



FLAT / Compact

VERTICAL / Compact

Condensers **GCHC/GCVC** for HFCs, NH₃, Propane

Gas coolers **GGHC/GGVC** for CO₂

Fluid coolers **GFHC/GFVC** for water/glycol and other media

4 – 400 kW



Compact design – ideal for commercial refrigeration
Innovative heat exchanger technology



Compact design – pioneering technology

Air cooled condensers and dry coolers for HFCs, CO₂, propane and water/glycol

This series is optimised for use in commercial refrigeration and for a capacity range up to about 400 kW. The extremely compact casings are available in horizontal or vertical design. Heat exchangers with microox or finoox technology can alternatively be used for the various refrigerants.

The newly developed heat exchangers with small tube diameters or extruded profiles require only small fill volume and provide optimal conditions for operation with CO₂ up to 120 bar, or propane.

Small footprint

- Compact casing
- High performance per m² footprint

Energy-saving operation

- Highly efficient heat exchangers
- Latest fan technology
- Energy-efficient classification as per Eurovent
- Stable operating conditions with precisely controlled condensing pressure*

Compact

The Compact product line offers standard units for standard applications, which are available from storage for the best possible price/performance ratio.



Designs with microox or finoox technology

*if you use Güntner Motor Management with EC fans

Güntner technology for high reliability and guaranteed performance



Vertical and horizontal design

- to suit the building design
- When space is at a premium
- Floor-standing unit
- For wall mounting on a console



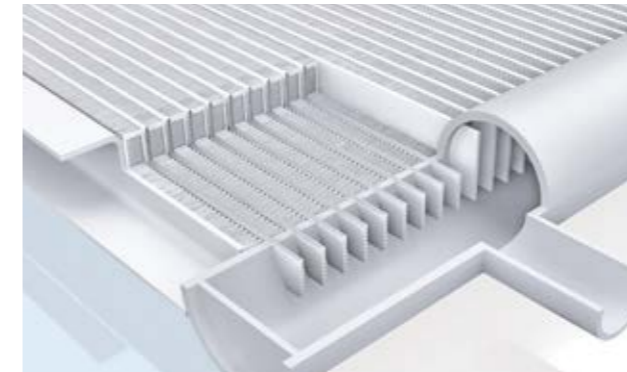
finoox

- Fin and tube heat exchanger
- Newly developed heat exchangers with varying fin geometries for forward-looking refrigerants and fluids



Optimised casing construction for transport and storage

- Casing dimensions optimised for truck and container transport
- Up to 3 units can be stacked on top of each other
- Easy forklift transport
- Suspension strap for crane transport
- Reduced weight



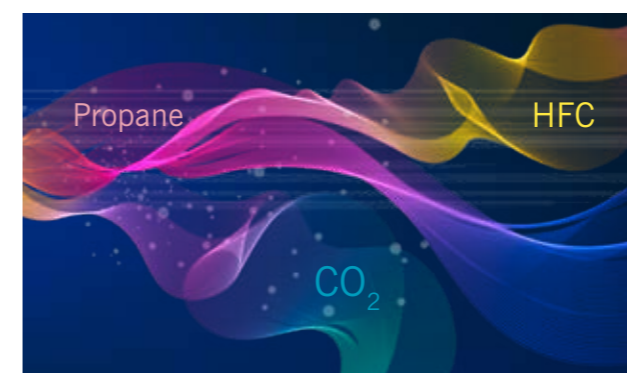
microox

- Microchannel heat exchanger
- High power density
- Low refrigerant charge
- Low weight
- Entirely made of aluminium



Highly efficient fans

- Maintenance-free, durable fans
- Available in AC and EC technology
- ErP-compliant
- Ø 350, 400, 450, 500, 630 und 800 mm
- Unit has optimal air and noise properties
- Adjustable speed



Optimised for various refrigerants

- CO₂: Optimised heat exchangers with small tube diameters (120 bar, 150°C.)
- Propane, propene: microox technology with TÜV approval for hydrocarbons
- HFC: Established technology with internally grooved special copper tubes



Modern integration into building management

- Optimal control concept with Güntner Motor Management
- Bus-enabled system
- Remote maintenance possible
- Energy data capture



