Issue 2 EN

EVOLUTION IS IN THE AIR

RLM EVO + RLE EVO

NICOTRA Gebhardt

fan|tastic solutions

Ready for the next Generation

We have accelerated impeller technology with the Evo series, the new generation in our plug fan range. The result: More efficiency and reduced turbulent conditions. And that is highly effective as the Evo series ensures:

- **lower energy consumption**
- **lower costs**
- **lower noise levels**

Nicotra Gebhardt – the professionals in profiling

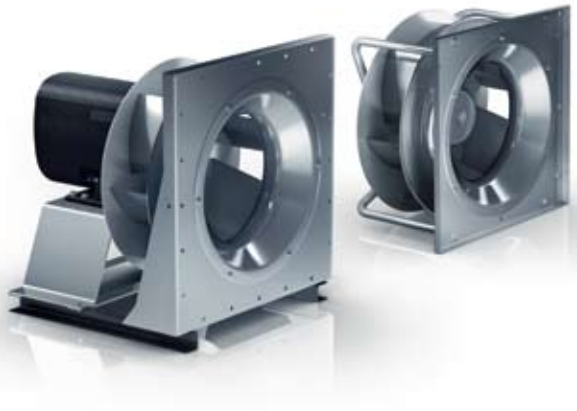
Nicotra Gebhardt is the first port of call for profiled impeller blades. We brought the first hollow section airfoil blades onto the market in 1975. Since then we have been achieving the absolutely best efficiencies in our fans in every application.

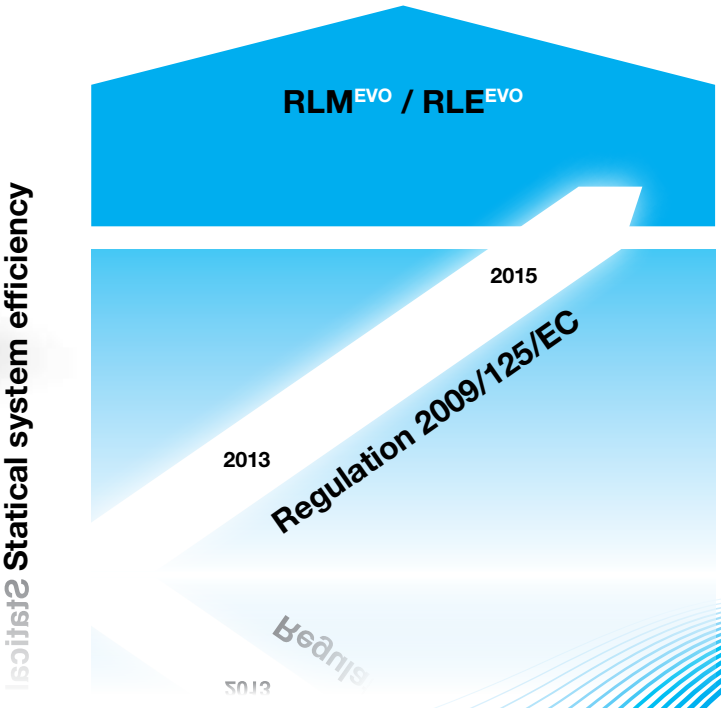
Our engineers and technicians use the latest simulation programmes to develop and test new designs. You can rely on the knowledge and experience of specialists.

Don't wait until 2015

Fans must reach ever higher system efficiencies. The EU's ERP directive will prescribe compulsory values in 2013 and will increase them again in 2015.

The new generation of plug fans by Nicotra Gebhardt, already achieved higher efficiency in 2011 than that required as from 2015.



