

High efficiency

In conclusion, unlike traditional sound control devices, the DNC not only reduces noise emissions but also **ensures the highest relative efficiency**.

More comfort and optimization

As a result, the DNC enhances **acoustic comfort** and optimizes the cooling plant, offering **better efficiency** compared to units with fixed fan speed limitations based on time slots.



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To reduce
the noise,
not the
performance
levels.



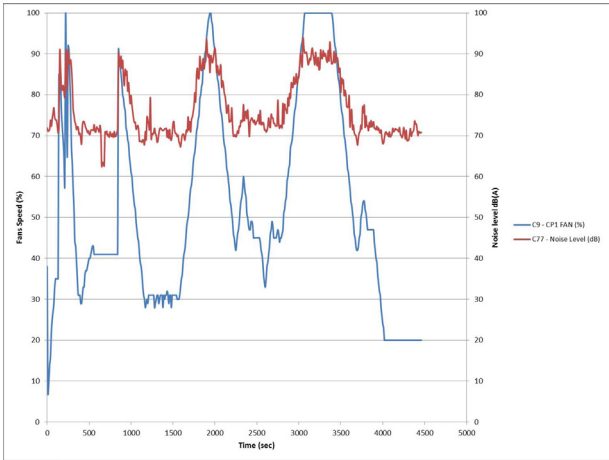


What is it?

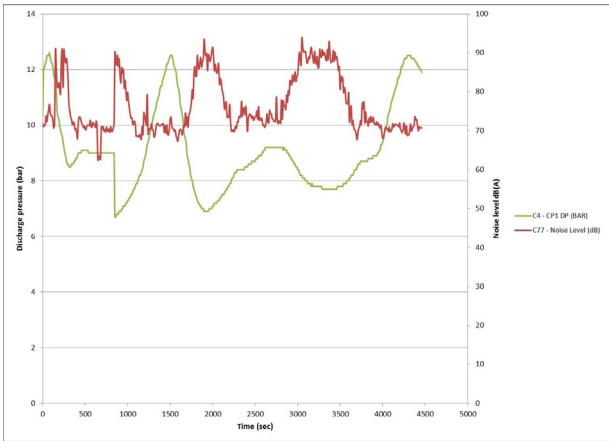
DNC (Dynamic Noise Control) is a device that **measures the noise** produced by the chiller in real time and **adjusts the fan speed** accordingly to ensure compliance with noise regulations, delivering consistently quiet operation.

The weak spot of traditional sound control devices

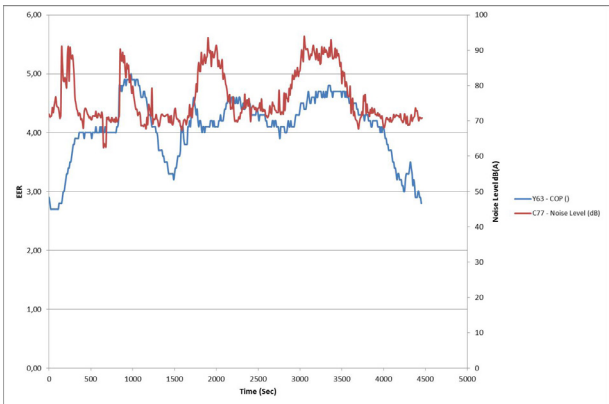
Traditional sound control devices are configured to reduce noise levels - and consequently performance - within specific time slots. Their main limitation lies in the inability to adjust performance based on the actual noise emissions generated by the chiller, often resulting in **unnecessary performance reductions**.



Fans Speed
reduction under
DNC operation



Condenser
Discharge pressure
trend under DNC
operation



COP (kW/kW)
trend under DNC
operation

How the smart DNC works.

The DNC is designed to avoid this problem: it is designed to be “smart”. The system constantly measures the noise produced by the chiller and adapts the fan performance to meet the noise limits set for different time slots.

Unlike other sound control systems, the DNC requires **only the noise limits to be set, not the performance levels**. The DNC automatically regulates fan speed, reducing performance as needed to fall within the maximum permissible noise levels.

What is it designed for?

The system features a microphone and sound processing unit, installed either directly on the chiller or in a suitable remote location, such as towards residential buildings nearby. Fully integrated with the chiller controls, the DNC is designed to be installed also on existing units and for any kind of application. While it optimizes noise levels by adjusting fan performance, the **cooling capacity remains unaffected**, ensuring consistent operation and high reliability.

