

Güntner Competence

Energy & Process Cooling

Power plants



Energy conversion



Oil & gas



Renewable energies



Gas turbines



Biogas plants



*“Customized heat exchanger engineering
with an innovative, competent
and reliable partner.”*

Volker Stamer, Energy & Process Cooling BU Manager



Cooling power generation, distribution and conversion processes as required in the energy sector is a demanding industry branch that requires plenty of experience and technical know-how. Innovative, competent and reliable partners, who know the meaning of customized heat exchanger engineering, are a must here.

We at Güntner have been active in this area for many years, and in addition to personal consulting and technical expertise we also provide global production, reliable delivery, fast spare parts service and high production capacities.

Our specialists in the Energy & Process Cooling (EPC) segment will find a precise and efficient thermodynamic solution for all your challenges, with complex specifications, restricted set-up areas, high sound specifications or special material requirements.

We consequently meet the highest demands.
100% Güntner – 100% reliable.

Competent. Reliable. Personal.

We support you in the following areas:

Power plants

Modern power plants achieve maximum output from the primary energy used. These plants cannot function without additional cooling. Güntner products are used for all plant parts that require cooling.



Energy conversion

Energy transport and energy conversion play an important role in modern economic systems. The high demand that this infrastructure responsibility entails also applies for the necessary plant components used. Güntner heat exchangers, which are used for cooling processes, are reliable and fail-safe.



Oil & gas

Oil and gas production and processing require cooling for equipment and processes in many different areas. Application conditions are made extremely diverse by global locations with different requirements, in the desert or offshore, for example. Güntner has the necessary application know-how and the ability to modularly adjust equipment according to the specified requirements.



Gas turbines

The importance of gas as a global economy fuel is constantly growing. Gas turbines are increasingly used for power generation in developing regions in particular. Frequently high ambient temperatures mean that these gas turbines require a cooled charge airflow. Güntner produces heat exchanger coils as OEM units for installation in filter houses in customer-specific dimensions and materials.



Renewable energies

In all areas of the current energy discussion, it is becoming clear that renewable energies will play a much more important role in the future. It is not just about the most environmentally friendly energy production – it is also about cost-effective use of the plants' components. With their specially developed control components, Güntner heat exchangers form an energy-optimised unit.



Biogas plants

Bioenergy is booming. Renewable energies are more than simply the key to sustainable climate protection on our planet. Biogas combustion engines are mostly installed in space-saving containers and delivered as complete systems. Güntner meets the requirement of making heat exchangers as compact, modular and high performance as possible.



Operational safety

Safety applies to the equipment – but it also applies to the people that work with it. This includes protection guards in front of fins, railings with units that can be walked on and appropriate precautionary measures and accessory parts in explosion-protected environments.



Protection guard ✓



Railings ✓



Explosion protection ✓

Failure safety

Thermodynamically precise constructions

To design a customized solution specifically for you, we make precise thermodynamic calculations – unusual application areas included. We give you the best solution for your application specifications.

Reliable

More than just heat exchangers: Güntner units and equipment have various properties that make them especially fail-safe. The Güntner's proven floating coil design, for example, prevents liquid-carrying tubes from touching casing parts through thermal expansion, and therefore maximizes leakage safety. Another example: The Güntner support profile braces the casing construction and consequently protects the heat exchanger for transport and installation.



Fans

Motor, blade wheel, duct and protection guard form an optimum air and sound unit. Directly driven brand name fans, as used by Güntner, are more efficient than indirectly driven fans. The speed-controllable external rotor motors are extremely long-life, maintenance-free, balanced and wired. A high number of fans ensures failure-safe operation.

The fans used have the following benefits for making required unit exchanges:

- Low storage costs
- Low space requirements
- Quick and easy installation
- Cost-effective spare parts prices





Noise abatement

The fans are available in different noise level classes; the relevant noise data is subjected to regular tests by Eurovent. The installation point, including protection guard, fan nozzle and heat exchangers, is measured here. We only use reliable brand products of renowned manufacturers.



Performance test, material combinations and special projects

We have measurement chambers in various sizes to cover a wide performance range. We also examine different material combinations in detail for different unit types. We can verify all required tests and material checks:

Seismic tests



Material compatibility



Usage limits



Stability, strength, statics



Of course we also have the relevant documentation, including calculation proof and documents in acc. with different standards and certificates, such as ASME, UL, CE, PED, GOST, explosion protection, for example.

