

FOR ALL YOUR COOLING AND CLIMATE-CONTROL TECHNOLOGY NEEDS

MSC NEW YORK
PANAMA

INNOVATIVE SOLUTIONS

Committed in cooling technology



THE COMPLETE SPECTRUM OF COOLING AND CLIMATE-CONTROL TECHNOLOGY

From air-conditioning systems in buildings to cooling towers in industrial processes and and the offshore sector, we live in an age where cooling and climate-control technology is integrated into our daily lives. The approaching energy transition adds an extra dimension to this. There has been a clear focus on sustainability for a number of years now and success in this area requires specific products. It is precisely these kind of specialist projects where standard solutions fall short that NR Cooling embraces.

Our core business

NR Cooling Services specialises in cooling and climate-control technology with products and services that meet your needs and budget. From engineering to production and installation, we offer high-quality, innovative solutions in the following disciplines:

- Climate control
- Food refrigeration
- Concrete cooling

We also operate worldwide with advanced cooling technology and control systems in different industries and diverse markets, such as:

- Utilities & Construction
- Maritime sector
- Shipping & Yachts
- Industry
- Infrastructure

SPECIALIST COOLING AND CLIMATE-CONTROL INSTALLATIONS

Made to measure

Every situation is different and each assignment unique. Most projects require an approach that differs from the norm. Flexibility and creativity are the key characteristics that drive us forward. We have a compact team with skilled employees who know how to quickly respond. This solution-oriented mentality combined with skilled personnel and a workshop in which we realise your wishes down to the smallest detail is what sets

NR Cooling apart. With an open mind and the rich experience gained from past years, we approach each project as a unique opportunity to show what we do best.

MARKETS & SECTORS

From dry desert plains in the Middle East to luxury superyachts and a shopping complex in the heart of Rotterdam, each market has its own conditions and challenges. Ultimately, however, they all boil down to the same thing: sustainable and custom-made climate control, whatever the environmental conditions. NR Cooling Services provides all this and more in five markets.



Utilities & Construction

A healthy and comfortable indoor climate is tailored to the activities that take place there. Sustainability is playing an increasingly important role in the construction of utilities and new technologies must reduce energy consumption without sacrificing comfort. Our utilities department focuses on heating and ventilation systems for offices and public buildings such as railway stations and museums. We also provide specialist cooling solutions for data centres or leisure facilities like ice rinks and ski slopes.



Shipping and yachts

In luxury yacht building there is a special need for modern finishes, high comfort requirements and advanced control systems. A pleasant indoor climate with the right temperature and humidity play an important role in this. Also, the installation must be whisper-quiet and draught-free. The indoor climate not only plays a major role in the comfort of passengers, but the luxurious materials in the interior also benefit from a stable indoor climate. The NR Cooling service team knows to translate the high demands in yacht building into a high quality climate installation.



Industry

In industrial processes, everything is geared towards efficiency and reducing downtime. Smart cooling and climate-control technologies result in fully measurable, safe and profitable processes. An advanced control system with a comprehensive sensor package monitors the performance of the HVAC installation with all of its components. This provides an accurate insight into the service life of crucial components. NR's industrial division produces and supplies complete HVAC solutions to the steel production, (petro-)chemical, pharmaceutical and food industries.



