



ENGIE

THE REFRIGERATION MAGAZINE FROM  
ENGIE REFRIGERATION GMBH

# REFLECT

**SPECIAL  
EDITION**

with exclusive  
information for our  
customers

FOR A QUANTUM OF  
ADDED EFFICIENCY

Engie Refrigeration sets standards with  
the new QUANTUM Air



QUANTUM AIR OFFERS MAXIMUM EFFICIENCY

# A MILESTONE FOR THE REFRIGERATION INDUSTRY

The refrigeration market is in flux: requirements for refrigeration and climate technology have changed in recent years. Demand for more efficient and powerful refrigeration solutions, for example, is increasing steadily. And ENGIE Refrigeration is staying abreast of these altered conditions: the new QUANTUM Air perfectly fulfils current and future customer requirements.

The redesigned air-cooled QUANTUM Air from ENGIE Refrigeration is ideally suited for use in a large number of industries, from automotive manufacturing to the chemicals and pharmaceuticals industry and data centres. It combines numerous special features and technological innovations in a single chiller, which thus meets even the most stringent requirements for a refrigeration solution. 'The new QUANTUM Air is among the most efficient and high-quality chillers on the international market. ENGIE Refrigeration is thus setting an important milestone,' says Jochen Hornung, CEO of ENGIE Refrigeration. 'This machine incorporates all the experience we

gained in 16 years of product development for the previous air-cooled QUANTUM models. On this basis, our new QUANTUM Air is the ideal way for us to help our customers meet the most stringent economic and ecological requirements in an increasingly complex market environment.' From 24 June 2019, ENGIE Refrigeration will be offering a total of 28 versions of the QUANTUM Air series. Fourteen of these models use the refrigerant R-1234ze, and 14 models use the refrigerants R-134a or R-513A.

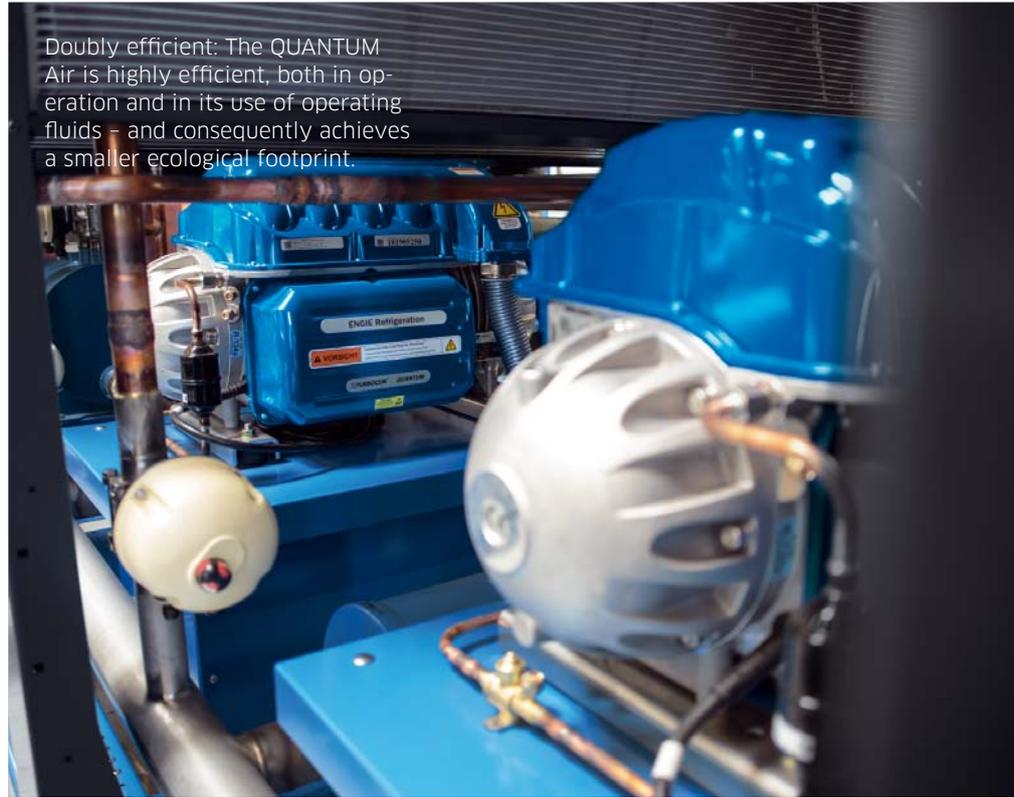
## Maximum efficiency

Maximum efficiency, maximum cooling, a convenient control system and



‘With the QUANTUM Air, we at ENGIE Refrigeration are living up to our aspiration, which is to offer the highest-quality and most efficient chillers. This gives us a pioneering role in the refrigeration industry.’