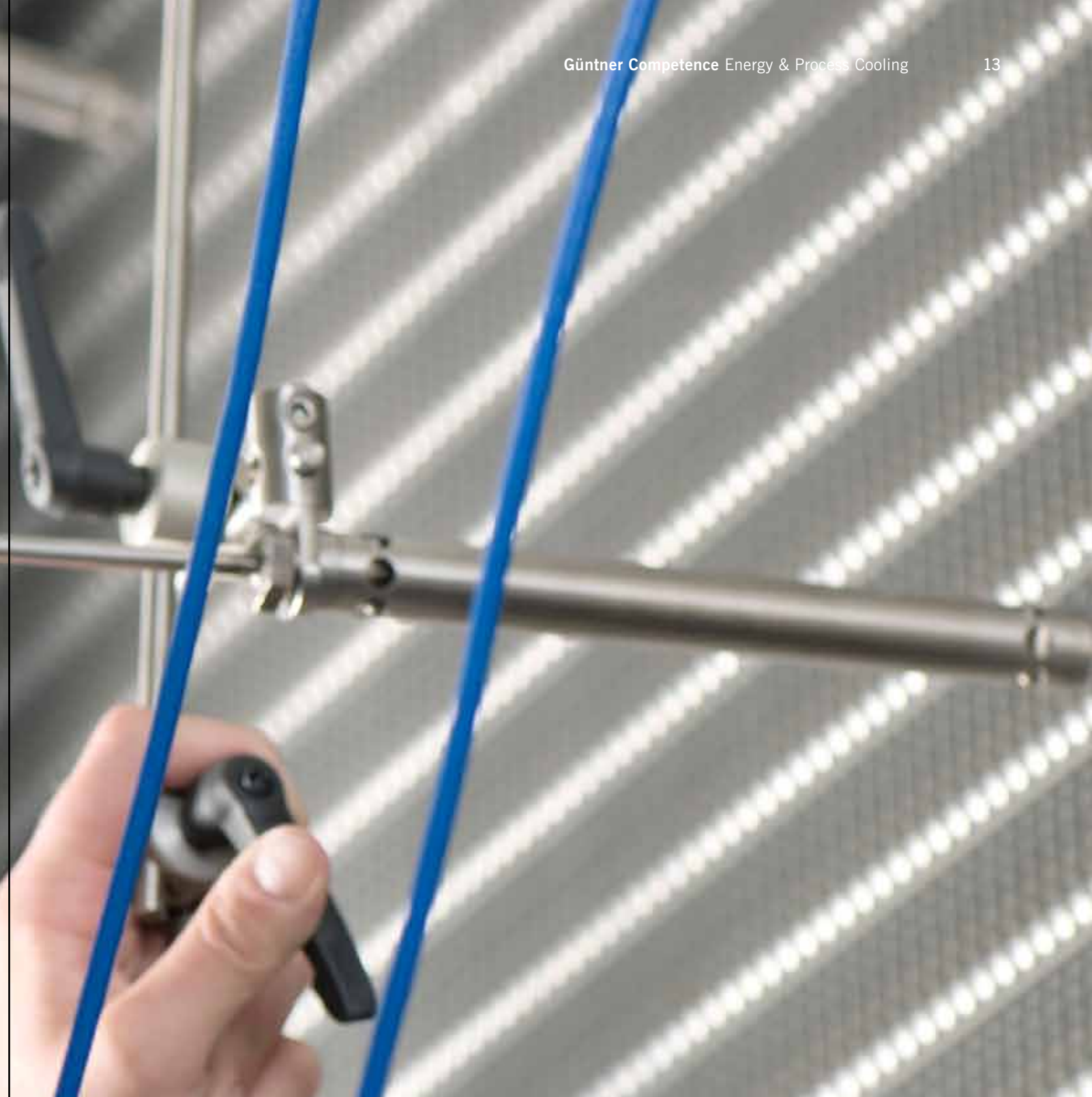