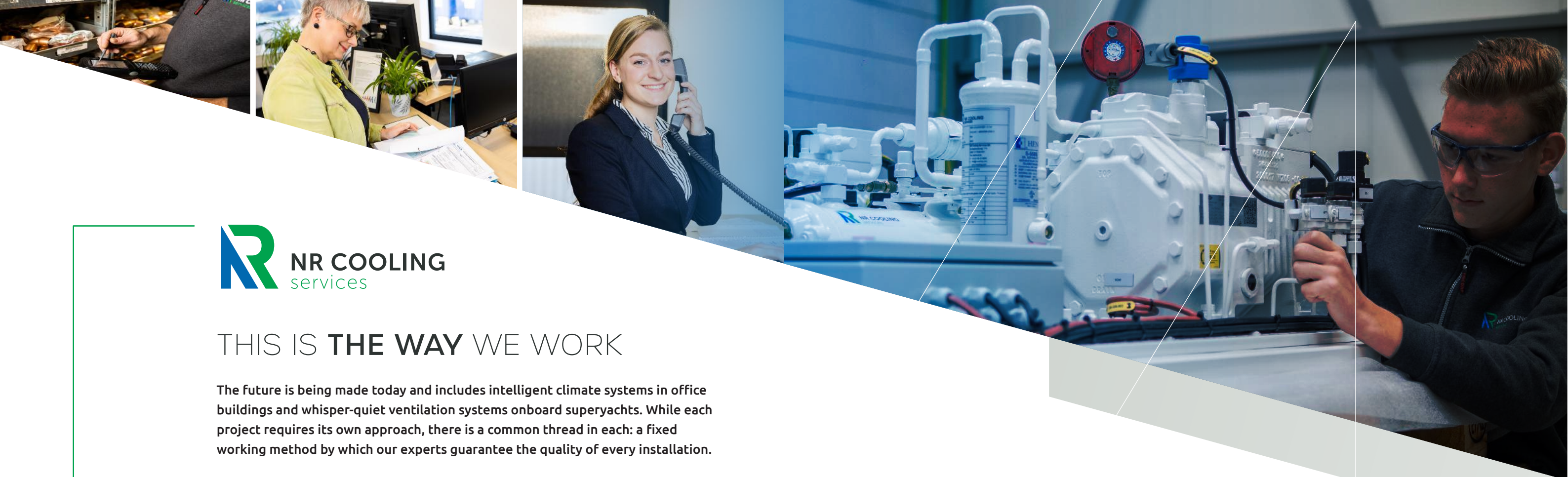
Infrastructure

From ventilation in tunnels and mine shafts to the cooling of concrete, cooling and climate control is used for various purposes in civil engineering to significantly increase quality. Our civil engineering department is known worldwide for its innovative cooling, heating and ventilation solutions in concrete production, tunnel drilling, tunnel ventilation and mining. NR Cooling solutions are applied worldwide, from Panama to Australia and from Laos to Brazil.



Maritime sector

In the maritime sector, due to the extreme conditions in which ships operate, a great deal is demanded from the cooling and air conditioning installation. Moreover, the safety requirements are high, and a minimum of maintenance is required. The NR Cooling Service team has over 50 years of experience in the maritime sector, both in new construction and refit projects. We understand the challenges of our customers and work exclusively with sustainable materials such as stainless steel or even titanium. Our cooling and air conditioning installations can be found on a wide variety of (commercial) ships, but also on cranes, pipelaying systems and drilling installations.



THIS IS **THE WAY** WE WORK

The future is being made today and includes intelligent climate systems in office buildings and whisper-quiet ventilation systems onboard superyachts. While each project requires its own approach, there is a common thread in each: a fixed working method by which our experts guarantee the quality of every installation.



1. CONCEPT ENGINEERING

In the concept phase we go through your design conditions and technical drawings. Calculations are made for the installation and described in a comprehensive technical specification, supported by a clear quotation. This includes an overview of all main components and fittings.



2. ENGINEERING AND MODELLING

During the detail engineering stage we calculate the parameters of the installation down to the smallest detail. 3D drawing programs are used to model the main components, resulting in a comprehensive package with P&IDs, scale drawings and electrical schematics.



3. PRODUCTION & TESTING

All main components such as cooling machines and air-conditioning units are produced in this phase. Part of the production takes place in our own workshop before the machines are put through their paces in our testing room.



4. TRANSPORT

All parts, fittings and primary components are shipped to the location where the system will be installed. We also take care of the transport and everything associated with it, including crates, packing lists and agreements with the carrier.



