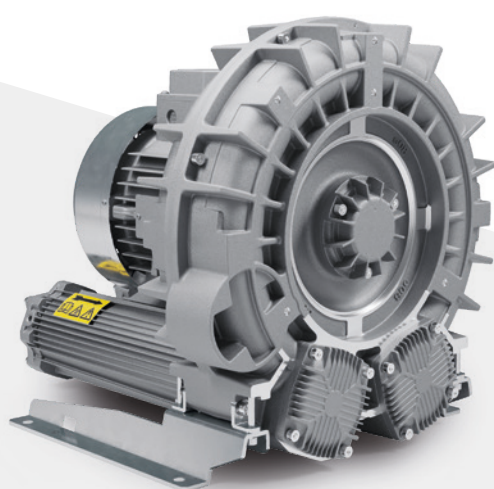
EVO Blowers with Smartwave technology

A big step forward by FPZ towards human well-being and environmental sustainability.

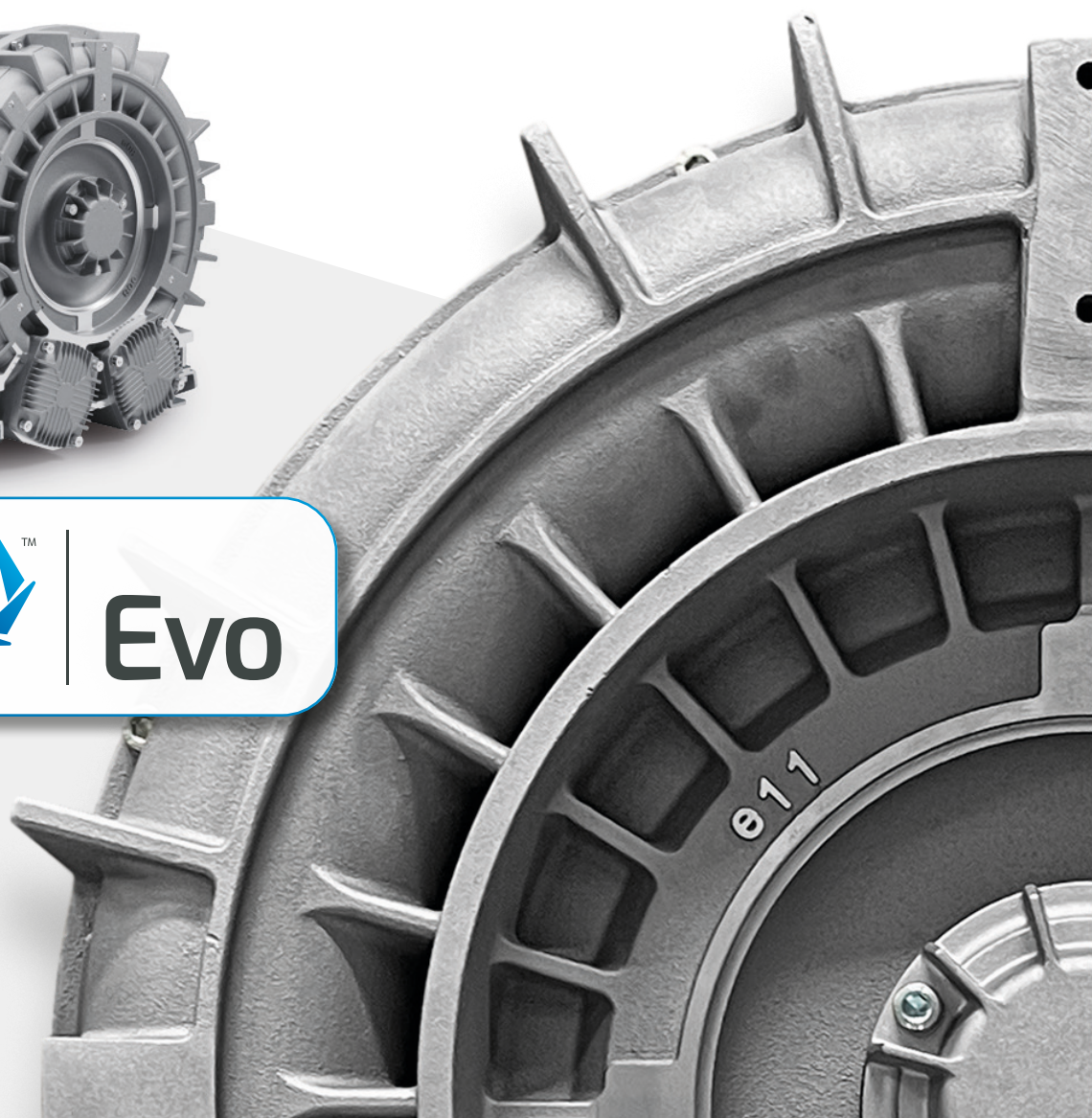
The working environment is one of the determining factors for people's well-being. In noisy environments, even with the use of protective headphones, our body is also affected by sounds through the vibration of the skeletal system with a potential increase in stress and risk of possible carelessness.