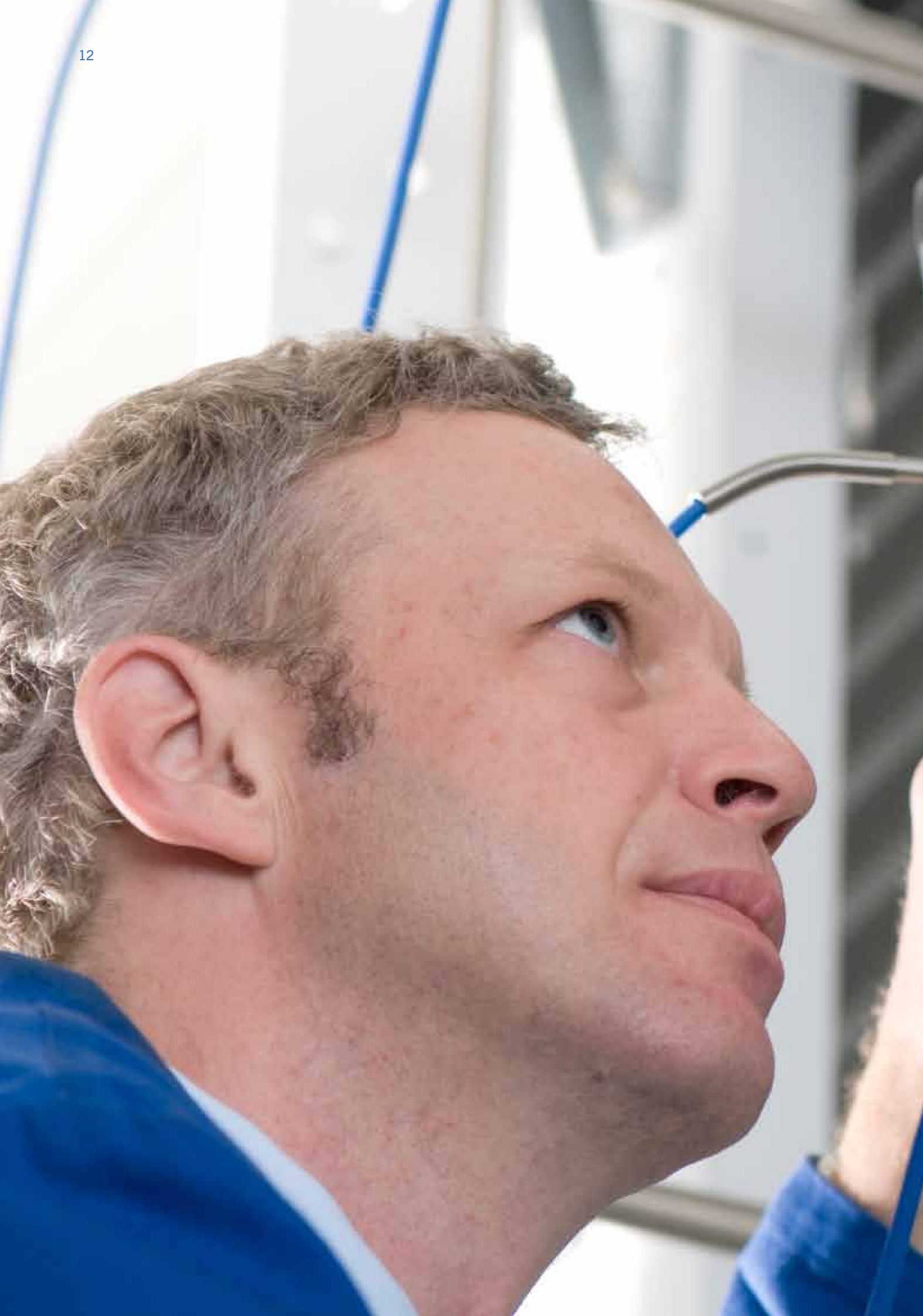


