

Quantima - the technological revolution

Redditch, United Kingdom, 12th March 2008. CompAir's Quantima compressor is fundamentally different to any other oil-free technology on the market. It offers outstanding efficiencies and reliability with an environmental impact that is considered to be the lowest in its class.

What makes this difference possible is what makes Quantima such a breakthrough in compressor technology - its innovative, Q-drive, centrifugal compression assembly. This high-speed motor incorporating direct-driven compression impellers operates with the rotor levitated by active electromagnetic bearings and spinning at up to 60,000 revolutions per minute.

Unlike conventional compressors therefore, Quantima's Q-drive assembly has only one moving part, the rotor shaft, which has no contact and no wear. In addition, Quantima's induction motor design and high frequency inverter mean that no gearbox is required and that the compressor can operate without any oil lubrication.

This results in a package that consumes less power and which is approximately half the weight and physical size of many equivalent compressors, meaning that it can be sited easily into existing plant rooms.

Other 300 kW compressors have noise levels typically around 74 dB (A) and above, whereas Quantima is housed in a modular acoustic canopy, resulting in the lowest noise levels in its class at just 69 db(A). This allows the compressor to be installed at the point of use and not in a separate building and enables operators to work comfortably without any ear protection.

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The combination of these features results in a fundamental shift from the oil-free compressor technology currently in use today – there is not a single drop of oil where existing technology includes complete oil systems; absolutely no gears where other compressors have seven; just four bearings where other compressors have nineteen and only two seals where others have seventeen.

Commenting on CompAir's major breakthrough in compressor design, Jouko Peussa, vice president of technology added, "With Quantima, we set out to make the world's ultimate compressor that would meet industry's demands for lower operating costs with high environmental performance. Now it is time for customers to reap the rewards of our five years of research, design and extensive field-testing with a compressor design that is truly unique."

Quantima was purpose-designed to be easy to operate and simple to install, helping to improve production uptime and efficiencies. The intelligent Q-master controller features a touch screen panel with intuitive navigation and menu structure for the user and also monitors all compressor parameters automatically.

In addition, Quantima incorporates remote monitoring technology as standard. This enables CompAir to offer every customer its Q-life predictive maintenance system, which monitors all operating parameters remotely, ensuring high performance and exceptional reliability, 24 hours a day, every day of the year.

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