FPZ, in line with Industry 5.0, has developed the **EVO** blowers with **Smartwave** technology, capable of reducing the higher frequencies, generating greater uniformity of the sound emission, and ultimately the **reduction of its acoustic impact on humans**.

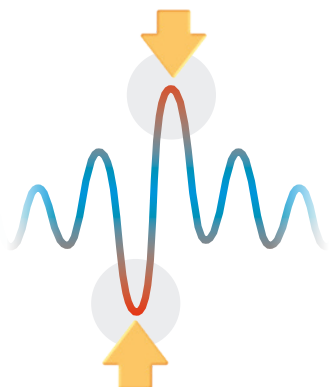
EVO's technological innovation also translates into an increase in energy efficiency, which together with other production choices contributes to **improve environmental sustainability**.



Evo



EVO advantages



REDUCTION OF
THE HIGHEST
SOUND
FREQUENCIES



UP TO
+30%

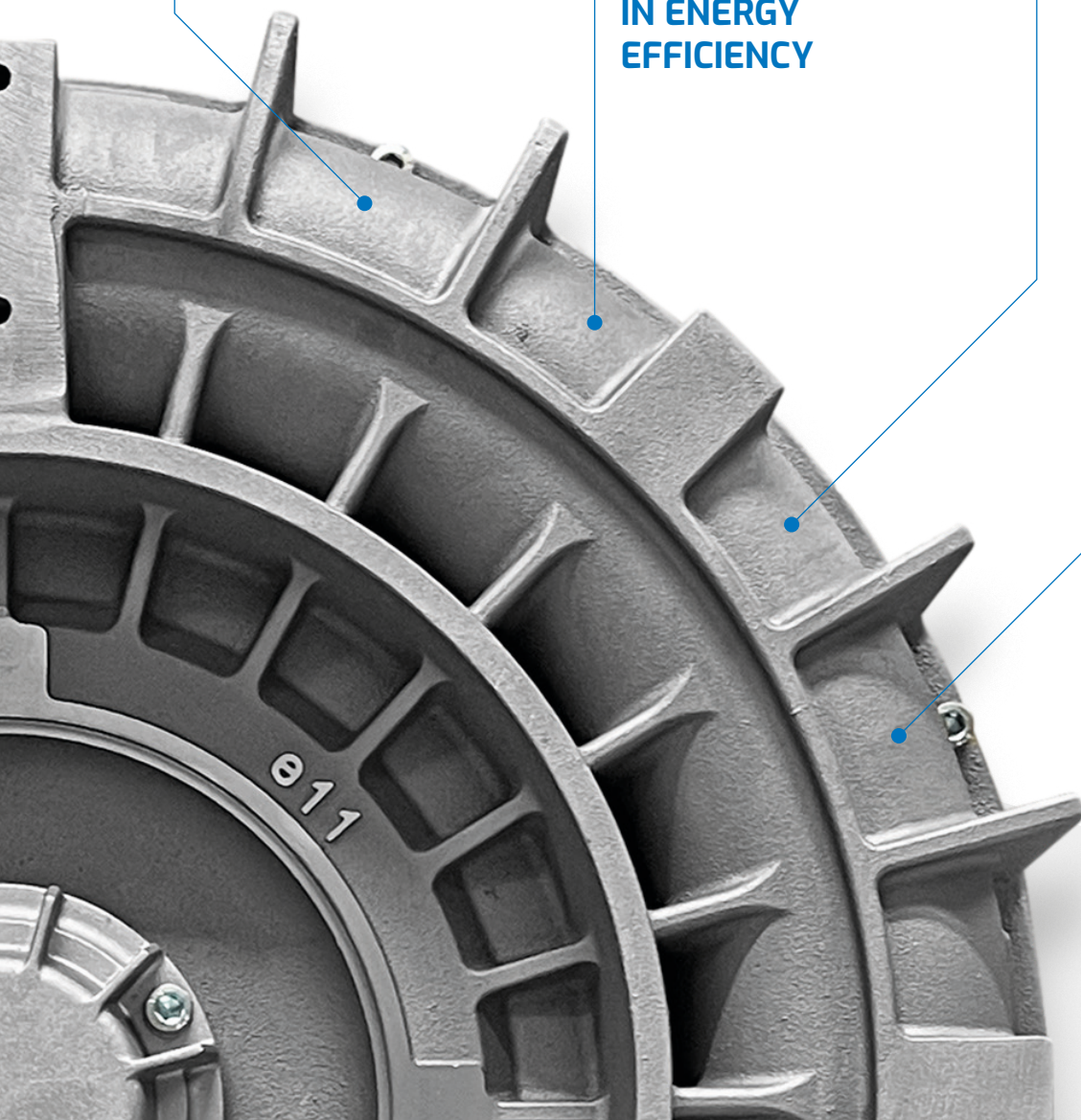
INCREASE
IN ENERGY
EFFICIENCY



UP TO
-15%

LOWER
TEMPERATURE
INCREASE IN
THE FLUID

SMOOTH
NATURAL
UNPAINTED
FINISH



The innovative Smartwave impeller

A patent resulting from FPZ research, in collaboration with the University of Genoa.