Cost-effectiveness and safety do not contradict one another.

Solutions that pay off.

Being financially successful, achieving environmental objectives, accepting social responsibility – these are the challenges of a modern company. To do this you need know-how and the consistent implementation of assignments and tasks.

Our experts support you with know-how, experience and skills in the efficient implementation of your projects.



Comprehensive tests and approvals

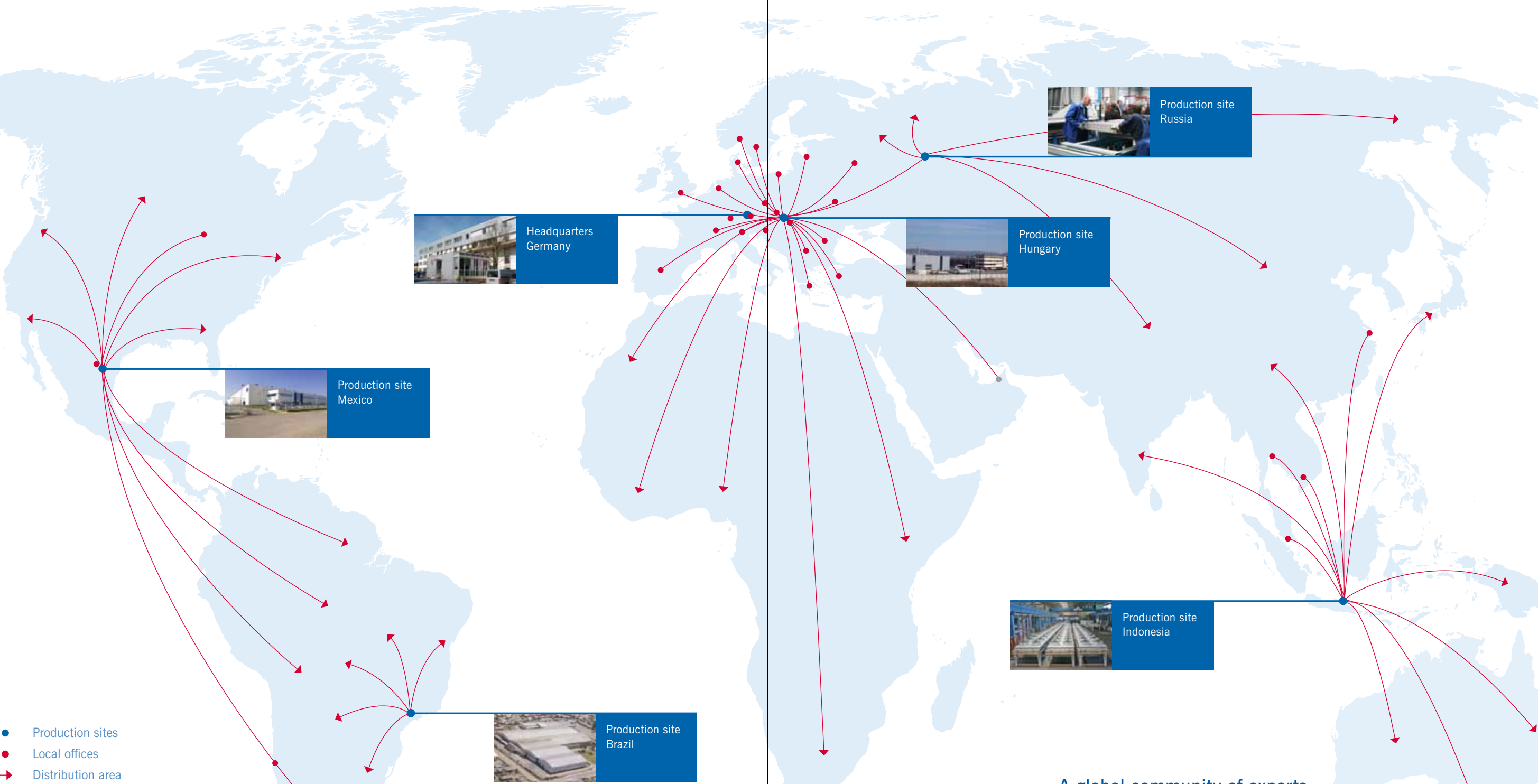
Our experts offer you competent consulting for your application case. We know the difficult requirements of your area of application. To be able to address these requirements in detail, we have our own research and development department, and can therefore carry out very broadly defined, application-related research.

We specifically check special customer requests, which we implement on a factual technical basis.

A customized solution, designed for you.

Global presence

As your partner we support you around the entire globe! You will find us at over 50 locations in almost every important production and trade centre in Europe, the Americas and Asia. We speak the language of the market and understand regional laws and mentalities.



A global community of experts



Flexible plant integration

We deliver completely mounted units to the installation site so that only the system integration is required. We consequently ensure there are no delays. Right time, right place.