Jochen Hornung, CEO of  
ENGIE Refrigeration



Doubly efficient: The QUANTUM Air is highly efficient, both in operation and in its use of operating fluids – and consequently achieves a smaller ecological footprint.

excellent serviceability – these qualities are shared by all QUANTUM Air models. First, the new chillers considerably exceed even the very high levels of efficiency of the previous series. To that end, the ENGIE Refrigeration team has developed intelligent connections between the different components. Second, the specialists have significantly reduced refrigerant filling volumes – no matter whether refrigerant R-1234ze, R-134a or R-513A is chosen. So these operating fluids are deployed much more efficiently. The result: a smaller ecological footprint due to greater efficiency in the operation and use of operating fluids.

### Record-breaking refrigeration capacity

In addition, ENGIE Refrigeration has chosen different components for the new air-cooled QUANTUM Air and recombined the individual machine components. As a result, the chiller is both smaller and lighter than its predecessor. This substantially reduces the maximum required roof load – a key advantage for chillers intended for outdoor use on top of a building. Performance, on the other hand, has not been reduced in any way – quite the opposite: for the first time the QUANTUM Air enables a refrigeration performance between 250 kilowatts and two megawatts. This means

the chiller outperforms not only its predecessor model, but all air-cooled chillers with magnetic-bearing compressor technology that are currently available on the market.

### Convenient control system, excellent service

Another new and unique feature is that the QUANTUM Air offers optimised adaptation to the relevant cooling re-



‘The QUANTUM Air is an optimal answer to current as well as future requirements of operating companies. This makes it ideally suited for use in a variety of industries – from automotive manufacturers to the chemicals and pharmaceuticals industry and data centres.’

Daniel Keller, Head of Sales Support



A real powerhouse: the QUANTUM Air is currently the most powerful air-cooled chiller on the market.



'The QUANTUM Air models contain the concentrated expertise of our team. That is why we now offer what is currently the most powerful air-cooled chiller with magnetic-bearing compressor technology on the market.'

Rüdiger Roth, Head of Thermodynamics & Mechanical Systems

quirements for any operating point and at different ambient temperatures. ENGIE Refrigeration has achieved this through modifications to the control system, which have also improved energy efficiency in the provision of cooling. The refrigeration specialist from Lindau has also developed a sophisticated modular principle for the QUANTUM Air. As a result, customers benefit not just from shorter delivery times, but also from the excellent serviceability of the chillers, as it will be easier for the responsible ENGIE service technician to access the interior of the machine during maintenance in future – something that saves time and often lowers costs.

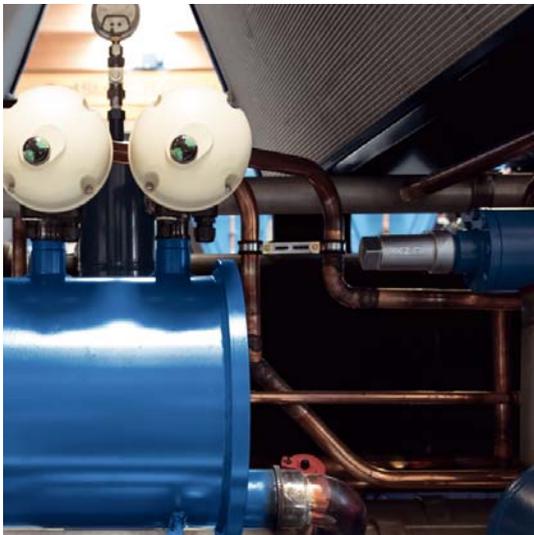
### Refrigeration for demanding applications

Another special feature of the QUANTUM Air is that it is optionally available in a super-silent version containing additional noise-reducing mea-

asures (Supersilent package). The chiller is thus perfect for noise-sensitive applications, for example in hospitals or office buildings. If needed, customers can also choose preconfigured hydraulic modules – i.e. pump units with a frequency converter – and integrated free cooling modules for free cooling, mixed mode or compression mode. Naturally, the QUANTUM Air also presents all the advantages that its predecessor offered: maximum energy efficiency, oil-free compressor, contact-free magnetic bearing, gentle starting behaviour, low noise and vibration levels, reduced CO<sub>2</sub> emissions and high reliability.

### Refrigeration technology of the future

In short: with its numerous special features and technological innovations, ENGIE Refrigeration is setting a new standard in the refrigeration market with the QUANTUM Air. 'Our aim is to offer the refrigeration technology of tomorrow, today. I am certain that we are doing even greater justice to this aim with the QUANTUM Air. This gives ENGIE Refrigeration a pioneering role in the industry,' says Jochen Hornung. But the refrigeration specialist from Lindau is not planning to rest on its laurels: as its next step, ENGIE Refrigeration will overhaul its water-cooled QUANTUM chillers as well. The relevant models will become available on the international market over the course of 2020.