5. INSTALLATION & COMMISSIONING

This includes everything from pipe and duct installation to final assembly and commissioning. Detailed pre-engineering and accurate drawings save a lot of time in this phase. The project is completed with extensive commissioning so that you have a fully operational system by the time we finish.



6. SERVICE & MAINTENANCE

Keep your installation in peak condition with preventive and corrective maintenance to minimise the risk of downtime. Service & maintenance is installation-dependent and tailored to your needs. This option is also available for installations not supplied by NR Cooling Services.

COOLING AND CLIMATE-CONTROL SOLUTIONS



Cooling and climate-control technology

Climate control is about more than just bringing a room to the right temperature. A comfortable indoor climate is attuned to the occupants and their activities. During the design phase, we take into account air velocity, humidity and noise requirements. This goes beyond simply an accurate design with the correct conditions and parameters. We also consider the specifications of hardware and components such as the cooling unit, and the dimensions of an air-handling unit.

Special attention is paid to the health and well-being of users, especially in the kind of confined spaces found in maritime environments. This is reflected in the design of our HVAC-systems, in which we take every measure to ensure a fresh and healthy environment. In doing so we minimise the risk of spreading viruses, bacteria and micro-organisms.

NR Cooling Services is an expert in air-conditioning systems for various sectors. We design, install and maintain air-conditioning systems for private individuals, utility companies, industry, yacht building and the maritime sector.



Test room

Every project is unique and so are the machines and components of each installation. We produce a large part of the cooling machines ourselves in our own workshop. In addition, we have our own test room, where each installation is tested before delivery. You can inspect the installation during this test before anything is placed on location so you are assured that the machine will meet your specified design requirements.



Food refrigeration

The technique of low-temperature storage has been used to preserve food for centuries: from the ancient Chinese, who transported ice from the mountains in straw and sawdust, to the ice cellars in Victorian London. Only since the advent of mechanical refrigeration has this technique been further perfected. Today, refrigerators and freezers are so integrated into our lives that no one considers them special anymore.

There is more to refrigerating food than just keeping it at a low temperature, however. The aim is to preserve the quality of the food. Take meat, for example. The slower meat freezes, the greater the chance of a damaged cell structure causing it to dry out. Large pieces of meat or carcasses require a different approach than a pre-packaged steak.

NR Cooling Services designs, supplies and installs equipment for freezing and cooling food in both custom-made and standard formats. During the design process you'll receive an accurate capacity calculation that includes your wishes and environmental factors.



Concrete cooling

The best temperature at to process concrete is between 5°C and 25°C. Higher temperatures impair the ability to work with and finish the concrete, as well as reducing its long-term strength. Low humidity, wind and elevated temperatures evaporate the water that hydrates and sets concrete, further increasing the temperature and causing problems such as weakness, shrinkage and cracking.

