



Güntner Info

GVHX

GVVX

Axial Fan
Condensers

HFC,
combustible
refrigerants

8 – 310 kW



**Proven reliability coupled with
innovative microox[®] technology**

Proven microox[®] technology for optimum reliability and safety

Energy-saving operation

- Excellent performance per m² set-up space
- Superb energy efficiency classification certified by Eurovent
- Reduced operating costs with GMM with highly efficient EC fans*
- Stable operating conditions with precisely controlled condensing pressure*

High level of installation and service friendliness

- Aluminium heat exchanger with copper connections
- Few unit legs for reduced substructure costs
- Short commissioning times*
- Wired and preset ready for operation*
- High operational reliability and leak-tightness
- Vertical and horizontal set-up possible

Optimised casing design for transport and storage

- Up to three units can be stacked on top of each other
- Casing dimensions optimised for truck and container transport
- Reduced unit weight with aluminium heat exchanger
- Casing made of galvanized steel, powder-coated, RAL 7035 (light grey)

Highly efficient fans

- Maintenance-free, long service life brand fans
- Pre-wired at the factory
- Available in AC and EC technology
- Wide range of sizes (Ø 450, 500, 710 and 800 mm)
- Optimum air and sound unit
- Specifically targeted sound pressure level reduction for night-time operation possible with Güntner controllers*

Easy integration into building management*

- High efficiency with central motor management
- Customised control concept integrated
- Bus-enabled system
- Remote maintenance possible
- Energy data recording
- Pre-wired ready to operate and parametered fans

Quality assurance

- Checks of all raw materials and semi-finished products required for later production
- Check of fully automatically assembled heat exchanger coils
- Leak tightness test
- Regular burst tests with a burst pressure of far above 100 bar



Condensers with microox[®] technology

- Up to 41 bar operating pressure
- Reduced refrigerant charge
- Reduced unit weight with aluminium heat exchanger

Certified performance reliability

- Eurovent-certified performance
- Performance details confirmed by independent laboratories



* With EC fan technology and GMM EC (optional)

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microox[®] – The technology of the future!

- More compact, more resistant heat exchangers made from top quality aluminium alloy
- For all standard refrigerants up to 41 bar operating pressure
- Low refrigerant charge compared with conventional heat exchangers
- Reduced unit weight and high efficiency with aluminium



Innovation as Standard

Condenser requirements are numerous and diverse. Constant technological advances provide the answer: With microox[®] technology Güntner presents the heat exchanger technology of the future.

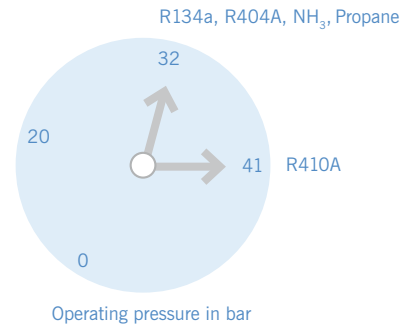
The basis for the new technology is provided by aluminium as a light, stable and recyclable material.

The microox[®] heat exchanger's profile, optimised for stationary refrigeration technology, and its high stability, low refrigerant charge and reduced weight are the essential benefits of this technology. The reduced refrigerant charge makes an active contribution to reducing the CO₂ equivalent.

Innovative microox[®] technology in detail

Can be used for all refrigerants

The microox[®] GVHX/GVVX heat exchangers can be used with an operating pressure of 41 bar for all standard refrigerants. Regular burst tests with a burst pressure of far above 100 bar are run to ensure the operational reliability of the microox[®] heat exchangers and to guarantee leakage resistance.



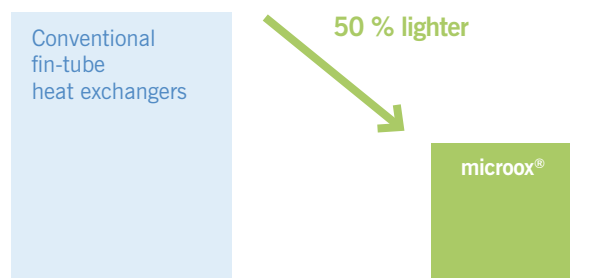
Combustible refrigerants

Due to its reduced refrigerant charge, the GVHX is the perfect condenser for all applications with combustible refrigerants. Güntner microox[®] approved for hydrocarbons: Propane, propene etc.

- TÜV approval for refrigerant class A1
- Propane
- Propene
- Dimethyl ether

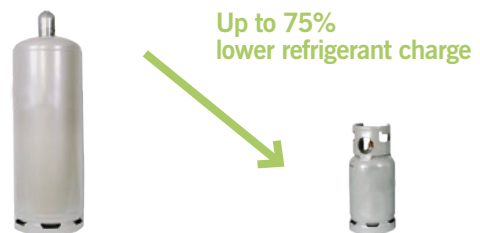
Low weight for transport and installation

GVHX/GVVX heat exchangers with microox[®] technology are made completely of aluminium and are up to 50 % lighter than conventional fin-tube heat exchangers.



