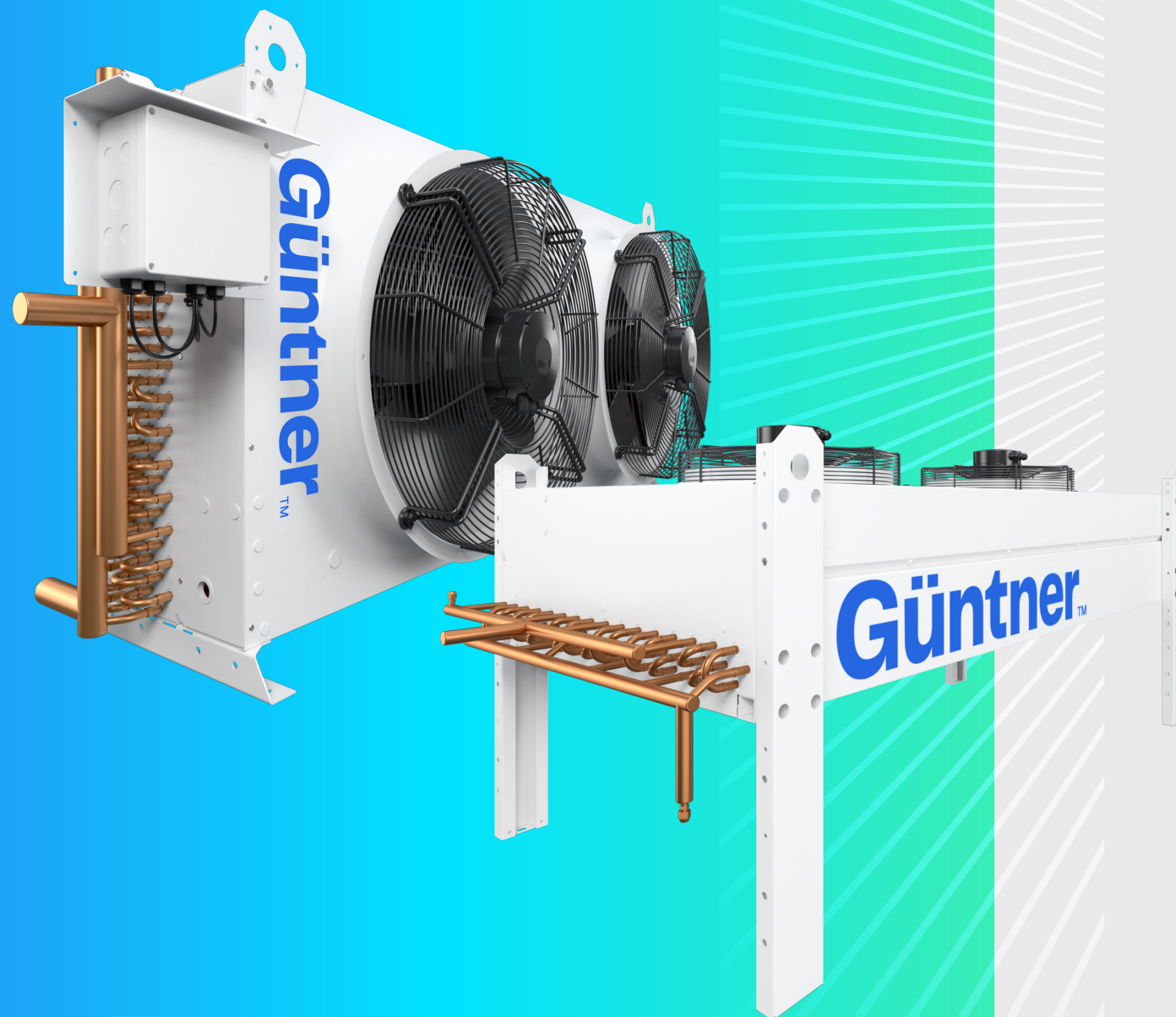




COMPACT
FLAT & VERTICAL
CONDENSERS
DRY COOLERS
GAS COOLERS



COMPACT FLAT & VERTICAL



This series is optimised for use in commercial refrigeration and for a capacity range up to about 400 kW. Condenser GCHC/GCVC is for HFCs and Propane, Dry Cooler GFHC/GFVC is for water/glycol and other media and Gas Cooler GGHC/GGVC is for CO₂. The extremely compact casings are available in horizontal or vertical design. 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.

KEY FEATURES

ENERGY-SAVING OPERATION

- Highly efficient heat exchangers
- Latest fan technology
- Stable operating conditions with precisely controlled condensing pressure by using together with Güntner Motor Management with EC fans

VERTICAL AND HORIZONTAL DESIGN

- Suit the building design when space is at a premium
- Floor-standing unit
- For wall mounting on a console

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

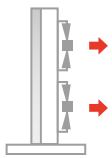
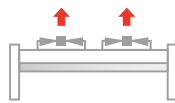
HIGHLY EFFICIENT FANS

- 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

MODERN INTEGRATION INTO BUILDING MANAGEMENT

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

TECHNICAL DETAILS

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

Fans	Available material		
1 - 8 350 mm 500 mm 400 mm 630 mm 450 mm 800 mm		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)

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

Dry cooler	Water/Glycol	5 – 325 kW*	27 – 70 dB(A)
	Water/Glycol 90/70 °C	20 – 1,000 kW	27 – 70 dB(A)

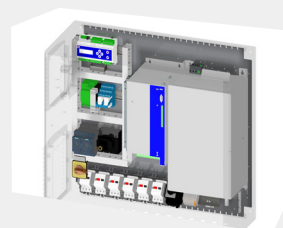
* as per EN1048 (tLE=25°C, 40/35 °C)

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.

	AC (alternating current)	EC (electronically commutated)
Diameter Protection rating	350, 400, 450, 500, 630, 800 mm IP 54	350, 400, 450, 500, 630, 800 mm 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, GMMnext phase-cut Frequency regulator with all-pole sine filter, GMMnext sincon	Güntner Motor Management, GMMnext EC
Step control	Standard: Step controller Other manufacturers' controllers can of course also be used. With frequency regulation you will need a built-in all-pole sine filter.	



GMMnext sincon
Controller variants
for AC 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.



GMMnext EC for EC fans

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

REFERENCES

High cooling power – special assembly situation

London is home to one of Europe's largest shopping centres. A total of 61 speed-controller-equipped Güntner dry coolers provide for a pleasant atmosphere. Such a large number of dry coolers calls for special measures for the assembly and installation. The speed controllers ensure that the required noise levels can be complied with day and night.



Process cooling

In this factory, the company Glockenbrot produces baked goods for branches all over Germany. This involves processing 100 tonnes of flour every day. Güntner's dry coolers cool the refrigeration units required for process cooling.



Altitude – extreme conditions

Germany's highest transmitter is operated by the Bavarian broadcasting company BR in the Alps. Güntner dry coolers are in operation in all weathers at an altitude of 1800 m.



Fish processing – corrosion proof

One of Europe's largest and most modern fish processing plants is on the Baltic island of Rügen. Erecting condensers and dry coolers on the coast calls for special anti-corrosion measures. Güntner's special corrosion-proof condensers fulfil these requirements.



Stringent noise requirements

Refrigeration equipment with a total cooling power of 3.5 MW is installed at the Rinecker Proton Therapy Center. The location of the dry coolers called for a non-standard assembly and compliance with extra stringent noise requirements.





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