Certified performance

- Eurovent-certificated
- Capacity specifications confirmed by independent laboratories

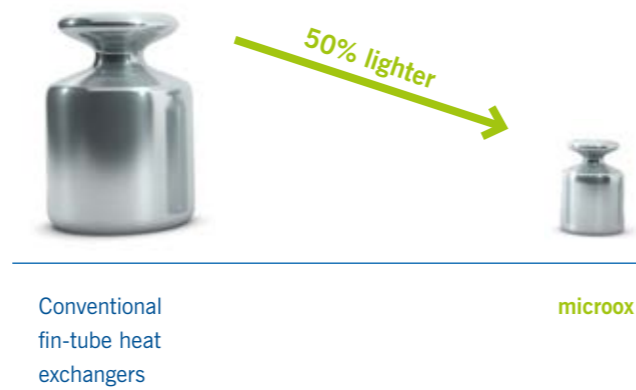
*if you use Güntner Motor Management with EC fans

Innovative microox technology in detail

The casings of the FLAT and VERTICAL Compact series can optionally be fitted with microox or finoox heat exchangers. This means that you have a choice of different technologies, different fin systems and different materials.

Low weight for transport and installation

Heat exchangers with microox technology are made entirely of aluminium and up to 50% lighter than conventional fin-tube heat exchangers.



Fewer leakage checks

The heat exchangers in this series offer an up to 75% lower charge volume relative to the capacity.

EU regulations 842/2006 (F-Gas Regulation) and 1005/2009 prescribe leakage tests depending on the system's charge volume.

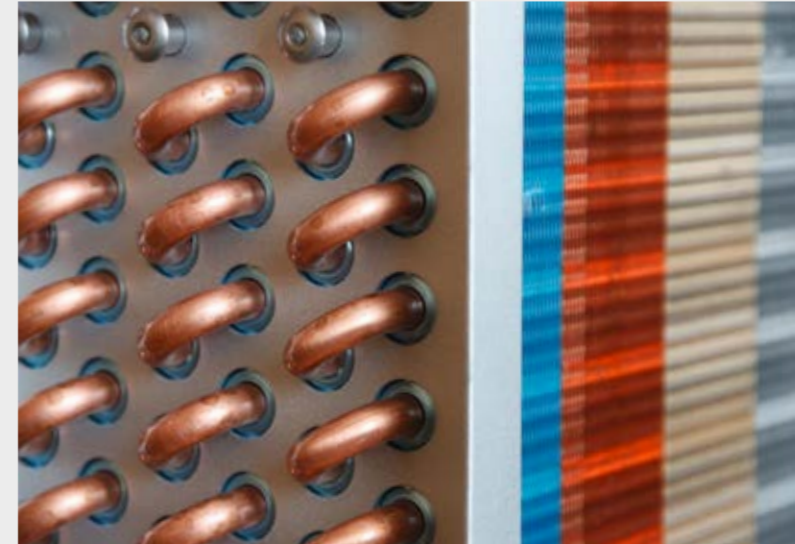
A lower charge therefore means fewer leakage tests.

Prescribed leakage tests per year	1	2	4
Old 842/2006 fill volume in kg	> 3	> 30	> 300
New 517/2014 CO ₂ -equivalent in t	> 5	> 50	> 500