28  
models

3

refrigerants:  
R-1234ze, R-134a  
or R-513A

-20%

refrigerant charge [kg]



-20%

operating weight [kg]



-10%

footprint [m<sup>2</sup>]

-10%

CO<sub>2</sub> footprint  
(TEWI value\* [kg CO<sub>2</sub>])

\*The TEWI value is a reference value for assessing the impact of an overall system on the greenhouse climate (CO<sub>2</sub> footprint). The TEWI value takes into account both direct and indirect CO<sub>2</sub> emissions from the chiller during operation.

The data are mean values for the entire model series.

# ONE CHILLER, MANY ADVANTAGES: AN OVERVIEW OF THE NEW QUANTUM AIR

**GREATEST REFRIGERATION CAPACITY** of all air-cooled chillers

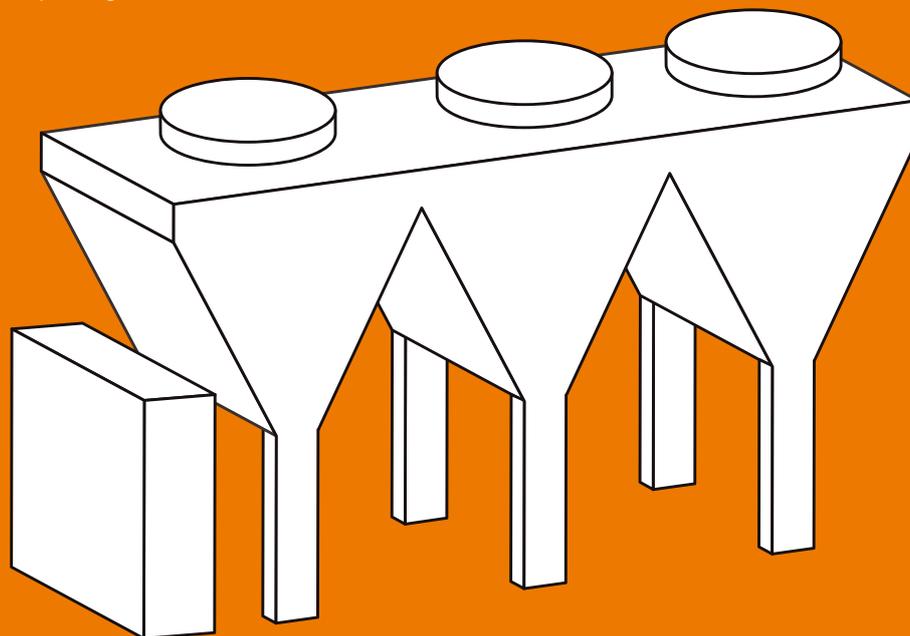
A reduced **ECOLOGICAL FOOTPRINT**

**MAXIMUM EFFICIENCY** in the use of operating fluids

**CONVENIENT CONTROL SYSTEM** due to increased computing capacity

**OPTIMISED ADJUSTMENT** to the cooling demand at any operating point

**LOWER NOISE EMISSIONS** due to Supersilent package



Small **SIZE** and reduced **WEIGHT**

Improved **SERVICE-ABILITY**

Fast **DELIVERY TIMES**

Maximum **OPERATING EFFICIENCY**

Optional **INTEGRATED FREE COOLING MODULES** for free cooling, mixed mode or compression available

Optional **PRECONFIGURED HYDRAULIC MODULES** available

## WE LOOK FORWARD TO HEARING FROM YOU!

Does this wealth of advantages take your breath away? Then we are here for you: for more information about the new air-cooled QUANTUM Air, visit

[www.engie-refrigeration.de/en/products/chillers/quantum/air-cooled-quantum-series](http://www.engie-refrigeration.de/en/products/chillers/quantum/air-cooled-quantum-series)

Or contact us directly via email at [sales.refrigeration@de.engie.com](mailto:sales.refrigeration@de.engie.com) !





**NOW  
AVAILABLE  
WORLDWIDE!**

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# The smartest of its kind: The new QUANTUM Air.

**ENGIE Refrigeration is now delivering the smartest chiller of its type around the world.**

Ultra-quiet, ultra-compact, ultra-strong: the new air-cooled QUANTUM from ENGIE Refrigeration represents a new global standard in refrigeration technology. 28 models are now available for all refrigeration needs, from 250 kW to 2 MW. With an intelligent design, and with smart control more precise than ever, the new QUANTUM Air is the ultimate in efficiency and performance.

A new approach to cooling: **ENGIE Refrigeration.**

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Optimal use of energies.

[engie-refrigeration.de](http://engie-refrigeration.de)