



# GHN

Vario Cubic  
for all refrigerants

4 – 240 kW

*Güntner Info*



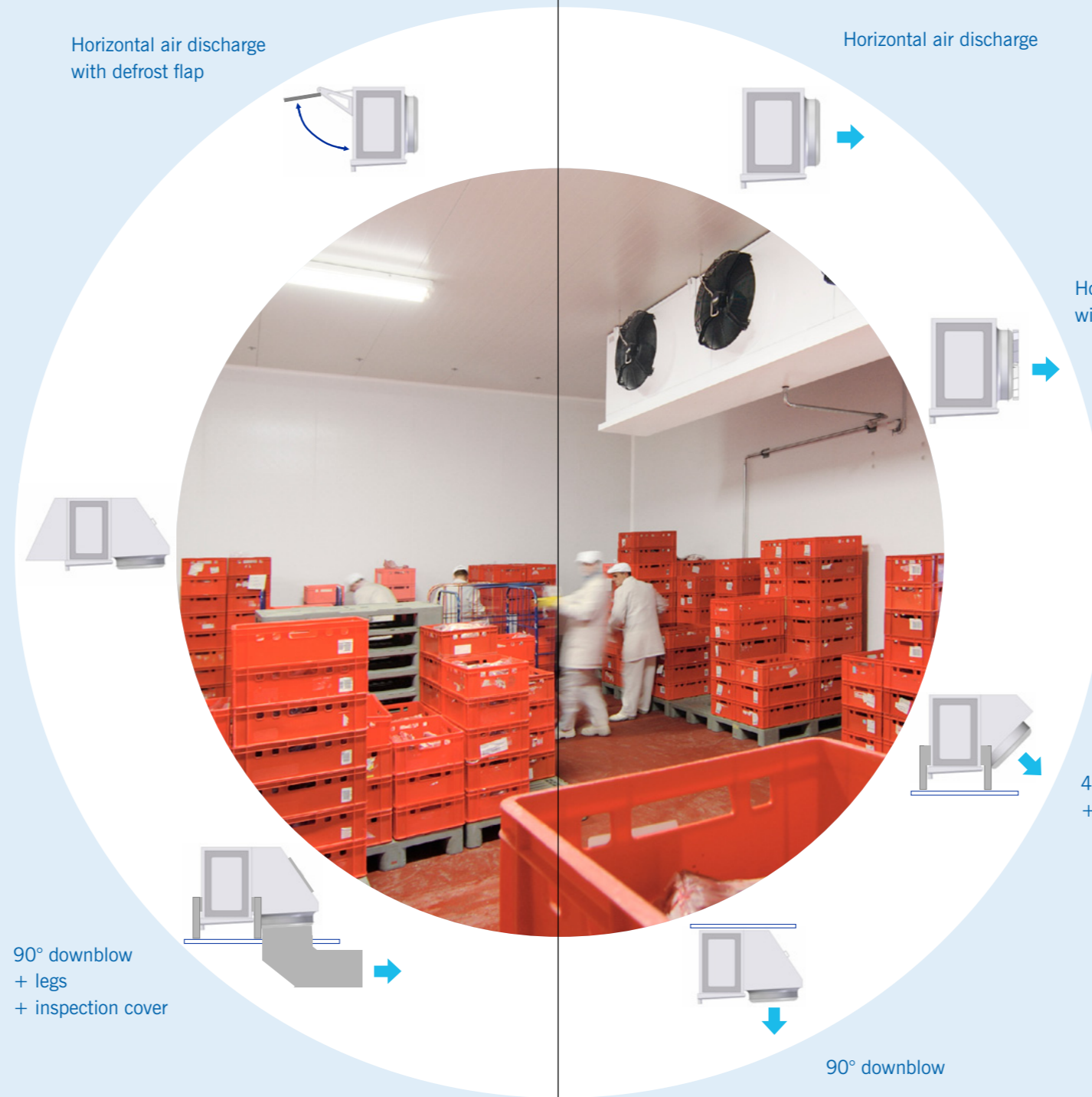
**Variable aircooler for industrial refrigeration**

# Variable aircoolers for manifold applications

The "Vario" is a variable industrial aircooler for a variety of applications. Its wide range of casing models, fan concepts and material combinations enable it to meet any requirements. It is available as the "GHN", with aligned tube patterns and large surface area, and as the "GHF", with staggered tube patterns and highly efficient heat exchangers.

The wide power range from 2 to 240 kW with versions for all refrigerants guarantees maximum flexibility.