Different applications – optimised heat exchangers

finoox – proven technology

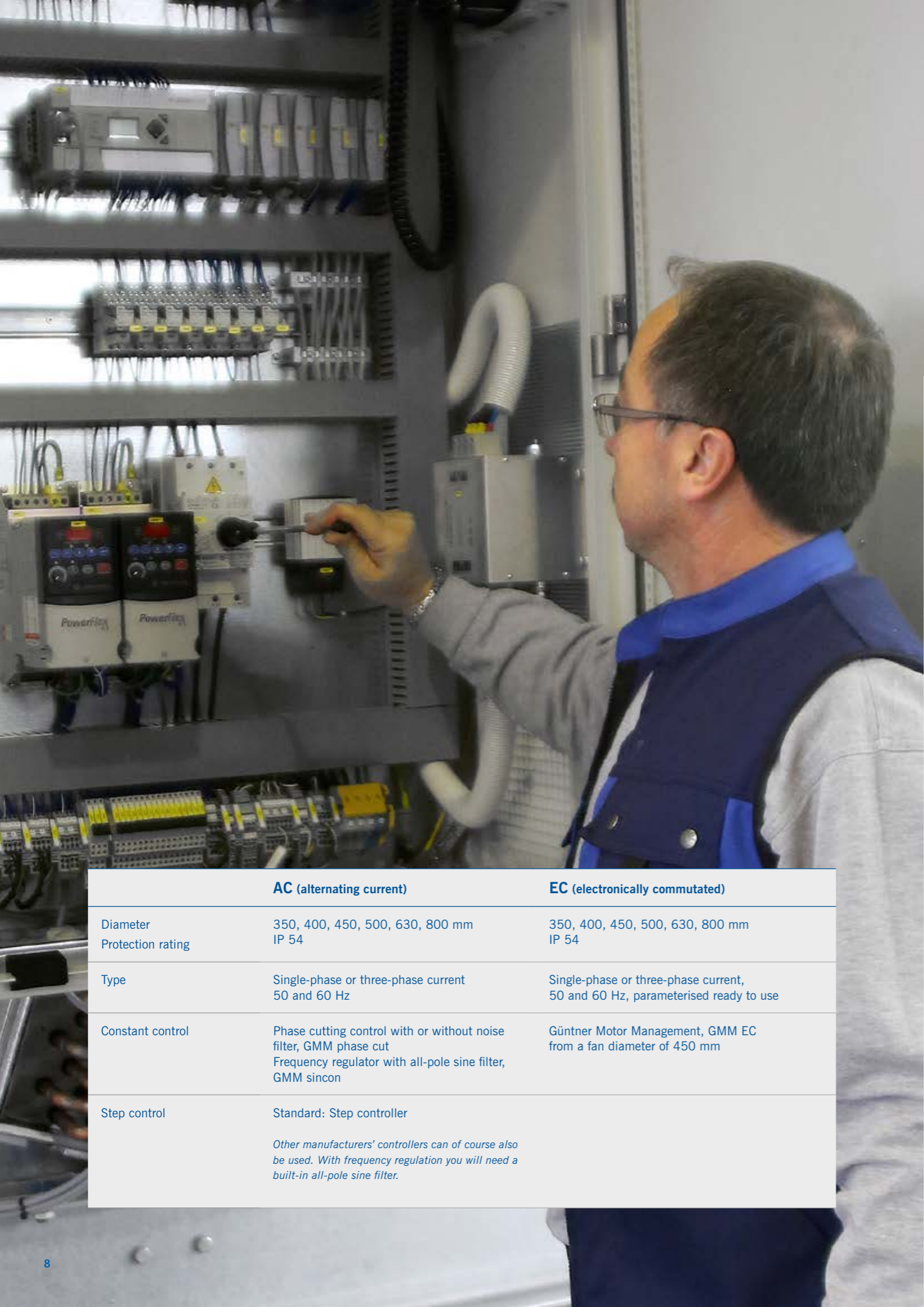
- Designed with copper tubes and aluminium fins
- Different tube diameters for different fluids
- Fin spacing 2.1/2.4/3.0 mm
- Operating pressure 120 bar, 150°C for CO₂



microox – the technology of the future!

- Compact heat exchangers made from top quality aluminium alloy
- Low refrigerant charge due to microchannel profiles
- Reduced weight
- Robust design for cleaning and operating
- For refrigerants up to 41 bar operating pressure
- TÜV approval for the fluid group “hydrocarbons”





Fans and control

AC and EC fans used

The series FLAT and VERTICAL use highly efficient axial fans. Motor, impeller, nozzle and protection guard form an optimal unit in terms of air and sound technology. These fans are available with AC or EC motor technology. EC fans come ready parameterised from the factory.



GMM sincon
Controller variants
for AC fans



GMM EC for EC fans

Switch cabinets and control concepts for AC fans.

Each VERTICAL or FLAT unit can be delivered with appropriate switch cabinets and controllers ex factory. All controllers and switch cabinets are developed in-house by Güntner and focus on the specific heat exchanger applications,

so their controller and cabinet concepts are optimally tailored to your requirements. Switch cabinets can be mounted on the unit in the factory or supplied separately. If you wish, our expert staff will install and commission the switch cabinets and/or controllers at your site.