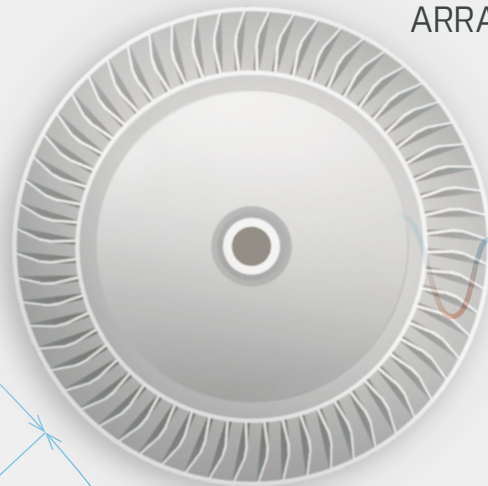
Our Research and Development department, in collaboration with the Department of Mechanical and Energy Engineering of the University of Genoa, carried out systematic tests and studies analyzing numerous factors that contribute to the generation of noise.

A targeted analysis with sound specialists allowed us to ascertain the improvement in the acoustic quality of the EVO blowers, also certifying a significant reduction in their acoustic impact. Through a psychoacoustic optimization algorithm, we redesigned the arrangement of the rotor blades; this new **non-equally spaced** distribution of the blades has allowed us, among other things, to uniformly distribute the noise emitted over

the entire audible range. We masked the characteristic hiss of the impellers, which had a significant negative impact on all those exposed to the noise generated by the blowers.

EQUALLY SPACED IMPELLER

STANDARD BLADE ARRANGEMENT

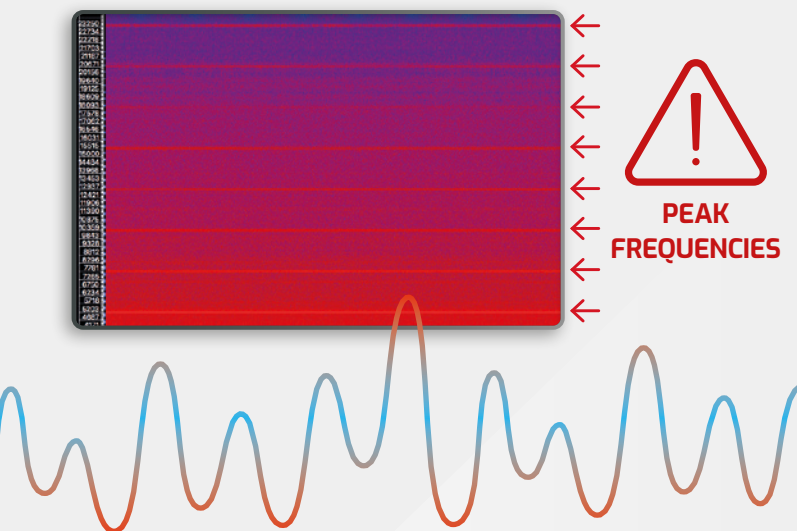


SMARTWAVE IMPELLER

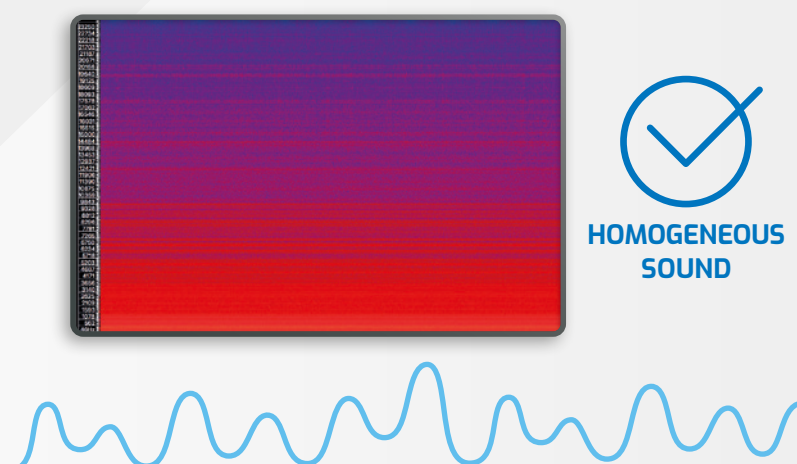
OPTIMIZED BLADE ARRANGEMENT



smartwave



The spectrogram of the equally spaced impeller presents **higher intensity sound peaks**, highlighted by the red arrows.



The spectrogram of the **Smartwave** impeller does not present intensity peaks, with a **more homogeneous sound distribution**

Evo Benefits:



IMPROVED WELL-BEING

Reduction of acoustic stress



ENERGY EFFICIENCY

Savings and reduction of environmental impact



POLLUTION REDUCTION

Absence of solvents and external coating paints



ACCESSORIES ACOUSTIC PROTECTION

Range of components as a further barrier to noise emission



Frame the QR Code and listen to the difference



Watch the video dedicated to EVO/Smartwave technology



Read the article on Applied Acoustic

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