Fewer leak tests

The microox[®] heat exchanger provides up to 75% lower refrigerant charge vis-a-vis capacity. EU regulations 842/2006 (F-Gas Regulation) and 1005/2009 specify leak tests depending on the system's refrigerant charge (see table). A lower refrigerant charge therefore means fewer leak tests, circumstances permitting.



System refrigerant charge in kg	3 - 30	30 - 300	> 300
Prescribed* leak tests per year	1	2	4

*EU regulations 842/2006 (F-Gas Regulation) and 1005/2009

At a glance: What does the GVHX / GVVX offer?

Excellent price-performance ratio

Up to 41 bar operating pressure
for all standard refrigerants

Reduced refrigerant charge



Optimised casing design
for transport and storage

Reduced unit weight
with aluminium heat exchanger

Vertical and horizontal
set-up possible

Low operating costs
with Güntner Motor Management
and EC fans*

* With EC fan technology and GMM EC (optional)

Well thought-out innovations for reliable operation

Knowing and meeting your wishes and requirements – that's what we concentrate on. We have therefore applied our long-standing years of experience and wide-ranging application know-how in developing the GVHX/GVVX. Be it for system planning, extending or optimising – we'll also find a solution for very special requirements.

Short delivery times, an optimised casing design and reduced refrigerant charge are just some of the benefits that make the GVHX/GVVX so unique. You can score points with our new condensers with regard to energy-efficient solutions in particular – the combination of Güntner Motor Management with EC fans leaves absolutely no requirement unsatisfied.

We apply our production expertise to offer you a unit whose functioning and performance we keep a keen eye on – from design to configuration, right through to production in our own internal factory. You therefore receive everything from one single source – 100 % Güntner. With our quality management system – certified in acc. with ISO 9001:2008 – we guarantee the reliable and safe functioning of our units. Every single heat exchanger coil and the finished unit is subjected to a comprehensive quality check before it can leave the factory.

Combining proven quality with innovation – for reliable performance and optimised operation.

GVHX



Refrigerant	R134a, R404A, R507, R407C, R410A, propane (R290), NH ₃ (R717)
Variants (fan sizes in mm)	For sizes 450, 500, 710: Single-row: 1 – 3 fans For size 710: Double-row: 2x2 – 2x3 fans For size 800: Single-row: 1 – 2 fans Double-row: 2x2 fans, 2x1 fan
Airflow direction	Vertical
Application area	Refrigerant condensation with air; outdoor set-up
Power range in kW	8 – 310
Dimensions (in mm)	from L 1295, W 1038, H 815 up to L 3808, W 2322, H 1160
Weight in kg	74 – 440
Quality standard	ISO 9001
Accessories	- Liquid receiver (mounted below) - Empty casing - Subcooler

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Airflow direction	Horizontal
Application area	Refrigerant condensation with air; outdoor set-up
Power range in kW	8 – 310
Dimensions (in mm)	from L 1295, W 310, H 1108 up to L 3808, W 1054, H 2382
Weight in kg	74 – 515
Quality standard	ISO 9001
Accessories	- Liquid receiver (supplied not mounted) - Empty casing - Subcooler

Fans and control

Use of AC and EC fans

Highly efficient, direct-driven axial fans are used for the GVHX/GVVX. Motor, blade wheel, nozzle and protection guard form an optimum air and sound unit. These fans can be selected in two technologies – axial fans with AC motors or optionally with EC motors. All fans are wired at the factory. EC fans are also parametered ready to operate.

	AC (alternating current)	EC (electronically commutated)
Diameter	450, 500, 710, 800 mm	450, 500, 710, 800 mm
Protection class	IP 54, pre-wired at the factory	IP 54, pre-wired at the factory
Type	Single-phase or three-phase current 50 and 60 Hz	Single-phase or three-phase current, parametered ready to operate, 50 and 60 Hz
Continuous control	<i>Optional:</i> Phase angle controller With or without noise filter <i>Optional:</i> Frequency controller with all-pole sine filter, GMM sincon	Güntner Motor Management (GMM EC)
Step control	<i>Standard:</i> Step controller <i>Other manufacturers' controllers can of course also be used. An all-pole sine filter must be installed with frequency control.</i>	



GMM sincon
Controller variant
for AC fans

Switch cabinets and control concepts for AC fans

The right switch cabinets for every GVHX/GVVX heat exchanger can be delivered with or without Güntner controllers. You have the choice here between standard Güntner switch cabinets and customised switch cabinets.

All switch cabinets are planned, designed, built and tested in-house at Güntner's Controls division. Together with you, we consequently create and offer the appropriate switch cabinet and control concept.

These switch cabinet concepts are then optimally tailored to the heat exchangers' set-up, capacity, energy efficiency and service life requirements, and, depending on the size, can be added on directly on the unit. Should an add-on not be possible, the switch cabinets can be delivered with the unit. Of course Güntner also offers connection and initial operation by its specialist staff on-site on request.



