

Whisper-Quiet Refrigeration for Urban Retail Installations

Noise pollution is a growing concern, especially in urban settings. Copeland's CO₂ scroll refrigeration units are engineered for retailers operating in densely populated areas that require silent, sustainable and reliable refrigeration. With advanced technology, expert design, and modular flexibility these units set a benchmark in silent operation ensuring compliance with noise regulations while enhancing the cohabitation in dense neighbourhood.



Optimized sound level through unit design

Copeland CO₂ scroll refrigeration units are designed for whisper-quiet operation, minimizing noise and vibration.



1 Vibrations - The operation of compressors generate vibrations resulting in an increased noise level. To eliminate this noise source Copeland's CO₂ scroll compressors and connected parts are mounted on a large floating baseframe with specially designed soft gromets. The baseframe is insulated from the compartment housing to prevent contact and thus the transmission of noise.



2 Compressor compartment - Copeland's CO₂ scroll refrigeration units are insulated by a special sound absorbing foam to reduce the compressors' sound emissions by the air. A specially designed acoustic labyrinth minimizes sound leaks through the ventilation holes further optimizing the units' sound level.



3 Gas cooler fan design - Copeland's CO₂ units are equipped with the latest fan technology and a smart design. The large fan design allows them to run at lower RPM/ speed thus generating less noise. The design of the fan propellers is inspired by nature. It is based in particular on the wing structure of an owl to reduce air turbulence and improve acoustic performance. In addition, the fans feature a special deep diffuser and use EC motors to enhance acoustic performance.

Optimized sound level through flexible installation

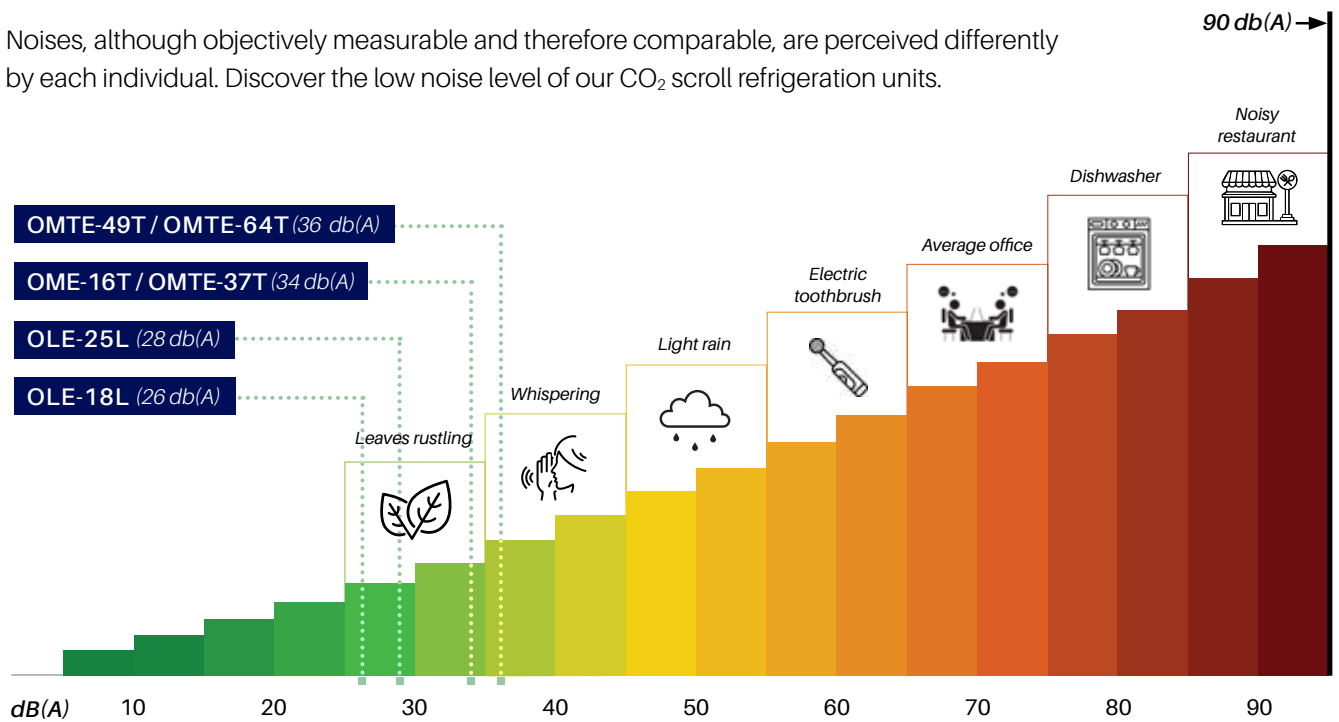
Copeland CO₂ scroll refrigeration units feature a modular design which allows for flexible installation. The sound generated by units is highly directional. Thanks to the flexible design of CO₂ scroll units, customer can direct sound to areas where it will not disturb the environment. Detaching the gas cooler from the compressor compartment allows for a stand-alone installation of the gas cooler outdoors while the compartment remains inside the building eliminating noise emission to the outside.



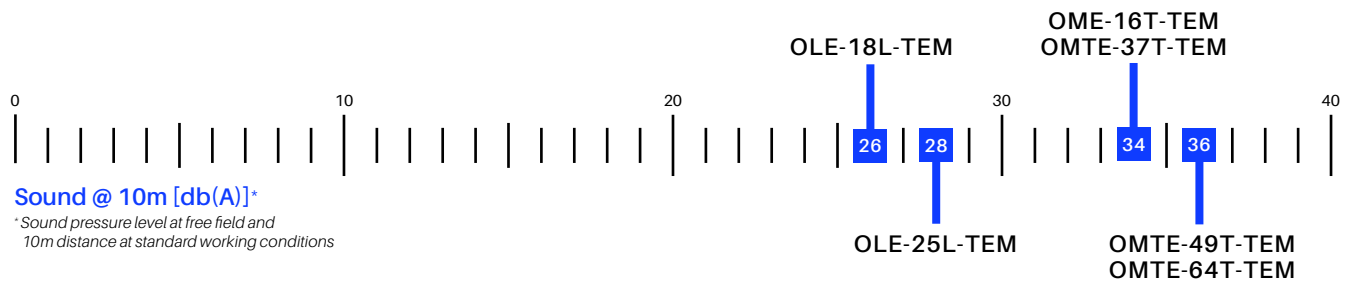
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Classification of Copeland CO₂ scroll refrigeration units in everyday noise perception

Noises, although objectively measurable and therefore comparable, are perceived differently by each individual. Discover the low noise level of our CO₂ scroll refrigeration units.



Copeland CO₂ scroll refrigeration units: Optimized noise levels



From the compressor compartment to the fans, every element is designed for low noise and vibration levels.

This makes Copeland's CO₂ scroll refrigeration units ideal for urban environments where noise control is crucial.

Discover how Copeland is setting new standards in quiet refrigeration technology:

copeland.com/CO2Refrigeration

Copeland Climate Technologies Limited

Tel: +44 1189 83 80 00 - Email: uk.sales@copeland.com - Internet: copeland.com/en-gb

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25330 EN FL HV CO₂ Scroll Refrigeration Units ©2025 Copeland LP

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