- Control: Switch cabinets and in-house control systems wired ready-to-operate
- Steel structure
- Tubing
- Service

Modular product diversity

The Güntner heat exchangers' modular structure enables customer-specific versions with a wide-ranging power bandwidth. The units are set up ready-to-operate and can be transported with standard trailer truck transports. The combination of different unit types for removing high heat loads is easy to implement.

GCO

finoox® heat exchanger coil

The fin-tube heat exchanger from Güntner offers high flexibility with dimensions, materials used and working fluids.



GFH

Drycooler

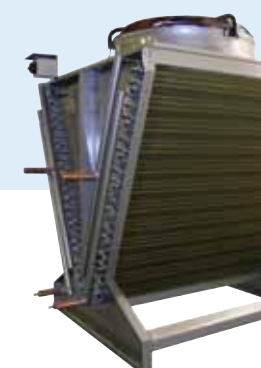
The Güntner GFH is an easy to set up standard heat exchanger with high operating and leakage safety.



GFW

Drycooler

Several units can be placed space-savingly in rows with high nominal capacity to cover high capacities.



GFD

V-coil drycooler

The GFD drycooler series has been specially developed for the power plant segment, where high cooling capacities are required with narrow space conditions.



Modular



Redundant



Low-maintenance





Optimum coordinated regulation

Güntner Controls has been delivering efficient and top quality controllers and switch cabinets, which are continuously further developed in accordance with the requirements of the refrigeration industry, for many years now.

The units used are developed and produced in-house. They are therefore harmonized with the Güntner drycoolers and condensers and form a very important element of the intelligent Güntner heat exchanger systems.

Why control?

The condensation temperature in a compression refrigeration system should be as low as possible to minimize compressor operating costs, but high enough to guarantee the system's proper functioning at all times.

Fan control is the most technically feasible method to achieve this objective.

How to control?

The basis for fan speed control is the recording of the actual values, such as pressure or temperature. The required control signals (fan speed) are calculated in the controller using the setpoint. Depending on the motor technology this setpoint is forwarded via the bus system to the fans directly or to a power unit. The bus system also enables constant communication with the fan or the power unit to be able to respond to incidents, such as operating information or faults, for example.

The difference is made here between continuous and step control. Güntner controllers are available for both control principles and have been specially developed for Güntner condensers and drycoolers, and adapted to AC or EC fan technology.



Innovative speed controllers

Güntner controllers are delivered as per design with the extended functions of Güntner Motor Management (GMM). This provides the contractor with additional benefits:

- BUS interface in master control systems, e.g. for integration into remote maintenance systems
- Monitoring functions of important operation components
- Operations and fault reports on the display
- Bypass function to increase operational reliability
- All-pole sine filter with the GMM sincon for max. AC fan service life
- Setpoint shifting for max. energy efficiency

Controller technologies at a glance

	AC fans		EC fans	
Control principle	Step	Continuous	Continuous	Continuous
Technology	Step controller	Phase angle controller	FC with sine filter	EC technology
Type	GSTS	GDRD	GMM sincon	GMM EC
Low investment costs	+++	++	+	+
Precise control	+	++	+++	+++
Noise-sensitive application	+	+	+++	+++
Energy efficiency	+	+	++	+++
Low installation costs	+	+	+	+++



Efficient heat exchanger solutions

Environmental protection is firmly anchored as a corporate goal at the Güntner Group. For the Güntner Group, accepting responsibility also means offering its customers environmentally and resource friendly solutions: For better quality of life – today and tomorrow. For a clear conscience with environmental issues. And for a leaner operating costs budget.