GMM EC
for EC fans

EC fans with Güntner Motor Management GMM EC

The control and regulation of the EC fans is performed with Güntner Motor Management GMM EC. EC fans have a progressive motor technology with integrated electronic components. These electronic components generate the motor's rotating field and provide enormous benefits for speed-controlled applications in particular.

Güntner Motor Management GMM EC has been specially developed for Güntner heat exchangers. Only the combination of energy-saving EC fans with GMM EC creates an intelligent heat exchanger system, which enables energy-optimised operation of the heat exchanger, as well as maximum efficiency regarding maintenance and servicing.

Want to find out more about Güntner Motor Management?
Ask for our detailed information brochure!

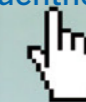
Quick and safe Calculate thermodynamically & prepare offers

The Güntner Product Calculator GPC calculation software allows you to quickly and easily configure the right unit for your **individual application**.

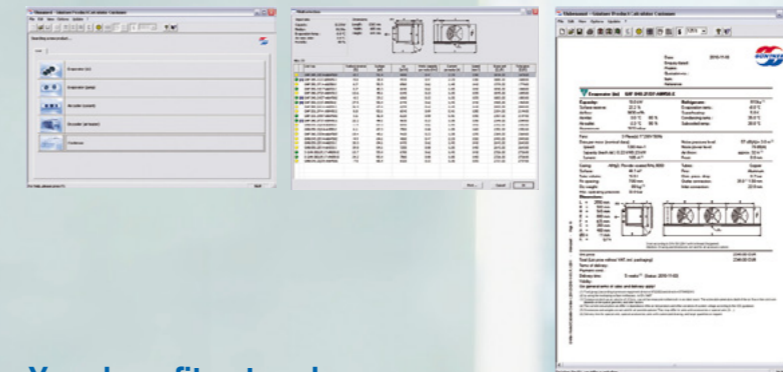
Simply enter the required basic data in the convenient entry screen of the GPC, and while considering your selected operating conditions, i.e. according to refrigerant or coolant, air humidity, evaporation temperature and selected accessories, an **exact thermodynamic calculation** will be performed.

Use our GPC for selecting evaporators, condensers, air coolers, drycoolers, control units and switch cabinets!

Download your
Güntner Product Calculator (GPC) for free.
www.guentner.eu



Numerous functions for quick and precise configuration
– from series selection to options, through to control:



Your benefits at a glance:

- Precise thermodynamic calculation, even with unusual usage areas
- Quick and safe configuration
- Individual setting of different units possible for every entry field
- 15 languages can be set
- Current prices and delivery times can be called up
- Display of quickly deliverable units in storage
- Automatic coordination of individual unit components



Our expertise is your advantage!

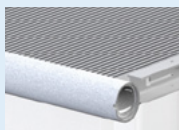
Application advice

Our specialists are your contact partners waiting to help you. They will advise you in detail and configure the best unit for your application case in accordance with your requirements, or develop a complete concept for a ready-to-operate solution straight away.



Technology of the future

microox[®] technology is a further development of the microchannel technology; microox[®] heat exchangers are made completely of aluminium and are optimally adjusted to stationary refrigeration engineering requirements. All microox[®] heat exchangers are produced in modern production lines at Güntner.



Certified performance reliability

As a member of the Eurovent Certification Programme we guarantee you our products' performance. As part of the certification all series of a participating manufacturer are tested and approved by specially approved laboratories. With units certified by Eurovent you can be assured that the specified capacity values are actually achieved.



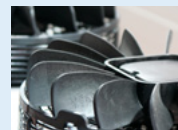
Control

Güntner Controls is an independent department which has been delivering efficient and top quality controllers and switch cabinets for many years now. Our experts work out project-specific solutions for you for the highest demands in all areas. We have an individual switch cabinet solution for all your applications – regardless of whether it involves AC or EC fans. We control everything!



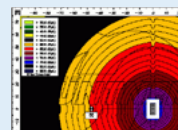
Fans

We use highly-efficient, directly-driven, brand name fans for continuous control, balanced in two planes. With balancing quality Q 6.3 they comply with DIN ISO 1940 Part 1. The fans are maintenance-free and extremely long-life.



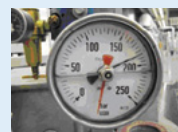
Sound

The extensive test runs in our internal test laboratories enable the optimum fans to be selected for the sound requirements of your application – starting with configuration with the Güntner Product Calculator.



Quality assurance

Quality assurance of the microox[®] production is guaranteed at several test stations. Only high-quality raw materials and semi-finished goods are used for production and these are all checked thoroughly before they enter the production process. After the brazing process, the fully automatically assembled heat exchanger blocks are checked for leaks. Regular burst tests with a burst pressure of far above 100 bar are another important part of our quality assurance.



Service After Sales

Our Service After Sales department supports our customers with problems and questions they may have. If there are any doubts at all, a colleague is quickly on-site to take care of your issues and interests directly there with you. Our employees are not only refrigeration technology experts – they are also qualified in many other specific areas. We also keep spare parts at the ready for you.



If interested, please contact our Sales department:
sales@guentner.de



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