EC fans with Güntner Motor Management GMM EC

EC fans have a progressive motor technology with integrated electronic components. These electronic components generate the motor's rotary field and offer enormous benefits, especially for speed-controlled applications.

Güntner Motor Management GMM EC was especially developed for Güntner's condensers and dry coolers. The combination of energy-saving EC fans and GMM EC ensures an intelligent heat exchanger system that enables energy-optimised operation of the units plus efficient maintenance and servicing.

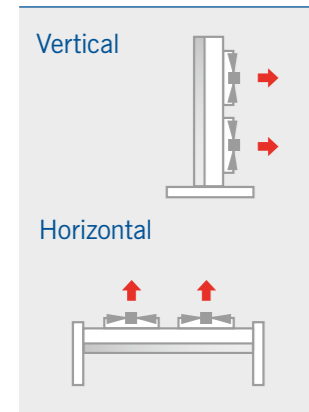
Want to find out more about Güntner Motor Management?

Ask for our detailed Controls brochure!

	AC (alternating current)	EC (electronically commutated)
Diameter	350, 400, 450, 500, 630, 800 mm	350, 400, 450, 500, 630, 800 mm
Protection rating	IP 54	IP 54
Type	Single-phase or three-phase current 50 and 60 Hz	Single-phase or three-phase current, 50 and 60 Hz, parameterised ready to use
Constant control	Phase cutting control with or without noise filter, GMM phase cut Frequency regulator with all-pole sine filter, GMM sincon	Güntner Motor Management, GMM EC from a fan diameter of 450 mm
Step control	Standard: Step controller	
	<i>Other manufacturers' controllers can of course also be used. With frequency regulation you will need a built-in all-pole sine filter.</i>	

Technical details

Orientation



Available Accessories

Circuit breakdown	Subcooler	Controls	Other
✓ On request	✓ Integrated with finoox	✓ GMM EC ✓ GMM sincon ✓ GMM phase cut ✓ GMM step	✓ AC or EC fans ✓ Vibration dampers ✓ Extended legs ✓ Flange connection ✓ Threaded connection ✓ Empty casings ✓ Ventilation, emptying with ball valve ✓ Special varnishing
	On request with microox	✓ Switch cabinet ✓ Repair switch ✓ Fans wired	

Fans



Available material

	Microchannel	Fin	Casing	Tube
AlMg				
Aluminium	✓	✓		
Copper				✓
Aluminium, coated with epoxy resin		✓		
Steel, hot-dip galvanised				
Sheet steel, galvanised			✓	
Stainless steel				

✓ Standard version

GCHC and GFHC series

	Fluid	Nominal capacity	Sound pressure level at a distance of 10 m as per EN 13487
Condenser	HFC	4 – 400 kW*	27 – 70 dB(A)
	Propane	4 – 380 kW*	27 – 70 dB(A)
Gas cooler	CO ₂	5 – 600 kW**	27 – 70 dB(A)
Dry cooler	Water/Glycol	5 – 325 kW*	27 – 70 dB(A)
	Water/Glycol 90/70 °C	20 – 1,000 kW	27 – 70 dB(A)

* as per EN327 (tLE=25°C, tC=40 °C)
** as per EN327 (tLE=25°C, 110/35 °C)

* as per EN1048 (tLE=25°C, 40/35 °C)

Quickly and reliable

thermodynamic calculation
and proposal submission

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

Simply enter the required parameters in the convenient entry screen of the GPC. The calculator will consider your specified operating conditions and selected accessories, perform the thermodynamic configuration and provide a selection of suitable units. Capacity specifications are stated in compliance with EUROVENT.

Use our software to select evaporators, condensers, air coolers, dry coolers, control units and switch cabinets!



YOUR BENEFITS AT A GLANCE:

- Thermodynamic calculation
- Quick and safe configuration
- Automatic coordination of individual unit components
- Various units of measurement possible
- Choice of 15 languages
- Current prices and delivery times can be called up
- Display of quickly deliverable units in stock



Download your **Güntner Product Calculator (GPC)** for free.

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