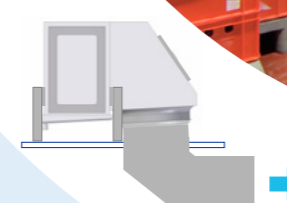
- Proven Güntner quality
- Wide power range
- All refrigerants (HFC, NH<sub>3</sub>, CO<sub>2</sub>, fluids)
- All types of defrosting
- Manifold combinations of materials
- Variety of fan designs
- Variety of casings



90° downblow with inlet hood



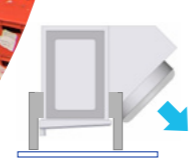
90° downblow + legs + inspection cover



90° downblow



45° downblow + legs



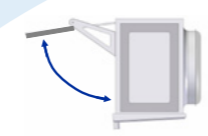
Horizontal air discharge with Streamer



Horizontal air discharge

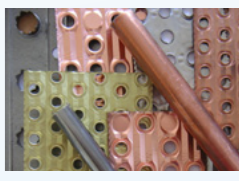


Horizontal air discharge with defrost flap



## Material combinations for any application!

- Meat processing
- Fishing industry
- Pastries and bakery products
- Warehousing & logistics



Various applications, especially those involving aggressive atmospheres, need a very specific material selection. We summarized our recommendations for material selection in a separate brochure.

[www.guentner.eu/know-how/application-tips](http://www.guentner.eu/know-how/application-tips)

## HACCP



Under EU regulations in force since 1 January 2006, all companies dealing with foodstuffs are required to set up a HACCP concept (hazard analysis and critical control point). This regulation applies to all companies that produce, handle or distribute food and drinks. In order to offer our customers the maximum possible safety, even in the sensitive area of foodstuffs, we have subjected our aircoolers to appropriate HACCP certification by the safety standards authority (TÜV). The units that now carry these certificates satisfy the stringent stipulations for all areas.

# Advantages the GHN has to offer

## Inspection and cleaning

- Side cover with hinges and quick-release fastener
- Tray can be folded down

## Easy to install

- Ceiling mounting brackets for easy installation
- Legs available if required
- Empty tube for defrost sensor
- Schrader valve on outlet
- Delivered on pallet in mounting position

## High operational reliability and leak-safety

- Proven Guntner floating coil principle increases the heat-exchanger's service life (no contact between refrigerant-carrying tubes and casing)

## Hygiene certificate HACCP

- All materials used are approved for foodstuffs
- Edges of drip tray angled at 45°
- Easy to clean



## Proven fans

- Standardly with two speeds (from 500 mm)
- Motor protection with thermal contacts
- Special fans with external pressure

## High quality tray design

- Can be folded down
- Thermally insulated (no condensation)
- Separate drip plate
- Corrosion resistant aluminium alloy AlMg
- Powder coating in RAL 9003
- Large drain for condensation angled at 45°

## Modified heat-exchangers for any application

- Aligned or staggered tube pattern
- Various fin spacings
- Staged fin spacing
- Special copper tubes for HFC, coolants and CO<sub>2</sub>
- Design for NH<sub>3</sub>: tubes made of stainless steel or hot-dip galvanised steel
- Undulating aluminium fins for high heat transfer

## Well thought-out versatile casing design

- Corrosion resistant aluminium alloy AlMg
- Galvanized steel, from 710 mm diameter fan
- Powder coating in RAL 9003
- Side cover is hinged to open up
- Inclined fans (from 710 mm) improve air throw and defrost behaviour



# High demand – reliable products

For the manufacturing of our heat exchangers, Güntner uses only high-quality raw materials and semi-finished goods by certified manufacturers. Using state-of-the-art machinery, those materials are then made into top-quality and optically pleasing products.

In addition to economics, the protection and safety of man and environment are equally important among Güntner's corporate goals.

## Incline Design



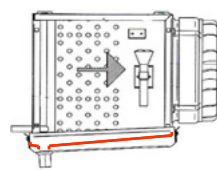
- For sizes 071, 080 and 090, the fans are inclined at an angle of 3°.
- Better air guidance due to an increased Coanda effect
  - Angled fan bell mouths improve run-off of condensation and de-frost water
  - Prevents ice forming in the annular gap

## Hinged side cover



- Easy access to connections and fittings
- Sizes 071, 080 and 090 have a spring lock that is even easier to open

## Condensation-free tray design



Thermally insulated tray design prevents condensation on the outside

## Insulated tray design



A double insulated drip tray is available for special conditions

## Tests and certificates

Güntner heat-exchangers are tested and carry certificates from independent institutes:

DIN ISO 9001	
GOST	
Eurovent	
UL	
ASME	

## Güntner's floating coil principle



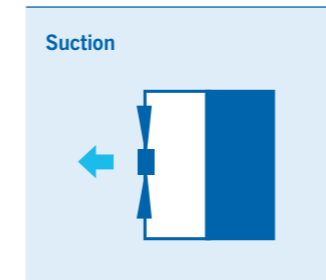
- Thermal expansion of the heat exchanger does not stress the core tubes
- Prevents leaks
- Increases the heat exchanger's service life

## Product Types / Refrigerant / Capacity

	Refrigerant	Operating Condition	Nominal Capacity with Fin Spacing of			
			4 mm	7 mm	10 mm	12 mm
GHN / GHF	HFC	-8 °C	0.8 – 210 kW	0.8 – 226 kW	4.6 – 198 kW	4.2 – 185 kW
		-25 °C	0.7 – 142 kW	0.6 – 162 kW	3.6 – 145 kW	3.3 – 137 kW
AGHN	NH <sub>3</sub>	-8 °C	4.7 – 237 kW	5.3 – 230 kW	4.4 – 193 kW	4.0 – 177 kW
		-25 °C	3.5 – 168 kW	3.9 – 171 kW	3.3 – 147 kW	22.0 – 136 kW
GGHN / GGHF	Coolant	-3 / 10 °C	1.3 – 155 kW	1.3 – 155 kW	7.4 – 148 kW	6.8 – 136 kW
CXGHN / CXGHF	CO <sub>2</sub>	-45°C / -10°C	1.4 – 41 kW	1.4 – 141 kW	9.2 – 122 kW	8.3 – 112 kW
CPGHN	CO <sub>2</sub>	-45°C / -10°C		6.1 – 127 kW	5.1 – 109 kW	4.7 – 101 kW

	Refrigerant	Operating Condition	Nominal Capacity with Fin Spacing of			
			6 mm	8 mm	10 mm	12 mm
GHK	NH <sub>3</sub>	-8°C	5.7 – 197 kW	6.9 – 203 kW	5.5 – 187 kW	4.9 – 173 kW
		-25°C	4.4 – 149 kW	4.7 – 155 kW	4.3 – 145 kW	3.8 – 132 kW

## Fans



## Available Defrosting Types

Circulation air	Electric	Hot gas	Brine	Water
✓	<ul style="list-style-type: none"> <li>✓ Coil</li> <li>✓ Tray</li> <li>✓ Fan</li> </ul>	<ul style="list-style-type: none"> <li>✓ Coil</li> <li>✓ Tray</li> </ul>	<ul style="list-style-type: none"> <li>✓ Coil</li> <li>✓ Tray</li> </ul>	<ul style="list-style-type: none"> <li>✓ Coil</li> <li>✓ Tray</li> </ul>

## Fans

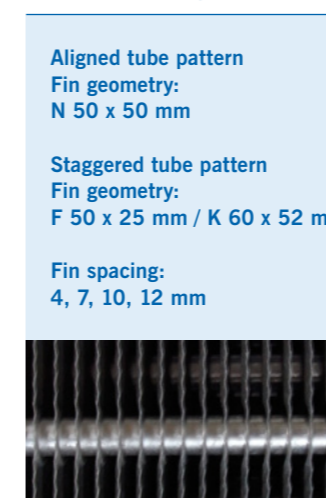


## Available Material

Material	Tube	Fin	Casing	Tray
AlMg			✓	✓
Aluminium		✓		
Copper	✓			
Aluminium, epoxy-resin coated		✓		
Steel, hot-dip galvanised	✓	✓		
Sheet steel, galvanized			✓ <sup>2</sup>	
Stainless steel, V2A 304	✓ <sup>1</sup>	✓	✓	✓
Stainless steel, V2A 316	✓	✓	✓	✓

✓ Standard version    1 Standard version with NH<sub>3</sub>    2 Standard from 710 mm fan diameter

## Heat Exchanger



# Our expertise is your advantage!

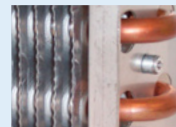
## Application advice

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.



## Leak-safety

The proven Güntner floating coil system relieves the fluid-carrying heat exchanger tubes, without any contact with enclosure parts (end plate/separator plate). The heat exchanger is on a floating bearing, and is therefore protected against leaks.



## GPC – Güntner Product Calculator

For a precise thermodynamic design we recommend to use our calculation software Güntner Product Calculator.

The software also allows for precise, simple design of the switch cabinet with control components, corresponding to your application.



## You do not have the Güntner Product Calculator?

Download the GPC from the Güntner Website or request a CD!  
[www.guentner.eu](http://www.guentner.eu)



## 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, e.g. as certified welders for different tube wall strengths and materials.



If interested, please contact our Sales department:  
[sales@guentner.de](mailto:sales@guentner.de)



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