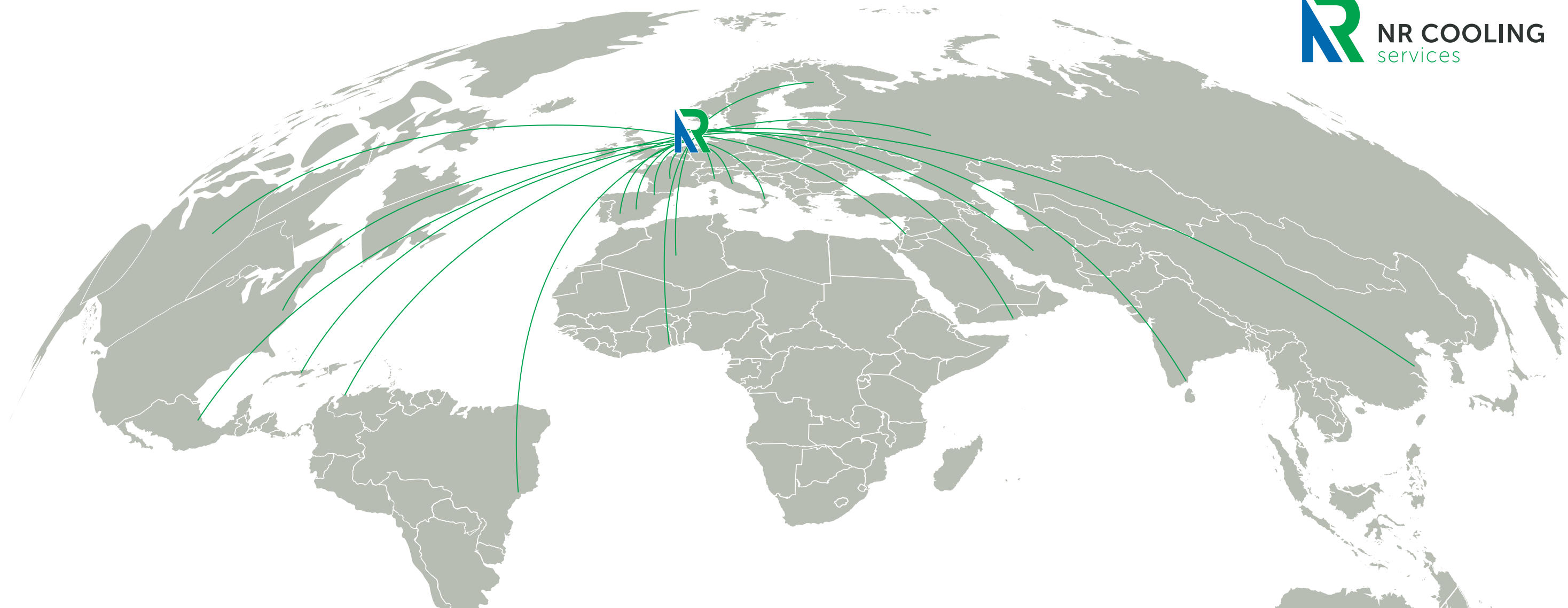
Concrete cooling is used before, during and after the production process. It is a necessity in environments that require concrete in large quantities and where outside temperatures are high. In addition, concrete cooling is used for constructions in which large temperature differences can occur or when there is a major temperature difference between the two sides of a construction.

Whatever the situation, NR Cooling Services offers the correct application, guaranteeing the quality of the concrete.



Natural refrigerants

In order to protect the environment and combat greenhouse gas emissions, more and more refrigeration systems make use of natural refrigerants. While this is obviously a good development, these machines do require special attention. The refrigerants are the energy carrier of the installation. The most energy-efficient result requires a good design with the right temperatures. In terms of installation and maintenance, a cooling machine that runs on natural refrigerant also works slightly differently. That is what makes them so interesting



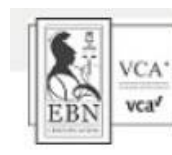
A GLOBAL PLAYER

WITH MORE THAN 50 YEARS OF EXPERIENCE

For all your high-quality and innovative climate-control solutions. NR Cooling Services has more than 50 years of experience and operates worldwide. Our activities know no boundaries.

Quality on all fronts

A premium-quality installation with respect for the environment can only be achieved if high standards apply to the process and organisational structure. That is why we are in possession of the ISO 9001:2015 certificate, the VCA certificate and F-gases certification for companies.



REVIEWS WHAT OTHERS SAY

"We are very satisfied with the working methods and partnership with NR Cooling. They know the systems onboard and their service and support are always good. The advantage of NR Cooling is that the documentation and service history are in good order. Spare parts are readily available and they offer good value for money."

Finy Cijssouw – Sea Contractors

"A properly functioning HVAC installation is vital to our business operations. NR Cooling delivers excellent work time and time again; they have site-specific knowledge of the environment and the associated risks. NR Cooling is an involved party and service-minded. Their many years of experience mean that all the necessary expertise is in-house."

Rudy Paalvast – RET

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