No water consumption
- Save on operating costs
- No Legionella-related risks

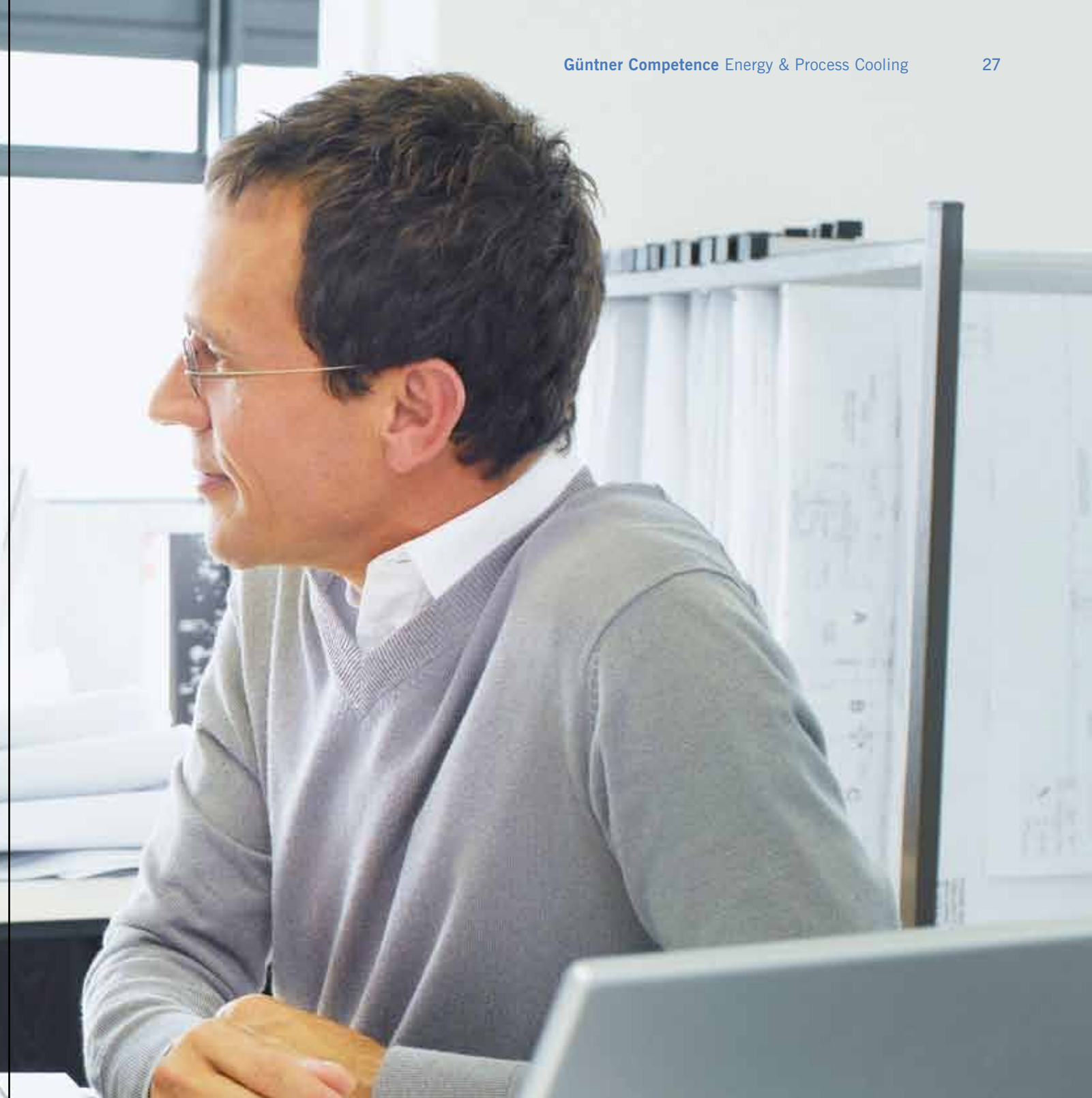


Low power consumption
- Modern fan technology
- Efficient system solution



Low sound
pressure level





Achieving objectives together with partnership-based consulting

Take advantage of Güntner's extensive experience. With specific application know-how and innovative products we can work out optimum solutions together with you.

Our technical sales supports you with your search for the optimum concept, and also provides you with the required technical data for your planning.

We project the heat exchangers according to your specifications with reliable data and advise you on the best possible selection, equipping and number of units.



Peiner Träger
Salzgitter / Germany



Transformer station
New Orleans / USA



Biogas plant
Jerrishoe / Germany



Tiefstack CHP
Hamburg / Germany



Transformer station
Winnipeg / Canada



BCHP
Adlershof / Germany

Our experts offer you competent consulting for your application case!

- Precise thermodynamic constructions
- Comprehensive tests and approvals
- Requirements-oriented training courses, instructions and start-ups
- Wide-ranging and deep product range
- High production capacity
- Reliable delivery
- Fast spare parts service

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