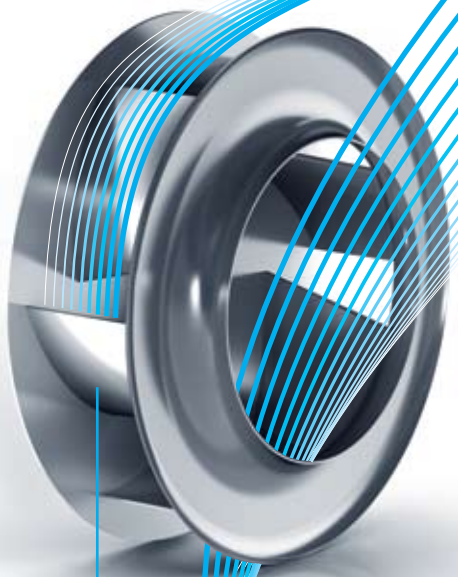


The evolutionary elements

The tailored drive

The new generation of our plug fans not only have a perfect impeller but also a precisely matched drive. For this reason, the Evo series, already an innovation in itself, is available with a cutting edge brushless DC motors. Together with such a drive, the Evo series delivers high performance with particularly low energy consumption. Whether during start-up or under base, partial or full load, the efficiency exceeds that of a conventional AC motor in every situation.

Our drives with brushless DCs reach efficiencies of efficiency class IE3 and higher.



The innovative high performance impeller

The re-designed high performance impeller makes the Evo series unbeatable in matters of efficiency. To ensure this we optimised the entire shape.

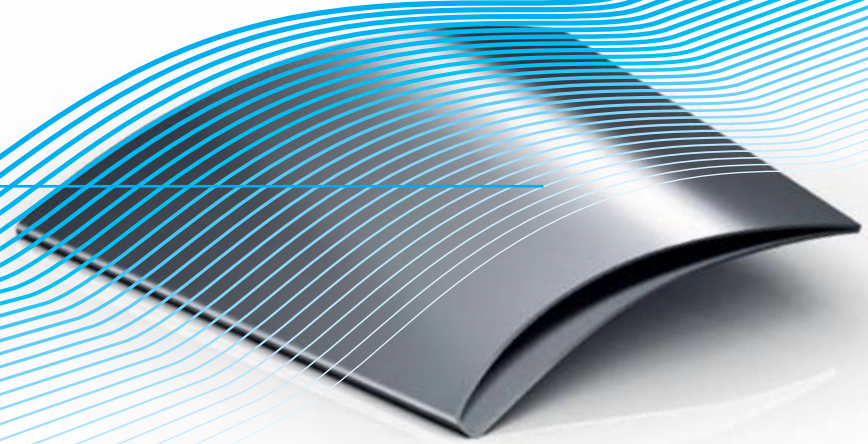
The special shape of the cover disc alone greatly improves turbulence. The width and diameter of the impeller are in an ideal ratio to each other.
The new hollow profile of the blades ensured that the weight of the impeller could be markedly reduced and that, at the same time, a high degree of stability could be reached. Pressure losses on entry were greatly decreased.
And at the exit, where losses had been sustained before, the new impeller shape ensures additional available static pressure.

The perfect profile

At the heart of the Evo series are the six blades with rounded inclined leading edges and re-designed hollow profile.
They ensure minimised turbulence conditions in the impeller thus enabling the extraordinary high efficiency of the fan.

Due to their special shape, the blades build up pressure evenly at all sections. The result: Air circulates around the blades better and the turbulence tends to dissipate.

This increases not only efficiency but also causes significantly lower noise.



The plus factors of the new Generation

01_ Unparalleled system efficiency for plug fans

The Evo series sets a new standard in efficiency.
No other plug fan reaches higher system efficiency.

02_ Innovative blade and impeller shaped for highest efficiencies

The entire shape of the impeller was optimised using a real turbulence profile for the blades.
This ensures that the impeller reaches as yet unparalleled high efficiency and takes the top position in aerodynamics.

03_ Optimal pressure and turbulence conditions

The re-designed impeller shape makes optimal pressure and minimised turbulence conditions in the impeller possible.
The inclined leading edge of the blade builds pressure more evenly minimising entry and exit losses.

04_ Low operating cost brushless DC motor

The brushless DC motor used by Nicotra Gebhardt is markedly more efficient than conventional drives: It reduces the energy consumption of the fan for partial loads by up to 50 %.

05_ Much quieter

Thanks to their new design the blades and the impeller run with less noise. The entire fan is thus much quieter.

06_ Easy to integrate

Despite their improved performance figures, the Evo series have the same external dimensions and significant operational data as earlier generations of plug fans.
They can therefore be easily and quickly exchanged in existing systems or integrated in available machine concepts.

07_ Easy maintenance

Thanks to the construction method and direct drive the Evo series is practically maintenance-free.

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